

SCHEDULE 1

DEFINITIONS AND INTERPRETATION**1. Definitions**

In this Agreement (including the recitals and Schedules), unless the context otherwise requires, the following expressions have the following meanings:

“**Acquisition Date**”, in the case of each parcel of Acquisition Lands, means the acquisition date with respect to that parcel of Acquisition Lands set out in Part 3 of Schedule 4 [Acquisition Lands and Acquisition Dates], in each case subject to extension in accordance with Section 8.1.4.

“**Acquisition Lands**” means the parcels of land identified in Part 3 of Schedule 4 [Acquisition Lands and Acquisition Dates] and referred to in Section 8.1.1, which parcels of land will, upon the acquisition by the Province or BCTFA pursuant to Section 8.1.2, form part of the Site.

“**Additional Permitted Borrowing**” means, on any date, the amount equal to any amount of principal outstanding under the Senior Funding Agreements in excess of the amount of principal scheduled under the Senior Funding Agreements (as at the date of this Agreement) to be outstanding at that date, but only to the extent that:

- (a) this amount is less than or equal to the Additional Permitted Borrowing Limit; and
- (b) in respect of any Additional Permitted Borrowing, the Agent is not in material breach of its obligations under Section 2.6.1 of the Direct Agreement as it applies to such Additional Permitted Borrowing,

and provided further that any such excess amount of principal advanced as financing for any Eligible Change will not be counted as Additional Permitted Borrowing.

“**Additional Permitted Borrowing Limit**” means an amount equal to:

- (a) 10% of the Original Senior Commitment for any Additional Permitted Borrowing during the period from the date of this Agreement to the date on which the amount outstanding under the Senior Funding Agreements is reduced to 50% or less of the Original Senior Commitment; and thereafter
- (b) the higher of:
 - (i) 5% of the Original Senior Commitment; and
 - (ii) the amount of any Additional Permitted Borrowing outstanding on the last day of the period referred to in paragraph (a) above.

“**Additional Works**” means any change, improvement or addition made or proposed to be made to the design, layout or structure of the Project Facilities or any part thereof at any time after issue of the Final Completion Certificate (Post Olympic Works) (but excluding any Subsequent Scheme or Improvement).

“**Adjacent Areas**” means the Temporary Adjacent Areas and, subject to Section 8.8 [Boundaries of Site and Adjacent Areas], the areas as may be made available by the Province in its sole and unfettered discretion which do not form part of the Site but upon which part of the Operations are to be carried out, provided that each part of the Temporary Adjacent Areas will cease to be part of the Adjacent Areas from the date upon which they are turned over to the relevant Public Authority in accordance with the provisions of this Agreement.

“**Adjusted Estimated Fair Value**” means the Estimated Fair Value, adjusted as follows:

- (a) the aggregate of the following amounts will be deducted from the Estimated Fair Value:
 - (i) the Post Termination Service Amounts (if a positive number);
 - (ii) the Bid Costs; and
 - (iii) amounts that the Province is entitled to set-off or deduct in accordance with Section 33.9 [Set-Off];
- (b) the aggregate of the following amounts will be added to the Estimated Fair Value:
 - (i) all credit balances on any bank accounts held by or on behalf of the Concessionaire on the date that the Estimated Fair Value is calculated;
 - (ii) any insurance proceeds and other amounts owing to the Concessionaire (and which the Concessionaire is entitled to retain), to the extent not included in clause (b)(i); and
 - (iii) the Post Termination Service Amounts (if a negative number),to the extent that:
 - (iv) the amounts referred to in clauses (b)(i), (ii) and (iii) have not been directly taken into account in calculating the Estimated Fair Value; and
 - (v) the Province has received such amounts in accordance with this Agreement.

“**Adjusted Highest Qualifying Bid Price**” means the Highest Qualifying Bid Price, adjusted as follows:

- (a) the aggregate of the following amounts will be deducted from the Highest Qualifying Bid Price:
 - (i) any Post Termination Service Amounts actually paid by the Province to the Concessionaire to date;
 - (ii) the Bid Costs; and
 - (iii) amounts that the Province is entitled to set-off or deduct in accordance with Section 33.9 [Set-Off];
- (b) the aggregate of the following amounts will be added to the Highest Qualifying Bid Price:
 - (i) all credit balances on any bank accounts held by or on behalf of the Concessionaire on the date that the highest priced Qualifying Bid is received;
 - (ii) any insurance proceeds and other amounts owing to the Concessionaire, to the extent not included in clause (b)(i); and
 - (iii) the Post Termination Service Amounts (if a negative number),
to the extent that:
 - (iv) the amounts referred to in clauses (b)(i), (ii) and (iii) have not been directly taken into account in that Qualifying Bid; and
 - (v) the Province has received such amounts in accordance with this Agreement.

“**Affiliate**” means: in respect of any person or partnership (including the Concessionaire), a person that “controls”, is “controlled by” or under “common control with” such person or partnership in question, and for purposes of this definition, the term “control” (including with correlative meanings, the terms “controlled by” and under “common control with”) means the possession, directly or indirectly, of the power to direct or cause the direction of the management and policies of the person or partnership, whether through the ownership of voting securities, partnership interests, by contract or otherwise, and, without limiting the foregoing, in the case of the Contractor and the Operator, includes each of the shareholders of the Contractor and the Operator and any person that is an “affiliate” of a shareholder of the Contractor or the Operator as that term is defined in the *Business Corporations Act*, S.B.C. 2002, c.57 as at the date of this Agreement, and in the case of the Concessionaire, includes each of the Unitholders of the Concessionaire and any person that is an “affiliate” of a Unitholder of the Concessionaire as that term is defined in the said *Business Corporations Act* as at the date of this Agreement.

Notwithstanding the provisions of section 2.6 of this Schedule 1 [Definitions and Interpretation], this definition will not be changed in the event of an amendment to the definition of “affiliate” contained in the said *Business Corporations Act* following the date of this Agreement.

“**Agent**” means any bank, trustee or other financial institution appointed by the Senior Funders to act in that capacity and such substitute as may be appointed from time to time in accordance with the Direct Agreement and notified to the Province in writing.

“**Agent’s Election**” has the meaning given in Section 1.1 of the Direct Agreement.

“**Allowable Capital Expenditure**” means the Capital Expenditure incurred by the Concessionaire as a direct consequence of a Relevant Works Change in Law, which will be calculated taking into account, *inter alia*, Section 35.2 [Mitigation].

“**Alternative Proposal**” has the meaning given in paragraph 1 of Section B of Part 3 of Schedule 5 [Design and Certification Procedure].

“**Annual Reconciliation Notice**” has the meaning given in Section 32.2.2.

“**Annual Report**” has the meaning given in paragraph 1.5 of Part 2 of Schedule 15 [Reports].

“**Annual Schedule of Lane Closures**” means an Annual Schedule of Lane Closures submitted by the Concessionaire under Section 15.2B.2 (as revised by any revision thereto submitted under Section 15.2B.4) indicating the period or periods during the Contract Year to which such Annual Schedule of Lane Closures relates during which the Concessionaire plans to effect or otherwise reasonably foresees any Lane Closure (including any Lane Closure in respect of any works by any Relevant Authority) in respect of the Concession Highway.

“**APB Distribution**” means, for the period during which any Additional Permitted Borrowing subsists, an amount equal to the aggregate of all Distributions made during that period up to an amount equal to the principal of the Additional Permitted Borrowing on the first day of that period.

“**Approval**” has the meaning given in Section 47.2 [Reasonableness].

“**Asset Condition Retentions**” means retentions from the Total Performance Payments made in accordance with paragraph 3 of Part 4 of Schedule 10 [Operation & Maintenance Performance Deduction].

“**Asset Preservation Performance Measures**” means the Asset Preservation Performance Measures referred to in the O&M Output Specifications.

“**Assets**” means all assets and rights required to enable the Province or a successor contractor or concessionaire to own, operate, maintain and rehabilitate the Project Facilities in accordance with this Agreement, including:

- (a) land and buildings;
- (b) equipment and machinery;
- (c) Design Data;
- (d) books and records (including operating and maintenance manuals, health and safety manuals and other know-how);
- (e) spare parts, tools and other assets (together with any warranties in respect of assets being transferred);
- (f) revenues and any other contractual rights; and
- (g) intellectual property rights,

but excluding any assets and rights owned by the Province or BCTFA.

“**Audit Team**” has the meaning given in paragraph 2.1 of Section A of Part 3 of Schedule 5 [Design and Certification Procedure].

“**Availability**” means the measure of the extent to which a particular part of a highway is directly affected by a Relevant Unavailability Event.

“**Availability Payment**” means the Availability Payment determined in accordance with paragraph 1.1 of Part 2 of Schedule 10 [Availability Payments].

“**Availability/Performance Deductions**” means Non-Availability Deductions, Traffic Management Adjustments, Pre Olympic Works Completion Reductions, O&M Performance Deductions, Olympic Requirements Works Completion Deductions and Post Olympic Works Completion Deductions.

“**Availability/Performance Deductions Warning Notice**” has the meaning given in Section 26.3.1.

“**Base Senior Debt Termination Amount**” means, subject to Section 2.3.4, the aggregate of:

- (a) amounts outstanding at the Termination Date (including interest and Default Interest accrued as at that date) from the Concessionaire to the Senior Funders under the Senior Funding Agreements including in respect of Permitted Borrowing; and
- (b) all amounts (including Hedge Termination Amounts and other breakage costs) payable by the Concessionaire to the Senior Funders as a result of a prepayment

under the Senior Funding Agreements including in respect of Permitted Borrowing, subject to the Concessionaire and the Senior Funders mitigating all such costs to the extent reasonably possible,

LESS, to the extent it is a positive amount, the aggregate of (without double-counting in relation to the calculation of the Base Senior Debt Termination Amount or the amounts below):

- (c) all credit balances on any bank accounts held by or on behalf of the Concessionaire on the Termination Date;
- (d) any amounts claimable on or after the Termination Date in respect of Contingent Funding Liabilities;
- (e) all amounts, including Hedge Termination Amounts and other breakage costs, payable by the Senior Funders or others to the Concessionaire as a result of prepayment of amounts outstanding under the Senior Funding Agreements including in respect of Permitted Borrowing;
- (f) any Additional Permitted Borrowing and any interest and Default Interest on such Additional Permitted Borrowing; and
- (g) all other amounts received by the Senior Funders on or after the Termination Date and before the date on which any compensation is payable by the Province to the Concessionaire as a result of enforcing any other rights they may have.

“BC Rail” means British Columbia Railway Company, a company continued under the *British Columbia Railway Act*, being the owner of the BC Rail Lands, and its successors and assigns.

“BC Rail Agreements” means

- (a) in respect of the period during the Contract Term that is prior to delivery of certain executed agreements between the Province and, among others, BC Rail Partnership, collectively, the Disclosed Data; the terms, conditions and requirements contemplated in Schedule “A” to the preferred proponent agreement made effective January 17, 2005 between the Province and the Concessionaire; and the standards and requirements that would be applicable to carrying out work adjacent to and to access and use rail lands and infrastructure which would reasonably be expected applying Good Industry Practice; and
- (b) at all other times during the Contract Period, the executed agreements between the Province and, among others, BC Rail Partnership that may be delivered by the Province to the Concessionaire,

and any and all statutory rights of way registered against any of the BC Rail Lands to the benefit of the Province.

“**BC Rail Lands**” means those lands described and identified in Part 12 of Schedule 4 [BC Rail Lands].

“**BC Rail Partnership**” means the general partnership of that name formed under the laws of the Province of British Columbia (the partners of which as at the date hereof are Canadian National Railway Company, CN Acquisition Limited and BC Rail Ltd.), being the operator of the BC Rail Lands, and its successors and assigns.

“**BC Rail Works**” means the works affecting the BC Rail Lands and railway facilities and infrastructure located thereon necessary to accommodate the access to and use of those lands by the Concessionaire for purposes of carrying out the Operations (including, for greater certainty, for purposes of constructing, operating, maintaining, removing and/or decommissioning any Olympic Requirements Works on the BC Rail Lands).

“**BC Rail Works Schedules**” has the meaning given in Section 11.10.

“**BCTFA**” means the BC Transportation Financing Authority continued under the Transportation Act.

“**Benchmark Traffic Management Points**” means the Benchmark Traffic Management Points determined in accordance with paragraph 3.6 of Part 6 of Schedule 10 [Performance Incentive Payments].

“**Best Management Practices for Highway Maintenance Activities**” means the document entitled "Best Management Practices for Highway Maintenance Activities, Final Draft" and dated July 2004 included in the Disclosed Data, as amended, supplemented or replaced from time to time.

“**Bid Costs**” means the reasonable and proper costs of the Province incurred in carrying out the Bidding Process and/or in connection with any calculation of the Estimated Fair Value.

“**Bidding Process**” means the process by which the Province requests bid proposals from any parties interested in entering into a New Agreement and evaluates the responses from those interested parties with a view to entering into a New Agreement with a New Concessionaire in accordance with Section 44.2.3 [Rebidding Election].

“**Bidding Process Monitor**” has the meaning given in Section 44.2.3.5.

“**Business Opportunities**” has the meaning given in Section 1.8.1.

“**Capital Cost Increase**” has the meaning given in Part 1 of Schedule 13 [Definitions].

“**Capital Expenditure**” means capital expenditure as interpreted in accordance with Canadian generally accepted accounting principles.

“**Certificate**” means any certificate to be issued pursuant to this Agreement and, in particular:

- (a) “Alternative Proposal Certificate” means a certificate in the form set out in Annex 1(9) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (b) “Assessment Certificate (Structures)” means a certificate in the form set out in Annex 1(18) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (c) “Concessionaire Change Certificate” means a certificate in the form set out in Annex 1(7) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (d) “Concessionaire’s Final Completion Certificate (Olympic Requirements Works)” means a certificate in the form set out in Annex 1(13) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (e) “Concessionaire’s Final Completion Certificate (PM-Section)” means a certificate in the form set out in Annex 1(13) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (f) “Concessionaire’s Final Completion Certificate (Post Olympic Works)” means a certificate in the form set out in Annex 1(13) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (g) “Concessionaire’s Final Completion Certificate (Pre Olympic Works)” means a certificate in the form set out in Annex 1(13) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (h) “Concessionaire’s Final Completion Certificate (Reinstatement Works)” means a certificate in the form set out in Annex 1(13) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (i) “Concessionaire’s Final Completion Certificate (Renewal Works)” means a certificate in the form set out in Annex 1(13) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (j) “Concessionaire’s Substantial Completion Certificate (Olympic Requirements Works)” means a certificate in the form set out in Annex 1(11) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (k) “Concessionaire’s Substantial Completion Certificate (PM-Section)” means a certificate in the form set out in Annex 1(11) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (l) “Concessionaire’s Substantial Completion Certificate (Pre Olympic Works)” means a certificate in the form set out in Annex 1(11) to Part 3 of Schedule 5 [Design and Certification Procedure];

- (m) “Construction Certificate” means a certificate in the form set out in Annex 1(10) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (n) “Design Certificate (General)” means a certificate in the form set out in Annex 1(1) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (o) “Design Certificate (Geotechnical)” means a certificate in the form set out in Annex 1(2) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (p) “Design Certificate (Structures)” means a certificate in the form set out in Annex 1(3) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (q) “End of Term Certificate” means a certificate in the form set out in Annex 1(17) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (r) “Final Completion Certificate (Olympic Requirements Works)” means a certificate in the form set out in Annex 1(14) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (s) “Final Completion Certificate (PM-Section)” means a certificate in the form set out in Annex 1(14) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (t) “Final Completion Certificate (Post Olympic Works)” means a certificate in the form set out in Annex 1(14) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (u) “Final Completion Certificate (Pre Olympic Works)” means a certificate in the form set out in Annex 1(14) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (v) “Province Change Certificate” means a certificate in the form set out in Annex 1(8) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (w) “Reinstatement Certificate” means a certificate in the form set out in Annex 1(16) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (x) “Renewal Certificate” means a certificate in the form set out in Annex 1(15) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (y) “Road Safety Audit Certificate (Stage 1)” means a certificate in the form set out in Annex 1(4) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (z) “Road Safety Audit Certificate (Stage 2)” means a certificate in the form set out in Annex 1(5) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (aa) “Road Safety Audit Certificate (Stage 3)” means a certificate in the form set out in Annex 1(6) to Part 3 of Schedule 5 [Design and Certification Procedure];

- (bb) “Substantial Completion Certificate (Olympic Requirements Works)” means a certificate in the form set out in Annex 1(12) to Part 3 of Schedule 5 [Design and Certification Procedure];
- (cc) “Substantial Completion Certificate (PM-Section)” means a certificate in the form set out in Annex 1(12) to Part 3 of Schedule 5 [Design and Certification Procedure]; and
- (dd) “Substantial Completion Certificate (Pre Olympic Works)” means a certificate in the form set out in Annex 1(12) to Part 3 of Schedule 5 [Design and Certification Procedure].

“**Change in Capital Costs**” has the meaning given in Part 1 of Schedule 13 [Definitions].

“**Change in Law**” means the coming into effect of:

- (a) any new Laws and Regulations after the date of execution of this Agreement; or
- (b) any modification (including repeal) of any Laws and Regulations existing on the date of this Agreement where such modification comes into effect after the date of execution of this Agreement,

(but excluding in each such case any lawful requirements of any Governmental Authority (unless resulting from a Change in Law) and any change in the interpretation of any legislation other than a judgement of a relevant Court which changes binding precedent in British Columbia) which is binding on the Concessionaire, provided that any such new Laws and Regulations or modification of existing Laws and Regulations:

- (c) arising from or in any way connected to or having substantially the same effect as any statute, law, regulation, by-law, rule, code, ordinance, judgment, decree, writ, administrative interpretation, guideline, policy, injunction, order or other requirement which as of the date of this Agreement:
 - (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; or
- (d) relating to the application for, coming into effect, terms, implementation, repeal, revocation or otherwise of any Order or any Permit, Licence or Approval,

will not constitute a Change in Law.

“**Change in Recurrent Costs**” has the meaning given in Part 1 of Schedule 13 [Definitions].

“**Change in Revenues**” has the meaning given in Part 1 of Schedule 13 [Definitions].

“**Checker**” means any person employed by the Concessionaire in accordance with paragraph 30 of Section A of Part 3 of Schedule 5 [Design and Certification Procedure] to check a Structure categorized as a Category III Structure under paragraph 26 of that Section or such substitute as may be appointed by the Concessionaire for the time being in accordance with Section 45.4.1 or 45.4.2.

“**Checking Team**” has the meaning given in paragraph 2.3 of Section A of Part 3 of Schedule 5 [Design and Certification Procedure].

“**Claim**” means any claim, demand, liability, damage, loss, proceeding, suit, action or cause of action and all costs and expenses relating thereto, including legal fees on a full indemnity basis (and “Claims” will be construed accordingly).

“**Closure**” means any partial or total closure, stoppage, 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 for greater certainty:

- (a) any closure, stoppage, obstruction, blockage, restriction or interference required for any works by a Relevant Authority or for any inspection, investigation or survey (whether carried out by the Concessionaire, the Province, the Minister, any other Relevant Authority or any other person);
- (b) any closure, stoppage, obstruction, blockage, restriction or interference resulting from an accident, vehicle breakdown, illegal parking, emergency or other incident;
- (c) any closure, stoppage, obstruction, blockage, restriction or interference instigated by the Police, instigated for health and safety or emergency reasons or resulting from Protesters or Trespassers;
- (d) any mobile closure, stoppage, obstruction, blockage, restriction or interference; and
- (e) any closure, stoppage, obstruction, blockage, restriction or interference materially affecting 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,

provided that traffic congestion or slow moving traffic 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).

“**Collateral Agreement**” means a collateral agreement in the form set out in Schedule 22 [Collateral Agreements].

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

“**Committed Standby Facility**” means any credit facility established by or for the benefit of the Concessionaire for the sole purpose of funding any cost overruns, increased expenses or loss of revenue incurred by the Concessionaire in connection with the Project, provided that funds advanced on any such facility are not used in substitution for other sources of committed funding designated for those purposes.

“**Comparable Controlled Access Highways**” means “controlled access highways”, as defined in the Transportation Act, that the Province determines in the Province’s absolute and unfettered discretion to be comparable to the Concession Highway.

“**Compensable Loss**” has the meaning given in Part 1 of Schedule 13 [Definitions].

“**Compensation Date**” means either:

- (a) if Section 44.2.3 [Rebidding Election] applies, the earlier of:
 - (i) the date that the New Agreement is entered into; and
 - (ii) the date on which the Province pays the Adjusted Highest Qualifying Bid Price to the Concessionaire; or
- (b) if Section 44.2.4 [No Rebidding Procedure] applies, the date that the Adjusted Estimated Fair Value has been agreed or determined in accordance with the provisions of this Agreement.

“**Compensation Event**” means any of the following:

- (a) an event within Section 26.5.3;
- (b) a material breach by the Province of the provisions of Section 8.1 [Access for Concessionaire], including a failure of the Province or BCTFA to complete an acquisition with respect to any parcel of Acquisition Lands by the relevant Acquisition Date (but only if and so long as such breach or failure does not constitute a Concessionaire Termination Event pursuant to Section 41.1.2);
- (c) if the Province's Representative refers a Dispute to the Disputes Resolution Procedure pursuant to Section 13.4.1, a determination in accordance with the Disputes Resolution Procedure that the Substantial Completion Certificate or Final Completion Certificate which is the subject matter of the Dispute was properly issued by the Independent Certifier;
- (d) the occurrence of an event of Eligible Force Majeure, if and for so long as neither the Province nor the Concessionaire has exercised a right to terminate this

Agreement in respect thereof pursuant to Section 42.2 [Termination for Eligible Force Majeure];

- (e) an opening up of the Works pursuant to Section 11.9.4 where such Works are not subsequently found to be defective and are found to have complied with the requirements of this Agreement;
- (f) compliance by the Concessionaire with any instructions given by the Province pursuant to Section 12.6.6 to accelerate construction or take other steps to avoid a delay or impediment or to reduce the period of a delay or mitigate the effect of an impediment, but only to the extent set out in the last sentence of Section 12.6.6;
- (g) [Not Used];
- (h) the failure by the Province to provide the Concessionaire with access to any of the Required BC Rail Lands by the date set forth in Section 8.4.3;
- (i) [Not Used];
- (j) the non-completion of any Off-Site Works as a result of the operation of Section 8.5.1, to the extent that the issue of a Substantial Completion Certificate (PM-Section) for any PM-Section is delayed solely as a result of such non-completion;
- (k) the failure by the Province (other than pursuant to exercise of its rights under Section 17.4.5) to rectify or cause the rectification of, or to appoint the Concessionaire to carry out the rectification of, any Culliton-Cheakamus Section Defect or MOT Section Defect identified in a Defect List produced in accordance with Section 17.2.1 or Section 17.2.2, respectively, as soon as reasonably practicable following the production of the relevant Defect List, or an election by the Province to defer the rectification of any Culliton-Cheakamus Section Defect or MOT Section Defect pursuant to Section 17.4.5;
- (l) the failure by the Province (other than pursuant to exercise of its rights under Section 17.4.5) to rectify or cause the rectification of, or to appoint the Concessionaire to carry out the rectification of, any Latent Defect in accordance with Section 17.4.1 as soon as reasonably practicable after the Concessionaire notifies the Province of the Latent Defect, or an election by the Province to defer the rectification of any Latent Defect pursuant to Section 17.4.5;
- (m) acts or omissions of the MOT Section Contractor in the course of performing the MOT Section Works or of the Existing O&M Contractor in the course of performing its obligations under the Existing O&M Contract, but only to the extent that any such act or omission directly results in a delay or impediment to the completion of the Works or the performance of the Operations and in any event excluding any Lane Closure effected by the MOT Section Contractor on the MOT Section prior to January 1, 2007;

- (n) the existence as at the Commencement Date of any Encumbrance affecting the Project Facilities, the Site and the Adjacent Areas or any part thereof which is not disclosed to the Concessionaire in the Disclosed Data and which the Concessionaire does not otherwise have knowledge of and could not have discovered through the exercise of reasonable due diligence, but only to the extent that the existence of such Encumbrance has a material adverse effect on the conduct of the Operations;
- (o) any actions required to be taken by the Concessionaire pursuant to Section 8.18.4 in respect of any Contamination of the Project Facilities, the Site and the Adjacent Areas or any part thereof caused by the Province after the Commencement Date and in the course of carrying out activities in relation to this Agreement;
- (p) a failure by the Province to obtain a Province Permit, Licence or Approval by such date as may be agreed upon by the Province and the Concessionaire (each acting reasonably), but only to the extent that such failure does not result from a Concessionaire Change or any act or omission of the Concessionaire or any of its agents, contractors or subcontractors of any tier or the employees of any of them and only if and for so long as such failure does not constitute an event of Eligible Force Majeure;
- (q) compliance by the Concessionaire with its obligations under Section 28.3.2 with respect to a new Utility Agreement or amendment to an existing Utility Agreement entered into by the Province pursuant to Section 28.4 [Rights of Province], or any action taken by a Utility Supplier in the exercise of rights conferred upon it under any such new Utility Agreement or amendment, but only to the extent that such compliance or action has a material adverse effect on the conduct of the Operations;
- (r) the existence of materially different geological conditions in any Geotechnical Baseline Area than those that would reasonably and in accordance with Good Industry Practice have been anticipated based on the Geotechnical Baseline Assumptions and any other information available to the Concessionaire with respect to the geological conditions in or in the vicinity of that Geotechnical Baseline Area; provided, however, that the Concessionaire will only be entitled to claim financial compensation in respect of the Compensation Event described in this clause (r) to the extent provided in the definition of “Compensable Loss” in Part 1 of Schedule 13 [Definitions];
- (s) any study, test or trial conducted pursuant to Section 14.4.1.2.3, to the extent that a delay or disruption to the construction of the Works, Closure or any other adverse effect on traffic flows on the relevant part of the Concession Highway or physical damage to the Project Facilities is caused as a direct result thereof; and
- (t) any other event which, by the terms of this Agreement, is deemed to be a Compensation Event or in respect of which the provisions of Part 4 of Schedule 13 [Compensation Events] are stated to be applicable.

“**Compulsory Acquisition Laws**” means all Laws and Regulations authorizing the expropriation or other compulsory acquisition of land or Rights in respect of land, including the Transportation Act, the Transportation Investment Act and the Expropriation Act.

“**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 Rights in respect of land forming part of the Site or Adjacent Areas.

“**concession agreement**” has the meaning given in the Transportation Investment Act.

“**Concession Highway**” means the Existing Highway and the New Highway.

“**Concession Highway Encumbrances**” means any Encumbrances attached or referred to in Part 8 of Schedule 4 [Concession Highway Encumbrances].

“**Concessionaire**” means, and this Agreement designates as the Concessionaire, Sea to Sky Highway Investment Limited Partnership.

“**Concessionaire Change**” means a variation in the design, quality or scope of the Works initiated by the Concessionaire in accordance with Section 11.4 [Concessionaire Changes] and, subject to Section 11.4.3, may include additions, deletions, substitutions, alterations in design and/or variations in or to the Construction Output Specifications and/or the Construction Requirements; and, for purposes of Section 11.4.3 and Part 3 of Schedule 13 [Concessionaire Changes], “Concessionaire Change” will be deemed to include an Alternative Proposal.

“**Concessionaire Proposal Extracts**” means the summaries of commitments taken from the Concessionaire’s submission in response to the RFP attached as Schedule 23 [Concessionaire Proposal Extracts].

“**Concessionaire's Environmental Obligations**” means the obligations and requirements with respect to the performance of obligations under and compliance with the Environmental Assessment Certificate, the Screening Decision dated June 11, 2004 issued pursuant to the Canadian Environmental Assessment Act, R.S.C. 1992, c. 37, and with respect to other environmental matters set forth in Schedule 12 [Environmental Obligations], and includes the obligation to comply with, fulfill and satisfy any commitments or requirements arising out of any amendment to the Environmental Assessment Certificate and such further Screening Decisions and/or amendments thereto as may be subsequently issued from time to time that become necessary as a result of the performance of the Operations or the Concessionaire’s design for the Works or any other works carried out in the course of performing the Operations.

“**Concessionaire’s Final Completion Certificate**” means a Concessionaire’s Final Completion Certificate (PM-Section), a Concessionaire’s Final Completion Certificate (Pre Olympic Works), a Concessionaire’s Final Completion Certificate (Olympic Requirements Works), a Concessionaire’s Final Completion Certificate (Post Olympic

Works), a Concessionaire's Final Completion Certificate (Reinstatement Works) or a Concessionaire's Final Completion Certificate (Renewal Works).

“Concessionaire’s Representative” means the person appointed by the Concessionaire pursuant to Section 22.2 [Concessionaire’s Representative] or such substitute as may be appointed by the Concessionaire pursuant to Section 22.3 [Change of Representatives].

“Concessionaire’s Substantial Completion Certificate” means a Concessionaire’s Substantial Completion Certificate (PM-Section), a Concessionaire’s Substantial Completion Certificate (Pre Olympic Works) or a Concessionaire’s Substantial Completion Certificate (Olympic Requirements Works).

“Concessionaire Termination Event” means any of the events set out in Section 41.1 [Concessionaire Termination Events].

“Confidential Information” has the meaning given in Section 50.1 [Confidential Information].

“Connecting Roads” means any highways and roads which provide access to the Concession Highway, including the existing highways and roads listed in Part 4 of Schedule 4 [Connecting Roads] and any highways or roads constructed in the future which provide access to the Concession Highway.

“Construction Insurance End Date” has the meaning given in Section 20.1.1.1.

“Construction Output Specifications” means the minimum performance specifications and requirements set out or identified or referred to in Part 1 of Schedule 5 [Construction Output Specifications], as amended from time to time by any Province Change or any Concessionaire Change to which the Province’s Representative has consented pursuant to Section 11.4.3, and all provisions of the Environmental Assessment Certificate relating to or prescribing standards, specifications, procedures, restrictions or other requirements in connection with the design and construction of the Works.

“Construction Plant” means plant, materials and equipment used or to be used by the Contractor in the construction of the Project Facilities, but does not include Plant.

“Construction Quality Management Plan” means the Construction Quality Management Plan referred to and described in Section 23.1.3.3.

“Construction Requirements” means the standards, specifications, procedures and other requirements for design and construction set out or identified or referred to in Part 2 of Schedule 5 [Construction Requirements], as amended from time to time by any Concessionaire Change, Alternative Proposal or Province Change.

“Contamination” means the presence of any Hazardous Substance in the environment, except Hazardous Substances present in the environment in concentrations below permissible levels as set by applicable Laws and Regulations. If Contamination is present in soil, surface water or ground water, then the soil, surface water or groundwater,

as the case may be, containing the Contamination will also be deemed for the purposes of this Agreement to be Contamination.

“**Contingent Funding Liabilities**” means contingent liabilities of the Unitholders, if any, in respect of financial obligations owed to the Concessionaire or the lenders under the Funding Agreements which are triggered as a result of or in relation to the termination of this Agreement, such as, for example, guarantees or letters of credit in respect of deferred equity.

“**Contracting Affiliate**” means any Affiliate of the Concessionaire which performs any function in connection with this Agreement or the Operations or is a party to any Project Document (including, for greater certainty, any Unitholder).

“**Contract Period**” means the period commencing on the Commencement Date and expiring on the Expiry Date or on such other date as may be the Termination Date.

“**Contract Year**” means a period of twelve months starting on April 1, with the exception of the first Contract Year, which will commence on the Commencement Date and end on the March 31st first occurring thereafter (the “First Contract Year”), and the last Contract Year, which will commence on April 1 and end on the Termination Date (the “Last Contract Year”).

“**Contractor**” means Peter Kiewit Sons Co. or such substitute as may be appointed by the Concessionaire for the time being in accordance with Section 45.4.1 or 45.4.2.

“**Contractor Claim Notice**” has the meaning given in Section 17.6.1.

“**Court**” means any court of competent jurisdiction.

“**CPI**” means the latest available Consumer Price Index (all items) for Canada as published by Statistics Canada from time to time, or, if such Consumer Price Index ceases to be available for any reason, such other replacement index as the Province may designate, acting reasonably.

“**Culliton-Cheakamus Section**” means those lengths of highway shown on drawings referenced in Part 5 of Schedule 5 [Construction Drawings] under Section DB10 Culliton Creek to Cheakamus Canyon and Section DB11 Cheakamus Canyon South to Cheakamus Canyon North.

“**Culliton-Cheakamus Section Contract**” means the contract signed on April 30, 2003 between the Province and Belpacific Excavating & Shoring Limited Partnership for the performance of the Culliton-Cheakamus Section Works, as amended from time to time.

“**Culliton-Cheakamus Section Contractor**” means the contractor under the Culliton-Cheakamus Section Contract.

“**Culliton-Cheakamus Section Defect**” has the meaning given in Section 17.1.3.

“**Culliton-Cheakamus Section Works**” means the works which have been designed, constructed and completed with respect to the Culliton-Cheakamus Section pursuant to, and as described in, the Culliton-Cheakamus Section Contract.

“**Cumulative Allowable Capital Expenditure**” means the cumulative amount of the Allowable Capital Expenditure from time to time during the Contract Period.

“**Data Room**” means the secure website established prior to the date of this Agreement containing or referring to materials, documents, information and data in respect of the Project; for record purposes the content of the said secure website, as at January 17, 2005, has been copied onto a computer hard drive and three identical copies of such computer hard drive have been distributed (one to the Concessionaire and two to the Province).

“**Deemed New Agreement**” means an agreement on the same terms and conditions as this Agreement, as at the Termination Date, but with the following amendments:

- (a) if this Agreement is terminated prior to the Post Olympic Works Final Completion Date, then each of the Pre Olympic Works Substantial Completion Longstop Date (if Substantial Completion of the Pre Olympic Works has not yet been achieved) and the Scheduled Post Olympic Works Final Completion Date will be extended by a period sufficient to allow a New Concessionaire (had one been appointed) to achieve Substantial Completion of the Pre Olympic Works prior to such extended Pre Olympic Works Substantial Completion Longstop Date and Final Completion of the Post Olympic Works by such extended Scheduled Post Olympic Works Final Completion Date;
- (b) any accrued Availability/Performance Deductions will be disregarded for purposes of Sections 26.3, 26.4 and 40.1.7 and any accrued Warning Notices will be cancelled; and
- (c) the term of such agreement will be for a period equal to the term from the Termination Date to the Expiry Date.

“**Default Interest**” means any increased interest that is payable to the Senior Funders or which accrued as a result of any payment due to the Senior Funders not being made on the date on which it is due.

“**Default Interest Rate**” means simple interest at an annual rate equal to **DELETED** over the Interest Rate.

“**Default Notice**” has the meaning given in Section 26.1.2.

“**Default Warning Notice**” has the meaning given in Section 26.3.2.

“**Defect List**” means a list produced pursuant to Section 17.2.1 (with respect to Culliton-Cheakamus Section Defects) or Section 17.2.2 (with respect to MOT Section Defects).

“**Defective Equipment**” has the meaning given in paragraph 7.2 of Part 8 of Schedule 10 [Monitoring and Measurement].

“**Defective Work**” means any defective workmanship, work or materials performed or supplied by any Third Party Contractor prior to the date of execution of this Agreement giving rise to a defect in the Concession Highway referred to in Section 17.4.4.

“**Delay Period**” has the meaning given in Section 12.6.7.

“**Delegated Obligations**” means the obligations identified in Part 1 of Schedule 19 [Delegated Obligations] as they relate to the Project Facilities, the Site and the Adjacent Areas (including, for greater certainty, the Works).

“**Delegated Rights, Powers and Functions**” means the rights, powers and functions identified in Part 2 of Schedule 19 [Delegated Rights, Powers and Functions] as they relate to the Project Facilities, the Site and the Adjacent Areas (including, for greater certainty, the Works).

“**Design and Certification Procedure**” means the procedure set out in Part 3 of Schedule 5 [Design and Certification Procedure].

“**Design-Build Contract**” means the design-build contract made on or about the date of execution of this Agreement between the Concessionaire and the Contractor in respect of, *inter alia*, the design and construction of the Works.

“**Design-Build Contract Guarantee**” means the guarantee of the obligations of the Contractor under the Design-Build Contract provided by Kiewit Construction Company made on or about the date of execution of this Agreement.

“**Design Data**” means all calculations, designs, design or construction information, standards, specifications, plans, 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 Technical Specifications, used, prepared or to be prepared by or on behalf of the Concessionaire (and/or any of the Concessionaire’s agents, employees, contractors or sub-contractors of any tier) or the Province relating to the design or construction of the Works or any Concessionaire Change, Province Change, Additional Works, Subsequent Scheme or Improvement or the operation, maintenance, rehabilitation or improvement of the Project Facilities.

“**Design Management Plan**” means the Design Management Plan submitted by the Concessionaire in accordance with Section 11.2.1 to which there has been no objection by the Province’s Representative in accordance with the Review Procedure.

“**Design Quality Management Plan**” means the Design Quality Management Plan referred to and described in Section 23.1.3.2.

“**Design Subcontract**” means the subcontract dated January 17, 2005 between the Contractor and the Designer in respect of, *inter alia*, the design of the Works.

“**Design Team**” has the meaning given in paragraph 2.5 of Section A of Part 3 of Schedule 5 [Design and Certification Procedure].

“**Designer**” means Hatch Mott MacDonald Ltd. or such substitute as may be appointed for the time being in accordance with Section 45.4.1 or 45.4.2, in each case being a firm employing duly qualified and experienced professional engineers registered in the Province of British Columbia.

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

“**Direct Agreement**” means the agreement to be entered into between the Province, the Agent (on behalf of the Senior Funders) and the Concessionaire in the form set out in Part 2 of Schedule 2 [Form of Direct Agreement].

“**Disclosed Data**” has the meaning given in Section 38.2.1.

“**Discount Rate**” means:

DELETED

“**Discriminatory Change in Tax Law**” means the coming into effect of a Change in Law which results in the imposition of Provincial Taxes or a change in Provincial Taxes which specifically apply to:

- (a) the Project and not to other highway projects whose design, construction, financing and operation are procured on a basis similar to the Project;
- (b) the Concessionaire and not to other persons;
- (c) persons that have contracted with the Province, a municipality or other statutory or public body to provide services which are procured on a basis similar to the Project (whether in relation to highways or other public infrastructure assets); and/or
- (d) projects whose design, construction, financing and operation are procured on a basis similar to the Project.

“**Dispute**” means a difference or dispute of whatever nature between the Parties or any of them arising under, out of or in connection with this Agreement (including a dispute as to any question of interpretation of this Agreement or any question as to whether a Party has acted or exercised its discretion reasonably where required to do so under the terms of this Agreement).

“**Disputes Resolution Procedure**” means the procedure referred to in Section 52 [Disputes Resolution Procedure] and set out in Schedule 16 [Disputes Resolution Procedure] and, for greater certainty, any reference to a determination or resolution thereunder or pursuant thereto shall mean the final determination or resolution made thereunder or pursuant thereto.

“**Distribution**” means:

- (a) whether in cash or in kind, any:
 - (i) partner distribution to Unitholders or other distribution in respect of Units;
 - (ii) redemption or purchase of Units or any other reorganization or variation to partnership capital;
 - (iii) payments in respect of Junior Debt (whether of principal, interest, breakage costs or otherwise);
 - (iv) payment, loan, contractual arrangement or transfer of assets or rights, in each case to the extent made or entered into after the date of this Agreement and not in the ordinary course of business and on reasonable commercial terms;
 - (v) the receipt of any other benefit which is not received in the ordinary course of business and on reasonable commercial terms;
 - (vi) any other payment to any Relevant Person howsoever arising and whether made pursuant to the terms of an agreement or otherwise or by way of gift or in respect of any class of Units or other securities of or interests in the Concessionaire if, in any such case, such payment would not have been made were it not for the occurrence of any Refinancing; or
- (b) the early release of any Contingent Funding Liabilities, the amount of such release being deemed to be a gain for the purposes of any calculation of Refinancing Gain,

and where any such Distribution is not in cash, the equivalent cash value of such Distribution will be calculated.

“**DVD**” means the digital video disc containing material, documents and data relating to the Project which has been made available to the Concessionaire.

“**Eligible Change**” means any of the following:

- (a) a Province Change; and
- (b) any Compensation Event.

“**Eligible Force Majeure**” means any of the following events:

- (a) war, hostilities (whether declared or undeclared), invasion, revolution, armed conflict, act of foreign enemy or terrorism, in each case within and involving British Columbia;
- (b) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds;
- (c) nuclear explosion, combustion of nuclear fuel, radioactive, chemical or biological contamination or ionizing radiation in each case within or affecting British Columbia, unless the source or cause of the contamination or radiation is brought to or near the Site or Adjacent Areas or the Project Facilities by the Concessionaire, the Concessionaire’s Representative, the Contractor, the Operator or any other person for whom the Concessionaire, the Contractor or the Operator is responsible;
- (d) the inability of the Concessionaire to obtain a required Permit, Licence and Approval (including, where applicable, as a consequence of the Province or BCTFA withholding its consent pursuant to Section 3.5.2) or a required renewal or extension thereof; provided, however, that where the Concessionaire is claiming the right to terminate this Agreement or other relief as a result of the occurrence of the event of Eligible Force Majeure described in this paragraph, the Concessionaire shall have used its best efforts to obtain the relevant Permit, Licence or Approval and the inability of the Concessionaire to obtain the relevant Permit, Licence or Approval does not result from a Concessionaire Change or any act or omission of the Concessionaire or any of its agents, contractors or subcontractors of any tier or the employees of any of them;
- (e) damage to the Project Facilities caused by a seismic event, but only to the extent that:
 - (i) the damage caused by the seismic event results in reinstatement costs to the Project Facilities in excess of **DELETED** for a single seismic event;and
 - (ii) all seismic design requirements specified in this Agreement applicable to the damaged Project Facilities were complied with and implemented by the Concessionaire (the onus of establishing which will be on the Concessionaire),

provided, however, that such damage to the Project Facilities will only constitute an event of Eligible Force Majeure in respect of that portion of the reinstatement costs referred to in clause (i) above (if any) which exceeds the amounts recoverable pursuant to insurance required to be taken out in accordance with Section 20.1.1 or any other insurance maintained by the Concessionaire;

- (f) **DELETED**
- (g) **DELETED**

provided in each case that such event:

- (h) could not reasonably have been prevented by and is beyond the reasonable control of the Party claiming the right to terminate this Agreement or other relief as a result of the occurrence of that event;
- (i) is not contemplated or taken into account or required by any Technical Requirement to be contemplated or taken into account in the design of the Works (provided that this will not exclude damage caused by a seismic event that would otherwise be included pursuant to paragraph (e) above); and
- (j) is not otherwise specifically dealt with under this Agreement and does not arise by reason of any Non-Excusable Event.

“Employee Termination Payments” means termination payments which are required under applicable Laws and Regulations to be made to employees of the Concessionaire reasonably and properly incurred by the Concessionaire arising as a direct result of termination of this Agreement (provided that the Concessionaire will take 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 Concessionaire arising out of:

- (a) contracts of employment or other agreements entered into by the Concessionaire to the extent that such contracts of employment or agreements were not entered into exclusively in connection with the Project; or
- (b) contracts of employment or other agreements entered into by the Concessionaire to the extent that such contracts of employment or agreements were not entered into in the ordinary course of business and on commercial arm’s length terms.

“enactment” has the meaning given to it in the *Interpretation Act*, R.S.B.C. 1996, c. 238.

“Encumbrance” means any Rights in respect of land, including any easement, right-of-way, restrictive covenant, encroachment, lease, licence or permit to use or occupy, and any mortgage, charge, pledge, lien, assignment, option, right to acquire, right of pre-emption, security interest, trust arrangement and any other equity or preferential right or any agreement to create any of them, including claims of the Worker’s Compensation Board, Canada Revenue Agency, Employment Standards Branch and other Governmental Authorities.

“End of Term Amount” has the meaning given in Section 19.6.4.

“End of Term Inspection” has the meaning given in Section 19.6.1.

“**End of Term Payment**” has the meaning given in paragraph 1.1 of Part 7 of Schedule 10 [End of Term Payment].

“**End of Term Requirements**” means the requirements set out or identified or referred to in Part 4 of Schedule 5 [End of Term Requirements], as amended from time to time by any Province Change.

“**Environmental Assessment Certificate**” means environmental assessment certificate T04-01 issued pursuant to the Environmental Assessment Act, S.B.C. 2002, c. 43, on June 4, 2004, as amended from time to time.

“**Environmental Laws**” means all Laws and Regulations relating to the protection of the environment, environmental assessment, plant, animal or human health, including occupational health, management of waste and safety and transportation of dangerous goods.

“**Environmental Quality Management Plan**” means the Environmental Quality Management Plan referred to and described in Section 23.1.3.6.

“**Equity Agreement**” means the agreement or agreements relating to the subscription for equity (or other equity funding) by the Unitholders or other equity participants in the Concessionaire referred to in Section 2.3.1.1.

“**Equity Charge**” means any Funding Agreement that creates an Encumbrance that, if enforced, would result in a Change in Control of the Concessionaire or of any Unitholder including the Security Documents under the Initial Credit Agreement (as defined in the definition of Senior Funding Agreements).

“**Equity IRR**” means the projected blended rate of return to the Relevant Persons over the full term of this Agreement, having regard to Distributions made and projected to be made.

“**Estimated Fair Value**” means the amount determined in accordance with Section 44.2.4 [No Rebidding Procedure] that a third party would pay to the Province as the market value of a Deemed New Agreement.

“**Event**” means an occurring natural phenomenon such as, but not limited to, fire, earthquake, rainfall, wind and snow which has sufficient intensity to cause Landslides and/or material damage to highway assets.

“**Event of Default**” has the meaning given in Section 40.1 [Events of Default].

“**Excepted Closure**” means any of the following:

- (a) a Lane Closure that is responded to and rectified in the manner and within the time periods provided for response and rectification in the Technical Requirements;

- (b) a Scheduled Closure to the extent it does not extend beyond its scheduled duration;
- (c) a Lane Closure caused by, and for so long as required by, the Province or another Relevant Authority (including to allow access by emergency services vehicles) for any reason not as a result of the actions or omissions of the Concessionaire or any of its agents, contractors or subcontractors of any tier or employees of any of them;
- (d) a Lane Closure resulting directly from a Compensation Event;
- (e) a Lane Closure resulting directly from a Landslide in respect of which the Province is obligated to bear some or all of the Landslide Repair Costs pursuant to Section 14.8.2 or Section 14.8.3;
- (f) a Lane Closure as a result of general public events (such as, for example, parades, marathons and similar events) specified by the Province and of the duration required by the Province;
- (g) a Lane Closure in special circumstances (to be reviewed on a case-by-case basis) that is consented to by the Province (either prospectively or retrospectively) in its absolute and unfettered discretion; and
- (h) a Lane Closure resulting directly and unavoidably from a Latent Defect (other than a Latent Defect in any Upgraded Section), Culliton-Cheakamus Section Defect or MOT Section Defect,

provided, however, that a Lane Closure in connection with any uninsured rectification works referred to in Section 37.4.4 will not constitute an Excepted Closure.

“Excess End of Term Requirements Amount” has the meaning given in Section 19.6.1.

“Exempt Refinancing” means:

- (a) any Refinancing that was fully taken into account in the calculation of the Total Performance Payments;
- (b) a change in taxation or change in accounting treatment pursuant to changes in Laws and Regulations or Canadian generally accepted accounting principles;
- (c) the exercise of rights, waivers, consents and similar actions which relate to day to day administrative and supervisory matters that are in respect of:
 - (i) breach of representations and warranties or undertakings;
 - (ii) movement of monies between the Project Accounts in accordance with the terms of the Senior Funding Agreements as at the date of this Agreement;

- (iii) late or non-provision of information or consents;
 - (iv) amendments to subcontracts;
 - (v) approval of revised technical and economic assumptions for financial model runs (to the extent required for forecasts under the Funding Agreements);
 - (vi) restrictions imposed by the Senior Funders on the dates at which the financing provided by the Senior Funders under the Senior Funding Agreements can be advanced to the Concessionaire under the Senior Funding Agreements, and which are given as a result of any failure by the Concessionaire to ensure that the Works are performed in accordance with the Works Schedule and which are notified in writing by the Concessionaire or the Senior Funders to the Province prior to being given;
 - (vii) changes to milestones for drawdown set out in the Senior Funding Agreements and which are given as a result of any failure by the Concessionaire to ensure that the Works are performed in accordance with the Works Schedule and which are notified in writing by the Concessionaire or the Senior Funders to the Province prior to being given;
 - (viii) failure by the Concessionaire to obtain any consents from Governmental Authorities required by the Senior Funding Agreements; or
 - (ix) voting by the Senior Funders and the voting arrangements between the Senior Funders in respect of the levels of approval required by them under the Senior Funding Agreements;
- (d) any amendment, variation or supplement of any agreement approved by the Province as part of any Eligible Change under this Agreement;
 - (e) any sale of Junior Debt or Units in the Concessionaire by Unitholders or, in the case of Junior Debt, Affiliates of Unitholders or securitization of the existing rights and/or interests attaching to Junior Debt or Units in the Concessionaire;
 - (f) any Qualifying Bank Transaction; or
 - (g) a conversion of Units into Junior Debt or of Junior Debt into Units, provided that the total principal amount of all Junior Debt outstanding immediately following the conversion plus amounts paid to the Concessionaire by way of subscription for Units outstanding immediately following the conversion does not exceed the total amounts paid to the Concessionaire by way of subscription for Units outstanding immediately prior to the conversion plus the total principal amount of all Junior Debt outstanding immediately prior to the conversion.

“Existing Contamination” means any Contamination which affects the Project Facilities, the Site or the Adjacent Areas or is situated in, on, under or over any of them at the date of this Agreement.

“Existing Highway” means (subject to Section 36.1.2 with respect to Additional Works, paragraph 7 of Part 1 of Schedule 14 [Subsequent Schemes] and paragraph 4 of Part 2 of Schedule 14 [Improvements]):

- (a) the lengths of highway (which are a part of Highway 99) described in Item A of Part 1 of Schedule 4 [Existing Highway];
- (b) the Sideroads; and
- (c) the Structures forming part of the highway and Sideroads described in (a) and (b) above including the bridges described in Item B of Part 1 of Schedule 4 [Existing Highway],

excluding any Public Authority Highway after it has been turned over to the relevant Public Authority.

“Existing O&M Contract” means the Highway Maintenance Agreement (Service Area No. 4) dated for reference October 26, 2003 between the Province and the Existing O&M Contractor.

“Existing O&M Contractor” means Mainroad Howe Sound Contracting Ltd., being the existing operations and maintenance contractor for the Existing Highway pursuant to the Existing O&M Contract.

“Expiry Date” means March 31, 2030.

“Extraordinary Traffic” has the meaning ascribed to “extraordinary traffic” in the Transportation Act.

“Fair Value” means the amount at which an asset or liability would be exchanged in an arms length transaction between informed and willing parties, other than in a forced or liquidation sale.

“Final Completion” means, with respect to any Works including the Pre Olympic Works, the Olympic Requirements Works, the Post Olympic Works and the Works comprised in or relating to any PM-Section and with respect to any Reinstatement Works or Renewal Works, the satisfactory full and final completion of such Works, Reinstatement Works or Renewal Works in accordance with the Construction Output Specifications, the Construction Requirements and all other applicable standards and specifications referred to or set out in this Agreement, as confirmed by the issue of all relevant Certificates (including road safety audit Certificates) and supporting documentation under the Design and Certification Procedure, and “Finally Completed” or “Finally Complete” have a corresponding meaning.

“Final Completion Certificate” means a Final Completion Certificate (PM-Section), a Final Completion Certificate (Pre Olympic Works), a Final Completion Certificate (Olympic Requirements Works) or a Final Completion Certificate (Post Olympic Works).

“Final PM-Section” means:

- (a) for purposes of Section 13.1.2 [Pre Olympic Works], the last remaining PM-Section for which a Substantial Completion Certificate (PM-Section) is to be issued once Substantial Completion Certificates (PM-Section) have been issued for all of the other PM-Sections; and
- (b) for purposes of Section 13.2.2 [Pre Olympic Works], the last remaining PM-Section for which a Final Completion Certificate (PM-Section) is to be issued once Final Completion Certificates (PM-Section) have been issued for all of the other PM-Sections.

“Financial Base Case” means the final Financial Model attached as Part 1 of Schedule 2 [Financial Base Case] and certified by a knowledgeable senior officer or director of the Concessionaire as being a true and correct copy of the final Financial Model and accompanied by a copy of the financial model audit report issued in respect of the final Financial Model.

“Financial Base Case Equity IRR” means **DELETED**

“Financial Base Case Project IRR” means **DELETED**

“Financial Base Date” means December 31, 2004.

“Financial Model” means the computer spreadsheet model for the Project incorporating statements of the Concessionaire’s cash flows including all expenditures, revenues, financing and taxation of the Operations together with the profit and loss accounts and balance sheets for the Concessionaire throughout the Contract Period, accompanied by details of all assumptions, calculations and methodology used in their compilation and any other documentation necessary or desirable to operate the model.

“Financial Terms” means the financial terms set out in the Funding Agreements.

“First Contract Year” has the meaning given in the definition of “Contract Year”.

DELETED

“Fisheries Act 2004 Letter” means the letter dated August 23, 2004 from the Oceans, Habitat and Enhancement Branch – Major Projects Review Unit, to the Manager, Environmental Services, Ministry of Transportation included in the Disclosed Data, and outlining general standards and practices under which Fisheries and Oceans Canada (DFO) may issue *Fisheries Act (Canada)* sub-section 35(2) Authorizations for the Works and other works carried out as part of the Operations, as such letter and such standards and practices may be amended, supplemented or replaced from time to time.

“**Five Year Management Plan**” means the Five Year Management Plan referred to in Section 14.10 [Five Year Management Plan], as submitted and updated from time to time without objection by the Province’s Representative in accordance with the Review Procedure.

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

- (a) Eligible Force Majeure;
- (b) riot or civil commotion, in each case within British Columbia;
- (c) any accidental loss or damage to the Works or Project Facilities;
- (d) fire, explosion, lightning, storm, tempest, flood or ionizing radiation (to the extent that it does not constitute an event of Eligible Force Majeure);
- (e) damage to the Project Facilities caused by a seismic event, but only to the extent that:
 - (i) the damage does not constitute an event of Eligible Force Majeure; and
 - (ii) all seismic design requirements specified in this Agreement applicable to the damaged Project Facilities were complied with and implemented by the Concessionaire (the onus of establishing which will be on the Concessionaire);
- (f) subject to any obligation of the Concessionaire to provide stand-by power facilities, failure by any Utility Supplier, Governmental Authority or other like body to perform works or provide services required to be performed or provided by them;
- (g) blockade or embargo falling short of Eligible Force Majeure;
- (h) Protest Action; or
- (i) any official or unofficial strike (including a general strike in British Columbia), lockout, go-slow or other labour dispute generally affecting the roads construction industry or the roads operation and maintenance industry or a significant sector of them,

provided in each case that such event:

- (j) could not reasonably have been prevented by and is beyond the reasonable control of that Party and directly causes that Party to be unable to comply with all or a material part of its obligations under this Agreement;
- (k) is not contemplated or taken into account or required by any Technical Requirement to be contemplated or taken into account in the design of the Works

(provided that this will not exclude damage caused by a seismic event that would otherwise be included pursuant to paragraph (e) above); and

- (l) is not otherwise specifically dealt with under this Agreement and does not arise by reason of any Non-Excusable Event.

“**Force Majeure Termination Sum**” has the meaning given in Section 44.3.2.

“**Forest Act**” means the *Forest Act*, R.S.B.C. 1996, c. 157.

“**Forest Practices Code of British Columbia Act**” means the *Forest Practices Code of British Columbia Act*, R.S.B.C. 1996, c. 159.

“**Freedom of Information and Protection of Privacy Act**” means the *Freedom of Information and Protection of Privacy Act*, R.S.B.C. 1996, c. 165.

“**Funders**” means all or any of the persons who provide financing or funding in respect of the Operations under the Funding Agreements including Société General and Royal Bank of Scotland and, where the context so permits, prospective financiers or funders.

“**Funding Agreements**” means all or any of the agreements or instruments entered into or to be entered into by the Concessionaire or any of its Affiliates relating to the financing of the Operations, including:

- (a) all or any of the agreements or instruments specified in Section 2.3.1.3, including any amendments or supplements thereto, and any agreements or instruments entered into by the Concessionaire or any of its Affiliates to raise additional or substitute finance or financial facilities of any form (including, for greater certainty, Junior Debt and/or additional equity) or relating to the rescheduling of its indebtedness or the re-financing of the Project; and
- (b) all or any agreements or instruments entered into by the Concessionaire or any of its Affiliates for the purpose of facilitating the hedging of any exposure to interest rate fluctuations under any of the agreements or instruments referred to in (a) above, including any amendments or supplements thereto, and any agreements or instruments entered into by the Concessionaire or any of its Affiliates to effect additional or substitute interest rate hedging arrangements;

in each case provided they have been entered into in accordance with this Agreement.

“**Geotechnical Baseline Areas**” means those areas identified as geotechnical baseline areas in Part 1 of Schedule 5 [Construction Output Specifications].

“**Geotechnical Baseline Assumptions**” means the underlying assumptions of the Province based on existing geotechnical field investigation information contained in the Data Room and specified in Part 1 of Schedule 5 [Construction Output Specifications], as such assumptions are adjusted by Part 2 of Schedule 5 [Construction Requirements].

“Good Industry Practice” means the exercise of that degree of skill, diligence, prudence and foresight which would reasonably and ordinarily be expected from a person, skilled and experienced in the design, construction, operation, maintenance and rehabilitation of roads similar in type to the Concession Highway, seeking in good faith to comply with all applicable Laws and Regulations and the same contractual obligations as the contractual obligations of the Concessionaire under this Agreement and under the same or similar circumstances and conditions.

“Governmental Authority” means any federal, provincial, territorial, regional, municipal or local governmental authority, quasi-governmental authority, Court, government or self-regulatory organization, commission, board, tribunal, organization, or any regulatory, administrative or other agency, or any 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, the Project Facilities, the Site and the Adjacent Areas or any part thereof or any aspect of the Operations.

“Gravel Pits” means the gravel pits, stockpile sites, staging/aggregate processing areas and quarries identified in Section A of Part 7 of Schedule 4 [Gravel Pits and Form of Gravel Licence].

“Gravel Licences” means the gravel licences referred to in Section 8.10.2.

“Gross End of Term Payment” has the meaning given in paragraph 1.1 of Part 7 of Schedule 10 [End of Term Payment].

“GST” means the tax payable and imposed pursuant to Part IX of the *Excise Tax Act* (Canada), but excludes the harmonized sales tax by deeming, for the purposes of this Agreement, that there are no participating provinces listed in Schedule VIII of that Act.

“Hazardous Substance” means any solid, liquid, gas, odour, heat, sound, vibration, radiation or other substance, material or emission the storage, manufacture, disposal, treatment, generation, transportation, remediation, use or Release of which into the environment is prohibited, controlled or regulated under any Environmental Laws, including those 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*, S.C. 1999, c. 33, the *Fisheries Act*, R.S. 1985, c. F-14, the *Transportation of Dangerous Goods Act*, S.C. 1992, c. 34, the *Canada Water Act*, R.S. 1985, c. C-11 and the *Environmental Management Act*, S.B.C. 2003, c. 53.

“Hedge Termination Amounts” means the net amount (if any) payable under the Hedging Agreements on termination of the interest rate hedging transaction(s) entered into under the Hedging Agreements.

“Hedging Agreements” means any agreements referred to in paragraph (b) of the definition of “Funding Agreements”.

“**Highest Qualifying Bid Price**” means the price offered by the Qualifying Bidder (if any) with the highest bid price and, if no Qualifying Bids are received, zero.

“**highway**” means a highway as defined in the Transportation Investment Act.

“**Improvement**” means any change, improvement or addition proposed by the Concessionaire to be made to the design, layout or structure of the Project Facilities or any part thereof at any time after issue of the Final Completion Certificate (Post Olympic Works) which does not involve or require any variation to any of the Technical Requirements (unless the Province's Representative, in its absolute and unfettered discretion, has consented to the variation) and which can be lawfully accomplished by the Concessionaire without obtaining planning permission or any Compulsory Acquisition Order or other New Order under the Transportation Act or otherwise.

“**Independent Certifier**” means the person from time to time appointed the Independent Certifier pursuant to the Independent Certifier Contract and as may be permitted pursuant to this Agreement.

“**Independent Certifier Contract**” means the contract entered into between the Concessionaire, the Province and the Independent Certifier in substantially the form attached hereto as Part 9 of Schedule 5 [Form of Independent Certifier Contract].

“**Initial Inspection**” has the meaning given in Section 19.2.1.

“**Insurance Adjustment Date**” has the meaning given in Section 20.13.1.3.

“**Intellectual Property**” means all current and future legal and equitable interests in registered or unregistered trade marks, service marks, patents, registered designs, utility marks, applications for any of the foregoing, copyrights, unauthorized extraction and/or re-utilisation rights, unregistered designs, inventions, confidential information, know-how or other intellectual property rights arising in connection with or relating in any way to the performance of the Operations.

“**Interested Parties**” means those persons who may be affected by the carrying out of the Works or Operations or who are duly authorized by a Legal Requirement to review or otherwise take an interest in the Works or any other aspect of the Operations, including the Relevant Authorities.

“**Interest Rate**” means a rate of interest per annum equivalent to the prime rate announced by Royal Bank of Canada which is current on the date upon which the amount bearing interest first became due (such interest to accrue daily on the basis of a 365 day year and to be compounded semi-annually). In the event of any variation in such prime rate being announced while such amount remains outstanding, the interest payable will be correspondingly varied from the date of each such variation.

“**Interface Agreement**” means the interface agreement made on or about the date of execution of this Agreement among the Concessionaire, the Contractor and the Operator.

“**Irrecoverable Tax**” has the meaning given in Section 48.5.

“**ISO 9001:2000 Standard**” means ISO 9001:2000 International Standard for Quality Management Systems, as revised and updated from time to time, or, if such Standard ceases to be available for any reason, such other replacement standard as the Province may designate, acting reasonably.

“**Junior Debt**” means indebtedness owing by the Concessionaire to any of its Unitholders or Affiliates of Unitholders which ranks subordinate in all respects to the Senior Debt and which was issued in connection with an Exempt Refinancing referred to in paragraph (g) of the definition of “Exempt Refinancing” in this Section 1 of Schedule 1 [Definitions and Interpretation], provided however that “Junior Debt” will exclude:

- (a) all amounts not actually paid to the Concessionaire by cash advance;
- (b) all fees, including commitment fees, standby fees or other fees, paid or to be paid by the Concessionaire; and
- (c) capitalized interest, and interest on overdue interest.

“**Key Performance Measures**” means the Key Performance Measures referred to in the O&M Output Specifications.

“**Landslide**” means a landslide, mudslide, rockfall, rockslide or debris flow.

“**Landslide Repair Costs**” has the meaning given in Section 14.8.2.

“**Lane Closure**” means any Closure affecting the use by traffic of a lane or lanes within the Concession Highway.

“**Last Contract Year**” has the meaning given in the definition of “Contract Year”.

“**Latent Defect**” has the meaning given in Section 17.1.1.

“**Laws and Regulations**” means any and all requirements under or prescribed by the common law and the law of equity and any enactments, statutes, regulations, laws, court orders or judgments, decrees, writs, administrative interpretations, ordinances, orders-in-council, by-laws, codes (including design and construction codes), orders, injunctions, directives, guidelines, rules or policies of any Governmental Authority affecting, applicable to or otherwise relating to the Concessionaire and/or the Project or any part thereof and/or the Project Facilities, the Site and the Adjacent Areas or any part thereof or the use thereof or any of the Operations and includes, for greater certainty, all Environmental Laws and Privacy Legislation.

“**Legal Requirement**” means a requirement under any Laws and Regulations or any lawful requirement or demand of any Governmental Authority which has jurisdiction with regard to the Project Facilities, the Site and Adjacent Areas or any part thereof or

any of the Operations or whose systems may be affected by the conduct of any of the Operations.

“**Liaison Procedures**” means the procedures set out in Schedule 17 [Liaison Procedures] or to be developed pursuant to this Agreement in accordance with that Schedule, as the case may be.

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“**Liquid Market**” means that there are sufficient willing parties (being at least two parties, each of whom is capable of being a Qualifying Bidder) in the market for agreements for the provision of services (where such agreements are the same as or similar to this Agreement and/or provide for the delivery of services or any material component of services similar to those required under this Agreement) for a price that, through the rebidding process in Section 44.2.3 [Rebidding Election], is likely to be a reliable indicator of Fair Value for the New Agreement, provided that any vehicle controlled and established by the Senior Funders specifically for the purposes of this Project and to which this Agreement may be novated will be disregarded in assessing whether there are sufficient willing bidders in the market for such purposes.

“**Loss**” means any loss, damage, liability, cost, expense (including legal and other professional charges and expenses on a full indemnity basis), charge, fine, penalty or assessment howsoever arising whether under statute, contract, common law, equity, in connection with judgements, proceedings, internal costs or demands or otherwise and whether direct, indirect or consequential (including for greater certainty those in connection with any criminal or quasi-criminal proceedings) (and “Losses” will be construed accordingly).

“**Maintenance Works**” means all works for the maintenance, repair or rehabilitation of the Project Facilities (but excluding any Routine Maintenance) that are necessary to ensure that the Project Facilities, the Site and the Adjacent Areas are maintained, repaired and rehabilitated throughout the Contract Period in accordance with the O&M Output Specifications and the O&M Requirements and that the Project Facilities are, on the Expiry Date, in the condition specified in the End of Term Requirements.

“**Market Value**” means the value of the consideration payable by the New Concessionaire to the Province in consideration for the entering into of the New Agreement.

“**Market Value Deduction Amount**” means for any Payment Period or part of a Payment Period, an amount equal to the total Availability/Performance Deductions made in the Payment Period immediately preceding the Termination Date, less an amount equal to such Availability/Performance Deductions resulting from or attributable to circumstances existing at the Termination Date but which have subsequently been rectified whether as a result of the Province incurring Rectification Costs or otherwise.

“**Master Use Agreements**” means:

- (a) the Master Use Agreement for Wireless Communications Sites between the Province and Microcell Connexions Inc. dated for reference October 27, 1997;
- (b) the Master Use Agreement for Wireless Communications Sites between the Province and Rogers Cantel Inc. dated for reference November 14, 1997;
- (c) the Master Use Agreement for Wireless Communications Sites between the Province and BC Tel Mobility Cellular Inc. dated for reference December 4, 1997; and
- (d) the Master Use Agreement for Wireless Communications Sites between the Province and Bell Mobility Cellular Inc. dated for reference June 11, 2001,

in each case as amended and supplemented to the date hereof.

“**Maximum Total Performance Payment**” means the Total Performance Payment at any time without taking into account any Availability/Performance Deductions. The Maximum Total Performance Payment for any period will be the total of the amounts payable during that period on account of components of the Total Performance Payment without taking into account any Availability/Performance Deductions.

“**Measure**” means, in respect of the traffic passing a Measurement Point during a period, to count the number of vehicles comprising such traffic and to determine the classification of each such vehicle in accordance with the provisions of Part 8 of Schedule 10 [Monitoring and Measurement], and “Measurement” and “Measured” will be construed accordingly.

“**Measuring Equipment**” has the meaning given in paragraph 3.1 of Part 8 of Schedule 10 [Monitoring and Measurement].

“**Measurement Limits of Accuracy**” has the meaning given in paragraph 4.2 of Part 8 of Schedule 10 [Monitoring and Measurement].

“**Measurement Point**” means any point designated as such pursuant to paragraph 2 of Part 8 of Schedule 10 [Monitoring and Measurement].

“**Minister**” means the member of the Executive Council of the Province who is charged from time to time with the administration of the Transportation Investment Act and the Transportation Act, and includes the Minister’s deputy and any person authorized to act for or on behalf of either of them with respect to any matter under or contemplated in this Agreement.

“**Ministry**” or “**MOT**” means the ministry of the Province headed by the Minister and known as the “Ministry of Transportation”.

“Ministry of Forests Protocol Agreement” means the Protocol Agreement Between the Ministry of Forests and the Ministry of Transportation and Highways signed by the Deputy Minister of Forests on September 9, 1992 and by the Deputy Minister of Transportation and Highways on August 8, 1992, as supplemented by the unsigned draft Protocol Agreement between the Ministry of Forests and the Ministry of Transportation dated March 19, 2002, and as further amended, supplemented or replaced from time to time (including pursuant to any pending amendment, supplement or replacement disclosed in the Disclosed Data).

“Ministry’s Standards” means all standards and specifications referred to or identified in Part 1 of Schedule 5 [Construction Output Specifications] and Part 1 of Schedule 7 [O&M Output Specifications] or elsewhere in this Agreement as applicable to the design, construction, operation, maintenance and/or rehabilitation of roads, highways, bridges and related structures, systems and improvements or any other part(s) or component(s) of the Project Facilities, the Site and the Adjacent Areas, including:

- (a) the Reference Documents identified in Annex 3 to Part 1 of Schedule 5 [Construction Output Specifications]; and
- (b) the Reference Documents identified in Annex 2 to Part 1 of Schedule 7 [O&M Output Specifications],

in each case (notwithstanding Section 2.5 of this Schedule 1 [Definitions and Interpretation]) as at the Commencement Date or as subsequently amended or revised by a Province Change.

“Monthly Availability Payment” means the Monthly Availability Payment determined in accordance with paragraph 1.2 of Part 2 of Schedule 10 [Availability Payments].

“Monthly Maximum Availability Payment” means the Monthly Maximum Availability Payment determined in accordance with paragraph 2.1 of Part 2 of Schedule 10 [Availability Payments].

“Monthly Report” has the meaning given in paragraph 1.4 of Part 2 of Schedule 15 [Reports].

“Monthly Retention” has the meaning given in Section 19.7.2.

“Monthly Traffic Management Payment” means the Monthly Traffic Management Payment determined in accordance with paragraph 3.3 of Part 6 of Schedule 10 [Performance Incentive Payments].

“Monthly Vehicle Usage Payment” means the provisional monthly payment on account of the Vehicle Usage Payment determined in accordance with paragraph 3.1 of Part 5 of Schedule 10 [Vehicle Usage Payment].

“**MOT Section**” means those lengths of the Concession Highway shown on drawings referenced in Part 5 of Schedule 5 [Construction Drawings] under Section DB2 Ansell Place to Lions Bay.

“**MOT Section Contract**” means the contract dated September 27, 2004 between the Province and Peter Kiewit Sons Co. for the performance of the MOT Section Works, as amended from time to time.

“**MOT Section Contractor**” means the contractor under the MOT Section Contract.

“**MOT Section Defect**” has the meaning given in Section 17.1.2.

“**MOT Section Works**” means the works which have been or are to be designed, constructed and completed with respect to the MOT Section pursuant to, and as described in, the MOT Section Contract.

“**Motor Vehicle**” has the meaning ascribed to “motor vehicles” in the Motor Vehicle Act.

“**Motor Vehicle Act**” means the *Motor Vehicle Act*, R.S.B.C. 1996, c. 318.

“**Net Present Value**” means the aggregate of the discounted values, calculated as of the estimated date of the Refinancing, of each of the relevant projected Distributions, in each case discounted using the Threshold Equity IRR.

“**New Agreement**” means an agreement on the same terms and conditions as this Agreement at the Termination Date, but with the following amendments:

- (a) if this Agreement is terminated prior to the Post Olympic Works Final Completion Date, then each of the Pre Olympic Works Substantial Completion Longstop Date (if Substantial Completion of the Pre Olympic Works has not yet been achieved) and the Scheduled Post Olympic Works Final Completion Date will be extended by a period sufficient to allow a New Concessionaire to achieve Substantial Completion of the Pre Olympic Works prior to such extended Pre Olympic Works Substantial Completion Longstop Date and Final Completion of the Post Olympic Works by such extended Scheduled Post Olympic Works Final Completion Date;
- (b) any accrued Availability/Performance Deductions will be disregarded for purposes of Sections 26.3, 26.4 and 40.1.7 and any accrued Warning Notices will be cancelled;
- (c) the term of such agreement will be equal to the term from the Termination Date until the Expiry Date; and
- (d) any other amendments which do not adversely affect the Concessionaire.

“**New Concessionaire**” means the person who has entered into or will enter into the New Agreement with the Province.

“**New Highway**” means (subject to Section 8.8 [Boundaries of Site and Adjacent Areas], Section 36.1.2 with respect to Additional Works, paragraph 7 of Part 1 of Schedule 14 [Subsequent Schemes] and paragraph 4 of Part 2 of Schedule 14 [Improvements]) those lengths of highway (which are or are to be a part of Highway 99) comprised in the Upgraded Sections.

“**New Order**” means any planning permission, approval or authorization (including any permission, approval or authorization in respect of any reserved matter in any Order or other New Order), Compulsory Acquisition Order or any other order, certificate, approval, revocation, consent or variation of any existing order, statutory instrument or other subordinate legislation made in respect of the Project Facilities, the Site and the Adjacent Areas or any part thereof in accordance with the terms of this Agreement.

“**No Default Interest Rate**” means the non-default interest rate provided for in the Senior Funding Agreements.

“**Non-Availability Deductions**” means the deductions provided for in Part 3 of Schedule 10 [Non-Availability Deductions].

“**Non-Conformance Report**” means a Non-Conformance Report issued pursuant to paragraph 1.2 of Part 4 of Schedule 10 [Operation & Maintenance Performance Deduction].

“**Nonconformity Report**” means a Nonconformity Report issued pursuant to Schedule 6 [Quality Management].

“**Non-Excusable Event**”, in relation to an event of Force Majeure or Eligible Force Majeure, means:

- (a) any act, omission or default by the Party affected by the event of Force Majeure or Eligible Force Majeure or any of its employees, agents, contractors or subcontractors of any tier or the employees of any of them or any other person for whom that Party is in law or under the terms of this Agreement responsible;
- (b) lack or insufficiency of funds or failure to make payment of moneys or to provide required security on the part of the affected Party;
- (c) any strike, lockout, go-slow, labour dispute or other labour action or protest caused by or attributable to any act (including any pricing or other practice or method of operation) or omission of the Concessionaire or any person for whom the Concessionaire is in law or under the terms of this Agreement responsible (including the Contractor and the Operator and their respective contractors and subcontractors of any tier);
- (d) except with respect to the events of Eligible Force Majeure referred to in paragraphs (d) and (f) of the definition of “Eligible Force Majeure” herein, any Legal Requirements or Laws and Regulations or the exercise of any power or discretion under any Laws and Regulations;

- (e) the diversion, restriction or Closure of the Concession Highway or any part thereof or of any Connecting Road or any part thereof by a Governmental Authority or the exercise of any traffic control, inspection or safety measures or the exercise of any Police, fire or other emergency powers or authority on the Concession Highway or any part thereof or on any Connecting Road or any part thereof; or
- (f) the economic condition or financial state of affairs of the area where the Concession Highway is located, or of any other part of Canada or any other country.

“Non-Foreseeable Contamination” means Existing Contamination (other than Contamination that occurs naturally in the environment or results from natural processes such as, for example, Contamination resulting from acid-generating rock) which was not foreseen or reasonably foreseeable at the date of this Agreement by the Concessionaire in accordance with Good Industry Practice (and in any event excluding any Existing Contamination disclosed in the Disclosed Data or that could reasonably have been foreseen or anticipated based on information contained in the Disclosed Data or that could reasonably have been discovered by a prudent person conducting an environmental inspection of the Project Facilities, Site and Adjacent Areas in accordance with Good Industry Practice having regard to the opportunity afforded the Concessionaire to conduct such inspection prior to the execution of this Agreement).

“Notice” has the meaning given in Section 46.1 [Requirement for Writing].

“Notice Date” means the later of the Termination Date and (if applicable) the date that the Adjusted Estimated Fair Value is agreed or determined pursuant to Section 44.2.4 [No Rebidding Procedure].

“O&M Insurance Coverages” has the meaning given in Section 20.13.1.

“O&M Output Specifications” means the minimum performance specifications and requirements set out or identified or referred to in Part 1 of Schedule 7 [O&M Output Specifications], as amended from time to time by any Province Change, and all provisions of the Environmental Assessment Certificate relating to or prescribing standards, specifications, procedures, restrictions or other requirements in connection with the operation, maintenance and rehabilitation of the Project Facilities, the Site and the Adjacent Areas.

“O&M Performance Deductions” means the deductions provided for in Part 4 of Schedule 10 [Operation & Maintenance Performance Deductions].

“O&M Period” means the period commencing on October 26, 2005 at 12:00:00 a.m. and ending on the Expiry Date.

“O&M Requirements” means the standards, specifications, procedures and other requirements for the operation, maintenance and rehabilitation of the Project Facilities set out or identified or referred to in Part 2 of Schedule 7 [O&M Requirements], as amended

from time to time by any Province Change or in accordance with Section 14.2 [O&M Requirements].

“**OHS Regulation**” means the *Occupational Health and Safety Regulation*, B.C. Reg. 296/97 promulgated pursuant to the Workers Compensation Act.

“**Off-Site Facilities**” means (subject to Section 36.1.2 with respect to Additional Works, paragraph 7 of Part 1 of Schedule 14 [Subsequent Schemes] and paragraph 4 of Part 2 of Schedule 14 [Improvements]), those parts of the Permanent Works (if any) located on Adjacent Areas, but excluding any parts thereof which are excluded from this definition from time to time in accordance with Section 13.3 [Temporary Off-Site Facilities].

“**Off-Site Works**” means those parts of the Works which are to be carried out by the Concessionaire in respect of the Off-Site Facilities.

“**Olympic Committee**” means the Vancouver Organizing Committee of the Olympic Games.

“**Olympic Games**” means the 2010 Olympic Winter Games and the 2010 Winter Paralympic Games.

“**Olympic Period**” means the period commencing at 12:01 a.m. on February 6, 2010 and ending at 11:59 p.m. on March 26, 2010.

“**Olympic Requirements Works**” means those specific parts of the Works which are to be constructed on a temporary basis to satisfy the increased short-term traffic capacity and other requirements to be met in connection with the Olympic Games or during the Olympic Period and which are to be removed and/or decommissioned following the Olympic Games or following the Olympic Period as set out or described or referred to in Part 1 of Schedule 5 [Construction Output Specifications] or Part 2 of Schedule 5 [Construction Requirements].

“**Olympic Requirements Works Completion Deductions**” means the deductions provided for in paragraph 6.1 of Part 2 of Schedule 10 [Availability Payments].

“**Olympic Requirements Works Final Completion Date**” means the date on which the Final Completion Certificate (Olympic Requirements Works) is issued.

“**Olympic Requirements Works Substantial Completion Date**” means the date on which the Substantial Completion Certificate (Olympic Requirements Works) is issued.

“**Olympic Requirements Works Substantial Completion Longstop Date**” means January 26, 2010.

“**Operating and Maintenance Contract**” means the operating and maintenance contract dated as of the Commencement Date between the Concessionaire and the Operator for the operation, maintenance and rehabilitation of the Project Facilities, the Site and the Adjacent Areas.

“**Operating and Maintenance Contract Guarantee**” means the joint and several guarantee of the obligations of the Operator under the Operating and Maintenance Contract provided by Miller Paving Ltd., Brennan Paving & Construction Ltd. and Capilano Highway Services Company dated as of the Commencement Date.

“**Operation, Maintenance and Rehabilitation Quality Management Plan**” means the Operation, Maintenance and Rehabilitation Quality Management Plan referred to and described in Section 23.1.3.4.

“**Operational Performance Measures**” means the Operational Performance Measures referred to in the O&M Output Specifications.

“**Operations**” means all activities of or required of the Concessionaire (and/or any of the Concessionaire’s agents, employees, contractors or sub-contractors of any tier) in connection with the performance of any obligations of the Concessionaire under this Agreement, and the conduct of all works (including the Works) or operations of the Concessionaire (and/or any of the Concessionaire’s agents, employees, contractors or sub-contractors of any tier) on or in relation to the Project Facilities, the Site and the Adjacent Areas.

“**Operator**” means Miller Capilano Maintenance Corporation or such substitute as may be appointed by the Concessionaire for the time being in accordance with Section 45.4.1 or 45.4.2.

“**Orders**” means the planning permissions, approvals and authorizations, Compulsory Acquisition Orders and other orders, certificates, statutory instruments, statutory right of way plans and other subordinate legislation identified in Part 5 of Schedule 4 [Orders], as the same may be amended, modified, varied or superseded by any New Order, and any New Order and, where the context so requires, means any of the individual permissions, approvals, authorizations, orders, certificates, instruments, right of way plans and subordinate legislation comprising the Orders.

“**Original Senior Commitment**” means the amount committed under the Senior Funding Agreements as at the date of this Agreement (as adjusted to take into account any additional financing provided by the Senior Funders for any Eligible Change).

“**Payment Periods**” means the payment periods for payment of components of the Total Performance Payment in accordance with Schedule 10 [Payments], and “**Payment Period**” means any of the Payment Periods.

“**Performance Incentive Payments**” means the Performance Incentive Payments determined in accordance with paragraph 1.1 of Part 6 of Schedule 10 [Performance Incentive Payments].

“**Performance Measures**” means the Key Performance Measures, the Asset Preservation Performance Measures and the Operational Performance Measures.

“Performance Securities” means the labour, material and performance bonds or other securities (including letters of credit) for the performance or provision of work or supply of material obtained or required to be obtained under or in connection with or pursuant to the Design-Build Contract, the Design Subcontract and/or the Operation and Maintenance Contract.

“Permanent Works” means the works having a permanent function (regardless of the length of the design life of such works) which are to be designed, constructed and completed by the Concessionaire in accordance with the Construction Output Specifications and the Construction Requirements and includes (notwithstanding that they are to be removed and/or decommissioned following the Olympic Games) the Olympic Requirements Works.

“Permits, Licences and Approvals” means all permissions, consents, approvals, certificates, permits, licences, statutory agreements and authorizations required by Laws and Regulations, and all consents, approvals and agreements from third parties (including development approvals and consents, approvals and agreements required under Orders and Concession Highway Encumbrances), required to perform the Operations in accordance with this Agreement (including, for greater certainty, Province Permits, Licences and Approvals), and includes all statements, requirements, representations and commitments which are contained within or are part of any plans, schedules, applications or submissions provided or submitted in order to obtain such permissions, consents, approvals, certificates, permits, licences, agreements and authorizations, as applicable.

“Permitted Borrowing” means, without double-counting, any:

- (a) advance to the Concessionaire under the Senior Funding Agreements, provided that such advance is not made under any Committed Standby Facility;
- (b) Additional Permitted Borrowing;
- (c) advance to the Concessionaire under any Committed Standby Facility which is made solely for the purpose of funding any cost overruns, increased expenses or loss of revenue which the Concessionaire incurs, provided that such funds are not used in substitution for other sources of committed funding designated for those purposes; and
- (d) interest and, in respect of the initial Senior Funding Agreements only (prior to any subsequent amendment), other amounts accrued or payable under the terms of the Senior Funding Agreements,

except where the amount referred to in paragraphs (a) to (d) above is or is being used to fund a payment of Default Interest on any Additional Permitted Borrowing.

“Persistent Breach” means a breach (other than a breach for which Availability/Performance Deductions could be made):

- (a) in respect of which a Default Notice has been given pursuant to Section 26.1.2 where more than 3 other Default Notices have been given at any time within the period of 3 months ending on the date that such Default Notice was given in respect of the same or similar breaches; and
- (b) in respect of which a Default Warning Notice has been given pursuant to Section 26.3.2; and
- (c) which continues beyond the applicable Remedial Period specified in the Default Notice referred to in paragraph (a) above or recurs one or more times within the period of 6 months after the date of the Default Warning Notice referred to in paragraph (b) above.

“Person Year” means 2080 hours of employment less vacation and statutory holiday entitlement.

“Plant” means plant, materials, machinery, equipment and apparatus intended to form or forming part of the Project Facilities.

“PM-Section” means one of the payment mechanism sections as indicated in Annex 1 to Schedule 10 [Payments], and reference to a PM-Section includes all of the Project Facilities (including, for greater certainty, Works other than Olympic Requirements Works) and all parts of the Site and the Adjacent Areas located within or relating to that PM-Section.

“Police” includes a Police Constable, the RCMP and any other provincial, federal, regional or municipal police force, police department or other law enforcement body and any related governing body (as the case may be).

“Police Constable” includes:

- (a) a member of a police force or police department having territorial jurisdiction over or in respect of the Project Facilities, the Site and the Adjacent Areas or any part or parts thereof from time to time; and
- (b) any other official who has 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 operation of, the Project Facilities, the Site and the Adjacent Areas or any part or parts thereof from time to time.

“Post Olympic Works” means the removal and/or decommissioning of the Olympic Requirements Works following the Olympic Games, and any other Works the completion of which, by agreement between the Concessionaire and the Province, is deferred until after the Olympic Games.

“Post Olympic Works Completion Deductions” means the deductions provided for in paragraph 4.1 of Part 2 of Schedule 10 [Availability Payments].

“Post Olympic Works Final Completion Date” means the date on which the Final Completion Certificate (Post Olympic Works) is issued.

“Post Termination Service Amount” means, for the purposes of Section 44.2.3 [Rebidding Election], for the whole or any part of a Payment Period for the period from the Termination Date to the Compensation Date, an amount equal to the Maximum Total Performance Payment which would have been payable for that Payment Period or part thereof under this Agreement had this Agreement not been terminated, less an amount equal to the aggregate of:

- (a) the Market Value Deduction Amount for that Payment Period;
- (b) the Rectification Costs incurred by the Province in that Payment Period; and
- (c) (where relevant), the amount by which the Post Termination Service Amount for the previous Payment Period was negative.

“Pre Olympic Works” means all of the Works other than the Olympic Requirements Works and the Post Olympic Works.

“Pre Olympic Works Completion Reductions” means reductions in the Availability Payment resulting from reductions in PM-Section Weighting as provided for in paragraph 2.2 of Part 2 of Schedule 10 [Availability Payments].

“Pre Olympic Works Final Completion Date” means the date on which the Final Completion Certificate (Pre Olympic Works) is issued.

“Pre Olympic Works Substantial Completion Date” means the date on which the Substantial Completion Certificate (Pre Olympic Works) is issued.

“Pre Olympic Works Substantial Completion Longstop Date” means September 25, 2009.

“Pre-Refinancing Equity IRR” means the nominal after-tax Equity IRR calculated immediately prior to the Refinancing.

“Privacy Legislation” means any Laws and Regulations from time to time applicable in British Columbia relating to or governing the collection, storage, use or disclosure of personal information, including the Freedom of Information and Protection of Privacy Act, the Transportation Investment Act, the *Personal Information Protection Act*, S.B.C. 2003, c. 63 and (if and to the extent applicable in British Columbia) the *Personal Information Protection and Electronic Documents Act*, S.C. 2000, c. 5.

“Prohibited Acts Termination Sum” has the meaning given in Section 44.4.2.

“Project” means the design and construction of the Works, the operation, maintenance and rehabilitation of the Project Facilities, the Site and the Adjacent Areas and the conduct of any other Operations during the Contract Period and the financing of such activities.

“Project Accounts” means accounts referred to in and required to be established under the Senior Funding Agreements.

“Project Documents” means the documents referred to in Section 2.3.1 as the same may be amended or varied from time to time in accordance with Sections 2.3.2, 2.3.2A, 2.3.3 and 45.4 and any other document delivered pursuant to Section 2.3.7 and which complies with the provisions of Sections 2.3.2, 2.3.2A, 2.3.3 and 45.4.

“Project Facilities” means the Concession Highway and the Off-Site Facilities (including the Works) and any Works not otherwise included in the Concession Highway and Off-Site Facilities.

“Project Schedule” means the schedule for the design and construction of the Works appearing in Schedule 3 [Project Schedule] (as amended from time to time in accordance with this Agreement).

“Proposal” has the meaning given in paragraph 1 of Section A of Part 3 of Schedule 5 [Design and Certification Procedure].

“Proposed Substitute Concessionaire” has the meaning given in the Direct Agreement.

“Protester” means any person engaged in Protest Action.

“Protest Action” means any civil disobedience or protest action, 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 Operations (including the construction of the Works) or against the construction and/or operation of highways in general, which directly or indirectly materially adversely affects performance of the Operations including any action or threatened action which results in increases in the cost of performing the Operations (including increased security costs) and/or delays in performing the Operations.

“Provider System” has the meaning given in Section 16.5.1.

“Province” means Her Majesty the Queen in right of the Province of British Columbia.

“Province Change” means:

- (a) a variation in the design, quality or scope of the Works;
- (b) a variation in the quality or scope of the Operations (other than as referred to in paragraph (a) above);

- (c) a variation in the Technical Requirements (including, for greater certainty, Ministry Standards) (other than as referred to in paragraphs (a) or (b) above);
- (d) a variation in the scope of insurance coverages pursuant to Section 3.1(f) of Schedule 11 [Insurance Requirements], or a requirement for insurance coverages and limits which is to be considered a Province Change in accordance with the provisions of Section 2.11, 3.10 or 4.6 of Schedule 11 [Insurance Requirements]; or
- (e) any Additional Works,

initiated by the Province's Representative in accordance with Part 2 of Schedule 13 [Province Changes] and may in any such case include additions, deletions, substitutions, alterations in design and/or variations in or to any of the Technical Requirements (including adding highways or portions thereof to, or removing highways or portions thereof from, the Project Facilities, Site and Adjacent Areas for any purpose including in connection with or as a result of construction projects, municipal boundary adjustments, development and subdivision approvals and changes in classification of any highway or part thereof); or

- (f) the delivery by the Province of the executed BC Rail Agreements contemplated in clause (b) of the definition of "BC Rail Agreements" in this Schedule 1, but only to the extent that the executed BC Rail Agreements differ from the definition of BC Rail Agreements set out in clause (a) of the definition of "BC Rail Agreements" in this Schedule 1 and such executed agreements materially adversely impact the work adjacent to and the access to and use of the BC Rail Lands for the Pre-Olympic Works, the Olympic Requirements Works and the removal and/or decommissioning of the Olympic Requirements Works following the Olympic Games (and if such Province Change is referred for resolution pursuant to the Disputes Resolution Procedure, then the factors to be taken into consideration in the determination of the Dispute will include the factors set out in the memorandum dated April 19, 2005 from Frank Margitan, the Contractor, to Gary Webster, the Province's Representative).

"Province Change Confirmation" has the meaning given in Paragraph 6.1.1.2 of Part 2 of Schedule 13 [Province Changes].

"Province Default Termination Sum" has the meaning given in Section 44.1.2.

"Province Permits, Licences and Approvals" means the Permits, Licences and Approvals identified in Part 8 of Schedule 5 [Province Permits, Licences and Approvals].

"Province Records Description" has the meaning given in Section 25.1.2.

"Province's Representative" means Gary A. Webster, P.Eng. or such substitute as may be appointed by the Province pursuant to Section 22.3 [Change of Representatives].

"Province's Share" has the meaning given in Section 35.5.3.

“**Provincial Taxes**” means any and all taxes, levies, imposts, duties, fees, withholdings, assessments, deductions or charges whatsoever, excluding PST, imposed, assessed, levied or collected by the Province, together with interest thereon and penalties with respect thereto.

“**PST**” means the tax that is imposed pursuant to the *Social Service Tax Act* (British Columbia).

“**Public Authority**” means an authority or other public body (including for greater certainty, where applicable, the Province, BCTFA or a municipality) to whom any Temporary Off-Site Facilities are to be turned over as contemplated in Section 13.3 [Temporary Off-Site Facilities].

“**Public Authority Highway**” means those lengths of the Existing Highway which, in accordance with any Technical Requirements, are to be turned over to a Public Authority upon completion of any part of the Works, which lengths of Existing Highway shall thereupon cease to be part of the Existing Highway.

“**Qualifying Bank**” means a lending institution that is a bank listed in Schedule I, II or III of the *Bank Act* (Canada) or a bank, life insurance company, pension fund or fund managed by a professional fund manager that controls funds in excess of \$500,000,000.00, provided such institution, fund or fund manager is not a Restricted Person.

“**Qualifying Bank Transaction**” means:

- (a) the disposition by a Senior Funder of any of its rights or interests in the Senior Funding Agreements to a Qualifying Bank;
- (b) the grant by a Senior Funder to a Qualifying Bank of any rights of participation in respect of the Senior Funding Agreements; or
- (c) the grant by a Senior Funder to a Qualifying Bank of any other form of benefit or interest in either the Senior Funding Agreements or the revenues or assets of the Concessionaire, whether by way of security or otherwise.

“**Qualifying Bid**” means a bid proposal submitted by a Qualifying Bidder that meets all of the qualification criteria notified under Section 44.2.3.3.

“**Qualifying Bidder**” means a bidder who, to the reasonable satisfaction of the Province:

- (a) has the legal capacity, power and authority to become a party to and perform the obligations of the Concessionaire under this Agreement; and
- (b) has the technical competence, experience and financial standing and the technical and financial resources (including employees with appropriate qualifications, experience and technical competence, committed financial resources, and

contracts) sufficient to enable it to perform the obligations of the Concessionaire under this Agreement.

“**Qualifying Landslide Repair Costs**” has the meaning given in Section 14.8.3.

“**Qualifying Refinancing**” means any Refinancing that will give rise to a Refinancing Gain greater than zero that is not an Exempt Refinancing.

“**Quality Audit**” has the meaning given in paragraph 1 of Schedule 6 [Quality Management].

“**Quality Audit Plans**” has the meaning given in paragraph 1 of Schedule 6 [Quality Management].

“**Quality Documentation**” has the meaning given in paragraph 1 of Schedule 6 [Quality Management].

“**Quality Management Plan**” has the meaning given in paragraph 1 of Schedule 6 [Quality Management].

“**Quality Management Representative**” means the person so appointed in accordance with Section 23.5 [Quality Management Representative].

“**Quality Management System**” has the meaning given in paragraph 1 of Schedule 6 [Quality Management].

“**Quality Manual**” has the meaning given in paragraph 1 of Schedule 6 [Quality Management].

“**Quality Records**” has the meaning given in paragraph 1 of Schedule 6 [Quality Management].

“**Quarter**” means a period of three calendar months beginning on April 1, July 1, October 1 or January 1.

“**RCMP**” means the Royal Canadian Mounted Police.

“**Recurrent Cost Increase**” has the meaning given in Part 1 of Schedule 13 [Definitions].

“**Records Management Protocol**” means the Records Management Protocol referred to in Section 25.4.1, as submitted and updated from time to time without objection by the Province’s Representative in accordance with the Review Procedure.

“**Recoverable Tax**” has the meaning given in Section 48.5.

“**Rectification Costs**” means an amount equal to the reasonable and proper costs incurred by the Province in a particular Payment Period or part of a Payment Period in performing or procuring the performance of the Operations including any costs incurred by the

Province in rectifying or mitigating the consequences of any default by the Concessionaire under this Agreement.

“Refinancing” means:

- (a) any amendment, variation, novation, supplement or replacement of any Funding Agreement;
- (b) the exercise of any right, or the grant of any waiver or consent, under any Funding Agreement;
- (c) the disposition of any rights or interests in, or the creation of any rights of participation in respect of, the Funding Agreements or the creation or granting of any other form of benefit or interest in either the Funding Agreements or the contracts, revenues or assets of the Concessionaire whether by way of security or otherwise; or
- (d) any other arrangement put in place by the Concessionaire or another person which has an effect which is similar to any of (a) to (c) above or which has the effect of limiting the Concessionaire’s ability to carry out any of (a) to (c) above.

“Refinancing Gain” means an amount equal to the greater of zero and $[(A - B) - C]$, where:

A = the Net Present Value of the Distributions projected immediately prior to the Refinancing (taking into account the effect of the Refinancing and using the Financial Base Case as updated (including as to the performance of the Project) so as to be current immediately prior to the Refinancing) to be made to each Relevant Person over the remaining term of this Agreement following the Refinancing;

B = the Net Present Value of the Distributions projected immediately prior to the Refinancing (but without taking into account the effect of the Refinancing and using the Financial Base Case as updated (including as to the performance of the Project) so as to be current immediately prior to the Refinancing) to be made to each Relevant Person over the remaining term of this Agreement following the Refinancing; and

C = any adjustment required to raise the Pre-Refinancing Equity IRR to the Threshold Equity IRR.

“Reinstatement Plan” has the meaning given in Section 20.6A.2.

“Reinstatement Works” has the meaning given in Section 20.6A.1.

“Release” includes any spill, leak, deposit, pumping, pouring, emission, discharge, injection, escape, leaching, migration, disposal and dumping of a Hazardous Substance.

“Relevant Assumptions” means the assumptions that the sale of the Units is on the basis that there is no default by the Province, that the sale is on a going-concern basis, that no restrictions exist on the transfer of the Units, that no Additional Permitted Borrowing has taken place and therefore that the effect of the Additional Permitted Borrowing on the calculation of such amount is disregarded but that otherwise the actual state of affairs of the Concessionaire and the Project is taken into account.

“Relevant Authority” means any entity whose authority is or may be required for the carrying out of all or any part of the Operations or which has any authority or right in respect of the Project Facilities, the Site and the Adjacent Areas or any part thereof under any Laws and Regulations.

“Relevant Change in Law” means any Change in Law (other than a Discriminatory Change in Tax Law) which specifically applies to:

- (a) the Project and not to other highway projects whose design, construction, financing and operation are procured on a basis similar to the Project;
- (b) the Concessionaire and not to other persons;
- (c) persons that have contracted with the Province, a municipality or other statutory or public body to provide services similar to those contemplated under this Agreement (whether in relation to highways or other public infrastructure assets); and/or
- (d) the design, construction, finance and/or operation of highways or the holding of shares or other evidences of ownership in persons whose principal business is providing services the same as or similar to the Operations,

and if compliance with such Change in Law would require a variation (as applicable) in the design, quality or scope of the Works or in the Operations (other than the Works).

“Relevant Lawful Requirement” means any notice, requirement, measure or order of any regulatory body or court (or other body to whose jurisdiction in the matter the Parties are subject) which would require or reasonably necessitate the carrying out of works upon the Project Facilities, the Site or the Adjacent Areas for the removal, treatment or other remediation of Contamination.

“Relevant Person” means a Unitholder and any of its Affiliates.

“Relevant Property” means any property which is not within the boundary of the Site and Adjacent Areas which is affected by any Contamination in, on or under the Project Facilities, the Site or the Adjacent Areas or any migration or leaching of Contamination from the Project Facilities, the Site or the Adjacent Areas.

“Relevant Third Party” means any person having a legal interest in any Relevant Property who suffers damage, injury or other harm caused by Contamination in, on or under the Project Facilities, the Site or the Adjacent Areas or by migration or leaching of

any Contamination into or onto the Relevant Property from the Project Facilities, the Site or the Adjacent Areas (including for greater certainty, where applicable, the Province and BCTFA) and/or any person who suffers damage, injury or other harm caused by any Contamination in, on or under any Relevant Property from time to time to the extent such Contamination constitutes Contamination which has migrated or leached into or onto the Relevant Property from the Project Facilities, the Site or the Adjacent Areas.

“Relevant Unavailability Event” means a Lane Closure other than an Excepted Closure.

“Relevant Works Change in Law” means a Change in Law (other than: (i) a Relevant Change in Law, or (ii) a Change in Law relating to Taxes or any change in Taxes which is not a Relevant Change in Law) which causes the Concessionaire to incur Capital Expenditure (other than increased Capital Expenditure incurred in achieving Final Completion of the Works) to perform works affecting the Project Facilities (being any work of alteration, addition, demolition or extension or variation in the quality or function of the Project Facilities) which are not Maintenance Work or work which the Concessionaire would otherwise be required to perform under this Agreement.

“Remedial Period” has the meaning given in Section 26.1.2.

“Renewal Amount” means the cost of carrying out the Renewal Works as agreed or determined in accordance with Section 19 [End of Term].

“Renewal Schedule” means the schedule for the carrying out of the Renewal Works over the remainder of the Contract Period following the Initial Inspection, as agreed or determined in accordance with Section 19 [End of Term], as such schedule may be revised or amended at any time in accordance with Section 19 [End of Term].

“Renewal Works” means the Maintenance Works or other works of renewal, reconstruction, repair or rehabilitation required, as agreed or determined at any time in accordance with Section 19 [End of Term], to be carried out in order to ensure that the Project Facilities will, on the Expiry Date, satisfy the End of Term Requirements.

“Report” means any report given in accordance with Section 24.1 [Required Reports].

“Required BC Rail Lands” means those portions of the BC Rail Lands identified as such in Part 11 of Schedule 4 [Required BC Rail Lands] and shown on drawings numbered 41DD-DB05-0109 Rev PC and 41DD-DB05-0110 Rev PC.

“Requirements of Interested Parties” means the lawful and other requirements of Interested Parties, whether established pursuant to Legal Requirements, the provisions of this Agreement or otherwise, as disclosed or described in the Disclosed Data.

“Restricted Person” means any person who, or any member of a group of persons acting together, any one of which:

- (a) has, directly or indirectly, its principal or controlling office in a country that is subject to any economic or political sanctions imposed by Canada for reasons other than its trade or economic policies;
- (b) has as any part of its business the illegal manufacture, sale, distribution or promotion of narcotics substances or arms, or is or has been involved in terrorism;
- (c) in the case of an individual, he or she (or, in the case of a legal entity, any of the members of its board of directors or its senior executive) has been sentenced to imprisonment or otherwise given a custodial sentence, other than a suspended sentence, for any criminal offence, other than minor traffic offences, less than 5 years prior to the effective date of any proposed transfer of shares to such person;
- (d) has as its primary business the acquisition of distressed assets or investments in companies or organizations which are or are believed to be insolvent or in a financial standstill situation or potentially insolvent;
- (e) is subject to a claim of the Province or any other Governmental Authority under any proceedings (including regulatory proceedings) which have been concluded or are pending at the time of any proposed transfer and which (in respect of any such pending claim, if it were to be successful) would, in the view of the Province, in either case, be reasonably likely to materially affect the performance by the Concessionaire of its obligations under this Agreement; or
- (f) has been convicted of an offence under the Proceeds of Crime (Money Laundering) and Terrorist Financing Act, S.C. 2000, c.17, or has been convicted of the commission of a money laundering offence or a terrorist activity financing offence under the Criminal Code, R.S.C. 1985, c. C-46, as amended.

“Retention Account” means the deposit account to be established in the name of the Province in accordance with Section 19.7.1.

“Revenue Loss” has the meaning given in Part 1 of Schedule 13 [Definitions].

“Review Procedure” means the procedure whereby submissions are made to the Province’s Representative as set out in Part 2 of Schedule 8 [Review Procedure].

“Revised Senior Debt Termination Amount” means, subject to Section 2.3.4, the aggregate of:

- (a) all amounts outstanding at the Termination Date (including interest and Default Interest accrued as at that date) from the Concessionaire to the Senior Funders under the Senior Funding Agreements including in respect of Permitted Borrowing, other than any such amounts that are in respect of Additional Permitted Borrowing;

- (b) all amounts of Additional Permitted Borrowing (including interest but excluding Default Interest) outstanding at the Termination Date, including such Additional Permitted Borrowing accrued to that date; and
- (c) all amounts (including Hedge Termination Amounts and other breakage costs) payable by the Concessionaire to the Senior Funders as a result of a prepayment under the Senior Funding Agreements including in respect of Permitted Borrowing, subject to the Concessionaire and the Senior Funders mitigating all such costs to the extent reasonably possible,

LESS, to the extent it is a positive amount, the aggregate of (without double-counting in relation to the calculation of the Revised Senior Debt Termination Amount or the amounts below):

- (d) all credit balances on any bank accounts held by or on behalf of the Concessionaire on the Termination Date;
- (e) any amounts claimable on or after the Termination Date in respect of Contingent Funding Liabilities;
- (f) all amounts, including Hedge Termination Amounts and other breakage costs, payable by the Senior Funders or others to the Concessionaire as a result of prepayment of amounts outstanding under the Senior Funding Agreements including in respect of Permitted Borrowing;
- (g) all other amounts received by the Senior Funders on or after the Termination Date and before the date on which any compensation is payable by the Province to the Concessionaire as a result of enforcing any other rights they may have; and
- (h) all APB Distributions.

“**RFP**” means the Request for Proposals issued in respect of the Project on August 31, 2004, as amended.

“**RFQ**” means the Request for Qualifications issued in respect of the Project on March 3, 2004, as amended.

“**Rights in respect of land**” means any right over or in respect of or otherwise relating in any way to land (including foreshore and land covered with water), whether temporary, revocable, legal, contractual, equitable or otherwise of whatever nature.

“**Routine Maintenance**” means work which is short term or cyclical in nature and necessary to keep the Project Facilities, the Site and the Adjacent Areas in good and safe working order and state of repair and maintenance, including minor repairs and maintenance to all elements of the Project Facilities, the Site and the Adjacent Areas, cleaning, median, shoulder and horticultural maintenance and Winter Maintenance and inspections and surveys associated with any of the foregoing.

“**Safety Performance Payment**” means the Safety Performance Payment determined in accordance with paragraph 2.4 of part 6 of Schedule 10 [Performance Incentive Payments].

“**Schedule of Lane Closures**” means a Weekly Schedule of Lane Closures or an Annual Schedule of Lane Closures.

“**Scheduled Closure**” means a Lane Closure provided for in a Schedule of Lane Closures to which there has been no objection in accordance with the Review Procedure.

“**Scheduled Olympic Requirements Works Final Completion Date**” means February 3, 2010.

“**Scheduled Olympic Requirements Works Substantial Completion Date**” means January 12, 2010.

“**Scheduled Post Olympic Works Final Completion Date**” means June 30, 2010.

“**Scheduled Pre Olympic Works Final Completion Date**” means October 31, 2009.

“**Scheduled Pre Olympic Works Substantial Completion Date**” means June 30, 2009.

“**Second Inspection**” has the meaning given in Section 19.4.1.

“**Senior Debt**” means the financing provided by the Senior Funders to the Concessionaire pursuant to and in accordance with the Senior Funding Agreements.

“**Senior Funders**” means all or any of the persons who provide financing or funding in respect of the Project under the Senior Funding Agreements.

“**Senior Funding Agreements**” has the meaning given in Part 2 of Schedule 2 [Form of Direct Agreement].

“**Sideroads**” means the sideroads described in Item C of Part 1 of Schedule 4 [Existing Highway].

“**Significant Appointment**” means the appointment of a contractor or subcontractor which could reasonably be considered significant whether as a consequence of the value of the appointment, the materiality of the part of the Operations being contracted or subcontracted or because of the level of importance of the appointment to the carrying out of the Operations in accordance with this Agreement (including for greater certainty any appointment the termination of which without replacement could reasonably be expected to materially adversely affect the performance by the Concessionaire, the Contractor and/or the Operator, as the case may be, of its respective obligations under this Agreement, the Design-Build Contract or the Operating and Maintenance Contract, respectively), or where the appointment (including for this purpose a failure to appoint) would have the potential to materially prejudice the Province’s rights and entitlements

under this Agreement (including for greater certainty the effectiveness of enforcing such rights and entitlements).

“**Site**” means, subject to Section 8.8 [Boundaries of Site and Adjacent Areas], Section 36.1.2 with respect to Additional Works, paragraph 7 of Part 1 of Schedule 14 [Subsequent Schemes] and paragraph 3 of Part 2 of Schedule 14 [Improvements], the land (including foreshore and land covered with water), spaces, waterways and other areas comprising the Concession Highway site as shown or identified or referenced as such on the date hereof in Part 1 of Schedule 4 [Existing Highway] and Part 5 of Schedule 5 [Construction Drawings] and, upon the acquisition by the Province or BCTFA pursuant to Section 8.1.2, the Acquisition Lands.

“**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 Operations on the Site and the Adjacent Areas.

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“**Statutory Decision Maker**” means a person to whom a power or right has been conferred by an enactment to make a decision deciding or prescribing:

- (a) the legal rights, powers, privileges, immunities, duties or liabilities of a person; or
- (b) the eligibility of a person to receive or to continue to receive a benefit or licence, whether or not the person is legally entitled to it.

“**Step-In Period**” has the meaning given in the Direct Agreement.

“**Structure**” means any (temporary or permanent):

- (a) bridge, tunnel or culvert having an individual span of 3 metres or more or (in respect of a multi-span structure) a cumulative span of 5 metres or more;
- (b) 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;
- (c) corrugated metal bridge or culvert having a span of 0.9 metres or more (irrespective of cover to the road surface);
- (d) pedestrian or cycle underpass (irrespective of span and cover to the road surface);
- (e) retaining wall, including reinforced earth, anchored earth and cribwall systems with slope between 70° 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;
- (f) environmental or torrent debris barrier; and

- (g) sign/signal gantry or high mast for lighting, television cameras and catenary lighting systems.

“**Subcontractor Breakage Costs**” means amounts reasonably and properly payable by the Concessionaire to the Contractor under the terms of the Design-Build Contract and to the Operator under the terms of the Operating and Maintenance Contract to compensate them for Losses sustained as a direct result of the termination of this Agreement, but only to the extent that:

- (a) the Losses are incurred in connection with the Project and in respect of the performance of the Operations, including:
 - (i) costs of materials or goods ordered or subcontracts placed that cannot be cancelled without such Losses being incurred;
 - (ii) expenditures reasonably incurred in anticipation of the performance of the Operations in the future;
 - (iii) demobilisation costs, including the cost of any relocation of equipment used in connection with the Project; and
 - (iv) employee termination payments; and
- (b) the 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 Concessionaire and the Contractor or Operator (as the case may be) has each used its reasonable efforts to mitigate the Losses.

“**Subsequent Scheme**” means any change, improvement or addition proposed by the Concessionaire to be made to the design, layout or structure of the Project Facilities or any part thereof at any time after issue of the Final Completion Certificate (Post Olympic Works) which cannot be lawfully accomplished by the Concessionaire without obtaining planning permission or any Compulsory Acquisition Order or other New Order under the Transportation Act or otherwise.

“**Subsequent Scheme Notice**” has the meaning given in paragraph 1.1 of Part 1 of Schedule 14 [Subsequent Schemes].

“**Substantial Completion**”, when used in relation to the Pre Olympic Works, means the satisfactory completion, as confirmed by the issue of all relevant Certificates (including road safety audit Certificates) and supporting documentation under the Design and Certification Procedure, of all of the Pre Olympic Works in accordance with the Construction Output Specifications, the Construction Requirements and all other applicable standards and specifications 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

entire Concession Highway and the proper intended use of the other Project Facilities, including but not limited to:

- (a) paving of all road surfaces;
- (b) completion of all Structures and drainage systems;
- (c) full operation of all traffic lighting and signalization;
- (d) all permanent pavement markings at all intersections and on all major roads;
- (e) installation of all regulatory and guide signing;
- (f) installation of all median and roadside barrier and other safety devices;
- (g) completion of all Utility Works;
- (h) all construction staging areas have been returned to their original condition or a condition otherwise acceptable to the Province; and
- (i) all debris, superfluous materials and equipment have been removed from the Site and Adjacent Areas and the Site and Adjacent Areas have been satisfactorily cleared and all as-built and other plans, drawings and specifications required in accordance with the Technical Requirements have been delivered to the Province,

and, when used in relation to a PM-Section or the Olympic Requirements Works, means the satisfactory completion, as confirmed by the issue of all relevant Certificates (including road safety audit Certificates) and supporting documentation under the Design and Certification Procedure, of all Works comprised in or relating to the relevant PM-Section or of the Olympic Requirements Works (as the case may be) to the same extent, and “Substantially Completed” or “Substantially Complete” have a corresponding meaning.

“**Substantial Completion Certificate**” means a Substantial Completion Certificate (PM-Section), a Substantial Completion Certificate (Pre Olympic Works) or a Substantial Completion Certificate (Olympic Requirements Works).

“**Suitable Substitute Concessionaire**” has the meaning given in the Direct Agreement.

“**TAF**” has the meaning given in paragraph 2.9 of Section A of Part 3 of Schedule 5 [Design and Certification Procedure].

“**Taxes**” means any and all taxes, levies, imposts, duties, fees, withholdings, assessments, deductions or charges whatsoever, imposed, assessed, levied or collected by any Governmental Authority, together with interest thereon and penalties with respect thereto, and includes all PST and GST except where stated to the contrary.

“**Technical Appraisal Authority**” has the meaning given in paragraph 2.10 of Section A of Part 3 of Schedule 5 [Design and Certification Procedure].

“**Technical Requirements**” means the Construction Output Specifications, the Construction Requirements, the Design Management Plan, the O&M Output Specifications, the O&M Requirements, the Concessionaire Proposal Extracts, the Unstable Slope Mitigation Program, the Five Year Management Plan, the Traffic Management Output Specifications, the Traffic Management Requirements, the Traffic Management Plan, the Records Management Protocol, the privacy code referred to in Section 14.11 [Privacy Code], the Concessionaire's Environmental Obligations, the First Nations Obligations, the First Nations Requirements, the End of Term Requirements, the requirements set out in Section 23.1.2 in respect of the Concessionaire's Quality Management System, the Ministry's Standards, the Best Management Practices for Highway Maintenance Activities, the Utility Policy Manual and any other standard, specification or technical requirement referred to or set out in this Agreement, in each case as updated, modified or varied from time to time in accordance with the provisions of this Agreement.

“**Temporary Adjacent Areas**” means, subject to Section 8.8 [Boundaries of Site and Adjacent Areas], those parts of the Adjacent Areas shown or identified as such on drawings numbered 41DD-DB06-0102 Rev PC and 41DD-DB06-0103 Rev PC attached respectively as Annexes 31 and 32 to Part 3 of Schedule 4 [Acquisition Lands and Acquisition Dates] on which the Temporary Off-Site Facilities are located.

“**Temporary Construction Area**” means, at any time, any area within which any of the Works or any other work in connection with the Operations is actively being carried out at such time.

“**Temporary Off-Site Facilities**” means any part as may be made available by the Province in its sole and unfettered discretion of the Off-Site Facilities which (on Substantial Completion or Final Completion of any relevant Works) is to be turned over to and operated and maintained by a Public Authority.

“**Temporary Works**” means all works and things of a temporary nature (but excluding, for greater certainty, the Olympic Requirements Works) of every kind required in or about the execution and completion of the Permanent Works or of capital works in connection with the operation, maintenance, rehabilitation or improvement of the Project Facilities.

“**Termination Date**” means the date upon which this Agreement terminates.

“**Termination Sum**” means any compensation payable by the Province to the Concessionaire on an early termination of this Agreement under Section 44 [Compensation on Termination] (excluding the Adjusted Highest Qualifying Bid Price).

“**Third Party Contractor**” means any contractor (including the MOT Section Contractor and the Culliton-Cheakamus Section Contractor) which, under a contract with the Province or BCTFA to which neither the Concessionaire nor any of its contractors,

subcontractors or Affiliates is a party, has prior to the date of execution of this Agreement or, in the case of the MOT Section, prior to completion of the MOT Section Works carried out work in respect of the Concession Highway.

“**Third Party Facilities**” means bus shelters, telephone facilities, Utilities and other public facilities and associated equipment, plant, materials and apparatus installed and operated or to be installed and operated on the Site or Adjacent Areas by any transit authority, communications provider, Utility Supplier or other third party.

“**Threshold Equity IRR**” means **DELETED**

“**Total Performance Payment**” means the Total Performance Payment determined in accordance with paragraph 1.1 of Part 1 of Schedule 10 [Total Performance Payment].

“**Traffic Data**” means the information relating to traffic in the reports submitted pursuant to Part 2 of Schedule 15 [Reports] and any information relating to traffic obtained by the Province by direct interrogation of any Measuring Equipment.

“**Traffic Engineer**” has the meaning given in the Traffic Management Output Specifications.

“**Traffic Management Adjustments**” means the Traffic Management Adjustments referred to in paragraph 3.4 of Part 6 of Schedule 10 [Performance Incentive Payments].

“**Traffic Management Output Specifications**” means the minimum performance specifications and requirements for the management of traffic on the Concession Highway set out or identified or referred to in Part 6 of Schedule 5 [Traffic Management Output Specifications], as amended from time to time by any Province Change.

“**Traffic Management Payment**” means the Traffic Management Payment determined in accordance with paragraph 3.2 of part 6 of Schedule 10 [Performance Incentive Payments].

“**Traffic Management Plan**” means the Traffic Management Plan referred to in Section 15.2A.1, including all related sub-plans as described in the Traffic Management Output Specifications, as submitted and modified from time to time without objection by the Province’s Representative in accordance with the Review Procedure.

“**Traffic Management Requirements**” means the procedures and other requirements for the management of traffic on the Concession Highway set out or identified or referred to in Part 7 of Schedule 5 [Traffic Management Requirements], as revised from time to time by any Concessionaire Change or Province Change.

“**Traffic Quality Management Plan**” means the Traffic Quality Management Plan referred to and described in Section 23.1.3.5.

“**Transportation Act**” means the *Transportation Act*, S.B.C. 2004, c. 44.

“**Transportation Investment Act**” means the *Transportation Investment Act*, S.B.C. 2002, c. 65.

“**Trespasser**” means any person (other than a Protester) not entitled to be on the Site or Adjacent Areas.

“**Uninsurable**” means, in relation to a risk, either that:

- (a) insurance is not available in the Canadian and international insurance markets in respect of that risk from insurers of good repute and substance; or
- (b) the insurance premium payable or terms and conditions for insuring that risk with insurers of good repute and substance in the Canadian and international insurance markets from time to time are such that the risk is not generally being insured against in the Canadian and international insurance markets.

“**Unitholder**” means any person from time to time holding a Unit or Units, including, for greater certainty, the general partner and any limited partner of the Concessionaire.

“**Units**” means units or other equity interests of any class in the capital of the Concessionaire.

“**Unstable Slope Mitigation Program**” means the Unstable Slope Mitigation Program referred to in Section 14.7.2, as submitted and updated and extended from time to time without objection by the Province’s Representative in accordance with the Review Procedure.

“**Unstable Slope Mitigation Work Compliance Certificate**” has the meaning given in Section 14.7.6.

“**Upgraded Sections**” means those lengths of highway shown on the drawings referenced in Part 5 of Schedule 5 [Construction Drawings], which are to be constructed, widened or otherwise modified in accordance with the Construction Output Specifications and the Construction Requirements.

“**Users**” means users of the Concession Highway.

“**Utilities**” means privately, publicly or cooperatively owned lines, facilities or systems for transmitting or distributing electricity, data, communications, gas, oil and petroleum products, water and 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, and all related equipment, apparatus and infrastructure.

“**Utility Agreements**” means the Utility Protocol Agreements and the Master Use Agreements and any new agreement entered into by the Province or BCTFA after the Commencement Date 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 any property within the jurisdiction of the Province as highway authority (including the Project Facilities, the Site and the Adjacent Areas), and includes any site or other permits issued thereunder or pursuant thereto.

“**Utility Policy Manual**” means the Ministry Utility Policy Manual included in the Disclosed Data, as the same may be updated, supplemented or amended from time to time.

“**Utility Protocol Agreements**” means the agreement entitled "Protocol Agreement Ministry of Transportation and Highways/BC Hydro - (1995)" made September 19, 1995 between the Ministry and BC Hydro and the agreement entitled "Protocol Agreement Ministry of Transportation and Highways/BC Tel (1996)" made January 26, 1996 between the Ministry and BC Tel, in each case as amended and supplemented to the date hereof.

“**Utility Supplier**” means the owner of any Utilities.

“**Utility Works**” means temporary and permanent installation, protection, removal and relocation works relating to Utilities carried out in connection with or as part of the Works or any other works carried out in the course of the Operations, including installation, protection, removal and relocation of poles, pole lines, conduits, gas pipes, oil pipes, sewers and tile lines, and related and ancillary works.

“**Vehicle Usage Payment**” means the Vehicle Usage Payment determined in accordance with paragraph 1.4 of Part 5 of Schedule 10 [Vehicle Usage Payment].

“**Vehicles**” means any Motor Vehicles authorized to travel on a highway.

“**Verification**” means the process of testing the calibration of any of the Measuring Equipment for the purpose of assessing any error in Measurement, and “Verify” shall be construed accordingly.

“**Warning Notice**” means either an Availability/Performance Deductions Warning Notice or a Default Warning Notice.

“**Weekly Schedule of Lane Closures**” means a Weekly Schedule of Lane Closures submitted by the Concessionaire under Section 15.2B.1 indicating the period or periods during the week to which such Weekly Schedule of Lane Closures relates during which the Concessionaire plans to effect or otherwise reasonably foresees any Lane Closure (including any Lane Closure in respect of any works by any Relevant Authority) in respect of the Concession Highway.

“**Winter Maintenance**” means works in relation to the inhibition of the formation of ice and the removal of snow and ice as set out or described in the O&M Output Specifications and the O&M Requirements and all maintenance works and functions relating thereto in addition to the usual repairs and maintenance of barriers, signs and roadside appurtenances.

“**Workers Compensation Act**” means the *Workers Compensation Act*, R.S.B.C. 1996, c. 492.

“**Working Day**” means a day (other than a Saturday or Sunday) on which banks are open for business in the City of Vancouver.

“**Works**” means the Permanent Works (including Plant) and the Temporary Works required in accordance with the Construction Output Specifications and the Construction Requirements for the design, construction, testing, completion and commissioning of the New Highway and the Off-Site Facilities, and includes the Pre Olympic Works, the Olympic Requirements Works and the Post Olympic Works.

“**Works Schedule**” means the detailed schedule for design, investigations, construction, testing, commissioning and related works, based upon the Project Schedule, to be submitted by the Concessionaire in accordance with Section 12.3.1 and any amended or varied version thereof submitted by the Concessionaire in accordance with Section 12.3.2.

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 the table of contents, headings and sub-headings, marginal notes and references to them in this Agreement are for convenience of reference only, do not constitute a part of this Agreement, and shall not be taken into consideration in the interpretation or construction of, or affect the meaning of, this Agreement;
- 2.2 this Agreement, together with the Direct Agreement and the Collateral Agreements with the Contractor and the Operator and subject to the terms of the Transportation Investment Act, including any requirement to obtain approvals under the Transportation Investment Act, such other related agreements as may from time to time be specified as forming part of the concession agreement, constitute the concession agreement for the purposes of and as contemplated in the Transportation Investment Act;
- 2.3 all references to Sections and Schedules are references to Sections of and Schedules to this Agreement and all references to Parts, paragraphs, Annexes or Appendices are references to Parts and paragraphs contained in and Annexes and Appendices to the Schedules;
- 2.4 the Schedules to this Agreement (including any Annexes or Appendices thereto) are an integral part of this Agreement and reference to this Agreement includes reference thereto and reference to any Schedule includes reference to any Annex or Appendix thereto;
- 2.5 all references to any agreement, document, standard, principle or other instrument include (subject to all relevant approvals and any other provision of this Agreement expressly concerning such agreement, document, standard, principle

- or other instrument) a reference to that agreement, document, standard, principle or instrument as amended, supplemented, substituted, novated or assigned;
- 2.6 all 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 and include any orders, regulations, by-laws, ordinances, orders, codes of practice, instruments or other subordinate legislation made under the relevant statute;
- 2.7 all references to time of day are references to Pacific Standard time or Pacific Daylight Saving time, as the case may be;
- 2.8 the words “herein”, “hereto”, “hereof” and “hereunder” and other words of like import refer to this Agreement as a whole and not to the particular Section, Schedule, Part, paragraph, Annex or Appendix in which such word may be used;
- 2.9 words importing the singular include the plural and vice versa;
- 2.10 words importing a particular gender include all genders;
- 2.11 “person” includes an individual, corporation, partnership, joint venture, association, trust, pension fund, union, government, governmental body, governmental agency, authority, board, tribunal, commission or department and the heirs, beneficiaries, executors, personal or other legal representatives or administrators of an individual, and the receivers and administrators of a corporation;
- 2.12 any reference to a public organization shall 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;
- 2.13 references to “Parties” mean the parties to this Agreement and references to a “Party” mean any one of the parties to this Agreement;
- 2.14 references to drawings are references to drawings appearing in the Schedules hereto;
- 2.15 all monetary amounts are expressed in Canadian Dollars;
- 2.16 references to amounts or sums being “indexed” or “index linked” are references to amounts or sums which have been or are to be adjusted to reflect the effects of inflation as measured by changes in the CPI from the value applicable as at the Financial Base Date. Such adjustment will be calculated by applying the following formula to the amounts or sums to be adjusted:

$$\text{Adjusted amount or sum} = \text{amount or sum} \times \frac{\text{CPI}_m}{\text{CPI}_{bd}}$$

where CPI_m is the most recent published monthly CPI value, and CPI_{bd} is the CPI value for the month and year in which the Financial Base Date occurs;

- 2.17 wherever this Agreement obliges the Province to pay any amount to the Concessionaire (including pursuant to Schedule 13 [Changes]) in respect of any costs, expenses, fees, charges, liabilities, Losses, Claims or other sums incurred by the Concessionaire:
- 2.17.1 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 where the payment is made to an Affiliate of the Concessionaire), so much of them as are proper and reasonable; and
- 2.17.2 the Concessionaire will, where requested by the Province, provide supporting evidence of such costs, expenses, fees, charges, liabilities, Losses, Claims or other sums;
- 2.18 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 those of its employees or agents (including the Province's Representative) who have responsibilities in connection with the conduct of the Operations or the Project;
- 2.19 without limiting the extent of its actual knowledge, the Concessionaire will for all purposes of this Agreement be deemed to have such knowledge in respect of the Operations as is held (or ought reasonably to be held) by all persons involved in carrying out the Operations including the Contractor, the Operator and any other contractor or subcontractor of any tier and the agents, employees or workers of any of them;
- 2.20 any references to statutory 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);
- 2.21 any requirement for any thing or action to be "in accordance with" or "in compliance with" any standard, code or specification or other requirement or stipulation means that such thing or action is to exceed or at least equal that standard, code, specification or other requirement or stipulation;
- 2.22 any reference to anything being "in", "on", "under" or "over" any other thing shall, where the context permits, include the others;
- 2.23 any reference in this Agreement or any Schedule to any proprietary name in relation to any goods or materials shall be deemed to include the words "or suitable (in the opinion of the Province's Representative) equivalent";
- 2.24 "lane" means any delineated traffic lane the design of which complies with the requirements of the Transportation Association of Canada Geometric Design Guide and is suitable for the passage of a unidirectional stream of traffic in

- accordance with Good Industry Practice, but in any event, for greater certainty, excluding any hard shoulder, bus lane or median;
- 2.25 whenever the terms “will” or “shall” are used in this Agreement they are to be construed and interpreted as synonymous and are to be read as “shall”;
- 2.26 the words “includes” or “including” are to be construed as meaning “includes without limitation” or “including without limitation”, respectively;
- 2.27 general words are not given a restrictive meaning:
- 2.27.1 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
- 2.27.2 by reason of the fact that they are followed by particular examples intended to be embraced by those general words;
- 2.28 words or abbreviations which have well-known trade meanings are used in accordance with those meanings;
- 2.29 the expression “all reasonable efforts” and expressions of like import, when used in connection with an obligation of the Concessionaire, means taking in good faith and with due diligence 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 Concessionaire’s obligations hereunder to mitigate delays and additional costs to the Province, 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;
- 2.30 the expressions “by the Concessionaire” and “by or through the Concessionaire” and expressions of like import are synonymous and mean by the Concessionaire or by anyone employed by or through the Concessionaire, including the Concessionaire and all contractors, subcontractors and suppliers of any tier and their respective officers, employees, consultants and agents;
- 2.31 the terms “deficiency”, “deficiencies”, “defect” and “defects” include errors, omissions, defects, deficiencies, incomplete parts of Operations and all other failures to fully conform to, meet and satisfy all requirements of this Agreement;
- 2.32 whenever the terms “submit”, “submitted”, “provide”, “deliver” or words of similar import are used in this Agreement to describe or indicate an obligation of the Concessionaire or a requirement to be satisfied or met by the Concessionaire, and whether capitalized or not, Part 2 of Schedule 8 [Review Procedure] will apply;

- 2.33 all capitalized terms used in a Schedule have the meanings given to such terms in this Schedule 1 [Definitions and Interpretation], unless stated otherwise in a particular Schedule in which case such term will have the meaning given to it in that Schedule solely for the purposes of that Schedule;
- 2.34 the language in the Construction Output Specifications, O&M Output Specifications, Traffic Management Output Specifications and other documents comprising this Agreement may in some cases be written in the imperative for brevity. Clauses containing instructions, directions or obligations are directed to the Concessionaire, and are to be construed and interpreted as if the words “the Concessionaire shall without additional compensation” immediately preceded the instructions, directions or obligations;
- 2.35 all accounting and financial terms used herein are, unless otherwise indicated, to be interpreted and applied in accordance with Canadian generally accepted accounting principles, consistently applied;
- 2.36 all of the Concessionaire’s obligations are to be construed as separate obligations owed to the Province and, except and to the extent otherwise expressly provided in this Agreement, to be performed at the Concessionaire’s own cost and expense;
- 2.37 the words of this Agreement are to be given their natural meaning. The Parties have had the opportunity to take legal advice on this Agreement and no term is, therefore, to be construed *contra proferentem*;
- 2.38 a reference to any right, power, obligation or responsibility of any department, ministry, agency, board, commission, corporation or other entity of any Governmental Authority is to the department, ministry, agency, board, commission, corporation or other entity of the Governmental Authority which, pursuant to Laws and Regulations, has such right, power, obligation or responsibility at the relevant time;
- 2.39 a reference to persons for whom a Party is in law responsible includes that Party’s employees, agents, contractors and subcontractors of any tier, advisors and any other persons for whom that Party is in law responsible or over whom that Party could reasonably be expected to exercise control;
- 2.40 if the time for doing an act falls or expires on a day that is not a Working Day, the time for doing such act will be extended to the next Working Day;
- 2.41 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;

- 2.42 any reference to a road or highway will include in each case all roadways, hard shoulders, slip roads, side roads, access roads, pavement, bridges and other highway structures whether over or under such road or highway, together with all related supporting infrastructure and amenities, including all fences and barriers, curbs, 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, washrooms and rest areas, picnic sites, pullouts, embankments and cuttings, and including in the case of the Concession Highway all land and structures and improvements thereon within the Site and Adjacent Areas;
- 2.43 all releases, waivers of liability and indemnities in this Agreement expressed to be given in favour of a Party are and shall be interpreted as having been given in favour of and may be enforced by that Party and its employees, directors, officers, deputies, delegates, representatives and agents and, without limiting the foregoing, the Party in whose favour any such release, waiver of liability or indemnity is expressed to be given may, at its option and without any obligation to do so, enforce the same as trustee for and on behalf of any of its employees, directors, officers, deputies, delegates, representatives or agents; and
- 2.44 wherever a consent or approval of a Party is provided for herein or required hereunder, the Party giving the consent or approval may impose conditions to the consent or approval which conditions may, in the case of a consent or approval which may be granted or withheld in the absolute and unfettered discretion of such Party, be arbitrary or unreasonable but otherwise will be reasonable having regard to the relevant circumstances.
- 2.45 No provision of this Agreement is intended to derogate from or be inconsistent with or in conflict with any Laws and Regulations and should not be interpreted in a manner as to result in any 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 and Regulations, the applicable Laws and Regulations 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 and Regulations, 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 and for purposes of this Section 2.45, the following will be excluded from the definition of the defined phrase “Laws and Regulations”: “and the law of equity”, “ordinances”, “codes (including design and construction codes)”, “, directives”, “guidelines”, and “rules or policies of any Governmental Authority”, and the word “or” will be added between the word “orders,” and the word “injunctions”.

DELETED

SCHEDULE 2, PART 1 HAS BEEN WITHHELD IN ITS ENTIRETY

SCHEDULE 2

FINANCIAL MATTERS

Part 2

Form of Direct Agreement

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

and

BC TRANSPORTATION FINANCING AUTHORITY

and

SOCIÉTÉ GÉNÉRALE (CANADA)

and

SEA TO SKY HIGHWAY INVESTMENT LIMITED PARTNERSHIP

**Direct Agreement
for the
Sea-to-Sky Highway Improvement Project
Concession Agreement**

THIS DIRECT AGREEMENT is made as of the 3rd day of June, 2005

BETWEEN:

- (1) **HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA**, as represented by the **MINISTER OF TRANSPORTATION**
(the "**Province**")

AND

- (2) **BC TRANSPORTATION FINANCING AUTHORITY**, a corporation continued under the *Transportation Act*, S.B.C. 2004, c. 44
(the "**BCTFA**")

AND

- (3) **SOCIÉTÉ GÉNÉRALE (CANADA)**, a corporation incorporated under the laws of Canada, for itself and as agent and trustee for and on behalf of the Senior Funders
(the "**Agent**")

AND

- (4) **SEA TO SKY HIGHWAY INVESTMENT LIMITED PARTNERSHIP**, a limited partnership established under the laws of British Columbia
(the "**Concessionaire**")

WHEREAS:

- (A) The Province, BCTFA and the Concessionaire have entered into the Concession Agreement.
- (B) By the Senior Funding Agreements the Senior Funders have agreed to make available certain credit facilities to the Concessionaire.
- (C) It is a requirement of the Concession Agreement and of the Senior Funding Agreements that this Agreement will be entered into by the Parties hereto.

NOW THEREFORE in consideration of the mutual promises and agreements of the Parties herein expressed and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto hereby covenant and agree as follows:

1. DEFINITIONS AND INTERPRETATION

1.1 Definitions

In this Agreement (including the recitals), unless the context otherwise requires, the following expressions have the following meanings:

“**Agent's Election**” has the meaning given in Section 27.3.

“**Appointed Representative**” means a Representative that has assumed the Concessionaire's rights under the Concession Agreement pursuant to Section 4.1.2.

“**Appointed Representative Notice**” has the meaning given in Section 4.1.1.

“**Associate**” means, in respect of a relevant person, a person that is an “associate” as that term is defined in the *Canada Business Corporations Act* as at the date of this Agreement. For greater certainty, this definition will not be changed in the event of an amendment to the definition of “associate” contained in the said *Canada Business Corporations Act* following the date of this Agreement.

“**Availability/Performance Deductions**” has the meaning given in the Concession Agreement.

“**Collateral Agreement**” has the meaning given in the Concession Agreement.

“**Concession Agreement**” means the agreement entitled “Sea-to-Sky Highway Improvement Project Concession Agreement” among the Province, BCTFA and the Concessionaire dated as of June 3, 2005 pursuant to which the Concessionaire has been engaged to carry out the Project, as the same may be amended, modified, supplemented or replaced from time to time.

“**Court**” means any court of competent jurisdiction.

“**Default Interest Rate**” means **DELETED** per annum above the Interest Rate.

“**Deficiency**” has the meaning given in Section 3.5.3.2.2.2.

“**Design-Build Contract**” has the meaning given in the Concession Agreement.

“**Enforcement Action**” means any acceleration of amounts due and owing under any of the Senior Funding Agreements and/or any enforcement procedure or enforcement action commenced or taken under any of the Security (including, for greater certainty, the exercise of any step-in rights under any direct or collateral agreement with the Contractor or the Operator).

“**Enforcement Event**” means an event of default under any of the Senior Funding Agreements or the Security Documents or any other event which permits Enforcement Action.

“**Event of Default**” has the meaning given in the Concession Agreement.

“**Exercise Date**” has the meaning given in Section 3.5.2.

“**Indebtedness Notice**” has the meaning given in Section 3.1.1.2.

“**Interest Rate**” has the meaning given in the Concession Agreement.

“**Letter of Credit**” means the letter of credit constituting the Performance Securities relating to the Design-Build Contract.

“**Liquid Market**” has the meaning given in the Concession Agreement.

“**No Liquid Market Notice**” has the meaning given in Section 3.6.1.

“**Novation Effective Date**” means the later of :

- (a) the Proposed Novation Date (unless an approval of the Lieutenant Governor in Council is required to be obtained pursuant to subsection 2(1) of the Transportation Investment Act in connection with the proposed novation and is not obtained by such date); and
- (b) the date which is 7 days after the date on which: (a) the Province has consented in accordance with this Agreement, and (b) any required approval of the Lieutenant Governor in Council has been obtained, in respect of the proposed novation.

“**Operating and Maintenance Contract**” has the meaning given in the Concession Agreement.

“**Operations**” has the meaning given in the Concession Agreement.

“**Project**” has the meaning given in the Concession Agreement.

“**Project Documents**” has the meaning given in the Concession Agreement.

“**Project Facilities**” has the meaning given in the Concession Agreement.

“**Proposed Novation Date**” means the date on which it is proposed by the Agent under Section 5.1 [Proposed Substitute Concessionaire] that a novation will become effective.

“**Proposed Novation Notice**” has the meaning given in Section 5.1 [Proposed Substitute Concessionaire].

“Proposed Substitute Concessionaire” has the meaning given in Section 5.1 [Proposed Substitute Concessionaire].

“Province Collateral Agreement Notice” has the meaning given in Section 3.5.1.1.

“Province’s Representative” has the meaning given in the Concession Agreement.

“Representative” means:

- (a) the Agent, any Senior Funder and/or any of their Affiliates;
- (b) an administrative receiver, receiver or receiver and manager of the Concessionaire appointed under the Security Documents;
- (c) an administrator of the Concessionaire;
- (d) a person directly or indirectly owned or controlled by the Agent and/or any Senior Funder(s); or
- (e) any other person approved by the Province (such approval not to be unreasonably withheld or delayed).

“Required Period” means, subject to Section 3.6 [No Liquid Market], the period starting on the date of a Termination Notice and ending 90 days later.

“Restricted Person” has the meaning given in the Concession Agreement.

“Security” means the security interests in the Project Documents, the Concession Agreement and any other assets which the Province has the right to acquire or obtain pursuant to the Concession Agreement, which security interests are granted by the Concessionaire to the Agent pursuant to the Security Documents.

“Security Documents” means the:

- (a) Borrower Trust Deed and Bonds;
- (b) Borrower General Partner Trust Deed and Bonds;
- (c) Borrower General Partner HoldCo Trust Deed and Bonds;
- (d) Borrower Limited Partner Trust Deed and Bonds;
- (e) Borrower Limited Partner HoldCo Trust Deed and Bonds;
- (f) Borrower Pledge Agreement;

- (g) Borrower General Partner Pledge Agreement;
- (h) Borrower General Partner HoldCo Pledge Agreement;
- (i) Borrower Limited Partner Pledge Agreement;
- (j) Borrower Limited Partner HoldCo Pledge Agreement;
- (k) DB Direct Agreement;
- (l) DB Guarantor Agreement;
- (m) OMR Direct Agreement;
- (n) OMR Guarantors Agreement;
- (o) Lenders' Direct Agreement;
- (p) Borrower Limited Partner Securities Charge;
- (q) Borrower Limited Partner HoldCo Securities Charge;
- (r) Borrower General Partner Securities Charge;
- (s) Borrower General Partner HoldCo Securities Charge;
- (t) Sponsor L/C;
- (u) Designer Collateral Warranty; and
- (v) Mortgage of Operating Centre Lease,

each in the form delivered to the Province by the Concessionaire on the Commencement Date, as the same may be amended, modified, supplemented and/or replaced from time to time to the extent permitted under Section 2.3 [Project Documents] of the Concession Agreement.

“**Senior Funders**” has the meaning given in the Concession Agreement.

“**Senior Funding Agreements**” means the:

- (a) Credit Agreement;
- (b) the documents described in the definition of Security Documents in this Section 1.1 [Definitions];

- (c) Intercreditor Agreement;
- (d) Hedging Agreements; and
- (e) Equity Contribution Agreement,

each in the form delivered to the Province by the Concessionaire on the Commencement Date, as the same may be amended, modified, supplemented and/or replaced from time to time to the extent permitted under Section 2.3 [Project Documents] of the Concession Agreement.

“**Step-In Date**” means the later of (i) the date on which the Province receives a Step-In Notice from the Agent, and (ii) the date on which any required approval of the Lieutenant Governor in Council has been obtained in respect of the proposed step-in.

“**Step-In Expiry Date**” means the date which is 24 months after the Step-In Date.

“**Step-In Notice**” has the meaning given in Section 4.1.2.

“**Step-In Period**” means the period commencing on the Step-In Date and ending on the earlier of:

- (a) the Step-In Expiry Date;
- (b) the Step-Out Date; and
- (c) the Novation Effective Date.

“**Step-Out Date**” has the meaning given in Section 4.2.1.

“**Subcontracts**” has the meaning given in Section 3.5.1.

“**Subsequent Indebtedness Notice**” has the meaning given in Section 3.1.2.

“**Substitute**” has the meaning given in the Collateral Agreements.

“**Substitute Designation Notice**” has the meaning given in the Collateral Agreements.

“**Suitable Substitute Concessionaire**” has the meaning given in Section 5.5.1.

“**Termination Notice**” has the meaning given in Section 3.1.1.1.

“**Unitholder**” has the meaning given in the Concession Agreement.

“**Warning Notice**” has the meaning given in the Concession Agreement.

“**Working Day**” has the meaning given in the Concession Agreement.

“**Works**” has the meaning given in the Concession Agreement.

1.2 Interpretation

Except to the extent that the context or the express provisions of this Agreement otherwise require:

- 1.2.1 headings and sub-headings are for ease of reference only and shall not be taken into consideration in the interpretation or construction of this Agreement;
- 1.2.2 all capitalized terms used in this Agreement which are not otherwise defined will have the respective meanings given to such terms in the Concession Agreement;
- 1.2.3 all references to Sections are references to Sections of this Agreement;
- 1.2.4 all references to any agreement, document, standard, principle or other instrument include (subject to all relevant approvals and any other provision of this Agreement and the Concession Agreement expressly concerning such agreement, document, standard, principle or other instrument) a reference to that agreement, document, standard, principle or instrument as amended, supplemented, substituted, novated or assigned;
- 1.2.5 all references to time of day are references to Pacific Standard time or Pacific Daylight Saving time, as the case may be;
- 1.2.6 all monetary amounts are expressed in Canadian Dollars;
- 1.2.7 words importing the singular include the plural and vice versa;
- 1.2.8 words importing a particular gender include all genders;
- 1.2.9 “person” includes an individual, corporation, partnership, joint venture, association, trust, pension fund, union, government, governmental body, governmental agency, authority, board, tribunal, commission or department and the heirs, beneficiaries, executors, personal or other legal representatives or administrators of an individual, and the receivers and administrators of a corporation;
- 1.2.10 any reference to a public organization shall be deemed to include a reference to any successor to such public organization or any organization or entity which has taken over the functions or responsibilities of such public organization;

- 1.2.11 references to "Parties" mean the parties to this Agreement (including, in the case of references to the Agent, the Senior Funders) and references to a "Party" mean any one of the parties to this Agreement;
- 1.2.12 whenever the terms "will" or "shall" are used in this Agreement they are to be construed and interpreted as synonymous and are to be read as "shall";
- 1.2.13 all accounting and financial terms used herein are, unless otherwise indicated, to be interpreted and applied in accordance with Canadian generally accepted accounting principles, consistently applied;
- 1.2.14 the words of this Agreement are to be given their natural meaning. The Parties have had the opportunity to take legal advice on this Agreement and no term is, therefore, to be construed *contra proferentem*;
- 1.2.15 the words "includes" or "including" are to be construed as being without limitation;
- 1.2.16 general words are not given a restrictive meaning:
- 1.2.16.1 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
- 1.2.16.2 by reason of the fact that they are followed by particular examples intended to be embraced by those general words;
- 1.2.17 if the time for doing an act falls or expires on a day that is not a Working Day, the time for doing such act will be extended to the next Working Day;
- 1.2.18 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 those of its employees or agents (including the Province's Representative) who have responsibilities in connection with the conduct of the Operations or the Project; and
- 1.2.19 no provision of this Agreement is intended to derogate from or be inconsistent with or in conflict with any Laws and Regulations and should not be interpreted in a manner as to result in any 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 and Regulations, the applicable Laws and Regulations 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 and Regulations, 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 and for purposes of this Section 1.2.19, the following will be excluded from the definition of the

defined phrase “Laws and Regulations”: “and the law of equity”, “ordinances”, “codes (including design and construction codes)”, “, directives”, “guidelines”, and “rules or policies of any Governmental Authority”, and the word “or” will be added between the word “orders,” and the word “injunctions”.

2. NOTICE AND ACKNOWLEDGMENTS

2.1 Notice of Security Interests

Without prejudice and subject to Section 6 [Rights of the Province], the Agent on behalf of the Senior Funders hereby gives notice to the Province that the Concessionaire has, concurrently with the execution and delivery of this Agreement, assigned, pledged, charged and granted a security interest under the Security Documents of the right, title, benefit and interest of the Concessionaire in and to the Concession Agreement and the Project Documents.

2.2 Acknowledgment of Security Assignment

Without prejudice and subject to Section 6 [Rights of the Province], the Province acknowledges that it has received notice of and to the extent necessary consents to the assignment, pledge, charge and grant referred to in Section 2.1 [Notice of Security Interests]. The Province confirms that it has not received notice of any other assignment or security interest granted over the Concessionaire’s rights under the Concession Agreement and the Project Documents.

2.3 Concession Agreement Dealings

Notwithstanding the assignment referred to in Section 2.1 [Notice of Security Interests] or the granting of any other Encumbrance in or over the Concession Agreement by or pursuant to the Senior Funding Agreements, and without prejudice to Section 6 [Rights of the Province], until the Province is notified by the Agent to the contrary the Province will be entitled (save to the extent expressly provided otherwise in this Agreement) to exercise or enforce all rights, discretions and remedies under or in respect of the Concession Agreement and to perform or discharge its obligations under the Concession Agreement to the Concessionaire as if the Concessionaire was at all times the absolute and beneficial owner of all right, title, benefit and interest in and to the Concession Agreement. Without limiting the generality of the foregoing, the Province may make all payments under the Concession Agreement to the account of the Concessionaire specified in the relevant invoice issued by the Concessionaire, until otherwise notified by the Agent at least 7 Working Days prior to the payment date (whereupon any such payment will be made to or to the order of the Agent).

2.4 Agreements and Security Documents

2.4.1 The Concessionaire, Agent and Senior Funders will not amend or modify the Senior Funding Agreements, or any of them, except where the Concessionaire is permitted to do so pursuant to the Concession Agreement.

- 2.4.2 The Agent acknowledges having received a copy of the Concession Agreement and a copy of the Collateral Agreements with each of the Contractor and the Operator.
- 2.4.3 The Province acknowledges having received copies of the Senior Funding Agreements.
- 2.4.4 The Agent confirms to the Province that the copies of the Senior Funding Agreements provided to the Province for acknowledgement under section 2.4.3 constitute all of the Senior Funding Agreements.

2.5 Assignment of Security Documents, Project Documents and Concession Agreement

- 2.5.1 Except for a transfer to a successor Agent to whom the rights and obligations of the Agent under this Agreement have been assigned or transferred in accordance with Section 8.2, the Agent will not exercise any right it may have pursuant to the Security Documents to assign, transfer or otherwise dispose of any right, title or interest it may have in, or obligations it may have pursuant to, the Security Documents in respect of the Concession Agreement or the Project Documents without the prior written consent of the Province.
- 2.5.2 Except as provided for in this Agreement, the Agent will not exercise any right it may have pursuant to the Security Documents to assign, transfer or otherwise dispose of the Project Documents or the Concession Agreement or any of them or any interest therein without the prior written consent of the Province.

2.6 Notification re Additional Permitted Borrowing

The Agent, in respect of Section 2.6.1 below, and the Concessionaire, in respect of Section 2.6.2 below, will promptly notify the Province of:

- 2.6.1 the details and amount of any proposed Additional Permitted Borrowing, including:
 - 2.6.1.1 the circumstances giving rise to the Additional Permitted Borrowing and reasons for the Additional Permitted Borrowing; and
 - 2.6.1.2 the terms on which the Additional Permitted Borrowing will be borrowed;
- 2.6.2 on the first Working Day of each calendar month during which any Additional Permitted Borrowing is, or may be, subsisting, the amount outstanding under the Senior Funding Agreements, and, to the extent it is aware (having made reasonable and proper enquiry):
 - 2.6.2.1 the amount of any Distribution made by the Concessionaire; and
 - 2.6.2.2 the amount of any credit balance on any account of the Concessionaire.

3. NOTICES OF TERMINATION AND ENFORCEMENT

3.1 Termination Notice

3.1.1 The Province will not give a notice terminating the Concession Agreement as a result of an Event of Default (other than in accordance with this Agreement) unless:

3.1.1.1 the Province gives the Agent at least the Required Period of prior written notice (a "**Termination Notice**") specifying the Event of Default in reasonable detail;

3.1.1.2 within 30 days of delivering a Termination Notice the Province gives notice (an "**Indebtedness Notice**") to the Agent setting out:

3.1.1.2.1 all amounts of which the Province is aware which are due and payable by the Concessionaire under the Concession Agreement as at the date on which the Province delivered the Termination Notice; and

3.1.1.2.2 all amounts of which the Province is aware which will become due and payable by the Concessionaire under the Concession Agreement on or before the end of the Required Period; and

3.1.1.3 within the Required Period the Province has not received a Step-In Notice from the Agent.

3.1.2 At any time after the Province delivers an Indebtedness Notice but before the Province receives a Step-In Notice, if the Province discovers amounts that have become owing by the Concessionaire to the Province but which were not included in the Indebtedness Notice, the Province will deliver a further notice (a "**Subsequent Indebtedness Notice**") to the Agent setting out those amounts.

3.2 Revocation of Notice

A Termination Notice can be revoked (by notice to the Agent) by the Province prior to the expiry of the Required Period. Upon any such revocation, the rights and obligations of the Parties will be construed as if the relevant Termination Notice had not been given.

3.3 Notice of Exercise of Other Remedies

The Province will notify the Agent promptly, and in any event within 7 days, of a notice given by or on behalf of the Province to the Concessionaire under Section 26 [Monitoring of Performance] or Section 40 [Default] of the Concession Agreement.

3.4 Notice of Enforcement or Intention to Enforce by Agent

The Agent undertakes to give notice to the Province at the same time as it requests the agreement or authority of any of the Senior Funders, or gives notice to any of the Senior Funders of its intention, or otherwise determines to take any action in respect of an Enforcement Action, specifying particulars of the action in respect of which the request is made or the notice is given or the determination is made in reasonable detail.

The aforesaid notice will be given a reasonable time (having regard to all the relevant circumstances and the nature of the action proposed to be taken) and in any event not less than 7 days before any Enforcement Action is taken in respect of the Concession Agreement or any of the Project Documents.

3.5 Priorities of Step-In Rights under Collateral Agreements

3.5.1 Notwithstanding any provision in the Collateral Agreements, neither the Province nor BCTFA will, prior to the Exercise Date, exercise any right it may have to step-in and assume (or cause a third party designated by the Province or BCTFA to step-in and assume) the Concessionaire's rights and obligations under the Design-Build Contract, the Interface Agreement, the Operating and Maintenance Contract, the Design-Build Contract Guarantee, the Operating and Maintenance Contract Guarantee or any Performance Securities relating to any such agreements or the performance of any obligations thereunder (collectively, the “**Subcontracts**”) (including, without limitation, the issuance of a step-in notice by the Province or BCTFA pursuant to any Collateral Agreement), or to transfer, novate or assign such Subcontract, unless:

3.5.1.1 the Province or BCTFA delivers notice (a “**Province Collateral Agreement Notice**”) to the Agent of the Province’s or BCTFA’s intention to step-in and assume (or cause a third party designated by the Province or BCTFA to step-in and assume) the Concessionaire’s rights and obligations under any such Subcontract, or to transfer, novate or assign any such Subcontract; and

3.5.1.2 the Province has not received a copy of a notice sent by the Agent and received by the Concessionaire exercising the Senior Funders' rights to step-in and assume any of the Concessionaire's rights or obligations under such Subcontract or to transfer, novate or assign such Subcontract, together with a Step-In Notice given by the Agent in accordance with Section 4.1 [Step-In]:

3.5.1.2.1 prior to issuance of the Post Olympic Works Final Completion Certificate, within 45 days of sending a Province Collateral Agreement Notice; and

3.5.1.2.2 following issuance of the Post Olympic Works Final Completion Certificate, within 85 days of sending a Province Collateral Agreement Notice.

For greater certainty, if the Senior Funders (or the Agent or any other Representative) have, prior to the giving of a Province Collateral Agreement Notice, exercised any rights to step-in and assume any of the Concessionaire's rights or obligations under any of the Subcontracts, the Senior Funders will be required, following delivery of a Province Collateral Agreement Notice and prior to expiry of the applicable periods referred to in Section 3.5.1.2.1 or Section 3.5.1.2.2, either to deliver a Step-In Notice in accordance with Section 3.5.1.2 or to terminate their step-in under each of the Subcontracts in respect of which they have exercised step-in rights.

3.5.2 From the date of termination of the Concession Agreement (the “**Exercise Date**”), provided always that the Province has complied with Sections 6.2 and 6.3 of this Agreement, the Province or BCTFA will be entitled to exercise its rights under the Collateral Agreements to step-in and assume (or cause a third party designated by the Province or BCTFA to step-in and assume) the Concessionaire’s rights and obligations under, or to transfer, novate or assign, the Subcontracts (or any thereof) in accordance with the Collateral Agreements.

3.5.3

3.5.3.1 Subject to Section 3.5.3.2, the Agent will release and discharge at no cost to the Province all Security in respect of each of the Subcontracts if such Subcontract(s) or any of the Concessionaire's rights or obligations thereunder are assumed, transferred, novated or assigned by or to the Province or BCTFA (or by or to a third party designated by the Province or BCTFA) pursuant to a Collateral Agreement.

3.5.3.2 Notwithstanding the release and discharge of Security by the Agent pursuant to Section 3.5.3.1, until such time as the Concession Agreement has been terminated and any Deficiency has been determined and recovered the Agent will retain the benefit of the Security in respect of:

3.5.3.2.1 claims (whether arising before or after the assumption, transfer, novation or assignment of the Design-Build Contract by or to the Province or BCTFA (or by or to a third party designated by the Province or BCTFA)) under the Letter of Credit and, to the extent that the proceeds of the Letter of Credit are insufficient, under the Design-Build Contract Guarantee (and, to the extent necessary to support any such claim, under the Design-Build Contract) in respect of the debt-service component of delay liquidated damages payable by the Contractor under the Design-Build Contract (“**LD Claims**”); provided that all

amounts recovered by the Agent in respect of any such claims will (except to the extent such amounts have already been applied in reduction of the principal and/or interest outstanding under the Senior Funding Agreements) be deducted in calculating the Revised Senior Debt Termination Sum; and

3.5.3.2.2 claims (other than LD Claims) for costs, damages, losses and liabilities which have arisen out of or in connection with a default by the Contractor or the Operator (as the case may be) under the Design-Build Contract and/or the Operating and Maintenance Contract that occurred prior to the date of the assumption, transfer, novation or assignment of the Design-Build Contract or the Operating and Maintenance Contract (as the case may be) by or to the Province or BCTFA (or by or to a third party designated by the Province or BCTFA); provided, however, that notwithstanding the foregoing:

3.5.3.2.2.1 neither the Senior Funders nor the Agent or any Representative will or will be entitled to exercise any rights or take any Enforcement Action in respect of any such claim during the period from the date on which such assumption, transfer, novation or assignment occurs to the date on which both the Concession Agreement has terminated, nor, during such period, will the Province or BCTFA exercise any rights to recover the debt-service component of any delay liquidated damages payable by the Contractor under the Design-Build Contract; and

3.5.3.2.2.2 the rights retained by the Agent pursuant to this Section 3.5.3.2.2 may only be exercised if and to the extent that the termination sum paid by the Province pursuant to Section 44.2 [Compensation on Termination for Concessionaire Default] of the Concession Agreement following a termination of the Concession Agreement pursuant to Section 40 [Default] of the Concession Agreement is less than the Revised Senior Debt Termination Sum (the amount by which such termination sum is less than the Revised Senior Debt Termination Sum being herein referred to as the “**Deficiency**”).

Any amounts recovered by the Senior Funders, the Agent or any other Representative pursuant to claims referred to in this

Section 3.5.3.2.2 during the period from the date on which the concession Agreement has been terminated to the date on which any termination sum payable under Section 44.2 [Compensation on Termination for Concessionaire Default] of the Concession Agreement and the amount of the Deficiency, if any, have been determined will be held by the Agent in a segregated account satisfactory to the Agent and the Province, each acting reasonably, and, upon determination of such termination sum and the amount of the Deficiency, if any, such funds will be distributed to the Agent, to the extent of the Deficiency, if any, and any balance of such funds will be paid to the Province.

3.5.3.3 Following a release and discharge by the Agent of the Security in respect of the Design-Build Contract and/or the Operating and Maintenance Contract pursuant to Section 3.5.3.1, neither the Province nor BCTFA will enter into any written amendment of the Design-Build Contract or the Operating and Maintenance Contract (as the case may be) which would have the effect of materially prejudicing the Senior Funders' ability to enforce their continuing rights to the extent permitted under Section 3.5.3.2, in respect of the Design-Build Contract Guarantee or the Operating and Maintenance Contract Guarantee (as the case may be) or in respect of the Performance Securities relating to the Design-Build Contract or the Operating and Maintenance Contract (as the case may be).

3.5.3.4 Notwithstanding the foregoing provisions of this Section 3.5.3 or any other provision of this Agreement, during the period commencing on the earlier of (i) the date on which the Province delivers a Province Collateral Agreement Notice to the Agent pursuant to Section 3.5.1.1, and (ii) the Exercise Date and ending on the Post Olympic Works Final Completion Date or, if earlier, the date on which the Agent, following receipt of a Province Collateral Agreement Notice, provides the Province with the notice and Step-In Notice referred to in Section 3.5.1.2 within the 45-day period referred to in Section 3.5.1.2.1, neither the Senior Funders nor the Agent or any other Representative will exercise any rights or take any Enforcement Action in respect of any of the Subcontracts, other than in respect of claims referred to in Section 3.5.3.2.1 in accordance with the provisions of that Section, if such action would materially prejudice the ability of the Province or BCTFA to exercise any of their respective rights under or in respect of any of the Subcontracts or would materially impair the on-going performance by the Contractor or the Operator (as applicable) under any of the Subcontracts.

3.5.4 Without prejudice to Section 3.5.3 of this Agreement, the Agent will release and discharge all Security as soon as reasonably possible after the Exercise Date and the payment of any termination sum payable under Section 44 [Compensation on

Termination] of the Concession Agreement (provided, however, that notwithstanding such release and discharge of the Security the Agent will retain the benefit of the Security in respect of claims which the Concessionaire may have against the Province or BCTFA under the Concession Agreement which arose prior to the Exercise Date if and to the extent only that the termination sum payable by the Province pursuant to Section 44.2 [Compensation on Termination for Concessionaire Default] of the Concession Agreement is less than the Revised Senior Debt Termination Sum).

3.5.5 Neither the Senior Funders nor the Agent or any Representative will transfer, novate or assign any Project Documents referred to in Sections 2.3.1.5 to 2.3.1.10 (inclusive) or in Section 2.3.1.12 of the Concession Agreement except to a Suitable Substitute Concessionaire in conjunction with a permitted transfer, novation or assignment of the Concession Agreement to that Suitable Substitute Concessionaire.

3.6 No Liquid Market

3.6.1 At any time during the Required Period the Agent may issue a written notice (the "**No Liquid Market Notice**") to the Province setting out the reasons why the Agent does not believe that a Liquid Market exists.

3.6.2 On or before the date falling 14 days after the date on which a No Liquid Market Notice is received by the Province, the Province will notify the Agent of its opinion as to whether or not a Liquid Market exists. Where the Province believes that a Liquid Market does exist, such notice will set out the reasons for the Province's belief. If the parties do not agree whether or not a Liquid Market exists, then either the Province or the Agent may refer the dispute to be determined in accordance with Section 52 [Disputes Resolution Procedure] of the Concession Agreement.

3.6.3 If the parties agree or it is determined in accordance with Section 52 [Disputes Resolution Procedure] of the Concession Agreement that no Liquid Market exists, the Concession Agreement will automatically terminate and the provisions of Section 44.2.4 [No Rebidding Procedure] of the Concession Agreement will apply.

3.6.4 If any dispute relating to this Section 3.6 is determined under Section 52 [Disputes Resolution Procedure] of the Concession Agreement, the Required Period will be extended by the period of time spent determining such dispute under Section 52 [Disputes Resolution Procedure].

4. STEP-IN AND STEP-OUT

4.1 Step-In

4.1.1 At least 7 days before the Agent delivers a Step-In Notice, the Agent will deliver notice (an "**Appointed Representative Notice**") to the Province confirming its intention to deliver a Step-In Notice.

4.1.2 If, at any time:

4.1.2.1 during the Required Period, or

4.1.2.2 during which an Enforcement Event is subsisting (whether or not a Termination Notice has been given by the Province),

the Agent gives notice (a "**Step-In Notice**") to the Province electing to appoint the Appointed Representative, together with a written consent from the Appointed Representative confirming its consent to act in such capacity, then, during the Step-In Period the Appointed Representative will assume, jointly with the Concessionaire, all of the Concessionaire's rights under the Concession Agreement.

4.1.3 During the Step-In Period, the Province will deal with the Appointed Representative instead of the Concessionaire in connection with all matters related to the Concession Agreement, and the Concessionaire agrees to be bound by all such dealings between the Province and the Appointed Representative to the same extent as if they had been between the Province and the Concessionaire. The Appointed Representative will at all times during the Step-In Period grant to the Province and its authorized representatives timely, full, complete and unrestricted access to all of the Concessionaire's and the Appointed Representative's books, records and information in order to enable the Province to monitor the performance of the obligations under the Concession Agreement.

4.2 Step-Out

4.2.1 The Agent may at any time during the Step-In Period give the Province at least 60 days notice to terminate the Step-In Period on a date (to be specified in the notice) (the "**Step-Out Date**") prior to the Step-In Expiry Date.

4.2.2 On the Step-Out Date the Appointed Representative will be released from all of its obligations and liabilities to the Province under the Concession Agreement arising prior to the Step-Out Date and all rights of the Appointed Representative against the Province and BCTFA under the Concession Agreement will be cancelled.

4.2.3 The Concessionaire will continue to be bound by the terms of the Concession Agreement, notwithstanding the occurrence of the Step-Out Date.

5. NOVATION

5.1 Proposed Substitute Concessionaire

At any time:

5.1.1 after an Enforcement Event has occurred; or

5.1.2 prior to the expiry of a Termination Notice; or

5.1.3 during the Step-In Period,

the Agent may give notice on behalf of the Senior Funders (a "**Proposed Novation Notice**") to the Province that it wishes to novate the Concessionaire's rights and obligations under the Concession Agreement to another person (a "**Proposed Substitute Concessionaire**") in accordance with the provisions of Section 5.5 [Implementation of Novation]. The Proposed Novation Notice will specify a Working Day, falling not later than 60 days after the date of the Proposed Novation Notice, on which such novation is to be effective. Subject to Sections 5.3.3 and 6.2.6, if a Proposed Novation Notice is given pursuant to Section 5.1.2 and no Step-In Notice has been given, the Province will not be entitled to give a notice terminating the Concession Agreement as a result of the occurrence of an Event of Default prior to the expiry of the 60-day period referred to above; provided, however, that the Province's right to terminate the Concession Agreement due solely to the expiry of the aforesaid 60-day period or to the fact that a Novation Effective Date has not occurred within such period will be suspended in the circumstances described in Section 5.3.3 pending resolution of any dispute referred to therein.

5.2 Information for Consent to Novation

Without limiting any other provisions of this Agreement, a novation in accordance with a Proposed Novation Notice will only be effective if the Province consents to that novation in writing in accordance with Section 5.3 [Grant of Consent]. The Agent will (as soon as practicable) supply the Province with such information as the Province reasonably requires to enable the Province to decide whether to grant such consent, including without limitation in relation to the Proposed Substitute Concessionaire:

5.2.1 its name and registered address;

5.2.2 the names of its equity holders and the equity capital held by each of them;

5.2.3 the names of its directors and officers (or those of its general partner, if it is a limited partnership, or of its partners, if it is a general partnership);

5.2.4 the manner in which it is proposed to finance the Proposed Substitute Concessionaire and the extent to which such financing is committed; and

5.2.5 the resources (including employees with appropriate qualifications, experience and technical competence, and contracts) which are available to the Proposed Substitute Concessionaire to enable it (as relevant) to construct, complete, maintain, operate and rehabilitate the Project Facilities, the Site and the Adjacent Areas and otherwise perform the obligations of the Concessionaire under the Concession Agreement.

5.3 Grant of Consent

5.3.1 The Province will not unreasonably withhold its consent to a proposed novation, but it will, without limitation, be reasonable for the Province to withhold its consent if the Agent has failed to show to the Province's reasonable satisfaction:

5.3.1.1 the legal capacity, power and authority of the Proposed Substitute Concessionaire to become a party to and perform the obligations of the Concessionaire under the Concession Agreement;

5.3.1.2 that the technical competence, experience and financial standing of the Proposed Substitute Concessionaire and the technical and financial resources available to the Proposed Substitute Concessionaire (including committed financing referred to in Section 5.2.4 and contracts referred to in Section 5.2.5) are sufficient to perform the obligations of the Concessionaire under the Concession Agreement;

5.3.1.3 that:

5.3.1.3.1 all of the equity in the Proposed Substitute Concessionaire; and

5.3.1.3.2 all rights to control and/or influence the activities of the Proposed Substitute Concessionaire,

are held or exercisable by entities which have been at all times wholly independent of and unconnected with the Concessionaire and any Associate of the Concessionaire and are not held or exercisable by any Restricted Person;

5.3.1.4 (if, in the case of a Proposed Novation Notice given pursuant to Section 5.1.2, the Termination Notice was given following the occurrence of the Event of Default referred to in Section 40.1.2 of the Concession Agreement) that the Proposed Substitute Concessionaire and each of the entities referred to in Section 5.3.1.3 is wholly independent of and unconnected with any person who acquired an interest in the Concessionaire or Unitholder (as the case may be) giving rise to that Event of Default; and

5.3.1.5 that neither the Proposed Substitute Concessionaire nor any of its shareholders, unitholders or holders of any other ownership interest nor any Affiliates of the Proposed Substitute Concessionaire or any of its shareholders, unitholders or holders of any other ownership interest is a Restricted Person.

5.3.2 The Province will notify the Agent within 30 days of the later of receipt of a Proposed Novation Notice and receipt of all information required under Section 5.2

[Information for Consent to Novation] whether or not the Province has decided to grant such consent to the proposed novation.

- 5.3.3 If the Province notifies the Agent under Section 5.3.2 that the Province has decided not to consent to the proposed novation, then the Agent on behalf of the Senior Funders may by issuing and serving proceedings on the Province within 15 days of such notification refer any dispute concerning such matter to the Court and, where a Step-In Notice has been given, the Step-In Period will continue and the Province's right to terminate due solely to expiry of the Required Period will be suspended pending resolution of any dispute referred to in this Section 5.3.3 until it is finally agreed or determined by the Court or otherwise resolved between the parties whether the Province was reasonable in withholding its consent. If the Agent does not issue and serve such proceedings on the Province within such period of 15 days, it will be conclusively deemed to have accepted the Province's decision and neither the Agent, the Concessionaire nor any of the Senior Funders will be entitled to challenge the same.

5.4 Subsequent Proposed Novations

If the Province exercises its right under Section 5.3 [Grant of Consent] to withhold its consent to a proposed novation, this will not prejudice the ability of the Agent to give one or more subsequent Proposed Novation Notices pursuant to the provisions of Section 5.1 [Proposed Substitute Concessionaire] containing changed particulars relating to the same Proposed Substitute Concessionaire or particulars relating to another Proposed Substitute Concessionaire which the Agent has good cause to believe would fulfil the requirements of Section 5.3.1, provided that only one Proposed Novation Notice may be outstanding at any one time.

5.5 Implementation of Novation

If the Province consents to a novation pursuant to a Proposed Novation Notice, then on the Novation Effective Date:

- 5.5.1 the Proposed Substitute Concessionaire will become a party to the Concession Agreement (in such capacity, the "**Suitable Substitute Concessionaire**") in place of the Concessionaire and thereafter will be treated as if it was named as a party thereto in place of the Concessionaire;
- 5.5.2 subject to Section 43 [Effect of Termination] of the Concession Agreement, the Province and BCTFA will be released from all of their obligations to the Concessionaire under the Concession Agreement and all rights of the Concessionaire against the Province and BCTFA under the Concession Agreement will be cancelled and terminate;
- 5.5.3 the Province, BCTFA, the Concessionaire and the Suitable Substitute Concessionaire will enter into a novation agreement and any other requisite agreements in form and

substance satisfactory to the Province, acting reasonably, pursuant to which the Suitable Substitute Concessionaire will be granted all of the rights and assume all of the obligations and liabilities of the Concessionaire under the Concession Agreement (whether actual, accrued, contingent or otherwise and whether arising on, before or after the Novation Effective Date) and the Concessionaire will be released from any obligations under or in connection with the Concession Agreement which arise from and after the date of the novation agreement, provided that the Province and BCTFA will not be in breach of any of their obligations hereunder if the Suitable Substitute Concessionaire or the Concessionaire fails to enter into such agreements;

- 5.5.4 the Province and BCTFA will owe their respective obligations under the Concession Agreement arising on and after the Novation Effective Date to the Suitable Substitute Concessionaire and the receipt, acknowledgement or acquiescence of the Suitable Substitute Concessionaire will be a good discharge;
- 5.5.5 the Province and BCTFA will enter into a direct agreement with the Senior Funders lending to the Suitable Substitute Concessionaire on substantially the same terms as this Agreement;
- 5.5.6 any Availability/Performance Deductions and Warning Notices that arose or were given prior to the Proposed Novation Date will be cancelled; and
- 5.5.7 any then subsisting grounds for termination of the Concession Agreement by the Province will be deemed to have no effect and any subsisting Termination Notice will be automatically revoked.

5.6 Continuation of Step-in Period

For greater certainty, if a Proposed Novation Notice is served during the Step-In Period and the Province does not consent to the proposed novation or any required approval of the Lieutenant Governor in Council is not obtained, the Step-In Period will continue (subject to the terms of this Agreement).

6. **RIGHTS OF THE PROVINCE**

6.1 Rights Not Prejudiced

The Parties hereby acknowledge that nothing in the Senior Funding Agreements, the Security Documents, this Agreement or any other agreement between any of them and the Concessionaire or the Province (including in particular but without limitation the service by the Agent of a Step-In Notice) will, except as expressly set out in this Agreement, affect in any way the rights of the Province under the Concession Agreement (but an exercise by the Province of those rights will not preclude a proper exercise by the Agent of its rights under this Agreement).

6.2 Rights of Termination

If:

- 6.2.1 a Termination Notice expires and no Step-In Notice or Proposed Novation Notice has been given (or any Proposed Novation Notice given has been withdrawn) prior to such expiry; or
- 6.2.2 the Step-In Period is terminated in accordance with Section 4.2 [Step-Out]; or
- 6.2.3 the Step-In Period ends and no Novation Effective Date has occurred; or
- 6.2.4 no Novation Effective Date has occurred within the period referred to in the second last sentence of Section 5.1 [Proposed Substitute Concessionaire], where applicable, unless: (a) in the case of a proposed novation to which the Province has consented pursuant to Section 5 [Novation], the Novation Effective Date has not occurred within the aforesaid period solely by reason of the approval of the Lieutenant Governor in Council being required to be obtained, pursuant to subsection 2(1) of the Transportation Investment Act, in relation to the proposed novation and such approval not having been obtained on or before that date which is 60 days after the Proposed Novation Date; and (b) an Agent's Election has been given to the Province within 15 days after the Agent first became entitled to give such election under Section 27.3,

then the Province will be entitled to act upon any grounds for termination available to it under the Concession Agreement whenever occurring and to terminate the Concession Agreement without further notice to the Agent.

6.3 Termination of Concession Agreement During Step-In Period

During the Step-In Period the Province will not exercise any right it may have to terminate the Concession Agreement:

- 6.3.1 solely on the grounds that the Agent has delivered a Step-In Notice or Proposed Novation Notice or (subject to compliance with the requirements of this Agreement) taken any Enforcement Action;
- 6.3.2 for an Event of Default that occurred before the Step-In Date that was not continuing at the Step-In Date;
- 6.3.3 for an Event of Default that occurred before the Step-In Date and was continuing at the Step-In Date, unless:
 - 6.3.3.1 the Event of Default relates to amounts referred to in Section 3.1.1.2.1 and the Province has not received full payment by the Step-In Date;

- 6.3.3.2 the Event of Default relates to amounts referred to in Section 3.1.1.2.2 and the Province has not received full payment by the last day of the Required Period;
 - 6.3.3.3 the Event of Default relates to amounts set out in a Subsequent Indebtedness Notice and the Province has not received full payment by the date which is 30 days after the date on which the Province sent the Subsequent Indebtedness Notice to the Agent or the Step-In Date, whichever is later;
 - 6.3.3.4 the Event of Default relates to amounts, of which the Province was not aware at the time the Termination Notice was given, which subsequently become payable and are not discharged on or before the date falling 30 days after the date upon which the liability for the amounts is notified to the Agent;
 - 6.3.3.5 the Event of Default relates to the Works, and the Appointed Representative is failing to use all reasonable efforts (including without limitation implementation of any remedial program pursuant to Section 40.3.1.5(b) of the Concession Agreement) to remedy the Event of Default, or the Pre Olympic Works Substantial Completion Date or the Olympic Requirements Works Substantial Completion Date does not occur on or before the date which is 6 months (or longer period, if agreed to in writing by the Province) after the Pre Olympic Works Substantial Completion Longstop Date or the Olympic Requirements Works Substantial Completion Longstop Date, respectively; or
 - 6.3.3.6 the Event of Default relates to any aspect of the Operations other than the Works, and the Appointed Representative is failing to use all reasonable efforts (including without limitation implementation of any remedial program pursuant to Section 40.3.1.5(b) of the Concession Agreement) to remedy the Event of Default, or the Event of Default remains unremedied on the date which is 60 days after the Step-In Date or such longer period of time as may be agreed to by the Province and the Agent, each in its sole discretion, if the Event of Default is capable of being remedied but is not capable of being remedied by the Appointed Representative using all reasonable efforts during the initial 60 day period of time; or
- 6.3.4 on the basis of any Availability/Performance Deductions made or Warning Notices given to the Concessionaire before the Step-In Date, provided that all such Availability/Performance Deductions and Warning Notices will continue to have effect for all other purposes.

For greater certainty, the Province will be entitled to terminate the Concession Agreement by written notice to the Concessionaire and the Appointed Representative for an Event of Default that occurs during the Step-In Period in accordance with the terms of the Concession

Agreement, provided that for the purposes of termination under the Concession Agreement, Availability/Performance Deductions made or Warning Notices given to the Concessionaire before the Step-In Date will not be taken into account during the Step-In Period but will be taken into account after the Step-In Period and for all other purposes.

6.4 Province's Step-In Rights

6.4.1 For greater certainty and without limiting the generality of Section 6.1 [Rights Not Prejudiced], the Province will be entitled at all times to exercise its rights under Sections 26.5 [Province Remedial Rights], 40.3.1.3 and 43.1 [Step-In Rights] of the Concession Agreement respectively.

6.4.2 Without prejudice to the Province's rights under Sections 26.5 [Province Remedial Rights] and 40.3.1.3 of the Concession Agreement, the Province's rights under Section 43.1 [Step-In Rights] and Section 26.5.1 [Province's Remedial Rights] of the Concession Agreement will continue until such time as the Appointed Representative or the Suitable Substitute Concessionaire has demonstrated to the reasonable satisfaction of the Province that it will ensure the performance and is capable of ensuring the performance of the obligations of the Concessionaire under the Concession Agreement, whereupon the Appointed Representative during the Step-In Period or the Suitable Substitute Concessionaire (as the case may be) will be entitled to have access to the Site and the Adjacent Areas for the purpose of ensuring the performance of such obligations.

6.5 Set-off and Withholding of Payment

For greater certainty and without limiting the generality of Section 6.1 [Rights Not Prejudiced], the Parties acknowledge that the Province is entitled in priority to any competing claims:

6.5.1 to set-off, withhold, suspend or retain payments due to the Concessionaire under the Concession Agreement in accordance with the provisions of the Concession Agreement;

6.5.2 to require the application of insurance proceeds in accordance with the provisions of Section 20.7 [Application of Proceeds] of the Concession Agreement; and

6.5.3 without prejudice to Section 3.5.3 or Section 3.5.4 of this Agreement, to exercise rights in respect of the transfer of assets under the Concession Agreement including pursuant to Sections 43.4, 44.1.3, 44.2.1.2, 44.3.7, 44.4.3 and 44.5.2 of the Concession Agreement,

and the Parties (other than the Province and BCTFA) further acknowledge and undertake that any right, title or interest in the Concession Agreement or any rights arising thereunder acquired by the Agent or any of the Senior Funders under or pursuant to any of the Senior Funding Agreements, the Security Documents, this Agreement or any other agreement or

instrument will at all times be subject to such entitlement to set-off, withhold, suspend or retain payments or contractual requirement or any other right or equity of or in favour of the Province in respect of the Concession Agreement. If and to the extent any of the Parties (other than the Province and BCTFA but including any of the Senior Funders) receives any proceeds of any insurance policy which have not been applied as they were required to be applied in accordance with the Concession Agreement, that Party will cause such proceeds to be so applied. If the Province exercises its rights to transfer assets under the Concession Agreement including pursuant to Sections 43.4, 44.1.3, 44.2.1.2, 44.3.7, 44.4.3 and 44.5.2 of the Concession Agreement such transfer will (subject to compliance with the Province's obligations under Section 43.4 of the Concession Agreement and without prejudice to Section 3.5.3 and Section 3.5.4 of this Agreement) be made free of any rights of the Agent or any of the Senior Funders under or pursuant to any of the Senior Funding Agreements, the Security Documents or this Agreement and the Agent, at no cost to the Province, will release and discharge any such rights.

6.6 Retention Account

For greater certainty and without limiting the generality of Section 6.1 [Rights Not Prejudiced] and Section 6.5 [Set-off and Withholding of Payment], the Parties acknowledge the rights of the Province in the Concession Agreement in relation to the creation and operation of, and the application of sums standing to the credit of, the Retention Account, and the Agent on behalf of the Senior Funders agrees to execute such documents and take such action as may be reasonably required from time to time to give effect to such provisions of the Concession Agreement.

6.7 [NOT USED]

6.8 Concessionaire's Obligations to Continue

Subject to the terms of the novation and other agreements referred to in Section 5.5.3, the Concessionaire will continue to be liable for all of its obligations and liabilities, whenever occurring, under or arising from the Concession Agreement notwithstanding:

6.8.1 the giving of a Step-In Notice or the expiry of the Step-In Period; or

6.8.2 the giving of a Proposed Novation Notice; or

6.8.3 any other provision of this Agreement.

7. NATURE OF OBLIGATIONS

7.1 Province's and BCTFA's Obligations etc

All of the obligations, undertakings and liabilities given, undertaken or arising on the part of the Province and BCTFA under this Agreement are given or owed solely to the Agent on behalf of the Senior Funders and (except as expressly provided herein) do not confer any

rights on or in favour of the Concessionaire or any Associate of the Concessionaire or any other person.

7.2 Concessionaire Acknowledgment

The Concessionaire joins in this Agreement to acknowledge for itself the arrangements effected hereby and agrees with each of the other Parties to observe the provisions of this Agreement at all times and not in any way to prejudice or affect the enforcement hereof or to do or permit to be done anything which would be a breach hereof.

8. ASSIGNMENT

8.1 The Concessionaire will not, without the prior written consent of the Province, assign, transfer, charge or otherwise dispose of any interest in this Agreement except to the extent permitted by the Concession Agreement and only if made concurrent with a permitted assignment, transfer, charge or other disposition of any of its interest in the Concession Agreement.

8.2 The Agent will not, without the prior written consent of the Province, assign, transfer, charge or otherwise dispose of any interest in this Agreement, provided that the Agent may (subject to the successor Agent entering into an agreement satisfactory to the Province ensuring that the successor Agent is bound by the terms of this Agreement and that the Agent will have assigned or transferred to the successor Agent all right, title and interest of the Agent in and to the Concession Agreement and the Project Documents held by the Agent pursuant to the Security Documents) assign or transfer its rights and obligations to a bank or financial institution as a successor Agent under the Senior Funding Agreements without the consent of the Province provided that:

8.2.1 the Province's prior written consent to any such assignment or transfer will be required if and for so long as any Party (other than the Province or BCTFA) is in default of any of its obligations or liabilities under this Agreement; and

8.2.2 any such assignment or transfer will be without prejudice to the rights and remedies of the Province against the relevant Agent in respect of any liability or obligation of such Agent under this Agreement which is outstanding or undischarged at or prior to the date of such assignment or transfer.

8.3 The Province and BCTFA may novate, assign or otherwise transfer the benefit of the whole or part of this Agreement to any person who is a permitted novatee, assignee or transferee under Section 45.6 of the Concession Agreement and will notify the Concessionaire and the Agent in writing upon completion of such novation, assignment or transfer. If and to the extent that such novatee, assignee or transferee has assumed the obligations and liabilities of the Province under the Concession

Agreement in connection with any novation, assignment or transfer effected pursuant to Section 45.6 of the Concession Agreement, the Province will cause the aforesaid novatee, assignee or transferee to assume the obligations and liabilities of the Province under this Agreement, whereupon the Province will be released from all of its obligations and liabilities hereunder. The Concessionaire and the Agent will do all things and execute all further documents as may be necessary in connection therewith.

- 8.4 Nothing in this Section 8 [Assignment] will prevent any Senior Funder from assigning or transferring its rights under the Senior Funding Agreements and the Security Documents in accordance with the terms of the Senior Funding Agreements and the Security Documents.

9. COUNTERPARTS

This Agreement may be executed in one or more counterparts. Any single counterpart or a set of counterparts executed, in either case, by all the Parties will constitute a full, original and binding agreement for all purposes. Counterparts may be executed either in original or faxed form provided that any Party providing its signature in faxed form will, upon any other Party's request, promptly forward to such Party an original signed copy of this Agreement which was so faxed.

10. PAYMENT

10.1 Payments

Any payment required to be made by any Party pursuant to this Agreement will be made in Canadian Dollars for value on the due date to such bank account of the recipient (located in the City of Victoria or the City of Vancouver, British Columbia) as the recipient may have specified for this purpose.

10.2 GST

All payments required to be made by any Party pursuant to this Agreement will be deemed to be exclusive of GST.

11. DEFAULT INTEREST

Each Party will be entitled, without prejudice to any other right or remedy, to receive interest on any payment under this Agreement not made on the due date calculated at the Default Interest Rate on a daily basis and on the basis of a 365 day year from the due date up to but excluding the date of payment.

12. WAIVER

12.1 Direct Agreement

Failure by the Province at any time to enforce any provision of this Agreement or to require performance by the Agent or the Concessionaire of any of the provisions of this Agreement will not be construed as a waiver of any such provision and will not affect the validity of this Agreement or any part thereof or the right of the Province to enforce any provision in accordance with its terms.

12.2 Concession Agreement

Without prejudice to Section 6.1 [Rights Not Prejudiced], no failure to exercise or delay in exercising any rights of the Province under or in relation to the Concession Agreement (whether or not arising out of or in connection with or as a consequence of the discharge of the Province's rights under this Agreement) will be construed as a waiver of any such right nor will it affect the validity of the Concession Agreement or any part thereof or the right of the Province to enforce any provision of the Concession Agreement in accordance with its terms.

13. PARTIAL INVALIDITY

If at any time any provision of this Agreement is or becomes illegal, invalid or unenforceable in any respect under the law of any jurisdiction, neither the legality, validity or enforceability of the remaining provisions of this Agreement nor the legality, validity or enforceability of such provision under the law of any other jurisdiction will in any way be affected or impaired thereby.

14. CONFIDENTIALITY

14.1 Confidentiality

Each Party agrees, for itself and its respective directors, officers, employees and agents, to keep confidential and not to disclose to any person (save as hereinafter provided) any of the terms of this Agreement or any information provided to or arising or acquired by it pursuant to the terms or performance of this Agreement or otherwise in relation to the Project (including without limitation all documents and information supplied in the course of legal proceedings) (together the "**Confidential Information**").

14.2 Exceptions

Notwithstanding Section 14.1 [Confidentiality], a Party will be entitled to disclose the whole or any part of the Confidential Information:

- 14.2.1 to its directors, officers, employees, sub-contractors, agents or professional advisors 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
- 14.2.2 when required to do so by Laws and Regulations or by or pursuant to the rules or any order having the force of law of any Court, association or agency of competent jurisdiction or any governmental agency; or
- 14.2.3 to the extent that the Confidential Information has, except as a result of breach of confidentiality, become publicly available or generally known to the public at the time of such disclosure; or
- 14.2.4 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; or
- 14.2.5 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; or
- 14.2.6 in the case of the Agent, to the Senior Funders and prospective permitted assignees and participants under the Senior Funding Agreements to the extent reasonably required by the Senior Funders in connection with their position as Senior Funders to the Project and to a prospective novatee of this Agreement; or
- 14.2.7 in the case of the Province and BCTFA:
 - 14.2.7.1 to the extent required for the purpose of the design, construction, completion, commissioning and testing of the Works, the operation, maintenance, rehabilitation or improvement of the Project Facilities or the carrying out by the Province, BCTFA or the Minister of any statutory or other duties or functions in respect of the Project Facilities in the event of termination of the Concession Agreement;
 - 14.2.7.2 (without limiting Section 14.2.2) in relation to the outcome of the procurement process for the Project as may be required to be published;
 - 14.2.7.3 to any department, office or agency of the Government (including for greater certainty the Auditor General and the Office of the Comptroller General) where required for parliamentary, governmental, statutory or judicial purposes;

14.2.7.4 whether or not falling within Section 14.2.7.2, to the Ministry, Partnerships BC and any other Governmental Authority (including without limitation any Public Authority); or

14.2.7.5 as required pursuant to the Freedom of Information and Protection of Privacy Act,

and, in the case of Section 14.2.1 and Section 14.2.6 above, upon obtaining from such person or entity to whom the disclosure is to be made an undertaking of strict confidentiality in relation to the Confidential Information in question.

14.3 Continuation of Confidentiality Obligations

The obligations of the parties under this Section 14 [Confidentiality] will continue for a period of 5 years following the date of termination of the Concession Agreement.

14.4 Publicity Regarding Disputes

Neither the Agent nor any of the Senior Funders will without the prior written consent of the Province publish alone or in conjunction with any other person any articles or other material relating to any dispute arising under this Agreement nor impart any information regarding any such dispute except to its professional advisors under obligations of confidentiality and except and to the extent that such publication arises out of any statutory or regulatory obligation applicable to the Agent or the relevant Senior Funder.

14.5 Remedies

Without prejudice to any other rights and remedies that any other Party would have, each of the Parties agrees that damages would not be an adequate remedy for any breach of this Section 14 [Confidentiality] and that the other Parties will be entitled to the remedies of injunction, specific performance and/or other equitable relief for any threatened or actual breach of this Section 14 [Confidentiality] subject, in the case of a claim for any such remedy against the Province, to the provisions of the *Crown Proceeding Act*, R.S.B.C. 1996, c.89.

15. ENTIRE AGREEMENT

This Agreement (when read together with the Concession Agreement but without prejudice thereto, save to the extent affected hereby, and without prejudice to the Senior Funding Agreements and the Security Documents) contains or expressly refers to the entire agreement between the Parties with respect to the specific subject matter hereof and expressly excludes any warranty, condition or other undertaking implied at law or by custom and supersedes all previous agreements and understandings between the Parties with respect thereto, and each of the Parties acknowledges and confirms that it does not enter into this Agreement in reliance on any representation, warranty or other undertaking not fully reflected in the terms of this Agreement.

16. EXPIRY**16.1 Extinguishment of Rights**

If:

16.1.1 the Concession Agreement expires or is terminated (except by the Province in breach of this Agreement) for whatever reason and, in the case of termination, any termination compensation payable by the Province as a consequence of the termination in accordance with the provisions of the Concession Agreement is paid; or

16.1.2 all sums due and owing to the Senior Funders by the Concessionaire under the Senior Funding Agreements are repaid by the Concessionaire and the Senior Funders are not required to make further advances to the Concessionaire under the Senior Funding Agreements,

then the rights of the Agent for itself and on behalf of the Senior Funders under this Agreement will be extinguished and the Agent, at no cost to the Province, will (subject to Sections 3.5.3 and 3.5.4 of this Agreement) release and discharge any Security over the Assets which has not previously been released and discharged. The Agent will provide notice to the Province of the date referred to in Section 16.1.2 within 30 days of its occurrence.

16.2 Agent's Rights

The right of the Agent to serve a Step-In Notice in accordance with Section 4.1 [Step-In] or a Proposed Novation Notice in accordance with Section 5.1 [Proposed Substitute Concessionaire], including in accordance with Section 5.4 [Subsequent Proposed Novations], will be exercisable on more than one occasion, provided that any Event of Default existing at the commencement of the prior Step-In Period or occurring during the prior Step-In Period was cured by the time of delivery of the subsequent Step-In Notice and further provided that no more than one Step-In Notice or Proposed Novation Notice may be outstanding at any particular time.

17. AUTHORITY**17.1 Warranty of Authority**

The Agent represents and warrants to and undertakes with each of the Province, BCTFA and the Concessionaire that the Agent is duly authorized by each of the Senior Funders to assume the obligations expressed to be assumed by it pursuant to this Agreement and to undertake on behalf of each Senior Funder in the terms of this Agreement so as to bind such Senior Funder as if it were a party to this Agreement, and each such Senior Funder will be so bound in accordance with the terms of this Agreement.

17.2 Authority

The Parties:

17.2.1 are entitled to assume that any act done, document executed or entered into or waiver given by the Agent has been duly authorized by each of the Senior Funders; and

17.2.2 are not obliged to make any enquiry as to the authority of the Agent in doing, executing, entering into or giving such act, document or waiver.

18. AMENDMENTS

No purported amendment or modification of this Agreement will be valid unless in writing executed by the Parties (and in the case of the Senior Funders, it will be sufficient if the same are executed on their behalf by the Agent).

19. NOTICES

19.1 Requirement for Writing

Wherever in this Agreement provision is made for the giving or issuing of any notice, consent or approval by any person (a "Notice"), unless otherwise specified such Notice will be in writing and the words "notify", "consent" or "approval" will be construed accordingly.

19.2 Addresses

Any Notice will be duly given if signed by or on behalf of a duly authorized officer of the person giving the Notice and (a) personally delivered to, (b) sent by a recognized express mail or courier service (with delivery receipt requested), or (c) sent by confirmed facsimile transmission with telephone confirmation, to the following addresses:

Province and BCTFA

5B – 940 Blanshard Street
Victoria, British Columbia V8W 9T5

Telephone: (250) 356-1403
Fax No.: (250) 387-6431
Attention: Frank Blasetti
Assistant Deputy Minister Transportation

Agent

1501 Ave. McGill College, Suite 1800
Montreal, Quebec H3A 3M8

Telephone: (514) 841-6000 ext. 4518
Fax No.: (514) 841-6250
Attention: Mariette Jean (Loan Servicing Group)

or

Telephone: (514) 841-6000 ext. 4538
Fax No.: (514) 841-6250
Attention: Manon Gauthier (Loan Servicing Group)

Concessionaire

Suite 2664, Four Bentall Centre
1055 Dunsmuir Street
P.O. Box 49183
Vancouver, British Columbia V7X 1K8

Telephone: (604) 605-1779
Fax No.: (604) 605-1634
Attention: Nicholas Hann (Vice President)

19.3 Changes

Any Party may change its address for notice to another address in British Columbia by prior notice to the other Parties.

19.4 Receipt

Any Notice will be deemed to have been received:

19.4.1 if sent by personal delivery or by an express mail or courier service, when delivered;

19.4.2 if sent by facsimile, upon sending, subject to:

19.4.2.1 confirmation of uninterrupted transmission by a transmission report, and

19.4.2.2 there having been no telephonic communication by the recipient to the sender (any such telephonic communication to be confirmed in writing) that the facsimile has not been received in legible form:

- (i) within 3 hours after sending, if sent on a Working Day and between the hours of 9.00 a.m. and 4.00 p.m.; or

- (ii) by noon on the next following Working Day if sent after 4.00 p.m. on a Working Day but before 9.00 a.m. on the next following Working Day,

provided that any Notice given by facsimile will be confirmed by letter sent by personal delivery or by a recognized express mail or courier service, with delivery receipt requested, but without prejudice to the original fax Notice if received in accordance with this Section 19.4.2

20. ACKNOWLEDGMENTS AND WAIVER

20.1 Acknowledgment

The Agent on behalf of the Senior Funders acknowledges that the Disclosed Data made available to the Concessionaire prior to the date of the Concession Agreement has been made available on the basis set out in Sections 6.1 [Site Inspection and Investigations], 38.2 [Disclaimer] and 39 [Indemnities] of the Concession Agreement.

20.2 Waiver

Without prejudice to Section 20.1[Acknowledgment]:

- 20.2.1 the Agent on behalf of the Senior Funders agrees and confirms that the Province will not be liable to any of the Agent or the Senior Funders (whether in contract, tort, by statute or otherwise howsoever and whether or not arising out of any negligence on the part of the Province or any of its employees, contractors or agents) in respect of any inaccuracy, error, omission, unfitness for purpose, defect or inadequacy of any kind whatsoever in the Disclosed Data;
- 20.2.2 the Province gives no warranty or undertaking to the Agent or the Senior Funders or any of them that the Disclosed Data represents all of the information in its possession or power (either during the procurement process for the Project or at the execution of this Agreement or the Concession Agreement) relevant or material to the Project or the obligations undertaken by the Agent or any other person under this Agreement;
- 20.2.3 the Province will not be liable to the Agent or the Senior Funders or any of them in respect of any failure to disclose or make available (whether before or after the execution of this Agreement) to any of them or the Concessionaire any information, documents or data, nor to keep the Disclosed Data up to date, nor to inform any of such parties (whether before or after execution of this Agreement or the Concession Agreement) of any inaccuracy, error, omission, unfitness for purpose, defects or inadequacy in the Disclosed Data;
- 20.2.4 the Agent on behalf of the Senior Funders acknowledges and confirms that it will not be entitled to make any claim against the Province whether in damages or for

extensions of time or additional payments under this Agreement or the Concession Agreement on the grounds of any misunderstanding or misapprehension in respect of the Disclosed Data or the matters referred to in Section 6.1 [Site Inspection and Investigations] of the Concession Agreement or on the grounds that incorrect or insufficient information relating thereto or to the Site or Adjacent Areas was given to it by any person, whether or not in the employ of the Province, or by or on behalf of the Concessionaire. Nor will any Party be relieved from any risks or obligations imposed on or undertaken by it under this Agreement on any such ground.

20.3 Appropriation

The Concessionaire and the Agent on behalf of the Senior Funders acknowledge that they are aware of the provisions of subsection 28(2) of the *Financial Administration Act*, R.S.B.C. 1996, c. 138.

21. **GOVERNING LAW AND JURISDICTION**

21.1 Law

This Agreement will be governed by and construed in all respects in accordance with the laws of the Province of British Columbia and the laws of Canada applicable therein and will be treated in all respects as a British Columbia contract, without regard to conflict of laws principles.

21.2 Jurisdiction

The Parties agree that the Courts of the Province of British Columbia will have exclusive jurisdiction to hear and settle any action, suit, proceeding or dispute in connection with or arising out of this Agreement and hereby irrevocably attorn to the jurisdiction of such Courts.

22. **CONSENTS AND APPROVALS**

22.1 Unless otherwise specified, where any consent, permission, expression of satisfaction or other approval is to be given by the Province under the terms of this Agreement, the same may be given or withheld in the absolute and unfettered discretion of the Province.

22.2 The provisions of this Agreement and the rights and obligations of the parties hereunder are subject and without prejudice to and in no way limit or constitute a waiver of any requirement to obtain the approval of the Lieutenant Governor in Council pursuant to section 2(1) of the Transportation Investment Act in respect of the entering into of an agreement as contemplated in the aforesaid section 2(1) that may result from or be required under the provisions of this Agreement or as a result of any action taken in the exercise of rights hereunder after the date hereof.

23. RELATIONSHIP OF PARTIES

This Agreement is not intended to and does not create or establish between the Parties any relationship as partners, joint venturers, employer and employee, or of principal and agent. None of the Concessionaire, the Agent or any of its or their representatives are or shall be deemed to be an employee or agent of the Province or BCTFA.

24. ENUREMENT

This Agreement will be binding upon each of the Parties and their respective successors, transferees and assigns and will enure to the benefit of the Parties and their respective successors and permitted transferees and assigns.

25. CONFLICT IN DOCUMENTS

In the event of any ambiguity, conflict or inconsistency between the provisions of this Agreement and the provisions of the Concession Agreement, the provisions of this Agreement will prevail.

26. FURTHER ASSURANCES

Each Party will do all things and execute all further documents necessary to give full effect to this Agreement.

27. MISCELLANEOUS

27.1 The Province and BCTFA will, at the Concessionaire's expense, take whatever action the Agent or an Appointed Representative effecting a novation in accordance with Section 5.5 [Implementation of Novation] may require for perfecting any transfer or release under Sections 4 [Step-In and Step-Out] and 5 [Novation], including the execution of any transfer or assignment and the giving of any notice, order or direction and the making of any registration which, in each case, the Agent or Appointed Representative reasonably requires.

27.2 Neither the Province nor BCTFA will take any action to appoint a receiver or receiver-manager or institute proceedings in respect of the bankruptcy, liquidation, dissolution or winding-up of the Concessionaire.

27.3 If:

27.3.1 the Agent has given a Step-In Notice to the Province pursuant to Section 4.1 [Step-In] or the Province has consented in writing to a proposed novation of the Concessionaire's rights and obligations under the Concession Agreement to another person pursuant to Section 5 [Novation]; and

27.3.2 the approval of the Lieutenant Governor in Council is required to be obtained, pursuant to subsection 2(1) of the Transportation Investment Act, in relation to the appointment of an Appointed Representative under Section 4.1 [Step-In] or a proposed novation to which the Province has consented pursuant to Section 5 [Novation]; and

27.3.3 the approval of the Lieutenant Governor in Council has not been obtained on or before that date which is 60 days after: (a) the date on which the Province receives a Step-In Notice from the Agent (in the case of an appointment of an Appointed Representative), or (b) the Proposed Novation Date (in the case of a proposed novation to which the Province has consented pursuant to Section 5 [Novation]),

the Agent, on behalf of the Senior Funders, will be entitled to give a notice to the Province (the "**Agent's Election**") requiring the termination of the Concession Agreement. Within 10 days of receipt by the Province of the Agent's Election, the Province will terminate the Concession Agreement pursuant to Section 42.4 [Termination for Failure to Obtain Lieutenant Governor in Council Approval] of the Concession Agreement.

28. PROOF OF AUTHORITY

The Province reserves the right to require anyone executing this Agreement on behalf of the Concessionaire or the Agent to provide proof, in a form acceptable to the Province, that they have the requisite authority to execute this Agreement on behalf of and to bind the Concessionaire or the Agent and the Senior Funders, as applicable.

IN WITNESS WHEREOF this Agreement has been executed as of the day and year first before 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)
in the presence of:)

(Witness)

JOHN DYBLE
Acting Deputy Minister, Ministry of Transportation
Assistant Deputy Minister, Ministry of Transportation

BC TRANSPORTATION FINANCING AUTHORITY

Per: _____
JOHN DYBLE
Chief Executive Officer

SOCIÉTÉ GÉNÉRALE (CANADA)

Per: _____
Authorized Signatory

SEA TO SKY HIGHWAY INVESTMENT LIMITED PARTNERSHIP,
by its General Partner,
SEA TO SKY HIGHWAY INVESTMENT MANAGEMENT LTD.

Per: _____
MARK WONG
President

Per: _____
MICHAEL SMERDON
Secretary

SCHEDULE 3

PROJECT SCHEDULE

HAS BEEN WITHHELD IN ITS ENTIRETY

Deleted: 11

Deleted: 4

SCHEDULE 4

LAND

Part 1

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Existing Highway

Deleted: Connecting Roads

ITEM A – Existing Highway (NB: highway described from North to South)

Deleted: ¶
Schedule of Connecting Roads¶
¶
Highway 99 Connecting R... [1]

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
4752	Part in Highway Plan 91 (VAP91H)	DF 114508 & DF 113120
UCL	Part in Highway Plan 91 (VAP91H)	DF 114508 & DF 113120
4750	Part in Highway Plan 91 (VAP91H)	DF 114508 & DF 113120
4750	Part dedicated on Plan LMP1652	
4750	Part dedicated on Plan VAP18266	
4750	Part dedicated on Plan VAP17377	
4750	Part dedicated on Plan VAP17791	
4750	Part dedicated on Plan LMP26173	
4750	Part dedicated on Plan VAP12811	
UCL	Part in Highway Plan 91 (VAP91H)	DF 114508 & DF 113120
5412	Parts dedicated on Plan VAP16634	
5413	Part in Highway Plan 91 (VAP91H)	DF 114508 & DF 113120
5413	Part dedicated on Plan VAP22325	
5413	Part dedicated on Plan LMP50674	
5413	Part dedicated on Plan VAP12109	
5413	Part dedicated on Plan VAP17374	
5413 & 7176	Part dedicated on Plan VAP15172	
7176	Block B Gazetted as road	DF 111858
5316	Block B Gazetted as road	DF 111858
7176	Part in Highway Plan 91 (VAP91H)	DF 114508 & DF 113120
4749	Part dedicated on Plan VAP21727	
4749	Part dedicated on Plan LMP49669	
4749	Part dedicated on Plan VAP18981	
4749	Part dedicated on Plan BCP3150	
4749	Part in Highway Plan 138 (VAP138H)	

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
4749	Part dedicated on Plan VAP12616	
4749	Part dedicated on Plan VAP13368	
4749	Part dedicated on Plan VAP18962	
4749	Part dedicated on Plan VAP17103	
5413	Part dedicated on Plan VAP13269	
5413	Part dedicated on Plan VAP12108	
4749	Part dedicated on Plan VAP21834	
3556	Part dedicated on Plan VAP17486	
3556	Part dedicated on Plan VAP14962	
3556	Part dedicated on Plan LMP10758	
1754	Part dedicated on Plan VAP17731	
UCL	Part in Highway Plan 78 (VAP78H)	
1754	Part dedicated on Plan VAP17731	
1754	Part returned to Crown on Plan LMP40154	
5625	Part in Highway Plan 117 (VAP117H)	DF 88360 & DF 136436
2941	Part in Highway Plan 117 (VAP117H)	DF 88360 & DF 136436
2941	Part in Highway Plan 117 (VAP117H) – closed road	DF 88360
5624	Part in Highway Plan 117 (VAP117H)	DF 88360 & DF 136436
2940	Part in Highway Plan 105 (VAP105H)	DF 124735
4097	Part in Highway Plan 105 (VAP105H)	DF 124735
4098	Part in Highway Plan 105 (VAP105H)	DF 124735
4098	Part in Highway Plan 88 (VAP88H)	
4098	Part in Plan filed under C14512	DF C14512
4099	Part in Highway Plan 104 (VAP104H)	
UCL	Part in Highway Plan 104 (VAP104H)	
4102	Part dedicated on Plan VAP19821	
2668	Unsurveyed portion	
5627	Unsurveyed portion	
2667	Unsurveyed portion	
2665A	Unsurveyed portion	
2665	Unsurveyed portion	
UCL	Unsurveyed portion	

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
A of 3115	Unsurveyed portion	
3115	Part dedicated on Plan VAP12028	
3115	Part dedicated on Plan VAP7212	
3115	Part in SRW Plan 15442 (VAP15442RX)	
3116	Part dedicated on Plan VAP14193	
3116	Part dedicated on Plan VAP13460	
UCL	Unsurveyed portion	
UCL, 5630 & 3669	Parts on Plans R1-97-01 to and including 06	DF K50911
5630	Part on SRW Plan LMP40974	
5630	Part dedicated on Plan LMP39931	
UCL	Parts Road on 13TU1748	
2245 & UCL	Parts dedicated on Plan LMP47841	
UCL & 2659	Parts dedicated on Plan LMP47841	
UCL & 2659	Parts dedicated on Plan BCP8502	
UCL & 1248	Parts in Plan 2TU1549	
1956	Part 2.87 acres	DF 101098
UCL	Part in Highway Plan 151 (VAP151H)	
Parts of Sections 23 & 26, TP 50	Part in SRW Plan VAP15522RX	
Parts of Section 23, TP 50	Part dedicated on Plan VAP1878	
N ½ NW ¼ Section 14, TP 50	Part in Highway Plan 177 (VAP177H)	DF 78859 & DF 76416
S ½ NW ¼ Section 14, TP 50	Part in Highway Plan 177 (VAP177H)	DF 78859 & DF 76416
N ½ of S ½ Section 14, TP 50	Part in Highway Plan 177 (VAP177H)	DF 78859 & DF 76416
S ½ of S ½ Section 14, TP 50	Part dedicated on Plan LMP3184	
Part Section 14, TP 50	Part dedicated on Plan LMP37943	
N ½ of N ½ of Section 11, TP 50	Part dedicated on Plan VAP21601	
Part Section 11, TP 50	Part dedicated on Plan LMP37943	

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
Parts of 1 & 2, Plan VAP12082	Part in Highway Plan 177 (VAP177H)	DF 78859 & DF 76416
Parts of S ½ of N ½ Section 11, TP50	Part dedicated on Plan LMP7519	
Parts Sec 11, TP 50	Parts dedicated on Plan VAP19415	
Part Lot 13, Plan 10458	Part dedicated on Plan VAP11721	
Part Lot 14, Plan 10458	Part in Highway Plan 177 (VAP177H)	DF 78859 & DF 76416
Part Lot A, Plan 10168	Part in Highway Plan 177 (VAP177H)	DF 78859 & DF 76416
Part Lot 7, Plan 9178	Part dedicated on Plan LMP29049	
Parts Lot 5 -7, Plan 9178	Part in Highway Plan 177 (VAP177H)	DF 78859 & DF 76416
Parts Lots D and E, Plan 9491	Part in Highway Plan 177 (VAP177H)	DF 78859 & DF 76416
Part Lot 1, Plan 10640	Part dedicated on Plan VAP21903	
Part Parcel F	Part dedicated on Plan VAP11865	
Part Section 11, TP 50	Part in SRW Plan 15402RX (VAP15402RX)	
Section 2, TP 50	Parts in SRW Plan 15402RX (VAP15402RX)	
Section 3, TP 50	Parts in SRW Plan 15402RX (VAP15402RX)	
Part Section 3, TP 50	Part dedicated on Plan VAP3857	
Part Section 3, TP 50	Part dedicated on Plan VAP4393	
Part Section 3, TP 50	Part in Highway Plan 98 (VAP98H)	DF 112540
Part 1305	Parts dedicated on Plan VAP4138	
Part 1305	Parts on Plan VAP4138 in Highway Plan 98 (VAP98H)	DF 112540
Part 1305	Parts dedicated on Plan VAP4434	
Part 1305	Parts on Plan VAP4434 in Highway Plan 98 (VAP98H)	DF 112540
Part 1305	Parts dedicated on Plan LMP40547	
Part 760	Parts dedicated on Plan VAP4715	

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
Part Lot 12, Plan VAP18954	Part dedicated on Plan VAP22384	
Part 760	Parts dedicated on Plan VAP4729	
Part 760	Parts on Plan VAP4729 in Highway Plan 98 (VAP98H)	DF 112540
Part 760	Parts dedicated on Plan VAP4765	
Part 760	Parts on Plan VAP4765 in Highway Plan 98 (VAP98H)	DF 112540
Part 760	Part dedicated on Plan VAP4715	
Part Block 3, Plan VAP4715	Part dedicated on Plan VAP15390	
UCL	Part in Highway Plan 98 (VAP98H)	DF 112540
4265	Part in Highway Plan 98 (VAP98H)	DF 112540, DF 116055 & DF 114532
6735	Part in Highway Plan 98 (VAP98H)	DF 112540
4261 & 2034	Parts dedicated on Plan VAP18351	
Lot U, Plan 13640	Part dedicated on Plan VAP21405	
Lot 9, Plan VAP14508	Part in Highway Plan 172H (VAP172H)	
Part Parcel A, RP 1355	Part in Highway Plan 98 (VAP98H)	DF 112540
Parts 4261	Part in Highway Plan 98 (VAP98H)	DF 112540
Part Parcel A, RP 1355	Part dedicated on Plan VAP13640	
486	Part dedicated on Plan VAP4628	
486 & 833	Part on Filing DF 35576	DF 35576
Part Plan 572	Part dedicated on Plan VAP9650	
Plans 572 & 7423	Part in Highway Plan 65 (VAP65H)	DF 59975 & DF 59976
Lot B, Plan 572	Part dedicated on Plan VAP10112	
Lot B, Plan 572	Part dedicated on Plan VAP12527	
Parts Plan 572	Part dedicated on Plan VAP18119	
Parts Plan 572	Parts dedicated on Plan VAP7423	
6807	Part in Highway Plan 98 (VAP98H)	
4261	Part dedicated on Plan VAP19736	
Bed of Mamquam River	Part in Highway Plan 98 (VAP98H)	

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
Parts Plans 10112 & 12527	Parts dedicated on Plan LMP16865	
Parts B & C, RP13965	Parts in Highway Plan 148H (VAP148H)	DF 111786, DF B34211 & DF B33857
Lots 1-3, Plan 7423	Parts in Highway Plan 148H (VAP148H)	
Part Block B, Plan VAP572	Parts in Highway Plan 148H (VAP148H)	
Lot 1, Plan VAP9940	Parts in Highway Plan 148H (VAP148H)	
4266	Part on Plan VAP2953RX	
4266	Part dedicated on Plan VAP11320	
4266	Part dedicated on Plan VAP11687	
4266	Parts in Highway Plan 148H (VAP148H)	
Plans VAP11320 & VAP9930	Parts in Highway Plan 148H (VAP148H)	
4267, Plan VAP8783RX	Part dedicated on Plan VAP12335	
4267, Plan VAP12335	Part dedicated on Plan VAP17066	
4267	Part on Plan VAP2953RX	
4267	Parts in Highway Plan 148H (VAP148H)	
1520	Parts in Highway Plan 133H (VAP133H)	DF 111786 & DF 153675
1520	Part in Plan VAP2953RX	
2177	Part in Highway Plan 133H (VAP133H)	
2177	Part on Plan VAP2953RX	
608	Parts dedicated on Plan VAP12045	
608	Parts dedicated on Plan VAP10467	
608	Part in Highway Plan 133H (VAP133H)	
608	Part dedicated on Plan VAP10639	
608	Part on Plan VAP2953RX	
608	Parts	DF 87637
Part Lot G, Plan VAP10639	Part in Highway Plan 71H (VAP71H)	
Part Lot C, Plan VAP889RX	Now highway - See Title	
608	Part in Highway Plan 133H (VAP133H)	

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
Part Lot J, Plan VAP7566RX	Part in Highway Plan 44H (VAP44H)	
UCL	Part in Highway Plan 44H (VAP44H)	
Part Lot A, Plan VAP889RX	Part in Highway Plan 44H (VAP44H)	
3538	Part in Highway Plan 134H (VAP134H)	DF 111786
3538	Part on Plan VAP2953RX	
3538	Part on Plan VAP2624RX in Plan VAP134H	
2451	Part in Highway Plan 134H (VAP134H)	
2451	Part on Plan VAP2624RX in Plan VAP134H	
2451	Part on Plan VAP2953RX	
UCL	Part in Highway Plan 134H (VAP134H)	
5639	Part in Highway Plan 134H (VAP134H)	
5639	Part on Plan VAP2953RX	
6836	Part in Highway Plan 134H (VAP134H)	
1735	Part on Plan VAP2953RX	
1735	Part in Highway Plan 134H (VAP134H)	
6834	Part in Highway Plan 145H (VAP145H)	DF 111786, DF B3197 & DF B3113
UCL	Part in Highway Plan 145H (VAP145H)	
6146	Part in Highway Plan 145H (VAP145H)	
5540	Part in Highway Plan 145H (VAP145H)	
6147	Part in Highway Plan 145H (VAP145H)	
6833	Part in Highway Plan 145H (VAP145H)	
3623	Part dedicated on Plan BCP7078	
3623	Part on Plan VAP15041RX - closed road	
3623	Part in Highway Plan 145H (VAP145H)	
1897	Part dedicated on Plan BCP7078	
1897	Part in Highway Plan 145H (VAP145H)	
891	Part in Highway Plan 145H (VAP145H)	
891	Part dedicated on Plan BCP7078	
891 & 892	Parts dedicated on Plan VAP19960	
7036	Parts dedicated on Plan LMP20810	
891	Parts in Highway Plan 67H (VAP67H)	DF 111786 & DF 104546

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
892	Parts in Highway Plan 67H (VAP67H)	BL27409
6537	Parts in Highway Plan 67H (VAP67H)	BL27410
2001	Parts dedicated on Plan VAP20309	
2001	Parts in Highway Plan 67H (VAP67H)	
1583	Parts in Highway Plan 67H (VAP67H)	
7037	Parts in Highway Plan 67H (VAP67H)	
1583	Parts in Highway Plan 76H (VAP76H)	DF 87006, DF 110074 & DF 109542
4008	Parts in Highway Plan 76H (VAP76H)	
4010	Parts in Highway Plan 76H (VAP76H)	
6422	Part gazetted road	
6757	Part gazetted road	
4011	Parts in Highway Plan 76H (VAP76H)	
2933	Parts in Highway Plan 76H (VAP76H)	
2933	Part dedicated on Plan LMP9997	
3939 in 2143	Parts in Highway Plan 76H (VAP76H)	
3939 in 2018	Parts in Highway Plan 76H (VAP76H)	
2018	Part in Highway Plan 76H (VAP76H)	
2018	Parts dedicated on Plan LMP36546	
1632, 1626, 1296 & 1898	Part dedicated on Plan LMP13803	
1632 & 1296	Part dedicated on Plan LMP16073	
1632	Part dedicated on Plan LMP36546	
1898 & 1659	Part dedicated on Plan LMP24805	
1626, 1632, 1659 & 1898	Parts in Highway Plan 76H (VAP76H)	
3425	Part in Highway Plan 51H (VAP51H)	
2808	Part in Highway Plan 51H (VAP51H)	
1748	Part in Highway Plan 66H (VAP66H)	DF 86998 & DF 104373
UCL	Part in Highway Plan 66H (VAP66H)	
2076	Part in Highway Plan 66H (VAP66H)	
2807	Part in Highway Plan 66H (VAP66H)	
2961	Part in Highway Plan 66H (VAP66H)	
3421	Part in Highway Plan 66H (VAP66H)	

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
3420	Part in Highway Plan 66H (VAP66H)	
4073	Part in Highway Plan 60H (VAP60H)	DF 99561
2937	Part in Highway Plan 60H (VAP60H)	
2936	Part in Highway Plan 60H (VAP60H)	
2936	Part in Parcel A	
3426	Part in Highway Plan 60H (VAP60H)	
3086	Part in Highway Plan 60H (VAP60H)	
3041	Part in Highway Plan 59H (VAP59H)	DF L15541
2935	Part in Highway Plan 59H (VAP59H)	
1815	Roads dedicated on Plan VAP3149	
1815	Parts in Plan VAP3149 dedicated on Plan VAP22766	
1815	Lots in Plan VAP3149 in Highway Plan 36H (VAP36H)	DF 86993 & DF 86998
1815	Part Block A in Highway Plan 36H (VAP36H)	DF 86998
1814	Part Block A in Highway Plan 36H (VAP36H)	
1814	Roads dedicated on Plan VAP3149	
1814	Lots in Plan VAP3149 in Highway Plan 36H (VAP36H)	
3021	Part in Highway Plan 36H (VAP36H)	
1814	Block 12, Plan VAP3149 dedicated on Plan LMP51293	
1814	Block 13, Plan VAP3149 dedicated on Plan LMP51293	
1814	Block 14, Plan VAP3149 in Highway Plan 36H (VAP36H)	
1814	Block 23, Plan VAP3149 dedicated on Plan LMP51293	
1814	Block 22, Plan VAP3149 in Highway Plan 36 (VAP36H)	
1575	Part in Highway Plan 47 (VAP47H)	DF86993 & DF 86998
1575	Remainder of Block A in Plan VAP8187RX	
1575	Part in Plan VAP18358RX – closed road	
1575	Parts in SRW Plan VAP18358RX	
1575	Lot 5, Block 3, Plan VAP10044	
1575	Lot 6, Block 3, Plan VAP10044	

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
1575	Lot 7, Block 3, Plan VAP10044	
1575	Lot 8, Block 3, Plan VAP10044	
1575	Lot A, Block 2, Plan VAP10044	
1575	Lot 1, Block 5, Plan VAP10236	
1575	Lot 2, Block 5, Plan VAP10236	
1575	Lot 3, Block 5, Plan VAP10236	
1575	Lot 4, Block 5, Plan VAP10236	
1575	Part Plan VAP10044 dedicated on Plan LMP31033	
1575	Parts dedicated on Plans VAP10044 & VAP10154	
1575	Parts of various lots in Plan VAP20457RX	DF GD131355
6748	Part in Plan VAP0457RX	
1575	Part Lot 21, Block 7, Plan VAP10595	DF N46094
1575	Part in Plan VAP11546RX	
1575	Parts in Plan VAP13432 dedicated on Plan VAP22902	
1575 & 6748	Parts of various lots in Plan VAP18792RX	
1575	Lot 24, Block 5, Plan VAP10236	
1575	Part Lot 16, Block 10, Plan VAP13629	DF P54583
1575	Part Lot 9, Block 11, Plan VAP13629	
1575	Part Lot 8, Block 11, Plan VAP13629	
1575	Road and parts road dedicated on Plans VAP10236 & VAP10457	
1575	Part Block A dedicated on Plan VAP10520	
2363	Part dedicated on Plan BCP11168	
2363	Part dedicated on Plan BCP11169	
2363	Part dedicated on Plan LMP51240	
2363	Part in Highway Plan 47 (VAP47H)	DF 64110
2154	Part in Highway Plan 47 (VAP47H)	
6631	Part in Highway Plan 47 (VAP47H)	
2155	Part in Highway Plan 47 (VAP47H)	
2152	Part in Highway Plan 47 (VAP47H)	
2156	Part in Highway Plan 47 (VAP47H)	
6928	Part in Plan VAP18970RX	
2153	Part in Highway Plan 45 (VAP45H)	DF 64110

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
5716	Part Lot 1, Plan VAP14621 in Plan VAP18970RX	
5716	Part of Remainder in Plan VAP18970RX	
2157	Part in Plan VAP18970RX	
5716	Part in Highway Plan 45 (VAP45H)	
2157	Part in Highway Plan 45 (VAP45H)	
2363	Part in Highway Plan 45 (VAP45H)	
6396	Part in Highway Plan 45 (VAP45H)	
6631	Part in Highway Plan 45 (VAP45H)	
2818	Part in Highway Plan 45 (VAP45H)	
2817	Part in Highway Plan 45 (VAP45H)	
5383	Part in Highway Plan 45 (VAP45H)	
2818	Part in Plan VAP20266RX	
2817	Part in RP987 in Plan VAP20266RX	
2817	Part Lot E of PGE R/W in Plan VAP20266RX	
2365	Part Lot G, Plan VAP11180 dedicated on Plan BCP8965	
2365	Part Lot D, Plan VAP11180 dedicated on Plan BCP8783	
2365	Part Lot C, Plan VAP11180 dedicated on Plan BCP8784	
2365	Part Lot 7, Plan VAP7016 dedicated on Plan BCP11317	
2365	Part Lot 6, Plan VAP7016 dedicated on Plan BCP8006	
2365	Part dedicated as Lane on Plan VAP7016	
2365	Part Lot 5, Plan VAP7016 dedicated on Plan BCP9771	
2365	Part Lot 4, Plan VAP7016 dedicated on Plan BCP13273	
2365	Part Lot 3, Plan VAP7016 dedicated on Plan BCP11233	
2365	Part Lot 2, Plan VAP7016 dedicated on Plan BCP13159	
2365	Parts Lots 1-14, Plan VAP7016 in Highway Plan 45 (VAP45H)	
2365	Part of Highway Plan 45 closed on Plan VAP11302RX	

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
2365	Part Lot E, Plan VAP11180 dedicated on Plan BCP8782	
2365	Part expropriated for Road on Plan BCP13292	
2365	Part Block A dedicated on Plan VAP14535	
2365	Part Block B dedicated on Plan VAP7002RX	DF 92422
2365	Parts in Highway Plan 52 (VAP52H)	
2361	Part Lot A, RP1779 in RP1831 in Highway Plan 52 (VAP52H)	DF 64110 & DF 96903
2361	Part dedicated on Plan VAP14536	
2361	Part Lot A, RP1779 dedicated on Plan BCP9606	
2361	Part dedicated on Plan LMP46951	
2361	Part Lot 6, Plan VAP6732 dedicated on Plan BCP11589	
2361	Part Lot 7, Plan VAP6732 dedicated on Plan BCP10680	
2361	Lane dedicated on Plan VAP6732	
2361	Part Lot 8, Plan VAP6732 dedicated on Plan BCP10508	
2361	Part Lot 9, Plan VAP6732 dedicated on Plan BCP10524	
2361	Part Lot 10, Plan VAP6732 dedicated on Plan BCP11590	
2361	Part Lot 11, Plan VAP6732 dedicated on Plan BCP10678	
2361	Part Lot 2, Plan VAP6991 dedicated on Plan VAP15519	
2361	Parts in Highway Plan 52 (VAP52H)	
2361	Parts in Plan VAP16452RX	
2361	Part dedicated on Plan LMP4564	
2361	Lane dedicated on Plan VAP6991	
2361	Part Lots 2 & 3, VAP7203 dedicated on Plan VAP14288	
2361	Lane dedicated on Plan VAP7203	
2361	Lane dedicated on Plan VAP6990	
2386	Parts in Highway Plan 52 (VAP52H)	
1495	Parts in Highway Plan 52 (VAP52H)	

<u>District Lot</u>	<u>Legal Description</u>	<u>LTO document</u>
1494	Parts in Highway Plan 52 (VAP52H)	
1493	Parts in Highway Plan 52 (VAP52H)	
430	Part dedicated on Plan LMP22017	
430	Parts in Highway Plan 52 (VAP52H)	

ITEM B – Bridges

<u>Bridge No.</u>	<u>Bridge Name</u>
1011	Stawamus River
1029	Mamquam River
1286	Britannia Creek
1428N	Nelson Creek
1433	Strip Creek
1446	Montizambert Creek
1451	Deeks Creek
1452	Magnesia Creek
1453	M Creek
1454	Loggers Creek
1455	Shannon Creek
1457	Strachan Mt. No. 2 – Charles Creek
1460	Lone Tree Creek
1462	Harvey Creek "H"
1463	Alberta Creek "K"
1465N	Furry Creek North
1465S	Furry Creek South
1468	Newman Creek
1561	Arch near Loggers Creek
1619	Horseshoe Bay Overhead
1626	Gonzales Creek (formerly Stoney Creek)
1829	Isleview Place

<u>Bridge No.</u>	<u>Bridge Name</u>
2002	Mamquam Blind Channel
2033	Furry Creek Collect O/P
2214	Daisy Lake
2269	Sunset Creek
2283	Cheakamus River No. 1
2340	Squamish U/P
2341	Eagleridge Drive U/P
2519	Callaghan Creek
2588	Cheekye River
2592	Eagle Bluff Structure
2622	Mamquam Pedestrian O/P
2789N	Culliton Creek
2789S	Culliton Creek
3101	Furry Cr. Frontage Rd - Furry Creek Sub-Division
7299	Shannon Falls Park Access
7332	Pilchuck Creek Bailey - Squamish Valley Road
7375	Brandywine Creek
7379	Swift (Lyal) Creek
7388	Rubble Creek
7842	Garibaldi #1 Bailey - Garibaldi Park Road
7843	Garibaldi #2 Bailey - Garibaldi Park Road
7851	Ansell Place U/P

ITEM C – Sideroads

<u>Road No.</u>	<u>Road Name</u>	<u>Dir</u>	<u>Class</u>	<u>Road Length Class 1-8</u>	<u>Lane Length Class 1-8</u>	<u>Road Length Class 1-7</u>	<u>Lane Length Class 1-7</u>
406R	Alice Lake Road	E	5C	1.206	2.442	1.206	2.442
649R	Squamish Valley Road	N	4C	1.604	3.308	1.604	3.308
1914	Squamish Valley Road	N	4C	17.303	34.606	17.303	34.606

Road No.	Road Name	Dir	Class	Road Length Class 1-8	Lane Length Class 1-8	Road Length Class 1-7	Lane Length Class 1-7
1808	Old Brunswick Pit Road (also known as Crystal Falls Road)	E	6D	0.225	0.405	0.225	0.405
1809	Charles Creek Road	E	7E	0.557	0.914	0.557	0.914
1810	Harvey Creek Road	E	7E	0.238	0.238	0.238	0.238
1811	Magnesia Creek Road	E	7E	0.448	0.77	0.448	0.77
1812	New Brunswick Pit Road	E	6E	0.298	0.596	0.298	0.596
1822	Furry Creek Drive	N	6D	2.101	4.062	2.031	4.062
1823	Country Club Road	W	6D	0.194	0.388	0.194	0.388
1825	Sea View Drive	E	6D	1.186	0.534	0.246	0.534
1826	Howe Sound Drive	E	6D	1.029	1.925	1.029	1.925
1828	Stonegate Drive	E	6D	0.403	0.806	0.403	0.806
1829	Britannia Frontage Road	N	6D	0.111	0.222	0.111	0.222
1830	Olivers Landing Court	S	6D	0.149	0.298	0.149	0.298
1899	Shannon Falls Park Road	N	5D	0.205	0.41	0.205	0.41
1906	Garibaldi Park Road	E	6D	5.779	11.558	5.779	11.558
1907	Ring Creek Road	N	6D	0.676	1.336	0.676	1.336
1909	Brackendale Pit Road	W	8F	0.045	0.045	0	0
1967	Elliott Road	E	8F	0.804	0.545	0	0
1968	Ellen Road	S	8F	0.676	0	0	0
1969	Olsen Road	E	8F	0.796	0.535	0	0
1970	Drummond Road	E	8F	1.427	0.41	0	0
1971	Hensman Road	E	8F	0.502	0.269	0	0
1972	Old Garibaldi Highway	N	6D	0.285	0.57	0.285	0.57
1973	Swift Creek Road	N	7F	0.437	0.874	0.437	0.874
1974	Tantalus Way	E	6D	0.136	0.272	0.136	0.272
1975	Magee Road	E	6D	1.086	2.172	1.086	2.172
1976	DeBoer Road	N	8F	0.805	1.368	0	0
1977	DeBoer Lane	N	8F	1.488	0.198	0	0
1979	Magee Lane	N	8F	1.746	1.746	0	0

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Road No.	Road Name	Dir	Class	Road Length Class 1-8	Lane Length Class 1-8	Road Length Class 1-7	Lane Length Class 1-7
1980	Britannia Road	E	8F	0.325	0.389	0	0
1981	Copper Road	S	8F	0.03	0.06	0	0
1905	Daisy Lake Road	E	6D	0.46	0.92	0.46	0.92
1917	Bridge Street	E	8F	0.044	0.044	0	0
1963	Stevens Drive	N	8F	0.4	0.8	0	0
1978	Old Garibaldi Highway	N	8F	1.057	2.114	0	0
	Lions Bay Avenue	E	7F	0	0	0.084	0.168
	Center Road	N	8F	0.095	0.19	0	0
				46.356	78.339	35.19	69.794

Schedule of Connecting Roads

Highway 99 Connecting Roads
Trans Canada Highway 1
Eagleridge Drive
Marine Drive
Pasco Road
Ansell Place (Connected via off and on ramps from Highway 99)
Lawrence Way
Strachan Point Road
Ocean Point Drive
Kelvin Grove Intersection
Lions Bay Avenue (Connected via NB off ramp, SB off ramp and SB on ramp at Lions Bay Interchange)
Isleview Place (Connects to Highway 99 SB off ramp at Lions Bay Interchange)
Center Road (Connecting Road to Northbound Entrance onto Highway 99 From Lions Bay)
Brunswick Road
Porteau Cove Park
Britannia Forest Service Road
Darrell Bay Road
Misty Heights Road
Mamquam Forest Service Road
Stawamus Drive / Valley Drive
Clarke Drive
Weldwood Access
Scott Crescent
Cleveland Avenue
Industrial Road / Finch Drive
Centennial Drive
Mamquam Road
Garibaldi Way
Depot Road
Squamish Valley Road
Cheekye River (CKat Lake) Forest Service Road
Conroy Creek Forest Service Road
Chance Creek Forest Service Road
Garibaldi Lake Road
Pinecrest Estates
Black Tusk Subdivision
Brew Creek Lodge Road
Brandywine Park Access
Brew Main Forest Service Road
Brandywine Forest Service Road

MacGuire Forest Service Road
Cal-Cheak (Daisy Lake) Forest Service Road
Callaghan Forest Service Road
RMoW Sewage Treatment Plant Access
Highway 99 (Beyond the North End of Concession Highway)
Harvey Creek Road Connecting Roads
Creekview Place
Garibaldi Park Road Connecting Roads
Garibaldi Park Road up to Municipal Boundary
Garibaldi Park Road Beyond Park Boundary
Brackendale Pit Road Connecting Roads
Cheekey Pit Access Road
Squamish Valley Road Connecting Roads
Squamish Valley Road
Squamish Valley Forest Service Road
Swift Creek Road Connecting Roads
Swift Creek Forest Service Road

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SCHEDULE 4

LANDS

Part 2

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Schedule of Connecting Roads¶
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Highway 99 Connecting R... [1]

Schedule of Connecting Roads

Highway 99 Connecting Roads
Trans Canada Highway 1
Eagleridge Drive
Marine Drive
Pasco Road
Ansell Place (Connected via off and on ramps from Highway 99)
Lawrence Way
Strachan Point Road
Ocean Point Drive
Kelvin Grove Intersection
Lions Bay Avenue (Connected via NB off ramp, SB off ramp and SB on ramp at Lions Bay Interchange)
Isleview Place (Connects to Highway 99 SB off ramp at Lions Bay Interchange)
Center Road (Connecting Road to Northbound Entrance onto Highway 99 From Lions Bay)
Brunswick Road
Porteau Cove Park
Britannia Forest Service Road
Darrell Bay Road
Misty Heights Road
Mamquam Forest Service Road
Stawamus Drive / Valley Drive
Clarke Drive
Weldwood Access
Scott Crescent
Cleveland Avenue
Industrial Road / Finch Drive
Centennial Drive
Mamquam Road
Garibaldi Way
Depot Road
Squamish Valley Road
Cheekye River (CKat Lake) Forest Service Road
Conroy Creek Forest Service Road
Chance Creek Forest Service Road
Garibaldi Lake Road
Pinecrest Estates
Black Tusk Subdivision
Brew Creek Lodge Road
Brandywine Park Access
Brew Main Forest Service Road
Brandywine Forest Service Road

MacGuire Forest Service Road
Cal-Cheak (Daisy Lake) Forest Service Road
Callaghan Forest Service Road
RMoW Sewage Treatment Plant Access
Highway 99 (Beyond the North End of Concession Highway)
Harvey Creek Road Connecting Roads
Creekview Place
Garibaldi Park Road Connecting Roads
Garibaldi Park Road up to Municipal Boundary
Garibaldi Park Road Beyond Park Boundary
Brackendale Pit Road Connecting Roads
Cheekey Pit Access Road
Squamish Valley Road Connecting Roads
Squamish Valley Road
Squamish Valley Forest Service Road
Swift Creek Road Connecting Roads
Swift Creek Forest Service Road

SCHEDULE 4

LAND

Part 3

Acquisition Lands and Acquisition Dates

NB: A table cross-referencing the annexes listed below and the preliminary land acquisition drawings attached to this Part 3 of Schedule 4 is set out on page 22.

ITEM A - LAND NOT OWNED BY THE PROVINCE OR BCTFA

1. DB1 (WP1) – Horseshoe Bay to Sunset Beach

Lands to be Acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
That part of Block B (Reference Plan 2164), Group 1, New Westminster District Except Portions in Reference Plan 4162 and Highway Plan 52, District Lot 1493 (Parcel Identifier 015-946-916) which is shown on Annexes 1 and 2 (the area of land required in this parcel is 4.163 ha)	April 18, 2006	Province/ BCTFA
That part of Lot F (Explanatory Plan 9412), District Lot 1494, Group 1, New Westminster District Except: Firstly; Part in Highway Plan 52, Secondly; Part in Plan LMP25925, Thirdly: Part in Highway Plan 118, Fourthly; Part in Highway Plan 126, Fifthly; Part in Highway Plan 12, Sixthly; Part Plan LMP49608 (Parcel Identifier 015-848-353) which is shown on Annexes 1, 2, 3 and 4 (the area of land required in this parcel as shown on Annexes 1 and 4 is 6.023 ha; as shown on Annex 2 is 3.297. ha; and, as shown on Annex 3 is 0.045 ha).	April 18, 2006	Province/ BCTFA
That part of Lot E (Explanatory Plan 9412), District Lot 1494, Group 1, New Westminster District (Parcel Identifier 015-848-329) which is shown on Annex 2 (the area of land required in this parcel is 0.296 ha).	April 18, 2006	Province/ BCTFA
That part of Parcel A (Reference Plan 1831), District Lot 1494, Group 1, New Westminster District Except: Firstly; Part in Plan 11000, Secondly; Part in Plan 10214, Thirdly; Part in Highway Plan 118 (Parcel Identifier 010-938-877) which is shown on Annex 2 (the area of land required in this parcel is 0.952 ha).	April 18, 2006	Province/ BCTFA

Lands to be Acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
<p>Those parts of Lot A (Reference Plan 1831), Except Part in Highway Plan 52, District Lot 1495, Group 1, New Westminster District (Parcel Identifier 024-293-431); and That part of District Lot 1495, Group 1, New Westminster District Except Portions in Reference Plans 987 and 1831, Highway Plan 52 and Part Lying West of Reference Plan 987 (Parcel Identifier 015-946-991) which are shown on Annexes 2, 5 and 6 (the area of land required in these parcels is 4.876 ha).</p>	April 18, 2006	Province/ BCTFA
<p>That part of Lot A, Group 1, New Westminster District Except Portions in Reference Plans 987 and 1831 and Part in Highway Plan 52, District Lot 2386 (Parcel Identifier 015-906-094) as shown on Annexes 6 and 7 (the area of land required in this parcel is 0.145 ha).</p>	April 18, 2006	Province/ BCTFA

2. DB3 (WP3A) – Lions Bay to “M” Creek

Lands to be Acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
<p>That part of Lot 50, Block B, District Lot 1575, Plan 18530 (Parcel Identifier 007-166-435) which is shown on Annex 8 (the area of land required in this parcel is 0.117 ha).</p>	April 18, 2006	Province/ BCTFA

Lands over which a Statutory Right of Way to be Obtained	Acquisition Date	Acquisition Costs Responsibility
<p>Those parts of That part of Block 2 in Reference Plan 1019, District Lot 2935, Plan 4485 (Parcel Identifier 001-539-852); and That part of Block 3 in Reference Plan 5714, District Lot 2935, Plan 4485 (Parcel Identifier 011-536-306); which are shown on Annex 9 (the area of land required in these parcels is 0.0257 ha).</p>	April 18, 2006	Province/ BCTFA

3. DB4 (WP3) – Brunswick Beach to Porteau Cove

Lands to be Acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
<p>That part of District Lot 2961, Group 1, New Westminster District Except Part in Statutory Right of Way Plan 18994 (Parcel Identifier 013-336-657) which is shown on Annexes 10, 14 and 15 (the area of land required in this parcel as shown on Annex 10 is 0.0148 ha; and, as shown on Annexes 14 and 15 is unidentified).</p> <p>THIS LAND IS REQUIRED FOR SLOPE STABILIZATION PURPOSES</p>	April 18, 2006	Province/ BCTFA
<p>That part of District Lot 2807, Group 1, New Westminster District Except Part in Statutory Right of Way Plan 18994 (Parcel Identifier 013-336-649) which is shown on Annexes 11 and 15 (the area of land required in this parcel as shown on Annex 11 is 0.0165 ha; and, as shown on Annex 15 is unidentified).</p>	April 18, 2006	Province/ BCTFA
<p>That part of District Lot 2076, Group 1, New Westminster District Except: Firstly; Part in Reference Plan 7320, Secondly; Part Subdivided by Plan 19240, Thirdly; Part in Plan LMP41651 (Parcel Identifier 015-919-218) which is shown on Annex 11 (the area of land required in this parcel is 0.013 ha).</p>	April 18, 2006	Province/ BCTFA
<p>That part of District Lot 3426, Group 1 Except: Portions in Reference Plans 1019, 1832, 9453 and Parts 3.353 acres and 3.232 acres on Highway Plan 60, New Westminster District (Parcel Identifier 015-900-665) which is shown on the plan attached as Annex 13 (the area of land required in this parcel is unidentified).</p> <p>THIS LAND IS REQUIRED FOR SLOPE STABILIZATION PURPOSES.</p>	April 18, 2006	Province/ BCTFA

Lands over which a Statutory Right of Way to be Obtained	Acquisition Date	Acquisition Costs Responsibility
<p>That part of That part of District Lot 1748 in Reference Plan 6955, Group 1, New Westminster District (Parcel Identifier 015-920-861) which is shown on Annex 12 (the area of land required in this parcel is 0.034 ha and 0.0285 ha).</p>	April 18, 2006	Province/ BCTFA

4. DB5, DB6, DB7 (WP4) – Porteau Cove to South Stawamus

Lands to be acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
<p>That part of District Lot 2808, Group 1, New Westminster District Except: Firstly; Portions Reference Plan 6425, Secondly; Part on Highway Plan 51 (Parcel Identifier 015-896-111) which is shown on Annexes 16 and 17 (the area of land required in this parcel as shown on Annex 16 is 0.283 ha; and, as shown on Annex 17 is 0.8249 ha).</p> <p>THIS LAND IS REQUIRED FOR SLOPE STABILIZATION PURPOSES</p>	April 18, 2006	Province/ BCTFA
<p>That part of Lot 24, Block 3, District Lot 1898, Plan LMP13803 (Parcel Identifier 018-613-021) which is shown on Annex 18 (the area of land required in this parcel is 0.0008 ha).</p>	April 18, 2006	Province/ BCTFA
<p>That part of Lot 23, Block 3, District Lot 1898, Plan LMP13803 (Parcel Identifier 018-613-004) which is shown on Annex 18 (the area of land required in this parcel is 0.0558 ha).</p>	April 18, 2006	Province/ BCTFA
<p>That part of Block A, Except: Firstly: Part Subdivided by Plan LMP35040; Secondly: Part Subdivided by Plan BCP10356, District Lots 1296, 1626, 1632, 1659, 1660, 1666, 1898 and 7799, Group 1, New Westminster District, Plan LMP13803 (Parcel Identifier 018-613-217) which is shown on Annex 18 and 21 (the area of land required in this parcel as shown on Annex 18 is 0.0988 ha and 0.0321 ha; and, as shown on Annex 21 is 0.0299 ha).</p>	April 18, 2006	Province/ BCTFA
<p>That part of Block 3, Except: Firstly, Part Subdivided by Plan LMP13803; Secondly, Part Subdivided by Plan LMP16073; Thirdly, Part Subdivided by Plan LMP24805; Fourthly, Part Subdivided by Plan LMP35040; Fifthly, Part Dedicated Road on Plan LMP36546; Sixthly, Part Subdivided by Plan LMP42785, District Lots 1296, 1626, 1632, 1659, 1660, 1666 and 1898, Group 1, New Westminster District, Plan LMP11960 (Parcel Identifier 018-380-417) which is shown on Annexes 18, 19, 21, 22 and 23 (the area of land required in this parcel as shown on Annex 18 is 0.3077 ha [THIS LAND IS REQUIRED FOR SLOPE STABILIZATION PURPOSES], 0.0467 ha, 0.0576 ha, 0.3765 ha and 0.1928 ha; as shown on Annex 19 is 0.3632 ha and 0.0913; as shown on Annex 21 is 0.0426 ha and 0.1711 ha; as shown on Annex 22 is 0.0099 ha; and, as shown on Annexes 22 and 23 is the part of the 0.5386 ha area which is not included in Reference Plan 4335 being British Columbia Railway Company's right of way).</p>	April 18, 2006	Province/ BCTFA

Lands to be acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
That part of District Lot 2933, Group 1, New Westminster District Except Portions in Highway Plan 76 and Statutory Right of Way Plan LMP9997 and Portions dedicated road on Plan LMP17053 (Parcel Identifier 010-025-715) which is shown on Annex 20 (the area of land required in this parcel is 0.0745 ha provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annexes 24 and 25 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annex 20).	April 18, 2006	Province/ BCTFA
That part of District Lot 2933, Group 1, New Westminster District Except Portions in Highway Plan 76 and Statutory Right of Way Plan LMP9997 and Portions dedicated road on Plan LMP17053 (Parcel Identifier 010-025-715) which is shown on Annexes 24 and 25 (the area of land required in this parcel as shown on Annex 24 is 0.0259 ha and 0.0313 ha; and, as shown on Annex 25 is 0.2374 ha and 0.1175 ha).	April 18, 2006	Concessionaire
That part of Parcel 1 (Reference Plan 4878) of District Lot 1583, Group 1, New Westminster District Except Part on Plan 21576 (Parcel Identifier 010-025-952) which is shown on Annexes 26, 27, 30 and 31 (the area of land required in this parcel as shown on Annex 26 is 0.0296 ha; as shown on Annex 27 is 0.208 ha and 0.0053 ha; as shown on Annex 30 is 0.089 ha; and, as shown on Annex 31 is 0.1146 ha and 0.047 ha).	April 18, 2006	Concessionaire
That part of District Lot 4008, Group 1, New Westminster District Except: Part on Highway Plan 76 (Parcel Identifier 010-025-766) which is shown on Annex 30 (the area of land required in this parcel is 0.0076 ha and 0.0534 ha).	April 18, 2006	Concessionaire
That part of Lot A, District Lots 1583, 2001 and 7034, Plan 21576 (Parcel Identifier 010-077-227) which is shown on the Annexes 27, 28, 31 and 32 (the area of land required in this parcel as shown on Annex 27 is 0.0265 ha, 0.1892 ha and 0.0878 ha; as shown on Annex 28 is 0.1587 ha; as shown on Annex 31 is 0.047 ha; and, as shown on Annex 32 is 0.2282 ha).	April 18, 2006	Province/ BCTFA
That part of Lot A, District Lots 2001 and 7035, Plan 20309 (Parcel Identifier 006-646-921) which is shown on Annexes 28 and 32 (the area of land required in this parcel as shown on Annex 28 is 0.0149 ha, 0.2082 ha and 0.2082 ha; and, as shown on Annex 32 is 0.1502 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 3, District Lot 892, Plan 19960 (Parcel Identifier 005-484-065) which is shown on Annexes 28 and 29 (the area of land required in this parcel as shown on Annex 28 is 0.0237 ha, 0.031 ha and 0.0059 ha; and, as shown on Annex 29 is 0.0056 ha).	April 18, 2006	Province/ BCTFA

Lands to be acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
<p>That part of District Lot 891, Group 1, New Westminster District Except Firstly: Part in Reference Plan 4390, Secondly: Portions in Plans 19660, BCP7077, BCP7078 and BCP10055 Thirdly: Part in Highway Plan 145 (Parcel Identifier 015-913-961) which is shown on Annex 29 (the area of land required in this parcel is 0.0043 ha, 0.0325 ha and 0.3852 ha provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annex 33 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annex 29).</p>	April 18, 2006	Province/ BCTFA
<p>That part of District Lot 891, Group 1, New Westminster District Except Firstly: Part in Reference Plan 4390, Secondly: Portions in Plans 19660, BCP7077, BCP7078 and BCP10055 Thirdly: Part in Highway Plan 145 (Parcel Identifier 015-913-961) which is shown on Annex 33 (the area of land required in this parcel is 0.1194 ha).</p>	April 18, 2006	Concessionaire
<p>Those parts of</p> <p>That part of District Lot 2451 in Reference Plan 2624, Group 1, New Westminster District Except; Part on Highway Plan 134 (Parcel Identifier 015-902-561)</p> <p>That part of District Lot 2451 in Reference Plan 2624, Group 1, New Westminster District Except Portions in Reference Plans 2624, 986, LMP2904, LMP2905 and Highway Plan 134 (Parcel Identifier 006-653-855)</p> <p>which are shown on Annexes 34, 35, 40 and 41 (the area of land required in these parcels as shown on Annex 34 is 0.0390 ha, 0.595 ha, 0.0079 ha and 0.240 ha; as shown on Annex 35 is 0.0433 ha and 0.0904 ha; as shown on Annex 40 is 0.6890 ha, 0.3729 ha and 0.0587 ha; and, as shown on Annex 41 is 0.0199 ha and 0.2331 ha).</p>	April 18, 2006	Province/ BCTFA
<p>That part of Block C (Reference Plan 889), Group 1, New Westminster District Except Part in Plan 10639, District Lot 608 (Parcel Identifier 015-979-865) which is shown on Annex 37 (the area of land required in this parcel is 0.0204 ha).</p>	April 18, 2006	Province/ BCTFA
<p>That part of District Lot 2177, Group 1, New Westminster District Except; Firstly, Part in Explanatory Plan 11467, Secondly, Part in Plan 12045, Thirdly, Part in Reference Plan 4148, Fourthly, Portion on Highway Plan 133 (Parcel Identifier 015-916-634) which is shown on Annexes 38 and 39 (the area of land required in this parcel as shown on Annex 38 is 0.2709 ha; and, as shown on Annex 39 is 0.104 ha provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annex 44 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annexes 38 and 39).</p>	April 18, 2006	Province/ BCTFA

Lands to be acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
<p>That part of District Lot 1520, Group 1, New Westminster District Except Firstly, Portions in Reference Plan 11534, Secondly, Part in Plan 14677, Thirdly, Part in Reference Plan 4183, Fourthly, Portions Shown as 8.65 acres, 0.27 acres, 0.0003 acres, 6.67 acres, 0.07 acres on Highway Plan 133 (Parcel Identifier 015-916-693) which is shown on Annex 39 (the area of land required in this parcel is 0.0227 ha provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annex 44 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annex 39).</p>	April 18, 2006	Province/ BCTFA
<p>That part of Block A (Reference Plan 889), District Lot 608, Group 1, New Westminster District Except: Firstly: Part on Plan 19266; Secondly: Portion on Highway Plan 133; Thirdly: Portion on Highway Plan 44; Fourthly: 1.08 acre Portion on Reference Plan 4142 (Parcel Identifier 015-979-831) which is shown on Annex 42 (the area of land required in this parcel is 0.0221 ha).</p>	April 18, 2006	Province/ BCTFA
<p>That part of Block G Except Firstly, Part in Explanatory Plan 8207, Secondly, Part on Highway Plan 71, Thirdly, Portions on Highway Plan 133, District Lot 608, Group 1, New Westminster District, Plan 10639 (Parcel Identifier 009-325-247) which is shown on Annex 42 (the area of land required in this parcel is 0.0712 ha).</p>	April 18, 2006	Province/ BCTFA
<p>Those parts of District Lot 1520, Group 1, New Westminster District Except Firstly, Portions in Reference Plan 11534, Secondly, Part in Plan 14677, Thirdly, Part in Reference Plan 4183, Fourthly, Portions Shown as 8.65 acres, 0.27 acres, 0.0003 acres, 6.67 acres, 0.07 acres on Highway Plan 133 (Parcel Identifier 015-916-693); and District Lot 2177, Group 1, New Westminster District Except; Firstly, Part in Explanatory Plan 11467, Secondly, Part in Plan 12045, Thirdly, Part in Reference Plan 4148, Fourthly, Portion on Highway Plan 133 (Parcel Identifier 015-916-634) which are shown on Annex 44 (the area of land required in these parcels is 0.305 ha).</p>	April 18, 2006	Concessionaire

Lands over which a Statutory Right of Way to be Obtained	Acquisition Date	Acquisition Costs Responsibility
That part of That part of District Lot 1898 in Reference Plan 4335, Group 1, New Westminster District (Parcel Identifier 015-972-836) which is shown on the plans attached as Annex 21 and 22 (the area of land required in this parcel as shown on Annex 21 is 0.0426 ha; and as shown on Annex 22 is 0.0099 ha and those parts of the 0.01711 ha and 0.0538 ha areas of land shown on Annex 22 which are included in this parcel).	April 18, 2006	Province/ BCTFA
That part of That part of Block D (Explanatory Plan 3458) in Reference Plan 4142, District Lot 608 Group 1, New Westminster District (Parcel Identifier 015-979-903) which is shown on Annexes 38 and 43 (the area of land required in this parcel as shown on Annex 38 is 0.3623 ha; and, that part of the 0.0231 ha area of land shown on Annex 43 which is included in this parcel).	April 18, 2006	Province/ BCTFA
That part of That part of District Lot 2451 in Reference Plan 10597, Group 1, New Westminster District (Parcel Identifier 015-902-595) which is shown on Annexes 34, 36, 41 and 42 (the area of land required in this parcel as shown on Annex 34 is 0.0639 ha; as shown on Annex 36 is 0.118 ha and 0.139 ha; and, as shown on Annexes 41 and 42 is 0.2074 ha).	April 18, 2006	Province/ BCTFA
That part of That part of District Lot 608 in Reference Plan 4142, Group 1, New Westminster District, Except (A) Part in Block A (Reference Plan 89) and (B) Part in Block D (Explanatory Plan 3458) (Parcel Identifier 015-980-006) which is shown on Annexes 37 and 42 (the area of land required in this parcel as shown on both annexes is 0.1502 ha).	April 18, 2006	Province/ BCTFA

5. DB8 (WP5) – Urban Squamish

Lands to be Acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
That part of Lot 1, District Lot 1520, Plan 14677 (Parcel Identifier 007-756-747) which is shown on Annex 45 (the area of land required in this parcel is 0.103 ha).	February 1, 2007	Province/ BCTFA
That part of District Lot 4266, Group 1, New Westminster District Except portions in Plans 9930, 9940, 11320, 11687, 14258, 20062, 22959, part 2.98 acres on SRW Plan 148, and parts .588 hectares, 1.66 hectares, and .216 hectares shown on Plan LMP46000 and Except portions in Plans LMP50903 and LMP50904 (Parcel Identifier 015-860-841) which is shown on Annexes 45 and 46 (the area of land required in this parcel as shown on Annex 45 is 0.154 ha and 0.0325 ha; and, as shown on Annex 46 is 0.0004 ha, 0.105 ha, 0.278 ha, 0.0375ha, 0.0925 ha and 0.0355 ha).	February 1, 2007	Province/ BCTFA

Lands to be Acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
That part of Lot 5 (Reference Plan 9042), District Lot 4267, Group 1, New Westminster District (Parcel Identifier 015-861-171) which is shown on Annex 46 (the area of land required in this parcel is 0.0108 ha and 0.166 ha).	February 1, 2007	Province/ BCTFA
That part of Lot 4 (Reference Plan 9042), District Lot 4267, Group 1, New Westminster District (Parcel Identifier 015-861-163) which is shown on Annex 46 (the area of land required in this parcel is 0.0237 ha, 0.0109 ha and 0.0123 ha).	February 1, 2007	Province/ BCTFA
That part of Lot 1, District Lot 4267, Plan 17066 (Parcel Identifier 007-323-590) which is shown on Annexes 46 and 47 (the area of land required in this parcel as shown on Annex 46 is 0.0001 ha; and, as shown on Annex 47 is 0.0063 ha and .0.387 ha).	February 1, 2007	Province/ BCTFA
That part of Lot B, Except Part in Plan 17066, District Lots 4266 and 4267, Plan 12335 (Parcel Identifier 008-908-303) which is shown on Annex 48 (the area of land required in this parcel is 0.130 ha).	February 1, 2007	Province/ BCTFA
That part of Block 5, District Lot 4266, Plan 11687 (Parcel Identifier 009-176-594) which is shown on Annex 47 (the area of land required in this parcel is 0.0160 ha).	February 1, 2007	Province/ BCTFA
That part of Block 3, Except Part on Highway Plan 148, District Lot 4266, Group 1, New Westminster District, Plan 9930 (Parcel Identifier 009-612-815) which is shown on Annex 47 (the area of land required in this parcel is 0.0083 ha).	February 1, 2007	Province/ BCTFA
That part of Block 1, Except Part on Highway Plan 148, District Lot 4266, Group 1, New Westminster District, Plan 9940 (Parcel Identifier 006-422-101) which is shown on Annexes 47 and 48 (the area of land required in this parcel as shown on Annex 47 is 0.08 ha; and, as shown on Annex 48 is 0.102 ha).	February 1, 2007	Province/ BCTFA
That part of Lot 3, Block 1 of Blocks A, B and C, District Lots 486 and 833, Plan 7423 (Parcel Identifier 010-627-065) which is shown on Annex 49 (the area of land required in this parcel is 0.0016 ha).	February 1, 2007	Province/ BCTFA
That part of Lot 2, Except: Part on SRW Plan 148, Block 1 of Blocks A, B and C, District Lots 486 and 833, Group 1, New Westminster District, Plan 7423 (Parcel Identifier 010-627-049) which is shown on Annex 49 (the area of land required in this parcel is 0.0039 ha).	February 1, 2007	Province/ BCTFA
That part of Lot 1, Except: Firstly, Part on SRW Plan 148, Secondly, Part on Highway Plan 65 of Blocks A, B and C, District Lots 486 and 833, Group 1, New Westminster District, Plan 7423 (Parcel Identifier 010-627-022) which is shown on Annex 49 (the area of land required in this parcel is 0.0038 ha).	February 1, 2007	Province/ BCTFA

Lands to be Acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
That part of Lot 11, Block A, District Lot 4261, Plan 19535 (Parcel Identifier 006-986-404) which is shown on Annex 50 (the area of land required in this parcel is 0.0032 ha).	February 1, 2007	Province/ BCTFA
That part of Lot 12, Block A, District Lot 4261, Plan 19736 (Parcel Identifier 006-965-440) which is shown on Annex 50 (the area of land required in this parcel is 0.160 ha).	February 1, 2007	Province/ BCTFA
That part of Lot 9, Except: Firstly: Part subdivided by Plan 20627, Secondly: Part on Statutory Right of Way Plan 172: Block A, District Lots 4261, Group 1, New Westminster District, Plan 14508 (Parcel Identifier 002-662-728) which is shown on Annex 50 (the area of land required in this parcel is 0.0761 ha).	February 1, 2007	Province/ BCTFA
That part of Block W, District Lots 2034 and 4261, Plan 18351, Plan 18351 (Parcel Identifier 007-191-847) which is shown on Annex 51 (the area of land required in this parcel is 0.0196 ha).	February 1, 2007	Province/ BCTFA
That part of Lot 2, District Lot 4261, Plan 17660 (Parcel Identifier 007-264-984) which is shown on Annex 51 (the area of land required in this parcel is 0.0877 ha).	February 1, 2007	Province/ BCTFA
That part of Lot 93, District Lot 1305, Plan 20132 (Parcel Identifier 006-854-559) which is shown on Annex 52 (the area of land required in this parcel is 0.0221 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 95, District Lot 1305, Plan 20132 (Parcel Identifier 006-854-605) which is shown on Annex 52 (the area of land required in this parcel is 0.0016 ha and 0.145 ha).	April 18, 2006	Province/ BCTFA
That part of Parcel 1, District Lots 760 and 1305, Group 1, New Westminster District, Plan BCP5423 (Parcel Identifier 025-659-774) which is shown on Annex 52 (the area of land required in this parcel is 0.0188 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 3, Except Part in Statutory Right of Way Plan 15402, South West ¼ of Section 2, Township 50, Plan 14255 (Parcel Identifier 007-908-296) which is shown on Annexes 53 and 54 (the area of land required in this parcel as shown on Annex 53 is 0.0251 ha; and, as shown on Annex 54 is 0.0393 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 2 of the West ½ of Section 2, Township 50, Plan 19496 (Parcel Identifier 007-004-966) which is shown on Annex 54 (the area of land required in this parcel is 0.0505 ha).	April 18, 2006	Province/ BCTFA
That part of Lot D, Except Part in Statutory Right of Way Plan 15402 Established as Highway North West ¼ of Section 1 and of the North East ¼ of Section 2, Township 50, Plan 12475 (Parcel Identifier 008-866-211) which is shown on Annexes 55 and 56 (the area of land required in this parcel as shown on Annex 55 is 0.112 ha; and, as shown on Annex 56 is 0.237 ha, less the area of land shown as "Not Required" on Annex 109).	April 18, 2006	Province/ BCTFA

Lands to be Acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
That part of Lot 2, Except Part in Statutory Right of Way Plan 15402, Now Highway, North West ¼ of Section 2, Township 50, Plan 13367 (Parcel Identifier 008-655-871) which is shown on Annex 56 (the area of land required in this parcel is 0.0505 ha, less the area of land shown as "Not Required" on Annex 109).	April 18, 2006	Province/ BCTFA
That part of the Common Property of Strata Plan 227 which is shown on Annex 56 (the area of land required in this parcel is 0.01 ha).	April 18, 2006	Province/ BCTFA
That part of Lot C, Except Part in Plan 17658, Blocks A and B, Section 11, Township 50, Plan 15617 (Parcel Identifier 007-641-818) which is shown on Annex 57 (the area of land required in this parcel is 0.0275 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 1, Blocks A and B, Section 11, Township 50, Plan 17658 (Parcel Identifier 007-265-000) which is shown on Annex 57 (the area of land required in this parcel is 0.0192 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 10, Blocks A and B, North ½ of the South East ¼ of Section 11, Township 50, Plan 14896 (Parcel Identifier 006-326-048) which is shown on Annexes 57 and 58 (the area of land required in this parcel as shown on Annex 57 is 0.0267 ha; and, as shown on Annex 58 is 0.0310 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 11, Except Part in Statutory Right of Way Plan 15402, Blocks A and B, North ½ of the South East ¼ of Section 11, Township 50, Plan 14896 (Parcel Identifier 007-800-703) which is shown on Annex 58 (the area of land required in this parcel is 0.138 ha).	April 18, 2006	Province/ BCTFA
That part of Lot D, Except: Part on Highway Plan 177; South West ¼ and South East ¼, Section 11, Township 50, New Westminster District, Plan 9491 (Parcel Identifier 006-665-241) which is shown on Annex 58 (the area of land required in this parcel is 0.0343 ha).	April 18, 2006	Province/ BCTFA
That part of Lot H, Block J, Section 11, Township 50, Plan 22344 (Parcel Identifier 014-650-045) which is shown on Annex 58 (the area of land required in this parcel is 0.0503 ha).	April 18, 2006	Province/ BCTFA
That part of Lot G, Except: Parcel A, Reference Plan BCP15131, Block J, Section 11, Township 50, Plan 22344 (Parcel Identifier 014-650-037) which is shown on Annex 58 (the area of land required in this parcel is 0.118 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 3, Block J, Section 11, Township 50, Plan 10640 (Parcel Identifier 009-331-158) which is shown on Annexes 58 and 59 (the area of land required in this parcel as shown on Annex 58 is 0.0162 ha; and, as shown on Annex 59 is 0.0295 ha).	April 18, 2006	Province/ BCTFA

Lands to be Acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
That part of Lot 14, Except: Part on Highway Plan 68 of Lot C, Sections 11 and 12, Township 50, Amended Plan 10458 (See DF L4601) (Parcel Identifier 003-753-409) which is shown on Annex 59 (the area of land required in this parcel is 0.152 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 3, Sections 11 and 12, Township 50, Plan 19415 (Parcel Identifier 007-019-416) which is shown on Annex 59 (the area of land required in this parcel is 0.0937 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 4, Sections 11 and 12, Township 50, Plan 19415 (Parcel Identifier 007-019-424) which is shown on Annex 59 (the area of land required in this parcel is 0.0349 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 2, Section 11, Township 50, Plan LMP7519 (Parcel Identifier 018-038-425) which is shown on Annexes 59, 60 and 66 (the area of land required in this parcel as shown on Annex 59 is 0.0927 ha; as shown on Annex 60 is 0.0651 ha; and, as shown on Annex 66 is 0.0651 ha).	April 18, 2006	Province/ BCTFA
That part of The Fractional North ½ of the South ½ of Section 14, Township 50 Except: Portions in Reference Plan 846 and Plans 15360, 21601, LMP26404, Highway Plan 177 and BCP4573, New Westminster District (Parcel Identifier 002-736-462) which is shown on Annexes 61 and 62 (the area of land required in this parcel as shown on Annex 61 is 0.237 ha; and, as shown on Annex 62 is 0.19 ha).	April 18, 2006	Province/ BCTFA
That part of The South West ¼ of the North East ¼ of Section 14, Township 50, Group 1, New Westminster District (Parcel Identifier 002-736-306) which is shown on Annexes 62 and 63 (the area of land required in this parcel as shown on Annex 62 is 0.151 ha; and, as shown on Annex 63 is 0.162 ha).	April 18, 2006	Province/ BCTFA
That part of Lot A, Blocks 18 and 19, South ½ of the South West ¼ of Section 23, Township 50, Plan 19844 (Parcel Identifier 006-962-181) which is shown on Annexes 64 and 65 (the area of land required in this parcel as shown on Annex 64 is 0.0529 ha; and, as shown on Annex 65 is 0.0528 ha).	April 18, 2006	Province/ BCTFA
That part of Block 18, Except Part in Statutory Right of Way Plan 15522 and Plan 19844, South ½ of South West ¼ of Section 23, Township 50, Plan 1878 (Parcel Identifier 002-490-102) which is shown on Annex 67 (the area of land required in this parcel is 0.011 ha). THE CONCESSIONAIRE WILL TRY TO ELIMINATE THE NEED FOR THIS LAND DURING DESIGN.	April 18, 2006	Concessionaire

Lands over which a Statutory Right of Way to be Obtained	Acquisition Date	Acquisition Costs Responsibility
That part of those portions of District Lot 4267 in Explanatory Plan 6013, Group 1, New Westminster District (Parcel Identifier 015-860-884) which is shown on Annexes 46 and 47 (the area of land required in this parcel as shown on Annex 46 is 0.0091 ha, 0.0189 ha and 0.0059 ha; and as shown on Annex 47 is 0.0613 ha).	April 18, 2006	Province/ BCTFA

6. DB12 and DB13 (WP8) – Cheakamus Canyon North to Function Junction

Lands to be Acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
That part of District Lot 5630 (Reference Plan 2312), Group 1, Except: Part dedicated Road on Plan LMP399931, New Westminster District (Parcel Identifier 015-779-122) which is shown on Annexes 68, 69, 70, 71, 72 and 73 (the area of land required in this parcel as shown on Annex 68 is 2.58 ha and 0.102 ha; as shown on Annex 69 is 0.0496 ha, 2.01 ha and 1.71 ha; as shown on Annex 70 is 5.27 ha; as shown on Annex 71 is 1.78 ha; as shown on Annex 72 is 4.87 ha; and, as shown on Annex 73 is 0.765 ha).	April 18, 2006	Province/ BCTFA
That part of District Lot 2665, Group 1, New Westminster District (Parcel Identifier 015-945-090) which is shown on Annexes 74 and 75 (the area of land required in this parcel as shown on Annex 74 is 2.33 ha, 0.0848 ha and 0.173 ha; and, as shown on Annex 75 is 0.0163 ha and 0.0518 ha).	April 18, 2006	Province/ BCTFA
That part of District Lot 2665A, Group 1, New Westminster District (Parcel Identifier 015-945-103) which is shown on Annexes 74 and 75 (the area of land required in this parcel as shown on Annex 74 is 0.0199 ha; and, as shown on Annex 75 is 1.03 ha).	April 18, 2006	Province/ BCTFA
That part of District Lot 2667, Group 1, New Westminster District (Parcel Identifier 015-945-391) which is shown on Annexes 75 and 76 (the area of land required in this parcel as shown on Annex 75 is 0.13 ha, 1.75 ha and 0.0485 ha; and, as shown on Annex 76 is 0.972 ha).	April 18, 2006	Province/ BCTFA
That part of Block A (Reference Plan 1651) District Lot 2666, Group 1, New Westminster District (Parcel Identifier 015-945-111) which is shown on Annexes 75 and 76 (the area of land required in this parcel as shown on Annex 75 is 0.491 ha; and, as shown on Annex 76 is 1.01 ha).	April 18, 2006	Province/ BCTFA

Lands to be Acquired in Fee Simple	Acquisition Date	Acquisition Costs Responsibility
That part of That part of District Lot 2668 lying east of the east boundary of District Lot 5627 (Reference Plan 2310), Group 1, New Westminster District (Parcel Identifier 015-949-818) which is shown on Annexes 76, 77 and 80 (the area of land required in this parcel as shown on Annex 76 is 2.41 ha; as shown on Annex 77 is 1.42 ha; and, as shown on Annex 80 is 0.2432 ha and 0.7965 ha).	April 18, 2006	Province/ BCTFA
That part of District Lot 6962, Plan 21481 (Parcel Identifier 008-651-345) which is shown on Annex 82 (the area of land required in this parcel is 0.0664 ha).	April 18, 2006	Province/ BCTFA
That part of Lot 1, District Lots 5624, 6083, 7887 and 7977, Group 1, New Westminster District, Plan BCP7576 (Parcel Identifier 025-759-434) which is shown on Annexes 85, 86, 87 and 88 (the area of land required in this parcel as shown on Annex 85 is 0.846 ha; as shown on Annex 86 is 1.6147 ha; as shown on Annex 87 is 0.1027 ha; and, as shown on Annex 88 is 0.3226 ha).	April 18, 2006	Province/ BCTFA

Lands over which a Statutory Right of Way to be Obtained	Acquisition Date	Acquisition Costs Responsibility
That part of District Lot 2945, Group 1, New Westminster District (Parcel Identifier 015-900-754) which is shown on Annexes 75, 79 and 81 (the area of land required in this parcel as shown on Annex 75 is 0.0052 ha, 0.0075 ha and 0.0485 ha; that part of the 0.058 ha area of land shown on Annex 79 which is included in this parcel; and, as shown on Annex 81 is 0.4711 ha)	April 18, 2006	Province/ BCTFA
That part of District Lot 4361, Reference Plan 1405, Group1, New Westminster District (Parcel Identifier 004-237-072) which is shown on Annexes 82, 83, 84, 85, 89, 90, 91, 92, 93 and 94 (the area of land required in this parcel as shown on Annex 82 is 0.0664 ha; as shown on Annex 83 is 0.647 ha; as shown on Annex 84 is 0.5864 ha; as shown on Annex 85 is 0.1053 ha; as shown on Annex 89 is 0.0188 ha; as shown on Annex 90 is 0.0005 ha and 0.2442 ha; as shown on Annex 91 is 0.0489 ha; as shown on Annex 92 is 0.0121 ha; as shown on Annex 93 is 0.0092 ha; and, as shown on Annex 94 is 0.01403 ha and 0.0612 ha). THE CONCESSIONAIRE IS TO ACQUIRE THE LAND SHOWN ON ANNEX 94.	April 18, 2006	Province/ BCTFA AND Concessionaire

**ITEM B - LAND OWNED BY THE PROVINCE OR BCTFA
WHICH WILL FORM PART OF THE NEW HIGHWAY**

1. DB3 (WP3A) – Lions Bay to “M” Creek

Lands	All Costs of the Province/BCTFA to be Paid by Concessionaire
That part of District Lot 1575, Group 1, New Westminster District within Reference Plan 11546 which is shown on Annexes 95 and 96 (the area of land required in this parcel as shown on Annex 95 is 0.3668 ha; and, as shown on Annex 96 is unidentified).	No
That part of Lot 51, Block B, District Lot 1575, Plan 18530 (Parcel Identifier 007-166-451) which is shown on Annex 97 (the area of land required in this parcel is 0.056 ha).	No
That part of Block A (Explanatory Plan 6448), Except Part on Highway Plan 36, District Lot 1815, Plan 3149 (Parcel Identifier 013-092-413) which is shown on Annexes 98 and 99 (the area of land required in this parcel is 0.226 ha).	No
That part of Block 5, Except (A) Part in Reference Plan 5222 and (B) Part in Highway Plan 59, District Lot 2935, Plan 4485 (Parcel Identifier 011-540-117) which is shown on Annex 100 (the area of land required in this parcel is 0.084 ha).	No

2. DB4 (WP3) – Brunswick Beach to Porteau Cove

Lands	All Costs of the Province/BCTFA to be Paid by Concessionaire
That part of Lot B, Except: Parts 15.084 Acres, 0.486 Acres, 2.513 Acres, 0.152 Acres and 0.193 Acres on Highway Plan 60, District Lot 3086, Group 1, New Westminster District (Parcel Identifier 009-171-479) which is shown on Annexes 13, 101, 102, 103 and 104 (the area of land required in this parcel as shown on Annexes 13, 103 and 104 is unidentified; as shown on Annex 103 is 0.02 ha and 0.0365 ha; and, as shown on Annex 102 is 0.003 ha and 0.041 ha). THIS LAND IS REQUIRED FOR SLOPE STABILIZATION PURPOSES.	No

Lands	All Costs of the Province/BCTFA to be Paid by Concessionaire
<p>Those parts of</p> <p>District Lot 2937 Except Portions in: (1) Reference Plan 9453; (2) Portions comprising 1.044 acres, 4.536 acres, 0.032 acres and 14.642 acres on Highway Plan 60; (3) Block C, Group 1, New Westminster District (Parcel Identifier 015-900-681); and</p> <p>District Lot 4073 Except Portions in: (1) Reference Plan 9453; (2) Portions comprising 1.546 acres, 3.917 acres, 5.444 acres and 0.523 acres on Highway Plan 60; (3) Block B, Group 1, New Westminster District (Parcel Identifier 016-624-971);</p> <p>which are shown on Annex 105 (the area of land required in these parcels is 0.1355 ha).</p> <p>THE CONCESSIONAIRE'S NEED FOR THIS LAND WILL BE DETERMINED DURING DESIGN</p>	No
<p>That part of District Lot 3425, Group 1, New Westminster District Except: Firstly; Lot A (Reference Plan 1833), Secondly; Part in Reference Plan 6587, Thirdly; Part in Highway Plan 51 (Parcel Identifier 015-875-032) which is shown on Annexes 17 and 18 (the area of land required in this parcel as shown on Annex 17 is 0.995 ha; and, as shown on Annex 18 is 0.1887 ha).</p> <p>THIS LAND IS REQUIRED FOR SLOPE STABILIZATION PURPOSES</p>	No

3. DB5, DB6, DB7 (WP4) – Porteau Cove to South Stawamus

Lands	All Costs of the Province/BCTFA to be Paid by Concessionaire
<p>That part of District Lot 4011, Group 1, New Westminster District Except: Portions in District Lots 2143, 6397 and 6524 and Part dedicated road on Plan LMP14394 (Parcel Identifier 004-865-766) which is shown on Annex 106 (the area of land required in this parcel is 0.0215 and 0.2665 ha, provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annex 25 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annex 106).</p>	No
<p>That part of District Lot 6757, Group 1, New Westminster District within Reference Plan 5394 which is shown on Annex 106 (the area of land required in this parcel is unidentified).</p>	No
<p>That part of District Lot 4011, Group 1, New Westminster District Except: Portions in District Lots 2143, 6397 and 6524 and Part dedicated road on Plan LMP14394 (Parcel Identifier 004-865-766) which is shown on the plan attached as Annex 25 (the area of land required in this parcel is 0.1175 ha).</p>	Yes

Lands	All Costs of the Province/BCTFA to be Paid by Concessionaire
That part of District Lot 4010, Group 1, New Westminster District Except Portions in District Lots 2143 and 6397 (Parcel Identifier 004-865-758) which is shown on Annex 26 (the area of land required in this parcel is 0.0766 ha and 0.0102 ha).	Yes
That part of Block H (Explanatory Plan 7565), Except: Portion Shown as 0.01 acre, 0.23 acre, 0.09 acre, 0.20 acre on Highway Plan 133, District Lot 608, Group 1, New Westminster District (Parcel Identifier 015-979-920) which is shown on Annexes 37 and 42 (the area of land required in this parcel as shown on Annex 37 is 0.1960 ha, 0.0416 ha and 0.0022 ha; and, as shown on Annex 42 is 0.2959 ha).	No
That part of Block E, Except Part on Highway Plan 133, District Lot 608, Group 1, New Westminster District, Plan 10467 (Parcel Identifier 009-413-499) which is shown on Annexes 37 and 38 (the area of land required in this parcel as shown on Annex 37 is 0.0869 ha and 0.0122 ha; and, as shown on Annex 38 is 0.0613 ha, provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annex 43 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annex 38)	No
That part of District Lot 6146, Group 1, New Westminster District, Reference Plan 4253 which is shown on Annex 107 (the area of land required in this parcel is that part of the 0.0203 ha area of land which is included in this parcel).	Yes
That part of District Lot 6835 (Reference Plan 5770) Group 1, New Westminster District (Parcel Identifier 015-769-704) which is shown on Annex 107 (the area of land required in this parcel is that part of the 0.0203 ha area of land which is included in this parcel).	Yes
That part of District Lot 1735, Group 1, New Westminster District which is shown on Annexes 107 and 108 (the area of land required in this parcel as shown on Annex 107 is 0.0696 ha, 0.0835 ha and 0.0726 ha; and, as shown on Annex 108 is 0.0184 ha).	Yes
That part of Lot 2, District Lot 1735, Group 1, New Westminster District, Plan 13051 which is shown on Annex 108 (the area of land required in this parcel is 0.0695 ha).	Yes
That part of Block E, Except Part on Highway Plan 133, District Lot 608, Group 1, New Westminster District, Plan 10467 (Parcel Identifier 009-413-499) which is shown on Annex 43 (the area of land required in this parcel is 0.2885 ha, 0.0231 ha and 0.0137 ha).	Yes

4. DB8 (WP5) – Urban Squamish

Lands	All Costs of the Province/BCTFA to be Paid by Concessionaire
That part of Lot 1, District Lot 4266, Group 1, New Westminster District, Plan LMP50904 (Parcel Identifier 025-389-114) which is shown on the plans attached as Annexes 45 and 46 (the area of land required in this parcel as shown on Annex 45 is 0.023 ha; and, as shown on Annex 46 is 0.0040 ha and 0.0094 ha).	No
That part of Lots 31 and 39, Block 16, South East ¼ of Section 3, Township 50, Group 1, New Westminister District, Plan VAP4393 which is shown on Annex 53 (the area of land required in this parcel is 0.0273 ha and 0.0155 ha)	No
That part of Lot 6 of the South East ¼ of Section 3, Township 50, Group 1, New Westminister District, Plan VAP3857 which is shown on Annexes 53 and 54 (the area of land required in this parcel as shown on Annex 53 is 0.106 ha and 0.0499 ha; and, as shown on Annex 54 is 0.0662 ha and 0.0255 ha).	No
That part of Portions of the North West ¼ of Section 2, Township 50 shown outlined red on Reference Plan 864, New Westminister District Except Plans 10670, 13367, 17230, 19496 and Reference Plans 1127 and 15402 (Parcel Identifier 024-342-653) which is shown on Annex 109 (the area of land required in this parcel is 0.0806 ha and 0.0039 ha).	No

5. DB12 and DB13 (WP8) – Cheakamus Canyon North to Function Junction

Lands	All Costs of the Province/BCTFA to be Paid by Concessionaire
That part of the Unsurveyed Crown land within Reference Plan 6589 which is shown on Annexes 68 and 69 (the area of land required in this parcel as shown on Annex 68 is 0.596 ha; and, as shown on Annex 69 is 0.002 ha).	No
That part of Lot 34, District Lot 3116, Plan 17439 (Parcel Identifier 007-277-920) , which is shown on Annex 73 (the area of land required in this parcel is 0.164 ha).	No
That part of District Lot 3116, Group 1, New Westminister District Except those portions in Plans 13460 and 14193 (Parcel Identifier 015-890-295) which is shown on Annexes 73 and 110 (the area of land required in this parcel as shown on Annex 73 is 0.375 ha; and, as shown on Annex 110 is 0.103 ha).	No
That part of Lot 4, Except Part in Plan 14374, District Lot 3116, Plan 14193 (Parcel Identifier 007-898-517) which is shown on Annex 73 (the area of land required in this parcel is 0.143 ha, provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annex 111 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annex 73).	No

Lands	All Costs of the Province/BCTFA to be Paid by Concessionaire
That part of Lot 13, District Lot 3116, Plan 14374 (Parcel Identifier 007-841-612) which is shown on Annex 73 (the area of land required in this parcel is 0.0248 ha).	No
That part of Lot 14, District Lot 3116, Plan 14374 (Parcel Identifier 007-841-639) which is shown on Annex 73 (the area of land required in this parcel is 0.0079 ha).	No
That part of Lot 12, District Lot 3116, Plan 14374 (Parcel Identifier 007-841-591) which is shown on Annexes 73 and 110 (the area of land required in this parcel as shown on Annex 73 is 0.0191 ha; and, as shown on Annex 110 is 0.0075 ha).	No
That part of Lot 7, District Lot 3116, Plan 14374 (Parcel Identifier 007-841-507) which is shown on Annex 110 (the area of land required in this parcel is 0.0357 ha).	No
That part of Lot 8, District Lot 3116, Plan 14374 (Parcel Identifier 007-841-558) which is shown on Annex 110 (the area of land required in this parcel is 0.0125 ha).	No
That part of Lot A, District Lot 3116, Plan 14374 (Parcel Identifier 007-842-236) which is shown on Annex 110 (the area of land required in this parcel is 0.0481 ha).	No
That part of Lot 11, District Lot 3116, Plan 14374 (Parcel Identifier 007-841-574) which is shown on Annex 110 (the area of land required in this parcel is 0.0191 ha).	No
That part of Lot 1, Except Part in Statutory Right of Way Plan 15442, District Lot 3115, Plan 7212 (Parcel Identifier 010-750-584) which is shown on Annex 110 (the area of land required in this parcel is 0.0824 ha, provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annex 112 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annex 110).	No
That part of Lot 2, District Lot 3115, Plan 7212 (Parcel Identifier 010-750-011) which is shown on Annex 110 (the area of land required in this parcel is 0.02 ha).	No
That part of Lot 3, District Lot 3115, Plan 7212 (Parcel Identifier 010-750-037) which is shown on Annex 110 (the area of land required in this parcel is 0.0083 ha).	No
That part of Lot 4, District Lot 3115, Plan 7212 (Parcel Identifier 010-750-053) which is shown on Annex 110 (the area of land required in this parcel is 0.0006 ha.).	No
That part of Block C, District Lot 3115, Plan 12028 (Parcel Identifier 008-966-443) which is shown on Annex 110 (the area of land required in this parcel is 0.0254 ha, provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annexes 112 and 113 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annex 110).	No

Lands	All Costs of the Province/BCTFA to be Paid by Concessionaire
That part of Block B, District Lot 3115, Plan 12028 (Parcel Identifier 008-966-401) which is shown on Annex 74 (the area of land required in this parcel is 0.0097 ha provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annex 113 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annex 74).	No
That part of District Lot 5627 (Reference Plan 2310), Group 1, New Westminster District (Parcel Identifier 015-781-640) which is shown on Annexes 76, 77 and 80 (the area of land required in this parcel as shown on Annex 76 is 0.0055 ha; as shown on Annex 78 is 1.32 ha; and, as shown on Annex 80 is 0.2566 ha).	No
That part of District Lot 3116, Group 1, New Westminster District Except those portions in Plans 13460 and 14193 (Parcel Identifier 015-890-295) which is shown on Annexes 111 (the area of land required in this parcel is 0.1527 ha).	Yes
That part of Lot 4, Except Part in Plan 14374, District Lot 3116, Plan 14193 (Parcel Identifier 007-898-517) which is shown on Annex 111 (the area of land required in this parcel is 0.0567 ha).	Yes
That part of Lot 1, Except Part in Statutory Right of Way 15442, District Lot 3115, Plan 7212 (Parcel Identifier 010-750-584) which is shown on Annex 112 (the area of land required in this parcel is 0.2658 ha and 0.1274 ha).	Yes
That part of Block C, District Lot 3115, Plan 12028 (Parcel Identifier 008-966-443) which is shown on Annexes 112 and 113 (the area of land required in this parcel as shown on both annexes is 0.152 ha).	Yes
That part of Block B, District Lot 3115, Plan 12028 (Parcel Identifier 008-966-401) which is shown on Annex 113 (the area of land required in this parcel is 0.2658 ha and 0.12 ha).	Yes
That part of District Lot 4102, Group 1, New Westminster District Except Part in Plan 19821 (Parcel Identifier 015-863-999) which is shown on Annexes 114 and 115 (the area of land required in this parcel as shown on Annex 114 is 0.0006 ha, 0.0051 ha and 0.1156 ha; and, as shown on Annex 115 is 0.2726 ha, 0.02706 ha and 0.031 ha).	No
That part of District Lot 4098, Except: Part on Highway Plan 105, Group 1, New Westminster District (Parcel Identifier 015-863-531) which is shown on Annexes 81, 116 and 117 (the area of land required in this parcel as shown on Annex 81 is 0.0455 ha, 0.4048 ha, 0.4851 ha, 0.1129 ha and 0.7524 ha; as shown on Annex 116 is 0.4112 ha and 0.5031 ha, less the area of land shown as "Not Required" on Annex 121; and, as shown on Annex 117 is 0.8878 ha, 0.3038 ha and 0.0733 ha, provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annex 122 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annexes 81, 116 and 117).	No

Lands	All Costs of the Province/BCTFA to be Paid by Concessionaire
That part of the Unsurveyed Crown land which is shown on Annexes 85, 86, 89, 90, 117, 118, 119 and 120 (the area of Crown land required as shown on Annex 85 is 0.1082 ha and 0.2818 ha; as shown on Annex 86 is 0.3818 ha; as shown on Annex 89 is 0.052 ha and 1.3164 ha; as shown on Annex 90 is 0.3518 ha and 0.409 ha; as shown on Annex 117 is 0.0228 ha; as shown on Annex 118 is 0.0415 ha and 0.0088 ha; as shown on Annex 119 is 0.1535 ha, 0.0025 ha and 0.0648; and, as shown on Annex 120 is 0.0603 ha, provided, however, that such area of land will be reduced by the area of land which is identified for acquisition by the Concessionaire as shown on Annexes 94, 123, 124 and 125 to the extent the area of land identified for acquisition by the Concessionaire overlaps the area of land shown on Annexes 85, 86, 89, 90, 117, 118, 119 and 120).	No
That part of District Lot 4098, Except: Part on Highway Plan 105, Group 1, New Westminster District (Parcel Identifier 015-863-531) which is shown on Annexes 121 and 122 (the area of land required in this parcel as shown on Annex 121 is 0.3838 ha; and, as shown on Annex 122 is 0.0787 ha).	Yes
That part of the Unsurveyed Crown land which is shown on Annexes 94, 123, 124, and 125 (the area of Crown land required in this parcel as shown on as shown on Annexes 94 and 125 is 0.0448 ha and 0.0967 ha; as shown on Annex 123 is 0.0111 ha and 0.0124 ha; and, as shown on Annex 124 is 0.0261 ha).	Yes

The drawings attached as annexes to this Part 3 of Schedule 4, are as follows:

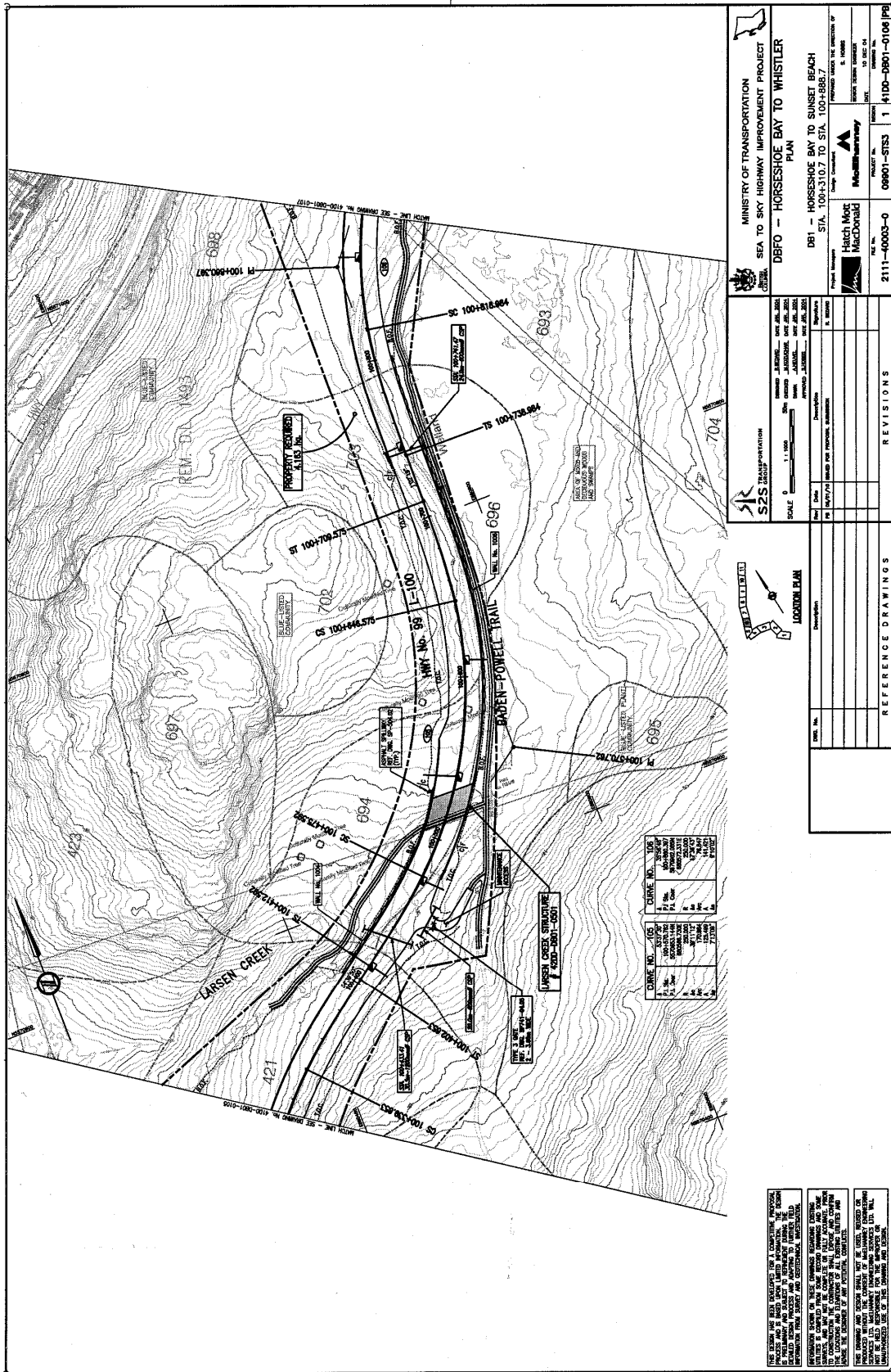
ANNEX	DRAWING NUMBER	REVISION	DRAFTER
1	41DD-DB01-0106	PB	S2S Transportation Group
2	41DD-DB01-0107	PB	S2S Transportation Group
3	41DD-BD01-0104	PB	S2S Transportation Group
4	41DD-BD01-0105	PB	S2S Transportation Group
5	41DD-DB01-0108	PB	S2S Transportation Group
6	41DD-DB01-0109	PB	S2S Transportation Group
7	41DD-DB01-0110	PB	S2S Transportation Group
8	41DD-PDHS-0602(a)	0	CH2MHILL
9	41DD-DB03-0105	PC	S2S Transportation Group
10	41DD-DB04-0110	PB	S2S Transportation Group
11	41DD-DB04-0112	PB	S2S Transportation Group
12	41DD-DB04-0113	PB	S2S Transportation Group
13	41DD-DB04-0204	0	SNC – Lavalin
14	41DD-DB04-0210	0	SNC – Lavalin
15	41DD-DB04-0211	0	SNC – Lavalin
16	41DD-PD05-3001	0	SNC – Lavalin
17	41DD-PD05-3002	0	SNC – Lavalin
18	41DD-PD05-3003	0	SNC – Lavalin
19	41DD-PD05-3004	0	SNC – Lavalin
20	41DD-PD05-3007	0	SNC – Lavalin
21	41DD-DB05-0102	PC	S2S Transportation Group
22	41DD-DB05-0103	PC	S2S Transportation Group
23	41DD-DB05-0104	PC	S2S Transportation Group
24	41DD-DB05-0106	PC	S2S Transportation Group
25	41DD-DB05-0107	PC	S2S Transportation Group
26	41DD-DB05-0108	PC	S2S Transportation Group
27	41DD-PD06-3002	0	SNC – Lavalin
28	41DD-PD06-3003	0	SNC – Lavalin
29	41DD-PD06-3004	0	SNC – Lavalin
30	41DD-DB06-0101	PC	S2S Transportation Group
31	41DD-DB06-0102	PC	S2S Transportation Group
32	41DD-DB06-0103	PC	S2S Transportation Group
33	41DD-DB06-0104	PC	S2S Transportation Group
34	41DD-PD07-3004	0	SNC – Lavalin

ANNEX	DRAWING NUMBER	REVISION	DRAFTER
35	41DD-PD07-3005	0	SNC – Lavalin
36	41DD-PD07-3006	0	SNC – Lavalin
37	41DD-PD07-3007	0	SNC – Lavalin
38	41DD-PD07-3008	0	SNC – Lavalin
39	41DD-PD07-3009	0	SNC – Lavalin
40	41DD-DB07-0104	PC	S2S Transportation Group
41	41DD-DB07-0105	PC	S2S Transportation Group
42	41DD-DB07-0106	PC	S2S Transportation Group
43	41DD-DB07-0107	PC	S2S Transportation Group
44	41DD-DB07-0108	PC	S2S Transportation Group
45	41DD-PD08-3003	PB	R. F. Binnie and Associates Ltd.
46	41DD-PB08-3004	PB	R. F. Binnie and Associates Ltd.
47	41DD-PD08-3005	PB	R. F. Binnie and Associates Ltd.
48	41DD-PD08-3006	PB	R. F. Binnie and Associates Ltd.
49	41DD-PD08-3007B	PB	R. F. Binnie and Associates Ltd.
50	41DD-PD08-3008B	PB	R. F. Binnie and Associates Ltd.
51	41DD-PD08-3009	PB	R. F. Binnie and Associates Ltd.
52	41DD-PD08-3013	PB	R. F. Binnie and Associates Ltd.
53	41DD-PD08-3015	PB	R. F. Binnie and Associates Ltd.
54	41DD-PD08-3016	PB	R. F. Binnie and Associates Ltd.
55	41DD-PD08-3018	PB	R. F. Binnie and Associates Ltd.
56	41DD-PD08-3019	PB	R. F. Binnie and Associates Ltd.
57	41DD-PD08-3020	PB	R. F. Binnie and Associates Ltd.
58	41DD-PD08-3021	PB	R. F. Binnie and Associates Ltd.
59	41DD-PD08-3022	PB	R. F. Binnie and Associates Ltd.
60	41DD-PD08-3023	PB	R. F. Binnie and Associates Ltd.
61	41DD-PD08-3025	PB	R. F. Binnie and Associates Ltd.
62	41DD-PD08-3026	PB	R. F. Binnie and Associates Ltd.
63	41DD-PD08-3027	PB	R. F. Binnie and Associates Ltd.
64	41DD-PD08-3028	PB	R. F. Binnie and Associates Ltd.
65	41DD-PD08-3029	PB	R. F. Binnie and Associates Ltd.
66	41DD-PD08-3023	PB	R. F. Binnie and Associates Ltd.
67	41DD-DB08-0129	PC	S2S Transportation Group
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69	41DD-PD12-3002	1	SNC – Lavalin
70	41DD-PD12-3003	0	SNC – Lavalin

ANNEX	DRAWING NUMBER	REVISION	DRAFTER
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73	41DD-PD12-3006	0	SNC – Lavalin
74	41DD-PD12-3008	0	SNC – Lavalin
75	41DD-PD12-3009	0	SNC – Lavalin
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77	41DD-PD12-3011	0	SNC – Lavalin
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79	41DD-DB12-0109	PD	S2S Transportation Group
80	41DD-PD13-3001	1	SNC – Lavalin
81	41DD-PD13-3008	1	SNC – Lavalin
82	41DD-PD13-3015	1	SNC – Lavalin
83	41DD-PD13-3016	1	SNC – Lavalin
84	41DD-PD13-3017	1	SNC – Lavalin
85	41DD-PD13-3018	1	SNC – Lavalin
86	41DD-PD13-3019	1	SNC – Lavalin
87	41DD-PD13-3020	1	SNC – Lavalin
88	41DD-PD13-3021	1	SNC – Lavalin
89	41DD-PD13-3023	1	SNC – Lavalin
90	41DD-PD13-3024	1	SNC – Lavalin
91	41DD-DB13-0115	PC	S2S Transportation Group
92	41DD-DB13-0119	PC	S2S Transportation Group
93	41DD-DB13-0120	PC	S2S Transportation Group
94	41DD-DB13-0125	PC	S2S Transportation Group
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96	41DD-DB03-0202	1	SNC – Lavalin
97	41DD-PDHS-0602(a)	0	CH2MHILL
98	41DD-PDHS-0608	1	CH2MHILL
99	41DD-DB03-0104	PC	S2S Transportation Group
100	41DD-PDHS-0610	0	CH2MHILL
101	41DD-DB04-0102	PB	S2S Transportation Group
102	41DD-DB04-0103	PB	S2S Transportation Group
103	41DD-DB04-0202	0	SNC – Lavalin
104	41DD-DB04-0203	0	SNC – Lavalin
105	41DD-DB04-0106	PB	S2S Transportation Group
106	41DD-PD05-3008	0	SNC – Lavalin

ANNEX	DRAWING NUMBER	REVISION	DRAFTER
107	41DD-DB07-0102	PC	S2S Transportation Group
108	41DD-DB07-0103	PC	S2S Transportation Group
109	41DD-DB08-0116	PC	S2S Transportation Group
110	41DD-PD12-3007	1	SNC – Lavalin
111	41DD-DB12-0106	PD	S2S Transportation Group
112	41DD-DB12-0107	PD	S2S Transportation Group
113	41DD-DB12-0108	PD	S2S Transportation Group
114	41DD-PD13-3002	1	SNC – Lavalin
115	41DD-DB13-0102	PC	S2S Transportation Group
116	41DD-PD13-3007	1	SNC – Lavalin
117	41DD-PD13-3009	1	SNC – Lavalin
118	41DD-PD13-3010	1	SNC – Lavalin
119	41DD-PD13-3022	1	SNC – Lavalin
120	41DD-DB13-0106	PC	S2S Transportation Group
121	41DD-DB13-0107	PC	S2S Transportation Group
122	41DD-DB13-0108	PC	S2S Transportation Group
123	41DD-DB13-0121	PC	S2S Transportation Group
124	41DD-DB13-0123	PC	S2S Transportation Group
125	41DD-DB13-0126	PC	S2S Transportation Group

Annex 1



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN
 DB1 - HORSESHOE BAY TO SUNSET BEACH
 STA. 100+310.7 TO STA. 100+888.7

Project Manager: Hatch Mott MacDonald
Design Consultant: Mott MacDonald
Project No.: 09801-SITS 1
Revision No.: 1
Date: 11/09/03

Scale: 0 1.1 km

DATE | **BY** | **DESCRIPTION**

DATE	BY	DESCRIPTION

REVISIONS

REFERENCE DRAWINGS

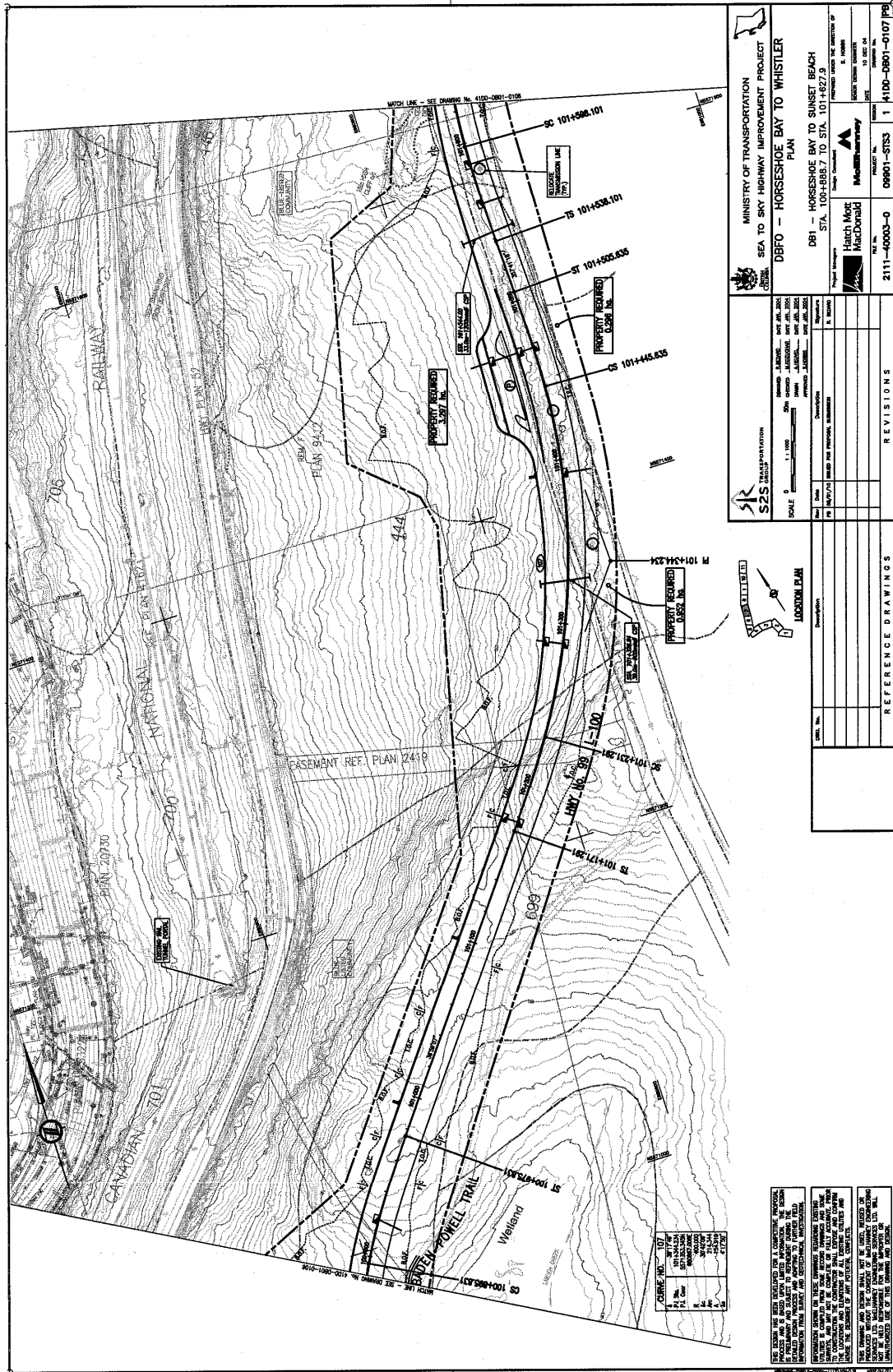
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NOTE: THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES. IT IS FOR INFORMATION ONLY AND IS NOT TO BE USED FOR ANY OTHER PURPOSES. THE USER OF THIS DRAWING IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AUTHORITIES. THE USER OF THIS DRAWING IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AUTHORITIES. THE USER OF THIS DRAWING IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AUTHORITIES.

DATE | **BY** | **DESCRIPTION**

DATE	BY	DESCRIPTION

Annex 2



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

Project Number: DB1 - HORSESHOE BAY TO SUNSET BEACH
 STA. 100+888.7 TO STA. 101+827.9

Project Name: **HATCH MOORE MacDonald**

Project No.: 2111-0000-0
 Revision: 1
 Date: 10 DEC 04

Scale: 1:1000

Drawn: [Name]
 Checked: [Name]
 Date: [Date]

REVISIONS

No.	Date	Description

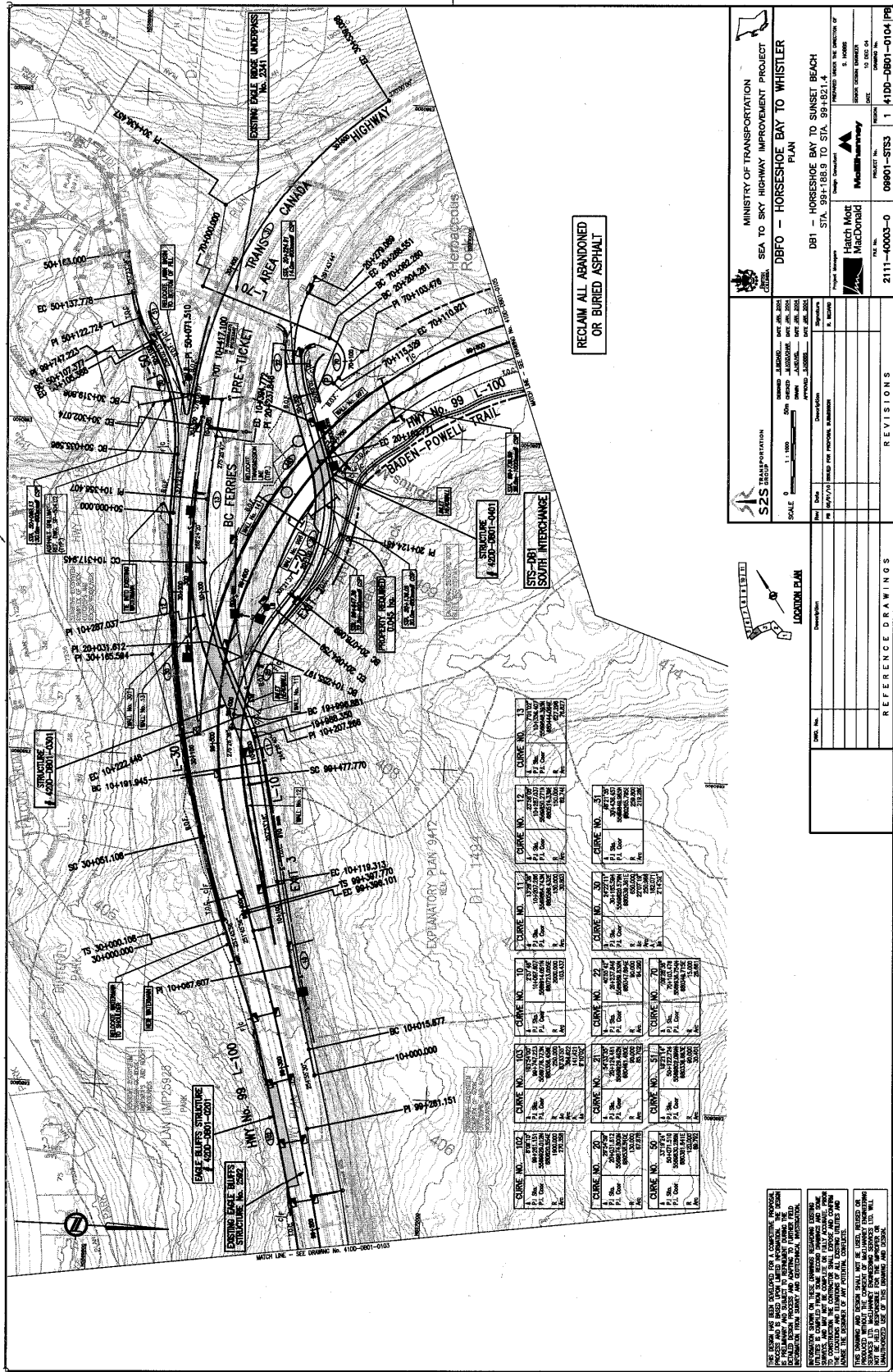
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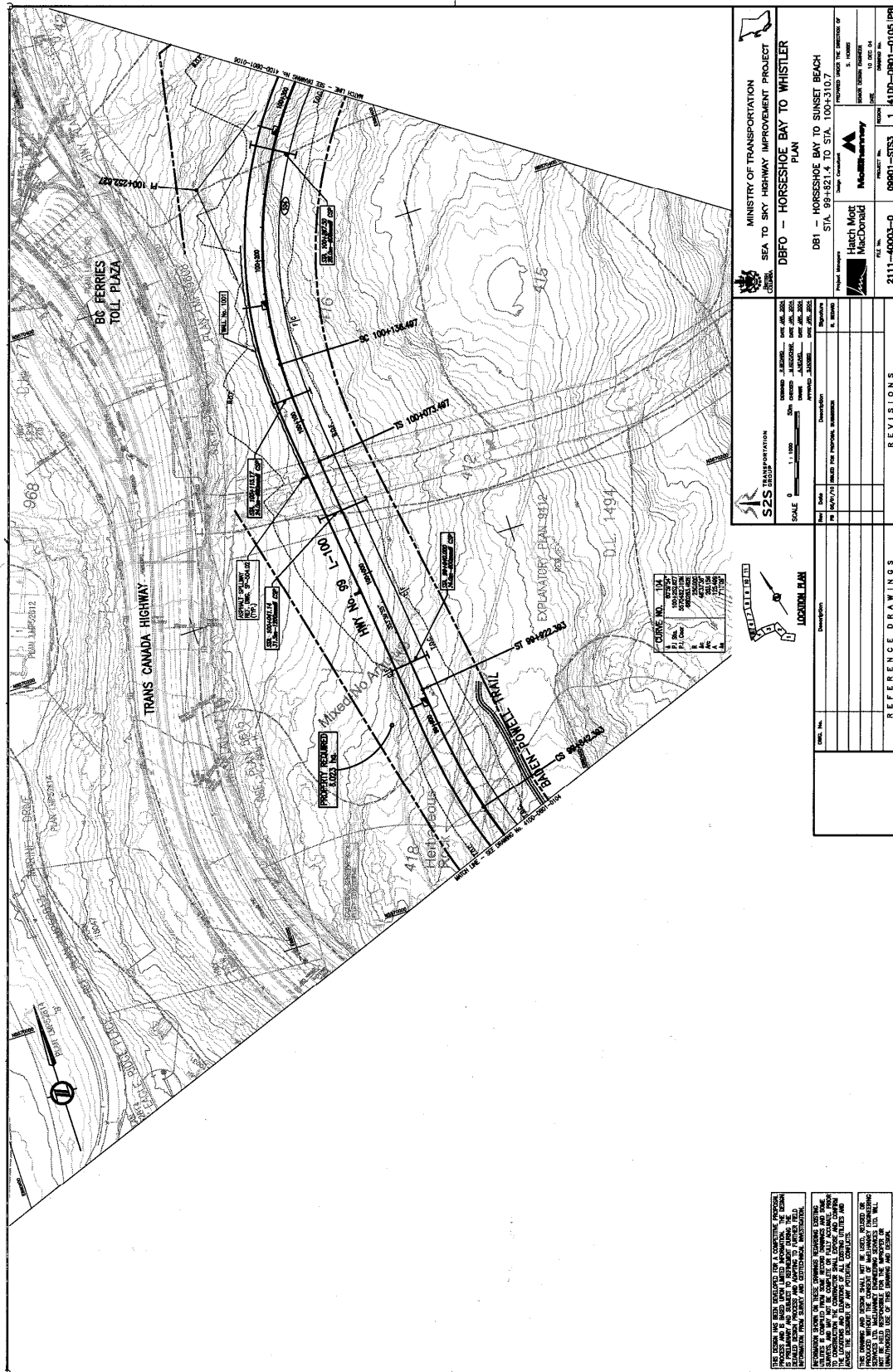
NOTES:

- THE DRAWING HAS BEEN PREPARED FOR A CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES.
- PROPERTY BOUNDARIES SHOWN ON THIS DRAWING ARE BASED ON THE RECORD DRAWINGS AND FIELD SURVEY DATA. THE CONTRACTOR SHALL VERIFY THE ACCURACY OF THESE BOUNDARIES AND THE LOCATION AND EXTENT OF ALL UTILITIES AND SERVICES BEFORE THE COMMENCEMENT OF ANY CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES AND AGENCIES.

Annex 3



Annex 4



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

DB1 - HORSESHOE BAY TO SUNSET BEACH
STA. 99+521.4 TO STA. 100+310.7

Project Manager: **Hatch Mott MacDonald**
Prepared for the use of: **BC Ferries**

Project No.: 2111-6003-0
Revision No.: 08901-ST33
Date: 141D-0801-01051P8

REVISIONS

No.	Date	Description

REFERENCE DRAWINGS

Sheet No.	Description

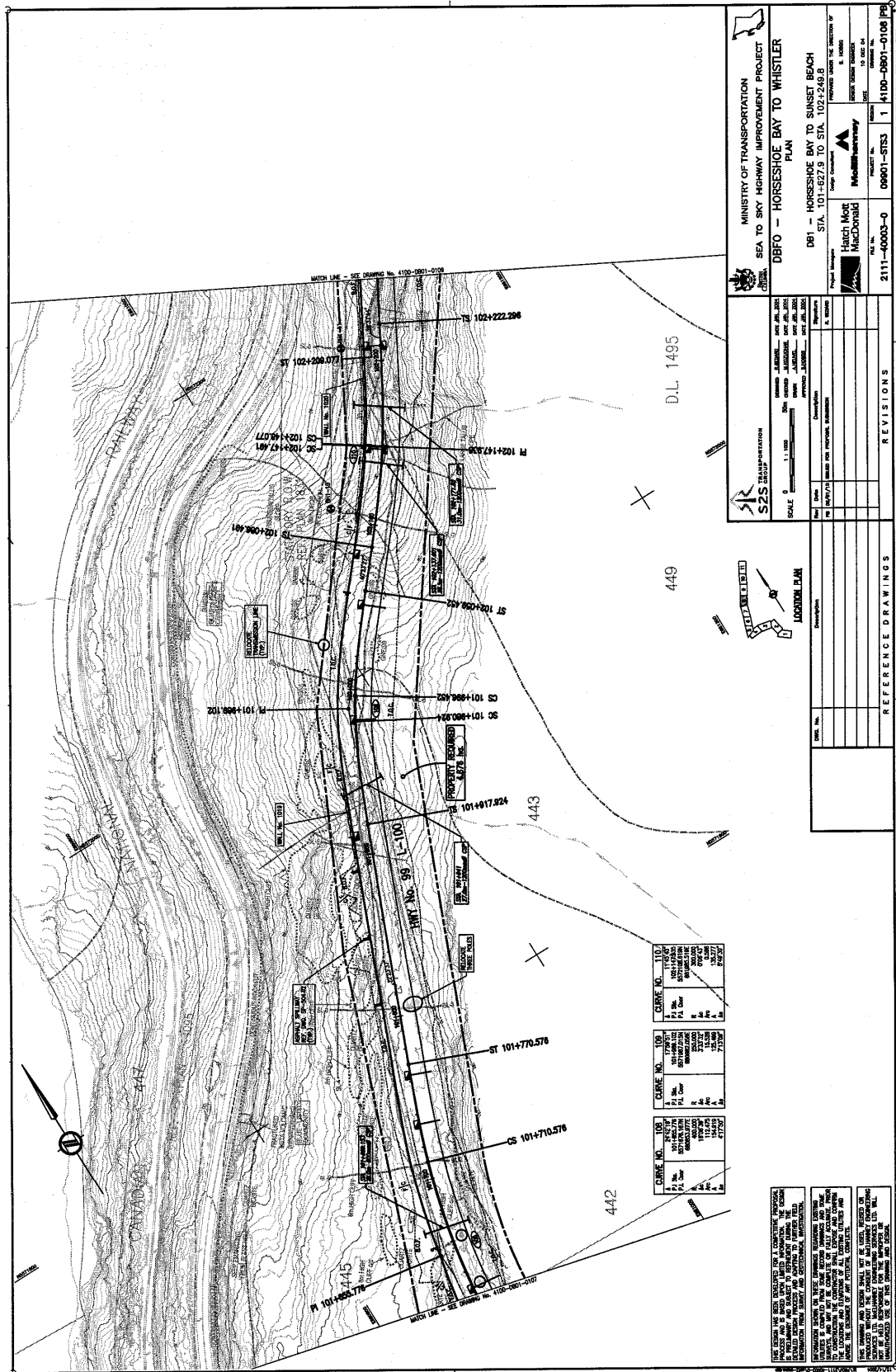
NOTES:

1. THIS DRAWING IS THE PROPERTY OF HATCH MOTT MACDONALD AND SHOULD NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF HATCH MOTT MACDONALD.

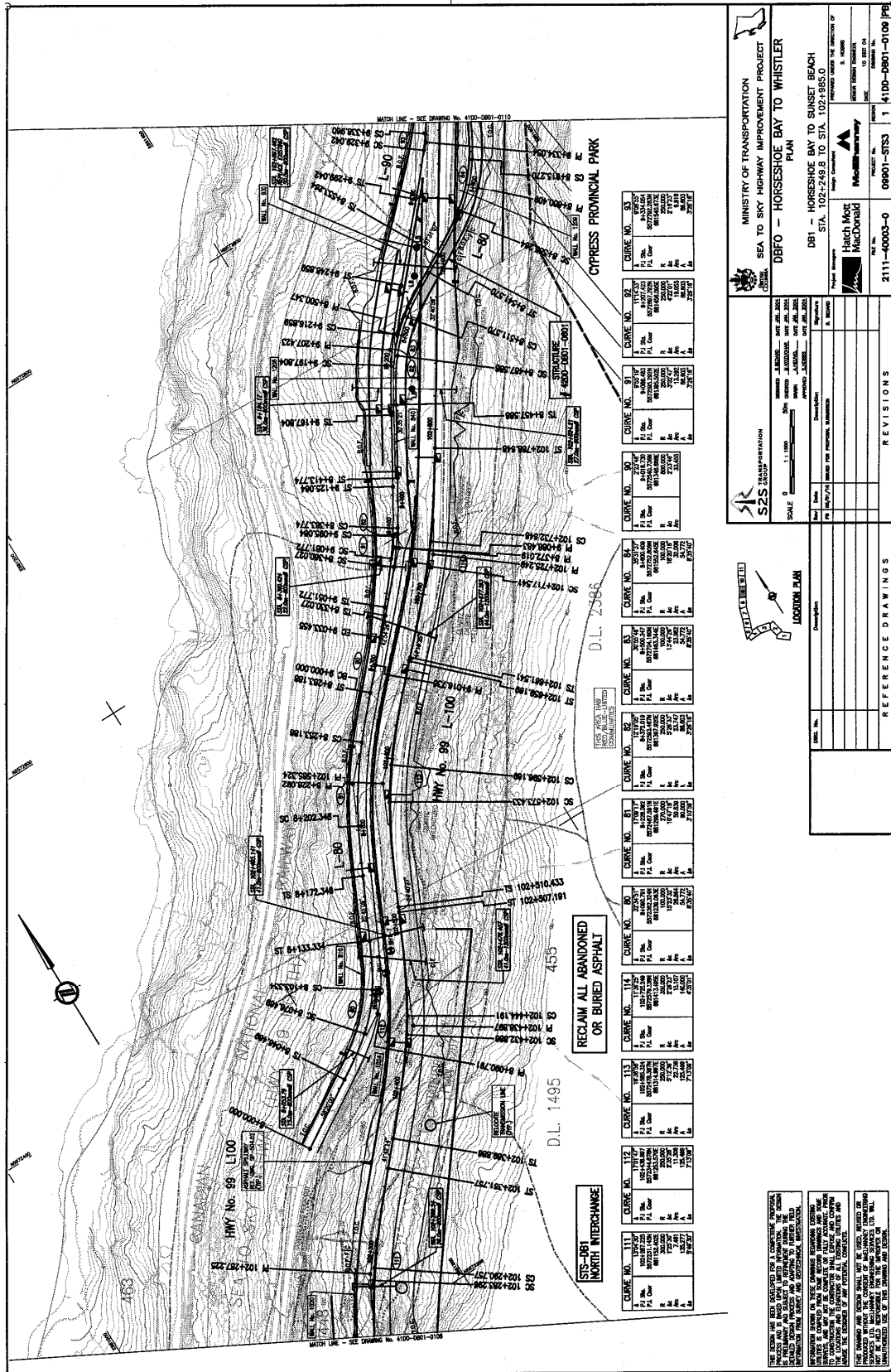
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3. THIS DRAWING IS THE PROPERTY OF HATCH MOTT MACDONALD AND SHOULD NOT BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS, ELECTRONIC OR MECHANICAL, INCLUDING PHOTOCOPYING, RECORDING, OR BY ANY INFORMATION STORAGE AND RETRIEVAL SYSTEM, WITHOUT THE WRITTEN PERMISSION OF HATCH MOTT MACDONALD.

Annex 5



Annex 6



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

DBFO - HORSESHOE BAY TO SUNSET BEACH
STA. 102+249.6 TO STA. 102+585.0

Hatch Mac
MacDonald

PROJECT NO. 09901-STES 1 41DD-DBO1-0109 PB

DATE: 2011-04-03-0

MINISTRY OF TRANSPORTATION
S2S GROUP

SCALE: 1:1000

DATE: 2011-04-03

PROJECT NO. 09901-STES 1 41DD-DBO1-0109 PB

DATE: 2011-04-03

REVISIONS

NO.	DATE	DESCRIPTION

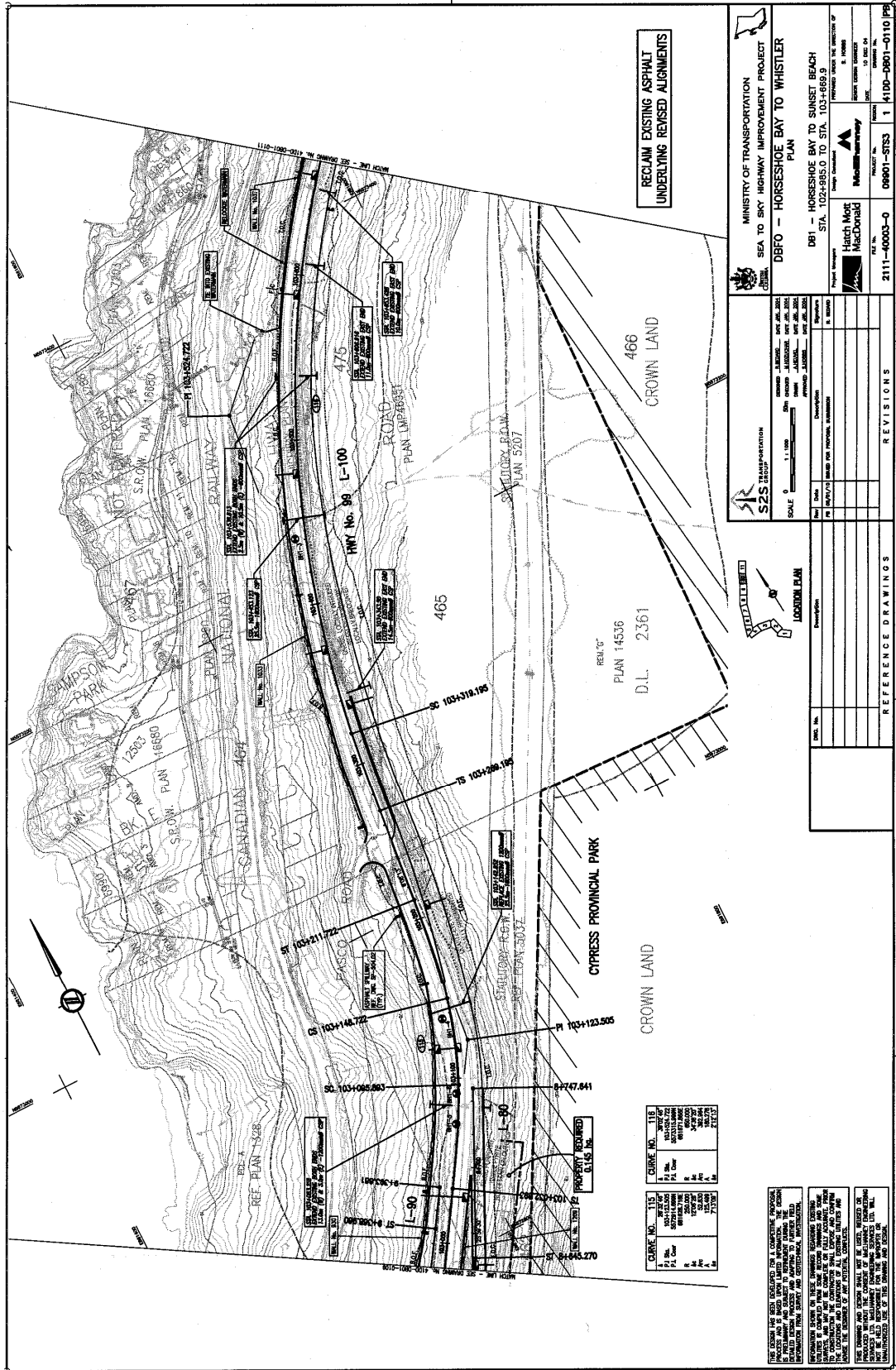
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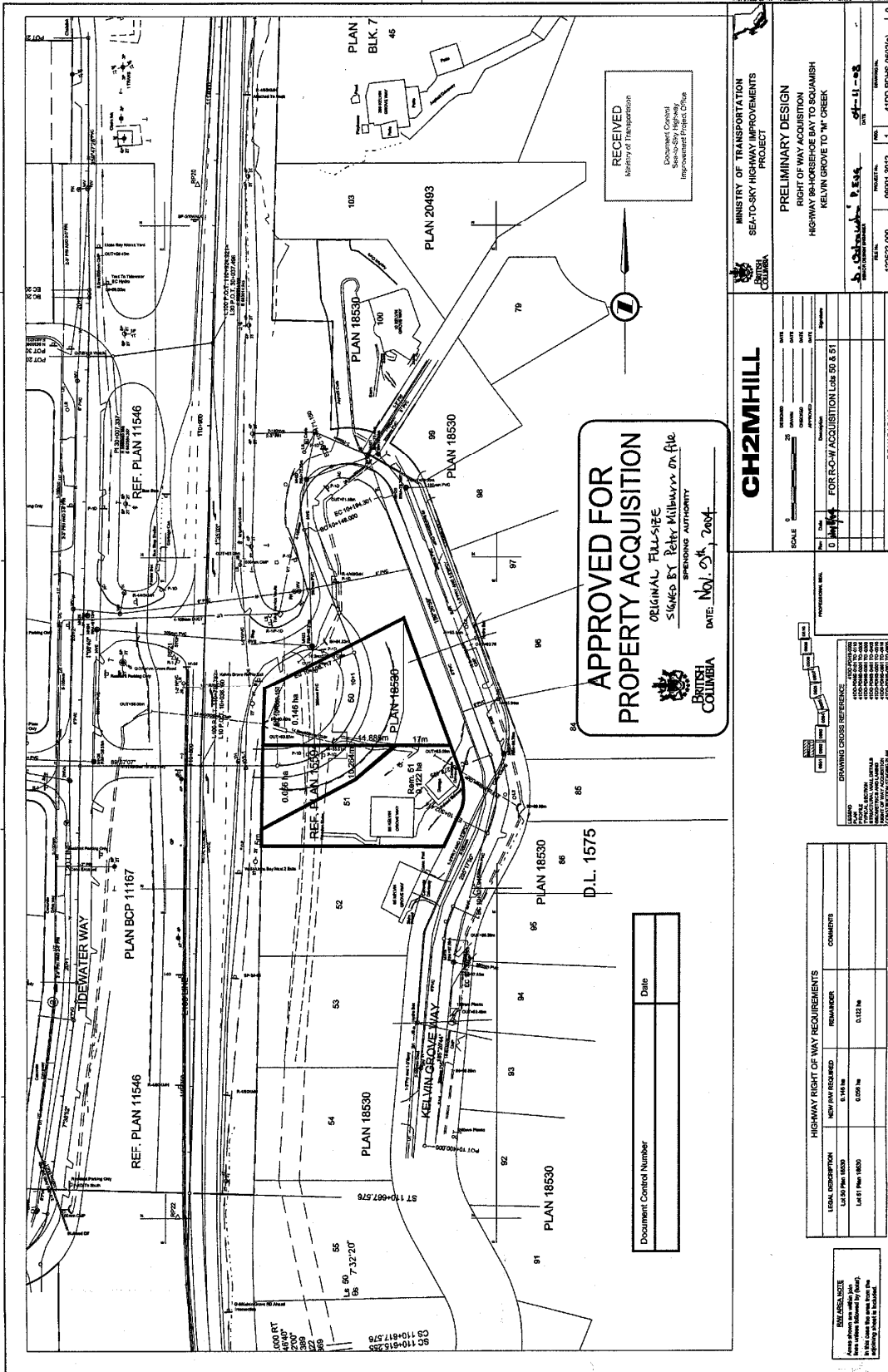
NOTES:

- THE DRAWING AND CURVE SHALL BE USED, UNLESS OTHERWISE SPECIFIED, IN CONNECTION WITH THE ROADWAY IMPROVEMENT PROJECT AND SHALL BE SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT AND THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- THE DRAWING AND CURVE SHALL BE USED, UNLESS OTHERWISE SPECIFIED, IN CONNECTION WITH THE ROADWAY IMPROVEMENT PROJECT AND SHALL BE SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT AND THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- THE DRAWING AND CURVE SHALL BE USED, UNLESS OTHERWISE SPECIFIED, IN CONNECTION WITH THE ROADWAY IMPROVEMENT PROJECT AND SHALL BE SUBJECT TO THE TERMS AND CONDITIONS OF THE CONTRACT AND THE STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.

Annex 7



Annex 8



**APPROVED FOR
PROPERTY ACQUISITION**
ORIGINAL FULL-SIZE
SIGNED BY Peter Milbrunn, DA file
SPENDING AUTHORITY
DATE: Nov. 9th, 2004



CH2MHILL

MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENTS
PROJECT

PRELIMINARY DESIGN
RIGHT OF WAY ACQUISITION
HIGHWAY BRANSHORSE WAY TO SALAMISH
KELVIN GROVE TO 'M' CREEK

SCALE: 0 10 20 30 40 50 METERS

FOR R.O.W. ACQUISITION LOTS 50 & 51

NO.	DATE	REVISIONS

LEGAL DESCRIPTION	NEW R/W REQUIRED	REMARKS	COMMENTS
Lot 50 Plan 18530	0.148 ha	0.148 ha	
Lot 51 Plan 18530	0.099 ha	0.122 ha	0.122 ha

DRAWING CROSS REFERENCE

100 DRAWING TO SEE
100 DRAWING TO SEE
100 DRAWING TO SEE
100 DRAWING TO SEE
100 DRAWING TO SEE
100 DRAWING TO SEE
100 DRAWING TO SEE
100 DRAWING TO SEE

DATE ACQUISITION
Areas shown are within 100m
from either side of the
proposed highway right-of-way
boundary shown in this plan.

BRITISH COLUMBIA

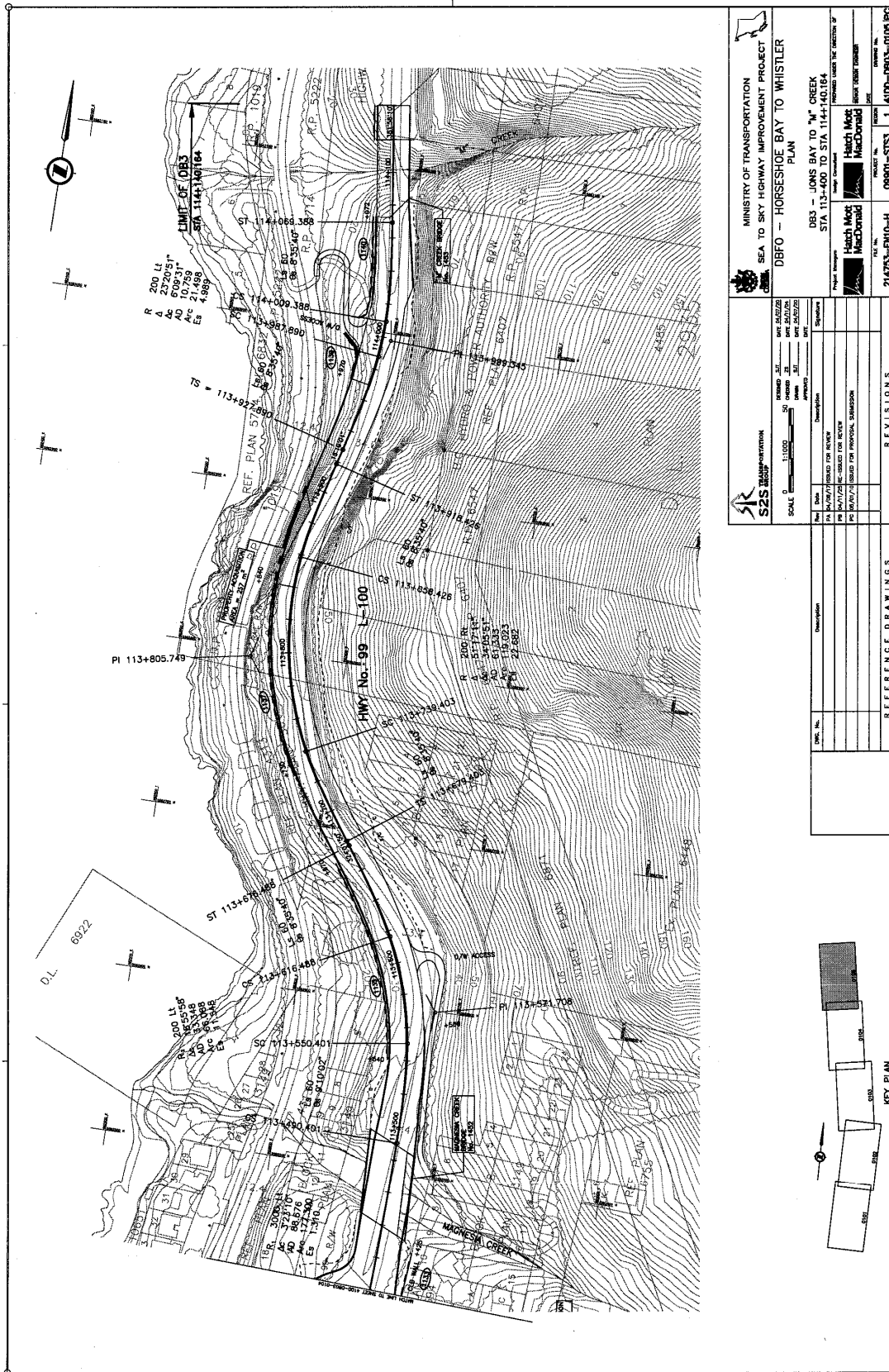
MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENTS
PROJECT

PRELIMINARY DESIGN
RIGHT OF WAY ACQUISITION
HIGHWAY BRANSHORSE WAY TO SALAMISH
KELVIN GROVE TO 'M' CREEK

DATE: Nov. 9th, 2004

122523-000 09901-3012 41DD-FCHS-06020

Annex 9



SR
S2S GROUP

MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

DBS - JONS BAY TO "M" CREEK
STA 113+400 TO STA 1144+140.184

Project Engineer: **Hatch Mott MacDonald**
Checked: **Hatch Mott MacDonald**
Reviewed Under the Direction of: **Hatch Mott MacDonald**
DATE: _____

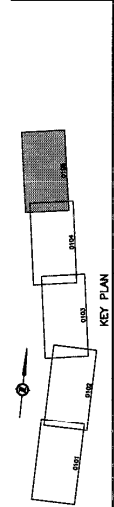
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PROJECT NO.: 09001-ST3
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CANCEL: WHITE REVISION PROPOSAL LETTER

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DATE: 25/02/2015
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CHECKED BY: [Name]
APPROVED BY: [Name]

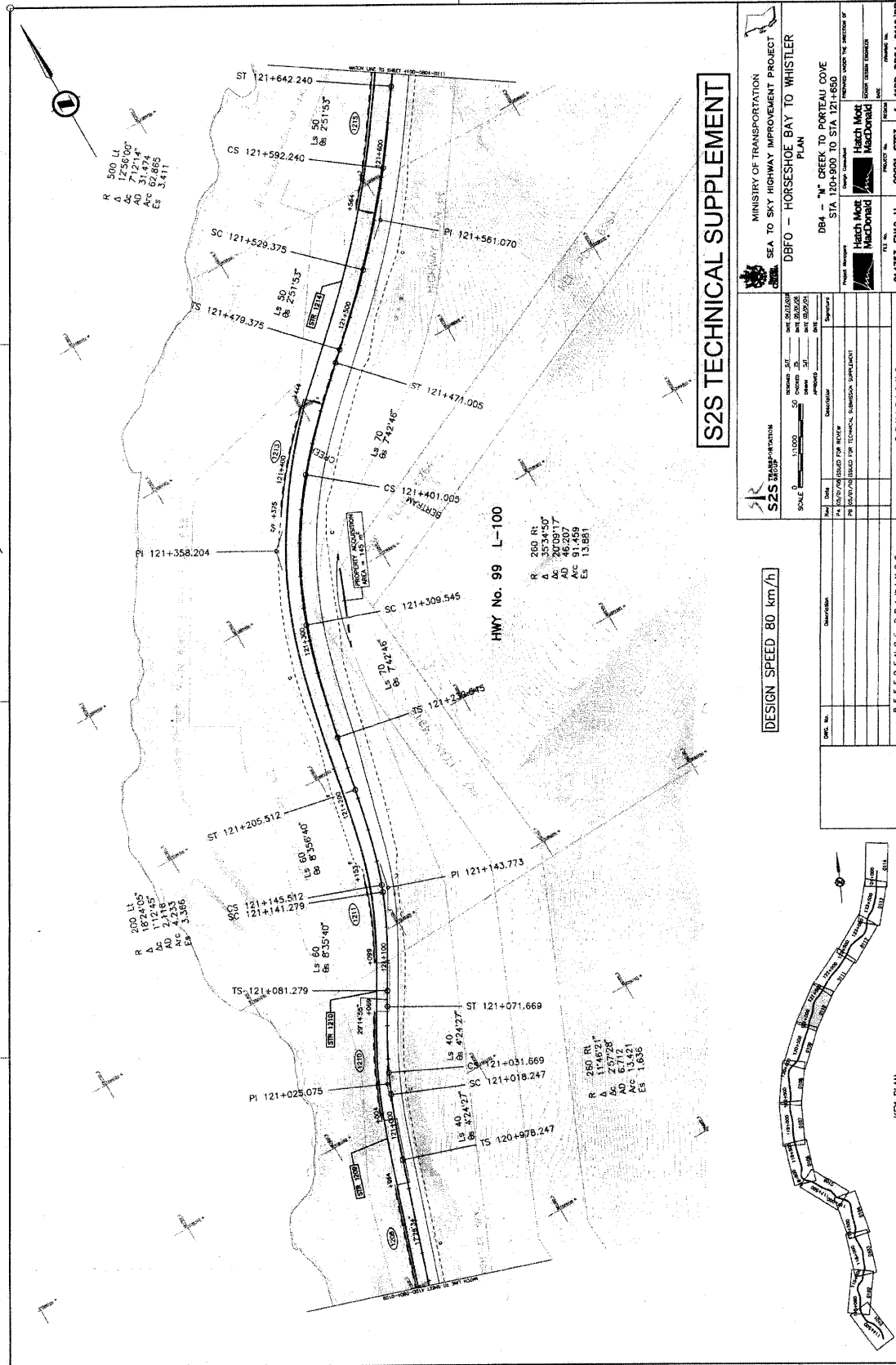
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NO SCALE/NO CHECKED FOR PROVISIONAL DIMENSION

REVISIONS

NO.	DESCRIPTION



Annex 10



S2S TECHNICAL SUPPLEMENT

MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN
DBA - "M" CREEK TO PORTEAU COVE
STA 120+900 TO STA 121+650

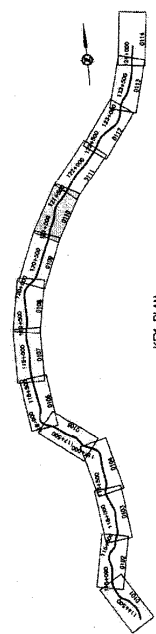
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DATE 12/20/2008
DRAWN BY J.S.
CHECKED BY J.S.
APPROVED BY J.S.

DESIGNED BY J.S.
CHECKED BY J.S.
APPROVED BY J.S.

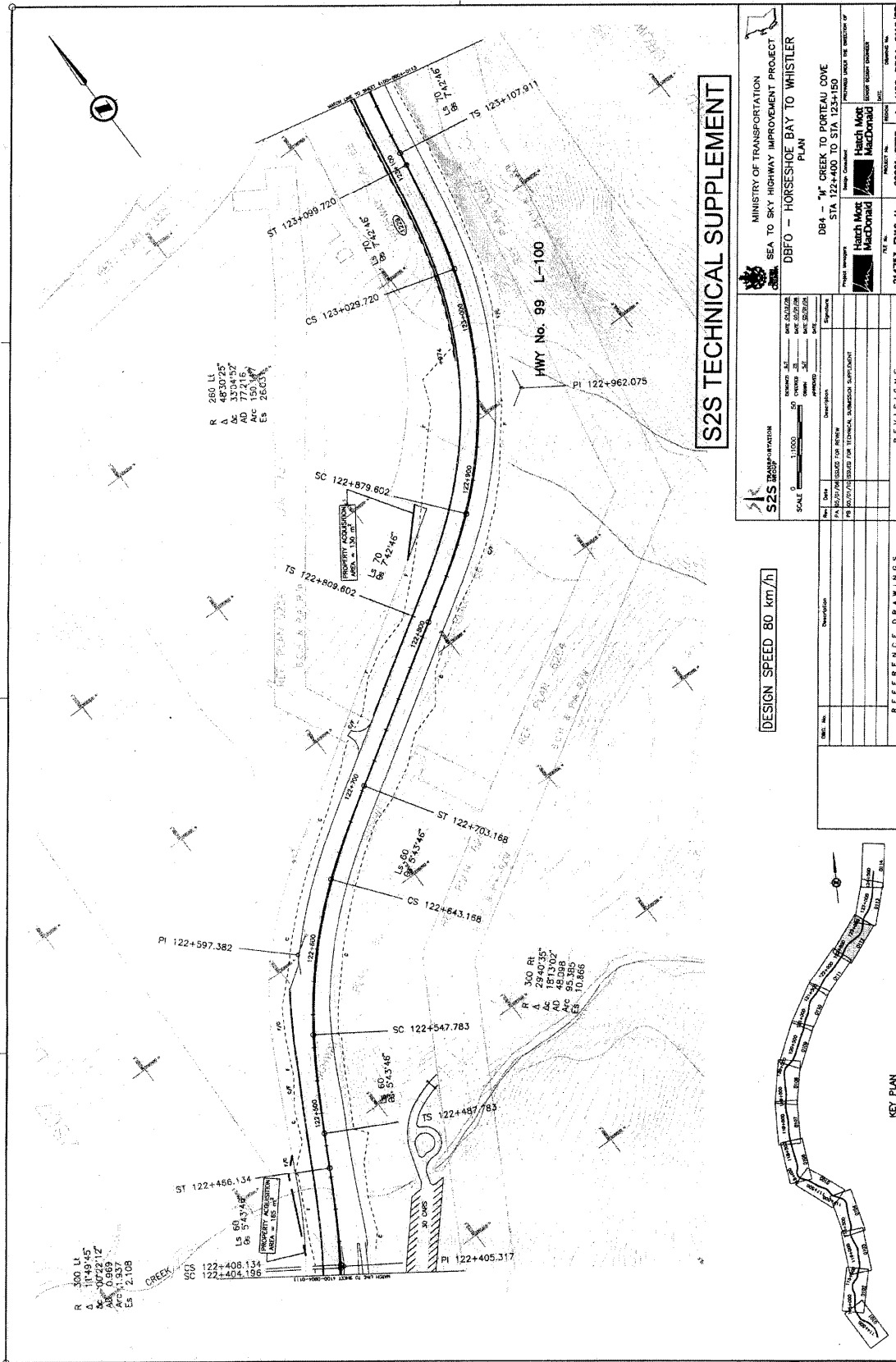
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DRAWING NUMBER: 214732-EN10-H
REVISED UNDER THE DIRECTION OF: Hatch Mott MacDonald
DESIGNED BY: Hatch Mott MacDonald
CHECKED BY: Hatch Mott MacDonald
APPROVED BY: Hatch Mott MacDonald

DESIGN SPEED 80 km/h

REV.	DATE	DESCRIPTION



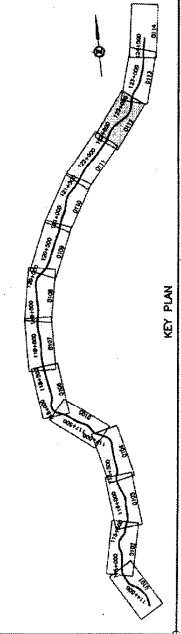
Annex 11



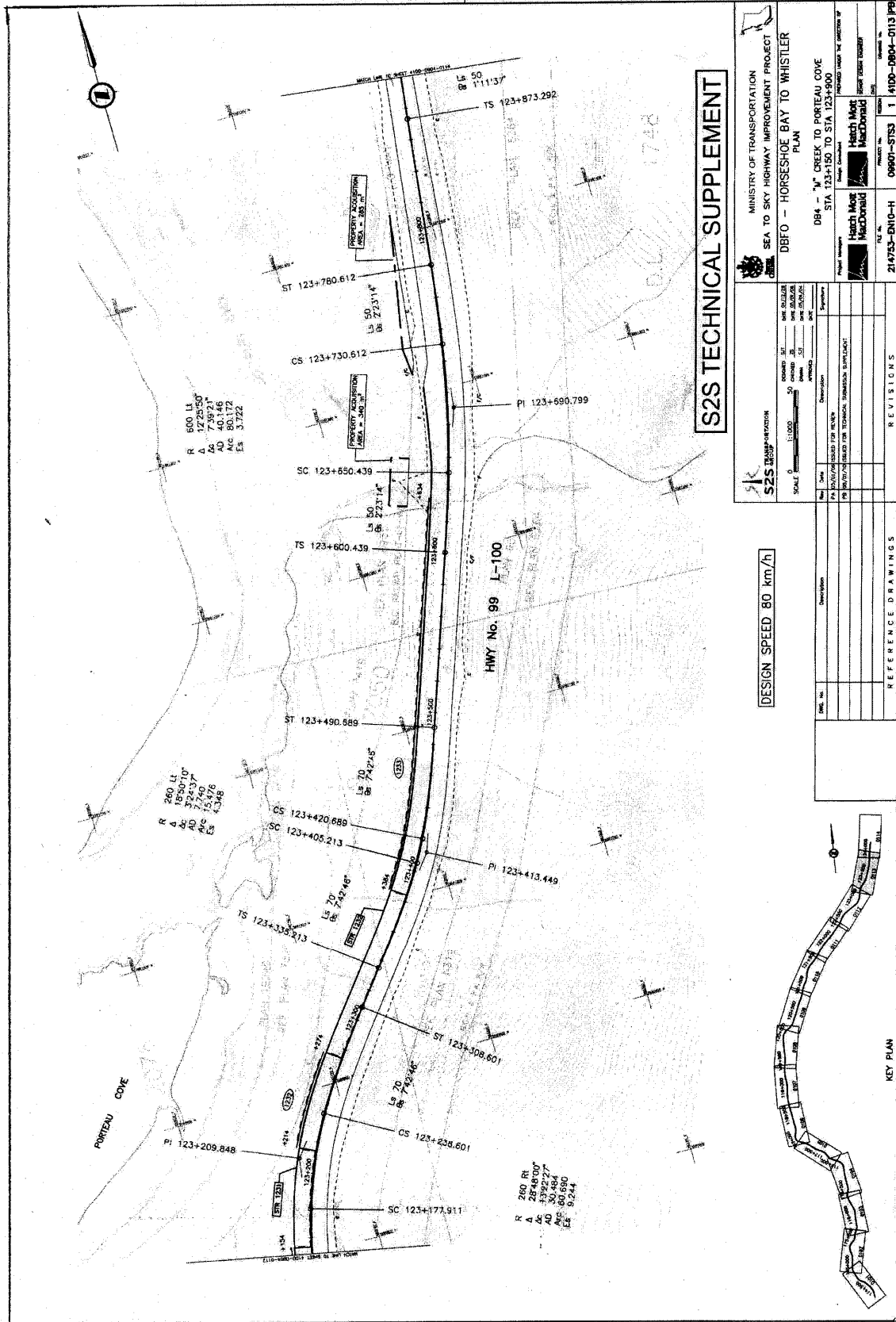
S2S TECHNICAL SUPPLEMENT

		MINISTRY OF TRANSPORTATION SEA TO SKY HIGHWAY IMPROVEMENT PROJECT DBFO - HORSESHOE BAY TO WHISTLER PLAN DBA - "M" CREEK TO PORTEAU COVE STA 122+400 TO STA 123+150	
SCALE 0 1:10,000 0 50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000 1050 1100 1150 1200 1250 1300 1350 1400 1450 1500 1550 1600 1650 1700 1750 1800 1850 1900 1950 2000	DATE 2017/04/05	DRAWN BY S2S	CHECKED BY S2S
PROJECT NUMBER 214753-EN10-H		PROJECT TITLE DBFO - HORSESHOE BAY TO WHISTLER	
CONTRACT NUMBER 09801-ST53		CONTRACT TITLE DBA - "M" CREEK TO PORTEAU COVE	
CONTRACT VALUE 1 4100-0904-0112 PB		CONTRACT DATE 2017/04/05	
CONTRACT OWNER HATCH MOTT MACDONALD		CONTRACT ENGINEER HATCH MOTT MACDONALD	
CONTRACT ARCHITECT HATCH MOTT MACDONALD		CONTRACT SURVEYOR HATCH MOTT MACDONALD	
CONTRACT CONSULTANT HATCH MOTT MACDONALD		CONTRACT SPECIALIST HATCH MOTT MACDONALD	
REVISIONS			

DESIGN SPEED 80 km/h



Annex 12



S2S TECHNICAL SUPPLEMENT

MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

DB4 - "M" CREEK TO PORTEAU COVE
STA 123+150 TO STA 123+900

PROJECT NUMBER: 214753-DN10-H
PROJECT NO.: 09001-ST53
DATE: 1/11/13

DESIGNED BY: [Name]
CHECKED BY: [Name]
DATE: [Date]

PREPARED UNDER THE DIRECTION OF:
Hatch Mott MacDonald

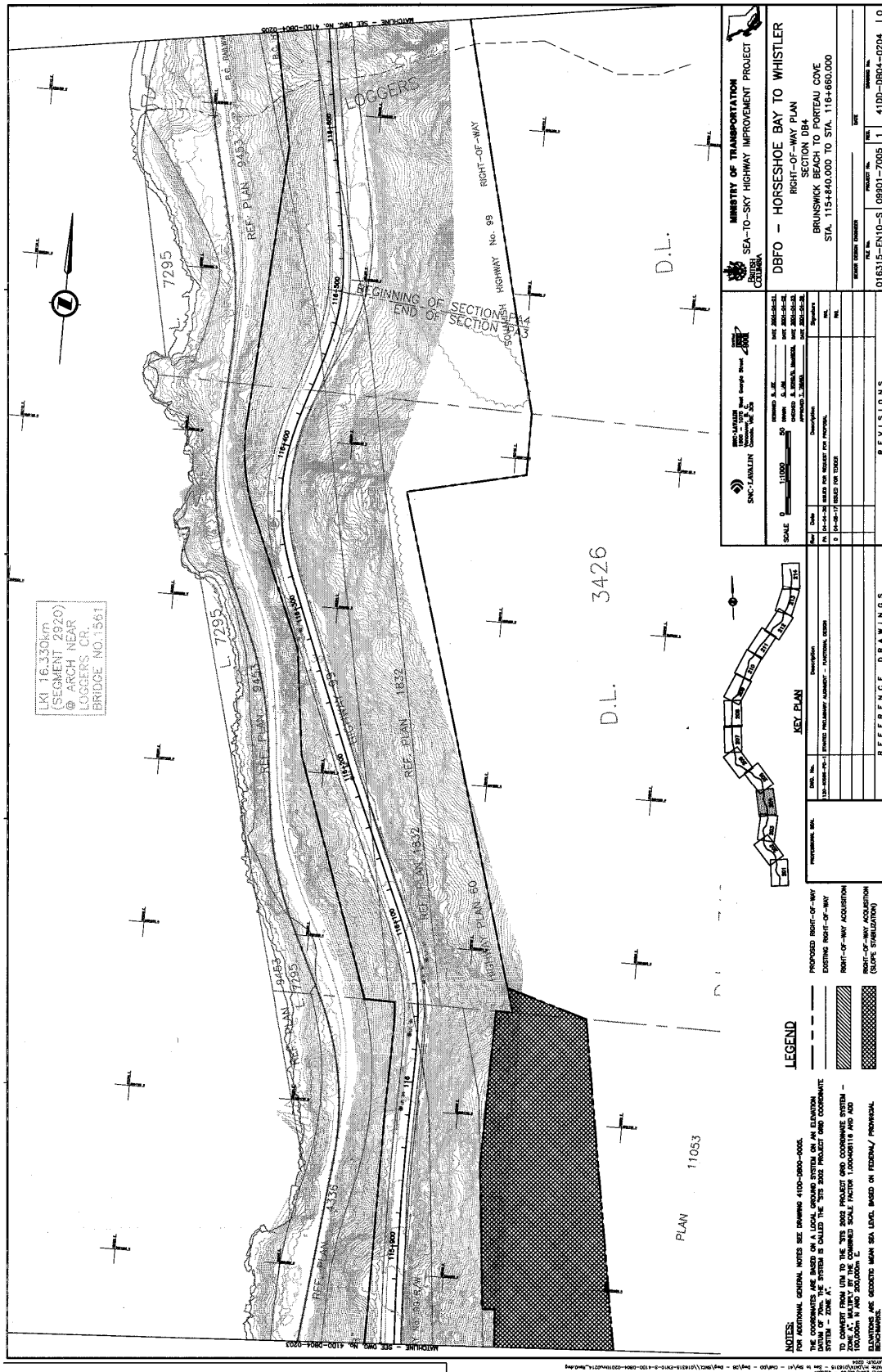
DESIGN SPEED 80 km/h

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REFERENCE DRAWINGS

KEY PLAN

Annex 13



MINISTRY OF TRANSPORTATION
ROADS BRANCH
BRUNSWICK BAY TO WHISTLER

SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT

RIGHT-OF-WAY PLAN
 BRUNSWICK BEACH TO PORTAU COVE
 STA. 115+840.000 TO STA. 116+680.000

SCALE: 1" = 110' 0"

DATE: 11/10/03

PROJECT NO. 09801-7005

REVISIONS

NO.	DATE	DESCRIPTION
1	11/10/03	ISSUED FOR TENDER
2	11/10/03	ISSUED FOR TENDER

KEY PLAN

DESCRIPTION: PROJECT PRELIMINARY LAYOUT - PORTAU COVE

PROPOSED RIGHT-OF-WAY
 EXISTING RIGHT-OF-WAY
 RIGHT-OF-WAY ACQUISITION
 RIGHT-OF-WAY ACQUISITION (SLOPE STABILIZATION)

LEGEND

- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- RIGHT-OF-WAY ACQUISITION
- RIGHT-OF-WAY ACQUISITION (SLOPE STABILIZATION)

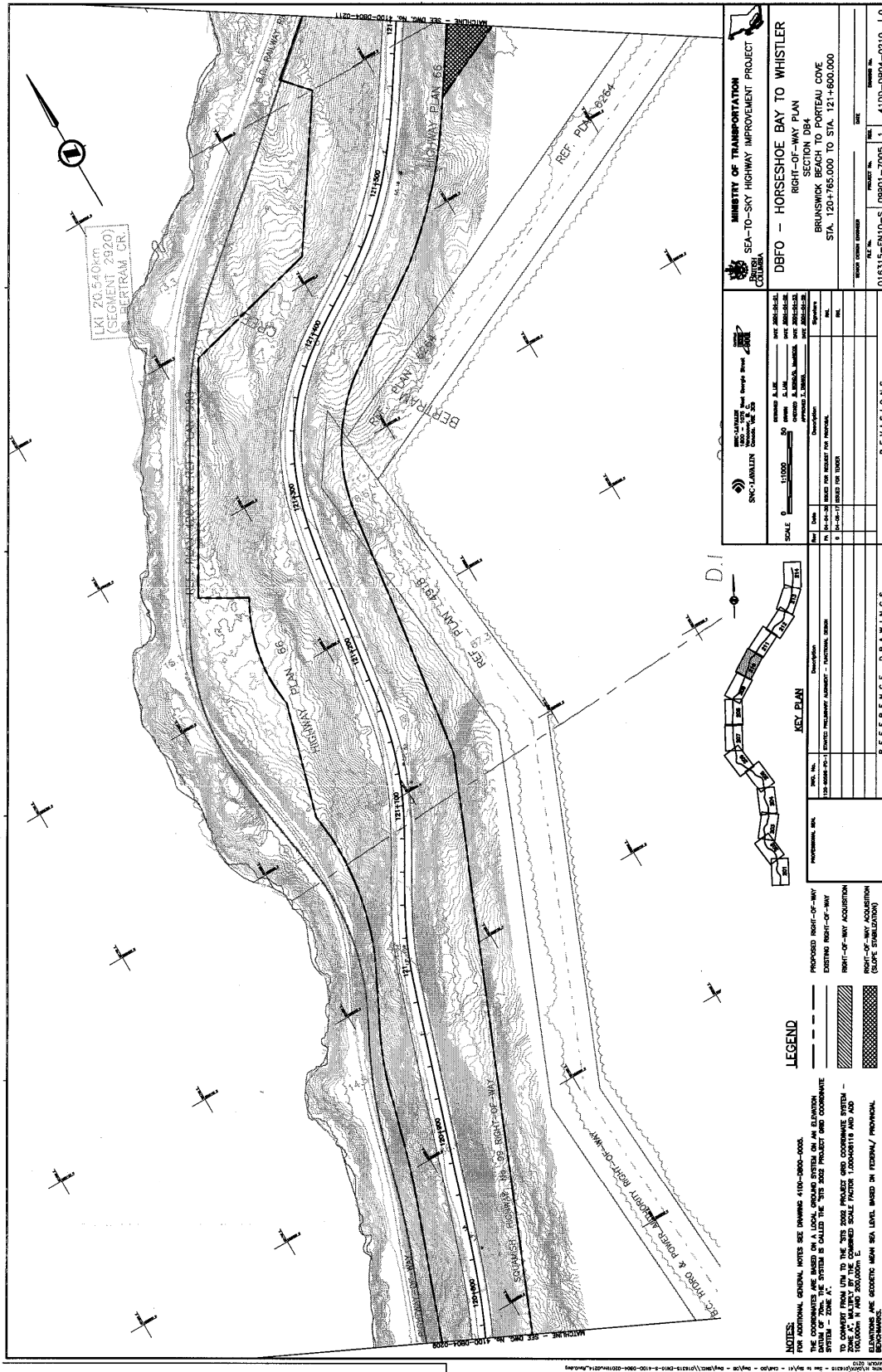
NOTES:

FOR ADDITIONAL GENERAL NOTES SEE DRAWING 4100-0800-0000.

THE COORDINATES ARE BASED ON A LOCAL GRID SYSTEM ON AN ELEVATION SYSTEM OF 2000 FT. THIS SYSTEM IS CALLED THE '93'S GRID PROJECT GRID COORDINATE SYSTEM'. TO CONVERT FROM UTM TO THE 2000 3000 PROJECT GRID COORDINATE SYSTEM - TAKE 47' MULTIPLY BY THE CONVERSION SCALE FACTOR 1.0000018 AND ADD 1000000.0 AND ADD 3000000.0.

THE ELEVATIONS ARE BASED ON FEDERAL / PROVINCIAL DATUM.

Annex 14



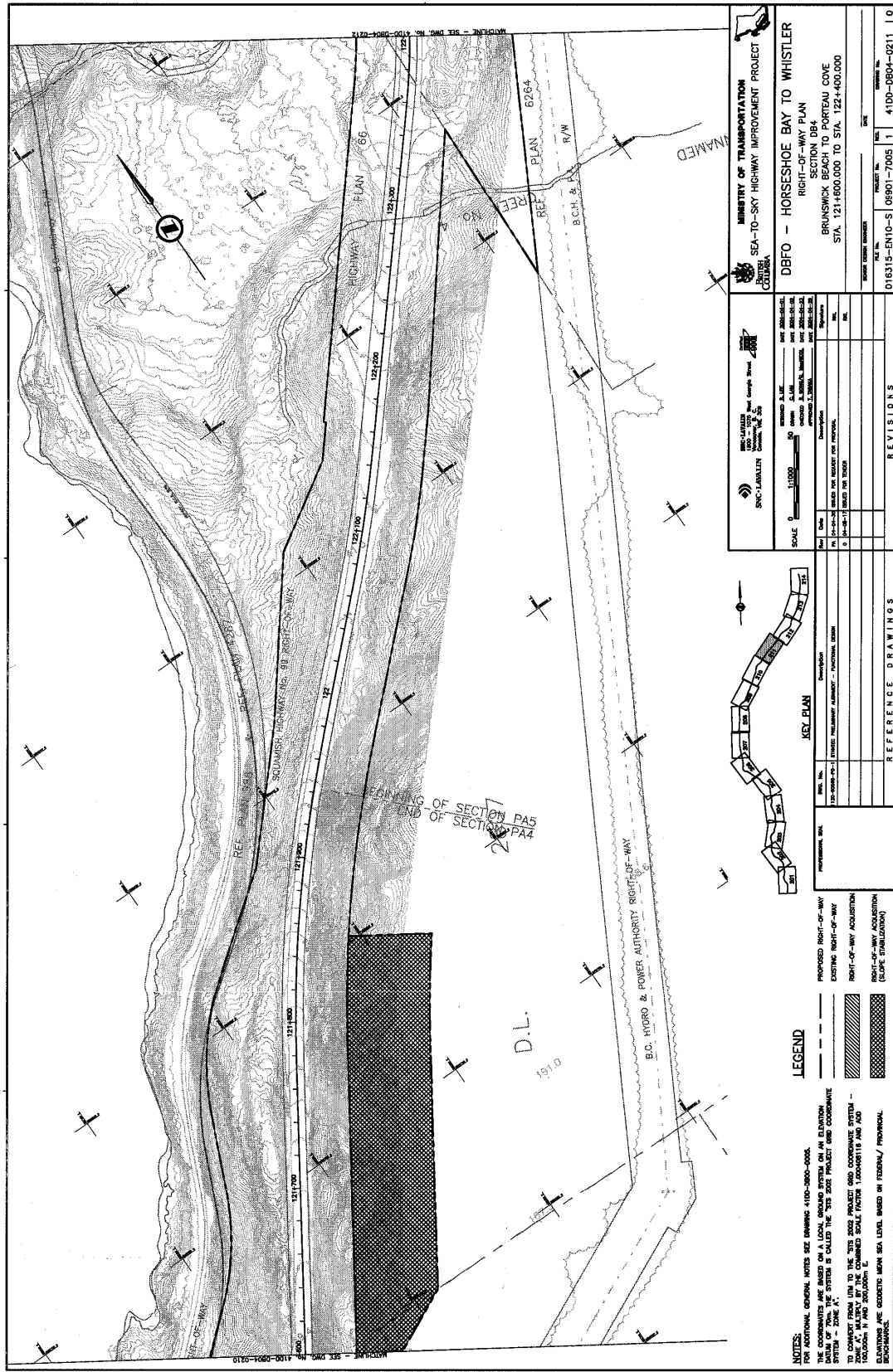
 SNC-LAVALIN 1000 Avenue du Parc Montréal, Québec H3A 2B4 Canada		MINISTRY OF TRANSPORTATION SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT BRUNSWICK BAY TO WHISTLER RIGHT-OF-WAY PLAN SECTION 08A STA. 120+765.000 TO STA. 121+600.000	
SCALE	1:5000	PROJECT NO.	016315-EN10-S
DATE	2010-11-17	ISSUE NO.	1
DESIGNED BY	...	PROJECT NO.	09901-7005
CHECKED BY	...	ISSUE NO.	1
APPROVED BY	...	PROJECT NO.	4100-0804-0210
DATE	...	ISSUE NO.	0

REV. NO.	DATE	DESCRIPTION
1	2010-11-17	ISSUED FOR PERMIT
2	2010-11-17	ISSUED FOR TENDER

NO.	DATE	DESCRIPTION
1	2010-11-17	ISSUED FOR PERMIT - FUNCTIONAL DESIGN

NOTES:
 FOR ADDITIONAL GENERAL NOTES SEE DRAWING 4100-0804-0005.
 THE COORDINATES ARE BASED ON A LOCAL GRIDING SYSTEM ON AN ELEVATION SYSTEM - ZONE 11.
 TO CONVERT FROM UTM TO THE 1983 CANADIAN COORDINATE SYSTEM - ZONE 11, USE THE FOLLOWING CONVERSION FACTOR 1.00000118 AND ADD 1000000 TO THE EASTING COORDINATE.
 ELEVATIONS ARE GEODETIC MEAN SEA LEVEL BASED ON FEDERAL/PROVINCIAL BENCHMARKS.

Annex 15



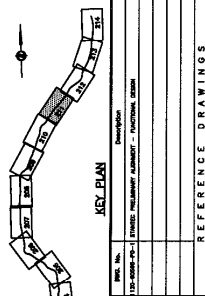
MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
CENTRAL

DBFO - HORSESHOE BAY TO WHISTLER
RIGHT-OF-WAY PLAN
SECTION DB4
PORTNEAU COVE
STA. 121+600.000 TO STA. 122+400.000

SCALE 0 1:1000
VERT. SCALE 1:1000
HORIZONTAL SCALE 1:1000

DATE: 12/11/03
BY: [Signature]

PROJECT NO. 018319-EN10-S
SHEET NO. 1
REVISED TO: 08901-7005
REVISED BY: [Signature]



LEGEND

- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- RIGHT-OF-WAY ACQUISITION
- RIGHT-OF-WAY ACQUISITION (SLOPE STABILIZATION)

REVISIONS

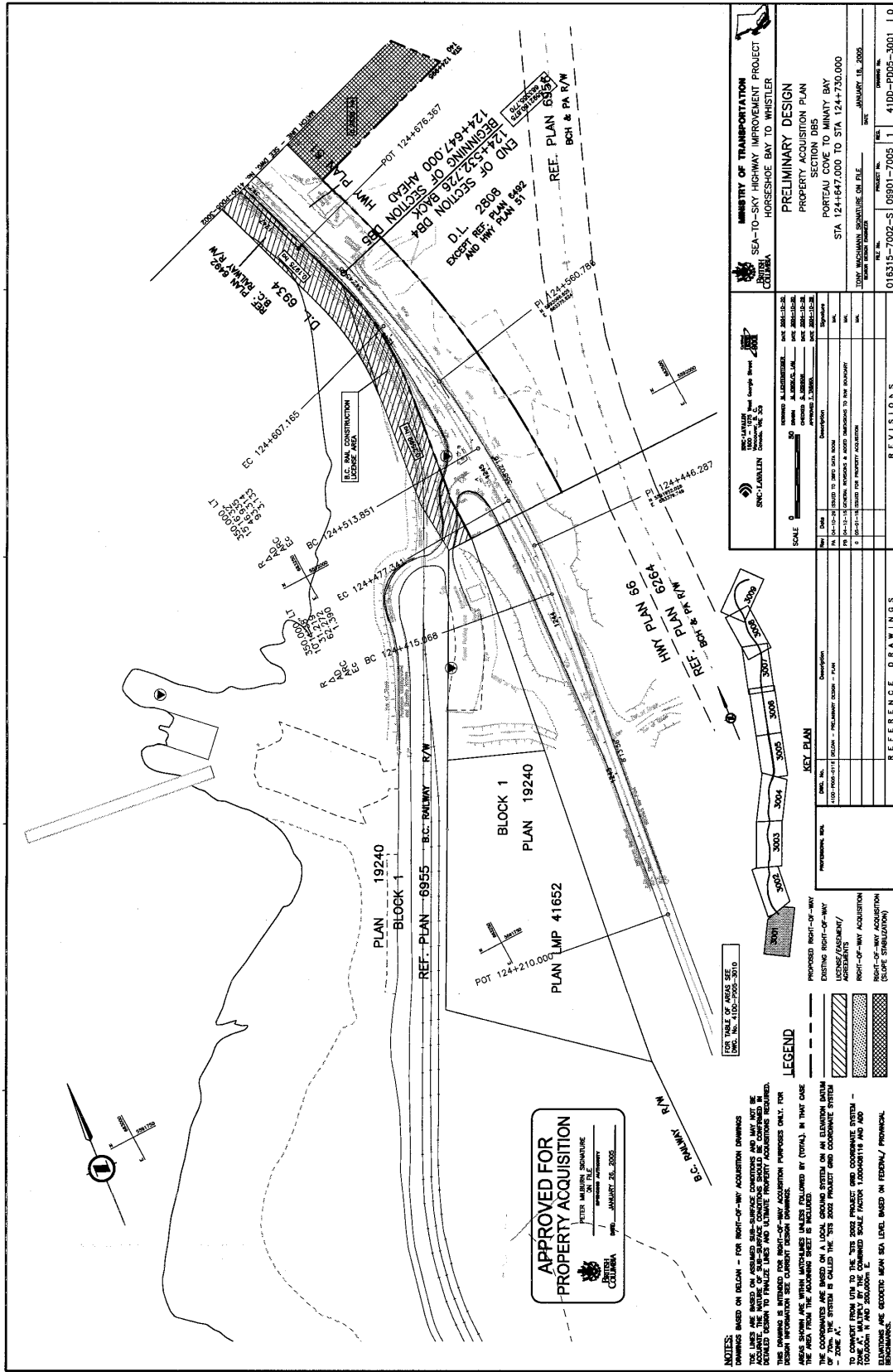
No.	Date	Description
1	12/11/03	ISSUED FOR REVIEW FOR APPROVAL
2	12/11/03	ISSUED FOR REVIEW FOR APPROVAL

REFERENCE DRAWINGS

Project No.	Description
118-0000-01-1	ISSUED FOR REVIEW FOR APPROVAL - FUNCTIONAL DESIGN
118-0000-01-2	ISSUED FOR REVIEW FOR APPROVAL - FUNCTIONAL DESIGN

NOTES:
FOR ADDITIONAL GENERAL NOTES SEE DRAWING 4100-3000-3000.
THE COORDINATES ARE BASED ON A LOCAL GRID SYSTEM ON AN ELEVATION SYSTEM OF 2000 M. THIS SYSTEM IS CALLED THE '2000 M' SYSTEM.
TO CONVERT FROM UTM TO THE 2000 M SYSTEM USE THE COORDINATE SYSTEM - ZONE 18, MERCATOR, UTM, NORTH, SCALE FACTOR 1,000,000.000 AND UTM ELEVATION IN METERS ABOVE MEAN SEA LEVEL BASED ON FRESHWATER/PROXIMAL EQUIVALENCE.

Annex 16



APPROVED FOR PROPERTY ACQUISITION
 PETER MULRENNIN
 PROJECT ENGINEER
 JANUARY 26, 2005

NOTES:
 DRAWINGS BASED ON BELCAN - FOR RIGHT-OF-WAY ACQUISITION DRAWINGS
 THE LINES ARE BASED ON ASSUMED SURFACE CONDITIONS AND MAY NOT BE
 DECIDED DESIGN TO FINALIZE LINES AND ULTIMATE PROPERTY ACQUISITION REQUIRED.
 THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR
 DESIGN INFORMATION SEE CURRENT DESIGN DRAWINGS.
 THE AREA FROM THE BELCAN STREET TO THE BELCAN STREET IS NOT TO BE INCLUDED BY (TOWN), IN THAT CASE
 THE COORDINATES ARE BASED ON A LOCAL GRID SYSTEM ON AN ELEVATION DATUM
 OF 7000. THE SYSTEM IS CALLED THE 2002 PROJECT GRID COORDINATE SYSTEM
 TO BE USED FOR THE 2002 PROJECT GRID COORDINATE SYSTEM -
 2002 AT 1:25000 SCALE BY THE COORDINATE SCALE FACTOR 1.00000117 AND ADD
 1000000 N AND 2500000 E.
 ELEVATIONS ARE GEOMETRIC MEAN SEA LEVEL BASED ON FEDERAL/ PROVINCIAL
 DATUMS.

MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
HORSESHOE BAY TO WHISTLER

PRELIMINARY DESIGN
 PROPERTY ACQUISITION PLAN
 SECTION DBS
 PORTLAND COVE TO WINNIE BAY
 STA 124+1547.000 TO STA 124+750.000
 DATE: JANUARY, 2005

DATE: JANUARY, 2005
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 PROJECT NO: 016315-7002-S (0601-7005) | 410D-PD05-3001 | 0

REVISIONS

No.	Date	Description
1	2005-01-26	ISSUED FOR PERMIT
2	2005-01-26	ISSUED FOR PERMIT
3	2005-01-26	ISSUED FOR PERMIT
4	2005-01-26	ISSUED FOR PERMIT
5	2005-01-26	ISSUED FOR PERMIT

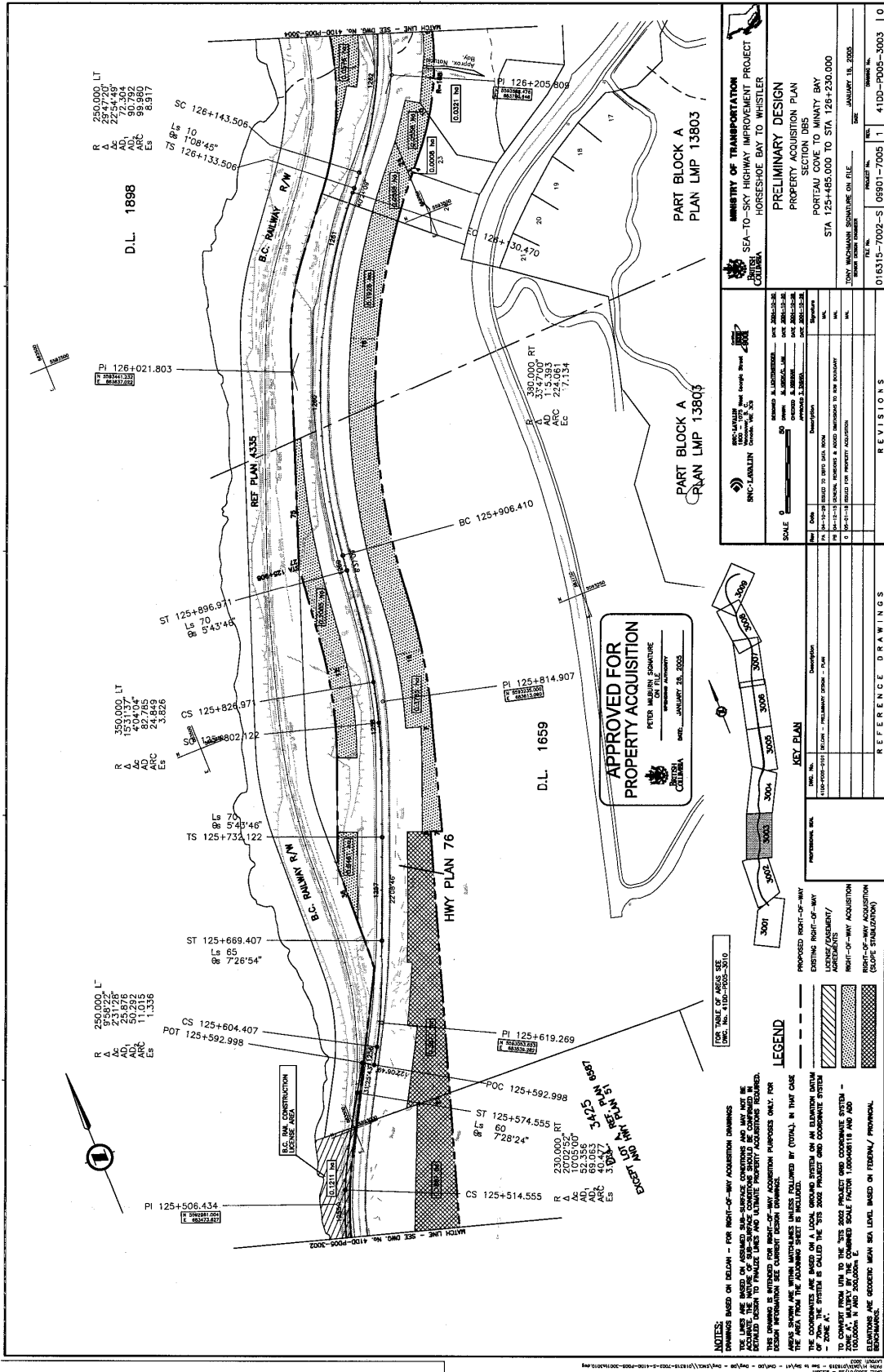
KEY PLAN

Block No.	Description
19240	PROPOSED RIGHT-OF-WAY
6955	EXISTING RIGHT-OF-WAY
41652	LICENSE/LEASE/RIGHT-OF-WAY AGREEMENTS
19240	RIGHT-OF-WAY ACQUISITION (SLOPE STABILIZATION)

LEGEND

Symbol	Description
[Hatched Box]	PROPOSED RIGHT-OF-WAY
[Dashed Line]	EXISTING RIGHT-OF-WAY
[Diagonal Lines]	LICENSE/LEASE/RIGHT-OF-WAY AGREEMENTS
[Stippled Box]	RIGHT-OF-WAY ACQUISITION (SLOPE STABILIZATION)

Annex 18



MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
FORRESTBAY TO WHISTLER

PRELIMINARY DESIGN
PROPERTY ACQUISITION PLAN
SECTION DB5
 PORT/AU COVE TO MINAY BAY
 STA 125+145.000 TO STA 126+200.000
 DATE: JANUARY 18, 2003
 DRAWN BY: TONY MOCHMANN
 PROJECT NO.: 0161515-7002-S
 DRAWING NO.: 41DD-PD05-3003

SCALE: 1" = 100'-0"

DATE: JANUARY 28, 2003

APPROVED FOR PROPERTY ACQUISITION
 PETER MEURIN, SIGNATURE
 JANUARY 28, 2003

FOR TABLE OF AREAS SEE SHEET 41DD-PD05-3010
 (REVISED 10/15/02)

LEGEND

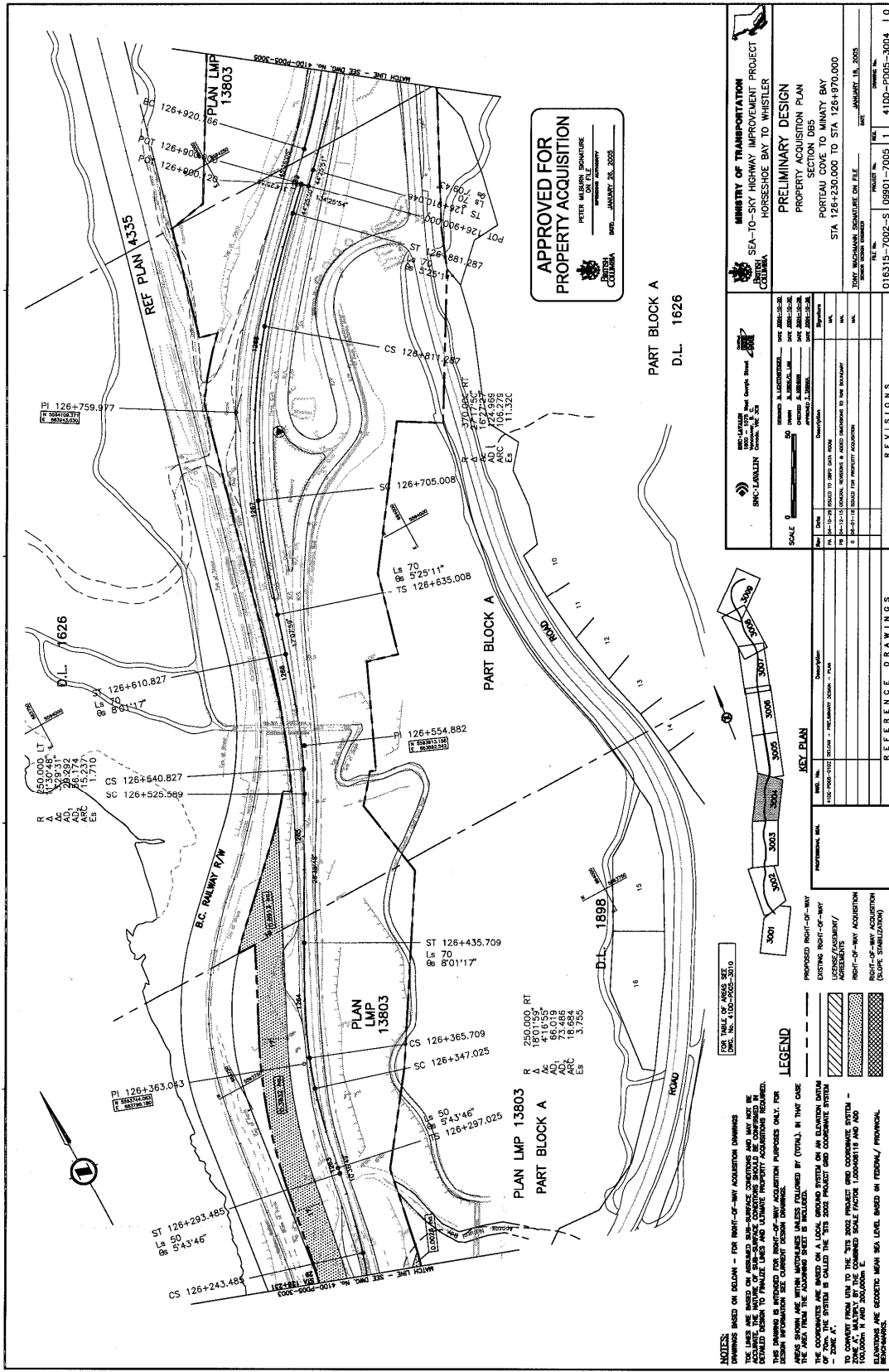
- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- UTILITIES/EASEMENTS
- RIGHT-OF-WAY ACQUISITION
- RIGHT-OF-WAY ACQUISITION (SLOPE STABILIZATION)

REVISIONS

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REFERENCE DRAWINGS

Annex 19



APPROVED FOR PROPERTY ACQUISITION
 PETER M. WAGMANN
 REGISTERED PROFESSIONAL ENGINEER
 CIVIL ENGINEER
 REG. NO. 10887
 EXP. DATE: JANUARY 26, 2005

PART BLOCK A
 D.L. 1626

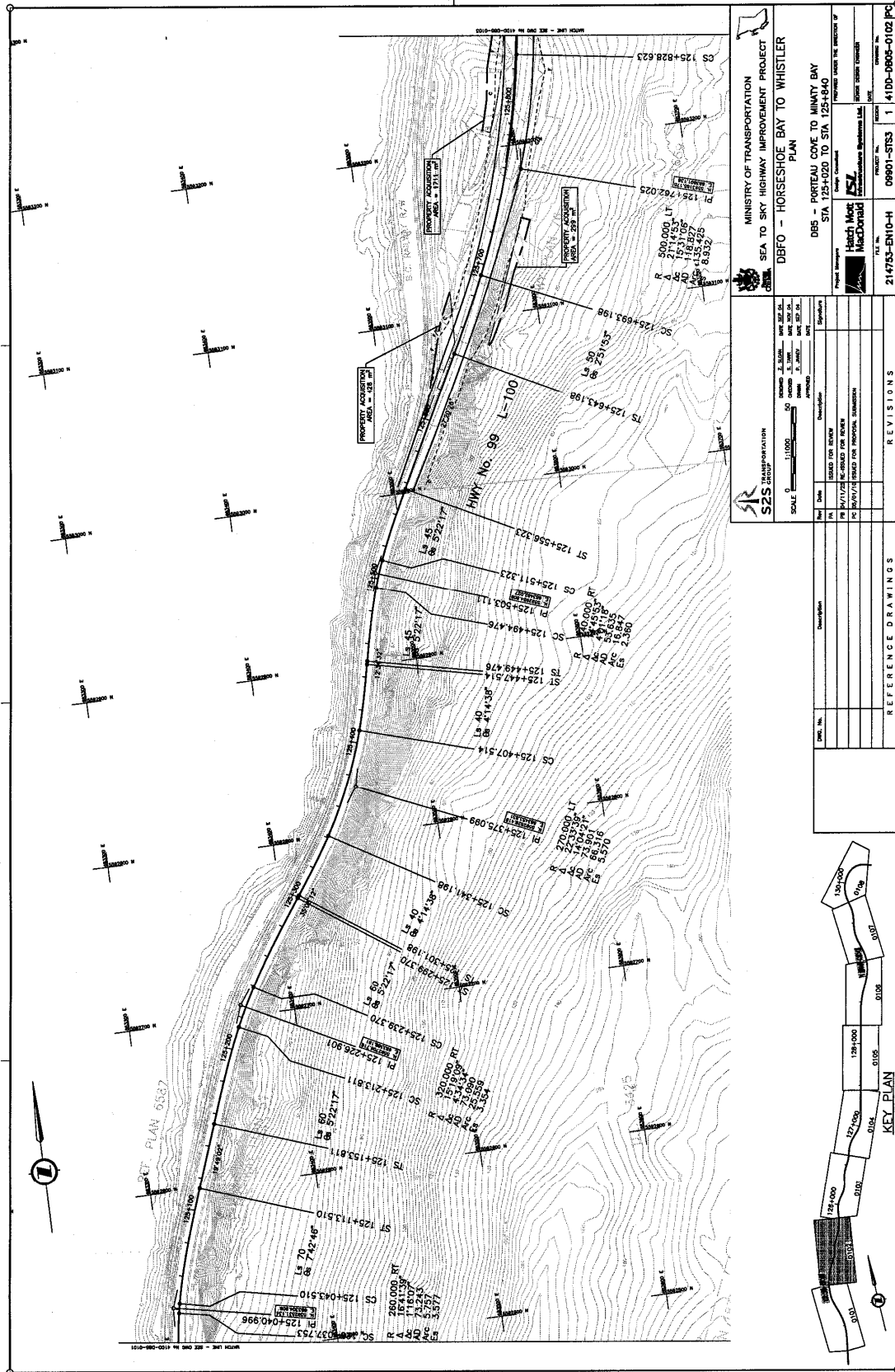
MINISTRY OF TRANSPORTATION SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT HORSESHOE BAY TO WHISTLER	
PRELIMINARY DESIGN PROPERTY ACQUISITION PLAN SECTION DBS PORTAU COVE TO MINNIE BAY STA 126+235.000 TO STA 126+970.000	
DATE: JANUARY 26, 2005	DRAWN BY: J. WAGMANN
CHECKED BY: P. WAGMANN	SCALE: AS SHOWN
PROJECT NO.: 016315-7002-S	SHEET NO.: 1
TOTAL SHEETS: 1	TOTAL SHEETS: 1

NO.	DATE	DESCRIPTION
1	01-26-05	ISSUED FOR PERMITS
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3	01-26-05	ISSUED FOR PERMITS
4	01-26-05	ISSUED FOR PERMITS
5	01-26-05	ISSUED FOR PERMITS

NO.	DATE	DESCRIPTION
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2	01-26-05	ISSUED FOR PERMITS
3	01-26-05	ISSUED FOR PERMITS
4	01-26-05	ISSUED FOR PERMITS
5	01-26-05	ISSUED FOR PERMITS

NOTES:
 DRAWINGS BASED ON DELTA - FOR RIGHT-OF-WAY ACQUISITION DRAWINGS
 THE LINES ARE BASED ON ASSUMED SURFACE CONDITIONS AND MAY NOT BE
 DECIDED UPON TO FINAL LINES AND ULTIMATE PROPERTY ACQUISITION REQUIRED.
 THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR
 DESIGN INFORMATION SEE CURRENT DESIGN DRAWINGS.
 THE COORDINATES ARE BASED ON A LOCAL GRID SYSTEM ON AN ELEVATION DATUM
 OF 700m. THE SYSTEM IS CALLED THE "5th 2002 PROJECT GRID COORDINATE SYSTEM".
 NO CORRECTIONS TO THE 5th 2002 PROJECT GRID COORDINATE SYSTEM -
 ZONE 47, MANNING BY THE COMBINED SCALE FACTOR (ACCURACY AND AID
 THROUGH IT AND 2002000 L.
 THE GEODETIC MEAN SEA LEVEL BASED ON FEDERAL / PROVINCIAL
 MEASUREMENTS.

Annex 21



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

DBFO - PORTAU COVE TO WHISTLY BAY
 STA 125+020 TO STA 125+840

Project Manager: **Hatch Mott MacDonald**
 Prepared under the direction of: **Project Engineer**

Scale: 1:1000
 Date: **11/02/07**
 Drawn by: **J. B. B.**
 Checked by: **J. B. B.**
 Approved by: **J. B. B.**

Project No.: **09901-ST53 1**
 Drawing No.: **4110D-0905-0102**
 Revision: **1**

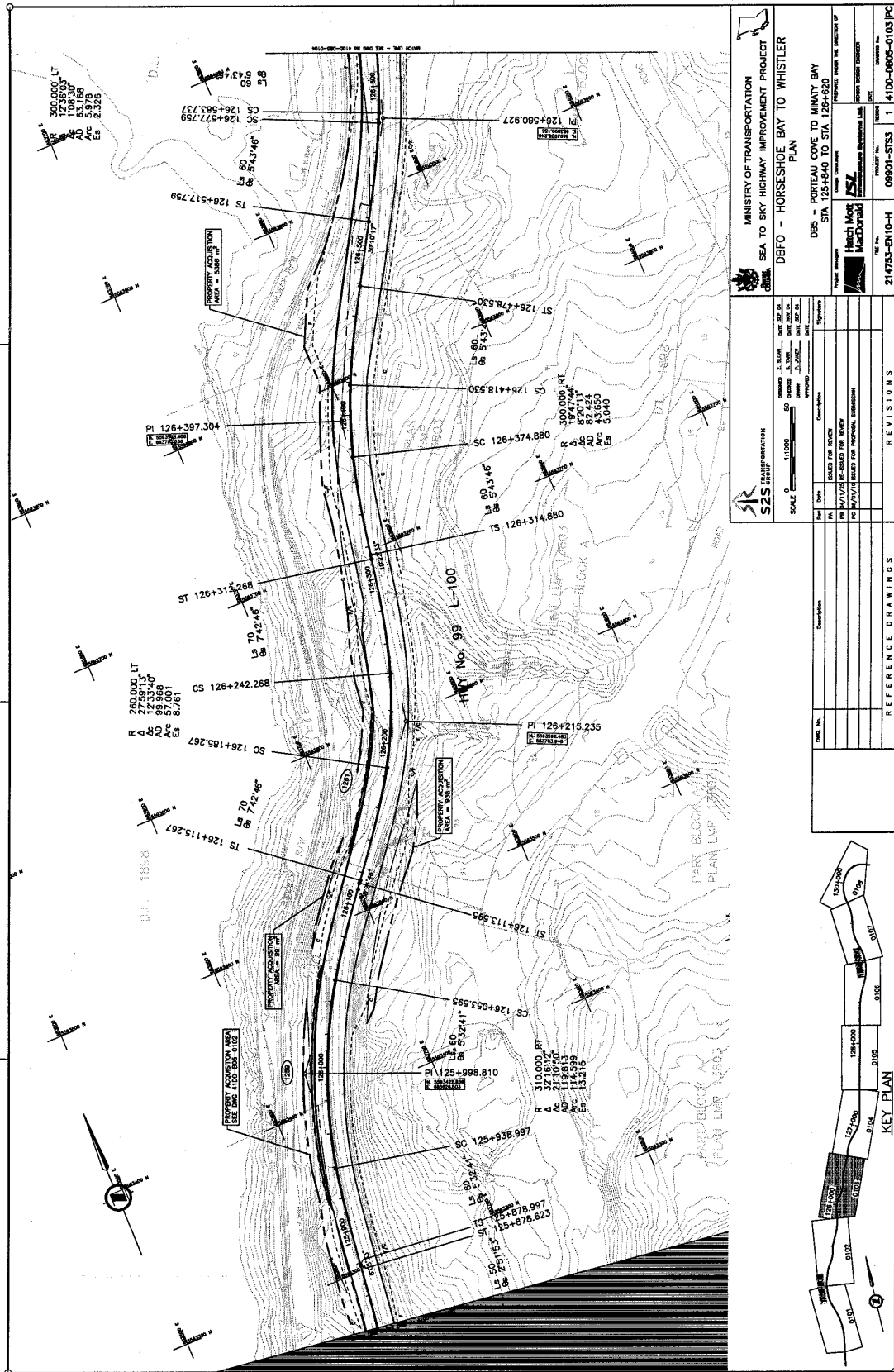
REVISIONS

No.	Date	Description	Signature
1	11/02/07	ISSUED FOR REVIEW	
2	11/02/07	REVISED FOR PROVISIONAL DIMENSIONS	

KEY PLAN

Scale: 1:10000

Annex 22



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN
DBFO - PROTEAU COVE TO HUNTER BAY
STA 125+840 TO STA 128+630

Scale: 1:1000
DATE: 11/17/2011
ISSUED FOR: REVIEW
FOR: 11/17/2011 FOR REVIEW FOR PROPOSAL SUBMISSION
BY: [Signature]

Project Manager: [Signature]
Checked: [Signature]
Approved: [Signature]

Project No.: 06901-ST53 1
Revision No.: 1
Scale: 1:1000
Sheet No.: 4100-0905-0103 PC

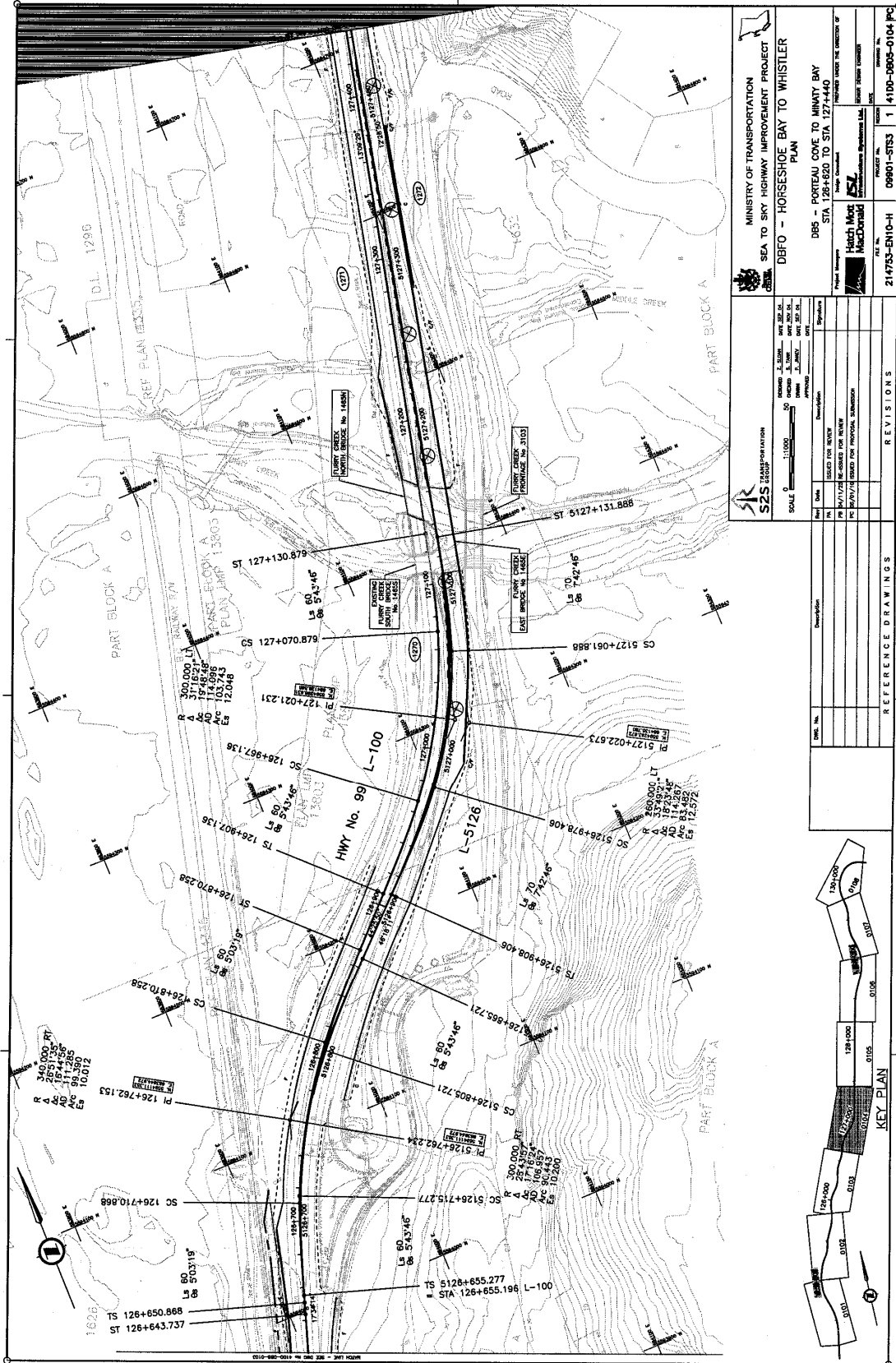
REVISIONS

No.	Date	Description

REFERENCE DRAWINGS

Ref. No.	Description

Annex 23



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

SCALE: 1:1000
 DATE: 12/17/2014
 DRAWN BY: [Name]
 CHECKED BY: [Name]

PROJECT NUMBER: DB5 - PORTEAU COME TO MINNITY BAY STA 126+520 TO STA 127+440
 DRAWING NUMBER: 214733-EN10-H
 PROJECT NO.: 09801-ST33 1 410D-9805-0104 PC
 SHEET NO.: 0108

DESIGNED BY: [Name]
 CHECKED BY: [Name]
 DATE: 12/17/2014
 DRAWN FOR: [Name]

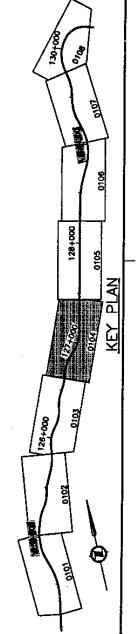
APPROVED BY: [Name]
 DATE: 12/17/2014

REVISIONS

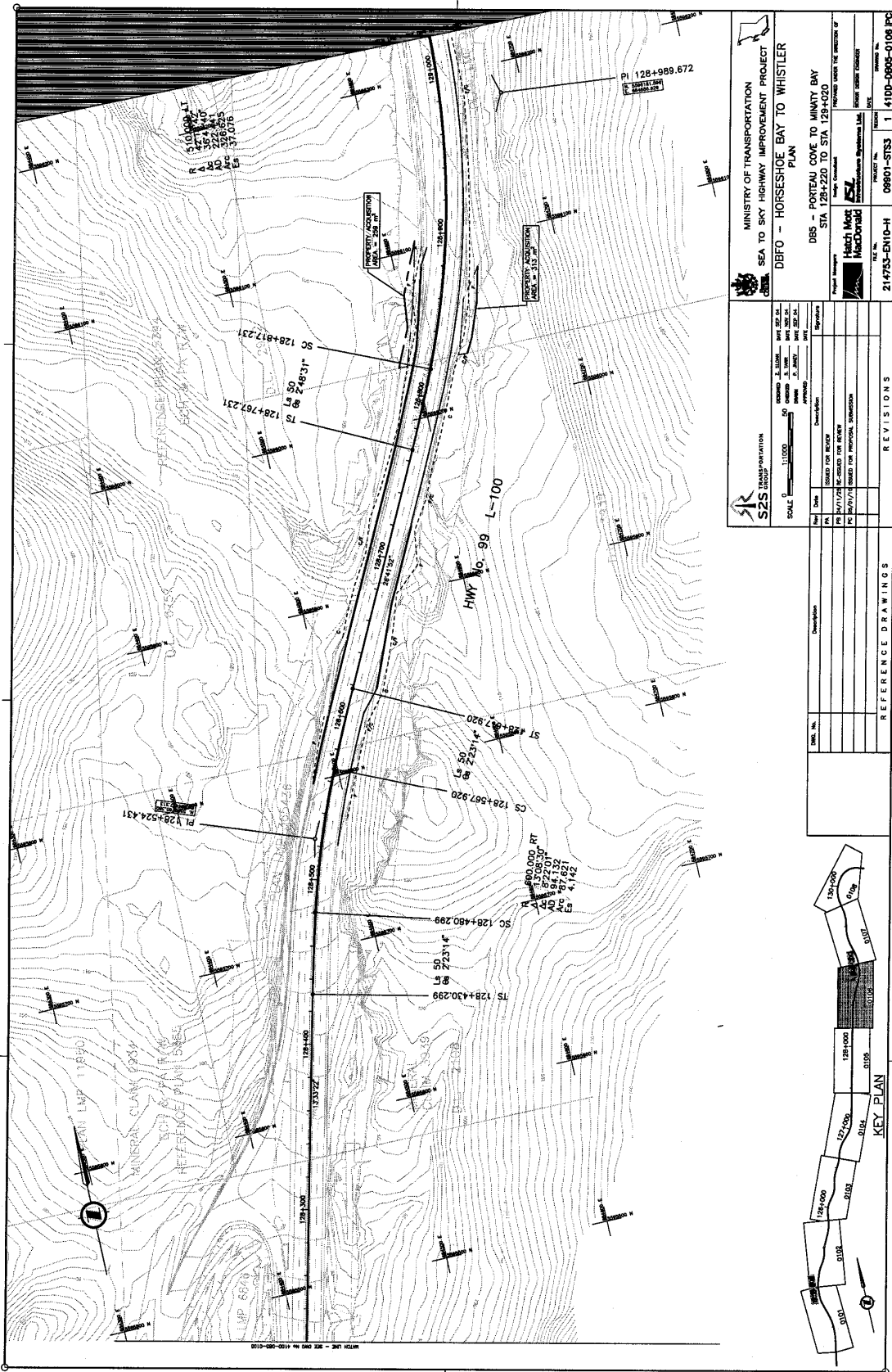
No.	Date	Description

REFERENCE DRAWINGS

Sheet No.	Description
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Annex 24



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
 PLAN

DBS - PORTEAU COVE TO MINNAY BAY
 STA 128+220 TO STA 128+020

Prepared under the direction of
 Highway Consultant
Hatch Mott MacDonald
 ENGINEERING CONSULTANTS

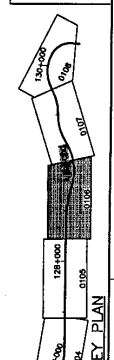
PROJECT NO. 214753-DM10-H
 SHEET NO. 09001-ST33 1 141DD-0806-0106 PCS
 DATE

SCALE: 1:1000
 DRAWN: J. S. LAM, DATE: SEP. 02, 00
 CHECKED: J. S. LAM, DATE: SEP. 25, 00
 DESIGNED: J. S. LAM, DATE: SEP. 25, 00
 IN CHARGE: J. S. LAM, DATE: SEP. 25, 00

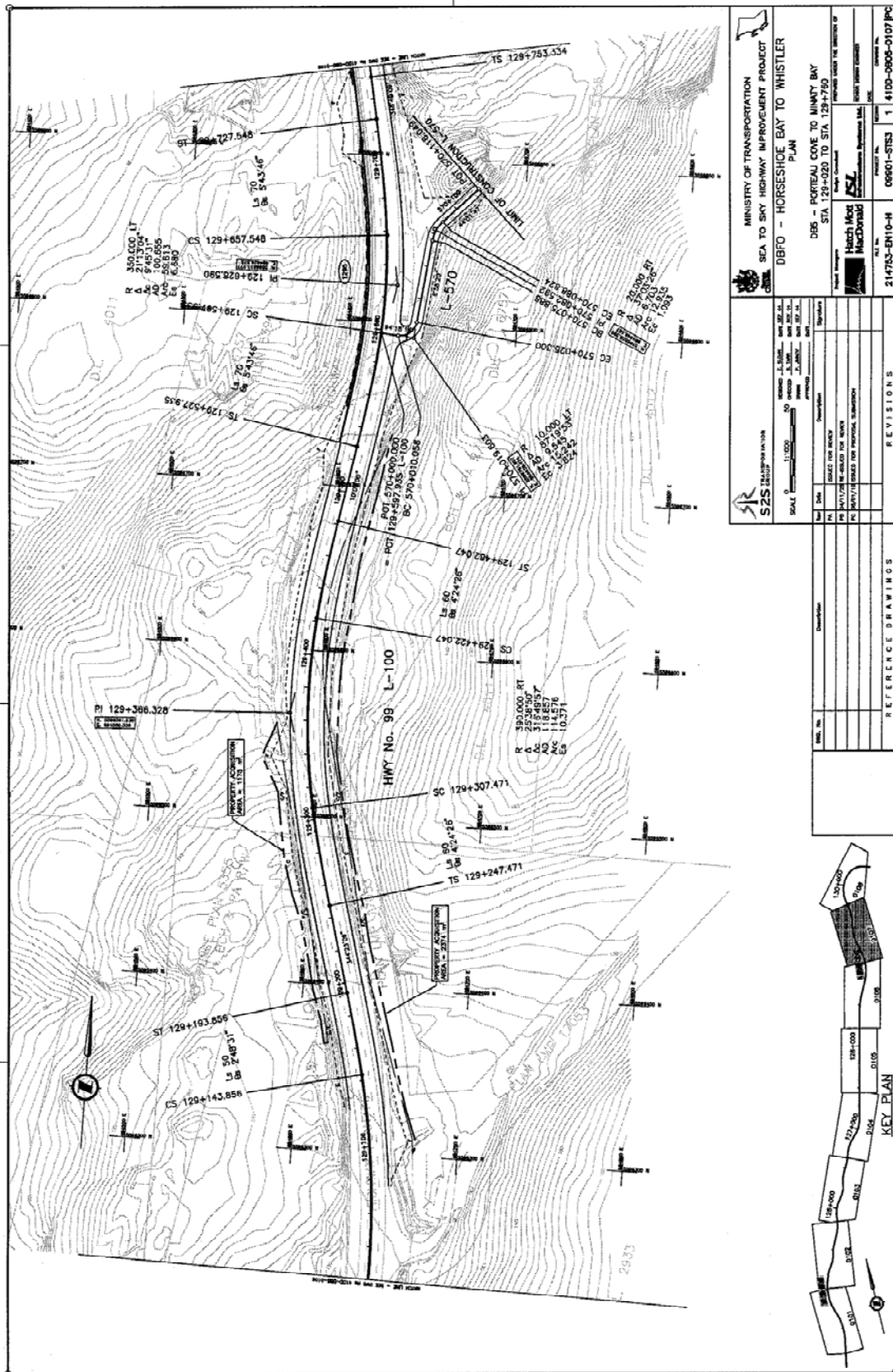
FOR REVIEW
 FOR APPROVAL
 FOR CONSTRUCTION

REVISIONS

NO.	DATE	DESCRIPTION



Annex 25



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

DBF - PORTLAND CONE TO NIMITY BAY
 STA. 129+000 TO STA. 129+750

Project Manager: **Hatch Mott MacDonald**
 Prepared Under the Direction of: **Hatch Mott MacDonald**

Project No.: **09601-ST53 1 410D-0606-0107 PC**
 Drawing No.: **214753-EN10-H**
 Scale: **AS SHOWN**

DATE: **11/20/08**
 DRAWN BY: **J. BROWN**
 CHECKED BY: **J. BROWN**
 APPROVED BY: **J. BROWN**

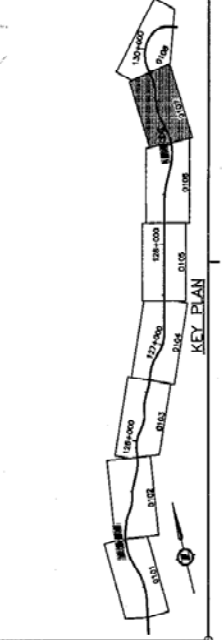
DATE: **11/20/08**
 DRAWN BY: **J. BROWN**
 CHECKED BY: **J. BROWN**
 APPROVED BY: **J. BROWN**

REVISIONS

No.	Date	Description
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REFERENCE DRAWINGS

Drawn	Checked	Approved



Annex 26



SR S2S GROUP
 MINISTRY OF TRANSPORTATION
 SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
 DBFO - HORSESHOE BAY TO WHISTLER PLAN

DB5 - PORTEAU COVE TO MINNY BAY
 STA 128+780 TO STA 130+394.440

Project Engineer: **Hatch Mott MacDonald**
 Prepared under the direction of: **Hatch Mott MacDonald**
 Project No.: 21753-EN10-H
 Revision No.: 09901-ST53 1 4100-0905-0108 PC
 Date: 09/05/10

Date	By	Description
09/05/10	J. B. [Signature]	ISSUED FOR REVIEW
09/05/10	J. B. [Signature]	REVISED FOR REVIEW
09/05/10	J. B. [Signature]	REVISED FOR PROVISIONAL SUBMISSION
09/05/10	J. B. [Signature]	REVISED FOR PROVISIONAL SUBMISSION

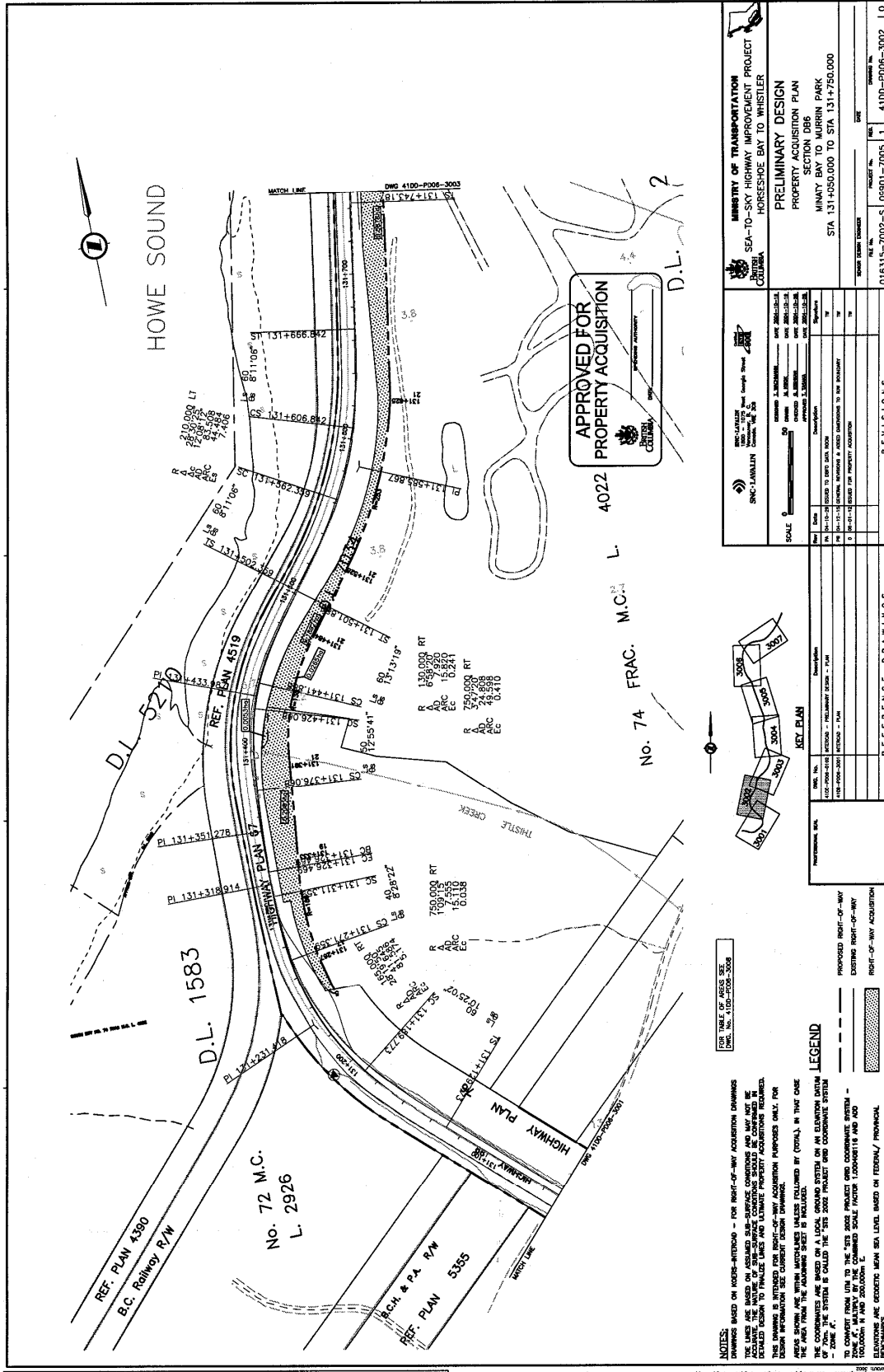
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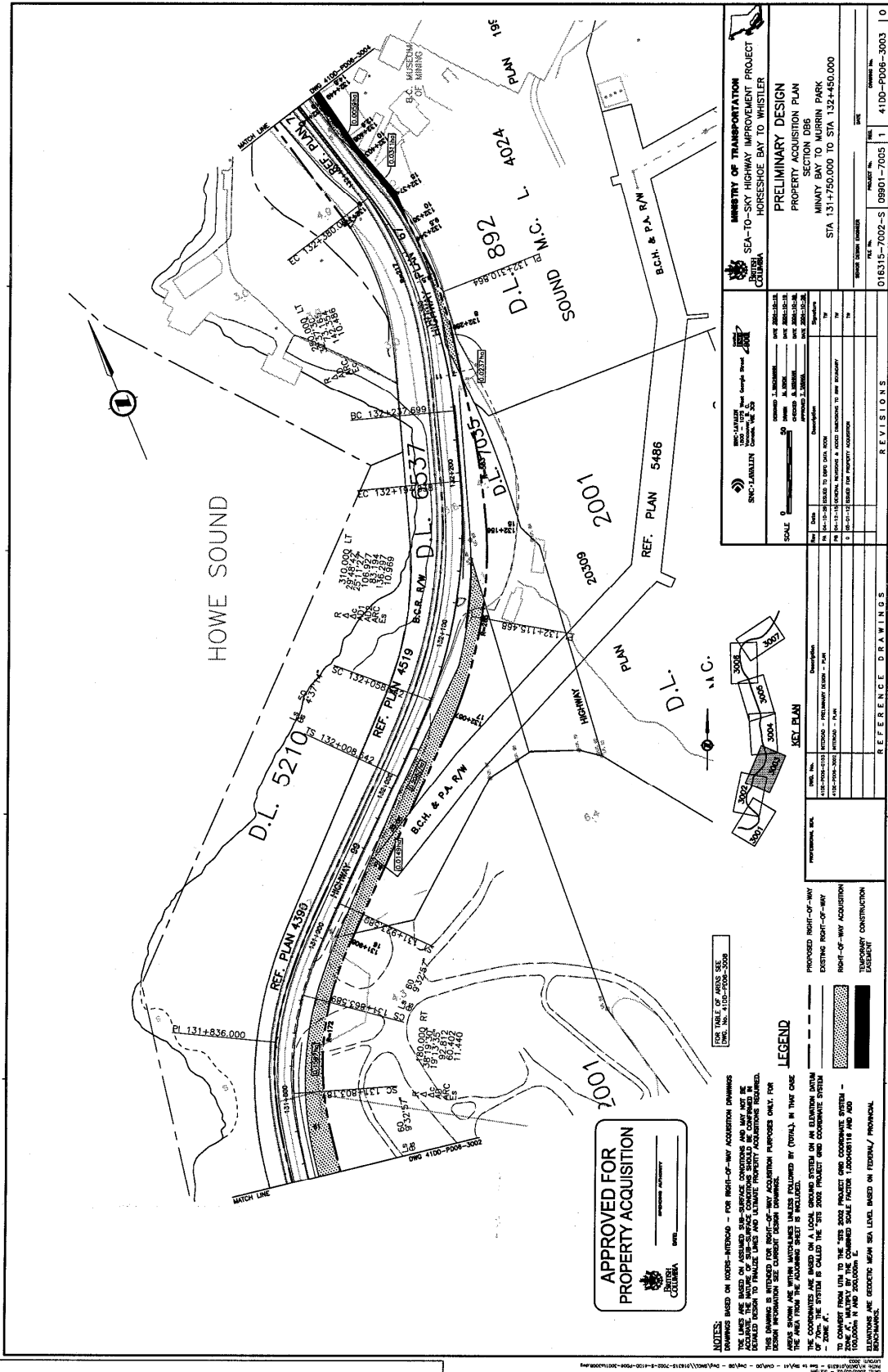
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0139	01/04	0139
0140	01/04	0140
0141	01/04	0141
0142	01/04	0142
0143	01/04	0143
0144	01/04	0144
0145	01/04	0145
0146	01/04	0146
0147	01/04	0147
0148	01/04	0148
0149	01/04	0149
0150	01/04	0150

KEY PLAN

Annex 27



Annex 28



APPROVED FOR PROPERTY ACQUISITION

MINISTRY OF TRANSPORTATION
BRITISH COLUMBIA

NOTES:
DRAWINGS BASED ON INSTRUMENTS - FOR RIGHT-OF-WAY ACQUISITION DRAWINGS THE LINES ARE BASED ON GROUND SURFACE CONDITIONS AND MAY NOT BE IDENTICAL TO THE GROUND SURFACE CONDITIONS. THESE DRAWINGS ARE INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR DESIGN INFORMATION SEE CURRENT DESIGN DOCUMENTS.
THE AREA FROM THE ADJACENT SHEET IS INCLUDED.
THE COORDINATES ARE BASED ON A LOCAL GRID SYSTEM ON AN ELEVATION DATUM OF 70m. THE SYSTEM IS CALLED THE '93 2000 PROJECT GRID COORDINATE SYSTEM'. TO CONVERT FROM UTM TO THE '93 2000 PROJECT GRID COORDINATE SYSTEM - SEE THE '93 2000 PROJECT GRID COORDINATE SYSTEM - UTM TO '93 2000 PROJECT GRID COORDINATE SYSTEM CONVERSION TABLE' ATTACHED BY THE DRAWING SCALE FACTOR (1:1000) AND THE '93 2000 PROJECT GRID COORDINATE SYSTEM - UTM TO '93 2000 PROJECT GRID COORDINATE SYSTEM CONVERSION TABLE' ATTACHED BY THE DRAWING SCALE FACTOR (1:1000).
ELEVATIONS ARE GROUND MEAN SEA LEVEL BASED ON FEDERAL/PROVINCIAL DATUMS.

FOR TABLE OF AREAS SEE:
Dwg. No. 4100-7008-3003

LEGEND

- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- RIGHT-OF-WAY ACQUISITION
- TEMPORARY CONSTRUCTION EASEMENT

KEY PLAN

DWG. No.	Description
4100-7008-3003	SECTION DBB - PRELIMINARY DESIGN - PLAN
4100-7008-3002	SECTION DBB - PRELIMINARY DESIGN - PLAN
4100-7008-3001	SECTION DBB - PRELIMINARY DESIGN - PLAN

REVISIONS

No.	Date	Description
1		
2		
3		
4		
5		

**MINISTRY OF TRANSPORTATION
BRITISH COLUMBIA**

SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
HORSESHOE BAY TO WHISTLER

PRELIMINARY DESIGN
SECTION DBB
PROPERTY ACQUISITION PLAN
MINI BAY TO MURRIN PARK
STA 131+750.000 TO STA 132+450.000

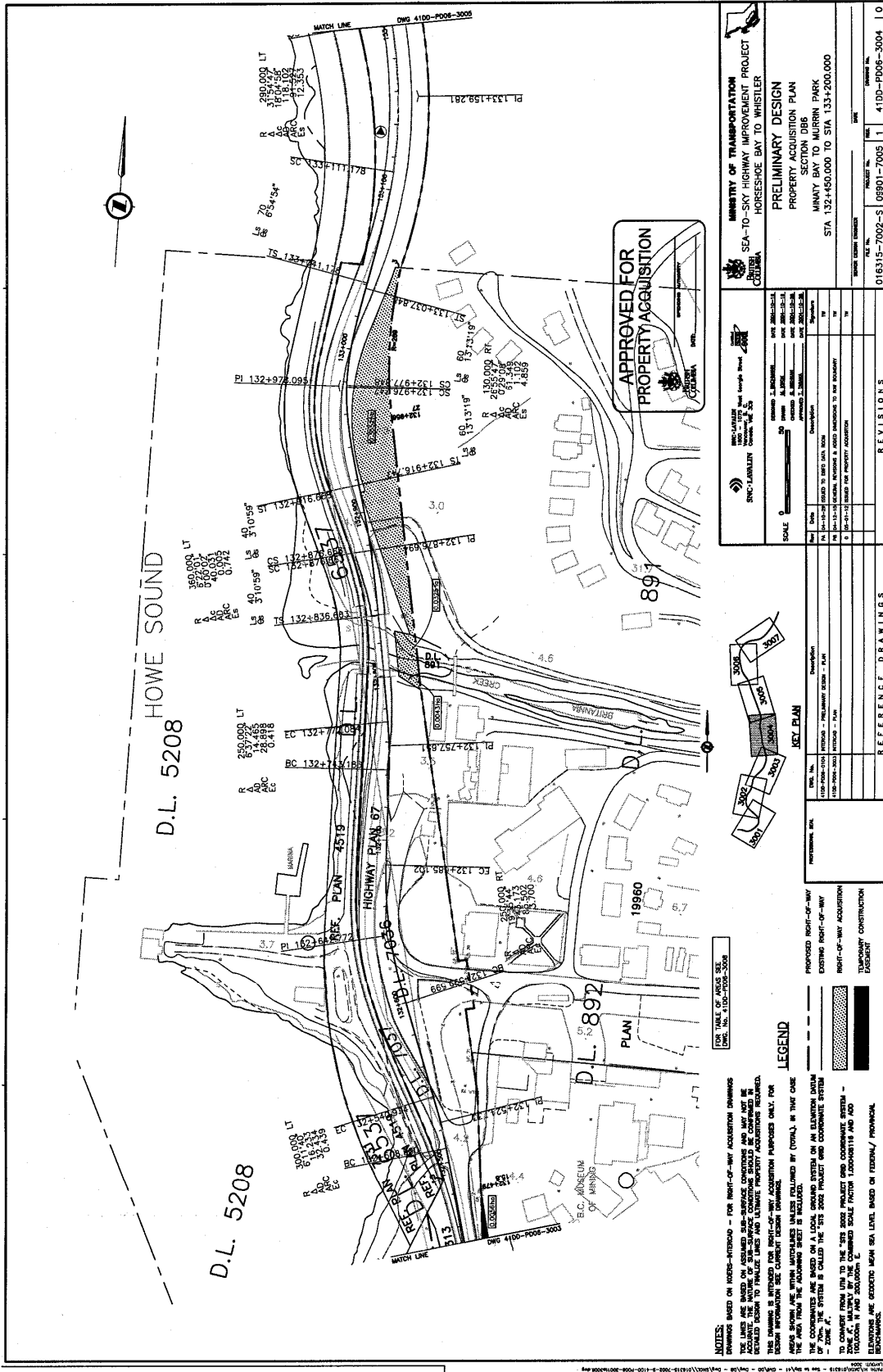
SCALE: 1:1000

DATE: 2008-11-15

PROJECT NO.: 09801-7005-1

DWG. NO.: 4100-7008-3003

Annex 29



NOTES:
 DRAWINGS BASED ON NOTES-INTERIOR - FOR RIGHT-OF-WAY ACQUISITION DRAWINGS
 THE LINES ARE BASED ON ASSUMED SURFACE CONDITIONS AND MAY NOT BE
 GUARANTEED TO REFLECT EXISTING CONDITIONS AND SHOULD BE
 CHECKED AGAINST THE LATEST SURVEY DATA AND ULTIMATE PROPERTY ACQUISITION RECORDS.
 THE DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR
 DESIGN INFORMATION SEE CURRENT DESIGN DOCUMENT.
 THE WORK SHALL BE ACCORDING TO THE DESIGN DOCUMENT.
 THE COORDINATES ARE BASED ON A LOCAL GRID SYSTEM ON AN ELEVATION DATUM
 OF 1985. THE SYSTEM IS CALLED THE '85 DATUM PROJECT GRID COORDINATE SYSTEM'
 TO DERIVE FROM DAT TO THE '85 DATUM PROJECT GRID COORDINATE SYSTEM -
 STATE, MULTIPLY BY THE CONVERSION SCALE FACTOR 1.00000118 AND ADD
 1000000.00 TO THE X AND Y COORDINATES.
 ELEVATIONS ARE DERIVED FROM SEA LEVEL BASED ON TIDE/GAUGE/PROXIMAL
 ELEVATIONS.

LEGEND

- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- RIGHT-OF-WAY ACQUISITION
- TEMPORARY CONSTRUCTION
- EXISTENT

KEY PLAN

Sheet No.	Description
1000-0000-0000	PROPOSED RIGHT-OF-WAY - PRELIMINARY DESIGN - PLAN
1000-0000-0000	EXISTENT RIGHT-OF-WAY - PLAN
1000-0000-0000	RIGHT-OF-WAY ACQUISITION - PLAN
1000-0000-0000	TEMPORARY CONSTRUCTION - PLAN

FOR TABLE OF AREAS SEE
 DWG. NO. 4100-P006-3006

REVISIONS

No.	Date	Description
1	2008-11-10	ISSUED FOR PERMIT
2	2009-03-10	ISSUED FOR PERMIT
3	2009-03-10	ISSUED FOR PERMIT
4	2009-03-10	ISSUED FOR PERMIT
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6	2009-03-10	ISSUED FOR PERMIT
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91	2009-03-10	ISSUED FOR PERMIT
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96	2009-03-10	ISSUED FOR PERMIT
97	2009-03-10	ISSUED FOR PERMIT
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99	2009-03-10	ISSUED FOR PERMIT
100	2009-03-10	ISSUED FOR PERMIT

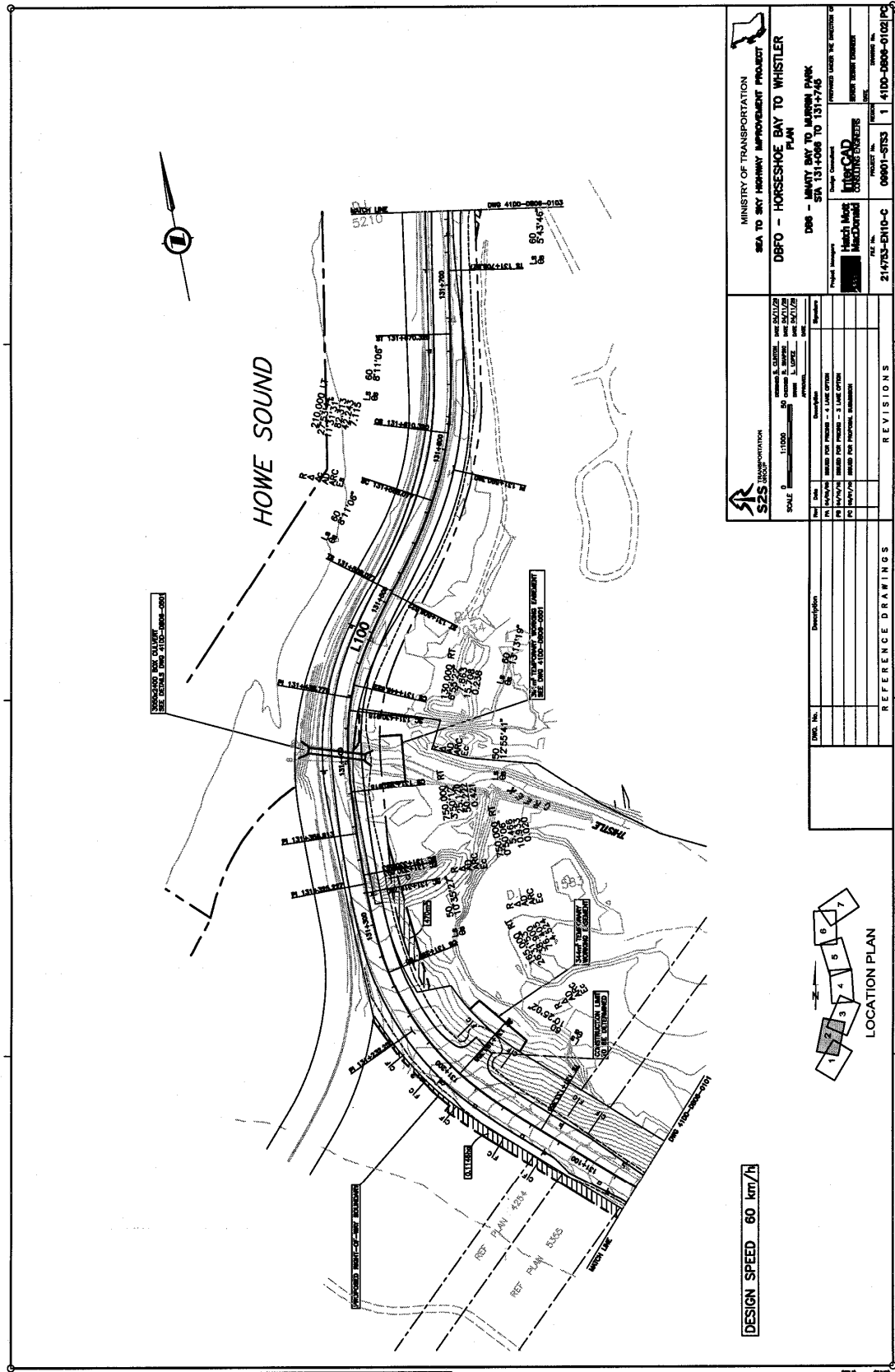
MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
HORSESHOE BAY TO WHISTLER
PRELIMINARY DESIGN
PROPERTY ACQUISITION PLAN
SECTION DB6
MINISTRY PARK
STA 132+450.000 TO STA 133+200.000

SCALE
 HORIZONTAL: 1" = 100'
 VERTICAL: 1" = 20'

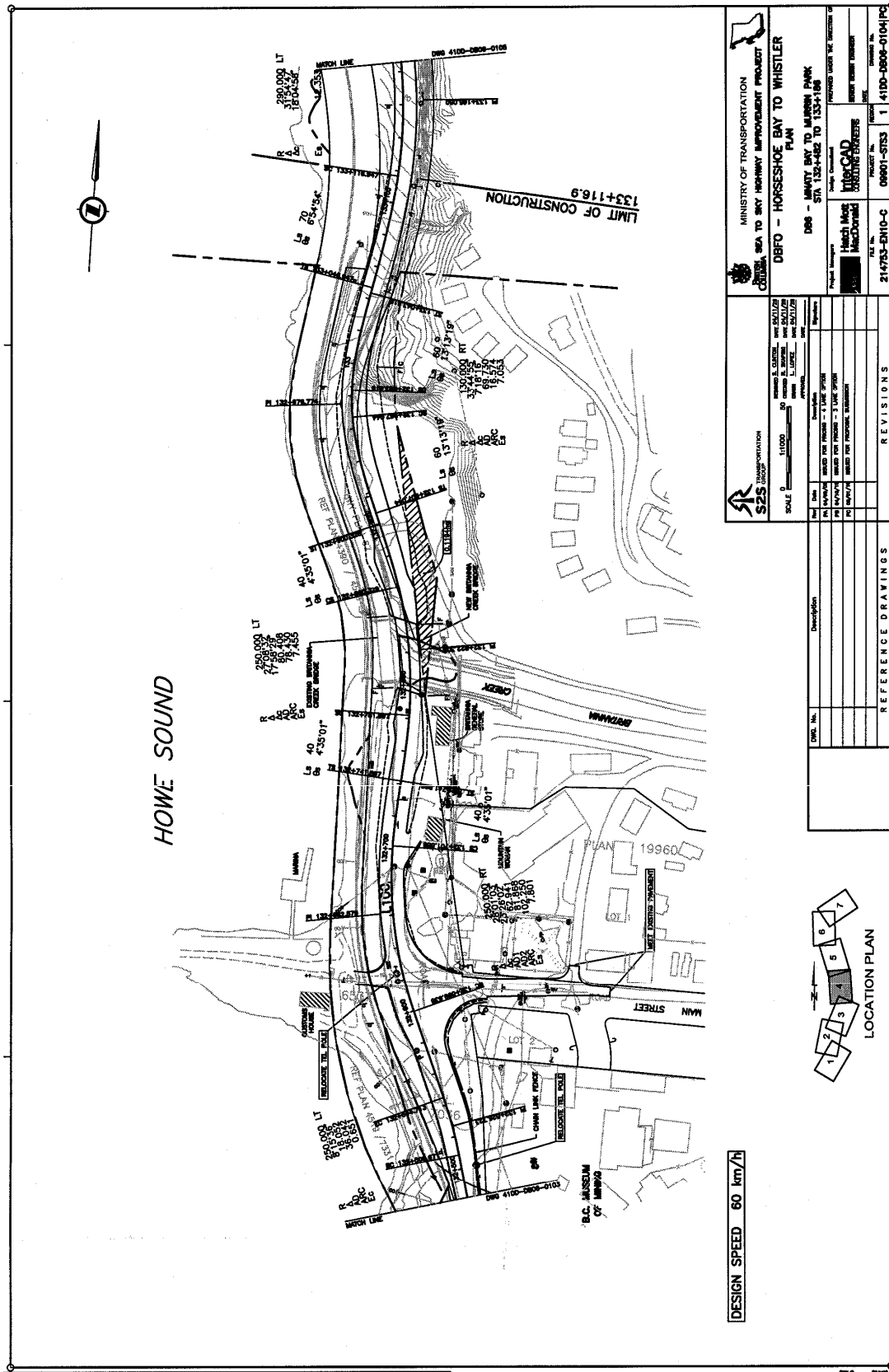
DATE
 2009-03-10

PROJECT NO.
 016315-7002-S (08801-7005) 1 4100-P006-3004

Annex 31

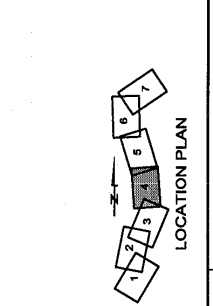


Annex 33



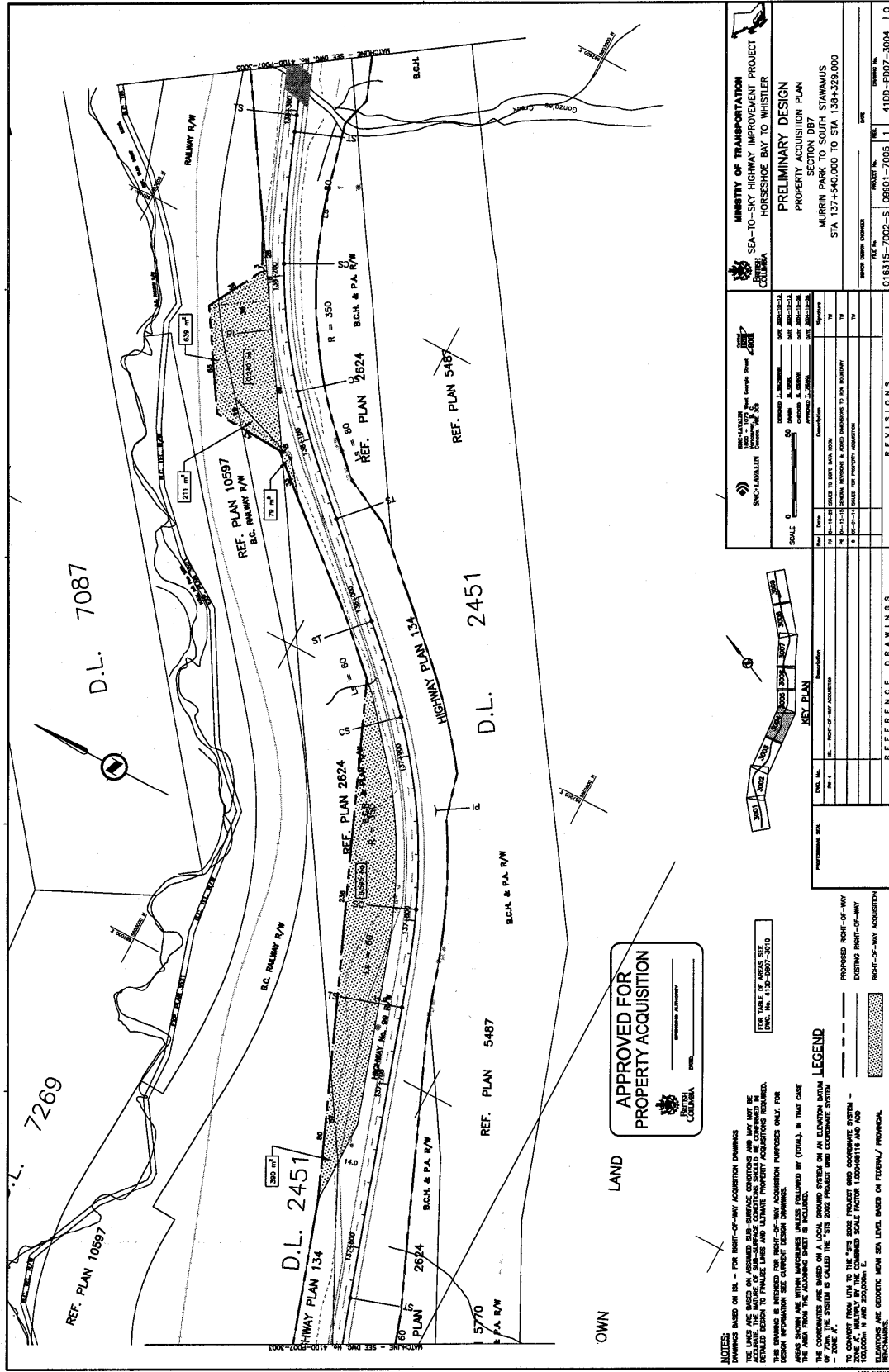
MINISTRY OF TRANSPORTATION BC TRANSPORTATION SEA TO SKY HIGHWAY IMPROVEMENT PROJECT		PROJECT NAME: DBFO - HORSESHOE BAY TO WHISTLER PLAN PROJECT NO.: 09901-ST3 SHEET NO.: 1 TOTAL SHEETS: 1	
SCALE: 1:1000 DATE: 2009-07-28 DRAWN BY: [Name] CHECKED BY: [Name]		PROJECT MANAGER: [Name] DESIGNER: [Name] DATE: 2009-07-28	
PREPARED UNDER THE SUPERVISION OF: [Name]		PROJECT NO.: 09901-ST3 SHEET NO.: 1 TOTAL SHEETS: 1	

REV.	DATE	DESCRIPTION



REV.	DATE	DESCRIPTION

Annex 34



NOTES:
 DRAWINGS BASED ON D.L. - FOR RIGHT-OF-WAY ACQUISITION DRAWINGS
 THE LINES ARE BASED ON ASSUMED SURFACE CONDITIONS AND MAY NOT BE
 BEHAVIOR TO FINAL DESIGN AND ULTIMATE PROPERTY ACQUISITION DRAWINGS.
 THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR
 DESIGN INFORMATION SEE CURRENT DESIGN DRAWINGS.
 THE AREA FROM THE PROPERTY ACQUISITION TO THE PROPERTY ACQUISITION
 THE COORDINATES ARE BASED ON A LOCAL GRID SYSTEM ON AN ELEVATION DATA
 OF 2000. THE SYSTEM IS CALLED THE "SIS 2000 PROJECT GRID COORDINATE SYSTEM".
 FROM THE "SIS 2000 PROJECT GRID COORDINATE SYSTEM" -
 SCALE "A" MULTIPLY BY THE CONVERSION SCALE FACTOR 1.00000118 AND ADD
 1000000.00 TO THE X AND Y COORDINATES.
 ELEVATIONS ARE GROUND MEAN SEA LEVEL BASED ON FEDERAL/PROVINCIAL
 DATUMS.

LEGEND
 PROPOSED RIGHT-OF-WAY
 EXISTING RIGHT-OF-WAY
 RIGHT-OF-WAY ACQUISITION

KEY PLAN
 PRELIMINARY PLAN
 SHEET NO. 134-1
 SHEET NO. 134-2
 SHEET NO. 134-3
 SHEET NO. 134-4
 SHEET NO. 134-5
 SHEET NO. 134-6
 SHEET NO. 134-7
 SHEET NO. 134-8
 SHEET NO. 134-9
 SHEET NO. 134-10

APPROVED FOR PROPERTY ACQUISITION
 BRITISH COLUMBIA
 ENGINEER/PLANNING

MINISTRY OF TRANSPORTATION
 SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
 HORSESHOE BAY TO WHISTLER
 PRELIMINARY DESIGN
 SECTION DB1
 MURPHY PARK TO SOUTH STAMANUS
 STA 137+500.000 TO STA 138+250.000

SCALE: 1" = 100'-0"

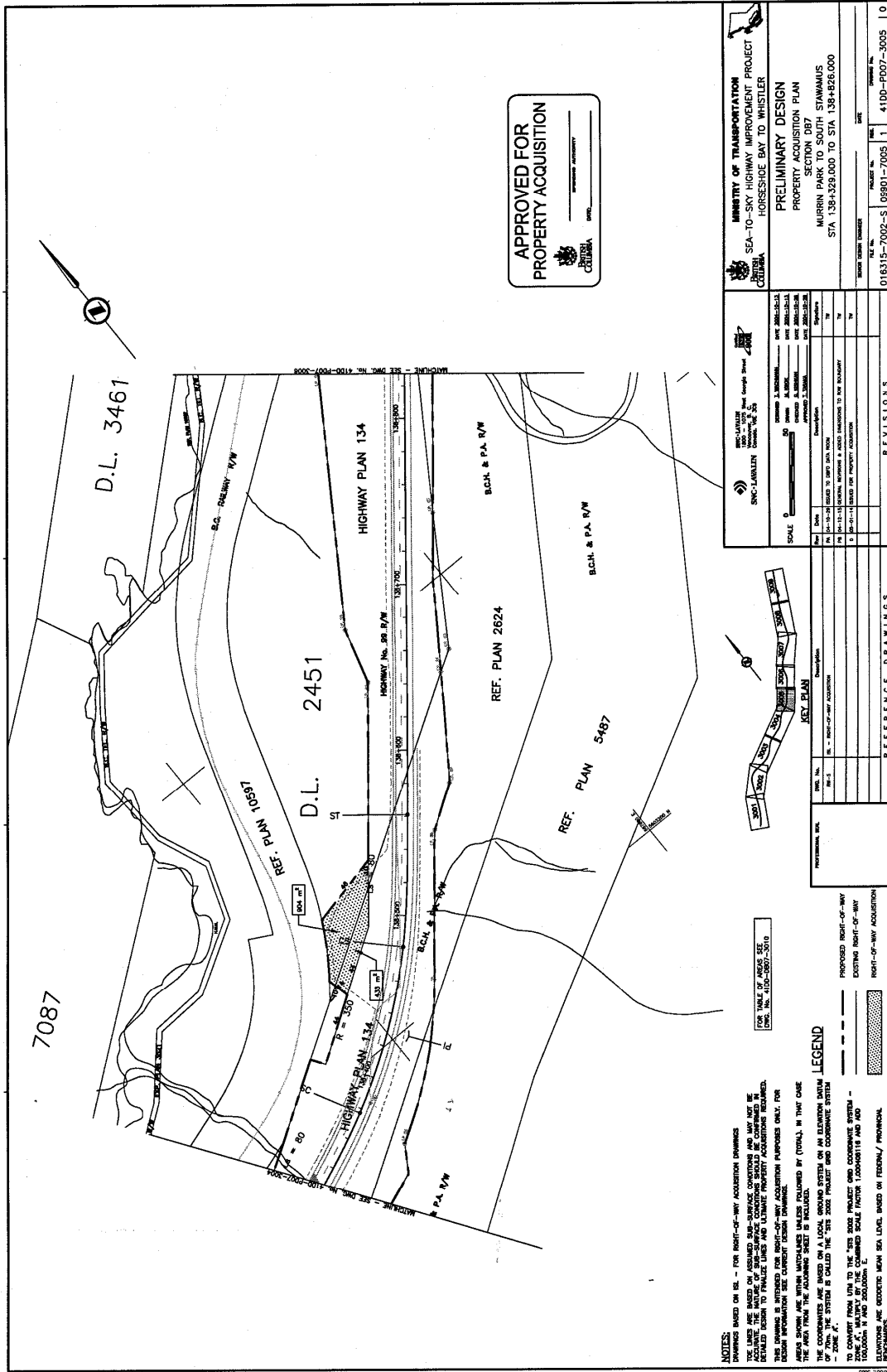
DATE: 2007-08-15
 DRAWN BY: J. [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]

NO.	DATE	DESCRIPTION
1	2007-08-15	ISSUED TO BIDDING
2	2007-08-15	ISSUED TO BIDDING
3	2007-08-15	ISSUED TO BIDDING

REVISIONS

018315-7002-S 08901-7005 1 4100-P007-3004 1.0

Annex 35



APPROVED FOR
PROPERTY ACQUISITION

MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
HORSESHOE BAY TO WHISTLER

PRELIMINARY DESIGN
PROPERTY ACQUISITION PLAN
SECTION 087
MURRIN PARK TO SOUTH STEWARTS
STA 138+329.000 TO STA 138+826.000

SCALE: 0 10 20 30 40 50 METERS

DATE: 10/11/11

PROJECT NO.: 018315-7002-S

DRAWING NO.: 4100-PP07-3005

1 0

REVISIONS

NO.	DATE	DESCRIPTION
1	10/11/11	ISSUED FOR PROPERTY ACQUISITION

REFERENCE DRAWINGS

PROJECT NO.	DRAWING NO.	DESCRIPTION
018315-7002-S	4100-PP07-3005	PROPERTY ACQUISITION PLAN

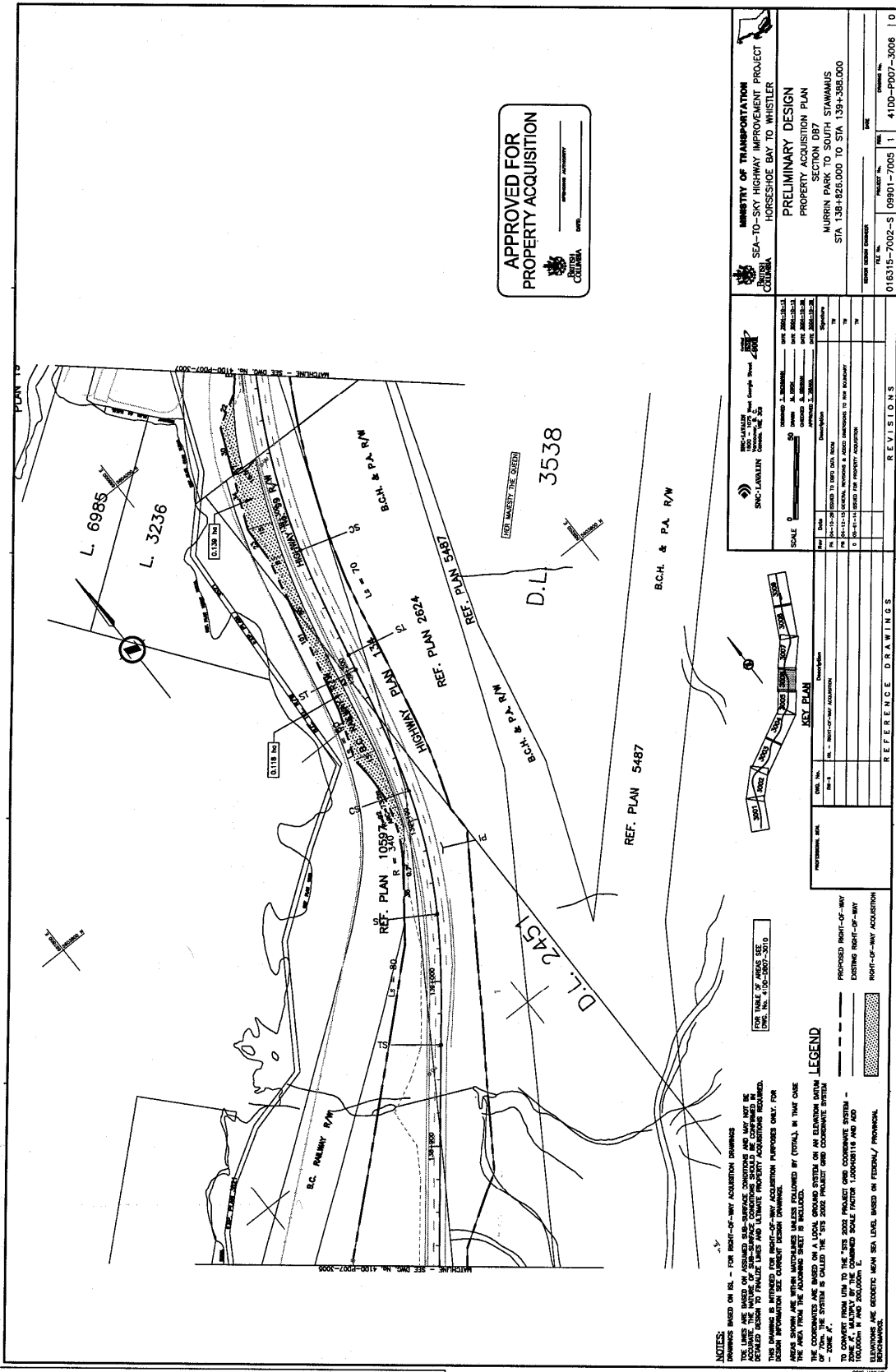
NOTES:
DRAWINGS BASED ON D.L. - FOR RIGHT-OF-WAY ACQUISITION DRAWINGS
THE LINES ARE BASED ON ASSUMED SUB-SURFACE CONDITIONS AND MAY NOT BE
ACCURATE TO THE ACTUAL SUB-SURFACE CONDITIONS. SHOULD A DISCREPANCY
BE FOUND, THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING THE
NECESSARY INFORMATION FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR
DESIGN INFORMATION SEE CURRENT DESIGN DRAWINGS.

AREAS SHOWN ARE WITH MATCHLINES UNLESS FOLLOWED BY (TOTAL) IN THAT CASE
THE AREA FROM THE MATCHLINE SHEET IS INCLUDED.

THE POINT FROM WHICH THE ELEVATIONS ARE TAKEN (VERTICAL CURVE SYSTEM) IS
FROM THE SYSTEM IS CALLED THE 2000 PROJECT AND COORDINATE SYSTEM
- ZONE 11.

TO CONVERT FROM UTM TO THE 2000 PROJECT AND COORDINATE SYSTEM -
ELEVATIONS ARE REDUCED MEAN SEA LEVEL BASED ON FEDERAL PROVINCIAL
ELEVATIONS.

Annex 36



**APPROVED FOR
PROPERTY ACQUISITION**

**MINISTRY OF TRANSPORTATION
BRITISH COLUMBIA**

DATE: _____
BY: _____

**MINISTRY OF TRANSPORTATION
BRITISH COLUMBIA**

SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
MUSKOGEE BAY TO WHISTLER

PRELIMINARY DESIGN
PROPERTY ACQUISITION PLAN
SECTION DB7
MURRIN PARK TO SOUTH STAMANUS
STA. 138+826.000 TO STA. 139+388.000

SCALE: 1" = 100'-0" (VERTICAL) / 1" = 200'-0" (HORIZONTAL)

DATE: _____
BY: _____

PROJECT NO. 09801-7005-1 | SHEET NO. 4100-PP07-3006 | 0

REVISIONS

NO.	DATE	DESCRIPTION

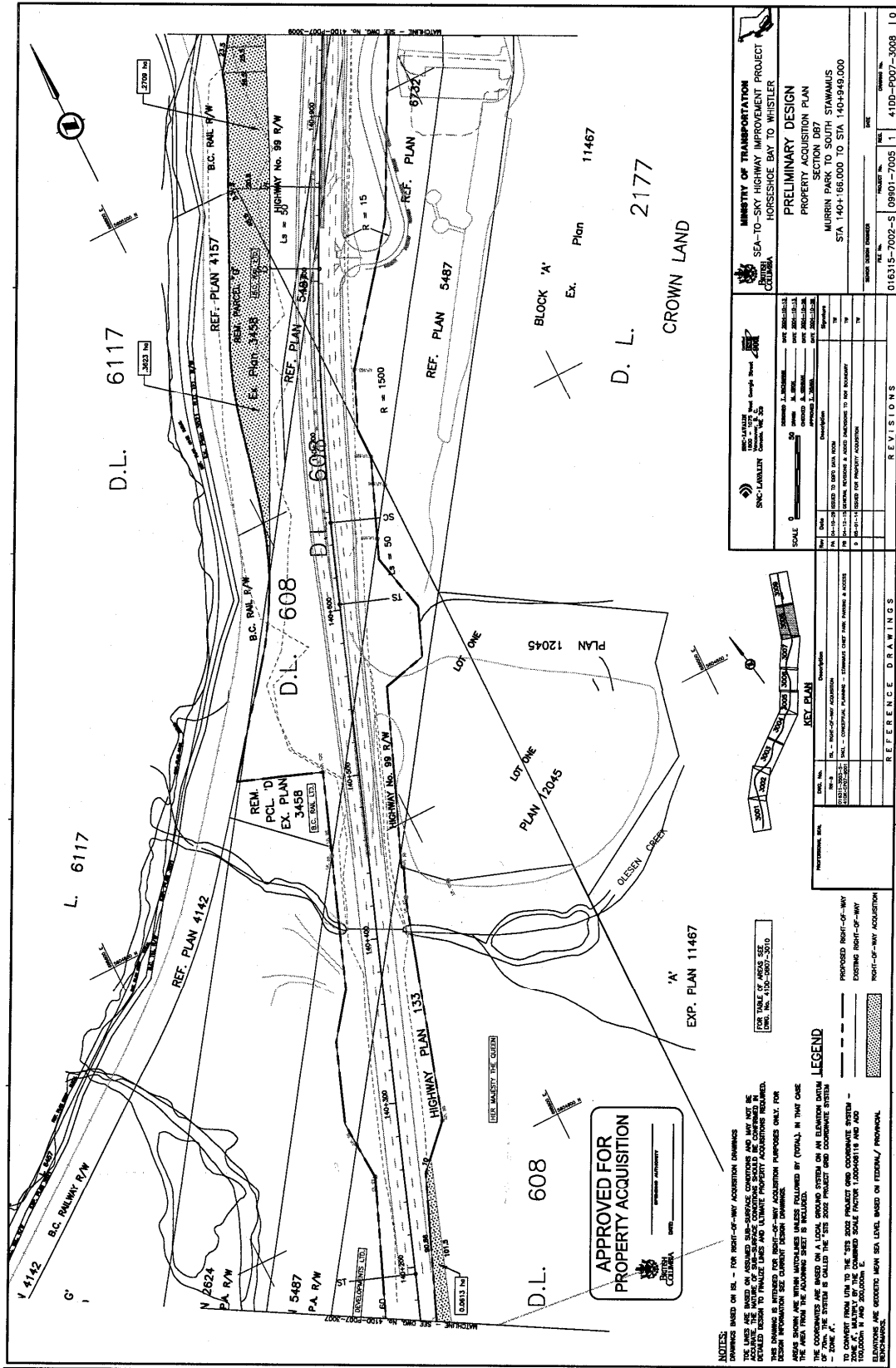
NOTES:

1. THIS DRAWING IS FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR THE PURPOSES OF THIS DRAWING, THE BOUNDARIES OF THE PROPERTY SHOWN ARE ASSUMED TO BE THE BOUNDARIES AS SHOWN ON THE TITLE DEEDS AND ULTIMATE PROPERTY ACQUISITION RECORDS. THE BOUNDARIES OF THE PROPERTY SHOWN ARE ASSUMED TO BE THE BOUNDARIES AS SHOWN ON THE TITLE DEEDS AND ULTIMATE PROPERTY ACQUISITION RECORDS. THE BOUNDARIES OF THE PROPERTY SHOWN ARE ASSUMED TO BE THE BOUNDARIES AS SHOWN ON THE TITLE DEEDS AND ULTIMATE PROPERTY ACQUISITION RECORDS.

2. THE COORDINATES ARE BASED ON A LOCAL GRID SYSTEM ON AN ELEVATION DATUM WHICH IS THE SYSTEM IN USE FOR THE SITE. THE COORDINATE SYSTEM IS TO BE CONVERTED FROM UTM TO THE "SITE 2002 PROJECT GRID COORDINATE SYSTEM" (UTM TO "SITE 2002 PROJECT GRID COORDINATE SYSTEM") BY THE USE OF THE COORDINATE TRANSFORMATION FACTOR 1.000001818 AND AN X-OFFSET OF 1000.000 METERS.

3. ELEVATIONS ARE GROUND MEAN SEA LEVEL BASED ON FEDERAL/PROVINCIAL DATUMS.

Annex 38



MINISTRY OF TRANSPORTATION SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT HORSESHOE BAY TO WHISTLER PRELIMINARY DESIGN PROPERTY ACQUISITION PLAN			
SECTION DB7 - TEMANUUS MURKIN PASS TO STA 140+166.000 TO STA 140+949.000			
STA 140+166.000 TO STA 140+949.000			
SCALE: 1:1000 DATE: 2007-11-15 DRAWN BY: [Name] CHECKED BY: [Name]			
REVISIONS			
016315-7002-S (08901-7005) 1 4100-9007-3008 1 0			

DATE	NO.	DESCRIPTION
2007-11-15	1	ISSUED FOR PROPERTY ACQUISITION
2007-11-15	2	ISSUED FOR PROPERTY ACQUISITION
2007-11-15	3	ISSUED FOR PROPERTY ACQUISITION
2007-11-15	4	ISSUED FOR PROPERTY ACQUISITION
2007-11-15	5	ISSUED FOR PROPERTY ACQUISITION
2007-11-15	6	ISSUED FOR PROPERTY ACQUISITION
2007-11-15	7	ISSUED FOR PROPERTY ACQUISITION
2007-11-15	8	ISSUED FOR PROPERTY ACQUISITION
2007-11-15	9	ISSUED FOR PROPERTY ACQUISITION
2007-11-15	10	ISSUED FOR PROPERTY ACQUISITION

NOTES:

1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.

2. THE LINES ARE BASED ON THE 1983 CANADIAN DATUM.

3. THE LINES ARE BASED ON THE 1983 CANADIAN DATUM.

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95. THE LINES ARE BASED ON THE 1983 CANADIAN DATUM.

96. THE LINES ARE BASED ON THE 1983 CANADIAN DATUM.

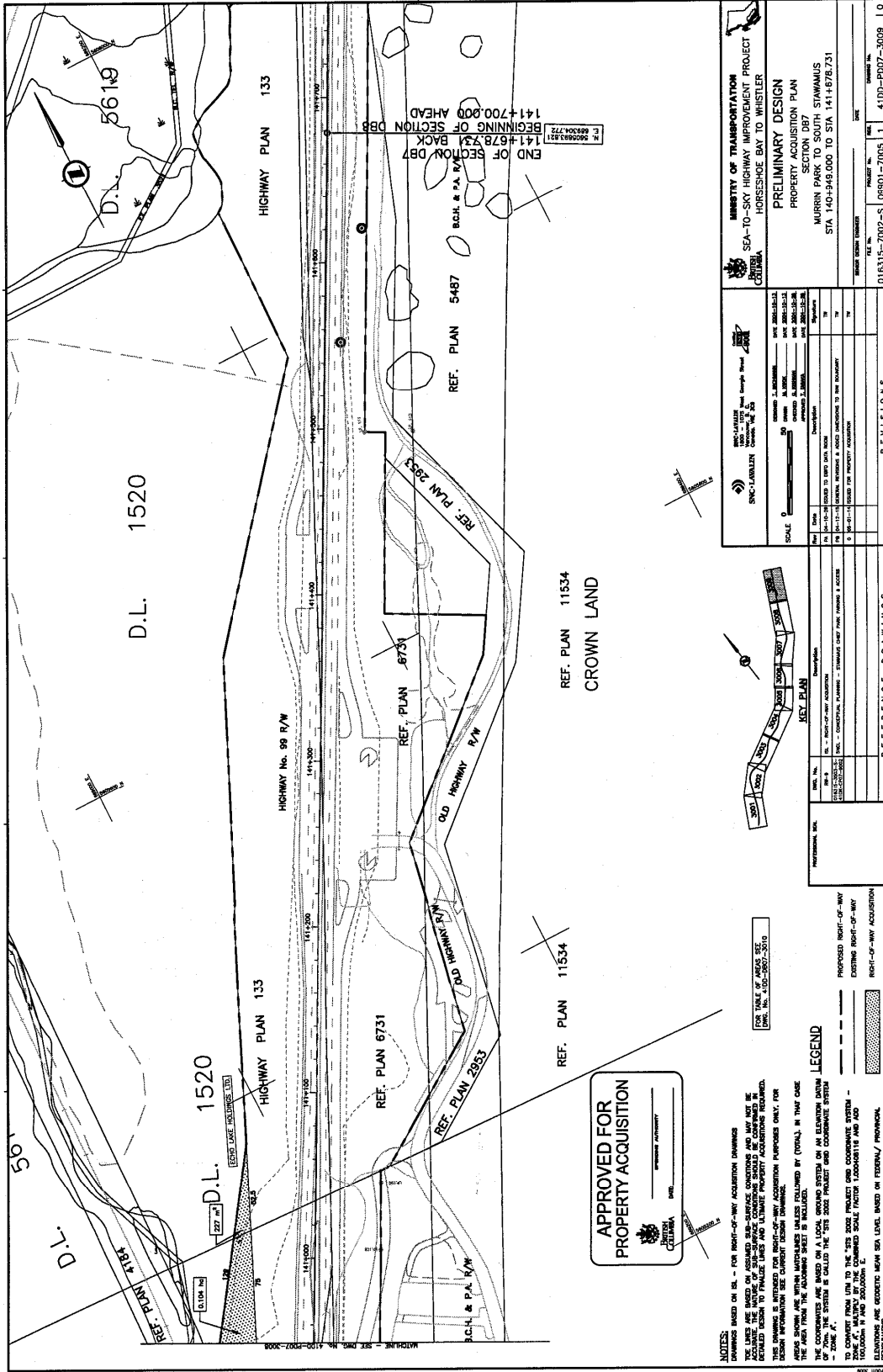
97. THE LINES ARE BASED ON THE 1983 CANADIAN DATUM.

98. THE LINES ARE BASED ON THE 1983 CANADIAN DATUM.

99. THE LINES ARE BASED ON THE 1983 CANADIAN DATUM.

100. THE LINES ARE BASED ON THE 1983 CANADIAN DATUM.

Annex 39



MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
HORSESHOE BAY TO WHISTLER

PRELIMINARY DESIGN
 PROPERTY ACQUISITION PLAN
 SECTION DB7
 MURRIN PARK TO SOUTH STAMAMUS
 STA 140+948.000 TO STA 141+678.731

DATE: 01/31/15
SCALE: 1:1000
PROJECT NO.: 410D-PD07-3009

REVISIONS

NO.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

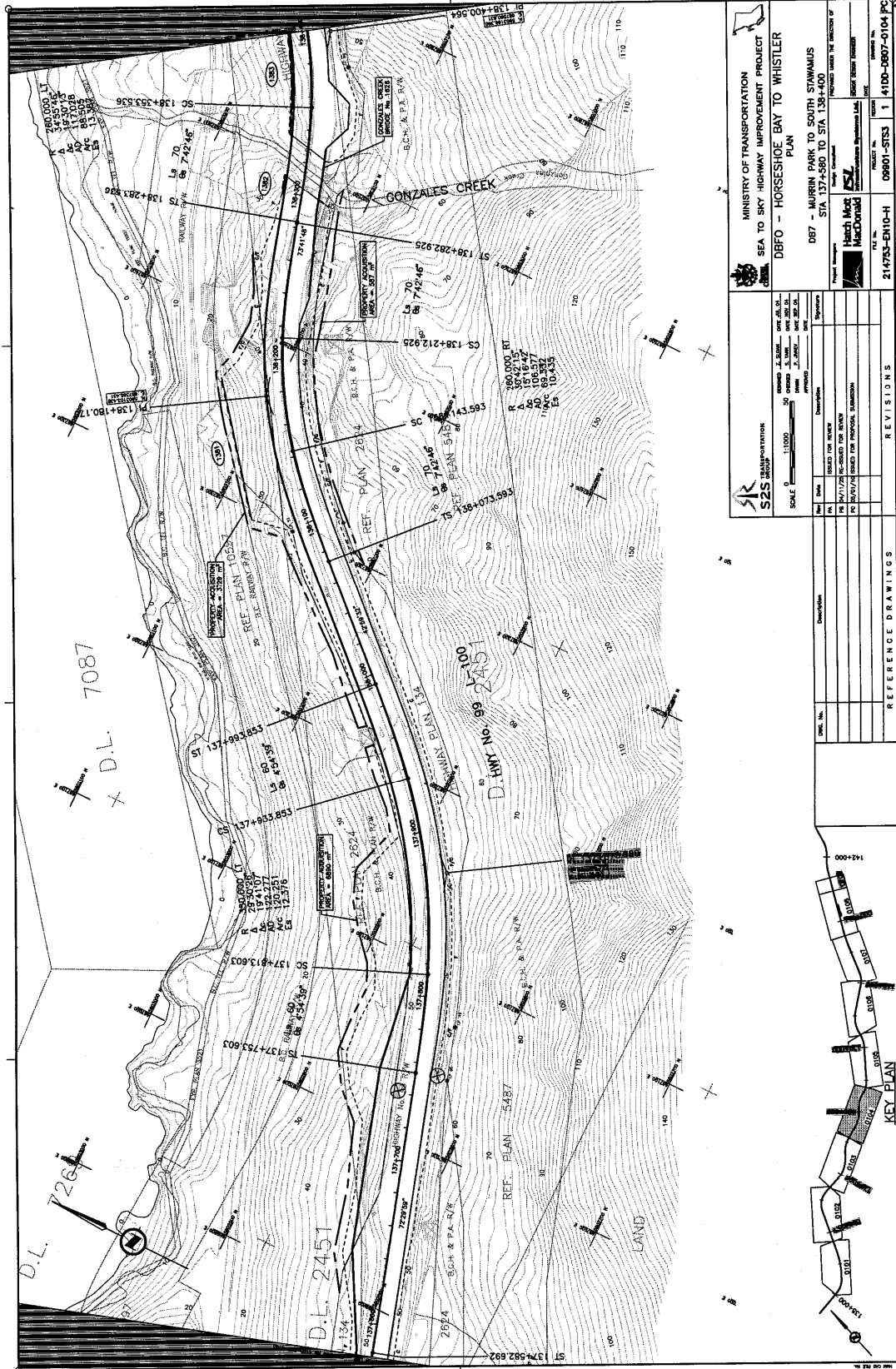
APPROVED FOR PROPERTY ACQUISITION

LEGEND

PROPOSED RIGHT-OF-WAY ACQUISITION
 EXISTING RIGHT-OF-WAY ACQUISITION
 RIGHT-OF-WAY ACQUISITION

NOTES:
 1. BOUNDARIES SHOWN ON THIS PLAN ARE BASED ON THE INFORMATION PROVIDED BY THE APPLICANT AND ARE NOT GUARANTEED BY THE MINISTRY OF TRANSPORTATION.
 2. THE INFORMATION ON THIS PLAN IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A WARRANTY OR GUARANTEE OF ANY KIND.
 3. THE INFORMATION ON THIS PLAN IS SUBJECT TO CHANGE WITHOUT NOTICE.
 4. THE INFORMATION ON THIS PLAN IS SUBJECT TO THE APPLICANT'S OBLIGATIONS UNDER THE APPLICANT'S AGREEMENT WITH THE MINISTRY OF TRANSPORTATION.
 5. THE INFORMATION ON THIS PLAN IS SUBJECT TO THE APPLICANT'S OBLIGATIONS UNDER THE APPLICANT'S AGREEMENT WITH THE MINISTRY OF TRANSPORTATION.
 6. THE INFORMATION ON THIS PLAN IS SUBJECT TO THE APPLICANT'S OBLIGATIONS UNDER THE APPLICANT'S AGREEMENT WITH THE MINISTRY OF TRANSPORTATION.
 7. THE INFORMATION ON THIS PLAN IS SUBJECT TO THE APPLICANT'S OBLIGATIONS UNDER THE APPLICANT'S AGREEMENT WITH THE MINISTRY OF TRANSPORTATION.
 8. THE INFORMATION ON THIS PLAN IS SUBJECT TO THE APPLICANT'S OBLIGATIONS UNDER THE APPLICANT'S AGREEMENT WITH THE MINISTRY OF TRANSPORTATION.
 9. THE INFORMATION ON THIS PLAN IS SUBJECT TO THE APPLICANT'S OBLIGATIONS UNDER THE APPLICANT'S AGREEMENT WITH THE MINISTRY OF TRANSPORTATION.
 10. THE INFORMATION ON THIS PLAN IS SUBJECT TO THE APPLICANT'S OBLIGATIONS UNDER THE APPLICANT'S AGREEMENT WITH THE MINISTRY OF TRANSPORTATION.

Annex 40



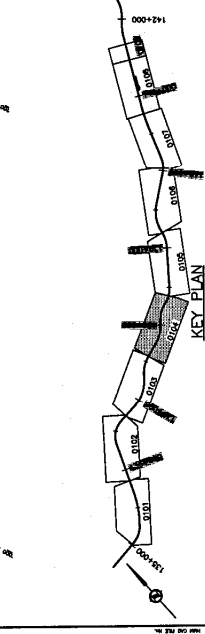
MINISTRY OF TRANSPORTATION
 SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
 DBFO - HORSESHOE BAY TO WHISTLER
 PLAN
 DBF7 - MURRIN PARK TO SOUTH STAWAMUS
 STA. 137+582 TO STA. 138+400
 PROJECT NO. 09901-ST5 1 410D-DB07-0104 P00
 SHEET NO. 214753-EN10-H
 CONSULT: PERRY SHAWNEE PREVIOUS LETTER

DATE	BY	DESCRIPTION
11/17/21	J. BIRN	ISSUED FOR REVIEW
12/17/21	J. BIRN	ISSUED FOR REVIEW
12/17/21	J. BIRN	ISSUED FOR REVIEW
12/17/21	J. BIRN	ISSUED FOR REVIEW

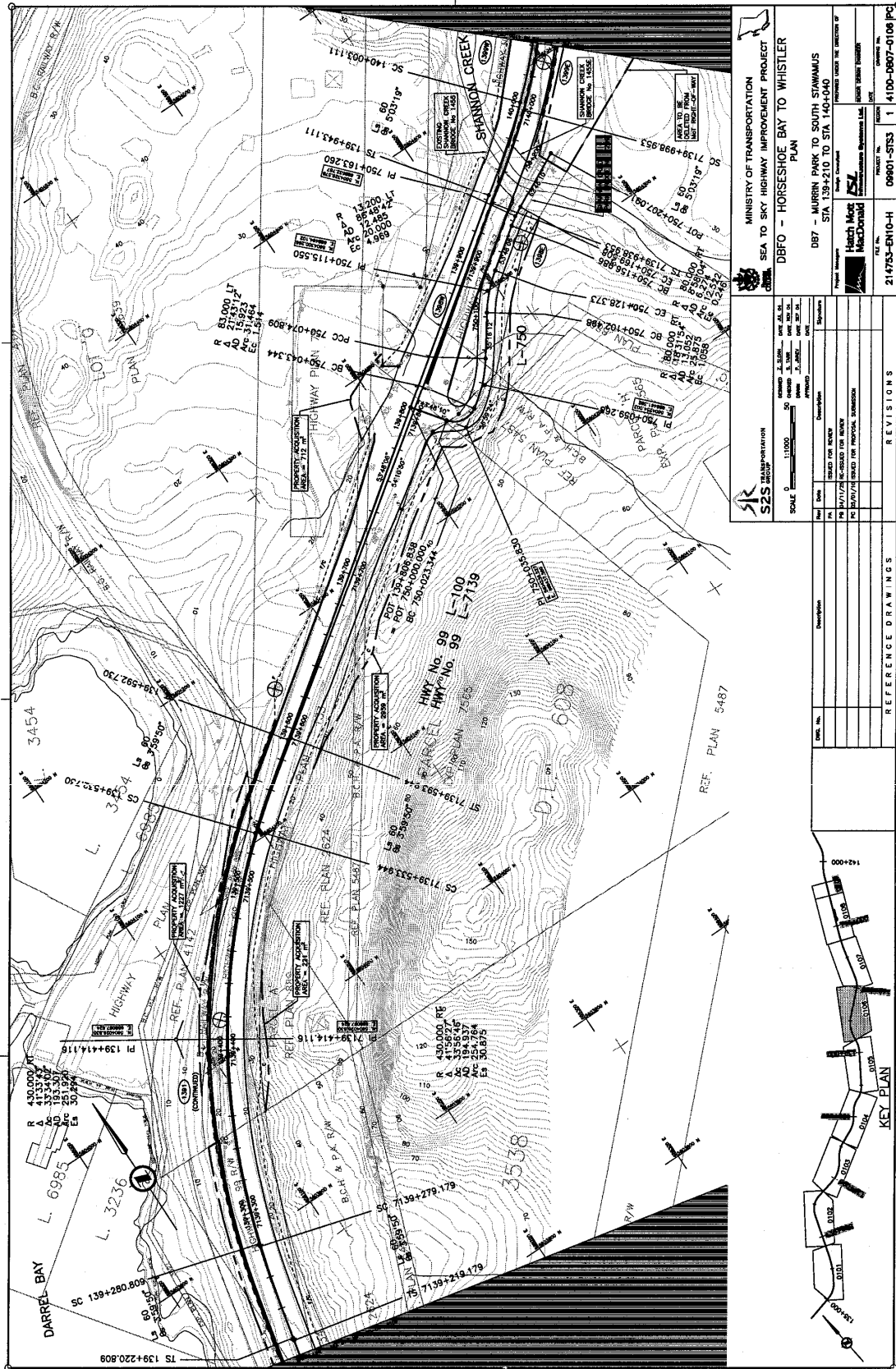
SCALE 0 1:1000
 S2S DESIGN GROUP

REVISIONS

NO.	DATE	DESCRIPTION



Annex 42



SR MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

DATE: 11/00
SCALE: 1:1000

PROJECT NO: 214753-EN10-H
REV: 1

DESIGNED BY: J. BROWN
CHECKED BY: J. BROWN
DATE: 11/00

PROJECT NO: 0901-ST3
REV: 1

PROJECT NO: 1 4100-0807-0108 PG
CANCEL: PLEASE OBSERVE PREVIOUS LETTER

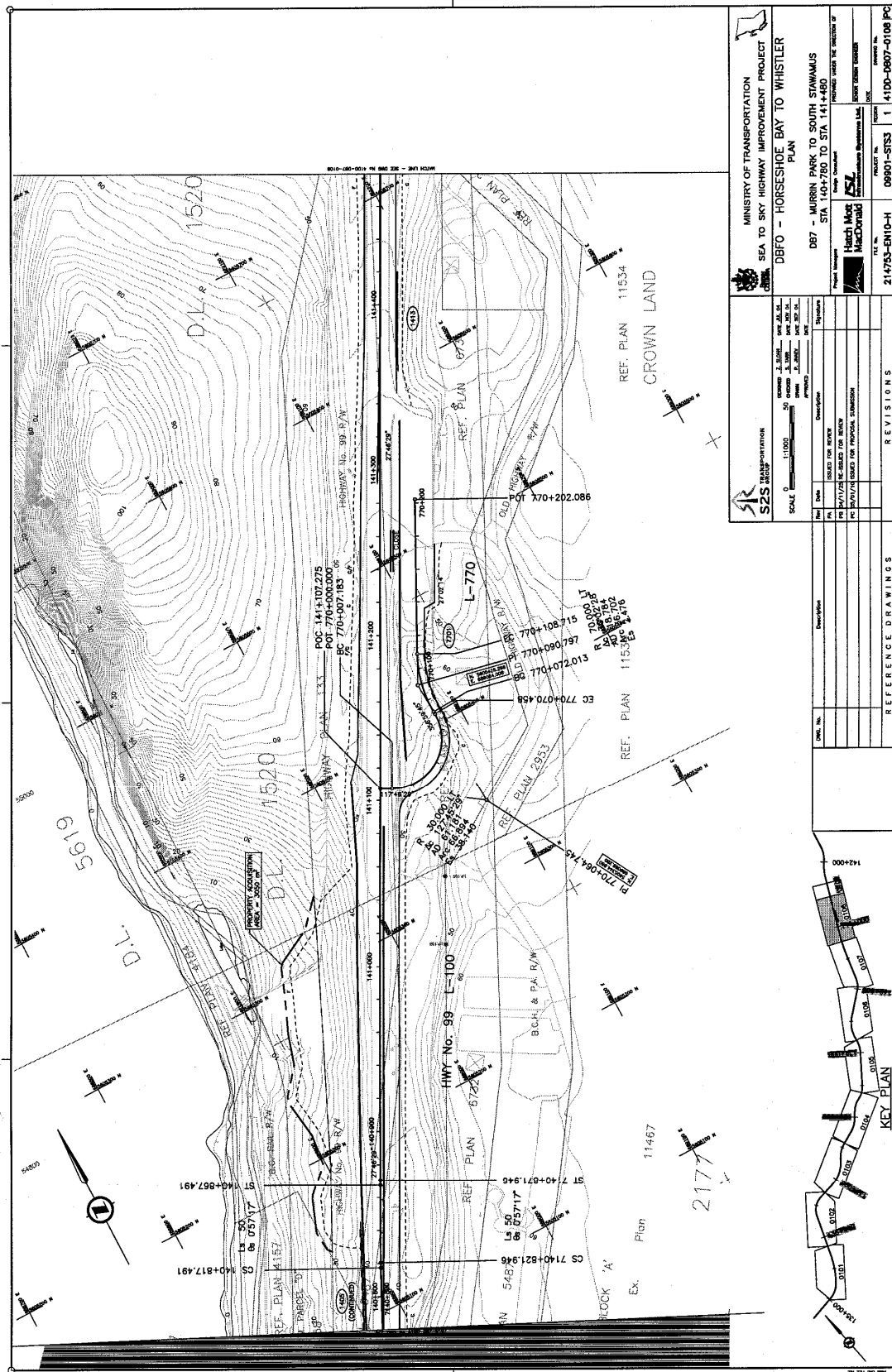
REV	DATE	DESCRIPTION
1	11/00	ISSUED FOR REVIEW
2	01/01	REVISED FOR REVIEW
3	01/01	REVISED FOR REVIEW
4	01/01	REVISED FOR REVIEW

REVISIONS

REFERENCE DRAWINGS

KEY PLAN

Annex 44



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DIBFO - HORSESHOE BAY TO WHISTLER
PLAN

DB7 - MURRIN PARK TO SOUTH STEWAMUS
STA 1400+000 TO STA 1410+000

Project Manager: **Haech Mac MacDonald**
Project Engineer: **Haech Mac MacDonald**

PROJECT NO. 08901-SIS3
REVISED BY: 1
DATE: 14/10/08
DRAWING NO. 4100-0807-0108 PC

SCALE: 1:1000
DATE: 14/10/08
BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

REVISIONS

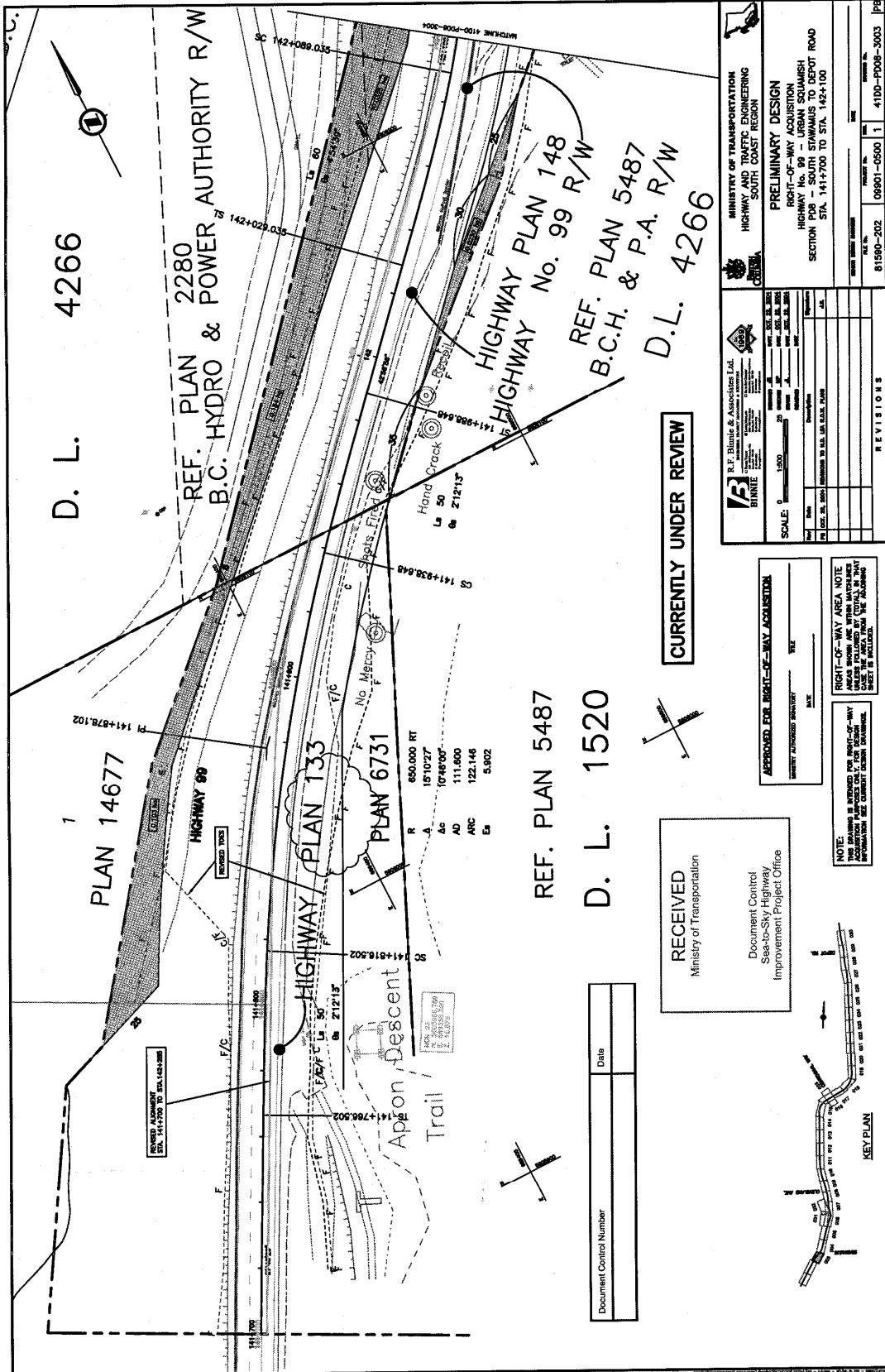
Rev	Date	Description
1	14/10/08	ISSUED FOR REVIEW
2	14/10/08	FOR REVIEW/REVISIONS FOR PROVISIONAL COMMENTS
3	14/10/08	FOR REVIEW/REVISIONS FOR PROVISIONAL COMMENTS

REFERENCE DRAWINGS

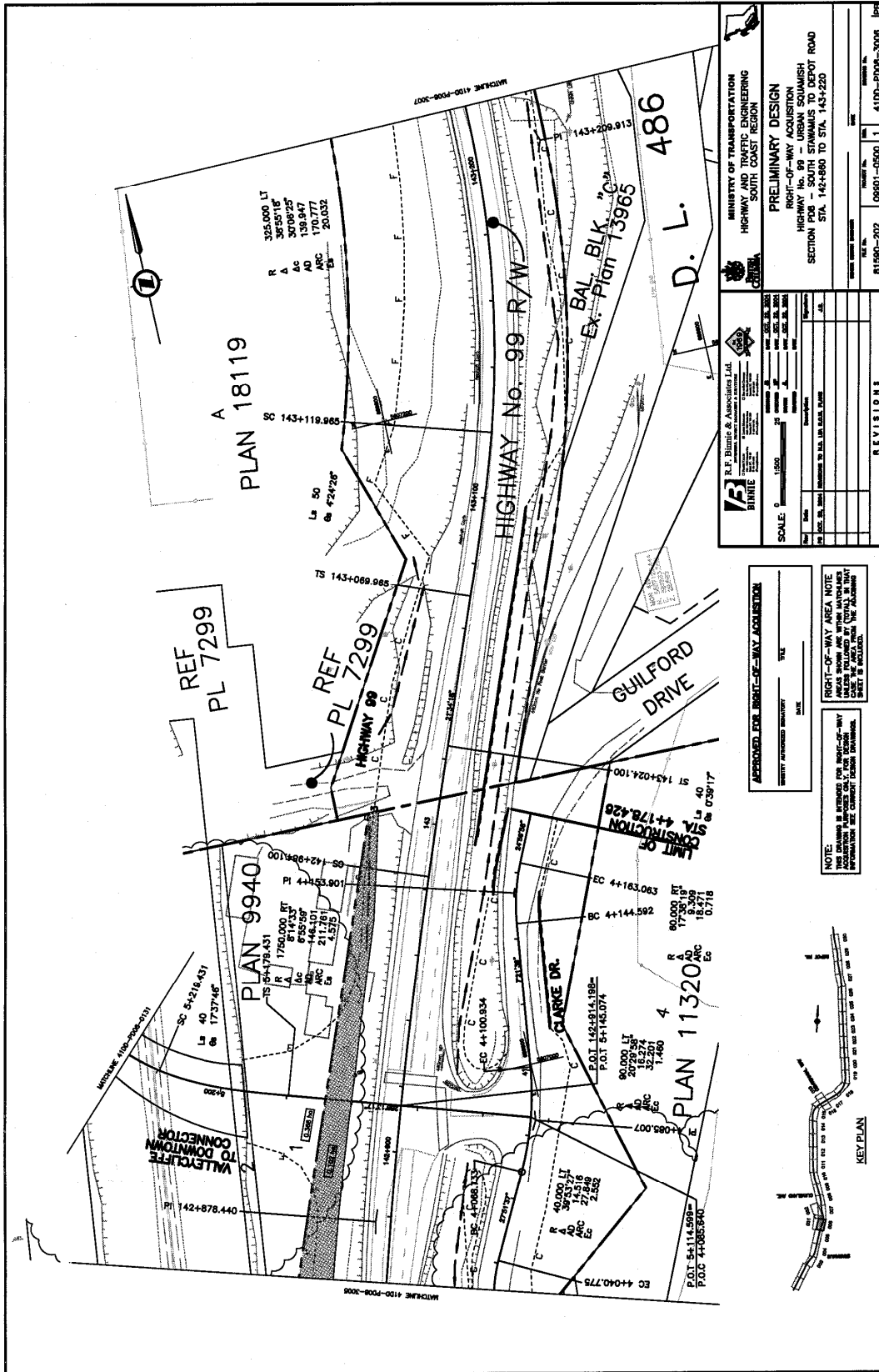
Draw. No.	Description
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2177	2177-004-140
2177	2177-005-140
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2177	2177-007-140
2177	2177-008-140
2177	2177-009-140
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2177	2177-011-140
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2177	2177-096-140
2177	2177-097-140
2177	2177-098-140
2177	2177-099-140
2177	2177-100-140

KEY PLAN

Annex 45



Annex 48



R.F. Blimie & Associates Ltd.
ENGINEERS
 1000-1000-2007

**MINISTRY OF TRANSPORTATION
 HIGHWAY AND TRAFFIC ENGINEERING
 SOUTH COAST REGION**

PRELIMINARY DESIGN
 RIGHT-OF-WAY ACQUISITION
 HIGHWAY No. 99 - URBAN SQUAMISH
 SECTION P08 - SOUTH STAMMAIS TO DEPOT ROAD
 STA. 142+880 TO STA. 143+220

SCALE: 1:500
 DATE: 11/11/11
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]

PROJECT NO. 81590-202
 DRAWING NO. 09901-0500 1
 SHEET NO. 4101-PD08-3006

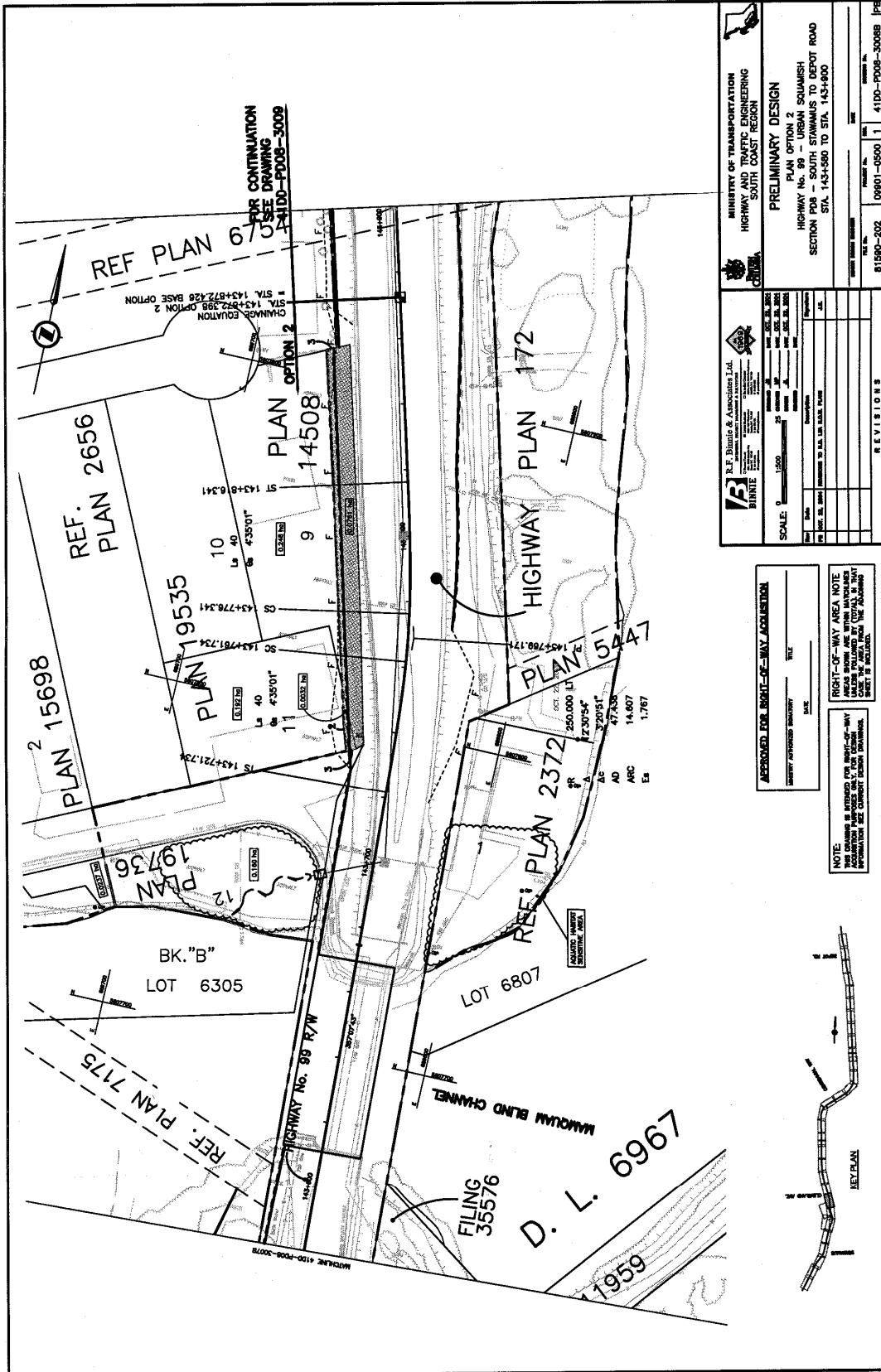
NO.	DATE	REVISIONS

APPROVED FOR RIGHT-OF-WAY ACQUISITION
 ENGINEER: [Name] TITLE: [Title] DATE: [Date]

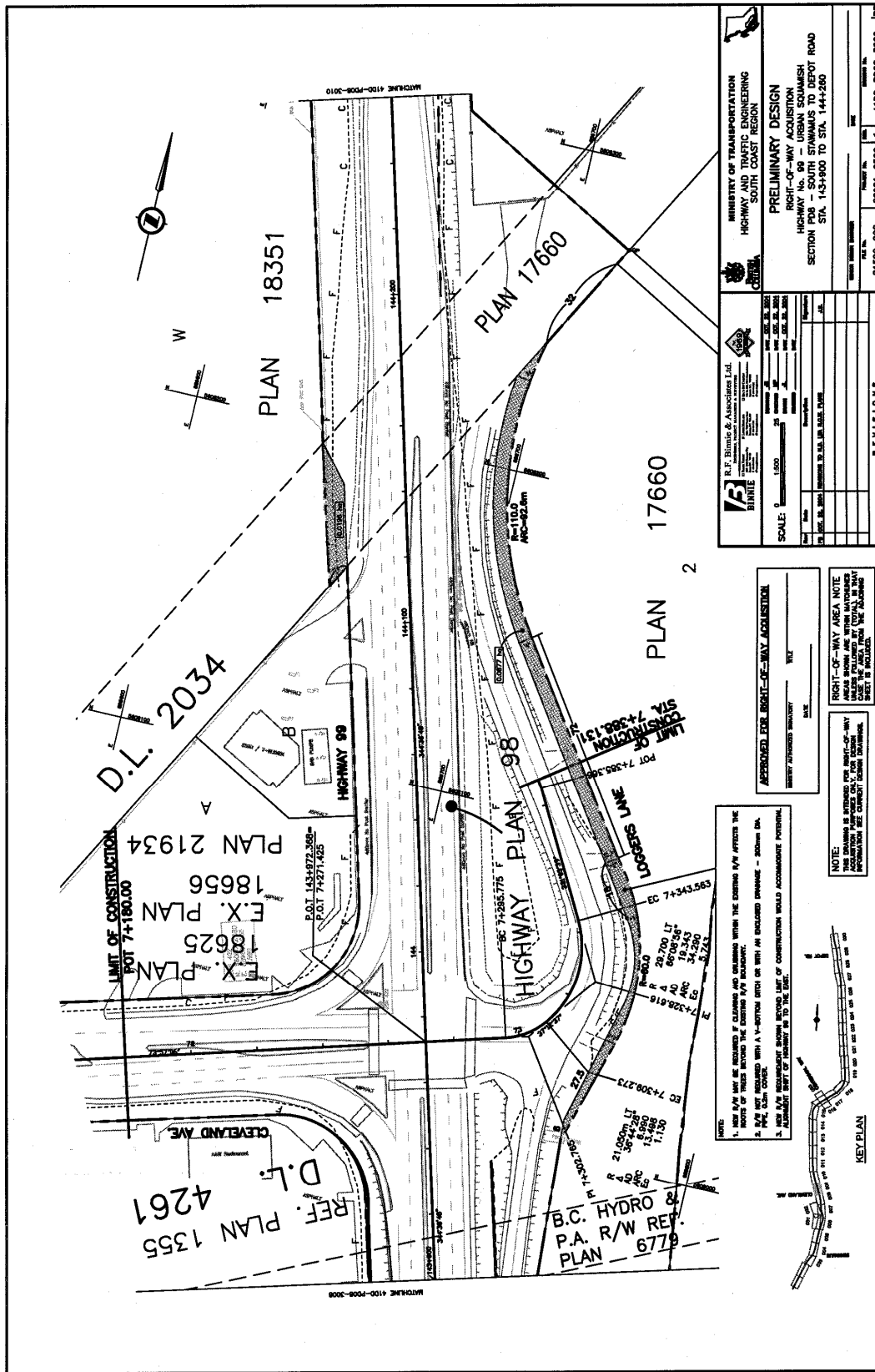
NOTE:
 THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. IT IS NOT TO BE USED FOR CONSTRUCTION. ANY CHANGES TO THIS DRAWING MUST BE APPROVED BY THE ENGINEER.

RIGHT-OF-WAY AREA NOTE:
 AREAS SHOWN ARE WITH MATCHLINES. MATCHLINES ARE SHOWN AT THE TOP AND BOTTOM OF THE SHEET. THE AREA BETWEEN THE MATCHLINES IS NOT INCLUDED.

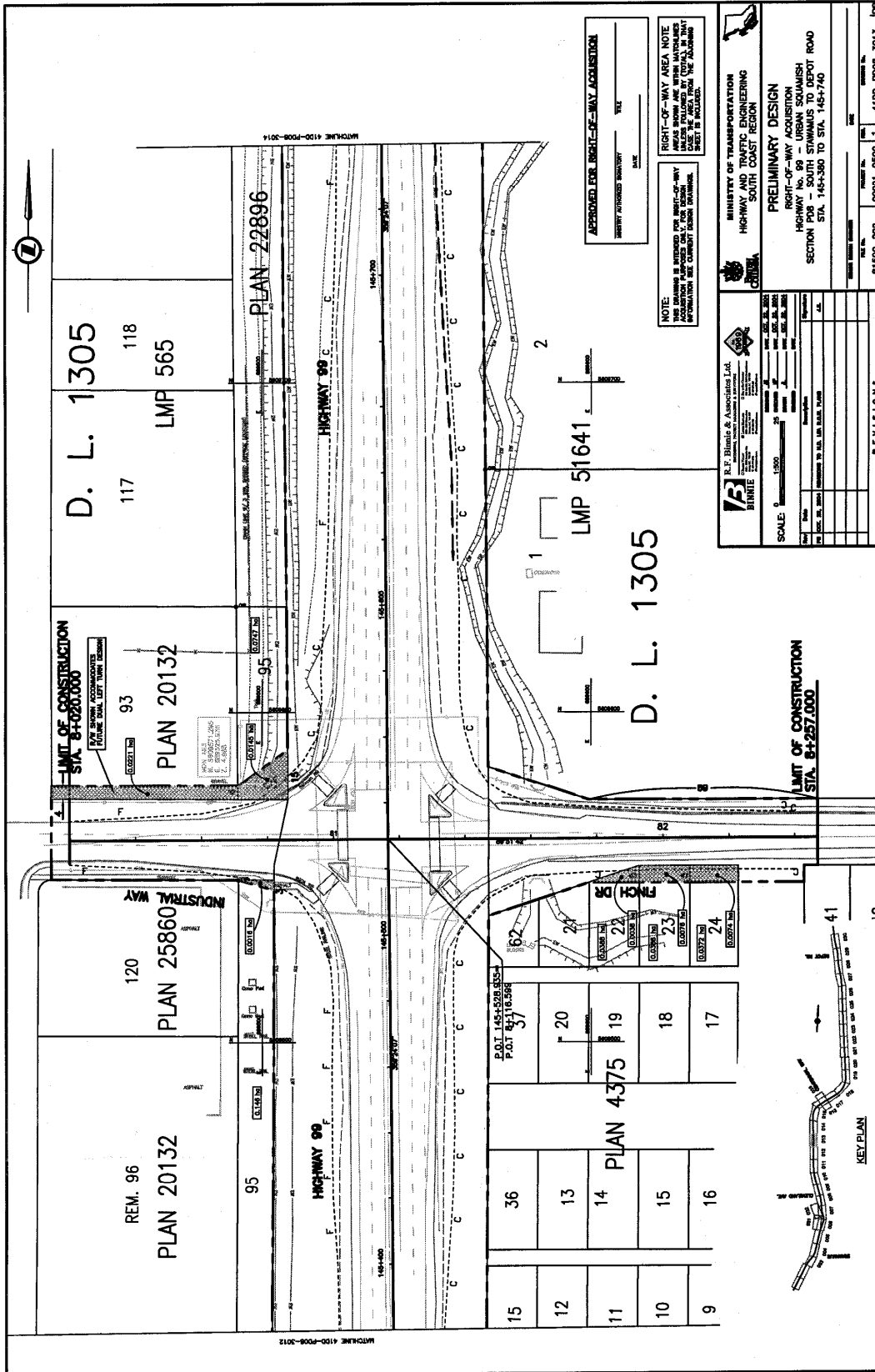
Annex 50



Annex 51



Annex 52



APPROVED FOR RIGHT-OF-WAY ACQUISITION

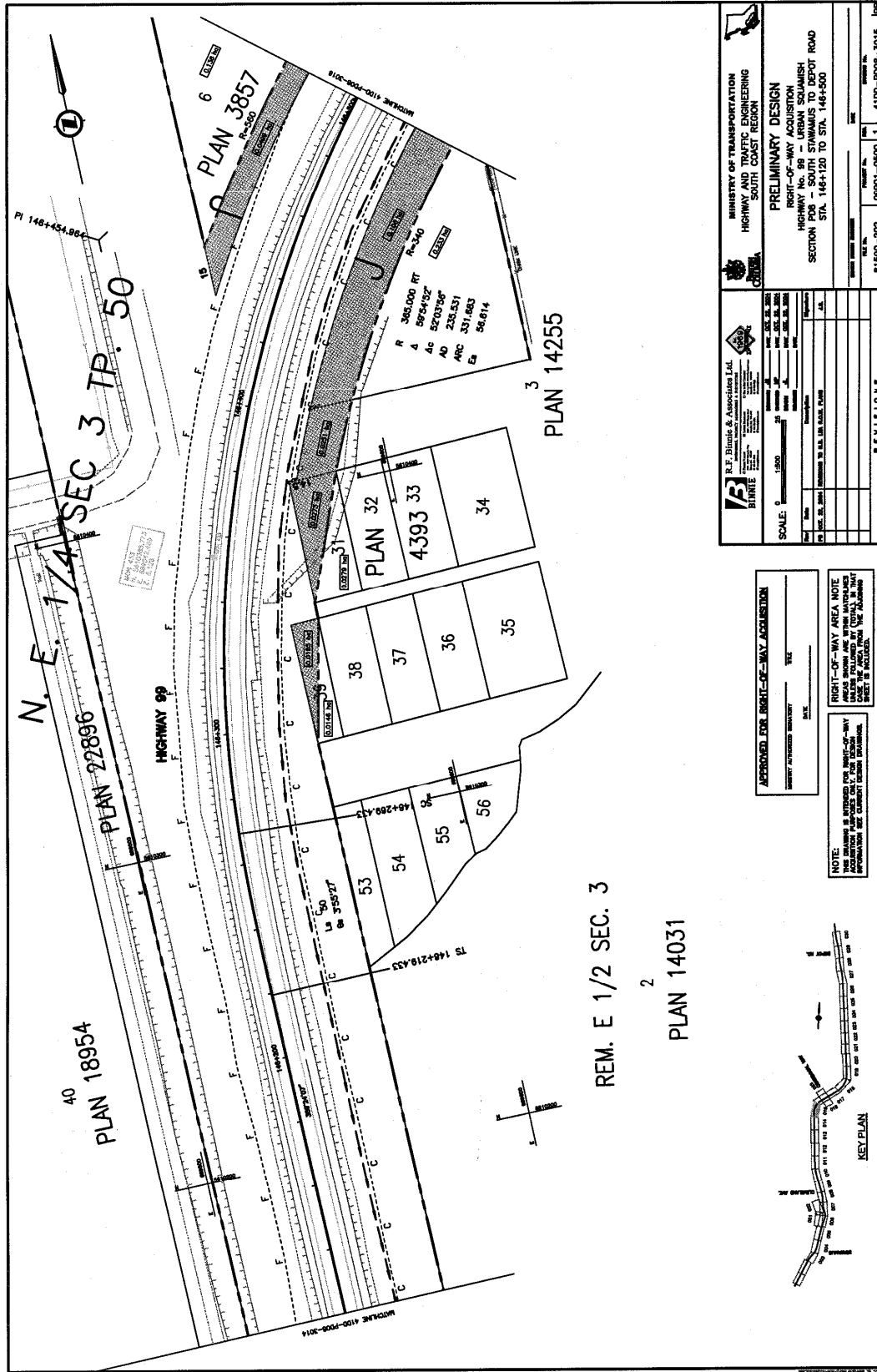
DATE: _____

BY: _____

NOTE: THIS PLAN SHOWS THE RIGHT-OF-WAY ACQUISITION PLANNED ONLY. FOR SECTION INFORMATION SEE CURRENT DESIGN DRAWINGS. THIS PLAN IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE AN OFFER OF ANY INVESTMENT OR A GUARANTEE OF ANY RESULTS.

		MINISTRY OF TRANSPORTATION HIGHWAY AND TRAVEL ENGINEERING SOUTH COAST REGION	
SCALE: 1:2000 DATE: _____ DRAWN BY: _____ CHECKED BY: _____ APPROVED BY: _____		PRELIMINARY DESIGN RIGHT-OF-WAY ACQUISITION HIGHWAY No. 99 - URBAN SQUAMISH SECTION PDB - SOUTH STIMULUS TO DEPOT ROAD STA. 145+380 TO STA. 148+740	
PROJECT No.	81500-202	DRAWING No.	4100-P008-3013
REVISIONS			

Annex 53



REM. E 1/2 SEC. 3
2
PLAN 14031

APPROVED FOR RIGHT-OF-WAY ACQUISITION

DATE: _____

PROJECT APPROVED: _____

RIGHT-OF-WAY AREA NOTE

NOTE: LINES & AREAS FOR RIGHT-OF-WAY ACQUISITION PURPOSES ON THIS DRAWING REPRESENT THE PROPOSED RIGHT-OF-WAY BOUNDARY. THE ACTUAL BOUNDARY IS TO BE DETERMINED BY SURVEY.

REVISIONS

NO.	DESCRIPTION	DATE

SCALE: 0 500 1000

1:500

DATE: _____

BY: _____

CHECKED BY: _____

DATE: _____

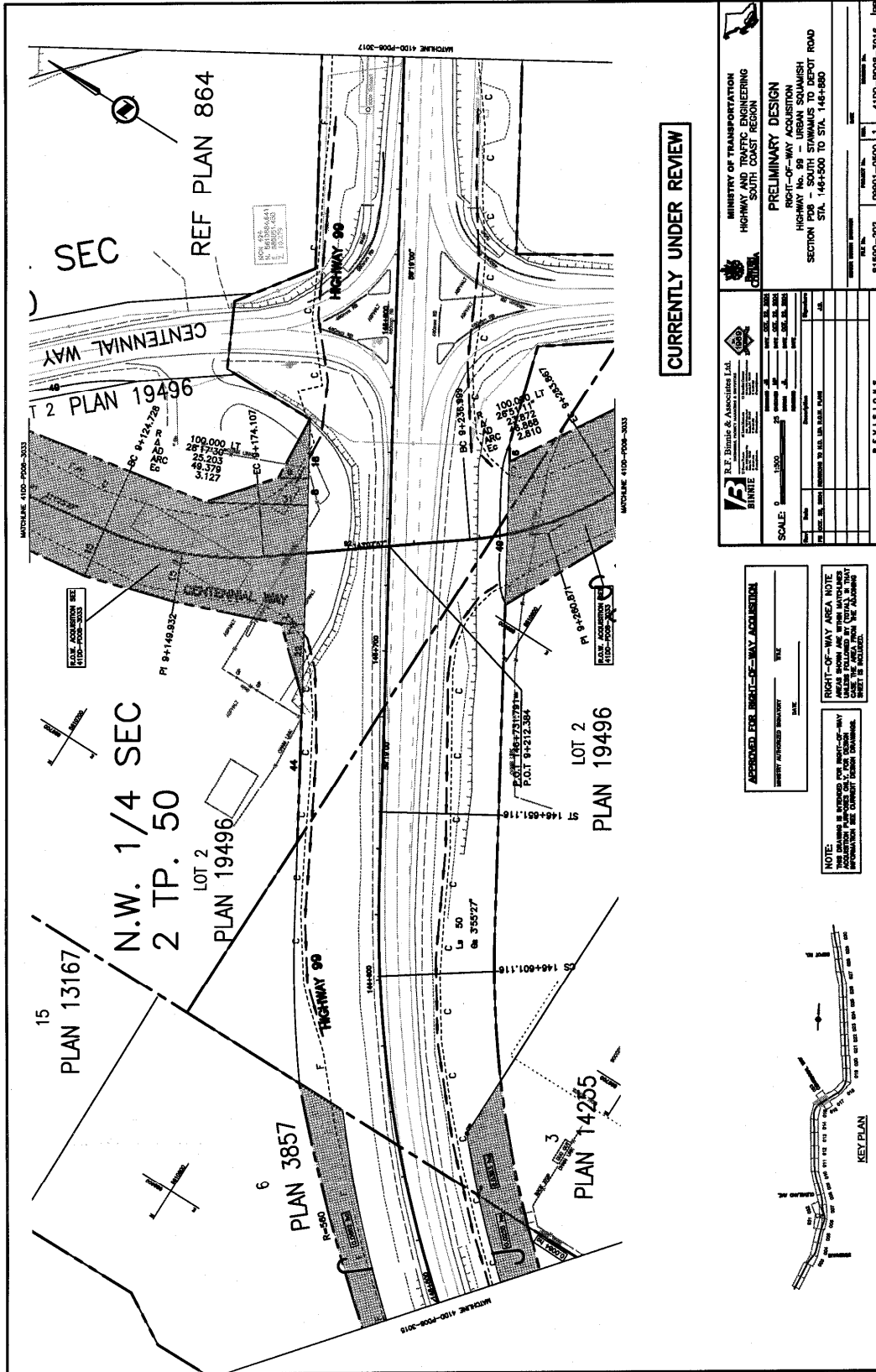
KEY PLAN

MINISTRY OF TRANSPORTATION
HIGHWAY AND TRAFFIC ENGINEERING
SOUTH COAST REGION

PRELIMINARY DESIGN
RIGHT-OF-WAY ACQUISITION
HIGHWAY No. 99 - URBAN SQUAMISH
SECTION P08 - SOUTH STAMMUS TO DEPOT ROAD
STA. 146+120 TO STA. 146+800

PROJECT NO.: 0901-0000 1
DRAWING NO.: 4100-P008-3015

Annex 54



CURRENTLY UNDER REVIEW

R.F. Brink & Associates Ltd.
 ENGINEERS
 100-1000-3033

**MINISTRY OF TRANSPORTATION
 HIGHWAY AND TRAFFIC ENGINEERING
 SOUTH COAST REGION**

PRELIMINARY DESIGN
 RIGHT-OF-WAY ACQUISITION
 HIGHWAY SOUTH COAST REGION
 SECTION STA. 146+500 TO STA. 148+180

SCALE: 1" = 100'

DATE: 1/20/00

BY: [Signature]

FOR THE USE OF: [Signature]

REVISIONS

NO.	DATE	DESCRIPTION
1	09/01/00	1

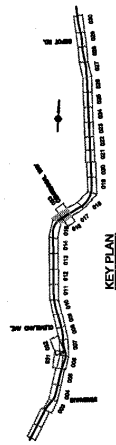
81590-202 09801-0500 1 4100-PO08-3016

APPROVED FOR RIGHT-OF-WAY ACQUISITION

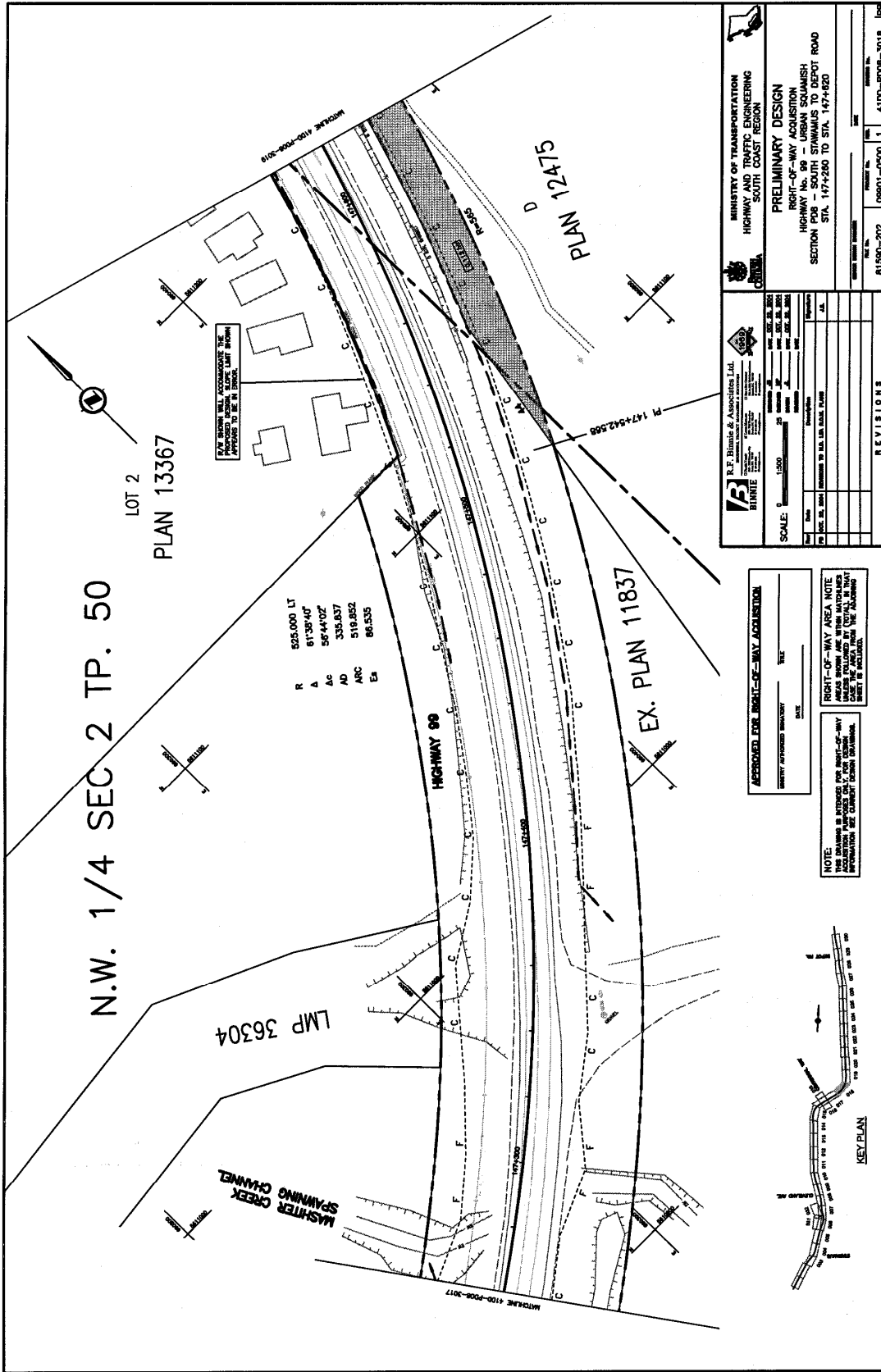
DATE: _____

BY: _____

NOTE: RIGHT-OF-WAY AREA NOTE
 THIS DRAWING IS INTENDED FOR THE PURPOSE OF RIGHT-OF-WAY ACQUISITION AND SHOULD NOT BE USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER.



Annex 55



R	625.000	LT
A	81°30'40"	
B	26°44'02"	
AD	335.837	
ARC	519.852	
Ea	88.535	

**MINISTRY OF TRANSPORTATION
HIGHWAY AND TRAFFIC ENGINEERING
SOUTH COAST REGION**

PRELIMINARY DESIGN
RIGHT-OF-WAY ACQUISITION
HIGHWAY No. 99 - URBAN SQUAMISH
SECTION 020 - URBAN SQUAMISH
STA. 1174+200 TO STA. 1174+825

R.F. Binlie & Associates Ltd.
BINLIE
1250
1174+200 TO 1174+825

SCALE: 1" = 100'

REVISIONS

NO.	DESCRIPTION	DATE

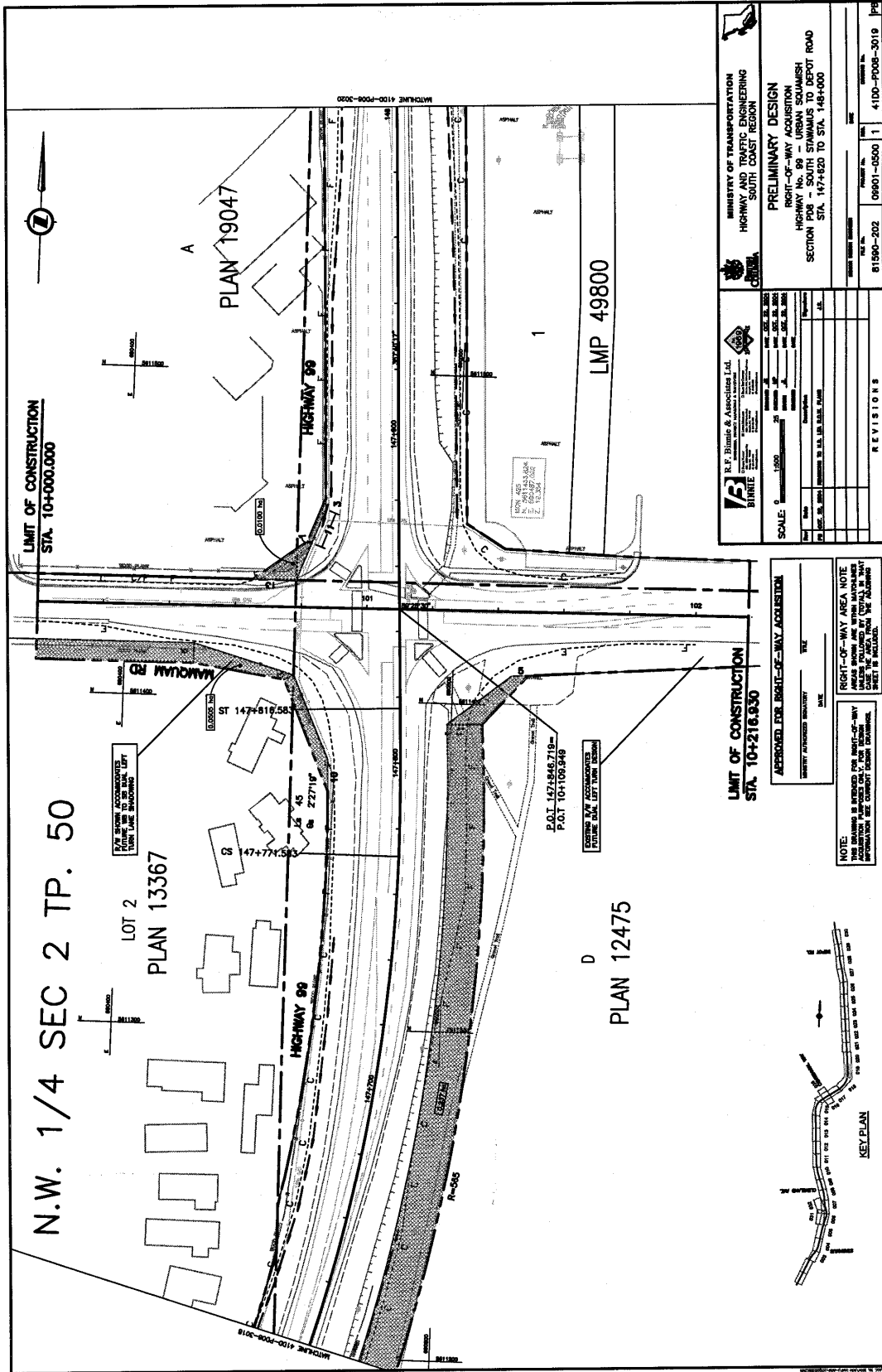
PROJECT NO. 81590-202
DRAWING NO. 41DD-P008-3018
PAGE 1

APPROVED FOR RIGHT-OF-WAY ACQUISITION

DATE: _____

RIGHT-OF-WAY AREA NOTE
THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR OTHER INFORMATION, CONTACT THE DESIGN ENGINEER OR CONSULTANT.

Annex 56



**MINISTRY OF TRANSPORTATION
HIGHWAY AND TRAFFIC ENGINEERING
SOUTH COAST REGION**

PRELIMINARY DESIGN
RIGHT-OF-WAY ACQUISITION
HIGHWAY No. 99 - URBAN SQUAMISH
SECTION PDB - SOUTH STANMAUS TO DEPOT ROAD
STA. 147+820 TO STA. 148+000

R.F. Dinicola & Associates Ltd.
SINCE 1958

SCALE: 1" = 100'

DATE: 1999

PROJECT NO.: 81590-202

DATE: 09/01-05/00

4100-P008-3019

NO.	DATE	DESCRIPTION
1		REVISIONS

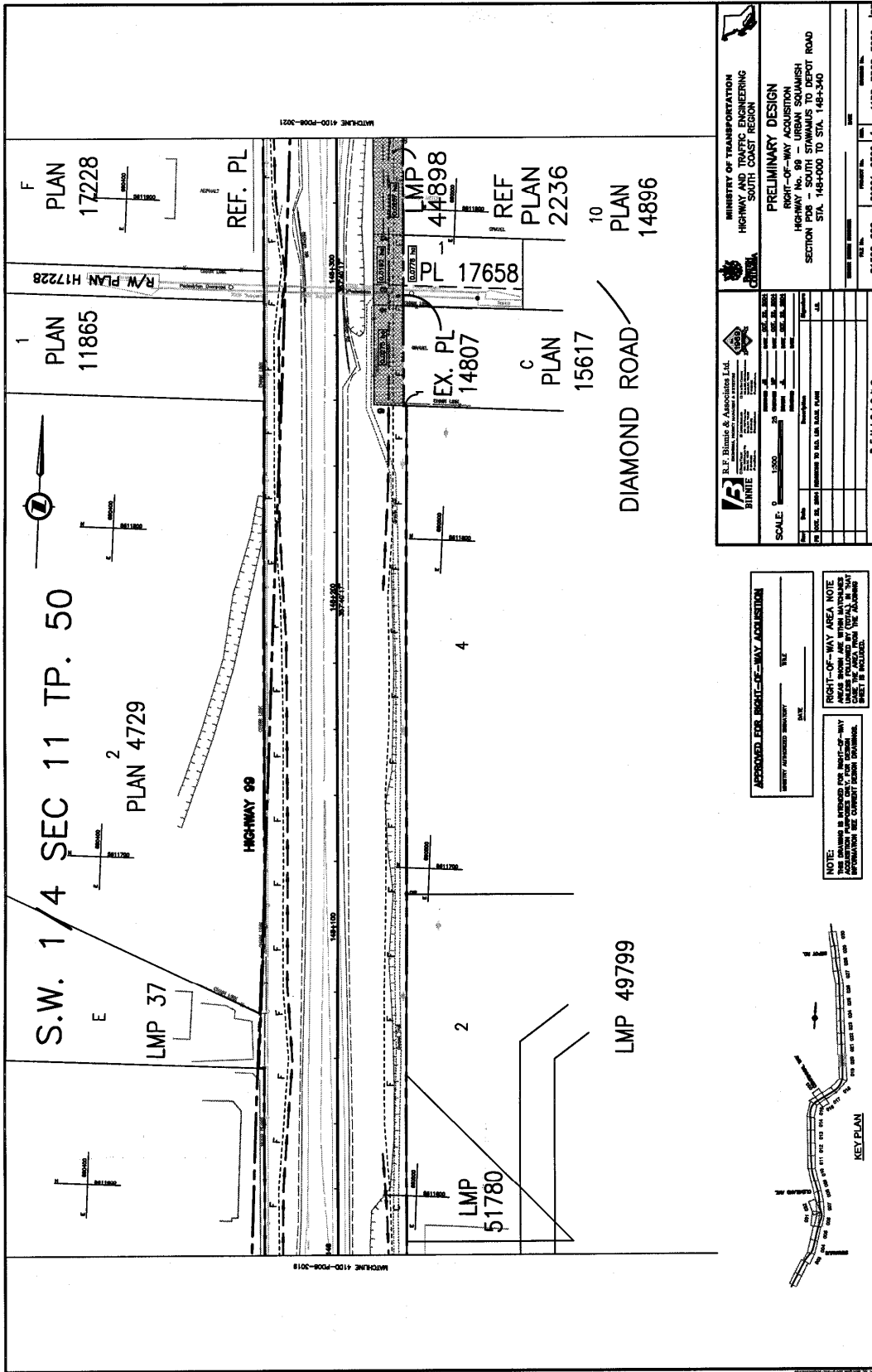
APPROVED FOR RIGHT-OF-WAY ACQUISITION

DATE: _____

DATE: _____

NOTE:
THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR FURTHER INFORMATION, REFER TO THE PROJECT MANUAL, SPECIFICATIONS AND CONTRACT DOCUMENTS.

Annex 57



MINISTRY OF TRANSPORTATION
HIGHWAY AND TRAFFIC ENGINEERING
SOUTH COAST REGION

PRELIMINARY DESIGN
 RIGHT-OF-WAY ACQUISITION
 HIGHWAY No. 99 - URBAN SQUAMISH
 SECTION P08 - SOUTH STAMMUS TO DEPOT ROAD
 STA. 148+000 TO STA. 148+340

SCALE: 1" = 1500'

REVISIONS

NO.	DATE	DESCRIPTION

PROJECT NO. 09901-0500 11 **4100-P008-3020**

DATE 01/09/202

APPROVED FOR RIGHT-OF-WAY ACQUISITION

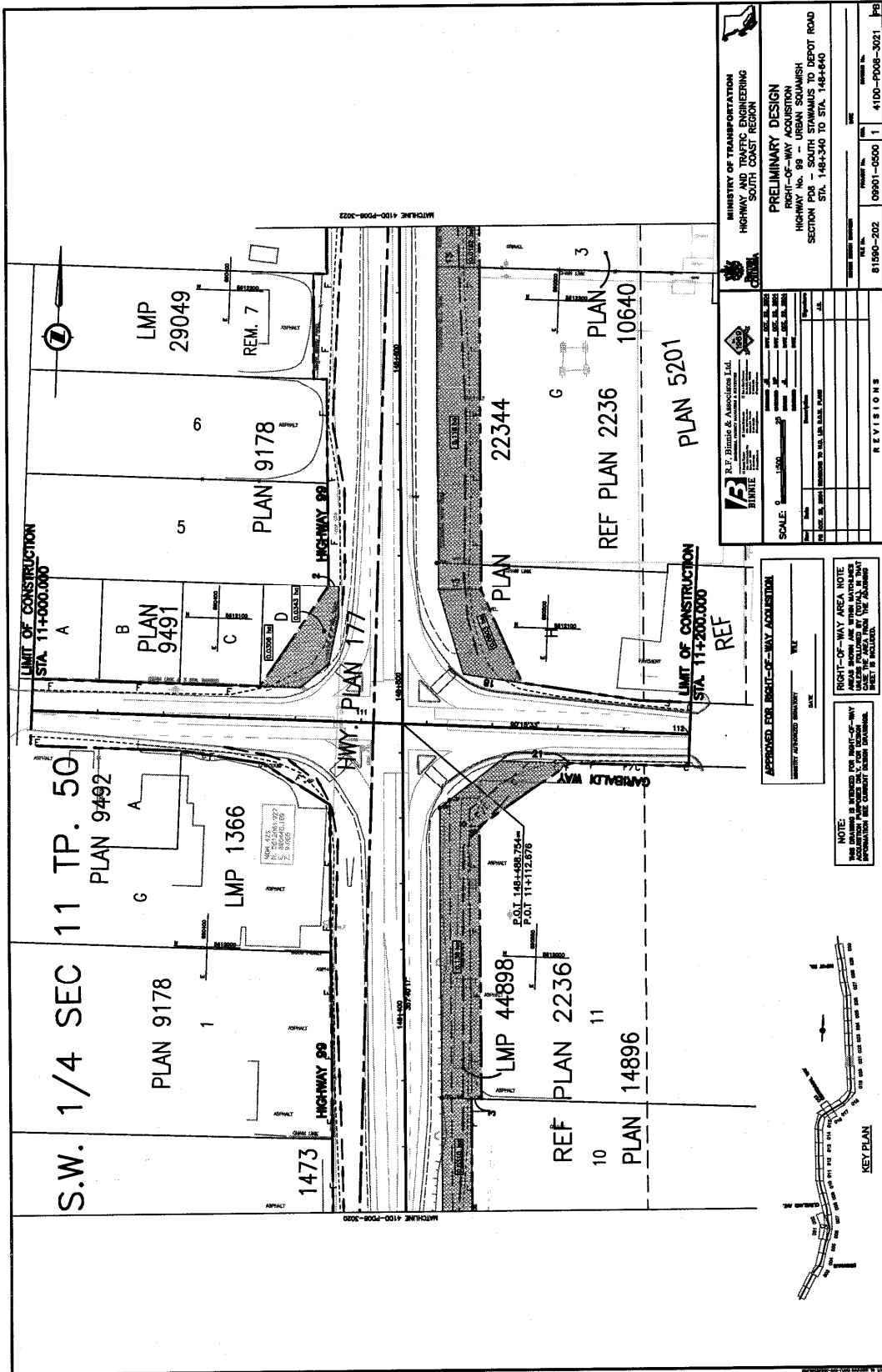
DATE: _____

BY: _____

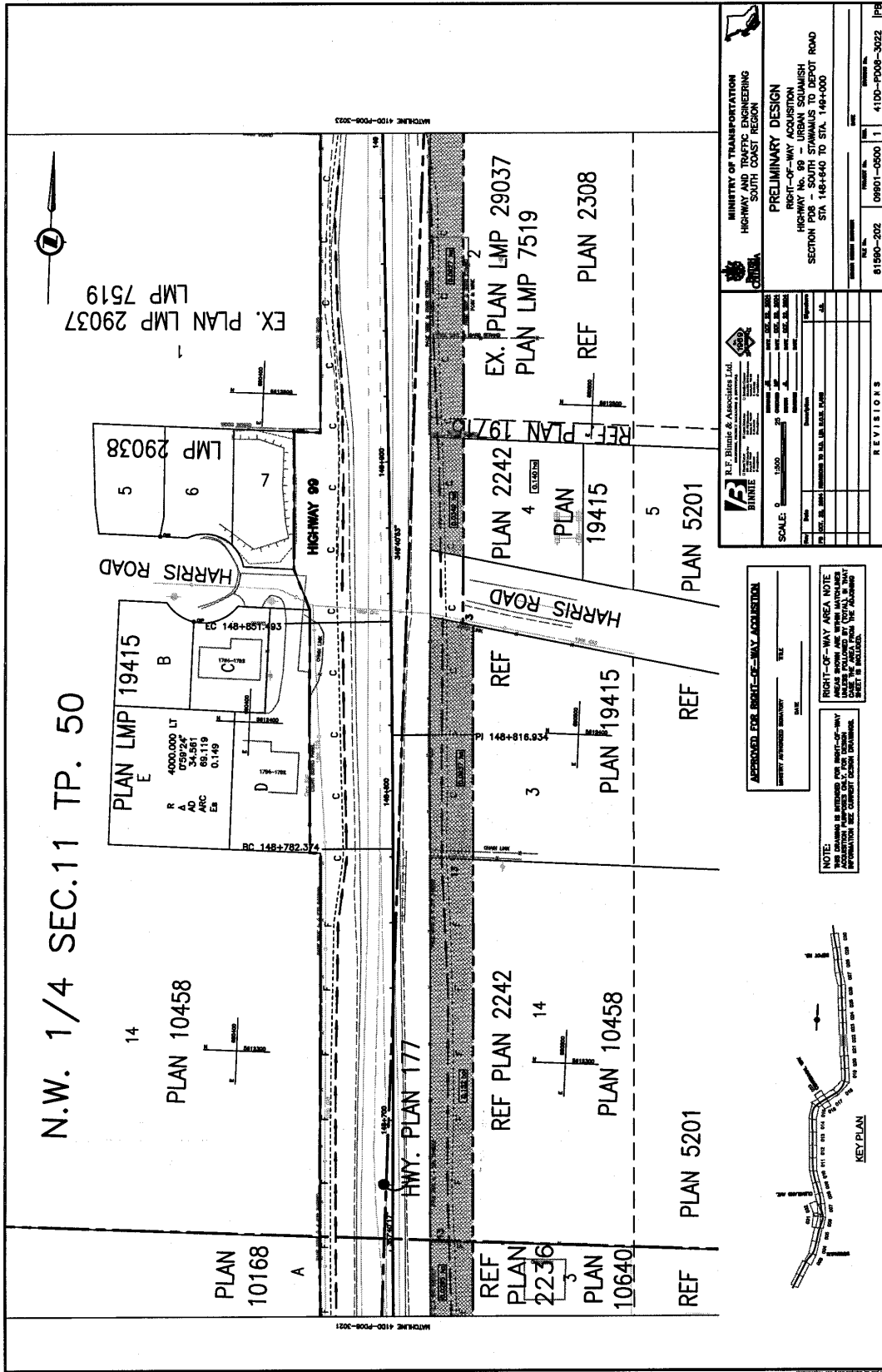
NOTE: THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. IT IS NOT TO BE USED FOR CONSTRUCTION. ANY CHANGES TO THIS DRAWING MUST BE APPROVED BY THE ENGINEER.

RIGHT-OF-WAY AREA NOTE
 ANGLES SHOWN ARE WITHIN MATCHLINES
 UNLESS INDICATED OTHERWISE BY THE DRAWING

Annex 58



Annex 59



MINISTRY OF TRANSPORTATION
HIGHWAY AND TRAFFIC ENGINEERING
SOUTH COAST REGION

PRELIMINARY DESIGN
RIGHT-OF-WAY ACQUISITION
HIGHWAY No. 99 - URBAN SQUAMISH
SECTION FOR - SOUTH STAMMUS TO DEPOT ROAD
STA 1464+00 TO STA. 1464+000

SCALE: 1:500
 DATE: 14/08/2014
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 APPROVED BY: [Name]

REVISIONS

NO.	DATE	DESCRIPTION
1		

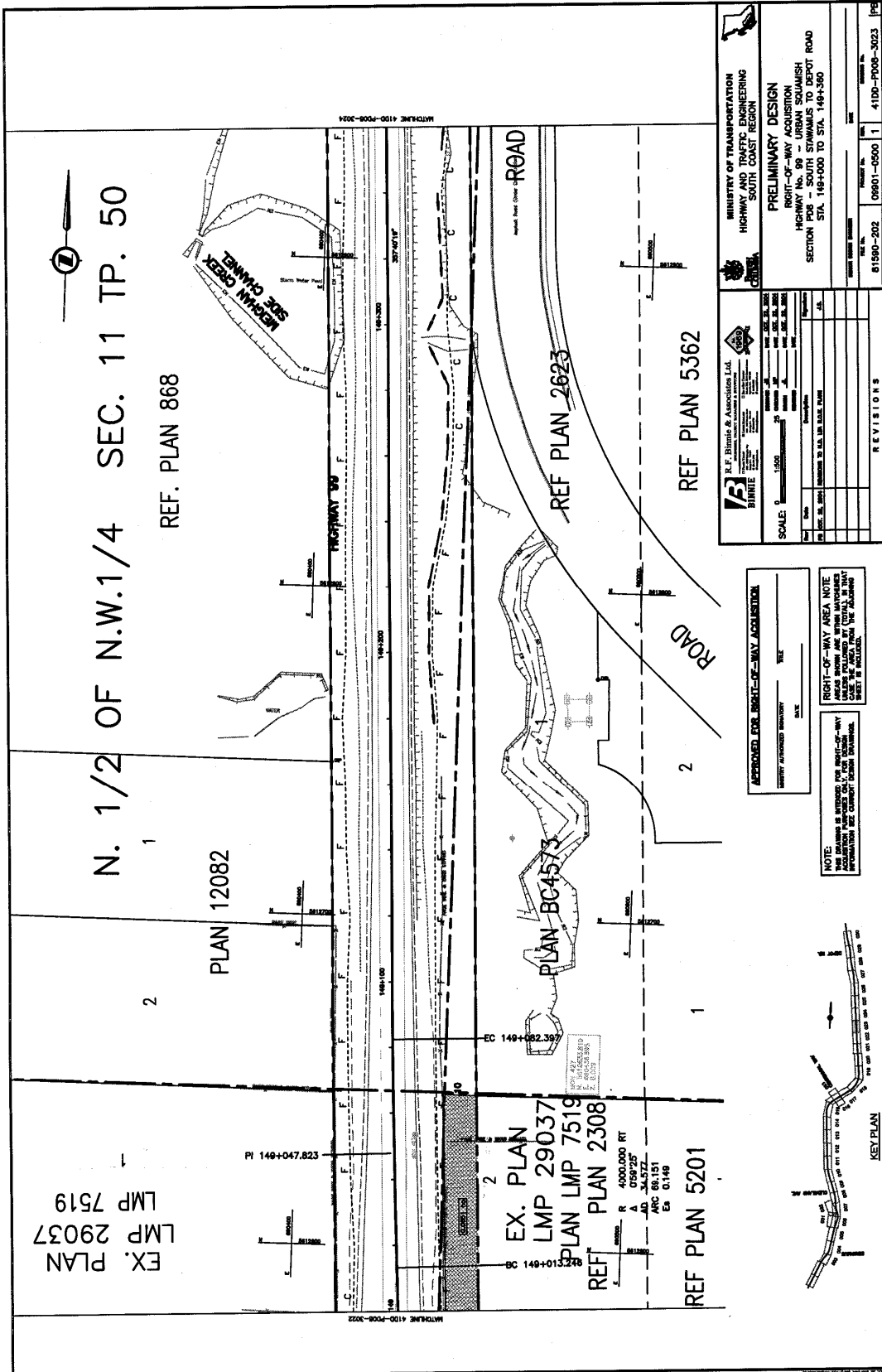
PROJECT NO.: 09801-0000
PLAN NO.: 410D-P00B-3022

APPROVED FOR RIGHT-OF-WAY ACQUISITION

NOTE: THIS PLAN IS PREPARED BY THE ENGINEER AND IS SUBJECT TO THE APPROVAL OF THE MINISTER OF TRANSPORTATION. THE INFORMATION IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A GUARANTEE OF ANY KIND.

RIGHT-OF-WAY AREA NOTE: THE RIGHT-OF-WAY AREA IS SHOWN BY A DOTTED LINE. THE INFORMATION IS FOR INFORMATION ONLY AND DOES NOT CONSTITUTE A GUARANTEE OF ANY KIND.

Annex 60



**MINISTRY OF TRANSPORTATION
HIGHWAY AND TRAFFIC ENGINEERING
SOUTH COAST REGION**

PRELIMINARY DESIGN
RIGHT-OF-WAY ACQUISITION
HIGHWAY No. 99 - URBAN SQUAMISH
SECTION PDB - SOUTH STAMMUS TO DEPOT ROAD
STA. 149+000 TO STA. 149+380

SCALE: 1:5000
DATE: _____
BY: _____

REVISIONS

NO.	DATE	DESCRIPTION

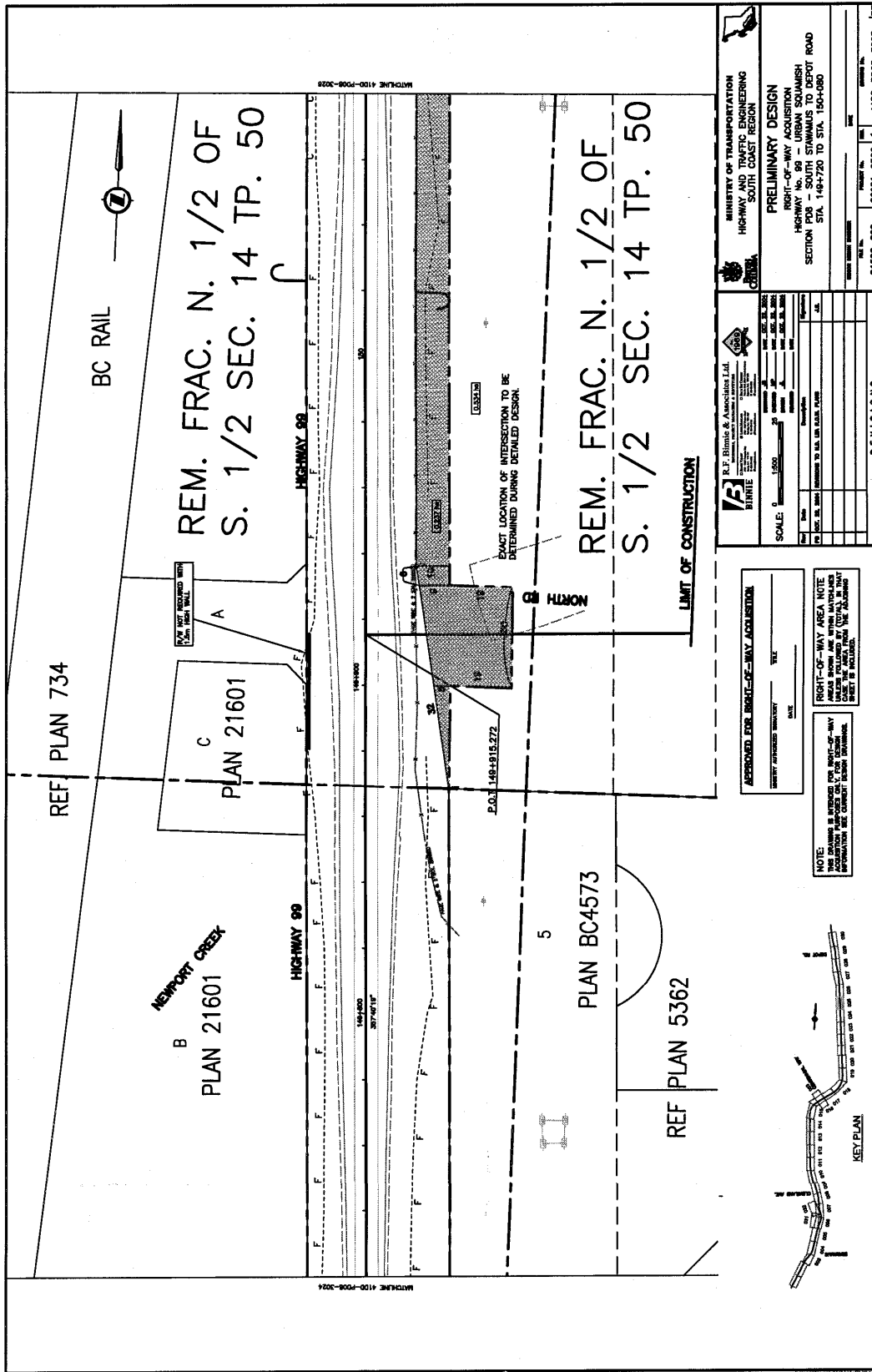
PROJECT NO. 81590-202
DRAWING NO. 09901-0500 1
4100-P008-3023

APPROVED FOR RIGHT-OF-WAY ACQUISITION

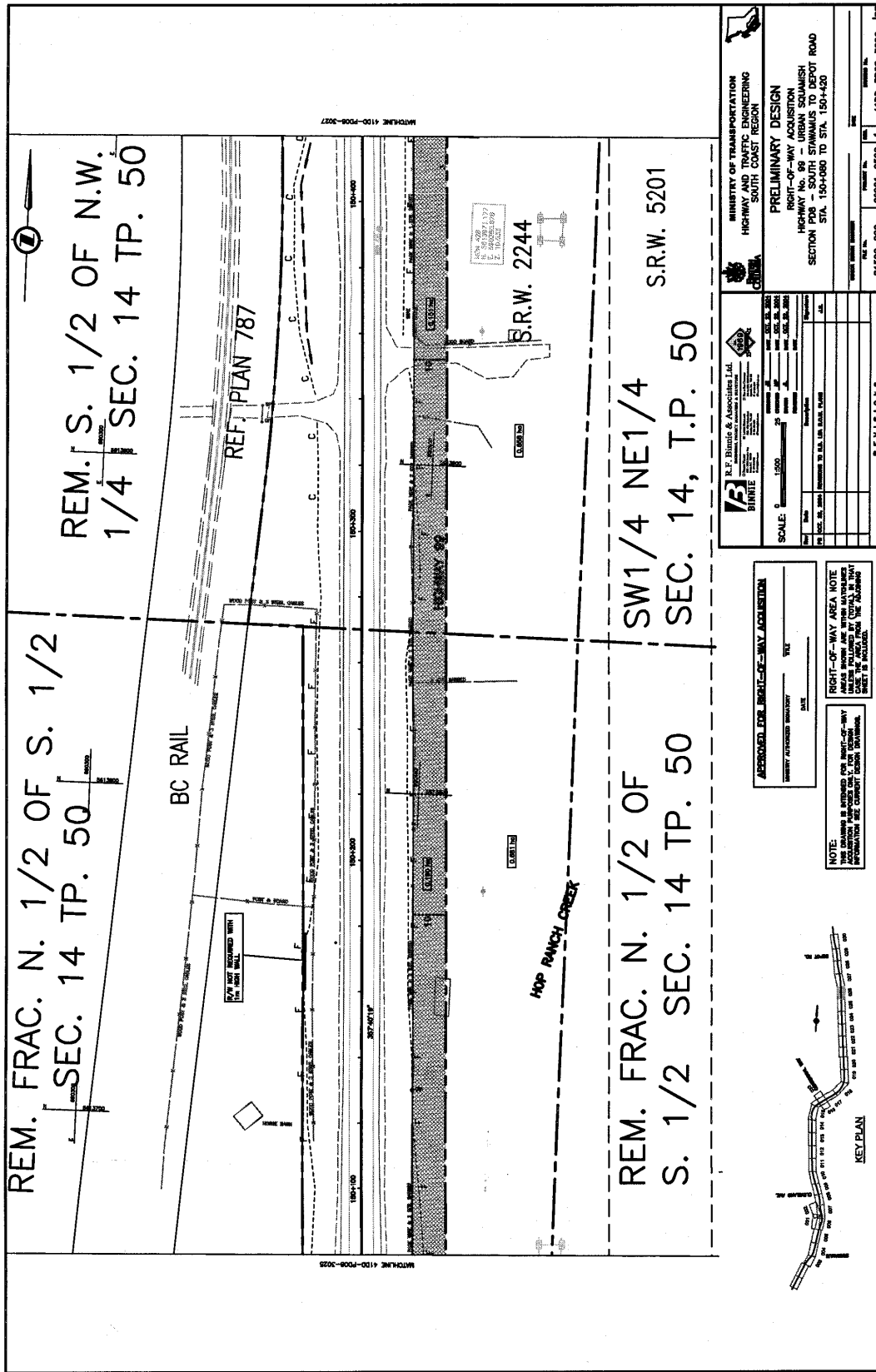
DATE: _____

RIGHT-OF-WAY AREA NOTE
THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. THE AREAS SHOWN ARE WITH MATCHLINES AND ARE NOT TO BE CONSIDERED AS A BASIS FOR CONSTRUCTION. THE EXACT BOUNDARIES OF THE ACQUIRED AREAS SHALL BE DETERMINED BY SURVEY.

Annex 61



Annex 62



APPROVED FOR RIGHT-OF-WAY ACQUISITION

DATE: _____

NOTE: THIS DRAWING IS PREPARED FOR RIGHT-OF-WAY ACQUISITION AND SHALL BE VALID ONLY FOR THE PURPOSES AND LIMITATIONS SPECIFIED THEREIN.

RIGHT-OF-WAY AREA NOTE
AREAS SHOWN ARE WITHIN THE RIGHT-OF-WAY AREA AND SHALL BE VALID ONLY FOR THE PURPOSES AND LIMITATIONS SPECIFIED THEREIN.

REVISIONS

NO.	DATE	DESCRIPTION

SCALE: 0 1500

DATE: _____

BY: _____

CHECKED BY: _____

DATE: _____

MINISTRY OF TRANSPORTATION
HIGHWAY AND TRAFFIC ENGINEERING
SOUTH COAST REGION

PRELIMINARY DESIGN
RIGHT-OF-WAY ACQUISITION
HIGHWAY No. 99 - URBAN SQUAMISH
SECTION PD8 - SOUTH STANMAUS TO DEPOT ROAD
STA. 150+000 TO STA. 150+400

PROJECT NO. 81590-202
DRAWING NO. 09901-0500
SHEET NO. 1
TOTAL SHEETS 1

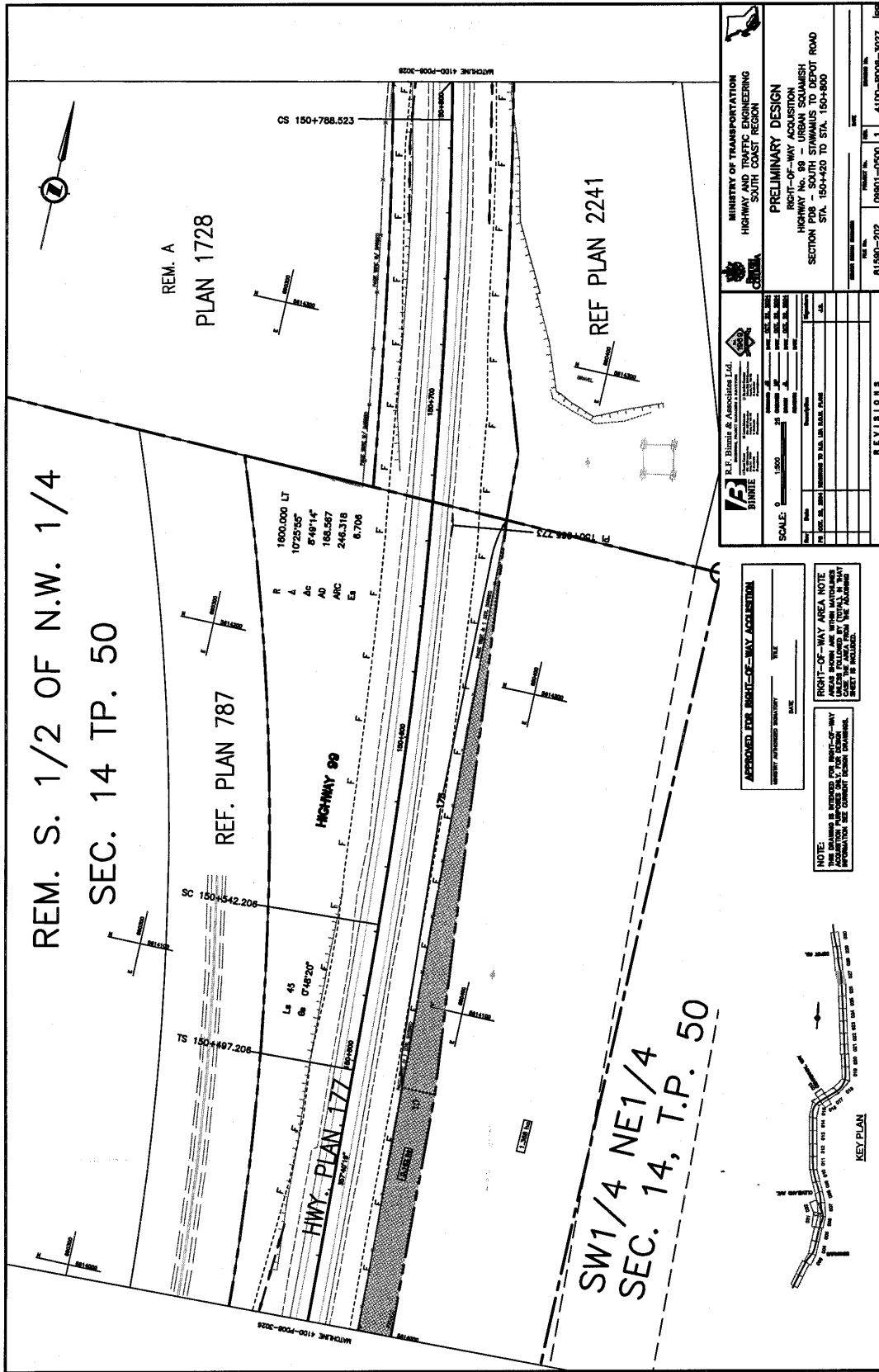
DATE: _____

BY: _____

CHECKED BY: _____

DATE: _____

Annex 63



R.F. Binette & Associates Ltd.
151 BINETTE

MINISTRY OF TRANSPORTATION
HIGHWAY AND TRAFFIC ENGINEERING
SOUTH COAST REGION

PRELIMINARY DESIGN
RIGHT-OF-WAY ACQUISITION
HIGHWAY 99 SOUTH COAST REGION
SECTION PER SOUTH STAMBUSS TO RESTO ROAD
STA. 150+420 TO STA. 150+800

SCALE: 1" = 150.00'

NO.	DATE	DESCRIPTION

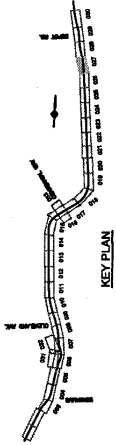
REVISIONS

PROJECT NO. 81590-202
SHEET NO. 09901-0500 1
DRAWING NO. 41100-P008-3027

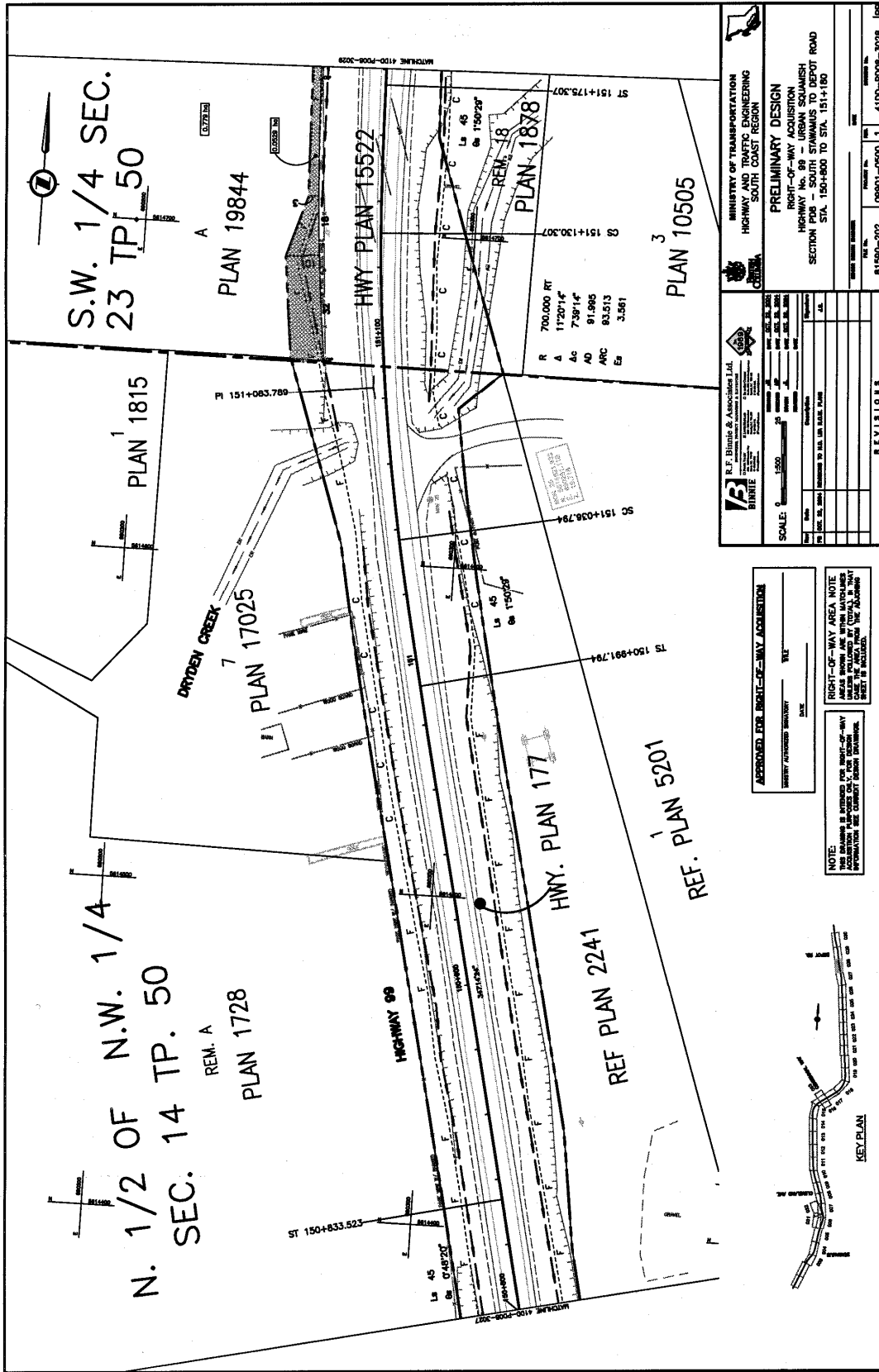
APPROVED FOR RIGHT-OF-WAY ACQUISITION

DATE: _____
NAME: _____
TITLE: _____

NOTE: THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. IT IS NOT TO BE USED FOR CONSTRUCTION OR AS A BASIS FOR ANY OTHER DESIGN OR CONSTRUCTION. THE USER ASSUMES ALL LIABILITY FOR ANY ERRORS OR OMISSIONS. THE USER SHALL VERIFY ALL INFORMATION AND CONDITIONS ON THE GROUND BEFORE ANY CONSTRUCTION BEGINS.



Annex 64



**MINISTRY OF TRANSPORTATION
HIGHWAY AND TRAFFIC ENGINEERING
SOUTH COAST REGION**

**PRELIMINARY DESIGN
RIGHT-OF-WAY ACQUISITION
HIGHWAY No. 99 - URSAN SQUAMISH
SECTION PDB - SOUTH STANMAUS TO DEPOT ROAD
STA. 150+800 TO STA. 151+180**

R.F. Birnie & Associates Ltd.
BIRNIE

SCALE: 1" = 500'

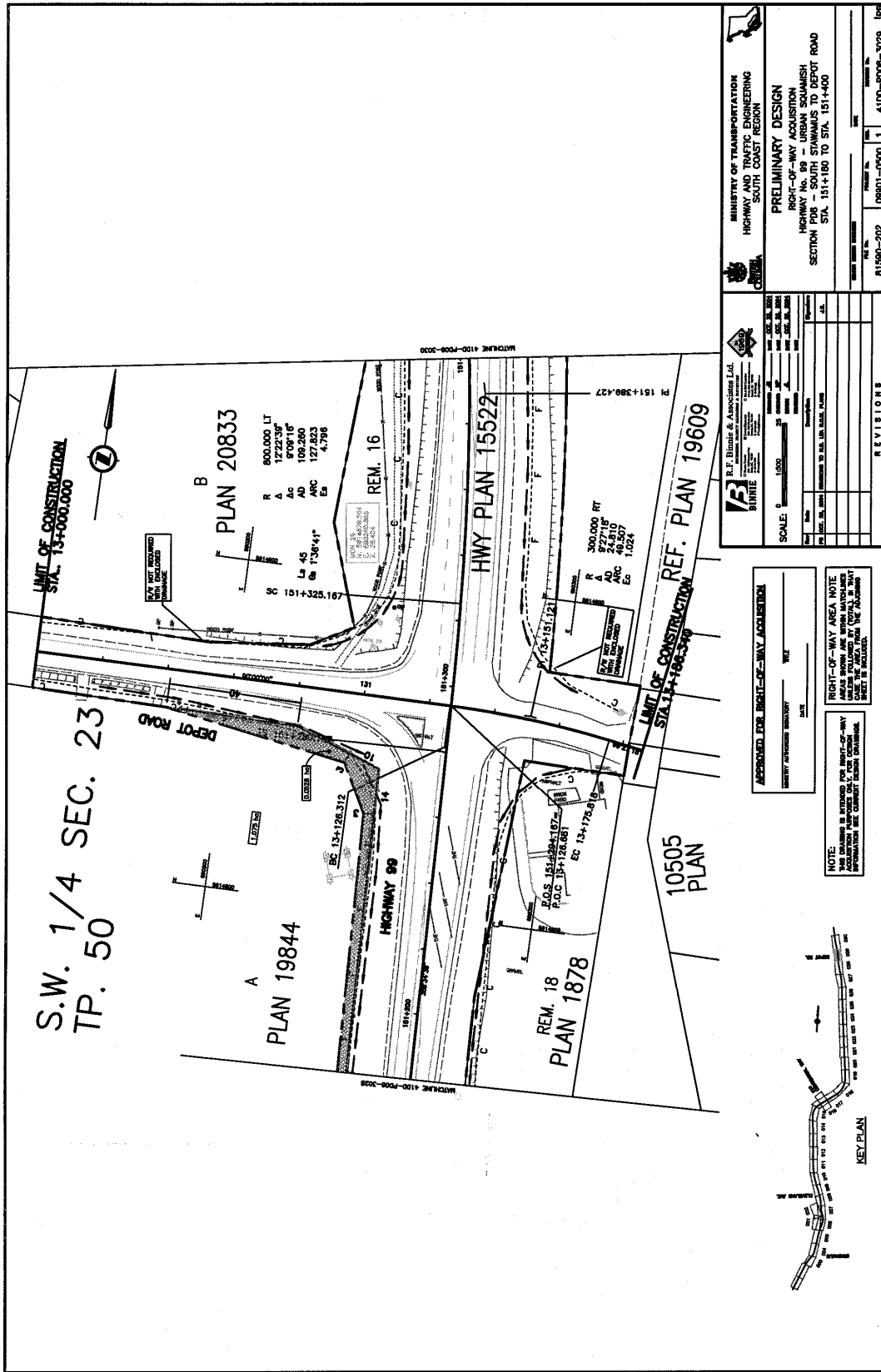
DATE: 15 DEC. 95 (REVISED TO ALL IN BLUE INK)

NO.	DATE	REVISIONS

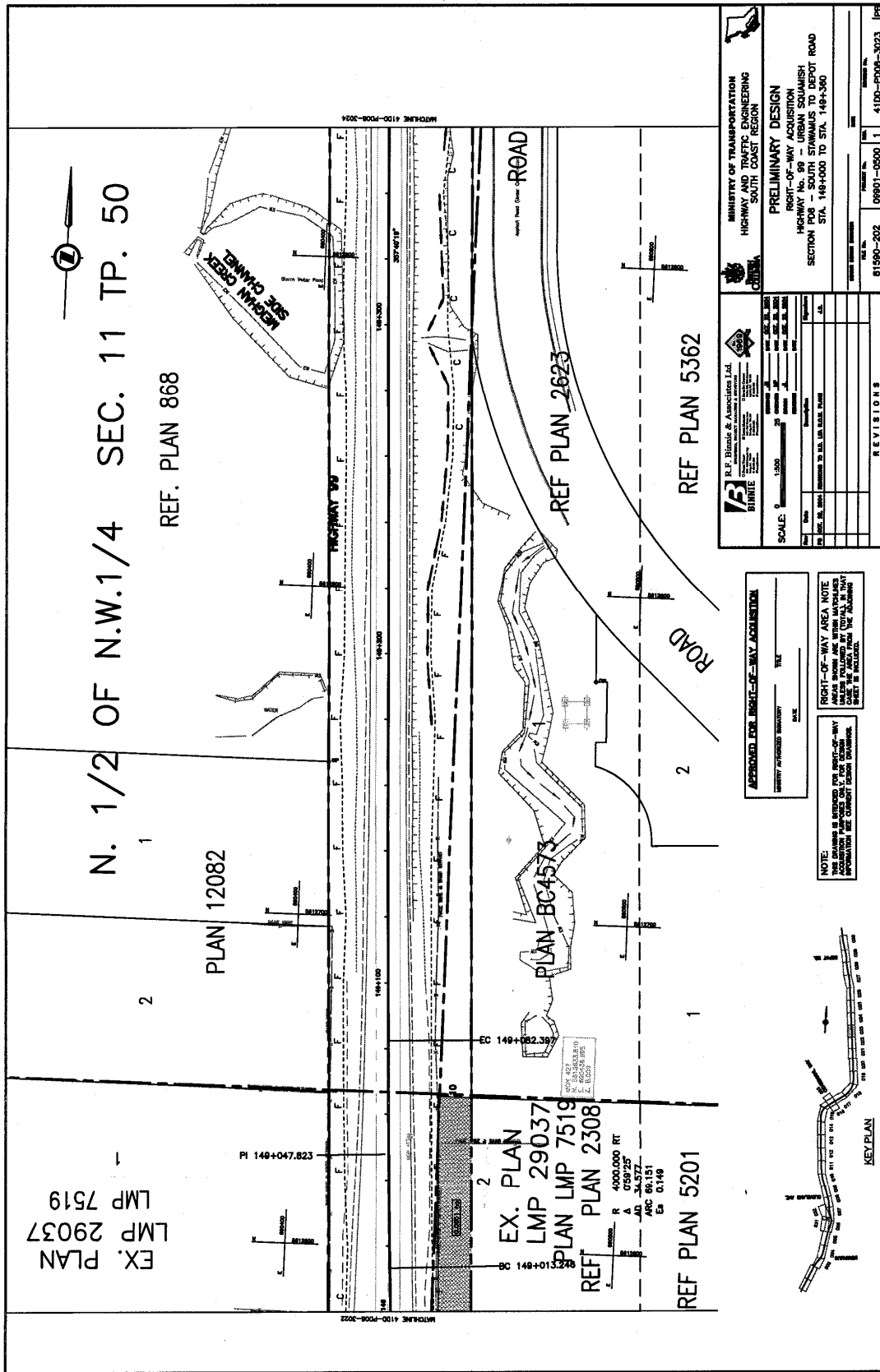
REVISOR'S

PROJECT NO.: 81580-202
PROJECT NO.: 09801-0500
PROJECT NO.: 410D-P008-3028

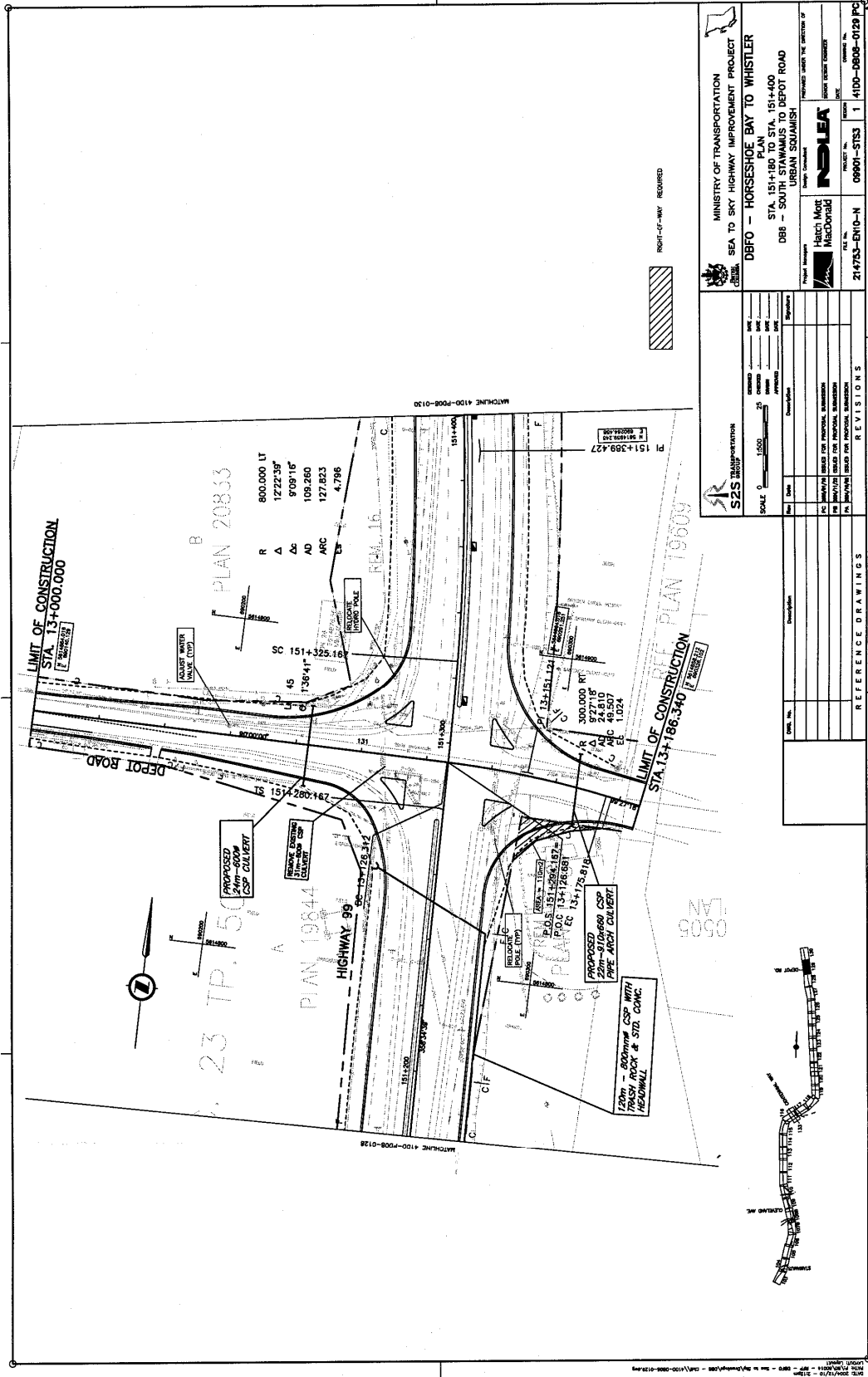
Annex 65



Annex 66



Annex 67



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT

DBFO - HORSESHOE BAY TO WHISTLER
STA. 151+180 TO STA. 151+400
DB8 - SOUTH STAMMAUS TO DEPOT ROAD
URBAN SQUAMISH

Project Manager: Haich Mait Macdonald
Checked: [Signature]
Date: [Date]

FILE NO. 09901-ST33 1 4100-0608-0129 PG. 02
CONC. PRINTS BEARING PREVIOUS LETTER

REV.	DATE	DESCRIPTION	BY	CHKD.
1	15/11/2010	ISSUED FOR PERIODIC SUBMISSION		
2	15/11/2010	ISSUED FOR PERIODIC SUBMISSION		
3	15/11/2010	ISSUED FOR PERIODIC SUBMISSION		

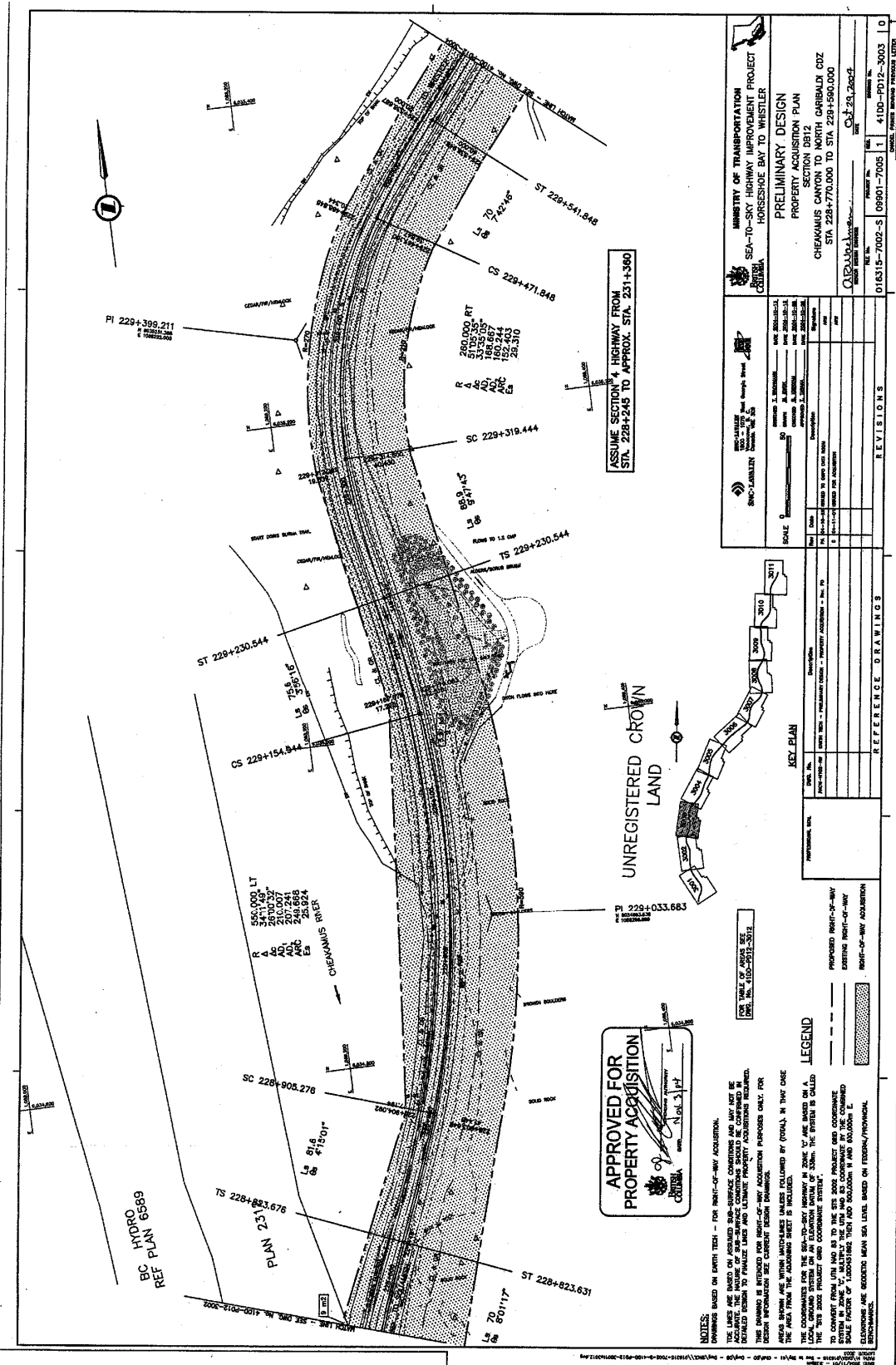
REVISIONS

REV. NO.	DATE	DESCRIPTION

REFERENCE DRAWINGS

NO.	DESCRIPTION

Annex 70



ASSUME SECTION OF HIGHWAY FROM STA. 228+245 TO APPROX. STA. 231+360

UNREGISTERED CROWN LAND

APPROVED FOR PROPERTY ACQUISITION

FOR THE USE OF THE PROJECT

NOTES:
 DIMENSIONS BASED ON EXISTING TIE - FOR POINT-OF-WAY ACQUISITION.
 THE LINES ARE BASED ON ASSUMED SUB-SURFACE CONDITIONS AND MAY NOT BE ACCURATE. THE USER SHOULD VERIFY THE LOCATION OF ALL POINTS AND LINES.
 THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR DESIGN INFORMATION SEE CURRENT DESIGN DRAWINGS.
 AREAS SHOWN ARE WITH MATCHLINES UNLESS FOLLOWED BY (TOTAL) IN THAT CASE THE AREA FROM THE ADJOINING SHEET IS INCLUDED.
 THE AREA FROM THE ADJOINING SHEET IS INCLUDED.
 LOCAL GRID COORDINATES ARE IN THE UTM SYSTEM. THE SYSTEM IS BASED ON THE LOCAL GRID SYSTEM OF THE AREA. THE SYSTEM IS BASED ON THE UTM SYSTEM TO CONVERT FROM UTM TO THE SCS 8000 PROJECT AND COORDINATE SYSTEM. THE SYSTEM IS BASED ON THE UTM SYSTEM.
 SCALE FACTOR OF 1:50,000. THE SYSTEM IS BASED ON THE UTM SYSTEM.
 ELEVATIONS ARE REDUCED TO MEAN SEA LEVEL BASED ON FRESHWATER/STANDARD ATMOSPHERE.

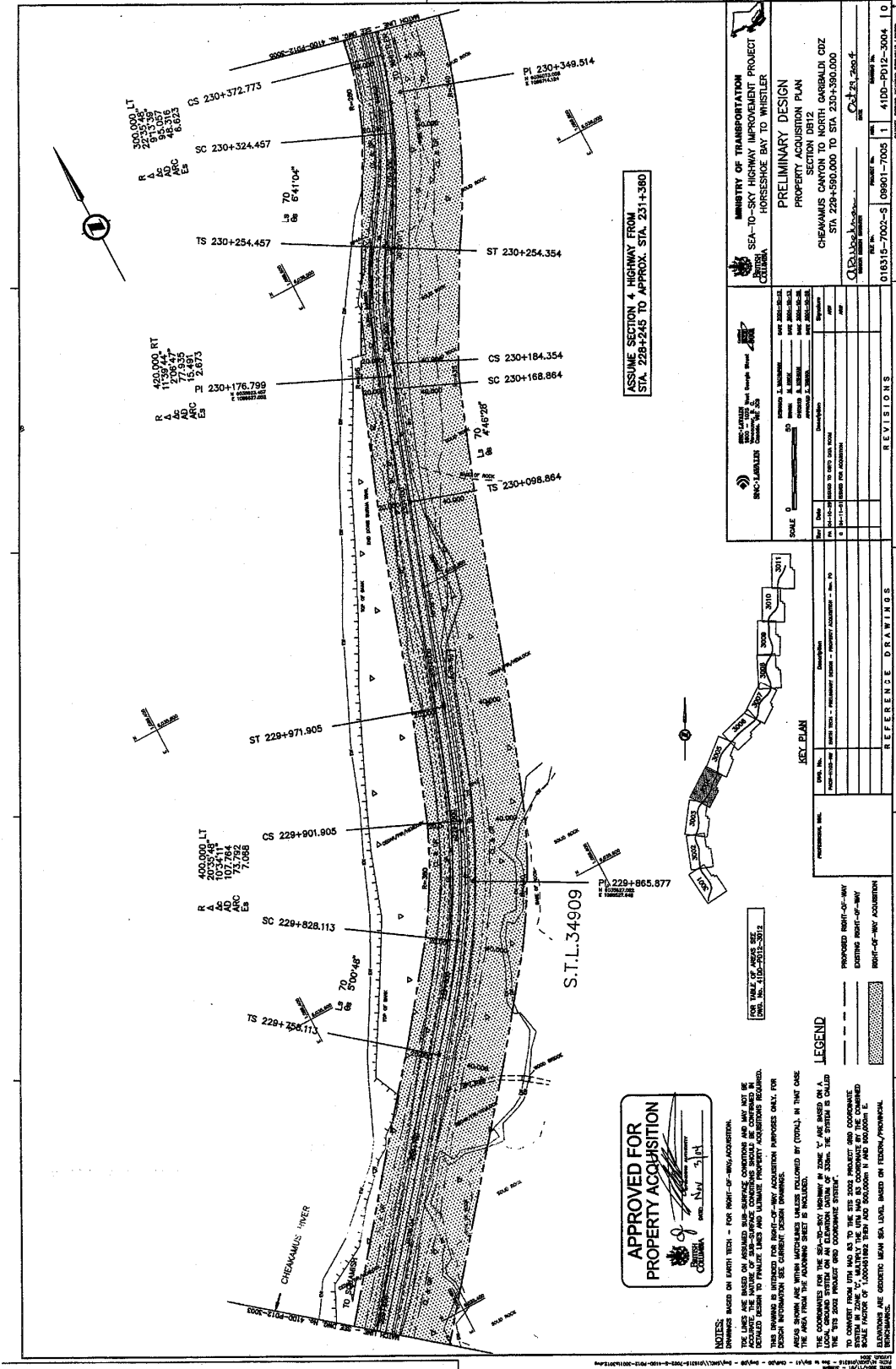
LEGEND
 --- PROPOSED RIGHT-OF-WAY
 --- EXISTING RIGHT-OF-WAY
 --- RIGHT-OF-WAY ACQUISITION

NO.	DATE	REVISIONS

NO.	DATE	REVISIONS

MINISTRY OF TRANSPORTATION
 SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
 FORTSIDDE BAY TO WHISTLER
 PRELIMINARY DESIGN
 PROPERTY ACQUISITION PLAN
 SECTION DB12
 CHEWANUS CANYON TO NORTH CARIBALD CIZ
 STA 228+770.000 TO STA 229+500.000
 DATE: OCT 23, 2007
 DRAWN BY: [Name]
 CHECKED BY: [Name]
 018315-7002-3 (09901-7005) 1 4100-R012-3003 0

Annex 71



ISSUE SECTION 4 HIGHWAY FROM STA. 228+245 TO APPROX. STA. 231+380

MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
HORSESHOE BAY TO WHISTLER

PRELIMINARY DESIGN
PROPERTY ACQUISITION PLAN
SECTION DB12
CHENAMUS CANYON TO NORTH CAROLAI CRZ
STA. 228+350.000 TO STA. 230+380.000

DATE: 02/21/2004
SCALE: 1" = 100'

PROJECT NO.: 018315-7002-S
DRAWING NO.: 09901-7005
SHEET NO.: 1
TOTAL SHEETS: 10

REVISIONS

NO.	DATE	DESCRIPTION

KEY PLAN

STATION	DESCRIPTION
228+000	START OF SECTION
228+245	ISSUE SECTION
229+000	
229+245	
230+000	
230+380	END OF SECTION

APPROVED FOR PROPERTY ACQUISITION

LEGEND

- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- RIGHT-OF-WAY ACQUISITION

NOTES:

1. DIMENSIONS BASED ON SURVEY TECH. - FOR RIGHT-OF-WAY ACQUISITION.

2. THE LINES ARE BASED ON ASSUMED SUB-SURFACE CONDITIONS AND MAY NOT BE EXACTLY AS SHOWN. FOR MORE DETAILED DESIGN TO FINISH LINES AND LAYOUTS PROPERTY ACQUISITION REQUIRED.

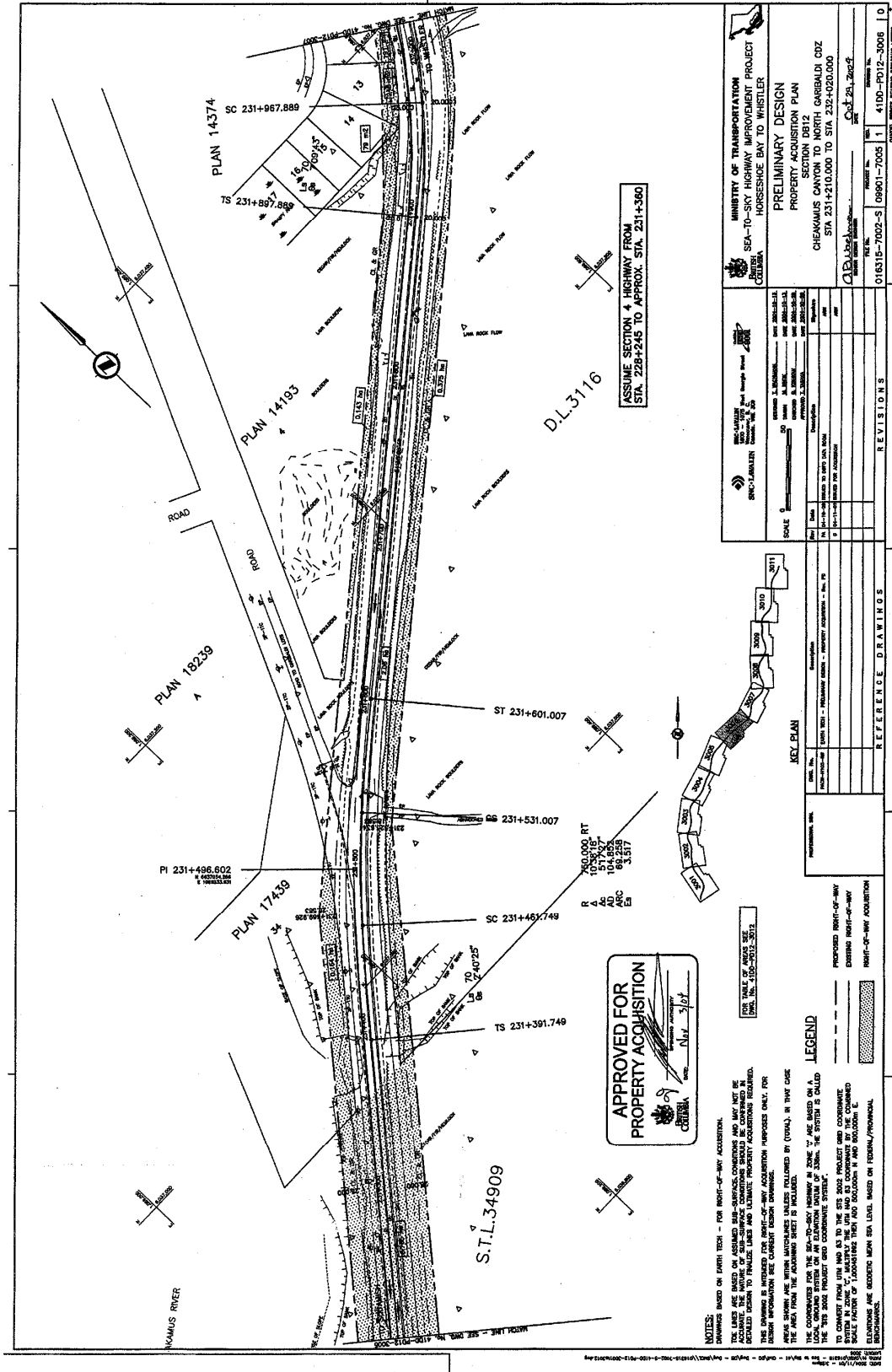
3. THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR DESIGN INFORMATION SEE CURRENT DESIGN DRAWINGS.

4. THE SURVEYING AND SURVEYING LINES FOLLOWED BY (CP) IN THIS CASE ARE THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY AT THIS LOCATION. THE SYSTEM IS CALLED LOCAL GRID SYSTEM ON AN ELEVATION VALUE OF 228M. THE SYSTEM IS CALLED THE 3D3 DASH PROJECT AND COORDINATE SYSTEM.

5. THE SCALE OF THIS DRAWING IS 1" = 100'. ALL DIMENSIONS ARE TO BE COMPLETED IN THE FIELD OF MATHEMATICS TO THE NEAREST MILLIMETER. THE COMBINED SCALE FACTOR OF 1:1000 SHOULD BE USED TO OBTAIN THE FINAL DIMENSIONS.

6. ELEVATIONS ARE GROUND MEAN SEA LEVEL, BASED ON TIDE/GAUGE, PROVIDED, UNLESS OTHERWISE SPECIFIED.

Annex 73



ASSUME SECTION A HIGHWAY FROM STA. 228+245 TO APPROX. STA. 231+360

APPROVED FOR PROPERTY ACQUISITION

FOR TABLE OF AREAS SEE DRAWING NO. 4100-7002-5

NOTES:
 DIMENSIONS BASED ON PARTIAL TECH. - FOR RIGHT-OF-WAY ACQUISITION.
 THE LINES ARE BASED ON ASSUMED DATA - SURVEYS, CONDITIONS AND MAY NOT BE ACCURATE. THE NATURE OF SURVEYING OPERATIONS SHOULD BE CONSIDERED IN ORDER TO PREPARE LINES AND ULTIMATE PROPERTY ACQUISITIONS REQUIRED.
 THE AREA FROM THE ADJOINING SHEET IS INCLUDED.
 AREAS SHOWN ARE WITHIN MATCHLINES UNLESS FOLLOWED BY (FORM), IN THIS CASE THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY AT ZONE 7, ARE BASED ON A TRANSVERSE SECTION OF THE SEA-TO-SKY HIGHWAY AT ZONE 7. THE SYSTEM IS CALLED "THE 1983 ROAD PROJECT GRID COORDINATE SYSTEM".
 TO CONVERT FROM UTM INTO AS TO THE 1983 ROAD PROJECT GRID COORDINATE SYSTEM IN ZONE 7, ADD 1000 TO THE UTM X COORDINATE BY THE COMBINED VALUE OF 1000 AND 1000. THE UTM Y COORDINATE IS THE SAME AS THE UTM Y COORDINATE.
 DIMENSIONS ARE GROUND WITH SEA LEVEL BASED ON FEDERAL/PROVINCIAL BENCHMARKS.

LEGEND

[Symbol]	PROPOSED RIGHT-OF-WAY
[Symbol]	EXISTING RIGHT-OF-WAY
[Symbol]	RIGHT-OF-WAY ACQUISITION

MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
HORSESHOE BAY TO WHISTLER

PRELIMINARY DESIGN
 PROPERTY ACQUISITION PLAN
 SECTION DB12
 CHEWAMUS CANYON NORTH GARIBOLD COZ
 STA 231+210.000 TO STA 232+620.000

DATE: Oct 23, 2004

PROJECT NO: 016315-7002-5
 DRAWING NO: 4100-7002-5
 SHEET NO: 1
 TOTAL SHEETS: 10

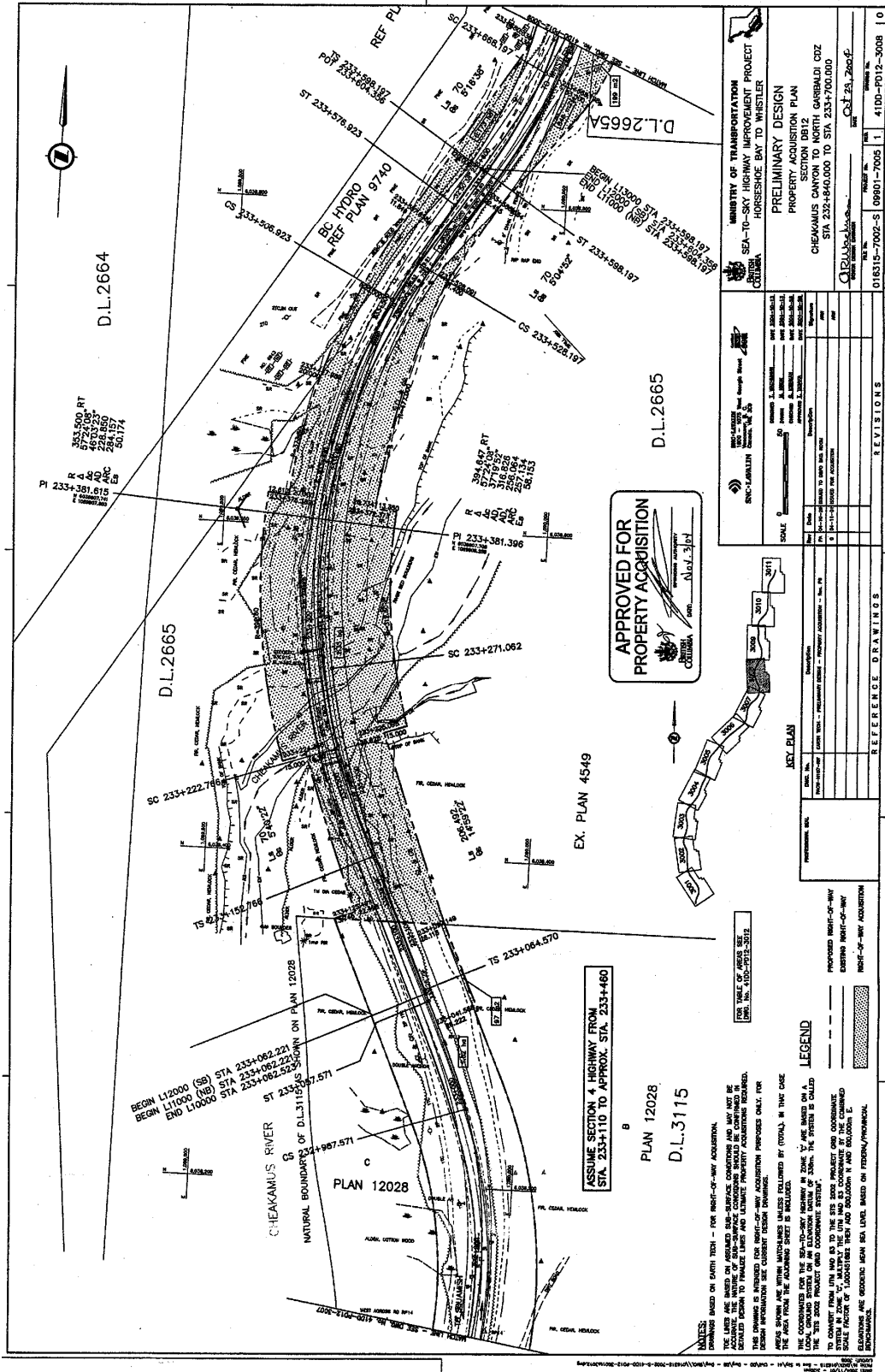
REVISIONS

NO.	DATE	DESCRIPTION

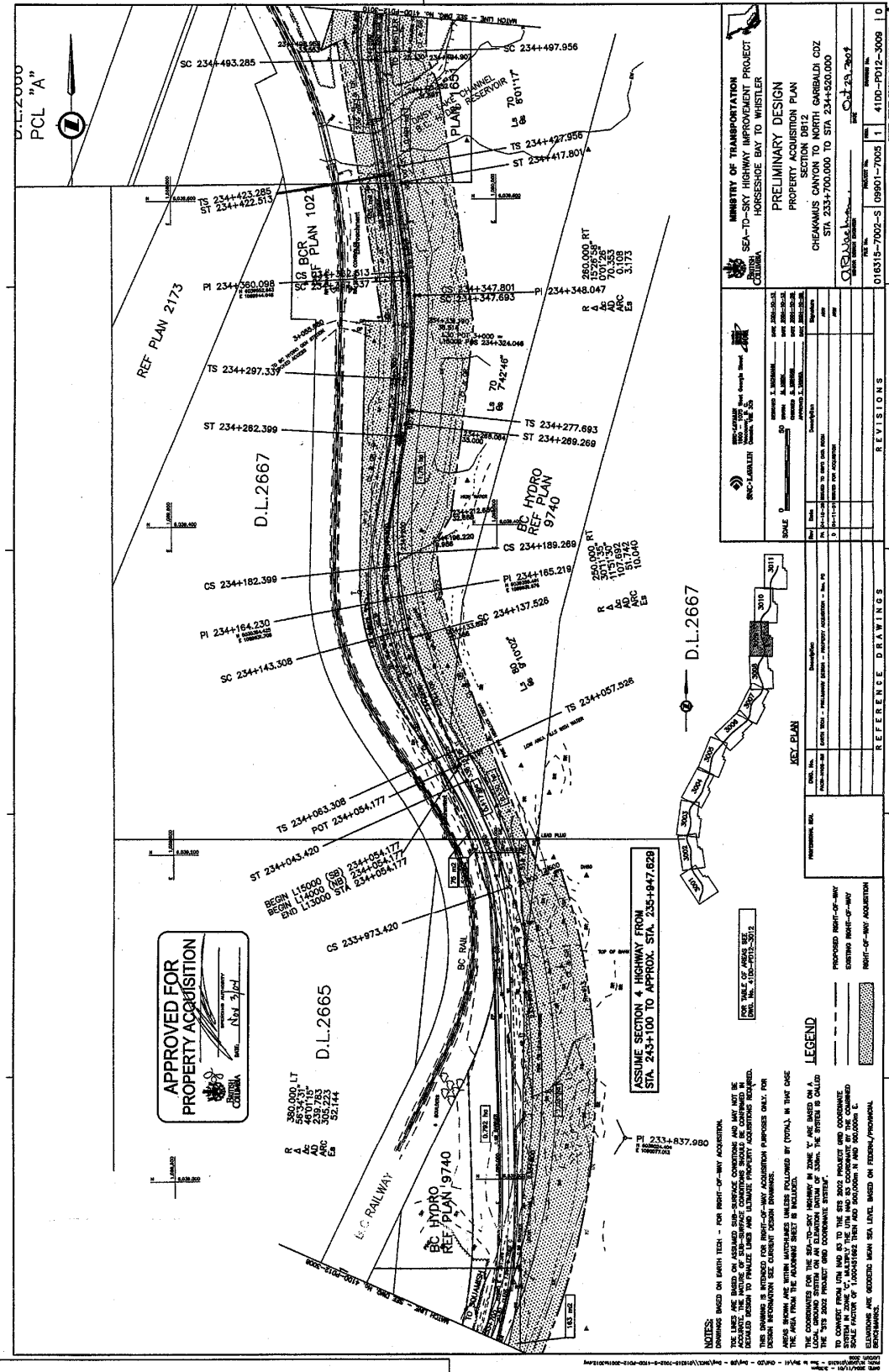
REFERENCE DRAWINGS

DRAWING NO.	DESCRIPTION

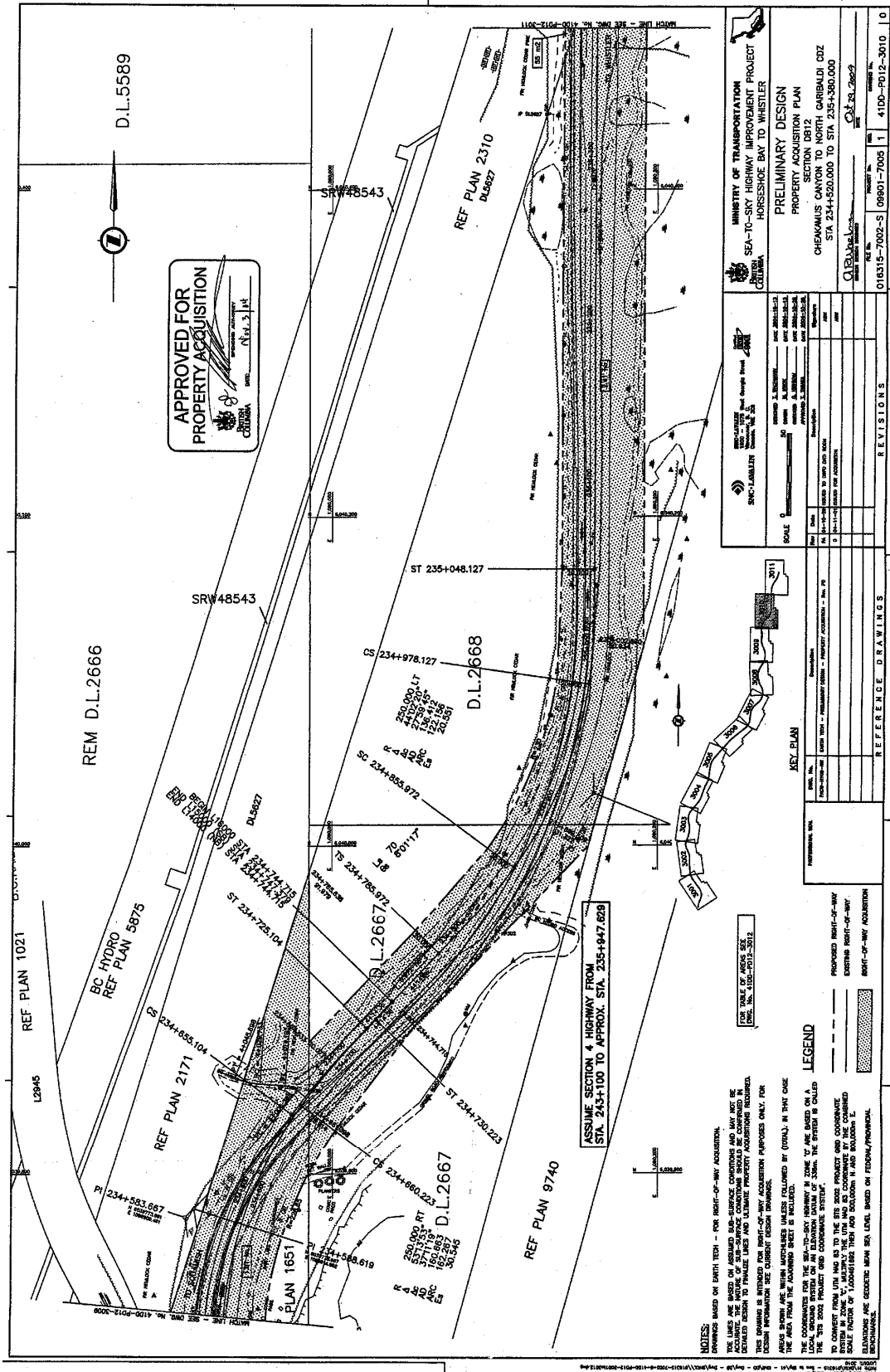
Annex 74



Annex 75



Annex 76



APPROVED FOR
PROPERTY ACQUISITION

MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
HORSESHOE BAY TO WHISTLER

PRELIMINARY DESIGN
PROPERTY ACQUISITION PLAN
SECTION DB12
CHEKAMUS CANYON TO NORTH GARIBALDI COZ
STA 234+520.000 TO STA 235+380.000

DATE: 01/24/2012

PROJECT NO: 016315-7002-S (09601-7005-1) 410D-PD12-3010

SCALE: 1" = 100'

KEY PLAN

NO.	DATE	DESCRIPTION
1	01/24/2012	ISSUED FOR PERMITTING

REVISIONS

LEGEND

[Symbol]	PROPOSED RIGHT-OF-WAY
[Symbol]	EXISTING RIGHT-OF-WAY
[Symbol]	NORTH-OF-WAY ACQUISITION

NOTES:

1. THIS DRAWING IS BASED ON THE DATA PROVIDED BY THE CLIENT AND THE DESIGNER HAS CONDUCTED VISUAL VERIFICATION ONLY. THE DESIGNER HAS NOT CONDUCTED A FIELD SURVEY OF THE AREA.

2. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IN THIS ZONE ARE BASED ON A DATUM OF 1984. THE DATUM IS THE UTM ZONE 18Q UTM COORDINATE SYSTEM. THE DATUM IS CALLED "NAD 83".

3. THE DATUM IS CALLED "NAD 83".

4. THE DATUM IS CALLED "NAD 83".

5. THE DATUM IS CALLED "NAD 83".

6. THE DATUM IS CALLED "NAD 83".

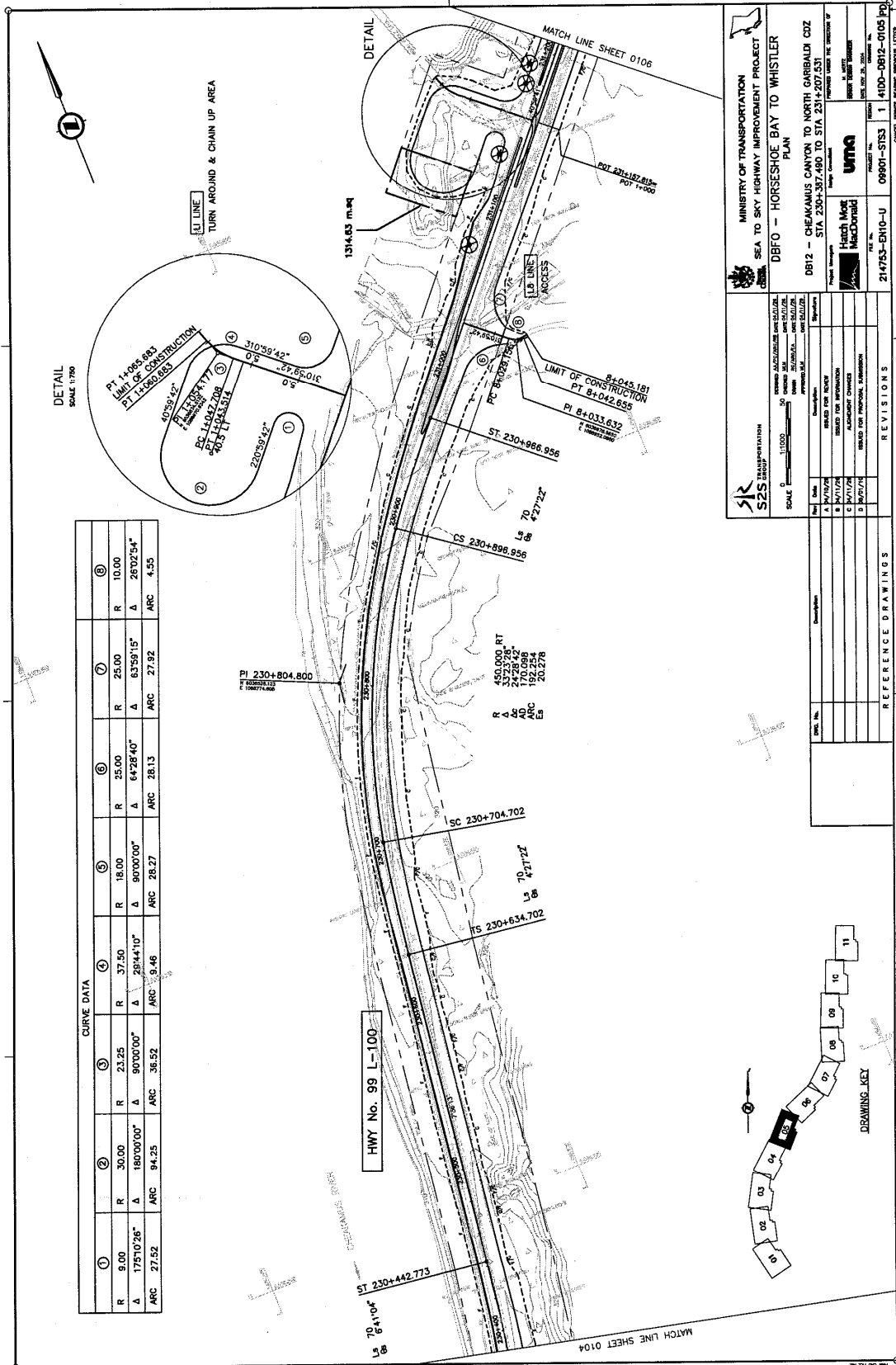
7. THE DATUM IS CALLED "NAD 83".

8. THE DATUM IS CALLED "NAD 83".

9. THE DATUM IS CALLED "NAD 83".

10. THE DATUM IS CALLED "NAD 83".

Annex 78



CURVE DATA

Station	Curve No.	Type	Radius (R)	Delta (Δ)	Arc Length	Station	Curve No.	Type	Radius (R)	Delta (Δ)	Arc Length
27.52	1	ARC	94.25	175°10'28"	36.52	36.52	2	ARC	30.00	63°59'15"	27.82
36.52	2	ARC	94.25	180°00'00"	36.52	36.52	3	ARC	23.25	90°00'00"	36.52
37.50	3	ARC	37.50	281°44'10"	9.46	9.46	4	ARC	18.00	90°00'00"	28.27
28.13	4	ARC	28.13	64°28'40"	28.13	28.13	5	ARC	25.00	64°28'40"	28.13
27.82	5	ARC	27.82	63°59'15"	27.82	27.82	6	ARC	25.00	64°28'40"	28.13
10.00	6	ARC	10.00	26°02'54"	4.55	4.55	7	ARC	25.00	64°28'40"	28.13
4.55	7	ARC	4.55	26°02'54"	4.55	4.55	8	ARC	10.00	26°02'54"	4.55

MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

DB12 - CHEWAMUS CANYON TO NORTH GARIBOLDI C02
STA. 230+357.480 TO STA. 231+207.531

Scale: 1:1000

DATE: 09/01/10

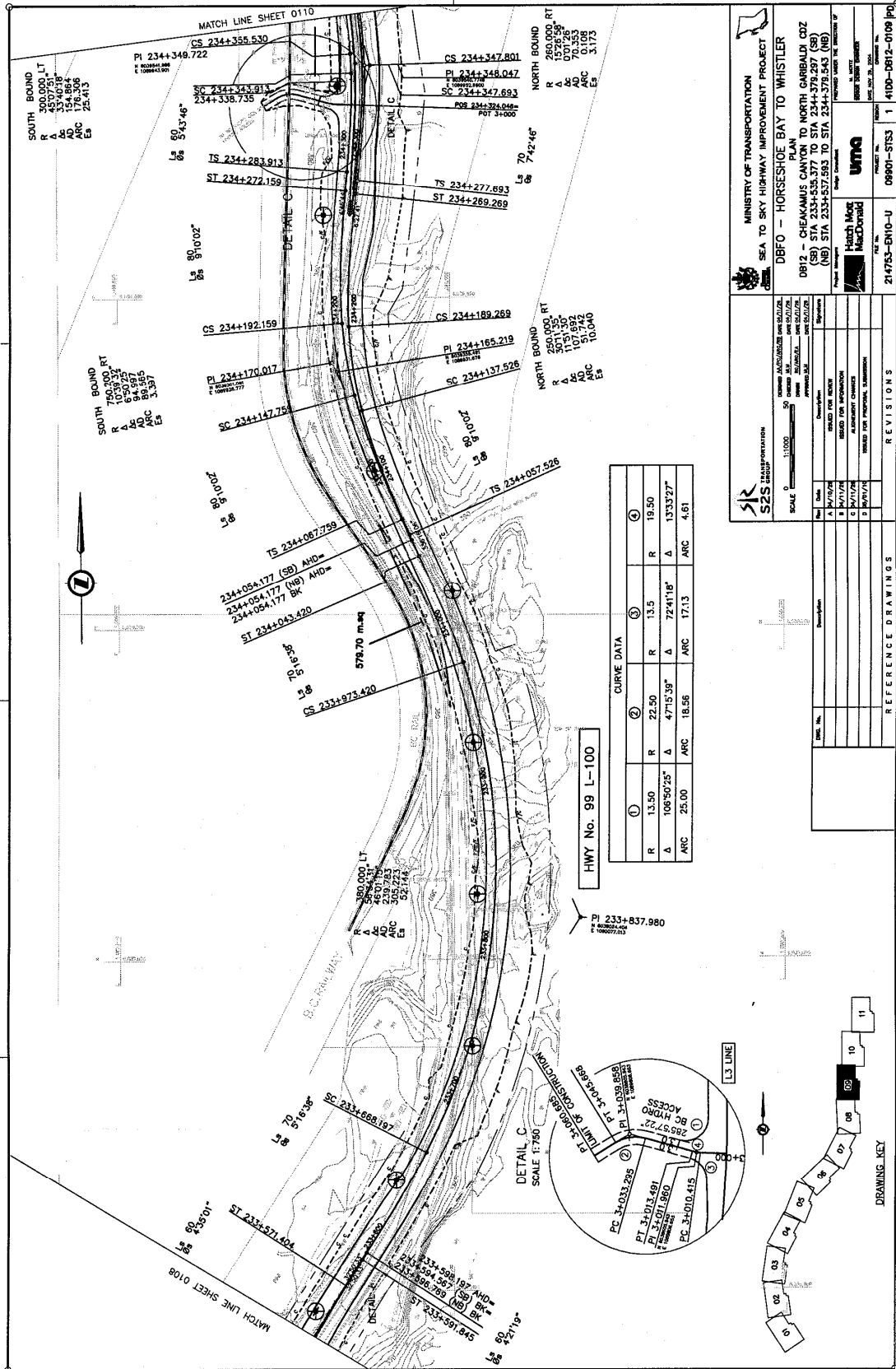
PROJECT MANAGER: HATCH MACDONALD

DESIGNER: HATCH MACDONALD

REVISIONS

No.	Date	Description
1	09/01/10	ISSUED FOR REVIEW
2	09/01/10	ISSUED FOR INFORMATION
3	09/01/10	ISSUED FOR INFORMATION
4	09/01/10	ISSUED FOR INFORMATION

Annex 79



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN
DB12 - CHEAKAMUS CANYON TO NORTH GARIBOLDI COZ
(SB) STA 233+535.377 TO STA 234+379.297 (SB)
(NB) STA 233+557.583 TO STA 234+378.543 (NB)

DESIGNED BY: **March Mac Donald MacDonald**
CHECKED BY: **March Mac Donald MacDonald**

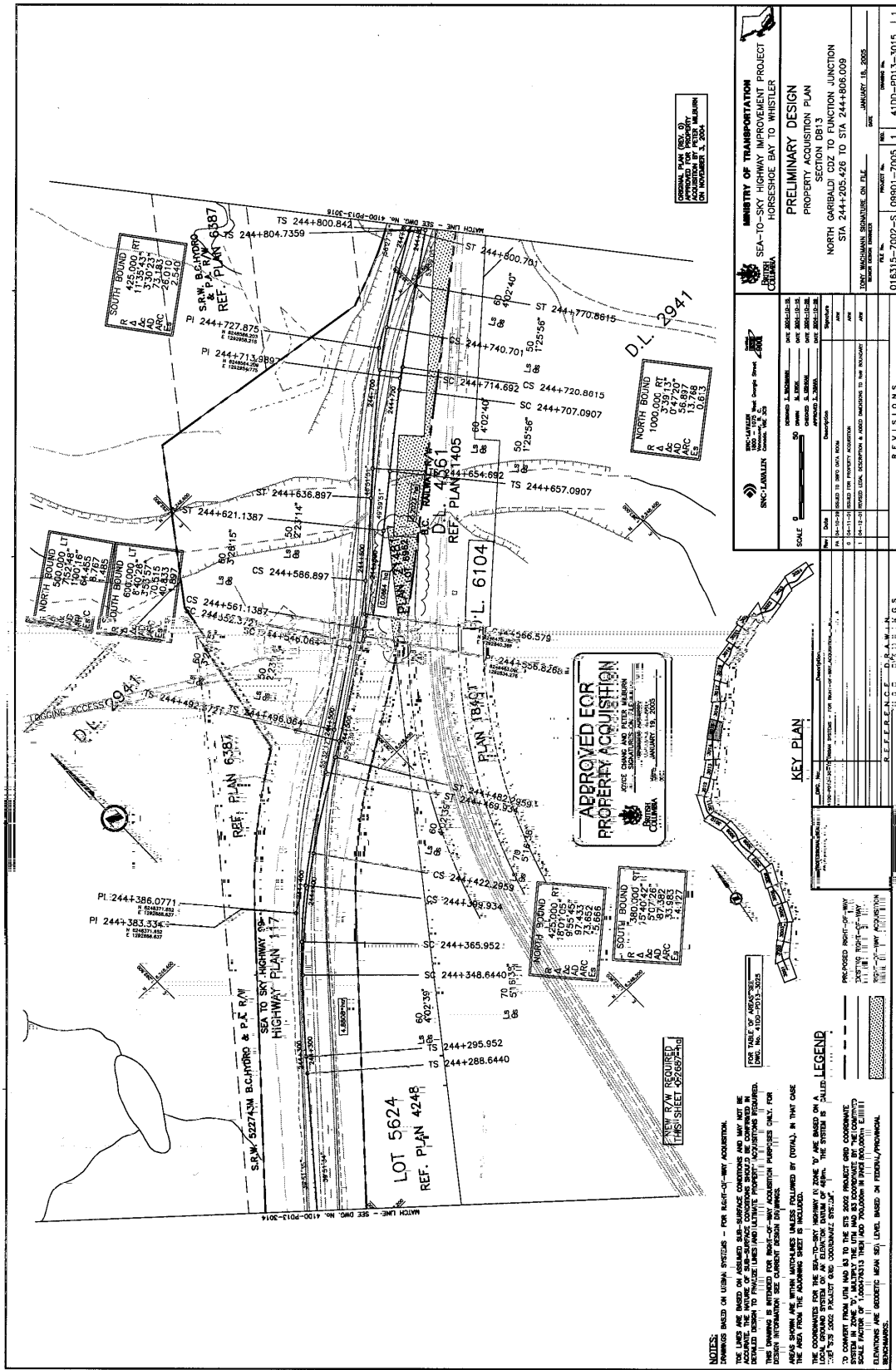
DATE: 07/29/2010
SCALE: 1:1000
PROJECT NO.: 214753-EN10-J
DRAWING NO.: 09901-STS3
SHEET NO.: 1

CONTRACT NAME: 9901-STS3
CONTRACT NUMBER: 214753-EN10-J
CONTRACT DATE: 07/29/2010

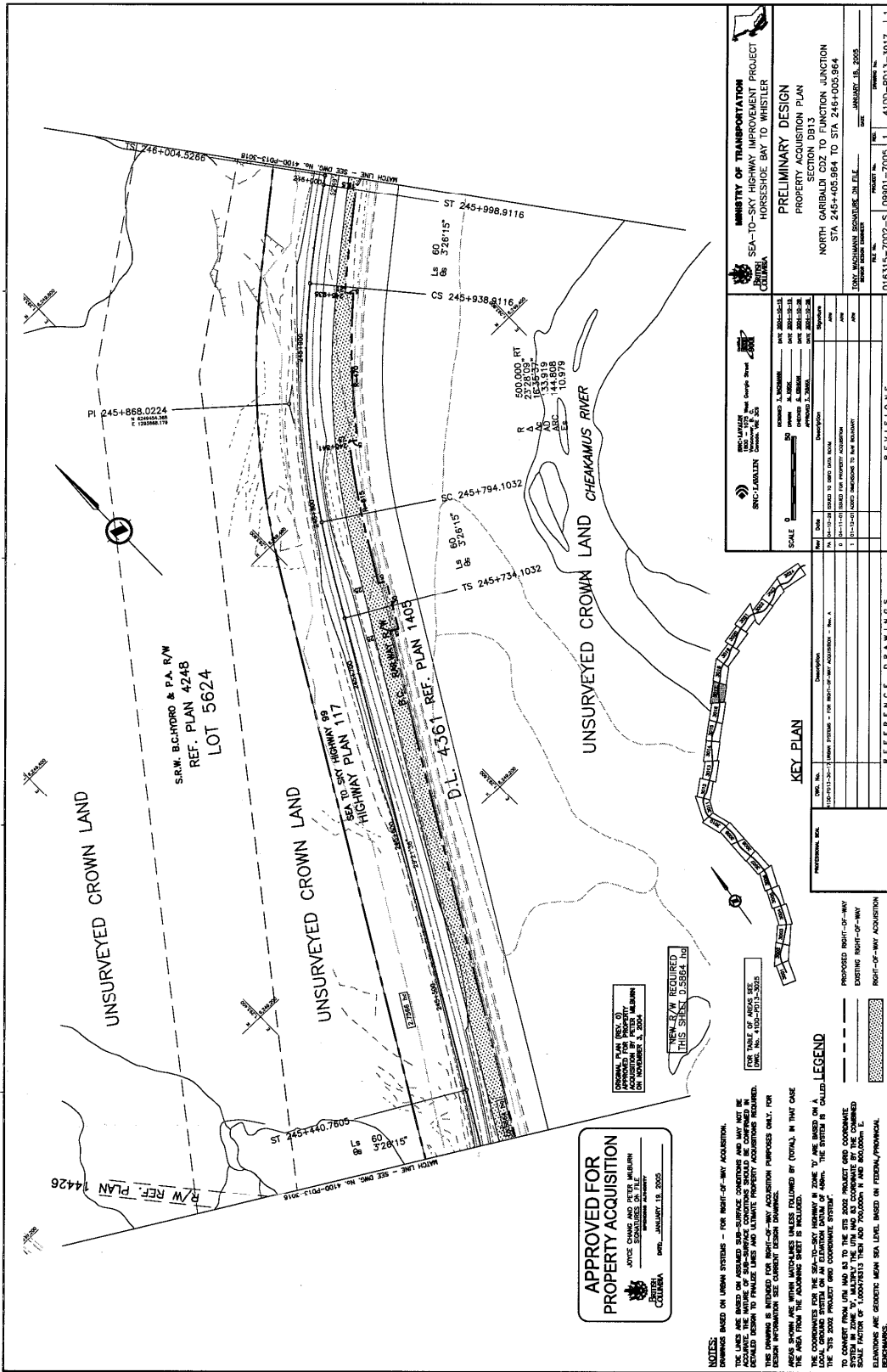
REVISIONS

NO.	DATE	DESCRIPTION
A	3/1/07	ISSUED FOR REVIEW
B	3/1/07	ISSUED FOR INFORMATION
C	3/1/07	ALTERNATE CHANGES
D	3/1/07	ISSUED FOR PERSONAL SUBMISSION

Annex 82



Annex 84



APPROVED FOR PROPERTY ACQUISITION
 JOHN SCARLETT, P.E., M.P.
 CIVIL ENGINEER
 REG. NO. 100-10013-3017
 DATE: JANUARY 13, 2005

NOTES:
 DRAWINGS BASED ON LARSEN SYSTEMS - FOR RIGHT-OF-WAY ACQUISITION.
 THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR LOCAL CROWN LANDS AND ULTIMATE PROPERTY ACQUISITIONS REQUIRED. THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION PURPOSES.
 THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IN ZONE 10 ARE BASED ON A LOCAL GRID SYSTEM ON AN ELEVATION DATUM OF BURN. THE SYSTEM IS CALLED "SEA-TO-SKY". THE UTM AND UTM 83 COORDINATE BY THE CANADIAN SYSTEM IN ZONE 10, MULTIPLY THE UTM AND 83 COORDINATE BY THE COMMON SCALE FACTOR OF 1100000000 THEN ADD 7000000 IN X AND 8000000 IN Y. ELEVATIONS ARE GEODETIC MEAN SEA LEVEL BASED ON FEDERAL/PROVINCIAL DATUMS.

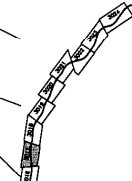
LEGEND
 PROPOSED RIGHT-OF-WAY
 EXISTING RIGHT-OF-WAY
 RIGHT-OF-WAY ACQUISITION

FOR STATE OF BRITISH COLUMBIA
 CIVIL NO. 100-10013-3017

NEW LAW REQUIRED
 THIS SHEET IS SUBJECT TO

APPROVED FOR THE ACQUISITION OF FEDERAL/PROVINCIAL LANDS BY THE MINISTER OF TRANSPORTATION AND INFRASTRUCTURE

KEY PLAN

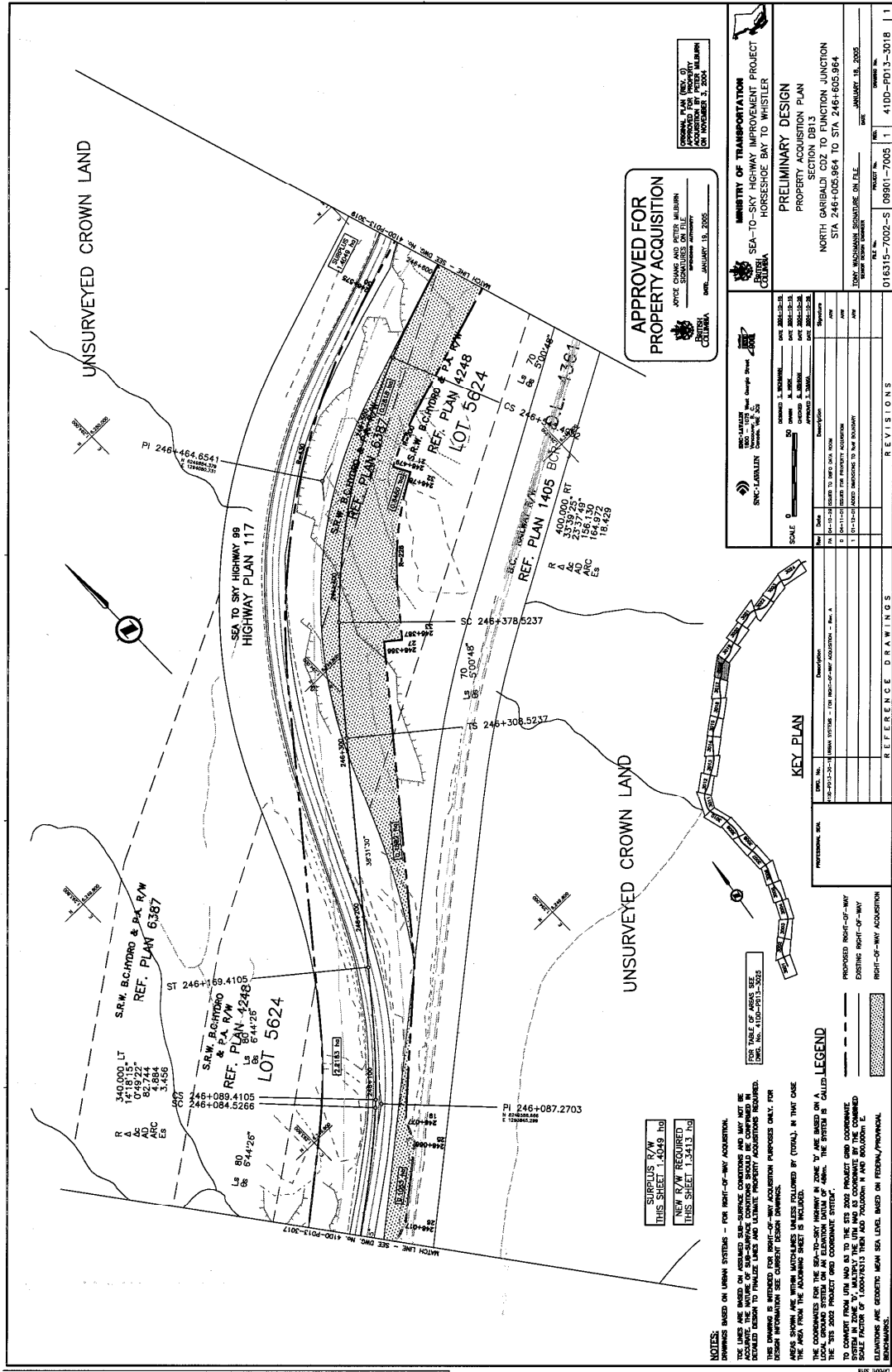


MINISTRY OF TRANSPORTATION SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT HORSESHOE BAY TO WHISTLER	
PRELIMINARY DESIGN PROPERTY ACQUISITION PLAN SECTION DB13 NORTH CARIBALDI CDZ TO FUNCTION JUNCTION STA 245+405.964 TO STA 246+005.964	
DATE: JANUARY 13, 2005	SHEET NO.: 016313-7002-S
PROJECT NO.: 09901-7008	DRAWING NO.: 410D-PD13-3017

NO.	DATE	DESCRIPTION
1	01-13-05	ISSUED FOR PROPERTY ACQUISITION
2	01-13-05	ISSUED FOR REVISION TO THE DRAWING
3	01-13-05	ISSUED FOR REVISION TO THE DRAWING

NO.	DATE	DESCRIPTION
1	01-13-05	ISSUED FOR PROPERTY ACQUISITION
2	01-13-05	ISSUED FOR REVISION TO THE DRAWING
3	01-13-05	ISSUED FOR REVISION TO THE DRAWING

Annex 85



APPROVED FOR PROPERTY ACQUISITION
 JOYCE CHANG AND PETER MURBIN
 CIVIL ENGINEERS
 DATE: JANUARY 18, 2005

MINISTRY OF TRANSPORTATION
 SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
 HORSESHOE BAY TO WHISTLER

PROPERTY ACQUISITION PLAN
 PRELIMINARY DESIGN

NORTH CARIBOU COUNTY JUNCTION
 STA 246+005.964 TO STA 246+605.964

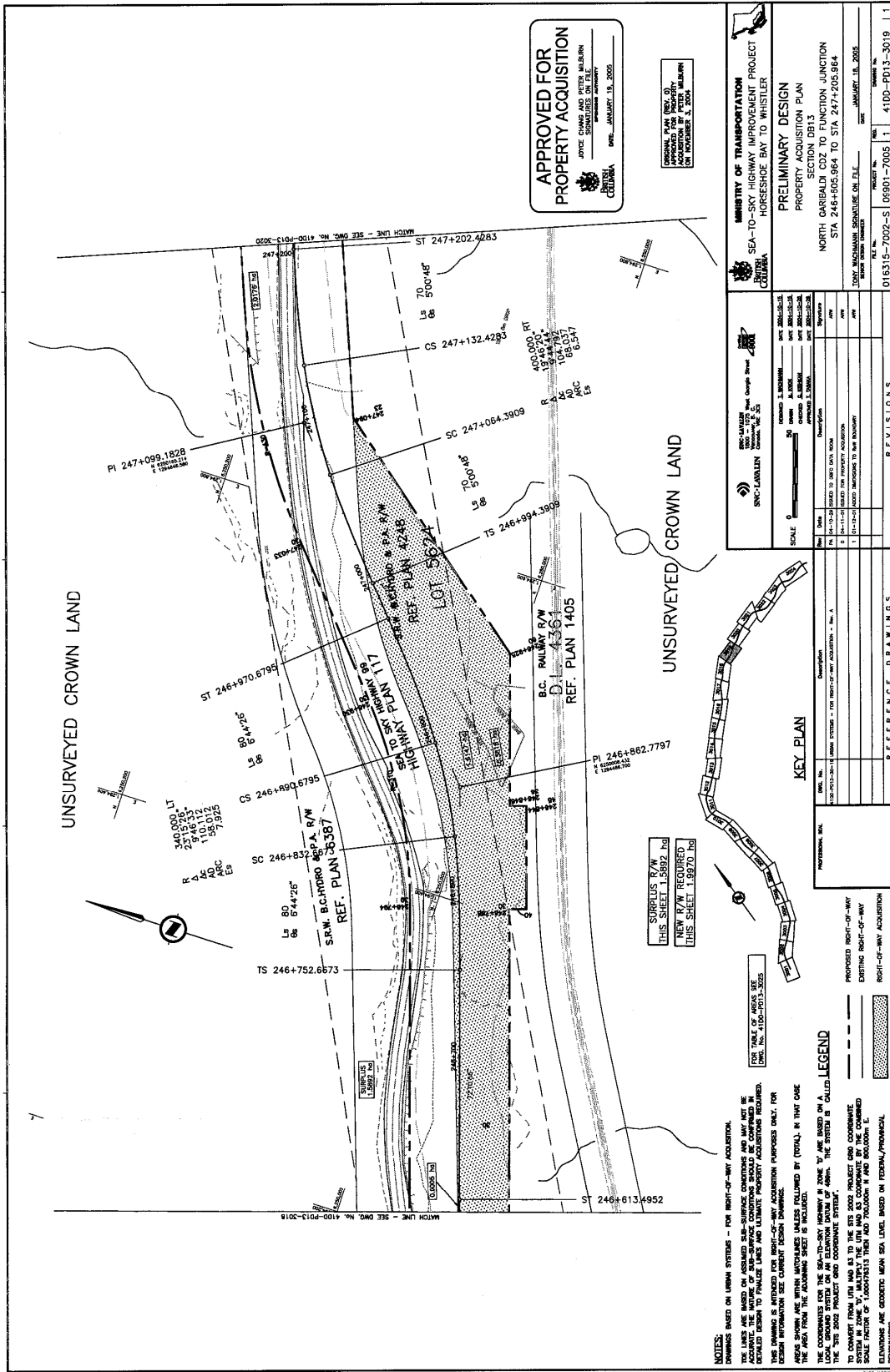
DATE: JANUARY 18, 2005

PROJECT NO. 016315-7002-S
 SHEET NO. 1
 TOTAL SHEETS 1

NO.	DATE	DESCRIPTION
1	01/18/05	ISSUED FOR PROPERTY ACQUISITION
2	01/18/05	REVISED TO SHOW CHANGES TO THE BOUNDARY
3	01/18/05	REVISED TO SHOW CHANGES TO THE BOUNDARY

NOTES:
 DRAWINGS BASED ON LUMIN SYSTEMS - FOR RIGHT-OF-WAY ACQUISITION.
 THE LINES ARE BASED ON ASSUMED SUB-SURFACE CONDITIONS AND MAY NOT BE ACCURATE TO THE ACTUAL SUB-SURFACE CONDITIONS.
 THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR DESIGN INFORMATION SEE CURRENT DESIGN DRAWINGS.
 AREAS SHOWN ARE WITHIN MATCHLINES UNLESS FOLLOWED BY (TOTAL) IN THAT CASE THE CORNERED FROM THE SEA-TO-SKY HIGHWAY IN ZONE 17 ARE BASED ON A THE 2003 PROJECT AND COORDINATE SYSTEM.
 TO CORRECT FROM UTM AND AS TO THE 2003 PROJECT GRID COORDINATE SCALE IN ZONE 17, ADJUST THE UTM AND AS COORDINATE BY THE COMBINED SCALE IN ZONE 17.
 BENCHMARKS ARE COORDINATE WITH SEA LEVEL BASED ON FEDERAL/PROVINCIAL BENCHMARKS.

Annex 86



APPROVED FOR PROPERTY ACQUISITION
 JOYCE CHANG AND PETER MURKIN
 SIGNATORIES ON FILE
 DATE: JANUARY 13, 2005
 COLUMBIA

APPROVED FOR PROPERTY ACQUISITION BY PETER MURKIN ON FEBRUARY 11, 2005

MINISTRY OF TRANSPORTATION
 SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
 HORSESHOE BAY TO WHISTLER

PRELIMINARY DESIGN
 PROPERTY ACQUISITION PLAN
 NORTH CASABLANCA CO2 TO FUNCTION JUNCTION
 STA 246+505.964 TO STA. 247+205.964

DATE: JANUARY 13, 2005
 PROJECT No. 06901-7002-S
 SHEET No. 016315-7002-S
 TOTAL SHEETS 11

REVISIONS

No.	Date	Description
1	10-11-04	ISSUED FOR PROPERTY ACQUISITION
2	10-11-04	ISSUED FOR PROPERTY ACQUISITION
3	10-11-04	ISSUED FOR PROPERTY ACQUISITION

REFERENCE DRAWINGS

Drawn	Checked	Reviewed	Approved

FOR TABLE OF AREA SEE THIS SHEET 1.8822 TO 1.9273 TO

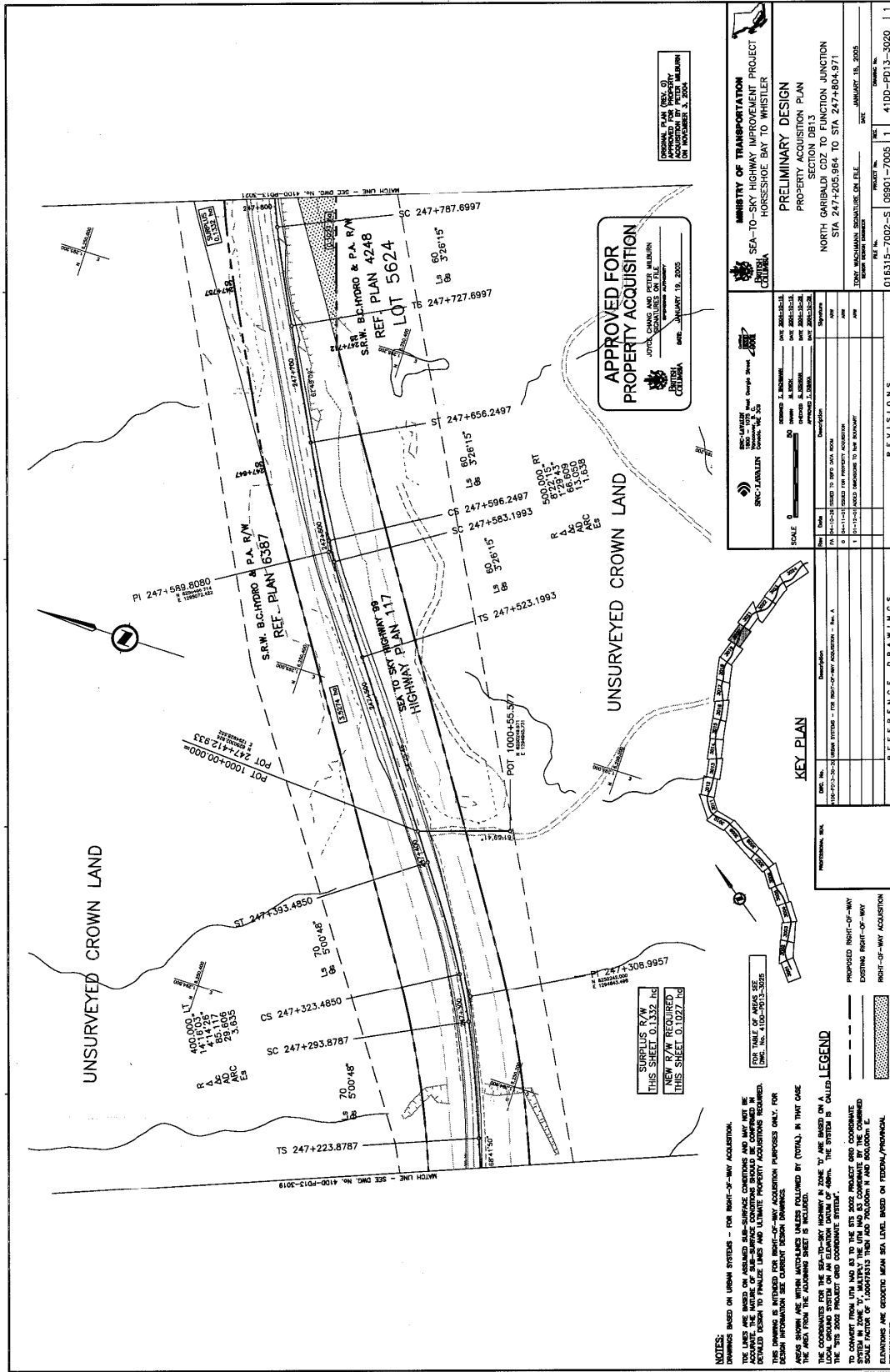
Area	Description

LEGEND

Symbol	Description
--- (dashed line)	PROPOSED RIGHT-OF-WAY
--- (solid line)	EXISTING RIGHT-OF-WAY
--- (dotted line)	RIGHT-OF-WAY ACQUISITION

NOTES:
 DRAWINGS BASED ON URBAN SYSTEMS - FOR RIGHT-OF-WAY ACQUISITION.
 THE LINES ARE BASED ON ASSUMED SEA-SURFACE CONDITIONS AND MAY VARY WITH ACTUALITY. THE NATURE OF SEA-SURFACE CONDITIONS SHOULD BE CONFIRMED BY DETAILED DESIGN TO FINALIZE LINES AND ULTIMATE PROPERTY ACQUISITIONS REQUIRED.
 THIS DRAWING IS FOR PRELIMINARY DESIGN PURPOSES ONLY. FOR FINAL DESIGN, CONSULT THE DESIGNER'S OFFICE FOR THE LATEST REVISIONS.
 AREAS SHOWN ARE WITHIN MATCHLINES UNLESS INDICATED BY (TOTAL) IN THAT CASE THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IN ZONE TO BE BASED ON A LOCAL GRID SYSTEM OR AN ESTABLISHED STATE OF 498m. THE SYSTEM IS CALLED "SEA-TO-SKY" AND IS DESCRIBED IN THE PROJECT CHARTER AND COORDINATE SYSTEM IN ZONE 3. MULTIPLE THE UTM X AND Y COORDINATES BY THE CHARTERED SCALE FACTOR OF 1:800000 TO GET THE UTM X AND Y COORDINATES IN METERS. ELEVATIONS ARE GEODETIC MEAN SEA LEVEL BASED ON FEDERAL/PROVINCIAL BENCHMARKS.

Annex 87



APPROVED FOR PROPERTY ACQUISITION
 JAMES CHANG AND PETER MURKIN
 ENGINEERS ON FILE
 BRITISH COLUMBIA
 INC. JANUARY 14, 2005

FORMAL PLAN (REG. 0)
 APPROVED FOR PROPERTY ACQUISITION
 ON NOVEMBER 3, 2004

MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
HORSESHOE BAY TO WHISTLER

PRELIMINARY DESIGN
 PROPERTY ACQUISITION PLAN
 NORTH CARIBOU CO. TO JUNCTION JUNCTION
 STA 247+205.964 TO STA 247+804.971

DATE: JANUARY 14, 2005
 PROJECT NO.: 08901-7005-1
 SHEET NO.: 41DD-PD13-3020

REVISIONS

No.	Date	Description
1	10-11-04	ISSUED FOR PROPERTY ACQUISITION
2	10-11-04	ISSUED FOR PROPERTY ACQUISITION
3	10-11-04	ISSUED FOR PROPERTY ACQUISITION

REFERENCE DRAWINGS

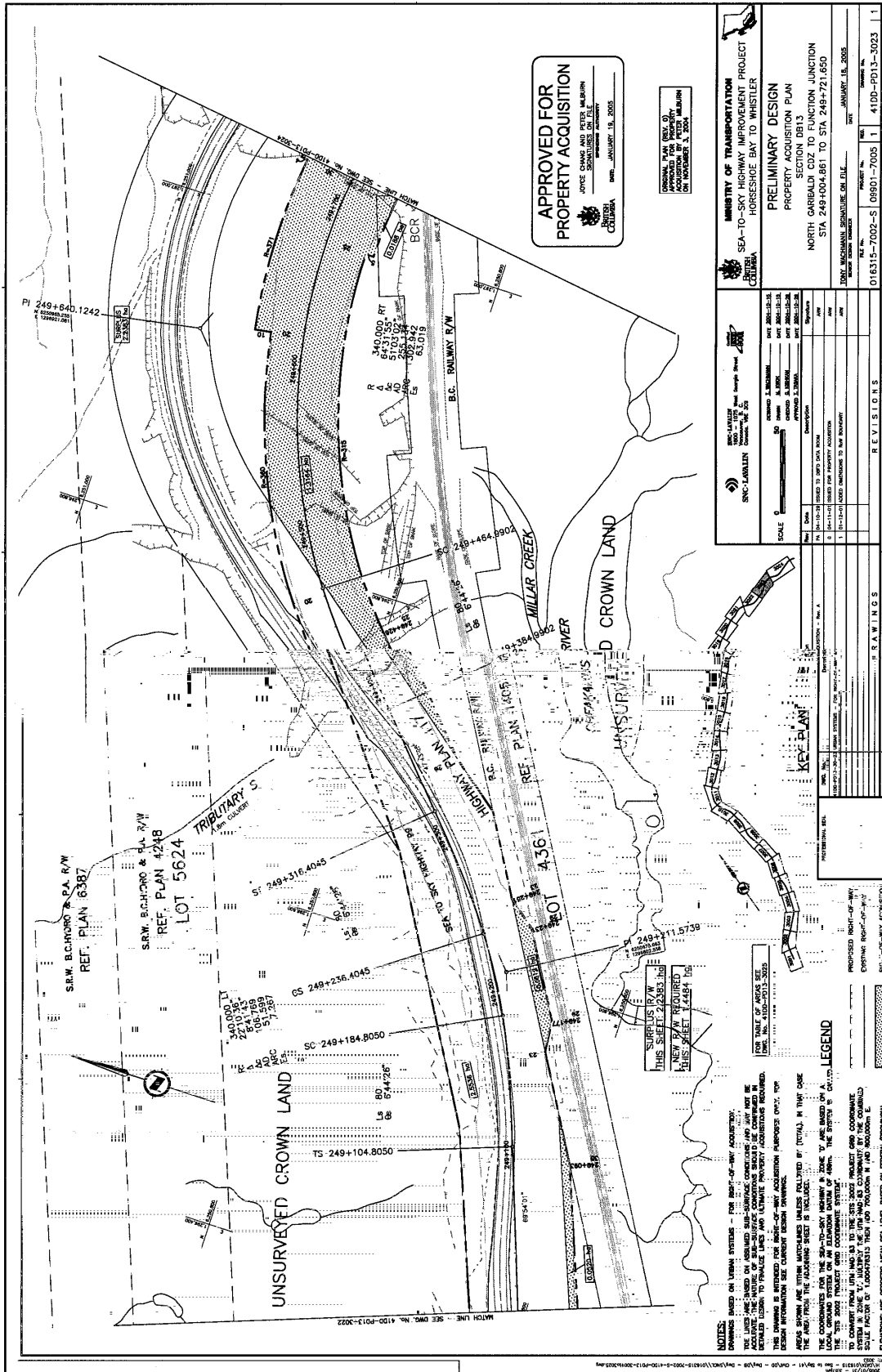
Draw. No.	Description
100-273-20-00	PROPOSED RIGHT-OF-WAY
100-273-20-00	EXISTING RIGHT-OF-WAY

LEGEND

PROPOSED RIGHT-OF-WAY
 EXISTING RIGHT-OF-WAY

NOTES:
 1. ALL DIMENSIONS ARE GIVEN IN METERS UNLESS OTHERWISE SPECIFIED.
 2. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IN ZONE 17 ARE BASED ON A LOCAL GRID SYSTEM ON AN ELEVATION DATUM OF 466M. THE SYSTEM IS CALLED "SEA-TO-SKY".
 3. THE "SEA-TO-SKY" LOCAL GRID IS TO THE LEFT OF THE SHEET AND COORDINATE SYSTEM IN ZONE 17. MULTIPLY THE UTM AND SO COORDINATE BY THE COORDINATE SCALE FACTOR OF 1.0000215 THEN ADD 700000.000 IN X AND 6000000.000 IN Y. ELEVATIONS ARE GROUND MEAN SEA LEVEL BASED ON TIDE/GAUGE APPROXIMATE BENCHMARKS.

Annex 89



APPROVED FOR PROPERTY ACQUISITION
 JOYCE CHANG AND PETER MURPHY
 SIGNATURE ON FILE
 DATE: JANUARY 18, 2005

PERSONAL SEAL (SEE 10)
 APPROVED FOR PROPERTY ACQUISITION
 ON BEHALF OF THE MINISTER OF TRANSPORTATION
 DATE: JANUARY 18, 2005

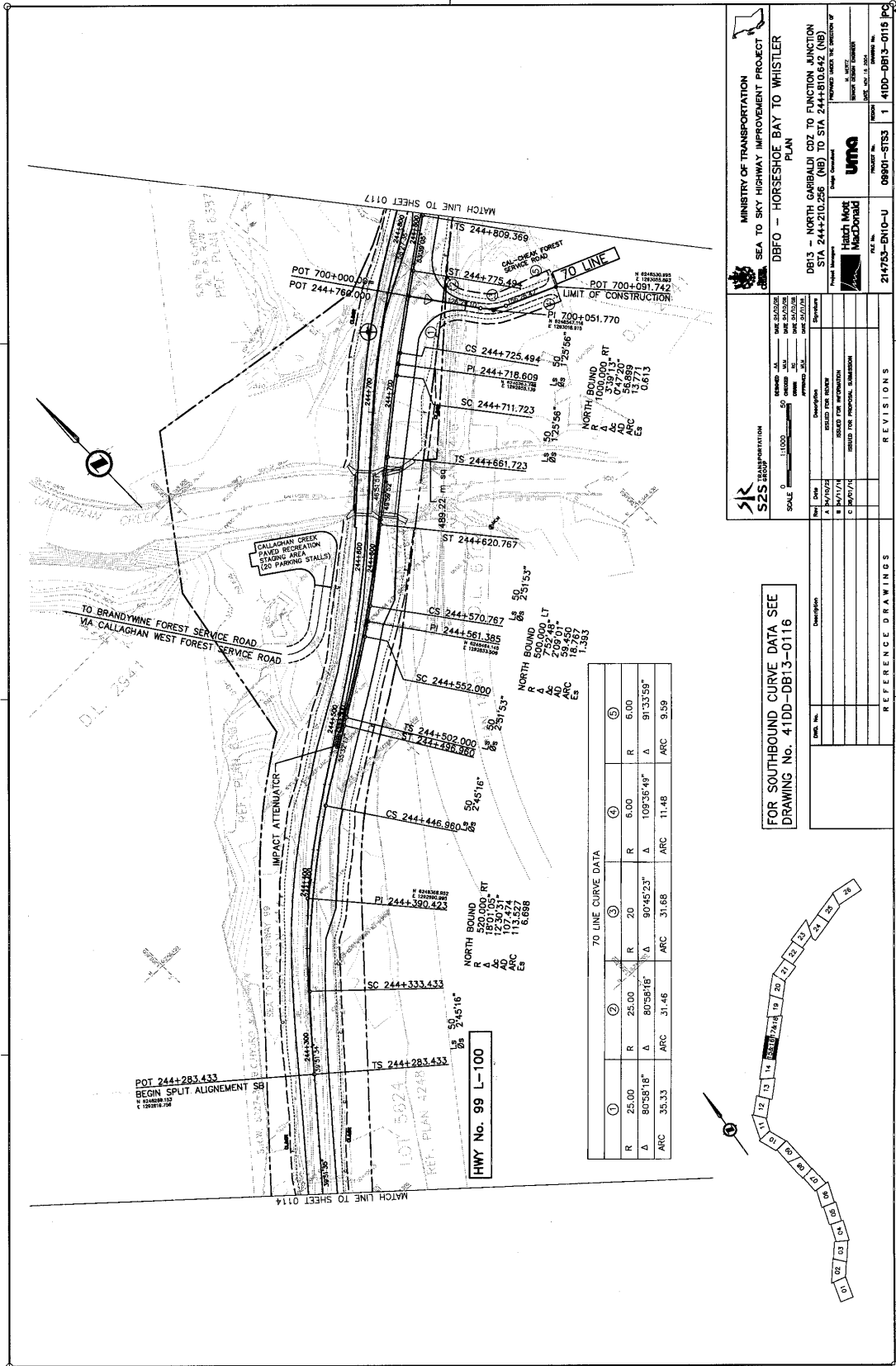
MINISTRY OF TRANSPORTATION SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT HORNSHORE BAY TO WHISTLER PRELIMINARY DESIGN SECTION DB13 NORTH GARBAUD COZ TO FUNCTION JUNCTION STA 249+404.861 TO STA 249+721.650 DATE: JANUARY 18, 2005	
SCALE: 0 1" = 100'-0" (30.48 M) 1" = 100'-0" (30.48 M)	REVISIONS NO. DATE DESCRIPTION 1 18-11-05 ISSUED FOR PROPERTY ACQUISITION 2 18-11-05 ISSUED FOR PROPERTY ACQUISITION

NO.	DATE	DESCRIPTION
1	18-11-05	ISSUED FOR PROPERTY ACQUISITION
2	18-11-05	ISSUED FOR PROPERTY ACQUISITION

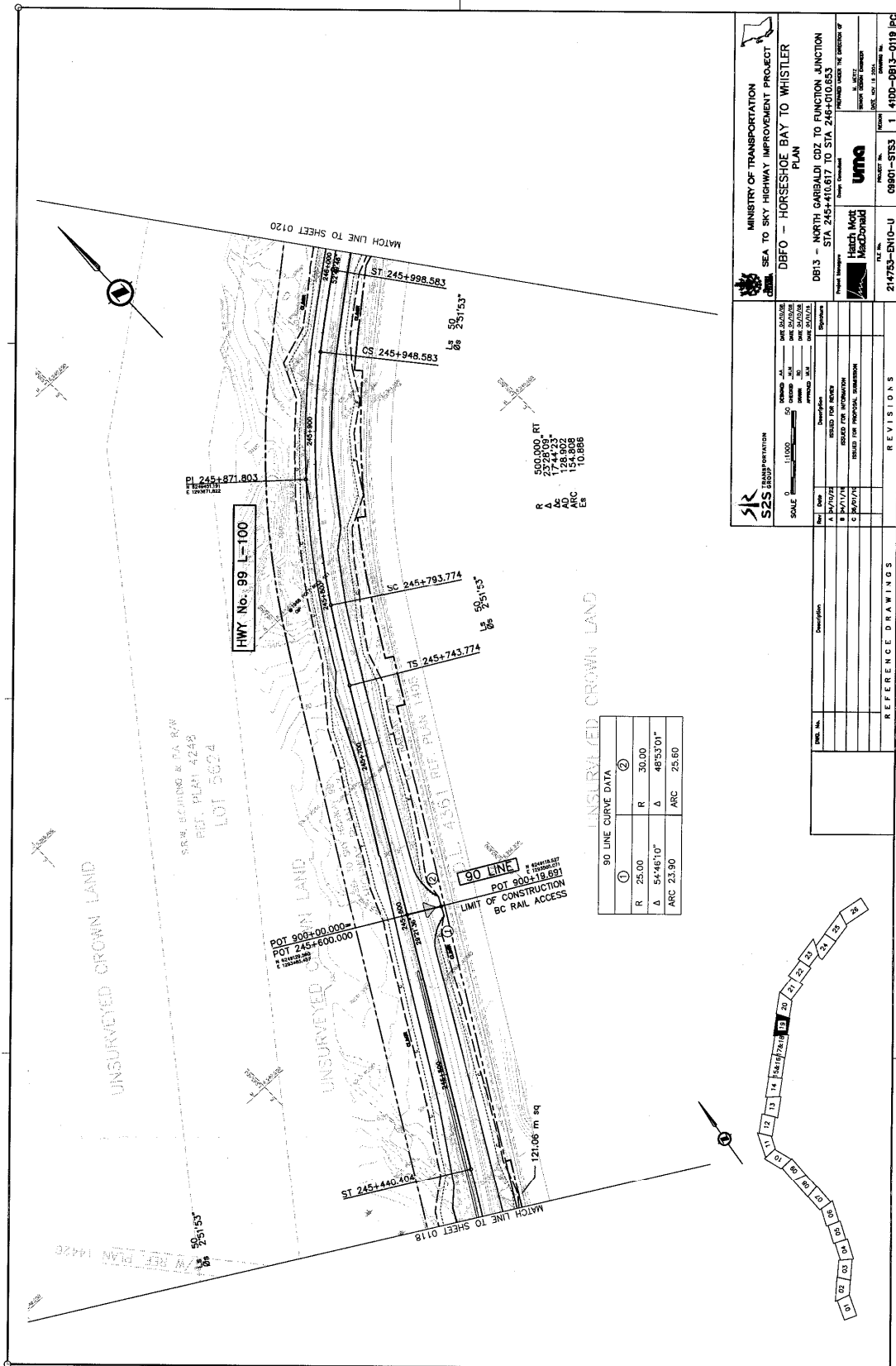
NOTES:
 1. DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED.
 2. ALL DIMENSIONS ARE TO BE VERIFIED BY TOTAL STATION SURVEY.
 3. THE NEED OF SURVEYED SUB-SURFACE CONDITIONS AND MAY NOT BE INCLUDED IN THIS PLAN AND ULTIMATE PROPERTY ACQUISITION REQUIRED.
 4. THE DRAWING IS INTENDED FOR THE BEST-OF-BEST ACQUISITION PURPOSES ONLY. THE DESIGN INFORMATION IS FOR CURRENT DESIGN PURPOSES.
 5. THE DESIGN IS FOR THE BEST-OF-BEST ACQUISITION PURPOSES ONLY. THE DESIGN IS FOR CURRENT DESIGN PURPOSES.
 6. THE DESIGN IS FOR THE BEST-OF-BEST ACQUISITION PURPOSES ONLY. THE DESIGN IS FOR CURRENT DESIGN PURPOSES.
 7. THE DESIGN IS FOR THE BEST-OF-BEST ACQUISITION PURPOSES ONLY. THE DESIGN IS FOR CURRENT DESIGN PURPOSES.
 8. THE DESIGN IS FOR THE BEST-OF-BEST ACQUISITION PURPOSES ONLY. THE DESIGN IS FOR CURRENT DESIGN PURPOSES.
 9. THE DESIGN IS FOR THE BEST-OF-BEST ACQUISITION PURPOSES ONLY. THE DESIGN IS FOR CURRENT DESIGN PURPOSES.
 10. THE DESIGN IS FOR THE BEST-OF-BEST ACQUISITION PURPOSES ONLY. THE DESIGN IS FOR CURRENT DESIGN PURPOSES.

LEGEND
 UNURVED CROWN LAND
 SURVEYED CROWN LAND
 PROPOSED RIGHT-OF-WAY
 EXISTING RIGHT-OF-WAY
 RIGHT-OF-WAY ACQUISITION

Annex 91



Annex 92



SR 525 **SR** 525

MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

DB13 - NORTH GARIBOLDI COTZ TO FUNCTION JUNCTION
TO STA 245+000 TO STA 245+948.583

Project No. 214753-EN10-U
Contract No. 08801-S153 1 4100-DB13-0119 PC
Scale: 1" = 50'

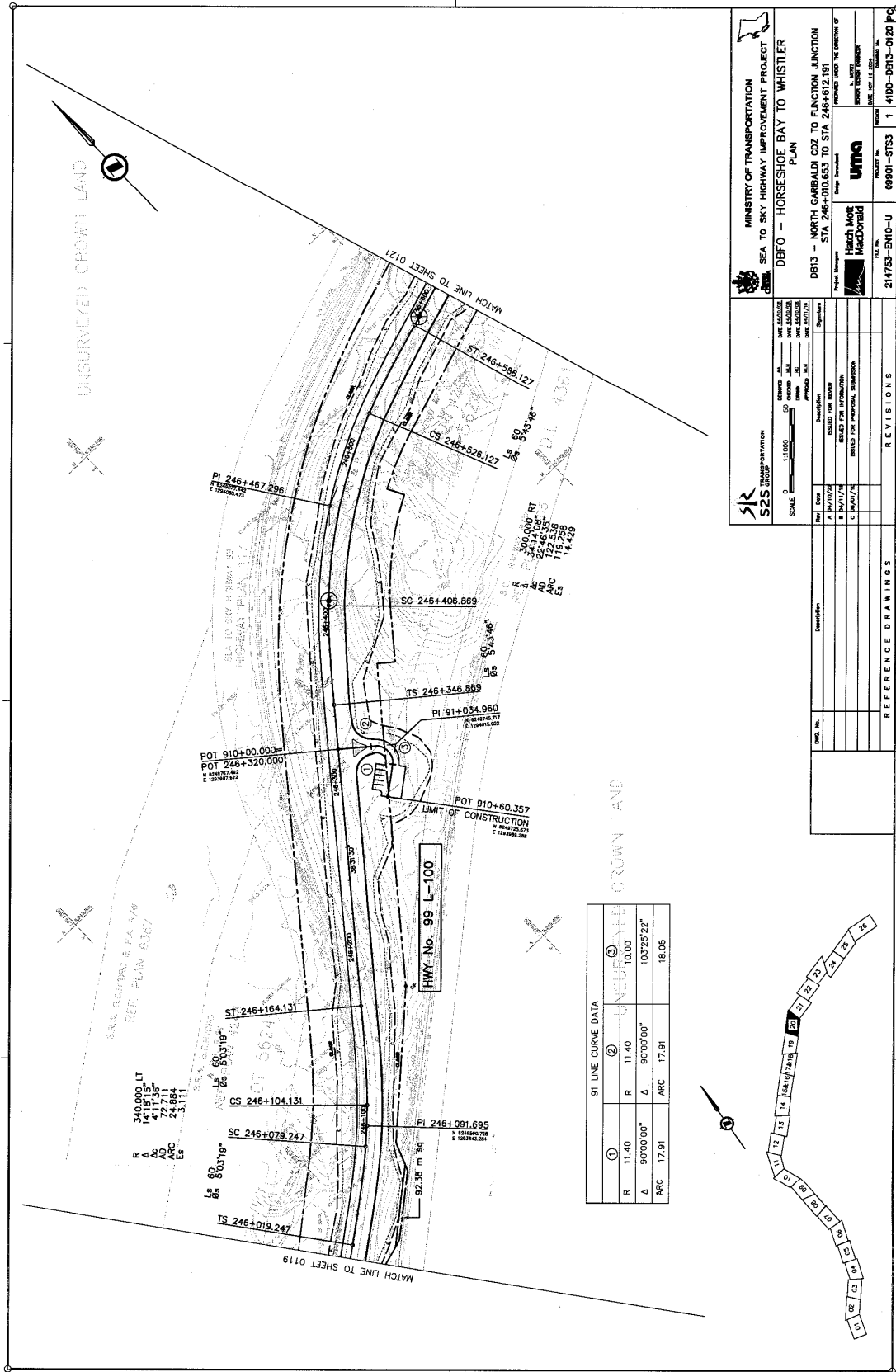
DATE: 11/11/2011
DRAWN BY: H. WATTS
CHECKED BY: H. WATTS
DATE: 11/11/2011
DESIGNED BY: H. WATTS
DATE: 11/11/2011
APPROVED BY: H. WATTS
DATE: 11/11/2011

UWA
Hatch Mott MacDonald

REVISIONS

REV. NO.	DATE	DESCRIPTION
A	24/7/12	ISSUED FOR PERMIT
B	24/7/12	ISSUED FOR PERMIT
C	24/7/12	ISSUED FOR PERMIT

Annex 93



91 LINE CURVE DATA

①	R	11.40	Δ	90°00'00"	ARC	17.91	18.05
②	R	11.40	Δ	90°00'00"	ARC	17.91	18.05
③	R	11.40	Δ	103°25'22"	ARC	17.91	18.05

MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER PLAN

DB13 - NORTH GARGALDI COZ TO FUNCTION JUNCTION
STA 246+010.653 TO STA 246+612.191

Scale: 1:1000
DATE: 11/17/14

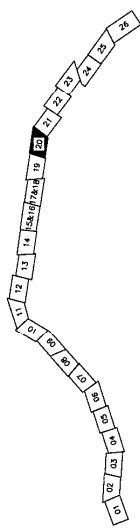
PROJECT NO.: 21753-EN0-U
DRAWING NO.: 09901-S153 1 4100-DB13-0120

DESIGNER: Macth MacDonnell
CHECKER: Macth MacDonnell

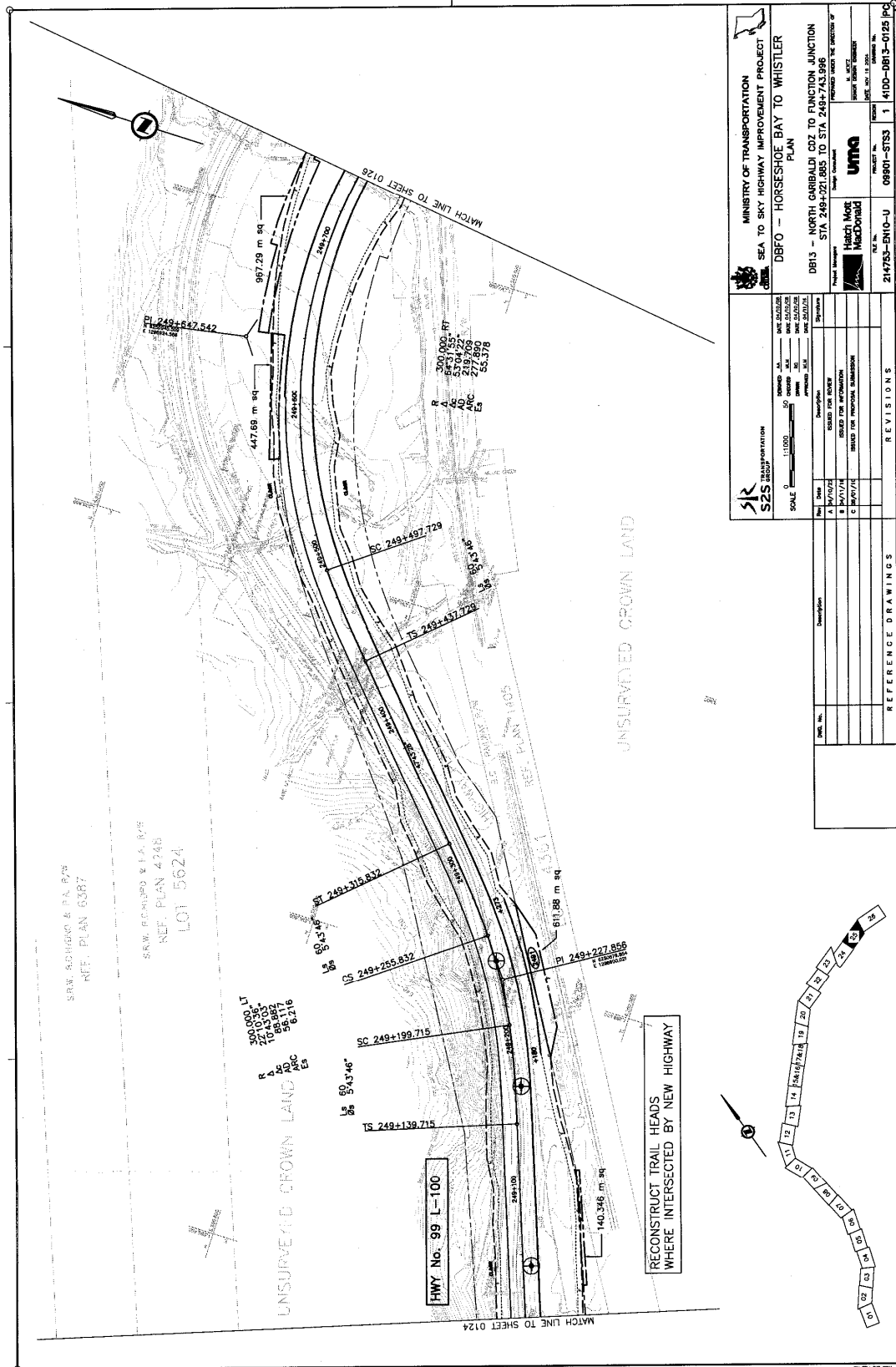
REVISIONS

REFERENCE DRAWINGS

Draw. No.	Description

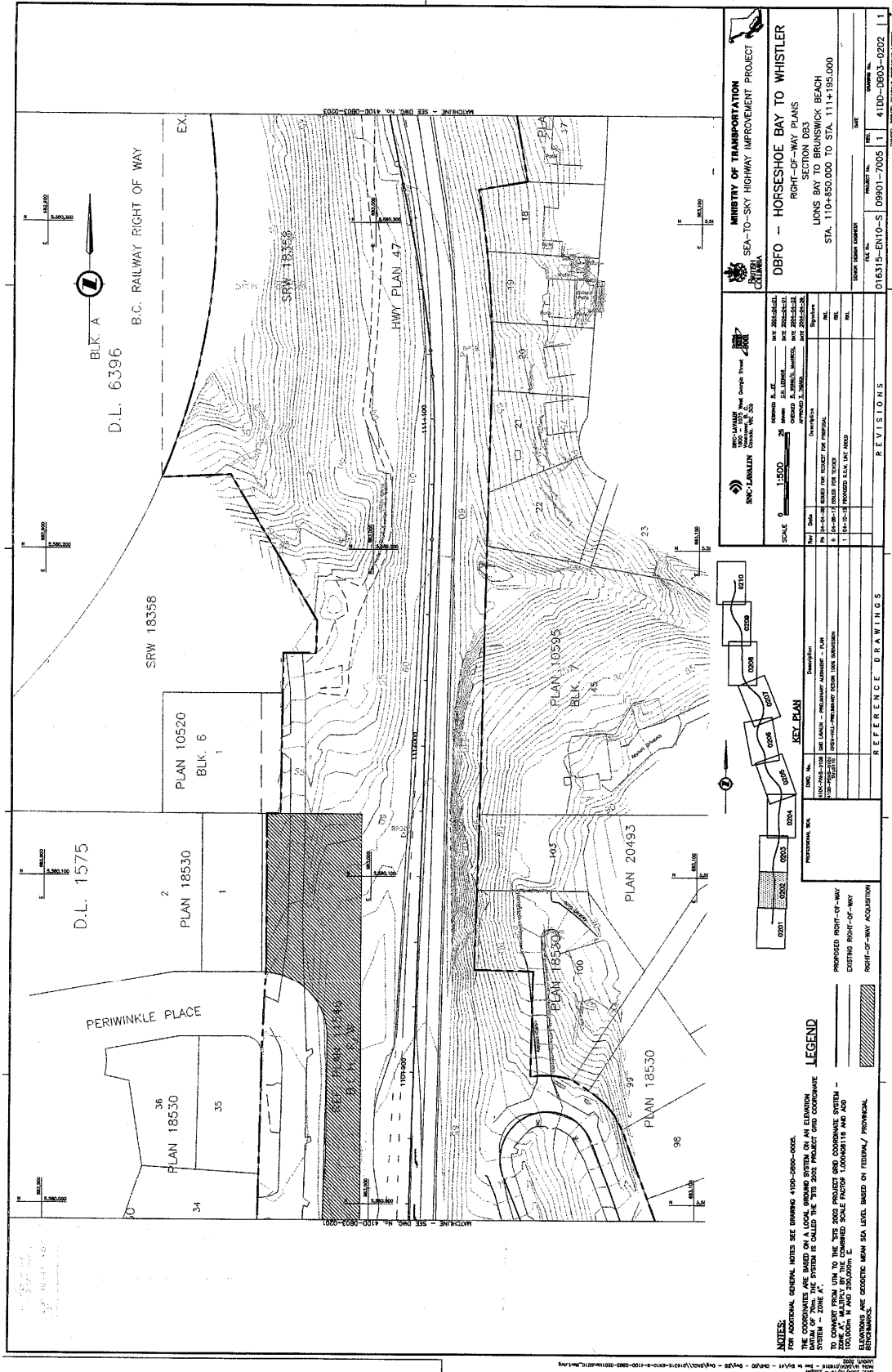


Annex 94



MINISTRY OF TRANSPORTATION SEA TO SKY HIGHWAY IMPROVEMENT PROJECT			
DBFO - HORSESHOE BAY TO WHISTLER PLAN			
DB13 - NORTH GARIBALDI COZ TO FUNCTION JUNCTION STA 249+221.865 TO STA 249+743.996			
Prepared under the direction of 		Project Manager HATCH MOTT MACDONALD	
SCALE 1:1000 0 10 20 30 METERS 0 10 20 30 FEET		PROJECT NO. 09901-STSS 1 4100-DB13-0125 SHEET NO. 11 OF 11	
DATE: 2010/07/14 DRAWN BY: [Name] CHECKED BY: [Name]		REVISIONS	
REFERENCE DRAWINGS		REVISIONS	

Annex 96



NOTES:
 1. GENERAL NOTES SEE DRAWING 4100-2000-002.
 2. THE COORDINATES ARE BASED ON THE CANADIAN NATIONAL DATUM OF 70 AND THE SYSTEM IS CALLED THE 980 2000 PROJECT GRID COORDINATE SYSTEM - ZONE 18.
 3. THE 2000 PROJECT GRID COORDINATE SYSTEM IS BASED ON THE CANADIAN NATIONAL DATUM OF 70 AND THE SYSTEM IS CALLED THE 980 2000 PROJECT GRID COORDINATE SYSTEM - ZONE 18.
 4. THE 2000 PROJECT GRID COORDINATE SYSTEM IS BASED ON THE CANADIAN NATIONAL DATUM OF 70 AND THE SYSTEM IS CALLED THE 980 2000 PROJECT GRID COORDINATE SYSTEM - ZONE 18.
 5. THE 2000 PROJECT GRID COORDINATE SYSTEM IS BASED ON THE CANADIAN NATIONAL DATUM OF 70 AND THE SYSTEM IS CALLED THE 980 2000 PROJECT GRID COORDINATE SYSTEM - ZONE 18.
 6. THE 2000 PROJECT GRID COORDINATE SYSTEM IS BASED ON THE CANADIAN NATIONAL DATUM OF 70 AND THE SYSTEM IS CALLED THE 980 2000 PROJECT GRID COORDINATE SYSTEM - ZONE 18.
 7. THE 2000 PROJECT GRID COORDINATE SYSTEM IS BASED ON THE CANADIAN NATIONAL DATUM OF 70 AND THE SYSTEM IS CALLED THE 980 2000 PROJECT GRID COORDINATE SYSTEM - ZONE 18.
 8. THE 2000 PROJECT GRID COORDINATE SYSTEM IS BASED ON THE CANADIAN NATIONAL DATUM OF 70 AND THE SYSTEM IS CALLED THE 980 2000 PROJECT GRID COORDINATE SYSTEM - ZONE 18.
 9. THE 2000 PROJECT GRID COORDINATE SYSTEM IS BASED ON THE CANADIAN NATIONAL DATUM OF 70 AND THE SYSTEM IS CALLED THE 980 2000 PROJECT GRID COORDINATE SYSTEM - ZONE 18.
 10. THE 2000 PROJECT GRID COORDINATE SYSTEM IS BASED ON THE CANADIAN NATIONAL DATUM OF 70 AND THE SYSTEM IS CALLED THE 980 2000 PROJECT GRID COORDINATE SYSTEM - ZONE 18.

LEGEND

- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- RIGHT-OF-WAY ACQUISITION

MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
CRITERIA

DBFO -- HORSESHOE BAY TO WHISTLER
 RIGHT-OF-WAY PLANS
 LIONS BAY TO BRUNSWICK BEACH
 STA. 110+850.000 TO STA. 111+125.000

SCALE: 1:500

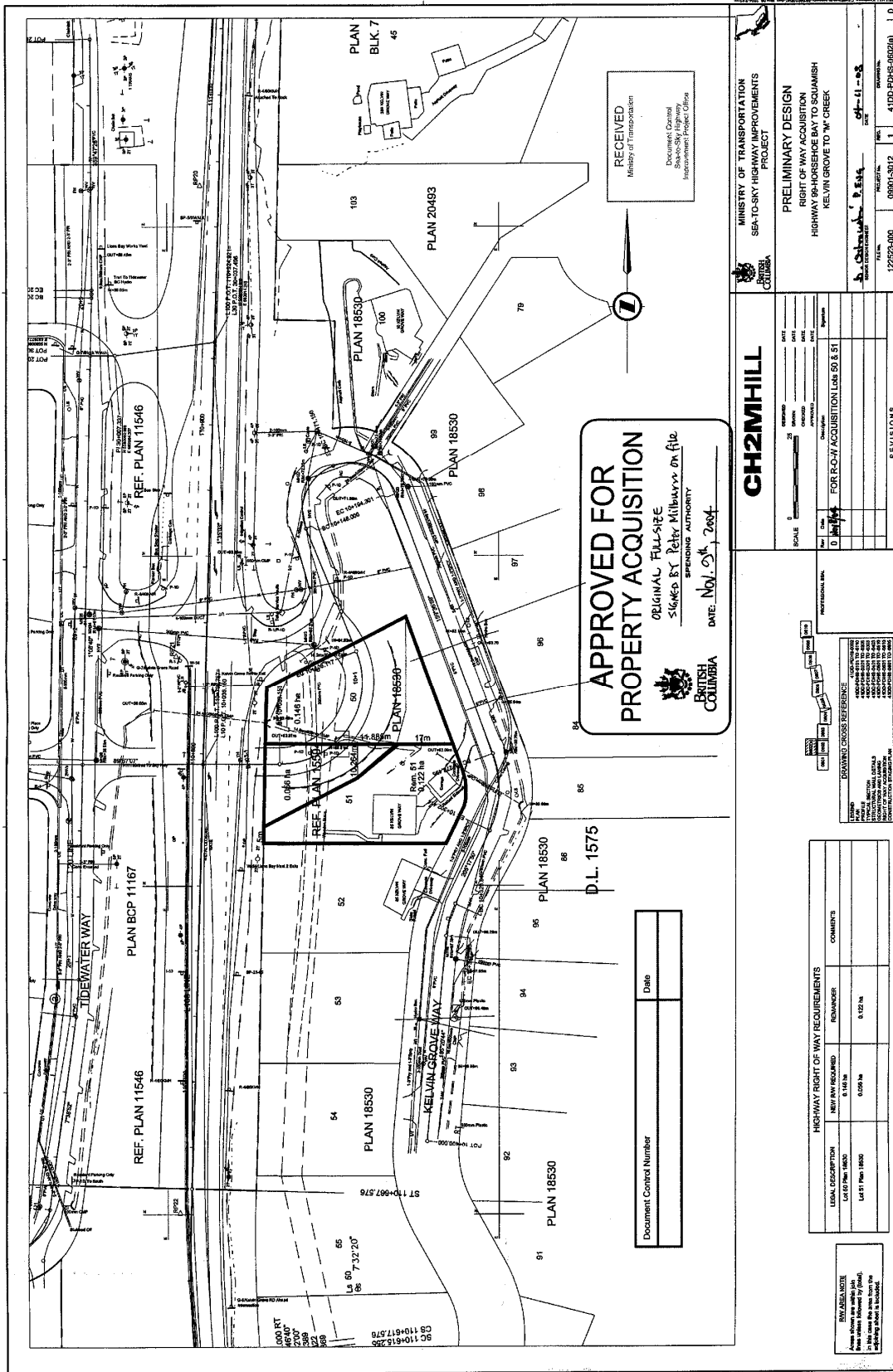
DATE: 11/11/2003

PROJECT NO.: 09901-7005

REVISIONS:

NO.	DATE	DESCRIPTION
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6	11/11/2003	REVISED FOR TENDER
7	11/11/2003	REVISED FOR TENDER
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98	11/11/2003	REVISED FOR TENDER
99	11/11/2003	REVISED FOR TENDER
100	11/11/2003	REVISED FOR TENDER

Annex 97



APPROVED FOR PROPERTY ACQUISITION
 ORIGINAL FULL-SITE
 SIGNED BY: *Peter Milbrink* on file
 SPENDING AUTHORITY
 DATE: *Nov. 26, 2004*

Document Control Number	Date

CH2MHILL

MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENTS PROJECT

PRELIMINARY DESIGN
RIGHT OF WAY ACQUISITION
HIGHWAY 99-HORSESHOE BAY TO SQUAMISH
KELVIN GROVE TO "W" CREEK

DATE: 08/01/2003
PROJECT: 12252-000
DRAWING: 0801-3012
SCALE: 1" = 100'

BRITISH COLUMBIA

FOR P.O.-W ACQUISITION LMS 50.8.51

DATE: 08/01/2003
PROJECT: 12252-000
DRAWING: 0801-3012

LEGAL DESCRIPTION	NEW RWY REQUIRED	REMARKS	COMMENTS
LOT 57 Plan 18530	0.009 Ha	0.122 Ha	
LOT 58 Plan 18530	0.146 Ha		

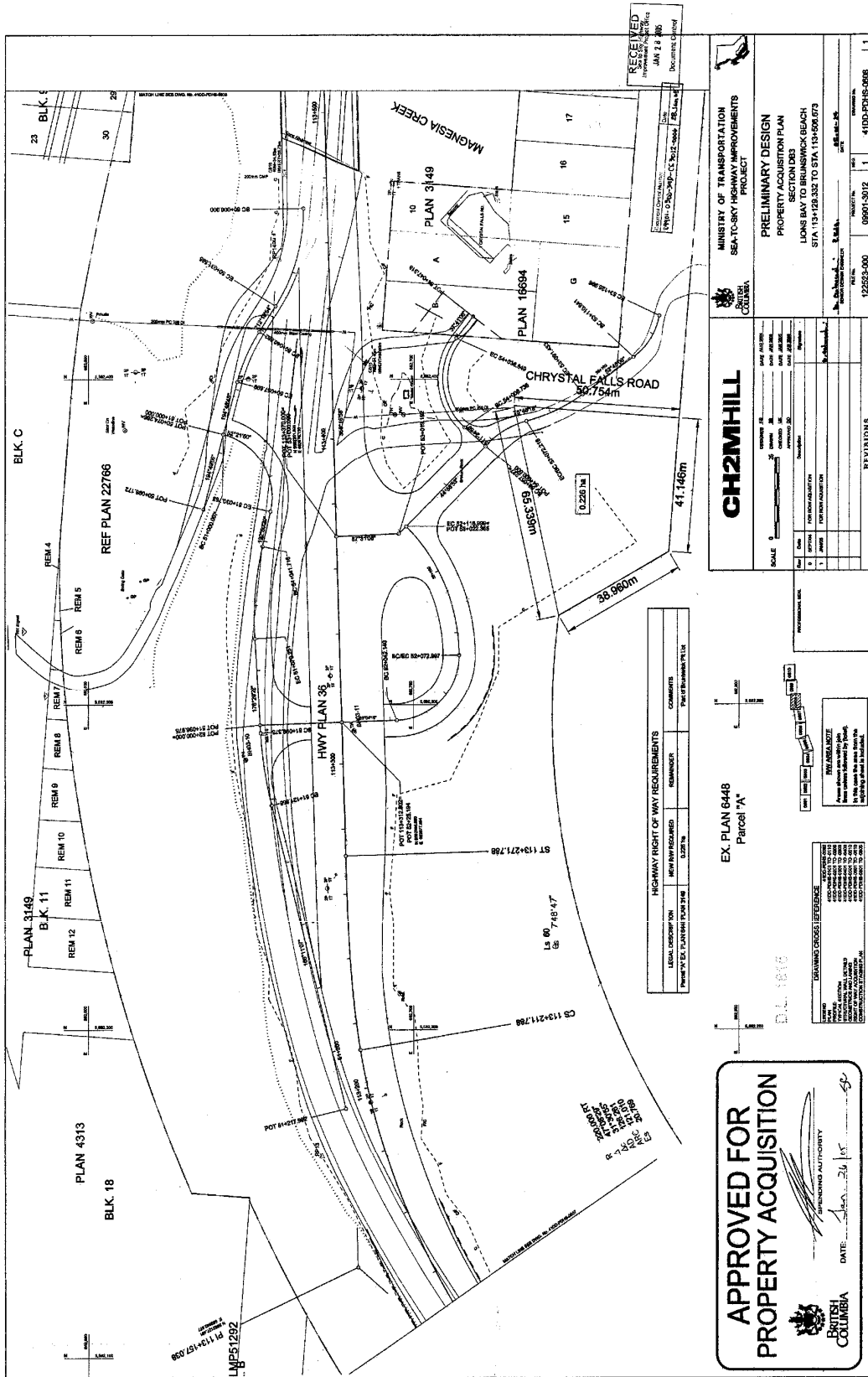
DRAWING CROSS REFERENCE

PLAN	DATE	BY	CHKD

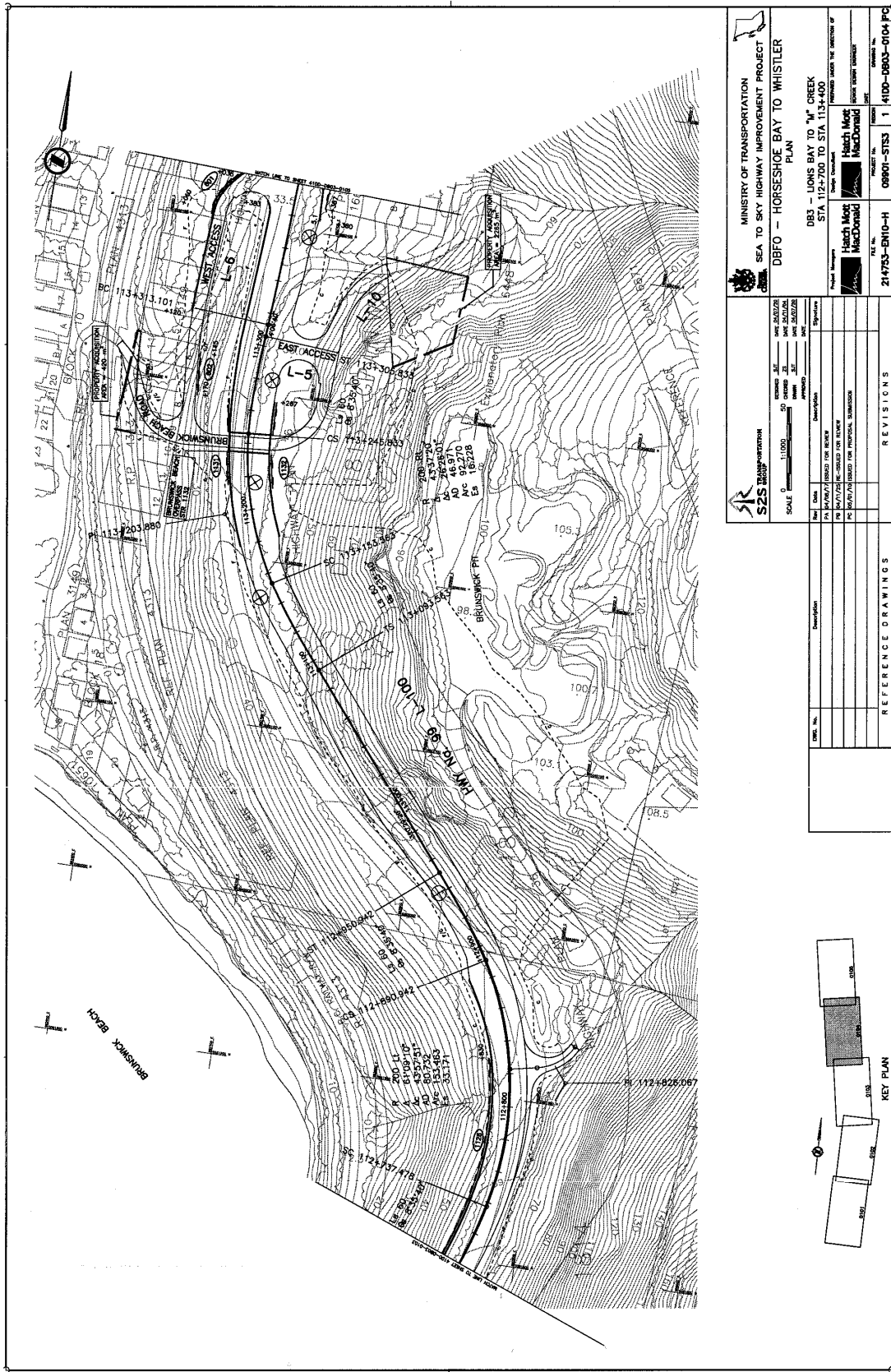
REVISIONS

NO.	DATE	DESCRIPTION

Annex 98



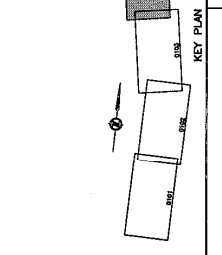
Annex 99



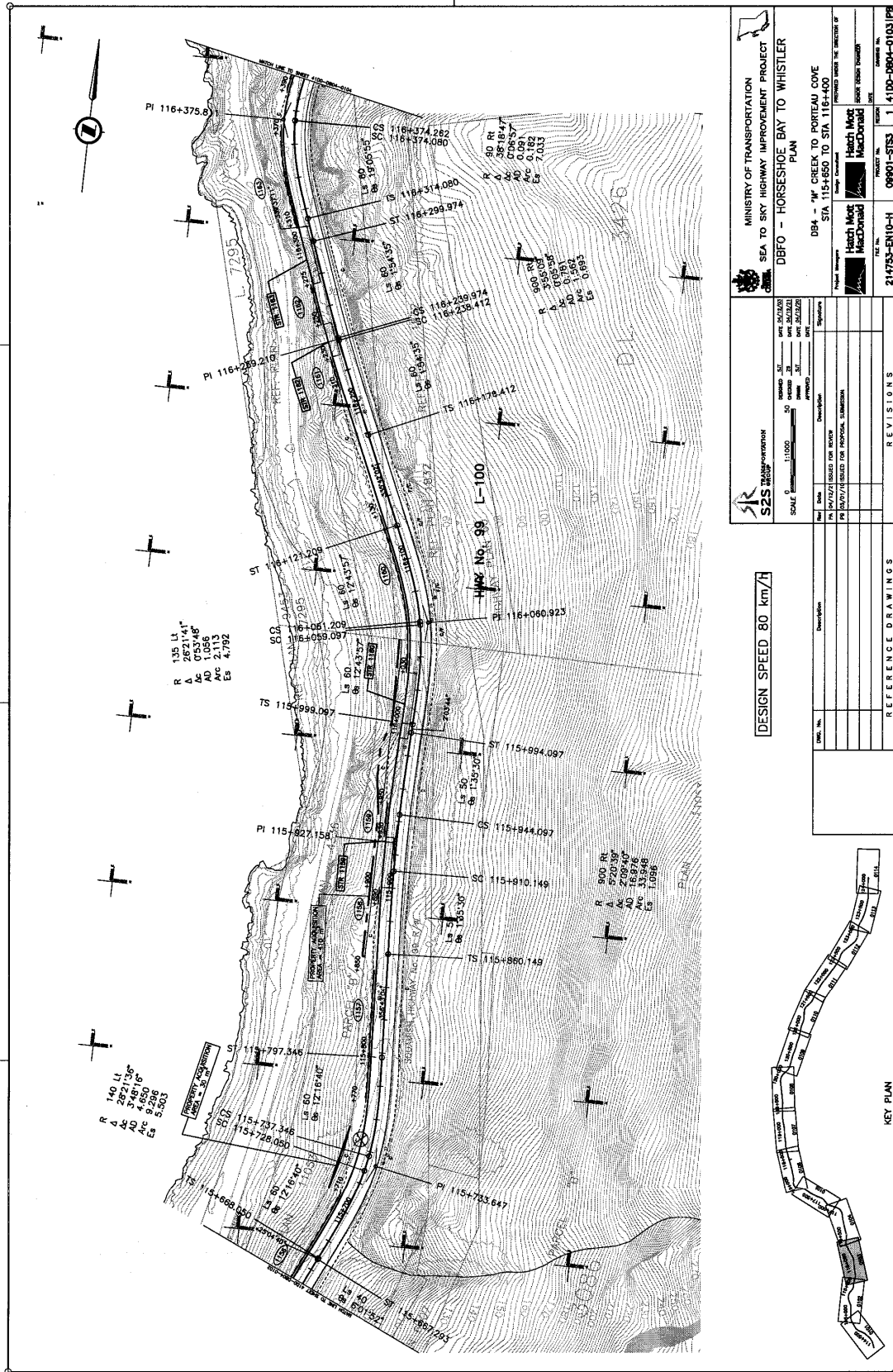
MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN
DB3 - LIONS BAY TO "M" CREEK
STA. 112+700 TO STA. 113+400
 DRAWN BY: [Name] DATE: [Date]
 CHECKED BY: [Name] DATE: [Date]
 PROJECT NO. 09801-ST33 1 4100-0903-0104 PC
 FILE NO. 214735-DN10-H
 CANCEL PRICE BEARING PREVIOUS EDITIONS

REV.	DATE	DESCRIPTION	BY	CHECKED

REF. NO.	DESCRIPTION



Annex 102



MINISTRY OF TRANSPORTATION
S2S STANDARD SPECIFICATIONS FOR ROADWAY CONSTRUCTION
 SCALE: 1:1000
 DATE: 11/15/2011
 PROJECT: DBFO - HORSESHOE BAY TO WHISTLER PLAN
 SHEET: 115+600 TO STA 116+375
 CONTRACT NO.: 08901-S13 | 4100-0894-0103 PR
 CONTRACT VALUE: \$21,753,000.00
 CONTRACT DATE: 08/15/2008

DESIGN SPEED 80 km/h

Rev. No.	Description	Date

REFERENCE DRAWINGS

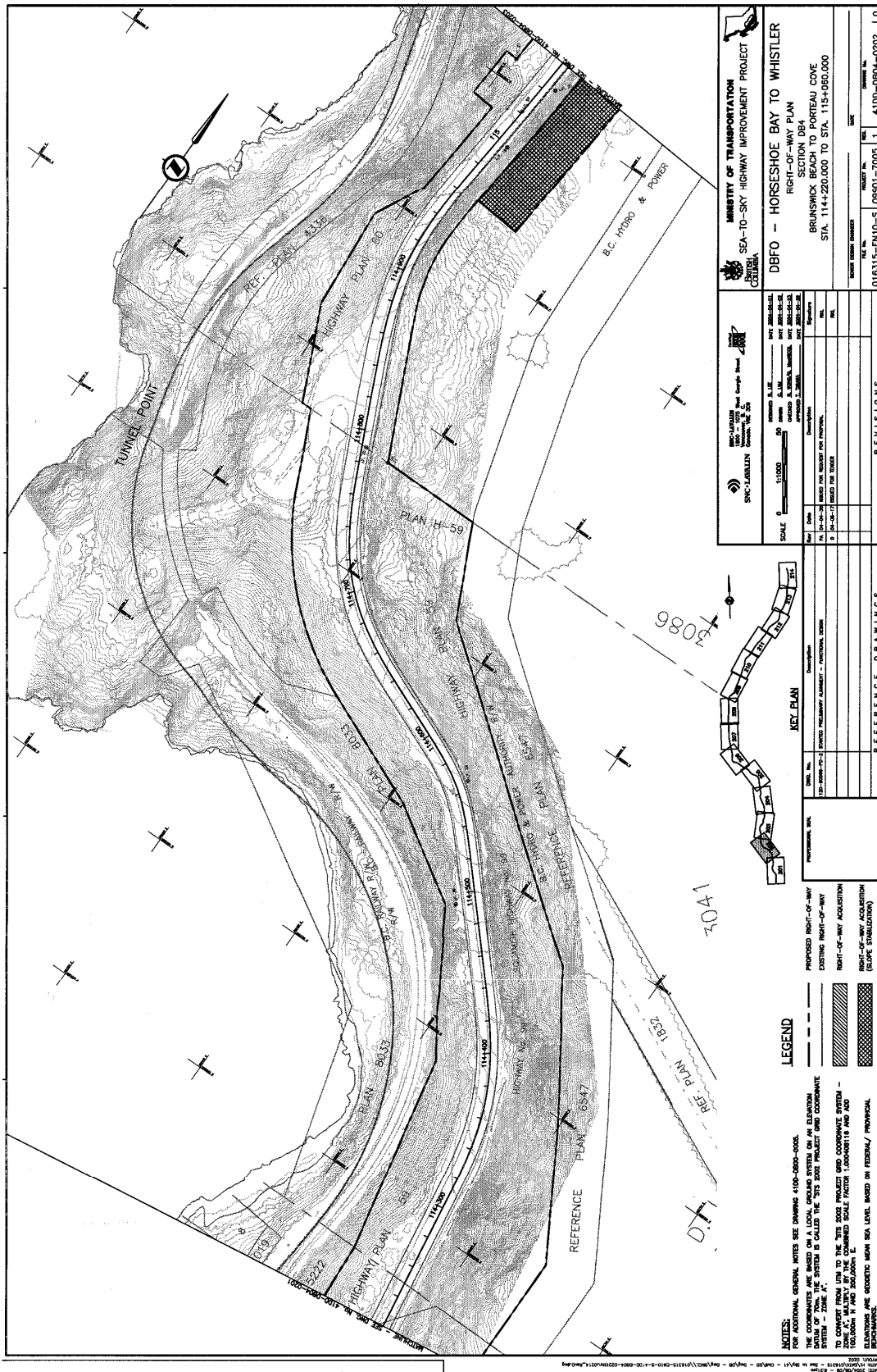
Sheet No.	Description

REVISIONS

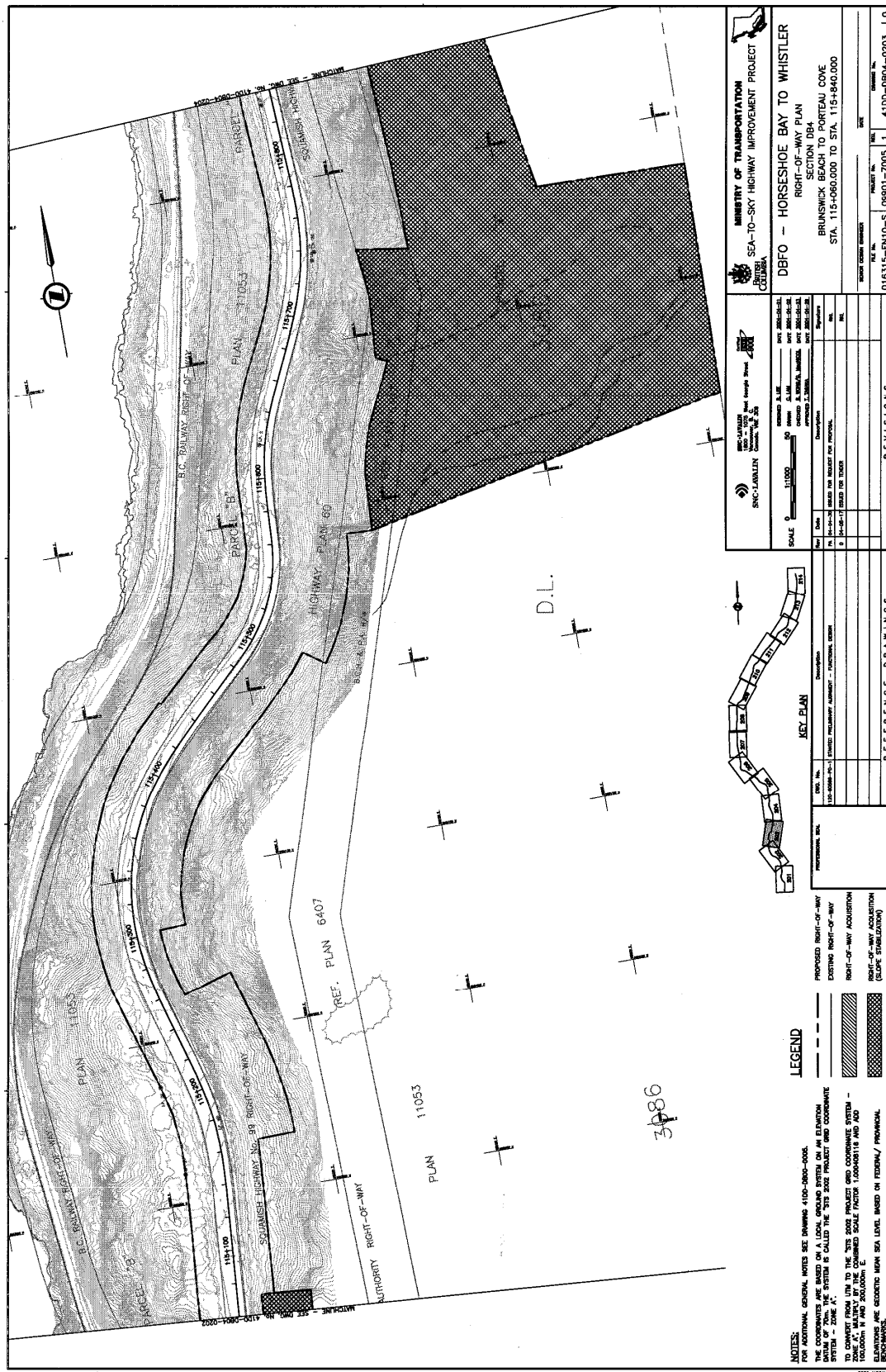
No.	Description

KEY PLAN

Annex 103



Annex 104



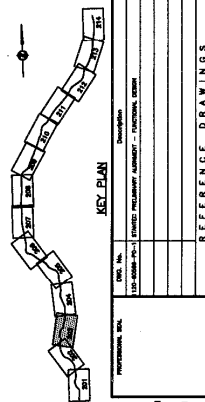
MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
COLUMBIA

DBFO - HORSESHOE BAY TO WHISTLER
RIGHT-OF-WAY PLAN
SECTION DB4
BRANSWICK BEACH TO PORTEAU COVE
STA. 115+660.000 TO STA. 115+840.000

SCALE: 1:1000
DATE: 11/11/03
DRAWN BY: [Name]
CHECKED BY: [Name]
APPROVED BY: [Name]

REVISIONS

NO.	DATE	DESCRIPTION
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2	11/11/03	ISSUED FOR TENDER

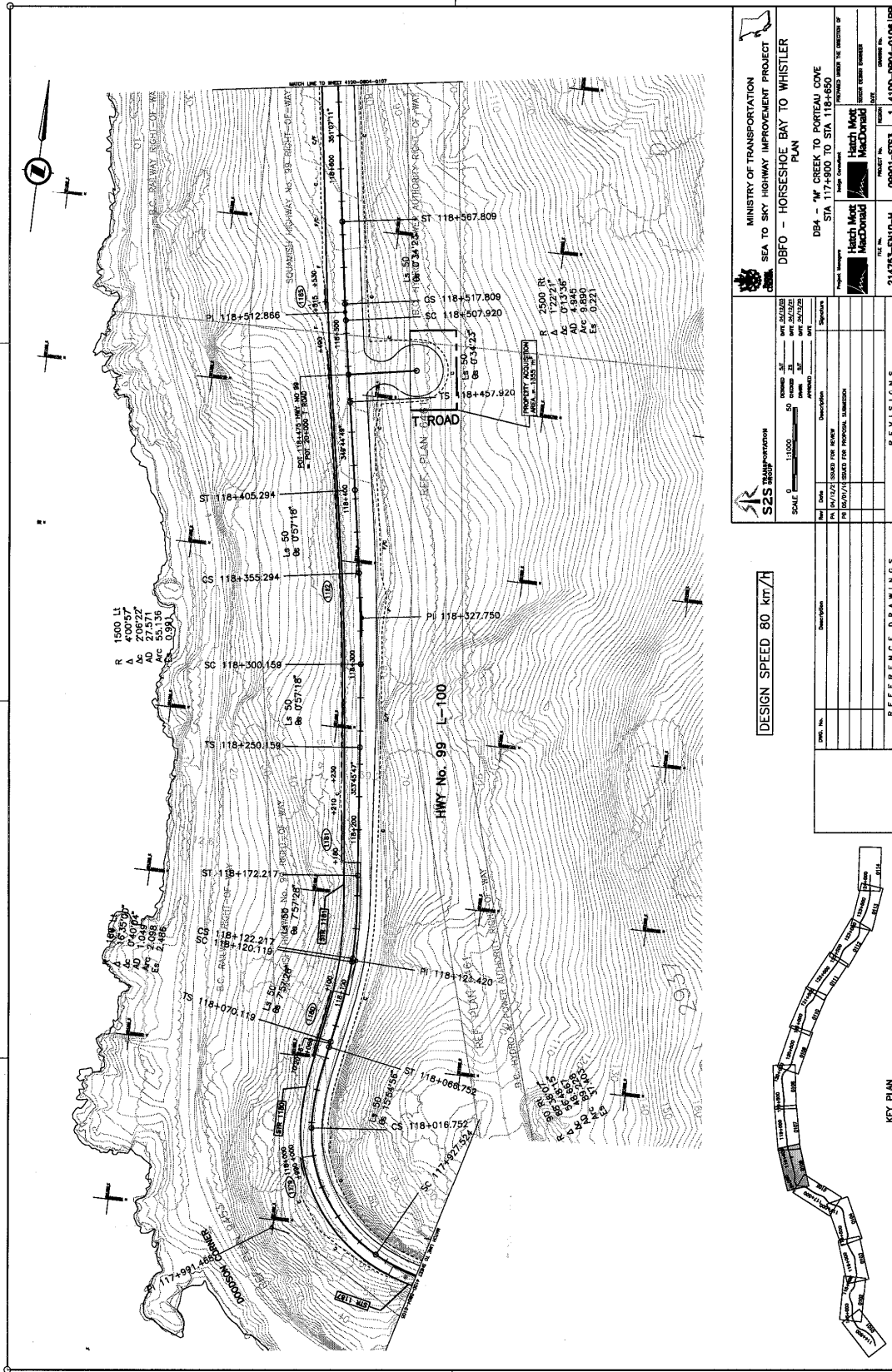


LEGEND

- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- RIGHT-OF-WAY ACQUISITION
- RIGHT-OF-WAY ACQUISITION (SLOPE STABILIZATION)

NOTES:
FOR ADDITIONAL GENERAL NOTES SEE DRAWINGS 4100-0000-0000.
THE COORDINATES ARE BASED ON A LOCAL GRID SYSTEM ON AN ELEVATION DATUM OF 700M. THE SYSTEM IS CALLED THE '700' GRID PROJECT GRID COORDINATE SYSTEM - 2000 A.D. THIS GRID IS THE 2000 PROJECTIONS AND COORDINATE SYSTEM - ZONE 47, MATRYN, BY THE COMBINED SCALE FACTOR 1.00000118 AND ADD 1000000 N AND 2000000 E.
THE ELEVATIONS FROM SEA LEVEL BASED ON FEDERAL / PROVINCIAL DATUMS.

Annex 105



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN
DBA - "M" CREEK TO PORTEAU COVE
STA 117+990 TO STA 118+650

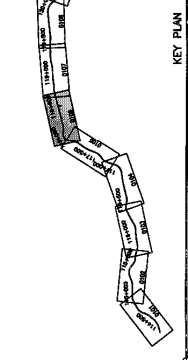
Project Engineer: Hatch Mott MacDonald
Checked: Hatch Mott MacDonald
Drawn: Hatch Mott MacDonald

PROJECT No. 0901-ST3
SHEET No. 1
DATE: 14/06/04
SCALE: 1:4100-9804-0108 [PB]

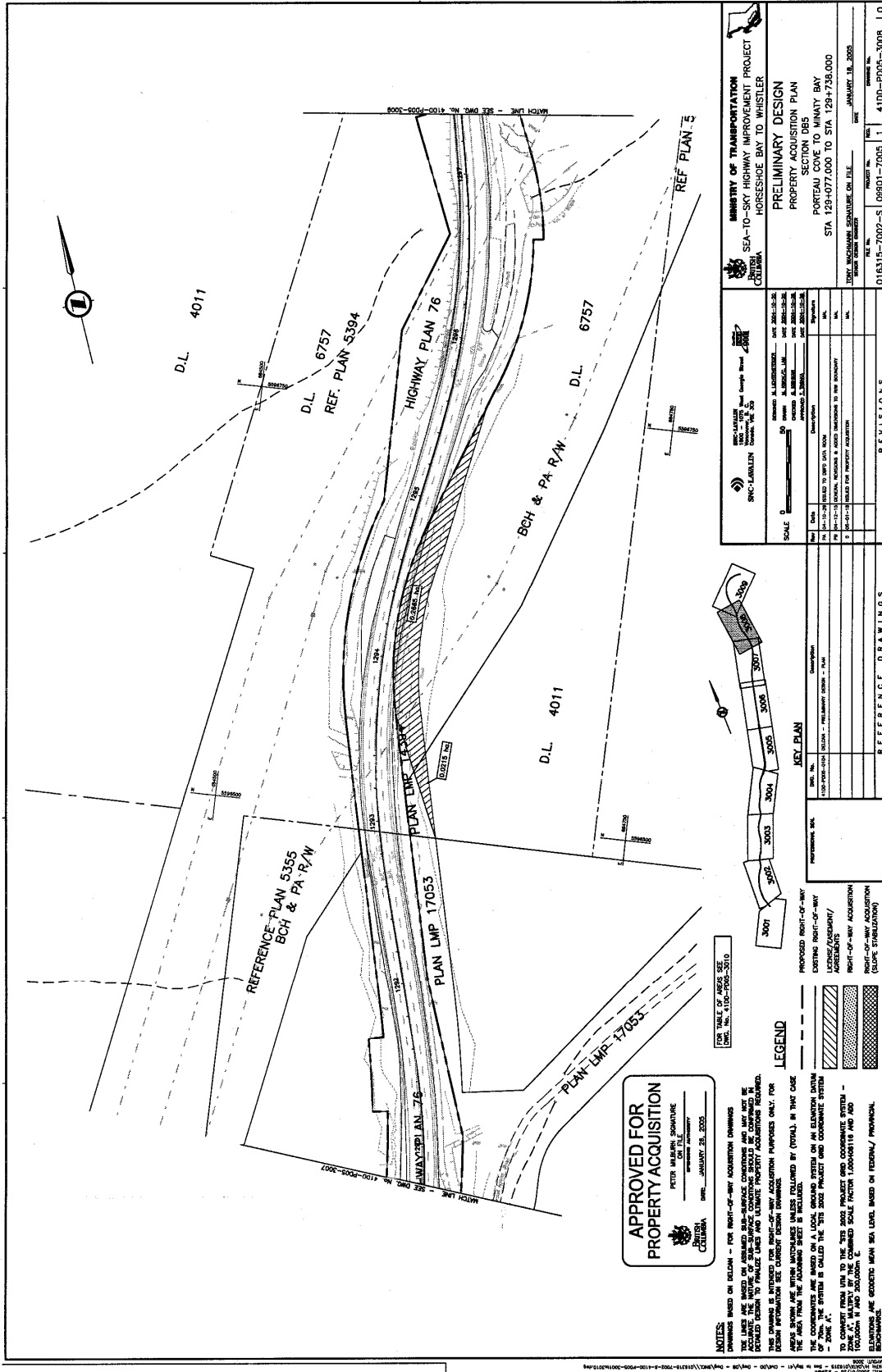
REV	DATE	DESCRIPTION	BY	CHKD

REV	DATE	DESCRIPTION	BY	CHKD

REV	DATE	DESCRIPTION	BY	CHKD



Annex 106



APPROVED FOR PROPERTY ACQUISITION
 PETER MURPHY, SIGNATURE
 PROJECT MANAGER
 DATE: JANUARY 28, 2005

NOTES:
 DRAWINGS BASED ON BELDON - FOR RIGHT-OF-WAY ACQUISITION DRAWINGS
 THE LINES ARE BASED ON ASSUMED SEA-LEVEL CONTOURS AND MAY NOT BE
 ACCURATE. THE DRAWING IS FOR INFORMATION PURPOSES ONLY. FOR
 FURTHER INFORMATION SEE CURRENT DESIGN DRAWINGS.
 THIS DRAWING IS INTENDED FOR RIGHT-OF-WAY ACQUISITION PURPOSES ONLY. FOR
 FURTHER INFORMATION SEE CURRENT DESIGN DRAWINGS.
 THE COORDINATES ARE BASED ON A LOCAL ORIGIN SYSTEM ON AN ELEVATION DATUM
 OF 2000. THE SYSTEM IS CALLED THE 2002 PROJECT GRID COORDINATE SYSTEM
 AND IS BASED ON THE 2002 PROJECT GRID COORDINATE SYSTEM.
 TO CONVERT FROM UTM TO THE 2002 PROJECT GRID COORDINATE SYSTEM -
 ADD 1000000 TO THE EASTING COORDINATE AND ADD 1000000 TO THE
 NORTHING COORDINATE. THE GRID IS BASED ON FEDERAL/PROVINCIAL
 MEASUREMENTS.

MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
HORSESHOE BAY TO WHISTLER
CRITERIA

PROPERTY ACQUISITION PLAN
PRELIMINARY DESIGN
 SECTION 085
 PORTAU QUAYS TO QUAYS BAY
 STA 126+077.000 TO STA 128+738.000

DATE: JANUARY 28, 2005

PROJECT NO.: 018319-7002-5
 DRAWING NO.: 08901-7005 1
 SHEET NO.: 410D-PD05-3008 10

REVISIONS

NO.	DATE	DESCRIPTION
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2		
3		
4		
5		

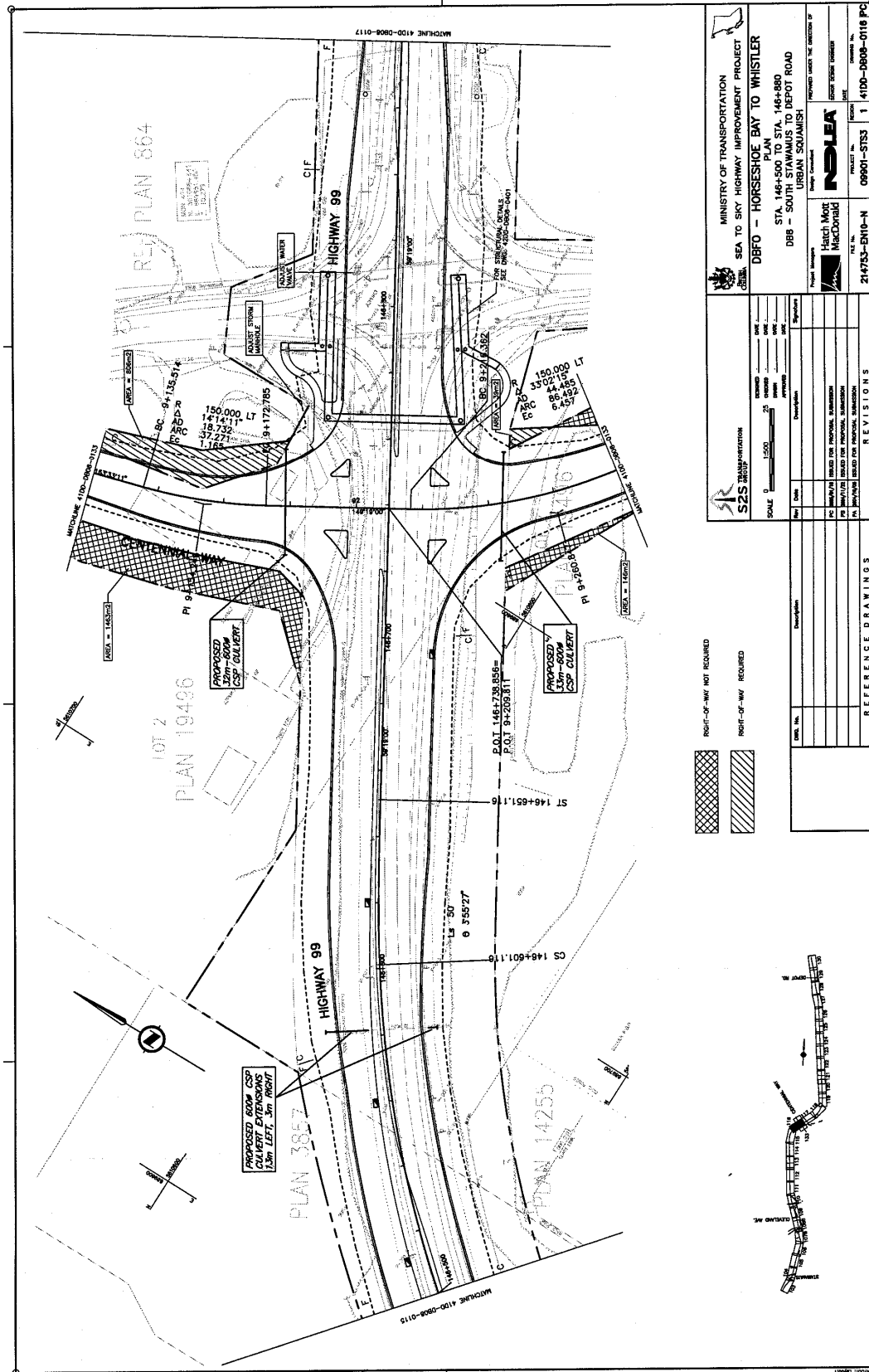
KEY PLAN

NO.	DESCRIPTION
3001	PROPOSED RIGHT-OF-WAY
3002	EXISTING RIGHT-OF-WAY
3003	EXISTING RIGHT-OF-WAY
3004	EXISTING RIGHT-OF-WAY
3005	EXISTING RIGHT-OF-WAY
3006	EXISTING RIGHT-OF-WAY
3007	EXISTING RIGHT-OF-WAY

LEGEND

SYMBOL	DESCRIPTION
[Hatched Pattern]	PROPOSED RIGHT-OF-WAY
[Hatched Pattern]	EXISTING RIGHT-OF-WAY
[Hatched Pattern]	EXISTING RIGHT-OF-WAY
[Hatched Pattern]	EXISTING RIGHT-OF-WAY
[Hatched Pattern]	EXISTING RIGHT-OF-WAY
[Hatched Pattern]	EXISTING RIGHT-OF-WAY

Annex 109



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
 PLAN STA. 146+880
 STA. 146+500 TO DEPOT ROAD
 DBB - SOUTH STANWIS TO DEPOT ROAD
 URBAN SQUAMISH

Project Manager: **Hatch Mott MacDonald**
 Project Engineer: **R. MacDonald**
 Project No.: **09901-ST53 1**
 Drawing No.: **214753-EN10-N**
 Revision: **1**
 Date: **4/10/08**

SCALE: 1:500
 SHEET NO. 25 OF 25
 DATE: 08/04/08

REVISIONS

NO.	DATE	DESCRIPTION
1	08/04/08	FOR PROPOSAL SUBMITTAL
2	08/04/08	FOR PROPOSAL SUBMITTAL
3	08/04/08	FOR PROPOSAL SUBMITTAL

REFERENCE DRAWINGS

NO.	DATE	DESCRIPTION
1	08/04/08	FOR PROPOSAL SUBMITTAL
2	08/04/08	FOR PROPOSAL SUBMITTAL
3	08/04/08	FOR PROPOSAL SUBMITTAL

RIGHT-OF-WAY NOT REQUIRED

RIGHT-OF-WAY REQUIRED

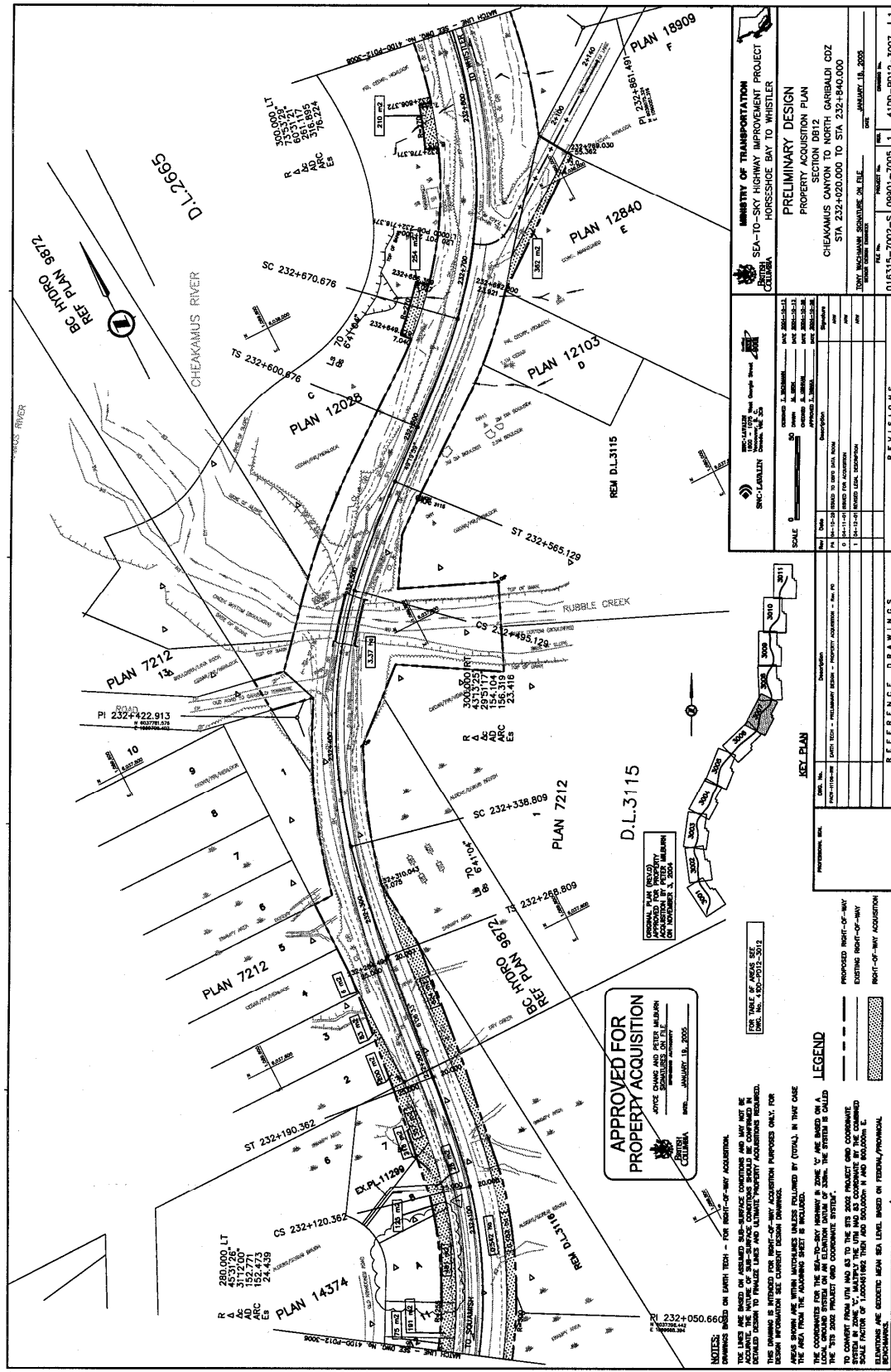
DATE: 08/04/08

SCALE: 1:500

SHEET NO. 25 OF 25

DATE: 08/04/08

Annex 110



APPROVED FOR PROPERTY ACQUISITION
 JAYCE CHANG AND PETER MELBY
 CIVIL ENGINEERS
 VANCOUVER, B.C.
 DATE: JANUARY 18, 2005

FOR TABLE OF AREAS SEE
 SHEET 4.302-2012-3012

PROPOSED RIGHT-OF-WAY
 EXISTING RIGHT-OF-WAY
 RIGHT-OF-WAY ACQUISITION

LEGEND

- PROPOSED RIGHT-OF-WAY
- EXISTING RIGHT-OF-WAY
- RIGHT-OF-WAY ACQUISITION

NOTES:
 DIMENSIONS SHOWN ON EARTH WITH - FOR RIGHT-OF-WAY ACQUISITION.
 THE LINES ARE BASED ON ASSUMED SUB-SURFACE CONDITIONS AND MAY NOT BE ACCURATE. THE NATURE OF SUB-SURFACE CONDITIONS SHOULD BE CONFIRMED BY GEOTECHNICAL INVESTIGATION FOR THE PROPOSED PROPERTY ACQUISITION.
 THESE DIMENSIONS ARE INTENDED FOR THE PROPOSED PROPERTY ACQUISITION ONLY. FOR TECHNICAL INFORMATION SEE CURRENT DESIGN DRAWINGS.
 AREAS SHOWN ARE WITHIN MATCHLINES UNLESS FOLLOWED BY (TOTAL) IN THIS CASE THE AREA FROM THE DRAWING SHEET IS INCLUDED.
 THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IN ZONE 'C' ARE BASED ON A 1983 DATUM. THE COORDINATES FOR THE EXISTING HIGHWAY IN ZONE 'C' ARE BASED ON A 1983 DATUM. THE 1983 DATUM PROJECT AND COORDINATE SYSTEM IS TO BE CONVERTED FROM UTM AND AS TO THE 1983 DATUM PROJECT AND COORDINATE SYSTEM IN ZONE 'C'. MATCHES TO THE UTM AND AS COORDINATE BY THE COMBINED SCALE FACTOR OF 1:250,000. THE UTM AND AS COORDINATE IN THIS DRAWING IS IN METERS. THE EXISTING MEAN SEA LEVEL BASED ON FEDERAL/PROVINCIAL DATUMS.

MINISTRY OF TRANSPORTATION
CENTRAL
 SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
 HORSESHOE BAY TO WHISTLER

PRELIMINARY DESIGN
 SECTION DB12
 CHEAKAMUS CANYON TO NORTH GARIBALDI GDZ
 STA. 232+400.000 TO STA. 232+840.000

DATE: JANUARY 18, 2005

PROJECT NO. 018315-7002-S
 SHEET NO. 0901-7005 | 1 | 4100-2012-3007 | 1 |

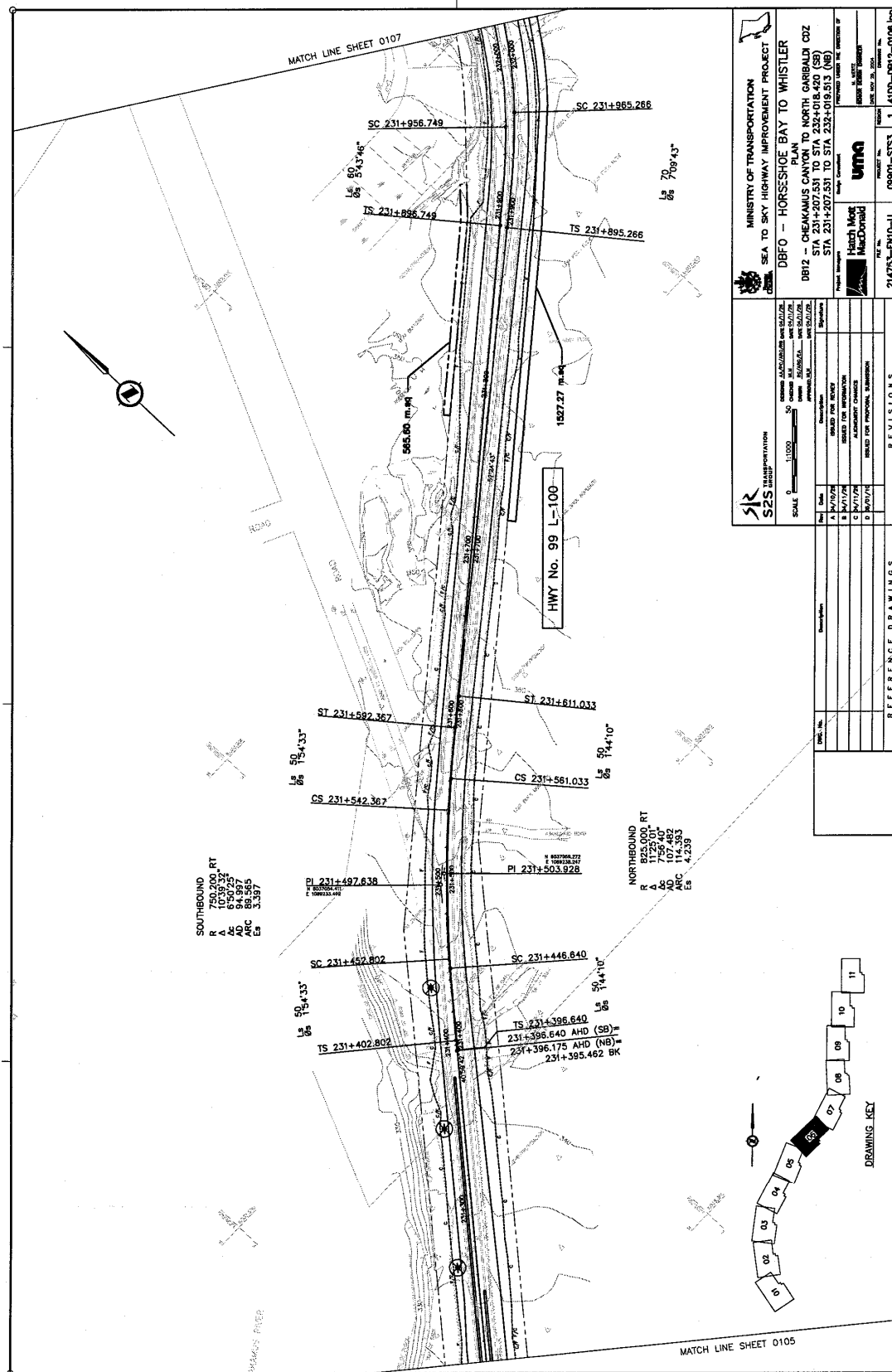
REVISIONS

NO.	DATE	DESCRIPTION
1	01-18-05	ISSUED FOR ACQUISITION
2	01-18-05	REVISED LINE, EXISTENCE

REFERENCE DRAWINGS

NO.	DATE	DESCRIPTION
1	01-18-05	PROPERTY ACQUISITION - PLAN 70
2	01-18-05	PROPERTY ACQUISITION - PLAN 70

Annex 111



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
PLAN
DBFO - HORSESHOE BAY TO WHISTLER
DB12 - CHEKANUS CANYON TO NORTH CARBALDI COZ
 STA 231+207.531 TO STA 232+018.420 (SB)
 STA 231+207.531 TO STA 232+019.513 (NB)

Scale: 1:1000
 0 50 100 METERS

Revisions:

Rev.	Date	Description
A	3/1/07	ISSUED FOR REVIEW
B	3/1/07	ISSUED FOR PERMITTING
C	3/1/07	ALTERNATE CHANGE
D	3/1/07	ISSUED FOR PROPOSAL SUBMISSION

REFERENCE DRAWINGS

Sheet No.	Description
01	
02	
03	
04	
05	
06	
07	
08	
09	
10	
11	

REVISIONS

Revision No.	Description
08601-5153	
214753-EN10-U	

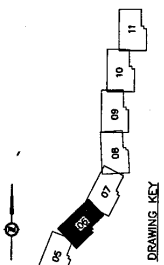
Contract No.: 08601-5153 | **Project No.:** 214753-EN10-U | **Sheet No.:** 111 | **Project Title:** DBFO - HORSESHOE BAY TO WHISTLER

Design Firm: Hochtief MacDonell
Client: UMa

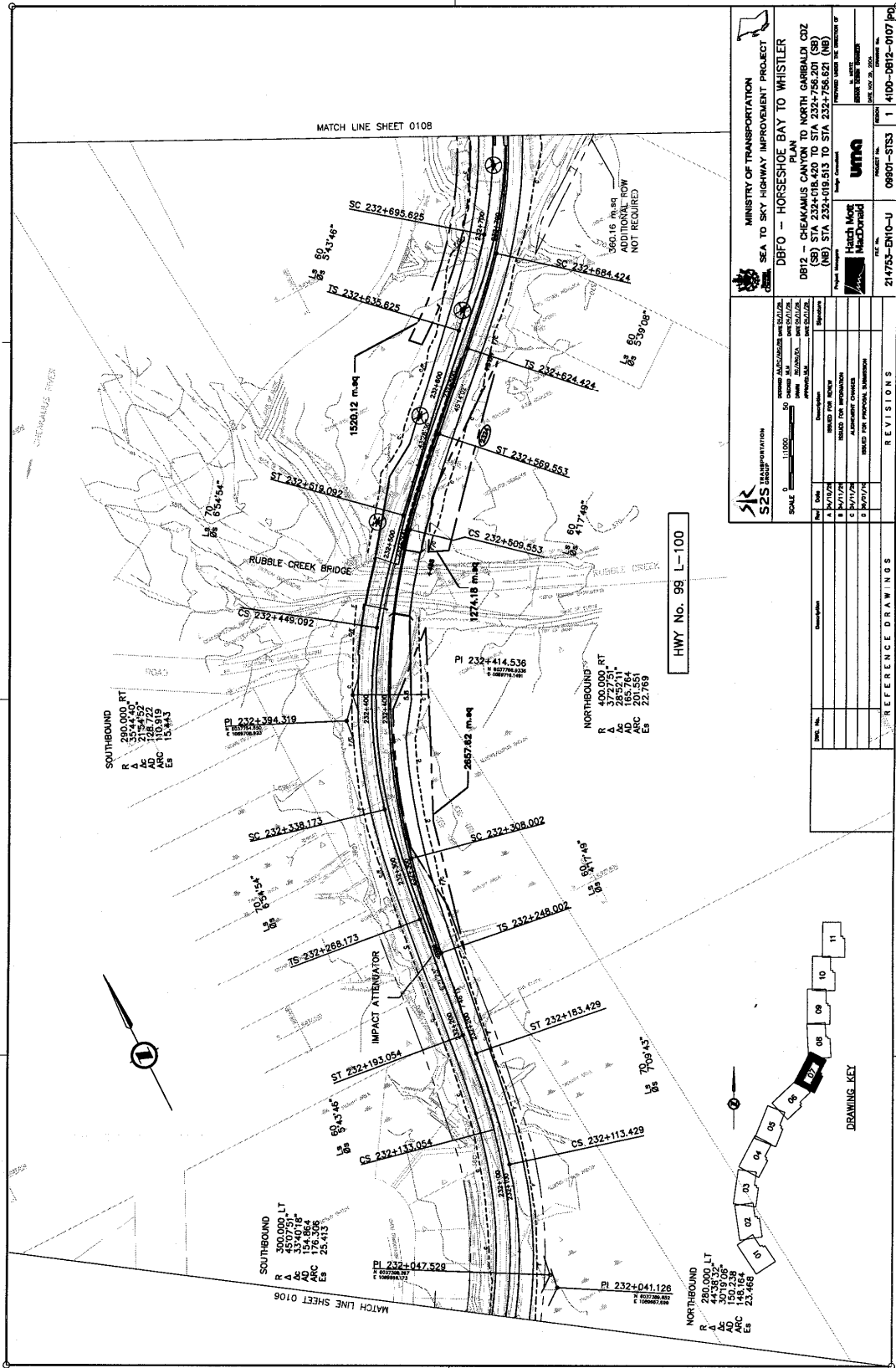
Scale: 1:1000

Author: [Name]
Checked: [Name]
Date: 03/01/07

Contract: 08601-5153 | **Project:** 214753-EN10-U | **Sheet:** 111 | **Project Title:** DBFO - HORSESHOE BAY TO WHISTLER



Annex 112

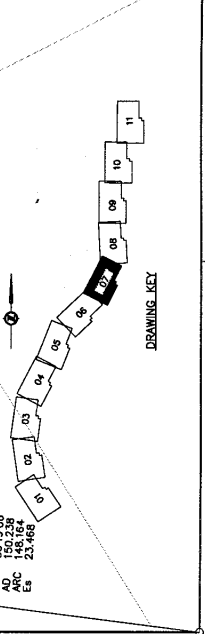


HWY. No. 99 L-100

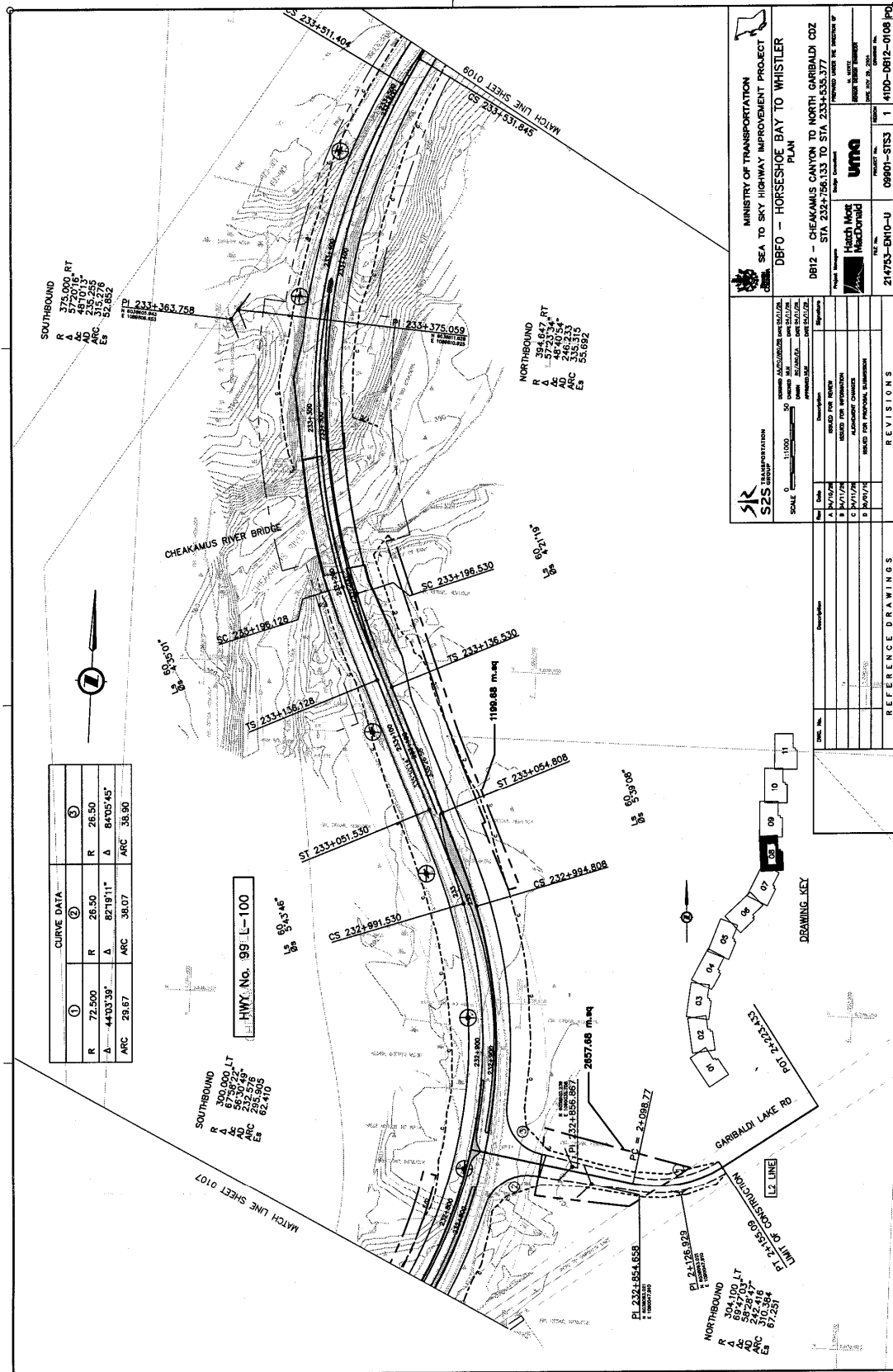
MINISTRY OF TRANSPORTATION
 SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
 DBFO - HORSESHOE BAY TO WHISTLER
 PLAN
 DB12 - CHEAMOUS CANYON TO NORTH GARIBOLDI CIZ
 STA 232+000 TO STA 232+756.62 (NB)
 STA 232+418.513 TO STA 232+756.62 (SB)
 HATCH MCG MACDONALD
 UTA
 PROJECT NO. 21753-EN10-U
 SHEET NO. 1
 DATE 0800-513
 1 4100-0812-0107 PRO

DATE	BY	DESCRIPTION
08/17/07	...	ISSUED FOR REVIEW
08/17/07	...	ISSUED FOR PROVISIONAL SUBMISSION

NO.	DATE	DESCRIPTION
1	08/17/07	ISSUED FOR PROVISIONAL SUBMISSION



Annex 113



CURVE DATA

Curve No.	R	ARC	A
1	72,500	28.67	84°05'45"
2	72,500	28.67	84°05'45"
3	72,500	28.67	84°05'45"

Hwy. No. 99 L-100

MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER PLAN

PROJECT NO. 21475-DN10-U
DRAWING NO. 0900-SITS 1
DATE 14/10/08

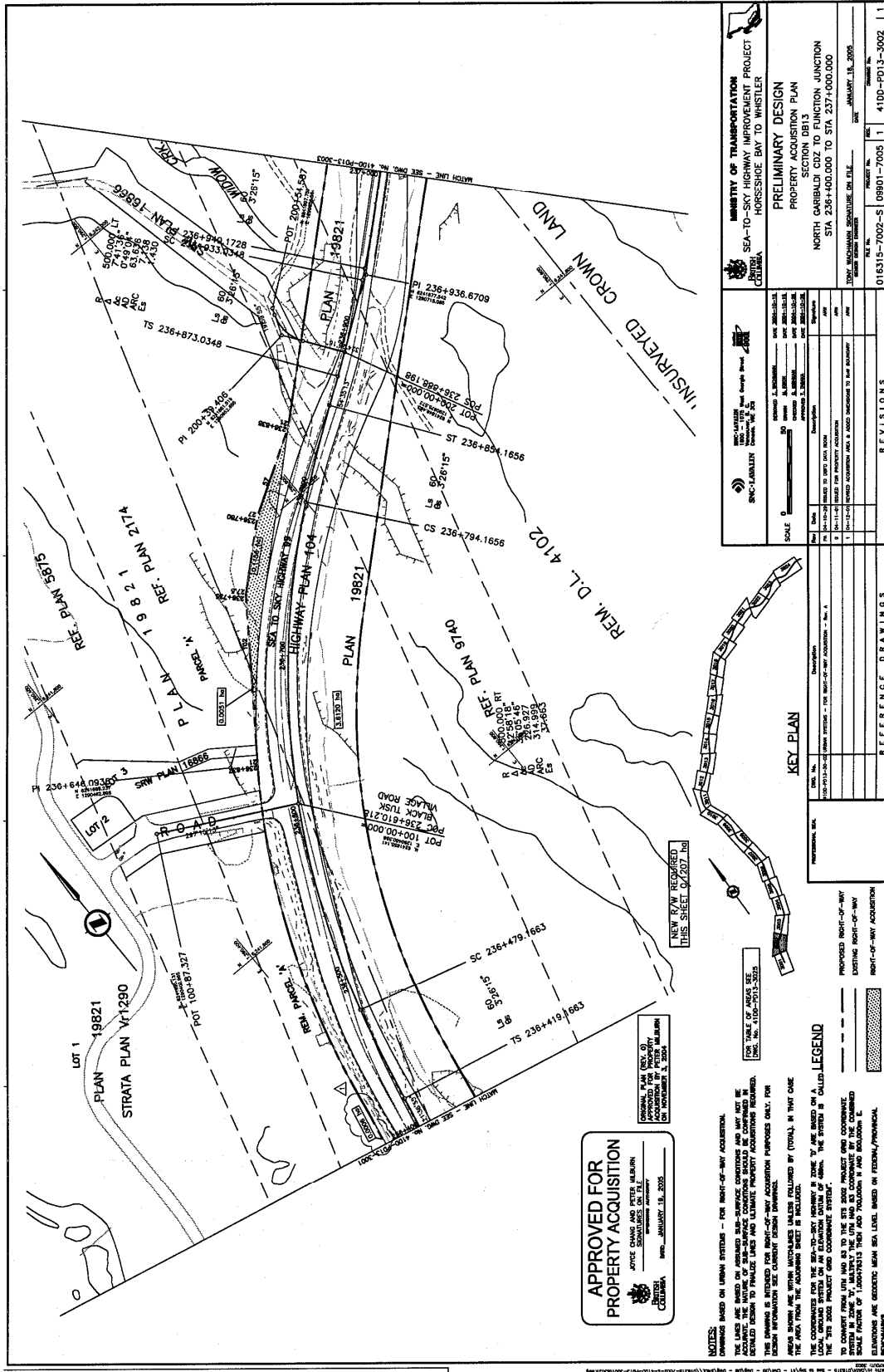
DESIGNED BY: HATCH MACDONALD
CHECKED BY: HATCH MACDONALD
APPROVED BY: HATCH MACDONALD

SCALE: 1" = 100'

REVISIONS

No.	Date	Description
A	14/11/08	ISSUED FOR REVIEW
B	14/11/08	ISSUED FOR INFORMATION
C	14/11/08	ISSUED FOR INFORMATION
D	14/11/08	ISSUED FOR INFORMATION

Annex 114



MINISTRY OF TRANSPORTATION
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
HORSESHOE BAY TO WHISTLER
PROPERTY ACQUISITION PLAN
PRELIMINARY DESIGN
NORTH CARIBULY COZ TO FUNCTION JUNCTION
STA 236+400.000 TO STA 237+000.000
DATE: JANUARY, 2005
PROJECT NUMBER: 018315-7002-S
SHEET NO.: 4100-PD13-3002

REV	DATE	DESCRIPTION
1	11-11-05	ISSUED FOR PROPERTY ACQUISITION
2	11-11-05	ISSUED FOR PROPERTY ACQUISITION
3	11-11-05	ISSUED FOR PROPERTY ACQUISITION
4	11-11-05	ISSUED FOR PROPERTY ACQUISITION
5	11-11-05	ISSUED FOR PROPERTY ACQUISITION
6	11-11-05	ISSUED FOR PROPERTY ACQUISITION
7	11-11-05	ISSUED FOR PROPERTY ACQUISITION
8	11-11-05	ISSUED FOR PROPERTY ACQUISITION
9	11-11-05	ISSUED FOR PROPERTY ACQUISITION
10	11-11-05	ISSUED FOR PROPERTY ACQUISITION

REFERENCE DRAWINGS

NO.	DATE	DESCRIPTION
1	11-11-05	SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT - PRELIMINARY DESIGN - PLAN 19821 TO 19840
2	11-11-05	SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT - PRELIMINARY DESIGN - PLAN 19821 TO 19840
3	11-11-05	SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT - PRELIMINARY DESIGN - PLAN 19821 TO 19840
4	11-11-05	SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT - PRELIMINARY DESIGN - PLAN 19821 TO 19840
5	11-11-05	SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT - PRELIMINARY DESIGN - PLAN 19821 TO 19840
6	11-11-05	SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT - PRELIMINARY DESIGN - PLAN 19821 TO 19840
7	11-11-05	SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT - PRELIMINARY DESIGN - PLAN 19821 TO 19840
8	11-11-05	SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT - PRELIMINARY DESIGN - PLAN 19821 TO 19840
9	11-11-05	SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT - PRELIMINARY DESIGN - PLAN 19821 TO 19840
10	11-11-05	SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT - PRELIMINARY DESIGN - PLAN 19821 TO 19840

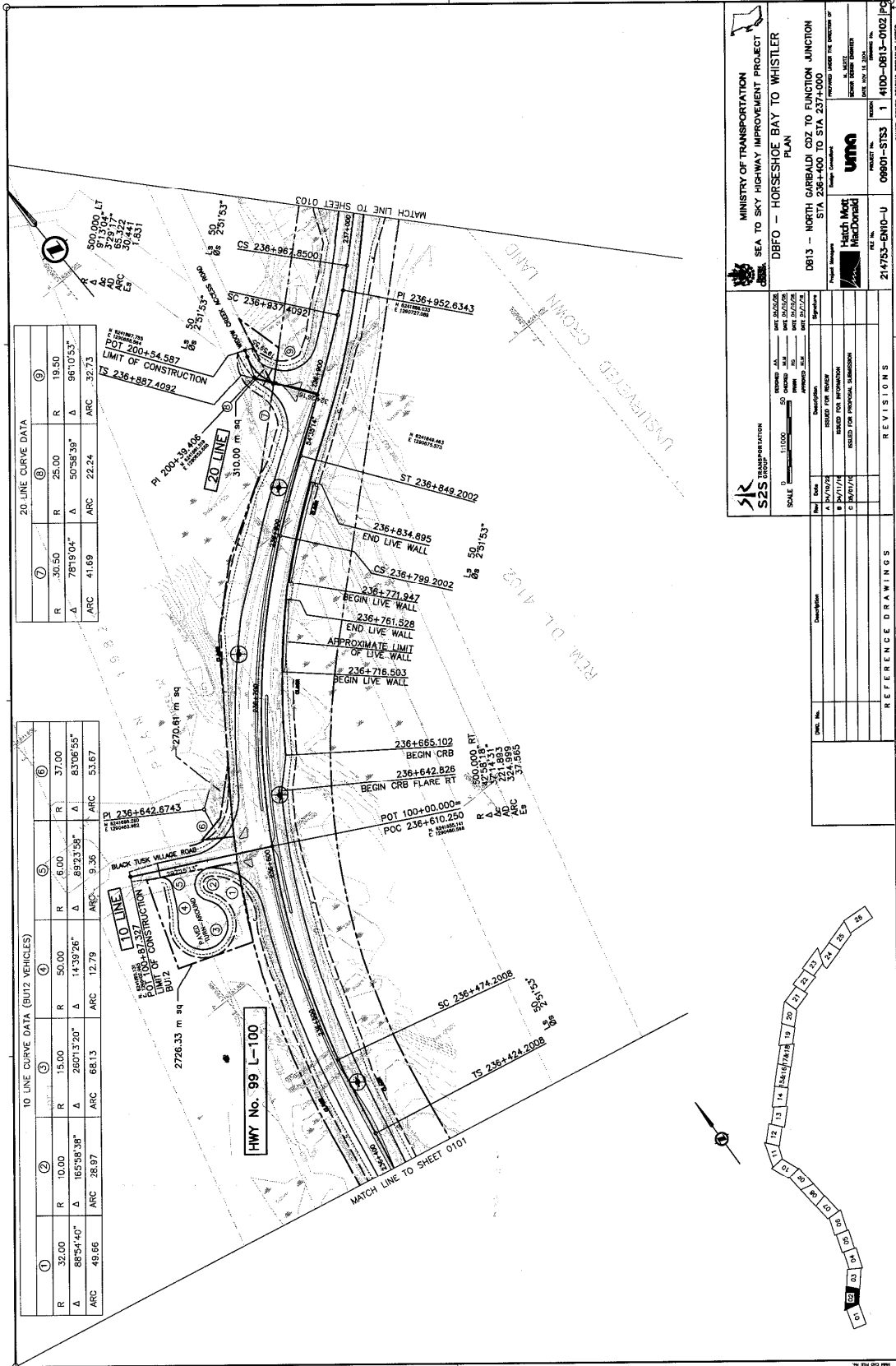
KEY PLAN

PROPOSED RIGHT-OF-WAY
EXISTING RIGHT-OF-WAY
RIGHT-OF-WAY ACQUISITION

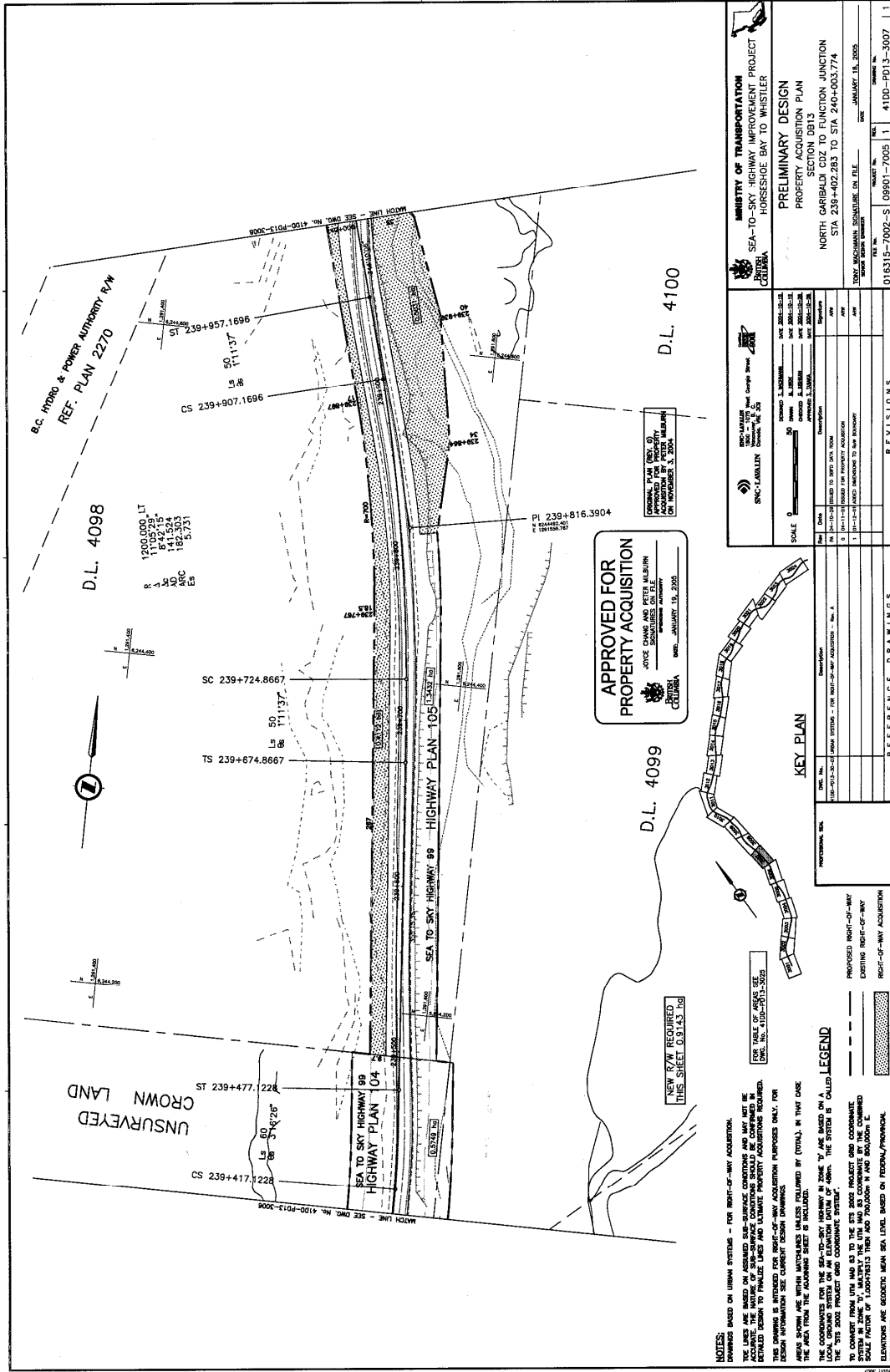
NOTES:
 1. COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A DATUM OF 1984. THE DATUM IS CALLED '84 DATUM'. THE SYSTEM IS CALLED '84 DATUM'. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A DATUM OF 1984. THE DATUM IS CALLED '84 DATUM'. THE SYSTEM IS CALLED '84 DATUM'.
 2. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A DATUM OF 1984. THE DATUM IS CALLED '84 DATUM'. THE SYSTEM IS CALLED '84 DATUM'.
 3. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A DATUM OF 1984. THE DATUM IS CALLED '84 DATUM'. THE SYSTEM IS CALLED '84 DATUM'.
 4. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A DATUM OF 1984. THE DATUM IS CALLED '84 DATUM'. THE SYSTEM IS CALLED '84 DATUM'.
 5. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A DATUM OF 1984. THE DATUM IS CALLED '84 DATUM'. THE SYSTEM IS CALLED '84 DATUM'.
 6. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A DATUM OF 1984. THE DATUM IS CALLED '84 DATUM'. THE SYSTEM IS CALLED '84 DATUM'.
 7. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A DATUM OF 1984. THE DATUM IS CALLED '84 DATUM'. THE SYSTEM IS CALLED '84 DATUM'.
 8. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A DATUM OF 1984. THE DATUM IS CALLED '84 DATUM'. THE SYSTEM IS CALLED '84 DATUM'.
 9. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A DATUM OF 1984. THE DATUM IS CALLED '84 DATUM'. THE SYSTEM IS CALLED '84 DATUM'.
 10. THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A DATUM OF 1984. THE DATUM IS CALLED '84 DATUM'. THE SYSTEM IS CALLED '84 DATUM'.

APPROVED FOR PROPERTY ACQUISITION
 OFFICE CHIEF AND PETER MURPHY
 CIVIL ENGINEER
 JANUARY, 2005
 COLUMBIA

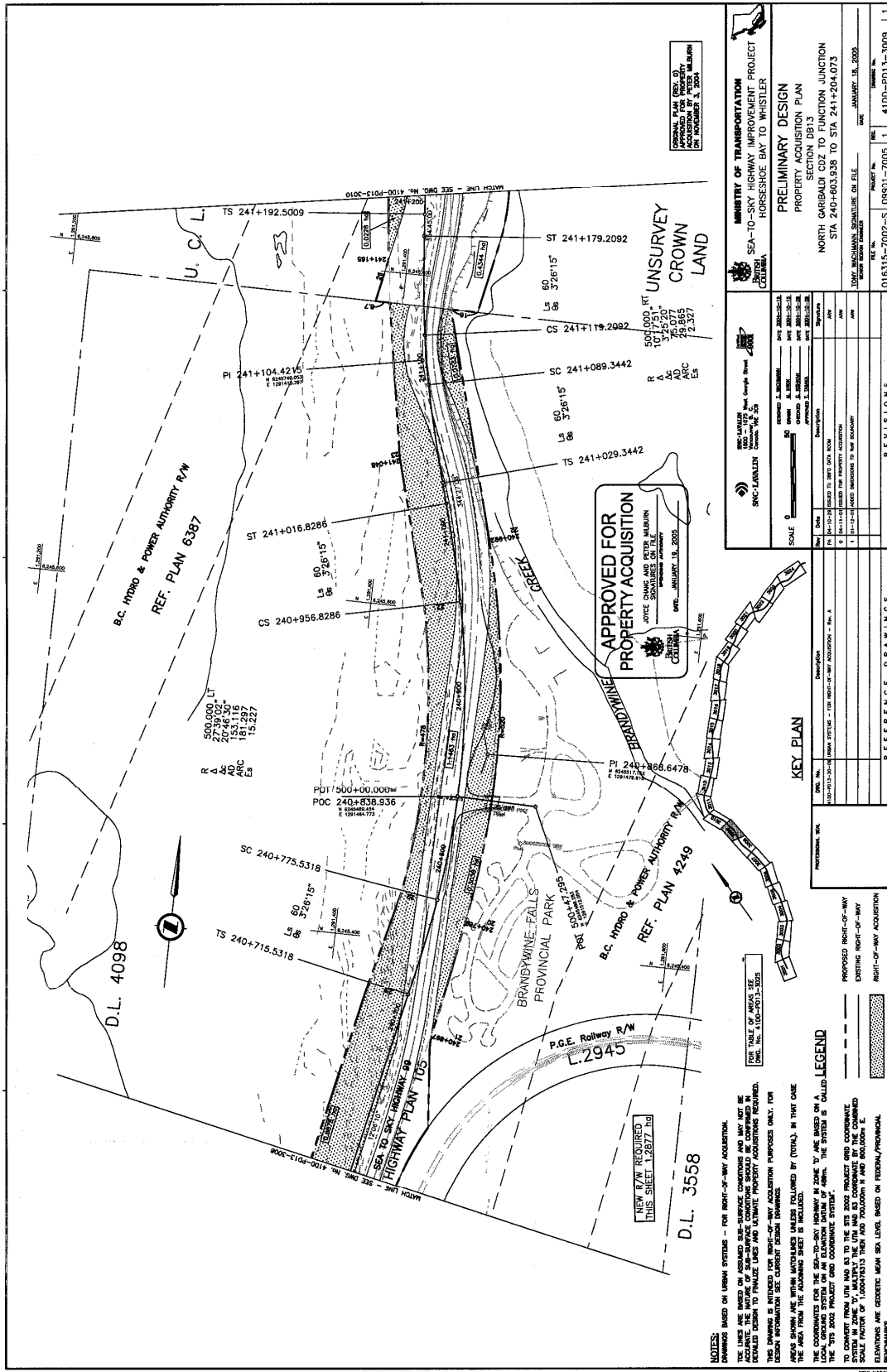
Annex 115



Annex 116



Annex 117



MINISTRY OF TRANSPORTATION
 SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT
 HORSESHOE BAY TO WHISTLER

PRELIMINARY DESIGN
 PROPERTY ACQUISITION PLAN
 SECTION DB13
 NORTH GARIBOLDI CVD TO FUNCTION JUNCTION
 STA 240+603.938 TO STA 241+204.073

DATE: JANUARY 18, 2009
 DRAWN BY: J. WICHMANN
 CHECKED BY: J. WICHMANN
 PROJECT NO.: 100-1100-1013-3025
 SHEET NO.: 4100-P013-3025

REVISIONS

No.	Date	Description
1	10-11-09	ISSUED FOR PROPERTY ACQUISITION
2	11-11-09	ISSUED FOR PROPERTY ACQUISITION
3	12-11-09	ISSUED FOR PROPERTY ACQUISITION
4	01-18-09	ISSUED FOR PROPERTY ACQUISITION

REFERENCE DRAWINGS

Proj. No.	Description
100-1100-1013-3025	SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT - HORSESHOE BAY TO WHISTLER - PRELIMINARY DESIGN
4100-P013-3025	PROPERTY ACQUISITION PLAN - SECTION DB13

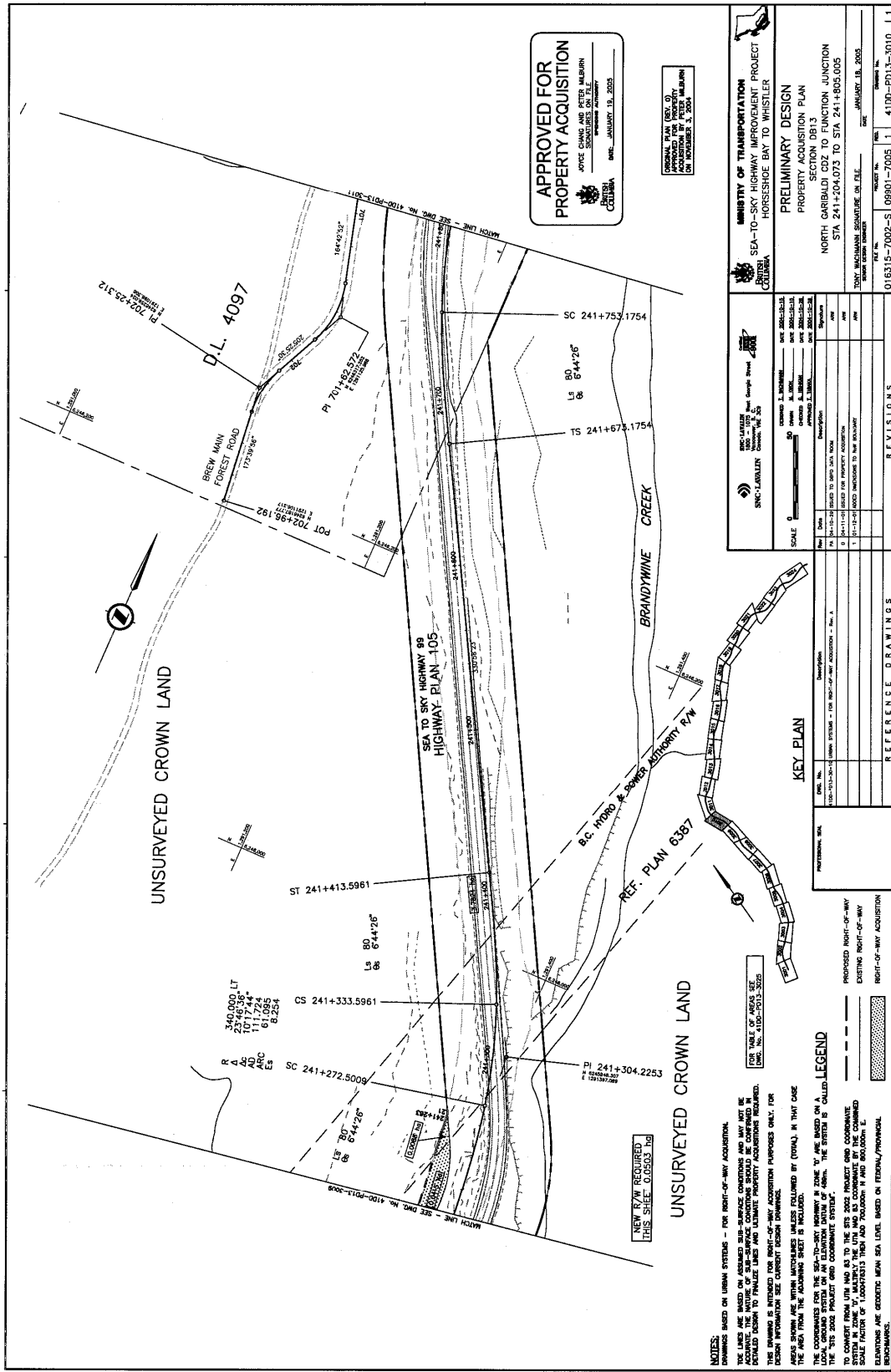
FOR TABLE OF AREAS SEE SHEET 4100-P013-3025

LEGEND

Symbol	Description
(Dashed line)	PROPOSED RIGHT-OF-WAY
(Solid line)	EXISTING RIGHT-OF-WAY
(Hatched area)	RIGHT-OF-WAY ACQUISITION

APPROVED FOR PROPERTY ACQUISITION
 JUDGE CHAMBERS AND PETER MURPHY
 PROFESSIONAL ENGINEERS
 100-1100-1013-3025
 DATE: JANUARY 18, 2009

Annex 118



APPROVED FOR PROPERTY ACQUISITION
 JOYCE CHANG AND PETER MUEHRBACH
 ENGINEERS
 JANUARY 19, 2005

APPROVED FOR PROPERTY ACQUISITION
 ON BEHALF OF THE MINISTER OF TRANSPORTATION
 JANUARY 19, 2005

MINISTRY OF TRANSPORTATION
 PROPERTY ACQUISITION PLAN
 PRELIMINARY DESIGN

SECTION 0810 - SECTION JUNCTION
 NORTH CARIBU 2073 TO STA 241+805.005
 STA 241+204.073 TO STA 241+805.005

DATE: JANUARY 19, 2005

PROJECT NO.: 016315-7002-S
 SHEET NO.: 1
 TOTAL SHEETS: 1

NO.	DATE	DESCRIPTION
1	01-19-05	ISSUED FOR PROPERTY ACQUISITION
2	01-19-05	ISSUED FOR PROPERTY ACQUISITION
3	01-19-05	ISSUED FOR PROPERTY ACQUISITION

KEY PLAN

DATE	DESCRIPTION
01-19-05	ISSUED FOR PROPERTY ACQUISITION - Rev. A
01-19-05	ISSUED FOR PROPERTY ACQUISITION - Rev. A
01-19-05	ISSUED FOR PROPERTY ACQUISITION - Rev. A

REVISIONS

NO.	DATE	DESCRIPTION
1	01-19-05	ISSUED FOR PROPERTY ACQUISITION
2	01-19-05	ISSUED FOR PROPERTY ACQUISITION
3	01-19-05	ISSUED FOR PROPERTY ACQUISITION

LEGEND

PROPOSED RIGHT-OF-WAY
 EXISTING RIGHT-OF-WAY
 RIGHT-OF-WAY ACQUISITION

NOTES:

1. DIMENSIONS SHOWN ARE WITHIN MATCHLINES UNLESS FOLLOWED BY (TOTAL) IN THAT CASE THE AREA FROM THE ADJOINING SHEET IS INCLUDED.

2. THE COORDINATES FOR THE 2002 CURVE DATA ARE BASED ON THE 2002 DATUM AND COORDINATE SYSTEM.

3. THE 2002 DATUM IS THE 2002 PROJECT GRID COORDINATE SYSTEM.

4. THE 2002 DATUM IS THE 2002 PROJECT GRID COORDINATE SYSTEM.

5. THE 2002 DATUM IS THE 2002 PROJECT GRID COORDINATE SYSTEM.

6. THE 2002 DATUM IS THE 2002 PROJECT GRID COORDINATE SYSTEM.

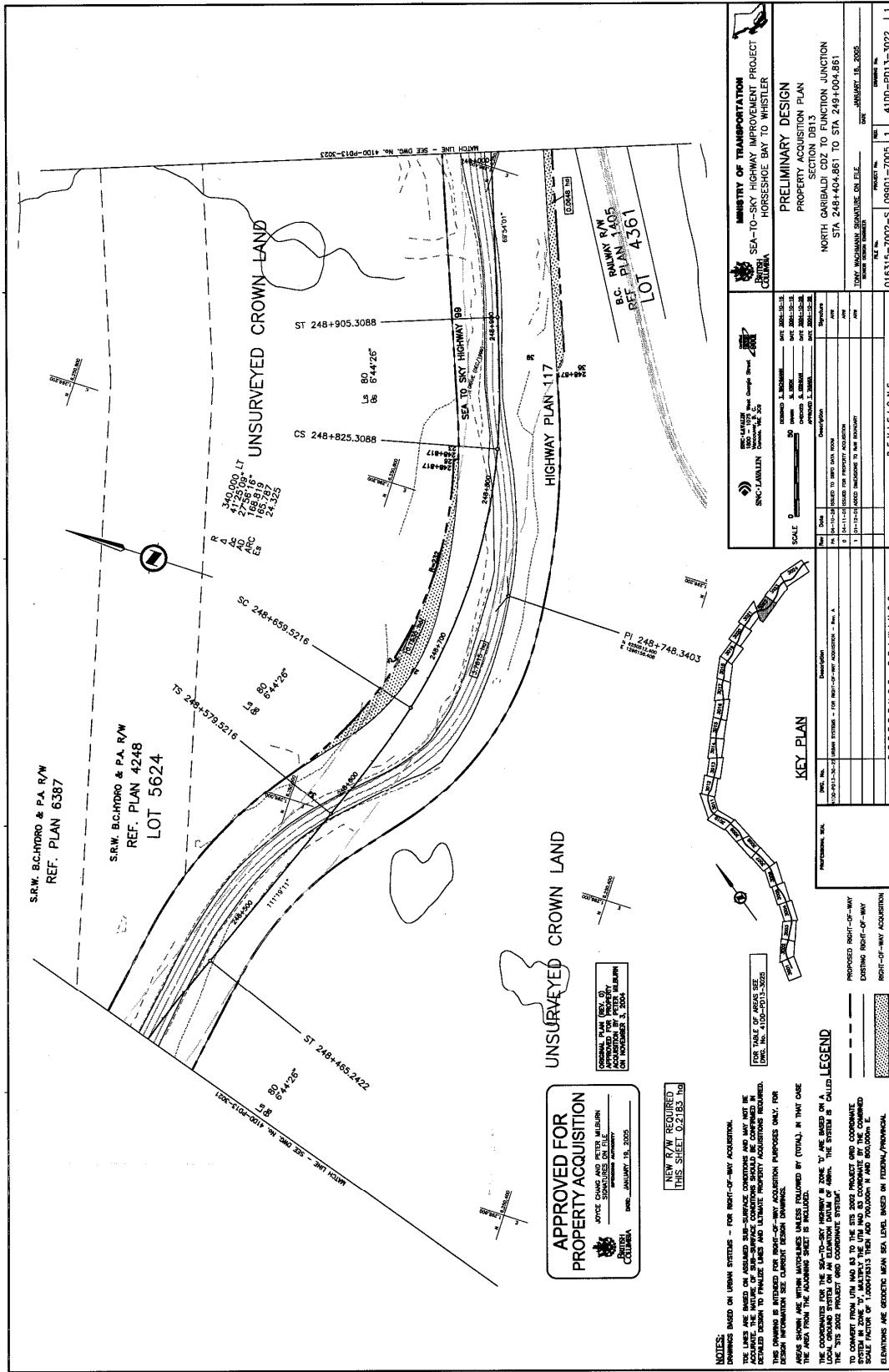
7. THE 2002 DATUM IS THE 2002 PROJECT GRID COORDINATE SYSTEM.

8. THE 2002 DATUM IS THE 2002 PROJECT GRID COORDINATE SYSTEM.

9. THE 2002 DATUM IS THE 2002 PROJECT GRID COORDINATE SYSTEM.

10. THE 2002 DATUM IS THE 2002 PROJECT GRID COORDINATE SYSTEM.

Annex 119



**APPROVED FOR
PROPERTY ACQUISITION**
 JUDGE SHERIDAN
 COURTNEY
 DATE: JANUARY 18, 2005

**NEW R/W REQUIRED
THIS SHEET 0.2183, 1m**

NOTES:
 DIMENSIONS BASED ON UTM84 SYSTEM - FOR RIGHT-OF-WAY ACQUISITION.
 THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A LOCAL BROADBAND SYSTEM ON AN ELEVATION DATUM OF 1985. THE SYSTEM IS CALLED "SEA-TO-SKY". THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A LOCAL BROADBAND SYSTEM ON AN ELEVATION DATUM OF 1985. THE SYSTEM IS CALLED "SEA-TO-SKY". THE COORDINATES FOR THE SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT ARE BASED ON A LOCAL BROADBAND SYSTEM ON AN ELEVATION DATUM OF 1985. THE SYSTEM IS CALLED "SEA-TO-SKY".

LEGEND
 PROPOSED RIGHT-OF-WAY
 EXISTING RIGHT-OF-WAY
 RIGHT-OF-WAY ACQUISITION

**FOR TABLE OF AREAS SEE
SHEET 0.2183, 1m**

KEY PLAN

SCALE
 1:1000
 1:2000
 1:4000

MINISTRY OF TRANSPORTATION SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT HORSESHOE BAY TO WHISTLER PRELIMINARY DESIGN PROPERTY ACQUISITION PLAN SECTION 0B13 NORTH CASBARI 602 TO JUNCTION UNCTION STA. 248+604.851 TO STA. 249+004.851 DATE: JANUARY 18, 2005		
PROJECT NO. 016315-7002-S	SHEET NO. 1	TOTAL SHEETS 1

NO.	DATE	DESCRIPTION
1	2005-01-18	ISSUED FOR PROPERTY ACQUISITION
2	2005-01-18	ISSUED FOR PROPERTY ACQUISITION

NO.	DATE	DESCRIPTION
1	2005-01-18	ISSUED FOR PROPERTY ACQUISITION
2	2005-01-18	ISSUED FOR PROPERTY ACQUISITION

NO.	DATE	DESCRIPTION
1	2005-01-18	ISSUED FOR PROPERTY ACQUISITION
2	2005-01-18	ISSUED FOR PROPERTY ACQUISITION

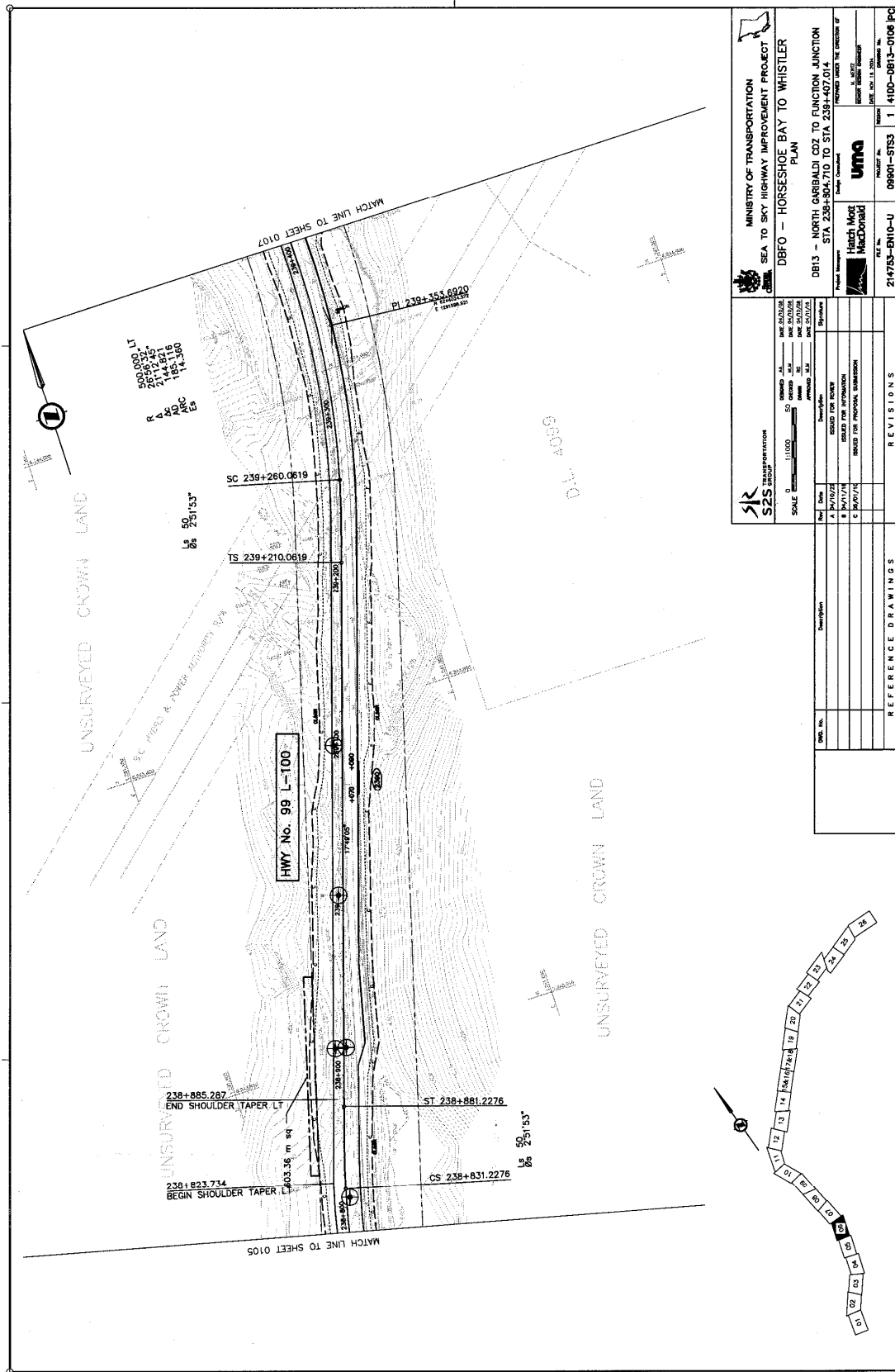
NO.	DATE	DESCRIPTION
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2	2005-01-18	ISSUED FOR PROPERTY ACQUISITION

NO.	DATE	DESCRIPTION
1	2005-01-18	ISSUED FOR PROPERTY ACQUISITION
2	2005-01-18	ISSUED FOR PROPERTY ACQUISITION

NO.	DATE	DESCRIPTION
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2	2005-01-18	ISSUED FOR PROPERTY ACQUISITION

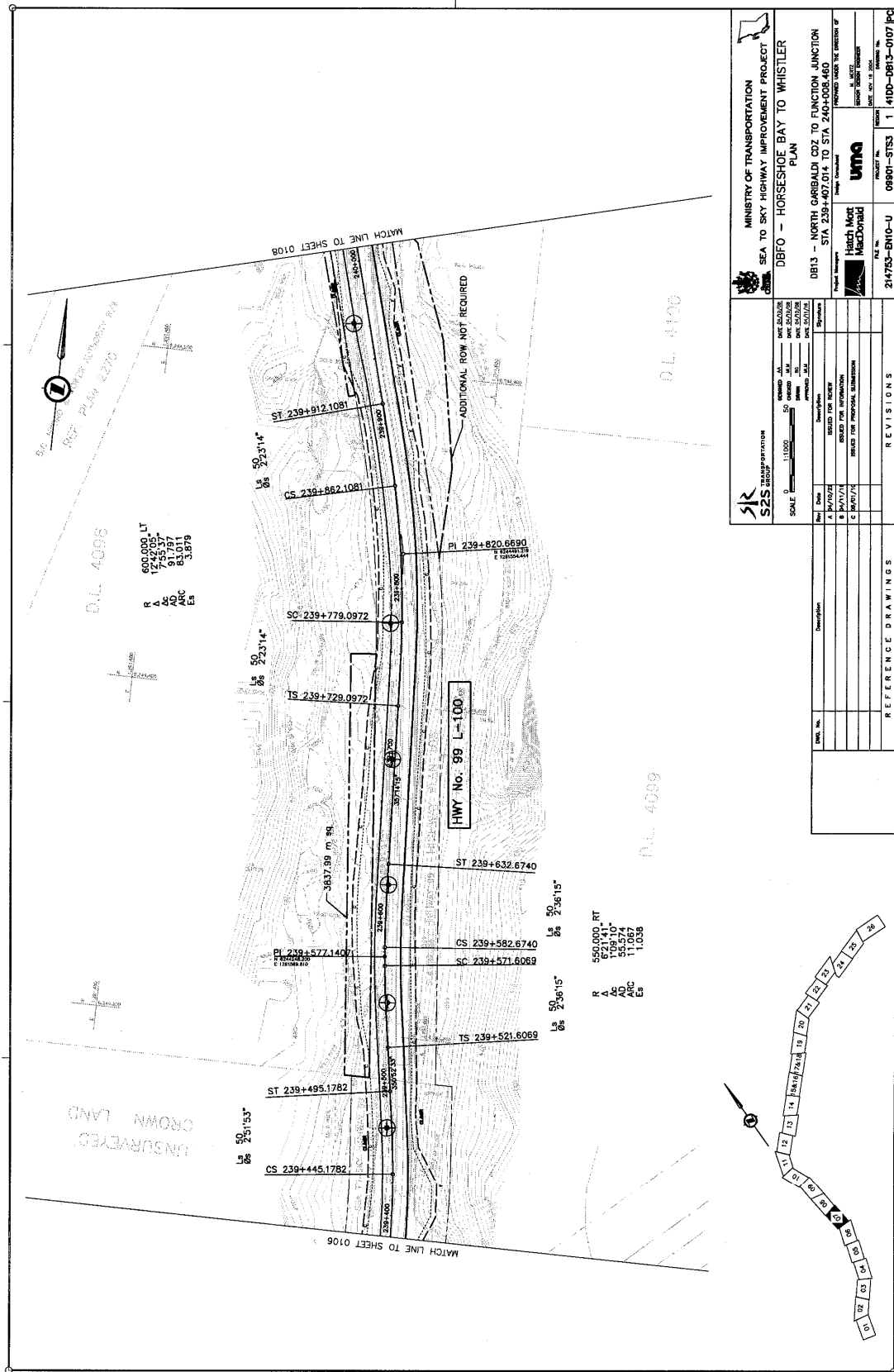
NO.	DATE	DESCRIPTION
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2	2005-01-18	ISSUED FOR PROPERTY ACQUISITION

Annex 120

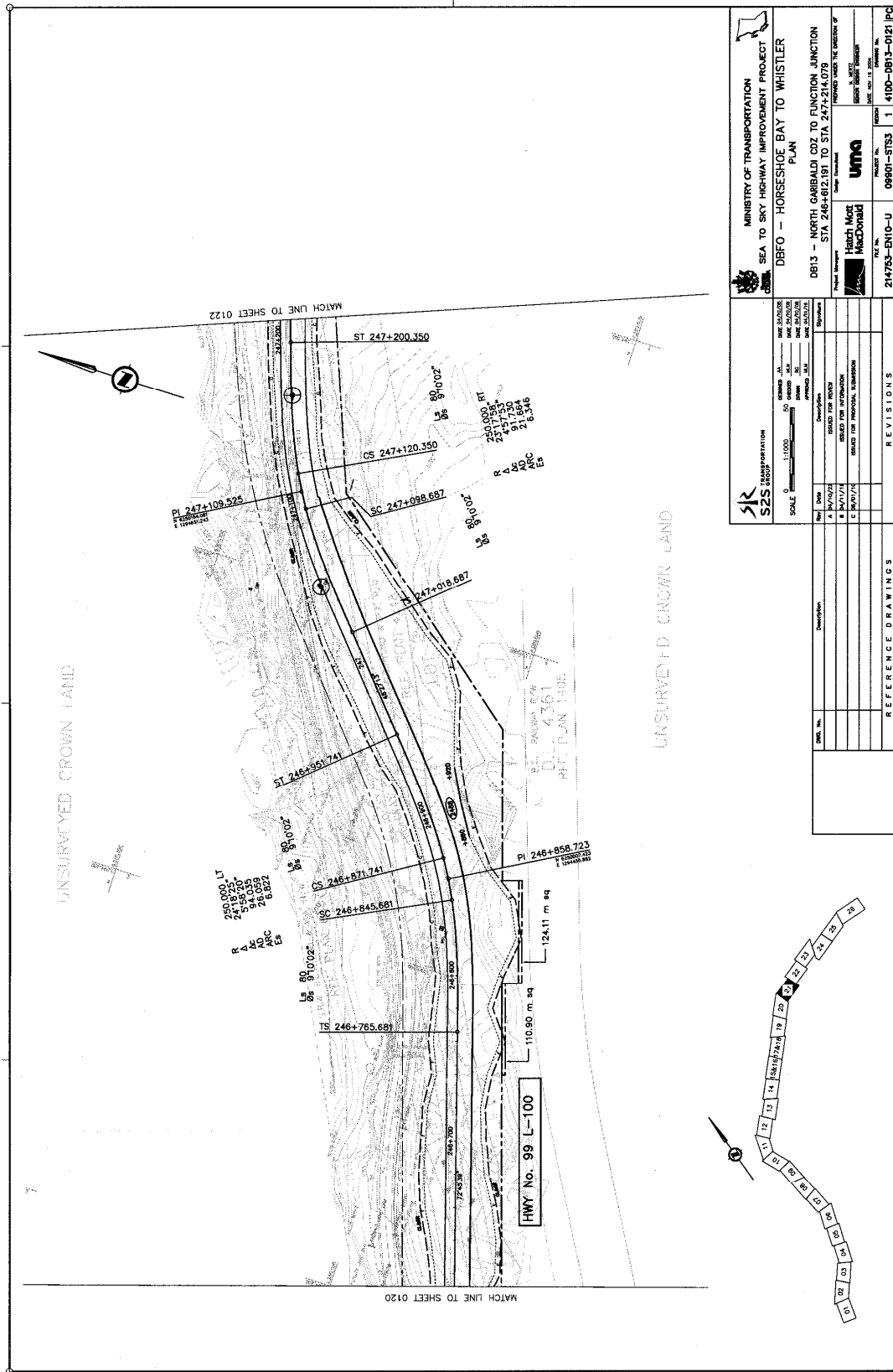


		MINISTRY OF TRANSPORTATION SEA TO SKY HIGHWAY IMPROVEMENT PROJECT DBFO - HORSESHOE BAY TO WHISTLER PLAN
SCALE: AS SHOWN DATE: 2/20/2018 DRAWN BY: [blank] CHECKED BY: [blank] APPROVED BY: [blank]		DB13 - NORTH GARIBOLDI GOZ TO FUNCTION JUNCTION STA 238+504.710 TO STA 239+407.018 PROJECT NO. 08801-ST53 DRAWING NO. 214753-EN10-U DATE: 08/13/2008 DRAWN BY: [blank] CHECKED BY: [blank] APPROVED BY: [blank]
REVISIONS		UTM Haack Mac MacDonald PROJECT NO. 08801-ST53 DRAWING NO. 214753-EN10-U DATE: 08/13/2008 DRAWN BY: [blank] CHECKED BY: [blank] APPROVED BY: [blank]
REFERENCE DRAWINGS		CORREL. THESE DRAWING PREVIOUS EDITIONS

Annex 121



Annex 123



SR
TRANSPORTATION
S2S GROUP

SCALE: 1:1000
DATE: 04/20/2018
DRAWN BY: []
CHECKED BY: []
DESIGNED BY: []
DESIGNED FOR: []
CHECKED FOR: []
DESIGNED FOR: []
CHECKED FOR: []

MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
PLAN
DBFO - HORSESHOE BAY TO WHISTLER

DB13 - NORTH GARIBOLDI COZ TO FUNCTION JUNCTION
STA 246+612.191 TO STA 247+214.079

Hatch Macdonald
PROJECT MANAGER

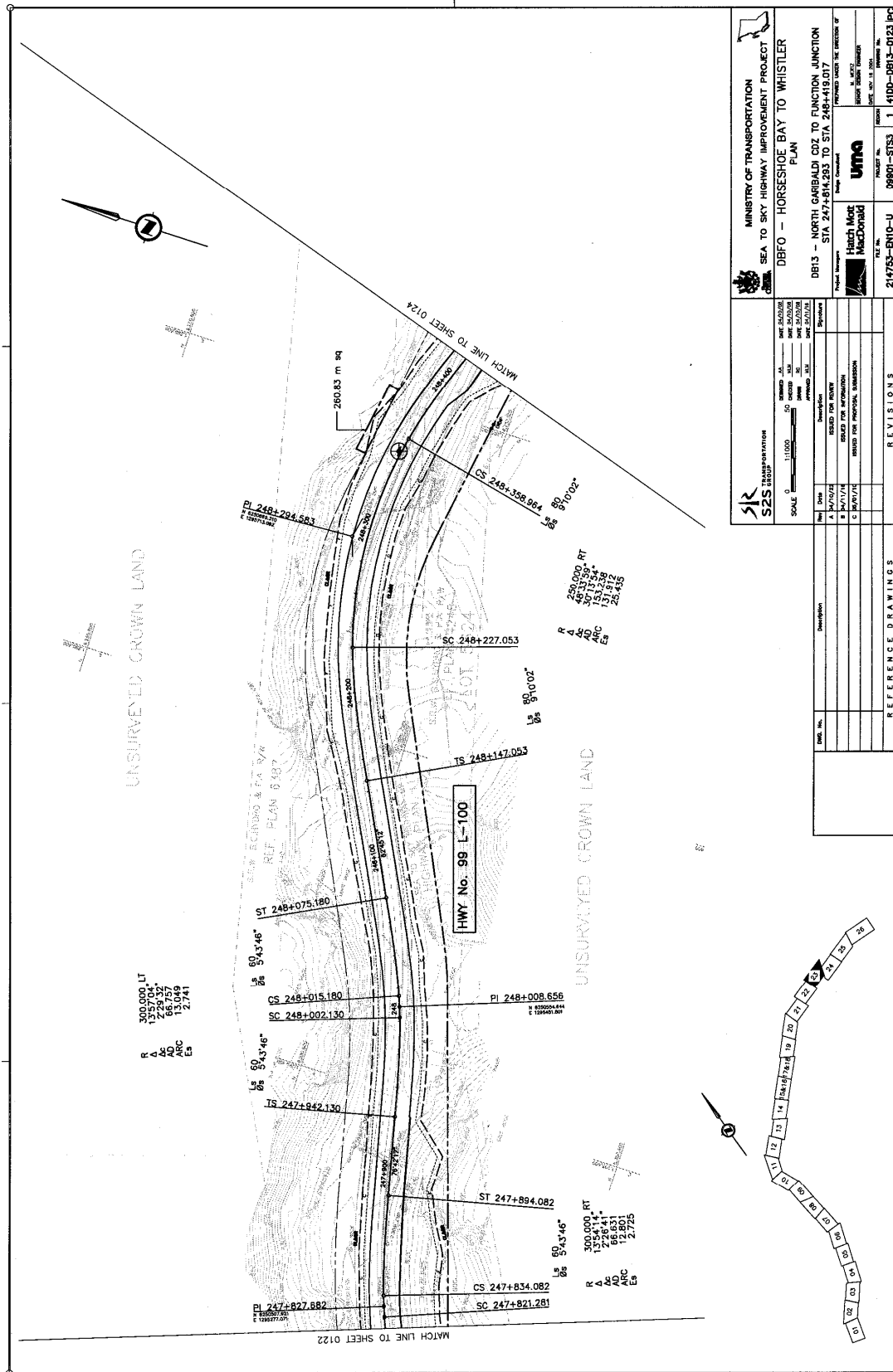
DATE: 04/11/2018
SCALE: 1:1000
DRAWN BY: []
CHECKED BY: []

FILE NO: 24753-BN10-U
PROJECT NO: 09801-ST3S 1
4100-0913-0121

REV. NO.	DATE	DESCRIPTION

REV. NO.	DATE	DESCRIPTION

Annex 124



MINISTRY OF TRANSPORTATION
SEA TO SKY HIGHWAY IMPROVEMENT PROJECT
DBFO - HORSESHOE BAY TO WHISTLER
PLAN

DB13 - NORTH GARIBOLDI CDZ TO FUNCTION JUNCTION
 STA 247+821.281 TO STA 248+358.984

Project Name: **Hatch Mack MacDonald**
 Project No.: **09801-8783**
 Date: **14/03/2011**

Scale: **1:1000**

Drawn: **AA** Date: **02/03/11**
 Checked: **ES** Date: **02/03/11**
 Approved: **AA** Date: **02/03/11**

Revisions:
 A 3/17/11 ISSUED FOR REVIEW
 B 3/17/11 ISSUED FOR INFORMATION
 C 3/17/11 ISSUED FOR PROVISIONAL SUBMISSION

Reference Drawings:
 1 4100-0813-0023 PC
 214783-EN10-U
 09801-8783
 1 4100-0813-0023 PC

Deleted: 11
 Deleted: ¶
 Deleted: ¶
 ¶
 ¶
 ¶
 ¶

SCHEDULE 4

LANDS

Part 4

Connecting Roads

Schedule of Connecting Roads

Highway 99 Connecting Roads
Trans Canada Highway 1
Eagleridge Drive
Marine Drive
Pasco Road
Ansell Place (Connected via off and on ramps from Highway 99)
Lawrence Way
Strachan Point Road
Ocean Point Drive
Kelvin Grove Intersection
Lions Bay Avenue (Connected via NB off ramp, SB off ramp and SB on ramp at Lions Bay Interchange)
Isleview Place (Connects to Highway 99 SB off ramp at Lions Bay Interchange)
Center Road (Connecting Road to Northbound Entrance onto Highway 99 From Lions Bay)
Brunswick Road
Porteau Cove Park
Britannia Forest Service Road
Darrell Bay Road
Misty Heights Road
Mamquam Forest Service Road
Stawamus Drive / Valley Drive
Clarke Drive
Weldwood Access
Scott Crescent
Cleveland Avenue
Industrial Road / Finch Drive
Centennial Drive
Mamquam Road
Garibaldi Way
Depot Road
Squamish Valley Road
Cheekeye River (Cat Lake) Forest Service Road
Conroy Creek Forest Service Road
Chance Creek Forest Service Road

Deleted: b

Comment [R1]: Actual Name - Mamquam Forest Service Road

Deleted: K
 Deleted: S4/1.¶
 Deleted: December
 Deleted: March 2005
 Deleted: 4
 Deleted: November 2004
 Deleted: ¶
 Strictly Confidential
 Deleted: - Prepared for Deliberation by Treasury Board and¶
 Cabinet in Anticipation of Commercial Negotiations
 Deleted: ¶

Garibaldi Lake Road
Pinecrest Estates
Black Tusk Subdivision
Brew Creek Lodge Road
Brandywine Park Access
Brew Main Forest Service Road
Brandywine Forest Service Road
MacGuire Forest Service Road
Cal-Cheak (Daisy Lake) Forest Service Road
Callaghan Forest Service Road
<u>RMoW</u> Sewage Treatment Plant Access
Highway 99 (Beyond the North End of Concession Highway)
Harvey Creek Road Connecting Roads
Creekview Place
Garibaldi Park Road Connecting Roads
Garibaldi Park Road up to Municipal Boundary
Garibaldi Park Road Beyond Park Boundary
Brackendale Pit Road Connecting Roads
Cheekeye Pit Access Road
Squamish Valley Road Connecting Roads
Squamish Valley Road
Squamish Valley Forest Service Road
Swift Creek Road Connecting Roads
Swift Creek Forest Service Road

Deleted: 11
Deleted: ¶
¶

Comment [R2]: Not a FSR, actual R/W Number 0301294, Believe this to be BC Rail

Deleted: S4/1.¶
Deleted: December
Deleted: March 2005
Deleted: 4
Deleted: November 2004
Deleted: ¶
Strictly Confidential
Deleted: - Prepared for Deliberation by Treasury Board and¶
Cabinet in Anticipation of Commercial Negotiations
Deleted: ¶

SCHEDULE 4**LAND****Part 5****Orders****Approval Officer Consents and Approvals**

Approving officer consents and approvals, including those in respect of the Rubble Creek Landslide Hazard Area, are set out in the attached Table 1.

Railway Orders

Orders issued under the *Railway Act* of British Columbia or similar predecessor legislation and by federal transportation authorities are set out in the attached Table 2.

Orders in Council

Orders in Council and Gazette Notices relating to controlled access highway and arterial designations are set out in the attached Table 3.

Fisheries Act Authorization

The Authorization under Subsection 35(2) of the *Fisheries Act* of Canada is set out in the attached Table 4.

Table 1: Approving officer consents and approvals

	Date	Description
1.	July 11, 1980	Authority granted to Director of the Provincial Emergency Program to permit construction as per OIC 1185-80, and to sell or dispose of improvements
2.	July 15, 1980	Letter of authorization excluding property from the provisions of Section 4 of OIC 1185-80
3.	August 8, 1980	Letter of authorization excluding property from the provisions of Section 4 of OIC 1185-80
4.	October 8, 1980	Letter of authorization excluding property from the provisions of Section 4 of OIC 1185-80
5.	October 8, 1980	Letter of authorization excluding property from the provisions of Section 4 of OIC 1185-80
6.	February 18, 1981	Letter of authorization excluding property from the provisions of Section 4 of OIC 1185-80
7.	February 26, 1981	Letter of authorization excluding property from the provisions of Section 4 of OIC 1185-80
8.	March 17, 1981	Approval for Ministry of Forests to reconstruct a forestry road
9.	March 30, 1981	Permission for reconstruction of Highway 99 at Cheakamus Canyon
10.	March 30, 1981	Approval for BC Hydro to undertake work to mitigate damage to DL 1953
11.	May 5, 1981	Letter of authorization excluding property from the provisions of Section 4 of OIC 1185-80
12.	May 21, 1981	Letter of authorization excluding property from the provisions of Section 4 of OIC 1185-80
13.	June 2, 1981	Letter of authorization to RAM Investments Ltd. granting permission to enter into lease and right to purchase agreement for access purposes
14.	June 3, 1981	Letter of authorization for BC Hydro to relocate the Dam Caretaker's residence
15.	August 16, 1982	Approval for BC Hydro power line improvements
16.	November 19, 1984	Approval for BC Hydro to establish an anchorage for a debris boom
17.	June 7, 1985	Approval to BC Hydro to undertake works relating to the Daisy Lake Dam
18.	February 21, 1988	Approval for BC Hydro to conduct specific remedial measures on the Daisy Lake Dam
19.	September 16, 1988	Permission for BC Hydro to build pole line

	Date	Description
20.	April 20, 1989	Approval for BC Hydro for removal of sand and gravel build-up in canal
21.	June 1, 1989	Approval for BC Rail to relocate microwave site
22.	March 9, 1990	Approval for BC Rail to relocate microwave site
23.	March 3, 1994	Approval for access by Ministry of Transportation and Highways
24.	March 11, 1994	Approval for access
25.	August 14, 1997	Approval for BC Hydro for works associated with replacement of bridge
26.	July 29, 1998	Approval for BC Hydro's security contractor to effect eviction of persons under OIC #1465
27.	July 27, 2000	Approval for special event (bicycle race)
28.	September 7, 2000	Approval for West Coast Trim to conduct works
29.	August 30, 2001	Permission for BC Hydro to reconstruct a helicopter pad
30.	October 5, 2001	Approval for transfer of lands
31.	May 8, 2002	Approval for BC Hydro's security contractor to effect eviction of persons under OIC #1465
32.	July 16, 2002	Approval for BC Hydro to reconstruct a helicopter pad
33.	September 24, 2002	Approval for Earth Tech for ground survey and design works
34.	July 13, 2004	Approval for Ministry of Transportation to undertake certain works and to stockpile materials
35.	April 26, 2004	Approval for Ministry of Transportation to undertake certain highway works
36.	November 4, 2004	Approval for Ministry of Transportation to undertake certain highway works
37.	April 1, 2004	Approval for BC Hydro for dredging near Daisy Lake

Table 2: Railway Orders

Date	Number	Mile Location
CERTIFICATES UNDER THE RAILWAY ACT OF BRITISH COLUMBIA		
Dec. 12/63	1139	71.17
July 11/68	1650	Unknown
July 2/64	1166	65.2
Mar. 28/61	1031	36.19
July 2/64	1165	84.80
Feb. 8/66	1319	77.1
Feb. 12/71	2179	77.14
Sept. 4/75	3198	46.64
Jan. 5/37	643	N/A
Feb. 19/74	2840	2.33
July 31/79	3943	90.06
Feb. 19/65	1217	92.1
July 15/93	5864	95.02
Oct. 18/93	5875	95.02
May 1/53	818	N/A
May 7/70	2053	95.4
May 30/96	6046	97.03
Dec. 3/98	6227	89.74
APPROVALS BY FEDERAL TRANSPORTATION AUTHORITIES		
Feb. 11/60	100471	124.71
Oct. 18/56	89985	4.93
Dec. 10/58	96526	124.71

Table 3: Orders in Council

OIC	Year	Month	Day	Arterial Ref. No.	Municipality		Gazette	OIC	Map
1063	1938	8	6	89R	W Vancouver		x	x	
1831	1949	8	20	132R	W Vancouver		x	x	
2125	1952	8	27	132R	W Vancouver		x	x	x
2682	1952	11		132R	W Vancouver		x	x	
2326	1954	10	12	222R	Squamish			x	
2644	1956	10	24	250R	W Vancouver		x	x	
419	1958	2	28	132R	W Vancouver		x	x	
256	1959	2	14						
1341	1960	6	7	289R	W Vancouver		x	x	
1341	1960	6	7	288R	W Vancouver		x	x	
2560	1960	11	15	313R	Squamish				
2988	1961	11	28	329R	W Vancouver		x		
2989	1961	11	28	288R	W Vancouver		x	x	
446	1964	2	21	132R	W Vancouver		x	x	
1523	1964	6	2						
1529	1964	6	2	132R	W Vancouver		x	x	
1898	1964	7	3	372R	W Vancouver		x	x	
2680	1965	9	29	222R	Squamish			x	
2682	1965	9	29	398R	Squamish			x	
2682	1965	9	29	406R	Squamish			x	
2682	1965	9	29	399R	Squamish			x	
1913	1966	6	29	426R	Squamish				
3400	1967	11	7	460R	Squamish				
1591	1971	5	4	518R	Lions Bay				
545	1972	2	14		W V/Squamish			x	
1656	1976	5	27	598R	Whistler		x		
3793	1977	12	15	329R	W Vancouver		x		
3794	1977	12	15	613R	W Vancouver		x	x	
1048	1978	4	27	617R	Squamish				
2651	1979	10	11	649R	Squamish			x	
2652	1979	10	11	648R	Squamish			x	
125	1983	1	28	759R	Whistler		x	x	
125	1983	1	28	598R			x	x	
743	2000	5	18	986R	Lions Bay		x	x	
103	2001	2	1	986R	Lions Bay				
276	2002	4	4	1001R	Squamish		x	x	

Table 4: Fisheries Act Authorization

1.	August 23, 2004	Sea to Sky Highway Improvement Project - Authorization under Subsection 35(2) of the <i>Fisheries Act</i>
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SCHEDULE 4

LAND

Part 6

Not Used

SCHEDULE 4

LAND

Part 7

Gravel Pits and Form of Gravel LicenceSection A

1.

Gravel Pit, Stockpile Site, Staging/Aggregate Processing Area, Quarry Name	<u>Allowable Usage by Concessionaire</u>
Brunswick Pit	250,000m³ The availability of Brunswick Pit is described in Sections 3 and 4 of this Section A
Furry Creek Quarry	120,000m³ The availability of this quarry is conditioned on this quarry being developed by the Province
Rayonier Quarry	280,000m³
Brackendale Pit	280,000m³
Callaghan Pit	400,000m³ (to be produced from the basalt outcroppings within the pit area) Approximately 107,000m³ of surplus excavated rock in stockpile from the Culliton-Cheakamus Project
Westport Road Pit	Construction staging/aggregate processing only
Old Garibaldi Townsite	Approximately 60,000m³ of 250mm surplus excavated rock in stockpile from advanced construction work in Design Build 12 Approximately 5,000m³ of bulk surplus excavated rock from the Culliton-Cheakamus Project. This area is in the Rubble Creek Landslide Hazard Area and is only to be used as a temporary stockpile site. The Concessionaire will not do anything, including establishing camps or offices that would unnecessarily detain personnel in this area. The gate must remain locked when not in use.

Gravel Pit, Stockpile Site, Staging/Aggregate Processing Area, Quarry Name	<u>Allowable Usage by Concessionaire</u>
Culliton-Cheakamus staging/aggregate processing site (approximately 3.8 km north of Culliton Creek)	Approximately 20,000m³ of 250 mm surplus excavated rock from the Culliton-Cheakamus Project.

2. Without limiting Section 8.10.4 of this Agreement in any way whatsoever, the availability of any Gravel Pit is subject to MOT having the right to issue to the Concessionaire in respect of such Gravel Pit, a licence, in substantially the form and containing substantially the terms set out in Section B of this Schedule.
3. For the time period from the Commencement Date to the completion of the MOT Section Contract, only that part of Brunswick Pit comprising an area of approximately 25,000m² and situated adjacent to the Existing Highway and Old Brunswick Pit Road (Road #1808), also known as “Crystal Falls Road”, on the northwest corner of Brunswick Pit (shown in hatched shading as “Pit Area Available to DBFO Co.” on Drawing 41DD-DB00-0015) will, subject to the terms of this Agreement, be available to the Concessionaire.
4. The availability of Brunswick Pit, as described in paragraph 3 of this Section A, is conditioned on the Concessionaire constructing and using, including obtaining any and all necessary approvals and permissions from applicable Governmental Authorities and any other Interested Parties, for such construction and use, at its sole cost an access road separate from Brunswick Pit access road.

Section B

1. Any gravel licence issued by the Province to the Concessionaire will be in substantially the form and containing substantially the terms set out below.

FORM OF GRAVEL LICENCE

THIS GRAVEL LICENCE dated for reference the ___ day of _____, 200__.

HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA, represented by the Minister of Transportation (the "Province")

SEA TO SKY HIGHWAY INVESTMENT LIMITED PARTNERSHIP
(the "Concessionaire")

NOW THEREFORE the Province and the Concessionaire agree as follows.

1. Definitions

1.1 In this Gravel Licence, unless the context otherwise requires:

- (a) "**Province Improvements**" means any premises or building equipment existing on the Gravel Pits at any time during the Term;
- (b) "**Concessionaire's Stockpiles**" means
 - (i) all stockpiles of Material processed by or for the Concessionaire with Pit-Run from the Gravel Pits, and
 - (ii) all stockpiles of Material located at the Gravel Pits processed by or for the previous highway maintenance Concessionaire or the Province and which have been sold or transferred to the use of the Concessionaire;
- (c) "**Gravel Fees Appendix**" means the fee provisions attached as Appendix "B" attached to this Gravel Licence;
- (d) "**Gravel Pits**" means those gravel pits, stockpile sites, staging/aggregate processing areas and quarries described in Appendix "A" attached to this Gravel Licence;
- (e) "**Material**" means Pit-Run, winter abrasive (with or without salt), crush, sealcoat and any other aggregate used for construction, maintenance and repair of highways which may be processed from Pit-Run and includes any by-products resulting from the processing of Pit-Run;

- (f) **"Pit-Run"** means pit-run granular aggregate excavated from a Gravel Pit with no further processing;
- (g) **"Subsisting Rights"** means
 - (i) all subsisting grants to or rights of any person made or acquired under the *Land Act*, R.S.B.C. 1996, c. 245, *Coal Act*, R.S.B.C. 1996, c. 51, the *Forest Act*, R.S.B.C. 1996, c. 157, the *Mineral Tenure Act*, R.S.B.C. 1996, c. 292, or any extension or renewal of the same, whether or not the Concessionaire has actual notice of them,
 - (ii) any prior dispositions made pursuant to the *Land Act*, R.S.B.C. 1996, c. 245, and
 - (iii) the exceptions and reservations of rights, interests, privileges and titles referred to in section 50 of the *Land Act*;
- (h) **"Concession Agreement"** means the agreement entitled "@@" between the Province and the Concessionaire dated for reference the _____, as it may be amended from time to time; and
- (i) **"Term"** means the term of this Gravel Licence described in section 2.1.

2. Term and Grant of Licence

- 2.1 The term of this Gravel Licence will commence on _____ and end on _____ unless sooner terminated in accordance with the terms of this Gravel Licence.
- 2.2 The Province hereby grants to the Concessionaire a non-exclusive Licence to enter on and occupy the Gravel Pits during the Term for the purpose of processing and removing Material subject to and in accordance with the terms and conditions of this Gravel Licence.
- 2.3 The Concessionaire acknowledges and agrees that this Gravel Licence does not grant to the Concessionaire any proprietary or property rights or interests in any of the Gravel Pits or in any of the Material at the Gravel Pits.
- 2.4 This Gravel Licence is subject to all Subsisting Rights.
- 2.5 The Concessionaire acknowledges and agrees with the Province that:
 - (a) any interference with the rights of the Concessionaire under this Gravel Licence by virtue of the exercise or operation of any of the Subsisting Rights will not constitute a breach of the Province's obligations under this Gravel Licence and the Concessionaire releases and discharges the Province from and against any claim for loss or damage arising directly or indirectly out of any such interference;

- (b) all costs and expenses, direct or indirect, that arise out of any interference by the Concessionaire with any of the Subsisting Rights will be borne by the Concessionaire; and
- (c) the Concessionaire will not commence or maintain proceedings under section 65 of the *Land Act* in respect of any interference with rights of the Concessionaire under this Gravel Licence arising directly or indirectly out of the exercise or operation of any of the Subsisting Rights.

3. Concessionaire's Covenants

3.1 The Concessionaire will:

- (a) only use Material removed from the Gravel Pits for the purpose of performing its obligations under the Concession Agreement;
- (b) return or cause the return to the Province of any and all Material that is not used for the performance of the Concessionaire's obligations under the Concession Agreement;
- (c) not remove Material from the Gravel Pits except from locations or stockpiles on the Gravel Pits approved by the Province or from the Concessionaire's Stockpile;
- (d) clearly mark and segregate each of the Concessionaire's Stockpiles from other stockpiles in a manner satisfactory to the Province;
- (e) conduct its operations at the Gravel Pits in accordance with any applicable "pit development plan" and gravel management plan as may be established by the Province from time to time;
- (f) not place or maintain any improvements on any of the Gravel Pits without the prior written consent of the Province;
- (g) make and keep each of the Gravel Pits in a safe, clean and sanitary condition satisfactory to the Province and, unless otherwise specified by notice in writing by the Province to the Concessionaire, make and keep safe, clean and sanitary any improvements at the Gravel Pits;
- (h) comply with any directives issued by the Province in respect of environmental protection or preservation arising from the Concessionaire's occupation or use of the Gravel Pits;
- (i) permit the authorized representatives of the Province to enter any of the Gravel Pits at any time for any purpose;

- (j) survey the pit or quarry, as the case may be, prior to any extraction of Material, in order to provide a baseline condition from which to determine Material usage quantities;
- (k) determine final excavation quantities by resurvey following completion of use of the pit or quarry, as the case may be;
- (l) provide adequate security for each of the Gravel Pits and prevent entry to the Gravel Pits or removal of Material from the Gravel Pits by persons who are not authorized by the Province;
- (m) provide drainage control measures at the Gravel Pits as required by the Province;
- (n) not interfere with the activities of any person authorized by the Province to enter on and use any of the Gravel Pits under a prior or subsequent licence granted by the Province, but will coordinate with any such persons as necessary;
- (o) arrange, at the written request of the Province and at the expense of the Concessionaire, for a quantity survey to be undertaken by a person reasonably qualified to do so in the opinion of the Province to confirm the quantity of Material removed from the Gravel Pits or located in the Concessionaire's Stockpiles, or both;
- (p) permit persons authorized by the Province to enter on any of the Gravel Pits and remove Material except from the Concessionaire's Stockpiles;
- (q) pay and discharge when due all taxes, levies, charges and assessments now or hereafter assessed, levied or charged which relate to the Gravel Pits or any improvements on the Gravel Pits provided that if the Concessionaire does not pay the taxes as required the Province will have the right to pay such charges and to recover the same forthwith from the Concessionaire unless such taxes are being contested in good faith by the Concessionaire and the Concessionaire may in law withhold payment of them and in such event the Concessionaire will pay all costs of contestation and will not in any way render any of the Gravel Pits subject to seizure;
- (r) observe, abide by and comply with all laws, bylaws, orders, directions, ordinances and regulations of any competent governmental authority relating to the Gravel Pits, and the entry on, occupation and use of the Gravel Pits, including the *Mines Act*, and accompanying regulations and codes including the Health, Safety and Reclamation Code for Mines in British Columbia, and the *Workers Compensation Act* and accompanying regulations.
- (s) not commit or suffer any willful or voluntary waste, spoil or destruction of the Gravel Pits or the Material or do or cause or permit to be done on the Gravel Pits anything that may be or become a nuisance or annoyance to the owners or occupiers of adjoining land other than as expressly authorized under this Gravel Licence;

- (t) not remove from the Gravel Pits any Material processed by or for the Concessionaire until
 - (i) the quantity survey report in respect of such Material has been delivered to the Province in accordance with section 2 of the Gravel Fees Appendix, and
 - (ii) the Gravel Usage fee in respect of such Material has been paid to the Province in accordance with section 1 of the Gravel Fees Appendix B;
- (u) not remove Pit-Run from the Gravel Pits for processing outside the Gravel Pits without the prior approval of the Province;
- (v) not remove processed Material from the Gravel Pits for storing or stockpiling outside the Gravel Pits without the prior approval of the Province;
- (w) pay for the cost of the supply to, or use and consumption on, the Gravel Pits of electricity, gas, water and other utilities provided that the cost of such utilities is determined by separate metering;
- (x) unless otherwise directed by the Province, at all times keep and maintain any improvements on the Gravel Pits, in a state of repair and condition at least equivalent to the state of repair and condition of such improvements at the commencement of the Term, or at the time the improvements were made, whichever is later, and to the same extent as would a prudent and careful owner in occupation, reasonable wear and tear only excepted;
- (y) repair any improvements on the Gravel Pits in accordance with directives as may be issued by the Province from timetime;
- (z) obtain and maintain in force during the Term insurances in form and content and with an insurer or insurers acceptable to the Province and such insurance will include comprehensive general liability insurance, automobile liability insurance, and equipment insurance;
- (aa) indemnify and save the Province harmless (and such indemnity will survive the expiration or termination of this Gravel Licence) from and against all claims, demands, losses, damages, costs, expenses, fines, penalties, assessments and levies made against or incurred, suffered or sustained by the Province at any time or times (whether before or after the expiration or termination of this Gravel Licence) where the same or any of them are based upon or arise of out any breach, violation or non-performance of any covenant, condition or agreement in this Gravel Licence by the Concessionaire its agents, contractors and subcontractors of any tier and employees of any of them, or any personal injury, death or property damage occurring at any of the Gravel Pits or happening by virtue of any acts or omissions of the Concessionaire or its agents, contractors and subcontractors of any tier and employees of any of them;

- (bb) perform its obligations set out in Appendix "C" attached to this Gravel Licence;
- (cc) have regard to and comply with the terms of the Variances set out in Appendix "D" attached to this Gravel Licence;
- (dd) if topsoil or undesirable overburden exist, strip and place such topsoil and overburden in separate stockpiles as directed by the Ministry Representative for future use in pit or quarry reclamation;
- (ee) not operate any Gravel Pit in a manner which will contaminate remaining granular material nor leave any Gravel Pit in a condition which will limit its future use.
- (ff) use all Gravel Pits to their full potential;
- (gg) not waste any portion of the products of crushers or screening plants that can be used but will stockpile or use any such product as directed by the Ministry Representative;
- (hh) when the Concessionaire discontinues operations in any Gravel Pit, trim the sides of any excavations, waste piles and stockpiles in the Gravel Pit to a 1.5 to 1 slope, or such other slope as the Province may direct, open up such drains or ditches as may be required to prevent water standing therein and drain such water, and leave the Gravel Pit in a neat condition, all to the satisfaction of the Province.

4. Province's Covenants

4.1 The Province:

- (a) will advise the Concessionaire from time to time of the identity of those persons authorized by the Province to enter on and use any of the Gravel Pits;
- (b) will accept interim estimates of Material usage based on load count or other reasonable means of estimation;
- (c) may, in its sole discretion, undertake surveys for verification of quantities information submitted by the Concessionaire; and
- (d) will, within 30 days after the commencement of the Term, provide the Concessionaire with a report (showing quantities and locations) of all stockpiles of Material at the Gravel Pits as of the commencement of the Term of this Licence.

5. Fees

- 5.1 In consideration of the licence granted by the Province to the Concessionaire in this Gravel Licence, the Concessionaire will pay fees to the Province in accordance with the Gravel Fees Appendix.

6. Records and Reports

6.1 The Concessionaire will maintain records of:

- (a) all Pit-Run removed from the Gravel Pits and used in unprocessed form for the purposes of the Concession; and
- (b) all Pit-Run from the Gravel Pits processed by the Concessionaire into other Material in such form and containing such information as the Province may reasonably require.

6.2 The Concessionaire will:

- (a) permit the Province or representatives of the Province to attend at the offices of the Concessionaire to examine the records described in section 6.1 of this Gravel Licence during normal office hours; and
- (b) upon the written request of the Province, deliver to the Province copies of such records within 10 days after the request.

6.3 The Concessionaire will establish and maintain proper books of account and cause to be made therein accurate entries of all transactions in relation to removal of Material from the Gravel Pits during the Term and at all reasonable times will supply to the Province such information relating to removal of Material from the Gravel Pits as the Province may reasonably require.

6.4 The Concessionaire will, no later than the end of January of each year of the Term, deliver to the Province a detailed statement, in a form satisfactory to the Province, showing for each Gravel Pit the quantity of Material removed from the Gravel Pit and used by the Concessionaire in unprocessed form during the previous calendar year (or portion thereof), during the Term.

7. Termination

7.1 The Province may, in its sole discretion, delete any of the Gravel Pits from this Gravel Licence by giving to the Concessionaire at least 30 days written notice of the deletion and sections 7.3 and 7.4 of this Gravel Licence will apply to any deleted Gravel Pit as if this Gravel Licence had been terminated or had expired in respect of that Gravel Pit as of the effective date of deletion.

7.2 If the Concessionaire fails to observe, perform or comply with any provision of this Gravel Licence or the Concession Agreement, the Province may terminate this Gravel Licence upon giving written notice of termination to the Concessionaire.

- 7.3 On the expiration or termination of this Gravel Licence, the Concessionaire will
- (a) cease occupation of the Gravel Pits; and
 - (b) remove all buildings, machinery, plant equipment and apparatus owned or leased by the Concessionaire located at the Gravel Pits.
- 7.4 Any buildings, machinery, plant equipment and apparatus owned or leased by the Concessionaire remaining at the Gravel Pits later than 30 days after expiration or termination of this Gravel Licence:
- (a) will be absolutely forfeited to and become the property of the Province; and
 - (b) may be removed from the Gravel Pits by the Province and the Concessionaire will pay to the Province, on demand, all costs of removal.

8. Interpretation

- 8.1 Unless the context otherwise requires, any reference to "this Gravel Licence" means this schedule and all of the appendices attached to it.
- 8.2 The headings or captions in this Gravel Licence are inserted for convenience only and do not form a part of this Gravel Licence and in no way define, limit, alter or enlarge the scope or meaning of any provision of this Gravel Licence.
- 8.3 Each appendix attached to this Gravel Licence is an integral part of this Gravel Licence as if set out at length in the body of this Gravel Licence.
- 8.4 The Concessionaire will not:
- (a) assign this Gravel Licence;
 - (b) sublicense any of the Gravel Pits; or
 - (c) dispose of any of its rights in respect of this Gravel Licence or any of the Gravel Pits;
- without the prior written consent of the Province, which consent may be arbitrarily withheld by the Province.
- 8.5 The Concessionaire will treat as confidential and will not, without the prior written consent of the Province, publish, release or disclose or permit to be published, released or disclosed either before or after expiration or termination of this Gravel Licence, any information supplied to, obtained by, or which comes to the knowledge of the Concessionaire as a result of this Gravel Licence except insofar as such publication, release or disclosure is required by law or is necessary to enable the Concessionaire to fulfill the obligations of the Concessionaire under this Gravel Licence.

8.6 The Concessionaire will not, during the Term, perform a service for or provide advice to any person, firm or corporation or other legal entity where the performance of the service or the provision of the advice may or does, in the reasonable opinion of the Province, give rise to a conflict of interest between the obligations of the Concessionaire to the Province under this Gravel Licence and the obligations of the Concessionaire to such other person, firm or corporation or other legal entity.

8.7 Any notice, document, statement, report, demand or payment desired or required to be given or made under this Gravel Licence will be in writing and may be given or made by personal delivery to the party to whom it is to be given or made, or by facsimile transmission, or by mailing in Canada with postage prepaid addressed to:

if to the Province:

Ministry of Transportation

Fax number: @NUMBER

and if to the Concessionaire

@@

Fax number: @NUMBER

and any such notice, document, statement, report, demand or payment so mailed will be deemed given to and received by the addressee on the third business day after the mailing of the same except in the event of disruption of postal services in Canada in which case any such notice, document, statement, report, demand or payment will be deemed given to and received by the addressee when actually delivered to the particular address set out above.

8.8 Either party may, from time to time, advise the other by notice in writing of any change of address or facsimile number of the party giving such notice and from and after the giving of such notice the address or facsimile number therein specified will, for purposes of section 8.7 be deemed to be the address or facsimile number, as the case may be, of the party giving such notice.

8.9 If any provision of this Gravel Licence or the application thereof to any person or circumstance is invalid or unenforceable to any extent, the remainder of this Gravel Licence and the application of such provision to any other person or circumstance will not be affected or impaired thereby and will be valid and enforceable to the extent permitted by law.

- 8.10 All provisions of this Gravel Licence in favor of the Province and all rights and remedies of the Province, either at law or in equity, will survive the expiration or termination of this Gravel Licence.
- 8.11 No waiver by either party of a breach or default by the other party in the observance, performance or compliance of any of its obligations under this Gravel Licence will be effective unless it is in writing and no such waiver will be deemed or construed to be a waiver of any other breach or default and failure or delay on the part of either party to complain of an act or failure of the other party or to declare such other party in default, irrespective of how long such failure or delay continues, will not constitute a waiver by such party of any of its rights against the other party.
- 8.12 Time will be of the essence of this Gravel Licence.
- 8.13 This Gravel Licence will enure to the benefit of and be binding upon the Province and its assigns and the Concessionaire and its successors and permitted assigns.

IN WITNESS WHEREOF the parties have executed this Gravel Licence on the date 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)
 in the presence of:)
)
)
 _____)

(Witness)

 For the Minister of Transportation

THE common seal of **Sea to Sky**)
Highway Investment Management Ltd.)
 as general partner of **Sea to Sky Highway**)
Investment Limited Partnership)
 was hereunto affixed in the presence of:)
)
)
)
 _____)

(Signature)

(c/s)

(Title)

APPENDIX "B" (TO GRAVEL LICENCE)**Gravel Fees Appendix****Gravel Usage Fees**

1. The Concessionaire will pay to the Province a Gravel Usage fee at the applicable rate established for the Gravel Pits as set out in section 1 of Appendix "A" based on the quantity of Pit-Run from the Gravel Pits, as measured in situ, used by the Concessionaire, which fees will be paid by set-off at the same time a quantity survey is required to be delivered to the Province in accordance with section 2 of this Appendix.

Quantity Surveys

2. The Concessionaire will, within 15 days of the completion of any Material processing operations conducted by or for the Concessionaire using Pit-Run from the Gravel Pits, deliver to the Province a quantity survey report produced by a person qualified to do so in the opinion of the Province certifying the quantity of Pit-Run used by the Concessionaire in such completed processing operations, which report will form the basis for calculating the fees payable under section 1 of this Appendix.

Fees Exclusive of Taxes

3. All fees required to be paid by the Concessionaire to the Province under this Gravel Licence are exclusive of applicable taxes.

APPENDIX "C" (TO GRAVEL LICENCE)**Obligations under *Mines Act***

1. In this Appendix:
 - (a) "Act" means the *Mines Act*, R.S.B.C. 1996, c. 293;
 - (b) "Code" means the health, safety and reclamation code prescribed under the Act, as it may be amended from time to time; and
 - (c) "Manager" means a manager as defined in the Act.
2. The Concessionaire will in respect of the Gravel Pits comply with any and all obligations of a Manager described in the Act and the Code.
3. The Concessionaire will:
 - (a) at least 2 weeks prior to the commencement of any operations at a Gravel Pit which is expected to utilize in excess of 1000m³ of Material, advise the Province of the nature and anticipated duration of the operations;
 - (b) install and maintain "No Entry" signs satisfactory to the Province at each road entrance to a Gravel Pit;
 - (c) comply with any order made under section 14(3) of the Act directed to the Concessionaire or to the Province by virtue of any activities or operations of the Concessionaire at a Gravel Pit;
 - (d) restrict hours of employment at the Gravel Pits in accordance with sections 1.5.1 to 1.5.5 of the Code;
 - (e) establish an Occupational Health & Safety Committee for each Gravel Pit in accordance with section 1.6.1 of the Code;
 - (f) as soon as it is practical to do so, advise the Province of any notifications made or reports prepared under sections 1.7.1 to 1.7.4 of the Code or section 15(6) of the Act; and
 - (g) shall appoint a properly certified supervisor or shift boss in compliance with the *Mines Act*, and ensure that the supervisor or shift boss is duly certified in accordance with all applicable laws, including the Health, Safety and Reclamation Code for Mines in British Columbia.

APPENDIX "D" (TO GRAVEL LICENCE)**Variances**

1. The following listed Variances to the Health, Safety and Reclamation Code for Mines in British Columbia will apply to pits and quarry operations which fall under the Ministry of Transportation ownership.

The Chief Inspector of Mines has provided the following clarifications to the Ministry in a letter dated August 9, 1999:

Application for Continuation of Variance to Mine Code Section 1.5.1 - Hours of Employment

“Pursuant to section 13 of the Mines Act, R.S.B.C. 1996. c293, the assigned Ministry of Transportation (MoT) Pit Manager may permit the employment of persons in a sand and gravel pit or quarry (Mine) for up to 12 hours in a 24 hour period. This variance applies only to pits managed by the MoT (Ministry of Transportation).

The Pit Manager shall communicate this variance to all affected workers, whether employees of the Ministry of Transportation, its contractors or sub-contractors. This variance is subject to review within five years as provided by section 13(4) of the Mines Act. A copy of this variance is available to any MoT regional or district Occupational Health and Safety Committees which may be involved in sand and gravel pit or quarry operations.”

Section 4.9.1 – Health, Safety and Reclamation Code for Mines in British Columbia (Code)

“Due to the short period of time that some haul trucks spend at your various pits and quarries, i.e. for loading purposes only, I am hereby enabling a Health and Safety Inspector of the Mines Branch to vary the requirement for automatic back-up alarms on transient haul trucks at the discretion of the Inspector. If, in the opinion of the Inspector, the time spent by the truck at the pit or quarry is of short duration, and the required routing of the truck for loading purposes is such that no hazards are created by such a routing, then an automatic back-up alarm need not be required and the use of any audio warning device will be accepted while in reverse.”

“You are reminded that the above refers only to transient haul trucks and not to trucks used for production purposes; neither does it apply to any other vehicle in excess of 7,000 kg gross vehicle weight.”

Section 4.9.5 - Health, Safety and Reclamation Code for Mines in British Columbia (Code)

As a haul truck driver's visibility of the area surrounding the truck tends to improve as the size of the truck decreases, I am prepared to allow a variance to the above section of the Code as follows:

“Provided that any haul truck used for production purposes at a gravel pit or quarry does not exceed 45 tonnes gross vehicle weight, there will be no requirement for the attachment of a whip antenna fitted with a flag and lamp, or a flashing light mounted on the cab of nonproduction vehicles.”

SCHEDULE 4**LAND****Part 8****Concession Highway Encumbrances**

1. This Part 8 of Schedule 4 identifies Concession Highway Encumbrances. The Concession Highway Encumbrances may be updated from time to time until the Commencement Date of this Agreement.
2. Concession Highway Encumbrances include subsisting exceptions and reservations of interests, rights, privileges and titles contained in any previous Crown grant of the Existing Highway.
3. With respect to the Existing Highway, Concession Highway Encumbrances include the following:
 - 3.1 permits issued by the Ministry of Transportation and the other Encumbrances which are set out in Table 1 to this Part 8 of Schedule 4;
 - 3.2 the certificates issued under the *Railway Act* of British Columbia and any similar predecessor legislation, and approvals by federal transportation authorities, which are set out in Table 2 of this Part 8 of Schedule 4;
 - 3.3 the agreements issued under the *Forest Act* of British Columbia and any similar predecessor legislation, which are set out in Table 3 of this Part 8 of Schedule 4;
 - 3.4 the mineral tenures issued under the *Mineral Tenure Act* and any similar predecessor legislation, which are set out in Table 4 of this Part 8 of Schedule 4.
4. With respect to the Acquisition Lands, Concession Highway Encumbrances include all Encumbrances affecting the land which are approved by the Province.
5. With respect to the land referred to in Section 8.6.2 of the Agreement, Concession Highway Encumbrances include all encumbrances affecting that land which are acceptable to the Province in accordance with the terms of that section of the Agreement.

Table 1: Permits and other Encumbrances

Reference#	Document	Date	General Location	Miscellaneous
CA350-73	Permit	1973	Hwy 99, Newman Creek	Access
CA286/74	Permit	1974	Hwy 99, Britannia Beach	Access
IR-61-74	Permit	1974	Hwy 99	Underground cable
IR-173-74	Permit	1974	Hwy 99, Garibaldi	Signage
15/17/73	Permit	1973	Hwy 99, Strachan Creek	Pole(s)
15/24/73	Permit	1973	Hwy 99, Squamish	Pole(s), North of Magnesia Creek
15/27/73	Permit	1973	Hwy 99, Strachan Creek	Pole(s)
15/39/73	Permit	1973	Hwy 99, Brackendale	Installation of sewage system
15/52/73	Permit	1973	Hwy 99, Strachan Creek	Pole(s)
15/86/73	Permit	1973	Hwy #99, Strachan Creek	Pole(s)
15/122/73	Permit	1973	Unnamed road south of Upper Squamish Road	Pole(s)
15/218/73	Permit	1973	Squamish Valley Road	Access
15/228/73	Permit	1973	Squamish Valley Road	Access
15/269/73	Permit	1973	Hwy 99, Squamish	Pole(s)
15/346/73	Permit	1973	Hwy 99, Strachan Creek	Installation and maintenance of a bridge over Strachan Creek No. 2
15/393/73	Permit	1973	Hwy 99, Whistler	Pole(s)
15/404/73	Permit	1973	Hwy 99, West Vancouver	Pole(s)
15/412/73	Permit	1973	Unnamed road, Whistler	Installation of underground electrical distribution
15-5-74	Permit	1974	Hwy 99, Squamish	Installation of pipe
15/155/74	Permit	1974	Old BC Hydro Access Road	Installation of underground cable
15/211/74	Permit	1974	Hwy 99, Strachan and Newman Creek	Pole(s)
15/286/74	Permit	1974	Stevens Drive, Squamish	Access
15/308/74	Permit	1974	Garibaldi Park Road, Squamish	Access
15/309/74	Permit	1974	Garibaldi Park Road, Squamish	Access
15-315/74	Permit	1974	Garibaldi Park Road, Squamish	Access
15-316/74	Permit	1974	Garibaldi Park Road, Squamish	Access
15-326/74	Permit	1974	Garibaldi Park Road, Squamish	Access
15-358/74	Permit	1974	Garibaldi Park Road, Squamish	Access

Reference#	Document	Date	General Location	Miscellaneous
15-359/74	Permit	1974	Garibaldi Park Road, Squamish	Access
15-360-74	Permit	1974	Garibaldi Park Road, Squamish	Access
15-361-74	Permit	1974	Garibaldi Park Road, Squamish	Access
15/393/74	Permit	1974	Hwy 99, Squamish	Pole(s)
15/504/74	Permit	1974	Hwy 99, Squamish	Pole(s)
15/505/74	Permit	1974	Mamquam Road and Hwy 99	Anchor(s)
15/509/74	Permit	1975	Hwy 99, Squamish	Installation of water service connection
15-1-75	Permit	1975	Hwy 99, Squamish	Access
15-2-75	Permit	1975	Hwy 99, Squamish	Access
15/24/75	Permit	1975	Hwy 99, Stawamus River Bridge, Squamish	Installation of underground construction
11/27/75	Permit	1975	Hwy 99, Squamish	Access
11/29/75	Permit	1975	Hwy 99, Squamish	Installation of water service line
11/32/75	Permit	1975	Depot Avenue, Squamish	Installation of storm sewer
11/34/75	Permit	1975	Hwy 99, Squamish	Installation of sanitary sewer
11-43-75	Permit	1975	Unnamed road	Access
11-65-75	Permit	1975	Daisy Lake Road	Access
11-68-75	Permit	1975	Squamish Valley Road, Squamish	Access
11-73-75	Permit	1975	Blacktusk Road, Squamish	Pole(s)
11-77-75	Permit	1975	Hwy 99, Alice Lake Junction, Squamish	Installation of water main
11-81-75	Permit	1975	Blacktusk Road, Squamish	Installation of underground cable
11-89-75	Permit	1975	Power Station Road, Squamish	Pole(s)
11-120-75	Permit	1975	Upper Squamish Valley Road	Access
11-124-75	Permit	1975		Access
11-134-75	Permit	1975	Hwy 99, Squamish	Access
11-146-75	Permit	1975	Squamish Valley Road, Squamish	Pole(s)
IR156/75	Permit	1975	Hwy 99, Britannia Beach	Signage
11-4-76	Permit	1976	Hwy 99, Britannia Beach	Underground construction
11-10-76	Permit	1976	Mamquam Blind Channel Bridge, Squamish	Underground construction
11-11-76	Permit	1976	Ring Creek Road	Access
11-42-76	Permit	1976	Stawamus River Bridge, Squamish	Underground construction

Reference#	Document	Date	General Location	Miscellaneous
11-59-76	Permit	1976	Upper Squamish Valley Road, Squamish	Access
11-61-76	Permit	1976	Hwy 99, Squamish	Aerial construction
11-109-76	Permit	1976	Hwy 99, Squamish	Aerial construction
11-110-76	Permit	1976	Hwy 99, Squamish	Underground construction
11-118-76	Permit	1976	Hwy 99, Whistler	Installation of sewer line
11-141-76	Permit	1977	Hwy 99, Squamish	Aerial construction
CA255/76	Permit	1976	Hwy 99, Whistler	Access
IR11/76	Permit	1976	Shannon Falls Park, Squamish	Paving
11-8-77	Permit	1977	Hwy 99, Squamish	Pole(s)
11-80-77	Permit	1977	Diamondhead Road, Squamish	Access
11-81-77	Permit	1977	Upper Squamish Valley Road, Squamish	Access
11-82-77	Permit	1977	Hwy 99 Alice Lake Section, Squamish	Access
11-91-77	Permit	1977	Hwy 99, Brackendale	Access
11-92-77	Permit	1977	Hwy 99, Brackendale	Access
11-145-77	Permit	1977	Upper Squamish Valley Road, Squamish	Access
11-164-77	Permit	1977	Hwy 99, Britannia area	Underground construction
11-174-77	Permit	1977	Hwy 99	Installation of pipes
11-184-77	Permit	1977	Hwy 99, Whistler	Installation of pipes
11-191-77	Permit	1977	Diamondhead Road, Squamish	Access
11-192-77	Permit	1977	Diamondhead Road, Squamish	Access
11-194-77	Permit	1977	Centennial Way and Hwy 99	Water pipe
11-211-77	Permit	1977	Hwy 99, Squamish	Installation of pipe
11-212-77	Permit	1977	Hwy 99, Mamquam River Bridge, Squamish	Underground electrical duct
11-220-77	Permit	1977	Hwy 99 at Alice Lake	Poles
11CA40-77	Permit	1977	Hwy 99, Squamish	Industrial access
11CA177-77	Permit	1977	Hwy 99 at Blacktusk Village	Access
11-13-78	Permit	1978	Ring Creek Road, Squamish	Access
11-18-78	Permit	1978	Ring Creek Road, Squamish	Access
11-42-78	Permit	1978	Ring Creek Road	Access
11-65-78	Permit	1978	Hwy 99	Landscaping
11-72-78	Permit	1978	Ring Creek Road	Access

Reference#	Document	Date	General Location	Miscellaneous
11-92-78	Permit	1978	Hwy 99, Britannia Beach	Aerial construction
11-144-78	Permit	1978	Hwy 99, Depot Road	Poles
11-145-78	Permit	1978	Hwy 99, Garibaldi Way	Poles
11-146-78	Permit	1978	Hwy 99, New Mamquam Road, Squamish	Poles
11-150-78	Permit	1978	Ring Creek Road	Access
11 CA12 /78	Permit	1978	Hwy 99, Lucille Lake	Access
11CA29 /78	Permit	1978	Hwy 99, Squamish	Access
11CA37 /78	Permit	1978	Hwy 99, Squamish	Access
11CA65 /78	Permit	1978	Hwy 99, Britannia Beach	Access
IR 41/78	Permit	1978	Hwy 99, Darrell Bay	Signage
11-2-79	Permit	1979	Hwy 99, Whistler	Pole
11-10-79	Permit	1979	Hwy 99, Strachan / Newman Creek	Construction of poles
11-11-79	Permit	1979	Montizambert Wynd	Installation of sewage disposal system.
11-54-79	Permit	1979	Hwy 99, Whistler	Poles
11-73-79	Permit	1979	Hwy 99, Whistler	Sewer pipes
11-108-79	Permit	1979	Upper Squamish Valley Road	Access
11-111-79	Permit	1979	Hwy 99, Whistler	Sanitary force main
11-127-79	Permit	1979	Hwy 99, Squamish	Water pipe
11-138-79	Permit	1979	Ring Creek Road	Access
11-139-79	Permit	1979	Ring Creek Road	Access
11-186-79	Permit	1979	Hwy 99, M Bridge	Water line
11-192-79	Permit	1979	Hwy 99, Whistler	Poles
11 CA64 /79	Permit	1979	Hwy 99, Horseshoe Bay	Access
11-8-80	Permit	1980	Hwy 99, Alice Lake Road	To install poles
11-10-80	Permit	1980	Hwy 99	Pole installation
11-11-80	Permit	1980	Old Garibaldi Road	Pole(s)
11-71-80	Permit	1980	Squamish Valley Road	Pole(s)
11-116-80	Permit	1980	Hwy 99 from Welwood Access Road to Mamquam Blind Channel Bridge	Gas pipes

Reference#	Document	Date	General Location	Miscellaneous
11-134-80	Permit	1980	Hwy 99, Mamquam Blind Channel Bridge	Water main connection
11-144-80	Permit	1980	Diamond Head Road, Squamish	Access
11-151-80	Permit	1980	Hwy 99, Ocean View Road	Pole(s)
11-170-80	Permit	1980	Hwy 99	Sanitary sewer
11-7-81	Permit	1981	Hwy 99, Lions Bay	Arial construction
11-13-81	Permit	1981	Hwy 99, Porteau Camp	Arial construction
11-17-81	Permit	1981	Hwy 99, Lions Bay	Underground construction
11-31-81	Permit	1981	Hwy 99, Sunset Point	Pole(s)
11-47-81	Permit	1981	Hwy 99, Sunset Point	Water main
11-56-81	Permit	1981	Hwy 99, Lions Bay	Pole(s)
11-63-81	Permit	1981	Hwy 99, Lions Bay	Underground electrical distribution.
11-68-81	Permit	1981	Hwy 99, Lions Bay	Arial and underground construction.
11-76-81	Permit	1981	Unnamed road, Upper Squamish Valley	Pole and anchor.
11-98-81	Permit	1981	Hwy 99, Lions Bay	Underground installation
11-115-81	Permit	1981	Hwy 99 at proposed intersection of Whistler Trials Recreation Vehicle Park	Pole(s)
11-128-81	Permit	1981	Unnamed road, Upper Squamish Valley	Pole(s)
11-129-81	Permit	1981	Unnamed road, Upper Squamish Valley	Pole(s)
11-140-81	Permit	1981	Hwy 99, Squamish Industrial Park	Drainage ditch
11 CA 44/81	Permit	1981	Hwy 99	Temporary access
190-1-2	Authorization Letter	1981	Hwy 99, Squamish	Signage
IR-18-81	Permit	1981	Mamquam Bridge, Hwy 99	Signage
11-5-82	Permit	1981	Hwy 99, Pasco Road	Retaining wall and water tank
11-23-82	Permit	1982	Hwy 99, Whistler	Pole(s)
11-26-82	Permit	1982	Hwy 99, Strachan Creek	Pole(s)
11-40-82	Permit	1982	Squamish Valley Road	Pole(s)
11-53-82	Permit	1982	Hwy 99	Sewer line
11-58-82	Permit	1982	Hwy 99, Garibaldi	Pole(s)
11-65-82	Permit	1982	Hwy 99, Lions Bay	Balcony encroachment

Reference#	Document	Date	General Location	Miscellaneous
11-78-82	Permit	1982	Hwy 99, Newman Creek	Pole(s)
11-79-82	Permit	1982	Hwy 99, Sunset Creek	Pole(s)
11-IR-1-82	Permit	1982	Hwy 99, Sunset Creek	Signage
11-7-83	Permit	1983	Squamish Valley Road	Culvert
11-9-83	Permit	1983	Hwy 99	Anchor
11-IR-12-83	Permit	1983	Hwy 99, Squamish	Signage
11-IR-13-84	Permit	1984	Hwy 99	Signage
11-11-84	Permit	1984	Squamish Valley Road	Access
11-32-84	Permit	1984	Magee Road	Access
11-35-84	Permit	1984	Magee Road	Poles and anchors
11-46-84	Permit	1984	Hwy 99, Brunswick Beach	Pole(s)
11-48-84	Permit	1984	Hwy 99, Horseshoe Bay	Pole(s)
11-49-84	Permit	1984	Hwy 99, Horseshoe Bay	Pole(s)
11-50-84	Permit	1984	Hwy 99, Horseshoe Bay	Pole(s)
11-51-84	Permit	1984	Hwy 99, Horseshoe Bay	Pole(s)
11-62-84	Permit	1984	Hwy 99, Magnesia Creek	Pole(s)
11-63-84	Permit	1984	Hwy 99, Charles Creek	Pole(s)
11-16-85	Permit	1985	Garibaldi Park Road	Logging Access
11-32-85	Permit	1985	Hwy 99, Magnesia Creek	Pole(s)
11-31-85	Permit	1985	Hwy 99, Turpin Creek and Newman Creek	Pole(s)
11-42-85	Permit	1985	Hwy 99, Newman Creek Bridge	Poles and anchors
11-59-85	Permit	1985	Hwy 99, Newman Creek and Howe Sound	Pole(s)
11-1-86	Permit	1986	Hwy 99, Lions Bay	Pole(s)
11-3-86	Permit	1986	Hwy 99, Horseshoe Bay	Access
11-6-86	Permit	1986	Hwy 99, Lions Bay	Anchor(s)
11-27-86	Permit	1986	Hwy 99, Squamish	Waterline
11-48-86	Permit	1986	Hwy 99, Squamish	Pole(s)
11-54-86	Permit	1986	Brunswick Pit Road, Lions Bay	Access
11-63-86	Permit	1986	Hwy 99, Lions Bay	Pole(s)
11-67-86	Permit	1986	Hwy 99, Newman Creek	Pole(s)
11-68-86	Permit	1986	Hwy 99	Encroachment

Reference#	Document	Date	General Location	Miscellaneous
11-76-86	Permit	1986	Hwy 99, Lions Bay, Newman Creek Marina	Pole and anchor
11-77-86	Permit	1986	Hwy 99, Lions Bay	Pole(s)
11-89-86	Permit	1986	Hwy 99 between McQuire and Callaghan Creek, south of Whistler	Pole(s)
11-21-1A-86/3	Permit	1986	Hwy 99, Whistler	Access
11-14-87	Permit	1987	Hwy 99, Lions Bay	Service duct
11-34-87	Permit	1987	Bayview Road, Lions Bay	Temporary access
11-50-87	Permit	1987	Squamish Valley Road, No. 1914, Squamish	Use and maintenance of a deep well and pump station
11-39-87	Permit	1987	Hwy 99, Squamish	Poles and anchors
11-53-87	Permit	1987	Hwy 99, Squamish	Poles and anchors.
11-62-87	Permit	1987	Hwy 99, Lions Bay	Pole(s)
11-98-87	Permit	1987	Hwy 99, Squamish	Anchor and underground duct
11-3-88	Permit	1988	Squamish Valley Road, No. 1914, Squamish	Water line
11-5-88	Permit	1988	Hwy 99, Lions Bay	Pole line
11-12-88	Permit	1988	Hwy 99, Squamish	Water line
11-28-88	Permit	1988	Hwy 99, Strip Creek	Poles
11-36-88	Permit	1988	Hwy 99, Squamish	Poles
11-44-88	Permit	1988	Hwy 99, Lions Bay	Water line
11-49-88	Permit	1988	Brunswick Beach, Lions Bay	Pole(s)
11-52-88	Permit	1988	Hwy 99, Strip Creek	Installation of service box
11-37-89	Permit	1989	Hwy 99, Darrell Bay	Access
11-47-89	Permit	1989	Garibaldi Park Road, No. 1906	Access
11-51-89	Permit	1989	Hwy 99, Tunnel Point	Pole(s)
11-58-89	Permit	1989	Hwy 99, Ansell Place	Underground cable
11-72-89	Permit	1989	Hwy 99, Squamish	Propane gas main
11-143-89	Permit	1989	Squamish Valley Road, No. 1914	Access
11-150-89	Permit	1989	Hwy 99, Brohm Lake	Hydro towers
11-CA-45-89	Permit	1989	Hwy 99, south of Whistler	Access
11-CA-15-82	Permit	1982	Hwy 99	Access
11-CA-53-83	Permit	1983	Hwy 99, Soo Provincial Forest	Access

Reference#	Document	Date	General Location	Miscellaneous
11-CA-24-84	Permit	1984	Hwy 99	Access
11-CA-49-84	Permit	1984	Hwy 99	Access
11-CA-87-88	Permit	1988	Hwy 99, Britannia Beach	Access
11-CA-35-88	Permit	1988	Hwy 99, Newman Creek	Access
11-CA-15-79	Permit	1979	Hwy 99	Access
11-CA-1-90	Permit	1990	Hwy 99, Britannia Beach	Access
11-CA-2-90	Permit	1990	Hwy 99, Horseshoe Bay	Access
11-CA-9-90	Permit	1990	Hwy 99, Montizambert Creek Bridge	Access
11-CA-16-90	Permit	1990	Hwy 99, Squamish	Temporary access
11-CA-01-91	Permit	1991	Hwy 99, Squamish	Access
11-CA-02-91	Permit	1991	Hwy 99, Horseshoe Bay	Access
11-CA-06-91	Permit	1991	Hwy 99, Squamish	Access
11-CA-09-91	Permit	1991	Hwy 99, Squamish	Access
11-CA-10-91	Permit	1991	Hwy 99, Horseshoe Bay	Access
11-CA-11-91	Permit	1991	Hwy 99, Squamish	Access
11-CA-12-91	Permit	1991	Hwy 99, Furry Creek	Access
11-CA-1-92	Permit	1992	Hwy 99, Britannia Beach	Temporary access
11-139-90	Permit	1990	Hwy 99, Squamish	Sanitary sewer
11-131-90	Permit	1990	Hwy 99, Black Tusk Village	Anchors
11-21-90	Permit	1990	Hwy 99, Horseshoe Bay	Emergency parking area
11-3-90	Permit	1990	Hwy 99, Squamish	Natural gas pipeline
11-14-90	Permit	1990	Hwy 99, Squamish	Construction of shelter
11-22-90	Permit	1990	Hwy 99, Squamish	Anchor
11-26-90	Permit	1990	Hwy 99, Loggers Lane, Squamish	Anchor

Reference#	Document	Date	General Location	Miscellaneous
11-44-90	Permit	1990	Horseshoe Bay	Drilling of holes, entrance of Horseshoe Bay Ferry Terminal
11-103-90	Permit	1990	Hwy 99, Squamish	Pole(s)
11-114-90	Permit	1990	Hwy 99, Whistler Industrial Park	Conduit
11-165-90	Permit	1990	Squamish Valley Road, No. 1914, Squamish	Access
11-182-90	Permit	1990	Squamish Valley Road, No. 1914, Squamish	Access
11-194-90	Permit	1990	Hwy 99, Horseshoe Bay	Pole(s)
11-16-91	Permit	1991	Squamish Valley Road, No. 1914, Squamish	
11-18-91	Permit	1991	Ring Creek Road, No. 1907, Squamish	Access
11-29-91	Permit	1991	Hwy 99, Squamish	Pole(s)
11-41-91	Permit	1991	Hwy 99, Brunswick Beach Gravel Pit	Pole(s)
11-45-91	Permit	1991	Squamish Valley Road, No. 1914, Squamish	Access
11-50-91	Permit	1991	Hwy 99, Lions Bay	Pole(s)
11-63-91	Permit	1991	Britannia Beach	Addition to existing building
11-71-91	Permit	1991	Magee Lane, No. 2031, Squamish	Pole(s)
11-70-91	Permit	1991	Deboer Road, No. 2020, Squamish	Pole(s)
11-69-91	Permit	1991	Magee Road, No. 1975, Squamish	Pole(s)
11-148-90	Permit	1990	Hwy 99, Squamish	Natural gas pipeline
11-173-90	Permit	1990	Hwy 99, Squamish	Cable
11-156-90	Permit	1990	Hwy 99, Squamish	Pole(s)
11-02-91	Permit	1991	Hwy 99, Britannia Beach	Underground conduit
11-08-91	Permit	1991	Squamish Valley Road, No. 1914, Squamish	Pole(s)
11-47-91	Permit	1991	Hwy 99, Squamish	Sidewalk and lighting
11-53-91	Permit	1991	Hwy 99, Squamish	Landscaping
11-56-91	Permit	1991	Hwy 99, Squamish	Landscaping
11-81-91	Permit	1991	Hwy 99, Squamish	Storm sewer system
11-144-91	Permit	1991	Hwy 99, Squamish	Meter station
11-151-91	Permit	1991	Deboer Road, No. 1976, Squamish	Access
11-170-91	Permit	1991	Ring Creek Road, No. 1907, Squamish	Access

Reference#	Document	Date	General Location	Miscellaneous
11-CA-221-91	Permit	1991	Hwy 99, Britannia Beach	Access
11-234-91	Permit	1991	Hwy 99, Lions Bay	Pole(s)
11-238-91	Permit	1991	Hwy 99, Squamish	Anchor(s)
11-247-91	Permit	1991	Hwy 99, Lawrence Way and Kelvin Grove	Arial construction
11-254-91	Permit	1991	Squamish Valley Road, Squamish	Access
11-04-92	Permit	1992	Hwy 99, Horseshoe Bay	Underground conduit
11-06-92	Permit	1992	Magee Lane, Squamish	Access
10003	Permit	1992	Magee Rd #1975, Squamish	Pole(s)
10012	Permit	1992	Squamish Valley Rd #1914, Squamish	Access
10023	Permit	1992	Hwy 99, Squamish	Brohm Interpretative Forest Parking Lot
11314	Permit	1995	Brohm Lake, Function Junction, Shadow Lake	Signage
10031	Permit	1992	Deboer Rd. #1977, Squamish	Access
10056	Permit	1992	Hwy 99, Britannia Beach	Access
10058	Permit	1992	Hwy 99, Horseshoe Bay	Installation of water main
10059	Permit	1992	Hwy 99, Horseshoe Bay	Construction of underground conduit
10082	Permit	1992	Hwy 99, Lions Bay	Installation of fence
10083	Permit	1992	Magee Rd. #1975, Squamish	Access
10087	Permit	1992	Garibaldi Park Rd #1906, Squamish	Access
10098	Permit	1992	Hwy 99, West Vancouver	Pole(s)
10108	Permit	1992	Hwy 99, Furry Creek	Temporary access
10156	Permit	1992	Hwy 99, Britannia Beach	Access
10157	Permit	1992	Hwy 99, Horseshoe Bay	Access
10158	Permit	1992	Hwy 99, Squamish	Access
10195	Permit	1992	Magee Road, No. 1614, Squamish	Access
10200		1992	Hwy 99, West Vancouver	Interchange at Ansell Place
10205	Permit	1992	Hwy 99, West Vancouver	Construction of emergency parking near Ansell Place
10222	Permit	1992	Hwy 99, Whistler	Underground duct
10244	Permit	1992	Hwy 99, Sunset Marina	Signage
10247	Permit	1992	Squamish Valley Road No. 1914, Squamish	Access

Reference#	Document	Date	General Location	Miscellaneous
10248	Permit	1992	Hwy 99, Squamish	Signage at Stawamus Chief Pull out
10250	Permit	1992	Hwy 99, Furry Creek	Installation of duct
10261	Permit	1992	Hwy 99, Furry Creek	Pole(s)
10262	Permit	1992	Hwy 99, Furry Creek	Pole(s)
10270	Permit	1992	Garibaldi Park Road No. 1906, Squamish	Access
10285	Permit	1993	Hwy 99, Squamish	Installation of recycling bins
10328	Permit	1993	Hwy 99, Furry Creek	Installation of PVC steel casing pipe
10329	Permit	1993	Hwy 99, Furry Creek	Installation of PVC steel casing pipe
10330	Permit	1993	Hwy 99, Furry Creek	Installation of underground electrical distribution
10331	Permit	1993	Hwy 99, Furry Creek	Installation of water pipe and sanitary sewer
10332	Permit	1993	Hwy 99, Furry Creek	Installation of storm culvert and ducts
10333	Permit	1993	Hwy 99, Furry Creek	Installation of storm culvert pipes and ducts
10334	Permit	1993	Hwy 99, Furry Creek	Installation of pipe, duct and sewer
10351	Permit	1993	Hwy 99, Furry Creek Subdivision	Underground conduit
10352	Permit	1993	Hwy 99, Furry Creek Subdivision	Underground conduit
10352	Permit	1993	Hwy 99, Furry Creek Subdivision	Underground conduit
10364	Permit	1993	Hwy 99, Furry Creek	Installation of underground conduit
10364	Permit	1993	Hwy 99, Furry Creek	Installation of underground conduit
10368	Permit	1993	Hwy 99, Lions Bay	Planting, installation of watering system
10373	Permit	1993	Hwy 99, Squamish	Signage at Stawamus Chief pullout
10374	Permit	1993	Hwy 99, Furry Creek	Access
10375	Permit	1993	Hwy 99, Furry Creek	Installation of drainage and ditches
10379	Permit	1993	Hwy 99, Squamish	Underground conduit
10394	Permit	1993	Hwy 99, Furry Creek	Anchor(s)
10431	Permit	1993	Hwy 99, Squamish	
10432	Permit	1993	Hwy 99, Whistler	Access

Reference#	Document	Date	General Location	Miscellaneous
10433	Permit	1993	Hwy 99, Squamish	Access
10434	Permit	1993	Garibaldi Park Road, No. 1906, Squamish	Access
10445	Permit	1993	Britannia Beach	Signage
10462	Permit	1993	Hwy 99, Horseshoe Bay	Pole(s)
10468	Permit	1993	Hwy 99, Horseshoe Bay	Pole(s)
10473	Permit	1993	Hwy 99, Black Tusk Village	Access
10515	Permit	1993	Hwy 99, Furry Creek	Sewer
10568	Permit	1993	Deboer Road, Squamish	Access
10569	Permit	1993	Squamish Valley Road, No. 1914, Squamish	Access
10570	Permit	1993	Squamish Valley Road, No. 1914, Squamish	Access
10578	Permit	1993	Hwy 99 Britannia Beach, Squamish	Construction of structures
10594	Permit	1993	Hwy 99 from Newman Creek to Lions Bay	Pole(s)
10628	Permit	1993	Squamish Valley Road, No. 1914, Squamish	Access
10742	Permit	1994	Hwy 99, Lions Bay	Pole(s)
10763	Permit	1994	Daisy Lake Road, No. 1905	Access
10780	Permit	1994	Hwy 99, Squamish	Installation of water pipe
10840	Permit	1994	Hwy 99, Squamish	Reconstruction, repaving laning, landscaping and canalizations
10847	Permit	1994	Hwy 99, Squamish	Access
10848	Permit	1994	Hwy 99, Squamish	Access
11-CA-11-91	Permit	1991	Hwy 99, Squamish	Access
10854	Permit	1994	Furry Creek Drive, No. 1822	Underground conduit
10855	Permit	1994	Furry Creek Drive, No. 1822	Underground conduit
10860	Permit	1994	Squamish Valley Road, No. 1914, Squamish	Access
10862	Permit	1994	Furry Creek Drive, No. 1822, Britannia Beach	Access
10872	Permit	1994	Hwy 99, Squamish	Underground conduit
10893	Permit	1994	Hwy 99, Strachan Creek	Access
10898	Permit	1994	Hwy 99, Furry Creek	Access
10899	Permit	1994	Hwy 99, Furry Creek	Access

Reference#	Document	Date	General Location	Miscellaneous
10908	Permit	1994	Magee Lane, No. 1979, Squamish	Access
10926	Permit	1994	Ring Creek Road, No. 1907, Squamish	Access
10947	Permit	1994	Hwy 99, Horseshoe Bay	Access
CPA144 / 68	Permit	1986	Hwy 99, Sunset Beach	Access.
11040	Permit	1995	Hwy 99, Garibaldi / Sunshine Coast	Signage
11068	Permit	1995	Hwy 99, Whistler	Bus pull out
11090	Permit	1995	Garibaldi Park Road No. 1906, Squamish	Access
11097	Permit	1995	Hwy 99, Squamish	Access
11104	Permit	1995	Hwy 99, Strachan Creek	Underground service vault
11106	Permit	1995	Country Club Road, No. 1483, Furry Creek	Access
11113	Permit	1995	Hensman Road, No. 1971 Squamish	Access
11133	Permit	1995	Hwy 99, Furry Creek to Britannia Beach	Underground conduit
11137	Permit	1995	Hwy 99, Porteau Cove	Installation of fence
11138	Permit	1995	Hwy 99, Horseshoe Bay	Access
11154	Permit	1995	Drummond Road No. 1970, Squamish	Access
11162	Permit	1995	Squamish Valley Road, Squamish	Access
11168	Permit	1995	Squamish Valley Road, No. 1916, Squamish	Access
11173	Permit	1995	Furry Creek Drive, No. 1822, Squamish	Access
11177	Permit	1995	Hwy 99, Squamish	Installation of manholes
11184	Permit	1995	Hwy 99, Squamish	Construction of intersection at Finch Drive
11198	Permit	1995	Squamish Valley Road, No. 1914, Squamish	Access
11203	Permit	1995	Ring Creek Road, No. 1907, Squamish	Access
11238	Permit	1995	Hwy 99, Montizambert Creek	Access
11253	Permit	1995	Squamish Valley Road, No. 1914, Squamish	Access
11256	Permit	1995	Squamish Valley Road, No. 1914, Squamish	Access
11272	Permit	1995	Hwy 99	Signage, Mamquam Road and Depot Road

Reference#	Document	Date	General Location	Miscellaneous
11314	Permit	1995	Hwy 99	Signage
11342	Permit	1995	Hwy 99, Old Garibaldi Town Site	Service gate installation
11343	Permit	1995	Furry Creek Drive, No. 1822, Furry Creek	Access
11387	Permit	1995	Magee Lane, No. 1979, Squamish	Access
11389	Permit	1996	Squamish Valley Road, No. 1914, Squamish	Pole(s)
11439	Permit	1996	Hwy 99, Lions Bay	Pole(s)
11448	Permit	1996	Furry Creek Drive, No. 1822, Furry Creek	Access
11476	Permit	1996	Hwy 99, Squamish	Signage, Strip Creek and Stawamus Chief Viewpoint
11477	Permit	1996	Hwy 99, Squamish	Signage, Brohm Lake
11491	Permit	1996	Hwy 99, Cleveland Avenue	Placement of gravel surcharge
11492	Permit	1996	Hwy 99, Squamish	Widening of Cleveland Avenue
11519	Permit	1996	Hwy 99, Horseshoe Bay	Signage
11600	Permit	1996	Furry Creek Drive, No. 1822, Furry Creek	Access
11613	Permit	1996	Hwy 99, Squamish	Access
11623		1996	Hwy 99, Squamish	Concrete culvert
11624		1996	Hwy 99, Britannia Beach	Access
11632		1996	Hwy 99, Horseshoe Bay	Utility poles.
11645	Permit	1997	Hwy 99, Furry Creek	Ducts
11648		1996	Hwy 99, Squamish	Underground utility, Cleveland.
11649		1996	Hwy 99, Squamish	Pole(s)
11660	Permit	1996	Squamish Valley Road, Squamish	Access
11666	Permit	1996	Hwy 99, Cheakamus	Special event
11677	Permit	1992	Hwy 99, Britannia Beach	Access
11705	Permit	1997	Furry Creek Drive	Access
11719		1996	Hwy 99, Britannia Beach	Access
11736	Permit	1998	Hwy 99, Squamish	Installation of sanitary forcemain
11761	Permit	1996	Furry Creek Drive	Access
11776	Permit	1996	Furry Creek Drive Road	Access
11798	Permit	1996	Hwy 99	Signage

Reference#	Document	Date	General Location	Miscellaneous
11852	Permit	1997	Squamish Valley Road, Squamish	Access
11854	Permit	1998	Hwy 99, Furry Creek	Access
11871		1998	Hwy 99, Squamish	Road work.
11889	Permit	1997	Furry Creek Drive Road, Furry Creek	Access
11924	Permit	1997	Ring Creek Road, No. 1907	Access
11953		1997	Hwy 99, Yahoo Creek	Access.
11960	Permit	1997	Furry Creek Drive, Furry Creek	Access
11965		1997	Hwy 99, Horseshoe Bay	Pole(s)
11971		1997	Ring Creek Road, Squamish	Temporary holding area.
11973	Permit	1997	Furry Creek Drive	Access
11985	Permit	1997	Furry Creek Drive	Access
12978	Permit	2000	Hwy 99	
13003	Permit	2000	Stone Gate Drive, #1828	Access
13002	Permit	2000	Stone Gate Drive, #1828	Access
12997	Permit	2000	Hwy 99, Squamish	Anchor(s)
12995	Permit	2000	Hwy 99, Whistler	Anchors, near Brandywine Falls and Function Junction
12993	Permit	2000	Stone Gate Drive, #1828	Access
12991		2000	Alta Lake Road	PVC ducts
12822	Permit	1999	Hwy 99, Function Junction	Poles and anchors
13033	Permit	2000	Hwy 99, Ansell Place	Highway road improvements
13014	Permit	2000	Hwy 99, Squamish	Signage
13013	Permit	2000	Stone Gate Drive, #1828, Furry Creek	Access
12810	Permit	1999	Marina Access Road, Furry Creek	Access
13035	Permit	2000	Hwy 99	Pole line relocation at Ansell Place
12736	Permit	1999	Hwy 99, Mamquam River Bridge	Installation of gas pipeline
12789	Permit	1999	Hwy 99, Squamish	Installation of HDPE ducts for fiberoptic installation, near Stawamus Forest Service Road
12779	Permit	2001	Hwy 99, Furry Creek	Access
12801	Permit	1999	Hwy 99, Function Junction	Anchor(s)
12072	Permit	1997	Hwy 99, Furry Creek	Installation of street lighting
12130	Permit	1997	Hwy 99, Brunswick Beach	Exploratory excavation for water main crossing

Reference#	Document	Date	General Location	Miscellaneous
12145	Permit	1998	Alice Lake Road, Squamish	Water well
12739	Permit	1999	Hwy 99, Brunswick Gravel Pit	Activation of new cable on pole link
12753	Permit	2000	Hwy 99, Britannia Beach	Recreational access
12861	Permit	1999	Lions Bay	Access via right of way adjacent to Alberta Creek
12854	Permit	1999	Hwy 99, Lions Bay	Access
12875	Permit	1999	Sea View Drive, #1825, Furry Creek	Access
12874	Permit	1999	Stone Gate Drive, #1828	Access
12873	Permit	1999	Stone Gate Drive, #1828, Furry Creek	Access
12903	Permit	1999	Hwy 99, Squamish	Signage
12801	Permit	1999	Hwy 99, Function Junction	Anchor(s)
12789	Permit	1999	Hwy 99, Stawamus Forest Service Road	Installation of HDPE ducts for fibroptic installation
12779	Permit	2001	Hwy 99, Furry Creek	Access
12736	Permit	1999	Hwy 99, Mamquam River Bridge	Installation of gas pipeline
12739	Permit	1999	Hwy 99, Brunswick Gravel Pit	Activation of new cable on pole link
12955		2000	Hwy 99, Whistler	Proposed valley trail construction
12941	Permit	2000	Hwy 99, Lions Bay	Pole(s)
12939	Permit	2000	Hwy 99	Multi-use gravel trail between Depot Road and Squamish Valley Road
12936	Permit	2000	Hwy 99, Lions Bay	Bus shelter
12935	Permit	2000	Hwy 99	Installation of joint trench
12928	Permit	2000	Stone Gate Drive, #1828	Access
12922	Permit	2000	Hwy 99, Squamish	Access
12912	Permit	2000	Hwy 99, Squamish	Installation of metal gate and signage
13165	Permit	2001	Hwy 99, Cheakamus Canyon	Signage
13164	Permit	2001	Hwy 99, Horseshoe Bay	Signage
13163	Permit	2001	Hwy 99, Britannia	Signage
13249	Permit	2001	Hwy 99, Lions Bay	Temporary helicopter landing station
13228.1	Permit	2003	Hwy 99, Lions Bay	Installation of water main
13226		2001	Hwy 99, Brunswick Beach Pit	Disposal of surplus land

Reference#	Document	Date	General Location	Miscellaneous
13217.1	Permit	2001	Hwy 99, Squamish	Access
13216.1	Permit	2001	Hwy 99, Squamish	Access
13097	Permit	2000	Hwy 99, Ansell Place	Installation of underground conduit
13096	Permit	2000	Hwy 99, Sunset Highlands Interchange	Anchor(s)
13250	Permit	2002	Hwy 99, Horseshoe Bay to Lions Bay	Pole(s)
13098	Permit	2000	Squamish Valley Road, #9194	Fencing
13152	Grant of Easement	2001	Lions Bay	Easement
13151	Permit	2001	Stone Gate Drive, #1828	Access
13137	Permit	2000	Culliton Creek Bridge and Swift Creek Forestry Road	For landing site of helicopter for placement of marking balls on fibreoptic cable on transmission towers
13140	Permit	2000	Hwy 99 Lions Bay	Pole(s), Brunswick Beach Road
13129	Permit	2000	Furry Creek Drive, #1822	Access
13126	Permit	2000	Drummond Road, #1970	Installation of temporary structure
13120	Permit	2000	Hwy 99	Ground water treatment system
13106	Permit	2000	Hwy 99	Anchor(s)
13040	Permit	2000	Hwy 99	Signage
13048	Permit	2000	Stone Gate Drive, #1828	Access
13062	Permit	2000	Watts Point Quarry	Energy and Mines Permit #Q-7-2
13069	Permit	2001	Hwy 99	Access
19006	Permit	2001	Hwy 99, Mamquam Road, Squamish	Revisions to traffic islands
19026	Permit	2001	Hwy 99	Signage
19038	Permit	2001	Harvey Creek Debris Basin, Lions Bay	Temporary easement
19027	Agreement	2003	Hwy 99, Mamquam River Bridge, Squamish	Special event
19113	Permit	2001	Hwy 99, Ansell Place and Montizambert Creek	Poles and anchors
19158	Right of Way License	2001	Brunswick Beach, Lions Bay	Public parking lot

Reference#	Document	Date	General Location	Miscellaneous
20502	Permit	2003	Hwy 99, Squamish	Installation of tourist info kiosk, upper Tantalus viewpoint
30596	Permit	2003	Squamish Valley Rod, #1914, Squamish	Campground and restaurant
20772	Permit	2003	Hwy 99, Strip Creek	Water line
20967	Permit	2003	Hwy 99	Signage
19309	Permit	2002	Hwy 99, Britannia Beach	Installation of groundwater monitoring wells
19530	Permit	2002	Stone Gate Drive, #1828, Furry Creek	Access
19544	Permit	2002	Hwy 99, Ansell Place	Installation of ducts
19559	Permit	2002	Squamish Valley area	Anchor(s)
19773	Agreement	2004	Hwy 99, Squamish	Use of highway for race
19810.03	Permit	2003	Hwy 99, Squamish	Signage
20189	Permit	2003	Hwy 99, Britannia Beach	Ministry of Energy and Mines sand and gravel permit #G-7-209
20199	Permit	2002	Hwy 99, Finch Drive	Installation of pipe
20200	Permit	2002	Hwy 99, Finch Drive	Installation of pipe
20288	Permit	2003	Sunset Highlands Interchange	Access
20900	Permit	2003	Hwy 99, Britannia Beach	Installation of storm sewer
20937	Permit	2002	Hwy 99	Pole(s) and underground duct
21012	Permit	2003	Hwy 99, Finch Drive	Installation of gas main
19218	Permit	1990	Crystal Falls Road, No. 1812 (Burnswick Pit), Lions Bay	Access
19218		2001	Burnswick Gravel Pit, Lions Bay	Easement
19259	Permit	2001	Hwy 99, Britannia Beach	Installation of ground water monitoring wells
19290	Permit	2001	Oliver's Landing	Landscaping
19308	Permit	2002	Squamish Valley Road, No. 1914	Pole(s)
19419	Permit	2002	Hwy 99, Horseshoe Bay	Anchor(s)
20189	Permit	2003		Ministry of Energy and Mines sand and gravel permit #G-7-207
19889	Permit	2002	Hwy 99, Finch Drive	Installation of pipe
2007	Permit	2002	Hwy 99, Loggers Lane, Squamish	Overhead crossing
20361	Permit	2003	Hwy 99, Finch Drive	Installation of pipes

Reference#	Document	Date	General Location	Miscellaneous
20363	Permit	2003	Hwy 99, Squamish	Pole(s)
19723	Permit	2002	Hwy 99, Squamish	Signage
12324	Permit	1998	Hwy 99, Furry Creek	Landscaping
12341	Permit	1998	Hwy 99, Ruble Creek	Installation of gate
12352	Permit	1999	Hwy 99, Britannia Beach	Temporary access
12367	Permit	1999	Hwy 99, Brohm Lake	Access
12374	Permit	1999	Hwy 99, Lions Bay	Temporary access
12379	Permit	1998	Hwy 99, Valley Drive	Installation of water main
12416	Permit	1998	Hwy 99, Valley Drive	Installation of gas main
12460	Permit	1998	Hwy 99, Horseshoe Bay	Set back permit for BC ferry maintenance building
12461	Permit	1998	Hwy 99, Garibaldi Park Road	Access
12467	Permit	1998	Upper Squamish Valley Road	Temporary access
12488	Permit	1998	Hwy 99, Furry Creek Drive	Access
12489	Permit	1998	Upper Squamish Valley Road	Access
12503(a)	Permit	1999	Hwy 99, Stawamus River Bridge	Installation of underground cable/conduit duct
12517	Permit	1998	Hwy 99, Function Junction	Pole(s)
12523	Permit	1998	Hwy 99, Lions Bay	Temporary access
12530	Permit	1998	Hwy 99, Function Junction	Installation of underground conduit
12574	Permit	1999	Hwy 99, Squamish	Pedestrian overpass
12570	Permit	1999	Squamish Valley Road, No. 1914	Access
12577	Permit	1999	Stone Gate Drive, No. 80, Horseshoe Bay	Access
12593	Permit	1999	Hwy 99, Garibaldi Way	Water main and storm sewer pipes
12607	Permit	1999	Squamish	Installation of fibre optic cables
12614	Permit	1999	Hwy 99, Squamish	Water line
12649	Permit	1999	Hwy 99, Squamish	Gas pipeline
12652	Permit	1999	Stone Gate Drive, No. 1828	Access
12661	Permit	1999	Stone Gate Drive, No. 1828	Access
12662	Permit	1999	Brunswick Pit, Lions Bay	Temporary helicopter landing station
12722	Permit	1999	Hwy 99, Squamish	Installation of gas pipeline

Reference#	Document	Date	General Location	Miscellaneous
12633	Permit	2000	Hwy 99, Collector Road and Marina Access Road	Joint trench for underground electrical duct and phone lines
10110	Permit	1992	Hwy 99, Furry Creek	Pole(s)
10118	Permit	1992	Drummond Road # 1970, Squamish	Access
10133	Permit	1992	Squamish Valley Road #1914, Squamish	Access
10136	Permit	1992	Furry Creek frontage Bridge #3101, Furry Creek	Construction of bridge and middle creek culvert
10137	Permit	1992	Hwy 99, Squamish	Access
10138	Permit	1992	Hwy 99, Squamish	Controlled access
10140	Permit	1992	Hwy 99, Whistler	Access
10148	Permit	1992	Hwy 99, Murrin Park, Squamish	Pole(s) and anchors
10402	Permit	1993	Hwy 99, Furry Creek	Installation of anchor
10465	Permit	1993	Hwy 99, Millar Creek Road	Underground conduit
11532	Permit	1996	Garibaldi Park Road	Monthly Diamond Head Hill climb race
11545	Permit	1996	Hwy 99, Stawamus Forest Service Road	Upgrade of existing parking lot
11560	Permit	1996	Furry Creek Drive # 1822	Access
11561	Permit	1996	Hwy 99, Cleveland intersection	Pole(s)
11790	Letter of Intent	1999	Hwy 99, between Squamish and Whistler	Letter of intent to Centra Gas to permit the construction, maintenance and operation of a high-pressure natural gas transmission pipeline within highway right-of-way
PS62626-L1	Right of Way Licence	2001	Lions Bay	Operation of a parking lot
PS60887-L2	Right of Way Licence	1999	Britannia Beach	For administrative control
PS60887-L3	Right of Way Licence	1999	Britannia Beach	For administrative control

Table 2: Encumbrances Under The Railway Act

CERTIFICATES UNDER THE RAILWAY ACT OF BRITISH COLUMBIA		
May 2/68	1611	71.17
May 2/68	1610	65.28
Jan. 18/71	2157	84.8, 92.1, 94.7, 10.08
Feb. 20/70	1993	77.14, 313.1, 386.9
Apr. 21/92	5722	91.20
May 14/93	5847	91.20
June 15/67	1518	N/A
APPROVALS BY FEDERAL TRANSPORTATION AUTHORITIES		
May 7/62	107847	4.93
Oct. 27/88	1988-R-995	Between mileages 2.9 and 3.18 of North Shore Industrial Line
Dec. 28/77	R-26019	Between mileages 2.98 and 3.18 of Thornton Industrial Line
Dec. 12/85	R-38801	3.18 of North Shore Industrial Line
May 7/69	R-5531	4.93 of Burrard Harbour Line
Mar. 17/70	R-8307	3.18, 3.44, 3.78, 3.86 of Thornton Beach Line
May 28/70	R-8945	3.18, 3.44, 3.78, 3.86 of Thornton Beach Line

Table 3: Encumbrances Under The Forest Act

	Number	Type
1.	T0830	Timber License
2.	A19216	Forest License
3.	A20479	Timber Sale License (Major)
4.	A35637	Forest License
5.	A35003	Forest License
6.	A21400	Forest License
7.	A37114	Forest License
8.	A25894	Forest License
9.	A19215	Forest License
10.	W0027	Woodlot
11.	W0087	Woodlot
12.	3077	Forest Service Road
13.	8079 / 8079.01	Forestry Service Road
14.	8210	Forestry Service Road
15.	6102	Forestry Service Road
16.	9282	Proposed Forestry Service Road
17.	9242	Forestry Service Road
18.	6527	Forestry Service Road
19.	9176	Forestry Service Road
20.	4823	Forestry Service Road
21.	7704	Forestry Service Road
22.	9281	Forestry Service Road
23.	9283	Forestry Service Road
24.	R08941	Road Permit
25.	R09224	Road Permit
26.	R11101	Road Permit
27.	6599	Recreation area
28.	3182	Recreation area
29.	0106	Recreation area
30.	6113	Recreation area
31.	6121	Recreation area
32.	6042	Recreation area

Table 4: Encumbrances Under the Mineral Tenure Act

	Tenure Number	Claim Name	Owner Number and % Owned		Area
1.	258313	EAGLE	119977	100%	2 un
2.	306871	ROCKWORK 7	123695	100%	1 un
3.	323012	RW #1	123695	100%	1 un
4.	323013	RW #2	123695	100%	1 un
5.	356249	(Lease)	136171	100%	6.73 ha
6.	367611	GLACIER WHITE #2	146560	100%	1 un
7.	371380	MCMAC 16	139399	100%	1 un
8.	371382	MCMAC 18	139399	100%	1 un
9.	371383	MCMAC 19	139399	100%	1 un
10.	371384	MCMAC 20	139399	100%	1 un
11.	371385	MCMAC 21	139399	100%	1 un
12.	371386	MCMAC 22	139399	100%	1 un
13.	371388	MCMAC 24	139399	100%	1 un
14.	371389	MCMAC 25	139399	100%	1 un
15.	373666	(Lease)	139399	100%	66.2 ha
16.	376196	(Lease)	146266	100%	25 ha
17.	388626	BOOMER	143842	100%	1 un
18.	396954	AWA #1	144800	100%	1 un
19.	396955	AWA #2	144800	100%	1 un
20.	396956	AWA #3	144800	100%	1 un
21.	396957	AWA #4	144800	100%	1 un
22.	396958	AWA #5	144800	100%	1 un
23.	396959	AWA #6	144800	100%	1 un
24.	401719	SUMMIT #1	145254	100%	1 un
25.	401720	SUMMIT #2	145254	100%	1 un
26.	401721	SUMMIT #3	145254	100%	1 un
27.	401722	SUMMIT #4	145254	100%	1 un
28.	401723	SUMMIT #5	145254	100%	1 un
29.	401724	SUMMIT #6	145254	100%	1 un
30.	401725	SUMMIT #7	145254	100%	1 un
31.	401726	SUMMIT #8	145254	100%	1 un
32.	401727	SUMMIT #9	145254	100%	1 un
33.	401728	SUMMIT #10	145254	100%	1 un
34.	409541	BRAG #1	134050	100%	1 un
35.	409542	BRAG #2	134050	100%	1 un
36.	409543	BRAG #3	134050	100%	1 un
37.	258252	MB 1	107306 117584	50% 50%	1 un

	Tenure Number	Claim Name	Owner Number and % Owned	Area
38.	258264	MB 10	107306 50% 117584 50%	1 un
39.	258265	MB 11	107306 50% 117584 50%	6 un
40.	258266	MB 18	107306 50% 117584 50%	12 un
41.	319461	HOWE #1	122244 100%	1 un
42.	331869	M-SILICA 1	123229 100%	1 un
43.	405455	HC-1	114948 100%	1 un
44.	405456	HC-2	114948 100%	1 un
45.	405457	HC-3	114948 100%	1 un
46.	405458	HC-4	114948 100%	1 un
47.	325345	FREEMAN 1	142446 100%	1 un
48.	325346	FREEMAN 2	142446 100%	1 un
49.	325347	FREEMAN 3	142446 100%	1 un
50.	325348	FREEMAN 4	142446 100%	1 un
51.	325353	CABIN 5	142446 100%	1 un
52.	325354	CABIN 6	142446 100%	1 un
53.	325355	CABIN 7	142446 100%	1 un
54.	325356	CABIN 8	142446 100%	1 un
55.	325358	CABIN 10	142446 100%	1 un
56.	325359	CABIN 11	142446 100%	1 un
57.	325360	CABIN 12	142446 100%	1 un
58.	325361	CABIN 13	142446 100%	1 un
59.	325879	RUB #1	142446 100%	1 un
60.	325880	RUB #2	142446 100%	1 un
61.	325881	RUB #3	142446 100%	1 un
62.	325882	RUB #4	142446 100%	1 un
63.	330314	HUCKLEBERRY 1	134224 100%	1 un
64.	330316	HUCKLEBERRY 3	134224 100%	1 un
65.	365797	(Lease)	134224 100%	27.6 ha
66.	367220	FREEMAN 5	142446 100%	1 un
67.	386723	LEO 2003	146560 100%	1 un
68.	386748	LEO 2001	146560 100%	1 un
69.	386749	LEO 2002	140564 100%	1 un
70.	390744	JASMINE 1	144198 100%	1 un
71.	390745	JASMINE 2	144198 100%	1 un
72.	391624	RUBBLE 5	142446 100%	1 un
73.	391625	RUBBLE 6	142446 100%	1 un
74.	391626	RUBBLE 7	142446 100%	1 un
75.	391627	RUBBLE 8	142446 100%	1 un
76.	391628	RUBBLE 9	142446 100%	1 un
77.	394711	CABIN 14	142446 100%	1 un

	Tenure Number	Claim Name	Owner Number and % Owned	Area
78.	394712	CABIN 15	142446 100%	1 un
79.	394740	JASMINE 3	144198 100%	1 un
80.	397416	HUCKLEBERRY 5	134224 100%	1 un
81.	397417	HUCKLEBERRY 6	134224 100%	1 un
82.	397418	HUCKLEBERRY 7	134224 100%	1 un
83.	403598	HUCKLEBERRY 8	134224 100%	1 un
84.	403599	HUCKLEBERRY 9	134224 100%	1 un
85.	403847	SPIKE 1	144198 100%	1 un
86.	403848	SPIKE 2	144198 100%	1 un
87.	403849	SPIKE 3	144198 100%	1 un
88.	404138	BROHMSTONE	107806 50% 145694 50%	1 un
89.	411850	(Lease)	142446 100%	95 ha
90.	413020	GOLD HAVEN 6	146269 100%	8 un
91.	258144	BRANDY 1	124665 100%	9 un
92.	258145	BRANDY 2	124665 100%	15 un
93.	258147	BRANDY 4	124665 100%	12 un
94.	258148	BRANDY 6	124665 100%	9 un
95.	258310	BRANDY A	124665 100%	6 un
96.	259024	(Lease)	124665 100%	44.77 ha
97.	324714	LOK 1	142446 100%	1 un
98.	324715	LOK 2	142446 100%	1 un
99.	324716	LOK 3	142446 100%	1 un
100.	324717	LOK 4	142446 100%	1 un
101.	325877	JANE 1	142446 100%	1 un
102.	325878	JANE 2	142446 100%	1 un
103.	332479	LOK-5	142446 100%	1 un
104.	334449	LOK 7	142446 100%	1 un
105.	334450	LOK 8	142446 100%	1 un
106.	334451	LOK 9	142446 100%	1 un
107.	337488	LOK 10	142446 100%	1 un
108.	337489	LOK 11	142446 100%	1 un
109.	337490	LOK 12	142446 100%	1 un
110.	337491	LOK 13	142446 100%	1 un
111.	338964	LOK 6	142446 100%	1 un
112.	370791	BRANDYWINE	119880 100%	9 un
113.	374271	CALL#1	142446 100%	1 un
114.	376988	DEN #1	146804 100%	1 un
115.	376989	DEN #2	146804 100%	1 un
116.	379862	CALL #2	142446 100%	1 un
117.	398838	JIMBO TOO	143691 100%	1 un
118.	404448	KOZIC GOLD #2	114617 100%	1 un

	Tenure Number	Claim Name	Owner Number and % Owned	Area
119.	404450	KOZIC GOLD #4	114617 100%	1 un
120.	406844	GOLDEN HILL	146269 100%	20 un
121.	408312	NEPTUNE	133156 100%	1 un
122.	409976	TRAIN	109858 100%	1 un
123.	411427	SPKL - 1	131929 100%	1 un
124.	411428	SPKL - 2	131929 100%	1 un
125.	413015	GOLD HAVEN 1	146269 100%	14 un
126.	413016	GOLD HAVEN 2	146269 100%	14 un
127.	413017	GOLD HAVEN 3	146269 100%	15 un
128.	413018	GOLD HAVEN 4	146269 100%	20 un
129.	413019	GOLD HAVEN 5	146269 100%	20 un
130.	378380	KOPER	114617 100%	20 un
131.	401884	SWIFT	145131 100%	1 un
132.	401885	LEAFY LANE	145131 100%	1 un
133.	404447	KOZIC GOLD #1	114617 100%	1 un
134.	404449	KOZIC GOLD #3	114617 100%	1 un

SCHEDULE 4

LAND

Part 9

Not Used

SCHEDULE 4

LAND

Part 10

Not Used

SCHEDULE 4

LAND

Part 11

Required BC Rail Lands

The Required BC Rail Lands are those parts of the following described land shown on Annexes 1 and 2:

- (a) Parcel Identifier 015-896-102
Those portions of District Lot 2808 in Reference Plan 6425,
Group 1, New Westminster District;
- (b) Parcel Identifier 015-875-008
That part of District Lot 3425 in Reference Plan 6587,
Group 1, New Westminster District; and
- (c) Parcel Identifier 015-769-941
District Lot 6934 (Reference Plan 6492),
Group 1, New Westminster District;

and access to the Required BC Rail Lands will be provided by June 1, 2009 in accordance with Section 8.4.3 of the Agreement.

Annex 1

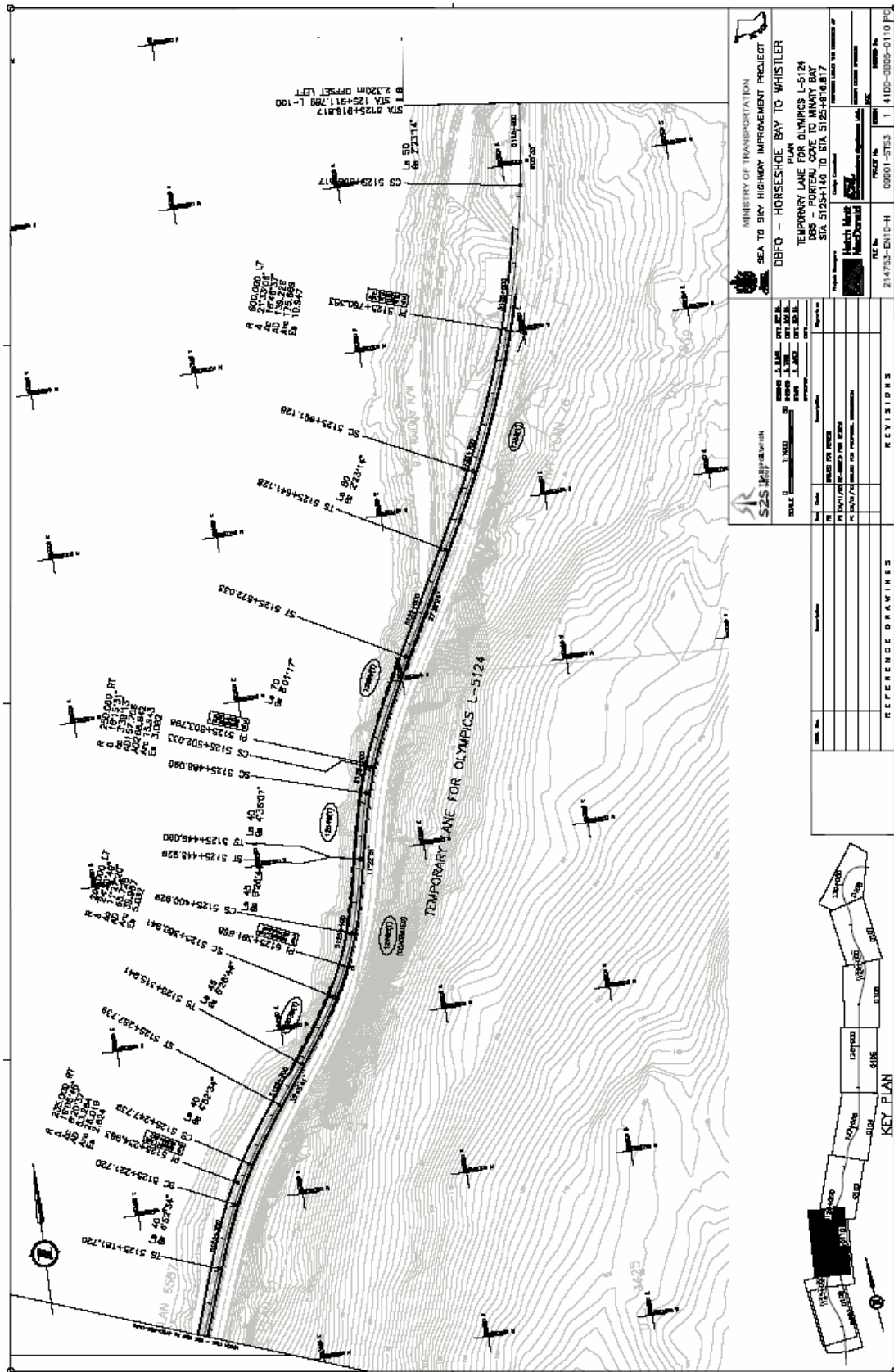


MINISTRY OF TRANSPORTATION SEA TO SKY HIGHWAY IMPROVEMENT PROJECT DBFO - HORSESHOE BAY TO WHISTLER	
PLAN TEMPORARY LANE FOR OLYMPICS L-5124 DES - FORTUNA COPE TO MINWAY BAY STA 5124+000 TO STA 5124+800	
PROJECT NO. 09801-STS3	SHEET NO. 1
PROJECT NAME TEMPORARY LANE FOR OLYMPICS L-5124	DRAWING DATE 21/07/2010
PROJECT NO. 09801-STS3	SHEET NO. 1
PROJECT NAME TEMPORARY LANE FOR OLYMPICS L-5124	DRAWING DATE 21/07/2010

NO.	DATE	DESCRIPTION
1	21/07/2010	ISSUED FOR PERMITS
2	21/07/2010	ISSUED FOR PERMITS
3	21/07/2010	ISSUED FOR PERMITS
4	21/07/2010	ISSUED FOR PERMITS

NO.	DATE	DESCRIPTION

Annex 2



SCHEDULE 4**LAND****Part 12****BC Rail Lands**

- 015-961-354 THAT PART OF DISTRICT LOT 890, IN REFERENCE PLAN 1125, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT PART IN REFERENCE PLAN 1956
- 015-974-596 THAT PART OF BLOCK A, (REFERENCE PLAN 423), IN REFERENCE PLAN 1272, DISTRICT LOT 879, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-975-274 THAT PART OF BLOCK H, (REFERENCE PLAN 731) IN REFERENCE PLAN 1125, DISTRICT LOT 879, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-974-600 THAT PART OF BLOCK B (REFERENCE PLAN 680) IN REFERENCE PLAN 1272 DISTRICT LOT 879 GROUP 1 NEW WESTMINSTER DISTRICT
- 015-975-282 THAT PART OF BLOCK L (REFERENCE PLAN 878) IN REFERENCE PLAN 1125, DISTRICT LOT 879, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-975-037 THAT PART OF BLOCK G (REFERENCE PLAN 692) IN REFERENCE PLAN 1125, DISTRICT LOT 879, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-977-030 THAT PART OF BLOCK F IN REFERENCE PLAN 1125, DISTRICT LOT 879, GROUP 1, NEW WESTMINSTER DISTRICT

- 015-974-791 THAT PART OF BLOCK E (REFERENCE PLAN 708) IN REFERENCE PLAN 1125, DISTRICT LOT 879, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-974-618 THAT PART OF BLOCK C (REFERENCE PLAN 730) IN REFERENCE PLAN 1125, DISTRICT LOT 879, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-967-361 THAT PART OF DISTRICT LOT 773 IN REFERENCE PLAN 1125, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-934-608 THAT PART OF DISTRICT LOT 1374, IN REFERENCE PLAN 1125, GROUP 1, NEW WESTMINSTER DISTRICT
- 019-199-511 LOT A, DISTRICT LOTS 772 AND 1494, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN LMP22016
- 025-488-988 THAT PART OF DISTRICT LOT 430 (REFERENCE PLAN 1123) GROUP 1, NEW WESTMINSTER DISTRICT AS SHOWN ON PLAN BCP525
- 017-776-384 THAT PART OF BLOCK D, IN REFERENCE PLAN 12508, DISTRICT LOT 1494, PLAN 12498
- 009-187-103 THAT PART OF LOT 9 IN REFERENCE PLAN 12026, BLOCK E, DISTRICT LOT 1374, PLAN 11000
- 015-946-932 THAT PART OF DISTRICT LOT 1494, IN REFERENCE PLAN 4162, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-946-908 THAT PART OF DISTRICT LOT 1493, IN REFERENCE PLAN 1123, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT PART IN REFERENCE PLAN 2042
- 015-946-959 THAT PART OF DISTRICT LOT 1495, IN REFERENCE PLAN 987, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-946-924 THAT PART OF DISTRICT LOT 1493, IN REFERENCE PLAN 4162, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-906-281 THAT PART OF DISTRICT LOT 2386, IN REFERENCE PLAN 4095, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT LOT A (REFERENCE PLAN 1328)
- 010-751-050 THAT PART OF AMENDED LOT 5 (SEE 111838L) IN REFERENCE PLAN 4095, BLOCK E, DISTRICT LOT 2361, PLAN 6990
- 010-750-959 THAT PART OF AMENDED LOT 3, (SEE 111839L) IN REFERENCE PLAN 4095, BLOCK E, DISTRICT LOT 2361, PLAN 6990
- 010-750-843 THAT PART OF LOT 2, IN REFERENCE PLAN 4095, BLOCK E, DISTRICT LOT 2361, PLAN 6990
- 010-750-827 THAT PART OF LOT 1, IN REFERENCE PLAN 4095, BLOCK E, DISTRICT LOT 2361, PLAN 6990
- 010-751-076 THAT PART OF LOT 6, IN REFERENCE PLAN 4095, BLOCK E, DISTRICT LOT 2361, PLAN 6990
- 010-751-106 THAT PART OF LOT 8, IN REFERENCE PLAN 4095, BLOCK E, DISTRICT LOT 2361, PLAN 6990
- 010-751-297 THAT PART OF LOT 11, IN REFERENCE PLAN 4095, BLOCK E, DISTRICT LOT 2361, PLAN 6990

- 010-751-351 THAT PART OF LOT 12, IN REFERENCE PLAN 4095, BLOCK E, DISTRICT LOT 2361, PLAN 6990
- 010-751-092 THAT PART OF LOT 7, IN REFERENCE PLAN 4095, BLOCK E, DISTRICT LOT 2361, PLAN 6990
- 010-751-254 THAT PART OF LOT 9, IN REFERENCE PLAN 4095, BLOCK E, DISTRICT LOT 2361, PLAN 6990
- 010-751-289 THAT PART OF LOT 10, IN REFERENCE PLAN 4095, BLOCK E, DISTRICT LOT 2361, PLAN 6990
- 010-724-494 THAT PART OF LOT 3, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-724-478 THAT PART OF LOT 2, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-724-435 THAT PART OF LOT 1, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-724-524 THAT PART OF LOT 4, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-724-591 THAT PART OF LOT 5, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-724-788 THAT PART OF LOT 8, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-724-834 THAT PART OF LOT 9, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-724-702 THAT PART OF LOT 6, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-724-745 THAT PART OF LOT 7, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-724-940 THAT PART OF LOT 11, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-724-923 THAT PART OF LOT 10, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-724-966 THAT PART OF LOT 12, IN REFERENCE PLAN 4095, BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-748-245 THAT PART OF LOT 8, IN REFERENCE PLAN 4095, BLOCK D, DISTRICT LOT 2361, PLAN 6991
- 010-748-202 THAT PART OF AMENDED LOT 6, (SEE 74902L) IN REFERENCE PLAN 4095, BLOCK D, DISTRICT LOT 2361, PLAN 6991
- 010-748-237 THAT PART OF LOT 7, IN REFERENCE PLAN 4095, BLOCK D, DISTRICT LOT 2361, PLAN 6991
- 010-748-181 THAT PART OF AMENDED LOT 5 (SEE 74902L) IN REFERENCE PLAN 4095, BLOCK D, DISTRICT LOT 2361, PLAN 6991

- 010-747-958 THAT PART OF LOT 3, IN REFERENCE PLAN 4095, BLOCK D, DISTRICT LOT 2361, PLAN 6991
- 010-748-067 THAT PART OF LOT 4, IN REFERENCE PLAN 4095, BLOCK D, DISTRICT LOT 2361, PLAN 6991
- 010-747-940 THAT PART OF LOT 2, IN REFERENCE PLAN 4095, BLOCK D, DISTRICT LOT 2361, PLAN 6991
- 010-725-130 LOT D (STATUTORY RIGHT-OF-WAY PLAN 16958), BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-725-075 LOT C (STATUTORY RIGHT-OF-WAY PLAN 16958), BLOCK F, DISTRICT LOT 2361, PLAN 7203
- 010-823-409 THAT PART OF LOT 11, IN REFERENCE PLAN 4095, BLOCK C, DISTRICT LOT 2361, PLAN 6732
- 010-823-379 THAT PART OF LOT 10, IN REFERENCE PLAN 4095, BLOCK C, DISTRICT LOT 2361, PLAN 6732
- 010-747-931 THAT PART OF LOT 1, IN REFERENCE PLAN 4095, BLOCK D, DISTRICT LOT 2361, PLAN 6991
- 010-907-289 THAT PART OF LOT 5, IN REFERENCE PLAN 4095, BLOCK C, DISTRICT LOT 2361, PLAN 6732
- 010-823-301 THAT PART OF LOT 8, IN REFERENCE PLAN 4095, BLOCK C, DISTRICT LOT 2361, PLAN 6732
- 010-947-205 THAT PART OF LOT 9, IN REFERENCE PLAN 4095, BLOCK C, DISTRICT LOT 2361, PLAN 6732
- 010-822-658 THAT PART OF LOT 6, IN REFERENCE PLAN 4095, BLOCK C, DISTRICT LOT 2361, PLAN 6732
- 010-822-674 THAT PART OF LOT 7, IN REFERENCE PLAN 4095, BLOCK C, DISTRICT LOT 2361, PLAN 6732
- 010-822-585 THAT PART OF LOT 4, IN REFERENCE PLAN 4095, BLOCK C, DISTRICT LOT 2361, PLAN 6732
- 011-200-677 THAT PART OF LOT 9 IN REFERENCE PLAN 4095 BLOCK A, DISTRICT LOT 2361, PLAN 5246
- 010-822-402 THAT PART OF LOT 1, IN REFERENCE PLAN 4095, BLOCK C, DISTRICT LOT 2361, PLAN 6732
- 011-200-642 THAT PART OF LOT 8, IN REFERENCE PLAN 4095, BLOCK A , DISTRICT LOT 2361, PLAN 5246
- 010-822-437 THAT PART OF LOT 2, IN REFERENCE PLAN 4095, BLOCK C, DISTRICT LOT 2361, PLAN 6732
- 010-822-496 THAT PART OF LOT 3, IN REFERENCE PLAN 4095, BLOCK C, DISTRICT LOT 2361, PLAN 6732
- 010-853-201 THAT PART OF LOT 4, IN REFERENCE PLAN 4095, BLOCK A, DISTRICT LOT 2361, PLAN 6594

- 010-851-089 THAT PART OF LOT 3, IN REFERENCE PLAN 4095, BLOCK A, DISTRICT LOT 2361, PLAN 6594
- 015-905-098 THAT PART OF LOT 1 (REFERENCE PLAN 1802) IN REFERENCE PLAN 4095 OF LOT A (REFERENCE PLAN 1779), DISTRICT LOT 2361, GROUP 1, NEW WESTMINSTER DISTRICT
- 010-850-929 THAT PART OF LOT 2, IN REFERENCE PLAN 4095, BLOCK A, DISTRICT LOT 2361, PLAN 6594
- 015-906-019 THAT PART OF BLOCK B (REFERENCE PLAN 1948) IN REFERENCE PLAN 4095, DISTRICT LOT 2365, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-905-845 THAT PART OF DISTRICT LOT 2365 IN REFERENCE PLAN 4095, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT PART IN REFERENCE PLAN 1948
- 010-764-381 THAT PART OF BLOCK 1, IN EXPLANATORY PLAN 5295, DISTRICT LOT 2365, PLAN 7016
- 010-764-542 THAT PART OF BLOCK 2, IN REFERENCE PLAN 4095, DISTRICT LOT 2365, PLAN 7016
- 010-764-526 THAT PART OF BLOCK 1, IN REFERENCE PLAN 4095, DISTRICT LOT 2365, PLAN 7016
- 010-766-359 THAT PART OF BLOCK 5 IN REFERENCE PLAN 4095, DISTRICT LOT 2365, PLAN 7016
- 010-765-751 THAT PART OF BLOCK 3 IN REFERENCE PLAN 4095 DISTRICT LOT 2365 PLAN 7016
- 010-765-832 THAT PART OF BLOCK 4, IN REFERENCE PLAN 4095, DISTRICT LOT 2365, PLAN 7016
- 010-766-561 THAT PART OF BLOCK 7, IN REFERENCE PLAN 4095, DISTRICT LOT 2365, PLAN 7016
- 010-766-464 THAT PART OF BLOCK 6, IN REFERENCE PLAN 4095 DISTRICT LOT 2365, PLAN 7016
- 010-766-847 THAT PART OF BLOCK 9, IN REFERENCE PLAN 4095, DISTRICT LOT 2365, PLAN 7016
- 013-345-184 THAT PART OF BLOCK I, PLAN 11180, IN STATUTORY RIGHT OF WAY PLAN 19066, DISTRICT LOT 2365
- 010-766-774 THAT PART OF BLOCK 8, IN REFERENCE PLAN 4095, DISTRICT LOT 2365, PLAN 7016
- 010-767-002 THAT PART OF BLOCK 13, IN REFERENCE PLAN 4095, DISTRICT LOT 2365, PLAN 7016
- 010-766-979 THAT PART OF BLOCK 12, IN REFERENCE PLAN 4095, DISTRICT LOT 2365, PLAN 7016
- 010-766-936 THAT PART OF BLOCK 11, IN REFERENCE PLAN 4095, DISTRICT LOT 2365, PLAN 7016
- 010-766-901 THAT PART OF BLOCK 10, IN REFERENCE PLAN 4095, DISTRICT LOT 2365, PLAN 7016
- 015-896-242 THAT PART OF DISTRICT LOT 2817, IN REFERENCE PLAN 987, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT: PARTS ON HIGHWAY PLAN 45
- 015-896-269 THAT PART OF DISTRICT LOT 2818, IN REFERENCE PLAN 987, GROUP 1, NEW WESTMINSTER DISTRICT
- 008-491-291 THAT PART OF LOT 2 IN REFERENCE PLAN 16213 DISTRICT LOT 2817, PLAN 13772
- 015-785-378 BLOCK A (REFERENCE PLAN 4287), GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT PORTIONS IN EXPLANATORY PLANS 5401 AND 5402 AND PLAN 18530, DISTRICT LOT 6396

- 015-785-408 BLOCK B (REFERENCE PLAN 4287), DISTRICT LOT 6396, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT, FIRSTLY: PART IN REFERENCE PLAN 6958, SECONDLY: PART IN REFERENCE PLAN 14621, THIRDLY: PART IN PLAN LMP5938, FOURTHLY: PART ON HIGHWAY PLAN 45
- 015-769-925 DISTRICT LOT 6929, (REFERENCE PLAN 6958)
- 015-788-504 THAT PART OF DISTRICT LOT 5716, IN REFERENCE PLAN 10530, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-769-917 DISTRICT LOT 6928, (REFERENCE PLAN 6958), GROUP 1, NEW WESTMINSTER DISTRICT
- 007-168-144 LOT 101 EXCEPT: PART SUBDIVIDED BY PLAN LMP30410; BLOCK B, DISTRICT LOTS 1575 AND 6396, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 18530
- 015-936-066 THOSE PORTIONS OF BLOCK A, IN REFERENCE PLAN 4815, DISTRICT LOT 1575, GROUP 1, NEW WESTMINSTER DISTRICT
- 013-092-014 THAT PART OF LOT 13A, IN REFERENCE PLAN 4313, BLOCK 22, DISTRICT LOT 1814, PLAN 3149
- 013-092-006 THAT PART OF LOT 13, IN REFERENCE PLAN 4313, BLOCK 22, DISTRICT LOT 1814, PLAN 3149
- 013-091-646 THAT PART OF LOT 7, IN REFERENCE PLAN 4313, BLOCK 23, DISTRICT LOT 1814, PLAN 3149
- 013-091-662 THAT PART OF LOT 8, IN REFERENCE PLAN 4313, BLOCK 23, DISTRICT LOT 1814, PLAN 3149
- 013-091-999 THAT PART OF LOT 12, IN REFERENCE PLAN 4313, BLOCK 22, DISTRICT LOT 1814, PLAN 3149
- 013-091-611 THAT PART OF LOT 6, IN REFERENCE PLAN 4313, BLOCK 23, DISTRICT LOT 1814, PLAN 3149
- 013-091-549 THAT PART OF LOT 4, IN REFERENCE PLAN 4313, BLOCK 23, DISTRICT LOT 1814, PLAN 3149
- 013-091-492 THAT PART OF LOT 2, IN REFERENCE PLAN 4313, BLOCK 23, DISTRICT LOT 1814, PLAN 3149
- 013-091-514 THAT PART OF LOT 3, IN REFERENCE PLAN 4313, BLOCK 23, DISTRICT LOT 1814, PLAN 3149
- 013-091-476 THAT PART OF LOT 1, IN REFERENCE PLAN 4313, BLOCK 23, DISTRICT LOT 1814, PLAN 3149
- 013-108-778 THAT PART OF LOT 11, IN REFERENCE PLAN 1019, BLOCK 14, DISTRICT LOT 1814, PLAN 3149
- 013-091-590 THAT PART OF LOT 5, IN REFERENCE PLAN 4313, BLOCK 23, DISTRICT LOT 1814, PLAN 3149
- 013-108-671 LOT 12, EXCEPT; PART ON HIGHWAY PLAN 36, BLOCK 14, DISTRICT LOT 1814, PLAN 3149
- 013-108-638 LOT 9, EXCEPT; PART ON HIGHWAY PLAN 36 BLOCK 14, DISTRICT LOT 1814, PLAN 3149

- 013-108-611 LOT 8, EXCEPT; PART ON HIGHWAY PLAN 36 BLOCK 14, DISTRICT LOT 1814, PLAN 3149
- 013-108-697 LOT 11, EXCEPT: FIRSTLY: PART IN REFERENCE PLAN 1019, SECONDLY: PART ON HIGHWAY PLAN 36, BLOCK 14, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 015-830-691 DISTRICT LOT 6503 (REFERENCE PLAN 4332), GROUP 1, NEW WESTMINSTER DISTRICT
- 013-109-341 LOT 4, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-109-375 LOT 5, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-109-863 LOT 6, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-109-898 LOT 7, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-109-952 LOT 10, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-109-961 LOT 11, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-109-430 LOT 1, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 13, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-109-979 LOT 12, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-109-448 LOT 2, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 13, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-109-472 LOT 3, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 13, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-106-171 LOT 15, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 17, DISTRICT LOT 1815, PLAN 3149
- 013-106-155 LOT 6, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 17, DISTRICT LOT 1815, PLAN 3149
- 013-106-201 LOT 7, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 14, DISTRICT LOT 1814, PLAN 3149
- 025-176-595 PARCEL A (PLAN LMP51292) DISTRICT LOTS 1814 AND 1815, GROUP 1, NEW WESTMINSTER DISTRICT, DEDICATED ROAD ON PLAN 3149
- 013-109-995 LOT 8, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-110-004 LOT 9, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-108-735 LOT 10, EXCEPT; PART ON HIGHWAY PLAN 36, BLOCK 14, DISTRICT LOT 1814, PLAN 3149

- 013-108-751 LOT 3 EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-150-464 LOT 11, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1814, PLAN 3149
- 013-150-421 LOT 9, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1814, PLAN 3149
- 013-150-456 LOT 10, EXCEPT; PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1814, PLAN 3149
- 013-150-286 LOT 3, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1814, PLAN 3149
- 013-109-677 LOT 7, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1814, PLAN 3149
- 013-150-383 LOT 8, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1814, PLAN 3149
- 013-109-260 LOT 1, EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-109-286 LOT 2 EXCEPT: PART DEDICATED ROAD ON PLAN LMP51293; BLOCK 12, DISTRICT LOT 1814, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN 3149
- 013-109-634 LOT 1, BLOCK 1, DISTRICT LOT 1814, PLAN 3149
- 013-109-642 LOT 2, BLOCK 1, DISTRICT LOT 1814, PLAN 3149
- 013-150-316 LOT 4, BLOCK 1, DISTRICT LOT 1814, PLAN 3149
- 013-150-553 LOT 12, BLOCK 1, DISTRICT LOT 1814, PLAN 3149
- 013-150-561 LOT 13, BLOCK 1, DISTRICT LOT 1814, PLAN 3149
- 013-106-881 LOT 13, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 17, DISTRICT LOT 1815, PLAN 3149
- 013-106-902 LOT 14, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 17, DISTRICT LOT 1815, PLAN 3149
- 013-106-864 LOT 12, BLOCK 17, DISTRICT LOT 1815, PLAN 3149
- 013-106-856 LOT 11, BLOCK 17, DISTRICT LOT 1815, PLAN 3149
- 013-106-821 LOT 10, BLOCK 17, DISTRICT LOT 1815, PLAN 3149
- 013-093-479 THAT PART OF LOT 4, IN REFERENCE PLAN 4313, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 013-093-550 THAT PART OF LOT 10, IN REFERENCE PLAN 4313, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 013-093-533 THAT PART OF LOT 5, IN REFERENCE PLAN 4313, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 013-104-667 LOT 13, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 013-093-444 THAT PART OF LOT 3, IN REFERENCE PLAN 4313, BLOCK 18, DISTRICT LOT 1815, PLAN 3149

- 025-176-609 PARCEL B (PLAN LMP51292) DISTRICT LOT 1815, GROUP 1, NEW WESTMINSTER DISTRICT, DEDICATED ROAD ON PLAN 3149
- 013-104-373 LOT 9, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 17, DISTRICT LOT 1815, PLAN 3149
- 013-104-322 LOT 8, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 17, DISTRICT LOT 1815, PLAN 3149
- 013-106-741 LOT 7, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 17, DISTRICT LOT 1815, PLAN 3149
- 013-105-345 LOT 17, EXCEPT; PART ON HIGHWAY PLAN 36, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 013-104-993 LOT 15, EXCEPT; PART ON HIGHWAY PLAN 36, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 013-105-019 LOT 16, EXCEPT; PART ON HIGHWAY PLAN 36, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 013-106-791 THAT PART OF LOT 8, IN REFERENCE PLAN 4313, BLOCK 10, DISTRICT LOT 1815, PLAN 3149
- 013-104-209 LOT 12, EXCEPT: PART IN PLAN 10651, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 013-103-610 LOT 11, EXCEPT PART IN PLAN 10651, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 013-104-691 LOT 14, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 025-176-617 PARCEL C (PLAN LMP51292) DISTRICT LOT 1815, GROUP 1, NEW WESTMINSTER DISTRICT, DEDICATED ROAD ON PLAN 3149
- 013-093-231 LOT 1, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 013-113-623 THAT PART OF LOT 11, IN REFERENCE PLAN 4313, BLOCK 10, DISTRICT LOT 1815, PLAN 3149
- 013-093-347 THAT PART OF LOT 2 IN REFERENCE PLAN 4313, BLOCK 18, DISTRICT LOT 1815, PLAN 3149
- 013-112-970 LOT 10, EXCEPT PART IN PLAN 22766, BLOCK 11, DISTRICT LOT 1815, PLAN 3149
- 013-112-996 LOT 11, EXCEPT PART IN PLAN 22766, BLOCK 11, DISTRICT LOT 1815, PLAN 3149
- 013-113-003 LOT 12, EXCEPT PART IN PLAN 22766, BLOCK 11, DISTRICT LOT 1815, PLAN 3149
- 013-113-542 THAT PART OF LOT 9, IN REFERENCE PLAN 4313, BLOCK 10, DISTRICT LOT 1815, PLAN 3149
- 013-113-593 THAT PART OF LOT 10, IN REFERENCE PLAN 4313, BLOCK 10, DISTRICT LOT 1815, PLAN 3149
- 009-322-728 LOT 18, EXCEPT THAT PART LYING TO THE WEST OF THE ROAD DEDICATED BY DEPOSIT OF PLAN 10651, BLOCK 10, DISTRICT LOT 1815, PLAN 10651
- 009-322-736 LOT 19, EXCEPT THAT PART LYING TO THE WEST OF THE ROAD DEDICATED BY DEPOSIT OF PLAN 10651, BLOCK 10, DISTRICT LOT 1815, PLAN 10651
- 013-112-961 LOT 9, EXCEPT PART IN PLAN 22766, BLOCK 11, DISTRICT LOT 1815, PLAN 3149
- 013-112-945 LOT 8, EXCEPT PART IN PLAN 22766, BLOCK 11, DISTRICT LOT 1815, PLAN 3149

013-112-911 LOT 5, EXCEPT PART IN PLAN 22766, BLOCK 11, DISTRICT LOT 1815, PLAN 3149

013-112-929 LOT 6, EXCEPT PART IN PLAN 22766, BLOCK 11, DISTRICT LOT 1815, PLAN 3149

013-112-937 LOT 7, EXCEPT PART IN PLAN 22766, BLOCK 11, DISTRICT LOT 1815, PLAN 3149

013-113-470 THAT PART OF LOT 3, IN REFERENCE PLAN 4313, BLOCK 10, DISTRICT LOT 1815, PLAN 3149

013-113-526 THAT PART OF LOT 5, IN REFERENCE PLAN 4313, BLOCK 10, DISTRICT LOT 1815, PLAN 3149

013-113-445 THAT PART OF LOT 2, IN REFERENCE PLAN 4313, BLOCK 10, DISTRICT LOT 1815, PLAN 3149

013-113-411 THAT PART OF LOT 1, IN REFERENCE PLAN 4313, BLOCK 10, DISTRICT LOT 1815, PLAN 3149

013-116-908 THAT PART OF LOT 21, IN REFERENCE PLAN 4313, BLOCK 9, DISTRICT LOT 1815, PLAN 3149

013-113-496 THAT PART OF LOT 4, IN REFERENCE PLAN 4313, BLOCK 10, DISTRICT LOT 1815, PLAN 3149

013-116-924 THAT PART OF LOT 23, IN REFERENCE PLAN 4313, BLOCK 9, DISTRICT LOT 1815, PLAN 3149

013-116-894 THAT PART OF LOT 20, IN REFERENCE PLAN 4313, BLOCK 9, DISTRICT LOT 1815, PLAN 3149

009-323-848 LOT 31, EXCEPT THAT PART LYING WEST OF THE ROAD DEDICATED BY DEPOSIT OF PLAN 10651, BLOCK 9, DISTRICT LOT 1815, PLAN 3149

013-115-057 LOT 19, BLOCK 9, DISTRICT LOT 1815, PLAN 3149

013-115-049 LOT 18, EXCEPT PART IN PLAN 22766, BLOCK 9, DISTRICT LOT 1815, PLAN 3149

013-112-716 LOT 4, EXCEPT PART IN PLAN 22766, BLOCK 11, DISTRICT LOT 1815, PLAN 3149

013-116-941 THAT PART OF LOT 24, IN REFERENCE PLAN 4313, BLOCK 9, DISTRICT LOT 1815, PLAN 3149

013-149-288 LOT 12, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 2, DISTRICT LOT 1815, PLAN 3149

013-149-482 LOT 8, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1815, PLAN 3149

018-617-247 LOT A, BLOCK 9, DISTRICT LOT 1815, PLAN LMP14446

013-149-253 LOT 11, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 2, DISTRICT LOT 1815, PLAN 3149

025-176-625 PARCEL D (PLAN LMP51292) DISTRICT LOT 1815, GROUP 1, NEW WESTMINSTER DISTRICT, DEDICATED ROAD ON PLAN 3149

013-149-911 LOT 3, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1815, PLAN 3149

013-150-014 LOT 7, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1815, PLAN 3149

- 013-149-954 LOT 5, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1815, PLAN 3149
- 013-149-997 LOT 6, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1815, PLAN 3149
- 013-149-938 LOT 4, EXCEPT: PART ON HIGHWAY PLAN 36, BLOCK 1, DISTRICT LOT 1815, PLAN 3149
- 011-538-465 THAT PART OF BLOCK 1, IN REFERENCE PLAN 1019, DISTRICT LOT 2935, PLAN 4485
- 015-769-593 DISTRICT LOT 6832 (REFERENCE PLAN 5714), GROUP 1, NEW WESTMINSTER DISTRICT
- 011-536-357 THAT PART OF BLOCK 4, IN REFERENCE PLAN 1019, EXCEPT PART IN HIGHWAY PLAN 59, DISTRICT LOT 2935, PLAN 4485
- 011-540-095 THAT PART OF BLOCK 5, IN REFERENCE PLAN 5222, DISTRICT LOT 2935, PLAN 4485
- 011-539-852 THAT PART OF BLOCK 2, IN REFERENCE PLAN 1019, DISTRICT LOT 2935, PLAN 4485
- 011-536-322 THAT PART OF BLOCK 6, IN REFERENCE PLAN 5714, DISTRICT LOT 2935, PLAN 4485
- 011-536-306 THAT PART OF BLOCK 3, IN REFERENCE PLAN 5714, DISTRICT LOT 2935, PLAN 4485
- 015-769-216 THAT PART OF DISTRICT LOT 3041, IN REFERENCE PLAN 8033, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-769-208 DISTRICT LOT 7069 (REFERENCE PLAN 8033), GROUP 1, NEW WESTMINSTER DISTRICT
- 011-540-401 THAT PART OF BLOCK 8, IN REFERENCE PLAN 1019, DISTRICT LOT 2935, PLAN 4485
- 011-540-231 THAT PART OF BLOCK 7, IN REFERENCE PLAN 5222, DISTRICT LOT 2935, PLAN 4485
- 015-890-244 THAT PART OF DISTRICT LOT 3086, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT LOT A (REFERENCE PLAN 1832) IN REFERENCE PLAN 4336
- 015-863-387 THAT PART OF DISTRICT LOT 3426, IN REFERENCE PLAN 9453, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-830-667 DISTRICT LOT 6511 (REFERENCE PLAN 4391), GROUP 1, NEW WESTMINSTER DISTRICT
- 015-764-842 DISTRICT LOT 7295, (REFERENCE PLAN 9453), GROUP 1, NEW WESTMINSTER DISTRICT
- 015-863-361 THAT PART OF DISTRICT LOT 2936, IN REFERENCE PLAN 9453, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-863-328 THAT PART OF LOT A (REFERENCE PLAN 1833) IN REFERENCE PLAN 9453 DISTRICT LOT 2936, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-863-379 THAT PART OF DISTRICT LOT 2937 IN REFERENCE PLAN 9453, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-863-395 THAT PART OF DISTRICT LOT 4073 IN REFERENCE PLAN 9453, GROUP 1, NEW WESTMINSTER DISTRICT
- 013-335-367 THAT PART OF DISTRICT LOT 3420, IN STATUTORY RIGHT OF WAY PLAN 18994, GROUP 1, NEW WESTMINSTER DISTRICT

- 015-919-196 THAT PART OF DISTRICT LOT 2076 IN REFERENCE PLAN 7320, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-863-409 THAT PART OF DISTRICT LOT 4074, IN REFERENCE PLAN 988, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-768-961 DISTRICT LOT 7051 (REFERENCE PLAN 7419), GROUP 1, NEW WESTMINSTER DISTRICT
- 015-768-953 DISTRICT LOT 7050 (REFERENCE PLAN 7419), GROUP 1, NEW WESTMINSTER DISTRICT
- 015-920-861 THAT PART OF DISTRICT LOT 1748 IN REFERENCE PLAN 6955, GROUP 1, NEW WESTMINSTER DISTRICT
- 013-341-324 THAT PART OF DISTRICT LOT 2961, IN STATUTORY RIGHT OF WAY PLAN 18994
- 013-341-359 THAT PART OF DISTRICT LOT 3421, IN STATUTORY RIGHT OF WAY PLAN 18994
- 013-341-316 THAT PART OF DISTRICT LOT 2807, IN STATUTORY RIGHT OF WAY PLAN 18994
- 024-473-910 THAT PART OF DISTRICT LOT 2076 IN PLAN LMP41651, GROUP 1, NEW WESTMINSTER DISTRICT.
- 015-896-102 THOSE PORTIONS OF DISTRICT LOT 2808 IN REFERENCE PLAN 6425, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-769-941 DISTRICT LOT 6934 (REFERENCE PLAN 6492), GROUP 1, NEW WESTMINSTER DISTRICT
- 015-875-008 THAT PART OF DISTRICT LOT 3425 IN REFERENCE PLAN 6587, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-918-807 THAT PART OF DISTRICT LOT 1296 IN REFERENCE PLAN 4335, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT: PART SUBDIVIDED BY PLAN LMP42785
- 015-918-823 THAT PART OF DISTRICT LOT 1632, IN REFERENCE PLAN 4335, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT: PART DEDICATED ROAD ON PLAN LMP42785
- 015-918-815 THAT PART OF DISTRICT LOT 1626, IN REFERENCE PLAN 4335, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-918-831 THAT PART OF DISTRICT LOT 1659 IN REFERENCE PLAN 4335, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT PART (0.22 ACRES MORE OR LESS ON PLAN 76) ESTABLISHED AS HIGHWAY
- 015-972-836 THAT PART OF DISTRICT LOT 1898, IN REFERENCE PLAN 4335, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-919-871 THAT PART OF DISTRICT LOT 2018, IN REFERENCE PLAN 4335, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-919-901 THAT PART OF DISTRICT LOT 2018 IN REFERENCE PLAN 6684, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-820-319 DISTRICT LOT 6524 (REFERENCE PLAN 4479), GROUP 1, NEW WESTMINSTER DISTRICT
- 015-820-301 DISTRICT LOT 6397 (REFERENCE PLAN 4479), GROUP 1, NEW WESTMINSTER DISTRICT

- 015-823-971 THAT PART OF DISTRICT LOT 1583, GROUP 1, IN REFERENCE PLAN 4390, NEW WESTMINSTER DISTRICT, EXCEPT: PART ON HIGHWAY PLAN 67
- 015-823-997 THAT PART OF DISTRICT LOT 2001, IN REFERENCE PLAN 4390, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT: PART ON HIGHWAY PLAN 67
- 015-824-021 THAT PART OF DISTRICT LOT 892, IN REFERENCE PLAN 7313, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT: PART ON HIGHWAY PLAN 67
- 015-823-962 THAT PART OF DISTRICT LOT 891, IN REFERENCE PLAN 4390, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT: PART ON HIGHWAY PLAN 67
- 015-823-989 THAT PART OF DISTRICT LOT 1897, IN REFERENCE PLAN 4390, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-824-004 THAT PART OF DISTRICT LOT 3623, IN REFERENCE PLAN 4390, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-820-351 DISTRICT LOT 6537 (REFERENCE PLAN 4519), GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT: FIRSTLY, PART IN REFERENCE PLAN 7331, SECONDLY: PORTION IN HIGHWAY PLAN 67
- 015-768-937 DISTRICT LOT 7037, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT: PART ON HIGHWAY PLAN 67
- 015-878-635 THE CLOSED ROAD IN REFERENCE PLAN 15041, DISTRICT LOT 3623, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-895-971 THAT PART OF DISTRICT LOT 2803, IN REFERENCE PLAN 10143, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-763-595 DISTRICT LOT 7307 (REFERENCE PLAN 10143), GROUP 1, NEW WESTMINSTER DISTRICT
- 015-763-731 DISTRICT LOT 7228, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-921-671 THAT PART OF DISTRICT LOT 1735 IN REFERENCE PLAN 9106, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-921-697 THAT PART OF LOT 1 (REFERENCE PLAN 647), IN REFERENCE PLAN 9106, DISTRICT LOT 1735, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-921-654 THAT PART OF LOT B (REFERENCE PLAN 989) IN REFERENCE PLAN 4185, DISTRICT LOT 1735, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-763-579 DISTRICT LOT 7308 (REFERENCE PLAN 10597), GROUP 1, NEW WESTMINSTER DISTRICT
- 015-768-414 DISTRICT LOT 7206 (STATUTORY RIGHT-OF-WAY PLAN 16692), GROUP 1, NEW WESTMINSTER DISTRICT
- 017-722-888 THAT PART OF DISTRICT LOT 2451, COMPRISING 122 SQUARE METERS ON STATUTORY RIGHT OF WAY PLAN LMP2904, GROUP 1, NEW WESTMINSTER DISTRICT
- 017-722-896 THAT PART OF DISTRICT LOT 2451, COMPRISING 0.294 HECTARES ON STATUTORY RIGHT OF WAY PLAN LMP2904, GROUP 1, NEW WESTMINSTER DISTRICT
- 017-722-900 THAT PART OF DISTRICT LOT 2451, COMPRISING 0.644 HECTARES, ON STATUTORY RIGHT OF WAY PLAN LMP2904, GROUP 1, NEW WESTMINSTER DISTRICT

- 015-902-595 THAT PART OF DISTRICT LOT 2451 IN REFERENCE PLAN 10597, GROUP 1, NEW WESTMINSTER DISTRICT
- 017-722-918 THAT PART OF DISTRICT LOT 2451, COMPRISING 1.39 HECTARES ON STATUTORY RIGHT OF WAY PLAN LMP2905, GROUP 1, NEW WESTMINSTER DISTRICT
- 017-722-926 THAT PART OF DISTRICT LOT 2451, COMPRISING 0.191 HECTARES, ON STATUTORY RIGHT OF WAY PLAN LMP2905, GROUP 1, NEW WESTMINSTER DISTRICT
- 017-722-934 THAT PART OF DISTRICT LOT 2451, COMPRISING 0.222 HECTARES, ON STATUTORY RIGHT OF WAY PLAN LMP2905, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-902-625 THAT PART OF DISTRICT LOT 3538 IN REFERENCE PLAN 10597, GROUP 1, NEW WESTMINSTER DISTRICT
- 017-016-282 THAT PART OF DISTRICT LOT 3538 IN EXPLANATORY PLAN 20152, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-980-006 THAT PART OF DISTRICT LOT 608, IN REFERENCE PLAN 4142, GROUP 1, NEW WESTMINSTER DISTRICT EXCEPT (A) PART IN BLOCK A (REFERENCE PLAN 889) AND (B) PART IN BLOCK D (EXPLANATORY PLAN 3458)
- 015-830-578 DISTRICT LOT 6457, (REFERENCE PLAN 4157), GROUP 1, NEW WESTMINSTER DISTRICT
- 015-979-903 THAT PART OF BLOCK D (EXPLANATORY PLAN 3458) IN REFERENCE PLAN 4142, DISTRICT LOT 608, GROUP 1, NEW WESTMINSTER DISTRICT
- 025-749-579 PARCEL 1 (STATUTORY RIGHT OF WAY PLAN BCP7568) OF BLOCK D (EXPLANATORY PLAN 3458) DISTRICT LOT 608 GROUP 1 NEW WESTMINSTER DISTRICT
- 025-749-889 PARCEL 2 (STATUTORY RIGHT OF WAY PLAN BCP7568) OF BLOCK D (EXPLANATORY PLAN 3458) DISTRICT LOT 608 GROUP 1 NEW WESTMINSTER DISTRICT
- 025-750-089 PARCEL 3 (STATUTORY RIGHT OF WAY PLAN BCP7568) OF BLOCK D (EXPLANATORY PLAN 3458) DISTRICT LOT 608 GROUP 1 NEW WESTMINSTER DISTRICT
- 009-325-212 LOT 1 (EXPLANATORY PLAN 8207) BLOCK G DISTRICT LOT 608 PLAN 10639
- 017-969-948 ALL THAT PART DISTRICT LOT 2177 SHOWN ON REFERENCE PLAN 4184, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-830-624 DISTRICT LOT 6470 (REFERENCE PLAN 4229), GROUP 1, NEW WESTMINSTER DISTRICT
- 017-969-913 ALL THAT PART OF DISTRICT LOT 1520 SHOWN ON REFERENCE PLAN 4184, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-860-884 THOSE PORTIONS OF DISTRICT LOT 4267 IN EXPLANATORY PLAN 6013, GROUP 1, NEW WESTMINSTER DISTRICT
- 024-779-393 THAT 0.588 HECTARE PORTION OF DISTRICT LOT 4266 GROUP 1 NEW WESTMINSTER DISTRICT SHOWN ON PLAN LMP46000
- 024-779-407 THAT 1.660 HECTARE PORTION OF DISTRICT LOT 4266 GROUP 1 NEW WESTMINSTER DISTRICT SHOWN ON PLAN LMP46000

- 024-779-415 THAT 0.216 HECTARE PORTION OF DISTRICT LOT 4266 GROUP 1 NEW WESTMINSTER DISTRICT, SHOWN ON PLAN LMP46000
- 002-674-360 DISTRICT LOT 2034, GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT PORTIONS IN PLANS 17660, 18351, 20627 AND LMP23510
- 017-445-124 THAT PART OF DISTRICT LOT 4261 IN STATUTORY RIGHT OF WAY PLAN VAP20561 GROUP 1 NEW WESTMINSTER DISTRICT EXCEPT: FIRSTLY PART DEDICATED ROAD ON PLAN LMP27995 AND SECONDLY: PART DEDICATED ROAD ON PLAN LMP36291
- 023-699-426 THAT PART OF DISTRICT LOT 4261, IN STATUTORY RIGHT OF WAY PLAN LMP32094, GROUP 1, NEW WESTMINSTER DISTRICT
- 023-491-124 LOT 4 BLOCK A DISTRICT LOT 4261 GROUP 1 NEW WESTMINSTER DISTRICT PLAN LMP29109
- 024-778-231 ALL THAT PART OF DISTRICT LOT 4261, GROUP 1, NEW WESTMINSTER DISTRICT, SHOWN ON STATUTORY RIGHT OF WAY PLAN LMP45999
- 025-392-514 THE 0.524 HECTARE PORTION OF LOT 1 (EXPLANATORY PLAN 750), DISTRICT LOT 486, GROUP 1, NEW WESTMINSTER DISTRICT, SHOWN ON PLAN LMP50913
- 025-392-557 THE 5.83 HECTARE PORTION OF DISTRICT LOT 4271, GROUP 1, NEW WESTMINSTER DISTRICT, SHOWN ON PLAN LMP50913
- 024-779-423 THAT 1.080 ACRE PORTION OF BLOCK A (REFERENCE PLAN 889) DISTRICT LOT 608, GROUP 1, NEW WESTMINSTER DISTRICT, SHOWN ON REFERENCE PLAN 4142
- 025-249-886 BLOCK N, DISTRICT LOTS 5619 AND 6117, GROUP 1, NEW WESTMINSTER DISTRICT
- 025-392-883 THE 1.39 HECTARE PORTION OF DISTRICT LOT 4272, GROUP 1, NEW WESTMINSTER DISTRICT, SHOWN ON PLAN LMP50913
- 025-392-921 THE 0.772 HECTARE PORTION OF DISTRICT LOT 4272, GROUP 1, NEW WESTMINSTER DISTRICT, SHOWN ON PLAN LMP50913
- 013-358-324 THAT PART OF LOT 1, (EXPLANATORY PLAN 750), IN STATUTORY RIGHT OF WAY PLAN 18925, DISTRICT LOT 486, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-041-492 LOT A (REFERENCE PLAN 1248) OF LOT I DISTRICT LOT 486, PLAN 999
- 025-392-000 BLOCK C, DISTRICT LOT 486, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN LMP50910
- 025-392-018 BLOCK A, DISTRICT LOT 4261, GROUP 1, NEW WESTMINSTER DISTRICT, PLAN LMP50911
- 025-392-026 DISTRICT LOT 7913, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-040-429 THAT PART OF LOT H, IN REFERENCE PLAN 830, DISTRICT LOT 486, PLAN 999
- 015-041-581 LOT A (REFERENCE PLAN 1130), OF LOT 16, BLOCK 19, DISTRICT LOT 486, PLAN 999
- 015-239-535 THAT PART OF BLOCK B, IN REFERENCE PLAN 4184, DISTRICT LOT 486, PLAN 572
- 015-239-560 THAT PART OF BLOCK C, IN REFERENCE PLAN 4184, DISTRICT LOT 486, PLAN 572
- 015-039-927 LOT A (REFERENCE PLAN 799) OF LOT F, DISTRICT LOT 486, PLAN 999
- 015-041-557 LOT A (REFERENCE PLAN 1129), OF LOT J, DISTRICT LOT 486, PLAN 999

- 015-980-341 THAT PART OF DISTRICT LOT 486, IN REFERENCE PLAN 828, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-239-527 THAT PART OF BLOCK A, IN REFERENCE PLAN 4184, DISTRICT LOT 486, PLAN 572
- 015-857-913 LOT K (REFERENCE PLAN 2775A,) BLOCK A (REFERENCE PLAN 1355), DISTRICT LOT 4261, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-980-367 THAT PART OF DISTRICT LOT 486 IN REFERENCE PLAN 26, GROUP 1, NEW WESTMINSTER DISTRICT, PART IN LOT O (REFERENCE PLAN 677)
- 015-980-332 THAT PART OF DISTRICT LOT 486, IN REFERENCE PLAN 831, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-040-241 THAT PART OF LOT G IN REFERENCE PLAN 829, DISTRICT LOT 486, PLAN 999
- 015-994-643 LOT 2 (EXPLANATORY PLAN 750), DISTRICT LOT 486, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-039-871 THAT PART OF LOT O (REFERENCE PLAN 677) IN REFERENCE PLAN 26 OF LOT F, DISTRICT LOT 486, PLAN 999
- 015-764-826 DISTRICT LOT 7294 (REFERENCE PLAN 9505), GROUP 1, NEW WESTMINSTER DISTRICT
- 025-981-525 PARCEL A (PLAN BCP10757) THAT PART OF DISTRICT LOT 4262 IN REFERENCE PLAN 19103, GROUP 1 NWD
- 025-981-536 PARCEL B (PLAN BCP10757) THAT PART OF DISTRICT LOT 4262 IN REFERENCE PLAN 19103, GROUP 1 NWD
- 025-981-544 PARCEL C (PLAN BCP10757) THAT PART OF DISTRICT LOT 4262 IN REFERENCE PLAN 19103, GROUP 1 NWD
- 023-700-220 DISTRICT LOT 7876 GROUP 1 NEW WESTMINSTER DISTRICT
- 023-700-211 BLOCK A (PLAN LMP32233) DISTRICT LOT 4273 GROUP 1 NEW WESTMINSTER DISTRICT
- 014-696-223 THAT PART OF THE NORTH EAST 1/4 OF SECTION 3 IN REFERENCE PLAN 1126, TOWNSHIP 50, GROUP 1, NEW WESTMINSTER DISTRICT
- 024-188-751 THAT PART OF LOT 97, SHOWN ON PLAN LMP38290, OF SOUTH EAST 1/4 OF SECTION 3, TOWNSHIP 50, PLAN 20491
- 009-508-112 LOT N, NORTH EAST 1/4 OF SECTION 3, TOWNSHIP 50, PLAN 9759
- 014-696-193 LOT A (REFERENCE PLAN 330) NORTH EAST 1/4 OF SECTION 3, TOWNSHIP 50, GROUP 1, NEW WESTMINSTER DISTRICT
- 009-508-155 LOT O, NORTH EAST 1/4 OF SECTION 3, TOWNSHIP 50, PLAN 9759
- 014-755-912 THAT PART OF THE NORTH WEST 1/4 OF SECTION 2, IN REFERENCE PLAN 1127, TOWNSHIP 50
- 023-614-200 PARCEL 1 (STATUTORY RIGHT OF WAY PLAN LMP30977), OF THAT PART OF THE SOUTH 1/2 OF THE SOUTH WEST 1/4 OF SECTION 11, IN REFERENCE PLAN 624, TOWNSHIP 50, NEW WESTMINSTER DISTRICT

- 014-697-874 THAT PART IN REFERENCE PLAN 1127, OF THAT PART OF THE SOUTH WEST 1/4 OF SECTION 11 IN REFERENCE PLAN 1092, TOWNSHIP 50, GROUP 1, NEW WESTMINSTER DISTRICT
- 014-697-548 THAT PART OF THE NORTH 1/2 OF THE SOUTH WEST 1/4 OF SECTION 11 IN REFERENCE PLAN 788, TOWNSHIP 50, GROUP 1, NEW WESTMINSTER DISTRICT
- 016-018-613 DISTRICT LOT 133, GROUP 1, NEW WESTMINSTER DISTRICT
- 014-851-962 THAT PART OF THE SOUTH 1/2 OF THE NORTH WEST 1/4 OF SECTION 11, IN REFERENCE PLAN 1171, TOWNSHIP 50, GROUP 1, NEW WESTMINSTER DISTRICT
- 014-851-954 THAT PART OF THE SOUTH 1/2 OF THE NORTH WEST 1/4 OF SECTION 11, IN REFERENCE PLAN 1170, TOWNSHIP 50, GROUP 1, NEW WESTMINSTER DISTRICT
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- 015-947-220 THAT PART OF DISTRICT LOT 1246, IN REFERENCE PLAN 917, GROUP 1, NEW WESTMINSTER DISTRICT
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- 015-947-939 THAT PART OF DISTRICT LOT 1249, IN REFERENCE PLAN 1040, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-940-748 THAT PART OF DISTRICT LOT 1250, IN REFERENCE PLAN 1162, GROUP 1, NEW WESTMINSTER DISTRICT
- 017-781-272 BLOCK J (STATUTORY RIGHT OF WAY PLAN LMP1182), DISTRICT LOT 1519, GROUP 1, NEW WESTMINSTER DISTRICT
- 016-768-060 THAT PART OF DISTRICT LOT 1250 SHOWN ON STATUTORY RIGHT OF WAY PLAN 20264, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-947-050 THAT PART OF DISTRICT LOT 1519, IN REFERENCE PLAN 943, GROUP 1, NEW WESTMINSTER DISTRICT
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- 017-766-591 BLOCK A (STATUTORY RIGHT OF WAY LMP800), DISTRICT LOT 3033, GROUP 1, NEW WESTMINSTER DISTRICT
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- 004-237-072 DISTRICT LOT 4361, REFERENCE PLAN 1405, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-921-565 THAT PART OF DISTRICT LOT 1754, IN REFERENCE PLAN 1066, GROUP 1, NEW WESTMINSTER DISTRICT
- 004-237-081 DISTRICT LOT 4362, REFERENCE PLAN 1405, GROUP 1, NEW WESTMINSTER DISTRICT
- 015-880-621 THAT PART OF DISTRICT LOT 3361 IN REFERENCE PLAN 1066, GROUP 1, NEW WESTMINSTER DISTRICT
- 004-237-137 DISTRICT LOT 4364, REFERENCE PLAN 1405, GROUP 1, NEW WESTMINSTER DISTRICT
- 004-237-102 DISTRICT LOT 4363 (REFERENCE PLAN 1405) GROUP 1, NEW WESTMINSTER DISTRICT, EXCEPT: PARTS SUBDIVIDED BY PLANS LMP4877, LMP17409 AND LMP41222
- 015-919-412 THAT PART OF DISTRICT LOT 2110, IN REFERENCE PLAN 990, GROUP 1, NEW WESTMINSTER DISTRICT
- 025-002-287 DISTRICT LOT 7948, GROUP 1, NEW WESTMINSTER DISTRICT AS SHOWN ON PLAN LMP49613

SCHEDULE 5**CONSTRUCTION AND END OF TERM REQUIREMENTS****Part 1****Construction Output Specifications**

1. In the design, planning and execution of the Works and other works in connection with the repair, maintenance, rehabilitation or improvement of the Project Facilities, the Site and the Adjacent Areas, and functions associated with the construction of the Project Facilities (including the Works), the Concessionaire shall take all such action and do all such things (including organizing itself, adopting measures and standards, executing procedures, including inspection procedures and safety patrols, and engaging and managing contractors, agents and employees) as will and in such manner as will:
 - 1.1 enable the Province to provide an acceptably safe highway in respect of its condition (structural safety) and use (road safety); and
 - 1.2 enable the Province and other Governmental Authorities to fulfill its and their statutory and common law functions, duties and obligations;and, subject to paragraphs 1.1 and 1.2 above:
 - 1.3 enable the Police, Public Authorities, and others with statutory duties or functions in relation to the Concession Highway or Connecting Roads to fulfill those duties and functions;
 - 1.4 minimize the occurrence and adverse effects of accidents and ensure that all accidents and emergencies are responded to as quickly as possible;
 - 1.5 minimize the risk of damage, destruction or disturbance to third party property;
 - 1.6 ensure that members of the public are treated with all due courtesy and consideration;
 - 1.7 provide a safe, clear and informative system of road signs;
 - 1.8 comply with any specified schedule requirements, including for the completion of the Works or any part or parts thereof;
 - 1.9 enable standards of reliability, durability, accessibility, maintainability, quality control and assurance, and fitness for purpose appropriate to a highway of the character of the Concession Highway to be achieved throughout the Contract Period;
 - 1.10 comply with the Orders and any New Order;

- 1.11 meet the environmental objectives detailed in the Environmental Assessment Certificate, including the achievement of a high standard in the mitigation of adverse environmental effects; and
 - 1.12 achieve a high standard in the appearance and aesthetic quality of the Project Facilities, the Site and the Adjacent Areas and achieve integration of the Concession Highway with the character of the surrounding landscape through both sensitive design and sensitive management of all visible elements including those on the Existing Highway.
2. The Concessionaire shall comply with the specifications identified in Annex 1 to this Part 1 of Schedule 5, which specifications constitute the minimum performance obligations of the Concessionaire in respect of the design and construction of the Works. For greater certainty, nothing in this Part 1 of Schedule 5 relieves the Concessionaire from its obligations to comply with the terms of Part 2 of Schedule 5 [Construction Requirements], which terms shall supplement and enhance the Concessionaire's obligations under this Part 1 of Schedule 5.

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Annex 1 to Part 1 of Schedule 5**PART A. INTRODUCTION****1. Scope and Interpretation**

The minimum specifications for design and construction are set out in this Part 1 of Schedule 5. The Concessionaire must meet or exceed those requirements. Capitalized terms used herein not otherwise defined in Schedule 1 [Definitions and Interpretation] shall have the meaning given to such terms as set out in Annex 2. Locations referenced by stationing are to the stationing used on the drawings in Part 5 of Schedule 5 [Construction Drawings], unless otherwise indicated.

Improvements and/or requirements described in this Part 1 of Schedule 5 which are located within IR24 (Sta. 142+029 to Sta. 143+069) are currently excluded from the scope of the Agreement. Any Improvements and/or other requirements pertaining to IR24 (Sta. 142+029 to Sta. 143+069) will be added to this Agreement by way of a Province Change in accordance with Part 2 of Schedule 13 [Province Changes].

2. References

Code, standard, guideline references and other reference documents are listed in Annex 3.

For design and construction of Works completed before 2010, including the work for the Olympic Period operation, the codes, standards, and guidelines in effect as of the Commencement Date will apply.

3. Design Reviews

The Concessionaire will submit design materials and progress reports to the Province's Representative for review, in accordance with Part 3 of Schedule 5 [Design and Certification Procedure].

4. Designs, Drawings, and Document Preparation

The Concessionaire will prepare all detailed design drawings and documents required for design compliance and reviews in accordance with Part 3 of Schedule 5 [Design and Certification Procedure] and for its construction use. All detailed design drawings will be prepared in accordance with the *BC Supplement to TAC Geometric Design Guide*, except as modified in this Part 1 of Schedule 5.

5. Acquisition Lands

The Concessionaire shall perform all necessary legal survey work and prepare and provide to the Province such drawings, sketches and plans including such subdivision, reference, road dedication and other plans in forms registrable under the *Land Title Act*, R.S.B.C. 1996, c. 250, *Land Act*, R.S.B.C. 1996, c.245 and any successor legislation as may be required by the Province so as to permit it to acquire those Acquisition Lands identified in Part 3 of Schedule 4 [Acquisition Lands and Acquisition Dates] where the acquisition costs are the responsibility of the Concessionaire.

PART B. DESIGN CRITERIA**1. Highway Design Criteria****1.1 Introduction**

The design for the Concession Highway will be accordance with MOT's *BC Supplement to TAC Geometric Design Guide* or *TAC Geometric Design Guide* except where there is a conflict with the design criteria included herein, in which case the design criteria herein shall prevail.

Highway 99 is designated a Class 2 highway in accordance with MOT Technical Circular T-2/92, *Seismic Design and Rehabilitation Criteria*.

All detailed design within a municipality but outside the Highway Right-of-Way must conform to local municipal standards and/or the *Master Municipal Specifications* prepared jointly by the Consulting Engineers of British Columbia, the Road Builders and Heavy Construction Association and the Municipal Engineers Division.

Provision shall be made for bicycle paths and trails that currently cross Highway 99. Provisions shall be equal to or better than those in existence at the Commencement Date.

The specific design criteria for each highway section for which Works will be required are set out in Sections 1.2-1.9 of this Part B below. The following additional design criteria apply to all highway sections:

a) Horizontal Curves

The minimum horizontal curve radius shown in the design criteria tables is based on a maximum super elevation of 6%.

b) Vertical Curves

The minimum K values for the proposed design speed are based on headlight (sag curves) and taillight (crest curves) control.

c) Stopping Sight Distance

Stopping sight distance must be provided on all horizontal curves in accordance with MOT's *BC Supplement to TAC Design Guide* and TAC's *Geometric Design Guide for Canadian Roads*. Decision sight distance must also be provided for sight triangles at all intersections and at other critical locations.

d) Outside Paved Shoulder Width

Bicycle passage and paved shoulders in new and reconstructed sections must be a minimum of 1.5 m wide where no barrier is present, and 2.1 m with a concrete roadside barrier (1.5 m shy distance + 0.6 m barrier width).

Rumble strips must be installed on paved shoulders in conformance with MOT's document entitled "*Shoulder Rumble Strip*" *Technical Bulletin No. DS04001*, dated April 22, 2004.

Wherever a roadside barrier is warranted, the paved shoulder must be widened by 600 mm to accommodate the concrete roadside barrier.

e) Inside Paved Shoulder Width

Inside paved shoulder widths are to be as shown on the typical cross section drawings contained in Part 5 of Schedule 5 [Construction Drawings] and modified as necessary to provide stopping sight distances.

f) Recovery Slope

In rock excavation areas, side slopes of 4:1 must be provided to allow added opportunities for errant vehicles to recover.

g) Median Barrier

The minimum shy distance from lane edge to median barrier is 0.7 m.

h) Rock Ditch Widths

The minimum catchment width must be as presented in the CSD Guidelines, Section 11. For a catchment width of 3.0 m to 5.0 m, the ditch depth will vary from 0.75 m to 1.25 m (depending on the recovery slope) where there are no additional requirements for drainage.

i) Design Vehicle

The design vehicle template to be applied to the Concession Highway, as well as to intersections in industrial and major commercial areas, is a WB20, as per TAC's *Geometric Design Guide for Canadian Roads, Section 1.2.4*, except that the following intersections will be designed to accommodate WB15 vehicles:

- Brunswick Pit at Sta. 112+860
- East side of Valley Cliff to Clarke Drive at Sta. 142+900
- East side of Cleveland to Loggers Lane at Sta. 143+970
- Salt shed access at Sta. 227+300 to Sta. 227+500
- Brandywine Park at Sta. 240+838

Access to communities and park areas will be designed to accommodate BU12 vehicles at the following locations:

- Pasco Road Intersection at Sta. 103+350 (approximate)
- Kelvin Grove at Sta. 110+840 (approximate)
- Brunswick Beach at Sta. 113+310
- Main Street in Britannia Beach at Sta. 132+600
- Murrin Park at Sta. 135+600
- Pine Crest Estate at Sta. 235+520
- Black Tusk at Sta. 236+610
- Brew Creek Lodge Road at Sta. 237+575
- Shannon Falls Park
- Stawamus Chief Park

Minor or residential intersections may be designed to a lower standard but must accommodate emergency vehicles and the type of vehicle that commonly accesses that specific intersection.

j) Viewpoints, Rest Areas and Pullouts

The entry and exit tapers and the protective barriers for viewpoints, rest areas and pullouts, other than DB4 through DB7, must be developed as per *BC Supplement to TAC Geometric Design Guide*, Section 9 – Auxiliary Facilities.

k) Access and Intersections

Access and intersections, other than those specifically described in Sections 1.2-1.9 of this Part B, shall be designed as per *BC Supplement to TAC*, Chapter 7 and *TAC Guidelines*.

Access intersection design and construction includes, but is not limited to, the detailed design and construction of all accesses and intersections shown on the drawings in Part 5 of Schedule 5 [Construction Drawings] and/or required in this Part 1 of Schedule 5. Accesses and intersections listed in the design criteria throughout this Section are included in the scope of work.

l) Roadside Barriers

Placement of roadside barriers shall be as per Barrier Index Warrant, Chapter 6 of the *BC Supplement to TAC*.

m) Limit of Construction at Intersection Roads or Accesses

The limit of construction at intersections must incorporate the space required for the development of safe and functional intersection configuration and must extend to transition smoothly both horizontally and vertically to tie to existing roadway. Roadway surfaces outside of the Concession Highway must match the existing road surface type unless specified otherwise. Roadway edge treatments, boulevards and sidewalks must be constructed to match the existing conditions or the municipal standards, whichever is of a higher standard.

The construction limit on accesses must extend to the limit of the Concession Highway or beyond the limit of the Concession Highway to ensure smooth tie to the existing grade of the access road, whichever is greater.

Where the intersecting roadway is gravel surfaced, an adequate section of the intersecting road must be asphalt paved to minimize migration of loose gravel onto the Concession Highway.

1.2 Highway Section DB1 - Horseshoe Bay to Sunset Beach

1.2.1 Highway Geometrics Information

Table 1-1 provides minimum highway geometrics design criteria for the Horseshoe Bay to Sunset Beach highway section of the Concession Highway (Sta. 98+650 to Sta. 104+02). Typical cross sections that apply to this highway section are shown on cross sections TS4 and TS11 on Drawings 41DD-DB00-0006 and 41DD-DB00-0008 in Part 5 of Schedule 5 [Construction Drawings]. The criteria are for the upgrading of the Horseshoe Bay to Sunset Beach highway section to the ultimate four-lane divided highway using a new overland route east of the Existing Highway.

The interchange with Highway 1 at the south end of this highway section must be designed so as to minimize interference with ferry traffic. (See Section 1.1.2.5 of Part 6 of Schedule 5 [Traffic Management Output Specifications] for restrictions on lane closures in connection with ferry traffic.)

TABLE 1-1
Highway Geometrics Design Criteria for Section DB1

Item	Present Conditions	Minimum Design Criteria
Design Classification	Rural Arterial Undivided	Rural Arterial Divided
Posted Speed	50-80 km/h	60-80 km/h ^{Note 1}
Design Speed	50-80 km/h	60-80 km/h ^{Note 2}
Basic Lanes	2	4
Minimum Radius	120 m	250 m
Min. K Factor Sag	12	32
Min. K Factor Crest	7	36
Max. Grade	9%	7%
Max. Superelevation	8%	6%
Minimum S.S.D.	80 m	85/140 m ^{Note 3}
Minimum D.S.D.		205/230 m
Lane Width	3.6 m	3.5 m
Shoulder Width Outside	0.0 – 1.5 m	1.5 m
Shoulder Width Inside	0.0 m	0.7 m
Clear Zone – offset width	shoulder width only	5 m
Recovery Slope	shoulder width only	4:1
Median Width	none	2.0 m
Median Barrier	none	yes
Catchment Width in Rock Cuts	variable	3.0 – 5.0
Design Vehicle	WB 15	WB 20

Notes:

1. Posted Speed

The 60 km/h posted speed is applicable to the south end of Highway 99 from approximately Nelson Creek to Larson Creek.

2. Design Speed

Highway 1 is posted at 60 km/h where it connects to Highway 99. This 60 km/h criterion is to be used for the design of the connection.

3. Stopping Sight Distance

For the section of Highway 99 from approximately Nelson Creek to Larson Creek only, it is recognized that SSD may not be achieved alongside the median barrier and cut slopes. The Concessionaire's design in the highway section from approximately Nelson Creek to Larson Creek must achieve at least 110 m of stopping sight distance (70 km/h standard) with speed advisories (CSD Guidelines, Executive Summary, Exhibit 1). In addition to speed advisories, speed shall be controlled using methods suggested in CSD Guidelines, Section 7, to ensure that the speed of traffic in the 85th percentile meets the design speed.

1.2.2 Intersections and Access Treatment

The design of intersections and private accesses will be as follows:

1.2.2.1 *North End Connection*

To provide direct access between the North End Connection and Horseshoe Bay, a direct southbound off-ramp and a northbound grade separated fly-over on-ramp are to be provided.

1.2.2.2 *Pasco Road Intersection*

A modified T-intersection is to be provided at Pasco Road, allowing left-out from Pasco northbound. Northbound traffic accessing Pasco Road is required to use Ansell Place interchange to turn around, which is approximately 900 m further north.

The rock outcrop on the west side of Highway 99 is to be retained as a buffer from the residential area.

1.2.2.3 *Eagleridge Interchange*

The Eagleridge Interchange and adjacent highway and roadway shall be designed in a manner which facilitates a future grade separated connection from the Eagleridge Interchange to lands on the northeast side of the new overland four-lane divided highway. Connections to Eagleridge Drive and Marine Drive are to be maintained.

1.3 Highway Section DB31.3.1 Urban Lions Bay; Kelvin Grove to Brunswick Pit1.3.1.1 Highway Geometrics Information

Table 1-2 provides minimum highway geometrics design criteria for the urban Lions Bay; Kelvin Grove to Brunswick Pit section of the Concession Highway (Sta. 110+712 to 113+000). Typical cross sections that apply to this highway section are shown on cross sections TS8, TS9, and TS11 on Drawings 41DD-DB00-0008 in Part 5 of Schedule 5 [Construction Drawings].

Between Kelvin Grove and Lions Bay Avenue, the Concessionaire is to provide urban design features including curb and gutter, raised median, continuous street lighting, bicycle lane markings on shoulders, landscaping, and pedestrian pathways, as shown in Part 5 of Schedule 5 [Construction Drawings] Drawing 41DD-DB00-0008, cross section TS9.

TABLE 1-2
Highway Geometrics Design Criteria for Section DB3 (Urban Section)

Item	Present Conditions	Minimum Design Criteria
Design Classification	Rural Arterial Undivided	Urban Arterial Divided
Posted Speed	50-80 km/h	60 km/h ^{Note 1}
Design Speed	50-80 km/h	60 km/h
Basic Lanes	2	4
Minimum Radius	120 m	130 m
Min. K Factor Sag	18	18
Min. K Factor Crest	36	13
Max. Grade	6%	7%
Max. Superelevation	8%	6%
Minimum S.S.D.	100 m	85 m
Minimum D.S.D.		205 m
Lane Width	3.6 m	3.5 m
Shoulder Width Outside	1.0 m	1.5 m ^{Note 2}
Shoulder Width Inside	0.0 m	0.7 m
Clear Zone – Offset Width	shoulder width only	5 m
Recovery Slope	shoulder width only	4:1
Median Width	variable	2.0 m ^{Note 3}
Median Barrier	yes	yes ^{Note 4}
Catchment Width in Rock Cuts	variable	3.0 – 5.0
Design Vehicle	WB 15	WB 20

Notes:

1. Posted Speed

The posted speed will be determined in consultation with the community.

2. Shoulder Width

Where combined curb and gutter is used, a 1.5 m wide bike lane will be provided between the lane edge and the edge of gutter. Rumble strips must not be used through this urban section of roadway.

3. Median Width

Median width is to be 2.0 m from lane edge to lane edge with an allowance of 0.4 m from lane edge to curb face in areas of raised island with constant width from just south of Kelvin Grove Way to just north of Alberta Creek.

From just north of Alberta Creek to Brunswick Pit the median will be 2.0 m wide (1.0 m on each side of the roadway centreline), with median barrier.

4. Median Barrier

The exact location of the transition points from raised island median to barrier median will be determined by the Concessionaire during the design process.

1.3.1.2 Interchanges, Intersections and Access Treatment

The design of interchanges, intersections and private accesses will be as follows:

1.3.1.2.1 Kelvin Grove

An interchange as shown conceptually in Part 5 of Schedule 5 [Construction Drawings], Drawing 41DD-DB00-0013, is to be incorporated at Kelvin Grove.

The minimum acceptable lane and taper lengths for the exit/entrance movements from/to the highway are:

Lane	Lane Length	Taper Length
Deceleration (off-ramp)	40 m	50 m
Acceleration (on-ramp)	70 m	60 m

1.3.1.2.2 Lions Bay

Lions Bay Interchange will remain unchanged, except that the existing retaining wall on the southbound on-ramp must be reconfigured.

1.3.1.2.3 Brunswick Pit

The entrance to Brunswick Pit must be designed either with right-in/right-out access only, or alternatively the existing connection to Highway 99 may be closed with the Pit access reconnected to the proposed interchange at Brunswick Beach.

1.3.1.3 *Transition Zone Treatment*

At the south end, this Highway Section DB3 ties to the four-lane divided, Sunset Beach to Lions Bay highway section. At the north end of the Sunset Beach to Lions Bay section, just south of Kelvin Grove, the Concession Highway will transition from RAD80 to UAD60 through Lions Bay.

This transition will be accomplished by implementing speed control measures, including those proposed in the CSD Guidelines Section 7, including the introduction of a gateway feature and sharpening curvature approaching Kelvin Grove.

1.3.1.4 *Pullouts and Bus Stops*

Two pullouts suitable for traffic enforcement must be provided by the Concessionaire, one on the southbound side just south of Brunswick Beach and one for northbound traffic in the wide median just south of Kelvin Grove.

Bus stops are to be provided at locations determined through consultation with BC Transit and other transit operators.

1.3.1.5 *Bicycle Parks and Trails*

At Lions Bay, the Concessionaire is to design and construct a bicycle/foot path from Tidewater Way to Southview Place. The path is to be within the Highway Right-of-Way and be physically separate from the roadway. The path shall provide for two-way pedestrian traffic, minimum 2 m in width and surfaced with crushed limestone or approved equivalent.

1.3.2 Rural Lions Bay: Brunswick Pit to “M” Creek

1.3.2.1 *Highway Geometrics Information*

Table 1-3 provides minimum highway geometrics design criteria for the rural Lions Bay (Brunswick Pit to “M” Creek) section of the Concession Highway (Sta. 113+000 to 114+093). Typical cross sections that apply to this highway section are shown on cross section TS11 on Drawing 41DD-DB00-0008 in Part 5 of Schedule 5 [Construction Drawings].

TABLE 1-3
Highway Geometrics Design Criteria for Section DB3 (Rural Section)

Item	Present Conditions	Minimum Design Criteria
Design Classification	Rural Arterial Undivided	Rural Arterial Divided
Posted Speed	50-80 km/h	60 km/h ^{Note 1}
Design Speed	50-80 km/h	70 km/h ^{Note 2}
Basic Lanes	2	4-3 ^{Note 3}

TABLE 1-3
Highway Geometrics Design Criteria for Section DB3 (Rural Section)

Item	Present Conditions	Minimum Design Criteria
Minimum Radius	90 m	250 m
Min. K Factor Sag	12	25
Min. K Factor Crest	7	23
Max. Grade	5%	7%
Max. Superelevation	8%	6%
Minimum S.S.D.	80 m	110 m
Minimum D.S.D.		200 m
Lane Width	3.6 m	3.5 m
Shoulder Width Outside	0.0 – 1.5 m	1.5 m
Shoulder Width Inside	0.0 m	0.7 m
Clear Zone – Offset Width	shoulder width only	5 m
Recovery Slope	shoulder width only	4:1
Median Width	none	2.0 m
Median Barrier	none	yes
Catchment Width in Rock Cuts	variable	3.0 – 5.0
Design Vehicle	WB 15	WB 20

Notes:

1. Posted Speed

The posted speed will be determined during the pre-design in consultation with the community.

2. Design Speed

The design criteria used on Highway Section DB4 are to be used for the design of the transition section between Magnesia Creek and “M” Creek.

3. Basic Lanes

Four lanes are to be provided from Kelvin Grove to north of Magnesia Creek. Transition from four lanes to three lanes is to be located between Magnesia Creek and “M” Creek.

1.3.2.2 *Intersections and Access Treatment*

The design of intersections and private accesses will be as follows:

1.3.2.2.1 Brunswick Beach

An interchange that consolidates the old Brunswick Pit Road, Brunswick Road, and the private accesses respectively at Sta. 113+390, 113+450, and 113+500 is to be provided at Brunswick Beach. The interchange must provide safe access for all movements, accommodate pedestrians, provide an off highway bus stop opportunity, and use less property than a fully developed interchange. This interchange is shown conceptually in Part 5 of Schedule 5 [Construction Drawings], Drawing 41DD-DB00-0013.

The minimum acceptable lane and taper lengths for the exit/entrance movements from/to this highway section are:

Lane	Lane Length	Taper Length
Deceleration (off-ramp)	40 m	50 m
Acceleration (on-ramp)	70 m	60 m

1.3.2.2.2 Access Road North of Magnesia Creek at Sta. 113+560 (northbound)

The existing private access road just north of Magnesia Creek will be designed as a right-in/right-out. Southbound (traffic having to turn left to access the property) will be required to use the nearby interchange. Traffic from the property wanting to head south will be required to head north on Highway 99 and use a turnaround facility at a location to be determined by the Concessionaire.

The existing private access road on the southbound side of Highway 99 just south of “M” Creek will continue to be a right-in/right-out facility. Traffic from the property wanting to go north will have to head south on Highway 99 and use the Brunswick Beach interchange to turn around. Northbound traffic accessing the property will have to use the turnaround facility to be provided by the Concessionaire further north.

1.3.2.3 *Transition Zone Treatment*

1.3.2.3.1 South End

At the south end, this highway section will tie to the northern portion of Urban Lions Bay: Kelvin Grove to Brunswick Pit. Transition treatment between rural and urban features must be incorporated to reduce vehicle speed entering the urban area.

1.3.2.3.2 North End

At the north end, this section will tie to the “M” Creek to Porteau Cove segment.

This transition will be accomplished by implementing speed control measures, including those proposed in the CSD Guidelines, Section 7, including the introduction of a gateway feature.

1.4 Highway Section DB4 - "M" Creek to Porteau Cove

1.4.1 Highway Geometrics Information

Table 1-4 provides minimum highway geometrics design criteria for the "M" Creek to Porteau Cove section of the Concession Highway (Sta. 114+161 to 124+563). The cross sections applicable for two, three or four lanes are shown on the typical cross sections TS1, TS2 and TS6 on Drawings 41DD-DB00-0006 and 41DD-DB00-0007 in Part 5 of Schedule 5 [Construction Drawings].

The minimum standards for this highway section are the conditions in existence at the Commencement Date, with improvements as noted below.

The Concessionaire shall provide a minimum of three lanes between "M" Creek and Squamish for the Olympic Period. Where only three lanes are provided, one lane is to be reversible to provide for two northbound lanes in the morning and two southbound lanes in the afternoon. The Concessionaire will accomplish this by either:

1. Providing a temporary third lane on the rail lands and rail bed assets with the Existing Highway accommodating the other two lanes; or
2. Widening the highway section to accommodate the interim three-lane operation.

TABLE 1-4
Highway Geometrics Design Criteria for Section DB4

Item	Minimum Design Criteria (Present Conditions)
Design Classification	Rural Arterial Undivided
Posted Speed	50-80 km/h
Design Speed	50-80 km/h
Basic Lanes	2-3 ^{Note 1}
Minimum Radius	85 m
Min. K Factor Sag	17.2
Min. K Factor Crest	17.8
Max. Grade	<9%
Max. Superelevation	8%
Minimum S.S.D.	Unknown
Minimum D.S.D.	
Lane Width	3.6 m
Shoulder Width Outside	0.0 – 1.0 m
Shoulder Width Inside	0.0 m
Clear Zone – Offset Width	shoulder width only

TABLE 1-4
Highway Geometrics Design Criteria for Section DB4

Item	Minimum Design Criteria (Present Conditions)
Recovery Slope	shoulder width only
Median Width	None
Median Barrier	None
Catchment Width in Rock Cuts	Variable
Design Vehicle	WB 15

Note:

1. Basic Lanes

After the Olympic Period, two lanes with passing opportunities are required.

1.4.2 Intersections and Access Treatment

The design of intersections and private accesses shall be as follows:

1.4.2.1 *Channelized Intersection at Sta. 118+600*

The pullout at Sta. 118+600 shall be developed with the channelized left turn enlarged to provide room for a turnaround.

1.4.2.2 *Right-in/Right-out*

The gated access to BC Rail premises which are leased to Construction Aggregate at Sta. 122+290 shall be designed as right-in/right-out.

1.4.2.3 *Private Access/Driveways*

The private access at Sta. 116+970 on the northbound side and proposed new pullout at Sta. 116+940 can be combined to operate as a single right-in/right-out access.

The right-in/right-out access at Sta. 122+670 to Porteau Camp is to be maintained.

1.4.2.4 *Porteau Cove Provincial Park*

A channelized T-intersection shall be provided at Sta. 124+500 to maintain access to Porteau Cove Provincial Park.

1.4.3 Transition Zone Treatment

1.4.3.1 *South End*

The south end of this highway section will tie to the north end of the four-lane divided highway section through Lions Bay.

1.4.3.2 *North End*

The north end of this highway section will tie to the Porteau Cove to Minaty Bay highway section.

1.5 Highway Section DB5 - Porteau Cove to Minaty Bay

1.5.1 Highway Geometrics Information

Table 1-5 provides minimum highway geometrics design criteria for the Porteau Cove to Minaty Bay section of the Concession Highway (Sta. 124+647 to 130+364). Typical cross sections that apply to this highway section are shown on cross sections TS2, TS6, TS7, and TS11 on Drawings 41DD-DB00-0006, 41DD-DB00-0007, and 41DD-DB00-0008 in Part 5 of Schedule 5 [Construction Drawings].

The minimum standards for this highway section are the conditions in existence at the Commencement Date, with improvements as noted below.

For the Olympic Period, the Concessionaire is to provide a minimum of three lanes for this highway section. Where only three lanes are provided, one lane is to be reversible to provide for two northbound lanes in the morning and two southbound lanes in the afternoon.

TABLE 1-5
Highway Geometrics Design Criteria for Section DB5

Item	Minimum Design Criteria (Present Conditions)
Design Classification	Rural Arterial Undivided
Posted Speed	60-80 km/h
Design Speed	60-80 km/h
Basic Lanes	2-4
Minimum Radius	170 m
Min. K Factor Sag	–
Min. K Factor Crest	–
Max. Grade	8%
Max. Superelevation	<8%
Minimum S.S.D.	unknown
Minimum D.S.D.	
Lane Width	3.5 – 3.6 m
Shoulder Width Outside	0.0 – 1.5 m
Shoulder Width Inside	0.0 m
Clear Zone – Offset Width	shoulder width only
Recovery Slope	shoulder width only
Median Width	none

TABLE 1-5
Highway Geometrics Design Criteria for Section DB5

Item	Minimum Design Criteria (Present Conditions)
Median Barrier	none ^{Note 1}
Catchment Width in Rock Cuts	variable
Design Vehicle	WB 15

Note:

1. Median Barrier

The existing median barrier at the southbound on-ramp of Furry Creek interchange shall remain in place to preclude left-in and left-out turning movements.

1.5.2 Intersection and Access Treatment

The design of intersections and private accesses shall be as follows:

1.5.2.1 *Salt Shed*

The unchannelized intersection at Sta. 124+660 shall be retained.

1.5.2.2 *Right-in/Right-out*

The accesses at Sta. 129+100 northbound and Sta. 129+850 shall be retained.

1.5.2.3 *Third Lane on BC Rail Lands (Olympic Period)*

If a third highway lane is developed on the rail lands and rail bed assets between Porteau Bluffs and Furry Creek, then the additional lane must begin at approximately Sta. 124+460 and end at approximately Sta. 125+600. Any rock excavation to accommodate such additional lane must not adversely impact slope stability.

1.5.2.4 *Pullout*

The southbound emergency pullout at Sta. 128+700 (approximate) shall be retained.

1.5.2.5 *Bus Bays*

The Concessionaire shall provide improved access to bus stops, as determined through consultation with the community and transit operators.

1.6 Highway Section DB6 - Minaty Bay to Murrin Park

1.6.1 Highway Geometrics Information

Table 1-6 provides minimum highway geometrics design criteria for the Minaty Bay to Murrin Park section of the Concession Highway (Sta. 130+400 to 135+350). Typical cross sections that apply to this highway section are shown on cross sections TS1, TS2, TS3, TS6, and TS13 on Drawings 41DD-DB00-0006, 41DD-DB00-0007, and 41DD-DB00-0008 in Part 5 of Schedule 5 [Construction Drawings].

The minimum standards for this highway section are the conditions in existence at the Commencement Date, with improvements as noted below.

For the Olympic Period, the Concessionaire is to provide a minimum three lanes for this highway section. Where only three lanes are provided, one lane is to be reversible to provide for two northbound lanes in the morning and two southbound lanes in the afternoon.

TABLE 1-6
Highway Geometrics Design Criteria for Section DB6

Item	Minimum Design Criteria (Present Conditions)
Design Classification	Rural Arterial Undivided
Posted Speed	50-80 km/h ^{Note 1}
Design Speed	50-80 km/h ^{Note 2}
Basic Lanes	2-3 ^{Note 3}
Minimum Radius	130 m
Min. K Factor Sag	22
Min. K Factor Crest	43
Max. Grade	8%
Max. Superelevation	8%
Minimum S.S.D.	unknown
Minimum D.S.D.	
Lane Width	3.5 – 3.6 m
Shoulder Width Outside	1.0 – 2.5 m
Shoulder Width Inside	none
Clear Zone – Offset Width	shoulder width only
Recovery Slope	shoulder width only
Median Width	none
Median Barrier	none
Catchment Width in Rock Cuts	variable
Design Vehicle	WB 15

Notes:

1. Posted Speed

The 60 km/h speed applies to the commercialized area within Britannia Beach.

2. Design Speed

The 60 km/h speed applies to urban Britannia Beach.

3. Basic Lanes

Most of this highway section is already three lanes with the exception of the commercialized portion of Britannia Beach from Sta. 131+130 to Sta. 133+110. The Concessionaire shall improve the intersections within Britannia Beach and provide three lanes for the Olympic Period.

1.6.2 Intersections and Access Treatment

The existing access to the 99^{er} Restaurant, the parking areas and the intersection at Main Street are to be improved by the Concessionaire to provide the following:

- A right-in/right-out access northbound at Sta. 131+040.
- A full movement T-intersection to the chain-up area at Sta. 131+863.
- A full movement T-intersection at Sta. 132+140, with a left turn channel for southbound traffic to the restaurant area.
- A right-out only from the restaurant parking area to the northbound highway at Sta. 132+250.
- Consolidated Main Street intersection at Sta. 132+600. The existing uncontrolled accesses will be consolidated into a single full movement four-leg intersection.

1.6.3 Transition Zone Treatment

To transition from the posted rural 80 km/h speed (approaching Britannia Beach, northbound and southbound) to the posted urban 60 km/h speed (in Britannia Beach), speed control measures such as those discussed in the CSD Guidelines, Section 7, including introduction of gateway features, are to be implemented by the Concessionaire. These measures are to be implemented in conjunction with appropriate context sensitive features to provide a more urban/village feel to the highway section.

Any changes to the bridge at Britannia Beach must be designed to provide gateway features and speed control measures equivalent to the current level.

1.6.4 Bus Bays

The Concessionaire will provide improved access to bus stops as determined through consultation with the community and the transit operators.

1.7 Highway Section DB7 - Murrin Park to South Stawamus

1.7.1 Highway Geometrics Information

Table 1-7 provides minimum highway geometrics design criteria for the Murrin Park to South Stawamus section of the Concession Highway (Sta. 135+388 to 141+679). Typical cross sections that apply to this highway section are shown on cross sections TS1, TS2, TS6, TS11, and TS13 on Drawings 41DD-DB00-0006, 41DD-DB00-0007, and 41DD-DB00-0008 in Part 5 of Schedule 5 [Construction Drawings].

The minimum standards for this highway section are the conditions in existence at the Commencement Date, with improvements as noted below.

For the Olympic Period, the Concessionaire shall provide a minimum of three lanes. Where only three lanes are provided, one lane shall be reversible to provide for two northbound lanes in the morning and two southbound lanes in the afternoon.

TABLE 1-7
Highway Geometrics Design Criteria for Section DB7

Item	Minimum Design Criteria (Present Conditions)
Design Classification	Rural Arterial Undivided
Posted Speed	80 km/h
Design Speed	–
Basic Lanes	2-3
Minimum Radius	–
Min. K Factor Sag	unidentified
Min. K Factor Crest	unidentified
Max. Grade	7%
Max. Superelevation	<8%
Minimum S.S.D.	unknown
Minimum D.S.D.	
Lane Width	3.5 – 3.6 m
Shoulder Width Outside	1.0 – 1.2 m
Shoulder Width Inside	none
Clear Zone – Offset Width	shoulder width only
Recovery Slope	shoulder width only
Median Width	none
Median Barrier	none
Catchment Width in Rock Cuts	variable
Design Vehicle	WB 15

1.7.2 Intersection and Access Treatment

The design of intersections and private accesses will be as follows:

1.7.2.1 *Stawamus Chief Park and Viewpoint Access (Sta. 141+300 approximate)*

To improve safety at the entrance into the parking lot at the Stawamus Chief Mountain, a protected T-intersection shall be provided to control the access and egress to a single location further south from the existing entrances.

1.7.2.2 *Murrin Park Access*

A full movement conventional channelized left turn intersection shall be provided at the Murrin Park access.

1.7.2.3 *Shannon Falls Intersection*

The existing signalized intersection shall be maintained. Viewpoint Access

The existing conventional pavement-marked left-turn bay currently provided at Sta. 137+100 shall be retained with improved access and egress.

1.7.2.4 *Chain-up Pullout*

In creating a third lane, the Concessionaire shall undertake widening, as necessary, to recreate the chain-up pullout at Sta. 137+700.

1.7.2.5 *Access to Sta. 136+400*

This access shall be maintained with accommodation for right-in/right-out movements only.

1.7.3 Three Lanes During the Olympic Period

To accommodate the three-lane requirement during the Olympic Period, the road section from Sta. 135+250 to Sta. 135+300 may be reduced to 12.7 m, as shown on cross section TS6 on Drawing 41DD-DB00-0007 in Part 5 of Schedule 5 [Construction Drawings].

1.8 Highway Section DB81.8.1 Rural Squamish1.8.1.1 Highway Geometrics Information

Table 1-8 provides geometrics design criteria for the rural Squamish highway section of the Concession Highway, which consists of the two highway segments adjoining either end of Urban Squamish. Rural Squamish is from South Stawamus to Stawamus Forest Service Road (Sta. 141+700 to Sta. 142+200) and from Sta. 148+800 to just north of Depot Road (Sta. 151+687). Typical cross sections that apply to this section of the highway includes cross sections TS11 and TS13 shown on Drawing 41DD-DB00-0008 in Part 5 of Schedule 5 [Construction Drawings].

TABLE 1-8
Highway Geometrics Design Criteria for Rural Squamish (DB8)

Item	Present Conditions	Minimum Design Criteria
Design Classification	Rural Arterial Undivided	Rural Arterial Divided
Posted Speed	60-80 km/h	70-80 km/h ^{Note 1}
Design Speed	60-80 km/h	80 km/h
Basic Lanes	2	4 ^{Note 2}
Minimum Radius	250 m	250 m
Min. K Factor Sag	20	32
Min. K Factor Crest	32	36
Max. Grade	7%	7%
Max. Superelevation	8%	6%
Minimum S.S.D.	200 m	140 m
Minimum D.S.D.		230 m
Lane Width	3.6 m	3.5 m
Shoulder Width Outside	1.5 m	1.5 m
Shoulder Width Inside	0.0 m	0.4 m
Clear Zone – Offset Width	shoulder width only	5 m
Recovery Slope	shoulder width only	4:1
Median Width	0.0 m	2.0 m ^{Note 3}
Median Barrier/Raised Median	none	yes ^{Note 4}
Catchment Width in Rock Cuts	no rock cuts	no rock cuts
Design Vehicle	WB 15	WB 20
Level of Service	D (present)	C ^{Note 5} (to year 2026)

Notes:

1. Posted Speed

The posted speed will be determined by the Concessionaire during the pre-design in consultation with the community.

2. Basic Lanes

The through laning will be four-lane except at the north end transition where the laning will be reduced to three lanes north of the Depot Road intersection.

3. Median Width

The median applies only to the cross section TS11. Cross section TS13 north of Depot Road is undivided.

4. Median Barrier/Raised Median

The template cross sections listed below and shown on the Drawings in Part 5 of Schedule 5 [Construction Drawings] and the associated median treatment requirements apply to the following locations:

Sta.	Template	Median Treatment
141+700	TS11	2 m CMB
141+800		2 m raised median
142+200		
148+800	TS11	2 m CMB
151+300		TS13
151+687		No median

The template cross sections indicate the minimum roadway cross section required between intersections. Minimum acceptable intersection requirements are described below.

The Concessionaire shall develop a design that provides smooth transitions between the minimum specified cross sections as indicated above and between highway intersections.

The laning and median treatments provided in the Preliminary Design Plan drawings (No. 41DD-PD08-100 series in the Data Room) conform to the minimum laning and median treatments requirements in Rural Squamish.

1.8.1.2 *Intersections and Access Treatment*

The intersection configurations from the Urban Squamish Preliminary Design Report are shown in the Geometric and Laning drawing series 41DD-PD08-400 in the Data Room. These drawings set out the minimum acceptable design criteria for lane configuration, turning movements, and storage lengths in highway section DB8, except as modified as follows:

1.8.1.2.1 Full Movement Intersections

The design of full movement intersections will be modified as follows:

1.8.1.2.2 Stawamus Forest Service Road Intersection

The geometric and laning design of Stawamus Forest Service Road at Sta. 142+200 as shown in Drawing 41DD-PD08-04040-PC in the Data Room must be modified as follows:

- pre-duct for traffic signals and install signals if or when warranted as determined by MOT, in consultation with the Concessionaire
- provide access to apron parking lot
- design for stop control on east/west movements
- remove traffic islands
- design the intersection for a WB15 vehicle without lane encroachment and for a WB20 vehicle with lane encroachment.

1.8.1.2.3 North Road Intersection

The geometric and laning design for the North Road intersection as shown in Drawing 41DD-PD08-0425-PC in the Data Room must be modified as follows:

- provide a wider median to allow for future left turn lanes
- pre-duct for traffic signals

The Concessionaire will not be required to build the municipal road (North Road) or the associated deceleration and acceleration lanes.

1.8.1.2.4 Depot Road Intersection

The geometric and laning design for Depot Road at Sta. 151+300 as shown in Drawing 41DD-PD08-0429-PC in the Data Room must be modified as follows:

- pre-duct for traffic signals
- install signals if, or when, warranted
- meet minimum criteria for length of acceleration and deceleration lanes

1.8.1.2.5 Right-In/Right-Out Access

Right-in/right-out access only are to be provided at the following locations:

- At Sta. 150+325 on both the southbound and northbound sides of the highway section.
- At Sta. 151+060 on the northbound side only of the highway section.

1.8.1.3 *Transition Zone Treatments*

1.8.1.3.1 Rural/Urban Transitions

Transition zones are to be created at both ends of the Rural Squamish highway section. A component of this transition must be the introduction of signalized intersections at Stawamus Forest Service Road (south end) and Sta. 148+900 (north end of this highway section).

1.8.1.3.2 Four-lane/Three-lane Transition

At the north end of the Rural Squamish highway section, the highway transitions from a four-lane divided section south of Depot Road to a three-lane undivided section north of Depot Road. The concrete median barrier must end at Sta. 150+992 on the south side of Depot Road. On the north and south sides of Depot Road a narrow raised curbed median must be located adjacent to the left turn lanes.

1.8.1.3.3 Speed Control Measures

Due to the flat topography at the north end and the relatively long tangent downhill approach on the south end of the Rural Squamish highway section, speed control measures, including those proposed in the CSD Guidelines, including the introduction of gateway features, must be applied.

Large gateway features are to be provided at Sta. 141+800 northbound and Sta. 151+600 southbound to mark the entrances to the Squamish community. A medium gateway feature must be provided at Sta. 142+200 northbound to provide recognition to the Squamish Nation Community, and a small gateway point feature at Sta. 149+000 southbound must be provided to identify the Garibaldi commercial area, and to influence driver behaviour and calm traffic.

1.8.2 Urban Squamish1.8.2.1 *Highway Geometrics Information*

Table 1-9 provides minimum geometrics design criteria for the Urban Squamish: Stawamus Forest Service Road to Newport Ridge Drive highway section (Sta. 142+200 to 148+800). Typical cross sections that apply to this section of the highway include cross sections TS8 and TS9 shown on 41DD-DB00-0008 series Drawings in Part 5 of Schedule 5 [Construction Drawings].

TABLE 1-9
Highway Geometrics Design Criteria for Urban Squamish (DB8)

Item	Present Conditions	Minimum Design Criteria
Design Classification	Rural Arterial Undivided	Urban Arterial Divided
Posted Speed	60-80 km/h	60-70 km/h
Design Speed	60-80 km/h	70 km/h
Basic Lanes	2	4
Minimum Radius	200 m	190 m
Min. K Factor Sag	20	25
Min. K Factor Crest	32	23
Max. Grade	7%	7%
Max. Superelevation	8%	6%
Minimum S.S.D.	200 m	110 m
Minimum D.S.D.		275 m
Lane Width	3.6 m	3.5 m
Shoulder Width Outside	1.5 m	1.5 m
Shoulder Width Inside	0.0 m	0.4 m
Clear Zone – Offset Width	shoulder width only	2.0 – 5.0 m ^{Note 1}
Recovery Slope	shoulder width only	4:1
Median Width	0.0 m	2.0 – 6.0 m ^{Note 2}
Median Barrier/Raised Median	none	raised median ^{Note 3}
Catchment Width in Rock Cuts	no rock cuts	no high rock cuts
Design Vehicle	WB 15	WB 20
Level of Service	D (present)	C ^{Note 4} (to year 2025)
Boulevard	none	1.5 m ^{Note 5}

Notes:

1. Clear Zone

The clear zone for curb and gutter designs is 2.0 m from the face of the curb, or 0.5 m behind the sidewalk, whichever is greater. Where there is no curb and gutter, or roadside barrier, the 5.0 m clear zone applies, measured from the lane edge.

2. Median Width

The median widths applicable to this highway section are included in the template list under Note 3).

3. Median Barrier

A raised median with curb and gutter is required through the developed urban areas (Sta. 143+650 to Sta. 144+600, and Sta. 147+300 to Sta. 148+800).

Throughout the remaining sub-urban sections, concrete median barrier or raised median is to be provided as indicated in the table below.

The typical cross sections and the associated median treatment requirements apply to the following locations:

Sta.	Template	Median Treatment
142+200		
143+650	TS8	6 m raised median
144+600	TS9	6 m raised median
146+450	TS8	2 m CMB
147+300	TS8	2 m raised median
148+800	TS9	6 m raised median

The typical cross sections indicate the minimum roadway cross section required between intersections. Minimum intersection requirements are described below.

The Concessionaire shall develop a design that provides smooth transitions between the minimum specified cross sections as indicated above and between highway intersections.

The laning and median treatments provided in the Preliminary Design Plan drawings (No. 41DD-PD08-100 series in the Data Room) generally conform to the minimum laning and median treatments requirements in Urban Squamish.

5. Boulevard

Boulevard to be provided in curb and gutter sections where property is available.

1.8.2.2 *Intersections and Access Treatment*

All intersections will provide median protection using raised islands.

The intersection configuration from the Urban Squamish Preliminary Design Report is shown in the geometric and laning drawing series (41DD-PD08-0403 to 41DD-PD08-0433) in the Data Room. These drawings set out the minimum acceptance design criteria for lane configuration, turning movements and storage lengths in DB8, except as modified as follows:

1.8.2.2.1 Full Movement Intersections

- Valley Road at Sta. 142+400: Municipal road status – collector. Existing four-leg full movement retaining existing signals. The geometric and laning design as shown in Drawing 41DD-PD08-0404-PC in the Data Room must be modified as follows:
 - Reconfigure eastbound approach to provide a single combined through and left turn lane
 - Reconfigure westbound approach to provide a single combined through and left turn lane
- Clark Drive at Sta. 142+900: Municipal road status – arterial. Potential conversion of a T-intersection to a four-way full movement intersection, retaining existing signals. The geometric and laning design as shown in Drawing 41DD-PD08-0406-PC in the Data Room must be modified as follows:
 - Re-design as a full movement T-intersection, with provision to upgrade to a four-leg intersection by others in the future as shown presently on the drawings
 - Confirm storage length of southbound to eastbound left turning movements
- Mill Road at Sta. 143+400: Municipal collector road. Protected T-intersection with left-in/left-out to/from Mill Road, southbound side of the highway section. The geometric and laning design as shown in Drawing 41DD-PD08-0407-PC in the Data Room must be modified as follows:
 - Pre-duct for traffic signals and install signals if or when warranted as determined by MOT, in consultation with the Concessionaire
 - Concrete median barrier for channelization is to be changed to raised median
- Cleveland Avenue at Sta. 143+980: Municipal road status – arterial. Four-leg full movement retaining existing signals. The geometric and laning design as shown in Drawing 41DD-PD08-0409-PC in the Data Room must be modified as follows:
 - Minimize changes to the existing median treatment on Cleveland Avenue

- Re-design eastbound approach to provide:
 - double left turn lanes
 - combined right and through lane
- Minimize property requirements and impacts to adjacent businesses
- Maintain all existing business accesses along Cleveland Avenue
 - Industrial Way at Sta. 145+520: Municipal road status – arterial. Four-way full movement retaining existing signals. The geometric and laning design as shown in Drawing 41DD-PD08-0413-PC in the Data Room must be modified as follows:
- Change eastbound through lane to a combined through and left turn lane
 - Centennial Way at Sta. 146+780: Municipal road status – arterial. Potential for four-way full movement with signals. The geometric and laning design as shown in Drawing 41DD-PD08-0416-PC in the Data Room must be modified as follows:
- Re-align Centennial Way to reduce property requirements without compromising safety
 - Mamquam Road at Sta. 148+850: Municipal road status – arterial. Four-way full movement retaining existing signals. The geometric and laning design as shown in Drawing 41DD-PD08-0419-PC in the Data Room must be modified as follows:
- Re-design to provide for double westbound to southbound left turn lane
- Provide a safe access into Canadian Tire for southbound, northbound, and eastbound traffic
 - Garibaldi Way at Sta. 148+500: Municipal road status – arterial. Four-way full movement retaining existing signals. The geometric and laning design is as shown in Drawing 41DD-PD08-0421-PC in the Data Room.

1.8.2.2.2 Right-In/Right-Out Movements

The following locations require right-in or right-out designs:

- At Sta. 143+503 southbound: Right-in to local business.
- At Sta. 143+560: Northbound right-in/right-out to Scott Crescent.
- At Sta. 144+100: Southbound right-in/right-out to local business.

1.8.2.2.3 Urban Squamish Typical Cross Section

The Urban Squamish highway section extends from Sta. 142+200 to Sta. 148+800, a length of 6.6 km. The urban development is concentrated in two sections, one between the two crossings of Mamquam Blind Channel (Squamish town centre area) and the other

north of Mamquam River bridge (Garibaldi commercial area), with sparse development in between.

For these urban sections, the highway shall be designed with curb and gutter. In the section between, Sta. 144+600 and Sta. 147+300, although classified as Urban Squamish at this stage of development, this sub-urban section of the highway will be built with open ditches, and divided by either a CMB or raised median.

1.8.2.2.4 Pedestrian Crossings

All existing pedestrian crossing locations are to be maintained with existing or improved functionality, including the two grade-separated crossings at Centennial Way and just south of Garibaldi Way, modified as necessary to accommodate additional laning.

1.8.2.2.5 Gateway Features

Three small gateway features are to be provided at Sta. 144+200 northbound, Sta. 144+700 southbound, and Sta. 147+300 northbound to identify Squamish town centre and the Garibaldi commercial area, to influence driver behaviour and calm traffic.

1.9 Highway Sections DB12 and DB13 - Cheakamus Canyon North to Function Junction

1.9.1 Highway Geometrics Information

Table 1-10 provides minimum highway geometrics design criteria for the Cheakamus Canyon North to Function Junction highway section (Sta. 227+103 to 250+260). Typical cross sections that apply to this highway section are shown in cross sections TS1, TS11, TS12, and TS13 on Drawings 41DD-DB06-0006 and 41DD-DB06-0008 in Part 5 of Schedule 5 [Construction Drawings].

The minimum design criteria for this highway section is to upgrade the roadway to a 2+1 highway, which is basically a two-lane undivided highway with continuous alternating passing lanes with transitions approximately 2 to 3 kilometres apart.

TABLE 1-10
Highway Geometrics Design Criteria for Sections DB12 and DB13

Item	Present Conditions	Minimum Design Criteria
Design Classification	Rural Arterial Undivided	Rural Arterial Undivided
Posted Speed	40-80 km/h	80 km/h
Design Speed	40-80 km/h	80 km/h
Basic Lanes	2-4	2+1 ^{Note 1}
Minimum Radius	190	250 m
Min. K Factor Sag	unidentified	32
Min. K Factor Crest	unidentified	36
Max. Grade	8.5%	7-8%
Max. Superelevation	<8%	6-8%
Minimum S.S.D.	80 m	140 m
Minimum D.S.D.		230 m
Lane Width	3.2 – 3.7 m	3.5 m
Shoulder Width Outside	0.0 – 1.5 m	1.5 m (2 lane) 2.1 m (1 lane)
Shoulder Width Inside	none	0.2 m
Clear Zone – Offset Width	shoulder width only	shoulder width only
Recovery Slope	shoulder width only	shoulder width only
Median Width	none	0.40 m
Median Barrier	none	none ^{Note 2}
Catchment Width in Rock Cuts	variable	3.0 – 5.0
Design Vehicle	WB 15	WB 20

Notes:

1. Basic Lanes

The continuous alternating passing lanes may be discontinued in some sections only for lengths not exceeding 500 m and provided that the width of the two-lane section is wide enough to accommodate the temporary three-lane operation during the Olympic Period (see cross sections TS6 on Drawing 41DD-DB00-0007 in Part 5 of Schedule 5 [Construction Drawings]).

At existing bridges, a cross section narrower than cross section TS6 may be used for the Olympic Period provided the Concessionaire can demonstrate, through design review and safety audit, that it can safely operate.

2. Median Barrier

The 300 mm wide median rumble strip is to be used throughout DB12 and DB13 (see layout detail on Drawing 41DD-DB00-0007 in Part 5 of Schedule 5 [Construction Drawings]).

Median barriers are not to be used in DB12 and DB13.

1.9.2 Intersections and Access Treatment

The design of intersections and private accesses is to be as follows:

1.9.2.1 *Channelized T-Intersection*

Conventional channelized T-intersections are to be provided at the following locations:

- Sta. 231+180: Chance Creek Forest Service Road, including a turnaround facility and a chain up area
- Sta. 232+820: Road to Garibaldi Lake Trailhead
- Sta. 235+400: Access to Pinecrest Estate
- Sta. 236+610: Black Tusk Village Road, with turn-around capability
- Sta. 237+575: Brew Creek Lodge Road
- Sta. 240+839: Brandywine Falls Provincial Park
- Sta. 241+850: Brew Main Forest Service Road
- Sta. 243+520: Brandywine Forest Service Road
- Sta. 245+289: Callaghan Forest Service Road, including a turnaround facility

1.9.2.2 *Right-in/Right-out Access*

Right-in/right-out accesses are to be provided at the following locations:

- Sta. 227+300 to Sta. 227+500: A loop road at the salt shed for emergency and maintenance vehicle turnaround
- Sta. 228+350 Southbound: Existing paved viewpoint/pullout
- Sta. 228+700 Southbound: Existing paved viewpoint/pullout
- Sta. 229+800 Northbound: Existing pullout/gravel pit
- Sta. 230+050 Northbound: Existing pullout and chain up area
- Sta. 231+000 Northbound: Existing gravel road
- Sta. 234+320 Southbound: Access for BC Hydro
- Sta. 234+670 Southbound: Access for BC Hydro
- Sta. 236+888: Widow Creek Access
- Sta. 238+750 Southbound: Existing pullout
- Sta. 243+520: Macguire Forest Service Road
- Sta. 244+100 Northbound: Access for BC Hydro
- Sta. 244+870: Cal-Cheak Forest Service Road
- Sta. 245+600 Northbound: Access for BC Rail
- Sta. 247+412: Access for BC Hydro

1.9.2.3 *Access to be Closed*

For safety reasons, the following accesses will be closed:

- Sta. 229+000 Northbound: Access to old salt shed
- Sta. 229+350 Northbound: Access to old salt shed
- Sta. 231+400 Southbound: Access
- Sta. 231+500 Southbound: Access
- Sta. 232+450 Southbound: Access
- Sta. 244+525: MOT pit access
- Sta. 248+500 Existing gravel pullout
- Sta. 249+000 Existing gravel pullout
- Sta. 250+80: Access to Waste Water Treatment Plant

1.9.3 Grade Separation

The railway crossings near Brandywine Park and Function Junction are to be grade separated with the highway over the railway.

1.9.4 Bus Stops and Enforcement Pullouts

Bus stops are to be provided at locations determined through consultation with BC Transit and other transit operators.

2. Pavement Design Criteria

The pavement structural design is to follow applicable sections of the following documents and the design criteria in this Section 2.

- AASHTO (1993) *Guide for Design of Pavement Structures*
- Technical Circular T-01/04 *Pavement Structure Design Guidelines*

2.1 Design Methodology

The following design criteria and input parameters are to be used in conjunction with the AASHTO *Guide for Design of Pavement Structures*:

Asphalt Pavements	
Minimum Analysis Period	25 years
Reliability	R = 85%
Standard Deviation	So = 0.45
Pavement Serviceability Index (PSI):	
Initial Serviceability Index	p _i = 4.2
Terminal Serviceability Index	p _t = 2.5
Portland Cement Concrete (PCC) Pavements	
Minimum Analysis Period	30 years
Reliability	R = 90%
Standard Deviation	So = 0.35
Pavement Serviceability Index (PSI):	
Initial Serviceability Index	p _i = 4.5
Terminal Serviceability Index	p _t = 2.5

2.2 OGFC Mix Design Criteria

The pavement must be Open Graded Asphalt and it must satisfy the following minimum criteria:

2.2.1 Aggregate Requirements

The aggregate must be comprised of only crushed stone or gravel consisting of hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials, within the gradations limits specified when tested to ASTM C136 and ASTM C117.

Sieve Designation	Percent Passing
16.0 mm	100
12.5 mm	95 - 100
9.5 mm	50 - 70
*4.75 mm	15 - 30
2.36 mm	5 - 15
0.075 mm	2 - 5

* Coarse aggregate is aggregate retained on the 4.75 mm sieve and fine aggregate is aggregate passing the 4.75 mm sieve when tested to ASTM C136.

2.2.2 Physical Property Requirements – Air Voids

A minimum of 18 percent air voids is required.

Air voids are to be tested in accordance with ASTM D3203.

2.2.3 Field Performance Criteria

The completed OGFC asphalt pavement shall allow water to drain freely to the curb and/or shoulder locations. The OGFC asphalt pavement must not be permitted to trap or pond water at construction joints or at curb and shoulder locations.

The OGFC asphalt pavement must retain a minimum 50% of its initial in-situ permeability when tested after five years of operation. For each subsequent 5-year period, the OGFC asphalt pavement must retain a minimum 50% in-situ permeability of the previous tested in-situ permeability value.

The initial in-situ permeability of the OGFC asphalt pavement shall be established by the Concessionaire and provided to MOT for record purposes within two weeks of placement.

Until such time that a standard test method is agreed upon by the MOT, the in-situ permeability of the OGFC asphalt pavement shall be measured using a falling-head permeameter as illustrated in Figure 3.1 of the *Oregon Department of Transportation – Interim Report SPR 371, “Development of Maintenance Practices for Oregon F-Mix”, August, 1999.*

3. Structural Design Criteria

This Section contains the structural design criteria which is the minimum requirement for the Works.

3.1 Bridges and Structures

All bridges and overpasses are classified as Class 2 (Standard) facilities. All structures spanning 3 m or more will be designed using the structural design criteria in the subsections below.

Detail design and construction are required for the following bridge conditions:

- Parapets and railings for existing bridges being modified must comply with the requirements of this Section 3, Structural Design Criteria.
- If a watercourse crossing is determined by the Concessionaire to be at risk of debris flow overflow, the detail design and construction of the watercourse crossing will also include a debris flow barrier wall to reduce the risk in accordance with the information provided and referenced within this Part 1 of Schedule 5.
- The work includes detail design and construction of railway overpasses at Brandywine Falls Provincial Park and Function Junction. The Concessionaire is responsible for all coordination with, and approval by, the affected railroad company.

All new or modified pedestrian bridges shall have a maximum gradient of 1:12 as per *Bridge Standards and Procedures*. Existing pedestrian bridges not otherwise being modified are not required to conform to the *Bridge Standards and Procedures*.

3.1.1 Design Codes for New Structures

The Canadian Standards Association's (CSA's) *Canadian Highway Bridge Design Code* (CAN/CSA-S6-00) will be the governing code unless noted otherwise. The live load classification will be CL-625.

For seismic design, all bridge structures will be defined as "other bridges" in accordance with CAN/CSA-S6-00.

For fatigue design of bridges, Class A Highway ADTT as per S6-00 will be used.

3.1.2 Design Codes for Existing Structures which are Modified for Continuing Service

Structures which are modified for continuing service, except those modified by the addition of traffic, pedestrian, or cyclist barriers only, are to be evaluated at the Ultimate Limit States (ULS) using CL-625 loading in accordance with CAN/CSA-S6-00 Components and will achieve a live load capacity factor of at least 1.0.

Seismic retrofitting for structures will be according to the *Seismic Retrofit Design Criteria*, July 2000. Classification of bridge will be “other bridges” and level of retrofit will be “safety”.

3.1.3 Design Life

New structures will be designed to have a minimum Design Life of 75 years.

Modified structures will have a minimum Design Life of 50 years.

Design calculations for corrosion and other time-related durability calculations will use 100 years.

3.1.4 Integral Structures

Design of integral or jointless bridge spans must take into account the zone of soil/structure interaction behind the abutments, specifically the lateral soil pressure build-up and settlements that will occur in this zone as a result of thermal cycling. Design will follow published design criteria from a source applicable to the type of jointless bridge under consideration. The design must be in accordance with BA 42/96 including Amendment No 1 dated May, 2003, *Design Manual for Roads and Bridges*, ISBN 115524606 or equivalent guide as approved by the Province.

The design of jointless bridges will take account of the deformations that result, and the displacements that occur between components, when loading is imposed during each construction stage. Field splices between components are to be designed to transfer the forces induced during subsequent construction stages and during service.

3.1.5 Structural Steel

For structural steel bridges, the following requirements are to be followed:

- Superstructure members (excluding bracing) are to be 350 AT steel.
- Bracing members are to be 300W, 350W, or 350 AT steel.
- Bracing members of 300W or 350W steel are to be coated for corrosion resistance.
- Superstructure members located within a distance of 1.5 h (where h is the overall depth of the superstructure) of all deck joints or within 1.5 h from the end of the bridge are to be coated for increased corrosion resistance.
- Weathering steel structures are to be designed in accordance with *Bethlehem Technical Bulletin TB-307*.
- The structural steel/concrete interface are to be detailed such that no rust staining of the concrete occurs.

Access to steel girders for inspection purposes are to be incorporated into the design, including, where appropriate, devices to enable inspectors to walk along all girders and tie-off safely in accordance with Workers Compensation Board regulations.

Tie-off devices are to be designed such that the devices require a minimum level of maintenance and inspection, and shall be galvanized. Tie-off devices are to be 1.5 m above the bottom flange. No slack on the tie-off device is permitted.

Access to the girders by the general public are to be blocked by ending the tie-off devices at some distance from abutments, forcing the use of a ladder, and by providing locking devices on any hatches which give access from deck level.

3.1.6 Corrosion Rates for Steel Below Ground

For structural elements in non-aggressive soil, the thickness loss due to corrosion for each surface which is exposed to soil or which is below the water table are to be computed as follows:

Galvanization loss	=	15 micrometres/year for first two years
	=	4 micrometres/year for subsequent years
Carbon steel loss	=	12 micrometres/year after zinc depletion

For all structural elements in soil, the thickness loss due to corrosion for each surface must be determined by a corrosion specialist retained by the Concessionaire and additional corrosion protection will be provided to achieve the Design Life.

3.1.7 Reinforcing Steel

The steel within the top 100 mm of the deck surface and all reinforcing steel in concrete parapets is to be epoxy coated or galvanized. If galvanized steel is to be used, all deck reinforcement is to be galvanized.

The use of couplers is to be restricted to those products approved by Caltrans as of January 31, 2004. See link:

http://www.dot.ca.gov/hq/esc/approved_products_list/prequal_steel_reinforcing_couplers

The steel within a plastic hinge zone is to be grade 400W.

3.1.8 Deck Cover

For new bridge decks, concrete cover to the top steel is to be not less than 70 mm.

3.1.9 Deck Concrete

For new bridge decks, deck and parapet concrete are to be high performance concrete with a 90-day chloride-permeability of not more than 1000 Coulombs. For new bridge decks and concrete overlay, the minimum content of condensed silica fume is to be 7.5% of the cement content by weight.

Full height precast decks are allowed with the following requirements:

- The panels are to cover the full width of the bridge.
- The depth of the panels is not less than 190 mm.
- At transverse joints, the panels are to be joined together by grouted shear keys and be longitudinally post-tensioned with a minimum effective prestress of 1.7 MPa. The post-tensioning system is to be fully grouted. The transverse joints are to be of a female to female type. Tongue and groove type shear keys and butt joints are not to be used for the transverse shear keys.
- The ducts for the longitudinal post-tensioning are to be located at mid-depth of the panels, and openings, also known as blockouts, are to be provided at the joints to accommodate splices for the tendons.
- Blockouts are to be provided in the panels at locations where the panels are to be connected to the beams for composite action.
- Initially the panels are to be supported on the beams by temporary adjustable levelling devices. The blockouts for the connections to the beams for composite action and the gap between the panels and the beams must be filled with grout after the completion of post-tensioning. A minimum gap of 25 mm is to be provided under the panels above the supporting beams.
- The grout used in the shear keys is to have a minimum strength of 35 MPa at 24 hours.
- The deck slabs are to be composite with the supporting beams.
- Cast-in-place concrete parapets are to be used for the bridge barriers. The parapets are to be continuous across the transverse deck panel joints except in the negative moment regions of the supporting beams. The parapets are to be placed after the longitudinal post-tensioning.
- The panel is to have a waterproofing membrane and a minimum of 100 mm of asphalt wearing surface.
- The spacing between the shear connection pockets is not to exceed 600 mm.
- The design of the shear studs must take into account the thickness of the bedding layer under the panels above the supporting beams.
- The design must account for the fact that the stud shear connections reduce in strength and stiffness immediately after cyclic loads are applied. (See Oehlers D.J., Seracino R., and Yeo M.F. "Fatigue Behaviour of Composite Steel and Concrete Beams with Stud shear Connections", *Prog. Struct. Engng. Mater.*, Vol 2, 2000, pp 187-195.)

3.1.10 Deck Waterproofing Membrane and Asphalt Overlay

For all new bridge decks and existing bridges with complete deck replacement, application of a waterproofing membrane with a 100 mm minimum thickness asphalt overlay is required. Waterproof membranes must be selected from the MOT Recognized Products List (available at MOT's website at: http://www.th.gov.bc.ca/publications/eng_publications/geotech/rpb.htm). Concrete decks must be cured for a minimum of 28 days prior to the application of the waterproofing membrane.

Asphalt drains will be provided in accordance with MOT's *Manual of Standard Specifications for Highway Construction*.

3.1.11 Approach Slabs

Approach slabs are to have a 100 mm minimum asphalt overlay.

Unless approved otherwise by MOT, 6 m minimum length, continuous, full-width approach slabs at the interface between the structure and the approach fills are to be provided.

3.1.12 Clearances

Minimum vertical clearance is to be 5.0 m over all paved surfaces, including any on- or off-ramps that pass underneath. The minimum vertical clearance is to be increased to 5.5 m for pedestrian underpasses, sign bridges, and other lightweight structures spanning the highway.

The minimum vertical clearance must be maintained throughout the life of the structure to account for such conditions as long-term settlement of supports and superstructure deflection and pavement overlays.

Horizontal separation from existing bridges, retaining walls, or other structures is to be maintained at all locations to prevent pounding due to seismic events. The Concessionaire must perform a risk assessment at parallel structures to determine the level of safety measures required to prevent pedestrians from falling between structures.

3.1.13 Surface Water Run-off

Runoff water from the surface of bridges and/or approach roads is to be conveyed to discharge locations that are acceptable to the regulatory agencies and must be in accordance with the Concessionaire's Environmental Obligations. Runoff water from the 1 in 10 year design storm must not extend more than 1 m into the adjacent traffic lane. Except near the crowns of vertical crest curves, a minimum longitudinal gradient of 1.0% and a minimum crossfall of 2% must be provided on bridge decks. Sidewalk surfaces are to be provided with 2% crossfall away from the bridge parapet.

3.1.14 Bearings

Bearings must be designed for easy maintenance, inspection and replacement. Bearing replacement procedure, including jacking locations and jacking loads, is to be shown on the bridge drawings.

3.1.15 Piles

Design loads, ultimate capacities, and details of splices and tips will be indicated on the Concessionaire's drawings.

3.1.16 No Water Ingress

Water ingress into or onto the substructure or abutment wall backfill from the superstructure above are to be prevented. Joints between the superstructure/ end diaphragm and the substructure are to be waterproofed.

3.1.17 Products and Systems

Only products approved by MOT are permitted. The following systems are **not** approved by MOT for use in new bridge structures:

- stay-in-place steel decking formwork
- steel grid decking
- induced current cathodic protection system
- modular deck joints
- bridge deck heating systems
- timber components
- proprietary composite steel/concrete girders

3.1.18 Aesthetics

Structures must have an aesthetically pleasing design, including structural configuration and surface treatments (refer to the MOT *Manual of Aesthetic Design Practice* for general guidelines). Designs are to minimize maintenance resulting from vandalism and other causes.

3.1.19 Proprietary Structures

For any proprietary systems/structures, the Concessionaire is to provide a letter to MOT which states that the proprietary system supplier has monitored the installation of the proprietary structure and which certifies that the in-situ system is in accordance with the proprietary system requirements. The letter is to be on the letterhead of the proprietary system supplier and be sealed by the Professional Engineer who sealed the proprietary system design drawings.

3.1.20 Pier Collision Loads

Piers in the median and piers within 10 m of the edges of the roadway pavement are to be designed for collision load according to CAN/CSA-S6-00.

3.1.21 Metal Culvert Structures

Metal culvert structures shall be designed in accordance with CAN/CSA S6-00.

3.1.22 Unbonded Tendons

Unbonded tendons are not permitted in bridge, culvert, or wall structures.

3.1.23 Piers and Abutments

Piers and abutments adjacent to and above roadways are to be of reinforced concrete construction.

Scour depth at piers and abutments of proposed structures must be estimated in accordance with FHWA-NH 01-001, *Hydraulic Engineering Circular No. 18, Evaluating Scour at Bridges* by the US Department of Transportation, Federal Highway Administration. The values obtained from this publication are to be compared with values obtained from the Blench Regime Depth formula (as set out in FHWA-NH 01-001).

3.1.24 Parapets and Railings for New and Existing Structures

- a) Concrete parapets and bicycle railings are to be provided as required by Section B4.1, Figure B6 of MOT's *Manual of Bridge Standards*, and to comply with type PL-2 requirements in Section 12 of the CAN/CSA-S6-00.
- b) Standard concrete median barriers must be used on four-lane divided highway decks. Standard aluminum parapets are not to be used for new or modified structures.
- c) Sidewalks must be separated from the adjacent roadway surface by a bridge parapet. A standard bicycle fence is to be provided on the outside edge.

3.1.25 Sign Structures

Sign supports, sign structures and poles are to be designed in accordance with CAN/CSA-S6-00. Anchor bolts for sign structures are to be fabricated from ASTM/SAE 4140 steel, complete with double nuts above the base plates and galvanized after fabrication. Levelling nuts below the base plates are not permitted.

3.1.26 Sloped Pavements

Sloped Pavements are to be designed in accordance with Section 8 of this Part B, Landscape and Site Restoration Design Criteria.

3.1.27 Electrical

Conduit and junction box requirements on structures are to be designed in accordance with Section 8 of this Part B, Electrical, Signals and Lighting Design Criteria.

3.2 Retaining Walls

The Works include the design and construction of structural retaining walls along the upslope and downslope sides of the Concession Highway to accommodate highway widening and re-alignment. The Works also include design and construction of retaining walls along the median of the Concession Highway, where the Concessionaire's design has a split-grade alignment.

MOT has determined that retaining walls over 3 m high constructed on existing rock fill slopes would have a static factor of safety (FOS) <1.5 for global stability. For retaining walls 5 m in height the average static FOS is reduced to 1.2 to 1.3 with a pseudo-static FOS <1.0. The Concessionaire's design will incorporate measures to improve the performance of walls and slopes under static and seismic conditions, such as increased width of buttress rock fill, backfill with lightweight material, and installation of soil or rock anchors, where stability is an issue.

MOT may accept a lower design factor of safety in global stability of mechanically stabilized earth retaining walls founded on existing rock fill slopes. The design will be subject to review by MOT and must be accepted by MOT prior to approval for construction. Refer to Section 4.6.4 of this Part B for details of requirements for retaining walls on rock fill slopes.

3.2.1 Design Codes

AASHTO *Standard Specifications for Highway Bridges*, Seventeenth Edition, 2002 is the governing code for items other than structural design.

For mechanically stabilized earth walls, items not covered by AASHTO are to meet the requirements of the U.S. Federal Highway Administration's (FHWA's) Publication No. FHWA-SA-96-071, *Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, Design and Construction Guidelines*.

Structural design is to be performed using the Limit State Design approach of CAN/CSA-S6-00.

3.2.2 Design Life

Abutment walls and other retaining walls are to be designed to have a minimum Design Life of 75 years.

3.2.3 Railings

Railings for pedestrian safety must be provided wherever a vertical drop of more than 0.5 m occurs between the level of the pedestrian surface and the adjacent surface.

3.2.4 Aesthetics

Retaining walls are to be designed to provide an aesthetically pleasing structure with patterned finishes on large concrete surfaces which are highly visible to road traffic. Horizontal ledges and other features which may require maintenance are not permitted except where absolutely necessary.

3.2.5 Mechanically Stabilized Earth Abutment Walls

Only the MSE wall systems listed under the heading “Bridge Abutments and Retaining Walls” in the latest edition of MOT’s Recognized Products List are permitted wall systems for bridge abutments.

Precast concrete facing panels must be used for bridge abutment walls and associated wing walls.

The minimum soil reinforcement length provided is to be the greater of:

- 60% of the distance from the top of the levelling pad to the road surface plus 2 m; or
- the minimum length required by AASHTO.

The tops of the walls are to be finished in straight-line segments, to provide an aesthetically pleasing appearance, and have a cast-in-place concrete coping.

3.2.6 Wall Types

Only wall systems listed on MOT’s Recognized Products List under “Proprietary Structures” are permitted for retaining walls (excluding abutment walls). Certain wall systems on this list have restricted use, as described below:

- MSE walls with dry cast concrete block facings are not to be used.
- Walls with wire facings are not to be used for median walls and upslope retaining walls visible to road traffic.
- Walls with wire facings are not to be used for downslope walls if they are visible to a community.

The suppliers of retaining wall systems must show a proven track record of successful use on past projects with similar design and exposure conditions to those of the Project. Documentation which clearly demonstrates that the wall system has a proven track record is to be submitted to MOT before the start of design in accordance with the Review Procedure. Proven track record documentation is not required for the following wall systems:

- Cast-in-place reinforced concrete walls.
- Wall systems listed in the MOT’s Recognized Products List as “Proven Products” in the category of “Earth Retaining Systems”.

- Wall systems listed in the MOT's Recognized Products List under "Proprietary Structures".

Retaining walls are also to meet the aesthetic and landscaping criteria in Section 8 of this Part B, Landscape and Site Restoration Design Criteria.

3.2.7 MSE Walls with Polymeric Reinforcement

MSE walls with polymeric reinforcement are not permitted for use as abutment walls or associated wing walls. Geotextiles are not permitted for use as reinforcement.

See Section 5 of this Part B, Geotechnical Design Criteria, for the maximum height of any MSE walls with polymeric reinforcement.

3.2.8 Backfill Requirements

Backfill material within the reinforced soil mass is to meet the following electrochemical requirements when steel is used in contact with water or soil:

- pH of 5 to 10;
- resistivity not less than 3000 ohm centimetres;
- chlorides not greater than 100 ppm; and,
- sulphates not greater than 200 ppm.

The reinforced backfill material is to be a clean, free draining material with a fines content of less than 8%.

3.2.9 Drainage for MSE Walls

Drainage water must only be discharged at locations that are acceptable to the relevant environmental agency. For MSE walls, a drainage system is to be provided behind the reinforced fill zone as well as immediately behind the wall.

3.2.10 MSE Walls with Uneven Reinforcement Length

Uneven reinforcement lengths may be employed where both of the following conditions apply:

- the MSE wall is not used as an abutment wall, and
- the MSE wall is founded entirely on intact bedrock.

Design must meet requirements of FHWA's Publication No. FHWA-NH1-00-043, *Mechanically Stabilized Earth Walls and Reinforced Soil Slopes Design and Construction Guidelines*, March 2001, Section 5.3 – "Walls with Uneven Reinforcement Lengths".

4. Geotechnical Design Criteria

The geotechnical design is to follow the design criteria in this Section 4 and applicable sections of the reference documents listed in Annex 3.

4.1 Seismic Design

Seismic Zoning for the Project area is as defined in the National Building Code of Canada (NBCC, 1995) and British Columbia Building Code (BCBC, 1992), or through a seismic site response analysis undertaken by the Geological Survey of Canada.

Liquefaction potential of the subsoils must be evaluated for structures, walls, and embankments, and the design is to incorporate ground improvements and other methods of addressing potential liquefaction, where appropriate.

The FOS against liquefaction to be used for design is 1.2.

Seismic design of the external stability of any retaining walls or bridge abutments is to be in accordance with the *AASHTO Standard Specifications for Highway Bridges*, Seventeenth Edition, 2002.

4.2 Stability of Slopes

The Concessionaire is to conduct field investigations in accordance with Good Industry Practice as necessary to satisfy design requirements, assess overall stability, and provide a cut/fill slope design, including any support measures that may be necessary to ensure stability for the Design Life.

The rock cut design must include a practical ditch design based on geometric criteria. Recommendations for the rock cut at the detailed design stage are to be based on a site specific investigation and take priority over the requirements outlined in MOT's Technical Bulletin GM02001, *Rock Slope Design*.

Where the failure of a slope would result in failure envelope encroaches on the paved surface, or where the failure causes lane closures for repairs, or where the failure necessitates excessive maintenance, the following is to apply:

Condition	Minimum FOS
For proposed new soil and rock slope failure under static conditions	1.5
For stability in design of remedial measures to stabilize, rather than reconstruct, existing rock slopes	1.3
For proposed new soil and rock slope failure under pseudo-static seismic analysis	1.1

4.3 Foundation Design

Working Stress Design is to be used in foundation design.

4.3.1 Shallow Foundations

The minimum FOS to be used in design against bearing capacity failure under static conditions for shallow foundations, against sliding under static loading, and against overturning under static loading is:

Condition	Minimum FOS
Bearing capacity failure under static conditions	3.0
Sliding under static loading	1.5
Overturning under static loading	2.0

Design for global stability is to follow *AASHTO Standard Specifications for Highway Bridges*, Seventeenth Edition, Section 4, Foundations, Part B, Service Load Design Method, Allowable Stress Design, Article 4.4.9, Overall Stability.

4.3.2 Deep Foundations

The minimum FOS against failure under static conditions for deep foundations is as follows:

Condition	Minimum FOS
Design based on standard penetration test (SPT) results ¹	4.0
Design based on cone penetration test (CPT) results ¹	3.0
Design based on Full Scale Test pile Dynamic Analysis and signal matching ¹	2.0
Design based on Full Scale Static Load Test results	1.8

Note

1. The above Factors of Safety values are not to be reduced at the design stage on the basis of an intention for an eventual field test.

The minimum FOS against failure under seismic loads is 1.1.

Design for global stability is to follow the *AASHTO Standard Specifications for Highway Bridges*, Seventeenth Edition, Section 4, Foundations, Part B, Service Load Design Method, Allowable Stress Design, Article 4.4.9, Overall Stability.

4.4 Settlement Analysis

Settlement analysis of structures/embankments is to be performed by the Concessionaire. Foundations are to be designed such that differential settlement between adjacent footings is limited to the amount tolerable as specified by the Concessionaire's structural engineer.

Embankment settlement is to be predicted and surcharging/overbuilding requirements evaluated by the Concessionaire.

4.5 Mechanically Stabilized Earth Wall Design

Slope angles steeper than 45 degrees are to be designed as walls. Wall design must follow the allowable stress method outlined in *AASHTO Standard Specifications for Highway Bridges*, Seventeenth Edition, 2002, Section 5, Retaining Walls and must incorporate the following requirements for external and internal stability.

The following Factors of Safety are to be used for external stability of MSE wall design:

Condition	Minimum FOS
Bearing Capacity	2.5
Sliding	1.5
Overturning	2.0
Global Stability-Static	1.5
Global Stability-Pseudostatic	1.1

The maximum internal angle of friction for the retained soil used in the construction of MSE walls is to be 30 degrees unless otherwise approved by MOT in accordance with the Review Procedure. This limitation also applies when determining the coefficient of sliding friction at the wall base.

4.5.1 Maximum Equivalent Vertical Height for MSE Wall Design – External Stability

The maximum equivalent to vertical height for the MSE portion of walls with extensible reinforcement is 5 m.

The maximum height of MSE walls employing full height precast concrete facing panels and Tensar UX-1700HS HDPE geogrid reinforcing is 5 m. Walls employing full height facing panels may be constructed on cast in place starter walls or cast-in-place concrete foundations.

The maximum height of Tensar Ares walls having precast concrete panels and UX-1700HS HDPE geogrid reinforcing is 9 m. The wall is to be the same design (including facing element dimensions) as that evaluated in the HITEC CERF Report #40358. Ares walls may be constructed on cast in place concrete starter walls.

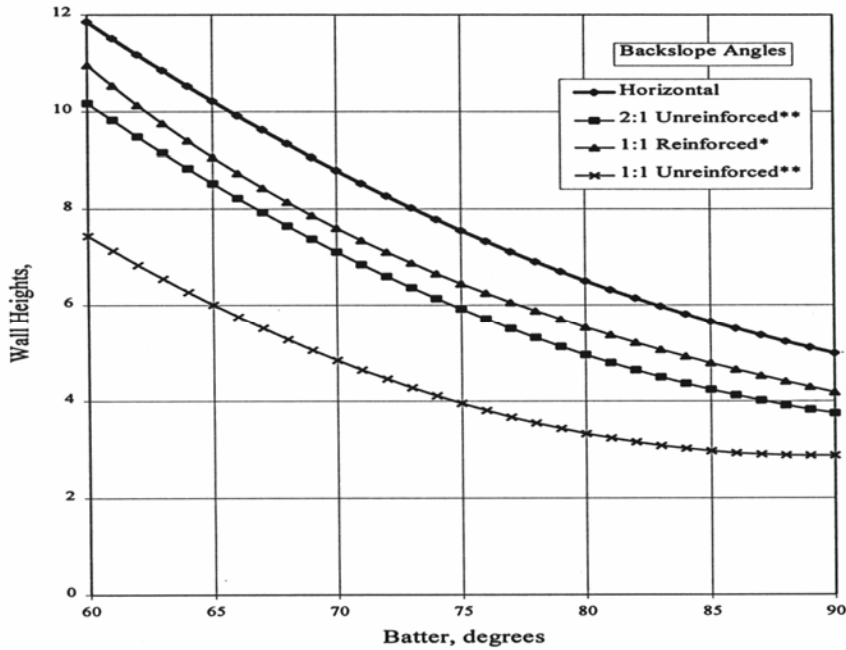
The Concessionaire must complete dynamic analyses on composite wall systems (MSE walls founded on cast in place starter walls) with overall height greater than 5 m.

The maximum height of MSE walls with non-extensible reinforcement and segmental precast concrete facing panels is 12 m. The MSE wall may sit on a cast in place concrete starter wall.

The maximum height of MSE walls with wire-formed facing is as required by the Recognized Products List.

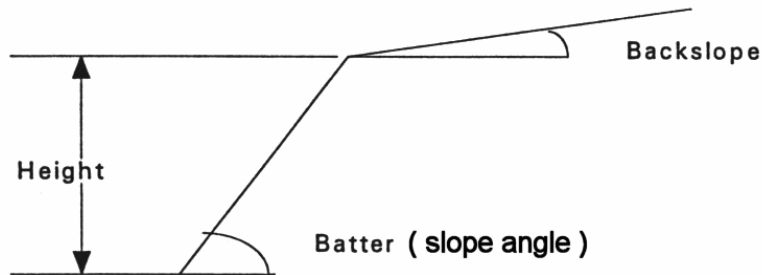
Figure 4-1 below illustrates the maximum equivalent to vertical height of MSE walls employing geosynthetic reinforcement. Wall height, batter, and backslope are defined in Figure 4-2.

FIGURE 4-1
Equivalent to Vertical Height



Note: * Reinforced zones refers to those zones reinforced with geosynthetics.

FIGURE 4-2
Definition of Batter and Backslope



4.5.2 Polymeric Reinforcement Specification for MSE Wall Design – Internal Stability

The FOS for polymeric reinforcement pullout is 1.5.

The allowable reinforcement tension T_a will be the lesser of the following two determinations:

$$T_{al} = \frac{T_l}{FD*FC*FS}$$

$$T_{as} = \frac{T_w}{FD*FC}$$

where: T_1 is $\frac{T_{ult}}{FS_{CRP}}$

FS_{CRP} is the partial FOS for creep

T_w is the tensile strength at 5% strain (kN/m) as per ASTM D6637-01 or GGI:GG1

FC is the partial FOS for construction damage

FD is the durability partial FOS for environmental and ageing losses

FS is the partial FOS for uncertainties

T_{ult} is the ultimate tensile strength

The partial FOS are determined by reference to Table 4-1 below.

TABLE 4-1
Uniaxial Geogrid Specifications Revised February 2004

Polymer Type	Partial Factors of Safety								
	With Testing and Mill Certificates					Without Testing and Mill Certificates			
	FS_{CRP}^1	FC Sand	FC Gravel	FD	FS^2	$FS_{CRP}^{1,3}$	FC	FD	FS^2
HDPE	Min. 3.1	Min. 1.15	Min. 1.25	Min. 1.1	1.5	5.0	3.0	2.0	1.5
Polyester Acrylic Coated	Min. 2.0	Min. 1.15	Min. 1.25	Min. 1.1	1.5	2.5	3.0	2.0	1.5
Polyester PVC Coated	Min. 2.0	Min. 1.15	Min. 1.25	Min. 1.1	1.5	2.5	3.0	2.0	1.5
Polypropylene	Min. 4.0	Min. 1.15	Min. 1.25	Min. 1.1	1.5	5.0	3.0	2.0	1.5

Notes

¹ For instantaneous loads lasting less than 60 seconds, creep can be ignored, i.e., $FS_{CRP}=1.0$

² Reference *AASHTO Standard Specifications for Highway Bridges*, Seventeenth Edition, 2002, Pg. 158

³ Reference AASHTO-AGC-ARTBA Task Force 27 Report - *In Situ Soil Improvement Techniques*

4.5.3 Corrosion Rates for Steel Reinforcement and Wire Formed Facing Elements in MSE Walls

For purposes of corrosion protection, soils on the Concession Highway are considered to be aggressive and the environment is considered chloride rich. *AASHTO Standard Specifications for Highway Bridges*, Seventeenth Edition employing 100 year Design Life is to apply.

4.5.4 Locking Block Style Walls

Locking block style MSE walls are not to be used except:

- a) for construction of rock fall catchment areas where:
 - wall height is limited to 2.25 metres; and
 - impact energy will not result in displaced or cracked blocks; or
- b) as Temporary Works.

4.5.5 Wire-formed MSE Walls

Wire-formed MSE walls must have a free draining, uniformly graded stone fill placed immediately behind the face. Gradation specifications for the stone fill are:

- 100 percent passing 100 mm
- 0 to 10 percent passing 50 mm

The stone fill is to be separated from the reinforced granular backfill by a non-woven geotextile, AASHTO M288-96 Class 2.

Wire-formed MSE walls are not to be used where it is apparent they may be subject to vandalism.

4.5.6 Connection Between Facing Element and Reinforcing Element

The connection between facing elements of MSE walls and reinforcing elements is to be a mechanical connection with strength equal to or exceeding the strength of the reinforcing element.

4.6 Special Design Provisions

4.6.1 Median Walls and Protection of Northbound Lanes

Design of median walls in split grade designs are to meet all design criteria and requirements of Technical Circular T-2/92. The Concessionaire is to complete detailed dynamic analysis of median retaining walls on rock fill slopes to evaluate the magnitude and pattern of deformations under both 1 in 475 year and 1 in 1000 year earthquake events. The analysis must follow the procedures outlined in Section 4.0 of Golder Associates report to the MOT "Reliability and Seismic Deformation Analysis for Proposed MSE Walls on Rockfill Slopes, Test Section, Section 2, Sea to Sky Highway Project", October 1, 2003. Deformation of median walls on rock fill slopes as determined from this analysis, under loading from the design 1 in 475 year earthquake, must not exceed 50 mm.

4.6.2 Functional Lane Requirements Following Earthquakes

“Functional” for the purposes of this Section 4.6.2 means the highway lane(s) will be available for emergency response after clearing of rock fall and slide debris and for limited use by general traffic following additional minor repair and maintenance. Maximum deformation of the lane(s) is limited to 50 mm. The following are the lane requirements following earthquakes:

- a) Four Lane Sections: Following the 1 in 475 year earthquake, two lanes remain functional.
- b) Three Lane Sections: Following the 1 in 475 year earthquake, two lanes remain functional.
- c) Two Lane Sections: Following the 1 in 475 year earthquake, one lane remain functional.

4.6.3 Reinforced Soil Slopes

Reinforced soil slope systems must have a proven track record of successful use on Ministry projects with similar design and climactic/exposure conditions to those of this Project. A list of proprietary walls is provided in the MOT Recognized Products List.

4.6.4 Retaining Walls on Rock Fill Slopes (excluding Median Walls)

The Concessionaire will identify specific areas involving retaining walls on rock fill slopes for review by MOT. If determined by MOT (after consultation with the Concessionaire), such consent not to be unreasonably withheld or delayed, the Concessionaire will apply the following criteria for MSE Walls in such areas:

- The Concessionaire shall complete reliability analyses of all proposed retaining walls under static conditions following the procedures outlined in Section 3.0 of Golder Associates report to the MOT “Reliability and Seismic Deformation Analysis for Proposed MSE Walls on Rockfill Slopes, Test Section, Section 2, Sea to Sky Highway Project”, October 1, 2003. The probability of failure (probability that the FOS is less than 1.0) under static conditions as determined in these analyses is not to exceed 0.5%.
- The Concessionaire shall complete detailed dynamic analysis of retaining walls on rock fill slopes to evaluate the magnitude and pattern of deformations under both 1 in 475 year and 1 in 1000 year earthquake events. The analysis will follow the procedures outlined in Section 4.0 of Golder Associates report to the MOT “Reliability and Seismic Deformation Analysis for Proposed MSE Walls on Rockfill Slopes, Test Section, Section 2, Sea to Sky Highway Project”, October 1, 2003. Deformation of retaining walls on rock fill slopes as determined from this analysis, under loading from the design 1 in 475 year earthquake, is not to exceed 350 mm or result in damage to down-slope facilities or structures.

The Concessionaire shall prepare, and submit to MOT for review a geotechnical report presenting methodology and results of reliability and dynamic analyses for stability of retaining walls.

4.6.5 Rock Slopes

All rock slope design is to be completed under the direction of the Concessionaire's geotechnical engineer by a Rock Slope Engineer.

All rock slopes are to be constructed to the back slope angle recommended by the Concessionaire's geotechnical engineer based on site-specific geotechnical investigation. Benches or other deviations from the design back slope angle that may cause falling rock to be projected out into highway lanes, other than at each 8 m lift as necessary to accommodate the drill head offset for drilling the backslope shear line, are not to be constructed.

All rock slopes constructed by the Concessionaire must be fully stabilized with rock bolting, application of shotcrete, wire mesh/cable systems, scaling, trim blasting or other measures as required to minimize the risk of rock fall reaching highway lanes.

Design of rock fall catchment is to be guided by the Federal Highway Administration Final Report SPR-3(032) *Rockfall Catchment Area Design Guide*, L.A. Pierson et al, December 2001. The minimum acceptable rock catchment width for constructed rock slopes at any given slope height is as set out in MOT Technical Bulletin GM02001, *Rock Slope Design*. The term "catchment width" is defined in Figure 1 of MOT Technical Bulletin GM02001.

For Concessionaire-constructed rock slopes, the effectiveness of rock fall catchment designed as specified above in combination with other rock fall mitigation measures must equal or better the effectiveness in preventing rock from reaching travelled highway lanes that would be achieved by rock fall catchment designed using the criteria developed by A.M. Ritchie and presented in the FHWA publication *Rock Slopes: Design, Excavation, Stabilization* (FHWA 1989). The effectiveness of the rock catchment, in combination with applied slope stabilization measures, is to be modelled under the direction of the Concessionaire's geotechnical engineer by a Rock Slope Engineer employing Colorado Rock Fall Simulation, Rockfall 2 or other MOT recognized rock fall simulation software. The Concessionaire is to prepare and submit to MOT in accordance with the Review Procedure a geotechnical report presenting results of analyses and demonstrating the effectiveness of the design in controlling rock fall.

Rock slopes not reconstructed by the Concessionaire are to be assessed for rock fall hazard and risk by the Concessionaire's specialist rock slope engineer to determine rock slope stabilization requirements. Stabilization measures must be applied as recommended by the Concessionaire's rock slope engineer to minimize the risk of rock fall reaching highway lanes. Final rock slope stabilization designs are to be provided for audit and project documentation. This requirement will not apply to highway sections DB2, DB4, DB9, DB10 and DB11.

The Concessionaire is required to continue a corridor-wide rock slope stabilization program as part of the Unstable Slope Mitigation Program.

For existing rock slopes, whether natural or constructed by others, it is desirable that containment of rock fall through applied on-slope stabilization in combination with catchment (existing or improved) equal the effectiveness that would be achieved for rock slopes constructed by the Concessionaire.

The Concessionaire must follow Good Industry Practice in implementing measures to reduce the probability and frequency of rock fall.

Appropriate measures must be taken to mitigate any risk of failure from overburden behind the crest of rock slopes.

Trees are to be removed from the top of constructed rock cuts to a minimum 5 m setback from the crest. Tree removal will not extend beyond 10 m from the crest of the rock cut.

4.6.6 Geotechnical Investigation and Design

The Concessionaire will conduct an evaluation of the geotechnical conditions along the Concession Highway and an assessment of the design and proposed construction activities to determine whether any surrounding properties are at risk of damage arising from such things as vibration, ground movement or groundwater changes induced by construction activities and post-construction operation of the Project. This evaluation must be carried out by a Professional Engineer registered in the Province of BC. The Concessionaire will be responsible for conducting pre-construction “baseline” inspections of all properties, infrastructure, water wells, utilities, etc., identified to be at risk. The Concessionaire will monitor the impact of construction, address any complaints regarding construction impacts, modify the design and/or construction activities to minimize impacts, and resolve any claims arising from impacts associated with, or resulting from, construction activities.

4.6.7 Geotechnical Baseline Areas

For purposes of the Geotechnical Baseline Assumptions, the Geotechnical Baseline Areas are as follows:

Geotechnical Baseline Areas

RFP Station	S2S DB Section	Station in S2S Submission
102+500 to 103+900	1	102+400 to 103+800
		L-80 8+040 to 8+800
		L-90 9+000 to 9+500
111+900 to 112+700	3	111+855 to 112+655
113+500 to 114+100	3	113+460 to 114+060
114+160 to 122+140	3	114+060 to 114+165
	4	114+225 to 122+150
123+000 to 124+500	4	123+010 to 124+115
	5	124+190 to 124+590

4.6.8 Geotechnical Assumptions

The Concessionaire shall adjust the Geotechnical Baseline Assumptions, at no cost to the Province, to ensure consistency of the baseline with the existing geotechnical field information (raw geotechnical data) which was made available to the Concessionaire in the Data Room.

Following the Commencement Date, the Concessionaire shall complete such investigation of geotechnical site conditions as it considers appropriate, including excavating test pits and drilling to bedrock where feasible.

Based on the geotechnical conditions encountered, the Concessionaire will revisit the initial design concept to confirm assumptions, explore potential alternatives, and initiate a “value engineering” process to develop design concepts for further consideration jointly with the Province.

The value engineering process, which will be conducted jointly by the Province and the Concessionaire, will include a review of:

- Bedrock structural details.
- Structural systems, whether walls or bridge-type structures.
- Highway alignment impacts.
- Construction methodology.
- Foundation options.

The Concessionaire shall undertake preliminary engineering based on the geotechnical information and the approach developed jointly by the Concessionaire and the Province in the value engineering process. Potential solutions will be priced by the Concessionaire and the most cost effective option selected for construction, with the consent of the Province.

The value engineering process, in relation to the established Geotechnical Baseline Areas, shall comprise cost sharing between the Concessionaire and the Province according to the following principles:

- Where actual conditions are more favourable than indicated by the agreed baseline assumptions, the Concessionaire shall retain any benefits resulting from such more favourable conditions.
- Where actual conditions are less favourable than the agreed baseline assumptions, the Concessionaire and the Province will share the additional costs (including overhead and fee) related to the less favourable conditions in the following proportions: 50% Province / 50% Concessionaire.
- With particular reference to the MSE wall design, the table below (Baseline Assumptions for MSE Wall Designs on Rockfill Slopes) identifies baseline designs developed by the Province for anchor sizings and spacings for a range of wall heights on rock fill slopes. Where the Concessionaire’s design is able

to take advantage of certain design methodologies that permit reduced anchor requirements relative to the baseline design assumptions, the Concessionaire shall retain the benefit of the reduced anchor requirements. Where conventional design methodologies are required resulting in anchor requirements greater than those indicated in the baseline design assumptions, the Concessionaire and the Province will share the additional related costs in the following proportions: 50% Province / 50% Concessionaire.

The Province will arrange to have geotechnical, structural and geometric engineering representatives available throughout the design process, providing compliance review and feedback on application of alternative acceptance criteria and other solutions as the Concessionaire's design evolves through construction to address unforeseen ground conditions.

4.6.9 Baseline Geotechnical and Design Assumptions

These baseline assumptions apply to the Geotechnical Baseline Areas identified in Section 4.6.7.

4.6.9.1 *Rock Foundation Conditions*

Adverse structure and near surface weathered rock is anticipated requiring excavation and support with rock bolts, dowels and concrete/shotcrete buttresses. Rock bolts will be 6 metre #8 fully grouted threadbar.

4.6.9.2 *Rock Cut Conditions*

Overburden is expected at the crest of rock cuts. Where geotechnical field investigation has been carried out, overburden depth is as defined by that investigation. In all other areas an average 1.5 metres of overburden is anticipated.

Where rock cuts exceed 8 metres height, 8 m long horizontal drain holes on 50 m centers are required.

Rock slope support requirement assumptions are:

Rock Slope Support Requirement Assumptions

	S2S Station	Maximum Design Rock Cut Height (m)	Preliminary Design Bench Slope Angle (H:V)	Preliminary Bolt Density (lineal m of bolt / m ² of face)
DB1	102+400 to 102+480	40	0.33:1	0.20
	102+800 to 103+000	25	0.33:1	0.20
	103+000 to 103+800	25	0.17:1	0.20
DB3	112+000 to 112+110	20	0.17:1	0.15
	112+230 to 112+300	15	0.17:1	0.10
	112+300 to 112+450	10	0.17:1	0.10
	112+450 to 112+500	10	0.17:1	0.20
	113+660 to 113+820	20	0.17:1	0.25
	113+820 to 113+870	10	0.17:1	0.25

	S2S Station	Maximum Design Rock Cut Height (m)	Preliminary Design Bench Slope Angle (H:V)	Preliminary Bolt Density (lineal m of bolt / m ² of face)
DB4	116+170 to 116+190	6	0:1	0
	116+910 to 117+040	7	0.75:1	0
	117+210 to 117+230	5	0:1	0
	117+390 to 117+450	13	0.5:1	0
	118+190 to 118+350	15	0.33:1	0.15
	119+090 to 119+150	9	0.33:1	0
	119+920 to 120+030	20	0.25:1	0.20
	120+320 to 120+530	22	0.25:1	0.25
	120+460 to 120+510	6	0.33:1	0
	121+170 to 121+280	12	0.25:1	0
	121+280 to 121+330	22	0.25:1	0.25
	121+300 to 121+420	15	0.25:1	0.10
	121+690 to 121+840	15	0.33:1	0.10
	123+390 to 123+420	9	0:1	0.10
	123+740 to 123+870	15	0.84:1	0.10
123+870 to 123+910	15	0.25:1	0.10	

4.6.9.3 Soil Foundation Conditions

Existing embankment fills are anticipated to be of heterogeneous nature and may be poorly compacted. Low strength soils including organic rich soils may be encountered within the fills and on bedrock surfaces. Where poor quality soils are encountered in excavation, they will be sub-excavated and replaced. Parameters to be employed in stability and deformation analyses of rock fill slopes and retaining walls on rock fill slopes are provided by the Data Room document “Reliability and Seismic Deformation Analysis for Proposed MSE Walls on Rockfill Slopes”, Golder Associates.

4.6.9.4 Foundation Condition Assumptions

	S2S Station	Assumed Foundation Conditions	Assumed Foundation Type
DB1	102+390 to 102+650	Rock	Wall founded on rock
	102+650 to 102+750	Rockfill	Wall founded on existing rockfill
	102+910 to 102+950	Rockfill	Wall founded on existing rockfill
	102+950 to 102+990	Rockfill	Wall founded on existing rockfill
	102+930 to 102+970	Less than 3 m of rockfill over rock	Wall founded on rockfill
	102+450 to 102+490	Rock	Wall founded on rock
	102+490 to 102+510	Rock	Spread footings founded on rock
	102+510 to 102+590	Rock	Wall founded on rock
	102+590 to 102+650	Rock	Spread footings founded on rock
	102+650 to 102+810	Rockfill	Rock socketed piles
	102+810 to 102+870	Rockfill	Wall founded on existing rockfill
	102+850 to 102+890	Rockfill	Wall founded on existing rockfill
	102+890 to 102+990	Rockfill	Rock socketed piles
	102+990 to 103+050	Rockfill	Wall founded on existing rockfill
	103+050 to 103+150	Rockfill	Wall founded on existing rockfill
	103+260 to 103+320	Rockfill	Wall founded on existing rockfill
	103+400 to 103+440	Rockfill	Wall founded on existing rockfill
	103+660 to 103+700	Less than 3 m of rockfill over rock	Wall founded on rock
	103+700 to 103+740	Rockfill	Wall founded on existing rockfill
DB3	112+430 to 112+480	Rockfill and/or outwash sand and gravel	Wall founded on existing rockfill and/or sand and gravel
	112+480 to 112+510	Less than 3 m of rockfill over rock	Wall founded on rock
	112+610 to 112+830	Rockfill and/or outwash sand and gravel	Wall founded on existing rockfill and/or sand and gravel
	113+540 to 113+670	Rockfill	Wall founded on existing rockfill
	113+727 to 113+834	Less than 3 m of rockfill over rock	Wall founded on rock
	113+834 to 113+840	Less than 3 m of rockfill over rock	Wall founded on rock
	133+840 to 113+850	Less than 3 m of rockfill over rock	Wall founded on rock
	113+850 to 113+900	Rock	Spread footings founded on rock
	113+900 to 113+920	Rock	Wall founded on rock
	133+920 to 113+970	Sand, gravel and cobbles (fill over outwash)	Wall founded on existing sand and gravel
	113+970 to 113+976	Sand, gravel and cobbles (fill over outwash)	Wall founded on existing sand and gravel
	113+976 to 114+072	Sand, gravel and cobbles (fill over outwash)	Wall founded on existing sand and gravel
DB4	114+290 to 114+420	Rockfill	Wall founded on existing fill
	114+420 to 114+560	Rock	Wall founded on rock
	114+560 to 114+670	Rockfill	Wall founded on existing fill
	114+690 to 114+710	Rockfill	Wall founded on existing fill
	114+870 to 114+940	Rockfill	Wall founded on existing fill
	114+940 to 114+964	Less than 3 m of rockfill over rock	Wall founded on rock
	114+964 to 114+970	Less than 3 m of rockfill over rock	Wall founded on rock
	114+970 to 115+000	Less than 3 m of rockfill over rock	Wall founded on rock
	115+000 to 115+006	Less than 3 m of rockfill over rock	Wall founded on rock
115+006 to 115+030	Less than 3 m of rockfill over rock	Wall founded on rock	

	S2S Station	Assumed Foundation Conditions	Assumed Foundation Type
DB4	115+290 to 115+415	Rock	Wall founded on rock
	115+460 to 115+565	Rockfill	Wall founded on existing fill
	115+610 to 115+710	Rockfill	Wall founded on existing fill
	115+770 to 115+850	Rockfill	Wall founded on existing fill
	115+890 to 115+894	Rockfill	Wall founded on existing fill
	115+894 to 115+900	Rockfill	Wall founded on existing fill
	115+900 to 115+930	Rockfill	Wall founded on existing fill
	115+930 to 115+936	Rockfill	Wall founded on existing fill
	115+936 to 115+950	Rockfill	Wall founded on existing fill
	115+984 to 115+990	Less than 3 m of rockfill over rock	Wall founded on rock
	115+990 to 116+030	Less than 3 m of rockfill over rock	Wall founded on rock
	116+030 to 116+036	Less than 3 m of rockfill over rock	Wall founded on rock
	116+036 to 116+130	Less than 3 m of rockfill over rock	Wall founded on rock
	116+210 to 116+224	Rock	Wall founded on rock
	116+224 to 116+230	Rock	Wall founded on rock
	116+230 to 116+250	Rock	Wall founded on rock
	116+250 to 116+256	Rock	Wall founded on rock
	116+256 to 116+269	Rock	Wall founded on rock
	116+269 to 116+275	Rock	Wall founded on rock
	116+275 to 116+310	Rock	Wall founded on rock
	116+310 to 116+316	Rock	Wall founded on rock
	116+316 to 116+370	Rock	Wall founded on rock
	116+390 to 116+530	Rockfill	Wall founded on existing fill
	117+050 to 117+129	Rockfill	Wall founded on existing fill
	117+129 to 117+135	Rockfill	Wall founded on existing fill
	Deeks Creek Bridge	Rock	Wall founded on rock
	117+162 to 117+168	Rockfill	Wall founded on existing fill
	117+270 to 117+290	Rockfill	Wall founded on existing fill
	117+325 to 117+340	Rockfill	Wall founded on existing fill
	117+340 to 117+400	Rockfill	Wall founded on existing fill
	117+450 to 117+510	Rockfill	Wall founded on existing fill
	117+559 to 117+694	Rockfill	Wall founded on existing fill
	117+710 to 117+814	Rockfill	Wall founded on existing fill
	117+834 to 117+880	Less than 3 m of rockfill over rock	Wall founded on rock
	117+880 to 117+970	Rock	Wall founded on rock
	117+970 to 118+024	Rockfill	Wall founded on existing fill
	118+024 to 118+030	Rockfill	Wall founded on existing fill
	118+030 to 118+164	Rockfill	Wall founded on existing fill
	118+164 to 118+170	Rockfill	Wall founded on existing fill
	118+170 to 118+194	Rockfill	Wall founded on existing fill
118+239 to 118+494	Rockfill	Wall founded on existing fill	
118+534 to 118+575	Rockfill	Wall founded on existing fill	
118+734 to 118+788	Rock	Wall founded on rock	
118+788 to 118+794	Rock	Wall founded on rock	

	S2S Station	Assumed Foundation Conditions	Assumed Foundation Type
DB4	118+794 to 118+895	Rock	Wall founded on rock
	118+895 to 118+901	Rock	Wall founded on rock
	118+901 to 118+920	Rock	Wall founded on rock
	118+920 to 118+999	Less than 3 m of rockfill over rock	Wall founded on rock
	118+999 to 119+005	Rock	Wall founded on rock
	119+005 to 119+030	Rock	Wall founded on rock
	119+030 to 119+036	Less than 3 m of rockfill over rock	Wall founded on rock
	119+036 to 119+094	Less than 3 m of rockfill over rock	Wall founded on rock
	119+133 to 119+214	Rockfill	Wall founded on existing fill
	119+275 to 119+297	Rockfill	Wall founded on existing fill
	119+297 to 119+303	Rockfill	Wall founded on existing fill
	119+303 to 119+384	Rockfill	Wall founded on existing fill
	119+384 to 119+390	Less than 3 m of rockfill over rock	Wall founded on rock
	119+390 to 119+410	Less than 3 m of rockfill over rock	Wall founded on rock
	119+410 to 119+590	Rockfill	Wall founded on existing fill
	119+654 to 119+770	Rockfill	Wall founded on existing fill
	119+770 to 119+930	Less than 3 m of rockfill over rock	Wall founded on rock
	119+930 to 119+979	Rockfill	Wall founded on existing fill
	120+035 to 120+434	Rockfill	Wall founded on existing fill
	120+528 to 120+554	Rock	Wall founded on rock
	120+554 to 120+560	Rock	Wall founded on rock
	120+560 to 120+640	Rock	Wall founded on rock
	120+640 to 120+646	Rock	Wall founded on rock
	120+646 to 120+818	Rock	Wall founded on rock
	120+818 to 120+824	Rock	Wall founded on rock
	120+824 to 120+854	Rock	Wall founded on rock
	120+854 to 120+860	Rock	Wall founded on rock
	120+894 to 120+958	Rock	Wall founded on rock
	120+958 to 120+964	Rock	Wall founded on rock
	120+964 to 121+000	Rock	Wall founded on rock
	121+000 to 121+006	Rock	Wall founded on rock
	121+006 to 121+061	Rock	Wall founded on rock
	121+061 to 121+067	Rock	Wall founded on rock
	121+067 to 121+095	Rockfill	Wall founded on existing fill
	121+095 to 121+101	Rockfill	Wall founded on existing fill
	121+101 to 121+153	Rockfill	Wall founded on existing fill
	121+375 to 121+438	Rockfill	Wall founded on existing fill
	121+438 to 121+444	Rockfill	Wall founded on existing fill
	121+444 to 121+564	Rockfill	Wall founded on existing fill
	121+564 to 121+570	Rockfill	Wall founded on existing fill
121+570 to 121+610	Rockfill	Wall founded on existing fill	
121+610 to 121+694	Rock	Wall founded on rock	
121+855 to 121+960	Less than 3 m of rockfill over rock	Wall founded on rock	
121+960 to 122+194	Rockfill	Wall founded on existing fill	

S2S Station	Assumed Foundation Conditions	Assumed Foundation Type
122+974 to 123+148	Rockfill	Wall founded on existing fill
123+148 to 123+154	Rockfill	Wall founded on existing fill
123+154 to 123+214	Less than 3 m of rockfill over rock	Wall founded on rock
123+214 to 123+220	Less than 3 m of rockfill over rock	Wall founded on rock
123+220 to 123+268	Less than 3 m of rockfill over rock	Wall founded on rock
123+268 to 123+274	Less than 3 m of rockfill over rock	Wall founded on rock
123+274 to 123+384	Rockfill, Outwash and/or Till	Wall founded on rock
123+384 to 123+390	Rockfill, Outwash, and/or Till	Wall founded on rock
123+390 to 123+580	Rockfill, Outwash, and/or Till	Wall founded on rock
123+580 to 123+634	Rockfill, Outwash, and/or Till	Wall founded on rock
124+034 to 124+074	Rockfill	Wall founded on existing fill

Baseline Assumptions for MSE Wall Designs on Rockfill Slopes

Wall Type	MSE Wall		MSE Wall on CIP Starter			
Height	5 to 9 m		>9m			
Reinforcing			Inextensible			
Footing	CIP footing		CIP Starter Wall			
Anchor Type	46 mm DCP (1662 sq mm section) Grade 75 ksi (517 MPa) Bar					
Anchor Embedment Length	9					
Anchor Bond Length	4					
Anchor Density	Anchors					
	Wall Height (m)	Footing Width (m)	Rows	Spacing (m)	Density (/m)	Steel Section /m of Wall Length (sq mm/m)
	5				0.33	548
	6				0.67	1114
	7				0.67	1114
	8				0.77	1280
	9				0.77	1280
	10				1.1	1828
	11				1.1	1828
	12				1.8	2992
	13				2.13	3540
	14				2.66	4421
	15				2.66	4421

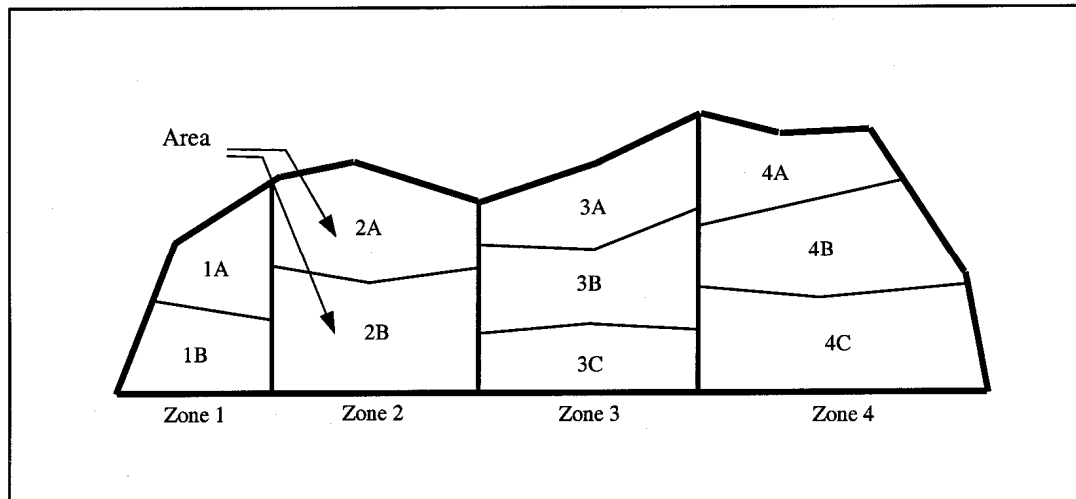
4.6.10 Terminology for Documentation of Applied Rock Slope Stabilization

All stabilization recommendations are to be referenced using a zone reference system. “Zones” can be further subdivided into “Areas” if required. Definitions of “Zones” and “Areas” are provided below along with a sketch:

Zone – Zone boundaries extend from highway elevation to the top of the bluff. The selection of a zone boundary is arbitrary, but is typically based on changes of geologic or physical features of the rock face. Zones are labeled numerically increasing in the direction of the Road Features Inventory (typically south to north or west to east).

Area – Areas are subdivisions of Zones. Areas typically subdivide zones into specific work areas or areas of similar geologic or physical features. Areas are labeled alphabetically.

FIGURE 4-3
View of Rock Face – Subdivided into Zones and Areas



Photographic documentation of stabilization measures is to be provided to the Ministry at three scales:

Overall Photograph – The location and type of stabilization measures are to be shown on an overall photograph (or mosaic) of the site so that the location of work areas can be easily identified. It is not necessary to show a high degree of detail at this scale (i.e., it is not required to show individual rock bolt locations; instead just delineate the rock bolting area).

Zone Photograph – All stabilization measures for a specific zone are to be presented on one photograph (or a mosaic) of the zone. The zone photograph is to show greater detail than the overall photograph (e.g., show locations of individual rock bolts, drains, etc.). The zone photograph must include the highway on the photograph for scale.

Detail Photographs – Detailed close-up photographs of specific areas (if required). Locations where detailed photos were taken are to be referenced on the Zone photograph.

All applied stabilization measures are to be presented on annotated site photographs. Quantities must be itemized by zone and presented in a tabular format.

All existing stabilization measures are to be defined on the annotated site photographs.

5. Electrical, Signals and Lighting Design Criteria

Electrical, signals and lighting design is to follow applicable sections of the documents listed in Sections 5.1 to 5.3 of this Part B and the design criteria in this Section 5.

The Concessionaire will design, procure, construct, install and configure all traffic and electrical devices including, but not limited to, signing, temporary and permanent paint markings, roadside barriers, median barriers, delineation, signals, flashers, and lighting to ensure the safe and efficient movement of motor vehicles, cyclists and pedestrians.

5.1 General

All electrical, signals, and lighting design is to be carried out in accordance with the following:

- The design criteria in this Section 5
- MOT's *Electrical and Traffic Engineering Design Guidelines* (available on the Ministry's web site at:

http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm

- MOT's *Technical Bulletins*, Highway Engineering Branch, Traffic Section (Electrical) available at the Ministry's web site at:

http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm)

5.2 Roadway Lighting

As a minimum, roadway lighting to the existing levels is required where roadway lighting currently exists, except that the following minimum requirements apply at the following locations:

- At any intersections with right-in and right-out movements, install at least one 150W luminaire to provide beacon lighting (reference figures in TAC's *Illumination of Isolated Rural Intersections*).
- At any intersection with left turn movements off the highway provide partial lighting with a minimum two lights, as per TAC's *Illumination of Isolated Rural Intersections*.
- At any signalized intersection, provide full illumination in accordance with Section 300 of MOT's *Electrical and Traffic Engineering Manual*.
- At all on- and off-ramp tapers, provide full illumination in accordance with Section 300 of MOT's *Electrical and Traffic Engineering Manual*.
- Within Urban Squamish (Highway 99 from the north side of the Mamquam Blind Channel Bridge to the Mamquam culvert north of Cleveland Avenue, and Highway 99 from Mamquam Road to the beginning of the exit tapers north of Garibaldi Way), lighting is to be provided in accordance with Urban

Arterial Standard in MOT's *Electrical and Traffic Engineering Manual* (this includes lighting of sidewalks and bike lanes).

5.3 Traffic Signals

Traffic signals are to be installed, where warranted, as set out in the *Guidelines for the Design of Lighting, Signal and Sign Installations* and will be designed to meet the requirements of the *Guidelines for the Design of Lighting, Signal and Sign Installations*. Signals are not allowed south of Darrel Bay, Squamish.

The table below lists the traffic signal phase requirements at the intersections in highway section DB8. Within highway section DB8, traffic signals have been assigned to groups (Group 1, 2 or 3) as indicated in the table for signal timing coordination by time of day. Traffic signals within a group will be linked and coordinated to optimize two-way progression on the highway section. Signalized intersections in highway section DB8 are to be equipped with emergency pre-emption. The Concessionaire will pre-duct where indicated in the table below:

Intersection	Signal Phasing	Group
Highway 99/Stawamus Forest Service Road	Pre-duct for traffic signals	n/a
Highway 99/Valley Drive	Two-phase signal	Group 1
Highway 99/Clarke Drive	Protected and permitted phase for southbound to eastbound left turn movement	Group 1
Highway 99/Mill Road	Pre-duct for traffic signals	n/a
Highway 99/Cleveland Avenue	Protected phase for northbound to westbound left turn movement Split phase for eastbound and westbound approaches	Group 1
Highway 99/Industrial Way	Protected and permitted phase for northbound to westbound left turn movement Protected and permitted phase for southbound to eastbound left turn movement Split phase for eastbound and westbound approaches	Group 2
Highway 99/Centennial Way	Protected and permitted phase for northbound to westbound left turn movement Protected and permitted phase for southbound to eastbound left turn movement Split phase for eastbound and westbound approaches	Group 2
Highway 99/Mamquam Road	Protected and permitted phase for northbound to westbound left turn movement Protected and permitted phase for southbound to eastbound left turn movement Split phase for eastbound and westbound approaches	Group 3

Intersection	Signal Phasing	Group
Highway 99/Garibaldi Way	Protected and permitted phase for northbound to westbound left turn movement Protected and permitted phase for southbound to eastbound left turn movement Protected and permitted phase for westbound to southbound left turn movement	Group 3
Highway 99/North Road	Pre-duct for traffic signals	n/a
Highway 99/Depot Road	Pre-duct for traffic signals	n/a

The Concessionaire is to provide recommended signal timing for intersections within rural and urban Squamish for approval by MOT in accordance with the Review Procedure.

6. Drainage Design Criteria

Drainage design must be in accordance with Good Industry Practice and as a minimum must comply with the requirements of Section 1000, Hydraulics and Structures Chapter, of MOT's *BC Supplement to TAC Geometric Design Guide*. All drainage works must accommodate all surface run off flowing through and generated from within the Project site and must include facilities to convey run off across the BC Rail right-of-way, where required by the Concessionaire's design.

6.1 Design Return Periods

Table 6-1 presents the return period for the hydraulic design of various items:

TABLE 6-1
Design Return Periods for Hydraulic Items

Hydraulic Item	Design Return Period
Gutters	5 years
Stormwater Inlets	5 years
Storm Sewers	10 years
Highway Ditches	25 years
Culverts	100 years
Structures	200 years

6.2 Catchbasins

Catchbasins are to be provided along the median barrier on the lower side of the Concession Highway where the Concession Highway is superelevated. The spacing of these catchbasins is to be in accordance with the *BC Supplement to TAC Geometric Design Guide*, except that there is a modification for catchbasins along the median barrier as follows:

- Maximum ponding width is to be equal to 65% of the paved shoulder width or 1.2 m, whichever is greater.
- Gutter flow is to be avoided within the travelled portion of the Concession Highway due to the possibility of hydroplaning.
- A maximum ponding width of 1.2 m or the width of the shy distance, whichever is the lesser, is to be used for the development of catchbasin spacing along the median barrier.

6.3 For Structures

6.3.1 Design Flow

The hydrology/hydraulic design and analysis by the Concessionaire must include all drainage crossings.

Minimum requirement for hydrology design and analysis includes, but is not limited to, the determination of the design flow using station frequency analysis, stage discharge computations and other applicable methods as confirmation. Minimum requirement for hydraulics design and analysis includes, but is not limited to, computation of required hydraulic opening size and configuration, general and local scour depths, designing rip rap protection for banks, instream pier design, force of ice on piers, assessment of geomorphic stream pattern changes, and channel stability and debris impact.

The 200-year design flow return period is to be used for estimating the station frequency analysis of the maximum annual discharges available from the Water Survey of Canada.

6.3.2 Freeboard

A minimum freeboard of 1.5 m must be maintained between bridge soffits and the 200-year flood elevation.

6.3.3 Scour Depth

FHWA-NH 01-001, *Hydraulic Engineering Circular No. 18, Evaluating Scour at Bridges* by the US Department of Transportation, Federal Highway Administration, is to be used for estimating scour depths at piers and abutments of the proposed structures. The values obtained from this publication are to be compared with the values obtained from the Blench Regime Depth formula.

7. Signing and Pavement Marking Design Criteria

Signing is to follow applicable sections of MOT's *Manual of Standard Traffic Signs and Pavement Markings* and the design criteria in this Section 7.

7.1 Static Signing

G-5 Guide signs are to be shoulder-mounted at all off-ramps at the exit and at approximately 600 m and 1,200 m in advance of the exit, as per MOT standards, except in Urban Squamish, where G-5 signs are to be mounted overhead. Service and attraction signing is to be maintained as per existing, or relocated and/or replaced to suit roadworks.

7.2 Changeable Message Signs

Existing changeable message signs will be maintained in their general locations, as part of the Ministry digital information display system. The signs are controlled by the Provincial Highway Communications Centre via phone lines that the Concessionaire must ensure remain operational. Any new CMS signs proposed by the Concessionaire shall be connected to the PHCC via modem and dedicated phone line (min. 1200 baud) or digital cellular modem. Sign drivers shall be NTCIP compatible and shall be integrated into the existing Ministry sign control software.

7.3 Pavement Markings and Delineators

Pavement marking and delineators are to be provided by the Concessionaire and designed in accordance with MOT's *Manual of Standard Traffic Signs and Pavement Markings*.

8. Landscape and Site Restoration Design Criteria

The Concessionaire will conduct a site inventory, site analysis and visual impact assessment of both the Existing Highway and the proposed highway improvements in connection with the landscape and aesthetic design of the corridor.

Preliminary and detail landscape and aesthetic design for the highway corridor will require the Concessionaire to:

- provide aesthetic design input on structures
- develop a landscape plan
- prepare a lighting plan
- produce a signing and corridor branding plan
- prepare viewpoint and pullout designs
- develop gateway/portal designs
- prepare other point features designs

Landscaping and aesthetic treatment must be designed and implemented on all areas affected by the Works and areas such as gateways, viewpoints, and other areas where aesthetic enhancements are desired.

All aesthetic designs are to be developed and signed by a Landscape Architect or Architect.

The landscape and site restoration design for the Project must be in accordance with the CSD Guidelines and MOT's *Manual of Aesthetic Design Practices*.

The Works shall generally conform with the landscape and aesthetic criteria for "Parkway" as defined in the MADP, and as recommended in the CSD Guidelines.

8.1 Linear Classification

The highway route for the Concession Highway is composed of three main character and land use types that form the following classifications:

- **Urban Premium** – applies to existing and potential developed portions of the core areas of Squamish and Lions Bay where the character and surrounding land uses are clearly urban; drivers are travelling at slower speeds in these sections and have more perception of detail.
- **Community Premium** – applies to smaller communities where there is urban development mixed with a rural character, e.g., Porteau Cove, Britannia Beach, most of Squamish around and between the core areas, and most of Lions Bay outside of the core area.

- **Rural** – applies to the remainder of the corridor where any development is low density and the rural character is dominant.

The distribution of the classifications on the preliminary Landscape and Site Restoration Treatment Level Map (in the Data Room) is as follows:

- Urban Premium 2.3 km
- Community Premium 20.4 km
- Rural Remainder

8.2 Linear Treatments

Unless otherwise indicated, the treatments described in Table 8-1 are the minimum required landscape and aesthetic treatments in the various types of linear areas.

TABLE 8-1
Minimum Acceptable Base Level Treatments for Linear Areas

Item	Urban Premium	Community Premium	Rural
Retaining Walls	See more detailed section on retaining walls below (Section 8.3).		
Slope Paving	Where hard surfacing of sloped areas is required, e.g., under bridges and around bridge abutments (aprons), between roads in a split grade situation, etc., these surfaces shall be finished in exposed aggregate concrete (or equivalent) ¹		
Raised Traffic Islands			
<200 m ²	Crowned island with stamped concrete rock pattern finish (or equivalent) ¹	Crowned island with stamped concrete rock pattern finish (or equivalent) ¹	Crowned island with exposed aggregate concrete finish (or equivalent) ¹
>200 m ²	Min. 0.5 m wide perimeter of stamped concrete on crowned island with inside planting of shrubs under 300 mm at maturity	Same as for urban if approved by community. Otherwise full hard surfacing with stamped concrete rock pattern finish (or equivalent) ¹	Crowned island with exposed aggregate concrete finish (or equivalent) ¹
Raised Medians			
<3 m wide	Crowned median with stamped concrete rock pattern finish (or equivalent) ¹	Crowned median with stamped concrete rock pattern finish (or equivalent) ¹	Crowned island with exposed aggregate concrete finish (or equivalent) ¹
>3 m wide	Min. 0.5 m wide perimeter of stamped concrete on crowned island with inside plating of shrubs under 300 mm at maturity	Same as for urban if approved by community. Otherwise full hard surfacing with stamped concrete rock pattern finish (or equivalent) ¹	N/A except at Viewpoints and Pullouts (see below)
Barriers	Not provided in raised median	Standard MOT concrete barrier, or raised median where indicated on drawings and Highway Design Criteria	Standard MOT concrete barrier, except for non-highway side perimeter barriers at viewpoints/pullouts (as applicable). See “Barriers” below (Section 8.8)
Boulevards	Grassed boulevard	N/A	N/A

TABLE 8-1
Minimum Acceptable Base Level Treatments for Linear Areas

Item	Urban Premium	Community Premium	Rural
Planting and Revegetation of Roadside Areas	Ornamental trees and shrubs, mowed grass, irrigation as required for plant establishment (only)	Continuous street trees in the more developed portions and adjacent to urban areas. Shall have shrub pockets for screening and interest. Otherwise minimum of 150 mm growing medium for grass; clumps of 300 mm growing medium and native planting where side slopes are wide and in highly visible locations.	Generally seeding of grasses for revegetation purposes on existing soils that are graded to finished elevations. Selected areas will have wildflowers included in the seedmix (see "Planting" subsection below)
Rock Cut Faces	See more detailed section on rock cut faces below		
Sound Walls	Finish equal or better than that specified for retaining walls (see retaining walls and embankment section below)	Finish equal or better than that specified for retaining walls (see retaining walls and embankment section below)	N/A
Lighting	Street lighting as per MOT warrant, using coloured metal lamp standards. Make provision for banners on light standards. Additional point feature lighting to highlight architectural features (e.g., gateway signs, landscape features, bridges, etc.) is required	Same as Urban Premium	Standard highway lighting per MOT warrant, using coloured meter lamp standards
Signs	See "Signing" subsection below	See "Signing" subsection below	See "Signing" subsection below
Bridge Railing ²	Refer to Section 3	Refer to Section 3	Refer to Section 3

Notes:

1. Hard surface finishes in this table are provided for estimating purposes only. As part of the design process, the Concessionaire is encouraged to present equivalent alternatives that will further enhance the aesthetic quality of the corridor.
2. Bridge rails must be low maintenance, aesthetically pleasing and meet highway safety standards.

The following point locations require unique treatment as described below:

- **Viewpoints and Pullouts** – see separate section below (Section 8.9).
- **Parks/Access Roads** – provide feature planting, e.g., grove of flowering trees; provide identification sign.
- **Trailheads** – provide access from parking area to trailhead; provide identification sign; use rock walls or post and rail/cable for any barriers at the trailhead.
- **Natural/Cultural Features** – use dark grey pigment rock pattern stamped concrete (or equivalent) for any traffic islands and walkways; provide feature

planting, e.g., grove of flowering trees; provide identification sign; use rock walls or post and rail/cable for any barriers at the trailhead; provide lighting for special features visible from the road where the lighting will not have negative environmental effects.

- **Gateways/Portals** – provide feature planting, e.g., grove of flowering trees; provide lighting of entry sign and associated special feature; use fastened obelisk on barriers (per CSD Guidelines) prior to gateway/portal; include the installation of a sculpture or special feature provided by the community to enhance their gateway.

8.3 Retaining Walls and Embankments

The treatments described in Table 8-2 are the minimum required treatments for retaining walls for the various situations encountered. Where shot rock fill is used for embankments, it is to be in-filled with sufficient topsoil to encourage pockets of native trees, shrubs and grasses covering 30% of the area.

Where retaining walls are constructed using a “plain” standard concrete to cover or screen the wall or wire fence (e.g., downhill side), and these walls exceed 5 m in height and are highly visible from residences, or intrude significantly into the viewscape, a planting strip shall be provided at the base of such walls. This planting strip shall be a minimum of 1 m wide, excavated to a minimum depth of 0.6 m, and filled with high organic matter topsoil to support vegetation.

TABLE 8-2
Minimum Acceptable Base Level Retaining Wall Treatments

Linear Classification	Downhill Side	Median	Uphill Side
Urban Premium	Textured Finish ¹ cast in place concrete, or MSE concrete panel with ‘Ashlar Stone’ finish (or equivalent) both with coping. In sensitive areas ² , walls with custom architectural finish and planting strips at the base of the wall will be required.	Textured Finish ¹ cast in place concrete or MSE concrete panel with ‘Ashlar Stone’ finish (or equivalent) both with coping.	Textured Finish cast in place concrete or MSE concrete panel with ‘Ashlar Stone’ finish (or equivalent) both with coping. In sensitive areas ² , walls with custom architectural finish and planting strips at the base of the wall will be required.
Community Premium	Same as above	Same as above	Same as above

TABLE 8-2
Minimum Acceptable Base Level Retaining Wall Treatments

Linear Classification	Downhill Side	Median	Uphill Side
Rural	<p>Standard Finish cast in place concrete, or MSE concrete panel, both with coping.</p> <p>Wire walls and Geotech material 'Green Walls' are acceptable.</p> <p>Planting strip will be required at the base of the wall in sensitive areas².</p>	<p>Textured Finish¹ cast in place concrete or MSE concrete panel with 'Ashlar Stone' finish (or equivalent) both with coping.</p>	<p>Textured Finish cast in place concrete or MSE concrete panel with 'Ashlar Stone' finish (or equivalent) both with coping.</p> <p>'Green Walls' may be considered at ramp locations, e.g., to recreational pullouts, etc.</p>

Notes:

- ¹ Textured finish will mean walls poured using form linear inserts to provide a suitable pattern or surface relief – as acceptable to the Ministry.
- ² Sensitive areas include locations adjacent to residences or recreation use areas, or any other locations used or seen on a regular basis by the public, e.g., commercial use, close to Howe Sound with no screening.

8.4 Rock Cuts

Drill holes and bolt heads will be visible on rock cuts, though not necessarily throughout. Due to space limitations, most rock cuts will be covered with wire mesh.

The following is required for reducing the visual impact of rock cuts:

- Wire mesh is to be neatly installed and tied-in at the bottom so as not to protrude outwards or appear 'ragged edged' and unsightly.

8.5 Metal

The Concessionaire must consult with the communities along the Concession Highway regarding branding, and shall select one or two colours for all metal within the Concession Highway corridor, including sign supports and backs of signs as well as railings, site furniture, light standards, etc. The Concessionaire shall use that colour(s) consistently by powder coating metal. One colour shall be for the rural sections of the corridor. If desired, the communities may use a different colour.

8.6 Planting

Planting shall be in accordance with MOT's standard specifications and the intent of the MADP and the CSD. For more details on planting requirements see construction requirements in Section 11 of Part C.

8.7 *Signing*

This section applies to signs other than MOT regulatory and guide signs, as well as the support structures of regulatory and guide signs.

The CSD Guidelines set out the requirements for signs, except for the following modifications:

- Sea-to-Sky Highway logo may appear on signs OR on the sign support system.
- Sign support type may vary from that specified in the CSD Guidelines.

Table 8-3 presents the types of identification signs to be included along the corridor.

TABLE 8-3
Identification Sign Types and Design Criteria

Type of Sign	Minimum Design Criteria
Recreation Opportunity	<p>Provide signs at all recreation access points, including parks, access road, trailheads, and other recreation areas.</p> <p>Provide name of road or use area. Include standard symbols for recreation activities (e.g., hiking, climbing, kayaking, swimming) on the signs.</p> <p>Use one sign style with consistent colour and graphics for all recreation opportunity signs.</p>
Municipal Boundary	<p>Provide signs at all municipal boundaries, at the entry only.</p> <p>Use a relatively small sign that includes the name of the community and “municipal boundary”.</p> <p>Use one sign style with consistent colour and graphics for all municipal boundary signs.</p>
Community Entry	<p>Provide signs just prior to the developed portions of communities, at the entry only.</p> <p>Use large signs with the community name (and logo if they have one) using consistent design elements, for all community entry signs, e.g., size of sign, support structure, colour of sign.</p>
Distance Markers	<p>Provide signs at 10 km intervals, with the 0 mark occurring at the Highway's southern project limit. Coordinate these signs with the needs of others for distance markers, e.g., maintenance and emergency use.</p> <p>Use a relatively small sign with only the distance, and possibly the "Parkway" logo, or with the sign panel as the shape of the logo.</p>

TABLE 8-3
Identification Sign Types and Design Criteria

Type of Sign	Minimum Design Criteria
Natural and Cultural Features	<p>Provide signs identifying all points of interest, e.g., creeks, canyons, mountains, waterfalls, First Nations' communities. Locate the sign either at the feature (e.g., on the bridge for a creek) or with an arrow pointing in the direction of the feature (e.g., Stawamus Chief). Consult with First Nations regarding the inclusion of the names of features in their language.</p> <p>Consult with Squamish Nation on coordinating signage and branding themes they have developed for the corridor.</p> <p>Use a sign similar to the recreation opportunity sign, but with some difference, e.g., colour.</p> <p>Use one sign style with consistent colour and graphics for all natural and cultural feature signs.</p>
Interpretive & Information Signs	<p>Provide signs at all viewpoints and pullouts as indicated. Base Level treatment signing at these locations will require design of a typical sign panel approximately 450 mm tall by 600 mm wide, to be mounted at waist level on an angle on a railing or post. Develop a standard design template for the sign graphics including parkway logo, title, and 2 or 3 items of information each with a graphic and minimal text. Use up to 3 panels to convey the information at each viewpoint.</p> <p>Enhanced Level treatment at viewpoints and pullouts will require design of a sign shelter or kiosk that can accommodate multiple sign panels, and possibly of a larger size.</p>

8.8 Barriers

Barriers adjacent to the Concession Highway shall be standard MOT concrete barriers as per Ministry warrants.

Barriers provided on the non-highway side at viewpoints and pullouts shall be either poured concrete walls faced with rock, or conventional style blast rock and mortar walls.

8.9 Viewpoints and Pullouts

Additional requirements beyond those provided in Section 8.7 above and the CSD Guidelines include the following:

- Use dark grey pigment rock pattern stamped concrete or equivalent for any traffic islands and walkways at viewpoints.
- Use rock walls (seating height) with interpretive signs mounted above walls at all viewpoints.
- Include bear-proof litter containers at all viewpoints, Haul-All 'Hid-a-Bag' double containers or equivalent. Use selected corridor colour for the metal.

- Viewpoints and trailhead pullouts are categorized as being large or small sites. Large sites will typically provide parking for a minimum of 10 to 15 vehicles, while small sites will have less capacity. In addition to this capacity related designation, sites are further categorized as having base level or enhanced amenities.
- Base level sites will have litter containers, some form of signing and generally minimal site landscaping. Enhanced level sites will have litter containers, more signing, sign shelter or kiosk, and possibly picnic tables, custom features and planting. (See details in Table 8-4 below.)
- Sign shelters shall be distinctive in design, constructed of high-quality vandal-resistant materials. Design(s) will be developed by an Architect, and will be responsive to both the input obtained from the consultation process, and the desire to establish amenity structures that distinguish them from other facilities along the route.
- Design and manage vegetation at viewpoints to ensure that the view remains, i.e., it is not blocked by vegetation.

The Concessionaire will develop viewpoints and pullouts at locations set out in Table 8-5, in accordance with the requirements and provisions set out in Tables 8-4 and 8-5.

TABLE 8-4
Viewpoint and Pullout Site Requirements

Facility Size	Capacity	Base Level Amenities	Enhanced Level Amenities
Small	Min. 5 to 10 cars, Paved Parking	1 “Hid-A-Bag II” Double Litter Container – Bear Proof, with concrete mounting pad 1 minimum, to 2 maximum info or interpretive signs, individually mounted or in small shelter(s) Rock barrier wall on viewpoint side	1 “Hid-A-Bag II” Double Litter Container – Bear Proof, with concrete mounting pad 1 minimum, to 4 maximum info or interpretive signs, individually mounted or in sign shelter(s) or kiosk where specified Rock barrier wall on viewpoint side

TABLE 8-4
Viewpoint and Pullout Site Requirements

Facility Size	Capacity	Base Level Amenities	Enhanced Level Amenities
Large	Min. 10 cars, average 15-20, actual as specified in Table 2-22, Paved Parking	2 minimum, to 3 maximum “Hid-A-Bag II” Double Litter Containers – Bear Proof, with concrete mounting pads 2 minimum, to 4 maximum info or interpretive signs, individually mounted or in small shelter(s) Rock barrier wall on viewpoint side	2 minimum, to 3 maximum “Hid-A-Bag II” Double Litter Containers – Bear Proof, with concrete mounting pads 2 minimum, to 12 maximum info or interpretive signs, individually mounted or in sign shelter(s) or kiosk where specified. May require lighting. Rock barrier wall on viewpoint side A maximum of 2 MOT standard concrete terrazzo picnic tables on concrete pads where specified Patterned hard surface areas Native planting and landscaping Custom ‘items of interest’ features

Table 8-5
Highway 99 Viewpoint and Pullout Provisions

	Preliminary Alignment Stationing	Access Travel Direction	Description of Recreation Feature	Requirements	URA Ref. No.¹
DB 1	99+700	NB	Large Trailhead pullout – Baden Powell Trail at Eagleridge Drive	Minimize encroachment on existing area used for parking, and retain approximately 2,000 m ² for existing parking	PA1-1
	101+900	SB	Small viewpoint, Horseshoe Bay view (5-10 cars capacity)	Retain 5-10 car parking capacity and Base Level amenities if feasible (i.e. safe access/egress)	PA1-3
	103+800	SB	Large viewpoint north of Pasco Road (parking capacity approx. 30+ cars, 2 bus/RV)	Retain parking capacity for 10+ cars and 2 buses, provide Enhanced Level Amenities. Sta. 102+850 will be considered by the Province as an alternate location.	PA1-4(b)
DB 4	114+800	SB	Large viewpoint and trail head access/staging area (27 car parking capacity, bus/RV accessible) at Tunnel Point	Retain parking capacity for 20+ cars and 2 buses and provide Enhanced Level amenities; or if capacity is affected and re-configuration is impractical then construct additional view pullout (see PA4-1, and/or other locations).	PA3-2
	122+180	NB	Large Trailhead pullout – BC Parks trail at highway, Deeks Lake Trail and Cypress Provincial Park (existing parking capacity of 20+ cars between the 2 SB pullouts, plus additional capacity NB off-shoulder parking)	Construct NB Base Level pullout and area with parking capacity for 30 cars and connective pedestrian access to trailhead. A conceptual drawing (Drawing 41DK-CP04-9001 Rev. PA) of one possible location option has been placed in the Data Room.	PA5-1
DB 5	126+800	SB	Large Trailhead pullout – Twin Beaches foreshore access at Furry Creek (existing 15-20 cars parking capacity at pullout); enables parking/public access from highway to beach via pedestrian right-of-way across golf course (per MOT/SLRD/landowner agreement)	Retain parking capacity for 10+ cars, and provide Base Level amenities	PA6-1
DB 6	133+850	SB	Large viewpoint, stop of interest, and climber staging area north of Britannia Beach (approximately 20 cars parking capacity)	Retain parking capacity for 20+ cars, and provide Enhanced Level amenities	PA7-2

	Preliminary Alignment Stationing	Access Travel Direction	Description of Recreation Feature	Requirements	URA Ref. No.¹
DB 7	137+030	N/S	Large viewpoint and stop of interest at Watts Point (parking capacity for 10 – 15 cars)	Retain parking capacity for 10+ cars, and provide Base Level amenities	PA8-3
	138+420	NB	Small existing SB gravel pullouts north of Gonzales Creek used for climbers access to “Snakes & Ladders” and other potential climbing routes.	Construct NB pullout (if feasible) for parking capacity of 5+ cars, and provide Base Level amenities; if NB pullout in this vicinity	
	141+300	N/S	Large viewpoint – Stawamus Chief Provincial Park – park/campground access, hiker and climber staging and social/picnic area (50+ car parking capacity incl. gravel area near toilets; bus/RV parking constrained during peak use)	Retain parking capacity for 50+ cars and 2 buses, and provide Enhanced Level facilities. Also construct safe NB and SB access/egress. MOT and WLAP to discuss ultimate ownership, management and maintenance of the parking area. This is a major site requiring complete redevelopment, including new toilet facilities, tables and signing.	PA8-6
	141+530	SB	Large viewpoint & access to “malamute” climbing area (parking capacity approx. 10 cars)	Retain parking capacity for 10 cars and provide Base Level amenities, if the recreation user group can secure access with the property owner prior to construction (access to climbing routes requires crossing private land).	PA8-6
DB 9	217+700	NB	Large viewpoint – “Tantalus Range Lookout”, & access to upland recreation (10 – 15 cars parking capacity)	Retain parking capacity for 10+ cars, provide Enhanced Level amenities.	PA12-2
DB 11	227+100	SB	Large viewpoint and recreation staging area – “Godfrey’s Lookout” (parking capacity approx. 15 cars)	Retain parking capacity for 15 cars, and provide Enhanced Level amenities.	PA14-1

	Preliminary Alignment Stationing	Access Travel Direction	Description of Recreation Feature	Requirements	URA Ref. No. ¹
DB 13	244+650	SB	Large Pullout at West Callaghan FSR provides for river recreation staging area and snowmobiling staging (20+ cars parking capacity)	Retain parking capacity for 20+ cars, and provide Base Level amenities. If access consolidation occurs in vicinity and highway access to this pullout is closed, then provide alternative access to the river at this location by either: a) re-establishing access to the pullout via Brandywine FSR/West Callaghan Road; or b) constructing an equal or better staging area on the north side of Callaghan Cr., with re-established access via Callaghan FSR. (Alternative options require discussion between MOT and MOF).	PA16-1, PA16-2
	246+300	NB	Unique view location on approach to Whistler (mountain views to north, east, south without overhead powerlines in view)	Construct Small viewpoint for parking capacity of 5-10 cars, and provide Base Level facilities (subject to constructability review)	PA16-5
VIEW POINT ENHANCEMENTS					
DB 1	STA. 101+450			Construct a southbound viewpoint at Sta. 101+450 along the 4-lane overland route.	
<p>NOTES</p> <p>¹ “URA REFERENCE NUMBER” COLUMN CROSS-REFERENCES TO LOCATIONS IDENTIFIED IN THE UPLAND RECREATION ASSESSMENT REPORT/MAPPING (PROJECT APPLICATION, AUGUST 2003), OR IN DISCUSSIONS AND MEETING MINUTES OF THE RECREATION FOCUS GROUP (“RFG”).</p>					

9. Design Submissions, Reviews and Reports

9.1 Design Management Plan

The Concessionaire must submit a Design Management Plan, as described in this Paragraph 9.1, within 30 days of the Commencement Date in accordance with Section 11.2 [Design and Certification Procedure] of the Agreement, and which plan must include:

- A design review and audit schedule indicating planned dates for submission of design review folders to MOT, planned dates for design review meetings with MOT, and dates that the Concessionaire plans to conduct internal audits of the design verification process.
- A detailed scope for the safety audit process described in Section 2.3 of Part C.
- A drawing submission schedule indicating dates that the Concessionaire plans to submit drawings to MOT.
- A drawing tree indicating the organization and hierarchy of the Concessionaire's drawings.

MOT will use metrics as a means of monitoring progress of the work. The Concessionaire will propose appropriate metrics to measure the progress of the design for each discipline discussed in the paragraphs following, and will report progress against these metrics as part of the progress reports set out in Paragraph 1.2 of Part 2 of Schedule 15 [Reports], on a monthly basis.

9.2 Design Program Reviews

9.2.1 Design Progress Reports

The Concessionaire will make design information for each discipline available to MOT at the stages shown in Table 9-1 (50%, 90% and 100%). Final design submissions shall be made in accordance with Part 3 of Schedule 5 [Design and Certification Procedure]. Drawings will be in a format in accordance with the requirements of the *BC Supplement to TAC Geometric Design Guide*. The Concessionaire will confirm drawing conventions and standards (e.g., AutoCAD standards, title block, stationing convention, etc.) with the Province's Representative prior to commencing design drawing production. The Concessionaire will organize review meetings with the Province's Representative for the purpose of reviewing the design information at the stipulated interim and final stages.

The Concessionaire is to prepare minutes of review meetings, including recording MOT comment, and promptly address the MOT comment to the satisfaction of the Province's Representative.

The Province's Representative will review the Concessionaire's design information in accordance with Part 2 of Schedule 8 [Review Procedure].

TABLE 9-1
Design Stages

Discipline	Design Stage		
	50%	90%	100%
Highway	✓	✓	✓
Bridges	✓	✓	✓
Retaining Walls	✓	✓	✓
Geotechnical	✓		✓
Electrical		✓	✓
Cantilever and Sign Bridge Structures			✓
Signing and Markings			✓

The design stages 50%, 90% and 100% are indicators of the relative progress of the design; the individual discipline requirements are described in detail in this Section 9.2.1.1 through 9.2.1.4 below.

The Road Safety Audit must, as a minimum, be conducted at the 50% and 100% design completion stages and after construction is complete. Should the Concessionaire propose any intermediate construction before the completion of design, the Concessionaire must have the design for such intermediate construction audited by the Road Safety Audit Team prior to commencement of any construction.

At the 100% design stage, document submission is required. The Concessionaire will submit ten copies of the key plan, plans, and profiles; five copies of each of the other drawings and documentation will be required. An electronic copy of each submission in Microsoft Office and AutoCAD 2000 compatible format will be provided.

Design drawings will be signed and sealed by the responsible engineer who will be registered as a Professional Engineer with APEGBC. The 100% submission shall be accompanied by Design Certificates as per Part 3 of Schedule 5 [Design and Certification Procedure].

9.2.1.1 *Roadway and Drainage*

9.2.1.1.1 50% Design Review

The 50% design review will examine, but not be limited to, the following:

- complete laning and geometrics, including final details for intersection and access treatment;
- complete typical sections;
- template cross sections;
- final right-of-way acquisition drawings;

- general arrangement drawings for retaining structures, over/underpass structures, and larger drainage structures;
- final drainage calculations and design;
- final plan for protection/relocation of utilities;
- environmental mitigation/compensation plans;
- preliminary geotechnical report and recommendations pertaining to preliminary geometric design;
- construction staging and traffic management plans; and,
- internal design review and quality control.

9.2.1.1.2 90% Design Review

The 90% design review will examine, but not be limited to, the following:

- all drawings;
- complete working cross sections;
- complete construction staging drawings;
- detailed regulatory, warning, and guide sign design;
- electrical and lighting design;
- environmental mitigation/compensation plans;
- geotechnical report pertaining to characteristics of material encountered and design recommendations;
- resolution of all MOT review comments from the 50% progress report; and,
- internal design review and quality control.

9.2.1.1.3 100% Design Submission

The 100% design submission will address all MOT comments from the previous design reviews, internal design reviews, quality control, and final design report.

The final design report will include revisions, stakeholder issues, plan for utility relocations, critical constructability and traffic handling considerations, environmental issues and mitigation plans, a signed copy of the final design criteria document, and signed and sealed drawings.

9.2.1.2 *Bridges Design*

9.2.1.2.1 Bridges – 50% Design Review

The 50% design review will examine, but not be limited to, the following:

- an outline of the design codes, criteria, parameters, and philosophies;
- a description of the structures including span configuration, retaining walls, substructure, superstructure, articulation system, seismic load path, seismic restraints, and seismic detailing;
- preliminary geotechnical recommendations, including a description of geotechnical and groundwater issues;
- a description of maintenance and aesthetics considerations;
- general arrangement and preliminary sub-structure and superstructure drawings;
- a description of computer models used for analysis and design;
- environmental mitigation/compensation plans;
- the proposed construction sequencing including deck placement procedure; and,
- a draft of any special provisions required for construction of the structures.

9.2.1.2.2 90% Design Review

The 90% design review will examine, but not be limited to, the following:

- all design drawings;
- a geotechnical report for the bridges;
- environmental mitigation/compensation plans;
- resolution of all Ministry review comments from the 50% progress report; and,
- any special provisions for construction of the structure.

9.2.1.2.3 100% Design Submission

The 100% design submission will contain, but not be limited to, the following:

- full size and reduced size (11" x 17") plots of all design drawings (one set to be reproducible);
- a geotechnical report for the structures;
- environmental mitigation/compensation plans;

- resolution of all issues identified during previous Ministry reviews;
- any special provisions for the construction of the structures; and,
- a neat, bound, indexed set of design calculations for the bridge structures initialled by both the designer and the checker.

9.2.1.3 *Retaining Wall Design*

9.2.1.3.1 50% Design Review

The 50% design review will examine, but not be limited to, the following:

- an outline of the design codes, design criteria, parameters, and philosophies;
- description of the wall systems, its components, and drainage requirements;
- drawings showing the plan view, the elevation view, and a typical cross section of the wall;
- preliminary geotechnical recommendations, including a description of geotechnical and groundwater issues;
- description of aesthetic and maintenance considerations;
- description of computer models used for analysis and design;
- a clear description of the seismic design methodology; and
- geotechnical report presenting methodology and results of reliability and dynamic analysis for stability.

9.2.1.3.2 90% Design Review

The 90% design review will examine, but not be limited to, the following:

- final geotechnical report for the walls;
- descriptions of aesthetic and maintenance considerations;
- completed drawings; and,
- a neat, bound, indexed set of design calculations initialled by both the designer and the checker.

9.2.1.3.3 100% Design Submission

The 100% design submission will contain:

- descriptions of aesthetic and maintenance considerations;
- resolution of all issues identified in the Province's Representative's comments from all previous review meetings;

- final, full-sized and reduced size (11" x 17"), completed reproducible plans; and,
- drawings signed and sealed by the design engineer.

9.2.1.4 *Geotechnical Design*

The Concessionaire will prepare a geotechnical report for the Project that covers existing geotechnical information and known site conditions, new investigations performed for the Project, engineering analysis and design recommendations, and the Unstable Slope Mitigation Program. The contents will include, but not be limited to, the following:

9.2.1.4.1 50% Design Review

The 50% design review will examine, but not be limited to, the following:

- preliminary recommendations for allowable vertical and horizontal loads and acceptable foundation systems for the structures, including comments on possible differential settlements and estimated overall settlements;
- a summary of any additional subsurface investigation that has been completed, including drafted drill summary logs in Ministry format;
- an outline of the design codes, criteria, parameters, and philosophies;
- any changes to the design or layout of the concept since the submission of the Concessionaire's preliminary design report;
- a description of computer models used for analysis and design;
- drawings showing the road alignment in plan and section 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 drawing); and,
- a 50% geotechnical progress report for the structures, which will include reduced size (11" x 17") drawings showing general arrangements for the bridge structures in plan and profile, with drill locations shown in plan and simplified summary logs shown in profile.

9.2.1.4.2 100% Design Submission

The 100% design submission will contain, but not be limited to, the following:

- discussion regarding any additional work that has been completed since the 50% progress report;
- a summary of any additional subsurface investigation that has been completed since the 50% progress report including drafted drill summary logs in Ministry format;
- final recommendations for foundation systems, allowable loads, settlement, and differential settlement predictions;

- reduced size (11" x 17") drawings showing the road alignment in plan and section 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 drawing);
- a 100% geotechnical progress report for the structures with reduced size (11" x 17") 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; and
- geotechnical report presenting results of analyses and demonstrating the effectiveness of the design in controlling rock fall.

Design notes for the 100% submission will indicate as a minimum:

- surficial material;
- stripping depths;
- heights of cuts or fills along centre line;
- heights of cuts or fills left and right of centre line;
- slope angles left and right of centre line;
- S.G.S.B. thickness; and,
- any additional construction notes as conditions change along the alignment.

9.2.1.5 *Electrical, Signing and Markings Design Submissions*

All electrical, sign, and markings submissions will be undertaken in accordance with Section 200 of the Ministry Electrical and Traffic Engineering Design Manual. Sign design sheets will be submitted with signing and marking drawings for all custom guide signs. Sign design sheets will be produced using Transoft Guidesign (or equivalent) software.

9.2.1.5.1 Cantilever and Sign Bridge Structures

All cantilever and sign bridge structures submissions will be undertaken in accordance with Section 300 of the Ministry Electrical and Signing Material Standards Manual.

9.2.1.6 *Landscaping and Site Restoration Submissions*

The overall landscape and site restoration design process shall be conducted in the following three stages:

Stage 1 – Inventory and analysis

Stage 2 – Preliminary Design

Stage 3 – Detailed Design

Within each stage there are a series of design submissions or deliverables.

The following table provides more details on the landscape design tasks and the associated deliverable submission requirements.

Inventory and Analysis Stage

Task	Deliverable
Site Inventory including: landscape units and subunits, description of landscape character and quality, landmarks, features, good and bad views of and from road, aesthetic quality of existing road-side structures, recreation access points (locations available), viewpoints	Site inventory maps with photographic examples
Site Analysis and Visual Assessment including: assessment of the visual impact of the proposed highway construction, opportunities and constraints, and mitigation, e.g., gateways, viewpoints, needs for screening, signs; refinement of Landscape and Site Restoration Treatment Level Map based on consultation with design team, MOT and communities	Site Analysis/Visual Impact Assessment maps, Refined Landscape and Site Restoration Treatment Level Map

Preliminary Design

Task	Deliverable
Aesthetic Input on Structures including: review of all proposed roadway structures, discussion with team on potential finishes, review of proposed plan for finishes based on landscape analysis and treatment classification (see below)	Summary of Finishes for each roadway structure, with graphic examples
Preliminary Landscape Plan including: delineation of rough grass, mowed grass, planting bed, naturalization; delineation of general planting types, i.e., coniferous tree, deciduous tree, shrub bed, ground cover, native plantings	Preliminary Landscape Plan
Preliminary Lighting Plan including: review of options with team, input into selection of light standards and fixtures in the various treatment classification areas and community and urban areas	Memo on Lighting Aesthetics, with graphic examples
Preliminary Signing Plan including: review of options for regulatory sign support structure, input on selection of the structure; development of optional designs for identification signs; development of draft list of identification signs; work with communities on “branding”, corridor logo	Memo on Regulatory Sign Support Structure with graphic examples; Identification sign design options; Identification sign list
Viewpoints & Pullouts including: identification of common and variable elements of viewpoints/pullouts; generation of preliminary design options; refinement of design for typical small and large sites	Design Approach and Options; Typical small and large site preliminary designs for both base level and enhancement treatments
Gateways/Portals including: identification of common and variable elements of major and minor gateways/portals; generation of options for each gateway/portal treatment.	Gateway/Portal Design Approach and Options for each Gateway/Portal

Preliminary Design

Task	Deliverable
Other Point Features including: design approach for parks and recreation access roads, trailheads, natural and cultural features (it is assumed that most aspects of this will be covered within the preliminary signage plan, however some features may warrant more than signage only)	Other Point Feature Design Approach
Consultation Phase: an extensive consultation phase, in conjunction with MOT, will be required with corridor communities and First Nations to identify and select options during the process described above, and to identify partnership opportunities	Consultation Summaries, Draft Partnership Plan

Detailed Design

Task	Deliverable
Aesthetic Input on Structures including: consultation with team on finishes for all roadway structures, addressing community input, costs, location of structures, etc.	Input to Design Team on Finishes, Consultation as Required
Detailed Landscape Plan including: layout of landscape treatment types; planting plan with plant list, sizes, condition, etc. Irrigation plan for urban premium	Detailed Landscape Plan, Irrigation Plan for Urban Premium areas
Input to Lighting Plan including: selection of lighting options with team based on community input, costs, etc.	Input to Design Team on Lighting, Consultation as Required
Detailed Signage Plan including: regulatory sign support structures; detailed design of identification sign supports, graphics, quantities, locations	Input on Regulatory Sign Supports, Detailed Identification Signage Plan
Viewpoints & Pullouts including: detailed design including site plans, grading, walls, barriers, paving, site furniture, sign structures, and any other features	Viewpoint & Pullout Detailed Design for base level and enhanced treatments for small and large sites
Gateways/Portals including: detailed design of gateway/portal grading, planting, signs, lighting and any other features	Gateway/Portal Detailed Design
Other Point Features including: detailed design for point features other than signing	Other Point Feature Detailed Design

9.2.2 Design Folders

Design folders will be prepared for the 100% design submissions and will have indexes and sectional dividers. They will contain pertinent correspondence and will be arranged by subject matter in chronological order. The folders will include design calculations and backup information.

Design folders will include, but not be limited to, a copy of all approvals, design reports, correspondence, and calculations such as, barrier requirements, drainage and traffic analysis.

The design submission must be completed in CAiCE project data format as per *BC Supplement to TAC Geometric Design Guide*, Section 1270 – October 2003, www.th.gov.bc.ca/publications/eng_publications/geomet/TAC/TAC.htm.

9.3 Drawings and Specifications

9.3.1 Design Drawings and Specifications

Except where specified on General Drawing No. 41DD-DB00-0003 and 41DD-DB00-0004 in Part 5 of Schedule 5 [Construction Drawings], design drawings and specifications will be prepared in accordance with the Ministry standards and will be CAiCE compatible. The standards will be the following:

- *BC Supplement to TAC Geometric Design Guide* 2001 Edition;
- Section 1270, CAiCE Project Data Format Terms of Reference; and,
- AutoCAD Drafting Standards.

Ministry standards are available at:

http://www.th.gov.bc.ca/publications/eng_publications/geomet/TAC/TAC.htm

http://www.th.gov.bc.ca/publications/eng_publications/geomet/CAiCE/CAiCE.htm

http://www.th.gov.bc.ca/mot_org/hwyeng/geomethome.htm

9.3.2 Record Documentation

The original design drawings that the Concessionaire submits as the 100% design submission must not be amended in any way. At the time that the Concession Highway is opened for public use and improvements are completed, copies of the original AutoCAD design drawing are to be used and amended, as required, to reflect the actual constructed roadway and amenities. The drawing numbers will remain the same as the originals for storage and retrieval purposes. Record Documents will be stand-alone documents and contain all of the original information, except that which has been changed during construction. Record Documents shall be submitted in accordance with Part 3 of Schedule 5 [Design and Certification Procedure].

The drawings will be drafted in the format and to the standards of the original design drawings and plotted on standard mylar drawing sheets with waterproof ink.

Each item or area on the drawing that has been changed from the original design will have an 8 mm triangle adjacent to the area of the change with the number of the change inscribed within the triangle. The same number will be shown cross-referenced in a “Construction Revisions” block with a description of the change beside it. The triangle will be drawn with the apex of the triangle pointing toward the change.

All of the contract drawings will be included as part of the record documents, except staging drawings.

In addition to the above, the Concessionaire will submit to the Ministry the record documents described below.

9.3.2.1 *Record Documents for Highways*

After construction of the Works, the Concessionaire will submit a set of Record Documents for each highway section to the Province's Representative, including Record Drawings, as follows:

- design plans;
- typical cross sections;
- supplemental drawings;
- geometrics and laning;
- profiles;
- signing and markings drawings;
- underground utility plans;
- landscape plans;
- final record cross section plans and material types on all roadways;
- hydrologic and hydraulic calculations, drawings, and maps;
- all quality control folders showing test data and location;
- electrical plans; and
- all final documentation on the safety audit.

9.3.2.2 *Record Documents for Bridges*

After construction of the Works, the Concessionaire will submit to the Province's Representative, a set of Record Documents for each bridge as follows:

- copies of all final versions of shop drawings;
- copies of all test results, mill certificates, and other quality control monitoring reports and information;
- copies of all geotechnical engineering reports and investigation results;
- daily construction diary;
- a complete log of all concrete placement summaries on a Concrete Inspection Report (Ministry's Form H-47);
- a complete driving record for all piling installed, submitted on a full size drawing; and,

- a complete record of the as-constructed deck concrete data, submitted on full size drawings. As-constructed deck concrete data drawings will include:
 - as-constructed deck profiles at 3 m intervals along the centreline of the roadway and at 0.3 m offset from parapet lines, the elevations referenced to a permanent benchmark;
 - a table of actual elevations compared to design elevations, including plots for each line;
 - a sketch of the deck showing the direction and extent of each day’s placement of concrete;
 - the concrete design mix and adjustments;
 - records on the number of truck loads cast in the concrete, air and slump content, any changes in conditions (e.g., site conditions, weather, etc.), identity of the placement areas, and concrete cylinder strengths; and,
 - a design folder of design calculations for construction revisions.

9.3.2.3 *Record Documents for Retaining Walls*

After construction of the retaining wall, the Concessionaire will submit to the Province’s Representative, a set of Record Documents for each wall as follows:

- copies of all final versions of shop drawings;
- copies of all test results, mill certificates, and other quality control monitoring reports and information; and,
- copies of all geotechnical and ground water engineering reports and investigation results.

9.3.2.4 *Signing of Drawings*

The Record Drawings are to be signed and sealed by the original design engineer to verify that the drawings represent the original design with all design revisions added.

9.3.2.5 *Distribution of Drawings*

The signed drawings are to be forwarded to the Province’s Representative for compliance review. Original drawings will be accompanied by a CD containing the drawings in AutoCAD format and a CD containing the CAiCE project data archive files.

After a final review by the Province’s Representative and the Concessionaire and when no further changes are to be made to the drawings, they will be submitted to the Ministry for record purposes.

PART C. CONSTRUCTION SPECIFICATIONS**1. General**

The construction of the Works must comply with the requirements of MOT's *Manual of Standard Specifications for Highway Construction*, 2004 Edition (the "Standard Specifications"), as amended herein:

- Section 115 – Major Works Construction Agreement – General Conditions does not apply.
- Section 117 – Minor Works Construction Agreement – General Conditions does not apply.
- Section 125 – Value Engineering – Proposal Guidelines does not apply.

Any and all reference to "approval by MOT's Representative" in the Standard Specifications, in terms of acceptance of materials, work methodology or end product, is to be construed as meaning "approval by the Concessionaire's Designer".

Additionally, any and all reference in the Standard Specifications to submission of material to MOT "for approval", "for acceptance", or other qualifying phrase with similar connotation is to be construed as MOT retaining the right to object to the submission material as set out in the Review Procedure.

The Concessionaire will, when required by MOT, submit for approval, in accordance with the Review Procedure, samples of any products proposed by the Concessionaire which are not included in MOT's Recognized Products List.

Such samples will be of the exact item proposed to be furnished and will include, where applicable, colour chips and finish styles.

2. Road Safety Audit**2.1 Requirement for a Road Safety Audit**

The Concessionaire must retain, at the Concessionaire's expense, an Audit Team, independent of the design team, to carry out Road Safety Audits on the design and on the constructed works. The Audit Team must be approved by the Province's Representative in accordance with Section 15 of Part 3 of Schedule 5 [Design and Certification Procedure].

2.2 Definition and Intent

The Road Safety Audit is to be a formal and independent review by the Audit Team to assess the multi-modal safety performance of a design.

2.3 Road Safety Audit Process

The Road Safety Audit process shall generally conform to the procedures outlined under Section 2.1 of the Canadian Road Safety Audit Guide (TAC, 2001) and in accordance with Part 3 of Schedule 5 [Design and Certification Procedure].

2.4 Concessionaire's Responsibilities

The Concessionaire will be responsible for:

- scheduling, initiating, and managing the Road Safety Audit process at the appropriate times during the course of the Project;
- providing all necessary design drawings and supporting documentation for the Audit Team to conduct the audit;
- ensuring that the audit is conducted to a high quality standard;
- receiving and reviewing the audit report;
- responding to the audit report and documenting this response;
- conducting any re-design as a result of the safety audit suggestions; and,
- providing all documentation related to the safety audit to MOT for information.

All costs associated with the Road Safety Audit, including any re-design and increased construction costs which result from the audit, are the responsibility of the Concessionaire. The Concessionaire's schedule must also allow the appropriate time for the Road Safety Audit process to be undertaken.

3. Survey Control

Survey control for the works must comply with "Sea-to-Sky Highway Survey Control" report by McElhanney Consulting Services Ltd. dated November 2002.

In addition to being responsible for survey monuments and property markers, as set out in SS 145.28, the Concessionaire is responsible for the protection of reference points and benchmarks, and will replace, at its own expense, any which are damaged during construction. The Concessionaire's responsibility for both legal survey markers and other survey reference points and benchmarks applies whether they were established before or after the Commencement Date.

4. Use of Ministry Facilities, Pits, and Quarries for Design and Construction

The Concessionaire may use the MOT pits and quarries in accordance with the provisions of Part 7 of Schedule 4 [Gravel Pits and Form of Gravel License].

Brunswick Pit will be divided into two separate construction sites to enable shared use by the Concessionaire and the DB2 Contractor. For the period from the Commencement

Date to December 31, 2006, the Concessionaire must restrict its use of Brunswick Pit to an area of approximately 25,000 m² adjacent to Highway 99 and Crystal Falls Road on the northwest corner of Brunswick Pit (shown in hatched shading as “Pit Area Available to DBFO Co” on Figure Drawing 41DD-DB00-0015). The Concessionaire shall erect a chain link fence separating this area from the remainder of Brunswick Pit. The Concessionaire must establish and use access to this area separately from the main Brunswick Pit access road. The remaining area of Brunswick Pit is available to the Concessionaire following completion of the work by the DB2 Contractor.

5. Roadworks

5.1 Organic Stripping

Organic material is to be removed from areas where roadway is to be constructed. Upon completion of roadway embankment construction, this organic material may be placed on the embankment slopes and neatly trimmed. Proper drainage must be maintained. The Concessionaire’s landscape design is to determine the appropriateness of using organic stripping as cover for roadway embankment slopes.

6. Structural for Bridge

6.1 Bridge Identification Numbers

The Concessionaire shall supply bridge numeral forms to imprint identification numbers on bridges. During the detailed design, the Concessionaire is to apply to MOT for a bridge number and description.

6.2 Detour

Detour bridges, if required, are to be designed for CL-625 loading.

The Concessionaire must maintain the detour bridge throughout the period of its use. After traffic is routed onto the new bridge, the Concessionaire is to remove the detour bridge and restore the Site to its original condition.

6.3 Foundation Excavation and Backfill

The Concessionaire geotechnical engineer shall inspect foundation excavations for suitable materials. Where in the professional judgment of the Concessionaire’s geotechnical engineer, materials in the bottom of the excavation are unsuitable, the Concessionaire’s geotechnical engineer shall direct replacement with suitable materials.

6.4 Piles

Timber piles are not to be used for permanent structural support. Timber piles used for ground densification shall have a Design Life of 75 years.

6.5 Formwork

Formwork is to be designed, supplied, and installed in accordance with CAN/CSA-S269.3-M92, *Concrete Formwork*.

6.6 Reinforcing Steel

Reinforcing steel is to be supplied and installed in accordance with SS 412.

6.7 Concrete

All concrete works shall be governed by the requirements of SS 211 and 413.

6.7.1 Reactive Aggregates

The Concessionaire must ensure that:

- a) the aggregates do not have alkali aggregate reactive potential; or
- b) the mix design(s) mitigate against AAR potential.

6.7.2 Surface Finishes

Concrete surface finishes, as per SS 211, shall be as follows:

- | | |
|--|---------------------|
| • Surfaces submerged or buried | Class 1 |
| • Top and inner surfaces of curbs, parapets | Class 3 |
| • Outer surfaces of curbs, parapets, outer edges of deck | Class 2 |
| • Abutments | Class 2 |
| • Piers | Class 1, 2, or 3 |
| • Bearing seats | Trowelled finish |
| • Top of deck (no membrane) | Coarse broom finish |
| • Top of deck (with membrane) | As per SS419 |
| • Underside of deck | Class 1 (or better) |

6.7.3 Parapets

Concrete parapets are not to be extruded and the corners of parapets must be chamfered.

6.7.4 Cement

Cement shall conform to the requirements of SS 211.3.1.

6.8 High-Density Concrete Overlay

High-density concrete overlays on bridge decks are to be in accordance with SS 413.

6.9 Slope Pavement

The Concessionaire is to design and construct slope pavement and edge walls to protect abutment slopes.

The slope surfaces shall be trimmed to suit and shall be compacted to 95% proctor.

Concrete is to be placed in alternate strips. Sufficient hand spading and/or tamping shall be done to the prepared subbase to secure a dense paving free of voids and honeycombs.

The surface finish is to be as specified in the Landscape and Site Restoration Design Criteria in Section 8 of Part B.

6.10 Prestressed Concrete Stringers

6.10.1 Supply and Fabrication

Prestressed concrete stringers are to be supplied and fabricated in accordance with SS 415 – “Manufacture and Erection of Precast and Prestressed Concrete Members” and “Quality Control Program”.

6.10.2 Shipping and Erection

Prestressed concrete stringers shall be shipped and erected in accordance with SS 415 – “Manufacture and Erection of Precast and Prestressed Concrete Members”.

6.11 Post-Tensioned Concrete Members

Post-tensioning is to be performed in accordance with SS 416 – “Manufacture and Installation of Post-Tensioned Concrete Members”.

Transverse post-tensioning shall be performed in accordance with SS 416 – “Manufacture and Installation of Post-Tensioned Concrete Members”.

6.12 Structural Steelwork

6.12.1 Supply and Fabrication

Structural steelwork is to be supplied and fabricated in accordance with SS 421.

6.12.2 Shipping and Erection

Structural steelwork is to be shipped and erected in accordance with SS 421.

6.12.3 Painting

Structural steelwork is to be prepared and painted in accordance with SS 421.

6.13 Deck Joints

Deck joints are to be designed, supplied and installed by the Concessionaire. The Concessionaire may form a blockout for each deck joint.

The steel portions of deck joints shall be supplied and fabricated in accordance with SS 422.

Each joint seal is to be supplied in a single length, without splices. Before the joint seal is installed, the joint must be thoroughly cleaned with a wire brush and all moisture removed from the joint. The seal is to be installed in accordance with the manufacturer's recommendations.

Compression seals are to be installed almost fully compressed approximately 5 mm below the surface of the deck.

Blockout concrete is to be bonded to the concrete previously cast by means of an epoxy bonding agent conforming with ASTM C881, Type II, Grade 2. The Class of bonding agent shall be appropriate for the temperature at time of application. The bonding agent is to be applied in accordance with the manufacturer's recommendations.

6.14 Bearing Assemblies

6.14.1 General

The Concessionaire is to design, supply and install bearing assemblies and anchor bolts, which must be approved by the Concessionaire's engineer. Bearing assemblies include all components between the underside of the bottom flange and the concrete bridge seat.

The details of design and manufacture of bearings shall be in accordance with CAN/CSA-S6-00, Section 11.6. Steel fabrication is to be in accordance with SS 422.

The elastomer used in bearings is to conform to the requirements of CAN/CSA-S6-00, Section 11.6.6.

All exposed steel surfaces shall be galvanized to CAN/CSA-G164-M or metallized to CSA G189.

Stainless steel shall conform to ASTM A167 Type 304. The face of the stainless steel in contact with TFE polymer is to have a bright annealed mirror finish. The roughness of the contact surface is to be less than 0.12 μ m arithmetic average measured in accordance with CAN/CSA B95.

TFE shall conform to the requirements of CAN/CSA-S6-00, Section 11.6.3.

The Concessionaire is to compile test results and certificates of compliance for all materials incorporated into the bearings including, elastomer, steel, stainless steel, TFE and any other materials, and make the tests and certificates available to MOT for audit purposes.

6.14.2 Pot and Disc Bearings

The elastomer used in disc bearings is to be 100% polymer urethane. The hardness when tested according to ASTM D2240 must be 62±2 Durometer D. Tensile; testing is to be performed in accordance with ASTM D412, at 500 mm/minute. The tensile stress at 100% elongation shall be at least 14 MPa, and at 200% elongation at least 26 MPa. The ultimate tensile stress shall be at least 34.5 MPa. The ultimate elongation shall be at least 220%. The compression set, when tested according to ASTM D395 for 22 hours at 70°C shall be 40% maximum.

For pot bearings, the tolerance of fit between the piston and the pot is to be +0.75 mm to +1.25 mm.

Bearings are to be clearly marked to indicate their orientation.

All pot and disc bearings shall be plant-assembled.

6.14.3 Unreinforced Elastomeric Bearings

Unreinforced elastomeric bearings and bearings cut from cured rolled stock are to be tested only for durometer hardness.

6.14.4 Steel Reinforced Elastomeric Bearings

6.14.4.1 *General*

Fabrication tolerances are to conform to *AASHTO Standard Specifications for Highway Bridges*, Division II. For steel reinforced elastomeric bearings the cover of elastomer over the edges of reinforcing plates is to be 5 mm.

The bearing manufacturer is to conduct compression tests as described below, either by, or in the presence of, an independent certified inspection agency.

6.14.4.2 *Nondestructive Testing – Compression Test*

Each bearing must be tested as follows using a concentric compression load:

- a) The testing machine used must have platens at least 20 mm greater in both plan dimensions than the bearing under test.
- b) At least two dial gauge micrometers must 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 will separate the bearings and a set of dial gauge micrometers will be installed for each bearing.
- c) The load must 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 will be recorded.
- d) The load must be reduced at the same rate until the pressure on the bearing is 1.5 MPa and the deformations recorded.

- e) The load on the bearing must be maintained at 1.5 MPa for fifteen minutes, and the deformations will be recorded.
- f) The bearing must be reloaded as in step (c), and steps (d) to (e) will be repeated.
- g) The bearing must be reloaded to 10 MPa with deformations being recorded after each 1 MPa increment.
- h) A graph of the pressure versus average deformation with data recorded in (g) must be constructed.

The rates of loading specified in steps (c) and (d) also apply to steps (f) and (g).

6.14.4.3 *Deficiencies*

The Concessionaire shall not use a bearing which has any of the following deficiencies:

- If it displays bulging patterns under compression load which indicate laminate placement which does not satisfy design criteria and manufacturing tolerances, or indicates poor laminate bond.
- If it has more than two surface cracks which are greater than 2 mm long and 2 mm deep.
- If the compressive deformation exceeds 7% of the total elastomeric thickness of the bearing during the application of the sum of the vertical serviceability loads shown on the Drawings.
- If the compressive stiffness differs by more than 10% between similar bearings.

6.14.4.4 *Seismic Bearings*

Bearings that are designed for seismic loading and load sharing are to be tested for both vertical and horizontal loads simultaneously for five cycles without failure.

6.15 *Railings*

6.15.1 *Parapet Railings*

Steel railing and steel components of standard parapet railing, MOT Dwg No 2785-2, shall be supplied, fabricated, and installed in accordance with SS 422.

6.15.2 *Sidewalk Fence (or Bicycle Fence)*

Sidewalk (or bicycle) fence shall be supplied, fabricated, and installed in accordance with SS 422. See MOT Dwg Nos 2891-1 and 2891-2.

6.16 *Deck Drains*

Deck drains shall be supplied, fabricated, and installed in accordance with SS 422.

6.17 Waterproofing Membrane

The Concessionaire is to supply and install an approved waterproofing membrane. The membrane shall be installed in accordance with the manufacturer's specifications and SS 419.

6.18 Restrainer Bolt Assemblies

Restrainer bolt assemblies shall be supplied, fabricated, and installed in accordance with SS 422.

6.19 Steel Bracing between Concrete I-Beams

Steel bracing between concrete I-beams shall be supplied, fabricated, and installed in accordance with SS 422.

6.20 Riprap

The Concessionaire is to design, supply, and place stone riprap in accordance with SS 205.

The Concessionaire will haul all material excavated from any creek beds in preparation for placing riprap to an approved disposal area and dispose of it.

6.21 Expanded Polystyrene Fill

Expanded polystyrene fill, as described below, is acceptable.

6.21.1 Materials

Expanded polystyrene is to be in the form of blocks. It will be classified with regard to surface burning characteristics in accordance with CAN4-5102.2, having a flame spread rating not greater than 500.

The minimum compressive strength, measured in accordance with ASTM D1621, Method A, is to be 125 kPa at a strain of not more than 5%. The density (kg/m^2) of the blocks shall be less than, or equal to, $0.2 \times$ compressive strength (kN/m^2).

6.21.2 Geometry

Blocks are to be cuboids with a maximum deviation from the specified dimensions of $\pm 1\%$.

The evenness of the block faces will be within ± 2.5 mm of a line formed by a 3 m straight edge.

All blocks shall be supplied in a single size. The preferable block dimensions are 4,870 mm x 1,210 mm x 500 mm. The minimum acceptable block dimensions are 2,400 mm x 600 mm x 300 mm. Thinner blocks may be considered if the Concessionaire can demonstrate they can be adequately bundled to the minimum block size specified.

6.21.3 Placement

The blocks are to be placed on a compacted sand levelling course which is graded to within ± 10 mm of the design grade, laid in bond, with the long dimension rotated 90° with each successive lift to avoid continuous vertical joints, and protected with polyethylene sheeting placed as soon as possible.

6.21.4 Polyethylene Sheeting

The Concessionaire is to supply and place 250 μ m polyethylene sheeting to encapsulate the polystyrene fill as designed. All joints are to be lapped a minimum of 300 mm to provide a full sealed enclosure.

7. Geotechnical

7.1 Asphalt Pavement

The Concessionaire is to supply and place an open graded friction course as a top lift pavement in areas described in Paragraph 5.3 of Part 1 of Schedule 12 [Environmental Obligations]. In all other areas, top lift pavement, including any overlays of existing pavement, must be Superpave mix design.

The minimum requirement for lower lift asphalt pavement, is a Class 1 medium mix.

Strategic Highway Research Program (SHRP) Standards for a Superpave Mix Design are contained in the Asphalt Institute's Superpave Series Publication – *Superpave Mix Design SP-2*.

7.2 Pavement Construction

'Sandwich construction pavements', defined as a granular layer sandwiched between two asphalt pavement layers, are not to be used.

7.3 Recycling of Asphalt Pavement and Granular Road Materials

7.3.1 General

Recycling of existing asphalt pavement and granular road materials is acceptable with the following qualifications:

- Asphalt pavement may be milled and used in fills within the Site that are not considered to be environmentally sensitive.
- If milled asphalt is being used as fill material, the asphalt pavement millings shall be blended uniformly with other granular materials, to a maximum of 50% by volume of the blended materials.

- A maximum of 20% recycled asphalt pavement may be used in the bottom lift of new asphalt pavement. Recycled asphalt pavement is not to be incorporated in the mix for the top pavement lift.
- Reclamation of asphalt pavement/base is defined as the blending of asphalt pavement/base materials to depth in the single pass of a road reclaimer machine. Asphalt pavement will not exceed 50% of the blended mix.
- A reclaimed asphalt pavement/base blend may be used as subbase or the base course provided that the reclaimed asphalt pavement/base blend is not used in the upper 150 mm of base.

7.3.2 Reclaimed Materials Specifications

The reclaimed asphalt pavement/base aggregate mixture shall meet applicable aggregate gradation requirements for use, as specified in MOT's *Standard Specifications for Highway Construction*.

7.4 Acid Rock Drainage/Metals Leaching (ARD/ML)

Acid generating and potentially acid generating rock must not be incorporated into embankment fills or elsewhere in the works. These materials are to be disposed of at the following approved, permitted disposal sites:

- Watts Point offshore marine disposal area (PAG rock only)
- Point Grey offshore marine disposal area (PAG rock only)
 - Commercial disposal sites

7.4.1 Inspection and Testing for PAG Materials

The Concessionaire is to be responsible for undertaking sampling and testing as may be required to supplement testing completed by MOT and for assessment of ARD/ML potential from rock excavated in areas not tested by MOT.

During rock excavations, the Concessionaire's geotechnical engineer shall implement an adaptive-management plan for inspection and testing of rock, components of which must address the following:

- Visual inspection of rock cuts, during construction, for PAG materials that were not identified in the study of ARD/ML completed for MOT by Golder Associates
- Testing of suspected PAG materials
- Disposal of PAG materials as indicated in this Section 7.4
- Management of acidic drainage from rock slopes

7.4.2 Management of Excavated Rock with Potential for Acid Generation and Metals Leaching

The Concessionaire shall develop a Materials Management Plan that addresses specific measures for effective segregation of PAG from non-PAG materials and commits to best management practices in avoiding impacts from ARD/ML in transporting, stockpiling, and disposal of materials.

If non-PAG materials cannot be effectively segregated from PAG, all materials within the excavation are to be considered PAG.

The Materials Management Plan for AG and PAG materials is to be made available to and explained to all of the Concessionaire's personnel and by all of the Concessionaire's subcontractors' personnel working with these materials.

7.4.3 Management of Rock Cuts with ARD/ML Potential

The Concessionaire shall design and implement measures that will mitigate potential for ARD/ML from rock cuts. Such measures will include, but are not limited to, the following:

- Minimizing the volume of water that may flow over the face of exposed rock cuts that are PAG.
- Shotcreting rock slopes that have been determined to be potentially acid generating to retard oxidation of sulphides.
- Minimizing infiltration of surface water through PAG materials.
- Diverting surface water flow away from PAG materials.
- Designing ditches systems that increase dilution of acidic drainage.
- Prevention of sensitive species from exposure to acidic drainage from rock cuts.
- Treatment of acidic water prior to discharge to creeks.

The Concessionaire shall develop monitoring and maintenance provisions to ensure long-term performance of mitigation works (see Schedule 12 [Environmental Obligations]).

8. Electrical and Lighting

8.1 General

Electrical, signals, and lighting is to be carried out in accordance with the specifications in this Section 8 and the following MOT documents:

- *Standard Specifications for Highway Construction*

- *Recognized Products List* available at MOT's website at:

http://www.th.gov.bc.ca/publications/eng_publications/geotech/rpb.htm

- *Ministry Technical Bulletins*, Highway Engineering Branch, Traffic Section (Electrical) available at MOT's website at:

http://www.th.gov.bc.ca/publications/eng_publications/eng_pubs.htm

8.2 Electrical Servicing

The Concessionaire shall provide a list of all electrical loads and arrange for service applications with the MOT Electrical Operations Manager.

8.3 Roadway Lighting

All luminaires shall be flat-glass style. Where lighting exists throughout the Concession Highway (including those highway sections that are not reconstructed as part of the Works), and is not flat glass, it is to be upgraded with new flat glass cobra head luminaires prior to the final completion of the Pre-Olympic Works.

Unless otherwise noted, electrical materials supplied by the Concessionaire are to be selected from MOT's Recognized Products List.

All existing lighting is to be maintained in operation through construction and operation of the new lighting.

8.4 Traffic Signals

Traffic signal displays shall be LED. All materials, with the exception of controllers, must conform to MOT's *Electrical and Signing Material Standards Manual*. Traffic controllers shall conform to National Electrical Manufacturers' Association Standards.

8.5 Changeable Message Signs

Changeable message signs shall use LED technology.

9. Drainage

9.1 General

The Concessionaire is to provide a highway drainage system that functions as a new installation would function, but does not need to be new. The Concessionaire is to review all existing drainage appurtenances to confirm that they are of adequate capacity and condition for the design flows.

9.2 Catch Basins

The Concessionaire shall design, supply and install cast iron catch basins as specified in Standard Specification Drawing SP504-01. The Concessionaire is to supply and install

200 mm galvanized corrugated steel outlet pipes, anchors, and splash pads at each catch basin, as shown on Standard Specification Drawing SP504-02.

10. Signing and Pavement Marking

10.1 Signing

Signing is to be designed and installed in accordance with MOT's *Manual of Standard Traffic Signs and Pavement Markings*.

All text font for guide signs must be "clear Vue". Sign sheeting for overhead guide signs must be ASTM D4956 type IX micro-prismatic retro-reflective sheeting for all symbols, text and background sheeting. Sheeting for all symbols and text on shoulder guide signs must be ASTM D4956 type IX micro-prismatic retro-reflective and background sheeting on shoulder guide signs must be either ASTM D4956 type IX micro-prismatic retro-reflective or ASTM D4956 type III retro-reflective.

10.2 Pavement Markings

Pavement markings are to follow the requirements of MOT's *Manual of Standard Traffic Signs and Pavement Markings* and Section 10.2.3 of Part C.

Temporary pavement markings which require removal by grinding or scabbling are not permitted on final pavement surfaces.

Painted pavement markings will be applied using equipment capable of applying clean edged pavement markings of the designated width, length and spacing and will have a bead dispenser directly behind and synchronized with the paint applicator. The equipment must have an automatic mechanism for controlling the length and spacing of dashed lines. The equipment must apply double lines simultaneously.

Thermoplastic equipment will include the capability of applying a uniform top dressing of glass bead.

Pavement markings will be placed when the condition of the road is appropriate to the material being applied and in accordance with the manufacturer's specifications.

Inlaid pavement markings are an acceptable alternative to painted markings.

Pavement markings will conform to standards across the following measures as detailed below:

- Materials
- Daytime Visibility
- Night time Retro-reflectivity
- Dimensions
- Colour and Colour Retention
- Thickness
- Durability
- Skid Resistance

Materials – All materials used for pavement markings will be selected from MOT's Recognized Products List.

Daytime Visibility – When viewed dry or wet in the daytime, the pavement markings will be readily visible for a forward distance of 150 m, or as far forward as possible until obstructed by the road geometry if less than 150 m.

Night time Retro-reflectivity – Under dry conditions, the retro-reflectivity of a Longitudinal Marking, or any other marking, must exceed:

Yellow Markings	White Markings
175 millicandela m ⁻² lux ⁻¹	250 millicandela m ⁻² lux ⁻¹

Dimensions – Pavement marking lines will be straight or of uniform curvature and will conform with the tangents, curves, and transitions as specified in the *Manual of Standard Traffic Signs and Pavement Markings*.

Pavement marking lines will have well-defined edges and be free of horizontal fluctuations. The lateral deviation will not exceed 10 mm from the proposed location alignment as specified in the *Manual of Standard Traffic Signs and Pavement Markings*.

Pavement marking lines will not exceed a dimensional width of 110 mm for specified 100 mm wide lines. No tolerance below 100 mm will be allowed for the specified 100 mm wide line.

Pavement marking lines will not exceed a dimensional width of 210 mm for specified 200 mm wide lines. No tolerance below 200 mm will be allowed for the specified 200 mm wide line. Pavement marking direction dividing, lane dividing or continuity lines will not exceed a maximum dimensional length deviation of +/- 100 mm for existing lengths of line. Spaces between painted direction dividing, lane dividing or continuity lines will not exceed a maximum dimensional length deviation of +/- 100 mm for existing lengths of space.

Lane lines, continuity lines and edge lines on tangent sections of constant width will be placed parallel to each other, maintaining their correct offset from the edge of the pavement and from one another and shall be straight and true.

Pavement markings placed to delineate changes in the number of lanes, variations in roadway width or adjustments in lane width will be straight and true.

Pavement markings placed on curves will accurately follow the change in direction prescribed by the roadway. Transition from adjacent tangent sections will occur smoothly and at a constant rate over the specified distance.

Pavement markings will always maintain the specified lane width. Pavement markings will not be placed within 300 mm of reflectorized pavement markings to avoid overspray. Pavement markings will be applied for the full length of all ramps, gores and traffic islands where sufficient lane width exists.

Pavement markings will be free of splatter, excessive over spray or other defects. Overspray on roadway markers shall be avoided.

Colour and Colour Retention – The colour of white pavement markings will comply with U.S. Federal specification 595b White 17886. The colour of yellow pavement markings will fall within the tolerances outlined in Table 3-2, using a CIELAB colour scale. CIELAB is defined in ASTM D2244-02, *Calculation of Color Tolerances and Color Differences for Instrumentally Measured Color Coordinates*.

TABLE 10-1
Yellow Traffic Paint Colour

	L	a	b
Standard	78.94	7.76	71.93
Maximum	80.94	10.76	77.93
Minimum	76.94	6.26	70.43

* Readings taken with a Minolta CR-231 or CR-221 colour meter.

Thickness – Pavement markings will have a sufficiently thick cross section throughout their entire length to completely cover the intended area being marked.

Thermoplastic material will be applied at a minimum finished thickness of 3 mm and a maximum finished thickness of 5 mm.

Durability – Pavement markings will have a minimum durability of three months from the end of the season or the time of application, whichever is the later. Pavement markings applied with thermoplastic materials will have a minimum durability of two years from the time of application.

Skid Resistance – Pavement markings applied with thermoplastic materials will have a skid resistance of greater than 45 British Pendulum Number units at any temperature.

Testing – Testing will be done by an independent third party testing agency. Sufficient testing shall be undertaken within 60 days of installation to provide evidence that the specifications have been met. Testing shall be undertaken at intervals required to gain confidence in a statistically valid manner, to a 95% confidence level, so that the sample results represent the overall quality of the work being performed.

The testing locations will be random and shall include samples of each crew's work and the distribution of samples among the crews will be equal to the ratio that each crew's work bears to the total line kilometres of work performed.

Testing must be done on pavement markings that are reasonably clean given their road environment. The cleaning of pavement markings before testing should be limited to brushing. Testing will be as follows:

- Daytime visibility will be assessed visually. Where it is not clear that the specification is met, the distance will be measured.
- Night-time retro-reflectivity will be measured as per ASTM D 6359-99 Standard Specification for Minimum Retro-reflectance of Newly Applied Pavement Marking Using Portable Hand-Operated Instruments. Testing will be done under dry conditions by a independent third party testing agency. The

retro-reflectivity will be measured by a Mirolux 30 retro-reflectometer or equivalent retro-reflectometer.

- Dimensions will be assessed visually. Where it is not clear that the specification is met, measurements will be made.
- The diffused day colour of the pavement marking shall be measured using a portable colour meter to determine if the colour falls within the following CIE Chromaticity coordinates limits as follows:

CIE Chromaticity Coordinate Limits

Colour	1		2		3		4		Reflectance Limits Y (%)	
	X	Y	X	Y	X	Y	X	Y	Min	Max
White	0.303	0.287	0.368	0.353	0.340	0.380	0.274	0.316	80.0	–
Yellow	0.492	0.471	0.571	0.462	0.477	0.417	0.461	0.433	50.0	60.0

- Pavement markings will be tested as per ASTM D913-88 Standard Test Method for Evaluating Degree of Resistance to Wear of Traffic Paint. Newly applied pavement markings must exceed the photographic reference standard of 97%.
- Skid resistance will be measured by ASTM E-303-83 Method of Measuring Surface Frictional Characteristics.

The Concessionaire shall submit a complete written test report to the Province's Representative within 90 days of the installation of pavement marking.

10.2.1 Roadside Delineators

The Concessionaire will supply and install delineators in accordance with MOT's *Manual of Standard Traffic Signs and Pavement Markings*. Delineators must be mounted on barriers or on posts. Posts are to be galvanized perforated square steel tubing as per Section 635 of MOT's *Standard Specifications for Highway Construction*. To improve visibility, reflectors with ASTM D4956 Class IV micro-prismatic sheeting shall be used.

10.2.2 Reflectors on Barriers

Reflectors on barriers shall be attached with an epoxy adhesive applied as per manufacturer's instructions. The concrete barrier surface is to be clean and dry prior to reflector installation.

10.2.3 Raised Pavement Markings

Raised pavement markings shall be plowable type as listed on MOT's Recognized Product List. RPMs are to be placed in a slot in the pavement and will securely be attached to the pavement to prevent damage by snowplows.

10.3 Materials

All standard signs, new and replacement, shall meet MOT Specifications for Standard Highway Sign Materials, Fabrication and Supply, which can be found on MOT's web page at:

http://www.th.gov.bc.ca/publications/eng_publications/geometsigns.htm

11. Landscape and Site Restoration

All work shall be in accordance with MOT's standard specifications and the intent of the MADP and the CSD Guidelines.

11.1 Planting

Planting will be consistent with the following guidelines:

- Protect as much existing vegetation as possible.
- In community premium and urban premium areas, provide a minimum of 150 mm growing medium in all grassed areas that are to be maintained.
- For steep fill slopes on the downhill side that are not rock and not in sensitive areas, apply hydroseed only. Steep fill slopes in sensitive areas shall receive additional planting.
- Planting strips provided at the base of concrete retaining walls shall be planted with native conifer trees for screening.
- In planting beds (shrubs or ground cover), apply minimum 300 mm growing medium.
- In areas to be naturalized, apply minimum 300 mm growing medium. Naturalize all locations adjacent to creeks or other environmentally sensitive areas.
- In rural areas, use true native plants only, mulch rings around plants only, i.e., no mulched beds.
- In community premium and urban areas, mulch all planting beds.
- Minimum size for ground cover (use in urban premium only) – #1 pot.
- Minimum size for small shrubs (under 0.5 m at maturity) – #2 pot.
- Minimum size for large shrubs (over 0.5 m at maturity) – #5 pot.
- Minimum size for deciduous street trees in community premium and urban premium – 7 cm caliper.
- Minimum size for conifer screening trees – 1 m height.
- For rock cuts in community premium and urban premium, apply sedum, penstemon and aubretia seed to face so that it lands on ledges.

- Hydroseed all disturbed areas not identified for other landscape treatment, with the South Coast Region 1 grass seed mix and amendments specified in the Standard Specifications.
- Add perennial lupine seed to hydroseeding mix on uphill and downhill slopes that are in visible locations and larger than 200 m² in size.
- Review hydroseed slopes every month during the growing season after application of hydroseed. Repair any eroded areas, and reapply hydroseed until minimum 95% cover is obtained on any slope.

12. BC Rail Lands and Rail Bed Assets

1. The Province has concluded the “Term Sheet – Highway 99 Provisions” and the “Term Sheet – General Access Provisions” with BC Rail Partnership, and anticipates entering into access agreements, and having granted for its benefit statutory rights of way and other permits and other authorizations for access to and use and occupation of the rail lands and rail bed assets, the Concessionaire will abide by, comply with and perform and cause to be abided by, complied with and performed by its agents, contracts, and subcontractors of any tier and employees of any of them, such Term Sheets, agreements, permits and authorizations including materials, documents, information and data in respect of same contained in the Data Room.
2. Subject to paragraph 3 below, the Concessionaire will take all reasonable steps to ensure that neither it nor its agents, contractors and subcontractors of any tier and employees of any of them,
 - a) adversely affect the operations of BC Rail Partnership, BC Rail, and the condition of the rail lands and rail bed,
 - b) interfere with the safe and efficient rail operations.
3. If the Concessionaire undertakes or causes to be undertaken work on the rail lands or rail bed assets, then the Concessionaire will and will ensure that its agents, contractors and subcontractors of any tier and employees of any of them will, to the least extent possible, adversely affect the operations of BC Rail Partnership, BC Rail, the condition of the rail lands and rail bed and will, to the least extent possible, interfere with efficient rail operations.
4. On completion of any and all Works, the Concessionaire will return all impacted rail lands and rail bed assets to the same condition, reasonable wear and tear excepted, as existed prior to such works.
5. Any and all work by or on behalf of the Concessionaire shall be done in accordance with Good Industry Practice, in conformity with all Laws and Regulations so as not to unreasonably interfere with the safe and efficient operations of BC Rail or BC Rail Partnership. Any work directly affecting the rail lands or rail bed assets must be completed in accordance with the BC Rail Partnership standards and must not adversely affect the operating characteristics of the rail lands or the rail bed assets.

6. BC Rail Partnership may in its discretion and, at the cost and expense of the Concessionaire, place watchmen, flagmen, inspectors or supervisors for the protection of rail operations or the property of BC Rail Partnership or of others.

Annex 2 to Part 1 of Schedule 5**Definitions and Abbreviations**

“**AADT**” means average daily traffic.

“**AAR**” means alkali aggregate reactive.

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

“**AG**” means acid generating.

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

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

“**ARD/ML**” means acid rock drainage and metals leaching.

“**Audit Team**” means the team of suitably qualified persons assigned to carry out the Road Safety Audit.

“**BU12**” has the meaning given in TAC.

“**CIE Chromaticity**” means the quality of colour regarded independently of brightness as determined by the International Commission on Illumination (Commission Internationale del'Eclairage).

“**CMS**” means changeable message sign.

“**concrete median barrier**” or “**CMB**” means concrete median barrier.

“**CRB**” means concrete roadside barrier.

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

“**CSD**” means context sensitive design.

“**CSD Guidelines**” means *Design Guidelines for the Highway 99 Sea-to-Sky Parkway Corridor: Context Sensitive Design Engineering Practices* as published in November 2002, a copy of which is in the Data Room.

“**DB2 Contractor**” means the party who has entered into a contract with the Ministry to design and build the highway section from Sunset Beach to Lions Bay (Kelvin Grove).

“**Design Life**” has the meaning given to that term in CSA S6-00.

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

“**DIDS**” means the provincial digital information display system.

“**DSD**” means decision sight distance.

“**EAO**” means the Environmental Assessment Office.

“**FOS**” means factor of safety.

“**Highway Right-of-Way**” means the lands which MOT has the right to occupy either by way of ownership, license or Statutory Right-of-Way.

“**highway section**” means any of Highway Sections DB1 through DB13 of the Concession Highway.

“**Highway Section DB1**” means that portion of the Concession Highway from Horseshoe Bay to Sunset Beach.

“**Highway Section DB2**” means that portion of the Concession Highway from Sunset Beach to Lions Bay.

“**Highway Section DB3**” means that portion of the Concession Highway from Lions Bay to “M” Creek.

“**Highway Section DB4**” means that portion of the Concession Highway from “M” Creek to Porteau Cove.

“**Highway Section DB5**” means that portion of the Concession Highway from Porteau Cove to Minaty Bay.

“**Highway Section DB6**” means that portion of the Concession Highway from Minaty Bay to Murrin Park.

“**Highway Section DB7**” means that portion of the Concession Highway from Murrin Park to South Stawamus.

“**Highway Section DB8**” means that portion of the Concession Highway from South Stawamus to Depot Road.

“**Highway Section DB9**” means that portion of the Concession Highway from Depot Road to Culliton Creek.

“**Highway Section DB10**” means that portion of the Concession Highway from Culliton Creek to Cheakamus Canyon South.

“**Highway Section DB11**” means that portion of the Concession Highway from Cheakamus Canyon South to Cheakamus Canyon North.

“**Highway Section DB12**” means that portion of the Concession Highway from Cheakamus Canyon North to Rubble Creek Landslide Hazard Area.

“**Highway Section DB13**” means that portion of the Concession Highway from Rubble Creek Landslide Hazard Area to Function Junction.

“**Landscape Architect**” means a person who is a member in good standing of the British Columbia Society of Landscape Architects and entitled to use the designation “Landscape Architect”.

“**MADP**” means Manual of Aesthetic Design Practices, BC Ministry of Transportation.

“**Materials Management Plan**” means the Concessionaire’s plan describing the schedule, generic and site specific procedures and best management practices for the handling, use, storage and disposal of excavated rock, excavated unsuitable construction materials and organic materials.

“**MOT Electrical Operations Manager**” means the person so delegated by the Ministry.

“**MSE**” mechanically stabilized earth.

“**Open Graded Friction Course**” or “**OGFC**” or “**Open Graded Asphalt**” or “**OGA**” means asphalt pavement which feature an open aggregate structure in which larger sized aggregate is bound together by asphalt cement.

“**PA**” means preliminary alignment.

“**PAG**” means potentially acid generating.

“**PHCC**” means the Provincial Highway Communications Centre.

“**Potentially Acid Generating/Metal Leaching Materials and Acid Rock Drainage Adaptive Management Plan**” or “**PAG/MLMARDMP**” has the meaning given to it in Section 3.2.

“**Professional Engineer**” means a person who is registered as a professional engineer with the Association of Professional Engineers and Geoscientists of British Columbia.

“**Record Documents**” means all documents of any kind which record the as-built features of the Concession Highway.

“**Record Drawings**” means drawings which record the as-built features of the Concession Highway.

“**Road Features Inventory**” means a component of the Provincial Road Inventory and Maintenance System (RIMS) described in the Data Room.

“**Road Safety Audit**” or “**RSA**” is a formal and independent safety performance review of a road transportation project by an experienced team of safety specialists, addressing the safety of all road users.

“**Rock Slope Engineer**” means an engineer with a B.A. Sc. in Geological or Geotechnical Engineering who is registered as a professional engineer with the Association of Professional Engineers and Geoscientists of British Columbia, and has a minimum of five years of engineering experience with rock slope hazard assessment, design and stabilization, and blast design.

“**RPM**” means reflectorized pavement markings as used in context.

“**RPMs**” means raised pavement markings as used in context.

“**Rural Arterial Divided**” has the meaning as given in TAC Geometric Design Guide, Chapter 1.3.

“**Rural Arterial Undivided**” has the meaning as given in TAC Geometric Design Guide, Chapter 1.3.

“**Sea-to-Sky Highway Improvement Project**” means the project described at www.seatoskyimprovements.ca.

“**SSD**” means stopping sight distance as defined in TAC Geometric Design Guide.

“**Sta.**” means Station as a measure, in metres, from a given starting point, as referenced on the Construction Drawings.

“**Standard Specifications**” or “**SS**” means Standard Specifications for Highway Construction as issued by MOT.

“**TAC**” means *Geometric Design Guide for Canadian Roads* as issued by the Transportation Association of Canada.

“**TCH**” means the Trans Canada Highway.

“**TFE**” means tetrafluorethylene.

“**Urban Arterial Divided**” has the meaning given to it in TAC Geometric Design Guide, Chapter 1.3.

“**WB15**” has the meaning given in TAC.

“**WB20**” has the meaning given in TAC.

“**Working Stress Design**” has the meaning given in CAN/CSA-C6-00, *Canadian Highway Bridge Design Code*.

Annex 3 to Part 1 of Schedule 5

Reference Documents*Highway*

Document Name	Short Form
Ministry of Transportation	
<i>BC Supplement to TAC Geometric Design Guide, 2001.</i>	BC Supplement to TAC
<i>Manual of Standard Specifications for Highway Construction, 2004.</i>	Standard Specifications (SS)
MOT, <i>Shoulder Rumble Strip</i> , Technical Bulletin No. DS04001, April 22, 2004. Attachment to <i>TC-06-04 Shoulder Rumble Strips</i> .	MOT Technical Circular
<i>Seismic Design and Rehabilitation Criteria</i> , Technical Circular T-2/92, February 14, 1992, and the amendment dated March 11, 1994.	Technical Circular T-2/92
Miscellaneous	
<i>Sea-to-Sky Corridor Improvements, Traffic Volume Analysis Summary</i> , July 2003 (Draft), SNC-Lavalin Inc.	Traffic Volume Analysis Summary
<i>Conceptual Alignments Evaluation Report (Draft), Sea to Sky Corridor Improvements</i> , December 2002, SNC-Lavalin Inc.	Conceptual Alignments Evaluation Report
<i>Geometric Design Guide for Canadian Roads</i> , Transportation Association of Canada, 1999.	TAC Geometric Design Guide

Structural

Document Name	Short Form
Ministry of Transportation	
<i>Seismic Design Requirements for New Bridges in British Columbia, Bridge Engineering Design Memorandum</i> , Nov. 17, 1995	Seismic Design Requirements for New Bridges
<i>Manual of Aesthetic Design Practice, BC Ministry of Transportation and Highways, Highway Engineering Branch, 1991</i>	Manual of Aesthetic Design Practice
<i>Recognized Products List, BC Ministry of Transportation</i> , April 2004.	Recognized Products List
<i>Electrical and Traffic Engineering Manual – Guidelines for the Design of Lighting, Signal and Sign Installations, 2003</i>	Guidelines for the Design of Lighting, Signal and Sign Installations
<i>Manual of Standard Specifications for Highway Construction, 2004.</i>	Standard Specifications (SS)
<i>BCH Test 1-17, Geotechnical and Materials Branch Manual of Testing Procedures - Soils and Mineral Aggregates.</i>	BCH Test 1-17
<i>Manual of Bridge Standards and Procedures, BC Ministry of Transportation, 1996.</i>	Bridge Standards and Procedures
<i>Utility Policy Manual</i> , March 1995	Utility Policy Manual
<i>Seismic Retrofit Design Criteria</i> , July 2000	Seismic Retrofit Design Criteria

Document Name	Short Form
Canadian Standards Association	
CAN/CSA-A23.1-00/A23.2-00, <i>Concrete Materials and Methods of Concrete Construction/Methods of Test for Concrete</i>	CAN/CSA-A23.1-00/A23.2-00
CAN/CSA-B95-1962 (R2002), <i>Surface Texture (Roughness, Waviness and Lay)</i>	CAN/CSA-B95-1962 (R2002)
CAN/CSA-G30.18-M92 (R2002), <i>Billet-Steel Bars for Concrete Reinforcement</i>	CAN/CSA-G30.18-M92 (R2002)
CAN/CSA-G40.20/G40.21-98 (R2003), <i>General Requirements for Rolled or Welded Structural Quality Steel/Structural Quality Steel</i>	CAN/CSA-G40.20/G40.21-98 (R2003)
CAN/CSA-G164-M92 (R1998), <i>Hot Dip Galvanizing of Irregularly Shaped Articles</i>	CAN/CSA-G164-M92 (R1998)
CAN/CSA-S6-00, <i>Canadian Highway Bridge Design Code</i>	CAN/CSA-S6-00
CAN/CSA-S269.1-1975 (R1998), <i>Falsework for Construction Purposes</i>	CAN/CSA-S269.1-1975 (R1998)
CAN/CSA-S269.3-M92 (R2003), <i>Concrete Formwork</i>	CAN/CSA-S269.3-M92 (R2003)
CAN/CSA-W47.1-03, <i>Certification of Companies for Fusion Welding of Steel</i>	CAN/CSA-W47.1-03
CAN/CSA W59-03, <i>Welded Steel Construction (Metal Arc Welding)</i>	CAN/CSA W59-03
CAN/CSA-W186-M1990 (R1998), <i>Welding of Reinforcing Bars in Reinforced Concrete Construction</i>	CAN/CSA-W186-M1990 (R1998)
American Society of Testing Materials	
ASTM A167-99, <i>Standard Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip</i>	ASTM A167-99
ASTM A252-98 (2002), <i>Standard Specification for Welded and Seamless Steel Pipe Piles</i>	ASTM A252-98 (2002)
ASTM A767/A767M-00b, <i>Standard Specification for Zinc-Coated (Galvanized) Steel Bars for Concrete Reinforcement</i>	ASTM A767/A767M-00b
ASTM A775/A775M-01, <i>Standard Specification for Epoxy-Coated Reinforcing Steel Bars</i>	ASTM A775/A775M-01
ASTM C881/C881M-02, <i>Standard Specification for Epoxy-Resin-Base Bonding Systems for Concrete</i>	ASTM C881/C881M-02
ASTM D395-03, <i>Standard Test Methods for Rubber Property-Compression Set</i>	ASTM D395-03
ASTM D412-98a (2002), <i>e1 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension</i>	ASTM D412-98a (2002)
ASTM D2240-03, <i>Standard Test Method for Rubber Property-Durometer Hardness</i>	ASTM D2240-03
ASTM D1621, <i>Standard Test Method for Compressive Properties of Rigid Cellular Plastics</i>	ASTM D1621-04
ASTM D3963/D3963M-01, <i>Standard Specification for Fabrication and Jobsite Handling of Epoxy-Coated Steel Reinforcing Bars</i>	ASTM D3963/D3963M-01
ASTM G189-1966 (R1998), <i>Sprayed Metal Coatings for Atmospheric Corrosion Protection</i>	ASTM G189-1966 (R1998)

Document Name	Short Form
Federal Highway Administration	
<i>Uncoated Weathering Steel In Structures</i> , FHWA Technical Advisory T 5140.22/Technical Bulletin TB-307, 1990	FHWA T 5140.22 TB-307
<i>Mechanically Stabilized Earth Walls and Reinforced Soil Slopes, Design and Construction Guidelines</i> , in V. Elias and B.R. Christopher (eds). <i>Federal Highway Administration (FHWA) Demonstration Project 82</i> Publication No. FHWA-NHI-00-043, 1996.	FHWA-NHI-00-043
<i>Guidelines for Design, Specification, and Contracting of Geosynthetic Mechanically Stabilized Earth Slopes on Firm Foundations</i> , Publication No. FHWA-SA-93-025, January 1993	FHWA-SA-93-025
<i>Hydraulic Engineering Circular HEC No. 18, Evaluating Scour at Bridges</i> , Publication No. FHWA NH 01-001, Nov. 1995.	FHWA NH 01-001
Miscellaneous	
<i>Design Procedures for Buried Flexible Metal Culvert Structures</i> , Dr. Peter Byrne, UBC, 1990.	Design Procedures for Buried Flexible Metal Culvert Structures
<i>AASHTO Standard Specifications for Highway Bridges</i> , 17th Edition, 2002.	AASHTO Standard Specifications for Highway Bridges, 17 th Edition.
<i>Bethlehem Technical Bulletin</i> , TB-307 (www.bethsteel.com)	TB-307
<i>Railway Safety Act</i> , Transport Canada, 1985.	Railway Safety Act
<i>Canada Transportation Act</i> , 1996	Transportation Act
<i>ATC-6 Seismic Design Guidelines for Highway Bridges</i> , Applied Technology Council/ Federal Highway Administration, 1981.	ATC-6
<i>Occupational Health and Safety Regulation</i> , Workers Compensation Board, April 1998 (updated to 2004).	WCB Occupational Health and Safety Regulations
Kim J.H., Shim C.S., Matsui S., and Chang S.P., <i>The Effect of Bedding Layer on the Strength of Shear Connection in Full-Depth Precast Deck</i> , Engineering Journal, Third Quarter, 2002, pp 127-135 (www.aisc.org).	The Effect of Bedding Layer on the Strength of Shear Connection in Full-Depth Precast Deck
Oehlers D.J., Seracino R., and Yeo M.F., <i>Fatigue Behaviour of Composite Steel and Concrete Beams with Stud Shear Connections</i> , Prog. Struct. Engng, Mater., Vol 2, 2000, pp 187-195 (www3.interscience.wiley.com/cgi-bin/abstract/72515762/ABSTRACT)	Fatigue Behaviour of Composite Steel and Concrete Beams with Stud Shear Connections
<i>Design Manual for Roads and Bridges, The Design of Integral Bridges</i> , BA 42/96 (including Amendment No.1), May 2003, The Highways Agency et al, UK, ISBN 115524606	Design Manual for Roads and Bridges, BA 42/96

Geotechnical

Document Name	Short Form
Ministry of Transportation	
<i>Seismic Design and Rehabilitation Criteria</i> , Technical Circular T-2/92, February 14, 1992, and the amendment dated March 11, 1994.	Technical Circular T-2/92
<i>Seismic Design Requirements for New Bridges in British Columbia, Bridge Engineering Design Memorandum</i> , Nov. 17, 1995	Seismic Design Requirements for New Bridges
<i>Foundation Design</i> , Technical Circular T-10/99, August 31, 1999.	Technical Circular T-10/99
<i>Rock Slope Design</i> , Technical Bulletin GM02001, September 17, 2002.	Technical Bulletin GM02001
<i>Manual of Standard Specifications for Highway Construction</i> , 2004.	Standard Specifications (SS)
<i>Proceedings of the National Centre for Earthquake Engineering Workshop on Evaluation of Liquefaction Resistance of Soils</i> January 5-6, 1996.	Proceedings of NCEE Workshop on Evaluation of Liquefaction Resistance of Soils
<i>Recognized Products List, BC Ministry of Transportation</i> , April 2004.	Recognized Products List
Federal Highway Administration	
<i>Design Guidance: Geotechnical Earthquake Engineering for Highways</i> , E Kavazanjian – Vols. I and II, Geotechnical Engineering Circular No. 3 – Publication No. FHWA-SA-97-076, May 1997.	FHWA-SA-97-076
<i>Mechanically stabilized earth walls and reinforced soil slopes design and construction guidelines: FHWA demonstration project 82, reinforced soil structures MSEW and RSS</i> , Victor Elias, P.E. Barry and R. Christopher – Publication No. FHWA-SA-96-071, Aug. 1997.	FHWA-SA-96-071
<i>Rockfall Catchment Area Design Guide</i> , Federal Highway Administration Final Report SPR-3 (032), L.A. Pierson et al, Dec. 2001.	Rockfall Catchment Area Design Guide
<i>Rock Slopes: Design, Excavation, Stabilization</i> , Evert Hoek and John Bray, FHWA and Golder Associates 1989.	Rock Slopes: Design, Excavation, Stabilization
<i>Durability/Corrosion of Soil Reinforced Structures</i> , Victor Elias, Publication No. FHWA-RD-89-186 December 1990.	FHWA-RD-89-186
FHWA Report, <i>Rockfall Hazard Rating System Implementation Manual</i> , OR-EG-90-01.	FHWA-OR-EG-90-01
National Cooperative Highway Research Program (NCHRP) Report 350, <i>Recommended Procedures for the Safety Performance Evaluation of Highway Features</i> , FHWA. (gulliver.trb.org/publications/nchrp/nchrp_rpt_350-a.pdf)	Recommended Procedures for the Safety Performance Evaluation of Highway Features
<i>The Nature of Rockfall as the Basis for a New Catchment Area Design Criteria for 0.25 H: 1 V Slopes</i> , Pierson et al., Report No. FHWA-OR-GT-95-05, 1994.	FHWA-OR-GT-95-05

Document Name	Short Form
Miscellaneous	
AASHTO <i>Standard Specifications for Highway Bridges</i> , 17 th Edition, 2002.	AASHTO Standard Specifications for Highway Bridges, 17 th Edition
<i>National Building Code of Canada, 1995</i>	NBCC
<i>British Columbia Building Code, 1992</i>	BCBC
<i>Evaluation of the Tensar Mesa Retaining Wall System</i> , HITEC-CERF Report No. 40358, April 2000.	HITEC-CERF Report No. 40358
<i>In-Situ Soil Improvement Techniques</i> , Task Force 27 Report, AASHTO-AGC-ARTBA, 1990.	In-Situ Soil Improvement Techniques
<i>Proceedings of the National Centre for Earthquake Engineering Workshop on Evaluation of Liquefaction Resistance of Soils</i> , January 5-6, 1996.	Proceedings of the National Centre for Earthquake Engineering Workshop on Evaluation of Liquefaction Resistance of Soils
<i>SP-2 Superpave Mix Design</i> , Asphalt Institute Superpave Series Publication	SP-2 Superpave Mix Design
<i>Report on rock fall containment for rock cuts Highway 99 – Horseshoe Bay to Whistler</i> , Wyllie & Norrish Rock Engineers Ltd., Sept. 2002.	Report on rock fall containment for rock cuts Highway 99 – Horseshoe Bay to Whistler
<i>Evaluation of Rockfall and its Catchment</i> , Ritchie 1963.	Evaluation of Rockfall and its Catchment
<i>Reliability and Seismic Deformation Analysis for Proposed MSE Walls on Rockfill Slopes, Test Section, Section 2, Sea to Sky Highway Project</i> , Golder Associates report to the MoT, October 1, 2003.	Reliability and Seismic Deformation Analysis for Proposed MSE Walls on Rockfill Slopes, Test Section, Section 2, Sea to Sky Highway Project
<i>Detailed ARD Characterization of Section 2 Andesites – Environmental Assessment of Bedrock Excavation, Re-use and Disposal, Sea to Sky Parkway Horseshoe Bay to Squamish</i> , Golder Associates report to the MoT, June 27, 2003.	Detailed ARD Characterization of Section 2 Andesites – Environmental Assessment of Bedrock Excavation, Re-Use and Disposal, Sea to Sky Parkway Horseshoe Bay to Squamish

Traffic Management

Document Name	Short Form
Ministry of Transportation	
<i>Traffic Control Manual for Work on Roadways, Revised and Consolidated, 1999.</i>	Traffic Control Manual
<i>Traffic Management Guidelines for Work on Roadways, Sept. 2001.</i>	Traffic Management Guidelines
<i>Manual of Standard Traffic Signs and Pavement Markings, Sept. 2000.</i>	Manual of Standard Traffic Signs and Pavement Markings

Document Name	Short Form
Miscellaneous	
<i>Geometric Design Guide for Canadian Roads</i> , Transportation Association of Canada, 1999.	TAC Geometric Design Guide
<i>Recommended Procedures for the Safety Performance Evaluation of Highway Features</i> , National Cooperative Highway Research Program, NCHRP 350.	NCHRP 350, Recommended Procedures for the Safety Performance Evaluation of Highway Features

Drainage

Document Name	Short Form
Ministry of Transportation	
<i>BC Supplement to TAC Geometric Design Guide</i> , 2001.	BC Supplement to TAC
Miscellaneous	
<i>Coastal runoff formulae</i> derived by Quick and Loukas at UBC (1996)	Coastal runoff formulae
Loukas, A. and Quick, M.C. 1996. "Spatial and temporal distribution of storm precipitation in southwestern British Columbia". <i>Journal of Hydrology</i> . 174. 37-56.	

Pavement Design Codes

Document Name	Short Form
Ministry of Transportation	
<i>Manual of Transportation Standard Specifications for Highway Construction</i> , 2004.	Standard Specifications (SS)
<i>Recognized Products List</i> , BC Ministry of Transportation, April 2004.	Recognized Products List
<i>Draft Pavement Structure Design Guidelines</i> , Technical Circular T-01/04, January 2004.	Technical Circular T-01/04
<i>Pavement Surface Condition Rating Manual</i> , July 1999.	Pavement Surface Condition Rating Manual
<i>Resurfacing Program, Roadway Pavement Management System Pavement Condition Data Primer</i> , Feb. 2000.	Roadway Pavement Management System Pavement Condition Data Primer
Miscellaneous	
<i>Pavement Design and Management Guide</i> , Transportation Association of Canada (TAC), 1997.	TAC Pavement Design and Management Guide
<i>Guide for Design of Pavement Structures</i> , AASHTO, 1993.	AASHTO Guide for Design of Pavement Structures

Document Name	Short Form
<i>Guidelines for Conducting and Calibrating Road Roughness Measurements</i> , M.W. Sayers, T.D. Gillespie and W.D.O. Paterson, World Bank Technical Paper Number 46, 1986.	Guidelines for Conducting and Calibrating Road Roughness Measurements
<i>Asphalt Handbook</i> , Asphalt Institute, 1989.	Asphalt Handbook

Electrical

Document Name	Short Form
Ministry of Transportation	
<i>Electrical and Traffic Engineering Manual – Guidelines for the Design of Lighting, Signal and Sign Installations</i> , 2003.	Lighting, Signal and Sign Guidelines
<i>Manual of Standard Specifications for Highway Construction</i> , 2004.	Standard Specifications (SS)
<i>Technical Bulletins</i> , Highway Engineering Branch, Traffic Section (Electrical).	Ministry Technical Bulletins
<i>Draft Electrical and Signing Material Standards Manual</i> , 2003.	Electrical and Signing Material Standards Manual
<i>Recognized Products List</i> , BC Ministry of Transportation, April 2004.	Recognized Products List
Miscellaneous	
<i>Illumination of Isolated Rural Intersections</i> , Transportation Association of Canada (TAC), February 2001.	Illumination of Isolated Rural Intersections

Signs and Pavement Markings

Document Name	Short Form
Ministry of Transportation	
<i>Electrical and Traffic Engineering Manual – Guidelines for the Design of Lighting, Signal and Sign Installations</i> , 2003.	Lighting, Signal and Sign Guidelines
<i>Pedestrian Crossing Control Manual for British Columbia, Second Edition</i> , April 1994.	Pedestrian Crossing Control Manual
<i>Manual of Standard Traffic Signs and Pavement Markings</i> , Sept. 2000.	Manual of Standard Traffic Signs and Pavement Markings
<i>Traffic Control Manual for Work on Roadways, Revised and Consolidated</i> , 1999.	Traffic Control Manual
<i>Manual of Standard Specifications for Highway Construction</i> , 2004.	Standard Specifications (SS)
<i>Service and Attraction Sign Manual: A Directional Signing Program for Tourist Services, Facilities, and Attractions</i> , January 1995.	Service and Attraction Sign Manual
<i>Draft Electrical and Signing Material Standards Manual</i> , 2003.	Electrical and Signing Material Standards Manual

Document Name	Short Form
Miscellaneous	
<i>Highway Capacity Manual 2000</i> , Transportation Research Board (TRB), 2000.	Highway Capacity Manual 2000
<i>Manual of Uniform Traffic Control Devices for Canada</i> , Transportation Association of Canada (TAC), 1998 (Updated 2000 and 2002).	TAC Manual of Uniform Traffic Control Devices
 <i>Landscape</i>	
Document Name	Short Form
<i>Landscape Policy and Design Standards</i> , Ministry of Transportation, 1991.	Landscape Policy and Design Standards
<i>Manual of Aesthetic Design Practice, BC Ministry of Transportation and Highways, Highway Engineering Branch, 1991.</i>	Manual of Aesthetic Design Practice
<i>BC Landscape Standard, 6th Edition</i> , BC Landscape and Nursery Trades Association and the BC Society of Landscape Architects, 2001.	BC Landscape Standard
Standards for Landscape Irrigation Systems, Irrigation Industry Association of BC, March 1997 (www.irrigationbc.com).	Standards for Landscape Irrigation Systems

Miscellaneous

Document Name	Short Form
<i>Sea-to-Sky Survey Control Report</i> by McElhanney Consulting Services Ltd., November 2002.	Sea-to-Sky Survey Control Report
<i>Canadian Road Safety Audit Guide</i> (TAC, 2001) (www.TAC-ATC.com).	Canadian Road Safety Audit Guide
<i>Best Management Practices for Highway Maintenance Activities Manual</i> , Draft Ministry of Transportation document, July 2004.	Best Management Practices
<i>Project Scope Development Report (Draft), Sea to Sky Corridor Improvements</i> , November 2002, SNC-Lavalin Inc.	Project Scope Development Report
<i>Draft Traffic Operations and Projections – Highway 99 North Conceptual Design Study, Urban Squamish, Base Case</i> , Ward Consulting Group, December 2002. Attachment to <i>Highway 99N, Urban Squamish Conceptual Design Study, Options Development, and Evaluation Report</i> .	Draft Traffic Operations and Projections – Highway 99 North Conceptual Design Study
<i>Clarification Report, Horseshoe Bay to Sunset Beach</i> , April 2004	Clarification Report, Horseshoe Bay to Sunset Beach

SCHEDULE 5**CONSTRUCTION AND END OF TERM REQUIREMENTS****Part 2****Construction Requirements**

In addition to the specifications identified in Part 1 of Schedule 5 [Construction Output Specifications], the Concessionaire shall comply with the requirements identified in Annex 1 to this Part 2 of Schedule 5. For greater certainty, the terms of this Part 2 of Schedule 5 shall supplement and enhance the Concessionaire's obligations under Part 1 of Schedule 5 [Construction Output Specifications].

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Annex 1 to Part 2 of Schedule 5**PART A. INTRODUCTION****1. Interpretation**

Capitalized terms used herein not otherwise defined in Schedule 1 [Definitions and Interpretation] or Annex 2 to Part 1 of Schedule 5 [Construction Output Specifications], shall have the meaning given to such terms as set out in Annex 2 to this Part 2 of Schedule 5.

Unless otherwise indicated, copies of drawings referred to (and corresponding station references) in this Part 2 of Schedule 5 are attached in Annex 2 to Part 5 of Schedule 5 [Requirement Drawings].

PART B. DESIGN CRITERIA**1. Highway Design Criteria****1.1 Introduction**

The design of each highway section of the Concession Highway will be in accordance with the specific terms set out in Sections 1.2-1.9 of this Part B below.

For Stopping Sight Distance, the Concessionaire has adopted the provisions of the B.C. Supplement to TAC Geometric Design Guide Section 630.02 which permits a modified median treatment, represented by Figure 630.A therein. This provision provides some additional sight distance and allows the driver to swerve safely around an object that partially obstruct the inside lane.

For specified right-in/right-out intersections such as viewpoints, rest areas, pullouts and other accesses, where minimum design criteria are in effect, the Concessionaire shall adopt the provisions of MOT access standard Table K.1.

1.2 Highway Section DB1 – Horseshoe Bay to Sunset Beach**1.2.1 Highway Geometrics Information**

Table 1-1 below provides the highway geometrics design criteria for Highway Section DB1, being the Horseshoe Bay to Sunset Beach highway section of the Concession Highway.

The design will be in accordance with the Concessionaire's Drawing No. 41DD-DB01-0101 to 0111 Plan, 41DD-DB01-0201 to 0207 Profile, 41DD-DB01-0301 to 0302 Typical Sections & Details, 41DD-DB01-0403 to 0411 Geometrics and Laning and TMP-DB1-1 to 17 Suggested Detour Staging set out in Annex 2 to Part 5 of Schedule 5.

TABLE 1-1
Highway Geometrics Design Criteria for Highway Section DB1

Item	Design Criteria
Design Classification	RAD
Posted Speed	80 km/h
Design Speed	80 km/h
Basic Lanes	4
Minimum Radius	250 m
Min. K Factor Sag	32/23.2 ^{Note 1}
Min. K Factor Crest	36
Max. Grade	8.62% ^{Note 2}
Max. Superelevation	6%
Minimum S.S.D.	140 m ^{Note 3}
Minimum D.S.D.	230 m
Lane Width	3.5 m

TABLE 1-1
Highway Geometrics Design Criteria for Highway Section DB1

Item	Design Criteria
Shoulder Width Outside	1.5 m
Shoulder Width Inside	0.7 m
Clear Zone – offset width	5 m
Recovery Slope	4:1
Median Width	2.0 m
Median Barrier	yes
Catchment Width in Rock Cuts	3.0 to 5.0
Design Vehicle	WB 20

Notes:

1. Min. K Factor Sag

With illumination the K-Factor Sag at stations 100+266 and 103+504 exceed the TAC 80 km/h design domain (K 12-16) rate of vertical curvature for comfort control.

2. Max. Grade

There are two occurrences where the maximum grade criteria are exceeded, EVC/BVC station 100+071 at 7.98% and for 25 m at 103+368 to 103+394 at 8.62%. The length is less than the 500 m allowed for short grades up to 9%.

3. Minimum SSD and DSD

The minimum stopping sight distance and minimum decision sight distance provided in the table are based on the vertical alignment. However, the horizontal alignment restricts stopping sight distances to less than desirable minimums because of the use of concrete roadside and median barriers. Where concrete roadside and median barriers are present, the outside and inside shoulders shall be widened on the inside of curves (measured between the fog line and the face of concrete barrier), to provide additional sight distance at barrier locations in accordance with MOT Supplement to TAC, Section 630. Where concrete roadside barriers are not present, the horizontal SSD and DSD may be reduced as a function of minimum rock catchment widths.

1.2.2 Pullouts and Bus Stops

The Concessionaire shall provide three roadside parking areas and two bus stops at the following locations:

- Trailhead Parking for Baden-Powell Trail Sta. 99+700, with parking capacity for 10 cars;
- Small base-level Horseshoe Bay viewpoint that can accommodate 10 cars at Sta. 101+450;

- Large Enhanced-level viewpoint that can support 11 cars and two buses at Sta. 102+850;
- Northbound and Southbound bus stop at Pasco Road.

1.3 Highway Section DB3

1.3.1 Urban Lions Bay; Kelvin Grove to Brunswick Pit

1.3.1.1 Highway Geometrics Information

Table 1-2 provides the highway geometrics design criteria for the urban portion of Highway Section DB3, being the urban Lions Bay; Kelvin Grove to Brunswick Pit highway section of the Concession Highway.

The design will be in accordance with the Concessionaire's Drawing No. 41DD-DB03-0002 Supplementary Legend, 41DD-DB03-0101 to 0105 Plans, 41DD-DB03-0201 to 0206 Profile, 41DD-DB03-0301 to 0302 Typical Sections & Details, 41DD-DB03-0401 to 0405 Geometrics and Laning and 41DD-DB03-0601 to 0603 Interchanges set out in Annex 2 to Part 5 of Schedule 5.

TABLE 1-2
Highway Geometrics Design Criteria for Highway Section DB3 (Urban Lions Bay)

Item	Design Criteria
Design Classification	Urban Arterial Divided
Posted Speed	60 km/h ^{Note 1}
Design Speed	60 km/h
Basic Lanes	4
Minimum Radius	160 m
Min. K Factor Sag	35.1
Min. K Factor Crest	42.1
Max. Grade	5%
Max. Superelevation	5.9% ^{Note 2}
Minimum S.S.D.	145 ^{Note 3}
Minimum D.S.D.	155 ^{Note 3}
Lane Width	3.5 m
Shoulder Width Outside	1.5 m ^{Note 4}
Shoulder Width Inside	0.7 m
Clear Zone – Offset Width	5 m
Recovery Slope	4:1
Median Width	2.0 m ^{Note 5}
Median Barrier	yes ^{Note 6}
Catchment Width in Rock Cuts	3.0 to 5.0 m
Design Vehicle	WB 20 ^{Note 7}

Notes:

1. Posted Speed

The posted speed will be determined in consultation with the community during detailed design. In the interim, a posted speed of 60 km/h will be used.

2. Maximum Super-elevation

The existing super-elevation (Max. 6.8%) on Harvey Creek bridge will be maintained.

3. Minimum Stopping and Decision Sight Distance

The minimum stopping sight distance and minimum decision sight distance provided in the table are based on the vertical alignment. The Decision Sight Distance southbound at Alberta Creek bridge is reduced to 155 m, with an object height suitable for washout conditions.

However, the horizontal alignment restricts these sight distances (to approximately 66 m) because of the use of shoulder and median concrete barriers. The outside shoulder shall be widened to 1.9 m, and the median shoulder also widened to 1.9 m to provide additional sight distance at barrier locations, in accordance with MOT Supplement to TAC Geometric Design Guide Section 630.

4. Shoulder Width

Where combined curb and gutter is used, from Station 110+640 to 112+100, a 1.5 m wide bike lane will be provided between the lane edge and the edge of gutter. Rumble strips will not be used through this urban section of roadway.

5. Median Width

A 2 m raised median from lane edge to lane edge, is used from Sta. 110+640 to 112+100. A 2 m (minimum) median, with a median barrier is used in the remainder of this section of Highway Section DB3. The majority of the median is 3.2 m wide, which provides some additional sight distance, in accordance with MOT supplement to TAC Geometric Design Guide Section 630.

6. Median Barrier

A raised median is used from Sta. 110+640 to 112+100. A median barrier is used in the remainder of this section of Highway Section DB3.

7. Design Vehicle

A B-12 design vehicle shall be used at the Kelvin Grove interchange. At some intersection locations it is not possible to provide the required radius for a B-12 vehicle. All other movements on Highway 99 have been designed for a WB 20 design vehicle.

1.3.1.2 *Pullouts and Bus Stops*

One police enforcement area is provided in the southbound lanes, south of the Brunswick Beach interchange, based on the requirements for a Canada Post pullout. This location will also serve as a bus stop.

A suitable site for a northbound police enforcement area will be identified during detailed design.

One northbound bus stop is provided north of the Brunswick Beach interchange. Final considerations for bus stops will be determined during detailed design, in consultation with Transit authorities.

1.3.2 Rural Lions Bay; Brunswick Pit to “M” Creek

1.3.2.1 *Highway Geometrics Information*

Table 1-3 provides the highway geometrics design criteria for the rural portion of Highway Section DB3, being the rural Lions Bay; Brunswick Pit to “M” Creek highway section of the Concession Highway.

The design will be in accordance with the Concessionaire’s Drawing No. 41DD-DB03-0002 Supplementary Legend, 41DD-DB03-0101 to 0105 Plan, 41DD-DB03-0201 to 0206 Profile, 41DD-DB03-0301 to 0302 Typical Sections & Details, 41DD-DB03-0401 to 0405 Geometrics and Laning and 41DD-DB03-0601 to 0603 Interchanges.

TABLE 1-3
Highway Geometrics Design Criteria for Highway Section DB3

Item	Design Criteria
Design Classification	Rural Arterial Divided
Posted Speed	60 km/h ^{Note 1}
Design Speed	70 km/h ^{Note 2}
Basic Lanes	4 ^{Note 3}
Minimum Radius	200 m ^{Note 4}
Min. K Factor Sag	39.6
Min. K Factor Crest	66.7
Max. Grade	6%
Max. Superelevation	6%
Minimum S.S.D.	185 m ^{Note 5}
Minimum D.S.D.	340 m ^{Note 5}
Lane Width	3.5 m
Shoulder Width Outside	1.5 m
Shoulder Width Inside	0.7 m ^{Note 6}
Clear Zone – Offset Width	5 m
Recovery Slope	4:1
Median Width	2.0 m ^{Note 7}

TABLE 1-3
Highway Geometrics Design Criteria for Highway Section DB3

Item	Design Criteria
Median Barrier	yes ^{Note 8}
Catchment Width in Rock Cuts	3.0 to 5.0 m
Design Vehicle	WB 20 ^{Note 9}

Notes:

1. Posted Speed

The posted speed will be determined in consultation with the community during detailed design. In the interim, a posted speed of 60 km/h is assumed.

2. Design Speed

The Section of Highway Section DB3 from Brunswick Pit to M Creek (north of Sta. 113+000) is designed to 70 km/h.

3. Basic Lanes

Four basic lanes shall be maintained throughout this section.

4. Minimum Radius

As noted in part (c) above, the design speed in this section is 70 km/h, and as such the minimum radius is 200 m.

5. Minimum Stopping and Decision Sight Distance

The minimum stopping sight distance and minimum decision sight distance are based on the vertical alignment. The decision sight distance northbound at the Brunswick Beach interchange overpass bridge is 340 metres.

The horizontal alignment restricts these sight distances to approximately 74 metres because of the use of shoulder and median concrete barriers. The shoulder shall be widened to 1.9 m and the median shoulder also widened to 1.9 m to provide additional sight distance at barrier locations, in accordance with MOT Supplement to TAC Geometric Design Guide Section 630.

6. Shoulder Width Inside

The shoulder width inside is 0.70 m (minimum), since a 2 m (minimum) median is provided with a median barrier.

7. Median Width

A 2 m (minimum) median is provided throughout this section. The majority of the median is 3.2 m wide, which provides some additional sight distance, in accordance with MOT Supplement to TAC Geometric Design Guide Section 630.

8. Median Barrier

A concrete median barrier shall be provided throughout this highway section.

9. Design Vehicle

A BU-12 design vehicle was used at the Brunswick Beach interchange. All other movements on Highway 99 have been designed for a WB 20 design vehicle.

1.4 Highway Section DB4 – “M” Creek to Porteau Cove1.4.1 Highway Geometrics Information

Table 1-4 provides the highway geometrics design criteria for Highway Section DB4, being the “M” Creek to Porteau Cove highway section of the Concession Highway.

The design will be in accordance with the Concessionaire’s Technical Supplement Drawings No. 41DD-DB04-0002 Supplementary Legend, 41DD-DB04-0101 to 0114 Plans, 41DD-DB04-0201 to 0208 Profile, 41DD-DB04-0301 to 0302 Typical Sections & Details and 41DD-DB04-0401 to 0414 Geometrics and Laning set out in Annex 2 to Part 5 of Schedule 5.

TABLE 1-4
Highway Geometrics Design Criteria for Highway Section DB4

Item	Design Criteria
Design Classification	Rural Arterial Divided ^{Note 1}
Posted Speed	50 to 80 km/h ^{Note 2}
Design Speed	50 to 80 km/h ^{Note 3}
Basic Lanes	2 to 4 ^{Note 4}
Minimum Radius	90 m ^{Note 5}
Min. K Factor Sag	20 ^{Note 6}
Min. K Factor Crest	21
Max. Grade	7%
Max. Superelevation	6%
Minimum S.S.D.	106 m ^{Note 7}
Minimum D.S.D.	63 m ^{Note 7}
Lane Width	3.5 m
Shoulder Width Outside	1.5 m to 2.65 m ^{Note 8}
Shoulder Width Inside	0.0 m to 1.9 m ^{Note 9}
Clear Zone – Offset Width	5.0 m (min) ^{Note 10}
Recovery Slope	4:1 ^{Note 11}
Median Width	0.4 m (min) ^{Note 12}
Median Barrier	varies ^{Note 13}
Catchment Width in Rock Cuts	2.75 m (min) ^{Note 14}
Design Vehicle	WB 20

Notes:

1. Design Classification

The two-lane sections of the road are undivided; the four-lane sections are divided.

2. Posted Speed

The posted speed will be 80 km/h with warning signs for horizontal curves with a lower design speed.

3. Design Speed

The design speed varies from 50 to 80 km/h. Two horizontal curves have a design speed of 50 km/h, 13 curves have a design speed of 60 km/h, 5 curves have a design speed of 70 km/h, and 23 curves have a design speed of 80 km/h. The design speed of the vertical alignment also varies between 60 and 80 km/h.

4. Basic Lanes

About 60% of Highway Section DB4 shall have four basic lanes; the remainder of the highway section shall have two basic lanes.

5. Minimum Radius

The minimum radius shall be 90 m, which is adequate for a 50 km/h design speed.

6. Minimum K Factor Crest

There are two vertical curves with a crest K of 21. This value is suitable for a design speed of approximately 65 km/h. These vertical curves are located adjacent to an area where the horizontal alignment shall have a design speed of 60 km/h.

7. Minimum Stopping and Decision Sight Distance

The minimum stopping sight distance and minimum decision sight distance provided in the table are based on the vertical alignment. The decision sight distance southbound at Deeks Creek bridge is reduced to 63 m, with an object height suitable for washout conditions.

However, the horizontal alignment restricts these sight distances to approximately 56 m because of the use of roadside concrete barriers. In the four-lane sections, the outside and median shoulder shall be widened to 1.9 m to provide additional sight distance at barrier locations (where required), in accordance with MOT Supplement to TAC Geometric Design Guide Section 630.

8. Shoulder Width Outside

The shoulder width outside shall be 2.65 m, in the two-lane sections. In the four-lane sections the outside shoulder width is 1.5 m. Rumble strips will be used on all the outside shoulders.

9. Shoulder Width Inside

On the four-lane sections the inside shoulder width shall be a minimum of 0.70 m where there is a 2.0 m median. The inside shoulder shall be widened as required to provide additional sight distance, as described above in Note 7. On the two-lane sections there is no median shoulder since it is an undivided highway.

10. Clear Zone – Offset Width

The four-lane sections shall have the minimum clear zone of 5.0 m. The two-lane sections shall have a clear zone of 5.65 m.

11. Recovery Slope

A recovery slope of 4:1 shall be provided, which is consistent with the section of highway to the south.

12. Median Width

A 0.40 m median with rumble strip will be used within the two-lane sections except where good passing opportunities exist. In the four-lane sections, a 2.0 m (minimum) median is provided, which is consistent with section DB3 to the south. The majority of the four-lane median is 3.2 m wide, which provides some additional sight distance, in accordance with MOT's Supplement to TAC Geometric Design Guide Section 630.

13. Median Barrier

A concrete median barrier is provided throughout the four-lane sections except for the opening at the protected T-intersection around the mid-point of the section. There is no concrete median barrier in the two lane sections of DB4.

14. Catchment Width in Rock Cuts

A rock catchment width for the proposed two-lane section will be 2.75 m regardless of the height of the rock cut. The rock catchment width for the proposed four-lane section will be not less than 3 m regardless of the height of the rock cut.

1.4.2 Pullouts

A northbound pullout will be provided at Sta.116+520 with parking capacity for approximately five cars. A northbound pullout will be provided at Sta. 122+350 with parking capacity for 30 cars.

The southbound pullout at Sta.114+800 (Tunnel point) will be retained.

1.5 Highway Section DB5 – Porteau Cove to Minaty Bay

1.5.1 Highway Geometrics Information

Table 1-5 provides the highway geometrics design criteria for Highway Section DB5, being the Porteau Cove to Minaty Bay highway section of the Concession Highway.

The design will be in accordance with the Concessionaire's Drawing No. 41DD-DB05-0002 Supplementary Legend, 41DD-DB05-0101 to 0110 Plans, 41DD-DB05-0201 to 0210 Profile, 41DD-DB05-0301 to 0302 Typical Sections & Details and 41DD-DB05-0401 to 0410 Geometrics and Laning set out in Annex 2 to Part 5 of Schedule 5.

During the Olympic Period a minimum of 3 lanes will be provided in Highway Section DB5. For three-lane sections one lane reversible will be provided northbound in the morning and southbound in the afternoon.

For the section from Sta. 124+762 to 125+580, a temporary third lane for the Olympic Period shall be provided on the adjacent rail lands and rail bed assets.

TABLE 1-5
Highway Geometrics Design Criteria for Highway Section DB5

Item	Design Criteria
Design Classification	RAU-RAD ^{Note 1}
Posted Speed	70 to 80 km/h ^{Note 2}
Design Speed	70 to 80 km/h
Basic Lanes	2 to 4
Minimum Radius	200 m
Min. K Factor Sag	32
Min. K Factor Crest	36
Max. Grade	8%
Max. Superelevation	8% ^{Note 3}
Minimum S.S.D.	140 m ^{Note 4}
Minimum D.S.D.	230 m ^{Note 4}
Lane Width	3.5 m
Shoulder Width Outside	0.3 to 2.1 m ^{Note 5}
Shoulder Width Inside	0.2 to 1.9 m ^{Note 6}
Clear Zone – Offset Width	0.8 to 7 m ^{Note 7}
Recovery Slope	4:1 ^{Note 8}
Median Width	0.4 to 3.2 m ^{Note 9}
Median Barrier	Yes ^{Note 10}
Catchment Width in Rock Cuts	3 to 5 m
Design Vehicle	WB 20

Notes:

1. Design Classification

Rural Arterial Undivided shall be designed only in the area adjacent to the Porteau Bluffs (Sta. 124+760 to 125+760). All other areas have been designed as Rural Arterial Divided with median barrier provided.

2. Posted Speed

The proposed alignment shall match the existing alignment along the Porteau Bluff, which is currently posted at 80 km/h. Two horizontal curves in this area achieve a 240 m

radius. These radii values, along with spiral lengths in this section (Sta. 124+760 to 125+560) imply a posted curve warning advisory speed sign for 70 km/h.

3. Maximum Superelevation

The existing super-elevation of 8% will be used at the north end of Highway Section DB5 through the horizontal curve with a radius of 200 m (Sta. 130+260).

All other locations will have a super-elevation that shall not exceed 6%.

4. Minimum SSD and DSD

The minimum stopping sight distance and minimum decision sight distance provided in the table are based on the vertical alignment.

However, the horizontal alignment restricts stopping sight distances to less than desirable minimums because of the use of concrete roadside and median barriers. Where concrete roadside and median barriers are present, the outside and inside shoulders shall be widened to 1.9 m on the inside of curves (measured between the fog line and the face of concrete barrier). This will provide additional sight distance at barrier locations in accordance with MOT Supplement to TAC, Section 630. Where concrete roadside barriers are not present, the horizontal SSD and DSD may be reduced as a function of minimum rock catchment widths.

5. Shoulder Width Outside

The outside shoulder widths along the Porteau Bluff will remain unchanged (Sta. 124+762 to 125+580).

Outside of the Porteau Bluff area, a 2.1 m shoulder will be provided adjacent to areas with only one northbound and/or southbound lane and no CRB is present (2.7 m with CRB).

All other locations will be provided a 1.5 m outside shoulder width where no CRB is present (2.1 m with CRB). However, as per MOT Supplement to TAC, Section 630, outside shoulder widths will be increased to 2.5 m inside of curves with CRB placement (1.9 m to face of CRB + 0.6 m CRB).

6. Shoulder Width Inside

The section of Highway Section DB5 adjacent to the Porteau Bluff will be provided a 0.4 m rumble strip (Sta. 124+760 to 125+760), which constitutes a 0.2 m inside shoulder width for each of the NB and SB lanes.

All other areas have been designed with concrete median barrier with a minimum 0.7 m inside shoulder width (measured between the fog line and the face of CMB). However, as per MOT Supplement to TAC, Section 630, inside shoulder widths will be widened to 1.9 m on the inside of curves.

7. Clear Zone Offset Width

The clear zone offset width along the Porteau Bluff will remain unchanged (Sta. 124+762 to 125+580). The existing clear zone in this area varies from approximately 0.8 to 2.0 m (existing shoulder width of 0.3 to 1.5 m plus the existing 0.5 m gravel rounding).

For areas of Highway Section DB5 outside of Porteau Bluffs and with CRB placement on shoulders, the clear zone offset width shall be equal to the outside shoulder width (1.5 m typical and 1.9 m on the inside of curves with CRB and 2.3 m adjacent to single lane sections).

For areas of Highway Section DB5 outside of Porteau Bluffs and no CRB, the clear zone varies from 5 to 7 m depending on the necessary rock catchment width, or, 4:1 fill slope tie to the existing ground.

8. Recovery Slopes

The recovery slopes along the Porteau Bluff will remain unchanged (124+762 to 125+580). For areas of Highway Section DB5 outside of Porteau Bluffs and no CRB, excavation and fills will be constructed with recoverable side slopes of 4:1.

9. Median Width

The section of Highway Section DB5 adjacent to the Porteau Bluff (Sta. 124+762 to 125+760) will be provided a 0.4 m rumble strip, which constitutes a 0.4 m median.

All other areas shall be designed with CMB on a minimum 2.0 m median. However, as per MOT supplement to TAC, Section 630, the median shall be widened to 3.2 m (1.6 m each side of the control line) on curvilinear sections of the highway.

10. Median Barrier

The section of Highway Section DB5 adjacent to the Porteau Bluff (Sta. 124+760 to 125+760) will be provided a 0.4 m rumble strip.

All other areas shall be designed with concrete median barrier.

Roadwork will not impact existing golf course tunnels at Sta. 126+570 and 127+680.

The design of pullouts and bus stops shall be in accordance with Table 1-6.

TABLE 1-6:
Proposed Pull-Outs and Bus Stops for Highway Section DB5

Station	Description	Left / Right	Design Result
126+800	Existing pull-out	Left	Parking capacity for 10+ cars
128+700 (approx)	Existing emergency pull-out	Left	Retained
130+200	Existing pull-out	Left	Pull-out will be maintained with approx. 1.6 m less width due to the addition of the centre median barrier

1.6 Highway Section DB6 – Minaty Bay to Murrin Park1.6.1 Highway Geometrics Information

Table 1-7 provides the highway geometrics design criteria for Highway Section DB6, being the Minaty Bay to Murrin Park highway section of the Concession Highway.

The design will be in accordance with the Concessionaire's Drawing No. 41DD-DB06-0101 to 0107 Plan, 41DD-DB06-0201 to 0204 Profiles, 41DD-DB06-0301 Typical Sections & Details, 41DD-DB06-0401 to 0407 Geometrics and Laning, 41DD-DB06-0408 to 0409 Laning Concept During Olympic Period and 41DD-DB06-0501 Thistle Creek Culvert Replacement set out in Annex 2 to Part 5 of Schedule 5.

During the Olympic Period a minimum of 3 lanes will be provided in Highway Section DB6. For three-lane sections one lane reversible will be provided northbound in the morning and southbound in the afternoon.

TABLE 1-7
Highway Geometrics Design Criteria for Highway Section DB6

Item	Design Criteria
Design Classification	Rural Arterial Undivided ^{Note 1}
Posted Speed	60 to 80 km/h ^{Note 2}
Design Speed	60 to 80 km/h ^{Note 3}
Basic Lanes	2 to 3 ^{Note 4}
Minimum Radius	130 m ^{Note 5}
Min. K Factor Sag	19 ^{Note 6}
Min. K Factor Crest	50 ^{Note 6}
Max. Grade	7.9% ^{Note 7}
Max. Superelevation	8% ^{Note 8}
Minimum S.S.D.	40 m ^{Note 9}
Minimum D.S.D.	220+ m ^{Note 10}
Lane Width	3.5 m
Shoulder Width Outside	0.8 to 2.1 m ^{Note 11}
Shoulder Width Inside	0 ^{Note 12}
Clear Zone – Offset Width	Shoulder width only ^{Note 13}
Recovery Slope	Shoulder width only
Median Width	0 m ^{Note 14}
Median Barrier	None ^{Note 15}
Catchment Width in Rock Cuts	variable
Design Vehicle	WB 15 ^{Note 16}

Notes:

1. Design Classification

Rural arterial divided classification is achieved from Sta. 130+425 (DB5/6 boundary) to 131+860.

2. Posted Speed

The 60 km/h posted speed applies from the boundary between Highway Section DB5 and Highway Section DB6 through the commercialized area of Britannia Beach and ends at Sta. 132+920.

3. Design Speed

The 60 km/h design speed applies from the boundary between Highway Section DB5 and Highway Section DB6 through the commercialized area of Britannia Beach and ends at Sta. 132+920.

4. Basic Lanes

Two basic lanes shall be provided through the Britannia Beach area only (Sta. 132+100 to 132+900). Three basic lanes shall be provided elsewhere.

5. Horizontal Curves

Horizontal alignment through commercialized area of Britannia Beach, between chainup area at Sta. 132+080 and Main Street intersection at Sta. 132+060, shall be designed with simple curves (i.e., no spirals).

6. Vertical Curves

Vertical alignment through commercialized area of Britannia Beach, between Sta. 131+464 and 132+780, shall be designed as a series of alternating 0.50% tangents without vertical curves to provide positive drainage in very flat terrain.

7. Maximum Grade

Maximum grade of 7.9% is governed by existing pavement profile over a distance of 75 m. Maximum sustained grade is 7.4% and is governed by the existing pavement profile.

8. Maximum Super-elevation

Design approach shall match existing super-elevation in areas where existing pavement structure is being reused.

9. Stopping Sight Distance

Minimum value shall be achieved where the Concession Highway is widened between Sta. 130+425 and 131+860, to provide Rural Arterial Divided cross-section, on outside of curves where sight lines are reduced as a result of the median or CRB barrier. At these locations, an inside or outside shoulder width of 1.9 m shall be provided to allow for vehicle avoidance manoeuvre as per B.C. MOT Supplement to TAC Geometric Design Guide Section 630.02.

10. Decision Sight Distance

DSD applies at intersections only on multi-lane highways. In this instance, it shall apply at the southbound approach to intersection at Sta. on 131+860.

11. Shoulder Width Outside

Where the Concession Highway is widened between Sta. 130+425 and 131+860, to provide Rural Arterial Divided cross-section, paved shoulder width of 1.5 m for two travel lanes and 2.1 m for one travel lane is achieved. Minimum value of 0.8 m shall apply to Existing Highway north of Britannia Beach, where no upgrading is proposed.

12. Shoulder Width Inside

Where the Concession Highway is widened between Sta. 130+425 and 131+860, to provide Rural Arterial Divided cross-section, a minimum inside paved shoulder width of 0.7 m is achieved. See additional comments under Note 9.

13. Clear Zone - offset width

Clear zone offset width of 5.0 m will be achieved only in areas where highway is upgraded.

14. Median Width

Where the Concession Highway is widened between Sta. 130+425 and 131+860, to provide RAD cross-section, median width of 3.2 m is provided.

15. Median Barrier

Where the Concession Highway is widened between Sta. 130+425 and 131+860, to provide Rural Arterial Divided cross-section, median barrier shall be provided.

16. Design Vehicle

Main intersections shall be designed to accommodate WB15 design vehicle, except north leg of Main Street intersection which shall be designed to accommodate B-12 design vehicle. Lane widening for vehicle off-tracking shall be designed to accommodate WB20 design vehicle.

Olympic Period:

A 12.7 m minimum pavement width shall be designed throughout Highway Section DB6 to provide three lanes for the Olympic Period. Adjacent to the B.C. Museum of Mining's conveyor and maintenance buildings at Sta. 132+420, the Concessionaire shall provide temporary widening of the Concession Highway.

The left-turn channellization at the Main Street intersection will be temporarily removed to accommodate a third lane. The left-turn channellization will be painted only prior to the Olympic Period and raised islands will be constructed after the Olympic Period.

A new bridge shall be constructed immediately upstream of the existing bridge to provide a third vehicle lane across Britannia Creek during the Olympic Period, prior to decommissioning the existing bridge.

1.6.2 Pull-outs and Bus Stops

The existing pull-out/viewpoint at Sta. 133+840 will be retained.

1.7 Highway Section DB7 – Murrin Park to South Stawamus1.7.1 Highway Geometrics Information

Table 1-8 provides the highway geometrics design criteria for Highway Section DB7, being the Murrin Park to South Stawamus highway section of the Concession Highway.

The design will be in accordance with the Concessionaire's Drawing No. 41DD-DB07-0002 Supplementary Legend, 41DD-DB07-0101 to 0109 Plans, 41DD-DB07-0201 to 0208 Profile, 41DD-DB07-0301 to 0302 Typical Sections & Details and 41DD-DB07-0401 to 0409 Geometrics and Laning set out in Annex 2 to Part 5 of Schedule 5.

During the Olympic Period a temporary third lane will be provided by temporarily widening the Concession Highway to accommodate three 3.5 metre lanes with 1.5 metre outside paved shoulders.

TABLE 1-8
Highway Geometrics Design Criteria for Highway Section DB7

Item	Design Criteria
Design Classification	RAU-RAD
Posted Speed	80 km/h
Design Speed	80 km/h
Basic Lanes	2 to 4
Minimum Radius	260 m
Min. K Factor Sag	32
Min. K Factor Crest	36
Max. Grade	7%
Max. Superelevation	6%
Minimum S.S.D.	140 m ^{Note 1}
Minimum D.S.D.	230 m ^{Note 1}
Lane Width	3.5 m
Shoulder Width Outside	1.5 to 2.1 m ^{Note 2}
Shoulder Width Inside	0.7 to 1.9 m ^{Note 3}
Clear Zone – Offset Width	5 to 7 m ^{Note 4}
Recovery Slope	4:1 ^{Note 5}
Median Width	none to 3.2 m
Median Barrier	Yes ^{Note 6}
Catchment Width in Rock Cuts	3 to 5 m
Design Vehicle	WB 20 ^{Note 16}

Notes:

1. Minimum SSD and DSD

The minimum stopping sight distance and minimum decision sight distance provided in the table are based on the vertical alignment. However, the horizontal alignment restricts stopping sight distances to less than desirable minimums because of the use of concrete

roadside and median barriers. Where concrete roadside and median barriers are present, the outside and inside shoulders shall be widened to 1.9 m on the inside of curves (measured between the fog line and the face of concrete barrier), to provide additional sight distance at barrier locations in accordance with MOT Supplement to TAC, Section 630. Where concrete roadside barriers are not present, the horizontal SSD and DSD may be reduced as a function of minimum rock catchment widths.

The existing location of the CRB along the southbound lane at Browning Lake will be retained. No permanent SSD improvements will be made at this location owing to the desire to retain the pedestrian trail between the Concession Highway and the lake and to retain the adjacent rock climbing crags.

2. Shoulder Width Outside

The outside shoulder widths along Browning Lake will remain unchanged (Sta. 135+020 in DB6 to Sta. 135+600).

North of the access to Murrin Park, a 2.1 m shoulder will be provided to the northbound single lane (Sta. 135+560 to 135+746) and to the southbound single lane (Sta. 135+600 to 135+850).

All other locations are adjacent to a four-lane cross-section and will be provided a 1.5 m outside shoulder width where no CRB is present (2.1 m with CRB). However, as per MOT Supplement to TAC, Section 630, outside shoulder widths shall be increased to 2.5 m inside of curves with CRB placement (1.9 m to face of CRB + 0.6 m CRB).

3. Shoulder Width Inside

The alignment has been designed with concrete median barrier beginning at 135+622 (after the access to Murrin Park). The minimum inside shoulder width adjacent to the CMB is 0.7 m (measured between the fog line and the face of CMB). However, as per MOT Supplement to TAC, Section 630, inside shoulder widths will be widened to 1.9 m on the inside of curves.

4. Clear Zone Offset Width

For areas of Highway Section DB7 north of the access to Murrin Park (Sta. 135+600) and without CRB, the clear zone varies from 5 to 7 m depending on the necessary rock catchment width, or, 4:1 fill slope tie to the existing ground.

5. Recovery Slopes

For areas of Highway Section DB7 north of the access to Murrin Park (Sta. 135+600) and without CRB, excavation and fills will be constructed with recoverable side slopes of 4:1.

6. Median Barrier

The alignment has been designed with concrete median barrier beginning at 135+622 (after the access to Murrin Park).

1.7.2 Intersection and Access Treatment

The design of intersections and private accesses will be as follows:

1.7.2.1 *Intersection and Accesses*

The design of intersections and accesses will be as specified in Table 1-9.

TABLE 1-9

Intersection and Access Treatment for Highway Section DB7

Station	Description	Left / Right	Design Result
135+600	Murrin Park	L	Painted channellized T-intersection with northbound left turn.
136+380	Minor Access Road	L	Right-in / Right-out.
137+020	Major Access Road & Viewpoint	L	Painted channellized T-intersection with northbound left turn.
138+600	Minor Access Road	L	Close.
138+860	Minor Access Road	R	Close.
139+800	Shannon Falls Junction	L / R	Signalized four-leg intersection with channellized left turns.
140+380	Major Access Road	L	Right-in / Right-out
140+550	Minor Access Road (gravel pit)	R	Right-in / Right-out
141+060	Minor Access Road	R	Close.
141+110	Stawamus Chief Park (new location)	R	Protected left turn T-intersection.
141+250	Stawamus Chief Park (existing right-in)	R	Close.
141+340	Stawamus Chief Park (existing right-out)	R	Close.

1.7.2.2 *Pullouts and Bus Stops*

The design of pullouts and bus stops will be as specified in Table 1-10.

TABLE 1-10:

Pull-Outs and Bus Stops for Highway Section DB7

Station	Description	Left / Right	Design Result
137+020	Major access road and viewpoint	L	Parking capacity for 10+ cars
137+700	Chain-up pull-out	L	Capacity for 2+ trucks to apply chains. Right-in/Right-out
138+420	Pull-out (for access to "Snakes and Ladders" rock climbing area)	R	Parking capacity for 5+ cars northbound at Sta. 138+350
141+300	Large Viewpoint – Stawamus Chief Provincial Park	R	Parking capacity for 50+ cars and two buses
141+530	Small southbound viewpoint for South Stawamus (and access to "Malamute" rock climbing area)	L	Parking capacity for 10+ cars (if the recreational user group can secure access to the Malamute rock climbing area prior to construction)

1.8 Highway Section DB81.8.1 Rural Squamish1.8.1.1 Highway Geometrics Information

Table 1-11 provides the geometrics design criteria for rural portion of Highway Section DB8, being the rural Squamish highway section of the Concession Highway.

The design will be in accordance with Concessionaire's Drawing No. 41DD-DB08-0103 to 0130 and 133 Plans, 41DD-DB08-0202 to 0228 Profile, 41DD-DB08-0301 to 0302 Typical Sections & Details, 41DD-DB08-0303 to 0304 Culvert Sections and 41DD-DB08-0403 to 0430 and 0433 Geometrics and Laning set out in Annex 2 to Part 5 of Schedule 5.

TABLE 1-11
Highway Geometrics Design Criteria for Rural Squamish Highway Section DB8

Item	Design Criteria
Design Classification	Rural Arterial Divided
Posted Speed	70 to 80 km/h ^{Note 1}
Design Speed	80 km/h
Basic Lanes	4 ^{Note 2}
Minimum Radius	350 m
Min. K Factor Sag	32
Min. K Factor Crest	n/a
Max. Grade	7%
Max. Superelevation	6%
Minimum S.S.D.	>140 m
Minimum D.S.D.	>230 m
Lane Width	3.5 m
Shoulder Width Outside	1.5 m
Shoulder Width Inside	0.4 m
Clear Zone – Offset Width	5.0 to 5.9 m
Recovery Slope	4:1
Median Width	2.0 m ^{Note 3}
Median Barrier / Raised Median	Yes ^{Note 4}
Catchment Width in Rock Cuts	No rock cuts
Design Vehicle	WB 20 ^{Note 5}
Level of Service	C (to year 2026) ^{Note 6}

Notes:

1. Posted Speed

The posted speed will be determined during the pre-design in consultation with the community.

2. Basic Lanes

The through laning is basically four-lane except at the north end transition where the laning is reduced to three lanes north of the Depot Road intersection.

3. Median Width

The median applies only to the cross-section TS11. Cross-section TS13 north of Depot Road shall be undivided.

4. Median Barrier/Raised Median

The typical cross-sections and the associated median treatment requirements apply to the following locations:

Sta.	Typical Sections	Median Treatment
141+700 to 141+800	TS11	2 m CMB
141+800 to 142+200	TS11	2 m raised median
Urban Section: refer to next section		
148+800 to 151+300	TS11	2 m CMB
151+300 to 151+687	TS13	No median

The median treatment within the intersection does not always conform to the median treatment suggested with the stated typical sections. Raised median has been used rather than CMBs to maintain consistency across the intersections.

The typical cross-sections indicate the minimum roadway cross-section required between intersections. Minimum acceptable intersection requirements are described below.

The laning and median treatments provided in the Preliminary Design Plan drawings (No. 41DD-PD08-100 series in the Data Room) conform to the minimum laning and median treatments requirements in rural Squamish highway section except as noted in the above table and the Intersection and Access Treatment Section, variations and the following statement.

5. Design Vehicle

The exception to the WB 20 design vehicle is where Part 1 of Schedule 5 [Construction Output Specifications] requires only a WB 15 as noted in the Intersection and Access section.

6. Level of Service

The LOS for this section of the Highway shall to be “C” or better.

1.8.2 Urban Squamish1.8.2.1 *Highway Geometrics Information*

Table 1-12 provides the highway geometrics design criteria for the urban portion of Highway Section DB8, being the urban Squamish highway section of the Concession Highway.

The design will be in accordance with the Concessionaire's Drawing No. 41DD-DB08-0103 to 0130 and 133 Plans, 41DD-DB08-0202 to 0228 Profiles, 41DD-DB08-0301 to 0302 Typical Sections & Details, 41DD-DB08-0303 to 0304 Culvert Sections and 41DD-DB08-0403 to 0430 and 0433 Geometrics and Laning set out in Annex 2 to Part 5 of Schedule 5.

TABLE 1-12
Highway Geometrics Design Criteria for Urban Squamish Highway Section DB8

Item	Design Criteria
Design Classification	Urban Arterial Divided
Posted Speed	70 km/h
Design Speed	70 km/h
Basic Lanes	4
Minimum Radius	280 m
Min. K Factor Sag	26
Min. K Factor Crest	23
Max. Grade	7% ^{Note 1}
Max. Superelevation	6%
Minimum S.S.D.	>110 m
Minimum D.S.D.	>275 m
Lane Width	3.5 m
Shoulder Width Outside	1.5 m
Shoulder Width Inside	0.4 m
Clear Zone – Offset Width	2.0 to 5.9 m ^{Note 2}
Recovery Slope	4:1
Median Width	2.0 to 6.0 m ^{Note 3}
Median Barrier / Raised Median	See ^{Note 4}
Catchment Width in Rock Cuts	No high rock cuts
Design Vehicle	WB 20
Level of Service	C (to year 2026) ^{Note 5}
Boulevard	1.5 m *

Notes:

1. Maximum Grade

There will be a short section of 7.25% for 40 m starting at Sta. 143+100. This falls within the TAC Geometric Design Guide criteria for maintaining a maximum grade of 7%.

2. Clear Zone

The clear zone for curb and gutter designs shall be 2.0 m from the face of the curb, or 0.5 m behind the sidewalk, whichever is greater. Where there is no curb and gutter, or roadside barrier, the 5.0 m clear zone applies, measured from the lane edge.

3. Median Width

The median widths applicable to this highway section are included in the template list under Note 4 below.

4. Median Barrier

A raised median with curb and gutter is required through the developed urban areas (Sta. 143+650 to 144+600, and Sta. 147+300 to 148+800).

Through the remaining sub-urban sections, concrete median barrier or raised median shall be provided as indicated in the table below.

The typical cross-sections and the associated median treatment requirements apply to the following locations:

Sta.	Typical Sections	Median Treatment
142+200 to 143+650	TS8	6 m raised median
143+650 to 144+600	TS9	2-6 m raised median
144+600 to 146+450	TS8	2 m CMB
146+450 to 147+340	TS8	2 m raised median
147+340 to 148+800	TS8	6 m raised median

The transition from a curb and gutter section to an open shoulder shall be modified (Sta. 147+300 to 147+340) to allow for the development of a required barrier flare.

The laning and median treatments provided in the Preliminary Design Plan drawings (No. 41DD-PD08-100 series in the Data Room) generally conform to the minimum laning and median treatments requirements in Urban Squamish except as noted in the above table. The median width conforms to the 6.0 m width except in the area of closely spaced intersections where the median width remains the width used in the intersection to maintain a constant cross section for superior vehicle driver operations.

5. Level of Service

The LOS for this highway section is to be “C” or better.

* Boulevard to be provided in curb and gutter sections where property is available.

1. The curve located at Sta. 147+400 will allow for sufficient SSD by increasing the median width on the outside portion of the curve.
2. Where median barrier transition to raised median curbs, the barriers will be flared to the far side of the median curb.

3. Additional roadside barriers will be added where there are retaining walls immediately adjacent to the sidewalks to provide safety to pedestrians.
4. Industrial Road intersection will be modified by using median barriers with appropriate barriers for the turning lanes rather than a raised median.

Three small gateway features shall be provided along the urban Squamish highway at the following locations:

1. Sta. 144+200 northbound – to identify Squamish town center
2. Sta. 144+700 southbound – to identify the Garibaldi commercial area
3. Sta. 147+300 northbound – to influence driver behaviour and calm traffic.

1.9 Highway Section DB12 and DB13 – Cheakamus Canyon North to Function Junction

1.9.1 Highway Geometric Information

Table 1-13 provides the highway geometrics design criteria for Highway Sections DB12 and DB13, being the Cheakamus Canyon North to Function Junction highway section of the Concession Highway.

The design in DB12 will be in accordance with the Concessionaire's Drawing No. 41DD-DB12-0002 Supplementary Legend, 41DD-DB12-0101 to 0111 Plans, 41DD-DB12-0201 to 0209 Profiles, 41DD-DB12-0301 to 0302 Typical Sections & Details and 41DD-DB12-0401 to 0411 Geometrics and Laning set out in Annex 2 to Part 5 of Schedule 5.

The design in DB13 will be in accordance with the Concessionaire's Drawing No. 41DD-DB13-0002 Supplementary Legend, 41DD-DB13-0101 to 0125 Plan, 41DD-DB13-0201 to 0213 Profile, 41DD-DB13-0301 to 0302 Typical Sections & Details and 41DD-DB13-0401 to 0426 Geometrics and Laning set out in Annex 2 to Part 5 of Schedule 5.

The DB12 pre-grading work did not complete all rock cuts to their final locations as defined by the MOT preliminary design. These incomplete rock cut areas are to be designed in accordance with MOT's BC Supplement to TAC Geometric Design Guide or TAC Geometric Design Guide except where there is a conflict with the design criteria set out in Schedule 5. In completed rock cut areas generally north and south of the Cheakamus River, the Province accepts the rock cuts as final based on the preliminary design and the pre-grading contract. The geometric design of the highway will be best-fit within the limitations of the completed pre-built rock cuts.

TABLE 1-13
Highway Geometrics Design Criteria for Highway Sections DB12 and DB13

Item	Design Criteria
Design Classification	Rural Arterial Undivided ^{Note 1}
Posted Speed	80 km/h
Design Speed	80 km/h

TABLE 1-13
Highway Geometrics Design Criteria for Highway Sections DB12 and DB13

Item	Design Criteria
Basic Lanes	2 + 1 ^{Note 2}
Minimum Radius	250 m
Min. K Factor Sag	32
Min. K Factor Crest	36
Max. Grade	6.94%
Max. Superelevation	6% ^{Note 3}
Minimum S.S.D.	140 m ^{Note 4}
Minimum D.S.D.	230 m ^{Note 4}
Lane Width	3.5 m ^{Note 5}
Shoulder Width Outside	1.5 (2 lane) ^{Note 6} 2.1 (1 lane) ^{Note 6}
Shoulder Width Inside	0.2 m ^{Note 7}
Clear Zone – Offset Width	Shoulder width only ^{Note 8}
Recovery Slope	Shoulder width only ^{Note 9}
Median Width	0.4 m
Median Barrier	None ^{Note 10}
Catchment Width in Rock Cuts	3.0 to 5.0
Design Vehicle	WB 20

Notes:

1. Design Classification

A rural arterial divided shall be provided at the following bridge locations:

- Rubble Creek
- Cheakamus River
- Daisy Lake Channel
- Callaghan Creek

2. Basic Lanes

Basic laning is 2+1 except for the four-lane sections at the following locations:

- South of Rubble Creek to north of Cheakamus River
- Between Sta. 235+788 to 236+120
- Between Sta. 237+078 to 237+700
- Between Sta. 239+952 to 240+247
- Between Sta. 242+535 to 244+477
- Between Sta. 247+787 to 249+498

3. Max. Super-elevation

The existing 8% super-elevation at the existing Cheakamus River bridge shall be retained.

4. Minimum S.S.D. / Minimum D.S.D.

The minimum stopping sight distance shown in the table is based on the vertical alignment. On small radius curves, the horizontal alignment restricts the sight distance (to approximately 85 m) where roadside barriers shall be used. The outside shoulder for curves with a radius between 250 and 700 m, inclusive, shall be widened to 1.9 m to provide additional sight distance at barrier locations.

5. Lane Width

On horizontal curves with a radius less than 500 m the lanes shall be widened in accordance with Tables 2.1.2.15 of the TAC Guide.

6. Shoulder Width Outside

The outside shoulder shall be widened to 1.9 m for curves to the right with a radius of 250 to 700 m inclusive, where a roadside barrier is used.

7. Shoulder Width Inside

The inside shoulder shall be widened to 2.0 m for the existing bridges at Rubble Creek, Cheakamus River, and Daisy Lake.

8. Clear Zone – Offset Width

A clear zone of 5.0 m shall be provided in rock cuts. A clear zone of 5.0 m shall be provided in fills wherever a barrier is not provided.

9. Recovery Slope

A 4:1 recovery slope shall be provided wherever a clear zone has been provided.

10. Median Barrier

A rumble strip shall be provided wherever the median width is 0.4 m.

1.9.2 Viewpoints and Pull-outs

The access to the southbound pull-out at Sta. 244+650 will be provided via Brandywine Forest Service Road and West Callaghan Road with paved parking for 20 vehicles. The northbound pullout at Sta. 246+300 will be provided with paved parking for five vehicles.

2. Pavement Design Criteria

2.1 Paving

2.1.1 Bottom lift paving on newly constructed grade

Bottom lift pavement will be used as the driving surface on the newly constructed detour section. The Concessionaire will construct an additional 0.6 m of bottom lift paving as a temporary base for roadside barrier locations, as required. Drainage facilities will be provided as needed for temporary service until top lift paving is constructed. Temporary lane paint markings will be installed.

2.1.2 Bottom lift paving of re-shaped existing lanes

Where existing pavement is reused in the final pavement matrix, it will be re-shaped through milling or levelling. The thickness of bottom lift paving will vary as required to meet overall pavement strength requirements. Drainage facilities will be constructed prior to top lift paving.

2.1.3 Paving for transitions at detours

Temporary paving, in accordance with bottom lift paving standards, will be provided as a transition to detour sections. Drainage facilities will be provided as required. Lane markings and delineation will also be provided.

2.1.4 Top lift paving

Upon completion of construction for major sections of the Concession Highway, top lift paving of 50 mm of Superpave will be applied. Temporary roadside barriers that have previously been installed to protect detour traffic will be removed and re-installed in their final location prior to top lift paving. Final drainage facilities will be installed.

2.2 OGFC Mix Design Criteria

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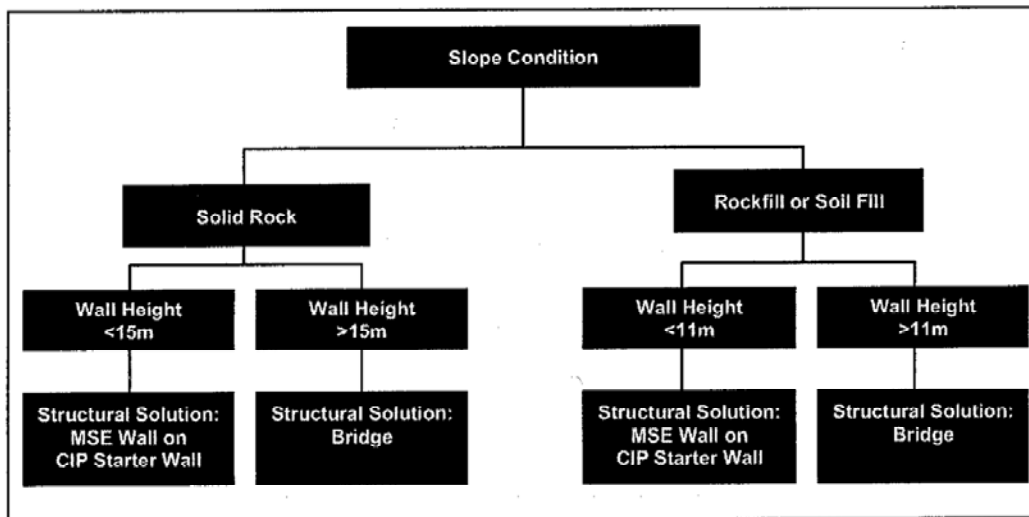
3. Structural Design Criteria

3.1 Bridges and Structures

The Concessionaire will adopt the approach set out in the structure decision chart shown in Figure 3.1 to determine the structure type in steep side-slope terrain.

FIGURE 3.1:

Structure Decision Chart



3.1.1 Design Criteria

In accordance with the Final Project technical requirements, bridges that require deck rehabilitation or replacement will not be raised or otherwise modified to achieve freeboard requirements under the 200-year flood conditions.

3.1.2 Deck Concrete

All newly designed and constructed structures will have a reinforced concrete deck with epoxy-coated reinforcement within 100 mm of the deck surface and at least 70 mm concrete cover.

3.1.3 Deck Waterproofing Membrane and Asphalt Overlay

The concrete decks will be overlaid with a redundant protection system of waterproofing membrane plus at least 100 mm asphalt.

The Concessionaire will overlay at least 11 bridge decks which do not require deck replacement as part of the Pre-Olympic Works rather than later during the operation and maintenance phase of the Concession Agreement.

3.1.4 Railway Criteria

For overhead crossings in Highway Section DB13, the Concessionaire will use multi-plate arches for the rail crossings.

3.1.5 Bridge Seismic Analysis and Design Methodology

3.1.5.1 *Analysis Method*

Seismic analysis and design will follow CSA-S6-00 standard for new bridge construction. Single-span bridges will be analyzed to ensure the minimum seat width requirements have been met, unless site or structural conditions require otherwise as determined by the Concessionaire's engineer. For multi-span bridges, the "uniform load" method of analysis will be utilized, consistent with CSA-S6-00 requirements for a maximum Seismic Performance Zone 3.

Design forces must be consistent with the requirements of Section 4.4.10 of CSA-S6-00.

3.1.5.2 *Zonal Acceleration Ratio, A*

The Concessionaire shall use the PGA for the 1-in-475 year event, acquired from the Pacific Geoscience Centre during the proposal period for four distinct sites along the Sea-to-Sky Highway, as the Zonal Acceleration Ratio "A" in the Canadian Highway Bridge Design Code S6-00. The PGA values acquired by the Concessionaire form the basis of the values shown in Table 3-2.

3.1.6 Bridge Hydraulics and Scour Protection

All bridges must be evaluated for Q200 flows. A new independent structure will be built at the following locations:

Furry Creek – A new single-span bridge shall be built to avoid hydraulic constrictions and provide sufficient freeboard.

Gonzales Creek -The existing bridge shall be raised to accommodate debris flow, so a new, four-lane structure will be built.

Shannon Creek -The existing bridge has insufficient clearance, so a new, parallel, independent bridge shall be built.

Rubble Creek -The underside of the existing bridge has insufficient stream cross-section to accommodate the Q200 flow, so a new, parallel, independent, two-lane bridge shall be built.

Additional analyses and field testing will be undertaken by the Concessionaire during detailed design to more accurately quantify the Q200 flows, and adjustments to the bridge heights and configurations to be made accordingly.

Scour potential must be evaluated by the Concessionaire at each creek crossing through additional field testing. Two prevention and mitigation measures will be considered: (1)

founding the abutment on piles, with appropriate scour protection provided by rip-rap, such as at Furry Creek and Brandywine Creek; and (2) using caisson-type spread footings to establish a lower footing elevation with appropriate rip-rap, such as at Britannia, Shannon, and Rubble Creeks. The Concessionaire shall complete twinning of the bridges at these locations to provide the following:

- improved channel hydraulics with reduced likelihood of washout;
- redundancy is provided in the event that the existing bridge is washed out;
- asset improvements related to the new bridges.

3.1.7 Foundation Design Methodology

The Concessionaire shall conduct additional field testing for bridge foundations. The Concessionaire shall use the following abutment foundation types:

- Cast-in-place concrete abutments that are founded on rock.
- MSE concrete face abutment walls set on rock, rock fill, or cast-in-place concrete starter walls, with cast-in-place concrete abutment set atop the wall; MSE concrete face panels are continued on each side, a minimum of 6.0 m away from the face of the abutment.
- In locations where scour of the streambed is a concern, the foundation will be situated on firm-bearing stratum below the scour depth. To minimize disturbance to the surrounding stream, a caisson-type footing is constructed, with a wall-type pier set atop the caisson footing. This allows the footing to be constructed below the groundwater table, while minimizing the amount of dewatering required and any instream work.
- In locations where the depth to a firm-bearing stratum is not easily reached using a conventional spread footing type abutment, steel pipe or H piles at the abutments will be used.

For bridges that require widening, the existing abutments have been determined to be adequate and will therefore be matched when constructing the new bridge section.

The Concessionaire will conduct detailed site survey and additional geotechnical investigation of the deck structures in Highway Section DB4 to re-assess the sub-structure, to finalize the exact location of bent footings. Rock outcrops will be used by the Concessionaire as a base for foundations wherever possible.

3.1.8 Bridge Superstructure

The following superstructure types, diagrams of which are below, will be used by the Concessionaire for new bridge construction:

- For spans less than 25 m, the application of pre-cast box girders with a 150 mm cast-in-place concrete deck. This structure will be required for Highway Section DB4 and

for some of the shorter bridges. For certain situations where clearances and bridge height are critical, precast box girders up to 30 m long may be employed.

- For spans of up to 45 m, the application of pre-cast concrete “I” girders with a minimum 225 mm thick cast-in-place deck will be used. Type 4, 5, 6, or 7 “I” girders will be used depending on the span length. This type of structure will be used for the typical bridge crossing and for the elevated deck sections in Highway Section DB4.
- For spans greater than 40 m, steel girders with a 240 mm thick cast-in-place concrete deck are proposed.

For all three structure types, a waterproof membrane and 100 mm thick asphalt topping will be applied to the bridge deck. For those bridges that require widening, such as at Magnesia Creek, a concrete driving surface will be provided to match the existing bridge deck.

3.1.9 Joints, Span Fixity and Bearings

The Concessionaire’s design shall eliminate joints to the greatest extent possible. All new single-span bridges shall feature the integral push-through diaphragm/abutment configuration to eliminate the need for expansion joints at the bridge ends. Longitudinal restraint will be provided to prevent the spans from shifting forwards. Lateral restraint will be provided via shear-keys at the abutments.

Expansion joints will be required on multiple-span bridges. The Concessionaire’s design shall include strip-seal type joints when spans or continuous segments exceed 80 m. Longitudinal joints will be required where the road is widened with a deck structure so one or more lanes are deck-supported and one or more lanes are on fill. In all cases, the Concessionaire will use reinforced elastomeric bearings for the bridge girders. On new structures, expansion and contraction will be permitted by shearing of the bearings. Typical limits on bearing deformations will be limited to meet the S6-00 requirement of 0.5 times the total rubber thickness. All existing structures that are being widened will have fixed elastomeric bearings at one abutment, an elastomeric bearing with a PTFE (Polytetrafluoroethylene polymer) sliding surface bonded on the top side, and a stainless steel sheet welded to the underside of the girder. The new bearings shall match the functionality of the existing bearings.

3.1.10 Navigable Waters Protection Act Requirements

The Concessionaire’s bridge design will comply with the requirements set out in the *Navigable Waters Protection Act*, as applicable. These locations, and specific actions required for compliance, are summarized in Table 3-1.

TABLE 3-1

Bridge Compliance Requirements with the NWPA

Bridge Name	Proposed Action to Meet NWPA
Furry Creek East bridge	Match existing Furry Creek access road clearance (vertical clearance >1.5 m).
Britannia Creek East bridge No. E1286	New bridge approximately parallel to the existing bridge.
Shannon Creek East bridge No E1445	Improved vertical clearance to provide 1.5 m clearance above Q200 flow.
Mamquam Blind Channel West bridge No. W2002	Match existing bridge pier locations and vertical clearance (vertical clearance >1.5 m).
Mamquam River East bridge No. E1029	Match existing bridge pier location and vertical clearance (vertical clearance >1.5 m).
Cheakamus River East bridge No. E2283	Provide additional vertical clearance and keep piers out of the Q200 flood plain (vertical clearance >1.5 m).
Daisy Lake Channel East bridge No. E2214	Match existing bridge vertical clearance and clear span the channel (vertical clearance >1.5 m).
Callaghan Creek East bridge No. E2519	Improved vertical clearance to provide 1.5 m clearance above Q200 flow; increase horizontal clearance.

As part of the NWPA approval process, an NWPA permit drawing containing the following will be prepared by the Concessionaire:

- Key map that identifies the site, latitude, and longitude.
- Navigation plan with name of the waterway, chart, or topographic map number.
- Plan of the bridge, including its overall dimension, legal description (section, lot, concession), extent of normal high water level, existing structures and clearance, and navigation channels.
- Elevation of the bridge and the river/creek; pier locations; water depth and width; navigation channel; low, normal, and high (200-year) water levels; and vertical clearance of the bridge to the river or creek.
- Bridge section with normal and high water level elevation.
- Temporary instream works (if required).

The NWPA permit drawings, in concert with a complete, signed letter of application and any backup documentation, will be submitted by the Concessionaire to Transport Canada for approval. If necessary, an on-site meeting with the NWPA officer will be conducted by the Concessionaire.

3.1.11 Utilities

For those bridges that support Utilities, such as in Squamish, the Concessionaire will interact with the utility owner to ensure that any required modifications are included in the design and that service interruptions are well-planned.

3.1.12 Bridge Summary Details

Summary data for the Project bridges is provided in Table 3-2 and the Concessionaire's bridge general arrangement drawings set out in Annex 2 to Part 5 of Schedule 5.

TABLE 3-2
DBFO Bridges (legend provided on the following page)

Bridge & Section No.	Bridge Name	Scope	Type	Depth ¹ (m)	Vertical ² Clearance (m)	Horizontal ³ Clearance (m)	Lane Arrangement	Span Arrangement	Foundation Type	Total Length (m)	Material ⁴	Brg/Span Fixity	Seismic Accel. Ratio	NWPA Permit Required	Hydraulics	Utilities
DB1																
1428	Nelson Creek Bridge	minor	CC	1.60	n/a	n/a	2NB, 2SB	n/a	n/a	214.3	n/a	n/a	0.19	no	no	n/a
2592	Eagle Bluff Structure	wide	HW	n/a	n/a	n/a	3SB	MS: 14-17-17-14	SPR	62.6	C Box	n/a	0.19	no	no	no
0301	Horseshoe Bay Ferries U/P #2	new	UP	0.60	5	n/a	3NB, 2SB	SS	SPR	12.5	Conc	F-F	0.19	no	no	no
0401	Eagleridge Ramp U/P #3	new	UP	0.50	5	n/a	2NB, 2SB	SS	SPR	9.5	Conc	F-F	0.19	no	no	no
Br0103	Larson Creek Hwy 99 N Bridge	new	CC	1.15	10	n/a	2NB, 2SB	SS	SPR	25.0	Conc	F-E	0.19	no	no	no
STR 1025	Sta 102+490 to 510	new	HW	1.20	n/a	n/a	2NB 1SB	SS	SPR -RA	20.0	C Box	F-E	0.19	no	no	no
STR 1026	Sta 102+590 to 810	new	HW	1.95	n/a	n/a	1NB 1SB/1 B	MS 30, 5x32.30	SPR -RA	220.0	C Box	2E, 4F 2E	0.19	no	no	no
STR 1029	Sta 102+890 to 990	new	HW	1.95	n/a	n/a	2SB	MS 32-35-32	SPR -RA	100.0	C Box	E-F-F-E	0.19	no	no	no
0801	Northbound O/P	new	OP	1.00	5	n/a	1NB	MS 22-22	SPR	44.0	C Box	E-F-E	0.19	no	no	no
DB3																
STR 1107	Kelvin Grove Overpass	new	UP	0.70	5	n/a	2NB, 2SB	SS	SPR	13.5	Conc	F-F	0.19	no	no	no
STR 1132	Brunswick Beach Overpass	new	UP	1.00	5	n/a	2NB, 2SB	SS	SPR	28.0	Conc	F-F	0.19	no	no	no
1452	Magnesia Creek Bridge	wide	CC	2.53	5.5	n/a	3NB, 2SB	SS	SPR	50.9	Steel	F-E	0.19	no	no	no
STR 1138	1138	new	HW	1.80	17	n/a	2SB	MS: 5x26	SPR	130.0	C Gird	E-4F-E	0.19	no	no	no
1453	M Creek Bridge	wide	CC	2.24	10	n/a	2NB, 2SB	SS	P-P	47.5	Steel	F-E	0.19	no	no	no

Bridge & Section No. DB4	Bridge Name	Scope	Type	Depth ¹ (m)	Vertical ² Clearance (m)	Horizontal ³ Clearance (m)	Lane Arrangement	Span Arrangement	Foundation Type	Total Length (m)	Material ⁴	Brg/Span Fixity	Seismic Accel. Ratio	NWPA Permit Required	Hydraulics ⁵	Utilities
STR 1149	Sta. 114+970 to 115+000	NEW	HW	1.95	15	N/a	1SB	SS	SPR - RA	30.0	C Gird	F-E	0.19	no	no	no
STR 1159	Sta. 115+900 to 930	NEW	HW	1.95	15	N/a	1SB	SS	SPR	30.0	C Gird	F-E	0.19	no	no	no
STR 1160	Sta. 115+990 to 116+030	NEW	HW	1.00	15	N/a	1SB	MS 2x20	SPR	40.0	C Box	F-E-E	0.19	no	no	no
STR 1162	Sta. 116+230 to 250	NEW	HW	1.00	15	N/a	1SB	SS	SPR	20.0	C Box	F-E	0.19	no	no	no
1561 (1163)	Sta. 116+275 to 310 (Loggers Arch)	WIDEN	HW	1.95	25	N/a	1SB	SS	SPR	35.0	C Gird	F-E	0.19	no	no	no
1454	Loggers Creek Bridge	WIDEN	CC	2.50	21	N/a	1NB, 1SB	SS	SPR	45.0	Steel	F-E	0.19	no	no	no
1171	Deeks Creek Bridge	NEW	CC	1.95	15	N/a	1NB, 1SB	SS	SPR	33.0	C Gird	F-E	0.19	no	no	no
STR 1180	Sta. 118+030 to 164	NEW	HW	1.80	17	N/a	2SB & partly 2NB	MS: 5x26.8	SPR	134.0	C Gird	E-F-F-E-F-E	0.19	no	no	no
STR 1187	Sta. 118+794 to 895	NEW	HW	2.10	18	N/a	2SB	MS: 3x33.7	SPR	101.0	C Gird	E-F-F-E	0.19	no	no	no
STR 1190	Sta. 119+005 to 030	NEW	HW	1.80	18	N/a	2SB	SS	SPR	25.0	C Gird	F-E	0.19	no	no	no
STR 1193	Sta. 119+303 to 384	NEW	HW	1.80	12	N/a	2SB	MS: 3x27	SPR	81.0	C Gird	E-F-F-E	0.19	no	no	no
STR 1205	Sta. 120+560 to 640	NEW	HW	1.80	19	N/a	2SB	MS: 3x26.7	SPR	80.0	C Gird	E-F-F-E	0.19	no	no	no
STR 1208	Sta. 120+824 to 854	NEW	HW	1.95	15	n/a	1SB	SS	SPR	30.0	C Gird	F-E	0.19	no	no	no
STR 1209	Sta. 120+964 to 121+000	NEW	HW	1.00	15	n/a	1SB	MS 2x18	SPR	36.0	C Box	F-E-E	0.19	no	no	no
STR 1210	Sta. 121+067 to 095	NEW	HW	1.95	12	n/a	1SB	SS	SPR	28.0	C Gird	F-E	0.19	no	no	no
STR 1214	Sta. 121+444 to 564	NEW	HW	1.80	16	n/a	2SB	MS: 4x30	SPR	120.0	C Gird	E-3xF-E	0.19	no	no	no
STR 1223	Kallanhe Creek Culvert	NEW	CC	5.00	1.5	n/a	2NB, 2SB	n/a	SPR	10.0	Steel	n/a	0.19	no	yes	no
STR 1231	Sta. 123+154 to 214	NEW	HW	0.95	17	n/a	2SB	MS: 3x20	SPR	60.0	C Gird	E-F-F-E	0.19	no	no	no
STR 1232	Sta. 123+274 to 634	NEW	HW	2.10	13	n/a	2SB	MS: 4x27.5	SPR	110.0	C Gird	E-3xF-E	0.19	no	no	no

Notes: 1. Depth includes deck and asphalt thickness. 2. Vertical clearance means the clearance from soffit of superstructure to the Q200 elevation for bridges. For underpasses, it is the height restriction underneath. 3. The horizontal distance between the existing bridge and the new bridge. 4. Material of girders / superstructure. 5. Widening of the channel needed to reduce flood water level?

DB5																
1465E	Furry Creek East Bridge	new	CC	2.30	2.2	6.6	2NB	SS	P-P	52.7	Steel	F-E	0.10	yes	yes	no
1465N	Furry Creek North Bridge	rhb	CC	0.90	0	n/a	2SB	SS	n/a	21.4	C Box	F-E	0.16	no	no	no
DB6																
1286E	Britannia Creek Bridge East	new	CC	45.00	2.7	0.5	1NB 1SB	SS	CAIS		Steel	F-E	0.16	yes	yes	no
1286	Britannia Creek Bridge	remove	CC	n/a	n/a	n/a	0	n/a	n/a	n/a	n/a	n/a	0.16	no	no	no
DB7																
1626	Gonzales Creek Bridge	repl	CC	1.80	7	n/a	2NB, 2SB	SS	SPR	24.2	C Gird	F-E	0.16	no	no	no
1455E	Shannon Creek Bridge East	new	CC	1.15	1.6	1.5	2NB	SS	CAIS	24.2	C Box	F-E	0.16	yes	yes	no
1455	Shannon Creek Bridge	minor	CC	1.12	n/a	n/a	2SB	n/a	n/a	18.3	n/a	F-E	0.16	no	no	no
7299	Shannon Creek Park	minor	CC	n/a	n/a	n/a	2	n/a	n/a	n/a	n/a	n/a	0.16	no	no	no
DB8																
2002W	Mamquam Blind Channel Bridge	new	CC	2.00	1.5	0.5	2SB	MS: 40.0, 19.2	SPR, P-P	60.1	Steel	F-E-E-F	0.15	yes	no	E
2002	Mamquam Blind Channel Bridge	minor	CC	n/a	n/a	n/a	2NB	n/a	n/a	58.8	n/a	n/a	0.15	no	no	W.G
2622	Mamquam Pedestrian O/P	repl	SS	1.30	5.5	n/a	n/a	MS 5x21.5 1x40	P-P	225.7	C Box	F-E-F-E-F	0.15	no	no	no
1029W	Mamquam River Bridge	new	CC	1.35	1.5	0.5	2SB	MS: 31-30.5-31	P-P	93.5	C Box	E-E	0.15	yes	yes	E
1029	Mamquam River Bridge	minor	CC	n/a	n/a	n/a	2NB	n/a	n/a	91.7	n/a	n/a	0.15	no	yes	WG
	Garibaldi Pedestrian O/P	repl	SS	1.30	5.5	n/a	n/a	MS 4x33.5, 28.5	SPR	210.0	C Box	F-E-F-E-F	0.15	no	no	no
DB12																
7388E	Rubble Creek Bridge	new	CC	2.64	1.5	n/a	2SB	SS	CAIS	40.0	C Gird	E-F	0.11	no	yes	no
7388	Rubble Creek Bridge	minor	n/a	n/a	n/a	n/a	2SB	SS	n/a	29.0	n/a	n/a	0.11	no	yes	no
2283E	Cheakamus River No. 1 East Bridge	new	CC	2.24	7	3	2NB	MS: 16-40-16	SPR	72.0	Steel	E-F-E-E	0.11	yes	no	no
2283	Cheakamus River No. 1 Bridge	minor	n/a	n/a	n/a	n/a	1SB	SS	n/a	71.6	n/a	n/a	0.11	no	no	no
2214E	Daisy Lake East Bridge	new	CC	2.33	5.5	3	2NB	SS	SPR	49.4	Steel	F-E	0.11	Yes	no	no
2214	Daisy Lake Bridge	RHB	n/a	n/a	n/a	n/a	1SB	SS	n/a	34.2	n/a	n/a	0.11	no	no	no
DB13																
BR1302	BC Rail Overhead No. 1	new	OP	1.50	7	Rail	1NB, 2SB	SS	SPR	8.1	S Arch	N/A	0.11	no	no	no
7375	Brandywine Bridge	wide	CC	2.05	1.5	n/a	2NB, 2SB	SS	P-H	32.4	C Gird	E-E	0.11	yes	yes	no
2519E	Callaghan Creek East Bridge	new	CC	2.05	1.5	1.5	2NB	SS	SPR	26.8	C Gird	F-E	0.11	yes	yes	no
2519	Callaghan Creek Bridge	minor	CC	n/a	n/a	n/a	1SB	SS	SPR	24.5	Steel	F-E	0.11	no	no	no
BR1304	BC Rail Overhead No. 2	new	OP	1.50	7	Rail	2NB, 1SB	SS	SPR	8.1	S Arch	N/A	0.11	no	no	no

Notes: 1. Depth includes deck & asphalt thickness. 2. Vertical clearance means the clearance from soffit of superstructure to the Q200 elevation for bridges. For underpasses, it is the height restriction underneath. 3. The horizontal distance between the existing bridge and the new bridge. 4. Material of girders / superstructure. 5. Widening of the channel needed to reduce flood water level?

Table Legend (for Revised Table 3-2)

<u>Scope</u>		<u>Foundation</u>	
NONE	Leave as is	SPR	Spread Footing
MINOR	Lane striping	SPR - RA:	Spread Footing with Rock Anchors
WIDE	Widening of existing bridge	P-P	Pile Foundation – Pipe piles
RHB	Rehabilitation of deck.	P-H	Pile Foundation – H-Piles
TWIN	Twinning of existing bridge	P-D	Pile Foundation – Drilled CIP concrete
TEMP	Temporary Structure such as a Bailey Bridge	CAIS	Concrete Caisson Foundation
REPL	Replace existing structure		
NEW	New Structure completely	<u>Total Length</u>	Length Back of Ballast Wall to Back of Ballast Wall
<u>Type</u>		<u>Bearing/Span Fixity</u>	
CC	Creek or River Crossing	F	Fixed
HW	Deck structure for highway widening	E	Expansion
UP	Under Pass	CF	Continuous – Fixed
OP	Over Pass	CE	Continuous, superstructure free to rotate independent of substructure
<u>Depth</u>	Top of deck to underside of girder (m)	<u>Material</u>	
		Conc	Concrete - for Underpass or other structure
<u>Lane Arrangement</u>		C Box	Concrete Box Girder
2NB, 2SB	2 = number of lanes, NB = Northbound,	C Gird	Concrete I Girder
	SB = Southbound	Steel	Steel Girder or other Steel structure
<u>Span Arrangement</u>			
SS	Single Span		
MS 20-30-20	Multi-Span and individual span lengths		

3.1.13 General Comments

3.1.13.1 *Highway Section DB4 - Elevated Deck Structures*

Walls will be used in Highway Section DB4 wherever possible to minimize cost and maintenance requirements; however, once the required height of a wall exceeds 9.0 m, alternate options will be considered. Highway Section DB4 requires the construction of 19 new elevated deck structures. These typical elevated deck structures to be constructed of:

- An abutment wall with MSE concrete faces that extends a minimum of 6.0 m away from the face of the abutment.
- Cast-in-place concrete spread footing with perched abutment behind the MSE abutment walls.
- Pre-cast concrete box stringers with 150 mm cast-in-place topping, or pre-cast concrete "I" girders with 225 mm cast-in-place topping.

Where deck sections transition from two to four lanes, expansion joints will be carried across the full width of the deck and the four-lane segment will be built as an integral unit. Elevated deck sections will be continuous over multiple spans to eliminate expansion joints wherever possible, and expansion movement will be accounted for in the design by incorporating push-through type abutments.

3.1.13.2 *Deeks Creek*

Deeks Creek bridge superstructure shall be completely replaced during the initial construction phase of the Project.

3.1.13.3 *Furry Creek North Bridge*

The existing Furry Creek North bridge superstructure shall be completely replaced during the initial construction phase of the Project.

3.1.13.4 *Britannia Creek Bridge*

The Concessionaire will construct a new bridge parallel to the existing bridge over Britannia Creek on its east side, and provide four lanes (two northbound lanes and two southbound lanes) for the Olympic Period. The new bridge shall be built during the initial construction phase of the Project. After the Olympic Period, the existing bridge will be demolished and removed.

3.1.13.5 *Gonzales Creek*

Gonzales Creek bridge shall be replaced with a new four-lane bridge with a raised profile, providing better alignment for the new road. The Concessionaire shall provide different deck crossfall to accommodate the back-to-back spirals.

This bridge section shall also be illuminated as an additional safety enhancement.

3.1.13.6 *Shannon Creek East*

A new two-lane bridge between the existing Shannon Creek bridge and Shannon Creek Park access bridge shall be built. The new bridge will carry two lanes of northbound traffic; the existing bridge will accommodate traffic travelling south.

The foundations for the new Shannon Creek East bridge will be a caisson-type footing set below the existing stream bed to account for possible scour. In addition, scour protection, similar to the Park bridge upstream, will be placed in front of the abutment walls.

The abutments will be set farther back from the stream than those of the existing bridge but will be within the 200-year flood zone.

The structure depth has been minimized to allow maximum hydraulics clearance for the 200-year flow, while still meeting the alignment grades at the Darrell Bay intersection to the south.

3.1.13.7 *Mamquam Blind Channel*

A new twinned bridge at Mamquam Blind channel shall be built by the Concessionaire for southbound traffic; the existing two-lane bridge will accommodate the northbound lanes. The Concessionaire's design shall consist of a single, pile-supported pier aligned downstream on the existing instream pier and the design shall span the inter-tidal zone.

Further site geotechnical analysis is required by the Concessionaire to determine to what extent ground improvement is required for the soft silts at the instream pier and north abutment. The Concessionaire shall undertake ground improvement measures using timber compaction piles around the pier and abutment.

3.1.13.8 *Rubble Creek*

A new bridge at Rubble Creek will be constructed by the Concessionaire to the east of the existing structure. Two lanes of northbound traffic will be carried by the new bridge, and two southbound lanes will be accommodated by the existing bridge.

The new two-lane bridge shall have an increased hydraulic opening with a longer span, and will meet the vertical clearance requirements for the 200-year flood. To prevent potential scour problems, the footing elevations shall be lowered below the global scour level and rip-rap shall be installed in front of the abutments.

3.1.13.9 *Cheakamus River Bridge*

A new two-lane bridge at Cheakamus River will be constructed by the Concessionaire for northbound traffic. The existing bridge will be maintained to accommodate two lanes of southbound traffic.

The new bridge abutments shall be located in approximately the same location as the existing bridge. To reduce the main span length, bridge piers will be constructed on the local rock outcrops next to the river channel.

A continuous deck slab over the piers will be used by the Concessionaire, but with discontinuous girders, similar to the configuration used on the Island highway. The Concessionaire will use a full-strip seal expansion joint at both abutments.

3.1.13.10 *Callaghan Bridge*

A new two-lane Callaghan Creek bridge will be built by the Concessionaire downstream of the existing bridge for northbound traffic. A new bridge will be built and the existing bridge will be reduced to one lane for southbound traffic.

The new bridge shall have the required clearance for the 200-year expected flow. The new abutments shall be set back farther from the river than the existing abutments to increase the hydraulic opening for the creek. Foundations for the new bridge shall be set into the existing bedrock to prevent the possibility of foundation scour.

3.1.13.11 *B.C. Rail Crossings*

Multi-plate structures shall be built for the rail crossings at Brandywine and Function Junction.

The risk of liquefaction at the Brandywine rail crossing shall be addressed by installing drains or stone columns prior to embankment construction. Settlement at that crossing shall be addressed by over-building the embankments during construction, allowing the fill to settle before final regrading and paving activities are carried out. In addition, the Concessionaire shall install stone columns and vertical drains to densify the soil and significantly reduce the total global settlement.

3.1.13.12 *Bridge General Arrangement Drawings*

The layout of bridges and structures shall be in accordance with the following Concessionaire drawings, each of which is attached in Annex 2 to Part 5 of Schedule 5:

Highway Section DB1 – Horseshoe Bay to Sunset Beach

42DD-DB01-0201	EAGLE BLUFF STRUCTURE - GA
42DD-DB01-0202	EAGLE BLUFF STRUCTURE - DETAILS
42DD-DB01-0301	STRUCTURE #2 – G.A. SH 1
42DD-DB01-0302	STRUCTURE #2 – G.A. SH 2
42DD-DB01-0303	STRUCTURE #2 – RETAINING WALL 102
42DD-DB01-0304	STRUCTURE #2 – RETAINING WALL 103
42DD-DB01-0305	STRUCTURE #2 – RETAINING WALL 995
42DD-DB01-0401	STRUCTURE #3 – G.A.
42DD-DB01-0402	STRUCTURE #3 – DETAILS
42DD-DB01-0403	STRUCTURE #3 – RETAINING WALLS – SH 1
42DD-DB01-0404	STRUCTURE #3 – RETAINING WALLS – SH 2
42DD-DB01-0501	LARSEN CREEK STRUCTURE – G.A. SH 1
42DD-DB01-0502	LARSEN CREEK STRUCTURE – G.A. SH 2
42DD-DB01-0601	STRUCTURES #5 G.A.

Highway Section DB3 – Lions Bay to “M” Creek

42DD-DB03-0301	MAGNESIA CREEK BRIDGE No. 1452 – G.A.
42DD-DB03-0401	M CREEK BRIDGE No. 1453 – GA
42DD-DB03-0501	KELVIN GROVE OVERPASS G.A.
42DD-DB03-0601	BRUNSWICK BEACH OVERPASS G.A.
42DD-DB03-5001	GENERAL ARRANGEMENT-STA.110+640 TO 110+900
42DD-DB03-5011	GENERAL ARRANGEMENT-STA.113+240 TO 113+500
42DD-DB03-5013	GENERAL ARRANGEMENT-STA.113+760 TO 114+020
42DD-DB03-9001	TYPICAL DETAILS MSE WALLS WITH CONC PANELS & SOIL NAILS

Highway Section DB4 – “M” Creek to Porteau Cove

42DD-DB04-0201	LOGGERS CREEK BRIDGE EAST No. 1454 – G.A.
42DD-DB04-0301	DEEKS CREEK BRIDGE No. 1451 – G.A.
42DD-DB04-5026	GENERAL ARRANGEMENT STA.120+640 TO 120+900
42DD-DB04-9001	TYPICAL ABUTEMENT TYPE 1 – GENERAL ARRANGEMENT
42DD-DB04-9008	TYPICAL BENTS – STA.120+600 ABD STA. 120+740

Highway Section DB5 Porteau Cove to Minaty Bay

42DD-DB05-0101	FURRY CREEK EAST BRIDGE No. 1465E – G.A.
42DD-DB05-0102	FURRY CREEK NORTH BRIDGE No. 1465W – G.A.
42DD-DB05-5011	GENERAL ARRANGEMENT-STA.512+640 TO 5124+860
42DD-DB05-5015	GENERAL ARRANGEMENT-STA.5125+640 TO 5125+860

Highway Section DB6 Minaty Bay to Murrin Park

42DD-DB06-0101	BRITTANNIA CREEK BRIDGE – G.A.
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Highway Section DB7 Murrin Park to South Stawamus

42DD-DB07-0101	GONZALLES CREEK BRIDGE No. 1626 – G.A.
42DD-DB07-0201	SHANNON CREEK BRIDGE No. 1455 – G.A.
42DD-DB07-0203	SHANNON CREEK BRIDGE SIDEWALK REPLACEMENT – G.A.
42DD-DB07-5003	GENERAL ARRANGEMENT-STA.139+360 TO 139+420
42DD-DB07-5005	GENERAL ARRANGEMENT-STA.139+880 TO 140+140

Highway Section DB8 South Stawamus to Depot Road

42DD-DB08-0301	MAMQUAM BLIND CHANNEL BRIDGE No. 2002 – G.A. SH 1
42DD-DB07-0302	MAMQUAM BLIND CHANNEL BRIDGE No. 2002 – G.A. SH 2
42DD-DB07-0401	MAMQUAM PEDESTRIAN OVERPASS No. 2622 G.A.
42DD-DB07-0501	MAMQUAM RIVER BRIDGE No. 1029 – G.A. – SH 1
42DD-DB07-0502	MAMQUAM RIVER BRIDGE No. 1029 – G.A. – SH 2
42DD-DB07-0601	GARIBALDI PEDESTRAIN OVERPASS – SH 1
42DD-DB07-0602	GARIBALDI PEDESTRAIN OVERPASS – SH 2

Highway Sections DB12 and DB13 Cheakamus Canyon to Function Junction

42DD-DB12-0101	RUBBLE CREEK BRIDGE No. 7388 – G.A.
42DD-DB12-0201	CHEAKAMUS BRIDGE EAST No. 2283 – G.A. SH 1
42DD-DB12-0202	CHEAKAMUS BRIDGE EAST No. 2283 – G.A. SH 2
42DD-DB12-0301	DAISY LAKE BRIDGE EAST No. 2214 – G.A.
42DD-DB13-0101	BC RAIL OVERHEAD No. 1 G.A. SH 1
42DD-DB13-0102	BC RAIL OVERHEAD No. 1 G.A. SH 2

42DD-DB13-0201	BRANDYWINE CREEK BRIDGE No. 7375 – G.A.
42DD-DB13-0301	CALLAGHAN CREEK BRIDGE EAST No. 2519 – G.A.
42DD-DB13-0401	BC RAIL OVERHEAD No. 2 G.A. SH 1
42DD-DB13-0402	BC RAIL OVERHEAD No. 2 G.A. SH 2

General – All Highway Sections

42DD-DB00-9001	GENERAL STRUCTURAL NOTES
42DD-DB00-9002	PARAPET REPLACEMENTS
42DD-DB00-9003	STEEL BICYCLE RAILING
47DD-DB00-9017	CONDUIT INSTALLATION TYPICAL BRIDGE DETAILS VARIOUS LOCATIONS

3.2 Retaining Walls

3.2.1 Wall Types

Typical sections of proposed retaining walls throughout the Project shall be as set out on the following Concessionaire drawings, each of which is set out in Annex 2 to Part 5 of Schedule 5:

42DD-DB00-9006	TYPICAL MSE WALL ON FILL/SOIL
42DD-DB00-9007	TYPICAL MSE WALL ON ROCK
42DD-DB00-9008	TYPICAL MSE WALL ON FILL C/W STARTER WALL
42DD-DB00-9009	TYPICAL MSE WALL ON ROCK C/W STARTER WALL
42DD-DB00-9010	MSE-CF AND TEMPORARY WALLS

MSE walls with concrete facing panels shall be used in locations where prescribed by Construction Output Specifications, including at bridge abutments and in areas of high visibility to the traveling public.

3.2.2 Design Criteria

The Concessionaire will ensure the wall supplier monitors any overlying surcharge or bridge abutment and the geotechnical engineer evaluates the global stability of the wall and:

- Determines the need for supporting measures.
- Monitors the bearing pressures at the base of the wall.
- Confirms the overall stability of any cut or fill slope on which the wall is constructed.

The Concessionaire shall follow AASHTO's "allowable stress design" method, as outlined in "Standard Specifications for Highway Bridges" (17th Edition), in determining retaining wall design.

3.2.3 Seismic Analysis and Design Methodology

The seismic design of retaining wall external stability shall be carried out by the Concessionaire according to AASHTO's "Standard Specifications for Highway Bridges".

The design acceleration to be used by the Concessionaire in the pseudostatic dynamic analysis shall be the site-specific value provided by the Pacific Geoscience center for the 1-in-475-year event.

3.2.4 Groundwater and Hydraulics Conditions

The Concessionaire shall use continuous longitudinal drains at the back of the MSE soil reinforcing and inside the front wall facing. Transverse discharge drains shall be located along the wall segment at 50 to 75 m intervals, and at strategic locations where there is excessive groundwater, or where there is a low point in the wall profile.

4. **Geotechnical Design Criteria**

4.1 *Geotechnical Assumptions*

The Concessionaire will adjust their assumptions to ensure consistency of the baseline with the existing geotechnical field information (raw geotechnical data) which was made available to the Concessionaire in the Data Room, at no cost to the Province.

The Concessionaire confirms that:

- Its MSE and composite walls designs are based on the assumptions and baseline information provided in its proposal.
- The raw geotechnical data contained within relevant geotechnical reports in the Data Room (listed below) will govern for purposes of geotechnical baselining, not the Concessionaire's assumptions.
- The Concessionaire will adjust its assumptions to ensure consistency of its baseline with the existing geotechnical field investigation information (understood to mean raw geotechnical data) available in the Data Room. The Concessionaire's MSE and composite wall and other designs based on the Concessionaire's assumptions will be adjusted accordingly to ensure consistency with the existing geotechnical field investigation information in the Data Room.

For example, this will entail:

- Revisions to wall types
- Increase in DCP anchor embedment lengths
- Increase in anchor size
- Anchor density
- Requirement for bolts/dowels and concrete for rock support
- Requirement for sub-excavation of unsuitable materials
- The costs associated with any such adjustment (which would include any costs associated with revised MSE and composite wall and other designs) will be borne solely by the Concessionaire.

Geotechnical Reports

- "Section 1 Preliminary Design Geotechnical Assessment", Thurber Engineering
- "Results of Geotechnical Investigations, Section PD2", Golder Associates
- "Functional Geotechnical Report, Brunswick Beach to Porteau Cove", Trow Associates
- "Work Package 1 - Segment WP1B Horseshoe Bay to Sunset Beach Factual Geotechnical Report", EBA Engineering

- “WP1B Addendum to Proponent Requests for Additional Information”, EBA Engineering
- “Geotechnical Report WP3A (DB3) Lions Bay to Brunswick Beach (Final Factual)”, EBA Engineering
- “DBFO Proponent Requests for Additional Information - WP1B Geotechnical Investigations”, EBA Engineering
- “DBFO Proponent Requests for Additional Information - WP3 Geotechnical Investigations”, EBA Engineering
- “Preliminary Design Geotechnical Report - Sunset Beach to Kelvin Grove”, Golder Associates
- “Reliability and Seismic Deformation Analysis for Proposed MSE Walls on Rockfill Slopes”, Golder Associates
- “Rock Slope Condition Assessment Report WP#3A and #3 (DB3 and 4) Lions Bay to Porteau Cove Vol 1 & 2”, EBA Engineering

4.2 Retaining Walls on Rock Fill Slopes (excluding Median Walls)

The specific areas on the Concession Highway corridor where the Concessionaire will construct retaining walls on existing rockfill slopes where walls exceed 3 m height and where conventional geotechnical design criteria for global stability cannot be achieved are summarized in Table 4-1.

TABLE 4-1

Areas Where Conventional Global Stability Analysis Methods may be Inappropriate and Deformation Analysis will be Required

DB1	DB3	DB4	DB5	DB7
100+090 to 100+210	111+030 to 111+220	114+290 to 114+420	125+970 to 126+050	138+290 to 138+390
102+100 to 102+250	112+610 to 112+830	114+560 to 114+670	126+140 to 126+200	139+260 to 139+310
102+650 to 103+150	113+540 to 113+670	114+690 to 114+710	129+550 to 129+700	139+410 to 139+610
103+270 to 103+330	113+920 to 114+070	114+870 to 114+940	129+750 to 129+810	
103+390 to 103+450		115+460 to 115+565		
103+700 to 103+760		115+610 to 115+710		
103+870 to 104+000		115+770 to 115+850		
		115+890 to 115+894		
		115+894 to 115+900		
		115+900 to 115+930		
		115+930 to 115+936		
		115+936 to 115+950		
		116+390 to 116+530		
		117+050 to 117+129		
		117+129 to 117+135		
		117+162 to 117+168		
		117+270 to 117+280		
		117+325 to 117+340		
		117+340 to 117+400		
		117+450 to 117+510		
		117+559 to 117+694		
		117+710 to 117+814		
		117+970 to 118+024		
		118+024 to 118+030		
		118+030 to 118+164		
		118+164 to 118+170		
		118+170 to 118+194		
		118+239 to 118+494		
		118+534 to 118+575		
		119+133 to 119+214		
		119+275 to 119+297		
		119+297 to 119+303		
		119+303 to 119+384		
		119+410 to 119+590		
		119+654 to 119+770		
		119+930 to 119+979		
		120+035 to 120+434		
		121+067 to 121+095		
		121+095 to 121+101		
		121+101 to 121+153		
		121+375 to 121+438		
		121+438 to 121+444		
		121+444 to 121+564		
		121+564 to 121+570		
		121+570 to 121+610		
		121+960 to 122+194		
		122+974 to 123+148		
		123+148 to 123+154		
		123+274 to 123+384		
		123+384 to 123+390		
		123+390 to 123+580		
		123+580 to 123+634		
		124+034 to 124+074		

4.3 Seismic Design/Liquefaction Potential

Several areas that may be susceptible to liquefaction during a seismic design event have been identified. The Concessionaire will adopt the actions set out in the attached Table 2.3.1c-7 to achieve the required factor of safety:

TABLE 2.3.1c-7

Areas Potentially Susceptible to Liquefaction	Preliminary Remedial Design
South side of the Furry Creek east bridge	Seismic drains
Mamquam Blind Channel	Timber compaction piles installed below the water table at the north abutment and pier
Mamquam Blind Channel approach fill walls	Further site investigation required to determine if soils are liquefiable, results to be incorporated in design
Mamquam River pedestrian overpass	Timber compaction piles
Grade separated rail crossing at Brandywine Creek	Vibro-replacement at the abutments. Two longitudinal strips of vibro-replacement or dynamic compaction under each of the approach fills

5. Electrical, Signals And Lighting

5.1 Roadway Lighting

Traffic signals and lighting installations shall be provided in accordance with the following typical drawings:

47DD-DB03-0001 Lighting Installation-Site Plan-Elevations- Route 99 at Brunswick Beach Road

47DD-DB08-0004 Traffic Signal and Lighting Installation-Site Plan-Route99 at Centennial Way

47DD-DB08-0005 Traffic Signal and Lighting Installation-Site Plan Enlargement-Route 99 at Centennial Way

47DD-DB08-0006 Traffic Signal and Lighting Installation Elevations-Details-Route 99 at Centennial Way

47DD-DB08-0007 Lighting Installation-Site Plan-Elevations-Right-in/Right-out various locations

47DD-DB08-0011 0004 Traffic Signal and Lighting Installation

47DD-DB08-0012 0004 Traffic Signal and Lighting Installation

47DD-DB12-0001 Lighting and Message Sign Installation-Site Plan-Chance Creek Forest Service Road

47DD-DB12-0002 Bridge Deck Lighting-Site Plan-Variou

5.2 Electrical Sites

The Concessionaire shall install lighting in addition to the specifications set out in Part 1 of Schedule 5 [Construction Output Specifications] at the following locations:

- DB13 - Callaghan Creek Bridge*
- DB13 - Brandywine Creek Bridge*
- DB12 – Rubble Creek Bridge*

- DB9 – Alice Lake Road Pullout
- DB9 – Accesses at Sta 150+325 and Sta 151+160
- DB9 – North Road (pre-ducting)
- DB9 – Mamquam River Bridge*
- DB8 – Squamish Gateway Features
- DB8 – Mamquam Blind Channel Bridge
- DB7 – Stawamus Chief Park and Viewpoint Entrance and Exit
- DB7 – Shannon Creek Bridge*
- DB7 – Sta 137+700 Chain-up Pullout
- DB6 – Sta. 132+140 (Entrance) & 132+250 (Exit) Chain-up Area Entrance and Exit
- DB5 – North of Furry Creek Southbound Access for minimum 650 m
- DB5 – Furry Creek Off-ramps and On-ramps (N/B & S/B)
- DB5 – Sta. 124+660 Salt Shed Access
- DB4 – Kallahane Creek*

Note: For bridges identified *, addition lighting shall be provided for 20m to 30m either side of the structure.

6. **Drainage Design**

6.1 *Introduction*

The Concessionaire shall provide drainage facilities for the Existing Highway and the New Highway, as well as for any retaining walls and all streams that cross the Concession Highway.

6.2 *Highway Drainage*

The Concessionaire shall provide the drainage system illustrated on drawings 41DD-DB01-0103PB to -0111PB, 41DD-DB06-0102PC, 41DD-DB06-0501PC and 41DD-DB08-0106BPC to -0133PC. The Concessionaire shall ensure that the Concession Highway is designed to have adequate crossfall or longitudinal grade to ensure good drainage. Catchbasins will be provided along curbed sections of the Concession Highway through defined urban areas, and at the centerline barrier on super-elevated portions of the alignment. Catchbasins will be spaced to ensure shoulder ponding widths do not exceed MOT design criteria. Upslope ditches will drain longitudinally to culverts (which will cross the road at intervals) or to available drainage features, such as existing streams.

If an upgrade in capacity for a creek or stream is required, an arched culvert with a gravel bottom shall be installed in accordance with the environmental constraints. If an upgrade in capacity is not required, work in the stream will be kept to an absolute minimum.

The Concessionaire shall manage and improve the existing surface drainage system through the built-up area of Britannia Beach using roadside swales complete with catch basins and/or subdrains alongside the B.C. Rail track. May require some curbing to control drainage. Typical highway ditches will not be used.

Underground drainage system shall be used for the commercialized area of Britannia Beach between the 99'er Restaurant and Britannia Creek bridge. Drainage will outfall in two directions to a new outfall at Britannia Creek and to a new culvert crossing the highway and B.C. Rail tracks at the restaurant. Highway drainage will be kept separate from existing drainage systems.

The compiled information for all creeks is summarized in Table 6-1 below.

TABLE 6-1

	Creek / Channel / River	Existing Structure	DBFO Proposed Upgrade
DB1	Larson Creek	n/a	fisheries enhancement / new four-lane bridge
	Nelson Creek	bridge	re-lane existing structure
DB3	Rundle Creek	culvert	wire catchment
	Harvey Creek	barrier and storage basin (1985)	No update planned as part of the Pre Olympic Works
	Alberta Creek	debris channel and bridge (1988)	No update planned as part of the Pre Olympic Works
	North Alberta Creek		No update planned as part of the Pre Olympic Works
	Magnesia Creek	barrier and storage basin and bridge (1989)	No update planned as part of the Pre Olympic Works
DB3/DB4	M Creek	bridge (1982)	widen bridge with two-lanes
	Deeks Creek	bridge (1968)	new two-lane bridge
	Brunswick Pt Creek (120+070)	culvert	roadside debris basin
	Unnamed #3 (120+220)	culvert	No update planned as part of the Pre Olympic Works
	Unnamed #3.5 (120+550)	culvert	roadside debris basin
	Bertram Creek (121+420)	culvert	roadside debris basin and wire catchment
	Unnamed #4 (Bosco Creek) (122+290)	culvert	No update planned as part of the Pre Olympic Works
	Kallahne Creek (122+440)	culvert	10 m span CMP arch and roadside debris basin

	Creek / Channel / River	Existing Structure	DBFO Proposed Upgrade
	North Kallahne Creek (123+140)	culvert	No update planned as part of the Pre Olympic Works
DB5	Unnamed #6.9 (123+630)	culvert	No update planned as part of the Pre Olympic Works
	Unnamed #7 (24.2 km) (124+080)	culvert	improve ditching on east side; divert excess to #7.1
	Unnamed #7.1 (124+240)	culvert	improve ditching on east side; divert excess to #8
	Unnamed #8 (24.6) (124+550)	culvert	3500 x 2200 CMP arch
	Unnamed #8.05	culvert	No update planned as part of the Pre Olympic Works
	Unnamed #8.1 "South Creek" (126+280)	culvert	No update planned as part of the Pre Olympic Works
	Furry Creek	bridges	add second two-lane bridge
	Middle Creek (127+180)	culvert	3300 x 2200 CMP arch; fisheries enhancement
	Unnamed #9 (128+230)	culvert	No update planned as part of the Pre Olympic Works
	Unnamed #10 (128+700)	culvert	No update planned as part of the Pre Olympic Works
DB6	Daisy Creek (130+800)	culvert	Training berms
	Thistle Creek (131+400)	culvert	3050 x 2400 box culvert; fisheries enhancement
	Britannia Creek	bridge (1977)	new second two-lane bridge
	Unnamed #11 (133+380)	culvert	No update planned as part of the Pre Olympic Works
	Unnamed #12 (133+915)	culvert	new 2100 CMP
	Unnamed #13 (137+090)	culvert	add second 1800 CMP
	Unnamed #14 (138+120)	culvert	No update planned as part of the Pre Olympic Works
DB7	Gonzales Creek	bridge (1968)	new 4-lane bridge and channel improvements
DB6	Unnamed #15 (138+930)	culvert	No update planned as part of the Pre Olympic Works
DB7	Shannon Creek	bridge (1968)	add second two-lane bridge
	Olesen Creek (140+400)	culvert	relief or arch culvert
DB8	Mamquam Blind Channel	culvert	add second two-lane bridge
	Mamquam Blind channel (culvert 144+360)	culvert	3600 x 1800 box culvert; fisheries enhancement

	Creek / Channel / River	Existing Structure	DBFO Proposed Upgrade
	Mamquam Creek	bridge (1977)	add second two-lane bridge
	Mashiter Channel (147+300)	bridge	1800 x 1800 box culvert; fisheries enhancement
	Meighan Creek (149+390)	culvert	No update planned as part of the Pre Olympic Works
	Thunderbird Creek (149+435)	culvert	No update planned as part of the Pre Olympic Works
	Newport Creek (149+840)	culvert	1800 x 1200 box culvert; fisheries enhancement
	Hop Ranch Creek (150+100)	culvert	No update planned as part of the Pre Olympic Works
	Dryden Creek (151+070)	culvert	1600 x 2400 CMP arch
DB12	Rubble Creek	bridge (1979)	add second two-lane bridge and debris berms to prevent channel migration
	Cheakamus River	bridge (1965)	add second two-lane bridge
	Daisy Lake	bridge (1964)	add second two-lane bridge
DB13	Brew / Widow Creek (237+000)	culvert	10200 x 1800 CMP arch
	Brandywine Creek	bridge (1979)	add second two-lane bridge rip-rap channel
	Callaghan Creek	bridge (1975)	add second two-lane bridge
	Unnamed #20 (247+250)	culvert	1900 x 1400 CMP arch
	Unnamed #21 (247+680)	culvert	No update planned as part of the Pre Olympic Works
	Unnamed #22 (248+150)	culvert	2800 x 1900 CMP arch
	Tributary South of Millar Creek (Unnamed #23)	culvert	5000 x 3300 CMP arch
	Unnamed #24 (249+515)	culvert	No update planned as part of the Pre Olympic Works
	Millar Creek (249+730)	culvert	10200 x 4800 CMP arch

6.3

Wall Drainage

Mechanically stabilized earth and concrete retaining walls shall have perforated subdrains installed along the toe of the wall. Subdrains will also be installed at the base of the fill, where it meets native ground, to prevent groundwater from saturating the fill. In cases where existing walls require burial behind new retaining structures, the existing subdrains will be extended through new fills to minimize the possibility of saturation of the buried fills.

6.4 Debris Flow Hazard

The Concessionaire will implement a debris flow mitigation strategy similar to that currently adopted by MOT in Highway Section DB2 for all creeks. The Concessionaire shall also monitor all small creeks with culvert crossings, low hazards ratings, small design volumes, and reasonable sight distances in their vicinity under the alert system. The Concessionaire shall install trash racks on all creeks which have a significant amount of storage volume against the Existing Highway embankment.

6.4.1 Debris Flow Mitigation

The Concessionaire shall construct debris flow mitigation and/or hazard reduction structures on Rundle, Brunswick Point, Bertram, Kallahne, Daisy, and Gonzales creeks and the Tributaries South of Millar Creek, as outlined below.

The Concessionaire shall also implement mitigative measures to reduce potential hazards at Disbrow, Unnamed #1 (5.0 km), Unnamed #3 (Bosco), North Kallahne and Unnamed #8 (24.6 km) creeks. The Concessionaire shall excavate small basins adjacent to the Concession Highway or install flexible spring wire catchment fences in these areas to increase the amount of storage against the highway embankment.

6.4.2 Rundle Creek

The Concessionaire will construct a flexible spring wire catchment fence system upstream of the Concession Highway at Rundle Creek, and shall also install a trash rack at the culvert inlet.

6.4.3 Brunswick Point Creek

The Concessionaire shall excavate a small basin in the area between the rock cut and road shoulder at Brunswick Point Creek to create as much storage against the highway embankment as possible.

6.4.4 Bertram Creek

The Concessionaire will construct a mitigation structure at Bertram Creek consisting of either a storage basin constructed by excavating additional rock, or a flexible spring wire catchment fence constructed upstream of the Concession Highway.

6.4.5 Kallahne Creek

The Concessionaire shall increase the culvert under the Concession Highway to a 10 m span CMP arch at Kallahne Creek, capable of handling debris flows.

6.4.6 Daisy Creek

The Concessionaire shall construct a deflection berm and catchment system at Daisy Creek. The Concessionaire shall construct a deflection berm 4 to 5 m high between the Concession Highway and Daisy Creek where they run parallel to each other, such that the

berm directs debris to the north where a flexible spring wire catchment fence will be constructed about 20 m upstream of the culvert. The Concessionaire shall conduct detailed field work during detailed design to refine design volume, berm placement, and fence location.

6.4.7 Gonzales Creek

The Concessionaire will raise the vertical alignment and shift the horizontal alignment downslope to allow a clearance of at least 6 m for the bridge at Gonzales Creek. A 4 m high deflection berm will also be constructed on the north side of the existing channel to prevent flows from diverting into the old channel and impacting the road to the north.

6.4.8 Tributaries South of Millar Creek

Several tributaries are located about 300 m south of Millar Creek. A debris flow hazards assessment of these tributaries was conducted by BGC in December 2003 after an event in October 2003. The assessment suggested a design volume of 15,000 m³ was appropriate and recommended the construction of a basin catchment structure. The tributaries cross the highway at two locations. The north and south crossings comprise two and three culverts of varying sizes, respectively. The south set of culverts is currently the primary creek crossing; however, upstream evidence suggests the creek has jumped between channels in the past.

The Concessionaire's alignment shall shift the entire highway downslope from the existing alignment, and a catchment structure will be constructed per BGC's recommendation. The Existing Highway embankment will be raised by 2 to 3 m between the north and south crossings and, where possible, material will be excavated adjacent to the existing channels to create more storage volume. A debris straining structure or flexible spring wire catchment will be constructed above the south crossing of the creek to pass the 1-in-200 year water flood event.

7. Signing and Pavement Marking Design Criteria

7.1 Shoulder Rumble Strips

The Concessionaire's design shall provide shoulder rumble strips in the following highway sections:

- Highway Sections DB4 to DB7, where a minimum shoulder width of 1.5 m will be provided; total lengths are 24.5 km for northbound and 25.6 km for southbound
- Highway Section DB9 over a length of 12.7 km.

7.2 Centerline Rumble Strips

Centreline Rumble Strips will be provided by the Concessionaire in the following sections:

- Highway Sections DB1 to DB3, where median barriers are required, for a total length of 14.2 km
- Highway Sections DB4 to DB7, where a flush median (with or without median barriers) is proposed, for a total length of 25.1 km
- Highway Section DB8, where median barriers are proposed, for a total length of 4.9 km
- Highway Section DB9, over a length of 12.7 km.

7.3 High Reflectivity Pavement Markings

High Reflectivity Pavement Markings (“HRPMs”) will be applied along the Concession Highway according to the following principles:

- On divided sections of the Concession Highway with median barrier or raised median, HRPMs will only be used on the shoulder (fog) lines.
- For undivided sections of the Concession Highway (both two- and three-lane), HRPMs will be used on both the centerline and the shoulder (fog) lines.
- HRPMs will not be used in fully illuminated urban areas with curb and gutter and sidewalks.
- In Highway Sections DB2 and DB9 to DB11, HRPMs will be installed, according to the above treatments, at the first resurfacing event.

The installation schedule for HRPMs will be no later than:

- In Highway Sections DB1, DB3 to DB8, and DB12/13, 2010
- In Highway Section DB9 south, 2013
- In Highway Section DB9 north, DB10, and DB11; 2017
- In Highway Section DB2, 2021

The HRPMs will be maintained by the Concessionaire at the described locations throughout the Contract Term.

7.4 Post-Mounted Delineators

Post-mounted delineators consisting of reflective markers on wood or steel posts will be installed by the Concessionaire according to B.C. standard spacing requirements set out in the Specifications wherever an open shoulder is proposed. This treatment will be applied to all highway sections except for Highway Sections DB10 and DB11. The total lengths of this treatment are approximately 73 km for northbound lanes and 54 km for southbound lanes.

7.5 *Flashing Beacons*

The Concessionaire will provide flashing beacons at Murrin Park Access, Stawamus Chief Access, and Alice Lake Road intersections.

8. **Landscaping and Site Restoration Design**

DELETED

PART C. CONSTRUCTION**1. General**

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2. Road Safety Audits**2.1 Overview**

The Road Safety Audit process shall follow the principles and guidelines set forth in the “The Canadian Road Safety Audit Guide”, published by the Transportation Association of Canada (TAC), 2001.

2.2 Road Safety Audit Team

The Audit Team will consist of John Morrall, P. Eng. (Team Leader), and Gerry Smith, P. Eng.

2.3 Detailed Design Road Safety Audit

The Road Safety Audit process for the detailed design phase will involve the following:

- start-up meeting of the Concessionaire’s design team and the Audit Team to review the Project, discuss any safety-related design issues, and collect the available plans and reports, etc.
- review of the design standards established for the Project to ensure they are consistent with the state-of-the-art and best practices related to geometric design standards
- detailed review of the completed design plans to identify any potential safety-related enhancements that might have an impact on the operational safety of the Concession Highway. Issues considered would include:
 - design consistency through intersections and interchanges
 - horizontal and vertical alignment
 - cross-section design
 - roadside treatment, clear zone requirements
 - sight distances at critical locations
 - intersection layouts related to the location of traffic control devices, potential visual obstructions, lane arrangements, and lane assignments
 - accommodation of the design vehicle
 - pavement markings
 - signing locations
 - the interface with the existing adjacent roadways
- the results of the audit will be documented in a report to the Concessionaire’s design team.

2.4 Pre-Opening Road Safety Audit

A Road Safety Audit will be carried out on the completed highway sections to identify potential safety enhancements that may contribute to collisions. This process includes:

- meeting with the project team to review any construction-related issues, in particular design changes that may affect the safety of the Concession Highway
- checking to ensure that enhancements identified in the design audit are addressed and the resulting design changes do not create a safety problem
- checking to ensure the safety features proposed for the Project are properly installed in accordance with the Technical Requirements
- reviewing any design changes that occurred during construction to ensure they do not create a safety problem
- conducting a field review of the Concession Highway, under both daytime and nighttime conditions, to observe its operation from the perspective of the road user
- preparing a report that outlines any safety enhancements that have been identified.

2.5 Temporary Traffic Control Road Safety Audit

Road Safety Audits shall be conducted for all temporary traffic control set-ups.

The Audit Team will follow a prompt list (based on “Guidelines for an In-Service Road Safety Operational Review of Temporary Traffic Control,” ITE 2004) that includes both daytime and night time audits, as well as a review of all paper plans, procedures, inspection sheets, and records kept by the Contractor and Designer. The TTC prompt list would include:

- office documentation
- geometric design
- traffic control signs
- channellization devices
- other devices (CMS, arrow boards, etc.)
- field check of plans
- security of work site
- pavement markings
- flagging
- human factors
- environmental factors.

2.6 Pavement Construction

The following minimum pavement structures will be provided for the highway sections indicated:

2.6.1 Highway Sections DB1 and DB3 to DB7

125 mm	AP
150 mm	-25 mm CBC
150 mm	-75 mm CBC

In addition, the requirements of Schedule 12 [Environmental Obligations] with respect to Open Graded Friction Course shall apply and shall be incorporated into the pavement design and construction.

2.6.2 Highway Section DB8

The minimum pavement structure will be the greater of adequate for 6.5 M ESALs or:

125 mm	AP
150 mm	-25 mm CBC
150 mm	-75 mm CBC
475 mm	-75 mm SGSB

The SGSB layer may be reduced to 300 mm thickness where the road structure is built on top of imported granular earth embankment fill, constructed in accordance with MOT Standard Specification, Section 201.37.

In addition, the requirement of Schedule 12 with respect to Open Graded Friction Course shall apply and shall be incorporated into the pavement design and construction.

2.6.3 Highway Sections DB12 and DB13

2.6.3.1 Rock or rockfill subgrade

100 mm	AP
150 mm	-25 mm CBC
150 mm	-75 mm CBC

Type D granular earth embankment

100 mm	AP
150 mm	-25 mm CBC
150 mm	-75 mm CBC
300 mm	-75 mm SGSB

Annex 2 to Part 2 of Schedule 5**Definitions and Abbreviations**

“**Community Premium**” has the meaning given in Section 8.1 of Part B of Part 1 of Schedule 5 [Construction Output Specifications].

“**ESAL**” means equivalent single axel loads.

“**HRPMs**” means High Reflectivity Pavement Markings.

“**NWPA**” means *Navigable Waters Protection Act*.

“**PGA**” means peak ground acceleration.

“**PTFE**” means polytetraflouethylene polymer.

“**TTC**” means temporary traffic control.

“**Urban Premium**” has the meaning given in Section 8.1 of Part B of Part 1 of Schedule 5 [Construction Output Specifications].

SCHEDULE 5**CONSTRUCTION AND END OF TERM REQUIREMENTS****Part 3****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 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, 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 Maintenance 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 and/or property 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 (including the Works) 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 Checker who has been designated in writing by the Concessionaire, Contractor, Designer, Audit Team or Checker to the Province as having authority to sign Certificates on behalf of the Concessionaire, Contractor, Designer, Audit Team or Checker. 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 Section 1 of 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 below 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, 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 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, Design Data for Temporary Works may be prepared by a registered professional engineer employed by the Contractor, registered in British Columbia. 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 below, 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 below, 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 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, 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 Proposal (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 Proposal 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 registered 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 a duly experienced and registered professional engineer of the appropriate discipline in each case respectively, 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 a duly experienced and registered professional geotechnical engineer, registered in British Columbia, together with the submission of Design Data in accordance with paragraph 5 above.

Testing

13. To the extent and in the manner provided by the Design Management Plan, 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 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 or any other works the subject of a Proposal that does not accord with the Technical Requirements shall be rejected.

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, any Public Authority Highway or other relevant works) shall be subject to road safety audits as and where required pursuant to the provisions of the Design Management Plan and other 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 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 Province's Representative pursuant to Section 13.1.1.2, 13.1.3.2 or 13.2.3.3 or, where applicable, Section 19.7.14 or 20.7.3.1 of this Agreement 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.
18. Except as otherwise expressly agreed in writing by the Province's Representative, the Concessionaire shall implement after each road safety audit all recommendations made by the Audit Team.
19. The Concessionaire shall, after implementation of all recommendations (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 with respect to any PM-Section or any other Pre Olympic Works or with respect to the Olympic Requirements Works, and the Concessionaire's Final Completion Certificate shall not be issued with respect to any Post Olympic Works or Olympic Requirements Works, unless a Stage 3 Road Safety Audit Certificate in relation to the relevant PM-Section, Pre Olympic Works, Olympic Requirements Works, Post Olympic Works or Olympic Requirements Works has been submitted.

Construction

20. During the construction of any Works or any other works that are the subject of a Proposal, the Designer shall, in accordance with the procedures set out in the Design Management Plan and 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 Design Management Plan and 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 and Final Completion Certificates

22. The Concessionaire shall provide to the Province's Representative: (a) a Concessionaire's Substantial Completion Certificate (PM-Section) once all the Pre Olympic Works relating to each PM-Section have been Substantially Completed; (b) a Concessionaire's Substantial Completion Certificate (Pre Olympic Works) once all the Pre Olympic Works have been Substantially Completed; and (c) a Concessionaire's Substantial Completion Certificate (Olympic Requirements Works) once all of the Olympic Requirements Works have been Substantially Completed. A Concessionaire's Substantial Completion Certificate shall only be issued after:

22.1 all Construction Certificates in respect of the Works to which the Concessionaire's Substantial Completion Certificate relates have been issued;

22.2 a Stage 3 Road Safety Audit Certificate in respect of the Works to which the Concessionaire's Substantial Completion Certificate relates has been issued; and

22.3 all relevant quality assurance 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 showing that the Works to which the Concessionaire's Substantial Completion Certificate relates have been Substantially Completed in accordance with all applicable Technical Requirements and other requirements of this Agreement.

A Concessionaire's Substantial Completion Certificate must be issued with respect to the relevant Pre Olympic Works and with respect to the Olympic Requirements Works prior to the Independent Certifier commencing its inspection for the purposes of the issuance of a Substantial Completion Certificate in respect of such Works as provided in Section 13.1.1, Section 13.1.2 or Section 13.1.3 (as applicable).

23. The Concessionaire shall provide to the Province's Representative: (a) a Concessionaire's Final Completion Certificate (PM-Section) once all the Pre Olympic Works relating to each PM-Section have been Finally Completed; (b) a Concessionaire's Final Completion Certificate (Pre Olympic Works) once all the Pre Olympic Works have been Finally Completed; (c) a Concessionaire's Final Completion Certificate (Olympic Requirements Works) once all the Olympic Requirements Works have been Finally Completed; (d) a Concessionaire's Final Completion Certificate (Post Olympic Works) once all the Post Olympic Works have been Finally Completed; (e) a Concessionaire Final Completion Certificate (Reinstatement Works) once all the Reinstatement Works provided for in a Reinstatement Plan have been Finally Completed; and (f) a Concessionaire's Final Completion Certificate (Renewal Works) once any Renewal Works have been Finally Completed. A Concessionaire's Final Completion Certificate shall only be issued after:
- 23.1 Construction Certificates in respect of all of the Works to which the Concessionaire's Final Completion Certificate relates have been issued;
 - 23.2 Stage 3 Road Safety Audit Certificates in respect of all of the Works to which the Concessionaire's Final Completion Certificate relates have been issued; and
 - 23.3 all relevant quality assurance 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 showing that all of the Works to which the Final Completion Certificate relates have been Finally Completed in accordance with all applicable Technical Requirements and other requirements of this Agreement.

A Concessionaire's Final Completion Certificate must be issued with respect to the relevant part of the Works prior to an application by the Concessionaire under Section 13.2.1, 13.2.2, 13.2.2A or 13.2.3 of this Agreement for the issue of a Final Completion Certificate in respect of such Works and prior to an application by the Concessionaire under Section 20.7.3 or Section 19.7.14 for the issue of a Reinstatement Certificate or Renewal Certificate in respect of the relevant Reinstatement Works or Renewal Works, as applicable.

24. All Concessionaire's Substantial Completion Certificates and Concessionaire's Final Completion Certificates 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 50meters; or
- (v) have a skew exceeding 45 degrees; 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 below, 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 be entitled to object to such proposed Category only on the ground that the proposal 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 without limitation assessments, drawings and bar schedules) shall be checked as follows:
- 29.1 Category 0 and Category I Structures require an independent check by a registered 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 and Category II 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 a check to be carried out by a Checker appointed in accordance with paragraph 30 below.

All Structures shall have a Concept Review.

Checker

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 to serve as Checker in respect of that Structure and the proposed terms and conditions of its employment. The proposal shall be supported by a C.V. for each member of the checking team. The Province's Representative may object to such proposed Checker only on the grounds that the organization proposed as Checker:
- 30.1 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 Procedure

31. The form and detail of the design check is for the checking engineer, Checking Team or Checker (as applicable) to decide.
32. The Design Team, Designer, checking engineer, Checking Team and Checker 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 Checker shall each also be responsible for its own interpretation of the relevant ground information.
33. Independence of the Design Team and Checking Team, and independence of the Designer, Concessionaire and Contractor and the Checker, 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 above, 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 account of 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 by the Province's Representative.
39. Without limiting paragraph 3 of Section B below, 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 without limitation 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 above 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 above 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.
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 and 35 and 37 to 39 shall apply *mutatis mutandis* to any such TAF, provided that the reference in paragraph 37 above 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 shall 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 Proposal, 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 requirements.

Section B: Alternative Proposals

1. An "Alternative Proposal" 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, Maintenance Works, Reinstatement Works, Renewal Works or otherwise (other than a Concessionaire Change) which proposes a variation 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 below, the Concessionaire shall submit any proposal for an Alternative Proposal 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 Proposal in relation to a Structure or in relation to any Temporary Works referred to in paragraph 44 of Section A above or in relation to any Strengthened Earthwork, the Designer shall propose such Alternative Proposal in the relevant TAF, which shall be accompanied by an Alternative Proposal Report in accordance with paragraph 4 below. 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 Proposal.
4. Without limitation to the provisions of Part 2 of Schedule 8 [Review Procedure], the submission of an Alternative Proposal 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 Proposal Report"). The nature and scope of the information required shall

vary with the proposal under consideration but shall at a minimum include relevant aspects of the following:

- 4.1 detailed information (including plans) about the existing circumstances and the impact of the Alternative Proposal;
 - 4.2 detailed information (including plans) of possible options or schemes that would not require an Alternative Proposal;
 - 4.3 reasons for proposing the Alternative Proposal (for example, cost, environmental factors, value for money, economics);
 - 4.4 details of the Alternative Proposal 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 Proposal 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 Proposal; and
 - 4.8 evidence of deterioration characteristics or long term assessment criteria sufficient to establish the condition and remaining service life of Project Facilities constructed in accordance with the Alternative Proposal at the end of the Contract Period.
5. No Alternative Proposal shall be incorporated into the design or construction of the relevant works until there has been no objection to such Alternative Proposal under the Review Procedure.
 6. Each Alternative Proposal 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 Proposal in other sites or circumstances.

Annex 1 to Part 3 of Schedule 5**Index of Certificates**

1. Design Certificate (General)
2. Design Certificate (Geotechnical)
3. Design Certificate (Structures)
4. Road Safety Audit Certificate (Stage 1)
5. Road Safety Audit Certificate (Stage 2)
6. Road Safety Audit Certificate (Stage 3)
7. Concessionaire Change Certificate
8. Province Change Certificate
9. Alternative Proposal Certificate
10. Construction Certificate
11. Concessionaire's Substantial Completion Certificates (PM Section/Pre Olympic Works/Olympic Requirements Works)
12. Substantial Completion Certificates (PM-Section/Pre Olympic Works/Olympic Requirements Works)
13. Concessionaire's Final Completion Certificates (PM-Section/Pre Olympic Works/Olympic Requirements Works/Post Olympic Works/ Reinstatement Works/Renewal Works)
14. Final Completion Certificates (PM-Section/Pre Olympic Works/Olympic Requirements Works/Post Olympic Works)
15. Renewal Certificate
16. Reinstatement Certificate
17. End of Term Certificate
18. Assessment Certificate (Structures)

Annex 1(1) to Part 3 of Schedule 5
Certificate Ref No. []

DESIGN CERTIFICATE (GENERAL)

In respect of :..... (Provide details eg. Highway/ Rock Retention/Drainage/ Environmental)

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 Sea-to-Sky Highway Improvement 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 11.3 and 14.6 of the Agreement and Part 3 of Schedule 5 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 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 Technical Requirements, as amended by the following:

[List, if any, the changes made by the issue of Change Certificates and Alternative Proposal 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 Sea-to-Sky Highway Improvement 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 and 14.6 of the Agreement and Part 3 of Schedule 5 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 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. 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 Proposal 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 the Sea-to-Sky Highway Improvement 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 and 14.6 of the Agreement and Part 3 of Schedule 5 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 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 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 Proposal 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 Sea-to-Sky Highway Improvement 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 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 Management Plan, 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 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 Sea-to-Sky Highway Improvement 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 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 Management Plan, 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 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 Sea-to-Sky Highway Improvement 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 to the Agreement.

1. We certify that [*reference relevant works*] as constructed, tested and commissioned has been the subject of a Stage 3 Road Safety Audit in accordance with Part 3 of Schedule 5 to the Agreement, the Design Management Plan, 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 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 Sea-to-Sky Highway Improvement 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 Sea-to-Sky Highway Improvement 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.

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

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 PROPOSAL 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 Sea-to-Sky Highway Improvement 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 Proposal in accordance with Section 14.6 of the Agreement.

- 1. The following changes are recorded as an Alternative Proposal to which there has been no objection in accordance with the Review Procedure. The submission of the proposal for this Alternative Proposal 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 Sea-to-Sky Highway Improvement 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 Part 3 of Schedule 5 to the Agreement.

Contractor's and Concessionaire's Statement

- 1. We certify that **[name and element of construction]** has been designed, constructed, [Substantially Completed] [Finally 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 Technical Requirements [as amended by the following Concessionaire Changes, Province Changes and Alternative Proposals: [.....]].

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 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 Works or other works has been designed, constructed, [Substantially Completed] [Finally 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 Technical Requirements [as amended by the Concessionaire Changes, Province Changes and Alternative 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.....
 Province's Representative
 Name.....
 Date.....

Annex 1(11) to Part 3 of Schedule 5
Certificate Ref. No. []

**CONCESSIONAIRE'S SUBSTANTIAL COMPLETION CERTIFICATE
(PM-SECTION) or (PRE OLYMPIC WORKS) or
(OLYMPIC REQUIREMENTS WORKS)**

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 Sea-to-Sky Highway Improvement 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 to the Agreement when a PM-Section has been Substantially Completed or all of the Pre Olympic Works or all of the Olympic Requirements Works have been Substantially Completed.

For PM-Section:

We certify that all of the Works relating to [*reference relevant PM-Section*] were Substantially Completed in accordance with the Agreement on [date] and that such PM-Section is suitable and safe for use by members of the public without traffic management restrictions.

For Pre Olympic Works:

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

For Olympic Requirements Works:

We certify that all of the Olympic Requirements Works were Substantially Completed in accordance with the Agreement on [date] and that all of the Olympic Requirements Works are 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
Certificate Ref No. []

**SUBSTANTIAL COMPLETION CERTIFICATE
(PM-SECTION) or (PRE OLYMPIC WORKS) or
(OLYMPIC REQUIREMENTS WORKS)**

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 Sea-to-Sky Highway Improvement Project. Expressions used in the Agreement have the same meanings in this Certificate.

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

For PM-Section:

1. Confirmation was given on [date] by the Concessionaire that all of the Works relating to [reference relevant PM-Section] have been Substantially Completed in accordance with the Agreement and that such [reference relevant PM-Section] is suitable and safe for use by members of the public without traffic management restrictions.
2. A Road Safety Audit Certificate (Stage 3) for [reference relevant PM-Section] was issued on [date].
3. A Concessionaire's Substantial Completion Certificate (PM-Section) for the Works relating to [reference relevant PM-Section] was issued on [date].
4. This document shall serve as the Substantial Completion Certificate (PM-Section) for the Works relating to [reference relevant PM-Section].

For Pre Olympic Works:

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

For Olympic Requirements Works:

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

Signed.....
 Independent Certifier
 Name.....
 Title.....
 Date.....
 Professional Registration Number:
 Affix Professional Seal

Annex 1(13) to Part 3 of Schedule 5
Certificate Ref. No. []

**CONCESSIONAIRE'S FINAL COMPLETION CERTIFICATE
(PM-SECTION) or (PRE OLYMPIC WORKS) or (OLYMPIC REQUIREMENTS
WORKS) or (POST OLYMPIC WORKS)
or (REINSTATEMENT WORKS) or (RENEWAL WORKS)**

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 Sea-to-Sky Highway Improvement 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 to the Agreement when a PM-Section, the Pre Olympic Works, the Olympic Requirements Works, the Post Olympic Works, Reinstatement Works or Renewal Works have been Finally Completed.

We certify that [all of the Works relating to *reference relevant PM-Section*] or [all of the Pre Olympic Works] or [all of the Olympic Requirements Works] or [all of the Post Olympic Works] or [all of the Reinstatement Works described in the Reinstatement Plan identified in Schedule "A" annexed hereto] or [all of the Renewal Works described in Schedule "A" annexed hereto] were Finally 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. []

**FINAL COMPLETION CERTIFICATE
(PM-SECTION) or (PRE OLYMPIC WORKS) or
(OLYMPIC REQUIREMENTS WORKS) or
(POST OLYMPIC WORKS)**

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 Sea-to-Sky Highway Improvement Project. Expressions used in the Agreement have the same meanings in this Certificate.

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

1. Confirmation was given on [date] by the Concessionaire that [all of the Works relating to *reference relevant PM-Section*] or [all of the Pre Olympic Works] or [all of the Olympic Requirements Works] or [all of the Post Olympic Works] have been Finally Completed in accordance with the Agreement.

2. This document shall serve as the Final Completion Certificate (PM-Section) or (Pre Olympic Works) or (Olympic Requirements Works) or (Post Olympic Works) for [the Works relating to *reference relevant PM-Section*] or [the Pre Olympic Works] or [the Olympic Requirements Works] or [the Post Olympic Works].

Signed:
 Independent Certifier
 Name:
 Title.....
 Date.....
 Professional Registration Number:
 Affix Professional Seal

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 Sea-to-Sky Highway Improvement 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 Finally 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. []

REINSTATEMENT 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 Sea-to-Sky Highway Improvement Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Reinstatement Certificate to be used by the Province’s Representative in accordance with Section 20.7.3 of the Agreement.

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

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

* Annex Schedule “A” identifying relevant Reinstatement Plan

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 Sea-to-Sky Highway Improvement 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 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 Sea-to-Sky Highway Improvement 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 Part 3 of Schedule 5.

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 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 Proposal 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 Type of highway

1.2 Permitted 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 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.

- 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 Minimum headroom provided m. and navigational clearances and rail clearance envelopes.
 - 4.1.8 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. 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, 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 Checker.
- 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 (without limitation):
 - 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:
 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 Proposals)

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	4.0	4.0	5.0	N/A	2.0	2.0	3.0
Structures constituting Temporary Off-Site Facilities	N/A	5.0	5.0	6.0	N/A	3.0	3.0	4.0

Notes:

- (a) This Annex 3 applies only to those TAFs that do not include any Alternative Proposals.
- (b) The above times are in place of those given in paragraph 1.3 of Part 2 of Schedule 8.
- (c) The review time commences when the Province's Representative actually receives the completed TAF.
- (d) All review times are quoted in weeks.
- (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) \times $\frac{\text{Number of Forms Submitted}}{12}$.
- (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.

Annex 4 to Part 3 of Schedule 5

Review Times for Technical Appraisal Forms
(Alternative Proposals 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	5.0	5.0	6.0	N/A	2.0	2.0	3.0
Structures constituting Temporary Off-Site Facilities	N/A	7.0	7.0	7.0	N/A	3.0	3.0	4.0

Notes:

- (a) This Annex 4 applies only to those TAFs that include an Alternative Proposal.
- (b) The above times are in place of those given in paragraph 1.3 of Part 2 of Schedule 8.
- (c) The review time commences when the Province's Representative actually receives the completed TAF.
- (d) All review times are quoted in weeks.
- (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) \times $\frac{\text{Number of Forms Submitted}}{12}$.
- (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.

Annex 5 to Part 3 of Schedule 5

Review Times for Technical Appraisal Forms
(Temporary Works)**No Alternative Proposals**

STRUCTURE GROUP	FIRST SUBMISSION OF TECHNICAL APPRAISAL FORM	RE-SUBMISSION OF TECHNICAL APPRAISAL FORM
Structures other than Structures constituting Temporary Off-Site Facilities	4.0	2.0

Alternative Proposals

STRUCTURE GROUP	FIRST SUBMISSION OF TECHNICAL APPRAISAL FORM	RE-SUBMISSION OF TECHNICAL APPRAISAL FORM
Structures other than Structures constituting Temporary Off-Site Facilities	6.0	2.0

Notes:

- (a) This Annex 6 applies only to TAFs in respect of Temporary Works.
- (b) The above times are in place of those given in paragraph 1.3 of Part 2 of Schedule 8.
- (c) The review time commences when the Province's Representative actually receives the completed TAF.
- (d) All review times are quoted in weeks.
- (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) \times $\frac{\text{Number of Forms Submitted}}{12}$.
- (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.

SCHEDULE 5**CONSTRUCTION AND END OF TERM REQUIREMENTS****Part 4****End of Term Requirements**

Capitalized terms used in this Part 4 of Schedule 5 [End of Term Requirements] that are defined in the Highway Asset Preservation Performance Measures for Highway Concessions included in the Ministry's Standards have the meanings herein that are ascribed to them in the Highway Asset Preservation Performance Measures for Highway Concessions.

Upon the Expiry Date each element of the Project Facilities must comply in all respects with the relevant requirements specified in this Part 4 of Schedule 5 [End of Term Requirements].

1. Compliance with Asset Preservation and Other Performance Measures

In addition to and without limiting any other requirements under this Part 4 of Schedule 5 [End of Term Requirements] applicable to particular elements of the Project Facilities, at the Expiry Date each element of the Project Facilities must be in the condition in which it is required to be maintained in accordance with the provisions of the O&M Output Specifications and the O&M Requirements and the other provisions of this Agreement, including, without limitation, the following Ministry Standards referred to in Section 1.2 of Part 1 of Schedule 7 [O&M Output Specifications]:

- Highway Asset Preservation Performance Measures for Highway Concessions;
- Highway Maintenance Specifications for Highway Concessions;
- Highway Corridor Management Specifications for Highway Concessions; and
- Local Area Specifications for the Sea to Sky Concession.

2. Determination of RSL

For purposes of this Part 4 of Schedule 5 [End of Term Requirements], the remaining service life ("RSL") of an asset component will be determined in accordance with the following:

$$\text{RSL} = (\text{Expected Service Life} \times \text{Life Adjustment}) - \text{Age}$$

Where:

Expected Service Life is the expected service life of the asset component in years taking into account the historic performance of similar construction. The expected service life will be a function of

	treatment type, design, materials, and construction workmanship.
Age	is the age of the asset component, in years, between the date of establishment and the current date.
Life Adjustment	is the adjustment to the Expected Service Life to account for current asset condition, past utilization and historic performance of the asset. The adjustment process will be carried out using B.C. Ministry of Transportation accepted methodologies that exist at the Commencement Date in consultation with the Concessionaire

The RSL is assessed for each homogenous section of Concession Highway and the lengths of the Concession Highway with the same RSL are accumulated to produce a profile line over the entire range of RSL's (the "RSL Distribution").

3. Asphalt Paved Highway Running Surfaces

Calculated on a lane-km basis, the RSL Distribution of the asphalt paved highway running surfaces at the Expiry Date must exist on or above the limits defined in Table 3.1. The calculations include asphalt paved traffic lanes and asphalt paved bridge deck wearing surfaces. Patches (areas less than 400 m²) within the traffic lane will be deemed to have a surface age the same as the adjacent surface. Where this is not clearly discernable, then the oldest surface age at the location will be used in the calculations.

Table 3.1: Committed Remaining Service Life Profile – Highway Running Surfaces

Remaining Service Life (years)	Percentage of Concession Highway by Length
> 1	100
> 2	100
> 3	100
> 4	100
> 5	100
> 6	100
> 7	88
> 8	68
> 9	60
> 10	57
> 11	50
> 12	50
> 13	44
> 14	44

4. Bridge Concrete Wearing Surfaces

Calculated for the entire Concession Highway, the distribution of RSL for concrete bridge deck wearing surfaces at the Expiry Date must exist on or above the limits defined in Table 4.1.

Table 4.1: Committed Remaining Service Life Profile – Bridge Concrete Wearing Surfaces

Remaining Service Life (years)	Percentage of Concession Highway by Length
> 2	100
> 4	100
> 6	100
> 8	100
> 10	100
> 12	77.5
> 14	51.3
> 16	37.3
> 18	33.9
> 20	32.4
> 22	18.5

5. Structures - Stock Condition

The requirements in this paragraph 5 apply to all Bridges, Major Retaining Walls, Major Culverts, Tunnels and Major Sign Structures.

At the Expiry Date, the Stock Condition Index must be less than or equal to the requirements defined in Table 5.1 for each age group.

For the purposes of the Stock Condition Index, the age of widened Bridge Structures (i.e. additional permanent traffic lanes added to an existing bridge) will be calculated as follows:

$$\text{Age}_w = \frac{(\text{Area of Remaining Existing Bridge Deck Area} \times \text{Age}) + (\text{New Bridge Deck Area} \times \text{Age})}{\text{Total Deck Area}}$$

The Stock Condition Index criteria specified will not apply to age groups that contain only a single structure.

Table 5.1: Stock Condition Index

Age Group (years)	Stock Condition Index
0 to 5	1.82
6 to 10	1.85
11 to 15	1.88
16 to 20	1.91
21 to 25	1.94
26 to 30	1.97

Age Group (years)	Stock Condition Index
31 to 35	2.00
36 to 40	2.03
41 to 45	2.06
46 to 50	2.09
51 to 55	2.12
56 to 60	2.15
61 to 65	2.18
66 to 70	2.21

6. Structures – Component Condition

The requirements in this paragraph 6 apply to all Bridges, Major Retaining Walls, Major Culverts, Tunnels and Major Sign Structures.

At the Expiry Date, the following provisions for all Structure Components will apply:

- a Component Condition Rating less than or equal to 3.0 as in accordance with the requirements defined in the Highway Asset Preservation Performance Measures for Highway Concessions document.
- the bridge deck wearing surface RSL for asphalt wearing surfaces at the Expiry Date will be based on the criteria defined in paragraph 3 above.

In addition, at the Expiry Date, the following requirements for new Structures and the new portions of widened bridge structures will apply:

- no portion of any component type will have a Condition State worse than Fair condition (3.0) and the average Condition Rating of each component type must be lower than 2.5 as defined in the Highway Asset Preservation Performance Measures for Highway Concessions document.
- the remaining bridge deck wearing surface service life for concrete wearing surfaces at the Expiry Date must be at least 15 Years.

7. Structures – Network Component Condition

The requirements in this paragraph 7 apply to all Bridges, Major Retaining Walls, Major Culverts, Tunnels and Major Sign Structures.

At the Expiry Date, the following provisions for all Structure Network Components will apply:

- the condition must be such that no action (i.e. physical works or remediation strategies) is required at the Expiry Date for all Concession Highway Component

Measures defined in Table 3.3.4 of the Highway Asset Preservation Performance Measures for Highway Concessions document.

8. Drainage and Debris Control Structures

At the Expiry Date, the following requirements for Drainage and Debris Control Structures will apply:

- a Structure Condition Index less than or equal to 3.4 as defined in the Highway Asset Preservation Performance Measures for Highway Concessions document.
- the condition must be such that no action (i.e. physical works or remediation strategies) is required at the Expiry Date for all Concession Highway Network Component Measures defined in Table 3.4.4 of the Highway Asset Preservation Performance Measures for Highway Concessions document.

9. Electrical Systems

At the Expiry Date, the following requirement for Electrical Systems will apply:

- The Concessionaire is required to achieve or exceed the design life expectations based on industry best practices and standards of the electrical system components as defined in the Highway Asset Preservation Performance Measures for Highway Concessions document.

10. Inspections

The Initial Inspection, the Second Inspection and the End of Term Inspection, and all assessments and inspections in connection therewith, will be carried out using MOT's current assessment and inspection methodology as more particularly described in Part 1 of Schedule 7 and the data inputs for such methodology shall be based on information obtained over the Contract Period. To the extent there is a dispute between the Province and the Concessionaire as to the final result of the application of such assessment, such dispute shall be resolved in accordance with the Disputes Resolution Procedure set out in Schedule 16.

SCHEDULE 5

CONSTRUCTION AND END OF TERM REQUIREMENTS

Part 5

Construction Drawings

**Construction Drawings
Listed in Annex 1 and Annex 2
to Part 5 of Schedule 5 of the Concession Agreement**

SCHEDULE 5

CONSTRUCTION AND END OF TERM REQUIREMENTS

Part 5

Construction Drawings

A listing of Specification Drawings is attached as Annex 1 to this Part 5 of Schedule 5 of the Agreement.

A listing of Requirement Drawings is attached as Annex 2 to this Part 5 of Schedule 5 of the Agreement.

Copies of the Specification Drawings and the Requirement Drawings are contained in a separate volume entitled “Construction Drawings Listed in Annex 1 and Annex 2 to Part 5 of Schedule 5 of the Concession Agreement” and which volume forms part of this Agreement.

Annex 1 to Part 5 of Schedule 5

Specification Drawings

Copies of these Specification Drawings are contained in a separate volume entitled “Construction Drawings Listed in Annex 1 and Annex 2 to Part 5 of Schedule 5 of the Concession Agreement” and which volume forms part of this Agreement.

DELETED

Annex 2 to Part 5 of Schedule 5

Requirement Drawings

Copies of these Requirement Drawings are contained in a separate volume entitled “Construction Drawings Listed in Annex 1 and Annex 2 to Part 5 of Schedule 5 of the Concession Agreement” and which volume forms part of this Agreement.

List of Structural Drawings

DB00

42DD-DB00-0000	PA	Cover Sheet
42DD-DB00-0001	PA	Drawing List
42DD-DB00-0002	PA	Legend
42DD-DB00-0003	PA	Key Plan
42DD-DB00-9001	B1	General Structural Notes
42DD-DB00-9002	B1	Parapet Replacements
42DD-DB00-9003	B1	Steel Bicycle Railing
42DD-DB00-9006	B1	Typical MSE Wall On Fill/Soil
42DD-DB00-9007	B1	Typical MSE Wall On Rock
42DD-DB00-9008	B1	Typical MSE Wall On Fill C/W Starter Wall
42DD-DB00-9009	B1	Typical MSE Wall On Rock C/W Starter Wall
42DD-DB00-9010	B1	MSE-CF And Temporary Walls

DELETED

DB01

42DD-DB01-0201	B1	Eagle Bluff Structure - G.A.
42DD-DB01-0202	B1	Eagle Bluff Structure – Details
42DD-DB01-0301	B1	Structure #2 - G.A. Sh 1
42DD-DB01-0302	B1	Structure #2 - G.A. Sh 2
42DD-DB01-0303	B1	Structure #2 - Retaining Wall 102
42DD-DB01-0304	B1	Structure #2 - Retaining Wall 103
42DD-DB01-0305	B1	Structure #2 - Retaining Wall 995
42DD-DB01-0401	B1	Structure #3 - G.A.
42DD-DB01-0402	B1	Structure #3 - Details
42DD-DB01-0403	B1	Structure #3 Retaining Walls - Sh 1
42DD-DB01-0404	B1	Structure #3 Retaining Walls - Sh 2
42DD-DB01-0501	B1	Larsen Creek Structure - G.A. Sh 1
42DD-DB01-0502	B1	Larsen Creek Structure - G.A. Sh 2
42DD-DB01-0601	B1	Structure #5 G.A.

DB03

42DD-DB03-0301	B1	Magnesia Creek Bridge No. 1452 - G.A.
42DD-DB03-0401	B1	M Creek Bridge No. 1453 - G.A.
42DD-DB03-0501	B1	Kelvin Grove Overpass G.A.
42DD-DB03-0601	B1	Brunswick Beach Overpass G.A.
42DD-DB03-5001	B1	General Arrangement-Sta.110+640 To 110+900
42DD-DB03-5011	B1	General Arrangement-Sta.113+240 To 113+500
42DD-DB03-5013	B1	General Arrangement-Sta.113+760 To 114+020
42DD-DB03-9001	B1	Typical Details MSE Walls With Conc Panels & Soil Nails

DB04

42DD-DB04-0201	B1	Loggers Creek Bridge East No. 1454 - G.A.
42DD-DB04-0301	B1	Deeks Creek Bridge No. 1451 - G.A.
42DD-DB04-5026	B1	General Arrangement-Sta.120+640 To 120+900
42DD-DB04-9001	PA	Typical Abutment Type 1 - G.A.
42DD-DB04-9008	PA	Typical Bents - Sta. 120+600 And Sta. 120+740

DB05

42DD-DB05-0101	B1	Furry Creek East Bridge No. 1465E - G.A.
42DD-DB05-0102	B1	Furry Creek North Bridge No. 1465W - G.A.
42DD-DB05-5011	B1	General Arrangement-Sta.5124+600 To 5124+860
42DD-DB05-5015	B1	General Arrangement-Sta.5125+640 To 5125+860

DB06

42DD-DB06-0101	B1	Britannia Creek Bridge - G.A.
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DB07

42DD-DB07-0101	B1	Gonzales Creek Bridge No. 1626 - G.A.
42DD-DB07-0201	B1	Shannon Creek Bridge No. 1455 - G.A.
42DD-DB07-0203	B1	Shannon Creek Bridge Sidewalk Replacement - G.A.
42DD-DB07-5003	B1	General Arrangement-Sta.139+360 To 139+620
42DD-DB07-5005	B1	General Arrangement-Sta.139+880 To 140+140

DB08

42DD-DB08-0301	B1	Mamquam Blind Channel Bridge No. 2002 - G.A. Sh 1
42DD-DB08-0302	B1	Mamquam Blind Channel Bridge No. 2002 - G.A. Sh 2
42DD-DB08-0401	B1	Mamquam Pedestrian Overpass No. 2622 - G.A.
42DD-DB08-0501	B1	Mamquam River Bridge No. 1029 - G.A. - Sh 2
42DD-DB08-0502	B1	Mamquam River Bridge No. 1029 - G.A. - Sh 2
42DD-DB08-0601	B1	Garibaldi Pedestrian Overpass - Sh 1
42DD-DB08-0602	B1	Garibaldi Pedestrian Overpass - Sh 2

DB12

42DD-DB12-0101	B1	Rubble Creek Bridge No. 7388 - G.A.
42DD-DB12-0201	B1	Cheakamus Bridge East No. 2283 - G.A. Sh 1
42DD-DB12-0202	B1	Cheakamus Bridge East No. 2283 - G.A. Sh 2
42DD-DB12-0301	B1	Daisy Lake Bridge East No. 2214 - G.A.

DB13

42DD-DB13-0101	B1	BC Rail Overhead No. 1 G.A. Sh 1
42DD-DB13-0102	B1	BC Rail Overhead No. 1 G.A. Sh 2
42DD-DB13-0201	B1	Brandywine Creek Bridge No. 7375 - G.A.
42DD-DB13-0301	B1	Callaghan Creek Bridge East No. 2519 - G.A.
42DD-DB13-0401	B1	BC Rail Overhead No. 2 G.A. Sh 1
42DD-DB13-0402	B1	BC Rail Overhead No. 2 G.A. Sh 2

Lighting**DB00**

47DD-DB00-9017	PA	Conduit Installation Typical Bridge Details Various Locations
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DB03

47DD-DB03-0001	PA	Lighting Installation - Site Plan – Elevations
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Route 99 At Brunswick Beach Road

DB08

47DD-DB08-0004	PA	Traffic Signal And Lighting Installation Site Plan - Route 99 At Centennial Way
47DD-DB08-0005	PA	Traffic Signal And Lighting Installation Site Plan Enlargement- Route 99 At Centennial Way
47DD-DB08-0006	PA	Traffic Signal And Lighting Installation Elevations - Details - Route 99 At Centennial Way
47DD-DB08-0007	PA	Lighting Installation - Site Plan – Elevations Right-In/Right-Out Various Locations
47DD-DB08-0011	PA	Lighting Installation - Site Plan – Elevations Typical Continuous Lighting
47DD-DB08-0012	PA	Lighting Installation - Site Plan – Elevations Typical Continuous Lighting

DB12

47DD-DB12-0001	PA	Lighting & Message Sign Installation Site Plan – Chance Creek Forest Service Road
47DD-DB12-0002	PA	Bridge Deck Lighting Site Plan – Various Locations

List of Highway Drawings**DB00**

41DD-DB00-0000	PA	Cover Sheet
41DD-DB00-0001	PA	Drawing List – Hwy Dwg Sheet 1 of 2
41DD-DB00-0002	PA	Drawing List – Hwy Dwg Sheet 2 of 2
41DD-DB00-0003	PA	Legend
41DD-DB00-0004	PA	Key Plan
41DD-DB00-9001	PA	Shoulder Detail

DB01

41DD-DB01-0001	PB	Key Map and Title	
41DD-DB01-0101	PB	Plan	
41DD-DB01-0102	PB	Plan	
41DD-DB01-0103	PB	Plan	Sta. 98+454.292 to Sta 99+188.9
41DD-DB01-0104	PB	Plan	Sta. 99+188.9 to Sta 99+821.4
41DD-DB01-0105	PB	Plan	Sta. 99+821.292 to Sta 100+310.7
41DD-DB01-0106	PB	Plan	Sta. 100+310.7 to Sta 100+888.7
41DD-DB01-0107	PB	Plan	Sta. 100+888.7 to Sta 101+627.9
41DD-DB01-0108	PB	Plan	Sta. 101+627.9 to Sta 102+249.8
41DD-DB01-0109	PB	Plan	Sta. 102+249.8 to Sta 202+985.0
41DD-DB01-0110	PB	Plan	Sta. 102+985.0 to Sta 103+669.9
41DD-DB01-0111	PB	Plan	Sta. 103+669.9 to Sta 104+000.0
41DD-DB01-0201	PB	Profile L-100	Sta. 98+454.292 to Sta 99+900
41DD-DB01-0202	PB	Profile L-100	Sta. 99+900 to Sta 101+400
41DD-DB01-0203	PB	Profile L-100	Sta. 101+400 to Sta 102+900
41DD-DB01-0204	PB	Profile L-100	Sta. 102+900 to Sta 104+400
41DD-DB01-0205	PB	Profile L-10 & L-20	
41DD-DB01-0206	PB	Profile L-30, L-50 & L-70	
41DD-DB01-0207	PB	Profile L-80 & L90	
41DD-DB01-0301	PB	Typical Sections	
41DD-DB01-0302	PB	Typical Sections & Details	

41DD-DB01-0403	PB	Geometrics and Laning	Sta.98+454.292 to Sta.99+188.9
41DD-DB01-0404	PB	Geometrics and Laning	Sta.99+188.9 to Sta.99+821.4
41DD-DB01-0405	PB	Geometrics and Laning	Sta.99+821.4 to Sta.100+310.7
41DD-DB01-0406	PB	Geometrics and Laning	Sta.100+310.7 to Sta.100+888.7
41DD-DB01-0407	PB	Geometrics and Laning	Sta.100+888.7 to Sta.101+627.9
41DD-DB01-0408	PB	Geometrics and Laning	Sta.101+627.9 to Sta.102+249.8
41DD-DB01-0409	PB	Geometrics and Laning	Sta.102+249.8 to Sta.102+985.0
41DD-DB01-0410	PB	Geometrics and Laning	Sta.102+985.0 to Sta.103+669.9
41DD-DB01-0411	PB	Geometrics and Laning	Sta.103+669.9 to Sta.104+000.000
TMP-DB1-1	PB	Suggested Detour Staging	STS-DB1 South Interchange
TMP-DB1-2	PB	Suggested Detour Staging	STS-DB1 South Interchange
TMP-DB1-3	PB	Suggested Detour Staging	STS-DB1 South Interchange
TMP-DB1-4	PB	Suggested Detour Staging	STS-DB1 South Interchange
TMP-DB1-5	PB	Suggested Detour Staging	STS-DB1 South Interchange
TMP-DB1-6	PB	Suggested Detour Staging	STS-DB1 South Interchange
TMP-DB1-7	PB	Suggested Detour Staging	STS-DB1 South Interchange
TMP-DB1-8	PB	Suggested Detour Staging	STS-DB1 South Interchange
TMP-DB1-9	PB	Suggested Detour Staging	STS-DB1 South Interchange
TMP-DB1-10	PB	Suggested Detour Staging	STS-DB1 South Interchange
TMP-DB1-11	PB	Suggested Detour Staging	STS-DB1 South Interchange
TMP-DB1-12	PB	Suggested Detour Staging	STS-DB1 North Interchange
TMP-DB1-13	PB	Suggested Detour Staging	STS-DB1 North Interchange
TMP-DB1-14	PB	Suggested Detour Staging	STS-DB1 North Interchange
TMP-DB1-15	PB	Suggested Detour Staging	STS-DB1 North Interchange
TMP-DB1-16	PB	Suggested Detour Staging	STS-DB1 North Interchange
TMP-DB1-17	PB	Suggested Detour Staging	STS-DB1 North Interchange

DB03

41DD-DB03-0001	PB	Key Map & Title	
41DD-DB03-0002	PB	Supplementary Legend	
41DD-DB03-0101	PC	Plan	Sta.110+640.000 to Sta.111+300.000
41DD-DB03-0102	PC	Plan	Sta.111+300.000 to Sta.112+000.000
41DD-DB03-0103	PC	Plan	Sta.112+000.000 to Sta.112+700.000
41DD-DB03-0104	PC	Plan	Sta.112+700.000 to Sta.113+400.000
41DD-DB03-0105	PC	Plan	Sta.113+400.000 to Sta.114+140.164
41DD-DB03-0201	PC	Profile L-100	Sta.110+640.000 to Sta.112+000.000
41DD-DB03-0202	PC	Profile L-100	Sta.112+000.000 to Sta.113+150.000
41DD-DB03-0203	PC	Profile L-100	Sta.113+150.000 to Sta.114+140.164
41DD-DB03-0204	PC	Profile L-1, L-2, L-3	
41DD-DB03-0205	PC	Profile L-10	
41DD-DB03-0206	PC	Profile L-5, L-6	
41DD-DB03-0301	PB	Typical Sections & Details	
41DD-DB03-0302	PB	Typical Sections & Details	
41DD-DB03-0401	PB	Geometrics & Laning	Sta.110+640.000 to Sta.111+300.000
41DD-DB03-0402	PB	Geometrics & Laning	Sta.111+300.000 to Sta.112+000.000
41DD-DB03-0403	PB	Geometrics & Laning	Sta.112+000.000 to Sta.112+700.000
41DD-DB03-0404	PB	Geometrics & Laning	Sta.112+700.000 to Sta.113+400.000
41DD-DB03-0405	PB	Geometrics & Laning	Sta.113+400.000 to Sta.114+140.164
41DD-DB03-0601	PB	Interchanges	Kelvin Grove
41DD-DB03-0602	PB	Interchanges	Brunswick Beach
41DD-DB03-0603	PB	Interchanges	Brunswick Beach

DB04

41DD-DB04-0001	PB	Key Map & Title	
41DD-DB04-0002	PB	Supplementary Legend	
41DD-DB04-0101	PB	Plan	Sta.114+228.493 to Sta.114.900.000
41DD-DB04-0102	PB	Plan	Sta.114+900.000 to Sta.115+650.000
41DD-DB04-0103	PB	Plan	Sta.115+650.000 to Sta.116+400.000
41DD-DB04-0104	PB	Plan	Sta.116+400.000 to Sta.117+150.000
41DD-DB04-0105	PB	Plan	Sta.117+150.000 to Sta.117+900.000
41DD-DB04-0106	PB	Plan	Sta.117+900.000 to Sta.118+650.000
41DD-DB04-0107	PB	Plan	Sta.118+650.000 to Sta.119+400.000
41DD-DB04-0108	PB	Plan	Sta.119+400.000 to Sta.120+150.000
41DD-DB04-0109	PB	Plan	Sta.120+150.000 to Sta.120+900.000
41DD-DB04-0110	PB	Plan	Sta.120+900.000 to Sta.121+650.000
41DD-DB04-0111	PB	Plan	Sta.121+650.000 to Sta.122+400.000
41DD-DB04-0112	PB	Plan	Sta.122+400.000 to Sta.123+150.000
41DD-DB04-0113	PB	Plan	Sta.123+150.000 to Sta.123+900.000
41DD-DB04-0114	PB	Plan	Sta.123+900.000 to Sta.124+104.286
41DD-DB04-0201	PB	Profile	Sta.114+228.493 to Sta.115+600.000
41DD-DB04-0202	PB	Profile	Sta.115+500.000 to Sta.117+100.000
41DD-DB04-0203	PB	Profile	Sta.117+100.000 to Sta.118+600.000
41DD-DB04-0204	PB	Profile	Sta.118+600.000 to Sta.120+100.000
41DD-DB04-0205	PB	Profile	Sta.120+100.000 to Sta.121+600.000
41DD-DB04-0206	PB	Profile	Sta.121+600.000 to Sta.123+100.000
41DD-DB04-0207	PB	Profile	Sta.123+100.000 to Sta.124+104.286
41DD-DB04-0208	PB	Profile – T-Road	Sta. 20+000.000 to Sta.20+056.100
41DD-DB04-0301	PB	Typical Sections	
41DD-DB04-0302	PB	Typical Sections	
41DD-DB04-0401	PB	Geometrics & Laning	Sta.114+228.493 to Sta.114+900.000
41DD-DB04-0402	PB	Geometrics & Laning	Sta.114+900.000 to Sta.115+650.000
41DD-DB04-0403	PB	Geometrics & Laning	Sta.115+650.000 to Sta.116+400.000
41DD-DB04-0404	PB	Geometrics & Laning	Sta.116+400.000 to Sta.117+150.000
41DD-DB04-0405	PB	Geometrics & Laning	Sta.117+150.000 to Sta.117+900.000
41DD-DB04-0406	PB	Geometrics & Laning	Sta.117+900.000 to Sta.118+650.000
41DD-DB04-0407	PB	Geometrics & Laning	Sta.118+650.000 to Sta.119+400.000
41DD-DB04-0408	PB	Geometrics & Laning	Sta.119+400.000 to Sta.120+150.000
41DD-DB04-0409	PB	Geometrics & Laning	Sta.120+150.000 to Sta.120+900.000
41DD-DB04-0410	PB	Geometrics & Laning	Sta.120+900.000 to Sta.121+650.000
41DD-DB04-0411	PB	Geometrics & Laning	Sta.121+650.000 to Sta.122+400.000
41DD-DB04-0412	PB	Geometrics & Laning	Sta.122+400.000 to Sta.123+150.000
41DD-DB04-0413	PB	Geometrics & Laning	Sta.123+150.000 to Sta.123+900.000
41DD-DB04-0414	PB	Geometrics & Laning	Sta.123+900.000 to Sta.124+104.286

DB05

41DD-DB05-0001	PC	Key Map & Title	
41DD-DB05-0002	PC	Supplementary Legend	
41DD-DB05-0101	PC	Plan	Sta.124+192.674 to Sta.125+020.000
41DD-DB05-0102	PC	Plan	Sta.125+020.000 to Sta.125+840.000
41DD-DB05-0103	PC	Plan	Sta.124+840.000 to Sta.126+620.000
41DD-DB05-0104	PC	Plan	Sta.126+620.000 to Sta.127+440.000
41DD-DB05-0105	PC	Plan	Sta.127+440.000 to Sta.128+220.000
41DD-DB05-0106	PC	Plan	Sta.128+220.000 to Sta.129+020.000
41DD-DB05-0107	PC	Plan	Sta.129+020.000 to Sta.129+760.000
41DD-DB05-0108	PC	Plan	Sta.129+760.000 to Sta.130+394.440
41DD-DB05-0109	PC	Plan	Sta.5124+309.823 to Sta.5125+140.000
41DD-DB05-1110	PC	Plan	Sta.5125+140.000 to Sta.5125+916.817

41DD-DB05-0201	PC	Profile	Sta.124+192.674 to Sta.125+400.000
41DD-DB05-0202	PC	Profile	Sta.125+400.000 to Sta.126+900.000
41DD-DB05-0203	PC	Profile	Sta.126+900.000 to Sta.127+900.000
41DD-DB05-0204	PC	Profile	Sta.127+400.000 to Sta.128+400.000
41DD-DB05-0205	PC	Profile	Sta.128+400.000 to Sta.129+800.000
41DD-DB05-0206	PC	Profile	Sta.129+800.000 to Sta.130+394.440
41DD-DB05-0207	PC	Profile L-5124	Sta.5124+300.823 to Sta.5125+400.000
41DD-DB05-0208	PC	Profile L-5124	Sta.5125+400.000 to Sta.5126+916.817
41DD-DB05-0209	PC	Profile L-5126	Sta.5126+655.277 to Sta.5127+754.316
41DD-DB05-0210	PC	Profile L-570	
41DD-DB05-0301	PC	Typical Sections	
41DD-DB05-0302	PC	Typical Sections	
41DD-DB05-0401	PC	Geometrics & Laning	Sta.124+192.674 to Sta.125+020.000
41DD-DB05-0402	PC	Geometrics & Laning	Sta.125+020.000 to Sta.125+840.000
41DD-DB05-0403	PC	Geometrics & Laning	Sta.125+840.000 to Sta.126+620.000
41DD-DB05-0404	PC	Geometrics & Laning	Sta.126+620.000 to Sta.127+440.000
41DD-DB05-0405	PC	Geometrics & Laning	Sta.127+440.000 to Sta.128+220.000
41DD-DB05-0406	PC	Geometrics & Laning	Sta.128+220.000 to Sta.129+020.000
41DD-DB05-0407	PC	Geometrics & Laning	Sta.129+020.000 to Sta.129+760.000
41DD-DB05-0408	PC	Geometrics & Laning	Sta.129+760.000 to Sta.130+394.440
41DD-DB05-0409	PC	Geometrics & Laning	Sta.5124+309.823 to Sta.5125+140.000
41DD-DB05-0410	PC	Geometrics & Laning	Sta.5125+140.000 to Sta.5125+916.817

DB06

41DD-DB06-0001	PC	Key Map & Title	
41DD-DB06-0101	PC	Plan	Sta.130+429 to Sta.131+066
41DD-DB06-0102	PC	Plan	Sta.131+066 to Sta.131+745
41DD-DB06-0103	PC	Plan	Sta.131+745 to Sta.132+482
41DD-DB06-0104	PC	Plan	Sta.132+482 to Sta.133+186
41DD-DB06-0105	PC	Plan	Sta.133+186 to Sta.133+895
41DD-DB06-0106	PC	Plan	Sta.133+895 to Sta.134+694
41DD-DB06-0107	PC	Plan	Sta.134+694 to Sta.134+987
41DD-DB06-0201	PC	Profile	Sta.130+429 to Sta.131+600
41DD-DB06-0202	PC	Profile	Sta.131+600 to Sta.132+900
41DD-DB06-0203	PC	Profile	Sta.132+900 to Sta.134+200
41DD-DB06-0204	PC	Profile	Sta.134+200 to Sta.134+987
41DD-DB06-0301	PC	Typical Sections	
41DD-DB06-0401	PC	Geometrics & Laning	Sta.130+429 to Sta.131+066
41DD-DB06-0402	PC	Geometrics & Laning	Sta.131+066 to Sta.131+745
41DD-DB06-0403	PC	Geometrics & Laning	Sta.131+745 to Sta.132+482
41DD-DB06-0404	PC	Geometrics & Laning	Sta.132+482 to Sta.133+186
41DD-DB06-0405	PC	Geometrics & Laning	Sta.133+186 to Sta.133+895
41DD-DB06-0406	PC	Geometrics & Laning	Sta.133+805 to Sta.134+694
41DD-DB06-0407	PC	Geometrics & Laning	Sta.134+694 to Sta.134+987
41DD-DB06-0408	PC	Laning Concept During Olympic Period	Sta.131+745 to Sta.132+482
41DD-DB06-0409	PC	Laning Concept During Olympic Period	Sta.132+482 to Sta.133+186
41DD-DB06-0501	PC	Thistle Creek Culvert Replacement	Sta 131+

DB07

41DD-DB07-0001	PC	Key Map & Title	
41DD-DB07-0002	PC	Supplementary Legend	
41DD-DB07-0101	PC	Plan	Sta.135+020.914 to Sta.135+860.000

41DD-DB07-0102	PC	Plan	Sta.135+860.000 to Sta.136+740.000
41DD-DB07-0103	PC	Plan	Sta.136+740.000 to Sta.137+580.000
41DD-DB07-0104	PC	Plan	Sta.137+580.000 to Sta.138+400.000
41DD-DB07-0105	PC	Plan	Sta.138+400.000 to Sta.139+210.000
41DD-DB07-0106	PC	Plan	Sta.139+210.914 to Sta.140+040.000
41DD-DB07-0107	PC	Plan	Sta.140+040.000 to Sta.140+780.000
41DD-DB07-0108	PC	Plan	Sta.140+780.914 to Sta.141+480.000
41DD-DB07-0109	PC	Plan	Sta.140+480.000 to Sta.141+686.662
41DD-DB07-0201	PC	Profile	Sta.135+020.914 to Sta.136+450.000
41DD-DB07-0202	PC	Profile	Sta.136+450.000 to Sta.137+400.000
41DD-DB07-0203	PC	Profile	Sta.137+400.000 to Sta.138+900.000
41DD-DB07-0204	PC	Profile	Sta.138+900.000 to Sta.140+300.000
41DD-DB07-0205	PC	Profile	Sta.140+300.000 to Sta.141+686.662
41DD-DB07-0206	PC	Profile L-7139	Sta.7139+219.179 to Sta.7140+400.000
41DD-DB07-0207	PC	Profile L-7139	Sta.7140+400.000 to Sta.7140+871.946
41DD-DB07-0208	PC	Profile I-730, I-750 & I-770	
41DD-DB07-0301	PC	Typical Sections	
41DD-DB07-0302	PC	Typical Sections	
41DD-DB07-0401	PC	Geometrics & Laning	Sta.135+020.914 to Sta.135+860.000
41DD-DB07-0402	PC	Geometrics & Laning	Sta.135+860.000 to Sta.136+740.000
41DD-DB07-0403	PC	Geometrics & Laning	Sta.136+740.000 to Sta.137+580.000
41DD-DB07-0404	PC	Geometrics & Laning	Sta.137+580.000 to Sta.138+400.000
41DD-DB07-0405	PC	Geometrics & Laning	Sta.138+400.000 to Sta.139+210.000
41DD-DB07-0406	PC	Geometrics & Laning	Sta.139+210.000 to Sta.140+040.000
41DD-DB07-0407	PC	Geometrics & Laning	Sta.140+040.000 to Sta.140+780.000
41DD-DB07-0408	PC	Geometrics & Laning	Sta.140+780.000 to Sta.141+480.000
41DD-DB07-0409	PC	Geometrics & Laning	Sta.140+480.000 to Sta.141+686.662

DB08

41DD-DB08-0001	PC	Key Plan, Location Plan & Index	
41DD-DB08-0103	PC	Plan	Sta.141+700.000 to Sta.142+100.000
41DD-DB08-0104	PC	Plan	Sta.142+100.000 to Sta.142+475.000
41DD-DB08-0105	PC	Plan	Sta.142+475.000 to Sta.142+860.000
41DD-DB08-0106	PC	Plan	Sta.142+860.000 to Sta.143+220.000
41DD-DB08-0107B	PC	Plan	Sta.143+220.000 to Sta.143+580.000
41DD-DB08-0108B	PC	Plan	Sta.143+580.000 to Sta.143+900.000
41DD-DB08-0109	PC	Plan	Sta.143+900.000 to Sta.144+260.000
41DD-DB08-0110	PC	Plan	Sta.144+260.000 to Sta.144+640.000
41DD-DB08-0111	PC	Plan	Sta.144+640.000 to Sta.145+000.000
41DD-DB08-0112	PC	Plan	Sta.145+000.000 to Sta.145+380.000
41DD-DB08-0113	PC	Plan	Sta.145+380.000 to Sta.145+740.000
41DD-DB08-0114	PC	Plan	Sta.145+740.000 to Sta.146+120.000
41DD-DB08-0115	PC	Plan	Sta.146+120.000 to Sta.146+500.000
41DD-DB08-0116	PC	Plan	Sta.146+500.000 to Sta.146+880.000
41DD-DB08-0117	PC	Plan	Sta.146+880.000 to Sta.147+260.000
41DD-DB08-0118	PC	Plan	Sta.147+260.000 to Sta.147+620.000
41DD-DB08-0119	PC	Plan	Sta.147+620.000 to Sta.148+000.000
41DD-DB08-0120	PC	Plan	Sta.148+000.000 to Sta.148+340.000
41DD-DB08-0121	PC	Plan	Sta.148+340.000 to Sta.148+640.000
41DD-DB08-0122	PC	Plan	Sta.148+640.000 to Sta.149+000.000
41DD-DB08-0123	PC	Plan	Sta.149+000.000 to Sta.149+360.000
41DD-DB08-0124	PC	Plan	Sta.149+360.000 to Sta.149+720.000
41DD-DB08-0125	PC	Plan	Sta.149+720.000 to Sta.150+080.000
41DD-DB08-0126	PC	Plan	Sta.150+080.000 to Sta.150+420.000
41DD-DB08-0127	PC	Plan	Sta.150+420.000 to Sta.150+800.000
41DD-DB08-0128	PC	Plan	Sta.150+800.000 to Sta.151+180.000

41DD-DB08-0129	PC	Plan	Sta.151+180.000 to Sta.151+400.000
41DD-DB08-0130	PC	Plan	Sta.151+400.000 to Sta.151+687.492
41DD-DB08-0133	PC	Plan	Centennial Way
41DD-DB08-0202	PC	Profile	Sta.141+700.000 to Sta.142+300.000
41DD-DB08-0203	PC	Profile	Sta.142+300.000 to Sta.142+900.000
41DD-DB08-0204	PC	Profile	Sta.142+900.000 to Sta.143+500.000
41DD-DB08-0205	PC	Profile	Sta.143+500.000 to Sta.144+100.000
41DD-DB08-0206	PC	Profile	Sta.144+100.000 to Sta.144+700.000
41DD-DB08-0207	PC	Profile	Sta.144+700.000 to Sta.145+300.000
41DD-DB08-0208	PC	Profile	Sta.145+300.000 to Sta.145+900.000
41DD-DB08-0209	PC	Profile	Sta.145+900.000 to Sta.146+500.000
41DD-DB08-0210	PC	Profile	Sta.146+500.000 to Sta.147+100.000
41DD-DB08-0211	PC	Profile	Sta.147+100.000 to Sta.147+700.000
41DD-DB08-0212	PC	Profile	Sta.147+700.000 to Sta.148+300.000
41DD-DB08-0213	PC	Profile	Sta.148+300.000 to Sta.148+900.000
41DD-DB08-0214	PC	Profile	Sta.148+900.000 to Sta.149+500.000
41DD-DB08-0215	PC	Profile	Sta.149+500.000 to Sta.150+100.000
41DD-DB08-0216	PC	Profile	Sta.150+100.000 to Sta.150+700.000
41DD-DB08-0217	PC	Profile	Sta.150+700.000 to Sta.151+300.000
41DD-DB08-0218	PC	Profile	Sta.151+300.000 to Sta.151+687.492
41DD-DB08-0219	PC	Profile	Stawamus Forestry Road
41DD-DB08-0220	PC	Profile	Valley Road
41DD-DB08-0222	PC	Profile	Cleveland Avenue
41DD-DB08-0223	PC	Profile	Industrial Way/Finch Avenue
41DD-DB08-0224	PC	Profile	Centennial Way
41DD-DB08-0225	PC	Profile	Mamquam Road
41DD-DB08-0226	PC	Profile	Garibaldi Way
41DD-DB08-0227	PC	Profile	Clarke Drive
41DD-DB08-0228	PC	Profile	Depot Road
41DD-DB08-0301	PC	Typical Sections	
41DD-DB08-0302	PC	Typical Sections	
41DD-DB08-0303	PC	Culvert Sections	
41DD-DB08-0304	PC	Culvert Sections	
41DD-DB08-0403	PC	Geometrics & Laning	Sta.141+700.000 to Sta.142+100.000
41DD-DB08-0404	PC	Geometrics & Laning	Sta.142+100.000 to Sta.142+475.000
41DD-DB08-0405	PC	Geometrics & Laning	Sta.142+475.000 to Sta.142+860.000
41DD-DB08-0406	PC	Geometrics & Laning	Sta.142+860.000 to Sta.143+220.000
41DD-DB08-0407B	PC	Geometrics & Laning	Sta.143+220.000 to Sta.143+580.000
41DD-DB08-0408B	PC	Geometrics & Laning	Sta.143+580.000 to Sta.143+900.000
41DD-DB08-0409	PC	Geometrics & Laning	Sta.143+900.000 to Sta.144+260.000
41DD-DB08-0410	PC	Geometrics & Laning	Sta.144+260.000 to Sta.144+640.000
41DD-DB08-0411	PC	Geometrics & Laning	Sta.144+640.000 to Sta.145+000.000
41DD-DB08-0412	PC	Geometrics & Laning	Sta.145+000.000 to Sta.145+380.000
41DD-DB08-0413	PC	Geometrics & Laning	Sta.145+740.000 to Sta.146+120.000
41DD-DB08-0414	PC	Geometrics & Laning	Sta.145+740.000 to Sta.146+120.000
41DD-DB08-0415	PC	Geometrics & Laning	Sta.146+120.000 to Sta.146+500.000
41DD-DB08-0416	PC	Geometrics & Laning	Sta.146+500.000 to Sta.146+880.000
41DD-DB08-0417	PC	Geometrics & Laning	Sta.146+880.000 to Sta.147+260.000
41DD-DB08-0418	PC	Geometrics & Laning	Sta.147+260.000 to Sta.147+620.000
41DD-DB08-0419	PC	Geometrics & Laning	Sta.147+620.000 to Sta.148+000.000
41DD-DB08-0420	PC	Geometrics & Laning	Sta.148+000.000 to Sta.148+340+000
41DD-DB08-0421	PC	Geometrics & Laning	Sta.148+340.000 to Sta.148+640.000
41DD-DB08-0422	PC	Geometrics & Laning	Sta.148+640.000 to Sta.149+000.000
41DD-DB08-0423	PC	Geometrics & Laning	Sta.149+000.000 to Sta.149+360.000
41DD-DB08-0424	PC	Geometrics & Laning	Sta.149+360.000 to Sta.149+720.000
41DD-DB08-0425	PC	Geometrics & Laning	Sta.149+720.000 to Sta.150+080.000

41DD-DB08-0426	PC	Geometrics & Laning	Sta.150+800.000 to Sta.150+420.000
41DD-DB08-0427	PC	Geometrics & Laning	Sta.150+420.000 to Sta.150+800.000
41DD-DB08-0428	PC	Geometrics & Laning	Sta.150+800.000 to Sta.151+180.000
41DD-DB08-0429	PC	Geometrics & Laning	Sta.151+180.000 to Sta.151+400.000
41DD-DB08-0430	PC	Geometrics & Laning	Sta.151+400.000 to Sta.151+687.492
41DD-DB08-0433	PC	Geometrics & Laning	Centennial Way
DB12			
41DD-DB12-0001	PE	Key Plan, Location Plan & Index	
41DD-DB12-0002	PD	Supplementary Legend	
41DD-DB12-0101	PD	Plan	Sta.227+100.000 to Sta.227+967.992
41DD-DB12-0102	PD	Plan	Sta.227+967.992 to Sta.228+767.550
41DD-DB12-0103	PD	Plan	Sta.228+767.550 to Sta.229+586.384
41DD-DB12-0104	PD	Plan	Sta.229+586.384 to Sta.230+387.490
41DD-DB12-0105	PD	Plan	Sta.230+387.490 to Sta.231+207.531
41DD-DB12-0106	PD	Plan	Sta.231+207.531 to Sta.232+018.420 (SB) Sta.231+207.531 to Sta.232+219.513 (NB)
41DD-DB12-0107	PD	Plan	Sta.232+018.420 to Sta.232+756.201 (SB) Sta.232+019.513 to Sta.232+756.621 (NB)
41DD-DB12-0108	PD	Plan	Sta.232+756.113 to Sta.233+535.377
41DD-DB12-0109	PD	Plan	Sta.233+535.337 to Sta.234+379.297 (SB) Sta.233+537.593 to Sta.234+379.543 (NB)
41DD-DB12-0110	PD	Plan	Sta.234+379.297 to Sta.235+208.813 (SB) Sta.234+379.543 to Sta.235+208.813 (NB)
41DD-DB12-0111	PD	Plan	Sta.235+208.813 to Sta.235+948.000
41DD-DB12-0201	PD	Profile	Sta 227+100.000 to Sta.228+600.000
41DD-DB12-0202	PD	Profile	Sta 228+600.000 to Sta.230+200.000
41DD-DB12-0203	PD	Profile	Sta 230+200.000 to Sta.231+395.462
41DD-DB12-0204	PD	Profile	Sta 231+396.175 to Sta.232+800.000
41DD-DB12-0205	PD	Profile	Sta 232+800.000 to Sta.234+054.177
41DD-DB12-0206	PD	Profile	Sta 231+396.640 to Sta.232+800.000
41DD-DB12-0207	PD	Profile	Sta 232+800.000 to Sta.233+594.567
41DD-DB12-0208	PD	Profile L-140 Profile L-150	Sta 234+054.177 to Sta.234+744.715 Sta 234+054.177 to Sta.234+748.327
41DD-DB12-0209	PD	Profile	Sta 234+744.715 to Sta.235+947.629
41DD-DB12-0301	PC	Typical Sections	
41DD-DB12-0302	PD	Typical Sections	
41DD-DB12-0401	PD	Geometrics & Laning	Sta.227+100.000 to Sta.227+967.992
41DD-DB12-0402	PD	Geometrics & Laning	Sta.227+967.992 to Sta.228+767.550
41DD-DB12-0403	PD	Geometrics & Laning	Sta.228+767.550 to Sta.229+586.384
41DD-DB12-0404	PD	Geometrics & Laning	Sta.229+586.384 to Sta.230+387.490
41DD-DB12-0405	PD	Geometrics & Laning	Sta.230+387.490 to Sta.231+207.490
41DD-DB12-0406	PD	Geometrics & Laning	Sta.231+207.531 to Sta.232+018.420 (SB) Sta.231+207.531 to Sta.232+019.513 (NB)
41DD-DB12-0407	PD	Geometrics & Laning	Sta.232+018.420 to Sta.232+756.201 (SB) Sta.232+019.513 to Sta.232+756.621 (NB)
41DD-DB12-0408	PD	Geometrics & Laning	Sta.232+756.201 to Sta.233+535.377 (SB) Sta.232+756.621 to Sta.233+537.593 (NB)
41DD-DB12-0409	PD	Geometrics & Laning	Sta.233+535.377 to Sta.234+379.297 (SB) Sta.233+535.593 to Sta.234+379.543 (NB)
41DD-DB12-0410	PD	Geometrics & Laning	Sta.234+379.297 to Sta.235+208.813 (SB) Sta.234+379.543 to Sta.235+208.813 (NB)
41DD-DB12-0411	PD	Geometrics & Laning	Sta.235+208.813 to Sta.235+948.000

DB13

41DD-DB13-0001	PD	Key Plan, Location Plan & Index	
41DD-DB13-0002	PC	Supplementary Legend	
41DD-DB13-0101	PC	Plan	Sta.236+095.690 to Sta.236-400.000
41DD-DB13-0102	PC	Plan	Sta.236+400.000 to Sta.237-000.000
41DD-DB13-0103	PC	Plan	Sta.237+000.000 to Sta.237-601.435
41DD-DB13-0104	PC	Plan	Sta.237+601.435 to Sta.238-292.828
41DD-DB13-0105	PC	Plan	Sta.238+202.828 to Sta.238-804.710
41DD-DB13-0106	PC	Plan	Sta.238+804.710 to Sta.239-407.014
41DD-DB13-0107	PC	Plan	Sta.239+407.014 to Sta.240-008.460
41DD-DB13-0108	PC	Plan	Sta.240+008.460 to Sta.240-608.576
41DD-DB13-0109	PC	Plan	Sta.240+608.576 to Sta.241-208.587
41DD-DB13-0110	PC	Plan	Sta.241+298.587 to Sta.241-809.822
41DD-DB13-0111	PC	Plan	Sta.241+809.822 to Sta.242-409.357
41DD-DB13-0112	PC	Plan	Sta.242+409.357 to Sta.243-000.357
41DD-DB13-0113	PC	Plan	Sta.243+009.357 to Sta.243-609.983
41DD-DB13-0114	PC	Plan	Sta.243+609.983 to Sta.244-210.256
41DD-DB13-0115	PC	Plan	Sta.244+210.256 to Sta.244-810.642 (NB)
41DD-DB13-0116	PC	Plan	Sta.244+283.433 to Sta.244-811.182 (SB)
41DD-DB13-0117	PC	Plan	Sta.244+810.642 to Sta.245-410.617 (NB)
41DD-DB13-0118	PC	Plan	Sta.244+811.182 to Sta.244-973.944 (SB)
41DD-DB13-0119	PC	Plan	Sta.245+410.617 to Sta.246-010.653
41DD-DB13-0120	PC	Plan	Sta.246+010.653 to Sta.246-612.191
41DD-DB13-0121	PC	Plan	Sta.246+612.191 to Sta.247-214.079
41DD-DB13-0122	PC	Plan	Sta.247+214.079 to Sta.247-814.293
41DD-DB13-0123	PC	Plan	Sta.247+814.293 to Sta.248-419.017
41DD-DB13-0124	PC	Plan	Sta.248+419.017 to Sta.249-021.885
41DD-DB13-0125	PC	Plan	Sta.249+021.885 to Sta.249-743.996
41DD-DB13-0126	PC	Plan	Sta.249+743.996 to Sta.250-283.112
41DD-DB13-0201	PC	Profile	Sta.236+095.690 to Sta.237-500.000
41DD-DB13-0202	PC	Profile	Sta.237+500.000 to Sta.238-700.000
41DD-DB13-0203	PC	Profile	Sta.238+700.000 to Sta.239-900.000
41DD-DB13-0204	PC	Profile	Sta.239+900.000 to Sta.241-100.000
41DD-DB13-0205	PC	Profile	Sta.241+100.000 to Sta.242-300.000
41DD-DB13-0206	PC	Profile	Sta.242+300.000 to Sta.243-500.000
41DD-DB13-0207	PC	Profile	Sta.243+500.000 to Sta.244-700.000 (NB)
41DD-DB13-0208	PC	Profile	Sta.244+283.433 to Sta.243-973.944 (SB)
41DD-DB13-0209	PC	Profile	Sta.244+700.000 to Sta.245-900.000 (NB)
41DD-DB13-0210	PC	Profile	Sta.245+900.000 to Sta.247-100.000
41DD-DB13-0211	PC	Profile	Sta.247+100.000 to Sta.248-300.000
41DD-DB13-0212	PC	Profile	Sta.248+300.000 to Sta.249-500.000
41DD-DB13-0213	PC	Profile	Sta.249+500.000 to Sta.250-283.112
41DD-DB13-0301	PC	Typical Sections	
41DD-DB13-0302	PB	Typical Sections	
41DD-DB13-0401	PC	Geometrics & Laning	Sta.236+095.690 to Sta.236+400.000
41DD-DB13-0402	PC	Geometrics & Laning	Sta.236+400.000 to Sta.237+000.000
41DD-DB13-0403	PC	Geometrics & Laning	Sta.237+000.000 to Sta.237+601.435
41DD-DB13-0404	PC	Geometrics & Laning	Sta.237+601.435 to Sta.238+202.828
41DD-DB13-0405	PC	Geometrics & Laning	Sta.238+202.828 to Sta.238+804.710
41DD-DB13-0406	PC	Geometrics & Laning	Sta.238+804.710 to Sta.239+407.014
41DD-DB13-0407	PC	Geometrics & Laning	Sta.239+407.014 to Sta.240+008.460
41DD-DB13-0408	PC	Geometrics & Laning	Sta.240+008.460 to Sta.240+608.576
41DD-DB13-0409	PC	Geometrics & Laning	Sta.240+008.460 to Sta.240+608.576
41DD-DB13-0410	PC	Geometrics & Laning	Sta.241+208.587 to Sta.241+208.587
41DD-DB13-0411	PC	Geometrics & Laning	Sta.241+809.822 to Sta.242+409.357
41DD-DB13-0412	PC	Geometrics & Laning	Sta.242+409.357 to Sta.243+009.357

41DD-DB13-0413	PC	Geometrics & Laning	Sta.243+009.357 to Sta.243+609.983
41DD-DB13-0414	PC	Geometrics & Laning	Sta.243+609.983 to Sta.244+210.256
41DD-DB13-0415	PC	Geometrics & Laning	Sta.244+210.256 to Sta.244+810.642 (NB)
41DD-DB13-0416	PC	Geometrics & Laning	Sta.244+283.433 to Sta.244+811.182 (SB)
41DD-DB13-0417	PC	Geometrics & Laning	Sta.244+810.642 to Sta.245+410.617 (NB)
41DD-DB13-0418	PC	Geometrics & Laning	Sta.244+811.182 to Sta.244+973.944 (SB)
41DD-DB13-0419	PC	Geometrics & Laning	Sta.245+410.617 to Sta.246+010.653
41DD-DB13-0420	PC	Geometrics & Laning	Sta.246+010.653 to Sta.246+612.191
41DD-DB13-0421	PC	Geometrics & Laning	Sta.246+612.191 to Sta.247+214.079
41DD-DB13-0422	PC	Geometrics & Laning	Sta.247+214.079 to Sta.247+814.293
41DD-DB13-0423	PC	Geometrics & Laning	Sta.247+814.293 to Sta.248+419.017
41DD-DB13-0424	PC	Geometrics & Laning	Sta.248+419.017 to Sta.249+021.885
41DD-DB13-0425	PC	Geometrics & Laning	Sta.249+021.885 to Sta.249+743.996
41DD-DB13-0426	PC	Geometrics & Laning	Sta.249+743.996 to Sta.250+283.112

SCHEDULE 5**CONSTRUCTION AND END OF TERM REQUIREMENTS****Part 6****Traffic Management Output Specifications****1. Traffic Management****1.1 Permitted Traffic Stoppages and Road Scheduled Closures**

The Concessionaire must adhere to the restrictions for Stoppages and Scheduled Daytime and Night-time Closures for the Concession Highway as described herein. The meaning of “Stoppage”, “Scheduled Daytime Closure”, “Scheduled Night-time Closure” and “Single-lane Alternating Traffic” are as described in Table 1 below.

TABLE 1
Traffic Stoppage and Scheduled Closure Definitions

Stoppages	
2-minute Stoppage	A stoppage of traffic of no longer than 2 minutes in duration, in one or both directions.
10-minute Stoppage	A stoppage of traffic of no longer than 10 minutes in duration, in one or both directions.
20-minute Stoppage	A stoppage of traffic of greater than 10 minutes and no longer than 20 minutes in duration, in one or both directions.
Single-lane Alternating Traffic	A closure of one or more lanes that results in a single lane open to serve traffic in each direction in alternating cycles.
Scheduled Closures	
Scheduled Daytime Closure	A scheduled Closure of the Concession Highway, in both directions, between sunrise and sunset.
Scheduled Night-time Closure	A scheduled Closure of the Concession Highway, in both directions, between sunset and sunrise.

Further to SS 194.30, Traffic Control for Work Zones, the Concessionaire shall adhere to the permitted timeframes and durations for Stoppages and Scheduled Closures shown in Tables 2 and 3(A)(B)(C)(D), which shall form the basis of the Traffic Management Plan. The Concessionaire shall coordinate the Work and Operations so that delays to traffic do not occur in periods during which Stoppages and Scheduled Closures are not permitted in accordance with Tables 2 and 3 (A)(B)(C)(D).

The timeframes for Stoppages and Scheduled Closures have been defined for four segments of the Concession Highway:

- Segment 1: Highway 1 (Nelson Creek) to Horseshoe Bay (100 m North of Exit 1)
- Segment 2: Horseshoe Bay (100 m North Exit 1) to Lions Bay (Immediately South of Kelvin Grove) including DB2
- Segment 3: Lions Bay (immediately North of “M” Creek) to Squamish (Immediately South of Stawamus Forestry Road)
- Segment 4: Squamish (immediately North of Depot Road) to Whistler (Function Junction)

The timeframes and durations for Stoppages and Scheduled Closures shown in Tables 2 and 3(A)(B)(C)(D) are based on typical daily traffic flows, subject to adjustment in accordance with the Agreement.

No closures will be allowed in the following areas:

- Within the Village of Lions Bay between immediately South of Kelvin Grove and immediately North of “M” Creek.
- Within the urban area of Squamish between Stawamus Forestry Road and Depot Road.

The total number of permitted closures prior to Substantial Completion of the Pre Olympic Works is stipulated in Table 4.

TABLE 2Periods of the Year when Stoppages¹ and Scheduled Closures² are Permitted/Not Permitted for the Four Highway Segments

Type of Stoppage/Scheduled Closure	Time Periods					
	January 1 to February 29	March 1 to April 20	April 21 to June 15	June 16 to September 15	September 16 to November 30	December 1 to December 31
Highway 1 to Horseshoe Bay						
2-minute Stoppage	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
10-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
20-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Night-time Closure	Not Permitted	Not Permitted	Permitted	Not Permitted	Permitted	Not Permitted
Scheduled Daytime Closure	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted
Horseshoe Bay to Lions Bay³						
2-minute Stoppage	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
10-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
20-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Night-time Closure ⁴	Not Permitted	Not Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Daytime Closure ⁴	Not Permitted	Not Permitted	Permitted	Not Permitted	Permitted	Not Permitted
Lions Bay to Squamish (Depot Road)						
2-minute Stoppage	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
10-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
20-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Night-time Closure ⁴	Not Permitted	Not Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Daytime Closure ⁴	Not Permitted	Not Permitted	Permitted	Not Permitted	Permitted	Not Permitted
Squamish (Depot Road) to Whistler (Function Junction)						
2-minute Stoppage	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
10-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
20-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Night-time Closure ⁴	Not Permitted	Not Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Daytime Closure ⁴	Not Permitted	Not Permitted	Permitted	Not Permitted	Permitted	Not Permitted

Notes

1. See Tables 3(A)(B)(C)(D) for Stoppage details.
2. See Tables 3(A)(B)(C)(D) and 4 for Scheduled Closure details.
3. This Segment refers to the active portion of the Highway 99 and may be either the existing route north of Horseshoe Bay or the new overland route (Option B, shown in the Clarification Report, which is in the Data Room) depending on which route the Concessionaire is using for traffic.
4. No Scheduled Closures permitted in the Village of Lions Bay or urban area of Squamish.

TABLE 3 (A)

Stoppage and Scheduled Closure Durations and Timeframes Segment 1 – Highway 1 (Nelson Creek) to Horseshoe Bay (100 m North of Exit 1)

Type of Stoppage or Scheduled Closure	Stoppage/ Scheduled Closure Duration	Stoppage and Scheduled Closure Timeframes		
		Monday to Thursday ¹	Friday ¹	Saturday and Sunday ¹
2-minute Stoppage	2 minutes	12:00 am to 6:00 am 9:00 am to 5:00 pm 8:00 pm to 12:00 am	12:00 am to 6:00 am 9:00 am to 12:00 pm	Not Permitted
10-minute Stoppage ³	10 minutes	12:00 am to 5:00 am	12:00 am to 5:00 am	Not Permitted
20-minute Stoppage ³	20 minutes	12:00 am to 5:00 am 1:30 pm to 2:30 pm	12:00 am to 5:00 am	Not Permitted
Scheduled Daytime Closure		Not Permitted	Not Permitted	Not Permitted
Scheduled Night-time Closure ²	2 hours	3:00 am to 5:00 am	3:00 am to 5:00 am	Not Permitted

Notes

1. When a Statutory Holiday or Special Event listed in Section 1.1.5 occurs, requirements detailed in Section 1.1.5 will apply.
2. When a Scheduled Night-time Closure is implemented, no Stoppages are permitted between 2:00 am and 3:00 am.
3. Stoppages are subject to coordination with BC Ferries, requirements detailed in Section 1.1.2.5.

TABLE 3 (B)

Stoppage and Scheduled Closure Durations and Timeframes Segment 2 – Horseshoe Bay (100 m North of Exit 1) to Lions Bay (immediately South of Kelvin Grove)

Type of Stoppage or Scheduled Closure	Stoppage/ Scheduled Closure Duration	Stoppage and Scheduled Closure Timeframes		
		Monday to Thursday ¹	Friday ¹	Saturday and Sunday ¹
2-minute Stoppage	2 minutes	12:00 am to 6:00 am 9:00 am to 5:00 pm 8:00 pm to 12:00 am	12:00 am to 6:00 am 9:00 am to 12:00 pm	Not Permitted
10-minute Stoppage	10 minutes	12:00 am to 6:00 am 9:00 am to 4:00 pm 8:00 pm to 12:00 am	12:00 am to 6:00 am 9:00 am to 12:00 pm	Not Permitted
20-minute Stoppage ²	20 minutes	12:00 am to 6:00 am 10:00 am to 2:00 pm 10:00 pm to 12:00 am	12:00 am to 6:00 am	Not Permitted
Scheduled Daytime Closure ² (April 21 to June 15 and Sept 16 to Nov 30)	1 hour	1:30 pm to 2:30 pm	Not Permitted	Not Permitted
Scheduled Night-time Closure ² (April 21 to June 15 and Sept 16 to Nov 30)	4 hours	12:00 am to 2:00 am plus 3:00 am to 5:00 am	12:00 am to 2:00 am plus 3:00 am to 5:00 am	Not Permitted
Scheduled Night-time Closure ² (June 16 to Sept 15)	2 hours	3:00 am to 5:00 am	3:00 am to 5:00 am	Not Permitted

Notes

1. When a Statutory Holiday or Special Event listed in Section 1.1.5 occurs, requirements detailed in Section 1.1.5 will apply.
2. When a Scheduled Daytime Closure is implemented, no Stoppages are permitted between 10:00 am and 1:30 pm. When a Scheduled Night-time Closure is implemented, no stoppages are permitted between 2:00 am and 3:00 am.

TABLE 3 (C)

Stoppage and Scheduled Closure Durations and Timeframes Segment 3 – Lions Bay (immediately North of “M” Creek) to Squamish (immediately South of Stawamus Forestry Road)

Type of Stoppage or Scheduled Closure	Stoppage/ Scheduled Closure Duration	Stoppage and Scheduled Closure Timeframes		
		Monday to Thursday ¹	Friday ¹	Saturday and Sunday ¹
2-minute Stoppage	2 minutes	12:00 am to 6:00 am 9:00 am to 5:00 pm 8:00 pm to 12:00 am	12:00 am to 6:00 am 9:00 am to 12:00 pm	Not Permitted
10-minute Stoppage	10 minutes	12:00 am to 6:00 am 9:00 am to 4:00 pm 8:00 pm to 12:00 am	12:00 am to 6:00 am 9:00 am to 12:00 pm	Not Permitted
20-minute Stoppage ²	20 minutes	12:00 am to 6:00 am 10:00 am to 2:00 pm 10:00 pm to 12:00 am	12:00 am to 6:00 am	Not Permitted
Scheduled Daytime Closure ² (April 21 to June 15 and Sept 16 to Nov 30)	2 hour	12:30 pm to 2:30 pm	Not Permitted	Not Permitted
Scheduled Night-time Closure ² (April 21 to June 15 and Sept 16 to Nov 30)	4 hours	12:00 am to 2:00 am plus 3:00 am to 5:00 am	12:00 am to 2:00 am plus 3:00 am to 5:00 am	Not Permitted
Scheduled Night-time Closure ² (June 16 to Sept 15)	2 hours	3:00 am to 5:00 am	3:00 am to 5:00 am	Not Permitted

Notes

1. When a Statutory Holiday or Special Event listed in Section 1.1.5 occurs, requirements detailed in Section 1.1.5 will apply.
2. When a Scheduled Daytime Closure is implemented, no Stoppages are permitted between 10:00 am and 12:30 pm. When a Scheduled Night-time Closure is implemented, no Stoppages are permitted between 2:00 am and 3:00 am.

TABLE 3 (D)

Stoppage and Scheduled Closure Durations and Timeframes Segment 4 – Squamish (Depot Road) to Whistler (Function Junction)

Type of Stoppage or Scheduled Closure	Stoppage/ Scheduled Closure Duration	Stoppage and Scheduled Closure Timeframes		
		Monday to Thursday ¹	Friday ¹	Saturday and Sunday ¹
2-minute Stoppage	2 minutes	12:00 am to 6:00 am 9:00 am to 5:00 pm 8:00 pm to 12:00 am	12:00 am to 6:00 am 9:00 am to 12:00 pm	Not Permitted
10-minute Stoppage	10 minutes	12:00 am to 6:00 am 9:00 am to 4:00 pm 8:00 pm to 12:00 am	12:00 am to 6:00 am 9:00 am to 12:00 pm	Not Permitted
20-minute Stoppage ²	20 minutes	12:00 am to 6:00 am 10:00 am to 2:00 pm 8:00 pm to 12:00 am	12:00 am to 6:00 am	Not Permitted
Scheduled Daytime Closure ² (April 21 to June 15 and Sept 16 to Nov 30)	2 hour	12:30 pm to 2:30 pm	Not Permitted	Not Permitted
Scheduled Night-time Closure ² (April 21 to June 15 and Sept 16 to Nov 30)	7 hours	12:00 am to 2:00 am plus 3:00 am to 6:00 am plus 10:00 pm to 12:00 am	12:00 am to 2:00 am plus 3:00 am to 6:00 am	Not Permitted
Scheduled Night-time Closure ² (June 16 to Sept 15)	3 hours	3:00 am to 6:00 am	3:00 am to 6:00 am	Not Permitted

Notes

1. When a Statutory Holiday or Special Event listed in Section 1.1.5 occurs, requirements detailed in Section 1.1.5 will apply.
2. When a Scheduled Daytime Closure is implemented, no Stoppages are permitted between 10:00 am and 12:30 pm. When a Scheduled Night-time Closure is implemented, no Stoppages are permitted between 2:00 am and 3:00 am.

TABLE 4

Total Number of Permitted Scheduled Closures, per Highway Segment, for Period Prior to Substantial Completion of Pre Olympic Works

Type of Scheduled Closure	Total Number of Permitted Scheduled Closures			
	Highway 1 to Horseshoe Bay	Horseshoe Bay to Lions Bay	Lions Bay to Squamish (Depot Road)	Squamish (Depot Road) to Whistler (Function Junction)
Scheduled Daytime Closure	0	30	240	80
Scheduled Night-time Closure	20	50 ¹	230 ¹	280 ²

Notes

1. Scheduled Night-time Closures of 2 hours duration each during the period June 16 to September 15 for Segments 2 and 3 will be counted as 0.5 Scheduled Night-time Closures.
2. Scheduled Night-time Closures of 3 hours duration each during the period June 16 to September 15 for Segment 2 will be counted as 0.4 Scheduled Night-time Closures.

1.1.1 Stoppage and Scheduled Closure Compliance

A Stoppage or Scheduled Closure will be considered to be over once the Concession Highway is opened to traffic in both directions. A Stoppage or Scheduled Closure will be deemed non-compliant if any part of a Stoppage or Scheduled Closure is outside of the permitted Stoppage and Scheduled Closure timeframes, or longer than the permitted durations in this Section 1.1.

1.1.2 Conditions for Stoppages

The Concessionaire shall adhere to the permitted timeframes and durations for traffic Stoppages and shall adhere to the maximum queue lengths based on Stoppage types, as shown in Table 5 below. At the end of a Stoppage, lanes will be opened to clear traffic queues in both directions simultaneously. Once a free flow traffic condition exists and queues have been eliminated, another Stoppage may be implemented if allowed under these specifications.

The Concessionaire shall not implement Stoppages on the Statutory Holidays or Special Event Days described in Section 1.1.5.

1.1.2.1 2-Minute Stoppages

The Concessionaire shall implement 2-minute Stoppages in accordance with Tables 2 and 3 (A)(B)(C)(D).

The Concessionaire shall make every effort to coordinate 2-minute Stoppages within a Concessionaire construction area with the DB2 Contractor in order to minimize overall traffic delay in accordance with Sections 1.1.3 and 1.1.4.

1.1.2.2 10-Minute Stoppages

The Concessionaire shall implement 10-minute Stoppages in accordance with Tables 2, 3(A)(B)(C)(D) and 5.

The Concessionaire shall make every effort to coordinate 10-minute Stoppages within a Concessionaire construction area with the DB2 Contractor in accordance with Sections 1.1.3 and 1.1.4.

1.1.2.3 20-Minutes Stoppages

The Concessionaire shall implement 20-minute Stoppages in accordance with Tables 2, 3 (A)(B)(C)(D) and 5.

The Concessionaire may implement 20-minute Stoppages only once per hour for the time period from 10:00 am to 2:00 pm and shall arrange the work so that every attempt is made to have each 20-minute Stoppage begin on the hour.

The Concessionaire may implement 20-minute Stoppages only twice per hour for the time period from 10:00 pm to 6:00 am, Monday to Friday. The Concessionaire shall coordinate the work so that every attempt is made to have traffic Stoppages begin on the hour and half-hour.

The Concessionaire shall coordinate 20-minute Stoppages within the Concessionaire construction area with the DB2 Contractor in accordance with Sections 1.1.3 and 1.1.4.

1.1.2.4 Scheduled Daytime and Night-time Closures

The Concessionaire shall implement Scheduled Daytime and Night-time Closures in accordance with Tables 2, 3 (A)(B)(C)(D) and 4. Scheduled Daytime and Night-time Closures shall not be implemented on the Statutory Holidays or Special Event Days described in Section 1.1.5.

The Concessionaire will coordinate Scheduled Daytime and Night-time Closures so that traffic leaving any Closure can reach the far end of the Concession Highway corridor without being stopped for the next Scheduled Daytime and Night-time Closure. For example: northbound traffic released from a Scheduled Daytime and Night-time Closure near Furry Creek must be able to pass through the area of a Scheduled Daytime and Night-time Closure north of Squamish en route to Whistler without delay.

The Concessionaire will not implement any Stoppages, Single-lane Alternating Traffic, single lane Scheduled Closures or median crossovers in Segments 1 through 4 described in Section 1.1 during periods of Scheduled Night-time Closure breaks as defined in Tables 3 (A)(B)(C)(D).

1.1.2.5 Highway 1 Scheduled Closures

The Concessionaire may implement single-lane Scheduled Closures on Highway 1 only during the following times:

- Eastbound during the hours of 9:00 am to 3:00 pm and 10:00 pm and 6:00 am
- Westbound during the hours of 9:00 am to 3:00 pm and 10:00 pm and 6:00 am

The Concessionaire may implement median crossovers on Highway 1 only during the following times:

- Eastbound during the hours of 10:00 pm to 5:00 am
- Westbound during the hours of 10:00 pm to 5:00 am

Before initiating a single lane Scheduled Closure or median crossover on Highway 1, the Concessionaire will assess the volume of traffic through the site and estimate the likelihood of achieving the delay criterion. If volumes appear sufficiently high to cause delay in excess of that allowable, the Concessionaire is to delay the Closure or median crossover until volume has reduced sufficiently to achieve the criterion.

If delays during the Scheduled Closure windows exceed 5 minutes the Scheduled Closures must be lifted and queues cleared prior to implementing another single-lane Scheduled Closure or median crossover.

Two eastbound lanes must be open to allow traffic to flow freely during periods of ferry off loading from the Langdale and Departure Bay ferries. Single-lane

Scheduled Closures and median crossovers are subject to BC Ferries schedules and may change without notice.

Ramps to Eagle Ridge interchange may be closed concurrent with a Highway 1 Stoppage or Scheduled Closure.

Single-lane Scheduled Closures and median crossovers on Highway 1 will not be permitted on Saturdays or Sundays or on Statutory Holidays or Special Event Days described in Section 1.1.5.

1.1.2.6 Single-Lane Alternating Traffic

The Concessionaire shall implement Single-lane Alternating Traffic operations on Concession Highway only during the following times:

- During 10-minute and 20-minute Stoppage timeframes, as defined on Tables 2 and 3 (A)(B)(C)(D), only after traffic queues resulting from a 10-minute or 20-minute Stoppage have cleared, resulting in free flow traffic.
- Anytime during a 20-minute Stoppage timeframe, as defined on Tables 2 and 3 (A)(B)(C)(D), if the Concessionaire does not initiate any 20-minute Stoppages within that timeframe.

The Concessionaire's Traffic Management Plan shall address the impact that Single-lane Alternating Traffic operations will have on traffic flow. The Concessionaire will not initiate Single-lane Alternating Traffic operations if it is estimated that the resulting delay durations will be greater than the 10 minute Stoppage duration permitted within that timeframe as stated in Tables 2 and 3 (A)(B)(C)(D).

The Concessionaire shall coordinate Single-lane Alternating Traffic operations with the DB2 Contractor and other contractors to minimize inconvenience to the travelling public and to meet the requirements of Sections 1.1.3 and 1.1.4 so that the accumulated delay to any vehicle is not more than 30-minutes between Highway 1 and Squamish (Depot Road); 30-minutes from Squamish (Depot Road) and Whistler (Function Junction); and 45 minutes between Highway 1 and Whistler (Function Junction).

If at any time the queue lengths exceed those provided in Table 5, or if full clearing of stopped traffic takes longer than the permitted Stoppage duration for that timeframe, then the Concessionaire shall clear the closed lane to re-establish safe passage of two-way traffic as soon as possible. The Concessionaire may reinstate Single-lane Alternating Traffic when traffic queues have cleared in both directions.

1.1.3 Coordination of Stoppages and Scheduled Closures

From Monday to Friday inclusive, the Concessionaire shall coordinate all Stoppages so that the accumulated delay to any vehicle is not more than 30-minutes between Highway 1 and Squamish (Depot Road) and not more than 30-minutes between Squamish (Depot Road) and Whistler (Function Junction). The

accumulated delay between Highway 1 and Whistler (Function Junction) shall not be more than 45 minutes.

30-minute and 45-minute accumulated delay shall be the actual travel time between Highway 1 and Squamish (Depot Road) or Squamish (Depot Road) and Whistler (Function Junction) and Highway 1 and Whistler (Function Junction) respectively minus the travel time between those locations at the time of current road conditions including construction speed zone with no Stoppages and Closures in place.

The 30-minute and 45-minute accumulated delay restriction will not be applied when Closures are implemented.

On Saturdays and Sundays the Concessionaire shall coordinate Stoppages so that the accumulated delay to any vehicle travelling between Highway 1 and Whistler (Function Junction) is not more than 5 minutes.

Accumulated delay shall include any delay imposed by work in DB2.

Simultaneous Stoppages are permitted within the time frames identified in Tables 2 and 3 (A)(B)(C)(D) provided that accumulated delay does not exceed that defined in this Section.

Simultaneous Scheduled Closures and 20-minute Stoppages, within any one of the four highway segments described in Section 1.1, are permitted, provided that the following conditions are met:

- Access to all communities along that highway segment is maintained from one or both directions. These communities, to which access must be maintained in at least one direction, include, but are not limited to Horseshoe Bay, Sunset Beach, Lions Bay, Furry Creek, Britannia Beach, and Pinecrest/Black Tusk.
- Scheduled Closures or 20-minute Stoppages are coordinated so that traffic leaving any Scheduled Closure can reach the project limits of the Highway without being stopped for the next closure. For example: northbound traffic released from a Scheduled Closure or 20-minute Stoppage near Furry Creek must be able to pass through the area of a planned Scheduled Closure or 20-minute Stoppage north of Squamish en route to Whistler without delay.

1.1.3.1 Queue Requirement for Stoppages and Scheduled Closures

In addition to the timeframes and durations for Stoppages defined in Tables 2 and 3 (A)(B)(C)(D), the Concessionaire shall monitor actual queue lengths during Stoppages and ensure that they do not exceed the maximum queue lengths for a particular Stoppage type as defined in Table 5. Queue length in Table 5 is defined as the time it takes to clear the queue.

TABLE 5
Maximum Queue Lengths During Stoppages

Stoppage Type	Maximum Queue Length
10-Minute Stoppage	5 minutes
20-Minute Stoppage	10 minutes

If a queue length for a Stoppage exceeds the maximum queue length defined in Table 5, the Concessionaire shall immediately clear a lane for safe passage of traffic, even if the Stoppage duration has not been reached.

The Concessionaire shall ensure that traffic queues that form at a Stoppage or Scheduled Closure are not located within, or extend into, a rock fall hazard zone, debris flow structure, or any unsafe area.

The Concessionaire shall ensure that traffic queues that form at a Stoppage or Scheduled Closure do not extend into the work zones of other contractors and highway access/egress points.

1.1.3.2 Schedules of Lane Closures

The Concessionaire will prepare and submit, to the Province's Representative, Weekly Schedules of Lane Closures and Annual Schedules of Lane Closures as required by Section 15.2B of the Agreement. The Weekly Schedules of Lane Closures and the Annual Schedules of Lane Closures shall comply with the Traffic Management Output Specifications and Traffic Management Requirements, and, for greater certainty, will comply with and reflect the Province's objective to ensure that Stoppages, Scheduled Closures, and traffic management and control are consistent and reliable.

1.1.4 Coordination with DB2 and Other Work

1.1.4.1 DB2 Coordination

The Concessionaire shall schedule Stoppages for the Work and Operations around the Stoppages of the DB2 Contractor. The Concessionaire will limit the number and duration of Stoppages and Scheduled Closures, such that the cumulative successive delay to any User travelling along the Highway 1 to Squamish (Depot Road) Segment does not exceed 30 minutes due to Stoppages of both the DB2 Contractor and the Concessionaire. The accumulated delay of Stoppages of both the DB2 Contractor and the Concessionaire between Highway 1 and Whistler (Function Junction) shall not be more than 45 minutes.

The DB2 Stoppages regime is provided in the Data Room.

In the period between March 1, 2005 and May 31, 2005, the DB2 Contractor will identify a 30-day window where no Stoppages will occur in DB2.

The work of the DB2 Contractor is scheduled for substantial completion by August 31, 2007.

1.1.5 Statutory Holidays and Special Events

Notwithstanding the permitted timeframes and durations for Stoppages and Scheduled Closures shown in Tables 2 and 3 (A)(B)(C)(D) and Section 1.1.2, the Concessionaire shall not implement any Stoppages or Scheduled Closures during the Statutory Holidays and Special Events identified in Table 6, with the exception of the Spring Break Special Event, for which the restrictions of Stoppages and Scheduled Closures are listed after Table 7. In addition, Table 7 provides details regarding the Stoppage and Scheduled Closure restrictions close to Statutory Holidays and Special Events.

TABLE 6
Canada and USA Statutory Holidays and Special Events

Canada	USA
New Year's Day	New Year's Day
Spring Break	Martin Luther King Jr. Day
Good Friday	Spring Break (Washington State)
Easter Monday	Good Friday
Victoria Day	Easter Monday
Canada Day	President's Day
British Columbia Day	Memorial Day
Labour Day	Independence Day
Thanksgiving Day	Labor Day
Remembrance Day	Columbus Day
Christmas Day	Veterans Day
Boxing Day	Thanksgiving Day plus the following day
	Christmas Day

TABLE 7
Restrictions on Stoppages and Scheduled Closures

Days on which Statutory Holidays and Special Events Fall	Timeframe for Restrictions
Monday	No Stoppages or Scheduled Closures are permitted from the Friday before the Statutory Holiday or Special Event at 12:00 noon, to Monday at 12:00 midnight
Tuesday, Wednesday, or Thursday	No Stoppages or Scheduled Closures are permitted from the day before the Statutory Holiday or Special Event at 12:00 noon, to the day of the Statutory Holiday or Special Event at 12:00 midnight
Friday	No Stoppages or Scheduled Closures are permitted from the Thursday before the Statutory Holiday or Special Event at 12:00 noon, to Sunday at 12:00 midnight

Spring Break is a week-long Special Event. No Stoppages or Scheduled Closures are permitted on the Saturday and Sunday before and after the Spring Break Special Event. No Scheduled Closures, 10-minute Stoppages, or 20-minute Stoppages are permitted the week of the Spring Break Special Event (Monday

through Friday). Only 2-minute Stoppages are permitted the week of the Spring Break Special Event (Monday through Friday), in accordance with Tables 3 (A)(B)(C)(D). Both the Canadian and USA Spring Break Special Event shall apply whether concurrent or not.

It is anticipated that unforeseen Special Events may occur along the Concession Highway. The Concessionaire will anticipate that four unforeseen single-day Special Events will occur each year during which the Province reserves the right to direct the Concessionaire to eliminate all Stoppages and Scheduled Closures and initiate free-flow traffic for a 24 hour period. The Province will provide the Concessionaire with 10 days advance notice of any such unforeseen Special Event..

1.1.6 Rock Blasting and Excavation

Rock blasting and excavation will be permitted during the Stoppages and Scheduled Closures only after the Concessionaire has successfully completed rock blasting testing which demonstrates that blasting during Stoppages and Scheduled Closures can be done within the Stoppage and Scheduled Closure durations that the Concessionaire is proposing (e.g. if the Concessionaire is proposing to do blasting within the 10-minute Stoppage timeframes, then the Concessionaire must demonstrate that the rock blasting and excavation can be completed and that the lanes can be safely opened to traffic within that 10 minute duration). Once the Concessionaire has successfully demonstrated this process the Concessionaire may perform rock blasting and excavation within the applicable Stoppage or Scheduled Closure timeframes until one of the following situations occurs:

- a new rock blasting and excavation location or face is identified;
- a non-compliant Stoppage has occurred;
- changes in natural rock characteristics such as geology, faults, and fractures exist; or,
- the proximity of the rock excavation to the travelled roadway or height of rock excavation changes.

Once one of the above conditions occurs, a specific, progressive testing procedure will be developed for the new situation, prior to continuing with rock blasting and excavation. The Province reserves the right to comment on, and if necessary reject, the blasting process if in the Province's sole opinion the process has not been satisfactorily demonstrated in the field.

1.1.7 Documentation

The Concessionaire will document traffic control measures and activities in accordance with Clause 1.5.3 of the Traffic Control Manual (except that photo logging is not required). This will include completion of the following records:

- Traffic Control Supervisor's Daily Activity Report – to be kept on site and, if requested, submitted to the Province's Representative within 24 hours of a request by the Province's Representative.
- Incident Management Report – to be submitted to the Province's Representative within 12 hours of the incident.
- Traffic Control Supervisor's Daily Report of Traffic Control - to be kept on site and, if requested, submitted to the Province's Representative within 24 hours of a request by the Province's Representative.

Forms that may assist in keeping the above records can be found in the Traffic Management Guidelines.

1.1.8 Traffic Control Devices

Construction and Advisory Signs

Supply, installation, relocation, maintenance, and removal of all works related to signing will be the responsibility of the Concessionaire and will be considered incidental to the Works and Operations. The location and type of each sign will be indicated on the Traffic Control Plan, in accordance to SS 635 and the Manual for Standard Traffic Signs and Pavement Markings.

Signs shall include all permanent and temporary regulatory, warning, guide and directional signs, as indicated on the Traffic Control Plan drawings or specifications, during construction.

The Concessionaire shall supply all sign support materials subject to the material specifications contained within SS 635.29 Part D, Signing.

The Concessionaire will check signs daily for visibility, damage, suitability, and location. Signs and delineators will be cleaned as frequently as necessary to ensure full legibility and reflectance.

Sign supports for lane closure will be Windmaster, as by MDI Traffic Control Products, or accepted equivalent, complete with "high level warning devices".

Project Signs

Contrary to SS 194.21 of Traffic Control for Work Zones, all standard signs, new and replacement, shall meet Ministry specifications which may be found at the Ministry web page at:

http://www.th.gov.bc.ca/publications/eng_publications/geomet/geometsigns.htm

The Concessionaire shall supply all signs, including C-018's (Construction Ahead) and Z210's (Traffic Fines Double), with the exception of the C-035 Project Signs.

Changeable Message Signs

Further to SS 194.46 of Traffic Control for Work Zones, the Concessionaire shall provide a minimum of two portable changeable message signs (CMSs) for each Stoppage and Scheduled Closure, and will use the signs to provide advance

notification of all Stoppages, Scheduled Closures, and traffic pattern changes. The number of CMSs required to be in use at any time will be adjusted in accordance with the Traffic Management Plan. One (1) sign is to be provided for each direction of traffic flow at each Scheduled Closure and Stoppage location. CMSs are to be installed and activated a minimum of two weeks in advance of the Scheduled Closure or Stoppage. Sign locations and messages shall be as shown on the Traffic Control Plan. In addition, the Concessionaire is to use the CMSs to provide notification of incidents or unplanned traffic pattern changes, as deemed necessary by the Incident Management Plan and Incident Response Plan.

When in operation, the bottom of each portable CMS will be a minimum of 2 m above the road surface, and will be level and capable of pivoting for sighting purposes.

TABLE 8
Changeable Message Signs Specifications

Sign unit:	Yellow LED display
Sign display:	3 lines with 8 characters per line
Character size:	450 mm
Character matrix:	5 x 7
Remote dial-up access:	By cellular phone or equivalent (where “shadows” in cellular coverage exist, the Concessionaire will manually control electronic messages on a timely basis)

A full matrix sign may be used provided that it has the display parameters noted above.

The Concessionaire shall be responsible for providing appropriate and timely means to display and/or change messages on the CMS.

1.1.9 Detours

The minimum design requirements for a two-lane detour are provided in the following table.

TABLE 9
Minimum Design Requirements for Two-Lane Detours

Design Speed/Posted Speed	50 km/hr, or as accepted by MOT
Design Vehicle	TS7
Maximum Grade	8% on highway, 12% on cross streets
Maximum Superelevation	6%
Stopping Site Distance	To meet TAC requirements commensurate with design speed
Vertical Clearance	5.0 m minimum except where existing is less
Lane Width	Existing, or minimum 3.25 m travel lanes
Shoulder (Open)	Existing, or 0.5 m (minimum) paved
Shoulder (Closed by Barrier)	Existing, or 0.4 m (minimum) paved

The Concessionaire shall prepare an engineered design for each detour, including lane shifts that will conform to the minimum design requirements stated in Table 9. The engineered design shall provide detail drawings for detour construction that will include, as a minimum, the design speed, the horizontal and vertical geometry, evidence that the design vehicle is accommodated for all movements.

Where detours and lane shifts are required for the execution of the Works, the Concessionaire shall provide a paved surface to facilitate passage of traffic around the construction area.

The Concessionaire shall maintain a uniform and even pavement surface for detours and lane shifts to prevent any adverse impacts to the safety and function of the Concession Highway. On some pavement surfaces, permanent markings that have been effectively removed based on dry daylight conditions, may under certain conditions (e.g. wet road surface) still appear to be in place. Where these conditions are anticipated or found to exist, the Concessionaire shall eliminate that condition by providing either a new pavement surface or milled surface to form a uniform surface texture and eliminate the appearance of all prior pavement markings.

The Concessionaire shall provide detours and lane shifts with adequate drainage facilities to prevent pooling of water on and flow of water across the roadway. The Concessionaire shall clean milled surfaces to facilitate adequate drainage. Where the detour shifts lanes toward the upslope rock face and alters the existing drainage system, the Concessionaire shall design and construct drainage facilities to adequately accommodate storm water runoff.

The Concessionaire shall supplement temporary directional dividing lines with raised or recessed pavement markers consisting of reflective yellow bi-directional markers placed at 2 m spacing, the Concessionaire shall utilize “L” shaped flexible reflectorized markers on milled pavement surfaces. The Concessionaire shall re-apply temporary pavement markings and raised pavement markers that are faded, or damaged, as required to maintain complete delineation, in accordance with Section 1.1.14.

The Concessionaire shall provide illumination along the entire length of all detours and lane shifts. The luminaires shall be cobra head style roadway type fixtures with 400-watt high-pressure sodium clear lamp or equivalent and a Type IV distribution pattern. The luminaires will be mounted 10 m to 12 m above the roadway and spaced at approximately 60 m. The illumination will provide a minimum 1.0 foot-candles and a uniformity ratio of 1:3.

1.1.10 Concrete Roadside Barrier Requirements

As a minimum, the Concessionaire shall supply and install temporary concrete roadside barriers:

- between detour traffic and median wall construction;
- between detour traffic and rock cut excavations;

- to meet drop-off delineation requirements; and
- where required by the Concessionaire 's TCP.

The Concessionaire may use existing barriers for detours and lane shifts. All temporary barrier installations shall provide a minimum shy distance of 0.4 m between the lane line and the face of barrier. In curves, the shy distance shall be increased to accommodate the appropriate stopping sight distance for a minimum 50 km/hr design speed.

Traffic barriers used for detours and lane shifts, or used for the protection of the site, shall be continuous or adequately protected by terminals, flares, or impact attenuators to current Ministry standards, (NCRHP Report 350). Temporary barriers shall have reflectors installed in accordance with the Manual of Standard Traffic Signs and Pavement Markings.

Where traffic barriers are used the Concessionaire shall make adequate provision for drainage and removal of snow and ice.

1.1.11 Drop-offs

The Concessionaire shall conduct all construction operations so as to minimize any drop-offs (abrupt changes in roadway elevation) left exposed to traffic during non-working hours. Unless otherwise specified in the TCP, drop-offs left exposed to traffic during non-working hours shall be delineated as follows:

- a) Drop-offs up to 60 mm, unless otherwise specified on the TCP, may remain exposed with appropriate traffic control devices alerting motorists of the condition. However, no drop-offs will be allowed between adjacent lanes of traffic.
- b) Drop-offs greater than 60 mm, that are in the roadway or shoulder will be delineated with appropriate traffic control devices and further delineated as described in Section 1.1.11(c)2. The Concessionaire may consider the use of channelizing devices as listed in Section 1.1.11 (c)2 provided that, subject to a Safety Audit, the Concessionaire's TCP can demonstrate its effectiveness and the drop-off is less than 100 mm.
- c) Drop-offs greater than 60 mm, but less than 300 mm that are not within the roadway or shoulder shall be delineated with appropriate traffic control devices and further delineated in accordance with the following:
 1. A wedge of compacted stable material (25 mm well graded base course aggregate or better) placed at a slope of 4:1 or flatter.
 2. 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.

3. 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 painted a minimum of 500 mm from the face of the barrier. An accepted terminal, flare, or impact attenuator will be required at the beginning of the section. For night use, the barrier will have reflective markers and/or warning lights.
- d) Drop-offs more than 300 mm that are not within the roadway or shoulder will be delineated with appropriate traffic control devices and further delineated as indicated in Section 1.1.11(c) if all of the following conditions are met:
 1. the drop-off is less than 600 mm;
 2. the drop-off does not remain for more than three consecutive days;
 3. the drop-off is not present on any Statutory Holiday or Special Event day; and,
 4. the drop-off is only on one side of the roadway.
- e) Drop-offs more than 300 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 Section 1.1.11(c)1 and 2 above.
- f) Open trenches within the pavement and shoulder shall be covered with an anchored steel plate cover. A wedge of suitable material, if required, shall be placed to provide a smooth transition between the pavement and the steel plate. Excavations within the roadway will be backfilled and paved to match the existing adjacent pavement prior to returning the lane to traffic.
- g) Any drop-off over 300 mm in height shall be protected with concrete roadside barrier with end treatments as required by TCM.

All areas of excavation and their proposed safety measures shall be shown in the TCP.

1.1.12 Accommodation of Cyclists

The Concessionaire shall make provision for cyclists to have safe access and passage through the Works and Operations.

1.1.13 Public Washroom Facilities

The Concessionaire shall provide portable washroom facilities for public use at each approach to a Scheduled Closure location.

1.1.14 Temporary Pavement Markings

Further to TCM 2.2.1, the Concessionaire shall accept full responsibility for the application and removal of all temporary pavement markings and reflective devices. Permanent paint lines shall be applied to the final pavement surface.

When traffic lanes are to be redefined for long-duration work (more than one daytime shift), the Concessionaire shall eradicate all redundant temporary or

permanent pavement markings that are not required for the intended traffic patterns and install revised markings.

Notwithstanding SS 194.45 of the Traffic Control for Work Zones, the Concessionaire shall supply all temporary pavement markings. The material used for temporary pavement markings shall be paint with glass bead or thermoplastic marking supplemented with raised or recessed pavement markers.

The Concessionaire shall apply all pavement markings in accordance with the signing and pavement markings drawings and the detour and lane shift design drawings.

The Concessionaire shall re-apply temporary pavement markings and raised pavement markers that are faded or damaged, as required to maintain complete delineation in accordance with these specifications.

1.1.15 Completed Sections of New Roadway

The Concessionaire shall prepare a TCP for all sections of the Works not being utilized by the travelling public, that are completed before the physical completion of all the Works. Such sections shall be delineated with flexible drums and Class 1 barricades in an alternating pattern.

1.1.16 Protection of Roadways

All costs associated with the repair of damaged roadways as described in SS145.28.03 will be considered incidental to the work; no additional payment will be made.

Vehicles hauling material on any part on the pavement structure that is not intended to be fully reconstructed under the Project will be subject to the following restrictions:

- Vehicles which are licensed or which could be licensed shall not exceed the gross weight for which they can be licensed.
- Vehicles which cannot be licensed will be subject to MOT load restrictions based on pavement loading intensities less than or equal to those imposed by licensed vehicles, and when so required by MOT, the Concessionaire shall provide the necessary vehicle and tire specifications that may be required to determine the equivalency.

Provincial load restrictions must be adhered to.

1.1.17 Location and Storage of Materials and Equipment

The Concessionaire shall not store equipment on the roadway or shoulder of the Concession Highway at any time. Equipment stored within 6.0 m of the outside edge of the shoulder shall be protected by barrier and impact attenuators.

1.1.18 Speed Limits and Safe Passage through the Site

Further to Clause 1.4.6 of the Traffic Control Manual for Work on Roadways, the Province reserves the right to determine speed limits within the Site.

Where the Province considers it appropriate, an overall reduction in the speed limit may be granted to a speed of not less than 50 km/h through a work zone.

Reduction in speed limits will only be considered where:

- a) It is not practicable to achieve a design speed equal to the existing posted speed on a detour. A construction speed zone may be established and an appropriate lower speed limit posted through the temporary alignment during the whole period that it is in operation.
- b) A temporary speed zone has been established within active work zones for short-duration work (not more than one shift), but only during the hours during which the condition exists.

1.2 Traffic Management Plan

1.2.1 Traffic Management

This Section 1.2 provides details of the requirements of the Traffic Management Plan, the Concessionaire's traffic resource requirements, accommodation of emergency vehicles, and the traffic management process.

MOT has publicized potential traffic delays as a planning tool for transportation stakeholders and the travelling public. In the event of a discrepancy between the duration of publicized delays and this Section 1.2, this Section 1.2 will prevail. The Closure regime is as shown in Tables 2, 3 (A)(B)(C)(D) and 4 and Section 1.1.2. If not defined in Schedule 1 [Definitions and Interpretation], terms used in this Section 1.2.1 will have the meaning given in the Traffic Control Manual (TCM). If not defined in either of the foregoing, the definition in the TAC Geometric Design Guide will apply.

1.2.1.1 Traffic Management Plan Overview

The Traffic Management Plan must be fully integrated with the Concessionaire's applicable Works Schedule provided in accordance with SS 204.04.05 of Traffic Control for Work Zones, and with the applicable blast design as provided by the Concessionaire in advance of each blast in accordance with SS 204.04.07 Traffic Control for Work Zones.

The Concessionaire shall provide qualified Traffic Control Supervisors (see Section 1.2.2.3), a Traffic Engineer (see Section 1.2.2.4) and a Traffic Manager (see Section 1.2.2.5). The Concessionaire's Traffic Control Supervisors, Traffic Engineer, and Traffic Manager must attend pre-construction meetings.

All traffic control measures are to be in accordance with this Section 1.2.1, Traffic Control Manual, Traffic Management Guidelines (TMG), and SS194 of Traffic Control for Work Zones. In the case of conflict, the TCM will prevail over SS194 of Traffic Control for Work Zones and the publications cited therein.

The TCM standard is modified as shown below.

Further to TCM 1.2.3: Responsibility	The Concessionaire is assigned such responsibility for, and shall at all times make provision for, traffic to pass through the Works at a sufficiently high standard in accordance with this Part 6 of Schedule 5, that will ensure the convenience and safety of the public, vehicular and pedestrian traffic, and the workers on the Works, and the protection of the Works.
Further to TCM 1.4: Traffic Control (Work) Zones	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 Site, but this will in no way diminish the Concessionaire's responsibility to meet the requirements of the TCM.
Further to TCM 1.5: Installation, Maintenance and Inspection of Traffic Control	Construction signs, specific to an operation, will be either removed or effectively covered so that their message is obscured whenever such operation is not in progress.

Further to SS 194.11 Traffic Control for Work Zones, MOT has assessed this work to be a Category 4 Project in accordance with Part 2, Clauses 4 to 6, of the TMG. The Traffic Management Plan must comply with MOT definitions and guidelines provided in the TMG. The following traffic management sub-plans are required in accordance with the TMG for the Concessionaire's Traffic Management Plan:

- Advisory Signing Plan
- Traffic Communication Plan
- Traffic Control Plan
- Incident Management Plan
- Incident Response Plan
- Implementation Plan
- Public Information Plan
- Risk Assessment Plan
- Rock Excavation Process Progressive Test Procedure Plan

Sub-plans are further defined in Sections 1.2.1.3 through 1.2.1.10 below.

1.2.1.2 Traffic Management Plan Submission and Review

The Traffic Management Plan will comply with the provisions of Section 15.2A of the Agreement.

The Concessionaire must not conduct the Operations or any construction activity with respect to the Work that affects traffic without a current Traffic Management Plan that has been accepted and sealed by the Traffic Engineer and reviewed by the Province's Representative in accordance with Section 15.2A of the Agreement.

1.2.1.3 Traffic Control Plan

The Concessionaire shall prepare a customized Traffic Control Plan for all activities that affect traffic, including but not limited to:

- a) each construction stage; and
- b) operations, maintenance, and rehabilitation tasks.

Further to the Category 4 Traffic Management Plan requirements in the TMG, the Concessionaire shall conduct a traffic analysis on the Traffic Control Plan for each stage in the construction of the Works. The traffic analysis shall identify the pertinent hourly traffic volumes at the time of implementation and determine the effect of each Traffic Control Plan on the capacity and operation of the Concession Highway, including the resulting vehicle delays and queue lengths. The traffic analysis shall be conducted for the hours and days that each traffic control plan will be in operation.

The Concessionaire shall continuously measure the effectiveness of the Traffic Control Plan and, if those measurements indicate the Traffic Control Plan is non-compliant, the Concessionaire shall immediately adjust the Traffic Control Plan to bring it into compliance.

1.2.1.4 Incident Management Plan and Incident Response Plan

The Concessionaire shall organize and implement an Incident Management Plan and Incident Response Plan in accordance with Traffic Management Guidelines for Work on Roadways. The primary objectives of an Incident Management Plan and an Incident Response Plan are to facilitate incident response and move traffic safely and expeditiously through or around the incident. The plans will specify how the Concessionaire will provide access for emergency vehicles and assistance to emergency response personnel. An incident includes, but is not limited to, passage of emergency vehicles, motor vehicle accidents, emergency road repairs, disabled vehicles, and debris on the road. The immediate response to an emergency must, by necessity, make use of all available devices and equipment.

The Incident Management Plan and Incident Response Plan shall initially be prepared to address the general requirements of the entire Project. The Province reserves the right to require the Concessionaire to prepare stage-specific Incident Plans whenever deemed necessary.

The Concessionaire shall contact emergency services, as described below, through the Traffic Control Supervisor. In anticipation of the requirement for emergency vehicles to pass through the construction site, the Concessionaire shall have adequate equipment and labour available to clear a passage should a Stoppage or Scheduled Closure be in effect. Whenever the Traffic Control Supervisor is notified by emergency services personnel of an emergency, the Concessionaire shall act immediately to provide safe passage for responding vehicles. The Concessionaire shall have adequate resources available to ensure safe passage is provided immediately upon request of the emergency responder.

Emergency services include, but are not limited to:

- fire
- police
- ambulance
- utility companies
- search and rescue
- Ministry of Forests Coastal Fire Centre
- conservation

The Concessionaire shall maintain a reliable communication system between the Traffic Control Supervisor and the Province's Representative, including a back-up communication system, during blasting operations. The same communication system shall also be accessible to the appropriate emergency services to provide three-way communications.

The Concessionaire shall coordinate and cooperate with all emergency providers. In the event that due to a Stoppage or Scheduled Closure additional emergency equipment and/or labour is required (as requested by the emergency provider) the Concessionaire will be responsible for satisfying the emergency provider's requirements.

The Concessionaire shall coordinate the details of the Incident Plans with the Traffic Control Plan. The Incident Plans shall include procedures for coordination with emergency services.

1.2.1.5 Implementation Plan

The Concessionaire shall prepare and submit an Implementation Plan in accordance with the Traffic Management Guidelines for Work on Roadways. 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 Plan and Incident Plans are developed and implemented efficiently and appropriately, and that they are kept up-to-date with necessary modifications during construction.

1.2.1.6 Traffic Communication Plan

The Concessionaire shall prepare and submit a Traffic Communication Plan in accordance with the Traffic Management Guidelines for Work on Roadways. This plan shall indicate how the Province will be kept informed of planned traffic pattern changes, including, but not limited to, the following: Scheduled Closures and Stoppages, detours, lane shifts, lane closures, access restrictions, schedule changes, and other traffic control procedures which may delay traffic or disrupt traffic flow. Procedures for disseminating information related to un-planned traffic pattern changes (e.g. due to incidents such as emergency repairs, motor vehicle accidents) shall be addressed by the Concessionaire in the Incident Plans.

All media requests received by the Concessionaire shall be referred to the Province's Representative.

The Concessionaire shall accept full responsibility for all advance notification and arrangements required to inform the Province of planned changes in traffic patterns caused by the Works and the Operations.

1.2.1.7 Advisory Signing Plan

The Concessionaire shall organize and implement an Advisory Signing Plan. The primary objective of an Advisory Signing Plan is to notify the travelling public in advance of the Concessionaire's scheduled Stoppages and Scheduled Closures.

The Advisory Signing Plan shall include the supply and installation of temporary project information signs along the Concession Highway at the following locations to notify highway users of the time and date of traffic Stoppages and Scheduled Closures:

- Approximately 1.0 km from each construction limit
- Approximately 1.0 km south of Horseshoe Bay for northbound traffic
- Approximately 1.0 km north of Squamish (Depot Road) for southbound traffic
- Approximately 1.0 km south of Depot Road in Squamish for northbound traffic
- Approximately 1.0 km north of Whistler (Function Junction) for southbound traffic

The temporary project information signs shall provide current information throughout the duration of the project. Each sign shall be fully reflective, 1,220 mm by 2,440 mm in size, and shall have messaging developed in conjunction with MOT.

1.2.1.8 Risk Assessment Plan

MOT has performed a risk assessment and identified risks that must be considered and addressed in the Concessionaire's Traffic Management Plan in the form of the Risk Assessment Plan. These risks include but are not limited to the following:

Physical Risks

- falling rocks, excavated material and other objects
- BC Hydro power lines
- roadway surface condition during construction
- winter lay-up
- roadway cross section elements

Work Risks

- nature of work activity
- construction equipment movement through work zone
- storage of construction equipment or materials
- night-time work

Traffic Risks

- abandoned and immobilized vehicles
- accommodation of emergency vehicles
- accommodation of cyclists
- vehicles queue hazards
- posted speed through work zone and speed control
- traffic impacts extend beyond work zone
- volume/capacity ratio and traffic delays
- impact of Statutory Holidays or Special Events
- advisory signing

Further definitions of these risks are contained in the Traffic Management Guidelines for Work on Roadways.

Notwithstanding the risk assessment performed by MOT, the Concessionaire shall perform an independent assessment to identify any other risks not identified by MOT, or special conditions that must be addressed through the Concessionaire's Risk Assessment Plan. The Concessionaire shall identify all risks and state the measures to be implemented to manage or eliminate the risks.

1.2.1.9 Rock Excavation Process Progressive Test Procedure Plan

The Concessionaire shall prepare a Rock Excavation Process Progressive Test Procedure Plan that includes a generic, progressive testing procedure for rock blasting that can be modified to suit each specific application, prior to implementing rock blasting and excavation requiring any Stoppage or Scheduled Closure. The Concessionaire shall include the Rock Excavation Process Progressive Testing Procedure Plan as part of the Traffic Management Plan.

In developing the Rock Excavation Process Progressive Test Procedure Plan, the Concessionaire shall consider all aspects and implications of rock blasting and excavation including, but not limited to, traffic management, rock blasting procedures, physical relationship between the Concession Highway and blast location, natural conditions of the rock, and volume of blasted material. The generic, progressive testing procedure for rock blasting will take into account the number of steps required and the number of tests needed at each step.

1.2.1.10 Public Information Plan

The Concessionaire shall prepare a Public Information Plan which satisfies the requirements of the Highway Corridor Management Specification for Highway Concessions (dated October, 2004, located in the Data Room) with respect to providing information to the public on the condition of the Concession Highway and anticipated Stoppages and Scheduled Closures.

1.2.2 Responsibilities for the Traffic Management Plan

1.2.2.1 Concessionaire Responsibilities

The Concessionaire shall accept full responsibility for quality control and quality assurance of all activities affecting the Traffic Management Plan. The Traffic Manager, as described in Section 1.2.2.5, shall be responsible for acting on the results of quality audits. The Traffic Management Plan quality control process shall be included in the Construction Quality Management Plan.

1.2.2.2 Traffic Control Personnel

All traffic control personnel will be qualified in accordance with WCB Regulations.

1.2.2.3 Traffic Control Supervisor(s)

The Concessionaire shall designate a TCS, who has the Concessionaire's authority to respond to traffic control requirements and who shall personally perform all the duties of the TCS, in accordance with this Part 6 of Schedule 5.

Further to SS 194.04 of Traffic Control for Work Zones, a TCS will be on site full-time while the Works are underway. The TCS shall have direct line authority over all of the Concessionaire's traffic control personnel and procedures on the site. The Concessionaire will not designate the Site Superintendent as the TCS. The TCS may have no other duties.

The duties of the TCS shall include the following:

- a) Directing all traffic control operations on the site and coordinating with other contractors for any adjacent construction or maintenance operation.
- b) Liaising with the Province's Representative, as required.
- c) Directing the Concessionaire's Incident Plans. The TCS shall report immediately to the Province's Representative on traffic/construction incidents involving damage, injuries or fatalities, or on complaints from residents or the travelling public. The TCS shall ensure that the Incident Management Report is accurately completed for traffic/construction incidents involving damage, injuries or fatalities. The report will be submitted to the Province's Representative by the next Working Day.
- d) Directing the installation, maintenance and inspection of all traffic control measures, in accordance with TCM 1.5.
- e) Inspecting night-time lighting and minimizing the impact of its glare on the travelling public.
- f) Recording the actual duration of delays and forwarding this information, on a daily, basis to the Province's Representative for review.
- g) Monitoring queue lengths during active construction and implementing appropriate measures when such queues become excessive.
- h) Documenting traffic control measures and activities in accordance with Section 1.2.1.
- i) Inspecting the condition of all temporary signs and ensuring that these are maintained in accordance with Clause 1.5.2 of the TCM. Overseeing all requirements of the Agreement that contribute to the convenience, safety, and orderly movement of vehicular and pedestrian traffic.

The Concessionaire shall designate an alternative TCS who will assume the duties of the primary TCS in the event of that person's inability to undertake the primary role. The alternative TCS shall be adequately trained and qualified to the same degree as the primary TCS.

Traffic control supervision shall be provided by the TCS on site on a 24 hours per day basis whenever there is active construction under way. During non-work periods, the TCS or accepted alternate shall be on-site within 45 minutes of being notified. Once on site, the TCS shall commence with the implementation of appropriate traffic control measures as defined in the accepted Traffic Management Plan. The TCS shall have appropriate personnel and equipment available on call, at all times.

The Concessionaire shall provide a vehicle for the TCS on site. The vehicle used by the TCS shall be equipped with a roof or post-mounted flashing amber light visible for 360 degrees.

1.2.2.4 Traffic Engineer

The Concessionaire shall designate a Traffic Engineer who has the Concessionaire'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.

1.2.2.5 Traffic Manager

The duties of the Traffic Manager shall include the following:

- a) Finalizing proposed traffic control measures as approved by the Traffic Engineer and directing the implementation of the accepted TCP.
- b) Ensuring that appropriate modifications are made to the accepted TCP and are approved by the Traffic Engineer, if the specified traffic control measures are not achieving the desired effect. The TCS shall mark-up the accepted TCP to indicate all modifications, as installed, and maintain a complete record of all original and modified TCPs, a copy of which shall be provided to MOT for acceptance.
- c) Liaising with the Province's Representative, as required.
- d) Responding to incidents within the work zone and complete the Incident Management Reports to be submitted to the Province's Representative within 12 hours of the Incident.
- e) Attending weekly meetings with the Province's Representative to discuss traffic control for the following week. In addition the TCS shall attend all pertinent project meetings with corridor stakeholders, as requested by the Province's Representative, when the Traffic Management Plan and traffic control are expected to be discussed.
- f) Communicating traffic communication updates to the Province's Representative.
- g) Keeping a daily log of all delays and opening times, plus a report summarizing traffic queue lengths, traffic control issues, number and nature of calls from the general public, and action(s) proposed or taken in consultation with the Province's Representative. This information shall be made available to the Province's Representative upon request.
- h) Reviewing the Traffic Control Supervisor's daily activity report and daily report of traffic control and make and make field modifications as required.
- i) Coordinating all stoppages and delays throughout the corridor and ensure that all requirements as contained in this Part 6 of Schedule 5 are satisfied.
- j) Coordinating with adjacent work areas including but not limited to DB2, maintenance, and utilities.

Annex 1

Definitions and Abbreviations

“**Advisory Signing Plan**” means the sub-plan described in Section 1.2.1.7.

“**CMS**” means changeable message signs.

“**DB2**” means Highway Section DB2, as defined in Annex 2 to Part 1 of Schedule 5 [Construction Output Specifications]

“**DB2 Contractor**” has the meaning given in Annex 2 to Part 1 of Schedule 5 [Construction Output Specifications].

“**Implementation Plan**” means the sub-plan described in Section 1.2.1.5.

“**Incident Management Plan**” and “**Incident Response Plan**” mean those sub-plans described in Section 1.2.1.4 .

“**Public Information Plan**” means the sub-plan described in Section 1.2.1.10.

“**Risk Assessment Plan**” means the sub-plan described in Section 1.2.1.8.

“**Rock Excavation Process Progressive Testing Procedure Plan**” means the sub-plan described in Section 1.2.1.9 .

“**Scheduled Daytime Closure**” has the meaning given in Section 1.1.

“**Scheduled Night-time Closure**” has the meaning given in Section 1.1.

“**Single-lane Alternating Traffic**” has the meaning given in Section 1.1.

“**Site Superintendent**” means a person appointed by the Concessionaire or any subcontractor to the Concessionaire to direct the work on the Site.

“**Special Event**” means events that have a high public and/or political value.

“**SSxxx**” means Section xxx of the Standard Specifications for Highway Construction, BC Ministry of Transportation.

“**Statutory Holiday**” means a holiday as defined in the *Interpretation Act*, R.S.B.C. 1996, c.238, as amended.

“**Stoppage**” means a 2-minute Stoppage, a 10-minute Stoppage or a 20-minute Stoppage, as described in Section 1.1.

“**TCM**” means *Traffic Control Manual for Work on Roadways, Revised and Consolidated, 1999* by MOT.

“**TMG**” means *Traffic Management Guidelines for Work on Roadways, Sept. 2001* by MOT.

“**Traffic Communication Plan**” means the plan prepared by the Concessionaire in accordance with Section 1.2.1.6.

“**Traffic Control Plan**” or “**TCP**” means the sub-plan or plans prepared by the Concessionaire in accordance with Section 1.2.1.3.

“**Traffic Control Supervisor(s)**” means the persons or persons appointed by the Concessionaire in accordance with Section 1.2.2.3.

“**Traffic Engineer**” means the persons appointed by the Concessionaire in accordance with Section 1.2.2.4.

“**Traffic Management Plan**” means the plan prepared by the Concessionaire in accordance with Section 1.2.1.

“**Traffic Manager**” means the persons appointed by the Concessionaire in accordance with Section 1.2.2.5.

Annex 2
Resource Documents

Document Name	Short Form
Ministry of Transportation	
<i>Traffic Control Manual for Work on Roadways, Revised and Consolidated, 1999.</i>	Traffic Control Manual
<i>Traffic Management Guidelines for Work on Roadways, Sept. 2001.</i>	Traffic Management Guidelines
<i>Manual of Standard Traffic Signs and Pavement Markings, Sept. 2000.</i>	Manual of Standard Traffic Signs and Pavement Markings
Miscellaneous	
<i>Geometric Design Guide for Canadian Roads, Transportation Association of Canada, 1999.</i>	TAC Geometric Design Guide
<i>Recommended Procedures for the Safety Performance Evaluation of Highway Features, National Cooperative Highway Research Program, NCHRP 350.</i>	NCHRP 350, Recommended Procedures for the Safety Performance Evaluation of Highway Features

SCHEDULE 5

CONSTRUCTION AND END OF TERM REQUIREMENTS**Part 7****Traffic Management Requirements****1. Lane Closures**

In addition to complying with the minimum traffic management criteria set out in Part 6 of Schedule 5 [Traffic Management Output Specifications], the Concessionaire will only permit the number of Lane Closures set out in the following tables. Table 1 describes the number of permitted Lane Closures for the 12-month period following the Commencement Date. Table 2 describes the number of permitted Lane Closures for the Contract Period.

Table 1 - First Year Stoppage and Closure Plan

Type of Stoppage/Closure	S2S Transportation Group Number of Proposed Stoppages/Closures												Total Proposed
	May-05	Jun-05	Jul-05	Aug-05	Sep-05	Oct-05	Nov-05	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	
Highway 1 (Nelson Creek) to Horseshoe Bay (Exit 1)													
20-minute night stoppage	2	2	4	4	2	2					12	22	50
20-minute day stoppage		2	4	3	1						4	10	24
Scheduled daytime closure													
Scheduled night time closure ⁽¹⁾												1	1
Horseshoe Bay (Exit 1) to Lions Bay (Kelvin Grove)													
20-minute night stoppage	2	2	6	6	2	2					10	20	50
20-minute day stoppage		1	4	4	1						4	10	24
Scheduled daytime closure												1	1
Scheduled night time closure ⁽¹⁾												1	1
Scheduled night time closure ⁽²⁾			0	1	1							0	2
Note: Scheduled night time closures not to exceed aggregate total of 200 hours.													
Lions Bay (M Creek) to Squamish (Stawamus Forestry Road)													
20-minute night stoppage	2	8	30	60	60	60	60				60	60	400
20-minute day stoppage	2	8	20	20	20	20	20				30	40	180
Scheduled daytime closure				0		1						1	2
Scheduled night time closure ⁽¹⁾					1	1	1				0	1	4
Scheduled night time closure ⁽²⁾			1	3	2							0	6
Note: Scheduled night time closures not to exceed aggregate total of 960 hours.													
Squamish (Depot Road) to Whistler (Function Junction)													
20-minute night stoppage	2	8	16	16	16	8	4				10	20	100
20-minute day stoppage	1	4	8	8	5						4	10	40
Scheduled daytime closure												1	1
Scheduled night time closure ⁽¹⁾												1	1
Scheduled night time closure ⁽²⁾					1							0	1

Notes: 1. 21 April to 15 June and 16 September to 30 November. 2. 16 June to 15 September. Scheduled night time closures not to exceed aggregate total of 1,960 hours.

Table 2 - Total Project Closure and Stoppage Plan

Type of Stoppage/Closure	S2S Transportation Group Number of Proposed Stoppages/Closures					Total Proposed	Total Counted	Maximum Permitted	Points for Each Counted	Stoppage & Closure Points
	May-05 to Apr-06	May-06 to Apr-07	May-07 to Apr-08	May-08 to Apr-09	May-09 to Apr-10					
Highway 1 (Nelson Creek) to Horseshoe Bay (Exit 1)										
20-minute night stoppage	50	500	520	100	40	1,210	1,210	9,750	2	2,420
20-minute day stoppage	24	75	75	50	18	242	242	780	30	7,260
Scheduled daytime closure								0	N/A	
Scheduled night time closure ⁽¹⁾	1	6	6	6	1	20	20	20	50	1,000
Horseshoe Bay (Exit 1) to Lions Bay (Kelvin Grove)										
20-minute night stoppage	50	200	780	780	85	1,895	1,895	14,820	2	3,790
20-minute day stoppage	24	60	125	125	70	404	404	3,120	15	6,060
Scheduled daytime closure	1	9	9	10	1	30	30	30	165	4,950
Scheduled night time closure ⁽¹⁾	1	8	10	10	1	30	30	50	100	3,000
Scheduled night time closure ⁽²⁾	2	12	12	12	2	40	20		50	1,000
Note: Scheduled night time closures not to exceed aggregate total of 200 hours.										
Lions Bay (M Creek) to Squamish (Stawamus Forestry Road)										
20-minute night stoppage	400	2,500	2,800	2,500	400	8,600	8,600	14,820	2	17,200
20-minute day stoppage	180	520	550	520	100	1,870	1,870	3,120	12	22,440
Scheduled daytime closure	2	47	60	50	8	167	167	240	520	86,840
Scheduled night time closure ⁽¹⁾	4	44	44	44	6	142	142	230	100	14,200
Scheduled night time closure ⁽²⁾	6	54	54	54	8	176	88		50	4,400
Note: Scheduled night time closures not to exceed aggregate total of 960 hours.										
Squamish (Depot Road) to Whistler (Function Junction)										
20-minute night stoppage	100	1,500	1,800	1,800	300	5,500	5,500	17,940	1	5,500
20-minute day stoppage	40	260	390	390	60	1,140	1,140	3,120	8	9,120
Scheduled daytime closure	1	10	14	14	8	47	47	80	340	15,980
Scheduled night time closure ⁽¹⁾	1	32	36	36	18	123	123	280	240	29,520
Scheduled night time closure ⁽²⁾	1	34	40	40	16	131	52		125	6,550
SCP Value 241,230										

Notes: 1. 21 April to 15 June and 16 September to 30 November. 2. 16 June to 15 September. Scheduled night time closures not to exceed aggregate total of 1,960 hours.

2. Intelligent Transportation Systems Technology

The Concessionaire shall implement and use intelligent transportation systems (“ITS”) technology to maximize the capacity of the Concession Highway. In addition to meeting its obligations under this Agreement including the Traffic Management Output Specifications and the O&M Output Specifications, the Concessionaire will provide the additional ITS features described in Table 3.

Table 3 - Summary of Enhancements

<u>Item</u>	<u>Scope</u>
ITS Features during construction	<p>Dynamic messaging along corridor, providing advance notification of stoppages and closures and real-time traffic monitoring and management.</p> <p>Four, portable, Intelligent Transportation System (ITS) setups will be utilized during construction.</p> <p>Each portable ITS site will feature:</p> <ul style="list-style-type: none"> • Dynamic Message Signs (DMS) to provide advance notification of traffic conditions • Full motion or image-capture-capable camera sites • Vehicle Detection Stations providing speed, volume and occupancy data • Wireless communication technology.

<u>Item</u>	<u>Scope</u>
	<p>A centralized Traffic Management Centre will monitor and control the ITS devices and disseminate information to both public and construction traffic personnel. Information can also be shared with web sites of outside agencies, such as TransLink Regional ATIS or the Ministry's DriveBC.</p> <p>Changeable Message Signs (CMS) will be provided at each traffic control activity.</p> <p>The ITS-Dynamic Message Signs are included with four (4) portable ITS set-ups to be stationed at key locations throughout the corridor, specifically at the main project entry points (Horseshoe Bay, Squamish-South, Squamish-North and Whistler). In addition to monitoring traffic volumes, the four ITS-DMS set-ups will provide important information to the Concession Highway users entering the Project corridor. The DMS messages may include anticipated travel times through the corridor, notice of extended delays, severe weather conditions, and/or unexpected events/delays. The DMS's will not operate in isolation from each other or from the work zone CMS's, but coordinated through the centralized Traffic Control Centre (TCC).</p> <p>The Dynamic Message Signs are additional to the CMS and provide the following:</p> <ul style="list-style-type: none"> • a portal affect for the corridor and give the public the impression of overall traffic coordination • Central control at the TCC and their dynamic content is based upon the centralized intelligence and operational knowledge for the entire corridor • supplementary to roadside CMS signs • measurement stations where vehicle times through the corridor are tracked • centrally programmed in real time <p>As required, all DMS messaging will be prepared in conjunction with the MOT representative.</p> <ol style="list-style-type: none"> 1. By providing travelers entering the corridor, at four key locations, with important information regarding current construction activities along the highway. 2. By providing the Traffic Control Centre with traffic speed, volume and occupancy data at each location. The data can be used to verify corridor travel times and provide a basis for development of the Concessionaire's corridor delay analysis. <p>All DMS messages will be generated at the TCC in conjunction with the MOT Representative.</p> <p>ITS components such as video, speed, volume and occupancy will also provide real time visual information to dedicated TCC staff who will be able to immediately update CMS's, websites and other public information outlets.</p>

<u>Item</u>	<u>Scope</u>
<p>Centralized Traffic Control Centre</p>	<p>A centralized traffic office that will serve as the home base for the Communications Manager, Traffic Manager, Traffic Engineer, Traffic Control Supervisors, Traffic Control Personnel (TCP), and support staff. This base will also serve as a central traffic communications hub with file server, individual computers, web server, phones, radios, and dedicated links to the ITS system and will provide as a minimum the following.</p> <ul style="list-style-type: none"> • A specialized communication link between the traffic office and the TCP at each active construction zone. • The centralization and compilation of performance records. • Responsiveness to the Ministry regarding concerns or issues that may arise. • Communication with emergency response providers. Emergency crews and their dispatchers will have a single contact that will be informed about traffic controls/conditions and will be empowered to make changes to suit the situation. • The Concessionaire’s weekly work and traffic activity schedules. <p>All feedback generated by our operations is channeled through the TCC where it is compiled, reviewed, communicated to the public in a timely manner. This feedback is also used to refine the TMP and improve our traffic activity schedules and delay analysis.</p> <p>The TCC will be equipped with phone lines, radio communications and internet access. The TCC will have communication links to work area Supervisors, Traffic Control Supervisors, Emergency Response agencies, the MOT Representative, the Concessionaire’s Management including the Communications Manager, the project’s ITS and CMS, and public information sources including the Concessionaire website, outside agency websites and the 1-877-4SAFE99 line.</p> <p><i>Dash-Mounted Digital Display Timers</i></p> <p>The Concessionaire traffic personnel vehicles will be equipped with digital display timers to help ensure delays are kept within the scheduled timeframe and in accordance with the Project RFP requirements. Delays will be monitored and recorded on a regular basis, not only to ensure compliance, but also, to provide useful data for the improvement of delay analysis, scheduling, and TMP Procedures.</p> <p>Highly visible digital clocks alert responsible personnel to the start, time remaining, and end of planned stoppages or closures. These will also reinforce the Concessionaire management commitment to rigorous time control of these events.</p> <p><i>ITS Monitoring and Travel Time Records</i></p> <p>The, during-construction, ITS system will provide approximate overall travel times for the corridor and will be an independent check on the collective time management of the individual Closures.</p> <p>It will audit our TMP effectiveness.</p>

<u>Item</u>	<u>Scope</u>
<p>Enhanced Public Information and Regular Communication</p>	<p><i>Public website with real time information</i></p> <p>The Concessionaire will provide a dedicated traffic component of a public web site including real time display of delays and travel times between Horseshoe Bay to Squamish, and Squamish to Whistler. The public will be able to obtain current online information with respect to weekly closure schedules and expected travel times between corridor destinations.</p> <p><i>Central programming of Changeable Message Signs</i></p> <p>The Concessionaire will utilize remotely programmed Changeable Message Signs (CMS) throughout the corridor to inform the public of scheduled closures and expected delays. The CMS messaging will be coordinated and programmed with the assistance of the Traffic Control Centre and the input of MOT.</p> <p><i>Dedicated phone line to respond to public concerns</i></p> <p>A dedicated, manned phone line will be instituted for public use. The public will be able to call for pre-recorded updates on the Concession Highway conditions and delays or, at certain times, to speak with a Concessionaire representative regarding problems along the corridor.</p>

SCHEDULE 5**CONSTRUCTION AND END OF TERM REQUIREMENTS****Part 8****Province Permits, Licences and Approvals****1. PERMITS, LICENCES AND APPROVALS**

1.1 The following permits, licences and approvals comprise the Province Permits, Licences and Approvals.

- (a) Letter of Agreement between MoT and MWLAP, dated January 2004;
- (b) Permit pursuant to section 28(2) of the Indian Act (Canada) with respect to lands within Squamish Indian Reserve #24;
- (c) Resource Use Permit No. LM0410575 issued by the Environmental Stewardship Division, Ministry of Water Land and Air Protection for the limited use of Porteau Cove for barge loading operations during construction for the period prior to June, 2009;
- (d) Ocean Disposal Permit 4543-2-03354 pursuant to Part VI of the Canadian Environmental Protection Act (Canada) for the period September 15, 2004 to September 14, 2005;
- (e) Authorization Number 02-HPAC – PA1-000-000092 pursuant to section 35(2) of the Fisheries Act (Canada) for work being done by others in the area referred to as Section DB12 in the RFP (being that part of the Project Facilities, Site and Adjacent Area commencing in and around the north boundary of the Culliton-Cheakamus Section and ending in and around the Pinecrest Estates) (signed August 23, 2004);
- (f) Notification for Proposed Works and Changes In and About a Stream under Part 7 Water Regulation BC Reg 204/88 of the Water Act (British Columbia) in connection with works in the area referred to as DB12 in the RFP (being that part of the Project Facilities, Site and Adjacent Area commencing in and around the north boundary of the Culliton-Cheakamus Section and ending in and around the Pinecrest Estates);
- (g) Environmental Assessment Certificate agreed to by the Province on May 19, 2004;
- (h) Screening Decision Dated June 11, 2004 issued pursuant to the Canadian Environmental Assessment Act (Canada), and any replacement to the Screening Decision or any portion thereof which becomes necessary as a consequence of or

results from a decision by a court of competent jurisdiction invalidating all or any portion of the Screening Decision.

2. JANE BASIN GLORY HOLE

2.1 The Province has given the MOT Section Contractor the option, at the MOT Section Contractor's election, to use the Jane Basin Glory Hole for purposes of disposal of acid generating and potentially acid generating rock. Responsibilities for and requirements of Permits, Licenses and Approvals and other matters (including agreements with Governmental Authorities and Interested Parties) relating to access to (including use of the road network leading to the Jane Basin Glory Hole) and use of the Jane Basin Glory Hole for the disposal of acid generating and potentially acid generating rock are summarized in the tables set out in Section 2.1(a) and Section 2.1(b), and further described in the documents included in the Disclosed Data and listed in Table 4 (the "Table 4 Documents") set out in Section 2.1(c). More detailed terms and requirements relating to the matters set out in the Table 4 Documents, including works, activities, and use of the Jane Basin Access Road and the Jane Basin Glory Hole will be developed by the Province based on the Table 4 Documents and delivered to the Concessionaire.

- (a) If the MOT Section Contractor elects to use the Jane Basin Glory Hole, the Province will give the Concessionaire notice of such election and the following allocation of responsibilities will apply among the Province, the MOT Section Contractor and the Concessionaire:

TABLE 1

Permit Agency or Authority	Type	Province Responsibility	MOT Section Contractor Responsibility	Concessionaire Responsibility
Ministry of Forests (MoF)	Road use permit	Obtain permit	Compliance with permit, with the Table 4 Documents, and further terms and requirements that may be developed pursuant to section 2.1 of this Part 8 of Schedule 5.	Compliance with permit with the Table 4 Documents, and further terms and requirements that may be developed pursuant to section 2.1 of this Part 8 of Schedule 5.
MEM	Mines Act		Compliance with all Laws and Regulations, including the Mines Act, with the Table 4 Documents, and further terms and requirements that may be developed pursuant to section 2.1 of this Part 8 of Schedule 5.	Compliance with all Laws and Regulations, including the Mines Act, with the Table 4 Documents, and further terms and requirements that may be developed pursuant to section 2.1 of this Part 8 of Schedule 5.

Permit Agency or Authority	Type	Province Responsibility	MOT Section Contractor Responsibility	Concessionaire Responsibility
Ministry of Energy & Mines (MEM)	Variance from the Health, Safety and Reclamation Code for Mines in British Columbia Re: Jane Basin Access Road between upper Britannia Creek Crossing and Jane Basin Glory Hole.	Obtain variance	Compliance with terms of variance.	Compliance with terms of variance
Ministry of Water, Land & Air Protection (MWLAP)	Permit for Disposal under Waste Management Act	Obtain Permit	Submit work plans and schedule to Province to support permit application.	Without limiting Sections 3.5 and 3.6 of the Concession Agreement, comply with permit and submit work plans and schedule on an annual basis, and all related costs, to the Province to support annual permit renewals.
Ministry of Sustainable Resource Management (MSRM)	Agreement on cost-share of initial upgrades to Jane Basin Access Road.	Negotiate agreement.	Compliance with applicable terms of any such agreement.	Compliance with applicable terms of any such agreement.
Ministry of Sustainable Resource Management (MSRM)	Agreement on shared use and maintenance of Britannia Forest Service Road ("BFSR")	None	Without limiting Sections 3.5 and 3.6 of the Concession Agreement, negotiate agreement, provide notice and details of agreement to Province prior to undertaking operations and indemnify Province in the terms of the agreement.	Without limiting Sections 3.5 and 3.6 of the Concession Agreement, negotiate agreement, provide notice and details of agreement to Province prior to undertaking operations and indemnify Province in the terms of the agreement.
Richmond Plywood Corp. Ltd. (RichPly)	Agreement on cost-share of initial BFSR upgrade and initial Mineral Creek rock cut stabilization works	Negotiate agreement.	Compliance with applicable terms of any such agreement.	Compliance with applicable terms of any such agreement.

Permit Agency or Authority	Type	Province Responsibility	MOT Section Contractor Responsibility	Concessionaire Responsibility
RichPly	Agreement on shared use and maintenance of Britannia Forest Service Road (BFSR)	None	Without limiting Sections 3.5 and 3.6 of the Concession Agreement, negotiate agreement, provide notice and details of agreement to Province prior to undertaking operations and indemnify Province in the terms of agreement.	Without limiting Sections 3.5 and 3.6 of the Concession Agreement, negotiate agreement, provide notice and details of agreement to Province prior to undertaking operations and indemnify Province in the terms of agreement.

- (b) If the MOT Section Contractor elects to not use the Jane Basin Glory Hole, the Province will give the Concessionaire notice of such election and the allocation of responsibilities that will apply between the Province and the Concessionaire are set out in the following two tables:

TABLE 2

Permit Agency or Authority	Type	Province Responsibility	Concessionaire. Responsibility
Ministry of Forests (MoF)	Road use permit	None	Compliance with permit with the Table 4 Documents, and further terms and requirements that may be developed pursuant to section 2.1 of this Part 8 of Schedule 5.
MEM	Mines Act	None	Compliance with all Laws and Regulations, including the Mines Act, with the Table 4 Documents, and further terms and requirements that may be developed pursuant to section 2.1 of this Part 8 of Schedule 5.
Ministry of Energy & Mines (MEM)	Variance from the Health, Safety and Reclamation Code for Mines in British Columbia Re: Jane Basin Access Road between upper Britannia Creek Crossing and glory hole.	None	Obtain variance and compliance with terms of variance
Ministry of Water, Land & Air Protection (MWLAP)	Permit for Disposal under Waste Management Act	Obtain Permit	Without limiting Sections 3.5 and 3.6 of the Concession Agreement, comply with permit, and submit work plans and schedule on an annual basis, and all related costs, to the Province to support annual permit renewals.

Permit Agency or Authority	Type	Province Responsibility	Concessionaire. Responsibility
Ministry of Sustainable Resource Management (MSRM)	Agreement on cost-share of initial upgrades to Jane Basin Access Road.	None	Negotiate agreement
Ministry of Sustainable Resource Management (MSRM)	Agreement on shared use and maintenance of Britannia Forest Service Road (“BFSR”)	None	Without limiting Sections 3.5 and 3.6 of the Concession Agreement, comply with permit, and submit work plans and schedule on an annual basis, and all related costs, to the Province to support annual permit renewals.
Richmond Plywood Corp. Ltd. (RichPly)	Agreement on cost-share of initial BFSR upgrade and initial Mineral Creek rock cut stabilization works	None	Negotiate agreement
RichPly	Agreement on shared use and maintenance of Britannia Forest Service Road (BFSR)	None	Without limiting Sections 3.5 and 3.6 of the Concession Agreement, negotiate agreement, provide notice and details of agreement to Province prior to undertaking operations and indemnify Province in the terms of agreement.

TABLE 3
Activities

Activity	Province Responsibilities	Concessionaire Responsibility
Initial upgrade to BFSR and initial rock slope stabilization to Mineral Creek Rock Cut	None	Construct necessary works. Maintenance as per agreement on shared use between RichPly and Concessionaire
Upgrade current ford crossing at Marmot Creek with new Q ₁₀₀ bridge crossing (if required)	None	Negotiate cost-share agreement with MSRM and Richply. Maintenance as per agreement on shared use between RichPly and Concessionaire.
Design and construct stockpile site / transfer station at Mount Sheer town site	None	Construct necessary works. Monitoring, operations and maintenance during periods of use.
Initial upgrades to Jane Basin Access Road.	None	Construct necessary works. Monitoring, operations and maintenance during periods of use, including upper Britannia Creek crossing.
Disposal of waste rock in Jane Basin Glory Hole	None	Monitoring and operations procedures as defined in attached documentation

(c) The Table 4 Documents are listed below.

TABLE 4

	Documents
1.	Memo from Golder Associates Ltd. To BC Ministry of Water, Land and Air Protection, dated March 5, 2004, RE: Conceptual Plan for Transport and Disposal of Sea to Sky Highway Acid-Generating Waste Rock at Jane Basin
2.	Memo from Golder Associates Ltd. To Environmental Assessment Office, dated March 5, 2004, RE: Ministry of Transportation Sea to Sky Highway 99 Upgrade Works – Disposal of Potentially Acid-Generating Waste Rock at Britannia Mine
3.	Memo from Golder Associates Ltd. To BC Ministry of Energy and Mines, dated March 5, 2004, RE: Britannia Mine Reclamation Project (MSRM) Highway 99 Upgrade (MoT) Hauling Plan to Jane Basin and Application for Variance
4.	Report from Golder Associates Ltd. To Ministry of Sustainable Resource Management, dated February 20, 2004, title “Proposed PAG and AG Rock Disposal Facility Concept Jane Basin, Britannia Mine Britannia Beach, British Columbia
5.	Memo from Golder Associates Ltd. To Ministry of Transportation, dated May 5, 2004, RE: Permitting Requirements and Constraints to Dispose of PAG and AG Material in Jane Basin Sea to Sky Highway Improvement Project

SCHEDULE 5**CONSTRUCTION AND END OF TERM REQUIREMENTS****Part 9****Form of Independent Certifier Contract**

The following is the form of Independent Certifier Contract agreed upon between the Province and the Concessionaire to be executed by the Province, the Concessionaire and the Independent Certifier following the Closing Date. The Province and the Concessionaire acknowledge that the Independent Certifier Contract remains subject to modification following review by the Independent Certifier with any such modifications to be agreed by each of the Province, the Concessionaire and the Senior Funders acting reasonably.

THIS CONTRACT is made as of the 3rd day of June 2005

AMONG:

**HER MAJESTY THE QUEEN IN RIGHT OF THE
PROVINCE OF BRITISH COLUMBIA**, as represented
by the **MINISTER OF TRANSPORTATION**
(the “**Province**”)

AND:

SEA TO SKY HIGHWAY INVESTMENT LIMITED PARTNERSHIP
a limited partnership created under the laws of British Columbia
(the “**Concessionaire**”)

AND:

<> **a** <> incorporated under the laws of <>
(the “**Independent Certifier**”)

WHEREAS:

- A. The Province, BC Transportation Financing Authority and the Concessionaire (the Province and the Concessionaire being herein collectively and individually referred to as the “CA Parties”) have entered into the Concession Agreement.
- B. Pursuant to the terms of the Concession Agreement, the CA Parties wish to appoint the Independent Certifier, and the Independent Certifier wishes to accept such appointment, to perform certain services in connection with the Concession Agreement.
- C. The CA Parties and the Independent Certifier wish to enter into this Contract in order to record the terms upon which the Independent Certifier shall perform such services.

NOW THEREFORE in consideration of the mutual promises and agreements of the CA Parties and the Independent Certifier herein expressed and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the CA Parties and the Independent Certifier covenant and agree as follows:

1. DEFINITIONS

1.1 Definitions

In this Contract including the recitals and Annexes, unless the context indicates a contrary intention, terms which are defined in the Concession Agreement (and not otherwise defined in this Contract) shall have the meanings given to them in the Concession Agreement and the following terms shall have the following meanings:

- (i) “Concession Agreement” means the agreement entitled “Sea-to-Sky Highway Improvement Project Concession Agreement” made between the Province, BC Transportation Financing Authority and the Concessionaire and dated as of the <> day of <>, 2005, as the same may be amended from time to time.
- (ii) “Contract” means this Contract, as the same may be amended from time to time.
- (iii) “Contract Material” means all material:
 - (A) provided to the Independent Certifier or created or required to be created by any CA Party; and
 - (B) provided by or created or required to be created by the Independent Certifier as part of, or for the purpose of, performing the Functions, including documents, equipment, reports, technical information, plans, charts, drawings, calculations, tables, schedules and data (stored and recorded by any means).
- (iv) “Fee” means the fees payable by the CA Parties to the Independent Certifier for the Functions, as such fees are specified and made payable in Annex B.
- (v) “Functions” means:
 - (A) all of the functions and obligations conferred on and to be performed by the Independent Certifier under the Concession Agreement;
 - (B) all of the functions and obligations conferred on and to be performed by the Independent Certifier under this Contract, including the functions described in Annex A to this Contract; and
 - (C) all other things or tasks which the Independent Certifier must do to comply with its obligations and discharge its duties under this Contract and to comply with the obligations and discharge the duties of the Independent Certifier under the Concession Agreement.

- (vi) “Functions Variation” is any change to the Functions.
- (vii) “Intellectual Property” means any and all intellectual property rights throughout the world, whether subsisting now or in the future, including rights of any kind in inventions, patents, copyright, trademarks, service marks, industrial designs, integrated circuit topography rights, applications for registration of any of the foregoing, and know-how, trade secrets, confidential information and trade or business names.
- (viii) “CA Parties” has the meaning given in recital A hereto.

2. INTERPRETATION

2.1 Interpretation

This Contract will be interpreted according to the following provisions, save to the extent that the context or the express provisions of this Contract otherwise require:

- (a) the headings and sub-headings and references to them in this Contract are for convenience of reference only, do not constitute a part of this Contract, and shall not to be taken into consideration in the interpretation or construction of, or affect the meaning of, this Contract;
- (b) the words “herein”, “hereto”, hereof, and “hereunder” and other words of like import refer to this Contract as a whole and not to the particular provision in which such word may be used;
- (c) all references to Sections are references to Sections of this Contract unless otherwise indicated;
- (d) words importing the singular include the plural and vice versa;
- (e) words importing a particular gender include all genders;
- (f) references to any contract, document, standard, principle or other instrument include (subject to all relevant approvals and any other provision of this Contract or the Concession Agreement expressly concerning such contract, document, standard, principle or other instrument or amendments thereto) a reference to that contract, document, standard, principle or instrument as amended, supplemented, substituted, novated or assigned;
- (g) “person” includes an individual, corporation, partnership, joint venture, association, trust, pension fund, union, government, governmental body, governmental agency, authority, board, tribunal, commission or department and the heirs, beneficiaries, executors, personal or other legal representatives or administrators of an individual, and the receivers and administrators of a corporation;

- (h) all monetary amounts are expressed in Canadian Dollars;
- (i) whenever the terms “will” or “shall” are used in this Contract they are to be construed and interpreted as synonymous and are to be read as “shall”;
- (j) the words “includes” or “including” are to be construed as being without limitation;
- (k) general words are not given a restrictive meaning:
 - (i) 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
 - (ii) by reason of the fact that they are followed by particular examples intended to be embraced by those general words;
- (l) if the time for doing an act falls or expires on a day that is not a Working Day, the time for doing such act will be extended to the next Working Day;
- (m) all 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 and include any orders, regulations, by-laws, ordinances, orders, codes of practice, instruments or other subordinate legislation made under the relevant statute; and
- (n) the words of this Contract are to be given their natural meaning. The CA Parties and the Independent Certifier have had the opportunity to take legal advice on this Contract and no term is, therefore, to be construed contra proferentem.

2.2 Obligations and Exercise of Rights by CA Parties

- (a) All obligations of the CA Parties under this Contract are and will be several and not joint or joint and several.
- (b) Except as specifically provided for in this Contract, including pursuant to Section 10.5, the rights of the CA Parties under this Contract will be jointly exercised by the CA Parties.

3. ROLE OF THE INDEPENDENT CERTIFIER

3.1 Engagement

The CA Parties hereby appoint the Independent Certifier, and the Independent Certifier hereby accepts such appointment, to carry out the Functions in accordance with this Contract and the provisions of the Concession Agreement. The Independent Certifier shall perform the Functions in accordance with this Contract and the provisions of the Concession Agreement.

3.2 Qualifications and Standard of Skill, Care and Diligence

The Independent Certifier represents and warrants to the CA Parties that:

- (i) it has and will continue to have all requisite professional qualifications, skill, knowledge and expertise;
- (ii) it holds and will continue to hold all requisite permits, licences, consents and authorizations; and
- (iii) it has and will continue to have all requisite expertise, qualifications, facilities, materials and equipment in addition to those referred to in paragraphs (i) and (ii) above,

required to undertake and perform the Functions and its obligations under this Contract in accordance with the terms of this Contract and the Concession Agreement. The Independent Certifier shall exercise and ensure that all of its staff members engaged in the performance of the Functions exercise the standard of skill, care and diligence in the performance of the Functions that would be expected of an expert professional experienced in providing services in the nature of the Functions for projects similar to the Project.

3.3 Duty of Independent Judgement

(a) In performing the Functions, the Independent Certifier must:

- (i) act fully, impartially, honestly and independently in representing the interests of both CA Parties in accordance with the terms of the Concession Agreement and this Contract;
- (ii) act reasonably and to the highest professional standards;
- (iii) act in a timely manner:
 - (A) in accordance with the times prescribed in this Contract and in the Concession Agreement; or
 - (B) where no times are prescribed, within a reasonable time so as to enable the CA Parties to exercise their rights and perform their respective obligations under the Concession Agreement; and
- (iv) act in accordance with the joint directions of the CA Parties provided that the directions are not inconsistent with the other terms of this Contract or the terms of the Concession Agreement and do not vary or prejudice the Independent Certifier's authority or responsibilities or the exercise by the Independent Certifier of its professional judgement under this Contract.

- (b) Although the Independent Certifier may take account of any opinions or representations made by the CA Parties, the Independent Certifier shall not be bound to comply with any opinions or representations made by either of them in connection with any matter on which the Independent Certifier is required to exercise its professional judgement.
- (c) The Independent Certifier acknowledges that the CA Parties may rely on the Functions, including determinations, findings and certifications made by the Independent Certifier, and accordingly the Independent Certifier, without limiting its obligations under Section 3.2, will use its best skill and judgment in performing the Functions.

3.4 Authority to Act

The Independent Certifier:

- (i) is an independent consultant and is not, and must not purport to be, a partner, joint venturer or agent of any CA Party;
- (ii) has no authority to give any directions to a CA Party or its officers, directors, members, employees, contractors, consultants or agents; and
- (iii) has no authority to waive or alter any terms of the Concession Agreement, nor to discharge or release a party from any of its obligations under the Concession Agreement unless jointly agreed by the CA Parties in writing.

3.5 Knowledge of the CA Parties' Requirements

The Independent Certifier represents and warrants to the CA Parties that:

- (i) it has reviewed the Concession Agreement and informed and will be deemed to have informed itself fully of the requirements of the Concession Agreement as they relate to the performance of the Functions and as to the nature of the Works provided for under the Concession Agreement;
- (ii) it has informed or will inform itself fully of, and will be deemed to have informed itself fully of, all Laws and Regulations and Legal Requirements that relate to or may apply in respect of the performance of the Functions and the terms of this Contract;
- (iii) it will inform itself fully of the requirements of such other documents and materials as may become relevant from time to time to the performance of the Functions;
- (iv) without limiting Sections 3.5(i) to 3.5(iii), inclusive, it has and will be deemed to have informed itself fully of all time limits and other requirements for any Function which the Independent Certifier carries out under the Concession Agreement and this Contract;
- (v) it has and will be deemed to have informed itself fully of the work necessary for the performance of the Functions and the means of access to, communication with

and facilities at the Project Facilities, the Site and the Adjacent Areas including restrictions on any such access or protocols that are required; and

- (vi) it has satisfied itself as to the correctness and sufficiency of its proposal for the Functions and that the Fee covers the cost of complying with all of the obligations under this Contract and of all matters and things necessary for the due and proper performance and completion of the Functions.

3.6 Co-ordination and Information by Independent Certifier

The Independent Certifier must:

- (i) fully co-operate in good faith with the CA Parties;
- (ii) carefully co-ordinate the Functions with the work and services performed by the CA Parties;
- (iii) without limiting its obligations under Sections 3.3 and 3.6(ii), perform the Functions so as to avoid unreasonably interfering with, disrupting or delaying the work and services performed by the CA Parties; and
- (iv) provide copies to all CA Parties of all reports, communications, certificates and other documentation that it provides to any CA Party.

3.7 Ability to Fulfill Terms of Contract; Conflict of Interest

The Independent Certifier represents and warrants to the CA Parties that:

- (i) it has no knowledge of any fact, circumstance or condition that adversely affects or, so far as it can foresee, might adversely affect its ability to perform the Functions in accordance with and to fulfill the terms of this Contract; and
- (ii) at the date of signing this Contract, no actual or perceived conflict of interest exists or is likely to arise in the performance of the Functions or any of its other obligations under this Contract.

The Independent Certifier shall not (and shall at all time have and maintain in place practices and procedures to ensure that it does not) perform services for or provide advice to any other person or engage in any other activity that may or does give rise to any actual or perceived conflict of interest in the performance of the Functions or any of its other obligations under this Contract. Without prejudice to the foregoing, if during the term of this Contract any such actual or perceived conflict or risk of actual or perceived conflict of interest arises, the Independent Certifier will notify the CA Parties immediately in writing of that conflict or risk of conflict including full particulars of all relevant facts and circumstances with respect thereto and, without limiting any other rights or remedies of the CA Parties, will forthwith provide each of the CA Parties with such further information relating thereto as it may request and take such steps as may be required by each of the CA Parties to avoid or mitigate that conflict or risk.

3.8 Independent Certifier Personnel

- (a) The Independent Certifier represents and warrants to the CA Parties that it has and will continue to have expert and professional staff who are competent, experienced and qualified to perform, and who hold all requisite licences and other professional qualifications necessary to perform, the Functions in accordance with the terms of this Contract and the Concession Agreement.
- (b) Subject to Section 3.8(c), the Independent Certifier shall use the partners, directors or employees described in Annex C hereto in connection with the performance of the Functions and such persons' services shall be available for so long as may be necessary to ensure the proper performance by the Independent Certifier of the Functions. Such persons shall have full authority to act on behalf of and bind the Independent Certifier for all purposes in connection with this Contract.
- (c) None of the persons listed in Annex C shall be removed or replaced unless he/she ceases to work as a partner in or director or employee of the Independent Certifier due to circumstances beyond the control of the Independent Certifier or he/she is unable to work because of death or illness. The Independent Certifier shall notify the CA Parties of any such circumstances and shall be responsible for finding a replacement who shall previously have been approved in writing by the CA Parties.

4. ROLE OF THE CA PARTIES

4.1 Assistance

The CA Parties agree to co-operate with and provide reasonable assistance to the Independent Certifier to enable the Independent Certifier to carry out its obligations under this Contract.

4.2 Instructions in Writing

All instructions to the Independent Certifier by the CA Parties shall be given in writing.

4.3 Information and Services

Each of the CA Parties shall make available to the Independent Certifier, as soon as practicable from time to time, all information, documents and particulars necessary for the Independent Certifier to carry out the Functions, including such information, documents and particulars required in order for the Independent Certifier to determine whether Substantial Completion or Final Completion of any Works has occurred, and shall provide copies of all such information, documents and particulars provided by it to the Independent Certifier to the other CA Party. Each CA Party hereby consents to the other CA Party disclosing to the Independent Certifier any Confidential Information in connection with or for the purpose of enabling the Independent Certifier to carry out the Functions (which Confidential Information disclosed to the Independent Certifier shall, for greater certainty, form part of the Contract Material).

4.4 Additional Information

If any information, documents or particulars are reasonably required to enable the Independent Certifier to perform the Functions and have not been provided by the CA Parties, then:

- (i) the Independent Certifier must give notice in writing to the Concessionaire's Representative or the Province's Representative, as the case may be, of the details of the information, documents or particulars demonstrating the need and the reasons why they are required; and
- (ii) the Concessionaire or the Province, as the case may be, must arrange the provision of the required information, documents or particulars.

4.5 Right to Enter and Inspect

Upon giving reasonable notice to the Province's Representative and the Concessionaire's Representative, the Independent Certifier (and any person authorized by it) may enter upon and inspect the Works and the Project Facilities, the Site and the Adjacent Areas or any part or parts thereof at any reasonable time in connection with the exercise or performance or proposed exercise or performance of rights or obligations under this Contract, subject to:

- (i) observance of the reasonable rules of the Concessionaire as to safety and security for the Works and the Project Facilities, the Site and the Adjacent Areas;
- (ii) not causing unreasonable delay to the carrying out of the Works by reason of its presence at the Project Facilities, the Site and the Adjacent Areas; and
- (iii) not causing any damage to the Works or the Project Facilities, the Site or the Adjacent Areas.

4.6 CA Parties Not Relieved

Neither CA Party shall be relieved from performing or observing its obligations, or from any other liabilities, under the Concession Agreement as a result of either the appointment of, or any act or omission by, the Independent Certifier.

4.7 CA Parties Not Liable

On no account will either CA Party be liable to the other CA Party for any act or omission of the Independent Certifier whether under or purportedly under a provision of the Concession Agreement, this Contract or otherwise, provided that any such act or omission shall not extinguish, relieve, limit or qualify the nature or extent of any right or remedy of either CA Party against, or any obligation or liability of either CA Party to, the other CA Party which would have existed regardless of such act or omission.

5. QUALITY

5.1 Quality Project Plan

The Independent Certifier must:

- (i) develop and implement a quality project plan identifying the processes and outcomes of the Functions that complies with all requirements of the Independent Certifier's quality assurance accreditation, and is otherwise satisfactory to each of the Province's Representative and the Concessionaire's Representative;
- (ii) within 14 days after the date of this Contract, provide such quality project plan to each of the Province's Representative and the Concessionaire's Representative;
- (iii) provided it is satisfactory to each of the Province's Representative and the Concessionaire's Representative, implement such quality project plan; and
- (iv) if such quality project plan is not satisfactory to either the Province's Representative or the Concessionaire's Representative, within 7 days after receiving notice thereof from either CA Party to that effect, revise and resubmit the quality project plan to each of the Province's Representative and the Concessionaire's Representative, and, once it is satisfactory to each of the Province's Representative and the Concessionaire's Representative, implement such quality project plan as so revised.

5.2 Quality Project Plan Not to Relieve Independent Certifier

The Independent Certifier will not be relieved of any responsibilities or obligations in respect of the performance of the Functions and will remain solely responsible for them notwithstanding:

- (i) the obligation of the Independent Certifier to develop and implement a quality project plan; or
- (ii) any comment or direction upon, review or acceptance of, approval to proceed with or request to vary any part of the quality project plan by either the Province's Representative or the Concessionaire's Representative.

6. SUSPENSION

6.1 Notice

The Functions (or any part thereof) may be suspended at any time by the CA Parties:

- (i) if the Independent Certifier fails to comply with its obligations under this Contract, immediately by the CA Parties giving joint notice in writing to the Independent Certifier; or
- (ii) in any other case, by the CA Parties giving seven days joint notice in writing to the Independent Certifier.

6.2 Costs of Suspension

The Independent Certifier will:

- (i) subject to the Independent Certifier complying with Section 9, be entitled to recover the extra costs incurred by the Independent Certifier by reason of a suspension directed under Section 6.1(ii) valued as a Functions Variation under Section 9; and
- (ii) have no entitlement to be paid any costs, expenses, losses or damages arising from a suspension under Section 6.1(i).

6.3 Recommencement

The Independent Certifier must immediately recommence the carrying out of the Functions (or any part thereof) on receipt of a joint written notice from the CA Parties requiring it to do so.

7. INSURANCE AND LIABILITY

7.1 Independent Certifier's Professional Indemnity Insurance

- (a) The Independent Certifier must have and maintain in place:
 - (i) professional errors and omissions insurance:
 - (A) in the amount of \$5 million per claim and in the aggregate, a deductible of not more than \$250,000 per claim and from an insurer and on terms satisfactory to each of the CA Parties;
 - (B) with a term and extended reporting period from the date of this Contract until the expiration of 3 years from the cessation of the Functions; and
 - (C) covering liability which the Independent Certifier might incur as a result of a breach by it of its obligations or any breach of a duty owed by the Independent Certifier in a professional capacity to the CA Parties, or either of them, under or in connection with this Contract or the provision of the Functions; and
 - (ii) comprehensive general liability insurance in the amount of \$5 million per claim and in the aggregate, no deductible for personal injury or bodily injury, a deductible of not more than \$50,000 per occurrence for property damage, and from an insurer and on terms and conditions satisfactory to each of the CA Parties.
- (b) The Independent Certifier must provide copies of its insurance policies and renewals to each of the CA Parties (or as either of them may direct) upon request.

7.2 Workers' Compensation Insurance

The Independent Certifier must, at its own cost, insure its liability (including its common law liability) as required under any applicable workers compensation statute or regulation in relation to its employees engaged in the performance of the Functions.

8. PAYMENT FOR SERVICES

8.1 The Fee

- (a) In consideration of the Independent Certifier performing the Functions in accordance with this Contract, the CA Parties shall pay the Independent Certifier the Fee.
- (b) The Fee includes all taxes (except for Goods and Services Tax), disbursements and expenses (including accommodation, car hire, equipment and travel expenses), overheads and profit to perform the Functions.

8.2 Payment of Fee

The CA Parties shall each pay one-half of the Fee to the Independent Certifier in accordance with the payment schedule specified in Annex B. The obligation of each CA Party to pay its one-half of the Fee to the Independent Certifier is a several obligation and not subject to joint or joint and several liability, and neither CA Party shall have any liability whatsoever for the non-payment by the other CA Party of any fees or costs payable by such other CA Party under this Contract.

8.3 Appropriation

The Independent Certifier acknowledges that it is aware of the provisions of subsection 28(2) of the *Financial Administration Act*, R.S.B.C. 1996, c. 138.

9. FUNCTIONS VARIATIONS

9.1 Notice of Functions Variation

- (a) If the Independent Certifier believes, other than in the case of a "Functions Variation Order" under Section 9.3, that any direction by the CA Parties constitutes or involves a Functions Variation, it must:
 - (i) within 7 days after receiving the direction and before commencing work on the subject matter of the direction, give notice to the CA Parties that it considers the direction constitutes or involves a Functions Variation; and
 - (ii) within 21 days after giving the notice under Section 9.1(a)(i), submit a written claim to each of the Province's Representative and the Concessionaire's Representative which includes detailed particulars of the claim, the amount of the claim and how it was calculated.

- (b) Regardless of whether the Independent Certifier considers that such a direction constitutes or involves a Functions Variation, the Independent Certifier must continue to perform the Functions in accordance with this Contract and all directions, including any direction in respect of which notice has been given under this Section.

9.2 No Adjustment

If the Independent Certifier fails to comply with Section 9.1, the Fee will not be adjusted as a result of the relevant direction.

9.3 Functions Variation Procedure

- (a) The Province's Representative and the Concessionaire's Representative may jointly issue a document titled "Functions Variation Price Request" to the Independent Certifier which will set out details of a proposed Functions Variation which the CA Parties are considering.
- (b) Within 7 days after the receipt of a "Functions Variation Price Request", the Independent Certifier must provide each of the Province's Representative and the Concessionaire's Representative with a written notice in which the Independent Certifier sets out the effect which the proposed Functions Variation will have on the Fee.
- (c) Each of the Province's Representative and the Concessionaire's Representative may then jointly direct the Independent Certifier to carry out a Functions Variation by written document titled "Functions Variation Order" which will state either that:
 - (i) the Fee is adjusted as set out in the Independent Certifier's notice; or
 - (ii) the adjustment (if any) to the Fee will be determined under Section 9.4.

9.4 Cost of Functions Variation

- (a) Subject to Section 9.2, the Fee will be adjusted for all Functions Variations or suspensions under Section 6.1(ii) carried out by the Independent Certifier by:
 - (i) the amount (if any) stated in the "Functions Variation Order" in accordance with Section 9.3(c);
 - (ii) if Section 9.4(a)(i) is not applicable, an amount determined pursuant to the fee schedule for Functions Variations in Annex B; or
 - (iii) where such rates or prices are not applicable, a reasonable amount to be agreed between the CA Parties and the Independent Certifier or, failing agreement, determined by the Province's Representative and the Concessionaire's Representative jointly.
- (b) Any reductions in the Fee shall be calculated on the same basis as any increases.

10. TERM AND TERMINATION

10.1 Term

Subject to earlier termination, this Contract will commence [*insert Commencement Date*] and continue in full force until:

- (i) 60 days after Final Completion of the Post Olympic Works; or
- (ii) such later date as may be mutually agreed between the CA Parties and the Independent Certifier.

10.2 Notice of Breach

If the Independent Certifier commits a breach of this Contract, the CA Parties may give written notice to the Independent Certifier:

- (i) specifying the breach; and
- (ii) directing its rectification in the period specified in the notice being a period not less than 7 days from the date of service of the notice.

10.3 Termination for Breach

If the Independent Certifier fails to rectify the breach within the period specified in the notice issued under Section 10.2, the CA Parties may, without prejudice to any other rights of the CA Parties or either of them, immediately terminate this Contract.

10.4 Termination for Financial Difficulty

The CA Parties may, without prejudice to any other rights which the CA Parties or either of them may have, terminate this Contract immediately if:

- (i) events have occurred or circumstances exist which, in the opinion of the CA Parties, may result in or have resulted in insolvency or the control of the Independent Certifier passing to another body or corporation; or
- (ii) the Independent Certifier has communications with its creditors with a view to entering into, or enters into, any form of compromise, arrangement or moratorium of any debts whether formal or informal, with its creditors.

10.5 Termination for Convenience

Notwithstanding anything to the contrary in this Contract, either of the CA Parties acting reasonably may at any time terminate this Contract upon 30 days written notice to the Independent Certifier.

10.6 Independent Certifier's Rights upon Termination for Convenience

Upon a termination under Section 10.5, the Independent Certifier will:

- (i) continue on a day to day basis thereafter until a new Independent Certifier is appointed, unless otherwise directed by the CA Parties;
- (ii) be entitled to be reimbursed by the CA Parties for the value of the Functions performed by it to the date of termination; and
- (iii) not be entitled to any damages or other compensation in respect of the termination and (without limitation) any amount in respect of:
 - (A) the lost opportunity to earn a profit in respect of the Functions not performed at the date of termination; and
 - (B) any lost opportunity to recover overheads from the turnover which would have been generated under this Contract but for it being terminated.

10.7 Procedure upon Termination

Upon completion of the Independent Certifier's engagement under this Contract or earlier termination of this Contract (whether under Section 10.3, 10.4 or 10.5 or otherwise) the Independent Certifier must:

- (i) co-operate with the CA Parties;
- (ii) hand over to the CA Parties all Contract Material and all other information concerning the Project held or prepared by the Independent Certifier; and
- (iii) as and when required by the CA Parties, meet with them and such other persons nominated by them with a view to providing them with sufficient information to enable the CA Parties to execute the Project or the persons nominated to provide the Functions.

10.8 Effect of Termination

Except as otherwise expressly provided in this Contract, termination of this Contract shall be without prejudice to any accrued rights and obligations under this Contract as at the date of termination (including the right of the CA Parties to recover damages from the Independent Certifier).

10.9 Survival

Termination of this Contract shall not affect the continuing rights and obligations of the CA Parties and the Independent Certifier under Sections 7, 8, 10.6, 10.7, 10.8, 11, 12.7, 12.8 and this Section or under any other Section which is expressed to survive termination or which is required to give effect to such termination or the consequences of such termination.

11. INDEMNITY & FUNDERS' RELIANCE

11.1 Indemnity

- (a) The Independent Certifier shall indemnify and hold the CA Parties and each of them, and their respective employees, directors, officers, deputies, delegates, representatives and agents, harmless from and against any and all losses, claims, damages, liabilities and costs (including without limitation costs and expenses incurred in retaining another person to act as the Independent Certifier under the Concession Agreement in the event of termination of this Contract pursuant to Section 10.3 or 10.4) incurred or suffered by any of them by reason of, resulting from, in connection with, or arising out of:
 - (i) the breach of any representation, warranty, covenant, term, duty or obligation of the Independent Certifier set out in or arising under this Contract or the Concession Agreement; or
 - (ii) any act or omission of the Independent Certifier in connection with the subject matters of this Contract.
- (b) For the purposes of this Section, "costs" includes reasonable lawyers' fees and expenses, reasonable accountants' fees and expenses, arbitration costs, court costs and all other reasonable out-of-pocket expenses on a full indemnity basis.
- (c) The Independent Certifier acknowledges and agrees that the Funders have an interest in the Independent Certifier's performance of its Functions and the Funders are relying, and shall be entitled to rely, upon the Independent Certifier's full and faithful performance of its Functions in its dealings and agreements with the Concessionaire.

12. GENERAL

12.1 Entire Contract

This Contract and the Concession Agreement constitute the entire Contract between the CA Parties and the Independent Certifier and supersede all communications, arrangements and agreements, either oral or written, made or entered into prior to the date of this Contract between the CA Parties and the Independent Certifier with respect to the subject matter of this Contract.

12.2 Negation of Employment

- (a) The Independent Certifier, its officers, directors, members, employees, servants and agents and any other persons engaged by the Independent Certifier in the performance of the Functions, will not by virtue of this Contract or the performance of the Functions become in the service or employment of the CA Parties for any purpose.
- (b) The Independent Certifier will be responsible for all matters requisite as employer or otherwise in relation to such officers, directors, members, employees, servants and agents and other persons who are engaged by the Independent Certifier.

12.3 Waiver

Failure by any CA Party or the Independent Certifier to enforce a provision of this Contract will not be construed as a waiver by that CA Party or the Independent Certifier of any right in respect of that provision, or any other provisions of this Contract.

12.4 Notices

(a) Any document which is to be or may be issued or given to or served upon the CA Parties or the Independent Certifier under this Contract will be deemed to have been sufficiently issued or given to or served:

- (i) if it is delivered or sent by commercial courier, upon receipt;
- (ii) if it is sent by fax between the hours of 9:00 a.m. and 4:00 p.m. on a Working Day, upon confirmation of a successful transmission by a transmission report received by the sender,

to the addresses set out below:

If to the Concessionaire

Suite 2664, Four Bentall Centre
1055 Dunsmuir Street
P.O. Box 49183
Vancouver, British Columbia V7X 1K8

Telephone: 604-605-1779
Facsimile: 604-605-1634
Attention: Nicholas Hann (Vice President)

If to the Province

5B – 940 Blanshard Street
Victoria, British Columbia V8W 9T5

Telephone: 250-356-1403
Facsimile: 250-387-6431
Attention: Frank Blasetti, Assistant Deputy Minister Transportation

If to the Independent Certifier

<>
Address:<>

Telephone: <>
Facsimile: <>
Attention: <>

- (b) Any party may change its address for notice by notice given to the other parties in accordance with this Section.

12.5 Transfer and Assignment

- (a) The Independent Certifier:
- (i) must not assign, transfer, mortgage, charge or encumber any right or obligation under this Contract without the prior written consent of the CA Parties, which each CA Party may give or withhold in its absolute and unfettered discretion; and
 - (ii) agrees that any assignment, transfer, mortgage, charge or encumbrance will not operate to release or discharge the Independent Certifier from any obligation or liability under this Contract.
- (b) For the purposes of this Section, an assignment will be deemed to have occurred where there is a change in effective control of the Independent Certifier after the date of this Contract, being a change for any reason in the person or persons controlling:
- (i) the composition of the board of directors;
 - (ii) the voting power of the board of directors;
 - (iii) any class of shareholders; or
 - (iv) more than half the issued shares in the capital of the Independent Certifier.

12.6 Governing Laws and Attornment

This Contract will be governed by and construed in accordance with the laws of the Province of British Columbia and the federal laws of Canada applicable therein without regard to conflicts of law principles that would apply a different body of law, and the CA Parties and the Independent Certifier hereby irrevocably submit and attorn to the exclusive jurisdiction of the courts of that Province and all courts competent to hear appeals therefrom with respect to any action, suit, proceeding or dispute in connection with this Contract.

12.7 Confidentiality

- (a) The Independent Certifier must ensure that:
- (i) except as required by law, neither it nor any of its officers, directors, members, employees, servants and agents disclose, or otherwise make public, any Contract Material or any other information or material acquired in connection with or during the performance of the Functions without the prior written approval of each of the CA Parties (which approval may be granted or withheld in the absolute and unfettered discretion of each CA Party); and

- (ii) no Contract Material is used, copied, supplied or reproduced for any purpose other than for the performance of the Functions under this Contract.
- (b) The CA Parties may at any time require the Independent Certifier to give and to arrange for its officers, directors, members, employees, servants and agents engaged in the performance of the Functions to give written undertakings, in the form of confidentiality agreements on terms required by the CA Parties, relating to the non-disclosure of Contract Material, in which case the Independent Certifier must promptly arrange for such agreements to be made and delivered to the CA Parties.

12.8 Contract Material

- (a) The CA Parties and the Independent Certifier agree that the Independent Certifier does not and will not have any rights, including any Intellectual Property, in any Contract Material provided to the Independent Certifier or created or required to be created by any CA Party.
- (b) As between the CA Parties and the Independent Certifier, all title and ownership, including all Intellectual Property, in and to the Contract Material created or required to be created by the Independent Certifier as part of, or for the purposes of performing the Functions, is hereby assigned jointly to the CA Parties on creation, or where such title, ownership and Intellectual Property cannot be assigned before creation of the Contract Material, it will be assigned to the CA Parties on creation. In addition, to the extent that copyright may subsist in such Contract Material so created by the Independent Certifier, the Independent Certifier hereby waives all past, present and future moral rights therein and the Independent Certifier shall ensure that any agent or employee of the Independent Certifier shall have waived all such moral rights. The CA Parties acknowledge and agree that, as between themselves, title, ownership and other rights to the foregoing shall be governed by the Concession Agreement.
- (c) The Independent Certifier will do all such things and execute all such documents as reasonably requested by either of the CA Parties in order to confirm or perfect the assignment of Intellectual Property in the Contract Material referred to in Section 12.8(b).

12.9 Time of the Essence

Time will be of the essence of this Contract and of the transactions contemplated by this Contract.

12.10 Amendment

No change or modification of this Contract will be valid unless it is in writing and signed by each party to this Contract.

12.11 Severability

If any provision of this Contract shall be declared invalid, unenforceable or illegal by the courts of any jurisdiction to which it is subject, such provision may be severed and such

invalidity, unenforceability or illegality shall not prejudice or affect the validity, enforceability or legality of the remaining provisions of this Contract.

12.12 Enurement

Subject to the restrictions on transfer contained in this Contract, this Contract will enure to the benefit of and be binding on the parties and their respective heirs, executors, administrators, successors and assigns.

12.13 Counterparts

This Contract may be executed in any number of counterparts and all counterparts taken together will constitute one and the same instrument.

IN WITNESS WHEREOF the Province, the Concessionaire and the Independent Certifier have executed this Contract.

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)
in the presence of:)
)
)
)

(Witness)

JOHN DYBLE
Acting Deputy Minister, Ministry of Transportation
Assistant Deputy Minister, Ministry of Transportation

SEA TO SKY HIGHWAY INVESTMENT LIMITED PARTNERSHIP,
by its General Partner,
SEA TO SKY HIGHWAY INVESTMENT MANAGEMENT LTD.

Per: _____
MARK WONG
President

Per: _____
MICHAEL SMERDON
Secretary

[Independent Certifier]

Per: _____
Name:
Title:

Annex A to Part 9 of Schedule 5**Functions**

1. The Independent Certifier shall do everything expressed in, or reasonably to be implied from, the Concession Agreement as the functions of the Independent Certifier; and
2. Without limiting the other provisions of this Contract and the Concession Agreement, and without prejudice to the generality of Paragraph 1 of this Annex A to Part 9 of Schedule 5, in order for the Independent Certifier to perform in accordance with the standards required of the Independent Certifier under this Agreement, the Independent Certifier shall, amongst other things, provide the following services and perform the following functions:
 - (a) Except to the extent such review has been completed by the Province, review drawings and other Design Data, documentation and information related to the design, construction and completion of the Works.
 - (b) Review such progress reports as may be delivered to the Independent Certifier for the Independent Certifier to be and to keep itself informed as to the progress of the Works.
 - (c) Attend site meetings as requested by the Province's Representative and the Concessionaire's Representative.
 - (d) Attend commissioning tests at the end of construction activities, including re-tests, and inspections at the end of the construction activities to be performed as set out in the Technical Requirements or as otherwise required for the Concessionaire to achieve Substantial Completion and Final Completion of the Pre Olympic Works and the Post Olympic Works.
 - (e) Prior to issuing any Substantial Completion Certificate or Final Completion Certificate, consider the views, comments and submissions of the Province's Representative in relation to the satisfaction of the conditions for the issuance of the relevant Substantial Completion Certificate or Final Completion Certificate.
 - (f) Inspect the Works.
 - (g) Review all documentation, including Certificates and approvals, Design Data, certifications, test results and quality assurance audits, provided to the Independent Certifier pursuant to the Concession Agreement or otherwise required for the Independent Certifier to discharge its obligations and duties under this Contract.
 - (h) Consider all applicable Laws and Regulations and Legal Requirements.
 - (i) Upon receipt of notice from the Concessionaire given in accordance with the applicable provision of Section 13 of the Concession Agreement requesting the issuance of a Substantial Completion Certificate or Final Completion Certificate,

as applicable, carry out all necessary inspections of the relevant part or parts of the Works within the time period set out in the applicable provision of Section 13 of the Concession Agreement, consider such request and, within the time period set out in the relevant provision of Section 13 of the Concession Agreement, either:

- (i) issue the relevant Substantial Completion Certificate or Final Completion Certificate, as the case may be, to the Province and the Concessionaire; or
 - (ii) notify the Concessionaire and the Province's Representative of its decision not to issue the relevant Substantial Completion Certificate or Final Completion Certificate, as the case may be, and state the reasons for such decision.
- (j) If the Independent Certifier serves a notice under clause (ii) of paragraph (i) of this Annex and upon the Concessionaire issuing a notice to the Independent Certifier and the Province's Representative that such further works or other measures necessary or appropriate to remedy or remove the cause of the Independent Certifier's refusal to issue the relevant Substantial Completion Certificate or Final Completion Certificate, as the case may be, have been completed, the Independent Certifier shall inspect such further works or measures within the time period set out in the relevant provision of Section 13 of the Concession Agreement and shall repeat the procedures in paragraph (i) of this Annex until the issuance of the relevant Substantial Completion Certificate or Final Completion Certificate.
- (k) Provide advice on other matters that may arise under the Concession Agreement that both of the CA Parties may jointly require in writing.
- (l) Participate in and give the CA Parties and their counsel all reasonable cooperation, access and assistance (including providing or making available documents and information and witnesses for attendance at hearings and other proceedings) in connection with any proceedings pursuant to the Disputes Resolution Procedure relating to any of the Functions.

Annex B to Part 9 of Schedule 5

Fee

To be completed prior to execution of the Independent Certifier Contract. This Annex B will include a fee schedule for Functions Variations.

Annex C to Part 9 of Schedule 5

Independent Certifier Personnel

To be completed prior to execution of the Independent Certifier Contract.

SCHEDULE 6**QUALITY MANAGEMENT****1. Definitions**

In this Schedule 6 [Quality Management], unless the context otherwise requires, the following terms have the following meanings:

“Asset Preservation Performance Measures” means the Asset Preservation Performance Measures specified in Paragraph 1.2 of Part 1 of Schedule 7 [O&M Output Specifications].

“Corrective Action” means action to eliminate the cause of a detected Nonconformity, to prevent recurrence.

“Disposition” means the action taken or to be taken to deal with an existing Nonconformity.

“External Quality Audit” means a second party or third party Quality Audit; second party Quality Audits are Quality Audits conducted by parties having an interest in the relevant organization, such as customers; third party Quality Audits are Quality Audits conducted by external independent organizations such as certification or registration bodies.

“Internal Quality Audit” means a first party Quality Audit conducted by or on behalf of the relevant organization of its own processes.

“Key Performance Measures” shall have the meaning set out in the resource document identified in Annex 2 of Part 1 of Schedule 7 [O&M Output Specifications], referred to as Highway Asset Preservation Performance Measures for Highway Concessions.

“Nonconformity” means the non-fulfillment of a requirement.

“Nonconformity Report” means a document issued by the Province’s Representative detailing the description, proposed rectification and proposed Disposition of an identified Nonconformity.

“Operational Performance Measures” shall have the meaning set out in the resource document identified in Annex 2 of Part 1 of Schedule 7 [O&M Output Specifications], referred to as Highway Asset Preservation Performance Measures for Highway Concessions.

“Preventive Action” means action to eliminate the cause of a potential Nonconformity, to prevent its occurrence.

“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 Quality Audit Plans referred to and described in paragraph 2 below.

“Quality Documentation” means the Quality Manual and the Quality Management Plans and related documentation that together constitute and describe the Concessionaire’s Quality Management System.

“Quality Management Plan” means a detailed quality management plan for a specific project, product, process, activity or contract, including the Design Quality Management Plan, the Construction Quality Management Plan, the Traffic Quality Management Plan, the Environmental Quality Management Plan and the Operation, Maintenance and Rehabilitation Quality Management Plan referred to and described in Annexes 1 to 6, inclusive, to this Schedule 6 [Quality Management].

“Quality Management System” means a management system that establishes the organizational structure, procedures, processes and resources for determining and implementing Quality Policy.

“Quality Manual” means the Quality Manual referred to and described in paragraph 2 below.

“Quality Objectives” means objectives related to quality that are measurable and consistent with the Quality Policy and which are to be formally expressed and recorded in the Concessionaire’s Quality Manual.

“Quality Policy” means the overall intentions and direction of the Concessionaire related to quality applicable to the entire organization involved in performing the Operations and which are to be formally expressed and recorded in the Concessionaire’s Quality Manual.

“Quality Records” means the Quality Records referred to and described in paragraph 2 below.

2. **Quality Management System and Quality Documentation**

The Concessionaire will develop and implement a Quality Management System in accordance with the requirements of Section 23 [Quality Management] of the Agreement, the ISO 9001:2000 Standard and the provisions of this Schedule 6 [Quality Management]. The Concessionaire will be responsible for all quality assurance and quality control activities required to manage its own processes, as well as those of its subcontractors and suppliers of any tier for the Project. The Concessionaire’s Quality Management System (as described in the Concessionaire’s Quality Manual) must be certified by an accredited ISO 9001:2000 certification agency acceptable to the Province, acting reasonably, and that certification must be retained throughout the Contract Period. The Concessionaire is responsible for updating its Quality Management System and all Quality Documentation from time to time, in accordance with the procedures set forth in the Agreement, to ensure that the Quality Management System and all Quality Documentation is and at all times remains in full

compliance with the ISO 9001:2000 Standard and the requirements of the Agreement (including this Schedule 6 [Quality Management]).

The minimum documentation requirements for the Concessionaire's Quality Management System are as follows:

- a **Quality Manual** outlining the Concessionaire's Quality Management System for all aspects of the Operations and establishing Quality Policy and Quality Objectives and outlining the means by which the Concessionaire will establish, implement, control and continually improve processes to achieve that Quality Policy and those Quality Objectives;
- **Quality Management Plans** detailing which procedures and associated resources will be applied by whom and when to verify critical activities in respect of all aspects of the Operations;
- **Quality System Procedures and Process Flow Charts** documenting who does the work, what they do, and what evidence will be generated that they have done the work correctly on quality related activities;
- **Work Method Statements** for critical and complex activities where the absence of written instructions could have a negative impact on product safety, quality, consistency, cost, or schedule;
- **Quality Audit Plans** defining the Internal and External Quality Audits that the Concessionaire will perform on its own processes and those of its subcontractors and suppliers of any tier; and
- **Quality Records** providing objective evidence of conformity to all requirements and of the effective operation of the Concessionaire's Quality Management System.

The Concessionaire will submit the Quality Documentation to the Province's Representative for review in accordance with the provisions of Section 23 [Quality Management] of the Agreement. The minimum requirements and principles which apply to the Quality Documentation are set out in Annexes 1 to 6, inclusive, to this Schedule 6 [Quality Management].

3. **Basic Quality Management System Principles**

The Concessionaire's Quality Management System will be based on the following principles as referenced in the ISO 9001:2000 Standard:

- Customer focus;
- Leadership;

- Involvement of people;
- Process approach;
- System approach to management;
- Continual Improvement;
- Factual approach to decision making; and
- Mutually beneficial supplier relationships.

4. Quality Management System Improvement

The Concessionaire will initiate a program to continually improve the effectiveness and efficiency of the Quality Management System and will have mechanisms in place, such as management reviews, Quality Audit programs, and Corrective and Preventive Actions to allow all identified opportunities for improvement to be actioned, tracked, and closed out. It is essential that all of the Concessionaire's employees, subcontractors, and suppliers of any tier are aware of the importance of continuous improvement and are actively engaged in its implementation.

5. ISO Reference Documents

- ISO 9001-2000 Quality Management Systems – Requirements
- ISO 9004:2000 Quality Management Systems – Guidelines for Performance Improvement
- ISO 9000-2000 Quality Management Systems – Fundamentals and Vocabulary
- ISO 19011-2004 Guidelines for Quality and/or Environmental Management Systems Auditing
- ISO 14001-1996 Environmental Management Systems – Specification with guidance for use

6. Quality Audits

6.1 Concessionaire Quality Audits

The Concessionaire will provide Quality Audit Plans that detail the Internal and External Quality Audits that will be conducted by the Concessionaire on its own processes and those of its subcontractors and suppliers of any tier. The purpose of the Concessionaire's quality auditing process is to confirm that all activities are in compliance with those documented in the Concessionaire's Quality Manual and Quality Management Plans and or to identify any non-conformities. In the latter case the party being audited will identify necessary Corrective

Actions. The Quality Management Representative will schedule Internal and External Quality Audits to ensure that all key processes are reviewed regularly and at least once per year. Where necessary, follow-up audits will be scheduled to ensure that identified Corrective Actions and Preventive Actions are carried out in a timely fashion. Internal and External Quality Audits will be scheduled taking into account the status and importance of the processes being audited as well as the results of previous audits. The results of these audits will be documented in audit reports and be made available to the Province's Representative upon request.

6.2 Province Quality Audits

The Province's Representative will, during the Quality Documentation review process pursuant to Section 23.1.4 of the Agreement, conduct an initial assessment of the Concessionaire's Quality Documentation to ensure that the Province's auditing efforts and resources are directed at critical activities and processes identified in the Concessionaire's Quality Manual and Quality Management Plans. The Province will determine the frequency of auditing through regular and ongoing review and effective risk assessment of the Concessionaire'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 may have the frequency of auditing increased. Notwithstanding the foregoing, the frequency of audits will remain entirely within the discretion of the Province and there will be a minimum base level of auditing determined by the Province throughout the Contract Period. The Concessionaire and its subcontractors and suppliers of any tier will provide the Province's auditors with all documentation, records, access, facilities and assistance for the safety and convenience of the Province's auditors.

Quality Management System Audits will be conducted at specific times to assess the performance of the Concessionaire's Quality Management System and to ensure that all activities are in compliance with the Quality Management System. The Province's Lead Auditor will contact the Concessionaire's Quality Management Representative and confirm the scope and schedule of the audit. At the opening meeting with the Concessionaire, the Lead Auditor will review the audit scope and objectives, and subsequently conduct audit interviews, and document any observations on prepared checklists. At the end of the audit interviews, the Lead Auditor will evaluate the observations and identify procedural or performance Nonconformities that require Corrective Action. At the closing meeting with the Concessionaire, the Lead Auditor will discuss the observations and inform the Concessionaire of any Nonconformities and audit recommendations. The Concessionaire will prepare a Corrective/Preventive Action Plan and submit it to the Lead Auditor. The Province reserves the right, acting reasonably, to conduct follow up reviews to ensure compliance with the Concessionaire's Corrective/Preventive Action Plan.

Additional information relating to Province Quality Audits with respect to particular Quality Management Plans is identified in the Annexes to this Schedule 6 [Quality Management].

6.3 Third Party Certification Audits

Third party Quality Audits (as referenced in the definition of "External Quality Audit" in paragraph 1 above) will be conducted on the Concessionaire's Quality Management System

by an accredited certification agency acceptable to the Province, and these audit reports will be made available to the Province's Representative upon request.

7. Quality Records

The Concessionaire will maintain, and each Quality Management Plan will require the maintenance of, complete and accurate quality management records ("Quality Records") providing evidence of conformity to the Agreement, the ISO 9001:2000 Standard, and the Quality Management System. Such records must at all times remain legible, readily identifiable, and retrievable. Quality Records will be made available to the Province's Representative upon request.

8. Quality Management System Reporting

The Concessionaire will prepare and submit to the Province's Representative a comprehensive monthly Quality Management System report for each month or part thereof during the Contract Period separately summarizing all quality management activities performed for that month. The monthly Quality Management System reports will, as a minimum, include the following information:

- a Nonconformity Report log providing details of all nonconformities identified to date, their disposition and close-out status;
- Corrective and Preventive Action logs providing details of the Corrective Actions and Preventive Actions performed to date and their close-out status;
- a summary of any inspection and testing activities conducted during the month;
- Internal and External Quality Audits (including any third party Quality Audits as referenced in the definition of "External Quality Audit" in paragraph 1 above) performed during the month;
- any continual improvement initiatives taken during the month;
- any other information required to be included in the monthly Quality Management System reports pursuant to any of the Annexes to this Schedule 6 [Quality Management] or the terms of the relevant Quality Management Plan; and
- any changes made to the Quality Management System or the Quality Documentation (which changes, for greater certainty, may only be made subject to and in compliance with the relevant provisions of the Agreement).

Annex 1 to Schedule 6

1. Quality Manual

The Concessionaire will provide a comprehensive Quality Manual that describes the Quality Management System for all aspects of the Operations throughout the design and construction and the operation, maintenance and rehabilitation phases of the Project. The Quality Manual will establish the Quality Policy and Quality Objectives for all aspects of the Operations and, in accordance with the requirements of the ISO 9001:2000 Standard, will describe the processes that will be established, implemented, controlled, and continually improved to achieve the established Quality Objectives.

The Quality Objectives will be measurable, consistent with the Quality Policy and linked to meeting the needs and performance expectations of the Province in respect of the Project. The Quality Management System described in the Quality Manual will include all the activities required to achieve the Quality Objectives, including project controls such as scope, cost, schedule and general document control management activities. The Concessionaire will obtain ISO 9001:2000 certification for all of these activities, and all of these activities will be subject to Internal and External Quality Audits.

The Quality Manual will describe the nature of the Concessionaire's organization involved in performing the Operations and how key management activities (such as project controls; design; construction; operation, maintenance and rehabilitation; traffic management; and environmental) will interface with each other. The Quality Manual will also show how the various levels of Quality Management System documentation are linked together.

2. Management Responsibility

The Quality Manual will clearly define the reporting function and authority of the Quality Management Representative who will act as the single point representative of the Concessionaire for all quality matters. The Quality Management Representative, as a minimum, will be responsible for the:

- development, implementation and maintenance of the Quality Management System;
- preparation of Quality Audit Plans, scheduling and coordination of Internal and External Quality Audits of key processes and of subcontractors and suppliers of any tier;
- development and implementation of a Nonconformity and Corrective/ Preventive Action program;
- initiation of management reviews of the Quality Management System;
- continuous improvement of the Quality Management System;
- coordination of all Quality Management System certification related issues;

- preparation of monthly Quality Management System reports; and
- any other matters which, in accordance with Section 23 [Quality Management] of the Agreement, are the responsibility of the Quality Management Representative.

Annex 2 to Schedule 6

1. Design Quality Management Plan

The Concessionaire will provide a comprehensive Design Quality Management Plan that describes how it intends to manage the design processes in connection with the Project in accordance with the requirements of the ISO 9001:2000 Standard and the provisions of the Agreement including the Design and Certification Procedure.

The Design Quality Management Plan will contain an organizational chart identifying key design management personnel and the linkage with the Quality Management Representative for the Concessionaire's overall Quality Management System as documented in the Concessionaire's Quality Manual. It will also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between other engineering groups and construction disciplines.

The Design Quality Management Plan will, as a minimum, include or reference detailed Quality System Procedures and Process Flow Charts for the following processes:

- design input and output review;
- design verification to ensure that design input requirements have been met;
- design validation to ensure that the final product is capable of meeting its intended use;
- design changes;
- design subcontractor quality assessment and procurement;
- External Quality Audits of design subcontractors;
- Internal Quality Audits;
- Corrective and Preventive Actions;
- document management; and
- control of Quality Records.

The above procedures and flow charts will document who does the work, what they do, and what evidence is generated that they have done the work correctly.

Annex 3 to Schedule 6

1. Construction Quality Management Plan

The Concessionaire will 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 requirements of the ISO 9001:2000 Standard and the provisions of the Agreement including the Design and Certification Procedure.

The Construction Quality Management Plan will contain an organizational chart identifying key construction management personnel and the linkage with the Quality Management Representative for the Concessionaire's overall Quality Management System as documented in the Concessionaire's Quality Manual. It will also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between the design and other construction disciplines such as environmental and traffic management.

The Construction Quality Management Plan will, as a minimum, include or reference detailed Quality System Procedures and Process Flow Charts for the following processes:

- construction safety audits;
- inspection and testing;
- materials identification and traceability;
- subcontractor and supplier quality assessment and procurement;
- External Quality Audits of subcontractors and suppliers;
- Internal Quality Audits;
- control of nonconforming product;
- Corrective and Preventive Actions;
- document management; and
- control of Quality Records.

The above procedures and flow charts will document who does the work, what they do, and what evidence is generated that they have done the work correctly.

The procedures will be augmented with construction Work Method Statements for critical and complex construction activities where the absence of written instructions could have a negative impact on product safety, quality, consistency, cost, or schedule.

The Construction Quality Management Plan will also include or reference an Inspection and Test Plan detailing all major on-site and off-site inspection and test activities for work performed by the Concessionaire and its subcontractors and suppliers of any tier. The Inspection and Test Plan will, as a minimum, include:

- description of the inspection and test activity;
- frequency of inspections and tests;
- reference to standards, codes, specifications, and acceptance criteria;
- reports and checklists required;
- personnel responsible for inspection and test activity; and
- quality assurance review, witness and hold points.

The Province's Representative, in the course of its Quality Documentation review, will pay special attention to the Concessionaire's Inspection and Test Plan to verify that the Concessionaire has taken full responsibility for all of the quality assurance functions. The Inspection and Test Plan will be consistent with the quality control and quality assurance requirements listed in the material specification, work methodology and end product specifications listed in the MOT Standard Specifications for Highway Construction, 2004 edition, as updated, amended or replaced from time to time. The Province's Representative will review the Inspection and Test Plan and specify any required witness and hold points against any inspection or test activity that the Province requires the opportunity to observe. The Concessionaire is obligated to provide not less than 2 Working Days advance notice of any specified inspection and test activities so that they will be able to be observed by a representative of the Province. The Concessionaire may proceed with the activity past any specified witness point if a representative of the Province is not available at the appointed time. The Concessionaire may not proceed with the activity past any specified hold point without a representative of the Province being present to observe the activity, except by written instruction by the Province.

2. Construction Deficiency Observations

Any deficiency observations noted, during construction activities, by the Province's Representative will be forwarded to the Concessionaire for evaluation and resolution.

Annex 4 to Schedule 6

1. Operation, Maintenance and Rehabilitation Quality Management Plan

The Concessionaire will provide a comprehensive Operation, Maintenance and Rehabilitation Quality Management Plan that describes how it intends to monitor and measure the operation, maintenance, and rehabilitation activities in connection with the Project in accordance with the requirements of the ISO 9001:2000 Standard and the provisions of the Agreement. The Operation, Maintenance and Rehabilitation Quality Management Plan must be aligned with all relevant Key Performance Measures, Asset Preservation Performance Measures, and Operational Performance Measures and define the Concessionaire's approach to achieving compliance with all requirements of the Agreement relating to the performance of operation, maintenance and rehabilitation activities.

The Concessionaire will be required to develop documented Quality System Procedures and Process Flow Charts to ensure that all performance specifications and requirements in the Agreement in respect of operation, maintenance, and rehabilitation are met or exceeded. These procedures and flow charts will document who does the work, what they do, and what evidence is generated that they have done the work correctly. The procedures will be augmented, where necessary, with documented Work Method Statements that provide specific instructions for personnel. Work Method Statements generally apply to the responsibilities of the individual within the workplace outlining in detail the exact steps to be carried out for the activity in question. These Quality System Procedures, Process Flow Charts and Work Method Statements may be contained within the Operation, Maintenance and Rehabilitation Quality Management Plan or be stand-alone controlled documents.

The Operation, Maintenance and Rehabilitation Quality Management Plan will detail a Performance Measures Compliance Monitoring Process to track compliance with all Performance Measures. The Performance Measures Compliance Monitoring Process must clearly describe the approach taken in assessing compliance, and define the frequency and method of monitoring and reporting Performance Measures compliance. The Province's Representative will review the Concessionaire's Performance Measures Compliance Monitoring Process and may request, acting reasonably, changes to ensure that compliance with all Performance Measures will be accurately and appropriately monitored and reported and otherwise to meet the requirements of the Agreement. The Concessionaire's Performance Measures Compliance Monitoring Process will be subject to ongoing review by the Province's Representative throughout the Contract Period.

2. Operation, Maintenance and Rehabilitation Quality Audits

Surveillance Quality Audits will be conducted by the Province on a random basis or on specific areas of interest throughout the Contract period. The objective of these surveillance audits is to monitor the Concessionaire's activities involving its work practices, workmanship and general quality of materials.

Where Province Quality Audits identify elements of the Concessionaire's operation, maintenance and rehabilitation service delivery, including traffic and environmental management activities, that do not meet the requirements of the Agreement, the Province's Representative will issue Nonconformity Reports to the Concessionaire for the following:

- defective repairs and/or workmanship not meeting contract specifications and/or standards;
- use of materials and/or equipment not meeting contract specifications and/or standards;
- deficient, incomplete, and/or illegible Quality Records;
- inadequate and/or ineffective defect identification processes;
- failure to comply with Quality Management System processes;
- failure to achieve documented response time requirements; and/or
- failure to complete Corrective Action and/or Preventive Action by the required action target date.

All Nonconformity Reports will be reviewed by the Province's Representative before being issued to the Concessionaire. This review process will be carried out to ensure that all Nonconformity Reports are legitimate, consistent and are managed in accordance with the Province's audit program.

An independent third party review of the Province auditing will be conducted on an annual basis to ensure that all aspects of the auditing are carried out in a fair and consistent manner. The review will be carried out by a suitably qualified independent organization designated by the Province and will involve input from the Concessionaire.

Annex 5 to Schedule 6

1. Traffic Quality Management Plan

The Concessionaire will 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 requirements of the ISO 9001:2000 Standard and the provisions of the Agreement.

The Traffic Quality Management Plan will contain an organizational chart identifying key traffic management personnel and the linkage with the Quality Management Representative for the Concessionaire's overall Quality Management System as documented in the Concessionaire's Quality Manual. It will also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between the traffic management and other disciplines such as design, construction, and environmental management. The Traffic Quality Management Plan will address the design, construction, operation, maintenance and rehabilitation phases of the Project.

The Traffic Quality Management Plan will, as a minimum, include or reference detailed Quality System Procedures and Process Flow Charts for the following processes:

- traffic control plan design input and output review;
- traffic control plan design verification to ensure that design input requirements have been met;
- traffic control plan design validation to ensure that the final product is capable of meeting its intended use;
- traffic control plan design changes;
- traffic control plans;
- traffic management incident plans;
- traffic management implementation plan;
- traffic management public information plan;
- Closure implementation;
- temporary road structure implementation;
- administration and control of Closure durations;
- subcontractor and supplier quality assessment and procurement;
- External Quality Audits of subcontractors and suppliers;
- Internal Quality Audits;
- control of nonconforming activities and/or product;
- Corrective Actions and Preventive Actions;

- document management; and
- control of Quality Records.

The above procedures and flow charts will document who does the work, what they do, and what evidence is generated that they have done the work correctly.

The procedures will be augmented with traffic management Work Method Statements for Closures required for critical and complex construction activities where the absence of written instructions could have a negative impact on product safety, quality, consistency, cost, or schedule.

When the above processes are already covered as part of another Quality Management Plan, the process heading still needs to be identified as part of the Traffic Quality Management Plan; however the details can be minimized to a reference to the Plan and Section where the details are provided. The referenced Quality Management Plan and Section must indicate specific requirements with regards to the above processes as it relates to Traffic Quality Management and be able to provide a tangible audit trail. Notwithstanding, processes that fall within the specific requirements of the Traffic Management Plan will be required to include detailed Quality System Procedures and Process Flow Charts under the Traffic Quality Management Plan.

2. Traffic Management Quality Audits

Surveillance Quality Audits will be conducted by the Province on a random basis or on specific areas of interest throughout the Contract Period. The objective of these surveillance audits is to monitor the Concessionaire's activities involving its work practices, workmanship and general quality of materials.

The Province's Field Auditor will, during the performance of Province surveillance audits, record any observations and inform the Concessionaire of any deficiencies that require further evaluation. Any noted deficiencies will be resolved to the satisfaction of the Field Auditor through evidence of the Concessionaire's deficiency evaluation findings or Nonconformity process. If the deficiency is not resolved to the reasonable satisfaction of the Field Auditor, then the Province reserves the right to issue a Nonconformity Report to the Concessionaire.

Annex 6 to Schedule 6

1. Environmental Quality Management Plan

The Concessionaire will provide a comprehensive Environmental Quality Management Plan that describes how it intends to manage the environmental components of the Project to meet the requirements of ISO 14001:1996 or its equivalent, the Quality Management System requirements stated in the Concessionaire's Quality Manual and the provisions of the Agreement. The Environmental Quality Management Plan is to apply throughout all phases of the Project including design, construction, operation, maintenance and rehabilitation.

The Environmental Quality Management Plan will contain an organizational chart identifying key environmental management personnel and the linkage with the Quality Management Representative for the Concessionaire's overall Quality Management System as documented in the Concessionaire's Quality Manual. It will also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between the design and other construction, operation, maintenance and rehabilitation disciplines.

The Environmental Quality Management Plan will include or reference detailed Quality System Procedures and Process Flow Charts for the following processes:

- satisfying and ensuring compliance with the Concessionaire's Environmental Obligations, including the preparation and implementation of an Environmental Management Plan and specific plans as detailed in the Concessionaire's Environmental Obligations and specified elsewhere in the Agreement;
- agency approvals;
- environmental monitoring and reporting;
- environmental incident reporting and tracking;
- External Quality Audits of subcontractors and suppliers;
- Internal Quality Audits;
- control of nonconforming services or products;
- Corrective Actions and Preventive Actions;
- document management; and
- control of Quality Records.

The above procedures and flow charts will document who does the work, what they do, and what evidence is generated that they have done the work correctly.

The procedures will be augmented, where necessary, with documented environmental Work Method Statements that provide specific instructions for personnel. Work Method

Statements generally apply to the responsibilities of the individual within the workplace outlining in detail the exact steps to be carried out for the activity in question. These Work Method Statements may be contained within the Environmental Quality Management Plan or be stand-alone controlled documents.

The Province's Representative, in the course of its Quality Documentation review, will pay special attention to the Concessionaire's Environmental Quality Management Plan to verify that the Concessionaire has taken full responsibility for all of the environmental requirements as specified in the Concessionaire's Environmental Obligations and elsewhere in the Agreement, including obtaining agency approvals and other environmental requirements as outlined in the Agreement.

2. Environmental Quality Audits

Surveillance Quality Audits will be conducted by the Province on a random basis or on specific areas of interest throughout the Contract Period. The objective of these surveillance audits is to monitor the Concessionaire's activities involving its work practices, workmanship and general quality of materials.

The Province's environmental Field Auditor will, during the performance of Province surveillance audits, record any observations and inform the Concessionaire of any deficiencies that require further evaluation. Any noted deficiencies will be resolved to the satisfaction of the environmental Field Auditor through evidence of the Concessionaire's deficiency evaluation findings or Nonconformity process. If the deficiency is not resolved to the reasonable satisfaction of the environmental Field Auditor, then the Province reserves the right to issue a Nonconformity Report to the Concessionaire.

3. Quality Records

The Quality Records maintained by the Concessionaire will include records evidencing conformity to ISO 14001 and compliance with the Concessionaire's Environmental Obligations and the other environmental requirements contained in the Agreement, and all applicable approvals, permits, authorizations, monitoring reports and written correspondence with agencies, the Province, public consultation, user groups, etc.

4. Quality Management System Reporting

The Concessionaire's monthly Quality Management System reports will include a summary of all environmental quality management activities during each month and:

- environmental monitoring reports;
- steps taken to obtain required environmental permits and the results thereof; and
- steps taken to implement, comply with and satisfy the Concessionaire's Environmental Obligations and the other environmental requirements contained in the Agreement.

SCHEDULE 7**OPERATIONS AND MAINTENANCE****Part 1****O&M Output Specifications****1.0 GENERAL****1.1 Scope of Operation, Maintenance and Rehabilitation Obligations**

The scope of the operation, maintenance and rehabilitation of the Project Facilities, the Site and the Adjacent Areas includes, subject to the terms of these O&M Output Specifications, the provision of all services associated with the management, planning and delivery of the operations, maintenance and rehabilitation activities to ensure compliance with all Performance Measures. This includes:

- (a) highway operations;
- (b) maintenance and rehabilitation of the assets to not less than the minimum acceptable requirements;
- (c) managing the integrity of the assets through cost-effective long-term maintenance and rehabilitation;
- (d) identification, programming, prioritization and delivery of maintenance and rehabilitation services to achieve the Performance Measures;
- (e) provision of all inspections and reporting; and
- (f) supplying and placement of all materials associated with meeting the standards.

In meeting its operation, maintenance and rehabilitation obligations under the Concession Agreement and in particular under these O&M Output Specifications and the O&M Requirements, the Concessionaire shall take all actions and execute all works and functions (including organizing itself, adopting measures and standards and executing procedures) to ensure that the ability of the Province and others with statutory duties or functions in relation to the Project Facilities, the Site and the Adjacent Areas or the Connecting Roads, to perform those duties and functions is unimpaired by the actions of the Concessionaire. Further, in discharging its operation, maintenance and rehabilitation obligations under the Concession Agreement, the Concessionaire shall ensure that all members of the public are treated with due courtesy and consideration.

1.2 Minimum Performance Obligations

The minimum performance obligations of the Concessionaire in respect of the operation, maintenance and rehabilitation of the Project Facilities, the Site and the Adjacent Areas throughout the Contract Period are set out in these O&M Output Specifications. Unless otherwise specifically modified by these O&M Output Specifications, the specifications set out

in the following resource documents referred to in Annex 2 attached to this Part 1 are incorporated into these O&M Output Specifications and shall, at all times during the Contract Period, be complied with by the Concessionaire:

- (a) Highway Asset Preservation Performance Measures for Highway Concessions;
- (b) Highway Corridor Management Specifications for Highway Concessions;
- (c) Highway Maintenance Specifications for Highway Concessions;
- (d) Reporting Specifications for Highway Concessions; and
- (e) Local Area Specifications for Sea-to-Sky Concession.

The foregoing minimum performance obligations of the Concessionaire in respect of the operation, maintenance and rehabilitation under the Concession Agreement shall be supplemented and enhanced by the additional obligations and requirements set out in the O&M Requirements forming Part 2 of Schedule 7.

2.0 Performance System

The minimum performance obligations of the Concessionaire in respect of the performance system relating to operation, maintenance and rehabilitation of the Project Facilities, the Site and the Adjacent Areas throughout the Contract Period are set out in these O&M Output Specifications.

Contract requirements further to the O&M Output Specifications follow:

2.1 Asset Preservation Performance Measures

The Asset Preservation Performance Measure requirements for the Project Facilities, the Site and the Adjacent Areas throughout the Contract Period are set out in the Highway Asset Preservation Performance Measures for Highway Concessions.

The asset types to which Asset Preservation Performance Measures apply include, but are not limited, to the following:

- Highway running surfaces
- Structures
- Drainage and debris control
- Electrical control systems
- Avalanche control facilities
- Other assets (i.e., rest areas)

The Asset Preservation Performance Measures apply from October 26, 2005 at 12:00:00 a.m. for the balance of the Contract Period with the following exceptions:

- (a) Only those assets on the Highway are to be included in the Asset Preservation Performance Measures.
- (b) If the New Works are completed by the Concessionaire as part of the Concession Agreement, then compliance with the Asset Preservation Performance Measures is required from the date of Final Completion.
- (c) For lengths of the Highway where construction is to take place, compliance with the Asset Preservation Performance Measures is required on final completion of the individual works.

2.2 Operational Performance Measures

For lengths of the Highway where construction activities are taking place either on, or immediately adjacent to, the existing Highway (whether by Concessionaire or others), and temporary traffic management is in place as a result of the construction activities, compliance with the Operational Performance Measures relating to the provision of a safe route for motorists and other road users will apply.

3.0 **ADJUSTMENTS TO SCOPE OF OPERATION, MAINTENANCE AND REHABILITATION**

3.1 Adjustments to Southern Boundary

The operation, maintenance and rehabilitation obligations of the Concessionaire in respect of the Project Facilities, the Site and the Adjacent Areas will be subject to the following geographical limitation in respect of the southern most boundary of the Concession Highway:

- (a) during the Contract Period prior to the DB1 Construction Commencement Date, the Concessionaire shall be responsible for meeting its operation, maintenance and rehabilitation obligations under the Concession Agreement for the Concession Highway from the Initial Southern Boundary;
- (b) from and including the DB1 Construction Commencement Date until Substantial Completion of the portion of the Concession Highway contained in DB1, the southern boundary of the Concession Highway for the purposes of performing operation, maintenance and rehabilitation shall be the Construction Southern Boundary and the Concessionaire, shall in addition to the other operation, maintenance and rehabilitation obligations under the Concession Agreement and in particular these O&M Output Specifications and the O&M Requirements promptly repair all hazardous pavement defects on the Bypass Highway and any damage arising from any and all construction traffic relating to the Concessionaire's construction of the Works under the Concession Agreement but the Concessionaire shall not otherwise be responsible for rehabilitation of the Bypass Highway; and

- (c) from and after the date of Substantial Completion of DB1, the southern boundary of the Concession Highway for the purposes of the Concessionaire meeting its operation, maintenance and rehabilitation under the Concession Agreement and in particular these O&M Output Specifications and the O&M Requirements shall be the Final Southern Boundary and the Concessionaire shall have no further obligations with respect to repair or rehabilitation of the Bypass Highway.

3.2 Olympic Period

Notwithstanding anything else contained in these O&M Output Specifications, during the Olympic Period the Concessionaire shall not perform any rehabilitation of or on the Concession Highway and shall take all necessary steps to ensure that any rehabilitation undertaken by the Concessionaire on the Concession Highway prior to the Olympic Period shall be fully completed prior to the Olympic Period.

3.3 MOT Section

Subject to the terms in the main body of this Agreement as read with Schedule 1 [Definitions and Interpretation] of this Agreement, during that portion of the Contract Period prior to commencement of the O&M Period, the Concessionaire shall not be responsible for providing any of the operation, maintenance or rehabilitation services on the MOT Section that are the responsibility of the MOT Section Contractor in the MOT Section Contract or that are the responsibility of the Existing O&M Contractor in the Existing O&M Contract.

Subject to the terms in the main body of this Agreement as read with Schedule 1 [Definitions and Interpretation] of this Agreement, after commencement of the O&M Period and prior to Substantial Completion of the MOT Section Works, the Concessionaire shall not be responsible for providing any of the operation, maintenance or rehabilitation services on the MOT Section that are the responsibility of the MOT Section Contractor in the MOT Section Contract provided always that immediately after Substantial Completion of the MOT Section Works and for the balance of the Contract Period, the Concessionaire shall perform operation, maintenance and rehabilitation services as specified in the Concession Agreement and in particular as specified in these O&M Output Specifications and the O&M Requirements in the MOT Section as part of its operation, maintenance and rehabilitation obligations in respect of the Project Facility, the Site and the Adjacent Areas.

3.4 Side Roads

As part of the performance of its obligations to provide operation and maintenance in respect of the Project Facilities, the Site and the Adjacent Areas, the Concessionaire shall provide operation and maintenance services as specified in these O&M Output Specifications and in the O&M Requirements provided always that the Concessionaire will be responsible only for planning of rehabilitation services in respect of the Side Roads and shall not be obligated to provide rehabilitation services in respect thereof.

4.0 PLANS

4.1 Quality Management

The Concessionaire shall, at all times of the Contract Period (with the exception of the first 365 days), have an ISO 9001 Quality Management System in place for the operations and

maintenance aspects of the services it is providing under these O&M Output Specifications and in the O&M Requirements and shall manage and perform such maintenance aspects in conformance with the terms of that system. The Province shall at all times be entitled to audit the performance of the Concessionaire in terms of its certified Quality Management System and the Concession Agreement requirements.

The Concessionaire shall at all times, without restricting the foregoing, comply with the Quality Management Requirements set out in Schedule 6 [Quality Management] that apply for operations, maintenance and rehabilitation, including but not limited to the requirement that the Concessionaire prepare an Operations, Maintenance and Rehabilitation Quality Plan.

4.2 Operations and Maintenance Management Plan

The Concessionaire shall, within 180 days from the Commencement Date, provide to the Province a written plan (the “Operations and Maintenance Plan”) which shall be updated in writing and resubmitted by the Concessionaire to the Province annually throughout the Contract Period and which describes the procedures for the following key categories of operational or maintenance activity delivered during the Contract Period. Each procedure must:

- (a) be aligned with the Key Performance Measures and Operational Performance Measures;
- (b) comply with these O&M Output Specifications and the O&M Requirements;
- (c) produce outcomes as prescribed in the Highway Maintenance Specifications for Highway Concessions;
- (d) produce outcomes as prescribed in the Highway Corridor Management Specifications for Highway Concessions; and
- (e) comply with the Local Area Specifications for the Sea-to-Sky Concession.

The foregoing procedures shall address at a minimum, the following key categories of delivery of the operations and maintenance services required under the Concession Agreement including these O&M Output Specifications and the O&M Requirements:

- (a) maintenance specifications;
- (b) work identification and planning;
- (c) stakeholder communication;
- (d) environmental compliance;
- (e) site safety; and
- (f) emergency response.

The Operations and Maintenance Plan and all updates shall specifically address all aspects of delivery of the operations and maintenance services required under the Concession Agreement including these O&M Output Specifications and the O&M Requirements during the Contract Period and shall include at a minimum:

- (a) introduction of the service activities and the manner in which they are to be carried out;
- (b) relationship to the Five Year Management Plan;
- (c) the following information in respect of each activity:
 - (i) key functional steps identified and described;
 - (ii) person responsible for the activity outcome;
 - (iii) person(s) providing the service;
 - (iv) resources and plant;
 - (v) inputs and outputs;
 - (vi) reporting requirements;
 - (vii) quality measures; and
 - (viii) program or response times.

4.3 Asset Management Plan

The Concessionaire shall, within 180 days from the Commencement Date, provide to the Province a written plan (the “Asset Management Plan”) which shall be updated in writing and resubmitted by the Concessionaire annually to the Province and which describes the procedures for achieving the specified Key Performance Measures delivered during the Contract Period.

The Asset Management Plan and all updates must include as a minimum:

- (a) description of and the manner in which the Key Performance Indicators will be achieved;
- (b) identify the intervention criteria for each Key Performance Indicator;
- (c) identify the deterioration rate and factors affecting the Key Performance Indicators;
- (d) identify and describe the asset management approach in respect to maintenance versus rehabilitation;
- (e) identify any areas of risk and describe mitigation measures;
- (f) describe the approach for asset condition inspection, work identification, programming, prioritization of work;
- (g) describe the use of asset management systems and processes including any innovations to improve performance;

- (h) describe the process for deciding work programs in terms of both the Asset Management Plan and the Five Year Management Plan as updated by the Concessionaire; and
- (i) describe the resources employed to deliver the Maintenance Works and the labour, plant, materials and facilities associated therewith and in delivering any other physical works including labour, plant, materials and facilities.

Annex 1 to Part 1 of Schedule 7

Definitions and Interpretation

Unless specifically defined in this Annex 1 or otherwise provided in the O&M Output Specifications, capitalized terms used in the O&M Output Specifications shall have the meanings set out in Schedule 1 [Definitions and Interpretation] of the Concession Agreement. The following specific terms referred to in the O&M Output Specifications shall have the following meanings:

“Asset Management Plan” means the Asset Management Plan referred to in Section 4.3 of the O&M Output Specifications.

“Asset Preservation Performance Measures” means those Asset Preservation Performance Measures set out in the resource document identified in Annex 2, referred to as Highway Asset Preservation Performance Measures for Highway Concessions.

“Bypass Highway” means during the construction of the portion of the Concession Highway in DB1, that portion of the Existing Highway from the Westport overpass in the south to the point where the Existing Highway meets Pasco Road including Horseshoe Bay Village Lane.

“Construction Southern Boundary” means the southern boundary from which the Concessionaire is obligated to provide operation, maintenance and rehabilitation services under the O&M Output Specifications which during construction of the Project Facilities in DB1 shall be where the overpass for Westport Road passes over the Trans Canada Highway.

“DB1” means that portion of the Concession Highway identified as DB1 in Annex 1 to Part 1 of Schedule 5 [Construction Output Specifications].

“DB1 Construction Commencement Date” means that date upon which the Concessionaire commences construction of the Works within DB1 such that traffic can no longer freely travel through DB1 and is forced to utilize the Bypass Highway.

“Final Southern Boundary” means the southern boundary from which the Concessionaire is obligated to provide operation, maintenance and rehabilitation services under the O&M Output Specifications which following Substantial Completion of the portion Concession Highway to be constructed DB1 shall be the gore separating the Concession Highway from the Trans Canada Highway.

“Horseshoe Bay Village Lane” means the single lane portion of the Bypass Highway near the property occupied by the British Columbia Ferry Terminal comprising the lane adjacent the centreline or median of the Bypass Highway.

“Initial Southern Boundary” means the southern boundary from which the Concessionaire is obligated to provide operation, maintenance and rehabilitation services under the O&M Output Specifications which prior to commencement of construction of the Project Facilities in DB1 shall be the point at which the Existing Highway meets the Trans Canada Highway.

“**Key Performance Indicator(s)**” shall have the meaning set out in the resource document identified in Annex 2, referred to as Highway Asset Preservation Performance Measures for Highway Concessions.

“**Key Performance Measures**” shall have the meaning set out in the resource document identified in Annex 2, referred to as Highway Asset Preservation Performance Measures for Highway Concessions.

“**Operational Performance Measures**” shall have the meaning set out in the resource document identified in Annex 2, referred to as Highway Asset Preservation Performance Measures for Highway Concessions.

“**Operations and Maintenance Plan**” means the plan referred to in Section 4.2 of the O&M Output Specifications.

“**Performance Measures**” means the Key Performance Measures, the Asset Preservation Performance Measures and the Operational Performance Measures.

Annex 2 to Part 1 of Schedule 7**Resource Documents**

The documents prepared by the Ministry forming part of the Ministry's Standards incorporated in the O&M Output Specifications shall be as follows:

“Highway Asset Preservation Performance Measures for Highway Concessions” means the reference document entitled Highway Asset Preservation Performance Measures for Highway Concessions dated October 2004.

“Highway Corridor Management Specifications for Highway Concessions” means the reference document entitled Highway Corridor Management Specifications for Highway Concessions dated October 2004.

“Highway Maintenance Specifications for Highway Concessions” means the reference document entitled Highway Maintenance Specifications for Highway Concessions dated October 2004.

“Local Area Specifications for Sea-to-Sky Concession” means the reference document entitled Local Area Specifications for Sea-to-Sky Concession dated December 17, 2004.

“Reporting Specifications for Highway Concessions” means the reference document entitled Reporting Specifications for Highway Concessions dated October 2004.

The foregoing documents are located in the Data Room.

SCHEDULE 7

OPERATIONS AND MAINTENANCE

Part 2

O&M Requirements

In addition to the Specifications identified in Part 1 of Schedule 7 [O&M Output Specifications], the Concessionaire shall comply with the requirements identified in Annex 1 to this Part 2 of Schedule 7.

Annex 1 to Part 2 of Schedule 7

The O&M Requirements to be complied with by the Concessionaire as part of its obligations to the Province under this Agreement shall be set out in the following parts:

- A. **Pavement Rehabilitation Design and Construction**
- B. **Winter Maintenance**
- C. **Emergency Response**
- D. **Resources**
- E. **Additional Operations, Maintenance and Rehabilitation Requirements**
- F. **Traffic Management**
- G. **Existing Rock Slope Monitoring Program**

A. Pavement Rehabilitation Design and Construction**1.1 Single Pavement Resurfacing Program DB1 to DB7**

The Concessionaire will commit to one set of lane closures for the purpose of complete resurfacing of Sections DB1 through DB7, or parts thereof, during the Project Term, Any additional repaving events will be subject to non-availability deductions.

1.2 DB References

For the purposes of the O&M Requirements, all references to sections of the Concession Highway including those references above to DB1 through DB7, DB8, DB12 and DB13 shall mean those portions of the Concession Highway identified as such in an Annex 1 to Part 1 of Schedule 5 [Construction Output Specifications].

B. Winter Maintenance1. Additional Provisions

The Concessionaire shall implement the following as part of the O&M Requirements throughout the Contract Period:

- three Road Weather Information System (“RWIS”) sites along the highway corridor shall be installed, operated and maintained to support the interpolation of road and weather conditions across the various micro-climates;
- infrared thermometers shall be installed on each patrol truck, with data logging to support the development of thermal mapping and snow and ice control decision making;
- automated vehicle location tracking shall be employed via global positioning on all winter vehicles to both document the services delivered as well as enhance the efficiency and effectiveness of snow and ice control practices;
- electronic, as opposed to manual, diary-keeping shall be utilized to expedite the prioritization and response to deficiencies;
- live-to-cab information shall be provided patrollers to access real-time road and atmospheric sensor information to support their snow and ice control strategy and decisions.

2. Winter Patrols

Without limiting the Concessionaire’s obligations to satisfy the O&M Output Specifications, throughout the Contract Period, the Concessionaire defines the core winter periods as:

- December 1 to March 15 from Horseshoe Bay to Squamish
- November 15 to March 31 from Squamish to Function Junction.

During these periods, the Operations Centre (as defined in Part D of this Annex) to be staffed by patrollers who will actively monitor conditions in the field along the Concession Highway, RWIS forecasts, and real-time information (including corridor cameras). Changing conditions will be regularly reported to patrollers in the field to support their knowledge of conditions and their snow and ice control strategy.

During the Core Winter Periods, and for a transition period of two weeks before and two weeks after, the patrollers will monitor road and weather conditions working in two shifts of 12 hours each, 7 days per week.

3. Winter Equipment

To meet public expectations and satisfy all requirements even under extreme inclement weather conditions, the Concessionaire shall provide the following number of winter trucks, upon substantial completion of construction for each route described below:

- Two units will be dedicated the area from Garibaldi to Function Junction.
- From north of Brackendale to Garibaldi, two units will be in service.
- One unit will be dedicated to the Squamish area and to north of Brackendale.
- Two units will service the Porteau Cove to Squamish area.
- Three units will service the Horseshoe Bay to Porteau Cove area.
- One unit will be dedicated to adjacent side roads west of Brackendale.
- One spare unit will be stationed at the Operations Centre (as defined in Part D of this Annex) in case of breakdown, for a total of 12 units. The units will each be mobilized as necessary to meet the required Level of Service (“LOS”) specified by the O&M Output Specifications. The number of winter trucks will be phased in as appropriate for each of the route areas as construction on various highway sections proceeds.
- One grader will provide winter plowing on Garibaldi Park Road and shoulder winging following large snow events.
- One loader with sufficient capacity to accommodate the combination units will be stationed at each winter material storage yard and where possible the Concessionaire shall arrange with a local contractor for a spare loader, as needed.

C. Emergency Response

1. Communications

The Concessionaire will provide a 1-800 number to receive phone calls. This number will be advertised on roadside contractor identification signs as well as on the Concessionaire's web site. Emergency calls will be monitored through this number and all calls will be logged and immediately forwarded to the patrol foreman or assigned alternate for consideration and appropriate follow-up. In addition, the British Columbia Provincial Highways Condition Centre and area Police will have a list of pertinent Concessionaire personnel's phone numbers and pager numbers, and such personnel will be accessible 24 hours a day.

Patrollers will proceed to the emergency site to begin traffic control, supervise the necessary work, and coordinate with emergency forces.

As part of or in addition to its reporting obligations under this Agreement, the Concessionaire will ensure that occurrences which require or may require an emergency response are properly documented and reported to MOT by:

- Using a single reporting form that contains the required information outlined on MOT's spills response "Spill Report" and accident reporting forms, the Transport of Dangerous Goods Act ("TDGA") Dangerous Occurrence Report, and the police accident reporting form.
- Setting photographic requirements and ensuring all reports are accompanied by photographs.
- Preparing an emergency response kit to be carried in each maintenance vehicle which kit will include:
 - an emergency response guide
 - notification requirements including phone numbers
 - safety equipment such as latex gloves, safety glasses, and disposable respirators
 - emergency response forms
 - disposable camera.
- Refurbishing the emergency response kit annually and after each incident.

2. Ministry of Transportation Communication Protocols

The Concessionaire's formal communication protocols will include web-based information (in conjunction with the Province) including traffic conditions, road conditions, travel time expectations and other related matters.

D. Resources

1. Facilities

The Concessionaire shall construct within the first Contract Year an operations centre and associated maintenance yard (the “Operations Centre”) which will be situate in the District of Squamish. The Operations Centre will be the central operations and communications hub, providing office quarters for all staff, as well as garage bays, secure yard storage for equipment and materials, and a housing area for the salt brine tankage and brine maker.

Storage facilities for winter materials will be established along the Concession Highway corridor prior to the onset of the first winter of the Contract Period.

2. Labour

All necessary Operations Centre staff and field staff will be immediately hired to support operation, maintenance and rehabilitation activities. In addition to the Key Individuals to be made available to the Concessionaire for the Project under the terms of the Concession Agreement and in particular Part 3 of Schedule 8 [Key Individuals], the Concessionaire shall on the Effective Date of the OMR Period retain further management and staff with the following duties:

- *Operations Manager* – oversees all aspects of the operation, maintenance, and rehabilitation of the project
- *Asset & Contracts Supervisor* – coordinates all aspects of the Asset Management Program, including liaising with external consultants, and coordinating and preparing follow-up contracts for the delivery of needed work
- *Quality Management Supervisor* – oversees the preparation and updating of the quality manual, quality plans, and quality procedures; serves as an internal auditor and trainer on quality-related matters
- *Health & Safety Supervisor* – oversees the preparation and updating of the Concessionaire’s health and safety manual which outlines health and safety issues in the workplace. The Health and Safety Supervisor also confirms proper safety measures are followed; arranges necessary safety-related training for personnel.

- *Communications Coordinator* – prepares the Concessionaire’s corporate presence to the public, including public information sessions, media presence, website information, etc., and serves as a window of contact for any concerns or complaints that arise
- *ITS Technician* – coordinates the ITS and technology applications on the project as they evolve, including communications technology, RWIS, changeable message signs (“CMS”), GPS vehicle location, traffic counting, traffic cameras, etc.

E. Additional Operations, Maintenance and Rehabilitation Requirements

1. Inspections

During the Contract Period, the Concessionaire shall conduct annual non-destructive pavement load/deflection testing using a falling weight deflectometer (“FWD”) to assess the structural condition of the pavement and integrity of the various pavement layers, as required for the Concessionaire to meet its obligations under the Concession Agreement.

2. Highway Running Surfaces

2.1 **Pavement Structure and Resurfacing Strategy**

The Concessionaire shall operate, maintain and rehabilitate the asphalt highway running surfaces so as to provide a smooth riding surface free of ruts that is within the tolerable distress ratings for surface deterioration described in the Asset Preservation Performance Measures (“APPMs”) described in the O&M Output Specifications. The Concessionaire shall throughout the Contract Period adopt a pavement structure and resurfacing strategy for the design/build (“DB”) portions of the Concession Highway sections below based on local differences in climate and expected usage as follows:

- *Squamish to Function Junction* (harsher winter climate; lesser loads; less construction over rockfill): DB sections will be constructed with a conventional 100 mm asphalt thickness with a Superpave surface course. The resurfacing strategy will be to mill and resurface 50 mm on the travelled lanes at approximately Contract Year 12 after the new surface is installed. After a further 10 years, the travelled lanes as well as shoulders and other asphalt surfaces will be milled and resurfaced by 50 mm.
- *Squamish to Horseshoe Bay* (milder winter climate; increased loads and traffic volumes; more construction over rock fill): DB sections will be constructed with a 125 mm asphalt thickness with a Superpave surface course. The resurfacing strategy for this section will be to mill and resurface 50 mm on the travelled lanes at approximately Contract Year 15 after the new surface is installed. Other paved areas, including shoulders, will be monitored to track deterioration, and will be treated accordingly.
- *Urban Squamish* (increased local traffic loadings) – In the DB section through urban Squamish, where local loadings necessitate pavement strengthening, the

pavement will be constructed with a 125 mm asphalt thickness surfaced in a Superpave surface course. Based on the performance of the pavement as monitored by the asset management system (“AMS”), the expectation will be to mill and resurface 50 mm on the travelled lanes at approximately Contract Year 12 after the new surface is installed. After a further 10 years, the travelled lanes as well as shoulders and other asphalt surfaces will be milled and resurfaced by 50 mm.

As an alternative to the foregoing three strategies along the Concession Highway corridor, subject to the outcome of the AMS inspections at the time, the Concessionaire may overlay with 50 mm of asphalt without milling (depending on pavement deformation) provided always that prior to proceeding, actual pavement deformation will be assessed and all necessary measures taken where required (including localized milling, localized base repair, drainage correction, etc.). At all times, the Concessionaire shall give due consideration in determining how to proceed to the potential for reflection cracking, particularly if fatigue cracking is a concern.

The asphalt pavement of the Concession Highway will receive major maintenance at an appropriate age during the Contract Period by removing approximately 50 mm of surface and replacing it with 50 mm of performance graded (“PG”) asphalt. This final rehabilitation will be carried out to ensure compliance with the End of Term Requirements. The Concessionaire shall vary the actual milling depth depending on the surface condition, rut depth and roughness. Similarly, the Concessionaire shall determine the overlay thickness based on a structural assessment of the pavement made from deflection survey results, the expected traffic and the required condition of the Concession Highway at the Expiry Date. Paved shoulders and other paved areas will be similarly evaluated.

2.2 **Asset Management Approach**

The Concessionaire shall utilize a computerized asset inventory management system.

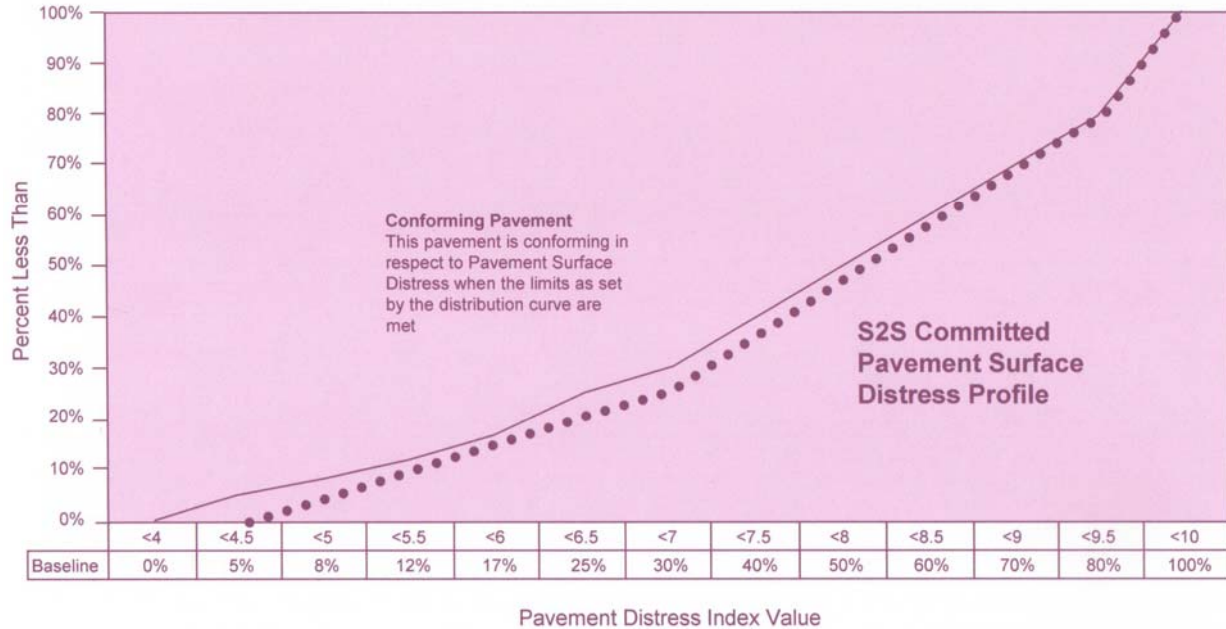
3. Enhanced APPM Commitments

3.1 **Committed Pavement Surface Distress Profile**

The Concessionaire shall conduct its operations, maintenance and rehabilitation activities on the Concession Highway over the Contract Period so as to deliver the cumulative distribution profile set out in the table below for pavement surface distress over and above the profile set out in

Section 22, Figure 22-1 of the Local Area Specifications for Sea-to-Sky Concession referred to in the O&M Output Specifications:

Figure 2.4.2b-1: Enhanced/Reduced Pavement Surface Distress Profile Commitment



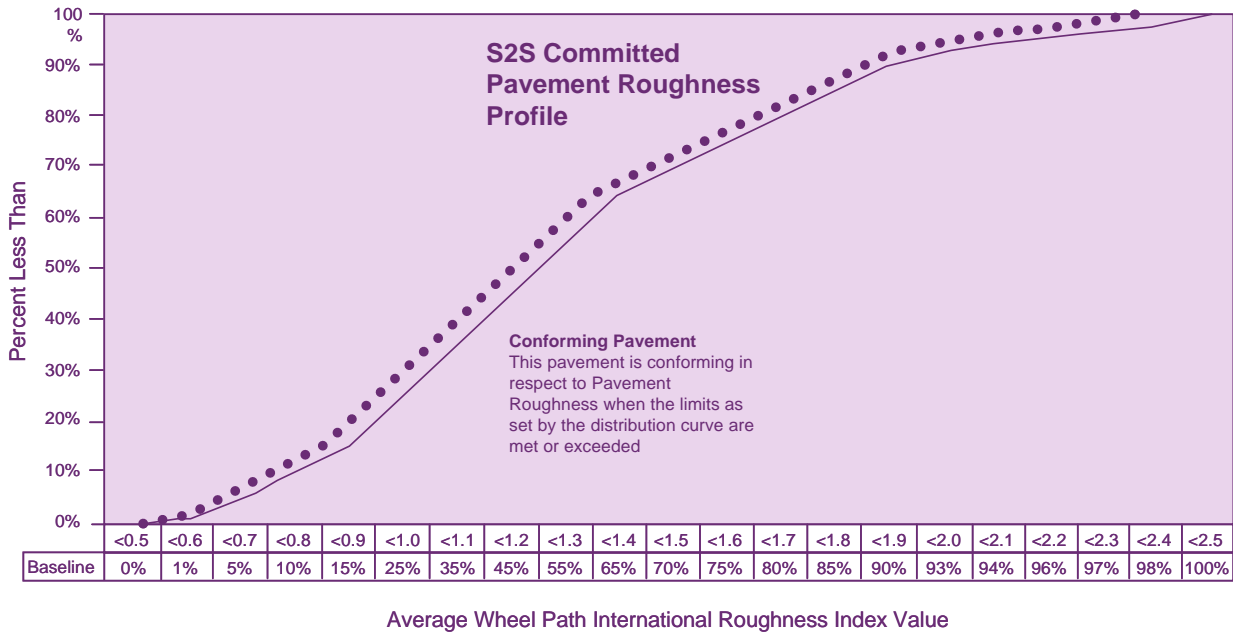
Pavement Surface Distress Profile – Cumulative Distribution

% of network	<4	<4.5	<5	<5.5	<6	<6.5	<7	<7.5	<8	<8.5	<9	<9.5	<10
Specified Baseline Profile	0	5	8	12	17	25	30	40	50	60	70	80	100
Concessionaires Committed Profile	0	0	5	10	15	20	25	36	47	58	69	80	100

3.2 Committed Pavement Roughness Profile

The Concessionaire shall conduct its operations, maintenance and rehabilitation activities on the Concession Highway over the Contract Period so as to deliver the cumulative distribution profile set out in the table below for pavement roughness over and above the profile set out in Section 22, Figure 22-2 of the Local Area Specifications for Sea-to-Sky Concession referred to in the O&M Output Specifications:

Figure 2.4.2b-2: Enhanced/Reduced Pavement Roughness Profile Commitment



Pavement Roughness Profile – Cumulative Distribution

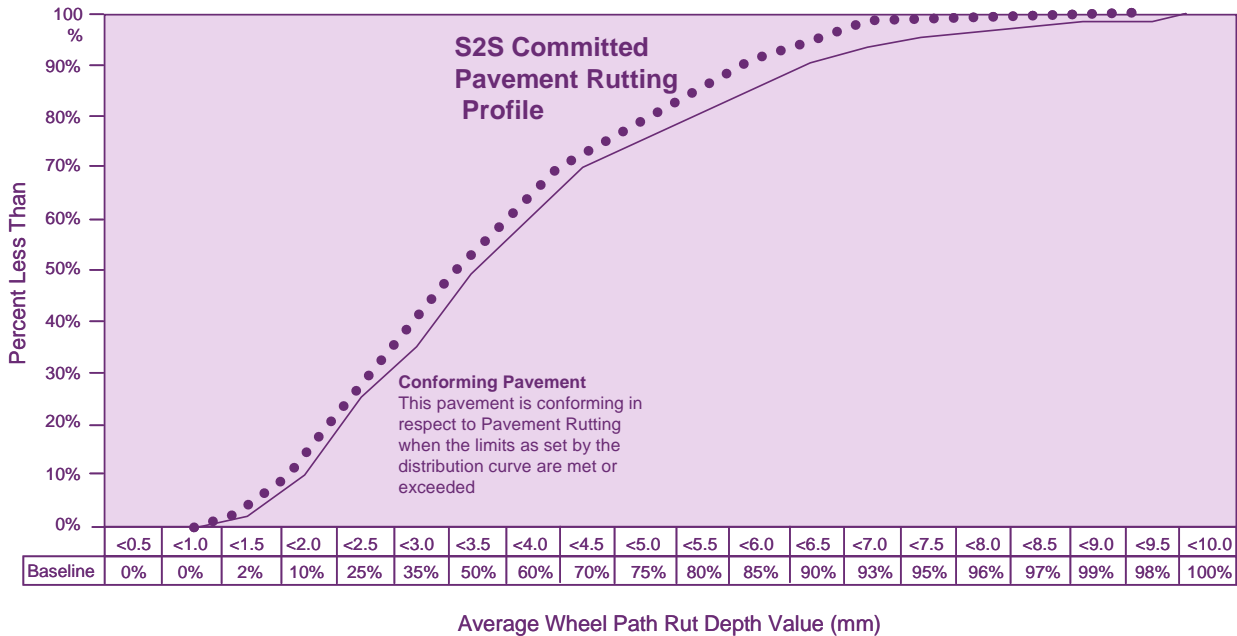
% of network	<0.5	<0.6	<0.7	<0.8	<0.9	<1.0	<1.1	<1.2	<1.3	<1.4	<1.5	<1.6	<1.7
Specified Baseline Profile	0	1	5	10	15	25	35	45	55	65	70	75	80
Concessionaires Committed Profile	0	1	7	13	20	29	38	48	58	68	72	77	82

% of network	<1.8	<1.9	<2.0	<2.1	<2.2	<2.3	<2.4	<2.5
Specified Baseline Profile	85	90	93	94	96	97	98	100
Concessionaires Committed Profile	87	92	95	96	97	98	100	100

3.3 Committed Pavement Rutting Profile

The Concessionaire shall conduct its operations, maintenance and rehabilitation activities on the Concession Highway over the Contract Period so as to deliver the cumulative distribution profile set out in the table below for pavement rutting over and above the profile set out in Section 22, Figure 22-3 of the Local Area Specifications for Sea-to-Sky Concession referred to in the O&M Output Specifications:

Figure 2.4.2b-1: Enhanced/Reduced Pavement Rutting Profile Commitment



Pavement Rutting Profile – Cumulative Distribution

% of network	<0.5	<1.0	<1.5	<2.0	<2.5	<3.0	<3.5	<4.0	<4.5	<5.0	<5.5	<6.0	<6.5
Specified Baseline Profile	0	0	2	10	25	35	50	60	70	75	80	85	90
Concessionaires Committed Profile	0	0	3	15	30	41	53	65	72	79	85	92	95

% of network	<7.0	<7.5	<8.0	<8.5	<9.0	<9.5	<10.0
Specified Baseline Profile	93	95	96	97	99	98	100
Concessionaires Committed Profile	96	97	98	99	100	100	100

F. Traffic Management**1. Roadside Weather Information Systems (RWIS)**

The Concessionaire shall prior to October 31, 2009, establish three RWIS stations. The RWIS shall be operated to provide real-time weather information to the travelling public.

2. Advanced Traveller Information Systems

During the Contract Period, advanced traveller information systems (ATIS) will be established throughout the Contract Period between Horseshoe Bay and Whistler. Real-time travel speeds, weather information, and incident detection will be made available over the telephone and Internet.

3. Speed Management Plan

The Concessionaire will dedicate \$100,000 annually, from and including year 2010 and for each year thereafter to the end of the Contract Period, to the RCMP Squamish detachment and West Vancouver police for additional speed, seatbelt and impaired driving enforcement for the corridor. Such payments shall be made to the Province for delivery to the foregoing police agencies.

The Concessionaire will supply and use four mobile speed display boards throughout the Concession Highway corridor for the Project Term.

4. Intersection Level of Service

The Concessionaire shall operate and maintain signal timing and synchronization to reduce northbound and southbound approach delays, assessed in year 2004, through the DB8 portion of the Concession Highway including urban Squamish. Synchro 6 software was used to assess the intersection Level of Service (LOS) for the Concessionaire's design at the signalized intersections in urban Squamish.

5. Mobility Improvement Provisions**5.1 Vehicle Count Stations**

The Concessionaire will install nine new vehicle counter stations prior to October 31, 2009. Vehicle detection stations will be located at frequent intervals from Horseshoe Bay to Whistler.

Vehicle detectors will count, classify vehicles, and provide real-time travel speed information. Historical travel time data will be stored to provide typical travel time information to the travelling public.

5.2 **Patrols**

The Concessionaire will provide as part of its Incident Management System two patrollers of the Concession Highway, both north and south of the Operations Centre in Squamish, who will be on duty 24 hours per day, 7 days per week. Each patroller will provide roadside assistance to stalled vehicles on the shoulder, as appropriate, and communicate with the Operations Centre via an electronic touchpad linked to GPS.

G. Existing Rock Slope Monitoring Program

Initially, the Concessionaires rock slope monitoring program will include measuring, recording and reporting displacements of monitoring targets for the following four sites:

- Snake Hill Bluff (Provincial responsibility following substantial completion of Section DB1)
- M Creek Bluff
- Loggers Creek Slide
- Cheakamus Canyon Bluff

Monitoring will be completed on a monthly basis, with the exception of the Cheakamus extensometers, which will be monitored continuously and reported monthly. Displacements exceeding a pre-determined threshold will be reported immediately to the Concessionaire operations and the rock slope engineer. The monitoring frequency will be adjusted (increased or decreased) in response to slope movement.

SCHEDULE 7

OPERATION AND MAINTENANCE

Part 3

Concession Highway Intellectual Property

Nil

SCHEDULE 8**REPRESENTATIVES****Part 1****Province's Representative**

The functions to be performed by the Province's Representative under this Agreement include the following:

1. monitor the design, construction, completion, commissioning, testing and maintenance of the Works by means of the system of inspection, testing, surveys, certification and review set out, *inter alia*, in Sections 11 [Design and Construction], 13 [Inspection and Completion], 14 [Operations, Maintenance and Rehabilitation], 15 [Traffic Management and Police Services], 16 [Signing, Traffic Control Devices and Communications], 23 [Quality Management], 25.2 [Audit and Inspection], 26 [Monitoring of Performance], Part 3 of Schedule 5 [Design and Certification Procedure], and Part 2 of this Schedule 8 [Review Procedure];
2. 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;
3. review reports and records of safety, health and welfare and damage or injury to persons and to property;
4. audit the Concessionaire's Quality Management System in accordance with Section 23 [Quality Management] and monitor and verify the operation of such 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's Representative of not complying with the requirements of this Agreement;
5. review and comment upon the Quality Documentation and any additional parts of or changes to the Quality Documentation submitted by the Concessionaire in accordance with Section 23 [Quality Management] and periodically review the Quality Documentation with the Concessionaire;
6. monitor and review schedules prepared by the Concessionaire or the Contractor, including the Project Schedule and the Works Schedule, and all amended or varied versions thereof, and require reports or revised Project Schedules in accordance with Section 12.2 [Variations to Project Schedule] and reports or revised Works Schedules in accordance with Section 12.3 [Preparation of Works Schedule];
7. receive, consider and make decisions with respect to applications by the Concessionaire and other matters relating to delay under Section 12.6 [Delay];

8. receive and consider and, where considered appropriate, provide the Independent Certifier with submissions with respect to applications for the issue of Substantial Completion Certificates, cause all necessary inspections to be carried out in connection therewith and where required, cause the Independent Certifier to issue Substantial Completion Certificates, all in accordance with Section 13.1 [Substantial Completion Certificates];
9. receive and consider and, where considered appropriate, provide the Independent Certifier with submissions with respect to applications for the issue of Final Completion Certificates, cause all necessary inspections to be carried out in connection therewith and where required, cause the Independent Certifier to issue Final Completion Certificates, all in accordance with Section 13.2 [Final Completion Certificates];
10. receive, consider and make decisions with respect to applications in respect of traffic and other signage and traffic control devices and take other actions in accordance with Section 16 [Signing, Traffic Control Devices and Communications];
11. settle with the Concessionaire the form of and receive from the Concessionaire the reports referred to in Part 2 of Schedule 15 [Reports] (including construction progress reports, Monthly Reports, Annual Reports and such other reports as may be required in accordance with the provisions of this Agreement, including to comply with the Requirements of Interested Parties) and any other reports or information provided by the Concessionaire and, where applicable, serve notices of objection to such reports in accordance with Section 24.4.1;
12. inspect and audit the records referred to in Part 1 of Schedule 15 [Records];
13. monitor and review the obtaining and, where applicable, renewal or extension by the Concessionaire of Permits, Licences and Approvals and compliance by the Concessionaire with Permits, Licences and Approvals and the Requirements of Interested Parties;
14. monitor the performance by the Concessionaire of the Concessionaire's Environmental Obligations and compliance by the Concessionaire with its other obligations under Section 8.13 [Concessionaire's Environmental Obligations] and Section 8.18 [Environmental Matters];
15. monitor the implementation of the First Nations Requirements and the performance by the Concessionaire of the First Nations Obligations and its other obligations under Section 8.14 [First Nations];
16. request Province Changes and Additional Works where the Province so instructs and receive and negotiate on behalf of the Province consequential applications by the Concessionaire relating to additional payment, and countersign Province Change Certificates;
17. notify the Concessionaire when a Concessionaire Change is required in order that the Concessionaire will comply with its obligations under this Agreement;

18. receive, consider and make decisions with respect to applications by the Concessionaire for revisions to or substitutions for the O&M Requirements;
19. receive and deal with any request by the Concessionaire for a revision to the Traffic Management Requirements and submissions by the Concessionaire of the Traffic Management Plan and Schedules of Lane Closures and revisions thereto in accordance with Section 15 [Traffic Management and Police Services];
20. negotiate with the Concessionaire the need for or location of any Measurement Points in accordance with the provisions of Part 8 of Schedule 10 [Monitoring and Measurement] and receive and deal with any notice of installation or replacement of any Measuring Equipment;
21. monitor the measurement of traffic by means of the system of inspections, verifications, testing, surveys, certification, review and correction of defects set out in, and deal with any other matters arising under, Part 8 of Schedule 10 [Monitoring and Measurement];
22. receive and deal with all matters submitted in accordance with the Review Procedure, including requests for a Concessionaire Change;
23. receive notification of discovery of any items referred to in Section 18.2 [Items of Geological, Historical or Archaeological Interest or Value] and give instructions to the Concessionaire as to the manner of dealing with the same;
24. receive notices and other information and give instructions in respect of environmental matters in accordance with Section 8.18 [Environmental Matters], including notification of discovery of any Non-Foreseeable Contamination referred to in Section 8.18.12 and instructions given to the Concessionaire as to the manner of dealing with the same;
25. receive details of, review and comment on insurances in accordance with Section 20.1 [Insurance Cover];
26. receive policies or other documents relating to insurances and evidence of insurances and performance bonds in accordance with Section 20 [Insurance] and Schedule 11 [Insurance Requirements];
27. inspect the register of insurance claims kept by the Concessionaire in accordance with Section 20.6 [Claims];
28. receive and respond to proposed amendments to the Project Documents in accordance with Section 2.3.2 or any appointment of or change in the identity of the Contractor, Designer, Checker, Operator, Quality Management Representative or Audit Team;
29. receive or give any notice in accordance with Section 26 [Monitoring of Performance] and take any actions in respect of any such notice or any remedial measures;

30. receive and deal with matters submitted in respect of any Eligible Change in accordance with Schedule 13 [Changes];
31. negotiate on behalf of the Province the amount of any compensation payable under Section 44 [Compensation on Termination];
32. receive and, as instructed by the Province, deal with any request by the Concessionaire in respect of a Subsequent Scheme or an Improvement;
33. receive and deal with all matters in respect of a claim of Force Majeure;
34. liaise with the Concessionaire and other persons, including Interested Parties, as required by any Liaison Procedure;
35. perform any functions under the Technical Requirements which are to be carried out by the Province's Representative, the Province or a representative of the Province;
36. receive notification of the discovery of any protected species and how the Concessionaire intends to deal with them;
37. receive and consider any certificates of compliance required by the Technical Requirements;
38. participate in any Initial, Second or End of Term Inspection and exercise the other functions specified in Section 19 [End of Term];
39. receive and consider applications for the issue of Reinstatement Certificates and Renewal Certificates, make all necessary inspections in connection therewith, and issue Reinstatement Certificates and Renewal Certificates when appropriate;
40. receive, consider and make decisions with respect to any applications for approval of any matters referred to in the Technical Requirements or any other provisions of this Agreement as requiring the approval of the Province or the Province's Representative;
41. conduct any other general or specific inspections of the Project Facilities (including the Works), the Site and the Adjacent Areas in the discretion of the Province's Representative;
42. perform such other functions as may be ascribed to the Province's Representative under this Agreement including the Technical Requirements; and
43. such other functions as may from time to time be designated by the Province.

SCHEDULE 8**REPRESENTATIVES****Part 2****Review Procedure****1. Review Procedure**

A submission by or through the Concessionaire pursuant to Section 47.1 [Review Procedure] will be made 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 procedure will apply:

- 1.1 The Province's Representative will as soon as practicable and in any event within 30 days (or such other period as may be specified in this Agreement for any particular case) of actual receipt thereof return one copy of the relevant submission document endorsed "received" or (subject to paragraph 3 below) "received with comments" or (subject to paragraph 3 below) "comments" as appropriate. In the case of any submission document returned endorsed with "comments" or "received with comments", the Province's Representative may also transmit any such comments to the Concessionaire by fax.
- 1.2 The Concessionaire may proceed to implementation in the case of a submission document endorsed "received". The documents or proposed course of action accompanying a submission document endorsed "received with comments" will be amended by the Concessionaire in accordance with such comments but need not be re-submitted to the Province's Representative. The documents or proposed course of action accompanying a submission document endorsed "comments" will be revised by the Concessionaire and re-submitted to the Province's Representative together with the relevant submission document, unless the Concessionaire disputes that any such comment is on grounds permitted by this Agreement, in which case either the Concessionaire or the Province's Representative may refer the matter to the Disputes Resolution Procedure. For greater certainty, any comment made by the Province's Representative on grounds permitted by this Agreement will be deemed to have been reasonably made.
- 1.3 If the Province's Representative fails to return any such submission document (including any re-submitted submission document) duly endorsed within 30 days (or such other period as may be specified in this Agreement for any particular case) of actual receipt thereof, then it will be deemed to have returned such submission document to the Concessionaire marked "received".

For greater certainty, 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 Concessionaire 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 Concessionaire (including, in the case of a submission in respect of a Proposal under Part 3 of Schedule 5 [Design and Certification Procedure], a Technical Appraisal Authority) and the Concessionaire will comply with any such designation in making submissions under the Review Procedure and, where a submission is delivered in accordance with any such designation, will 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.

2. Further Information

If the Province's Representative so requires in writing, the Concessionaire will promptly submit any further or other information, data and documents (including details of calculations and comments of the Designer and/or Checker) which may be required by the Province's Representative for a full appreciation of a submission under paragraph 1 and its implications, and will take all such steps as may be required to satisfy the Province's Representative that the proposed document or proposed course of action complies with this Agreement and is appropriate. If the Province's Representative makes a written request for further or other information, data and/or documents under this paragraph, then the time periods referred to in paragraph 1 above will not commence to run until such time as the Concessionaire has submitted the requested information, data and/or documents to the Province's Representative in satisfaction of the request.

3. Grounds of Objection

The Province's Representative may make comments in relation to any submission in accordance with any express provision set out elsewhere in this Agreement or on the ground that the proposed document or course of action would conflict or be inconsistent with the Province's or any other Governmental Authority's statutory or other duties or functions or with any provisions of this Agreement or in breach of any Laws and Regulations or Legal Requirements, or on the ground that the Concessionaire has not provided all information, data and documents required (including any information, data and documents required by the Province's Representative pursuant to paragraph 2) in respect of such submission (and the Province's Representative will always be entitled to make such comments on the foregoing grounds notwithstanding the following provisions of this paragraph 3 or any other provision in this Agreement including any provision which restricts the grounds for objection to any specific basis). In relation to the submissions set out below, the Province's Representative may make comments as follows:

- 3.1 in relation to a document or proposed course of action submitted to the Review Procedure pursuant to Section 2.3.2, the Province's Representative may make comments only on the grounds that the adoption of such document or proposed course of action would, or might reasonably be expected to:
 - 3.1.1 adversely affect the performance by the Concessionaire of its obligations under this Agreement;
 - 3.1.2 adversely affect any right of the Province or BCTFA under this Agreement or the ability of the Province or BCTFA to enforce any such right or to perform its obligations under this Agreement or the ability of the Province or BCTFA or any other Governmental Authority to carry out any duty or function;
 - 3.1.3 without limiting paragraph 3.1.2, increase any liability of the Province or BCTFA, whether actual or contingent, present or future, known or unknown (including any liability under Section 44 [Compensation on Termination] or Schedule 13 [Changes]); or
 - 3.1.4 adversely affect the financial position, liquidity or solvency of the Concessionaire or any of its Unitholders;
- 3.2 in relation to a submission of a proposed Concessionaire Change (which term, for purposes of this paragraph 3.2, will be deemed to include an Alternative Proposal), the Province's Representative may make comments only on the grounds that:
 - 3.2.1 the proposed Concessionaire Change is not in accordance with Good Industry Practice or would be prejudicial to the safety of Users;
 - 3.2.2 the proposed Concessionaire Change would result in a material departure from, material failure to comply with or material variation to any of the Technical Requirements;
 - 3.2.3 the proposed Concessionaire Change is likely, in the reasonable opinion of the Province's Representative, to prejudice the completion of the Pre Olympic Works to such standard as would require the issue of the Substantial Completion Certificate (Pre Olympic Works) by the Scheduled Pre Olympic Works Substantial Completion Date, or to prejudice the completion of the Olympic Requirements Works to such standard as would require the issue of the Substantial Completion Certificate (Olympic Requirements Works) by the Scheduled Olympic Works Substantial Completion Date, or to prejudice the completion of the Post Olympic Works to such standard as would require the issue of the Final Completion Certificate (Post Olympic Works) by the Scheduled Post Olympic Works Final Completion Date;
 - 3.2.4 following the proposed Concessionaire Change the Construction Requirements would be less likely to achieve compliance with the Construction Output

- Specifications than the Construction Requirements prior to such Concessionaire Change;
- 3.2.5 following the proposed Concessionaire Change the Works would not be of a quality or standard of performance or value (to the Province) equal to or better than that of the Works required under the Construction Output Specifications and the Construction Requirements prior to such Concessionaire Change; or
- 3.2.6 the proposed Concessionaire Change would or might reasonably be expected to increase any liability of the Province or BCTFA, whether actual or contingent, present or future, known or unknown (including any liability under Section 44 [Compensation on Termination] or Schedule 13 [Changes]);
- 3.3 in relation to a submission of a revised Project Schedule in accordance with Section 12.2 [Variations to Project Schedule] or the initial or a revised Works Schedule in accordance with Section 12.3 [Preparation of Works Schedule], the Province's Representative may make comments only on the grounds that compliance with the revised Project Schedule or Works Schedule (as the case may be):
- 3.3.1 is not practicable;
- 3.3.2 would breach the Construction Output Specifications or the Construction Requirements;
- 3.3.3 would adversely affect or might reasonably be expected to adversely affect the performance by the Concessionaire of its obligations pursuant to Sections 12.5.1.2, 12.5.1.3, 12.5.1.4, 12.5.1.5 or 12.5.1.6, or Section 12.5.2 of this Agreement;
- 3.3.4 would breach any other obligation of the Concessionaire under this Agreement; or
- 3.3.5 would be inconsistent with the Requirements of Interested Parties.
- 3.4 in relation to a submission of a proposed revision to or substitution for the O&M Requirements, the Province's Representative may make comments only on the grounds that:
- 3.4.1 the proposed revision or substitution is not in accordance with Good Industry Practice or would be prejudicial to the safety of Users;
- 3.4.2 the conduct of the Operations in accordance with the proposed revision or substitution would be less likely to achieve compliance with the O&M Output Specifications or would be likely to provide for compliance to a lower standard or quality than the conduct of the Operations in accordance with the O&M Requirements prior to such proposed revision or substitution;

- 3.4.3 the proposed revision or substitution would or might reasonably be expected to increase any liability of the Province or BCTFA, whether actual or contingent, present or future, known or unknown (including any liability under Section 44 [Compensation on Termination] or Schedule 13 [Changes]);
- 3.5 in relation to the submission of a Schedule of Lane Closures pursuant to Section 15.2B.1 or Section 15.2B.2 or of a proposed revision to an Annual Schedule of Lane Closures pursuant to Section 15.2B.4, the Province's Representative may make comments in respect of a period or periods of Lane Closure requested by the Concessionaire only on the grounds that:
- 3.5.1 such Lane Closure is not in accordance with the Traffic Management Output Specifications, the Traffic Management Requirements, the Traffic Management Plan or the Requirements of Interested Parties or any other provisions of this Agreement;
- 3.5.2 there has been material non-compliance by the Concessionaire with the requirements of this Agreement regarding liaison between the Concessionaire and any other person, including any Interested Party, with respect to traffic management;
- 3.5.3 such Lane Closure would be inconsistent with any duty or function of the Province or any other Governmental Authority (including as a highway authority, street authority or traffic authority);
- 3.5.4 the rescheduling of such Lane Closure would materially ameliorate any adverse effect of such Lane Closure on traffic flow on any Connecting Road(s) (whether or not the Province is the highway authority for the relevant Connecting Road(s)); or
- 3.5.5 the duration of the requested period of Lane Closure exceeds the period reasonably required for the relevant works to be carried out;
- 3.6 in relation to a submission of a proposal in respect of the layout, location, type, size, colour and content of any traffic signs or other signs in accordance with the provisions of Section 16.2 [New Signs], the Province's Representative may make comments only on the grounds:
- 3.6.1 that the proposals or any of them do not satisfy the requirements of Section 16 [Signage, Traffic Control Devices and Communications];
- 3.6.2 that the proposals or any of them are not in accordance with Good Industry Practice;

- 3.6.3 that the proposals or any of them do not comply with the relevant provisions of the Technical Requirements;
- 3.6.4 of safety, taking into account, *inter alia*, the nature of the Concession Highway and the proposed location of the relevant sign(s); or
- 3.6.5 of the efficiency of strategic routing for the public highway network or any part thereof;
- 3.7 in relation to a submission in respect of insurance in accordance with Section 20.1.2, the Province's Representative may make comments only on the grounds that such insurance would not comply with any provision of Section 20 [Insurance] or Schedule 11 [Insurance Requirements];
- 3.8 in relation to a submission of any Quality Documentation or part of any Quality Documentation or any changes to any Quality Documentation, the Province's Representative may make comments only on the grounds that such Quality Documentation, parts or changes or the Quality Management System which they reflect would not comply with or would be inconsistent with the requirements of Section 23 [Quality Management] or Schedule 6 [Quality Management] or any other provision of this Agreement;
- 3.9 in relation to a submission in respect of the installation or replacement of any component of the Measuring Equipment in accordance with the provisions of Part 8 of Schedule 10 [Monitoring and Measurement], the Province's Representative may make comments only on the grounds that the proposed Measuring Equipment would not meet the specification set out in the Technical Requirements or would not comply with the requirements set out in Part 8 of Schedule 10 [Monitoring and Measurement] or with any other requirement of this Agreement;
- 3.10 in relation to the submission of a proposal for any Improvement in accordance with Part 2 of Schedule 14 [Improvements], the Province's Representative may make comments only on the grounds that:
 - 3.10.1 the safety of Users or others would be adversely affected;
 - 3.10.2 the utility of the Concession Highway to any class of Users would be adversely affected; or
 - 3.10.3 the Improvement would fail to meet the then current and relevant standards or requirements of the Province in relation to the design, construction, maintenance, rehabilitation or operation of Comparable Controlled Access Highways;

- 3.11 in relation to any submission of Design Data in accordance with the Design and Certification Procedure, the Province's Representative may make comments only on the grounds that such Design Data:
- 3.11.1 is not in accordance with the Technical Requirements or (where there are no applicable Technical Requirements) with Good Industry Practice and the then current and relevant standards or requirements of the Province in relation to the design, construction, maintenance, rehabilitation and operation of Comparable Controlled Access Highways;
 - 3.11.2 if implemented would adversely affect the safety of Users or others; or
 - 3.11.3 does not comply with any other provision of this Agreement;
- 3.12 in relation to a submission of a proposed revision to the First Nations Requirements, the Province's Representative may make comments only on the grounds that the proposed revision is not in accordance with the provisions of Section 8.14 [First Nations] or would result in the First Nations Requirements being not in compliance with the First Nations Obligations or being less likely to satisfy and fulfill all of the First Nations Obligations than the First Nations Requirements prior to such proposed revision;
- 3.13 in relation to a submission of a proposed revision to the Traffic Management Requirements in accordance with Section 15.1.2 or Section 15.1.3, the Province's Representative may make comments only on the grounds that:
- 3.13.1 the proposed revision is not in accordance with Good Industry Practice or the Traffic Management Output Specifications or any other provision of this Agreement;
 - 3.13.2 there has been non-compliance in any material respect by the Concessionaire with the requirements of this Agreement regarding liaison between the Concessionaire and any other person, including any Interested Party, with respect to traffic management; or
 - 3.13.3 the proposed revision would implement any change to the Traffic Management Requirements that is inconsistent with any duty or function of the Province or any other Governmental Authority (including as a highway authority, street authority or traffic authority);

- 3.14 in relation to a submission of the initial Five Year Management Plan or any update thereof in accordance with Section 14.10 [Five Year Management Plan], the Province's Representative may make comments only on the grounds that:
- 3.14.1 the proposed Five Year Management Plan or update does not comply with and satisfy the requirements set out in Part 3 of Schedule 15 [Five Year Management Plan]; or
 - 3.14.2 management of the Operations in accordance with the proposed Five Year Management Plan or update would be inconsistent with any of the Concessionaire's obligations under or any other provision of this Agreement or would not be conducive to achieving compliance with the O&M Output Specifications, the O&M Requirements and the other Technical Requirements or otherwise would not result in the delivery of the Operations in the manner and to the quality and standards contemplated by this Agreement;
- 3.15 in relation to a submission of an updated privacy code in accordance with Section 14.11 [Privacy Code], the Province's Representative may make comments only on the grounds that the updated privacy code does not comply with the requirements of all applicable Privacy Legislation and other Laws and Regulations and Legal Requirements and the provisions of Schedule 21 [Privacy Protection] or is inconsistent with any other provision of this Agreement;
- 3.16 in relation to a submission of the initial Unstable Slope Mitigation Program or any update and extension thereof in accordance with Section 14.7.2, the Province's Representative may make comments only on the grounds set out in Section 14.7.4;
- 3.17 in relation to a submission of a Reinstatement Plan in accordance with Section 20.6A.2, the Province's Representative may make comments only on the grounds that:
- 3.17.1 the Reinstatement Works described in the Reinstatement Plan are not adequate to restore the Project Facilities, the Site and the Adjacent Areas to substantially the same condition they were in prior to the occurrence of the relevant damage or destruction (subject, where applicable, to any Province Change) with a minimum of traffic disruption, delay or inconvenience to Users, or are not in accordance with the Technical Requirements and Good Industry Practice;
 - 3.17.2 the schedule for the execution of the Reinstatement Works set out in the Reinstatement Plan is not a reasonable schedule having regard to all relevant circumstances including the Requirements of Interested Parties and the public interest in restoring the Project Facilities to a condition safe for use by the public without traffic restrictions as soon as reasonably possible, or would adversely affect or might reasonably be expected to

- adversely affect the performance by the Concessionaire of its obligations under Section 12.5 [Achievement of Completion];
- 3.17.3 implementation of the Reinstatement Plan would adversely affect any right of the Province or BCTFA under this Agreement or the ability of the Province or BCTFA to enforce any such right or to perform their obligations under this Agreement or the ability of the Province or BCTFA or any other Governmental Authority to carry out any duty or function;
- 3.17.4 without limiting paragraph 3.17.3, implementation of the Reinstatement Plan would increase any liability of the Province or BCTFA, whether actual or contingent, present or future, known or unknown (including any liability under Section 44 [Compensation on Termination] or Schedule 13 [Changes];
- 3.17.5 implementation of the Reinstatement Plan would adversely affect the safety of Users or others; or
- 3.17.6 implementation of the Reinstatement Plan would not be in accordance with the Technical Requirements or would be inconsistent with or result in non-compliance with any other provision of this Agreement.
- 3.18 in relation to a submission of the initial Records Management Protocol or any update thereof in accordance with Section 25.4.1, the Province's Representative may make comments only on the grounds that the initial or updated Records Management Protocol (as the case may be) is inconsistent with or will not meet any of the requirements set forth in Section 25 [Records], Part 1 of Schedule 15 [Records] or any other provisions of this Agreement;
- 3.19 in relation to a submission of an update to the complaints protocol in accordance with Section 30.1.1, the Province's Representative may make comments only on the grounds that the complaints protocol as so updated will not meet the requirements of the Provincial Ombudsman and Good Industry Practice and the reasonable requirements of the Province;
- 3.20 in relation to a submission of proposed procedures for backing-up and storage in safe custody of data, materials and documents referred to in Section 49.1 [Design and Other Data] or any variation in such procedures pursuant to Section 49.3.2, the Province's Representative may make comments only on the grounds that the proposed procedures, or the procedures after giving effect to the proposed variation, would not be in accordance with Good Industry Practice and the reasonable requirements of the Province or would be inconsistent with any other provision of this Agreement;
- 3.21 in relation to a submission of a proposed Design Management Plan in accordance with Section 11.2.1, the Province's Representative may make comments only on the grounds that the proposed Design Management Plan does not include the components

and information (including with respect to submissions of drawings and other Design Data and design reviews, meetings, audits and progress reports) required by, or otherwise does not comply with the requirements for such plan set forth in, the Construction Output Specifications; and

3.22 in relation to the submission of the proposed Traffic Management Plan in accordance with Section 15.2A.1 or of a proposed revision to the Traffic Management Plan (including any proposed revision to a sub-plan included in the Traffic Management Plan) in accordance with Section 15.2A.2, the Province's Representative may make comments only on the grounds that:

3.22.1 the proposed Traffic Management Plan or revision is inconsistent or does not comply with the requirements set forth in the Traffic Management Output Specifications or with the Traffic Management Requirements, the Traffic Quality Management Plan or any other Technical Requirements or relevant provisions of this Agreement;

3.22.2 there has been non-compliance in any material respect by the Concessionaire with the requirements of this Agreement regarding liaison between the Concessionaire and any other person, including any Interested Party, with respect to traffic management;

3.22.3 the proposed Traffic Management Plan or revision is inconsistent with any duty or function of the Province or any other Governmental Authority (including as a highway authority, street authority or traffic authority); or

3.22.4 the proposed Traffic Management Plan or revision is not in accordance with Good Industry Practice or would be prejudicial to the safety of Users.

4. Optional Standards

In respect of the Ministry's Standards or other standards or specifications which are incorporated into the Technical Requirements and which contain options from which a choice can be made, any choice by the Concessionaire of any one option set out in such standards or specifications will satisfy the Technical Requirements in that regard (unless any such option is excluded or limited by the terms of the Technical Requirements) and the Province's Representative will not object to such choice (of such option) on that basis. If the Concessionaire has notified such choice to the Province's Representative and subsequently proposes to substitute another such option, it will request a Concessionaire Change. If the Province's Representative requires an option set out in the above standards or specifications to be adopted which the Concessionaire has not chosen, the Province's Representative will request a Province Change.

5. No Objection

A reference in this Agreement 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 Part 2 of Schedule 8 [Review Procedure] and returned (or deemed returned) with an endorsement of "received" or returned with an endorsement "received with comments", in the latter case the matter having been amended in accordance with such comments.

6. Adherence

Documents or courses of action the subject of a submission pursuant to paragraph 1 above and returned (or deemed returned) endorsed:

6.1 "received" shall be adhered to; or

6.2 "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 the Review Procedure.

7. Concessionaire Change Certificate

The Concessionaire's Representative will issue a Concessionaire Change Certificate in respect of a Concessionaire Change to which there has been no objection in accordance with the Review Procedure, and will submit a copy of the Concessionaire Change Certificate in duplicate to the Province's Representative who will, as a matter of record only, return to the Concessionaire's Representative a receipted copy thereof.

SCHEDULE 8**REPRESENTATIVES****Part 3****Key Individuals**

The Key Individuals are the following:

1. Project Director: **Nicholas Hann**
2. Project Manager: **Frank Margitan**
3. Design Manager: **Tony Purden**
4. Construction Manager: **Dan Howell**
5. Operations, Maintenance and Rehabilitation Manager: **Geoffrey Leach**
6. Financing Lead Manager: **Duncan Ball**
7. Quality Management Representative: **James Turnham**
8. Site Safety Manager: **Gary McComb**
9. Environmental Manager: **Andrew Allan**
10. First Nations Coordinator: **Paul Wearmouth**
11. First Nations Employment Coordinator: **Melanie Rapada**
12. First Nations Business Coordinator: **Troy Van Bostelen**
13. Communications Manager: **Gayle Bukowsky**
14. Traffic Engineer: **José Pinto**
15. Traffic Manager: **Robert Parkinson**
16. Rock Slope Engineer: **Daryl Fieber**
17. Road Safety Audit Team Leader: **John Morall**

SCHEDULE 9

NOT USED

SCHEDULE 10**PAYMENTS**

This Schedule 10 is comprised of the following Parts:

Part	Description
1A	Interpretation
1	Total Performance Payments
2	Availability Payments
3	Non-Availability Deductions
4	Operation & Maintenance Performance Deduction
5	Vehicle Usage Payment
6	Performance Incentive Payments
7	End of Term Payment
8	Monitoring and Measurement
Annex	
1	PM Sections – Classification and Weightings
2	Limits on Vehicle Traffic Bands
3	Monthly Factors for Vehicle Usage

SCHEDULE 10**PAYMENTS****Part 1A****Interpretation**

In this Schedule 10 [Payments], unless the context otherwise requires, the following expressions have the following meanings:

“**Availability Payment**” has the meaning given in Part 2 of this Schedule.

“**Closure Category**” has the meaning given in Table 6-2 in Part 6 of this Schedule.

“**CPI_n**” means the value for CPI for the month of January which most recently precedes the start of the Contract Year n.

“**CPI₀**” means the value for CPI for the month of December, 2004.

“**day**”, for purposes of Table 6-4 in Part 6 of this Schedule, means the hours from 06:00 a.m. to 12:00 p.m. inclusive, and “daytime” has a corresponding meaning.

“**Long Vehicle**” means any vehicle classified as Class 4 or above in the GR02-FHWA13 Vehicle Classification Table.

“**Maximum Availability Payment**” means the annual maximum payment from the Province attributable to the availability of the Concession Highway as calculated in accordance with paragraph 3.1 of Part 2 of this Schedule.

“**Measurement Point 1**” means the measurement point for Vehicle Usage Payment south of Squamish at Horseshoe Bay being approximately 1km north of Route 1 / Route 99 junction as designated on drawing 41DD-DB01-0104 Rev. P.B. referenced in Part 5 of Schedule 5 [Construction Drawings].

“**Measurement Point 2**” means the measurement point for Vehicle Usage Payment north of Squamish at Cheekye being at the south end of the Cheekye River Bridge approximately 10km north of Squamish as designated on drawing 41DD-DB09-0204 Rev. O referenced in Part 5 of Schedule 5 [Construction Drawings].

“**Monthly Maximum Availability Payment**” means the monthly maximum payment from the Province attributable to the availability of the Concession Highway as calculated in accordance with paragraph 2.1 of Part 2 of this Schedule.

“**night**”, for purposes of Table 6-4 in Part 6 of this Schedule, means the hours from 00:00 a.m. to 06:00 a.m. inclusive, and “night-time” has a corresponding meaning.

“**Non Availability Deductions**” has the meaning given in Part 3 of this Schedule.

“**Non Conformance Event Points**” has the meaning given in Part 4 of this Schedule.

“**Non Conformance Event Points Rate**” has the meaning given in Part 4 of this Schedule.

“**Non Conforming Event**” or “**NCE**” has the meaning given in paragraph 1.1.1 of Part 4 of this Schedule.

“**O&M Performance Deduction**” means the Operation and Maintenance Performance Deduction as set out in Part 4 of this Schedule.

“**Other Vehicles**” means any vehicle classified as Class 1 to 3 in the GR02-FHWA13 Vehicle Classification Table.

“**Performance Incentive Payments**” has the meaning given in Part 6 of this Schedule.

“**PM-Section Weighting**” means the proportion each PM-Section contributes to the Maximum Availability Payment as specified in Annex 1 to this Schedule.

“**Province Traffic Forecast**” means the “Sea-to-Sky Corridor Traffic Forecast” dated June 2004 prepared by TSi Consultants and included in the Disclosed Data.

“**Rural PM-Section**” means a PM-Section classified (based on the minimal entry and exit points within the PM-Section) as rural in Annex 1 to this Schedule.

“**Safety Performance Payment**” has the meaning given in paragraph 2 of Part 6 of this Schedule.

“**Special Event**” means an occasion that the Province has designated as such in writing with not less than 30 days prior notice, and is limited to a maximum of four such occasions in any Contract Year.

“**Total Performance Payment**” has the meaning given in Part 1 of this Schedule.

“**Traffic Management Adjustment**” has the meaning given in paragraph 3.4 of Part 6 of this Schedule.

“**Traffic Management Payment**” has the meaning given in paragraph 3 of Part 6 of this Schedule.

“**Urban PM-Section**” means a PM-Section classified (based on the numerous entry and exit points within the PM-Section) as urban in Annex 1 to this Schedule.

“**Vehicle Usage Payment**” has the meaning given in Part 5 of this Schedule.

“**Vehicles**” means Long Vehicles and Other Vehicles.

Unless otherwise indicated, a reference in any Part of this Schedule to a paragraph is a reference to the specified paragraph in the Part of this Schedule in which the reference appears.

SCHEDULE 10**PAYMENTS****Part 1****Total Performance Payment****1. Total Performance Payment**

- 1.1 The Total Performance Payment (“TPP_n”) in Contract Year n will be determined in accordance with the following formula:

$$TPP_n = AP_n + VUP_n + PIP_n + IA_n - ACR_n + EOTP$$

Where:

TPP_n	=	Total Performance Payment for Contract Year n
AP_n	=	Availability Payment for Contract Year n calculated in accordance with Part 2 of this Schedule
VUP_n	=	Vehicle Usage Payment for Contract Year n calculated in accordance with Part 5 of this Schedule
PIP_n	=	Performance Incentive Payments for Contract Year n calculated in accordance with Part 6 of this Schedule
IA_n	=	The Insurance Adjustment resulting from Section [20.13] [Benchmarking of Insurance] of the Agreement
ACR_n	=	The Asset Condition Retention for Contract Year n in accordance with paragraph 3 of Part 4 of this Schedule 10
$EOTP$	=	The End of Term Payment as calculated in accordance with Part 7 of this Schedule

2. Annual Affordability Ceiling

- 2.1 The TPP_n excluding the Safety Performance Payment (SPP_n) as calculated in accordance with paragraph 2.4 of Part 6 of this Schedule, in any Contract Year n prior to 31 March 2010 cannot exceed the Annual Affordability Ceiling (“AAC_n”) for that Contract Year n.
- 2.2 In the event that TPP_n less the Traffic Management Payment (TMP_n) for Contract Year n as calculated in accordance with this Schedule 10 exceeds the AAC_n less the TMP_n for Contract Year n prior to 31 March 2010 the TPP_n less TMP_n payable to the Concessionaire will be limited to AAC_n less TMP_n and Concessionaire will not be entitled to receive any additional payments in Contract Year n or any subsequent Contract Year in respect of TPP_n claimed for that Contract Year n.

2.3 AAC_n will be calculated in accordance with the following formula:

$$AAC_n = AAC_{n0} \times \left(1 + Fx \left(\frac{CPI_n}{CPI_0} - 1 \right) \right)$$

Where:

AAC_{no} = Annual Affordability Ceiling for contract year n in Base Data prices as set out in Table 1-1 below.

F = Indexation Factor of 0.35.

TABLE 1-1
Annual Affordability Ceiling

Contract Year	Year ended 31 March	AAC_e \$
1	2006	7,250,000
2	2007	14,895,730
3	2008	19,722,913
4	2009	29,917,328
5	2010	54,167,316
6	2011	60,840,559

SCHEDULE 10

PAYMENTS

Part 2

Availability Payments

1. Availability Payment

- 1.1 The Availability Payment (“AP_n”) will be payable from the commencement of the O&M Period. The AP_n payable in Contract Year n will be determined in accordance with the following formula:

$$AP_n = \sum_{m=1}^m MAP_{mn}$$

Where:

AP_n	=	Availability Payment in Contract Year n
MAP_{mn}	=	Monthly Availability Payment in month m of Contract Year n as calculated in accordance with paragraph 1.2 below
m	=	Number of months in Contract Year n

- 1.2 The Monthly Availability Payment (“MAP_{mn}”) in month m of Contract Year n will be determined in accordance with the following formula:

$$MAP_{mn} = MMAP_{mn} - NAD_{mn} - OMPD_{mn} - POWCD_{mn} - ORWCD_{mn} - TMA_{mn}$$

Where:

$MMAP_{mn}$	=	Monthly Maximum Availability Payment in month m of Contract Year n as calculated in accordance with paragraph 2 below
NAD_{mn}	=	Non-Availability Deductions for month m of Contract Year n as calculated in accordance with Part 3 of this Schedule
$OMPD_{mn}$	=	O&M Performance Deductions for month m of Contract Year n as calculated in accordance with Part 4 of this Schedule

$POWCD_{mn}$	=	Post Olympic Works Completion Deductions for month m in Contract Year n as calculated in accordance with paragraph 4 below
$ORWCD_{mn}$	=	Olympic Requirements Works Completion Deductions for month m in Contract Year n as calculated in accordance with paragraph 6 below
TMA_{mn}	=	The Traffic Management Adjustment for month m in Contract Year n in accordance with paragraph 3.4 of Part 6 of this Schedule 10
m	=	Number of months in Contract Year n

- 1.3 The total of Non-Availability Deductions, O&M Performance Deductions, Post Olympic Works Completion Deductions, Olympic Requirements Works Completion Deductions and Traffic Management Adjustments in month m in Contract Year n will be capped at the Monthly Maximum Availability Payment ($MMAP_{mn}$) for the relevant month, i.e.

$$MMAP_{mn} \geq NAD_{mn} + OMPD_{mn} + POWCD_{mn} + ORWCD_{mn} + TMA_{mn}$$

- 1.4 The Concessionaire will calculate and report to the Province the MMAP monthly within 10 days of the end of each month. The Concessionaire will report the calculated MAP_{mn} in writing to the Province, setting out the calculation of the MAP_{mn} and information supporting the calculation in detail.

2. Monthly Maximum Availability Payment

- 2.1 The Monthly Maximum Availability Payment ($MMAP_{mn}$) in month m of Contract Year n will be calculated in accordance with the following formula:

$$MMAP_{mn} = \left[\sum_{s=1}^s SW_s + 0.20 \right] \times \frac{MaxAP_n}{12}$$

Where:

$MMAP_{mn}$	=	Monthly Maximum Availability Payment in month m of Contract Year n
$MaxAP_n$	=	Maximum Availability Payment for Contract Year n as calculated in accordance with paragraph 3 below
SW_s	=	The PM-Section Weighting for the relevant PM-Sections for which Substantial Completion Certificates (PM-

Section) have been issued, as set out in Annex 1 to this Schedule

s = Number of PM-Sections

- 2.2 In the event that a Final Completion Certificate (PM-Section) is not issued for a PM-Section for which the Concessionaire is receiving Availability Payments within 90 days (or such longer period as may have been determined by the Province's Representative, acting reasonably, under Section 13.2.1.1 of the Agreement) of the date of issue of the Substantial Completion Certificate (PM-Section) for that PM-Section other than by reason of Post Olympic Works or other works agreed by the Province as being able to be deferred prior to the issue of the Final Completion Certificate (PM-Section), then the PM-Section Weighting (SW_s) for that PM-Section will be reduced by 25% until the day following the day upon which the Final Completion Certificate (PM-Section) is issued for that PM-Section.
- 2.3 The PM-Section Weighting in the month in which the Substantial Completion Certificate (PM-Section) is issued with respect to a PM-Section will be calculated on a pro-rata basis based on the number of days from the day of issue of the Substantial Completion Certificate (PM-Section) to the end of the contract month in which the Substantial Completion Certificate (PM-Section) is issued.
- 2.4 The Monthly Maximum Availability Payment will be calculated as set out in paragraph 2 above except in the first month following the commencement of the O&M Period and in the month prior to the Termination Date where it will be based on:
- 2.4.1 in the case of the first month following the commencement of the O&M Period, the number of days from the commencement of the O&M Period to the end of the first contract month following the commencement of the O&M Period;
- 2.4.2 in the case of the month including the Termination Date, the number of days from the start of the month including the Termination Date to the Termination Date.

3. Maximum Availability Payment

- 3.1 The Maximum Availability Payment (MAP_n) in Contract Year n will be calculated in accordance with the following formula:

$$MaxAP_n = MaxAP_0 \times \left(1 + F \times \left(\frac{CPI_n}{CPI_0} - 1 \right) \right)$$

Where:

$MaxAP_n$ = Maximum Availability Payment for Contract Year n

$MaxAP_0$ = Maximum Availability Payment in Base Date prices, being
[\$50,500,000]

F = Indexation Factor of 0.35

4. Post Olympic Works Completion Deduction

4.1 If the Final Completion Certificate (Post Olympic Works) has not been issued by the Scheduled Post Olympic Works Final Completion Date, then the Concessionaire will suffer a deduction of **DELETED** per day or part thereof until the day following the day upon which the Final Completion Certificate (Post Olympic Works) is issued. The $POWCD_{mn}$ will be applied on a monthly basis in accordance with paragraph 1.2 above.

5. [Not Used]

6. Olympic Requirements Works Completion Deduction

6.1 If a Final Completion Certificate (Olympic Requirements Works) has not been issued by the Scheduled Olympic Requirements Works Final Completion Date, then the Concessionaire will suffer a deduction of **DELETED** per day or part thereof until the day following the day upon which the Final Completion Certificate (Olympic Requirements Works) is issued. The $ORWCD_{mn}$ will be applied on a monthly basis in accordance with paragraph 1.2 above.

SCHEDULE 10**PAYMENTS****Part 3****Non-Availability Deductions****1. Non-Availability Deductions (NAD) – General**

- 1.1 The PM-Sections as set out in Annex 1 to this Schedule are characterized as either rural or urban.
- 1.2 In the event that the characteristics of a PM-Section change as a result of a future development either the Province or the Concessionaire may propose that the classification of the PM-Section changes. Where the Province and the Concessionaire do not agree to the change, either of them may refer the proposed change to the Disputes Resolution Procedure. Any such change in classification will commence on the first day of the month following agreement or determination of the change.
- 1.3 The Concessionaire will be responsible for developing a system to accurately measure and record all Relevant Unavailability Events both for Rural PM-Sections and Urban PM-Sections on the Concession Highway.
- 1.4 For the purposes of calculation of NAD prior to the issue of the Final Completion Certificate (Pre-Olympic Works), non-availability deductions for all PM-Sections for which a Substantial Completion Certificate (PM-Section) has been issued will be calculated as if the PM-Section were an Urban PM-Section in accordance with Section 3 below.
- 1.5 Following issue of the Final Completion Certificate (Pre-Olympic Works), non-availability deductions will be calculated:
 - 1.5.1 for Rural PM-Sections, in accordance with Section 2 below; and
 - 1.5.2 for Urban PM-Sections, in accordance with Section 3 below.
- 1.6 For greater certainty, the Concessionaire will not incur a NAD where a Relevant Unavailability Event occurs as a result of an Excepted Closure.
- 1.7 Where a Relevant Unavailability Event occurs during a Special Event, the NAD calculated in accordance with paragraphs 2 and 3 below will be increased by a factor of two.
- 1.8 The limit on the total of NAD on the Concession Highway in any contract day will be \$154,000 (indexed linked) in Base Date prices and the limit on either RAD or UAD in any PM-Section in any contract day will be \$50,000 (indexed linked) in Base Date prices.

2. Rural Area Deductions

2.1 For Rural PM-Sections, the relevant Rural Area Deductions (RAD) will be calculated on a monthly basis for each Rural PM-Section in accordance with the following formula:

$$RAD_{mn} = \sum_{d=1}^m \sum_{s=1}^s RAD_{ds}$$

Where:

RAD_{mn} = Rural Area Deduction for month m in Contract Year n
 m = Number of days in month m
 s = Number of Rural PM-Sections
 RAD_{ds} = Rural Area Deduction for day d and Rural PM-Section s which will be calculated in accordance with the following formula:

$$RAD_{ds} = TTD_{ds} \times TTC$$

Where:

TTD_{ds} = Travel Time Delay for day d in Rural PM-Section s measured in vehicle hours.

Where:

$$TTD_{ds} = \sum_{p=1}^{96} TTD_{ps}$$

TTD_{ps} = Travel Time Delay for Rural PM-Section s as calculated in accordance with paragraph 2.2 below

p = Number of 15 minute periods in day d, being 96

s = Rural PM-Section s

TTC = Travel Time Cost, which is **DELETED** per vehicle hour.

2.2 The Travel Time Delay (TTD_{ps}) for a Rural PM-Section will be calculated in accordance with the following formula:

$$TTD_{ps} = TTI_s \times \left(\frac{CTI_{ps}}{TTI_s} - \frac{CTO_{ps}}{TTO_s} \right) \times T$$

Where:

T = is the time duration of each measurement period t in hours over which performance will be evaluated

p = the current measurement period in day d

TTI_{ps} = Traffic Inflow for measurement period p for Rural PM-Section s

- TO_{ps} = Traffic Outflow for measurement period p for Rural PM-Section s
 CTI_{ps} = Cumulative Traffic Inflow up to measurement period p for Rural PM-Section s in day d, i.e. $CTI_{ps} = \sum_{p=1}^p TI_{ps}$
 CTO_{ps} = Cumulative Traffic Outflow up to measurement period p for Rural PM-Section s in day d, i.e. $CTO_{ps} = \sum_{p=1}^p TO_{ps}$
 TTI_s = Total Traffic Inflow for Rural PM-Section s in day d, i.e. $TTI_s = \sum_{p=1}^{96} TI_{ps}$
 TTO_s = Total Traffic Outflow for Rural PM-Section s in day d, i.e.
 $TTO_s = \sum_{p=1}^{96} TO_{ps}$
 TTD_{ps} = Travel Time Delay for measurement period p for Rural PM-Section s

- 2.3 In calculating TTD_{ps} where the variation between Cumulative Traffic Inflow and Cumulative Traffic Outflow is less than 4%, then $\left(\frac{CTI_{ps}}{TTI_s} - \frac{CTO_{ps}}{TTO_s} \right)$ will be assumed to be equal to zero and no RAD will be applicable to the relevant period p.
- 2.4 The Concessionaire will not incur a RAD where a Relevant Unavailability Event occurs as a result of an Excepted Closure and then only for the time period provided in that Excepted Closure together with any related period thereafter such as the time for clearing traffic resulting from the Excepted Closure. No time period during which an Excepted Closure is occurring will be taken into account in calculating the TTD_{ps} .
- 2.5 Where a Relevant Unavailability Event occurs on a PM-Section that results in the Closure lasting for a complete day, then for each complete day that the Closure continues, the Concessionaire will suffer a RAD in the amount of \$50,000 (indexed linked) in Base Date prices for the relevant PM-Section.

3. Urban Area Deductions

- 3.1 For Urban PM-Sections, the relevant Urban Area Deductions (UAD) will be calculated on a monthly basis for each Urban PM-Section in accordance with the following formula:

$$UAD_{mn} = \sum_{s=1}^s \sum_{i=1}^i UAD_{is}$$

Where:

UAD_{mn}	=	Urban Area Deduction for month m in Contract Year n for PM-Section s
UAD_{is}	=	Urban Area Deduction for Relevant Unavailability Event i in Urban PM-Section s
i	=	Number of Relevant Unavailability Events in month m for PM-Section s
s	=	Number of Urban PM-Sections

3.2 The UAD for Relevant Unavailability Event i in an Urban PM-Section s will be calculated in accordance with the following formula:

$$UAD_{is} = \sum_t [UADR_{tm} \times UAD_{pi} \times DF_i \times L]$$

Where:

UAD_{is}	=	Urban Area Deduction for Relevant Unavailability Event i in Urban PM-Section s
$UADR_{tm}$	=	Urban Area Deduction Rate for timeframe t and Relevant Unavailability Event i in Contract Year n as calculated in accordance with paragraph 4 below
UAD_{pi}	=	The duration of Relevant Unavailability Event i in timeframe t measured in hours. The duration of the Relevant Unavailability Event commences (a) in the case of a Relevant Unavailability Event that does not qualify as an Excepted Closure, at the time the Concessionaire is aware, or should have been aware, of the Relevant Unavailability Event, and (b) in the case of a Relevant Unavailability Event that does qualify as an Excepted Closure at the time the Relevant Unavailability Event no longer qualifies as an Excepted Closure, and in either case, ends at the time the Relevant Unavailability Event ceases.
DF_i	=	Deduction Factor for period of the Relevant Unavailability Event i as set out in Table 3-1 below
L	=	Number of Lanes affected by Relevant Unavailability Event i
t	=	Timeframe as set out in Tables 3-2 and 3-3 below

Table 3-1
Deduction Factors

Unavailability Period	Deduction Factor (DFi)
0 – 30 minutes	1.0
31 – 60 minutes	1.5
61 – 90 minutes	2.0
91 minutes and greater	2.5

3.4 The Concessionaire will not incur a UAD where a Relevant Unavailability Event occurs as a result of an Excepted Closure and then only for the time period provided in that Excepted Closure. No time period during which an Excepted Closure is occurring will be taken into account in calculating UAD_{pi} .

4 Urban Area Deduction Rate ($UADR_{in}$)

4.1. The Urban Area Deduction Rate for timeframe t and Relevant Unavailability Event i in Contract Year n will be calculated in accordance with the following formula:

$$UADR_{in} = UADR_{i0} \times \left(1 + F \times \left(\frac{CPI_n}{CPI_0} - 1 \right) \right)$$

Where:

$UADR_{i0}$ = Urban Area Deduction Rate in Base Date prices as set out in Table 3-2 and paragraph 4-2 below.

F = Indexation Factor of 0.35

TABLE 3-2
Urban Area Deductions Rate ($UADR_{tio}$)

Time Frame (See Table 3-3)	Deduction (\$) per lane per Hour ($UADR_{tio}$)
Peak	2,600
Shoulder	1,400
Non-Peak	NIL

TABLE 3-3

Time Frame

	Peak	Shoulder	Non-Peak
Statutory Holidays, Special Event Days, Fridays, Saturdays and Sundays	00:00:00 to 23:59:59	n/a	n/a
Mondays to Thursdays	06:00:00 to 08:59:59 and 16:00:00 to 19:59:59	09:00:00 to 15:59:59 and 20:00:00 to 21:59:59	00:00:00 to 05:59:59 and 22:00:00 to 23:59:59

- 4.2 Where a Relevant Unavailability Event occurs that results in the Concession Highway being subject to a total Closure of all lanes of the Concession Highway the $UADR_{t_{i0}}$ for Non-Peak periods will only be nil where the Relevant Unavailability Event lasts no longer than 2 hours in any rolling 24 hour period. Where the period of such Relevant Unavailability Event lasts longer than 2 hours in any such rolling 24 hour period the $UADR_{t_{i0}}$ for the Non-Peak will be 50% of the $UADR_{t_{i0}}$ for a Shoulder time frame.

SCHEDULE 10

PAYMENTS

Part 4

Operation & Maintenance Performance Deduction

1. Operation & Maintenance Performance Deduction

- 1.1 The records maintained by the Concessionaire pursuant to Section 25 [Records] of the Agreement must contain, *inter alia*, the following:
- 1.1.1 Details of all failures of the Concessionaire to perform any of its obligations under this Agreement in respect of any aspect of the operation, maintenance and rehabilitation of the Project Facilities, the Site and the Adjacent Areas (each a “Non Conforming Event” or “NCE”);
 - 1.1.2 Reference numbers of all NCEs;
 - 1.1.3 A detailed description of all NCEs;
 - 1.1.4 The NCEP determined in accordance with Table 6-2;
 - 1.1.5 The action(s) which the Concessionaire proposes to take to rectify each NCE;
 - 1.1.6 The time at which each NCE was identified; and
 - 1.1.7 The time at which each NCE was rectified.
- 1.2 Subject to paragraph 2.6, if at any time the Province’s Representative is notified or otherwise becomes aware of the occurrence of an NCE, the Province’s Representative may (without prejudice to any other right or remedy available to the Province or BCTFA) by notice to the Concessionaire issue a report (“Non-Conformance Report”, “Nonconformity Report” or “NCR”) to the Concessionaire. The Concessionaire will record the NCR in its records described in paragraph 1.1 above.
- 1.3 The Concessionaire will only be entitled to dispute an NCR if it refers such dispute to the Disputes Resolutions Procedure within 10 Working Days of receipt of such NCR.

2. Operation & Maintenance Performance Deduction

- 2.1 The O&M Performance Deduction ($OMPD_n$) for Contract Year n will be calculated in accordance with the following formula:

$$OMPD_n = \sum_{m=1}^{12} MOMP D_{mn}$$

Where:

$OMPD_n$ = O&M Performance Deduction for Contract Year n

$MOMPD_{mn}$ = Monthly O&M Performance Deduction for month m in Contract Year n as calculated in accordance with paragraph 2.2 below

2.2 The Monthly O&M Performance Deduction ($MOMPD_{mn}$) for month m in Contract Year n will be calculated in accordance with the following formula:

$$MOMPD_{mn} = \sum_{d=1}^m NCEP_{dmn} \times NCEPR_{pn}$$

Where:

$MOMPD_{mn}$ = Monthly O&M Performance Deduction in month m of Contract Year n

$NCEP_{dmn}$ = Non Conformance Event Points in day d of month m of Contract Year n as calculated in accordance with paragraph 2.4 below

$NCEPR_{pn}$ = Non Conformance Event Points Rate in \$/point for Contract Year n for event P

m = Number of days in the month

2.3 The Non Conformance Event Points Rate ($NCEPR_{pn}$) in Contract Year n will be calculated in accordance with the following formula:

$$NCEPR_{pn} = NCEPR_0 \times \left(1 + F \times \left(\frac{CPI_n}{CPI_0} - 1 \right) \right)$$

Where:

$NCEPR_n$ = Non Conformance Event Points Rate in Contract Year n

$NCEPR_0$ = Non Conformance Event Points Rate in Base Date prices as provided in Table 4-1 below

F = Indexation Factor of 0.35

TABLE 4-1
Non Conformance Event Point Rate Deduction

NCEP outstanding on any day	NCEPR₀ (\$/NCEP/day)
0-15	Nil
16-25	280
26-50	420
51-75	560
76+	840

- 2.4 The NCEP outstanding means the aggregate of all NCEP that are outstanding on any given contract day and is determined on a daily basis in accordance with the following Table 4-2 and paragraphs 2.5 and 2.6 below:

TABLE 4-2
Non-Conformance Event Point Rate Deduction

Item	Standard	NCEPs/NCE
Repeat NCE	2 or more NCEs relating to the same requirement in a rolling 1 month period 6 or more NCEs relating to the same requirement in a rolling 12 month period	Twice the relevant NCE point rate
Failure to identify and record defects (Issue of NCR by Province Representative)	Inspection regimes are specified in highway Maintenance Specifications 8-830 to 8-850 including amendments thereto.	10
Operational Performance Measures within the limits of the sealed pavement	As specified in the O&M Output Specifications and/or the O&M Requirements	5
Records and reporting	As specified in Section 24 [Reports and Information] and Section 25 [Records] of Agreement and Schedule 15 [Records and Reports]	2
All other non-conformance	Any requirement specified in the Agreement including without limitation the O&M Output Specifications and/or the O&M Requirements and not covered above	1

- 2.5 Repeat NCEs (as referred to in Table 4-2 above) will be deemed to subsist for a minimum period of 7 days even if the Concessionaire remedies the relevant failure within 7 days of the notification of the NCE or issuance of the NCR.

- 2.6 For the purposes of determining the number of NCEP outstanding, the Concessionaire will be relieved from NCEP where:
- 2.6.1 the NCE is caused by the actions of the Province, BCTFA or a Relevant Authority; or
 - 2.6.2 the NCE is the result of a Compensation Event; or
 - 2.6.3 the NCE relates to an Excepted Closure for which the Concessionaire will not incur NAD pursuant to the provisions of this Schedule; or
 - 2.6.4 the NCE is caused by an event that would be covered by the Province's indemnity under Section 14.7.7 of the Agreement;
- 2.7 The Concessionaire will calculate and report to the Province the OMPD monthly within 10 days of the end of each month. The Concessionaire will report the calculated OMPD in writing to the Province, setting out the calculation of the OMPD and providing information supporting the calculation in detail.

3. Asset Condition Retention

- 3.1 As a requirement in the Quality Management Plan, the Concessionaire is required to submit an annual capital plan every Contract Year, which highlights any capital rehabilitation work to be undertaken during that Contract Year as set out in Part 3 of Schedule 15 [Five Year Management Plan] and the Reporting Specifications for Highway Concessions referred to in paragraph 1.2 of Part 1 of Schedule 7 [O&M Output Specifications]. If the Project Facilities do not comply with the asset condition requirements (the "Quality Management Plan Requirements") set out in the Highway Asset Preservation Performance Measures, the Province will provide the Concessionaire with 15 days notice of the non-compliance with the Quality Management Plan Requirements, and where the Concessionaire does not, within 15 days of receipt of such notice, either:
- 3.1.1 bring the Project Facilities back into a condition that meets or exceeds the Quality Management Plan Requirements; or
 - 3.1.2 provide the Province with an acceptable plan demonstrating how the Concessionaire will bring the Project Facilities back into Quality Management Plan Requirements,
- the Province will withhold the Asset Condition Retention from the Total Performance Payments during the period commencing from the issue of the Final Completion Certificate (Pre Olympics Works) until the earlier of:
- 3.1.2.1 the first Monthly Retention referred to in Section 19.7 [Retention Account] of this Agreement; or

3.1.2.2 the Project Facilities are brought to a condition that meets or exceeds the Quality Management Plan Requirements.

3.2 The Asset Condition Retention for month m (“ACR $_m$ ”) in Contract Year n will be calculated as follows:

$$ACR_m = (ARE_n \times RF) - DACR$$

Where:

ARE $_n$ = The cost of carrying out (or if work is being undertaken, of completing) the works of renewal, reconstruction, repair and reinstatement in order to ensure that the Project Facilities will meet or exceed the Quality Management Plan Requirements. The cost will be determined every Contract Year, within the first 30 days of Contract Year n in accordance with Section 3.3.

RF = Retention Factor of 2.

DACR = The aggregate of all Asset Condition Retentions made in Contract Year n prior to month m .

3.3 Unless otherwise agreed between the parties, ARE $_n$ will be determined on the basis of the costs of the relevant works set out in the Concessionaire’s annual capital plan for Contract Year n . If any such cost is not in the annual capital plan, it will be the Province’s estimate of such cost. If the Concessionaire does not agree with the Province’s estimate of such cost, the Concessionaire will notify the Province in writing giving details of the grounds of its disagreement and the Concessionaire’s estimate of the cost, failing which the Concessionaire will be deemed to have agreed to the Province’s estimate. If no agreement is reached between the Concessionaire and the Province on the amount of such cost within 60 days of the Province’s receipt of the Concessionaire’s estimate, either the Province or the Concessionaire may refer the matter to the Disputes Resolution Procedure for determination of the cost of the works. Within 30 days of the determination of such amount in accordance with the Disputes Resolution Procedure, the Province and the Concessionaire will take such steps as are necessary to adjust for any over or under retention.

3.4 The Province will return to the Concessionaire the Asset Condition Retention within 30 days of receiving an asset condition report referred to in the Reporting Specifications for Highway Concessions referred to in paragraph 1.2 of Part 1 of Schedule 7 [O&M Output Specifications] or other evidence satisfactory to the Province confirming that the Project Facilities meets or exceeds the Quality Management Plan Requirements.

3.5 If the Asset Condition Retention in any month exceeds the aggregate of the Monthly Availability Payment and the Monthly Vehicle Usage Payment to which the

Concessionaire is otherwise entitled for that month, then the Province will be entitled to set-off the shortfall against any subsequent Monthly Availability Payment and Monthly Vehicle Usage Payment in addition to the Payment Retention that is otherwise to be withheld from such subsequent payments of the Monthly Availability Payment and the Monthly Vehicle Usage Payment. For greater certainty, such retentions will not be affected by or subject to any readjustment on account of any subsequent reconciliation of the monthly payments of an Total Performance Payment pursuant to Section 32 [Calculation of Payments].

- 3.6 The Concessionaire will not be entitled to any interest on the Asset Condition Retention.
- 3.7 The foregoing provisions of this paragraph 3 will not apply if and to the extent that the Concessionaire provides the Province with a letter of credit, guarantee or other form of security as security for the Concessionaire's obligations relating to such Asset Condition Retentions issued by a bank or other institution approved by the Province and in form and substance acceptable to the Province (in each case in the Province's absolute and unfettered discretion). If the Concessionaire delivers a letter of credit, guarantee or other form of security to the Province in accordance with the aforesaid, the Province will pay the balance of the Asset Condition Retentions then held by the Province to the Concessionaire and will not make any further Asset Condition Retentions.
- 3.8 The holding of the Asset Condition Retentions and the estimation of the cost of works by the Province in accordance with this paragraph 3 will not in any way prejudice or affect any other rights or remedies of the Province for the purpose of ensuring the full performance of Concessionaire's obligations under this Agreement.
- 3.9 If the Province exercises its rights under Section 26.5.1 of this Agreement to remedy the Concessionaire's failure, the Province shall be entitled to deduct and retain absolutely for its own benefit, from the Asset Condition Retentions then held by the Province, an amount equal to the costs and expenses of remedying such failure.
- 3.10 Upon the occurrence of an Event of Default or the termination of this Agreement, the Province may at its option and without prejudice to any of its other rights or remedies apply all or any part of the Asset Condition Retentions then held by the Province in payment of any amount due from the Concessionaire to the Province or becoming due as a consequence of such Event of Default or any termination of this Agreement (including any damages arising from such Event of Default or termination).

SCHEDULE 10**PAYMENTS****Part 5****Vehicle Usage Payment****1. Vehicle Usage Payment**

- 1.1 The Vehicle Usage Payment (VUP) will be payable from the day following the issuance of the Final Completion Certificate (Pre Olympic Works).
- 1.2 During the Olympic Period the VUP will be calculated based upon the Province Traffic Forecast.
- 1.3 Vehicle usage will be measured at two Measurement Points along the Concession Highway and the VUP will be linked to the annual number of vehicles passing these Measurement Points (in both directions). For the purpose of calculating the VUP, each Long Vehicle will be equivalent to three Other Vehicles.
- 1.4 The Vehicle Usage Payment in Contract Year n will be calculated in accordance with the following formula:

$$VUP_n = (A_n \times V1_n) + (B_n \times V2_n) + (C_n \times V3_n) + (D_n \times V4_n)$$

Where:

VUP_n	=	the Vehicle Usage Payment in month m of Contract Year n
A_n	=	the payment per Vehicle within Band 1 for Contract Year n.
B_n	=	the payment per Vehicle within Band 2 for Contract Year n.
C_n	=	the payment per Vehicle within Band 3 for Contract Year n.
D_n	=	the payment per Vehicle within Band 4 for Contract Year n, which is zero.
$V1_n$	=	the number of Vehicles for Contract Year n which is the higher of: a) zero; and b) the lower of: $VB1_n$ and V_n
$V2_n$	=	the number of Vehicles for Contract Year n which is the higher of: a) zero; and

		b) the lower of: VB _{2n} -VB _{1n} ; and V _n -VB _{1n}
V _{3n}	=	the number of Vehicles for Contract Year n which is the higher of: a) zero; and b) the lower of: VB _{3n} -VB _{2n} ; and V _n -VB _{2n}
V _{4n}	=	the number of Vehicles for Contract Year n which is the higher of: a) zero; and b) V _n -VB _{3n}
VB _{1n}	=	the upper limit of Band 1 for Vehicles in Contract Year n as set out in Annex 2 to this Schedule 10.
VB _{2n}	=	the upper limit of Band 2 for Vehicles in Contract Year n as set out in Annex 2 to this Schedule 10.
VB _{3n}	=	the upper limit of Band 3 for Vehicles in Contract Year n as set out in Annex 2 to this Schedule 10.
V _n	=	the pro-rated number of vehicles using the Concession Highway from Horseshoe Bay to south of Squamish or from north of Squamish to Whistler.

where:

$$V_n = \frac{A}{C} \times VC1_n + \frac{B}{C} \times VC2_n$$

where:

A	=	the number of kilometres between Horseshoe Bay and south of Squamish, being 40
B	=	the number of kilometres between north of Squamish and Whistler, being 43
C	=	A+B
VC1 _n	=	the number of Vehicles counted at Measurement Point 1 for Contract Year n
VC2 _n	=	the number of Vehicles counted at Measurement Point 2 for Contract Year n

2.1 The per vehicle payments, A_n , B_n , C_n and D_n must be greater than or equal to zero and will be indexed on an annual basis in accordance with the following formula:

$$PVP_n = PVP_0 \times \left(1 + F \times \left(\frac{CPI_n}{CPI_0} - 1 \right) \right)$$

Where:

- PVP_n = A_n, B_n, C_n and D_n in contract year n
- PVP_0 = A_0, B_0, C_0 and D_0 in Base Date Prices as set out in Table 5-1
- F = Indexation Factor of 0.35

TABLE 5-1
Per Vehicle Payment

Vehicle Band	PVP ₀ (\$)
A _n	DELETED
B _n	DELETED
C _n	DELETED
D _n	DELETED

3.1 The VUP will be payable to the Concessionaire on a monthly provisional basis based upon the actual Vehicle usage in the contract month with an annual reconciliation being completed in accordance with Section 32.2 [Annual Reconciliation] of the Agreement. The Monthly VUP will be calculated in accordance with the following formula:

$$VUP_{mn} = (A_n \times V1_{mn}) + (B_n \times V2_{mn}) + (C_n \times V3_{mn}) + (D_n \times V4_{mn})$$

Where:

- VUP_{mn} = the Monthly Vehicle Usage Payment in month m of Contract Year n
- $V1_{mn}$ = the number of Vehicles for month m in Contract Year n which is the higher of:
 - a) zero; and
 - b) the lower of: $VB1_{mn}$ and V_{mn}

V_{2mn}	=	the number of Vehicles for month m in Contract Year n which is the higher of: a) zero; and b) the lower of: $VB_{2mnn}-VB_{1mn}$; and $V_{mn}-VB_{1mn}$
V_{3mn}	=	the number of Vehicles for month m in Contract Year n which is the higher of: a) zero; and b) the lower of: $VB_{3mn}-VB_{2mn}$; and $V_{mnn}-VB_{2mn}$
V_{4mn}	=	the number of Vehicles for month m in Contract Year n which is the higher of: a) zero; and b) $V_{mn}-VB_{3mn}$
VB_{1mn}	=	the upper limit of Band 1 for Vehicles for month m in Contract Year n as calculated in accordance with paragraph 3.2 below.
VB_{2mn}	=	the upper limit of Band 2 for Vehicles for month m in Contract Year n as calculated in accordance with paragraph 3.2 below.
VB_{3mn}	=	the upper limit of Band 3 for Vehicles for month m in Contract Year n as calculated in accordance with paragraph 3.2 below.
V_{mn}	=	the pro-rated number of Vehicles using the Concession Highway from Horseshoe Bay to south of Squamish or from north of Squamish to Whistler in month m of Contract Year n.

3.2 The Monthly Vehicle Usage Bands will be calculated in accordance with the following formula:

$$VBX_{nm} = VBX_n \times MF_m$$

Where:

VBX_{nm}	=	Upper limit of Vehicle Band X (1 to 3) for month m in Contract Year n
VBX_n	=	Upper limit of Vehicle Band X (1 to 3) for Contract Year n as set out in Annex 2.
MF_m	=	Monthly Factor for Vehicle use for month m as set out in Annex 3

- 3.3 The Monthly Vehicle Usage Bands in the first month following the issue of the Final Completion Certificate (Pre Olympic Works) and in the final month prior to the Termination Date will be calculated on a pro-rata basis based on:
- 3.3.1 in the case of the first month following issue of the Final Completion Certificate (Pre Olympic Works), the number of days from the date of issue of the Final Completion Certificate (Pre Olympic Works) to the end of the month in which the Final Completion Certificate (Pre Olympic Works) was issued;
 - 3.3.2 in the case of the final month prior to the Termination Date, the number of days from the start of the month in which the Termination Date falls to the Termination Date.
- 3.4 In the event of an Excepted Closure, the deemed Vehicle Usage (V_n) for the affected day in which the Excepted Closure occurred will be calculated as the average Vehicle Usage for the same day in the immediately preceding four weeks.
- 3.5 The Concessionaire will calculate and report to the Province the Monthly Vehicle Usage Payment within 10 days of the end of each month. The Concessionaire will report the calculated Monthly Vehicle Usage Payment in writing to the Province, setting out the calculation of the Monthly Vehicle Usage Payment and providing information supporting the calculation in detail.

SCHEDULE 10

PAYMENTS

Part 6

Performance Incentive Payments

1. Performance Incentive Payments

1.1 Performance Incentive Payments (PIP_n) for Contract Year n will be calculated in accordance with the following formula:

DELETED

Where:

PIP_n = Performance Incentive Payments in Contract Year n

SPP_n = Safety Performance Payment in Contract Year n as calculated in accordance with paragraph 2 below

TMP_n = Traffic Management Payment in Contract Year n as calculated in accordance with paragraph 3 below

DELETED = **DELETED**

1.2 The PIP will be payable on either a monthly or annual basis as set out below:

Payment Component	Frequency of Payment	Period of Payment
• Traffic Management Payment	Monthly	From Commencement Date until issue of Final Completion Certificate (Pre Olympic Works)
• Safety Performance Payment	Annual	From issue of Final Completion Certificate (Pre Olympic Works) to Termination Date
• DELETED	DELETED	DELETED

2. Safety Performance Payment

2.1 The Concessionaire will measure the safety performance on the Concession Highway on an annual basis and will maintain detailed records of all accidents on the Concession Highway.

2.2 The Concessionaire will be entitled to a Safety Performance Payment (SPP_n) in Contract Year n if the safety performance of the Concession Highway exceeds the Provincial safety performance record for comparable highways both on a three year

rolling average basis. In the first two Contract Years where the three year rolling average is not available, the Province will use the respective one and two year average in the calculation.

- 2.3 In determining the safety performance of the Concession Highway, the Concessionaire will measure the number of the following categories of accidents:
- 2.3.1 Fatalities;
 - 2.3.2 Injury;
 - 2.3.3 Property Damage;

- 2.4 The Safety Performance Payment (SPP_n) in Contract Year n will be calculated as follows:

$$SPP_n = SPP_0 \times \left[1 + F \times \left(\frac{CPI_n}{CPI_0} - 1 \right) \right] \times SPPR_n$$

Where:

- SPP_n = The Safety Performance Payment in Contract Year n
- SPP_0 = The Safety Performance Payment in Base Date prices, being \$1,000,000
- $SPPR_n$ = The Safety Performance Payment Reduction percentage in Contract Year n as calculated in accordance with paragraph 2.6 below
- F = Indexation Factor of 0.35

- 2.5 The Safety Performance Payment in the first Contract Year following the issue of the Final Completion Certificate (Pre Olympic Works) and in the final Contract Year prior to the Termination Date will be calculated on a pro-rata basis based on:

- 2.5.1 in the case of the first Contract Year following issue of the Final Completion Certificate (Pre Olympic Works), the number of days from the date of issue of the Final Completion Certificate (Pre Olympic Works) to the end of the Contract Year in which the Final Completion Certificate (Pre Olympic Works) was issued;
- 2.5.2 in the case of the final Contract Year prior to the Termination Date, the number of days from the start of the Contract Year in which the Termination Date falls to the Termination Date.

- 2.6 The Safety Performance Payment Reduction percentage ($SPPR_n$) in Contract Year n will be calculated by reference to the actual safety performance of the Concession Highway compared to the relevant Provincial Average Number of accidents for comparable highways in accordance with the following formula

$$SPPR_n = \left[3 - \frac{2 \times AAN_n}{PAN_n} \right]$$

Where:

- AAN_n = The Actual Average Number of accidents on the Concession Highway in Contract Year n, as calculated in paragraph 2.2 of Part 6
- PAN_n = The Provincial Average Number of accidents in Contract Year n as calculated in accordance with paragraph 2.8 below

2.7 In the event that the calculation of $SPPR_n$ in accordance with paragraph 2.6 above would result in $SPPR_n$ being:

- 2.7.1 less than or equal to zero, then the $SPPR_n$ for the relevant Contract Year will be deemed to be zero and no Safety Performance Payment will be payable to the Concessionaire in that Contract Year;
- 2.7.2 equal to or greater than one, then the $SPPR_n$ for the relevant Contract Year will be deemed to be one and the full Safety Performance Payment will be payable to the Concessionaire in that Contract Year.

2.8 In order to determine the Provincial Average Number of accidents, the Province will provide the Concessionaire with the relevant safety statistics for a portfolio of comparable highway sections, with such portfolio of comparable highway sections being provided by the Province within 12 months from the date of this Agreement. The portfolio of similar highway sections will be developed to consist of highway sections with similar accident and physical characteristics as the Concession Highway and will include such highways, or sections thereof, as Kicking Horse Canyon and Coquihalla Highway. The statistics to be provided by the Province will be developed by the Province in the period prior to 12 months before the issue of the Final Completion Certificate (Pre Olympic Works) and will include an average calculation of the safety record per category of accident per lane kilometer. The statistics will be derived from independent sources such as Highway Accident Statistics (HAS), ICBC and RCMP Records. The average calculation of the safety record will be used to determine the relevant Provincial Average Number (PAN_n) of accidents for Contract Year n as follows:

$$PAN_n = \sum_{ac} AACRK_n \times LK$$

Where:

- PAN_n = The Provincial Average Number of accidents for Contract Year n
- $AACRK_n$ = The Average Accident Category Rate per lane kilometer
- LK = The number of lane kilometers for the Concession Highway

- 2.9 The Concessionaire will calculate and report to the Province annually in arrears, within 30 days of the end of each Contract Year, the detailed calculation of the Safety Performance Payment and will provide appropriate supporting documentation.

3. Traffic Management Payment

- 3.1 The Concessionaire will be responsible for developing a system to accurately measure and record all Lane Closures on the Concession Highway.

- 3.2 The Traffic Management Payment (TMP_n) for Contract Year n is payable on a monthly basis prior to the issue of the Final Completion Certificate (Pre Olympic Works) and will be calculated in accordance with the following formula:

$$TMP_n = \sum_{m=1}^{12} MTMP_{mn}$$

Where:

- TMP_n = Traffic Management Payment for Contract Year n
- $MTMP_{mn}$ = Monthly Traffic Management Payment for month m in Contract Year n as calculated in accordance with paragraph 3.3 below

- 3.3. The Monthly Traffic Management Payment for month m of Contract Year n ($MTMP_{mn}$) will be calculated in accordance with the following formula:

$$MTMP_{mn} = MMTMP_{mn} - RTMP_{mn} - TDC_{mn}$$

Where:

- $MMTMP_{mn}$ = The Maximum Monthly Traffic Management Payment for month m in Contract Year n as calculated in accordance with section 3.5 below
- $RTMP_{mn}$ = The Reduction in the Traffic Management Payment based on the number of Lane Closures on the Concession Highway in month m of Contract Year n and as calculated in accordance with paragraphs 3.6 to 3.9 below.
- TDC_{mn} = The Traffic Disruption Charge for month m in Contract Year n resulting from Scheduled Lane Closures exceeding the allowable time for the relevant Closure Category on the Concession Highway as calculated in accordance with paragraph 3.10 below.

- 3.4. The deductions against the Monthly Traffic Management Payment ($MTMP_{mn}$) for any month will be limited to the Maximum Monthly Traffic Management Payment ($MMTMP_{mn}$), save where the Concessionaire has not received a $MTMP_{mn}$ in each of

the preceding two months. In such event the limit on deductions against the $MTMP_{mn}$ will be twice the $MMTMP_{mn}$ and any amount of deduction above the relevant $MTMP_{mn}$ (the “Traffic Management Adjustment”) will reduce the Monthly Availability Payment (MAP_{mn}) as calculated in accordance with paragraph 1.2 of Part 2 of this Schedule for the relevant month until the Concessionaire receives a $MTMP_{mn}$ of at least 25% of the $MMTMP_{mn}$ in two consecutive months.

- 3.5 The $MMTMP_{mn}$ will be as set out in Table 6-1 except in the first month following the date of the Agreement and in the final month prior to issue of the Final Completion Certificate (Pre Olympic Works) where it will be amended on a pro-rata basis based on:
 - 3.5.1 in the case of the first month following the date of the Agreement, the number of days from the date of this Agreement to the end of the first month;
 - 3.5.2 in the case of the final month prior to the issue of the Final Completion Certificate (Pre Olympic Works), the number of days from the start of the month in which the Final Completion Certificate (Pre Olympic Works) is issued to the end of the month in which the Final Completion Certificate (Pre Olympic Works) is issued.

TABLE 6-1
Maximum Monthly Traffic Management Payments

Contract Year n	Maximum Monthly Traffic Management Payment ($MMTMP_{mn}$)
1	DELETED
2	DELETED
3	DELETED
4	DELETED
5	DELETED
6 onward	DELETED

- 3.6 The Benchmark Number of Traffic Management Points for month m in Contract Year n ($BTMP_{mn}$) will be based on the Scheduled Closures consistent with the Traffic Management Requirements and calculated in accordance with the following formula:

$$BTMP_{mn} = \sum_{d=1}^m \sum_{sc=1}^{sc} (NS_{scd} \times SP_{sc}) + CFBTMP_{m-1n}$$

Where:

$BTMP_{mn}$ = The Benchmark Traffic Management Points for month m in Contract Year n

NS_{scd} = The number of Scheduled Lane Closures for Closure Category sc

in day d in month m in Contract Year n

SP_{sc} = The Closure Points for Closure Category sc as set out in Table 6-2 below

sc = The Closure Category as set out in Table 6-2 below

d = Number of days in month m of Contract Year n

$CFBTMP_{m-1n}$ = The Carry Forward Benchmark Traffic Management Points for month m-1 in Contract Year n in accordance with paragraph 3.6A below.

TABLE 6-2
Closure Points Weightings

Closure Category (sc)	Closure Points (SP_{sc})
20 Minute Stoppage – night	3
20 Minute Stoppage – day	20
Scheduled Night-time Closing	600
Scheduled Daytime Closing	1200

3.6A Where the Concessionaire has been unable to utilize the full allotment of Benchmark Traffic Management Points associated with the Scheduled Lane Closures within a given month, the Concessionaire may carry forward the $BTMP_{mn}$ attributable to the unused Scheduled Lane Closures subject to a maximum carry forward from any month of [10%] of the $BTMP_{mn}$ for that month and further subject to the consent of the Province acting reasonably. Carried over $BTMP_{mn}$ can only be utilized using the same Scheduled Lane Closures Closure Category that would have been used during the previous month. $BTMP_{mn}$ can only be carried over one month and will not be accumulated.

3.7 The Actual Number of Traffic Management Points ($ATMP_{mn}$) will be calculated based on the actual number of Lane Closures during month m in Contract Year n recorded by the Concessionaire and will be calculated in accordance with the following formula:

$$ATMP_{mn} = \sum_{sc} ANS_{sc} \times SP_{sc}$$

Where:

$ATMP_{mn}$ = The Actual Traffic Management Points for month m in Contract Year n

ANS_{sc} = The actual number of Lane Closures for Closure Category sc in month m

SP_{sc} = The Closure Points for Closure Category sc as set out in Table 6-2

sc = above
 = The Closure Category as set out in Table 6-2 above

3.8 In the event that a Lane Closure occurs on the Concession Highway that is not a Scheduled Closure (an “Unscheduled Closure”), the Closure Category for that Lane Closure will be categorized as a Scheduled Daytime Closing and will accrue points in accordance with Table 6-2 above.

3.8A In the event that a Lane Closure occurs on the Concession Highway that is solely and unavoidably the result of the Concessionaire complying with and carrying out the unstable slope mitigation work under the Unstable Slope Mitigation Program, then such Lane Closure will not be included in calculating the $ATMP_{mn}$ for the month in which such Lane Closure occurred.

3.9 Where the $ATMP_{mn}$ in month *m* exceeds the $BTMP_{mn}$ in month *m*, the $MMTMP_{mn}$ will be reduced by $RTMP_{mn}$ which is calculated in accordance with the following formula:

$$RTMP_{mn} = MMTMP_{mn} \times (1 - TMRP_{mn})$$

Where:

$TMRP_{mn}$ = The Traffic Management Reduction Percentage for month *m* in Contract Year *n* calculated in accordance with Table 6-3 below

TABLE 6-3
 Reduction in Traffic Management Payment

Percentage Difference between ATMP and BTMP (% Difference)	TMRP
0% < % Difference < 2%	80%
2% ≤ % Difference < 4%	70%
4% ≤ % Difference < 6%	50%
6% ≤ % Difference < 8%	30%
8% ≤ % Difference < 10%	10%
% Difference ≥ 10%	0%

Where:

$$\% \text{ Difference} = \frac{(ATMP_{mn} - BTMP_{mn})}{BTMP_{mn}} \times 100\%$$

$ATMP_{mn}$ = Actual Traffic Management Points in month m of Contract Year n

$BTMP_{mn}$ = Benchmark Traffic Management Points in month m of Contract Year n

3.10 The Concessionaire will be subject to Traffic Disruption Charge (TDC_{mn}) where the period of a Scheduled Closure exceeds the time allowed for such Scheduled Closure in the period up to the issue of the Final Completion Certificate (Pre Olympic Works). The TDC_{mn} for month m in Contract Year n will be calculated in accordance with the following formula:

$$TDC_{mn} = \sum_c RP_c \times TDC_c$$

Where:

RP_c = The Relevant Period for the Scheduled Closure c as calculated in accordance with paragraph 3.11 below

TDC_c = The Traffic Disruption Charge for the Scheduled Closure c as calculated in accordance with paragraph 3.12 below

c = a Scheduled Closure

3.11 The Relevant Period for a Scheduled Closure c (RP_c) is the period by which the actual duration of such Scheduled Closure exceeds the time allowed by the Closure Category for such Scheduled Closure rounded up to the next full minute. For example if a Closure Category is a 20 minute closure and the actual closure lasts for 25 minutes then the Relevant Period is 5 minutes.

3.12 The Traffic Disruption Charge for a Scheduled Closure c will be calculated in accordance with Table 6-4 below:

TABLE 6-4
Traffic Disruption Charge

Closure Category	Time Outside Permitted Timeframe or Duration	Traffic Disruption Charge (TDC)
Daytime Stoppage or Daytime Closing	First 5 minutes	DELETED / minute
	Second 5 minutes	DELETED / minute
	After 10 minutes	DELETED / minute
Night-time Stoppage or Night-time Closing	First 5 minutes	DELETED / minute
	Second 5 minutes	DELETED / minute
	After 10 minutes	DELETED / minute

3.13 The Concessionaire will calculate and report to the Province the MTMP monthly within 10 days of the end of each month. The Concessionaire will report the calculated MTMP in writing to the Province, setting out the calculation of the MTMP and information supporting the calculation in detail.

4. **DELETED**

SCHEDULE 10

PAYMENTS

Part 7

End of Term Payment

1. End of Term Payment

1.1 Subject to Section 19.6 [End of Term Inspection and End of Term Payment] of this Agreement, the Province will pay to the Concessionaire the End of Term Payment (EOTP) which will be determined and paid, if any amount is payable by the Province, in accordance with Section 19.6 [End of Term Inspection and End of Term Payment] of this Agreement. The EOTP will be calculated as follows:

$$EOTP = GEOTP (- EOTA \text{ or } + EETRA)$$

Where:

<i>GEOTP</i>	=	Gross End of Term Payment, being DELETED
<i>EOTA</i>	=	End of Term Amount, determined in accordance with Section 19.6 [End of Term Inspection and End of Term Payment]
<i>EETRA</i>	=	Excess End of Term Requirements Amount, which shall not, in any event, exceed DELETED determined in accordance with Section 19.6 [End of Term Inspection and End of Term Payment]

SCHEDULE 10**PAYMENTS****Part 8****Monitoring and Measurement**

- 1 Measurement Method
 - 1.1 At all times from and after the issue of the Final Completion Certificate (Pre Olympic Works) the traffic using any part of the Concession Highway will be continuously Measured by the Concessionaire at each Measurement Point using the Measuring Equipment.

- 2 Measurement Points
 - 2.1 Each of the following will be a Measurement Point for the purposes of this Agreement:
 - 2.1.1 Measurement Point 1 and Measurement Point 2; and
 - 2.1.2 if, as a result of any Subsequent Scheme or Additional Works, the Measurement Points specified in paragraph 2.1.1 are insufficient or inadequate to Measure the traffic using the Concession Highway to a level of accuracy equivalent to that prior to the Subsequent Scheme or Additional Works, such other point or points as necessary to Measure such traffic to such an equivalent level of accuracy.
 - 2.2 If there is any Dispute between the Concessionaire and the Province's Representative as to the need for or location of any Measurement Point referred to in paragraph 2.1.2, such Dispute will at the request of either of them be submitted to the Disputes Resolution Procedure.
 - 2.3 The Province will bear the cost of any additional Measurement Point required pursuant to paragraph 2.1.2 as a result of any Additional Works. The Concessionaire will bear the cost of any other Measurement Point required pursuant to paragraph 2.1.2 as a result of any Subsequent Scheme.

- 3 Measuring Equipment
 - 3.1 The Concessionaire will provide and install (at its own cost, except as provided in paragraph 2.3) Measuring Equipment (the "Measuring Equipment") at each Measurement Point conforming with the following requirements:
 - 3.1.1 a) the Measuring Equipment shall record the year, date and time period measured;

- b) the Measuring Equipment shall be capable of measuring to the following accuracy:
 - in respect of the count of the number of Motor Vehicles in each category in each direction, within plus or minus 2%; and
 - in respect of the count of the total number of Motor Vehicles in each lane, within plus or minus 2%;
 - at (in both of the foregoing cases) 98% confidence interval, without bias to under-recording or over-recording. These accuracy levels shall be achieved over every period of 24 hours and at all speeds; and
 - c) the Measuring Equipment shall operate in accordance with requirements defined above for not less than 98% of the time during every 12-month period;
- 3.1.2 all other measuring and verification equipment (together with necessary housings, appliances and buildings) required to Measure the traffic passing the Measurement Point; and
- 3.1.3 such cables or other means of electronic data transmission as necessary to connect the equipment referred to in paragraphs 3.1.1 and 3.1.2 to the public service telephone network and so as to enable the Province directly to receive data from the Measuring Equipment.
- 3.2 The Measuring Equipment will be capable of collecting the following Traffic Data:
- 3.2.1 recording each Vehicle passing the Measurement Point;
 - 3.2.2 classifying each Vehicle passing the Measurement Point into one of the following categories:
 - 3.2.2.1 Other Vehicles; or
 - 3.2.2.2 Long Vehicles;
 - and
 - 3.2.3 recording the time of each Vehicle passing the Measurement Point.
- 3.3 The Measuring Equipment will include such alternative facilities as may reasonably be required to ensure that failure or withdrawal for maintenance or adjustment of any individual component does not materially affect the Measurement of traffic by the Measuring Equipment.
- 3.4 Prior to the installation or replacement of any component of the Measuring Equipment which may materially affect the accuracy of Measurement of such Measuring Equipment, the Concessionaire will notify the Province's Representative of the design and type of such equipment and such notice will be dealt with under the Review Procedure.
- 3.5 Without limitation to any other provision of this paragraph 3, the Concessionaire will design, supply, install, test, commission, maintain, repair, replace and operate all Measuring Equipment, to deliver the requirements specified in paragraph 3.1.1.
- 3.6 The Province will be entitled at any time and from time to time to install and operate

(at its own expense and risk) at any Measurement Point:

3.6.1 check measuring equipment to check the Measurement of the traffic at such Measurement Point; and/or

3.6.2 equipment linked directly to the Measuring Equipment,

to provide at the Province's premises independent confirmation and/or direct readings of the Measurement of the traffic at such Measurement Point.

3.7 Any equipment installed by the Province pursuant to paragraph 3.6 will be compatible with and will not damage or interfere with the use or operation of the Measuring Equipment.

4 Verification

4.1 The Concessionaire may at any time submit to the Province's Representative in accordance with the Review Procedure any proposed revision to the Verification methodology referred to in Schedule 6 [Quality Management] (as previously revised in accordance with this paragraph 4.1). The Province's Representative may object to any such proposed revision only on the grounds that the proposed Verification methodology would not meet any of the requirements specified in paragraph 3.1.1. From the date on which there has been no objection to any such revised Verification methodology under the Review Procedure, the Concessionaire will comply with such revised Verification methodology.

4.2 The Concessionaire will Verify the Measuring Equipment at each Measurement Point at least once in every 90 days or at such other frequency as may be agreed by the Province's Representative. Without limitation to paragraph 7, the Concessionaire will adjust the Measuring Equipment to read centrally and accurately within the limits of accuracy specified in paragraph 3.1.1 (the "Measurement Limits of Accuracy").

4.3 The Concessionaire will give to the Province's Representative reasonable notice of the date and time of any Verification pursuant to paragraph 4.2 and the Province's Representative will be entitled to attend and witness any such Verification. The Province's Representative may require the Concessionaire to Verify any Measuring Equipment at any other time.

4.4 Verifications will be made at the expense of the Concessionaire, except that the Province will bear the costs of the attendance of the Province's Representative at any Verification and the whole expense of any Verification (other than periodic Verification pursuant to paragraph 7) made at the request of the Province's Representative if the Measuring Equipment is found to be registering within the Measurement Limits of Accuracy.

5 Collection of Data

5.1 The Concessionaire will ensure that the Traffic Data is collected at such times and in such format as will enable the Concessionaire to prepare the Monthly Report in accordance with Schedule 15 [Records and Reports].

5.2 Subject to paragraph 7, if there is more than one set of vehicle detection equipment

measuring the same flow of traffic at a Measurement Point, then the traffic passing the Measurement Point during any period will be deemed to be the average of the figures produced by each of such sets of vehicle detection equipment during such period. Such average will be calculated and provided to the Province in the Monthly Report together with the figures produced for each of such sets of vehicle detection equipment.

6 Inspection and Auditing

6.1 The Province's Representative will be entitled at all reasonable times to inspect:

6.1.1 any Measuring Equipment; and

6.1.2 any charts or other measurement or test data relating to the Measuring Equipment.

7 Correction of Defects

7.1 If at any time any Measuring Equipment is found to be defective or measuring outside the Measurement Limits of Accuracy, the Concessionaire will as soon as practicable adjust such equipment to read centrally and accurately within such limits or (if that is not possible) will replace it with serviceable equipment.

7.2 If the Measuring Equipment referred to in paragraph 7.1 (the "Defective Equipment") comprises only one of two or more sets of vehicle detection equipment at a Measurement Point, then the calculation for the relevant Measurement Point pursuant to paragraph 5 will be retrospectively corrected, excluding from such calculations the data from such defective set of vehicle detection equipment from the time when such set of vehicle detection equipment became defective or (where that time cannot be established) from the time which is the mid-point between the last Verification which indicated that the set of vehicle detection equipment was operating within the Measurement Limits of Accuracy and the next following Verification.

7.3 In all other circumstances where there is any Defective Equipment, the Traffic Data from the relevant Measurement Point or (where there are two or more sets of vehicle detection equipment at a Measurement Point) the calculations for the relevant Measurement Point pursuant to paragraph 5 will be retrospectively corrected from the time when such equipment became defective (or where two or more sets of vehicle detection equipment are defective, from the time when the last such set of vehicle detection equipment became defective) or (where that time cannot be established) from the time which is the mid-point between the last Verification which indicated that the equipment was operating within the Measurement Limits of Accuracy and the next following Verification.

7.4 Calculations will be corrected for purposes of paragraph 7.3 by applying the methods set out below in the order in which they appear:

7.4.1 by using the readings recorded by any check measuring equipment, provided that such equipment was at the relevant time operating within the Measurement Limits of Accuracy. If such equipment was at the relevant

time not operating accurately or if no such equipment has been installed, then

- 7.4.2 by correcting the error if the percentage of error is ascertainable to the satisfaction of the Concessionaire and the Province's Representative by calibration, test or mathematical calculation. If the percentage of error is not so ascertainable, then
- 7.4.3 by using the readings recorded during the comparable period of the immediately preceding month, provided the relevant equipment was operating within the Measurement Limits of Accuracy during such period. If such equipment was not operating accurately or if there are no such readings, then
- 7.4.4 by estimating the number and classification of vehicles by reference to Measurements made under similar circumstances when the Defective Equipment was registering accurately. If there is any Dispute between the Concessionaire and the Province's Representative in respect of any such estimate, then such Dispute shall at the request of either of them be submitted to the Disputes Resolution Procedure.

8 Availability

- 8.1 The Concessionaire will be responsible for monitoring and recording Availability within each PM-Section in accordance with the O&M Output Specifications and the O&M Requirements.
- 8.2 The Concessionaire may from time to time during the Contract Period submit proposals for variations, amendments and modifications to the measurement and monitoring of Availability which will be subject to the Review Procedure, provided that any such proposals will:
 - 8.2.1 comply with Good Industry Practice;
 - 8.2.2 provide reliable and verifiable data for use in connection with the calculation of Availability Payments;
 - 8.2.3 be fully costed identifying any reduction or increase in costs; and
 - 8.2.4 provide a system of monitoring which is at least of equivalent value to the Province to that applying immediately prior to the proposals.
- 8.3 If the Province does not object to a proposal submitted by the Concessionaire in accordance with paragraph 8.2 in accordance with the Review Procedure, the proposal will be implemented by the Concessionaire as soon as reasonably practicable as a Concessionaire Change and any reference to the measurement and monitoring of Availability will thereafter be to the measurement and monitoring of Availability as so amended, varied or modified in accordance with such proposal.

9 Availability Report

- 9.1 The report to be delivered pursuant to Section 33.1.2 of the Agreement will, together with the information required by Section 33.1.3 of the Agreement, include details of all Relevant Unavailability Events affecting the Concession Highway (including the

time, date, duration and cause, location and length of each Lane Closure and the number of lanes affected thereby) which have occurred in respect of the month for which the report is produced.

ANNEX 1

Payment Mechanism Sections – Classification and Weightings

PM-Section No.	PM-Section Description	Classification	PM-Section Weighting (SW)
1	Station 98+450-110+640	Rural	15.0%
2a	Station 110+640-118+475	Rural	7.3%
2b	Station 118+475-126+700	Rural	7.7%
3	Station 126+700-132+000	Rural	10.0%
4	Station 132+000-134+000	Rural	0.0%
5	Station 134+000-139+700	Rural	10.0%
6	Station 139+700-151+700	Urban	10.0%
7a	Station 227+100-232+100	Rural	6.0%
7b	Station 232+100-237+200	Rural	4.0%
8	Station 237+200-250+300	Rural	10.0%
			80%

ANNEX 2

Limits on Vehicle Traffic Bands

Contract Year n	VB1_n Upper Limit	VB2_n Upper Limit	VB3_n Upper Limit
1	6,000,000	6,000,000	6,000,000
2	6,000,000	6,000,000	6,000,000
3	6,000,000	6,000,000	6,000,000
4	6,000,000	6,000,000	6,000,000
5	6,000,000	6,000,000	6,000,000
6	2,402,232	5,338,293	7,781,563
7	2,140,886	5,550,218	7,960,313
8	2,023,501	5,645,404	8,116,563
9	1,906,117	5,740,591	8,272,813
10	1,788,732	5,835,777	8,429,063
11	1,672,013	5,930,424	8,585,313
12	1,554,629	6,025,611	8,741,875
13	1,437,244	6,120,797	8,899,063
14	1,319,860	6,215,984	9,055,313
15	1,203,216	6,310,569	9,211,563
16	1,085,832	6,405,756	9,367,813
17	968,447	6,500,942	9,524,063
18	851,063	6,596,129	9,680,313
19	733,678	6,691,315	9,836,563
20	616,294	6,786,502	9,992,813
21	498,909	6,881,688	10,149,063
22	381,525	6,976,875	10,305,313
23	264,140	7,072,061	10,461,563
24	146,756	7,167,248	10,617,813
25	29,371	7,262,434	10,774,063

ANNEX 3

Monthly Factors for Vehicle Usage

Calendar Month	MF_m
January	9%
February	8%
March	9%
April	8%
May	8%
June	8%
July	10%
August	10%
September	8%
October	7%
November	7%
December	8%

SCHEDULE 11**INSURANCE REQUIREMENTS****1. EVIDENCE OF COVERAGE****1.1** The following evidence of coverage will be required:

- (a) File originals or signed, certified copies of all policies and renewals of such policies together with any other endorsements necessary to comply with this Schedule 11 and any other requirements outlined in this Agreement with: The Manager, Insurance and Bonds, Ministry of Transportation, P.O. Box 9850 STN Prov Govt, 4 Floor, 940 Blanshard Street, Victoria, BC V8W 9T5.
- (b) If filed originals or signed, certified copies of such policies and renewals are not available as at the time that delivery by the Concessionaire to the Province is required, the Concessionaire may, as an **INTERIM** measure pending delivery of the originals and signed certified copies and subject to the condition that the Concessionaire complies with subsection 1.1(c) of this Schedule, deliver to the Province a duly completed Certificate of Insurance certifying to the Province that the insurance requirements have been met.
- (c) If the Concessionaire delivers a Certificate of Insurance, the Concessionaire must make best efforts to deliver within **one hundred and twenty (120)** days and in any event must deliver by not later than **one hundred and fifty (150)** days after the date of issuance of the Certificate, originals or signed, certified copies of all current policies and necessary endorsements to the Province at the following address: The Manager, Insurance and Bonds, Ministry of Transportation, PO Box 9850, Stn Prov Govt, 940 Blanshard Street, Victoria, BC V8W 9T5.
- (d) Any endorsements issued must be countersigned, and only original or certified copies of endorsements are acceptable.
- (e) For Automobile Liability insurance, a duly executed Insurance Corporation of British Columbia APV 47 form may be used for evidence of coverage or renewal provided that if excess limits are purchased through private insurers, evidence will be provided by way of signed, certified copies of such policies.

2. INSURANCE COVERAGES REQUIRED

(See Section 20.1.1.1 and Section 20.1.1.2 of the Concession Agreement)

2.1 Third Party General Liability Policies

- (a) “Wrap-Up” Commercial General Liability insurance with limits of not less than **DELETED** 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 insured 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 Concessionaire or contractors or subcontractors of any tier, including all persons, firms, corporations or partnerships who perform any of the Works, in connection with this Agreement, anywhere within Canada. 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.

For all bodily injury or death and property damage arising from any one accident or occurrence for all vessels that are owned, leased, rented or operated by the Concessionaire or contractors or subcontractors of any tier, including all persons, firms, corporations or partnerships who perform any works in connection with this Agreement, insurance coverage is to be provided through the “Wrap – Up” Comprehensive General Liability Insurance policy, or through a separate Protection and Indemnity insurance policy(ies), and if provided through a separate Protection and Indemnity insurance policy(ies) then with limits of not less than **DELETED** for bodily injury or death and property damage arising from any one accident or occurrence, and in the annual aggregate, submitted to the Province in accordance with and to which there is no objection under the Review Procedure. The Concessionaire will be responsible for ensuring that any changes to the requirements of the Marine Liability Act and/or the regulations of the Marine Liability Act are reflected in the insurance coverage provided.

If aircraft (including helicopters) are used in the performance of this Agreement and are owned, leased, rented, or used by the Concessionaire, or any contractors or subcontractors of any tier then third party liability coverage with limits of not less than **DELETED** 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.

(b) **Extension of Coverage**
(applicable to liability policies described in Section 2.1(a) in this Schedule):

Such liability insurance will cover liability assumed by the Concessionaire in connection with and applicable to this Agreement and will include the following coverage extensions applicable to the following liability policies:

**Coverage Extensions Applicable to the
“Wrap-Up” Commercial General Liability Policy**

- Canada 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)
- 24 months Products and Completed Operations (as more fully outlined under Section 2.5 of this Schedule)
- Sudden and Accidental Pollution with coverage of not less than **DELETED** (IBC Form #2313)
- 60 days notice of Cancellation or Limitation of cover (as more fully outlined under Section 2.6 of this Schedule)
- Blanket Additional Insureds

Coverage Extensions Applicable to the Marine and Aviation Policies

- Canada coverage territory
- 60 days notice of Cancellation or Limitation of cover (as more fully outlined under Section 2.6 of this Schedule)

(c) **Inclusions / Exclusions Not Permitted**

Hazardous operations, including excavation pile driving, shoring, blasting, underpinning, or demolition work or any other operation or work to be performed will not be excluded from insurance coverage.

Claims arising out of the legal liability imposed upon the Insured at common law and extended 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 any Workers Compensation Statutes or for assessment by any Workers Compensation Board will be permitted.

Liability assumed by the insureds under contract with railroad companies for the use and operation of railway sidings or crossings will not be excluded.

Liability assumed by the Concessionaire under and applicable to any Gravel Licenses will not be excluded.

Liability arising out of all products where the Concessionaire supplies the material will not be excluded.

Tort liability assumed by the Concessionaire under this Agreement will not be excluded.

Exclusions for design/build, design/build/finance, design/build/finance/operate, or joint venture projects will not be permitted.

Other types of services not listed above, to be performed by the Concessionaire under this Agreement will not be excluded.

(d) **Deductible**

A maximum deductible on the primary insurance policy will be allowed for any one accident or per occurrence of up to **DELETED**. Payment of any deductible will be the responsibility of the Concessionaire.

(e) **Self-Insured Retention**

A maximum self-insured retention of up to **DELETED** for any one accident or per occurrence will be permitted for the Concessionaire providing umbrella/excess liability insurance subject to having a minimum primary insurance policy of **DELETED** underlying the umbrella/excess.

2.2 **Professional Liability Insurance (Errors & Omissions)**

- (a) Single Project Specific Professional Liability insurance with minimum limits of **DELETED** per claim, and **DELETED** aggregate insuring against all insured loss or damage including coverage for third party property damage, bodily injury or death, arising out of the professional services rendered by the Concessionaire, the Concessionaire's contractors or sub-contractors of any tier, and/or any engineers / architects / surveyors and any of their servants or employees including personnel on loan to the Concessionaire or the Concessionaire's contractors or sub-contractors of

any tier and personnel who perform normal services of the Concessionaire under this Agreement. The named insured shall also include but not be limited to all architectural or engineering firms, including project managers, construction managers, applied science technologists, land surveyors, or quantity surveyors engaged in providing professional services to the Project.

Coverage will be maintained for a period of 3 years following the Post Olympic Works Final Completion Date.

- (b) A maximum deductible of **DELETED** will be allowed provided that the Concessionaire can demonstrate to the reasonable satisfaction of the Province that the payment of the deductible is secured in a manner satisfactory to the Province.

Exclusions for design/build, design/build/finance/, design/build/finance/operate, or joint venture projects will not be permitted.

- (c) The required 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 Manager, Insurance and Bonds, Ministry of Transportation, P0 Box 9850, Stn Prov Govt, 940 Blanshard Street, Victoria, BC V8W 9T5.

2.3 Automobile Insurance

Automobile Liability coverage with limits of not less than **DELETED** 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 Concessionaire or by the Contractor, and that are used in the performance of this Agreement.

2.4 Property Insurance

- (a) **Builders Risk, Direct Damage, Installation Floater, "All-Risk" Insurance**

"All risks" of direct physical loss or damage including but not limited to flood, full resultant loss or damage, structural collapse (for greater certainty, excluding loss or damage resulting from seismic (earthquake events)) 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. The insurance policy shall provide coverage for and limits to the full value of any buildings, structures (including walls and bridges) and improvements and include the value of any material and/or structure and/or property destined for or entering into or forming part of the Works, whether belonging to the Concessionaire or any of its contractors or sub-contractors of any tier and/or the Province 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.

(b) **Deductibles Per Occurrence**

- (i) Flood – up to **DELETED**
- (ii) All other losses up to **DELETED**

The Concessionaire will be solely responsible for the payment of all deductibles except the deductible applying in the event of damage caused by Landslides. In the event of damage caused by Landslides the payment of the deductible will be included in the calculation of the repair costs contemplated in Section 14.8 of this Agreement such that any contribution to the repair costs that the Province may make in accordance with the terms of Section 14.8 will, subject to the terms of Section 14.8, take into account the deductible, if any, applicable to the damage caused by the Landslide.

The following Waiver of Subrogation is to be added to Equipment and Property Insurance Policies:

“In the event of any third party loss or damage or any physical loss or damage to the work, or contractor's equipment, the settlement or payment of the subsequent claim shall be made without the right of subrogation against Her Majesty the Queen or the BC Transportation Financing Authority, or any of their employees, agents and servants, or the architects, engineers, consultants, contractors, or 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 “Sea to Sky Highway Improvement Project”.”

**2.5. Additional Conditions In All Property and Liability Policies
(Except Owned Automobile and Professional Liability Insurance)
are to be Included by Endorsement as Follows**

Each of the Province and BC Transportation Financing Authority will be named as an additional named insured in all property insurance policies 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.”

Notwithstanding any other terms, conditions, or exclusions elsewhere in the policies or in this Schedule 11, it is understood and agreed that every liability insurance policy (except owned automobile, professional liability, marine liability and aviation liability insurance) is extended to include insurance coverages and clauses as follows:

“Her Majesty the Queen in Right of the Province of British Columbia and 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 “Sea to Sky Highway Improvement Project” hereinafter referred to 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 as is afforded 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. Any breach of a condition of the policy by any Insured shall not affect the protection given by this policy to any other insured. The inclusion herein of more than one 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 24 months after the work has been completed, irrespective of the expiry date of the policy.”

2.6 Cancellation / Limitation For All Policies **(Except Owned Automobile and Professional Liability)**

The required insurance coverages 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 Manager, Insurance and Bonds, Ministry of Transportation, P0 Box 9850, Stn Prov Govt, 940 Blanshard Street, Victoria, BC V8W 9T5.

The required insurance coverages shall not be lapsed without at least 30 days’ notice in writing by registered mail to: The Manager, Insurance and Bonds, Ministry of Transportation, P0 Box 9850, Stn Prov Govt, 940 Blanshard Street, Victoria, BC V8W 9T5.

2.7 Loss Payable

The insurance policies must contain a loss payable clause directing payment in accordance with the provisions of section 20.7 entitled “Application of Proceeds” of the Agreement.

2.8 Use and Occupancy

Use and occupancy of the work or any part thereof prior to the date of completion shall not be cause for any termination of insurance coverage shown in the applicable sections.

2.9 Primary and Excess Coverage

The Concessionaire may satisfy limit requirements through the use of primary and excess liability insurance programs.

2.10 Construction Works after Construction Insurance End Date

The insurances described in Section 2.1 to and including Section 2.9, subject to any reasonable variations in such insurance requirements made by the Province, including any adjustments in policy limits and additions of coverages will apply, *mutatis mutandis*, in connection with any construction works undertaken after the Construction Insurance End Date, with any reference to Post Olympic Works Final Completion Date being deemed a reference to the date of final completion of any such construction works (as evidenced, if applicable, by the issuance of a final completion certificate in respect of such construction works). Variations to the insurance requirements contemplated in this section 2.10 will not impose more stringent or less stringent requirements than those imposed by the MOT for construction contracts of a similar nature or value to the construction works undertaken after the Construction Insurance End Date and will be based on the Province's reasonable assessment of the risks involved, based on the then current version of the MOT Form INS152 or INS172, as appropriate.

If the Concessionaire should dispute the reasonableness of the Province's assessment of the relevant risks and any resulting variation to the insurance requirements under this Section 2.10, the Concessionaire will notify the Province of its dispute within 10 days of the Province having notified the Concessionaire of the insurance requirements that will apply to the relevant construction works. If the Province and the Concessionaire have not resolved the dispute within 10 days of the Concessionaire's notice of disagreement, the dispute will be referred for resolution under the Disputes Resolution Procedure.

2.11 Railway Insurances

Any insurance coverages and limits as may, from time to time, be required by British Columbia Railway Company, BC Rail Partnership or CN Acquisition Limited Limited in connection with the Concession Agreement, the BC Rail Agreements, the BC Rail Works and the Operations, or any of them, will be at the sole expense of the Concessionaire, save and except if any such insurance coverages and limits are required in connection with:

- (a) the Required BC Rail Lands and the Olympic Requirements Works; or
- (b) those portions of the Acquisition Lands that also form part of the BC Rail Lands,

and any such insurance coverages and limits referred to in paragraphs (a) or (b) above:

- (c) are additional to or vary from any insurance coverages or limits disclosed as part of the Disclosed Data; and
- (d) require adjustment to any insurance coverages and limits required under the terms of this Schedule (except for greater certainty under this Section 2.11, Section 3.10, and Section 4.6 of this Schedule),

in which case, any such additional or adjusted insurance coverages and limits will be considered a Province Change.

2.12 Earthquake Insurances

In the case of any insurance coverages and limits for earthquake loss or damage required to be obtained by the Concessionaire pursuant to the Senior Funding Agreements, or any of them, or pursuant to other requirements of the Senior Funders, any such insurance coverages and limits for earthquake loss or damage shall be deemed to be insurance coverages and limits required under this Agreement (including for greater certainty, under Section 20.7 [Application of Proceeds] of this Agreement).

3. INSURANCE COVERAGES REQUIRED (Section 20.1.1.3 of the Concession Agreement)

3.1 Third Party General Liability Policies

- (a) Commercial General Liability insurance will be arranged with limits of not less than **DELETED** 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 insured 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 Concessionaire or contractors or subcontractors of any tier, including all persons, firms, corporations or partnerships who perform any works, in connection with this Agreement, anywhere within Canada. 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.

For all bodily injury or death and property damage arising from any one accident or occurrence and in the annual aggregate for all vessels that are owned, leased, rented or operated by the Concessionaire or contractors or subcontractors of any tier, including all persons, firms, corporations or partnerships who perform any works in connection with this Agreement, insurance coverage is to be provided through the Comprehensive General Liability Insurance policy with limits of not less than **DELETED**, or through a separate Protection and Indemnity insurance policy(ies) submitted to the Province in accordance with and to which there is no objection under the Review Procedure. The Concessionaire will be responsible for ensuring that any changes to the requirements of the Marine Liability Act and/or the regulations of the Marine Liability Act are reflected in the insurance coverage provided.

(b) **Extension of Coverage (applicable to liability policies described above in Section 3.1(a) in this Schedule)**

Such liability insurance will cover liability assumed by the Concessionaire in connection with and applicable to this Agreement and will include the following coverage extensions applicable to the following liability policies:

Coverage Extensions Applicable to the Commercial General Liability Policy

- Canada 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)
- Sudden and Accidental Pollution with coverage of not less than \$2,000,000.00 (IBC Form #2313)
- 60 days notice of Cancellation or Limitation of cover (as more fully outlined under Section 3.6 of this Schedule)
- Blanket Additional Insureds

Coverage Extensions Applicable to the Marine and Aviation Policies

- Canada coverage territory
- 60 days notice of Cancellation or Limitation of cover (as more fully outlined under Section 3.6 of this Schedule)

(c) **Inclusions / Exclusions Not Permitted**

Hazardous operations, including excavation pile driving, shoring, blasting, underpinning, or demolition work or any other operation or work to be performed will not be excluded from insurance coverage.

Claims arising out of the legal liability imposed upon the Insured at common law and extended 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 any Workers Compensation Statutes or for assessment by any Workers Compensation Board will be permitted.

Liability assumed by the insureds under contract with railroad companies for the use and operation of railway sidings or crossings will not be excluded.

Liability assumed by the Concessionaire under and applicable to any Gravel Licenses will not be excluded.

Liability arising out of all products where the Concessionaire supplies the material will not be excluded.

Tort liability assumed by the Concessionaire under this Agreement will not be excluded.

Exclusions for design/build, design/build/finance, design/build/finance/operate, or joint venture projects will not be permitted.

Other types of services not listed above, to be performed by the Concessionaire under this Agreement will not be excluded.

(d) **Deductible**

A maximum deductible on the primary insurance policy will be allowed for any one accident or per occurrence of up to **DELETED**. Payment of any deductible will be the responsibility of the Concessionaire.

(e) **Self-Insured Retention**

A maximum self-insured retention of up to **DELETED** for any one accident or per occurrence will be permitted for the Concessionaire providing umbrella/excess liability insurance subject to having a minimum primary insurance policy of **DELETED** underlying the umbrella/excess.

(f) **Amendments to Insurance Coverages**

The Province may from time to time, in its reasonable discretion and on written notice to the Concessionaire, amend the required insurance coverages described in any of Sections 2, 3 or 4 of this Schedule 11 (other than those insurance coverages described in Sections 2.11 [Railway Insurances], 3.10 [Railway Insurances] or 4.6 [Railway Insurances]), including by adjusting the policy limits and by changing the scope of coverages; provided, however, that any such amendment will be considered a Province Change.

3.2 Professional Liability Insurance (Errors & Omissions)

- (a) The Concessionaire will obtain and maintain or cause to be obtained and maintained professional liability insurance coverage in connection with the services of “professionals” in the performance of the Operations or any part thereof, including the maintenance, repair, rehabilitation, or construction of any road or bridge, or in the conduct of other services involving “professionals”.

Coverage will be maintained for a period of 3 years following completion of each item of maintenance, repair, rehabilitation, or construction work of the Project.

- (b) A maximum deductible of **DELETED** will be allowed provided that the Concessionaire can demonstrate to the reasonable satisfaction of the Province that the payment of the deductible is secured in a manner satisfactory to the Province.

Exclusions for design/build, design/build/finance, design/build/finance/operate, or joint venture projects will not be permitted.

- (c) The required 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 Manager, Insurance and Bonds, Ministry of Transportation, P0 Box 9850, Stn Prov Govt, 940 Blanshard Street, Victoria, BC V8W 9T5.

3.3 Automobile Insurance

Automobile Liability coverage with limits of not less than **DELETED** 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 Concessionaire or by the Operator, and that are used in the performance of this Agreement.

3.4 Aircraft Insurance

If aircraft (including helicopters) are used in the performance of this Agreement and are owned, leased, rented or used by the Concessionaire or by the Operator, then third party liability coverage with limits of not less than **DELETED** must be provided, together with a waiver of subrogation on the hull.

**3.5 Additional Conditions In All Property and Liability Policies
(Except Owned Automobile and Professional Liability Insurance)
are to be Included by Endorsement as Follows**

Each of the Province and BC Transportation Financing Authority will be named as an additional named insured in all property insurance policies 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.”

Notwithstanding any other terms, conditions, or exclusions elsewhere in the policies or in this Schedule 11, it is understood and agreed that every liability insurance policy (except owned automobile and professional liability insurance) is extended to include insurance coverages and clauses as follows:

“Her Majesty the Queen in Right of the Province of British Columbia and 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 “Sea to Sky Highway Improvement Project” hereinafter referred to 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 as is afforded 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. Any breach of a condition of the policy by any Insured shall not affect the protection given by this policy to any other insured. The inclusion herein of more than one 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 24 months after the work has been completed, irrespective of the expiry date of the policy.”

**3.6 Cancellation / Limitation For All Policies
(Except Owned Automobile and Professional Liability)**

The required insurance coverages 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 Manager, Insurance and Bonds, Ministry of Transportation, PO Box 9850, Stn Prov Govt, 940 Blanshard Street, Victoria, BC V8W 9T5.

The required insurance coverages shall not be lapsed without at least 30 days' notice in writing by registered mail to: The Manager, Insurance and Bonds, Ministry of Transportation, PO Box 9850, Stn Prov Govt, 940 Blanshard Street, Victoria, BC V8W 9T5.

3.7 Loss Payable

The insurance policies must contain a loss payable clause directing payment in accordance with the provisions of Section 20.7 [Application of Proceeds] of the Agreement.

3.8 Primary and Excess Coverage

The Concessionaire may satisfy limit requirements through the use of primary and excess liability insurance programs.

3.9 Use and Occupancy

Use and occupancy of the work or any part thereof prior to the date of completion shall not be cause for any termination of insurance coverage shown in the applicable sections.

3.10 Railway Insurances

Any insurance coverages and limits as may, from time to time, be required by British Columbia Railway Company, BC Rail Partnership or CN Acquisition Limited in connection with the Concession Agreement, the BC Rail Agreements, the BC Rail Works and the Operations, or any of them, will be at the sole expense of the Concessionaire, save and except if any such insurance coverages and limits are required in connection with:

- (a) the Required BC Rail Lands and the Olympic Requirements Works; or
- (b) those portions of the Acquisition Lands that also form part of the BC Rail Lands,

and any such insurance coverages and limits referred to in paragraphs (a) or (b) above:

- (c) are additional to or vary from any insurance coverages or limits disclosed as part of the Disclosed Data; and
- (d) require adjustment to any insurance coverages and limits required under the terms of this Schedule (except for greater certainty under Section 2.11, this Section 3.10, and Section 4.6 of this Schedule),

in which case, any such insurance coverages and limits will be considered a Province Change.

4. **INSURANCE COVERAGES REQUIRED**

(Section 20.1.1.4 of the Concession Agreement)

4.1 **Property Insurance**

(a) **Property and Equipment Insurance**

The Concessionaire shall obtain, maintain and provide evidence of “ALL RISKS” insurance coverage (for greater certainty, excluding coverage for loss or damage resulting from seismic (earthquake events)) for buildings, structures, and improvements and equipment insurance, including flood and waterborne coverages, satisfactory to the Province covering all equipment, including equipment owned, rented or leased and used in the performance of the Concession Agreement or for which the Concessionaire may be responsible including the current (as at the time of loss) replacement value of the structures (including walls and bridges).

(b) **Deductibles Per Occurrence**

(i) Flood – up to **DELETED**

(ii) All other losses up to **DELETED**

The Concessionaire will be solely responsible for the payment of all deductibles, except the deductible applying in the event of damage caused by Landslides. In the event of damage caused by Landslides the payment of the deductible will be included in the calculation of the repair costs contemplated in Section 14.8 of this Agreement such that any contribution to the repair costs that the Province may make in accordance with the terms of Section 14.8 will, subject to the terms of Section 14.8, take into account the deductible, if any, applicable to the damage caused by the Landslide.

The following Waiver of Subrogation is to be added to Equipment and Property Insurance Policies:

“In the event of any third party loss or damage or any physical loss or damage to the work, or contractor's equipment, the settlement or payment of the subsequent claim shall be made without the right of subrogation against Her Majesty the Queen or the BC Transportation Financing Authority, or any of their employees, agents and servants, or the architects, engineers, consultants, contractors, or 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 “Sea to Sky Highway Improvement Project.”

Each of the Province and BC Transportation Financing Authority will be named as an additional named insured in all Equipment and Property Insurance Policies 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.”

4.2 Cancellation / Limitation For All Policies (Except Owned Automobile)

The required insurance coverages 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 Manager, Insurance and Bonds, Ministry of Transportation, PO Box 9850, Stn Prov Govt, 940 Blanshard Street, Victoria, BC V8W 9T5.

The required insurance coverages shall not be lapsed without at least 30 days’ notice in writing by registered mail to: The Manager, Insurance and Bonds, Ministry of Transportation, PO Box 9850, Stn Prov Govt, 940 Blanshard Street, Victoria, BC V8W 9T5.

4.3 Loss Payable

The insurance policies must contain a loss payable clause directing payment in accordance with the provisions of section 20.7 [Application of Proceeds] of the Agreement.

4.4 Primary and Excess Coverage

The Concessionaire may satisfy limit requirements through the use of primary and excess liability insurance programs.

4.5 Use and Occupancy

Use and occupancy of the work or any part thereof prior to the date of completion shall not be cause for any termination of insurance coverage shown in the applicable sections.

4.6 Railway Insurances

Any insurance coverages and limits as may, from time to time, be required by British Columbia Railway Company, BC Rail Partnership or CN Acquisition Limited in connection with the Concession Agreement, the BC Rail Agreements, the BC Rail Works and the Operations, or any of them, will be at the sole expense of the Concessionaire, save and except if any such insurance coverages and limits are required in connection with those portions of the Acquisition Lands that also form part of the BC Rail Lands, and any such insurance coverages and limits:

- (a) are additional to or vary from any insurance coverages or limits disclosed as part of the Disclosed Data; and

- (b) require adjustment to any insurance coverages and limits required under the terms of this Schedule (except for greater certainty under Section 2.11, Section 3.10 and this Section 4.6 of this Schedule),

in which case, any such additional or adjusted insurance coverages and limits will be considered a Province Change.

4.7 Earthquake Insurances

In the case of any insurance coverages and limits for earthquake loss or damage required to be obtained by the Concessionaire pursuant to the Senior Funding Agreements, or any of them, or pursuant to other requirements of the Senior Funders, any such insurance coverages and limits for earthquake loss or damage shall be deemed to be insurance coverages and limits required under this Agreement (including for greater certainty, under Section 20.7 [Application of Proceeds] of this Agreement).

Annex 1

Insurance Benchmarking**1. First Benchmarking Period**

Assumptions

Initial cost of insurance at the Commencement Date
 Actual insurance cost incurred for Contract Year 4
 No premium increase for claim history

DELETED
DELETED

Calculation

10% Threshold Amount
 Province 'share' of premium increase calculated as:

DELETED

DELETED

DELETED

Total Performance Payments increase from 1 April in Contract Year 4 by

DELETED

2. Second Benchmarking Period

Assumptions

Initial cost of insurance in Contract Year 4
 Actual insurance cost incurred for Contract Year 7
 No premium increase for claim history

DELETED
DELETED

Calculation

10% Threshold Amount
 Province 'share' of premium increase calculated as:

DELETED

DELETED

DELETED

Total Performance Payments increase from 1 April in Contract Year 7 by

DELETED

DELETED

3. Third Benchmarking Period

Assumptions

Initial cost of insurance in Contract Year 8
 Actual insurance cost incurred for Contract Year 11
 No premium increase for claim history

DELETED
DELETED

Calculation

10% Threshold Amount **DELETED**
 Province 'share' of premium *decrease* calculated as:

DELETED **DELETED**

Total Performance Payments increase from 1 April in Contract Year 7 by **DELETED**
DELETED

4. Fourth Benchmarking Period

Assumptions

Initial cost of insurance in Contract Year 8 **DELETED**
 Actual insurance cost incurred for Contract Year 11 **DELETED**
 Premium increase for claim history **DELETED**

Calculation

10% Threshold Amount **DELETED**
 Province 'share' of premium *increase* calculated as:

DELETED **DELETED**

Total Performance Payments increase from 1 April in Contract Year 7 by **DELETED**
DELETED

5. Fifth Benchmarking Period

Assumptions

Initial cost of insurance in Contract Year 8 **DELETED**
 Actual insurance cost incurred for Contract Year 11 **DELETED**
 Premium decrease for claim history **DELETED**

Calculation

10% Threshold Amount **DELETED**
 Province 'share' of premium *decrease* calculated as:

DELETED **DELETED**

Total Performance Payments increase from 1 April in Contract Year 7 by **DELETED**
DELETED

SCHEDULE 12**ENVIRONMENTAL OBLIGATIONS****Part 1****Concessionaire's Environmental Obligations****1. GENERAL**

- 1.1 Throughout the Contract Period, the Concessionaire is responsible for managing environmental issues associated with the Project, and for complying with and taking into account the commitments, responsibilities and information set forth in each of this Schedule 12, Annex 1 [Environmental Assessment Certificate and Federal Screening Recommendation and Decision Summary], Annex 2 [Environmental Commitments and Responsibilities], and Annex 4 [Sensitive Features and Environmental Constraints], each of which is attached hereto, and with all provisions relating to environmental matters set out in this Agreement (being the Concessionaire's Environmental Obligations) including without limitation Table 8-5 (Highway 99 Viewpoint and Pullout Provisions) in Part 1 of Schedule 5 [Construction Output Specifications].
- 1.2 Without limiting the generality of the foregoing, the Concessionaire must comply with and will be responsible for the activities set forth in the Environmental Assessment Certificate (including any amendments to the Environmental Assessment Certificate from time to time that become necessary as a result of the design by the Concessionaire or otherwise) and must ensure satisfaction of the owner's commitments and responsibilities set forth in the table of owner's commitments and responsibilities contained in Table 1 of the Environmental Assessment Certificate (together with any amendments resulting from the design by the Concessionaire or otherwise). To the extent that additional activities are identified elsewhere in the Concessionaire's Environmental Obligations as being the responsibility of the Concessionaire, the Concessionaire must also comply with and be responsible for those additional activities.
- 1.3 Any changes to the Environmental Assessment Certificate or the table of owner's commitments and responsibilities contained in Table 1 of the Environmental Assessment Certificate which are required as a result of the design by the Concessionaire or otherwise will be at the cost and risk of Concessionaire, whether or not the application for the change is made by the Province or the Concessionaire. The Concessionaire is required to obtain all additional permits and approvals which relate to, or are required in connection with, the Project, unless otherwise indicated in Section 3.5.1 of this Agreement.
- 1.4 Where the responsibility for the activity is not specifically identified in the Concessionaire's Environmental Obligations as a Concessionaire commitment, the Concessionaire will be responsible for complying (and will cause all of its employees, agents, contractors and subcontractors of any tier and employees of any of them to comply) with the relevant commitment should it undertake or cause to be undertaken any work or activity that causes the commitment or responsibility to come into effect or apply.

1.5 Without prejudice or limitation to the foregoing paragraphs, and in particular without prejudice or limitation to Sections 8.13 [Concessionaire's Environmental Obligations] or 8.18 [Environmental Matters] of this Agreement, the Concessionaire will ensure that the Project complies with the provincial and federal environmental guidelines and policies ("Guidelines and Policies") that may apply during the Contract Period. Such Guidelines and Policies include (without limitation) the most current version of the following documents (contained in the Data Room):

- *Best Management Practices For Highway Maintenance Activities*, Ministry of Transportation document, July 2004;
- *Habitat Conservation and Protection Guidelines*, Fisheries and Oceans Canada, 1998;
- *Standards and Best Practices for Instream Works*, Ministry of Water, Land and Air Protection, March 2004;
- *Land Development Guidelines for the Protection of Aquatic Habitat*, Department of Fisheries and Oceans Canada and Ministry of Environment, Lands and Parks, 1992;
- *Manual of Control of Erosion and Shallow Slope Movement*, Ministry of Transportation (and Highways), August 22, 1997;
- *Practitioners Guide to Habitat Compensation for DFO Habitat Management Staff*, Fisheries and Oceans Canada, 2002;
- Recommended best practices information bulletins, publications, checklists and forms available at http://srmwww.gov.bc.ca/sry/csd/forms/#info_bul;
- *SS 165 Protection of the Environment* of the Ministry's Standard Specifications. The Highway is classified as a "designated environmentally sensitive area" in accordance with SS 165.01.04 and is subject to all the restrictions set out in SS 165;
- *Instream Works Windows Information Bulletin* available at <http://wlapwww.gov.bc.ca/sry/fwh/hp/iwn.htm>.

2. DESIGN AND CONSTRUCTION

2.1 Without prejudice or limitation to the foregoing paragraphs, and in particular without prejudice or limitation to Sections 3.5.1, 8.13 [Concessionaire's Environmental Obligations] or 8.18 [Environmental Matters] of this Agreement, the Concessionaire must design and build the Works in full compliance with the Concessionaire's Environmental Obligations, and by taking into account, the following:

- Applicable Environmental Laws, Permits, Licenses and Approvals, and relevant requirements under any other applicable Laws and Regulations;
- The Environmental Assessment Certificate for the Project (attached as Annex 1 hereto), including its conditions and the Screening Recommendation and Decision Summary (contained in the Data Room);

- The Concessionaire’s Environmental Obligations set forth in this Schedule 12 including the commitments, responsibilities, and information set forth in:
 - Annex 2 [Environmental Commitments and Responsibilities];
 - Annex 4 [Sensitive Features and Environmental Constraints]; and
 - Table 8-5 (Highway 99 Viewpoint and Pullout Provisions) in Part 1 of Schedule 5 [Construction Output Specifications].
- Applicable provincial and federal environmental Guidelines and Policies that are current at the time of design and construction.

3. ENVIRONMENTAL MANAGEMENT RESPONSIBILITIES

- 3.1 The Concessionaire must have available at all times during the Contract Period a multi-disciplinary team of qualified environmental specialists responsible for managing and monitoring all environmental issues associated with the Project.
- 3.2 The Concessionaire shall provide funding in the amount of **DELETED** to be allotted for enhancements to the Environmental Management Plan that exceed minimum performance requirements (“MPR”) of the Concessionaire’s Environmental Obligations, such funding to be spent during the period of construction of the Works.
- 3.3 The Concessionaire will also develop, maintain, and implement an Environmental Enhancement Plan (a summary of which is attached as Annex 7 to Schedule 23 [Environmental Enhancement Plan] of this Agreement) and in connection therewith the Concessionaire will provide funding in the amount of **DELETED** to be allotted for site-specific enhancement features and a Sea-to-Sky Environmental Enhancement Program, such funding to be spent during the period of construction of the Works.
- 3.4 The Concessionaire is required to:
- Identify and obtain, prior to commencing construction, at its own cost, all necessary Permits, Licences, and Approvals including fisheries Authorization under subsection 35(2) of the *Fisheries Act*, R.S.C. 1985, c. F-14 (the “Authorization”), required for construction of the New Highway, unless otherwise specified herein.
 - Develop, implement, maintain, and update an Environmental Management Plan (a summary of which is attached as Annex 6 to Schedule 23 [Environmental Management Plan] of this Agreement) and an Environmental Enhancement Plan (a summary of which is attached as Annex 7 to Schedule 23 [Environmental Enhancement Plan] of this Agreement).
 - Implement and maintain an Environmental Quality Management Plan pursuant to Section 23 [Quality Management] and Schedule 6 [Quality Management] of this Agreement.
 - Establish and maintain working relationships with regulatory agencies and Interested Parties.
 - Address all environmental issues associated with the Project.

- Participate in the group established by the Province as a forum to resolve design issues and address concerns raised by recreational Interested Parties and as a means of Interested Parties communication (the “Recreation Focus Group”). Field reconnaissance meetings with recreational Interested Parties will be organized and held by the Concessionaire from time to time with a view to ensuring that Interested Parties’ concerns are clearly communicated to the Concessionaire.
 - Conduct environmental monitoring in respect of the Works during construction of the Works and after construction is completed.
 - Finalize design and construct all compensation works for the Project, in accordance with the fisheries Authorization unless otherwise identified herein.
 - The Concessionaire is responsible for all fisheries compensation post-construction monitoring, including post construction monitoring of the fisheries compensation at the old salt shed location (PA sta. 229+180¹), in accordance with the terms of the fisheries Authorization.
 - Restore and revegetate those portions of the Existing Highway that will be discontinued for road purposes and will not form part of the New Highway.
 - Following completion of construction:
 - Restore and revegetate all portions of the New Highway through Brandywine Falls Provincial Park; and
 - Restore and revegetate those portions of the Existing Highway not forming part of the New Highway adjacent to Brandywine Falls Provincial Park, and MOT will request a legislative amendment under the *Park Act*, R.S.B.C. 1996, c.344, to add these portions of the Existing Highway to the Brandywine Falls Provincial Park, all in accordance with the Letter of Agreement dated January 2004 between MOT and the Ministry of Water, Land and Air Protection (“WLAP”), contained in the Data Room.
 - Minimize the area of impact to dry arbutus dominated habitat in the Horseshoe Bay area and areas of red- and blue-listed plant communities.
 - Identify and implement measures to offset loss of tailed frogs habitat or impacts to tailed frogs as required by the appropriate environmental agency.
 - Conduct any and all future nest surveys.
- 3.5 The Environmental Management Plan shall comply with all of the Concessionaire’s Environmental Obligations, including without limitation those set forth in the Environmental Assessment Certificate (attached hereto as Annex 1).
- 3.5.1 The Environmental Management Plan will be expanded and updated throughout the Contract Period to reflect the work scheduling, site conditions and weather that is current at the time.

¹ All station references in the environmental sections of this Schedule are to Preliminary Alignment (PA) stationing.

- 3.5.2 The Environmental Management Plan will include, but will not be limited to, the following²:
- Post-construction monitoring and maintenance of fish and wildlife habitat compensation and enhancement sites.
 - Water quality monitoring and mitigation.
 - Spill contingency planning and response.
 - Potentially acid generating and metal leaching materials and acid rock drainage monitoring and mitigation.
 - Other environmental issues that may arise as a result of routine operation, maintenance and rehabilitation activities, in respect of the Concession Highway.
- 3.5.3 The Concessionaire will submit the Environmental Management Plan, and any subsequent updates, to the Province for review and comment prior to the Concessionaire submitting the Environmental Management Plan to the appropriate environmental agency for acceptance. The Concessionaire is fully responsible for developing an Environmental Management Plan that is acceptable to all environmental agencies.
- 3.5.4 The Environmental Management Plan will include the following subcomponent plans:
- Air Quality Monitoring and Mitigation Plan (AQMP) - the AQMP will, as a minimum, describe the measures to be used to control dust during the construction of the Works and the program that will be implemented to monitor nuisance dust concentrations, ambient particulate matter (PM₁₀ and PM_{2.5}), and ambient air quality if vegetative debris is burned. The AQMP will include provisions for air quality monitoring and management at Squamish Nation IR 24 (“IR 24”). The portions of the AQMP that apply to IR 24 will be developed in consultation with the Squamish Nation.
 - Archaeology and CMT Management Plan (AMP) - the AMP will, as a minimum, describe the archaeology, heritage and First Nations sites of significance, the proposed archaeological impact assessment program, permit requirements, First Nations consultation and involvement, site protection measures and the contingency plan to manage the possibility of encountering previously unidentified archaeological resource. The AMP will be developed in consultation with both the Squamish and the Lil’wat Nations.
 - Bear/Human Conflict Reduction Plan (BHCRP) - the BHCRP will, as a minimum, describe the education/training program and the best management practices that will be implemented to minimize the risk of bear/human encounters on the construction site.

² The Concessionaire should also be aware of the provisions relating to the Environmental Protection Plan referenced in Annex 4 to Schedule 23 [Operation, Maintenance & Rehabilitation Plan]) of the Agreement.

- Construction Schedule - the schedule will, as a minimum, link the schedule for obtaining permits and approvals, environmental tasks, environmental timing windows and work restrictions to the planned construction schedule.
- Contaminated Soils Management Plan (CSMP) - the CSMP will, as a minimum, identify areas of potentially contaminated soils and remediation procedures and describe the contingency plan for remediation and/or disposal procedures in the event that soils contamination is encountered or an accidental spill or other accident results in soil and/or groundwater contamination.
- Environmental Quality Management Plan (EQMP) - the EQMP will be integrated within the overall quality management plan and will, as a minimum, describe the process that will be implemented to achieve acceptable environmental monitoring standards, acceptable standards of environmental services and acceptable environmental management standards, in conformance with the requirements of the contract. The EQMP will address reporting, quality assurance and integration of environmental coordination with the engineering design and construction components.
- Environmentally Sensitive Areas Management and Protection Plan (ESAMPP) - the ESAMPP will, as a minimum, identify environmental resources in the proposed work area and describe proposed work, schedule, equipment, environmental protection measures including demarcation of sensitive areas on construction drawings and in the field, contingency plans and the planned environmental monitoring program.
- Environmental Training Plan (ETP) - the ETP will, as a minimum, describe how, when and the type of environmental training that will be provided to senior design and construction personnel, to the construction safety manager, and to construction workers.
- Equipment and Materials Plan (EqMP) - the EqMP will, as a minimum, describe procedures and best management practices for the transport of dangerous goods and materials, the inventory and storage of hazardous materials, servicing of equipment and equipment operations in environmentally sensitive areas.
- Fisheries Mitigation/Compensation Plan (FMCP) - the FMCP will satisfy DFO with respect to the fisheries Authorization requirements and as a minimum, provide habitat balance calculations for the work, compensation plans and a description of the construction and post-construction monitoring program.
- Infrastructure Demolition Management Plan (IDMP) - the IDMP will, as a minimum, describe the schedule, generic and site specific procedures and best management practices for the demolition of bridges, walls, excess highway surface, etc.
- Materials Management Plan (MMP) - the MMP will, as a minimum, describe the schedule, generic and site specific procedures and best management practices for the handling, use, storage and disposal of excavated rock, excavated unsuitable construction materials and organic materials.

- Noise Control and Mitigation Plan (NCMP) - the NCMP will, as a minimum, describe site specific schedule, procedures and best management practices to control construction noise emissions including target noise emission levels of equipment, equipment maintenance, management and education, community communication, and noise monitoring. The goal of the plan will be to minimize community impacts and achieve community acceptance of unavoidable noise.

The NCMP will include noise monitoring, management and mitigation measures that will be implemented at IR 24 during construction of the Works. The noise mitigation measures applicable to IR 24 will be developed in consultation with the Squamish Nation.

- Potentially Acid Generating/Metal Leaching Materials and Acid Rock Drainage Adaptive Management Plan (PAG/MLMARDMP) - the PAG/MLMARDMP will, as a minimum, describe the qualifications of the persons responsible for developing the plan, alignment modifications made to avoid rock excavation in areas of PAG/ML, ongoing assessments of ML/ARD potential, best management practices and handling procedures to avoid impacts from ML/ARD, risk assessments to identify if physical pathways to sensitive aquatic organisms exist, construction and post-construction monitoring plans, measures that will be implemented for the term of the Agreement to avoid the production of ML/ARD, measures that will be implemented should monitoring indicate the production of ARD and adaptive management measures should previously unidentified areas of PAG/ML be encountered.
- Raptor/Heron Management Plan (R/HMP) - the R/HMP will, as a minimum, provide updated information on the presence of active/inactive raptor and heron nests in the corridor, work scheduling with respect to the nest locations and applicable timing restrictions and the status of permit applications in the event that a nest will be impacted by construction.
- Recreation Resource Management Plan (“RRMP”) – the RRMP will provide measures to ensure concerns of Interested Parties are managed.
- Riparian Restoration and Terrestrial Reclamation/Revegetation Plan (RRTRRP) - the RRTRRP will, as a minimum, describe timing requirements, seed mixes, applications rates, etc., of hydroseeding and site specific restoration plans, including species type, size, spacing, etc., for riparian areas and areas of higher sensitivity.
- Sensitive Ecosystem Management Plan (SEMP) - the SEMP will, as a minimum, delineate red- and blue-listed plant communities and dry arbutus dominated habitats on construction drawings and in the field, describe measures available to avoid or minimize impact to the sensitive elements within these communities as well as to old or large trees both living and dead, describe measures that will be used to protect the plant communities from disturbance, describe measures that will be implemented to control invasive species, and quantify the area of red- and blue-listed plant communities and dry arbutus dominated habitats affected by construction.
- Sediment and Drainage Management Plan (SDMP) - the SDMP will, as a minimum, identify areas that are prone to sedimentation and describe general and site specific

measures that will be applied to mitigate soil erosion and shallow slope movement, to control sediment laden flows, and to prevent sediment laden water from entering water courses. The plan will include a description of the monitoring program that will be implemented.

- Soil Conservation/Stripped Organic Material Management Plan (SCSOMMP) - the SCSOMMP will, as a minimum, describe how existing soils will be protected in place, and how stripped soils will be stored and utilized on the Project.
- Spill Contingency and Response Plan (SCRП) - the SCRП will, as a minimum, list the spill abatement materials/equipment to be stored on site, identify responsible project members and external contacts, education procedures, incident procedures including communications, containment, clean-up, debriefing and follow-up reporting.
- Tailed Frog Management Plan (TFMP) - the TFMP will, as a minimum, demarcate tailed frog streams on construction drawings and in the field, identify measures to minimize the impact to tailed frog habitat, and develop and implement compensation measures for unavoidable encroachments.
- Vegetation Debris Management Plan (VDMP) - the VDMP will, as a minimum, describe generic and site specific measures for handling, storing, re-using and/or disposing of non-merchantable vegetation.
- Waste Management Plan (WMP) - the WMP will, as a minimum, describe measures that will be implemented to reduce, re-use and recycle solid waste, as well as the disposal plan for solid, non-hazardous waste.
- Water Quality Sampling Program (WQMP) - the WQMP will, as a minimum, describe the water quality and sampling program that will be implemented for runoff from PAG/ML rock cuts and the general water quality field sampling program.
- Wildlife Mitigation Plan (WiMP) - the WiMP will, as a minimum, demarcate sensitive wildlife habitats on construction drawings and in the field, identify measures to minimize impacts to wildlife and describe wildlife enhancement measures, including restoration planning measures to benefit wildlife. The plan will identify timing restrictions and describe wildlife salvage procedures.

4. AREAS OF MAXIMUM ENVIRONMENTAL IMPACT

- 4.1 The Concessionaire will keep environmental impacts within the magnitude and extent identified in the application (the “EA Application”) for the Environmental Assessment Certificate and submissions during the EA Application review period, as the same may be modified from time to time and approved by the appropriate environmental agency from time to time as a result of changes to the design by the Concessionaire which do not contravene and which continue to reflect the sensitive features and constraints set forth in Annex 4 [Sensitive Features and Environmental Constraints] hereto. Within Horseshoe Bay to Sunset Beach, the maximum areas of environmental impact are:

Red-listed plant ecosystem, including the Arbutus-Hairy Manzanita unit	0 ha
Blue-listed plant ecosystem	0.70 ha
Douglas fir/Arbutus woodland-rock outcrop ecosystem	1.36 ha
Wetted area of swamp habitat in Larsen Creek headwaters	0 ha

5. ENVIRONMENTAL DESIGN

- 5.1 The landscape and site restoration design for the Project is to be consistent with Context Sensitive Design aesthetic guidelines set forth in the *Design Guidelines for the Highway 99 Sea-to-Sky Parkway Corridor: Context Sensitive Design Engineering Practices* and with MOT's *Manual of Aesthetic Design Practice* dated September, 1991 ("MADP"). The Works shall generally conform with the landscape and aesthetic criteria for "Parkway" as defined in the MADP, as recommended by the Context Sensitive Design aesthetic guidelines, and shall comply with the landscape and restoration design requirements set out in Section 8 [Construction Output Specifications].
- 5.2 Without limiting the foregoing paragraph, the Concessionaire is required to:
- Apply the Federal Department of Fisheries and Oceans ("DFO") hierarchy of preferences for crossing structures.
 - Obtain Authorization from DFO under subsection 35(2) of the *Fisheries Act*, R.S.C. 1985, c. F-14, for any Harmful Alteration, Disruption or Destruction of fish habitat ("HADDs").
 - Offset any HADDs with compensation that is acceptable to DFO.
 - Comply with all post-construction monitoring requirements prescribed by DFO.
 - Finalize the design of all fisheries compensation for the Works, with the exception of the fisheries compensation site at the old salt shed location (PA sta. 229+250).
 - Culvert design and placement in the District of Squamish will adhere to the following specifications:
 - Mamquam Blind Channel culvert (PD Stn. 144+370). This is the "main" Mamquam Blind Channel culvert. It is presently a 1.8m CSP with an invert elevation of 0.37m (GSC). The preferred crossing solution at this site is a 1.8m x 1.8m (6'x6'), concrete box culvert (no baffles required). It should be set at the same location and gradient as the existing culvert but the invert should be lowered to -1m (GSC).
 - Mamquam Blind Channel culvert (PD Stn. 144+593). This is the "minor" Mamquam Blind Channel culvert. It is presently a 0.6m CSP with an invert elevation of 0.58m (GSC). The preferred crossing solution at this site is a 0.67m x 1.1m (or larger) concrete box (no baffles required). It should be placed in the same location and the same gradient as the existing culvert but its invert should be lowered to 0.0m (GSC).

- Mashiter Spawning Channel culvert (PD Stn. 147 +285). The preferred crossing solution for this site is that an equal or larger size culvert be used to replace the existing culvert. Either a concrete box or elliptical corrugated steel culvert can be used. The new culvert should be placed in the same location, or immediately adjacent to, the existing culvert. Its invert should be set 1m lower than the existing culvert's invert. The bottom of the new culvert should be "seeded" with fisheries gravel to a depth of approximately 25 cm.
- Include wildlife habitat enhancement features in the design of all fisheries compensation for the Works. These features will be developed in consultation with WLAP and Canadian Wildlife Service ("CWS").
- Where roadside rock piles and talus habitat is removed in the Daisy Lake area, rock pile habitat suitable for pika shall be recreated to an equivalent extent.
- Provide cyclist-safety railings where appropriate (in accordance with current MOT policy/design guidelines).
- Re-align and revegetate any affected sections of the Baden Powell Trail, and grade-separate any Concession Highway crossings of trail (approximately PA sta. 99+700 to 101+100; URA Ref. No. PA1-1).
- Grade-separate any Concession Highway crossing of the Black Mountain trail at Larsen Creek (approximately PA sta. 100+200; URA Ref. No. PA1-1), and preserve the continuity and functionality of the fire response and water system accesses.
- Re-align and revegetate recreation trail below the Existing Highway (west side) from Tidewater Avenue through to Southview Place, to existing or better conditions (approximately PA sta. 110+980 to 111+500; Upland Recreation Assessment (URA) Ref. No. PA2-4).
- Retain northbound access to Britannia forest service road for backcountry recreation access (approximately PA sta. 129+080; URA Ref. No. PA6-3).
- Retain road access to "Comic Rocks" rock climbing area (approximately PA sta. 129+620; URA Ref. No. PA6-3).
- Retain pedestrian access route via southbound shoulder, extending north from pullout along the west side of Concession Highway, to existing or better conditions to allow climbers to access trail to Seal Cove (approximately PA sta. 133+850 to 134+340; URA Ref. No. PA7-2).
- Remove the temporary third lane immediately after the Olympic Games are finished and re-establish the recreation trail within Murrin Provincial Park between Browning Lake and the New Highway to existing or better conditions (approximately PA sta. 135+100 to 135+420; URA Ref. No. PA7-3).
- Accommodate pedestrian access along east side of Concession Highway for climbers' access and trail route connecting crags and trail points in Murrin Provincial Park and surrounding areas (approximately PA sta. 135+210 to 135+780; URA Ref. No. PA7-4, PA8-1).

- If Works encroach on the trail to Papoose climbing area, reconstruct trail connection from Shannon Provincial Park to Papoose climb to existing or better conditions and revegetate between trail and New Highway (approximately PA sta. 139+690; URA Ref. No. PA8-4).
- Ensure continued pedestrian access across Mamquam Blind Channel bridge and under bridge on north side (approximately PA sta. 143+670; URA Ref. No. PA9-2).
- If Works encroach on Rose Park and nature viewing trails, reconstruct trail and revegetate to existing or better conditions (approximately PA sta. 143+750 to 143+980; URA Ref. No. PA9-2).
- If Works encroach on vegetative screening at Brennan Park municipal sports fields, then re-establish vegetative screening to existing or better conditions (approximately PA sta. 146+490 to 146+600; URA Ref. No. PA9-3).
- Ensure continued pedestrian access across Mamquam River bridge and under bridge on north side, and if there is encroachment on north side of Mamquam River recreation trail system, then reconstruct trail and/or revegetate trail to existing or better conditions (approximately PA sta. 147+000 to 147+240; URA Ref. No. PA10-1).
- Retain recreation access upland via Chance Creek forest service road (approximately PA sta. 231+230; URA Ref. No. PA14-5).
- Retain recreation access upland via Daisy Main forest service road or alternative access (approximately PA sta. 244+950; URA Ref. No. PA16-3).
- Retain recreation access upland via Callaghan forest service road or alternative access (approximately PA sta. 245+400; URA Ref. No. PA16-4).
- If Works encroach on “Train Wreck Trail” east of the Concession Highway and/or recreation/historical features, then reconstruct trail and revegetate to existing or better conditions in consultation with Interested Parties’ representatives including Whistler Off-Road Cycling Association (“WORCA”), Regional Municipality of Whistler (“RMOW”)) (approximately PA sta. 247+200 to 247+500; URA Ref. No. PA 16-6, PA16-7).
- If Works encroach on trails or trailheads on west or east side of Concession Highway, then reconstruct trail and revegetate to existing or better conditions in consultation with Interested Parties’ representatives (including WORCA and RMOW) (approximately PA sta. 249+900; URA Ref. No. PA16-7).
- Design and construct viewpoints and/or pullouts described in Table 8-5 (Highway 99 Viewpoint and Pullout Provisions) in Part 1 of Schedule 5 [Construction Output Specifications], and maintain all existing, reconstructed, and constructed viewpoints and pullouts at the same level as safety rest areas as set out in Schedule 7 [Operation and Maintenance] to the Agreement.

5.3 Noise Design Mitigation

The Concessionaire will design and construct noise attenuation and incorporate construction methods and techniques to achieve traffic noise reductions at key locations along the corridor. The Concessionaire will use Open Graded Friction Course and other design mitigation features, such as traffic calming, to achieve a 5 dB reduction in the follow locations:

Area of Highway 99:	Approx. length:	From:	To:
Village of Lions Bay	3.6 km	Southern Lions Bay Village Limit (South of Kelvin Grove)	Northern Lions Bay Village Limit (North between Magnesia Creek and M Creek)
District of Squamish	10.6 km	200 meter south of Stawamus Forest Road	200 meters north of Depot Road

The Concessionaire is to provide a planted wall (“Green Wall”), approximately 150m in length, on the east side of the Concession Highway, below the Lions Bay condominiums that are adjacent to the commercial area. The Green Wall must be designed and constructed such that it has the capability of supporting a noise attenuation wall above. The Concessionaire is to remove the existing wooden noise barrier on the west side of the Concession Highway adjacent to the southbound off-ramp to Lions Bay Avenue and replace it with a noise barrier that is aesthetically acceptable to the Province. The Concessionaire is not to use wooden barrier and will undertake community consultation regarding noise barrier aesthetics and construction methods.

6. CONSTRUCTION

- 6.1 The Concessionaire must comply with the environmental design criteria as are set forth as part of the Concessionaire’s Environmental Obligations, when constructing in the vicinity of the archaeology, vegetation and wildlife, recreation, and fisheries constraints identified in Annex 4 [Sensitive Features and Environmental Constraints] hereto and when constructing in the vicinity of any other sensitive environmental sites identified during the Contract Period.
- 6.2 The following documents (contained in the Data Room) describe minimum environmental protection construction requirements:
- Water Quality Monitoring Program, Sea-to Sky Highway Improvement Project;
 - Air Quality Monitoring and Mitigation Plan Considerations, dated February 2004;
 - Guidelines for the Control of Construction Noise Impacts, dated April 2004;
 - Guidelines for Emergency Impact Management: Heritage and Archaeological Resources.

- SS 165 *Protection of the Environment* of the Ministry's Standard Specifications. The Highway is classified as a "designated environmentally sensitive area" in accordance with SS 165.01.04 and is subject to all the restrictions set out in SS 165;
- Instream Works Windows Information Bulletin available at <http://wlapwww.gov.bc.ca/sry/fwh/hp/iwn.htm>.

6.4 Water

6.4.1 The Concessionaire must:

- Carry out the Works in a manner that protects and maintains surface and groundwater resources, both within and outside the Site and Adjacent Areas, including drinking water supplies.
- Apply current best management practice to the design of all stormwater conveyance systems and be responsible for implementing a design that will ensure that existing water quality conditions improve or, at a minimum, do not deteriorate.
- Be responsible for planning, scheduling and performing the Works in such a manner that the quality of water flowing from the Site, the Off-Site Facilities, and the Temporary Off-Site Facilities is, at all times, acceptable to all relevant environmental agencies, and take immediate action to correct any deficiency in water quality.
 - The Concessionaire is responsible for conducting water quality field sampling during construction, as described in the Sea-to-Sky Highway Improvement Project Water Quality Monitoring Program document.
- Be responsible for conducting water quality sampling and analysis of runoff from potentially acid generating/metal leaching ("PAG/ML") rock cuts and water quality field sampling protocol as described in the Water Quality Monitoring Program document.
 - Should the water quality monitoring program indicate that water quality has deteriorated, directly or indirectly, as a result of the Works, the Concessionaire is responsible for all costs associated with implementing measures to identify the source of the problem and re-establishing the ambient water quality condition.

6.5. Ocean Dumping And Barge Loading

- The Concessionaire is responsible for applying and securing all ocean dumping permits for periods after September 15, 2005, along with all permit costs.
- Prior to September 15, 2005, it is anticipated that Environmental Stewardship Division, WLAP, will issue a Park Use Permit for the limited use of Porteau Cove for barge loading operations during construction. The Concessionaire will comply with all restrictions and requirements of the Park Use Permit.
- The Concessionaire's ocean dumping and barge loading operations will be physically limited to the area of land that is designated as a Recreation Area under the *Park Act*, R.S.B.C. 1996, c.344.

- The Concessionaire will prepare an annual operating plan in respect of ocean dumping and barge loading for submission to and approval by WLAP. The Concessionaire's barge loading operations will not be permitted to be undertaken between June 25 through September 7 annually, with preference given to undertaking barge loading operations between September 15 and May 15 of any year.
- The Concessionaire is responsible for compensating the operator of Porteau Cove park facility and WLAP should either party lose revenue opportunities as a result of the barge loading operation at Porteau Cove, as determined by an independent business valuator or as otherwise agreed upon by the affected parties.
- The Concessionaire is responsible for either repairing or compensating WLAP for any damage to the Porteau Cove park facility that occurs as a result of the Concessionaire's barge loading operation.

6.6 Noise And Air Quality

The Concessionaire is responsible for:

- Monitoring of noise during construction and implementing measures to mitigate construction noise. The Concessionaire is responsible for conducting post-construction noise monitoring 1 year after construction completion to verify the accuracy of traffic noise projections and the effectiveness of the noise mitigation techniques implemented by the Concessionaire in accordance with this Schedule. The Concessionaire must conduct post-construction noise monitoring in all areas where the Concession Highway has been surfaced with open graded friction course.
- If post-construction noise monitoring results indicate that the noise mitigation measures do not achieve the 5 dB reduction in noise levels in accordance with this Schedule, re-design and re-construction of noise attenuation and undertake additional monitoring until it is demonstrated that the 5 dB noise reduction objective has been achieved. In addition, if the Concessionaire proposes any measures in Lions Bay to exceed the MPR of 5 dB reduction in noise levels, the Concessionaire must conduct post-construction noise monitoring to verify if these enhanced noise mitigation techniques have achieved the additional dB noise reduction objective and is responsible for the re-design and re-construction of noise attenuation and additional monitoring until it is demonstrated that the additional dB noise reduction objective has been achieved.
- Developing, in consultation with the Squamish First Nation, noise mitigation measures and a noise monitoring program applicable to IR 24 during construction.
- Air quality monitoring and implementing mitigation measures during construction to minimize the generation of road dust and particulate matter. The Concessionaire must provide air quality monitoring and management at IR 24. The monitoring and management program that applies to IR 24 will be developed in consultation with the Squamish First Nation.

6.7 Archaeology

The Concessionaire is responsible for:

- Developing an Archaeology and Culturally Modified Trees Management Plan in consultation with the Squamish First Nation and the Lil'wat First Nation.
- Any archaeological impact assessments as may be required in addition to those carried out by the Province prior to the date of this Agreement.
- All tasks associated with managing the Archaeological Resources (as defined in the document posted at <http://srmwww.gov.bc.ca/arch/pubs/resweb/archres.htm#arch>) and Culturally Modified Trees (as defined in the document posted at <http://srmwww.gov.bc.ca/arch/policy/regist.htm>).

6.8 Bird Habitat

The Concessionaire is responsible for:

- Conducting pre-construction raptor (bald eagle, osprey, peregrine falcon) and heron nest and roost tree surveys.
- Pre-construction surveys of spotted owls.
- Pre-construction nest survey(s) for marbled murrelet on the east side of Doodson Corner, (Polygon 899) in accordance with the commitments and responsibilities set forth in Annex 2 [Environmental Commitments and Responsibilities] hereto.
- Conducting pre-construction nest surveys to the satisfaction of the CWS should the Concessionaire intend to seek approval from the CWS for vegetation clearing within the no-clearing period of March 15 to July 31 (bird breeding time period) in any year during the Contract Period.

7. OPERATION, MAINTENANCE AND REHABILITATION

7.1 Section 2 of Annex 4 to Schedule 23 [Operation, Maintenance & Rehabilitation Plan] outlines the responsibilities of the Concessionaire for environmental matters throughout the operation, maintenance and rehabilitation phases of the Project.

7.2 The Concessionaire is fully responsible for any referrals to relevant environmental agencies which may be necessary or desirable at any time and from time to time during the Contract Period and for satisfying any requirements imposed by any such agency.

SCHEDULE 12

ENVIRONMENTAL OBLIGATIONS

Part 2

Other Environmental Obligations

1. The environmental commitments and responsibilities set forth in Part 2 of Annex 2 [Environmental Commitments and Responsibilities] hereto are not the obligation of the Concessionaire, unless otherwise expressly stated in Part 1 of Annex 2.

Annex 1

Environmental Assessment Certificate

This Annex 1 to Schedule 12 attaches the Environmental Assessment Certificate, and the Federal Screening Recommendation and Decision Summary.

**IN THE MATTER OF
THE ENVIRONMENTAL ASSESSMENT ACT, S.B.C. 2002, c. 43 (THE ACT)**

AND

**IN THE MATTER OF
AN APPLICATION FOR AN ENVIRONMENTAL ASSESSMENT CERTIFICATE
BY THE MINISTRY OF TRANSPORTATION (THE MoT)**

FOR THE

SEA TO SKY HIGHWAY IMPROVEMENT PROJECT (THE PROJECT)

ENVIRONMENTAL ASSESSMENT CERTIFICATE T04-01

Whereas,

- A. On July 31, 2003, the Executive Director's delegate of the Environmental Assessment Office (the EAO) accepted for review an application (the Application) from the MoT for an Environmental Assessment Certificate (the Certificate) under the Act for the Project;
- B. The Project comprises an upgrade of the existing Sea-to-Sky Highway between Horseshoe Bay and Whistler, excluding the upgrading of the section of highway between Culliton Creek and Cheakamus Canyon, to improve highway safety and reliability, reduce travel times and accommodate increased traffic during the Vancouver/Whistler 2010 Winter Olympics.
- C. The Application was reviewed by representatives from federal, provincial and local government agencies and by the Squamish Nation, the Lil'wat Nation, the Tsleil-Waututh First Nation and the Musqueam Indian Band;
- D. The MoT provided additional reporting on consultations held with the Village of Lions Bay in the *Sea-to-Sky Highway Improvement Project Clarification Report: Village of Lions Bay, March 2004*;
- E. The MoT provided additional reporting on consultations held with the District of West Vancouver in the *Sea-to-Sky Highway Improvement Project Clarification Report: Horseshoe Bay to Sunset Beach, (West Vancouver Segment), April 2004* (the West Vancouver Clarification Report);

- F. The West Vancouver Clarification Report presents two alignment Options for certification by Ministers, namely, Option B and Option D. Option B is described as an overland route with four new lanes up-slope from the existing Highway 99 corridor and Option D includes a two-lane two way tunnel approximately 1 kilometre in length;
- G. The MoT proposes to develop an Environmental Management Plan (the EMP) that includes a number component plans as described in the Application and in the MoT's "Owner's Commitments and Responsibilities" (the MoT Commitments);
- H. The Executive Director's delegate reported on the potential effects of the Project in a report entitled the "Sea to Sky Highway Improvement Project Assessment Report" (the Assessment Report);
- I. The Project may be constructed in sections referred to as "work packages" in the Application and described in Table 1 of the Assessment Report;
- J. The documentation and correspondence listed in Schedule A, in particular, the MoT's Commitments, includes commitments made by the MoT during the environmental assessment review and is subject to Condition 1 of this Certificate;
- K. The Executive Director has referred the Application, the Assessment Report, and Recommendations of the Executive Director and Reasons for Recommendations pursuant to s.17 of the Act, to the Minister of Sustainable Resource Management (the Minister), the Minister of Community and Aboriginal and Women's Services (the Responsible Minister), and the Minister of Water, Land and Air Protection (hereafter the Ministers); and,
- L. The Ministers have considered the Application, Assessment Report, and Recommendations of the Executive Director and Reasons for Recommendations.

Now Therefore,

The Ministers, pursuant to s.17(3) of the Act, hereby issue this Certificate to the MoT subject to the following conditions (the Conditions):

Conditions

1. The MoT must cause the Project to be designed, located, constructed, and operated in accordance with the Conditions of this Certificate and the documents and correspondence listed in Schedule A, and the MoT 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 contents of 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 Conditions which follow, these Conditions must take precedence over and supersede the contents of the documents listed in Schedule A.
4. Despite Condition 1 above, if prior to the start of construction of a work package defined in Table 1 of the Assessment Report and as described in the documents listed in Schedule A, the MoT proposes a material change to the design, location, construction or operation of the Project within that work package and the change may in the opinion of the Executive Director have the potential for significant adverse effects, the MoT must then provide to the Executive Director:
 - a) an application in writing to amend the Certificate pursuant to s.19(1) of the Act; and,
 - b) plans, analysis, records and other information necessary for an effective assessment by the Executive Director of the potential impacts of the proposed change.
5. The MoT must submit, to the satisfaction of the Executive Director, quarterly reports on the status of compliance with the Conditions of this Certificate, and the documents and correspondence listed in Schedule A, from the date of issuance of this Certificate until completion of Project construction on all work packages. The Executive Director may adjust or extend this reporting requirement by providing written notice to the MoT.
6. As part of the compliance reporting responsibilities defined in section 5 above, the MoT must provide each component plan of the EMP to third parties in consultation with the Executive Director, or where required by other statutory requirements. The MoT must report on any required review, amendment or implementation of component plans of the EMP in a manner mutually acceptable to the Executive Director, the MoT and regulatory agencies.
7. This Certificate is of no force or effect until signed by the Ministers.
8. This Certificate does not constitute a permit, licence, approval or any other authority required under any other enactment.
9. The MoT 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

10. The MoT 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, if not this Certificate expires.

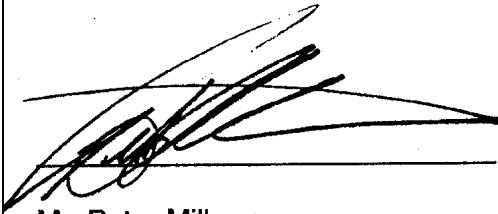
Suspension, Cancellation and Amendment of Certificate

11. This Certificate may be subject to cancellation, suspension in whole or in part, amendments, or the attachment of new Conditions, for any of the following reasons:

- a) the Minister has reasonable and probable grounds to believe that the MoT 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 MoT or its officers or employees when acting on behalf the MoT, have been convicted of an offence under the Act, with respect to the Project.

The Conditions of this Certificate are agreed to by the MoT this

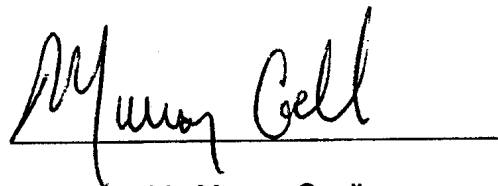
19 day of May, 2004



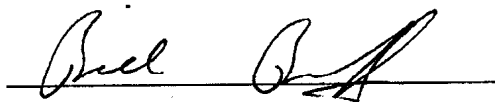
Mr. Peter Milburn
Executive Project Director
Ministry of Transportation



Honourable George Abbott
Minister of Sustainable Resource
Management



Honourable Murray Coell
Minister of Community, Aboriginal
and Women's Services



Honourable Bill Barisoff
Minister of Water, Land and Air Protection

Issued this 4th day of June, 2004, in Victoria, British Columbia.

SCHEDULE A**DOCUMENTATION AND CORRESPONDENCE FOR THE
SEA-TO-SKY HIGHWAY IMPROVEMENT PROJECT**

1. August 13, 2003: Sea to Sky Highway Improvement Project Application for Project Approval Certificate from the Ministry of Transportation (MoT) Volumes 1 to 5
2. October 7, 2003: Letter from Peter Milburn to Ray Crook re: Re: Sea to Sky Highway Improvement Project Geotechnical Investigations
3. October 10, 2003: Letter from Jim Roberts (Coast River Environmental Services) to Debra Hughes and Sylvia Letay re: Alternative option for replacement of the Horseshoe Bay overhead structure
4. October 24, 2003: Public Consultation Report
5. October 31, 2003: Email from Angela Buckingham to John Turner re: Response to comments on the application
6. November 17, 2003: Letter from Angela Buckingham to Sue Farlinger re: MoT response to DFO Comments
7. November 19, 2003: Email response from Tom Tasaka to Mick Gottardi re: comments on the application
8. November 25, 2003: Letter from Angela Buckingham to Kim Bellefontaine re: response to comments on the application
9. November 26, 2003: Letter from Angela Buckingham to Jennifer Tennant re: Response to comments on the application
10. November 26, 2003: Letter from Angela Buckingham to Dave Carter re: Response to comments on the application
11. November 27, 2003: Letter from Peter Milburn to Chief Gibby Jacob and Council and Chief Leonard Andrew and Council re: Response to First Nations comments on the application (plus attachment).
12. November 27, 2003: Letter from Angela Buckingham to Stephanie Meyn re: response to comments on the application
13. November 27, 2003: Letter from Angela Buckingham to Tom Bell re: Response to comments on the application

14. November 27, 2003: Letter from Angela Buckingham to Michael Willcox re: Response to comments on the application
15. November 27, 2003: Letter from Angela Buckingham to Jacques Dupas re: Response to comments on the application (plus attachment)
16. November 28, 2003: Letter from Angela Buckingham to Dave Carter re: Response to comments on the application (Plus attachment "Technical Information Package")
17. November 28, 2003: Letter from Angela Buckingham to Carl Alleyne re: Response to comments on the application
18. December 12, 2003: Letter from Peter Milburn to Elizabeth Jordan re: Response to comments on the application
19. December 18, 2003: Letter from Tom Tasaka to Paul Shakotko re: Response to comments on the application
20. December 19, 2003: Letter from Tom Tasaka to Marion Town re: Response to comments on the application
21. January 23, 2004: E-mail from Isobel Doyle to Jennifer Tennant re: STS Response to questions from December 4 BTWG meeting (with attachment entitled "Responses to Questions Raised During --STS Biophysical/Technical Working Group Meeting – 04-12-03")
22. February 11, 2004: Letter from Peter Milburn to Chief Maureen Wilson and Council re: Response to Comments on Proposed Sea to Sky Project - Environmental Assessment Application
23. February 2004: Cumulative Effects Assessment Report
24. March 2004: Sea to Sky Highway Improvement Project Clarification Report: Village of Lions Bay
25. April 2004 Sea to Sky Highway Improvement Project Clarification Report: Horseshoe Bay to Sunset Beach (West Vancouver Segment)
26. April 13, 2004: E-mail from Isobel Doyle to Paul Finkel re: Detours - Sea to Sky
27. April 16, 2004: Letter to Dave Carter regarding follow-up to meeting of February 24, 2004 with two attachments (ABC Pipe Cleaners Services Ltd. Report and Summary of Onsite Review with DFO)

28. April 26, 2004: Status Update for EAO Test Section Construction
29. May 5, 2004: Sea to Sky Highway Improvement Project Ministry of Transportation Response to Biophysical/Technical Working Group and Socio-economic Working Group Comments on the Clarification Report, Horseshoe Bay to Sunset Beach, April 2004
30. May 7, 2004: Letter from Peter Milburn to Mayor Douglas Miller and Lions Bay Council re: Outline of the Important Design Elements
31. May 12, 2004: E-mail from Daphne Taylor (on behalf of Tom Tasaka) re: STS - Comment from Lions Bay Rep to the Working Group
32. May 10, 2004 Addendum to the Cumulative Effects Assessment Sea-to-Sky Highway Improvement Project
33. May 18, 2004: Owner's Commitments and Responsibilities - Sea-to-Sky Highway Improvement Project



Linda Sullivan
Pacific and Yukon Region
Canadian Environmental Assessment Agency
320 - 757 West Hastings Street
Sinclair Centre
Vancouver, BC V6C 1A1

June 11, 2004

Mr. Paul Finkel
Project Assessment
Environmental Assessment Office
836 Yates Street
Victoria, B.C. V8W 1X4

Dear Mr. Finkel:

Subject: Screening Report for the Sea to Sky Highway Improvement Project

On behalf of federal responsible authorities, the Canadian Environmental Assessment Agency is providing the screening decision for the environmental assessment of the Sea to Sky Highway Improvement Project regarding meeting the requirements of the *Canadian Environmental Assessment Act* (CEAA) for a screening level environmental assessment.

The need for an assessment under CEAA comes from Fisheries and Oceans Canada's (DFO) determination that an authorization under the *Fisheries Act* will be required for the project, from Environment Canada's (EC) determination that an ocean disposal permit under the Canadian Environmental Protection Act will be required, from Transport Canada's determination that a permit for construction of a bridge over navigable waters will be required and from Indian and Northern Affairs Canada's (INAC) determination that a land use permit under the Indian Act will be required.

DFO, EC, TC and INAC and other federal agencies participated in the joint environmental assessment with the provincial Environmental Assessment Office in accordance with the Canada/BC Agreement for Environmental Assessment Cooperation. The determination pursuant to CEAA is contained in the attached document.

Please contact me if you have any questions or concerns relating to the attached screening report.

Yours truly,

A handwritten signature in black ink, appearing to read "Linda Sullivan". The signature is fluid and cursive, with a large initial "L" and "S".

Linda Sullivan
Senior Project Officer
Canadian Environmental Assessment Agency

cc: Paul Scott, CEA Agency
Lisa Walls, Environment Canada
Jeff Johansen, Fisheries and Oceans Canada
Bob Gowe, Transport Canada
Joanne Wilkinson, Indian and Northern Affairs Canada
Jan Hagen, Environmental Assessment

**SCREENING RECOMMENDATION AND DECISION SUMMARY
CANADIAN ENVIRONMENTAL ASSESSMENT ACT**

FISHERIES AND OCEANS CANADA
Oceans, Habitat and Enhancement Branch

ENVIRONMENT CANADA
Environmental Protection Branch

TRANSPORT CANADA
Navigable Waters Protection Division

INDIAN AND NORTHERN AFFAIRS CANADA
Lands and Trust Services

PROJECT IDENTIFICATION

Responsible Authorities:

Date: June 10, 2004

Fisheries and Oceans Canada (DFO)
Environment Canada (EC)
Transport Canada (TC)
Indian and Northern Affairs Canada (INAC)

PROJECT NAME:

Sea to Sky Highway Improvement Project

PROJECT LOCATION:

The Sea-to-Sky Highway Improvement Project (Project) extends from immediately east of Nelson Creek canyon in the District of West Vancouver to Function Junction in Whistler, a distance of approximately 95 kilometres (km). The Project excludes the section of highway between Cullifton Creek and Cheakamus Canyon because highway improvements in this area were already approved by DFO prior to this review.

PROJECT INFORMATION:

The Project is subject to a screening level assessment under the *Canadian Environmental Assessment Act* (CEAA) as it requires federal actions (CEAA Law List Regulations) to be taken in order for the project to proceed. The Project is also subject to provincial review because the Ministry of Transportation (Proponent) requested the provincial Environmental Assessment Office to designate the Project a reviewable project in accordance with Section 7(1) of the

SCREENING RECOMMENDATION AND DECISION SUMMARY CANADIAN ENVIRONMENTAL ASSESSMENT ACT

BC Environmental Assessment Act. Thus, a joint environmental assessment was undertaken with the provincial EAO in accordance with the Canada/BC Agreement on Environmental Assessment Cooperation.

For the purposes of the environmental assessment review the scope of the Project included:

- the works necessary to improve the existing highway;
- methods and locations for disposal of rock, surplus material and other waste;
- construction, use and maintenance of new ancillary facilities such as equipment storage and marshalling areas, barge access areas and gravel borrow areas;
- ancillary road system modifications adjacent to the Sea-to-Sky Highway associated with construction, operation and maintenance of the Project;
- all off-site facilities such as construction camps or other infrastructure services associated with and necessitated by implementation of the Project;
- any off-site environmental compensation works associated with and necessitated by implementation of the Project;
- all activities associated with the construction, operation and maintenance of the upgraded highway, including ongoing maintenance and traffic management; and
- any other physical works or activities which, in the view of the Responsible Authorities, form an integral part of the Project.

POTENTIAL IMPACTS:

Community Noise Impacts

- temporary during construction phase
- permanent during operations phase
- concentration of noise in Westport area if tunnel option chosen

Geochemical Issues

- acid rock drainage
- disposal of potential acid generating materials

Geotechnical Issues

- landslides
- rock cuts and excavation

Water Quality

- oil and grease
- sedimentation

Air Quality

- emissions from vehicle traffic
- concentration of emissions at tunnel portals if tunnel option chosen

Fisheries and Aquatics

- stream channel modifications at crossings
- hydrology and stream flows

SCREENING RECOMMENDATION AND DECISION SUMMARY CANADIAN ENVIRONMENTAL ASSESSMENT ACT

- Wildlife
 - loss of riparian vegetation
 - loss and disturbance of wildlife, including species at risk, and associated habitats
 - habitat fragmentation
- Vegetation
 - loss of common vegetation
 - Arbutus trees
 - Red and blue listed plant communities

FEDERAL CONSIDERATIONS:

Based on the joint environmental assessment, the Responsible Authorities considered all potential environmental impacts of the Project and the mitigation measures proposed by the Proponent. Documentation included the Application; Clarification Reports; government, First Nation and public comments on the potential effects of the Project; responses from the Proponent; and the discussions of the Biophysical/Technical and Socio-Economic Working Groups.

Expert Federal Authority advice was sought from Health Canada (HC) and Natural Resources Canada (NRCAN) on matters within their areas of expertise. HC and NRCAN commented on the Application and the responses from the Proponent. HC's comments were addressed as part of the joint assessment. While the discussion of geochemical issues was completed as part of the joint assessment process, NRCAN also raised concerns regarding geotechnical issues not covered in the Application. In correspondence with the Proponent, these matters were satisfactorily addressed by the Proponent.

The Ministry of Water, Land and Air Protection provided expert advice regarding impacts on the Coast Tailed Frog, a species at risk listed in Schedule 1 of the *Species at Risk Act*. Based on the mitigation measures provided by the Proponent, the Ministry advised that no significant adverse environmental effects are expected as a result of the Project. The Responsible Authorities also relied on the assessment of the Ministry of Water, Land and Air Protection with regards to the effects of the Project on provincially listed plant communities.

At a meeting on June 7, 2004, the District of West Vancouver, DFO, EC and the Canadian Environmental Assessment Agency discussed the environmental assessment process under CEAA and the proposal for an overland route through the District's lands. The District of West Vancouver raised their concerns about impacts on red-listed plant communities, the potential for trees to blow down and the impact of noise on residents. They were advised that these issues had been considered during the review of the project and, taking into account the mitigation measures proposed, no significant environmental effects had been identified. They were also advised that the CEAA process does not allow for federal

SCREENING RECOMMENDATION AND DECISION SUMMARY CANADIAN ENVIRONMENTAL ASSESSMENT ACT

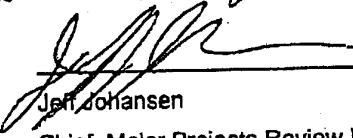
agencies to require the option with the least environmental effects; the decision is whether significant adverse environmental effects would be likely to result from the project as proposed. Neither of the route options through the District of WV was found to be likely to cause significant adverse environmental effects.

Environmental issues raised by West Vancouver residents with respect to the overland and tunnel route options were considered by the Responsible Authorities and addressed during the joint review of the project.

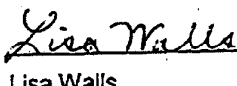
SCREENING DECISION

Fisheries and Oceans Canada (DFO), Environment Canada (EC), Transport Canada (TC) and Indian and Northern Affairs Canada (INAC), responsible authorities as defined in the CEAA, have completed their review of the Sea to Sky Highway Improvement Project. DFO, EC, TC and INAC have completed a harmonized environmental assessment of the project working in cooperation with the British Columbia Environmental Assessment Office. All relevant factors required by Section 16 of CEAA were considered including the environmental effects of the Project and their significance. Based on the information in the Project Assessment Report dated May 2004, conditions in the Commitments Table, and Considerations (see above) DFO, EC, TC and INAC have concluded that the project is not likely to cause significant adverse environmental effects. In accordance with Section 20(1)(a) of CEAA, such a determination enables the Habitat and Enhancement Branch of DFO, EC, TC and INAC to proceed, if appropriate, with the issuance of an Authorization under subsection 35(2) the Fisheries Act, a Permit under the Canadian Environmental Protection Act, a Permit under subsection 5(1) of the Navigational Waters Protection Act and a Permit under subsection 28, and/or subsection 35(2) of the Indian Act.

Approved by:

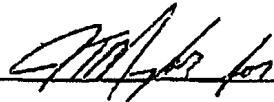
 (Date) June 11, 2004
Jeff Johansen
Chief, Major Projects Review Unit
Habitat and Enhancement Branch, DFO
Pacific and Yukon Region

Approved by:

 (Date) June 11, 2004
Lisa Walls
Head, Environmental Assessment and Waste
Prevention Section
Environmental Protection Branch
Environment Canada
Pacific and Yukon Region

**SCREENING RECOMMENDATION AND DECISION SUMMARY
CANADIAN ENVIRONMENTAL ASSESSMENT ACT**

Approved by:

 (Date) 07/06/11

Bob Gowe

Chief, Navigable Waters Protection Division

Transport Canada

Pacific Region

Approved by:

 (Date) 11/6/14

Joanne Wilkinson

Associate Director

Lands and Trust Services

Indian and Northern Affairs Canada

Pacific Region

Annex 2**Environmental Commitments and Responsibilities****PART 1****Commitments and Responsibilities of the Concessionaire**

The commitments and responsibilities set forth herein are without prejudice to and form part of the Concessionaire's Environmental Obligations.

These commitments and responsibilities apply to on-site, off-site, permanent, temporary and ancillary works and activities. "Site" refers to highway right-of-way as it may exist from time to time and as defined in Schedule 1 [Definitions and Interpretation].

1. General

The Concessionaire will mitigate the potential impacts to the environment by:

- 1.1 Providing one month advance notice to the environmental agencies that an item(s) subject to agency review will be provided for review.
- 1.2 Developing an Environmental Management Plan prior to construction start-up, in accordance with or equivalent to the provisions of Section 165 of Ministry of Transportation's ("MoT") *Standard Specifications for Highway Construction* (hereafter referred to as "Section 165"), contained in the Data Room, to convey an understanding of the Project's environmental constraints (including construction timing) and how the Project will be undertaken to avoid/mitigate negative impacts. The Environmental Management Plan(s) ("EMP") will be submitted by the Concessionaire to the appropriate environmental agency for acceptance before work commences and will include, as relevant, an:
 - Air Quality Monitoring and Mitigation Plan,
 - Archaeology and CMT Management Plan,
 - Raptor/Heron Management Plan,
 - Bear/Human Conflict Reduction Plan,
 - Construction Schedule pertaining to permits and approvals, environmental tasks, environmental timing windows and work restrictions,
 - Contaminated Soils Management Plan,
 - Environmental Quality Management Plan,
 - Environmentally Sensitive Areas Management and Protection Plan,
 - Environmental Training Plan,
 - Equipment and Materials Plan

- Fisheries Mitigation/Compensation Plan (including habitat balance calculations and monitoring)
- Infrastructure Demolition Management Plan
- Materials Management Plan
- Noise Control and Mitigation Plan,
- Potentially Acid Generating/Metal Leaching Materials and Acid Rock Drainage Adaptive Management Plan,
- Recreation Resource Management Plan,
- Riparian Restoration and Terrestrial Reclamation/Revegetation Plan,
- Sensitive Ecosystem Management Plan,
- Sediment and Drainage Management Plan,
- Soil Conservation/ Stripped Organic Material Management Plan,
- Spill Contingency and Response Plan,
- Tailed Frog Management Plan,
- Vegetation Debris Management Plan,
- Waste Management Plan
- Water Quality Sampling Program, and
- Wildlife Mitigation Plan.

Revisions to plans will be required as changes in work scheduling, site conditions and weather occur.

- 1.3 Consulting with environmental agencies to determine the conditions under which work in Environmentally Sensitive Areas (as defined in Section 165) must be carried out.
- 1.4 Conducting on-site investigations and examinations of documents supplied and referenced by the MoT in order to fully comprehend the environmental aspects of the work required.
- 1.5 Producing an Environmentally Sensitive Area Management and Protection Plan for any work in and around Environmentally Sensitive Areas (as defined in Section 165), such as fish habitat. The environmental procedures will contain the following items:
 - Existing environmental conditions. Identification of the environmental resources (e.g. fish species and habitat) in the area of the proposed work.
 - Description of work proposed in the Environmentally Sensitive Area. Summary of the proposed work, equipment to be used, schedule of activities, and location.
 - Environmental protection measures. Statement concerning the measures that will be used to protect environmental resources (e.g., species and habitat) from each potential adverse impact.
 - Contingency plan. Description of alternative or backup plan in the event of an environmental emergency or failure of any of the protective measures.

- Environmental monitoring requirements. Indication of any specific or unique environmental monitoring requirements to ensure compliance with environmental specifications and proper implementation of the environmental procedures.
- 1.6 Retaining an environmental monitor to work on-site during all phases of highway construction. The monitor will work with the Concessionaire to ensure the protection of the environment, that mitigation measures are appropriately implemented and to facilitate communication between the Concessionaire, environmental agencies, and MoT.
 - 1.7 Not Used.
 - 1.8 Providing documented demolition procedures and schedules in the Infrastructure Demolition Management Plan, and liaising closely with environmental agencies to ensure a full understanding of the site-specific environmental issues.
2. **Potentially Acid Generating (PAG) Material Management and Metal Leachate Loading at Final Rock Cut Faces**

The Concessionaire will mitigate the potential impacts to biological receptors from acid generating materials by:

- 2.1 Detailed characterization of metals leaching/ acid rock drainage (“ML/ARD”) in andesitic rock between Sunset Beach and ‘M’ Creek has identified PAG materials in four proposed rock cuts. These results will be used in conjunction with ongoing studies at the Britannia Mine to determine the appropriate handling and disposal options for this material, in consultation with the Ministry of Water Land and Air Protection (“MWLAP”) and Ministry of Energy and Mines.
- 2.2 Optimizing the preliminary highway alignments to minimize rock excavation in areas where the potential exists for acid generating material.
- 2.3 Using best management practices to avoid impacts from ML/ARD from material handling, stockpiling, transportation and placement of stockpiled materials during the construction phase.
- 2.4 Ensuring a properly qualified person or persons are retained for the terms of reference, methodology and products of subsequent metal leachate/ acid rock drainage assessments and mitigation work.
- 2.5 Conducting the proposed detailed risk assessment during detailed design to identify if physical pathways exist and to evaluate the sensitivity of receptors to aluminum and copper toxicity.
- 2.6 Conducting a surface water monitoring program immediately prior to, during and post-construction for the sensitive waterbodies and any ditches at the base of the rock cuts if

physical pathways are shown to exist to these water bodies that contain sensitive aquatic organisms (based on the risk assessment).

- 2.7 Maintaining a comprehensive database of all geological and geochemical data collected for the Concession Highway, including the rock units, sample type, location and results, drainage monitoring locations and results, and maps showing the sampling locations, rock types and acid rock drainage (“ARD”) potential at planned excavation sites. This information will be provided in all tendering documents, and noted in all as-built plans as a guide for those conducting future highway maintenance and expansion. The database and plans will be updated when additional information is collected.
- 2.8 Referring the Potentially Acid Generating/Metal Leaching Materials and Acid Rock Drainage Adaptive Management Plan and the Materials Management Plan to environmental agencies for review and acceptance.
- 2.9 Retaining a qualified consultant to monitor material characteristics during construction to confirm assessments and to identify any materials with the potential for ML/ARD that were missed in the planning stages. The Concessionaire will follow approved material disposal strategies and where necessary, recommend specific mitigative strategies to address unexpected conditions encountered during construction. If such areas are discovered, material handling options will be discussed with the Ministry of Energy and Mines
- 2.10 Not used
- 2.11 Not incorporating acid generating (“AG”) and potentially acid generating (“PAG”) rock into embankment fills or elsewhere in the construction works, nor are they to be wasted other than in approved permitted disposal sites at: Watts Point offshore marine disposal area (PAG rock only), Point Grey offshore marine disposal area (PAG rock only); Britannia Mine Jane Basin glory hole (AG & PAG rock) and commercial disposal sites.
- 2.12 Not segregating PAG and non-PAG materials within rock cuts unless it can be done without the potential for contaminating non-PAG materials with those with the potential for ML/ARD
- 2.13 Taking a proactive approach to designing and implementing measures that will mitigate potential for acid rock drainage and metals leaching from rock cuts. Measures may include:
 - shotcreting rock slopes or otherwise minimizing the infiltration of surface water through PAG/ML materials,
 - diverting surface water or otherwise minimising the volume of water that is in contact with PAG/ML materials,
 - designing ditches that will enhance dilution of acidic or metal contaminated drainage,
 - prevention of sensitive species from exposure to acidic drainage or metal leaching from rock cuts,

- treatment of acidic or metal contaminated water prior to discharge to creeks.
- 2.14 Developing monitoring and maintenance provisions to ensure long-term performance of mitigation works.
- 2.15 Applying for a "Disposal at Sea Permit" in accordance with the Regulations Respecting Applications for Permits for Disposal at Sea.
- 2.16 Not Used.
- 2.17 Encapsulating acid generating material in a bulk fill or waste rock pile and treating any groundwater leachate generated from within it if the results of additional testing on the Squamish to Whistler section indicate acid generation. Detailed testing of the Greenstone rock immediately west of Daisy Lake has shown these rocks to be non-PAG.
- 2.18 Monitoring and treating any groundwater leachate if acid generating materials are encapsulated in bulk fill or waste rock piles on the Squamish to Whistler section until water quality standards are met.

3. Contaminated Soils

The Concessionaire will mitigate the potential impacts by:

- 3.1 Placing fills /soils directly over the existing materials at the Britannia Beach site, so that, if possible, only minimal disturbance takes place.
- 3.2 Obtaining a Soil Relocation Agreement from MWLAP to ensure that any soils at Britannia Beach site that require relocation can be dealt with safely. Soils will be retained within the affected area of Britannia Mine operations.
- 3.3 Ensuring that construction activities do not compromise the Britannia Mines remediation efforts.
- 3.4 Not used.
- 3.5 Developing a Soil Relocation Agreement with MWLAP for the removal and transport of any contaminated soils as required.
- 3.6 Developing a Contaminated Soils Management Plan (see item 1.2).

4. Terrestrial Environment and Wildlife

The Concessionaire will mitigate the potential impacts to wildlife, migratory birds and biodiversity by:

- 4.1 Developing a Wildlife Mitigation Plan that includes measures to limit light pollution and measures to manage wildlife/human interactions.
- 4.2 Including measures to minimize the loss of and mitigate potential impacts to red- and blue-listed plant communities, dry arbutus habitat, and sensitive components of ecosystems in the Sensitive Ecosystems Management Plan, in accordance with management recommendations in Volume 2 Section A: Wildlife and Vegetation as set out in the Application (the “EA Application”) for the Environmental Assessment Certificate. This Plan will include: a survey of sensitive ecosystem polygons that are within proposed clearing and grubbing lines to determine if the sensitive ecosystem component is at risk; measures to delineate buffers around sensitive ecosystem components; measures to control the introduction of invasive and non-native species; and water quality protection measures. This plan will be submitted for environmental agency acceptance before work commences.
- 4.3 Conducting pre-construction raptor (bald eagle, osprey, peregrine falcon) and heron nest surveys following Resource Information Standards Committee standards to determine the status (active or inactive) of previously recorded nests as well as any new active nests and their location.
- 4.4 Retaining and protecting raptor and heron nests and roost trees where possible and applying for a permit under the Wildlife Act, R.S.B.C. 1996, c. 488, if a nest can not be retained.
- 4.5 Complying with the following:
 - a) no clearing of vegetation is permitted during the general bird breeding time period of March 15 to July 31 unless pre-approved by Canadian Wildlife Service on the basis of review of nest survey information collected by the Concessionaire at the time;
 - b) no clearing is to occur within 500 metres and no blasting is to occur within 1 km of an active bald eagle, osprey, peregrine falcon, or heron nest between the January 31 to August 15 period unless otherwise pre-approved by Canadian Wildlife Service and the MWLAP on the basis of review of nest survey information collected by the Concessionaire at the time;
 - c) if blasting is to occur within 1 km of the heron colony on the banks of the Mamquam Blind Channel at IR24, then the blasting shall occur outside of the January 31 to August 15 period unless otherwise pre-approved by Canadian Wildlife Service;

- d) if construction of the BC Rail detour proceeds at Porteau Cove or barge loading sites are constructed and operated, waterbirds in the vicinity shall be monitored to ensure foraging/loafing waterbirds are not displaced and work practices shall be adjusted to minimize disturbance;
 - e) where amphibian habitat is directly affected, efforts shall be made to isolate the area, then salvage and relocate the amphibians prior to any site disturbance;
 - f) where roadside rock piles and talus habitat is removed in the Daisy Lake area, rock piles shall be created to an equivalent extent using rock fill of a diameter suitable for reptiles and pika.
- 4.6 Conducting pre-construction surveys of spotted owls following RISC standards. Continuing to consult with the environmental agencies regarding requirements for spotted owl surveys and developing an inventory program for areas where disturbances overlap high and moderate habitat suitability/capability ratings for this species.
- 4.7 Retaining a wildlife biologist to monitor trees with nesting potential for marbled murrelet on the east side of Doodson Corner, Polygon 899, and if required, developing in consultation with environmental agencies, mitigative measures to minimize or off-set losses of nesting habitat as a result of clearing of trees in this area.
- 4.8 Including on applicable construction drawings all critical and sensitive wildlife habitats and ecosystems (e.g., nest trees, red- and blue-listed plant communities, wetlands, etc.) as identified in Volume 2 Section A: Wildlife and Vegetation (EA Application) and supplemental documents.
- 4.9 Including on applicable construction drawings “no disturbance” riparian and “vegetation to remain” (protected vegetation) areas. Areas of protected vegetation will include those areas that provide a vegetated buffer from outside disturbance to sensitive ecosystem components, including red- and blue-listed plant communities, as identified in Volume 2 Section A: Wildlife and Vegetation (EA Application) and supplemental documents.
- 4.10 Minimizing the width of the cleared edge beside the highway, while meeting the driver sight distance and project safety requirements to reduce the opportunities for vegetation that is attractive to wildlife to become established and to minimize the amount of habitat lost and/or altered.
- 4.11 Developing terrestrial revegetation plans, in consultation with environmental agencies, that utilize native plant species that are appropriate to the site and coarse woody debris for amphibian and reptile habitat creation.
- 4.12 Developing, in consultation with the environmental agencies, mitigative measures to limit wildlife mortality associated with vehicle collisions. Measures might include culvert or bridge design refinements to accommodate wildlife passage, identification of locations for wildlife signs, and concrete roadside barriers with enlarged scuppers (holes) to

facilitate small animal passage. Special attention will be paid to developing mitigation measures for off-alignment construction segments (e.g. Horseshoe Bay).

- 4.13 Complying with the 2,000 m no fly-zone around mountain goat winter range.
- 4.14 Reducing the area of impacted sensitive plant communities.
- 4.15 Developing, in consultation with the environmental agencies, wildlife habitat features at the proposed fisheries compensation sites, for example the creation of amphibian habitat at the Callaghan Creek Tributary Wetland Complex. Compensation for wildlife habitat loss will be developed in association with aquatic compensation requirements to ensure development of a comprehensive compensation strategy.
- 4.16 Demarcating “no disturbance” and “vegetation to remain” areas in the field before clearing and grubbing begins.
- 4.17 Not used.
- 4.18 Not used.
- 4.20 Re-vegetating and protecting all exposed soils from erosion in accordance with, or using means equivalent to, MoT’s Manual of Control of Erosion and Shallow Slope Movement, 1997. Hydroseed mixes for use along the highway will serve the primary function of successful erosion control, and to the extent possible, will exclude species that are palatable or attractive to wildlife
- 4.21 Implementing the approved “Bear/Human Conflict Reduction Plan” and “Wildlife Mitigation Plan”.
- 4.22 Mitigating for impacts from ancillary areas by:
 - minimizing the losses of the largest (>60 years old) trees when laying out tote roads;
 - restoring all tote roads and equipment storage and marshalling sites as soon as they are no longer in use; and
 - reclaiming and revegetating depleted or inactive gravel and granular borrow pits in a manner consistent with, or using means equivalent to, MoT’s Reclamation and Environmental Protection Handbook for Sand, Gravel and Quarry Operations in British Columbia (1995). To meet or exceed the requirements, all machinery, equipment and structures associated with the pits will be removed; watercourses will be reclaimed as close to their original position as possible; side slopes of sand and gravel pits will be recontoured to 2 horizontal: 1 vertical or flatter; and self-sustaining native plant cover will be re-established.

- 4.23 Carrying out operational activities in accordance with, or using means equivalent to, applicable MoT policies and procedures (contained in the Data Room), including:
- MoT's Maintenance Specifications in order to prevent immediate or delayed environmental impacts to wildlife habitat. The Concessionaire's responsibilities include, but are not limited to: agency notification; properly maintaining drainage patterns; exercising sediment and erosion control; controlling dust; and carrying out emergency maintenance; and
 - MoT's Highway Corridor Management Specifications for Highway Concessions, October 2004, and Reporting Specifications for Highway Concessions, October, 2004, which describe what actions the Concessionaire must take in the event of a hazardous spill.
- 4.24 Installing bear proof garbage containers at popular pullouts and any proposed safety rest areas.
- 4.25 Immediately cleaning-up any spills that involve foods that are attractive to wildlife.
- 4.26 Wherever possible, refraining from utilizing herbicides or pesticides along the corridor during construction or maintenance. Where spot treatments of a herbicide are necessary, the Concessionaire will consult with the Squamish and Lil'wat Nations regarding potential impacts and appropriate mitigation.
- 4.27 Consulting with the Lil'Wat Nation on the development and implementation of wildlife/habitat mitigation plans within their territory.
- 4.28 Undertaking a windthrow prediction assessment within the Larson headwater swamp, and, if required, developing and implementing mitigation measures such as spiral thinning and feathering of forest edges.

5. Fisheries and Aquatic Habitat

The Concessionaire will mitigate the potential impact to stream and foreshore fisheries resources by:

- 5.1 Including on applicable construction drawings all fish bearing streams and sensitive fish and amphibian habitats as identified in Volume 2 Section B: Fisheries and Aquatic Habitat (EA Application) and supplemental documents.
- 5.2 Identifying "no disturbance" riparian and "vegetation to remain" (protected vegetation) areas in the construction drawing package and marking these area in the field.
- 5.3 Developing riparian restoration plans, in consultation with environmental agencies.
- 5.4 Developing a Sediment and Drainage Management Plan that addresses, but is not to be limited to, areas of expected sedimentation.

- 5.5 Preparing generic treatment schemes for areas and slopes of sedimentation potential (e.g., hydroseeding to cover exposed soils following construction) and developing site-specific treatment prescriptions for areas prone to shallow slope movement and detailed on drawings. The Sediment and Drainage Management Plan will be referred to environmental agencies for their review prior to soil disturbance.
- 5.6 Incorporating fisheries window information into the development of the Environmental Management Plan before the start of construction.
- 5.7 Finalizing crossing structure designs on the basis of geotechnical and biological considerations and on-site discussions between the Concessionaire, its fisheries biologists and representatives of MoT, the MWLAP and the Department of Fisheries and Oceans (“DFO”). The Squamish Nation will be involved in designs affecting the Stawamus River. Crossings will maintain natural drainage patterns, meet the DFO’s requirements for water flow and fish passage, in accordance with, or using means equivalent to, the guidelines and best management practices presented in the following documents contained in the Data Room:
- “Fact Sheet on Culverts and Fish Passage”, a Ministry publication,
 - Land Development Guidelines for the Protection of Aquatic Habitat, a joint publication of the Ministry of Environment, Lands and Parks and the DFO,
 - Standards and Best Practices for Instream Works, Ministry of Water, Land and Air Protection, March 2004, and
 - Any updated best management practices that are developed during the project.
- 5.8 Not used.
- 5.9 Retaining a hydrologist to provide input to the detailed design to protect hydrological function and water quality in the headwaters of Larsen Creek.
- 5.10 Finalizing detail design on the basis of highway engineering, biological considerations and discussions between the Concessionaire, its fisheries biologists, its engineering designers, and representatives of MoT, MWLAP and the DFO (e.g., near the unnamed tributary to Brohm Creek and at Millar Creek).
- 5.11a Applying DFO’s preferred management options for the protection of fish habitat during detailed design.
- 5.11b Identifying and implementing special measures to offset any impacts to amphibian habitats, in conjunction with fish habitat compensation works. Special measures might include the addition of marsh benches or woody debris. Key compensation sites being considered include the Mashiter Spawning Channel, the unnamed tributary to the Cheakamus River near SW 83, and the Callaghan Creek Tributary/wetland complex at SW 181 and SW 183.

- 5.12 Identifying and implementing special measures, in consultation with MWLAP, to offset any impacts to tailed frogs. Special measures might include replacement of perched, closed culverts on important tailed frog streams with open bottom structures or installation of cobble and boulder ramps on tailed frog streams where existing culvert outlets are perched. The quality of the potentially tailed frog streams will be ranked and the most optimal sites, with the greatest resultant benefits for important tailed frog populations, will be enhanced.
- 5.13 Finalizing the design of mitigation measures, in consultation with the environmental agencies.
- 5.14 Installing an open bottom culvert at Middle Creek, unless a technical rationale that documents why a closed bottom structure is more acceptable at this location is developed and is accepted by MWLAP and DFO during the permitting/authorization phase.
- 5.15 Applying mitigation measures to the final design of culvert extensions between Centennial Way and Depot Road.
- 5.16 Finalizing fish habitat compensation plans to ensure the DFO's no-net-loss policy requirement is met prior to construction in a work segment. A fisheries biologist will be retained to complete compensation and monitoring plans, in consultation with design engineers and environmental agencies, at some of the following potential sites:
- Larsen Creek (for both onsite and offsite compensation requirements);
 - Middle Creek;
 - lower Thistle Creek, in consultation with BC Rail, if the bypass option proceeds and Thistle Creek and its tributary are impacted;
 - the Mashiter Spawning Channel and culvert crossing;
 - Loggers Lane Creek;
 - at the two existing Mamquam Blind Channel culvert crossings (sample sites HS 110 and 111);
 - the Cheakamus River tributary at the decommissioned salt shed and sand storage site;
 - Callaghan Creek Tributary/wetland complex at SW 181 and SW183.
- 5.17 Working with the DFO during the permitting/authorization phase towards the installation of an acceptable crossing structure design at the Mashiter Spawning Channel, with the invert of the new structure to be lower than the existing culvert to improve the likelihood of success for any future restoration activities that would be taken to address inadequate groundwater supplies.
- 5.18 Liaise with Land & Water BC Inc. on requirements for *Land Act*, R.S.B.C. 1996, c. 245, and *Water Act*, R.S.B.C. 1996, c. 483, approvals. This is particularly in relation to works in and about streams and other fresh water bodies that could be affected by construction activities (bridges, pillars, pilings, fill etc.).

- 5.19 Finalized compensation plans will avoid conversion of higher value or critical upland habitats into instream or riparian habitats when unacceptable to regulatory agencies. Wildlife habitat considerations (e.g., wildlife habitat feature protection or creation measures) will be incorporated into compensation plans.
- 5.20 Marking “no disturbance” riparian and “vegetation to remain” areas in the field before clearing and grubbing begins. All cleared material will be kept out of wetland areas, streams and the foreshore, and where possible, riparian vegetation that does not pose a hazard to the highway will be left intact.
- 5.21 Complying with MoT’s *Standard Specifications for Highway Construction* or equivalent contract document, to ensure that unstable areas are not created during construction, to ensure proper work practices regarding the transport, handling, storage and use of deleterious/hazardous materials and to protect fish-bearing waters from potential malfunctions or accidents during the construction phase.
- 5.22 Restoring riparian areas by planting appropriate native species following MWLAP/ DFO criteria.
- 5.23 Revegetating and protecting all exposed soils from erosion in accordance with, or using means equivalent to, the Ministry’s *Manual of Control of Erosion and Shallow Slope Movement, 1997* (contained in the Data Room).
- 5.24 Installing, as required, riprap splash pads or discharge aprons at ditched outlets to protect against ditch slope erosion and the creation of new plunge pools.
- 5.25 Implementing and monitoring the compensation plans approved by the DFO under Authorization.
- 5.26 Mitigating for impacts from ancillary disturbance areas by:
- restoring all tote roads and equipment storage and marshalling sites as soon as they are no longer in use; and
 - reclaiming and revegetating depleted or inactive gravel and granular borrow pits in a manner consistent with, or using means equivalent to, MoT’s *Reclamation and Environmental Protection Handbook for Sand, Gravel and Quarry Operations in British Columbia, 1995* (contained in the Data Room). To meet or exceed the requirements, all machinery, equipment and structures associated with the pits will be removed; watercourses will be reclaimed as close to their original position as possible; side slopes of sand and gravel pits will be recontoured to 2 horizontal: 1 vertical or flatter; and self-sustaining native plant cover will be re-established.
- 5.27 Retaining a fisheries biologist to monitor the post-construction success of the stream compensation sites in accordance with the terms and conditions of the DFO Authorizations.

- 5.28 Carrying out operational activities in accordance with, or using means equivalent to, applicable MoT policies and procedures (contained in the Data Room), including:
- MoT's *Maintenance Specifications* in order to prevent immediate or delayed environmental impacts to wildlife habitat. The Concessionaire's responsibilities include, but are not limited to: agency notification; properly maintaining drainage patterns; exercising sediment and erosion control; controlling dust; and carrying out emergency maintenance; and
 - MoT's Highway Corridor Management Specifications for Highway Concessions, October 2004, and Reporting Specifications for Highway Concessions, October, 2004 which describe what actions the Concessionaire must take in the event of a hazardous spill.
- 5.29 Conducting regular inspections during operations so that potential problems, including erosion and slope instabilities, are recognized early and site-specific treatments developed and implemented.
- 5.30 Continuing to consult with the Squamish Nation in relation to stream and habitat mitigation/consultation measures regarding the following areas of importance for fishing and hunting activities by Squamish Nation members:
- Stawamus River,
 - Mamquam River,
 - Mamquam Blind Channel,
 - Larsen Creek, and
 - Brohm River.
- 5.31 Consulting with the Lil'Wat Nation on the development and implementation of the Sea-to-Sky Highway Improvement Project fisheries mitigation plans within their territory
- 5.32 Avoiding encroachment to the wetted area of the swamp habitat in the Larsen Creek headwaters through horizontal adjustments to the alignment or mitigating impacts through design features, such as retaining walls. MoT's intention is to apply DFO's hierarchy of preferences at preliminary design and to first try to relocate, then redesign, then mitigate the potential impact.

6. Air Quality

The Concessionaire will mitigate the potential impacts to air quality by:

- 6.1 Implementing site specific pollution prevention measures and best management practices to minimize the generation of road dust and particulate matter. These measures include:
- develop, in consultation with stakeholders, a Vegetation Debris Management Plan for clearing and grubbing activities,

- as much as possible, remove and fill material “in one trip” to minimize the handling of material on stockpiles and during transfer to and from construction equipment,
- minimize the time unpaved surfaces are exposed and frequently water unpaved and hauling surfaces to minimize road dust,
- ensure soil piles are watered on dry days, cover small soil piles and vegetate longer-term soil piles to minimize dust,
- cover haul/dump truck loads of fine-grained materials during longer distance hauls, and
- ensure effective management of ambient air quality impacts when construction activities take place near residences located within 50m of the road (e.g., Lions Bay, near Squamish, Stawamus IR#24) by monitoring PM10 and PM2.5 during the driest days each season.

6.2 Developing and implementing the Air Quality Monitoring and Mitigation Plan.

6.3 Adhering to open burning enactments with regard to burning of vegetative debris. Where vegetative burning could impact nearby residences, monitoring on those days where ambient levels could already be elevated.

6.4 Cooperating with the Greater Vancouver Regional District (“GVRD”) and environmental agencies, as required, in the assessment of air quality data measured periodically by those agencies at Horseshoe Bay, Squamish and Whistler, and determining the resultant appropriate level of prevention management.

6.5 Managing road dust by cleaning the highway in compliance with, or using means equivalent to, MoT’s maintenance specification.

7. Socio-Community/Economic Assessment

The Concessionaire will mitigate the potential impacts to local communities by:

7.1 Developing and implementing a traffic management plan to address potential traffic disruption during construction. Mitigation of traffic disruption is recognized as a key consideration and essential component in Project planning. Mitigation measures include, but are not limited to, scheduling of construction works to avoid times when traffic volumes are higher, including seasons, day-of-week and hours of the day.

7.2 Developing, in association with the Vancouver Coast Health Authority (“VCHA”), communications for residents and physicians about access to health care services in the Lower Mainland and related travel times. In particular:

- working with VCHA to communicate with residents of affected areas and physicians to make patients aware of additional time required to travel to appointments.
- working with VCHA, physicians, nurses and community resources to ensure that expectant parents are aware of possible delays in getting to hospital.

- communicating schedule for delays or closures to Health Authority, clinicians and couriers so that clinic schedules, physician travel times and courier schedules may be adjusted.

7.3 Working cooperatively with the public, police, fire and ambulance service providers along the corridor to ensure effective emergency service by:

- communicating with the public in communities affected by construction so that, when an emergency arises, they can factor construction delays into their decisions (e.g., where to go for care; whether to call an ambulance).
- maintaining access to one highway lane for emergency vehicles to the extent possible. During blasting (when one lane can not be cleared quickly), ensure that helicopter transport is on standby.
- working with the B.C. Ambulance Service (“BCAS”) to ensure access to helicopter services are available if required. The Concessionaire may need to identify or develop potential helicopter landing sites.
- developing communication protocol between construction site(s) and the B.C. Ambulance Service to ensure that ambulances are able to get to front of traffic queues during delays and temporary closures.
- developing communication protocol between construction site(s) and fire protection services dispatchers to ensure that fire protection services are able to get to the front of traffic queues during delays and that neighbouring fire protection services are able to access service areas during times of temporary closures.
- developing a communications protocol between VCHA and BCAS to ensure dispatchers are aware of delays or closures.
- working with the RCMP to map high frequent crash areas to construction areas so that the RCMP can identify in advance those high-incidence areas that require RCMP response and for which access may be restricted due to construction.

8. Community Access

The Concessionaire will mitigate the potential impacts to community access by:

- 8.1 Not used.
- 8.2 Not used.
- 8.3 Not used.
- 8.4 Implementing detours in areas requiring by-pass routes around construction areas.
- 8.5 Providing directional signage along detours to notify motorists of the approaching communities and egress points.

- 8.6 Implementing effective safety measures on all detours, including but not limited to, as required, a posted speed limit, flag persons, train actuated gates, and pilot vehicles to lead vehicle platoons through the detour.
- 8.7 Highway design and access solutions on and through the Stawamus Reserve (IR#24) will be jointly identified and refined by the Concessionaire, the Squamish Nation and the MoT. The Concessionaire will notify the Squamish Nation if new road accesses are developed during the detailed design process.

9. Noise

The Concessionaire will mitigate the potential impacts from noise by:

- 9.1 Keeping the community well informed of the nature and time limits of the planned construction work and of the effort to be made to control noise impacts.
- 9.2 Holding meetings with representatives of the various municipalities affected to identify the noisiest construction activities that must be conducted within each community and to discuss the extent to which these activities can be conducted during normal daytime working hours. For those activities which must be done at night, the Concessionaire will describe the measures which will be taken to minimize the noise produced and will discuss whether work can be scheduled during the first few evening hours rather than between midnight and 5:00 am.
- 9.3 Following procedures specified in the contract documents to minimize noise emissions and communicating effectively with the affected communities.
- 9.4 Using open graded friction course, that creates less tire noise, thereby reducing average noise levels in the noisier residential areas along the corridor (e.g., Lions Bay, IR 24 and urban Squamish).
- 9.5 Working with the Lions Bay community to reduce current highway noise by 5 dB through mitigation measures, such as open graded friction course and speed reduction. Further, MoT encourages the Concessionaire to work with the community to make best efforts to incorporate noise barriers and other noise mitigation efforts where effective, which could result in a further 5dB reduction.
- 9.6 Not used.
- 9.7 Undertaking additional analysis of the potential impact of highway noise within IR 24, in cooperation with the Squamish Nation, during the detailed design phase as the physical characteristics of the alignment become better known. In addition to the mitigative measures that have already been proposed (the use of open graded asphalt, traffic calming measures, etc.) The Concessionaire will consider other viable options in consultation with the Squamish Nation.

- 9.8 Assessing, monitoring and, if necessary, mitigating the impacts of operational (traffic) noise at the daycare facility on the Squamish First Nation's IR #24 during the detailed design phase of the Urban Squamish section.
- 9.9 Assessing, monitoring and, if necessary, mitigating construction noise exposures at the Eagle Ridge (Glen Eagles) School and the Stawamus Elementary School.
- 9.10 As part of the Noise Control and Mitigation Plan, determining the layout, nature and schedules of any affected daycare facilities, including the facilities at Lions Bay and on the Squamish First Nation's IR #24, to develop strategies that will limit project-related construction noise exposures during nap times.
- 9.11 Educating construction personnel about particular noise issues and associated equipment operation.
- 9.12 Avoiding or reducing construction noise at the source through the appropriate operation, modification or maintenance of construction equipment and processes.
- 9.13 Scheduling construction activities so the noisiest activities (e.g., rock drilling, pile driving) are conducted, to the extent possible, within the daytime construction period.
- 9.14 Conducting meetings with representatives of affected municipalities to discuss measures that the Concessionaire will take to minimize the noise produced or received in the community.
- 9.15 Developing and implementing a Noise Control and Mitigation Plan to minimize the disturbance to adjacent residential enclaves and communities.
- 9.16 Complying with contract documents to minimize construction noise.
- 9.17 Reducing average noise levels in the noisier residential areas along the corridor (e.g., Lions Bay, IR 24, and urban Squamish) by implementing traffic calming measures.
- 9.18 Conducting follow-up noise monitoring within one year of project completion to verify the accuracy of traffic noise projections and effectiveness of noise mitigation techniques.

10. Water Quality

The Concessionaire will mitigate the potential impacts to water quality by:

- 10.1 Implementing a Water Quality Monitoring Program, including water quality sampling and analysis of runoff from PAG/ML rock cuts, and water quality field sampling monitoring protocol. The water quality field sampling monitoring program will include pH and conductivity.
- 10.2 Avoiding areas of unstable or erosion-prone terrain.

- 10.3 Preparing a Sediment and Drainage Management Plan that identifies sensitive or potential problem areas and provide a strategy for dealing with them, including planned water control, sediment control, stormwater runoff controls and water quality testing programs.
- 10.4a Preparing generic treatment schemes for areas and slopes of sedimentation potential (e.g., hydroseeding to cover exposed soils following construction) and developing and detailing on drawings site-specific treatment prescriptions for areas prone to shallow slope movement.
- 10.4b Preparing a Spill Contingency and Response Plan for the clean-up of toxic or hazardous spills prior to construction and submitting it, together with a list of spill abatement equipment, to be stored on the job site, to the Province's Representative for review.
- 10.4c Reporting immediately as required by law and verbally to the Province's Representative and the Provincial Emergency Program, any spill of any toxic or hazardous material and immediately taking the necessary steps as required by law, including measures to abate the discharge and providing the necessary labour, equipment, materials and absorbents to contain and remove the spill, clean-up the affected area, dispose of waste materials at an approved disposal site, and restore the area to the satisfaction of the environmental regulatory agencies.
- 10.5 Not used.
- 10.6 Not used.
- 10.7 Placing concrete roadside barriers on the highway in the vicinity of Retta Lake to reduce the risk of vehicles entering the lake.
- 10.8 Minimizing and controlling rock blasting in the vicinity of Retta Lake.
- 10.9 Implementing the guidelines in, or using means equivalent to those outlined in, MoT's Guidelines for Environmental Design of Highway Drainage, 1992 (contained in the Data Room).
- 10.10 Implementing standard forms of erosion and siltation control, including but not limited to, silt fences, straw bale barriers, hydroseeding, diversions, sediment ponds.
- 10.11 Continuing the implementation of a water quality data collection program during construction to identify water quality issues. Water sampling will be done as close to "first flush" as possible.
- 10.12 Revegetating and protecting all exposed soils from erosion in accordance with, or using means equivalent to those outlined in, MoT's Manual of Control of Erosion and Shallow Slope Movement, 1997 (contained in the Data Room).

- 10.13 Conducting regular inspections in compliance with, or using means equivalent to, the MoT's maintenance specifications so that potential problems – including erosion and slope instabilities – can be identified early.
- 10.14 If water sampling conducted by MoT approximately 6 months after construction completion indicates that exceedences of drinking water or aquatic standards are occurring as a result of construction, the Concessionaire will alleviate the situation and further monitoring will be conducted until water quality standards are met.
- 10.15 Developing site-specific treatments (e.g., sodding, installing a permanent water quality treatment basin, applying bioengineering techniques or applying shotcrete), if required to further stabilize an area.

11. Recreation

The Concessionaire will mitigate the potential impacts to recreation resources by:

- 11.1 Consulting with recreation industry and user representatives about issues that affect their interests, and ensure that, whenever feasible, adverse impacts are avoided or mitigated.
- 11.2 Consulting with recreation user groups to discuss the potential for enhancement of recreation sites.
- 11.3 Developing a communications strategy specific to recreation users to discuss design and site-specific construction access and use issues that affect their interests.
- 11.4 Not used.
- 11.5 Developing and implementing detailed mitigative measures, in association with BC Parks, to minimize potential impact to recreation features and amenities at Porteau Cove Provincial Park, Murrin Provincial Park, Shannon Falls Provincial Park and Brandywine Falls Provincial Park. Impacts to marine recreation at Porteau Cove will be mitigated through access management.
- 11.6 Adhering to the Letter of Agreement between MoT and MWLAP, dated January 2004, which discusses the responsibilities and commitments specific to parks and other related features and services impacted by the highway improvements.
- 11.7 If Nelson Canyon Park is affected by the Works, developing and implementing detailed mitigative measures in association with the District of West Vancouver to minimize potential impacts to recreational features and amenities at the park.
- 11.8 Adding to the construction drawing package showing all site-specific and temporary mitigative measures to be implemented during construction. Temporary measures may include re-routing sections of trails and providing alternate access routes, staging areas or scenic viewpoints.

- 11.9 Complying with contract documents for construction to minimize encroachment or other impact to recreation trails, trailheads, staging areas and related amenities or features.
- 11.10 Implementing a communication strategy specific to recreation users to address potential site specific access and use issues.

12. Archaeology and Heritage

The Concessionaire will mitigate the potential impacts to archaeology, culture and heritage by:

- 12.1 Adding to the construction drawing package, polygons showing areas with archaeological or heritage potential, including areas containing culturally modified trees (“CMTs”) in proximity to the project corridor as identified in **Volume 3 Section G: Culture and Heritage (EA Application)**. Site specific mitigative measures, if required, will be detailed on drawings and the requirements explained in contract Special Provisions for construction. The drawings and contract Special Provisions will be referred to the Archaeology and Registry Services Branch and First Nations for their review.
- 12.2 Not used.
- 12.3 Not used.
- 12.4 Consulting with First Nations if post-1846 heritage resources are to be impacted, including but not limited to culturally modified trees at upper Larsen Creek, Montizambert Creek, Bertram Creek, Cheakamus River, and south of Rubble Creek. The Concessionaire will make provisions for any impacted CMTs to be provided to First Nations for cultural purposes.
- 12.5 Where highway widening provides improved access to a site of known archaeological or historical significance, the Concessionaire will work cooperatively with the First Nation(s) that have an interest in the site, as well as the responsible government agencies, to develop measures to minimize impacts related to over use and/or vandalism.
- 12.6 Exploring options to protect sites of known archaeological , historical or cultural significance from project related impacts. This will include consulting with First Nations on management of Site DiRt-13, an aboriginal rock carving, including such measures as excluding any land-altering developments from the immediate vicinity of the petroglyph or placement of a barrier to protect the site.
- 12.7 Consulting with First Nations on issues identified by them, and ensure that, wherever feasible, adverse impacts are avoided or mitigated.
- 12.8 Avoiding CMTs where feasible. However, if avoidance is not possible, the Concessionaire will consult with First Nations and will date the affected CMT(s) using an increment borer to determine if the trees predate 1846 and require an alteration permit

from Archaeology and Registry Services Branch. Regardless of whether a permit is required or not, the affected culturally modified tree will be recorded, photographed and stem round segments obtained, analysed and dated Provisions will be made for any impacted CMTs to be provided to First Nations for cultural purposes.

- 12.9 If, during the course of the project any items of archaeological, heritage or historical interest are found in the project area, the Concessionaire will immediately cease operations in the affected area and minimize activities that create ground disturbance in and adjacent to the affected area, in compliance with, or using means equivalent to, those described in Section 165. Archaeology and Registry Services Branch, Department of Canadian Heritage (if within IR24) and First Nations representatives to the Project will be notified, and work within 30 m of the discovery site (or larger buffer area if human remains are encountered) will not resume until an appropriate directive has been received from representatives of those agencies after consultation with First Nations.
- 12.10 Retaining an archaeology monitor during the route clearing and preparation stage to examine the area at Function Junction identified by the archaeology consultants as having potential for containing buried archaeological remains. If archaeological sites are encountered, mitigative measures, including, for example, installing drainage or erosion control, applying slope measures, erecting fences or other suitable barriers to protect sites, or establishing a buffer zone in which no land alteration or other activity is permitted will be applied. The Concessionaire will only undertake a systematic data recovery program as a mitigative measure if avoidance is not possible. If avoidance is not possible, appropriate permit(s) will be obtained prior to impacting the site(s).
- 12.11 Not used.
- 12.12 Working with the Lil'Wat Nation to maintain Lil'Wat access to culturally modified tree sites near Rubble Creek.
- 12.13 Maintaining ongoing liaison with First Nations throughout planning and design to provide design information that may necessitate additional archaeological assessment.

13. Navigable Waters

The Concessionaire will mitigate the potential impacts to navigable waters by:

- 13.1 Obtaining final determination of navigability from the Coast Guard for crossings affected by the Project and for the proposed barge loading site at Sunset Marina.
- 13.2 Liaising with the Coast Guard, Harbours Board and known mariners, as required, regarding referral process requirements for proposed temporary works, facilities and equipment.

14. Not Used.

15. Aesthetics

The Concessionaire will enhance the aesthetic attributes of the highway corridor by:

- 15.1 Consulting with the communities to develop design treatments that achieve aesthetic continuity and coherence along the highway corridor and incorporate these measures into designs so that the visual quality of the corridor and the corresponding aesthetic experience of those using the corridor is enhanced.
- 15.2 Conducting further visual quality assessment as required to refine the list of important landscape features and to determine precisely how and if their use should be promoted.
- 15.3 Not used.
- 15.4 Developing and/or upgrading existing roadside facilities in partnership with the private sector, community groups, and various government agencies.
- 15.5 Developing aesthetic design treatment to maintain driver interest and attentiveness and thereby encourage safe driving.
- 15.6 Providing aesthetic unity and character for the entire corridor, while respecting and reflecting the unique landscape character, culture, and ecology.
- 15.7 Commissioning a landscape design consultant to work closely with the District of Squamish on the urban Squamish section of the highway improvements, and with the Squamish Nation on Stawamus IR#24.

16. Not Used**17. Public Information Sharing and Consultation**

The Concessionaire will:

- 17.1 Maintain local dialogue
- 17.6 Maintain broad public access to information, particularly in construction phases
- 17.8 Advertise project information as necessary
- 17.10 Communicate with the affected communities on a regular basis to advise them in advance of the types of activities that will be taking place and to notify them of changes in the estimated start and/or completion dates for the various construction phases.

18. First Nations

Relevant commitments that result from ongoing discussions between the Province and the First Nations and are not captured herein, will be included in other forms of documentation agreeable to the First Nations.

18.1 Not Used

18.2 Noise:

The Concessionaire will undertake additional analysis of noise issues with the Squamish Nation once the physical characteristics of the alignment are better known. The Concessionaire will consider viable options for mitigation in consultation with Squamish Nation. The Concessionaire will monitor noise at key locations to permit comparison with objectives.

18.3 Safety:

The Concessionaire will work closely with the Squamish First Nation to identify and mitigate potential impacts related to intra-community barriers within IR#24.

18.4 Culturally Significant Sites / Interests:

- The Concessionaire will consult with First Nations regarding the protection of important plant harvesting areas and will work towards identifying appropriate land protection, harvesting, relocation, or replanting measures.
- The Concessionaire will consult with the Squamish Nation to identify locations where culturally significant rock formations may be potentially impacted by construction activities. Where feasible, the Concessionaire will work cooperatively with the Squamish Nation to establish appropriate measures for this rock to be safely collected by the Squamish Nation.
- During construction, the Concessionaire will consult with the Squamish and Lil'Wat Nations if any of the previously identified cedar groves will be impacted/harvested during construction. If impacts to these cedars are unavoidable the method of harvesting and cutting into lengths for provisions to First Nations will be mutually agreed upon by the Province and First Nations.
- The Concessionaire will consult with the Squamish Nation regarding the potential for minimizing rock blasting through Murrin Park.
- The Concessionaire will consult with the Lil'Wat Nation regarding any environmental rehabilitation plans within their territory to ensure their cultural interests are incorporated, as appropriate.

19. Federal Department, Provincial Agency, and Local Government

The Concessionaire will:

- 19.1 Consult with government agencies on an individual basis post-certification as further detailed herein. During this period, detailed design plans at environmentally sensitive sites will be referred to the agencies, mitigation and compensation designs will be finalized, and permits and authorizations from these agencies will be secured.
- 19.2 Consult with government agencies on an ongoing basis, including on-site meetings to ensure compliance with best practices and permits and approvals as further detailed herein.

Part 2
Other Commitments and Responsibilities

Except as expressly included in Part 1 of this Annex 2 or as provided for in any other provision of this Agreement, the following commitments and responsibilities are not the obligations of the Concessionaire.

Note: These commitments apply to on-site, off-site, permanent, temporary and ancillary works and activities. "Site" refers to highway right-of-way as it may exist from time to time.

1. General

1.7 Undertaking environmental quality audits to ensure the Concessionaire complies with the Environmental Management Plan.

2. Potentially Acid Generating (PAG) Material Management and Metal Leachate Loading at Final Rock Cut Faces

2.16 Applying for permits from MWLAP and the Ministry of Energy and Mines for disposal of PAG/AG materials at the Britannia mine site.

3. Contaminated Soils

3.4 Should highway construction proceed within the area affected by the Gonzales Creek Hydrocarbon Spill site, coordinating the design team and Levelton Engineering Ltd. (who are managing the site for Scamp Industries) and Hemmera Environmental (who are managing the site for Interfor, owners of the property on which the spill occurred) to ensure the remediation is done prior to construction.

4. Terrestrial Environment and Wildlife

4.14 Developing, in consultation with the environmental agencies, a compensation plan for the potential loss of dry arbutus dominated habitat in the Horseshoe Bay area and the loss of areas of red- and blue-listed plant communities at a replacement ratio of 1:1. This compensation could take the form of the adjustment of BC Parks boundaries to encompass the sensitive ecosystem; adding a Restrictive Covenant to a land title if the property owner is willing to be a signatory to the covenant; and/or transfer of the title to a conservation group.

4.19 Ensuring that the Concessionaire complies with the contract documents with respect to critical bird breeding time periods and related clearing restrictions, including construction timing and location restrictions in the vicinity of active raptor and heron nests.

4.27 Consulting with the Lil'Wat Nation on the development and implementation of wildlife/habitat mitigation plans within their territory.

5. Not Used**6. Not Used****7. Socio-Community/Economic Assessment**

7.4 Communicating closure/delay schedule to School Districts and school administrators.

7.5 Developing and implementing a pro-active overall communications strategy to coordinate construction work, communications and stakeholder dialogue. This will include liaison with First Nations, municipalities, businesses, Chambers of Commerce, and tourism associations about schedules for construction and special events and working with businesses to examine adjustments to work schedules during closure periods.

7.6 Establishing a project liaison office to coordinate consultations, communication and construction.

7.7 Encouraging programs for fostering local employment and local business opportunities.

8. Community Access

8.1 Consulting with municipalities, First Nations, and individuals requiring access to their properties during construction to devise plans to maintain necessary property access.

8.2 Developing a communications strategy and working relationship with local businesses to address potential access issues during construction.

8.3 Continuing to consult with the Project Technical Liaison Committee (“TLC”) and work closely with key stakeholders, First Nations, and Community Advisory Groups (“CAGs”) to ensure that adverse impacts are identified and design features are developed to provide safe pedestrian, cyclist and vehicular movement to, from and across the Highway.

8.7 Highway design and access solutions on and through the Stawamus Reserve (IR#24) will be jointly identified and refined by the Concessionaire, the Squamish Nation and the MoT.

9. Noise

9.6 Working to reduce traffic speeds through the Village of Lions Bay, including consulting with the police and the RCMP to discuss ways in which MoT can facilitate more effective speed enforcement (e.g., additional pull outs for enforcement use).

10. Water Quality

10.1 Implementing a water quality audit and performance monitoring program. The water quality audit and performance monitoring program will include hydrocarbon and, oil and

grease testing conducted on samples taken as part of stages 2, 3 and 4; if samples taken during stage 2 sampling do not indicate the presence of hydrocarbons in the surface waters, then random sampling may be implemented for stages 3 and 4.

- 10.5 Compiling a list of groundwater well users whose wells are within 500 m of the proposed project works and testing of wells where permission is granted by the owner.
- 10.6 Implementing a water quality audit and performance (trend) monitoring program prior to construction to establish the immediate pre-construction water chemistry of surface water streams, domestic wells and community water supplies.
- 10.14 Implementing a water quality data collection program approximately 6 months after construction completion to ensure water quality guidelines are met.

11. Recreation

- 11.1 Continuing to consult with recreation industry and user representatives about issues that affect their interests, and ensure that, whenever feasible, adverse impacts are avoided or mitigated.
- 11.2 Consulting with recreation user groups to discuss the potential for enhancement of recreation sites.
- 11.3 Developing a communications strategy specific to recreation users to discuss design and site-specific construction access and use issues that affect their interests.
- 11.4 Entering into discussions with BC Parks and other affected stakeholders with respect to ancillary sites and the possible use of the Porteau ferry dock for barge loading purposes.
- 11.6 Adhering to those portions of the Letter of Agreement between MoT and MWLAP, dated January 2004, not incorporated in Part 1 of this Annex 2 or assigned as part of the Concessionaire's Environmental Obligations in Schedule 12, which discusses the responsibilities and commitments specific to parks and other related features and services impacted by the highway improvements.

12. Archaeology and Heritage

- 12.2 Consulting with the First Nations regarding the three trails identified as areas of concern to the Squamish Nation in **Volume 3 Section G: Culture and Heritage (EA Application)** and facilitating discussions between the Squamish, other concerned First Nations, and other Ministries or provincial government agents regarding the management of the trails.
- 12.3 Facilitating discussion between the Province and the First Nations to identify steps that can be taken by BC Parks to protect the pictograph site in Murrin Provincial Park from impacts from rock climbing and vandalism.

- 12.6 Exploring options to protect sites of known archaeological , historical or cultural significance from project related impacts. This will include consulting with First Nations on management of Site DiRt-13, an aboriginal rock carving, including such measures as excluding any land-altering developments from the immediate vicinity of the petroglyph or placement of a barrier to protect the site.
- 12.7 Continuing to consult with First Nations on issues as identified by them, and ensure that, wherever feasible, adverse impacts are avoided or mitigated.
- 12.11 Retaining a First Nations representative to act in the capacity of a Cultural and Heritage Advisor to liaise with the MoT and Concessionaire in providing input related to potential impact/interference with archaeological and/or cultural interests. It is anticipated that the representative will be on site at appropriate intervals during site preparation and construction.
- 13. Not Used**
- 14. Not Used**
- 15. Aesthetics**
- 15.3 Undertaking a corridor-wide review of scenic viewpoints and pullouts to ensure an appropriate distribution of such amenities, while taking into account traffic safety considerations, site servicing, community and recreation interests.
- 16. Property Acquisition**
- 16.1 Negotiating with BC Parks regarding compensation for property requirements at Murrin Provincial Park, Shannon Falls Provincial Park and Brandywine Falls Provincial Park (a change in Park boundaries at Brandywine Falls Provincial Park requires cabinet approval), including consideration of any Concessionaire impacts.
- 16.3 Initiating offers and negotiating with private property owners to acquire lands,.
- 16.4 Following MoT's process to ultimately register a Survey Plan of Road at the Crown Land Registry.
- 16.5 Minimizing property acquisition requirements whenever possible.
- 17. Public Information Sharing and Consultation**
- 17.1 Maintaining local dialogue
- 17.2 Conducting regular meetings between the Province and Interested Parties

- 17.3 Conducting regular meetings with corridor elected officials and key stakeholder groups
- 17.4 Establishing a project liaison office in a central location to facilitate local access and maintain a presence in the corridor.
- 17.5 Conducting open houses at key stages, by community.
- 17.6 Maintaining broad public access to information, particularly in construction phases
- 17.7 Updating website
- 17.8 Advertising project information as necessary
- 17.9 Maintaining project liaison office: reporting project activity is key role of liaison function during construction, along with "customer service" function of fielding and following up on questions and complaints.
- 17.10 Communicating with the affected communities on a regular basis to advise them in advance of the types of activities that will be taking place and to notify them of changes in the estimated start and/or completion dates for the various construction phases.

18. First Nations

Relevant commitments that result from ongoing discussions between the Province and the First Nations and are not captured herein, will be included in other forms of documentation agreeable to the First Nations.

- 18.1 Squamish Nation IR 24: MoT is committed to working cooperatively with the Squamish Nation, and other government agencies as appropriate, for a timely grant of the permit authorizing the use of the lands through IR 24 and subsequent transfer. The parties will work cooperatively towards this end.
- 18.2 Safety: The MoT will work closely with Squamish First Nation to identify and mitigate potential impacts related to intra-community barriers within IR#24.
- 18.3 Culturally Significant Sites / Interests:
 - The MoT has committed to further exploring options/opportunities to protect identified sites from impacts where highway improvements may provide increased access.
 - The MoT will continue to consult with First Nations regarding the protection of important plant harvesting areas and will work towards identifying appropriate land protection, harvesting, relocation, or replanting measures.
 - The MoT will continue to consult with the Squamish Nation to identify locations where culturally significant rock formations may be potentially impacted by construction activities. Where feasible, the MoT will work cooperatively with the

Squamish Nation to establish appropriate measures for this rock to be safely collected by the Squamish Nation.

- During construction, the MoT will consult with the Squamish and Lil'Wat Nations if any of the previously identified cedar groves will be impacted/harvested during construction. If impacts to these cedars is unavoidable the method of harvesting and cutting into lengths for provision to First Nations will be mutually agreed upon by the Province and First Nations.
- The MoT will continue to consult with the Squamish Nation regarding the potential for minimizing rock blasting through Murrin Park.
- The MoT will consult with the Lil'Wat Nation regarding any environmental rehabilitation plans within their territory to ensure their cultural interests are incorporated, as appropriate.

18.4 Signage:

- MoT will continue to consult with the First Nations to develop appropriate forms and locations of signs in the First Nations' language for naming. MoT will work with the First Nations to develop and install displays that recognize culturally significant sites. Sign and display wording will be jointly developed.
- MoT will work with the Squamish Nation to develop wording and select a location for a memorial plaque to be placed at M Creek. MoT will work with the Squamish Nation to provide safe access for related ceremonial activities.

Annex 3

[Not Used]

Annex 4

Sensitive Features And Environmental Constraints

Note: Capitalized terms used in this Annex 4 are defined in the Application for the Environmental Assessment Certificate.

Horseshoe Bay to Sunset Beach Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
Archaeology				
DELETED		L	CMTs	Larson Creek
Vegetation and Wildlife				
99+165-99+409	1	R	Sensitive ecosystem (Eagle Ridge Bluffs)	Overland Option, Polygons 406, 407, 408, 409, 418, 394
100+459-100+960	1	L	Sensitive ecosystem (Larsen Creek wetland)	Overland Option, Polygons 693, 696
101+159	1	L	Blue-listed community	Overland Option, Polygon 698
101+560-102+050	1	L	Blue-listed community	Overland Option, Polygon 445
102+460-102+700	1	R	Blue-listed community	Overland Option, Polygon 706 boundary near cut and grub boundary
100+599-101+041	1	R	Blue-listed community	Existing alignment improvement, Polygon 698
101+250	2	R	Near start of Blue-listed Polygon 445	Existing alignment improvement
101+660-101+820	2	R	Blue-listed community	Existing alignment improvement, Polygon 445
103+900	3	L	Bald eagle nest	Existing alignment improvement, Active in 2004
Recreation				
99+700-101+100	PA1-1		Baden Powell Trail	Minimize encroachment on trail

Horseshoe Bay to Sunset Beach Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
Fisheries				
100+280	HS 0.1		Larsen Creek, habitat class 4, Salmonid Habitat	Under Horseshoe Bay overhead. Design for fish passage. Atypical Type A – compensation required to offset loss of open channel and riparian habitat in sensitive fish bearing waters – other standard Type A mitigation measures apply
100+280	HS 0.1		Larsen Creek, habitat class 2A, Watercourse/Amphibian Habitat	Upper Larsen Crossing. Standard Type B – set bridge columns back from top of bank

Sunset Beach (Ansell Place) to Kelvin Grove Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
Archaeology				
DELETED		R	CMT	
DELETED		L	Petroglyph	DiRt-13
Vegetation and Wildlife				
104+640-105+060	4	R	Blue-listed community	Polygons 487 near cut and grub boundary
109+000-109+620	7	R	Blue-listed community	Polygon 818
109+620-110+060	7	R	Red-listed community	Polygon 809
Recreation				
Fisheries				
104+740	HS 14	R	Disbrow Creek, habitat class 2A, Tailed Frog Habitat	Standard Type B – retaining wall will reduce width of footprint
	HS 16		Unnamed Creek No. 1 (5.0 km Creek), habitat class 2A, Watercourse / Potential Tailed Frog Habitat	Standard Type B – retaining wall will reduce footprint width
105+180	HS 17	R	Sclufield Creek, habitat class 2A, Tailed Frog Habitat	Standard Type B – retaining wall will reduce footprint width
	HS 21		Turpin Creek, habitat class 2A, Potential Tailed Frog Habitat	Standard Type B
105+540	HS18		Montizambert Creek, habitat class 2A, Tailed Frog Habitat	Standard Type B
106+700	HS19		Strip Creek, habitat class 2A, Tailed Frog Habitat	Standard Type B

Sunset Beach (Ansell Place) to Kelvin Grove Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
107+200	HS20		Charles Creek, habitat class 2A, Tailed Frog Habitat	Standard Type B
109+700	HS29		Lonetree Creek, habitat class 2A, Tailed Frog Habitat	Standard Type B

Kelvin Grove to Furry Creek Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
Archaeology				
DELETED		R	CMTs and Trail	On south side of unnamed creek
Vegetation and Wildlife				
113+650-114+040	10	R	Red-listed community and Blue-listed community	Polygon 853 (red-listed) and Polygon 854 (blue-listed)
115+600	11	R	Bald eagle nest	Nest located in polygon 871
117+550-117+580		R	Blue-listed community	Polygon 896
117+580-117+980	12	R	Red-listed community; potential marbled murrelet nesting habitat	Polygons 897 and 899
117+980-118+900	13	R	Red and blue-listed plant community	Polygon 900
119+000-119+180	13	L	Red-listed community	Polygon 908
120+300-120+480	14	R	Blue-listed community	Polygons 917 and 641
121+000-121+240	14	R	Blue-listed community	Polygons 641

Kelvin Grove to Furry Creek Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
122+790-122+820	15	L	Blue-listed community	Polygon 603
124+600-125+100	16	R	Bald eagle nest in blue-listed polygon above highway	Polygon 918
Recreation				
Fisheries				
111+000	HS 33		Rundle Creek, habitat class 2A, Tailed Frog Habitat	Atypical Type B <ul style="list-style-type: none"> - minimize clearing and grubbing width in proximity to creek - retaining wall or headwalls may reduce riparian impacts - maintain angular substrates in culvert extension, if possible - note that all other standard mitigation measures still apply
114+160	HS 40		M (Yahoo) Creek, habitat class 4, Resident Salmonids; habitat class 2A, Tailed Frog Habitat	Standard Type A
116+550	HS44		Loggers Creek, habitat class 2A, Tailed Frog Habitat	Standard Type B
117+100	HS 45		Deeks Creek, habitat class 4, Watercourse/Fish Habitat	Design for fish passage. Atypical Type A <ul style="list-style-type: none"> - protect 15 m from stream bank adjacent to ancillary site - minimize clearing and grubbing width in proximity to creek - note that all other standard mitigation measures still apply
121+340	HS 56		Bertram Creek, habitat class 4, Fish and Tailed Frog Habitat	Standard Type A <ul style="list-style-type: none"> - maintain existing culvert inlet pool
	HS 57		Unnamed Creek No. 3 (Bosco Creek), habitat class 2A, Potential Tailed Frog Habitat	Standard Type B

Kelvin Grove to Furry Creek Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
122+220	HS 58		Unnamed Creek No. 4, habitat class 4, Tailed Frog Habitat	Standard Type A
122+380	HS 59		Kallahne Creek, habitat class 2A, Tailed Frog Habitat	Standard Type B - consider installation of a headwall to reduce instream impact
123+570	HS 67		habitat class 2A, Tailed Frog Habitat	Standard Type B
124+020	HS 70		Unnamed Creek No. 7, habitat class 4, Salmonid and Tailed Frog Habitat	Design for fish passage. Standard Type A

Furry Creek to South Stawamus Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
Archaeology				
DELETED			First Nations area of interest at Deeks Creek	
DELETED		L	Pictograph	DjRt-10, Outside construction zone
Vegetation and Wildlife				
129+144-129+174	19	L	Blue-listed community	Polygon 953
129+930-130+282	19-20	L	Red-listed community	Polygon 18
130+321-130+482	20	R	Red-listed community	Polygon 13
133+997-134+074	22	R	Blue-listed community	Polygon 988
134+253	22	R	Red-listed community	Polygon 87
134+922-135+062	23	R	Red-listed community	Polygon 87 (North end)
135+113-135+372	23	L	Browning Lake	Polygon 992
135+422-135+622	23	L	Blue-listed community	Polygon 1000
135+622-135+682	23	L	Blue-listed community	Polygon 995
135+763-136+037	23	L	Blue-listed community	Polygon 996
136+353-136+500	23-24	L	Blue-listed community	Polygon 1016
139+833-139+853	26	R	Red-listed community	Polygon 1062
140+100-141+000	26	R	Blue-listed community	Polygon 1055
141+200-141+861	27	R	Peregrine falcon nesting habitat	Peregrine falcons nest on the Stawamus Chief. Mitigation may be required to avoid disturbance issues

Furry Creek to South Stawamus Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
Recreation				
129+620	PA6-3	R	"Comic Rocks" rock climbing area off-highway parking (5+ cars capacity) at road access	No rock cut or disturbance to rock face (climbing route) beside highway
134+100	PA7-2	R	Rock climbing crags, "Welcome to Squamish"	No rock cut or other changes affecting climbs at Sta.133+980, 134+080
135+100-135+420	PA7-3	L	Recreation trail between Browning Lake and highway, within Murrin Provincial Park	Permanent encroachment of highway on trail is not permissible
135+440-135+570	PA7-4	R	"Leviticus" and other climbing routes, located within Murrin Park	No rock cut or other changes affecting the established climbing routes
135+600-136+100	PA8-1. RFG	L	"Presto" and "Nightmare Rock" climbing routes, boulders in trees	No rock cut or other changes affecting the established climbing routes or boulders
135+720-135+780	PA8-1	R	"Jalup Bluff" climbing routes	No rock cut or other changes affecting the established climbing routes
139+690	PA8-4	R	Trailhead to Papoose climbing area, also climbs beside highway	No rock cut or other changes affecting "Purple and Gold" climbing route and minimize encroachment on trail to Papoose climbing area.
142+110-142+180	PA9-1	R	Parking/staging area for "The Apron" climbing area (parking capacity approx. 50 cars, bus/RV parking possible but constrained during peak use)	Avoid boulders that are used for climbing
Fisheries				
127+160	HS 80		Furry Creek (side channel), habitat class 5, Salmonid Habitat	Design for fish passage. Standard Type A - keep existing bridge abutments in place, if possible
127+210	HS 81		Furry Creek (primary channel), habitat class 5, Salmonid Habitat	Design for fish passage. Standard Type A

Furry Creek to South Stawamus Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
127+280	HS 81.1		Middle Creek, habitat class 5, Salmonid Habitat	Design for fish passage. Atypical Type A – note that all other Standard Type A mitigation measures still apply
128+740	HS 84		Unnamed Creek No. 9, habitat class 5, Salmonid Habitat	Standard Type A
	HS 85		(Tributary to Unnamed Creek No. 9), habitat class 2 u/s, 3 d/s, Potential Fish Habitat	Standard Type A
129+100	HS 86		(Tributary to Unnamed Creek No. 9), habitat class 4, Fish Habitat	Standard Type A
130+800	HS 89		Daisy Creek, habitat class 2A, Salmonid and Tailed Frog Habitat	Standard Type B – if bypass alternative is selected
131+400	HS 90		Thistle Creek, habitat class 4, Fish Habitat	Design for fish passage. Standard Type A – there may be an opportunity to replace or decommission the existing culverts that extend under the highway and railway – if replaced, upgrade recommended (e.g. wide or open bottom structure or bridge) to improve anadromous fish access as fisheries compensation
133+100 to +150	HS 91.1		habitat class 4, Fish Habitat	Standard Type A – no proposed works on existing 3-lane section, but if widening is required then d/s widening would be preferred
134+900 north	HS 95.1		(Browning Lake Outlet Channel), habitat class 4, Fish Habitat	Standard Type A – avoid encroachment
	HS 95.1		(Browning Lake Outlet Channel), habitat class 3, Fish Habitat	Standard Type A – avoid encroachment

Furry Creek to South Stawamus Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
	HS 95.2		Browning Lake, habitat class 5, Fish Habitat	Standard Type A <ul style="list-style-type: none"> - avoid encroachment - maintain existing vegetation along lake - protect water quality
135+200	HS 95.3		(Browning Lake Inlet Channel), habitat class 3, Seasonal Fish Habitat	Standard Type A <ul style="list-style-type: none"> - minimize encroachment
137+570	HS 99		habitat class 2A, Watercourse	Standard Type B
138+270	HS 100		Gonzales Creek, habitat class 4, Salmonid Habitat	Design for fish passage. Standard Type A
139+940	HS 106		Shannon Creek, habitat class 5, Resident Salmonids	Design for fish passage. Standard Type A <ul style="list-style-type: none"> - widening on east side, between existing highway bridge and u/s provincial park access bridge, will minimize habitat impacts
140+400	HS 107		Oleson Creek, habitat class 2A, Tailed Frog Habitat	Standard Type B

Squamish (South Stawamus to Depot Road) Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
Archaeology				
Vegetation and Wildlife				
141+540-141+580	27	L	Blue-listed community	Polygon 1080
142+640	27	L	Great blue heron colony	Polygon 1117
142+268-142+298	27	L & R	Blue-listed community on either side of the Stawamus River	Polygon 1095
144+491-144+709 and 145+050-145+170	29	L	Red-listed community	Polygon 1129
144+709-145+050	29	L	Ponds and wetlands	Polygon 1130
145+602-146+431	30	R	Red-listed community	Polygon 1142
149+156-149+468	32	L	Ponds and wetlands	Polygon 1177
Recreation				
Fisheries				
142+270	HS 108		Stawamus River, habitat class 5, Sensitive Fish Habitat	Design for fish passage. Standard Type A - requires further environmental input at detailed design
143+620	HS 109		Mamquam Blind Channel, habitat class 5, Salmonid Habitat	Design for fish passage. Atypical Type A - follow existing alignment - if existing structure is widened, impacts to sensitive tidal marsh will be largely avoided
144+360	HS 110		Mamquam Blind Channel, habitat class 3 u/s, 4 d/s, Salmonid Habitat	Design for fish passage. Atypical Type A - install headwalls to avoid encroachment - minimize clearing and grubbing width in proximity to creek

Squamish (South Stawamus to Depot Road) Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
144+600	HS 111		Mamquam Blind Channel, habitat class 3 u/s, 4 d/s, Salmonid Habitat	Design for fish passage. Atypical Type A - install headwalls to avoid encroachment - minimize clearing and grubbing width in proximity to creek
144+940	HS 112		Loggers Lane Creek, habitat class 4, Salmonid Habitat	Standard Type A - minimize impacts to riparian habitat - consider restricting widening to west side of highway, to minimize encroachment on riparian habitat
	HS 112		Loggers Lane Creek, habitat class 4, Salmonid Habitat	Standard Type A - minimize impacts to riparian habitat - consider restricting widening to west side of highway, to minimize encroachment on riparian habitat
145+500	HS 113		(Tributary to Loggers Lane Creek), habitat class 3, Salmonid Habitat	Standard Type A
146+950	HS 114		Mamquam River, habitat class 5, Salmonid Habitat	Design for fish passage. Atypical Type A - minimize clearing and grubbing width in proximity to creek - minimize impacts to instream or riparian habitat values associated with Mamquam Spawning Channel enhancement works (requires selecting an optimal alignment) - consider retaining walls or other measures to minimize width of highway footprint - if impacts are unavoidable, compensation will be required - additional field investigations required, with further input at detailed design to ensure that impacts have been avoided or minimized
147+300	HS 115		(Mashiter Spawning Channel), habitat class 4, Spawning Habitat	Atypical Type A - minimize clearing and grubbing width in proximity to creek - minimize impacts to instream or riparian habitat values associated with Mamquam Spawning Channel enhancement works (requires selecting an optimal alignment) - consider retaining walls or other measures to minimize width

Squamish (South Stawamus to Depot Road) Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
				of highway footprint – if impacts are unavoidable, compensation will be required – additional field investigations required, with further input at detailed design to ensure that impacts have been avoided or minimized
149+300	HS 116		(Meighan Creek Side Channel), habitat class 5 d/s, 4 u/s, Salmonid Habitat	Design for fish passage. Standard Type A – recommend widening to east, in area of recent disturbance by golf course development (avoid impacts to d/s pond) – proposed headwall will reduce length of culvert extension
149+400	HS 117		Meighan Creek, habitat class 5 d/s, 4 u/s, Salmonid Habitat	Design for fish passage. Standard Type A – recommend widening to east, in area of recent disturbance by golf course development (avoid impacts to d/s pond) – proposed headwall will reduce length of culvert extension
149+440	HS 118		Thunderbird Creek, habitat class 5 d/s, 4 u/s, Salmonid Habitat	Design for fish passage. Standard Type A – recommend widening to east, in area of recent disturbance by golf course development (avoid impacts to d/s pond) – proposed headwall will reduce length of culvert extension
149+840	HS 119		Newport Creek, habitat class 3, Seasonal Salmonid Habitat	Design for fish passage. Standard Type A – proposed headwall will reduce length of culvert extension – recommend that any widening d/s (to east) to minimize impacts to outlet pond – reestablish healthy and permanent outlet pond if existing pond is impacted
150+100	HS 120		Hop Ranch Creek (Alice Lake Creek), habitat class 5, Salmonid Habitat	Design for fish passage. Standard Type A – proposed headwall will reduce length of culvert extension
150+600		L	Hop Ranch Creek Tributary seasonal rearing habitat for juvenile coho salmon and food/nutrient supply	west side of highway

Squamish (South Stawamus to Depot Road) Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
151+070	HS 122		Dryden Creek, habitat class 5, Salmonid Habitat	Design for fish passage. Standard Type A – proposed headwall will reduce length of culvert extension

Cheakamus to Function Junction Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
Archaeology				
DELETED		L	Artifact scatter	DIRs-6
DELETED		R	CMTs	Flagged with yellow ribbon
Vegetation and Wildlife				
226+690-227+030	45	L	Red-listed community	Polygons 1395 and 1396
227+440-227+565	45	R	Red-listed community	Polygon 1384
227+200-228+010	46	R	Red-listed community	Polygon 1384
228+119-228+229	46	R	Red-listed community	Polygon 1381
228+880-229+130	46	R	Red-listed community	Polygon 356
229+145-229+225	46	R	Blue-listed community	Polygon 358
229+240-230+290	47	L	Blue-listed community	Polygon 364
230+160-231+650	47-48	R	Red-listed community	Polygons 313 and 302
234+940-236+320	50-51	R	Ponds and wetlands	Polygons 151 and 148
236+700-236+850	51	R	Ponds and wetlands red-legged frog confirmed	Polygons 152
135+800-136+850	51	L	Ponds and wetlands	Polygons 142, 143, 1180 and 1181
236+900	51	R	Ponds and wetlands	Polygon 1187
137+350-237+480	51-52	L	Ponds and wetlands	Polygon 1185
237+950-237+210	52	R	Ponds and wetlands and old osprey nest tree	Polygon 1195
240+300-240+520	53	R	Red-listed community	Polygon 1225
240+980-241+030	54	R	Ponds and wetlands	Polygon 1241

Cheakamus to Function Junction Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
241+030-242+080	54	R	Red-listed community	Polygons 1244, 1246 and 1247
241+500-241+800	54	L	Red-listed community	Polygon 1249
242+085-242+110	54	L	Red-listed community	Polygon 1244
242+055-243+500	54-55	R	Ponds and wetlands	Polygons 1248, 1258 and 1262
243+600-243+900	55-56	R	Ponds and wetlands	Polygons 1270 and 1271
242+900-243+380	55	L	Ponds and wetlands	Polygon 1264
243+750-243+960	55-56	L	Ponds and wetlands	Polygon 1267
244+300-244+440	56	L	Ponds and wetlands	Polygon 1279
244+850-245+100	56	L	Ponds and wetlands	Polygon 1288
254+100-245+320	56	L	Red-listed community	Polygon 1291
245+440-245+510	57	L	Ponds and wetlands	Polygon 1292
245+510-246+350	57	L	Red-listed community	Polygons 1294 and 1295
245+980-246+285	57	R	Red-listed community	Polygons 1308 and 1310
246+200-246+400	57	L	Red and blue-listed community	Polygon 1314
247+050-247+260	58	L	Red-listed community	Polygon 1321
247+680-274+840	58	R	Ponds and wetlands	Polygon 1334
248+710	59	R	Red-listed community	Polygon 1342
248+710-278+860	59	R	Ponds and wetlands	Polygon 1343
249+010-249+140	59	L	Red-listed community	Polygon 1354
249+250--249+400	59	L	Red-listed community	Polygon 1356
249+650-249+850	59	R & L	Ponds and wetlands	Polygon 1374
249+800-249+980	59	R	Ponds and wetlands	Polygon 1372

Cheakamus to Function Junction Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
250+250-250+453	60	R	Blue-listed community	Polygons 1369 and 1373
250+300-250+453	60	L	Blue-listed community	Polygons 1367
Recreation				
229+300-231+230	PA 14-4	L	Mountain biking trail, "Doris Burma Memorial" and Sea to Sky Trail section	
23+570-238+900	PA 15-1	R	Forest visual screening along Daisy Lake	Minimize vegetation clearing on NB side so as to leave a forested buffer/screening of views to east
244+720	PA 16-2		Callaghan Creek Bridge, instream recreation	Avoid disturbance/changes to channel affecting hydraulic characteristics and instream safety; consult on this matter with user group/representative association (WKABC) during design.
247+200 to 247+500	PA 16-6, 16-7	R	"Train wreck Trail" east of highway, and recreation/historical features	Minimize encroachment or vegetation clearing
249+900	PA 16-7		Trailhead/trails on both sides of highway	Minimize encroachment or vegetation clearing at trailhead.
Fisheries				
229+180	SW 83		(Cheakamus River Tributary), Habitat Class 5, Dolly Varden/Bull Trout and Salmonid Habitat	Design for fish passage. Standard Type A – avoid d/s extension, if feasible (otherwise, impacts to stream on west side will increase)
229+500	SW 84		(Cheakamus River Tributary), Habitat Class 5, Dolly Varden/Bull Trout and Salmonid Habitat	Atypical Type A
229+670	SW 85		(Cheakamus River Tributary), Habitat Class 5, Bull Trout Habitat	Atypical Type A

Cheakamus to Function Junction Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
229+840	SW 86		(Cheakamus River Tributary), Habitat Class 5, Bull Trout Habitat	Standard Type A
230+280	SW 89		Cheakamus River (alongside hwy), Habitat Class 5, Salmonid Habitat	Standard Type A
230+850	SW 90.1		(Cheakamus River Tributary), Habitat Class 4, Resident Trout	Design for fish passage. Standard Type A
232+040	SW 93		(Cheakamus River Tributary), Habitat Class 3, Potential Fish Habitat	Design for fish passage. Standard Type A
232+320	SW 94		(Cheakamus River Tributary) , Habitat Class 4, Resident Trout	Design for fish passage. Standard Type A
232+550	SW 95		Rubble Creek, Habitat Class 4, Resident Trout	Design for fish passage. Standard Type A
233+340	SW 97		Cheakamus River, Habitat Class 5, Salmonid Habitat	Design for fish passage. Standard Type A
not identified	SW 98.4		Daisy Lake, Habitat Class 5, Resident Salmonid Habitat	Standard Type A
234+550	SW 99		Roe Creek (Daisy Lake Channel), Habitat Class 5, Resident Salmonid Habitat	Design for fish passage. Standard Type A DFO's hierarchy of preferences for crossing structures must be applied and mitigation measures developed to avoid encroachment into the seasonally wetted areas of Daisy Lake or minimize encroachment to a level acceptable to DFO.
234+900	SW 102		(Daisy Lake Tributary), Habitat Class 3, Potential Fish Habitat	Standard Type A - impacts to riparian habitat values of Daisy Lake tributary can be minimized by widening west instead of east side of highway (otherwise, Atypical Type A impacts might apply)

Cheakamus to Function Junction Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
235+020	SW 103		Habitat Class 3, Potential Fish Habitat	Standard Type A - impacts to wetland riparian habitat values can be avoided by widening west instead of east of highway (otherwise, Atypical Type A impacts may apply)
235+100	SW 104		Habitat Class 3, Potential Fish Habitat	Standard Type A - impacts to channel riparian habitat values can be avoided by widening west instead of east of highway (otherwise, Atypical Type A impacts may apply)
235+220	SW 105		Habitat Class 3, Potential Fish Habitat	Standard Type A - impacts to wetland riparian habitat values can be avoided by widening west instead of east side of highway (otherwise, Atypical Type A impacts may apply)
235+270	SW 106		Habitat Class 3	Standard Type A - impacts to channel riparian habitat values can be avoided by widening west instead of east side of highway (otherwise, Atypical Type A impacts may apply)
235+340	SW 107		Habitat Class 3, Potential Fish Habitat	Standard Type A - impacts to wetland riparian habitat values can be avoided by widening west instead of east side of highway (otherwise, Atypical Type A impacts may apply)
235+400	SW 108		Habitat Class 3	Standard Type A - impacts to channel riparian habitat values can be avoided by widening west instead of east side of highway (otherwise, Atypical Type A impacts may apply)
235+440	SW 109		Habitat Class 3, Potential Fish Habitat	Standard Type A - impacts to wetland riparian habitat values can be avoided by widening west instead of east side of highway (otherwise, Atypical Type A impacts may apply)

Cheakamus to Function Junction Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
235+470	SW 110		Habitat Class 3, Potential Fish Habitat	Standard Type A - impacts to wetland riparian habitat values can be minimized by widening west instead of east side of highway (otherwise, Atypical Type A impacts may apply, especially to western edge of small portion of wetland area)
235+700	SW 111		Habitat Class 2A, Potential Fish Habitat	Atypical Type B - consider retaining walls to avoid or minimize wetland encroachment - other Standard Type B mitigation measures apply
235+700	SW 112		Habitat Class 2A, Potential Fish Habitat	Standard Type B - impacts to wetland aquatic/riparian habitats can be minimized by widening to east and avoiding impacts to SW 114 (otherwise, Atypical Type A impacts may apply) - retaining wall will also protect wetland from encroachment
not identified	SW 114		Habitat Class 2A, Potential Fish Habitat	Standard Type B - retaining wall will avoid any direct wetland loss
235+940	SW 115		Retta Lake, Habitat Class 4, Community Reservoir	Standard Type A - impacts to lake aquatic/riparian habitats will be minimized by widening to east (otherwise, Atypical Type A impacts would apply) - retaining wall will also protect lake from encroachment
235+920	SW 116		Habitat Class 2A, Amphibian Habitat	Atypical Type B - it appears that this wetland will be unavoidably impacted by the highway footprint - retaining wall would minimize impacts - other Standard Type B mitigation measures apply

Cheakamus to Function Junction Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
236+100	SW 118		Habitat Class 2A, Amphibian Habitat	Atypical Type B - it appears that this wetland will be unavoidably impacted by the highway footprint - retaining wall would minimize impacts - other Standard Type B mitigation measures apply
236+700	SW 123		Habitat Class 2A, Amphibian Habitat	Atypical Type B - minimize impacts to wetland aquatic/riparian habitats - retaining wall would reduce impacts to some extent
237+000	SW 126		Widow (Brew) Creek, Habitat Class 5, Resident Trout	Design for fish passage. Standard Type A - replacement of existing culverts with improved structure (e.g. wide or open bottom structure with headwalls and tailwater pond installation) - avoid encroachment of ancillary site on Brew Creek riparian habitat (maintain all vegetation within 15 m from top-of-bank)
243+460	SW 164		Habitat Class 4, Resident Salmonid Habitat	Design for fish passage. Standard Type A
not identified	SW 164.1		Habitat Class 3, Resident Salmonid Habitat	Standard Type A
244+720	SW 177		Callaghan Creek, Habitat Class 5, Char and Resident Salmonid Habitat	Design for fish passage. Atypical Type A - minimize riparian impacts - avoid encroachment on Callaghan Creek riparian habitat (maintain all vegetation within 15 m from top-of-bank) - other Standard Type A mitigation measures apply
244+770	SW 178		(Callaghan Creek tributary), Habitat Class 4, Resident Salmonid Habitat	Standard Type A - avoid sensitive habitat to the west - note that clearing and grubbing must be minimized to avoid atypical impacts

Cheakamus to Function Junction Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
244+870	SW 180		(Callaghan Creek tributary), Habitat Class 4, Resident Salmonid Habitat and Potential Char Habitat	Standard Type A - avoid sensitive habitat to the west - note that clearing and grubbing must be minimized to avoid atypical impacts
244+940	SW 181		Habitat Class 4, Resident Salmonid Habitat	Atypical Type A - widening to east would minimize encroachment into wetland feature - proposed retaining wall will also help to minimize wetland encroachment - some loss of wetland habitat and associated riparian vegetation will likely occur and require compensation - other Standard Type B mitigation measures apply
245+160	SW 183		Habitat Class 4, Potential Char Habitat	Standard Type A - minimize encroachment on wetland feature, with installation of a retaining wall - some loss of riparian vegetation may occur
245+460	SW 185		Habitat Class 4, Potential Char Habitat	Standard Type A - retaining wall if necessary, to ensure avoidance of encroachment on riparian vegetation - minimize clearing and grubbing width in proximity to lake (maintain a minimum 15 m buffer from top-of-bank)
not identified	SW 190.1		Habitat Class 2A, Amphibian Habitat	Atypical Type B - minimize grubbing width in proximity to creek
247+810	SW 198		Habitat Class 2A, Amphibian Habitat	Atypical Type B - minimize clearing and grubbing width in proximity to creek
247+780	SW 199		Habitat Class 2A, Amphibian Habitat	Atypical Type B - sensitive habitat to the east
247+910	SW 200		Habitat Class 2A, Amphibian Habitat	Atypical Type B - sensitive habitat to the east

Cheakamus to Function Junction Sensitive Features/Environmental Constraints				
PA Sta.	Sheet or ref.	Side, northbound	Sensitive Feature/Constraint	Comment
248+080	SW 202		Habitat Class 2A, Amphibian Habitat	Atypical Type B - sensitive habitat to the east
249+550	SW 208		Trib S, Amphibian Habitat; habitat class 2A, Tailed Frog Habitat	Standard Type B - select a final alignment that crosses this stream at the most optimal location (follow-up field work is required) - minimize highway footprint width in order to avoid excessive impacts to riparian habitat values - install a wide or open bottom structure to avoid impacts to instream habitat values
	SW 209		Habitat Class 2A, Amphibian Habitat	na
	SW 212		Habitat Class 2A, Amphibian Habitat	Standard Type B - select a final alignment that crosses this stream at the most optimal location (follow-up field work is required) - minimize highway footprint width in order to avoid excessive impacts to riparian habitat values - install a wide or open bottom structure to avoid impacts to instream habitat values
	SW 213		Miller Creek, Habitat Class 5, Salmonid Habitat	Design for fish passage. Atypical Type A - select a final alignment that crosses Miller Creek at the most optimal location (follow-up field work is required) - minimize highway footprint width in order to avoid excessive impacts to riparian habitat values - maintain a minimum 15 m from top-of-bank buffer - other Standard Type A mitigation measures apply

SCHEDULE 13**CHANGES****Part 1****Definitions**

In this Schedule 13, unless the context otherwise requires, the following expressions have the following meanings:

“**Amended Change Appraisal**” has the meaning given in Paragraph 4.1.4 of Part 2 of this Schedule 13 [Province Changes].

“**Amended Change Notice**” has the meaning given in Paragraph 4.1.1 of Part 2 of this Schedule 13 [Province Changes].

“**Amended Compensation Notice**” has the meaning given in Paragraph 1.1 of Part 4 of this Schedule 13 [Compensation Events].

“**Bid Price**” means, in respect of a Province Change or a Compensation Event (as the case may be), the price set out in the report on Valid Tenders referred to in Paragraph 4.1.4 of Part 2 of this Schedule 13 [Province Changes].

“**Cancellation Notice**” has the meaning given in Paragraph 6.1.1.3 of Part 2 of this Schedule 13 [Province Changes].

“**Capital Cost Increase**” means, in relation to a Province Change or Compensation Event, the amount of the Fixed Price or Bid Price therefor (if any) accepted by the Province and (except insofar as covered by such Fixed Price or Bid Price) the amount, if any, by which:

- (a) Capital Expenditure (in addition to such Fixed Price or Bid Price) that is demonstrably incurred by the Concessionaire in carrying out the Operations as a direct consequence of such Province Change or Compensation Event, the Concessionaire having taken all reasonable steps to minimize such Capital Expenditure,
exceeds:
- (b) Capital Expenditure which would have been demonstrably incurred by the Concessionaire in carrying out the Operations without such Province Change or Compensation Event,

provided, however, that, for greater certainty, if a Bid Price is accepted by the Province, any reasonable additional Capital Expenditure properly and demonstrably incurred and arising under the terms of the Bid Price will be added subsequently and recovered as a Capital Cost Increase insofar as such costs have been included in the report on Valid Tenders contained in the Change

Appraisal or Amended Change Appraisal (as applicable) delivered to the Province pursuant to Paragraph 3.1 or 4.1 of Part 2 of this Schedule 13 [Province Changes].

“**Capital Cost Saving**” means, in relation to a Province Change, Concessionaire Change or Compensation Event, the amount, if any, by which:

- (a) Capital Expenditure that is demonstrably incurred by the Concessionaire in carrying out the Operations as a direct consequence of such Province Change, Concessionaire Change or Compensation Event, the Concessionaire having taken all reasonable steps to minimize such Capital Expenditure,
is less than:
- (b) Capital Expenditure which would have been demonstrably incurred by the Concessionaire in carrying out the Operations without such Province Change, Concessionaire Change or Compensation Event,

provided, however, that, for greater certainty, if a Bid Price is accepted by the Province, any reasonable additional reduction in Capital Expenditure arising under the terms of the Bid Price will be added to and recovered subsequently as a Capital Cost Saving insofar as such costs have been included in the report on Valid Tenders contained in the Change Appraisal or Amended Change Appraisal (as applicable) delivered to the Province pursuant to Paragraph 3.1 or 4.1 of Part 2 of this Schedule 13 [Province Changes].

“**Change Adjustment**” means an adjustment to the Total Performance Payment calculated in accordance with Annex A to this Schedule 13.

“**Change Appraisal**” has the meaning given in Paragraph 3.1 of Part 2 of this Schedule 13 [Province Changes].

“**Change Completion Date**” has the meaning given in Paragraph 2.1.1.2 of Part 2 of this Schedule 13 [Province Changes].

“**Change in Capital Costs**” means a Capital Cost Increase or a Capital Cost Saving.

“**Change in Recurrent Costs**” means a Recurrent Cost Increase or a Recurrent Cost Saving.

“**Change in Revenues**” means a Revenue Gain or a Revenue Loss.

“**Compensable Loss**” in respect of a Compensation Event (other than a Geotechnical Baseline Event) means:

- (a) a Capital Cost Increase; and/or
- (b) a Recurrent Cost Increase; and/or
- (c) a Revenue Loss,

incurred by the Concessionaire as a direct consequence of the Compensation Event (the Concessionaire having taken all reasonable steps to mitigate such Compensable Loss) to the extent the aggregate amounts referred to in paragraphs (a), (b) and (c) above exceed the

aggregate of any Capital Cost Saving, Recurrent Cost Saving, Revenue Gain and any other saving incurred as a direct consequence of such Compensation Event (the Concessionaire having taken all reasonable steps to maximize the same).

In respect only of a Geotechnical Baseline Event, “**Compensable Loss**” means an amount which is equal to the aggregate of 50% of any Capital Cost Increase and 50% of any Revenue Loss incurred by the Concessionaire as a direct consequence of the occurrence of the Geotechnical Baseline Event (the Concessionaire having taken all reasonable steps to mitigate such Compensable Loss) to the extent the aforesaid amount exceeds 50% of any Capital Cost Saving and 50% of any Revenue Gain and any other saving incurred as a direct consequence of the Geotechnical Baseline Event (the Concessionaire having taken all reasonable steps to maximize such saving or gain).

“**Compensation Notice**” has the meaning given in Paragraph 1.1 of Part 4 of this Schedule 13 [Compensation Events].

“**Disputed Matter**” has the meaning given in Paragraph 6.1.1.1 of Part 2 of this Schedule 13 [Province Changes].

“**Fixed Price**” means a fixed price quotation (excluding financing costs) for the implementation of a Province Change or Compensation Event (as the case may be) incorporating all such information, including quantities, as is required pursuant to Paragraph 3.1.1 of Part 2 of this Schedule 13 [Province Changes] or as the Province may reasonably require to enable it to properly evaluate such quotation excluding, for greater certainty, a Bid Price.

“**Geotechnical Baseline Event**” means the Compensation Event referred to in clause (r) of the definition of "Compensation Event" in Schedule 1 [Definitions and Interpretation].

“**Payment Amount**” has the meaning given in Paragraph 1.1.1 of Part 4 of this Schedule 13 [Compensation Events].

“**Province Change Confirmation**” has the meaning given in Paragraph 6.1.1.2 of Part 2 of this Schedule 13 [Province Changes].

“**Province Change Notice**” has the meaning given in Paragraph 2.1.1 of Part 2 of this Schedule 13 [Province Changes].

“**Recurrent Cost**” means any expenditure (whether recurrent or not) which is not a Capital Expenditure.

“**Recurrent Cost Increase**” means, in relation to a Province Change or a Compensation Event, the amount (if any) by which:

- (a) the Recurrent Costs demonstrably incurred and/or to be incurred by the Concessionaire in performing the Operations as a direct consequence of such Province Change or Compensation Event, subject to the Concessionaire taking all reasonable steps (having regard to its continuing obligations under the Agreement) to minimize such Recurrent Costs insofar as they are attributable to such Province Change or Compensation Event,

exceeds:

- (b) the Recurrent Costs which would demonstrably have been incurred by the Concessionaire in performing the Operations without such Province Change or Compensation Event.

“Recurrent Cost Saving” means, in relation to a Province Change, Concessionaire Change or Compensation Event, the amount (if any) by which:

- (a) the Recurrent Costs demonstrably incurred and/or to be incurred by the Concessionaire in performing the Operations as a direct consequence of such Province Change, Concessionaire Change or Compensation Event, subject to the Concessionaire taking all reasonable steps (having regard to its continuing obligations under the Agreement) to minimize such Recurrent Costs insofar as the Recurrent Costs are attributable to such Province Change, Concessionaire Change or Compensation Event,

is less than:

- (b) the Recurrent Costs which would demonstrably have been incurred by the Concessionaire in performing the Operations without such Province Change, Concessionaire Change or Compensation Event.

“Refusal Notice” has the meaning given in Paragraph 5.1.1 of Part 2 of this Schedule 13 [Province Changes].

“Relevant Consents” has the meaning given in Paragraph 3.1.4 of Part 2 of this Schedule 13 [Province Changes].

“Revenue Gain” means a net increase in the Total Performance Payment receivable by the Concessionaire in accordance with Section 32.1 [Total Performance Payment] of the Agreement as a direct consequence of a Province Change, Concessionaire Change or Compensation Event which would not have been payable by the Province but for the Province Change, Concessionaire Change or Compensation Event.

“Revenue Loss” means the absence of, delay in, or a net decrease in the Total Performance Payment receivable by the Concessionaire in accordance with Section 32.1 [Total Performance Payment] of the Agreement as a direct consequence of a Province Change or Compensation Event which would have been payable by the Province but for the Province Change or Compensation Event; provided however that to the extent a Revenue Loss results from a delay in completion of the Works resulting from a Province Change or a Compensation Event, the Revenue Loss will be determined on the basis of the Delay Period determined in accordance with Section 12.6.7 of the Agreement.

“Valid Tender” means a tender received by the Concessionaire which complies with the tender requirements established in accordance with the provisions of Paragraph 4.1.2 of Part 2 of this Schedule 13 [Province Changes] and notified to tenderers by the Concessionaire.

SCHEDULE 13**CHANGES****Part 2****Province Changes****1.1 General**

- 1.1.1 Subject to the terms and conditions of this Schedule 13, the Province will be entitled to propose and require the Concessionaire to carry out and implement a Province Change.
- 1.1.2 The Concessionaire will not be entitled to any payment, compensation or extension of time for a Province Change except to the extent provided in a Province Change Confirmation in accordance with this Schedule.

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2.1 Procedure for requesting a Province Change

- 2.1.1 If the Province wishes to make a Province Change, the Province will issue a Notice (a "Province Change Notice") to the Concessionaire and the Agent specifying:

2.1.1.1 the nature, extent and full details of the Province Change in sufficient detail to reasonably allow the Concessionaire to calculate and provide the Change Appraisal in accordance with Paragraph 3.1 of this Part 2;

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2.1.1.2 the date as of which the Province wishes the Province Change to be completed (which will be a reasonable date having regard to the nature of the Province Change) (the "Change Completion Date");

2.1.1.3 whether or not the Province wishes any Capital Cost Increase consequent on a Province Change to be paid for by way of a lump sum payment or payments, or by way of a Change Adjustment (and, if desired by the Province in the case of a Change Adjustment, with a request for the Concessionaire to use all reasonable efforts to obtain financing for all or part of the Province Change, provided, however, that no such request may be made by the Province unless the Province believes that the Capital Cost Increase consequent on the Province Change is reasonably likely to exceed \$250,000 (index linked)), or a combination thereof;

2.1.1.4 where, in the opinion of the Province, it is or would be likely to be required by applicable laws, regulations, policies or guidelines to competitively tender or seek competitive bids or proposals in respect of any contract in connection with or relating to the Province Change, that the Concessionaire is required to seek and evaluate competitive tenders, bids or proposals (as applicable) or other competitive price quotations for the Province Change and submit a Bid Price in accordance with the provisions set out in Paragraph 4.1 (provided, however, that references in Paragraph 4.1 to "Amended Change Notice" and

“Amended Change Appraisal” will be construed for purposes of this Paragraph 2.1.1.4 as if they were references to “Province Change Notice” and “Change Appraisal” respectively).

3.1 Change Appraisals

Subject to Paragraphs 4.1.6 and 5.1 of this Part 2, within 30 Working Days (or such later date as the Province may specify acting reasonably in the circumstances) of the issuance of a Province Change Notice, the Concessionaire will deliver to the Province a written report (a “Change Appraisal”), which will set out:

- 3.1.1 the amount of the Fixed Price, together with a detailed summary of the prices, costs, charges, overhead amounts, profit and other margins, used to calculate the Fixed Price and a statement of the Concessionaire confirming the matters set out in Paragraphs 3.1.1.1 to 3.1.1.6 (inclusive), which statement must be accompanied by sufficient additional information to demonstrate to the Province’s satisfaction that:
 - 3.1.1.1 the Concessionaire has used all reasonable efforts, including the use of competitive quotations or tenders, to oblige its subcontractors to minimize any increase in costs and to maximize any reduction in costs;
 - 3.1.1.2 all costs of the Concessionaire and its contractors and subcontractors of any tier 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 Concessionaire, its contractors or subcontractors of any tier (as applicable); or (ii) paid by the Concessionaire, its contractors or subcontractors of any tier (as applicable), all without addition of any markup, overhead charges, or other increases above the actual amounts referred to above, whether for salary or wages, machinery, equipment, tools, or any other input;
 - 3.1.1.3 the margins for profit and overhead included in the calculation of the Fixed Price do not exceed **DELETED** and no other margins or mark-ups (except for any margin or premium referred to in Paragraph 3.1.1.3A below) are included;
 - 3.1.1.3A to the extent the Province Change would directly result in a material adverse change to the Concessionaire in the overall risk allocation under the Concession Agreement as at the date of the Province Change Notice, taking into account any other factors mitigating the effect of the Province Change on the overall risk allocation, the amount of any margin or premium included in the calculation of the Fixed Price (in excess of the margins for profit and overhead referred to in Paragraph 3.1.1.3 above) fairly and appropriately reflects such change in overall risk allocation (provided, however, that no risk premium may be included in the Fixed Price to take account of any amendments by the Province to relieve the Concessionaire of the obligation to maintain any insurances identified in Section 2, 3 or 4 of Schedule 11 [Insurance Requirements] or to reduce the scope of coverage or the policy

limits of any insurance coverage required to be maintained by the Concessionaire pursuant to Schedule 11 [Insurance Requirements]);

3.1.1.4 all costs included in the Fixed Price reflect: (i) labour rates applying in the open market to providers of services similar to those required in connection with the implementation of the Province Change; (ii) any and all changes in the Technical Requirements arising out of the proposed Province Change; and (iii) any and all changes in risk allocation (including any margin or premium referred to in Paragraph 3.1.1.3A above);

3.1.1.5 the Fixed Price will provide good overall value to the Province and takes into account all reasonably foreseeable Changes in Law;

3.1.1.6 the Concessionaire 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 all Good Industry Practice in relation to any such procurement, to a standard no less than the Concessionaire would apply if all costs incurred were to its own account without recourse to the Province;

3.1.2 where relevant, an estimate of the likely:

- (a) Capital Cost Increases or Capital Cost Savings; and/or
- (b) Recurrent Cost Increases or Recurrent Cost Savings; and/or
- (c) Revenue Loss or Revenue Gain,

resulting from the implementation of the Province Change insofar as not covered by the Fixed Price or, where a Bid Price is required pursuant to Paragraph 4.1 of this Part 2, by the Bid Price (which estimate, for greater certainty, will not be binding on either Party unless expressly agreed to by both Parties);

3.1.3 where the Province Change Notice has specified that the Province wishes the Province Change to be paid for by a Change Adjustment, an estimate of such adjustment calculated in accordance with Annex A to this Schedule 13 (which, for greater certainty, will not be binding on either Party unless expressly agreed to by both Parties) and, where there is a Capital Cost Increase, a report on whether funding for the Capital Cost Increase to which the Change Adjustment relates is available under the Funding Agreements and, if not, whether the Concessionaire has been able to obtain or is likely to obtain funding for such Capital Cost Increase within the time period specified in Paragraph 9.1 of this Part 2, including details of steps taken or to be taken to obtain such funding;

3.1.3A where the Concessionaire has included a margin or premium in respect of a material adverse change in overall risk allocation as contemplated under Paragraph 3.1.1.3A above, a detailed description of the nature and extent of such material adverse change which, in its reasonable assessment, would result from the implementation of the Province Change;

- 3.1.4 a list of any Permits, Licences and Approvals or amendments or revisions to existing Permits, Licences and Approvals which must be obtained (including any Permits, Licences and Approvals which can only be obtained by the Province) before the Province Change can be effected or implemented to give effect to the Province Change (the “Relevant Consents”) and the costs of and anticipated timetable for obtaining the same together with any consequential impact upon the date specified by the Province in Paragraph 2.1.1.2 of this Part 2;
- 3.1.5 a detailed description of any anticipated adverse (or beneficial) effect on the Concessionaire’s ability to comply with the provisions of the Agreement or perform any of the Operations and proposals for mitigating (or enhancing) such effect;
- 3.1.6 the Concessionaire’s reasonable assessment of whether the implementation of such a Province Change would require or result in changes, alterations or amendments to any of the Technical Requirements;
- 3.1.7 without prejudice to any of the Concessionaire’s obligations pursuant to Section 12.6 [Delay] of the Agreement or Part 5 of this Schedule 13 [Relief] and:
- 3.1.7.1 subject to the determination by the Province’s Representative pursuant to Section 12.6.7 of the Agreement regarding the Delay Period (if any) which has arisen or will arise as a consequence of the Province Change, a detailed description of any anticipated delay or impediment to completion of the Works;
- 3.1.7.2 subject to the determination by the Province’s Representative pursuant to Paragraph 1.1.3 of Part 5 of this Schedule 13 [Relief] regarding the period of any delay or impediment in performance of the Operations which has arisen or will arise as a consequence of the Province Change, a detailed description of any such anticipated delay or impediment;
- 3.1.8 where the Concessionaire is of the opinion (reasonably held) that implementation of the Province Change may result in the Concessionaire being unable to or prevented from meeting any of the Technical Requirements and/or any other provisions of the Agreement, details of how such an effect can be mitigated (if at all) and the estimated cost (if any) of doing so.
- 3.1.9 a detailed description of any changes to the Construction Requirements, the O&M Requirements and any other parts of the Agreement which the Concessionaire considers (acting reasonably) would reasonably be required in order to implement the Province Change;
- 3.1.9A except with respect to material adverse changes in risk allocation taken into account in the margin or premium referred to in Paragraph 3.1.1.3A included in the calculation of the Fixed Price pursuant to Paragraph 3.1.1 of this Part 2, a detailed description of such amendments to the provisions of Part IV of the Agreement [Payments], Schedule 10 [Payments] and other provisions of the Agreement associated with the aforesaid provisions of Part IV and Schedule 10 which the Concessionaire considers (acting

reasonably) are necessary as a consequence of the Province Change, the objective being to ensure that (save for the obligation of the Province to make payments or altered payments in respect of the Province Change or any other adverse consequences for the Province arising from the Province Change itself) the parties are in no better and no worse position in relation to the Project than they would have been in if such Province Change had not been implemented;

- 3.1.10 if implementing the Province Change will, in the Concessionaire's opinion, result in any of the following events: (i) the Pre Olympic Works Substantial Completion Date not occurring on or before the Scheduled Pre Olympic Works Substantial Completion Date, (ii) the Post Olympic Works Final Completion Date not occurring on or before the Scheduled Post Olympic Works Final Completion Date, or (iii) the Olympic Requirements Works not occurring on or before the Scheduled Olympic Requirements Works Substantial Completion Date, a statement by the Concessionaire as to whether it would be practicable for the Contractor to accelerate construction so as to eliminate or mitigate the delay and (if it is so practicable) the Concessionaire's estimate of the costs of such acceleration;
- 3.1.11 details as to any land or Rights in respect of land to which the Concessionaire would require access in order to implement the Province Change in respect of which it does not currently have access pursuant to the licence granted to the Concessionaire and those authorized by it under Section 8 of the Agreement; and
- 3.1.12 the Concessionaire's proposed schedule for the implementation of the Province Change (which will, *inter alia*, provide for completion of the relevant Province Change by not later than the Change Completion Date in respect of that Province Change).

4.1 Bid Price

- 4.1.1 As soon as practicable following the delivery of the Change Appraisal to the Province in accordance with Paragraph 3.1 of this Part 2, the Province's Representative will meet with the Concessionaire's Representative to discuss the matters set out in the Change Appraisal. If, following any such discussions, the Province (acting reasonably) is not satisfied that the criteria set out in Paragraph 3.1.1 have been met or is otherwise not satisfied that the Fixed Price represents the best value for money obtainable in connection with the implementation of the proposed Province Change, it may, if the Fixed Price set out pursuant to Paragraph 3.1.1 of this Part 2 is likely to exceed \$150,000 (index linked), provide an amended Province Change Notice (the "Amended Change Notice") to the Concessionaire requiring it to seek and evaluate competitive tenders for implementation of the proposed Province Change from appropriately qualified and experienced third parties (each of which must be, as at the date of submission by the Concessionaire of the Amended Change Appraisal referred to in Paragraph 4.1.4 below, dealing at "arm's length" with the Concessionaire and with one another, as the term "arm's length" is used in the Income Tax Act (Canada) in effect as of the date of this Agreement) and to submit a Bid Price;

- 4.1.2 as soon as possible, but in any event no later than 5 Working Days after receipt of the Amended Change Notice, the Province's Representative and the Concessionaire's Representative will meet to discuss and develop the appropriate manner of identifying prospective tenderers and the terms of the tender requirements, which terms must include (without limitation):
- 4.1.2.1 a statement of the tender validity period;
 - 4.1.2.2 details of the tender evaluation criteria;
 - 4.1.2.3 the terms and conditions under which the relevant services will be contracted by the Concessionaire;
 - 4.1.2.4 the information that tenderers are required to provide; and
 - 4.1.2.5 the minimum number of tenders that are required to be obtained for the tender to be valid;
- 4.1.3 any Dispute with respect to the matters referred to in Paragraph 4.1.2 above will be determined in accordance with the Disputes Resolution Procedure;
- 4.1.4 within 30 Working Days of agreement or determination of the matters referred to in Paragraph 4.1.2 above, the Concessionaire will obtain Valid Tenders and submit an amended Change Appraisal (the "Amended Change Appraisal") containing a report on Valid Tenders;
- 4.1.5 if the Concessionaire demonstrates to the Province's satisfaction (acting reasonably) that it is impracticable to obtain Valid Tenders in accordance with this Paragraph 4.1 and complete the Amended Change Appraisal within 30 Working Days of receiving the Amended Change Notice or such longer period as the Province in its absolute and unfettered discretion may allow, the Concessionaire will deliver the Amended Change Appraisal to the Province as soon as reasonably practicable;
- 4.1.6 if the Concessionaire demonstrates to the Province's satisfaction (acting reasonably) that it is impracticable given the nature of the Province Change to obtain a Bid Price (including the Concessionaire being unable, despite taking all reasonable steps to comply, to meet the time requirements set out in Paragraph 4.1.5 of this Part 2), the Concessionaire will be entitled (subject to notifying the Province in writing of its reasons therefor) to decline to submit a Bid Price in which event the Province may, in its absolute and unfettered discretion, withdraw the Amended Change Notice and cancel the proposed Province Change or accept the Fixed Price provided by the Concessionaire in response to the original Province Change Notice relating to the proposed Province Change.

5.1 Circumstances in which the Concessionaire may refuse to deliver a Change Appraisal

- 5.1.1 Subject to providing the Province with written notification (a "Refusal Notice") not later than 20 Working Days after receipt by the Concessionaire of a Province Change Notice

or an Amended Change Notice (whichever is later) (which Refusal Notice must contain an explanation of the Concessionaire's reasons therefor in sufficient detail to permit a considered review thereof by the Province), the Concessionaire may decline to provide a Change Appraisal or implement a Province Change on the basis that:

- 5.1.1.1 to implement the Province Change would be technically unfeasible or the Province Change would, if implemented, materially and adversely affect the Concessionaire's ability to perform its obligations under the Agreement; or
- 5.1.1.2 to implement the Province Change would be contrary to Good Industry Practice; or
- 5.1.1.3 to implement the Province Change would be contrary to Laws and Regulations; or
- 5.1.1.4 to implement the Province Change would be illegal or unsafe; or
- 5.1.1.5 the Concessionaire would be unable (using all reasonable efforts in respect thereof) to obtain any Relevant Consents (other than Relevant Consents that would be the responsibility of the Province) necessary to implement the Province Change or otherwise to allow compliance with the provisions of the Agreement as a consequence of implementation of such a Province Change having regard to the provisions of the Agreement (as amended, where appropriate, to take account of or make provision for the Province Change); or
- 5.1.1.6 the Province Change would cause any existing Permit, Licence or Approval to be revoked or cancelled or would cause any additional conditions to be imposed in relation to any such Permit, Licence or Approval with which the Concessionaire would be unable to comply; or
- 5.1.1.7 the Concessionaire would be unable (using all reasonable efforts in respect thereof) to obtain any land or Rights in respect of land necessary for the purpose of implementing the Province Change except where the Province obtains such land.

5.2 Province Response to Refusal Notice

- 5.2.1 Within 10 Working Days of receiving a Refusal Notice, the Province will deliver a Notice to the Concessionaire that it: (i) is cancelling the proposed Province Change; or (ii) does not agree that the proposed Province Change properly falls within any of the grounds set out in Paragraph 5.1.1 of this Part 2 and is referring the matter for resolution pursuant to the Disputes Resolution Procedure.
- 5.2.2 If the Province fails to deliver to the Concessionaire the Notice referred to in Paragraph 5.2.1 of this Part 2 within the time stipulated thereunder, the Concessionaire will deliver a notice to the Province requiring the Province to deliver the Notice referred to in Paragraph 5.2.1 of this Part 2 within 5 Working Days failing which the Province Change Notice will be deemed to have been cancelled.

- 5.2.3 In any circumstances where the Province cancels or is deemed to have cancelled a Province Change pursuant to Paragraphs 5.2.1 or 5.2.2 of this Part 2, the Province will pay within 20 Working Days of demand a sum equal to the costs, fees and expenses reasonably incurred by the Concessionaire (from the date of receipt by the Concessionaire of the Province Change Notice) in considering the Province Change and (if applicable) preparing a Change Appraisal or Amended Change Appraisal.
- 5.2.4 If the Province makes a reference to the Disputes Resolution Procedure as contemplated in Paragraph 5.2.1(ii) of this Part 2 and it is determined under the Disputes Resolution Procedure that the Concessionaire was not entitled to refuse to implement the Province Change, the Concessionaire will deliver a Change Appraisal in accordance with Paragraph 3.1 of this Part 2 within 20 Working Days of such determination or such longer period as the Province (acting reasonably, given the nature and extent of the Province Change) may agree with the Concessionaire and the Concessionaire will pay on demand the reasonable and proper costs, fees and expenses reasonably and properly incurred by the Province in connection with its consideration of the Refusal Notice.

6.1 Procedure following submission of a Change Appraisal

- 6.1.1 The Province will, within 15 Working Days of receiving a Change Appraisal or Amended Change Appraisal, as the case may be (or such longer period as the Parties may agree), notify the Concessionaire whether it:
- 6.1.1.1 disputes any matter or matters whatsoever (a “Disputed Matter”) in the Change Appraisal or Amended Change Appraisal, as the case may be; or
 - 6.1.1.2 wishes to proceed with the Province Change on the basis set out in the Change Appraisal or the Amended Change Appraisal, as the case may be (a “Province Change Confirmation”); or
 - 6.1.1.3 wishes to cancel the Province Change (a “Cancellation Notice”); or
 - 6.1.1.4 requires any further clarification or information before making a decision in respect of any of the information set out in the Change Appraisal or the Amended Change Appraisal, as the case may be (including, for greater certainty, confirmation whether funding will be available within the time period specified in Paragraph 9.1 of this Part 2 for the Capital Cost Increases which the Province wishes to pay for (whether in whole or in part) by way of a Change Adjustment), in which case the Concessionaire will supply such information or clarification within 20 Working Days of such notification and this Paragraph 6.1.1 will apply *mutatis mutandis* as if receipt of such information or clarification were receipt of a Change Appraisal or Amended Change Appraisal (as the case may be) and the full provision of all requested further clarifications or information will be treated as receipt of the Change Appraisal or the Amended Change Appraisal (as the case may be) for the purposes of this Paragraph 6.1.1; or

- 6.1.1.5 wishes the Province Change Notice or the Amended Change Notice (as the case may be) to be amended, in which event the Concessionaire will submit a revised Change Appraisal or Amended Change Appraisal (as the case may be) within 20 Working Days of such notification; or
- 6.1.1.6 wishes to implement the Province Change itself or through third parties in the circumstances and in the manner set forth in Paragraph 6.1.4 below, failing which the Province will be deemed to have issued a Cancellation Notice.
- 6.1.2 Within 10 Working Days of notification by the Province as to a Disputed Matter either Party may refer the Disputed Matter for determination or resolution pursuant to the Disputes Resolution Procedure.
- 6.1.3 Within 10 Working Days of the final agreement or determination of all Disputed Matters referred to in Paragraph 6.1.2 of this Part 2, the Province will serve either a Province Change Confirmation or a Cancellation Notice in respect of the Province Change.
- 6.1.4 Notwithstanding any other provision contained in this Part 2, where a Province Change involves Capital Expenditure and where the Concessionaire has included a margin or premium as contemplated in Paragraph 3.1.1.3A of this Part 2 in the calculation of the Fixed Price in respect of such Province Change, the Province may (if the aforesaid margin or premium is not acceptable to the Province in its opinion, reasonably held, and without being required to treat such matter as a Disputed Matter) in its discretion determine to have any works included in such Province Change carried out by its own labour forces (including day labour retained by the Province) or by a third party contractor, in which event the Province will take measures to have the work carried out in a reasonable fashion, and will have no payment or other obligations to the Concessionaire and the Concessionaire will have no entitlement to any compensation or other relief in respect of or arising out of such Province Change and, without limiting the generality of the foregoing, the provisions of Paragraphs 7.1 and 11.1 of this Part 2 will not apply.

7.1 Province Change Confirmation

- 7.1.1 A Province Change Confirmation must, *inter alia*, specify whether or not (if the same has formed part of the Change Appraisal or Amended Change Appraisal, as the case may be):

7.1.1.1 the Province accepts any Fixed Price or Bid Price submitted by the Concessionaire in respect of a Province Change or any part of a Province Change in which event such Fixed Price or Bid Price will be binding on the Parties; and

7.1.1.2 subject to Paragraph 9.1 of this Part 2, the Province requires (in the event that the Concessionaire has been able to obtain an acceptable offer of finance to fund all or part of a Capital Cost Increase) the Concessionaire to accept such offer of finance and proceed on the basis of a Change Adjustment in respect of such Capital Cost Increase (or part thereof).

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- 7.1.2 If the Province fails to issue a Province Change Confirmation within 10 Working Days of agreement or determination of all Disputed Matters, it will be deemed to have served a Cancellation Notice. Without prejudice to the Concessionaire's obligation to pay the Province's costs, fees and expenses pursuant to Paragraph 5.2.4 of this Part 2, the effect of a Cancellation Notice (whether served or deemed to have been served) will be to render the Province liable to pay to the Concessionaire within 20 Working Days of demand a sum equal to the costs, fees and expenses reasonably and properly incurred by the Concessionaire in preparing and amending the Change Appraisal and any Amended Change Appraisal and complying with its obligations under Paragraph 7.1.3 of this Part 2.
- 7.1.3 Where Relevant Consents are required to implement a Province Change, the Concessionaire will not take steps to implement the Province Change until the Relevant Consents have been obtained, except insofar as it is necessary to take any such steps in order to obtain the Relevant Consents. If the Concessionaire (or the Province in the case of Relevant Consents which can only be obtained by it), having used all reasonable efforts, fails within 3 months of the issuance of a Province Change Confirmation or such longer period as the Province may from time to time reasonably specify (having regard to the nature of the Relevant Consents) to obtain such Relevant Consents, the Province will be deemed to have served a Cancellation Notice in respect of that Province Change and Paragraph 7.1.2 of this Part 2 will apply with respect thereto.

8.1 Effect of a Province Change

Subject to Paragraph 9.1 of this Part 2, a Province Change Confirmation will have the effect of varying the Technical Requirements to the extent provided in the Change Appraisal or the Amended Change Appraisal (as the case may be) as read with the relevant Province Change Notice or Amended Change Notice (as the case may be) with effect from the date of issuance of the Province Change Confirmation. As soon as practicable thereafter the Concessionaire will implement such Province Change and will be bound by the Agreement in so doing as if the Province Change formed part of the Technical Requirements.

9.1 Procurement of an Offer of Finance

If a Province Change Notice or Amended Change Notice (as the case may be) has been issued by the Province in respect of which the Province has stated in such Notice that it wishes any Capital Cost Increase (or any part thereof) to be paid for by way of a Change Adjustment, the Concessionaire will use all reasonable efforts to obtain a commercially acceptable offer of finance to fund the Capital Cost Increase to be incurred in implementing the Province Change on terms reasonably satisfactory to the Concessionaire and the Senior Funders. If the Concessionaire, having used all reasonable efforts, cannot obtain a commercially acceptable offer of finance to fund the Capital Cost Increase on terms reasonably satisfactory to the Concessionaire and the Senior Funders within 30 Working Days of a Province Change Confirmation, or if, having obtained a commercially acceptable offer of finance, the conditions precedent to such offer of finance are not satisfied or such offer is subsequently withdrawn (in either case other than at the request of, or as a consequence of wilful inaction or default by, the Concessionaire), the Concessionaire will notify the Province and the Province will either

compensate the Concessionaire for the Capital Cost Increase resulting from the Province Change in accordance with Paragraph 10.1 of this Part 2 or, if it is unwilling to compensate the Concessionaire for such Capital Cost Increase, will serve a Cancellation Notice in respect of the Province Change.

10.1 Payment of Capital Cost Increase by Province

If the Province is obliged or agrees to finance a Capital Cost Increase itself (whether in whole or in part), such financing will be by way of lump sum compensation paid to the Concessionaire as and when such Capital Cost Increase (or any part thereof) becomes properly due and payable by the Concessionaire. For greater certainty, when the Province compensates the Concessionaire for a Capital Cost Increase pursuant to this Paragraph 10.1, no Change Adjustment will be made in respect of that Capital Cost Increase except to the extent that the Province Change Notice or Amended Change Notice has stated that the Province intends to pay for the Province Change referred to therein by way of a combination of lump sum payment and Change Adjustment.

11.1 Change Adjustments

Subject to the provisions of Section 12.6.7 of the Agreement, and to Paragraph 10.1 of this Part 2, following commencement of implementation of each Province Change there will be a Change Adjustment in respect of:

- 11.1.1 any Capital Cost Increase (except to the extent such Capital Cost Increase is being paid for other than by way of an adjustment to the Total Performance Payment) or Capital Cost Saving; and/or
- 11.1.2 any Recurrent Cost Increase or Recurrent Cost Saving; and/or
- 11.1.3 any Revenue Loss or Revenue Gain; and/or
- 11.1.4 any other loss, expense and/or saving such that the Concessionaire will be left in a position which is no better or worse position than it would have been in had the relevant Province Change not occurred (the Concessionaire having used all reasonable efforts and taken all reasonable steps to mitigate the adverse effects of such Province Change and to minimize any such loss or expense and to take advantage of any positive or beneficial effects of such Province Change and to maximize any such saving),

resulting from the implementation of a Province Change provided that a Change Adjustment in respect of a change to the Construction Output Specifications will not take effect until the date of issuance of the Substantial Completion Certificate (PM-Section) in respect of a PM-Section affected by such change to the Construction Output Specifications.

12.1 Consequential Amendments

- 12.1.1 The Concessionaire and the Province's Representative will use their reasonable efforts to reach agreement as to any amendments to the terms of the Agreement (including without limitation the End of Term Requirements) necessary as a consequence of any Province Change. If they are unable to reach agreement within 30 Working Days of issuance of a

Province Change Confirmation, then either Party may refer the matter for resolution under the Disputes Resolution Procedure (provided, however, that in no circumstances will the Contract Period be extended or the Expiry Date changed pursuant to the Disputes Resolution Procedure without the mutual written consent of the Province and the Concessionaire).

SCHEDULE 13**CHANGES****Part 3****Concessionaire Changes****1.1 Financial Consequences and Value Engineering**

- 1.1.1 In the case of any Concessionaire Change which the Province has consented to pursuant to Section 11.4.3 of the Agreement or to which there has been no objection by the Province's Representative in accordance with the Review Procedure and which, if implemented, would result in Capital Cost Savings, Recurrent Cost Savings or Revenue Gain, there will be a Change Adjustment whereby all Capital Cost Savings and/or all Recurrent Cost Savings and/or any Revenue Gain resulting from implementation of such Concessionaire Change will be shared equally between the Province and the Concessionaire after deducting the costs actually paid (or to be paid) by the Concessionaire to the Province pursuant to Paragraph 1.1.2 of this Part 3.
- 1.1.2 If the Concessionaire submits a proposal for a Concessionaire Change pursuant to Section 11.4 [Concessionaire Changes] of the Agreement, the Concessionaire will reimburse the Province, within 20 Working Days of demand, for all costs, fees and expenses reasonably incurred by the Province in connection with its consideration and review of such proposal and (where applicable) in documenting any Concessionaire Change irrespective of whether or not the proposed Concessionaire Change is implemented in accordance with the provisions of Section 11.4 [Concessionaire Changes] of the Agreement.

1.2 Consequential Amendments

The Concessionaire and the Province's Representative will use their reasonable efforts to reach agreement as to any amendments to the terms of the Agreement necessary as a consequence of any Concessionaire Change. If they are unable to reach agreement within 30 Working Days of issuance of a Concessionaire Change Certificate by the Concessionaire's Representative duly countersigned by the Province's Representative in accordance with the provisions of Section 11.4.1 of the Agreement, then either Party may refer the matter for resolution under the Disputes Resolution Procedure (provided, however, that in no circumstances will the Contract Period be extended or the Expiry Date changed or any additional payment or adjustment to the Total Performance Payment (except be made or pursuant to the Disputes Resolution Procedure without the mutual written consent of the Province and the Concessionaire).

SCHEDULE 13**CHANGES****Part 4****Compensation Events****1.1 Concessionaire Notification**

Without prejudice to Section 12.6.1 of the Agreement, within 7 days of the Concessionaire becoming aware of the occurrence of a Compensation Event it will give Notice of such occurrence (or likely occurrence) to the Province's Representative (unless included in a Notice given by the Concessionaire pursuant to Section 12.6 [Delay] of the Agreement). The provisions of Sections 12.6.2 and 12.6.3 of the Agreement will apply, *mutatis mutandis*, in respect of the contents of any Notice given pursuant to this Paragraph 1.1 and the consequences of a failure by the Concessionaire to comply with the requirement to give Notice pursuant to this Paragraph 1.1. If the Concessionaire suffers a Compensable Loss as a result of a Compensation Event notified under this Paragraph 1.1 or under Section 12.6 [Delay] of the Agreement, the Concessionaire will, within 30 Working Days following the giving of the Notice referred to above in this Paragraph 1.1, give a further Notice to the Province (a "Compensation Notice") setting out:

- 1.1.1 a detailed calculation of the Compensable Loss (the "Payment Amount") including an explanation as to why the Compensable Loss has occurred and the steps taken or to be taken to mitigate such Compensable Loss; and
- 1.1.2 the extent and terms and conditions of any offer of additional financing which the Concessionaire (having used all reasonable efforts) has been able to procure to fund any Capital Cost Increase or Revenue Loss included in such Compensable Loss and whether or not such terms and conditions are acceptable to the Concessionaire, acting reasonably.

In connection with the calculation of any Capital Cost Increase included in the calculation of Compensable Loss under Paragraph 1.1.1 above, the provisions of Paragraphs 2.1.1.4, 3.1.1 and 4.1 of Part 2 of this Schedule 13 [Province Changes] will apply, *mutatis mutandis*, provided that any references in any such Paragraphs to "Province Change", "Change Appraisal", "Amended Change Notice" and "Amended Change Appraisal" will be construed for purposes of this Paragraph 1.1 as if they were references to "Compensation Event", "Compensation Notice", the notification contemplated under Paragraph 1.3 of this Part 4, and an amended Compensation Notice (an "Amended Compensation Notice") (which will be submitted by the Concessionaire within 30 Working Days of agreement or determination of the matters referred to in Paragraph 4.1.2 of Part 2 of this Schedule 13 [Province Changes]), respectively.

1.2 Additional Information

The Province may, within 20 Working Days following receipt of a Compensation Notice or an Amended Compensation Notice, request from the Concessionaire such additional information

and/or particulars as it may reasonably require to substantiate the Payment Amount or any other matter referred to in the Compensation Notice.

1.3 Province Notification

The Province will, within 30 Working Days following receipt of a Compensation Notice or an Amended Compensation Notice (as applicable), or, if later, within 30 Working Days following receipt of the last of any additional information requested in accordance with Paragraph 1.2 of this Part 4:

- 1.3.1 notify the Concessionaire whether or not it agrees to the Payment Amount (having regard, *inter alia*, to the determination by the Province's Representative, pursuant to Section 12.6.7 of the Agreement or Paragraph 1.1.3 of Part 5 of this Schedule 13 [Relief] (as applicable), as to any Delay Period or other period of delay or impediment in performance of the Operations which has arisen or will arise as a consequence of the Compensation Event), failing which the Province will be deemed not to have agreed to the Payment Amount; and
- 1.3.2 to the extent that the Concessionaire has notified the Province in accordance with Paragraph 1.1.2 of this Part 4 that it has been able to procure a commercially acceptable offer of finance to fund a Capital Cost Increase or Revenue Loss included in such Compensable Loss, confirm to the Concessionaire whether or not it wishes the Concessionaire to accept such offer of finance. If the Province does not give any confirmation in accordance with this Paragraph 1.3.2, the Province will be deemed to have confirmed that it does not wish the Concessionaire to accept the offer of finance and to have elected to compensate the Concessionaire by making a lump sum payment. In the event that the conditions precedent to any offer of finance to which this Paragraph 1.3.2 applies have not been satisfied or the offer of finance is subsequently withdrawn (in either case other than at the request of, or as a consequence of wilful inaction or default by, the Concessionaire) prior to acceptance by the Concessionaire then the Province will be deemed to have elected to compensate the Concessionaire by making a lump sum payment.

1.4 Payment

- 1.4.1 Subject to Paragraph 1.5 of this Part 4, the Province will pay the Payment Amount:
 - 1.4.1.1 save where Paragraph 1.4.2 of this Part 4 applies, in the case of any Compensable Loss suffered or incurred by the Concessionaire (including, for greater certainty, all costs incurred in mitigating the effect of the Compensation Event) within 20 Working Days of receipt by the Province of an invoice from the Concessionaire in respect of the same; and
 - 1.4.1.2 in the case of any Recurrent Cost Increase and/or to the extent that the Concessionaire has secured an offer of finance to fund a Capital Cost Increase and/or Revenue Loss included in such Compensable Loss on terms and conditions acceptable to the Province (acting reasonably), by a Change Adjustment.

1.4.2 If the Province does not agree with the Payment Amount claimed in the Compensation Notice then, unless otherwise agreed by the Parties, the Province will pay to the Concessionaire the undisputed part (if any) of the Payment Amount in accordance with Paragraph 1.4.1 of this Part 4 and either Party will be entitled to refer the determination of the disputed part of the Payment Amount to the Disputes Resolution Procedure.

1.5 Continuing Compensation Event

For greater certainty, where the Compensation Event or the impact of the Compensation Event is continuing, the Concessionaire may serve Compensation Notices at such frequency (not less than monthly intervals) as it may, acting reasonably, determine.

1.6 Mitigation

Relief under this Part 4 will not be available or will cease to be available to the Concessionaire to the extent it fails to take all necessary steps in accordance with the terms of the Agreement to mitigate the effects of the Compensation Event or to remedy the failure to perform or mitigate the delay or impediment in performance as aforesaid.

1.7 Failure to Notify

In the event that the Concessionaire fails to serve a Compensation Notice or an Amended Compensation Notice upon the Province in accordance with Paragraph 1.1 of this Part 4 within the time periods contemplated in such Paragraph, the Concessionaire will not be entitled to any payment from the Province in respect of a Compensable Loss to the extent that such Compensable Loss is greater than it otherwise would have been had the Compensation Notice or the Amended Compensation Notice (as the case may be) been given in a timely manner or the rights of the Province are otherwise prejudiced in any way by the failure of the Concessionaire to give the Compensation Notice or the Amended Compensation Notice within the time periods contemplated in Paragraph 1.1 of this Part 4.

1.8 No Liability

The Province will not be liable for any indirect, special or consequential losses suffered by the Concessionaire in respect of any Compensation Event (other than, for greater certainty, Revenue Loss).

1.9 Consequential Amendments

The Concessionaire and the Province's Representative will use their reasonable efforts to reach agreement as to any amendments to the terms of the Agreement necessary as a consequence of any Compensation Event. If they are unable to reach agreement within 30 Working Days of issuance of a Notice by the Province pursuant to Paragraph 1.3.1, then either Party may refer the matter for resolution under the Disputes Resolution Procedure (provided, however, that in no circumstances will the Contract Period be extended or the Expiry Date changed pursuant to the Disputes Resolution Procedure without the mutual written consent of the Province and the Concessionaire).

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SCHEDULE 13**CHANGES****Part 5****Relief****1.1 Relief**

- 1.1.1 Subject to the provisions of Section 1.9 [General Duty to Mitigate] of the Agreement and of Sections 12.6.7, 12.6.8 and 12.6.9 of the Agreement and of this Paragraph 1.1, but notwithstanding any other provisions of the Agreement or this Schedule 13, the Concessionaire will be relieved from liability under the Agreement and the Province will not be entitled to levy Availability/Performance Deductions to the extent that, by reason of a Province Change or Compensation Event, the Concessionaire is not able to perform its obligations under the Agreement during the Delay Period or during any other period of material delay or impediment in performance of the Operations in accordance with the requirements of the Agreement, and such relief will be taken into account in relation to any Change Adjustment, lump sum payment or Payment Amount (as applicable) in respect of such Province Change or Compensation Event.
- 1.1.2 Without limiting the Concessionaire's obligations under Paragraph 1.1.1 of this Part 5 or under Sections 12.6.6 or 12.6.2.3 of the Agreement, in the case of any material delay or impediment in performance of the Operations in accordance with the requirements of the Agreement caused by a Province Change or Compensation Event, the Concessionaire, to the extent it is possible to do so, will take all reasonable steps to avoid the delay or impediment or to reduce the period of the delay or mitigate the effect of the impediment.
- 1.1.3 Without prejudice to the provisions of Section 12.6.7 of the Agreement, where the Concessionaire may be entitled to any Change Adjustment, lump sum payment or Payment Amount or to any other relief pursuant to Part 2 [Province Changes] or Part 4 [Compensation Events] of this Schedule 13, then subject to the Concessionaire:
- 1.1.3.1 complying with the requirements of Part 2 [Province Changes] or Part 4 [Compensation Events] of this Schedule 13, as applicable; and
 - 1.1.3.2 putting forward proposals as to the measures it intends to adopt in order to mitigate the consequences of any delay or impediment,

the Province's Representative will, as soon as reasonably practicable, notify the Concessionaire (either prospectively or retrospectively) of its determination in accordance with this Paragraph 1.1.3 of the period of the material delay or impediment (if any) in performance of the Operations (other than construction of the Works) which has arisen or will arise as a consequence of the Province Change or Compensation Event. If the Province's Representative determines that no such material delay or impediment has arisen or will arise or the Concessionaire considers the period of material delay or

impediment so determined to be insufficient, then the Concessionaire may refer the matter to the Disputes Resolution Procedure for determination.

- 1.1.4 The provision of Sections 12.6.8 and 12.6.9 of the Agreement will apply, *mutatis mutandis*, to the determination by the Province's Representative of the period of any material delay or impediment in performance of the Operations for the purposes of this Part 5.

Annex A to Schedule 13**CHANGE ADJUSTMENT**

1. Where pursuant to this Schedule 13 a Change Adjustment is to be made, the Performance Payment will be adjusted with effect from the commencement of the next succeeding month following the month in the Contract Year in which the adjustment is calculated such that following the Change Adjustment:
 - (a) the Equity IRR (as calculated in accordance with the Financial Model Extracts) remains unchanged before and after modelling the financial consequences of the Province Change for which the Change Adjustment is to be made; and
 - (b) the loan life cover ratios and the annual debt service cover ratios provided for in the Senior Funding Agreements (for each calculation period, as calculated in accordance with the Financial Model Extracts) are not less than they were immediately prior to the date upon which the Change Adjustment is to take effect.
2. In adjusting the Performance Payment:
 - (a) adjustments shall be restricted to the Maximum Availability Payment;
 - (b) regard shall be had to the timing of the financial consequences and to the date from which the Change Adjustment will take effect.
3. Where the Change Adjustment arises as a consequence of a Province Change in respect of which:
 - (a) the Capital Cost Increase is less than \$1,000,000 (index linked); or
 - (b) the Recurrent Cost Increase is less than \$100,000 (index linked) per annum; or
 - (c) a combination of (a) and (b) would equate to a net present value (calculated as of the date upon which the Change Adjustment is to take effect using a discount rate equal to the Threshold Equity IRR) over a period of ten years or until the Expiry Date (if earlier) of less than \$1,000,000 (index linked), ,

the Parties will, acting in good faith, seek to agree to the Change Adjustment (either permanently or provisionally, as appropriate having regard to the circumstances) without recourse to running the Financial Model.

SCHEDULE 14**SUBSEQUENT SCHEMES AND IMPROVEMENTS****Part 1****Subsequent Schemes****1. Subsequent Scheme Notice**

- 1.1 Where the Concessionaire desires a Subsequent Scheme to be carried out it will give notice to that effect to the Province (the "Subsequent Scheme Notice").
- 1.2 The Subsequent Scheme Notice will:
 - 1.2.1 include a description of the proposed Subsequent Scheme which will be in sufficient detail to enable the Province to assess the nature and extent thereof and the likely effect of the Subsequent Scheme on the Project Facilities and on the Operations under this Agreement;
 - 1.2.2 without limitation to paragraph 1.2.1, give details of:
 - 1.2.2.1 the size and scope of the proposed works (including outline plans);
 - 1.2.2.2 estimated costings; and
 - 1.2.2.3 a proposed schedule for the works; and
 - 1.2.3 contain the Concessionaire's suggestions as to the contractual arrangements in respect of the construction of the Subsequent Scheme, including any statutory authority to be relied on, the party who will promote the Subsequent Scheme through any statutory approvals process, the party who will enter into the contracts in respect of the Subsequent Scheme, and the party who will serve as contractor.
- 1.3 The Province may at any time require the Concessionaire to provide such additional information with respect to the Subsequent Scheme as the Province may reasonably require, and if the Concessionaire fails to provide such information the Province will have no obligation to give any further consideration to the proposed Subsequent Scheme.

2. Consideration by the Province

- 2.1 Within 7 days after receipt of the Subsequent Scheme Notice, the Province will acknowledge receipt of such Notice and will thereafter proceed with reasonable dispatch to consider the request contained in the Subsequent Scheme Notice.
- 2.2 The Province will, as soon as reasonably practicable in the circumstances, taking into consideration, *inter alia*, the complexity of the proposed Subsequent Scheme, give a notice to the Concessionaire indicating whether or not the Province considers that it is worthwhile giving further consideration to the proposed Subsequent Scheme.
- 2.3 The Province will consider the proposal contained in the Subsequent Scheme Notice on its merits, in accordance with and in view of any relevant statutory duties. Without in any way limiting the discretion of the Province in responding to any such request, the Province will, in reaching a decision on whether it is worthwhile to proceed to further discussions with the Concessionaire in regard to such Subsequent Scheme, give consideration, *inter alia*, to whether the Subsequent Scheme would be of benefit to the public.
- 2.4 If the Province gives notice to the Concessionaire that it is willing to consider further the proposed Subsequent Scheme, then, subject to the Concessionaire confirming to the Province in form and substance reasonably acceptable to the Province that the Concessionaire will bear any abortive costs of the Province in considering the proposed Subsequent Scheme, the Province and the Concessionaire will enter into negotiations with a view to reaching agreement on the terms and conditions on which the Subsequent Scheme may be taken forward.
- 2.5 The terms and conditions referred to in paragraph 2.4 to be agreed between the Parties will include, *inter alia*, the following:
 - 2.5.1 the statutory authority under which the Subsequent Scheme will be promoted and any procedural or structural arrangements to satisfy the requirements of such statutory authority;
 - 2.5.2 the responsibilities of each of the Parties in respect of the statutory approvals process in respect of the Subsequent Scheme;
 - 2.5.3 the standards and specifications to apply to the construction of the Subsequent Scheme and to its subsequent operation, maintenance and rehabilitation;
 - 2.5.4 the procedure for the design and certification of the Subsequent Scheme;
 - 2.5.5 the schedule for the works in connection with the Subsequent Scheme;

- 2.5.6 any amendments required to this Agreement as a consequence of the Subsequent Scheme, including any amendment referred to in paragraph 7 below and any adjustments to the Total Performance Payments to reflect:
 - 2.5.6.1 any changes in traffic as a consequence of the Subsequent Scheme; and
 - 2.5.6.2 any changes in the Concessionaire's costs in respect of the Concession Highway; and
- 2.5.7 the manner in which any land or Rights in respect of land required in connection with the Subsequent Scheme will be acquired, provided that any land or Rights in respect of land acquired by the Concessionaire will, upon request by the Province, be dedicated as a highway or conveyed to the Province or BCTFA free of charge and without any Encumbrances.
- 2.6 For greater certainty:
 - 2.6.1 the Province, in its absolute and unfettered discretion, will be entitled to require changes in the proposed Subsequent Scheme as a condition to its agreement;
 - 2.6.2 either the Concessionaire or the Province may in its absolute and unfettered discretion by notice to the other terminate the discussions in respect of the Subsequent Scheme and, subject to paragraphs 2.7 and 4 below, in such event neither the Concessionaire nor the Province will have any liability to the other in respect of such Subsequent Scheme; and
 - 2.6.3 any agreement reached in accordance with paragraph 2.4 will be conditional upon the making by any relevant Statutory Decision Maker, in accordance with its statutory duties, of any statutory order required to give effect to the agreement in respect of the Subsequent Scheme.
- 2.7 If either the Concessionaire or the Province at any time gives notice terminating the negotiations in respect of the Subsequent Scheme, the Concessionaire will reimburse the Province for all costs incurred by the Province in connection with the Subsequent Scheme (including an appropriate sum in respect of general staff costs and overheads).

3. Statutory Procedures

- 3.1 If the Parties reach agreement in respect of a Subsequent Scheme in accordance with paragraph 2.4 above, then they will cooperate in any statutory procedures necessary in respect of the Subsequent Scheme. Subject to the terms of any agreement reached pursuant to paragraph 2.5.2 above, the Concessionaire will provide the Province with such advice and assistance and will undertake such duties as may be necessary and as may be required by the Province (including the attendance at any meeting,

consultation, inquiry or tribunal, the provision of any witnesses required for any public hearing or inquiry, and the preparation of any documentation) in respect of any such statutory procedures.

- 3.2 For greater certainty, no action taken in connection with any such statutory procedures will fetter in any way the discretion of any relevant Statutory Decision Maker to decide any issue in accordance with any relevant statutory duties. If a Statutory Decision Maker fails or refuses to make any order or take any other action required in connection with the Subsequent Scheme, such decision will not be subject to review under the Disputes Resolution Procedure and the Concessionaire will not be entitled to any compensation in respect thereof.

4. Costs

Subject to express agreement to the contrary in accordance with paragraph 2.4, the Concessionaire will bear and will indemnify and hold the Province harmless against:

- 4.1 the Concessionaire's costs in respect of the Subsequent Scheme, including any costs of design or the provision of any information and any costs incurred in connection with any negotiations between the Concessionaire and the Province or any statutory procedures in respect of the Subsequent Scheme;
- 4.2 the costs of any statutory procedures in respect of the Subsequent Scheme, including any costs of objectors who participate in such procedures to the extent such costs are required to be borne by the Province;
- 4.3 any costs incurred by the Province in connection with the Subsequent Scheme, including any costs incurred in connection with any negotiations or statutory procedures referred to in paragraphs 2 and 3 above; and
- 4.4 any Loss or Claim of any person (including the Province) arising from or in connection with the Subsequent Scheme.

5. Other Consents

For greater certainty, nothing in this Part 1 of Schedule 14 will affect the requirement for the Concessionaire to obtain at its own cost all necessary consents and approvals in respect of the Subsequent Scheme, including any New Order and any Permits, Licences and Approvals (but excluding Province Permits).

6. Procurement

Where in the opinion of the Province it is or would be likely to be required by applicable laws, regulations, policies or guidelines to competitively tender or seek competitive bids or proposals in respect of any works necessary in connection with or relating to the Subsequent Scheme, the Concessionaire will be required to seek and evaluate competitive tenders, bids or

proposals, as applicable, for such works in accordance with the provisions of Part 2 of Schedule 13 [Province Changes] as if the Subsequent Scheme were a Province Change, provided, however, that subject to any express agreement to the contrary in accordance with paragraph 2.4, the Concessionaire will not be entitled to any payment, compensation or extension of time in respect of the Subsequent Scheme and the Concessionaire will bear and will indemnify and hold the Province harmless against any cost or expense in connection therewith.

7. Concession Highway

Upon completion, any Subsequent Scheme will become part of the Concession Highway for all purposes of this Agreement, and the definitions of "Existing Highway", "New Highway", "Off-Site Facilities", "Concession Highway" and "Project Facilities" in Section 1 of Schedule 1 [Definitions and Interpretation] will be deemed to be amended as appropriate to include references to such Subsequent Scheme.

SCHEDULE 14**SUBSEQUENT SCHEMES AND IMPROVEMENTS****Part 2****Improvements**

1. Any proposal by the Concessionaire for an Improvement will be submitted to the Province's Representative in accordance with the Review Procedure. The Concessionaire will not commence the Improvement unless there has been no objection to such Improvement in accordance with the Review Procedure, subject to the provisions of paragraph 2 below.
2. The Province will be entitled to object to any proposed Improvement on the grounds set out in paragraph 3.10 of Part 2 of Schedule 8 [Review Procedure].
3. Any Improvement will be deemed to be part of the Concession Highway for all purposes of this Agreement (including for purposes of determining the standards and specifications to apply to such Improvement) and the definitions of "Existing Highway", "New Highway", "Off-Site Facilities", "Concession Highway" and "Project Facilities" in Section 1 of Schedule 1 [Definitions and Interpretation] will be deemed to be amended as appropriate to include references to such Improvement.
4. For greater certainty, no review of or failure to make comments on or to object to a proposed Improvement by the Province will absolve the Concessionaire from any obligation to obtain any required consent or approval (including any Permit, Licence or Approval) or to take any other action required by applicable Laws and Regulations in respect of such Improvement (including where applicable the preparation of any environmental audit or statement).

SCHEDULE 15**RECORDS AND REPORTS****Part 1****Records****1. General**

Unless otherwise expressly set out, any reference to "records" in this Schedule 15 [Records and Reports] includes the records referred to in Section 2 of this Part 1 and all other records required by the Agreement or Good Industry Practice to be produced, maintained and updated by the Concessionaire pursuant to the Technical Requirements or otherwise in connection with the Project, Project Facilities, Site, Adjacent Areas, the Works, and the Operations.

The Concessionaire will produce, maintain and update all records in accordance with all applicable requirements of the Agreement, including Section 25 [Records], and the Records Management Protocol. Without limiting the generality of the foregoing, the Concessionaire will establish and maintain records in accordance with the requirements of the ISO 9001:2000 Standard that provide objective evidence of conformity to the Agreement as stated in Schedule 6 [Quality Management]. All records produced and maintained by the Concessionaire must be:

- accurate;
- complete;
- legible;
- readily identifiable; and
- retrievable.

All records will be made available for audit or inspection by or on behalf of the Province, BCTFA, the Province's Representative or any of their respective authorized representatives at all reasonable times, and such parties will be entitled to take copies of any records at the Concessionaire's cost, in accordance with the provisions of Section 25 [Records] of the Agreement.

All records will be maintained, retained and disposed of by the Concessionaire only in accordance with and subject to the provisions of Sections 25.4.3, 25.4.4, 25.4.5 and 25.4.6 and Section 25.5 [Computer Records] of the Agreement and in accordance with the Records Management Protocol as submitted and updated from time to time without objection in accordance with the Review Procedure.

The requirements set out in this Part 1 and the Records Management Protocol include the minimum requirements to be complied with. The requirements set out in this Part 1 and the Records Management Protocol are without prejudice to any Laws and Regulations or Legal

Requirements which require the keeping of specified records for a longer period or the production and maintenance of additional records.

Subject to and without limiting any other requirements or obligations of the Concessionaire in respect thereof:

- all records of operational aspects of the Concessionaire's record keeping system will be retained indefinitely and will be systematically and periodically updated and filed so as to be readily retrievable;
- records which have been superseded but are still of historical, contractual or legal importance will be retained and filed on microfilm or in other machine readable form for at least 10 years after being superseded;
- records which are obsolete and are of no historical, contractual or legal significance will be retained and filed on microfilm or in other machine readable form and can be disposed of 5 years after becoming obsolete;
- superseded and obsolete plans and drawings will be retained either on microfiche or digitally on disc or tape or in other machine readable form, using software agreed with the Province's Representative; and
- text of all documents will be prepared and recorded using software systems agreed with the Province's Representative.

2. Required Records

The required records include all those described in the Agreement, including those described in:

- Part 1 of Schedule 5 [Construction Output Specifications];
- Schedule 6 [Quality Management];
- Part 1 of Schedule 7 [O&M Output Specifications];
- Section 9 [Health and Safety] of the Agreement; and
- any other Technical Requirements.

3. Requirements for Records Management Protocol

The Records Management Protocol referred to in Section 25.4 [Management and Retention of Records] of the Agreement must comply with, and must provide for implementation and maintenance of systems and processes to ensure compliance with, the following requirements:

- 3.1 The Records Management Protocol must be consistent with and comply with the Concessionaire's Quality Management System and Quality Documentation and Schedule 6 [Quality Management], and with the requirements set out in Section 25.4.1 of the Agreement and all other provisions of the Agreement.

- 3.2 The Records Management Protocol will set forth minimum retention periods satisfactory to the Province's Representative for each class of records produced and maintained by the Concessionaire.
- 3.3 The Concessionaire will maintain, including classify, all records according to the records management practices of the MOT, the Administrative Records Classification System (ARCS) and the Operational Records Classification System (ORCS) as may be amended by the Province from time to time on written notice to the Concessionaire, or any other standards that would be applied by the MOT if the records were created and maintained by the MOT.
- 3.4 Records will be retained primarily in the format of hard copy, but may be created or maintained in computer or other electronic format subject to compliance with those requirements that would apply if the records were created and maintained by the MOT.
- 3.5 The Concessionaire will 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's Representative.
- 3.6 Any warehouse or other facility used to store records must meet the storage and security standards established by the Corporate Records Management Branch.
- 3.7 Records referred in section 25.1.2 of the Agreement will be kept separate from other records, will be clearly identified as records of the Province subject to the *Document Disposal Act*, and will not be marked, altered, destroyed, or disposed of without prior written authorization from the Province's Representative.
- 3.8 Notwithstanding any other terms of the Agreement, no records will be destroyed or otherwise disposed of without the express written consent of the Province's Representative or as authorized under a records retention schedule approved by the Legislative Assembly of the Province of British Columbia.
- 3.9 Any records authorized for disposition will be disposed of only in accordance with disposition standards established by the MOT or by the Corporate Records Management Branch.
- 3.10 The Concessionaire will 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's Representative in connection with all matters relating thereto.
- 3.11 The Concessionaire will not sell, transfer or relocate any records to the custody, physical or otherwise, of another jurisdiction or person.
- 3.12 The Concessionaire will not disclose any of the records or contents thereof except subject to and in accordance with the provisions of the Agreement, including Section 50 [Confidentiality] thereof.

SCHEDULE 15**RECORDS AND REPORTS****Part 2****Reports****1. Report Requirements and Categories**

The reporting requirements are provided for in the Agreement, the Technical Requirements and this Part 2 of Schedule 15 [Reports] and include the following seven primary categories of reports:

- Quality Management Reports
- Design and Construction Reports
- Operations, Maintenance and Rehabilitation Reports
- Monthly Reports
- Annual Reports
- Accident Reports
- Financial Reports

All reports will be submitted in such number and at such times as required by the Agreement or applicable Technical Requirements or, where no such number or time is so specified, in such number and at such time as may be required by the Province's Representative. Unless otherwise specified in the Agreement or applicable Technical Requirements, such reports will be in such form as reasonably required by the Province's Representative 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's Representative.

1.1 Quality Management Reports

The Concessionaire will provide documentation and reports in accordance with, and will comply with and satisfy, all Quality Management System reporting requirements set forth in paragraph 8 of Schedule 6 [Quality Management] and in the Quality Management Plans described in Schedule 6 [Quality Management], including the following:

- Design Quality Management Plan;
- Construction Quality Management Plan;
- Operations, Maintenance and Rehabilitation Quality Management Plan;
- Traffic Quality Management Plan; and
- Environmental Quality Management Plan.

1.2 Design and Construction Reports

The Concessionaire will provide documentation and reports in accordance with, and will comply with and satisfy, all reporting requirements set forth in Parts 1 [Construction Output Specifications] and 2 [Construction Requirements] of Schedule 5 [Construction and End of Term Requirements].

From the date of this Agreement until the issue of the Final Completion Certificate (Post Olympic Works), the Concessionaire will submit to the Province's Representative within 5 Working Days after the end of each month which falls within such period 5 copies of:

- 1.2.1 a formal monthly progress report covering all relevant aspects of the Works, including:
 - 1.2.1.1 all actual or potential departures from the Construction Output Specifications including the Design Management Plan, the Construction Requirements, the Project Schedule or the Works Schedule;
 - 1.2.1.2 all grounds for a substantial Dispute which have occurred or which may reasonably be foreseen as likely to occur in respect of the design or construction of the Works;
 - 1.2.1.3 all breaches of any provisions of this Agreement relating to the design or construction of the Works;
 - 1.2.1.4 particulars of any substantial disagreements among the Concessionaire, the Contractor, the Designer and the Checker material to the design or construction of the Works;
 - 1.2.1.5 the proposed measures to be taken by the Concessionaire to overcome such departure, breach or occurrence or to resolve such grounds for a Dispute; and
 - 1.2.1.6 the date on which the Concessionaire expects the Works and each relevant component thereof will be (a) Substantially Completed and (b) Finally Completed; and
- 1.2.2 such other reports as may be reasonably required to be produced by the Concessionaire so as to comply with the Requirements of Interested Parties.

1.3 Operations, Maintenance and Rehabilitation Reports

The Concessionaire will provide documentation and reports in accordance with, and will comply with and satisfy, all reporting requirements set forth in Parts 1 [O&M Output Specifications] and

2 [O&M Requirements] of Schedule 7 [Operation and Maintenance], including all reporting requirements set forth in the following:

- Operations and Management Plan (as required in Section 4.2 of Part 1 of Schedule 7 [O&M Output Specifications]);
- Asset Management Plan (as required in Section 4.3 of Part 1 of Schedule 7 [O&M Output Specifications]);
- Salt Management Plan (as required in Section 3.1 of the Highway Corridor Management Specifications for Highway Concessions referred to in Section 1.2 of Part 1 of Schedule 7 [O&M Output Specifications]);
- Communications and Customer Care Plan (as required in Section 3.2 of the Highway Corridor Management Specifications for Highway Concessions referred to in Section 1.2 of Part 1 of Schedule 7 [O&M Output Specifications]);
- Emergency Response Plan (as required in Section 3.3 of the Highway Corridor Management Specifications for Highway Concessions referred to in Section 1.2 of Part 1 of Schedule 7 [O&M Output Specifications]);
- Safety Management and Intervention Plan (as required in Section 3.4 of the Highway Corridor Management Specifications for Highway Concessions referred to in Section 1.2 of Part 1 of Schedule 7 [O&M Output Specifications]);
- Annual Asset Management Report (as required in Section 2.3 of the Reporting Specifications for Highway Concessions referred to in Section 1.2 of Part 1 of Schedule 7 [O&M Output Specifications]);
- Five Year Management Plan (as required in Section 14.10 [Five Year Management Plan] of the Agreement and Part 3 of this Schedule 15 and Section 2.2 of the Reporting Specifications for Highway Concessions); and
- Unstable Slope Mitigation Program (as required in Section 14.7 [Unstable Slope Mitigation Program] of the Agreement).

1.4 Monthly Report

Capitalized and other terms used in this paragraph 1.4 that are defined or used in Schedule 10 [Payments] have the meanings herein that are ascribed to them in Schedule 10 [Payments].

Within 10 Working Days after the end of each month which falls within the Contract Period the Concessionaire will provide to the Province's Representative 5 copies (save as expressly provided below) of a report (the "Monthly Report") containing the following information:

- 1.4.1 details of the calculation of the Monthly Availability Payment payable by the Province for the month including details of the relevant PM-Sections for which the Concessionaire is entitled to receive Availability Payments, including:
- 1.4.1.1 the date of issue of the Substantial Completion Certificate (PM-Section) for each PM-Section in respect of which a Substantial Completion Certificate (PM-Section) was issued during the month and the calculation of the relevant PM-Section Section Weighting for each such PM-Section for the month in accordance with paragraph 2.3 of Part 2 of Schedule 10 [Availability Payments];
 - 1.4.1.2 details of any reductions in the PM-Section Section Weightings applicable in the month as a result of the application of paragraph 2.2 of Part 2 of Schedule 10 [Availability Payments]; and
 - 1.4.1.3 details of any Post Olympic Works Completion Deductions, Future Works Completion Deductions or Olympic Requirements Works Completion Deductions incurred during the month as a result of the application of paragraphs 4, 5 and/or 6 of Part 2 of Schedule 10 [Availability Payments];
- 1.4.2 details of all Non-Availability Deductions incurred during the month in accordance with Part 3 of Schedule 10 [Non-Availability Deductions] including a detailed report on the occurrence of Relevant Unavailability Events including but not limited to the following information:
- 1.4.2.1 details of each Relevant Unavailability Event that occurred during the month, including but not limited to the time, date, duration, cause, location and number of lanes affected;
 - 1.4.2.2 for each RAD, sufficient information to enable the Province's Representative to verify the calculation of the relevant RAD including details of the calculation, in both tabular and graphical format (where applicable), in accordance with paragraph 2 of Part 3 of Schedule 10 [Non-Availability Deductions] of:
 - 1.4.2.2.1 Travel Time Delay;
 - 1.4.2.2.2 Traffic Inflow and Traffic Outflow; and
 - 1.4.2.2.3 Cumulative Traffic Inflow and Cumulative Traffic Outflow; and
 - 1.4.2.3 for each UAD, sufficient information to enable the Province's Representative to verify the calculation of the relevant UAD in accordance with paragraph 3 of Part 3 of Schedule 10 [Non-Availability Deductions];

- 1.4.3 a detailed report on the traffic volumes for each Measurement Point including but not limited to:
- 1.4.3.1 Vehicle count for all Vehicles passing the Measurement Point on a daily and monthly basis, in both chart and tabular format;
 - 1.4.3.2 classification of all Vehicles passing the Measurement Point as either Long Vehicles or Other Vehicles on a daily and monthly basis, in both chart and tabular format;
 - 1.4.3.3 time of each Vehicle passing the Measurement Point;
 - 1.4.3.4 where there is more than one set of Measuring Equipment at the Measurement Point, the information in paragraphs 1.4.3.1 to 1.4.3.3 (inclusive) for each set of Measuring Equipment together with a calculation of the average of the figures produced by all the sets of Measuring Equipment;
 - 1.4.3.5 details of the use of any alternative facilities referred to in paragraph 3.3 of Part 8 of Schedule 10 [Monitoring and Measurement], including but not limited to identification of the alternative facilities used, time, date and reason for use of the alternative facilities;
 - 1.4.3.6 details of the installation of any additional Measurement Points as contemplated in paragraph 2.1.2 of Part 8 of Schedule 10 [Monitoring and Measurement], including but not limited to the date and time of the installation, date and time that the additional Measurement Point was brought into use and whether the additional Measurement Point was installed as a result of a Subsequent Scheme or Additional Works;
 - 1.4.3.7 details of construction or maintenance activities at or affecting the Measurement Point, including but not limited to the time and date of the activities and a description of the work carried out;
 - 1.4.3.8 details of any Defective Equipment identified, including but not limited to identification of the Measurement Point affected, the date and time that the Defective Equipment was identified and the date and time that the Defective Equipment was taken out of use;
 - 1.4.3.9 details of any adjustment or replacement of any Defective Equipment, including but not limited to identification of the Measurement Point affected, the date and time of the adjustment or replacement and the date and time that the adjusted or replacement Measuring Equipment was brought into use; and

- 1.4.3.10 details of any retrospective correction and calculations of that correction in accordance with paragraph 7.2 of Part 8 of Schedule 10 [Monitoring and Measurement], including but not limited to identification of the Measurement Point affected, date, time and details of the required correction.
- 1.4.4 a detailed calculation of the Vehicle Usage Payment payable in the month in accordance with Part 5 of Schedule 10 [Vehicle Usage Payment] including but not limited to:
- 1.4.4.1 the number of Vehicles counted at both Measurement Point 1 and Measurement Point 2;
 - 1.4.4.2 the calculation of the monthly Vehicle usage in Bands 1 to 3;
 - 1.4.4.3 the Per Vehicle Payments in each Vehicle usage Bands 1 to 3; and
 - 1.4.4.4 the number of Vehicles in each of Bands 1 to 3;
- 1.4.5 a calculation showing details of any and all Operation and Maintenance Performance Deductions made in the month in accordance with Part 4 of Schedule 10 [Operation & Maintenance Performance Deduction] including sufficient information to enable the Province's Representative to verify the calculation including but not limited to:
- 1.4.5.1 all actual or potential departures from the O&M Output Specifications and/or the O&M Requirements or from the Traffic Management Output Specifications, the Traffic Management Requirements and/or the Traffic Management Plan;
 - 1.4.5.2 all breaches of this Agreement, including the occurrence of any Non Conforming Events for purposes of Part 4 of Schedule 10 [Operation & Maintenance Performance Deduction];
 - 1.4.5.3 all Nonconformities in respect of Quality Management System requirements which occurred during the month for purposes of Schedule 6 [Quality Management];
 - 1.4.5.4 all grounds for a substantial Dispute which have occurred or may reasonably be foreseen as likely to occur; and
 - 1.4.5.5 the proposed measures to be taken by the Concessionaire to overcome such departure, breach, Nonconformity or occurrence or to resolve such grounds for a Dispute;

- 1.4.6 a detailed report of any and all Asset Condition Retentions made in the month in accordance with paragraph 3 of Part 4 of Schedule 10 [Operation & Maintenance Performance Deduction];
- 1.4.7 a summary report on all accidents on the Concession Highway during such month (including all accidents on which a report has previously been made pursuant to paragraph 1.6 below), including:
- 1.4.7.1 a categorization of all accidents on the Concession Highway involving a personal injury or property damage:
- 1.4.7.1.1 by section of the Concession Highway. Such sections shall encompass the whole of the Concession Highway and shall include:
- (a) discrete lengths of the Concession Highway of not more than one kilometer and not containing any major junction; and
- (b) each major junction (including the first 20 metres of each intersecting road, to the extent forming part of the Concession Highway),
- such sections to be agreed by the Province's Representative and the Concessionaire and, in the absence of agreement, to be determined by the Province's Representative;
- 1.4.7.1.2 by accident severity, divided into Fatal, Injury, and Property Damage only;
- 1.4.7.1.3 by type of User/vehicle, as follows:
- pedestrians
pedal cyclists
powered two wheel vehicles
car/taxi
light goods vehicles (<3.5 tonnes)
heavy goods vehicles (>3.5 tonnes)
public service vehicles
other vehicles; and
- 1.4.7.1.4 by road condition (including lighting), weather conditions and time of day; and

- 1.4.7.2 the total number of accidents for each section of the Concession Highway referred to in paragraph 1.4.7.1.1 above and for the Concession Highway as a whole.

The data to be provided in respect of accidents in accordance with the foregoing shall be based on the requirements set out in the provisions of paragraph 2 of Part 6 of Schedule 10 [Performance Incentive Payments];

- 1.4.8 a detailed calculation of the Monthly Traffic Management Payment in accordance with paragraph 3 of Part 6 of Schedule 10 [Performance Incentive Payments] including but not limited to:

- 1.4.8.1 details of all Lane Closures in the month providing full details of the Lane Closure including but not limited to:

1.4.8.1.1 the time of commencement and duration of each Lane Closure;

1.4.8.1.2 the Relevant Period of any Lane Closure in accordance with paragraph 3.11 of Part 6 of Schedule 10 [Performance Incentive Payments];

1.4.8.1.3 details of any Traffic Disruption Charges made in the month together with sufficient back-up information to enable the Province's Representative to verify the calculation;

1.4.8.1.4 the Reduction in Traffic Management Payment in accordance with paragraphs 3.6 to 3.9 of Part 6 of Schedule 10 [Performance Incentive Payments];

1.4.8.1.5 details of any Lane Closures that were departures from the Schedule of Lane Closures applicable to the month in accordance with Section 15.2B [Schedules of Lane Closures] of the Agreement; and

1.4.8.1.6 any Lane Closures anticipated for the following month, identifying any anticipated departures from the Schedule of Lane Closures applicable to such month in accordance with Section 15.2B [Schedules of Lane Closures] of the Agreement;

- 1.4.9 a summary report of all occurrences on the Concession Highway (referred to in this Part 2 as "Incidents") during such month necessitating traffic control measures either by the Concessionaire or the Police or affecting or potentially affecting safety, the environment or the structural integrity of the Concession Highway or any part thereof (other than accidents referred to in paragraph 1.4.7 above), including:

- 1.4.9.1 a categorization of all such Incidents:
 - 1.4.9.1.1 by section of the Concession Highway (using the sections referred to in paragraph 1.4.7.1.1 above); and
 - 1.4.9.1.2 by type of occurrence (e.g. chemical spillage, structural failure, etc.); and
- 1.4.9.2 the total number of such Incidents for each section of the Concession Highway referred to in paragraph 1.4.7.1.1 above and for the Concession Highway as a whole;
- 1.4.10 the results of all Verifications conducted during such month and (to the extent not already provided in the report referred to in paragraph 1.4.3) a report of all actions taken pursuant to paragraph 7.1 of Part 8 of Schedule 10 [Monitoring and Measurement] as a consequence of such Verifications;
- 1.4.11 details of any defects identified on the Concession Highway; and
- 1.4.12 an account of the number and type of complaints received from Users and others in respect of the Concession Highway and the conduct of the Operations and the actions taken or proposed to be taken by the Concessionaire to deal with or address such complaints.

The Concessionaire is required to provide only one hard copy of the information referred to in this paragraph 1.4, together with four copies of a diskette containing the same information, using software agreed with the Province's Representative.

1.5 Annual Report

Capitalized and other terms used in this paragraph 1.5 that are defined or used in Schedule 10 [Payments] have the meanings herein that are ascribed to them in Schedule 10 [Payments].

As soon as reasonably practicable and in any event not later than 30 days following the end of each Contract Year, the Concessionaire will provide to the Province's Representative 5 copies of a report (the "Annual Report") in respect of such Contract Year containing the following information:

- 1.5.1 a statement showing any adjustments to the Monthly Reports in accordance with Section 24.5 [Revisions to Reports] of the Agreement;
- 1.5.2 a summary for each month of such Contract Year of the information required under paragraph 1.4 with appropriate totals for the Contract Year;
- 1.5.3 details of actual Lane Closures during the Contract Year;

- 1.5.4 such details as necessary for the calculation of the Safety Performance Payment;
- 1.5.5 such details as necessary for the calculation of the First Nations Bonus Payments; and
- 1.5.6 detailed calculation of the Annual Reconciliation in accordance with Section 32.2 [Annual Reconciliation] of the Agreement.

The Province may incorporate all or any part of the Annual Report, Monthly Report or any other report prepared by the Concessionaire in any annual, monthly or other report published by the Province.

1.6 Accident Reports

- 1.6.1 As soon as practicable and in any event no later than 24 hours following the occurrence of any Major Road Accident (as defined in paragraph 1.6.3 below) on the Concession Highway, the Concessionaire will submit to the Province's Representative a report setting out details of such Major Road Accident and, to the extent they are known, the causes of such Major Road Accident, and the Concessionaire will thereafter promptly report to the Province's Representative any additional details of such Major Road Accident or its causes which become known to it.
- 1.6.2 On request by the Province's Representative, the Concessionaire will investigate the circumstances of any accident or Incident on the Concession Highway (whether or not falling within the scope of the paragraph 1.6.1) and shall as soon as practicable and in any event no later than 7 days following such request submit to the Province's Representative a report setting out details of such accident or Incident and, to the extent they are known, the causes of such accident or Incident, and the Concessionaire will thereafter promptly report to the Province's Representative any additional details of such accident or Incident or its causes which become known to it.
- 1.6.3 For purposes of this paragraph 1.6, "Major Road Accident" means any accident or Incident on the Concession Highway included in the following:
 - 1.6.3.1 any vehicle accident or Incident resulting in a fatality;
 - 1.6.3.2 any vehicle accident or Incident resulting in serious structural damage; and
 - 1.6.3.3 any vehicle accident or Incident which provokes considerable media attention.

1.7 Financial Reports

The Concessionaire will provide to the Province's Representative:

- 1.7.1 as soon as possible and in any event within 60 days after the end of the first 6 months of each of its financial years, certified true copies of the unaudited financial statements of the Concessionaire and, if appropriate, consolidated financial statements of the Concessionaire and its subsidiaries as at the end of and for that 6 month period; and
- 1.7.2 as soon as they shall have been finalized but no later than 180 days after the end of each of its financial years, a copy of the audited financial statements of the Concessionaire and, if appropriate, consolidated financial statements of the Concessionaire and its subsidiaries in respect of that period (prepared in accordance with Canadian generally accepted accounting principles), together with copies of all related directors' and auditors' reports.

If at any time after the provision to the Province of the documents referred to in paragraphs 1.7.1 and 1.7.2 above the Province's Representative notifies the Concessionaire of any matter which gives him concern and which arises in connection with anything in such documents, the Concessionaire will instruct its auditors to prepare as soon as is reasonably practicable a report on that matter, giving such further information, amplification or explanation as is reasonable having regard to the contents of the Province's Representative's notification; and the Concessionaire will provide the Province's Representative with a copy of that report within 7 days of the Concessionaire's receipt of it from its auditors.

SCHEDULE 15**RECORDS AND REPORTS****Part 3****Five Year Management Plan****1. General**

The Concessionaire will prepare and submit its initial proposed Five Year Management Plan to the Province's Representative in accordance with the Review Procedure within 6 months following the Commencement Date. Thereafter, not less than 60 days prior to the commencement of the second and each subsequent Contract Year the Concessionaire will submit to the Province's Representative, in accordance with the Review Procedure, an update and extension of the Five Year Management Plan proposed for the five-year period from the commencement of that Contract Year.

2. Plan Requirements

The Five Year Management Plan is a rolling, forward works program that describes the rehabilitation in respect of the Project Facilities, the Site and the Adjacent Areas in accordance with the Concessionaire's rehabilitation obligations under this Agreement including but not limited to the O&M Output Specifications and the O&M Requirements, excluding Routine Maintenance, that the Concessionaire is planning to undertake over the next five-year period (the "Rehabilitation Works").

For greater certainty, a reference in this Agreement including any of the Technical Requirements to the "Asset Management Plan" for a given year is a reference to the first year of the corresponding Five Year Management Plan.

The Five Year Management Plan will provide specific details including:

- Location and extent of the proposed Rehabilitation Works;
- Description of the sites of the proposed Rehabilitation Works; and
- Scheduling of the proposed Rehabilitation Works.

The annual update and extension of the Five Year Management Plan will, without limitation, incorporate any changes in asset inventory within the plan in accordance with the Performance Measure requirements defined in Part 1 of Schedule 7 [O&M Output Specifications] and as Rehabilitation Works are completed.

The Five Year Management Plan must at all times be compliant with the Concessionaire's Quality Management System and the Quality Documentation.

SCHEDULE 16**DISPUTES RESOLUTION PROCEDURE**

Except as expressly provided in any other provision of the Agreement, all Disputes will be resolved in accordance with the provisions set out in this Schedule 16 [Disputes Resolution Procedure]. In this Schedule 16 the term “Parties” means the Concessionaire and the Province, and the term “Party” means either the Concessionaire or the Province.

1. General

- 1.1 Each of the Parties agrees that at all times, both during and after the Contract Period, it will make bona fide efforts to:
 - 1.1.1 resolve by amicable negotiations any and all Disputes arising between the Parties; and
 - 1.1.2 have all Disputes resolved at the lowest level of management before engaging the dispute resolution processes described in Paragraphs 3 to 5 of this Schedule 16.
- 1.2 If the Parties are unable to resolve a Dispute at the lowest level of management pursuant to Paragraph 1.1.2 of this Schedule 16, either Party may deliver to the Province’s Representative or the Concessionaire’s Representative, as applicable, a written notice of dispute (the “Notice of Dispute”), which Notice of Dispute will initiate either the dispute resolution process described in Paragraphs 3 to 5 of this Schedule 16, or the dispute resolution process described in Paragraphs 4 and 5 of this Schedule 16 where the Dispute is a Dispute in relation to a decision of the Independent Certifier. To be effective, the Notice of Dispute must expressly state that it is a notice of dispute, set out the particulars of the matter in dispute, describe the remedy or resolution sought by the Party issuing the Notice of Dispute and be signed by the Province’s Representative, if given by the Province, or by the Concessionaire’s Representative, if given by the Concessionaire.

2. Independent Certifier

- 2.1 Without limiting any obligations of the Parties under the Independent Certifier Contract, the Parties will cooperate with the Independent Certifier and provide such information, records and documents as may be required by the Independent Certifier to make any determination or decision required to be made by the Independent Certifier pursuant to and in accordance with the provisions of the Agreement.
- 2.2 Subject to Section 13.4.2 of the Agreement, unless and until revised, cancelled, varied or overturned by an Arbitrator or court of competent jurisdiction in accordance with the provisions of Paragraph 5 of this Schedule 16, any decision of the Independent Certifier to issue or not to issue any Substantial Completion

Certificate or Final Completion Certificate will be final and binding on the Parties and not subject to appeal, arbitration, litigation or any other dispute resolution process, and each of the Parties expressly waives all rights of appeal in connection with the Independent Certifier's decisions. For greater certainty, Paragraph 3 of this Schedule 16 will not apply in respect of the resolution of any Dispute regarding a decision of the Independent Certifier unless otherwise agreed by the Parties on terms acceptable to the Parties.

3. Referral to Expert

3.1 If the Parties are unable to resolve the Dispute in the manner contemplated in Paragraph 1.1 of this Schedule 16, then either Party may, at any time, by written notice to the other Party (the "Expert Dispute Notice") require the Dispute to be resolved on an expedited basis by a qualified and experienced expert (the "Expert") in accordance with this Paragraph 3.

3.2 The Expert will be appointed as follows:

3.2.1 there will be three panels of experts (each, a "Panel", collectively, the "Panels"), one which will resolve Disputes relating to construction matters (the "Construction Panel"), one of which will resolve Disputes relating to operation, rehabilitation and maintenance matters (the "O & M Panel") and one of which will resolve all Disputes relating to financial and other matters arising under the Agreement (the "General Panel");

3.2.2 each of the Construction Panel and the O & M Panel will consist of 3 experts who will be jointly appointed by the Province and the Concessionaire within 30 days of Financial Close;

3.2.3 the General Panel will consist of 3 experts (at least one of whom will be a barrister and solicitor duly licensed to practice law in the Province of British Columbia and one of whom will be a member in good standing of the Institute of Chartered Accountants of British Columbia) who will be jointly appointed by the Province and the Concessionaire within 30 days of Financial Close;

3.2.4 if any member of a Panel resigns, dies or otherwise withdraws from the Panel at any time during the Contract Period, a replacement expert will be appointed to the relevant Panel by the Province and the Concessionaire as soon as practicable thereafter;

3.2.5 if the Parties fail to agree on the identity of any expert to be appointed to any of the Panels within the aforesaid 30-day period following Financial Close, either Party may apply to the British Columbia International Commercial Arbitration Centre ("BCICAC") or to a judge of the Supreme Court of the Province of British Columbia for appointment of such expert, in which case the BCICAC or court will appoint the expert at the earliest opportunity from

the list of potential experts submitted by the Parties or, if either Party fails to submit its list of potential experts within 7 Working Days, the BCICAC or court may appoint such person as expert who meets the requirements set out in this Schedule 16 for qualifications and experience of the relevant expert.

- 3.3 No person will be nominated or appointed to act as a member of any of the Panels who is or at any time has been interested in the conduct of the Operations or in the business affairs of the Concessionaire or any consultant, subconsultant or subcontractor of any tier of the Concessionaire.
- 3.4 The Expert will be selected from the Panels established pursuant to Paragraph 3.2 as follows:
 - 3.4.1 the Party that issues the Expert Dispute Notice will designate in such notice the relevant Panel from which the Expert is to be selected;
 - 3.4.2 where the Construction Panel or the O&M Panel is designated as the relevant Panel by the Party that issues the Expert Dispute Notice, the Expert will be selected on a strictly rotational basis from such Panel no later than 5 Working Days following delivery of the Expert Dispute Notice;
 - 3.4.3 where the General Panel is designated as the relevant Panel by the Party that issues the Expert Dispute Notice, such Party will designate in the Expert Dispute Notice a member of the General Panel (having qualifications and experience relevant to the issues in the particular Dispute for which the Expert is appointed) to serve as Expert; and
 - 3.4.4 if the Party that did not issue the aforesaid Expert Dispute Notice does not agree with the choice of Panel, or with the choice of member of the General Panel, pursuant to Paragraph 3.4.3, designated in the Expert Dispute Notice, it may, by notice in writing delivered to the other Party and to the members of the General Panel within the aforesaid 5-Working Day period, refer the matter for resolution by an Expert drawn on a rotational basis from the General Panel (provided that in no circumstance will the member of the General Panel designated as Expert in the Expert Dispute Notice resolve any disagreement regarding the choice of himself or herself as Expert), whose decision in relation to such disagreement must be delivered within 3 Working Days of delivery of such notice. Any such decision will be final and binding on the Parties and not subject to appeal, arbitration, litigation or any other dispute resolution process.
- 3.5 The Expert selected pursuant to Paragraph 3.4 of this Schedule 16 will determine the appropriate process for timely and cost effective resolution of the Dispute and, without limiting the generality of the foregoing, the Expert has discretion to, among other things:

- 3.5.1 solicit submissions and documents from the Parties, and impose deadlines for the receipt of such submissions;
 - 3.5.2 require some or all of the evidence to be provided by affidavit;
 - 3.5.3 direct the Parties or either of them to prepare and provide the Expert with such documents, test results or other things as the Expert may require to assist the Expert in the resolution of the Dispute and rendering of a decision;
 - 3.5.4 require either Party to supply or prepare for examination by the Expert and the other Party any document or information the Expert considers necessary;
 - 3.5.5 inspect the Project Facilities, giving reasonable notice to each Party of the time when, and the place where, the Expert intends to conduct any inspection;
 - 3.5.6 convene meetings of the Parties to have the Parties discuss the issues in Dispute in the presence of the Expert;
 - 3.5.7 take, or require either or both Parties to take and provide to the Expert, such measurements, make such calculations, perform such tests, audit such processes and procedures, and take any and all such other measures and steps as the Expert considers necessary to make a final determination in the Dispute; and
 - 3.5.8 seek advice from one or more of the Panels or any other qualified independent professional advisors in respect of the Dispute.
- 3.6 The Expert will render a decision as soon as possible and, in any event, will use all reasonable efforts to render a decision no later than 10 Working Days after the date of selection of the Expert, or such longer period of time as agreed to in writing by the Parties. The Expert may give reasons or a summary of reasons for the Expert's decision, but will not be required to provide reasons.
- 3.7 The Expert will keep all information about the Dispute confidential and will not disclose that information to anyone other than the Parties.
- 3.8 Each Party will bear its own costs of the process for resolution of the Dispute by the Expert (including all legal fees and expenses). The Parties will share equally, and be responsible for their respective shares of, all costs of the Expert as and when due.
- 3.9 Unless and until revised, cancelled, varied or overturned by an Arbitrator or court of competent jurisdiction in accordance with the provisions of Paragraph 5 of this Schedule 16, the Expert's determination will be final and binding on the Parties and not subject to appeal, arbitration, litigation or any other dispute resolution process, and each of the Parties expressly waives all rights of appeal in connection with the Expert's determination.

4. Referral of Disputes to Arbitration

4.1 If:

4.1.1 the amount awarded by the Expert to a Party pursuant to Paragraph 3 of this Schedule 16 is more than the following amounts, or if the result of the Expert's determination pursuant to Paragraph 3 results in a Party doing or not doing something that has a value or consequence to that Party or to the other Party that is, in the reasonable opinion of any Party, more than the following amounts:

4.1.1.1 \$250,000 in the aggregate; or

4.1.1.2 \$50,000 per year, in the case of a decision by the Expert that would result in either a recurring annual payment (for a period of at least 5 years) by the Province or a recurring annual cost to the Concessionaire;

4.1.2 the Dispute involves issues other than monetary claims by one Party against the other Party which a Party reasonably believes are material and significant to that Party; or

4.1.3 a Notice of Dispute has been issued for a Dispute in relation to a decision of the Independent Certifier,

then either Party may, by written notice given in accordance with Paragraph 4.2 of this Schedule 16, require that the Dispute be resolved by arbitration pursuant to Paragraph 5 of this Schedule 16; provided, however, that no Party may require that a Dispute referred to in Paragraph 4.1.1 or 4.1.2 be resolved by arbitration pursuant to Paragraph 5 of this Schedule 16 unless the Dispute has first been referred for resolution to an Expert pursuant to Paragraph 3 of this Schedule 16.

4.2 If a Party is entitled to refer a Dispute to which Paragraph 3 of this Schedule 16 applies to arbitration pursuant to Paragraph 4.1 or otherwise initiate or pursue any dispute resolution process, appeal or legal proceeding (including any appeal or litigation permitted pursuant to Paragraph 5.8 or 6 of this Schedule 16), then, unless the Parties otherwise expressly agree in writing, all submissions prepared by a Party in connection with any proceedings involving the Expert or the Arbitrator (as the case may be) and all information, documents, notes and records prepared by the Expert or the Arbitrator (as the case may be) and all decisions and determinations of the Expert or the Arbitrator (as the case may be) will be confidential and inadmissible in any such arbitration, dispute resolution process, appeal or legal proceeding.

5. Arbitration

- 5.1 If a Dispute is referred to arbitration pursuant to Paragraph 4 of this Schedule 16, the *Commercial Arbitration Act* will apply to any arbitration conducted hereunder except to the extent that its provisions are modified by the express provisions of this Paragraph 5 or by agreement of the Parties.
- 5.2 A Party (the “Initiating Party”) may commence arbitration proceedings by giving a written notice to the other Party (the “Responding Party”) identifying the nature of the Dispute, the determination of the Expert or the Independent Certifier (as applicable) that is to be the subject of the arbitration, and any amount involved and the remedy sought. Within 10 Working Days following receipt of such notice by the Responding Party, the Initiating Party and the Responding Party will designate a single arbitrator acceptable to both of them. If the Parties fail to appoint such a single arbitrator within such period of time, the Initiating Party will, by written notice to the Responding Party, appoint an arbitrator. The Responding Party will, within 10 Working Days following receipt of such notice, appoint an arbitrator by written notice to the Initiating Party, and the two arbitrators so appointed will select a third arbitrator acceptable to both of them. If the Responding Party fails to appoint an arbitrator within such period of time (or such additional period of time as the Parties may agree), the Initiating Party may appoint an arbitrator on behalf of the Responding Party and is hereby appointed the agent of the Responding Party for such purpose. If the two arbitrators so appointed are unable to agree upon the third arbitrator within 10 Working Days following the appointment of the arbitrator by (or on behalf of) the Responding Party, either Party may apply under the *Commercial Arbitration Act* to a judge of the Supreme Court of the Province of British Columbia to appoint the third arbitrator, and the provisions of the *Commercial Arbitration Act* will govern such appointment. No person may be nominated or appointed to act as an arbitrator who is or at any time has been interested in the conduct of the Operations or in the business affairs of the Concessionaire or any consultant, subconsultant or subcontractor of any tier of the Concessionaire.
- 5.3 The single arbitrator or panel of arbitrators appointed pursuant to Paragraph 5.2 of this Schedule 16 to act hereunder (the “Arbitrator”) will have appropriate qualifications by profession or occupation to decide the matter in Dispute.
- 5.4 Within 10 Working Days following the appointment of the Arbitrator (or, where the Arbitrator is a panel of arbitrators, the appointment of the last member of such panel) pursuant to Paragraph 5.2 of this Schedule 16, the Initiating Party will send to the Responding Party and the Arbitrator a statement (the “Statement”) setting out in reasonable detail the facts and any contentions of law on which the Initiating Party relies and the relief that it claims. Within 10 Working Days following receipt of such Statement, the Responding Party will send to the Initiating Party and the Arbitrator a response (the “Response”) to the Statement setting out in reasonable detail which of the facts and contentions of law in the Statement the Responding Party admits or denies, on what grounds, and any other facts and contentions of law

on which it relies. Within 10 Working Days following receipt of such Response, the Initiating Party may send to the Responding Party and the Arbitrator a reply to the Response (the "Initiating Party's Reply"). Within 10 Working Days following receipt of the Initiating Party's Reply, the Responding Party may send to the Initiating Party and the Arbitrator a reply to the Initiating Party's Reply (the "Responding Party's Reply") (the Initiating Party's Reply and the Responding Party's Reply being referred to in this Schedule 16, collectively, as "Replies" and, individually, as a "Reply"). Every Statement, Response and Reply given in accordance with the foregoing will be accompanied by copies (or, if they are especially voluminous, lists) of all essential documents and other materials on which the Party concerned relies.

- 5.5 After submission of the Statement, Response and Replies, if any, given in accordance with Paragraph 5.4 of this Schedule 16, the Arbitrator will forthwith meet with and give directions to the Parties for the further conduct of the arbitration. There will be no oral discovery unless otherwise ordered by the Arbitrator.
- 5.6 Meetings and hearings of the Arbitrator will take place in Vancouver, British Columbia or in such other place as the Parties 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 will give the Parties adequate notice thereof. All meetings and hearings will be in private unless the Parties otherwise agree, and each Party may be represented at any meetings or hearings by legal counsel. Each Party may examine and re-examine its witnesses and cross-examine those of the other Party at the arbitration.
- 5.7 Subject to the provisions of the *Commercial Arbitration Act*, the Arbitrator will send a decision in writing to the Parties within 30 days following the conclusion of all hearings referred to in Paragraph 5.6 of this Schedule 16 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 Parties otherwise agree, will state the reasons for the decision. If the Arbitrator is a panel, the decision of the majority of the panel will be deemed to be the decision of the Arbitrator.
- 5.8 Subject to the provisions of the *Commercial Arbitration Act*, and with the exception of monetary awards in excess of \$5,000,000 or errors in law, the decision of the Arbitrator will be final and binding on the Parties and not subject to any appeal, further arbitration, litigation or any other dispute resolution process, provided that the Arbitrator has followed the rules and procedures herein in good faith and has proceeded in accordance with the principles of natural justice. If the decision results in an award in excess of \$5,000,000, the decision of the Arbitrator may be appealed on a question of fact or on a question of mixed fact and law where permitted pursuant to the provisions of the *Commercial Arbitration Act*. If the decision is alleged to have been based upon an error in law, a Party may appeal the decision in that regard pursuant to the provisions of the *Commercial Arbitration Act*.

- 5.9 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 *Commercial Arbitration Act*, a submission to arbitration hereunder will confer on the Arbitrator the jurisdiction and power to:
- 5.9.1 determine any question of law arising in the arbitration;
 - 5.9.2 determine any question as to the Arbitrator's jurisdiction;
 - 5.9.3 determine any question of good faith or dishonesty arising in the Dispute;
 - 5.9.4 order any Party to furnish further details of its case, in fact or in law to the other Party;
 - 5.9.5 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 notice that the Arbitrator intends to do so;
 - 5.9.6 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;
 - 5.9.7 make one or more interim awards;
 - 5.9.8 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;
 - 5.9.9 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;
 - 5.9.10 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;
 - 5.9.11 make any order as to the payment of costs of the arbitration, including without limitation legal fees on a solicitor and own client basis, and
 - 5.9.12 include, as part of any award, the payment of interest at the rate set out in the Agreement from an appropriate date as determined by the Arbitrator.

The jurisdiction and powers referred to in this Paragraph 5.9 will be exercised at the discretion of the Arbitrator subject only to applicable Laws and Regulations and the provisions of the Agreement.

6. Provisional Remedies

No Party is precluded from initiating a proceeding in a Court of competent jurisdiction 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 the Agreement, including temporary and preliminary injunctive relief and restraining orders and the appointment of a receiver or receiver and manager.

7. Continuing Performance

7.1 At all times, notwithstanding the existence of any Dispute or the referral of any Dispute for resolution under this Schedule 16, except as may otherwise be expressly provided in the Agreement, the Parties will continue to comply with, observe and perform all of their respective obligations (including the obligation of the Concessionaire to proceed with the conduct of the Works) in accordance with the provisions of the Agreement without prejudice to the right to contest, dispute and challenge the relevant matter in accordance with the provisions of the Agreement. Without limitation to the foregoing, and for illustrative purposes only, in the event of a Dispute with respect to the reasonableness of any approval by the Province, the Concessionaire will comply with such decision but, where permitted under the terms of the Agreement, may submit the question of reasonableness for determination pursuant to the provisions of this Schedule 16. To the extent that any such Dispute involves a disagreement as to the nature or scope of the Concessionaire's obligations hereunder (including as to the performance or method of performance of any of the Works), the Concessionaire will comply with all instructions given by the Province's Representative pending the outcome of the Dispute, but without prejudice to the rights of the Concessionaire as ultimately determined in accordance with the Disputes Resolution Procedure.

7.2 Subject to the express provisions of the Agreement, where there is any Dispute as to the amount of monies owing by one Party to the other Party hereunder, the portion of the amount owing that is not contested, disputed or challenged, if any, will be paid when due hereunder, but without prejudice to the rights of the Parties to contest, dispute or challenge the disposition of the remaining portion of the monies claimed hereunder.

8. Rights Pending Final Resolution of Dispute

If the Party receiving a notice of termination of the Agreement disputes the right of the Party giving such notice to terminate the Agreement by making application to the Disputes Resolution Procedure in this Schedule 16, it must state in the Notice of Dispute if it elects to accept such termination without prejudice to its right to assert a claim for damages for the alleged wrongful termination or to any other rights to which it is entitled under the Agreement. Such election will be irrevocable and the Party making the election will only be entitled to seek its damages, if any. If the disputing Party does not so elect, subject to the rights of the senior Funders under the Direct Agreement, the termination of the Agreement

will occur upon the expiry of a period of 30 days following a final decision of the Arbitrator to the effect that the right to terminate was validly exercised.

9. Costs of Arbitration

The Parties will share equally, and be responsible for their respective shares of, all costs relating to the arbitration as and when due.

10. Legal Proceedings

Except as expressly contemplated in this Schedule 16, neither any Expert nor any Arbitrator may be required to testify or otherwise be compellable in or in connection with any appeal, litigation, arbitration, dispute resolution process or legal proceeding, nor will any of their respective information, documents, notes, records, decisions, determinations or written reasons be used or referred to or admissible in or in connection with any such appeal, litigation, arbitration, dispute resolution process or legal proceeding (and, for greater certainty, all such notes, records, decisions, determinations and written reasons will be confidential).

SCHEDULE 17**LIAISON PROCEDURES****Part 1****General Principles**

1. The following principles will be reflected in the Liaison Procedures to be developed under this Agreement:
 - 1.1 the Parties should consult and cooperate to the extent reasonably possible;
 - 1.2 the Parties should attempt to prepare matters on a joint basis to the extent reasonably possible;
 - 1.3 each Party is to be given a reasonable opportunity to consider matters, and where information is supplied it should include or be accompanied by sufficient explanatory or other material to enable the information to be properly considered; and
 - 1.4 so far as practical, matters arising should be discussed immediately between those concerned so that where in any Liaison Procedures there is reference to any material being sent for comment, this will be a reference to the final form of material the substance of which has previously been discussed between those concerned.
2. While Liaison Procedures are guidelines of the best current assessment of sensible work practice, they may require amendment in light of practical experience and, if so, they should be amended in accordance with paragraph 3 of this Part 1.
3. Where any Party is dissatisfied with the operations of any Liaison Procedures and/or considers that they should be amended in any way, the following provisions will apply:
 - 3.1 the matter will immediately be brought to the attention of the lowest level of management referred to in paragraph 1.1 of Schedule 16 [Disputes Resolution Procedure], who will as soon as possible discuss the matter with a view to resolving the dissatisfaction and reaching agreement on what action should be taken, including any possible amendment to the Liaison Procedures; and
 - 3.2 should the lowest level of management fail to agree, then the matter will be referred to the Disputes Resolution Procedure and the provisions of Schedule 16 [Disputes Resolution Procedure] (except paragraph 1.1 thereof) will apply.

SCHEDULE 17**LIAISON PROCEDURES****Part 2****Operations, Emergencies, and Traffic Management**

The Liaison Procedures to be developed pursuant to Section 14.5.1 will, *inter alia*:

1. be agreed by the Concessionaire and the Province and, as appropriate, with the police, the fire and ambulance services, the Ministry and its communications division ("Communications Department"), the MOT Section Contractor and third party operations and maintenance contractors referred to in Section 15.5.2 (as appropriate), other affected highway authorities, and any other affected Relevant Authority;
2. define the Olympic Period as commencing at 12:01 am on February 6, 2010 and ending at 11:59 pm on March 26, 2010. During this period the Concessionaire will be responsible for the operation, maintenance and rehabilitation of the Project Facilities, the Site and the Adjacent Areas (including the MOT Section, Upgraded Sections and the Off-site Facilities except as otherwise required in the O&M Output Specifications. Notwithstanding this, the Concessionaire is required to co-operate with the Vancouver Olympic organizing committee both before, during and after the Olympic Period (including throughout the period of the planning, design, construction, testing, commissioning, and de-commissioning phases of the 2010 Olympics and Paralympics);
3. provide for periodic meetings between the persons referred to in paragraphs 1 and 2 above to discuss issues affecting the subject matter of the relevant Liaison Procedures;
4. set out procedures for the imposition of temporary speed limits or lane restrictions to accommodate poor visibility, adverse weather conditions, incidents and accidents (but on the understanding that in the case of emergency all agreed procedures may be overridden by the police);
5. set out agreed procedures for the handling of any emergency, including without limitation access procedures and routes for the emergency services (police, fire and ambulance) and notification of any changes to such routes;
6. provide for the appointment by the Concessionaire of the Concessionaire's Representative or another responsible representative of the Concessionaire whose duty it will be to liaise with the Province's Representative, as the case may be, and the other persons referred to in paragraphs 1 and 2 above in accordance with the Liaison Procedures;
7. set out agreed access arrangements to enable each of the Concessionaire, the Minister and any other affected highway authority to carry out its respective functions; and

8. require the Concessionaire to manage and coordinate utility-related works in accordance with the Ministry Utility Policy Manual. The Concessionaire is required to provide liaison and monitoring in a prompt and courteous manner in cooperation with the relevant utility. The Concessionaire will honor existing licenses to occupy and operational arrangements with utility operators in accordance with its obligations under the Concession Agreement.

SCHEDULE 17**LIAISON PROCEDURES****Part 3****Publicity**

1. Without prejudice to the provisions of Parts 1 and 2 of this Schedule 17, the Liaison Procedures to be agreed between the Concessionaire and the Communications Department referred to in paragraph 1 of Part 2 of this Schedule 17 will take account of the principles in paragraph 2 below and will comply with the provisions of paragraph 3 below.
2. The principles referred to in paragraph 1 above are as follows:
 - 2.1 recognition of the national and local importance of the Concession Highway;
 - 2.2 development of procedures and strategies for dealing with any public communications relating to the Operations, the Project, the Concession Highway and any matters affecting the same;
 - 2.3 without prejudice to paragraph 2.2 above, development of procedures and strategies for dealing with key media issues, which will include (without limitation) the following in relation to the Operations, the Project, the Concession Highway and any matters affecting the same:
 - 2.3.1 issues which are likely to be controversial;
 - 2.3.2 issues which are likely to attract national or regional interest; and
 - 2.3.3 issues which are likely to affect any local community;
 - 2.4 cooperation between the Parties, any representatives or members of the Government and the relevant local authorities in relation to the organization or holding of any events, exhibitions or public meetings by either the Province or the Concessionaire in relation to the Operations, the Project, the Concession Highway or any matters affecting the same and the contents of and participants in such events, exhibitions or public meetings;
 - 2.5 liaison with Olympic organizations and organizers; and
 - 2.6 mutual respect for the respective roles of each of the Parties.

3. The provisions referred to in paragraph 1 above are as follows:
- 3.1 each of the Concessionaire and the Province will from time to time nominate a representative (the "Media Representative") who will be responsible for any public communications, particularly media communications relating to the Operations, the Project, the Concession Highway and any matters affecting the same. The Media Representatives for the time being will be as set out below until such time as either Party notifies the other as to a change in its Media Representative:
- 3.1.1 The Concessionaire
Ms. Gayle Bukowsky
- Telephone: **DELETED**
Facsimile: **DELETED**
- 3.1.2 The Province
Mr. Peter Milburn
Executive Project Director
- Telephone: 604-605-5948
Facsimile: 604-605-5936
- 3.2 without prejudice to Section 50.6 [Public Communications Regarding Disputes] and except as may be required or permitted pursuant to the provisions of Part 4 of this Schedule 17 [Community Relations], neither the Concessionaire nor the Province will make any public statement or public announcement in relation to the Operations, the Project, the Concession Highway or any matters affecting the same without the prior written approval (such approval not to be unreasonably withheld or delayed) by the Media Representative of the other Party of the content of such statement or announcement unless, in the case of the Province, such statement or announcement is for parliamentary, governmental, statutory or judicial purposes.

SCHEDULE 17**LIAISON PROCEDURES****Part 4****Community Relations**

1. The requirements set out in this Part 4 will apply throughout the Contract Period in respect of all communications and consultation in relation to the Operations, the Project, the Concession Highway and any matters affecting the same.
2. Categories of Communication and Consultation

2.1 There are four categories of communication and consultation:

Traffic Communication – Traffic communication involves providing timely, accurate information to the public and Stakeholders regarding current and expected traffic conditions for the Concession Highway, particularly regarding delays and closures associated with construction and maintenance.

Community Relations – Community relations involves ongoing two-way communication with the public and Stakeholders. This includes dealing with ongoing public inquiries, problem solving, project updates, and regular public reporting. It is distinct from public and Stakeholder consultation.

Public and Stakeholder Consultation – Public and Stakeholder consultation involves gathering input from the public and Stakeholders on the scope and nature of the Highway improvements, including comments on design options, pre-design, preliminary design, and detailed design.

Media Relations – Media relations involves interaction with and responding to requests from the media.

2.2 Lead and Supporting Roles

Within each category of communication and consultation, the Concessionaire will play either a lead or a supporting role. In each case the Concessionaire will work with the Province to provide communication and consultation services and in each case the Concessionaire shall be responsible for any costs associated with its role including the costs of providing such communication and consultation services to the Province.

2.2.1 Lead role responsibilities include:

- (a) Developing communication and consultation plans (and, where the Concessionaire is in the lead role, obtaining approval by the

Province) and implementing approved communication and consultation plans (as applicable), and

- (b) Establishing and maintaining constructive relationships with the public and Stakeholders.

2.2.2 Supporting role responsibilities include:

- (a) Assisting with the development of communication and consultation plans (as applicable);
- (b) Conducting Project activities in a manner consistent with communication and consultation plans;
- (c) Maintaining constructive relationships with the public and Stakeholders and supporting the lead party and its team members as the primary contact with the public and Stakeholders;
- (d) Providing information, as required by the lead party and its team members, to support all communication activities;
- (e) Attending community consultation meetings and other community relations meetings, as necessary, throughout the Contract Period;
- (f) Consideration of public and Stakeholder input throughout the Contract Period and reporting to the public and Stakeholders regarding the manner in which public and Stakeholder input will be used.

2.3 Traffic Communication

2.3.1 From the Commencement Date until the end of the Olympic Period, the Province will take the lead role in traffic communication, while the Concessionaire will take the supporting role. The Concessionaire's obligation, in such supporting role, is to support the Province by providing information in a timely and accurate fashion with respect to information contemplated by Section 15.4.1 of the Agreement, to enable the Province to be able to provide clear and timely advance information to the public.

2.3.2 Following the Olympic Period, the Concessionaire will have full responsibility (both the lead and supporting roles) for traffic communications.

2.4 Community Relations

2.4.1 From the Commencement Date until the end of the Olympic Period, the Province will take the lead role in community relations, while the Concessionaire will take the supporting role. In such supporting role, the Concessionaire will assist the Province in implementing a comprehensive community relations program to provide the public and Stakeholders with information pertaining to the Project, the Operations and the Concession Highway on a regular basis and to respond to public inquiries and concerns.

2.4.2 Following the Olympic Period, the Concessionaire will have full responsibility (both the lead and supporting roles) for community relations.

2.5 Public and Stakeholder Consultation

2.5.1 From the Commencement Date until the end of the Olympic Period, the Province will take the lead role in public and Stakeholder consultation, while the Concessionaire will take the supporting role. In such supporting role, the Concessionaire's obligation is to support the Province through (i) the provision of consultation materials regarding the Concessionaire's Design Data (including pre-design, preliminary design, and detailed designs), (ii) attendance and participation in consultation activities relating to design issues, such as small group meetings, open houses, and council presentations, and (iii) the provision of other assistance and support as the Province may from time to time require (acting reasonably).

2.5.2 Following the Olympic Period, the Concessionaire will have full responsibility (both the lead and supporting roles) for public and Stakeholder consultation.

2.6 Media Relations

2.6.1 The Province is responsible for, and will take the lead role in, media relations throughout the Contract Period while the Concessionaire will take the supporting role. In such supporting role, the Concessionaire will use all reasonable efforts to support the Province in media relations by responding to media relations issues and providing information as needed.

SCHEDULE 18

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SCHEDULE 19

DELEGATED OBLIGATIONS, RIGHTS, POWERS AND FUNCTIONS

Part 1

Delegated Obligations

1. The obligations of the Minister that are set out in section 70 of the Transportation Act are imposed on the Concessionaire in relation to the Project Facilities, the Site and the Adjacent Areas (including, for greater certainty, the Works).
2. The common law obligations of the Minister are imposed on the Concessionaire in relation to the Project Facilities, the Site and the Adjacent Areas (including, for greater certainty, the Works).

SCHEDULE 19**DELEGATED OBLIGATIONS, RIGHTS, POWERS AND FUNCTIONS****Part 2****Delegated Rights, Powers and Functions**

1. The rights, powers and functions of the Minister that are set out in the following sections of the following enactments, are delegated to the Concessionaire, in relation to the Project Facilities, the Site and the Adjacent Areas (including, for greater certainty, the Works).
 - 1.1 Section 2(1)(a) Transportation Act, save and except that the rights, powers and functions of the Minister to remove, discontinue, close and dispose of the whole or any part or parts of the Project Facilities, the Site and the Adjacent Areas (including, for greater certainty, the Works), are not delegated to the Concessionaire.
 - 1.2 Section 16 Transportation Act
 - 1.3 Section 22 Transportation Act
 - 1.4 Section 47 Transportation Act, save and except that the rights, powers and functions of the Minister to remove, discontinue, close and dispose of the whole or any part or parts of the Project Facilities, the Site and the Adjacent Areas (including, for greater certainty, the Works), that is or are designated as arterial highway are not delegated to the Concessionaire.
 - 1.5 Section 49 Transportation Act
 - 1.6 Section 50 Transportation Act
 - 1.7 Section 51(1) Transportation Act
 - 1.8 Sections 51(2)(a), (b), (c), (d) Transportation Act
 - 1.9 Section 51(3) Transportation Act
 - 1.10 Section 55 Transportation Act
 - 1.11 Section 61(1)(a) Transportation Act, save and except that the rights, powers and functions of the Minister to remove, discontinue, close and dispose of the whole or any part or parts of the Project Facilities, the Site and the Adjacent Areas (including, for greater certainty, the Works), are not delegated to the Concessionaire.
 - 1.12 Sections 61(1)(b), (c) Transportation Act

- 1.13 Section 61(2) Transportation Act
- 1.14 Section 135(1) Motor Vehicle Act
- 1.15 Section 204(3) Motor Vehicle Act
- 1.16 Section 214(2) Motor Vehicle Act

SCHEDULE 20

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WITHHELD IN ITS ENTIRETY

SCHEDULE 21

PRIVACY PROTECTION

1. Definitions

1.1 In this Schedule:

- 1.1.1 “**Act**” means the *Freedom of Information and Protection of Privacy Act* (British Columbia), as amended from time to time;
- 1.1.2 “**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;
- 1.1.3 “**personal information**” means recorded information about an identifiable individual, other than contact information, collected or created by the Concessionaire as a result of this Agreement or any previous agreement between the Province and the Concessionaire dealing with the same subject matter as this Agreement.

2. Purpose

2.1 The purpose of this Schedule 21 [Privacy Protection] is to:

- 2.1.1 enable the Province to comply with its statutory obligations under the Act with respect to personal information; and
- 2.1.2 ensure that, as a service provider, the Concessionaire is aware of and complies with its statutory obligations under the Act 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 Concessionaire may only collect or create personal information that is necessary for the performance of the Concessionaire's obligations, or the exercise of the Concessionaire's rights, under this Agreement.
- 3.2 Unless this Agreement otherwise specifies or the Province otherwise directs in writing, the Concessionaire 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 Concessionaire must tell an individual from whom the Concessionaire collects personal information:
- 3.3.1 the purpose for collecting it;
 - 3.3.2 the legal authority for collecting it; and
 - 3.3.3 the title, business address and business telephone number of the person designated by the Province to answer questions about the Concessionaire's collection of personal information.

4. Accuracy of Personal Information

The Concessionaire must make every reasonable effort to ensure the accuracy and completeness of any personal information to be used by the Concessionaire or the Province to make a decision that directly affects the individual the information is about.

5. Requests for Access to Personal Information

If the Concessionaire receives a request for access to personal information from a person other than the Province, the Concessionaire must promptly advise the person to make the request to the Province unless this Agreement expressly requires the Concessionaire to provide such access and, if the Province has advised the Concessionaire of the name or title and contact information of an official of the Province to whom such requests are to be made, the Concessionaire must also promptly provide that official's name or title and contact information to the person making the request.

6. Correction of Personal Information

- 6.1 Within 5 Working Days of receiving a written direction from the Province to correct or annotate any personal information, the Concessionaire must annotate or correct the information in accordance with the direction.
- 6.2 When issuing a written direction under paragraph 6.1, the Province must advise the Concessionaire of the date the correction request to which the direction relates was received by the Province in order that the Concessionaire may comply with paragraph 6.3.
- 6.3 Within 5 Working Days of correcting or annotating any personal information under paragraph 6.1, the Concessionaire 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 Concessionaire disclosed the information being corrected or annotated.
- 6.4 If the Concessionaire receives a request for correction of personal information from a person other than the Province, the Concessionaire must promptly advise

the person to make the request to the Province and, if the Province has advised the Concessionaire of the name or title and contact information of an official of the Province to whom such requests are to be made, the Concessionaire must also promptly provide that official's name or title and contact information to the person making the request.

7. Protection of Personal Information

The Concessionaire 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.

8. Storage and Access to Personal Information

Unless the Province otherwise directs in writing, the Concessionaire must not store personal information outside Canada or permit access to personal information from outside Canada.

9. Retention of Personal Information

Unless this Agreement otherwise specifies, the Concessionaire must retain personal information until directed by the Province in writing to dispose of it or deliver it as specified in the direction.

10. Use of Personal Information

10.1 Unless the Province otherwise directs in writing, the Concessionaire may only use personal information if that use is:

10.1.1 for the performance of the Concessionaire's obligations, or the exercise of the Concessionaire's rights, under this Agreement; and

10.1.2 in accordance with paragraph 13.

11. Disclosure of Personal Information

11.1 Unless the Province otherwise directs in writing, the Concessionaire may only disclose personal information inside Canada to any person other than the Province if the disclosure is for the performance of the Concessionaire's obligations, or the exercise of the Concessionaire's rights, under this Agreement.

11.2 Unless this Agreement otherwise specifies or the Province otherwise directs in writing, the Concessionaire must not disclose personal information outside Canada.

12. Inspection of Personal Information

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 Concessionaire, enter on the Concessionaire's premises to inspect any personal information in the possession of the Concessionaire or any of the Concessionaire's information management policies or practices relevant to its management of personal information or its compliance with this Schedule and the Concessionaire must permit, and provide reasonable assistance to, any such inspection.

13. Compliance with the Act and Directions

13.1 The Concessionaire must in relation to personal information comply with:

13.1.1 the requirements of the Act applicable to the Concessionaire as a service provider, including any applicable order of the commissioner under the Act; and

13.1.2 any direction given by the Province under this Schedule.

13.2 The Concessionaire acknowledges that it is familiar with the requirements of the Act governing personal information that are applicable to it as a service provider.

14. Notice of Non-Compliance

If for any reason the Concessionaire does not comply, or anticipates that it will be unable to comply, with a provision in this Schedule in any respect, the Concessionaire 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.

15. Termination of Agreement

In addition to any other rights of termination which the Province may have under this Agreement or otherwise at law, the Province may, subject to any provisions in this Agreement establishing mandatory cure periods for defaults by the Concessionaire, terminate this Agreement by giving written notice of such termination to the Concessionaire, upon any failure of the Concessionaire to comply with this Schedule in a material respect.

16. Interpretation

16.1 In this Schedule, references to paragraphs by number are to paragraphs of this Schedule unless otherwise specified in this Schedule.

- 16.2 Any reference to the “Concessionaire” in this Schedule includes any subcontractor or agent retained by the Concessionaire to perform obligations under this Agreement and the Concessionaire must ensure that any such subcontractors and agents comply with this Schedule.
- 16.3 The obligations of the Concessionaire in this Schedule will survive the termination of this Agreement.
- 16.4 If a provision of this Agreement (including any direction given by the Province under this Schedule) conflicts with a requirement of the Act or an applicable order of the commissioner under the Act, the conflicting provision of this Agreement (or direction) will be inoperative to the extent of the conflict.
- 16.5 The Concessionaire must comply with the provisions of this Schedule despite any conflicting provision of this Agreement or the law of any jurisdiction outside Canada.

SCHEDULE 22

COLLATERAL AGREEMENTS

Part 1

Contractor's Collateral Agreement

THIS AGREEMENT is made as of the 3rd day of June, 2005

AMONG:

- (1) **HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA**, as represented by the **MINISTER OF TRANSPORTATION** (the "**Province**")

OF THE FIRST PART

AND

- (2) **BC TRANSPORTATION FINANCING AUTHORITY**, a corporation continued under the *Transportation Act*, S.B.C. 2004, c. 44 ("**BCTFA**")

OF THE SECOND PART

AND

- (3) **PETER KIEWIT SONS CO.**, a corporation incorporated under the laws of Nova Scotia (the "**Contractor**")

OF THE THIRD PART

AND

- (4) **KIEWIT CONSTRUCTION COMPANY**, a corporation incorporated under the laws of the State of Delaware, U.S.A. (the "**Guarantor**")

OF THE FOURTH PART

AND

- (5) **SEA TO SKY HIGHWAY INVESTMENT LIMITED PARTNERSHIP**, a limited partnership created under the laws of British Columbia (the “**Concessionaire**”)

OF THE FIFTH PART

WHEREAS:

- A. The Province, BCTFA and the Concessionaire have entered into the Concession Agreement pursuant to which the Concessionaire will carry out the Project described therein.
- B. The Concessionaire and the Contractor have entered into the Design-Build Contract pursuant to which the Contractor has agreed to provide design services and perform construction work required to carry out the Project.
- C. The Contractor and the Designer have entered into the Design Subcontract pursuant to which the Designer has agreed to perform design services relating to the Project which the Contractor has agreed to provide under the Design-Build Contract.
- D. The obligations of the Contractor under the Design-Build Contract have been guaranteed by the Guarantor pursuant to the Design-Build Contract Guarantee.
- E. The Contractor has provided the Concessionaire with the Design-Build Contract Performance Securities in connection with the Design-Build Contract.
- F. The Concession Agreement requires the Concessionaire to enter into, and to cause the Contractor and the Guarantor to enter into, this Agreement with the Province and BCTFA.

NOW THEREFORE in consideration of the mutual promises and agreements of the Parties herein expressed and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby covenant and agree as follows:

1. Definitions

In this Agreement, unless the context otherwise requires:

- (a) “Agreement” means this Agreement;
- (b) “Antecedent Obligations” has the meaning given to it in Section 7(b)(i);
- (c) “Concession Agreement” means the agreement titled “Sea-to-Sky Highway Improvement Project Concession Agreement” made between the Province, BCTFA and the Concessionaire and dated as of the 3rd day of June, 2005;

- (d) “Concessionaire” has the meaning given on the first page of this Agreement;
- (e) “Contractor” has the meaning given on the first page of this Agreement;
- (f) “Contractor’s Data” has the meaning given in Section 4(a);
- (g) “Default Notice” has the meaning given in Section 5(a);
- (h) “Design-Build Contract Performance Securities” means the Performance Securities provided or to be provided by the Contractor pursuant to the terms of the Design-Build Contract.
- (i) “Designer” means Hatch Mott MacDonald Ltd.;
- (j) “Guarantor” has the meaning given on the first page of this Agreement;
- (k) “Interface Agreement” means the interface agreement dated June 3, 2005 among the Concessionaire, the Contractor and the Operator;
- (l) “Party” means any of the Province, BCTFA, the Contractor, the Guarantor or the Concessionaire, and “Parties” means the Province, BCTFA, the Contractor, the Guarantor and the Concessionaire;
- (m) “Province” has the meaning given on the first page of this Agreement;
- (n) “Representative” has the meaning given in the Direct Agreement;
- (o) “Step-In Notice” has the meaning given in Section 7(a);
- (p) “Substitute” has the meaning given in Section 7(a);
- (q) “Substitute Designation Notice” has the meaning given in Section 7(a); and
- (r) other words and expressions with initial capital letters used in this Agreement which are defined in the Concession Agreement have the same meanings when used in this Agreement as are given to them in the Concession Agreement.

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:

- (a) the 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 shall not to be taken into consideration in the interpretation or construction of, or affect the meaning of, this Agreement;

- (b) the words “herein”, “hereto” and “hereunder” and other words of like import refer to this Agreement as a whole and not to the particular provision in which such word may be used;
- (c) all references to Sections are references to Sections of this Agreement;
- (d) words importing the singular include the plural and vice versa;
- (e) words importing a particular gender include all genders;
- (f) all references to any agreement, document, standard, principle or other instrument include (subject to all relevant approvals and any other provision of this Agreement or the Concession Agreement expressly concerning such agreement, document, standard, principle or other instrument or amendments thereto) a reference to that agreement, document, standard, principle or instrument as amended, supplemented, substituted, novated or assigned;
- (g) “person” includes an individual, corporation, partnership, joint venture, association, trust, pension fund, union, government, governmental body, governmental agency, authority, board, tribunal, commission or department and the heirs, beneficiaries, executors, personal or other legal representatives or administrators of an individual, and the receivers and administrators of a corporation;
- (h) whenever the terms “will” or “shall” are used in this Agreement they are to be construed and interpreted as synonymous and are to be read as “shall”;
- (i) the words “includes” or “including” are to be construed as being without limitation;
- (j) general words are not given a restrictive meaning:
 - (i) 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
 - (ii) by reason of the fact that they are followed by particular examples intended to be embraced by those general words;
- (k) if the time for doing an act falls or expires on a day that is not a Working Day, the time for doing such act will be extended to the next Working Day;
- (l) the words of this Agreement are to be given their natural meaning. The Parties have had the opportunity to take legal advice on this Agreement and no term is, therefore, to be construed *contra proferentem*; and
- (m) no provision of this Agreement is intended to derogate from or be inconsistent with or in conflict with any Laws and Regulations and should not be interpreted in

a manner as to result in any 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 and Regulations, the applicable Laws and Regulations 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 and Regulations, 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 and for purposes of this Section 2(m), the following will be excluded from the definition of the defined phrase “Laws and Regulations”: “and the law of equity”, “ordinances”, “codes (including design and construction codes)”, “, directives”, “guidelines”, and “rules or policies of any Governmental Authority”, and the word “or” will be added between the word “orders,” and the word “injunctions”.

3. Agreements Regarding Design-Build Contract, Interface Agreement, Design-Build Contract Performance Securities and Design-Build Contract Guarantee

- (a) The Concessionaire and the Contractor will not terminate, make or agree to any material amendment to or variation of, or in any material respect depart from or waive or fail to enforce any rights they may have under, or enter into any agreement or document which would materially affect the interpretation or application of, the terms of the Design-Build Contract, the Interface Agreement or any of the Design-Build Contract Performance Securities except in compliance with the provisions of Section 2.3.2 of the Concession Agreement. The Concessionaire and the Contractor will provide to the Province a certified true copy of all documents entered into in accordance with the foregoing.
- (b) The Concessionaire, the Guarantor and the Contractor will not terminate, make or agree to any material amendment to or variation of, or in any material respect depart from or waive or fail to enforce any rights they may have under, or enter into any agreement or document which would materially affect the interpretation or application of, the terms of the Design-Build Contract Guarantee except in compliance with the provisions of Section 2.3.2 of the Concession Agreement. The Concessionaire, the Guarantor and the Contractor will provide to the Province a certified true copy of all documents entered into in accordance with the foregoing.
- (c) Each of the Province, BCTFA, the Concessionaire, the Contractor and the Guarantor acknowledges having received and reviewed a copy of the Concession Agreement, the Design-Build Contract, the Interface Agreement, each of the Design-Build Contract Performance Securities and the Design-Build Contract Guarantee and acknowledges the terms thereof.
- (d) If the Contractor gives the Concessionaire any notice of any default(s) under the Design-Build Contract and/or the Interface Agreement that may give the Contractor a right to terminate the Design-Build Contract and/or the Interface

Agreement or to treat either of them as having been repudiated by the Concessionaire or to discontinue the Contractor's performance thereunder, then the Contractor will concurrently provide the Province and BCTFA with a copy of such notice and set out in reasonable detail the default(s).

3A. Agreements Regarding Design Subcontract

- (a) The Contractor will perform and will continue to perform all of the terms of the Design Subcontract to be performed on the Contractor's part and will not terminate, make or agree to make any material amendment to or variation of, or in any material respect depart from or waive or fail to enforce any rights it may have under, or enter into any agreement or document which would materially affect the interpretation or application of, the terms of the Design Subcontract except in compliance with the provisions of Section 2.3.2A of the Concession Agreement. The Contractor will provide to the Province a certified true copy of all documents entered into in accordance with the foregoing.
- (b) The Contractor will ensure that all portions of the design provided by the Designer under the Design Subcontract are prepared under the supervision and direction of and, where appropriate, are prepared by professional engineers or such other professionals as appropriate to the nature of the design who are registered in British Columbia and lawfully authorized to practice in British Columbia.
- (c) The Contractor will ensure that the Designer complies with all provisions of the Concession Agreement (including the Design and Certification Procedure, the Design Management Plan, the Design Quality Management Plan and all other Technical Requirements) applicable to the design work performed and to be performed by the Designer pursuant to the Design Subcontract and performs all functions which, pursuant to the terms of the Concession Agreement, are to be performed by the Designer.
- (d) The Contractor acknowledges and agrees that neither the entering into of the Design Subcontract nor anything contained therein qualifies, limits or relieves the Contractor from any of its duties or obligations under the Design-Build Contract, and that the Contractor remains and will remain liable for all design and other work to be performed and services to be provided under the terms of the Design-Build Contract notwithstanding any default or failure to perform by the Designer under the Design Subcontract.
- (e) All drawings, details, plans, specifications, reports and other documents and data of any nature whatsoever and any designs and inventions contained in them which have been or are hereafter provided by the Designer in the course of performing the services provided for in the Design Subcontract will form part of the Contractor's Data as defined in and for the purposes of Section 4 of this Agreement, and the Contractor will ensure that it has full power and authority to grant the perpetual, unrestricted, transferable and assignable, non-exclusive,

worldwide, irrevocable and non-terminable, royalty-free licence or sub-licence (carrying the right to grant sub-licences) in respect of all such drawings, details, plans, specifications, reports, documents, data, designs and inventions to the Province and BCTFA as contemplated by Section 4(a) of this Agreement, including the right to make any alterations, adaptations or additions to any of the same.

4. Contractor's Data

- (a) In relation to all drawings, details, plans, specifications, reports and other documents and data of any nature whatsoever and any designs and inventions contained in them which have been or are hereafter provided by the Contractor in the course of performing the works and services provided for in the Design-Build Contract (including any and all design data and construction data now or hereafter owned by the Contractor and including all drawings, details, plans, specifications, reports, documents, data, designs and inventions referred to in Section 3A(e)) (collectively, the "Contractor's Data"), the Contractor hereby grants to the Province and BCTFA a perpetual, unrestricted, transferable and assignable, non-exclusive, worldwide, irrevocable and non-terminable royalty-free licence (which term as used in this Section 4 includes, where applicable, a sub-licence) (carrying the right to grant sub-licences) to use and reproduce all or any of the Contractor's Data for any purpose (whether during or after the Contract Period) relating to the design, construction, completion, commissioning or testing of the Works, the operation, maintenance, rehabilitation or improvement of the Project Facilities, the Site and the Adjacent Areas or the conduct of any other Operations or the carrying out of any statutory or other duties or functions in respect of the Project Facilities, the Site and the Adjacent Areas, including the right to make any alterations, adaptations or additions to any Contractor's Data.
- (b) With respect to Contractor's Data arising during the Contract Period, the licence granted pursuant to Section 4(a) will take effect immediately upon the coming into existence of such Contractor's Data.
- (c) The Contractor agrees on a reasonable request at any time and following reasonable prior written notice to give and to cause the Designer to give the Province and BCTFA or any person(s) authorized by either of them access to the Contractor's Data and to provide and to cause the Designer to provide copies (including copy negatives and CAD disks) thereof at the Province's or BCTFA's (as the case may be) expense.
- (d) The Contractor represents and warrants to and covenants with the Province and BCTFA that each item of Contractor's Data is its own original work or, if any item of Contractor's Data (including any item referred to in Section 3A(e)) is not its own original work, the Contractor has obtained, or prior to such item being acquired or brought into existence in any manner whatsoever will have obtained, all rights necessary in order to enable:

- (i) such item to be so acquired or brought into existence and to be used for the purposes of the Project by the Contractor and the Concessionaire and their respective contractors or subcontractors of any tier; and
- (ii) the Contractor to grant the licence granted in Section 4(a) and to comply with all of its obligations under this Section 4,

and that in any event no such item infringes or will infringe any third party's copyright, moral rights, design rights, trade mark or other intellectual property rights.

- (e) The Contractor undertakes at the request of the Province or BCTFA to execute and, where requested by the Province, to cause the Designer to execute all documents and do all acts which may be necessary to bring into effect or confirm the terms of any licence or sub-licence contained or referred to in Section 4(a).
- (f) The provisions of this Section 4 will survive the expiry or termination of this Agreement for any reason.

5. No Termination by Contractor without Default Notice

- (a) The Contractor will not exercise any right it may have to terminate the Design-Build Contract and/or the Interface Agreement or to treat either of them as having been repudiated by the Concessionaire or to discontinue the Contractor's performance thereunder unless:
 - (i) the Contractor first delivers a written notice (a "Default Notice") to the Province and BCTFA setting out in reasonable detail the default(s) on which the Contractor intends to rely in terminating the Design-Build Contract and/or the Interface Agreement or treating either of them as having been repudiated by the Concessionaire or discontinuing the Contractor's performance thereunder; and
 - (ii) within 90 days of the Province and BCTFA receiving the Default Notice:
 - A. the default(s) on which the Contractor intends to rely in terminating the Design-Build Contract and/or the Interface Agreement or treating either of them as having been repudiated by the Concessionaire or discontinuing the Contractor's performance thereunder have not been remedied; and
 - B. the Contractor has not received a Step-In Notice from the Province or BCTFA; and
 - (iii) the Senior Funders have not exercised their step-in or novation rights under the Direct Agreement.

- (b) If the Contractor delivers a Default Notice to the Province and BCTFA pursuant to Section 5(a)(i), the Province will pay the Contractor in accordance with the Design-Build Contract for work performed by the Contractor during the period commencing on the date when the Contractor, but for the provisions of Section 5(a) above, would have been entitled to suspend its performance under or terminate the Design-Build Contract as a consequence of the default(s) specified in the Default Notice and ending on the earliest to occur of:
- (i) the date upon which the Province gives the Contractor a written notice confirming that neither the Province nor BCTFA are exercising their step-in rights under Section 7(a);
 - (ii) the date upon which a Step-In Notice is given by the Province or BCTFA under Section 7(a) (in which event the provisions of Section 7(b) will apply in accordance with its terms);
 - (iii) the date upon which the Senior Funders (or the Agent or any other Representative) exercise any right to step-in and assume any of the Concessionaire's rights and/or obligations under the Design-Build Contract or to transfer, novate or assign the Design-Build Contract; and
 - (iv) the expiry of the 90-day period referred to in Section 5(a).

For greater certainty, the Province will not be liable pursuant to the provisions of this Section 5(b) for payment of any amounts owing by the Concessionaire to the Contractor under the Design-Build Contract for work performed by the Contractor prior to the time at which the Contractor, but for the provisions of Section 5(a) above, would have been entitled to suspend its performance under or terminate the Design-Build Contract as a consequence of the default(s) specified in the Default Notice.

6. Duty of Care, Representation and Warranty

The Contractor represents and warrants to and covenants with the Province and BCTFA on behalf of itself and its subcontractors of any tier (including the Designer) that:

- (a) it has performed and will continue to perform all of the terms of the Design-Build Contract and the Interface Agreement to be performed on the Contractor's part and that it has carried out, supplied and performed and will carry out, supply and perform the works and services it is to carry out, supply and perform under the Design-Build Contract in accordance with the Design-Build Contract;
- (b) it has provided and will maintain in full force and effect all of the Design-Build Contract Performance Securities in accordance with the terms of the Design-Build Contract;
- (c) it has carried out and supplied and will carry out, supply and complete the works and services it is to carry out, supply and complete under the Design-Build

Contract in a good and workmanlike manner using suitable goods, materials and methods and in accordance with the Design-Build Contract;

- (d) it has exercised and will continue to exercise all reasonable professional skill, care and diligence in carrying out, supplying and completing the works and services under the Design-Build Contract to be expected of a properly qualified design-build contractor experienced in carrying out, supplying and completing works and services of similar scope, size, type and complexity as the Project, including, without limiting the generality of the foregoing, the selection of goods and materials, design and the satisfaction of the performance specifications and requirements referred to in or to be inferred from the Design-Build Contract and the Technical Requirements;
- (e) the Designer has performed and will continue to perform all of the terms of the Design Subcontract to be performed on the Designer's part, and that the Designer has carried out, supplied and performed and will carry out, supply and perform the services it is to carry out, supply and perform under the Design Subcontract in accordance with the Design Subcontract; and
- (f) in performing the services to be provided under the Design Subcontract the Designer has utilized and will continue to utilize the standards of care, skill and diligence that, in accordance with the standards of its profession, are required of experienced professionals undertaking the performance of similar services in connection with projects of similar scope, size, type and complexity as the Project.

The Contractor will not have any liability for delay in the completion of the work to be completed under the Design-Build Contract to the extent that the delay is caused by and results from the exercise by the Province or BCTFA of its step-in rights under this Agreement; provided, for greater certainty, that the foregoing will not relieve the Contractor from any liability for delay under the Design-Build Contract which arises after the exercise by the Province or BCTFA of its step-in rights under this Agreement or from any other cause.

7. Step-In Rights

- (a) Subject to the provisions of the Direct Agreement, including Section 3.5 thereof, the Province or BCTFA may at any time:
 - (i) within 90 days of the Province and BCTFA receiving a Default Notice, unless prior to expiry of such 90 day period the default(s) on which the Contractor intends to rely in terminating the Design-Build Contract and/or the Interface Agreement or treating either of them as having been repudiated by the Concessionaire or discontinuing the Contractor's performance thereunder have been remedied; or
 - (ii) if the Province's right to terminate the Concession Agreement has arisen,

deliver a notice (a “Step-In Notice”) electing to replace the Concessionaire under the Design-Build Contract and the Interface Agreement with the Province or BCTFA or with a third party designated by the Province or BCTFA in the Step-In Notice. In any case where the Province or BCTFA elects in a Step-In Notice to replace the Concessionaire under the Design-Build Contract and the Interface Agreement with the Province or BCTFA, the Province may by subsequent notice (a “Substitute Designation Notice”) designate a third party to replace the Province or BCTFA (as the case may be) under the Design-Build Contract and the Interface Agreement in which event the third party so designated will succeed to all rights and obligations of the Province or BCTFA (as the case may be) under the Design-Build Contract and the Interface Agreement and other agreements and documents referred to in Section 7(b) and the Province or BCTFA (as the case may be) will be released from all obligations under the Design-Build Contract and the Interface Agreement and such other agreements and documents. A third party designated by the Province or BCTFA in a Step-In Notice or Substitute Designation Notice as aforesaid is referred to in this Agreement as a “Substitute”.

- (b) Upon receipt by the Contractor of a Step-In Notice:
- (i) the Concessionaire and the Contractor will be deemed to be released from their obligations under the Design-Build Contract and the Interface Agreement to each other (except with respect to claims under any and all indemnities from the Concessionaire in favour of the Contractor and from the Contractor in favour of the Concessionaire arising in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Contractor and except with respect to claims against the Contractor for the debt-service component of delay liquidated damages payable under the Design-Built Contract); and the Province, BCTFA or the Substitute, as applicable, and the Contractor will be deemed to assume those same obligations towards each other (for greater certainty, including obligations (“Antecedent Obligations”) arising prior to the date of receipt of the Step-In Notice by the Contractor but excluding obligations with respect to claims under any and all indemnities from the Concessionaire in favour of the Contractor arising in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Contractor, and without prejudice to claims by the Concessionaire against the Contractor for the debt-service component of delay liquidated damages payable under the Design-Build Contract);
 - (ii) all claims which the Contractor may have against the Concessionaire in respect of Antecedent Obligations will, subject to performance of the relevant Antecedent Obligations, be deemed to be and are hereby assigned by the Contractor to and in favour of the Province or, at the direction of the Province, to BCTFA or the Substitute, as applicable, provided, however, that the amount recoverable from the Concessionaire pursuant to any such claim will be reduced by the amount of any sums which the Province has set-off in respect of such claim pursuant to Section 7A;

- (iii) the Guarantor will be deemed to be released from its obligations to the Concessionaire under the Design-Build Contract Guarantee (except with respect to claims under the Design-Build Contract Guarantee arising in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Contractor); and the rights and benefits previously available to the Concessionaire under the Design-Build Contract Guarantee (without prejudice to claims by the Concessionaire under the Design-Build Contract Guarantee in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Contractor) will be deemed to have been granted in favour of the Province, BCTFA or the Substitute, as applicable (provided, for greater certainty, that any limitations on the maximum liability of the Guarantor under the Design-Build Contract Guarantee will continue in effect);
- (iv) the rights of the Concessionaire against the Contractor under the Design-Build Contract and the Interface Agreement and vice versa will be deemed to be cancelled (except with respect to claims under any and all indemnities from the Concessionaire in favour of the Contractor and from the Contractor in favour of the Concessionaire arising in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Contractor and except with respect to claims against the Contractor for the debt-service component of delay liquidated damages payable under the Design-Built Contract); and the Province, BCTFA or the Substitute, as applicable, and the Contractor will be deemed to acquire those same rights against each other (except with respect to claims under any and all indemnities from the Concessionaire in favour of the Contractor arising in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Contractor, which rights are assigned to the Province or, at the direction of the Province, to BCTFA or the Substitute, as applicable, pursuant to paragraph 7(b)(ii) above, and without prejudice to claims by the Concessionaire against the Contractor for the debt-service component of delay liquidated damages payable under the Design-Build Contract);
- (v) the rights and benefits previously available to the Concessionaire under the Design-Build Contract Performance Securities (without prejudice to claims by the Concessionaire under the Design-Build Contract Performance Securities in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Contractor or in respect of the debt-service component of delay liquidated damages payable under the Design-Built Contract) will be transferred and assigned to the Province, BCTFA or the Substitute, as applicable (provided, for greater certainty, that any limitations on the maximum liability of the issuers of the Design-Build Contract Performance Securities under the Design-Build Contract Performance Securities will continue in effect);
- (vi) at the Province's or BCTFA's request, the Contractor will enter into, and the Province or BCTFA will or will cause the Substitute, as applicable, to

enter into all such agreements or other documents as reasonably necessary to give effect to the provisions of this Section 7(b), including agreements between the Province, BCTFA or the Substitute, as applicable, and the Contractor on the same terms as the Design-Build Contract and the Interface Agreement (except with respect to necessary ministerial changes);

- (vii) at the Province's or BCTFA's request, the Guarantor will execute and deliver to the Province, BCTFA or the Substitute, as applicable, an agreement of guarantee from the Guarantor in favour of the Province, BCTFA or the Substitute, as applicable, on the same terms as the Design-Build Contract Guarantee (except with respect to necessary ministerial changes and which agreement, for greater certainty, will be consistent with the provisions of paragraph 7(b)(iii) above) together with all such other documents and further assurances as may reasonably be requested by the Province or BCTFA to give effect to the provisions of this Section 7(b); and
- (viii) at the Province's or BCTFA's request, the Contractor will and will cause the issuers of the Design-Build Contract Performance Securities to enter into, and the Province or BCTFA will or will cause the Substitute, as applicable, to enter into all such agreements or other documents necessary to give effect to the provisions of this Section 7(b), including assignments and necessary consents to assignments of the Design-Build Contract Performance Securities to the Province, BCTFA or the Substitute, as applicable, or replacement performance securities from the issuers of the Design-Build Contract Performance Securities in favour of the Province, BCTFA or the Substitute, as applicable, on the same terms as the Design-Build Contract Performance Securities except with respect to necessary ministerial changes (which assignments or replacement performance securities, for greater certainty, will be consistent with the provisions of paragraph 7(b)(v) above) and, in the case of the issuance of replacement performance securities as aforesaid, the original Design-Build Contract Performance Securities (except with respect to claims by the Concessionaire thereunder in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Contractor) will be cancelled.

If the Province or BCTFA replaces the Concessionaire under the Design-Build Contract and the Interface Agreement pursuant to a Step-In Notice and subsequently designates a Substitute pursuant to a Substitute Designation Notice, the relevant Parties will enter into (and the Province or BCTFA (as the case may be) will cause the Substitute to enter into and, in the case of the Design-Build Contract Performance Securities, the Contractor will cause the issuers of the Design-Build Contract Performance Securities to enter into) all such agreements or other documents necessary to effect and confirm the succession of the Substitute to the rights and obligations of the Province or BCTFA (as the case may be) under the agreements and other documents referred to in this Section 7(b)

previously entered into by or for the benefit of the Province or BCTFA (as the case may be) and to release the Province or BCTFA (as the case may be) from all obligations and liabilities under such agreements and other documents.

In the event the Province or BCTFA causes a Substitute to enter into the agreements and other documents as are necessary to give effect to the provisions of this Section 7(b), the Contractor will not have any right to approve the Substitute where such Substitute is any of the following:

- (ix) any Ministry or department of the Province;
- (x) any person whose obligations under such agreements or other documents are guaranteed by the Province or any Ministry or department of the Province;
- (xi) a Qualifying Bidder as defined in the Concession Agreement in circumstances of an assignment, transfer or novation of the Concession Agreement; or
- (xii) any person who has the financial standing and the financial resources reasonably necessary to enable it to perform the obligations of the Concessionaire under the Design-Build Contract and the Interface Agreement.

Otherwise, the Substitute shall be subject to the approval of the Contractor, such approval not to be unreasonably withheld or delayed, and the Province or BCTFA will provide such information relating to any proposed Substitute not falling within subparagraphs 7(b)(ix), (x), (xi) or (xii) as the Contractor may reasonably request to the extent such information is readily available to the Province or BCTFA.

- (c) Each of the Concessionaire and the Contractor will, at its own cost, cooperate fully with the Province, BCTFA and any Substitute in order to achieve a smooth, efficient and orderly transfer of the Design-Build Contract, the Interface Agreement, the Design-Build Contract Guarantee and the Design-Build Contract Performance Securities to the Province, BCTFA or the Substitute, as applicable, and to avoid or mitigate in so far as reasonably practicable any inconvenience, including the administration of the Design-Build Contract and the Interface Agreement, ongoing supervisory activities and scheduling. The Guarantor will, at its own cost, cooperate fully with the Province, BCTFA and any Substitute in order to achieve a smooth, efficient and orderly transfer of the Design-Build Contract Guarantee to the Province, BCTFA or the Substitute, as applicable.
- (d) [Not Used]
- (e) [Not Used]

- (f) The Contractor will ensure, through the inclusion of appropriate provisions in the Design Subcontract, that the exercise by the Province or BCTFA of their step-in rights under this Section 7 will not entitle the Designer to terminate, alter, amend or not comply with its obligations under the Design Subcontract and that the terms of the Design Subcontract will remain in full force and effect notwithstanding the exercise of such step-in rights.
- (g) The Contractor will ensure, through measures satisfactory to the Province and BCTFA, acting reasonably, that the terms of the Design-Build Contract Performance Securities permit the exercise by the Province and BCTFA of their step-in rights under this Agreement and that the exercise by the Province or BCTFA of their step-in rights under this Agreement will not entitle the issuer of any Design-Build Contract Performance Security to terminate, alter, amend or not comply with its obligations under the Design-Build Contract Performance Security, and that the terms of all Design-Build Contract Performance Securities will remain in full force and effect notwithstanding the exercise of such step-in rights and will provide further that upon the Province exercising its step-in rights, the Province will be entitled to all rights and benefits under such Design-Build Contract Performance Securities as though the Province were the originally named beneficiary thereunder.

7A. Amounts Paid by the Province, BCTFA or Substitute

Any amounts paid by the Province, BCTFA or a Substitute to the Contractor pursuant to this Agreement or any agreement or other document entered into pursuant hereto (including, for greater certainty, any amounts paid by the Province to the Contractor pursuant to Section 5 hereof and any amounts paid by the Province, BCTFA or a Substitute pursuant to Section 7(b) hereof or any agreement or other document entered into pursuant thereto) will be deemed to be amounts owing by the Concessionaire to the Province under the Concession Agreement and, subject to Section 44.8 [Rights of Set-Off] of the Concession Agreement, may be set-off against any payments to be made by the Province to the Concessionaire under the Concession Agreement including the Total Performance Payment and any Termination Sum (which term, for this purpose, will be deemed to include any Adjusted Highest Qualifying Bid Price).

7B. Appropriation

The Contractor, the Guarantor, and the Concessionaire acknowledge that they are aware of the provisions of subsection 28(2) of the *Financial Administration Act*, R.S.B.C. 1996, c. 138.

8. Contractor Liability

- (a) The obligations and liabilities of the Contractor under this Agreement, the Design-Build Contract and/or the Interface Agreement and the obligations and liabilities of the Guarantor under this Agreement and the Design-Build Contract

Guarantee will not be modified, released, limited, diminished or in any way affected by:

- (i) any independent inspection, investigation or enquiry into any matter which may be made or carried out by or on behalf of the Province or BCTFA, or by any failure or omission to carry out any such inspection, investigation or enquiry; or
 - (ii) the appointment by the Province or BCTFA of any other person to make or carry out any inspection, investigation or enquiry or to review the progress of or otherwise report to the Province in respect of the Project or any aspect thereof, or by any action or omission of such person whether or not such action or omission might give rise to any independent liability of such person to the Province.
- (b) In the event that the Province or BCTFA delivers a Step-In Notice:
- (i) the Contractor will have no greater liability to the Province, BCTFA or any Substitute than it would have had to the Concessionaire under the Design-Build Contract, and the Contractor will be entitled in any proceedings by the Province, BCTFA or any Substitute to rely on any liability limitations in the Design-Build Contract; and
 - (ii) the Guarantor will have no greater liability to the Province, BCTFA or any Substitute than it would have had to the Concessionaire under the Design-Build Contract Guarantee, and the Guarantor will be entitled in any proceedings by the Province, BCTFA or any Substitute to rely on any liability limitations in the Design-Build Contract Guarantee.

9. Disclosed Data Disclaimer

- (a) Neither the Province nor BCTFA gives 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 the date of execution of this Agreement) relevant or material to the Project, the Project Facilities, the Site or the Adjacent Areas or any obligations undertaken by the Contractor under the Design-Build Contract and/or the Interface Agreement or by the Designer under the Design Subcontract. Neither the Province nor BCTFA will be liable to the Contractor, the Guarantor or the Designer in respect of any failure to disclose or make available (whether before or after the execution of this Agreement) to the Concessionaire, the Contractor, the Guarantor or the Designer any information, documents or data, nor to keep the Disclosed Data up to date, nor to inform the Concessionaire, the Contractor, the Guarantor or the Designer (whether before or after execution of this Agreement) of any inaccuracy, error, omission, unfitness for purpose, defect or inadequacy in the Disclosed Data.

- (b) Neither the Province nor BCTFA will have any liability to the Contractor or the Designer (whether in contract, tort, by statute or otherwise howsoever and whether or not arising out of any negligence on the part of the Province or BCTFA or any of their respective employees, contractors or agents) in respect of, and the liability of the Guarantor under the Design-Build Contract Guarantee will not be released, lessened or limited in any way as a result of, any inaccuracy, error, omission, unfitness for purpose, defect or inadequacy of any kind whatsoever in the Disclosed Data.
- (c) Prior to the Designer performing any of the Operations the Contractor will cause the Designer to provide the Province and BCTFA with an acknowledgement of the provisions of this Section 9 and a waiver of liability in respect of the Disclosed Data in a form satisfactory to the Province (acting reasonably).

10. Concessionaire as Party

The Concessionaire is a party to this Agreement for the purpose of giving its consent to and agreeing to be bound by the provisions hereof. The Concessionaire acknowledges and agrees that the Contractor will not be in breach of the Design-Build Contract or the Interface Agreement and the Guarantor will not be in breach of the Design-Build Contract Guarantee by reason of complying with its obligations hereunder. Any default by the Concessionaire in the performance of its obligations under this Agreement will constitute a default by the Concessionaire under and for all purposes of the Concession Agreement.

11. Assignment

- (a) The Concessionaire will not, without the prior written consent of the Province and BCTFA, assign, transfer, charge, subcontract, subparticipate or otherwise dispose of any interest in this Agreement other than an assignment by way of security in favour of the Senior Funders in accordance with the Senior Funding Agreements.
- (b) The Province and BCTFA may assign or otherwise dispose of the benefit of the whole or part of this Agreement in conjunction with a permitted assignment under the terms of the Concession Agreement and only to a permitted assignee thereunder on written notice to the Concessionaire and the Contractor and otherwise will not without the prior written consent of the Concessionaire or the Contractor, not to be unreasonably withheld or delayed, assign or otherwise dispose of the benefit of the whole or any part of this Agreement. Notwithstanding the foregoing, no consent of the Concessionaire or the Contractor will be required in the event of an assignment by the Province or BCTFA or other disposal of the benefit of the whole or part of this Agreement to any person referred to in subparagraphs 7(b)(ix), (x), (xi) or (xii).
- (c) Neither the Contractor nor the Guarantor will, without the prior written consent of the Province and BCTFA, assign, transfer, charge, subcontract, subparticipate or otherwise dispose of any interest in this Agreement.

12. Notices

Any notices required or permitted under this Agreement will be in writing and (a) delivered personally, (b) sent by a recognized express mail or courier service, with delivery receipt requested, or (c) sent by confirmed facsimile transmission with telephonic confirmation, to the following addresses:

If to the Province or BCTFA	<p>5B – 940 Blanshard Street Victoria, British Columbia V8W 9T5</p> <p>Telephone: (250) 356-1403 Fax No.: (250) 387-6431 <u>Attention:</u> Frank Blasetti Assistant Deputy Minister Transportation</p>
If to the Contractor	<p>120 – 10651 Shellbridge Way Richmond, British Columbia V6X 2W8</p> <p>Telephone: (604) 248-3792 Fax No.: (604) 278-5729 <u>Attention:</u> Frank Margitan (Area Manager)</p>
If to the Guarantor	<p>1000 Kiewit Plaza Omaha, Nebraska USA 68131</p> <p>Telephone: (402) 536-3617 Fax No.: (402) 271-2830 <u>Attention:</u> Samuel Gilmore (Attorney)</p>
If to the Concessionaire	<p>Suite 2664, Four Bentall Centre 1055 Dunsmuir Street P.O. Box 49183 Vancouver, British Columbia V7X 1K8</p> <p>Telephone: (604) 605-1779 Fax No.: (604) 605-1634 <u>Attention:</u> Nicholas Hann (Vice President)</p>

- (a) Where any notice is provided or submitted to a Party via facsimile, an original of the notice sent via facsimile will also promptly be delivered personally or sent by a recognized express mail or courier service, with delivery receipt requested.
- (b) A Party may at any time and from time to time change its nominated address or facsimile number by prior notice to the other Parties, and such change will be effective on the day that next follows the recipient Parties' receipt of such notice.

- (c) Notices given by mail will be effective upon the earlier of (i) actual receipt, and (ii) 7 days after mailing if mailed within Canada, and 21 days after mailing if mailed outside of Canada. Notices delivered personally will be effective upon delivery. Notices given by facsimile will be deemed to have been received where there is confirmation of uninterrupted transmission by a transmission report and where there has been no telephonic communication by the recipient to the sender (to be confirmed in writing) that the facsimile has not been received in legible form:
- (i) within 3 hours after sending, if sent on a Working Day between the hours of 9a.m. and 4p.m.; or
 - (ii) by noon on the next following Working Day, if sent after 4p.m. on a Working Day but before 9a.m. on that next following Working Day.
- (d) If the Party giving the notice or communication knows or ought reasonably to know of difficulties or disruption with the postal system which might affect the delivery of mail:
- (i) any such notice will not be mailed but will be made or given by personal delivery or by facsimile transmission; and
 - (ii) where such difficulties or disruption arise after mailing but before the date of receipt as provided in this Section 12, the Party giving such notice will make or give such notice by personal delivery or by facsimile transmission.
- (e) To be effective, notices and all formal communications under this Agreement must be in writing and delivered as provided in this Section 12, and must be signed by an authorized representative of the Party giving the notice. E-mails will not be used for and will not constitute notices under this Agreement.
- (f) Oral communications will not constitute formal communication under this Agreement and no Party has any obligation to act on any oral communication, instruction or assurance unless and until it is confirmed in writing. Any action taken by a Party based on oral communications, instructions or assurances will be at that Party's sole risk and will be without liability to or recourse against the other Parties.

13. Amendments

No oral or written amendment or modification of this Agreement, either before or after execution and delivery of this Agreement, will be of any force or effect unless such amendment or modification is in writing and is signed by a duly authorized officer of each Party sought to be bound thereby.

14. Waiver

- (a) No waiver of any rights under this Agreement will be binding or effective unless the waiver is in writing and signed by an authorized representative of the Party giving such waiver.
- (b) Any Party's waiver of any of its rights under this Agreement or of any breach or failure to enforce any of the terms, covenants, conditions or other provisions of this Agreement at any time will not in any way affect, limit, modify, or waive that Party's right thereafter to enforce or compel strict compliance with every term, covenant, condition and other provision hereof, any course of dealing or custom of the trade notwithstanding.

15. Time is of the Essence

Time is of the essence of this Agreement and each provision herein.

16. Independent Contractor

The Parties are independent contractors. This Agreement is not intended to and does not create or establish between the Parties any relationship as partners, joint venturers, employer and employee, master and servant or principal and agent. Neither the Concessionaire nor the Contractor nor any of its or their representatives are or will be deemed to be an employee or agent of the Province or BCTFA for any purpose.

17. Entire Agreement

Except where provided otherwise in this Agreement, this Agreement constitutes the entire agreement between the Parties in connection with its subject matter and supersedes all prior representations, communications, negotiations and understandings, whether oral, written, express or implied, concerning the subject matter of this Agreement.

18. Severability

If any provision of this Agreement is declared invalid, unenforceable or illegal by the courts of any jurisdiction to which it is subject, 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.

19. Enurement

This Agreement will enure to the benefit of and be binding upon each of the Parties and their respective successors and permitted transferees and assigns.

20. Dispute Resolution

Any dispute under this Agreement will be resolved in accordance with the Disputes Resolution Procedure.

21. Governing Law and Jurisdiction

- (a) This Agreement will be governed by and construed in accordance with the laws of the Province of British Columbia and the laws of Canada applicable therein and will be treated in all respects as a contract in the Province of British Columbia, without regard to conflict of laws principles.
- (b) Subject to the provisions of Section 20, the Parties agree to submit to the non-exclusive jurisdiction of the courts of British Columbia as regards to any claim or matter arising in relation to this Agreement.

22. Further Assurance

Each Party shall do all things and execute all further documents necessary to give full effect to this Agreement.

23. Proof of Authority

The Province reserves the right to require everyone executing this Agreement on behalf of the Concessionaire, the Contractor or the Guarantor to provide proof, in a form acceptable to the Province, that they have the requisite authority to execute this Agreement on behalf of and to bind the Concessionaire, the Contractor or the Guarantor, respectively.

24. Confidentiality

The Contractor and the Guarantor will comply with the obligations on the part of the Concessionaire contained in Section 50 [Confidentiality] of the Concession Agreement.

25. Responsibilities, Obligations and Rights Under Concession Agreement

The provisions of this Agreement are without prejudice to, and in no way limit, restrict or impair, the responsibilities and obligations of the Concessionaire or the rights of the Province under and as set forth in the Concession Agreement.

26. Counterparts

This Agreement may be executed in one or more counterparts. Any single counterpart or 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 faxed form provided that any Party providing its signature in faxed form will, upon any other Party's request, promptly forward to such Party an original signed copy of this Agreement which was so faxed.

IN WITNESS WHEREOF the Parties 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)
in the presence of:)
)
)
_____)

(Witness)

JOHN DYBLE
Acting Deputy Minister, Ministry of Transportation
Assistant Deputy Minister, Ministry of Transportation

BC TRANSPORTATION FINANCING AUTHORITY

Per: _____
JOHN DYBLE
Chief Executive Officer

PETER KIEWIT SONS CO.

Per: _____
GREGORY D. DIXON
President

KIEWIT CONSTRUCTION COMPANY

Per: _____
RICHARD W. COLF
Executive Vice-President

SEA TO SKY HIGHWAY INVESTMENT LIMITED PARTNERSHIP,
by its General Partner,
SEA TO SKY HIGHWAY INVESTMENT MANAGEMENT LTD.

Per: _____
MARK WONG
President

Per: _____
MICHAEL SMERDON
Secretary

SCHEDULE 22

COLLATERAL AGREEMENTS

Part 2

[Not Used]

SCHEDULE 22

COLLATERAL AGREEMENTS

Part 3

Operator's Collateral Agreement

THIS AGREEMENT is made as of the 3rd day of June, 2005

AMONG:

- (1) **HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA**, as represented by the **MINISTER OF TRANSPORTATION** (the "**Province**")

OF THE FIRST PART

AND

- (2) **BC TRANSPORTATION FINANCING AUTHORITY**, a corporation continued under the *Transportation Act*, S.B.C. 2004, c. 44 ("**BCTFA**")

OF THE SECOND PART

AND

- (3) **MILLER CAPILANO MAINTENANCE CORPORATION**, a corporation incorporated under the laws of Canada (the "**Operator**")

OF THE THIRD PART

AND

- (4) **MILLER PAVING LIMITED**, a corporation incorporated under the laws of Ontario, **BRENNAN PAVING & CONSTRUCTION LTD.**, a corporation incorporated under the laws of Ontario, and **CAPILANO HIGHWAY SERVICES COMPANY**, a general partnership established under the laws of British Columbia (collectively and jointly and severally, the "**Guarantors**")

OF THE FOURTH PART

AND

- (5) **SEA TO SKY HIGHWAY INVESTMENT LIMITED PARTNERSHIP**, a limited partnership created under the laws of British Columbia (the “**Concessionaire**”)

OF THE FIFTH PART

WHEREAS:

- A. The Province, BCTFA and the Concessionaire have entered into the Concession Agreement pursuant to which the Concessionaire will carry out the Project described therein.
- B. The Concessionaire and the Operator have entered into the Operating and Maintenance Contract pursuant to which the Operator has agreed to perform work and provide services in connection with the operation, maintenance and rehabilitation of the Project Facilities, the Site and the Adjacent Areas.
- C. The obligations of the Operator under the Operating and Maintenance Contract have been jointly and severally guaranteed by the Guarantors pursuant to the Operating and Maintenance Contract Guarantee.
- D. The Operator has provided the Concessionaire with the Operating and Maintenance Contract Performance Securities in connection with the Operating and Maintenance Contract.
- E. The Concession Agreement requires the Concessionaire to enter into, and to cause the Operator and the Guarantors to enter into, this Agreement with the Province and BCTFA.

NOW THEREFORE in consideration of the mutual promises and agreements of the Parties herein expressed and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby covenant and agree as follows:

1. Definitions

In this Agreement, unless the context otherwise requires:

- (a) “Agreement” means this Agreement;
- (b) “Antecedent Obligations” has the meaning given to it in Section 7(b)(i);
- (c) “Concession Agreement” means the agreement titled “Sea-to-Sky Highway Improvement Project Concession Agreement” made between the Province, BCTFA and the Concessionaire and dated as of the 3rd day of June, 2005;
- (d) “Concessionaire” has the meaning given on the first page of this Agreement;

- (e) “Default Notice” has the meaning given in Section 5(a);
- (f) “Guarantors” has the meaning given on the first page of this Agreement;
- (g) “Interface Agreement” means the interface agreement dated June 3, 2005 among the Concessionaire, the Contractor and the Operator;
- (h) “Operating and Maintenance Contract Performance Securities” means the Performance Securities provided or to be provided by the Operator pursuant to the terms of the Operating and Maintenance Contract.
- (i) “Operator” has the meaning given on the first page of this Agreement;
- (j) “Operator’s Data” has the meaning given in Section 4(a);
- (k) “Party” means any of the Province, BCTFA, the Operator, the Guarantors or the Concessionaire, and “Parties” means the Province, BCTFA, the Operator the Guarantors and the Concessionaire;
- (l) “Province” has the meaning given on the first page of this Agreement;
- (m) “Representative” has the meaning given in the Direct Agreement;
- (n) “Step-In Notice” has the meaning given in Section 7(a);
- (o) “Substitute” has the meaning given in Section 7(a);
- (p) “Substitute Designation Notice” has the meaning given in Section 7(a); and
- (q) other words and expressions with initial capital letters used in this Agreement which are defined in the Concession Agreement have the same meanings when used in this Agreement as are given to them in the Concession Agreement.

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:

- (a) the 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 shall not to be taken into consideration in the interpretation or construction of, or affect the meaning of, this Agreement;
- (b) the words “herein”, “hereto” and “hereunder” and other words of like import refer to this Agreement as a whole and not to the particular provision in which such word may be used;
- (c) all references to Sections are references to Sections of this Agreement;

- (d) words importing the singular include the plural and vice versa;
- (e) words importing a particular gender include all genders;
- (f) all references to any agreement, document, standard, principle or other instrument include (subject to all relevant approvals and any other provision of this Agreement or the Concession Agreement expressly concerning such agreement, document, standard, principle or other instrument or amendments thereto) a reference to that agreement, document, standard, principle or instrument as amended, supplemented, substituted, novated or assigned;
- (g) “person” includes an individual, corporation, partnership, joint venture, association, trust, pension fund, union, government, governmental body, governmental agency, authority, board, tribunal, commission or department and the heirs, beneficiaries, executors, personal or other legal representatives or administrators of an individual, and the receivers and administrators of a corporation;
- (h) whenever the terms “will” or “shall” are used in this Agreement they are to be construed and interpreted as synonymous and are to be read as “shall”;
- (i) the words “includes” or “including” are to be construed as being without limitation;
- (j) general words are not given a restrictive meaning:
 - (i) 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
 - (ii) by reason of the fact that they are followed by particular examples intended to be embraced by those general words;
- (k) if the time for doing an act falls or expires on a day that is not a Working Day, the time for doing such act will be extended to the next Working Day;
- (l) the words of this Agreement are to be given their natural meaning. The Parties have had the opportunity to take legal advice on this Agreement and no term is, therefore, to be construed *contra proferentem*; and
- (m) no provision of this Agreement is intended to derogate from or be inconsistent with or in conflict with any Laws and Regulations and should not be interpreted in a manner as to result in any 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 and Regulations, the applicable Laws and Regulations 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 and Regulations, 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 and for purposes of this Section 2(m), the following will be excluded from the definition of the defined phrase “Laws and Regulations”: “and the law of equity”, “ordinances”, “codes (including design and construction codes)”, “, directives”, “guidelines”, and “rules or policies of any Governmental Authority”, and the word “or” will be added between the word “orders,” and the word “injunctions”.

3. Agreements Regarding Operating and Maintenance Contract, Interface Agreement, Operating and Maintenance Contract Performance Securities and Operating and Maintenance Contract Guarantee

- (a) The Concessionaire and the Operator will not terminate, make or agree to any material amendment to or variation of, or in any material respect depart from or waive or fail to enforce any rights they may have under, or enter into any agreement or document which would materially affect the interpretation or application of, the terms of the Operating and Maintenance Contract, the Interface Agreement or any of the Operating and Maintenance Contract Performance Securities except in compliance with the provisions of Section 2.3.2 of the Concession Agreement. The Concessionaire and the Operator will provide to the Province a certified true copy of all documents entered into in accordance with the foregoing.
- (b) The Concessionaire, the Guarantors and the Operator will not terminate, make or agree to any material amendment to or variation of, or in any material respect depart from or waive or fail to enforce any rights they may have under, or enter into any agreement or document which would materially affect the interpretation or application of, the terms of the Operating and Maintenance Contract Guarantee except in compliance with the provisions of Section 2.3.2 of the Concession Agreement. The Concessionaire, the Guarantors and the Operator will provide to the Province a certified true copy of all documents entered into in accordance with the foregoing.
- (c) Each of the Parties acknowledges having received and reviewed a copy of the Concession Agreement, the Operating and Maintenance Contract, the Interface Agreement, each of the Operating and Maintenance Contract Performance Securities and the Operating and Maintenance Contract Guarantee and acknowledges the terms thereof.
- (d) If the Operator gives the Concessionaire any notice of any default(s) under the Operating and Maintenance Contract and/or the Interface Agreement that may give the Operator a right to terminate the Operating and Maintenance Contract and/or the Interface Agreement or to treat either of them as having been repudiated by the Concessionaire or to discontinue the Operator’s performance thereunder, then the Operator will concurrently provide the Province and BCTFA with a copy of such notice and set out in reasonable detail the default(s).

4. Operator's Data

- (a) In relation to all drawings, details, plans, specifications, reports and other documents and data of any nature whatsoever and any designs and inventions contained in them which have been or are hereafter provided by the Operator in the course of carrying out and performing its obligations under the Operating and Maintenance Contract (including any and all Design Data now or hereafter owned by the Operator) (the "Operator's Data"), the Operator hereby grants to the Province and BCTFA a perpetual, unrestricted, transferable and assignable, non-exclusive, worldwide, irrevocable and non-terminable royalty-free licence (which term as used in this Section 4 includes, where applicable, a sub-licence) (carrying the right to grant sub-licences) to use and reproduce all or any of the Operator's Data for any purpose (whether during or after the Contract Period) relating to the design, construction, completion, commissioning or testing of the Works, the operation, maintenance, rehabilitation or improvement of the Project Facilities, the Site and the Adjacent Areas or the conduct of any other Operations or the carrying out of any statutory or other duties or functions in respect of the Project Facilities, the Site and the Adjacent Areas, including the right to make any alterations, adaptations or additions to any Operator's Data.
- (b) With respect to Operator's Data arising during the Contract Period, the licence granted pursuant to Section 4(a) will take effect immediately upon the coming into existence of such Operator's Data.
- (c) The Operator agrees on reasonable request at any time and following reasonable prior written notice to give the Province and BCTFA or any person(s) authorized by either of them access to the Operator's Data and to provide copies (including copy negatives and CAD disks) thereof at the Province's or BCTFA's (as the case may be) expense.
- (d) The Operator represents and warrants to and covenants with the Province and BCTFA that each item of Operator's Data is its own original work or, if any item of Operator's Data is not its own original work, the Operator has obtained, or prior to such item being acquired or brought into existence in any manner whatsoever will have obtained, all rights necessary in order to enable:
- (i) such item to be so acquired or brought into existence and to be used for the purposes of the Project by the Operator and the Concessionaire and their respective contractors or subcontractors of any tier; and
 - (ii) the Operator to grant the licence granted in Section 4(a) and to comply with all of its obligations under this Section 4,

and that in any event no such item infringes or will infringe any third party's copyright, moral rights, design rights, trade mark or other intellectual property rights.

- (e) The Operator undertakes at the request of the Province or BCTFA to execute all documents and do all acts which may be necessary to bring into effect or confirm the terms of any licence or sub-licence contained or referred to in Section 4(a).
- (f) The provisions of this Section 4 will survive the expiry or termination of this Agreement for any reason.

5. No Termination by Operator without Default Notice

- (a) The Operator will not exercise any right it may have to terminate the Operating and Maintenance Contract and/or the Interface Agreement or to treat either of them as having been repudiated by the Concessionaire or to discontinue the Operator's performance thereunder unless:
 - (i) the Operator first delivers a written notice (a "Default Notice") to the Province and BCTFA setting out in reasonable detail the default(s) on which the Operator intends to rely in terminating the Operating and Maintenance Contract and/or the Interface Agreement or treating either of them as having been repudiated by the Concessionaire or discontinuing the Operator's performance thereunder; and
 - (ii) within 90 days of the Province and BCTFA receiving the Default Notice:
 - A. the default(s) on which the Operator intends to rely in terminating the Operating and Maintenance Contract and/or the Interface Agreement or treating either of them as having been repudiated by the Concessionaire or discontinuing the Operator's performance thereunder have not been remedied; and
 - B. the Operator has not received a Step-In Notice from the Province or BCTFA; and
 - (iii) the Senior Funders have not exercised their step-in or novation rights under the Direct Agreement.
- (b) If the Operator delivers a Default Notice to the Province and BCTFA pursuant to Section 5(a)(i), the Province will pay the Operator in accordance with the Operating and Maintenance Contract for work performed by the Operator during the period commencing on the date when the Operator, but for the provisions of Section 5(a) above, would have been entitled to suspend its performance under or terminate the Operating and Maintenance Contract as a consequence of the default(s) specified in the Default Notice and ending on the earliest to occur of:
 - (i) the date upon which the Province gives the Operator a written notice confirming that neither the Province nor BCTFA are exercising their step-in rights under Section 7(a);

- (ii) the date upon which a Step-In Notice is given by the Province or BCTFA under Section 7(a) (in which event the provisions of Section 7(b) will apply in accordance with its terms); and
 - (iii) the date upon which the Senior Funders (or the Agent or any other Representative) exercise any right to step-in and assume any of the Concessionaire's rights and/or obligations under the Operating and Maintenance Contract or to transfer, novate or assign the Operating and Maintenance Contract; and
 - (iv) the expiry of the 90-day period referred to in Section 5(a).
- (c) For greater certainty, the Province will not be liable pursuant to the provisions of this Section 5(b) for payment of any amounts owing by the Concessionaire to the Operator under the Operating and Maintenance Contract for work performed by the Operator prior to the time at which the Operator, but for the provisions of Section 5(a) above, would have been entitled to suspend its performance under or terminate the Operating and Maintenance Contract as a consequence of the default(s) specified in the Default Notice.

6. Duty of Care, Representation and Warranty

The Operator represents and warrants to and covenants with the Province and BCTFA on behalf of itself and its subcontractors of any tier that:

- (a) it has performed and will continue to perform all of the terms of the Operating and Maintenance Contract and the Interface Agreement to be performed on the Operator's part and that it has carried out, supplied and performed and will carry out, supply and perform the works and services it is to carry out, supply and perform under the Operating and Maintenance Contract in a good and workmanlike manner using suitable goods, materials and methods and in accordance with the Operating and Maintenance Contract;
- (b) it has provided and will maintain in full force and effect all of the Operating and Maintenance Contract Performance Securities in accordance with the terms of the Operating and Maintenance Contract; and
- (c) it has exercised and will continue to exercise all the reasonable professional skill, care and diligence in carrying out, providing and performing the works and services under the Operating and Maintenance Contract to be expected of a properly qualified contractor experienced in carrying out, providing and performing works and services of similar scope, size, type and complexity as the Project, including, without limiting the generality of the foregoing, the selection of goods and materials, any design and the satisfaction of the performance specifications and requirements referred to in or to be inferred from the Operating and Maintenance Contract and the Technical Requirements.

The Operator will not have any liability for delay in the completion of the work to be completed under the Operating and Maintenance Contract to the extent that the delay is caused by and results from the exercise by the Province or BCTFA of its step-in rights under this Agreement; provided, for greater certainty, that the foregoing will not relieve the Operator from any liability for delay under the Operating and Maintenance Contract which arises after the exercise by the Province or BCTFA of its step-in rights under this Agreement or from any other cause.

7. Step-In Rights

(a) Subject to the provisions of the Direct Agreement, including Section 3.5 thereof, the Province or BCTFA may at any time:

(i) within 90 days of the Province and BCTFA receiving a Default Notice, unless prior to expiry of such 90-day period the default(s) on which the Operator intends to rely in terminating the Operating and Maintenance Contract and/or the Interface Agreement or treating either of them as having been repudiated by the Concessionaire or discontinuing the Operator's performance thereunder have been remedied; or

(ii) if the Province's right to terminate the Concession Agreement has arisen,

deliver a notice (a "Step-In Notice") electing to replace the Concessionaire under the Operating and Maintenance Contract and the Interface Agreement with the Province or BCTFA or with a third party designated by the Province or BCTFA in the Step-In Notice. In any case where the Province or BCTFA elects in a Step-In Notice to replace the Concessionaire under the Operating and Maintenance Contract and the Interface Agreement with the Province or BCTFA, the Province may by subsequent notice (a "Substitute Designation Notice") designate a third party to replace the Province or BCTFA (as the case may be) under the Operating and Maintenance Contract and the Interface Agreement in which event the third party so designated will succeed to all rights and obligations of the Province or BCTFA (as the case may be) under the Operating and Maintenance Contract and the Interface Agreement and other agreements and documents referred to in Section 7(b) and the Province or BCTFA (as the case may be) will be released from all obligations under the Operating and Maintenance Contract and the Interface Agreement and such other agreements and documents. A third party designated by the Province or BCTFA in a Step-In Notice or Substitute Designation Notice as aforesaid is referred to in this Agreement as a "Substitute".

(b) Upon receipt by the Operator of a Step-In Notice:

(i) the Concessionaire and the Operator will be deemed to be released from their obligations under the Operating and Maintenance Contract and the Interface Agreement to each other (except with respect to claims under any and all indemnities from the Concessionaire in favour of the Operator and from the Operator in favour of the Concessionaire arising in respect of

matters occurring prior to the date of receipt of the Step-In Notice by the Operator); and the Province, BCTFA or the Substitute, as applicable, and the Operator will be deemed to assume those same obligations towards each other (for greater certainty, including obligations (“Antecedent Obligations”) arising prior to the date of receipt of the Step-In Notice by the Operator but excluding obligations with respect to claims under any and all indemnities from the Concessionaire in favour of the Operator arising in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Operator);

- (ii) all claims which the Operator may have against the Concessionaire in respect of Antecedent Obligations will, subject to performance of the relevant Antecedent Obligations, be deemed to be and are hereby assigned by the Operator to and in favour of the Province or, at the direction of the Province, to BCTFA or the Substitute, as applicable, provided, however, that the amount recoverable from the Concessionaire pursuant to any such claim will be reduced by the amount of any sums which the Province has set-off in respect of such claim pursuant to Section 7A;
- (iii) the Guarantors will be deemed to be released from their obligations to the Concessionaire under the Operating and Maintenance Contract Guarantee (except with respect to claims under the Operating and Maintenance Contract Guarantee arising in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Operator); and the rights and benefits previously available to the Concessionaire under the Operating and Maintenance Contract Guarantee (without prejudice to claims by the Concessionaire under the Operating and Maintenance Contract Guarantee in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Operator) will be deemed to have been granted in favour of the Province, BCTFA or the Substitute, as applicable (provided, for greater certainty, that any limitations on the maximum liability of the Guarantors under the Operating and Maintenance Contract Guarantee will continue in effect);
- (iv) the rights of the Concessionaire against the Operator under the Operating and Maintenance Contract and the Interface Agreement and vice versa will be deemed to be cancelled (except with respect to claims under any and all indemnities from the Concessionaire in favour of the Operator and from the Operator in favour of the Concessionaire arising in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Operator); and the Province, BCTFA or the Substitute, as applicable, and the Operator will be deemed to acquire those same rights against each other (except with respect to claims under any and all indemnities from the Concessionaire in favour of the Operator arising in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Operator, which rights are assigned to the Province or, at the direction of the

Province, to BCTFA or the Substitute, as applicable, pursuant to paragraph 7(b)(ii) above);

- (v) the rights and benefits previously available to the Concessionaire under the Operating and Maintenance Contract Performance Securities (without prejudice to claims by the Concessionaire under the Operating and Maintenance Contract Performance Securities arising in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Operator) will be transferred and assigned to the Province, BCTFA or the Substitute, as applicable (provided, for greater certainty, that any limitations on the maximum liability of the issuers of the Operating and Maintenance Contract Performance Securities will continue in effect);
- (vi) at the Province's or BCTFA's request, the Operator will enter into, and the Province or BCTFA will or will cause the Substitute, as applicable, to enter into all such agreements or other documents as reasonably necessary to give effect to the provisions of this Section 7(b), including agreements between the Province, BCTFA or the Substitute, as applicable, and the Operator, on the same terms as the Operating and Maintenance Contract and the Interface Agreement (except with respect to necessary ministerial changes);
- (vii) at the Province's or BCTFA's request, the Guarantors will execute and deliver to the Province, BCTFA or the Substitute, as applicable, an agreement of guarantee from the Guarantors in favour of the Province, BCTFA or the Substitute, as applicable, on the same terms as the Operating and Maintenance Guarantee (except with respect to necessary ministerial changes and which agreement for greater certainty, will be consistent with the provisions of paragraph 7(b)(ii) above) together with all such other documents and further assurances as may reasonably be requested by the Province or BCTFA to give effect to the provisions of this Section 7(b);
- (viii) at the Province's or BCTFA's request, the Operator will and will cause the issuers of the Operating and Maintenance Contract Performance Securities to enter into, and the Province or BCTFA will or will cause the Substitute, as applicable, to enter into all such agreements or other documents necessary to give effect to the provisions of this Section 7(b), including assignments and necessary consents to assignments of the Operating and Maintenance Contract Performance Securities to the Province, BCTFA or the Substitute, as applicable, or replacement performance securities from the issuers of the Operating and Maintenance Contract Performance Securities in favour of the Province, BCTFA or the Substitute, as applicable, on the same terms as the Operating and Maintenance Contract Performance Securities except with respect to necessary ministerial changes (which assignments or replacement performance securities, for greater certainty, will be consistent with the provisions of

paragraph 7(b)(v) above) and, in the case of the issuance of replacement performance securities as aforesaid, the original Operating and Maintenance Contract Performance Securities (except with respect to claims by the Concessionaire thereunder in respect of matters occurring prior to the date of receipt of the Step-In Notice by the Operator) will be cancelled.

If the Province or BCTFA replaces the Concessionaire under the Operating and Maintenance Contract and the Interface Agreement pursuant to a Step-In Notice and subsequently designates a Substitute pursuant to a Substitute Designation Notice, the relevant Parties will enter into (and the Province or BCTFA (as the case may be) will cause the Substitute to enter into and, in the case of the Operating and Maintenance Contract Performance Securities, the Operator will cause the issuers of the Operating and Maintenance Contract Performance Securities to enter into) all such agreements or other documents necessary to effect and confirm the succession of the Substitute to the rights and obligations of the Province or BCTFA (as the case may be) under the agreements and other documents referred to in this Section 7(b) previously entered into by or for the benefit of the Province or BCTFA (as the case may be) and to release the Province or BCTFA (as the case may be) from all obligations and liabilities under such agreements and other documents.

In the event the Province or BCTFA causes a Substitute to enter into the agreements and other documents as are necessary to give effect to the provisions of this Section 7(b), the Operator will not have any right to approve the Substitute where such Substitute is any of the following:

- (ix) any Ministry or department of the Province;
- (x) any person whose obligations under such agreements or other documents are guaranteed by the Province or any Ministry or department of the Province;
- (xi) a Qualifying Bidder as defined in the Concession Agreement in circumstances of an assignment, transfer or novation of the Concession Agreement; or
- (xii) any person who has the financial standing and the financial resources reasonably necessary to enable it to perform the obligations of the Concessionaire under the Operating and Maintenance Contract and the Interface Agreement.

Otherwise, the Substitute shall be subject to the approval of the Operator, such approval not to be unreasonably withheld or delayed, and the Province or BCTFA will provide such information relating to any proposed Substitute not falling within subparagraphs 7(b)(ix), (x), (xi) or (xii) as the Operator may reasonably

request to the extent such information is readily available to the Province or BCTFA.

- (c) Each of the Concessionaire and the Operator will, at its own cost, cooperate fully with the Province, BCTFA and any Substitute in order to achieve a smooth, efficient and orderly transfer of the Operating and Maintenance Contract, the Interface Agreement, the Operating and Maintenance Contract Guarantee and the Operating and Maintenance Contract Performance Securities to the Province, BCTFA or the Substitute, as applicable, and to avoid or mitigate in so far as reasonably practicable any inconvenience, including the administration of the Operating and Maintenance Contract and the Interface Agreement, ongoing supervisory activities and scheduling. The Guarantors will, at their own cost, cooperate fully with the Province, BCTFA and any Substitute in order to achieve a smooth, efficient and orderly transfer of the Operating and Maintenance Contract Guarantee to the Province, BCTFA or the Substitute, as applicable.
- (d) [Not Used]
- (e) [Not Used]
- (f) The Operator will ensure, through measures satisfactory to the Province and BCTFA acting reasonably, that the terms of the Operating and Maintenance Contract Performance Securities permit the exercise by the Province and BCTFA of their step-in rights under this Agreement and that the exercise by the Province or BCTFA of their step-in rights under this Agreement will not entitle the issuer of any Operating and Maintenance Contract Performance Security to terminate, alter, amend or not comply with its obligations under the Operating and Maintenance Contract Performance Security, and that the terms of all Operating and Maintenance Contract Performance Securities will remain in full force and effect notwithstanding the exercise of such step-in rights and will provide further that upon the Province exercising its step-in rights, the Province will be entitled to all rights and benefits under such Operating and Maintenance Contract Performance Securities as though the Province were the originally named beneficiary thereunder.

7A. Amounts Paid by the Province, BCTFA or Substitute

Any amounts paid by the Province, BCTFA or a Substitute to the Operator pursuant to this Agreement or any agreement or other document entered into pursuant hereto (including, for greater certainty, any amounts paid by the Province to the Operator pursuant to Section 5 hereof and any amounts paid by the Province, BCTFA or a Substitute pursuant to Section 7(b) hereof or any agreement or other document entered into pursuant thereto) will be deemed to be amounts owing by the Concessionaire to the Province under the Concession Agreement and, subject to Section 44.8 [Rights of Set-Off] of the Concession Agreement, may be set-off against any payments to be made by the Province to the Concessionaire under the Concession Agreement including the

Total Performance Payment and any Termination Sum (which term, for this purpose, will be deemed to include any Adjusted Highest Qualifying Bid Price).

7B. Appropriation

The Operator, the Guarantors, and the Concessionaire acknowledge that they are aware of the provisions of subsection 28(2) of the *Financial Administration Act*, R.S.B.C. 1996, c. 138.

8. Operator Liability

- (a) The obligations and liabilities of the Operator under this Agreement, the Operating and Maintenance Contract and/or the Interface Agreement and the obligations of the Guarantors under this Agreement and the Operating and Maintenance Contract Guarantee will not be modified, released, limited, diminished or in any way affected by:
 - (i) any independent inspection, investigation or enquiry into any matter which may be made or carried out by or on behalf of the Province or BCTFA, or by any failure or omission to carry out any such inspection, investigation or enquiry;
 - (ii) the appointment by the Province or BCTFA of any other person to make or carry out any inspection, investigation or enquiry or to review the progress of or otherwise report to the Province in respect of the Project or any aspect thereof, or by any action or omission of such person whether or not such action or omission might give rise to any independent liability of such person to the Province.
- (b) In the event that the Province or BCTFA delivers a Step-In Notice:
 - (i) the Operator will have no greater liability to the Province, BCTFA or any Substitute than it would have had to the Concessionaire under the Operating and Maintenance Contract, and the Operator will be entitled in any proceedings by the Province, BCTFA or any Substitute to rely on any liability limitations in the Operating and Maintenance Contract; and
 - (ii) the Guarantors will have no greater liability to the Province, BCTFA or any Substitute than they would have had to the Concessionaire under the Operating and Maintenance Contract Guarantee, and the Guarantors will be entitled in any proceedings by the Province, BCTFA or any Substitute to rely on any liability limitations in the Operating and Maintenance Contract Guarantee.

9. Disclosed Data Disclaimer and Indemnity

- (a) Neither the Province nor BCTFA gives 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 the date of execution of this Agreement) relevant or material to the Project, the Project Facilities, the Site or the Adjacent Areas or any obligations undertaken by the Operator under the Operating and Maintenance Contract and/or the Interface Agreement. Neither the Province nor BCTFA will be liable to the Operator or the Guarantors in respect of any failure to disclose or make available (whether before or after the execution of this Agreement) to the Concessionaire, the Operator or the Guarantors any information, documents or data nor to keep the Disclosed Data up to date, nor to inform the Concessionaire, the Operator or the Guarantors (whether before or after execution of this Agreement) of any inaccuracy, error, omission, unfitness for purpose, defect or inadequacy in the Disclosed Data.

- (b) Neither the Province nor BCTFA will have any liability to the Operator (whether in contract, tort, by statute or otherwise howsoever and whether or not arising out of any negligence on the part of the Province or BCTFA or any of their respective employees, contractors or agents) in respect of, and the liability of the Guarantors under the Operating and Maintenance Contract Guarantee will not be released, lessened or limited in any way as a result of, any inaccuracy, error, omission, unfitness for purpose, defect or inadequacy of any kind whatsoever in the Disclosed Data.

10. Concessionaire as Party

The Concessionaire is a party to this Agreement for the purpose of giving its consent to and agreeing to be bound by the provisions hereof. The Concessionaire acknowledges and agrees that the Operator will not be in breach of the Operating and Maintenance Contract or the Interface Agreement and the Guarantors will not be in breach of the Operating and Maintenance Contract Guarantee by reason of complying with its or their obligations hereunder. Any default by the Concessionaire in the performance of its obligations under this Agreement will constitute a default by the Concessionaire under and for all purposes of the Concession Agreement.

11. Assignment

- (a) The Concessionaire will not, without the prior written consent of the Province and BCTFA, assign, transfer, charge, subcontract, subparticipate or otherwise dispose of any interest in this Agreement other than as assignment by way of security in favour of the Senior Funders in accordance with the Senior Funding Agreements.
- (b) The Province and BCTFA may assign or otherwise dispose of the benefit of the whole or part of this Agreement in conjunction with a permitted assignment under the terms of the Concession Agreement and only to a permitted assignee thereunder on written notice to the Concessionaire and the Operator and otherwise will not without the prior written consent of the Concessionaire or the Operator, not to be unreasonably withheld or delayed, assign or otherwise dispose of the benefit of the whole or any part of this Agreement. Notwithstanding the

foregoing, no consent of the Concessionaire or the Operator will be required in the event of an assignment by the Province or BCTFA or other disposal of the benefit of the whole or part of this Agreement to any person referred to in subparagraphs 7(b)(ix), (x), (xi) or (xii).

- (c) Neither the Operator nor the Guarantors will, without the prior written consent of the Province and BCTFA, assign, transfer, charge, subcontract, subparticipate or otherwise dispose of any interest in this Agreement.

12. Notices

Any notices required or permitted under this Agreement will be in writing and (a) delivered personally, (b) sent by a recognized express mail or courier service, with delivery receipt requested, or (c) sent by confirmed facsimile transmission with telephonic confirmation, to the following addresses:

If to the Province or BCTFA	5B – 940 Blanshard Street Victoria, British Columbia V8W 9T5 Telephone: (250) 356-1403 Fax No.: (250) 387-6431 <u>Attention:</u> Frank Blasetti Assistant Deputy Minister Transportation
If to the Operator	118 Bridge Road West Vancouver, British Columbia V7P 3R2 Telephone: (604) 983-2411 Fax No.: (604) 983-2433 <u>Attention:</u> Steven Drummond
If to the Guarantors	Miller Paving Limited 505 Miller Avenue P.O. Box 4080 Markham, Ontario L3R 9R8 Telephone: (905) 475-1440 Fax No.: (905) 475-7160 <u>Attention:</u> Leo McArthur (President)

Brennan Paving & Construction Ltd.
505 Miller Avenue
P.O. Box 4080
Markham, Ontario L3R 9R8

Telephone: (905) 475-1440
Fax No.: (905) 475-7160
Attention: Leo McArthur (President)

Capilano Highway Services Company
118 Bridge Road
West Vancouver, British Columbia V7P 3R2

Telephone: (604) 983-2411
Fax No.: (604) 983-2433
Attention: Steven Drummond

If to the Concessionaire Suite 2664, Four Bentall Centre
1055 Dunsmuir Street
P.O. Box 49183
Vancouver, British Columbia V7X 1K8

Telephone: (604) 605-1779
Fax No.: (604) 605-1634
Attention: Nicholas Hann (Vice President)

- (a) Where any notice is provided or submitted to a Party via facsimile, an original of the notice sent via facsimile will also promptly be delivered personally or sent by a recognized express mail or courier service, with delivery receipt requested.
- (b) A Party may at any time and from time to time change its nominated address or facsimile number by prior notice to the other Parties, and such change will be effective on the day that next follows the recipient Parties' receipt of such notice.
- (c) Notices given by mail will be effective upon the earlier of (i) actual receipt, and (ii) 7 days after mailing if mailed within Canada, and 21 days after mailing if mailed outside of Canada. Notices delivered personally will be effective upon delivery. Notices given by facsimile will be deemed to have been received where there is confirmation of uninterrupted transmission by a transmission report and where there has been no telephonic communication by the recipient to the sender (to be confirmed in writing) that the facsimile has not been received in legible form:
 - (i) within 3 hours after sending, if sent on a Working Day between the hours of 9 a.m. and 4 p.m.; or

- (ii) by noon on the next following Working Day, if sent after 4 p.m. on a Working Day but before 9 a.m. on that next following Working Day.
- (d) If the Party giving the notice or communication knows or ought reasonably to know of difficulties or disruption with the postal system which might affect the delivery of mail:
 - (i) any such notice will not be mailed but will be made or given by personal delivery or by facsimile transmission; and
 - (ii) where such difficulties or disruption arise after mailing but before the date of receipt as provided in this Section 12, the Party giving such notice will make or give such notice by personal delivery or by facsimile transmission.
- (e) To be effective, notices and all formal communications under this Agreement must be in writing and delivered as provided in this Section 12, and must be signed by an authorized representative of the Party giving the notice. E-mails will not be used for and will not constitute notices under this Agreement.
- (f) Oral communications will not constitute formal communication under this Agreement and no Party has any obligation to act on any oral communication, instruction or assurance unless and until it is confirmed in writing. Any action taken by a Party based on oral communications, instructions or assurances will be at that Party's sole risk and will be without liability to or recourse against the other Parties.

13. Amendments

No oral or written amendment or modification of this Agreement, either before or after execution and delivery of this Agreement, will be of any force or effect unless such amendment or modification is in writing and is signed by a duly authorized officer of each Party sought to be bound thereby.

14. Waiver

- (a) No waiver of any rights under this Agreement will be binding or effective unless the waiver is in writing and signed by an authorized representative of the Party giving such waiver.
- (b) Any Party's waiver of any of its rights under this Agreement or of any breach or failure to enforce any of the terms, covenants, conditions or other provisions of this Agreement at any time will not in any way affect, limit, modify, or waive that Party's right thereafter to enforce or compel strict compliance with every term, covenant, condition and other provision hereof, any course of dealing or custom of the trade notwithstanding.

15. Time is of the Essence

Time is of the essence of this Agreement and each provision herein.

16. Independent Contractor

The Parties are independent contractors. This Agreement is not intended to and does not create or establish between the Parties any relationship as partners, joint venturers, employer and employee, master and servant or principal and agent. Neither the Concessionaire nor the Operator nor any of its or their representatives are or will be deemed to be an employee or agent of the Province or BCTFA for any purpose.

17. Entire Agreement

Except where provided otherwise in this Agreement, this Agreement constitutes the entire agreement between the Parties in connection with its subject matter and supersedes all prior representations, communications, negotiations and understandings, whether oral, written, express or implied, concerning the subject matter of this Agreement.

18. Severability

If any provision of this Agreement is declared invalid, unenforceable or illegal by the courts of any jurisdiction to which it is subject, 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.

19. Enurement

This Agreement will enure to the benefit of and be binding upon each of the Parties and their respective successors and permitted transferees and assigns.

20. Dispute Resolution

Any dispute under this Agreement will be resolved in accordance with the Disputes Resolution Procedure.

21. Governing Law and Jurisdiction

- (a) This Agreement will be governed by and construed in accordance with the laws of the Province of British Columbia and the laws of Canada applicable therein and will be treated in all respects as a contract in the Province of British Columbia, without regard to conflict of laws principles.
- (b) Subject to the provisions of Section 20, the Parties agree to submit to the non-exclusive jurisdiction of the courts of British Columbia as regards to any claim or matter arising in relation to this Agreement.

22. Further Assurance

Each Party shall do all things and execute all further documents necessary to give full effect to this Agreement.

23. Proof of Authority

The Province reserves the right to require everyone executing this Agreement on behalf of the Concessionaire, the Operator or any Guarantor to provide proof, in a form acceptable to the Province, that they have the requisite authority to execute this Agreement on behalf of and to bind the Concessionaire, the Operator or the relevant Guarantor, respectively.

24. Confidentiality

The Operator and the Guarantors will comply with the obligations on the part of the Concessionaire contained in Section 50 [Confidentiality] of the Concession Agreement.

25. Responsibilities, Obligations and Rights under Concession Agreement

The provisions of this Agreement are without prejudice to, and in no way limit, restrict or impair, the responsibilities and obligations of the Concessionaire or the rights of the Province under and as set forth in the Concession Agreement.

26. Counterparts

This Agreement may be executed in one or more counterparts. Any single counterpart or 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 faxed form provided that any Party providing its signature in faxed form will, upon any other Party’s request, promptly forward to such Party an original signed copy of this Agreement which was so faxed.

IN WITNESS WHEREOF the Parties 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)
in the presence of:)

_____)
(Witness)

_____)
JOHN DYBLE
Acting Deputy Minister, Ministry of Transportation
Assistant Deputy Minister, Ministry of Transportation

BC TRANSPORTATION FINANCING AUTHORITY

Per: _____
JOHN DYBLE
Chief Executive Officer

MILLER CAPILANO MAINTENANCE CORPORATION

Per: _____
STEVEN DRUMMOND
Vice-President

Per: _____
BARRIE BRAYFORD
Authorized Signatory

MILLER PAVING LIMITED

Per: _____
Authorized Signatory

BRENNAN PAVING & CONSTRUCTION LTD.

Per: _____
Authorized Signatory

CAPILANO HIGHWAY SERVICES COMPANY

Per: _____
Authorized Signatory

SEA TO SKY HIGHWAY INVESTMENT LIMITED PARTNERSHIP,
by its General Partner,
SEA TO SKY HIGHWAY INVESTMENT MANAGEMENT LTD.

Per: _____
MARK WONG
President

Per: _____
MICHAEL SMERDON
Secretary

SCHEDULE 23

CONCESSIONAIRE PROPOSAL EXTRACTS

The following Concessionaire plans are attached as Annexes 1 through 7 to this Schedule 23 of the Agreement:

- Annex 1 - Communication Plan
- Annex 2 - Construction Safety Plan
- Annex 3 - Traffic Management Plan
- Annex 4 - Operation, Maintenance & Rehabilitation Plan
- Annex 5 - Quality Management Plan
- Annex 6 - Environmental Management Plan
- Annex 7 - Environmental Enhancement Plan

Deleted: February

SCHEDULE 23**CONCESSIONAIRE PROPOSAL EXTRACTS****Annex 1****Communication Plan****1.0 Communication Plan**

The Concessionaire shall develop a Communication Plan to create a system of communication with Users to ensure that they have full and immediate access to information about traveling conditions at all times during construction activities on the Concession Highway and throughout the Contract Period. Through a range of proven, effective communication initiatives—such as public service advisories, radio/TV broadcasting, and an up-to-date website—the Concessionaire will inform the Users and the public and create an efficient inquiry response system that continuously provides performance feedback to the Concessionaire to improve communications about interruptions and highway conditions.

The Concessionaire will solicit public comment on design and construction of the Project Facilities and the operations, maintenance and rehabilitation of the Concession Highway. During the critical initial period between 2005 and 2010, the Concessionaire will collaborate with the Province to prioritize the significance of issues raised by the stakeholder communities and establish an internal tracking system to record the responses to these concerns. After the Olympic Period, the Concessionaire will merge its public consultation and community relations programs into a single program founded on the strong relationships established with local communities during the initial phase.

The Concessionaire's Communication Plan will be comprehensive and will support community relations. It will build grassroots support for, and community involvement in, the Sea to Sky Improvement Project. The Concessionaire will design and implement its Communication Plan to achieve the goals to foster dialogue, responsiveness, and the pursuit of shared goals with the Province, local communities, and stakeholders along the Sea-to-Sky corridor during construction and throughout the Contract Period. The Concessionaire will use commercially reasonable efforts to ensure that its Communication Plan is delivered generally in accordance with the proposed plan details outlined in Section 2.0 below (acknowledging that actual delivery may be somewhat different in practice following integration with the Province's communications plan).

2.0 Communications and Consultation Plan Principles

2.1 General

Notwithstanding anything contained in this Annex 1, all communication and consultation activities of the Concessionaire shall be subject to the Concessionaire's compliance with the terms of this Agreement including without limitation Schedule 17 [Liaison Procedures].

2.2 Communications Tools

The Concessionaire will use the following communications tools, as appropriate, to inform the traveling public as to the travel conditions including safety and mobility on the Concession Highway during the period from the Commencement Date until the expiry of the Olympic Period (the "Pre Olympic Period"):

- highway signage, including changeable message signs ("CMS")
- radio public service announcements ("PSA")
- television PSAs
- newspaper PSAs
- Sea-to-Sky website
- telephone information line
- "Safe 99 cards distributed by traffic control persons ("TCP") for 1-877-4SAFE99 or 604-605-5955 numbers, providing information on:
 - scheduled delays
 - unscheduled incidents
 - locations and durations of planned closures.

2.3 Traffic Inquiry Response System

The Concessionaire shall, during the Pre Olympic Period, institute a variety of communications options, through which the public may make inquiries and receive immediate responses. These options shall include:

- information feeds to MOT sources
- website "contact us" email connection

- telephone hotline fax information line
- well-publicized contact information for the Concessionaire's communications manager.

2.4 Community Relations Tools

During the Pre Olympic Period the Concessionaire will specifically solicit information and feedback by means of periodic meetings and discussions as to performance of its communications obligations in respect of the Concession Highway from the following audiences:

- Ministry of Transportation
- Emergency response services
- Transit operations
- Motorists
- Cyclists
- Pedestrians
- Transport companies
- Tour operators
- Municipalities
- Utility companies
- Property owners
- Contractors
- Business owners
- Business organizations
- Service clubs
- Schools, universities, hospitals, other institutions
- Parent Advisory Committees
- Corridor community residents
- TLC/CAGs
- Provincial, local media
- Environmental groups/Non-Governmental Organizations

2.5 Communication Channels

Communication channels utilized by the Concessionaire in dealing with the public, during the Pre Olympic Period, shall include some or all of the following:

Face-to-Face

- Opinion leader meetings
- Small group meetings
- Large group meetings
- Telephone interviews
- Development of key contact lists by interest areas
- Regular schedule of meetings with corridor Councils
- Regular briefings with local media
- Speakers Bureau of experts available to service clubs, etc.
- Database tracking of meetings, discussions, and commitments

Electronic, Voice, Print

- The Concessionaire's website
- Information telephone hotline
- Quarterly electronic newsletter on the Concessionaire's website; print distribution to be determined by preliminary research into communications preferences
- Letters as required
- Media packages (releases, backgrounders)
- Batch fax capability to respond to stakeholder preferences
- TV, radio, newspapers, PSAs

Community Investment

- Consider ways to contribute to local development:
- Sponsorships/donations
- Scholarships
- Provision of expertise
- Legacy opportunities (materials, equipment, infrastructure, aesthetic enhancements, etc.)

2.6 Public Inquiry Response System

During the Pre Olympic Period the Concessionaire shall employ the following mechanisms as its public enquiry response system:

- website “Contact Us” email connection
- telephone hotline
- well-publicized contact information for the Concessionaire’s communications manager
- proactive solicitation of public inquiries through regular contact with municipal leaders, the business community, and other key stakeholder groups in Sea-to-Sky communities
- regular relationship-building visits with key stakeholders along the corridor
- responses to inquiries by telephone, email, fax, and/or regular mail
- database tracking of inquiries and responses.

The Concessionaire will provide regular communication updates throughout the Pre Olympic Period to the public through the following:

- an up-to-date website
- quarterly newsletters, available electronically in portable document format (pdf) and distributed in print according to stakeholder preference
- regular, face-to-face meetings with key stakeholder groups
- speaking engagements by experts, upon request, to service clubs, associations, schools, and other community groups
- the availability of experts to answer questions and concerns of the media.

2.7 Regular Public Reporting

The Concessionaire shall establish a database tracking system to record communications activities, public inquiries and responses, and progress on stakeholder issues and concerns. The Concessionaire shall, during the Pre Olympic Period, make this information available in real time to members of the public via the web or in the form of printed reports that will be made available on request.

In addition, the Concessionaire will, throughout the Pre Olympic Period, provide:

- continuous website reporting
- quarterly newsletter updates, available electronically or in print according to stakeholder preference
- media relations aimed at regular, accurate media reports annual meetings with Sea-to-Sky corridor communities.

2.8 Public Consultation Tools

During the Pre Olympic Period, for the purposes of initial meetings organized by the Province with communities along the highway corridor relating to the Concession Agreement and the Concessionaire's role in it, the Concessionaire shall prepare and provide the following materials:

- storyboards and other display materials, which can be mounted in Town Hall settings
- take-away brochure material that outlines our approach to the project and background information on our consortium members
- visual aids that explain our ideas for aesthetic enhancements at community gateways along the Sea-to-Sky corridor
- information on additional channels through which community members can share their views (e.g., email, website, telephone hotline, regular mail, community relations manager, etc.).

The Concessionaire shall record and categorize all comments from such meetings and make such records available to the Province as soon as possible thereafter. Additionally, the Concessionaire will prepare a database to track issues raised through all input channels during the Pre Olympic Period and make such database available to the Province's Representative for review.

The Concessionaire shall develop and maintain throughout the Pre Olympic Period a plan (the "Public Consultation Support Plan") using the following communication vehicles:

- public meetings at a frequency prescribed by the Province
- small group meetings (focus groups) to explore and clarify specific issues
- individual interviews, by phone or in person, to learn more about specific concerns
- website to collect input and post frequently asked questions

- telephone hotline for messages, with calls returned by appropriate expert
- contact information widely posted for direct contact with the Concessionaire's Community Relations Manager
- letters responding to specific inquiries
- monthly reporting to MOT, TLC and the CAGs in the form of an issues tracking document
- quarterly newsletter, available both electronically and in print, that reports the outcomes of public consultation process.

2.9 Consultation Summary Reports

The Concessionaire shall, during the Pre Olympic Period, create and maintain an issues tracking document on a public consultation database that categorizes public input as “issues”, “concerns” or “comments”, and report on them as unresolved (and why), resolved (and how), or noted (and follow-up).

These reports will be issued to MOT, the TLC, CAGs, and whatever other audiences the Province recommends on a monthly basis or at whatever frequency deemed most appropriate by the Province.

SCHEDULE 23**CONCESSIONAIRE PROPOSAL EXTRACTS****Annex 2****Construction Safety Plan****1. Introduction**

To fulfill the requirements of the Construction Safety Plan, an organized and effective Health, Safety and Environment Program will be carried out at each location where the Works are performed.

The safety performance objectives for the Project are to:

- work each day injury free;
- work towards eliminating all injuries, occupational illnesses, and incidents through a process of continuous improvement;
- promote environmental, safety, and health objectives as a constant value in designing, planning, training, and executing work;
- spread ownership for environmental, safety, and health effectiveness throughout the organization; and
- enhance employee awareness and involvement in our program implementation.

1.1 Health and Safety Responsibilities

The Concessionaire will ensure that all employees, including senior management, managers, supervisors, and workers receive training about their respective health and safety responsibilities.

The Concessionaire will take appropriate action against any of the Concessionaire's agents, employees, contractors or sub-contractors of any tier who engages in an unsafe act or who fails to comply with established safe work practices and procedures.

The Concessionaire shall be responsible for compliance with all provisions of the Agreement and the provisions of this Annex 2. A summary of Concessionaire responsibilities for its key personnel, sub-contractors, and employees is outlined below:

1.1.1 Project Manager

The design/build Project Manager is responsible for assisting in the development and implementation of the Construction Safety Plan. Specifically, the Project Manager will:

- provide goals, allocate resources, assign measurable responsibilities and include safety performance in annual salary and promotion reviews of subordinates;
- assign and communicate responsibilities for all aspects of the program, so that all members of the Project management team know what is expected of them;
- ensure Project management is fulfilling its roles in safety on the Project;
- meet or exceed established annual district safety performance goals;
- provide a status report on all Project incidents for discussion at the Monday managers' meeting; and
- review the current analysis and work plans during each work site visit.

1.1.2 Construction Manager

The Construction Manager shall assume full responsibility for safety on the job site with assistance from line supervisors. The Construction Manager will work closely with the Superintendents and the Safety Manager to ensure full implementation and maintenance of the Health, Safety and Environment Program on the job site.

The Construction Manager will:

- ensure superintendents, project engineer, field engineers, and foreman are fulfilling their roles in safety on the Project;
- ensure that each operation is safely planned;
- ensure Project compliance with all relative municipal, provincial and federal laws, Province requirements, and the Concessionaire policies;
- meet or exceed established annual district safety performance goals;
- report incidents/accidents to district Safety Manager within two hours of occurrence;
- submit the weekly loss management report to the district Safety Manager by Saturday morning of each week;

- ensure safety orientation has been completed for all new hires;
- schedule and participate in the monthly mass safety meeting;
- write environmental, safety, and loss prevention requirements into subcontracts;
- initiate action to correct unsatisfactory environmental or safety performance;
- ensure proper safety performance of all sub-contractors;
- consult and participate with the district safety manager for education and training needs;
- provide resources and allow time for safety and health training of all job site personnel;
- ensure job compliance with the district substance abuse policy;
- provide technical expertise and direction to eliminate hazards using engineering controls prior to issuing personal protective equipment;
- establish an emergency contingency plan and ensure all persons on the job are familiar with it (e.g., drills); and
- ensure that the corporate preventive maintenance program is implemented.

1.1.3 General/Field Superintendent's Responsibilities

The General Superintendent and the Field Superintendents are responsible, and will be held accountable for their performance and the craftworkers' performance under their direction. Superintendents will train, lead, and control work activities so that performance meets the Concessionaire's obligations.

The General/Field Superintendent will:

- ensure that each operation is safely planned;
- ensure complete compliance with all relative municipal, provincial and federal laws, Province requirements and the Concessionaire policies;
- review, update and sign off on major-hazard analysis and work plans for work being performed;
- report and investigate near-miss incidents in a timely manner and ensure appropriate action is taken;

- take immediate corrective action to correct unsafe work practices or conditions;
- attend weekly safety toolbox meetings and pre-job safety instruction meetings;
- ensure that appropriate first aid plans and facilities are established; and
- ensure sub-contractors comply with all safety and health requirements relating to the safety and health of persons and/or property.

1.1.4 Field Engineer/Project Engineer Responsibilities

The Field Engineer/Project Engineer will assist with the implementation and maintenance of the Construction Safety Plan. Specifically the Field Engineer/Project Engineer will:

- assist Project personnel in the assembly of details, drawings, and inspection procedures;
- assist the superintendent in obtaining the necessary approvals prior to commencing construction activities such as heavy lifts or crane/man lifts;
- provide necessary technical specifications requiring approval;
- assist the Construction Manager in assembling detail drawings requiring a professional engineer's seal; and
- take action to correct unsatisfactory safety performance.

1.1.5 Foreman/Supervisor Responsibilities

The Foreman/Supervisor will be responsible for promoting safety awareness and demonstrating to workers, through day-to-day examples and actions, that safety compliance is a top priority of the Concessionaire.

The Foremen are responsible, and will be held accountable, for the performance of the crew/workers. The Foremen must train, lead, and control so that performance meets the Concessionaire obligations.

The Foremen/Supervisors will:

- ensure complete compliance with all relative municipal, provincial and federal laws, Province requirements and the Concessionaire policies;
- perform one weekly formal inspection and ensure proper follow-up is done;

- conduct daily pre-task instruction meetings with all crew members;
- conduct weekly toolbox meetings with all crew members;
- report and investigate near-miss incidents in a timely fashion;
- take the lead in developing hazard analyses for all operations, and regularly hold meetings with the crew to discuss the Construction Safety Plan;
- ensure that safety and health requirements are adhered to and enforced;
- maintain orderliness and housekeeping at all times in work areas;
- promptly complete and submit all safety reports as necessary;
- correct, retrain, and/or reprimand employees in safety procedures when at-risk behaviour is observed; and
- ensure no operation is performed that is not safe;
- participate in a four-step orientation process.

2. Sub-contractor's Responsibilities

The Concessionaire is ultimately responsible for sub-contractor environmental, safety and health compliance at the Project. The Concessionaire must ensure that all of the Concessionaire's agents, employees, contractors or sub-contractors of any tier comply with all requirements established for the Project. The Concessionaire's agents, employees, contractors or sub-contractors of any tier and visitors including consultants are subject to safety reprimands by the Concessionaire management personnel. Repeat violators will be removed from site.

All sub-contractors working on the job site will be given a copy of the Concessionaire Construction Safety Plan. It is the sub-contractor's responsibility to perform the job in compliance with the Concessionaire's safety standards.

Each sub-contractor and all its employees are required to perform their work in a safe and professional manner. To accomplish the goal of an accident-free work-site for all individuals involved, the Concessionaire will ensure that each sub-contractor follows the set of safety requirements for work on any Project site.

2.1 Site Setup

The Concessionaire will ensure that all work areas are set up in a manner that will enable the workers to work safely and in case of emergencies, allow for swift evacuation from the site. Reliable communication devices (two-way radios, cell phones, satellite cellular phones, etc.) will be available to all appropriate personnel.

In case of emergency, a minimum of two areas will be designated as muster areas. These areas will be located on opposite sides of the worksite and will contain:

- wind direction indicator;
- emergency alarm (i.e., portable air horn); and
- one 30 lb. ABC fire extinguisher.

The Concessionaire is responsible for hazard identification, ensuring proper access to the site, and the identification of safe briefing (muster) areas to assist in the prevention of incidents and to help with emergency response in the event of an incident.

2.2 Purchase and Rental of Materials

The Concessionaire shall continuously work to ensure that the equipment used on site can perform the job for which it was designed and is required. To this end, and to ensure compliance with all Occupational Health and Safety (“OHS”) Regulations, a purchase and rental of materials/equipment procedure will be established by the Concessionaire for all equipment and materials.

2.3 Safe Work Procedures and Hazard Controls

The Concessionaire will have a written hazard analysis for each work operation. Prior to the start of any operation, the superintendent and sub-contractors will ensure a hazard analysis (in conjunction with the “work plan”) is prepared and reviewed. The hazard analysis will identify:

- all risks associated with the operation;
- any workers who are considered to be at risk; and
- assess the levels of risk (i.e., high, medium, or low).

The Field Superintendent, Field Engineer, and Foreman with his/her crew will prepare, review, and revise each hazard analysis. A copy of the signed hazard analysis will be kept readily accessible at the work location for reference by crew members and safety personnel.

The Field Superintendent, Foreman, and Field Engineer will perform an ongoing evaluation of the construction activity, ensuring the hazard analysis is understood and followed by all employees.

3. List of Known Pre-Existing Workplace Hazards

The following is a list of known pre-existing workplace hazards identified by the Ministry:

Hazard of falling – The Existing Highway is built in mountainous terrain, and there are numerous locations throughout the work site that pose a hazard of rockfall. These areas will be assessed for risk of rockfall prior to the start of any construction activity.

Rail hazards – The Existing Highway parallels an active right-of-way. Trains and rail equipment on the tracks are an expected presence. Regardless of existing agreements, the Concessionaire will liaise with BC Rail to establish safe operating procedures regarding encroachment.

Danger trees – For the most part, the Existing Highway passes through healthy second growth and mixed deciduous stands of trees; however, there are some areas where the hazard requires a danger tree assessment. The Concessionaire will ensure assessments are done where necessary.

Confined spaces – Confined spaces include any space that is enclosed or partially enclosed; not intended for continuous human occupancy; and/or so configured that the access and egress restrictions would complicate provision of first aid or the evacuation of an injured worker.

Power lines – There are a number of places where high-tension power lines encroach or cross the Concession Highway.

Debris flow – Debris flow is a unique risk that will be identified in the safety training program. During high runoff events, the Concessionaire will be vigilant and will take appropriate steps to minimize hazards to the public and construction personnel.

Vehicular traffic – The Existing Highway services a number of communities. As a result there will be considerable vehicular traffic throughout the duration of the Project. Workers may be exposed to the hazards of moving vehicles. A risk assessment will be completed prior to starting any of the Works.

Violence – The nature of the Project requires significant traffic control activities. Whenever the travelling public encounters traffic control persons, there is a potential for confrontation. A risk assessment for violence will be completed prior to starting any of the Works.

4. Safety Rules

Safety rules provide the minimum acceptable standard for employee conduct at the job site. The Concessionaire and its supervisory staff are responsible for ensuring all employees understand and follow these safety rules.

Safety rules will be reviewed with each employee during orientation and will be reinforced, as required, to ensure compliance. Safety rules will be posted at the site in prominent locations such as job site safety boards, superintendent's safety boards, offices, workshops, and lunchrooms.

Applicable safety rules are listed below (note: these safety rules are not all-inclusive). Employees who violate rules will be held accountable under the Concessionaire's disciplinary action policy, which consists of written warnings, suspensions, and/or termination.

1. All employees must immediately report all work-related injuries to their immediate supervisor or first aid person, no matter how minor the injury.
2. All employees must report all incidents and near-misses promptly to their immediate supervisor.
3. All unsafe conditions and unsafe acts must be immediately corrected and/or reported to employees' immediate supervisor.
4. Equipment and machinery must be shut down and locked-out before oiling, adjusting, repairing, or maintenance activities are carried out. Equipment and machinery must be shut down before fuelling.
5. Employees must not work alone in isolated areas or undertake hazardous tasks unless arrangements have been made for periodic checks with another individual,

- or some form of communication has been arranged to summon readily available assistance if needed.
6. Full-body safety harnesses (properly fitted), work lanyards, and lifelines must be used by individuals working above 6.0 ft when it is impractical to provide work platforms equipped with guardrails. A policy of 100% fall protection will apply at all times.
 7. Safe distance must be maintained from all overhead power lines at all times.
 8. No worker is allowed to enter any trench or excavation until the walls have been adequately cut back or temporary protective structures have been installed, unless the trench or excavation is shallower than the legal minimum and the soil is stable.
 9. Any entry, including "partial entries," into a confined space must have the consent of the supervisor; a hazard assessment must be performed; and safe work procedures (including rescue) implemented. This will identify the hazards in the space and how to control them.
 10. Work plans and hazard analysis must be developed and reviewed prior to starting a new operation.
 11. Engaging in horseplay, fighting, practical joking and any similar potentially hazardous conduct is forbidden and will result in disciplinary action.
 12. Possessing or working under the influence of alcohol or drugs on the work site are strictly prohibited.
 13. All work areas must be properly maintained to prevent the possibility of slipping and tripping hazards.
 14. All employees must wear an approved hard hat, safety footwear (above the ankle height and laces done up), safety vest, gloves, and safety glasses at all times in construction and maintenance work areas.
 15. Shirts (minimum 6" sleeves) and long pants (sweat pants are not suitable) must be worn in all construction and maintenance areas.
 16. Hearing protection devices (muffs and/or plugs) must be worn when there is excessive noise (85 dB or greater daily average) and/or when directed by the supervisor.
 17. Respiratory protection that has been fit-tested must be worn or personally carried in locations identified by the supervisor.

18. Personal flotation devices (life jackets) must be zipped, buckled, or tied when worn.
19. Employees must lift correctly, using their legs, not their back. Employees are responsible for seeking assistance for heavy lifts.
20. Smoking is permitted only in designated areas.
21. Theft, vandalism, or any other abuse of property is prohibited.
22. Individuals may operate equipment and vehicles only if they are a trained, designated operator.
23. All drivers of company vehicles must possess a valid, appropriate driver's licence.
24. Posted speed limits, traffic signs, and driving practices must be obeyed.
25. The use of seat belts is mandatory at all times while driving all vehicles and equipment.
26. No employee may remove, impair, or render ineffective any safeguard provided for the protection of workers.
27. Tools and equipment must be used in the way they were meant to be used, per manufacturer's instructions.
28. Rigging may only be done by, or under the supervision of, qualified and authorized workers.
29. Hazardous materials must be used in accordance with the manufacturer's recommendations (i.e., Material Safety Data Sheets).
30. In addition to these rules, the OHS Regulation applies.

4.1 Safety Training

Employees will receive workplace orientation, on-the-job training, and follow-up. Supervisors will ensure that all new or transferred employees are properly trained.

Managers and supervisors will receive ongoing training in safety and health, as applicable. Records of training for all employees will be maintained.

4.1.1 Four-Step Orientation Program

The orientation process is an extremely important part of the Concessionaire's Health, Safety and Environment Program. Initial orientation will be provided to employees as outlined in Table 2.3.4-1.

Table 2.3.4-1: Initial Orientation Responsibilities

Orientation Program	Responsibility
Step One	Job Office Manager (or Safety Manager)
Step Two	Superintendent (or Construction Manager)
Step Three	Foreman
Step Four: Follow-Up/Employee Motivation	Employee's Superintendent

Green hardhats will be issued to new Concessionaire employees and will be worn for a minimum of 30 days. Following the minimum probationary period, employees will be presented with an orange hardhat.

Orientation records will be kept on site and will be readily available for review. Orientation hardhat stickers will be issued to each individual who attends the orientation; these will be placed on their hardhats for site identification purposes.

4.2 Safety Meetings

Supervisors and sub-contractors will conduct safety meetings with employees on a regular basis. Records of these meetings will be maintained on site and reviewed by the job superintendent.

Safety meetings will be organized and monitored by the construction manager and/or the job superintendent to ensure their effectiveness. These meetings will be conducted according to the schedule shown in Table 2.3.4-2.

Table 2.3.4-2: Schedule of Safety Meetings

Meetings	Frequency of Meetings (minimum)
Site Safety Plan Review Meeting	Prior to project mobilization and annually thereafter
Pre-Task Instruction (PTI) Meeting (incorporating the Stretch & Flex Program)	One per shift
Toolbox Meeting (incorporating the Stretch-and-Flex Program)	One per week
Mass Safety Meeting	One per month
Site Safety Committee Meeting	One per month
Work Plan / Hazard Analysis Crew Review Meeting	Prior to start of any operation
Job Safety Standdown Meeting	Within 24 hours of a serious incident occurrence (near-miss, recordable injury, property damage, or environmental)
All other meetings (schedule, planning, subcontractor, progress, supervisory, engineer's, manager's, staff, etc.)	Safety will be the first item of business discussed at all meetings

4.3 Occupational Health and Safety Committee

The Concessionaire will establish and maintain an Occupational Health and Safety Committee (“OHSC”), in keeping with the OHS Regulation when there are 20 or more workers employed on site.

The OHSC will be organized and monitored by the Construction Manager or the General Superintendent to ensure its effectiveness. Committee activities will be scheduled as shown in see Table 2.3.4-3.

Table 2.3.4-3: OHSC Meeting Schedule

Activity	Frequency of Meetings (minimum)
Health & Safety Committee Meetings	Monthly
Health & Safety Committee Workplace Inspections	Monthly
Incident Investigations	As required
Resolving Worker Complaints	As required

4.4 Safety Inspections

4.4.1 Workplace Inspections

The Concessionaire and its sub-contractors will perform formal workplace safety inspections of all work sites on a regular basis. Formal workplace safety inspections will be organized and monitored by the Construction Manager or the General Superintendent to ensure corrective

action is taken without undue delay. These inspections will be conducted according to the schedule shown in Table 2.3.4-4.

Table 2.3.4-4: Workplace Inspection Schedule

Inspector	Frequency of Inspection (minimum)
Worker Safety Champion	One per shift
Equipment Operator (daily visual)	One per shift
Crane Operator	One per shift
Foreman	Weekly
Subcontractor	Weekly
Project Safety Manager	Weekly
Superintendent	Monthly
Job Manager	Monthly
Area Manager and/or Job Sponsor	Monthly
District Safety Manager	One per work tour
Project Safety Committee	Monthly
Corporate Safety Committee	One per site tour
District Manager & District Safety Manager	Annually

Sub-contractors will also conduct weekly formal safety inspections in their work areas and forward copies of the report to the Construction Manager or General Superintendent.

All tools and equipment will be inspected for defects by a competent worker prior to use.

Any tool, equipment, or machinery that is worn, damaged, or has missing parts will be removed from service and marked with a “Danger – Remove from Service” tag.

4.4.2 Government Regulatory Compliance Inspections

Governmental Authority inspectors may perform unannounced health and safety inspections of the work site on an ongoing basis. The Concessionaire shall ensure that these inspectors will receive full cooperation and are treated in a professional and courteous manner by all Concessionaire personnel.

The Construction Manager or General Superintendent will ensure any noncompliance orders from these inspections are addressed without delay, and a follow-up memo of compliance will promptly be sent to the applicable Governmental Authority, Workers Compensation Board (“WCB”), if required, and to the district safety manager.

4.5 Incident Reporting and Investigation

The Concessionaire will investigate all incidents so that causes can be determined and corrective action can be implemented to prevent recurrence, including the following types of incidents which will be fully investigated:

- near-misses that have the potential for serious injury or major equipment damage;
- any accident involving costs for a WCB claim;
- all major or serious environmental incidents; and
- all incidents that require reporting under the Workers Compensation Act.

The Project Manager, Construction Manager or General Superintendent, and sub-contractors will ensure all incidents are promptly reported and investigated to prevent future recurrence.

4.5.1 Accident or Incident Reports

The Concessionaire will deliver a copy of any accident or incident reports, prepared by the Concessionaire in compliance with the Workers Compensation Act, to the Province's Representative.

Copies of incident investigation reports (including medical aid and near miss incidents with potential for serious injury) will be provided to the site health and safety committee and the WCB in accordance with the timelines set out in Table 2.3.4-5.

Table 2.3.4-5: Incident Reporting Actions & Timelines

Responsibility	Action & Timeline
Employee	
1	Immediately – Report all work-related injuries, incidents, and near-misses to their immediate supervisor.
2	By the End of Shift – Initial timecard indicating they were injured.
3	Incidents Requiring Medical Aid – Read and Sign an “Authorization For Initial Treatment and Release of Medical Information” (Form #1103). Inform doctor about the company’s Return to Work Program.
4	Incidents Requiring Medical Aid – Complete & review Employee Injury Report (Form #1102) with the Foreman/Craft Superintendent.
Foreman/Craft Superintendent	
1	When informed of a Work-Related Injury during a Shift – Will ensure first aid is provided.
2	Immediately – Notify Construction Manager/General Superintendent after any incident involving a serious near-miss; reportable injury; recordable injury; equipment, property, or vehicle damage over \$1000.00; major or serious environmental spills; or all incidents that require reporting under OH&S/WCB Acts and Regulations.
3	As Soon as Reasonably Possible (Incidents Requiring Medical Aid) – Have employee complete the Employee Injury Report (Form #1102). Deliver the Employee Injury Report to the Job Manager/Job Superintendent. By the End of Shift – Have employee initial the timecard indicating that they were injured.
4	Within 4.0 hours of an Incident – Complete and deliver a preliminary Incident Investigation Report (Form #1104) to the Construction Manager/General Superintendent for all incidents involving a serious near-misses; reportable injury; recordable injury; equipment, property or vehicle damage over \$1000.00; major or serious environmental spills; or all incidents that require reporting under OH&S/WCB Acts and Regulations.
5	Included with this report shall be copies of the pre-task Instruction reports covering the last four pre task instruction meetings attended by the injured employee or crew along with the hazard analysis for the operation.
Construction Manager / General Superintendent	
1	Incidents Requiring Medical Aid – The Construction Manager, General Superintendent, Craft Superintendent or other responsible individual will accompany the injured employee to the hospital or clinic.
2	Request the employee to read and sign an “Authorization for Initial Treatment and Release of Medical Information” form (Form #1103).
3	Within 2.0 hours of the incident – Notify District Safety Manager after any incident involving a serious near-miss; reportable injury; recordable injury; equipment, property or vehicle damage over \$1000.00; major or serious environmental spills; or all incidents that require reporting under OH&S/WCB Acts and Regulations.
4	Within 12.0 hours of the Incident – Deliver the completed “preliminary” Incident Investigation Report (Form #1104) to the District Manager, Job Sponsor, and the District Safety Manager. Included with this report shall be copies of the pre-task Instruction reports covering the last four pre-task instruction meetings attended by the injured employee along with the hazard analysis for the operation.

Responsibility	Action & Timeline
5	Within 72.0 hours of an Incident – Complete and deliver a copy of the “interim or final” Incident Investigation Report (Form #1104) to the District Manager, Job Sponsor, and District Safety Manager for any incident involving a serious near-miss; reportable injury; recordable injury; equipment, property or vehicle damage over \$1000.00; major or serious environmental spills; or all incidents that require reporting under OH&S/WCB Acts and Regulations.
6	Within 5 Days of the Incident – Complete & Deliver a copy of the completed “It Happened to Us Alert” (Form #1107-1110) to the District Safety Manager for any incident involving a serious near-miss; reportable injury; recordable injury; equipment, property or vehicle damage over \$1000.00; major or serious environmental spills; or all incidents that require reporting under OH&S/WCB Acts and Regulations.
Project Manager	
1	At the Completion of the Investigation – Review the completed Incident Investigation Reports (Form #1104) follow-up with the Construction Manager/General Superintendent to ensure the appropriate corrective actions have been implemented to prevent recurrence.
District Safety Manager	
1	Within 48.0 hours of the Incident – Forward a copy of the preliminary Incident Investigation Report (Form #1104) to the S2S Home Office Safety Department. Within 7 Days of the Incident – Forward a copy of the completed “It Happened to Us Alert” (Form #1107-1110) to the S2S Home Office Safety Department.

4.5.2 Informing the WCB of an Immediately Reportable Accident Procedure

The Construction Manager or General Superintendent will ensure WCB is notified immediately of the occurrence of any accident/incident which involves:

- serious personal injury, disease, disablement, or death to any workers, or had the potential for doing so;
- a major structural failure or collapse of a building, building component, crane, hoist, scaffolding, or other temporary construction support systems;
- a collapse of concrete formwork or false work;
- a major release of harmful substance that resulted in an injury to a worker who required immediate medical attention beyond the level provided by a first aid attendant, or which required first aid service for more than one worker or resulted in a condition of continuing danger to workers; and
- the use of explosives.

4.5.3 Reporting Form 7 to WCB and Appeal Procedure

All work-related injuries that require medical treatment will be reported on Form 7 (see Figure 2.3.4-1) to WCB within three days of receiving information about the injury or disease. Fatalities will be reported immediately.

Within the three-day reporting period, the Construction Manager and General Superintendent, following discussion with the foreman and district safety manager, will decide whether or not the claim should be contested.

Figure 2.3.4-1: Reporting Form 7 from WCB

WORKERS' COMPENSATION BOARD			
Please send this report to the office covering Worker's Workplace Area Please answer all questions and complete this report in ink.		First Aid Report	
Supplementary to Employer's Form 7 "Employer's Report of Injury or Occupational Disease."		WCB Head Office: 6051 Westminister Highway, Richmond BC V7C 1C8	
The following questions to be completed in full by first aid Attendant, or other person rendering First Aid. Please sign and attach to the Form 7 for submission to the office covering the worker's workplace area.		Please Note: Facsimile (fax) copies are acceptable at all WCB offices in British Columbia	
Workers Last Name (please print)		Employer's name (as registered with the Board)	
First Name(s)	Initial	Mailing address	
Mailing address		City	Postal code
City	Postal code	Location of plant or project where injury occurred	Postal code
Telephone	Social insurance Number	Date of birth	Type of business
Weight	Height	Marital Status	Employer's Tel. No.
Worker's occupation			
1. Date and time of injury		(month) (day) 79 . at	a.m./p.m.
2. (a) Time of reporting to First Aid Attendant		(month) (day) 79 . at	a.m./p.m.
(b) How did the worker get to the First Aid Room (walk, stretcher, truck, etc.)			
(b) By whom was the injured worker brought to the First Aid Room?			
(d) Was the worker unconscious following injury or exposure? Yes No If yes, for how long?			
(d) Was this based on personal observation? Yes No			
3. (a) Please describe injuries found			
(b) Please give nature of initial first aid rendered			
(b) Please give dates and nature of subsequent treatments			
4. When did the worker leave to see a physician or qualified practitioner?		(month) (day) 79 . at	a.m./p.m.
Did worker report to a physician or qualified practitioner as soon as advised? Yes No			
5. Location and approximate distance to nearest physician or qualified practitioner?			
6. Please give name and address of physician or qualified practitioner?			
7. By what means was the worker transported to a physician or qualified practitioner?			
First aid attendant's signature			Date
First aid Certificate (if any) dated		Certificate number	Grade
Workers statement of injury			

ADDITIONAL INFORMATION CAN BE RECORDED ON THE REVERSE SIDE OF THIS REPORT

4.6 Emergency Response

A written emergency response plan will be developed specifically for Project construction to ensure serious incidents, accidents, and other emergencies are effectively managed.

Prior to the commencement of the work, contact will be made with local emergency services to advise them of Project commencement, potential emergency response scenarios, contact names, and phone numbers.

Emergency telephone numbers and a route map to the nearest hospital will be posted in lunchrooms and the office.

All employees and sub-contractors will receive emergency response instructions during the new hire orientation. The topics covered will include:

- guidelines of the emergency response plan;
- employees' responsibilities within the plan;
- how to initiate an emergency response; and
- site evacuation procedures.

4.6.1 First Aid Requirements

Prior to the commencement of construction activities, the Construction Manager and the General Superintendent will ensure that:

- an assessment is conducted to determine the level of first aid services required for the site;
- adequate and appropriate first aid equipment, supplies, facilities, attendants and services are provided; and
- written first aid procedures are developed.

A sufficient number of qualified first aid personnel, as well as facilities and equipment, will be provided.

First aid services, supplies, and equipment will be made readily available to workers during all working hours. At a minimum, first aid kits will be located in the Project office, at a central location within each specific work area, and in all company vehicles.

A qualified first aid attendant will be available on each shift. The name and work area of such personnel will be posted to ensure they are identifiable to all employees.

The Construction Manager, General Superintendent, or other responsible individual will accompany the injured employee to the hospital or clinic. The employee will be asked to read and sign a “Medical Assessment” form at this time.

4.6.2 First Aid Assessment

A first aid assessment will be conducted annually or whenever a significant change in operations occurs. A written record of review results will be maintained on site. The Concessionaire will ensure first aid services, equipment, and supplies are maintained on site in accordance with the high-risk workplace first aid requirements outlined in Table 2.3.4-6.

4.6.3 First Aid Procedures

The Concessionaire will keep up-to-date written procedures for providing first aid at the work site including:

- the availability of equipment, supplies, facilities, first aid attendants and services;
- the location of who and how to call for first aid assistance and how a first aid attendant is to respond to a call for first aid;
- the authority of the first aid attendant over the treatment of injured workers and the responsibility of the employer to report injuries to the board;
- who is to call for transportation for the injured worker, and the procedures to be followed; and
- pre-arranged routes in and out of the workplace and to a medical treatment facility.

Table 2.3.4-6: High-Risk Workplace First Aid Requirements

# of Workers per Shift	Supplies, Equipment & Facility	Level of First Aid Certificate for Attendant	Transportation	Other Considerations
1	Personal first aid kit		At employer's expense*	
2-5	Level 1 first aid kit	Level 1	At employer's expense*	
6-10	Level 1 first aid kit ETV equipment	Level 1 with transportation endorsement	ETV	
11-30	Level 3 first aid kit Dressing station ETV Equipment	Level 3	ETV	Unrestricted certificate required in some cases**
31-50	Level 3 first aid kit First Aid Room ETV equipment	Level 3	ETV	Unrestricted certificate required in some cases**
51-200	Level 3 first aid kit First Aid Room Industrial ambulance equipment	Level 3	Industrial ambulance	Unrestricted certificate required in some cases**
201 or more	Level 3 first aid kit First Aid Room Industrial ambulance equipment	2 Level 3	Industrial ambulance	Unrestricted certificate required in some cases**

Note: *Transportation to medical treatment may include a taxi, a company vehicle, or an ambulance, depending on the injured or ill worker's condition. **In remote workplaces (over two hour's surface travel time to hospital), or where there is a potential for delay in transporting an injured worker, a person who holds a Level 3 certificate that is restricted may only provide first aid while under the supervision of an unrestricted Level 3 attendant.

The Concessionaire will post the procedures in conspicuous locations throughout the workplace and ensure that the information is effectively communicated to workers.

The Concessionaire will ensure that the first aid attendant and all other persons authorized to call for transportation of injured workers are properly trained.

The Concessionaire will conduct a drill at least once per year to test the effectiveness of available treatment, equipment, facilities, first aid attendants, and transportation procedures.

4.6.4 First Aid Treatment Record

All injuries, no matter how minor, must be entered on a first aid treatment record and be noted on the injured individual's time card. The information on the first aid treatment record will be reviewed and initialled by the General Superintendent.

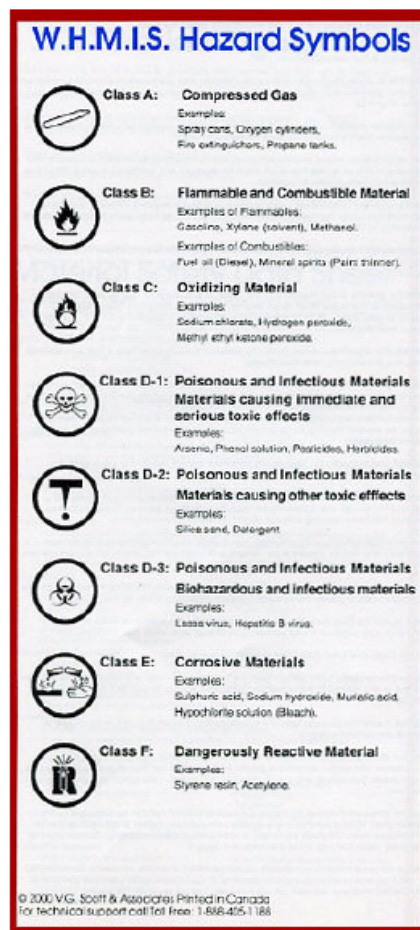
First aid records will be kept confidential and will not be disclosed except as permitted by WCB OHS Regulations or otherwise permitted by law.

4.7 Hazardous Materials Handling

The Concessionaire will maintain copies on site of all relevant material safety data sheets (“MSDS”), and will comply with all Workplace Hazardous Material Information System (“WHMIS”) regulations.

In order to ensure the effectiveness of the WHMIS program and employee training, personnel will be instructed to use the following “four questions” as a measuring tool and they must know the relevant answers at all times:

1. What is the name of the product you are using?
2. What are the hazards associated with the product you are using?
3. What are the emergency procedures for this product?
4. Where can you find out more information regarding the product?



To ensure all employees can answer the above questions, the Concessionaire will implement a hazardous materials handling program, as outlined in the following sections.

4.7.1 Policy and Responsibilities

All hazardous materials stored or used by site personnel will be identified and labelled. Information regarding hazardous materials will be made readily available to workers by providing an MSDS file for all work locations where WHMIS-controlled materials are used, handled, or stored.

Management will ensure all employees exposed to hazardous materials have been trained in the proper recognition, safe handling, use, and storage procedures. Information and training regarding hazardous materials will be reviewed on a regular basis.

Supervisory staff will ensure that workers who use or handle WHMIS-controlled or other hazardous products have been adequately trained to recognize standard hazard symbols, understand risk phrases and first aid measures, and implement appropriate protective measures as required by law.

In addition, supervisory staff will ensure that sufficient labelling, MSDS, and protective equipment are available at work locations to meet regulated requirements.

Workers are responsible for following procedures and instructions provided for safe use, handling, storage, and transport of hazardous products. Lastly, workers are responsible for reporting containers that are unlabelled, illegibly labelled, or incorrectly labelled.

The Concessionaire will ensure first aid attendants are aware of the emergency first aid procedures required for workers who may have been overexposed to hazardous substances at their worksites.

4.7.2 Hazardous Materials Control

A list of all hazardous materials used at the job site will be maintained by the Concessionaire. The list will be updated as necessary and will be available to all site employees.

Any purchaser of new materials must ensure that supplier labels have been provided and applied to controlled products received at the workplace. Improperly labelled products must not be handled or used except to be held in storage.

With bulk shipments, if the supplier sends a supplier label, the receiver must apply or post it to individual containers. Where the supplier only sends labelling instructions, the receiver must apply, at minimum, a workplace label to containers.

Workplace labels are also necessary on containers of controlled products that have been transferred or decanted from a supplier's bulk container (i.e., fuels, lubricants, form oils). Workplace labels will provide three types of information: product name, safe handling information, and a reference to the MSDS.

4.7.3 Material Safety Data Sheets (MSDS)

MSDS (see Figure 2.3.4-2) must be received for all controlled products supplied to the workplace. In addition, if the preparation date on an MSDS indicates it is more than three years old, the supplier will be contacted to provide an updated sheet.

If an MSDS does not exist for a product, the material will not be used until a proper sheet is obtained from the manufacturer or supplier.

4.7.4 Work Procedures and Controls

Supervisory personnel are responsible for monitoring storage, handling, and use of controlled products on their work sites as part of their daily and weekly inspections. Monitoring will take into account, among other things, the physical and health hazards of the product, quantities, work processes, and the location of use.

On the basis of WHMIS and other workplace information, management, in cooperation with suppliers and supervisory personnel, will develop work procedures that ensure worker health and safety.

Hazard control measures shall include:

- engineering controls such as ventilation, process modification, or isolation of the hazard source; and
- administrative controls such as work procedures; storage arrangements; maintenance and shift scheduling; and personal protective equipment, such as respirators gloves and protective clothing.

Figure 2.3.4-2: First Page of a Sample MSDS

MATERIAL SAFETY DATA SHEET				
Abbreviations used on this Material Safety Data Sheet: N/av. = Not available, N/ap. = Not applicable, ppm = parts per million, TLV = Threshold Limit Value.				
				Page 1 of 2
WHMIS HAZARD RATING: Compressed Flammable Gas, Class A, B-1				
SECTION 1 - PRODUCT IDENTIFICATION AND USE				
PRODUCT IDENTIFIER Propane				
PRODUCT USE Flammable gas used as an industrial and household fuel, aerosol propellant, solvent and refrigerant.				
MANUFACTURER'S NAME			SUPPLIER'S NAME Propane Sales Co.	
STREET ADDRESS			STREET ADDRESS 1234 Green St.	
CITY		PROVINCE/STATE	CITY Anytown	PROVINCE/STATE BC
POSTAL CODE	EMERGENCY TELEPHONE NUMBER		POSTAL CODE E6K 2R4	EMERGENCY TELEPHONE NUMBER (604) 555-5555
SECTION 2 - HAZARDOUS INGREDIENTS				
HAZARDOUS INGREDIENTS	%	CAS NUMBER OR UN NUMBER OR NA NUMBER	LETHAL DOSE (50%) OF INGREDIENT (SPECIFY SPECIES AND ROUTE)	LETHAL CONCENTRATION (50%) OF INGREDIENT (SPECIFY SPECIES AND ROUTE)
Propane	100	74-98-6	N/av.	N/av.
SECTION 3 - PHYSICAL DATA				
PHYSICAL STATE	Gas	COLOUR AND APPEARANCE	Colourless gas with a trace amount of odourous mercaptan.	
ODOUR THRESHOLD (ppm)				N/ap.
VAPOUR PRESSURE (kPa @ 21 C)	853 kPa @ 21 C	VAPOUR DENSITY (AIR = 1)	1.55	EVAPORATION RATE (AIR = 1)
			N/ap.	BOILING POINT -42.1C
FREEZING POINT				-190 C
SPH	N/ap.	SPECIFIC GRAVITY (AIR = 1)	0.5 (Saturated pressure at 20 C)	COEFFICIENT OF WATER/OL DISTRIBUTION
				Log P (oct) = 2.36
SECTION 4 - FIRE AND EXPLOSION DATA				
FLAMMABILITY IF YES UNDER WHICH CONDITIONS? When a gas in air between flammability limits.				
YES	<input checked="" type="checkbox"/>	NO		
MEANS OF EXTINCTION Dry chemical, carbon dioxide, water spray, fog. Water may be ineffective because it will not cool propane below its flash point.				
SPECIAL PROCEDURES Do not extinguish a leaking gas flame unless leak can be securely plugged. Stop flow of gas and move containers from fire area if without risk. Use water to cool fire exposed containers. Stay away from ends of tanks. Withdraw immediately in case of rising sound from venting safety device or any discoloration of tank due to fire.				
FLASHPOINT AND METHOD	-104.4 C	UPPER FLAMMABILITY LIMIT (% BY VOLUME)	9.5	LOWER FLAMMABILITY LIMIT (% BY VOLUME)
				2.2
AUTOMATIC TEMPERATURE	450 C	HAZARDOUS COMBUSTION PRODUCTS Carbon monoxide, carbon dioxide		
EXPLOSION DATA			SENSITIVITY TO STATIC DISCHARGE	
SENSITIVITY TO IMPACT			Yes	
	No			
SECTION 5 - REACTIVITY DATA				
CHEMICAL STABILITY IF NO, UNDER WHICH CONDITIONS?				
YES	<input checked="" type="checkbox"/>	NO		
INCOMPATIBILITY WITH OTHER SUBSTANCES IF YES, WHICH ONE? Strong oxidizing agents can increase the risk of fire and explosion.				
YES	<input checked="" type="checkbox"/>	NO		
REACTIVITY, AND UNDER WHAT CONDITIONS? Avoid strong oxidizing agents.				
HAZARDOUS DECOMPOSITION PRODUCTS				
None				

4.7.5 Education and Training

The Construction Manager will ensure a qualified WHMIS trainer is appointed for the site and receives training.

The Concessionaire shall ensure that all employees have had generic WHMIS education prior to accessing the workplace.

Employees who use hazardous materials or work in proximity to them are required to have received instruction in:

- hazards of the materials they will be exposed to;
- procedures for safe use, handling, and storage of the product as contained on labels and MSDS; and
- recognition of symptoms of overexposure and overexposure emergency response; and
- the responsibility for reporting injuries, and reporting containers that are unlabelled, illegibly labelled, or incorrectly labelled.

4.7.6 Disposal of Hazardous Substances

Hazardous substances must be disposed of using the method described on the MSDS for that substance, or as required by the Provincial authority for that jurisdiction.

4.8 Transportation of Dangerous Goods

Anyone involved with the handling, offering for transport, or transporting of dangerous goods must be trained and certified. Certification will be repeated on the earlier of the date required by applicable regulations or every three years and will include training in the following:

- classification information;
- safety marks, labels, and placards;
- documentation requirements; and
- dangerous occurrence reporting and response.

4.9 Preventative Maintenance

A comprehensive Preventive Maintenance Program for all motorized and special equipment will be initiated. The district equipment manager will assume the responsibility for providing on-the-job training, as required.

4.9.1 Motorized Equipment

Complete inspections will be performed on a unit when it is returned from a project. Brakes, lights, drivelines, hydraulic pump and lines, steering linkage, cooling system, lube oils, back-up alarms, and exhaust systems will all be checked. Engine oil and filters will be changed every 5,000 km or 250 hours of operation. Oil samples will be analyzed annually to determine, among other things, metal content and lubrication properties.

4.9.2 Electrical Equipment

Complete inspections will be performed on an electrical unit each month, or after it has been returned during the project. Electrical "HOT GLOVES" will be certified annually.

All substations will be marked "Authorized Personnel Only," and all generators will be grounded with grounding rods.

The Concessionaire shall ensure that the following three fundamental principles are implemented to help ensure the construction of a safe power system:

1. enclose all "like" conductors;
2. use only adequate circuit protective equipment; and
3. design all systems so that working on energized conductors is not necessary.

4.9.3 Hand Tools

All hand tools will be inspected and repaired as required and as soon as they are returned from a Project.

4.9.4 Tools and Equipment

All tools or equipment that are defective or in need of repair will be tagged “Danger - Remove from Service”. The tag will list what the fault is, and will include the signature and date of the person tagging the item.

4.10 Records and Statistics

The Concessionaire’s Construction Manager will ensure the following types of records and statistics are maintained on site for the duration of the Project:

- construction safety plan;
- employee orientation and training records;
- work plans and job hazard analysis records;
- tool box meeting records;
- pre-task instruction records;
- mass safety meeting records;
- employee reprimand records;
- maintenance records and mobile equipment inspection records;
- equipment certification records;
- emergency preparedness drills;
- first aid treatment records;
- incident investigation reports;
- near-miss reports;
- work site inspection reports;
- safety committee meeting minutes;
- hearing tests records;
- weekly loss management reports;
- safety audits and action plans; and
- WCB/OHS Regulation Inspection Reports.

Training records will be retained by the district.

4.11 *Full Disclosure of Records*

Health and safety records will be maintained on site for the duration of the Project. Upon request, the Province will be given full access to these records in order to review, copy, or audit them.

At all times during the Project, the Concessionaire will provide the Province with a copy of any accident or incident reports prepared by the Concessionaire in compliance with the Workers Compensation Act.

In addition, the Concessionaire will provide the Province with a statistical summary of all health and safety records applicable to the work site. This summary will provide the following information:

- total number hours worked by employees, sub-contractor or otherwise;
- total number of incidents or events that occurred on site that were subject to the notification requirements of the Workers Compensation Act;
- total number of person-days lost due to accidents, injuries, or incidents; and
- total cost of damage to equipment and materials due to accidents, injuries, or incidents.

SCHEDULE 23**CONCESSIONAIRE PROPOSAL EXTRACTS****Annex 3****Traffic Management Plan****1. Introduction**

This section outlines the organization of the project and identifies the key roles and responsibilities for the implementation and ongoing development of the Traffic Management Plan (“TMP”).

1.1 Organization Charts and Contact Lists

The TMP will include the following charts and lists:

- Concessionaire organization chart for the construction works;
- design/build team QA/QC organization chart for each section of the project;
- emergency contacts list;
- key site contacts list;
- Province contacts list; and
- other project contacts list.

The sub-plans that will comprise the TMP are as follows:

- Traffic Control Plan;
- Incident Management and Response Plan;
- Implementation Plan;
- Public Information Plan;
- Risk Assessment Plan; and
- Rock Excavation Process/Progressive Test Procedure Plan.

1.2 Work Areas

Each highway section (as defined in Part 1 of Schedule 5 [Construction Output Specifications]) will be separated into named sections and structures to facilitate scheduling and traffic management in specific areas.

1.3 Traffic Management Responsibilities

Quality control and quality assurance of activities affecting the TMP will be the sole responsibility of the Concessionaire. The TMP quality control process will be included in the Construction Quality Management Plan, and the results of Quality Audits will be acted upon by the Traffic Manager.

The Concessionaire will provide qualified traffic control supervisors, a qualified professional traffic engineer, an experienced traffic manager and trained traffic control persons for each highway section. The responsibilities of these key positions are summarized below. Specific duties for each will be listed in the TMP.

1.3.1 Traffic Control Supervisor

The Traffic Control Supervisor has the Concessionaire's authority to respond to traffic control requirements and will personally perform all the duties of the Traffic Control Supervisor, outlined in Part 6 of Schedule 5 [Traffic Management Output Specifications] and the TMP. The Traffic Control Supervisor will have direct authority over the Concessionaire's traffic control personnel and the procedures on the site.

On-site traffic control supervision will be provided by a Traffic Control Supervisor at all times for each highway section in which there is active construction underway. This duty will be shared on a shift rotation basis.

1.3.2 Traffic Engineer

The Traffic Engineer is responsible for designing, sealing, and approving the traffic control plan(s). The Traffic Engineer has the Concessionaire's authority to review and seal the TMP and associated sub-plans and take responsibility for ensuring that all traffic engineering issues and requirements are taken into account.

1.3.3 Traffic Manager

The Traffic Manager will share responsibility for implementation and development of the TMP with both the Traffic Control Supervisor and the Traffic Engineer. The Traffic Manager will be responsible for responding to quality audits as required under the Agreement and initiating improvements to the accepted TMP and its sub-plans.

1.3.4 Traffic Control Person

All traffic control personnel will provide current verification of training in accordance with a standard recognized and approved by the Province. The Traffic Control Supervisor will ensure that traffic control personnel understand the planned activities and that all means of communication are functional prior to implementing traffic control measures.

1.4 Scope of Work

Traffic management for the entire Site will require considerable preplanning and rigorous coordination during construction. The Concessionaire will assure the seamless integration of the entire TMP into construction plans and Work Schedule, and will assume responsibility for all aspects of traffic management associated with the Project.

1.5 Traffic References

In addition to the Traffic Management Output Specifications and the Traffic Management Requirements, the guidelines, specifications and instructions that apply to the traffic management work are:

- “Traffic Management Guidelines for Work on Roadways,” Sept 2001
- “Traffic Control Manual for Work on Roadways” (TCMWR)
- “The Manual of Standard Traffic Signs and Pavement Markings”
- Standard Specifications 2004, Section 194, “Traffic Management for Work Zones”
- Standard Specifications 2004, Section 204, “Rock Cuts”
- “TAC Geometric Design Guide for Canadian Roads.”

2. Approach to Traffic Management

The following subsections summarize the Concessionaire’s approach to traffic management within the Site during construction.

2.1 General Approach to Traffic Management

The objective of a traffic management plan is to minimize disruption to traffic during construction. The goals of the TMP are to ensure that:

- traffic control plans accommodate project and site-specific considerations;
- traffic impacts are evaluated using accepted industry standards;
- stakeholders are notified of potential impacts in an acceptable manner; and
- an effective mechanism for change is established in response to unsatisfactory performance.

The Concessionaire is committed to the careful implementation and continuous development of this TMP to facilitate the safe, predictable movement of traffic within the Site.

2.2 Methods to Provide Predictable Closures and Minimize Impacts to Highway Users

At a minimum, the Concessionaire will use the following methods to manage construction-related impacts and provide impact predictability along the Concession Highway:

1. *Optimizing traffic flow through work zones.* Through the use of detour alignments and single-lane alternating traffic (“SLAT”) regimes, the Concessionaire will safeguard workers and facilitate the mobility of the traveling public to the extent practical along the entire Project corridor.
2. *Performing delay analysis in the preplanning and activity scheduling stages.* The Concessionaire will prepare a weekly schedule of anticipated traffic control activities in the Site, in conjunction with the weekly construction schedule, and will submit it to the Ministry representative at least 10 days in advance of the work.
3. *Implementing timely, planned stoppages and synchronized Closures.* The Concessionaire will implement synchronized Closures at prescribed intervals in accordance with the requirements of this Agreement and in particular the Traffic Management Output Specifications and the Traffic Management Requirements in order to enhance predictability and reduce the frequency of delays. Closures will be scheduled well in advance of the work and, whenever possible, during non-peak hours.

4. *Persistent monitoring and recording of Closures and delays.* The Concessionaire will continually monitor, record and assess traffic delays and Closures.
5. *Continually improving the TMP.* In addition to any other updates required under this Agreement, the Concessionaire will review the TMP every two months in the first year and bi-annually in subsequent years to determine how it can be further refined in order to reduce traffic delays and Closures. These refinements will be issued in conjunction with MOT as addenda. The Concessionaire will also develop new reference material (e.g., statistics on clearance times for queues or travel time averages for various common combinations of stoppages along the corridor) to assist traffic control personnel.
6. *Effectively communicating Closures and delays to the public.* The Concessionaire will communicate all Closures and traffic delays to the public in a manner which will increase the predictability of Closures and their associated delays. The Concessionaire will implement and sustain an overall Site communication link between all work areas, the Project's centralized traffic control centre, and all parties involved in the Project's construction in order to ensure reduced response times and to minimize delays.
7. *Providing a coordinated response to unexpected incidents.* The Concessionaire will provide reliable access and support to emergency response crews during an incident. To expedite response times, the Concessionaire will implement enhanced communication and coordination systems with emergency response crews during incidents.

2.3 Approach to Integrating Construction Schedules and Traffic Management Plans

The Concessionaire will incorporate the following methods to provide accurate work schedules integrated with realistic, compliant traffic closure plans:

- use of a model that assesses overall traffic delays caused by the daily closure schedule;
- constant monitoring of Closures and recording of impacts; and
- provision of impact feedback and subsequent refinement of methods.

Successful prediction of delays at the scheduling stage of the work will minimize impacts and provide predictable delays to the public during construction.

2.4 Approach to Dealing with Incidents

The TMP will include an Incident Management and Response Plan, which will provide methods for communicating and responding to unexpected events on the Site.

2.5 Adapting to Unexpected High Traffic Volumes

The Concessionaire will, where practical, implement permanent engineered detours with large segregated work zones.

Where it is necessary to apply single-lane alternating traffic regimes, the Concessionaire will count and record the number of vehicles clearing at each cycle. A design maximum queue length (in number of cars) will be part of the design for each Closure location and direction. The Concessionaire will ensure that traffic control personnel terminate operations and restore two-way traffic if the maximum queue lengths are reached.

2.6 Coordination of Closures with Adjacent Work Areas

The Concessionaire will coordinate all work schedules and traffic control activities with adjacent work areas. Regular meetings will be held for reviewing schedules and coordinating traffic plans between adjacent work areas. Traffic management plans for other areas will be reviewed, modified, and incorporated into the TMP to provide an overall traffic management plan that takes into account all work areas.

3. Stoppage and Closure Predictability

3.1 ITS Features during construction

The Concessionaire will provide dynamic messaging along corridor, providing advance notification of stoppages and closures and real-time traffic monitoring and management.

The Concessionaire will station four portable ITS set-ups including ITS-Dynamic Message Signs at the main Site entry points (Horseshoe Bay, Squamish-South, Squamish-North and Whistler). In addition to monitoring traffic volumes, the four ITS-DMS set-ups will provide traffic information to the Concession Highway users entering the Site. The DMS messages will include anticipated travel times through the corridor and may include specific messages such as notice of extended delays, severe weather conditions, and/or unexpected events/delays as they occur. All DMS messages will be generated at the TCC in conjunction with the MOT Representative.

Each portable ITS site will feature:

- Dynamic Message Signs (DMS) to provide advance notification of traffic conditions
- Full motion or image-capture-capable camera sites
- Vehicle Detection Stations providing speed, volume and occupancy data
- Wireless communication technology.

A centralized Traffic Control Centre will monitor and control the ITS devices and disseminate information to both the public and traffic control personnel. Information will also be shared by the Concessionaire with web sites of outside agencies, including TransLink Regional ATIS and the Ministry's DriveBC.

Changeable Message Signs (CMS) will be provided at each traffic control activity.

All DMS messaging will be prepared in conjunction with the Province's Representative.

ITS components such as video, speed, volume and occupancy will also provide real time visual information to dedicated TCC staff who will be able to immediately update CMS's, websites and other public information outlets.

3.2 Centralized Traffic Control Centre

The Concessionaire will establish a centralized traffic control centre that will serve as the home base for the Communications Manager, Traffic Manager, Traffic Engineer, Traffic Control Supervisors, Traffic Control Personnel and support staff. The Concessionaire will ensure that the Traffic Control Centre will provide, as a minimum, the following:

- A specialized communication link between the traffic office and the TCP at each active construction zone.
- The centralization and compilation of performance records.
- Responsiveness to the Ministry regarding concerns or issues that may arise.
- The Concessionaire's weekly work and traffic activity schedules.

One person who is present at the Traffic Control Centre at any given time will be designated by the Concessionaire as the contact person for emergency crews and their dispatchers. This

contact person will be informed about traffic controls/conditions and will be empowered to make changes to suit the situation.

All feedback generated by the Concessionaire's Operations will be channeled through the TCC where it is compiled, reviewed, communicated to the public in a timely manner.

The TCC will be equipped with phone lines, radio communications and internet access. The TCC will have communication links to work area Supervisors, Traffic Control Supervisors, Traffic Control Persons at each active construction zone, Emergency Response agencies, the MOT Representative, The Concessionaire's Management including the Communications Manager, the project's ITS and CMS, and public information sources including the Concessionaire website, outside agency websites and the 1-877-4SAFE99 line.

3.3 Enhanced Coordination with adjacent work areas

3.3.1 Enhanced Schedules and Closure Plans with Work Package 2

Agreement on scheduled work activities and Closure plans along the entire corridor will be done through weekly meetings between the Concessionaire and the Contractor.

3.3.2 Coordination of communication between the Concessionaire and the Contractor

The Concessionaire will ensure that the Contractor's three-way communication system will be incorporated into the Concessionaire system to ensure that all parties working on the Site, the Ministry, and Emergency Services have a common communication link and a direct connection to the Traffic Control Centre.

3.3.3 Creating a common communication system along the entire Project

The Concessionaire will:

- Hold daily meetings with the Contractor in Highway Section DB2;
- Integrate the Contractor's traffic management plan for Highway Section DB2 with the Concessionaire's TMP to form a single document;
- Integrate communications with the Contractor through the TCC;

3.4 Easy-To-Remember Closures – Synchronized, Repetitive Closures Plans

Multiple simultaneous closures will be implemented in multiple work zones, throughout the Site, at regular prescribed times within the allowable Closures timeframes. Where possible, simultaneous Closures will be implemented on a long-term schedule. The timing and spacing of simultaneous Closures will vary depending on the date, the type of Closure required in each work zone, location, and the average travel time through each highway section and the overall corridor, as outlined below in greater detail.

Whenever possible, the Concessionaire will schedule the construction of the Works to maximize the number of Closures occurring simultaneously in different areas of the Site. In addition, the Concessionaire will schedule these simultaneous Closures at regular prescribed times of day, in order to create a predictable, repetitive daily schedule of Closures, while minimizing overall Project corridor delays.

The Concessionaire will implement repetitive daily traffic activity schedules within the Site to perform long term, repetitive operations, such as blasting, hauling, and equipment moves. The duration of these daily schedules will vary depending on the type and volume of repetitive work.

The Concessionaire will ensure that the synchronized Closure time schedule remains constant over weeks or months (i.e., every weekday at 10 a.m., noon, 2 p.m., etc.), so that workers in each Work zone, and commuters and other users, will become familiar with the schedule.

3.5 Enhanced Analysis, Supervision, and Tracking of Corridor Delays

The Concessionaire will perform analysis of daily Closure schedules to calculate the approximate overall corridor delay introduced by the scheduled activities. This analysis will be performed during preparation of the weekly construction schedule. The results will be used to manipulate the schedule and to ensure that resulting accumulated delays through the Site are minimized.

The Site delay analysis will be continually updated and modified to reflect changing conditions on the Concession Highway.

The central Traffic Control Centre will coordinate the supervision of Closures and provide a single point of contact for all traffic control supervisors, traffic personnel, emergency crews, and MOT.

The Traffic Control Supervisor will designate traffic control personnel to monitor each activity and record the impacts. Documentation will include detailed descriptions of the activity and its impacts on traffic, including the type of Work, quantity of work performed (e.g., cubic metres, lineal metres), the Closure type, Closure location and direction, closing and opening times, queue lengths and clearing times, and any specific comments relating to the operation or causes of delays.

Detailed recordkeeping will provide an ongoing database of Closure impacts to the public under various conditions. This information will be used to identify specific problems with traffic control procedures and allow the Concessionaire's staff to implement management initiatives to continue to improve the Concessionaire's operations performance with respect to the TMP objectives. Any trends will feed back into the Concessionaire modeling methods and will allow more predictable and accurate planning of future Closures.

The information compiled from monitoring records will be developed as a database.

3.5.1 Daily Analysis

Daily analysis refers to the analysis of historical data for equivalent days on the current schedule. Traffic volumes and conditions will be analyzed for each day on an advance weekly basis. Previous year's data will be reviewed and updated to reflect current trends and observations.

3.5.2 Daily Site Delay Analysis

During preparation of the weekly traffic activity schedule, a Site delay analysis will be performed to model the expected Site travel times for each day of the schedule, utilizing the method set out below:

First, the expected Site travel time is input into the analysis to provide a baseline from which delays will be measured. The Site travel time is equivalent to the time it takes a vehicle to travel through the Site, during construction at the posted speeds, and allowing for expected stopping at signalized intersections, without encountering any Closures.

Then, the anticipated Closure schedule is entered into the analysis including the location of the Closure, the time of day, and the expected delay at each Closure. Closure clearing time delays will be included; based either on traffic activity monitoring records or the limits permitted by the

Traffic Management Output Specifications and the Traffic Management Requirements. Northbound and southbound lanes are modeled separately to account for SLAT regimes and single-lane closures.

From this input, the analysis models the overall corridor travel time of vehicles traveling either northbound from Horseshoe Bay to Whistler or southbound from Whistler to Horseshoe Bay. The basic form of the analysis models a single vehicle leaving at ten minute intervals throughout the day. The modeled travel time is compared to the baseline corridor travel time and a total delay calculated.

3.6 Reopening Predictability and Compliance Enhancements

3.6.1 Dash-Mounted Digital Display Timers

The Concessionaire traffic personnel vehicles will be equipped with digital display timers to help ensure delays are kept within the scheduled timeframe. The Concessionaire will monitor and record delays on a regular basis, not only to ensure compliance, but also, to provide useful data for the improvement of delay analysis, scheduling, and TMP procedures.

3.6.2 Weekly Traffic Meetings with MOT

A fixed week day and time will be set aside for Project traffic meetings. The Concessionaire's Traffic Control Personnel, Traffic Engineer, Traffic Manager, and selected senior site management of the Concessionaire will meet with the MOT.

3.6.3 Closure Parameters on Record Forms

The Concessionaire will provide each TCP with a record form which outlines specific parameters or design features for the activity they are monitoring. Such features will include station limits of control points, purpose of the Closure, measured quantity of work to be conducted during the stoppage, design or maximum queue limits, design or maximum stoppage time, design start and end of Closure, and maximum time for clearing queues.

3.7 Enhanced Response to Incidents and Unexpected Events

3.7.1 Coordination through the Traffic Control Centre

Major incidents and unexpected events (such as heavy rain, washouts, debris flows, forest fires, rock instability, etc.) will be coordinated through the Traffic Control Centre, where additional communication resources will be available to alert appropriate authorities and the public.

The Traffic Control Centre will provide centralized coordination between construction zones and adjacent work areas throughout the corridor.

3.7.2 Equipping Concessionaire Site vehicles with Service Patrol capabilities and training

The Concessionaire will provide service patrol capability, including tow bar and rigging, for seven vehicles. Primary operators of these vehicles will be trained in the proper use and limitations of the equipment. Requirements and conditions for performing roadside assistance will be determined prior to start of construction and to the satisfaction of the Province's Representative.

3.8 Enhanced Public Information and Regular Communication

3.8.1 Open Houses

The Concessionaire will support the Ministry in holding up to five open houses on traffic management with respect to the Concession Highway. Scheduling of the open houses is anticipated before commencement of construction. The Concessionaire will prepare display graphics and provide technical support staff.

3.8.2 Public website with real time information

The Concessionaire will provide a dedicated traffic component of a public web site including real time display of delays and travel times between Horseshoe Bay to Squamish, and Squamish to Whistler. The website will provide the public with current information with respect to weekly closure schedules and expected travel times between corridor destinations.

3.8.3 Central programming of Changeable Message Signs

The Concessionaire will utilize remotely programmed Changeable Message Signs (CMS) throughout the Concession Highway corridor to inform the public of scheduled closures and expected delays. The CMS messaging will be coordinated and programmed with the assistance of the Traffic Control Centre and the input of MOT.

3.8.4 Dedicated phone line to respond to public concerns

A toll-free dedicated, manned phone line will be instituted by the Concessionaire for public use. The public will be able to call for pre-recorded updates on the Concession Highway conditions and delays or, at certain times, to speak with a Concessionaire representative regarding problems along the corridor.

3.9 Enhanced Local Coordination

3.9.1 Pre-construction traffic meetings with communities

Pre-construction meetings will provide communities with an opportunity to ask questions about the Project Traffic Management Plan, voice concerns regarding traffic impacts, and to discuss how to mitigate impacts during construction. Pre-construction meetings will be arranged with the communities of Horseshoe Bay, Lions Bay, Britannia Beach, Squamish, and Whistler.

3.9.2 Construction Coordination meetings with communities

During construction of Works along the Concession Highway, meetings with local community representatives will be arranged to discuss traffic impacts from construction and to provide improvements where concerns exist. These meetings will be held every two months with each community during the first year of construction, then bi-yearly for the remainder of the construction. These meetings will be arranged with the community representatives of Horseshoe Bay, Lions Bay, Britannia Beach, Squamish, and Whistler.

3.10 Enhanced Detours and Segregation of Construction and Traffic

As part of the Concessionaire's detour plans, the Concessionaire will design and clearly mark the construction access points.

The Concessionaire will minimize traffic disruptions caused by the access of work vehicles. Access points will be designed with each custom traffic control plan which considers the location

and type of work, expected queue lengths, sight distances, and any relevant data recorded during similar traffic activities.

4. Traffic Control Plan

The following outline has been prepared by the Concessionaire as a basis for preparation of the Traffic Control Plan to be incorporated into the overall project TMP for use during construction of the Project.

4.1 Scope of Work

The scope of work for the Project requires a number of detour widening and staged alignment changes throughout the entire Site. These changes will be carefully planned to ensure the minimum impact to the public is achieved. Single-lane alternating traffic Closures will be employed along with periodic Closures to allow construction activity and access to the Concession Highway. A detour and construction work scope will be provided for each section of the Concession Highway later in this plan.

4.2 References

The Concessionaire Traffic Control Plan will comply with the requirements of Part 18 of the OHS Regulation.

Traffic control measures will be in accordance with the TMP. In the case of conflict, the TCMWR will prevail over SS194. These standards are modified as shown in Table 2.3.5b-3. Capitalized Terms used in this Clause will have the meaning ascribed in the RFP Glossary of Terms, the TCMWR, or TAC's "Geometric Design Guide for Canadian Roads".

Table 2.3.5b-3: TMC Standard – Modifications

S2S is assigned such responsibility and will at all times make provision for traffic through the work area to a sufficiently high standard in accordance with the RFP. S2S is committed to the safety and unencumbered mobility of public, the safety of pedestrian traffic and site workers, as well as protection of the work.	
Further to TCM 1.4: Traffic Control (Work) Zones	Any one or more of the advance warning area, transition area, buffer space, work area, and termination area of the traffic control Work Zone may be outside the Limits of Construction, but this will in no way diminish S2S's responsibility to meet the requirements of the TCMWR.
Further to TCMWR 1.5: Installation, Maintenance and Inspection of Traffic Control	Construction signs specific to an operation will be either removed or effectively covered so that their message is obscured whenever the operation is not in progress.

Rockfall hazard areas – Rockfall hazard areas will be identified by the Concessionaire and a list by highway section will be incorporated into the TMP prior to construction.

4.3 Construction Constraints

Further to SS 194.30, traffic control operation durations and time frames for stoppages and closures will be in accordance with the Construction Output Specifications. This addresses all daytime and night time activities including stoppages (20 minute, 10 minute), minor interruptions (2 minute), road closures, and any single-lane alternating traffic situations.

No Closures will be allowed in the following areas:

- Highway Section DB 3: Within the Village of Lions Bay between immediately south of Kelvin Grove and immediately north of M Creek;
- Highway Section DB 8: Within the urban area of Squamish between Stawamus Forestry Road and Depot Road.

Table 2.3.5b-5: Allowable Stoppages & Closures: Periods of the Year

Type of Stoppage/Closure	Time Periods					
	January 1 to February 29	March 1 to April 20	April 21 to June 15	June 16 to September 15	September 16 to November 30	December 1 to December 31
Highway 1 to Horseshoe Bay						
2-minute Stoppage	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
10-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
20-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Night-time Closure	Not Permitted	Not Permitted	Permitted	Not Permitted	Permitted	Not Permitted
Scheduled Daytime Closure	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted	Not Permitted
Horseshoe Bay to Lions Bay (3)						
2-minute Stoppage	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
10-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
20-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Night-time Closure (4)	Not Permitted	Not Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Daytime Closure (4)	Not Permitted	Not Permitted	Permitted	Not Permitted	Permitted	Not Permitted
Lions Bay to Squamish (Depot Road)						
2-minute Stoppage	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
10-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
20-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Night-time Closure (4)	Not Permitted	Not Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Daytime Closure (4)	Not Permitted	Not Permitted	Permitted	Not Permitted	Permitted	Not Permitted
Squamish (Depot Road) to Whistler (Function Junction)						
2-minute Stoppage	Permitted	Permitted	Permitted	Permitted	Permitted	Permitted
10-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
20-minute Stoppage	Not Permitted	Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Night-time Closure (4)	Not Permitted	Not Permitted	Permitted	Permitted	Permitted	Not Permitted
Scheduled Daytime Closure (4)	Not Permitted	Not Permitted	Permitted	Not Permitted	Permitted	Not Permitted

Notes: 1. See RFP Volume 3 Table 3-5 for reference. 2. See Table 2.3.5.2(B) for Stoppage/Closure Details 3. This segment refers to the active portion of the Highway 99. 4. No Closures permitted in the Village of Lions Bay or urban Squamish.

Table 2.3.5b-6: Allowable Stoppages & Closures: Durations & Time Frames

Type of Stoppage or Closure	Duration	Stoppage and Closure Timeframes		
		Monday to Thursday (1)	Friday (1)	Saturday & Sunday (1)
Highway 1 to Horseshoe Bay				
2-minute Stoppage	2 min	12:00 am to 6:00 am	12:00 am to 6:00 am	Not Permitted
		9:00 am to 5:00 pm	9:00 am to 12:00 pm	
		8:00 pm to 12:00 am		
10-minute Stoppage (3)	10 min	12:00 am to 5:00 am	12:00 am to 5:00 am	Not Permitted
20-Minute Stoppage(3)	20 min	12:00 am to 5:00 am	12:00 am to 5:00 am	Not Permitted
		1:30 pm to 2:30 pm		
Scheduled Daytime Closure	N/A	Not Permitted	Not Permitted	Not Permitted
Scheduled Night time Closure (2)	2 hours	3:00 am to 5:00 am	3:00 am to 5:00 am	Not Permitted
Horseshoe Bay to Lions Bay				
2-minute Stoppage	2 min	12:00 am to 6:00 am	12:00 am to 6:00 am	Not Permitted
		9:00 am to 5:00 pm	9:00 am to 12:00 pm	
		8:00 pm to 12:00 am		
10-minute Stoppage	10 min	12:00 am to 6:00 am	12:00 am to 6:00 am	Not Permitted
		9:00 am to 4:00 pm	9:00 am to 12:00 pm	
		8:00 pm to 12:00 am		
20-Minute Stoppage (4)	20 min	12:00 am to 6:00 am	12:00 am to 6:00 am	Not Permitted
		10:00 am to 2:00 pm		
		10:00pm to 12:00am		
Scheduled Daytime Closure (4)	1hour	1:30 pm to 2:30 pm	Not Permitted	Not Permitted
(April 21 to June 15 & Sept 16 to Nov 30)				
Scheduled Night time Closure (4)	4 hours	12:00 am to 2:00 am	12:00 am to 2:00 am	Not Permitted
(April 21 to June 15 & Sept 16 to Nov 30)		3:00am to 5:00 am	3:00am to 5:00 am	
Scheduled Night time Closure (4)	2 hours	3:00 am to 5:00 am	3:00 am to 5:00 am	Not Permitted
(June 16 to Sept 15)				
Lions Bay to Squamish (Depot Road)				
2-minute Stoppage	2 min	12:00 am to 6:00 am	12:00 am to 6:00 am	Not Permitted
		9:00 am to 5:00 pm	9:00 am to 12:00 pm	
		8:00 pm to 12:00 am		
10-minute Stoppage	10 min	12:00 am to 6:00 am	12:00 am to 6:00 am	Not Permitted
		9:00 am to 4:00 pm	9:00 am to 12:00 pm	
		8:00 pm to 12:00 am		

Type of Stoppage or Closure	Duration	Stoppage and Closure Timeframes		
		Monday to Thursday (1)	Friday (1)	Saturday & Sunday (1)
20-Minute Stoppage(5)	20 min	12:00 am to 6:00 am	12:00 am to 6:00 am	Not Permitted
		10:00 am to 2:00 pm		
		10:00pm to 12:00am		
Scheduled Daytime Closure (5)	2 hours	12:30 pm to 2:30 pm	Not Permitted	Not Permitted
(April 21 to June 15 & Sept 16 to Nov 30)				
Scheduled Night time Closure (5)	4 hours	12:00 am to 2:00 am	12:00 am to 2:00 am	Not Permitted
(April 21 to June 15 & Sept 16 to Nov 30)		3:00am to 5:00 am	3:00am to 5:00 am	
Scheduled Night time Closure (5)	2 hours	3:00 am to 5:00 am	3:00 am to 5:00 am	Not Permitted
(June 16 to Sept 15)				
Squamish (Depot Road) to Whistler (Function Junction)				
2-minute Stoppage	2 min	12:00 am to 6:00 am	12:00 am to 6:00 am	Not Permitted
		9:00 am to 5:00 pm	9:00 am to 12:00 pm	
		8:00 pm to 12:00 am		
10-minute Stoppage	10 min	12:00 am to 6:00 am	12:00 am to 6:00 am	Not Permitted
		9:00 am to 4:00 pm	9:00 am to 12:00 pm	
		8:00 pm to 12:00 am		
20-Minute Stoppage(5)	20 min	12:00 am to 6:00 am	12:00 am to 6:00 am	Not Permitted
		10:00 am to 2:00 pm		
		8:00 pm to 12:00 am		
Scheduled Daytime Closure (5)	2 hours	12:30 pm to 2:30 pm	Not Permitted	Not Permitted
(April 21 to June 15 and Sept 16 to Nov 30)				
Scheduled Night time Closure (5)	7 hours	12:00 am to 2:00 am	12:00 am to 2:00 am	Not Permitted
(April 21 to June 15 and Sept 16 to Nov 30)		3:00am to 6:00 am	3:00am to 6:00 am	
		10:00pm to 12:00am		
Scheduled Night time Closure (5)	3 hours	3:00 am to 6:00 am	3:00 am to 6:00 am	Not Permitted
(June 16 to Sept 15)				

Notes: 1. When a statutory holiday or special event occurs, RFP Volume 3, Section 3.2.1.8 will apply. 2. When a night time closure is implemented, no stoppages are permitted between 2:00 a.m. and 3:00 a.m. 3. Stoppages are subject to coordination with B.C. Ferries. 4. When a daytime closure is implemented, no stoppages are permitted between 10:00 a.m. and 1:30 p.m. When a night time closure is implemented, no stoppages are permitted between 2:00 a.m. and 3:00 a.m. 5. When a daytime closure is implemented, no stoppages are permitted between 10:00 a.m. and 12:30 p.m. When a night time closure is implemented, no stoppages are permitted between 2:00 a.m. and 3:00 a.m.

4.4 Highway 1 Closures

The Concessionaire will assess traffic volumes to the satisfaction of the MOT representative prior to the implementation of the work. For the construction of the south DB1 interchange and the Eagle Bluffs structure, traffic control activities will be coordinated around the B.C. Ferries schedules to avoid southbound stoppages during ferry off-loading and to avoid northbound stoppages during peak terminal periods (especially if B.C. Ferries has to provide overflow traffic control outside their terminal holding areas). Specific traffic coordination meetings will be held

regularly with the terminal management and their traffic control contractor when construction is being carried out between Exit 2 and the Nelson Creek bridge.

4.5 Conditions for Single-Lane Alternating Traffic

During the allowable time frames, and once traffic queues have been cleared, single-lane alternating traffic will be permitted provided the Closure of traffic in any one direction does not exceed 10 minutes. If the traffic queues cannot be cleared within the allowable durations, the Concessionaire will immediately remove the single-lane alternating regime and open both lanes of the road to traffic.

Implementation of single-lane Closures resulting in alternating traffic will be permitted during the following times only:

- during 10- and 20-minute stoppage time frames, only after traffic queues resulting from local 10- or 20-minute stoppages are cleared and a free flow period is initiated; and
- anytime during a 20-minute stoppage time frame provided the Concessionaire does not initiate any local 20-minute stoppages within that time frame.

In all cases, the TMP will address the impact to traffic due to the initiation of single-lane alternating traffic. The Concessionaire will not initiate a single-lane alternating regime if it is estimated that the resulting delay durations will be greater than the permissible Closures. This estimation will take into account the length of the work zone and cycle times. If at any time the queue lengths do not allow full clearing of stopped traffic within the single cycle, or if lane movement and allowable stoppage durations are exceeded, the Concessionaire will immediately make both lanes available to the traffic until such time as single-lane alternating traffic can be reinstated without exceeding the permitted Closure duration.

4.6 Traffic Control Documentation

The traffic control schedule will serve to implement and maintain the following traffic control documentation in accordance with Clause 1.5.3 of the Traffic Control Manual (photo-logging is not required).

- *Traffic manager's daily report* – Daily report summarizing all traffic control measures in operation.
- *Traffic manager's activity report* – Daily report to document individual lane Closures. This report will include the Concessionaire field records completed during monitoring of traffic control activities. See Section B.1.5 for details.
- *Traffic control supervisor's daily report* – Daily report summarizing all traffic control activities.
- *Records of traffic control equipment* – Up-to-date record of traffic control equipment installed within the work zone. Traffic control equipment will include, but not be limited to, delineators, signs, CMS, flashing arrow boards, and barricades.

All such records will be maintained by the Concessionaire and will be available to the Ministry, upon request.

4.7 Traffic Control Devices

Scheduled Closures will require CMSs to be activated two weeks in advance. The Concessionaire will also use the CMSs to provide notification of incidents or unplanned traffic pattern changes, as outlined in the “Incident Management and Response Plan”.

Each portable CMS, when in operation, will conform to the guidelines of SS194.46.

4.8 Detour Requirements

The Concessionaire understands the importance of constructing detours that address the needs of all users: cyclists, pedestrians, buses, cars, and trucks. Fundamental requirements for successful construction detour planning include high visibility markings; proper lighting on persons, barriers, and/or the roadway; detour signage that effectively communicates appropriate traffic information; and traffic personnel dedicated to safety and the public interest.

The minimum design requirements for a two-lane detour are provided in Table 2.3.5b-10.

Table 2.3.5b-10: Design Criteria for Detours

Item	Design Criteria
Design speed/posted speed	50 km/h or as approved by the Ministry
Design vehicle	TS7
Maximum grade	8% on highway, 12% on cross-streets
Maximum super-elevation	6%
Vertical clearance	5.0 m (or existing)
Lane width	Existing or minimum 3.25 m travel lanes
Shoulder (open)	Existing or 0.5 m (minimum) paved
Shoulder (closed by barrier)	Existing or 0.4 m (minimum) paved

Further to SS194.27, the Concessionaire will prepare an engineered design for detours, including lane shifts, which will conform to the design criteria in Table 2.3.5b-10. Other detour design considerations are listed below:

- detour signage and sign maintenance;
- detour or temporary road maintenance;
- uniform pavement surfaces and prior pavement markings detour drainage facilities;
- temporary pavement markings and delineation; and
- detour illumination along the entire length of the detour or lane shift.

The engineered design will be submitted to the Province's Representative a minimum of 20 days in advance of detour construction.

4.9 Additional Design Considerations

Additional design considerations are summarized below.

Concrete roadside barrier requirements – Temporary concrete roadside barriers will be utilized in accordance with the Construction Output Specifications and/or the Construction Requirements. Minimum location requirements include the following:

- between detour traffic and median wall construction;

- between detour traffic and rock cut excavations;
- to meet drop-off delineation requirements; and
- where required by the Concessionaire traffic control personnel.

Drop-off requirements – The Concessionaire will minimize any drop-offs exposed to traffic during non-working hours in accordance with the Construction Output Specifications and/or the Construction Requirements. All areas of excavation and their proposed safety measures will be shown in the traffic control plans.

Pedestrians and cyclists – Work zones will have reduced lane shoulder widths, which will impact pedestrians and cyclists. Designated travel paths will be protected and whenever possible separated from work zone hazards. Communications will be sent to bicycle and park trail organizations with information and updates on work zone conditions. In addition, clear signage will be posted advising motorists, cyclists, and pedestrians where the designated paths are and where a vehicular lane is shared by both cars and cyclists.

Access to public washroom facilities – The Concessionaire will provide portable washroom facilities for public use at each approach to a Closure location.

Completed sections of new roadway – The Concessionaire will prepare, as required, a TCP for all completed sections of new roadway not utilized by the travelling public. The TCP will include delineation requirements in all relevant areas.

Protection of roadways – The Concessionaire will be responsible for repair of damaged roadway as described in SS145.28.03. Vehicle load restrictions will be maintained, as provided in the O&M Output Specifications and/or the O&M Requirements.

Local intersections – During construction, access to all local intersections will be available except for short intermittent Closures, as required.

Location and storage of materials and equipment – The Concessionaire will not store materials or equipment on the roadway or shoulder. Materials stored within 6.0 m of the edge-of-shoulder will be protected by barrier and impact attenuators, as required.

4.10 *Speed Limits and Safe Passage*

MOT has the right to determine speed limits along the corridor. In certain instances, the Concessionaire may employ the services of the RCMP to maintain the safety of the public and workers along the corridor. This will only be done as deemed necessary by both the Concessionaire and the Province's Representative.

SCHEDULE 23**CONCESSIONAIRE PROPOSAL EXTRACTS****Annex 4****Operation, Maintenance & Rehabilitation Plan**

This Annex 4 contains supplementary supporting information relating to the Concessionaire's Operation, Maintenance, and Rehabilitation ("OMR") obligations under this Agreement including those obligations contained in the O&M Output Specifications and the O&M Requirements. Nothing in this Annex replaces, supersedes or derogates from such OMR obligations.

The Concessionaire's OMR Plan will be delivered by the Concessionaire's Operations Corporation ("OpCo") to the Province's Representative and will meet or exceed the requirements set out in the O&M Output Specifications and the O&M Requirements where possible by using allocated resources and best practices to support the safety and mobility of the travelling public.

The OMR Plan will describe the Concessionaire's approach to delivering the required range of quality services for the duration of the Contract Period on both the Concession Highway and the Side Roads. In particular, the following will be described:

- daily maintenance activities;
- periodic maintenance activities to extend and preserve the asset value;
- rehabilitation for ultimate replacement, refurbishing, and/or renewal of specific components on the highway (with implementation on adjacent side roads by MOT);
- activities that support the operation of the highway, including the interface with the travelling public (e.g., website, changing message sign ("CMS"), roadside assistance, etc.), vehicle counts, signage, road weather information system, emergency response, etc.;
- operations during the post-construction period; and
- interim measures for use during the initial construction period where applicable.

1.1 Understanding the OPMs, KPMs and APPMs

The Concessionaire confirms that the OMR Plan and the discharge of the Concessionaire's OMR obligations under this Agreement will be consistent with the approach and hierarchy of the three levels of performance measures used to administer the O&M Period. In particular, the levels are:

- *Operational Performance Measures* ("OPMs"), which provide requirements for individual assets as well as various specific corridor management functions. Prescribed requirements are referenced in the O&M Output Specifications and the O&M Requirements, which will, for the purposes of the OMR Plan, be collectively referred to as the "Highway Maintenance Specifications" or the "HMSs", and the highway corridor management specifications as set out in the O&M Output Specifications and/or the O&M Requirements.
- *Key Performance Measures* ("KPMs") of the principal target outcomes for the level of service to be provided in key strategic areas.
- *Asset Preservation Performance Measures* ("APPMs"), which define compliance conditions for each asset, ensuring they are maintained in an average or better condition in keeping with sound asset management practices.

The Concessionaire will develop and implement a typical maintenance management system, which will provide program support as a compliance monitoring system to ensure both standards and response times are achieved or exceeded. OPMs related to providing a safe route for motorists and other Users will also apply in areas where construction activities are taking place.

The Concessionaire Work Plan will detail procedures to be followed for activities related to each HMS, including:

- surface drainage;
- winter;
- roadside;
- traffic;
- bridge and structure;
- emergency; and
- inspections.

The Work Plan will extend the procedures as necessary to meet the Concession Highway corridor management OPMs in a cooperative and well-managed approach and shall include

procedures to achieve those particular requirements that the Concessionaire is obligated to provide under this Agreement including the O&M Requirements that exceed the HMSs. Included will be:

- winter maintenance;
- public relations;
- emergency response;
- utilities management:
- electrical;
- signs;
- wildlife protection;
- rest areas;
- vegetation control;
- litter;
- access control;
- pavement marking;
- avalanche control;
- weather stations (RWIS and RAWS); and
- rock slope stabilization.

1.2 Specific Plans for Key Issues

Under the umbrella of the Quality Management System and without limiting the Concessionaire's obligations under this Agreement, certain maintenance plan details are set out herein for the following key issues.

1.2.1 Surface Maintenance

The Concessionaire will carry out surface maintenance on the Concession Highway in accordance with the terms of this Agreement including the O&M Output Specifications and the O&M Requirements including the HMSs, applicable manuals and instructions (including applicable Labour Relations Board orders), Laws and Regulations, and any other Technical Requirements and appropriate standards and specifications and as follows:

- Road patrols will inspect pavement surfaces on a regular basis to identify defects and schedule required work.

- Annual inspections of the Concession Highway including the Side Roads will be carried out during the summer. A report listing the condition defects will be prepared as part of the Asset Management Plan (“AMP”) by November 1 (to be used for adjusting forward works plans as necessary).
- Defects reported will include potholes, slippery surfaces (polishing), scaling/ravelling of the pavement, pavement edge surface loss, stepping at cracks, longitudinal, transverse and diagonal cracking, spalling, surface bumps or depressions, joint sealant loss, joint failures (including blow-ups), and water ponding.
- Concessionaire staff will be directed weekly and daily by the patrol foreman to arrange the needed repairs.
- Required repairs will be scheduled by the patrol foreman, who will direct the field staff to undertake the work in accordance with the time frames noted in the HMSs.
- A supply of needed materials will be kept readily available to meet the repair requirements.
- Potholes will be repaired with hot mix as a first preference to minimize call backs. Alternatively, cold mix or other suitable methods and materials will be used.
- Loss of pavement at the edge of the driving lane will be repaired using hot mix or alternative methods and materials to keep a straight and consistent edge of pavement. Areas of pavement in the vicinity of the defect will be examined and rectified at the same time to avoid recalls.
- The annual pavement inspection will identify areas where roughness is approaching the performance threshold; scheduling of corrective action will be taken accordingly.
- Bumps and depressions will be treated with an appropriate safety precaution, such as the installation of a “bump sign”. Action will be carried out immediately by the patroller if the defect is considered hazardous. Bumps and depressions at bridge approaches will be tracked to monitor continuing deterioration and to consider further action.

- Water ponding caused by high gravel shoulders or sand berms will be corrected by grading or other appropriate means.
- On adjacent side roads that are surface-treated, flushing, corrugations / wash-boarding, broken-up areas, and soft or wet areas will be corrected as much as practicable, and the defect will be reported to MOT as a candidate project for rehabilitation in accordance with the AMP.
- Potholes, corrugations/wash-boarding, or distortions on gravel surfaces will be corrected by grading where appropriate; crossfall correction will be done where possible by routine grading, as per the applicable standard.
- Dust control on gravel surfaces will be applied to areas that meet the location requirements as specified in HMSs for Highway Concessions Section 1-140.
- Surfacing aggregates for gravel areas will be made available for placement to address routine deficiencies as confirmed by MOT.
- Protruding rocks or stumps will be reported to MOT for consideration as a candidate project for rehabilitation in accordance with the AMP.
- When any hazardous road surface condition is discovered on either the Concession Highway including the Side Roads, or when the Concessionaire is made aware of any hazardous condition by MOT, the police, or the public, immediate steps will be taken to mark, make safe, and/or install whatever interim safety precautions are necessary pending ultimate repair of the condition. If the situation is on an adjacent road, it will be reported to MOT for further consideration.

The O&M Output Specifications and the O&M Requirements provide further details related to periodic maintenance and rehabilitation of running surfaces that constitute obligations of the Concessionaire under this Agreement.

1.2.2 Bridge Maintenance

Bridge inspection, cleaning, and repair activities will be coordinated and scheduled by the Concessionaire's operations manager for inclusion in the OMR work to be performed by the Concessionaire, as follows:

- Bridges will be observed during scheduled routine road patrols and inspected annually in the spring (following bridge sweeping and washing). Inspections will

also be performed after vehicle collisions, severe weather, and/or when perceived problems may exist to identify defects and schedule required work.

- Detailed structural inspections will be performed in accordance with the appropriate schedule determined by a qualified consultant.
- In addition to the mandatory inspection schedule, qualified staff will inspect the bridges annually in the spring and produce a condition report for the AMP. For bridges in adjacent areas, the report will be provided to MOT for further consideration.
- Minor repairs will be scheduled for completion by the Concessionaire staff, with other work being performed by qualified construction subcontractors.
- Defects causing a hazard will be addressed immediately and coordinated by the patrol foreman.
- Activities such as sweeping and washing, deck pothole repair, and crack repair will be scheduled for completion within the time frame outlined in the HMSs.

The O&M Output Specifications and O&M Requirements provide further details related to periodic maintenance and rehabilitation of bridges that constitute obligations of the Concessionaire under this Agreement.

1.3 Road Patrolling and Condition Monitoring

In addition to the Concessionaire's obligations in the O&M Output Specifications and the O&M Requirements, if patrollers and/or operators are off-shift, the Concessionaire will call them in to monitor rapidly changing conditions when a storm is imminent. Supplementary patrolling may also be undertaken by an operator who is called in to observe and report conditions, in anticipation of required active equipment operations; the patrol foreman will also perform supplementary patrolling as needed. Patrollers may become operators as necessary, and will be responsible for arranging the dispatch of additional operators.

Patrolling boundaries may be adjusted to overlap, depending on the characteristics of individual storm events. This will be based on full communication between the Operations Centre, and all patrollers and operators throughout the area.

The Concessionaire shall build, establish and maintain facilities and stockpiles for winter materials as necessary for winter maintenance purposes on the Concession Highway.

Prior to a forecast storm event, during periods of deteriorating road and/or weather conditions, and during a period of ongoing winter services, the patrollers will prepare an ongoing snow and ice control strategy, mobilize off-site operators, and dispatch and deliver winter services as needed.

Throughout the winter, core staff operators will have either dedicated or standby shifts similar to the patroller shift cycle. It is intended to stagger the start time of the patroller shift to be earlier than the operator shift. Also, when the patrol foreman is present, he may support road observations when needed. While this arrangement differs from the shifts currently in practice, an early start will improve initial response times as well as the early morning road condition. Note: shift cycles and start/end times may be altered, earlier or later, depending on local and evolving needs.

When staff is not responding to winter storm conditions, they will perform other required routine maintenance activities to ensure that standards for all maintenance activities are met. Off-storm duties typically include maintenance yard cleanup, equipment maintenance, and other miscellaneous field maintenance activities. The patrol foreman will monitor the patroller and operator schedules along with other activities to ensure they continue to meet the O&M Output Specifications and have adequate rest to perform winter equipment operation services.

Should an assigned patroller not be available for their scheduled shift, an alternate patroller or trained operator or seasonal staff member will act as a replacement. A suitable pool of trained operators will be available to drive the equipment; all eligible staff members will serve as operators as necessary.

The Work Plan assumes the availability of a given number of combination plow-and-spreader units (alternate fleet arrangements that involve plow-only and/or spreader-only units may evolve to suit the need). A roster of on-call, top qualified individuals will be maintained to operate each piece of equipment, and a list of stand-by contingency or backup operators will also be prepared to operate equipment during periods of extended duration. Additional seasonal operator/workers will be hired to operate in-house equipment and perform routine maintenance tasks during the winter season. The Concessionaire may utilize “call-in” operators to relieve permanent staff and seasonal operators, so the working hours of standard employees conform to the *Transportation*

Act, S.B.C. 2004 c. 44. These call-in employees will be paid an hourly rate for their services and receive the relevant training. The Concessionaire intends to deploy only single-operator combination units.

Details on the delivery of these commitments and other aspects of the Winter Maintenance Plan will be provided as part of the annual Winter Preparedness and Mobilization Plan.

The Concessionaire intends to source and operate a fleet of tandem axle trucks over the term of this contract, suitably equipped as a combination unit with a hopper and a plow, or a plow-and-wing. On-board prewetting capability will be included on each of the combination units, including the assigned spare unit.

1.4 Winter Materials

Salt will be applied prevent snow and ice from bonding to the road surface, to facilitate plowing, and to quickly return the Concession Highway to bare pavement as quickly as possible. Sand will be applied where enhanced friction is desired. Both sand and salt will be prewettered with salt brine when it is expected to have a beneficial effect (e.g., to speed the dissolution of salt or to enhance retention of the material on the road).

All of the above methods are known as best practices in the delivery of snow and ice control services. The Concessionaire will stay current with these practices, and will incorporate any improvements that evolve over time to ensure the best level of service possible is provided.

The Concessionaire estimates that some 4,000 t of salt, 15,000 t of sand and up to 1,500,000 litres of salt brine may be used each winter on average. Note: the use of salt, sand, and salt brine will be used only to the extent necessary, while remaining prudent as to the amount of materials used and their possible detrimental effect on the environment.

1.5 Emergency Response

To ensure public safety, the Concessionaire will respond quickly, efficiently, and competently to varying degrees of emergencies as follows in addition to the obligations set out in the O&M Output Specifications and the O&M Requirements:

1.5.1 Activation Strategy

Where a narrow corridor restricts access to an emergency area or other vulnerable sites along the corridor, protection from moving traffic will be provided by a guard vehicle, mobile crash attenuator/crash truck, or other devices as necessary. This will ensure the safety of police, fire fighters, and EMS, as well as the public, workers, and others at the incident scene.

When an emergency situation arises such as traffic accidents, spills, road failures, signal outages, debris flows, flooding, etc., the Concessionaire will call in staff using the following procedures:

- The patrol foreman, or assigned alternate, will contact the required patroller by telephone at his or her residence, by cellular phone number (when available), or at a forwarding number left with the patrol foreman.
- The patroller will notify appropriate emergency agencies, call in standby workers, and contact other workers as necessary.
- All emergencies will be reported via radio to PHCC.
- The patroller will proceed to the emergency site to begin traffic control, supervise the necessary work and coordinate with emergency forces.
- A sufficient number of emergency signs and traffic control devices will be stored at the Operations Centre for use in the event of an emergency road closure.
- Local heavy-duty tow trucks and a spill response team will be identified to assist in emergency response and ensure rapid response.
- Given the year-round 24/7 patroller coverage on the corridor, the response time to an incident site will be immediate. Upon assessing the situation, the patroller will dispatch all required resources from the Operations Centre to the scene.
- Procedures for preparing for, and responding to, a potential emergency situation, as well as follow-up procedures, will be contained in the Emergency Response Plan. As highlighted in the Health and Safety Program Training Requirements, the Concessionaire will train all staff that could potentially be required to respond to emergencies. This training will include:
 - occupational health and safety concerns;
 - basic First Aid and CPR training as provided by St. John's Ambulance or equivalent as required by the WCB;

- traffic protection procedures;
- incident management;
- notification procedures; and
- spills first-response procedures.

The Concessionaire will ensure that all appropriate agencies are properly introduced to the Concessionaire organization, scope of work, and necessary staff. The Concessionaire will prepare a complete listing of emergency contacts to be notified in the event of an emergency, including the Ministry of Environment, CANUTEC (Transport Canada's Response and Operations Division) and municipalities in case of a spill.

The Concessionaire will report to MOT by:

- Training maintenance staff in proper emergency response procedures including proper documentation recording.
- Appointing an Emergency Response Coordinator to perform an internal audit function and ensure that occurrences are properly managed, documented, and followed up in compliance with appropriate standards.

1.6 Health and Safety Program

The Concessionaire will adopt Health and Safety Programs and Safety Policies substantially equivalent to those of Miller Paving Limited and Capilano Highway Services, both of which have been used for highway maintenance services for many years. The composite Concessionaire Health and Safety Program will be reviewed on an annual basis.

In meeting the terms of the health and safety policy, only staff members who have the appropriate knowledge, training, and experience will be deemed competent and appointed as supervisors. All staff will receive an initial orientation that will include the necessary training in the OHS Regulation to ensure knowledge and competency regarding the inherent safety hazards. Regular training will be provided to ensure all employees in a supervisory position are familiar with the current requirements of the OHS Regulation and other corresponding regulations.

A copy of the OHS Regulation and the Concessionaire Health and Safety Program will be posted in the workplace.

1.7 Maintenance Operations, Safety Risks, Mitigation and Hazard Management

Maintenance subcontractors must submit the following information so their health and safety policies and practices can be evaluated:

- the New Experimental Experience Rating (NEER);
- the Council Amended Draft #7 (CAD-7) Rating;
- injury frequency performance over the last two years;
- WCB orders/warnings over the last two years;
- clearance letter from WCB;
- letter of independent operator status; and
- copy of current vehicle registration record.

The Concessionaire will monitor the work of subcontractors to ensure compliance with the OHS Regulation and the Concessionaire Health and Safety Program. Non-compliance may result in subcontract termination.

The Concessionaire uses an occupational health and safety hazards vs. work operation matrix to identify worker-related safety risks associated with maintenance activities (see Table 2.4.1-1). Through health and safety training for all staff employees, combined with the enforcement of policies and safe work practices/procedures, these risks can be mitigated.

A hazard analysis will be conducted for all types of work associated with this project and the results will be reviewed by the Joint Health and Safety Committee. Training and information will be provided to employees involved for each specific hazard encountered. Work methods will be modified as a result of the hazard analysis. Also, the Concessionaire will continue to assess workplace hazards throughout the duration of the project.

Table 2.4.1-1: Maintenance Operations – Health & Safety Risks

Maintenance Operation		Health & Safety Risks		
1	Bridge Cleaning	Confined space	Traffic	Vehicle/equipment
		Working around water	Fall from height	Noise
2	Bridge Inspection/Maintenance	Confined space	Traffic	Noise
		Working around water	Fall from height	
3	Road Sweeping	Eye/face	Traffic	Noise
		Vehicle/equipment	Dust	Skin
4	Culvert Cleaning	Confined space	Traffic	Vehicle/equipment
		Working around water	Fall from height	Noise
5	Catchbasin Cleaning	Confined space	Traffic	Vehicle/equipment
		Biological	Fall from height	Noise
		Eye/face	Excavation	
6	Ditching	Excavation	Eye/face	Traffic
		Vehicle/equipment		
7	Traffic Control	Traffic/visibility	Vehicle/equipment	
8	Spill Containment	Confined space	Skin	Chemical
		Traffic/visibility	Biological	
		Eye/face	Fire/explosion	
9	Debris Removal	Eye/face	Traffic/visibility	Chemical
		Fire/explosion	Skin	
10	Dead Animal Removal	Eye/face	Traffic/visibility	Biological
		Skin	Vehicle/equipment	
11	Highway Repairs	Excavation	Traffic/visibility	Hot work
		Eye/face	Vehicle/equipment	Noise
12	Shoulder Grading	Traffic/visibility	Vibration	
		Vehicle/equipment	Noise	
13	Drop-off Repair	Excavation	Traffic/visibility	Vibration
		Eye/face	Vehicle/equipment	Noise
14	Pothole Patching	Eye/face	Vehicle/equipment	Noise
		Skin	Chemical	Respiratory
		Traffic/visibility	Hot work	
15	Guide Rail Repairs	Electrical	Traffic/visibility	Noise
		Eye/face	Vehicle/equipment	
		Skin	Vibration	
16	Sign Maintenance/Installation	Electrical	Skin	Vehicle/equipment
		Eye/face	Traffic/visibility	Fall from height
		Foot/head		

Maintenance Operation		Health & Safety Risks		
17	Tree Removal	Chainsaw	Foot/head	Vehicle/equipment
		Electrical	Skin	Vibration
		Eye/face	Traffic/visibility	Hot work/cutting
18	Grass Control	Eye/face	Traffic/visibility	Vibration
		Skin	Vehicle/equipment	Noise
19	Herbicide Control	Confined space	Traffic/visibility	Respiratory
		Eye/face	Vehicle/equipment	
		Skin	Chemical	
20	Litter Collection	Foot	Biological (including liquid filled bottles found by the roadway)	Thermal/UV
		Skin		
		Traffic/visibility		
21	Snow Plowing	Fire/explosion	Traffic/visibility	Noise
		Foot	Vehicle/equipment	
		Skin	Vibration	
22	Spreading Sand/Salt	Fall from height	Skin	Vibration
		Foot	Traffic/visibility	Noise
		Lock/tag out	Vehicle/equipment	
23	Loader Operation	Electrical	Skin	Vibration
		Excavation	Traffic/visibility	Noise
		Fire/explosion	Vehicle/equipment	Lock/tag out
24	Grader Operations	Fire/explosion	Traffic/visibility	Hot work
		Foot	Vehicle/equipment	Noise
		Skin	Vibration	Lock/tag out
25	Beaver Dam Removal	Chainsaw	Foot	Biological
		Excavation	Skin	Vibration
		Explosives	Vehicle/equipment	Noise
		Eye/face	Working around water	
26	Electrical Maintenance	Electrical contact	Vehicle/equipment	Chemical
		Traffic/visibility	Falls from height	
		Eye/face/skin	Material handling	
27	Pavement Marking	Traffic/visibility	Chemical	Thermal/UV
		Vehicle/equipment	Material handling	Electrical (120V generator)
		Eye/face/skin	Fire	

1.8

WHMIS Program

- All hazardous materials used and stored in the workplace will be identified and inventoried in accordance with the Workplace Hazardous Materials Information System (“WHMIS”) regulations made under the OHS Regulation.
- Current material safety data sheets (“MSDSs”) for all pertinent hazardous materials will be stored at the WHMIS station in the Operations Centre to assist in the appropriate handling, storage, and disposal of these materials.

- No new hazardous materials will be introduced to the project without first being approved by the Joint Health and Safety Committee. The Committee will ensure that all information is available and that proper training is conducted before granting approval.
- The WHMIS “Participant Handbook” will be made available to all employees.
- Employees who work with, or in close proximity to, hazardous materials will have formal training under WHMIS regulations.
- Symbols are shown in the policy for reference.

1.9 Safe Work Procedures System

- All new employees and employees returning after an extended absence must attend a safety orientation program.
- All employees will be made aware of the Safety Policy, Safety Handbook, and safe work practices with particular emphasis on working on high volume highways, use of personal protective equipment, and hazard identification.
- Employees will attend monthly group safety meetings.
- Safety stickers for hard hats will be issued when employees are certified under the Certification Plan.
- A Safe Work incentive program that rewards increasing years of accident-free performance will be established.
- Maintenance work and traffic control will be conducted in compliance with guidelines found in the “*Traffic Control Manual for Work on Roadways*”.

1.10 Employee Accident Reporting and Investigation Process

- Immediately arrange first aid and emergency transportation.
- Ensure the scene of major accidents is disturbed as little as possible and that the Health and Safety Supervisor is notified immediately.
- Report accidents immediately to supervisors.

- Complete the Employee's Accident/Incident Report.
- Prepare the Functional Abilities Form for Timely Return to Work.
- The Operations Manager will investigate the accident and complete an investigation report, which must be filed with the safety department within two working days of the incident.
- Inform the Safety Department if medical aid or absence from work due to accident is required.
- Accidents involving company vehicles require police notification, supervisor notification, and completion of a driver's accident report. All persons involved must remain (if possible) at the scene until the local investigation is complete. The supervisor will notify the Health and Safety Supervisor and Equipment Supervisor if there is damage to the vehicle. The Safety Supervisor will also investigate the accident and confirm the accident report and driver's accident report.
- For property damage accidents, a property damage report must be completed and submitted to the Equipment Supervisor; in the event of injury to non-employees, the Health and Safety Supervisor must be notified.
- The Health and Safety Supervisor is to be notified when a staff member returns to work following a workplace accident.

1.10.1 Employee Training

Safety training programs will be prepared and presented by the Concessionaire Health and Safety Supervisor, with input from relevant safety agencies. These programs will include:

- an orientation program for new or returning employees;
- equipment orientation, route training, and others skills upgrading as required;
- performance-based training by designated instructors where field performance of the appropriate guidelines is monitored;
- training for traffic control personnel by qualified Traffic Control Instructors using the booklets, "Traffic Control Person Training – Participant Guide" and "Traffic Control Manual for Work on Roadways" (issued and monitored by the B.C. Safety Network);

- specific training on traffic control, Transportation of Dangerous Goods legislative requirements, and containment of spills for employees working on freeways;
- general driver training and defensive driving training to meet ICBC and National Safety Code standards for truck driver Class 3, truck driver Class 1, float operators, tanker operators, truck and trailer operators, in service operators;
- truck driver training for personnel operating specialized equipment such as front-end loaders, graders, plow-spreader combination units, bulldozers, road rollers, pavers and other road maintenance equipment, as well as forklift trucks;
- records of all training and licensing qualifications are kept with personnel records; and
- CPR and first aid training as required by WCB.

1.10.2 Health and Safety Meetings / Inspections

- The patrol foreman will conduct monthly safety meetings in accordance with the Workers Compensation Act.
- Minutes of each meeting are kept to record topics, attendance, and safety concerns. Each concern must be addressed at the next meeting.
- Based on the requirements of the Workers Compensation Act, a Joint Health and Safety Committee will be established where 20 or more workers are employed. Meetings will be held at least once per month and an appropriate monthly report will be issued.
- All members of the Committee will attend Safety Network CORE certification and workplace-specific training.
- A Committee member will be designated to carry out monthly workplace inspections.
- All employees are responsible for daily inspections of their areas and equipment, and must bring any deficiencies to the attention of their supervisor or the Health and Safety Supervisor at any time.

1.10.3 Violations Under the Workers Compensation Act

The Concessionaire's policy of response to violations under the Workers Compensation Act identified by the Concessionaire's management, MOT, or the WCB is based on past precedents

for minor incidents. The Concessionaire's policy for responding to potential violations is as follows:

- Minor infractions identified by MOT are expected to be received directly by the Operations Manager. The Operations Manager will note the deficiency, take appropriate action to correct the problem, document the occurrence, and follow up with MOT.
- For more serious infractions, the Operations Manager will immediately take the necessary steps to rectify the cause of the violation by investigating the cause and will reprimand and/or discipline the offending employee where an employee's actions are the cause of the violation. Further retraining will be provided as required.
- All inspection reports from WCB will be forwarded to the Health and Safety Supervisor for review and follow up. Copies will be distributed to the Concessionaire senior management and immediately to MOT by fax or other means where appropriate.
- The Operations Manager will immediately take action to remedy the use of non-approved substances or materials that arrive on site without proper WHMIS information sheets. All employees using restricted products must be trained in the use and safe handling of all products, as well as the procedures required should a mishap occur.
- Where an employee commits a serious error that affects the safety of work operations, the employee will be sent home for the day and further actions (as described above) will be carried out.
- The Concessionaire may terminate subcontracts for non-compliance with the OHS Regulation and/or the Concessionaire Health and Safety Program.
- The Concessionaire may consult with MOT to resolve an approved action plan and ensure that the violation is not repeated. The results of any approved action plan will be incorporated into the Concessionaire's training and safety programs. Employees who are repeat offenders will be disciplined.

1.10.4 Traffic Control Procedures

The Concessionaire will use traffic control standards and procedures for work operations and emergencies in strict accordance with the regulations as follows:

- Temporary signage for work zones will be erected in accordance with the requirements of the Traffic Control Manual for Work on Roadways (“TCM”).
- Access to fire hydrants, water and gas valves, hydro, television cable systems, and other utilities will be provided as well as access for pedestrians and vehicles during the work.
- A road through the work site will be provided at all times with shoulder and lane closure signage and traffic coning applied in accordance with the requirements of the TCM.
- A minimum of two flagpersons (one at each end of the work area) will control traffic during lane closures in compliance with the TCM. Where flagpersons are not in visual contact, a two-way radio system will be used to coordinate traffic switching. More efficient or automated flagging.
- Operations that are approved during the term of the project will also be considered.
- Lane closures will be carried out using the appropriate truck- or trailer- mounted illuminated “moving arrow”, as per the TCM.
- Adopt-A-Highway work groups will be provided with safety vests and temporary “road work” signs.
- For necessary road closures, road closure barricades will be provided in collaboration with the local police and RCMP. Where appropriate, a flagperson will be stationed at the closure to answer questions from motorists. If the closure is long term, detour signs will be erected to direct traffic to alternate routes at appropriate intersections. The Concessionaire will notify PHCC of the nature and timing of the work.

Traffic control personnel will consist of flagpersons, sign truck operators, sign installers, maintenance workers, and equipment operators. To ensure public and employee safety, the Concessionaire will provide training as follows:

- All workers will attend a one-day safety orientation meeting conducted by the Operations Manager and Health and Safety Supervisor, along with the Equipment Supervisor when appropriate.
- Flagpersons will attend a two-part course, and further training if required, that outlines the proper procedures of flagging, coordination between flagpersons, use of two-way radios, and personal protection equipment (e.g., mandatory vests, hardhat, and boots, etc.). The course will be held in the office and on site. The course material will be based on the “Traffic Control Person Training – Participant Guide” and “Traffic Control Manual for Work on Roadways” issued and monitored by the B.C. Safety Network.
- All workers and operators will be given a safety course on working adjacent to freeways. The proper use of signing, coning, and flagging will be emphasized.
- All supervisors involved in traffic control operations will be issued a copy of the TCM for their guidance.

1.10.5 Health and Safety – Safety and Mobility Exceedances

The Concessionaire will employ all known and evolving best practices to ensure optimal safety for the traveling public and workers without compromising mobility. To accomplish this objective, the Concessionaire will:

- plan, develop, and design the project with due regard for traffic impacts;
- select materials and methods with consideration for minimizing traffic impacts;
- provide operational and project-specific traveller and traffic information; and
- employ ITS and innovative technology where appropriate (end-of-queue notification, delay time approximation, “ETA” signage, work zone demarcations, etc.).

2. Environmental Matters

2.1 Commitment to the Environment

The Concessionaire will ensure that all Project activities are compliant with existing environmental legislation and reflect sound principles of environmental stewardship.

The Concessionaire will implement an Environmental Management System that will include the development and enforcement of environmental codes of practice, staff training, and ongoing monitoring and reporting.

2.2 Environmental Policies and Procedures - Sensitive Sites

The Concessionaire will, through the Contract Period, continually review the Site and Adjacent Areas to identify and avoid, to the greatest extent possible, potentially environmentally sensitive areas. This review will be carried out in consultation with MOT, the Ministry of Water, Land and Air Protection (“WLAP”), the Department of Fisheries and Oceans (“DFO”), and local conservation authorities. The need for specific Environmental Protection Plans (EPP) will be assessed at the start of each summer maintenance period, and specific environmental protection measures will be instituted as necessary.

2.2.1 Watercourse and Fish Habitat Protection

- Sensitive watercourses, fisheries, and ditches that drain into fish habitat will be identified. Prior to carrying out any activity that could alter fish habitat, the Concessionaire will consult with the local DFO representative and, where necessary, obtain authorization from the DFO.
- Maintenance activities will at all times be carried out in a way that minimizes the introduction of deleterious substances to watercourses following known best practices.
- In accordance with appropriate standards, drainage problems outside the highway right-of-way limits will be referred to MOT.

2.2.2 Ditch Cleaning

- Each year the Concessionaire will review the planned ditch cleaning program prior to the start of the cleaning operations. Where appropriate, sensitive locations will be identified to MOT to be considered for the development of a

site-specific environmental protection plan in consultation with the appropriate Governmental Authority.

- Where necessary, the Concessionaire shall institute environmental protection measures which will include maintenance of vegetative buffers and/or installation of flow check dams to prevent sediment from entering sensitive watercourses.
- The Concessionaire shall periodically inspect check dams and clean them when sediment levels reach one-half of the storage capacity of the dam. Check dams that are found to be damaged will be repaired.
- Prior to conducting cleaning operations in the vicinity of a wetland, the Concessionaire shall carry out an assessment of potential impacts to the wetland and develop suitable mitigating measures.
- Materials from ditching operations and check dam maintenance will be disposed of in accordance with the appropriate Legal Requirements and the requirements of this Agreement.
- Contaminated materials will be managed in accordance with WLAP's Guidance for Contaminated Sites and the Environmental Management Act.

2.2.3 Erosion and Sediment Control

- The Concessionaire shall inspect all areas prone to erosion following spring runoff and heavy rainfalls.
- The Concessionaire shall repair and stabilize minor erosion locations in ditches or around bridge deck drains as soon as possible after detection.
- The Concessionaire shall schedule all major erosion sites for stabilization on a priority basis.

2.2.4 Wildlife

- Side slopes will be inspected, and shoulder grading and berm removal will be completed promptly to prevent ponding of salt-laden matter that may attract wildlife. (Side slopes and shoulder deterioration and deficiencies will be identified in the annual report prepared as part of the reporting requirements set out in the O&M Output Specifications.)

- Right-of-way fences will be repaired according to MOT standards to prevent wildlife access to the highway.
- Beaver dams will be removed in accordance with MOT standards and Legal Requirements and in a manner that protects property and the environment.

2.2.5 Application of De-icing Chemicals

Electronic controllers and other measuring equipment will be maintained in good working order and properly calibrated to ensure efficient use of de-icing chemicals.

The application rate of chemicals will be monitored by checking volume/weight against distance travelled for each vehicle on a regular basis. The Concessionaire shall ensure that any unit that varies from its specifications will be recalibrated.

The performance of applied materials will be monitored to ensure the use of optimal quantities and prevent over-usage.

2.2.6 Salt and Salt Brine Storage and Handling

- Salt and winter sand will be stored in covered facilities.
- Whenever possible, salt deliveries will be made inside the storage structure. When delivered outdoors, salt will immediately be placed under cover.
- Areas outside of salt storage buildings will be kept salt-free as much as practicable.
- Salt brine for use in prewetting and/or anti-icing will be stored in suitable tanks, protected from accidental hits by vehicles. Reference will be made to and the Concessionaire will comply with appropriate best practices, endorsed by Environment Canada, as they evolve.
- Care will be taken to avoid over-filling spreaders to minimize the potential for spillage or leakage from the vehicles during transport to the spreading site.
- All surplus solid materials not used en route will be returned to the stockpile.

2.2.7 Historical and Heritage Resources

If any archaeological resources (e.g., artifacts, bones, etc.) are unearthed during maintenance activities, operations will be stopped, the Concessionaire will advise MOT and operations will not resume until authorization is received from MOT or the appropriate Governmental Authority.

2.2.8 Environmental Training

The Concessionaire shall train its staff on an ongoing basis on materials handling requirements, environmental protection measures, spill response provisions, and reporting procedures.

2.2.9 Waste Management – Materials

Without limiting the Concessionaire's obligations under this Agreement including Schedule 12 [Environmental Obligations], the O&M Output Specifications and the O&M Requirements, the Concessionaire shall comply with the following procedures in respect of the matters listed below:

To the extent required under any Laws or Regulations, any waste generated from maintenance activities shall be registered with WLAP or the appropriate Governmental Authority. In addition, to the extent required under any Laws or Regulations, any waste materials shall be transported by a licensed hauler, and waste dangerous goods shall be packaged, labelled, placarded and documented in accordance with the Transportation of Dangerous Goods Act. One of the Concessionaire's prime contractors, Miller Paving Limited, has a subsidiary company, Miller Waste Systems, who is thoroughly familiar with all regulations, procedures and operations, including the disposal of toxic and hazardous waste materials.

The Concessionaire and Miller will obtain an EPA generator registration number for the Operations Centre and all necessary system certificates required by the Environmental Protection Act for waste materials. In all cases and in addition to any other requirements under this Agreement, wastes and excess materials will be managed in accordance with the Environmental Special Provision ("ESP") "Waste and Excess Materials Management for Maintenance". Waste classes include:

- 112 — acid solutions containing heavy metals
- 145 — paint wastes
- 113 — acid solutions containing other metals (e.g., cleaning acids)
- 122 — alkaline solutions
- 133 — brines
- 146 — other specific inorganic sludges (e.g., sediments and tank bottoms)

- 211 — aromatic solvents (e.g., toluene)
- 212 — aliphatic solvents (e.g., antifreeze)
- 213 — petroleum distillates (e.g., varsol)
- 221 — light fuels (e.g., gasoline/diesel)
- 222 — heavy fuels
- 232 — polymeric resins (e.g., epoxy)
- 241 — halogenated solvents (e.g., 1-1-1 trichloroethane)
- 243 — PCBs
- 252 — waste crankcase oils and lubricants
- 262 — detergents and soaps.

MOT has previously negotiated a Provisional Certificate of Approval for a Waste Management System with WLAP that contains special field operations provisions unique to its maintenance activities. The Concessionaire will consult with WLAP and MOT to adopt these special provisions as appropriate.

Hazardous Waste Disposal

Maintenance activities can be expected to generate various wastes on a daily basis. These wastes might include, but are not limited to, the following:

- waste oils (changing oils in vehicles)
- waste petroleum distillates (parts washers)
- waste oily water (oil and water separator)
- waste paint and related material (line painting operation)
- waste electrical ballasts.

All hazardous waste generated and transported from S2S locations will be documented by the use of a waste manifest following proper procedures.

Non-Hazardous Waste

All non-hazardous wastes (such as treated posts, highway sweepings, concrete, asphalt, zone painting materials, electrical, etc.) will be disposed of in accordance with applicable Laws and Regulations including local, provincial and federal regulations in a properly regulated landfill site. All materials that might be recycled and used in other applications will be removed from the waste stream and stored for that purpose.

Further procedures for dealing with specific wastes include:

Excess Materials

- Excess materials will be managed in accordance with the ESP “Waste and Excess Materials Management for Maintenance”.
- Where possible and practicable, excess materials such as concrete, asphalt, road sweepings, catchbasin materials, and sign posts will be reused or recycled. Where engineering requirements can be met, excess asphalt, brick, and concrete material may be used in road and highway shoulders, driving surfaces (paved and unpaved) and binder courses.
- Treated wood materials that cannot be reused will be disposed of in an approved landfill site.
- Signs removed from service will be recycled in an appropriate manner.
- Tire rubber or spent tires will not be stockpiled for any length of time at the Operations Centre. Tires will be recycled with frequent removal from the storage pile.
- Where excess materials cannot be reused or recycled, they will be sent to an approved landfill site.

Road Sweepings

- In areas having a rural cross-section, winter sand will be swept to the granular shoulder/rounding.
- In areas having an urban cross-section, winter sand will be power swept, collected, and disposed of in an approved site or recycled by blending with virgin winter sand.
- Other reuse or recycling options will be explored, when available, in consultation with MOT.

Catchbasin, Manhole and Ditch Cleanout Materials

- When required, catchbasin cleanout materials will be dewatered either to the source storm sewer or in an approved sanitary sewer. The dewatered sand will be reused as winter sand, recycled appropriately, or disposed of in an approved landfill.

Electrical

- Waste electrical material will be removed from the right-of-way.
- Materials will be recycled where possible or will be disposed of at an approved site.
- Batteries will be sent to a battery recycler or an approved scrap yard.

Bridge Cleaning

- The Concessionaire will operate under ESP “Environmental Protection – Migratory Birds for Bridge and Culvert Maintenance and Reconstruction”.
- Prior to bridge washing and flushing, excessive accumulations of debris and sand will be removed by scraping and/or sweeping.
- Where possible and practicable, washwater from bridge washing and flushing operations will be directed to vegetated swales rather than directly to watercourses in accordance with ESP “Environmental Protection - Watercourse and Fisheries Protection”.
- Where washwater is drawn from surface or groundwater sources, a water-taking permit will be obtained from WLAP.
- The local DFO office will be contacted prior to bridge cleaning operations, if necessary.

Dead Animals

- The Concessionaire will train its maintenance staff on an ongoing basis in the safe handling and disposal of dead animals.
- Proper protective clothing will be carried in maintenance vehicles.
- All dead animals will either be turned over to a responsible agency or disposed of at an approved site. Road kills involving game animals will be reported to the MOT’s Wildlife Accident Reporting System Manager and the Police if necessary. Road kills involving large domestic animals will be reported to the SPCA. In the case of small domestic animals, the identification will be removed and the animal will be disposed of at an approved site, in accordance with the requirements of the disposal site.
- The Concessionaire will review any other disposal options with MOT.

Dust Control

- Magnesium chloride will be used in extremely dusty conditions.
- Application rates for magnesium chloride will be set to ensure that only the amount required to control dust effectively is applied. Magnesium chloride will be applied only to the driving surface where excavation is required and where operation of traffic on gravel surfaces is required.
- Tankers used for applying liquid magnesium chloride will not be washed in the field. Washwater will be collected and disposed of in a proper manner and in accordance with all applicable Laws and Regulations.

Vegetation Disposal

- Brush removed during maintenance activities will either be disposed of at a landfill or chipped and reused (e.g., landscaping, mulch, animal bedding, energy from wood, etc.).
- Where possible, vegetation within 30 m of watercourses containing fisheries shall be left in place to provide shading and cover.
- Brush removal from or adjacent to watercourses will be done manually.
- Where permitted, stumps will be managed as push-outs.

Spills Response

- Responses to spills will be carried out in accordance with the ESP “Contractor Response to Spills within MOT Rights-of-Way”.
- Highway spills will be handled by the owner or person responsible for the spilled material. The Concessionaire will provide its Spills Response Guide to assist in cleanup and restoration.
- A copy of the Spills Response Guide, complete with contact list, will be carried in each maintenance vehicle, and staff will be trained in spills response procedures. Each maintenance vehicle will contain basic first response equipment including shovels, absorbing material, fire extinguishers, cones, vests, flares and emergency lighting units.

- In the event of a spill that requires notification under this Agreement, the Police, local fire department, local municipality, WLAP Spills Action Centre, and MOT will be notified as part of and in addition to the parties that are required to receive notification under this Agreement.

Operating Fluids

- All waste operating fluids generated as a result of vehicle maintenance will be contained, stored in a protected area, and either sent to a recycler or a licensed disposal facility. Licensed haulers will be used, and appropriate manifesting will be completed, when transporting such wastes to disposal sites.

Pavement Marking

- Paint beads stored at the Operations Centre will be kept dry and away from other flammable materials.
- Paint loading will be performed in a designated area that is well ventilated and off the right-of-way.
- Spilled paint will be contained with shovels until it dries/hardens, after which it will be removed and disposed of at an acceptable site in accordance with all applicable Laws and Regulations and the terms of this Agreement.
- For small spills where shovels are not satisfactory for containment, dikes of absorbing material (e.g., “absorb-all” or “speedy-dry”) will be positioned to soak up the paint.
- Un-used liquid paint will be saved and returned to the supplier if necessary.
- To the extent practicable, pavement marking will be carried out using durable materials (e.g., thermoplastic, tapes), which do not present disposal issues.

2.3 *Environmental Aspects of the Operations Centre*

The Concessionaire will develop an environmental management system for the Operations to minimize the potential for contamination and ensure that spills are properly contained and quickly managed. Good housekeeping procedures will be followed at the Operations Centre, as described below.

2.3.1 Equipment Maintenance

- Equipment maintenance involving operating fluids will be carried out at commercial facilities or the Concessionaire's garage facilities.
- Vehicles will be washed in a garage bay with an oil/grit separator.
- Leaking equipment will be repaired as required.
- The Concessionaire will take all necessary care to prevent operating fluids from entering floor drains.
- Minor spills of operating fluids will be contained using absorbent materials.

2.3.2 Wastes

- All wastes generated at the Operations Centre will be stored in proper containers and either recycled (being the Concessionaire's first preference), or disposed of in approved landfill sites.
- Generator registration and system certification will be obtained under the Environmental Management Act to allow the handling, transportation, and disposal of project waste.

2.3.3 Fuel Storage

- Fuel will be stored in above-ground tanks that are diked and vented (or approved "tank-in-tank" models); all piping will be visible for easy inspection.
- Fuel storage tanks will be located away from vehicle traffic and protected from vehicle impact as necessary.
- Tanks and piping will be inspected regularly for leaks. If a leak is detected, immediate action will be taken to stop the leak and contain any lost product.
- A trained employee will at all times supervise the refilling of the tanks.

2.3.4 Materials Handling

- Maintenance materials and wastes will be properly stored and contained in the event of a spill. All necessary and appropriate WHMIS, *Transportation of Dangerous Goods Act* (TDGA), and *Environmental Management Act* (EMA) labeling will be maintained.

2.3.5 Leaks, Spills, Fire and Explosions

- Spill response kits will be stored at the Operations Centre and shall at all times be available to maintenance workers.
- Any spills will be contained and cleaned up immediately. Contaminated materials will be disposed of at an approved site in accordance with applicable Laws and Regulations and the terms of this Agreement.
- In the event of a fuel fire or explosion, the local fire department, local municipality, and MOT will be notified immediately as part of or in addition to the parties that the Concessionaire is required to notify under this Agreement.
- All contamination resulting from the Concessionaire's activities will be cleaned up in accordance with WLAP's "Guidance for Contaminated Sites" and the Environmental Management Act.
- Staff will be trained in the health and safety, and environmental implications of dealing with leaks, spills, fires and explosions. Employees will be given a copy of the spill response and notification procedures.
- In accordance with this Agreement, the Concessionaire will complete and deliver to the Province's Representative a report specifying all relevant details each time the Spills Action Centre, local fire department, local municipality, or other relevant agency is notified of an incident.

2.3.6 Oil-Grit Separators

- The contents of oil-grit separators will be monitored regularly.
- Clean-out will be scheduled and performed as required with the collected material being disposed of at an approved site in accordance with all applicable Laws and Regulations.

SCHEDULE 23**CONCESSIONAIRE'S PROPOSAL EXTRACTS****Annex 5****Quality Management Plan****1. Quality Management Representative**

For the purposes of providing Quality Management throughout the Contract Period, the Concessionaire shall make available James Turnham as the Quality Management Representative in accordance with Section 23.5 [Quality Management Representative] of this Agreement and as a Key Individual in accordance with Part 3 of Schedule 8 [Key Individuals] for the purposes of developing, implementing and monitoring the ISO 9001:2000 Quality Management Systems ("QMS") for the Project. The Quality Management Representative shall also act as Project Quality Manager for the Project and shall have overall responsibility for preparing, updating, developing, implementing and maintaining the Concessionaire's QMS and Quality Manual.

2. Quality Management System Framework

On or before the Commencement Date, the Concessionaire will commence developing a QMS in accordance with the schedule shown in Figure 2.5-1 below.

Figure 2.5-1: Schedule for ISO 9001 Certification

Task Name	Duration (days)	Days After Commencement Date							
		+45d	+90d	+135d	+180d	+225d	+270d	+315d	+360d
S2S Overall QMS	30	█							
Design QMP	45	█							
Construction QMP	45	█							
Traffic QMP	45	█							
Environmental QMP	45	█							
OMR QMP	45	█							
Quality Audit Plan	45		█						
Remaining QMS	45		█						
Gap Analysis*	5			◆					
Quality Awareness Training	90		█	█	█				
Audit Training*	5			◆					
QMS Fully Implemented					◆				
Initial Assessment Audit*	2				◆				
Document Review**	1					◆			
First Internal Audit	2						◆		
Pre-Assessment	2							◆	
Management Review	1							◆	
Second Internal Audit	2								◆
Registration Audit**	3								◆
Certification Issued**	1								◆

Notes: * indicates by Ashbrooke QA; ** indicates by certification agency.

3. Concessionaire Quality Policy and Objectives

For the purposes of Quality Management, the Concessionaire's Quality Policy as defined in Schedule 6 [Quality Management] will be expanded and will include as a minimum the following:

- (a) meet or exceed the expectations of the Concessionaire's customers including all Users by ensuring that the project is designed, constructed, operated and maintained and rehabilitated in accordance with this Agreement and the Environmental Assessment Certificate;
- (b) ensure the Project is built safely and is designed, operated, maintained and rehabilitated in a manner so as to improve the safety, reliability and capacity of the Concession Highway;
- (c) ensure that all Works are completed by the dates required under the Concession Agreement, including the Pre Olympic Works and the Olympics Requirements Works;
- (d) reduce inconvenience to the traveling public by minimizing disruptions and maximizing predictability of delay;
- (e) ensure that all personnel understand and implement the QMS;
- (f) specify and document the requirements to control the quality of construction of Works and performance of the Operations at all necessary stages;
- (g) monitor the implementation of the QMS at planned intervals to ensure continuing effectiveness and improvement.

Quality objectives that are linked to the foregoing Quality Policy will be developed. These objectives will be expanded before the final QMS is submitted but will include, as a minimum, the following:

Table 2.5-1: Quality Objectives

Objective	Goal
Meet or exceed the requirements in the DBFO Agreement.	Reduce the number of non-conformities by 10% each year.
Meet or exceed the requirements in the EA certificate.	Incur zero environmental infractions each year after the first year.
Ensure the project is built safely.	Receive a maximum Worker's Compensation Board rebate each year.
Ensure the project is completed on schedule.	Monitor as-built schedule on a regular basis; develop contingency and work-around plan in case of slippage.
Minimize disruptions to travelling public.	Comply with permitted delays.
Ensure all personnel understand the QMS.	All employees to be trained in the QMS within one week of starting work.
Specify and control quality.	Produce work instructions before each work activity commences.
Monitor QMS at planned intervals.	Perform audits on plan; hold management review each quarter.

5. Form of Non-Conformity Report

The form of Non-Conformity Report identified as Attachment 1 to this Annex will be used to identify the action taken to correct a non-conformity.

6. Management Review Committee

The Management Review Committee will be chaired by the Project Director as identified in the organizational documents referred to in Paragraph 8 of this Annex and initially meet each calendar quarter. Once the Project Quality Manager is confident that the QMS is performing effectively these meetings will be held in accordance with Section 23.5.2.

7. Certification Process

A compliance schedule to be met by the Concessionaire, indicating the QMS requirements of the Agreement (including Schedule 6 [Quality Management] thereto) and necessary certification, is shown in Figure 2.5-1, referred to in Paragraph 2 of this Annex.

Within 30 days of the Commencement Date the Concessionaire will submit a Quality Manual to the Province for its own activities, focusing on project management for the Project and including full quality management. It will describe the QMS for all the Concessionaire Operations throughout all Project phases, it will also include the Quality Policy and objectives in accordance with ISO 9001:2000. It will also define the authority and responsibilities of the Quality Management Representative (Project Quality Manager).

Within 45 days of the Commencement Date, the following Quality Management Plans will be submitted:

- (a) Construction Quality Management Plan based on Peter Kiewit Sons Co. Quebec Division ISO 9001:2000 QMS, and the QMS it will be employing on the DB2 of the project;
- (b) Design Quality Management Plan based on HMM's QMS, which should be certified to ISO 9001:2000;
- (c) Traffic Quality Management Plan;
- (d) Environmental Quality Management Plan prepared by Hatfield Consultants and conforming to ISO 14001:1996; and
- (e) Quality Management Plan to cover operations, maintenance and rehabilitation based on Capilano Highway's ISO 9001:2000 compliant QMS.

Within 90 days of the Commencement Date, the Concessionaire will submit a comprehensive quality audit plan which addresses the above activities. The Concessionaire will perform external audits on its subcontractors and suppliers who will in turn perform internal audits on their own operations.

Within 180 days of the Commencement Date, the Concessionaire will ensure that its QMS is fully implemented, including the following:

- (a) the Concessionaire will begin training employees in ISO 9001:2000 and internal auditing procedures; training records will be documented;
- (b) the Concessionaire will engage in experienced consultant, such as Ashbrooke QA, who has assisted more than 100 organizations worldwide in attaining ISO

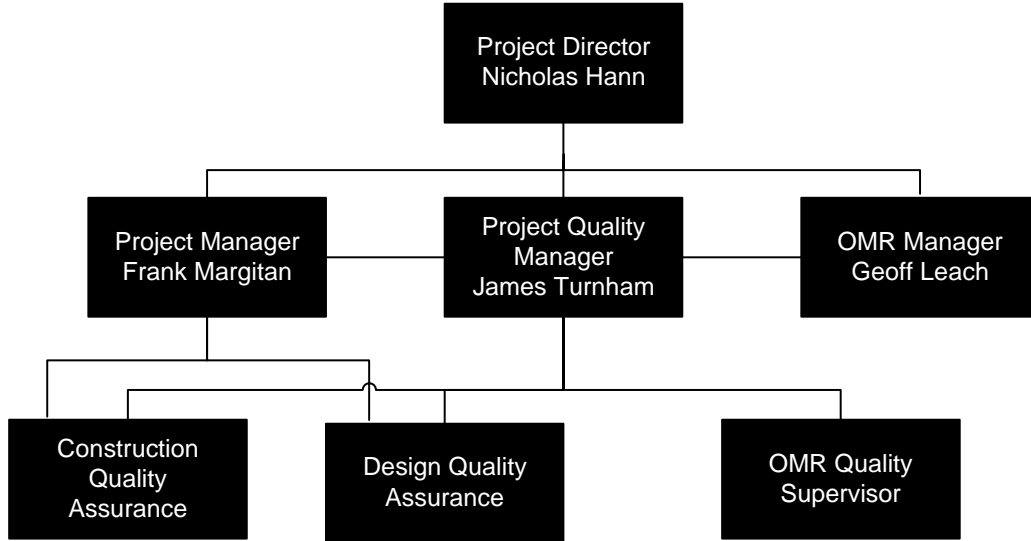
- certification. Ashbrooke will perform “gap analysis” once the QMS is fully implemented;
- (c) internal audits will be performed on all the Concessionaire’s processes;
 - (d) once the QMS has been found to be functioning in a satisfactory manner, Ashbrooke will undertake and document an initial assessment;
 - (e) the QMS will be updated and modified as necessary;
 - (f) the accredited certification agency acceptable to the Province will review the QMS documentation and comment on its conformance with ISO 9001:2000;
 - (g) the Concessionaire will undertake an internal audit and make any required changes to the QMS documentation;
 - (h) Ashbrooke will undertake and document a pre-assessment audit, and any further changes to the QMS documentation will be completed;
 - (i) the certification agency will undertake a documented registration audit, documenting and implementing any corrective actions. The audit report will be made available to the Province;
 - (j) the certification agency will undertake a follow-up review to ensure that any corrective actions have been effective. Once this is completed, the authority will issue the certification;
 - (k) when the designed and construction phase is completed, the QMS will be modified to cover operations, maintenance, and rehabilitation of the improved highway only; and
 - (l) certification (surveillance) audits will be undertaken at least annually to ISO 9001:2000 and the Concessionaire’s QMS to ensure that the Concessionaire is certified for the life of the Agreement. All certification audit reports will be made available to the Province.

8. Concessionaire Structure and Organization

For the purposes of the Concessionaire’s quality management organization, the Concessionaire shall establish the structures set out in the Quality Management Organization Supplementary Figure below.

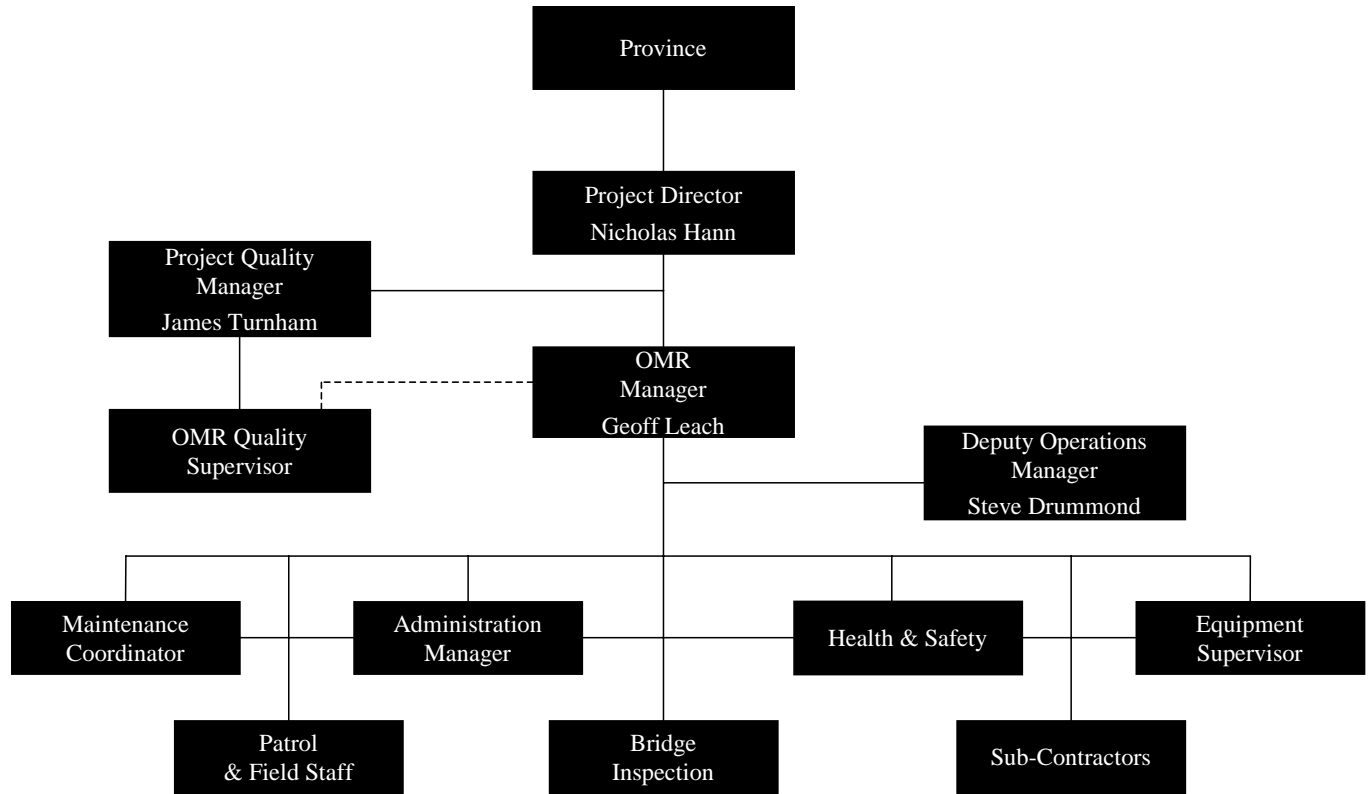
S2S Quality Management Organization Chart

Supplementary Figure



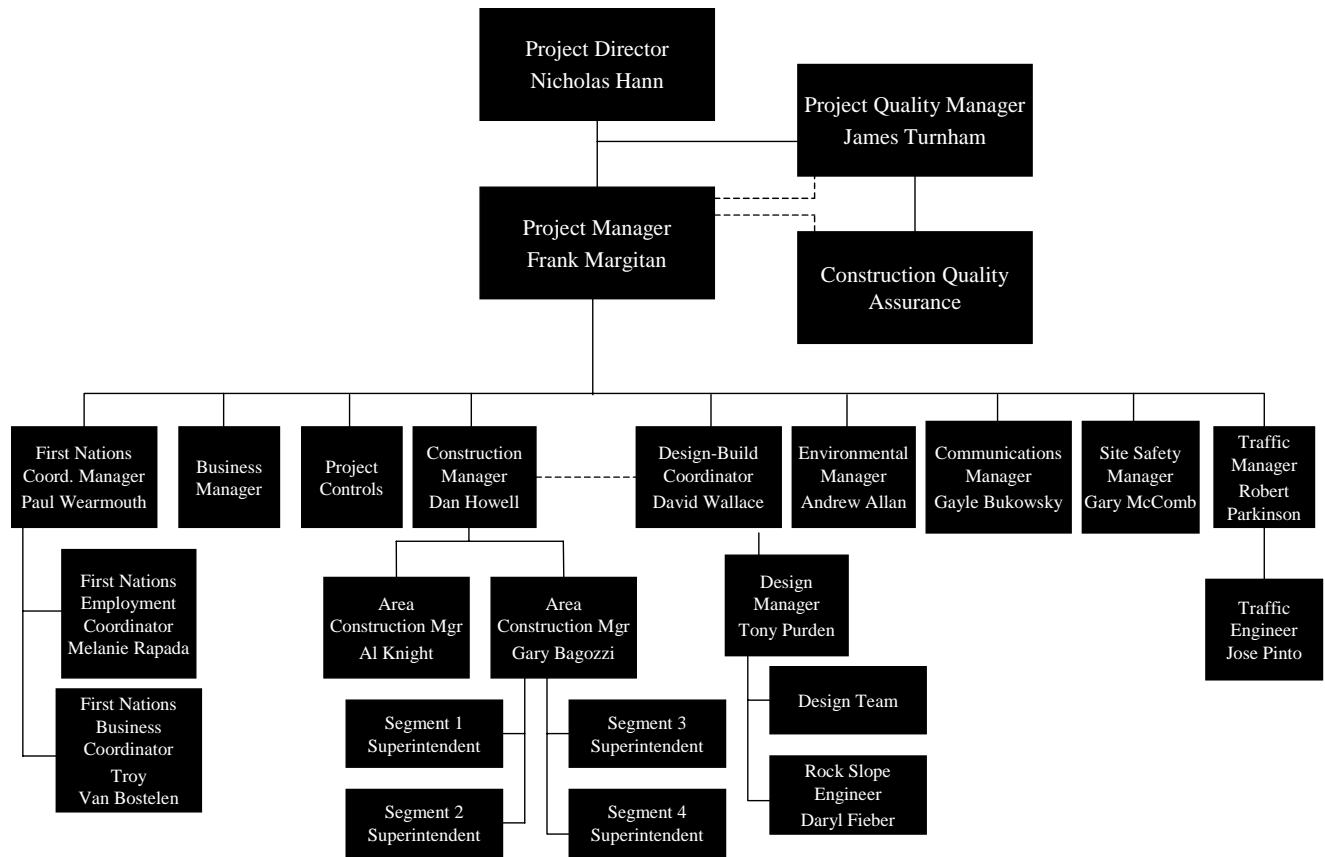
For the purposes of operation and management organization, the Concessionaire shall structure itself for the purposes of Quality Management in accordance with the organizational chart attached as Figure 2.1-5.

Figure 2.1-5: Operations & Management Organization Chart
Revised January 21, 2005



For the purposes of design/build team work organization, the Concessionaire shall structure itself for the purposes of Quality Management reporting functions in accordance with the organizational chart attached as Figure 2.1-4.

Figure 2.1-4: Design/Build Team Organization
 Revised January 21, 2005



Attachment 1

S2S Non-Conformance Report		
Sea-to-Sky Transportation Group		NCR No. _____
Location/Drawing:		Date: _____
Reference Document	Clause	Non-Conformance (describe requirement and actual condition)
Originator's Signature _____		Project Quality Manager: _____
<p>Proposed Disposition/Corrective Action (to be returned to Project Quality Manager within 7 days) (include root cause elimination) For use as-is Project Quality Manager and Design Manager to approve.</p>		
S2S Representative _____		Target Completion Date _____
Project Quality Manager Confirmation of Disposition _____		Date: _____
Design Manager _____		Project Quality Manager _____
Verified by: _____		Date: _____
S2S Form 2 Non-Conformance Report		

SCHEDULE 23**CONCESSIONAIRE PROPOSAL EXTRACTS****Annex 6****Environmental Management Plan****1. Funding Commitments**

The Concessionaire will enhance the biophysical environment and recreational opportunities along the corridor beyond the obligations set out as the Concessionaire's Environmental Obligations. These enhancements, which include a variety of features in key locations identified during the environmental process, is reflected in the **DELETED** of committed funding provided by the Concessionaire for these required enhancements above Minimum Performance Requirement ("MPR") expenditures. This commitment is allocated as follows:

DELETED has been allotted for enhancements to the Environmental Management Plan ("EMP") that exceed the MPR identified in the Agreement. This **DELETED** amount is in addition to the **DELETED** committed funding for site-specific enhancement features and a Sea-to-Sky Environmental Enhancement Program ("STSEEP") described in Annex 7 to Schedule 23 [Environmental Enhancement Plan].

Key EMP enhancements include as a minimum the following:

- an environmental database/web portal for the life of the project
- an extensive sensitive plant, animal, and fish habitat signage program
- the improvement of wildlife corridor connectivity (in addition to the requirements already set out in Schedule 12 [Environmental Obligations])
- improved recreation access and information along the corridor (in addition to the requirements and commitments already set out in Schedule 12 [Environmental Obligations] and Annex 7 to Schedule 23 [Environmental Enhancement Plan]).

All proposed EMP enhancements will require review and approval from the Province.

2. Environmental Management Plan (“EMP”)

This Annex 6 to Schedule 23 [Environmental Management Plan] of the Agreement contains a summary of the Concessionaire’s EMP which addresses the MPR in summary form.

The Concessionaire will deliver its services in a way that protects and enhances the environment and socio-economy of the corridor.

The Concessionaire will practice “continual improvement”, with respect to the overall environmental management and compliance throughout the duration of the project.

The objectives of the EMP are to:

- protect valued ecological components and socioeconomic features along the Sea-to-Sky highway corridor during the design, construction, and operation phases of the project
- ensure compliance with the conditions of environmental approvals from regulatory authorities
- reduce potential environmental liabilities.

The Concessionaire’s environmental management team will implement the EMP throughout the design, construction, operation, and maintenance phases of the project.

The Concessionaire will develop a project-wide EMP Guidance Manual, followed by one specific EMP for each of the project sections. The EMP Guidance Manual will outline general requirements for project-wide environmental issues and initiatives that are common to all DB sections. Examples of these items include, but are not limited to, environmental quality management, environmental design review, environmental training, water quality sampling procedures, and other general component plans.

To complement the EMP Guidance Manual, section-specific EMPs will be developed to provide specific detail on the treatment of environmental issues unique to each project section. These sectional EMPs will address items as construction schedules, sediment and drainage management plans, wildlife features and sensitive ecosystem treatments, archaeological features, Potentially Acid Generating / Acid Generating (“PAG/AG”) areas, etc.

This structure will also facilitate EMP updates for time-sensitive environmental issues and construction activities. In many cases, requirement for pre-construction environmental submittals or field survey activities beyond a 90-day period may be difficult to predict. These activities are dictated by continued design and construction plan development as they reflect changing constructability and environmental conditions. Given this unpredictability, the Concessionaire will provide sectional EMP updates in a 90-day submission format, whereby each sectional EMP is reviewed by the environmental management team and updated to ensure that it addresses the current project schedule and any unanticipated environmental issues. These submittals will be subject to Province and regulatory review. Construction activities will not commence until the regulatory bodies have reviewed and approved each EMP iteration.

3. Environmental Team

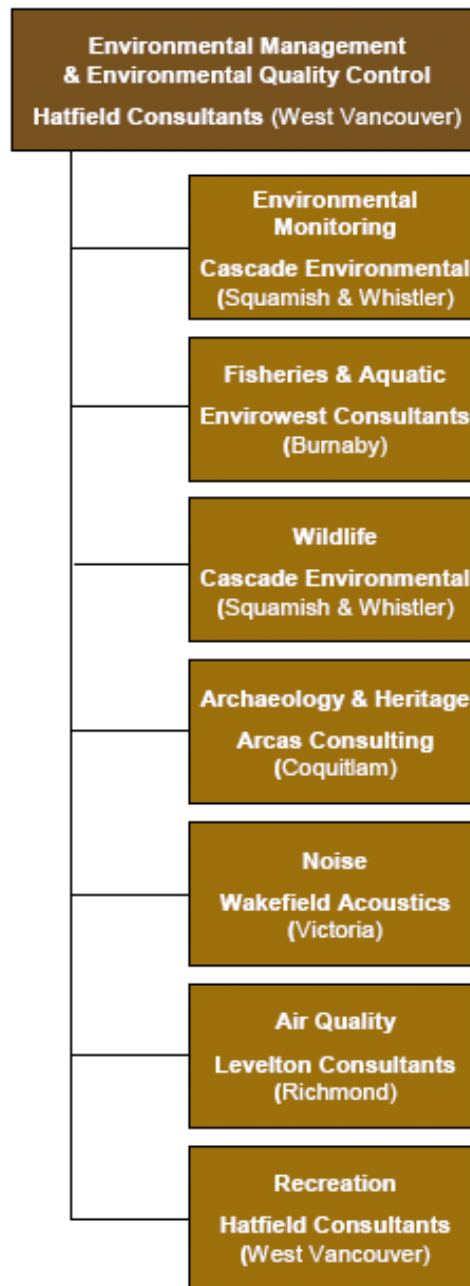
The Concessionaire has assembled a highly qualified multi-disciplinary group of specialists that will manage and monitor all environmental issues associated with the project. All members of the Concessionaire's environmental team are available to work for the duration of the Concession Agreement. The various environmental disciplines, as well as a listing of the Concessionaire's environmental specialists and duties, are shown below in Table 2.6-6 and Figure 2.6-1.

Table 2.6-6: S2S Environmental Team Roles & Responsibilities

Discipline	Firm	Role/Responsibilities
Environmental Management & Environmental Quality Control	Hatfield Consultants (West Vancouver, B.C.)	<p>Coordinate preparation of the EMP</p> <p>Coordinate environmental input to design and construction planning</p> <p>Oversee the environmental monitoring program, including water quality monitoring program</p> <p>Coordinate confirmatory environmental assessments by discipline specialists and preparation of environmental documentation in support of environmental permitting/agency acceptance</p> <p>Manage monitor(s) and other environmental specialists retained to provide environmental support services to the S2S team</p> <p>Provide environmental reporting (management level)</p> <p>Develop and implement environmental training/orientation program</p> <p>Manage environmental costs in consultation with S2S team's other managers</p> <p>Provide environmental liaison between S2S team and other parties (e.g., MOT, regulatory agencies, stakeholders and the public)</p> <p>Coordinate environmental quality management with S2S team's broader quality management program</p> <p>Track environmental compliance with the terms and conditions of the EAC, the contract documents, permit conditions, and other environmental requirements</p>
Environmental Monitoring	Cascade Environmental (Squamish & Whistler, B.C.)	<p>On-site monitoring of construction, particularly in environmentally sensitive areas</p> <p>Wildlife salvages</p> <p>Water quality monitoring</p> <p>Field level liaison with MOT, regulatory agencies, and other relevant parties</p> <p>Preparation of environmental procedures (field level) based on information provided by specialty consultants as necessary or appropriate</p> <p>Field level environmental reporting and issue tracking</p> <p>Environmental training during construction</p>
Fisheries/Aquatic	Envirowest Consultants (Burnaby, B.C.)	<p>Confirmatory assessments of crossing impacts and corresponding mitigation</p> <p>Preparation of fisheries/aquatic documentation for EMP and to support relevant permit applications</p> <p>Design, development, and monitoring of fisheries compensation areas</p> <p>Liaison with DFO, WLAP, LWBC and other relevant agencies on fisheries/aquatic resources aspects to construction</p>

Discipline	Firm	Role/Responsibilities
Wildlife (including aquatic wildlife)	Cascade Environmental (Squamish & Whistler, B.C.)	Confirmatory assessments of alignment and crossing impacts and corresponding mitigation Preparation of wildlife (including amphibian) documentation for EMP and to support relevant permit applications Input into design and development of fisheries compensation areas with respect to wildlife enhancement opportunities Liaison with CWS, WLAP, LWBC and other relevant agencies on wildlife resources aspects to construction
Archaeology & Heritage	Arcas Consulting Archaeologists (Coquitlam, B.C.)	CMT dating Mitigation prescriptions Coordinate archaeological permits as necessary Archaeological monitoring as necessary Liaison with First Nations and Archaeology Branch of MSRMM
Noise	Wakefield Acoustics Ltd. (Victoria, B.C.)	Review and input into design related noise abatement measures near residential areas Noise monitoring of construction equipment and activities near sensitive receptors as required Liaison with health agencies and local municipal bodies as necessary or appropriate
Air Quality	Levelton Consultants Ltd. (Richmond, B.C.)	Monitoring of ambient particulate matter during extended period of dry days where construction is <50 m from residences Other ambient air quality monitoring as necessary or appropriate Liaison with GVRD and local municipal bodies on air quality issues
Recreation	Hatfield Consultants Ltd. (West Vancouver, B.C.)	Participate in the Recreation Focus Group Review and provide input to design issues as they related to impacts on recreation and recreation user groups In consultation with MOT and recreation user groups, identify opportunities for recreational enhancements
Environmental Enhancements	British Columbia Wildlife Federation (BCWF) & British Columbia Conservation Foundation (BCCF)	Development and management of the Sea-to-Sky Environment Enhancement and Education Institute (Institute). Quality control, budgeting, and project monitoring of enhancement projects Cost/benefit analysis for enhancement features

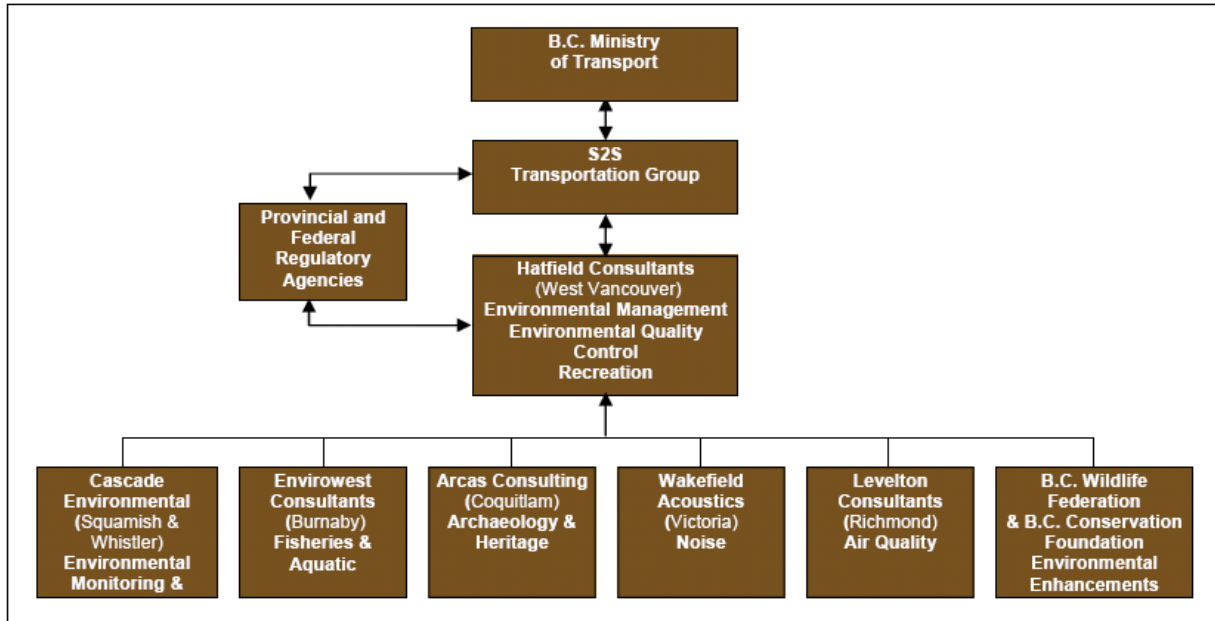
Figure 2.6-1: S2S Environmental Team Subconsultants



The Concessionaire's Environmental Manager will undertake quality management of other environmental support subconsultants primarily through a technical review of deliverables (e.g., assessments and documentation) that are required for agency approval of project design, construction methods, and environmental procedures or plans. The Environmental Manager will ensure this work is completed on schedule and within budget.

The Concessionaire's lines of communication and authority for the environmental program are illustrated in Figure 2.6-2.

Figure 2.6-2: S2S Environmental Team Organization & Reporting Structure



4. Environmental Process and Risk Management

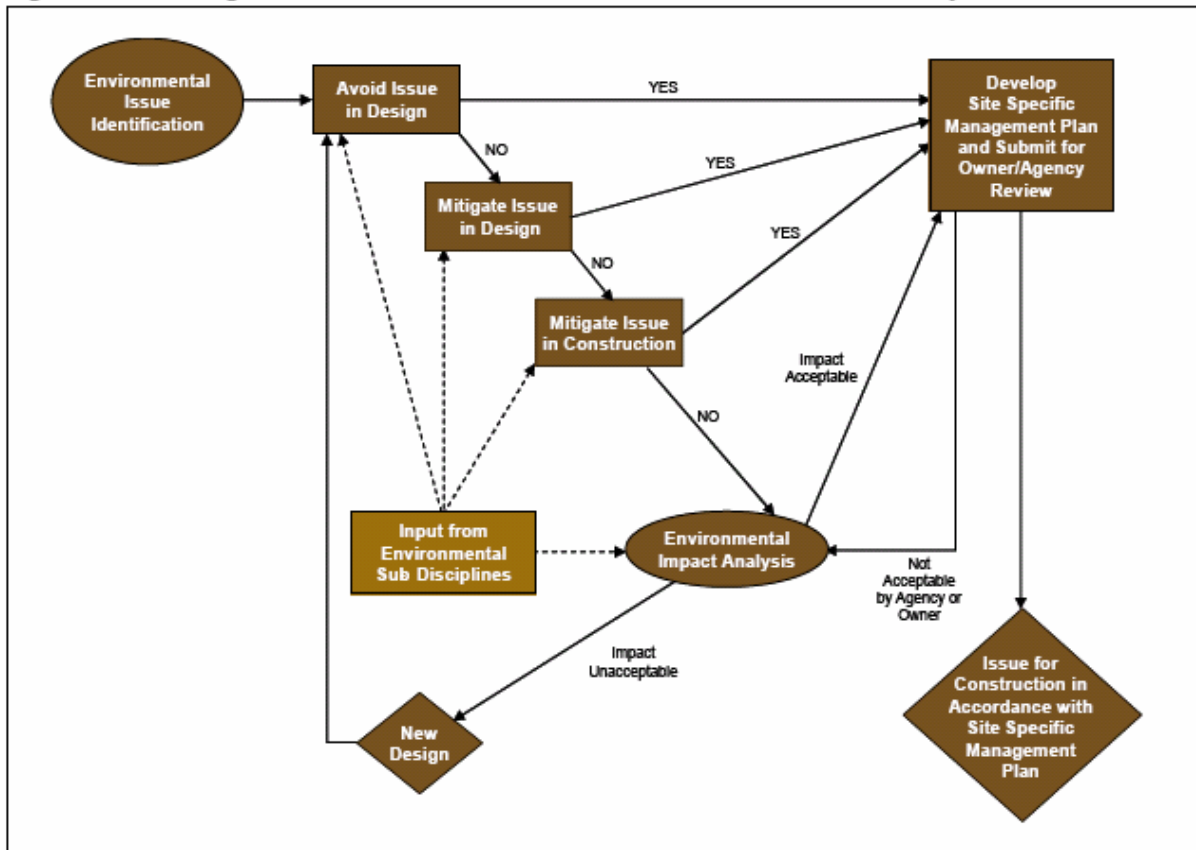
A summary of the Concessionaire's environmental process and risk management strategy is provided below in Table 2.6-7. Figure 2.6-3 below shows how the environmental review and actions will be applied throughout project life. The Concessionaire's Environmental Manager will be responsible for applying the feedback system to the satisfaction of the Concessionaire's design team, the Province, and regulatory agencies. Project delays will be avoided by clearly identifying environmental milestone requirements (e.g., regulatory review, approvals, and permitting) and allocating resources to address environmental issues in a timely fashion.

Table 2.6-7: EMP Implementation, Management & Processes

Process Component	Project Management & Design	Construction, Operation & Management
Develop & implement an environmental management Plan	Regulatory requirements analysis Identify environmental constraints to design (based on regulatory requirements and other factors)	Regulatory requirements analysis Identify sensitive receptors and activities Identify environmental protection approach (mitigation, compensation) including priorities.
Environmental permit acquisition	Integrate environmental permitting process with overall project management and design processes Retain specialty consultants to provide supporting services as necessary	Integrate environmental permitting process with construction planning & scheduling. Retain specialty consultants to provide supporting services as necessary
Compliance monitoring & issue tracking	Environmental Manager monitors compliance of design with environmental requirements Environmental Manager tracks resolution of environmental design & project management issues Environmental Manager oversees the Environmental Monitor(s)	Environmental Monitor provides in-field monitoring services including: - water quality sampling/monitoring; advise on mitigation measures; - tracking of field level environmental construction issues; and - environmental reporting
Environmental review & QA/QC	Environmental Manager provides environmental input to and environmental review of design. Environmental Manager is subject to environmental audit and other quality management processes.	Environmental Manager and Environmental Monitor participate in environmental review of construction planning & methods Environmental Monitor is subject to environmental oversight by the Environmental Manager and other quality management processes.
Environmental training/orientation	Environmental Manager conducts workshops for design engineers to communicate environmental constraints on design.	Environmental Manager provides environmental training/orientation to senior construction personnel. Environmental Manager works with Safety Manager to provide environmental content of training/orientation for construction personnel; Environmental Monitor provides environmental input at field level (including 'toolbox' sessions).
Environmental reporting	Environmental Manager writes environmental section of weekly and/or monthly progress reports Environmental Manager writes environmental memos to senior project management as required Environmental Manager provides environmental input to other project reporting as required Environmental Manager reviews environmental monitoring reports	Environmental Monitor prepares stand alone monitoring reports & issue tracking summary; submits to Environmental Manager for review prior to release to MOT. Expectation is the Environmental Monitor will keep a daily log and prepare reports for submission once every two weeks. Reports also submitted to regulatory agencies as required or agreed.

Process Component	Project Management & Design	Construction, Operation & Management
Environmental consultation	Environmental Manager participates in higher level consultations with MOT, municipalities, regulatory agencies and others as required by contract or as directed by S2S team	Environmental Monitor participates in field level consultations with environmental personnel from MOT and regulatory agencies. Environmental Manager will provide additional support as required.
Other (e.g., environmental support to community & media relations)	Environmental Manager provides environmental input to S2S team's communication process.	Environmental Monitor may provide field level communication as directed by S2S team (in consultation with MOT).

Figure 2.6-3: Management Process for Environmental Issue Resolution, DBFO Project



Environmental Database and Portal

The Concessionaire will develop and maintain a project-specific web-based environmental data access portal database (“EDA”), which will provide access to environmental data and related documents via an interactive map interface and text-based search engine. Data will be organized and retrieved based on spatial location, sampling component, or other parameters. Documents will be organized and searchable by a range of parameters.

The Concessionaire will enable the EDA to provide pop-up warnings of areas or aspects of the project that require environmental agency, Province, or subconsultant review. The warnings will be linked to the project schedule and will allow sufficient time for any additional surveys, data collection activities, and agency submissions to be handled well in advance.

5. Environmental Component Plans

The EMP will address various components of the project that have been identified as having actual or potential environmental effects. Component plans will be developed to establish personnel responsibilities, reporting requirements, regulatory requirements, actions, and scheduling considerations required by the environmental authorities, the Province, the Concessionaire, and other Interested Parties. A description of the Concessionaire's approach to these component plans is provided below.

5.1 Air Quality Monitoring and Mitigation Plan ("AQMP")

Primary guidance documentation for the AQMP includes Item No. 10 of the Supplemental Environmental Information distributed by the Province for the Project, and Section 165, Subsection 165.16.02 and other applicable subsections within the MOT Standard Specifications for Highway Construction. The AQMP will also specifically address provisions for air quality monitoring and maintenance at IR#24. These measures will be developed in consultation with Squamish First Nations.

Dust will be controlled through the duration of the work using environmentally acceptable dust suppressants or water. Water will be preferred, with consideration for water conservation, drainage, and sediment control where appropriate. No oils will be used for dust control. Dry soil piles, exposed surfaces including temporary and permanent unpaved roads will either be covered or wetted down during periods of extended exposure. Paved surfaces will either be wetted or swept regularly to control dust.

Within the constraints of operational construction requirements, attempts will be made to minimize the time unpaved roads are exposed and a "one trip" handling procedure will be implemented during removal and fill material hauling. Dust suppressant or covers will be used when hauling finer material over longer distances or near environmentally sensitive areas.

The Concessionaire team has retained the services of Levelton Consultants to review air quality mitigation procedures and to conduct ambient air quality monitoring for the project. As outlined in Supplemental information Item No. 10, the air quality monitoring program includes:

- monitoring ambient PM10 and PM2.5 (particulate matter) when working within 50 m of residences for extended periods of time on the driest days of each season during the most intense work activity
- monitoring during vegetation burning, should burning be required and permitted.

The air quality program will include the submission of air quality reports to the Province during monitoring events. The primary purpose of the air quality monitoring program will be to track compliance and non-compliance with air quality goals set out in the contract documents. For non-compliance issues, the air quality consultant will advise the Environmental Manager and the Construction Manager on further mitigation measures aimed at future compliance with air quality goals and objectives. The successes and failures of these mitigation measures will also be tracked and reported on in the air quality monitoring reports.

5.2 Archaeology Management Plan (“AMP”)

Five areas of archaeological significance are located along the highway in various DBFO sections. These areas include culturally modified trees (“CMTs”), pictographs, traditional trails, and artifact scatter. A qualified archaeological consultant, who is deemed acceptable by local First Nations, will confirm the location of the sites vis-à-vis the Concessionaire’s proposed design footprint and anticipated construction activity. Discussions will be held with both the Squamish and Lil’wat First Nations to determine appropriate protocols for monitoring and managing culturally significant sites. In addition, best management practices will be followed for all construction activities near these important cultural resources.

A contingency plan that addresses the possibility of encountering previously unidentified archaeological resources during construction will be developed in accordance with MOT’s document entitled, “Guidelines for Emergency Impact Management: Heritage and Archaeological Resources” (May 2004).

Management and monitoring of cultural sites will follow procedures and guidelines provided in the standard EMP. However, enhancements at the design stage will be sought to minimize impact on these areas through minor alignment adjustments. These enhancements will be

documented and provided to the B.C. Archaeology Branch and local First Nations for their input. If impact is unavoidable, the CMTs within those areas will be assessed to determine whether or not they require special provisions under the Heritage Conservation Act, again in consultation with the B.C. Archaeology Branch and local First Nations.

5.3 Raptor/Heron Management Plan (“R/HMP”)

A wildlife expert will conduct pre-construction raptor/heron nest surveys to provide updated information on the presence of active or inactive raptor/heron nests in the contract area. Environmental Assessment certificate application documents show the location of four raptor nesting sites and one heron colony. The Concessionaire’s wildlife expert will annually assess whether any of these nests are active.

The R/HMP will combine detailed pre-construction surveys with management and monitoring during construction. On an annual basis and prior to construction, the Concessionaire’s wildlife specialists will conduct a Resource Information Standards Committee (“RISC”)-based raptor (bald eagle, osprey, peregrine falcon) and heron nest surveys to determine status of previously recorded nests at the following locations:

- bald eagle nests at Sta. 103+800, 115+600 & 124+700 bald eagle perch/roost tree at Sta. 125+600
- peregrine falcon nests adjacent to Sta. 141+700 to 142+200
- great blue heron colony 470 m west of alignment at Sta. 142+500 to 142+600
- osprey nests at Sta. 229+350 and between Sta. 2370+900 and 238+100.

In addition, a RISC-based survey will be implemented to determine any new active locations of raptor (bald eagle, osprey, peregrine falcon), heron nesting, and surveys of appropriate habitat for spotted owls. Following these surveys, the wildlife specialist will provide information for the development of mitigation strategies for the protection of raptor and heron nests and roost trees, and the protection of spotted owls. Where protection is not feasible, the Concessionaire will provide documentation to support the application of a removal permit under the *Wildlife Act*.

If the raptor nests are active at time of construction, then activities generating noise that could impact the breeding pair will be restricted between January 31 and August 15. Similar

restrictions will be applied to the heron colony near Mamquam Blind Channel. Exclusions of these restrictions may be granted upon consultation with Ministry of Water, Land and Air Protection (“MWLAP”) and Canadian Wildlife Service (“CWS”) providing appropriate survey and reporting are submitted along with the request. Specific measures to reduce impacts to breeding and nesting birds include:

- use information gathered during preconstruction raptor (bald eagle, osprey, peregrine falcon, spotted owl) and heron nest surveys to retain and protect nests and roost trees
- minimize areas to be cleared of vegetation/blasting
- implement a no blasting zone within 1 km of the heron colony on the banks of the Mamquam Blind Channel at IR 24 or within 1 km of an active bald eagle, osprey, peregrine falcon, or heron nest between January 31 to August 15, unless pre-approved by CWS
- no clearing of vegetation within 500 m of an active bald eagle, osprey, peregrine falcon, or heron nest between January 31 and August 15, unless pre-approved by CWS
- where retention of nest/roost trees is not possible, construct suitable nesting/roosting platforms in suitable locations as compensation (upon approval from CWS and MWLAP)
- determine impacts of construction activities on a nest-by-nest basis and if necessary, determine activity exclusion zones, timing of works, and effective/functional buffer/screening setback distances with CWS and MWLAP
- conduct ongoing monitoring of known raptor/heron nests, roosting areas, and sensitive features to determine effectiveness of buffers.

5.4 Bear/Human Conflict Reduction Plan

Bears can be attracted to construction offices and sites (e.g., due to presence of garbage) or wander onto active construction sites where they may encounter humans. Also, the linear nature of the Sea-to-Sky Highway, by definition, crosses many traditional upland to lowland travel routes used by bears on a seasonal basis.

The Concessionaire approach will combine education and training (“Bear Aware”) with Best Management Practices (“BMP”) to minimize the risk of bear/human encounters on the construction site. BMPs include storing potential bear attractants (e.g., garbage, petroleum products) in a secure and inaccessible location, particularly at site offices and in equipment maintenance/storage areas.

The Bear Aware program will include enhanced bear safety training for all site personnel and will be incorporated in the general safety training program. A Bear Aware signage program at all site office, maintenance, and rest areas will be implemented. Signage will also be posted on all garbage and waste receptacles to provide constant awareness of the potential for bear encounters. This program will also include a bear encounter and reporting function in the event of a bear observance within the project area.

Preventative BMPs for bear management include storing potential bear attractants (e.g., garbage and petroleum products) in secure and inaccessible locations (particularly at site offices and in equipment maintenance/storage areas); the installation of bearproof garbage containers at work sites, popular pullouts, and any proposed safely rest areas; regular garbage pick-up to prevent the overflow of garbage; and the identification of potentially high encounter areas along the project corridor.

5.5 Construction Schedule

The environmental schedule for obtaining regulatory permits/approvals, conducting information support surveys, providing Province and agency notifications, construction windows, and site-specific management plans will be linked to the Concessionaire’s overall construction and design schedule. Agency review of sub-component plans may require up to five or six months (e.g., Navigable Waters Act notifications). The Concessionaire’s environmental schedule will identify data requirements early in the design phase to facilitate seasonal field surveys in support of environmental applications and notifications.

Realizing that the design and construction schedule will change throughout the duration of the Project, the environmental schedule will be revised based on ‘90 day’ design revisions for general work and ‘3 week’ revisions for site specific construction activities.

An integrated, evolving construction schedule will be provided in the EMP. It is the intent of the Concessionaire’s to link this schedule to the environmental database/portal to provide for

advance warning of timing windows, regulatory requirements, and notifications. The schedule will outline construction activities and when environmental tasks, data gathering, and reports will be required. The schedule will require bimonthly updates of construction and environmental activities if it is to be used as an effective environmental management tool.

The environmental schedule will provide environmental reporting timelines and milestones that are tied to the proposed design and construction schedule. Key environmental timelines and milestones include:

- project EMP – two months after award
- sectional EMPs – six months after award (updates throughout project)
- environmental database – two months after award (updates throughout project)
- advanced environmental training – start three months after award and at 50% and 80% design stages
- initiate design dependent regulatory permit acquisition process – three months after award
- initiate construction dependent regulatory permit acquisition process – one year after award
- initiate recreational user consultation – immediately after award
- initiate First Nations consultation with regard to archaeological sites – two months after award.

Uncertainty in design and construction activities will have a direct impact on the environmental schedule. The EDA will provide a warning feature that will indicate upcoming permitting/approval requirements, Province submissions, timing windows, and other time-sensitive environmental activities or features. Sufficient time will be given to allow for additional surveys, data gathering, and agency review.

5.6. Contaminated Soils Management Plan

Encounters with previously contaminated soils may be an issue near Gonzales Creek and Britannia mine. The Concessionaire will retain a contaminated soils/groundwater specialist on a

contingency basis to advise on remediation and/or disposal procedures in the event that such contamination is encountered and to provide expertise in case an accidental spill results during construction in areas of induced soil/groundwater contamination.

The removal of contaminated soils from the Gonzales Creek site will require that the Concessionaire develop a Soil Relocation Agreement with MWLAP. A similar agreement is required for Britannia soils, but with the stipulation that those soils remain within the affected area of Britannia mine operations. The plan will include a soil quality sampling program when it is suspected that construction activities may disturb these sites.

5.7 Environmental Quality Management Plan (“EQMP”)

The EQMP will clearly outline specific goals that need to be achieved to meet the requirements of the Concessionaire’s Environmental Mission Statement. To be acceptable under the ISO 14001 standard, every action, requirement, and procedure contained within the environmental management system must have its roots in this statement.

The EQMP will set out the principles under which the environmental components of the Project will be addressed in accordance with the requirements of ISO 9001:2000, the Concession Agreement, and Environmental Assessment Certificate specifications. The EQMP will be integrated with the Concessionaire’s overall quality management plan for the Project utilizing the Concessionaire’s process, procedures, and reporting requirements for design review, non-conformance, and corrective action activities.

The EQMP will be based on the plan-implement-check-act cycle and will be continually improved upon. The continual improvement concept is aimed at enhancing, on a regular basis, the overall environmental management system.

Plan

The planning phase of the EQMP follows the development of the Environmental Mission Statement. At this stage, the objectives and targets of the environmental program will be clearly identified and documented as the Project Environmental Policy.

Implement

The implementation and operation phase of the EQMP follows the development of the Environmental Mission Statement and the planning phase. This section of the EQMP discusses the necessary elements for the implementation and operation of the environmental management system. Key elements addressed in this stage of the EQMP are:

- the structure, responsibility, and authority of the key environmental team members and the organizational interfaces between design, construction, and operation aspects of the project
- the training, awareness, and competence levels of environmental team members, design engineers, construction supervisors, and operation people; and identifying the best use of environmental training resources and programs
- the communication systems for disseminating environmental issues and program information and the identification of methods for environmental reporting and monitoring information transfer between the environmental team, the Province, design engineers, construction personnel, regulatory agencies, and when required, other public and Interested Parties
- the level of environmental management system documentation required and how will the Concessionaire will keep current and accurate documents (i.e., environmental subdiscipline, monitoring, and auditor reports)
- the operation control procedures for those programs that outline the issue of “control and influence” and address the need to communicate relevant portions of the Concessionaire EMP to design engineers, construction personnel, and subcontractors if their services and activities have the potential to interact with environmental aspects of the project
- emergency preparedness and response including, but limited to, identifying the possibilities for accidents and emergency situations, the development of emergency preparedness and response procedures, and evaluation and revision of those procedures, as appropriate.

Check

This section of the EQMP will discuss the necessary elements of the checking and corrective action process of the environmental management system. This section contains four distinct elements:

- monitoring and measuring
- non-conformance, corrective and preventative
- action control of quality records;
- environmental quality audits (internal and external).

Act

The Concessionaire will be responsible for conducting regular reviews of the environmental management system to evaluate its effectiveness; evaluating the information provided by the environmental management system to determine if that information is adequate to perform the review; and, based on the review of the overall system management, weighing the potential benefits related to possible changes in the Environmental Mission Statement, environmental objectives and EMP. The last requirement has its foundation in the concept of “continual improvement”. The results of the management reviews must be documented.

The Concessionaire will appoint internal and external Environmental Quality Managers (“EQMs”) to perform quality audits for the duration of the project. Reporting to the Concessionaire’s overall Quality Management Representative and as a member of the quality management team, the primary role of the EQMs will be to ensure that environmental management system procedures outlined in the EQMP are followed by the Concessionaire and their subcontractors.

The Concessionaire’s environmental programs will also be subject to external surveillance and scheduled Quality Audits by the Province’s Representative. These audits will be incorporated into the EQMP at the “check and act” cycle stages to provide further guidance for continual improvement of the Concessionaire’s environmental program.

Environmental Monitoring

Environmental monitoring is the key construction stage environmental quality activity to ensure that goals and objectives set out in the EMPs, contract documents, and regulatory agency approvals are addressed prior to and during construction.

The Concessionaire has secured the services of Cascade Environmental Resource Group (“Cascade”) to fulfill the role of environmental monitor for the project. Cascade has offices in Whistler and Squamish and can easily provide 24-hour, 7 days-a-week monitoring duties as required.

The Concessionaire will employ a team of up to three full-time environmental monitors to be responsible for reviewing, observing, and reporting on daily construction activities. Depending on the location of construction activities, additional environmental monitoring resources are available should construction activities warrant an expanded monitoring program. The environmental monitors will work under the Project managers and report to the Concessionaire.

The environmental monitor(s) will have the authority to halt aspects of the work if there is a risk of damage to the surrounding environment. In such an event, the environmental monitor(s) will inform the Project manager (or designate) of the activity and require that work be halted until the problem is rectified. The environmental monitor(s) will advise the Project manager of the activity on possible means to mitigate the problem. An environmental incident report form will document the situation and be forwarded to the site supervisor and the Province’s Representative.

The environmental monitors’ duties will include, but not be limited to, the following:

- ensuring that construction staff are aware of the environmental policies and requirements
- verifying that all required permits, licenses, and approvals are obtained prior to the start of the applicable construction activity
- reviewing the work schedule with regard to present and future construction activities
- regularly monitoring fuel delivery and refuelling procedures
- regularly checking all equipment and vehicles on site for hydrocarbon leaks

- ensuring that emergency spill and fire equipment caches are adequately supplied and dated
- checking the condition and operational efficiency of all water and sediment retention measures
- providing technical assistance on environmental matters to construction staff and government surveillance officers (i.e., buffer limits in sensitive habitat areas, etc.)
- inspecting all activities during construction to ensure compliance with terms and conditions of approvals and permits and the protection of vegetation and sensitive habitats
- documenting construction activities by field notes and photographs
- monitoring water and effluent within the project area in accordance with the Water Quality Program and increasing observations and/or sampling as necessary when activities occur around sensitive areas.

Environmental Reporting

A large component of the environmental quality management plan is the production of effective environmental reports. These reports transfer information between the Province, Concessionaire, regulatory agencies, and Interested Parties. Clear, concise reporting during all project phases and activities will form the basis for environmental issue identification, resolution, and compliance auditing. The Concessionaire will implement an environmental reporting structure that addresses activities during project design, construction, and operation as described below.

- i. The first level of environmental reporting is the environmental incident/corrective action report. The environmental incident report is used to describe a particular situation, actions taken, and future preventative actions in the case of an unanticipated environmental incident (e.g., hazardous material spill, sediment discharge into a watercourse, etc.). In most cases, the environmental monitor(s) will complete these reports; however, depending on the timing and type of incident, they may also be the responsibility of the Environmental Manager. All environmental incident reports will be forwarded to the Environmental Manager, the Concessionaire's site supervisor and Province's Representative. A corrective action report detailing measures to prevent re-occurrence will be filed along with the environmental incident report.
- ii. During construction, the environmental monitor(s) will provide weekly written reports to the Environmental Manager and project supervisor for subsequent

forwarding to the Province's Representative and appropriate regulatory agencies on a monthly basis. At the discretion of the environmental monitor(s) or Environmental Manager, more frequent written reports may be required when construction activities have the potential to impact sensitive habitats. These reports will include, but not be limited to:

- a description of construction activities
 - any non-compliance and subsequent work stoppages (i.e., environmental incidents)
 - environmental concerns, either expected or unexpected
 - results of water quality analyses
 - site photographs, as necessary
 - amendments to the EMP or any other required plan
 - any reports required by any of the other plans.
- iii. The Concessionaire will prepare monthly environmental quality reports that outline the design and construction activities 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 Concessionaire was able to comply with regulatory agency permits and approvals for each project section. All environmental subconsultant reports, environmental incident reports, specific mitigation plans, and sediment and drainage plans will be appended to the monthly reports. The monthly reports will be submitted to the project supervisor, Province's Representative, and regulatory agencies.
- iv. Section Completion Environmental reports will be submitted once design and construction activities have been completed for each section. These reports, produced by the Concessionaire, will summarize the overall environmental compliance, issues, and challenges encountered for that section, focusing on an evaluation of the EMP and environmental program that indicates successes and failures, and recommends program improvements. These reports will also clearly outline the environmental program required during the operational phase of the contract. From an environmental quality control perspective, Section Completion Environmental reports will be an important evaluation tool where recommendations that have been identified can be implemented on sections that are still under construction.

- v. Annual environmental quality reports will also be prepared by the Concessionaire to provide a project-wide state-of-the-environment summary. These reports will be inclusive of design, construction, and operation phases of the project. Key activities to be reported include the state of fisheries compensation activities, revegetation plans, unanticipated issues, environmental compliance evaluations, and Interested Parties' accounts of the overall environmental program for the project. These reports will also outline the environmental program for the next year of activities. These reports will be made available by the Concessionaire for comment and review by the Province and regulatory agencies. Upon consultation with the Province, these reports can also be formatted to serve as 'green' Olympics public information documents or handouts.

5.8 Environmentally Sensitive Areas Management & Protection Plan ("ESAMPP")

This section of the EMP will provide a summary of general and site-specific measures to mitigate adverse project effects in environmentally sensitive areas (such as defined in Section 165, Subsection 165.01.04 of the MOT's "Standard Specifications for Highway Construction"). The ESAMPP will provide an account of the Concessionaire's environmental resources, schedules, protection requirements, and mitigation strategies, as well as monitoring and contingency plans that will be used to protect those resources.

Specific plans with regard to the management and protection of environmentally sensitive areas are addressed in Riparian Restoration and Revegetation Management Plan, Sensitive Ecosystem Management Plan, and Tailed Frog Management Plan. The following points are general mitigation measures that will be employed as well as those points in the specific plans listed above.

- confirm and perimeter flag or fence sensitive plant communities, riparian areas, and wildlife habitats that are to be considered in design and construction, and provide for specific management/mitigation measures that are to be implemented
- indicate flagged perimeters on design drawings
- assess the need for site-specific protection buffers around sensitive ecosystems and habitat elements, and provide specific plans for implementing buffers and their delineation and management
- provide measures to prevent the infestation of non-native or weed species along the alignment

- provide recommendations for re-vegetation along the alignment, with emphasis on native plant species that have value as ground cover; provide for improvement of water quality from road runoff to riparian zones.

5.9 Environmental Training Plan (“ETP”)

The ETP will be approached at four levels: advanced design, advanced construction, basic, and “tailgate” as follows:

1. **Advanced Level Design:** At the 50% and 80% design submission for each project area, the Environmental Manager will conduct an environmental information session for senior design and construction personnel to review key design requirements of the Environmental Assessment Certificate and discuss how the EMP addresses requirements for that area.
2. **Advanced Level Construction:** Similar to the Advanced Level Design, The Environmental Manger will also conduct an ‘Advanced Level’ construction workshop once final design for each area is complete. Senior construction personnel, the Environmental Manager, and the Environmental Monitor will review potential environmental impacts and how those will be best addressed through mitigation activities.
3. **Basic Level:** All on-site personnel (e.g., equipment operators, tradespersons, subcontractors, and labourers) will all receive an environmental orientation program prior to working on site. The basic environmental orientation will be integrated into the health and safety orientation that all site workers and subcontractors must attend prior to working on site. Records of these safety/environmental sessions will be available to the Province.
4. **Site Meetings & ‘Tailgate’ Sessions:** As the project proceeds, the environmental monitor will attend regular on-site construction meetings and tailgate sessions to articulate specific environmental requirements, issues pertaining to environmentally sensitive sites, construction activities that may impact these sites, and mitigative strategies that can be implemented to protect the environment.

Each level will have a firm schedule, which will be developed once all approvals have been met and a confirmed construction start date is determined.

5.10 Equipment and Materials Plan (“EqMP”)

The EqMP outlines on-site management of vehicles, machinery (including fuelling and operation), imported materials (including hazardous materials), and materials generated from construction activities. The Plan will follow regulations outlined in Section 165, Subsection 165.13 of the MOT’s “Standard Specifications for Highway Construction”, the B.C. Waste Management Act and Special Wastes Regulations (B.C. Reg. 63/88), and the Federal Transportation of Dangerous Goods Regulations. All major equipment and materials storage and servicing areas will be located in the site office areas within each project section. These areas are clearly identified on the environmental site drawings. Key points in the EqMP are addressed below.

Transportation

Equipment and containers that are capable of safely transporting petroleum products and/or hazardous materials will be used in compliance with Section 7.33.1 of the Federal Transportation of Dangerous Goods Regulations for bulk containers, and Sections 7.21 and 7.23 for materials in packages or small containers. The Concessionaire will take all necessary precautions to prevent the loss of material during transport. Trucks carrying loose material will be covered and restraints will be used to prevent any material from escaping the load. All materials and litter deposited on public roadways by vehicles (including dirt and mud from truck tires) due to construction-related activities will be collected and disposed of according to best management practices.

Fuel Storage

Fuel will not be stored within 30 m of a watercourse or where there is potential for any spilled fuel to enter a watercourse or groundwater. Fuel storage facilities will be located on flat ground and will be diked to contain at least 125% of the total capacity of the storage container(s). Dikes will be constructed of impermeable material or will be lined to ensure that petroleum products cannot escape into the receiving environment. Fuel stored in smaller caches will have a similar diking system and will be covered to prevent accumulation of precipitation on the storage container. A similar containment system will be used for long term (i.e., overnight) parking of refuelling and maintenance trucks to prevent residual fuel and oil from entering the receiving environment. The transport, storage, and dispensing of fuel and other petroleum-based products will comply with the Ministry of Water, Land, and Air Protection/Ministry of Forests publication “A Field Guide for Fuel Handling, Transportation and Storage” (February 2002).

Equipment Servicing

Servicing and washing of machinery and vehicles will be done at a secured location in the site office area away from riparian areas, watercourses, and water/sediment retention facilities. Refuse generated during the servicing of equipment (e.g., oil filters, waste oil, used absorbent pads, etc.) is considered hazardous material and will be disposed of according to hazardous materials guidelines and the Waste Management Plan. When feasible, fuelling of machinery and vehicles will be carried out at these centralized locations. Should fuelling of machinery not be practical at these locations, fuelling activities will occur outside of the wetted perimeter or riparian zone of any watercourse.

Equipment Operation in Environmentally Sensitive Areas

Environmentally sensitive areas will be clearly marked and flagged prior to the start of construction activities. Equipment will be operated only within the designated construction area. Any equipment working in close proximity to sensitive areas must be in good repair and free of oil, hydraulic fluid, grease, and fuel leaks.

If substantial machine work is required in sensitive riparian areas, environmentally friendly oil and hydraulic fluids will be utilized in machines and vehicles working for prolonged periods. Further assessment of work conditions may determine that it is advantageous to have one 'riparian dedicated machine' utilizing the previously mentioned mitigation measures.

Hazardous Materials

Environmental aspects of hazardous material management will be integrated into the Environmental Training Plan and addressed during the safety and environment orientation/education program. All hazardous materials will be handled in compliance with the Workplace Hazardous Materials Information System ("WHMIS"), will be properly labeled, and current material safety data sheets ("MSDS") will be stored in the site office where they are easily accessible for all personnel. Any wastes generated from these compounds will be disposed of in accordance with the B.C. Waste Management Act and B.C. Special Waste Regulations.

5.11 Fisheries Mitigation/Compensation Plan (“FMCP”)

The Documentation and Correspondence listed in Schedule A of the Environmental Assessment Certificate outlines a number of short-term and long-term potential impacts to fisheries and aquatic resources resulting from project activities. The Province has considered the Department of Fisheries and Oceans (“DFO”) hierarchy of preferences (relocation, redesign, mitigation, and compensation) in design and management requirements in the RFP. Many of the potential impacts have been, and will continue to be, mitigated through design and construction requirements (e.g., sediment and drainage plans, water quality objectives, etc.).

Using DFO’s hierarchy of preferences, and given that relocation of the project is not an option, the Concessionaire’s approach to fish and fish habitat will be directed at redesign, mitigation, and compensation.

Redesign

In order to reduce the impact to fisheries resources along the alignment, the Concessionaire will install upstream and downstream headwall structures (rather than culvert extensions) where feasible. These sites are located primarily in DB8, but future headwall design considerations will be made for all culverted fish and tailed frog streams.

Mitigation

The Environmental Assessment Certificate recognizes that stream crossing sites that are not fish bearing still have instream and/or riparian zones that may offer food and nutrients to downstream fish-bearing waters. The FCMP will provide for mitigation at stream crossings to offset adverse effect to food and nutrient function, including restoration of instream and riparian areas, as well as local habitat improvement where reasonable opportunity for such presents itself. Depending upon the habitat sensitivity and type of crossing improvement, regulatory review of mitigation prescriptions at these locations may require Water Act Notification (MWLAP) or Water Act Approval (LWBC).

Mitigation prescriptions will be based on mitigation commitments outlined in the application for the Environmental Assessment Certificate, Volume 2, Section B (“Fisheries and Aquatic Habitat Impact Assessment”), Appendix B (“Freshwater Summary Tables”). The final EMP will include a complete list of crossings with corresponding classification, mitigation, and monitoring requirements both during and after construction.

As a fisheries enhancement tool, the Concessionaire proposes to institute an extensive signage program aimed reducing construction-related impacts to fishbearing streams through awareness. This program will involve posting 'fish bearing' signs at all four alignment corners of fish-bearing streams.

Compensation

Permanent, unavoidable impacts to fish habitat will require authorization under the Subsection 35(2) of the Fisheries Act for Harmful Alteration, Disruption or Destruction ("HADD") of Fish Habitat. Such disruptions are anticipated during the highway upgrade. Given HADD authorizations require a compensation component (i.e., DFO policy of 'no net loss' of fish habitat), the Province has provided a list of preferred compensation sites to achieve the DFO policy of no net loss of fish habitat for the project. From this list, the Concessionaire has identified several sites as priority areas for fish habitat compensation activities, as shown in below in Table 2.6-3.

The application for the Environmental Assessment Certificate, Volume 2, Section B ("Fisheries and Aquatics") estimates that approximately 2,100 m² of instream habitat and 14,000 m² of riparian habitat would be impacted according to the preliminary design footprint. It is estimated that the Concessionaire's design improvements beyond MPR will contribute an additional 10% to these impacts, resulting in impacts to a total of approximately 2,300 m² of instream habitat and 15,400 m² of riparian habitat. As indicated below in Table 2.6-3, the Concessionaire's compensation plans provide more than enough compensation habitat to satisfy DFO's no-net-loss policy. These calculations will be updated at the 50%, 90%, and 100% design stages.

Table 2.6-3: Fish & Wildlife Compensation Areas for the DBFO Project

	Description	Approx. Sta. No.	Amount of Instream Habitat Created (m ²)	Amount of Riparian Habitat Created (m ²)	Comments
DB6	Middle Creek Box Culvert	127+280	40	-	Improvement through culvert work associated with Hwy improvement
DB6	Thistle Creek Box Culvert	131+400	75	600	Improvement through stream and riparian work
DB8	Mamquam Blind Channel Culverts (Box & Cs Pipe)	143+620	2,000	4,000	Improvement through culvert work associated with Hwy improvement
	Mashiter Creek Box Culvert	147+300	360	-	Improvement through culvert work associated with Hwy improvement
DB12	Unnamed Tributary to Cheakamus Creek (Old Salt Shed)	229+200	2,130	2,325	Work to be done by MOT outside of project boundaries
DB13	Wetland Complex Near Sw183 (Callaghan Creek)	246+160	500	2,000	Work by S2S, 1 ha of crown land available outside of project boundaries
All	Riparian Enhancement through Culvert Improvements	-	-	1,000	Improvement through culvert work associated with Hwy improvement
DB12	Widow Creek Arch Culvert	237+000	300	600	Design will include fish habitat features
DB13	Millar Creek Arch Culvert	249+760	50	-	Design will include fish habitat features
TOTAL			5,095	18,925	

Monitoring and Reporting

Environmental monitoring and reporting for the compensation works will follow best management practices and guidelines set out in applicable Fisheries Act and Water Act permits and approvals. In particular, all construction activities requiring a Fisheries Act Authorization 35(2) will be in accordance with the guidelines outlined in the 23 August 2004 letter from DFO to MOT.

Key monitoring issues include, but are not limited to, the maintenance of water quality, substrate retention, fish and wildlife utilization, and plant survival. After completion, fisheries authorizations typically require a minimum five-year monitoring and reporting program to ensure that compensation areas are functioning as intended. During this period, DFO may require corrective action (e.g., replanting) on the part of the Concessionaire.

The Environmental Assessment Certificate also recognizes that stream crossing sites that are not fish bearing still have instream and/or riparian zones that may offer food and nutrients to downstream fish-bearing waters. The plan will provide for mitigation at stream crossings to offset adverse effect to food and nutrient function, including restoration of instream and riparian areas, as well as local habitat improvement where reasonable opportunity for such presents itself. Depending on the habitat sensitivity and type of crossing, improvement regulatory review of mitigation prescriptions at these locations may require Water Act Notification (MWLAP) or Approval (LWBC).

Mitigation prescriptions will be based on mitigation commitments outlined in the application for the Environmental Assessment Certificate, Volume 2, Section B, Appendix B (“Freshwater Summary Tables”). The final EMP will include a full list of crossings with corresponding classification, mitigation, and monitoring requirements during and post construction.

5.12 Infrastructure Demolition Management Plan

The demolition of existing infrastructure (e.g., roadways, bridges, shoulders, wing walls, etc.) will be managed on the basis of reuse, recycle, and/or remove according to the project Waste Management Plan. Any non-hazardous demolition material that can be reused will be set aside for consideration in further construction activities. In particular, clean fill material, gravels, rocks, and asphalt can be re-worked into on-site construction practices, including fill materials, providing they do not pose a risk to fill integrity, human safety, or the environment.

Some demolition material that may not be appropriate for reuse on site but may have value in recycling will be set aside, stockpiled, and removed from site to an approved recycling facility. Any demolition waste that is deemed to be hazardous material will be removed from the site in accordance with the Hazardous Materials and Waste Management Plans contained within this EMP.

Infrastructure demolition procedures in and around sensitive habitats will conform to those outlined in the Sensitive Ecosystem Management Plan. In particular, wing wall, bridge deck, road surface, and retaining wall demolition activities will take place so as to minimize habitat disturbance. Measures such as buffer strips and no disturbance zones will be marked and construction crews will be briefed on best management practices prior to demolition. Should unforeseen demolition activities have the potential to impact sensitive habitats, the environmental monitor will assess the requirement for mitigation measures and develop a management plan accordingly.

Infrastructure demolition activities will be integrated into the environmental schedule and database to allow sufficient time and resources to be allocated for environmental protection measures.

5.13 Materials Management Plan (“MMP”)

Materials management procedures will include logging and tracking imported construction material, on-site material generation, and material relocation throughout the duration of the project. MMP procedures for materials management will be tied to construction schedules and the environmental database. The MMP will follow best management practices as provided in Subsection 165.06 of MOT’s “Standard Specifications for Highway Construction”.

The Concessionaire’s design will be optimized to minimize off-site disposal of waste material. Shotrock will be stockpiled at predetermined sites for processing into base course. Small organic material from clearing and grubbing activities will be trucked offsite for disposal or burned at prescribed sites based on agency approval. All overburden material, with the exception of topsoil and organics, will be used in road fills. Suitable overburden material may be processed at the cut for use as MSE wall backfill. Topsoil will be stored at suitable sites for future use in landscaping and revegetation. Details on the handling and disposal of potential acid-generating rock are provided in the Potentially Acid Generating/Metal Leaching Materials & Acid Rock Drainage Adaptive Management Plan (“PAG/MLMARDMP”).

Specific material storage and handling procedures are as follows.

- all storage piles of excavated material will be located 30 m from any waterbody to prevent material from entering the work area and/or creek
- excavated materials will be stockpiled in designated areas and will be limited in duration and aerial extent as much as possible
- soil and organic material storage piles located in close proximity to environmentally sensitive watercourses will be covered with plastic sheeting when not in use for more than 24 hours
- silt fences will be installed as required at the bottom of slopes containing stockpiled material to prevent erosion and sediment transfer into watercourses and drainage systems.

5.14 Noise Control and Mitigation Plan (“NCMP”)

The NCMP will reflect the requirements outlined in Section 11 of the Supplemental Environmental Information distributed by the Province on 12 May 2004.

Timely completion of the Project will require that substantial amounts of work be carried out during an eight-hour night time traffic closure period between 22:00 and 06:00 hours. When heavy construction must be conducted at night, the potential for community disturbance and negative reaction is greatly enhanced due to potential disturbance during relaxation and sleep.

The NCMP will include a set of best management practices to control construction noise emissions, minimize community impacts, and achieve community acceptance of unavoidable noise. The NCMP will focus on noise-sensitive enclaves including Eagleridge, Lions Bay, Britannia Beach, urban Squamish, and IR#24. Noise mitigation measures implemented near IR#24 will be developed in consultation with the Squamish First Nations. Mitigation considerations will include:

- compliance with local municipal noise bylaws
- restrictions on pile driving in the general vicinity of residences limit rated noise emissions of construction equipment maintenance
- management and education
- community liaison
- noise monitoring.

In addition to the noise mitigation and monitoring program outlined in the MPR requirements, the Concessionaire proposes an expanded noise program to further minimize community impacts. As required under the MPR noise program, noise mitigation measures implemented near IR#24 will be developed in consultation with the Squamish First Nations.

Equipment Operation

All heavy mobile equipment and ancillary powered equipment used at night within 500 m of any residential area will be certified to meet applicable noise emission levels (see Table 2.6-4 below). All such equipment must be recertified on a semi-annual basis if it is to be used for night time work. Other mitigation measures to minimize night time noise may include the use of flashers instead of back-up alarms and the scheduling of noisier activities for daylight hours, providing worker health and safety are not an issue.

Table 2.6-4: Guidelines for Maximum Noise Levels during Night time Hours

Equipment Type	Maximum Noise Level (L_{max}) in dBA Measured at Distance of 15 m
Air compressor	80
Backhoe	80
Concrete truck / mixer	85
Crane, mobile	85
Dozer	85
Dump truck	84
Generator	82
Grader	85
Hoe ram	90
Loader	80
Paver	85
Rock drill (hydraulic)	85
Roller	80
Miscellaneous trucks	84

Equipment Maintenance

All construction equipment will be kept in good working condition to minimize general noise emissions. This will include adherence to the guidelines provided in Section 7.1.4, Volume 3, Section C of the Application for the Environmental Assessment Certificate.

Management and Education

Management and education controls will be implemented to make equipment operators aware of the need to minimize noise emissions when working within 500 m of residential areas. This will include adherence to the guidelines provided in Section 7.1.3, Volume 3, Section C of the Environmental Assessment Certificate.

The Concessionaire will establish and maintain lines of communication with all communities and residents' groups that may be affected by construction noise to:

- inform potentially affected communities well in advance of the timing and likely duration of all major construction phases (particularly those to be conducted during night time) and of any changes in these plans
- notify communities well in advance of any particularly noisy activities that are anticipated (e.g., rock drilling, blasting, pile driving)
- inform communities of measures being taken to minimize noise disturbances

- receive, and to the extent possible act on, input from the communities about scheduling the noisiest activities and discuss other suggestions that residents may have about mitigating the impacts of construction noise on their community
- field concerns and complaints via telephone at the site office; the site office telephone number and responsible personnel will be provided to local residents during work notification
- resolve noise concern/complaint situations in a timely fashion by considering all practicable means to mitigate noise impacts either through changes of work schedule, use of alternative construction techniques, quieting and/or relocation of key equipment, or constructing effective temporary noise barriers.

A noise monitoring program will be conducted on a regular basis to:

- certify and recertify the noise emissions of construction equipment
- record noise over representative time periods at residential or other noise-sensitive locations both as means of documenting, on a periodic basis, the residents' noise exposures (particularly at night) and facilitate response to noise complaints received
- quantify/document the effectiveness of any noise abatement measures.

All noise monitoring reports, communications with local residents and resulting mitigation measures will be included within monthly environmental reports to be submitted to the Province's Representative.

Innovative site and machine specific noise abatement features, such as machine shrouds and portable sound walls that were used successfully on Work Package 2 section of the Sea-to-Sky Improvement Project, will be designed for use in sensitive areas. These measures will be developed and implemented in consultation with the Concessionaire's noise specialist.

5.15 Potentially Acid Generating/Metal Leaching Materials and Acid Rock Drainage Adaptive Management Plan ("PAG/MLMARDMP")

Acid rock drainage ("ARD") and metal leachate ("ML") can have adverse impacts on aquatic ecosystems. These impacts can range from acute toxicity, bioaccumulation in the food chain, behavioural effects to species composition changes.

The Specifications Environmental Assessment Application supporting geotechnical documentation (Golder, 2003) identified potential acid generating (“PAG”) rock concern areas in Sections DB3, DB4, and DB12/13. Within these areas, a number of environmentally sensitive aquatic ecosystems exist that could potentially receive ARD and ML from project-related activities. The Concessionaire’s three-tiered approach to address ARD/ML mitigation is as follows:

- i. Minimize rock cuts during detailed design in PAG areas. The Concessionaire’s geotechnical specialist will conduct confirmatory surveys to confirm the presence and location of PAG materials within the areas identified in the EA documentation.
- ii. Prevent ARD/ML formation in PAG areas through a proactive mitigation program. This program entails a combination of surface water control measures (e.g., surface water diversion and non-ponding design) and shotcreting of exposed PAG cuts that will minimize infiltration of surface water through PAG/ML materials.
- iii. Treatment of acidic or metal contaminated water prior to discharge to creeks and/or environmentally sensitive areas. This treatment may include lining rock cut ditches with soil or sod to prevent contact between water and PAG material. To buffer acidic discharge, surface water may also be treated with granulated lime prior to discharge.

A surface water quality sampling program will be implemented immediately prior to, during, and after construction for sensitive waterbodies and any ditches at the base of PAG rock cuts if physical pathways exist between surface runoff from these cuts and sensitive environments. This sampling program will be integrated with the overall water quality sampling and reporting program for the project. The environmental monitor will be responsible for monitoring the PAG water quality mitigation and sampling program. Reports and results from the program will be included in weekly monitoring reports.

Excavated PAG material will either be hauled with legal end dumps to the Porteau Cove ferry ramp to be loaded on a barge for ocean disposal or disposed of at the Britannia mine site. The Concessionaire’s will be responsible for providing supporting documentation and applying for all the appropriate permits and authorization regarding the disposal of PAG or AG material.

The Concessionaire’s approach to the management of PAG, AG, and ML will be entail further testing, inspection, materials handling, and water quality sampling. Details on each of these phases are provided below.

Testing

It is understood that there are four categories to be considered with respect to acid generation from excavated rock cuts. These are outlined below:

- NAG (not acid generating) is understood to be rock with a neutralization potential ratio (NPR) value greater than 4. This is not subject to any disposal restrictions.
- NPAG (not potentially acid generating) is understood to be rock with an NPR value between 2 and 4. This is not subject to any disposal restrictions but will be inspected during excavation.
- PAG (potentially acid generating) is understood to be rock with an NPR value between 1 and 2, or rock with an NPR less than 1 that is not reactive at present. PAG rock will be ocean dumped, as allowed for in the Ocean Dump Permit Application.
- AG (acid generating) is understood to be rock with an NPR value less than 1 that is reactive and will be disposed of through means such as the Jane Basin disposal site on the Britannia mine property.

To classify the rock cuts prior to excavation, the cuts will be surveyed for presence of staining and sulphide mineralization. Based on this survey, samples collected from the proposed rock cuts will be submitted to an independent laboratory for acid-base accounting (“ABA”) testing to determine its NPR values. To determine if rock samples with an NPR value less than 1 are reactive at present, paste pH tests, as outlined in Price (1997), will be conducted. If the paste test results in a pH of 6 or greater, the rock will be considered not reactive at present and classified as PAG. However, if the paste test results in a pH of less than 5, the rock will be considered reactive at present and classified as AG. If the pH of the rock is between 5 and 6, the paste pH test result will be compared with the pH of the deionized/distilled (“DI”) water used in the paste pH test. If the paste pH test result is less than the pH of the DI water, the sample will be considered reactive and classified as AG. If the paste pH test result is greater than the pH of the DI water, the sample will be considered not reactive at present and classified as PAG.

Based on the results of the laboratory testing and survey of staining and mineralization, portions of the proposed rock cuts will be designated as NAG, NPAG, PAG, or AG. The limits will be clearly marked in the field prior to rock excavation.

Inspection

During excavation of NPAG rock cuts, the geotechnical engineer will conduct periodic inspections to confirm visually that there are no localized zones of PAG and/or AG in the excavation.

Similar inspections will be conducted more frequently for excavation of PAG rock cuts to confirm there are no localized zones of AG in the excavation. If during excavation of PAG materials, PAG materials cannot be delineated from adjacent NPAG materials based on observations of staining and/or presence of mineralization, and/or effectively segregated during bulk excavation, all materials within the excavation will be handled in the same manner as required for PAG materials.

Where excavation of AG material is required, full-time inspection by the geotechnical engineer will be conducted to ensure AG material is sufficiently delineated and removed during excavation. If during excavation of AG material it cannot be delineated from adjacent PAG/NPAG materials based on observations of staining and/or presence of mineralization, and/or effectively segregated during bulk excavation, all materials within the excavation will be handled in the same manner as required for AG material.

AG/PAG zones may be encountered during excavation within areas identified as PAG/NPAG based on surveys and lab testing prior to excavation. It is anticipated that these zones may occur in localized shear zones or as local alteration of joint planes. Prior to excavation of NPAG/PAG material, machine operators will be briefed on the typical occurrence and visual indicators of the presence of PAG/AG material. If encountered, the geotechnical engineer will be contacted to inspect the area and, if required, sample. As described above, the geotechnical engineer will be conducting periodic inspections during excavation.

If a suspect zone occurs as a discontinuous pocket, is less than the volume of a typical excavator bucket (1 m^3) and is surrounded by apparently, nonreactive rock, the zone will be not be segregated. However, if the zone is larger than 1 m^3 or if the suspect zone occurs as a continuous feature, such as a shear zone or joint plane, the material will be segregated and temporarily stockpiled under conditions of full containment pending test results to determine its classification and the appropriate disposal method.

To supplement the existing Golder information, an additional 16 samples were collected in DB1, DB3, and DB4 and subjected to ABA testing. Based on the results of the recent and previous testing, the following AG/PAG zones are provided in Table 2.6-5.

Additional ABA testing will be conducted during detailed design to further delineate the limits of AG/PAG materials.

Table 2.6-5: PAG Material Locations along the Project Corridor

	Station Interval	Category	Rock Group	Rock Type
DB1	103+250 to 103+450	PAG	Twin Island	Gneiss
DB3	111+000 to 112+150	PAG	Gambier	Andesite
DB4	114+220 to 115+750	PAG	Gambier	Volcanic Breccia/Conglomerate
	118+850 to 119+300	PAG	Gambier	Andesite and Tuff
	119+880 to 120+280	PAG	Gambier	Argillite
	120+280 to 120+560	AG	Gambier	Argillite
	120+560 to 121+460	PAG	Gambier	Argillite
	121+890 to 123+100	PAG	Gambier	Argillite
	123+380 to 123+620	PAG	Gambier	Argillite

Materials Handling

The highway alignment was designed to minimize the volume of PAG/AG that will need to be excavated. To mitigate ARD/ML formation in AG/PAG areas, a proactive management program using a combination of surface water control measures and shotcreting of exposed PAG cuts will attempt to minimize infiltration of surface water through PAG/AG materials.

PAG material will be trucked directly to a barge loading facility for ocean disposal or temporarily stockpiled for a short period of time. AG material will either be trucked directly to an approved disposal facility in the Lower Mainland or to Britannia Mine for disposal in Jane basin.

If PAG material is temporarily stockpiled for a period of two to three weeks before being trucked for barging, the temporary stockpile will be placed on a 150 mm thick pad of crushed limestone and covered with a large tarp to keep rain off. Runoff from the tarp will be directed away from the stockpile. Although the tarp should prevent water from infiltrating through the stockpile, the

subgrade beneath the stockpile will be sloped inward. Runoff from the stock pile will be directed via drainage ditches to a storage pond. The size of the storage pond will be determined once the volume of PAG/AG material has been determined. The water level in the pond will be monitored regularly and the pH of any leachate will be monitored on a weekly basis.

At no time will low pH leachate water be released into the receiving environment. Instead, water will be chemically treated within the pond and released only if it meets B.C. Approved Water Quality Guidelines for Aquatic Life (MWLAP 1998). The best method of treating low-pH water involves the injection of a buffering agent (e.g., soda ash or sodium hydroxide). Upon chemical treatment, pond water will be tested for pH and providing it meets water quality standards can be released via a controlled drainage system for discharge into the environment.

If the PAG stockpile must remain for an extended period of time due to unforeseen difficulties with the barge loading, a new temporary stockpile facility will be constructed with an impermeable concrete, asphalt, or geomembrane liner, and leachate collection system. A similar facility will be constructed if AG material must also be temporarily stockpiled. AG stockpiles will be completely separated from PAG stockpiles to prevent cross contamination.

Water Quality/Sampling Program for PAG/ML Cuts

A water quality and sampling program will be implemented where cuts are into potentially acid generating or metal leaching rock material. The objective of this program is to confirm the assumptions and findings of the Province sampling reported in the Application for an EAC and to adapt mitigation measures as required. The proposal assumes sampling will target surface water, not groundwater.

Water sampling and analysis will be conducted as follows:

- *Pre-construction (baseline)* – The first set of samples will be obtained during or immediately following a rainfall event and prior to any PAG rock work to characterize baseline conditions. The data obtained will supplement data previously obtained for the purpose of the environmental assessment.
- *During construction* – A set of samples will be obtained approximately 3 and 6 months after the rock cut is completed.
- *Post-construction* – A final set of samples will be obtained approximately 12 months following the completion of the rock cut to confirm there are no adverse effects.

During each phase of the program water samples will be submitted to a certified laboratory for analysis of pH, alkalinity/acidity, sulphate, and total and dissolved aluminum, chromium, copper, iron, and zinc. These parameters provide an indication of whether acid rock drainage (elevated pH detected) and/or metal leaching (metals) are occurring. The metals selected for laboratory analysis are those that are considered most likely to leach given the nature of the parent material and other site-specific considerations. If low pH (<5.75) or elevated metals (above background and aquatic life criteria) are measured, mitigative strategies (i.e., water treatment to reduce pH and/or removal via vacuum truck) will be implemented and additional sampling conducted. Field measurements of temperature, pH, conductivity, and turbidity will also be measured using hand-held portable instruments at the time the samples are taken for laboratory analysis.

5.16 Recreation Resource Management Plan (“RRMP”)

The Concessionaire will develop, maintain, and implement an RRMP to ensure concerns of Interested Parties are managed.

5.17 Riparian Restoration & Terrestrial Reclamation/Revegetation Plan (“RRTRRP”)

The RRTRRP will include generic plans involving hydroseeding (e.g., timing requirements, seed mix, application rates, and quality management) and site-specific plans for areas of higher sensitivity (e.g., tailed frog and fish streams). The objectives of riparian restoration plans include restoring the pre-project food/nutrient productivity of temporarily or permanently affected riparian zones at stream crossings and restoring wildlife/amphibian habitat. Planting and seeding will be conducted in accordance with specifications on methodology and timing provided by the supplier to minimize plant mortality and subsequent replanting requirements. A post-construction monitoring program will be implemented to identify re-planting or re-seeding requirements. The riparian restoration program will follow guidelines and requirements provided in regulatory agency approvals and authorizations.

The RRTRRP will include generic plans involving hydroseeding (e.g., timing requirements, seed mix, application rates, and quality management) and site-specific plans for areas of higher sensitivity (e.g., steep slopes). The objectives of riparian restoration plans include restoring the pre-project food/nutrient productivity of temporarily or permanently affected riparian zones at stream crossings and restoring wildlife/amphibian habitat.

The RRTRRP will include improvements and best management practices for revegetation of disturbed areas and road right-of-ways including the following:

- retain existing vegetation wherever possible
- revegetate and protect all exposed soils from erosion utilizing hydroseed mixes with fertilizer, mulch, and tackifier
- utilize native plant species that are appropriate to the site to enhance existing or historical biodiversity
- utilize coarse woody debris for amphibian and reptile habitat creation and retain large diameter stumps and snags for wildlife enhancements
- utilize site-salvaged plant material or native nursery stock and on-site conserved soil/organic material to establish native plant cover
- utilize the MELP Planting Criteria and Recommended Native Tree and Shrub Species for the Restoration and Enhancement of Fish and Wildlife Habitat (July 1998).

Generally, the vegetation restoration plans will utilize native plant species that provide nutrient value for local and downstream aquatic resources, achieve visual/safety aspects of highway operation (e.g., that do not attract wildlife to the roadside), and implement measures prior to, and during, planting to control invasive and non-native species.

5.18 Sensitive Ecosystem Management Plan (“SEMP”)

The Concessionaire will develop and implement an SEMP that will include mitigative and compensatory measures for the Sensitive Ecosystem categories as identified and defined by the Ministry of Sustainable Resource Management (Volume 2, Section A, Appendix 10). The categories include block fields, cliffs, floodplains, gravel bars, mature forests, mudflats, old-growth forests, rivers, rock outcrops, talus, wetlands, and woodland components.

A number of red- and blue-listed plant communities will be affected during project construction. Assessments will be conducted by the Concessionaire’s vegetation specialists to confirm the degree to which the project footprint encroaches on sensitive ecosystem components, particularly on the communities identified in the supplemental information distributed by the Province on 12 May 2004.

A primary mitigation tool will involve awareness through a Sensitive Ecosystem signage program, which will be implemented during the construction phase of the project. Similar to the fish habitat and tailed frog signage program, signs warning of sensitive ecosystems in close proximity will be stationed at key access routes and work area boundaries.

In addition to signage program, the SEMP will provide guidance on the following mitigation measures, which will be applied in the vicinity of sensitive ecosystems:

- delineate the communities on construction drawings and in the field
- avoid removal of old and/or large trees, whether living or dead
- leave coarse woody debris (“CWD”) (large logs on the forest floor) in place
- prevent flow of waste materials from entering plant communities downslope of the highway
- recreate roadside rock pile and talus habitat
- protect rare or sensitive plant communities with a vegetated buffer, wherever possible, to isolate the ecosystem from outside disturbance
- implement active control of invasive species (including plants, feral animals, and pets); active control methods include hand clearing, pruning, mowing, excavation, and planting of appropriate native species
- implement a windthrow prediction assessment in the Larsen Creek headwater swamp and if required develop and implement mitigation measures to minimize the potential for windthrow in this area.

5.19 Sediment and Drainage Management Plan (“SDMP”)

A project SDMP will provide general measures for mitigating soil erosion and controlling sediment-laden flows emanating from disturbed areas, dewatering, cut faces, fills, ditching, stream crossings, and other areas requiring temporary disturbance of potentially erodible materials. In addition, the plan will address pH issues arising from cast-in-place and other works involving Portland cement products.

BMPs will include measures outlined in Section 165, notably:

- 165.01.03 – general restraints for watercourses and groundwater
- 165.04 – erosion, sediment and drainage control
- 165.04.02 – sediment and drainage management plans
- 165.10.02 – management of water discharges
- other relevant subsections.

The SDMP will include a generic SDMP (shopping list format) and site specific SDMPs for each construction zone. The generic SDMP will provide generic measures for mitigating soil erosion, controlling sediment-laden flows emanating from disturbed areas, and handling wastewater contaminated by concrete. Site-specific SDMPs will be developed for each crossing after final design and prior to construction. The project SDMP will provide a shopping list of mitigation measures from which the site specific SDMPs can choose mitigation treatment appropriate to the site characteristics and construction activity.

General sediment control measures that may be utilized include, but are not limited to:

- ditch blocks and sediment tracks (to control sediment movement in roadside ditching)
- slope protection and soil stabilization (e.g., using geotextiles, mulching, armouring)
- temporary sediment control ponds
- sediment barriers including berms (e.g., using clean gravel and filter cloth) to detain sediment laden flow emanating from disturbed areas or to intercept clean flow upstream of worksites and divert the flow away from disturbed areas
- temporary seeding (e.g., hydroseeding).

Site-specific sediment and drainage plans will be developed for each crossing and/or construction activity. These plans will include site drawings and descriptive text that will be submitted for Province and regulatory agency review and approval prior to construction activities for that area.

Each site-specific sediment and drainage plan will include the following information:

- a schedule for the proposed activities
- a description of construction procedures and equipment
- a description of site-specific erosion control, sediment and run-off management measures
- a schedule and description for slope management and re-vegetation activities
- a detailed description and plan drawing of water quality mitigation measures
- a written commitment of on-site equipment, materials, and personnel responsible for erosion sediment control measures
- a list of contact names, positions, and telephone numbers
- a description of the monitoring procedures prior to, during, and after the completion of construction activities.

Copies of site-specific plans will be kept at the project office and will be updated to reflect any changes in construction activities or environmental conditions. Updates are also subject to review and approval by the Province and the regulatory agencies. The results of sediment and drainage mitigation activities and associated water quality reporting will be included in the weekly monitoring reports to the Environmental Manager, the Province Representative and regulatory agencies.

The SDMP will provide general and site-specific measures to prevent elevated pH in runoff resulting from cast-in-place, shotcreting, and other works involving Portland cement. Some general mitigation measures include:

- Instream concrete works will be completed in isolation of streamflow. As per current agency guidelines, A 72-hour minimum cure time will be allowed prior to exposing completed concrete works to streamflow.
- High pH water emanating from areas where pours and other works are recent or ongoing will be contained and either treated prior to release to the environment (e.g., by bubbling carbon dioxide through it) or hauled for disposal at an approved facility.

- Instead of water, a curing compound will be used where appropriate.
- concrete washwater from concrete delivery trucks, concrete pumping equipment, and other tools and equipment will not be discharged to the ground. Washwater will be recycled to the concrete plant as much as possible. On-site containment and treatment of such water will be provided when recycling is not feasible.

Scheduling of instream works will comply with relevant timing window(s) specified in contract documents. Instream works will be completed in isolation of flowing water using an appropriate isolation technique. Stream flow will be directed around work sites using appropriately sized pumps, flumes, or other suitable methods. Instream worksites will be dewatered as necessary. The performance of isolation systems will be monitored. Isolate systems will be repaired or modified where necessary to maintain sediment control function.

5.20 Soil Conservation / Stripped Organic Material Management Plan (“SC/SOMMP”)

The Concessionaire’s approach to soil conservation is to stockpile on site at designated storage areas and reuse during construction activities. The preference will be to utilize stockpiled soil during revegetation and/or landscaping activities. Organic material can be sorted and chipped for future use as a mulch coating for erosion prevention. Sediment and erosion control measures will be taken prior to and after placement of stockpiled soil or organic material. These measures will include avoidance of storage where natural drainage or storm water could erode the stockpile and tarping of erodible materials.

Specific procedures with regard to soil conservation and stripped organic material management will focus on material placement and slope protection (i.e., erosion control). The EMP will describe how best to implement the best management practices contained in the MOT’s Standard Specifications, Section 165, Subsection 165.06, Section 3 (Slope Protection and Surface Protection) of the “Land Development Guidelines” (DFO, 1992) and the “Manual of Control of Erosion and Shallow Slope Movement” (MOT, 1997). Best management practices addressed in the relevant sections of the equipment and materials management, erosion control, and vegetation management plans will also apply to the SC/SOMMP.

Additional procedures with regard to soil conservation and stripped organic material management will be addressed in the Materials Management Plan and Vegetation Debris Management Plan.

5.21 Spill Contingency and Response Plan (“SCRP”)

The EMP will include a spill contingency and emergency response plan. The plan will conform to Section 165, Subsection 165.14.02 of MOT’s Standard Specifications and the MWLAP document entitled, “A Field Guide to Fuel Handling, Transportation and Storage” (MWLAP 2002). The plan will also conform to MWLAP’s current emergency response planning guidelines. The finalized plan will include:

- list of spill abatement materials/equipment to be stored on site list and contact numbers for external resources
- criteria for substance recognition/spill identification
- verbal notification procedure (“call out”), including a decision tree for spill reporting and contact numbers
- containment procedures
- clean-up procedures
- debriefing and follow-up reporting.

The plan will be integrated with the Safety Program developed for the Project.

There is the potential for environmental damage from the accidental spillage of petroleum products and chemicals. To minimize the possible adverse effects on the environment of such a spill, the Concessionaire will develop an enhanced SCRП to deal with small spills and possible emergency situations. This plan will include guidelines for reporting a spill, as well as training procedures, resource allocation, and the supervision of containment and restoration procedures. This plan will be made available to all employees and subcontractors on site. It will also be discussed at the initial site meeting and safety training sessions. A primary goal of the enhanced SCRП is spill prevention and quick response.

Pre-Emergency Planning

Hazard Identification: Each phase of construction will be examined to identify the potential hazards. A WHMIS sheet will identify all hazardous compounds being transported to site and this information will be available to all personnel. Hazardous compounds will be stored on site in locked containers within secured enclosures. Compounds used to cure concrete, lubricants, and fuel for small equipment will be present.

Spill Criteria: A spill, as defined by MWLAP, means a “discharge of a pollutant into the natural environment from or out of a structure, vehicle or other container, that is abnormal in quality or quantity in light of all the circumstances of the discharge.” Procedures will vary according to location, quantity, and product spilled.

Risk Analysis: The greatest risk of spills will come from the use of petroleum products. Any spills will be contained quickly with the available spill equipment onsite. Trailers will be equipped with sufficient spill absorbent materials and other tools to address and contain a small spill.

Resources Available: If required, emergency response for larger spills will be available. First responders such as fire departments have the capability to clean up a variety of spills. Other resources, such as local environmental cleanup companies, can also be called upon in an emergency. Response will be consistent with specifications in the Incident Management Plan.

Internal Alerting: Because timely and accurate reporting of an accidental spill can help ensure quick and efficient response, this plan includes detailed information regarding both general and specific notification procedures.

General Response

The initial response to any spill on the project site will be to:

- i. Ensure safety in the spill area.
- ii. Stop the flow of the hazardous material if it is safe to do so.
- iii. Secure and isolate the spill area.
- iv. Assess the situation (identify product, equipment involved, affected area, and spill status).

The first responders under the direction of the person in authority, usually the Site Superintendent or the Environmental Manager, will take action to prevent additional spillage, utilize on-site resources, and notify the Environmental Monitor, the Province and appropriate regulatory authorities of the event.

With the occurrence of a minor spill, the Concessionaire will have the personnel and equipment available to clean up the contaminant and restore the location to pre-spill conditions. Current policy is to clean up minor on-site spills less than the reportable criteria first and to contact the appropriate government agency after completion of the operation. In case of a spill that exceeds the defined criteria or for spills near water, MWLAP (Provincial Emergency Program) will be notified immediately. The Concessionaire will use its own resources and private clean up companies, if necessary. In the unlikely event of a very large spill, assistance will be requested from relevant government agencies. Any spill, regardless of size, reaching a watercourse will be reported immediately.

Spills will be reported to the regulatory agencies when quantities of materials exceed the classifications laid out by the Transportation of Hazardous Goods Regulations (200 L or more for flammable liquids, e.g., gasoline). Spills that do not exceed the above criteria will be documented internally and reported to the Province. Reporting and response procedures will be consistent with those specified in the Incident Management Plan for the project.

Specific Response

The first action for clean up of land-based spills is to prevent the spread to watercourses or drainage ditches and to limit the saturation of the material deep into the soils. Therefore, damming of the free liquid will be the first response followed by the removal of the liquid by absorbents or pumping. When the free liquid is contained, steps will then be taken to collect all contaminated soil for later disposal.

Spills into or near watercourses have the potential for causing environmental damage. All spills near or into water, even those less than the reportable quantities, require immediate attention. The first response will be to immediately stop the spread of the spilled material downstream. This can be accomplished with the use of absorbent booms and absorbent material designed to pick up oil. These spills will be immediately reported to MWLAP and DFO through the Provincial Emergency Program dispatch.

One large spill response kit will be easily accessible within any active work area to provide for clean up of small- and medium-size spills or to initially respond to a large spill. Individual spill kits will be carried on all construction-related site vehicles. It is assumed that in the unlikely event of a large spill, the Concessionaire will utilize the resources of local clean-up companies, the Provincial Emergency Program, and local fire response teams.

Reporting

At the end of the clean-up, a detailed environmental report will be filed with the Province and with government regulatory agencies as required.

Spill Response Training

Spill response training will be undertaken as part of the health and safety program for site personnel. This training program will familiarize the workers with the location and use of spill equipment and the need to report all spills to either the Site Superintendent or the Environmental Manager. Spill response training will focus on:

- due diligence to prevent spills
- safety procedures
- roles and responsibilities
- spill assessment
- site security and safety
- characteristics of petroleum products spill containment and recovery site restoration
- spill documentation.

5.22 Tailed Frog Management Plan (“TFMP”)

The TFMP will outline the Concessionaire’s approach to mitigation and compensation for impacts to tailed frog habitat. Stream-specific mitigation and compensation measures will reflect the ranking of tailed frog streams along the Concession Highway alignment (as per EA application, Volume 2, Section B, Appendix D, “Potential Impacts of Highway Expansion to the Tailed Frog (*Ascaphus truei*)” and Recommended Management Measures and Mitigation Options). Ascaphus Consulting ranked stream crossings along the Sea-to-Sky corridor on the basis of relative abundance of tailed frogs and quality of habitat at the crossing sites, with a three-tier approach: creeks that require mitigation and/or enhancement (Tier 1), creeks where disturbance should be minimized through construction mitigation measures (Tier 2), and creeks that are of no concern (Tier 3).

Assessments will be conducted at each of the priority creeks to measure the adverse effect of the proposed design/construction activities and to identify suitable mitigation or compensation measures.

In order to comply with requirements under the Environmental Assessment Certificate for the Sea-to-Sky Improvement project and Items 1.2 and 4.5e of the Owner's Table of Commitments and Responsibilities, the Concessionaire will build upon the standard tailed frog management plan to develop tailed frog and amphibian enhancements along the Concession Highway alignment. This plan will address general procedures for tailed frog and tailed frog habitat mitigation and salvage procedures to isolate work areas and salvage/relocate amphibians prior to site disturbance for clear and grub activities and instream construction work (e.g., culvert extension and headwall construction).

Mitigation

Tailed frogs reside year round within the stream environment and are most vulnerable to channel disturbances (sedimentation and bedload movement). Given that point source sedimentation impacts can affect the length of a watercourse channel a considerable distance downstream from the construction site, the guiding document for maintaining habitat quality in tailed frog streams is the Sediment and Drainage Management Plan ("SDMP"). Mitigation procedures for tailed frog streams will be required during clear and grub activities and instream works.

Mitigation during construction will include the demarcation of tailed frog streams on construction drawings; flagging of tailed frog streams in the field; salvage of tailed frogs from construction zones and relocation to other parts of the stream beyond direct physical effects of construction; sediment controls; measures to mitigate pH effects and other adverse water quality impacts; and monitoring. A salvage permit from MWLAP will be required for the capture and transfer of adult and larval tailed frogs. This salvage will be restricted to the period when larval tailed frogs are active, unless otherwise approved by MWLAP. A tailed frog signing program will be implemented as an additional awareness tool for construction crews. These signs will be erected at all four alignment corners at each tailed frog stream crossing prior to construction.

Design mitigation will be implemented as feasible given an overriding concern to protect human safety (e.g., protection from debris flow). All design-related enhancements will be implemented subject to endorsement by the Concessionaire's aquatic wildlife specialist and in consultation with MWLAP. The proposed crossing designs at tailed frog streams already provide mitigation

in that the culvert extensions are generally less than anticipated in the Application for the Environmental Assessment Certificate (i.e., headwall design). Subject to further assessment, it may be feasible to include design features that facilitate the passage of the adult tailed frog. In addition, it may be possible to salvage boulders and other key habitat features from the zone of permanent disturbance, segregate the materials, and replace them outside the immediate project footprint to enhance existing habitat that will be undisturbed by construction.

Compensation

Enhanced tailed frog habitat features will be incorporated into fisheries compensation measures on an opportunistic basis. All fish and fish habitat compensation plans will be provided to MWLAP for review on possible tailed frog habitat enhancements.

During final design, consideration will be made with regard to improving tailed frog habitat in Tier 1 and 2 streams within the alignment. The Concessionaire will include the following design related improvements to tailed frog habitat throughout the alignment. All design related enhancements will be implemented subject to consultation with the MWLAP tailed frog representative.

Attempts will be made to salvage key habitat features (e.g., smooth boulders and large cobble) from the zone of permanent disturbance, segregate the materials, and replace them outside the immediate project footprint to enhance existing habitat within the same watercourse that will be undisturbed by construction. Instream placement of these features will provide good foraging habitat for larval tailed frogs.

5.23 Vegetation Debris Management Plan (“VDMP”)

Clearing will comply with restrictions relating to protection of raptor nests (both active and inactive) and general timing restrictions relating to protection of nests and nesting birds (for non-raptors).

Clearing will conform to the requirements of MOT’s “Standard Specifications for Highway Construction,” Section 165, including the provisions in Subsections 165.05 and other relevant passages. Clearing in the vicinity of any watercourse or environmentally sensitive area will be minimized. “No disturbance” and “vegetation to remain” areas will be defined on construction drawings and marked in the field. The width of these zones, if not specified in contract documents, will be determined in consultation with the Province’s Representative and relevant environmental agencies.

Coarse woody debris (“CWD”) suitable for amphibian habitat will be salvaged and segregated for subsequent use in restoring wildlife riparian habitat (suitable for amphibians). Vegetation debris that is not used for habitat restoration will be disposed of off site at an approved facility or burned at locations previously approved by the Province (providing air quality objectives are met).

Large woody debris (“LWD”) suitable for amphibian or instream fish habitat will be salvaged and segregated for subsequent use in wildlife and aquatic habitat compensation activities. Smaller vegetation debris not used in habitat restoration may be suitable for mulch in future erosion control or landscaping activities. Merchantable timber will be cold-deck at approved locations for scaling and subsequent removal.

Attempts will be made during vegetation removal (clear and grub) activities to prevent the deposition of wood waste into any watercourse. Any trees or large pieces of woody debris that accidentally fall into a watercourse will be removed in a manner that minimizes the disturbance of the streambed and banks. An Environmental Monitor will be present during instream removal activities.

All non-merchantable timber and wood waste will be stockpiled at predetermined locations along the project alignment. These storage areas will be situated in well-drained sites free of running and standing water to prevent undue generation of tannin and lignin leachate, which can be toxic to aquatic species. This material will later be burned, chipped, and commercially removed from the project area or used on site for environmental benefit.

All proposed burning activities will comply with the Forest Act, the Open Burning Smoke Control Regulation (Waste Management Act) and local bylaw requirements. All burning activities will be subject to approval by regulatory agencies and/or governing bodies.

All vegetation clearing, removal, and disposal activities will be logged in the environmental database. A tracking component will ensure that BMPs are followed with regard to vegetation debris management and that unsuitable materials are not reused during construction and rehabilitation.

5.24 Waste Management Plan (“WMP”)

The EMP will include provisions regarding management and disposal of solid, non-hazardous waste, conforming to MOT’s “Standard Specifications for Highway Construction,” Section 165, including Subsection 165.14.01. The waste disposal system will maximize opportunity for reduction, reuse, and recycling of solid waste. Disposal of hazardous waste is not expected to be an issue except for the possibility of an accidental spill. Such disposal is addressed in the Spill Contingency and Emergency Response plans.

Provisions regarding management and disposal of solid, non-hazardous waste conform to Section 165, Subsection 165.14.01 of the MOT Standard Specifications. The waste disposal system will maximize opportunity for reduction, reuse, and recycling of solid waste. In addition to solid waste, the enhanced WMP addresses concerns over human waste given the number of workers that may be working along the alignment at any given time.

Solid Waste

The Project area will not have space for storage of significant quantities of waste materials (e.g., non-reusable concrete forms, dimension lumber, packing materials, containers for various construction materials, pallets, various types of plastic, etc.). There will also be significant amounts of waste from offices and lunchrooms. Depositories/bins for non-recyclable waste materials will be maintained on site and removed from the project area to an approved facility, as required. Solid waste containers will be large enough to contain all of the waste between collection periods and be covered to protect against spreading by water, wind, or animals. Additional requirements for waste containers are provided in the Bear/Human Conflict Management Plan.

The waste management program will include a recycling program for office waste (e.g., paper and cardboard), bottles, cans, and other recyclable materials. Recyclables will be regularly removed from the project area by an approved recycling subcontractor to prevent excessive build-up of generated wastes.

The Concessionaire will maintain the site in a neat and clean manner. All debris, garbage, and waste materials will be cleared on a continuous basis. Upon completion of work in a particular area, the site will be cleaned to the satisfaction of the Province and the Environmental Manager.

Materials such as wooden pallets and packing materials that can be recycled will be returned to the supplier. Construction materials such as plywood forms for concrete work will be used many times during the period of concrete pouring. Other materials such as dimension lumber will be reused as well.

Sewage Disposal

As per Subsection 166.18.01 of MOT's Standard Specifications, no sewage or greywater wastes will be discharged into watercourses or onto ground surfaces. Flushable toilets and potable water facilities will be located at the site offices and administration facilities. Sewage and greywater waste from this facility will be contained in an approved holding tank or tied into the local sanitary sewer system. Portable toilets will be located at strategic locations away from any watercourse or drainage channels. All toilet and sewage holding tanks will be regularly serviced and drained in an approved manner by a professional waste management company.

5.25 Water Quality Sampling Program ("WQMP")

Based on the Water Quality Monitoring Program provided as supplemental information to proponents, contractor responsibilities are water quality sampling and analysis of runoff from PAG/ML rock cuts and general water quality field sampling as it relates to construction activities. The PAG/ML water sampling program is provided in the PAG/MLMARDMP section of this document. Minimum performance requirements for water sampling during construction activities are adequate to address water quality compliance.

All water quality sampling data, activities, and associated reports will be included in weekly and monthly reporting documents for submission to the Province and the regulatory agencies, as required.

The Concessionaire will post all water quality sampling dates, times, and data on the EDA. This information will be available to all project-related personnel including regulatory agencies, the Province and Concessionaire team members. Upon consultation with the Province, these data can also be made available to stakeholder groups and the public.

5.26 Wildlife Mitigation Plan (“WiMP”)

The WiMP will address both design and construction issues. Wildlife issues addressed in the plan will include sensitive ecosystems, tailed frog and other amphibians, marbled murrelet, raptor nests, nests, and nesting birds protected under the B.C. Wildlife Act.

The WiMP will include field assessments to confirm that the impacts from the design and methods proposed by the Concessionaire do not exceed those assumed in the Application for an EAC. Items to be considered in the WiMP are:

- identification of design mitigation (site specific)
- identification of construction mitigation (e.g., timing restrictions, wildlife salvage, etc.)
- inclusion of wildlife considerations in restoration and fisheries compensation planning
- light spill impacts to wildlife habitat during night time activities.

Wildlife mitigation will require additional revegetation at streams and other sensitive areas using native species. Where possible, restoration will also include features and species beneficial to wildlife (e.g., a CWD component). Locally produced seed and/or plants will be obtained that are adapted to the climate of the areas for which they will be used (e.g., rock outcrops will be planted with species that occur naturally on rock outcrops of the region). To minimize potential for vehicle-wildlife collisions, revegetation adjacent to the right-of-way will not use species palatable to black-tailed deer and black bear.

Culvert design will take into consideration the safe passage of wildlife. For example, the proposed large arch culverts at Widow Creek and Millar Creek at the north end of the project corridor will not only provide additional fish habitat but also a safe crossing option for wildlife that may reduce vehicular mortality.

The WiMP will be developed on the following principles:

- minimize areas to be cleared of vegetation/blasted
- clear vegetation outside the critical bird breeding period of March 15 to July 31 unless pre-approved by CWS

- implement wildlife protection measures that will mitigate, avoid, and deal with wildlife issues that may arise during construction and post-construction, including addressing light pollution issues
- manage interactions between employees/contractors and wildlife
- minimize duration of construction
- revegetate with native species
- follow Province procedures regarding operations
- implement and follow emergency response plans for hazard materials spills and brush/forest fires
- retain and protect raptor and heron nests and roost trees
- recreate roadside rock pile and talus habitat if removed during construction activities (such as those in the Daisy Lake area)
- monitor waterbirds in the vicinity of construction (such as at barge loading sites or at the Porteau Cove detour) to ensure they are not displaced; adjust work practices to minimize disturbance
- monitor trees with nesting potential for marbled murrelets (such as on the east side of Doodson Corner, Polygon 899) and develop specific measures to minimize or offset losses of nesting habitat as a result of tree clearing.

It is expected that night work will be required throughout the duration of the project. Work procedures and equipment will be adapted to minimize illumination of wildlife habitat. Wildlife passage through existing corridors such as ravines, stream channels, and culverts will be maintained. All construction personnel will be required to report wildlife sightings that may impact or be affected by construction activities. The wildlife subconsultant will regularly monitor key animal activity periods and/or areas where wildlife may impact or be affected by construction activities.

All wildlife sightings and monitoring activities will be reported monthly to the Province and regulatory agencies, as required.

Tailed Frog

Tailed frog mitigation is addressed separately in the Tailed Frog Management Plan.

Birds

Raptor and raptor nest mitigation is addressed separately in the Raptor/Heron Nest Management Plan.

General avian habitat protection BMPs include delineating clear and grub boundaries on plan drawings, minimizing vegetation removal, minimizing the loss of the largest trees, and re-establishing native plant species within riparian zones and on tote roads.

The wildlife specialist will conduct on-site monitoring if the possibility exists that construction activities will impact nesting areas. The results of bird nesting monitoring activities will be outlined in monthly monitoring reports submitted to the Province and the regulatory agencies, as required.

Amphibians

Clearing will be avoided or minimized in moist or wet areas, and areas with high levels of LWD that provide critical habitat for salamanders. Other BMPs include: maintaining drainage pattern in local wet areas; minimizing width of cut and grub boundaries where they abut or encroach on wetlands; and salvaging appropriate LWD. It may be necessary to relocate amphibians to appropriate habitats outside of the impacted work area.

Snakes

Potential impacts are greatest in rocky areas where snake hibernacula may be located and in damp forests (the preferred habitat for several local reptile species). Mitigation will include creation of rock piles, and other activities similar to those outlined above for amphibians.

Wildlife Restoration Planning

Erosion control may require preliminary hydroseeding to minimize sediment inputs to streams. Fish and wildlife mitigation will require additional revegetation at streams and other sensitive areas using native species. Where possible, restoration will also include features beneficial to wildlife (e.g., a CWD component). Locally produced seed and/or plants will be obtained that are

adapted to the climate of the areas for which they will be used (e.g., rock outcrops will be planted with species that occur naturally on rock outcrops of the region). To minimize potential for vehicle-wildlife collisions, revegetation materials used adjacent to the right-of-way will not include those species palatable to black-tailed deer and black bear.

The Environmental Monitor will provide ongoing monitoring of restored areas throughout the project life noting presence of wildlife and wildlife activities.

A wildlife management report will be submitted upon completion of a Concession Highway section. This report will describe all wildlife mitigation, habitat restoration, and habitat maintenance activities within the section area, and will assess the successes and failures of wildlife management strategies and make suggestions as to how they can be improved.

All wildlife compensation activities will be included in the environmental database, which will be available to regulatory agencies, the Province, the Concessionaire team members, and stakeholder groups.

SCHEDULE 23

CONCESSIONAIRE PROPOSAL EXTRACTS

Annex 7

Environmental Enhancement Plan

1. Funding Commitments

The Concessionaire will enhance the biophysical environment and recreational opportunities along the corridor beyond the obligations set out as the Concessionaire’s Environmental Obligations. These enhancements, which include a variety of features in key locations identified during the environmental process, is reflected in the **DELETED** of committed funding provided by the Concessionaire for these required enhancements above Minimum Performance Requirement (“MPR”) expenditures. This commitment is allocated as follows:

In addition to the **DELETED** committed funding described in Annex 6 to Schedule 23 [Environmental Management Plan] for enhancements to the Environmental Management Plan (“EMP”) that exceed the Minimum Performance Requirement (“MPR”) identified in the Agreement, **DELETED** has been allotted for site-specific enhancement features and a Sea-to-Sky Environmental Enhancement Program (“STSEEP”). A detailed description of these features and the STSEEP is provided below in Table 2.6-8. The Concessionaire confirms that the dollar amounts in Table 2.6-8 represent firm commitments to the environmental enhancements.

Table 2.6-8: Estimated Contribution by S2S to Environmental Enhancements

Enhancement Area	Enhancement Type(s)	S2S Contribution
Eaglenidge Bluffs	Sensitive ecosystem protection Recreation (interpretive trails) Visual impact mitigation	\$150,000
Larsen Creek	Hydrological improvements	\$150,000
Squamish Area	Biophysical (fish and wildlife habitat)	\$450,000
Squamish Area	Recreation (trail networks)	\$450,000
Total		\$1,200,000

All proposed enhancement features and the STSEEP will require review and approval from the Province. The Concessionaire confirms that the Province has final acceptance authority, consistent with such specific items in the Concession Agreement, regarding actions to be taken and their priorities with respect to the contribution outlined in Table 2.6-8.

2. Sea-To-Sky Environmental Enhancement Program

To effectively plan, develop, and control the quality of the enhancements, the Concessionaire has reached an agreement with the British Columbia Wildlife Federation (“BCWF”) and the British Columbia Conservation Foundation (“BCCF”) to institute a STSEEP. This program will be governed jointly by the Concessionaire, BCWF, and BCCF, and will function to receive, assess, and support approved environmental enhancement project proposals from community groups (e.g., fish and game clubs, First Nations, stewardship groups, schools, Sea-to-Sky University, recreational groups, and other community organizations throughout the corridor). The BCWF and BCCF will also be responsible for the daily management of STSEEP. STSEEP management will report to the Concessionaire’s Environmental Manager and Program Coordinator. All proposed projects under STSEEP will require review and approval from the Province, relevant regulatory agencies, and stakeholder groups.

Guidelines will be established for proposal submissions and any groups proposing enhancements will be required to contribute labour, materials, and/or supplies to qualify for this funding. BCWF and BCCF will then issue contracts for completion of the work. Ongoing quality control and project monitoring will be provided by the BCWF and BCCF. The program will include providing support to the Community Mapping Network (“CMN”) each year to help map the completed activities and to provide an information-rich website for the entire corridor.

The Concessionaire will operate in accordance with BCWF and BCCF guidelines that for every \$1 spent, a \$3 benefit will be returned to the environment. Consequently, enhancement activities will focus on habitat enhancements, environmental education, trail development, and nature interpretation.

Any engineered enhancements or improvements will be designed within the context of the Environmental Assessment Certificate “Table of Commitments and Responsibilities” and applicable component plans within the project EMP. The enhancements to which the Concessionaire is committed are described below.

3. Eagleridge Bluffs Environmental Enhancements

Visual Impact Mitigation

Coniferous trees will be planted along the base of all retaining walls, and bioengineering of the exposed slopes will be undertaken.

Rebar will be driven into the slope and the live cuttings woven behind the rebar into a “wattle fence”. Growing medium will be placed behind the wattle, enabling larger plants to be placed there. Without bioengineering, it will be extremely difficult to establish any plants other than grass on the steep slopes, since the angle of incline is often too great to accommodate and hold growing medium.

An area immediately downslope from the future viewpoint above Horseshoe Bay will be kept free of trees. This area will receive grass and shrub plantings.

Biophysical Impact Mitigation

The Concessionaire’s design proposes alignment adjustments through DB1 that will pose less of a threat to sensitive habitats in and around the Eagleridge Bluffs area compared to the Option B alignment provided in the MOT’s EA. These impact reductions are outlined in Table 2.6-9.

Table 2.6-9: DB1 Impacts to Sensitive Habitats

Habitat Type	MOT Option B Area of Impact (ha)	S2S DBFO Area of Impact (ha)
Blue-listed polygons (#445 & #698)	1.568	0.697
Deciduous / swamp	0.350	0.224
Wetland	0.330	0
Wetted area	----	0
Arbutus/woodland/rock outcrop	1.410	1.355
Common	14.748	20.994
Total	18.406	23.270 ha

The Concessionaire will implement an “access control” program to limit public access into, and wildlife access out of particularly sensitive ecosystems within the Eagleridge Bluffs area. The Concessionaire will also provide an interpretive signage program along the Baden-Powell Trail will highlight sensitive species and the unique nature of the area in a regional context.

Specific measures that will be implemented for the Eagleridge Bluffs area are explained in more detail below.

- Installation of fencing along the right-of-way and relocated Baden-Powell Trail will make access to (pedestrian) and from (wildlife) the sensitive area more difficult. The fencing will also provide a barrier and control mechanism for the movement of invasive plant species. Once erected, the fencing will provide an easier platform for vegetation control measures. The Baden-Powell trail will be realigned without the need for a pedestrian overpass.
- Landscaping in and around Eagleridge Bluffs will involve the use of native species appropriate to the ecosystem. The importation and use of invasive species will be avoided.
- Information and interpretive signs will be erected in the Baden-Powell parking lot and along the fencing to educate the public about the fragility of the local ecosystem.

4. Larsen Creek Hydrology Enhancement Plan

Improved Hydrology

The Concessionaire's approach to improving hydrology involves providing more groundwater storage and cleaning capacity within the Larsen Creek watershed. These measures will provide a more consistent creek flow during dry periods and better water quality during all flow levels. The minimum Larsen Creek Hydrology measures include:

- vegetating embankments on the downslope side to contain the water in the rock embankment material
- using elevated culverts to force base flows to enter the embankment (increased biofiltration)
- redirecting drainage north and south into Larsen Creek watershed (upon regulatory consultation).

In addition, elevated culverts will provide wildlife access between the upper and lower reaches of Larsen Creek.

Some of the water in the larger, upper catchment area to the north can be diverted to Larsen Creek watershed. This flow, which is most likely the result of seepage from Whyte Lake seepage, runs year-round and currently enters the drainage system at the B.C. Ferries loading area. Provided there are little or no impacts to Horseshoe Bay, then diverting this flow would increase the amount of water available to the lower Larsen Creek catchment area during dry periods. If the diversion plan is not acceptable to regulatory agencies, the Concessionaire will remain responsible for developing and implementing an alternate plan to address water flows.

As a general philosophy in this area, the Concessionaire's design will not change the upper Larsen Swamp area as it has been designated as a sensitive ecosystem. The Concessionaire's approach to enhancing water quality and quantity focuses on flow and filtering improvements downstream of the swamp. The items required for the Larsen Creek Enhancement Plan are addressed below, in order.

- The diversion of water from either or both the northern and southern sub-basins will provide a more stable flow in Larsen Creek during low flow periods. Engineered biofiltration combined with the natural increase in ground water flow will improve storage capacity/retention and water quality downstream of the highway.
- Maximizing the degree (buffer width) to which the alignment and Baden Powell trail is 'pushed' toward Polygon 702. However, consideration for this adjustment must balance the buffering of the swamp with encroachment on the old growth ecosystem (rated blue) found in Polygon 702. The design of this alignment adjustment also considers the increased potential for 'blow down' along the edge of Polygon 702.
- Improved water quality and quantity by placing soil and planting to seal the east highway ditch and provide biofiltration. The base flows would then be directed to Larsen Creek by removing the existing ditch block at the toll booths; this flow would continue down the east ditch to the Larsen Creek culvert at the inlet. Currently little of the flow from the 24.6 ha Eagleridge catchment area reaches Larsen Creek. The Concessionaire will treat the water from the Eagleridge interchange with biofiltration swales at the drainage outfalls to improve water quality.

Minimizing Trail and Swamp Impacts

To isolate trail users from the Larsen swamp and minimize adverse impacts to the local hydrology, visually pleasing fencing (e.g., split rail and wattle) will be erected, and boardwalks, low footbridges, and raised gravel sections will be constructed.

In addition to these enhancements and as part of the MPR, the Concessionaire will construct a bridge over Larsen Creek, providing a better east/west wildlife corridor transition than a culvert design.

5. Squamish Area Environmental Enhancements

During the development of any enhancements and as part of the MPR, the Concessionaire will consult with the District of Squamish Environmental Coordinator, the Squamish Lillooet Regional District Education Coordinator, and local environmental user groups and Interested Parties (such as the Squamish Environmental Conservation Society, the Squamish River Watershed Society, Sierra Club of Canada Sea to Sky Group, Squamish Streamkeepers, and Squamish Bird Watching Club). All compensation and enhancement programs will be prepared in consultation with these various groups so that they do not conflict, and may even enhance, current initiatives in the area.

In keeping with the goals set out in the Squamish Estuary Management Plan (“SEMP”), the Concessionaire’s environmental enhancements proposed for urban Squamish will focus on the maintenance and enhancement of fish and wildlife habitat. Key initiatives will include: minimizing design footprint, improving watercourse connectivity between the east and west sides of the highway, and improving water quality in adjacent receiving waters.

Mamquam Blind Channel Culvert (PD Sta. 144+370) – in addition to the MPR of Section 5.2 of Schedule 12 [Environmental Obligations] of the Agreement, the Concessionaire’s design will improve hydrological design, fish habitat, and wildlife crossing ability by increasing the size of the culvert to 3.6 x 1.8 m set at the same location and gradient as the existing culvert with the invert lowered to -1 m (GSC).

Mamquam Blind Channel Culvert (PD Sta. 144+593) – in addition to the MPR of Section 5.2 of Schedule 12 [Environmental Obligations] of the Agreement, the Concessionaire will design a larger aluminum steel pipe arch structure for this location. Similar to the main Mamquam Blind

Channel culvert, this design will improve hydrological design, fish habitat, and wildlife crossing ability over that provided in the application for the Environmental Assessment Certificate and supporting documents.

In compliance with MPR of the Concessionaire's Environmental Obligations referenced in Schedule 12 [Environmental Obligations] of the Agreement, the Concessionaire will minimize culvert extensions and maximize headwall design at: Thunderbird Creek (Sta. 149+435), Meighan Creek (Sta. 149+390), Newport Creek (Sta. 149+840), and Dryden Creek (Sta. 151+070). Other locations may be identified during detailed design.

Water Quality Improvements

As one of its enhancement commitments, the Concessionaire has incorporated a two tiered approach in its design to improving water quality in the Urban Squamish corridor. This approach makes use of a combination of oil and water separators and biofiltration swales, as described below.

Oil/water separators will be utilized in urban Squamish along the median barrier drainage system. Effluent from these drainage systems will be fed into roadside biofiltration swales. Accumulated petroleum products, silt, and fines will need to be regularly removed from these separators.

6. **DELETED**

7. **Compliance with Environmental Constraints**

Environmental impact assessment of the Concessionaire's design improvements beyond MPR will undergo continued review at each of the 50%, 90% and 100% design phases. Impact avoidance and mitigation will require Province and regulatory agency review prior to construction.

The Concessionaire's design will comply with the following commitments:

Table 2.6-13: S2S & EA Application Design Impact Assessment Summary

Issue	S2S Design compared to EA Application Design	Comments
Archaeology	No change	Consultation with FN required
Water Quality	No change	
Fisheries & Aquatics	Greater habitat impact	More compensation required for S2S design
Wildlife	Less impact to Murrelet habitat	
Vegetation	Less overall impact	
PAG	No change	
Contaminated Sites	No change	
Noise & Air Quality	No change	
Recreation	No change	
Aesthetics	No change	
Economics	No change	

SCHEDULE 24**EMPLOYEE INFORMATION AND CHANGES TO WORKFORCE**1. Employee Information

- 1.1 When requested in writing by the Province to do so, the Concessionaire (subject to any relevant collective agreement and applicable Laws and Regulations including applicable Privacy Legislation) will provide Employee Information (defined below) to the Province within 14 days of such notice. The Concessionaire will take and will cause its contractors and subcontractors to take such steps as may be necessary to enable the Concessionaire to comply with any such request by the Province, including notifying employees that such information may be provided to the Province and obtaining appropriate consents from employees to the release of such information to the Province.
- 1.2 Subject to any applicable Privacy Legislation, the Province may disclose Employee Information to any person (a "Prospective Bidder") who has been or is to be invited to submit a bid in relation to the provision of works or services of a similar type to any of those provided by the Concessionaire under this Agreement in connection with the Concession Highway, provided that, if requested in writing by the Concessionaire to do so, the Province will ensure that prior to such disclosure the Prospective Bidder undertakes in writing not to disclose (unless required by law to do so) the information to any other person other than a person who:
 - 1.2.1 is an employee or agent (including legal advisor) of the Prospective Bidder; and
 - 1.2.2 has undertaken in writing not to disclose that information unless required by law to do so.
- 1.3 Where Employee Information has been provided, the Concessionaire will:
 - 1.3.1 inform the Province of any change to the information provided or provide any new Employee Information not previously provided;
 - 1.3.2 use reasonable efforts to clarify any matter upon which clarification is requested by the Province; and
 - 1.3.3 use reasonable efforts to co-operate with any other reasonable request made by the Province concerning the Employee Information or other information concerning the Concessionaire's employees or the employees of its contractors or subcontractors,within 14 days of any such change, discovery of new information or receipt of such request.

- 1.4 Subject to paragraph 1.2 above and unless required by law to do so, the Province will not disclose Employee Information (or any part of that information) to any other person.
 - 1.5 For the purposes of this Schedule 24 [Employee Information and Changes to Workforce], “Employee Information” means written details of:
 - 1.5.1 the total number of employees employed by the Concessionaire or any of its contractors and subcontractors whose work (or any part of it) is work undertaken for the purposes of this Agreement;
 - 1.5.2 information relating to or connected with the employment of employees falling within the scope of paragraph 1.5.1 above, including details of:
 - 1.5.2.1 terms and conditions of employment including terms incorporated from any collective agreement;
 - 1.5.2.2 each employee’s salary, normal working hours, length of service, contractual period of notice, any pay settlement covering future dates which has already been agreed by the relevant employer and any redundancy entitlement;
 - 1.5.2.3 any other information that may be relevant to the calculation of Employee Termination Payments and/or Subcontractor Breakage Costs; and
 - 1.5.2.4 such other information as the Province may reasonably require in relation to the Concessionaire’s employees or the employees of its contractors and subcontractors (other than the name or other details which enable any employee to be identified unless both the Concessionaire and that employee have consented in writing to the provision of such details).
2. Changes to Workforce
 - 2.1 At any time after either Party has given notice to terminate this Agreement, the Concessionaire will not (except only in the case of paragraph 2.1.2 below as may reasonably be necessary to enable the Concessionaire to meet its obligations under this Agreement) without the prior written consent of the Province (which consent may not be unreasonably withheld or delayed):
 - 2.1.1 materially amend or offer, promise or agree for the future materially to amend the terms and conditions of employment of any employee falling within the scope of paragraph 1.5.1 above;

- 2.1.2 materially increase or make offers of employment so as materially to increase the number of employees whose work (or any part of it) is work undertaken for the purposes of this Agreement; or
- 2.1.3 do or omit to do any other thing in relation to employees falling within the scope of paragraph 1.5.1 above which is likely to increase any Employee Termination Payments and/or Subcontractor Breakage Costs included in any Termination Sum payable by the Province in connection with the termination of this Agreement.