

**SCHEDULE 7  
QUALITY MANAGEMENT**

<b>PART 1 QUALITY MANAGEMENT SYSTEM .....</b>	<b>1</b>
1.1 Quality Management System.....	1
1.2 Project Co Responsibilities.....	1
1.3 Quality Management System Requirements.....	1
1.4 Compliance .....	2
1.5 Documentation Deliverables.....	2
1.6 Timing of Implementation.....	3
1.7 Compliance with Quality Management System.....	3
1.8 Continual Improvement .....	4
<b>PART 2 QUALITY PERSONNEL.....</b>	<b>4</b>
2.1 Quality Director .....	4
2.2 Quality Managers.....	6
<b>PART 3 TESTING.....</b>	<b>6</b>
3.1 Testing Requirements .....	6
3.2 Accreditation Standards .....	6
3.3 Material Verification Testing.....	7
3.4 Structural Component Inspection and Testing.....	7
3.5 Re-Inspection and Re-Testing of Steel Structural Components .....	9
3.6 Remedial Work .....	9
<b>PART 4 QUALITY AUDITS AND MONITORING.....</b>	<b>9</b>
4.1 Quality Audit Plans.....	9
4.2 Project Co's Quality Audits.....	10
4.3 Province's Quality Audits.....	10
4.4 Province Monitoring.....	11
4.5 Deficient Quality Audits .....	12
4.6 Costs of Audits.....	12
4.7 Independent Quality Audits .....	12
4.8 Traffic Management Auditing .....	13
<b>PART 5 QUALITY DOCUMENTATION .....</b>	<b>15</b>
5.1 Principles .....	15
5.2 ISO Reference Documents.....	15
5.3 Quality Documentation Requirements.....	15
5.4 Submission of Quality Documentation.....	16
5.5 Project Co Obligation to Update.....	16
5.6 Changes to Quality Documentation .....	16
5.7 Amendment of Quality Documentation.....	17
5.8 Quality Records .....	17
5.9 Quality Management System Reports .....	17
5.10 Additional Information .....	18
<b>PART 6 NONCONFORMITIES .....</b>	<b>18</b>
6.1 Nonconformity Reporting Process.....	18
6.2 Nonconformity Report Tracking System.....	20
6.3 Unremedied Nonconformity .....	20
6.4 Nonconformity Records.....	21

**PATTULLO BRIDGE REPLACEMENT PROJECT  
PROJECT AGREEMENT  
SCHEDULE 7: QUALITY MANAGEMENT**

*Commercial in Confidence  
Execution*

- ii -

Appendix A	Quality Manual
Appendix B	Design Quality Management Plan
Appendix C	Construction Quality Management Plan
Appendix D	[Not Used]
Appendix E	Traffic Quality Management Plan
Appendix F	Environmental Quality Management Plan
Appendix G	Traffic Management Site Condition Rating Checklist – Sample

**PART 1  
QUALITY MANAGEMENT SYSTEM**

**1.1 Quality Management System**

Project Co shall develop and implement a Quality Management System in accordance with the requirements of this Schedule. Project Co acknowledges and agrees that Project Co is solely responsible for the quality of the Project Work and that the effective implementation of a comprehensive Quality Management System is a critical component of the proper and timely completion of the Project Work.

**1.2 Project Co Responsibilities**

Project Co is responsible for all quality assurance and quality control activities required to manage its own processes as well as those of its Principal Contractors and Subcontractors throughout the Term. Project Co shall throughout the Term ensure that all aspects of the Project are the subject of a Quality Management System that complies with the provisions of this Schedule, and shall comply with and cause each of its Principal Contractors and Subcontractors and the employees of each of them to comply with the requirements of such Quality Management System. For greater certainty, and without limiting Project Co's ability to contractually assign matching responsibilities and obligations to the Principal Contractors and Subcontractors in accordance with this Agreement, Project Co shall not be relieved of any of Project Co's responsibilities or obligations set out in this Schedule by the assignment of such responsibilities or obligations to its Principal Contractors and Subcontractors.

**1.3 Quality Management System Requirements**

The Quality Management System shall address all aspects of the Project Work for all phases of the Project, including Design and Construction. The Quality Management System shall be integrated into all Project Work, including environmental management, traffic management, safety management and communications activities. The Quality Management System shall include all quality control and quality assurance activities for all aspects of the Project Work for all phases of the Project.

The Quality Management System shall, at a minimum, include the Quality Documentation described in Part 5 [Quality Documentation] of this Schedule and shall comply with:

- (a) the requirements and principles of the ISO 9001:2015 Standard and any other applicable standards specified in this Schedule;
- (b) the Project Requirements;
- (c) Good Industry Practice; and
- (d) all other requirements set out in this Schedule and this Agreement.

**1.4 Compliance**

*1.4.1 Performance Measures*

**PQ1.4.1a** The Quality Management System must be compliant with the ISO 9001:2015 Standard in accordance with Section 1.3(a) of this Schedule.

*1.4.2 Specific Requirements*

Project Co shall update its Quality Management System and all Quality Documentation as required to ensure that the Quality Management System and all Quality Documentation is and at all times remains in full compliance with the ISO 9001:2015 Standard and the requirements of this Schedule.

**1.5 Documentation Deliverables**

*1.5.1 Performance Measures*

Without limiting the generality of Section 1.3 [Quality Management System Requirements] of this Schedule, Project Co will prepare and submit to the Province’s Representative, by the dates shown in Table 1.5.1, each of the following:

**Table 1.5.1 Schedule of Plans and Reports (Response Time Measures)**

<b>Performance Measure</b>	<b>Deliverable Name</b>	<b>Due Date</b>	<b>Specification Reference</b>	<b>Review Procedure or Consent Procedure</b>
<b>PQ1.5.1a</b>	Quality Manual	Submitted 30 days from the Effective Date	Appendix A	Consent Procedure
<b>PQ1.5.1b</b>	Design Quality Management Plan	Submitted 30 days from the Effective Date	Appendix B	Consent Procedure
<b>PQ1.5.1c</b>	Construction Quality Management Plan	Submitted 45 days from the Effective Date	Appendix C	Consent Procedure
<b>PQ1.5.1d</b>	Traffic Quality Management Plan	Submitted 45 days from the Effective Date	Appendix E	Consent Procedure
<b>PQ1.5.1e</b>	Environmental Quality Management Plan	Submitted 30 days from the Effective Date	Appendix F	Consent Procedure
<b>PQ1.5.2a</b>	Other Quality Management Plans (see below)	Submitted 45 days from the Effective Date	1.5.2	Review Procedure
<b>PQ4.1.1a</b>	Quality Audit Plans	Submitted 90 days from the Effective Date	4.1.1	Consent Procedure
<b>PQ4.1.1b</b>	Quality Audit Plans Updates	At twelve monthly intervals	4.1.1	Review Procedure

<b>Performance Measure</b>	<b>Deliverable Name</b>	<b>Due Date</b>	<b>Specification Reference</b>	<b>Review Procedure or Consent Procedure</b>
<b>PQ5.9.1a</b>	Monthly Quality Management System reports	By 15th of each following month	5.9.1	N/A
<b>PQ4.2.2b</b>	Quality Audit Reports	Within 14 days of audit completion	4.2.2	N/A

The documents above that are indicated to be subjected to the Consent Procedure or the Review Procedure shall be submitted to the Province’s Representative in accordance with the Consent Procedure or the Review Procedure, as the case may be, pursuant to Schedule 2 [Representatives, Review Procedure and Consent Procedure]. All other documents shall be submitted to the Province’s Representative.

*1.5.2 Specific Requirements*

Project Co shall prepare and submit a Quality Management Plan for any other person contracting with Project Co, any Principal Contractor or any Subcontractor for the purposes of undertaking any material and substantial aspect of the Project Work (but excluding legal and financial advisors and lenders) in each case for undertaking the activities covered by that party’s contract with Project Co, such Principal Contractor or such Subcontractor (as the case may be) and meeting the requirements of the Quality Manual.

**1.6 Timing of Implementation**

*1.6.1 Performance Measures*

**PQ1.6.1a** The Quality Manual and all Quality Management Plans must be fully implemented within 120 days from the Effective Date.

*1.6.2 Specific Requirements*

Project Co shall not commence or permit the commencement of any aspect of the Project Work before those parts of the Quality Documentation that concern such aspect of the Project Work have been submitted to the Province’s Representative in accordance with this Schedule under the Consent Procedure or the Review Procedure, as the case may be.

**1.7 Compliance with Quality Management System**

Project Co shall ensure that:

- (a) Project Co complies with the Quality Management System detailed in the Quality Manual and any other Quality Documentation in connection with its management activities and any other Project Work carried out by Project Co;
- (b) the Designer complies with the Design Quality Management Plan and any other Quality Documentation in connection with its design and construction-related activities;

- 4 -

- (c) the Design-Build Contractor complies with the Design Quality Management Plan, the Construction Quality Management Plan, the Traffic Quality Management Plan, the Environmental Quality Management Plan and any other Quality Documentation in connection with all activities under the Design-Build Contract;
- (d) any other person contracting with Project Co, any Principal Contractor or any Subcontractor complies with the relevant Quality Management Plan prepared and implemented pursuant to Section 1.5.2 [Specific Requirements] of this Schedule in connection with the activities covered by that party's contract with Project Co, such Principal Contractor or such Subcontractor (as the case may be); and
- (e) Project Co shall ensure that any person who performs any portion of the Project Work shall comply with the Quality Management System as it relates to that portion of the Project Work.

The means by which the above requirements are communicated, understood and verified shall be documented in the Quality Records.

## **1.8 Continual Improvement**

- (a) Project Co shall implement a program and shall have mechanisms in place, such as management reviews and Quality Audit programs, to allow all identified Opportunities for Improvement to be recorded, tracked and implemented, and closed out.
- (b) The program shall be used to continually improve the effectiveness and efficiency of Project Co's Quality Management System.
- (c) Project Co shall ensure that all of Project Co's employees, Principal Contractors and Subcontractors are aware of the importance of continual improvement and are actively engaged in its implementation in connection with the performance of the Project Work.

## **PART 2 QUALITY PERSONNEL**

### **2.1 Quality Director**

- (a) At all times until the Total Completion Date, Project Co shall employ a Quality Director who shall, irrespective of such person's other responsibilities, have defined authority for ensuring the establishment and maintenance of the Quality Management System and auditing and reporting on the performance of the Quality Management System.
- (b) The Quality Director shall be a Professional Engineer with experience in a similar quality management representative role for a successful project of similar scope and complexity and shall have successfully completed an ISO 9001 Lead Auditor Course.
- (c) The identity of the Quality Director (and any replacement) and the Quality Director's job specification and responsibilities shall be subject to the approval of the Province (such approval not to be unreasonably withheld or delayed), and the Quality Director shall be a Key Individual subject to the requirements of Section 3.3(b) of Schedule 2 [Representatives, Review Procedure and Consent Procedure].

- 5 -

- (d) Without limiting the generality of the foregoing, the job specification and responsibilities of the Quality Director shall include the following:
- (i) developing, implementing and maintaining, and ensuring the effective operation of, the Quality Management System;
  - (ii) verifying Quality Documentation conform to applicable Project Requirements prior to submission to the Province;
  - (iii) coordinating with Quality Managers and other quality personnel to ensure integration of the Quality Management System with and between all Project disciplines;
  - (iv) initiating management reviews, not less frequently than annually, and taking other actions necessary to ensure the effective operation and continual improvement of the Quality Management System;
  - (v) approving and signing off on all Quality Management System documents, including all revisions;
  - (vi) scheduling and coordinating Independent Quality Audits with the Independent Quality Auditor;
  - (vii) preparing Quality Audit Plans and managing (including scheduling and coordinating) Internal Quality Audits and External Quality Audits of all key processes with Project Co's personnel and with the Principal Contractors and Subcontractors (including the Designer);
  - (viii) ensuring that all Quality Audits required under Section 4.2 [Project Co's Quality Audits] of this Schedule and under the Quality Documentation are conducted, and reporting the findings of such audits to the Province's Representative;
  - (ix) having the authority to immediately stop any work or activity which is not being performed or carried out in accordance with the Quality Documentation applicable thereto;
  - (x) liaising with the Province's Representative and acting as the primary representative for Project Co on all matters relating to quality management;
  - (xi) preparing and submitting to the Province's Representative monthly Quality Management System reports;
  - (xii) ensuring that relevant Records are maintained and retained in accordance with this Agreement, the Quality Management System and the Records Management Protocol;
  - (xiii) developing and implementing a program for Correction, and where applicable, Corrective Action in respect of Nonconformities;

- 6 -

- (xiv) developing and implementing a program for Opportunities for Improvement in respect of potential Nonconformities or continual improvement initiatives;
- (xv) approving and signing off on the action taken in close out of Nonconformity Reports in accordance with Section 6.1 [Nonconformity Reporting Process] of this Schedule; and
- (xvi) carrying out any other matters which, in accordance with this Agreement, are the responsibility of the Quality Director.

## **2.2 Quality Managers**

- (a) Project Co shall appoint Quality Managers, each with experience in a similar role for successful projects of similar scope and complexity, who shall be responsible for the Quality Management Plans developed by Project Co including the DQMP, CQMP, TQMP and EQMP.
- (b) Each Quality Manager shall have at a minimum successfully completed an ISO 9001 Lead Auditor Course, except for the Quality Manager for the EQMP, who shall be an environmental professional with experience in environmental management and/or planning who shall have completed either an ISO 9001 Lead Auditor Course or an ISO 14001:2004 Environmental Management Systems Lead Auditor Course.
- (c) The Quality Manager for the DQMP shall be a Professional Engineer.
- (d) All Quality Managers shall be independent of the Design and Construction and shall report directly to the Quality Director.

## **PART 3 TESTING**

### **3.1 Testing Requirements**

Where Project Co is required by this Agreement, any of the Project Requirements, the Design and Certification Procedure or any Quality Documentation to carry out any calibration, sample, test or trial, such calibration, sample, test or trial shall be carried out in accordance with the following provisions of this Part 3 and the provisions of the relevant Quality Documentation.

### **3.2 Accreditation Standards**

- (a) All on and off Project Site calibrations, samples, tests and trials shall be carried out by laboratories that are duly accredited for the carrying out of such calibrations, samples, tests and trials.
- (b) Laboratory accreditation shall be in accordance with ISO/IEC 17025, as amended, updated or replaced from time to time, provided that, for specific activities, the Province may, in accordance with the Consent Procedure, accept other industry-recognized accreditation in lieu of ISO/IEC 17025, including:



- (i) concrete and concrete materials: CAN/CSA A283, “Qualification Code for Concrete Testing Laboratories”, to the appropriate category for the tests being done;
  - (ii) structural steel and welding: CAN/CSA W178.1, “Certification of Welding Inspection Organizations”, to the level appropriate for the inspection being carried out;
  - (iii) aggregates, bituminous paving mixtures: “Canadian Council of Independent Laboratories”, as appropriate to the work being carried out; and
  - (iv) protective coatings: “National Association of Corrosion Engineers”, as appropriate to the work being carried out.
- (c) Project Co may request the approval of the Province to use other industry-recognized accreditations, which approval shall not be unreasonably withheld or delayed if such other accreditation is applicable to the Project Work for which it is proposed and meets the intent of ISO/IEC 17025.

### **3.3 Material Verification Testing**

For all materials incorporated into the Project Work, Project Co shall have a laboratory, registered as a corporation in Canada and accredited in accordance with this Agreement, carry out verification of the materials as follows:

- (a) test and verify that the material meets the requirements of the Design;
- (b) perform verification testing on, but not limited to, materials such as structural steel, miscellaneous steelwork, cement, aggregates, supplementary cementing materials, additives, reinforcing steel, fasteners, bolts, anchor rods, and welding consumables;
- (c) verify that the mill certificates for the material and any other material certifications are valid;
- (d) perform verification testing of steel for boron content; and
- (e) stamp the mill certificates and any other material certifications with the name of the laboratory, the laboratory’s authorized officer, and the names and signatures of the inspectors and testers.

### **3.4 Structural Component Inspection and Testing**

- (a) For manufacturing and fabrication of components incorporated into a Structure, including but not limited to, structural steel, fabricated steel elements, steel piles, steel strands, stay cables and pre-cast concrete (the “**Structural Components**”), Project Co shall, as a minimum, employ independent testing and inspection companies registered as corporations in Canada and certified by organizations accredited by the Standards Council of Canada to provide the following:

- 8 -

- (i) full time quality inspection and testing at the mills and fabrication facilities, under the on-site direction of a Professional Engineer, while the manufacture and fabrication works are in process;
- (ii) quality reports and assurances produced under the direction of the Professional Engineer identified in Section 3.4(a)(i) of this Schedule:
  - (A) at the following milestones:
    - (1) upon supply of raw materials to the fabricator; and
    - (2) at 25%, 50%, 75% and 100% fabrication completion stages; and
  - (B) including a record of the fabrication activities and testing and inspections to date including Nonconformities, Corrections and Corrective Actions;
- (iii) monthly status reports, signed and sealed by the Professional Engineer identified in Section 3.4(a)(i) of this Schedule, which include a status of the stages of the manufacture and fabrication process carried out to the date of the report and a record of the quality reports and assurances identified in Section 3.4(a)(ii) of this Schedule carried out to the date of the report; and
- (iv) a full and final report, signed and sealed by the Professional Engineer identified in Section 3.4(a)(i) of this Schedule, following the completion of any manufacture and fabrication process including a summary of all stages of the manufacture and fabrication process and a record of the quality reports and assurances identified in Section 3.4(a)(ii) of this Schedule

and provide each of the reports identified in this Section 3.4 to the Province's Representative at the times and the milestones identified in this Section.

- (b) Project Co shall notify the Province's Representative, no later than 60 days prior to shipping, of its intent to ship Structural Components to the Project Site.
- (c) Project Co shall cause the responsible Professional Engineer identified in Section 3.4(a)(i) of this Schedule to provide a signed and sealed declaration that "by utilizing the standards of care, skill and diligence in accordance with the standards of the profession, the [insert name/description of the relevant Structural Components] have been manufactured and/or fabricated to meet the requirements of the specifications as attached [insert list of all relevant specifications]".
- (d) Project Co shall cause the Designer (Principal) as required by Part 3 [Design and Certification Procedure] of Schedule 4 to provide a signed and sealed declaration that "by utilizing the standards of care, skill and diligence in accordance with the standards of the profession, the [insert name/description of the relevant Structural Components] have been manufactured and/or fabricated to meet the requirements of the relevant Design Data and the provisions of the Agreement".
- (e) Project Co shall submit the declarations referred to in Sections 3.4(c) and 3.4(d) of this Schedule to the Province's Representative in accordance with the Review Procedure five

Business Days prior to any Structural Components leaving the place of manufacture or fabrication.

### **3.5 Re-Inspection and Re-Testing of Steel Structural Components**

- (a) For steel Structural Components manufactured or fabricated outside of Canada or the United States (the “**Applicable Steel Structural Components**”), Project Co shall, prior to incorporation into the Project Infrastructure, re-inspect and re-test, at a location in Canada, 10% of each such Applicable Steel Structural Component by a company certified by the Canadian Welding Bureau in accordance with CSA W47.1 to Division 1 and by the Canadian Institute of Steel Construction in the category of steel bridges.
- (b) For each Applicable Steel Structural Component, Project Co shall ensure:
  - (i) that such Applicable Steel Structural Component shall be in a configuration and location that facilitates all re-inspection and re-testing requirements;
  - (ii) the re-inspection and re-testing of such Applicable Steel Structural Component shall be completed in accordance with the testing and inspection requirements of DBSS 421 Structural Steelwork and to ensure that such Applicable Steel Structural Component was not damaged during transportation and that the shop assembly is in accordance with DBSS 421 Structural Steelwork; and
  - (iii) that the re-inspection of the welding of such Applicable Steel Structural Component is carried out by a CAN/CSA W178.2 Level III certified welding inspector accredited with W47.1/W59 to inspect Applicable Steel Structural Components.
- (c) Project Co shall provide to the Province’s Representative the results of all re-inspection and re-testing of Applicable Steel Structural Components in accordance with this Section 3.5.

### **3.6 Remedial Work**

Project Co shall be responsible at its own expense for any remedial work required as a result of any failure to pass any calibration, sample, test or trial required in accordance with this Agreement, any of the Project Requirements, the Design and Certification Procedure or any Quality Documentation or as a result of any laboratory not being duly accredited as required by this Agreement.

## **PART 4 QUALITY AUDITS AND MONITORING**

### **4.1 Quality Audit Plans**

#### *4.1.1 Performance Measures*

**PQ4.1.1a** Project Co shall provide the Quality Audit Plans to the Province’s Representative within 90 days after the Effective Date.

**PQ4.1.1b** Project Co shall provide updated Quality Audit Plans at twelve month intervals thereafter.

*4.1.2 Specific Requirements*

Quality Audit Plans shall detail the Internal Quality Audits and the External Quality Audits that shall be conducted by Project Co on its own processes and those of its Principal Contractors and Subcontractors, and the planned dates of such Quality Audits.

**4.2 Project Co's Quality Audits**

*4.2.1 General*

Project Co shall conduct Internal Quality Audits and External Quality Audits of its own processes and those of its Principal Contractors and Subcontractors (including the Designer) in accordance with the requirements of this Schedule, the Quality Documentation and the Quality Audit Plans referred to therein. The purpose of Project Co's quality auditing process is to confirm that all activities comprising the Project Work are in compliance with those documented in the Quality Management System (including the Quality Manual and Quality Management Plans), to identify all Nonconformities, necessary Corrective Actions and Opportunities for Improvement, and to facilitate continual improvement.

*4.2.2 Performance Measures*

**PQ4.2.2a** The Quality Director shall schedule Internal Quality Audits and External Quality Audits to ensure that all key processes are reviewed regularly (at least annually).

**PQ4.2.2b** Within 14 days of completion of any Quality Audit, Project Co shall document, or cause to be documented, the results of such Quality Audit in an audit report and make such report available to the Province's Representative.

*4.2.3 Specific Requirements*

- (a) Internal Quality Audits and External Quality Audits shall be scheduled taking into account the status and importance of the processes being audited as well as the results of previous audits.
- (b) Internal Quality Audits and External Quality Audits shall be conducted by personnel independent of the area(s) being audited.
- (c) Where necessary, follow-up audits shall be scheduled to ensure that identified Corrections, Corrective Actions and Opportunities for Improvement are carried out in a timely fashion.

**4.3 Province's Quality Audits**

*4.3.1 General*

The Province shall, pursuant to the submission of the Quality Documentation in accordance with this Schedule, review the Quality Documentation to identify the critical activities and processes

identified in the Quality Manual and Quality Management Plans on which the Province's auditing efforts and resources should be directed. The Province shall determine the frequency of auditing through regular and ongoing review of Project Co's performance and management systems. Work procedures and activities that show good audit performance may have the frequency of auditing decreased, while those that show poor performance or increased risk may have the frequency of auditing increased. Project Co shall provide and shall ensure its Principal Contractors and Subcontractors provide the Province's auditors with all documentation, records, access, facilities and assistance for the safety and convenience of the Province.

#### **4.3.2 *Types of Quality Audits***

The following two types of Quality Audits may be conducted by, or on behalf of, the Province in its discretion:

- (a) Surveillance Quality Audits – Scheduled or unscheduled field audits conducted on a random basis or on specific areas of interest. The objective of these surveillance audits is to monitor Project Co's activities involving the Project Work, including but not limited to work practices, workmanship, performance measures and general quality of materials; and
- (b) Quality Management System Audits – Scheduled audits conducted at specific times to assess the performance of and compliance with the Quality Management System.

#### **4.3.3 *Audit Observations and Findings***

The Province may, at any time and in its discretion, provide its observations and findings, including deficiencies, procedural or performance nonconformities, to Project Co in an audit report.

Where the Province initiates a Nonconformity Report, Project Co shall investigate, address and track the Nonconformity in accordance with Part 6 [Nonconformities] of this Schedule.

All other observations and findings identified by the Province and provided to Project Co in an audit report, shall be reviewed and evaluated by Project Co for Opportunities for Improvement.

#### **4.3.4 *Performance Measures***

**PQ4.3.4a** Project Co shall prepare a Corrective Action plan and submit it to the Province's Representative within 10 Business Days of receiving the report of the Province's Quality Audit.

The Province reserves the right to conduct follow up reviews to determine if Project Co's Corrective Action plan has been implemented and completed.

#### **4.4 *Province Monitoring***

In addition to carrying out any scheduled and unscheduled Quality Audits as provided in Section 4.3 [Province's Quality Audits] of this Schedule, the Province may, at its discretion, monitor and verify the operation of the Quality Management System by, inter alia, carrying out spot checks and making independent inspections and tests of any plant or material including any plant or

material which fails any test or is suspected by the Province of not complying with the requirements of this Agreement.

#### **4.5 Deficient Quality Audits**

If either:

- (a) the Province reasonably believes that Project Co is failing to conduct Quality Audits of its Quality Management System as required by this Agreement in any material respect or if such Quality Audits are not conducted in accordance with the ISO 9001:2015 Standard or the ISO 19011:2018 Standard by personnel competent to conduct such Quality Audits; or
- (b) any auditing, monitoring or spot checks of the Quality Management Systems reveal material deficiencies in the Quality Management System or the implementation thereof,

the Province may carry out increased levels of External Quality Audits (whether in number, duration or detail) of all or any aspect of the Quality Management System until such time as the Province is reasonably satisfied that none of the circumstances described in this Section 4.5 continue to exist.

#### **4.6 Costs of Audits**

If the Province carries out any audit pursuant to Section 4.3 [Province's Quality Audits], Section 4.4 [Province Monitoring] or Section 4.5 [Deficient Quality Audits] of this Schedule, and the results of such audit shows any material Nonconformity in respect of the Project Work, then without limiting any other rights and remedies of the Province, Project Co shall compensate the Province for all costs incurred in carrying out such audit (including the relevant administrative expenses of the Province, including an appropriate sum in respect of general staff costs and overheads). All other audits carried out by the Province pursuant to Section 4.3 [Province's Quality Audits], Section 4.4 [Province Monitoring] or Section 4.5 [Deficient Quality Audits] of this Schedule shall be at the Province's cost.

#### **4.7 Independent Quality Audits**

- (a) In addition to Internal Quality Audits and External Quality Audits, Project Co shall cause independent quality audits (each, an "**Independent Quality Audit**") to be undertaken during the Project Work. A full Independent Quality Audit on the QMS, including all Quality Management Plans, shall be completed within one year after the Effective Date and thereafter at least once per year until the Total Completion Date.
- (b) Each Independent Quality Audits shall be conducted by an independent quality auditor (an "**Independent Quality Auditor**") acceptable to the Province and Project Co and certified by an accredited auditors' registration body, such as the International Register for Certified Auditors or Registrar Accreditation Board, who is qualified to audit the full scope of the QMS.
- (c) Each Independent Quality Audit shall, at a minimum, ensure that all input requirements as required by the Project Agreement are included in the QMS and adhered to in the performance of the Project Work.

- (d) Project Co shall cause the Independent Quality Auditor to prepare a report (the “**Independent Quality Audit Report**”) that addresses all quality audit findings identified from the Independent Quality Audit, and to submit the Independent Quality Audit Report to the Province’s Representative at the same time as the Independent Quality Audit Report is submitted to Project Co.
- (e) All corrective measures addressed in an Independent Quality Audit Report shall be implemented and reported to the Province’s Representative.

#### **4.8 Traffic Management Auditing**

- (a) If any Project Co or Province Traffic Management audit identifies any traffic management or safety Nonconformity, or if a Nonconformity is reported to or brought to the attention of Project Co via any source, then Project Co shall rectify such Nonconformity immediately.
- (b) For complex temporary traffic control set-ups as detailed in Sections 13.5 [Temporary Traffic Control (Design) Road Safety Audit] and 13.6 [Temporary Traffic Control (On-site) Road Safety Audit] of Part 2 of Schedule 4, the Road Safety Audit process shall be implemented in accordance with Article 13 [Road Safety Audit] of Part 2 of Schedule 4.
- (c) For the purpose of facilitating the conduct of Internal Quality Audits and External Quality Audits relating to the performance of traffic management (“**Traffic Management Auditing**”) in an active or inactive work zone with a traffic control set-up, Project Co shall develop and implement a Site Condition Rating checklist acceptable to the Province, for use by each of Project Co and the Province.
- (d) As a component of the Traffic Quality Management Plan, the Site Condition Rating checklist shall be submitted to the Province’s Representative in accordance with the Consent Procedure. Submissions of subsequent updates to the checklist shall be in accordance with Section 5.6 [Changes to Quality Documentation] of this Schedule.
- (e) The checklist shall provide the framework for auditing the safety and overall management of traffic within the Project Site against the requirements contained in the Traffic Management Plan, the requirements of Part 4 [Traffic Management] of Schedule 4 and the Traffic Management Manual (collectively, the “**Traffic Management Criteria**”).
- (f) The checklist, at a minimum, shall include the following information:
  - (i) Traffic Management Plan – in relation to the approved site specific plan;
  - (ii) General Traffic Requirements – in relation to Article 1 [General Traffic Management Requirements] of Part 4 of Schedule 4, including:
    - Storage of materials
    - Traffic control devices
    - Roadside barriers
    - Drop-offs
    - Temporary Pavement Markings; and

- (iii) Traffic Management Manual – in relation to all relevant requirements.

A sample Site Condition Rating checklist of Nonconformities is set out in Appendix G [Traffic Management Site Condition Rating Checklist - Sample] to this Schedule. For clarity, the sample checklist is not an exhaustive checklist and shall be considered a minimum, and Project Co shall submit a checklist as set out in this Schedule based on specific work zone hazards and risks.

- (g) Each Nonconformity in the checklist shall be assigned a number of Site Condition Rating points (“**SCR Points**”) that reflects its relative importance in relation to the other listed Nonconformities. SCR Points shall be assigned to Project Co for each occurrence of a Nonconformity with Traffic Management Criteria that is identified at the time of the relevant audit, at the site within the Project Site that is the subject of such audit. The aggregate of such assigned SCR Points shall indicate the applicable site condition rating (the “**Site Condition Rating**”) for the subject site as at the time of the relevant audit.
- (h) The following table sets out the Site Condition Rating categories and the number of SCR Points the assignment of which will result in assignment of a particular Site Condition Rating.

<b>Site Condition Rating category</b>	<b>SCR Points</b>
Category 1	1 – 25
Category 2	26 - 50
Category 3	51+

- (i) At a minimum, Traffic Management Auditing shall be carried out weekly and on a specifically selected temporary traffic control set-up. Traffic Management Auditing shall be planned taking into consideration the status, importance and level of risk of each traffic control set-up, and generally rotate through the traffic control set-ups implemented for the Project at that time.
- (j) The designation of Site Condition Rating categories “Category 1”, “Category 2”, and “Category 3”, as identified in Section 4.8(h) of this Schedule and as shown in the sample checklist set out in Appendix G [Traffic Management Site Condition Rating Checklist - Sample] to this Schedule, indicates the basis on which NCE Points will be assigned in accordance with Part 8 [NCE Points and Default Points] of Schedule 10 to this Agreement.
- (k) Copies of Traffic Management Auditing reports shall be provided to the Province within two Business Days following the audit.
- (l) The requirements of this Section 4.8 are in addition to, and do not limit, Project Co’s other obligations under this Schedule, including Project Co’s obligations in Part 6 [Nonconformities] of this Schedule.



**PART 5  
QUALITY DOCUMENTATION**

**5.1 Principles**

The minimum requirements and principles which apply to the Quality Documentation are set out in Appendices A to F inclusive to this Schedule. Project Co's Quality Management System shall also comply with the requirements and principles of the ISO 9001:2015 Standard, this Schedule, and the principles of the ISO 9004:2009 Standard, including:

- (a) customer focus;
- (b) leadership;
- (c) engagement of people;
- (d) process approach;
- (e) improvement;
- (f) evidence-based decision making; and
- (g) relationship management.

**5.2 ISO Reference Documents**

Without limiting the requirement of the Quality Management System to comply with the ISO 9001:2015 Standard, Project Co's Quality Management System shall also incorporate the requirements of the following:

- (a) ISO 9004:2009 Standard;
- (b) ISO 9000:2015 Standard; and
- (c) ISO 19011:2018 Standard.

**5.3 Quality Documentation Requirements**

The minimum documentation requirements for the Quality Management System are:

- (a) the Quality Manual as required pursuant to Section 1.5 [Documentation Deliverables] of this Schedule;
- (b) Quality Management Plans for all aspects of the Project Work as required pursuant to Section 1.5 [Documentation Deliverables] of this Schedule;
- (c) that the following are included in each Quality Management Plan:
  - (i) quality system procedures and process flow charts documenting who does the work, what they do, and what evidence shall be generated that they have done the work correctly;

- (ii) the Quality Audit Plans required pursuant to Section 4.1 [Quality Audit Plans] of this Schedule;
- (d) Work Method Statements, as applicable;
- (e) Inspection and Test Plans, as applicable; and
- (f) the Records required pursuant to Section 5.8 [Quality Records] of this Schedule.

#### **5.4 Submission of Quality Documentation**

- (a) Project Co shall prepare and submit all required Quality Documentation to the Province's Representative for review in accordance with the Consent Procedure or the Review Procedure, as the case may be in accordance with Section 1.5 [Documentation Deliverables] of this Schedule.
- (b) If any Quality Documentation relies on or incorporates any quality manual, plan, procedure or like document then such quality manual, plan, procedure or other document or the relevant parts thereof shall (unless the Province otherwise agrees) be submitted to the Province's Representative at the time that the relevant Quality Documentation or part thereof or change, addition or revision to the Quality Documentation is submitted in accordance with the Consent Procedure or the Review Procedure, as the case may be, and the contents of such quality manual, plan, procedure or other document shall be taken into account in the consideration of the relevant Quality Documentation or part thereof or change, addition or revision to the Quality Documentation in accordance with the Consent Procedure or the Review Procedure, as the case may be. The Province may require the amendment of any such quality manual, plan, procedure or other document to the extent necessary to enable the relevant Quality Documentation to satisfy the requirements of this Schedule.

#### **5.5 Project Co Obligation to Update**

Project Co shall be responsible for proactively updating its Quality Management System and all Quality Documentation from time to time, in accordance with the procedures set forth in this Agreement, to ensure that the Quality Management System and all Quality Documentation are, and at all times remain, relevant and in full compliance with the ISO 9001:2015 Standard and the requirements of this Agreement.

#### **5.6 Changes to Quality Documentation**

- (a) Project Co may submit to the Province's Representative in accordance with the Review Procedure any proposed changes or additions to or revisions of any of the Quality Documentation.
- (b) Without limiting the generality of Section 5.6(a) of this Schedule, Project Co shall from time to time submit to the Province's Representative in accordance with the Review Procedure any changes to any of the Quality Documentation required for such Quality Documentation to continue to reflect and comply with the requirements set out in this Schedule.

- (c) If Project Co does not propose any change required pursuant to Section 5.6(b) of this Schedule, then the Province may propose such change and it shall be dealt with in accordance with the Review Procedure as though it had been proposed by Project Co and shall not therefore be treated as a Province Change. Any dispute between the parties in respect of any such change shall be resolved in accordance with the Dispute Resolution Procedure.

## **5.7 Amendment of Quality Documentation**

If there is no unresolved objection by the Province under the Consent Procedure or the Review Procedure, as the case may be, to a part of the Quality Documentation pursuant to Section 5.4 [Submission of Quality Documentation] of this Schedule or to a change, addition or revision proposed pursuant to Section 5.6 [Changes to Quality Documentation] of this Schedule, then the Quality Documentation shall be amended to incorporate such part, change, addition or revision.

## **5.8 Quality Records**

- (a) Project Co shall establish and maintain complete and accurate quality management records (the “**Quality Records**”), which shall form part of the Records.
- (b) The Quality Records shall provide objective evidence of conformance with all requirements of this Agreement, compliance with the ISO 9001:2015 Standard and the effective operation of the Quality Management System.

## **5.9 Quality Management System Reports**

### *5.9.1 Performance Measures*

- PQ5.9.1a** For each month from the Effective Date until the Total Completion Date, Project Co shall prepare, and submit to the Province’s Representative within 15 Business Days of the start of the following month, a comprehensive Quality Management System report.

### *5.9.2 Specific Requirements*

- (a) The monthly Quality Management System report shall address all quality management activities under the Quality Manual and each of the Quality Management Plans for that month and any outstanding quality issues from prior months.
- (b) The monthly Quality Management System reports shall, as a minimum, include the following information separately identified for the Quality Manual and for each Quality Management Plan:
  - (i) a Nonconformity Report log summarizing the Nonconformity Tracking System and providing the following in respect of each Nonconformity Report: “date open”, “date closed”, “status” (open, pending, closed) and “description of Correction” (Repair, Rework, Reject, Use As Is);
  - (ii) a Corrective Action log providing details of the Corrective Actions performed to date and their close-out status;

- (iii) an Opportunities for Improvement log summarizing the Opportunities for Improvement raised to date, including the following information: reference numbers, “date open”, “status” (open, pending, closed), “date closed”, and description of how it was closed;
- (iv) a summary of any inspection and testing activities conducted during the month and a four month look-ahead schedule for planned inspection and testing activities;
- (v) Internal Quality Audits and External Quality Audits, including any third party Quality Audits performed during the month and a four month look-ahead schedule for planned future Quality Audits;
- (vi) any other information required to be included in the monthly Quality Management System reports pursuant to any of the Appendices to this Schedule or the terms of the relevant Quality Management Plan; and
- (vii) any changes made to the Quality Management System or the Quality Documentation in compliance with the provisions of this Agreement.

#### **5.10 Additional Information**

- (a) The Corrective Action log and Opportunities for Improvement log as described in Sections 5.9.2(ii) and (iii) of this Schedule shall be:
  - (i) maintained and updated until the Total Completion Date; and
  - (ii) made easily accessible to the Province.
- (b) Notwithstanding any other provision of this Schedule, Project Co shall provide the Province’s Representative with such information as the Province may request from time to time to demonstrate compliance with this Agreement, including this Schedule.

### **PART 6 NONCONFORMITIES**

#### **6.1 Nonconformity Reporting Process**

The Nonconformity reporting process, from initial creation through to closeout, shall follow the process outlined below:

- (a) If Project Co or the Province discovers a Nonconformity, it shall initiate a Nonconformity Report in accordance with the ISO 9001:2015 Standard, and as follows:
  - (i) Project Co initiated Nonconformity Reports - Upon discovery of a Nonconformity, Project Co shall, within two Business Days of discovering the Nonconformity, issue a Nonconformity Report identifying the problem and provide a copy of the Nonconformity Report to the Province’s Representative; or

- (ii) Province initiated Nonconformity Reports - If at any time the Province is notified, or otherwise becomes aware, that there is any Nonconformity relating to the Project Work, the Province may issue a Nonconformity Report, without prejudice to any other right or remedy available to the Province and BCTFA, including the assignment of NCE Points and/or Default Points pursuant to Schedule 10 [Payment and Performance Mechanism].
- (b) The Nonconformity Report is issued to the Quality Director, thereby activating the Nonconformity Report. The date of issue shall be recorded denoting the commencement of the time period for which the Nonconformity Report has an ‘open’ status.
- (c) Project Co shall investigate and respond to all Nonconformity Reports.
- (d) The Quality Director shall in response to the Nonconformity Report describe a Correction of the Nonconformity and, if applicable, a Corrective Action in accordance with the ISO 9001:2015 Standard. A response time for the implementation of the Correction shall be included in the response.
- (e) Acceptable responses are set out in Table 6.1 for various scenarios.

**Table 6.1 Acceptable Responses to Nonconformity Reports**

<b>Status of Nonconformity</b>	<b>Correction</b>	<b>Corrective Action (if applicable)</b>
Correction has been undertaken	Describe nature of the Correction (Rework, Repair, Reject, Use As Is).  Provide confirmation that the Correction has remedied (if applicable) the Nonconformity	Describe any improvements to process to prevent reoccurrence.  Provide a plan committing to scope and timing of the Corrective Action.
Correction is proposed	Describe nature of the Correction (Rework, Repair, Reject, Use As Is).  Provide a plan committing to scope and timing of Correction.	Describe any improvements to process to prevent reoccurrence.  Provide a plan committing to scope and timing of the Corrective Action.
Objection to NCR and no Correction is proposed	N/A	N/A

- (f) The Quality Director shall change the status of the Nonconformity Report to ‘pending’ once a Correction, a response time and, if applicable, a Corrective Action has been documented for the Nonconformity in accordance with Section 6.1(d).
- (g) Project Co shall rectify each Nonconformity in accordance with the Correction and, if applicable, the Corrective Action described in the Nonconformity Report.
- (h) Once the Nonconformity has been corrected, it shall be subject to verification by the Quality Director to demonstrate conformity to the requirements. The Quality Director shall then change the Nonconformity Report status to “closed” and shall provide a copy of the Nonconformity Report to the Province within two Business Days thereafter.

- (i) Project Co may object to the issuance of any Nonconformity Report by the Province. If such objection has not been resolved by mutual agreement between the Province and Project Co within five Business Days of delivery by Project Co to the Province's Representative of notice of the objection, then either Project Co or the Province may refer the matter to the Dispute Resolution Procedure for determination.
- (j) If Project Co fails to object to the issue by the Province of a Nonconformity Report within five Business Days, Project Co is deemed to have accepted that Nonconformity Report.

## **6.2 Nonconformity Report Tracking System**

Project Co will implement and maintain a live, electronic, internet-based Nonconformity Tracking System to monitor the status of all Nonconformity Reports initiated by the Province and Project Co.

**PQ6.2.1** The Nonconformity Tracking System shall be fully operating, with the following minimum requirements, within 90 days from the Effective Date:

- (a) comprise a single repository containing both Project Co and Province initiated Nonconformity Reports;
- (b) have the ability to attach supporting material such as photos and documents;
- (c) provide live access to the current Nonconformity Report status to both Project Co and the Province;
- (d) automatically apply NCE Points to each Non-Compliance Event in accordance with Schedule 10 [Payment and Performance Mechanism];
- (e) allow for the application of additional NCE Points to individual Nonconformity Reports in accordance with Schedule 10 [Payment and Performance Mechanism]; and
- (f) produce monthly summary Reports for delivery to the Province's Representative of outstanding Nonconformity Reports, NCE Points and Default Points accrued within each performance threshold category in any given month, and the total NCE Points and Default Points accrued across all performance threshold categories in any given month.

## **6.3 Unremedied Nonconformity**

The Province may issue further Nonconformity Reports if a Nonconformity identified in a Nonconformity Report continues unremedied, and may assign Default Points in respect of such unremedied Nonconformity pursuant to Section 8.4 [Assignment of Default Points] of Schedule 10.

**6.4 Nonconformity Records**

In addition to the maintenance of the Nonconformity Tracking System under Section 6.2 [Nonconformity Report Tracking System] of this Schedule, Project Co shall maintain records of:

- (a) each Nonconformity;
- (b) the reference numbers of all Nonconformity Reports;
- (c) a description of all Nonconformity Reports;
- (d) the proposed actions by Project Co to rectify each Nonconformity;
- (e) the date and time at which Nonconformities were identified;
- (f) the date and time at which the status of Nonconformity Report is changed to “pending” in accordance with Section 6.1(f) of this Schedule; and
- (g) the date and time at which a Nonconformity specified in a Nonconformity Report was rectified.

**APPENDIX A  
QUALITY MANUAL**

**1.0 QUALITY MANUAL**

- 1.1 Project Co shall provide a comprehensive Quality Manual that describes the Quality Management System for all aspects of the Project Work including the Design and Construction phases of the Project, in accordance with the ISO 9001:2015 Standard. The Quality Manual shall establish the Quality Policy and Quality Objectives for all aspects of the Project Work and shall describe the processes that shall be established, implemented, controlled, and continually improved to achieve the established Quality Objectives.
- 1.2 The Quality Objectives shall be measurable, consistent with the Quality Policy and linked to meeting the needs and performance expectations of the Province with respect to all aspects of the Project Work, including the Design and Construction phases of the Project. The Quality Management System described in the Quality Manual shall include all the activities required to achieve these Quality Objectives, including project controls such as scope, cost, schedule, actions to address risks and opportunities, document control, and general management activities. All of these activities shall be subject to Internal Quality Audits and External Quality Audits.
- 1.3 The Quality Manual shall describe the nature of Project Co's organization involved in performing the Project Work and how key management activities (such as project controls; Design; Construction; Traffic Management; communications, and environmental management) shall interface with each other. The Quality Manual shall also provide the organization chart, authority and responsibilities of all key personnel. The Quality Manual shall also show how the various levels of Quality Management System documentation, including other relevant documentation such as any plan, procedure or like document detailed elsewhere in this Agreement, are linked together.
- 1.4 The Quality Manual shall clearly define the reporting function and authority of Project Co's Quality Director who shall liaise with the Province's Representative and act as the single point representative of Project Co for all matters relating to quality management.



**APPENDIX B  
DESIGN QUALITY MANAGEMENT PLAN**

**1.0 DESIGN QUALITY MANAGEMENT PLAN**

- 1.1 Project Co shall provide a comprehensive Design Quality Management Plan that describes how it intends to manage the design processes for the Project in accordance with the ISO 9001:2015 Standard, the Quality Management System requirements stated in its Quality Manual and the provisions of this Agreement.
- 1.2 The Design Quality Management Plan shall contain an organizational chart identifying key design management personnel and the relationship with the Quality Director for the overall Quality Management System as documented in the Quality Manual. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces with other engineering groups, environmental management, and construction disciplines.
- 1.3 The Design Quality Management Plan shall, at a minimum, include or reference detailed quality system procedures and process flow charts for the following processes:
- (a) design input and output review;
  - (b) design verification to ensure that design input requirements have been met;
  - (c) design validation to ensure that the final product is capable of meeting its intended use;
  - (d) design changes;
  - (e) design subcontractor quality assessment and procurement;
  - (f) field reviews;
  - (g) interface with Construction, including the development and review of inspection and test plans by the Designer prior to and during Construction, and ongoing designer review of records during Construction;
  - (h) External Quality Audits of design subcontractor(s);
  - (i) Internal Quality Audits;
  - (j) control of nonconforming activities and/or product;
  - (k) Corrective Actions;
  - (l) Opportunities for Improvement;
  - (m) document management; and
  - (n) control of Records.

**PATTULLO BRIDGE REPLACEMENT PROJECT**  
**PROJECT AGREEMENT**  
**SCHEDULE 7: QUALITY MANAGEMENT**  
**Appendix B: Design Quality Management Plan**

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- 2 -

The above procedures and flow charts shall document who does the work, what they do, and what evidence is generated that they have done the work correctly.

- 1.4 When any of the above processes are addressed as part of other Quality Documentation, such as the Quality Manual or another Quality Management Plan, these processes shall still be provided with their own section heading in the Design Quality Management Plan, but the details of such processes in the applicable section of the Design Quality Management Plan may be limited to a reference to the section or paragraph of the other applicable Quality Documentation where the relevant details are provided, provided that such referenced section or paragraph of such other Quality Documentation includes specific requirements to the applicable process as it relates to design quality management. Notwithstanding the foregoing, processes that fall within the specific requirements for Design must include detailed quality system procedures and process flow charts under the Design Quality Management Plan.

**APPENDIX C  
CONSTRUCTION QUALITY MANAGEMENT PLAN**

**1.0 CONSTRUCTION QUALITY MANAGEMENT PLAN**

- 1.1 Project Co shall provide a comprehensive Construction Quality Management Plan that describes how it intends to manage the Construction processes in connection with the Project in accordance with the ISO 9001:2015 Standard, the Quality Management System requirements stated in its Quality Manual and the provisions of this Agreement.
- 1.2 The Construction Quality Management Plan shall contain an organizational chart identifying key Construction management personnel and the relationship with the Quality Director for the overall Quality Management System as documented in the Quality Manual. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces with design and other disciplines such as communications, environmental management and Traffic Management.
- 1.3 The Construction Quality Management Plan shall, at a minimum, include or reference detailed quality system procedures and process flow charts for the following processes:
- (a) construction safety audits;
  - (b) inspection, testing and monitoring;
  - (c) materials identification and traceability;
  - (d) chain of custody for sampling and testing;
  - (e) receiving inspections;
  - (f) Principal Contractors' and Subcontractors' quality assessment and procurement;
  - (g) interface with design and other disciplines for work activities including the development and review of inspection and test plans prior to and during Construction, and coordination of field reviews during Construction;
  - (h) External Quality Audits of Principal Contractors and Subcontractors;
  - (i) Internal Quality Audits;
  - (j) control of nonconforming activities and/or product;
  - (k) Corrective Actions;
  - (l) Opportunities for Improvement;
  - (m) document management; and
  - (n) control of Records.

**SCHEDULE 7: QUALITY MANAGEMENT**

**Appendix C: Construction Quality Management Plan**

- 2 -

The above procedures and flow charts shall document who does the work, what they do, and what evidence is generated that they have done the work correctly.

- 1.4 When any of the above processes are addressed as part of other Quality Documentation, such as the Quality Manual or another Quality Management Plan, these processes shall still be provided with their own section heading in the Construction Quality Management Plan, but the details of such processes in the applicable section of the Construction Quality Management Plan may be limited to a reference to the section or paragraph of the other applicable Quality Documentation where the relevant details are provided, provided that such referenced section or paragraph of such other Quality Documentation includes specific requirements to the applicable process as it relates to construction quality management. Notwithstanding the foregoing, processes that fall within the specific requirements for Construction must include detailed quality system procedures and process flow charts under the Construction Quality Management Plan.
- 1.5 The Construction Quality Management Plan shall include or reference an Inspection and Test Plan detailing all on and off Project Site inspection and test activities for work performed by Project Co and that of its Principal Contractors and Subcontractors and suppliers of any tier. The Inspection and Test Plan shall, at a minimum, include:
  - (a) description of the inspection, test and monitoring activity;
  - (b) frequency of inspections, tests and monitoring;
  - (c) reference to standards, codes, specifications, and acceptance criteria;
  - (d) reports, documents, certificates and checklists required;
  - (e) personnel responsible for inspection, test and monitoring activity;
  - (f) quality assurance review, witness and hold points; and
  - (g) description and frequency of geotechnical instrumentation monitoring and adherence to acceptance criteria.
- 1.6 The Construction Quality Management Plan shall also identify all major work activities requiring detailed Work Method Statements. Work Method Statements shall describe the processes and methodologies required to deliver the Project Work. Work Method Statements shall be developed and in place prior to the commencement of the relevant work activity.

**PATTULLO BRIDGE REPLACEMENT PROJECT  
PROJECT AGREEMENT  
SCHEDULE 7: QUALITY MANAGEMENT**

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**APPENDIX D**

**[NOT USED]**

**APPENDIX E  
TRAFFIC QUALITY MANAGEMENT PLAN**

**1.0 TRAFFIC QUALITY MANAGEMENT PLAN**

- 1.1 Project Co shall provide a comprehensive Traffic Quality Management Plan that describes how it intends to administer the Traffic Management processes in connection with the Project in accordance with the ISO 9001:2015 Standard, the Quality Management System requirements stated in its Quality Manual and the provisions of this Agreement. The Traffic Quality Management Plan shall address all phases of the Project Work including Design and Construction.
- 1.2 The Traffic Quality Management Plan shall contain an organizational chart identifying key Traffic Management personnel and the relationship with the Quality Director for the overall Quality Management System as documented in the Quality Manual. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between Traffic Management and other disciplines such as Design, Construction, communications and environmental management.
- 1.3 The Traffic Quality Management Plan shall at a minimum, include or reference detailed quality system procedures and process flow charts for the following processes:
- (a) Traffic Control Plan design input and output review;
  - (b) Traffic Control Plan design verification to ensure that design input requirements have been met;
  - (c) Traffic Control Plan design validation to ensure that the final product is capable of meeting its intended use;
  - (d) Traffic Control Plan design changes;
  - (e) Principal Contractors' and Subcontractors' quality assessment and procurement;
  - (f) External Quality Audits of Principal Contractors and Subcontractors;
  - (g) Internal Quality Audits;
  - (h) control of nonconforming activities and/or product;
  - (i) Corrective Actions;
  - (j) Opportunities for Improvement;
  - (k) document management; and
  - (l) control of Records.

The above procedures and flow charts shall document who does the work, what they do, and what evidence is generated that they have done the work correctly.

**PATTULLO BRIDGE REPLACEMENT PROJECT  
PROJECT AGREEMENT  
SCHEDULE 7: QUALITY MANAGEMENT  
Appendix E: Traffic Quality Management Plan**

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- 2 -

- 1.4 When any of the above processes are addressed as part of other Quality Documentation, such as the Quality Manual or another Quality Management Plan, these processes shall still be provided with their own section heading in the Traffic Quality Management Plan, but the details of such processes in the applicable section of the Traffic Quality Management Plan may be limited to a reference to the section or paragraph of the other applicable Quality Documentation where the relevant details are provided, provided that such referenced section or paragraph of such other Quality Documentation includes specific requirements to the applicable process as it relates to traffic quality management. Notwithstanding the foregoing, processes that fall within the specific requirements of the Traffic Management Plan must include detailed quality system procedures and process flow charts under the Traffic Quality Management Plan.
- 1.5 The Traffic Management Auditing process and Site Condition Rating checklist as described in Section 4.8 [Traffic Management Auditing] of this Schedule shall be incorporated into the Traffic Quality Management Plan.

**APPENDIX F  
ENVIRONMENTAL QUALITY MANAGEMENT PLAN**

**1.0 ENVIRONMENTAL QUALITY MANAGEMENT PLAN**

1.1 Project Co shall provide a comprehensive Environmental Quality Management Plan that describes how it intends to manage the environmental components of the Project in accordance with the ISO 14001:2015 Standard, the Quality Management System requirements stated in its Quality Manual and the provisions of this Agreement. The Environmental Quality Management Plan shall address all phases of the Project Work including Design and Construction.

1.2 The Environmental Quality Management Plan shall contain an organizational chart identifying key environmental management personnel and the relationship with the Quality Director for the overall Quality Management System as documented in the Quality Manual. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between the environmental management and other disciplines such as design and construction.

1.3 The Environmental Quality Management Plan shall include or reference detailed quality system procedures and process flow charts for the following processes:

- (a) satisfying and ensuring compliance with Project Co's Environmental Obligations, including the preparation and implementation of an Environmental Management Plan and specific plans as detailed elsewhere in this Agreement;
- (b) obtaining and maintaining Permits;
- (c) environmental monitoring and reporting;
- (d) environmental incident reporting and tracking;
- (e) External Quality Audits of Principal Contractors and Subcontractors;
- (f) Internal Quality Audits;
- (g) control of nonconforming activities and/or products;
- (h) Corrective Actions;
- (i) Opportunities for Improvement;
- (j) document management; and
- (k) control of Records.

The above procedures and flow charts shall document who does the work, what they do, and what evidence is generated that they have done the work correctly.

1.4 When any of the above processes are addressed as part of other Quality Documentation, such as the Quality Manual or another Quality Management Plan, these processes shall still be provided with their own section heading in the Environmental Quality Management Plan, but the details of



**PATTULLO BRIDGE REPLACEMENT PROJECT**  
**PROJECT AGREEMENT**  
**SCHEDULE 7: QUALITY MANAGEMENT**  
**Appendix F: Environmental Quality Management Plan**

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- 2 -

such processes in the applicable section of the Environmental Quality Management Plan may be limited to a reference to the section or paragraph of the other applicable Quality Documentation where the relevant details are provided, provided that such referenced section or paragraph of such other Quality Documentation includes specific requirements to the applicable process as it relates to environmental quality management. Notwithstanding the foregoing, processes that fall within the specific requirements of environmental management must include detailed quality system procedures and process flow charts under the Environmental Quality Management Plan.

- 1.5 The Environmental Quality Management Plan shall clearly demonstrate how verification of Project Co's compliance with Project Co's Environmental Obligations, including obtaining approvals from relevant Environmental Authorities, will be carried out.

**APPENDIX G**

**TRAFFIC MANAGEMENT SITE CONDITION RATING CHECKLIST- SAMPLE**

Contractor		Location	
Auditor		Direction	
Date & Time		TCP #	
Weather		Activity	

**A. Advanced Warning Area**

- Signage .....
- Visibility .....
- Placement .....
- Condition .....

**B. Transition Area, Buffer Space, Work Area, Termination Area**

- Signage .....
- Visibility .....
- Placement .....
- Condition .....
- Delineation .....
- Placement .....
- Condition .....
- Spaced Correctly .....

**C. Other issues**

- Excavations .....
- Pedestrians from work .....
- Pedestrians from traffic .....
- Cyclists from work .....
- Cyclists from traffic .....
- Advance Warning area .....
- Transition area .....
- Buffer Space .....
- Work Area .....
- Warning lights .....
- Vehicles operating with traffic flow .....
- Vehicles parked with traffic flow .....
- Vehicles outside zone .....
- Entering/leaving with traffic flow .....
- Workers safety .....
- Traffic Control Plan available on site .....
- TCP or TCP Supervisor on site .....

**D. General Observations**

.....  
 .....

**SCHEDULE 7: QUALITY MANAGEMENT**

**Appendix G: Traffic Management Site Condition Rating Checklist - Sample**

**SITE CONDITION RATING**

Nonconformity		SCR Points	No. Of Occurrences	Total SCR Points
Signs	Missing (including side road)	5 for each sign		
	Incorrect Spacing	2 for each sign		
	Misaligned/Not visible	3 for each sign		
	Obstructed	3 for each sign		
	Condition marginal - needs repair	1 for each sign		
	Condition unacceptable - needs replacement	4 for each sign		
	Order incorrect	2 for each set of signs out of order		
	Contradictory sign not covered	2 for each sign		
	Unapproved sign	4 for each sign		
	Sign on wrong side	2 for each sign		
	Sign too low	1 for each sign		
	Speed restriction/de-restriction not appropriate/inconsistent	5 for each occasion		
	Speed limit not correctly aligned	2 for each occasion		
	Sign not upright	1 for each sign		
	Non-compliant support	2 for each support		
	Wrong sign	5 for each sign		
	Lateral location incorrect	1 for each sign		
Any other sign Deficiency	1 for each sign			
Delineation Devices	Missing as per TCP	30 where delineation is missing and required		
	Tapers too short	5 for each taper		
	Spacing in tapers	3 for each taper where spacing too great to be effective		
	Spacing in lanes	2 where spacing in lanes/around work area is too great		
	Condition marginal - needs repair	1 for each device where classified in marginal condition		
	Condition unacceptable - needs replacement	3 for each device in unacceptable condition		
	Using non-approved device	4 for each non-approved device		
	Used incorrectly	2 for each device		
	Lane Shift	10 for each missing or installed incorrectly		
	Any other delineation device deficiency	2 for each occurrence		
Pavement Markings	Marking missing	5 for each occurrence		
	Marking incorrect	5 for each occurrence		
	Marking not located as per TCP	5 for each occurrence		
	Marking not visible	5 for each occurrence		
	Contradictory markings/not eradicated	5 for each occurrence		
	Any other pavement marking deficiency	2 for each occurrence		
Miscellaneous	Workers working in Live Lanes	55 for each occasion		
	Traffic Control Personnel not located as per TCP	30 for each occurrence		
	Unauthorized/Unqualified person controlling traffic	30 for each occurrence		
	Flashing Beacon not used / ineffective	1 for each vehicle		
	PPE not worn	5 for each individual		
	PPE in poor condition	5 for each PPE in unacceptable condition		
	No provision for pedestrians	30 where no provision made and required		
	No provision for cyclists	30 where no provision made and required		
Parking/stopping features not relocated	5 where relocation of feature is required			

**PATTULLO BRIDGE REPLACEMENT PROJECT  
PROJECT AGREEMENT**

*Commercial in Confidence  
Execution*

**SCHEDULE 7: QUALITY MANAGEMENT**

**Appendix G: Traffic Management Site Condition Rating Checklist - Sample**

- 3 -

Nonconformity		SCR Points	No. Of Occurrences	Total SCR Points
	Equipment/materials obstruct pedestrians or cyclists	5 for each occurrence		
	Transition Area, or Buffer Space, or Work Area compromised	2 for unacceptable or no safety zone		
	Excavation not protected	10 for excavation not protected by acceptable method		
	DMS/PDMS message incorrect	20 for displaying incorrect information		
	Barrier defects	10 for each incorrect or missing barrier component		
	Any other hazards	10 for each occurrence		
Mobile & Semi Static Operations	Pilot vehicle omitted	20 for missing or incorrect location		
	Buffer/Shadow vehicle omitted	20 for missing or incorrect location		
	Vehicle mounted signs	5 for missing or incorrect signs		
	TMA missing	20 for TMA missing when required		
	TMA non-compliant	5 for TMA in use but not of acceptable standard		
	Arrowboard missing	20 for Arrowboard missing when required		
	Arrowboard display incorrect	20 for no display or incorrect display		
	Any other mobile & semi static deficiency	20 for each occurrence		
Other Operational	TBD			
<b>SCR POINT TOTAL</b>				

Site Condition Rating	No Nonconformities Identified (0)	Category 1 (1 -25)	Category 2 (26-50)	Category 3 (51+)
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Copies to:

Province's Representative