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100.0 GENERAL

100.1 INTRODUCTION

- 100.1.1 References to Section numbers in this Schedule 15 are to Section numbers of the Technical Requirements unless expressed otherwise.
- 100.1.2 This Section 100 covers the general Technical Requirements applicable to all design, construction, operations and rehabilitation of the Infrastructure.
- 100.1.3 The Information in the Technical Requirements is organized as follows:
- this Schedule 15-1 - General, Section 100 – General
 - a) Appendix A – Schedule of Plans and Reports;
 - b) Appendix B – Design Management Plan;
 - c) Appendix C – Construction Management Plan;
 - d) Appendix D – Traffic Management Plan; Appendix E – Sample Traffic Accommodation Plan; and
 - e) Appendix F – Geotechnical Reports.
 - Schedule 15-2 - Design and Construction, Section 200 – Design;
 - a) Appendix A – Reference Concept;
 - b) Appendix B – Select Ministry Standard Drawings and Reference Tables;
 - c) Appendix C – Additional Resources;
 - d) Appendix D – Guide Signing ;
 - e) Appendix E – Phase One Drawings;
 - f) Appendix F – Intelligent Transportation Systems (“ITS”) Requirements;
 - g) Appendix G – Traffic Modeling and Traffic Signal Guidelines (Packages A-J);
 - h) Appendix H – Right of Way;
 - i) Appendix I – Global Memoranda of Understanding; and
 - j) Appendix J – Hydrotechnical Sketches
 - Schedule 15-2 – Design and Construction, Section 300 – Construction;
 - Schedule 15-3 – OM&R and Handback, Section 400 – Operations Infrastructure;
 - Schedule 15-3 - OM&R and Handback, Section 401 – Operations and Maintenance;
 - Schedule 15-3 - OM&R and Handback, Section 402 – Asset Preservation;
 - Schedule 15-3 - OM&R and Handback, Section 500 – Handback;
 - Schedule 15-3 - OM&R and Handback, Appendix A – OM&R Limits; and
 - Schedule 15-3 - OM&R and Handback, Appendix B – Snow Plowing Segments.
 - Schedule 15-3 – OM&R and Handback, Appendix C – WRB Interim Maintenance Section.

100.1.4 Any standards written by the Ministry, including without limitation Standard Plans, can be found (or the location of where they can be found is) on the Ministry's website (<http://www.highways.gov.sk.ca/business>). Subject to Section 18 (a) of the Project Agreement Project Co shall use the latest revision for the Standard Plans referenced.

100.2 PROJECT CO'S RESPONSIBILITIES

100.2.1 Project Co shall be responsible for the design and construction of all aspects of the Works including, but not limited to, works to the Existing Bypass Infrastructure and New Bypass Infrastructure, all geotechnical investigations, environmental considerations and permits, topographic surveys, in-stream watercourse surveys, approvals and permits, other field investigations and technical analysis required to complete the designs in a professional, competent manner as described in Sections 100, 200, and 300 of the Technical Requirements and with all applicable Project Agreement requirements.

100.2.2 Project Co shall be responsible for carrying out all operation, maintenance and rehabilitation of the Existing Bypass Infrastructure and Works as described in Sections 100, 400, 401, 402 and 500 of the Technical Requirements and with all applicable Project Agreement requirements.

100.3 COORDINATING PROFESSIONAL ENGINEER

100.3.1 Project Co shall engage or cause to be engaged a single Coordinating Professional Engineer who shall coordinate the engineering aspects of the design work, and shall ensure that the design work has been performed by or under the direction of appropriate registered professionals and that the interrelationships between the involved engineering disciplines have been fully assessed and issues have been addressed. The Coordinating Professional Engineer may also be an Engineer of Record for part of the Works.

100.3.2 The Coordinating Professional Engineer shall ensure that:

- a) designs between the interrelated engineering disciplines are coordinated.
- b) designs are performed by or under the direct supervision of a Professional Engineer;
- c) designs and design reports are signed and sealed by the Engineer(s) of Record;
- d) field reviews for the designs of each Engineer of Record are arranged and carried out;

- e) record drawings are produced and signed and sealed by the Engineer(s) of Record and other required signatories and the originals submitted to the Ministry in accordance with the Review Procedure; and
- f) all registered professionals shall have signed and submitted their respective assurances to the Coordinating Professional Engineer.

100.3.3 Upon completion of construction of the Works, the Coordinating Professional Engineer shall sign and seal the Construction Certificate in the form given in Appendix B of Schedule 9 - Review Procedure.

100.4 ENGINEER OF RECORD

100.4.1 An Engineer of Record shall be assigned to each design component of the Works which requires an engineering design.

100.4.2 Each Engineer of Record shall ensure that the Design Data for which it is responsible contained in the Final Design Development Submittal (including any changes made during construction) meets the Technical Requirements and other provisions of the Project Agreement. During construction, the Engineer of Record may receive notice of proposed design changes.

100.4.3 Each Engineer of Record shall review any proposed changes, and make appropriate revisions to, the Design Data for which it is responsible for submittal under the Review Procedure.

100.4.4 Where significant changed conditions are encountered on the Site, each Engineer of Record shall confirm the applicability of the Design Data for which it is responsible or make consequential revisions to such Design Data for submission under the Review Procedure.

100.4.5 Each Engineer of Record shall issue a Non-Conformance Report pursuant to Section 7 of Schedule 14 – Integrated Management System upon the discovery of a Non-Conformance.

100.4.6 Each Engineer of Record shall sign a Design Certificate in the form given in Appendix B of Schedule 9 - Review Procedure for all Design Data for which it is responsible contained within the Final Design Development Submittal and any revisions made thereto.

100.4.7 Where an Engineer of Record has also been retained as the Field Reviewer, that Engineer of Record will also fulfill the Field Reviewer obligations.

100.5 FIELD REVIEWER

100.5.1 The Design Team shall employ a Field Reviewer who shall ensure that the Works comply in all respects with the Technical Requirements.

100.5.2 The Field Reviewer role is distinct from any day-to-day inspections that would normally be occurring and from any design services during construction provided by the Engineer of Record to aid in interpretation of the Design Data or to make necessary revisions.

100.5.3 Field reviews will be performed by, or under the direct supervision of, the Field Reviewer. The Field Reviewer can also be an Engineer of Record.

100.5.4 The Field Reviewer shall:

- a) have the same access rights to the Site as Project Co has under the Project Agreement, in order to determine whether or not the Works are in compliance with the Design Data;
- b) review the reports of any inspection and testing performed by other qualified persons which pertain directly to the work being reviewed;
- c) confirm that design changes required in the field have been forwarded to the appropriate Engineer of Record for review and acceptance;
- d) record any changed conditions encountered, observations made, and deficiencies found during Site visits;
- e) provide the Coordinating Professional Engineer, Engineer of Record, and the Ministry Representative with a written report of any Non-Conformances observed; and
- f) upon completion of Construction Activities, sign and seal the Construction Certificate in the form given in Appendix B of Schedule 9 - Review Procedure.

100.6 NOT USED

100.7 NOT USED

100.8 PROJECT CO MANAGEMENT PLANS

100.8.1 Project Co Management Plans

Project Co agrees to design, build, operate, maintain and rehabilitate in accordance with the Management Plans. Project Co shall review and amend the Management Plans on an ongoing basis throughout the Project Term and submit any changes under the Review Procedure. Any such changes to the Management Plans shall not be

implemented unless they have been endorsed “Reviewed” or “Reviewed as Noted” in accordance with the Review Procedure.

100.8.2 Performance Measures

Without limiting the generality of Part 2 [Integrated Management System Requirements] of Schedule 14 - Integrated Management System, Project Co will prepare and submit the plans and reports set out in Appendix A to this Schedule 15-1 – General to the Ministry Representative, by the dates shown in Appendix A to this Schedule 15-1 - General.

100.8.3 Specific Requirements

Project Co shall prepare and submit IMS Documentation for any other person contracting with Project Co and any Subcontractor, throughout the Project Term for the purposes of undertaking any material aspect of the Works as requested by the Ministry (but excluding legal and financial advisors and lenders) in each case for undertaking the activities covered by that party’s contract with Project Co or such Subcontractor and meeting the requirements of the IMS Manual.

100.8.4 Traffic Accommodation Plan

100.8.4.1 Within 45 days following Commercial Close, Project Co shall submit an initial traffic management plan (the “**Traffic Accommodation Plan**”) to the Ministry Representative pursuant to the Review Procedure. Project Co shall submit all subsequent proposed changes to the Traffic Accommodation Plan to the Ministry Representative pursuant to the Review Procedure.

100.8.4.2 The Traffic Accommodation Plan and all updates thereto shall be consistent with and comply with all of the requirements set forth in this Section 100.8.4, all other relevant provisions of the Project Agreement and the Ministry’s Traffic Control Devices Manual for Work Zones.

100.8.4.3 Project Co’s Traffic Accommodation Plan shall reference and be integrated with Project Co’s Traffic Management Plan as described in Appendix D to this Schedule 15 - 1, Project Co’s Emergency Traffic Plan and the Ministry’s Traffic Control Devices Manual for Work Zones.

100.8.4.4 The Traffic Accommodation Plan shall document how Project Co plans on managing traffic during the Works. Updates to the Traffic Accommodation Plan shall be prepared and submitted to the Ministry Representative pursuant to the Review Procedure for any and all Construction Activities.

- 100.8.4.5 Project Co shall not conduct any Construction Activity that affects traffic without a current Traffic Accommodation Plan that has been “Reviewed” or “Reviewed as Noted” in accordance with the Schedule 9 - Review Procedure by the Ministry Representative and has also been signed and sealed by Project Co’s Traffic Engineer.
- 100.8.4.6 The Traffic Accommodation Plan must comply with the definitions and guidelines provided in the Ministry’s Traffic Control Devices Manual for Work Zones.
- 100.8.4.7 Project Co’s Traffic Accommodation Plan shall outline how public traffic, as well as the traffic generated by its Construction Activities, is to be managed.
- 100.8.4.8 The following sub-plans for Project Co’s Traffic Accommodation Plan are required at a minimum and shall be submitted to the Ministry Representative for review in accordance with Schedule 9 - Review Procedure:
- a) Traffic Control Plan;
 - b) Emergency Traffic Plan;
 - c) Implementation Plan;
 - d) Temporary Signing Plan;
 - e) Risk Assessment Plan;
 - f) Traffic Accommodation Communications Plan; and
 - g) Any other related plans as Project Co may deem necessary.

100.8.5 Traffic Accommodation Sub-Plans

100.8.5.1 Traffic Control Plans

- a) Project Co shall prepare Project specific traffic control plans (the “**Traffic Control Plans**”) in accordance with the Ministry’s Traffic Control Devices Manual for Work Zones for all activities that affect traffic operations, including but not limited to:
 - i. the Works;
 - ii. interfacing with municipalities;
 - iii. commissioning of newly constructed roads, interchanges and structures; and
 - iv. any other Construction Activity during the Project Term.
- b) Project Co shall document any proposed Project Co initiated closures, full closures, detour routes, lane shifts and diversions in the Traffic Control Plan. The Traffic Control Plan will be submitted to the Ministry Representative for review in accordance with Schedule 9 - Review Procedure prior to the commencement of the Construction Activities. The Traffic Control Plan shall be updated and amended as required.

- c) Project Co shall conduct a traffic analysis on the Traffic Control Plan for each construction stage of the Works where traffic operations are affected. The traffic analysis shall determine the effect of each Traffic Control Plan on the capacity and operation, including the resulting vehicle delays and queue lengths. The analysis shall confirm that the resulting queues are expected to clear before the commencement of the period which results in more than 1 (one) Deductible Availability Failure Point as identified in Section 2.2 of Part C of Schedule 18 - Payment Mechanism. The construction level of service shall be equal to or better than the pre-construction level of service. The traffic analysis shall be conducted for the representative hour(s) and day(s) that each Traffic Control Plan is in operation. Analysis results are to be provided to the Ministry Representative.
- d) Project Co shall include construction generated traffic in the Traffic Control Plan and any associated analysis.
- e) Project Co shall continuously measure the effectiveness of Traffic Control Plans and, if those measurements indicate a Traffic Control Plan is non-compliant with the Ministry's Traffic Control Devices Manual for Work Zones, Project Co shall immediately adjust the Traffic Control Plan to bring it into compliance.
- f) The Traffic Control Plan shall include engineered designs for each local detour route, diversion and Lane Closure. The locations and details of all signs, VMS, pavement markings, barriers, and protective works shall be indicated on the drawings. All drawings are to be signed/sealed by Project Co's Traffic Engineer.
- g) Acceleration/deceleration lane lengths shall not be reduced unless analysis confirms operation acceptable to the Ministry Representative.

100.8.5.2 Emergency Traffic Plan

- a) Project Co shall prepare and submit an emergency traffic plan (the "**Emergency Traffic Plan**"). The Emergency Traffic Plan shall specify how Project Co will provide access for emergency vehicles and provide assistance to emergency service providers. The Emergency Traffic Plan shall also address access via the Lands or the Bypass generally for incidents or emergencies external to the Lands or the Bypass generally but for which emergency vehicles and emergency service providers require passage over the Lands or the Bypass following Phase One Substantial Completion or Substantial Completion as the case may be. Project Co shall consult with Local Authorities, emergency service providers, and other stakeholders in developing the Emergency Traffic Plan, and liaise closely with them throughout the Works as it evaluates and updates the plan.

The Ministry will first consult with Project Co in the event that other provincial highways are closed for emergencies and traffic is diverted to the Project in any way.

100.8.5.3 Implementation Plan

- a) Project Co shall prepare an implementation plan (the “**Implementation Plan**”) that identifies the 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 Plans and the Emergency Traffic Plan are developed and implemented efficiently and appropriately, and that they are kept up-to-date with necessary modifications during the Project Term.

100.8.5.4 Temporary Signing Plan

- a) Project Co shall prepare and implement a temporary signing plan (the “**Temporary Signing Plan**”). The primary objective of a Temporary Signing Plan is to notify Bypass users in advance of scheduled Construction Activities, Closures, detour routes, lane shifts and diversions.

100.8.5.5 Risk Assessment Plan

- a) Project Co shall perform an independent assessment to identify any risks that could have an impact on traffic accommodation or special conditions that must be addressed through Project Co’s risk assessment plan (the “**Risk Assessment Plan**”). Project Co shall identify all risks and state the measures to be implemented to manage or eliminate the risks.

100.8.5.6 Traffic Accommodation Communications Plan

- a) Project Co shall implement a traffic accommodation communications plan (the “**Traffic Accommodation Communications Plan**”) to apply throughout the Project Term. The Traffic Accommodation Communications Plan will describe clearly how, during the Project Term, Project Co will communicate to Bypass users and other stakeholders about all matters relating to traffic flow, including, specifically, how it will provide timely notice of construction related delays, Closures, detours, traffic incidents and emergencies. The Traffic Accommodation Communications Plan will comply with the requirements of Schedule 12 - Communications Protocol. The Traffic Accommodation Communications Plan shall include provision for interfacing with the Ministry’s Communications Branch and protocols.

100.8.5.7 Responsibilities for Traffic Accommodation Plan

a) Project Co Responsibilities

Project Co shall accept full responsibility for quality control and quality assurance of all activities affecting the Traffic Accommodation Plan and shall ensure that all personnel identified in the Traffic Accommodation Plan are suitably qualified and licensed.

b) Traffic Manager

Project Co shall designate a traffic manager (the “**Traffic Manager**”) who shall have completed an approved course in traffic accommodation and hold a valid certificate which shall be made available on request from the Ministry Representative.

The Traffic Manager or accepted alternate shall be on the Site at all times when Construction Activities are underway both during the Works and the OM&R Work and within 45 minutes of being notified during hours when no construction activity is underway. The Traffic Manager shall have appropriate personnel and equipment available on call, at all times.

- i. development, implementation and management of the Traffic Accommodation Plan;
- ii. ensuring the Ministry Representative is kept informed of all upcoming traffic activities and any revisions to the Traffic Accommodation Plan;
- iii. ensuring that appropriate modifications are made to the Traffic Accommodation Plan if the specified traffic control measures are not achieving the desired effect; and
- iv. coordinating with persons carrying out work in areas adjacent to the Lands;
- v. directing all traffic control operations on the Site;
- vi. having direct line authority over all of Project Co’s traffic control personnel and procedures on the Site;
- vii. liaising with the Ministry Representative, as required;
- viii. recording the actual duration of Lane Closures, detours and lane shifts and unauthorized traffic delays and forwarding this information, on a daily basis to the Ministry Representative for information;
- ix. monitoring queue lengths in active construction zones and implementing appropriate measures when such queues become excessive;
- x. documenting traffic control measures and activities in accordance with this Section 100.8.4 of Schedule 15-1 - General;
- xi. overseeing all requirements of the Project Agreement that contribute to the safety, convenience, and orderly movement of vehicular, cycling and pedestrian traffic;

- xii. identifying potential danger areas and providing signing, traffic control and dust control necessary to provide a safe and convenient travel path for users;
 - xiii. erecting, moving, cleaning, removing and replacing all signs and other devices, used to control and accommodate traffic;
 - xiv. maintaining a log of all regulatory speed signs installed and removed;
 - xv. maintaining a log of when workers are present and adjacent to traffic accommodation devices; and
 - xvi. ensuring that flagpersons are trained in the proper procedures for flagging and maintaining in their possession a valid certificate indicating successful completion of an approved flagperson training course.
- c) Traffic Engineer
Project Co shall designate a traffic engineer (the “**Traffic Engineer**”) who is a Professional Engineer and has Project Co’s authority to review, sign as the Engineer of Record, and seal the Traffic Accommodation Plan and associated sub-plans and take responsibility for ensuring that all traffic engineering issues and requirements are taken into account.
- d) Traffic Control personnel
All traffic control personnel shall be qualified in accordance with the OHSA and the regulations thereunder.

100.9 OCCUPATIONAL HEALTH AND SAFETY OBLIGATIONS

100.9.1 Saskatchewan Employment Act and Prime Contractor Obligations

Regardless of the specifications in this Schedule and subject to Section 1.1 of Schedule 29 – Additional Works and Third Party Works, Project Co shall at all times assume all of the responsibilities and duties of the “prime contractor” as defined by the *Saskatchewan Employment Act* and its subordinate regulations, as amended or replaced. Project Co, its employees, agents and subcontractors, shall at all times comply with the provisions of the *Saskatchewan Employment Act* and its subordinate regulations, as amended or replaced. Project Co will comply with the applicable legal requirements enforced at that time. To the extent permitted by law Project Co may enter into an agreement with its Subcontractors primarily responsible for carrying out the Project to be the “prime contractor” during the Construction Activities, and may enter into an agreement with its subcontractor primarily responsible for carrying out the OM&R Work to be the “prime contractor” during the Operational Term.

Words used in this paragraph in lower case and in quotations have the meanings as set out in the *Saskatchewan Employment Act*. If the Ministry allows an Other Contractor onto Project Co’s

work site and if the Ministry, acting reasonably, determines that the Other Contractor's work site can be separated by time and space from the Site, the Ministry shall require the Other Contractor to:

- (a) separate the Other Contractor's work site by time and space from the Site;
- (b) acknowledge that, for the purpose of the *Saskatchewan Employment Act*, the Other Contractor is the "owner" for the Other Contractor's work site and is the "prime contractor", if there are two or more "employers" involved in work at the Other Contractor's work site at the same time and "prime contractor" status has not been assigned by written agreement; and
- (c) cooperate with Project Co (and any other contractors working in the area) and jointly develop and agree in a written occupational health and safety system or process.

Project Co shall, to the extent required of a "prime contractor" by the *Saskatchewan Employment Act*, as amended or replaced, ensure compliance by its Subcontractors with the *Saskatchewan Employment Act* and its subordinate regulations, as amended or replaced, as well as Schedule 14 - Integrated Management System, and all requirements outlined in this Section 100.9.1.

100.9.2 Work Site Hazards

As part of the required IMS-OHS, which includes the need for comprehensive hazard identification, risk assessment and risk control for occupational hazards, Project Co shall identify work site hazards and shall develop occupational safety policies, procedures and plans that are specific to those hazardous aspects of the Construction Activities, O&M Interim Services or the OM&R Work to ensure the safety of every person at a construction or maintenance site and the public travelling through the Site. When requested by the Ministry, Project Co shall provide copies of these safety policies, procedures and plans prior to the commencement of the work.

100.9.3 Occupational Health and Safety Officer Inspections and Orders

If an Occupational Health and Safety Officer conducts a work site inspection of Project Co's or its Subcontractor's activities and/or work areas and that inspection results in "orders" being issued to Project Co or any of its Subcontractors, Project Co shall supply copies of these orders to the Ministry within 24 hours of receipt. Project Co shall ensure corrective actions are taken to address all orders issued to Project Co or any of its Subcontractors within the timeline allocated by the orders. Should the corrective action timelines not be met, Project Co will open an NCR for the incident and follow the NCR Procedure.

Notwithstanding the above, the Ministry may order the suspension of work in cases of recognized imminent danger or when Project Co or any of its Subcontractors fail to comply with

Occupational Health and Safety Officer orders issued or fails to rectify previously identified work site hazards.

100.9.4 Accident Investigations

Project Co shall also notify the Ministry of the time, place and nature of the injury or accident immediately in all cases where an accident or injury causes or may cause the death of a worker or that requires a worker to be admitted to a hospital as an in-patient for a period of 24 hours or more, as described in Section 29 of the Saskatchewan *Occupational Health and Safety Regulation*, as amended or replaced, involving employees of Project Co or its Subcontractors, and occurs during the Project Operations.

In addition, Project Co shall immediately notify the Ministry of any:

- (a) accident occurring within the Infrastructure involving its own or its Subcontractors' vehicles or equipment; and
- (b) accident occurring during the Project Operations which involves a fatality, serious personal injury, or third party property damage in excess of \$1,000 or as specified in the *Traffic Safety Act*, or successor act or regulation;

In the event of an injury or accident as defined by Section 29 of Saskatchewan *Occupational Health and Safety Regulation* and its subordinate regulations, as amended or replaced, involving employees of Project Co or its Subcontractors during the Project Operations, Project Co shall conduct an accident investigation in accordance with Section 29 of Saskatchewan *Occupational Health and Safety Regulation* (or such successor section or legislation).

In addition, Project Co shall supply a copy of an investigation report to the Ministry within 72 hours of the injury or accident. In the event of a death involving employees of Project Co or its Subcontractors during the Project Operations, Project Co shall inform the Ministry within two hours of such a death.

Project Co shall ensure corrective actions are taken to address all recommendations from accident investigations by Project Co or any of its Subcontractors in accordance with the NCR Procedure. For all other accidents, incidents or first aid administrations, not specifically identified above, Project Co shall meet all health and safety legal requirements and take appropriate corrective actions in accordance with *Saskatchewan Employment Act*, and subordinate regulations, as amended or replaced.

100.9.5 Health and Safety Monitoring and Inspection Programs

Project Co shall ensure inspections of all Construction Activities and OM&R Work, including Subcontractor activities, are completed at least weekly and in accordance with any inspection

requirements outlined within the *Saskatchewan Employment Act*, and subordinate regulations, as amended or replaced. On written notice by Project Co's inspector of an unsafe condition or a contravention of the *Saskatchewan Employment Act* or any regulations made pursuant to the *Saskatchewan Employment Act*, Project Co must ensure all actions as required by *Saskatchewan Employment Act*, and subordinate regulations, as amended or replaced, are taken.

The IMS-OHS shall provide for documented health and safety monitoring and inspection programs that verify compliance with all the requirements. The documented programs shall include a description of:

- the scoping and confirmation of the monitoring and/or inspection programs;
- frequency of inspection and/or monitoring events and rationale for frequency;
- qualifications of monitors and inspectors;
- listing of applicable performance requirement criteria (may include legislative requirements);
- monitoring and inspection methodologies;
- reporting schedule, format, and document control; and
- the responsibilities and requirements for conducting inspections, monitoring programs, reporting results and follow-up actions.

Project Co shall ensure corrective actions are taken to address issues raised against Project Co or any of its Subcontractors through monitoring and inspection programs. Project Co may track follow-up actions taken in response to a monitoring program / inspection finding through use of a tracking system independent of the NCR Procedure, with some exceptions. All monitoring and inspection findings representing a systematic or reoccurring issue and / or may represent high level health and safety risk if not appropriately addressed must be managed through the NCR Procedure.

100.9.6 Monthly Health and Safety Summary Reports

For each month of the Construction Activities and the Operational Term, Project Co shall complete a monthly health and safety summary report covering that month, in a form (subject to change) reasonably required by the Ministry. Project Co shall submit to the Ministry each monthly report within five Business Days of the end of the month for which the report covers.

100.9.7 Year-End Health and Safety Summary Report

For each calendar year of the Construction Activities and the Operational Term, Project Co shall complete a year-end health and safety summary report covering that calendar year, in a form (subject to change) reasonably required by the Ministry. Project Co shall submit to the Ministry each year-end report by January 31st of the year following the calendar year for which the report covers.

100.9.8 Annual Health And Safety Review

During each March/April of the Project Operations, Project Co and the Ministry shall jointly complete an annual health and safety review covering the prior calendar year, in a form (subject to change) reasonably required by the Ministry.

100.9.9 Required Information For Reports/Reviews

The form of the reports/review set out in Sections 100.9.6, 100.9.7, and 100.9.8 require, without limitation, the following information:

- (a) number of safety meetings conducted;
- (b) dates of and attendance at pre-construction meetings;
- (c) Project Co's and Subcontractors' COR numbers;
- (d) number of workers by trade;
- (e) number of training hours (project-specific);
- (f) select details about key site conditions and activities;
- (g) number and outcome of work site inspections completed;
- (h) copy of "day-log" of work site inspections;
- (i) number of lost-time injuries and accidents, including select details;
- (j) number of other injuries and accidents including vehicle/equipment accidents, including select details;
- (k) select details about Occupational Health and Safety Officer inspections and issued safety orders, as applicable;
- (l) key health and safety successes;
- (m) key health and safety construction or OM&R issues; and
- (n) copy of non-conformance report log sheet and status of % open and % closure.

100.9.10 Safety Meetings

For the duration of the Project Operations, Project Co shall conduct safety meetings prior to the commencement of any work on each major work phase of the Project Operations, or monthly, whichever occurs more frequently. Project Co shall invite the Ministry Representative to attend such safety meetings and shall give reasonable advance notice of such meetings.

100.10 DEFINITIONS

100.10.1 In this Schedule 15 (Technical Requirements), capitalized terms shall have the corresponding meaning as set out in Schedule 1 Definitions and Interpretation of the Project Agreement and the following expressions shall have the following meanings (and where applicable their plurals have corresponding meanings):

- 100.10.1.1 **“AASHTO”** means the American Association of State Highway and Transportation Officials;
- 100.10.1.2 **“Above Ground Level”** or **“AGL”** has the meaning as described in Section 200.5.5.7;
- 100.10.1.3 **“Advanced Traffic Management System”** or **“ATMS”** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.4 **“Advanced Traveler Information System”** or **“ATIS”** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.5 **“Aerodrome Reference Point”** has the meaning as described in Section 200.5.5.4;
- 100.10.1.6 **“Application Programming Interface”** or **“API”** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.7 **“AREMA”** means the American Railway Engineering and Maintenance-of-Way Association;
- 100.10.1.8 **“As-Built Construction Report – Bridge Structures”** has the meaning as described in Section 300.2.11.5;
- 100.10.1.9 **“As-Built Pavement Surfacing Information”** has the meaning as described in Section 300.2.11.4;
- 100.10.1.10 **“As-Built Roadway Construction Report”** has the meaning as described in Section 300.2.11.2;
- 100.10.1.11 **“As-Built Surfacing Information”** has the meaning as described in Section 300.2.11.3;
- 100.10.1.12 **“As-Built Traffic Signal and Street Lighting Information”** has the meaning as described in Section 300.2.11.6;
- 100.10.1.13 **“Asset Management”** means the systematic and coordinated activities and practices through which the OM&R Provider optimally manages the infrastructure assets, and their associated performance,

risks and expenditures over their life cycle in order to achieve the specified asset conditions and the Handback requirements;

- 100.10.1.14 **“Asset Management Plan”** means a written plan which describes the procedures for achieving the specified Performance Measures delivered for the entire Infrastructure during the Operational Term;
- 100.10.1.15 **“Asset Preservation Performance Measure(s)”** or **“APPM”** has the meaning as described in Section 402.3 Asset Preservation Performance Measures;
- 100.10.1.16 **“ASTM”** means the American Society for Testing and Materials;
- 100.10.1.17 **“Availability Failure Deduction”** has the meaning given in Schedule 18 – Payment Mechanism;
- 100.10.1.18 **“Bare Pavement”** means the travel lanes, shoulders, and walkway/pathways being free of snow, packed snow, frost and ice;
- 100.10.1.19 **“Bridge or Bridge Structure”** means a structure including bridge size culverts (3.0 m diameter or larger) that provides a roadway for the passage of vehicles (or other similar forms of transportation) across an obstruction, gap or facility;
- 100.10.1.20 **“Bridge Condition Index”** or **“BCI”** means an overall measure of bridge condition, as published by the Ministry of Transportation Ontario and modified in accordance with *Saskatchewan Modified Bridge Condition Index – BAM304*;
- 100.10.1.21 **“Bridge Design Code”** has the meaning set out in Section 200.7.1;
- 100.10.1.22 **“Bridge Design Criteria”** means the Ministry Bridge Design Criteria document, BD-100 available on the Ministry web site;
- 100.10.1.23 **“C-D”** means collector-distributor;
- 100.10.1.24 **“CHBDC”** means Canadian Highway Bridge Design Code CAN/CSA S6-06;
- 100.10.1.25 **“Closed Circuit Television (CCTV) Stations”** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;

- 100.10.1.26 “**Closure**” means any partial or total closure, obstruction, blockage, or other restriction or interference (howsoever arising) impeding the flow of traffic on or affecting the ability of the public to pass and re-pass over a traffic lane of whatever duration including, without limitation, any such partial or total closure, obstruction, blockage, restriction or interference;
- 100.10.1.27 “**CN**” means Canadian National Railway Company;
- 100.10.1.28 “**Commercial Vehicle Enforcement**” or “**CVE**” has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.29 “**Condition Rating**” means a determination of the condition of the Infrastructure using the Ministry of Transportation Ontario OSIM, and in accordance with the Ministry’s *Exception to OSIM – BAM204*;
- 100.10.1.30 “**Construction Management Plan**” or “**CMP**” has the meaning given in Schedule 14 – Integrated Management System;
- 100.10.1.31 “**Coordinating Professional Engineer**” has the meaning given in Section 100.3 of Schedule 15-1, Technical Requirements, General;
- 100.10.1.32 “**Corrective Action(s)**” has the meaning given in Schedule 14 – Integrated Management System
- 100.10.1.33 “**CP**” means Canadian Pacific Railway Company;
- 100.10.1.34 “**Critical Element(s)**” means bridge elements that are considered critical and should not be allowed to deteriorate below a certain condition. This includes deck top, deck soffit, expansion joint, bearings, barriers, substructure and embankment, girders and slope protection;
- 100.10.1.35 “**Crosshole Sonic Logging**” or “**CSL**” has the meaning given in ASTM standard D6760, *Standard Test Method for Integrity Testing of Concrete Deep Foundations by Ultrasonic Crosshole Testing*;
- 100.10.1.36 “**Crossing Agreement**” means an agreement between a Utility Company and a road authority that identifies responsibilities for and authorizes the design, construction, operation, and maintenance of Utility Works;
- 100.10.1.37 “**Crossroad(s)**” has the meaning provided in Section 200.6.1.3;

- 100.10.1.38 **“CSA”** means the Canadian Standards Association;
- 100.10.1.39 **“Cyber Security Audit”** means an audit on the cyber security of the ITS Infrastructure as described in Schedule 15-2 – Technical Requirements – Design and Construction, Appendix F.
- 100.10.1.40 **“Cyber Security Plan”** means a formal cyber security plan which provides a blueprint to deter attacks on the network and devices as well as prevent access to data from ITS Infrastructure that could be used to disrupt traffic flow, degrade safety or support illegal activity.
- 100.10.1.41 **"Data Hub"** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.42 **"Data Management Centre”** or **“DMC”** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.43 **“Data Room”** means the secure website established by the Ministry for the Project prior to the date of this Project Agreement containing or referring to materials, documents, information and data in respect of the Project;
- 100.10.1.44 **“DDI”** means Diverging Diamond Interchange;
- 100.10.1.45 **“Design Criteria”** means the established parameters used during design;
- 100.10.1.46 **“Design Engineer”** means a Professional Engineer or engineers that are employed by or retained by Project Co for the carrying out of the Project Operations and the O&M Interim Services;
- 100.10.1.47 **“Design Life”** has the meaning given to that term in the CHBDC;
- 100.10.1.48 **“Design Manager”** means the key individual that is responsible for managing the Design Team. The Design Manager shall be a Professional Engineer;
- 100.10.1.49 **“Design Management Plan”** or **“DMP”** has the meaning given in Schedule 14 – Integrated Management System;
- 100.10.1.50 **"DFO"** means the Department of Fisheries and Oceans;

- 100.10.1.51 **“Diamond Interchange”** means a diamond interchange as described in TAC *Geometric Design Guide* figure 2.4.5.3;
- 100.10.1.52 **"DM1"** Ministry Design Manual Part 1;
- 100.10.1.53 **“DM2”** Ministry Design Manual Part 2;
- 100.10.1.54 **“Drainage Infrastructure”** means any Infrastructure that has been designed to convey water runoff;
- 100.10.1.55 **"Durability Absorption Ratio”** has the meaning as described in Section 300.4.14 Stone Riprap;
- 100.10.1.56 **“Durability Index”** means a durability index for coarse aggregate determined by Test Method No. California 229. It is a measure of the quality and quantity of fine material washed and/or abraded from the surface of the material being tested;
- 100.10.1.57 **"Electrical Infrastructure"** means any aspect of the Works associated with the installation, modification, or removal of electrical equipment including work required for all auxiliary concrete, mechanical, metallic or associated non-electrical components or equipment;
- 100.10.1.58 **“Electronic Facilities Zoning”** has the meaning as described in Section 200.5.5.6;
- 100.10.1.59 **“Elevated Directional Ramps”** means the directional ramps at freeway to freeway interchanges which will result in a third vertical level of traffic movement, were the directional ramp placed at the centre of an interchange;
- 100.10.1.60 **“Elevated Rotary Interchange”** means an elevated rotary interchange as described in TAC *Geometric Design Guide* figure 2.4.5.6
- 100.10.1.61 **"Emergency Response Plan”** has the meaning as described in Section 401.12.1.2 Emergency Operation and Maintenance;
- 100.10.1.62 **“Emergency Traffic Plan”** has the meaning given in Section 100.8.5.2.a);

- 100.10.1.63 **“Engineer of Record”** has the meaning given in Section 100.4 of Schedule 15-1, Technical Requirements, General;
- 100.10.1.64 **“Engineering Technologist”** means a member of the Saskatchewan Applied Science Technologists & Technicians who is registered as an applied science technologist pursuant to Section 18 of *The Saskatchewan Applied Science Technologists and Technicians Act* and who is entitled to carry on his or her occupation as an applied science technologist pursuant to *The Saskatchewan Applied Science Technologists and Technicians Act* and the bylaws.
- 100.10.1.65 **“Environmental Assessment”** or **“EA”** means an Environmental Assessment Report relating to the Project;
- 100.10.1.66 **“Environmental Protection Plan”** or **“EPP”** means a conceptual plan that details the methods to be employed to prevent, minimize, monitor, mitigate, remedy or reclaim an adverse effect before, during or after any activity;
- 100.10.1.67 **“Excepted Lane Closure(s)”** are Lane Closures or Full Closures arising, and without being caused by a breach by Project Co of any of the obligations of Project Co under the Project Agreement or the acts or omissions of Project Co or those for whom Project Co is responsible at law, from:
- a) an emergency, including without limitation clean-up of a motor vehicle collision;
 - b) an order of the police, fire department, emergency medical services, military, or other similar emergency services providers having jurisdiction;
 - c) approved special events where the Ministry consents to full or partial closure of the Infrastructure for a special event;
 - d) repairs to the Infrastructure caused by the Ministry or any MHI Party;
 - e) a direction of the Ministry including during Storm Events or the performing of the Province’s obligations under the Project Agreement;
 - f) a bridge bearing replacement taking place between 7 p.m. and 6 a.m.; and
 - g) Protestor action, where the only viable response to such action is complete closure of both lanes in one direction or all lanes in both directions.

- 100.10.1.68 **“External IMS Audit(s)”** has the meaning given in Schedule 14 – Integrated Management System
- 100.10.1.69 **"Field Acceptance Test"** or **“FAT”** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.70 **"Field Reviewer”** has the meaning given in Section 100.5 of Schedule 15-1, Technical Requirements, General;
- 100.10.1.71 **“Final Design Road Safety Audit”** means a road safety audit of the Design Data produced for the Final Design Development Submittal and that covers the issues referred to in Section 200.5.7.3.2 of Schedule 15-2 – Design and Construction;
- 100.10.1.72 **"Full Closure”** means a Closure affecting all of the lanes in one or both travelling directions within the Roadway;
- 100.10.1.73 **"Full Illumination"** means a consistent lighting system covering a defined area such as an interchange or intersection, designed to provide a specific lighting level and uniformity of light over the traveled portion of the Roadway;
- 100.10.1.74 **"Future Works"** means the planned final configuration of the Bypass Infrastructure as described in the Functional Plans and modified and further detailed in the Technical Requirements.
- 100.10.1.75 **"Gateway Feature"** means landscape plantings, commemorative signage or sculpture or decorative details on a highway structure, or a combination of all of these, and may include lighting and irrigation. This landscaping may also contain hard features, such as rock, and may also include seasonable plantings. Details of these features are to be confirmed in detailed design through consultation with parties with whom commitment for one of these Gateway Features has been given through the Environmental Assessment process;
- 100.10.1.76 **"Geotechnical Engineer”** means a Professional Engineer who works in the field of geotechnical engineering;
- 100.10.1.77 **"Global Memoranda of Understanding”** has the meaning as described in Section 200.6.2.4;

- 100.10.1.78 **"GTH"** means the Global Transportation Hub which is located west of, and will obtain access via, the Rotary Avenue Interchange;
- 100.10.1.79 **"Highway Running Surface"** means the Roadway infrastructure including asphalt or concrete paved traffic lanes, paved shoulders, paved medians, paved pullouts, rest areas, entrance and exit ramps, and paved and gravel crossroads and Service Roads;
- 100.10.1.80 **"HSU"** means a heavy single unit design vehicle;
- 100.10.1.81 **"HTC"** means high tension cable for roadside safety protection;
- 100.10.1.82 **"IMS Director"** has the meaning given in Schedule 14 - Integrated Management System;
- 100.10.1.83 **"IMS Manual"** has the meaning given in Schedule 14 - Integrated Management System;
- 100.10.1.84 **"IMS-OHS"** has the meaning given in Schedule 14 – Integrated Management System;
- 100.10.1.85 **"IMS Record(s)"** has the meaning given in Schedule 14 – Integrated Management System
- 100.10.1.86 **"Imminent Danger"** means a safety hazard that may be encountered by any user of the Bypass Infrastructure due to a collision, condition or any other abnormal occurrence on the Infrastructure;
- 100.10.1.87 **"Implementation Plan"** has the meaning provided in Section 100.8.5.3.a);
- 100.10.1.88 **"Incident(s)"** means, but is not limited to, events such as traffic accidents, emergency situations, spills (hazardous and non-hazardous), flooding, water ponding, highway deficiencies, debris control, and tree removal;
- 100.10.1.89 **"Incident Site"** means the location within the Project Limits where an incident has occurred and a response is required;
- 100.10.1.90 **"Informational Package"** has the meaning as described in Section 401.9.1.2;
- 100.10.1.91 **"Infrastructure Condition Report(s)"** has the meaning as described in Section 401.5.1.4;

- 100.10.1.92 **"Integrated Management System (IMS)"** means Project Co's integrated management system prepared in accordance with the provisions of Schedule 14 - Integrated Management System;
- 100.10.1.93 **"Integrated Management System – Environmental System" or "IMS-ES"** means a report outlining how the Valued Ecological Components (VECs) of the EPP will be implemented, managed and monitored during the Project Term;
- 100.10.1.94 **"Integrated Resource Manager"** means the titled employee of the Saskatchewan Environment Ministry;
- 100.10.1.95 **"Intelligent Transportation System(s)" or "ITS"** has the meaning given in Schedule 1 – Definitions and Interpretation.
- 100.10.1.96 **"Interchange Limits" or "Intersection Limits"** means a line drawn perpendicular to the road centerline at the point where the normal cross section of the road beyond the interchange or intersection is first achieved (no tapers or turn lanes or added lanes related to the interchange or intersection);
- 100.10.1.97 **"Interim Maintenance Period"** has the meaning given in Section 1 of Schedule 28 – O&M Interim Maintenance Services Agreement;
- 100.10.1.98 **"Interim Maintenance Sections"** means the trafficked sections of the Existing Bypass Infrastructure, the WRB Interim Maintenance Section, and Roadways on Conveyed Lands.
- 100.10.1.99 **"Internal IMS Audit(s)"** has the meaning given in Schedule 14 – Integrated Management System
- 100.10.1.100 **"International Roughness Index" or "IRI"** means the measure of the pavement smoothness based on the longitudinal profiles of the pavement surface as defined in the World Bank Paper 46;
- 100.10.1.101 **"Intervention Criteria"** are the intervention criteria described in Tables 402-6, 402-7, 402-8, 402-9, 402-10, 402-11, 402-13 and 402-16 and as further described in Section 402.2.3;
- 100.10.1.102 **"In-Service Road Safety Review"** has the meaning as described in Section 400.1.6;

- 100.10.1.103 **"ITS Infrastructure"** means the ITS hardware, software and communications network that is required to be provided to support the Technical Requirements of the Project, pursuant to Section 200.6.12 of Schedule 15-2 Technical Requirements – Design and Construction;
- 100.10.1.104 **"ITS Lead Designer"** means the Key Individual who is responsible for the design, procurement, testing, installation and commissioning of ITS devices and infrastructure on the Bypass as well as the telecommunications network to transmit the data to the Data Management Centre. The individual will be responsible for all hardware and software for the field infrastructure and telecommunications network as well as the application software in the Data Management Centre. The ITS Lead Designer will work closely with the Ministry to ensure that the performance and standards for ITS data quality and security are achieved and the application software works well in the Data Management Centre's hardware environment which the Ministry will provide; and will also work closely with the local telecommunication service provider to ensure that the network is designed and procured to meet the Technical Requirements;
- 100.10.1.105 **"Key Performance Measure(s)"** or **"KPM(s)"** are those key performance measures as described in Section 401.3.2;
- 100.10.1.106 **"Lane Closure(s)"** means any Closure affecting a lane or lanes, but excludes a Full Closure or a Closure affecting a Crossroad or Service Road;
- 100.10.1.107 **"LMR"** means Last Mountain Railway;
- 100.10.1.108 **"Maximum Response Time"** means the maximum permissible period of time within which Project Co must complete the remedial action from the earlier time of observation of the defect by Project Co or any Project Co Party and the time of notification of the defect by the Ministry or the public to Project Co or any Project Co Party;
- 100.10.1.109 **"MHP"** has the same meaning as "Ministry" given in Schedule 1 – Definitions and Interpretation;
- 100.10.1.110 **"Minimum Condition"** means, for the purposes of Schedule 15-3 - OM&R and Handback, the least onerous permissible standard in

respect of Asset Preservation Performance Measures that Project Co must comply with throughout the Project Term;

- 100.10.1.111 **“Minimum Required Design Life”** is the specified minimum Design Life of a Bypass Infrastructure component;
- 100.10.1.112 **“Ministry’s Interim Maintenance Period”** means the period of time between Commercial Close and April 30, 2016, 23:59 hours;
- 100.10.1.113 **“Ministry’s Interim Maintenance Sections”** means the trafficked sections of the Existing Bypass Infrastructure that the Ministry will maintain between Commercial Close and April 30, 2016, 23:59 hours;
- 100.10.1.114 **“Multi-Use Trails”** means shared pedestrian and cyclist pathways;
- 100.10.1.115 **“NCR Procedure”** means the Non-Conformance Reporting procedure set out in Part 7 of Schedule 14 – Integrated Management Systems.
- 100.10.1.116 **“Noxious Weeds”** are weeds identified as noxious under Saskatchewan regulations;
- 100.10.1.117 **“Obstacle Limitation Surfaces”** has the meaning as described in Section 200.5.5.5;
- 100.10.1.118 **“Occupational Health and Safety Officer”** means the Occupational Health and Safety Officer appointed under the *Saskatchewan Employment Act*, as amended or replaced.
- 100.10.1.119 **“OD-OW”** means over-dimension (length, width and/or height) and/or overweight permit vehicles;
- 100.10.1.120 **“OM&R” or “OM&R Works”** means the operation, maintenance and rehabilitation of the Bypass Infrastructure during the Operational Term;
- 100.10.1.121 **“OM&R Limits”** means the limits of Project Co’s OM&R responsibilities as identified on the sketches in Appendix A to Schedule 15-3 – OM&R and Handback;

- 100.10.1.122 **“OM&R Monthly Report”** means the report that provides the Ministry with a status of Project Co’s operation and maintenance activities each month;
- 100.10.1.123 **“OM&R Requirements”** has the meaning given in Schedule 1 – Definitions and Interpretation;
- 100.10.1.124 **“Operation”** means the work required to maintain operation of the Bypass Infrastructure;
- 100.10.1.125 **“Operation and Maintenance Plan”** or **“OMP”** means a plan that demonstrates compliance with respect to operations and maintenance performance obligations identified in the Project Agreement;
- 100.10.1.126 **“Operations and Maintenance Manual”** or **“OMM”** has the meaning as described in Section 500.8.1;
- 100.10.1.127 **“Operations Director”** means the Key Individual who is responsible for the overall management of the OM&R Work including the preparation of the Asset Management Plan and rehabilitation strategy. The Operations Director may work on other projects.
- 100.10.1.128 **“Operations Manager”** means the Key Individual who is responsible for the day to day management of the OM&R Work and the O&M Interim Services. The Operations Manager is a full time position and will report to the Operations Director.
- 100.10.1.129 **“OSIM”** means the Ontario Structures Inspection Manual;
- 100.10.1.130 **“Other Contractor”** has the meaning provided in Section 100.9.1;
- 100.10.1.131 **“Other Minor Assets”** means all other assets which are not Highway Running Surfaces, Structures, Drainage Infrastructure, Electrical Infrastructure and ITS Infrastructure and include without limitation signs, fences, retaining walls < 2m, noise barrier, gates, guardrail, median barrier, reflectors, and lineal safety features;
- 100.10.1.132 **“Parclo A Interchange”** means a Parclo A interchange as described in TAC *Geometric Design Guide* figure 2.4.5.4;
- 100.10.1.133 **“Parclo A2 Interchange”** means a Parclo A2 interchange as described in TAC *Geometric Design Guide* figure 2.4.5.4;

- 100.10.1.134 **“Pedestrian Walks”** means dedicated pedestrian only pathways;
- 100.10.1.135 **“Performance Measures”** means the minimum performance criteria, set out in auditable outputs, that clearly define the required service level for each service areas of Project Co delivery for operations and maintenance and asset preservation as set out in Schedule 15-3 – OM&R and Handback;
- 100.10.1.136 **“Pile Driving Analyzer” or “PDA”** is pile driving analyzer testing carried out in accordance with ASTM D4945 *“Standard Test Method for High Strain Dynamic Testing of Deep Foundations”*;
- 100.10.1.137 **“Point Of Discharge”** means a watercourse (natural or manmade) or an existing trapped low area (i.e. an area with no overland flow outlet) that historically collects stormwater runoff from surrounding lands;
- 100.10.1.138 **“Post Construction Road Safety Audit”** means a road safety audit of the Bypass Infrastructure prior to opening prior to opening and that covers the issues described in Section 200.5.7.3.4 of Schedule 15-2 – Design and Construction;
- 100.10.1.139 **“Pre-final Design Road Safety Audit”** means a road safety audit of the Design Data produced for the Pre-final Design Development Submittal and that covers the issues referred to in Section 200.5.7.3.1 of Schedule 15-2 – Design and Construction;
- 100.10.1.140 **“Preventative Action(s)”** has the meaning given in Schedule 14 – Integrated Management System;
- 100.10.1.141 **“Primary Bird Hazard Zone”** has the meaning as described in Section 200.5.5.7;
- 100.10.1.142 **“Professional Biologist”** means a person that is competent and qualified to collect or analyze inventories or other data or carry out research or assessments, to design, evaluate, advise on, direct or otherwise provide professional or technical support in the field of biology.
- 100.10.1.143 **“Project Limits”** means the physical limits of the Project as identified in the Reference Concept, including drawings 15-A-2-01 to 15-A-2-20, to the extent allowable by the directional arrows set out in such drawings, and as further described in Section 200;

- 100.10.1.144 **“Project Safety Plan”** has the meaning given in Schedule 14 – Integrated Management System.
- 100.10.1.145 **“Province”** means Her Majesty the Queen in right of Saskatchewan;
- 100.10.1.146 **“Provincial Highways Condition Centre”** means the facility operated by the Ministry;
- 100.10.1.147 **“Quality Manager”** has the meaning given in Schedule 14 – Integrated Management System
- 100.10.1.148 **“Rating Section”** means a 1.0 kilometre maximum continuous segment of asphalt surface for each travel lane, in each direction and each interchange entrance and exit ramp;
- 100.10.1.149 **“Reference Concept”** means the Reference Concept described on the drawings in Appendix 15-2 – Design and Construction, Section 200 – Design, Appendix A – Reference Concept and as summarized in Section 200.2 of Schedule 15-2 Design and Construction, Section 200 – Design;
- 100.10.1.150 **“Reference Documents”** means the references, codes, standards, specifications, guidelines, policies, reports, publications, manuals, bulletins, and other such documents listed throughout the Technical Requirements.
- 100.10.1.151 **“Regina Airport Weather Station”** means the Environment Canada weather station at the Regina Airport;
- 100.10.1.152 **“Rehabilitation Strategy”** means the plan developed to ensure that the specified level of service is achieved that considers the management of risks associated with defects (including deterioration and damage), and may include ongoing monitoring, planned maintenance, rehabilitation and replacement;
- 100.10.1.153 **“Remaining Service Life”** or **“RSL”** has the meaning as described in Section 500.1.2;
- 100.10.1.154 **“RIRO”**, means right-in, right-out access;
- 100.10.1.155 **“Risk Assessment Plan”** has the meaning provided in Section 100.8.5.5.a);

- 100.10.1.156 **“Road Right-Of-Way”** or **“ROW”** shall be as labelled on the drawings attached to this document, or as amended by a revision submitted by Project Co and agreed to by the Ministry, then finalized by the legal survey and legal plans;
- 100.10.1.157 **“Road Safety Audit”** means a road safety audit carried out in accordance with the *Canadian Road Safety Guide (RSA)* published by TAC;
- 100.10.1.158 **“Road Safety Audit Certificate”** has the meaning as described in Section 200.5.7.4 of Schedule 15-2 Technical Requirements, Design and Construction;
- 100.10.1.159 **“Road Safety Audit Team”** has the meaning as described in Section 200.5.7.1 of Schedule 15-2 Technical Requirements, Design and Construction;
- 100.10.1.160 **“Road Salt Code of Practice”** means the Ministry’s code;
- 100.10.1.161 **“Road Temperature and Condition Forecast(s)”** or **“RTC Forecast(s)”** means forecasted weather information from various sources including, but not limited to Environment Canada, local airports, and other service providers;
- 100.10.1.162 **“Roadway(s)”** means all mainline lanes and shoulders, interchange ramps, crossroads and other roads that form the Bypass Infrastructure, as well as the associated drainage systems, lighting, signage, signals, markings, landscaping, fencing and other appurtenances, excluding bridge structures;
- 100.10.1.163 **“Road Weather Information Systems”** or **“RWIS”** means the provincial network of weather stations operated by the Ministry;
- 100.10.1.164 **“Roughness”** means a measure of the riding comfort experienced by the road user, where the roughness may be due to deficiencies with the original construction or the result of deterioration from traffic and environmental conditions, with the extent of the pavement distortion combined with a vehicle’s suspension and operating speed all contributing to the ride quality;
- 100.10.1.165 **“Routine Maintenance”** means maintenance that is undertaken on a day by day basis;

- 100.10.1.166 **“Rutting”** means deformation of the surface of the road in the vehicle wheel path due to repetitive passes of vehicle tires;
- 100.10.1.167 **“Safety Management and Intervention Plan”** has the meaning as described in Section 401.15.1.2;
- 100.10.1.168 **“Salt Management Plan”** has the meaning as described in Section 401.8.4;
- 100.10.1.169 **“Salt Usage Report”** means a report that provides details on the use of sand, salt and salt substitutes that meets the requirements specified by Environment Canada and the Ministry for environmental monitoring and reporting;
- 100.10.1.170 **“Saskatchewan Bridge Management System”** means the bridge management system used by the Ministry.
- 100.10.1.171 **“Saskatchewan Pavement Preservation Database”** means the pavement management system used by the Ministry.
- 100.10.1.172 **“Saskatchewan Sign Database”** means the sign database application that is used by the Ministry.
- 100.10.1.173 **“Schedule of Lane Closures”** has the meaning as set out in Section 400.1.5;
- 100.10.1.174 **“Seal Score”** means a composite index ranging from 0 (excellent condition) to 5 (very poor condition) that is calculated according to the Ministry’s Seal Score algorithm;
- 100.10.1.175 **“Service Roads”** has the meaning provided in Section 200.6.1.4;
- 100.10.1.176 **“Shoulder Score”** means the rating score that is calculated according to the Ministry’s *Defect & Maintenance Planning Assessment Process Reference Guide* (2012);
- 100.10.1.177 **“Single Point Diamond Interchange”** means a single point diamond interchange as described in TAC *Geometric Design Guide* figure 2.4.5.3
- 100.10.1.178 **“Site Office”** has the meaning as described in Section 300.2.1.1;

- 100.10.1.179 **“Skid Number”** means friction measurements as determined in accordance with ASTM E274;
- 100.10.1.180 **“Skid Resistance”** means a measure of the frictional characteristics of a pavement surface;
- 100.10.1.181 **“SKS”** Saskatchewan Supplement to the TAC Geometric Design Guide for Canadian Roads (TAC-GDG);
- 100.10.1.182 **“SMOE”** means Saskatchewan Ministry of Environment;
- 100.10.1.183 **“Species at Risk”** has the meaning given in Schedule 1 – Definitions and Interpretation;
- 100.10.1.184 **“Spill Control Centre”** means the spill control centre operated by the Province of Saskatchewan;
- 100.10.1.185 **“Splash Zone Surfaces”** has the meaning as described in Section 200.7.6.5;
- 100.10.1.186 **“Standard Plans”** means one of the standard design drawings 20000 to 29999 developed by the Ministry, contained in the Ministry Design Manual Part 1 (DM1) and provided via posting on the Ministry’s website;
- 100.10.1.187 **“Storm Event”** means a period of time from the commencement of precipitation to the end of precipitation as recorded by the Regina Airport Weather Station between the period of November 1st to April 30th;
- 100.10.1.188 **“Structure(s)”** include bridges, major culverts (3.0 metre diameter or larger), major retaining walls (greater than 2.0 m in height), and major overhead and cantilevered sign structures that form the Bypass Infrastructure;
- 100.10.1.189 **“Structural Engineer”** means a Professional Engineer specializing in bridge structural design, construction, maintenance and rehabilitation;
- 100.10.1.190 **“SU9”** means a single unit truck AASHTO design vehicle;

- 100.10.1.191 **“Surface Defect(s)”** means the rating score that is calculated according to the Ministry’s *Defect & Maintenance Planning Assessment Process Reference Guide* (2012);
- 100.10.1.192 **“System Acceptance Test” or “SAT”** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.193 **“TAC”** Transportation Association of Canada;
- 100.10.1.194 **“Temporary Signing Plan”** has the meaning provided in Section 100.8.5.4.a);
- 100.10.1.195 **“Temporary Traffic Accommodation On-Site Road Safety Audit”** means a Road Safety Audit of the Design Data produced for traffic accommodation works and that covers the issues referred to in Section 200.5.7.3.3 of Schedule 15-2 – Design and Construction;
- 100.10.1.196 **“Top of Centreline Finished Crown”** has the meaning as described in Section 200.7.18.3;
- 100.10.1.197 **“Traffic Accommodation Communication Plan”** has the meaning given in Section 100.8.5.6.a);
- 100.10.1.198 **“Traffic Accommodation Plan”** has the meaning given in Section 100.8.4.1;
- 100.10.1.199 **“Traffic Control Plans”** has the meaning given in Section 100.8.5.1.a);
- 100.10.1.200 **“Traffic Data Counter (TDC) Stations”** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.201 **“Traffic Engineer”** has the meaning given in Section 100.8.5.7.c);
- 100.10.1.202 **“Traffic Manager”** has the meaning given in Section 100.8.5.7.b);
- 100.10.1.203 **“Traffic Operations Hub”** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.204 **“Trumpet B Interchange”** means a Trumpet B interchange as described in TAC *Geometric Design Guide* figure 2.4.5.6;

- 100.10.1.205 **“Turnpike Triple”** means a triple, long combination truck AASHTO design vehicle in a B-train configuration with a maximum total length of 58 m;
- 100.10.1.206 **“User Acceptance Testing”** or **“UAT”** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.207 **“Valued Ecological Component(s)”** or **“VEC(s)”** means the elements identified in (but not limited to) the Environmental Protection Plan with scientific, economic, social or cultural importance;
- 100.10.1.208 **“Variable Message Signs”** or **“VMS”** has the meaning as described in Appendix F, Schedule 15-2 – Design and Construction;
- 100.10.1.209 **“WB-20”** means an interstate trailer combination truck AASHTO design vehicle;
- 100.10.1.210 **“Witness Point”** means a point of time in the construction process when it would be unreasonably onerous or impossible to confirm conformance to the Technical Requirements of either materials or workmanship, once work proceeds past this point;
- 100.10.1.211 **“Work Method Statement(s)”** means a written methodology on how the applicable work is to be carried out.
- 100.10.1.212 **“WRB Interim Maintenance Section”** means the section of Roadway identified in Appendix C of Schedule 15-3.
- 100.10.2 Words and abbreviations which are not defined in the Technical Requirements or the Project Agreement and which have well known technical or trade meanings and which are used in the Technical Requirements are used in accordance with such recognized meanings.
- 100.10.3 Standard units of measurement may be abbreviated in the Technical Requirements.

101.0 APPENDIX A – SCHEDULE OF PLANS AND REPORTS

SCHEDULE OF PLANS AND REPORTS

Schedule of Plans and Reports (Response Time Measures)

Performance Measure	Deliverable Name	Due Date	Specification Reference	Submitted under Review Procedure
n/a	IMS Manual including the IMS-ES and the IMS-OHS manuals	Submitted 30 days from the Commercial Close	Schedule 14 – Integrated Management Systems	Yes
n/a	Design Management Plan	Submitted 45 days from the Commercial Close	Schedule 15-1 - General Appendix B	Yes
n/a	Construction Management Plan	Submitted 60 days from the Commercial Close	Schedule 15-1 - General Appendix C	Yes
P04.1a	Operation and Maintenance Plan	Submitted 60 days prior to the Anticipated Phase One Substantial Completion and the Anticipated Substantial Completion as applicable	Schedule 15-3 – OM&R and Handback 401	Yes
PO4.1b	Operation and Maintenance Plan (Updates)	June 1 annually	Schedule 15-3 – OM&R and Handback 401	Yes
PR1	Asset Management Plan for Existing Bypass Infrastructure During Construction	60 days prior to start date of the Interim Maintenance Period	Schedule 15-3 – OM&R and Handback 402	Yes

Performance Measure	Deliverable Name	Due Date	Specification Reference	Submitted under Review Procedure
PR2	Asset Management Plan for Existing and New Bypass Infrastructure (including initial 5 year Rehabilitation schedule)	60 days prior to start of Interim Maintenance Period	Schedule 15-3 – OM&R and Handback 402	Yes
PR3	Asset Management Plan Updates (including updated 5 year Rehabilitation schedule)	January 30 annually	Schedule 15-3 – OM&R and Handback 402	Yes
n/a	Traffic Management Plan	Submitted 45 days from Commercial Close	Schedule 15-1 - General Appendix D	Yes
n/a	Subcontractor Quality Management Plans	Submitted 45 days from Commercial Close	Schedule 14 – Integrated Management Systems Part 2	Yes
n/a	IMS Audit Plans	Submitted 30 days from Commercial Close		Yes
n/a	IMS Audit Plans Updates	At twelve month intervals		Yes
n/a	IMS Audit Reports	Within 14 days of audit completion	Part 5	N/A
P04.1c	OM&R Monthly Reports	By 10 th day of each month	Schedule 15-3 – OM&R and Handback 401	Yes
P05.1.2c	Highway Condition Reports	As per Section 5.1 of Schedule 15-3 – OM&R and Handback 401	Schedule 15-3 – OM&R and Handback 401	No
P05.4.2b	Customer Care Plan	June 1 annually	Schedule 15-3 – OM&R and Handback 401	Yes

Performance Measure	Deliverable Name	Due Date	Specification Reference	Submitted under Review Procedure
P04.1.j	Salt Management Plan	June 1 annually	Schedule 15-3 – OM&R and Handback 401	Yes
P04.1.k	Salt Usage Report	June 1 of each year or as otherwise specified	Schedule 15-3 – OM&R and Handback 401	Yes
PO12.1.2a	Emergency Response Plan	June 1 following Commercial Close. Reissue when amendments are made	Schedule 15-3 – OM&R and Handback 401	Yes
PO12.2.2d	Incident Reports	As required	Schedule 15-3 – OM&R and Handback 401	No
PO16.1.2e	Safety Management and Intervention Plan	June 1 following Commercial Close, reissue when amendments are made	Schedule 15-3 - OM&R and Handback 401	Yes
PR4	Annual APPM Achievement Report	Commencing from Substantial Completion - November 30 annually	Schedule 15-3 – OM&R and Handback 402	Yes
PR7	Additional Structures Inspection Report	As required within 7 days of incident	Schedule 15-3 – OM&R and Handback 402	Yes
PR9	ITS Condition Report	November 30 annually	Schedule 15-3 – OM&R and Handback 402	Yes

Performance Measure	Deliverable Name	Due Date	Specification Reference	Submitted under Review Procedure
N/A	Project Safety Plan	Submitted 30 days from Commercial Close	Schedule 14 – Integrated Management Systems Appendix A	Yes

102.0 APPENDIX B – DESIGN MANAGEMENT PLAN

DESIGN MANAGEMENT PLAN

- 1.1. The Design Management Plan (DMP) shall require all designs, drawings, specifications and similar documents, for all design aspects of the Works and the OM&R Work, to be stamped and signed by a “Design Engineer” in accordance with Association of Professional Engineers and Geoscientists of Saskatchewan (APEGS) Authentication of Documents – Use of Professional Seals as posted on www.apegs.ca
- 1.2. Project Co shall provide a comprehensive “DMP” that describes how it intends to manage the design processes for the Works and OM&R Work in accordance with the ISO 9001 standard, its IMS and the provisions of this Project Agreement. The DMP is to apply throughout Project Term.
- 1.3. The DMP shall contain an organizational chart identifying Key Individuals and other key personnel responsible for design management and their relationship with the IMS Director as documented in Project Co’s IMS. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between those responsible for design management and other engineering and construction management disciplines.
- 1.4. Project Co shall appoint an individual who shall be responsible for the DMP and shall:
 - have experience in a similar role on a successful project of similar scope and have successfully completed an ISO 9001 Lead Auditor Course; and
 - functionally report to the IMS Director.
- 1.5. The DMP shall, at 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 completed Bypass is capable of meeting its intended use;
 - design changes;
 - implementation of road safety audit recommendations;
 - quality assessment and procurement of Project Co Parties responsible for design;
 - External IMS Audits of Project Co Parties responsible for design;
 - Internal IMS Audits;
 - Corrective Actions, Preventative Actions and opportunities for improvement;
 - document management; and
 - control of IMS Records.

103.0 APPENDIX C – CONSTRUCTION MANAGEMENT PLAN

CONSTRUCTION MANAGEMENT PLAN

- 1.1. Project Co shall provide a comprehensive Construction Management Plan (“CMP”) that describes how it intends to manage the Construction Activities in accordance with the ISO 9001 standard, its IMS Manual and the provisions of this Project Agreement. The CMP is to apply throughout the Project Term.
- 1.2. The CMP shall contain an organizational chart identifying Key Individuals and other key personnel responsible for construction management and their relationship with the IMS Director for Project Co’s overall IMS as documented in Project Co’s IMS Manual. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between those responsible for construction management and other disciplines such as design management, OM&R Work, environmental management and traffic management.
- 1.3. Project Co shall appoint a Quality Manager who shall be responsible for the CMP and shall:
 - have experience in a similar role on a successful project of similar scope and have successfully completed an ISO 9001 Lead Auditor Course; and
 - functionally report to the IMS Director.
- 1.4. The CMP shall, at a minimum, include or reference detailed IMS procedures and process flow charts for the following processes:
 - inspection, testing and monitoring;
 - materials identification and traceability;
 - quality assessment and procurement of Project Co Parties responsible for construction;
 - External IMS Audits of Project Co Parties responsible for construction;
 - Internal IMS Audits;
 - control of nonconforming product;
 - road safety audits;
 - Corrective Actions, Preventative Actions and opportunities for improvement;
 - document management; and
 - control of IMS Records.
- 1.5. 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.

- 1.6. The CMP shall provide for ensuring that the as-built Project is in conformance with the requirements of the Design Data and construction specifications developed for the Bypass. Project Co shall implement a methodology to verify compliance of the construction with the design requirements. Changes made to the design during construction shall be stamped and signed by the relevant Engineer of Record.
- 1.7. The CMP shall require that the supplier have full time representation on site during MSE wall construction and during any ground improvement measures below the wall, and that the MSE wall designer be given the responsibility of Field Reviewer for the wall.
- 1.8. Witness Points shall be identified in the CMP, and the Ministry shall be given sufficient notice of all upcoming Witness Points to allow auditing of the work.
- 1.9. The CMP shall require that notice for concrete pours for the following Business Day be provided by email to the Ministry Representative before noon of the previous day, and shall identify the estimated time, location and element to be poured. The CMP shall further require that on the day of the pour, not less than two hours' notice be given to the Ministry by email indicating the actual pour time, and confirming that all work is complete.
- 1.10. The CMP shall require that a completed checklist be signed off by Project Co's quality control staff, and that this checklist be on site and available to the Ministry Representative not less than two hours prior to the planned delivery of concrete. At least one quality control field staff member shall be on site for the full duration of all concrete pours.
- 1.11. For all construction materials and products, the CMP shall detail the testing and acceptance program, including, but not limited to, the following:
 - Material property or characteristics to be measured or inspected;
 - test methods and reference standards;
 - testing frequency;
 - inspection criteria and frequency; and
 - criteria for product acceptance/rejection.
- 1.12. The CMP shall require that monthly fabrication schedules be provided to the Ministry Representative for the fabrication of all steel work and precast concrete work, and that updates to these are provided weekly if and when changes are made to them.
- 1.13. The CMP shall require that pre-construction meetings be held prior to:
 - fabrication of precast concrete elements;
 - fabrication of structural steel elements, including sign structures and bridge rail;

- construction of MSE walls; and
 - concrete deck pours.
- 1.14. The CMP shall require Project Co to conduct pre-construction meetings after the relevant shop drawings have been reviewed in accordance with Schedule 9 (Review Procedure), but before fabrication commences. Project Co shall provide notice to the Ministry Representative by email at least one week prior to the meeting so that the Ministry Representative may attend. The meeting shall be held at the fabricator's plant and Project Co shall ensure that the plant superintendent and plant manager responsible for the work and any manufacturer's representative directly involved in the specialized work are in attendance. Project Co shall be responsible for all travel, boarding and lodging costs incurred by the Ministry Representative to attend fabrication inspections and pre-construction meetings outside the Province of Saskatchewan.
- 1.15. The CMP shall require that complete testing/inspection reports be prepared for the Works and the OM&R Work, including all test results and inspection activities for all grade, sub-base, base and surfacing materials, bridge structures, curb and gutter, sidewalks, drainage items, lighting, signals, signage, pavement markings, and other appurtenances.

104.0 APPENDIX D – TRAFFIC MANAGEMENT PLAN

TRAFFIC MANAGEMENT PLAN

Project Co shall provide a comprehensive Traffic Management Plan (“TMP”) that describes how it intends to administer the traffic management processes in connection with the Regina Bypass in accordance with the ISO 9001 standard, its IMS Manual and the provisions of this Project Agreement. The TMP is to apply throughout the Project Term.

The TMP shall contain an organizational chart identifying Key Individuals and other key personnel responsible for traffic management and their relationship with the IMS Director as documented in Project Co’s IMS Manual. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between those responsible for traffic management and other disciplines such as design management, construction management, the OM&R Work and environmental management. The TMP shall address the manner in which traffic management relates to design, Construction Activities and OM&R Work.

Project Co shall appoint the traffic accommodation personnel identified in this Schedule 15-1 – General who shall be responsible for the TMP and shall:

- have experience in a similar role on a successful project of similar scope.

The TMP shall at a minimum, include or reference detailed quality system procedures and process flow charts for the following processes:

- major processes outlined in the Traffic Management Plan and the associated sub plans listed in Section 100.8.4;
- External IMS Audits of Project Co Parties responsible for traffic management;
- Internal IMS Audits;
- management of Non-Conformances;
- road safety audits;
- Corrective Actions and Preventative Actions;
- document management; and
- control of IMS 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.

105.0 APPENDIX E – SAMPLE TRAFFIC ACCOMMODATION PLAN

SAMPLE TRAFFIC ACCOMMODATION PLAN

Sample Traffic Accommodation Plan

1. Background statements of goals and objectives for the accommodation of traffic during construction and throughout the operations and management stages.
 - 1.1 Construction
 - 1.1.1 Safe and efficient passage of all modes of public traffic including, but limited to vehicles, pedestrians, cyclists etc.
 - 1.1.2 Safety measures for the protection of all workers
 - 1.1.3 Drawings and plans of temporary signage and structures
 - 1.1.4 Safe and continuous access at key locations:
 - 1.1.4.1 Location A.
 - 1.1.4.2 Location B.
 - 1.1.5 Identify traffic levels to be maintained in conjunction with Local Authorities and the Ministry.
 - 1.1.6 Identification of impacts to non-emergency service providers
 - 1.1.7 Designated access routes for emergency service providers
 - 1.1.8 Traffic accommodation simulation and preparation and implementation of traffic accommodation strategies.
 - 1.2 Operation and Maintenance
 - 1.2.1 Safe and efficient passage of all modes of public traffic including, but limited to vehicles, pedestrians, cyclists etc.
 - 1.2.2 Safe and efficient passage of all maintenance vehicles (e.g. snow plows, salt trucks, landscaping vehicle etc.) and service vehicles (e.g. Utility Company repair and service etc.)
 - 1.2.3 Safety measures for the protection of all workers
 - 1.2.4 Drawings and plans of temporary signage and Structures
 - 1.2.5 Plans for alternate or detour routes in conjunction with local authority and the Ministry
 - 1.2.6 Plans for partial road Closures for maintenance purposes in conjunction with Local Authorities and the Ministry
 - 1.2.7 Safe and continuous access at key locations:
 - 1.2.7.1 Location A.
 - 1.2.7.2 Location B.
 - 1.2.8 Identify traffic levels to be maintained in conjunction with Local Authorities and the Ministry.

- 1.2.9 Identification of impacts to non-emergency service provider
 - 1.2.10 Designated access routes for emergency service providers
 - 1.2.11 Traffic accommodation simulation and preparation and implementation of traffic accommodation strategies.
2. Coordination with police and other emergency services.
- 2.1. Internal communication strategy.
 - 2.2. Communication with police and other emergency measure services.
 - 2.3. Coordination with Province’s Communication Branch in emergency situations.
 - 2.4. Coordination with Province’s Communication Branch in non-emergency situations (i.e. social media sites and the highway hotline)
 - 2.5. Provision of detour signs and emergency site signing.
 - 2.6. Notice to the Ministry of closures.
3. Incident Management (via the Data Management Centre).
- 3.1. Identification of risks and types of potential incidents for each activity
 - 3.2. Procedures for detection, verification, response and restoration specific to a given task and location
 - 3.3. Strategies for the preservation of public and worker safety
 - 3.4. Communications strategies
 - 3.5. Incident training requirements (i.e. bomb threats, car accident, dangerous and hazardous goods and spill response training etc.).

Reference: Traffic Signing Guidelines and Uniform Traffic Control Devices Canada

106.0 APPENDIX F - GEOTECHNICAL REPORTS

1. Review of Geotechnical Data Available for the Regina Bypass, Golder Associates, October 2014
2. Regina Bypass Preliminary Geotechnical Investigation, Golder Associates, October 31, 2014
3. Regina Bypass Preliminary Geotechnical Investigation CPT Data, Golder Associates, October 31, 2014 (See Note 1)
4. Regina Bypass Preliminary Geotechnical Investigation Supplementary Information, Technical Memorandum 1, Golder Associates, November 21, 2014 (See Note 1)
5. Regina Bypass Preliminary Geotechnical Investigation Supplementary Information, Technical Memorandum 2, Golder Associates, December 3, 2014 (See Note 1)
6. Regina Bypass Preliminary Geotechnical Investigation Supplementary Information, Technical Memorandum 3, Golder Associates, December 10, 2014 (See Note 1)
7. Preliminary Geotechnical Evaluation Report Three Interchanges at Hwy 1 and Hwy 46, Hwy 1 and Hwy 48, and Hwy 1 and Hwy 624 20 km East of Regina, EBA, September 2013
8. Cindercrete Products Ltd. Geotechnical Investigation NE ¼ Section 19-17-18-2, AECOM, May 2010
9. Cindercrete Products Ltd. Geotechnical Investigation SW ¼ Section 21-17-18-2, AECOM, April 2010
10. Report on the Geotechnical Investigation for the West Regina Bypass – CPR Overpass, MDH Engineered Solutions, February 2011
11. Review of Embankment Stability CPR Overpass on West Regina Bypass Regina, Saskatchewan, Clifton Associates Ltd, November 20, 2013
12. Preliminary Geotechnical Investigation for the Proposed West Regina Bypass and Highway No. 1 Interchange, MDH Engineered Solutions, June 2010
13. West Regina Bypass Geotechnical Instrumentation and Monitoring Program - Draft, SNC Lavalin, August 26, 2013
14. Stability Analysis and Option Evaluation for WRB Bridge Embankments at Highway No. 1 Overpass, MDH Engineered Solutions, February 15, 2012
15. Stability Analysis for the WRB Bridge Embankments at the CPR Overpass Updated Analysis – Draft Issued for Discussion, MDH Engineered Solutions, February 21, 2013

Note 1: This document is a supplement to the Regina Bypass Preliminary Geotechnical Investigation, Oct 31, 2014.