## SCHEDULE 15

## PAYMENT ADJUSTMENTS SUMMARY

#### 1. GENERAL

#### 1.1 Capitalized Terms

Capitalized terms used in this Schedule have the definitions as set out in Schedule 18 (Technical Requirements) unless expressed otherwise.

## **1.2 DBFO Agreement Reference**

This Schedule is referenced in sections 1.1, 1.3, and 10.2 of the Agreement to Design, Build, Finance and Operate Southwest Calgary Ring Road (the "**DBFO Agreement**") between Her Majesty the Queen in right of Alberta and the Contractor, as defined therein.

#### 1.3 Section References

References to section numbers in this Schedule are to section numbers of Schedule 18 (Technical Requirements) unless expressed otherwise.

## 1.4 Priority

This Schedule is subject to section 10.2 of the DBFO Agreement.

## 1.5 Indexing of Payment Adjustments

The Payment Adjustments (except for the Traffic Volume Adjustment) are subject to annual indexing for inflation in the manner and at the times set out in Schedule 10 (Index Factor) to the DBFO Agreement.

#### 2. TRAFFIC VOLUME PAYMENT ADJUSTMENTS (Section 200.3.1)

The New O&M Payments shall be adjusted, in accordance with this Section, effective each April 1<sup>st</sup> of the Operating Period based upon changes in traffic volume calculated during the previous calendar year.

The Contractor shall install a new ATR on the Mainline lanes of the Calgary Ring Road between 90 Avenue and the Elbow River crossing. The data collected from the ATR located between 90 Avenue SW and the Elbow River crossing shall be the only ATR used for the purpose of determining Traffic Volume Payment Adjustments and the upper threshold for noise mitigation requirements.

No Traffic Volume Payment Adjustments shall be made based on partial years or for changes in traffic volume within the current year.

There shall be no Traffic Volume Payment Adjustment for the first April 1<sup>st</sup> of the Operating Period.

The Department shall count the total number of vehicles to cross a point in both directions during a calendar year and shall divide this total by the number of days in that calendar year to determine the average annual daily traffic (the "AADT"). For any portion of a year between RNI Traffic Availability and the subsequent April 1<sup>st</sup>, the AADT shall be considered equivalent to the average daily traffic measured in that partial year. The AADT shall be calculated by the Department's traffic statistics consultant. In the event that the ATR is not recording for a given period of time, the Department's traffic statistics consultant shall make an estimate of AADT. Weather conditions permitting, the Department shall repair the ATR to bring it into operation within four weeks of the time that the Department first becomes aware that the ATR is not functioning.

If the AADT for any calendar year exceeds 167,000 vehicles per day for the location identified on the New Infrastructure (Calgary Ring Road Mainline between 90 Avenue and the Elbow River crossing), a onetime supplement of 5% of the New O&M Payment for such calendar year (before any Traffic Volume Payment Adjustment) shall be added to each of the New O&M Payments for the 12-month period starting April 1<sup>st</sup> after such calendar year.

In the event that unusual conditions, such as construction activity by a Local Authority on roadways other than the New Infrastructure, result in a temporary change in traffic volume on the Mainline of Calgary Ring Road, the Department, in the interest of both parties avoiding unnecessary costs, will advise the Contractor that the Department wishes to negotiate with the Contractor with respect to a temporary full or partial waiver of the Traffic Volume Payment Adjustment and a corresponding temporary full or partial waiver of certain requirements under Section 400.3 (Winter Maintenance Operation Requirements).

## 3. PAYMENT ADJUSTMENTS

Where Payment Adjustments are described relative to a kilometre section of the roadway, the kilometre will be a continuous section of a single lane. Neither the requirement nor the Payment Adjustments will be pro-rated based on a partial kilometre length, but will be calculated for the next highest full kilometre length. Crossroads and individual ramps or loops will be considered as discrete sections and treated as one kilometre regardless of the actual length. Where Payment Adjustments are described relative to a period of time or a portion thereof, the Payment Adjustment shall not be prorated but shall be applied in full even if only a portion of the specified period of time has elapsed (see Section 400.1.3).

The following is a summary of the Payment Adjustments set out in Schedule 18 (Technical Requirements) to the DBFO Agreement:

## 3.1 Quality Management System ("QMS") – External Audit (Section 100.2.1.4.2)

All QMS deficiencies identified by the external QMS auditor during the audit shall be addressed and corrective measures implemented by the Contractor within 30 days of completion of the audit. The results of the audit shall be documented and shall be submitted by the Contractor to the Department within seven calendar days of audit completion. Evidence of the correction of any deficiencies identified in the audit shall be submitted by the Contractor to the Department within 30 days of completion of the audit.

If an external audit has not been completed within the specified time, Payment Adjustments of \$2,400/week or any partial week, for the first four weeks and \$6,000/week or any partial week, thereafter shall apply until so completed.

If any deficiencies identified by the external QMS auditor have not been corrected within the specified time, Payment Adjustments of \$6,000/week or any partial week, for the first four weeks and \$12,000/week or any partial week, thereafter shall apply until corrected.

# 3.2 Environmental Management System ("EMS") – External Audit (Section 100.2.2.3)

The results of the audit shall be documented and shall be submitted by the Contractor to the Department within seven days of audit completion. All EMS deficiencies identified by the external EMS auditor during the audit shall be addressed and corrective measures implemented by the Contractor, to the extent reasonable and practicable as determined by the Department acting reasonably, within 30 days of the completion of the audit. Evidence of the correction of any deficiencies identified in the audit shall be submitted by the Contractor to the Department within 30 days of completion of the audit.

If an external audit has not been completed within the specified time, Payment Adjustments of \$2,400/week or any partial week, for the first four weeks and \$6,000/week or any partial week, thereafter shall apply until completed.

If any deficiencies identified by the external EMS auditor have not been corrected within the specified time, Payment Adjustments of \$6,000/week or any partial week, for the first four weeks and \$12,000/week or any partial week, thereafter shall apply until corrected.

## 3.3 Handling of QMS/EMS Non-Conformance (Section 100.2.3)

Design or construction works identified as non-conforming by the Department shall be treated as non-conforming works within the Contractor's QMS. The Contractor's remedies to non-conforming works reports generated as a result of the Department's audits shall be proposed to the Department. The Contractor is required to respond to the

non-conforming works report with a remedy which requires review and prior written approval by the Department acting reasonably. Failure of the Contractor to respond to non-conformances with a reasonable plan for remedy or alternative action within 14 calendar days after occurrence or discover of the occurrence shall result in a Payment Adjustment of \$5,000 per occurrence.

Non-conforming construction works will be considered unacceptable and the Contractor shall undertake the necessary modifications to ensure the as-built New Infrastructure conforms to the requirements of the Detailed Designs and Technical Requirements. Work without documentation to conclusively demonstrate conformance and which cannot be verified by non-destructive testing will be considered non-conforming. In the event of the foregoing sentence, the Contractor shall be responsible for all costs associated with any removal, replacement and testing that may be required to confirm the Technical Requirements have been met.

Any audits that identify a meaningful discrepancy between the state of the work and its representation on the Contractor's signed-off checklist shall be subject to a Payment Adjustment of \$2,000 per occurrence.

#### 3.4 Operations and Maintenance Plan (Section 100.2.9.1)

If the Contractor fails to develop and provide the Department with an updated Operations and Maintenance Plan (with the exception of the Snow Clearing and Ice Control Operations Plan and Preferential Bridge Deck Icing Plan) by the start of each calendar year, the Payment Adjustment shall be \$1,200/week or any partial week, until it is submitted.

If the Contractor fails to develop and provide the Department with an updated Snow Clearing and Ice Control Operations Plan and Preferential Bridge Deck Icing Plan by September 15 of each year, the Payment Adjustment shall be \$6,000/week or any partial week, for the first four weeks and then \$12,000/week or any partial week, thereafter until it is submitted.

## 3.5 Infrastructure Wholelife Management Plan (Section 100.2.10.1)

If the Contractor fails to develop and provide the Department with an updated Infrastructure Wholelife Management Plan by the start of each calendar year, the Payment Adjustment shall be \$1,200/week or any partial week, until it is submitted.

## 3.6 Intentionally Deleted

#### 3.7 Detours (Section 200.2.3.23)

The following requirements, including without limitation, Payment Adjustments (unless expressly stated otherwise), shall apply during the Construction Period (with such

modifications as necessary) to all detours (the "**Deemed New Infrastructure**") as if all detours were New Infrastructure:

- (a) Section 400.1.5 (Imminent Danger Repairs);
- (b) Section 400.1.6 (Lane Closure) applied to any reduction of the minimum lane requirements for the Deemed New Infrastructure as set out in Section 200.2.3.23 (Detours). The provisions applicable to the Schedule of Lane Closures and telephone service shall not apply. Except with the prior written approval of the Department, acting reasonably, and except for an Excepted Lane Closure, the Contractor shall not close all lanes in either direction or close any lanes for an extended period of time (as determined by the Department acting reasonably). For planned maintenance activities on the Deemed New Infrastructure with two lanes in each direction the Contractor must have at least one lane in each direction open to traffic at all times, unless otherwise approved in writing and in advance by the Province, acting reasonably;
- (c) Section 400.2.1 (Roadway Inspection Requirements);
- (d) Section 400.2.2 (Emergency Maintenance);
- (e) Section 400.2.3 (Routine Maintenance);
- (f) Section 400.2.4 (Measuring for Compliance);
- (g) Section 400.3.1 (General). For the Winter Maintenance Standards table in Section 400.3.1, Highway 201 is deemed a Class AA roadway, and all other crossroads are deemed Class A roadways;
- (h) Section 400.3.2 (Equipment and Materials);
- (i) Section 400.3.3 (Snow Clearing and Ice Control Operations);
- (j) Section 400.4.1 (Roadway Maintenance Requirements), except for the requirements in the third bullet under Section 400.4.1.2 (Completing Repairs);
- (k) Sections 400.4.4 (Rutting Performance Requirement (New Infrastructure Only)) and 400.4.6 (General Pavement Maintenance Requirements). Detours shall be designed to accommodate the anticipated traffic and to meet the requirements of "\$/Isolated Deficiency" column of Section 400.4.4.2 (Payment Adjustments) of Section 400.4.4 (Rutting Performance Requirement (New Infrastructure Only)) and Section 400.4.6 (General Pavement Maintenance Requirements), except the requirements in Section 400.4.6.3 and 400.4.6.4 and that the definition of localized roughness in Section 400.4.6.2 shall be modified to be any abrupt deviation in excess of 12mm when measured with a 1.2m straight edge;

- (I) Section 400.4.7 (Miscellaneous Operation and Performance Requirements), except for the requirements in Section 400.4.7.9 and for any Payment Adjustments set out in Section 400.4.7.1, 400.4.7.3 through 400.4.7.9 inclusive; and
- (m) Section 400.4.8 (Traffic Control Devices Operation and Performance Requirements), except for any Payment Adjustments set out in Section 400.4.8.

## 3.8 Operation and Maintenance of In-Service Roads During Construction Period (Section 200.3.10)

The following requirements, including without limitation Payment Adjustments (unless expressly stated otherwise), shall apply during the Construction Period starting the date that is two months after Execution of the DBFO Agreement (with such modifications as necessary) to the In-Service Roads:

- (a) Section 400.1.5 (Imminent Danger Repairs);
- (b) Section 400.1.6 (Lane Closure) applied to any reduction of the minimum lane requirements for the In-Service Roads as set out in Section 200.2.3.23 (Detours). The provisions applicable to the Schedule of Lane Closures and telephone service shall not apply. Except with the prior written approval of the Department, acting reasonably, and except for an Excepted Lane Closure, the Contractor shall not close all lanes in either direction or close any lanes for an extended period of time (as determined by the Department acting reasonably). For planned maintenance activities on the In-Service Roads with two lanes in each direction the Contractor must have at least one lane in each direction open to traffic at all times, unless otherwise approved in writing and in advance by the Province, acting reasonably;
- (c) Section 400.2.1 (Roadway Inspection Requirements);
- (d) Section 400.2.2 (Emergency Maintenance);
- (e) Section 400.2.3 (Routine Maintenance);
- (f) Section 400.2.4 (Measuring for Compliance);
- (g) Section 400.3.1 (General). For the Winter Maintenance Standards table in Section 400.3.1, Highway 201 is deemed a Class AA roadway, and all other crossroads are deemed Class A roadways;
- (h) Section 400.3.2 (Equipment and Materials);
- (i) Section 400.3.3 (Snow Clearing and Ice Control Operations);

- (j) Section 400.4.1 (Roadway Maintenance Requirements), except for the requirements in the third bullet under Section 400.4.1.2 (Completing Repairs);
- (k) Section 400.4.6 (General Pavement Maintenance Requirements), except the requirements in Sections 400.4.6.3 and 400.4.6.4 and that the definition of localized roughness in Section 400.4.6.2 shall be modified to be any abrupt deviation in excess of 12 mm when measured with a 1.2 m straight edge;
- (I) Section 400.4.7 (Miscellaneous Operation and Performance Requirements), except for the requirements in Section 400.4.7.9 and for any Payment Adjustments set out in Section 400.4.7.1, 400.4.7.3 through 400.4.7.9 inclusive;
- (m) Section 400.4.8 (Traffic Control Devices Operation and Performance Requirements), except for any Payment Adjustments set out in Section 400.4.8; and
- (n) Section 400.5.2.4 (Preventative Bridge Structures Maintenance) but only the requirements of annual washings of bridge decks, sealing of all bridge decks exposed to de-icing salts and sealing of all curbs.

## 3.9 As-Built Information (Sections 300.3.3 and 400.1.2)

The maximum time for completion and the providing of the As-Built Construction Reports to the Department shall be 12 months after RNI Traffic Availability.

If the As-Built Construction Reports are not available to the Department within the specified time, a Payment Adjustment of \$20,000/month or any partial month, for every month in excess of the specified time shall apply until available.

As-Built Construction Reports shall be updated, as required, to reflect maintenance and rehabilitation activities that change the physical dimensions or characteristics of the Infrastructure. The maximum time for completion and the providing of the updated As-Built Construction Reports to the Department shall be two months after completion of the maintenance or rehabilitation activity. If the updated As-Built Construction Reports are not available to the Department within the specified time, a Payment Adjustment of \$4,000/month or any partial month, for every month in excess of the specified time shall apply until available.

#### **3.10** Traffic Signals (Section 300.4.1.9.2)

All traffic signal installations, including pedestrian controls, shall be designed in accordance with Alberta Transportation Standard Specifications for Highway Construction, as amended by Specification Amendments and Supplemental Specifications for Highway and Bridge Constructions, and any applicable Design Bulletins, including Design Bulletin #32. Signal phasing and timing designs shall be based on the practices outlined in the current edition of the TAC Manual of Uniform

Traffic Control Devices for Canada, and the Institute of Transportation Engineers Canadian Capacity Guide for Signalized Intersections. The traffic signal design shall be as per the design traffic volumes identified in Packages A through E of Appendix J. The traffic signals shall be installed prior to the Traffic Availability, unless otherwise specified in Packages A through E of Appendix J. The Contractor shall identify, as part of the Contractor's Designs, any planned staging of signal installations (the "Planned Future Signal Installations") based on traffic volumes at other locations on the New Infrastructure. The Contractor shall verify annually the signal warrants for any unsignalized intersection within the Road Right of Way using the procedures outlined by the new TAC method in the document "Traffic Signal Warrant Handbook" which applies the Canadian Traffic Signal Warrant Matrix Procedure. The Contractor shall submit the warrant calculations to the Department as soon as practicable after verification. If the Total Priority Points requirement (as defined in the TAC Traffic Signal Warrant Handbook has been met (minimum 100 cumulative warrant points) and if instructed to do so in writing (the "Notice") by the Department, the Contractor shall install traffic signals at such applicable intersection(s) within 12 weeks after the Notice (the "Installation Deadline").

If the Contractor fails to complete the Planned Future Signal Installations on or before the Installation Deadline, the "first occurrence of a non-functioning signal location" of the Payment Adjustments set out in Section 400.4.8.2.3 (Traffic Signals – Payment Adjustments) at an amended rate of \$600/day or any partial day, until rectified shall apply as if the Planned Future Signal Installations had been completed but for 24 hours per day the deemed installed signals were not at all operational. For the purpose of applying such Payment Adjustment, the time stipulated for completing repairs as set out in Section 400.4.8.2.2 (Traffic Signal – Completing Repairs) shall be deemed to have expired on the Installation Deadline. The foregoing Payment Adjustment shall continue to accrue and be payable until such time as the Contractor completes the Planned Future Signal Installations.

#### 3.11 Site Office for Bridge Construction (Section 300.5.5.1.3)

If the site office trailer has not been provided to the Department prior to the commencement of any field work or becomes unavailable for the Department's use, Payment Adjustments of \$2,000/week or portion thereof for the first four (4) weeks and \$5,000/week or portion thereof thereafter shall apply.

## 3.12 Concrete Strength Requirements (Section 300.5.7.18)

Concrete with Strength Test Results shown below shall be removed:

- Class D and Pile concrete less than 24 MPa
- Class C concrete less than 27 MPa
- Class HPC and HPC with steel fibres concrete less than 40 MPa
- Class S concrete less than 16 MPa

The Department reserves the right to reject any concrete whatsoever which does not meet all the requirements for that class of concrete as stated in Section 300.5.7.5 (Class and Composition of Concrete). However, provided that the Design Engineer is of the opinion that the low strength concrete will meet all performance requirements throughout the design life of the New Infrastructure, the Department may, in its sole discretion, accept concrete the strength of which falls below the specified strength requirements.

Payment Adjustments will be made in accordance with the following:

## Class D Concrete, Pile Concrete, 30 MPa

## Strength Test Results

29 MPa to 30 MPa	\$30 per cubic metre
28 MPa to 29 MPa	\$60 per cubic metre
27 MPa to 28 MPa	\$90 per cubic metre
26 MPa to 27 MPa	\$120 per cubic metre
25 MPa to 26 MPa	\$160 per cubic metre
24 MPa to 25 MPa	\$220 per cubic metre

#### Class C Concrete, 35 MPa

#### Strength Test Results

34 MPa to 35 MPa	\$30 per cubic metre
33 MPa to 34 MPa	\$60 per cubic metre
32 MPa to 33 MPa	\$90 per cubic metre
31 MPa to 32 MPa	\$120 per cubic metre
30 MPa to 31 MPa	\$160 per cubic metre
29 MPa to 30 MPa	\$220 per cubic metre
28 MPa to 29 MPa	\$300 per cubic metre
27 MPa to 28 MPa	\$400 per cubic metre

#### Class HPC Concrete, 45 MPa

## **Strength Test Results**

44 MPa to 45 MPa	\$40 per cubic metre
43 MPa to 44 MPa	\$100 per cubic metre
42 MPa to 43 MPa	\$180 per cubic metre
41 MPa to 42 MPa	\$280 per cubic metre
40 MPa to 41 MPa	\$400 per cubic metre

## Class S Concrete, 20 MPa

## Strength Test Results

18 MPa to 20 MPa	\$30 per cubic metre
16 MPa to 18 MPa	\$70 per cubic metre

The Payment Adjustments for all classes of concrete shall apply to the volume of concrete represented by the Strength Test as defined in Section 300.5.7.7.1 (Strength Test).

## 3.13 Intentionally Deleted

## 3.14 Appeal of Department Measurements (Section 400.1.4)

If the independent third party's measurements verify the deficiency, the Contractor shall be invoiced by the Department, and shall reimburse the Department, for the third party appeal measurement costs plus an additional \$5,000 per appeal.

Any Payment Adjustments supported by the independent third party's measurements shall be upheld. If the independent third party's measurement(s) verify that no deficiency exists, such Payment Adjustments shall be reversed.

## 3.15 Imminent Danger Repairs (Section 400.1.5)

If protective action is not undertaken immediately or implemented as soon as reasonably possible given the circumstances, the Department may elect to undertake such action as it determines necessary and the Contractor shall be responsible for the actual cost of the actions which may include the cost of accommodating traffic over, through or around portions of the Infrastructure, if necessary, plus a 25% administration fee. These costs shall be deducted from Payments to be made to the Contractor. In instances where the Contractor fails to meet the above timelines and/or the Department is forced to undertake action to protect any user from an Imminent Danger, the Contractor shall also be assessed a Payment Adjustment of \$15,000/occurrence. The third occurrence in any consecutive 12 month period anywhere on the Infrastructure shall be a potential Termination Event for the purposes of and having the consequences set out in section 16.8(k) of the DBFO Agreement. The Department shall provide the Contractor with timely notice after the Department has considered it necessary to take action to protect a user from an Imminent Danger situation. The responsibility for the repair of the cause of the Imminent Danger shall be governed by the DBFO Agreement and the other applicable provisions of the Technical Requirements.

For the purposes of this section, "**Imminent Danger**" refers to a safety hazard that may be encountered by any user of the Infrastructure due to a collision, condition or any other abnormal occurrence on the Infrastructure. For further clarification, an "**Imminent Danger**" may or may not correspond to a need for "emergency maintenance activities" under Section 400.2.2 (Emergency Maintenance).

#### **3.16** Lane Closure (Section 400.1.6)

Subject to the Excepted Lane Closures, for every full or partial hour of Lane Closure (as defined below) occurrence anywhere on the Infrastructure, the Contractor shall be assessed a Payment Adjustment at the applicable lane closure rate. The length of the Lane Closure for determination of Lane Closure Payment Adjustments shall be rounded up to the next higher whole kilometre.

For planned maintenance and rehabilitation activities on roadways or bridge structures that have two lanes in each direction, the Contractor must have at least one lane open to traffic in each direction at all times.

For planned maintenance and rehabilitation activities on roadways or bridge structures that have three-lanes or four-lanes in each direction, the Contractor must have at least two adjacent lanes open to traffic in each direction at all times. The Department may, by prior written approval, permit an exception in the interest of safety.

The right of the Contractor to do Lane Closures and incur Lane Closure Payment Adjustments is subject always to the paramount requirements set out in the first paragraph of this Section 400.1.6 and the above two paragraphs. Lane Closure Payment Adjustments are as follows:

Type	Timing/Duration	Rate
Peak Hours* - Weekdays	0600 to 0900 and 1530 to	\$520/hr/lane-km
	1800 hrs	
Day – Weekdays	0900 to 1530 hrs	\$220/hr/lane-km
Day - Weekends and	0600 to 1800 hrs	\$220/hr/lane-km
Statutory Holidays		
Evening	1800 to 2200 hrs	\$160/hr/lane-km
Night	2200 to 0600 hrs	No Charge

<sup>\*</sup> A Lane Closure for planned operational purposes may not be started during Peak Hours.

#### A "**Lane Closure**" is defined as:

- Any partial or complete closure of a traffic lane; or
- Any reduction of posted speed to less than 75% of the normal posted speed prior to construction impacting any through lane, merge lane or ramp, C-D road, turn lane, crossroad, bridge structure, detour or other road forming a part of or connected to the Infrastructure.

## Conclusion of Lane Closure is defined as:

- Continuous, smooth, paved intact travel surface;
- Traffic control removed and traffic fully restored; and
- Cause of closure has been removed and all safety requirements have been satisfied.

#### 3.17 In-Service Safety Review (New Infrastructure Only) (Section 400.1.7)

If the minor operational recommendations from the In-Service Safety Review are not implemented within the specified time by the Contractor, a Payment Adjustment of \$1,500/week or any partial week, for the first four weeks and \$3,000/week or any partial week, thereafter shall apply until all of the minor operational recommendations are implemented.

## 3.18 Roadway Inspections, Emergency and Routine Maintenance (Section 400.2.5)

If the roadway inspection, emergency maintenance and routine maintenance are not completed within the required time period on the Infrastructure, the Contractor shall be assessed the following Payment Adjustments.

In this section, "occurrence" refers to an occurrence anywhere on the Infrastructure.

If the Contractor fails to undertake the roadway inspections, Payment Adjustments shall be made as follows. The number of occurrences of non-conformance shall be determined for a consecutive 12 month period.

- \$3,000 for the first occurrence;
- \$6,000 for the second occurrence;
- \$12,000 for the third occurrence; and
- \$24,000 for the fourth occurrence and each occurrence thereafter.

If the Contractor fails to undertake routine maintenance in any consecutive 12 month period, Payment Adjustments shall be made as follows:

- \$6,000 for the first occurrence;
- \$12,000 for the second occurrence;
- \$24,000 for the third occurrence, and each occurrence thereafter.

If the Contractor fails to undertake emergency maintenance in any consecutive 12 month period, Payment Adjustments shall be made as follows:

- \$25,000 for the first occurrence;
- \$50,000 for the second occurrence; and
- The third occurrence shall be a potential Termination Event for the purposes of and having the consequences set out in section 16.8(k) of the DBFO Agreement.

The Department shall notify the Contractor after the first and second occurrence of non-compliance with an emergency maintenance performance requirement in any consecutive 12 month period.

## 3.19 Snow Clearing and Ice Control Operations (Section 400.3.3.3)

When the Contractor is non-compliant, Payment Adjustments shall be made as follows:

- \$15,000 for each occurrence of non-compliance during a Storm Event or a Severe Storm Event (to a maximum of \$90,000 total for the Infrastructure);
- \$30,000 for each occurrence of non-compliance during a subsequent Storm Event or a Severe Storm Event in any consecutive 12 month period (to a maximum of \$180,000 total for the Infrastructure); and

• The third occurrence of any non-compliance within a consecutive 12 month period but in a separate third Storm Event/Severe Storm Event shall be a potential Termination Event for the purposes of and having the consequences set out in section 16.8(k) of the DBFO Agreement.

The number of occurrences of non-conformance shall be determined for a consecutive 12 month period.

The Department shall notify the Contractor after the first and second occurrences of non-compliance in any consecutive 12 month period. In this section, "occurrence" refers to an occurrence anywhere on the Infrastructure.

## 3.20 Preferential Bridge Deck Icing (Section 400.3.4)

The Contractor shall implement and carry out the Preferential Bridge Deck Icing Plan (see Section 100.2.9 (Operation and Maintenance Plan)). For the purposes of the Technical Requirements, "**preferential bridge deck icing**" shall mean ice formation within the driving lanes of a bridge deck during a weather circumstance when ice formation within the driving lanes of the roadway leading to and from such bridge deck is not occurring.

## (a) Measuring for Compliance

The Contractor shall monitor its performance relative to the Preferential Bridge Deck Icing Plan and record all occurrences of preferential bridge deck icing and response times in a maintenance management record which shall be provided to the Department on a monthly basis.

## (b) Non-Compliance

The Contractor shall be in non-compliance under this Section 400.3.4.2 if preferential bridge deck icing is observed within any of the driving lanes on any of the PBD Bridges (as defined in Section 200.2.16 (Preferential Bridge Deck Icing)) and either:

- such icing has occurred as the result of the Contractor's failure to comply with the current Preferential Bridge Deck Icing Plan; or
- upon becoming aware of such preferential bridge deck icing, the Contractor fails to immediately mobilize in order to reasonably minimize such preferential bridge deck icing; or
- preferential bridge deck icing has previously occurred on any of the PBD Bridges under the same Preferential Bridge Deck Icing Plan during a prior distinct weather circumstance occurring in the prior 12 month period,

(each a "Preferential Bridge Deck Icing Non-Compliance Event").

## (c) Payment Adjustments

When the Contractor is non-compliant pursuant to Section 400.3.4.2 (Non-Compliance), Payment Adjustments shall be made as follows:

- \$15,000 for each occurrence of a Preferential Bridge Deck Icing Non-Compliance Event during a distinct weather circumstance (to a maximum of \$90,000 total for the Infrastructure) (the "**First Set of Occurrences**");
- \$30,000 for each occurrence of a Preferential Bridge Deck Icing Non-Compliance Event following the First Set of Occurrences during a subsequent but separate and distinct weather circumstance in any consecutive 12 month period (to a maximum of \$180,000 total for the Infrastructure) (the "Second Set of Occurrences"); and
- The third occurrence of any Preferential Bridge Deck Icing Non-Compliance Event within a consecutive 12 month period but during a separate and distinct weather circumstance shall be a potential Termination Event for the purposes of and having the consequences set out in section 16.8(k) of the DBFO Agreement.

The number of occurrences of non-compliance shall be determined for a consecutive 12 month period.

The Department shall notify the Contractor after the First Set of Occurrences and the Second Set of Occurrences in any consecutive 12 month period. In this section, "occurrence" refers to an occurrence anywhere on the Infrastructure.

# 3.21 Pavement Geometric Requirements (New Infrastructure Only) (Section 400.4.2.4)

Payment Adjustments shall be assessed on a \$/lane-km basis for cross-slope and superelevation rate measurement. Pavement width Payment Adjustments shall be assessed on a \$/km basis for width variations. Payment Adjustments shall apply to full or partial kilometres and full or partial weeks and shall be assessed until the deficiency is corrected.

Payment Adjustments:

#### (a) Cross-Slope and Superelevation:

If following construction and prior to the New Infrastructure being opened for use by the public, the roadway superelevation and cross-slope rates are measured and are found not to be maintained within  $\pm 0.35\%$  of the design rates then the New Infrastructure shall not be opened for use by the public and no Payment shall be paid until such time as the deficiency is corrected.

If during the PNI Operating Period or the Operating Period, as applicable, the roadway superelevation and cross-slope rates are measured and are found not to be maintained within  $\pm 1.0\%$  of the design rates then the following Payment Adjustments will apply:

- \$4,500/week or any partial week, for the first four weeks the deficiency is not remedied; then
- \$13,500/week or any partial week, thereafter.

Percentages refer to a numeric deviation from the designed percentage and not to a percentage deviation. This means that if the designed percentage is 6% the deviation referred to in the pre-public use scenario is > 5.65% and < 6.35%; and the deviation referred to in the operations scenario is > 5.0% and < 7.0%.

## (b) Pavement Width Less than Design Width (Mainline):

If following construction and prior to the New Infrastructure being opened for use by the public, the Mainline pavement surface width is measured and is found to be up to 0.35 m narrower than the design width then any Payment shall be reduced by an amount equal to the length of the non-conforming roadway, rounded to the next highest kilometre, multiplied by \$120,000/km.

If following construction and prior to the New Infrastructure being opened for use by the public, the Mainline pavement surface width is measured and is found to be more than 0.35 m narrower than the design width then the New Infrastructure shall not be opened for use by the public and no Payment shall be paid until such time as the deficiency is corrected.

If after final-stage paving or pavement rehabilitation, the Mainline pavement surface width is measured and is found to be up to 0.35 m narrower than the design width then there shall be a Payment Adjustment equal to the length of the non-conforming roadway, rounded to the next highest kilometre, multiplied by \$120,000/km. Payment Adjustments for the same section of non-conforming roadway will be applied once following construction and again following each paving opportunity (i.e. final-stage paving or pavement rehabilitation, including overlay and/or mill and replace).

If after pavement rehabilitation, the Mainline pavement surface is measured and is found to be more than 0.35 m narrower than the design width then the Contractor must repair the deficiency within the timeframes specified in Section 400.4.1.2 (Completing Repairs). A failure to repair such deficiencies shall be a potential Termination Event for the purposes of and having the consequences set out in section 16.8(k) of the DBFO Agreement.

# (c) Pavement Width Less than Design Width (C-D Roads, Ramps and Crossroads):

If following construction and prior to the New Infrastructure being opened for use by the public, the pavement surface width on C-D roads, ramps or crossroads is measured and is found to be less than the design width then the New Infrastructure shall not be opened for use by the public and no Payment shall be paid until such time as the deficiency is corrected.

If after pavement rehabilitation, the pavement surface width on C-D roads, ramps or crossroads is measured and is found to be less than the design width then the Contractor must repair the deficiency within the timeframes specified in Section 400.4.1.2 (Completing Repairs). A failure to repair such deficiencies shall be a potential Termination Event for the purposes of and having the consequences set out in section 16.8(k) of the DBFO Agreement.

## 3.22 Smoothness Requirements (New Infrastructure Only) (Section 400.4.3.2)

If the repairs are not completed within the applicable specified time period in Section 400.4.1.2 (Completing Repairs), the Contractor shall be assessed the following Payment Adjustments. The Payment Adjustment shall apply to full or partial lane-kilometres and 100 m sections, as applicable, and will be assessed until the deficiency is corrected.

## Payment Adjustments:

Deviation Above Specified Maximum IRI Values as listed in Section 400.4.3 and measured on a 1 lane-km interval:

<sup>1</sup> Deviation Above Specified Maximum IRI Value (mm/m)	Payment Adjustment (\$/lane km)		
1. After Initial Construction			
Average IRI is less than (Specified Maximum IRI)	No Payment Adjustment. Roadway may be opened.		
Average IRI is equal to or greater than (Specified Maximum IRI) and less than (Specified Maximum IRI + 1.0)	Roadway may open, however repairs and Payment Adjustments to apply. \$4,500/week or any partial week, for first 4 weeks, then \$13,500/week or any partial week, thereafter		
Average IRI is equal to or greater than (Specified Maximum IRI +1.0)	No Payment Adjustment. Cannot open roadway.		
2. During Operating Period			
Average IRI is greater than (Specified Maximum IRI + 0.3)	\$4,500/week or any partial week, for first 4 weeks, then \$13,500/week or any partial week, thereafter		

Note <sup>1</sup> Deviation refers to the numeric difference from the specified IRI value, i.e. if the design speed was 110 kph the roadway must be maintained at an IRI of less than 2.0 mm/m. If the measured IRI during the PNI Operating Period or the Operating Period, as applicable, was greater than 2.3, then a Payment Adjustment would apply.

Deviation Above Specified Maximum IRI Value as listed in Section 400.4.3 and measured on a 100-metre lane interval:

Deviation Above Specified Maximum IRI Value (mm/m)	Payment Adjustment (\$/100 m lane section)		
1. After Initial Construction			
Average IRI is equal to or less than (Specified Maximum IRI )	No Payment Adjustment. Roadway may be opened.		
Average IRI is greater than (Specified Maximum IRI) and less than or equal to (Specified Maximum IRI + 1.0).	Roadway may open, however repairs and Payment Adjustments to apply. \$4,500/week or any partial week, for first 4 weeks, then \$13,500/week or any partial week, thereafter		
Average IRI is greater than (Specified Maximum IRI + 1.0)	No Payment Adjustment. Cannot open roadway.		
2. During Operating Period			
Average IRI is greater than (Specified Maximum IRI + 0.3)	\$4,500/week or any partial week, for first 4 weeks, then \$13,500/week or any partial week, thereafter		

Payment Adjustments for lane-km averages are based on the average of both wheel path test results and Payment Adjustments shall apply to full or partial lane-kilometres. The Payment Adjustment assessment for individual 100 m sections shall be based on the average of both wheel path test results and Payment Adjustments shall apply to each 100 m section of non-compliance.

## 3.23 Rutting Performance Requirements (New Infrastructure Only) (Section 400.4.4.2)

If the repairs are not completed within the applicable specified time period, Section 400.4.1.2 (Completing Repairs), the Contractor shall be assessed a Payment Adjustment. The \$/lane-km value shall apply to full or partial kilometres and shall be assessed until the deficiency is corrected.

## Payment Adjustments:

Average Rut Depth (mm)(1 km average)	\$/lane-km	Average Rut Depth (mm) (100 m section)	\$/Lane 100 m Section	Rut Depth (mm) (Isolated Deficiency)	\$/Isolated Deficiency
After initial construction >4	No payment, cannot open roadway	After initial construction >4	No payment, cannot open roadway	After initial construction >4	No payment, cannot open roadway

During	\$4,500/ week	During	\$4,500/week	During	\$3,000/week or
operations	or any partial	operations >19 -	or any partial	operations >29	any partial
>14 - must fix	week, for first	must fix within	week, for first	- must fix	week, for first
within	four weeks,	specified time	four weeks,	within	four weeks,
specified time	then	period	then	specified time	then
period	\$13,500/week		\$13,500/week	period	\$9,000/week or
	or any partial		or any partial		any partial
	week,		week,		week, thereafter
	thereafter		thereafter		

Payment Adjustments for lane-km averages are based on both wheel path test results. The Payment Adjustment for individual 100 m sections applies to the average of both wheel paths except that isolated sections shall be based on individual wheel paths and can result in a Payment Adjustment based on both wheel paths at the same station location. The Payment Adjustment for 100 m sections applies to each 100 m section of noncompliance.

## 3.24 Skid Resistance Requirements (New Infrastructure Only) (Section 400.4.5.3)

If the repairs are not completed within the applicable specified time period, the Contractor shall be assessed a Payment Adjustment. The \$/lane-km value shall apply to full or partial kilometres and will be assessed until the deficiency is corrected.

Skid Resistance	\$/Deficiency
During operations IFI<30 – must fix	\$4,500/lane-km/week or any partial week, for
within specified time period	first four weeks, then \$13,500/lane-km/week
	or any partial week.

## **3.25** General Pavement Maintenance Requirements (Section 400.4.6.7)

If repairs, permanent or otherwise, are not completed within the stipulated time period, the Contractor shall be assessed Payment Adjustments at a rate of \$750/required repair for each seven day period or any partial week, until the deficiency is corrected.

For the Existing Infrastructure only, if the annual crack sealing programs are not completed by August 31<sup>st</sup> each year, the Contractor shall be assessed a Payment Adjustment of \$2,500/km or any partial km, of single direction unsealed mainline, C-D road, ramp or crossroad/month or portion thereof, until the annual programs are completed.

#### **3.26** Delineators (Section 400.4.7.1.3)

Payment Adjustments shall be assessed against the Contractor for each delineator which does not comply with the requirements of this Section 400.4.7.1 (Delineators) within the stipulated time period at a rate of \$30/delineator/day or any partial day, until made to comply.

## **3.27 Roadway Lighting (Section 400.4.7.2.3)**

The Contractor shall be assessed Payment Adjustments for failing to adjust, maintain, repair/replace lamps or components of the roadway lighting system within the time stipulated in Section 400.4.7.2.2 as follows:

- Lamp repair/replacement, \$150/lamp/day or any partial day, that the lamp remains in need of repair/replacement; and
- Repair or adjustment of any pole, base or other lighting system component, \$150/component/day or any partial day, that the component needs adjustment.

## 3.28 Barriers and Guardrail (Section 400.4.7.3.3)

Following the expiration of the specified time-frame for completing repairs, or in the case where temporary repairs have been in-place until weather permits repairs to be more reasonably undertaken, a Payment Adjustment of \$275/metre/day or any partial day, of non-compliant barrier or guardrail shall be assessed until the repairs are completed.

## 3.29 Grass Cutting and Landscape Maintenance (Section 400.4.7.4.5)

Payment Adjustments shall be assessed against the Contractor on the following basis:

• Grass or weeds in excess of the specified maximum height, \$500/hectare or any partial hectare/month or any partial month, for any portion of a hectare that fails to meet these requirements.

#### 3.30 Litter and Graffiti Clean Up (Section 400.4.7.5.3)

If the Contractor is determined to be non-compliant, a Payment Adjustment of \$400/day, or any partial day, shall be assessed for each and every occurrence of non-compliance. An occurrence is any single or multiple non-compliance. Payment Adjustments for litter or graffiti clean-up are cumulative but shall not exceed \$800/day. The Payment Adjustment shall be assessed for each day, or portion thereof, until the clean-up is completed.

#### **3.31 Drainage Systems (Section 400.4.7.6.3)**

The ponding of water on the road surface at any time is not acceptable. For each and every case in which ponded water remains on the road surface for greater than 60 minutes, the Contractor shall be assessed a Payment Adjustment per day, or portion thereof, until the water is removed and the cause of the ponding is rectified.

For paved areas with ponds less than or equal to 4 m<sup>2</sup> the Payment Adjustment shall be \$1,500/pond/day or any partial day. For paved areas with ponds in excess of 4 m<sup>2</sup> a Payment Adjustment of \$7,500/pond/day or any partial day, shall be made.

If any gate, actuator, wireless modem or other component of the control systems that are part of the spill control system of the stormwater management infrastructure related to the Elbow River stormwater ponds is deficient in its function, or if the Contractor's monthly inspection identifies a deficiency in any gate, actuator, wireless modem or other component of the spill control system, the Contractor shall rectify the deficiency immediately or Payment Adjustments of \$5,000/day or any partial day, for each deficiency, shall be assessed until the deficiency is repaired.

If erosion of lands occurs, the Contractor shall be assessed a Payment Adjustment if it is not repaired, and the cause rectified within one week of the time of the Contractor becoming aware or should have been aware of the deficiency, of \$700/day or any partial day, until repairs are complete.

For all other drainage system deficiencies, the Contractor shall complete the necessary repairs within the stipulated time period or be assessed a Payment Adjustment of \$150/day or any partial day, for each deficiency, until the deficiency is repaired.

#### **3.32** Curb and Gutter (Section 400.4.7.7.3)

Payment Adjustments for each instance where a curb and gutter section does not conform to the Technical Requirements, and is not repaired within the stipulated time period, shall be \$1,500/occurrence/day or any partial day, until rectified.

## 3.33 Sidewalks, Walks, Pedestrian Walks and Multi-use Trails (Section 400.4.7.8.3)

Payment Adjustments for each instance where Walkways do not conform to the Technical Requirements, shall be \$1,500/occurrence/month or any partial month, until rectified.

## 3.34 Subgrade Sideslopes and Backslopes (New Infrastructure Only) (Section 400.4.7.9.3)

Payment Adjustments for each instance when where the sideslope and backslope does not conform to the requirements herein, shall be \$1,500/occurrence/week or any partial week, for deficiencies located within the clear zone and \$1,500/occurrence/month or any partial month, for other deficiencies.

#### 3.35 Signs (Section 400.4.8.1.3)

Payment Adjustments shall be assessed against the Contractor for failing to maintain, repair/replace signs within the stipulated time as follows:

• General maintenance - \$150/sign/week for any whole or partial week the sign remains in need of maintenance;

- Repair or replacement of regulatory signs \$1,500/sign/day or any partial day, until rectified;
- Repair or replacement of information signs < 1 m<sup>2</sup> or failure to remove an unauthorized sign \$150/sign/day or any partial day, until rectified; and
- Repair or replacement of information signs  $\geq 1 \text{ m}^2$  \$400/sign/day or any partial day, until rectified.

## **3.36** Traffic Signal (Section 400.4.8.2.3)

Any period when the traffic signals are not fully functional, for any reason whatsoever, including power failure under the Contractor's control, shall result in a Payment Adjustment, following the expiration of the specified time period for completing the specific repair, in accordance with the following:

- First occurrence of a non-functioning signal location \$750/hour or any partial hour, until rectified;
- First occurrence of non-functioning bulb or colour display (maximum of one at a signal location) \$150/day or any partial day, until rectified;
- First occurrence of non-functioning bulb or colour display (2 to 4 non-functioning lights or colour displays (provided no non-functioning two bulbs or colour display of the same type affects traffic in any single direction)) \$300/day or any partial day, until rectified;
- First occurrence of mis-aligned signal pole \$150/day or any partial day, until rectified: and
- Each occurrence to remediate corrosion within the specified time \$150/occurrence/month or any partial month, until rectified.

Payment Adjustments for further occurrences of non-compliance following the first occurrence shall be twice the value shown above for each and every such further occurrence. In this section, "occurrence" refers to an occurrence anywhere on the Infrastructure.

The number of occurrences of non-compliance shall be determined for a consecutive 12 month period.

## **3.37** Pavement Markings – (Section 400.4.8.3.3)

If temporary markings are not installed within the time period specified, Payment Adjustments in the amount of \$7,500 per line/marking per km or any partial km, per day or any partial day, shall be assessed until the temporary markings are installed.

If the permanent markings to replace temporary markings are not installed to the required standard within the stipulated time period, Payment Adjustments in the amount of \$150 per line/marking per km or any partial km, per day or any partial day, shall be assessed to the Contractor until the repairs are made.

If minimum retroreflectivity as specified in Section 400.4.8.3 is not achieved, Payment Adjustments in the amount of \$150 per line/marking per km or any partial km, per week or any partial week, shall be assessed until the minimum retroreflectivity is achieved

If non-compliant markings are not re-installed to the required standard within the stipulated time period, Payment Adjustments of \$150 per marking/day or any partial day, shall be assessed until the markings are re-installed.

If incorrect or confusing markings are not removed within seven days, Payment Adjustments in the amount of \$150/marking/day or any partial day, shall be assessed to the Contractor until the repairs are made.

## 3.38 Road Traffic Noise Mitigation (New Infrastructure Only)(Section 400.4.9.3)

Subject to the second sentence of Section 400.4.9 (Road Traffic Noise Mitigation), if the Contractor fails to implement repairs to attain compliance within the stipulated time period, the Contractor shall be assessed a Payment Adjustment as set out below until repaired.

For the first 180 days, the Payment Adjustment shall be \$75,000/30 day period or any partial 30 day period, for each km of roadway or any partial km, which exceeds the noise level.

Following the 180 day period, a Payment Adjustment of \$150,000/30 day period or any partial 30 day period, for each km of roadway or any partial km, shall be assessed.

If within 360 days of the time period stipulated for completing repairs, the Contractor has not completed repairs to result in compliance, the Department may undertake the construction of sound attenuating works and deduct the costs, plus a 25% administration fee, from Payments to be made to the Contractor.

The Contractor's responsibility for noise mitigation applies to and includes Mainline AADT volumes of 167,000 vehicles per day. AADT volumes shall be determined in accordance with Section 200.3.1 (Traffic Volume Payment Adjustments).

If the Contractor fails to conduct a noise assessment using an independent, qualified noise consultant within one year of receiving a noise complaint, a Payment Adjustment of \$5,000 per month or any partial month until the noise assessment is completed will apply.

## 3.39 Testing Conducted with an Inertial Profiler (Existing Infrastructure Only) (Section 400.4.10.2)

If the field measurements are not collected within the same week of the year in each testing year, the Contractor shall be assessed Payment Adjustments at a rate of \$2,500/week or any partial week, for each week in which the field measurements vary from the required week.

If the profile measurements and IRI post-processing is not submitted within the stipulated time period, the Contractor shall be assessed Payment Adjustments at a rate of \$750/week or any partial week, for each week that the information is not submitted.

## 3.40 Performance Compliance Inspection and Testing (Section 400.5.1.3.6)

In the event the Contractor fails to complete the scheduled inspection and testing requirements, including the submission of inspection results to the Department, the Department shall assess the following Payment Adjustments for late submission of inspection results:

- \$15,000/bridge/month or any partial month, for routine Level 1 inspections until submitted:
- \$30,000/bridge/year or any partial year, specialized Level 2 inspections until submitted.

## 3.41 Bridge Maintenance and Operations (Section 400.5.2.5)

In the event the Contractor fails to meet the specified schedule for preventative maintenance actions or satisfactory repair and remediation of identified deficiencies, the Department shall assess the following Payment Adjustments:

### (a) Structural and Operational (New Infrastructure Only) (Section 400.5.2.5.1)

In the event the Contractor fails to commence work within 60 days of identification of a structural or operational deficiency, a Payment Adjustment of \$1,500/day or any partial day, per deficiency shall be assessed until the Contractor commences and diligently pursues completion of the work.

For deficiencies where the Department has extended the required time period for commencement of work to 180 days, a Payment Adjustment of \$1,500/day or any partial day, per deficiency if the Contractor fails to commence work within 180 days of being notified of the deficiency and shall be assessed until the Contractor commences and diligently pursues completion of the work.

#### (b) Standard Maintenance (New Infrastructure Only) (Section 400.5.2.5.2)

In the event the Contractor fails to complete work within 20 months of a standard maintenance deficiency being identified, a Payment Adjustment of \$7,500/month or any partial month, per deficiency shall be assessed until the Contractor completes the work.

#### (c) Preventative Bridge Structures Maintenance (Section 400.5.2.5.3)

In the event the Contractor fails to complete the scheduled preventative bridge structures maintenance (see Section 400.5.2.4), with the exception of annual bridge washings within the year scheduled, a Payment Adjustment of \$7,500/bridge/month or any partial month, shall be assessed until the Contractor completes the work.

In the event the Contractor fails to complete the annual bridge washings by June 1<sup>st</sup> of the year scheduled, a Payment Adjustment of \$7,500/bridge/month or any partial month, shall be assessed until the Contractor completes the work.

# 4. MAIN BODY DBFO AGREEMENT PAYMENT ADJUSTMENTS (Section 5.17 of the DBFO Agreement)

Notwithstanding the previous paragraph, and in addition to the rights of the Province under the previous paragraph, the Province shall be entitled to a Payment Adjustment in the sum of \$2,500 per day for each day or partial day after the Construction Completion Deadline that Construction Completion has not been achieved.