



TENDER DOCUMENT

APRON I & IV REHABILITATION

SASKATOON AIRPORT AUTHORITY

July 2019
ISSUED FOR TENDER

SASKATOON AIRPORT AUTHORITY TENDER DOCUMENT

APRON I & IV REHABILITATION

Prepared For:

Saskatoon Airport Authority

Prepared By:

Avia NG Inc.

Revision	0	July 2019
Prepared By:	Jeffrey Lo, P.Eng.	
Reviewed By:	James Gunn, P.Eng.	

INVITATION TO TENDER
SASKATOON INTERNATIONAL AIRPORT
APRON I & IV REHABILITATION

Qualified Contractors are hereby invited to submit a tender to undertake the Apron I & IV Rehabilitation Project at the Saskatoon International Airport. Tenders, on supplied forms, will be received at the **Saskatoon Airport Authority (Suite #1 – 2625 Airport Drive, Saskatoon, SK Canada S7L 7L1)** until **2:00pm on August 13, 2019, local time.**

The work generally involves rehabilitation on Apron I & IV. The work on Apron I includes repairs to the existing pavement and installing a new subdrain. The work on Apron IV includes mill and pave of the existing concrete. The work is scheduled to begin in **as soon as possible, and no later than September 3, 2019.**

Plans, specifications and tender forms may be obtained by prospective bidders the Skyxe website on the Business Opportunities & Service Information webpage located at <https://skyxe.ca/en-us/about-us/business-opportunities-service-information>. Tender documents are available as of July 30, 2019.

A Bid Bond, Certified Cheque, or Irrevocable Letter of Credit in the amount of 10% of the tender amount and an Agreement to Bond must accompany each Tender. The successful Tenderer will be required to provide a 50% Performance Bond and a 50% Labour and Material Payment Bond upon execution of the Contract.

There will be **NO PRE-BID MEETING**. Prospective bidders may request escorted site visits.

Tender Closing Date: AUGUST 13, 2019, AT 2:00 P.M. LOCAL TIME.

The lowest or any Tender will not necessarily be accepted. Tenders submitted will be opened privately. All inquiries and questions shall be submitted no later than August 6, 2019, and referred to the following persons by email only.

Eric Desnoyers, Manager of Facilities
Saskatoon Airport Authority
Tel: 306.491.2185
Email: edesnoyers@skyxe.ca

James Gunn, P. Eng.
Senior Project Manager
Avia NG Inc.
Tel: 403-992-0262
Email: james.gunn@aviang.ca

----- **END OF SECTION 00 00 00** -----

SECTION TITLE

BIDDING AND CONTRACT REQUIREMENTS

00 00 00	Invitation to Tender
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00 33 00	Form of Tender - Unit Price
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01 15 00	Weigh Scales
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DIVISION 31 - EARTHWORK

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31 22 14	Airfield Grading
31 23 33.01	Excavating, Trenching, and Backfilling
31 32 19.01	Geotextiles

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----- **END OF SECTION 00 01 00** -----

1.0 GENERAL

The project is located at the Saskatoon John G Diefenbaker International Airport in Saskatoon, Saskatchewan. The work proposed under this tender involves rehabilitation of the existing airfield pavements and new subdrain for Apron I.

For Apron I, the pavement rehabilitation generally involves removal of the existing asphalt pavement, installing new subdrain, adding new granular subbase and base material, paving new Hot Mix Asphalt Concrete and reinstating pavement line markings. For Apron IV, the pavement rehabilitation generally involves milling existing concrete, repaving with new Hot Mix Asphalt Concrete, and reinstating pavement line markings.

Work is proposed to be completed while the airport is operational, therefore the Contractor is expected to provide sufficient manpower and equipment and schedule the work such that construction is completed within the provided duration from the given starting date.

2.0 LIST OF DRAWINGS

DWG NO.	DRAWING NAME	REV	REV. DATE
000	Cover Sheet – Title Page	0	2019.07.29
G001	Site Plan	0	2019.07.29
G100	Construction Staging and PCO – Stage 1	0	2019.07.29
G101	Construction Staging and PCO – Stage 2	0	2019.07.29
C100	Existing Conditions and Removals	0	2019.07.29
C100	Proposed Layout and Grading Plan	0	2019.07.29
G200	Details	0	2019.07.29

----- **END OF SECTION 00 05 00** -----

- 1.0 GENERAL DEFINITIONS (Refer also to GC 00 70 00 for additional definitions):
- 1.1 **Contract Documents:** mean the executed Agreement between the Owner and the Contractor, the General Conditions of the Unit Price Contract, Form of Tender - Unit Price, Supplementary Tender Information, specifications, drawings and such other documents as listed in the Form of Agreement including amendments thereto incorporated before the execution of the Contract and subsequent amendments thereto made pursuant to the provisions of the Contract and agreed upon between parties.
 - 1.2 **Bid Documents:** mean Contract Documents as defined above supplemented with Information to Tenderer's and bid securities and other documents attached hereto for the purpose of bidding.
 - 1.3 **Net Amount:** means the sum named in the Form of Tender - Unit Price, excluding PST or GST as applicable.
 - 1.4 **Tender Price:** means the sum named in the Form of Tender - Unit Price including PST or GST as applicable.
 - 1.5 **The term ENGINEER or CONSULTANT:** shall mean the engineering firm as may from time to time be duly authorized and appointed in writing by the Owner to act for the purposes of this tender within the authority and responsibility defined in consultant agreements.
 - 1.6 **The Owner, Saskatoon Airport Authority:** means the Owner. The terms "The Owner" may be used interchangeably with the "The Owner" or "Owner".
 - 1.7 **Contract Price:** as defined under GC1, Section 00 70 00.
- 2.0 A COMPLETE TENDER IS COMPRISED OF THE FOLLOWING:
- 2.1 **Sections 00 33 00 and 00 40 00** with all pages and spaces for entry of information by Tenderers filled in as instructed and with all pages initialled by the Tenderer except those requiring signatures;
 - 2.2 **Addenda** received by the Tenderer during the Tendering period with each page, sheet or sketch initialled by the Tenderer;
 - 2.3 **Tender/Bid Security;**
 - 2.4 **An Agreement to Bond**, executed under its corporate seal, by the surety company from which the Tenderer proposes to obtain the required bond for 50% Performance and the bond for 50% Labour and Material Payment.
 - 2.5 **Any and all other requirements as outlined within these documents.** Tenderers are solely responsible for the delivery of their bids in accordance with the instructions herein, and for ensuring that all work is taken into account when submitting a Tender.
 - 2.6 A Tender shall be sealed in a package bearing no mark from which the identity of the Tenderer can be ascertained. Incomplete tenders may be disqualified.

3.0 THE TENDER PACKAGE SHALL BE ENDORSED:

**Tender for: SASKATOON AIRPORT AUTHORITY
APRON I & IV REHABILITATION**

and shall be addressed to the Owner:

Saskatoon Airport Authority
Suite #1-2625 Airport Drive Saskatoon, SK Canada S7L 7L1

and must be delivered by 2:00 p.m. local time on August 13, 2019 hereinafter referred to as the closing date.

The Saskatoon Airport Authority reserves the right to extend the tender closing date by up to forty-eight (48) hours at its sole discretion without notification.

4.0 INFORMATION CONCERNING CONDITIONS OF THE WORK:

- 4.1 Tenderers shall carefully examine the contract documents and the worksite, and shall fully inform themselves as to all existing conditions and limitations which will affect the execution of the contract including labour conditions and labour rules and shall not claim at anytime after the execution of the Contract that there was any misunderstanding in regard to such conditions.
- 4.2 In preparation of a tender, tenderers shall use only those drawings listed in the contract documents that are clearly labelled "Issued for Tender". Tenderers shall not rely on any documents that are not so labelled.
- 4.3 Discussions at tender briefings or other oral discussions shall not become a part of the contract documents nor modify the contract documents unless confirmed by addenda issued to all tenderers before closing.
- 4.4 There will be no scheduled pre-bid meeting. **Tenderers are encouraged to request an optional escorted site tour** to review site conditions to occur no later than August 9, 2019.
- 4.4.1 To arrange a site tour, contact Eric Desnoyers at 306.491.2185 with a minimum of two (2) business days notice. Dates and times are subject to staff availability.
- 4.4.2 A maximum of three (3) persons may be accommodated on a site tour. High visibility PPE and photo identification are required for all persons attending. Maximum tour duration is ninety (90) minutes.
- 4.4.3 No questions or queries will be answered during the site tour.

When forming their estimates and preparing their tenders, Tenderers shall take full cognizance of the content of all the various documents which will comprise the Contract.

5.0 ADDENDA

- 5.1 If there are to be any changes in the work, tenderers will be informed, prior to the close of the period allowed for receiving tenders, by means of an addendum, a written communication

issued by the owner. All addenda shall become a part of the contract documents, and receipt of addenda shall be acknowledged by the tenderer in the tender.

- 5.2 Any ambiguities, inconsistencies, or uncertainties in the contract documents which may become apparent to tenderers when tendering shall be advised in writing to the consultant, Avia NG Inc. The consultant will advise all tenderers simultaneously of any decisions on such matters as necessary by means of addenda (which will be serially numbered) and all addenda issued shall be incorporated in the tender.
- 5.3 Addenda will not be issued later than two (2) calendar days before the tender closing date.
- 6.0 TENDER SUBMISSION REQUIREMENTS:
- 6.1 An Agreement to Bond, executed under its corporate seal, by the surety company from which the Tenderer proposes to obtain the required bond for 50% Performance and the bond for 50% Labour and Material Payment.
- 6.2 Completed Section 00 40 00 – Supplementary Tender Information.
- 6.3 And other information as required by this tender document.
- 7.0 AMENDMENT OR WITHDRAWAL OF TENDER:
- 7.1 Tenders may be amended or withdrawn by letter, or facsimile prior to date and time of closing. Amendment of individual unit prices is the only acceptable price amendment. Amendments shall not disclose either original or revised total price.
- 7.2 Head amendment or withdrawal as follows: "[amendment]/[withdrawal] of tender for SASKATOON INTERNATIONAL AIRPORT – APRON I & IV REHABILITATION". Sign and seal as required for tender, and submit at address given for receipt of tenders prior to time of tender closing.
- 7.3 Proof of receipt of the written notice will be an acknowledgment by return email or facsimile by the Owner.
- 7.4 After tenders have been opened, no changes, additions, or deletions to any tender, except those specifically provided for in the tendering conditions shall be made either by or on behalf of the Owner, or by or on behalf of the Tenderer.
- 8.0 DISCREPANCIES, OMISSIONS AND CONSTRUCTABILITY:
- 8.1 If a Tenderer finds discrepancies or errors or omissions in the drawings, specifications, or other documents or has any doubt as to the meaning or intent of any part thereof, he shall at once inform the Owner. Any necessary changes, or additions, or further explanations, will be made by the Owner by issuing an addendum.
- 8.2 Every request for an interpretation shall be made in writing, and forwarded to the address given on the invitation to tender. Oral discussions, unless confirmed in writing in an addendum, shall not modify the contract documents or the tendering procedure.
- 8.3 The tenderer is responsible for gaining an understanding of the intent of the design as conveyed

by the contract documents, adequate to allow the Tenderer to prepare a valid tender. The Tenderer shall be responsible for determining that the work is constructible in accordance with the intent of the design.

9.0 REQUESTS FOR REVIEW OF EQUIVALENT ALTERNATIVES

- 9.1 The Tenderer shall submit any requests for review of equivalent alternatives to the Owner at least five (5) days prior to the tender closing date.
- 9.2 Requests for consideration of alternative product shall be submitted in writing and directed to the Owner, and shall contain pertinent data such as construction and operation characteristics.
- 9.3 The Owner may allow the alternative, and issue an addendum to the contract, or he may reject the alternative.
- 9.4 The Tenderer shall use only alternatives that are confirmed by an addendum.
- 9.5 Whenever alternatives are accepted, the Tenderer shall be responsible for making all consequent adjustments to make the alternative fit into the work as specified, and the consequent costs shall be deemed to be included in the tender price.

10.0 SUBCONTRACTORS

- 10.1 The Tenderer shall submit in the schedule of subcontractors the names of subcontractors proposed for the work.
- 10.2 Where the schedule of subcontractors shows specific items of work the Tenderer shall name his subcontractor; or if the work will not be subcontracted he shall so indicate using the words "own forces".
- 10.3 The subcontractors listed in the tender may not be changed without the written consent of the Owner. If the Owner so requires, the Tenderer shall be prepared to confirm to the Owner the competence of subcontractors prior to their acceptance of the work.
- 10.4 If at the time of contract award a subcontractor named in the tender is not acceptable to the Owner, the Tenderer shall name an alternative subcontractor acceptable to the Owner.

11.0 SUPPLIERS AND MANUFACTURERS

- 11.1 The Tenderer shall submit in the schedule of suppliers and manufacturers of material and product, the names of manufacturers, and if material and product are obtained through intermediate agents, the agents shall be indicated as the suppliers.
- 11.2 The suppliers and manufacturers named in the tender shall not be changed without the written consent of the Owner.
- 11.3 If, at the time of contract award a supplier and/or manufacturer named in the tender is not acceptable to the Owner, the Tenderer shall name an alternative supplier or manufacturer acceptable to the Owner.

12.0 TENDER GUARANTEE

- 12.1 The tender shall be accompanied by a bid bond in the amount of 10% of the tender price and a Consent of Surety for the performance bond and labour and materials payment bond, in the amounts specified in the tender invitation. The bid bond and consent of surety shall be provided in an acceptable form by an agency that is acceptable to the Owner, and licensed in the jurisdiction of the project.
- 12.2 The obligation of the tender guarantee shall be that if the Owner accepts a tender and the Tenderer refuses to sign the agreement and to provide the specified performance guarantees, then the tender guarantee shall be forfeited to the Owner.
- 12.3 In the event that the Owner's damages arising from default of the Tenderer in failing to perform the contract after acceptance of its tender are greater than the amount of the tender guarantee, the tender guarantee shall not be construed to limit or eliminate the Owner's right to sue for the balance of its damages or for all of its damages and that right may be exercised by the Owner in its sole discretion.
- 12.4 The initial deposit of the Contractor will be returned following execution of the Form of Agreement and the provision of the bond for Performance and the bond for Labour and Material Payment. If the Contractor declines or neglects to provide in full, the required Surety Bonds as provided for in the Form of Tender or neglects or refuses to enter the Contract when called upon to do so, the Tenderer's initial deposit or the additional cost of accepting another tender up to a maximum of 10% of the Tender Price whichever is the lesser shall be forfeitable to the Owner as Liquidated Damages, but not by way of penalty and the Contract shall be cancelled.
- 12.5 The initial deposit of the unsuccessful Tenderers will be returned to them as soon as possible after the Contract is awarded or the expiration of validity of their tenders, whichever is the sooner.

13.0 TENDER EVALUATION

- 13.1 The Owner reserves the right to evaluate tenders on the basis of criteria of its own choice, in its sole discretion, whether previously disclosed to Tenderers or not, provided only that the reasons for selection of a tender shall not be frivolous, irrelevant, or malicious.
- 13.2 In evaluation of tenders the Owner may, but is not obligated to, apply preference for:
- 13.2.1 An earlier completion date over later;
- 13.2.2 A contractor deemed by the Owner in its sole discretion to be more competent than a less competent, (even though both may be competent to perform the work).
- 13.2.3 A Contractor with local experience.
- 13.3 In evaluation of tenders the Owner may, but is not obligated to, consider previous or on-going disputes from other contracts, with a Tenderer.

14.0 ACCEPTANCE OR REJECTION OF TENDERS

- 14.1 The Owner reserves the right to reject any or all tenders, to waive irregularities and

informalities at his discretion and to accept the tender that the Owner deems to be in its best interest. The lowest tender will not necessarily be accepted. Without limiting the generality of the foregoing, any tender may be rejected for any of the following reasons:

- 14.1.1 Incomplete tender.
 - 14.1.2 Obscured or irregular erasures or corrections in the schedule of prices.
 - 14.1.3 Prices omitted or unbalanced.
 - 14.1.4 Insufficient or irregular tender guarantees.
 - 14.1.5 Evidence of inadequate experience, or of inadequate capacity to perform the contract, or failure to qualify under conditions of the tendering requirement.
 - 14.1.6 Evidence of previous failure to perform adequately on similar work.
 - 14.1.7 The insertion by the Tenderer of conditions which vary the tendering requirements or the tender forms.
- 14.2 All Tenders shall be valid for acceptance for sixty (60) calendar days from the date set for their delivery to the Owner.
- 14.3 No action of the Owner other than a written "notice of acceptance" shall constitute an acceptance of a tender. Such written notice shall be in the form included in the contract documents (document 00 30 50), or such other form as desired by the Owner, and shall be signed by officials properly authorized by the Owner to do so, and either under the seal of the Owner, or witnessed, as may be appropriate for the Owner.
- 14.4 The Form of Agreement is included in the Contract Documents at the time of Tendering only for the information of Tenderers and shall not be completed at the time of tendering.
- 14.5 On the written acceptance by the Owner of a Tender, that Tender becomes the Contract and the Tenderer who has submitted it becomes the Contractor. The Contractor will be required to enter into a formal agreement with the Owner following receipt of a written letter of acceptance from the Owner.
- 14.6 The Owner will not defray any expenses whatsoever incurred by Tenderers in the preparation and submission of their tenders.
- 15.0 COMPLETION DATES
- 15.1 The Tenderer is advised that the stipulated completion dates set forth in the form of tender are non-negotiable and liquidated damages shall apply after the stipulated completion dates as referred in Section 00 21 00.

----- **END OF SECTION 00 10 00** -----

1.0 PRELIMINARY CONSTRUCTION SCHEDULE

- 1.1 The project site work shall begin by **SEPTEMBER 3, 2019** and shall be totally completed by **OCTOBER 11, 2019**.
- 1.2 SUBSTANTIAL PERFORMANCE of the WORK shall be achieved on or before **OCTOBER 11, 2019**.
- 1.3 Hours of work shall be the responsibility of the Contractor and shall be in accordance with any local codes, statutes, by-laws or ordinances regarding noise. It is expected that evening and/or weekend work will be required to meet the stipulated completion date.
- 1.4 The Contractor shall submit a preliminary construction schedule to the Contract Administrator for review no later than ten (10) days after notification of award. The preliminary construction schedule shall include the scheduling restrictions as noted in this section and Section 01 15 50 – Special Provisions.

----- **END OF SECTION 00 21 00** -----

1.0 EXISTING SITE CONDITIONS

- 1.1 Tenderers must visit the site and examine site conditions before submitting a Tender, and shall make its own estimate of the facilities and difficulties that may be encountered and of the nature of the subsurface conditions. The Tenderer shall not claim at any time after submission of the Tender that there was any misunderstanding of the terms and conditions of the Contract related to site conditions.
- 1.2 Tenderers may make tests, inspections and measurements, but such investigations must be performed under time schedules and arrangements with the Owner and Tenderers must comply with the Owner's requirements.
- 1.3 Tenderers must make prior arrangements with the Airport for all site visits and inspections.
- 1.4 The airport is an operational aviation facility. It is a federal offence to enter the property without authorization.
- 1.5 Where geotechnical information has been made available by the Owner for reference by the Tenderers, the Tenderers shall make their own interpretations of the information and opinions expressed in such report, particularly with respect to the implications of the site geotechnical conditions on their ability to perform, in the timeframe specified, the Work of the Contract for which the Tender is being submitted. The Owner, Engineer or author of the report will not be responsible for the accuracy of the information or the manner in which the information is used or interpreted.

----- **END OF SECTION 00 23 00** -----

1.0 WRITTEN NOTICE OF ACCEPTANCE

The tender of SASKATOON INTERNATIONAL AIRPORT – APRON I & IV REHABILITATION, Submitted by:

**CONTRACTOR
ADDRESS**

For the project entitled SASKATOON INTERNATIONAL AIRPORT – APRON I & IV REHABILITATION, to perform the work described in the plans, specifications and addenda issued for the project.

For the total contract price (GST Excluded) of: \$ _____ **dollars.**

Submitted to the **SASKATOON AIRPORT AUTHORITY (OWNER)**

On AUGUST 13, 2019 before 2:00pm local time,

Is hereby accepted on this date **DATE, 2019**

The successful Tenderer, unless otherwise modified in writing by the OWNER, must sign the Form of Agreement within fourteen (14) days of written acceptance of the Tender.

Authorization

This notice of acceptance is authorized by the SASKATOON AIRPORT AUTHORITY: (OWNER)

Signature of the Owner		
Name		(Seal)

----- END OF SECTION 00 30 50 -----

1.0 FORM OF TENDER

- 1.1 The undersigned Tenderer, having carefully read and examined the Tender Documents prepared by the Consultant for the completion of SASKATOON INTERNATIONAL AIRPORT – APRON I & IV REHABILITATION, in accordance with the:
- 1.1.1 Description of Work and List of Drawings (Section 00 05 00)
 - 1.1.2 Information to Tenderers (Section 00 10 00)
 - 1.1.3 Form of Tender - Unit Price (Section 00 33 00)
 - 1.1.4 Supplementary Tender Information (Section 00 40 00)
 - 1.1.5 Sample Form of Agreement - Unit Price (Section 00 53 00)
 - 1.1.6 General Conditions (Section 00 70 00)
 - 1.1.7 Specifications of Work
 - 1.1.8 Appendix A - Contract Drawings Listed in Section 00 05 00
 - 1.1.9 Appendix B – Plan of Construction Operations

hereby accepts the same as part and parcel of the Contract herein referred to, and having carefully examined the locality and Site of Works and having full knowledge of the work required and of the materials to be furnished and used, does hereby Tender and offer to enter into a contract to perform and complete, the whole of the said works and provide all necessary labour, plant, tools, materials and equipment and pay all applicable taxes, as set forth and in strict accordance with the Specifications, Drawings and other Contract Documents and to do all therein called for on the terms and conditions and under the provisions therein set forth for the Schedule of Quantities and Unit Prices.

**Tenderer's Initials
and date:**

SCHEDULE OF UNIT PRICES:

1.2 The Contractor offers the following Schedule of Unit Prices for performance of the Contract:

SCHEDULE OF UNIT PRICES						
Item No.	Section No.	Item Description	Unit	Quantity	Unit Price	Total
1.0	GENERAL CONSTRUCTION					
1.1	01 15 50	Mobilization/Demobilization/ Bonding/Insurance/Etc.	ls	1	\$ _____	\$ _____
1.2	01 15 50	Implementation of Plan of Construction Operations	ls	1	\$ _____	\$ _____
TOTAL SECTION 1.0 (Transfer to Summary)						\$ _____

SCHEDULE OF UNIT PRICES						
Item No.	Section No.	Item Description	Unit	Quantity	Unit Price	Total
2.0	APRON I REHABILITATION					
2.1	02 41 13.14	Remove Existing Asphalt/Concrete c/w Offsite Disposal	m2	400	\$ _____	\$ _____
2.2	31 14 13	Topsoil Stripping and Salvage for Reuse c/w Disposal of Excess Onsite	m3	70	\$ _____	\$ _____
2.3	31 22 14	Common Excavation c/w Onsite Disposal of Granular and Common Fill	m3	850	\$ _____	\$ _____
2.4	33 05 16	Supply and Install 1200mm dia. Airfield Precast Concrete Manhole c/w Grate	each	1	\$ _____	\$ _____
2.5	33 46 16	Supply and Install 200 mm dia. Subdrain Pipe c/w Filter Sock, Clear Stone and Geotextile	lm	20	\$ _____	\$ _____
2.6	01 15 50	Watertight Connection to Existing Manhole c/w Hardware and Materials	ls	1	\$ _____	\$ _____
2.7	31 22 14	Subgrade Preparation	m2	660	\$ _____	\$ _____

**Tenderer's Initials
and date:**

SCHEDULE OF UNIT PRICES						
Item No.	Section No.	Item Description	Unit	Quantity	Unit Price	Total
2.0	APRON I REHABILITATION					
2.8	31 32 19.01	Supply and Place Geotextile Combigrd	m2	660	\$ _____	\$ _____
2.9	01 15 50	Supply and Place Granular Subbase	tonne	740	\$ _____	\$ _____
2.10	01 15 50	Supply and Place Granular Base	tonne	530	\$ _____	\$ _____
2.11	01 15 50	Supply and Place HMAC	tonne	110	\$ _____	\$ _____
2.12	32 92 19.16	Restoration (Place 100mm Salvaged Topsoil and Hydroseed)	ls	1	\$ _____	\$ _____
2.13	32 17 23	Pavement Markings	ls	1	\$ _____	\$ _____
		TOTAL SECTION 2.0 (Transfer to Summary)				\$ _____

SCHEDULE OF UNIT PRICES						
Item No.	Section No.	Item Description	Unit	Quantity	Unit Price	Total
3.0	APRON IV REHABILITATION					
3.1	02 41 13.14	Mill Existing Concrete and Offsite Disposal	m2	2,130	\$ _____	\$ _____
3.2	01 15 50	Supply and Place HMAC	tonne	260	\$ _____	\$ _____
3.3	01 15 50	Reinstate Gate Loop	ls	1	\$ _____	\$ _____
3.4	01 15 50	Sawcutting and Joint Sealing	ls	1	\$ _____	\$ _____
3.5	32 17 23	Pavement Markings	ls	1	\$ _____	\$ _____
		TOTAL SECTION 3.0 (Transfer to Summary)				\$ _____

**Tenderer's Initials
and date:**

SUMMARY:

SECTION DESCRIPTION	SECTION TOTALS
SECTION 1.0 – RUNWAY PAVEMENT REHABILITATION	\$ _____
SECTION 2.0 – APRON I REHABILITATION	\$ _____
SECTION 3.0 – APRON IV REHABILITATION	
NET AMOUNT OF TENDER	\$ _____
ADD GST AT 5% OF NET AMOUNT	\$ _____
ADD PST AT 6% OF NET AMOUNT	\$ _____
TOTAL TENDER PRICE	\$ _____

TOTAL TENDER PRICE IN WORDS:

**Tenderer's Initials
and date:**

- 2.0 THE UNDERSIGNED TENDERER:
- 2.1 Declares that the Schedule of Quantities and Unit Prices set forth in the Form of Tender has been correctly computed for the purposes of this tender and that it includes and covers all contingencies and provisional sums; all duties, and handling charges; transportation; and all other charges. PST is not to be included in the tendered unit prices or Net Amount.
 - 2.2 Hands the Owner herewith by way of initial deposit a certified cheque or a Bid Bond in the amount of 10% of the tender price on the understanding that in the event of this tender not being accepted by the Owner, then this initial deposit will be returned to the undersigned Tenderer either at the time that the Contract is awarded to some other Tenderer, or at the expiration of validity of this tender, whichever is the sooner.
 - 2.3 Undertakes in the event of the Owner's acceptance of the tender, to execute a formal agreement in the form hereto attached, within fourteen (14) days of written acceptance of the tender and further agrees to provide by way of surety for the due performance of the Contract, a Performance Bond and a Labour and Material Payment Bond satisfactory to the Owner as to form, each issued in the amount of fifty (50) percent of the tender price.
 - 2.4 Agrees that in the event of failing or neglecting either to provide the bonds or other security and/or to execute the Form of Agreement in the manner hereinbefore undertaken, then the initial deposit being the amount 10% of the tender price or the additional cost of accepting another tender up to a maximum of ten (10) percent of the Tender Price whichever is the lesser, shall be forfeited to the Owner as liquidated damages.
 - 2.5 Agrees that unless and until a formal agreement is prepared and executed, this tender together with the Owner's written letter of acceptance thereof shall constitute a binding Contract between the Tenderer and the Owner.
 - 2.6 Understands and agrees that the Owner is not bound to accept the lowest or any tender which the Owner may receive.
 - 2.7 Agrees to pay to the Owner forthwith upon demand liquidated damages in the amount of \$2,500.00 per calendar day which includes the cost of all engineering/project management and costs as a result of failure to meet the SUBSTANTIAL COMPLETION as specified in the Contract. This cost will be documented and deducted from the Contractor's Payment Certificates.
 - 2.8 Agrees to take out and maintain during the life of the Contract, insurance as required by the Contract.
 - 2.9 Declares to have personal knowledge of the location of the proposed work and is informed as to the actual conditions and requirements, including labour conditions and labour rules and shall not claim at any time after execution of the Contract that there was any misunderstanding in regard to such conditions and requirements.
 - 2.10 Declares to have carefully examined the documents and declares that this tender is valid for sixty (60) calendar days from the closing date of the tender.
 - 2.11 The contractor offers to furnish all of the material and product (except as otherwise specified to be supplied by others), together with all of the labour, plant and transportation to perform the work described in the contract documents, in the manner prescribed therein, for the prices

**Tenderer's Initials
and date:**

quoted in the schedule of prices, and in accordance with the other schedules in this tender.

- 2.12 Where provisional cost sums for portions of the work are included in the schedule of prices, only actual expenditures made upon the written authority of the Owner, shall be paid out of these provisional cost sums, and if the provisional cost sum is not sufficient to cover the work, then the contract price shall be increased, and if the provisional cost sum is greater than required for the work, the contract price shall be decreased.
- 2.13 Where a contingency allowance is included in the schedule of prices, only actual expenditures for increases in the quantities and changes in the work, made upon the written authority of the Owner, will be paid out of such allowance, and the contract price will be changed in the amount by which the contingency allowance either exceeds or is exceeded by such expenditures.
- 2.14 Any equivalent alternatives used in this tender shall receive a final detailed review at the time of submission of shop drawings, and if an equivalent alternative is rejected at that time, the contractor shall provide the item as originally specified at no change in the contract price.
- 2.15 The estimated quantities of work are approximate only and are subject to increase or decrease, and whether the quantities are increased or decreased, the unit prices stated in the schedule of prices shall apply, and the contract price shall be adjusted accordingly.
- 2.16 If a discrepancy is found between a unit price and an amount, the unit price shall be considered as representing the intention of the contractor, and the Owner will recalculate the amount. The addition of the amounts will be corrected and a corrected tender amount and contract price will be established.
- 2.17 If a discrepancy is found between the sum of the corrected amounts and the tender price shown, the sum of amounts, as corrected shall be deemed to represent the intent of the Tenderer.
- 2.18 If a discrepancy is found between a lump sum price and the corresponding breakdown prices, the lump sum price shall be considered as representing the intention of the contractor.
- 2.19 No action of the Owner other than sending a "notice of acceptance" in writing to the contractor shall constitute acceptance of a tender. The notice of acceptance shall be in the form included in the contract documents in Section 00 30 50.
- 2.20 Time is of the essence in this contract, and in the event that the work is not completed within the period named above, the contractor shall be responsible for all damages accruing to the Owner due to late completion.
- 2.21 Agrees that the Period of Maintenance defined in the document shall be for a period of twelve (12) months from the date of the Consultant's Certificate of Substantial Performance.
- 2.22 The Contractor will be required to submit monthly progress reports to the Contract Administrator in accordance with the General Conditions. These reports, when approved, will be considered as monthly requisition for payment. At least TEN percent (10%) of each monthly requisition will be withheld and the total of all the TEN percent (10%) withheld will be paid at the end of the lien period. Final payment, constituting the balance of the contract, will not be made until sixty (60) days after the premises have been accepted by the Owner and the requirements of the Builder's Lien Act have been satisfied.

**Tenderer's Initials
and date:**

2.23 Understands that the remaining holdback, and any other monies still owing, and the bonds for Performance and for Labour and Material Payment will be held until the Date of Total Performance as certified by the Consultant.

3.0 PERFORMANCE GUARANTEE AND INSURANCE CERTIFICATE:

3.1 After receipt of Notice of Acceptance, the CONTRACTOR shall provide a Performance Bond in the amount of 50% of the CONTRACT PRICE and a standard Labour and Materials Payment Bond in the amount of 50% of the CONTRACT PRICE and the Bonds shall remain in effect for the duration of construction and the Warranty Period.

3.2 The bonds shall be in a form that is acceptable to the OWNER and shall be supplied by an agency that is acceptable to the OWNER and that is licensed in the jurisdiction in which THE WORK is located.

3.3 After receipt of Notice of Acceptance, the CONTRACTOR shall provide the required Insurance Certificate.

3.4 The costs of bonds and insurance shall be borne by the CONTRACTOR.

3.5 No Progress Payments shall be made until the required Bonds or Security Deposit and Insurance Certificate have been delivered to the OWNER.

4.0 SCHEDULE OF ADDENDA:

4.1 The CONTRACTOR states that he has received the following ADDENDA which have been considered and taken into account in determining the Prices tendered in the Schedule of Prices. The ADDENDA are issued by or in behalf of the Owner.

ADDENDUM NUMBER	DATE ISSUED	NUMBER OF PAGES

4.2 The Tenderer hereby accepts and agrees to these Addenda forming a part of the Contract.

4.3 Copies of each Addenda received by the Tenderer during the Tendering period with each page, sheet or sketch initialled by the Tenderer shall be attached to this Form of Tender and shall form part of the completed Tender.

**Tenderer's Initials
and date:**

Dated at _____ this _____ day of _____, 2019.

Name of Witness

NAME OF TENDERER

Signature of Witness

AUTHORIZED SIGNATURE OF TENDERER

TITLE

(Affix
Corporate
Seal)

Note: If the Tender is submitted by or on behalf of a corporation, it must be signed in the name of such corporation by the duly authorized officers and the seal of the corporation must be affixed. If the Tender is submitted by or on behalf of an individual or a partnership, a seal must be affixed opposite the signature of the individual or partnership.

----- END OF SECTION 00 33 00 -----

<p>Tenderer's Initials and date:</p>

1.0 CONTENT OF SUPPLEMENTARY TENDER FORMS

- 1.1 The Schedules in the Supplementary Tender Forms are offered for information and are subject to review by the OWNER, who may require these Schedules to be modified before the award of the CONTRACT. Modifications may be required for good cause, including but not limited to:
- 1.1.1 unbalanced breakdown prices.
 - 1.1.2 unacceptable SUBCONTRACTORS or Suppliers and Manufacturers.
 - 1.1.3 unacceptable Force Account Rates.
 - 1.1.4 unacceptable provisional unit prices.
 - 1.1.5 unacceptable supervisory personnel.
 - 1.1.6 other causes.
- 1.2 The CONTRACTOR warrants that all of the information given in these Schedules is current and correct. Changes to any schedule in the supplementary Tender Forms, agreed upon by the OWNER and the CONTRACTOR, after closing of the Tender Period but before Contract Award shall not in any way affect the Validity of the Tender.
- 1.3 Upon acceptance by the OWNER, all Schedules in the Supplementary Tender Forms shall become a part of the CONTRACT DOCUMENTS.

2.0 SCHEDULE OF FORCE ACCOUNT RATES

- 2.1 The TENDERER offers to do force account work for the following rates for personnel and equipment. Equipment rates include operator, fuel, maintenance, profit and overhead. Personnel rates include payroll cost of labour, all payroll burdens, room and board, if applicable, overhead and profit. The cost of superintendents, time keepers, and other administrative and supervisory personnel and their vehicles are included in overhead. The cost of Bonding and Insurance is included in overhead.
- 2.2 The TENDERER understands that the OWNER may review these Force Account Rates and require changes for good cause.
- 2.3 The Schedule is provided for a Change to the Work pursuant to General Conditions of the Contract where the "force account" rates are applicable. The TENDERER may attach additional work sheets to add to the tables below.

**Tenderer's Initials
and date:**

EQUIPMENT:		
Description and Make	Model and Size	Hourly Rate

PERSONNEL:		
Occupation Or Trade	Hourly Rate	Overtime Rate

**Tenderer's Initials
and date:**

3.0 REFEREE AS TO TENDERER'S FINANCIAL STATUS:

Name _____

Address _____

_____ Telephone _____

4.0 NAME AND ADDRESS OF COMPANY WHO HAS AGREED TO UNDERWRITE THE BONDS FOR PERFORMANCE AND FOR LABOUR AND MATERIAL PAYMENT.

Name _____

Address _____

_____ Telephone _____

5.0 NAME AND ADDRESS OF COMPANY WHO HAS AGREED TO UNDERWRITE INSURANCE ON THIS CONTRACT AND THE TYPE AND AMOUNT OF INSURANCE.

Name _____

Address _____

_____ Telephone _____

Type of Insurance	Amount
_____	_____
_____	_____
_____	_____
_____	_____

**Tenderer's Initials
and date:**

6.0 PARTICULARS OF TENDERER'S RECENT CONTRACTS:

6.1 The Tenderer shall furnish particulars of at least three, and if possible, five contracts successfully completed or currently being carried to completion. The projects quoted should be approximate in nature to the Works now tendered for and be of comparable or greater size (Attached additional reference pages to the Tender is required).

OWNER and Contact Name and Telephone Number for Reference	Description	Start Date	End Date	Contract Value

**Tenderer's Initials
and date:**

7.0 LIST OF EQUIPMENT TO BE USED ON THIS PROJECT (TO INCLUDE: DESCRIPTION, SIZE OR CAPACITY, CONDITION, AGE AND PRESENT LOCATION)

8.0 TENTATIVE PROGRAM OF WORKS:

- 8.1 The Tenderer shall provide a summary of their understanding of, and their ability to carry out, the Work. This summary shall be no more than 5 pages in length and affixed hereto on the Tenderer's company letterhead. The Tenderer should provide sufficient detail to allow the OWNER to assess the Tenderer's ability to meet the specified Completion Date while considering the technical specifications/contract drawings, logistics, project management requirements and cost/schedule risks, etc.
- 8.2 The Tenderer shall provide an outline of the Tenderer's other major subcontractors (i.e. underground/sewer/paving subcontractor's) experience, and their ability to meet the specified Completion Date. The Tenderer shall provide an explanation on how the Tenderer will coordinate the work with the subcontractor's to ensure a successful project.
- 8.3 The Tentative Program of Works shall be signed by the Tenderer and all major subcontractors.

**Tenderer's Initials
and date:**

9.0 LIST OF SUB-CONTRACTORS TO BE USED:

- 9.1 The Tenderer's attention is drawn to the General Conditions of the Contract – Subcontracts. The Tenderer shall enter the name and address of each Sub-Contractor used in making up the tender. Only one Sub-Contractor shall be named for each part of the work to be sublet.
- 9.2 After the tender has been accepted by the Owner, the Contractor shall not be allowed to substitute other sub-contractors in place of those named in the tender without written approval from the Owner.

Division or Section or Work	Name of Subcontractors

10.0 LIST OF PROPOSED SUPPLIERS OF PROJECT MATERIALS/PRODUCTS INCLUDING NAME AND MATERIALS/PRODUCTS TO BE SUPPLIED:

Division or Section or Work	Name of Suppliers

**Tenderer's Initials
and date:**

11.0 SENIOR PROJECT PERSONNEL:

11.1 The Tenderer shall include below, the names, qualifications and previous experience of those people who will be directly involved with the project. The names shall, for example, include foreman, superintendent, project engineer and/or project manager. The Tenderer shall provide detailed resumes/curricula vitae of these people if so requested.

Name	Title	Experience

----- END OF SECTION 00 40 00 -----

**Tenderer's Initials
and date:**

FORM OF AGREEMENT

APRON I & IV REHABILITATION

THIS AGREEMENT made this day of 2019

BETWEEN

CONTRACTOR

(hereinafter called the "Contractor")

OF THE FIRST PART

- and -

SASKATOON AIRPORT AUTHORITY

(hereinafter called the "Owner")

OF THE SECOND PART

WITNESSETH AS FOLLOWS:

1. The OWNER intends that the WORK comprised in this Contract be constructed and has accepted a Tender by the CONTRACTOR for the construction, completion, testing and maintenance of the WORK.
2. In consideration of the covenants and agreements hereinafter contained and to be performed by the OWNER, the CONTRACTOR HEREBY AGREES with the OWNER to do the following WORK:
 - (a) To find and supply all the PLANT, MATERIALS, PRODUCTS and labour necessary to fulfil construct the WORK specified in the CONTRACT DOCUMENTS, on the terms and conditions specified in the CONTRACT, for the CONTRACT PRICE specified in the CONTRACT DOCUMENTS.
 - (b) To commence and actively proceed with the WORK within seven (7) days of the date of receiving written notice from the OWNER to proceed with WORK and to achieve SUBSTANTIAL PERFORMANCE of the WORK on or before OCTOBER 11, 2019 and CONSTRUCTION COMPLETION for the WORK on or before **OCTOBER 11, 2019**.
3. If the CONTRACTOR fails to achieve SUBSTANTIAL COMPLETION of the WORK, to the satisfaction of the ENGINEER, by the SUBSTANTIAL COMPLETION DATE (as such date may be adjusted in accordance with the CONTRACT), then the CONTRACTOR shall pay the OWNER \$2,500.00 per calendar day of delay in completing such WORK. The CONTRACTOR acknowledges and agrees that these liquidated damages are intended to be a limitation of the CONTRACTOR'S liability and not a penalty and that the OWNER'S actual damages would exceed such liquidated damages.
4. The CONTRACTOR agrees that time shall be construed as being of the essence of the CONTRACT.
5. It is agreed that the CONTRACTOR has full knowledge of the location of the WORKSITE and is informed as to the actual conditions and requirements thereof including labour conditions and labour rules, and shall not claim at any time after the execution of the CONTRACT that there was a misunderstanding in regard to such conditions and requirements.

6. The OWNER hereby covenants to pay to the CONTRACTOR in consideration of the construction, completion, testing and maintenance of the WORK, the CONTRACT PRICE in accordance with the CONTRACT.
7. The CONTRACTOR shall, at its expense, prior to submitting its first PROGRESS PAYMENT CLAIM, provide the OWNER:
 - (a) a performance bond in an amount equal to 50% of the CONTRACT PRICE covering the performance of the CONTRACT, including the correction of all deficiencies and the fulfillment of all warranties; and
 - (b) a labour and material payment bond in an amount equal to 50% of the CONTRACT PRICE, covering the payment of labour, MATERIALS and PRODUCTS.
8. The bonds shall be in a form and issued by a surety (licenced in SASKATCHEWAN), acceptable to the OWNER. The bonds shall remain in effect until the expiry of the WARRANTY PERIOD.
9. The CONTRACT ensures to the benefit of, and is binding upon, the parties and their respective successors and permitted assigns.
10. All provisions of the CONTRACT which expressly or by their nature survive the termination of the CONTRACT or the completion of the WORK, will continue in full force and effect after any termination of the CONTRACT or completion of the WORK.
11. If the CONTRACTOR constitutes a joint venture or other unincorporated grouping of two or more persons, these persons shall be deemed jointly and severally liable to the OWNER for the performance of the Contract.
12. The CONTRACTOR shall not alter its composition or legal status without prior consent of the OWNER.

[The remainder of this page is intentionally blank]

IN WITNESS WHEREOF the parties hereunto have caused these presents to be executed, the day and year first above written.

SASKATOON AIRPORT AUTHORITY (OWNER)

Per: _____
Name:
Title:

Per: _____
Name:
Title:

(CONTRACTOR)

Per: _____
Name:
Title:

Per: _____
Name:
Title:

(Date)

----- **END OF SECTION 00 53 00** -----

GC1.0 DEFINITIONS

- 1.1 The contents of the CONTRACT DOCUMENTS and the CONTRACT are limited to:
- 1.1.1 The Agreement Section 00 53 00
 - 1.1.2 General Conditions; Section 00 70 00
 - 1.1.3 Form of Tender Section 00 33 00
 - 1.1.4 Supplementary Tender Information Section 00 40 00
 - 1.1.4.1 Including:
 - 1.1.4.1.1 Quantities and Unit Prices;
 - 1.1.4.1.2 Force Account Rates;
 - 1.1.4.1.3 Subcontractors;
 - 1.1.4.1.4 Suppliers and Manufacturers;
 - 1.1.5 Drawings;
 - 1.1.6 Specifications;
 - 1.1.7 Addenda;
 - 1.1.8 Field Orders;
 - 1.1.9 Change Orders.
- 1.2 The following definitions shall apply throughout the CONTRACT DOCUMENTS:
- 1.2.1 The term ENGINEER or CONSULTANT shall mean an engineering firm as may from time to time be duly authorized and appointed in writing by the OWNER to act for the purposes of this CONTRACT with the authority and responsibility defined in the CONTRACT DOCUMENTS.
 - 1.2.2 The term OWNER REPRESENTATIVE shall mean an employee of the OWNER or an agent of the OWNER, specifically designated in writing by the OWNER to have special responsibilities and authorities as set out in the CONTRACT DOCUMENTS.
 - 1.2.3 The term the WORK shall mean the entirety of the work described in the CONTRACT DOCUMENTS, including MATERIAL, PRODUCT, labour, PLANT, transportation and other facilities and items ancillary to the foregoing required to furnish and perform the CONTRACT by the CONTRACTOR in accordance with the intent of the design as expressed in the CONTRACT DOCUMENTS.
 - 1.2.4 The term THE PROJECT shall mean the total construction contemplated by the OWNER, of which the WORK may be the whole or only a part.
 - 1.2.5 The Term MAJOR WORK ITEM shall mean any tender item that has a value, calculated on the basis of its actual or estimated tender quantity, whichever is the greater, multiplied by its tender unit price, which is equal to or greater than the lesser of:

- 1.2.5.1 \$200,000, or
- 1.2.5.2 5% of the total tender value calculated on the basis of the total of all the estimated tender quantities and the tender unit prices.
- 1.2.6 The term WORKSITE shall mean the spatial limits within which the WORK is located, as indicated on the Contract Drawings, during the period of performance of the WORK.
- 1.2.7 The term CONTRACTOR'S SUPERINTENDENT shall mean an employee or representative of the CONTRACTOR who is specifically authorized to be in full charge of the CONTRACTOR'S operations at the WORKSITE and is so designated in writing by the CONTRACTOR to the OWNER.
- 1.2.8 The term CONTRACTOR'S PROJECT MANAGER shall mean a representative of the CONTRACTOR, superior to the CONTRACTOR'S SUPERINTENDENT, who has authority to issue QUOTATIONS FOR CONTEMPLATED CHANGE, to sign CHANGE ORDERS and to act on behalf of the CONTRACTOR both at and away from the WORKSITE with respect to the CONTRACT.
- 1.2.9 The term SUBCONTRACTOR shall mean a person neither contracting with nor employed directly by the OWNER for doing any of the WORK, but contracting with or being employed directly or indirectly by the CONTRACTOR, provided however that the term SUBCONTRACTOR shall not include one who merely supplies MATERIAL or PRODUCT for the WORK to the CONTRACTOR.
- 1.2.10 The term OTHER CONTRACTOR shall mean any person, firm or corporation employed by the OWNER on the site of THE PROJECT other than through the CONTRACTOR.
- 1.2.11 The term CONTRACT PRICE shall mean the aggregate or total price for performing the WORK specified in the Contract Documents, adjusted during the course of the WORK as required by these CONTRACT DOCUMENTS.
- 1.2.12 The term GST shall mean any tax imposed under the *Excise Tax Act* (Canada), as amended from time to time, or any other federal consumption, *ad valorem*, or similar tax imposed in substitution thereof.
- 1.2.13 The term DIVISION III GST shall mean the tax imposed under Division III of the Excise Tax Act (Canada), as amended from time to time or any similar tax imposed in substitution thereof.
- 1.2.14 The term PST shall mean any tax imposed under The Provincial Sales Tax Act (SASKATCHEWAN), as amended from time to time, or any other consumption, *ad valorem*, or similar tax imposed in substitution thereof in the Province of Saskatchewan.
- 1.2.15 The term TIME FOR COMPLETION shall mean the time for: (a) completing the WORK specified in section 2(b) of the AGREEMENT as evidenced by the CONSTRUCTION COMPLETION CERTIFICATE; and (b) achieving any other milestone set out in the CONTRACT DOCUMENTS; as such dates may be adjusted in accordance with the CONTRACT.

- 1.2.16 Certificates
- 1.2.16.1 The term PROGRESS PAYMENT CERTIFICATE shall mean a claim for payment for work done, prepared by the CONTRACTOR, reviewed and certified by the ENGINEER, upon which payment on account is made periodically by the OWNER.
- 1.2.16.2 The term SUBSTANTIAL PERFORMANCE CERTIFICATE shall mean a certificate issued by the ENGINEER upon the Work being SUBSTANTIALLY PERFORMED.
- 1.2.16.3 The term CONSTRUCTION COMPLETION CERTIFICATE shall mean a certificate issued by the ENGINEER upon full completion of the WORK, including cleanup and rectification of all deficiencies and receipt of a final invoice from the Contractor ("CONSTRUCTION COMPLETION").
- 1.2.16.4 The term FINAL CERTIFICATE shall mean the certificate issued by the ENGINEER on behalf of the OWNER or by the OWNER, only at the request of the CONTRACTOR, after expiry of the WARRANTY PERIOD, provided that the conditions of the CONTRACT have been met and a final invoice has been received by the Contractor.
- 1.2.17 A contract is SUBSTANTIALLY PERFORMED when (a) the WORK under the CONTACT is ready for use or is being used for the purposes intended; and (b) the WORK to be made performed under the CONTACT is capable of completion or, where there is a known defect, correction, at a cost of not more than: (i) 3 percent of the first \$500,000 of the contract price, (ii) 2 percent of the next \$500,000 of the contract price, and (iii) 1 percent of the balance of the contract price.
- 1.2.18 The term CONSTRUCTION COMPLETION means the completion of all services or materials in the performance of the CONTRACT. A CONTRACT shall be deemed to be complete and services or materials shall be deemed to be last supplied to the improvement when the price of completion, correction of a known defect or last supply is not more than the lesser of: (a) 1 percent of the contract price; (b) \$1,000.00.
- 1.2.19 The term WARRANTY PERIOD means the period of time specified in GC 35.1
- 1.2.20 The term CHANGE shall mean any substitutions for, addition to or deletions from the WORK or any change in the TIME FOR COMPLETION.
- 1.2.21 The term FIELD ORDER (F.O.) shall mean a written communication from the OWNER, or from the ENGINEER on behalf of the OWNER, to the CONTRACTOR, clarifying the CONTRACT DOCUMENTS, issuing additional instructions, requesting information, or ordering a CHANGE in the WORK within the general scope of the WORK.
- 1.2.22 The term CHANGE ORDER shall mean a written communication issued by the OWNER, with the agreement of the CONTRACTOR, setting forth the authorized amount and time to be added to or deducted from the CONTRACT PRICE on account of a CHANGE in the WORK described by a NOTICE OF CONTEMPLATED CHANGE.
- 1.2.23 The term NOTICE OF CONTEMPLATED CHANGE (NCC) shall mean a written communication from the ENGINEER, on behalf of the OWNER, describing a contemplated change in the WORK and requesting a quotation, complete with a narrative description of the details of the work to be done by the CONTRACTOR to achieve the contemplated CHANGE.

- 1.2.24 The term QUOTATION FOR CONTEMPLATED CHANGE (QCC) shall mean a written proposal by the CONTRACTOR to the OWNER for doing the work required to achieve the contemplated CHANGE, including both cost and time implications for doing the WORK.
- 1.2.25 The term PLANT or EQUIPMENT shall mean collectively all tools, implements, machinery, vehicles, structures, equipment and other things required for the execution of the WORK, and provided by the CONTRACTOR or a SUBCONTRACTOR.
- 1.2.26 The term MATERIAL shall mean collectively all materials and commodities required to be furnished under the CONTRACT for the WORK except those specifically provided for otherwise in the CONTRACT DOCUMENTS.
- 1.2.27 The term PRODUCT shall mean collectively machinery or assembled components specifically provided for the WORK and standard PRODUCT such as motors, pumps, etc. designed and produced for a specific use.
- 1.2.28 The term CONTRACT QUANTITY shall mean the estimated quantity of WORK, PRODUCT, MATERIAL and LABOUR estimated for the completion of the Schedule of Quantities and Unit Prices.
- 1.2.29 The term CONTRACT DOCUMENTS or CONTRACT means the documents so identified in GC 1.1.
- 1.2.30 The term DRAWINGS means the graphic and pictorial portions of the CONTRACT DOCUMENTS, wherever located and whenever issued, showing the design, location and dimensions of the WORK, generally including plans, elevations, sections, details and diagrams.
- 1.2.31 The term SPECIFICATIONS means the specifications, standards and schedules included with the CONTRACT DOCUMENTS or issued to the CONTRACTOR during the performance of the WORK, including revisions thereto.
- 1.2.32 The term LAWS means any applicable federal, provincial, or local law, regulation, bylaw, ordinance, rule, permit, licence or code of every relevant jurisdiction that in any manner affects the WORK or the performance of the CONTRACTOR'S obligation under the CONTRACT and any order, decree, authorization or approval, or other binding determination of any relevant governmental authority, body, tribunal or agency with jurisdiction over the foregoing.
- 1.2.33 The term COSTS means all direct, incremental expenditures reasonably and necessarily incurred by the CONTRACTOR or a SUBCONTRACTOR at the WORKSITE, exclusive of profit or overhead.
- 1.2.34 The term BUSINESS DAYS means a day other than Saturday, Sunday, statutory holiday, or statutory vacation day that is observed by the construction industry in the Province of Saskatchewan.
- 1.2.35 The term "PROVIDE" shall mean supply and install.
- 1.3 Words importing the singular only shall also include the plural and vice-versa, where the context requires.
- 1.4 MATERIAL, PRODUCT, PLANT or methods described in words which so applied have a well-known technical or trade meaning shall be held to refer to such recognized meaning.

GC2.0 INTERPRETATION

- 2.1 The Contract Documents are complementary, and what is required by one will be binding as if required by all.
- 2.2 If any question arises about any conflict, ambiguity, inconsistency, error, omission or discrepancy in or between the following documents, such documents shall take precedence and govern in the following descending order:
 - 2.2.1 Agreement
 - 2.2.2 Addenda
 - 2.2.3 Special Provisions
 - 2.2.4 Contract Drawings
 - 2.2.5 Plan of Construction Operations
 - 2.2.6 Standard Specifications
 - 2.2.7 Information to Bidders,
 - 2.2.8 Form of Tender
 - 2.2.9 General Conditions

GC3.0 LAWS AND PERMITS

- 3.1 The CONTRACTOR shall obtain all Permits, Licenses and Certificates, and pay all fees required for the performance of the WORK.
- 3.2 The OWNER shall obtain all easements and rights of way, and the CONTRACTOR shall have free use thereof for the purposes of this CONTRACT, provided that such use shall not interfere with or impede the operation of any OTHER CONTRACTORS or workmen employed by the OWNER, nor be in conflict with conditions of easement agreement or right of way limits. The CONTRACTOR shall indemnify and defend the OWNER against any claims, demands, or losses due to failure to meet all conditions of an easement agreement.
- 3.3 The CONTRACTOR shall give all required notices, and comply with all laws, ordinances, regulations, codes and orders of all authorities having jurisdiction relating to the WORK, to preservation of public health, and to construction safety. If the CONTRACTOR observes anything in the CONTRACT DOCUMENTS to be at variance with the foregoing, he shall promptly notify the ENGINEER in writing, and shall await the ENGINEER'S instructions. If the CONTRACTOR performs any WORK, knowing it to be contrary to such LAWS, ordinances, regulations, codes or orders, and without giving notice to and requesting instructions from the ENGINEER, he shall bear all costs arising therefrom.
- 3.4 The CONTRACTOR shall make all arrangements with local authorities, operating departments, railway and highway officials, utility and service companies and the like, for detours, crossings, traffic control and similar requirements relating to performance of the WORK, and he shall at his own cost observe their requirements and regulations.
- 3.5 The CONTRACT is governed by the law in force in the Province of Saskatchewan and the laws of Canada applicable in the Province of Saskatchewan.
- 3.6 Subject to GC47.0 - DISPUTE RESOLUTION, each party shall bring any court proceeding, action or suit brought under, related to, or by virtue of this CONTRACT, the business relationship between the parties or the performance of and compliance with the CONTRACT, in a court of competent jurisdiction in the Province of Saskatchewan and each party attorns to the exclusive jurisdiction of the courts of the Province of Saskatchewan.
- 3.7 The CONTRACTOR shall: (a) ensure that the WORK is performed in accordance with, and complies with, applicable LAWS; (b) comply with all applicable LAWS in performing its

obligations under the CONTRACT; and (c) provide the OWNER with evidence of compliance with LAWS when the OWNER reasonably requests.

GC4.0 GENERAL INVESTIGATIONS

- 4.1 The CONTRACTOR warrants to the OWNER that it has:
 - 4.1.1 carefully examined and satisfied itself as to the location of and all conditions relating to the WORKSITE, including but not limited to accessibility, general character, surface conditions, utilities, roads, hydrological and climatic conditions, uncertainty of seasonal weather and all other physical, topographical or geographical conditions;
 - 4.1.2 carefully examined all information relevant to the risks, contingencies and other circumstances having an effect on its obligations under this CONTRACT which is obtainable by making reasonable inquiries;
 - 4.1.3 carefully examined and satisfied itself as to all LAWS applicable to the WORK or that might affect the WORK; and
 - 4.1.4 entered into this CONTRACT based upon its own investigations, examinations and determinations, including assessments of any risks that could have an effect on its obligations under this CONTRACT.
- 4.2 The CONTRACTOR confirms and warrants that there are no known errors, inconsistencies or omissions in the DRAWINGS or SPECIFICATIONS that will affect the CONTRACT PRICE or the TIME FOR COMPLETION.

GC5.0 DRAWINGS AND INSTRUCTIONS

- 5.1 The CONTRACTOR shall maintain a current set of the complete CONTRACT DOCUMENTS, in good order, at the WORKSITE.
- 5.2 All DRAWINGS, SPECIFICATIONS and copies thereof furnished by the ENGINEER are its property. They shall not be used on other work and, with the exception of the signed CONTRACT DOCUMENT set, are to be returned to the ENGINEER on request, upon completion of the WORK.
- 5.3 All models prepared by the ENGINEER for the OWNER'S use and paid for by the OWNER, are the property of the OWNER, and not the CONTRACTOR, unless specifically agreed otherwise.
- 5.4 If the CONTRACTOR suffers delay and/or incurs additional costs as a result of the failure of the ENGINEER to issue DRAWINGS within the time specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall provide immediate written notice to the OWNER and shall be entitled to:
 - 5.4.1 an extension of the TIME FOR COMPLETION, to the extent the CONTRACTOR is or will be delayed in completing the WORK by the TIME FOR COMPLETION, based on critical path method analysis, as a result of the OWNER'S failure to issue DRAWINGS within the time specified in the CONTRACT DOCUMENTS; and
 - 5.4.2 compensation for additional COSTS incurred as a direct result of, and solely attributable to the ENGINEER'S failure to issue DRAWINGS within the time specified in the CONTRACT DOCUMENTS, plus a markup of 10% on account of overhead and profit.

- 5.5 The failure of the CONTRACTOR to give written notice to the ENGINEER in accordance with GC 5.4 within five (5) BUSINESS DAYS after the OWNER'S failure to issue DRAWINGS within the time specified in the CONTRACT DOCUMENTS, constitutes a waiver of the CONTRACTOR'S right to an extension of the TIME FOR COMPLETION and/or additional compensation.
- 5.6 The ENGINEER may furnish to the CONTRACTOR, during the progress of the WORK, additional instructions to supplement the CONTRACT DOCUMENTS, including the DRAWINGS and SPECIFICATIONS as the ENGINEER considers necessary or desirable for the performance of the WORK. Additional instructions will be consistent with the intent of the CONTRACT DOCUMENTS. Additional instructions may be in the form of SPECIFICATIONS, DRAWINGS, samples, models or other written instructions. The CONTRACTOR shall comply with all additional instructions.
- 5.7 If the CONTRACTOR considers that any additional instructions issued under GC 5.6 increase the Time for Completion or the cost of carrying out the WORK, the CONTRACTOR shall give written notice to the ENGINEER in accordance with GC 18.10 before proceeding with the WORK relating to such instruction.

GC6.0 REFERENCE POINTS AND LAYOUT

- 6.1 The ENGINEER will establish reference points for the location of principal components of the WORK as well as bench marks in reasonable proximity to the WORK, but the CONTRACTOR shall use reasonable efforts to verify their accuracy before they are used.
- 6.2 The CONTRACTOR shall be responsible for protection and preservation of the reference points and stakes, and legal survey pins, and in case of wilful or careless destruction, he shall be charged with the resulting expense and shall be responsible for any mistakes that may be caused by their loss or disturbance.
- 6.3 The CONTRACTOR shall provide all detailed layout of dimensions, locations, and elevations of the WORK from the reference points and bench marks set by the ENGINEER.
- 6.4 The CONTRACTOR shall not proceed with the WORK until he has received from the ENGINEER such reference points, elevations, and other points and instructions as are required for the execution of the WORK.
- 6.5 The CONTRACTOR shall, before commencing WORK at any point, satisfy himself as to the meaning and correctness of all stakes and instructions. The CONTRACTOR shall have no claim for an extension of the TIME FOR COMPLETION and/or additional compensation based on alleged inaccuracies, failure to read reference points correctly, or failure to interpret instructions correctly.
- 6.6 If the CONTRACTOR, in the course of executing the WORK, finds any discrepancy between the drawings and the physical conditions of the locality, or any errors, omissions or discrepancies in the DRAWINGS or in the layout as given by points and instructions, he shall inform the OWNER immediately in writing, and the OWNER or the ENGINEER shall promptly verify the same and issue appropriate instructions. Any work done after discovery of errors, omissions or discrepancies, before further work is authorized, will be done at the CONTRACTOR'S risk.

GC7.0 THE OWNER

- 7.1 The OWNER shall give the CONTRACTOR right of access to the WORKSITE within such times as required to enable the CONTRACTOR to proceed without disruption in accordance with the CONTRACT DOCUMENTS.

- 7.2 The CONTRACTOR shall give immediate written notice to the OWNER whenever the WORK is, or is likely to be, delayed or disrupted by the OWNER'S failure to provide the CONTRACTOR with access to the WORKSITE. Such notice shall include the details of the delay, details of why and by when it should be resolved, and the nature and amount of delay or disruption likely to be suffered if is not.

GC8.0 THE ENGINEER

- 8.1 The ENGINEER shall be appointed by the OWNER to carry out the duties assigned to him in the Contract and as delegated and agreed in consultant agreements or as necessarily implied from the Contract.
- 8.2 The duties, responsibilities and limitations of authority of the ENGINEER are defined in the CONTRACT DOCUMENTS and they may not be changed except with the written consent of the OWNER, the CONTRACTOR and the ENGINEER.
- 8.3 The duties, responsibilities and limitations of authority of the ENGINEER have been delegated to the Engineer by the OWNER.
- 8.4 The ENGINEER shall have no authority to amend the CONTRACT without permission of the OWNER and CONTRACTOR.
- 8.5 The ENGINEER has no authority to relieve either party of any duties, obligations or responsibilities under the Contract.
- 8.6 The ENGINEER shall administer the CONTRACT and shall, in the first instance: (a) be the interpreter of the DRAWINGS and SPECIFICATIONS; (b) assess the adequacy of performance by the parties; and (c) where the CONTRACTOR is entitled to additional compensation and/or an extension of the TIME FOR COMPLETION under the CONTRACT, determine the amount of such additional compensation and/or extension of the TIME FOR COMPLETION. Such interpretation or assessment is without prejudice to a party's rights under GC47.0 - DISPUTE RESOLUTION.
- 8.7 The ENGINEER shall provide full time resident services at the WORKSITE and general engineering services for the WORK.
- 8.8 The ENGINEER does not guarantee the CONTRACTOR'S work nor undertake to check the quality and quantity of work on behalf of the CONTRACTOR. The ENGINEER is not responsible to the CONTRACTOR for discovering defects in the WORK nor for advising the CONTRACTOR of defects in the WORK.
- 8.9 The ENGINEER may, by FIELD ORDER, put a "hold" on any portion of the WORK while an error, discrepancy or omission, whether discovered by the CONTRACTOR or the ENGINEER, is investigated. Such a "hold" order shall not constitute a basis for a claim by the CONTRACTOR for delay, unless and until it critically affects the performance of the WORK and the TIME FOR COMPLETION.
- 8.10 Whenever the ENGINEER exercises an authority expressly provided for in this CONTRACT, then the OWNER shall be deemed to have given its approval.

GC9.0 THE CONTRACTOR

- 9.1 The CONTRACTOR shall bring to the WORK the expertise, skill and experience required for the execution of the WORK.
- 9.2 The CONTRACTOR shall have complete control of the WORK and shall direct and supervise

the WORK to ensure conformance with the intent of design as expressed in the CONTRACT DOCUMENTS. The CONTRACTOR shall be solely responsible for construction means, methods, techniques, sequences and procedures, and for coordinating the various aspects of the WORK under the CONTRACT. The CONTRACTOR shall have determined that the WORK is constructible.

- 9.3 The CONTRACTOR shall have the sole responsibility for the design, erection, operation, maintenance and removal of temporary structures and other temporary facilities, and for the design and execution of methods required in their use.
- 9.4 The CONTRACTOR shall be responsible for the adequacy, stability and safety of all WORKSITE operations and of all methods of construction. The CONTRACTOR shall be responsible for all CONTRACTOR'S documents, temporary works, and such design of each item of plant and material as is required by the CONTRACT.
- 9.5 When required by law or by the CONTRACT, the CONTRACTOR shall engage and pay for registered professional engineering personnel to perform the design of temporary facilities and methods of execution to ensure safety and satisfactory performance.
- 9.6 The CONTRACTOR shall pay and satisfy, or cause to be paid and satisfied, all proper invoices, claims and accounts of SUBCONTRACTORS, and any other person employed directly or indirectly by the CONTRACTOR or SUBCONTRACTORS in connection with the WORK.
- 9.7 During the course of execution of the WORK, if the CONTRACTOR becomes aware of any error, discrepancy or omission in the drawings or the specifications, the CONTRACTOR shall immediately notify the ENGINEER in writing and request instructions. The CONTRACTOR shall not proceed any further with that portion of the WORK until he has received such instructions in writing from the ENGINEER pursuant to GC 5.6.
- 9.8 When required by the SPECIFICATIONS or DRAWINGS, the CONTRACTOR shall submit to the ENGINEER a written description and drawings or conduct a test strip to show its proposed methods and means for doing certain specified items of the WORK. These submissions are to be made to allow the ENGINEER on the OWNER'S behalf to:
- 9.8.1 determine the general conformance of the proposed means and methods with the intent of the design;
 - 9.8.2 determine whether there are or could be any serious effects of a permanent nature on the WORK, the WORKSITE, or the contiguous area outside the WORKSITE.
- 9.9 The ENGINEER may stop the CONTRACTOR from implementing the proposed means and methods by issuing a FIELD ORDER.
- 9.10 The CONTRACTOR shall employ a competent CONTRACTOR'S SUPERINTENDENT who shall be in attendance at the WORKSITE while the WORK is being performed. The CONTRACTOR'S SUPERINTENDENT shall be acceptable to the OWNER and shall not be removed or changed without good reason, and then only with the approval of the OWNER.
- 9.11 The CONTRACTOR'S SUPERINTENDENT shall represent the CONTRACTOR at the WORKSITE and additional instructions given to him by the ENGINEER shall be deemed to have been given to the CONTRACTOR.
- 9.12 Nothing contained in the CONTRACT DOCUMENTS shall be construed to form any contractual obligation between the ENGINEER and the CONTRACTOR.
- 9.13 The CONTRACTOR shall give the ENGINEER not less than 21 calendar days' notice of the date

on which any major PLANT, MATERIAL or PRODUCT will be delivered to the WORKSITE.

- 9.14 The CONTRACTOR shall be responsible for packing, transporting, receiving, unloading, storing, and protecting all PLANT, MATERIAL or PRODUCT.
- 9.15 The CONTRACTOR shall be responsible for all PLANT brought on WORKSITE. The CONTRACTOR shall not remove from the WORKSITE any major items of the PLANT without the prior written consent of the ENGINEER.
- 9.16 Unless otherwise specified in the CONTRACT DOCUMENTS, the CONTRACTOR shall institute a quality assurance system acceptable to the OWNER to demonstrate compliance with the requirements of the CONTRACT. This is to be independent of any system implemented by or on behalf of the OWNER.
- 9.17 The CONTRACTOR shall submit a detailed time programme for the completion of the WORK to the ENGINEER within 30 calendar days of the effective date of the CONTRACT. The CONTRACTOR shall also submit a revised programme whenever the previous program is inconsistent with the actual progress of the WORK or with the CONTRACTOR'S obligations. Unless the ENGINEER gives notice within 21 calendar days after receiving the programme to the CONTRACTOR, stating that it does not comply with the Contract, the CONTRACTOR shall proceed in accordance with the programme. The OWNER'S personnel shall be entitled to rely upon the programme when planning their activities. The Program shall include:
- 9.17.1 The order in which the CONTRACTOR intends to carry out the WORK;
- 9.17.2 Dates and descriptions of each of the stages of the WORK and if subcontracts are used to complete the WORK; and
- 9.17.3 The sequence and timing of inspections and tests specified in the CONTRACT DOCUMENTS.
- 9.18 The CONTRACTOR shall promptly give notice to the ENGINEER of specific probable future events or circumstances which may adversely affect the WORK, increase the CONTRACT PRICE or delay the execution of the WORK.

GC10.0 OTHER CONTRACTORS

- 10.1 The CONTRACTOR shall coordinate his WORK with that of OTHER CONTRACTORS and tie into the work constructed by OTHER CONTRACTORS as specified or shown in the CONTRACT DOCUMENTS.
- 10.2 The CONTRACTOR shall report to the OWNER or the ENGINEER any apparent deficiencies in OTHER CONTRACTORS' work which would affect the WORK of this CONTRACT as soon as they come to his attention and shall confirm such report in writing. Failure by the CONTRACTOR to so report shall invalidate any claims against the OWNER by reason of the deficiencies of OTHER CONTRACTORS' work except as to those of which the CONTRACTOR could not reasonably be aware.

GC11.0 SUBCONTRACTORS

- 11.1 Subject to the CONTRACT, the CONTRACTOR shall not assign all or any part of the CONTRACT, without the prior written consent of the OWNER.
- 11.2 The CONTRACTOR shall not employ any SUBCONTRACTOR to perform any WORK, which is not specifically listed in the Schedule of Subcontractors as being done by a specific, named SUBCONTRACTOR, without the OWNER'S prior written consent.

- 11.3 The CONTRACTOR shall be responsible for the acts or defaults of any SUBCONTRACTOR, its agents or employees, as if they were the defaults of the CONTRACTOR.
- 11.4 The CONTRACTOR shall preserve and protect the rights of the OWNER with respect to all WORK performed under the CONTRACT and shall:
- 11.4.1 require all SUBCONTRACTORS to perform WORK in accordance with and subject to the terms and conditions of the CONTRACT;
 - 11.4.2 be as fully responsible to the OWNER for acts and omissions of SUBCONTRACTORS and of persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the CONTRACTOR; and
 - 11.4.3 incorporate all terms and conditions of the CONTRACT DOCUMENTS into all subcontracts it with SUBCONTRACTORS, insofar as they are applicable.
- 11.5 Each subcontract shall include provisions which would entitle the OWNER to require the subcontract to be assigned to the OWNER, if requested, upon termination of the CONTRACT.
- 11.6 Nothing contained in the CONTRACT DOCUMENTS shall create any contractual obligation between any SUBCONTRACTOR and the OWNER.

GC12.0 ASSIGNMENT

- 12.1 Neither party to the CONTRACT shall assign the CONTRACT or any portion thereof, nor any monies due to either party, without the written consent of the other; which consent shall not be unreasonably withheld.

GC13.0 DELAYS

- 13.1 If the CONTRACTOR is delayed in the performance of the WORK by weather, labour disputes, strikes or lock outs of the CONTRACTOR'S forces, or delay by common carriers, the CONTRACTOR shall not be compensated for any additional costs thereby incurred, nor shall the completion dates be changed, because it is agreed that the CONTRACTOR is more competent than the OWNER to assess the probability and impact of these events. The CONTRACTOR'S forces in this context includes SUBCONTRACTORS and suppliers and manufacturers supplying or providing PRODUCTS or MATERIALS.
- 13.2 If the CONTRACTOR is delayed in completing the WORK by the TIME FOR COMPLETION due to: (a) a failure of the OWNER to make decisions respecting the WORK; (b) the late delivery of MATERIALS or PRODUCTS identified in the CONTRACT DOCUMENTS as being furnished by the OWNER; (c) a breach by the OWNER of its obligations under the CONTRACT DOCUMENTS; (d) a "hold" on any portion of the WORK pursuant to GC 8.9; or (e) strikes or lock outs of the OWNER'S forces; then the CONTRACTOR shall provide immediate written notice to the OWNER and the OWNER shall be entitled to:
- 13.2.1 an extension of the TIME FOR COMPLETION, to the extent the CONTRACTOR is or will be delayed in completing the WORK by the TIME FOR COMPLETION, based on critical path method analysis; and
 - 13.2.2 compensation for additional COSTS incurred as a direct result of, and solely attributable to the OWNER'S failure to issue DRAWINGS within the time specified in the CONTRACT DOCUMENTS, plus a markup of 10% on account of overhead and profit.

- 13.3 The failure of the CONTRACTOR to give written notice to the ENGINEER in accordance with GC 13.2 within five (5) BUSINESS DAYS after the event or circumstance causing such delay, constitutes a waiver of the CONTRACTOR'S right to an extension of the TIME FOR COMPLETION and/or additional compensation.
- 13.4 If the CONTRACTOR is delayed in completing the WORK by the TIME FOR COMPLETION due to:
- 13.4.1 acts of God including tornados, earthquakes, landslides, floods, washouts, and fires;
 - 13.4.2 strikes or other labour disturbances which are the result or part of a general industry labour strike or disturbance;
 - 13.4.3 acts of terrorism, sabotage, war, insurrections, vandalism or riots;
 - 13.4.4 restraints by governments or governmental agencies;
 - 13.4.5 the order of any court or the directive or ruling of any governmental or administrative body; or
 - 13.4.6 any other similar cause beyond the reasonable control of the CONTRACTOR;
- then the CONTRACTOR shall provide immediate written notice to the OWNER and the CONTRACTOR shall be entitled to an extension of the TIME FOR COMPLETION, to the extent the CONTRACTOR is or will be delayed in completing the WORK by the TIME FOR COMPLETION, based on critical path method analysis.
- 13.5 The failure of the CONTRACTOR to give written notice to the ENGINEER in accordance with GC 13.4 within five (5) BUSINESS DAYS after the event or circumstance causing such delay, constitutes a waiver of the CONTRACTOR'S right to an extension of the TIME FOR COMPLETION.

GC14.0 OWNER'S RIGHT TO DO WORK

- 14.1 If the CONTRACTOR should refuse or fail to supply adequate PRODUCT, MATERIAL, PLANT, labour or workmanship for the scheduled performance of the WORK, or neglect to prosecute the WORK properly, or fail to perform any of the provisions of the CONTRACT, then the OWNER may give written notice to the CONTRACTOR and his Surety that the CONTRACTOR is in default of his contractual obligations, and instruct him to correct the default within five (5) BUSINESS DAYS.
- 14.2 If the correction of the default cannot be completed within the five (5) BUSINESS DAYS, the CONTRACTOR shall be considered to be in compliance with the OWNER'S instruction if he:
- 14.2.1 commences the correction of the default within the specified time; and
 - 14.2.2 provides the OWNER with a schedule for such correction, acceptable to the OWNER; and
 - 14.2.3 completes the correction in accordance with such schedule.
- 14.3 If the CONTRACTOR fails to comply with the provisions of GC 14.1 and GC 14.2, the OWNER may, without prejudice to any other right or remedy he may have, correct such default and may deduct the cost thereof from the payment then or thereafter due the CONTRACTOR. The ENGINEER shall, in the first instance, determine that both the corrective action and the

amount subsequently charged to the CONTRACTOR are reasonable.

GC15.0 OWNER'S RIGHT TO TERMINATE THE CONTRACT

15.1 If the CONTRACTOR should:

- 15.1.1 be adjudged bankrupt, or make a general assignment for the benefit of creditors, or if a receiver is appointed on account of his insolvency;
- 15.1.2 fail to make sufficient payments due to his creditors for labour, PLANT, PRODUCT and MATERIAL used or reasonably required for use on or in the WORK;
- 15.1.3 disregard any LAWS or the ENGINEER'S instructions;
- 15.1.4 abandon the WORK, or fail to adhere to the WORK Schedule to such an extent that there is danger of failing to meet the TIME FOR COMPLETION; or
- 15.1.5 commit any material breach of the CONTRACT;

the OWNER shall, by written notice, instruct the CONTRACTOR to correct the default within five (5) BUSINESS DAYS. If the default is not corrected within five (5) BUSINESS DAYS, then the OWNER may, without prejudice to any other right or remedy he may have, terminate the CONTRACTOR'S right to continue the WORK or terminate the CONTRACT.

15.2 If the OWNER terminates the CONTRACTOR'S right to continue with the WORK or terminates the CONTRACT under GC 15.1, the OWNER shall be entitled to:

- 15.2.1 take possession of the WORK, PRODUCT, MATERIAL and PLANT and utilize them to finish the WORK by whatever method he may deem expedient but without undue delay or expense;
- 15.2.2 withhold any further payments to the CONTRACTOR until the WORK is finished;
- 15.2.3 upon completion of the WORK, determine the full cost of finishing the WORK as certified by the ENGINEER, including compensation to the ENGINEER for his additional services and a reasonable allowance as determined by the ENGINEER to cover the cost of any corrections required under the WARRANTY PERIOD, and charge the CONTRACTOR the amount by which the full cost exceeds the unpaid balance of the CONTRACT PRICE; or if such cost of finishing the WORK is less than the unpaid balance of the CONTRACT PRICE, pay the CONTRACTOR the difference; and
- 15.2.4 on expiry of the WARRANTY PERIOD, charge the CONTRACTOR the cost of corrections required under the warranty.

The CONTRACTOR'S obligation under the CONTRACT as to the quality of that portion of the WORK and warranty of that portion of the WORK performed by the CONTRACTOR prior to termination of the CONTRACTOR'S right to continue with the WORK shall continue in force after the termination.

15.3 If the CONTRACTOR has provided a Performance Bond, the OWNER shall have the option of:

- 15.3.1 Terminating the CONTRACTOR'S right to continue with the WORK; or
- 15.3.2 Terminating the CONTRACT; or

15.3.3 Exercising the OWNER'S rights in accordance with conditions of the Performance Bond.

GC16.0 SUSPENSION OF THE WORK BY THE OWNER

16.1 The OWNER may suspend the execution of the WORK by giving written notice to the CONTRACTOR to that effect.

16.2 The CONTRACTOR, upon receiving such written notice, shall immediately suspend all operations except those necessary for the care and preservation of the portions of the WORK already executed, and the WORKSITE.

16.3 During the period of suspension, the CONTRACTOR shall not remove from the WORKSITE any part of the WORK or any MATERIAL, PRODUCT or PLANT without the written approval of the OWNER.

16.4 If the period of suspension is sixty (60) calendar days or less, the CONTRACTOR shall, upon expiry of the suspension, resume the execution of the WORK and he shall be paid for all Costs reasonably and necessarily incurred as a result of the suspension. The additional Costs shall be claimed by the CONTRACTOR and shall be verified by a determination of the ENGINEER in the first instance.

16.5 After sixty (60) calendar days, of suspension of the WORK the OWNER at its sole option shall:

16.5.1 negotiate terms under which the CONTRACTOR shall continue with the execution of the WORK and the CONTRACTOR shall then resume operations in accordance with the terms of that negotiation; or

16.5.2 deem the CONTRACT to be terminated without cause. In such case, the OWNER shall pay the CONTRACTOR:

16.5.2.1 for the WORK performed at the WORKSITE to the date of termination in accordance with the CONTRACT; and

16.5.2.2 all Costs reasonably and necessarily incurred by the CONTRACTOR as a result of the suspension and termination.

The CONTRACTOR shall not have a claim for loss of profit on that portion of the WORK not performed.

16.6 After sixty (60) calendar days of suspension of the WORK, the CONTRACTOR shall be allowed to remove any or all of its PLANT from the WORKSITE without further approval from the OWNER.

GC17.0 CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

17.1 If the OWNER should be adjudged bankrupt, or makes a general assignment for the benefit of creditors, or if a receiver is appointed on account of his insolvency, the CONTRACTOR may, without prejudice to any other right or remedy he may have, by giving the OWNER five (5) BUSINESS DAYS written notice, terminate the CONTRACT.

17.2 If the WORK should be stopped or otherwise delayed for a period of sixty (60) calendar days or more under an order of any court, or other public authority, and provided that such order was not issued as the result of any act or fault of the CONTRACTOR or of anyone directly or indirectly employed by him, the CONTRACTOR may, without prejudice to any other right or

remedy he may have, by giving the OWNER written notice, terminate the CONTRACT.

17.3 The CONTRACTOR shall notify the OWNER in writing, with a copy to the ENGINEER, that the OWNER is in default of his contractual obligations if:

17.3.1 the ENGINEER fails to certify a PROGRESS PAYMENT CERTIFICATE in accordance with these General Conditions; or,

17.3.2 the OWNER, subject to requirements of these General Conditions, fails to pay to the CONTRACTOR when due, any amount certified by the ENGINEER, or awarded by arbitrators.

Such written notice shall advise the OWNER that if such default is not corrected within fifteen (15) calendar days from the receipt of the written notice the CONTRACTOR may, without prejudice to any other right or remedy he may have, stop the WORK and terminate the CONTRACT.

17.4 If the CONTRACTOR terminates the CONTRACT pursuant to this GC17.0, the OWNER shall pay the CONTRACTOR:

17.4.1 for the WORK performed at the WORKSITE to the date of termination in accordance with the CONTRACT; and

17.4.2 all Costs reasonably and necessarily incurred by the CONTRACTOR as a result of the CONTRACTOR'S breach.

The CONTRACTOR shall not have a claim for loss of profit on that portion of the WORK not performed.

GC18.0 CHANGES IN THE WORK

18.1 At any time, the OWNER may make CHANGES without invalidating the CONTRACT, by CHANGE ORDER or FIELD ORDER. All such CHANGES shall be executed under the conditions of the CONTRACT. No extension of the TIME FOR COMPLETION or adjustment to the CONTRACT PRICE shall be made on account of any CHANGE in the WORK unless expressly provided for in the CHANGE ORDER or FIELD ORDER.

18.2 No CHANGES in the WORK shall be made unless pursuant to a FIELD ORDER or a CHANGE ORDER and no payment shall be made or credit given unless authorized by a CHANGE ORDER or a FIELD ORDER.

18.3 The CONTRACTOR shall proceed promptly with any CHANGE authorized by a CHANGE ORDER or a FIELD ORDER.

18.4 The CONTRACTOR shall not change, modify or omit WORK, or perform any additional work, without a prior CHANGE ORDER or FIELD ORDER relating to such CHANGE. CHANGES performed by the CONTRACTOR without a prior CHANGE ORDER or FIELD ORDER shall be for the CONTRACTOR'S sole risk, cost and expense, and the OWNER shall not be liable for any claim for additional compensation or an extension of the TIME FOR COMPLETION thereof by the CONTRACTOR.

18.5 The CONTRACTOR may, in writing, propose CHANGES in the WORK, by providing the OWNER with a QUOTATION FOR CONTEMPLATED CHANGE to that effect.

18.6 When the OWNER desires to make a CHANGE in the WORK, it shall issue a NOTICE OF CONTEMPLATED CHANGE (NCC) to the CONTRACTOR and the CONTRACTOR shall return to

the OWNER a QUOTATION FOR CONTEMPLATED CHANGE (QCC). If the QUOTATION FOR CONTEMPLATED CHANGE is accepted, the CHANGE in the WORK shall be authorized by a CHANGE ORDER signed by the OWNER and the CONTRACTOR.

- 18.7 No course of conduct or dealing between the parties, no express or implied acceptance of alterations or additions to the WORK and no claims that the OWNER has been unjustly enriched by any alteration or addition to the WORK, whether in fact there is any such unjust enrichment or not, shall be the basis of a claim for additional compensation under this CONTRACT or a claim for any extension of the TIME FOR COMPLETION. Claims by the CONTRACTOR for an adjustment to the CONTRACT PRICE or to an extension of the TIME FOR COMPLETION shall be barred unless there has been strict compliance with this GC18.0.
- 18.8 The adjustment to the CONTRACT PRICE and the TIME FOR COMPLETION recorded in a CHANGE ORDER shall be the only adjustment made to the CONTRACT PRICE and the TIME FOR COMPLETION for the proposed CHANGE referred to in the CHANGE ORDER. The CONTRACTOR will not be entitled to be paid any additional amount or to be granted any additional time to perform the WORK as a result of or arising in any way, either directly or indirectly, from the CHANGE (including, without limitation, on account of cumulative impact of CHANGES to the WORK) other than that adjustment to the CONTRACT PRICE and the TIME FOR COMPLETION agreed to and recorded in the CHANGE ORDER.
- 18.9 Upon delivery of a duly executed copy of a CHANGE ORDER or Field Order in accordance with this GC18.0, this CONTRACT shall be deemed amended to incorporate such CHANGE.
- 18.10 If the CONTRACTOR claims that any instruction by drawings, or otherwise, constitutes a CHANGE in the WORK under this CONTRACT, then the CONTRACTOR shall give notice in writing to the OWNER describing the event or circumstance giving rise to the claim. The notice shall be given as soon as practicable, and not later than five (5) BUSINESS DAYS after the CONTRACTOR became aware or should have become aware, of the event or circumstance.
- 18.11 If the CONTRACTOR fails to give notice of claim referred to in GC 18.10, within such period of five (5) BUSINESS DAYS, then the CONTRACTOR shall not be entitled to any extension of the TIME FOR COMPLETION or and/or additional compensation or other damages, and the OWNER shall be discharged from all liability arising out of or in connection with the event or circumstance described in GC 18.10.

GC19.0 VALUATION OF CHANGES IN THE WORK

- 19.1 Were a CHANGE in the WORK requires an adjustment to the CONTRACT PRICE for the additional costs or savings properly attributable to perform or delete WORK or otherwise execute a CHANGE, the adjustment will be valued by one (or a combination) of the following methods:
- 19.1.1 a lump sum price mutually agreed between the OWNER and the CONTRACTOR;
- 19.1.2 at the applicable Unit Prices specified in the CONTRACT DOCUMENTS;
- 19.1.3 at the "force account" rates for the provision of labour and PLANT specified in the CONTRACT DOCUMENTS; or
- 19.1.4 on the CONTRACTOR'S "actual cost" basis as follows:
- 19.1.4.1 The CONTRACTOR'S actual payroll cost of labour, defined as direct wages, salaries and benefits for the hours worked, plus applicable Holiday Pay, Paid Statutory Holidays and contributions, assessments or taxes incurred for employment insurance, provincial

health insurance, workers' compensation or Canada Pension Plan; plus

- 19.1.4.2 The CONTRACTOR'S actual cost of providing room and board for labour, if room and board is normally provided by the CONTRACTOR on the WORK; plus
- 19.1.4.3 The CONTRACTOR'S actual cost for MATERIAL and PRODUCT delivered DDP (Incoterms 2010) to the WORKSITE, less trade discounts; plus
- 19.1.4.4 A 10% markup on the sum of GC 19.1.4.1, GC 19.1.4.2 ad GC 19.1.4.3 to cover office and general overhead, use of small tools and profit. Overhead includes the cost of superintendence, foremen, timekeepers and other administrative and supervisory personnel and their vehicles and other WORKSITE costs, plus all office overhead costs; plus
- 19.1.4.5 The actual cost of rental of PLANT for the hours worked, at locally accepted rates, or at provincial or territorial rates, for complete units including operator, fuel, grease, maintenance and all such other costs as are normal to an operating unit on the WORKSITE; plus
- 19.1.4.6 A 10% markup on GC 19.1.4.5 to the CONTRACTOR (but not to a Subcontractor) provided that the CONTRACTOR does not own the equipment; plus
- 19.1.4.7 Actual transportation costs for PLANT, specifically required for the CHANGE in the WORK, with no markup.

The choice of valuation methods in GC 19.1.2, GC 19.1.3 and GC 19.1.4 shall be made by the OWNER in his sole discretion.

- 19.2 When the CHANGE in the WORK is being done on a "force account" basis pursuant to GC 19.1.3 or an "actual cost" basis pursuant to GC 19.1.4, the CONTRACTOR shall be paid for the WORK performed by SUBCONTRACTORS on the basis of a valuation in accordance with GC 19.1.3 or GC 19.1.4, depending upon which was selected by the OWNER for the CHANGE in the WORK. The CONTRACTOR shall be allowed a markup of 5% on the SUBCONTRACTOR'S charges to cover the CONTRACTOR'S coordination.
- 19.3 When a CHANGE in the WORK is being done on a "force account" basis pursuant to GC 19.1.3 or an "actual cost" basis pursuant to GC 19.1.4, the CONTRACTOR shall submit to the ENGINEER or the OWNER on a daily basis an accounting in triplicate for WORK done on the preceding calendar day. The accounting shall include a listing of the hours of labour and PLANT and a listing of the MATERIAL and PRODUCT used, and shall include supporting invoices where applicable. The ENGINEER shall, each day, check the CONTRACTOR'S accounting and, if it is numerically correct, he shall sign the three copies and return one signed copy to the CONTRACTOR. Only those items which are eligible in accordance with the CONTRACT shall be certified for payment by a CHANGE ORDER or FIELD ORDER. The ENGINEER'S signature shall not constitute an approval for payment.
- 19.4 If, on any day, the CONTRACTOR fails to submit an account of the CHANGE in the WORK being done on a "force account" basis pursuant to GC 19.1.3 or an "actual cost" basis pursuant to GC 19.1.4, the ENGINEER shall prepare the accounting, and this accounting shall be used as the basis of payment for that portion of the change in the WORK, and no payment will be made for

any other amount subsequently claimed by the CONTRACTOR for that portion of the change in the WORK.

GC20.0 MEASUREMENT

- 20.1 Except as otherwise stated in the CONTRACT and notwithstanding local practice:
- 20.1.1 measurement shall be made of the net actual quantity of each item of the WORK;
 - 20.1.2 the unit of measurement shall be in accordance with the CONTRACT DOCUMENTS and Unit Prices; and
 - 20.1.3 payment shall not be provided nor measurements made of quantities outside the lines, grades, or scope of the PROJECT for which no approved CHANGE ORDER has been issued.
- 20.2 Whenever the ENGINEER requires any part of the WORK to be measured, reasonable notice shall be given to the CONTRACTOR'S SUPERINTENDENT, who shall:
- 20.2.1 promptly either attend or send another qualified representative to assist the ENGINEER in making the measurement, and
 - 20.2.2 supply any particulars requested by the ENGINEER.
- 20.3 If the CONTRACTOR fails to attend or send a representative, the measurement made by the ENGINEER shall be deemed accepted as accurate by the CONTRACTOR.
- 20.4 Except as otherwise stated in the CONTRACT, wherever any portion of the WORK is to be measured from records, these shall be prepared by the ENGINEER. The CONTRACTOR shall, as and when requested, attend to examine and agree the records with the ENGINEER, and shall sign the same when agreed. If the CONTRACTOR does not attend, the records shall be deemed to be accepted as accurate by the CONTRACTOR.
- 20.5 Where the basis of payment of the CONTRACT PRICE is "Unit Prices," quantities for progress payments shall be considered approximate until final verification of the quantities by the ENGINEER. A certificate of progress payment shall not be construed as ENGINEER'S final verification of quantities. Final verification will occur after all WORK of an item is completed.
- 20.6 Where the final measured quantity of a MAJOR WORK ITEM changes by more than 15% from the CONTRACT QUANTITY, either party shall be entitled to request an adjustment to the applicable "Unit Prices" to take into account the difference in quantity. Such written requests must be received by the other party no later than sixty (60) calendar days after the issuance of the CONSTRUCTION COMPLETION CERTIFICATE. Unless otherwise agreed, any such adjusted "Unit Price" should reflect the cost of performing the WORK, together with a reasonable markup on account of overhead and profit.

GC21.0 PROVISIONAL SUMS

- 21.1 Each provisional sum shall only be used, in whole or in part, in accordance with the ENGINEER'S instructions. For each "provisional sum," the ENGINEER may instruct the WORK to be executed by the CONTRACTOR and value such WORK in accordance with the Schedule of Quantities and Unit Prices.

GC22.0 PAYMENTS

- 22.1 At the end of each month during the performance of the WORK, the CONTRACTOR shall prepare a progress payment claim, in a form acceptable to the OWNER, for that portion of the WORK done during that month, and in the case of "Milestone Payments" identified in section 1 (General) of the Special Conditions, for the milestones completed (the "PROGRESS PAYMENT CLAIM").
- 22.2 The PROGRESS PAYMENT CLAIM shall be certified by the ENGINEER on the PROGRESS PAYMENT CERTIFICATE. Provided that the CONTRACTOR has submitted his PROGRESS PAYMENT CLAIM by the end of the month, the PROGRESS PAYMENT CERTIFICATE shall be submitted to the OWNER within seven (7) calendar days after the end of the month during which that portion of the WORK covered by the PROGRESS PAYMENT CERTIFICATE was performed.
- 22.3 Subject to GC 22.4 and GC 22.5, within 30 calendar days after receipt of the PROGRESS PAYMENT CERTIFICATE the OWNER shall make payment to the CONTRACTOR in the undisputed amount certified on the PROGRESS PAYMENT CERTIFICATE.
- 22.4 Each payment to the CONTRACTOR will be subject to a performance and lien holdback of 10% of the total value of that portion of the WORK performed to the end of that month, as shown on the PROGRESS PAYMENT CLAIM (the "HOLDBACK").
- 22.5 The OWNER may withhold payment to the CONTRACTOR on account of any PROGRESS PAYMENT CERTIFICATE as may be necessary or prudent to protect himself from loss on account of:
- 22.5.1 liquidated damages expressly provided in the CONTRACT;
 - 22.5.2 unsatisfactory progress by the CONTRACTOR;
 - 22.5.3 defective work which is not remedied;
 - 22.5.4 claims filed, or reasonable expectation that claims will be filed, against the OWNER or the CONTRACTOR;
 - 22.5.5 the failure of the CONTRACTOR to make payments properly to SUBCONTRACTORS or for MATERIAL, PRODUCT, PLANT and labour, or otherwise;
 - 22.5.6 damages caused by the CONTRACTOR to an OTHER CONTRACTOR; and
 - 22.5.7 any other evidence of loss or danger of loss by the OWNER, on account of the CONTRACTOR'S operations.
- 22.6 The HOLDBACK maintained pursuant to GC 22.4, shall be released as part of the OWNER'S FINAL PAYMENT to the CONTRACTOR pursuant to GC23.0 - FINAL PAYMENT.
- 22.7 FINAL PAYMENT and HOLDBACK release do not constitute a waiver of the WARRANTY PERIOD, nor shall they or attendant acts of the ENGINEER or the OWNER prejudice their rights under any requirement of the CONTRACT, nor relieve the CONTRACTOR of any of his responsibilities thereunder.

GC23.0 FINAL PAYMENT

- 23.1 Upon receipt of written notice from the CONTRACTOR that the WORK is complete, that all deficiencies have been rectified, and all cleanup finished, the ENGINEER shall make an inspection, and when he finds the WORK complete under the CONTRACT, he shall issue the

CONSTRUCTION COMPLETION CERTIFICATE. The date of this this CONSTRUCTION COMPLETION CERTIFICATE shall be the date of commencement of the WARRANTY PERIOD.

- 23.2 If, upon inspection, the ENGINEER determines that the WORK is not completed, he shall instruct the CONTRACTOR, and issue a list of work items to be done, of cleanup items remaining, and of deficiencies to be rectified and when these have been done, he shall issue to the CONTRACTOR, the CONSTRUCTION COMPLETION CERTIFICATE in accordance with GC 23.1.
- 23.3 Payment on account of the CONTRACTOR'S final PROGRESS PAYMENT CERTIFICATE (the "FINAL PAYMENT") shall only be made after the following conditions have been satisfied:
- 23.3.1 the CONTRACTOR has submitted to the OWNER a Statutory Declaration, acceptable to the OWNER, stating that: (a) all claims for payment for MATERIAL, PRODUCT, PLANT, and labour incurred by the CONTRACTOR directly or indirectly on account of the WORK have been paid; (b) no liens exist against the premises in respect of anything done or furnished under this CONTRACT; and (c) all claims and demands for payment in connection with this CONTRACT have been submitted and approved, thus establishing the final CONTRACT PRICE and the amount of the FINAL PAYMENT; and
- 23.3.2 the Engineer has issued the CONSTRUCTION COMPLETION CERTIFICATE;
- 23.3.3 the CONTRACTOR has submitted to the OWNER a certificate by the Worker's Compensation Board that all assessments due to them from the CONTRACTOR have been paid;
- 23.3.4 a period of at least 5 BUSINESS DAYS has passed after expiry of the limitation period for filing liens in the jurisdiction where the WORK has been performed.
- 23.3.5 Notwithstanding any other provision of the CONTRACT, the OWNER may withhold an amount equal to 2.5% of the final Contract Price from the Final Payment as security for the performance by the CONTRACTOR of its obligations under the CONTRACT during the WARRANTY PERIOD.

GC24.0 FINAL CERTIFICATE

- 24.1 Upon the expiration of the WARRANTY PERIOD, the successful conclusion of any tests required by the CONTRACT and satisfactory performance under operating conditions meeting the WORK performance Warranty, the OWNER shall accept the WORK and a FINAL CERTIFICATE may be issued if required by the CONTRACTOR. It shall be the responsibility of the CONTRACTOR to apply in writing to the ENGINEER for a FINAL CERTIFICATE.
- 24.2 The issuance of a FINAL CERTIFICATE shall not release the CONTRACTOR from responsibility for any defects in his work, PRODUCT or MATERIAL for which the CONTRACTOR may in future be found liable in a court of law or otherwise.

GC25.0 CONTRACT PRICE INCLUSIVE

- 25.1 Subject to GC26.0 - TAXES AND DUTIES, the CONTRACT PRICE includes all taxes, duties, levies, freight charges, licensing fees, packing charges, insurance charges, installation charges and any other charges whatsoever in connection with the WORK.

GC26.0 TAXES AND DUTIES

- 26.1 The CONTRACT PRICE is exclusive of, and the OWNER shall pay as an additional amount, any

applicable GST levied on the CONTRACT PRICE, but the CONTRACT PRICE is inclusive of all applicable PST.

- 26.2 The CONTRACTOR shall: (a) be or become, prior to commencing the WORK, a licensed PST vendor as required by applicable LAWS; (b) specify any applicable PST on each invoice which is included in the CONTRACT PRICE, together with any other information prescribed by applicable LAWS; (c) promptly pay or remit to the appropriate governmental authority when due all applicable PST; and (d) upon request, provide the OWNER appropriate clearance certificates regarding the payment of all such PST.
- 26.3 The CONTRACTOR shall: (a) be or become, prior to commencing the WORK, a GST registrant as required by applicable LAWS; (b) specify any applicable GST on each invoice, together with any other information prescribed by applicable LAWS; (c) collect from the OWNER and promptly pay or remit to the appropriate governmental authority when due, all such GST; and (d) upon request, provide the OWNER appropriate clearance certificates regarding the payment of all such GST.
- 26.4 Where the CONTRACTOR is required by applicable LAWS to collect and/or remit PST or GST, the CONTRACTOR shall: (a) comply with the requirements of all applicable LAWS relating to the collection, payment and/or remittance of PST and GST; (b) provide the OWNER with evidence of such compliance as and when the OWNER reasonably requests; and (c) do such acts and execute and provide any such certificates, elections or documents as are necessary to reduce the amount of PST and GST that is payable by the OWNER or payable by the CONTRACTOR and included as part of the CONTRACT PRICE.
- 26.5 The CONTRACTOR shall: (a) be the importer of record of all PRODUCTS and/or MATERIALS imported into Canada and the CONTRACT PRICE in respect of such PRODUCTS and/or MATERIALS shall be inclusive of all import duties and DIVISION III GST payable to a governmental authority in Canada; (b) provide the OWNER with any information, certificates or documents as are necessary to verify the amount of DIVISION III GST payable by the CONTRACTOR and included as part of the CONTRACT PRICE; and (c) provide the OWNER with any information, certificates or documents as are necessary to enable the OWNER to claim any applicable input tax credits in respect of the DIVISION III GST, including but not limited to, a copy of any Form B3, Canada Customs and Coding Form in respect of the importation.
- 26.6 The CONTRACTOR shall indemnify and save harmless the OWNER from and against liability incurred by the OWNER for all sales taxes, excise taxes, duties, workers' compensation assessments or other charges (including penalties and interest) relating to the performance of the Work that are payable by the CONTRACTOR to any governmental authority.
- 26.7 If the CONTRACTOR is a "non-resident" of Canada, as defined in the *Income Tax Act* (Canada) and performs any services in Canada under the CONTRACT, unless the CONTRACTOR provides the OWNER with a waiver exempting the OWNER from remitting the prescribed withholding tax pursuant to the *Income Tax Act* (Canada) in respect of such services provided in Canada, the OWNER shall be entitled to retain and remit the prescribed percentage withholding tax based on: (a) the portion of the CONTRACT PRICE allocated to the value of the services being performed in Canada; or (b) the entire CONTRACT PRICE where the CONTRACT does not allocate a specific value to the services performed in Canada. The CONTRACTOR shall indemnify and save harmless the OWNER from and against all liability for the payment of withholding taxes, penalties and interest payable by the OWNER pursuant to the *Income Tax Act* (Canada) that relate to the performance of the services in Canada.

GC27.0 PATENT FEES

- 27.1 The CONTRACTOR shall pay all royalties and patent license fees required for the performance of the CONTRACT. He shall hold the OWNER harmless from and against all claims, demands,

losses, costs, damages, actions, suits or proceedings arising out of the CONTRACTOR'S performance of the WORK which are attributable to an infringement or an alleged infringement of any patent of invention, by the CONTRACTOR, or anyone for whose acts it may be liable.

- 27.2 In the event that the CONTRACTOR claims that, during the performance of the WORK, he has encountered a claim for a patent license fee, for use of a MATERIAL, PRODUCT, process or method which was specified by the ENGINEER, and that he was not previously aware that use of such MATERIAL, PRODUCT, process or method was restricted under patent, or that a patent license fee was required, he shall immediately notify the OWNER, in writing, setting out the details of such claim and evidence of his previous lack of awareness of such license fee being required. The ENGINEER shall immediately investigate the claim and if it is judged valid, and the MATERIAL, PRODUCT, process or method is used, the OWNER shall pay the patent license fee.

GC28.0 COMPLIANCE WITH OCCUPATIONAL HEALTH AND SAFETY ENACTMENTS

- 28.1 The CONTRACTOR shall be solely responsible for construction safety at the WORKSITE and for compliance with the rules, regulations and practices required by the applicable Occupational Health and Safety LAWS and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the WORK.
- 28.2 The CONTRACTOR shall be familiar and comply with the OWNER'S Safety Policy and Non-Punitive SMS Policy, attached hereto, and shall include the principles of these policies within its own safety program relative to provision of the WORK.
- 28.3 In any case where, pursuant to the provisions of the applicable Occupational Health and Safety LAWS, an order is given to the CONTRACTOR or to one of his SUBCONTRACTORS with respect to their operations under this CONTRACT to cease operations for any reason (for examples, because of failure to install or adopt safety devices or appliances or methods as directed or required by the applicable LAWS, or because conditions of immediate danger exist that would be likely to result in injury to any person), the CONTRACTOR shall immediately obey such order and shall immediately take whatever steps are necessary to eliminate the cause of the order.
- 28.4 In the event that the ENGINEER discovers a dangerous condition which in the ENGINEER'S opinion is likely to result in injury to any person, and there is no one in authority from the CONTRACTOR available or capable of removing the danger resultant from the CONTRACTOR'S operations, and no Officer of the Crown is available to take charge, then the ENGINEER may:
- 28.4.1 issue a Field Order to the CONTRACTOR'S workers to vacate the area of danger;
 - 28.4.2 issue a Field Order to the CONTRACTOR requiring the immediate correction of the dangerous condition; and
 - 28.4.3 notify the appropriate Officer(s) under the applicable Occupational Health and Safety LAWS,
- and no such action by the ENGINEER shall in any way remove the responsibility for the matter from the CONTRACTOR, and the CONTRACTOR shall bear all related costs without recourse.
- 28.5 In the event that the CONTRACTOR refuses or fails to comply with an order under the Act or Regulations thereunder, so that the performance of the WORK is stopped, the OWNER may, upon written notice, terminate the CONTRACT and proceed in accordance with GC 15.0.
- 28.6 The CONTRACTOR shall confine his operations to the WORKSITE, and any additional areas

which may be obtained by the CONTRACTOR and agreed by the ENGINEER as additional working areas. The CONTRACTOR shall take all necessary precautions to keep the CONTRACTOR'S and SUBCONTRACTOR'S PLANT and personnel within the WORKSITE and these additional areas and keep them off adjacent land.

- 28.7 The CONTRACTOR shall keep the WORKSITE free from all unnecessary obstruction, and shall store or dispose of any CONTRACTOR'S equipment or surplus materials as authorized by the ENGINEER.
- 28.8 The CONTRACTOR shall send to the ENGINEER details of any accident as soon as practicable after its occurrence. The CONTRACTOR shall maintain records and make reports concerning health, safety and welfare of persons and damage to property, as the ENGINEER may reasonably require.
- 28.9 No action or lack of action by the ENGINEER or the OWNER under any of the provisions of this Section shall relieve the CONTRACTOR of his responsibilities under GC 28.1 above.

GC29.0 PROTECTION OF WORK AND PROPERTY

- 29.1 The CONTRACTOR shall continuously maintain adequate protection of all of the WORK from damage, and protect the OWNER'S property from damage or loss arising in connection with this CONTRACT. The CONTRACTOR shall make good, at the CONTRACTOR'S expense, any such damage or loss.
- 29.2 The CONTRACTOR shall provide and maintain all passageways, guard fences, lights and other facilities for protection required by public authority or local conditions, or laws and regulations.
- 29.3 The CONTRACTOR shall also protect all of the property outside of the WORK from damage as a result of his operations. Any such damage shall be corrected by the CONTRACTOR at his expense.
- 29.4 If any condition arises that endangers or threatens to endanger the safety of any person, the WORK or any property adjacent to the WORK ("EMERGENCY SITUATION"), the CONTRACTOR, on the CONTRACTOR'S initiative or instruction of the ENGINEER, shall immediately take all necessary steps to relieve the condition, including, but not limited to, stoppage of the WORK where necessary. The CONTRACTOR'S failure to comply with the requirement of this G.C. 29.4, shall constitute a material breach of the CONTRACT. Notwithstanding the foregoing, if any such Emergency Situation arises, the CONTRACTOR shall within twenty-four (24) hours give notice in writing to the ENGINEER of the presence of such condition together with a reasonable description of the nature of such condition.
- 29.5 Subject to GC28.0 - COMPLIANCE WITH OCCUPATIONAL HEALTH AND SAFETY ENACTMENTS, if the CONTRACTOR suffers delay and/or incurs additional costs as a result of an EMERGENCY SITUATION that is not attributable to the CONTRACTOR, the CONTRACTOR shall be entitled to:
- 29.5.1 an extension of the TIME FOR COMPLETION, to the extent the CONTRACTOR is or will be delayed in completing the WORK by the TIME FOR COMPLETION, based on critical path method analysis; and
- 29.5.2 compensation for additional COST incurred as a direct result of, and solely attributable to such Emergency Situation, plus a markup of 10% on account of overhead and profit.
- 29.6 The failure of the CONTRACTOR to give written notice to the ENGINEER in accordance with GC 29.4 within twenty-four (24) hours after the commencement of the EMERGENCY

SITUATION, constitutes a waiver of the CONTRACTOR'S right to an extension of the TIME FOR COMPLETION and/or additional compensation.

GC30.0 INSURANCE TO BE PROVIDED BY THE CONTRACTOR

- 30.1 All insurance provided by the CONTRACTOR shall specify the OWNER and the Crown as an additional insured.
- 30.2 The CONTRACTOR shall provide, maintain and pay for the following insurances:
 - 30.2.1 CONTRACTOR Equipment Insurance
 - 30.2.1.1 "All risks" contractor's equipment insurance covering owned and non-owned mobile equipment, property and constructions tools, machinery and equipment used by CONTRACTOR for the performance of the Work, including boiler insurance on temporary boilers and pressure vessels, in a form and with insurers reasonably acceptable to the OWNER and prohibiting subrogation against the OWNER and any party insured by the policy provided by the OWNER pursuant to this section and endorsed to provide the OWNER with not less than thirty (30) days prior notice by registered mail in advance of cancellation, material change or amendment restricting coverage.
 - 30.2.2 Automobile and Aircraft Liability Insurance
 - 30.2.2.1 Automobile and aircraft liability insurance with respect to automobiles and aircraft used directly or indirectly in the performance of the Work and which are owned, leased, chartered or used by the CONTRACTOR and covering liability for bodily injury, death and damage to property with a limit of not less than five million dollars (\$5,000,000) inclusive for each and every loss, in a form and with the insurers reasonably acceptable to the OWNER and prohibiting subrogation against the OWNER and providing not less than thirty (30) days' prior notice by registered mail in advance of cancellation, material change or amendment restricting coverage. The automobile liability policy may contain exclusionary language relative to liability incurred while vehicles are operating airside.
- 30.3 The CONTRACTOR, by way of contract, shall require each of its subcontractors to provide, maintain and pay for the insurances equivalent in scope and terms (including as to notice and waiver of subrogation) to those required of the CONTRACTOR by GC31.2.
- 30.4 The CONTRACTOR, by way of contract, shall require each of the contract services suppliers to assent and comply with all duties, obligations, releases and indemnities, all as to the OWNER as set out in GC 31.2.
- 30.5 All Insurances to be provided by the CONTRACTOR and SUBCONTRACTORS shall be primary and non-contributing and shall be maintained continuously from the commencement of the Work until total performance of the Work. Subject to the other provisions of this Contract, this shall include any Work completed in correcting deficiencies, warranty Work and any Work added to the scope of the contract by amendment.
- 30.6 The CONTRACTOR shall provide the OWNER with certified copies of all policies of insurance to be provided by CONTRACTOR or SUBCONTRACTORS promptly upon award of this CONTRACT or the subcontract as the case may be. Approvals of any policy of insurance by the OWNER, shall in no way relieve CONTRACTOR of its obligations under GC31.

- 30.7 The CONTRACTOR shall provide the OWNER with a revised certificate of insurance whenever there is a material change to the policy including, without limitation, renewals and changes to policy limits, types of coverage and insurers. Upon request, the CONTRACTOR shall allow the OWNER to review a complete copy of any insurance policy.
- 30.8 If the CONTRACTOR fails to provide, maintain or pay for insurances as required by the GC31, OWNER shall have the right, but not the obligation, to provide, maintain and pay for such insurance and give evidence of it to CONTRACTOR, in which case the cost thereof shall, at the option of the OWNER be payable by CONTRACTOR to the OWNER on demand or the OWNER may deduct such costs from monies which are then or thereafter become due and payable to CONTRACTOR under this Contract.

GC31.0 WORKERS' COMPENSATION

- 31.1 The CONTRACTOR shall at all times pay or cause to be paid any assessment or compensation required to be paid under applicable workers' compensation legislation and upon failure to do so, the OWNER may pay any such assessment or compensation to the applicable workers' compensation board and the amount of such payment shall, at the option of the OWNER be payable by the CONTRACTOR to the OWNER on demand or the OWNER may deduct the amount of such payment from any monies then or thereafter becoming due and payable to the CONTRACTOR under this Contract. The CONTRACTOR shall at the time of entering into this CONTRACTOR, deliver to the OWNER a statutory declaration sworn by a director or officer of the CONTRACTOR stating that all assessments or compensation payable to the applicable workers' compensation board have been paid and the OWNER may at any time during the performance and upon completion of the Work require a further similar statutory declaration. The CONTRACTOR unconditionally guarantees to the OWNER full compliance with the applicable conditions, regulations, and laws relating to workers' compensation by itself and by all SUBCONTRACTORS.

GC32.0 INDEMNITY

- 32.1 The CONTRACTOR shall indemnify and hold harmless, and when requested by the OWNER defend OWNER, the Crown, and their directors, officers, employees, agents and subsidiaries from and against all liabilities, suits, actions, judicial or administrative proceedings, claims, demands, damages, penalties, fines, costs and expenses of whatsoever kind or character (including but not limited to all costs and fees for investigation and defence thereof) arising out of or by reason of any liability or obligation in any manner caused or occasioned or claimed to be caused or occasioned by any act, omission, fault or negligence of the CONTRACTOR or anyone acting on its behalf, including but not limited to, subcontractors and vendors, their SUBCONTRACTORS and sub-vendors, and the employees and agents of any of the foregoing, in connection with or incident to the CONTRACTOR or the Work to be performed.
- 32.2 Without limiting the foregoing, the CONTRACTOR shall indemnify and hold harmless, and when requested by the OWNER defend the OWNER, the Crown, and their directors, officers, employees, agents and subsidiaries from and against all liabilities, suits, actions, judicial or administrative proceedings, claims, demands, damages, penalties, fines, costs and expenses of whatsoever kind or character (including but not limited to all costs and fees for investigation and defense thereof) arising out of or by reason of any injuries (including death) or damage to any person or damage to or destruction of any property of any person or entity employed by or acting on the CONTRACTOR'S behalf under the Contract, except where solely caused by the negligence of the OWNER.

GC33.0 INSPECTION OF THE WORK

- 33.1 The ENGINEER and his representatives shall at all times have access to the WORK whenever it is in preparation or progress and the CONTRACTOR shall provide proper facilities for such

access and for inspection. The ENGINEER shall have authority to reject WORK which does not conform to the requirements of the CONTRACT.

- 33.2 If any of the CONTRACT DOCUMENTS, applicable LAWS or any public authority require any part of the WORK to be specially tested or approved, the CONTRACTOR shall give the ENGINEER timely notice of his readiness for inspection, and if the inspection is required to be performed by an authority other than the ENGINEER, of the date fixed for such inspection.
- 33.3 Inspections by the ENGINEER shall be made promptly. If any part of the WORK should be covered up without approval or consent of the ENGINEER, it must, if required by the ENGINEER, be uncovered for examination at the CONTRACTOR'S expense.
- 33.4 Re-examination of questioned parts of the WORK may be ordered by the ENGINEER and if so ordered those parts of the WORK shall be uncovered by the CONTRACTOR. If such parts of the WORK are found not in accordance with the CONTRACT DOCUMENTS, the CONTRACTOR shall pay the cost of examination and replacement of the non-conforming WORK. If such parts of the WORK are found in accordance with the CONTRACT DOCUMENTS, the OWNER shall pay these costs.
- 33.5 MATERIAL and PRODUCT to be used in the WORK are subject to inspection and approval of the ENGINEER at his discretion. MATERIAL and PRODUCT which the ENGINEER determines being unsuitable and not in conformity with the CONTRACT DOCUMENTS, shall be removed from the WORK and its vicinity without delay, and replaced with MATERIAL and PRODUCT acceptable to the Engineer. If the CONTRACTOR fails to do so within forty eight (48) hours after having been so directed by the ENGINEER, the rejected MATERIAL and PRODUCT may be destroyed or removed by the OWNER and the cost shall be charged to the CONTRACTOR.
- 33.6 The ENGINEER'S inspection or lack of inspection of the WORK shall not relieve the CONTRACTOR of his responsibility to perform the WORK in accordance with the CONTRACT DOCUMENTS.
- 33.7 The CONTRACTOR shall permit the OWNER and/or persons appointed by the Government to inspect the WORKSITE and/or accounts and records of the CONTRACTOR and its SUBCONTRACTORS relating to the performance of the CONTRACT, and to have such accounts and records audited by auditors appointed by the OWNER or Government if required.

GC34.0 REJECTED WORK

- 34.1 The ENGINEER has the right to reject MATERIALS, PRODUCTS and WORK that, in the ENGINEER'S opinion do not conform to the requirements of the CONTRACT DOCUMENTS.
- 34.2 The CONTRACTOR shall within the time required remove, replace or modify and re-execute all parts of the WORK rejected by the ENGINEER as failing to conform with the CONTRACT, and shall restore the WORK and make good all other WORK or property destroyed or damaged by such removal and replacement or modification of the rejected WORK, at the CONTRACTOR'S expense.
- 34.3 If the CONTRACTOR does not within the time required remove and re-execute the rejected parts of the WORK, the ENGINEER may, without prejudice to any other rights which the OWNER may have, cause the removal and replacement or modification, and restoration to be carried out by the OWNER'S own forces or by OTHER CONTRACTOR'S in accordance with the provisions of GC14.0.
- 34.4 If, in the opinion of the ENGINEER, it is not expedient to correct defective or deficient WORK or WORK not performed in accordance with the CONTRACT DOCUMENTS, the OWNER will deduct from the CONTRACT PRICE that sum of money determined by the ENGINEER as being

equal to the difference in value between the work as performed and the WORK as called for in the CONTRACT.

GC35.0 WARRANTY PERIOD

- 35.1 The WARRANTY PERIOD is one (1) year following the date of the CONSTRUCTION COMPLETION CERTIFICATE.
- 35.2 The CONTRACTOR shall correct, at his own expense, any defects in the WORK due to faulty MATERIALS, PRODUCTS or workmanship arising within the WARRANTY PERIOD.
- 35.3 The CONTRACTOR shall correct or pay for any damage to the WORK or other property resulting from such defects or their correction.
- 35.4 The OWNER shall notify the CONTRACTOR promptly of such defects. If the CONTRACTOR does not cause repairs to be made within ten (10) calendar days after such notice, the OWNER shall have the right to purchase MATERIAL and employ men to execute said repairs, and the cost of the same shall be the responsibility of the CONTRACTOR or his Surety.
- 35.5 Where repairs must be made immediately by reason of an emergency existing or otherwise, the OWNER shall have the right to undertake such repairs and charge the cost to the CONTRACTOR, except that the OWNER shall immediately notify the CONTRACTOR and shall withdraw from the work of repair if and as soon as the CONTRACTOR'S forces are ready to start work.
- 35.6 The CONTRACTOR shall be responsible for all costs attributable to defective work, PRODUCT or MATERIAL, including the cost of engineering required for investigation of any repair of defects in the WORK.
- 35.7 At least one month prior to expiry of the WARRANTY PERIOD, the OWNER shall notify the CONTRACTOR in writing of any final tests which the CONTRACTOR may be required to carry out under the CONTRACT. The CONTRACTOR shall arrange to have such tests carried out promptly, and to provide opportunity for the OWNER to inspect or supervise such tests.
- 35.8 The CONTRACTOR is required to promptly remedy all defects which it is notified of prior to the expiry of the WARRANTY PERIOD. The WARRANTY PERIOD shall not expire until all such defects are remedied.

GC36.0 LABOUR

- 36.1 The CONTRACTOR shall at all times enforce discipline and good order among his employees, and shall not employ on the WORK any unfit person or anyone not skilled to do the WORK assigned to him. Any person employed on the WORK who becomes intoxicated, intemperate, disorderly, incompetent or wilfully negligent, shall be removed from the WORK.

GC37.0 TITLE

- 37.1 Subject to the CONTRACTOR'S rights under *The Mechanic's' Lien Act*, the CONTRACTOR warrants that the OWNER shall obtain title to the MATERIALS, PRODUCTS and all other aspects of the WORK free and clear of all liens, charges and encumbrances.
- 37.2 The OWNER shall obtain title to the MATERIALS, PRODUCTS and all other aspects of the WORK upon the earlier of:
 - 37.2.1 to the extent of payment for MATERIALS and PRODUCTS, wherever located, prior to

their delivery to the WORKSITE; and

37.2.2 delivery of the MATERIALS, PRODUCTS or other aspects of the WORK to the WORKSITE.

37.3 The CONTRACTOR shall prepare and deliver any documentation that the OWNER or the ENGINEER may reasonably request to establish the OWNER'S title to the MATERIALS, PRODUCTS or any other aspect of the WORK.

GC38.0 MATERIAL AND PRODUCT SUPPLIED BY THE CONTRACTOR

38.1 The CONTRACTOR shall deliver all MATERIALS and PRODUCTS supplied by the CONTRACTOR to the WORKSITE DDP (Incoterms 2010).

38.2 Unless otherwise specified, all MATERIAL and PRODUCT shall be new and of good quality. The CONTRACTOR shall furnish satisfactory evidence as to the kind and quality of MATERIAL and PRODUCT. The CONTRACTOR shall be responsible for replacement at his own cost of all MATERIAL and PRODUCT that are found to be defective in manufacture or that have become damaged in handling.

38.3 The CONTRACTOR shall be responsible for the safe storage of MATERIAL and PRODUCT furnished by or to him, and accepted by him, and intended for the WORK, until it has been incorporated into the WORK.

38.4 Where any particular MATERIAL, PRODUCT or method is specified in the CONTRACT DOCUMENTS, the CONTRACTOR may not use another MATERIAL, PRODUCT or method unless the ENGINEER has issued to the CONTRACTOR a written authorization for the use. The CONTRACTOR shall submit in writing an application for review to the ENGINEER. All submissions shall be accompanied by sufficient data including the following:

38.4.1 Delivery

38.4.2 Manufacture

38.4.3 Technical Data and Specifications in accordance with the International System of Units (S.I.) metric units

38.4.4 Specified MATERIAL, PRODUCT or method for which the alternative is submitted

38.4.5 Prices in relation to the MATERIAL; method or PRODUCT specified originally.

38.4.6 Where required by the ENGINEER, samples shall be submitted.

38.5 Whenever alternatives of MATERIAL, PRODUCT or methods are accepted for the WORK by the ENGINEER, the CONTRACTOR: (a) guarantees that the performance of such alternative MATERIAL, PRODUCT, or method shall be equivalent to what was originally specified; and (b) shall be responsible for making all consequential adjustments to the WORK, at his own expense, to make the alternative fit into the WORK as specified.

GC39.0 MATERIAL AND PRODUCT SUPPLIED BY THE OWNER

39.1 The OWNER undertakes to supply only such MATERIAL or PRODUCT as are specifically shown in the CONTRACT DOCUMENTS as being provided by the OWNER.

39.2 It shall be the responsibility of the CONTRACTOR to arrange for and schedule delivery and

storage of MATERIAL and PRODUCT supplied by the OWNER.

- 39.3 The CONTRACTOR is solely responsibility for all MATERIAL and PRODUCT furnished by the OWNER once such MATERIAL or PRODUCTS arrives at the WORKSITE. MATERIAL and PRODUCT already present at the WORKSITE shall become the sole responsibility of the CONTRACTOR commencing on the effective date of this CONTRACT.
- 39.4 The CONTRACTOR shall be responsible for unloading all OWNER supplied MATERIAL and PRODUCT and the CONTRACTOR and the ENGINEER shall jointly examine them at the time and place of delivery to the CONTRACTOR, and shall prepare a statement of acceptance, specifically noting any defects and rejecting any defective MATERIAL or PRODUCT. The CONTRACTOR shall sign a Statement of Acceptance of MATERIAL and PRODUCT when accepting them into his charge. Any MATERIAL and PRODUCT furnished by the OWNER and installed by the CONTRACTOR shall, if found defective, be replaced by the CONTRACTOR. The CONTRACTOR, shall, at his own expense, furnish supplies, labour and facilities necessary to remove the defective MATERIAL and PRODUCT and install the sound MATERIAL and PRODUCT in a satisfactory manner.
- 39.5 The CONTRACTOR shall be entitled to use for the purpose of the WORK such supplies of electricity, water, gas and other services as may be available on WORKSITE of which details and prices are given in the CONTRACT DOCUMENTS. The CONTRACTOR shall, at his risk and cost, provide any apparatus necessary for his use of these services and for measuring the quantities consumed. The quantities consumed and amounts due for such services shall be agreed through written agreement or, failing such agreement, determined by the ENGINEER. The CONTRACTOR shall pay such amounts to the OWNER monthly in arrears.
- 39.6 If any loss or damage happens to facilities while the CONTRACTOR is responsible for their care, arising from any cause whatsoever other than those for which the OWNER is liable, the CONTRACTOR shall, at his own cost, rectify the loss or damage to the satisfaction of the ENGINEER.

GC40.0 AVOIDANCE OF INTERFERENCE

- 40.1 The CONTRACTOR shall not interfere unnecessarily or improperly with:
- 40.1.1 the convenience of the public; or
 - 40.1.2 the access to and use and occupation of all aprons, taxiways, runways, roads and footpaths, irrespective of whether they are public or in the possession of the OWNER.
- 40.2 The CONTRACTOR shall indemnify and hold the OWNER harmless against and from all damages, losses and expenses (including legal fees and expenses) resulting from any such unnecessary or improper interference.

GC41.0 ACCESS ROUTE

- 41.1 Except as stated otherwise in the CONTRACT DOCUMENTS:
- 41.1.1 The CONTRACTOR shall (as between the parties) be responsible for the maintenance which may be required for the use of access routes;
 - 41.1.2 The CONTRACTOR shall provide all necessary signs or directions along access routes and shall obtain any permission which may be required from the relevant authorities for his use of routes, signs and directions;
 - 41.1.3 The CONTRACTOR shall be responsible for payment of and obtaining any permits or

approvals required for the construction of access routes;

- 41.1.4 The OWNER shall not be responsible for any claims which may arise from the use or otherwise of any access route;
- 41.1.5 The OWNER does not guarantee the suitability or availability of particular access routes; and
- 41.1.6 Costs due to non-suitability or non-availability, for the use required by the CONTRACTOR, of access routes shall be borne by the CONTRACTOR.

GC42.0 STORAGE FACILITIES AND USE OF PREMISES

- 42.1 The CONTRACTOR may use such facilities and areas as the OWNER may be willing and able to designate for the storage of MATERIAL and PRODUCT for the WORK, without charge to the CONTRACTOR. The CONTRACTOR shall take full responsibility for the OWNER'S facilities so provided.
- 42.2 Should the CONTRACTOR require additional facilities or areas he shall make all the necessary arrangements with the OWNERS or occupants of such other facilities or areas and shall pay all rentals and all damages caused by such occupancy.
- 42.3 The CONTRACTOR shall not unreasonably encumber the premises with his MATERIAL, PRODUCT or PLANT.
- 42.4 The CONTRACTOR shall enforce all regulations and rules for the WORKSITE regarding signs, advertisements, fires, smoking, and storage of inflammable MATERIAL or PRODUCT, and disposal of wastes.
- 42.5 The CONTRACTOR shall not load or permit any part of the WORK or of the OWNER'S structures to be loaded in any way that will endanger their safety.

GC43.0 USE OF COMPLETED PORTIONS OF THE WORK

- 43.1 The OWNER shall have the right to take possession of and use any completed or partially completed portions of the WORK, notwithstanding that the time for completing the WORK or such portions of the WORK; but such taking possession of and use shall not be deemed an acceptance of the WORK.
- 43.2 If such prior use increases the cost of the WORK, the CONTRACTOR shall be entitled to such compensation as the ENGINEER in the first instance may determine.
- 43.3 If a planned taking possession of and use of portions of the WORK has been stipulated in the CONTRACT DOCUMENTS, then the CONTRACTOR shall have no claim for extra compensation on that account.

GC44.0 CLEANUP AND FINAL CLEANING OF THE WORK

- 44.1 The CONTRACTOR shall maintain the WORK and the WORKSITE in a tidy condition, free from accumulation of waste products and debris caused by his own operations.
- 44.2 When the WORK is fully completed, the CONTRACTOR shall remove all surplus MATERIAL and PRODUCT, tools and PLANT from the WORKSITE. He shall also remove any waste products and debris, other than those caused by the OWNER, OTHER CONTRACTORS or their employees. He shall leave the WORKSITE in a neat and orderly condition.

GC45.0 PROTECTION OF THE ENVIRONMENT

- 45.1 The CONTRACTOR shall take all reasonable steps to protect the environment (both on and off the WORKSITE) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations.
- 45.2 The CONTRACTOR shall ensure that emissions, surface discharges and effluent from the CONTRACTOR'S activities shall not exceed the values stated in the CONTRACT DOCUMENTS or prescribed by the governing LAWS.
- 45.3 It is prohibited to pump any liquid directly onto the ground or into any sewer system or drainage ditch without first obtaining written permission from the appropriate authorities.
- 45.4 All special or hazardous wastes generated by the CONTRACTOR shall be removed from the WORKSITE and disposed of, by the CONTRACTOR, in accordance with local waste management regulations. Unless provided otherwise in the CONTACT DOCUMENTS, the OWNER'S site is not available for the disposal of any waste.

GC46.0 SECURITY OF THE WORKSITE

- 46.1 Unless otherwise stated in the CONTRACT DOCUMENTS:
 - 46.1.1 the CONTRACTOR shall be responsible for keeping unauthorized persons off the WORKSITE; and
 - 46.1.2 authorized persons shall be limited to the CONTRACTOR'S, ENGINEER'S and OWNER'S personnel; and any other personnel notified to the CONTRACTOR by the OWNER or ENGINEER, as authorized personnel.

GC47.0 DISPUTE RESOLUTION

- 47.1 The ENGINEER shall, in the first instance, interpret the CONTRACT and make any determinations for which it is responsible and which it is authorized to make under the CONTRACT. Should either the CONTRACTOR or the OWNER dispute the written interpretation or determination made by the ENGINEER in the first instance, that PARTY shall, within six (6) calendar days of receiving the determination or interpretation, submit to the ENGINEER a written notice of his dispute setting out all of the relevant details ("NOTICE OF DISPUTE").
- 47.2 Upon receipt of a NOTICE OF DISPUTE, the ENGINEER shall immediately notify in writing the other party to the CONTRACT and provide to the other party a copy of the NOTICE OF DISPUTE.
- 47.3 The OWNER and the CONTRACTOR shall, within six (6) calendar days of receiving such NOTICE OF DISPUTE, review the dispute jointly and attempt a resolution by negotiation.
- 47.4 If the OWNER and the CONTRACTOR are not able to resolve the dispute by negotiation, they may, by mutual agreement, engage a mediator to assist them in further negotiation towards reaching a resolution.
- 47.5 Alternatively, or after mediation has failed, the OWNER and the CONTRACTOR may, by mutual agreement, submit the dispute to arbitration under the laws of the jurisdiction in which the WORK is situated. Insofar as it is compatible with the law in the jurisdiction in which the WORK is situated, the Recommended Procedures for Arbitration of Construction Disputes of the Canadian Construction Association, the most current edition, shall be followed. The

arbitrator's decision shall be binding.

- 47.6 Alternatively, the CONTRACTOR or the OWNER may commence an action at law with respect to the dispute if it cannot be resolved by negotiation either with or without mediation. Neither negotiation with or without mediation, nor arbitration, shall be conditions precedent to proceeding with an action at law.
- 47.7 If the dispute is not resolved promptly, the ENGINEER shall give instructions in writing to the CONTRACTOR to do such work or to take such actions or refrain from taking such actions as may be required to avoid delay, mitigate damage and continue the proper performance of the WORK pending resolution of the dispute. The CONTRACTOR shall act promptly in accordance with such instructions and by so doing shall not jeopardize any claim he may have with respect to the dispute.

GC48.0 COMMUNICATIONS

- 48.1 Wherever the CONTRACT provides for the giving or issuing of approvals, certificates, consents, determinations, notices, requests and discharges, these communications shall be in writing and delivered by hand, sent by mail or courier, or transmitted using any of the legally recognized systems of electronic transmission. At all times requests for written hard copy documentation will be provided.

GC49.0 CONFIDENTIALITY

- 49.1 Any SPECIFICATIONS, DRAWINGS or other technical, commercial or financial information relating to the OWNER'S business (the "CONFIDENTIAL INFORMATION") which the CONTRACTOR may obtain in connection with the CONTRACT will be deemed confidential. The CONTRACTOR will not use the CONFIDENTIAL INFORMATION for its own purposes (other than fulfilling its obligations under the CONTRACT), nor will the CONTRACTOR disclose the CONFIDENTIAL INFORMATION to any third party except as specifically authorized by the OWNER in writing.

GC50.0 OWNER'S RIGHT TO AUDIT

- 50.1 During the execution of the WORK and for a period of 3 years from the termination of the CONTRACT or the date of the CONSTRUCTION COMPLETION CERTIFICATE (whichever date is later), the CONTRACTOR agrees to allow access and to arrange for access to the OWNER or to its authorized personnel at all reasonable times to:
- 50.1.1 the CONTRACTOR and its personnel; and
 - 50.1.2 all documentation pertaining to the execution of the WORK under the CONTRACT, including the award of subcontracts;
- for the purpose of auditing and verifying that:
- 50.1.3 any PROGRESS PAYMENT CERTIFICATE or payment claim submitted by the CONTRACTOR to the OWNER or ENGINEER for payment is in accordance with the CONTRACT;
 - 50.1.4 whether the CONTRACTOR has complied with the CONTRACT; or
 - 50.1.5 whether the CONTRACTOR has satisfied its payment obligations to its personnel (including SUBCONTRACTORS) arising out of the CONTRACT.

GC51.0 REMEDIES

- 51.1 The specific remedies to which the CONTRACTOR and the OWNER may resort under the terms of the CONTRACT DOCUMENTS are cumulative and are not intended to be exclusive of any other remedies to which the CONTRACTOR and the OWNER may be lawfully entitled in a case of breach or threatened breach of any covenant, term or provision of the CONTRACT.
- 51.2 The waiver by the OWNER or ENGINEER of any breach of any covenant or warrant in the CONTRACT shall not be construed as a waiver of any future breach of the same terms of the Contract, and the approval by the OWNER or ENGINEER of any act by the CONTRACTOR or SUBCONTRACTOR shall not be construed as an approval to any subsequent similar acts by the CONTRACTOR or SUBCONTRACTOR.

----- **END OF SECTION 00 70 00**-----

1.0 WORK UNDER THIS CONTRACT

1.1 THE WORK included is described in general in Section 00 05 00.

2.0 WORK INCLUDED

2.1 THE WORK, unless specifically stated otherwise, shall include the furnishing of all MATERIAL, PRODUCT, PLANT, labour and transportation necessary to complete THE WORK. The intent is that the CONTRACTOR provides a complete job.

2.2 THE WORK shall not be deemed complete until all components are placed in operation by the CONTRACTOR, and are operating satisfactorily.

2.3 Any minor item of THE WORK not called for in the specifications or shown on the drawings but clearly required to meet the intent of design and normally provided for the proper operation of THE WORK shall be provided as if specifically called for in the CONTRACT DOCUMENTS.

3.0 DOCUMENTS REQUIRED

3.1 Maintain at the job site at least one copy of each of the following:

- Contract Drawings
- Specifications
- Addenda
- Change Orders, Field Orders, Notices
- Reviewed Shop Drawings
- Modifications to the Contract
- Field Test Reports
- Construction Schedule
- Manufacturer's Installation and Application Instructions
- Occupational Health and Safety Regulations and Workers' Compensation Board Regulations;

and have readily available any referenced or specified Standards.

4.0 SPECIFICATIONS

4.1 Sentence structure in parts of the specifications is abbreviated, and phrases such as "shall be," and "the Contractor shall" are deliberately omitted. Such sentences shall be read as though they are complete.

4.2 The use of the word "PROVIDE" means "supply and install"; or "supply labour and materials for the installation of". It does not mean supply only.

4.3 The word "concealed" in connection with piping, electrical work, controls and wherever used in other sections shall mean "hidden from sight" as in ceiling spaces or furred out spaces, and not normally visible to persons in the construction area.

4.4 The word "exposed" in connection with piping, electrical work, controls and whenever used in other sections shall mean visible to persons within a building, in normal working areas.

5.0 STANDARDS

- 5.1 Wherever standards (e.g., CSA, ASTM and others), are referred to in these CONTRACT DOCUMENTS the current edition at the date of closing of TENDERS shall apply.
- 5.2 Where there is a clear conflict between the referenced Standard and the CONTRACT DOCUMENTS, the CONTRACT DOCUMENTS shall apply.
- 5.3 Where there is an ambiguity between a Standard and any term of these CONTRACT DOCUMENTS, the ENGINEER shall, in the first instance, give an interpretation of the intent of the CONTRACT.

----- **END OF SECTION 01 01 00** -----

1.0 THE WORKSITE

1.1 The OWNER will provide the lands as delimited on the Drawings upon which THE WORK is to be constructed.

2.0 CONTRACTOR'S USE OF THE WORKSITE

2.1 The CONTRACTOR shall have exclusive use and control of the WORKSITE, provided that the CONTRACTOR shall permit access to the OWNER, the ENGINEER and OTHER CONTRACTORS on the WORKSITE for purposes of inspections, reviews, tests and carrying out work related to THE WORK.

2.2 CONTRACTOR'S use of the WORKSITE for storage is limited to the following areas, as delimited on the Drawing.

2.3 The OWNER shall have unfettered use of thoroughfares, streets, lanes, runways, taxiways, aprons and service roads, and other areas within the WORKSITE until the CONTRACTOR requires those areas for execution of THE WORK, and after the CONTRACTOR has finished the portions of THE WORK in those areas.

2.4 Unless otherwise agreed with the OWNER, the CONTRACTOR shall give five (5) calendar days notice to the OWNER before entering a particular Area of the WORKSITE to execute THE WORK.

2.5 Up to the end of the period of Notice and after the CONTRACTOR has fully completed its operations in a particular Area, the OWNER shall have use of the Area and shall be responsible for Health and Safety Requirements and security in that Area.

2.6 During the CONTRACTOR'S use of a particular Area of the WORKSITE to execute THE WORK, the CONTRACTOR shall be responsible primarily for ensuring compliance with Health and Safety Regulations.

2.7 The CONTRACTOR shall be responsible for access to the WORKSITE by means of temporary roads, tote roads, or agreements with the appropriate authorities to use existing means of access.

----- **END OF SECTION 01 01 50** -----

1.0 GENERAL

- 1.1 The Laws and Regulations of the Province of Saskatchewan shall govern.
- 1.2 If the National Building Code of Canada applies to the WORK, the standards of the WORK shall conform to or exceed the minimum standards of the National Building Code of Canada.
- 1.3 In the event of a dispute resolution by arbitration, the arbitration shall be governed by the Saskatchewan Arbitration Act.
- 1.4 The CONTRACTOR shall ensure compliance on his part and on the part of all of his SUBCONTRACTORS with the Saskatchewan Occupational Health and Safety Act and Regulations thereunder.
- 1.5 The attention of the CONTRACTOR is drawn to the requirements of the Builder's Lien Act and Regulations thereunder.
- 1.6 Where the WORK under this CONTRACT falls under the requirements of the Saskatchewan Public Works Act, the Act shall apply.
- 1.7 All other Provincial Acts and Regulations thereof shall apply and the CONTRACTOR shall comply with the requirements thereof as though they had been specifically named in these specifications.

2.0 BURNING

- 2.1 Restrictions of federal, provincial and municipal authorities shall be complied with, and permits shall be obtained by the CONTRACTOR.

3.0 REGULATIONS, STANDARDS AND CODES

- 3.1 Codes, Standards and Regulations are specified in other sections of the specifications and the WORK shall be done in accordance with those Codes, Standards and Regulations where applicable.

----- **END OF SECTION 01 06 00** -----

4.0 ABBREVIATIONS, SPECIFICATIONS, METHODS, STANDARDS

4.1 General

AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
ARCA	Alberta Roofing Contractors Association
ASCE	American Society of Civil Engineers
ASTM	American Society for Testing and Materials
AWPA	American Wood Preservers Associations
AWS	American Welding Society
BCLMA	B.C. Lumber Manufacturer's Association
CAN	National Standard of Canada
CCA	Canadian Construction Association
CISC	Canadian Institute of Steel Construction
CITC	Canadian Institute of Timber Construction
CPCI	Canadian Prestressed Concrete Institute
CRCA	Canadian Roofing Contractors Association
CSA	Canadian Standards Association
CWB	Canadian Welding Bureau
ISO	International Organization for Standardization
NBC	National Building Code
PCI	Prestressed Concrete Institute
PMBC	Plywood Manufacturer's Association
SJI	Steel Joist Institute
SSPC	Steel Structures Painting Council
WCB	Worker's Compensation Board

4.2 Utilities

API	American Petroleum Institute
AWWA	American Water Works Association
CGA	Canadian Gas Association
CGSB	Canadian General Standards Board
CSPI	Corrugated Steel Pipe Institute
IAO	Insurer's Advisory Organization
RTAC	Roads and Transportation Association of Canada
ULC	Underwriters Laboratories of Canada
USA	United States of America Standards (ASA)

4.3 Mechanical

AFBMA	Anti Friction Bearing Manufacturer's Association
AGMA	American Gear Manufacturer's Association
AMCA	Air Moving and Conditioning Association
ANSI	American National Standards Institute
ACR	Air Conditioning and Refrigeration Institute
ASHRAE	American Society of Heating Refrigerating and Air Conditioning Engineers
NFPA	National Fire Protection Association
SAE	Society of Automotive Engineers

4.4 Electrical

AIEE	American Institute of Electrical Engineers
CEC	Canadian Electrical Code
EEMAC	Electrical and Electronic Manufacturers Association of Canada
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronic Engineers
IES	Illuminating Engineers Society
IPCEA	Insulated Power Cable Engineer's Association
LEMA	Lighting Equipment Manufacturer's Association
NEC	National Electrical Code
NEMA	National Electrical Manufacturers Association
NESC	National Electrical Safety Code

4.5 Use of Abbreviations

These abbreviations refer to Specifications, Methods and Standards issued by the respective Association, and the abbreviations are used in the specifications.

Alphanumeric designations following the abbreviations denote the specification, method, or standard.

5.0 ABBREVIATIONS – METRIC

5.1 General

The specifications are metric and metric usage is based upon SI units in accordance with CSA Standard CAN/CSA-Z234.1 Canadian Metric Practice Guide. In this specification SI units are abbreviated in accordance with the Metric Units and Abbreviations below.

5.2 Linear Measure

Metre	m or lm
Millimetre	mm
Kilometre	km

	micrometre	micro-m
5.3	Area	
	Square metre	m ²
	Square millimetre	mm ²
	Hectare	ha
5.4	Volume	
	Cubic metre	m ³
	Litre	L
5.5	Mass and Density	
	Kilogram	kg
	Gram	g
	Tonne	t
	Kilogram per metre	kg/m
	Gram per metre	g/m
	Kilogram per square metre	kg/m ²
	Gram per square metre	g/m ²
	Kilogram per cubic metre	kg/m ³
5.6	Temperature	
	Degree Celsius	°C
5.7	Force, Pressure, Stress	
	Newton	N
	Kilonewton	kN
	Pascal	Pa
	Kilopascal	kPa
	Megapascal	MPa
5.8	Velocity, Rate of Flow	
	Metre per second	m/s
	Metre per hour	m/h
	Kilometre per hour	km/h
	Litre per second	L/s
	Cubic metre per second	m ³ /s

5.9	Power, Energy, Heat, Work	
	Watt	W
	Kilowatt	kW
	Kilowatt hour	kWh
	Joule	J
5.10	Electricity	
	Ampere	A
	Volt	V

----- END OF SECTION 01 07 00 -----

1.0 GENERAL

1.1 Regulatory Requirements

- 1.1.1 Prior to use, have weigh scales certified as meeting requirements of Statutes of Canada, Chapter 36, Weights and Measures Act 1970-71-72 and subsequent amendments. Display certificate in prominent position.
- 1.1.2 Consultant will accept the use of commercial scales meeting all the following requirements.

2.0 PRODUCTS

2.1 Equipment

- 2.1.1 Weigh scales: electronic truck scale of sufficient capacity to weigh loaded vehicles in single operation.

3.0 EXECUTION

3.1 Installation

- 3.1.1 Provide, install and maintain electronic scales, and ramps, convenient to project site, at location approved by Consultant.

3.2 Operation

- 3.2.1 The contractor shall be responsible for providing a trained operator to weigh trucks and prepare weigh tickets.
- 3.2.2 The contractor shall record the tare weight of each truck at the beginning of each day, maintain a record of daily tare weights for each truck and shall advise the ENGINEER of any significant deviations therefrom.
- 3.2.3 Provide sufficient number of weigh tickets, in triplicate, with consecutive serial numbers. Obtain Consultant's approval of design.

3.3 Maintenance

- 3.3.1 Maintain scale platform and scale mechanism clean and free from gravel, asphalt, snow, ice, and debris.
- 3.3.2 Maintain approach and exit ramps free from sags and ruts.
- 3.3.3 Have scales re-certified if requested by Consultant.
- 3.3.4 Level approach and exit ramps and regrade to approval of Consultant.

----- **END OF SECTION 01 15 00** -----

1.0 GENERAL

- 1.1 Payments will be made on the basis of the lump sum prices bid and the unit prices bid in the Tender, and in accordance with the General Conditions.
- 1.2 The prices bid for various items of work, unless specifically noted otherwise, shall include the supply of all LABOUR, PLANT, EQUIPMENT, MATERIAL and PRODUCT necessary to construct THE WORK in accordance with the specifications. The tendered quantities are not to be used for ordering materials. The Contractor must conduct their own quantity take-off prior to ordering the materials.
- 1.3 The prices bid for supply and installation shall be full compensation for supplying, hauling, installing, cleaning, testing, and placing in service together with all other work subsidiary and incidental thereto for which separate payment is not provided elsewhere.
- 1.4 The method of measurement of the quantities for payment and the basis for payment will be in accordance with the following items of this section or as detailed in the various specifications contained in this document in accordance with the General Conditions.
- 1.5 Where the Tender shows separate items for supply and installation, the unit prices or lump sum prices bid for supply shall include supplying, delivering, loading, unloading and all allowances for handling, storage, breakage and waste. Payment will be made only for MATERIAL actually installed in THE WORK.
- 1.6 Progress Payment for supply-only items shall be made only for MATERIAL and PRODUCT on the WORKSITE and in the CONTRACTOR'S care, and shall then become the Property of the OWNER.
- 1.7 Other materials on site, whether existing structures, vegetation, topsoil, gravel, sand or other excavated or piled materials, are the property of the OWNER or of the owner of the land on which THE WORK is located. Only those materials specifically noted in the specification or on drawings as belonging to the CONTRACTOR shall become the CONTRACTOR'S property. For the purpose of this contract, any materials called for OFF-SITE disposal belong to the Contractor. On-site disposal shall imply the materials belong to the OWNER and that disposal shall be in designated areas on the airport property.
- 1.8 Where there are excess excavated materials, unsuitable materials excavated or materials of any kind that are excavated but not used in THE WORK, such materials are not the property of the CONTRACTOR unless authorized in writing by the ENGINEER or specified to be disposed of by the CONTRACTOR.
- 1.9 All work not measured or included under a specific bid item shall have all costs included and distributed throughout the unit rates as determined by the Contractor. The contractor shall note that not all costs and scope have a specific bid item.

2.0 QUALITY CONTROL TESTING

- 2.1 The provision of Quality Control Testing including associated laboratory testing, reporting and incidentals in accordance with Section 01 40 00 – Quality Control and Assurance, and the applicable Contract Drawings and Specifications shall be considered incidental to the work of each unit price bid item.

- 2.2 The Contractor shall include in each unit price bid item costs to complete applicable materials testing and geotechnical supervision by a Professional Engineer licensed to practice in the Province of Saskatchewan.
- 3.0 UNIT PRICE CONTRACTS SPECIAL PROVISIONS AND BASIS OF MEASUREMENT AND PAYMENT
- 3.1 Payments will be made on the basis of the following:
- 3.1.1 Unit price bid in the Schedule of Unit Prices.
- 3.1.2 Changes in THE WORK for items not covered by unit prices, in accordance with GC 18 - CHANGES IN THE WORK of the General Conditions.
- 3.1.3 For each Lump Sum item in the Schedule of Breakdown Prices, the ENGINEER will, in cooperation with the CONTRACTOR, estimate the percentage of the item completed at the end of the payment period.

GENERAL

1. The following sections are intended to provide supplemental detail to the contract items in the Schedule of Unit Prices, the associated technical specifications and the Contract Drawings. All of the information presented should be considered as a whole. The Contractor is advised that not all items within the Form of Tender may have an associated Special Provision.
2. Identify and note all components of the Work, as specified, and include in the Total Price the supply and installation of all material as shown on drawings and specifications to make a complete and fully operational system.
3. The List of Unit Prices does not detail or list each and every task / material / equipment necessary to result in a complete and fully operational system. Factor the cost of all such tasks / material / equipment into the Tender Items shown.
4. Unless otherwise indicated, all tender items shall include cost of restoration and/or salvage as applicable.

ITEMS 1.1 – GENERAL CONSTRUCTION ITEMS

1. Mobilization and demobilization shall include the CONTRACTOR'S costs of mobilization at the beginning of the project; and the costs of demobilization at the end of the project.
2. The lump sum bid for this work shall be relative to the costs involved but shall not exceed twenty (20) percent of the Net Amount of Tender. Payment shall be made at the lump sum bid prorated based on the progress of the Work. Payment shall be full compensation for all related Work.
3. Included in mobilization are such items as permits, moving personnel, materials and equipment to the site, setting up temporary facilities such as floodlighting and temporary onsite asphalt plant, contractor facilities, and all preparation for performing THE WORK. This includes but is not limited to the setup/preparation, take down/ restoration of the Contractor's yard/staging area, temporary asphalt plant and other construction facilities, haul routes including temporary culverts and signage, site offices, employee parking, etc.
4. Included in demobilization are the removal of personnel, materials and equipment; and restoration/cleanup of the site and the WORK.

5. The work under this item shall include the provision of the performance and labour and materials bonds as specified.
6. The work under this item shall include the provision of the required Contractor insurance coverage as specified in the General Conditions.
7. The work under this item shall include costs associated with the preparation of a project specific Health and Safety Plan which is to be provided to the Contract Administrator at the Pre-Construction Meeting.
8. The work under this item shall include all costs associated with the provision, and routine cleaning, of site privies in accordance with Section 01 50 00 – Construction Facilities and the applicable Employment Standards Act. Contractor to provide site privies at active gates for security personnel use.
9. Construction Access
 1. The Contractor shall maintain, and repair any haul routes/roads, at the end of construction to their original condition. The Contractor is advised to make their own determination of the quality of the public roadways for this project. The Contractor is advised that the use of public roadways may require coordination with the City and/or the Province. The Contractor shall coordinate any required permit applications with the City/Province a minimum of four (4) weeks prior to construction.
 2. No separate payment will be made for the construction, maintenance or restoration of access routes and haul routes. The work is considered incidental to the work under this item.
10. The Work under this item shall include the preparation of a Quality Control Plan which shall be submitted two (2) weeks prior to construction. The Quality Control Plan shall include the following:
 1. Quality policy and objectives;
 2. Organizational structure including quality control manager, supplier certifications, site testing and inspection representatives, laboratory testing personnel, laboratory certification and staff qualifications, etc.;
 3. Operational procedures and document control;
 4. Control of measuring and testing equipment;
 5. Quality management plan for each activity including production and stockpiling of construction aggregates, material quality placement control, excavation and fill placement and compaction, production and placement of asphalt concrete and Portland cement concrete, testing and sampling frequencies and requirements, reporting format and schedule;
 6. Non-conformance procedures; and
 7. Corrective action procedures.
11. The work under this item shall include full-time Project Management and Coordination as outlined in the General Conditions, Section 01 20 00 – Project Management and Coordination and throughout the Contract Documents.
12. Utility Locates
 1. The Work under this item includes without limitation, the locating, marking, and recording of existing utilities within the project limits.
 2. All existing utilities which could be damaged by any construction operation (i.e., trenching, grading, excavating, compacting, etc.) or must be determined to confirm new cable routing,

connections, etc., must be accurately located and marked on site prior to construction. Ensure markers placed do not damage cables. Replace any markers that become lost or obscured during and throughout construction. Under no circumstances should work begin unless utility identification markers are in place.

3. Inform Engineer immediately of any located cables which are not clearly shown on the Contract Drawings.
4. Provide the Engineer with copies of all locates, record all cable locations and transfer to record drawings in accordance with Section 01 70 00 – Contract Closeout.
5. No payment will be made under this item for the protection of existing utilities. Protection of existing utilities is considered incidental to the Work.

13. Field Office

1. The Work under this item shall include without limitation the supply, servicing, maintenance, removal and restoration to existing conditions or better at the end of the project, of Site Offices for the Contractor and the Engineer in accordance with Section 01 50 00 – Construction Facilities.
2. The location of the Engineer’s Site Office shall be determined onsite with the Contractor and the Engineer prior to Construction.

14. Environmental Control Plan

1. The Work under this item shall include costs associated with the preparation and execution of a project specific Environmental Control Plan.
2. The Work shall be completed in accordance with Section 01 56 10 – Environmental Protection except as amended herein.
3. The Environmental Control Plan shall include, at a minimum, the following information:
 - General outline of undertaking the Work;
 - Spill Prevention and Emergency Measures;
 - Storage and handling of petroleum products and other hazardous materials;
 - Vehicle and equipment management;
 - Disposal Sites, temporary stockpiles, mud tracking and dust control;
 - Litter/FOD monitoring;
 - Details of the Contractor’s proposed environmental monitoring plan

15. Construction Layout and Quantity Measurement

1. The Work under this item shall include, without limitation, all surveying required for construction layout and quantity measurement for the Work.
2. Prior to construction, the Engineer will provide an electronic version of the Contract Drawings (AutoCAD 2018 Format) to the Contractor for reference purposes.
3. Prior to construction, the Engineer and the Contractor shall locate on site those property bars, baselines, and benchmarks that are necessary to delineate the Working Area and to lay out the Work, all as shown on the Contract Drawings.
4. Prior to construction, the Contractor shall be responsible for checking and verifying the accuracy of the survey control Work and if the Contractor observes any variance, the

Contractor shall promptly notify the Engineer in writing. Any variances shall be promptly resolved between the Engineer and Contractor at no additional cost. If the Contractor performs any Work without having given prior notice in writing of problems with the Engineer's control survey Work, the Contractor shall assume all responsibility for the accuracy and location of work arising from the setting out and shall have no recourse to the OWNER or the Engineer for the consequences.

5. The Contractor shall be responsible for the preservation of all property bars and benchmarks while the Work is in progress, except those property bars or benchmarks that must be removed to facilitate the Work. Any other property bars disturbed, damaged, or removed by the Contractor's operations shall be replaced under the supervision of a Saskatchewan Land Surveyor, at the Contractor's expense.
6. At no extra cost to the OWNER, the Contractor shall provide the Engineer with such materials and devices as may be necessary to layout the baseline and benchmarks, and as may be necessary for the inspection of the Work. The Contractor shall provide all stakes required for layout purposes. There will be no separate payment made for this requirement, cost of same being deemed to be included in the unit prices for the Contract.
7. The Contractor shall provide qualified personnel to layout and establish all lines and grades necessary for construction. The Contractor shall notify the Engineer of any layout Work carried out, so that the same may be checked by the Engineer.
8. Maintain a complete, accurate log of control and survey work as it progresses.
9. The Contractor shall install and maintain substantial alignment markers and secondary benchmarks as may be required for the proper execution of the Work. The Contractor shall supply one copy of all alignment and grade sheets to the Engineer.
10. The Contractor shall assume full responsibility for alignment, elevations, and dimensions of each and all parts of the Work, regardless of whether the Contractor's layout work has been checked by the Engineer.
11. The Work under this item shall include quantity measurement during construction. Quantity measurement shall be undertaken by qualified personnel using GPS/total station survey equipment. For volumetric quantities, the contractor shall take cross sections at appropriate stations as directed by the Engineer for initial surface and final surface using GPS or total station methods. Submission of all survey data and calculations is required in a manner approved by the Engineer.
12. The Contractor shall provide the Engineer with survey data in an acceptable format to review at beginning and at completion of each activity as required for payment.
13. Survey information during construction to include, but is not necessarily limited to, the following:
 - Date when data was taken
 - Name of Surveyor
 - Material/Layer description
 - Location (shown on Contract Drawings)
 - Design elevation taken at survey location
 - As-built elevation taken at survey location
 - Difference between design and as-built elevation

14. The survey data must be reviewed and approved by the Engineer before commencing any fill operations or proceeding with the initial and subsequent lifts of materials.
 15. Topographic survey must be provided for area and volumetric measurement purposes along with grade requirements to confirm specifications and tolerances have been met.
 16. Survey data for top of new granular base and asphalt surfaces must be completed by total station (or equivalent). GPS survey is not permitted for vertical elevation checks.
16. As-built Survey and Closeout Documentation
1. This item shall include all costs associated with completing a topographic as-recorded survey of the project areas at the completion of construction including submission of all closeout documentation required by the contract.
 2. The Work shall include the completion of a digital topographical survey of completed Work. Survey shall include:
 - Survey to be completed in NAD 83 CSRS stereographic projection and is to be tied into a minimum of two existing airport control monuments verified and approved by the Engineer.
 - Spot elevations taken on maximum 15 m grid spacing and at each grade break.
 - Location and elevations of all existing utilities located prior to construction.
 - Logically assemble and label like features/object data, annotate by colour, and group by layer in AutoCAD file. Follow layer and linetype conventions provided by Engineer.
 - Transpose all as-built record information to AutoCAD file. The CAD file is to be in AutoCAD (ver. 2017 or newer) format. Level zero is not to be used.
 - Provide a separate ASCII (.txt) format file containing point number Northing, Easting, Elevation control, and label information respectively for all points (P, N, E, Z, D – Comma Delineated Format). For electrical equipment, the contractor shall use the label designations identified on the contract drawings.
 3. Closeout documentation shall include the following:
 - Redline record drawings in accordance with Section 01 70 00 – Contract Closeout.
 - Quality control and assurance summary binders.
 - Construction photographs which accurately document the progress of the Work.
 - Operation and Maintenance Manuals in accordance with Section 01 72 00 and 01 70 00 – Closeout Submittals and applicable electrical specifications.
 4. All submittals related to this item shall be submitted no later than thirty (30) calendar days following substantial completion.

ITEM 1.2 – IMPLEMENTATION OF PLAN OF CONSTRUCTION OPERATIONS

1. The work under this item shall include all work to meet the requirements as outlined in the Plan of Construction Operations (PCO).
2. For the purposes of this item, "maintenance" shall be deemed the periodic review and condition assessment of the placed low profile barricades/lights etc. to ensure they are secure and to the proper configuration and dimensions.
3. Contractor shall take adequate precaution to ensure the barricades are protected from wind forces. Unless approved by Engineer, barricades shall not be anchored by means of stakes or nails which require penetration of the existing airfield facility surface. Sand bags may be approved by the Contract administrator. It is imperative that these fences are securely anchored.
4. Spacing between unserviceability lights shall as per the drawings. Any lights found to be burnt out or non-operational should be repaired or replaced in a timely manner.
5. Contractor must take necessary steps to ensure FOD, debris and dust is contained within the construction zone.
6. Contractor must review PCO document and be completely familiar with the requirements and its impact on this cost item and construction logistics. The work restrictions, production rates, equipment/personnel, etc. will be reviewed by the Engineer and Owner prior to the work commencing. The Owner reserves the right to require the contractor to increase both personnel and equipment if they feel the proposed schedule is not achievable. No additional compensation would be made under this instance.
7. Payment shall be made at the lump sum basis and shall be full compensation for all labour, equipment, tools and all other incidentals required to complete the Work. No additional payment will be made for reasonably foreseeable materials, labour or tools, etc. necessary to execute the Work.

ITEM 2.9 – SUPPLY AND PLACE GRANULAR SUBBASE

1. The work under this item shall include, without limitation the loading, hauling, placing, grading and compacting granular subbase material in accordance with City of Saskatoon Section 03010 – Granular Subbase and as amended herein.
2. Granular sub-base shall be compacted to an average of 98% MPmdd in accordance with ASTM D1557 and in accordance with the testing frequencies indicated in Section 01 40 00 – Quality Control.
3. If excess moisture originating from external causes including but not limited to precipitation and/or Contractor's operation is present in the sub-base course and/or underlying material prior to the acceptance of the completed surfacing structure; the Contractor shall dry the sub-base course and/or the underlying material to the optimum moisture content and compact the sub-base and/or the underlying material to not less than the specified density.
4. Measurement for payment will be made by tonne of material incorporated into the work and accepted by the Engineer. Submit acceptable proof to the Engineer. Payment at the tendered unit price shall be compensation in full for all related Work.
 1. Payment will not be made until specified quantity verification and required quality control reports are submitted.

ITEM 2.10 – SUPPLY AND PLACE GRANULAR BASE

1. The work under this item shall include, without limitation the loading, hauling, placing, grading and compacting granular subbase material in accordance with City of Saskatoon Section 03005 – Granular Base and as amended herein.
2. Granular base shall be compacted to an average of 98% MPmdd in accordance with ASTM D1557 and in accordance with the testing frequencies indicated in Section 01 40 00 – Quality Control.
3. If excess moisture originating from external causes including but not limited to precipitation and/or Contractor's operation is present in the subgrade and/or sub-base course and/or base course prior to the acceptance of the completed surfacing structure; the Contractor shall dry the subgrade and/or sub-base course and/or base course to the optimum moisture content and compact the subgrade and/or sub-base course and/or base course to not less than the specified density.
4. Measurement for payment will be made by tonne of material incorporated into the work and accepted by the Engineer. Submit acceptable proof to the Engineer. Payment at the tendered unit price shall be compensation in full for all related Work.
 1. Payment will not be made until specified quantity verification and required quality control reports are submitted.

ITEM 2.11/3.2 – SUPPLY AND PLACE ASPHALT

1. The Work of this item shall include, without limitation, the completion of all required mix design, trial batches, supply HMAC to the project site, prime coat, tack coat and placement and compaction of hot-mix asphaltic concrete in accordance with COS Section 04015 – Asphalt Concrete and Section 32 12 13.23/.16 – Asphalt Prime and Tack Coat, and as amended herein.
2. When using variable width HMAC pavers, install auger and mainframe extensions as necessary such that neither the screed nor mainframe extends more than 750 mm from the end of the auger on each side.
3. All trucks delivering HMAC shall be covered/tarped immediately at time of loading and shall not be uncovered/untarped until immediately prior to placement.
4. Submittals
 1. The Contractor shall submit the following information at least ten (10) business days prior to commencing with paving operations:
 - Paving equipment list
 - Asphalt plant production capacity
 - Paving schedule
 - Asphalt placement pattern and procedures
5. Materials
 1. Hot Mix Asphalt shall conform to COS Standard Specification 04010.
 - Base/Surface/Overlay Course – Type 2 PMA mix
6. Trial Batch Testing
 1. The Contractor, seven (7) days prior to the date that he wishes to commence production of

the mixture, shall deliver a test report confirming the trial mix meets the requirements of the contract. The Contractor shall complete a trial batch on an approved section of the access road and airside pavement.

2. Test results from trial batches shall conform to the Contractor supplied mix design within the tolerances specified in COS Section 04015 – Asphalt Concrete for gradation, asphalt cement content, and physical properties or as amended by this special provision.
 3. If the trial batch does not meet the tolerances for gradation, asphalt cement content or physical properties, the Contractor will be required to provide additional samples for retesting until the hot mix conforms to the Contractor's mix design. Trial batches incorporated into the project shall be removed. All additional testing and removal of trial batches will be at the Contractor's expense.
7. Sampling and Testing Frequency for Hot Mix Asphalt
4. Sampling and testing frequency of Hot Mix Asphalt shall be in accordance with Section 01 45 00 – Quality Control and COS Section 04015 – Asphalt Concrete.
8. Asphalt Acceptance Criteria
1. Aggregate gradation, asphalt cement content and air void test results for HMA samples shall meet the tolerance requirements as specified in this special provision.
 2. Each course after final compaction shall be of uniform texture and shall be free of defects such as segregation, fat spots, oil spills, and roller marks. Defective areas shall be removed and replaced with HMA of the same type and compacted to the satisfaction of the Engineer.
 3. Surface grading acceptable tolerances shall be as follows:
 - Within 6 mm of the design elevations but not uniformly high or low;
 - No more than a lip of 3 mm at tie-in locations with existing HMA, manholes, catch basins;
 - No depressions exceeding 5 mm in depth measured in any direction using a 3.0 m long straight edge;
 - Slopes shall be within 0.5 percentage points of the design grades, with no slope less than 0.6% or greater than 4.0%.
 - Positive drainage must be maintained in the intended design direction at all locations; and
 - Free from standing water. Any standing water (measured 60 minutes after a natural or simulated rainfall event) of area greater than a maximum diameter of 1.0 m, or any size of area where the maximum depth is greater than 3 mm.
 4. Acceptance of HMA materials as per COS Specification Section 04010 – Asphalt Mix, and Section 04015 – Asphalt Concrete except as amended herein:
 - Owner reserves the right to order the Contractor to suspend all paving operations until the Contractor can prove that the mix can be produced within acceptance tolerances. The Contractor should note that a systemic change in aggregate gradation or properties outside of the tolerances permitted, may require a job mix formula modification which will be developed and provided at the Contractor's

cost by the CCIL Type "A" certified laboratory that prepared the job mix formula. Should a job mix formula modification be required, the Contractor shall provide the revised job mix formula to the Engineer for approval prior to placement of any of the new pavement mix.

- If any individual Quality Assurance test results indicate that hot mix is rejectable for aggregate gradation, asphalt cement content, or air voids, the HMAC represented by that test shall be considered rejectable.
- The HMAC subject to removal and replacement shall be from the location of the first acceptable sample preceding the rejectable sample to the location of the first acceptable sample following the rejectable sample, in accordance with the sequence of paving operations.
- If the Contractor disputes a Quality Assurance result, the Contractor may request that a third-party referee laboratory (mutually agreed to by the Owner and the Contractor) re-test the sample in question using the additional sample in storage at the Quality Assurance Consultant's laboratory. In the absence of a duplicate sample being available, a cored sample from the original sample location may be used to conduct the referee test. The referee laboratory's results shall be considered final and binding. If the re-test confirms that the hot mix is rejectable, the mix represented by the test shall be removed and replaced by the Contractor with acceptable HMA. If the mix is confirmed to be rejectable, the Contractor shall be responsible for all costs associated with the referee testing and all costs associated with the replacement.
- In the case of a confirmed rejectable mix, the Contractor may undertake a coring and testing program to supplement the previous referee results in order to further define the area of rejectable mix to minimize the area requiring replacement. The Owner must review and approve in advance, the coring and testing program and the firm to be used to carry out the additional testing. Cores must be located at a minimum distance of 100m from any previous test location.
- The Owner reserves the right to apply the Payment Adjustment Factors as specified in COS Specifications. Furthermore, the Owner reserves the right to reject and direct the Contractor to replace HMAC materials for which any one or combination of Quality Assurance tests would result in an or combined adjustment factor of 0.899 (89.9%) or less.

9. Measurement and Payment

1. Measurement for payment for hot mix asphalt will be made in metric tonnes of asphalt concrete incorporated into Work and accepted by the Engineer based on weigh scale tickets. Hand written or hand modified tickets are not acceptable. Unused material will not be paid. Payment at the applicable unit price bid will be considered full compensation for all labour, materials, equipment and incidentals required to complete the Work.

ITEM 2.6 – CONNECTION TO EXISTING CATCHBASIN/MANHOLE

1. The work under this item shall include, without limitation the connection to the existing catchbasin/manhole with the new subdrain.
2. Work to be completed as per Section 33 03 13 – Manholes and Catchbasin Structure.

5. Measurement for payment will be made by each connection made and accepted by the Engineer. Payment at the tendered unit price shall be compensation in full for all related Work.

ITEM 3.3 – REINSTATE GATE LOOP

1. The work under this item shall include reinstating the existing in-pavement automatic gate detection loop, complete with all associated materials, labour and equipment.
2. Reinstated loop shall be saw-cut into new pavement and sealed with an appropriate sealant, using duly qualified installer(s). Loop shall follow the same placement, shape and pattern as the existing loop and be compatible with existing equipment.
3. Connect and ensure compatibility and functionality with existing gate equipment. Test and demonstrate proper function to the satisfaction of the Owner and Engineer.
4. Measurement for payment will be made on a lumpsum basis once reinstated and accepted by the Engineer. Payment at the tendered unit price shall be compensation in full for all related Work.

ITEM 3.4 – SAWCUTTING AND JOINT SEALING

1. The work under this item shall include the sawcutting/routing of new asphalt and hot applied rubber joint sealing, complete with all associated materials, labour and equipment, in accordance with City of Saskatoon Section 04000 – Rubberized Asphalt Crack Sealing and as amended herein.
2. Joints shall be reinstated over the existing joints with the tolerances indicated on the drawings. The Contractor will survey existing joints after milling and use survey to reinstate the joints after paving. No separate payment will be made.
3. Use of sawcutting in lieu of routing is acceptable provided the dimensions as shown on the drawings are achieved neatly and without damage to the material. No separate payment will be made.
4. Measurement for payment will be made on a lumpsum basis once reinstated and accepted by the Engineer. Payment at the tendered unit price shall be compensation in full for all related Work.

----- **END OF SECTION 01 15 50** -----

1.0 PRECONSTRUCTION MEETING

- 1.1 Preconstruction meetings will be arranged by the ENGINEER after the Acceptance of the TENDER.
- 1.2 Meetings will be held at the OWNER's office or at an alternate location at or near the Worksite.
- 1.3 The agenda for the Preconstruction Meeting shall include, but is not limited to, the following:
 - 1.3.1 Confirm the SUPERINTENDENT, CONTRACTOR'S PROJECT MANAGER, and the ENGINEER'S Resident personnel on the WORKSITE.
 - 1.3.2 Establish WORKSITE protocols for communication, reporting, inspection, etc.
 - 1.3.3 Clear up any ambiguities or questions of interpretation known at that time.
 - 1.3.4 CONTRACTOR shall present its detailed WORK SCHEDULE a minimum of five (5) days in advance of the Preconstruction meeting.
 - 1.3.5 Occupational Health and Safety relationships and responsibilities.
 - 1.3.6 Discuss other responsibilities of the OWNER, the CONTRACTOR, and the ENGINEER.

2.0 PROGRESS MEETINGS

- 2.1 Progress meetings will be held on an a weekly basis and as otherwise required or requested by the Engineer, the Owner or the Contractor.
- 2.2 Accommodation for progress meetings shall be provided by the OWNER at or near the Worksite. The ENGINEER will give to all parties advance notice of meeting dates, times and locations.
- 2.3 The CONTRACTOR shall have in attendance the SUPERINTENDENT, the CONTRACTOR'S Project Manager and representatives of the SUBCONTRACTORS and/or Quality Control Supervisor if requested by the ENGINEER.
- 2.4 The ENGINEER will have the ENGINEER'S Project Manager or the Resident Engineer, or both, in attendance.
- 2.5 The OWNER may have a representative in attendance.
- 2.6 Occupational Health and Safety incidents, records and procedures shall be part of the agenda for every progress meeting.
- 2.7 Minutes will be taken by the ENGINEER and copies will be distributed to all attendees.

3.0 PROJECT MANAGEMENT AND COORDINATION BY THE CONTRACTOR

- 3.1 In addition to the requirements of the General Conditions, the work under this item include the provision of a dedicated full time Project Manager/Coordinator responsible for the administrative coordination of the Contractor's Work activities with the Contractor's Subcontractors and Suppliers and the Engineer as required.
- 3.2 The Project Manager/Coordinator shall be responsible for the preparation and coordination of weekly work permit applications and responsible for coordination of the Contractor's

participation in risk management meetings periodically during regular construction progress meetings.

- 3.3 The Project Manager/Coordinator shall be responsible for the submission of all submittals, mock-ups, shop drawings, RFI's, schedule and cash flow updates, subcontractor coordination updates, distribution of quality records and material test results, survey and layout information, and related correspondence during construction.

----- **END OF SECTION 01 20 00** -----

1.0 CONSTRUCTION SCHEDULE

- 1.1 Upon award of the CONTRACT and prior to commencement of THE WORK, the CONTRACTOR shall submit for approval to the ENGINEER a detailed construction schedule in critical path format, or other format as approved by the Engineer, showing all the principal phases of the work. No Progress Payment Claim shall be certified until an acceptable Construction Schedule has been received by the ENGINEER.
- 1.2 The project site work shall begin by September 3, 2019 and shall be totally completed by October 11, 2019.
- 1.3 **SUBSTANTIAL PERFORMANCE** of the WORK shall be achieved on or before **October 11, 2019**.
- 1.4 Hours of work shall be the responsibility of the Contractor and shall be in accordance with any local codes, statutes, by-laws or ordinances regarding noise. It is expected that evening and/or weekend work will be required to meet the stipulated completion date.
- 1.5 The Construction Schedule shall be updated monthly or as required by the ENGINEER against actual progress of THE WORK by the CONTRACTOR.
- 1.6 A copy of the updated monthly schedule is to be provided to the ENGINEER with each Progress Claim. Failure to comply will result in the Progress Claim being deemed incomplete until the updated monthly schedule is provided.
- 1.7 If, in the opinion of the ENGINEER, any Construction Schedule is inadequate as a control tool or if it does not show THE WORK being fully completed by the Substantial Performance, Construction Completion or full Stage Completion Dates specified in the CONTRACT DOCUMENTS, the ENGINEER may reject it and the CONTRACTOR shall provide a Construction Schedule and work program that is acceptable to the ENGINEER.

----- END OF SECTION 01 31 00 -----

- 1.0 REQUIREMENTS FOR SHOP DRAWINGS AND PRODUCT DATA
 - 1.1 The CONTRACTOR shall arrange for the preparation of clearly identified shop drawings and submit shop drawings in one of the following forms:
 - 1.1.1 Two prints to be retained by the ENGINEER plus the number of copies required by the CONTRACTOR.
 - 1.2 The Contractor shall provide clearly identified Product Data and submit two prints to be retained by the Engineer plus the number of copies required by the Contractor.
 - 1.2.1 Product Data shall include but not be limited to:
 - 1.0 Product assembly drawings
 - 2.0 Materials list
 - 3.0 Principal dimensions
 - 4.0 Parts and components details
 - 5.0 Letters of compliance with recognized standards where required
 - 6.0 Operation data
 - 7.0 Operation curves
 - 8.0 Operation manuals where specified
 - 9.0 Product Name and Model Number
 - 1.3 Shop drawings shall be accurately drawn to a scale sufficiently large to show all pertinent features of the item, and its method of connection to THE WORK and shall have sufficient space for the CONTRACTOR'S stamp and the ENGINEER'S stamp.
 - 1.4 Shop drawings shall be in accordance with the International System of Units (S.I.) metric units.
 - 1.5 Prior to submission to the ENGINEER the CONTRACTOR shall review all shop drawings. By this review, the CONTRACTOR represents that he has determined and verified all field measurements, field construction criteria, materials, catalogue numbers and similar data or will do so, and that he has checked and coordinated each shop drawing with the requirements of THE WORK and of the CONTRACT DOCUMENTS. The CONTRACTOR'S review of each shop drawing shall be indicated by stamp, with the date and signature of a responsible person.
 - 1.6 The CONTRACTOR shall submit shop drawings to the ENGINEER for his review with reasonable promptness and in orderly sequence so as to cause no delay in THE WORK or in the work of OTHER CONTRACTORS. If either the CONTRACTOR or the ENGINEER so requests they shall jointly prepare a schedule fixing the dates for submission and return of shop drawings.
 - 1.7 At the time of submission the CONTRACTOR shall notify the ENGINEER in writing of any deviations in the shop drawings from the requirements of the CONTRACT DOCUMENTS.

- 1.8 The ENGINEER will review and return shop drawings in accordance with a schedule agreed upon, or otherwise with reasonable promptness. The ENGINEER'S review shall be for conformity to the design concept and for general arrangement only and such review shall not relieve the CONTRACTOR of responsibility for errors or omissions in the shop drawings or of responsibility for meeting all requirements of the CONTRACT DOCUMENTS. A specific deviation on the shop drawings from the design concept requested by the CONTRACTOR may be approved or rejected in writing by the ENGINEER.
- 1.9 The CONTRACTOR shall make any changes in shop drawings which the ENGINEER may require consistent with the CONTRACT DOCUMENTS and resubmit unless otherwise directed by the ENGINEER. When resubmitting, the CONTRACTOR shall notify the ENGINEER in writing of any revisions made by the CONTRACTOR other than those requested by the ENGINEER, in his previous review.
- 1.10 Each reviewed shop drawing will be stamped by the ENGINEER with the following form of stamp:

REVIEWED	<input type="checkbox"/>
REVIEWED AS MODIFIED	<input type="checkbox"/>
REVISE AND RESUBMIT	<input type="checkbox"/>
NOT REVIEWED	<input type="checkbox"/>

This review by the ENGINEER is for the sole purpose of ascertaining conformance with the general design concept. This review shall not constitute approval of the detail design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same. Review by the ENGINEER shall not relieve the Contractor of his responsibility for errors or omissions in the shop drawings or of his responsibility for meeting all requirements of the Contract Documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction, for installation, and for co-ordination of the work of all sub-trades.

ENGINEER
By:
Date:

2.0 DESIGN BY THE CONTRACTOR

- 2.1 When the CONTRACTOR is responsible for engineering design of portions of THE WORK, this shall be clearly and specifically indicated in the drawings or in the specifications of the CONTRACT DOCUMENTS.
- 2.2 Where the CONTRACTOR is required, either by law or regulation or by the CONTRACT to provide engineering design, he shall use the services of a Professional Engineer registered in the area in which THE WORK is to be performed, and he shall submit Shop Drawings bearing the Seal and Signature of that Registered Professional Engineer.

3.0 SAMPLES

- 3.1 The CONTRACTOR shall submit for the ENGINEER'S approval such Manufacturers' and Suppliers' samples as the ENGINEER may reasonably require. Samples shall be labelled as to origin and intended use in THE WORK and shall conform to the requirements of the CONTRACT

DOCUMENTS.

- 3.2 Samples and sample mock ups prepared by the CONTRACTOR for the ENGINEER'S approval shall be retained on the site of THE WORK for comparison with the actual installation of the portions of THE WORK that the samples are intended to represent.
- 3.3 Upon conclusion of THE WORK, the samples and mock ups may be returned to the CONTRACTOR or to the Supplier or Manufacturer who provided them, and shall then be removed from the WORKSITE.

----- **END OF SECTION 01 33 00** -----

1.0 RECORDS DURING CONSTRUCTION

- 1.1 The CONTRACTOR shall keep two (2) complete set of all construction drawings on the WORKSITE.
- 1.2 On the WORKSITE set of CONTRACT Drawings, the CONTRACTOR shall record any changes that are made during the actual construction of THE WORK. The purpose of recording these changes is to provide drawings of record at the end of THE WORK. The CONTRACTOR shall be responsible for the adequacy and the reliability of the information recorded on the drawings of record.
- 1.3 A copy of the current record drawings are to be provided to the ENGINEER with each Progress Claim, to verify the record information is being recorded in accordance with the contract. Failure to comply will result in the Progress Claim being deemed incomplete until the record drawings are provided.
- 1.4 At the completion of the construction period, the CONTRACTOR shall turn over the set of construction drawings which have been marked up with changes during the course of THE WORK to the ENGINEER to permit the ENGINEER to prepare Drawings of Record for THE WORK.

----- END OF SECTION 01 39 00-----

1.0 GENERAL

- 1.1 The CONTRACTOR is totally responsible for the quality of MATERIAL and PRODUCT which he provides and for THE WORK.
- 1.2 The CONTRACTOR is responsible for quality control and shall perform such inspections and tests as are necessary to ensure that THE WORK conforms to the requirements of the CONTRACT DOCUMENTS.
- 1.3 During the progress of THE WORK, a sufficient number of tests shall be performed by the CONTRACTOR to determine that MATERIAL, PRODUCT and installation meet the specified requirements.
- 1.4 Minimum requirements regarding quality control are specified in various sections of the specifications, however, the CONTRACTOR shall perform as many inspections and tests as are necessary to ensure that THE WORK conforms to the requirements of the CONTRACT DOCUMENTS.
- 1.5 Testing shall be in accordance with pertinent codes and regulations, and with selected standards of the American Society for Testing and Materials (ASTM) and Canadian Standards Association (CSA).
- 1.6 Product testing, mill tests and laboratory reports to demonstrate that PRODUCT and MATERIAL supplied by the CONTRACTOR meet the specifications are specified under various sections of the CONTRACT DOCUMENTS.

2.0 QUALITY CONTROL TESTING BY THE CONTRACTOR

- 2.1 The CONTRACTOR shall retain the services of an independent testing agency under supervision of a registered professional engineer, and pay the cost of testing services for quality control including, but not limited to, the following:
 - 2.1.1 Aggregate quality tests for gravels, concrete and asphalt supplied to THE WORK
 - 2.1.2 Sieve analysis of sands and aggregates to be supplied to THE WORK.
 - 2.1.3 Aggregates and mix designs for asphaltic concrete and Portland Cement concrete.
 - 2.1.4 Moisture - Density curves for backfill and fill materials.
 - 2.1.5 Compaction control tests for backfill, subgrade and granular material.
 - 2.1.6 Any product testing that is required and is specified under various sections of the specifications.
- 2.2 The CONTRACTOR shall promptly process and distribute all required copies of test reports and test information and related instructions to all of his SUBCONTRACTORS and Suppliers to ensure that all necessary retesting and replacement of construction can proceed without delay.
- 2.3 The CONTRACTOR shall promptly (within 24 hours of the test being taken and prior to any additional work being done in the area) provide the ENGINEER with copies of all test results.

- 2.4 In addition to providing proof of material conformance with the requirements for products itemized in their respective specification sections, the CONTRACTOR'S quality control program shall meet or exceed the following minimum testing requirements:

MINIMUM QUALITY CONTROL TESTING REQUIREMENTS		
Work Phase	Type of Testing	Minimum Testing Frequency (No. of Tests per Unit)
<u>Granular Base:</u>		
Stockpiling	Gradation and Crushed Count	2 per day
	Atterberg Limits	1 per material
	Physical Properties	1 set per material type/source
Placing	Moisture-Density Relationship	2 per material type
	Gradation and Crushed Count	1 per day
Pulverized Material	Gradation	1 sample per 250 m ²
<u>Asphalt Concrete:</u>		
Aggregate Stockpiling	Gradation and Crushed Count	2 per day per aggregate type
	Physical Properties	1 set per material type/source
Mix Production	Plant Marshall Test	2 per day per mix ⁽¹⁾ min
	Ash Content	2 per mix
Placing	Straight Edge	1 test/100m ²
	Surface Defects	Continuous
<u>Compaction</u>		
Base	Nuclear Density Tests	1 per 500 m ² or every 40 lineal metres (whichever is more frequent)
Asphalt Concrete	Coring	2 cores per work area
	Nuclear Density Test	1 per 1,000m ² /lift
(1) Each Marshall test to include a minimum of 3 briquettes tested for: bulk density, stability, flow, air voids and VMA and one mix sample tested for: extraction bitumen content, aggregate gradation and crushed content. Refer to Special Provisions for additional testing requirements.		

3.0 Quality Assurance Testing by the OWNER

- 3.1 The OWNER may retain and pay for the services of an independent testing agency for testing for quality assurance, for the OWNER'S purposes.
- 3.2 The OWNER'S testing agency and the ENGINEER may inspect and test MATERIAL, PRODUCT and THE WORK for conformance with the requirements of the CONTRACT DOCUMENTS; however, they do not undertake to check the quality of THE WORK on behalf of the CONTRACTOR nor to provide quality control.
- 3.3 Inspections and tests by the OWNER'S testing agency and by the ENGINEER do not relieve the CONTRACTOR of his responsibility to supply MATERIAL and PRODUCT and to perform THE WORK in accordance with the requirements of the CONTRACT DOCUMENTS.
- 3.4 The ENGINEER, at his discretion, may order or perform any additional inspections and tests for

purposes of his own or for purposes of the OWNER.

- 3.5 The CONTRACTOR shall coordinate with the ENGINEER the scheduling of testing and inspection by the OWNER'S testing agencies or by the ENGINEER, to enable testing to be done as necessary, without delay, and the CONTRACTOR shall notify the ENGINEER sufficiently in advance of operations to allow for such inspection and tests by the ENGINEER'S or the OWNER'S testing agency.
- 4.0 Code Compliance Testing
- 4.1 Inspections and tests required by codes or ordinances, or by a plan approval authority, shall be the responsibility of and shall be paid for by the CONTRACTOR.
- 4.2 Copies of reports resulting from such inspections shall be submitted in a timely manner by the CONTRACTOR to the OWNER.
- 5.0 Retesting
- 5.1 When tests on PRODUCT, MATERIAL or completed portions of THE WORK carried out by the CONTRACTOR or the CONTRACTOR'S testing agency or by the OWNER'S testing agency yield results not meeting the requirements of the CONTRACT DOCUMENTS, the CONTRACTOR, in addition to carrying out remedial work or replacement of the PRODUCT or MATERIAL shall provide for retesting of the remedied work and the replacement PRODUCT and MATERIAL. Retesting, including retesting by the OWNER'S testing agency, shall be at the CONTRACTOR'S expense.
- 5.2 In every case where the CONTRACTOR has submitted test results which fail to meet the requirements of the CONTRACT DOCUMENTS, the CONTRACTOR shall submit within a practical and reasonable time results of a retest showing that the results are in accordance with the requirements of the CONTRACT DOCUMENTS. NOTE: Retest results that meet the requirements of the CONTRACT DOCUMENTS must be reviewed and approved by the ENGINEER prior to any further work being done.
- 5.3 If the CONTRACTOR fails or refuses to do remedial work or replace unacceptable MATERIAL or PRODUCT, the ENGINEER may refuse to certify payment and the OWNER may refuse to make payment, in addition to any other remedies the OWNER may have.

----- END OF SECTION 01 40 00 -----

- 1.0 TEMPORARY UTILITIES
 - 1.1 Natural Gas, Gasoline and Other Fuels
 - 1.1.1 Provide and pay all costs for natural gas, gasoline and other fuels required for the performance of THE WORK, in accordance with governing regulations and ordinances, and the CONTRACT DOCUMENTS.
 - 1.1.2 Furnish and install all necessary temporary piping and upon completion of THE WORK remove all such temporary piping.
 - 1.2 Water
 - 1.2.1 Provide and pay all costs for all water required for the performance of THE WORK, in accordance with governing regulations and ordinances, and the CONTRACT DOCUMENTS.
 - 1.2.2 Furnish and install all necessary temporary piping and upon completion of THE WORK remove all such temporary piping.
 - 1.3 Electricity And Lighting
 - 1.3.1 Provide and pay all costs for electricity and artificial lighting required for the performance of THE WORK, in accordance with governing regulations and ordinances, and the CONTRACT DOCUMENTS.
 - 1.3.2 Furnish and install all necessary temporary wiring, distribution boxes, panels, etc., and upon completion of THE WORK, remove all such temporary installations.
 - 1.4 Telephone
 - 1.4.1 Provide, maintain and pay all costs for a telephone for the CONTRACTOR'S use.
 - 1.5 Heating And Ventilating
 - 1.5.1 Provide and pay all costs for heating and ventilating, coverings and enclosures as necessary to protect and perform THE WORK.
 - 1.5.2 Furnish and install all necessary temporary equipment, piping, wiring, ducting, and other materials to perform THE WORK and upon completion of THE WORK, remove all such temporary equipment.
 - 1.5.3 Temporary heating and ventilating shall be in accordance with all governing regulations and ordinances, and the CONTRACT DOCUMENTS.
 - 1.5.4 Temporary heating and ventilating shall be provided to:
 - 1.5.4.1 facilitate progress of THE WORK
 - 1.5.4.2 protect THE WORK and PRODUCT and MATERIAL against dampness and cold
 - 1.5.4.3 prevent moisture condensation on surfaces

- 1.5.4.4 provide an atmosphere for curing MATERIAL as required
 - 1.5.4.5 provide adequate ventilation to meet safety regulations
 - 1.5.4.6 prevent hazardous accumulation of dust, fumes, mists, vapours or gases in areas occupied during construction
 - 1.5.4.7 ventilate storage spaces containing hazardous or volatile materials
- 1.6 Sanitary Facilities
- 1.6.1 Furnish and install all required temporary toilet buildings with sanitary toilets for use of all workmen including OWNER supplied gate security and the Engineer; comply with all minimum requirements of the Health Department or other public agency having jurisdiction; maintain in a sanitary condition at all times.
- 1.7 Fire Protection
- 1.7.1 Provide and pay all costs for adequate fire protection of THE WORK and adjacent property.
 - 1.7.2 Furnish and install temporary extinguishers, hydrants and other equipment, and upon completion of THE WORK remove all such temporary equipment.
- 1.1 Survey Equipment
- 1.1.1 Contractor to provide for the use by the ENGINEER a laser level and traditional level including legs and rods.
 - 1.7.3 The equipment will be returned to the Contractor after project completion.
- 2.0 CONSTRUCTION AIDS
- 2.1 Temporary Plant
- 2.1.1 Provide, arrange for, maintain and pay for all temporary items such as, but not limited to, stairs, ladders, scaffolding, ramps, transportation of labour and MATERIAL, runways, chutes, hoists, elevators, tools, templates, as required for the completion of THE WORK.
 - 2.1.2 The location of such items shall be such as to prevent interference with, marking of, or damage to any portion of THE WORK.
 - 2.1.3 All such items shall conform to all applicable national and local ordinances regulating safety, and to the National Building Code of Canada, and to the requirements of the CONTRACT DOCUMENTS.
- 2.2 Temporary Enclosures
- 2.2.1 Furnish, install, and maintain for the duration of construction all required scaffolds, tarpaulins, barricades, canopies, warning signs, steps, bridges, platforms, and other temporary construction necessary for proper completion of THE WORK in compliance with all pertinent safety and other regulations.

- 2.3 Falsework And Temporary Construction Supports
 - 2.3.1 The CONTRACTOR shall be responsible for means and methods used for the falsework and temporary construction supports.
 - 2.3.2 If required by the CONTRACT, employ a qualified Registered Professional Engineer for the design of temporary works, and design in accordance with CSA S269.1.
 - 2.3.3 Record design calculations and drawings to show that temporary works are adequate. Provide design loads, material details, and dimensions. Sign and seal design calculations and drawings, and revisions thereto.
 - 2.3.4 The ENGINEER'S approval to proceed with falsework and temporary construction supports shall not relieve the CONTRACTOR of his responsibility under the CONTRACT. The ENGINEER'S review shall be for general conformance to the intent of design and for permanent effects on the WORKSITE, or areas adjacent to the WORKSITE.
- 2.4 Temporary Excavation
 - 2.4.1 The CONTRACTOR is responsible for the means and methods of making temporary excavations in order to install components of THE WORK.
- 2.5 Winter Construction
 - 2.5.1 Special construction methods required to perform THE WORK in severe weather shall be the responsibility of the CONTRACTOR.
 - 2.5.2 Where the specifications call for work to be performed within a given temperature range or above a minimum temperature, it shall be the CONTRACTOR'S responsibility to provide all temporary enclosures and heat necessary to provide the conditions specified.
 - 2.5.3 Where compaction of backfill is specified, the CONTRACTOR shall perform THE WORK in a manner such that compaction can be achieved.
 - 2.5.4 Where weather conditions are such that compaction of backfill consisting of excavated materials is not possible, the CONTRACTOR shall provide unfrozen granular material for backfill, at the CONTRACTOR'S expense.
- 2.6 Access Roads
 - 2.6.1 Construct temporary access roads as necessary to perform THE WORK, and maintain temporary access roads until construction is over or until permanent access is established.
 - 2.6.2 Locations and drainage facilities for temporary access roads are subject to the approval of the ENGINEER.
 - 2.6.3 No direct payment will be made to the CONTRACTOR for construction of temporary access roads.

3.0 PROTECTION

- 3.1 Remove trees, fences and other structures from the site of THE WORK, as necessary to perform THE WORK.
- 3.2 Remove only those items that must be removed, or are clearly shown on the drawings to be removed.
- 3.3 Protect all remaining trees, plants, fences and other items from damage during construction.

4.0 EXISTING UTILITIES AND STRUCTURES

- 4.1 Existing utilities and structures include pipes, culverts, ditches or other items which are a part of an existing sewerage, drainage or water system; or which are a part of a gas, electrical, telephone, television, telecommunications or other utility system. Also included are sidewalks, curbs, gutters, swales, poles, fences or any other structures encountered during construction.
- 4.2 The CONTRACTOR shall be responsible for location, protection, removal or replacement of existing utilities and structures, or for repair of any damage which may occur during construction.
- 4.3 Existing utilities and structures may be shown on the drawings, or described in the specifications. Such information is shown for design purposes and the existence, location and detail given is information that is obtained during the design period and is not necessarily complete, correct or current.
- 4.4 The CONTRACTOR shall pay all costs and be responsible for establishing locations and state of use of all existing utilities that may affect THE WORK. The CONTRACTOR shall make satisfactory arrangements with the utilities companies involved for the location, protection and inspection of existing utilities.
- 4.5 Notice in writing shall be given by the CONTRACTOR to the utilities companies at least 48 hours before work commences in the vicinity of existing utilities.
- 4.6 The CONTRACTOR shall pay all the costs involved in protection of utilities, inspection of utilities, and all costs due to delays because of existing utilities and structures.
- 4.7 The CONTRACTOR shall provide for the uninterrupted flow of all water courses, sewers and drains encountered during THE WORK.
- 4.8 Access shall be maintained to all existing structures such as valves, hydrants, meter chambers and control structures at all times during construction.
- 4.9 If interruption of service provided by an existing utility is necessary, the planned shut down shall be approved by the owners of the utilities. Requests for shut down shall be made by the CONTRACTOR through the work permit process a minimum of five (5) days in advance.
- 4.10 The CONTRACTOR shall notify all customers or make arrangements with the utility company to notify all customers 48 hours in advance of a shut down, following OWNER approval of the applicable work permit.

- 4.11 Unless otherwise specified the CONTRACTOR shall make arrangements for relocation of existing utilities that the ENGINEER requests to be relocated; and the actual relocation shall be constructed by the OWNER of the utility. The CONTRACTOR will be reimbursed the invoiced cost of the relocation. No extra payment is permitted for delays, or standby time.
- 5.0 TEMPORARY CONTROLS
- 5.1 Noise Controls
- 5.1.1 Perform THE WORK in conformity with all municipal by laws with respect to noise, hours of work, night work and holiday work. Night work or holiday work requires the written permission of the ENGINEER.
- 5.2 Dust Control
- 5.2.1 Perform THE WORK in a manner that will not produce an objectionable amount of dust. Dust control measures shall be paid for by the CONTRACTOR.
- 5.3 Pollution Control
- 5.3.1 Perform THE WORK in conformance with the applicable sections of the Provincial Regulations with respect to air and water pollution control requirements.
- 5.4 Disposal Of Wastes
- 5.4.1 Burying of rubbish and waste on site is not permitted.
- 5.4.2 Disposal of waste or volatile materials into waterways, storm or sanitary sewers is not permitted.
- 5.4.3 Pumping or draining water containing silt in suspension into waterways, sewers or drainage systems is prohibited.
- 5.4.4 Abide by requirements of Statute, Bylaw and Regulations respecting disposal of wastes.
- 5.4.5 Obtain required Permits for waste disposal.
- 6.0 WORK ADJACENT TO WATERWAYS
- 6.1 Do not operate construction equipment in waterways, nor remove borrow material nor dump fill material into waterways, except as approved and permitted by the appropriate authorities. Obtain any required Permits.
- 7.0 TRAFFIC CONTROL
- 7.1 The CONTRACTOR shall be responsible for the regulation of traffic during construction, and shall perform THE WORK in a manner that will cause the least disruption of traffic.
- 7.2 The CONTRACTOR shall co-ordinate THE WORK with the ENGINEER, and the OWNER to reduce traffic problems.

- 7.3 Provision of flagmen, traffic signs, and other traffic controls shall be the CONTRACTOR'S responsibility and shall be in accordance with Provincial Traffic Control Manual.
- 7.4 The CONTRACTOR shall supply all barriers, barricades, warning signs, detours, fences, flagmen and all other devices to protect the public. All applicable safety standards shall be followed.
- 7.5 The CONTRACTOR shall obtain approval to block traffic temporarily if it is necessary to do so to perform THE WORK. Obtain the written approval of applicable municipal departments, the OWNER and the ENGINEER. At least 48 hours prior to actually blocking traffic notify the following:
- 7.5.1 Roadway Authority
 - 7.5.2 Public Works Departments
 - 7.5.3 Utilities Companies
 - 7.5.4 Fire Department
 - 7.5.5 Police Department
- 7.6 Adequate construction parking, meeting local regulations, shall be provided by the CONTRACTOR.
- 7.7 Haul routes shall be maintained by the CONTRACTOR. They shall be kept open to traffic and shall be clean at all times.
- 7.8 Obtain permits as required to use public roads or streets for haul routes.
- 8.0 CONTRACTOR'S FIELD OFFICE
- 8.1 Furnish and install a field office building adequate in size and accommodation for all CONTRACTOR'S offices, superintendent's office, supply and tool rooms, and parking facilities throughout the entire construction period.
- 9.0 TEMPORARY USE OF OWNER'S FACILITIES AND THE WORK
- 9.1 If the OWNER permits the CONTRACTOR to make temporary use of the OWNER'S facilities, the CONTRACTOR shall use the facilities with care, providing all maintenance and repair, and shall leave the facilities in good working order when he is finished.
- 9.2 If the OWNER permits the CONTRACTOR to use facilities incorporated into THE WORK, the CONTRACTOR shall use them with care and be responsible for all maintenance and repair and for leaving the facilities in good order.
- 9.3 Permanent systems shall not be used by the CONTRACTOR without the written permission of the ENGINEER.
- 9.4 Permanent heating systems shall not be used for temporary heating without the written permission of the ENGINEER.
- 9.5 If the CONTRACTOR obtains written permission to use existing heating systems or other systems temporarily, before completion, the CONTRACTOR shall change lubricants, filters and other accessory items completely upon completion of THE WORK. Warranties shall be

extended by the CONTRACTOR to ensure that the OWNER receives the full warranty, as specified.

- 9.6 Temporary or trial usage by the OWNER of any mechanical machinery, apparatus, equipment or any other work or materials supplied under the contract before final acceptance by the ENGINEER is not to be construed as evidence of acceptance. The OWNER shall have the privilege of such temporary and trial usage as soon as the CONTRACTOR shall claim that said work is completed.

----- **END OF SECTION 01 50 00** -----

1.0 CONTRACTOR SECURITY PROVISIONS

1.1 General

1.1.1 "Restricted Area" means an area at an aerodrome identified by a sign as an area to which access is restricted to authorized persons.

1.2 Contractor's Responsibility

1.2.1 The Contractor shall be responsible for compliance with all aspects of security requirements for his personnel. This includes obtaining security clearances, and complying with escort services to be provided by the Owner.

1.2.2 Be responsible for construction personnel and vehicles, employees on project and requiring access to restricted areas.

1.2.3 Ensure the Superintendents, Foreman, Flagmen and key personnel of the subcontractor attend a briefing, at site, to be scheduled before the start of the project, regarding safety and security.

1.2.4 Designate a person who will be responsible to ensure all aspects of security and operational safety requirements are adhered to and have authority to take immediate action to rectify the situation. Such person should be available at all times during construction.

1.3 Security Barrier/Gates

1.3.1 Security barriers such as fences, gates, locks, etc. are used to prevent or deter access by unauthorized persons to airport restricted areas. In the event it is necessary to remove such barriers, they must be replaced, where practical, at the end of each work day. If it is necessary to remove such barriers for an extended period of time, unprotected restricted areas shall be enclosed with temporary boarding and/or fencing. The ENGINEER must be immediately informed of any possibilities that a restricted area may be left unprotected at the end of a work day.

1.3.2 Failure to restore such security barriers when required will result in their restoration being recovered from the Contractor.

1.3.3 The ENGINEER must be given prior notification when it is necessary to remove security barriers to permit access to construction areas. Security barriers will not be removed without the prior approval of the ENGINEER.

1.4 Daily Security

1.4.1 The CONTRACTOR shall provide security personnel.

1.4.2 The Contractor shall notify the OWNER and the ENGINEER in advance, which Work Zones are planned to be active for construction activities.

1.4.3 Ensure that accesses to restricted areas are secured at the end of each work day.

- 1.4.4 During work hours the CONTRACTOR shall supply security to ensure access to sites within restricted areas are controlled to prevent access by unauthorized persons.
- 1.4.5 When work is to be carried out within restricted areas outside of normal working hours, the OWNER and the ENGINEER must be notified.
- 1.5 Airside Escort
 - 1.5.1 The Owner shall provide personnel in possession of permanent restricted area passes to perform escort duties within airport restricted areas if any permitted work is allowed during the normal airport operation hours.

----- **END OF SECTION 01 54 00** -----

1.0 REFERENCES

- 1.1 CSA S269.1 Falsework for Construction Purposes.
- 1.2 CAN/CSA S269.2 Access Scaffolding for Construction Purposes.
- 1.3 FC No. 301 Standard for Construction Operations

2.0 CONSTRUCTION SAFETY MEASURES

- 2.1 Observe construction safety measures of National Building Code, Provincial Government and municipal authority provided that in any case of conflict or discrepancy more stringent requirements shall apply.

3.0 OVERLOADING

- 3.1 Ensure no part of Work is subjected to loading that will endanger its safety or will cause permanent deformation.

4.0 WHMIS

- 4.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada and Health and Welfare Canada.
- 4.2 Deliver copies of WHMIS data sheets to ENGINEER on delivery of materials.

----- **END OF SECTION 01 54 50** -----

1.0 ENVIRONMENTAL MEASURES

- 1.1 Meet or exceed the requirements of all environmental legislation and regulations, including all amendments up to project date provided that in any case of conflict or discrepancy, the more stringent requirements will apply.

2.0 FIRES

- 2.1 Fires and burning of rubbish on site not permitted.

3.0 DISPOSAL OF WASTES

- 3.1 Do not bury rubbish and waste materials on site unless approved by the ENGINEER.
- 3.2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.
- 3.3 On-site excavated material disposal areas have been made available.
- 3.4 Dispose of wastes in accordance with the requirements of authorities having jurisdiction and to the satisfaction of the ENGINEER.

4.0 DRAINAGE

- 4.1 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- 4.2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- 4.3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.
- 4.4 Provide construction sediment control and erosion protection devices as required.

5.0 SITE CLEARING AND PLANT PROTECTION

- 5.1 Protect trees and plants on site and adjacent properties where indicated.
- 5.2 Wrap in burlap, trees and shrubs adjacent to construction work, storage areas and trucking lanes, and encase with protective wood framework from grade level to height of 2 m.
- 5.3 Protect roots of designated trees to dripline during excavation and site grading to prevent disturbance or damage. Avoid unnecessary traffic, dumping and storage of materials over root zones.
- 5.4 Minimize stripping of topsoil and vegetation.
- 5.5 Restrict tree removal to areas indicated or designated by the ENGINEER.

6.0 WORK ADJACENT TO WATERWAYS

- 6.1 Do not operate construction equipment in waterways.
- 6.2 Do not use waterway beds for borrow material without the ENGINEER 's approval.
- 6.3 Do not dump excavated fill, waste material or debris in waterways.
- 6.4 Design and construct temporary crossings to minimize erosion to waterways.
- 6.5 Do not skid logs or construction materials across waterways.
- 6.6 Avoid indicated spawning beds when constructing temporary crossings of waterways.
- 6.7 Do not blast under water or within 100 m of indicated spawning beds.

7.0 POLLUTION CONTROL

- 7.1 Maintain temporary erosion and pollution control features installed under this contract.
- 7.2 Control emissions from equipment and plant to local authorities emission requirements.
- 7.3 Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- 7.4 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

8.0 STRAW BALE FLOW CHECKS AND BARRIERS

- 8.1 Install straw bales upstream of pumping unit in order to filter the solids and sediments of the water prior to pumping or discharging into existing drainage system.

9.0 CONSTRUCTION WASTES

- 9.1 Provide sufficient suitable refuse containers throughout the site to receive and control construction wastes. Keep containers closed to prevent contents from blowing around site.

10.0 EQUIPMENT MAINTENANCE AREAS

- 10.1 Prepare and submit for approval, a drawing showing a proposed equipment maintenance area. This area must be located a minimum of 300 m from any watercourse.

11.0 NON-MAINTENANCE RELATED SPILLS

- 11.1 Non-maintenance related spills are spills that occur due to mishandling of fuels during the fuelling process, failure of hoses or other components on equipment, etc.
- 11.2 Submit a contingency plan for dealing with such occurrences to the ENGINEER for approval. The plan must describe in detail the action to be taken and the persons and the agencies to be notified in the event of such a spill.

12.0 DUST CONTROL

- 12.1 Excessive dust from construction activities creates a serious hazard for operational airports and must be controlled at all times.
- 12.2 Maintain sufficient watering equipment on site at all times to control construction dust.
- 12.3 Should the contractor fail to control dust emissions, the ENGINEER reserves the right to order the Contractor to cease all operations until adequate measures have been taken. No claims for delay of contract can be made by the Contractor on this item. Any costs incurred by the ENGINEER or the Owner for this work shall be deducted from future progress payment certificates due to the Contractor.

13.0 ENFORCEMENT

- 13.1 Protection of the environment is considered to be of prime importance during any works on federal properties.
- 13.2 Progress payments will not be made to the Contractor while any requirements for Environmental Protection are outstanding.
- 13.3 Directions given by the ENGINEER with respect to action to be taken to correct environmental deficiencies must be acted upon immediately.
- 13.4 In the event that deficiencies in work are not corrected, then the ENGINEER will take the necessary action for correction purposes and will deduct the cost thereof from any monies due to the Contractor.

----- **END OF SECTION 01 56 10** -----

1.0 GENERAL

- 1.1 Use new material and equipment unless otherwise specified.
- 1.2 Within 7 days of written request by the ENGINEER, submit following information for materials and equipment proposed for supply:
 - 1.2.1 name and address of manufacturer,
 - 1.2.2 trade name, model and catalogue number,
 - 1.2.3 performance, descriptive and test data,
 - 1.2.4 manufacturer's installation or application instructions,
 - 1.2.5 evidence of arrangements to procure.
- 1.3 Use products of one manufacturer for material and equipment of same type or classification unless otherwise specified.
- 1.4 All Airport equipment shall be Transport Canada approved.
- 1.5 All equipment shall be CSA approved. Where CSA approval is unavailable, contractor to arrange and pay for "Special Inspection" by the Local Authority having jurisdiction.

2.0 MANUFACTURERS INSTRUCTION

- 2.1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
- 2.2 Notify the ENGINEER in writing of any conflict between these specifications and manufacturer's instructions. The Consultant will designate which document is to be followed.

3.0 FASTENINGS - GENERAL

- 3.1 Provide metal fastenings and accessories in same texture, colour and finish as base metal in which they occur. Prevent electrolytic action between dissimilar metals. Use non-corrosive fasteners, anchors and spacers for securing exterior work.
- 3.2 Space anchors within limits of load bearing or shear capacity and ensure that they provide positive permanent anchorage. Wood plugs not acceptable.
- 3.3 Conceal fasteners where indicated. Space evenly and lay out neatly.
- 3.4 Fastenings which cause spalling or cracking are not acceptable.
- 3.5 Obtain the ENGINEER's approval before using explosive actuated fastening devices. If approval is obtained comply with CSA Z166 .1

4.0 FASTENINGS - EQUIPMENT

- 4.1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- 4.2 Use heavy hexagon heads, semi finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.
- 4.3 Bolts may not project more than one diameter beyond nuts.
- 4.4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

5.0 DELIVERY AND STORAGE

- 5.1 Deliver, store and maintain packaged material and equipment with manufacturer's seals and labels intact.
- 5.2 Prevent damage, adulteration and soiling of material and equipment during delivery, handling and storage. Immediately remove rejected material and equipment from site.
- 5.3 Store material and equipment in accordance with suppliers' instructions.
- 5.4 Touch up damaged factory finished surfaces to the ENGINEER's satisfaction. Use primer or enamel to match original. Do not paint over name plates.

6.0 CONFORMANCE

- 6.1 Materials specified by referenced standard, select any material that meets or exceeds the specified standard.
- 6.2 Where materials are required to be listed on the "Canadian General Standards Board, Qualified Products List" select any manufacturer so listed.
- 6.3 Materials specified by "Prescriptive" or "Performance" specification, select any material meeting or exceeding specification.
- 6.4 Materials specified by naming one or more materials, select any material named. For the purpose of these specifications, the term "Acceptable Material" is deemed to be a complete and working commodity as described by a manufacturer's name, catalogue number, trade name or any combination thereof.
- 6.5 When materials are specified by a Standard, Prescriptive or Performance specifications, upon request of the ENGINEER, obtain from manufacturer an independent testing laboratory reporting, showing that the material or equipment meets or exceeds the specified requirements.

7.0 CONSTRUCTION EQUIPMENT AND PLANT

- 7.1 On request, prove to the satisfaction of the ENGINEER that the construction equipment and plant are adequate to manufacture, transport, place and finish work to quality and production rates specified. If inadequate, replace or provide additional equipment or plant as directed.

- 7.2 Maintain construction equipment and plant in good operating order.
- 8.0 METRIC SIZED MATERIALS
 - 8.1 SI metric units of measurement are used exclusively on the drawings and in the specifications for this project.
 - 8.2 The Contractor is required to provide metric products in the sizes called for in the Contract Documents except where a valid claim can be made that a particular product is not available on the Canadian market.
 - 8.3 Claims for exemptions from use of metric sized products shall be in writing and fully substantiated with supportive documentation. Promptly submit application to ENGINEER for consideration and ruling. Non-metric sized products may not be used unless Contractor's application has been approved in writing by the Consultant.
 - 8.4 Difficulties caused by the Contractor's lack of planning and effort to obtain modular metric sized products which are available on the Canadian market will not be considered sufficient reasons for claiming that they cannot be provided.
 - 8.5 Claims for additional costs due to provision of specified modular metric sized products will not be considered.
- 9.0 SUBSTITUTION
 - 9.1 No substitutions will be permitted without prior written approval of the ENGINEER.
 - 9.2 Proposals for substitution may only be submitted after award of contract. Such request must include statements of respective costs of items originally specified and the proposed substitution.
 - 9.3 Proposals will be considered by ENGINEER if:
 - 9.3.1 materials specified are not available.
 - 9.3.2 delivery date of materials specified would unduly delay completion of contract, or
 - 9.3.3 substitute material which are brought to the attention of and considered by ENGINEER as equivalent to the material specified and will result in a credit to the Contract amount.
 - 9.4 Should proposed substitution be accepted either in part or in whole, assume full responsibility and costs when substitution affects other work on project. Pay for design or drawing changes required as result of substitution.
 - 9.5 Amounts of all credits arising from approval of substitutions will be determined by ENGINEER and contract Price will be reduced accordingly.

----- **END OF SECTION 01 60 00** -----

1.0 CLEANUP

- 1.1 Maintain the working area in a clean and orderly manner as THE WORK progresses, and upon completion of construction, remove all waste materials, and all temporary facilities from the Worksite.
- 1.2 Haul surplus or salvage materials that are the property of the OWNER to the OWNER'S storage site.
- 1.3 Remove surplus or salvaged materials belonging to the CONTRACTOR from the Worksite.
- 1.4 Clean haul routes and restore to pre-construction condition.
- 1.5 Remove grease, dust, dirt, stains, labels, finger prints and other foreign materials from sight on exposed interior and exterior finished surfaces, including glass and other polished surfaces.
- 1.6 Clean lighting reflectors, lenses and other lighting surfaces.
- 1.7 Broom clean paved surfaces, rake clean other surfaces of ground.
- 1.8 Remove debris and surplus materials from roof areas and accessible concealed spaces.

2.0 RECORD DOCUMENTS

- 2.1 As specified in other sections of the specifications, the CONTRACTOR may be required to prepare and record drawings, to provide survey notes, to supply test results or other documents. Such information shall be turned over to the ENGINEER; as soon as start up is complete, and before the Construction Completion Certificate is issued.
- 2.2 Record documents shall be neat, legible and accurate.

3.0 OPERATION MANUALS

- 3.1 Prepare operation and maintenance manuals and submit four hard copies and soft copies in PDF on a memory stick to the ENGINEER before the Completion Date.
- 3.2 Operation and maintenance manuals are specified in general in this section, with regard to numbers of binders, preparation, marking, general arrangement, format and general contents. Requirements for mechanical, process equipment, electrical work and other items may be specified in other sections of the specifications, however the general format shall be in accordance with this section.
- 3.3 Provide the services of qualified and experienced personnel to prepare manuals.
- 3.4 Prepare sets of manuals for various divisions using identical bindings, and the same indexing system and format for all manuals.
- 3.5 Provide 215 x 280 mm extension type catalogue binders bound with heavy weight bright red fabric, hot stamped in silver lettering front and spine. Acropress, Cerlox or similar light weight or special hole binders are not acceptable.

- 3.6 Letter each binder as follows:
 - 3.6.1 Front Face
 - 3.6.1.1 Full identification of title of project
 - 3.6.1.2 Prime consultant full identification title
 - 3.6.1.3 Sub consultant full identification title
 - 3.6.1.4 CONTRACTOR full identification title
 - 3.6.1.5 Sub contractors full identification title
 - 3.6.2 Spine
 - 3.6.2.1 Full identification of title of project
 - 3.6.2.2 Copy number
- 3.7 Arrange each individual binder as follows, using coloured divider tabs which shall be laminated mylar plastic and which shall be coloured according to section of the manual.
 - 3.7.1 Each division of the manual i.e. mechanical, electrical, process equipment etc. shall be a complete manual and shall in general be in the following format with the divider tabs as noted:
 - 3.7.2 Tab 1.0
 - 1.1.1.1 Title Page
 - 1.1.1.2 job name & OWNER'S name
 - 1.1.1.3 address, telephone number and complete name of:
 - 1.1.1.4 Prime Consultant
 - 1.1.1.5 Subconsultant
 - 1.1.1.6 General CONTRACTOR
 - 1.1.1.7 SUBCONTRACTOR
 - 1.1.1.8 index of all divider tabs
 - 3.7.3 Tab 1.1 List of drawings
 - 3.7.4 Tab 1.2 Description of Systems
 - 3.7.5 Tab 1.3 Operation of Systems

- 3.7.6 Tab 1.4 Maintenance & Lubrication
- 3.7.7 Tab 1.5 List of suppliers and addresses of same
- 3.7.8 Tab 2.0, 2.1 etc. Certifications
- 3.7.9 Tab 3.0, 3.1 etc. Manufacturers data, Shop drawings, Bulletins
- 3.8 Provide preventive maintenance program if specified in applicable sections.
- 3.9 Provide, in addition to mechanical, electrical equipment details:
 - 3.9.1 maintenance data for finished surfaces
 - 3.9.2 copies of hardware schedules
 - 3.9.3 guarantees, warranties and bonds showing names and addresses of manufacturer and guarantee commencement and expiry date
 - 3.9.4 valve lists giving numbers, types, service and location.
 - 3.9.5 certificates and inspection reports by the manufacturers and their representatives

----- **END OF SECTION 01 70 00**-----

1.0 GENERAL

- 1.1 Maintain the working area in a clean and orderly manner as THE WORK progresses, and upon completion of construction, remove all waste materials, and all temporary facilities from the site.
- 1.2 Conduct cleaning and disposal operations to comply with local ordinances and anti- pollution laws.
- 1.3 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- 1.4 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- 1.5 Prevent accumulation of waste which creates hazardous conditions.

2.0 MATERIALS AND EQUIPMENT

- 2.1 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- 2.2 Provide sweepers and water trucks in sufficient quantity at all times throughout construction.

3.0 CLEANING DURING CONSTRUCTION

- 3.1 Provide on site containers for collection of waste materials, and debris.
- 3.2 Dispose of waste materials, and debris off site.
- 3.3 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.
- 3.4 Dust control is a critical factor of this contract. Dust can create hazardous conditions at the airport such as reduced visibility for control tower and aircraft, dust accumulation on aircraft movement areas, etc. The Contractor shall ensure that adequate dust control is provided at all times during the contract to avoid any hazardous situations and shall immediately implement any measures as directed by the ENGINEER to control dust problems. Any damages or costs incurred as a result of excessive dust shall be paid for by the contractor.
- 3.5 Check continuously that no piece of concrete, gravel or any object has been dropped on a runway or taxiway by equipment during travelling to and from the site or during construction activities.
- 3.6 In the event of an open section of a runway, taxiway or apron fouled by truck spillage or debris, Contractor must
 - 3.6.1 Immediately notify the ENGINEER that area is temporarily unserviceable.
 - 3.6.2 Without delay arrange with the Engineer and the Airside Security Escort for clean-up by Contractor's own personnel.

- 3.6.3 Notify ENGINEER when area is clear.
- 3.6.4 In the event that due action is not carried out to ensure that area is made serviceable, then this will subject the CONTRACTOR to liquidated damages of \$1,000 for every hour the runway or taxiway is unserviceable.
- 3.6.5 Clean lighting reflectors, lenses and other lighting surfaces, as directed by the engineer at no cost to ENGINEER.

4.0 FINAL CLEANING

- 4.1 Haul surplus or salvage materials that are the property of the OWNER to the OWNER'S storage site.
- 4.2 Remove surplus or salvaged materials belonging to the CONTRACTOR from the site.
- 4.3 Clean haul routes and restore to pre-construction condition.
- 4.4 Clean lighting reflectors, lenses and other lighting surfaces.
- 4.5 Broom clean paved surfaces, rake clean other surfaces of ground.
- 4.6 Remove debris and surplus materials from roof areas and accessible concealed spaces (catch basins, maintenance holes, electrical vaults, etc.)

----- **END OF SECTION 01 71 00** -----

- 1.0 RECORD DRAWINGS
- 1.1 CONTRACTOR shall supply and maintain two sets of white prints for record drawing purposes.
- 1.2 Maintain project record drawings and record accurately deviations from Contract documents.
- 1.3 Record changes in red. Mark on one set of prints and at completion of project and prior to final inspection, neatly transfer notations to second set and submit both sets to the Engineer.
- 1.4 Record following information:
- 1.4.1 Field changes of dimension, detail and elevation.
- 1.4.2 Changes made by Change Order or Field Order.
- 1.4.3 Cables that are removed or abandoned.
- 1.4.4 Other significant deviations which are concealed in construction and cannot be identified by visual inspection.
- 1.5 At completion of project and prior to final inspection, neatly transfer "as-built" records to second set of white prints using fine, red marker. Neatly print lettering and numbers in size to match original. Lines may be drawn free-hand but shall be neat and accurate. Add at each drawing title block note: "AS BUILT RECORD". Also, circle on List of Drawings each title and number of drawing marked with "as-built" records.
- 1.6 Submit this set of "as-built" record drawings to ENGINEER.
- 1.7 At the completion of construction the Contractor's shall complete a topographic as-built survey of the project areas and submit the survey data in an acceptable form to the Engineer. Information be included in the topographic as-built survey shall be x,y,z coordinates at the following locations:
- 1.7.1 Existing control points as provided on the Contract Drawings;
- 1.7.2 Finished pavement edges and elevations of all new asphalt;
- 1.7.3 Pavement line markings; and
- 1.7.4 Pavement edges.
- 1.8 If project is completed without significant deviations from contract drawings, declare this in writing and submit to ENGINEER in lieu of record drawings.
- 1.9 The ENGINEER will review the progress of the record drawings as part of the each payment certificate authorization. Should the drawings not be properly updated, payment will be withheld for each payment certificate until the work is completed to the satisfaction of the Engineer.

----- **END OF SECTION 01 72 00** -----

1.0 GENERAL PROTECTION

- 1.1 Do not disrupt airport business except as permitted by the ENGINEER.
- 1.2 Provide temporary protection for safe handling of public, personnel, pedestrians and vehicular traffic.
- 1.3 Provide barricades and lights where directed for the safe movement of aircraft and for the protection of the Contractor's workforce.

2.0 MOVEMENT OF EQUIPMENT AND PERSONNEL

- 2.1 In areas of airport not closed to aircraft traffic:
 - 2.1.1 Obtain the OWNERS's approval on scheduling of work.
 - 2.1.2 Control movements of equipment and personnel as directed by the OWNER, the ENGINEER and Airside Security Escorts.
 - 2.1.3 Signals from the Airside Security Escorts to be obeyed instantly.

3.0 OPERATIONAL RESTRICTIONS AND CONSTRAINTS

- 3.1 Comply with Operational, Safety and Security and other applicable requirements in the execution of the work and working in close proximity of live runways and taxiways, including but not limited to the following:
 - 3.1.1 The integrity of all electronic and visual navigational aids associated with live aviation activities on airside must be maintained for aircraft operations, which take precedence over construction operations.
 - 3.1.2 Buried power, communication and control cables and other underground structures and services in the vicinity of the construction areas are to be identified and protected.
 - 3.1.3 Emergency Rescue Services mobility must be preserved at all times. Operating routes must be reviewed by OWNER to ensure that access is maintained at all times. Alternative and approved routes are to be established if new construction is anticipated to interfere with such access.

4.0 UNSERVICEABLE AREAS

- 4.1 The Contractor will be responsible for the supply, installation and maintenance and removal of all runway, taxiway and apron unserviceability barricades, closure markers, temporary daytime marker boards and unserviceability lighting as shown on the plans as directed by the Engineer.
- 4.2 Parking of equipment and stockpiling shall only be permitted within the Contractor's yard.
- 4.3 Equipment is to be stored in designated equipment storage areas or as directed by Engineer.
- 4.4 Contractor is advised due to possibility of jet blast or any turbulence from aircraft, all markers must be rigidly fixed and tied and delineators must be adequately weighed down with sand bags or bolted to pavement (if permitted).

5.0 TRENCHING

- 5.1 On or adjacent to pavements open to aircraft traffic, obtain ENGINEER's written permission to undertake trenching which cannot be completed, backfilled and sealed within one working day.
- 6.0 AIRPORT FACILITIES
- 6.1 The ENGINEER will coordinate with security and the airport to allow the contractor to stake or inform the location of underground facilities such as cables, pipes and ducts. Notify the ENGINEER, and comply with the OWNER's work permit process, of work areas sufficiently in advance of operations so that co-ordination can take place with security and the airport so underground facilities can be located by the contractor.
- 7.0 GENERAL PROVISIONS FOR AIRPORT ACTIVITIES
- 7.1 Access to the site by the Contractor's vehicles and equipment shall be restricted to the secured entrances which will be detailed on the construction drawings. These access points will require security personnel at all times during active periods, which will be provided by the OWNER.
- 7.2 No construction related vehicles or traffic shall travel on paved surfaces which are not part of the project limits without authorized security escort services.
- 7.3 Construction equipment and stockpiled materials shall be restricted to construction areas or areas indicated by the ENGINEER.
- 7.4 The Contractor shall designate one (1) person who will be responsible to ensure all aspects of operational safety requirements are adhered to and have authority to rectify the situation. Such a person shall be available at all times during construction and referred to as the "Contractor Safety Superintendent". The OWNER and the ENGINEER shall be advised of this person at the Pre Construction Meeting.
- 7.5 The CONTRACTOR shall be able to communicate to all persons on-site to facilitate efficient and fast response times should direction be received to mobilize from the construction areas. This contact shall be full-time during construction periods.
- 7.6 Construction Mobilization shall be closely co-ordinated with the ENGINEER to ensure all airport safety precautions are implemented properly. Direction will be provided at the Pre Construction Meeting.
- 7.7 All airside areas, i.e. Runways, taxiways, aprons, etc., are considered NO SMOKING zones. The Contractor Safety Superintendent shall ensure all construction personnel are briefed and adhere to these restrictions.
- 8.0 DUST CONTROL, PAVEMENT CONDITIONS FOREIGN OBJECT DAMAGE (FOD) CONTROL
- 8.1 Dust control shall be achieved through the application of water within the project limits during periods of construction or as indicated by the ENGINEER. There will be no separate payment for this item and cost of same being deemed to be included in the unit prices for the Contract. CALCIUM CHLORIDE SHALL NOT BE USED ANYWHERE WITHIN THE PROJECT LIMITS.
- 8.2 The Contractor shall supply appropriate labour and equipment to ensure pavement surfaces abutting the project limits are kept clean and free of loose debris at all times. This work shall be completed as indicated by the ENGINEER.

----- END OF SECTION 01 80 00 -----

APPENDIX A

APPENDIX B