



CITY OF QUESNEL

REQUEST FOR PROPOSALS: DRILLING AND DEVELOPMENT OF PRODUCTION WELL #11

February 26, 2024

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CONTACT: Chris Coben, Director of Capital Works and Infrastructure
E: ccoben@quesnel.ca

CONTENTS

DEFINITIONS	1
1.0 INTRODUCTION	2
1.1 PROPOSAL PROCESS AND TIME SCHEDULE	2
1.1.1 PROPOSAL PROCESS	2
1.1.2 PROPOSAL SCHEDULE.....	2
1.1.3 QUESTIONS ARISING FROM THE RFP	2
1.1.4 EXAMINATION OF DOCUMENTS.....	2
1.1.5 SUBMISSION OF PROPOSALS	3
1.1.6 AMENDMENT OF PROPOSALS.....	3
1.1.7 INCOMPLETE PROPOSALS	3
1.1.8 NON-COLLUSION.....	3
1.1.9 EXCLUSIVITY	3
1.1.10 ACCEPTANCE OF PROPOSALS	4
1.1.11 PROPONENT SELECTION.....	4
1.1.12 CONTRACTUAL REQUIREMENTS.....	4
1.2 OWNER RESPONSIBILITIES.....	4
2.0 SCOPE OF WORK.....	5
2.1 TECHNICAL SPECIFICATIONS.....	5
2.2 PREFERRED PROPONENT	5
2.3 CONSULTANTS.....	5
3.0 PROPOSAL REQUIREMENTS	5
3.1 COMPANY CONTACT INFORMATION	5
3.2 SCHEDULE.....	5
3.3 EQUIPMENT DETAILS.....	5
3.4 QUALIFIED WELL DRILLER INFORMATION.....	6
3.5 SUBCONTRACTOR PROJECT REFERENCES	6
3.6 PROPOSAL COSTS.....	6
4.0 SELECTION CRITERIA.....	6

APPENDICES

APPENDIX A: TECHNICAL SPECIFICATIONS FOR DRILLING PROPOSALS PACKAGE

APPENDIX B.1: PROPOSAL SUBMITTAL INFORMATION SHEETS

APPENDIX B.2: MEASUREMENT AND PAYMENT SPECIFICATIONS AND SCHEDULE OF PRICES

APPENDIX C: STANDARD CCDC4 UNIT PRICE CONTRACT

DEFINITIONS

Within this document, the following capitalized and italicized words and definitions will apply.

<i>Consultant</i>	“Consultant” means the person, firm or corporation appointed by the <i>Owner</i> and identified by the <i>Owner</i> in writing to the <i>Contractor</i> . For this work <i>Consultant</i> means Urban Systems Ltd. (Urban Systems)
<i>Contractor</i>	“Contractor” means the person, firm or corporation identified through a separate contract (CCDC 4) with the <i>Owner</i> to complete construction of the works including the supply and installation of all project components. This term also includes the <i>Contractor’s</i> authorized representative as designated to the <i>Owner</i> in writing.
<i>Engineer</i>	“Engineer” means a Professional Engineer registered, granted a license and in good standing with the Association of Professional Engineers and Geoscientists of British Columbia.
<i>Hydrogeologist</i>	“Hydrogeologist” means the person, firm or corporation appointed by the <i>Owner</i> and identified by the <i>Owner</i> in writing to the <i>Contractor</i> . For this work <i>Hydrogeologist</i> means Western Water Associates Ltd (WWAL)
<i>Owner</i>	“Owner” means the City of Quesnel and includes any authorized representative of the <i>Owner</i> .
<i>Project</i>	“Project” means the drilling and development of a new water well in the City of Quesnel.
<i>Proponent</i>	“Proponent” means the Supplier that is submitting a proposal to this Request for Proposal.
<i>Proposal</i>	“Proposal” means the <i>Proponent’s</i> submission to this Request for Proposal.
<i>Proposal Closing Date</i>	“Proposal Closing Date” means the date outlined in Section 1.1.5 Submission of Proposal.
<i>Proposal Closing Time</i>	“Proposal Closing Time” means the time outlined in Section 1.1.5 Submission of Proposals.

1.0 INTRODUCTION

The Owner requires one new production well to support their operations. The Owner is seeking *Proposals* from *Proponents* to retain a qualified water well drilling *Contractor* to drill and develop one new 16" (400 mm) production well.

1.1 PROPOSAL PROCESS AND TIME SCHEDULE

1.1.1 PROPOSAL PROCESS

The following summarizes the steps included in and subsequent to, the submission of the *Proposals* by the *Proponents* as detailed in the remainder of these documents:

1. *Proponents* submit *Proposals* as per the RFP documents;
2. The Owner may select a *Proponent* for the completion of the *Project*; if a *Proponent* is selected then;
3. The *Proponent* will coordinate with the *Hydrogeologist* and *Consultant* to complete the *Project*.

1.1.2 PROPOSAL SCHEDULE

The planned schedule for the RFP phase of the *Project* is as follows:

Distribution of RFP	February 2024
Submission and Evaluation of <i>Proposals</i>	March 2024
Notification of Preferred <i>Proponent</i>	March 2024
Start of Drilling and Development Program	Summer 2024

1.1.3 QUESTIONS ARISING FROM THE RFP

General inquiries related to this RFP are to be directed to:

- Chris Coben, Director of Capital Works and Infrastructure
 - Email address: ccoben@quesnel.ca

Please use subject line: RFP PW 11 Drilling and Development.

1.1.4 EXAMINATION OF DOCUMENTS

Proponents shall carefully examine the RFP documents and shall fully inform themselves as to the intent, existing conditions and limitations which may affect their *Proposal* submission. No consideration will be given after submission of a *Proposal* to any claim that there was any misunderstanding with respect to the conditions imposed.

Proponents finding discrepancies or omissions in the RFP or having any doubts as to the meaning or intent of any provision should immediately notify the above-noted project contact.

If there are any changes, additions, deletions to the *Proposal* scope, conditions or closing date, an Addendum issued by the Owner will be posted on the City of Quesnel website (www.Quesnel.ca). All Addenda are to become part of the *Proposal* documents. Verbal discussion with City of Quesnel staff shall not become part of the RFP or modify the RFP unless confirmed by written Addendum.

Inquiries and responses will be recorded and may be distributed to all *Proponents* at the *Owner's* option. Questions will not be accepted or answered within 48 hours of the *Proposal Closing Date* and *Proposal Closing Time*.

1.1.5 SUBMISSION OF PROPOSALS

Delivery of *Proposals* will be acknowledged as received through a reply e-mail confirming receipt of the *Proposal*, stating the full document has been received in a satisfactory format. This acknowledgement does not include any automatic replies from the receiving e-mail. The *Proponent* is responsible for ensuring they receive confirmation of receipt. The *Owner* shall not, under any circumstances, be responsible for delays caused by failure the documents. All *Proposals* and any amendments thereto must be acknowledged as received prior to the closing date and time.

Proposals must be received by 2:00 p.m. (local Quesnel time) on Tuesday, March 12, 2024, by email, sent to:

- Chris Coben, Director of Capital Works and Infrastructure
 - Email address: ccoben@quesnel.ca
- SUBJECT LINE OF EMAIL MUST clearly state: 1) name of proponent and 2) program title.
 - XYZ Company
 - RFP PW 11 Drilling and Development

1.1.6 AMENDMENT OF PROPOSALS

A *Proponent* may amend or revoke a *Proposal* by giving written notice to the *Owner* delivered by e-mail to email address: ccoben@quesnel.ca. Any amendments received after the *Proposal Closing Date* and *Proposal Closing Time* will not be considered and shall not affect a *Proposal*, as submitted.

An amendment or revocation must be delivered by an authorised signatory of the *Proponent*.

If a *Proposal* amendment is not acknowledged as received by the *Owner*, it is the *Proponent's* responsibility to contact the *Owner* to ensure the amendment is received before the *Proposal Closing Date* and *Closing Time*. The *Owner* shall not be liable to any *Proponent* for any reason if an email is not properly received.

1.1.7 INCOMPLETE PROPOSALS

The *Owner* reserves the right to reject or accept any *Proposal* whether or not completed properly and whether or not it contains all required information. Without prejudice to this right, the *Owner* may request clarification where in the sole opinion of the *Owner*, the *Proponent's* intent is unclear.

1.1.8 NON-COLLUSION

A *Proponent* shall not discuss or communicate with any other *Proponent* about the preparation of their *Proposals*. Each *Proponent* shall ensure that its participation in the RFP process is conducted without collusion or fraud.

1.1.9 EXCLUSIVITY

Any *Proponent* shall not have any interest whatsoever in the *Proposal* of any other *Proponent*, either directly or indirectly, nor shall it enter into any agreement before the *Proposal Closing Date* that could create such an interest.

1.1.10 ACCEPTANCE OF PROPOSALS

Each *Proposal* shall be valid for a period of 60 days from the *Proposal Closing Date*.

The *Owner* reserves the right to reject any or all proposals without any obligation or any reimbursement to the *Proponents*.

1.1.11 PROPONENT SELECTION

Within 14 calendar days of the *Proposal Closing Date*, the *Owner* intends to announce the selection of the Preferred *Proponent*.

The *Owner* reserve the right to negotiate changes to the Preferred *Proponent's Proposal* and the scope of the work with the Preferred *Proponent*.

In the case that an Agreement is not successfully negotiated, the *Owner* may, at its sole discretion, disqualify that *Proponent* and commence negotiations with the second-best *Proponent*.

1.1.12 CONTRACTUAL REQUIREMENTS

Upon conclusion of negotiations, the Preferred *Proponent* will be required to enter into a CCDC 4 contract with the *Owner*. As part of the *Proposal* submission, the *Proponent* must confirm their commitment to entering into the CCDC 4 contract (the standard form of the CCDC 4 contract is appended in Appendix C). The Preferred *Proponent* will be the Prime Contractor and will be required to provide insurance as per the contract and *Owner* requirements, and will be expected to have applicable WorkSafeBC coverage in place. A Labour and Material Payment Bond, and a Performance Bond will be required, each in 50% of the contract price. A Bid Bond is not required.

The unit price breakdown and contract price in the Schedule of Prices provided by the *Proponent* as part of the *Proposal* will be incorporated in the CCDC 4 contract. All overhead costs including required bonding, insurance and otherwise should be incorporated into the Schedule of Prices.

1.2 OWNER RESPONSIBILITIES

The *Owner* will not accept any liability arising from investigations or other work done or not done by a *Proponent* in preparing its *Proposal*.

During the RFP process, the *Owner*:

- Reserves the right to reject any or all *Proposals*;
- Reserves the right to waive any irregularities of any *Proposal*, to negotiate modification of any *Proposal*, and to request clarification and additional information on any *Proposal*;
- Reserves the right to accept the *Proposal* which is, in the sole opinion of the *Owner*, the most advantageous to the *Owner*;
- Takes no responsibility for the accuracy or completeness of the information supplied by any official, employee, or agent of the *Owner*;
- Takes no responsibility for any *Proponent* lacking any information;
- Will not permit assignment of any *Proposal* without prior written approval from the *Owner*; and

- Will not be responsible for any expense incurred by any *Proponent* in preparing a *Proposal* or in providing any additional information necessary for the valuation of *Proposals*.

2.0 SCOPE OF WORK

2.1 TECHNICAL SPECIFICATIONS

The Technical Specifications for the scope of work, which contains details of the water well drilling and development program, has been provided by WWAL and are included in Appendix A.

2.2 PREFERRED PROPONENT

The *Proponent* chosen as the Preferred *Proponent* shall be the Prime Contractor, and shall be responsible for the following components:

- Supplying a qualified drilling contractor capable of completing the drilling and development of the new water production well.
- Be a key team member in the overall delivery of a successful *Project*.

2.3 CONSULTANTS

Urban Systems and WWAL have been retained by the *Owner* to provide professional services in support of the *Project*. The Preferred *Proponent* will work with Urban Systems and WWAL to complete the *Project*. WWAL will provide on-site hydrogeological support during the drilling and testing program.

3.0 PROPOSAL REQUIREMENTS

This section outlines the requirements with respect to the *Proposal* submission. The components of the *Proposal* (forms included in Appendix B) are described below.

3.1 COMPANY CONTACT INFORMATION

The following contact information shall be included within the *Proposal* by filling out **Appendix B.1 – Proponent Contact Information**:

- Name, address and telephone number of the company proposed to complete the scope of work; and
- Key project contact (including name, phone number, and email).

3.2 SCHEDULE

Provide timing for the following project milestones by filling out the table provided in **Appendix B.1 – Proposed Works Schedule**.

3.3 EQUIPMENT DETAILS

A list of equipment that will be supplied shall be included in the *Proposal* by filling out the form provided in **Appendix B.1 – Equipment List**. The list must include all major equipment components that are required to complete the drilling program as described in the technical specification document provided

in Appendix A. The *Proponent* shall provide equipment that meet the requirements of the technical specifications.

3.4 QUALIFIED WELL DRILLER INFORMATION

A completed Qualified Well Driller Information Form, as per **Appendix B.1**.

3.5 SUBCONTRACTOR PROJECT REFERENCES

A completed Subcontractor Project References Form, as per **Appendix B.1**.

3.6 PROPOSAL COSTS

A completed Schedule of Prices, as per **Appendix B.2**, shall be included in the *Proponent's Proposal*. Note that Measurement and Payment specifications are included in Appendix B.2.

4.0 SELECTION CRITERIA

The *Owner*, the *Consultant*, and the *Hydrogeologist* will evaluate the *Proposals* based on technical applicability, references, schedule, location of technical support, and price. Once the Preferred *Proponent* has been identified, the *Owner* will enter contract discussions to clarify any outstanding issues if required. If discussions are successful, the *Owner* will enter into a contract with the Preferred *Proponent*. If discussions are unsuccessful, the *Owner* reserves the right to enter contract discussions with other *Proponents*, and/or decide not to award a contract at all.

All qualifications will be evaluated equally against pre-defined criteria by an evaluation team. The following will be considered.

- A. Technical/Equipment – 40 points
- B. Price – 25 points
- C. Schedule – 15 points
- D. Experience – 10 points
- E. References - 10 points

Submission of all the completed documents provided in Appendix B is mandatory.



APPENDIX A: TECHNICAL SPECIFICATIONS FOR DRILLING PROPOSALS PACKAGE

TECHNICAL SPECIFICATIONS FOR DRILLING PROPOSALS PACKAGE



TO:	BC Registered Well Drilling Contractors	DATE:	February 7, 2024
FR:	Warren Grafton, P.Geo. (Western Water on behalf of the City of Quesnel)	REFERENCE:	24-001-01PG
RE:	DRILLING AND DEVELOPMENT OF NEW PRODUCTION WELL: CITY OF QUESNEL PW11		

1.0 Introduction

This document provides technical specifications to drill and develop one new 16-inch (400 mm) diameter production well (PW11) for the City of Quesnel, BC (“CoQ” or “the City”). It includes information on:

- Project background
- Well location
- Expected subsurface conditions and lithology
- General order of works
- Technical specifications – well drilling and development

Attachments to these technical specifications include:

- A. Preliminary Well Site Plan
- B. Conceptual Completion Schematic for PW11
- C. Well Logs for Onsite Wells

Other Considerations:

- Mandatory Driller Registration and Well Construction Compliance – Prospective proponents must supply personnel qualified by and registered with the BC Ministry of Environment and Climate Change Strategy for drilling. All work will be completed in accordance with well construction and testing standards outlined in the *BC Groundwater Protection Regulation*.

2.0 Project Background

The City obtains its municipal water supply from six wells located in the north (PW8 and PW10), west (PW3, PW6 and PW7) and central (PW9) regions of the City. The new well (PW11) is proposed to be in the west region and a test well (TW2015-1, Well Plate ID (WPID) 41722) was previously drilled at the site selected for PW11 in 2015. A monitoring well (EB2015-1, WPID42231) is also located near the proposed well site. Locations of onsite wells are shown on attached Figure 1.

3.0 Project Well Location

PW11 will be constructed at 616 Baker Drive in Quesnel, B.C. A fenced dog park and a parking lot providing access to public walking trails are located at the well site. The proposed PW11 drill site is located in a grassed field to the south of the fenced park and to the west of the parking lot. Photo 1 below shows the proposed drill site and Figure 1 identifies key site features.

The proposed drill site is relatively flat. It is possible that minor site works may be required to construct an adequately level drilling pad. It is the contractor's responsibility to assess and detail any costs associated with site preparation and clean up in their proposal.

A dog park is located at the site and the site provides access to public trails. Temporary fencing is a requirement for the project to keep the public out of harms way during well drilling.

As described later in this document, well development is to be completed with a cable-tool drill rig using the surge and bail method. During surging, a temporary submersible pump is to be installed in the well and operated at ~200 US gpm to remove silt and fine sand. This pumped water can be discharged to ground in the vegetated area adjacent the site.

Photo 1: Proposed PW11 Drill Site (looking northwest)



4.0 Expected Subsurface Conditions and Lithology

Flowing artesian conditions are not expected within the depth ranges planned for this drilling program. Available information from the onsite wells suggests static water levels of about 27 m (89 ft) below ground surface. As indicated on the attached well logs for TW2015-1 and EB2015-1, lithology from surface downward can be expected to comprise the following main units as outlined in Table 1.

Table 1: Consolidated lithology encountered during test well drilling

Lithology	Depth	
	TW2015-1	EB2015-1
Silt and fine sand, loose, dry	0 – 25.3 m (0 - 84 ft)	0 – 15.8 m (0 - 52 ft)
Medium to coarse sand and fine gravel, trace silt, damp, loose	25.3 – 27.4 m (84 – 90 ft)	-
Fine to medium gravel and fine to coarse sand, some silt, moist	-	15.8 – 20.4 m (52 - 67 ft)
Fine to medium gravel and medium to coarse sand, silt, some clay, damp, dense	-	20.4 – 30.5 m (67 - 100 ft)
Medium to coarse sand and fine gravel, saturated, loose	27.4 – 30.5 m (90 – 100 ft)	-
Fine to coarse gravel, saturated, dense	30.5 – 42.5 m (100 -139 ft)	30.5 – 42.5 m (100 -139 ft)
Coarse sand, saturated	42.5 – 50.3 m (139 – 165 ft)	42.5 – 49.4 m (139 – 162 ft)
Clay, saturated, dense	50.3 – 51.8 m (165 – 170 ft)	49.4 – 53.4 m (162 – 175 ft)

5.0 General Order of Works

The order in which works will be completed by the contractor are as follows:

1. Mobilization/site preparation
2. Drilling of PW11
3. Well plumbness testing (could be deferred until after screen installation at contractor's risk)
4. Screen installation and development
5. Camera survey
6. Demobilization of all equipment and site clean-up
7. Submission of well driller's reports to Western Water and Province of B.C.

6.0 Technical Specifications – Well Drilling and Development

The following section outlines the specifications for the drilling of the new well.

- **Drilling method** – Drilling must be completed with a dual-rotary rig, or a cable tool rig. Screen installation can be completed with a dual rotary rig or a cable tool rig. Larger than typical drill rod (e.g. 6.625 inch diameter or larger) will be preferred.
- **Formation sampling** – Formation samples are to be collected at 1.5 m (5 ft) intervals from the surface to 25 m (82 ft) depth. Below this depth, samples are to be collected at 0.8 m (2.5 ft) intervals. Samples are to be stored onsite in labelled bags for hydrogeologist review.
- **Surface seal** – A 500 mm (20-inch) x 400 mm (16-inch) surface seal will be installed to a depth of 11.6 m (38 ft). The seal shall be installed by first advancing a temporary 500 mm (20-inch) casing. Once the well screen is in place and exposed to the aquifer, the temporary casing shall be withdrawn

while the surface seal is installed. The seal material can be hydrated bentonite chips or approved equivalent. The surface seal can be poured from the surface or pumped using a tremie pipe. The top of the seal shall be left at a depth of approximately 1 m (3 ft) below ground and the remainder of the annulus shall be filled with drill cuttings in anticipation of future pitless adaptor installation.

- **Well casing** – All permanent well casing shall be new 400 mm (nominal 16-inch) diameter. Casing will be composed of steel with sufficient wall thickness and collapse strength for the intended use and expected well depth of between 49 and 52 m (160 and 170 ft). Casing joints shall be butt-welded, and welds shall be fully penetrating.
- **Well screen** – For the proposal, assume that the overall length of the well screen assembly will be 9.1 m (30 ft), including riser and tail pipe (if used). The 400 mm (16-inch) telescoping screen will be composed of stainless steel, continuous wire-wrap and will be exposed using the pull-back method. Approximately 7.6 m (25 ft) of open screen will be exposed to the aquifer, not including riser, K-packer and tail pipe (sump), if used.

Final details of the screen design will be made during drilling and additions to or subtractions from the estimated length will be made at the per foot rate provided on the Schedule of Prices.

The proponent shall investigate shipping logistics with the screen supplier. The cost for shipping must be included in the per foot price provided for the well screen.

- **Well development** – Well development must be completed with a cable-tool drilling rig using the surge and bail method. During surging, a temporary submersible pump shall be installed in the well and operated to remove fine material suspended in the water column. The submersible pump shall be capable of producing approximately 200 US gpm during development. For costing purposes, it is assumed that up to 100 hours of well development will be completed (i.e., 4 hours per nominal foot of well screen exposed to formation); however, the actual number of development hours will depend on field observations and will ultimately be determined by WWAL. If a change to the total amount of development time is deemed necessary, this would be completed at the hourly rate specified in the proposal.

Prior to and during well development, brief specific capacity tests (10 minutes) are to be periodically completed to assess the effectiveness of the development process and to determine if additional development time is required. WWAL hydrogeologists will provide additional instructions in this regard while onsite or via telephone. The contractor can expect to complete one brief test per shift, with testing time counted towards the total development hours allocated to the well.

At the completion of development, the pump will be run for 60 minutes with it located near the top of the water column. Purged water can be discharged to ground. The intent of this is to clear the water column in anticipation of completing the video camera survey of the well (see below).

- **Water management** – Water and cuttings produced during the drilling and development process shall be managed to prevent erosion, sedimentation, and flow of turbid water off site. It is the driller's responsibility to manage water, with the performance target being to maintain all water and cuttings on site and minimizing the amount of site restoration and cleanup following drilling.
- **Site clean-up** – Following well drilling and development, all excess casing, and any other materials brought to the site and not used for well construction shall be removed by the drilling contractor.
- **Well straightness** – To ensure the well is sufficiently straight to allow for pump installation, a plumbness test must be completed.

The plumbness test shall be completed with a tripod and plumb bob. Details and specifications for a plumbness test are outlined in *Groundwater and Wells 2nd Edition* (pages 335-339), which also tests the alignment (straightness) of the casing string. A copy of the plumbness and straightness test specifications can be provided by WWAL on driller request.

The allowable deviation from plumb at the anticipated completion depth between 45 and 61 m (150 and 200 ft) is approximately 0.4 to 0.5 m (15.5 to 20.5 inches).

- **Video camera survey** – Following development, the contractor will provide a colour video camera survey (including side-looking images) of the well showing the full length of the casing, all casing welds and the screen. A digital hardcopy of the camera survey will be provided to WWAL upon completion.
- **Site fencing** – Security for the wellhead and all drilling and testing related equipment will be the contractor's responsibility. Temporary fencing that encompasses the entire work site shall be provided by the contractor. As mentioned previously, the area around the drill site sees heavy use by the public.
- **Well disinfection** – Following well development, the driller shall thoroughly disinfect the well. This process shall include the addition of sufficient chlorine solution to the well to achieve a concentration of at least 200 ppm chlorine throughout the water column. The chlorine solution shall be agitated and mixed appropriately within the water column with a surge block. Disinfection shall be done at a time when the process can be observed by WWAL or a CoQ representative.
- **Safety, daily reports and well log** – The drilling contractor will be the prime contractor for the project and will be responsible for site safety. The drilling contractor is expected to develop a job specific safety plan, complete daily safety meetings (or more, as needed), indoctrinate all visitors to the job site, and retain all safety records.

A WWAL hydrogeologist will be onsite frequently. When WWAL is not onsite, the driller shall provide updates via phone call or email at the end of each day. The drilling contractor shall also maintain written daily logs, which may be requested. The daily reports shall provide, at a minimum, a summary of the day's progress, any issues encountered, equipment and material used, formation conditions,

and plans for the next working day. The drilling contractor shall provide a well log (well report) using the B.C. provincial standard form and must submit the form directly to the Province, as required under the *Groundwater Protection Regulation*.

Attachments:

- Figure 1 – Site Plan
- Conceptual Completion Schematic for PW11
- Well Logs for Onsite Wells

Attachment A – Preliminary Well Site Plan



Figure 1 - Site Plan

Date: January 2023

Image Source: City of Quesnel Mapping

WWAL Project: 24-001-01PG

Drawn by: LG

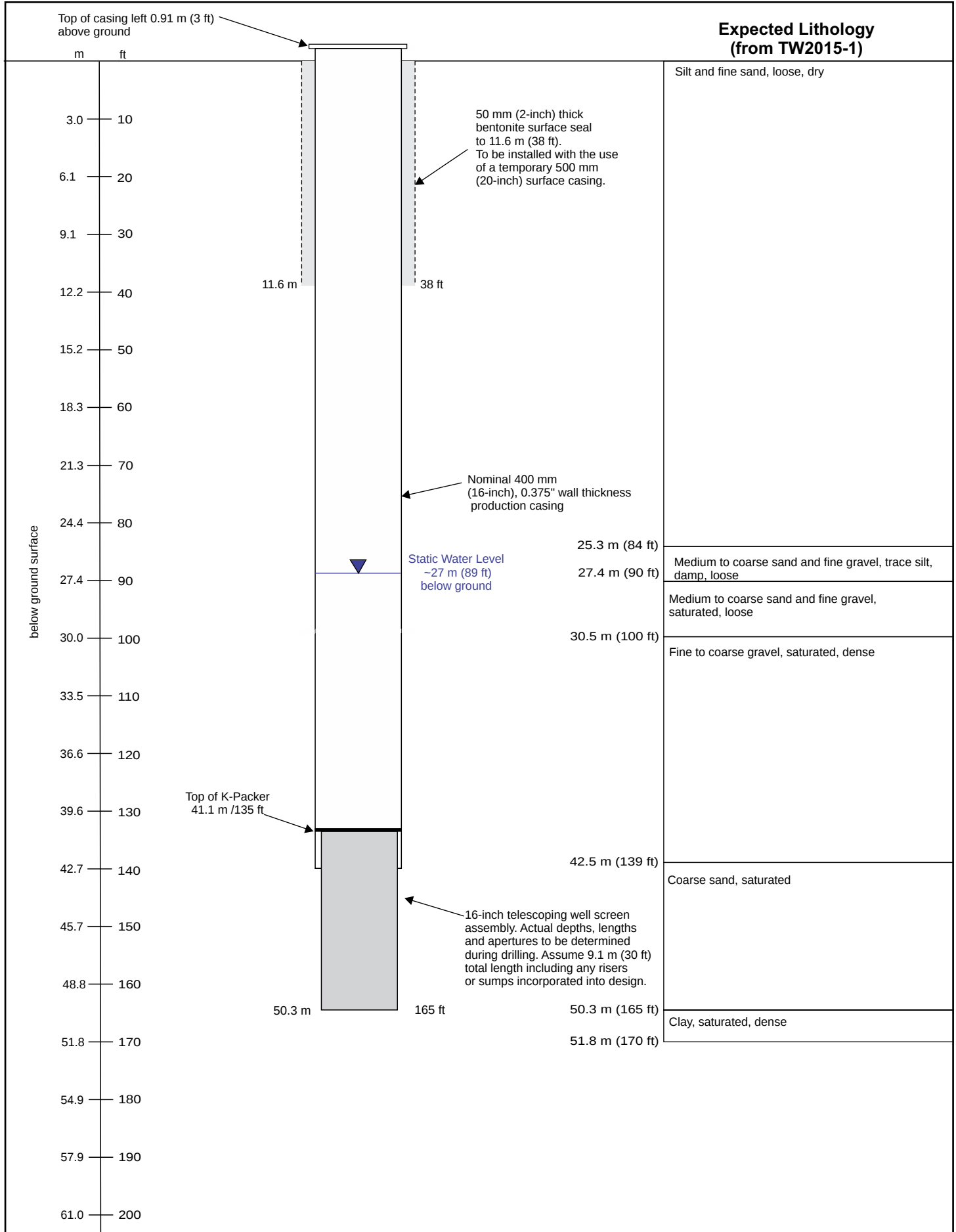
Checked by: WG

Client: City of Quesnel

Client Project:

Attachment B – Conceptual Completion Schematic for PW11

Conceptual Design of City of Quesnel Well PW11 (for Tender Package).
Screen to be designed based on drilling observations and may vary from this schematic.



Attachment C – Well Logs for Onsite Wells

MONITORING WELL

LITHOLOGY AND CONSTRUCTION

TW2015-1
WELL PLATE 41722

DEPTH	LITHOLOGY	COMPLETION	NOTES
0.0 m	GROUND SURFACE	LOCKED CAP	
2.5 m	Dry to moist loose brown SILT and f SAND SURFICIAL SEDIMENTS	BENTONITE CHIPS	SURFACE CASING NONE SURFACE SEAL 250 mm (10 inch) DIAMETER PRODUCTION CASING 200 mm (8 inch) DIAMETER
5.0 m			
7.5 m	... Cont'd	SEE PAGE 2 FOR STATIC WATER LEVEL	
10.0 m			
12.5 m	... Increasing to f-c SAND and tr. silt		
15.0 m	... becoming greyer		
17.5 m	... Cont'd		
20.0 m			

CLIENT: CITY OF QUESNEL PROJECT: E.A. AND PARALLEL INITIATIVES FILE NO. 09001.12 WEST EXPLORATION DRILLED: NOV 14 - 17, 2015 (JR CENTRAL) SCREENED: NOV 14 - 17, 2015 (JR CENTRAL) TESTED: NOT APPLICABLE	COMPLETION SUMMARY		"SUGARLOAF BALL PARK"
	ZONE 10U	NORTHING	5 870 449 mN ± 3 m GPS
		EASTING	532 803 mE ± 3 m GPS
	TOP OF CASING ELEVATION		503 m ± 3 m GPS
		CASING STICK-UP	0.91 m (3.0 ft) above ground
	DEPTH TO WATER (m-btoc)	TELESCOPIC WELL SCREEN	27.775 NOV 17 2015
PAGE 1 OF 3			

MONITORING WELL

LITHOLOGY AND CONSTRUCTION

TW2015-1
WELL PLATE 41722

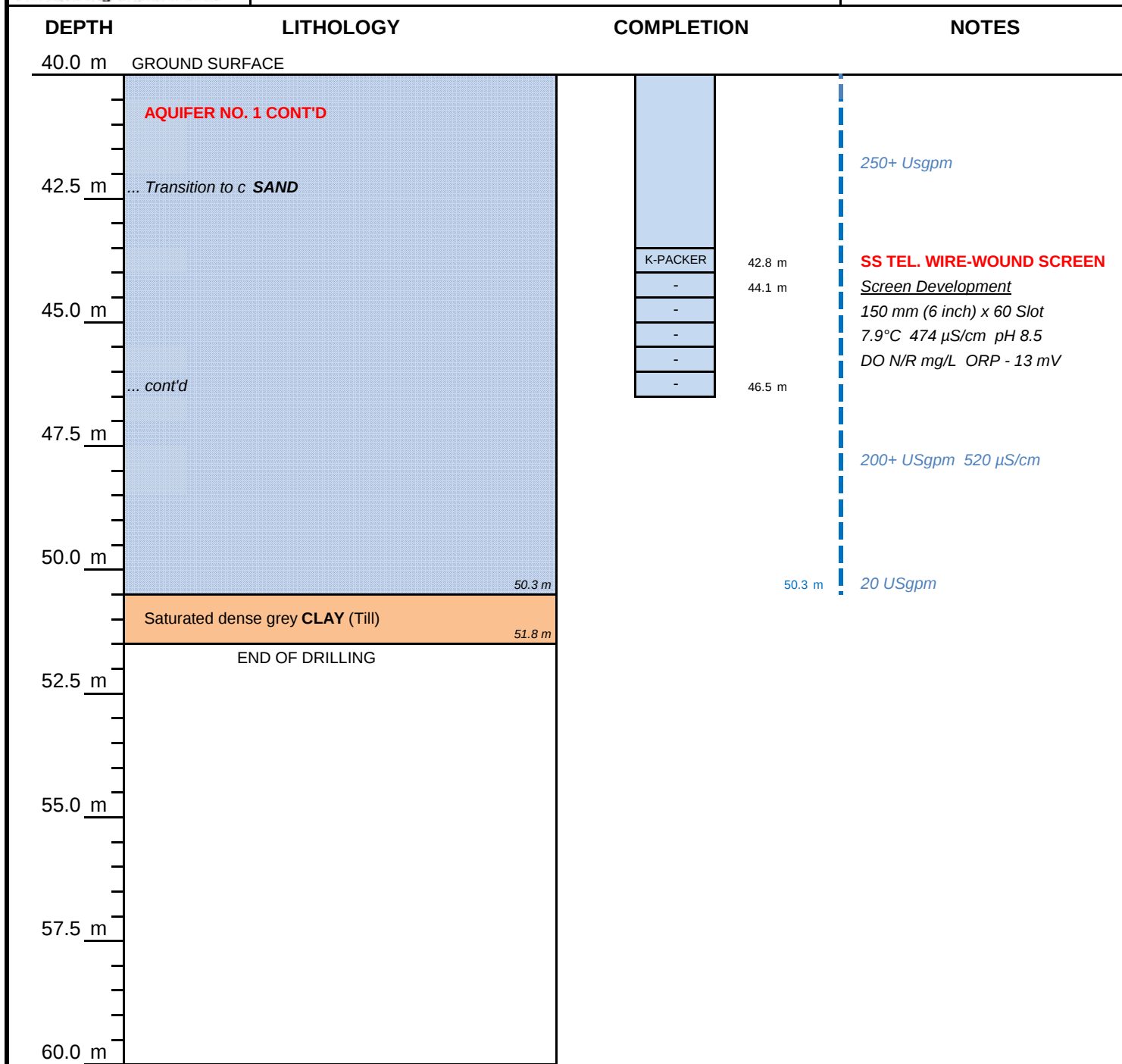
DEPTH	LITHOLOGY	COMPLETION	NOTES
20.0 m	GROUND SURFACE		
22.5 m	... Cont'd		
25.0 m			
27.5 m	Damp loose grey m-c SAND and f GRAVEL (angular), trace silt		
30.0 m	AQUIFER NO. 1 Saturated loose grey m-c SAND and f GRAVEL (angular), clean	STATIC WATER LEVEL	29.2 m FIRST WATER & DISCHARGE 10 USgpm
32.5 m	AQUITARD NO. 1 Saturated dense green / brown f-c GRAVEL (angular), clean		31.7 m
35.0 m			
37.5 m	AQUIFER NO. 1 Saturated dense green / brown f-c GRAVEL (angular), clean		35.1 m 50 USgpm 536 µS/cm
40.0 m	... Transition to bimodal sorting (angular fines and rounded coarse gravel)		150 USgpm 200+ USgpm 527 µS/cm

CLIENT: CITY OF QUESNEL PROJECT: E.A. AND PARALLEL INITIATIVES FILE NO. 09001.12 WEST EXPLORATION DRILLED: NOV 14 - 17, 2015 (JR CENTRAL) SCREENED: NOV 14 - 17, 2015 (JR CENTRAL) TESTED: NOT APPLICABLE		COMPLETION SUMMARY		"SUGARLOAF BALL PARK"	
		ZONE 10U NORTHING		5 870 449 mN ± 3 m GPS	
		EASTING		532 803 mE ± 3 m GPS	
		TOP OF CASING ELEVATION		503 m ± 3 m GPS	
		CASING STICK-UP		0.91 m (3.0 ft) above ground	
		DEPTH TO WATER (m-btoc)	TELESCOPIC WELL SCREEN	27.775	NOV 17 2015
PAGE 2 OF 3					

MONITORING WELL

LITHOLOGY AND CONSTRUCTION

TW2015-1
WELL PLATE 41722



CLIENT: CITY OF QUESNEL PROJECT: E.A. AND PARALLEL INITIATIVES FILE NO. 09001.12 WEST EXPLORATION DRILLED: NOV 14 - 17, 2015 (JR CENTRAL) SCREENED: NOV 14 - 17, 2015 (JR CENTRAL) TESTED: NOT APPLICABLE	COMPLETION SUMMARY		"SUGARLOAF BALL PARK"
	ZONE 10U NORTHING		5 870 449 mN ± 3 m GPS
	EASTING		532 803 mE ± 3 m GPS
	TOP OF CASING ELEVATION		503 m ± 3 m GPS
	CASING STICK-UP		0.91 m (3.0 ft) above ground
DEPTH TO WATER (m-btoc)		TELESCOPIC WELL SCREEN	27.775 NOV 17 2015
PAGE 3 OF 3			

- ☐ Well Construction Report
☐ Well Closure Report
☐ Well Alteration Report

Stamp company name/address/
phone/fax/e-mail here, if desired.

M-1063 77.722
Ministry Well ID Plate Number: 47720
Ministry Well Tag Number: 112495
☐ Confirmation/alternative specs. attached
☐ Original well construction report attached

Red lettering indicates minimum mandatory information.

See reverse for notes & definitions of abbreviations.

Owner name: City of Quesnel
Mailing address: 410 Kirchant St Town Quesnel Prov. BC Postal Code V2S 7J5
Well Location: Address: Street no. _____ Street name _____ Town _____
☐ Legal description: Lot _____ Plan _____ D.L. _____ Block _____ Sec. _____ Twp. _____ Rg. _____ Land District _____
☐ PID: _____ and ☐ Description of well location (attach sketch, if nec.): _____

NAD 83: Zone: _____ and UTM Northing: _____ m ☐ Latitude (see note 3): 50° 58' 57.1"
(see note 2) UTM Easting: _____ m ☐ Longitude: 122° 30' 40.1"

Method of drilling: ☐ air rotary ☐ cable tool ☐ mud rotary ☐ auger ☐ driving ☐ jetting ☐ excavating ☐ other (specify): _____

Orientation of well: ☐ vertical ☐ horizontal Ground elevation: 1659 ft ft (asl) Method (see note 4): _____

Class of well (see note 5): Water Supply Sub-class of well: Non-Domestic

Water supply wells: indicate intended water use: ☐ private domestic ☐ water supply system ☐ irrigation ☐ commercial or industrial ☐ other (specify): _____

Lithologic description (see notes 7-14) or closure description (see notes 15 and 16)

From ft (bgl)	To ft (bgl)	Relative Hardness	Colour	Material Description (Use recommended terms on reverse. List in order of decreasing amount, if applicable)	Water-bearing Estimated Flow (USgpm)	Observations (e.g., fractured, weathered, well sorted, silty wash), closure details
0	20	m	Br	MED SAND		
20	40	m	Br	MED to FINE SAND		
40	60	m	Br	MED to FINE SAND		
60	80	m	Br	MED to FINE SAND		
80	100	m	Gray	MED SAND		
100	120	m	Gray	MED to COARSE SAND		
120	140	m	Gray	GRAVEL MED		
140	160	m	Gray	GRAVEL MED-COARSE		
160	165	m	Gray	165 CLAY (160-165)		
				Pull Back		

Casing details

From ft (bgl)	To ft (bgl)	Dia in	Casing Material / Open Hole	Wall Thickness in	Drive Shoe
0	20	12	CB pipe		
0	8	8	Steel	322	DR

Surface seal: Type: Barbrite Chips Depth: 20 ft
Method of installation: ☐ Poured ☐ Pumped Thickness: _____ in
Backfill: Type: _____ Depth: _____ ft
Liner: ☐ PVC ☐ Other (specify): _____
Diameter: _____ in Thickness: _____ in
From: _____ ft (bgl) To: _____ ft (bgl) Perforated: From: _____ ft (bgl) To: _____ ft (bgl)

Developed by:

☐ Air lifting ☐ Surging ☐ Jetting ☐ Pumping ☐ Bailing
☐ Other (specify): _____ Total duration: 10 1/2 hrs
Notes: _____

Well yield estimated by:

☐ Pumping ☐ Air lifting ☐ Bailing ☐ Other (specify): _____
Rate: _____ USgpm Duration: _____ hrs
SWL before test: _____ ft (btoc) Pumping water level: _____ ft (btoc)

Obvious water quality characteristics:

☐ Fresh ☐ Salty ☐ Clear ☐ Cloudy ☐ Sediment ☐ Gas
Colour/odour: _____ Water sample collected: ☐

Well driller (print clearly):

Name (first, last) (see note 19): Kelly Kelly
Registration no. (see note 20): W200570X
Consultant (if applicable; name and company): BCGW

DECLARATION: Well construction, well alteration or well closure, as the case may be,
has been done in accordance with the requirements in the Water Act and the Ground
Water Protection Regulation.

Signature of Driller Responsible

PLEASE NOTE: The information recorded in this well report describes the works and hydrogeologic conditions at the time of construction,
alteration or closure, as the case may be. Well yield, well performance and water quality are not guaranteed as they are influenced by a
number of factors, including natural variability, human activities and condition of the works, which may change over time.

Screen details

From ft (bgl)	To ft (bgl)	Dia in	Type (see note 18)	Slot Size
136 1/2	139		Riser & Arter.	
139	149	5	Screen	100
149	150	5	Well Bottom	

Intake: ☐ Screen ☐ Open bottom ☐ Uncased hole
Screen type: ☐ Telescope ☐ Pipe size
Screen material: ☐ Stainless steel ☐ Plastic ☐ Other (specify): _____
Screen opening: ☐ Continuous slot ☐ Slotted ☐ Perforated pipe
Screen bottom: ☐ Bail ☐ Plug ☐ Plate ☐ Other (specify): _____
Filter pack: From: _____ ft To: _____ ft Thickness: _____ in
Type and size of material: _____

Final well completion data:

Total depth drilled: 165 ft Finished well depth: 150 ft (bgl)
Final stick up: 36 in Depth to bedrock: 0 ft (bgl)
SWL: _____ ft (btoc) Estimated well yield: 170 USgpm
Artesian flow: _____ USgpm, or Artesian pressure: _____ ft
Type of well cap: Aluminum Well disinfected: ☐ Yes ☐ No
Where well ID plate is attached: FDWG

Well closure information:

Reason for closure: _____
Method of closure: ☐ Poured ☐ Pumped
Sealant material: _____ Backfill material: _____
Details of closure (see note 17): _____

Date of work (YYYY/MM/DD):

Started: Nov 14, 2015 Completed: Nov 15, 2015

Comments: TW 2015-1

General

- 1. Requirements for well construction and well closure reports are found in Part 5 of the *Water Act* and the Ground Water Protection Regulation. Part 5 of the act and regulation are available at: <http://www.env.gov.bc.ca/wat/gws/index.html>.
- 2. The current Ministry standard datum for mapping and geodetic use is the North American Datum of 1983 (NAD 83). To determine GPS coordinates using a Global Positioning System (GPS), set the datum to NAD 83.
- 3. For latitude and longitude coordinates, provide coordinates either in degree, minutes and seconds (e.g., 50° 2' 21.037") or decimal degrees (e.g., 50.039175°).
- 4. For the method of determining ground elevation, enter: GPS, differential GPS, level, altimeter, 1:50,000 map, 1:20,000 map, 1:10,000 map or 1:5,000 map.
- 5. The classes and sub-classes of wells are shown below:

Class	Sub-class (if applicable)
Water supply	Domestic; Non-domestic
Monitoring	Temporary; Permanent
Recharge or injection	
Dewatering or drainage	Temporary; Permanent
Remediation	Temporary; Permanent
Geotechnical.....	Borehole; Test pit; Special type of hole; Closed loop geothermal
- 6. Well reports submitted to the Deputy Comptroller, or retained by the person responsible, as required under the *Water Act* and the Ground Water Protection Regulation, shall be considered part of the Provincial Government records and is subject to the *Freedom of Information and Protection of Privacy Act*.

How to Fill Out the Lithologic Description Table

- 7. Each row in the lithologic description table represents either a depth interval or depth in the well.
- 8. A row could represent a depth interval (e.g., from 0 feet to 12 feet), such as for a geologic stratum or a specific depth (e.g., 120 feet), such as for a depth location of a water-bearing fracture.
- 9. For a depth interval, enter the relative hardness of the material in the column "Relative Hardness," if applicable: Very Hard (VH), Hard (H), Dense (D), Stiff (ST), Medium (M), Loose (L), Soft (S), Very Soft (VS).
- 10. For a depth interval, enter the letter for the overall colour of the geologic material in the column "Colour," if applicable: White (W), Grey (Gy), Blue (Bl), Green (G), Yellow (Y), Brown (Br), Red (R), Tan (T), Black (Bk).
- 11. For each depth interval, enter the description of the geologic materials encountered during drilling in the column "Material Description." Material descriptions should be chosen from the following recommended list of materials:

Surficial materials (approximate range of particle size)	Bedrock materials
boulders (greater than 10 inches)	conglomerate
cobbles (2 1/2 inches to 10 inches)	sandstone
gravel (80 slot to 2 1/2 inches)	shale
coarse sand (25 slot to 80 slot)	siltstone
medium sand (10 slot to 25 slot)	limestone
fine sand (2 slot to 10 slot)	crystalline
silt (less than 2 slot)	granite
clay (much less than 2 slot)	basalt
till (variable particle size)	volcanic
organics (e.g., top soil, wood, peat)	bedrock

- 12. In describing the material, list the material in order from greatest to least and indicate what materials occur in trace (less than 5%) amounts. The word "and" means both materials occur in approximately equal amounts (e.g., "gravel and coarse sand, trace silt").
- 13. Under the column "Water-bearing Estimated Flow (USgpm)," use "D" for "dry," "W" for "wet," or enter the estimated flow in USgpm.
- 14. If a water-bearing fracture is encountered, the depth of the fracture should be recorded in a row and the estimated flow of water in the fracture can be entered in the column "Water-bearing Estimated Flow (USgpm)."

How to Fill Out the Closure Description Table and the Well Closure Information Section

- 15. Each row in the closure description table represents either a depth interval (e.g., from 0 feet to 12 feet) or depth (e.g., 120 feet) in the well.
- 16. For a depth interval, enter the type of backfill or sealant material(s) in the column "Material Description."
- 17. Indicate in "Details of closure" whether casing(s) or screen(s) were pulled or left in place. If casing(s) were left in place, indicate whether it was perforated or ripped.

Screen Details

- 18. "Type" includes riser pipe, K-packer, screen, screen blank, or tail pipe.

Well Driller

- 19. Fill in the name of the driller who constructed the well.

Registration Number of Driller Responsible

- 20. Fill in the registration number on the Qualified Well Driller identification card. If the work was completed by a driller who is not registered as a Qualified Well Driller, the Qualified Well Driller who is directly supervising the work should fill in their registration number on their Qualified Well Driller identification card. The Qualified Well Driller signs the form.

Definitions of Abbreviations

aslabove sea level	ftfeet	PIDParcel Identifier	USgpm...US gallons per minute
bglbelow ground level	hrshours	Rg.Range	UTMUniversal Transverse
btocbelow top of casing	ininches	Sec.....Section	Mercator Grid
DiaDiameter	NAD 83 ..North American	SWLstatic water level	
D.L.District Lot	Datum (1983)	Twp.Township	

MONITORING WELL

LITHOLOGY AND CONSTRUCTION

EB2015-1
WELL PLATE 42231

DEPTH	LITHOLOGY	COMPLETION	NOTES
0.0 m	GROUND SURFACE	LOCKED CAP	
2.5 m	Dry to moist loose brown SILT and f SAND SURFICIAL SEDIMENTS	BENTONITE CHIPS	SURFACE CASING NONE SURFACE SEAL 200 mm (8 inch) DIAMETER PRODUCTION CASING 150 mm (6 inch) DIAMETER
5.0 m			
7.5 m	... increasing c SAND and f GRAVEL (angular)	SEE PAGE 2 FOR STATIC WATER LEVEL	
10.0 m			
12.5 m	... return to f-m SAND and tr. <i>Silt</i>		
15.0 m	... becoming grey 15.8 m		
17.5 m	Moist brown / gray f-m GRAVEL clean (rounded) and f-c SAND some silt		
20.0 m	20.4 m		

CLIENT: CITY OF QUESNEL PROJECT: E.A. AND PARALLEL INITIATIVES FILE NO. 09001.12 WEST EXPLORATION DRILLED: JULY 14, 2015 (JR CENTRAL) SCREENED: JULY 14, 2015 (JR CENTRAL) TESTED: NOT APPLICABLE	COMPLETION SUMMARY		"SUGARLOAF BALL PARK"
	ZONE 10U	NORTHING	5 870 395 mN ± 2 m GPS
		EASTING	532 837 mE ± 2 m GPS
	TOP OF CASING ELEVATION		499 m ± 3 m GPS
		CASING STICK-UP	0.91 m (3.0 ft) above ground
	DEPTH TO WATER (m-btoc)	TELESCOPIC WELL SCREEN	26.248 JULY 14, 2015 26.278 JULY 24, 2015
PAGE 1 OF 3			

MONITORING WELL

LITHOLOGY AND CONSTRUCTION

EB2015-1
WELL PLATE 42231

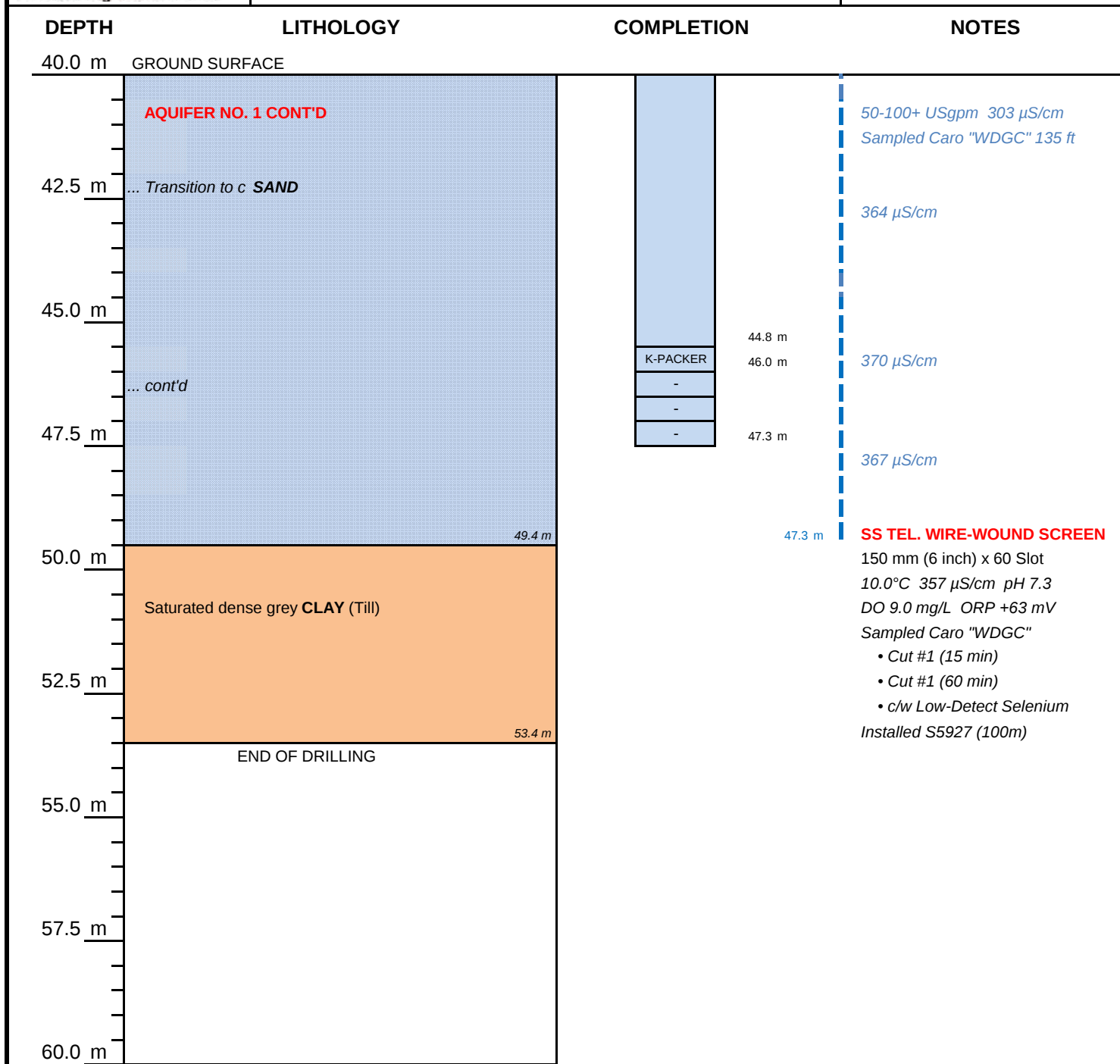
DEPTH	LITHOLOGY	COMPLETION	NOTES
20.0 m	GROUND SURFACE		
22.5 m	Damp dense brown / gray f-m GRAVEL (angular) m-c SAND, SILT and some clay ... fining to c SAND same clay content		
25.0 m			
27.5 m	... cont'd		
30.0 m		STATIC WATER LEVEL	29.0 m FIRST WATER & DISCHARGE 30-50 USgpm 304 μ S/cm Sampled Caro "WDGC" 095 ft
30.5 m			313 μ S/cm
32.5 m	AQUIFER NO. 1 Saturated dense green / brown f-c GRAVEL (angular), clean		30+ USgpm 338 μ S/cm
35.0 m			315 μ S/cm
37.5 m			326 μ S/cm
40.0 m	... Transition to c GRAVEL		

CLIENT: CITY OF QUESNEL PROJECT: E.A. AND PARALLEL INITIATIVES FILE NO. 09001.12 WEST EXPLORATION DRILLED: JULY 14, 2015 (JR CENTRAL) SCREENED: JULY 14, 2015 (JR CENTRAL) TESTED: NOT APPLICABLE		COMPLETION SUMMARY		"SUGARLOAF BALL PARK"
		ZONE 10U NORTHING		5 870 395 mN $\pm$ 2 m GPS
		EASTING		532 837 mE $\pm$ 2 m GPS
		TOP OF CASING ELEVATION		499 m $\pm$ 3 m GPS
		CASING STICK-UP		0.91 m (3.0 ft) above ground
		DEPTH TO WATER (m-btoc)	TELESCOPIC WELL SCREEN	26.248 JULY 14, 2015 26.278 JULY 24, 2015
PAGE 2 OF 3				

MONITORING WELL

LITHOLOGY AND CONSTRUCTION

EB2015-1
WELL PLATE 42231



CLIENT: CITY OF QUESNEL PROJECT: E.A. AND PARALLEL INITIATIVES FILE NO. 09001.12 WEST EXPLORATION DRILLED: JULY 14, 2015 (JR CENTRAL) SCREENED: JULY 14, 2015 (JR CENTRAL) TESTED: NOT APPLICABLE	COMPLETION SUMMARY		"SUGARLOAF BALL PARK"	
	ZONE 10U NORTHING		5 870 395 mN ± 2 m GPS	
	EASTING		532 837 mE ± 2 m GPS	
	TOP OF CASING ELEVATION		499 m ± 3 m GPS	
	CASING STICK-UP		0.91 m (3.0 ft) above ground	
	DEPTH TO WATER (m-btoc)	TELESCOPIC WELL SCREEN	26.248	JULY 14, 2015
		26.278	JULY 24, 2015	
PAGE 3 OF 3				

Red lettering indicates minimum mandatory information.

See reverse for notes & definitions of abbreviations.

Owner name: City of Quesnel
Mailing address: 414 Kinchant St Town: Quesnel Prov. BC Postal Code V2J7J5
Well Location: Address: Street no. Street name Town
(or) Legal description: Lot Parcel B Plan B6099 D.L. 1226 Block 11 Sec. Twp. Rg. Land District Cariboo
(or) PID: (and) Description of well location (attach sketch, if nec.): Plan 2798 Except Plan 8578

NAD 83: Zone: (see note 2) (and) UTM Easting: m (or) Latitude (see note 3):
UTM Northing: m Longitude:

Method of drilling: ☐ air rotary ☐ cable tool ☐ mud rotary ☐ auger ☐ driving ☐ jetting ☐ excavating ☐ other (specify):

Orientation of well: ☐ vertical ☐ horizontal Ground elevation: ft (asl) Method (see note 4):

Class of well (see note 5): Sub-class of well:

Water supply wells: indicate intended water use: ☐ private domestic ☐ water supply system ☐ irrigation ☐ commercial or industrial ☐ other (specify):

Lithologic description (see notes 7-14) or closure description (see notes 15 and 16)

From ft (bgl)	To ft (bgl)	Relative Hardness	Colour	Material Description (Use recommended terms on reverse. List in order of decreasing amount, if applicable)	Water-bearing Estimated Flow (USgpm)	Observations (e.g., fractured, weathered, well sorted, silty wash), closure details
0	17	S	Br	Till		
17	20	S	Brk	SAND GRAVEL		
20	80	S	Brk	SAND GRAVEL & traces CLAY		
80	100	S	Grey	GRAVEL SAND & traces CLAY	20 gpm	
100	120	S/m	Grey	GRAVEL SAND	30 gpm	
120	140	S/m	Grey	GRAVEL		
140	160	S/m	Grey	GRAVEL		
160	180	S	Blue	CLAY		

Casing details

From ft (bgl)	To ft (bgl)	Dia in	Casing Material / Open Hole	Wall Thickness in	Drive Shoe
0	20	8	Steel Reinforced		
0	151	6	Steel	1.219	DR

Screen details

From ft (bgl)	To ft (bgl)	Dia in	Type (see note 18)	Slot Size
149	151	5	K-Meter Liser	
151	155	5	Screen	60
155	156.5	5	Brk	

Surface seal: Type: Bentonite Depth: 20 ft
Method of installation: ☐ Poured ☐ Pumped Thickness: in
Backfill: Type: Depth: ft
Liner: ☐ PVC ☐ Other (specify):
Diameter: in Thickness: in
From: ft (bgl) To: ft (bgl) Perforated: From: ft (bgl) To: ft (bgl)

Intake: ☒ Screen ☐ Open bottom ☐ Uncased hole
Screen type: ☐ Telescope ☐ Pipe size
Screen material: ☐ Stainless steel ☐ Plastic ☐ Other (specify):
Screen opening: ☐ Continuous slot ☐ Slotted ☐ Perforated pipe
Screen bottom: ☒ Bail ☐ Plug ☐ Plate ☐ Other (specify):
Filter pack: From: ft To: ft Thickness: in
Type and size of material:

Developed by:

☐ Air lifting ☐ Surging ☐ Jetting ☐ Pumping ☐ Bailing
☐ Other (specify): Total duration: 2 hrs
Notes:

Well yield estimated by:

☐ Pumping ☐ Air lifting ☐ Bailing ☐ Other (specify):
Rate: USgpm Duration: hrs
SWL before test: ft (btoc) Pumping water level: ft (btoc)

Obvious water quality characteristics:

☐ Fresh ☐ Salty ☐ Clear ☐ Cloudy ☐ Sediment ☐ Gas

Colour/odour: Water sample collected: ☐

Well driller (print clearly):

Name (first, last) (see note 19): Kelly Palleher

Registration no. (see note 20): WDO7051201

Consultant (if applicable; name and company):

DECLARATION: Well construction, well alteration or well closure, as the case may be, has been done in accordance with the requirements in the Water Act and the Ground Water Protection Regulation.

Signature of Driller Responsible

PLEASE NOTE: The information recorded in this well report describes the works and hydrogeologic conditions at the time of construction, alteration or closure, as the case may be. Well yield, well performance and water quality are not guaranteed as they are influenced by a number of factors, including natural variability, human activities and condition of the works, which may change over time.

white: Customer copy
canary: Driller copy
pink: Ministry copy
Sheet ____ of ____

Final well completion data:

Total depth drilled: 180 ft Finished well depth: 155 ft (bgl)
Final stick up: 36 in Depth to bedrock: 0 ft (bgl)
SWL: ft (btoc) Estimated well yield: 30 USgpm
Artesian flow: USgpm, or Artesian pressure: ft

Type of well cap: Alum Cap Well disinfected: ☐ Yes ☐ No
Where well ID plate is attached: CASIN

Well closure information:

Reason for closure:
Method of closure: ☐ Poured ☐ Pumped
Sealant material: Backfill material:
Details of closure (see note 17):

Date of work (YYYY/MM/DD):

Started: July 14, 2015 Completed: July 14, 2015

Comments: EB2015-1

General

- 1. Requirements for well construction and well closure reports are found in Part 5 of the *Water Act* and the Ground Water Protection Regulation. Part 5 of the act and regulation are at: http://www.env.gov.bc.ca/wsd/plan_protect_sustain/groundwater/index.html#leg.
- 2. The current Ministry standard datum for mapping and geodetic use is the North American Datum of 1983 (NAD 83). To determine GPS coordinates using a Global Positioning System (GPS), set the datum to NAD 83.
- 3. For latitude and longitude coordinates, provide coordinates either in degree, minutes and seconds (e.g., 50° 2' 21.037") or decimal degrees (e.g., 50.039175°).
- 4. For the method of determining ground elevation, enter: GPS, differential GPS, level, altimeter, 1:50,000 map, 1:20,000 map, 1:10,000 map or 1:5,000 map.
- 5. The classes and sub-classes of wells are shown below:

Class	Sub-class (if applicable)
Water supply	Domestic; Non-domestic
Monitoring.....	Temporary; Permanent
Recharge or injection	
Dewatering or drainage	Temporary; Permanent
Remediation	Temporary; Permanent
Geotechnical.....	Borehole; Test pit; Special type of hole; Closed loop geothermal

- 6. Well reports submitted to the Deputy Comptroller, or retained by the person responsible, as required under the *Water Act* and the Ground Water Protection Regulation, shall be considered part of the Provincial Government records and subject to the *Freedom of Information and Protection of Privacy Act*.

How to Fill Out the Lithologic Description Table

- 7. Each row in the lithologic description table represents either a depth interval or depth in the well.
- 8. A row could represent a depth interval (e.g., from 0 feet to 12 feet), such as for a geologic stratum or a specific depth (e.g., 120 feet), such as for a depth location of a water-bearing fracture.
- 9. For a depth interval, enter the relative hardness of the material in the column "Relative Hardness," if applicable: Very Hard (VH), Hard (H), Dense (D), Stiff (ST), Medium (M), Loose (L), Soft (S), Very Soft (VS).
- 10. For a depth interval, enter the letter for the overall colour of the geologic material in the column "Colour," if applicable: White (W), Grey (Gy), Blue (Bl), Green (G), Yellow (Y), Brown (Br), Red (R), Tan (T), Black (Bk).
- 11. For each depth interval, enter the description of the geologic materials encountered during drilling in the column "Material Description." Material descriptions should be chosen from the following recommended list of materials:

Surficial materials (approximate range of particle size)	Bedrock materials
boulders (greater than 10 inches)	conglomerate
cobbles (2 1/2 inches to 10 inches)	sandstone
gravel (80 slot to 2 1/2 inches)	shale
coarse sand (25 slot to 80 slot)	siltstone
medium sand (10 slot to 25 slot)	limestone
fine sand (2 slot to 10 slot)	crystalline
silt (less than 2 slot)	granite
clay (much less than 2 slot)	basalt
till (variable particle size)	volcanic
organics (e.g., top soil, wood, peat)	bedrock

- 12. In describing the material, list the material in order from greatest to least and indicate what materials occur in trace (less than 5%) amounts. The word "and" means both materials occur in approximately equal amounts (e.g., "gravel and coarse sand, trace silt").
- 13. Under the column "Water-bearing Estimated Flow (USgpm)," use "D" for "dry," "W" for "wet," or enter the estimated flow in USgpm.
- 14. If a water-bearing fracture is encountered, the depth of the fracture should be recorded in a row and the estimated flow of water in the fracture can be entered in the column "Water-bearing Estimated Flow (USgpm)."

How to Fill Out the Closure Description Table and the Well Closure Information Section

- 15. Each row in the closure description table represents either a depth interval (e.g., from 0 feet to 12 feet) or depth (e.g., 120 feet) in the well.
- 16. For a depth interval, enter the type of backfill or sealant material(s) in the column "Material Description."
- 17. Indicate in "Details of closure" whether casing(s) or screen(s) were pulled or left in place. If casing(s) were left in place, indicate whether it was perforated or ripped.

Screen Details

- 18. "Type" includes riser pipe, K-packer, screen, screen blank, or tail pipe.

Well Driller

- 19. Fill in the name of the driller who constructed the well.

Registration Number of Driller Responsible

- 20. Fill in the registration number on the Qualified Well Driller identification card. If the work was completed by a driller who is not registered as a Qualified Well Driller, the Qualified Well Driller who is directly supervising the work should fill in their registration number on their Qualified Well Driller identification card. The Qualified Well Driller signs the form.

Definitions of Abbreviations

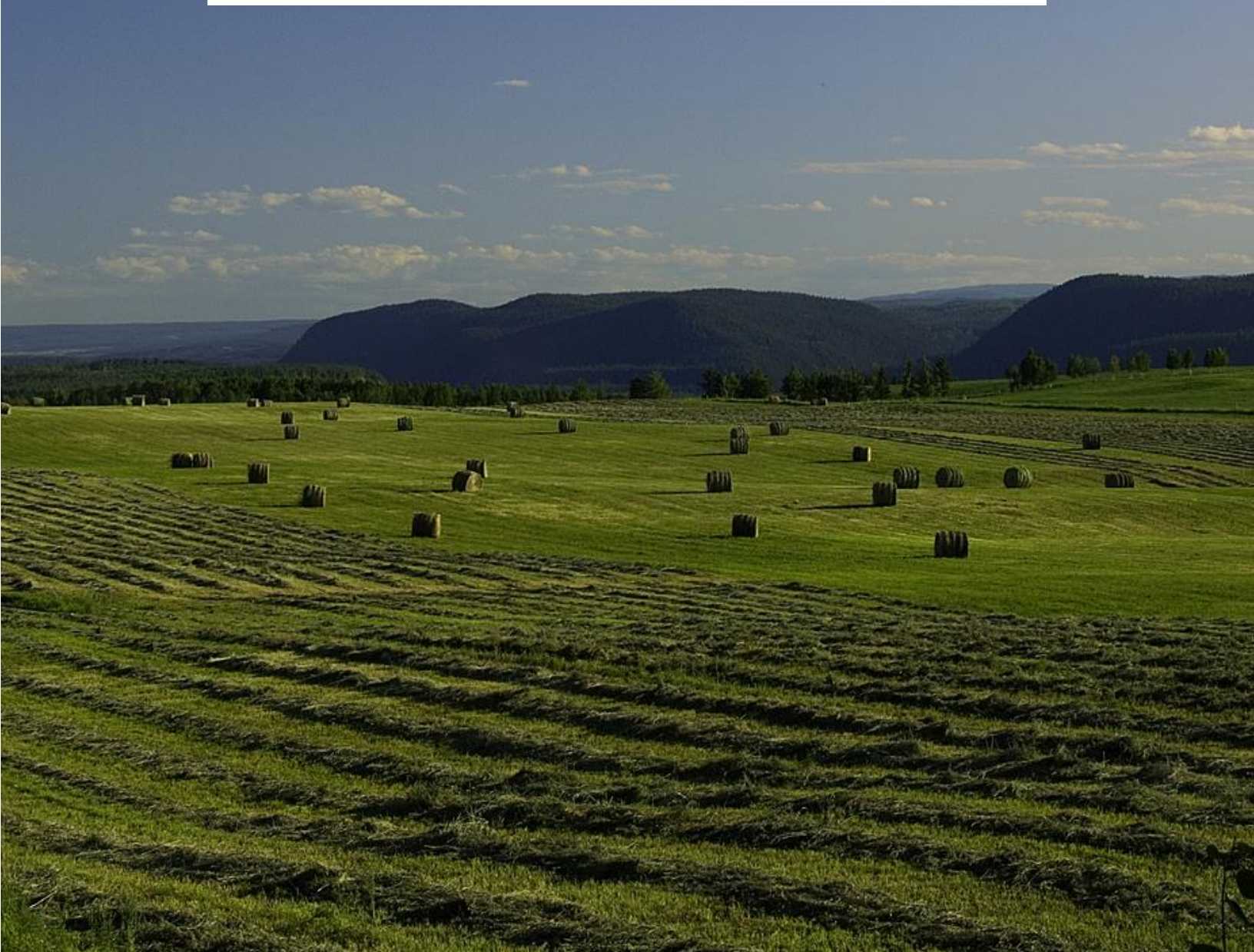
aslabove sea level	ft.....feet	PID.....Parcel Identifier	USgpm...US gallons per minute
bglbelow ground level	hrs.....hours	Rg.Range	UTM.....Universal Transverse
btocbelow top of casing	ininches	Sec.....Section	Mercator Grid
DiaDiameter	NAD 83 ..North American	SWLstatic water level	
D.L.District Lot	Datum (1983)	Twp.Township	

Return Completed Forms to:

Ground Water Data Technician
Water Stewardship Division, Ministry of Environment
PO Box 9362 Stn Prov Govt
Victoria BC V8W 9M2

updated: Jan. 18, 2007

APPENDIX B.1: PROPOSAL SUBMITTAL INFORMATION SHEETS



City of Quesnel

Drilling and Development of PW11

1. Proponent Contact Information

The following proponent information is requested:

Company Name:

Address:

Primary Project Contact:

Name:

Office Number:

Cell Number:

Email:

Confirm commitment to enter a CCDC 4 contract with the City if selected:

City of Quesnel

Drilling and Development of PW11

Proposed Work Schedule

Construction Start Date:

Construction Completion Date:

ACTIVITY Week:	CONSTRUCTION SCHEDULE				
	1	2	3	4	5
Mobilize / Site Preparation					
Drilling of PW11					
Plumbness Test					
Screen installation and development					
Camera Survey					
Site Cleanup and Demobilize					

City of Quesnel

Drilling and Development of PW11

Equipment List

TYPE	UNIT AND MODEL DESCRIPTION

City of Quesnel

Drilling and Development of PW I I

Qualified Well Driller Information

Well Driller Name:

Registration No.:

Address:

City, Province:

Postal Code:

Phone:

Email:

Subcontractor Project References

Contractor: _____

Date: _____

Reference #1

Project Name: _____

Client: _____ Date Completed: _____

Contact Name and Phone #: _____

Diameter of Well: _____ Depth of Well and Aquifer Type _____

Well Yield: _____ Pumping Test (Y / N) _____

Reference #2

Project Name: _____

Client: _____ Date Completed: _____

Contact Name and Phone #: _____

Diameter of Well: _____ Depth of Well and Aquifer Type: _____

Well Yield: _____ Pumping Test (Y / N) _____

Reference #3

Project Name: _____

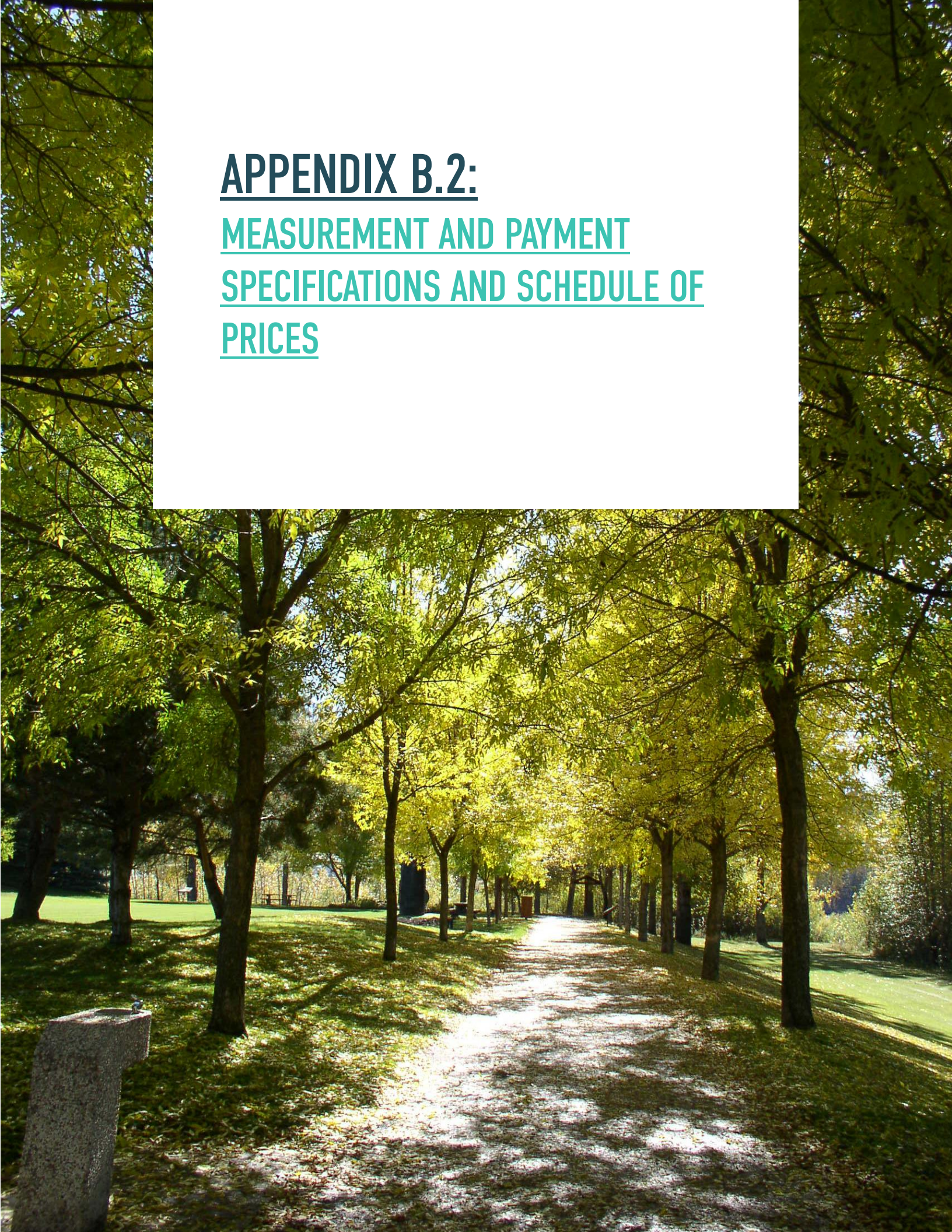
Client: _____ Date Completed: _____

Contact Name and Phone #: _____

Diameter of Well: _____ Depth of Well and Aquifer Type: _____

Well Yield: _____ Pumping Test (Y / N) _____

APPENDIX B.2: MEASUREMENT AND PAYMENT SPECIFICATIONS AND SCHEDULE OF PRICES



TECHNICAL SPECIFICATIONS FOR DRILLING PROPOSALS PACKAGE



TO: BC Registered Well Drilling Contractors **DATE:** February 7, 2024

FR: Warren Grafton, P.Geo. (Western Water on behalf of the City of Quesnel) **REFERENCE:** 24-001-01PG

RE: **DRILLING AND DEVELOPMENT OF NEW PRODUCTION WELL: CITY OF QUESNEL PW11 - SUPPLEMENTARY SPECIFICATIONS - MEASUREMENT AND PAYMENT**

1.0 Supplementary Specifications - Measurement and Payment

Refer to attached Schedule of Prices sheet.

1. **Drill crew and equipment, mobilization and demobilization.** The payment for this item will be lump sum (in two parts – half on the first invoice and half on the final invoice) and shall include all contractor costs for:
 - Mobilization of all drilling, well installation, and well development equipment and personnel
 - Site safety/security/fencing
 - Provision and installation of silt fencing and any water management equipment or materials necessary to complete the project
 - Site preparation, including all imported material and equipment
 - Crew changes (if any)
 - Shipping of equipment and supplies to site
 - Generating daily reports, well logs and complying with contract general conditions
 - Demobilization of all drilling, well installation and well development equipment and personnel
2. **Drill and temporary case nominal 500 mm (20-inch) diameter for surface seal.** Payment for this item will be on a per lineal foot basis, including the cost to install and remove the temporary surface casing, the drive shoe and any credit for removed temporary casing.
3. **Install 500 X 400 mm (20 x 16-inch) surface seal to a depth of 11.6 m (38 ft).** Payment for this item will be for all labour and materials to install the surface seal.
4. **Overlap 400 mm (16-inch) casing.** Payment for this item will be for providing and installing the 400 mm (16-inch) production casing within the temporarily cased 500 mm (20-inch) hole.
5. **Drill and case 400 mm (16-inch) diameter from bottom of surface casing to targeted depth.** Payment for this item will be based on the actual lineal footage drilled and cased, and the per foot price. Payment will not be made for drilling and/or casing that does not pass the plumbness test or does not allow the screen assembly to be installed to total depth. This footage cost includes use of a booster compressor if deemed necessary by the contractor.
6. **Furnish and install (400 mm) 16-inch telescoping well screen.** Payment for this item will be based on the actual lineal footage of well screen assembly (including all fittings and K-packer) installed. For

costing purposes, assume the assembly will be 9.1 m (30 ft). Note the price for the well screen must include an allowance for shipping and downtime while waiting for delivery, if such costs are not already covered in the mobilization cost.

7. **Well development.** Payment for well development will be based on the actual hours of well development, as indicated on the approved contractor daily drilling reports and the hourly price for well development. This item includes time for brief well performance tests.
8. **Plumbness test.** Payment for this item will be based on the lump sum price.
9. **Disinfection and temporary locking well cap.** Payment for this item will be based on the lump sum price.
10. **Drive shoes.** Payment for this item will be lump sum for non-recovered drive shoes.
11. **Video camera survey.** Payment for this item will be lump sum for the post development, video survey of the newly installed well. A digital copy of the survey must be provided to WWAL on a hard drive (compact disc is not acceptable).
12. **Drill crew subsistence/live-out.** Payment for this item will be based on a day rate. For costing purposes, a 25 day live-out period has been assumed. Payment will be based on actual number of days on site, excluding the mobilization and demobilization days.

Attachments:

- Schedule of Prices

Attachment A – Schedule of Prices

Schedule of Prices

City of Quesnel
Drilling and Development of PW11

The City of Quesnel is requesting pricing for the work described in the Request for Quotation. A schedule of prices is provided below; additional information is included in the Technical Specifications - Measurement and Payment section.

ITEM & DESCRIPTION	UNIT	ESTIMATED QUANTITY	UNIT PRICE	TOTAL PRICE
Well Drilling and Development				
1.0 Drill crew and equipment, Mobilization and Demobilization	lump sum	1		
2.0 Drill and temporary case nominal 20-inch dia. for surface seal	lineal feet	38		
3.0 Install 20-inch (500 mm) x 16-inch (400 mm) surface seal	lump sum	1		
4.0 Overlap 16-inch (400 mm) casing	lineal feet	38		
5.0 Drill and case 16-inch (400 mm) dia. from bottom of surface casing to targeted depth	lineal feet	132		
6.0 Furnish and install 16-inch telescoping well screen	lineal feet	30		
7.0 Well development	hours	160		
8.0 Well Plumbness test	lump sum	1		
9.0 Disinfection and temporary well cap	lump sum	1		
10.0 Non-recoverable Drive Shoes	lump sum	1		
11.0 Video camera survey	lump sum	1		
12.0 Drill crew subsistence / live out	day	25		
Tender Price:				
GST (5%):				
Tender Price plus GST:				

Notes:

1. This quotation will be valid and open for acceptance by the Owner for 30 calendar days after the submission date.

Submitted by: Contractor

Date (DD / MM / YYYY)

APPENDIX C: STANDARD CCDC4 UNIT PRICE CONTRACT



CCDC 4

Unit Price Contract

2 0 1 1

[Name of Project]

Apply a CCDC 4 copyright seal here. The application of the seal demonstrates the intention of the party proposing the use of this document that it be an accurate and unamended form of CCDC 4 – 2011 except to the extent that any alterations, additions or modifications are set forth in supplementary conditions.

CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE
CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE
CANADIAN CONSTRUCTION DOCUMENTS COMMITTEE

TABLE OF CONTENTS

AGREEMENT BETWEEN OWNER AND CONTRACTOR

- A-1 The Work
- A-2 Agreements and Amendments
- A-3 Contract Documents
- A-4 Contract Price
- A-5 Payment
- A-6 Receipt of and Addresses for Notices in Writing
- A-7 Language of the Contract
- A-8 Succession

DEFINITIONS

- Change Directive
- Change Order
- Construction Equipment
- Consultant
- Contract
- Contract Documents
- Contract Price
- Contract Time
- Contractor
- Drawings
- Notice in Writing
- Owner
- Place of the Work
- Product
- Project
- Provide
- Schedule of Prices
- Shop Drawings
- Specifications
- Subcontractor
- Substantial Performance of the Work
- Supplemental Instruction
- Supplier
- Temporary Work
- Unit Price
- Value Added Taxes
- Work
- Working Day

GENERAL CONDITIONS OF THE UNIT PRICE CONTRACT

PART 1 GENERAL PROVISIONS

- GC 1.1 Contract Documents
- GC 1.2 Law of the Contract
- GC 1.3 Rights and Remedies
- GC 1.4 Assignment

PART 2 ADMINISTRATION OF THE CONTRACT

- GC 2.1 Authority of the Consultant
- GC 2.2 Role of the Consultant
- GC 2.3 Review and Inspection of the Work
- GC 2.4 Defective Work

PART 3 EXECUTION OF THE WORK

- GC 3.1 Control of the Work
- GC 3.2 Construction by Owner or Other Contractors
- GC 3.3 Temporary Work
- GC 3.4 Document Review
- GC 3.5 Construction Schedule
- GC 3.6 Supervision
- GC 3.7 Subcontractors and Suppliers
- GC 3.8 Labour and Products
- GC 3.9 Documents at the Site
- GC 3.10 Shop Drawings
- GC 3.11 Use of the Work
- GC 3.12 Cutting and Remedial Work
- GC 3.13 Cleanup

PART 4 ALLOWANCES

- GC 4.1 Cash Allowances
- GC 4.2 Contingency Allowance

PART 5 PAYMENT

- GC 5.1 Financing Information Required of the Owner
- GC 5.2 Applications for Progress Payment
- GC 5.3 Progress Payment
- GC 5.4 Substantial Performance of the Work
- GC 5.5 Payment of Holdback upon Substantial Performance of the Work
- GC 5.6 Progressive Release of Holdback
- GC 5.7 Final Payment
- GC 5.8 Withholding of Payment
- GC 5.9 Non-conforming Work

PART 6 CHANGES IN THE WORK

- GC 6.1 Owner's Right to Make Changes
- GC 6.2 Change Order
- GC 6.3 Change Directive
- GC 6.4 Concealed or Unknown Conditions
- GC 6.5 Delays
- GC 6.6 Claims for a Change in Contract Price
- GC 6.6 Quantity Variations

PART 7 DEFAULT NOTICE

- GC 7.1 Owner's Right to Perform the Work, Terminate the Contractor's Right to Continue with the Work or Terminate the Contract
- GC 7.2 Contractor's Right to Suspend the Work or Terminate the Contract

PART 8 DISPUTE RESOLUTION

- GC 8.1 Authority of the Consultant
- GC 8.2 Negotiation, Mediation and Arbitration
- GC 8.3 Retention of Rights

PART 9 PROTECTION OF PERSONS AND PROPERTY

- GC 9.1 Protection of Work and Property
- GC 9.2 Toxic and Hazardous Substances
- GC 9.3 Artifacts and Fossils
- GC 9.4 Construction Safety
- GC 9.5 Mould

PART 10 GOVERNING REGULATIONS

- GC 10.1 Taxes and Duties
- GC 10.2 Laws, Notices, Permits, and Fees
- GC 10.3 Patent Fees
- GC 10.4 Workers' Compensation

PART 11 INSURANCE AND CONTRACT SECURITY

- GC 11.1 Insurance
- GC 11.2 Contract Security

PART 12 INDEMNIFICATION, WAIVER OF CLAIMS AND WARRANTY

- GC 12.1 Indemnification
- GC 12.2 Waiver of Claims
- GC 12.3 Warranty

CCDC 4 is the product of a consensus-building process aimed at balancing the interests of all parties on the construction project. It reflects recommended industry practices. CCDC 4 can have important consequences. The CCDC and its constituent member organizations do not accept any responsibility or liability for loss or damage which may be suffered as a result of the use or interpretation of CCDC 4.

AGREEMENT BETWEEN OWNER AND CONTRACTOR

For use when unit prices are the primary basis of payment.

This Agreement made on the _____ day of _____ in the year _____.

by and between the parties

hereinafter called the *Owner*

and

hereinafter called the *Contractor*

The *Owner* and the *Contractor* agree as follows:

ARTICLE A-1 THE WORK

The *Contractor* shall:

1.1 perform the *Work* required by the *Contract Documents* for

located at

insert above the name of the Work

for which the Agreement has been signed by the parties, and for which

insert above the Place of the Work

is acting as and is hereinafter called the "*Consultant*" and

insert above the name of the Consultant

1.2 do and fulfill everything indicated by the *Contract Documents*, and

1.3 commence the *Work* by the _____ day of _____ in the year _____ and, subject to adjustment in *Contract Time* as provided for in the *Contract Documents*, attain *Substantial Performance of the Work*, by the _____ day of _____ in the year _____.

ARTICLE A-2 AGREEMENTS AND AMENDMENTS

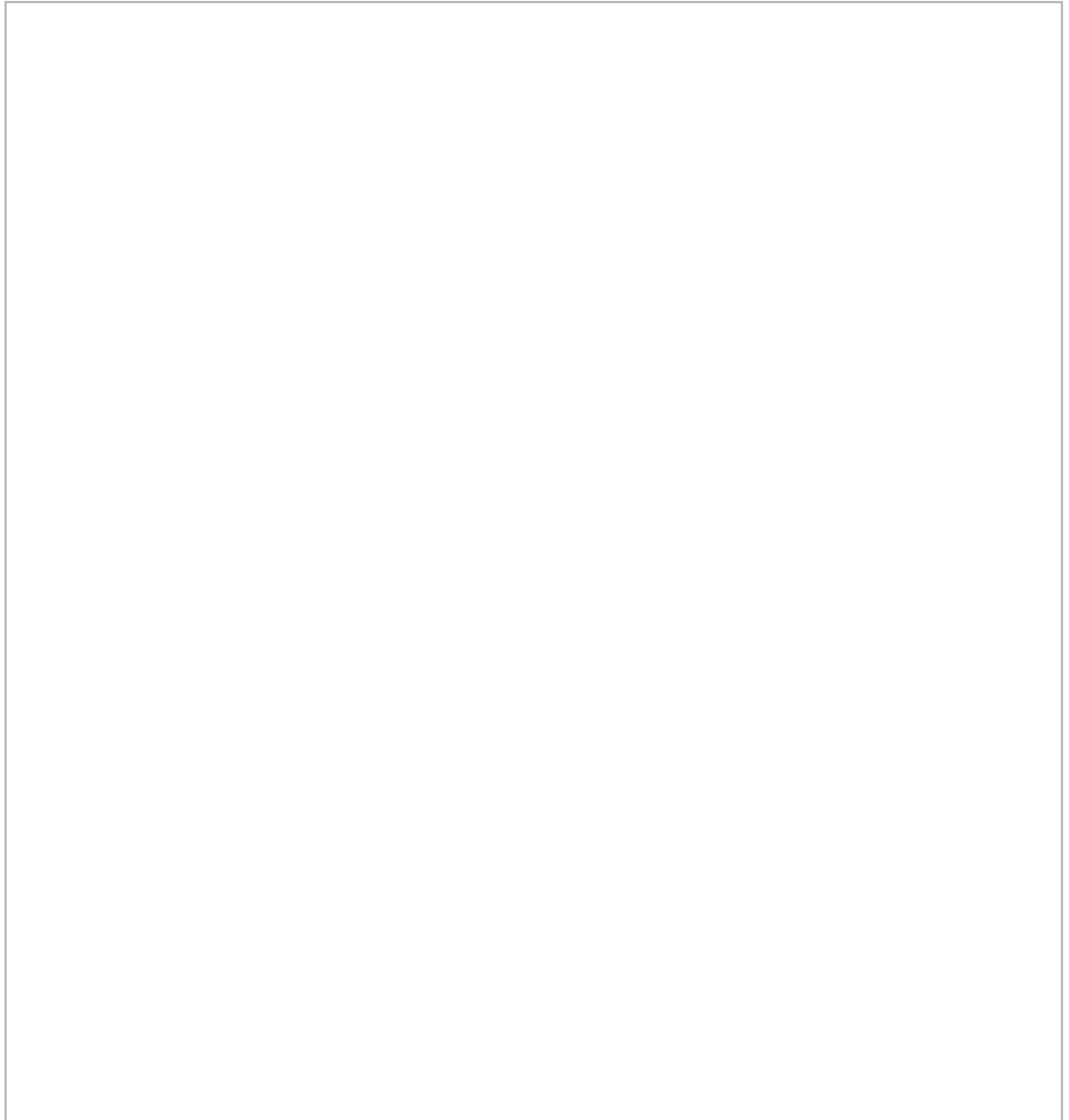
- 2.1 The *Contract* supersedes all prior negotiations, representations or agreements, either written or oral, relating in any manner to the *Work*, including the bidding documents that are not expressly listed in Article A-3 of the Agreement - CONTRACT DOCUMENTS.
- 2.2 The *Contract* may be amended only as provided in the *Contract Documents*.

ARTICLE A-3 CONTRACT DOCUMENTS

3.1 The following are the *Contract Documents* referred to in Article A-1 of the Agreement - THE WORK:

- Agreement between *Owner* and *Contractor*
- Definitions
- The General Conditions of the Unit Price Contract

*



* (Insert here, attaching additional pages if required, a list identifying all other Contract Documents e.g. supplementary conditions; information documents; specifications, giving a list of contents with section numbers and titles, number of pages and date; material finishing schedules; drawings, giving drawing number, title, date, revision date or mark; addenda, giving title, number, date)

ARTICLE A-4 CONTRACT PRICE

- 4.1 The *Schedule of Prices* forms the basis for determining the *Contract Price*. Quantities for *Unit Price* items in the *Schedule of Prices* are estimated.

Schedule of Prices					
Item No.	Description of Work	* Unit of Measure	* Estimated Quantity (EQ)	Unit Price (UP)	Amount (EQ x UP)
Page Subtotal Carried Forward from Page					\$
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
Page Sub-total					\$

* Lump sum items are denoted as lump sum (LS) as the unit of measure and have a quantity of one (1).

Page of

Schedule of Prices					
Item No.	Description of Work	* Unit of Measure	* Estimated Quantity (EQ)	Unit Price (UP)	Amount (EQ x UP)
Page Subtotal Carried Forward from Page					\$
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
				\$	\$ 0.00
Total Amount					\$

* Lump sum items are denoted as lump sum (LS) as the unit of measure and have a quantity of one (1).

Page of

4.2 The estimated *Contract Price*, which is the total amount indicated in the *Schedule of Prices*, and which excludes *Value Added Taxes*, is:

/100 dollars \$

4.3 *Value Added Taxes* (of %) payable by the *Owner* to the *Contractor*, based on the estimated *Contract Price*, are:

/100 dollars \$

4.4 Total estimated amount payable by the *Owner* to the *Contractor* for the construction of the *Work* is:

/100 dollars \$

4.5 These amounts shall be subject to adjustments as provided in the *Contract Documents*.

4.6 All amounts are in Canadian funds.

ARTICLE A-5 PAYMENT

5.1 Subject to the provisions of the *Contract Documents*, and in accordance with legislation and statutory regulations respecting holdback percentages and, where such legislation or regulations do not exist or apply, subject to a holdback of percent (%), the *Owner* shall:

- .1 make progress payments to the *Contractor* on account of the *Contract Price* when due in the amount certified by the *Consultant* together with such *Value Added Taxes* as may be applicable to such payments, and
- .2 upon *Substantial Performance of the Work*, pay to the *Contractor* the unpaid balance of the holdback amount when due together with such *Value Added Taxes* as may be applicable to such payment, and
- .3 upon the issuance of the final certificate for payment, pay to the *Contractor* the unpaid balance of the *Contract Price* when due together with such *Value Added Taxes* as may be applicable to such payment.

5.2 In the event of loss or damage occurring where payment becomes due under the property and boiler insurance policies, payments shall be made to the *Contractor* in accordance with the provisions of GC 11.1 – INSURANCE.

5.3 Interest

- .1 Should either party fail to make payments as they become due under the terms of the *Contract* or in an award by arbitration or court, interest at the following rates on such unpaid amounts shall also become due and payable until payment:
 - (1) 2% per annum above the prime rate for the first 60 days.
 - (2) 4% per annum above the prime rate after the first 60 days.Such interest shall be compounded on a monthly basis. The prime rate shall be the rate of interest quoted by

(Insert name of chartered lending institution whose prime rate is to be used)

for prime business loans as it may change from time to time.

- .2 Interest shall apply at the rate and in the manner prescribed by paragraph 5.3.1 of this Article on the settlement amount of any claim in dispute that is resolved either pursuant to Part 8 of the General Conditions – DISPUTE RESOLUTION or otherwise, from the date the amount would have been due and payable under the *Contract*, had it not been in dispute, until the date it is paid.

ARTICLE A-6 RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING

- 6.1 *Notices in Writing* will be addressed to the recipient at the address set out below. The delivery of a *Notice in Writing* will be by hand, by courier, by prepaid first class mail, or by facsimile or other form of electronic communication during the transmission of which no indication of failure of receipt is communicated to the sender. A *Notice in Writing* delivered by one party in accordance with this *Contract* will be deemed to have been received by the other party on the date of delivery if delivered by hand or courier, or if sent by mail it shall be deemed to have been received five calendar days after the date on which it was mailed, provided that if either such day is not a *Working Day*, then the *Notice in Writing* shall be deemed to have been received on the *Working Day* next following such day. A *Notice in Writing* sent by facsimile or other form of electronic communication shall be deemed to have been received on the date of its transmission provided that if such day is not a *Working Day* or if it is received after the end of normal business hours on the date of its transmission at the place of receipt, then it shall be deemed to have been received at the opening of business at the place of receipt on the first *Working Day* next following the transmission thereof. An address for a party may be changed by *Notice in Writing* to the other party setting out the new address in accordance with this Article.

Owner

*name of Owner**

address

Facsimile number

e-mail address

Contractor

*name of Contractor**

address

Facsimile number

e-mail address

Consultant

*name of Consultant**

address

Facsimile number

e-mail address

** If it is intended that the notice must be received by a specific individual, that individual's name shall be indicated.*

ARTICLE A-7 LANGUAGE OF THE CONTRACT

7.1 When the *Contract Documents* are prepared in both the English and French languages, it is agreed that in the event of any apparent discrepancy between the English and French versions, the English/French* language shall prevail.
* *Complete this statement by striking out inapplicable term.*

7.2 This Agreement is drawn in English at the request of the parties hereto. La présente convention est rédigée en anglais à la demande des parties.

ARTICLE A-8 SUCCESSION

8.1 The *Contract* shall enure to the benefit of and be binding upon the parties hereto, their respective heirs, legal representatives, successors, and assigns.

In witness whereof the parties hereto have executed this Agreement by the hands of their duly authorized representatives.

SIGNED AND DELIVERED

in the presence of:

WITNESS

OWNER

name of owner

signature

signature

name of person signing

name and title of person signing

signature

signature

name of person signing

name and title of person signing

WITNESS

CONTRACTOR

name of Contractor

signature

signature

name of person signing

name and title of person signing

signature

signature

name of person signing

name and title of person signing

N.B. Where legal jurisdiction, local practice or Owner or Contractor requirement calls for:

- (a) proof of authority to execute this document, attach such proof of authority in the form of a certified copy of a resolution naming the representative(s) authorized to sign the Agreement for and on behalf of the corporation or partnership; or*
- (b) the affixing of a corporate seal, this Agreement should be properly sealed.*

DEFINITIONS

The following Definitions shall apply to all *Contract Documents*.

Change Directive

A *Change Directive* is a written instruction prepared by the *Consultant* and signed by the *Owner* directing the *Contractor* to proceed with a change in the *Work* within the general scope of the *Contract Documents* prior to the *Owner* and the *Contractor* agreeing upon an adjustment in *Contract Price* and *Contract Time*.

Change Order

A *Change Order* is a written amendment to the *Contract* prepared by the *Consultant* and signed by the *Owner* and the *Contractor* stating their agreement upon:

- a change in the *Work*;
- the method of adjustment or the amount of the adjustment in the *Contract Price*, if any; and
- the extent of the adjustment in the *Contract Time*, if any.

Construction Equipment

Construction Equipment means all machinery and equipment, either operated or not operated, that is required for preparing, fabricating, conveying, erecting, or otherwise performing the *Work* but is not incorporated into the *Work*.

Consultant

The *Consultant* is the person or entity engaged by the *Owner* and identified as such in the Agreement. The *Consultant* is the Architect, the Engineer or entity licensed to practise in the province or territory of the *Place of the Work*. The term *Consultant* means the *Consultant* or the *Consultant's* authorized representative.

Contract

The *Contract* is the undertaking by the parties to perform their respective duties, responsibilities and obligations as prescribed in the *Contract Documents* and represents the entire agreement between the parties.

Contract Documents

The *Contract Documents* consist of those documents listed in Article A-3 of the Agreement - CONTRACT DOCUMENTS and amendments agreed upon between the parties.

Contract Price

The *Contract Price* is the sum of the products of each *Unit Price* stated in the *Schedule of Prices* multiplied by the appropriate actual quantity of each *Unit Price* item that is incorporated in or made necessary by the *Work*, plus lump sums, if any, and allowances, if any, stated in the *Schedule of Prices*.

Contract Time

The *Contract Time* is the time stipulated in paragraph 1.3 of Article A-1 of the Agreement - THE WORK from commencement of the *Work* to *Substantial Performance of the Work*.

Contractor

The *Contractor* is the person or entity identified as such in the Agreement. The term *Contractor* means the *Contractor* or the *Contractor's* authorized representative as designated to the *Owner* in writing.

Drawings

The *Drawings* are 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.

Notice in Writing

A *Notice in Writing*, where identified in the *Contract Documents*, is a written communication between the parties or between them and the *Consultant* that is transmitted in accordance with the provisions of Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

Owner

The *Owner* is the person or entity identified as such in the Agreement. The term *Owner* means the *Owner* or the *Owner's* authorized agent or representative as designated to the *Contractor* in writing, but does not include the *Consultant*.

Place of the Work

The *Place of the Work* is the designated site or location of the *Work* identified in the *Contract Documents*.

Product

Product or Products means material, machinery, equipment, and fixtures forming the *Work*, but does not include *Construction Equipment*.

Project

The *Project* means the total construction contemplated of which the *Work* may be the whole or a part.

Provide

Provide means to supply and install.

Schedule of Prices

The *Schedule of Prices* is the schedule included in Article A-4 - CONTRACT PRICE and, subject to adjustments as provided in the *Contract Documents*, identifies:

- the items of work;
- the units of measure, estimated quantity, and *Unit Price* for each *Unit Price* item;
- the price for each lump sum item, if any; and
- allowances, if any.

Shop Drawings

Shop Drawings are drawings, diagrams, illustrations, schedules, performance charts, brochures, *Product* data, and other data which the *Contractor* provides to illustrate details of portions of the *Work*.

Specifications

The *Specifications* are that portion of the *Contract Documents*, wherever located and whenever issued, consisting of the written requirements and standards for *Products*, systems, workmanship, quality, and the services necessary for the performance of the *Work*.

Subcontractor

A *Subcontractor* is a person or entity having a direct contract with the *Contractor* to perform a part or parts of the *Work* at the *Place of the Work*.

Substantial Performance of the Work

Substantial Performance of the Work is as defined in the lien legislation applicable to the *Place of the Work*. If such legislation is not in force or does not contain such definition, or if the *Work* is governed by the Civil Code of Quebec, *Substantial Performance of the Work* shall have been reached when the *Work* is ready for use or is being used for the purpose intended and is so certified by the *Consultant*.

Supplemental Instruction

A *Supplemental Instruction* is an instruction, not involving adjustment in the *Contract Price* or *Contract Time*, in the form of *Specifications*, *Drawings*, schedules, samples, models or written instructions, consistent with the intent of the *Contract Documents*. It is to be issued by the *Consultant* to supplement the *Contract Documents* as required for the performance of the *Work*.

Supplier

A *Supplier* is a person or entity having a direct contract with the *Contractor* to supply *Products*.

Temporary Work

Temporary Work means temporary supports, structures, facilities, services, and other temporary items, excluding *Construction Equipment*, required for the execution of the *Work* but not incorporated into the *Work*.

Unit Price

A *Unit Price* is the amount payable for a single *Unit Price* item as stated in the *Schedule of Prices*.

Value Added Taxes

Value Added Taxes means such sum as shall be levied upon the *Contract Price* by the Federal or any Provincial or Territorial Government and is computed as a percentage of the *Contract Price* and includes the Goods and Services Tax, the Quebec Sales Tax, the Harmonized Sales Tax, and any similar tax, the collection and payment of which, have been imposed on the *Contractor* by the tax legislation.

Work

The *Work* means the total construction and related services required by the *Contract Documents*.

Working Day

Working Day means a day other than a Saturday, Sunday, statutory holiday or statutory vacation day that is observed by the construction industry in the area of the *Place of the Work*.

GENERAL CONDITIONS OF THE UNIT PRICE CONTRACT

PART 1 GENERAL PROVISIONS

GC 1.1 CONTRACT DOCUMENTS

- 1.1.1 The intent of the *Contract Documents* is to include the labour, *Products* and services necessary for the performance of the *Work* by the *Contractor* in accordance with these documents. It is not intended, however, that the *Contractor* shall supply products or perform work not consistent with, not covered by, or not properly inferable from the *Contract Documents*.
- 1.1.2 Nothing contained in the *Contract Documents* shall create any contractual relationship between:
- .1 the *Owner* and a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
 - .2 the *Consultant* and the *Contractor*, a *Subcontractor*, a *Supplier*, or their agent, employee, or other person performing any portion of the *Work*.
- 1.1.3 The *Contract Documents* are complementary, and what is required by any one shall be as binding as if required by all.
- 1.1.4 Words and abbreviations which have well known technical or trade meanings are used in the *Contract Documents* in accordance with such recognized meanings.
- 1.1.5 References in the *Contract Documents* to the singular shall be considered to include the plural as the context requires.
- 1.1.6 Neither the organization of the *Specifications* nor the arrangement of *Drawings* shall control the *Contractor* in dividing the work among *Subcontractors* and *Suppliers*.
- 1.1.7 If there is a conflict within the *Contract Documents*:
- .1 the order of priority of documents, from highest to lowest, shall be
 - the Agreement between the *Owner* and the *Contractor*,
 - the Definitions,
 - Supplementary Conditions,
 - the General Conditions,
 - Division 1 of the *Specifications*,
 - technical *Specifications*,
 - material and finishing schedules,
 - the *Drawings*.
 - .2 *Drawings* of larger scale shall govern over those of smaller scale of the same date.
 - .3 dimensions shown on *Drawings* shall govern over dimensions scaled from *Drawings*.
 - .4 later dated documents shall govern over earlier documents of the same type.
- 1.1.8 The *Owner* shall provide the *Contractor*, without charge, sufficient copies of the *Contract Documents* to perform the *Work*.
- 1.1.9 *Specifications*, *Drawings*, models, and copies thereof furnished by the *Consultant* are and shall remain the *Consultant's* property, with the exception of the signed *Contract* sets, which shall belong to each party to the *Contract*. All *Specifications*, *Drawings* and models furnished by the *Consultant* are to be used only with respect to the *Work* and are not to be used on other work. These *Specifications*, *Drawings* and models are not to be copied or altered in any manner without the written authorization of the *Consultant*.
- 1.1.10 Models furnished by the *Contractor* at the *Owner's* expense are the property of the *Owner*.

GC 1.2 LAW OF THE CONTRACT

- 1.2.1 The law of the *Place of the Work* shall govern the interpretation of the *Contract*.

GC 1.3 RIGHTS AND REMEDIES

- 1.3.1 Except as expressly provided in the *Contract Documents*, the duties and obligations imposed by the *Contract Documents* and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights, and remedies otherwise imposed or available by law.

- 1.3.2 No action or failure to act by the *Owner*, *Consultant* or *Contractor* shall constitute a waiver of any right or duty afforded any of them under the *Contract*, nor shall any such action or failure to act constitute an approval of or acquiescence in any breach thereunder, except as may be specifically agreed in writing.

GC 1.4 ASSIGNMENT

- 1.4.1 Neither party to the *Contract* shall assign the *Contract* or a portion thereof without the written consent of the other, which consent shall not be unreasonably withheld.

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.1 AUTHORITY OF THE CONSULTANT

- 2.1.1 The *Consultant* will have authority to act on behalf of the *Owner* only to the extent provided in the *Contract Documents*, unless otherwise modified by written agreement as provided in paragraph 2.1.2.
- 2.1.2 The duties, responsibilities and limitations of authority of the *Consultant* as set forth in the *Contract Documents* shall be modified or extended only with the written consent of the *Owner*, the *Contractor* and the *Consultant*.
- 2.1.3 If the *Consultant's* employment is terminated, the *Owner* shall immediately appoint or reappoint a *Consultant* against whom the *Contractor* makes no reasonable objection and whose status under the *Contract Documents* shall be that of the former *Consultant*.

GC 2.2 ROLE OF THE CONSULTANT

- 2.2.1 The *Consultant* will provide administration of the *Contract* as described in the *Contract Documents*.
- 2.2.2 The *Consultant* will visit the *Place of the Work* at intervals appropriate to the progress of construction to become familiar with the progress and quality of the work and to determine if the *Work* is proceeding in general conformity with the *Contract Documents*.
- 2.2.3 If the *Owner* and the *Consultant* agree, the *Consultant* will provide at the *Place of the Work*, one or more project representatives to assist in carrying out the *Consultant's* responsibilities. The duties, responsibilities and limitations of authority of such project representatives shall be as set forth in writing to the *Contractor*.
- 2.2.4 The *Consultant* will promptly inform the *Owner* of the date of receipt of the *Contractor's* applications for payment as provided in paragraph 5.3.1.1 of GC 5.3 – PROGRESS PAYMENT.
- 2.2.5 Based on the *Consultant's* observations and review of the *Contractor's* applications for payment, the *Consultant* will determine the amounts owing to the *Contractor* under the *Contract* and will issue certificates for payment as provided in Article A-5 of the Agreement - PAYMENT, GC 5.3 - PROGRESS PAYMENT and GC 5.7 - FINAL PAYMENT.
- 2.2.6 The *Consultant* will not be responsible for and will not have control, charge or supervision of construction means, methods, techniques, sequences, or procedures, or for safety precautions and programs required in connection with the *Work* in accordance with the applicable construction safety legislation, other regulations or general construction practice. The *Consultant* will not be responsible for the *Contractor's* failure to carry out the *Work* in accordance with the *Contract Documents*. The *Consultant* will not have control over, charge of or be responsible for the acts or omissions of the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees or any other persons performing portions of the *Work*.
- 2.2.7 Except with respect to GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER, the *Consultant* will be, in the first instance, the interpreter of the requirements of the *Contract Documents*.
- 2.2.8 Matters in question relating to the performance of the *Work* or the interpretation of the *Contract Documents* shall be initially referred in writing to the *Consultant* by the party raising the question for interpretations and findings and copied to the other party.
- 2.2.9 Interpretations and findings of the *Consultant* shall be consistent with the intent of the *Contract Documents*. In making such interpretations and findings the *Consultant* will not show partiality to either the *Owner* or the *Contractor*.
- 2.2.10 The *Consultant's* interpretations and findings will be given in writing to the parties within a reasonable time.
- 2.2.11 With respect to claims for a change in *Contract Price*, the *Consultant* will make findings as set out in GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.

- 2.2.12 The *Consultant* will have authority to reject work which in the *Consultant's* opinion does not conform to the requirements of the *Contract Documents*. Whenever the *Consultant* considers it necessary or advisable, the *Consultant* will have authority to require inspection or testing of work, whether or not such work is fabricated, installed or completed. However, neither the authority of the *Consultant* to act nor any decision either to exercise or not to exercise such authority shall give rise to any duty or responsibility of the *Consultant* to the *Contractor*, *Subcontractors*, *Suppliers*, or their agents, employees or other persons performing any of the *Work*.
- 2.2.13 During the progress of the *Work* the *Consultant* will furnish *Supplemental Instructions* to the *Contractor* with reasonable promptness or in accordance with a schedule for such instructions agreed to by the *Consultant* and the *Contractor*.
- 2.2.14 The *Consultant* will review and take appropriate action upon *Shop Drawings*, samples and other *Contractor's* submittals, in accordance with the *Contract Documents*.
- 2.2.15 The *Consultant* will prepare *Change Orders* and *Change Directives* as provided in GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 2.2.16 The *Consultant* will conduct reviews of the *Work* to determine the date of *Substantial Performance of the Work* as provided in GC 5.4 - SUBSTANTIAL PERFORMANCE OF THE WORK.
- 2.2.17 All certificates issued by the *Consultant* will be to the best of the *Consultant's* knowledge, information and belief. By issuing any certificate, the *Consultant* does not guarantee the *Work* is correct or complete.
- 2.2.18 The *Consultant* will receive and review written warranties and related documents required by the *Contract* and provided by the *Contractor* and will forward such warranties and documents to the *Owner* for the *Owner's* acceptance.

GC 2.3 REVIEW AND INSPECTION OF THE WORK

- 2.3.1 The *Owner* and the *Consultant* shall have access to the *Work* at all times. The *Contractor* shall provide sufficient, safe and proper facilities at all times for the review of the *Work* by the *Consultant* and the inspection of the *Work* by authorized agencies. If parts of the *Work* are in preparation at locations other than the *Place of the Work*, the *Owner* and the *Consultant* shall be given access to such work whenever it is in progress.
- 2.3.2 If work is designated for measurement for payment, tests, inspections or approvals in the *Contract Documents*, or by the *Consultant's* instructions, or by the laws or ordinances of the *Place of the Work*, the *Contractor* shall give the *Consultant* reasonable notification of when the work will be ready for measurements, tests, inspections and approvals. The *Contractor* shall arrange for and shall give the *Consultant* reasonable notification of the date and time of inspections by other authorities.
- 2.3.3 The *Contractor* shall furnish promptly to the *Consultant* two copies of certificates and inspection reports relating to the *Work*.
- 2.3.4 If the *Contractor* covers, or permits to be covered, work that has been designated for measurement for payment, tests, inspections or approvals before such measurements, tests, inspections or approvals are made, given or completed, the *Contractor* shall, if so directed, uncover such work, have the measurements, tests, inspections, or approvals satisfactorily completed, and make good covering work at the *Contractor's* expense.
- 2.3.5 The *Consultant* may order any portion or portions of the *Work* to be examined to confirm that such work is in accordance with the requirements of the *Contract Documents*. If the work is not in accordance with the requirements of the *Contract Documents*, the *Contractor* shall correct the work and pay the cost of examination and correction. If the work is in accordance with the requirements of the *Contract Documents*, the *Owner* shall pay the cost of examination and restoration.
- 2.3.6 The *Contractor* shall pay the cost of making any test or inspection, including the cost of samples required for such test or inspection, if such test or inspection is designated in the *Contract Documents* to be performed by the *Contractor* or is designated by the laws or ordinances applicable to the *Place of the Work*.
- 2.3.7 The *Contractor* shall pay the cost of samples required for any test or inspection to be performed by the *Consultant* or the *Owner* if such test or inspection is designated in the *Contract Documents*.

GC 2.4 DEFECTIVE WORK

- 2.4.1 The *Contractor* shall promptly correct defective work that has been rejected by the *Consultant* as failing to conform to the *Contract Documents* whether or not the defective work has been incorporated in the *Work* and whether or not the defect is the result of poor workmanship, use of defective products or damage through carelessness or other act or omission of the *Contractor*.
- 2.4.2 The *Contractor* shall make good promptly other contractors' work destroyed or damaged by such removals or replacements at the *Contractor's* expense.

- 2.4.3 If, in the opinion of the *Consultant*, it is not expedient to correct defective work or work not performed as provided in the *Contract Documents*, the *Owner* may deduct from the amount otherwise due to the *Contractor* the difference in value between the work as performed and that called for by the *Contract Documents*. If the *Owner* and the *Contractor* do not agree on the difference in value, they shall refer the matter to the *Consultant* for a determination.

PART 3 EXECUTION OF THE WORK

GC 3.1 CONTROL OF THE WORK

- 3.1.1 The *Contractor* shall have total control of the *Work* and shall effectively direct and supervise the *Work* so as to ensure conformity with the *Contract Documents*.
- 3.1.2 The *Contractor* shall be solely responsible for construction means, methods, techniques, sequences, and procedures and for co-ordinating the various parts of the *Work* under the *Contract*.

GC 3.2 CONSTRUCTION BY OWNER OR OTHER CONTRACTORS

- 3.2.1 The *Owner* reserves the right to award separate contracts in connection with other parts of the *Project* to other contractors and to perform work with own forces.
- 3.2.2 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Owner* shall:
- .1 provide for the co-ordination of the activities and work of other contractors and *Owner's* own forces with the *Work* of the *Contract*;
 - .2 assume overall responsibility for compliance with the applicable health and construction safety legislation at the *Place of the Work*;
 - .3 enter into separate contracts with other contractors under conditions of contract which are compatible with the conditions of the *Contract*;
 - .4 ensure that insurance coverage is provided to the same requirements as are called for in GC 11.1 - INSURANCE and co-ordinate such insurance with the insurance coverage of the *Contractor* as it affects the *Work*; and
 - .5 take all reasonable precautions to avoid labour disputes or other disputes on the *Project* arising from the work of other contractors or the *Owner's* own forces.
- 3.2.3 When separate contracts are awarded for other parts of the *Project*, or when work is performed by the *Owner's* own forces, the *Contractor* shall:
- .1 afford the *Owner* and other contractors reasonable opportunity to store their products and execute their work;
 - .2 cooperate with other contractors and the *Owner* in reviewing their construction schedules; and
 - .3 promptly report to the *Consultant* in writing any apparent deficiencies in the work of other contractors or of the *Owner's* own forces, where such work affects the proper execution of any portion of the *Work*, prior to proceeding with that portion of the *Work*.
- 3.2.4 Where the *Contract Documents* identify work to be performed by other contractors or the *Owner's* own forces, the *Contractor* shall co-ordinate and schedule the *Work* with the work of other contractors and the *Owner's* own forces as specified in the *Contract Documents*.
- 3.2.5 Where a change in the *Work* is required as a result of the co-ordination and integration of the work of other contractors or *Owner's* own forces with the *Work*, the changes shall be authorized and valued as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 3.2.6 Disputes and other matters in question between the *Contractor* and other contractors shall be dealt with as provided in Part 8 of the General Conditions - DISPUTE RESOLUTION provided the other contractors have reciprocal obligations. The *Contractor* shall be deemed to have consented to arbitration of any dispute with any other contractor whose contract with the *Owner* contains a similar agreement to arbitrate.

GC 3.3 TEMPORARY WORK

- 3.3.1 The *Contractor* shall have the sole responsibility for the design, erection, operation, maintenance, and removal of *Temporary Work*.
- 3.3.2 The *Contractor* shall engage and pay for registered professional engineering personnel skilled in the appropriate disciplines to perform those functions referred to in paragraph 3.3.1 where required by law or by the *Contract Documents* and in all cases where such *Temporary Work* is of such a nature that professional engineering skill is required to produce safe and satisfactory results.

- 3.3.3 Notwithstanding the provisions of GC 3.1 - CONTROL OF THE WORK, paragraph 3.3.1 and paragraph 3.3.2 or provisions to the contrary elsewhere in the *Contract Documents* where such *Contract Documents* include designs for *Temporary Work* or specify a method of construction in whole or in part, such designs or methods of construction shall be considered to be part of the design of the *Work* and the *Contractor* shall not be held responsible for that part of the design or the specified method of construction. The *Contractor* shall, however, be responsible for the execution of such design or specified method of construction in the same manner as for the execution of the *Work*.

GC 3.4 DOCUMENT REVIEW

- 3.4.1 The *Contractor* shall review the *Contract Documents* and shall report promptly to the *Consultant* any error, inconsistency or omission the *Contractor* may discover. Such review by the *Contractor* shall be to the best of the *Contractor's* knowledge, information and belief and in making such review the *Contractor* does not assume any responsibility to the *Owner* or the *Consultant* for the accuracy of the review. The *Contractor* shall not be liable for damage or costs resulting from such errors, inconsistencies or omissions in the *Contract Documents*, which the *Contractor* did not discover. If the *Contractor* does discover any error, inconsistency or omission in the *Contract Documents*, the *Contractor* shall not proceed with the work affected until the *Contractor* has received corrected or missing information from the *Consultant*.

GC 3.5 CONSTRUCTION SCHEDULE

- 3.5.1 The *Contractor* shall:
- .1 prepare and submit to the *Owner* and the *Consultant* prior to the first application for payment, a construction schedule that indicates the timing of the major activities of the *Work* and provides sufficient detail of the critical events and their inter-relationship to demonstrate the *Work* will be performed in conformity with the *Contract Time*;
 - .2 monitor the progress of the *Work* relative to the construction schedule and update the schedule on a monthly basis or as stipulated by the *Contract Documents*; and
 - .3 advise the *Consultant* of any revisions required to the schedule as the result of extensions of the *Contract Time* as provided in Part 6 of the General Conditions - CHANGES IN THE WORK.

GC 3.6 SUPERVISION

- 3.6.1 The *Contractor* shall provide all necessary supervision and appoint a competent representative who shall be in attendance at the *Place of the Work* while work is being performed. The appointed representative shall not be changed except for valid reason.
- 3.6.2 The appointed representative shall represent the *Contractor* at the *Place of the Work*. Information and instructions provided by the *Consultant* to the *Contractor's* appointed representative shall be deemed to have been received by the *Contractor*, except with respect to Article A-6 of the Agreement – RECEIPT OF AND ADDRESSES FOR NOTICES IN WRITING.

GC 3.7 SUBCONTRACTORS AND SUPPLIERS

- 3.7.1 The *Contractor* shall preserve and protect the rights of the parties under the *Contract* with respect to work to be performed under subcontract, and shall:
- .1 enter into contracts or written agreements with *Subcontractors* and *Suppliers* to require them to perform their work as provided in the *Contract Documents*;
 - .2 incorporate the terms and conditions of the *Contract Documents* into all contracts or written agreements with *Subcontractors* and *Suppliers*; and
 - .3 be as fully responsible to the *Owner* for acts and omissions of *Subcontractors*, *Suppliers* and of persons directly or indirectly employed by them as for acts and omissions of persons directly employed by the *Contractor*.
- 3.7.2 The *Contractor* shall indicate in writing, if requested by the *Owner*, those *Subcontractors* or *Suppliers* whose bids have been received by the *Contractor* which the *Contractor* would be prepared to accept for the performance of a portion of the *Work*. Should the *Owner* not object before signing the *Contract*, the *Contractor* shall employ those *Subcontractors* or *Suppliers* so identified by the *Contractor* in writing for the performance of that portion of the *Work* to which their bid applies.
- 3.7.3 The *Owner* may, for reasonable cause, at any time before the *Owner* has signed the *Contract*, object to the use of a proposed *Subcontractor* or *Supplier* and require the *Contractor* to employ one of the other subcontract bidders.
- 3.7.4 If the *Owner* requires the *Contractor* to change a proposed *Subcontractor* or *Supplier*, the *Contract Price* and *Contract Time* shall be adjusted by the differences occasioned by such required change.
- 3.7.5 The *Contractor* shall not be required to employ as a *Subcontractor* or *Supplier*, a person or firm to which the *Contractor* may reasonably object.

- 3.7.6 The *Owner*, through the *Consultant*, may provide to a *Subcontractor* or *Supplier* information as to the percentage of the *Subcontractor's* or *Supplier's* work which has been certified for payment.

GC 3.8 LABOUR AND PRODUCTS

- 3.8.1 The *Contractor* shall provide and pay for labour, *Products*, tools, *Construction Equipment*, water, heat, light, power, transportation, and other facilities and services necessary for the performance of the *Work* in accordance with the *Contract*.
- 3.8.2 Unless otherwise specified in the *Contract Documents*, *Products* provided shall be new. *Products* which are not specified shall be of a quality consistent with those specified and their use acceptable to the *Consultant*.
- 3.8.3 The *Contractor* shall maintain good order and discipline among the *Contractor's* employees engaged on the *Work* and shall not employ on the *Work* anyone not skilled in the tasks assigned.

GC 3.9 DOCUMENTS AT THE SITE

- 3.9.1 The *Contractor* shall keep one copy of current *Contract Documents*, submittals, reports, and records of meetings at the *Place of the Work*, in good order and available to the *Owner* and the *Consultant*.

GC 3.10 SHOP DRAWINGS

- 3.10.1 The *Contractor* shall provide *Shop Drawings* as required in the *Contract Documents*.
- 3.10.2 The *Contractor* shall provide *Shop Drawings* to the *Consultant* to review in orderly sequence and sufficiently in advance so as to cause no delay in the *Work* or in the work of other contractors.
- 3.10.3 Upon request of the *Contractor* or the *Consultant*, they shall jointly prepare a schedule of the dates for provision, review and return of *Shop Drawings*.
- 3.10.4 The *Contractor* shall provide *Shop Drawings* in the form specified, or if not specified, as directed by the *Consultant*.
- 3.10.5 *Shop Drawings* provided by the *Contractor* to the *Consultant* shall indicate by stamp, date and signature of the person responsible for the review that the *Contractor* has reviewed each one of them.
- 3.10.6 The *Consultant's* review is for conformity to the design concept and for general arrangement only.
- 3.10.7 *Shop Drawings* which require approval of any legally constituted authority having jurisdiction shall be provided to such authority by the *Contractor* for approval.
- 3.10.8 The *Contractor* shall review all *Shop Drawings* before providing them to the *Consultant*. The *Contractor* represents by this review that:
- .1 the *Contractor* has determined and verified all applicable field measurements, field construction conditions, *Product* requirements, catalogue numbers and similar data, or will do so, and
 - .2 the *Contractor* has checked and co-ordinated each *Shop Drawing* with the requirements of the *Work* and of the *Contract Documents*.
- 3.10.9 At the time of providing *Shop Drawings*, the *Contractor* shall expressly advise the *Consultant* in writing of any deviations in a *Shop Drawing* from the requirements of the *Contract Documents*. The *Consultant* shall indicate the acceptance or rejection of such deviation expressly in writing.
- 3.10.10 The *Consultant's* review shall not relieve the *Contractor* of responsibility for errors or omissions in the *Shop Drawings* or for meeting all requirements of the *Contract Documents*.
- 3.10.11 The *Contractor* shall provide revised *Shop Drawings* to correct those which the *Consultant* rejects as inconsistent with the *Contract Documents*, unless otherwise directed by the *Consultant*. The *Contractor* shall notify the *Consultant* in writing of any revisions to the *Shop Drawings* other than those requested by the *Consultant*.
- 3.10.12 The *Consultant* will review and return *Shop Drawings* in accordance with the schedule agreed upon, or, in the absence of such schedule, with reasonable promptness so as to cause no delay in the performance of the *Work*.

GC 3.11 USE OF THE WORK

- 3.11.1 The *Contractor* shall confine *Construction Equipment*, *Temporary Work*, storage of *Products*, waste products and debris, and operations of employees and *Subcontractors* to limits indicated by laws, ordinances, permits, or the *Contract Documents* and shall not unreasonably encumber the *Place of the Work*.
- 3.11.2 The *Contractor* shall not load or permit to be loaded any part of the *Work* with a weight or force that will endanger the safety of the *Work*.

GC 3.12 CUTTING AND REMEDIAL WORK

- 3.12.1 The *Contractor* shall perform the cutting and remedial work required to make the affected parts of the *Work* come together properly.
- 3.12.2 The *Contractor* shall co-ordinate the *Work* to ensure that the cutting and remedial work is kept to a minimum.
- 3.12.3 Should the *Owner*, the *Consultant*, other contractors or anyone employed by them be responsible for ill-timed work necessitating cutting or remedial work to be performed, the cost of such cutting or remedial work shall be valued as provided in GC 6.1 – OWNER’S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 3.12.4 Cutting and remedial work shall be performed by specialists familiar with the *Products* affected and shall be performed in a manner to neither damage nor endanger the *Work*.

GC 3.13 CLEANUP

- 3.13.1 The *Contractor* shall maintain the *Work* in a safe and tidy condition and free from the accumulation of waste products and debris, other than that caused by the *Owner*, other contractors or their employees.
- 3.13.2 Before applying for *Substantial Performance of the Work* as provided in GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK, the *Contractor* shall remove waste products and debris, other than that resulting from the work of the *Owner*, other contractors or their employees, and shall leave the *Place of the Work* clean and suitable for use or occupancy by the *Owner*. The *Contractor* shall remove products, tools, *Construction Equipment*, and *Temporary Work* not required for the performance of the remaining work.
- 3.13.3 Prior to application for the final payment, the *Contractor* shall remove any remaining products, tools, *Construction Equipment*, *Temporary Work*, and waste products and debris, other than those resulting from the work of the *Owner*, other contractors or their employees.

PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

- 4.1.1 The *Contract Price* includes the cash allowances, if any, stated in the *Contract Documents*. The scope of work or costs included in such cash allowances shall be as described in the *Contract Documents*.
- 4.1.2 The *Contract Price*, and not the cash allowances, includes the *Contractor's* overhead and profit in connection with such cash allowances.
- 4.1.3 Expenditures under cash allowances shall be authorized by the *Owner* through the *Consultant*.
- 4.1.4 Where the actual cost of the *Work* under any cash allowance exceeds the amount of the allowance, the *Contractor* shall be compensated for the excess incurred and substantiated plus an amount for overhead and profit on the excess as set out in the *Contract Documents*. Where the actual cost of the *Work* under any cash allowance is less than the amount of the allowance, the *Owner* shall be credited for the unexpended portion of the cash allowance, but not for the *Contractor's* overhead and profit on such amount. Multiple cash allowances shall not be combined for the purpose of calculating the foregoing.
- 4.1.5 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the amount of each cash allowance and the actual cost of the work under that cash allowance.
- 4.1.6 The value of the work performed under a cash allowance is eligible to be included in progress payments.
- 4.1.7 The *Contractor* and the *Consultant* shall jointly prepare a schedule that shows when the *Consultant* and *Owner* must authorize ordering of items called for under cash allowances to avoid delaying the progress of the *Work*.

GC 4.2 CONTINGENCY ALLOWANCE

- 4.2.1 The *Contract Price* includes the contingency allowance, if any, stated in the *Contract Documents*.
- 4.2.2 The contingency allowance includes the *Contractor's* overhead and profit in connection with such contingency allowance.
- 4.2.3 Expenditures under the contingency allowance shall be authorized and valued as provided in GC 6.1 – OWNER’S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 4.2.4 The *Contract Price* shall be adjusted by *Change Order* to provide for any difference between the expenditures authorized under paragraph 4.2.3 and the contingency allowance.

PART 5 PAYMENT

GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER

- 5.1.1 The *Owner* shall, at the request of the *Contractor*, before signing the *Contract*, and promptly from time to time thereafter, furnish to the *Contractor* reasonable evidence that financial arrangements have been made to fulfill the *Owner's* obligations under the *Contract*.
- 5.1.2 The *Owner* shall give the *Contractor Notice in Writing* of any material change in the *Owner's* financial arrangements to fulfill the *Owner's* obligations under the *Contract* during the performance of the *Contract*.

GC 5.2 APPLICATIONS FOR PROGRESS PAYMENT

- 5.2.1 Applications for payment on account as provided in Article A-5 of the Agreement - PAYMENT may be made monthly as the *Work* progresses.
- 5.2.2 Applications for payment shall be dated the last day of each payment period, which is the last day of the month or an alternative day of the month agreed in writing by the parties.
- 5.2.3 As of the last day of the payment period, the amount claimed shall be:
1. the value of *Unit Price* work performed, being the sum of the products of each *Unit Price* stated in the *Schedule of Prices* multiplied by the appropriate actual quantity of each *Unit Price* item that is incorporated in or made necessary by the *Work*; plus
 2. the value of lump sum work performed, proportionate to the amount of the lump sum item, plus
 3. the value of *Products* delivered to the *Place of the Work*.
- 5.2.4 The *Contractor* shall submit to the *Consultant*, at least 15 calendar days before the first application for payment, a schedule of values for the lump sum items of work, aggregating the total amount of each lump sum item, so as to facilitate evaluation of applications for payment.
- 5.2.5 The schedule of values for lump sum items of work shall be made out in such form and supported by such evidence as the *Consultant* may reasonably direct and when accepted by the *Consultant*, shall be used as the basis for applications for payment for lump sum items, unless it is found to be in error.
- 5.2.6 The *Contractor* shall include with each application for payment:
1. a statement based on the schedule of values for the lump sum items of work; and
 2. quantity measurements and other evidence as requested by the *Consultant* for each *Unit Price* item.
- 5.2.7 Applications for payment for *Products* delivered to the *Place of the Work* but not yet incorporated into the *Work* shall be supported by such evidence as the *Consultant* may reasonably require to establish the value and delivery of the *Products*.

GC 5.3 PROGRESS PAYMENT

- 5.3.1 After receipt by the *Consultant* of an application for payment submitted by the *Contractor* in accordance with GC 5.2 - APPLICATIONS FOR PROGRESS PAYMENT:
- .1 the *Consultant* will promptly inform the *Owner* of the date of receipt of the *Contractor's* application for payment,
 - .2 the *Consultant* will issue to the *Owner* and copy to the *Contractor*, no later than 10 calendar days after the receipt of the application for payment, a certificate for payment in the amount applied for, or in such other amount as the *Consultant* determines to be properly due. If the *Consultant* amends the application, the *Consultant* will promptly advise the *Contractor* in writing giving reasons for the amendment,
 - .3 the *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement - PAYMENT on or before 20 calendar days after the later of:
 - receipt by the *Consultant* of the application for payment, or
 - the last day of the monthly payment period for which the application for payment is made.
- 5.3.2 Where the basis of payment for an item is by *Unit Price*, quantities in progress payments shall be considered approximate until all work required by that *Unit Price* item is complete.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK

- 5.4.1 When the *Contractor* considers that the *Work* is substantially performed, or if permitted by the lien legislation applicable to the *Place of the Work* a designated portion thereof which the *Owner* agrees to accept separately is substantially performed, the *Contractor* shall, within one Working Day, deliver to the *Consultant* and to the *Owner* a comprehensive list of items to be completed or corrected, together with a written application for a review by the *Consultant* to establish *Substantial Performance of the Work* or substantial performance of the designated portion of the *Work*. Failure to include an item on the list does not alter the responsibility of the *Contractor* to complete the *Contract*.
- 5.4.2 The *Consultant* will review the *Work* to verify the validity of the application and shall promptly, and in any event, no later than 20 calendar days after receipt of the *Contractor's* list and application:
- .1 advise the *Contractor* in writing that the *Work* or the designated portion of the *Work* is not substantially performed and give reasons why, or
 - .2 state the date of *Substantial Performance of the Work* or a designated portion of the *Work* in a certificate and issue a copy of that certificate to each of the *Owner* and the *Contractor*.
- 5.4.3 Immediately following the issuance of the certificate of *Substantial Performance of the Work*, the *Contractor*, in consultation with the *Consultant*, shall establish a reasonable date for finishing the *Work*.

GC 5.5 PAYMENT OF HOLDBACK UPON SUBSTANTIAL PERFORMANCE OF THE WORK

- 5.5.1 After the issuance of the certificate of *Substantial Performance of the Work*, the *Contractor* shall:
- .1 submit an application for payment of the holdback amount,
 - .2 submit CCDC 9A 'Statutory Declaration' to state that all accounts for labour, subcontracts, *Products*, *Construction Equipment*, and other indebtedness which may have been incurred by the *Contractor* in the *Substantial Performance of the Work* and for which the *Owner* might in any way be held responsible have been paid in full, except for amounts properly retained as a holdback or as an identified amount in dispute.
- 5.5.2 After the receipt of an application for payment from the *Contractor* and the statement as provided in paragraph 5.5.1, the *Consultant* will issue a certificate for payment of the holdback amount.
- 5.5.3 Where the holdback amount required by the applicable lien legislation has not been placed in a separate holdback account, the *Owner* shall, 10 calendar days prior to the expiry of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*, place the holdback amount in a bank account in the joint names of the *Owner* and the *Contractor*.
- 5.5.4 In the common law jurisdictions, the holdback amount authorized by the certificate for payment of the holdback amount is due and payable on the calendar day following the expiration of the holdback period stipulated in the lien legislation applicable to the *Place of the Work*. Where lien legislation does not exist or apply, the holdback amount shall be due and payable in accordance with other legislation, industry practice or provisions which may be agreed to between the parties. The *Owner* may retain out of the holdback amount any sums required by law to satisfy any liens against the *Work* or, if permitted by the lien legislation applicable to the *Place of the Work*, other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.
- 5.5.5 In the Province of Quebec, the holdback amount authorized by the certificate for payment of the holdback amount is due and payable 30 calendar days after the issuance of the certificate. The *Owner* may retain out of the holdback amount any sums required to satisfy any legal hypothecs that have been taken, or could be taken, against the *Work* or other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.

GC 5.6 PROGRESSIVE RELEASE OF HOLDBACK

- 5.6.1 In the common law jurisdictions, where legislation permits and where, upon application by the *Contractor*, the *Consultant* has certified that the work of a *Subcontractor* or *Supplier* has been performed prior to *Substantial Performance of the Work*, the *Owner* shall pay the *Contractor* the holdback amount retained for such subcontract work, or the *Products* supplied by such *Supplier*, on the first calendar day following the expiration of the holdback period for such work stipulated in the lien legislation applicable to the *Place of the Work*. The *Owner* may retain out of the holdback amount any sums required by law to satisfy any liens against the *Work* or, if permitted by the lien legislation applicable to the *Place of the Work*, other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.

- 5.6.2 In the Province of Quebec, where, upon application by the *Contractor*, the *Consultant* has certified that the work of a *Subcontractor* or *Supplier* has been performed prior to *Substantial Performance of the Work*, the *Owner* shall pay the *Contractor* the holdback amount retained for such subcontract work, or the *Products* supplied by such *Supplier*, no later than 30 calendar days after such certification by the *Consultant*. The *Owner* may retain out of the holdback amount any sums required to satisfy any legal hypothecs that have been taken, or could be taken, against the *Work* or other third party monetary claims against the *Contractor* which are enforceable against the *Owner*.
- 5.6.3 Notwithstanding the provisions of the preceding paragraphs, and notwithstanding the wording of such certificates, the *Contractor* shall ensure that such subcontract work or *Products* are protected pending the issuance of a final certificate for payment and be responsible for the correction of defects or work not performed regardless of whether or not such was apparent when such certificates were issued.

GC 5.7 FINAL PAYMENT

- 5.7.1 When the *Contractor* considers that the *Work* is completed, the *Contractor* shall submit an application for final payment.
- 5.7.2 The *Consultant* will, no later than 10 calendar days after the receipt of an application from the *Contractor* for final payment, review the *Work* to verify the validity of the application and advise the *Contractor* in writing that the application is valid or give reasons why it is not valid.
- 5.7.3 When the *Consultant* finds the *Contractor's* application for final payment valid, the *Consultant* will promptly issue a final certificate for payment.
- 5.7.4 Subject to the provision of paragraph 10.4.1 of GC 10.4 - WORKERS' COMPENSATION, and any lien legislation applicable to the *Place of the Work*, the *Owner* shall, no later than 5 calendar days after the issuance of a final certificate for payment, pay the *Contractor* as provided in Article A-5 of the Agreement - PAYMENT.

GC 5.8 WITHHOLDING OF PAYMENT

- 5.8.1 If because of climatic or other conditions reasonably beyond the control of the *Contractor*, there are items of work that cannot be performed, payment in full for that portion of the *Work* which has been performed as certified by the *Consultant* shall not be withheld or delayed by the *Owner* on account thereof, but the *Owner* may withhold, until the remaining portion of the *Work* is finished, only such an amount that the *Consultant* determines is sufficient and reasonable to cover the cost of performing such remaining work.

GC 5.9 NON-CONFORMING WORK

- 5.9.1 No payment by the *Owner* under the *Contract* nor partial or entire use or occupancy of the *Work* by the *Owner* shall constitute an acceptance of any portion of the *Work* or *Products* which are not in accordance with the requirements of the *Contract Documents*.

PART 6 CHANGES IN THE WORK

GC 6.1 OWNER'S RIGHT TO MAKE CHANGES

- 6.1.1 The *Owner*, through the *Consultant*, without invalidating the *Contract*, may make:
- .1 changes in the *Work* consisting of additions, deletions or other revisions to the *Work* by *Change Order* or *Change Directive*, and
 - .2 changes to the *Contract Time* for the *Work*, or any part thereof, by *Change Order*.
- 6.1.2 The *Contractor* shall not perform a change in the *Work* without a *Change Order* or a *Change Directive*.

GC 6.2 CHANGE ORDER

- 6.2.1 When a change in the *Work* is proposed or required, the *Consultant* will provide the *Contractor* with a written description of the proposed change in the *Work*. The *Contractor* shall promptly present, in a form acceptable to the *Consultant*, a method of adjustment or an amount of adjustment for the *Contract Price*, if any, and the adjustment in the *Contract Time*, if any, for the proposed change in the *Work*.

- 6.2.2 The method of adjustment or the amount of adjustment to the *Contract Price* presented by the *Contractor* may be one of or a combination of the following:
- .1 Change to the estimated quantities for *Unit Price* items listed in the *Schedule of Prices* that are applicable to the change in the *Work*;
 - .2 Lump sum quotation for the change in the *Work*;
 - .3 *Unit Price* quotation for the change in the *Work*;
 - .4 Cost of the *Contractor's* actual expenditures attributable to the change plus a fee for the *Contractor's* overhead and profit as agreed by the parties;
 - .5 Cost of the *Contractor's* actual savings attributable to the change.
- 6.2.3 When the *Owner* and *Contractor* agree to the adjustments in the *Contract Price* and *Contract Time* or to the method to be used to determine the adjustments, such agreement shall be effective immediately and shall be recorded in a *Change Order*. The value of the work performed as the result of a *Change Order* shall be included in the application for progress payment.

GC 6.3 CHANGE DIRECTIVE

- 6.3.1 If the *Owner* requires the *Contractor* to proceed with a change in the *Work* prior to the *Owner* and the *Contractor* agreeing upon the corresponding adjustment in *Contract Price* and *Contract Time*, the *Owner*, through the *Consultant*, shall issue a *Change Directive*.
- 6.3.2 A *Change Directive* shall only be used to direct a change in the *Work* which is within the general scope of the *Contract Documents*.
- 6.3.3 A *Change Directive* shall not be used to direct a change in the *Contract Time* only.
- 6.3.4 Upon receipt of a *Change Directive*, the *Contractor* shall proceed promptly with the change in the *Work*.
- 6.3.5 For the purpose of valuing *Change Directives*, changes in the *Work* that are not substitutions or otherwise related to each other shall not be grouped together in the same *Change Directive*.
- 6.3.6 The adjustment in the *Contract Price* for a change carried out by way of a *Change Directive* shall be determined on the basis of the cost of the *Contractor's* actual expenditures and savings attributable to the *Change Directive*, valued in accordance with paragraph 6.3.7 and as follows:
- .1 If the change results in a net increase in the *Contractor's* cost, the *Contract Price* shall be increased by the amount of the net increase in the *Contractor's* cost, plus the *Contractor's* percentage fee on such net increase.
 - .2 If the change results in a net decrease in the *Contractor's* cost, the *Contract Price* shall be decreased by the amount of the net decrease in the *Contractor's* cost, without adjustment for the *Contractor's* percentage fee.
 - .3 The *Contractor's* fee shall be as specified in the *Contract Documents* or as otherwise agreed by the parties.
- 6.3.7 The cost of performing the work attributable to the *Change Directive* shall be limited to the actual cost of the following:
- .1 salaries, wages and benefits paid to personnel in the direct employ of the *Contractor* under a salary or wage schedule agreed upon by the *Owner* and the *Contractor*, or in the absence of such a schedule, actual salaries, wages and benefits paid under applicable bargaining agreement, and in the absence of a salary or wage schedule and bargaining agreement, actual salaries, wages and benefits paid by the *Contractor*, for personnel
 - (1) stationed at the *Contractor's* field office, in whatever capacity employed;
 - (2) engaged in expediting the production or transportation of material or equipment, at shops or on the road;
 - (3) engaged in the preparation or review of *Shop Drawings*, fabrication drawings, and coordination drawings; or
 - (4) engaged in the processing of changes in the *Work*.
 - .2 contributions, assessments or taxes incurred for such items as employment insurance, provincial or territorial health insurance, workers' compensation, and Canada or Quebec Pension Plan, insofar as such cost is based on wages, salaries or other remuneration paid to employees of the *Contractor* and included in the cost of the work as provided in paragraphs 6.3.7.1;
 - .3 travel and subsistence expenses of the *Contractor's* personnel described in paragraphs 6.3.7.1;
 - .4 all *Products* including cost of transportation thereof;
 - .5 materials, supplies, *Construction Equipment*, *Temporary Work*, and hand tools not owned by the workers, including transportation and maintenance thereof, which are consumed in the performance of the *Work*; and cost less salvage value on such items used but not consumed, which remain the property of the *Contractor*;
 - .6 all tools and *Construction Equipment*, exclusive of hand tools used in the performance of the *Work*, whether rented from or provided by the *Contractor* or others, including installation, minor repairs and replacements, dismantling, removal, transportation, and delivery cost thereof;
 - .7 all equipment and services required for the *Contractor's* field office;
 - .8 deposits lost;

- .9 the amounts of all subcontracts;
 - .10 quality assurance such as independent inspection and testing services;
 - .11 charges levied by authorities having jurisdiction at the *Place of the Work*;
 - .12 royalties, patent licence fees and damages for infringement of patents and cost of defending suits therefor subject always to the *Contractor's* obligations to indemnify the *Owner* as provided in paragraph 10.3.1 of GC 10.3 - PATENT FEES;
 - .13 any adjustment in premiums for all bonds and insurance which the *Contractor* is required, by the *Contract Documents*, to purchase and maintain;
 - .14 any adjustment in taxes, other than *Value Added Taxes*, and duties for which the *Contractor* is liable;
 - .15 charges for long distance telephone and facsimile communications, courier services, expressage, and petty cash items incurred in relation to the performance of the *Work*;
 - .16 removal and disposal of waste products and debris; and
 - .17 safety measures and requirements.
- 6.3.8 Notwithstanding any other provisions contained in the General Conditions of the *Contract*, it is the intention of the parties that the cost of any item under any cost element referred to in paragraph 6.3.7 shall cover and include any and all costs or liabilities attributable to the *Change Directive* other than those which are the result of or occasioned by any failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work*. Any cost due to failure on the part of the *Contractor* to exercise reasonable care and diligence in the *Contractor's* attention to the *Work* shall be borne by the *Contractor*.
- 6.3.9 The *Contractor* shall keep full and detailed accounts and records necessary for the documentation of the cost of performing the work attributable to the *Change Directive* and shall provide the *Consultant* with copies thereof when requested.
- 6.3.10 For the purpose of valuing *Change Directives*, the *Owner* shall be afforded reasonable access to all of the *Contractor's* pertinent documents related to the cost of performing the work attributable to the *Change Directive*.
- 6.3.11 Pending determination of the final amount of a *Change Directive*, the undisputed value of the work performed as the result of a *Change Directive* is eligible to be included in progress payments.
- 6.3.12 If the *Owner* and *Contractor* do not agree on the proposed adjustment in the *Contract Time* attributable to the change in the *Work*, or the method of determining it, the adjustment shall be referred to the *Consultant* for determination.
- 6.3.13 When the *Owner* and the *Contractor* reach agreement on the adjustment to the *Contract Price* and to the *Contract Time*, this agreement shall be recorded in a *Change Order*.

GC 6.4 CONCEALED OR UNKNOWN CONDITIONS

- 6.4.1 If the *Owner* or the *Contractor* discover conditions at the *Place of the Work* which are:
- .1 subsurface or otherwise concealed physical conditions which existed before the commencement of the *Work* which differ materially from those indicated in the *Contract Documents*; or
 - .2 physical conditions, other than conditions due to weather, that are of a nature which differ materially from those ordinarily found to exist and generally recognized as inherent in construction activities of the character provided for in the *Contract Documents*,
- then the observing party shall give *Notice in Writing* to the other party of such conditions before they are disturbed and in no event later than 5 *Working Days* after first observance of the conditions.
- 6.4.2 The *Consultant* will promptly investigate such conditions and make a finding. If the finding is that the conditions differ materially and this would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Consultant*, with the *Owner's* approval, will issue appropriate instructions for a change in the *Work* as provided in GC 6.2 - CHANGE ORDER or GC 6.3 - CHANGE DIRECTIVE.
- 6.4.3 If the *Consultant* finds that the conditions at the *Place of the Work* are not materially different or that no change in the *Contract Price* or the *Contract Time* is justified, the *Consultant* will report the reasons for this finding to the *Owner* and the *Contractor* in writing.
- 6.4.4 If such concealed or unknown conditions relate to toxic and hazardous substances and materials, artifacts and fossils, or mould, the parties will be governed by the provisions of GC 9.2 - TOXIC AND HAZARDOUS SUBSTANCES AND MATERIALS, GC 9.3 - ARTIFACTS AND FOSSILS and GC 9.5 – MOULD.

GC 6.5 DELAYS

- 6.5.1 If the *Contractor* is delayed in the performance of the *Work* by an action or omission of the *Owner*, *Consultant* or anyone employed or engaged by them directly or indirectly, contrary to the provisions of the *Contract Documents*, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.2 If the *Contractor* is delayed in the performance of the *Work* by a stop work order issued by a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or any person employed or engaged by the *Contractor* directly or indirectly, then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The *Contractor* shall be reimbursed by the *Owner* for reasonable costs incurred by the *Contractor* as the result of such delay.
- 6.5.3 If the *Contractor* is delayed in the performance of the *Work* by:
- .1 labour disputes, strikes, lock-outs (including lock-outs decreed or recommended for its members by a recognized contractors' association, of which the *Contractor* is a member or to which the *Contractor* is otherwise bound),
 - .2 fire, unusual delay by common carriers or unavoidable casualties,
 - .3 abnormally adverse weather conditions, or
 - .4 any cause beyond the *Contractor's* control other than one resulting from a default or breach of *Contract* by the *Contractor*,
- then the *Contract Time* shall be extended for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor*. The extension of time shall not be less than the time lost as the result of the event causing the delay, unless the *Contractor* agrees to a shorter extension. The *Contractor* shall not be entitled to payment for costs incurred by such delays unless such delays result from actions by the *Owner*, *Consultant* or anyone employed or engaged by them directly or indirectly.
- 6.5.4 No extension shall be made for delay unless *Notice in Writing* of the cause of delay is given to the *Consultant* not later than 10 *Working Days* after the commencement of the delay. In the case of a continuing cause of delay only one *Notice in Writing* shall be necessary.
- 6.5.5 If no schedule is made under paragraph 2.2.13 of GC 2.2 - ROLE OF THE CONSULTANT, then no request for extension shall be made because of failure of the *Consultant* to furnish instructions until 10 *Working Days* after demand for such instructions has been made.

GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

- 6.6.1 If the *Contractor* intends to make a claim for an increase to the *Contract Price*, or if the *Owner* intends to make a claim against the *Contractor* for a credit to the *Contract Price*, the party that intends to make the claim shall give timely *Notice in Writing* of intent to claim to the other party and to the *Consultant*.
- 6.6.2 Upon commencement of the event or series of events giving rise to a claim, the party intending to make the claim shall:
- .1 take all reasonable measures to mitigate any loss or expense which may be incurred as a result of such event or series of events, and
 - .2 keep such records as may be necessary to support the claim.
- 6.6.3 The party making the claim shall submit within a reasonable time to the *Consultant* a detailed account of the amount claimed and the grounds upon which the claim is based.
- 6.6.4 Where the event or series of events giving rise to the claim has a continuing effect, the detailed account submitted under paragraph 6.6.3 shall be considered to be an interim account and the party making the claim shall, at such intervals as the *Consultant* may reasonably require, submit further interim accounts giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 6.6.5 The *Consultant's* findings, with respect to a claim made by either party, will be given by *Notice in Writing* to both parties within 30 *Working Days* after receipt of the claim by the *Consultant*, or within such other time period as may be agreed by the parties.
- 6.6.6 If such finding is not acceptable to either party, the claim shall be settled in accordance with Part 8 of the General Conditions - DISPUTE RESOLUTION.

GC 6.7 QUANTITY VARIATIONS

- 6.7.1 The provisions of GC 6.7 - QUANTITY VARIATIONS apply to the estimated quantities identified in the *Schedule of Prices*, or where the estimated quantities have been amended by *Change Order*, the provisions apply to the amended estimated quantities.
- 6.7.2 The *Owner* or the *Contractor* may request an adjustment to a *Unit Price* contained in the *Schedule of Prices* provided the actual quantity of the *Unit Price* item in the *Schedule of Prices* exceeds or falls short of the estimated quantity by more than 15%.
- 6.7.3 Where the actual quantity exceeds the estimated quantity by more than 15%, a *Unit Price* adjusted pursuant to paragraph 6.7.2 shall apply only to the quantity that exceeds 115% of the estimated quantity.
- 6.7.4 Where the actual quantity falls short of the estimated quantity by more than 15%, a *Unit Price* adjusted pursuant to paragraph 6.7.2 shall apply to the actual quantity of the *Unit Price* item. The adjusted *Unit Price* shall not exceed a *Unit Price* that would cause the payment amount to exceed that derived from the original *Unit Price* and estimated quantity.
- 6.7.5 The party that intends to request for an adjustment to a *Unit Price* shall give timely *Notice in Writing* to the other party and to the *Consultant*.
- 6.7.6 The *Consultant's* findings, with respect to a claim made by either party, will be given by *Notice in Writing* to both parties within 30 *Working Days* after receipt of the claim by the *Consultant*, or within such other time period as may be agreed by the parties.
- 6.7.7 If such finding is not acceptable to either party, the claim shall be settled in accordance with Part 8 of the General Conditions - DISPUTE RESOLUTION.

PART 7 DEFAULT NOTICE

GC 7.1 OWNER'S RIGHT TO PERFORM THE WORK, TERMINATE THE CONTRACTOR'S RIGHT TO CONTINUE WITH THE WORK OR TERMINATE THE CONTRACT

- 7.1.1 If the *Contractor* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Contractor's* insolvency, or if a receiver is appointed because of the *Contractor's* insolvency, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, terminate the *Contractor's* right to continue with the *Work*, by giving the *Contractor* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.1.2 If the *Contractor* neglects to prosecute the *Work* properly or otherwise fails to comply with the requirements of the *Contract* to a substantial degree and if the *Consultant* has given a written statement to the *Owner* and *Contractor* that sufficient cause exists to justify such action, the *Owner* may, without prejudice to any other right or remedy the *Owner* may have, give the *Contractor* *Notice in Writing* that the *Contractor* is in default of the *Contractor's* contractual obligations and instruct the *Contractor* to correct the default in the 5 *Working Days* immediately following the receipt of such *Notice in Writing*.
- 7.1.3 If the default cannot be corrected in the 5 *Working Days* specified or in such other time period as may be subsequently agreed in writing by the parties, the *Contractor* shall be in compliance with the *Owner's* instructions if the *Contractor*:
- .1 commences the correction of the default within the specified time, and
 - .2 provides the *Owner* with an acceptable schedule for such correction, and
 - .3 corrects the default in accordance with the *Contract* terms and with such schedule.
- 7.1.4 If the *Contractor* fails to correct the default in the time specified or in such other time period as may be subsequently agreed in writing by the parties, without prejudice to any other right or remedy the *Owner* may have, the *Owner* may:
- .1 correct such default and deduct the cost thereof from any payment then or thereafter due the *Contractor* provided the *Consultant* has certified such cost to the *Owner* and the *Contractor*, or
 - .2 terminate the *Contractor's* right to continue with the *Work* in whole or in part or terminate the *Contract*.

- 7.1.5 If the *Owner* terminates the *Contractor's* right to continue with the *Work* as provided in paragraphs 7.1.1 and 7.1.4, the *Owner* shall be entitled to:
- .1 take possession of the *Work* and *Products* at the *Place of the Work*; subject to the rights of third parties, utilize the *Construction Equipment* at the *Place of the Work*; finish the *Work* by whatever method the *Owner* may consider expedient, but without undue delay or expense, and
 - .2 withhold further payment to the *Contractor* until a final certificate for payment is issued, and
 - .3 charge the *Contractor* the amount by which the full cost of finishing the *Work* as certified by the *Consultant*, including compensation to the *Consultant* for the *Consultant's* additional services and a reasonable allowance as determined by the *Consultant* to cover the cost of corrections to work performed by the *Contractor* that may be required under GC 12.3 - WARRANTY, exceeds the unpaid balance of the *Contract Price*; however, if such cost of finishing the *Work* is less than the unpaid balance of the *Contract Price*, the *Owner* shall pay the *Contractor* the difference, and
 - .4 on expiry of the warranty period, charge the *Contractor* the amount by which the cost of corrections to the *Contractor's* work under GC 12.3 - WARRANTY exceeds the allowance provided for such corrections, or if the cost of such corrections is less than the allowance, pay the *Contractor* the difference.
- 7.1.6 The *Contractor's* obligation under the *Contract* as to quality, correction and warranty of the work performed by the *Contractor* up to the time of termination shall continue after such termination of the *Contract*.

GC 7.2 CONTRACTOR'S RIGHT TO SUSPEND THE WORK OR TERMINATE THE CONTRACT

- 7.2.1 If the *Owner* is adjudged bankrupt, or makes a general assignment for the benefit of creditors because of the *Owner's* insolvency, or if a receiver is appointed because of the *Owner's* insolvency, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* or receiver or trustee in bankruptcy *Notice in Writing* to that effect.
- 7.2.2 If the *Work* should be suspended or otherwise delayed for a period of 20 *Working Days* or more under an order of a court or other public authority and providing that such order was not issued as the result of an act or fault of the *Contractor* or of anyone directly or indirectly employed or engaged by the *Contractor*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, terminate the *Contract* by giving the *Owner* *Notice in Writing* to that effect.
- 7.2.3 The *Contractor* may give *Notice in Writing* to the *Owner*, with a copy to the *Consultant*, that the *Owner* is in default of the *Owner's* contractual obligations if:
- .1 the *Owner* fails to furnish, when so requested by the *Contractor*, reasonable evidence that financial arrangements have been made to fulfill the *Owner's* obligations under the *Contract*, or
 - .2 the *Consultant* fails to issue a certificate as provided in GC 5.3 - PROGRESS PAYMENT, or
 - .3 the *Owner* fails to pay the *Contractor* when due the amounts certified by the *Consultant* or awarded by arbitration or court, or
 - .4 the *Owner* violates the requirements of the *Contract* to a substantial degree and the *Consultant*, except for GC 5.1 - FINANCING INFORMATION REQUIRED OF THE OWNER, confirms by written statement to the *Contractor* that sufficient cause exists.
- 7.2.4 The *Contractor's* *Notice in Writing* to the *Owner* provided under paragraph 7.2.3 shall advise that if the default is not corrected within 5 *Working Days* following the receipt of the *Notice in Writing*, the *Contractor* may, without prejudice to any other right or remedy the *Contractor* may have, suspend the *Work* or terminate the *Contract*.
- 7.2.5 If the *Contractor* terminates the *Contract* under the conditions set out above, the *Contractor* shall be entitled to be paid for all work performed including reasonable profit, for loss sustained upon *Products* and *Construction Equipment*, and such other damages as the *Contractor* may have sustained as a result of the termination of the *Contract*.

PART 8 DISPUTE RESOLUTION

GC 8.1 AUTHORITY OF THE CONSULTANT

- 8.1.1 Differences between the parties to the *Contract* as to the interpretation, application or administration of the *Contract* or any failure to agree where agreement between the parties is called for, herein collectively called disputes, which are not resolved in the first instance by findings of the *Consultant* as provided in GC 2.2 - ROLE OF THE CONSULTANT, shall be settled in accordance with the requirements of Part 8 of the General Conditions - DISPUTE RESOLUTION.
- 8.1.2 If a dispute arises under the *Contract* in respect of a matter in which the *Consultant* has no authority under the *Contract* to make a finding, the procedures set out in paragraph 8.1.3 and paragraphs 8.2.3 to 8.2.8 of GC 8.2 - NEGOTIATION, MEDIATION AND ARBITRATION, and in GC 8.3 - RETENTION OF RIGHTS apply to that dispute with the necessary changes to detail as may be required.

- 8.1.3 If a dispute is not resolved promptly, the *Consultant* will give such instructions as in the *Consultant's* opinion are necessary for the proper performance of the *Work* and to prevent delays pending settlement of the dispute. The parties shall act immediately according to such instructions, it being understood that by so doing neither party will jeopardize any claim the party may have. If it is subsequently determined that such instructions were in error or at variance with the *Contract Documents*, the *Owner* shall pay the *Contractor* costs incurred by the *Contractor* in carrying out such instructions which the *Contractor* was required to do beyond what the *Contract Documents* correctly understood and interpreted would have required, including costs resulting from interruption of the *Work*.

GC 8.2 NEGOTIATION, MEDIATION AND ARBITRATION

- 8.2.1 In accordance with the Rules for Mediation of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing, the parties shall appoint a Project Mediator
- .1 within 20 *Working Days* after the *Contract* was awarded, or
 - .2 if the parties neglected to make an appointment within the 20 *Working Days*, within 10 *Working Days* after either party by *Notice in Writing* requests that the Project Mediator be appointed.
- 8.2.2 A party shall be conclusively deemed to have accepted a finding of the *Consultant* under GC 2.2 - ROLE OF THE CONSULTANT and to have expressly waived and released the other party from any claims in respect of the particular matter dealt with in that finding unless, within 15 *Working Days* after receipt of that finding, the party sends a *Notice in Writing* of dispute to the other party and to the *Consultant*, which contains the particulars of the matter in dispute and the relevant provisions of the *Contract Documents*. The responding party shall send a *Notice in Writing* of reply to the dispute within 10 *Working Days* after receipt of such *Notice in Writing* setting out particulars of this response and any relevant provisions of the *Contract Documents*.
- 8.2.3 The parties shall make all reasonable efforts to resolve their dispute by amicable negotiations and agree to provide, without prejudice, frank, candid and timely disclosure of relevant facts, information and documents to facilitate these negotiations.
- 8.2.4 After a period of 10 *Working Days* following receipt of a responding party's *Notice in Writing* of reply under paragraph 8.2.2, the parties shall request the Project Mediator to assist the parties to reach agreement on any unresolved dispute. The mediated negotiations shall be conducted in accordance with the Rules for Mediation of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing.
- 8.2.5 If the dispute has not been resolved within 10 *Working Days* after the Project Mediator was requested under paragraph 8.2.4 or within such further period agreed by the parties, the Project Mediator shall terminate the mediated negotiations by giving *Notice in Writing* to the *Owner*, the *Contractor* and the *Consultant*.
- 8.2.6 By giving a *Notice in Writing* to the other party and the *Consultant*, not later than 10 *Working Days* after the date of termination of the mediated negotiations under paragraph 8.2.5, either party may refer the dispute to be finally resolved by arbitration under the Rules for Arbitration of Construction Disputes as provided in CCDC 40 in effect at the time of bid closing. The arbitration shall be conducted in the jurisdiction of the *Place of the Work*.
- 8.2.7 On expiration of the 10 *Working Days*, the arbitration agreement under paragraph 8.2.6 is not binding on the parties and, if a *Notice in Writing* is not given under paragraph 8.2.6 within the required time, the parties may refer the unresolved dispute to the courts or to any other form of dispute resolution, including arbitration, which they have agreed to use.
- 8.2.8 If neither party, by *Notice in Writing*, given within 10 *Working Days* of the date of *Notice in Writing* requesting arbitration in paragraph 8.2.6, requires that a dispute be arbitrated immediately, all disputes referred to arbitration as provided in paragraph 8.2.6 shall be
- .1 held in abeyance until
 - (1) *Substantial Performance of the Work*,
 - (2) the *Contract* has been terminated, or
 - (3) the *Contractor* has abandoned the *Work*,whichever is earlier; and
 - .2 consolidated into a single arbitration under the rules governing the arbitration under paragraph 8.2.6.

GC 8.3 RETENTION OF RIGHTS

- 8.3.1 It is agreed that no act by either party shall be construed as a renunciation or waiver of any rights or recourses, provided the party has given the *Notice in Writing* required under Part 8 of the General Conditions - DISPUTE RESOLUTION and has carried out the instructions as provided in paragraph 8.1.3 of GC 8.1 – AUTHORITY OF THE CONSULTANT.

- 8.3.2 Nothing in Part 8 of the General Conditions - DISPUTE RESOLUTION shall be construed in any way to limit a party from asserting any statutory right to a lien under applicable lien legislation of the jurisdiction of the *Place of the Work* and the assertion of such right by initiating judicial proceedings is not to be construed as a waiver of any right that party may have under paragraph 8.2.6 of GC 8.2 – NEGOTIATION, MEDIATION AND ARBITRATION to proceed by way of arbitration to adjudicate the merits of the claim upon which such a lien is based.

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.1 PROTECTION OF WORK AND PROPERTY

- 9.1.1 The *Contractor* shall protect the *Work* and the *Owner's* property and property adjacent to the *Place of the Work* from damage which may arise as the result of the *Contractor's* operations under the *Contract*, and shall be responsible for such damage, except damage which occurs as the result of:
- .1 errors in the *Contract Documents*;
 - .2 acts or omissions by the *Owner*, the *Consultant*, other contractors, their agents and employees.
- 9.1.2 Before commencing any work, the *Contractor* shall determine the location of all underground utilities and structures indicated in the *Contract Documents* or that are reasonably apparent in an inspection of the *Place of the Work*.
- 9.1.3 Should the *Contractor* in the performance of the *Contract* damage the *Work*, the *Owner's* property, or property adjacent to the *Place of the Work*, the *Contractor* shall be responsible for making good such damage at the *Contractor's* expense.
- 9.1.4 Should damage occur to the *Work* or *Owner's* property for which the *Contractor* is not responsible, as provided in paragraph 9.1.1, the *Contractor* shall make good such damage to the *Work* and, if the *Owner* so directs, to the *Owner's* property. The *Contract Price* and *Contract Time* shall be adjusted as provided in GC 6.1 – OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.

GC 9.2 TOXIC AND HAZARDOUS SUBSTANCES

- 9.2.1 For the purposes of applicable legislation related to toxic and hazardous substances, the *Owner* shall be deemed to have control and management of the *Place of the Work* with respect to existing conditions.
- 9.2.2 Prior to the *Contractor* commencing the *Work*, the *Owner* shall,
- .1 take all reasonable steps to determine whether any toxic or hazardous substances are present at the *Place of the Work*, and
 - .2 provide the *Consultant* and the *Contractor* with a written list of any such substances that are known to exist and their locations.
- 9.2.3 The *Owner* shall take all reasonable steps to ensure that no person's exposure to any toxic or hazardous substances exceeds the time weighted levels prescribed by applicable legislation at the *Place of the Work* and that no property is damaged or destroyed as a result of exposure to, or the presence of, toxic or hazardous substances which were at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.4 Unless the *Contract* expressly provides otherwise, the *Owner* shall be responsible for taking all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to dispose of, store or otherwise render harmless toxic or hazardous substances which were present at the *Place of the Work* prior to the *Contractor* commencing the *Work*.
- 9.2.5 If the *Contractor*
- .1 encounters toxic or hazardous substances at the *Place of the Work*, or
 - .2 has reasonable grounds to believe that toxic or hazardous substances are present at the *Place of the Work*, which were not brought to the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible and which were not disclosed by the *Owner* or which were disclosed but have not been dealt with as required under paragraph 9.2.4, the *Contractor* shall
 - .3 take all reasonable steps, including stopping the *Work*, to ensure that no person's exposure to any toxic or hazardous substances exceeds any applicable time weighted levels prescribed by applicable legislation at the *Place of the Work*, and
 - .4 immediately report the circumstances to the *Consultant* and the *Owner* in writing.
- 9.2.6 If the *Owner* and *Contractor* do not agree on the existence, significance of, or whether the toxic or hazardous substances were brought onto the *Place of the Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and the *Contractor*.

- 9.2.7 If the *Owner* and *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were not brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Owner* shall promptly at the *Owner's* own expense:
- .1 take all steps as required under paragraph 9.2.4;
 - .2 reimburse the *Contractor* for the costs of all steps taken pursuant to paragraph 9.2.5;
 - .3 extend the *Contract* time for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in 9.2.6 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay; and
 - .4 indemnify the *Contractor* as required by GC 12.1 - INDEMNIFICATION.
- 9.2.8 If the *Owner* and *Contractor* agree or if the expert referred to in paragraph 9.2.6 determines that the toxic or hazardous substances were brought onto the place of the *Work* by the *Contractor* or anyone for whom the *Contractor* is responsible, the *Contractor* shall promptly at the *Contractor's* own expense:
- .1 take all necessary steps, in accordance with applicable legislation in force at the *Place of the Work*, to safely remove and dispose the toxic or hazardous substances;
 - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the place of the *Work* as provided in paragraph 9.1.3 of GC 9.1 – PROTECTION OF WORK AND PROPERTY;
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.2.6; and
 - .4 indemnify the *Owner* as required by GC 12.1 - INDEMNIFICATION.
- 9.2.9 If either party does not accept the expert's findings under paragraph 9.2.6, the disagreement shall be settled in accordance with Part 8 of the General Conditions - Dispute Resolution. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraph 9.2.7 or 9.2.8 it being understood that by so doing, neither party will jeopardize any claim that party may have to be reimbursed as provided by GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

GC 9.3 ARTIFACTS AND FOSSILS

- 9.3.1 Fossils, coins, articles of value or antiquity, structures and other remains or things of scientific or historic interest discovered at the *Place or Work* shall, as between the *Owner* and the *Contractor*, be deemed to be the absolute property of the *Owner*.
- 9.3.2 The *Contractor* shall take all reasonable precautions to prevent removal or damage to discoveries as identified in paragraph 9.3.1, and shall advise the *Consultant* upon discovery of such items.
- 9.3.3 The *Consultant* will investigate the impact on the *Work* of the discoveries identified in paragraph 9.3.1. If conditions are found that would cause an increase or decrease in the *Contractor's* cost or time to perform the *Work*, the *Consultant*, with the *Owner's* approval, will issue appropriate instructions for a change in the *Work* as provided in GC 6.2 - CHANGE ORDER or GC 6.3 CHANGE DIRECTIVE.

GC 9.4 CONSTRUCTION SAFETY

- 9.4.1 Subject to paragraph 3.2.2.2 of GC 3.2 - CONSTRUCTION BY OWNER OR OTHER CONTRACTORS, the *Contractor* shall be solely responsible for construction safety at the *Place of the Work* and for compliance with the rules, regulations and practices required by the applicable construction health and safety legislation and shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the performance of the *Work*.

GC 9.5 MOULD

- 9.5.1 If the *Contractor* or *Owner* observes or reasonably suspects the presence of mould at the *Place of the Work*, the remediation of which is not expressly part of the *Work*,
- .1 the observing party shall promptly report the circumstances to the other party in writing, and
 - .2 the *Contractor* shall promptly take all reasonable steps, including stopping the *Work* if necessary, to ensure that no person suffers injury, sickness or death and that no property is damaged as a result of exposure to or the presence of the mould, and
 - .3 if the *Owner* and *Contractor* do not agree on the existence, significance or cause of the mould or as to what steps need be taken to deal with it, the *Owner* shall retain and pay for an independent qualified expert to investigate and determine such matters. The expert's report shall be delivered to the *Owner* and *Contractor*.
- 9.5.2 If the *Owner* and *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was caused by the *Contractor's* operations under the *Contract*, the *Contractor* shall promptly, at the *Contractor's* own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould, and
 - .2 make good any damage to the *Work*, the *Owner's* property or property adjacent to the *Place of the Work* as provided in paragraph 9.1.3 of GC 9.1 - PROTECTION OF WORK AND PROPERTY, and
 - .3 reimburse the *Owner* for reasonable costs incurred under paragraph 9.5.1.3, and
 - .4 indemnify the *Owner* as required by paragraph 12.1 of GC 21.1 - INDEMNIFICATION.

- 9.5.3 If the *Owner* and *Contractor* agree, or if the expert referred to in paragraph 9.5.1.3 determines that the presence of mould was not caused by the *Contractor*'s operations under the *Contract*, the *Owner* shall promptly, at the *Owner*'s own expense:
- .1 take all reasonable and necessary steps to safely remediate or dispose of the mould, and
 - .2 reimburse the *Contractor* for the cost of taking the steps under paragraph 9.5.1.2 and making good any damage to the *Work* as provided in paragraph 9.1.4 of GC 9.1 - PROTECTION OF WORK AND PROPERTY, and
 - .3 extend the *Contract Time* for such reasonable time as the *Consultant* may recommend in consultation with the *Contractor* and the expert referred to in paragraph 9.5.1.3 and reimburse the *Contractor* for reasonable costs incurred as a result of the delay, and
 - .4 indemnify the *Contractor* as required by paragraph 12.1.
- 9.5.4 If either party does not accept the expert's finding under paragraph 9.5.1.3, the disagreement shall be settled in accordance with Part 8 of the General Conditions - DISPUTE RESOLUTION. If such disagreement is not resolved promptly, the parties shall act immediately in accordance with the expert's determination and take the steps required by paragraphs 9.5.2 or 9.5.3, it being understood that by so doing neither party will jeopardize any claim the party may have.

PART 10 GOVERNING REGULATIONS

GC 10.1 TAXES AND DUTIES

- 10.1.1 The *Contract Price* shall include all taxes and customs duties in effect at the time of the bid closing except for *Value Added Taxes* payable by the *Owner* to the *Contractor* as stipulated in Article A-4 of the Agreement - CONTRACT PRICE.
- 10.1.2 Any increase or decrease in costs to the *Contractor* due to changes in such included taxes and duties after the time of the bid closing shall increase or decrease the *Contract Price* accordingly.

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

- 10.2.1 The laws of the *Place of the Work* shall govern the *Work*.
- 10.2.2 The *Owner* shall obtain and pay for development approvals, building permit, permanent easements, rights of servitude, and all other necessary approvals and permits, except for the permits and fees referred to in paragraph 10.2.3 or for which the *Contract Documents* specify as the responsibility of the *Contractor*.
- 10.2.3 The *Contractor* shall be responsible for the procurement of permits, licences, inspections, and certificates, which are necessary for the performance of the *Work* and customarily obtained by contractors in the jurisdiction of the *Place of the Work* after the issuance of the building permit. The *Contract Price* includes the cost of these permits, licences, inspections, and certificates, and their procurement.
- 10.2.4 The *Contractor* shall give the required notices and comply with the laws, ordinances, rules, regulations, or codes which are or become in force during the performance of the *Work* and which relate to the *Work*, to the preservation of the public health, and to construction safety.
- 10.2.5 The *Contractor* shall not be responsible for verifying that the *Contract Documents* are in compliance with the applicable laws, ordinances, rules, regulations, or codes relating to the *Work*. If the *Contract Documents* are at variance therewith, or if, subsequent to the time of bid closing, changes are made to the applicable laws, ordinances, rules, regulations, or codes which require modification to the *Contract Documents*, the *Contractor* shall advise the *Consultant* in writing requesting direction immediately upon such variance or change becoming known. The *Consultant* will make the changes required to the *Contract Documents* as provided in GC 6.1 - OWNER'S RIGHT TO MAKE CHANGES, GC 6.2 - CHANGE ORDER and GC 6.3 - CHANGE DIRECTIVE.
- 10.2.6 If the *Contractor* fails to advise the *Consultant* in writing; and fails to obtain direction as required in paragraph 10.2.5; and performs work knowing it to be contrary to any laws, ordinances, rules, regulations, or codes; the *Contractor* shall be responsible for and shall correct the violations thereof; and shall bear the costs, expenses and damages attributable to the failure to comply with the provisions of such laws, ordinances, rules, regulations, or codes.
- 10.2.7 If, subsequent to the time of bid closing, changes are made to applicable laws, ordinances, rules, regulations, or codes of authorities having jurisdiction which affect the cost of the *Work*, either party may submit a claim in accordance with the requirements of GC 6.6 – CLAIMS FOR A CHANGE IN CONTRACT PRICE.

GC 10.3 PATENT FEES

- 10.3.1 The *Contractor* shall pay the royalties and patent licence fees required for the performance of the *Contract*. The *Contractor* shall hold the *Owner* harmless from and against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor's* performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention by the *Contractor* or anyone for whose acts the *Contractor* may be liable.
- 10.3.2 The *Owner* shall hold the *Contractor* harmless against claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of the *Contractor's* performance of the *Contract* which are attributable to an infringement or an alleged infringement of a patent of invention in executing anything for the purpose of the *Contract*, the model, plan or design of which was supplied to the *Contractor* as part of the *Contract Documents*.

GC 10.4 WORKERS' COMPENSATION

- 10.4.1 Prior to commencing the *Work*, *Substantial Performance of the Work* and the issuance of the final certificate for payment, the *Contractor* shall provide evidence of compliance with workers' compensation legislation at the *Place of the Work*, including payments due thereunder.
- 10.4.2 At any time during the term of the *Contract*, when requested by the *Owner*, the *Contractor* shall provide such evidence of compliance by the *Contractor* and *Subcontractors*.

PART 11 INSURANCE AND CONTRACT SECURITY

GC 11.1 INSURANCE

- 11.1.1 Without restricting the generality of GC 12.1 - INDEMNIFICATION, the *Contractor* shall provide, maintain and pay for the following insurance coverages, the minimum requirements of which are specified in CCDC 41 – CCDC Insurance Requirements in effect at the time of bid closing except as hereinafter provided:
- .1 General liability insurance in the name of the *Contractor* and include, or in the case of a single, blanket policy, be endorsed to name, the *Owner* and the *Consultant* as insureds but only with respect to liability, other than legal liability arising out of their sole negligence, arising out of the operations of the *Contractor* with regard to the *Work*. General liability insurance shall be maintained from the date of commencement of the *Work* until one year from the date of *Substantial Performance of the Work*. Liability coverage shall be provided for completed operations hazards from the date of *Substantial Performance of the Work*, as set out in the certificate of *Substantial Performance of the Work*, on an ongoing basis for a period of 6 years following *Substantial Performance of the Work*.
 - .2 Automobile Liability Insurance from the date of commencement of the *Work* until one year after the date of *Substantial Performance of the Work*.
 - .3 Aircraft or Watercraft Liability Insurance when owned or non-owned aircraft or watercraft are used directly or indirectly in the performance of the *Work*.
 - .4 "Broad form" property insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as Insureds all *Subcontractors*. The "Broad form" property insurance shall be provided from the date of commencement of the *Work* until the earliest of:
 - (1) 10 calendar days after the date of *Substantial Performance of the Work*;
 - (2) on the commencement of use or occupancy of any part or section of *Work* unless such use or occupancy is for construction purposes, habitational, office, banking, convenience store under 465 square metres in area, or parking purposes, or for the installation, testing and commissioning of equipment forming part of the *Work*;
 - (3) when left unattended for more than 30 consecutive calendar days or when construction activity has ceased for more than 30 consecutive calendar days.
 - .5 Boiler and machinery insurance in the joint names of the *Contractor*, the *Owner* and the *Consultant*. The policy shall include as Insureds all *Subcontractors*. The coverage shall be maintained continuously from commencement of use or operation of the boiler and machinery objects insured by the policy and until 10 calendar days after the date of *Substantial Performance of the Work*.
 - .6 The "Broad form" property and boiler and machinery policies shall provide that, in the case of a loss or damage, payment shall be made to the *Owner* and the *Contractor* as their respective interests may appear. In the event of loss or damage:
 - (1) the *Contractor* shall act on behalf of the *Owner* for the purpose of adjusting the amount of such loss or damage payment with the insurers. When the extent of the loss or damage is determined, the *Contractor* shall proceed to restore the *Work*. Loss or damage shall not affect the rights and obligations of either party under the *Contract* except that the *Contractor* shall be entitled to such reasonable extension of *Contract Time* relative to the extent of the loss or damage as the *Consultant* may recommend in consultation with the *Contractor*;

- (2) the *Contractor* shall be entitled to receive from the *Owner*, in addition to the amount due under the *Contract*, the amount which the *Owner's* interest in restoration of the *Work* has been appraised, such amount to be paid as the restoration of the *Work* proceeds in accordance with the progress payment provisions. In addition the *Contractor* shall be entitled to receive from the payments made by the insurer the amount of the *Contractor's* interest in the restoration of the *Work*; and
- (3) to the *Work* arising from the work of the *Owner*, the *Owner's* own forces, or another contractor, in accordance with the *Owner's* obligations under the provisions relating to construction by *Owner* or other contractors, shall pay the *Contractor* the cost of restoring the *Work* as the restoration of the *Work* proceeds and as in accordance with the progress payment provisions.

.7 *Contractors' Equipment Insurance* from the date of commencement of the *Work* until one year after the date of *Substantial Performance of the Work*.

- 11.1.2 Prior to commencement of the *Work* and upon the placement, renewal, amendment, or extension of all or any part of the insurance, the *Contractor* shall promptly provide the *Owner* with confirmation of coverage and, if required, a certified true copy of the policies certified by an authorized representative of the insurer together with copies of any amending endorsements applicable to the *Work*.
- 11.1.3 The parties shall pay their share of the deductible amounts in direct proportion to their responsibility in regards to any loss for which the above policies are required to pay, except where such amounts may be excluded by the terms of the *Contract*.
- 11.1.4 If the *Contractor* fails to provide or maintain insurance as required by the *Contract Documents*, then the *Owner* shall have the right to provide and maintain such insurance and give evidence to the *Contractor* and the *Consultant*. The *Contractor* shall pay the cost thereof to the *Owner* on demand or the *Owner* may deduct the cost from the amount which is due or may become due to the *Contractor*.
- 11.1.5 All required insurance policies shall be with insurers licensed to underwrite insurance in the jurisdiction of the *Place of the Work*.
- 11.1.6 If a revised version of CCDC 41 – INSURANCE REQUIREMENTS is published, which specifies reduced insurance requirements, the parties shall address such reduction, prior to the *Contractor's* insurance policy becoming due for renewal, and record any agreement in a *Change Order*.
- 11.1.7 If a revised version of CCDC 41 – INSURANCE REQUIREMENTS is published, which specifies increased insurance requirements, the *Owner* may request the increased coverage from the *Contractor* by way of a *Change Order*.
- 11.1.8 A *Change Directive* shall not be used to direct a change in the insurance requirements in response to the revision of CCDC 41 – INSURANCE REQUIREMENTS.

GC 11.2 CONTRACT SECURITY

- 11.2.1 The *Contractor* shall, prior to commencement of the *Work* or within the specified time, provide to the *Owner* any *Contract* security specified in the *Contract Documents*.
- 11.2.2 If the *Contract Documents* require surety bonds to be provided, such bonds shall be issued by a duly licensed surety company authorized to transact the business of suretyship in the province or territory of the *Place of the Work* and shall be maintained in good standing until the fulfillment of the *Contract*. The form of such bonds shall be in accordance with the latest edition of the CCDC approved bond forms.

PART 12 INDEMNIFICATION, WAIVER OF CLAIMS AND WARRANTY

GC 12.1 INDEMNIFICATION

- 12.1.1 Without restricting the *Owner's* obligation to indemnify as described in paragraphs 12.1.4 and 12.1.5, the *Owner* and the *Contractor* shall each indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings whether in respect to losses suffered by them or in respect to claims by third parties that arise out of, or are attributable in any respect to their involvement as parties to this *Contract*, provided such claims are:
 - .1 caused by:
 - (1) the negligent acts or omissions of the party from whom indemnification is sought or anyone for whose acts or omissions that party is liable, or
 - (2) a failure of the party to the *Contract* from whom indemnification is sought to fulfill its terms or conditions; and

- .2 made by *Notice in Writing* within a period of 6 years from the date of *Substantial Performance of the Work* as set out in the certificate of *Substantial Performance of the Work* issued pursuant to paragraph 5.4.2.2 of GC 5.4 – SUBSTANTIAL PERFORMANCE OF THE WORK or within such shorter period as may be prescribed by any limitation statute of the province or territory of the *Place of the Work*.

The parties expressly waive the right to indemnity for claims other than those provided for in this *Contract*.

12.1.2 The obligation of either party to indemnify as set forth in paragraph 12.1.1 shall be limited as follows:

- .1 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is to be provided by either party pursuant to GC 11.1 – INSURANCE, the general liability insurance limit for one occurrence as referred to in CCDC 41 in effect at the time of bid closing.
- .2 In respect to losses suffered by the *Owner* and the *Contractor* for which insurance is not required to be provided by either party in accordance with GC 11.1 – INSURANCE, the greater of the *Contract Price* as recorded in Article A-4 – CONTRACT PRICE or \$2,000,000, but in no event shall the sum be greater than \$20,000,000.
- .3 In respect to claims by third parties for direct loss resulting from bodily injury, sickness, disease or death, or to injury to or destruction of tangible property, the obligation to indemnify is without limit. In respect to all other claims for indemnity as a result of claims advanced by third parties, the limits of indemnity set forth in paragraphs 12.1.2.1 and 12.1.2.2 shall apply.

12.1.3 The obligation of either party to indemnify the other as set forth in paragraphs 12.1.1 and 12.1.2 shall be inclusive of interest and all legal costs.

12.1.4 The *Owner* and the *Contractor* shall indemnify and hold harmless the other from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings arising out of their obligations described in GC 9.2 – TOXIC AND HAZARDOUS SUBSTANCES.

12.1.5 The *Owner* shall indemnify and hold harmless the *Contractor* from and against all claims, demands, losses, costs, damages, actions, suits, or proceedings:

- .1 as described in paragraph 10.3.2 of GC 10.3 – PATENT FEES, and
- .2 arising out of the *Contractor's* performance of the *Contract* which are attributable to a lack of or defect in title or an alleged lack of or defect in title to the *Place of the Work*.

12.1.6 In respect to any claim for indemnity or to be held harmless by the *Owner* or the *Contractor*:

- .1 *Notice in Writing* of such claim shall be given within a reasonable time after the facts upon which such claim is based became known;
- .2 should any party be required as a result of its obligation to indemnify another to pay or satisfy a final order, judgment or award made against the party entitled by this contract to be indemnified, then the indemnifying party upon assuming all liability for any costs that might result shall have the right to appeal in the name of the party against whom such final order or judgment has been made until such rights of appeal have been exhausted.

GC 12.2 WAIVER OF CLAIMS

12.2.1 Subject to any lien legislation applicable to the *Place of the Work*, as of the fifth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the *Contractor* waives and releases the *Owner* from all claims which the *Contractor* has or reasonably ought to have knowledge of that could be advanced by the *Contractor* against the *Owner* arising from the *Contractor's* involvement in the *Work*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the date of *Substantial Performance of the Work*, except as follows:

- .1 claims arising prior to or on the date of *Substantial Performance of the Work* for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* no later than the sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*;
- .2 indemnification for claims advanced against the *Contractor* by third parties for which a right of indemnification may be asserted by the *Contractor* against the *Owner* pursuant to the provisions of this *Contract*;
- .3 claims for which a right of indemnity could be asserted by the *Contractor* pursuant to the provisions of paragraphs 12.1.4 or 12.1.5 of GC 12.1 – INDEMNIFICATION; and
- .4 claims resulting from acts or omissions which occur after the date of *Substantial Performance of the Work*.

12.2.2 The *Contractor* waives and releases the *Owner* from all claims referenced in paragraph 12.2.1.4 except for those referred in paragraphs 12.2.1.2 and 12.2.1.3 of GC 12.1 – INDEMNIFICATION and claims for which *Notice in Writing* of claim has been received by the *Owner* from the *Contractor* within 395 calendar days following the date of *Substantial Performance of the Work*.

- 12.2.3 Subject to any lien legislation applicable to the *Place of the Work*, as of the fifth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the *Owner* waives and releases the *Contractor* from all claims which the *Owner* has or reasonably ought to have knowledge of that could be advanced by the *Owner* against the *Contractor* arising from the *Owner's* involvement in the *Work*, including, without limitation, those arising from negligence or breach of contract in respect to which the cause of action is based upon acts or omissions which occurred prior to or on the date of *Substantial Performance of the Work*, except as follows:
- .1 claims arising prior to or on the date of *Substantial Performance of the Work* for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* no later than the sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*;
 - .2 indemnification for claims advanced against the *Owner* by third parties for which a right of indemnification may be asserted by the *Owner* against the *Contractor* pursuant to the provisions of this *Contract*;
 - .3 claims for which a right of indemnity could be asserted by the *Owner* against the *Contractor* pursuant to the provisions of paragraph 12.1.4 of GC 12.1 - INDEMNIFICATION;
 - .4 damages arising from the *Contractor's* actions which result in substantial defects or deficiencies in the *Work*. "Substantial defects or deficiencies" mean those defects or deficiencies in the *Work* which affect the *Work* to such an extent or in such a manner that a significant part or the whole of the *Work* is unfit for the purpose intended by the *Contract Documents*;
 - .5 claims arising pursuant to GC 12.3 - WARRANTY; and
 - .6 claims arising from acts or omissions which occur after the date of *Substantial Performance of the Work*.
- 12.2.4 The *Owner* waives and releases the *Contractor* from all claims referred to in paragraph 12.2.3.4 except claims for which *Notice in Writing* of claim has been received by the *Contractor* from the *Owner* within a period of six years from the date of *Substantial Performance of the Work* should any limitation statute of the Province or Territory of the *Place of the Work* permit such agreement. If the applicable limitation statute does not permit such agreement, within such shorter period as may be prescribed by:
- .1 any limitation statute of the Province or Territory of the *Place of the Work*; or
 - .2 if the *Place of the Work* is the Province of Quebec, then Article 2118 of the Civil Code of Quebec.
- 12.2.5 The *Owner* waives and releases the *Contractor* from all claims referenced in paragraph 12.2.3.6 except for those referred in paragraph 12.2.3.2, 12.2.3.3 and those arising under GC 12.3 – WARRANTY and claims for which *Notice in Writing* has been received by the *Contractor* from the *Owner* within 395 calendar days following the date of *Substantial Performance of the Work*.
- 12.2.6 "Notice in Writing of claim" as provided for in GC 12.2 – WAIVER OF CLAIMS to preserve a claim or right of action which would otherwise, by the provisions of GC 12.2 – WAIVER OF CLAIMS, be deemed to be waived, must include the following:
- .1 a clear and unequivocal statement of the intention to claim;
 - .2 a statement as to the nature of the claim and the grounds upon which the claim is based; and
 - .3 a statement of the estimated quantum of the claim.
- 12.2.7 The party giving "Notice in Writing of claim" as provided for in GC 12.2 – WAIVER OF CLAIMS shall submit within a reasonable time a detailed account of the amount claimed.
- 12.2.8 Where the event or series of events giving rise to a claim made under paragraphs 12.2.1 or 12.2.3 has a continuing effect, the detailed account submitted under paragraph 12.2.7 shall be considered to be an interim account and the party making the claim shall submit further interim accounts, at reasonable intervals, giving the accumulated amount of the claim and any further grounds upon which it is based. The party making the claim shall submit a final account after the end of the effects resulting from the event or series of events.
- 12.2.9 If a *Notice in Writing* of claim pursuant to paragraph 12.2.1.1 is received on the seventh or sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the period within which *Notice in Writing* of claim shall be received pursuant to paragraph 12.2.3.1 shall be extended to two calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*. If a *Notice in Writing* of claim pursuant to paragraph 12.2.3.1 is received on the seventh or sixth calendar day before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*, the period within which *Notice in Writing* of claim shall be received pursuant to paragraph 12.2.1.1 shall be extended to two calendar days before the expiry of the lien period provided by the lien legislation applicable at the *Place of the Work*.

GC 12.3 WARRANTY

- 12.3.1 Except for extended warranties as described in paragraph 12.3.6, the warranty period under the *Contract* is one year from the date of *Substantial Performance of the Work*.
- 12.3.2 The *Contractor* shall be responsible for the proper performance of the *Work* to the extent that the design and *Contract Documents* permit such performance.

- 12.3.3 The *Owner*, through the *Consultant*, shall promptly give the *Contractor Notice in Writing* of observed defects and deficiencies which occur during the one year warranty period.
- 12.3.4 Subject to paragraph 12.3.2, the *Contractor* shall correct promptly, at the *Contractor's* expense, defects or deficiencies in the *Work* which appear prior to and during the one year warranty period.
- 12.3.5 The *Contractor* shall correct or pay for damage resulting from corrections made under the requirements of paragraph 12.3.4.
- 12.3.6 Any extended warranties required beyond the one year warranty period as described in paragraph 12.3.1, shall be as specified in the *Contract Documents*. Extended warranties shall be issued by the warrantor to the benefit of the *Owner*. The *Contractor's* responsibility with respect to extended warranties shall be limited to obtaining any such extended warranties from the warrantor. The obligations under such extended warranties are solely the responsibilities of the warrantor.