

**All Trades
Specification**
FOR

FSJ RESIDENTIAL CARE COOLING UPGRADE

8407 112 Ave
Fort St John, BC V1J 0J5

Issued for Tender
December 11th, 2023

HHA #2230541

Three Bentall Centre
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NOT FOR CONSTRUCTION

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00 01 15

1 GENERAL

1.1 Scope

- .1 List of drawings bound separately from the project manual and that form part of the Contract Documents.
- .2 This drawing list does not include drawings, including standard details that are bound as part of the project manual.

2 DRAWINGS

Drawing Number – Title	Issue Date
Structural	
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END OF SECTION

INSTRUCTIONS TO BIDDERS

00 21 13

1 BIDS

1.1 Submission Date

- .1 Bids in accordance with the Drawings and Specifications included with these Bid Documents for:
Fort St. John Hospital – Residential Care Cooling Upgrade.

must be received by:
January 8th, 2023

prior to 5 o'clock p.m. PST

1.2 Submission requirements

- .1 Bids are to be electronically submitted, clearly identifying the name of the Bidder, and clearly marked:

BID FOR: Fort St. John Hospital – Residential Care Cooling Upgrade

ATTN: Meagan Webb: meagan.webb@hhangus.com, and

Joseph O'Sullivan: joseph.osullivan@hhangus.com

- .2 Bids are to be submitted on the Bid Form provided, filled out and signed by an authorized signing officer from the Bidder's organization and duly witnessed. Bid forms are to be completed without delineation, alteration or erasures and there is to be no re-capitulation of the work to be done. Should there be any discrepancy between the original and any of the copies, the original will prevail.
- .3 Bids to be for a Stipulated Sum without escalation clauses or other qualifications.
- .4 The Bid Price to include Provincial Sales taxes, Goods and Services Tax, Excise Taxes and Government Duties on materials and services required for completion of the work of the Contract, at the rates and under the conditions that are in force at the time of Bid submission.
- .5 The Bidder may show priced alternatives, substitutions and/or qualifications of the Bid which are not requested in the Bid Documents, separately from the Bid form, either as a further appendix or in an accompanying letter. The Bidder agrees that the Owner may accept the Bid without modification by the aforesaid priced alternatives, substitutions and/or qualifications, or that the Owner may accept all or any of these priced items within a mutually agreed time after executing the Contract.
- .6 Oral, telephonic, facsimile, e-mail, or telegraphic proposals will not be entertained.

2 QUESTIONS DURING BIDDING

2.1 Document review

- .1 Bidders finding discrepancies, ambiguities, or omissions in the Drawings or Specifications are to immediately notify the Consultant, and the Tender Calling Authority will issue written instructions to Bidders in the form of Addenda.

2.2 Addenda

- .1 During bidding period Bidders may be advised by Addenda of additions, deletions, or alterations to the Specifications and Drawings. The information contained in the Addenda is to supersede and amend the Drawings, Specifications and Schedules. These revisions to the work are to be allowed for in the Bid and the Addenda are to become part of the Contract Documents.
- .2 Bidders to state in the space provided on the Bid Form the numbers of the Addenda received and included for in the preparation of the Bid.

2.3 Questions arising during the bidding period to be directed to:

H.H. Angus & Associates Limited
Three Bentall Centre,
595 Burrard Street,
Suite 543,
Vancouver, BC
V7X 1G4

Attention: Meagan Webb & Joseph O'Sullivan
Telephone: (604) 229-3165
e-mail: meagan.webb@hhangus.com & joseph.osullivan@hhangus.com

- .1 Bidders seeking information with regard to organization of documents and clarification and interpretation of information on drawings or in specification may contact Consultant by telephone and questions will be collected, collated, printed and answered by Addenda.
- .2 Questions of substance with regard to quantities, quality, or acceptable manufacturers of materials and equipment or questions with regard to interpretation of the documents will not be discussed or answered by telephone and must be e-mailed to Consultant by December 19th.
- .3 E-mailed questions will be collected, collated, printed and answered by Addenda.
- .4 Neither Owner nor Consultant will be responsible for oral instructions.

3 MANDATORY SITE VISIT

- .1 A mandatory formal briefing meeting and site tour will be held at date and time and location as stipulated in Invitation to Bidders. All General and Mechanical/Electrical Subcontractors, wishing to bid must attend the Mandatory Formal Briefing Meeting and Site Tour. The Formal Briefing and Site Tour is on December 15th, 2023 Bidders must RSVP by December 13th, 2023 via email to Joseph O'Sullivan: joseph.osullivan@hhangus.com, The meeting will take place at 9:00am at the Fort St. John Hospital main entrance lobby.
- .2 Purpose of meeting is to review full extent of the Project, conduct an inspection of existing premises and to discuss any questions regarding this Project.
- .3 One representative(s) from each Bidding Contractor must attend. The minutes of this pre-Bid meeting listing attendees may be issued as an Addendum.
- .4 It is mandatory that the general, mechanical and electrical contractors attend the meeting. All other interested Bidders/sub-trades are also invited to attend, but must RSVP as per Instructions in this section. Bids will be accepted only from Bidders that attended the mandatory site tour. Bids from those who did not participate in the site tour will be disqualified.

- .5 Bidders must visit and examine the site and the existing building and satisfy themselves as to the conditions of the site, the means of access to same and the nature and quantity of work required.
- .6 Also ascertain the extent, nature and location of concealed services which may have to be protected, removed or relocated.
- .7 Information shown on the Drawings is furnished in good faith by the Consultant, but in no way relieve Bidders of the responsibility for ascertaining to their own satisfaction, the nature of conditions at the site. No claims for extra costs for failure to determine any/ all existing conditions will be entertained.
- .8 Take note of the nature of existing surfaces and include for temporary work necessary to maintain Owner's use of the premises, the roads, and the pathways during the progress of the Contract.

4 EXAMINATION OF SITE

- .1 Bidders are to visit and examine the site and the existing building, facility and satisfy themselves as to the conditions of the site, the means of access to same and the nature and quantity of work required.
- .2 Also ascertain the extent, nature and location of concealed services which may have to be protected, removed or relocated.
- .3 Levels and information shown on the Drawings are furnished in good faith by the Consultant, but in no way relieve Bidders of the responsibility for ascertaining to their own satisfaction, the nature of conditions at the site.
- .4 Take note of the nature of existing surfaces and include for temporary work necessary to maintain Owner's use of the premises, the roads, and the pathways during the progress of the Contract.

5 SUBMISSION OF BIDS

- .1 Submission of Bids to constitute proof of the Bidder's inclusion in the proposal for the work to complete the Contract in every respect and provisions for conditions and limitations, particularly with respect to access facilities, working conditions, existing conditions, storage space, codes, laws, ordinances, and regulations, whether mentioned in the Bid Documents or not.
- .2 Arrangements have been provided for the Bidder to obtain clarification with regard to discrepancies, ambiguities, or omissions in the Bid
- .3 Documents and to visit and review the conditions at the site and therefore the submission of a Bid will be construed as a waiver of any claims for extra compensation on account of un-anticipated work caused by existing conditions or un-expected interpretation of the Bid Documents.

6 BID DEPOSITORY

- .1 Conform to Rules and Instructions of the Bid Depository. Supplementary data called for in the Supplementary Bid Form must be submitted with the standard Bid in the electronic submission of each General Contractor either by transfer to the standard form or by inclusion of the Supplementary Bid Form with the standard form.

7 AWARDS

- .1 The Owner reserves the right to open Bids privately, to reject any or all Bids, to waive informalities, and to award the contract to the Bidder providing the greatest value, based on quality, service, and price. These rights are expressly reserved by the Owner without liability on the part of the Owner or Consultant.

- .2 The Owner reserves the right to reject Bids received from parties who cannot show a reasonable acquaintance with or preparation for the class of work specified. Evidence to substantiate competence to be furnished by the Bidder if requested.
- .3 It is to be understood by Bidders that the Bid is to be valid and subject to acceptance by the Owner without adjustment, for a period of up to and including ninety (90) days from the date of closing of Bids.

8 BONDS

- .1 Bidders to include with their Bid a Bid Bond made payable to Angus Consulting Management Limited (ACML) for the amount of 10% of the Bid Price as evidence of good faith that, if awarded the Contract, the Bidder will execute and enter into a formal agreement within the time required and will furnish the security required to secure the performance of the terms and conditions of the Contract.
- .2 Proof of a 50% Material and Labour Bond as well as a 50% Performance Bond to be included in the submission. Bonds must be provide by the selected contractor within 10 days of award.
- .3 Bidders are to include with their Bid an Agreement to Bond in accordance with Article 22.1 of the Supplementary General Conditions. The successful Bidder to furnish the Bond at the time of signing the Contract in accordance with Article GC11 of the General Conditions and Article 22.1 of the Supplementary General Conditions.

9 COMPANY PROFILE

- .1 Provide resumes for the proposed Project Manager and Foreman for General Contractor with completed projects of similar scope in Acute Care Hospital Settings over the past 5 years Bidders.

10 BID DOCUMENTS

- .1 Electronic copies of the drawings and specifications will be issued to each Bidder.
- .2 Bidder is responsible for checking the Drawings and Specifications received to ensure that the documents are complete in accordance with the List of Bid Documents.
- .3 After the Contract is signed the successful Bidder will be given electronic sets of Specifications and Drawings in addition to the signed and sealed Contract Document set.

11 SCHEDULING OF WORK

- .1 Time is the essence of this Contract. The Bidder is to indicate in the space provided on the Bid Form the time to mobilize before commencing the work after award of Contract and the time to complete the work after commencing.
- .2 Bidder to provide a detailed estimated schedule with major milestones along with the Bid Form. Estimated schedule to indicate equipment shutdowns and shutdown durations.

12 SUB-CONTRACTORS

- .1 Bids have been solicited from General Trades Contractors, and all other Sections of the work to be performed by sub-contractors employed and coordinated by the successful General Trades Bidder.
- .2 Bidders to submit on the Bid Form, a complete list of all sub-contractors to whom it is proposed to sublet any part of the work.

- .3 The list of sub-contractors set forth is not to be altered or changed except as may be agreed by the Owner and the Consultant prior to the signing of the Contract.

13 ASSIGNMENT

- .1 The work under this Bid covers the all trades, the whole of which will be executed by a General Contractor selected from the following list of General Trades Bidders:
 - .1 After the award of the General Contract, the work under this Bid will become a normal sub-contract within the General Contract.
 - .2 The work described in this Bid Document to be executed in full co-operation with the General Contractor and other Contractors and sub-contractors.
 - .3 After assignment of the Contract there will be no direct contractual relationship between the Owner and the sub-contractor.

14 EVALUATION PROCESS

- .1 The objective of the evaluation process is to identify the Proponent that has the highest ranking score based on the Evaluation Criteria in Section 15. The evaluation of the Bids will be conducted by the Consultant in three stages described below:
- .2 Stage 1 - Review of Mandatory Requirements
 - (a) Provided that the Proposal is a qualified Bid, the Bid shall be reviewed for compliance in accordance with all Mandatory Requirements contained in this RFT. Bids that fail to comply with all Mandatory Requirements in this RFT will be eliminated from the process.
 - (b) Mandatory Requirements are listed in the Evaluation Criteria in Section 15.
- .3 Step 2 - Evaluation of Rated Requirements: Bid Submission
 - .1 Proponents will be evaluated based on the requirements listed in Section 15, Evaluation Criteria.
 - .2 Pricing will be scored based on a relative pricing formula. Each bidder will receive a percentage of the total points possible related to the lowest bid price. The percentage will be calculated by dividing the lowest bid price / bid price and multiplying it by the maximum points available.
 - .3 Company and Personnel profiles will be scored based on a relative scoring formula. Each bidder will receive a percentage of the total points possible related to quality of submission (at sole discretion of HHA and Owner) while meeting of all of the mandatory tasks.
 - .4 Schedule will be scored based on a relative scoring formula. Each bidder will receive a percentage of the total points possible related to shortest duration of schedule and minimal air handling unit downtime while meeting of all of the mandatory tasks outlined in Section 11.2 (excluding alternate season testing). The percentage will be calculated by dividing the shortest schedule (days) / bid schedule (days) and multiplying it by the maximum points available.
 - .5 Impacts of Works to Normal Building Operation will be scored based on a relative scoring formula. Each bidder will receive a percentage of the total points possible related to not impacting the normal function of the long-term care facility, this is done by...
 - Limiting air handling unit downtime. Bidders to provide a plan for installing the dx cooling coil while causing minimal impact to the function of the AHU, bidders will receive a high percentage of points by having continuous airflow in the long term care facility.
 - Installing the blocking for the roof structural pad from above. Bidders to provide a plan for installing the condensing unit roof concrete pads and wooden curbs, bidders will receive a high percentage of points by not impacting the long-term care common area below.

.4 Step 3 - Identification of successful Proponent(s)

- .1 Identification of Successful Bidder based on the evaluation completed in Stage 1 and Stage 2.

15 EVALUATION CRITERIA

Rated Criteria	Weight
Step 1 : Mandatory Requirement	
a. Mandatory Site Visit	PASS/FAIL
b. Insurance Certificates	PASS/FAIL
c. Proof of Performance Bond / Material & Labour Bond	PASS/FAIL
d. Bid Bond	PASS/FAIL
e. Workplace Safety and Insurance Board	PASS/FAIL
Step 2: Rated Requirements – Bid Submission	
a. Price Proposal	45%
b. Company and Personnel Profile	15%
c. Schedule	30%
d. Impact of Works to normal Building Operation	10%
TOTAL	100%

16 MATERIALS AND EQUIPMENT

- .1 Bids to be based upon materials and equipment of manufacture, type and design specified.
- .2 Bid Price to be based on using materials or equipment of the manufacturer named in the Specification. If more than one manufacturer's name is listed in Specification for a specific item, the bidder may choose the manufacturer, whose price is used in preparing Bid.
- .3 Material and equipment, considered equal to that specified, may be proposed at time of Bidding. The price adjustment, showing addition to or deduction from Bid Price for each item, to be entered as an alternative price in the Bid Form. When requested, submit specifications and details of proposals to Consultant for evaluation.

17 ITEMIZED PRICES

- .1 Bidders to break pricing down to each individual subtrade and each piece of equipment.

18 SEPARATE PRICES

- .1 Bidders to provide separate prices for installing just one new cooling coil in each air handling unit or installing a new heating and cooling coil in each air handling unit. Bidder to provide separate schedules for both options.
- .2 Bidder to provide separate price for installing two 50 ton condensing units instead of 60 ton condensing units.

19 UNIT PRICES

- .1 Bidders to provide trade rates, regular timer and over time.

20 CASH ALLOWANCES

- .1 Not applicable.

END OF SECTION

NOT FOR CONSTRUCTION

BID FORM - STIPULATED SUM - SINGLE PRIME CONTRACT
00 41 13

TO: **Angus Consulting Management Limited (ACML)**

c/o: H.H. Angus & Associates Ltd.
Three Bentall Centre
595 Burrard Street
Suit 453
Vancouver, BC
V7X 1G4

BIDDER _____

ADDRESS _____

TELEPHONE _____

1 BID PRICE

- .1 Having examined the Contract Documents, Drawings, Specifications and Addenda prepared by H. H. Angus & Associates Limited for

Residential Care Cooling Upgrade

as well as the premises and conditions affecting the work, we offer to furnish plant, labour, services, equipment and materials necessary for the work for the price stated herein in lawful money of Canada.

- .2 The price includes overhead and profit, insurance, warranties, transportation charges, Provincial Sales Taxes and other related fees and charges.

1.2 Stipulated Sum (no tax) _____

Dollars (\$) _____

1.3 Provincial Sales Tax _____

Dollars (\$) _____

1.4 Goods and Services Tax _____

_____ Dollars (\$_____)

2 SCHEDULE

- .1 Our Bid is in accordance with the requirements of the Instructions to Bidders.
- .2 We will start preparation of shop drawings immediately on receipt of a Letter of Intent, and commence the work in ____ days after award of Contract. We will complete the work ____ weeks after commencing in accordance with the schedule of work in the Documents.
- .3 During the works AHU-11 supply section will be out of service for ____ days and AHU-12 supply section will be out of service for ____ days if adding a new cooling coil and a new heating coil and AHU-11 supply section will be out of service for ____ days and AHU-12 supply section will be out of service for ____ days if adding just a new cooling coil.
- .4 The Bid Price includes costs on account of premium time or overtime work required in order to meet the above-mentioned completion date, whether or not such work is done by the Contractor's own work force or by sub-contractors.

3 DOCUMENTS

- .1 The undersigned submits that he has carefully examined the site of the proposed work, existing conditions, as well as the Drawings listed in the List of Drawings.
- .2 Also, he has thoroughly reviewed the Instructions to Bidders, Bid Form, General Conditions, Supplementary Conditions, Specifications listed in the Table of Contents, and the following Addenda and hereby accepts and agrees to the same as forming part and parcel of the proposed Contract.

Addendum No. _____ dated _____

Addendum No. _____ dated _____

Addendum No. _____ dated _____

4 BONDS & INSURANCE

- .1 Bidders to include with their Bid a Bid Bond made payable to Angus Consulting Management Limited (ACML) for the amount of 10% of the Bid Price as evidence of good faith that, if awarded the Contract, the Bidder will execute and enter into a formal agreement within the time required and will furnish the security required to secure the performance of the terms and conditions of the Contract.
- .2 Proof of a 50% Material and Labour Bond as well as a 50% Performance Bond to be included in the submission. Bonds must be provide by the selected contractor within 10 days of award.
- .3 Bidders are to include with their Bid an Agreement to Bond in accordance with Article 22.1 of the Supplementary General Conditions. The successful Bidder to furnish the Bond at the time of signing the Contract in accordance with Article GC11 of the General Conditions and Article 22.1 of the Supplementary General Conditions.

.4 The following required items are submitted herewith.

Bid Bond
Agreement to Bond
Workplace Safety and Insurance Board

5 EXECUTE CONTRACT

- .1 If notified of the acceptance of this offer within ninety (90) days of the closing of Bids, we will:
- .1 Execute a Contract with the Owner for same in the form of the Canadian Standard Construction Document - CCDC2-2020.
 - .2 Furnish bonds as set out in the Instructions to Bidders
 - .3 When requested by the Owner, perform additional work at the percentages set forth in the Supplementary General Conditions Article 18.

6 WORK SUBLET

.1 Listed below are the names of sub-contractors and the extent of work sublet:

Work Sublet

Name

Mechanical Contractor: _____

Electrical Contractor: _____

Roofing Contractor: _____

- .2 We reserve the right to substitute other sub-contractors for any trades in the event of any sub-contractor withdrawing his Bid or becoming bankrupt after the award of Contract. Any such substitution shall be subject to the approval of the Owner, and contingent upon evidence of withdrawal or bankruptcy, satisfactory to the Consultant.

7 ALTERNATE MANUFACTURERS, MATERIALS, AND EQUIPMENT

- .1 The following are proposed alternates with the price adjustment if the alternate is accepted. Each price adjustment is inclusive of PST, and exclusive of GST.

Item	Manufacturer	Addition	Deduction

8 ITEMIZED PRICE

- .1 Bidders to break pricing down to each individual subtrade and each piece of equipment.

9 SEPARATE PRICE

- .1 Bidders to provide separate prices for installing just one new cooling coil in each air handling unit or installing a new heating and cooling coil in each air handling unit. Bidder to provide separate schedules for both options.
- .2 Bidder to provide separate price for installing two 50 ton condensing units instead of 60 ton condensing units.

10 UNIT PRICES

- .1 Bidders to provide trade rates, regular time and over time.

11 CASH ALLOWANCE

- .1 Not applicable.

12 COST BREAKDOWN

- .1 Bidders to supply cost breakdown at time of bid per spec section 01 29 76.

Date

SIGNATURE

COMPANY

Seal

ADDRESS

END OF SECTION

SUPPLEMENTARY GENERAL CONDITIONS – CCDC 2-2020
00 73 13.20

1 GENERAL

1.1 This specification section consists of supplementary conditions that modify:

- .1 the Agreement, Definitions and/or General Conditions of CCDC 2-2020 *Stipulated Price Contract*;
- .2 CCDC 40 *Rules for the Mediation and Arbitration of Construction Disputes*; and/or
- .3 CCDC 41 *CCDC Insurance Requirements*.

2 AGREEMENT – NEW ARTICLE A-9

2.1 Add article A-9:

ARTICLE A-9 Electronic Signatures and Counterparts

"9.1 This Agreement and any Change Orders, Change Directives or other instruments related to this Agreement may be executed in any number of counterparts, each of which shall be an original and all of which together shall constitute the same instrument. The execution of this Agreement and any Change Orders, Change Directives or other instruments related to this Agreement may be executed and communicated by way of facsimile, email or other form of electronic transmission (including PDF), and receipt of such transmission by any party shall be deemed to be good, sufficient and fully effectual as if an executed original hardcopy had been delivered to such party.

3 DEFINITIONS

3.1 Revise Item 19. Subcontractor by changing the item title to Sub-Contractor and Sub-Sub-Contractor and add a new sentence;

'A Sub-Sub-Contractor is a person or entity having a direct contract with a Sub-Contractor to perform a part or parts of the Work at the Place of the Work'

3.2 Revise Item 22. Supplier by inserting after the word 'Contractor' the words ' Sub-Contractor or Sub-Sub-Contractor '

4 CONTRACT DOCUMENTS (GC 1.1)

4.1 Delete paragraph GC 1.1.3 and replace with the following:

1.1.3 The Contractor shall review the *Contract Documents* to:

- .1 facilitate co-ordination and execution of the *Work* by the *Contractor*,
- .2 confirm that any discrepancies, ambiguities, or omissions in the *Contract Documents* found by *Contractor* during the bid period and for which Consultant was notified at that time have been resolved in the *Contract Documents*, and
- .3 confirm they are consistent with existing conditions of the *Place of the Work* based on *Contractors* thorough examination of those existing conditions at the time of the bid.

4.2 Add clause GC 1.1.5.6 as follows:

1.1.7.5 Where conflict occurs between *Specifications* or *Drawings* with requirements of codes applicable to the *Work*, the maximum condition shall govern and the Tender or Bid Price shall be based on

whichever indicates the greater cost. The Contractor shall obtain clarification of the conflict prior to the commencement of the *Work*.

4.3 Add clause GC 1.1.5.7 as follows:

1.1.7.6 In case of conflict between the General Conditions and the Supplementary Conditions, the General Conditions shall be amended but only to the extent necessary to make the provisions of the Supplementary Conditions effective.

5 LAW OF THE CONTRACT (GC 1.2)

5.1 Delete paragraph GC 1.2.1 and replace with the following:

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

6 ROLE OF THE CONSULTANT (GC 2.2)

6.1 Delete paragraph GC 2.2.7 and replace with the following:

2.2.7 The *Consultant* will be, in the first instance the interpreter of the requirements of the *Contract Documents*.

6.2 Add the following paragraph to GC 2.2:

2.2.19 The *Consultant* shall not be required to decide on questions arising under agreements or contracts between the Contractor, their *Sub-Contractor's*, their *Sub-Sub-Contractor's*, and *Supplier's*.

7 REVIEW AND INSPECTION OF THE WORK (GC 2.3)

7.1 Add the following paragraph to GC 2.3:

2.3.8 The Contractor shall notify the *Consultant* of locations where installation of fixtures, fittings and equipment would interfere with interior treatment and use of building. In such cases, supplemental *Drawings* or instructions exactly locating these items will be issued. If the *Contractor* believes that any such instructions, by *Drawings* or otherwise, involve extra cost under the *Contract*, the *Contractor* shall give the *Consultant* prior written notice and obtain the *Owner's* prior written approval in the form of a *Change Order* or *Change Directive*, before proceeding to carry out the *Work*.

8 DEFECTIVE WORK (GC 2.4)

8.1 Delete paragraph GC 2.4.3 and replace with the following:

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*, a *Change Order* will be issued to 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*.

9 SUPERVISION (GC 3.5)

9.1 Delete paragraph GC 3.5.1 and replace with the following:

- 3.5.1 The *Contractor* and each major *Sub-Contractor* shall provide supervision of the *Work* and appoint competent representatives and appropriate assistants who shall be in attendance at the *Place of the Work* while *Work* is being performed. The representatives and assistants shall not be changed without approval from the *Owner*, and upon submission of valid reasons such approval shall not be unreasonably withheld.

9.2 Delete paragraph GC 3.5.2 and replace with the following:

- 3.5.2 The *Contractor's* representative shall represent the *Contractor* at the *Place of the Work*. Information and instructions provided by the *Consultant* to the *Contractor's* 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. The *Contractor's* representative shall be responsible for prompt transmission of information and instruction received from the *Consultant* and they shall be promptly transmitted to *Sub-Contractors*, *Sub-Sub-Contractors* and *Suppliers* involved.

9.3 Add paragraph GC 3.5.3 as follows:

- 3.5.3 Where *Contractor's* representative, or the representative of any major *Sub-Contractor*, is determined by *Owner*, acting reasonably, as not possessing the necessary competency through demonstration of lack of appropriate knowledge or experience in understanding the *Contract Documents* or scope of the *Work*, *Owner* may direct *Contractor*, or major *Sub-Contractor*, to replace their representative with a person of appropriate level of knowledge and experience who shall be approved by *Owner*, acting reasonably.

10 LABOUR AND PRODUCTS (GC 3.7)

10.1 Delete paragraph GC 3.7.1 and replace with the following:

- 3.7.1 The *Contractor* shall maintain good order and discipline among the personnel engaged on the *Work* by *Contractor* or *Sub-Contractor* of any tier and shall not allow the employment of anyone not skilled in the tasks assigned.

11 SHOP DRAWINGS (GC 3.8)

11.1 Add the following to the end of the first sentence in paragraph GC 3.8.5:

..... and provide written explanation for the deviation, with proposed *Contract Price* adjustment.

12 CASH ALLOWANCES (GC 4.1)

12.1 Delete paragraph GC 4.1.2 and replace as follows:

- 4.1.2 The *Contract Price*, and not the cash allowance, includes the *Contractor's*, *Sub-Contractor's* and any other *Sub-Sub-Contractor* of any tier, overhead and profit in connection with such cash allowances.

13 FINANCING INFORMATION REQUIRED OF THE OWNER (GC 5.1)

13.1 Delete Article GC 5.1 and subsequent references to this Article in their entirety.

14 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK (GC 5.4)

14.1 Add new paragraph GC 5.4.7 as follows:

5.5.6 In addition to any rights the *Owner* has pursuant to any *Payment Legislation* applicable at the *Place of the Work*, if a lien is registered or an action commenced against the *Owner*, the *Owner* may withhold from any money otherwise due to the *Contractor*, the full amount claimed in the lien action plus an additional sum sufficient to satisfy all of the *Owner's* expenses relating to such lien actions, including legal costs. These funds held back shall be released to the *Contractor* upon the full discharge of all liens and dismissal of all actions against the *Owner*.

15 LAWS, NOTICES, PERMITS AND FEES (GC 10.2)

15.1 Delete paragraph GC 10.2.2 and replace with the following:

10.2.2 The *Owner* shall:

- .1 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*; and
- .2 if required, submit the *Drawings and Specifications*, complete with the necessary forms, to obtain approval from the regulatory authority concerning discharge of emissions to the atmosphere and/or waterways and will pay all costs in connection to such approvals.

15.2 Add the following at the end of paragraph GC 10.2.3:

Applications for permits requiring *Owner's* signature shall be submitted before *Work* is commenced.

16 READY-FOR-TAKEOVER (GC 12.1)

16.1 Add sentence 12.1.1.9 to 12.1.1.11 to GC 12.1.1 as follows:

- .9 all commissioning activities except for those activities that are identified or otherwise agreed by the *Owner* to be deferred commission activities which may be completed after *Ready-for-Takeover of the Work*;
- .10 integrated systems testing of fire protection and life safety systems;
- .11 provide all warranties in accordance with GC-12.3 – WARRANTY.

16.2 Delete paragraph GC 12.1.5 and replace with the following:

12.1.5 Immediately following the confirmation of the date of *Ready-for-Takeover*, the *Contractor* and *Owner* shall agree on a date for the *Contractor* to finish the *Work*.

END OF SECTION



1.2
PART 1.3 SUPPLEMENTARY CONDITIONS
For use with CCDC 2-2020 Stipulated Price Contract

ARTICLES

Add new:

Article A-9 TIME IS OF THE ESSENCE

“Time is of the essence in the performance of the Contract.”

GENERAL CONDITIONS OF THE STIPULATED PRICE CONTRACT

PART 2 ADMINISTRATION OF THE CONTRACT

GC 2.3 REVIEW AND INSPECTION OF THE WORK

2.3.2 Add, in the first sentence “review,” before the word “tests”.

2.3.4 In the first sentence, replace “special” with “review,” and add “review,” before the third instance of “inspections”.

Add new:

2.3.8 Should the *Consultant* be required to make more than one review of rejected work or should the *Consultant* perform additional reviews due to failure of the Work to comply with the application for status of completion made by the *Contractor*, the *Contractor* is required to compensate the *Owner* for such additional *Consultant* services including expenses incurred. Adjustment for such compensation should be made as outlined under PART 6 CHANGES IN THE WORK.

PART 3 EXECUTION OF THE WORK

GC 3.5 SUPERVISION

3.5.1 Add after the last sentence:

“The appointed *Contractor* representative shall not be changed without consultation with and written acceptance of the *Owner*. This acceptance shall not be unreasonably withheld.”

GC 3.6 SUBCONTRACTORS AND SUPPLIERS

3.6.4 Add at the end of the sentence “, as outlined in GC 6.3 – CHANGE DIRECTIVE.”



PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

- 4.1.2 Add, after the first sentence “Unless noted otherwise, none of the work included in the drawings and specifications is intended to be paid for by the cash allowances. The cash allowances are for the *Owner’s* use, at the *Owner’s* sole discretion.”

PART 5 PAYMENT

Amend the heading “**GC 5.1 FINANCING INFORMATION REQUIRED OF THE OWNER**” to read “**GC 5.1 FINANCING INFORMATION REQUIRED**”

Delete paragraph 5.1.1 and 5.1.2 in their entirety and replace with:

- 5.1.1 The *Owner* and the *Contractor* shall provide each other with timely *Notice in Writing* of any material change in their financial ability to fulfill their respective obligations under the *Contract*.

GC 5.2 APPLICATIONS FOR PAYMENT

- 5.2.4 Add, after the first sentence:
“A secondary schedule, stating the anticipated monthly progress payments, is to be submitted upon request.”

Add new:

- 5.2.9 An application for payment shall be deemed received only if submitted complete with required supporting documentation as determined by the *Consultant*.

GC 5.3 PAYMENT

- 5.3.1.1 Add another sentence:
“If, after a certificate of payment has been issued to the *Owner* (and prior to payment by the *Owner*), the *Consultant* determines on the basis of new information that the amount certified for payment is inappropriately high or low relative to the value of the work performed, then the *Consultant* shall issue a revised certificate of payment, and promptly advise the *Contractor* in writing giving reasons for the amendment.”

Add new:

- 5.3.2 At the first application for payment following *Ready-for-Takeover*, the *Consultant* shall issue to the *Owner* and copy to the *Contractor*, a certificate for payment for an amount that deducts an amount equal to twice the value of any deficiencies as determined by the *Consultant*.



Add new:

- 5.3.3 Partial payment may not be made for the completion or correction of any deficiencies shown on the comprehensive list of items to be completed or corrected prior to the date of the issuance of the final certificate of payment.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

- 5.4.1 Change “20 calendar days” to “10 days”.

Add new:

- 5.4.7 At *Substantial Performance of the Work*, the *Consultant* shall issue a list itemizing the value of any items to be corrected or completed to the *Owner* and copy to the *Contractor*.

GC 5.5 FINAL PAYMENT

- 5.5.2 Change “calendar days” to “*Working Days*”

- 5.5.4 Change “5 calendar days” to “10 *Working Days*”

PART 6 CHANGES IN THE WORK

GC 6.2 CHANGE ORDER

Add new:

- 6.2.3 The following shall determine *Contractor* markup on *Change Orders* by percentage:
- .1 To the cost of the *Work* performed by the *Contractor* directly, the *Contractor* may add a maximum of 20% markup for overhead and profit combined.
 - .2 To the cost of the *Work* performed by *Subcontractors* for the *Contractor*, before the *Subcontractor's* markup, the *Contractor* may add a maximum of 10% markup for overhead and profit combined.
 - .3 On *Work* deleted from the *Contract*, not covered by unit prices, the credit to the *Owner* shall be the cost of the *Work* as set out in GC 6.3 – CHANGE DIRECTIVE, article 6.3.7.
 - .4 For a detailed list of what the *Contractor* may include in the cost of the *Work* before adding markups, refer to GC 6.3 CHANGE DIRECTIVE, article 6.3.7.



GC 6.3 CHANGE DIRECTIVE

Add new:

6.3.14 The following shall determine *Contractor* markup on *Change Directives* by percentage:

- .1 To the cost of the *Work* performed by the *Contractor* directly, the *Contractor* may add a maximum of 20% markup for overhead and profit combined.
- .2 To the cost of the *Work* performed by Subcontractors for the *Contractor*, before the Subcontractor's markup, the *Contractor* may add a maximum of 10% markup for overhead and profit combined.
- .3 On *Work* deleted from the Contract, not covered by unit prices, the credit to the Owner shall be the cost of the *Work* as set out in GC 6.3 – CHANGE DIRECTIVE, article 6.3.7.

GC 6.5 DELAYS

6.5.3.3 Add the word "local" after the word "adverse".

Add new:

6.5.6 The party making the claim shall submit to the *Consultant*, within 10 *Working Days*, an estimated quantum of the claim and of the *Contract Time* extension claimed, and the grounds upon which the claim is based complete with required supporting documentation as determined by the *Consultant*.

Add new:

6.5.7 Should the *Consultant*, in consultation with the *Contractor*, determine the *Contractor* is delayed in performance of the *Work*, or any part thereof, by the *Contractor's* inaction, or by delay or inaction of anyone employed or engaged by the *Contractor* directly or indirectly, and the *Contract Time* is compromised:

- .1 Then the *Contractor* shall accelerate the *Work* as required to meet the *Contract Time*.
- .2 The *Consultant* will promptly give *Notice in Writing* of such determination to the *Owner* and the *Contractor*.
- .3 The *Contractor* shall then promptly give the *Owner* and the *Consultant* *Notice in Writing* of specific changes to the construction scheduling and construction processes the *Contractor* will implement to accelerate the *Work*.
- .4 The *Contractor* shall not be entitled to payment for costs to accelerate the *Work* to meet the *Contract Time*.
- .5 If either party does not accept the *Consultant's* determination, the disagreement shall be settled in accordance with Part 8 of the General Conditions – DISPUTE RESOLUTION. It being understood that by so doing neither party will jeopardize any claim the party may have to be reimbursed.



GC 6.6 CLAIMS FOR A CHANGE IN CONTRACT PRICE

6.6.1 Delete: “Timely” and add “10 Working Days from the event or series of events giving rise to the claim”

PART 7 DEFAULT NOTICE

GC 7.1 OWNER’S RIGHT TO PERFORM THE WORK, STOP THE WORK, OR TERMINATE THE CONTRACT

7.1.5 In the first sentence, after “paragraph 7.1.1,” replace “and” with “or”.

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.4 CONSTRUCTION SAFETY

Add to end of 9.4.1: “and be designated as the prime contractor”

PART 10 GOVERNING REGULATIONS

GC 10.2 LAWS, NOTICES, PERMITS, AND FEES

Add new:

10.2.8 The *Contractor* shall provide to the *Consultant* copies of all inspection reports from the various authorities having jurisdiction within two *Working Days* of their receipt.

GC 10.4 WORKERS’ COMPENSATION

Add new:

10.4.2 The *Contractor* is formally designated as the “prime contractor.”

PART 12 OWNER TAKEOVER

GC 12.2 EARLY OCCUPANCY BY THE OWNER

Add new:

GC 12.2.5

The *Owner* may take possession of and use completed or partially completed portion of the *Work*, in addition to occupancy conditions included in the Contract, providing:

- .1 Only as agreed by the Contractor, such agreement will not be unreasonably withheld.
- .2 the portion of the *Work* is ready to be used for the purpose intended, to the satisfaction of the *Consultant* and authorities having jurisdiction; and
- .3 the *Owner’s* possession and use do not interfere with the Contractor’s *Work*; and
- .4 the *Consultant* conducts a review prior to possession by the *Owner*; and
- .5 any extra costs are borne by the *Owner*, subject to the provisions of GC 6.5 Delays.



GC 12.3 WARRANTY

12.3.4 Add a second sentence “In effecting a correction of defects or deficiencies, the *Contractor* shall also bear all costs involved in removing, replacing, repairing, or restoring aspects of the *Work* that may be affected in the process of making the correction.”

Add new:

12.3.7 Where a material, product or installation referenced in 12.3.1 covered by warranty fails, the stipulated warranty and warranty period shall be renewed for the specific work being replaced or repaired, with the exception of warranties referred to in GC 12.3.6. Such extended warranties referenced in 12.3.1, shall not exceed one year from the date of removing, replacing, repairing, or restoring.

Add new:

PART 14 MISCELLANEOUS

14.1 CONFIDENTIALITY

14.1.1 All information provided by or obtained from the *Owner* in any form in connection with the *Project*:

1. is the sole property of the *Owner* and must be treated as confidential;
2. is not to be used for any purpose other than the performance of the *Work*;
3. is not to be disclosed without prior written authorization from the *Owner*; and
4. must be returned to the *Owner* immediately upon request.

14.2 INFORMATION TECHNOLOGY RELATED THREATS

14.2.1 The *Contractor* shall notify the *Owner* and its mutual affiliates, as soon as reasonably possible, of any information technology related threat that may be transmitted electronically to the *Owner* or any of its affiliates which includes but is not limited to: viruses, rogue security software, trojan horses, spyware, computer worms, phishing, rootkits and any real or perceived electronic attack (the “IT Threat”).

14.2.2 In the event the *Owner* becomes aware of an IT Threat, the *Owner* may as soon as reasonably possible, notify any organization that it reasonably believes could be exposed to the same IT Threat and include in such notification any relevant details for the purpose of avoiding or minimizing any negative impact.

PART 1.3 PROJECT SPECIFIC AMENDMENTS

The Articles of Agreement Between Owner and Contractor, the General Conditions of the Stipulated Price Contract CCDC 2 – 2020, BCDC Division 00 and BCDC 2-2022 Supplementary Conditions together with the following alterations and additions shall apply in their entirety to the Contract.

AMENDMENTS TO DIVISION 00

PART 1.1 Division 00 21 13 – INSTRUCTIONS TO BIDDERS

Add:

4.2.3 Infection Control Guidelines - Contractors are required to comply with CSA Z317.13-22 or latest approved version, which may require specialized equipment & procedures. The following are guidelines only and not to be taken as complete instruction. Requirements will vary from project to project, and it is the Contractor's responsibility to ensure they are fully aware of the requirements specific to this project. NH Infection Control Practitioners will instruct Contractors as to the level of infection control measures required. Measures may include but are not limited to the following:

- i) Dust control
 - (1) may include hoarding from true ceiling to floor with 12 mil polyethylene, zippered doors.
 - (2) hoarding may be required in ceiling space and vacuumed upon completion
 - (3) room penetrations such as doors, windows, electrical outlets, intake and exhaust vents etc. may need to be sealed with plastic & duct/tuck tape (includes holes cut in walls as part of the project unless repaired within 8 hours).
 - (4) water misting of work surfaces before cutting.
 - (5) Construction workers to wear personal protective equipment, and to vacuum themselves with a HEPA filtered vacuum before leaving the work site, or wear cloth paper coveralls that are removed before leaving the work site.
 - (6) Sticky walk-off mats at exit of hoarding, changed daily or more often if necessary
 - (7) Immediate cleanup with HEPA filtered vacuum in the event hoarding tears/breaks
- ii) Ventilation
 - (1) area ventilation system disabled during construction/renovation
 - (2) maintain negative pressure in construction zone
 - (3) Exhaust air directly outside and away from any intake vents or to be filtered through HEPA filters before recirculating
- iii) Debris Removal
 - (1) Debris removal at each days end in a covered container or plastic garbage bag through designated route covered with moistened sheet before transporting
 - (2) Container and wheels to be wiped down before re-entering facility
 - (3) External chute if construction is not on ground floor
- iv) Construction Clean
 - (1) Wet mop and vacuum area with HEPA filtered vacuum upon completion
 - (2) Wipe horizontal work surfaces with hospital approved disinfectant
- v) Terminal Clean
 - (1) To be performed by facility housekeeping staff upon completion of construction clean and PRIOR to hoarding being taken down

- 4.2.4 For greater clarity of CSA Z317.13-22 section 6.3.7 "Design and management professionals": The Design professional will be responsible for providing documentation demarcating the area and performance requirements required for infection control. The *Contractor* is required to design and provide the means and methods to meet the guidelines duly providing an IC plan and obtain acceptance from the MDT as per section 6.3.9.1.
- 4.2.5 Contractor shall comply with the infection control practices set out in the IPAC training program. Below is the link of the online course: <https://www.csagroup.org/store/product/50000035/>.

AMENDMENTS TO ARTICLES OF AGREEMENT BETWEEN OWNER AND CONTRACTOR

ARTICLE A-5 PAYMENT

- 5.2.1 Replace "2%" with "0%"; Replace "4%" with "0%".

AMENDMENTS TO GENERAL CONDITIONS

PART 3 EXECUTION OF THE WORK

GC 3.3.1 Temporary Work

3.3.1 Add, after the first sentence "For further clarity, the *Contractor* acknowledges and agrees that the *Contract Price* is inclusive of all costs associated with the design, erection, operation, maintenance, and removal of *Temporary Work*, including any *Construction Equipment* required for the same. The *Contractor* is not entitled to any additional payment for any such *Temporary Work*, including any *Construction Equipment*."

PART 4 ALLOWANCES

GC 4.1 CASH ALLOWANCES

- 4.1.2 Add, after the first sentence "Unless noted otherwise, none of the work included in the drawings and specifications is intended to be paid for by the cash allowances. The cash allowances are for the *Owner's* use, at the *Owner's* sole discretion. "

PART 5 PAYMENT

GC 5.2 APPLICATIONS FOR PAYMENT

Add:

- 5.2.10 The *Contractor* shall with each and every application for payment have an up-to-date red-lined as-built drawing available on site for *Consultant* review.

GC 5.3 PAYMENT

Delete: Section 5.3.1.2 in its entirety.

Add:

- 5.3.1.3 The *Owner* shall make payment to the *Contractor* on account as provided in Article A-5 of the Agreement – PAYMENT on or before 30 calendar days after the receipt by the *Owner* and the *Consultant* of the application for payment.

GC 5.4 SUBSTANTIAL PERFORMANCE OF THE WORK AND PAYMENT OF HOLDBACK

Add:

- 5.4.8 “An application for *Substantial Performance of the Work* shall be deemed complete only if submitted with required supporting documentation, including those requirements in GC 5.2.8, as determined by the *Consultant*, and including draft copies of *Operations and Maintenance Manuals* including table of contents, and approved shop drawings complete with *Operations and Maintenance Manuals* submissions.”

Add new:

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.
- 5.8.2 Upon the provision of *Notice in Writing* to the *Contractor*, and notwithstanding any other provisions of the *Contract Documents*, the *Owner* may withhold all or any portion of any payment to the extent necessary to protect the *Owner* from any actual or anticipated cost, damage, expense or loss arising from:
- .1 the unsatisfactory progress of the *Contractor* in performing the *Work*, as determined by the *Consultant* acting reasonably and in good faith;
 - .2 the failure of the *Contractor* to pay any amounts properly due and payable by the *Contractor* to third parties arising from the performance of the *Work* in the aggregate amount of such amounts; and
 - .3 unsatisfied claims for costs, damages, expenses or losses caused by the *Contractor* to the *Work* or to the property of the *Owner*, the *Consultant*, other contractors, or to anyone employed at the *Place of the Work*, or in connection with the *Work*, including for greater certainty, wages, expenses or other amounts payable to any person employed for the performance of the *Work*, including *Subcontractors* and *Suppliers*.
- 5.8.3 The *Owner* may withhold any or all monies pursuant to GC 5.8.1 and 5.8.2 until such matters have been completed, remedied, discharged, cleared, satisfied or released. When the *Owner* is satisfied that it is no longer necessary to withhold payment from the *Contractor* for any or all of the matters listed in GC 5.8.2, the *Owner* shall release all or part of any amounts withheld except statutory holdback amounts.

PART 6 CHANGES IN THE WORK

GC 6.2 CHANGE ORDER

- 6.2.1 Replace “promptly present” with “present within 5 business days”.
Add, after the last sentence “Failure to respond within the time limit deems the change in the *Work* to be at no cost to the *Owner*.”
- 6.2.3 Replace “20%” with “15%”; replace “10%” with “7%”.

PART 9 PROTECTION OF PERSONS AND PROPERTY

GC 9.4 – CONSTRUCTION SAFETY

9.4.1 Delete paragraph 9.4.1 in its entirety and substitute new paragraph 9.4.1:

9.4.1 The Contractor agrees to be the "Prime Contractor" for the purposes of all applicable occupational health and safety laws, including the *Workers Compensation Act* (British Columbia), and the Contractor is responsible for filing any documents necessary to comply with the *Workers Compensation Act* (British Columbia), including a Notice of Project. 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.

Add new paragraphs 9.4.6 and 9.4.7:

"9.4.6 Prior to the commencement of the *Work*, the *Contractor* shall submit to the *Owner*:

- .1 a current Worksafe BC clearance letter;
- .2 documentation of the Contractor's in-house safety-related programs; and,
- .3 a copy of the Notice of Project filed with WorkSafe BC naming itself as "Prime Contractor" under the Occupational Health and Safety Regulation pursuant to the *Workers Compensation Act* (BC).

9.4.7 The *Contractor* shall indemnify and save harmless the *Owner*, its agents, officers, directors, employees, consultants, successors and assigns from and against the consequences of any and all safety infractions committed by the *Contractor* or *Subcontractors* under the *Workers Compensation Act* (BC) including the payment of legal fees and disbursements on a full indemnity basis.

PART 11 INSURANCE

GC 11.1 INSURANCE, replace entirely with the following:

GC 11.1 - INSURANCE

Without restricting the generality of GC 13.1—INDEMNIFICATION, insurance and coverage will be arranged and paid for as under-noted:

11.1.1 **The *Contractor* shall, without limiting its obligations or liabilities herein and at its own expense, provide and maintain the following insurance with insurers licensed in British Columbia and in forms and amounts acceptable to the *Owner*:**

(a) Commercial General Liability Insurance with a limit of not less than FIVE MILLION DOLLARS (\$5,000,000), inclusive per occurrence against bodily injury and property damage, and the *Owner* is to be added as an additional insured and include a cross

liability clause. This insurance shall be primary and not require the sharing of any loss by any insurer of the *Owner*. Such insurance shall include, but not be limited to:

- .01 Premises and Operations Liability;
- .02 Products and Completed Operations Liability (24 months);
- .03 Blanket Written Contractual Liability;
- .04 Contingent Employer's Liability;
- .05 Personal Injury Liability;
- .06 Non-Owned Automobile;
- .07 Employees as Additional Insureds;
- .08 Broad Form Property Damage;
- .09 Elevator and Hoist Liability
- .10 Operation of Attached Machinery

and where such further risk exists:

- .01 Shoring, Blasting, Excavating, Underpinning, Demolition, Piledriving, Subsurface and Grading, as applicable;
- .02 Limited Pollution Liability (TWO MILLION DOLLARS (\$2,000,000))
- .03 Broad Form Tenants Legal Liability (ONE MILLION DOLLARS (\$1,000,000))
- .04 Forest Fire Fighting Expenses (ONE MILLION DOLLARS (\$1,000,000))

This insurance shall be maintained continuously from commencement of the *Work* and kept in force until the *Project* has reached *Ready-for-Takeover* of the *Work*.

(b) Automobile Liability Insurance in respect of each owned or leased vehicle if used directly or indirectly in the performance of the *Work*, subject to limits of not less than TWO MILLION DOLLARS (\$2,000,000) inclusive per occurrence. This insurance shall be maintained continuously from commencement of the *Work* and kept in force until the *Project* has reached *Ready-for-Takeover* of the *Work*.

(c) Owned or Non-Owned Aircraft (including Unmanned Aircraft Vehicles) Liability Insurance if used directly or indirectly in the performance of the *Work*, subject to limits of not less than TWO MILLION DOLLARS (\$2,000,000) inclusive per occurrence for bodily injury, death, and damage to property including loss of use thereof and including aircraft passenger hazard where applicable. The insurance will name the *Owner* as an additional insured and include a cross liability clause. This insurance shall be maintained continuously from commencement of the work involving aircraft (including unmanned aircraft vehicles) until such work is completed.

(d) Owned or Non-Owned Watercraft Liability Insurance if used directly or indirectly in the performance of the *Work*, subject to limits of not less than TWO MILLION DOLLARS (\$2,000,000) inclusive per occurrence for bodily injury, death, and damage to property including loss of use thereof. The insurance will name the *Owner* as an additional insured and include a cross liability clause. This insurance shall be maintained continuously from commencement of the work involving watercraft until such work is completed.

(e) Contractors Pollution Liability Insurance, where the *Contractor's* performance or the *Subcontractor's* performance of the *Work* is associated with hazardous materials clean up, removal and/or containment, transit, or disposal. This insurance must have a limit of liability not less than TWO MILLION DOLLARS (\$2,000,000) inclusive per occurrence insuring against bodily injury, death, and damage to property including loss of use thereof.

Any insurance required under this clause 11.1.1 (e) must name the *Owner* as an additional insured, but only with respect to liability arising out of the *Contractor's* performance of the work. Such insurance must include sudden and accidental, and gradual pollution events for third party liability including ongoing and completed operations and shall not be impaired by any, biological contaminants (without limitation, mould and bacteria), asbestos, or lead exclusions. Any 'insured vs. insured' exclusion shall not prejudice coverage for the *Owner* and shall not affect the *Owner's* ability to bring suit against the *Contractor* as a third party.

This insurance shall be maintained continuously from commencement of the work involving hazardous materials clean-up, removal and/or containment, transit and disposal until such work is completed and including a twenty-four (24) month extended reporting period if any such insurance is provided on a claims-made basis.

(f) Hot Roofing or Installation of Hot Membranes

If the project is a renovation involving hot roofing work or installation of hot membranes, the contractor will provide, maintain and pay for a liability policy insuring hot roofing or installation of hot membrane operations with a limit of not less than TWO MILLION DOLLARS (\$2,000,000) inclusive per occurrence against bodily injury and property damage. The insurance will name the *Owner* as an additional insured and include a cross liability clause. Such insurance shall include, but not be limited to:

- .01 Premises and Operations Liability;
- .02 Products and Completed Operations;
- .03 Owner's and Contractor's Protective Liability;
- .04 Blanket Written Contractual Liability;
- .05 Contingent Employer's Liability;
- .06 Personal Injury Liability;
- .07 Non-Owned Automobile Liability;
- .08 Employees as Additional Insureds; and
- .09 Broad Form Property Damage.

This insurance shall be maintained continuously from commencement of hot roofing or installation of hot membrane work until such work is completed.

(g) Property Insurance which shall cover, on a replacement cost basis, all property, of every description, to be used in the construction of the *Work*, against "All Risks" of physical loss or damage, including earthquake and flood, while such property is being transported to the site, and thereafter throughout erection, installation and testing. This insurance shall be maintained continuously from commencement of the *Work* and kept in force until the *Project* has reached *Ready-for-Takeover* of the *Work*. Such

insurance shall extend to protect the interest of the *Owner*, and shall contain a waiver of subrogation against the *Owner*.

11.1.2 Any insurance required under clauses 11.1.1 (a), (c), (d), (e), (f) and (g) must be endorsed to provide the *Owner* with 30 days' advance written notice of cancellation.

11.1.3 As may be applicable, the *Contractor* must cause all *Subcontractors* to comply with the insurance requirements outlined in clauses 11.1.1 (a) (b), (c), (d), (e), (f) and (g).

11.1.4 The *Contractor* will also provide, maintain and pay for any other insurance that the *Contractor* is required by law to carry, or which the *Contractor* considers necessary.

11.1.5 All the foregoing insurance shall be primary and not require the sharing of any loss by any insurer of the *Owner*.

11.1.6 The *Contractor* will provide the *Owner* with proof of insurance for those insurances required to be provided by the *Contractor* prior to the commencement of the *Work* in the form of a completed Certificate of Insurance and will also provide a certified copy of any required policies upon request.

11.1.7 The *Owner* will not be responsible for injury to the *Contractor's* employees or for loss or damage to the *Contractor's* or to the *Contractor's* employees' machinery, equipment, tools or supplies which may be temporarily used or stored in, on or about the project site during construction and which may, from time to time, or at the termination of this *Contract*, be removed from the project site. The *Contractor* hereby waives all rights of recourse against the *Owner* with regard to damage to the *Contractor's* property.

11.1.8 If the *Contractor* fails to provide, maintain and pay for insurance as required by this schedule, other than automobile liability insurance, the *Owner* may obtain and pay for the required insurance, the cost of which will be payable on demand by the *Owner*. The *Owner* may offset such amounts from any monies due to the *Contractor* if not paid within 15 days.

CONTRACT SECURITY (for projects of One Hundred Fifty Thousand (\$150,000) or greater)

11.1.9 The *Contractor* shall prior to commencement of the *Work* furnish performance and labour and material payment bonds within fourteen (14) days of the date of this *Contract*. Each bond must be in a sum equal to 50% of the total *Contract Price*. The bonds must be issued on the latest CCDC-221 or CCDC-222 approved forms or other such forms approved by the Surety Association of Canada and issued by a surety company registered in the Province of British Columbia or another surety company acceptable to the *Owner*. The *Contractor* must maintain the bonds in good standing until the fulfilment of the *Contract*.

GC 13.1 INDEMNIFICATION, delete GC 13.1.1 and 13.1.2 and replace with the following:

GC 13.1 – INDEMNIFICATION

13.1.1 Without restricting the parties' obligation to indemnify as described in paragraphs 13.1.4 and 13.1.5, and excepting always losses caused or contributed to by the acts of the party for whom indemnification is sought, 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 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 such periods as prescribed by the *Limitation Act* of the Province of British Columbia.

13.1.2 The obligation of either party to indemnify as set forth in paragraph 13.1.1 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 the *Contractor* pursuant to GC 11.1 - INSURANCE, the limit of:

- (1) Commercial General Liability coverage – GC 11.1.1 (a); or
- (2) Property Insurance – GC 11.1.1(g)

whichever is pertinent to the loss.

.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:

- (1) the *Contract Price* as recorded in Article A-4 – CONTRACT PRICE or;
 - (2) TWO MILLION DOLLARS (\$2,000,000),
- but in no event shall the sum be greater than TWENTY MILLION DOLLARS (\$20,000,000).

.3 In respect to indemnification by a party against the other with respect to losses suffered by them, such obligation shall be restricted to direct loss or damage, and neither party shall have any liability to the other for indirect, consequential, punitive or exemplary damages.

.4 In respect to indemnification respecting claims by third parties, the obligation to indemnify is without limit.

WORK COVERED BY CONTRACT DOCUMENTS

01 11 13

1 GENERAL

1.1 Arrange for;

- .1 Labor, material and equipment to complete work of Contract in conformity with Contract Documents and Construction Schedule.
- .2 Utility connections, permits, inspections, tests, and systems verifications. Demolition, relocation, and removal of existing equipment and services to complete Work.
- .3 Delivery, receiving, inspection at time of delivery, unloading, and hoisting of materials and equipment.
- .4 Clean-up of materials and garbage on daily basis or as directed, and removal of unused equipment/materials from site.

2 SUMMARY OF WORK

2.1 Project involves;

- .1 Installing new rooftop condensing units on both residential care buildings. Including the addition of structural housekeeping pads and associated roofing works.
- .2 Installing new heating coil and cooling coil blocks in AHU-11 & AHU-12. Works include piping connecting the new heating coils to the existing hydronic system and connecting the new dx cooling coils to the new condensing units with insulated refrigerant piping.
- .3 Contractor is responsible for terminating and making safe all existing connections and terminating new connection as per drawings that have been provided for reference. Site specific drawings will be provided to the successful contractor.
- .4 Contractor is responsible for terminating sealing the roof weathertight around the new structural pads;
 - .1 After curb installation, install insulation on curbs walls. Supply and install cover board over insulation.
 - .2 Embed granules on existing roof to 6". Use chalk lines for straightness.
 - .3 Supply and install two piles of SBS membrane - base ply is 180 and cap sheet to match existing.
 - .4 Install membrane in conformance with manufacturer's requirements.

END OF SECTION

PRODUCT SUBSTITUTION PROCEDURES 01 25 13

1 GENERAL

1.1 Scope

- .1 This specification describes the required procedures to request substitution of manufacturers or products during construction, for:
 - .1 substitute manufacturers not listed in the applicable technical specification, and
 - .2 substitute products by a manufacturer that is listed in the applicable technical specification.

1.2 Definitions and Abbreviations

- .1 The following definitions apply to this section.
 - .1 **Substitute manufacturer:** a proposed manufacturer that is not included in a list of manufacturers in the technical specification applicable to the subject product.
 - .2 **Substitute product:** a proposed alternative product to one that is specified, produced by the same manufacturer that is listed in the technical specification.

1.3 General Requirements for Substitutions

- .1 The Consultant or Owner will not review a substitution request unless it is accompanied by the required submittal information specified herein.
- .2 Where use of a substitution involves redesign or changes to other parts of the Work, the contractor shall be responsible for all such construction cost and time impacts. Any time and costs required by the Consultant to affect such redesign will be considered in evaluating the suitability of the proposed products.
- .3 Submittals or other requests made by a manufacturer directly to the Consultant or the Owner will not be considered.
- .4 Where classification, listing, or other certification to a recognized standard is a part of the project technical specification or as otherwise required by law, substitution submittals shall include reports from the testing certification laboratory indicating certification to those standard(s). Product data sheets that only indicate a testing laboratory mark symbol is not sufficient; at a minimum, a certification listing report that references the required product standard is required.

1.4 Timeliness of Substitution Request Submission

- .1 Substitution request shall be made in ample time to permit appropriate review without delaying the Work, taking into consideration that such a substitution request may be rejected and require providing the product or material as originally specified.
- .2 Except for eligible substitute product review by shop drawing submittal, the Consultant and the Owner shall require up to four (4) weeks to review a submission for each requested substitution. Substitution submissions consisting of multiple products, submitted concurrently or as one submission, will require longer review periods as determined by the Consultant.
- .3 Any time required by the Consultant and/or the Owner to review substitution requests shall not be deemed nor attributed to a cause for delay in the construction schedule.

1.5 Substitute Manufacturer Procedure

- .1 Where it is proposed to use a substitute manufacturer, such substitution is only permitted after review of a substitution request by the Consultant and approval by the Owner.

- .2 Substitution requests are subject to the following provisions;
 - .1 Prior to submission of the first product shop drawing for each Division of the Work, the contractor shall prepare and submit to the Consultant and the Owner for initial review a comprehensive list of substitute manufacturers. The submission of this list does not constitute a formal submittal as specified herein. The Owner shall consider the proposed list of manufacturers and inform the contractor of any manufacturer that will not be considered. The Owner reserves the right to reject, without review, any substitution submittals for manufacturers not included in this list.
 - .2 A substitute manufacturer will not be considered for reasons of meeting the construction schedule unless the contractor can demonstrate, to the satisfaction of the Consultant and the Owner, that the contractor has made all reasonable efforts to procure the specified product in a timely manner. The Owner reserves the right to verify independently the availability of the specified product.
 - .3 Request for a substitute manufacturer by means of a shop drawing submission is not acceptable and will be rejected.
 - .4 The substitute manufacturer represents their product to be of at least equal quality and of the required characteristics as specified, and is fit for the intended purpose.
 - .5 The burden-of-proof as to the quality and suitability of products proposed by the substitute manufacturer shall be borne by the substitute manufacturer, and they shall supply all information necessary as required by the Consultant at no additional costs to the contract.
 - .6 The costs of all testing required to prove equality of the product proposed by the substitute manufacturer shall be borne by the contractor or manufacturer.

1.6 Substitute Product Procedure

- .1 Where it is proposed to use a substitute product from the same manufacturer as a product listed in the technical specification, such substitution is only permitted after review of a substitution request by the Consultant and approval by the Owner.
- .2 Substitution requests are subject to the following provisions;
 - .1 A substitute product will not be considered for reasons of meeting the construction schedule unless the contractor can demonstrate, to the satisfaction of the Consultant and the Owner, that the contractor has made all reasonable efforts to procure the specified product in a timely manner. The Owner reserves the right to verify independently the availability of the specified product.
 - .2 Requests for a substitute product by means of a shop drawing submittal is permitted ("eligible substitute product"), provided the reason for the substitution is included in the submittal and is due to:
 - (a) the specified product name/product number has changed, but no material change has been made to the specified product,
 - (b) the specified product is no longer made, and the substitute product replaces the specified product and meets or exceeds the specification requirements.
 - .3 Upon submission of a substitute product through the shop drawing submittal process, the Consultant at its sole discretion shall determine if the submittal is eligible for review as a shop drawing. If determined not to be eligible, the substitute product shall be submitted in accordance with all the requirements as for a substitute manufacturer. Otherwise, the eligible substitute product will be reviewed as a shop drawing.
 - .4 Where a substitute product is not eligible to be reviewed through the shop drawing review process, the substitute product shall be submitted in accordance with all the requirements as for a substitute manufacturer.

1.7 Substitute Manufacturer Submittals

- .1 Include the following information for each product by a substitute manufacturer;

- .1 Confirmation that the submitted product was included in the proposed substitute manufacturer list, and was not previously rejected by the Owner.
- .2 A declaration acknowledging that rejection of the substitute manufacturer product will not impact the construction schedule.
- .3 A marked-up copy of the project specification prepared by the substitute manufacturer, identifying where the proposed product: complies with, does not comply with, or is different from, the requirements of the specification.
- .4 A declaration from the substitute manufacturer that their product is of the requisite quality, meets the technical specifications, and is fit for the intended purpose.
- .5 Sufficient product literature to allow ready comparison to the applicable technical specification.
- .6 Where the product is required to be listed/certified to a recognized standard, provide listing or certification documentation identifying the standard(s) to which it is certified.
- .7 Provide a detailed description of the installation requirements that differ from the specified manufacturer/product installation requirements.
- .8 Identify any offered cost-saving credit.
- .2 Description of manufacturer's authorized service personnel, including;
 - .1 nearest service location,
 - .2 the nature of the service company (direct manufacturer personnel, authorized dealer/service company, etc),
 - .3 call-out service level, including a description of availability (i.e. 24 hours per day, 7 days per week), response time management and escalation process, and
 - .4 confirmation of other service performance levels as required in individual technical specification sections.
- .3 Supply additional information on the product as reasonably requested by the Consultant and/or the Owner.
- .4 These submittals will not be reviewed or processed as a shop drawing. If the substitution review is acceptable to the the Owner, prepare and submit a formal shop drawing submittal for review by the Consultant.

1.8 Substitution Product Submittals

- .1 Include the following information for each eligible substitute product, where the product is eligible to be evaluated through the shop drawing submittal process:
 - .1 all required information as specified for shop drawing submittals applicable to the product,
 - .2 manufacturers declaration as to the reason for the substitution (as specified herein), and statement of any variance from the technical specification.
- .2 Where the product is not eligible to be submitted through the shop drawing review process, submit the following information:
 - .1 A marked-up copy of the project specification prepared by the substitute product manufacturer, identifying where the proposed product complies with, not complies with, or is different from, the requirements of the specification.
 - .2 Sufficient product literature to allow ready comparison to the applicable technical specification.
 - .3 Where the product is required to be listed/certified to a recognized standard, provide listing or certification documentation identifying the standard(s) to which it is certified.
 - .4 Provide a detailed description of the installation requirements that differ from the specified manufacturer/product installation requirements.

- .5 Identify any offered cost-saving credit.

1.9 Evaluation of Product Equivalency

- .1 The Consultant shall have the sole determination as to the equivalency of the proposed substitution to meet the project technical specification requirements and the general expected quality when compared to listed manufacturers.

1.10 Approval

- .1 The Owner shall have the sole authority and responsibility for approval of substitutions and reserves the right to accept or reject any substitution submittal request for any reason.

End of Section

NOT FOR CONSTRUCTION

CHANGE PROCEDURES

01 26 05

1 SUPPLEMENTAL INSTRUCTIONS

- .1 During construction, numbered and dated Supplemental Instructions (SI) will be issued by Consultant for clarification of Contract Documents.
- .2 Notify Consultant in writing where Contractor considers work described by SI involves changes to Contract Amount. On receipt of such notification Consultant will cancel SI, and issue Notice of Change.
- .3 Failure to notify the Consultant within seven working days of receipt of SI will be taken as acceptance, by Contractor, of the "no change in contract amount" provisions inherent in SI process.
- .4 On acceptance of SI, instruction to be recorded, circled, and marked with SI number on Record Drawings.

2 PROPOSED CHANGES

- .1 Numbered and dated Proposed Changes (PC) will be issued by Consultant to describe proposed changes to Contract Documents.
- .2 PCs may be generated through SI process, through Requests for Information (RFI) generated by Contractor, or through some instruction to Consultant from Client
- .3 Contractor agrees that receipt of NOC describing changes is notification to suspend execution of that work or that part or section of work, pending resolution of change in Contract Amount for proposed change.
- .4 Within 10 working days of receipt of PCs submit priced proposal for change in Contract Amount, including complete breakdown of price and copies of any subcontract or suppliers' quotations to Consultant for approval. Proposal to identify prolongation or reduction, if any, of construction period. Unacceptable, inaccurate or incomplete proposals will be returned for revision and re-submission.
- .5 Costs for proposed changes to be inclusive of contract extension impacts.
- .6 Issuance of a PCs does not authorize the contractor to proceed with the change until such time as a Change Order is issued.

3 CHANGE DIRECTIVES

- .1 During construction, numbered and dated Change Directives (CD) will be issued by Consultant and countersigned by Owner to make changes to Contract Documents to incorporate work, not foreseen during design, that is to proceed forthwith.
- .2 Contractor agrees to proceed with change to work as described, and to keep records of additions to and reductions in Contract Amount for submission not more than 5 working days after completion of work
- .3 Submit priced proposal showing costs incurred for work covered by CD as change in Contract Amount, including complete breakdown of price and copies of any subcontract or suppliers' quotations. Proposal to identify prolongation or reduction, if any, of construction period. Unacceptable, inaccurate or incomplete proposals will be returned for revision and re-submission.

- .4 Costs for changes described in CD to be inclusive of contract extension impacts.
- .5 Consultant to review cost adjustment proposal for changes described in CD and on approval a Change Order will be issued to revise the Contract Amount.

4 CHANGE ORDERS

- .1 Numbered Change Orders (CO) will be issued by Consultant and signed by Owner to confirm approval of priced Change Directives and Proposed Changes.
- .2 Record information contained in CD and PC and accepted by CO on Record Drawings circled and marked with CD, PC and CO numbers.

END OF SECTION

MEASUREMENT AND PAYMENT

01 29 76

1 COST BREAKDOWN

- .1 At the time of bid the bidder is to, furnish Consultant with a breakdown of Contract Price in such form and detail as to permit evaluation of progress payments, and to assist the Owner in assessment of taxation liabilities, and other accounting procedures.

2 FAIR WAGES AND LOCAL LABOUR

- .1 Wherever possible, give preference to use of labour, manufacturers, building mechanics, suppliers and sub-trades from the local area.
- .2 Wage rates, working hours and conditions for persons employed on work to be in accordance with Provincial Codes and as generally recognized and accepted in locality.

3 PREMIUM TIME

- .1 Chargeable overtime premium for overtime hours authorized and worked due to change in completion schedule where there is no change in scope of work to be the difference between straight time and overtime rates. No charge for overhead or profit to be included.

END OF SECTION

PROJECT COORDINATION

01 31 13

1 COORDINATION

- .1 Coordinate work done by own forces with work done by subcontractors. Mechanical and electrical subcontractors will be required by conditions of Contract to work and co-operate to ensure that services are installed in the spaces allocated.
- .2 After Contract Award meet with Consultant and present for approval, person or persons to be responsible for coordination work. Such persons to be appointed for duration of Contract and may not be released or replaced without prior approval from Consultant.
- .3 In congested areas of the work inside the building, prepare interference drawings.
 - .1 Drawings inside building to use as-built structural conditions and show work of all trades.
 - .2 Interference drawings to be produced at 1:50 (1/4in = 1ft) inside building, and to be signed off by all trades prior to commencing installation of work.
 - .3 Work to be kept within spaces allocated on the drawings;
 - (a) above ceilings,
 - (b) within furrings,
 - (c) within casings or cabinets, or
 - (d) within shafts or pipe chases etc.
- .4 During coordination process, relocation or off-setting of any of the work within 3 metres (10 feet) of designated position shown on Contract Drawings, to be done without extra cost to Owner.
- .5 Any work erected without proper coordination to be relocated without extra cost to Owner.
- .6 Check Drawings and Specifications and notify Consultant of any apparent discrepancies or dimensional ambiguities before proceeding with work.
- .7 Significant deviation from Specifications and Drawings involving increase or decrease in quantities or changes in quality of work to be drawn to attention of Consultant for approval. Where changes to the contract price are anticipated, documentation will be issued using Contract Change procedures.

2 EXAMINATION OF PREVIOUS WORK

- .1 Examine work upon which this work is dependent, and report any defects prior to commencement of work. Commencement of work will be taken as acceptance of existing conditions and as a waiver of claims for weakness or unsatisfactory condition of surrounding and supporting work.

3 WELDING TO STRUCTURAL STEEL

- .1 Do not make any welded connection to any building structural steel member without written approval from Consultant.
- .2 Submit details of proposed connection to Consultant for review. Review will be for assessment of impact on building structural steel and not to determine the adequacy of proposed connection.
- .3 Persons performing welding operations must be certified.

END OF SECTION

SCHEDULING OF WORK

01 32 13

1 AWARD OF CONTRACT

- .1 The Contract is scheduled for award by January 26th, 2023.

2 CONSTRUCTION START

- .1 Construction is scheduled to start in various locations..

3 CONSTRUCTION COMPLETION

- .1 The work of this project to be planned and organized to assure completion of each phase as scheduled.

4 PRODUCTION SHUTDOWNS

- .1 Shutdowns/tie-ins shall be done after hours and/or on weekends.
- .2 During these shutdowns perform "dusty" and "noisy" work that might otherwise inhibit Owners normal operations.

5 CONSTRUCTION SCHEDULE

5.1 Construction Scheduling at Award of Contract

- .1 Upon award of Contract, meet with Consultant to discuss project planning and to establish workable construction schedule and to establish continuing liaison.
- .2 Deviation from phased completion dates in attached construction schedule to be confirmed with Owner.

5.2 Construction Schedule During Execution of Work

- .1 Wherever work conditions or material and equipment deliveries interfere with completion dates, meet with Consultant, revise work plans, determine how lost time will be made up and resubmit revised construction schedule.

6 OWNER'S NORMAL WORKING HOURS

- .1 Owner's normal working hours are 7:00 a.m. to 7:00 p.m., Monday through Friday. Any work that is allowed outside normal working hours may not be noisy or disruptive.
- .2 Contractor may be permitted to work late after normal working hours and at weekends provided Contractor submits written request and obtains written approval from Owner. Request must be made 48 hours minimum prior to requested access time. Permission will only be granted in extenuating circumstances and may be refused.

7 DELIEVERY OF CONSTRUCTION MATERIALS AND EQUIPMENT

- .1 Delivery of construction materials shall occur during the predefined Owner's normal working hours.

- .2 In the case where materials or equipment is delivered through the emergency department, delivery access may be delayed if there is a trauma

8 PROGRESS REPORTS.

- .1 Prepare and keep up-to-date a progress chart showing proposed schedule for various trades at various locations within the work area.
- .2 Keep daily records of work done, Contractors and subcontractors forces on site, equipment and material deliveries, and weather conditions. Record to show date of commencement and date of completion of various parts of work and performance is to be compared with schedule targets on progress chart.
- .3 At the end of each month consolidate daily records into a summary progress report, for submission with Payment Requests.

END OF SECTION

OWNER SPECIAL REQUIREMENTS
01 35 23

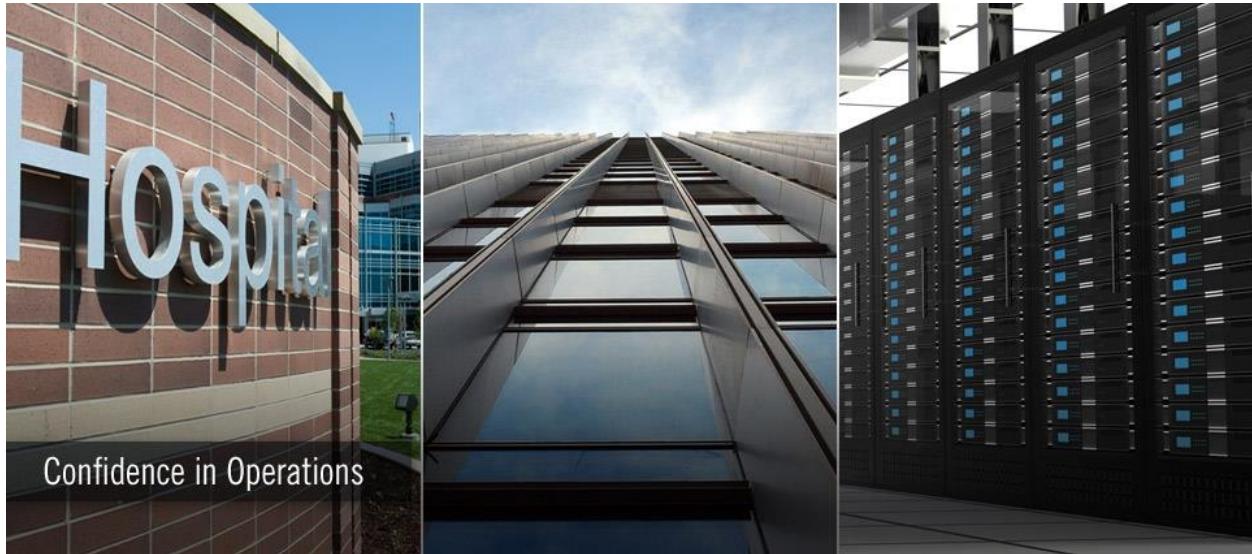
1 GENERAL

1.1 Owner Safety Requirements

- .1 Comply with the Owner's safety requirements for construction and building operations appended to the end of this Section. The following are included in this section,
- Fort St. John Contractor Site Guidelines.

End of Section

Guidelines and Instructions for Contractors



Prepared By:
ACML Operations (FSJ) Western Limited

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SECTION 1: INTRODUCTION

1.1 INTRODUCTION AND OBJECTIVES

This document applies to all Contractors who work on the Facility grounds or within the Facility. It is not intended to replace the construction safety laws, regulations, codes and standards or any other legislation governing safety matters, nor should they be construed as an assumption of responsibility by the Facility. Each Contractor/Subcontractor must be familiar with all current legislation pertaining to the Work and will be responsible to follow and enforce such legislation. In case of conflicts regarding requirements, contractors must adhere to the most stringent requirement. The Contractor shall also ensure that copies of all relevant construction safety laws, regulations, codes and standards are accessible on the site at all times.

This guide is meant to supplement rather than replace the safety training and direction required to handle the specific safety requirements particular to the Work involved on the project. Each Contractor/Subcontractor must ensure that his/her workers receive the specific training and supervision required TO HANDLE any hazards particular to the Work.

This document is also intended to ensure that the work performed by Contractors meets or exceeds the outcomes that would be expected of a Professional Organization or Trades Person. All work conducted is to:

- Be performed to applicable legislative requirements;
- Be performed by knowledgeable trained technicians;
- Be completed to the standards of a first-class facility;
- Have the areas worked in left in a clean and useable condition.

The document is divided into three separate sections, the second section is meant to be a general orientation and to be read by all individuals working within the Facility or on the grounds. The Supporting Documents section provides additional information to aid in the completion of specific jobs such as welding, working in patient areas, or working on the roof.

This document shall be reviewed by both the ACML employees and Contractors together to ensure complete understanding of the following information.

SECTION 2: ORIENTATION

2.1 BUILDING SECURITY & ORIENTATION

Orientation

Site orientation & training will be provided by the ACML staff for areas and building systems that are applicable to the work being performed but will include no less than:

1. Site access and access routes
2. Hours of work
3. Parking
4. Emergency Code response
5. Site emergency contacts
6. Isolation and lockout procedures

Any Critical Equipment precautions will be communicated to the Contractor by the ACML Staff at the time of Orientation.

Security

If required, keys and/or access cards will be provided upon receipt of a driver's license or other form of picture ID along with Vehicle keys. Contractors are to only access areas that have been identified to them by ACML Staff as the work area.

Contractors are to ensure the following when entering access restricted areas:

- Ensure doors close and lock behind you.
- Do not permit tailgating, each person must use their access badge to enter the space in question.
- Exercise caution when working in lock down areas such as, the pediatric unit, or psychiatric area. Be aware of patients or other personnel congregating near the exit/entrance you intend to utilize as they may be intending on making an unauthorized entry or exit from the area. Approach and inform facility staff if this type of activity is noticed.
- Lost keys or access cards must be report immediately to the ACML Staff.

There may be a requirement that Contractors are escorted by a member of the ACML Staff in certain areas of the facility. In these cases, it is imperative that you remain with your escort at all times and follow their direction.

2.2 RULES OF CONDUCT

Every Contractor has a public relations obligation to demonstrate to the community that public resources are being used prudently, skillfully and responsibly. Every activity should demonstrate to the patients/residents and visitors that employees spend no more time on a task than is necessary, that each task is completed skillfully, thoroughly and without unnecessary noise or mess. Contractor actions shall not present a risk to others, as safety is ACML's number one priority. Contractors should always be courteous and helpful to patients, visitors and other staff members while in and around the Facility premises.

Occasionally Contractors may wish to borrow tools or have items that appear to be scrap such as plastic containers, wood scraps or wooden skids. The determination of what constitutes scrap rests solely with ACML Site Manager (or designate) and all items are considered ACML property until released by the Plant Services Department.

POLICY

1. Assist others whenever possible, for example, holding elevator doors and giving directions.
2. Present yourself in a courteous and cheerful manner.
3. Use a dust enclosure, if appropriate, when performing duties (Refer to the Infection Control section of this guide for requirements).
4. Position your tools and materials at the side of a corridor or public space for minimal obstruction.
5. Cordon off the work area so it is clearly marked and presents no risk to health and safety.
6. Try to undertake the noisiest tasks at a time when there is most general noise in the Facility.
7. Be happy and willing to explain the work that is in progress to any colleagues, patients/residents, or family members who may take an interest.
8. Do not start a task and leave it part way through; try to complete the task once it is started.
9. Never leave tools or equipment in a place that is accessible to patients/residents at any time in a lock down area, pediatric unit, or psychiatric area.
10. Do not leave debris lying around once a task is completed. Clean up immediately and/or arrange beforehand for the Facilities Housekeeping to give you a hand.
11. The staff member should obtain written approval from the Site Manager to borrow/remove an item for personal use.
12. When removing an item from the Facility property the Contractor must be able to demonstrate he or she has written permission.
13. Persons in unauthorized possession of any Facility property or ACML property will be subject to disciplinary action up to and including termination of employment / criminal charges.

2.3 ON SITE REQUIREMENTS

When on Facility property, Contractors and Subcontractors must ensure that they have the following, where applicable:

- A First Aid Kit that is adequate based on the type of work being performed and the regulations of all governing bodies is in the area of the work,
- Emergency phone numbers (including the Contractor's Project Manager or Operations Manager) are provided and posted on the site,
- If on-site for longer than two weeks, regular safety meetings (tailgate/tool box) are to be conducted and recorded. The Facility's ACML Representative, at their discretion and with prior notice, may request to join a tailgate/tool box or other safety meetings with the Contractor, Subcontractor or their agents.
- All paints, volatile liquids and other potentially hazardous substances are clearly identified as hazardous materials by means of proper labelling,
- All hazardous substances and materials shall be inspected frequently, and properly stored with a fire extinguisher adjacent to the storage area. If such hazardous materials are not in use, they shall be stored in a separate locked container,
- All accidents or near misses involving Contractors and Subcontractors, their agents or representatives are fully investigated, recorded with preventative measures identified and implemented. A copy of the report must be provided to the Facility.
- All Contractors, Subcontractors and/or their agents or representatives do not engage in any activity, process or work that may endanger the health and safety of any workers or members of this community, and
- All accidents where Facility employees are affected, the Contractor, Subcontractor or their agents and or representative must send a report to ACML representative on site.
- All contractor and subcontractor personnel must attend a contractor orientation session.
- All documented programs and schedules must be reasonably available. If the logbooks, WHMIS labels or any other safety requirements are found to be lacking, the Contractor, Subcontractor, their agents and/or representatives may be asked to leave the Facility property and this may constitute an event of default under any contract(s). It will be up to the Facility's ACML Representative or the Project Manager to determine whether the project shall continue. Contractors, Subcontractors, their agents and/or representatives will not be permitted to resume work on the Facility property until such time as they have proven compliance with all required safety requirements, legislation and practices. The Facility, ACML, or ISL Health will not be liable for any additional costs due to the stoppage of the work which would include, but not limited to, any increase in material, equipment and labour costs, overhead costs, contract costs, or delayed/extended duration costs suffered by the Contractor and/or any of its Subcontractors or Suppliers. ACML will not accept any type of delay claim charges. There will be no time extensions granted to the Contractor for

this type of delay and the Contractor will be expected to recover any lost time through the implementation of acceleration measures, the cost of which shall be to the Contractor's account.

- All Contractors, Subcontractors, their agents and/or representatives shall remove flammable material or rubbish promptly from the premises. If removal is unavoidably delayed, the potential for fire shall be reduced by wetting down flammable material and/or rubbish.
- Disposing of waste material by burning on or near the Facility premises is not permitted.
- All rubbish shall be cleaned up and removed into containers and the removal of such containers and disposal off the site, including dumping fees, will be the responsibility of the Contractor or its Subcontractors. Any contaminated or hazardous materials and designated substances will be disposed of according to local and provincial codes and bylaws and the requirements of the Ministry of the Environment. Notification of such disposal must be provided to the Facility, together with copies of all supporting documentation.
- The Contractor and any Subcontractor shall inspect and detect temporary wiring, drop cords or temporary extension cables frequently for defective insulation or connections.
- All temporary wiring shall be removed after completion of the project and all wiring must be in accordance with building codes and relevant safety requirements.
- The Contractor and any Subcontractors are responsible for ensuring that all precautions are taken to prevent overloading of any part of the structure/temporary structures, false work or scaffolding during operations. If doubt exists, necessary approval must be obtained from the appropriate inspector from the WorkSafeBC or other Governmental Agency.

2.4 UNIFORMS, IDENTIFICATION AND HYGIENE

ACML requires all contractors to demonstrate professionalism and good judgment at all times relating to physical appearance in the workplace.

POLICY

1. For security reasons contractors are required to wear a uniform (a distinctive outfit to identify those who wear it as employees of the Company) or clothing suitable for the nature of work. Wearing a dirty, torn, frayed or modified uniform is not acceptable attire.
2. Contractor Badges must be visible and affixed to a break away lanyard to prevent strangulation risk. Log sheet must be kept in the facility management office which identifies the contractor(s) on site.
3. Contractors may not wear baseball caps while on the Facility, except in particular circumstances, such as working outdoors on the grounds, as permitted by the ACML Site Manager.
4. All footwear must be CSA #1 safety shoes or boots, Safety footwear is to be worn at all times while working within the facility premises.
5. Due to close contact with occupants, patients and other staff, contractors are to maintain their personal hygiene and cleanliness.
6. The use of strong, heavy scents and fragrances is not permitted to protect those with allergies.
7. For safety reasons, hair shall be worn in such a way as to not obscure vision; hair must be pulled back and secured away from the face. Hair must be kept clean and neat at all times.
8. For safety reasons, hand jewellery must be limited to a smooth band without projections or mounted stones.
9. Any intentional body alteration that detracts from a professional image is prohibited. Examples include but are not limited to: visible tattoos, body piercing (other than traditional ear piercing for men and women), tongue splitting, earlobe expansion, etc. Tattoos must be discreet and covered at all times. For safety reasons, jewellery, spacers, retainers, or plugs are not permitted in any body piercing while working.
10. Any Contractor staff not in accordance with the provisions of this policy will be sent home and directed to return in attire that complies with this policy.
11. Contractors should discuss with the ACML Site Manager or Supervisor if they believe they require an accommodation to this policy on the basis of race, religion, ethnic origin, disability, etc. ACML respects cultural diversity and supports the wearing of cultural or religious attire, while maintaining compliance with employee and tenant safety.

2.5 GENERAL SAFETY REQUIREMENTS

Definitions

Employer/Contractor:

Section 1(1) Occupational Health and Safety Regulation, 1990 “employer” means a person who employs one or more workers or contracts for the services of one or more workers and includes a Contractor or Subcontractor who performs work or supplies services and a Contractor or Subcontractor who undertakes with an Owner, Constructor, Contractor or Subcontractor to perform work or supply services.

Constructor:

Section 1(1) Occupational Health and Safety Regulation, 1990, “Constructor” means a person who undertakes a project for an Owner and includes an Owner who undertakes all or part of a project by himself or by more than one employer.

Project Representative:

“Project Representative” means the person who is designated to act on the behalf of the building Owner. This person may be a representative of ACML or ISL Health and shall be considered to be the Project Manager. If a Project Manager has not been assigned, the person arranging for the Contractor to perform work on the grounds shall be considered the Project Manager.

Requirements

- The Contractor shall ensure the safe operation and completion of projects at the Facility. Where there is a disagreement as to the meaning of legislated requirements and practices, WorkSafeBC and applicable codes and regulations may be called in to render an interpretation.
- The Contractor shall comply and cause all of its Subcontractors and Suppliers to comply with all applicable provisions, requirements and safety standards of the British Columbia Occupational Health and Safety Regulation (OHSR) and regulations thereto, WorkSafeBC, the Ministry of the Environment and other ‘Authorities Having Jurisdiction’.
- The Contractor shall be designated and hereby accepts the responsibilities and designation as “Constructor” under the Occupational Health and Safety Regulation on the Project. The Contractor assumes all liabilities and obligations imposed on a “Constructor” by the Occupational Health and Safety Regulation and any other governing body. In the event that the Contractor is not the “Constructor” for the project the Contractor shall follow the directions of the designated “Constructor” for the project. Refer to Appendix F.
- The Contractor shall perform all obligations of the “Constructor” within the meaning of the OHSR, and shall be solely responsible for safety at the Place of Work and for compliance with the rules, regulations and practices required under the OHSR. The Facility will contractually require other contractors or the Facility’s own forces to comply with the Contractor’s health and safety program and instruction, and the Contractor, as

“Constructor”, will have the right to direct the other contractors and the Facility’s own forces, and to remove them in the event that they do not comply with the Contractor’s health and safety program and safety instructions.

- The Contractor shall ensure that they implement safety programs and procedures and train all staff, subcontractors and suppliers on safety requirements applicable to the type of work being performed. This would include but not be limited to items such as falls arrest, confined work space procedures, welding or hot work procedures, working with compressed gases, working with chemicals or other toxic substances, the need for and proper use of personal protective equipment as required by the Occupational Health and Safety Regulation.
- It is the responsibility of the Contractor to ensure that his/her employees are fully instructed and trained in the legislated and Facility Safety Regulations and Practices prior to commencing any work.
- Prior to commencement of the Work, the Contractor shall submit to the Facility’s ACML Representative a copy of the completed Notice of Project that has been submitted to WorkSafeBC or any other Authorities Having Jurisdiction.
- The Contractor shall indemnify and save harmless the Owner, together with the Owner’s agents, officers, directors, employees, consultants, successors and assigns from and against any and all safety infractions and other liabilities under the British Columbia Occupational Health and Safety Regulation and regulations thereto, including the payment of all fines and legal fees on a solicitor and client basis. The Contractor shall ensure that the design details of critical elements such as temporary construction, form work, scaffolding and the use of lifting equipment and its supports shall be approved and stamped by a professional engineer.

2.6 THEFT, FRAUD, CORRUPTION AND NON-COMPLIANT ACTIVITIES

The goal of ACML is to ensure the highest standard of ethical conduct from our contractors while working in the facility. All contractors are required to act with integrity, trust, honesty and practice ethical behavior.

Contractors have the responsibility to conduct themselves in an appropriate manner and report any irregularities. Contractors are to utilize the “newspaper test” or “News Media Test” to provide guidance on ethical behavior that being, when considering whether an action is ethical, decide how you would feel if that action was reported on the internet or in the Local or National newspaper. How would your family feel and react to your actions that they read about on the internet or in a newspaper article.

To ensure best practices, Contractors are responsible for reporting all unethical conduct and irregularities. Individuals reporting shall take precautions to maintain strict confidentiality and avoid all situations that may result in the communication of mistaken or unfounded accusations or alert suspected perpetrators to an impending investigation.

Once reported, ACML will co-jointly work with Northern Health’s Incident Management System (IMS) structure to investigate, prevent recurrences, and reduce incidents. If allegations of misconduct are found to be accurate, disciplinary actions may be taken.

It is the responsibility of all Contractor employees to review this requirement and all related documents prior to working on-site.

Contractor Supervisor is responsible for the following:

- Report any professional misconduct to the ACML site manager (or designate) and discipline the employee(s) as required.
- Ensure all employees are educated regarding irregularity risks and controls, as outlined in the ACML guidelines, policies, and procedures
- Review all internal irregularity control procedures

Contractor Employees are responsible for the following:

- Follow all guidelines, policies, and procedures as outlined in this document
- Act in good faith when reporting irregularities
- Ensure all concerns of irregularities are reported
- Cooperate with all investigations

2.7 GENERAL CONDITIONS, RULES AND REGULATIONS

Policies and Procedures

The Contractor, their employees and staff and the staff of sub-trades and suppliers are to comply with all of the Facility's policies and procedures.

Permits

Unless otherwise agreed upon, the Contractor is responsible for applying and paying for all the necessary permits and any refundable and damage deposits associated with performing the work.

Health Screening

The Contractor warrants that all staff, the staff of sub-trades and suppliers in attendance or working on the Facility premises have met the Public Facilities Act regarding surveillance protocols and health reviews including but not limited to self-screening and being symptom free.

Access and Access Routes

All Contractors and their employees will enter and leave the Facility through entrances specified. The Contractor's employees', Subcontractors, agents or representatives must not go into any area other than those areas in which they are working, or any other area without the approval of the Facility's ACML Representative. Workers availing themselves to vending machines, cafeteria, toilet facilities and any other public areas must abide by all posted signs, keep to marked aisles, and take the most direct route.

Designated Substance

All Contractors must review the Designated Substances Report(s) prior to undertaking demolition of an area or commencement of work in the area. Special care should be taken at all times during work activities that could disturb ACM (asbestos containing materials), other hazardous and designated substances. All Contractors will be required to execute a "Contractor Notification Form" indicating that they will comply with all requirements concerning the exposure to and handling of any "designated substances" including asbestos containing material (ACM).

Parking

The Contractor, Subcontractors and their agents or employees are not exempt from parking charges and/or fees when parking on Facility grounds.

All parking regulations are to be observed.

Exemption of designated parking will only be allowed for the Contractor's work equipment and must be pre-arranged with and approved by the Facility's ACML representative.

Smoking

Smoking is NOT permitted on the Facility property or it's grounds.

Good Work Practice

Good work practice must be followed and it is the responsibility of the Contractor and Subcontractors to ensure that;

- Dirt and debris are not tracked throughout the facility especially on the floors,
- Locked doors are kept locked. If additional locks are used, Protection Services is to be provided with a key. Locked doors and/or fire doors are not to be propped open.
- Extension cords, power cords for equipment and tools, materials and tools do not create a tripping hazard,
- Equipment and materials are left in a safe manner during break periods and at the end of shifts. The Facility, ACML or ISL Health is not responsible for stolen tools or supplies. When working in an area with vulnerable patients, tools should not be left unattended and when not in use must be locked away.
- Areas within and outside of the area of construction are properly protected during construction from dirt and debris. Measures such as impermeable barriers, blockage of exhaust vents, ventilating the area of construction to the exterior, creating negative pressure within the area of construction and proper protection of materials being moved throughout the facility per Infection Control Guidelines are to be employed as required.
- All corridors, walkways and doorways must be kept clear at all times. Accumulation of garbage and rubble will not be permitted. All debris and salvaged material is to be removed by the Contractor through the designated areas. Contractors are to provide their own garbage bins/containers. The Housekeeping Manager must agree upon location of garbage container/bin which must meet Infection Control Guidelines.
- All areas of work are kept in a clean and tidy condition.
- Upon completion of the job, the Contractor must ensure that the site is cleaned to the satisfaction of the Project Manager and unless specific arrangements to the contrary are made, all Contractors are required to arrange for removal and disposal of their own refuse.

Work Schedule and Notice

Prior to starting any construction, the Contractor must provide a work schedule and advise the ACML Project Manager two weeks before the proposed work starts. In the event of evening or night emergency Call-Out work the Contractor, Subcontractor and/or their agents or Tradesmen must report to the ACML Shift Operator (through Communications/Security).

Disruption of Service

If it is necessary to disrupt any Facility services for construction or installation purposes, the Contractor must complete a Disruption of Service Application/Notification Form and submit it to the ACML Project Manager two weeks in advance of the required disruption. A copy of this form is provided in Appendix A1.

Work requiring the disruption of services or tie-ins to existing infrastructure will be performed outside of normal working hours. The Contractor is responsible for all costs associated with afterhours work involving service disruptions and tie-ins.

Drilling

Special precautions must be taken before the drilling of walls, ceilings and floors to ascertain the location of conduits, electrical cables, water lines, gas lines and other services. Scanning and/or X-Ray of slabs and walls are to be undertaken by the Contractor at their expense for this purpose.

Structural Integrity

The impact to the structural integrity of the building and/or any of its components is to be assessed prior to any cutting and/or coring taking place. This review will be undertaken by the Facility's Engineer at the expense of the Contractor's. The Contractor will provide to the Facility's Engineer all relevant information from scanning and or x-raying.

Fire Integrity and Fire Alarm

The integrity of all fire separations/barriers and fire zones is to be maintained at all times. Any penetrations through or changes to separations are to be sealed/corrected/reinstated as required by all Authorities Having Jurisdiction and the Facility. All fire stopping is the responsibility of the Contractor and the methods or means for fire stopping must comply with all applicable codes and bylaws and maintain the applicable rating.

Fire alarm devices are to be protected during the course of construction. When required, due to the nature of the work being performed, the Contractor will arrange for a bypass on the fire alarm system. Bypasses shall be reinstated at the end of the shift. If due to the nature of the work or condition of the space it is not possible to reinstate the fire alarm system, the Contractor shall, at their expense, post a fire watch to the satisfaction of the Project Manager.

If in the course of the work, a false fire alarm is triggered, the Contractor will be charged \$2,000 per occurrence.

Roof Access

Access to roof areas is prohibited without the approval of the Facility's ACML Representative. A roof access permit is required prior to accessing any roof areas (refer to Appendix A3). The Contractor must supply their own fall protection equipment and follow proper work procedures, cautionary and protective measures as defined by the OHSR (Occupational Health and Safety Regulation).

Damages

If any of the ACML's equipment or services is damaged by the Contractor during the course of their work, the Contractor is to immediately notify the Facility's ACML Representative. No attempt at repair is to be done without the approval of the Project Manager.

Work Outside Normal Hours

Whenever the Contractor is to perform work outside of normal hours, prior arrangements must be made with the Project Manager.

Facility's Tools and Systems

Use of Facility tools and equipment is not allowed unless by special permission from the Facility's ACML Representative.

Contractors are not allowed perform work on the Facility's systems and/or enter service rooms (such as electrical, mechanical and communications rooms/closets) without the permission of the Project Manager.

Cost Plus Tracking

For Contractors who perform cost plus work, daily time sheets must be submitted to the ACML Representative in charge of the project.

2.8 POST CONSTRUCTION MEASURES

Prior to the admittance of patients, completely clean the construction area according to the Infection Control Contractor Guidelines.

Conduct a final walk-through with the Consultants and the Project Manager to ensure that the ventilation system is functioning properly in the completed construction area.

Walkthrough with JOHSC member, Infection Control representative, Plant Operations and Maintenance and Occupational Health & Safety Representative.

2.9 WORK STATEMENT AND SERVICE REPORT REQUIREMENTS

Work Initiation

- Contractors will provide a work plan detailing
 - (1) Scope
 - (2) Methodology
 - (3) Schedule (if required)
- All work must have a written Work Order and/or Purchase Order issued by ACML.
- All work affecting or potentially affecting a system's uptime will be scheduled through ACML Site Manager.
- Any deviations from the approved work scope must be evaluated prior to work performance. Changes affecting safety or risk will be re-scheduled through the ACML Site Manager / Project Manager.
- Use of the dock and storage of equipment, materials and tools will be discussed with the ACML Site Manager / Project Manager prior to start of a project. Agreement will be reached on hours of loading/unloading, duration of dock use, and storage arrangements.

Upon Completion of work

Contractor service reports shall include at a minimum the following information:

- Name of the Company;
- Name (s) of service technician who performed the work;
- Date and Time the work was performed;
- Name designation of the equipment that was worked on;
- Test parameters if applicable i.e. GPM, CFM, voltage, amperage;
- Parts used and indicate if supplied by Vendor or from site stock;
- Recommendations for additional service;
- Changes made to any settings/parameters must be noted as either temporary for testing or permanent;
- Signature of the service technician in charge of the service;

The completed work shall be inspected by a member of the ACML operations team to ensure:

- Work meets the work order or Purchase order requirements
- Work area is left in a clean and acceptable state
- Work area is left in a safe condition.

2.10 EMERGENCY CODES

The following are Codes that may be announced over the Facilities Public Address (PA) system. When you hear the announcement of a Code over the PA system follow any instructions that may be given. There will be times in which only the Code and a location is given which is intended for action of the Facility Staff. In this case continue on with your work. If you have any concerns bring them to the attention of the Manager or Supervisor of the Operations Team.

CODE	INCIDENT
Black	Bomb Threat
Blue	Cardiac Arrest
Brown	Hazardous Spill
Green	Evacuation
Grey	Loss of Essential Services / External Air Exclusion
Orange	Disaster / Mass Casualties
Red	Fire
Yellow	Missing Patient(s)/ Resident Abduction of Infant
White	Violent/Aggressive Situation

SECTION 3: SIGN-OFF

3.1 LEGISLATIVE COMPLIANCE – HEALTH AND SAFETY

Prior to being awarded a Contract, Contractors must indicate in writing, if requested to by the Facility's ACML Representative, compliance with all legislative requirements and that the following are in place:

Item	Required / NA	Complete	ACML Initials
1) A written safety policy posted and circulated to all employees			
2) Proof of good standing in accordance with the WorkSafeBC. The information must include rate, class number and the company WCB number. The Contractor will provide copies of this information upon request, and at the very least, at the beginning and end of the Project.			
3) A Joint Health and Safety Committee (if required by legislation) and/or an appropriately certified Safety Representative/Officer			
4) A list of certified Joint Health and Safety Committee members (if required by legislation)			
5) A schedule of regular site inspections and corresponding site reports for each inspection			
6) A list of trained first aid providers (if required by legislation) and copies of their relevant certification			
7) A schedule ensuring that all employees are trained in WHMIS requirements, spills response, and asbestos awareness			
8) A logbook outlining that an equipment maintenance/inspection program for equipment has been implemented, enforced and documented			
9) Protective equipment for employees and employees must be trained in its proper use and maintenance of protective equipment			
10) Copies of Safety Data Sheets (SDS) for all products utilized			
11) Adequate fire extinguishers will be provided by the Contractor and shall be kept on site for specific projects such as welding and cutting			

3.2 LETTER OF UNDERSTANDING AND ACCEPTANCE

Prior to commencing any project on the Facility property, the Contractor must sign and date this page indicating that they have read and understand the contents of the required parts of this document, as checked in the below table, and accepts the liability and responsibility outlined herein and will comply with the terms and conditions outlined. The Contractor will also provide the required documents checked in the below table. By signing below, the Contractor confirms that there no restricted persons (as defined in Appendix 8) among his team to work on the Facility. A signed copy of this page must be kept readily available on the site for any contractor performing work at the facility

Scope of Service	Item	Required / NA
	Documentation to be provided:	
	- Work Safe BC clearance certificate	
	- Certificate of Insurance (see Appendix 7 for details)	
	- Employee Criminal record check	
	- Health and Safety related documents (see section 3.1)	
	Sections of the Guidelines and Instructions for Contractors to be read and understood by the Contractor:	
	- Section 1 – Introduction (page 4)	
	- Section 2 – Orientation (page 5 – 18)	
	- Section 4.1 – Infection Control (page 23 – 36)	
	- Section 4.2 – Chemical Safety (page 38)	
	- Section 4.3 – Work Site Isolation (page 39)	
	- Section 4.4 – Welding and Cutting Equipment Procedures (page 40)	
	- Section 4.5 – Hot Works Permit (page 41-42)	
	- Section 4.6 – Operations of Vehicle on Facility Property (page 43)	

Contractor Name: _____

Signature: _____

Company Name: _____

Date: _____

Phone Number _____

ACML Representative: _____

Signature: _____

SECTION 4: SUPPORTING DOCUMENTATION

4.1 INFECTION CONTROL

4.1.1 INTRODUCTION

The goal of this document is to provide an overview of the components in the Health Canada and CSA guidelines and offer a tool to assess risk, in order to prevent nosocomial infections associated with construction and renovation. The primary objectives are:

To control the level of dust generated to a minimum and
To protect patients from being exposed to potential disease-causing microorganisms.

4.1.2 POLICY

All workers at the Facility must use Routine Practices for the prevention of transmission of disease. These include hand hygiene upon entering and leaving a patient or treatment room. Additionally, Contractors, Subcontractors and their agents will ensure that staffs working on site at the Facility have met the requirements of the Public Facilities Act regarding surveillance protocols and health reviews. Works will self-screen and be symptom free prior to entering the Facility premises

If required to work in an active patient room/area, Contractors, subcontractors and their agents are required to check in at the nursing station prior to or upon entering the work area. The nursing staff will outline any additional precautions that must be taken when working in the room/area, in consultation with Infection Control.

Additional precautions are necessary to reduce risk of exposure and infection during construction, particularly from organisms spread in dust (airborne), water leaks (moulds) or stagnant water.

Contractors, Subcontractors and their agents must adhere to the most stringent standards, guidelines and/or practices as outlined in the following documents:

CSA Z317.13-12 December 2012 Infection Control during Construction, Renovation and Maintenance of Health Care Facilities

Health Canada Construction Related Nosocomial Infections in Patients in Health Care Facilities 2001

CSA Z317.10-F01(C2006) Handling of Waste Materials in Health Care Facilities and Veterinary Health Care Facilities

CCA 82 Mould Guidelines for the Canadian Construction Industry
Public Facilities Act

4.1.3 GENERAL

Read and be governed by the conditions of the Contract/Purchase Order, Supplemental General Conditions to the Contract, Division 1 of the Specifications (if applicable) and the above referenced documents.

All Contractors, Subcontractors and their agents are to be familiar with the above referenced documents. Prior to commencement of a project within the Facility and in conjunction with the Facility's ACML Representative and Infection Control Practitioner the Contractor will complete a risk assessment matrix. The Contractor shall utilize the Risk Assessment and Preventive Measures

Checklist in the completion of the matrix. The determination of risk will guide the need for barriers and other infection control measures and procedures to be in place during the project. The Facility's ACML Representative will communicate all findings of the assessment to the Contractor, who will implement all required precautions at no additional charge to the Facility. A copy of the completed and agreed upon matrix is to be provided to the Facility's ACML Representative and Infection Control Consultant along with a detailed description of the Infection Prevention and Control measures to be undertaken including but not limited to methods for dust containment and removal of construction debris.

The Contractor shall provide staff, Subcontractor, Suppliers, workers, own forces, or anyone for whom the Contractor may be responsible, with training on Infection Prevention and Control Procedures and Measures. Prior to commencement and during the course of the work, as required, the Contractor shall promptly provide the owner with written confirmation of such training by way of a certificate issued by a recognized company.

During the course of the Work, the Infection Control Consultant/Practitioner may require an additional risk assessment to be undertaken by the Contractor to ensure compliance related to the specifics of the Project.

The Facility's ACML Representative is to ensure that Contractors, Subcontractors and their agents are aware of the existence of this document and its contents.

The exact location, the type of construction activity, and the start and end dates of the construction work (where possible) is to be identified by the Contractor.

Infection Prevention and Control is to be notified, where appropriate, of meetings held by Contractors, in order to discuss new and existing concerns resulting from the project that may be pertinent to their respective areas, as the project progresses.

Patient populations that may be at risk are identified. Prior to each project, Infection Control and Occupational Health in conjunction with the Project Manager and the Contractor are to conduct a risk assessment of the activity to be performed along with the details of the project to determine the appropriate measures to follow, and to jointly determine a strategy.

Prevention procedures and measures to be undertaken when essential services (e.g., water, ventilation systems, electricity) are disrupted are provided by the Contractor.

The integrity of the Facility's exterior structure, spatial separations, ventilation, and water supplies

for any infection control problems are to be reviewed and assessed prior to the commencement of construction.

Prior to the commencement of construction traffic patterns for construction workers, construction activities, and supply delivery routes will be established to minimize risk to patients, staff, and visitors per the Facility's requirements and as indicated. Patient traffic should be redirected away from construction work sites.

Whenever possible, dedicated elevators will be made available for workers working in dust-generating activities. Otherwise, elevators used in conjunction with construction work shall be cleaned and disinfected following each usage.

The need for increased filter changes during construction is reviewed and determined prior to the commencement of construction.

The need to close down dampers temporarily to reduce circulation of contaminated air or fumes is assessed, in consultation with Project Manager, and implemented prior to the commencement of construction.

The Contractor will undertake all work required to ensure that air handling systems can provide the correct air exchange rates and pressure relationships in critical areas within and adjacent to the area of construction.

Disinfecting and cleaning requirements will be established at the initial stage of the Project.

During construction Infection Control Consultant/Practitioner will enhance surveillance as appropriate. Field review of the work will be conducted on a regular basis with the Contractor as necessary.

Breaches in Infection prevention measures that place staff, visitors and/or patients of the Facility at risk may result in "stop" construction order.

4.1.4 IMMUNIZATION

Personnel working within the Facility are at an increased risk of contracting vaccine-preventable diseases through their direct/indirect contact with patients. In an effort to reduce the risk of communicable and infectious disease, all Contractors must be immunized in accordance with WorkSafeBC and as recommended by Public Health Authorities prior to employment. This is to ensure the safety of employees, patients, and Facility staff.

POLICY

1. The following immunizations are currently **recommended** by BC Centre for Disease Control for all ACML employees and their Contractors working within a health care setting:
 - Tetanus/Diphtheria
 - Rubeola (Measles)
 - Mumps
 - Varicella (Chickenpox)
 - Rubella (German Measles)
 - Baseline Tb Skin Testing (as recommended by WH&S)
2. As per Northern Health's "Influenza Control Program Policy" all ACML employees and Contractors must be vaccinated annually against influenza or wear a surgical/procedure mask during influenza season when in a patient care area. During an influenza outbreak, this mask-wearing requirement is suspended and standard policies regarding exclusion and the use of anti-viral medications will apply. If employees do not obtain immunization annually, they may be excluded from work in the event of an influenza outbreak in the facility.
3. Proof of vaccination must be provided to the ACML Site Manager.
4. Any changes to a contractor employee's immunization status must be sent to the ACML Site Manager

4.1.5 ROUTINE PRACTICE

Contractors must follow “Routine Practices” when working in, the patient care environment or in close proximity to patients. These practices should include;

1. Following the directions of the patient care team,
2. Following the directions of the facility operations team
3. Using the proper personal protective equipment
4. Maintaining proper hand hygiene.
5. The following are “Routine Practices” to prevent contact with blood, body fluids, secretions, and extractions

Routine Practices are infection prevention and control practices designed to reduce the risk of blood and body fluid exposure to workers and to prevent and control contamination and transmission of microorganisms in all healthcare settings. Precautionary techniques taken to prevent the spread of infection require the maintenance of a clean, safe environment and regular use of Routine Practices supplemented where appropriate with the Transmission-based Precautions of Contact, Droplet, or Airborne.

It is the responsibility of Northern Health to provide the basic barrier supplies from the Central supplies/stores. These supplies are to be placed inside the isolation anterooms or outside Transmission Precautions rooms in carts.

POLICY

1. Contractors will be trained on the use of “Routine Practices”. This training will be conducted by a qualified Infection Control Practitioner.
2. Hand Hygiene shall be conducted as outlined in the “Hand Hygiene” policy. Hand hygiene can be performed by using soap and running warm water or by using alcohol-based hand run. Hands must be cleaned:
 - A) After any direct contact (skin to skin) with a patient or their environment and before contact with the next patient. The need for hand washing after casual contact unrelated to patient care should be judged on an individual basis.
 - B) Before and after contact is made with any patient or their immediate environment
 - C) After contact with blood and body fluids
 - D) After contact with equipment, fomites that are considered likely to be contaminated with blood, body fluids, secretions (e.g. bedpans, urinals, wound dressings).
 - E) Before putting on gloves and immediately after removing
 - F) When hands are visibly soiled, wash with soap and water
 - G) After personal use of toilet or wiping nose and before eating
3. The use of Personal Protective Equipment (PPE) will vary based on the risk assessment of staff interaction with the patient and the patient condition:

A) Gloves

- (1) Gloves are not a substitute for hand washing.
- (2) Clean, non-sterile gloves should be worn for direct contact with blood, body fluids and secretions
- (3) Gloves should be removed /changed after leaving patient rooms and/or the end of the task.
- (4) Hands should be cleaned with ABHR if not visibly soiled or washed with soap and water

B) Mask, Eye Protection, Face Shield

Are to be worn to protect mucous membranes of the eyes, nose and mouth during procedures where splatters or splashes of body fluids or blood are anticipated for example repairs to toilets or drain lines and cleaning up floods.

C) Gowns

Routine use of gowns is not recommended. Gowns are to be worn when splatters or splashes of body fluids to clothing is likely for example repairs to toilets or drain lines and cleaning up floods.

4. Contractors must follow the following Precautions when working within the patient care environment. A flowchart of the decision-making process can be found in "Appendix "6E-1". This flowchart should be used as reference, when in doubt contact the ACML Site Manager or Supervisor.

Contact Precautions

Contact Precautions include direct and indirect contact. Contact Precautions are required when Routine Precautions are not sufficient to control transmission.

Direct Contact occurs when transfer of microorganism result from direct physical contact between an infected or colonized individual and a susceptible host.

Indirect Contact involves the transfer of microorganisms to a susceptible host frequently by contaminated hands that are not washed between patients, or that have been in contact with a contaminated instrument or object in the patient's environment.

Precautionary Measures**1. Gloves**

- (a) Should be donned before entering the patient's room and removed before leaving the room.
- (b) Wash hands or apply Facility approved waterless hand antiseptic.

2. Gowns

- (a) Gowns should be worn when having direct contact with patient or

- patient's environment.
- (b) Gowns should be removed before leaving the room.

3. Hand washing

- (a) Wash hands after removing gown and gloves and before exiting patient's room.
- (b) Hands must be washed with soap and water or Facility approved waterless antiseptic before leaving the patient's room.

Droplet Precautions

Droplet transmission is a form of contact transmission. Droplet transmission refers to large droplets, 5 mm in diameter, generated from the respiratory tract of a patient during coughing or sneezing. These droplets are propelled a short distance (<1meter) through the air.

Some organisms transmitted by this route are very fragile, and do not survive in the environment of the patient or on hands. Other organism's expelled; especially respiratory viruses remain viable in droplets that settle on objects for a long period of time.

Precautionary Measures

1. Masks

- (a) The type of mask worn will depend on the activity to be performed. A Facility approved procedure mask is to be worn by all Facility Workers when entering the room.

2. Eye Protection (goggles, face shields)

- (a) Eye protection should be worn upon entering the room.

3. Gloves

- (a) Should be donned before entering the patient's room.
- (b) Gloves must be removed before leaving the room.
- (c) Wash hands or apply the Facility approved waterless antiseptic before leaving the room. The patient's washroom should not be used to wash hands.

4. Gowns (to be worn if contamination with secretions is likely, not required)

- (a) Gowns should be worn upon entering the room and discarded before leaving
- (b) Gowns are single use only.

Airborne Transmission

Airborne transmission refers to dissemination of microorganisms by aerosolization. Organisms are contained in droplet nuclei (airborne particles < 5m) that result from evaporation of large droplets, or in dust particles containing microbial debris, that remain suspended in the air for long periods of time. Such microorganisms are widely dispersed by air currents and inhaled by susceptible hosts. Controlling airborne transmission requires control of airflow through special ventilation systems.

There is evidence for airborne transmission from source patients with Mycobacterium Tuberculosis, Varicella zoster in an immunocompromised host, and measles (rubeola).

Precautionary Measures

1. Personal Protective Equipment (PPE)

A) Masks

- (1) High-efficiency submicron filtration masks for all who enter the patient's room.
- (2) The mask should filter particles one micron in size, and have a 95% filter efficiency, and provide a tight facial seal (less than 10% leak).
- (3) For N 95 masks, the mask must be fit tested before use.

B) Gloves & Gowns

- (1) To be worn as per routine practices.

4.1.6 HAND HYGIENE

Facility acquired infections are recognized as a serious problem affecting the quality of patient care and safety. These infections are spread mainly by cross-contamination and transmission of microorganisms through physical contact. Hand hygiene is the simplest, single most effective measure for preventing and reducing healthcare-associated infections.

1. Contractors must perform hand hygiene based on the following:
 - (a) BEFORE initial patient/patient environment contact (ix 6F-3)
 - (b) AFTER body fluid exposure risk
 - (c) AFTER patient/patient environment contact
2. Contractors must follow the techniques for performing hand hygiene

A) Technique for Using an Alcohol-based Hand Rub

The following procedure should be used for cleaning hands with ABHR (refer to Appendix 6F-2, “*Techniques for Performing Hand Hygiene*” for more information):

- (1) Ensure hands are visibly clean (if soiled, follow hand washing steps).
- (2) Remove hand and arm jewelry. Clothing or other items that impede frequent and effective hand hygiene should be removed. A simple and practical solution allowing effective hand hygiene is for health care providers to wear their rings around their neck on a chain as a pendant.
- (3) Apply one to two full pumps of product, or squirt a 35 mm-sized amount (about the size of a “loonie”), onto one palm.
- (4) Spread product over all surfaces of hands, concentrating on finger tips, between fingers, back of hands, and base of thumbs. These are the most commonly missed areas.
- (5) Rub hands until product is dry. This will take a minimum of 15 seconds if sufficient product is used. Hands must be fully dry *before touching the client/patient/resident* or the care environment/equipment for the alcohol-based hand rub to be effective and to eliminate the extremely rare risk of flammability in the presence of an oxygen-enriched environment.

B) Technique for Hand Washing

The following procedure should be used for hand washing;

- (1) Remove hand and arm jewelry. If a watch is worn, it must be worn above the wrist and fit snugly. Clothing or other items that impede frequent and effective hand hygiene should be removed or pushed back. A simple and practical solution allowing effective hand hygiene is for health care providers to wear their rings around their neck on a chain as a pendant.
- (2) Wet hands with warm (not hot) water. Hot water is hard on the hands, and will lead to dryness.
- (3) Apply liquid or foam soap. Do not use bar soap in health care settings as it may harbour bacteria that can then be spread to other users.

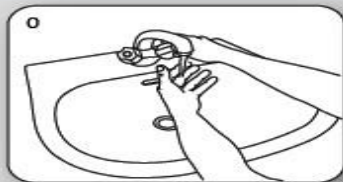
- (4) Vigorously lather all surfaces of hands for a minimum of 15 seconds. Removal of transient or acquired bacteria requires a minimum of 15 seconds of mechanical action. Pay particular attention to finger tips, between fingers, backs of hands and base of the thumbs. These are the most commonly missed areas.
 - (5) Using a rubbing motion, thoroughly rinse soap from hands. Residual soap can lead to dryness and cracking of skin.
 - (6) Dry hands thoroughly by blotting hands gently with a paper towel. Rubbing vigorously with paper towels can damage the skin.
 - (7) Turn off taps with paper towel, to avoid recontamination of the hands.
 - (8) If hand air dryers are used, hands-free taps are required.
 - (9) DO NOT use ABHR immediately after washing hands, as skin irritation will be increased.
 - (10) If running water is not immediately available, use moistened towelettes to remove the visible soil, followed by alcohol-based hand rub.
3. Hand Care is important of all members of the health care team including the ACML staff. Staff should:
 - (a) Recognize that intact skin is the body's first line of defense against bacteria; therefore, careful attention to hand care is an essential component of hand hygiene.
 - (b) Keep natural nails clean and short, they should not show past the end of the finger. False fingernails or chipped nail polish can harbor infections
 - (c) Be aware that ABHR has been shown to be less irritating to skin than soap and water
 - (d) Be encouraged to consult with Occupational Health for hand care concerns.

Hand Lotions:

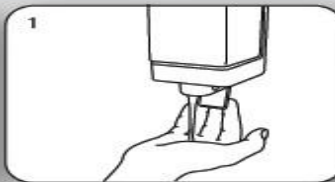
- Only Facility provided hand lotions should be used
 - Individual Hand Lotions are not recommended since studies have shown that individual hand lotions commonly grow bacteria.
4. The use of gloves does not replace the need for hand hygiene because gloves are not completely free of leaks, and tears/punctures can occur. Hands must be cleaned before donning gloves for an aseptic/clean procedure and after glove removal.
 5. Gloves must be removed immediately and discarded after the activity for which they were used and before exiting the environment of a patient.
 6. Gloves should not be washed or reused.
 7. Gloves should never be re-worn between clients/patients/residents.
 - (a) Wear gloves for as short a time as possible;
 - (b) Hands must be clean and dry before donning gloves; and
 - (c) Gloves should be intact and clean and dry inside.

APPENDIX 6F-1 HAND WASHING WITH SOAP

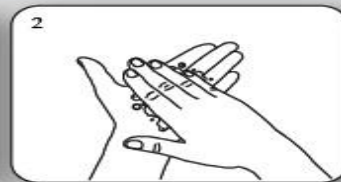
Handwashing Technique with Soap and Water



Wet hands with water



apply enough soap to cover
all hand surfaces



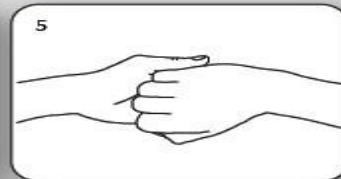
rub hands palm to palm



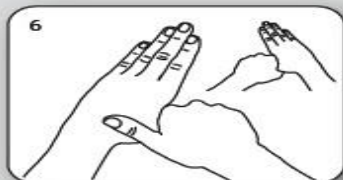
right palm over left dorsum
with interlaced fingers and
vice versa



palm to palm with fingers
interlaced



backs of fingers to opposing
palms with fingers interlocked



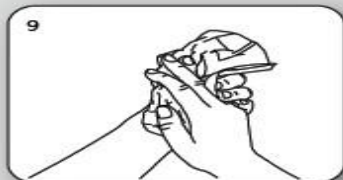
rotational rubbing of left
thumb clasped in right palm
and vice versa



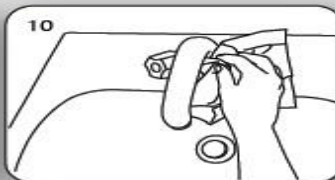
rotational rubbing, backwards
and forwards with clasped
fingers of right hand in left
palm and vice versa



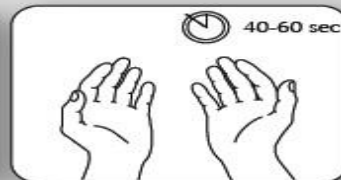
rinse hands with water



dry thoroughly with a single
use towel



use towel to turn off faucet



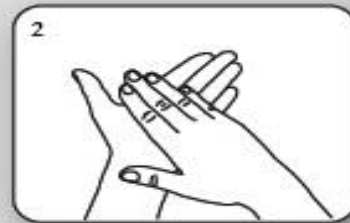
...and your hands are safe.

APPENDIX 6F-2 DECONTAMINATING HAND WITH ALCHOL-BASED HAND ANTISEPTIC

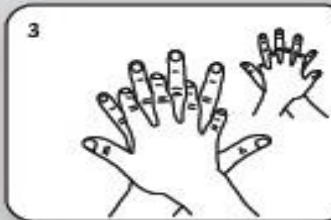
Hand Hygiene Technique with Alcohol-Based Formulation



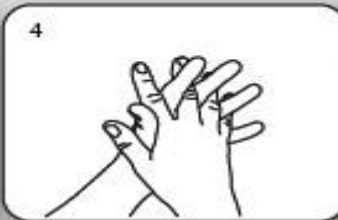
1a
Apply a palmful of the product in a cupped hand and cover all surfaces.



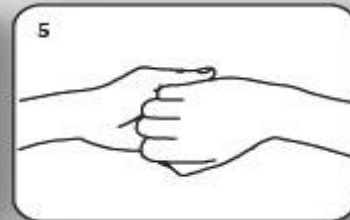
2
Rub hands palm to palm



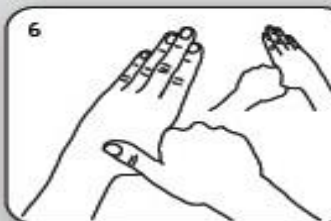
3
right palm over left dorsum with interlaced fingers and vice versa



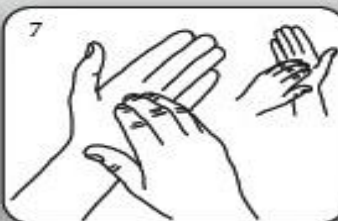
4
palm to palm with fingers interlaced



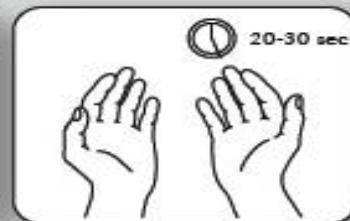
5
backs of fingers to opposing palms with fingers interlocked



6
rotational rubbing of left thumb clasped in right palm and vice versa



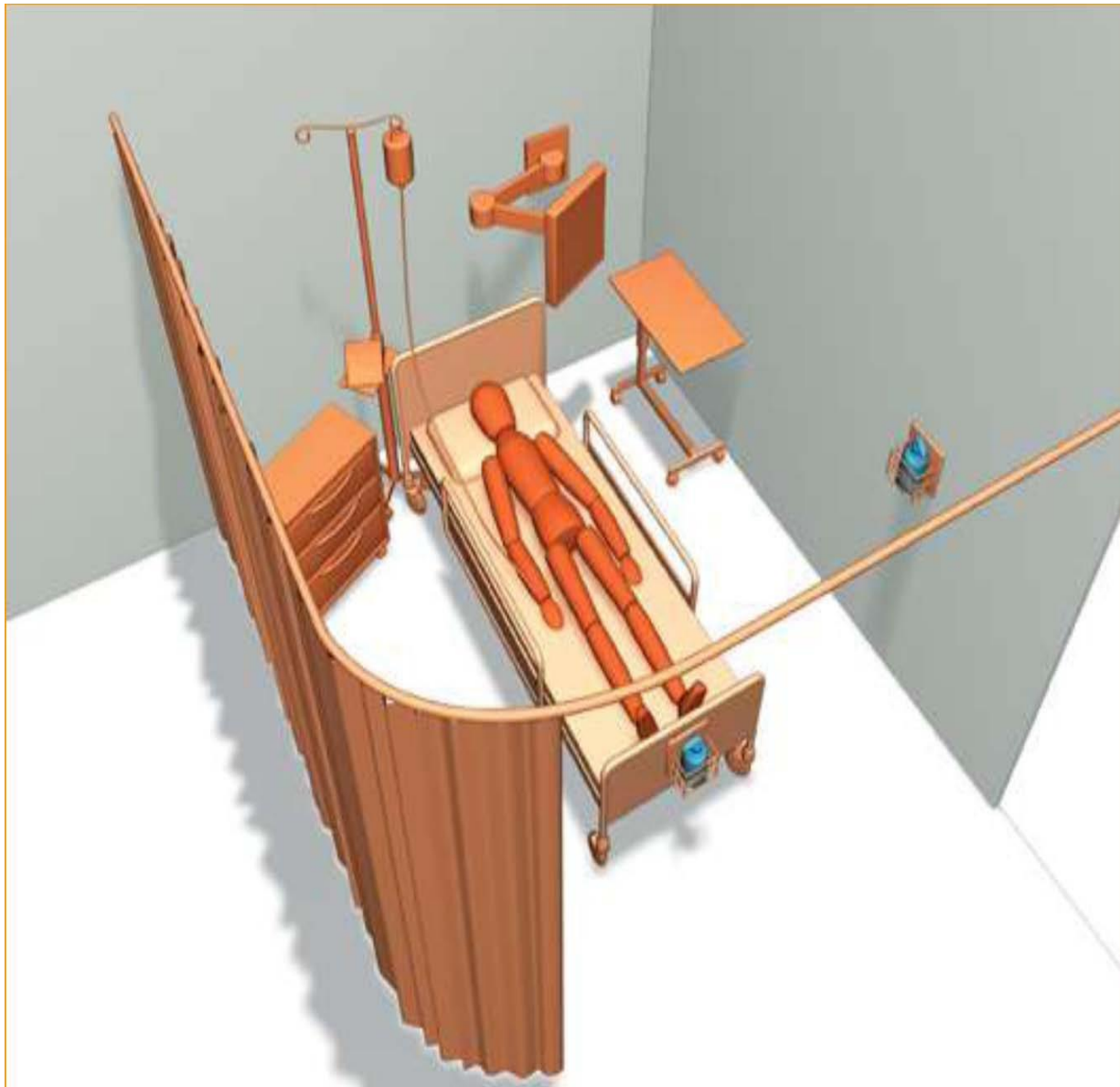
7
rotational rubbing, backwards and forwards with clasped fingers of right hand in left palm and vice versa



...once dry, your hands are safe.

APPENDIX 6F-3

PATIENTS ENVIRONMENTS



4.1.7 MINIMUM CONSTRUCTION REQUIREMENTS

The ACML Site Manager and/or Supervisor will determine what additional infection control mechanisms are required based upon ACML's internal Infection Control Policy I-03-03-P Dust Control. These requirements will be provided to the Contractors prior to pricing so that they may be included in the contractor's quote.

4.2 CHEMICAL SAFETY

Under the Occupational Health and Safety Regulation and related Regulations specific requirements, procedures and training must be carried out to ensure that workers work safely with chemicals. The Facility expects that these requirements, procedures and training will be carried out by all Contractors.

Before any job is started and for the project duration:

The Contractor must ensure that all necessary precautions are followed when working with or around any hazardous or designated substance including but not limited to personal protective equipment, signing, limiting entry, additional ventilation, etc.

The Contractor, Subcontractors and their agents shall be trained in the Workplace Hazardous Materials Information System ("WHMIS") and comply with WHMIS and be able to submit proof of training if requested by the Project Manager.

Appropriate written notice must be given to the Project Representative by the Contractor, with as much lead-time as possible to allow for temporary changes in the location of workers.

Copies of all Safety Data Sheets (SDS) for all products to be used on a project must be forwarded to the Occupational Health and Safety Department, (if a previous copy has been forwarded, send name of product). Include product and quantity, nature of work and precautions and procedures that will be followed. Contractor employees must review SDS of all products to be used on the project. SDS must be kept on site and readily available at all times. The Occupational Health and Safety Department must be notified and new SDS provided prior to any change in products being implemented.

The Facility may forward additional requirements, changes in procedures or other recommendations to the Contractor.

All chemical containers must be appropriately labelled in accordance with WHMIS Regulations. The Contractor must ensure that adequate ventilation is provided in the area of work for the type and quantity of products being utilized.

Contractor's staff names and emergency numbers must be submitted to the Facility's ACML Representative prior to starting any work.

Limitations, procedures and precautions outlined by SDSs and the Project Representative must be adhered to for both workers and occupants of the building (e.g. signage, charcoal fan filter, cordon off area, modify airflow where required, personal protective equipment, etc.). Where chemicals are used, spills kit should be readily available.

Chemical spills released into the environment must be reported immediately to appropriate government agencies and the Facility.

If it is not possible to safely use any substance or there is a doubt about SDS information, then the substance or product must not be used until the correct information is available, or an alternative can be found.

4.3 WORK SITE ISOLATION

Barricading, Limiting Access and Hoarding

It is the responsibility of the Contractor to provide appropriate barricading, fencing, hoarding, warning lights and signage in and around the work site as required by Code, Authorities Having Jurisdiction and the Facility. The location and extent of the work site isolation should be discussed with and approved by the manager of plant operations prior to the commencement of the work.

Barricades must be placed in such a manner as to prevent unauthorized personnel from entering the work site and potentially placing themselves in danger of injury.

No fire prevention equipment or fire exits/egress routes may be blocked without prior written approval from the Fire Marshal's Office and the Facility.

For construction projects, solid hoarding will be used in place of chain link fencing to keep pedestrians out of the construction areas.

Provide a combination lock on all access doors into and out of site hoarding.

Fire Alarm Bypasses

Fire alarm devices are to be protected during the course of construction. When required, due to the nature of the work being performed, the Contractor will arrange for a bypass on the fire alarm system. Bypasses shall be reinstated at the end of the shift. If due to the nature of the work or condition of the space it is not possible to reinstate the fire alarm system, the Contractor shall, at their expense, post a fire watch to the satisfaction of the Project Representative.

If in the course of the work, a false fire alarm is triggered, the Contractor will be charged \$2,000 per occurrence.

4.4 WELDING AND CUTTING EQUIPMENT PROCEDURES

When an operation requires the use of an open flame or there is the potential of hot sparks such as when work involves welding and/or cutting, a Hot Work Permit must be obtained from the Facility's ACML Representative prior to commencement of such work. The Permit (refer to Appendix B) is to be posted in the area of the work. When considering when to issue a Hot Works Permit, the Facility's ACML Representative may consider the following factors:

- Type and size of fire extinguisher required;
- Fire watchers if necessary;
- Shielding for arc welding;
- Combustible materials;
- Special job write-ups as may be needed;
- Possibility of toxic fumes;
- Ventilation needed;
- Wind direction, if relevant;
- Isolation of fire alarm system detection devices;
- Location of nearest fire alarm pull.

Prior to welding, the Fire Alarm System shall be bypassed and a fire watch must be maintained by the Contractor during and one-hour after completion of any welding or cutting operation.

Oxygen and acetylene bottles shall be stored in an upright position, secured to a stable support and not be left freestanding; the empty bottles shall be marked and separated from the full bottles. All bottles shall be stored per current regulations and away from any potentially hazardous situations, such as fire or areas where they may be exposed to mechanical damage. Compressed gas bottles shall not be stored in areas, which contain petroleum products. Any leaking compressed bottles shall be removed immediately from building structures and arrangements made to remove them from the project site as soon as possible. The fire alarm shall be pulled in case of leakage of flammable, explosive or other dangerous gases.

Contractors/Subcontractors must ensure that their workers and employees use the required specialized personal protective equipment required when working with welding or cutting equipment. They must also ensure that welding curtains are used where possible to protect others near the Facility property from welding arcs and flash.

The immediate area encompassing the site of operations will be hosed down with water both prior to and after the operations. The immediate area shall be properly ventilated to exhaust welding fumes.

A portable fire extinguisher of the "ABC" type approved by the Underwriters' Laboratories of Canada will be kept in close proximity to the site.

All combustible or inflammable materials within 40 feet (12.2 meters) of the site which can neither be hosed down with water nor moved away from the area shall be protected by a covering of non-combustible material at all times during the operations.

4.5 HOT WORKS PERMIT

Purpose

The purpose of this document is to provide minimum standards for the control of hot work on premises. Work involving welding or cutting torches is a very common source of fire in commercial and industrial occupancies. This permit system will help minimize the chance of these operations causing a fire.

Scope

This minimum standard applies to hot work in any area other than normally designated and protected maintenance areas or welding booths. It applies both inside and outside the Facility, and at new construction as well as existing operations. This is a minimum standard, applicable for all facilities and operations.

Responsibilities

Responsibility for compliance with these practices remains with building management for existing operations and with project management for new construction. These practices are minimum standards, and generally line up with fire prevention codes. Issuance of hot work permits must be to individuals, not to contractors or other groups as a whole.

Definitions

Hot Work: Any cutting, welding, soldering, sweating or other activity that involves a torch, open flame or other ignition source. Grinding is also considered hot work. Portable heating units such as gas fired salamanders, electric heaters, hot air guns and similar devices are also subject to this permitting function. Torch applied roofing is hot work, governed by this document.

Procedure

The Project Representative should be consulted regarding the work and other hazardous functions should be suspended in the area. Any fixed protection (sprinklers) must remain in full service during the work; if sprinklers are impaired, the hot work may be postponed.

Persons intending to perform hot work must be proficient in the activity, all aspects of safety and must prepare a work permit (attached). The permit must be reviewed and approved by the Plant Operations and Maintenance Manager/Supervisor or a similar, responsible person prior to the commencement of any work.

Acceptance by the Maintenance Manager/Supervisor implies only that conditions are acceptable for work to proceed and does not relieve the person(s) performing the work of the responsibility of maintaining a safe working area. If any changes in the work environment or area are observed by the person(s) performing the work, all hot work must cease until the site has been re-evaluated by the Maintenance Manager/Supervisor.

The person authorized to issue the permit must be familiar with the hazards of the area. The permit should be limited in time, and should be renewed by shift or daily. Only the person actually performing the work can be issued the permit.

The person authorized to issue the permit must check the area prior to issuing the permit. The area must be free of combustibles for at least 35 ft. (10 m) or local combustibles must be protected by heat shields such as welding screens and tarpaulins. Open spaces in walls and floors for the

same distance must be sealed, covered, or otherwise protected. Special consideration should be given to holes in floors and combustible walls. A fire watch must be posted, and extinguishers must be present. Fire watches should be aware of locations of pull stations and how to respond to small incidents. The fire watch must be trained in the use of the extinguisher.

The Contractor is responsible for the fire watch, extinguishers, and any necessary screens or tarpaulins.

The area must be checked at the end of the work, and should be inspected for at least one hour after the work to look for sparks, hot slag, or smoldering that may have been left behind by the work.

Cutting and welding is not to be permitted on any containers or pipelines that could contain flammable liquids, vapors or gases. Any such container must be reliably purged before the work. If there is any doubt, an inert gas purge should remain in place during the work. Hot work in confined spaces requires special attention, and may drive a common space into one regulated under confined space entry rules.

Area considerations should also include routing of employees or other persons who may accidentally make eye contact with the arc. Such incidental viewing may result in eye damage or temporary sight dysfunction that could result in a separate accident.

Gas cylinders used for hot work should be stored in a safe manner, preferably outside any building. Cylinders should be confined to a cart when in use, or otherwise restrained at all times. All hot work equipment such as cylinders, valves, hoses, nozzles, carts, extinguishers, etc. must be inspected prior to use, and should not be used if deficient.

Satisfactory Performance

Work is completed in accordance with the above conditions and the requirements of the permit.
Permits can only be issued by the designated Owner's Representative to requesting individual(s).
Permits are renewed by shift or by day.
No fires occur.

Unsatisfactory Performance

The area is not inspected by persons performing the work
Combustibles not removed, covered, or otherwise protected
Permit stays open for more than one shift
No extinguishers
Lack of a fire watch
No check of area after work
Work takes place in building with fixed protection impaired
Other conditions of the permit are omitted or violated
Signed permit not submitted at end of work

Required Records

Permits should be maintained on file for inspection at later dates. Up to one year's permits should be retained.

4.6 OPERATION OF VEHICLES ON FACILITY PROPERTY

The Contractor must provide a list of equipment requirements on site. Before entering the property, Site Manager must have this list and the appropriate arrangements made for access onto Facility grounds.

Contractor vehicles used on Facility property will not be overloaded, and passengers must ride within the cab (loading requirements are those of the Ministry of Transport or the City of Fort St John, whichever are more stringent). Riding upon running boards, fenders, hoods, scraper blades and buckets, or in boxes or other attachments is prohibited. Employees must not board or jump off moving vehicles.

Contractor vehicles must be left in designated areas and, when not in use, must not obstruct emergency vehicles or roadways.

Contractor vehicles must obey all traffic signs, speed limits and parking restrictions.

Vehicles with tracks should not be driven on pavement or sidewalks without suitable protection.

APPENDIX A1

FACILITY SERVICE DISRUPTION REQUEST

Note: The Plant Services Department requires a minimum of 14 days notice prior to the shutdown of Facility services.
 Contractor to confirm with the Plant Services staff that the Fire Alarm System is bypassed prior to starting the work in any area.

CONTRACTOR	
Type & Description of Service Disruption:	
Area(s) to be affected by Disruption:	
Approximate Duration of Disruption:	
Contractor (Company's) Name:	
Contact Name:	Phone: ()
Signature:	Date:
General Contractor's Signature:	Date:
Project Manager's Signature:	Date:
PLANT OPERATIONS AND MAINTENANCE	
Date Request Received/Reviewed:	
Approved Shutdown Date:	Time: From: To:
Date Affected Area(s) Notified:	Name & Date:
Plant Operations & Maintenance Manager Signature:	

APPENDIX A2
HOT WORK PERMIT

Contractor/Operator is to complete the following and post a copy in the area of work.

Contractor/Operator: _____
Building: _____
Area / Floor: _____
Work Being Undertaken: _____
Date: _____
Time: _____

-
- () Fire Extinguishers have been provided
 - () The area has been inspected for combustible construction
 - () Combustible material, within 35 feet (10 meters), has been removed or covered with a flame retardant tarp
 - () All holes in walls, floors or roof openings have been sealed
 - () I have explained safety requirements to other operators
 - () I have advised the area/departments manager
 - () Work has to be done here – cannot be done in a shop
 - () A guard or fire watcher has been provided in the area and the floor below.
 - () All equipment has been checked and is in good working condition.

Contractor to complete the following when finished.

- () When work is terminated, inspect the area for 1 hour
- () Inspect the floor below (if any) for 1 hour

I have checked the working area, adjacent areas and areas below (if any) for sparks, smoldering fires, smoke for at least 1 hour after work was completed. No unusual conditions were observed.

Contractor/Operator

Contractor to return completed permit to Manager/Supervisor Plant Operations & Maintenance upon completion of work.

Notes:

This permit:

Applies to cutting, welding, brazing, soldering, grinding, heated roofing materials work.
Does not apply to any of these operations when performed in areas designed specifically for them.
For example, does not apply to welding work in a welding shop and/or maintenance shop.
Does not apply to welding of tanks containing flammable liquids, gases, toxic materials. Special precautions are necessary for work in these.

Plant Operation and Maintenance Manager/Supervisor to complete the following:

Permit Expiration Date: _____ Time: _____

APPENDIX A2

Special Precautions: _____

Job Completed Date: _____ Time: _____

Area should be inspected every half hour for 8 hours after the work is discontinued.

Inspections Complete: _____

Area Secure: _____

Maintenance Manager/Supervisor: _____

APPENDIX A3

ROOF ACCESS PERMIT

DATE ISSUED: _____ EXPIRY DATE: _____

DESCRIPTION OF WORK: _____

SAFETY DEVICES REQUIRED (IF ANY): _____

INSTRUCTIONS:

1. No person shall enter or remain on any roof unless accompanied by at least one other person to act as a safety watch or be in radio contact with Plant Operations and Maintenance and/or Security. All work must be in compliance with the Health and Safety Guidelines for Low-Slope Roofing.

2. No person shall perform work at any point nearer than 3 meters to an unguarded roof-edge unless secured by an approved safety belt that when inspected at the time of use is found to be in good condition. No person shall work at roof edge where he must lean over to perform his work unless secured with an approved harness adequately secured to a fixed support and arranged so that the worker cannot fall vertically more than 1.5 meters. Safety belt or harness shall meet the criteria described in the Occupational Health and Safety Regulation.

Work may be performed without a safety belt on roofs when a parapet or suitable guard with a minimum height of 107cm. is in existence or is provided by the worker.

All work shall be performed in conformity with the Occupational Health and Safety Regulation for Industrial Establishments and/or for Construction Projects as well as any additional requirements of St. Josephs Health Care Centre.

All tools and equipment used in roof work must be in good condition before a Roof Access Permit shall be granted. While working on the roof all tools, materials and waste must be maintained in a secure manner so as not to pose a hazard to other workers or the area below.

Time and date of roof access shall be registered with the appropriate Plant Operations and Maintenance or Planning personnel. The same notification is required immediately at the time roof area is vacated.

APPENDIX A3**AGREEMENT**

All persons entering upon a roof shall conform to the above instructions, confirm they have received fall protection training (if working within 3 meters of the edge) and shall record below:

PRINT NAME

DATE

SIGNATURE

COMPANY NAME

APPROVED BY:

PRINT NAME

DATE

SIGNATURE

COMPANY NAME

Caution: Do not prop open doors and take caution when opening doors due to high winds that could cause the door to open unexpectedly as you egress the room.

APPENDIX A4

Information Practices Schedule- Personal Health Information

Collection, Use and Disclosure of Personal Health Information (PHI):

The Consultant/Contractor/Vendor agrees to receive PHI from the Facility in accordance with s. 17 or, in the case of health information network providers, s. 10(4) of the *Personal Health Information Protection Act, 2004* (British Columbia) and its related regulations, as part of the Consultant's provision of services to and on behalf of the Facility, and not on the Consultant's/Contractor's/Vendor's behalf or for the Consultant's/Contractor's/Vendor's own purposes.

The Consultant/Contractor/Vendor will only use as much PHI as is reasonably necessary to perform its obligations under the Agreement and will make PHI available only to those employees who require access in order to satisfy those obligations.

The Consultant/Contractor/Vendor will only use and disclose any PHI it receives from the Facility as is permitted or required under the Agreement or the laws of Canada and/or the province of British Columbia.

The Consultant/Contractor/Vendor will ensure that any of its agents or subcontractors to whom the Consultant/Contractor/Vendor provides the Facility PHI has agreed to the same restrictions and conditions that apply to the Consultant/Contractor/Vendor with respect to PHI.

The Consultant/Contractor/Vendor shall not disclose PHI, or any information, to any affiliated or unaffiliated third party without the prior written consent of the Facility.

The Consultant/Contractor/Vendor will maintain a log of access and disclosure of PHI by the Consultant/Contractor/Vendor and their Personnel and make such log(s) available to the Facility as and when requested.

Practices to Protect Personal Health Information:

The Consultant/Contractor/Vendor will employ appropriate safeguards to prevent theft, loss and unauthorized access, copying, modification, use, disclosure or disposal of PHI.

The Consultant/Contractor/Vendor will maintain privacy policies in accordance with Canadian and British Columbia laws and these policies will be made available for inspection on request.

The Consultant/Contractor/Vendor will educate its employees on privacy laws and policies and take reasonable steps to ensure employee compliance through staff training, confidentiality agreements and employee sanctions.

The Consultant/Contractor/Vendor will ensure that its employees, who are fired, resign or no longer require access to PHI from the Facility return all PHI to the Facility and can, thereafter, no longer access applications, hardware, software, network and facilities belonging to either the Consultant or the Facility.

The Consultant/Contractor/Vendor will revoke any user's access to PHI if security is breached and on the Facility's reasonable request.

At the termination of the Agreement, the Consultant/Contractor/Vendor will return or destroy all PHI received from, created or received by the Consultant/Contractor/Vendor on behalf of the Facility that the Consultant/Contractor/Vendor maintains custody of in any form and will retain no copies of PHI thereafter. If such return or destruction of PHI is not feasible, the Consultant/Contractor/Vendor will notify the Facility of this fact, extend the protections of the Agreement to all PHIS in your custody and will cease all further uses and disclosures.

Notification of and Communication with the Facility:

The Consultant/Contractor/Vendor will provide the Facility with the name of a contact person at the Consultant's/Contractor's/Vendor's organization responsible for the Consultant's/Contractor's/Vendor's privacy compliance and notify the Facility within 24 hours of any changes in the identity of the responsible person.

The Consultant's/Contractor's/Vendor's will provide notice to the Facility's Privacy Office if the nature of the Consultant's/Contractor's/Vendor's business and the services being provided to the Facility require that the Facility PHI must be transmitted or access be provided to any of the Consultant's Personnel or to any facility situated outside of British Columbia. When providing notice, please specify where outside of British Columbia the PHI will be transmitted or from where it will be accessed.

The Consultant/Contractor/Vendor will report to the Facility's Privacy Office at the Consultant's/Contractor's/Vendor's first reasonable opportunity, but in any event no more than 48 hours after the Consultant/Contractor/Vendor becomes aware of any use, disclosure, theft or unauthorized access of PHI by the Consultant/Contractor/Vendor or any of your agents or subcontractors to whom you provide the Facility PHI.

The Consultant/Contractor/Vendor will refer anyone trying to access, correct or complain about their PHI to the Facility's Privacy Office within 48 hours of receiving the complaint or request for access or correction.

The Consultant/Contractor/Vendor will, upon request, make PHI available to the Facility for amendment and incorporate any amendments into the Consultant's/Contractor's/Vendor's records of PHI. During the term of the Agreement, the Consultant/Contractor/Vendor may never deny the Facility access to its patients' PHI.

The Facility reserves the right to: inspect any equipment used or records maintained by the Consultant/Contractor/Vendor in connection with the provision of goods or services; question the Consultant's/Contractor's/Vendor's Personnel regarding their handling of PHI; and otherwise audit and electronically verifies compliance with these practices.

Additional Facility Rights:

Notwithstanding anything else contained in the Agreement, the Consultant/Contractor/Vendor authorizes, acknowledges and accepts termination without notice of the Agreement by the Facility in the event that the Facility determines the Consultant has violated any of these practices.

Information Practices Schedule survives the termination of the Agreement.

Information Practices Schedule. The Consultant/Contractor/Vendor acknowledges that any breach of these practices result in the Facility suffering irreparable harm.

APPENDIX A5

Employer's Duties under the Workers Compensation Act,

The following charts set out a summary of the duties of an Employer. While efforts have been made to ensure accuracy and completeness, the charts are intended for general guidance and assistance only. They do not constitute legal advice and do not replace the legislative provisions. In the event of any inconsistency between the charts and the *Occupational Health and Safety Regulation* and applicable regulations, the latter prevails. For the purpose of determining the precise duties of a constructor, reference should always be made to the official volumes of the *Occupational Health and Safety Regulation* and applicable regulations.

Duty	Section of Act
Ensure the health and safety of all workers working for that employer, and any other workers present at a workplace at which that employer's work is being carried out, and comply with this Part, the regulations and any applicable	115(1)
Remedy any workplace conditions that are hazardous to the health or safety of the employer's workers,	115(1)a
Ensure that the employer's workers (i) are made aware of all known or reasonably foreseeable health or safety hazards to which they are likely to be exposed by their work, (ii) comply with this Part, the regulations and any applicable orders, and (iii) are made aware of their rights and duties under this Part and the regulations,	115(1)b
establish occupational health and safety policies and programs in accordance with the regulations	115(1)c
provide and maintain in good condition protective equipment, devices and clothing as required by regulation and ensure that these are used by the employer's workers,	115(1)d
provide to the employer's workers the information, instruction, training and supervision necessary to ensure the health and safety of those workers in carrying out their work and to ensure the health and safety of other workers at the workplace	115(1)e
make a copy of this Act and the regulations readily available for review by the employer's workers and, at each workplace where workers of the employer are regularly employed, post and keep posted a notice advising where the copy is available for review,	115(1)f
consult and cooperate with the joint committees and worker health and safety representatives for workplaces of the employer,	115(1)g
cooperate with the Board, officers of the Board and any other person carrying out a duty under this Part or the regulations.	115(1)h

Constructor's Duties under the Regulation for Construction Projects
 British Columbia Regulation 213/91

Duty	Section of Regulation
Complete an approved registration form before beginning work at a project	5
Ensure that each employer on the project provides a completed approved registration form	5
Ensure that a copy of the employer's completed registration form is kept on the project while the employer is working on the project	
Where the nature of the project requires it, complete and file a Notice of Project (NOP) at the Ministry Office closest to the project generally before beginning work	6
Post the NOP in a conspicuous place on the Project	6
If NOP is not required but project includes work on a trench more than 1.2 meters deep into which a worker may enter, notify, by telephone or fax, the Ministry Office located nearest to the project before work begins	7
A constructor who submits a report under subsection 51 (1) of the Act (notice of death or injury) or gives a notice under section 52 or 53 of the Act (notice of accident, etc.) shall also provide, within 14 days after the occurrence, a professional engineer's written opinion stating the cause of the occurrence.	12
Post in a conspicuous place at the project, and keep posted while work is done, a notice setting out: 1. The constructor's name, and if the constructor carries on business in a different name, the business name 2. The address and telephone number of the constructor's head office or principle place of business in British Columbia 3. The address and phone number of the nearest office of the Ministry 4...Within 48 hours of selection for a project, the name, trade and employer of each H&S Rep or JHSC member	13
Appoint a supervisor for each project with 5 or more workers working at the same time	14
Establish written Emergency Procedures at a Project and ensure that they are followed in case of an emergency; Post them in a conspicuous place at the project; review them with JHSC or H&S Rep as applicable	17
Ensure that each worker has ready access to a telephone or other system of two-way communication system on the project in the event of an emergency	18
Keep records required by this regulation for at least one year after the project completion	19
The constructor shall keep the design of a horizontal life line system at the project while the system is in use.	26.9(8) para 6
Ensure that facilities (toilet, urinal and clean-up facilities) are provided or arranged at a project before the project is started and that each worker has reasonable access to such facilities.	29(3)
If the location of the facilities is varied, the constructor shall document in writing the locations and reasons for the variance and provide the document to the JHSC, H&S Rep or workers as applicable or the workers if there is no JHSC or H&S Rep.	29(9)

Duty	Section of Regulation
The constructor shall inform the workers of the location of the facilities & post such a location in a conspicuous place on the project if it is practical to do so	29(10)
The constructor shall keep at the project for the duration of the project a record of the servicing, cleaning and sanitizing of the facilities and the variance document required under subsection 29(9)	29(12)
If a temporary standpipe is installed in a building under construction, the constructor shall post at the project, or have available for review, a floor plan of the building indicating, <ul style="list-style-type: none"> (a) The location of the hose outlets on each floor; (b) The location of the point on the perimeter of each floor that is furthest from the hose outlet on that floor; and (c) The location of each exit on each floor. 	57(11)
Re temporary standpipe: The constructor shall give a copy of the floor plan to the fire department located nearest to the project.	57(12)
The constructor shall keep the design drawings for formwork and false work and the statements from the person who carried out the inspection (Professional engineer or competent worker) of such works on the project while the formwork or the false work is in use.	89(5)
The constructor shall keep the design drawings on the project while the formwork, false work or re-shoring is in use.	92(2)
The constructor shall give notice to the Ministry office located nearest the project, in person, by telephone, by fax or by electronic means before the first multi-tiered load hoisting operation is started at a project	103.1(10)
The constructor shall make available to an inspector upon request a copy of the certification by the professional engineer. Who would have verified and certified the results of a test on the structural components of a scaffold and the corresponding rated load of the scaffold.	127(3)
The constructor shall keep at a project the design drawings and the written statement for a scaffold, while the scaffold is erected, for scaffolds designed by a professional engineer.	130(5)
The constructor shall keep a copy of the design drawings and the required statement on a project while the suspended scaffold or suspended platform that is subject to the requirements of the section is on the Project	139(7)
Before a multi-point suspended scaffold is erected, the constructor shall ensure that the professional engineer responsible for the structural integrity of the permanent building or structure from which the scaffold is suspended provides a written report approving the design loads imposed on the building or structure by the scaffold	142.2 (14)
Before erecting or dismantling a multi-point suspended scaffold, the constructor shall give notice, in person, by telephone, by fax or by electronic means, to the Ministry office located nearest the project	142.3 (1)
The constructor must keep a copy of the required professional engineer's report and design drawings, any written approvals of deviations from the design drawings (approved by a professional engineer) and the inspection report of a professional engineer in respect of a multi-point suspended scaffold	142.4

Duty	Section of Regulation
The constructor of a project where a multi-point suspended scaffold is used shall keep a written record of all inspections, tests, repairs, modifications and maintenance performed on the scaffold and make copies of the record available to an inspector upon request.	142.8 (1)
Before beginning any hoisting operation involving a worker using a work platform, bucket, basket, load, hook, sling or similar device that is capable of moving and is supported by the cable to a crane or similar hoisting device, the constructor shall notify by telephone an inspector in the office of the Ministry of Labour nearest to the project	153 (11)
The constructor shall keep all design drawings, test reports, written statements and certification documents required under this section with the crane at all times during the hoisting operation	153 (14)
On request, the constructor shall provide an inspector with copies of any document described in subsection (14)	153 (15)
The constructor shall keep at the project while a tower crane is erected a copy of the signed design drawings for its foundation, shoring and bracing and any written opinion about the drawings by a structural engineer.	157(6)
The constructor shall keep the report of the non-destructive testing approved by the Canadian General Standards Board of the structural elements and components of a tower crane, at the project while the crane is erected	158(3)
The constructor shall keep the report prepared by a professional engineer or competent worker designated by a professional engineer who had conducted a required inspection of a tower crane at a project while the crane is erected	159(5)
The constructor shall ensure that the structural engineer responsible for the structural integrity of a building or structure reviews and approves in writing the design drawings and specifications for a derrick, stiff-leg derrick or similar hoisting device before it is installed.	166(4)
The constructor shall keep a copy of the design drawings and specifications for a derrick, stiff-leg derrick or similar hoisting device and the report prepared under subsection (6) at a project while the derrick, stiff-leg derrick or similar hoisting device is on the project.	166(7)
The constructor shall take precautions against hazards caused by helicopter rotor downwash.	167(4)
A constructor shall, Establish and implement written measures and procedures adequate to ensure that no part of a vehicle or equipment or its load encroaches on the minimum distance permitted by subsection (2); and Make a copy of the written measures and procedures available to every employer on the project.	188(4)
The constructor shall, ensure that written measures and procedures for complying with this section are established and implemented, so that workers are adequately protected from electrical shock and burn; and Make a copy of the written measures and procedures available to every employer on the project.	191(4)

Duty	Section of Regulation
Before any worker enters the confined space or begins related work with respect to the confined space, the constructor shall prepare a co-ordination document to ensure that the duties imposed on employers by this Part are performed in a way that protects the health and safety of all workers who perform work in the confined space or related work with respect to the confined space.	221.4(2)
The constructor shall provide a copy of the co-ordination document to each employer of workers who perform work in the same confined space or related work with respect to the same confined space; and to the project's joint health and safety committee or health and safety representative, if any.	221.4(3)
The constructor shall provide a copy of the confined space program to the project's joint health and safety committee or health and safety representative, if any.	221.5(4)
The constructor shall ensure that a copy of the program is available to, any other employer of workers who perform work to which the program relates; and Every worker who performs work to which the program relates, if the project has no joint health and safety committee or health and safety representative.	221.5(5)
If there is a possibility of unauthorized entry into a confined space at a project, the constructor shall ensure that each entrance to the confined space, Is adequately secured against unauthorized entry; or Has been provided with adequate barricades, adequate warning signs regarding unauthorized entry, or both.	221.15
If an excavation may affect the stability of an adjacent building or structure, the constructor shall take precautions to prevent damage to the adjacent building or structure.	229(1)
The constructor shall keep on the project a copy of every opinion given by a professional engineer, for the purpose of an excavation that is not a trench and is not made in Type 4 soil and with respect to which a professional engineer has given a written opinion that the walls of the excavation are sufficiently stable that no worker will be endangered if no support system is used, while the project is in progress.	234(4)
The constructor shall keep the design drawings and specifications for a prefabricated, hydraulic or an engineered support system at a project while the system is on the project.	236(7)
The constructor shall file with a Director two copies of the design drawings and specifications for an engineered support system before it is used on the project.	236(8)
Before a support system is used for repairing underground pipe breaks, the constructor shall submit two copies of its design drawings and specifications to the office of the Ministry of Labour nearest to the project.	237(3)
If a shaft is to be cut in sound rock, the constructor shall obtain a written opinion from a professional engineer as to whether the walls of the shaft need to be supported by rock bolts or wire mesh to prevent the spelling of loose rock.	279(3)

Duty	Section of Regulation
The constructor shall submit to a Director duplicate copies of design drawings for the shoring and bracing before construction of the shoring and bracing is begun.	280(4)
The constructor shall keep a copy of design drawings for the shoring and bracing at the project while the shoring and bracing are in use.	280(5)
If a tunnel is to be cut in sound rock, the constructor shall obtain a written opinion from a professional engineer as to whether the sides and roof of the tunnel need to be supported by rock bolts or wire mesh to prevent the spelling of loose rock.	307(2)
The constructor shall keep available for inspection at a project the design drawings for the primary supports.	307(7)
No constructor or employer shall begin work at a project where a worker may be subjected to compressed air until the following requirements of this section are met: The employer of workers who may be subjected to compressed air at a project shall give a Director written notice of the intended use of compressed air on the project at least fourteen days before beginning work on the project Before work is begun in compressed air, the employer shall obtain written permission from a Director	334(1) (2) (3)
Before work is begun in compressed air at a project, a constructor shall give written notice (containing the required information), To the local police department and the fire department and public Facility nearest to the project; and To a Director, together with the names and addresses of those to who notice is given under clause (a)?	335(1)
The constructor at a project shall provide workers with the sturdy metal or plastic badge required for a worker who works in compressed air. Such a badge shall meet the requirements outlined in subsection 339(2)	339(3)
A constructor shall supply at least one medical lock at a project where work in compressed air is done and shall maintain it ready for operation while work in compressed air is being done.	356(1)
The constructor shall send to a Director before construction of an air lock begins a copy of the design drawings for the air lock.	365(4)
The constructor shall keep at a project a copy of the design drawings for an air lock while the air lock is at the project.	365(5)

APPENDIX A6

CONTRACTOR NOTIFICATION FORM

Please be advised that Facility has identified the presence of asbestos containing materials within certain areas. An asbestos survey report showing the locations and types of asbestos present is available for review at the Facility by contacting the ACML Site Manager.

It is The Facility Policy that any disturbance of asbestos-containing materials be undertaken only by personnel who have received adequate training in handling asbestos materials.

DECLARATION BY CONTRACTOR

The Contractor shall follow the general instructions and work procedures as specified by the Facility Asbestos Management Program.

The Contractor shall ensure all employees and subcontractors have submitted asbestos training certificates and that all equipment and procedures are employed in accordance with applicable government regulations.

We hereby agree with the terms and conditions.

Contractor Name: _____

Date: _____

Contractor Representative: _____

Signature: _____

Permit Issued and Approved:

Manager: _____

Signature: _____

Property Name: _____

Date: _____

APPENDIX A7

INSURANCE REQUIREMENTS

The Contractor will take out, maintain in force and renew or will cause to be taken out, maintained and renewed:

A) Automobile liability insurance which will include the following terms:

- (1) Coverage in an amount of not less than \$2,000,000 inclusive per occurrence;
- (2) Coverage for Project Co, the Hard FM Provider, and all Sub- Contractors; and
- (3) include coverage for third party property damage and bodily injury (including accident benefits) arising out of the use of any automobile used in connection with the Project;

B) "all risks" insurance covering all construction equipment (including any scaffolding or hoarding) owned, leased or rented by the Contractor and any Sub-Contractor for use during Construction or for which any of them may be responsible which will include the following terms:

- (1) Coverage in an amount of not less than actual cash value of such equipment;
- (2) Coverage for the Contractor and all Sub-Contractors;
- (3) contain a waiver of subrogation against the Authority; and
- (4) A deductible not exceeding \$250,000 per occurrence;

C) Workers' compensation insurance in accordance with Schedule 2 (Design and Construction Protocols) to the Project Agreement

PERMITTING REQUIREMENTS***

The Contractor shall be responsible for the procurement of all permits, licenses, 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 unless stated otherwise. The contract price shall include the costs of these permits, licenses, inspection and certificates and their procurement.

*In instances where a CCDC contract document is being executed as part of the project, refer to the specific requirements for insurance and bonding requirements noted within the CCDC document.

** Per occurrence no aggregate limits

***In instances where a CCDC contract document is being executed as part of the project, refer to the specific requirements for permitting noted within the CCDC document.

APPENDIX 8

RESTRICTED PERSON

The contactor warrants by signing the Letter of Understanding and Acceptance in Section 2 that neither its company nor employees working on its behalf would be considered a "Restricted Person" as per the definition outlined below:

"Restricted Person" means any person who (or any member of a group of persons acting together, any one of which):

- (a) Has directly or indirectly, its principal or controlling office in a country that is subject to any economic or political sanctions imposed by Canada for reasons other than its trade or economic policies;
- (b) Has as its primary business the illegal manufacture, sale, distribution or promotion of narcotic substances or arms, or is or has been involved in terrorism;
- (c) In the case of an individual, he or she (or in the case of a legal entity, any of the members of the board of directors or its senior executive managers) has been sentenced to imprisonment or otherwise given a custodial sentence (other than a suspended sentence) for any criminal offence (other than minor traffic offences or misdemeanors) less than 5 years prior to the date at which the determination of whether the persons falls within this definition is being made;
- (d) Has as its primary business the acquisition of distressed assets or investments in companies or organizations which are believed to be insolvent or in a financial standstill situation or potentially insolvent;
- (e) Is subject to any material claim of the Northern Health Authority, ISL health or the province of British Columbia any proceedings (including regulatory proceedings) which have been concluded or are pending at the time at which the determination of whether the person fall within this definition is being made and which (*in respect of any such pending claim, if it were to be successful) would, in ISL Health's view, in either case, be reasonable likely to materially affect the ability of ACML to perform its obligations under this Hard FM Services Contract; or
- (f) has a material interest in the production of tobacco products;

SITE REQUIREMENTS

01 35 23.1

1 GENERAL

1.1 Owner Site Requirements

.1 Comply with the Owner's site requirements for construction permit and risk assessment appended to the end of this Section. The following are included in this section,

- Construction Permit.
- Risk Assessment and Prevention Measures Reference for Hospital Construction and Renovation.
- Risk Reduction Measures Construction Activity Class 1 Final.
- Risk Reduction Measures Construction Activity Class 2 Final.
- Risk Reduction Measures Construction Activity Class 3 Final.
- Risk Reduction Measures Construction Activity Class 4 Final.

End of Section

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RISK ASSESSMENT AND PREVENTION MEASURE REFERENCE FOR HOSPITAL CONSTRUCTION, RENOVATION AND MAINTENANCE

Construction Activity (see Part A)	Population Risk Group (See Part B)
Type A: Inspection, non-invasive activities	Group 1: Lowest Risk
Type B: Small scale, short duration, minimal dust generating activities	Group 2: Medium Risk
Type C: Activities generating moderate-high levels of dust, requires more than one work shift to complete	Group 3: Medium to High Risk
Type D: Activities generating high levels of dust, major demolition and construction activities, requiring consecutive work shifts to complete	Group 4: Highest Risk

If two types or groups are selected, select the higher level

E.g. Type A and Type B  Select Type B

E.g. Group 1 and Group 2  Select Group 2

PART A: TYPES OF CONSTRUCTION ACTIVITY

Construction Activity Type	Description
Type A	<p>Inspection and non-invasive activities. These include, but are not limited to:</p> <ul style="list-style-type: none"> a) Activities that involve a single controlled opening in a wall or ceiling for minor work or visual inspection, that is accessed by: <ul style="list-style-type: none"> i. Removing no more than one ceiling tile; or ii. Opening of an access panel on a wall or ceiling. b) Painting (but not sanding) and wall covering; c) Electrical trim work; d) Minor plumbing work that disrupts the water supply to a localized patient care area (e.g. one room) for less than 15 minutes; and e) Other maintenance activities that do not generate dust or require cutting of walls or access to ceiling (other than as specified in item (a) above).

Construction Activity Type	Description
Type B	<p>Small scale, short-duration (e.g., less than two hours) activities that create minimal dust. These include, but are not limited to:</p> <ul style="list-style-type: none"> a) Activities involving access to and use of chase spaces; b) Cutting a small opening in a contained space where dust migration can be controlled (e.g., cutting of walls or ceilings to provide an access point for installing or repairing minor electrical work, ventilation components, telephone wires or computer cables); c) Sanding or repair of a small area of a wall, and; d) Plumbing work that disrupts the water supply of one or more patient care areas for less than 30 minutes.
Type C	<p>Activities that generate a moderate to high level of dust, cause a moderate service disruption, require demolition, require removal of a fixed facility component (e.g., a sink) or assembly (e.g., a countertop or cupboard), or cannot be completed in a single work shift. These include, but are not limited to:</p> <ul style="list-style-type: none"> a) Activities that require sanding of a wall in preparation for painting or wall covering; b) Removal of floor coverings, ceiling tiles, and casework; c) New wall construction; d) Minor ductwork; e) Electrical work above ceilings; f) Major cabling activities, and; g) Plumbing work that disrupts the water supply of one or more patient care areas for more than 30 minutes, but less than one hour.
Type D	<p>Activities that generate high levels of dust, activities that necessitate significant services disruptions, and major demolition and construction activities requiring consecutive work shifts to complete. These include, but are not limited to:</p> <ul style="list-style-type: none"> a) Soil excavation; b) New construction that requires consecutive work shifts to complete; c) Activities that involve heavy demolition or removal of a complete cabling system, or; d) Plumbing work that disrupts the water supply of more than one patient care area (e.g., two or more rooms) for one hour or more.

PART B: POPULATION RISK GROUPS AND GEOGRAPHICAL AREAS

Population Risk Group	Typical Areas
Group 1 Lowest Risk	Office Areas Unoccupied patient care units Public areas not intersecting a patient care area Laundry and soiled linen sorting or storage areas Physical plant workshops Housekeeping rooms and closets
Group 2 Medium Risk	Patient care areas, unless listed in Group 3 or Group 4 Outpatient clinics (except oncology and surgery) Admission and discharge units Waiting rooms Autopsy and morgue Occupational therapy and physical therapy areas remote from patient care areas
Group 3 Medium to High Risk	Emergency (except trauma rooms) Diagnostic imaging Labour and birthing rooms (without operating room capability) Nurseries for healthy newborns Nuclear medicine Hydrotherapy Echocardiography Laboratories General medical and surgical wards or units (includes all areas including soiled and clean utility rooms) Paediatric units Geriatric units Long-term care units Food preparation, serving, and dining areas Respiratory therapy Cleaning linen handling and storage areas

Population Risk Group	Typical Areas
<p>Group 4</p> <p>Highest Risk</p>	<p>Intensive Care Units (ICU, PICU, NICU etc.)</p> <p>Operating Rooms (including prep, induction, post anaesthetic care unit (PACU) and scrub areas)</p> <p>Anaesthesia storage areas and workrooms</p> <p>Oncology units and outpatient clinics</p> <p>Transplant units and outpatient clinics</p> <p>Inpatient units and outpatient clinics for patients with AIDS or other immunodeficiency diseases</p> <p>Dialysis units</p> <p>Critical care nurseries</p> <p>Labour and delivery operating rooms</p> <p>Interventional or high risk diagnostic imaging e.g.:</p> <ul style="list-style-type: none"> • Cardiac catheterization and angiography • Interventional radiology • Endoscopy • Bronchoscopy • Cystoscopy <p>Cardiovascular and cardiology patient areas</p> <p>Pharmacy admixture rooms</p> <p>Medical device reprocessing areas (wherever located)</p> <p>Clean sterile supply</p> <p>Clean and sterile storage</p> <p>Burn care units</p> <p>Trauma rooms</p> <p>Protective isolation rooms</p> <p>Tissue culture laboratories</p> <p>Pacemaker insertion rooms</p> <p>Dental procedure rooms</p>

NOTE: All corridors/hallways adjacent to these areas without a physical barrier should be considered part of the construction site.

PART C: CONSTRUCTION ACTIVITY AND RISK GROUP MATRIX

Select Applicable Risk Group and Construction Activity:

Construction Activity				
Risk Group	Type A	Type B	Type C	Type D
Group 1	<input type="checkbox"/> I	<input type="checkbox"/> II	<input type="checkbox"/> II	<input type="checkbox"/> III/IV
Group 2	<input type="checkbox"/> I	<input type="checkbox"/> II	<input type="checkbox"/> III	<input type="checkbox"/> IV
Group 3	<input type="checkbox"/> I	<input type="checkbox"/> III	<input type="checkbox"/> III/IV	<input type="checkbox"/> IV
Group 4	<input type="checkbox"/> *I-III	<input type="checkbox"/> III/IV	<input type="checkbox"/> III/IV	<input type="checkbox"/> IV

Shaded areas indicate that a construction/renovation permit from IP&C is required.

*When the population risk group is Group 4 and the construction activity is Type A, consult with the Infection Prevention and Control Department to determine the appropriate preventative measure (I, II or III).

Recommendations for Risk Reduction Measures

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CLASS I

Plant and Property Staff and Contractors:

Dust Control

Use all methods that minimize generation and dispersion of dust such as:

- ☐ Inform healthcare staff of work being done in order to identify high-risk patients who may require temporary relocation from construction area.
- ☐ Ensure patient care equipment and supplies are protected from dust exposure
- ☐ Covered containers required to transport construction supplies and equipment in the health care facility.

Ceiling Access

- ☐ Immediately close access panels and replace displaced ceiling tiles; and if necessary clean the work area with a HEPA filtered vacuum cleaner
- ☐ Ceiling access exceptions may be appropriate however, consultation with multidisciplinary team (MDT) required. Clause does not apply in situations where there is observable contamination i.e. stained and wet ceiling tiles.

Plumbing Activities

- ☐ Inform environmental services and healthcare staff to report any discolored water and/or water leaks to plant services
- ☐ Schedule water interruption during lower user activity (e.g., evenings if possible)
- ☐ Flush water lines prior to use. Determine the methods to be used to disinfect the water lines.
- ☐ Water temperature meets health care facility requirements.
- ☐ Plumbing materials used in the healthcare facility water systems shall be resistant to build-up of scale and corrosion, and shall not promote the growth of bacteria including Legionella
- ☐ Ensure faucet aerators are not installed or used and shall be removed from existing faucets
- ☐ Use of water diverter preferred for ceiling leaks in risk group 3 & 4 areas.
- ☐ Maintain as dry an environment as possible and report any water leaks that occur to walls and substructures.

Important Reminders

- **Class II** recommendations must be followed if dust is created during Type A construction activity.
- If the project scope changes and more extensive work is required, the project Risk Class must be revised and the necessary controls implemented. Consultation with infection prevention and control practitioner (ICP), multidisciplinary team (MDT) and additional risk reduction measures analysis is required.

Recommendations for Risk Reduction Measures

Page 1 of 2

CLASS II

Plant and Property Staff and Contractors:

Dust Control	<p>Use all methods required to minimize generation and dispersion of dust such as:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Use drop sheets to control dust. <input type="checkbox"/> Control cube/temporary containment unit may be utilized; ensure unit is clean pre and post use. <input type="checkbox"/> Walk off dust mat at entrance to and exit from work areas. <input type="checkbox"/> Seal windows and unused doors with tape. <input type="checkbox"/> Seal air supply and return ducts in construction /renovation area. <input type="checkbox"/> Use dust-capturing attachments to hose of the HEPA vacuum. <input type="checkbox"/> Control dust by water misting work surfaces while cutting or alternatively use a utility knife. <input type="checkbox"/> Inform healthcare staff of work being done in order to identify high-risk patients who may require temporary relocation from construction area. <input type="checkbox"/> Ensure patient care equipment and supplies are protected from dust exposure <input type="checkbox"/> Construction workers to wear the appropriate personal protective equipment <input type="checkbox"/> Covered containers required to transport construction supplies and equipment in the health care facility. <input type="checkbox"/> Supplies and equipment are moved in covered containers during transportation through the healthcare facility.
Ceiling Access	<ul style="list-style-type: none"> <input type="checkbox"/> Ceiling access exceptions require consultation with the multidisciplinary team (MDT). Clause is not permitted with stained and wet ceiling tiles. <input type="checkbox"/> Immediately close access panels and replace displaced ceiling tiles.
Ventilation	<ul style="list-style-type: none"> <input type="checkbox"/> Disable or seal all potential sources of air leaks i.e. intake/exhaust vents, plumbing penetration, electrical outlets.
Plumbing Activities	<ul style="list-style-type: none"> <input type="checkbox"/> Inform environmental services and healthcare staff to report any discolored water and/or water leaks to plant services <input type="checkbox"/> Schedule water interruption during lower user activity (e.g., evenings if possible) <input type="checkbox"/> Flush water lines prior to use. Determine the methods to be used to disinfect the water lines. <input type="checkbox"/> Water temperature meets health care facility requirements. <input type="checkbox"/> Plumbing materials used in the healthcare facility water systems shall be resistant to build-up of scale and corrosion, and shall not promote the growth of bacteria including Legionella

Debris Removal	<input type="checkbox"/> Ensure faucet aerators are not installed or used and shall be removed from existing faucets <input type="checkbox"/> Use of water diverter preferred for ceiling leaks in risk group 3 & 4 areas. <input type="checkbox"/> Maintain as dry an environment as possible and report any water leaks that occur to walls and substructures.
Clean up	<input type="checkbox"/> Contain debris in covered container or cover with moistened sheet before transporting for disposal. <input type="checkbox"/> Transport debris via designated route
Important Reminders	<input type="checkbox"/> Facilities maintenance personnel notifies housekeeping to facilitate cleaning of project zone. <input type="checkbox"/> ➤ If the project scope changes and more extensive work is required, the project Risk Class must be revised and the necessary controls implemented. Consultation with infection prevention and control practitioner (ICP), multidisciplinary team (MDT) and additional risk reduction measures analysis is required.

CLASS III

Plant and Property Staff and Contractors:

Requirements prior to start-up of project

- ☐ The constructor's on-site team shall include at least one person with demonstrated knowledge and experience in infection prevention and control during construction. Workers not trained in infection control shall not work alone, shall work with trained personnel or be supervised
- ☐ Risk Reduction Measures for Class 3 and 4 require Infection Prevention and Control Practitioner and project manager review and signature prior to work initiation.

Dust Control

Use all methods required to minimize generation and dispersion of dust such as:

- ☐ Inform healthcare staff of project in order to identify high-risk patients who may require temporary relocation from construction area.
- ☐ Ensure patient care equipment and supplies protected from dust exposure. (May require nursing/department staff to remove/relocate supplies)
- ☐ Erect an impermeable dust barrier from true ceiling (includes area above false ceilings) to the floor consisting of two layers of 6 mL polyethylene and a gypsum wallboard layer. When deemed appropriate by the multidisciplinary team (MDT), the composition of the barrier may be modified to suit time, space, or impact constraints. The poly membrane shall be present under all circumstances.
- ☐ Place walk off dust mat at work areas entrance and exit.
- ☐ Ensure windows, doors, plumbing penetrations, electrical outlets and air supply and return ducts are properly sealed with plastic and taped within the construction / renovation area.
- ☐ Post infection control barrier warning signage
- ☐ Post risk reduction measures on outside of barrier
- ☐ Air ducts and spaces above ceilings should be HEPA vacuumed if necessary.
- ☐ Use dust capturing attachments to hose of the HEPA vacuum.
- ☐ Control dust by water misting work surfaces while cutting or alternatively use a utility knife.
- ☐ Construction workers to wear the appropriate personal protective equipment.
- ☐ Construction workers should be HEPA filter vacuumed before leaving the work site: or wear protective clothing that is removed each time; before entering client care areas.
- ☐ Cutting or coring of concrete slab requires a specific dust management plan (describe below):

Traffic Control	<input type="checkbox"/> Pulling wire/cables requires a specific dust management plan based on location of wires (ceiling track, conduit, etc.) and population risk group. Describe below: <hr/> <hr/> <hr/>
Ceiling Access	<input type="checkbox"/> Place supplies and equipment in covered containers during transportation through the health care facility. <input type="checkbox"/> All equipment and supplies must be clean and dry and meet the requirements detailed in the current CSA Z317 standards. <input type="checkbox"/> In collaboration with the facility project manager designate a traffic pattern for construction workers and debris removal that avoids client care areas, and a traffic pattern for clean or sterile supplies that avoids the construction area.
Ventilation	<input type="checkbox"/> Ceiling access exceptions required consultation with the MDT. Clause not permitted for stained and wet ceiling tiles. <input type="checkbox"/> Immediately close access panels and replace displaced ceiling tiles. <input type="checkbox"/> Disable the ventilation system in the construction/renovation area until project is completed. <input type="checkbox"/> Monitor the need to change and/or clean filters in construction/ renovation area. <input type="checkbox"/> Maintain differential negative pressure 7.5 Pa (0.03 WC) within the construction zone by using certified portable HEPA equipped air filtration units <input type="checkbox"/> Ensure continuous monitoring of negative pressure by using differential monitoring device connected to an alarmed data recorder. The differential monitoring device must be located on the adjacent or exterior side of the barrier; no closer than five metres of the construction site entry. <input type="checkbox"/> Monitoring equipment shall be maintained, zeroed and calibrated in accordance with manufacturers' instructions. <input type="checkbox"/> The constructors shall record the pressure differentials in a log sheet daily <input type="checkbox"/> Construction air handling unit (CAHU) must be performance verified, operated and maintained in accordance with CSA Z317 standards. <input type="checkbox"/> Air exhausted from construction, maintenance, and repair areas must be HEPA filtered, preferably directly outside and away from intake vents. Exhaust air shall not be discharged into Risk Group 3 or 4 areas. (measures related to re-circulated air require approval from the MDT). <input type="checkbox"/> If a HEPA filtered vacuum is used as a CAHU, it must meet the CAHU requirements specified in the CSA Z317 standards. <input type="checkbox"/> Ensure ventilation system is functioning properly and is cleaned if contaminated by soil or dust after construction project is complete.
Plumbing Activities	<input type="checkbox"/> Inform environmental services and healthcare staff to report any discolored water and/or water leaks to Plant Services.

Debris Removal

- ☐ Schedule water interruption during lower user activity (e.g., evenings if possible).
- ☐ Flush water lines prior to use. Describe methods used to disinfect water lines. _____

- ☐ Water temperature meets health care facility requirements.
- ☐ Plumbing materials used in the healthcare facility water systems shall be resistant to build-up of scale and corrosion, and shall not promote the growth of bacteria including Legionella
- ☐ Ensure faucet aerators are not installed or used and shall be removed from existing faucets
- ☐ Maintain as dry an environment as possible and report any water leaks that occur to walls and substructures.
- ☐ Use of water diverter preferred for ceiling leaks in risk group 3 & 4 areas.
- ☐ Appropriate containers supplied by contractor
- ☐ Remove debris at the end of the workday via designated route. Describe route: _____

Clean up

- ☐ Contain debris in covered container or cover with moistened sheet before transporting for disposal. Wipe wheels of bins/carts/etc. before entering occupied areas.
- ☐ Wet mop and vacuum work area with HEPA filtered vacuums daily and as required.
- ☐ Do not remove dust barrier until the project is complete and the area has been cleaned thoroughly and inspected.
- ☐ Remove dust barrier carefully by the following methods: HEPA vacuum surfaces; remove barrier and HEPA vacuum again (if practical) and damp wipe surfaces; roll up poly construction side up.
- ☐ A final construction clean required at end of project prior to terminal clean by housekeeping department
- ☐ Facilities maintenance personnel notifies housekeeping to facilitate cleaning of project zone (includes increased cleaning frequency of areas adjacent to the construction zone and final clean upon completion of project).

Important Reminders

- If the project scope changes and more extensive work is required, the project Risk Class must be revised and the necessary controls implemented – consultation with infection prevention and control practitioner (ICP), multidisciplinary team (MDT) and additional risk reduction measures analysis is required.
- An MDT representative shall regularly visit the construction area to confirm that preventive measures are being followed. The frequency of their visits shall be determined by the MDT. These visits shall be documented and these shall be documented and these records shall be retained as part of the risk management documentation for the construction project.

CLASS IV	
Plant and Property Staff and Contractors:	
Requirements prior to start-up of project	<input type="checkbox"/> The constructor's on-site team shall include at least one person with demonstrated knowledge and experience in infection prevention and control during construction. Workers not trained in infection control shall not work alone, shall work with trained personnel or be supervised <input type="checkbox"/> Risk Reduction Measures for Class 3 and 4 require Infection Prevention and Control Practitioner <u>and</u> project manager review and signature prior to work initiation
Dust Control	<p>Use all methods required to minimize generation and dispersion of dust such as:</p> <input type="checkbox"/> Inform healthcare staff of project in order to identify high-risk patients who may require temporary relocation from construction area. <input type="checkbox"/> Ensure patient care equipment and supplies protected from dust exposure. (May require nursing/department staff to remove/relocate supplies) <input type="checkbox"/> Erect an impermeable dust barrier which includes an anteroom to the construction zone, from true ceiling (includes area above false ceilings) to the floor consisting of two layers of 6 mL polyethylene and a gypsum wallboard layer. When deemed appropriate by the multidisciplinary team, the composition of the barrier may be modified to suit time, space, or impact constraints. The poly membrane shall be present under all circumstances. <input type="checkbox"/> Place walk off dust mat both inside and outside the anteroom. <input type="checkbox"/> Ensure windows, doors, plumbing penetrations, electrical outlets and air supply and return ducts are properly sealed with plastic and taped within the construction / renovation area. <input type="checkbox"/> Post infection control barrier warning signage <input type="checkbox"/> Post risk reduction measures on outside of barrier <input type="checkbox"/> Air ducts and spaces above ceilings should be HEPA vacuumed if necessary. <input type="checkbox"/> Use dust capturing attachments to hose of the HEPA vacuum. <input type="checkbox"/> Control dust by water misting work surfaces while cutting or alternatively use a utility knife. <input type="checkbox"/> Construction workers to wear the appropriate personal protective equipment. <input type="checkbox"/> Construction workers should be HEPA filter vacuumed before leaving the work site: or wear protective clothing that is removed each time; before entering client care areas. <input type="checkbox"/> All equipment and supplies must be clean and dry and meet the requirements detailed in the current CSA Z317 standards.

Traffic Control

- ☐ Cutting or coring of concrete slab requires a specific dust management plan (describe below):
-
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- ☐ Pulling wire/cables requires a specific dust management plan based on location of wires (ceiling track, conduit, etc.) and population risk group. Describe below:
-
-
-

Ventilation

- ☐ Place supplies and equipment in covered containers during transportation through the health care facility.
- ☐ In collaboration with the facility project manager designate a traffic pattern for construction workers and debris removal that avoids client care areas, and a traffic pattern for clean or sterile supplies that avoids the construction area.

- ☐ Disable the ventilation system in the construction/renovation area until project is completed.
- ☐ Monitor the need to change and/or clean filters in construction/ renovation area.
- ☐ Maintain differential negative pressure 7.5 Pa (0.03 WC) within the construction zone, and negative air pressure 2.5 Pa (0.01 WC) within the anteroom by using certified portable HEPA equipped air filtration units
- ☐ Ensure continuous monitoring of negative pressure by using differential monitoring device connected to an alarmed data recorder. The differential monitoring device must be located on the adjacent or exterior side of the barrier; no closer than five metres of the construction site entry.
- ☐ Monitoring equipment shall be maintained, zeroed and calibrated in accordance with manufacturers' instructions.
The alarm set point for the differential pressure monitoring device shall be established by the MDT. In no case shall the alarm set points be set lower than 2.5 Pa with a maximum alarm delay of 90 s
- ☐ The constructors shall record the pressure differentials in a log sheet daily
- ☐ Construction air handling unit (CAHU) must be performance verified, operated and maintained in accordance with CSA Z317 standards.
- ☐ Air exhausted from construction, maintenance, and repair areas must be HEPA filtered, preferably directly outside and away from intake vents.
- ☐ Exhaust air shall not be discharged into Risk Group 3 or 4 areas. (measures related to re-circulated air require approval from the MDT).
- ☐ If a HEPA filtered vacuum is used as a CAHU, it must meet the CAHU requirements specified in the CSA Z317 standards.
- ☐ Ensure ventilation system is functioning properly and is cleaned if contaminated by soil or dust after construction project is complete.

Plumbing Activities

- ☐ All opened ductwork must be sealed and remain sealed until installation and completion of connections and/or construction.
- ☐ All plumbing & HVAC systems shall be supplied, installed & commissioned in accordance to CSA Z 317.1, CSA Z 317.2 & CAN/CSA Z 8001
- ☐ Ensure ventilation system is functioning properly and is cleaned if contaminated by soil or dust after construction project is complete
- ☐ Ensure ventilation systems are working properly in adjacent areas
- ☐ Inform environmental services and healthcare staff to report any discolored water and/or water leaks to Plant Services
- ☐ Schedule water interruption during lower user activity (e.g., evenings if possible)
- ☐ Flush water lines prior to use. Describe methods used to disinfect water lines. _____

- ☐ Water temperature meets health care facility requirements.
- ☐ Use of water diverter preferred for ceiling leaks in risk group 3 & 4 areas.
- ☐ If there are concerns about Legionella, consider hyper-chlorinating stagnant potable water or superheating and flushing all stagnant lines before restoring or re-pressurizing the water system.
- ☐ Disinfect domestic water systems (or sections) that have been stagnant in accordance to clause 6.8
- ☐ The water lines in the construction area and adjacent client care areas shall be flushed prior to reuse.
- ☐ Plumbing materials used in the healthcare facility water systems shall be resistant to build-up of scale and corrosion, and shall not promote the growth of bacteria including Legionella
- ☐ Ensure faucet aerators are not installed or used and shall be removed from existing faucets
- ☐ Maintain as dry an environment as possible and report any water leaks that occur to walls and substructures.

Debris Removal

- ☐ Appropriate containers supplied by contractor
- ☐ Remove debris at the end of the workday via designated route. Describe route (may include external chute): _____

- ☐ Contain debris in covered container or cover with moistened sheet before transporting for disposal. Wipe wheels of bins/carts/etc. before entering occupied areas.

Clean up	<ul style="list-style-type: none"> <input type="checkbox"/> Wet mop and vacuum work area with HEPA filtered vacuums daily and as required. <input type="checkbox"/> Do not remove dust barrier until the project is complete and the area has been cleaned thoroughly and inspected. <input type="checkbox"/> Remove dust barrier carefully by the following methods: HEPA vacuum surfaces; remove barrier and HEPA vacuum again (if practical) and damp wipe surfaces; roll up poly construction side up. <input type="checkbox"/> A final construction clean required at end of project prior to terminal clean by housekeeping department <input type="checkbox"/> Facilities maintenance personnel notifies housekeeping to facilitate cleaning of project zone (includes increased cleaning frequency of areas adjacent to the construction zone and final clean upon completion of project).
Evaluation	<ul style="list-style-type: none"> <input type="checkbox"/> Evaluate infection control prevention measures with other members of the planning team or delegate, to evaluate the effectiveness and identify problems at the end of the construction project. <input type="checkbox"/> Infection prevention and control is consulted whenever problems arise that may result in additional infection risks
Important Reminders	<ul style="list-style-type: none"> ➤ If the project scope changes and more extensive work is required, the project Risk Class must be revised and the necessary controls implemented – consultation with infection prevention and control practitioner (ICP), multidisciplinary team (MDT) and additional risk reduction measures analysis is required. ➤ An MDT representative shall regularly visit the construction area to confirm preventive measures followed. Frequency of visits will be determined by the MDT. Visits shall be documented and records retained as part of the risk management documentation for the construction project.

INFECTION CONTROL PROCEDURES - HEALTHCARE

01 35 33

1 GENERAL

1.1 Scope

- .1 Develop an infection control plan and provide infection control measures to isolate construction work from existing hospital areas, and for new construction.
- .2 In the CAN/CSA Z317.13 standard where functions are stated to be performed by either of: (a) engineering, (b) operations and maintenance, or (c) the Constructor, then Contractor is responsible for providing these functions unless otherwise shown herein.

1.2 Applicable Codes and Standards

- .1 Comply with:
 - .1 CAN/CSA Z317.13 Infection control during construction, renovation, and maintenance of health care facilities.

1.3 Definitions and Abbreviations

- .1 Definitions:
 - .1 **Adjacent areas:** has the meaning as defined in CAN/CSA Z317.13
 - .2 **Construction Zone:** new build or a renovation area within the existing hospital which is under control of the Constructor and in which there are no normal hospital operations occurring during construction.
 - .3 **Construction Space:** renovation work area within the existing hospital of short duration such as evening shut-down work in which hospital operations continue to function during construction.
 - .4 **Long Term Infection Control Barrier:** an infection control physical barrier which will be in place for greater than one day, and is used for Preventative Measures III and IV.
 - .5 **Short Term Infection Control Barrier:** an infection control physical barrier which can be installed and removed in the same work shift, and is used for Preventative Measure II
- .2 Where the term "Constructor" is used in CAN/CSA Z317.13 it shall be read as meaning Contractor under the Construction Contract.

1.4 Submittals

- .1 Submit an infection control plan for approval by Owner which includes;
 - .1 marked-up floor plans indicating location of isolation barriers and indicate time periods of use for;
 - (a) Long Term Infection Control barriers, and
 - (b) Short term Infection Control barriers,
 - .2 details of negative exhaust venting and use of HEPA filtered equipment,
 - .3 names and contact details of Constructor's staff assigned to supervise infection control activities.
- .2 Submit the infection control plan at least fifteen (15) working days prior to commencement of the work in site.

1.5 Quality Control

- .1 During construction, the Owner will monitor the Constructor's compliance with the infection control plan. Such monitoring is not a replacement of the Constructor's quality control program.

- .2 Correct compliance defects immediately upon notification. If defects are not remedied, the Owner may require the Constructor to stop work until such time as the defects are corrected and the Constructor shall have no claim against the Owner for such stoppage of the Work.

2 PRODUCTS

2.1 Walk-Off Mats

- .1 Temporary floor mats for the removal of:
 - .1 sand and grit,
 - .2 sticky surface mats for removal of dust, and
- .2 Antimicrobial type with waterproof frames for holding of antibacterial solutions.

2.2 Portable Ventilation Fans

- .1 Portable ventilation fans equipped with:
 - .1 fans and motor starters at 208 and/or 600 VAC as applicable,
 - .2 HEPA filters, certified at start of construction and recertified annually,
 - .3 filter pressure gauges and alarm.

2.3 Vacuum Cleaners

- .1 Commercial grade complete with HEPA filters.

2.4 Mobile Containment System

- .1 Adjustable aluminum frame, vinyl enclosure with pressure porthole, wheel base platform, and disposable plastic liner, and sized as required.
- .2 Suitable for ceiling heights between 2100 - 3000 mm (7 - 10 ft).
- .3 HEPA filter and fan unit with manometer.

Standard of Acceptance

- ° Fiberlock Technologies Inc - Kontrol Kube Topsider or Kontrol Kube Topsider Jr.

3 EXECUTION

3.1 General

- .1 Provide and implement an infection control program in conformance to CSA Z317.13 and as shown. Where items specified herein relate to requirements in the CSA standard, they are provided for clarification only and do not otherwise restrict compliance to the standard for this or any other requirement of the standard.
- .2 Arrange and pay for the services of an industrial hygienist to instruct personal on the handling of mould, asbestos and other hazardous materials designated within the workspace.
- .3 Coordinate with the Hospital's infection control staff for isolation of Construction Space work areas. Confirm schedule times and durations for each Construction Space, including time to install and remove Short Term barriers for each work shift.
- .4 Where required by the Owner, ensure construction personnel wear infection-control personnel protection equipment and comply with other personnel infection control measures.

3.2 Owners Responsibilities

- .1 The Owner shall be responsible for ensuring that the Contractor is familiar with the Owner's construction-related infection control procedures, and for providing training in infection prevention and control procedures.
- .2 The Owner shall be responsible for coordinating the relocation of affected patients and pedestrian traffic routes to areas where there exists less potential for exposure to airborne contaminants.
- .3 The Owner shall be responsible for coordinating the preparation of the parts of the Place of the Work inside the existing building prior to the commencement of the Contractor's work in the affected area for:
 - .1 removal of medical supplies, waste, and equipment, and
 - .2 decontamination of existing areas where there may be a residual biological hazard.

3.3 Training

- .1 Coordinate training for all construction workers, who will be engaged in the Work at the Place of the Work or on the Owner's premises, in infection prevention and control procedures as provided by the Owner.
- .2 At construction kick-off meeting, at meetings convened prior to the start of each Phase of the Work, at pre-installation meetings, and at regular progress meetings, review infection prevention and control procedures. The Owner's infection control representative shall attend such meetings when necessary. Subjects to be reviewed include, but are not limited to, the following:
 - .1 general information on infection control procedures,
 - .2 identification of patient populations that may be at risk,
 - .3 prevention measures for essential services that may be disrupted,
 - .4 the integrity of the facility's exterior structure, spatial separations, ventilation and water supplies for any infection control problems,
 - .5 methods for dust containment and removal of construction debris,
 - .6 traffic patterns for construction workers and supply delivery routes to minimize risks to patients, staff and visitors,
 - .7 the need for increased filter changes during the Work,
 - .8 the need to close down dampers temporarily to reduce circulation of contaminated air or fumes,
 - .9 systems that can provide the required air exchange rates and pressure relationships in critical areas near construction activity,
 - .10 schedule of inspections by the Owner's infection control representative.

3.4 Prevention Measures Summary

- .1 The preventative measures analysis has been completed by the Owner and the applicable measures are summarized in the following table for work adjacent to existing areas:
 - .1 Adjacent area includes areas not within a construction zone, as well as areas within a construction space.
 - .2 "Population Risk Group" has the meaning as used in CSA Z317.13.
 - .3 "Construction Activity" has the meaning as defined and used in CSA Z317.13.
 - .4 "Preventative Measure" has the meaning as defined and used in CSA Z317.13.

Adjacent Area	Floor	Population Risk Group	Construction Activity	Preventative Measure
Patient Care Unit	2 nd	2	C	III
Service Rooms	All	1	C	II
Public Areas	Ground	1	B	II
Work above ceilings	All	2, 3, 4	C	III
Work above ceilings	All	1	C	II

3.5 Long Term Infection Control Barriers

- .1 Construct Long Term Infection Control barriers in accordance with CAN/CSA Z317.13.
- .2 In addition to the requirements of CSA Z317.13, where a Long Term Infection Control barrier is to be installed in an existing fire separation having a fire resistance rating, construct such barriers with a one (1) hour fire resistance rating complete with doors and frames having 3/4 hour fire resistance ratings:
 - .1 92 mm (3-5/8") 0.5 mm (25 Ga) steel studs at 610 mm (24") on centre, with 2 rows of bracing between studs and additional bracing for gypsum board finish.
 - .2 one (1) layer of 15.9 mm (5/8") thick square edge fire resistant gypsum board on both side of partition. Seal joints with drywall tape and one coat of drywall compound.
 - .3 weather seals on sides and top of door frame, and rubber stripping on the bottoms of doors.
- .3 Paint sides of Long Term barrier partitions exposed to Adjacent Areas of the existing building, colour to match existing walls.
- .4 Provide "Construction Zone - Authorized Access Only" signage outside barriers manufactured with minimum 75 mm (3") letters.

3.6 Short Term Infection Control Barriers

- .1 Construct Short Term Infection Control barriers:
 - .1 to CSA Z317.13, Preventative Measure II, or
 - .2 use a mobile containment system.

3.7 Temporary Ventilation for Construction

- .1 Provide temporary exhaust ductwork for portable construction exhaust fans and route ductwork outside of the building through temporary openings. Obtain approval from the Owner for location of discharge points.
- .2 Where exhaust fan systems are used for construction ventilation, arrange and pay for the installation of remote alarms installed in the construction zone/area to annunciate on fan system failure.
- .3 Provide temporary air filters, minimum MERV 11 rating, at return/exhaust grilles when dust producing construction is being performed.

3.8 Work in Ceiling Spaces and Concealed Spaces

- .1 Thoroughly clean mechanical and electrical services above dropped ceilings, ceiling spaces and other confined spaces with a HEPA filter vacuum cleaner including;
 - .1 services which will be worked on, and
 - .2 adjacent services within a 600 mm (24 in) radius of any ceiling opening into the work area.
- .2 Where services are to be removed, HEPA vacuum the entire surface of the service prior to its removal.

3.9 Access To/From Existing Building

- .1 Keep dust tight enclosure and partition doors at openings to the existing hospital closed.

3.10 Preventative Measures Dust Control Testing

- .1 Conduct visual checks of isolation barriers prior to testing and correct any identified defects.
- .2 Test negative pressure is maintained at a pressure differential of 7.5 Pa (0.03 in wc.) between adjacent areas (high pressure) and a construction zone or construction area (low pressure) prior to start of construction.
 - .1 Retest pressure differentials at Long Term Infection Control barriers on at least a monthly basis or more frequent as agreed with the Owner.
 - .2 Test pressure differentials at Short Term Infection Control barriers on a daily basis prior to use.

3.11 Cleaning

- .1 Provide site maintenance functions for cleaning and debris removal in accordance with the applicable measures of CAN/CSA Z317.13.
- .2 Maintain areas of the existing building adjacent to the Construction Zone or Construction Space affected by the Work, including circulation and access routes, in a clean state equivalent to the level of cleanliness maintained in the existing building, and as follows:
 - .1 clean and vacuum the Place of the Work and areas surrounding the Place of the Work daily or more frequently as required.
 - .2 provide chemically-treated walk-off mats on the construction area side of access doors to the Place of the Work so that workers can remove dust and debris from their footwear when exiting the Place of the Work. Replace or clean walk-off mats daily, or more frequently as required.
 - .3 wet mop floor areas in vicinity of access doors to the Place of the Work daily, or more frequently as required.
 - .4 vacuum carpeted areas daily or more frequently as required using a HEPA filtered vacuum cleaner.
 - .5 wet clean carpets in accordance with manufacturer's recommendations once work in such areas is complete.
 - .6 remove dust from body, footwear, and clothing by vacuum cleaning with a HEPA filtered vacuum cleaner prior to traversing patient care areas or exiting the Place of the Work through operating part(s) of the hospital.
 - .7 thoroughly clean infection control barriers prior to their removal with a HEPA filter vacuum cleaner.
- .3 Change HEPA filters as recommended by the manufacturer or required by use. Maintain a filter change log at the Place of the Work, available for review by the Consultant
- .4 Where permanent building return air or exhaust air ductwork is used for construction exhaust and temporary filters were not installed on the return/exhaust air grilles, HEPA vacuum clean the interior of the ductwork at the end of construction prior to hand-over.
- .5 Provide a final construction clean using HEPA filtered vacuum cleaner and wet mop as applicable, and wipe clean all surfaces with a hospital grade disinfectant, except where such disinfectants can affect the finish or function of a device.

3.12 Waste Protection and Removal

- .1 Provide waste management and disposal of waste in accordance with the applicable measures of CSA Z317.13.
- .2 Transport waste in containers with tightly fitting lids or cover waste with a wet sheet.
- .3 Remove waste as it is created. Contain and cover debris if it cannot be removed immediately.
- .4 Do not transport waste through occupied areas of existing building.
- .5 Remove waste at the end of each Working Day through construction access routes.

3.13 Project Hand-Over

- .1 Submit laboratory test reports of successful hyper-chlorination of potable water systems at a level of at least 50 ppm prior to being placed back into service.
- .2 Obtain a copy of the infection control checklist from the Owner, and check off all items as having been completed and ready for inspection prior to application for Ready-for-Takeover.

End of Section

COMMON PRODUCT REQUIREMENTS

01 61 00

1 GENERAL

1.1 Common Product Requirements - General

- .1 Provide Products that are not damaged or defective, and suitable for purpose intended, subject to specified requirements. If requested by Consultant, furnish evidence as to type, source and quality of Products provided.
- .2 Unless otherwise specified, maintain uniformity of manufacture for like items throughout.

1.2 Product Options

- .1 Subject to the provisions of Section 01 25 00 -Substitution Procedures:
 - .1 wherever a Product or manufacturer is specified by a single proprietary name, provide the named Product only,
 - .2 wherever more than one Product or manufacturer is specified by proprietary name for a single application, provide any one of the named Products.
- .2 Wherever a Product is specified by reference to a standard only, provide any Product that meets or exceeds the specified standard. If requested by Consultant, submit information verifying that the proposed Product meets or exceeds the specified standard.
- .3 Wherever a Product is specified by descriptive or performance requirements only, provide any Product that meets or exceeds the specified requirements. If requested by Consultant, submit information verifying that the proposed Product meets or exceeds the specified requirements.

1.3 Product Availability and Delivery Times

- .1 Promptly upon Contract award and periodically during construction, review and confirm Product availability and delivery times. Order Products in sufficient time to meet the construction progress schedule and the Contract Time.
- .2 If a specified Product is no longer available, promptly notify Consultant. Consultant will take action as required.
- .3 If delivery delays are foreseeable, for any reason, promptly notify Consultant.
- .4 If a delivery delay is beyond Contractor's control, Consultant will provide direction.
- .5 If a delivery delay is caused by something that was or is within Contractor's control, Contractor shall propose actions to maintain the construction progress schedule for Consultant's review and acceptance.

1.4 Storage, Handling, and Protection

- .1 Store, handle, and protect Products during transportation to Place of the Work and before, during, and after installation in a manner to prevent damage, adulteration, deterioration and soiling.
- .2 Comply with manufacturer's instructions for storage, handling and protection.
- .3 Store packaged or bundled Products in original and undamaged condition with manufacturer's seals and labels intact. Do not remove from packaging or bundling until required in Work.
- .4 Comply with the requirements of the workplace hazardous materials information system (WHMIS) regarding use, handling, storage, and disposal of hazardous materials, including requirements for labeling and the provision of material safety data sheets (MSDS).
- .5 Store Products subject to damage from weather in weatherproof enclosures.

- .6 Store sheet Products on flat, solid, supports and keep clear of ground. Slope to shed moisture.
- .7 Remove and replace damaged Products.

End of Section

NOT FOR CONSTRUCTION

EXECUTION

01 73 00

1 GENERAL

1.1 Summary

- .1 Except where otherwise specified in technical Specifications or otherwise indicated on Drawings, comply with requirements of this Section.

1.2 Manufacturer's Instructions

- .1 Install, erect, or apply Products in strict accordance with manufacturer's instructions.
- .2 Notify Consultant, in writing, of conflicts between Contract Documents and manufacturer's instructions where, in Contractor's opinion, conformance with Contract Documents instead of the manufacturer's instructions may be detrimental to the Work or may jeopardize the manufacturer's warranty.
- .3 Do not rely on labels or enclosures provided with Products. Obtain written instructions directly from manufacturers.
- .4 Provide manufacturer's representatives with access to the Work at all times. Render assistance and facilities for such access so that manufacturer's representatives may properly perform their responsibilities.

1.3 Concealment

- .1 Conceal pipes, ducts, and wiring in floors, walls and ceilings in finished areas:
 - .1 after review by Consultant (except where the Consultant declines to review any particular portion of the Work),
 - .2 after inspection by authority having jurisdiction, and
 - .3 where locations differ from those shown on Drawings, after recording actual locations on as-built drawings.
- .2 Provide incidental furring or other enclosures as required.
- .3 Notify Consultant in writing of interferences before installation.

1.4 Fastenings - General

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials.
- .2 Prevent electrolytic action and corrosion between dissimilar metals and materials by using suitable non-metallic strips, washers, sleeves, or other permanent separators to avoid direct contact.
- .3 Use non-corrosive fasteners and anchors for securing exterior work [and in spaces where high humidity levels are anticipated].
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Do not use fastenings or fastening methods that may cause spalling or cracking of material to which anchorage is made.

1.5 Fastenings - Equipment

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Bolts shall not project more than one diameter beyond nuts.

1.6 Fire Rated Assemblies

- .1 When penetrating fire rated walls, ceiling, or floor assemblies, completely seal voids with fire-stopping materials, smoke seals, or both, in full thickness of the construction element as required to maintain the integrity of the fire rated assembly.

1.7 Demolition, Storage, and Removal of Materials

- .1 Demolish obsolete work and prepare existing areas ready for new Work.
- .2 Demolished materials, unless otherwise specified to be relocated or retained and handed over to Owner, will become the property of Contractor and are to be removed from site.
- .3 Store items and materials retained by Owner in location directed by Owner.

1.8 Location of Fixtures, Outlets and Devices

- .1 Consider location of fixtures, outlets, and devices indicated on Drawings as approximate.
- .2 Locate fixtures, outlets, and devices to provide minimum interference, maximum usable space, and as required to meet safety, access, maintenance, acoustic, and regulatory, including barrier free, requirements.
- .3 Promptly notify Consultant in writing of conflicting installation requirements for fixtures, outlets, and devices. If requested, indicate proposed locations and obtain approval for actual locations.

1.9 Verification of Existing Conditions

- .1 Where work specified in any Section is dependent on the work of another Section or Sections having been properly completed, verify that work is complete and in a condition suitable to receive the subsequent work. Commencement of work of a Section that is dependent on the work of another Section or Sections having been properly completed, means acceptance of the existing conditions.
- .2 Verify that ambient conditions are suitable before commencing the work of any Section and will remain suitable for as long as required for proper setting, curing, or drying of Products used.
- .3 Ensure that substrate surfaces are clean, dimensionally stable, cured and free of contaminants.
- .4 Notify Consultant in writing of unacceptable conditions.

1.10 Protection of Completed Work and Work in Progress

- .1 Adequately protect parts of the Work completed and in progress from any kind of damage.
- .2 Promptly remove, replace, clean, or repair, as directed by Consultant, work damaged as a result of inadequate protection.
- .3 Do not load or permit to be loaded any part of the Work with a weight or force that will endanger the safety or integrity of the Work.

1.11 Remedial Work

- .1 Notify Consultant of, and perform remedial work required to, repair or replace defective or unacceptable work. Ensure that properly qualified workers perform remedial work. Coordinate adjacent affected work as required.

2 WORK IN EXISTING BUILDINGS**2.1 General**

- .1 This Work includes substantial interior renovation work to the extent as shown on Drawings, and specified. Such work to be carried out in accordance with Specification and best industry practice.

- .2 Condition of areas of existing building to be ascertained at time of tendering by inspection of premises.
- .3 Where piece of equipment, items, or material, is indicated to be removed, relocated, or is required to be temporarily removed and reinstalled, the respective trade subcontractor's shall remove, relocate, or temporarily remove and reinstall equipment, item or material.
- .4 Separate exterior access, work and storage areas from Owner occupied existing areas, with fencing and hoarding. Rearrange fencing/hoarding as Work progresses to suit extent and configuration of the Work.

2.2 Coordination of Work in Existing Facilities

- .1 It is essential that on-going operations of Owner be maintained with minimal disruption during period of new construction, renovations, and alterations to existing building.
- .2 Co-operate fully with other contractors on Work and proceed with this work as rapidly as job conditions permit.
- .3 Supply items to be built-in, in ample time to be incorporated into work of other trades, together with measurements, templates, or dimensioned sketches.

2.3 Protection of Existing Buildings

- .1 Document condition of the existing building in areas immediately adjacent to the Place of the Work by means of construction photographs.
- .2 Protect existing work from damage. Make good any damage caused. The onus is on the Contractor to substantiate that damage existed prior to commencement of the Work.
- .3 Do not overload the existing structure due to the Work.
- .4 Take special measures to protect existing work from damage when moving heavy loads or equipment. Protect areas used as passageways or through which materials are moved. Use resilient tired conveyances only when moving materials and equipment inside building. Provide coverings as required to protect existing work from damage.
- .5 Protect existing building components and contents from damage by weather, when executing Work affecting integrity of the building envelope.
- .6 Protect existing occupied areas from exposure to construction in progress. Cover glazing with 15 mm (5/8 in,) gypsum board on suitable framing for duration of construction.
- .7 Make good existing building components and contents damaged by weather resulting from inadequate temporary protection measures.
- .8 Where existing exterior and interior doors are used on a daily basis for the transport of materials and equipment, or for dedicated access for construction workers, temporarily remove existing doors and install temporary solid-core wood doors or hollow steel doors. At completion of the Work, reinstall existing doors and make-good any damage to door frames.

2.4 Finishes or Materials Altered During the Course of the Work

- .1 Make-good finishes or materials altered as part of the Work, and refinish to match existing quality and appearance to the satisfaction of Consultant. Repaired, replaced and/or refinished finishes or materials shall not be discernible from existing materials or finishes when judged by Consultant from a viewing distance of 1800 mm (6').

End of Section

RENOVATIONS

01 73 29

1 EXTENT OF WORK

- .1 This Work includes substantial interior renovation work to extent as shown on Drawings, and specified.
- .2 Such work to be carried out in accordance with Specification and best industry practice.
- .3 Condition of areas of existing building to be ascertained at time of tendering by inspection of premises.
- .4 Removal of, or changes to, mechanical equipment, piping, ductwork and plumbing fixtures is specified in Mechanical Division.
- .5 Removal of, or changes to, existing wiring and light fixtures is specified in Electrical Division.
- .6 Where piece of equipment, items, or material, is indicated to be removed, relocated, or is required to be temporarily removed and reinstalled, it to be respective contractor's responsibility to remove, relocate, or temporarily remove and reinstall equipment, item or material. Removal, relocation and temporary removal and reinstallation of mechanical and electrical equipment, item and material, is specified in Mechanical and Electrical Divisions.

2 COORDINATION

- .1 It is essential that on-going operations of Owner be maintained with minimal disruption during period of new construction, renovations, and alterations to existing building.
- .2 Co-operate fully with other contractors on work and proceed with this work as rapidly as job conditions permit.
- .3 Supply items to be built in, in ample time to be incorporated into work of other trades, together with measurements, templates, or dimensioned sketches.

3 INFECTION CONTROL AND PREVENTION (IPAC)

- .1 All contractors are to follow CSA Z317.14 for infection control protocols.
- .2 Temporary poly/hoarding with vestibule is required at entry to construction zone. Provide magnehelic gauge to ensure negative pressurization.
 - .1 Vestibule and construction zone to be negatively pressurized from surrounding spaces.
- .3 Provide HEPA filtered exhaust from vestibule and construction zone, connected back to the hospitals return system.
- .4 Contractor must submit an infection control plan to Owner providing sufficient time to review and achieve sign off prior to commencement of works. Any failures to comply that lead to delays will be borne by the contractor.

4 DEMOLITION, STORAGE AND REMOVAL OF MATERIALS

- .1 Demolish obsolete work and prepare existing areas ready for new Work.

- .2 Demolished materials, unless otherwise specified to be relocated or retained and handed over to Owner, will become property of Contractor and are to be removed from site.
- .3 Store items and materials retained by Owner in location directed by Owner.

5 MAINTENANCE OF FIRE SAFETY

- .1 Maintain site clean at all times and do not obstruct driveways, corridors, stairways, or doorways.
 - .1 Exits, including stairways and exterior doors serving existing building to be maintained.
 - .2 Where exit is blocked, provide alternative exit.
 - .3 Where exit leads through construction area, provide clearly defined protected route separated from construction area with smoke tight fire separation with ¾ hour fire-resistance rating.
- .2 Protect intersections between existing corridors in occupied floor areas and new corridors under construction.
 - .1 Erect temporary fire separations from steel studs and gypsum board with ¾ hour fire resistance rating.
 - .2 Where access is required provide door of solid core wood or hollow steel, equipped with self closing and latching hardware.
- .3 Provide Fire Department access.
 - .1 Access roadways designated for fire department equipment to be routed clear of building additions and construction activity.
 - .2 Where previously existing access roads are deleted or obstructed, provide alternative routes acceptable to fire department, prior to commencement of construction.
- .4 Control combustible materials within construction site.
 - .1 Stockpiling adjacent to existing, occupied buildings is prohibited where storage of materials create a fire hazard.
 - .2 Combustible materials to be piled in limited quantities in accordance with regulations under the Health and Safety Act.
 - .3 Open flame portable heating appliances to be located clear of combustible materials and finishes.
- .5 Protect existing occupied areas from exposure to construction in progress
 - .1 Glazing to be covered by 5/8 inch gypsum board on suitable framing for duration of construction.
 - .2 Doors, louvres, and other openings to be similarly protected or replaced with doors of solid core wood or hollow steel.
- .6 Openings through existing floor assemblies and vertical fire separations to be protected.
 - .1 Seal around ducts pipes conduits and other services with temporary seals of fire barrier material, mineral wool, or smoke stopping.

6 CUTTING AND PATCHING

- .1 Coordinate cutting and patching.
 - .1 Contractors are required to cut, patch and make good work of their own trade in altered portions of existing building.

- .2 Each trade is responsible for laying out required holes in partitions, roofs, smoke curtains, metal deck or siding and for providing sleeving, fireproofing, and smoke-stopping. Arrange with appropriate Contractor to leave these apertures.
- .3 Where openings are to be made in finished work, accurately saw-cut floors, walls and ceilings. Provide holes and openings no larger than necessary to minimize damage. Core drill circular holes in concrete. Accurately cut new openings for electrical outlets and other recessed items in walls.
- .4 Obtain Consultant's approval prior to drilling through concrete floor and ceiling slabs, structural members and load bearing walls.
- .5 Provide temporary supports during cutting and coring.
- .2 Where holes are to be cut through exterior walls, roofs, and metal deck, closure to be maintained until after equipment/duct or pipe is in place to minimize rain entering building.
- .3 Where alterations occur, patch floors, walls, partitions and ceilings to match existing.
 - .1 Join new work to existing in neat, accurate manner.
 - .2 Change, make good and adjust existing floors and ceilings where partitions are removed.
- .4 Refer to Drawings for extent of architectural, mechanical, electrical and structural work beyond main area of Work and provide for removal and reinstallation of ceilings and cutting and patching of existing finishes to accommodate this work.
 - .1 All work outside main area or renovation is to conform to the Owner's IPAC requirements for construction.
- .5 Provide openings in ceilings as required by revisions to mechanical and electrical work and make good afterwards.

END OF SECTION

CLEANING AND WASTE MANAGEMENT

01 74 00

1 GENERAL

1.1 Regulatory Requirements

- .1 Comply with applicable regulatory requirements when disposing of waste materials.
- .2 Obtain permits from authorities having jurisdiction and pay disposal fees where required for disposal of waste materials and recyclables.
- .3 Collect waste materials and separate into appropriate recyclable materials for collection as a recoverable resource.

1.2 General Cleaning Requirements

- .1 Provide adequate ventilation during use of volatile or noxious substances. Do not rely on building ventilation systems for this purpose.
- .2 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .3 Prevent cross-contamination during the cleaning process.
- .4 Notify the Consultant of the need for cleaning caused by Owner or other contractors.

1.3 Progressive Cleaning and Waste Management

- .1 Maintain the Work in a tidy and safe condition, free from accumulation of waste materials and construction debris.
- .2 Provide appropriate, clearly marked, containers for collection of waste materials and recyclables. Locate containers as necessary to suit the progress of the work, and where otherwise indicated on Drawings.
- .3 Remove waste materials and recyclables from work areas, separate, and deposit in designated containers at end of each Working Day. Collect packaging materials for recycling or reuse.
- .4 Remove waste materials and recyclables from Place of the Work [daily] [weekly] [at regular intervals].
- .5 Clean interior building areas prior to start of finish work and maintain free of dust and other contaminants during finishing operations.
- .6 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly finished surfaces nor contaminate building systems.

1.4 Final Cleaning

- .1 Before final cleaning, arrange a meeting at Place of the Work to determine the acceptable standard of cleaning. Ensure that Owner, Consultant, Contractor [and cleaning company] are in attendance.
- .2 Remove from Place of the Work surplus Products, waste materials, recyclables, Temporary Work, and Construction Equipment not required to perform any remaining work.
- .3 Provide professional cleaning by a qualified, established cleaning company.
- .4 Re-clean as necessary areas that have been accessed by Contractor's workers prior to Owner occupancy.
- .5 Remove stains, spots, marks, and dirt from finished surfaces, electrical fixtures, furniture fitments, walls, and floors.

- .6 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and all other finished surfaces, including mechanical and electrical fixtures. Replace broken, scratched or otherwise damaged glass.
- .7 Remove dust from lighting reflectors, lenses, lamps, bulbs, and other lighting surfaces.
- .8 Vacuum clean and dust exposed wall, floor, and ceiling surfaces, behind grilles, louvres and screens.
- .9 Remove waste material and debris from the worksite.
- .10 Clean and sweep roofs, clear roof drains, clean gutters and downspouts, and sunken wells,

1.5 Waste Management and Disposal

- .1 Dispose of waste materials and recyclables at appropriate municipal landfills and recycling facilities in accordance with applicable regulatory requirements.
- .2 Do not burn or bury waste materials at Place of the Work.
- .3 Do not dispose of volatile and other liquid waste such as mineral spirits, oil, paints and other coating materials, paint thinners, cleaners, and similar materials together with dry waste materials or on the ground, in waterways, or in storm or sanitary sewers. Collect such waste materials in appropriate covered containers, promptly remove from Place of the Work, and dispose of at recycling facilities or as otherwise permitted by applicable regulatory requirements.
- .4 Cover or wet down dry waste materials to prevent blowing dust and debris.

End of Section

PROJECT CLOSE-OUT

01 78 05

1 AS-BUILT RECORDS

1.1 As-Built Drawings

- .1 Contractor to obtain from Consultant at commencement of work, one complete set of white prints or electronic CAD drawing file of Drawings to be used for purpose of recording the as-built changes and deviations to work.
- .2 These prints and/or CAD files to be kept by Contractor in Job Office and made available to all Subcontractors so that all changes and deviations to be recorded by respective trades promptly as they occur by marking in black ink. Deviations and changes to mechanical and electrical systems must be recorded on these Drawings.
- .3 Upon completion of work, return these Drawings and CAD files in complete and good condition to Consultant in order that Owner will have record of exact location of all services and equipment.

1.2 Operating and Maintenance Manuals

- .1 Submit operating and maintenance manuals, as detailed in the specification sections.

2 CLEAN UP

- .1 Keep premises free from waste, debris or dirt.
- .2 Upon completion of work, thoroughly clean work and remove surplus materials and equipment of every description incidental to this work, leaving installation in neat and orderly condition.

3 WARRANTIES

3.1 Warranty

- .1 Remedy any defects due to faulty materials or workmanship appearing within period of one year from date of final acceptance of work and to pay for any damage to other work resulting therefrom which appears within such period and neither final certificate nor payment thereunder to relieve Contractor from this responsibility. Owner to give notice of observed defects promptly. Any work requiring excessive service during warranty period to be considered defective and to be replaced at no additional cost to Owner.

END OF SECTION

DEMONSTRATION AND TRAINING

01 79 00

1 GENERAL

1.1 Summary

- .1 Except where otherwise specified in technical Specifications, comply with requirements of this Section.
- .2 Demonstrate and provide training to Owner's personnel on operation and maintenance of the condensing units and dx cooling coils prior to scheduled date of June 1st.
- .3 Owner will provide list of personnel to receive training and will coordinate their attendance at agreed upon times.
- .4 Coordinate and schedule demonstration and training provided by Subcontractors and Suppliers.

1.2 Submittals

- .1 Submit proposed dates, times, durations, and locations for demonstration and training of each item of equipment and each system for which demonstration and training is required. Allow sufficient time for training and demonstration for each item of equipment or system, or time as may be specified in technical Specifications.
- .2 Consultant and Owner will review submittal and advise Contractor of any necessary revisions.
- .3 Submit report(s) within [5] working days after completion of demonstration and training:
 - .1 identifying time and date of each demonstration and training session,
 - .2 summarizing the demonstration and training performed, and
 - .3 including a list of attendees.

1.3 Prerequisites to Demonstration and Training

- .1 Testing, adjusting, and balancing has been performed in accordance with Contract Documents.
- .2 Equipment and systems are fully operational.
- .3 Copy of completed operation and maintenance manual is available for use in demonstration and training.
- .4 Conditions for demonstration and training comply with requirements specified in technical Specifications.

1.4 Demonstration and Training

- .1 Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, [] and maintenance of each item of equipment and system.
- .2 Review operation and maintenance manual in detail to explain all aspects of operation and maintenance.
- .3 Prepare and insert additional information in operation and maintenance manual if required.

End of Section