

PROJECT MANUAL

TRANSPORTABLE
HOLDING CELLS

DESCHAMBAULT LAKE, SASKATCHEWAN

for

TENDER SUBMISSION



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- A-01 Site Plan September 2014
- A102 Site Details, typical wood steps

ANNEX “A”

Drawings set of RCMP Transportable Holding Cells
Specification set of RCMP Transportable Holding Cells
Post tender documents/drawings, shop drawings, as buildsupon request

ANNEX “B”

RCMP Holding Cells Permit Confirmation Drawing
Lumsden SK Community Map and Site Plan
Deschambault Lake, SK Community Map and Google Earth View

END OF TABLE

PART 1 General

1.1 WORK COVERED BY CONTRACT DOCUMENTS

Work of this Contract comprises: The relocation of two RCMP transportable holding cells units (one master module and one base module) from the present location at Lumsden SK, to the RCMP Detachment, Deschambault Lake, Saskatchewan including disassembly of existing connections of units, electrical service connections, wooden deck, stairs, etc. and the transportation, positioning, re-connection of the trailers, all service connections, all additional construction activities, all site construction and associated works as per attached drawings.

1.2 WORK SEQUENCE

- .1 Coordinate Progress Schedule.
- .2 Maintain fire access/control.

1.3 CONTRACTOR USE OF PREMISES

- .1 Contractor has restricted use of site until Substantial Performance.
- .2 Coordinate use of premises under direction of Engineer.
- .3 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

1.4 GENERAL ITEMS

- .1 RCMP Responsibilities:
 - .1 Provide information on Transportable units.
 - .2 Confirm location from and where to be transported.
- .2 Contractor Responsibilities:
 - .1 Disassembly and deployment of the RCMP transportable holding cells and disassembled items from present location Lumsden, SK RCMP Detachment to the indicated above address.
 - .2 Coordinate schedule transportation of units and any crated or loose material/equipment.
 - .3 Protect units from damage, pay for repairs if damage occur during deployment.
 - .4 Be responsible for any site work to establish the units in designated location.
 - .5 Arrange for replacement of damaged, defective or missing items. This includes patching and repair to any cracking of interior walls due to shifting during transportation. Repairs will be conducted in accordance with drawings and specifications in Annex A.
 - .6 Installation on site of all equipment such as toilet fixtures, roof vents, gaskets and flashings, trailer interconnection, etc, which were disassembled in Lumsden. SK prior to demobilization.
 - .7 Designate submittals and delivery date for each product in progress schedule.

- .8 Review shop drawings, product data, samples, and other submittals. Submit to Engineer notification of any observed discrepancies or problems anticipated due to non-conformance with Contract Documents.
- .9 Receive and unload products at site.
- .10 Pay demurrage charges.
- .11 Inspect deliveries jointly with RCMP; record shortages, and damaged or defective items.
- .12 Handle products at site, including uncrating and storage.
- .13 Protect products from damage, and from exposure to elements.
- .14 Assemble, install, connect, adjust, and finish products.
- .15 Provide installation inspections required by public authorities.
- .16 Repair or replace items damaged by Contractor or subcontractor on site (under his control).
- .17 Construction of cribbing foundation in accordance with drawings and specifications in Annex A.
- .18 Existing decks, steps, cribbing, etc located at Lumsden, SK site are contractor's salvage; items not salvaged must be removed and properly disposed of.

1.5 PERMIT AND FEES

- .1 The Contractor shall obtain and pay for all building permits, deployment permits. Obtain and pay for all other permits, licenses, certificates, fees and governmental inspections or notices required for the performance of the work.

NOTE: Permit drawings are the property of the owner. Contractor to forward "approved" permit drawings and a copy of the building permit to the Engineer **prior** to the submission of the first request for progress payment.

1.6 EXISTING SERVICES

- .1 Notify Engineer and utility companies of intended interruption of services and obtain required permission.
- .2 Where Work involves breaking into or connecting to existing services, give Engineer 48 hours notice for necessary interruption of mechanical or electrical service throughout course of work. Minimize duration of interruptions. Carry out work at times as directed by governing authorities with minimum disturbance to pedestrian, vehicular traffic and tenant operations.
- .3 Provide alternative routes for personnel, pedestrian and vehicular traffic.
- .4 Establish location and extent of service lines in area of work before starting Work. Notify Engineer of findings.
- .5 Submit schedule to and obtain approval from Engineer for any shut-down or closure of active service or facility including power and communications services. Adhere to approved schedule and provide notice to affected parties.
- .6 Provide temporary services as required.
- .7 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.

- .8 Protect, relocate or maintain existing active services. When inactive services are encountered, cap off in manner approved by Authorities Having Jurisdiction.
- .9 Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.

1.7 DOCUMENTS REQUIRED

- .1 Maintain at job site, one copy each document as follows:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed Shop Drawings.
 - .5 List of Outstanding Shop Drawings.
 - .6 Change Orders.
 - .7 Other Modifications to Contract.
 - .8 Field Test Reports.
 - .9 Copy of Approved Work Schedule.
 - .10 Health and Safety Plan and Other Safety Related Documents.

1.8 SITE ASSESSMENT

- .1 SITE EXAMINATION
 - .1 Pre tender site examination in Deschambault Lake is recommended.
- .2 UNITS/TRAILERS EXAMINATION
 - .1 Pre tender site walk-through at Lumsden, SK is recommended and available upon request. To make arrangements, bidders should contact Bonny Manz at (306) 780-3352.

PART 2 Products

2.1 NOT USED

- .1 Not used.

PART 3 Execution

3.1 NOT USED

- .1 Not used.

END OF SECTION

PART 1 General

1.1 ACCESS AND EGRESS

- .1 Design, construct and maintain temporary "access to" and "egress from" work areas, including stairs, runways, ramps or ladders and scaffolding, independent of finished surfaces and in accordance with relevant municipal, provincial and other regulations.

1.2 USE OF SITE AND FACILITIES

- .1 Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with Engineer to facilitate work as stated.
- .2 Maintain existing services to building and provide for personnel and vehicle access.
- .3 Where security is reduced by work provide temporary means to maintain security.
- .4 Use only designated areas for moving workers and material.
 - .1 Accept liability for damage, safety of equipment and overloading of existing equipment.
- .5 Closures: protect work temporarily until permanent enclosures are completed.

PART 2 Products

2.1 NOT USED

- .1 Not used.

PART 3 Execution

3.1 NOT USED

- .1 Not used.

END OF SECTION

PART 1 General

1.1 CASH ALLOWANCES

- .1 Include in Contract Price specified cash allowances.
- .2 Cash allowances, unless otherwise specified, cover net cost to Contractor of services, products, construction machinery and equipment, freight, handling, unloading, storage installation and other authorized expenses incurred in performing Work.
- .3 Contract Price, and not cash allowance, includes Contractor's overhead and profit in connection with such cash allowance.
- .4 Contract Price will be adjusted by written order to provide for excess or deficit to each cash allowance.
- .5 Amount of each allowance, for Work specified in respective specification Sections is as follows:
 - .1 Valid Manufacturer Consulting services during deployment: \$5000
 - .2 Patching and repair to any cracking of interior walls due to shifting during transportation : \$5000.00

1.2 CONTINGENCY ALLOWANCE

- .1 Not used.

1.3 ALTERNATIVE PRICES

- .1 Not used.

PART 2 Products

2.1 NOT USED

- .1 Not Used.

PART 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 General

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- .1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by Engineer.

1.2 APPOINTMENT AND PAYMENT

- .1 Engineer will appoint and pay for services of testing laboratory except follows:
 - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
 - .2 Inspection and testing performed exclusively for Contractor's convenience.
 - .3 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.
 - .4 Mill tests and certificates of compliance.
 - .5 Tests specified to be carried out by Contractor under the supervision of Engineer.
 - .6 Additional tests specified as follows:
- .2 Where tests or inspections by designated testing laboratory reveal Work not in accordance with contract requirements, pay costs for additional tests or inspections as required by Engineer to verify acceptability of corrected work.

1.3 CONTRACTOR'S RESPONSIBILITIES

- .1 Provide labor, equipment and facilities to:
 - .1 Provide access to Work for inspection and testing.
 - .2 Facilitate inspections and tests.
 - .3 Make good Work disturbed by inspection and test.
 - .4 Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.
- .2 Notify Engineer, sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4 Record locations of maintained, re-routed and abandoned service lines.

PART 2 Products

2.1 NOT USED

- .1 Not used.

PART 3 Execution

3.1 NOT USED

.1 Not used.

END OF SECTION

PART 1 General

1.1 DESCRIPTION

- .1 Coordination of progress schedules, submittals, use of site, temporary utilities, construction facilities, and construction Work.

1.2 PROJECT MEETINGS

.1 ADMINISTRATIVE

- .1 Project meetings will include Pre-construction, Substantial Completion inspection/ meeting, and Final Completion inspection/ meeting.
- .2 Engineer will distribute written notice of each meeting minimum five (5) working days in advance of meeting date to all required attendees.
- .3 Engineer will provide physical space and make arrangements for meetings.
- .4 Engineer will preside at meetings.
- .5 Engineer will record the meeting minutes. Include significant proceedings and decisions. Identify actions by parties.
- .6 Engineer will reproduce and distribute copies of minutes within three working days after meetings and transmit to meeting participants and, affected parties not in attendance, including Owner and General Contractor.
- .7 Representative of Contractor, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

.2 PRECONSTRUCTION/PREDEPLOYMENT MEETING

- .1 Within 5 days after award of Contract, Engineer will request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Senior representatives of the Owner, Engineer, Contractor, major Subcontractors, field inspectors and supervisors will be in attendance.
- .3 Establish time and location of meeting and notify parties concerned minimum 5 days before meeting.
- .4 Agenda to include following:
 - .1 Appointment of official representative of participants in Work.
 - .2 Schedule of Work, progress scheduling
 - .3 Schedule of submission of shop drawings, samples, colour chips in accordance with Section 013300 - Submittal Procedures.
 - .4 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences in accordance with Section 015100 - Temporary Utilities.
 - .5 Delivery schedule of specified equipment in accordance with Section 013100 – Project Management And Coordination.
 - .6 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, and administrative requirements (GC).
 - .7 Owner provided products.
 - .8 Record drawings in accordance with Section 017800 - Closeout Submittals.
 - .9 Maintenance in accordance with Section 017800 - Closeout Submittals.

- .10 Take-over procedures, acceptance, and warranties in accordance with Section 017700 - Closeout Procedures and Section 017800 - Closeout Submittals.
- .11 Monthly progress claims, administrative procedures, photographs, and holdbacks (GC).
- .12 Appointment of inspection and testing agencies or firms in accordance with Section 014500 - Quality Control.
- .13 Insurances and transcript of policies (GC).
- .14 Owner security requirements
- .5 Comply with instructions of Engineer for use of temporary utilities and construction facilities.
- .6 Coordinate field engineering and layout work with Engineer.

.3 PROGRESS MEETINGS

- .1 During course of Work and prior to project completion, schedule progress meetings (to be determined at the preconstruction meeting).
- .2 Contractor, major Subcontractors involved in Work , Engineer and Owner are to be in attendance.
- .3 Agenda to include the following:
 - .1 Review, approval of minutes of previous meeting.
 - .2 Review of Work progress since previous meeting.
 - .3 Field observations, problems, conflicts.
 - .4 Problems which impede construction schedule.
 - .5 Review of off-site fabrication delivery schedules.
 - .6 Corrective measures and procedures to regain projected schedule.
 - .7 Revision to construction schedule.
 - .8 Progress schedule, during succeeding work period.
 - .9 Review submittal schedules: expedite as required.
 - .10 Maintenance of quality standards.
 - .11 Review proposed changes for effect on construction schedule and on completion date.
 - .12 Other business.

1.3 ON-SITE DOCUMENTS

- .1 Maintain at job site, one copy each of the following:
 - .1 Contract drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed shop drawings.
 - .5 Change orders.
 - .6 Other modifications to Contract.
 - .7 Field test reports.
 - .8 Copy of approved Work schedule.

- .9 Manufacturers' installation and application instructions.
- .10 Labour conditions and wage schedules.
- .11 Manufacturer's Certificates
- .12 Inspection Certificates

1.4 SCHEDULES

- .1 Submit preliminary construction progress schedule to Engineer, coordinated with Engineer's project schedule.
- .2 After review, revise and resubmit schedule to comply with revised project schedule.
- .3 During progress of Work revise and resubmit as directed by Engineer.

1.5 APPLICATIONS FOR PROGRESS PAYMENT

- .1 Make applications for payment on account as provided in Agreement as Work progresses.
- .2 Date applications for payment last day of agreed payment period and ensure amount claimed is for value, proportionate to amount of Contract, of Work performed and Products delivered to Place of Work at that date.
- .3 Submit to Engineer, at least 14 days before first application for payment, Cost Breakdown, in detail as directed by Engineer, for parts of Work, aggregating total amount of Contract Price, so as to facilitate evaluation of applications for payment. After approval by Engineer, Cost Breakdown will be used as basis for progress payments.
- .4 Support claims for products delivered to Place of Work but not yet incorporated into Work by such evidence as Engineer may reasonably require to establish value and delivery of products.

1.6 SCHEDULE OF VALUES

- .1 Make schedule of values out in such form and supported by such evidence as Engineer may reasonably direct and when accepted by Engineer, be used as basis for applications for payment.
- .2 Include statement based on schedule of values with each application for payment.
- .3 Support claims for products delivered to Place of Work but not yet incorporated into Work by such evidence as Engineer may reasonably require to establish value and delivery of products.
- .4 Itemize separate line item costs for the following (but not limited to) items of Work. Item to be organized in relation to the specification section formatting.
 - .1 General Requirements
 - .1 Transportation

- .2 Mobilization
- .3 Bonds / Permits / Insurance
- .4 Testing/ Commissioning
- .5 Demobilization
- .2 Site works
- .3 Metal Fabrications
- .4 Structural Metal
- .5 Rough Carpentry
- .6 Mechanical
- .7 Electrical

1.7 SUBMITTALS

- .1 Make submittal to Engineer for review.
- .2 Submit preliminary shop drawings, product data and samples in accordance with Section 013300 Submittal Procedures for review for compliance with Contract Documents; for field dimensions and clearances, for relation to available space, and for relation to Work of other contracts. After review, revise and resubmit for transmittal to Engineer.
- .3 Submit requests for payment for review, and for transmittal to Engineer.
- .4 Submit requests for interpretation of Contract Documents, and obtain instructions through Engineer.
- .5 Process substitutions through Engineer.
- .6 Process change orders through Engineer.
- .7 Deliver closeout submittals for review and preliminary inspections, for transmittal to Engineer.

1.8 CONSTRUCTIONPHOTOGRAPHS

- .1 PROGRESS PHOTOGRAPHS
 - .1 Submit construction photographs in accordance with procedures and requirements specified in this Section.
 - .2 Submit progress photographs in one of the following formats:
 - .1 Digital Format
 - .1 Sizes: 2048 x 1536 pixels
 - .2 Format: .jpg, (quality: 80% minimum)
 - .3 Compatibility: Microsoft Windows
 - .4 Identification: file name must include project name, room number, cardinal direction, and date of exposure.
Example: "MRB-103-West-10 Sept.jpg"
 - .5 Viewpoints: interior and exterior locations: viewpoints determined by Engineer. Number of viewpoints: Minimum Twelve (12).

- .6 Frequency: monthly. E-mail digital photos to: Engineer
- .3 All photographs to be focused and legible, with correct light exposure. Use a flash where necessary.

.2 **FINAL PHOTOGRAPHS**

- .1 Submit final photographs prior to application for Substantial Completion of the Work.
- .2 Final photographs:
 - .1 Digital format, requirements same as for progress photographs, above.
 - .1 Submit all files of the final photographs. Files are to be submitted on CD-Rom or DVD-Rom format.
- .3 Final photographs are to include each view of each room.

.3 **INTERIM PHOTOGRAPHS**

- .1 Contractor is required to be able to e-mail photographs within same business day to Engineer.

1.9 CLOSEOUT PROCEDURES

- .1 Notify Engineer when Work is considered ready for Substantial Performance.
- .2 Accompany Engineer on preliminary inspection to determine items listed for completion or correction.
- .3 Comply with Engineer's instructions for correction of items of Work listed in executed certificate of Substantial Performance.
- .4 Notify Engineer of instructions for completion of items of Work determined in Engineer's final inspection.

PART 2 Products

2.1 NOT USED

- .1 Not Used.

PART 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 General

1.1 ADMINISTRATIVE

- .1 Submit to Engineer submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2 Work affected by submittal shall not proceed until review is complete.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission to Engineer. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and co-ordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
- .6 Notify Engineer, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are coordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by Engineer's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Engineer review.
- .10 Keep one reviewed copy of each submission on site.

1.2 SHOP DRAWINGS AND PRODUCT DATA

- .1 The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data which are to be provided by Contractor to illustrate details of a portion of Work.
- .2 Allow 5 working days for Engineer's review of each submission.
- .3 Adjustments made on shop drawings by Engineer are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Engineer prior to proceeding with Work.
- .4 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.

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- .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
 - .5 After Engineer's review, distribute copies.
 - .6 Submit 3 copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Engineer where shop drawings will not be prepared due to standardized manufacture of product.
 - .7 Delete information not applicable to project.
 - .8 Supplement standard information to provide details applicable to project.
 - .9 Facsimile Shop Drawings will not be accepted.
 - .10 Maximum sheet size 860 x 1120 mm.

1.3 SAMPLES

- .1 Submit for review samples in as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Engineer's business address.
- .3 Notify Engineer in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.

- .5 Adjustments made on samples by Engineer are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Engineer prior to proceeding with Work.
- .6 Make changes in samples which Engineer may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

1.4 MOCK-UPS

- .1 Erect mock-ups in accordance with 014500 - Quality Control.

1.5 PROGRESS PHOTOGRAPHS

- .1 Submit progress photographs in accordance with Section 013100 Project Management and Coordination.

1.6 CERTIFICATES AND TRANSCRIPTS

- .1 Immediately after award of Contract, submit Workers' Compensation Board status, and transcription of insurances.

1.7 MANUFACTURER'S FIELD SERVICES REPORTS

- .1 Submit copies of written reports following all attendance at the site by the manufacturer's representative.
- .2 Submit copies to the Engineer, Contractor and appropriate Sub-Contractors.
- .3 Field Service reports shall include (as a minimum):
 - .1 Name of Report
 - .2 Date of attendance at the site
 - .3 List all attendees at time of attendance to the site
 - .4 Observations of progress of the Work
 - .5 Recommendations or directives made to the Contractor and/or Subcontractors and actions required to ensure acceptable application or construction.
- .4 Submit copies of manufacturer's standard recommendations for application / installation with initial field services report.

PART 2 Products

2.1 NOT USED

- .1 Not Used.

PART 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 REFERENCES

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS).
 - .1 Material Safety Data Sheets (MSDS).
- .3 Occupational Health and Safety Act, 1993 and The Occupational Health and Safety Regulations, 1996 - Saskatchewan

1.2 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .3 Submit copies of incident and accident reports.
- .4 Submit WHMIS MSDS - Material Safety Data Sheets.

1.3 FILING OF NOTICE

- .1 File Notice of Project with Provincial authorities prior to beginning of Work.

1.4 SAFETY ASSESSMENT

- .1 Perform site specific safety hazard assessment related to project.

1.5 REGULATORY REQUIREMENTS

- .1 Do Work in accordance with Section 01 41 00 - Regulatory Requirements.

1.6 GENERAL REQUIREMENTS

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Engineer may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

1.7 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.

- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.8 COMPLIANCE REQUIREMENTS

- .1 Comply with Occupational Health and Safety Regulations, 1996.

1.9 UNFORSEEN HAZARDS

- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Territory of Work having jurisdiction and advise Engineer verbally and in writing.

1.10 HEALTH AND SAFETY CO-ORDINATOR

- .1 Employ and assign to Work, competent and authorized representative as Health and Safety Co-ordinator. Health and Safety Co-ordinator must:
 - .1 Have minimum 2 years' site-related working experience specific to activities associated with this work.
 - .2 Have working knowledge of occupational safety and health regulations.
 - .3 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform Work.
 - .4 Be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.
 - .5 Be on site during execution of Work and report directly to and be under direction of site supervisor.

1.11 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Engineer.

1.12 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Engineer.
- .2 Provide Engineer with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Engineer or Owner may stop Work if non-compliance of health and safety regulations is not corrected.

1.13 BLASTING

- .1 Blasting or other use of explosives is not permitted without prior receipt of written instruction by Engineer.

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1.14 POWDER ACTUATED DEVICES

- .1 Use powder actuated devices only after receipt of written permission from Engineer.

1.15 WORK STOPPAGE

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

Part 2 Products

2.1 NOT USED

- .1 Not used.

Part 3 Execution

3.1 NOT USED

- .1 Not used.

END OF SECTION

PART 1 General

1.1 FIRES

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

1.2 DISPOSAL OF WASTES

- .1 Do not bury rubbish and waste materials on site.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

1.3 DRAINAGE

- .1 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- .2 Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

1.4 SITE CLEARING AND PLANT PROTECTION

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

1.5 WORK ADJACENT TO WATERWAYS

- .1 Do not operate construction equipment in waterways.
- .2 Do not use waterway beds for borrow material without Engineer's approval.
- .3 Do not dump excavated fill, waste material or debris in waterways.
- .4 Design and construct temporary crossings to minimize erosion to waterways.

1.6 POLLUTION CONTROL

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

PART 2 Products

2.1 NOT USED

- .1 Not Used.

PART 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 General

1.1 REFERENCES AND CODES

- .1 Perform Work in accordance with National Building Code of Canada (NBC) including all amendments up to tender closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2 Observe construction safety measures of NBC, applicable Worker's Compensation Board and Occupational Health and Safety Regulations requirements, and comply with all acts, regulations, bylaws and authorities having jurisdiction.
- .3 Meet or exceed requirements of:
 - .1 Contract documents.
 - .2 Specified standards, codes and referenced documents.

1.2 HAZARDOUS MATERIAL DISCOVERY

- .1 Comply with the requirements of Workplace Hazardous Materials Information System (WHMIS) regarding handling, storage, use, and disposal of hazardous materials, and regarding labeling and provision of material safety data sheets acceptable to Labour Canada and Health and Welfare Canada.

1.3 FIRE EXTINGUISHERS

- .1 Supply fire extinguishers, necessary to protect the work in progress and the contractor's physical plant on site.

1.4 FLAMMABLE AND COMBUSTIBLE LIQUIDS

- .1 The handling, storage, and use of flammable and combustible liquids are to be governed by the National Fire Code of Canada.

1.5 HAZARDOUS SUBSTANCES

- .1 Work entailing the use of toxic or hazardous materials, chemicals and/or explosives, which otherwise creates a hazard to life, safety or health, shall be in accordance with the National Fire Code of Canada.
- .2 When work is carried out in dangerous or hazardous areas involving use of heat, provide fire watchers, equipped with sufficient fire extinguishers.
- .3 When flammable liquids, such as lacquers or urethanes are to be used, provide proper ventilation and all sources of ignition are to be eliminated.

PART 2 Products

2.1 NOT USED

.1 Not Used.

PART 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

PART 1 General

1.1 INSPECTION

- .1 Allow Engineer access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Engineer instructions, or law of Place of Work.
- .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4 Engineer may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Engineer shall pay cost of examination and replacement.

1.2 INDEPENDENT INSPECTION AGENCIES

- .1 Independent Inspection/Testing Agencies will be engaged by Contractor for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Contractor.
- .2 Provide equipment required for executing inspection and testing by appointed agencies.
- .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by Engineer at no cost to Engineer. Pay costs for retesting and re-inspection.

1.3 ACCESS TO WORK

- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Co-operate to provide reasonable facilities for such access.

1.4 PROCEDURES

- .1 Notify appropriate agency and Engineer in advance of requirement for tests, in order that attendance arrangements can be made.

- .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.
- .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.

1.5 REJECTED WORK

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Engineer as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 Make good other Contractor's work damaged by such removals or replacements promptly.
- .3 If in opinion of Engineer it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner may deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which shall be determined by Engineer.

1.6 REPORTS

- .1 Submit 4 copies of inspection and test reports to Engineer.
- .2 Provide copies to Subcontractor of work being inspected or tested, manufacturer or fabricator of material being inspected or tested.

1.7 TESTS AND MIX DESIGNS

- .1 Furnish test results and mix designs as may be requested.
- .2 The cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work shall be appraised by Engineer and may be authorized as recoverable.

1.8 MOCK-UPS

- .1 Prepare mock-ups for Work specifically requested in specifications. Include for Work of all Sections required to provide mock-ups.
- .2 Construct in all locations acceptable to Engineer.
- .3 Prepare mock-ups for Engineer's review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.
- .4 Failure to prepare mock-ups in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .5 Mock-ups may remain as part of Work.

1.9 MILL TESTS

- .1 Submit mill test certificates as required of specification Sections.

1.10 EQUIPMENT AND SYSTEMS

- .1 Submit adjustment and balancing reports for mechanical, electrical systems.

PART 2 Products

2.1 NOT USED

- .1 Not Used.

PART 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 General

1.1 INSTALLATION AND REMOVAL

- .1 Provide temporary utilities controls in order to execute work expeditiously.
- .2 Remove from site all such work after use.

1.2 DEWATERING

- .1 Provide temporary drainage and pumping facilities to keep site free from standing water.

1.3 WATER SUPPLY

- .1 Provide continuous supply of potable water for construction use.
- .2 Arrange for connection with appropriate utility company and pay all costs for installation, maintenance and removal.
- .3 Pay for utility charges at prevailing rates.

1.4 TEMPORARY HEATING AND VENTILATION

- .1 Provide temporary heating required during construction period, including attendance, maintenance and fuel.
- .2 Construction heaters used inside building must be vented to outside or be non-flameless type. Solid fuel salamanders are not permitted.
- .3 Provide temporary heat and ventilation in enclosed areas as required to:
 - .1 Facilitate progress of Work.
 - .2 Protect Work and products against dampness and cold.
 - .3 Prevent moisture condensation on surfaces.
 - .4 Provide ambient temperatures and humidity levels for storage, installation and curing of materials.
 - .5 Provide adequate ventilation to meet health regulations for safe working environment.
- .4 Maintain temperatures of minimum 10 degrees C in areas where construction is in progress.
- .5 Ventilating:
 - .1 Prevent accumulations of dust, fumes, mists, vapours or gases in areas occupied during construction.
 - .2 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas.

- .3 Dispose of exhaust materials in manner that will not result in harmful exposure to persons.
- .4 Ventilate storage spaces containing hazardous or volatile materials.
- .5 Ventilate temporary sanitary facilities.
- .6 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful contaminants.

- .6 Permanent heating system of building, or portions thereof, may be used at Contractor's expense subject to approval of the Engineer. Should the Engineer agree to the use of the permanent heating system, the Engineer shall issue to the Contractor, written conditions for the use of the permanent heating system. Comply with such conditions as stated by Engineer. Be responsible for all damages thereto, upon completion Work or which the permanent heating system was used, replace all filters, clean and lubricate. Date of Warranties for heating system shall commence as of date of Substantial Completion.

- .7 Pay costs for maintaining temporary heat, when using permanent heating system.

- .8 Maintain strict supervision of operation of temporary heating and ventilating equipment to:
 - .1 Conform to applicable codes and standards.
 - .2 Enforce safe practices.
 - .3 Prevent abuse of services.
 - .4 Prevent damage to finishes.
 - .5 Vent direct-fired combustion units to outside.

- .9 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

1.5 TEMPORARY POWER AND LIGHT

- .1 Provide and pay for temporary power during construction for temporary lighting and operating of power tools and equipment.

- .2 Arrange for connection with appropriate utility company. Pay all costs for installation, maintenance and removal.

- .3 Provide and maintain temporary lighting throughout project. Ensure level of illumination on all floors and stairs is not less than 162 lx.

- .4 Electrical power and lighting systems installed under this Contract may be used for construction requirements only with prior approval of Engineer provided that guarantees are not affected. Make good damage to electrical system caused by use under this Contract. Replace lamps which have been used for more than 3 months.

1.6 TEMPORARY COMMUNICATION FACILITIES

- .1 Not required

1.7 FIRE PROTECTION

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by governing codes, regulations and bylaws.
- .2 Burning rubbish and construction waste materials is not permitted on site.

PART 2 Products

2.1 NOT USED

- .1 Not Used.

PART 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 General

1.1 REFERENCES

- .1 Canadian General Standards Board (CGSB)
 - .1 CGSB 1-GP-189M-[84], Primer, Alkyd, Wood, Exterior.
 - .2 CGSB 1.59-[97], Alkyd Exterior Gloss Enamel.
- .2 Canadian Standards Association (CSA International)
 - .1 CAN3-A23.1-/A23.2-[94], Concrete Materials and Methods for Concrete Construction/Method of Test for Concrete.
 - .2 CSA-0121-[M1978], Douglas Fir Plywood.
 - .3 CAN/CSA-Z321-[96], Signs and Symbols for the Occupational Environment.

1.2 INSTALLATION AND REMOVAL

- .1 Provide construction facilities in order to execute work expeditiously.
- .2 Remove from site all such work after use.

1.3 SCAFFOLDING

- .1 Provide and maintain scaffolding, ramps, ladders, platforms, and temporary stairs as required for the successful completion of the Work.

1.4 HOISTING

- .1 Provide, operate and maintain hoists and cranes required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for use thereof.
- .2 Hoists and cranes shall be operated by qualified operator.

1.5 SITE STORAGE/LOADING

- .1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- .2 Do not load or permit to load any part of Work with a weight or force that will endanger the Work.

1.6 CONSTRUCTION PARKING

- .1 Parking will be permitted on site provided it does not disrupt performance of Work.
- .2 Provide and maintain adequate access to project site.

- .3 Build and maintain temporary roads where indicated or directed by Engineer and provide snow removal during period of Work.
- .4 If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractors' use of roads.

1.7 SECURITY

- .1 Provide and pay for responsible security personnel to guard site and contents of site after working hours and during holidays.
- .2 Provide adequate lighting to allow security personnel to guard site.

1.8 EQUIPMENT, TOOL AND MATERIALS STORAGE

- .1 Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weatherproof sheds on site in a manner to cause least interference with work activities.

1.9 SANITARY FACILITIES

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.
- .3 When permanent water and drain connections are completed, provide temporary water closets and urinals complete with temporary enclosures, inside building. Permanent facilities may be used on approval of Engineer.

END OF SECTION

PART 1 General

1.1 REFERENCES

- .1 Canadian General Standards Board (CGSB)
 - .1 CGSB 1.189M-[84], Primer, Alkyd, Wood, Exterior.
 - .2 CGSB 1.59-[97], Alkyd Exterior Gloss Enamel.
- .2 Canadian Standards Association (CSA International)
 - .1 CSA-O121-[M1978], Douglas Fir Plywood.

1.2 INSTALLATION AND REMOVAL

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Remove from site all such work after use.

1.3 HOARDING

- .1 Provide barriers around trees and plants designated to remain. Protect from damage by equipment and construction procedures.

1.4 GUARD RAILS AND BARRICADES

- .1 Provide secure, rigid guard rails and barricades around deep excavations, open shafts, open stair wells, open edges of floors and roofs.
- .2 Provide as required by governing authorities.

1.5 WEATHER ENCLOSURES

- .1 Provide weather tight closures to unfinished door and window openings, tops of shafts and other openings in floors and roofs.
- .2 Close off floor areas where walls are not finished; seal off other openings; enclose building interior work for temporary heat.
- .3 Design enclosures to withstand wind pressure and snow loading.

1.6 DUST TIGHT SCREENS

- .1 Provide dust tight screens partitions to localize dust generating activities, and for protection of workers, finished areas of Work and public.
- .2 Maintain and relocate protection until such work is complete.

1.7 ACCESS TO SITE

- .1 Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work.

1.8 PUBLIC TRAFFIC FLOW

- .1 Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform Work and protect the public.

1.9 FIRE ROUTES

- .1 Maintain access to property including overhead clearances for use by emergency response vehicles.

1.10 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY

- .1 Protect surrounding private and public property from damage during performance of Work.
- .2 Be responsible for damage incurred.

1.11 PROTECTION OF BUILDING FINISHES

- .1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.
- .2 Provide necessary screens, covers, and hoardings.
- .3 Confirm with Engineer locations and installation schedule [3] days prior to installation.
- .4 Be responsible for damage incurred due to lack of or improper protection.

PART 2 Products

2.1 NOT USED

- .1 Not Used.

PART 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 General

1.1 REFERENCE STANDARDS

- .1 If there is question as to whether any product or system is in conformance with applicable standards, Owner reserves right to have such products or systems tested to prove or disprove conformance.
- .2 Conform to latest date of issue of referenced standards in effect on date of submission of Tenders, except where specific date or issue is specifically noted.

1.2 QUALITY

- .1 Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .3 Should any dispute arise as to quality or fitness of products, decision rests strictly with Engineer based upon requirements of Contract Documents.
- .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

1.3 ACCEPTABLE PRODUCTS

- .1 Products listed as acceptable products in various sections are to be used as a guide and does not imply exclusion of unlisted manufacturers, models or materials.
- .2 Acceptable products mean that items named and specified by manufacturers reference meets the specification in all respects and is acceptable to the Engineer.
- .3 Equipment or materials proposed shall meet the same standards.
- .4 All products listed as **NO SUBSTITUTIONS** in various sections are to be supplied as specified.

1.4 AVAILABILITY

- .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable,

notify Engineer of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.

- .2 In event of failure to notify Engineer at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Engineer reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

1.5 STORAGE, HANDLING AND PROTECTION

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials and lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged products at own expense and to satisfaction of Engineer.
- .9 Touch-up damaged factory finished surfaces to Engineer's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.6 TRANSPORTATION

- .1 Pay costs of transportation of products required in performance of Work.

1.7 MANUFACTURER'S INSTRUCTIONS

- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Engineer in writing, of conflicts between specifications and manufacturer's instructions, so that Engineer may establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Engineer to require removal and re-installation at no increase in Contract Price or Contract Time.

1.8 QUALITY OF WORK

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Engineer if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Engineer reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Engineer, whose decision is final.

1.9 CO-ORDINATION

- .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement units.

1.10 CONCEALMENT

- .1 In finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.
- .2 Before installation, inform Engineer if there is interference. Install as directed by Engineer.

1.11 REMEDIAL WORK

- .1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.
- .2 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

1.12 LOCATION OF FIXTURES

- .1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.
- .2 Inform Engineer of conflicting installation. Install as directed.

1.13 FASTENINGS

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.

- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

1.14 FASTENINGS - EQUIPMENT

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

1.15 PROTECTION OF WORK IN PROGRESS

- .1 Prevent overloading of any part of building. Do not cut, drill or sleeve any load bearing structural member, unless specifically indicated without written approval of Engineer.

1.16 EXISTING UTILITIES

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and pedestrian and vehicular traffic.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

PART 2 Products

2.1 ACCEPTABLE PRODUCTS

- .1 Products listed as acceptable products in various sections are to be used as a guide and does not imply exclusion of unlisted manufacturers, models or materials.
- .2 Acceptable products means that items named and specified by manufacturers reference meets the specification in all aspects and is acceptable to the Engineer.
- .3 Equipment or materials proposed shall meet the same standards. The decision of the Engineer is final regarding the approval of products proposed.

2.2 NO SUBSTITUTIONS

- .1 All products listed “No Substitutions” in various sections are to be supplied as specified.

PART 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 General

1.1 SUBMITTALS

- .1 Submit written request in advance of cutting or alteration which affects:
 - .1 Structural integrity of any element of Project.
 - .2 Integrity of weather-exposed or moisture-resistant elements.
 - .3 Efficiency, maintenance, or safety of any operational element.
 - .4 Visual qualities of sight-exposed elements.
 - .5 Work of Owner or separate contractor.

- .2 Include in request:
 - .1 Identification of Project.
 - .2 Location and description of affected Work.
 - .3 Statement on necessity for cutting or alteration.
 - .4 Description of proposed Work, and products to be used.
 - .5 Alternatives to cutting and patching.
 - .6 Effect on Work of Owner or separate contractor.
 - .7 Written permission of affected separate contractor.
 - .8 Date and time work will be executed.

1.2 MATERIALS

- .1 Required for original installation.

- .2 Change in Materials: Submit request for substitution in accordance with Section 013300 - Submittal Procedures.

1.3 PREPARATION

- .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.

- .2 After uncovering, inspect conditions affecting performance of Work.

- .3 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.

- .4 Provide protection from elements for areas which may be exposed by uncovering work; maintain excavations free of water.

1.4 EXECUTION

- .1 Execute cutting, fitting, and patching including excavation and fill, to complete Work.

- .2 Fit several parts together, to integrate with other Work.
- .3 Uncover Work to install ill-timed Work.
- .4 Remove and replace defective and non-conforming Work.
- .5 Remove samples of installed Work for testing.
- .6 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.
- .7 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- .8 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.
- .9 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.
- .10 Restore work with new products in accordance with requirements of Contract Documents.
- .11 Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .12 At penetration of fire rated wall, ceiling, or floor construction, completely seal voids with firestopping material, full thickness of the construction element.
- .13 Refinish surfaces to match adjacent finishes: For continuous surfaces refinish to nearest intersection; for an assembly, refinish entire unit.
- .14 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

PART 2 Products

2.1 NOT USED

- .1 Not Used.

PART 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 General

1.1 PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, including that caused by Owner or other Contractors.
- .2 Remove waste materials from site at regularly scheduled times or dispose of as directed by Engineer. Do not burn waste materials on site.
- .3 Clear snow and ice from access to building, bank/pile snow in designated areas only.
- .4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5 Provide on-site containers for collection of waste materials and debris.
- .6 Provide and use clearly marked separate bins for recycling. Refer to Section 017419 – Construction Waste Management and Disposal.
- .7 Remove waste material and debris from site and deposit in waste container at end of each working day.
- .8 Dispose of waste materials and debris off site.
- .9 Clean interior areas prior to start of finish work, and maintain areas free of dust and other contaminants during finishing operations.
- .10 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .11 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .12 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .13 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

1.2 FINAL CLEANING

- .1 When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 Prior to final review, remove surplus products, tools, construction machinery and equipment.

- .4 Remove waste products and debris other than that caused by Owner or other Contractors.
- .5 Remove waste materials from site at regularly scheduled times or dispose of as directed by Engineer. Do not burn waste materials on site.
- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
- .8 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, walls, floors, doors and ceilings
- .9 Clean lighting reflectors, lenses, and other lighting surfaces.
- .10 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .11 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .12 Remove dirt and other disfiguration from exterior surfaces.
- .13 Clean and sweep roofs, gutters, areaways, and sunken wells.
- .14 Sweep and wash clean paved areas.
- .15 Clean equipment and fixtures to a sanitary condition; clean or replace filters of mechanical equipment.
- .16 Clean roofs, downspouts, and drainage systems.
- .17 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.
- .18 Remove snow and ice from access to building.

PART 2 Products

2.1 NOT USED

- .1 Not Used.

PART 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION

PART 1 General

1.1 DEFINITIONS

- .1 Materials Source Separation Program (MSSP): Consists of a series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.
- .2 Separate Condition: Refers to waste sorted into individual types.

1.2 DOCUMENTS

- .1 Provide containers to deposit reusable and/or recyclable materials.
- .2 Collect, handle, store on-site, and transport off-site, salvaged materials in separate condition. Transport to approved and authorized recycling facility.

1.3 DISPOSAL OF WASTES

- .1 Burying of rubbish and waste materials is prohibited.
- .2 Disposal of waste, volatile materials, mineral spirits, oil, paint thinner into waterways, storm, or sanitary sewers is prohibited.
- .3 Dispose of all construction waste material in accordance with Provincial regulations and local bylaws.

1.4 STORAGE, HANDLING AND PROTECTION

- .1 Store, materials to be reused, recycled and salvaged in locations as directed by Engineer.
- .2 Unless specified otherwise, materials for removal become Contractor's property.
- .3 Protect surface drainage, mechanical and electrical from damage and blockage.

1.5 SCHEDULING

- .1 Coordinate work with other activities at site to ensure timely and orderly progress of the work.

PART 2 Products

2.1 NOT USED

- .1 Not Used.

PART 3 Execution

3.1 CLEANING

- .1 Clean-up work area as work progresses.
- .2 Source separate materials to be reused/recycled into specified sort areas.
- .3 Remove tools and waste materials on completion of each day, and leave work area in clean and orderly condition.

END OF SECTION

PART 1 General

1.1 INSPECTION AND DECLARATION

- .1 Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Engineer in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
 - .2 Request Engineer's Inspection.
- .2 Engineer's Inspection: Engineer and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.
- .3 Completion: submit written certificate that following have been performed:
 - .1 Work has been completed and inspected for compliance with Contract Documents.
 - .2 Defects have been corrected and deficiencies have been completed.
 - .3 Equipment and systems have been tested, adjusted and balanced and are fully operational.
 - .4 Certificates required by Boiler Inspection Branch, Fire Commissioner, Utility companies, other Authorities having Jurisdiction have been submitted.
 - .5 Operation of systems have been demonstrated to Owner's personnel.
 - .6 Work is complete and ready for Final Inspection.
- .4 Final Inspection: when items noted above are completed, request final inspection of Work by Engineer, and Contractor. If Work is deemed incomplete by Engineer, complete outstanding items and request re-inspection.

PART 2 Products

2.1 NOT USED

- .1 Not Used.

PART 3 Execution

3.1 NOT USED

- .1 Not Used.

Transportable
Holding Cells Deployment
Deschambault Lake, SK

Closeout Procedures

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END OF SECTION

PART 1 General

1.1 QUALITY ASSURANCE

- .1 Provide testing organization services under provisions specified in Section 014500 - Quality Control.
- .2 Testing organization: current member in good standing of appropriate professional organization, certified to perform specified services.
- .3 Comply with applicable procedures and standards of the certification sponsoring association.
- .4 Perform services under direction of supervisor qualified under certification requirements of sponsoring association.

1.2 REFERENCES

- .1 Associated Air Balance Council (AABC): National Standards For Field Measurements and Instrumentation, Total Systems Balance, Air Distribution-Hydraulics Systems.

1.3 SUBMITTALS

- .1 Prior to start of Work, submit name of organization proposed to perform services. Designate who has managerial responsibilities for coordination of entire testing, adjusting and balancing.
- .2 Submit documentation to confirm organization compliance with quality assurance provision.
- .3 Submit 3 preliminary specimen copies of each of report forms proposed for use.
- .4 Fifteen days prior to Substantial Performance, submit 3 copies of final reports on applicable forms.
- .5 Submit reports of testing, adjusting, and balancing postponed due to seasonal, climatic, occupancy, or other reasons beyond Contractor's control, promptly after execution of those services.

1.4 PROCEDURES – GENERAL

- .1 Pre manufactured transportable units will have a Commissioning Report done at manufacturer shop prior deployment, Contractor will have access to all conducted Reports. Contractor is responsible to provide Commissioning testing after the deployment, to meet all required standards as per Commissioning Report carried out before deployment. Refer to Annex A for Commissioning Reports and Testing Specification prior Deployment.
- .2 Comply with procedural standards of certifying association under whose standard services will be performed.

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- .3 Notify Engineer 3 days prior to beginning of operations.
 - .4 Accurately record data for each step.
 - .5 Report to Engineer any deficiencies or defects noted during performance of services.

1.5 FINAL REPORTS

- .1 Organization having managerial responsibility shall make reports.
- .2 Ensure each form bears signature of recorder, and that of supervisor of reporting organization.
- .3 Identify each instrument used, and latest date of calibration of each.

1.6 CONTRACTOR RESPONSIBILITIES

- .1 Prepare each system for testing and balancing.
- .2 Cooperate with testing organization and provide access to equipment and systems.
- .3 Provide personnel and operate systems at designated times, and under conditions required for proper testing, adjusting, and balancing.
- .4 Notify testing organization [7] days prior to time project will be ready for testing, adjusting, and balancing.

1.7 PREPARATION

- .1 Provide instruments required for testing, adjusting, and balancing operations.
- .2 Make instruments available to Engineer to facilitate spot checks during testing.
- .3 Retain possession of instruments and remove at completion of services.
- .4 Verify systems installation is complete and in continuous operation.
- .5 Verify lighting is turned on when lighting is included in cooling load.
- .6 Verify equipment such as computers, laboratory and electronic equipment are in full operation.

1.8 EXECUTION

- .1 Test equipment, balance distribution systems, and adjust devices for HVAC and other systems.
- .2 Test hydronic systems, adjust and record liquid flow at each piece of equipment.

PART 2 Products

2.1 NOT USED

.1 Not Used.

PART 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

PART 1 General

1.1 REFERENCES

- .1 National Lumber Grades Authority (NLGA)
 - .1 Standard Grading Rules for Canadian Lumber [2000].
- .2 Truss Design and Procedures for Light Metal Connected Wood Trusses, Truss Plate Institute of Canada.

1.2 QUALITY ASSURANCE

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Plywood, particleboard, OSB and wood based composite panels in accordance with CSA standards.

1.3 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 017419 – Construction Waste Management and Disposal and the Waste Reduction Workplan, and the Waste Management plan to the maximum extent economically possible.
- .2 Separate wood waste in accordance with the Waste Management Plan and place in designated areas in the following categories for recycling: Solid wood/softwood/hardwood.
- .3 Do not burn scrap at the project site.

PART 2 Products

2.1 FRAMING AND STRUCTURAL MATERIALS

- .1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% (S-dry) or less in accordance with following standards:
 - .1 CAN/CSA-O141.
 - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Light-frame trusses in accordance with "Truss Design and Procedures for Light Metal Connected Wood Trusses", Truss Plate Institute of Canada.
- .3 Framing and board lumber: in accordance with NBC, except as follows:
 - .1 SPF species, NLGA Construction Light Framing grade.
- .4 Furring, blocking, nailing strips, grounds, rough bucks, [cants,] curbs, fascia backing and sleepers:

- .1 S2S is acceptable
- .2 Board sizes: "Standard" or better grade.
- .3 Dimension sizes: "Standard" light framing or better grade.
- .4 Post and timbers sizes: "Standard" or better grade.

2.2 MATERIALS

- .1 Plywood, OSB and wood based composite panels: to CAN/CSA-O325.0.
- .2 Douglas fir plywood (DFP): to CSA O121, standard construction.
- .3 Pressure Treated Lumber, Treated Plywood: Pressure Treated, Wolmanized or approved equivalent, in accordance with CAN/CSA-O80 to an average net retention of 8 kg/m³ lumber and 9.7 kg/m³ plywood.

2.3 ACCESSORIES

- .1 Exterior wall sheathing paper: to CAN/CGSB-51.32 single ply type as indicated.
- .2 Polyethylene film: to CAN/CGSB-51.34, Type 1, 0.15 mm thick.
- .3 Sealants: Section 079210 – Joint Sealing.
- .4 Subflooring adhesive: to CGSB-71.26, cartridge loaded.
- .5 General purpose adhesive: to CSA O112 Series.
- .6 Nails, spikes and staples: to CSA B111.
 - .1 Galvanized for exterior locations;
 - .2 Plain finish for interior locations;
 - .3 Size and type to suit application.
- .7 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
 - .1 Galvanized for exterior locations;
 - .2 Plain finish for interior locations;
 - .3 Size and type to suit application.
- .8 Proprietary fasteners: toggle bolts, expansion shields and lag bolts, screws and lead or inorganic fibre plugs, explosive actuated fastening devices, recommended for purpose by manufacturer.
- .9 Joist hangers: minimum 1 mm thick sheet steel, galvanized ZF001 coating designation.
- .10 Nailing discs: flat caps, minimum 25 mm diameter, minimum 0.4 mm thick, sheet metal, formed to prevent dishing. Bell or cup shapes not acceptable.
- .11 Roof sheathing H-Clips: formed "H" shape, thickness to suit panel material, type approved by Engineer.

PART 3 Execution

3.1 PREPARATION

- .1 Store wood products.

3.2 INSTALLATION

- .1 Comply with requirements of NBC 1995 Part 9 supplemented by following paragraphs.
- .2 Install members true to line, levels and elevations, square and plumb.
- .3 Construct continuous members from pieces of longest practical length.
- .4 Install spanning members with "crown-edge" up.
- .5 Select exposed framing for appearance. Install lumber and panel materials so that grade-marks and other defacing marks are concealed or are removed by sanding where materials are left exposed.
- .6 Install wall sheathing in accordance with manufacturer's printed instructions.
- .7 Install roof sheathing in accordance with requirements of NBC.
- .8 Install furring and blocking as required to space-out and support casework, cabinets, wall and ceiling finishes, facings, fascia, soffit, siding electrical equipment mounting boards, and other work as required.
- .9 Install furring to support siding applied vertically [where there is no blocking and] where sheathing is not suitable for direct nailing.
 - .1 Align and plumb faces of furring and blocking to tolerance of 1:600.
- .10 Install rough bucks, nailers and linings to rough openings as required to provide backing for frames and other work.
- .11 Install wood cants, fascia backing, nailers, curbs and other wood supports as required and secure using galvanized fasteners.
- .12 Install sleepers as indicated.
- .13 Use dust collectors and high quality respirator masks when cutting or sanding wood panels.

3.3 ERECTION

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .2 Countersink bolts where necessary to provide clearance for other work.
- .3 Use nailing disks for soft sheathing as recommended by sheathing manufacturer.

3.4 PRESSURE TREATED WOOD

- .1 All wood blocking in contact with cementitious materials, or located on exterior side of air barrier or roof membrane, shall be “pressure treated”.
- .2 Treat surfaces exposed by cutting, trimming, or boring with a liberal brush or dip application of preservative, compatible with pressure treatment, before installation.

3.5 SCHEDULES

- .1 Roof and wall sheathing: indicated on plans
- .2 Electrical equipment mounting boards:
 - .1 Plywood, CSP grade, square edge 19 mm thick.

END OF SECTION