SPECIFICATION

INTERIOR AND EXTERIOR RENOVATIONS

Rankin Inlet, Nunavut

Construction

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Part 1 General

1.1 WORK COVERED BY CONTRACT DOCUMENTS

.1 Work of this Contract comprises the interior and exterior renovations of two houses and minor exterior renovations of a facility building in Rankin Inlet, Nunavut. This work includes; labour, materials and shipping of materials, in accordance with the contract documents and as further described herein.

1.2 SCOPE OF WORK

.1 House – 5-15 Ayaruaq Street

- .1 Remove and replace existing exterior siding
- .2 Remove and replace exterior stairs (three sets)
- .3 Remove and replace all windows
- .4 Remove and replace all exterior doors
- .5 Remove interior flooring and replace as shown on drawings
- .6 Renovate interior kitchen cabinets
- .7 Remove and install window and door casings.
- .8 Install new window blinds
- .9 Install new millwork as shown
- .10 Remove and install new bathroom fixtures.
- .11 Remove all existing light fixtures and replace
- .12 Remove existing HRV and replace with new. Add new supply ductwork as shown.
- .13 Remove and replace exterior siding, soffit and fascia with new prefinished steel siding.
- .14 Install new 2” rigid insulation on exterior

.2 House – 9-15 Ayaruaq Street

- .1 Level existing house.
- .2 Remove and replace exterior stairs
- .3 Remove and replace all windows
- .4 Remove and replace all exterior doors
- .5 Remove interior flooring and replace as shown on drawings
- .6 Renovate interior kitchen cabinets
- .7 Remove and install window and door casings.
- .8 Install new window blinds
- .9 Install new millwork as shown
- .10 Remove and install new bathroom fixtures.
- .11 Remove all existing light fixtures and replace
- .12 Remove existing HRV and replace with new. Add new supply ductwork as shown.

.3 House 7-15 and 7-11 Ayaruaq Street

.1 Remove and replace side decks as shown.

1.3 SITE VERIFICATION

Upon award of the contract contractor is to schedule a site trip to site verify all sizes and dimensions. No additional fees will be considered for materials brought onto site of the wrong size.

1.4 WINDOW BLINDS

.1 Standard of Acceptance:

.1 Levelor Roller Blackout blinds, c/w cassette valence, clutch control system, color to be contemporary blackout white.

.2 Sunproject dual shade, c/w 1 sun shade and 1 blackout shade, color to be from manufacturers standard set.

1.5 WORK SEQUENCE

.1 Buildings will remain occupied during the renovation.

.2 Co-ordinate Progress Schedule with Departmental Representative, Consultant and Local Commander

.3 Maintain fire access/control at all times.

.4 The work on the facility building will be done in phases one phase being completed and certified prior to the second phase being started.

1.6 PROTECTION OF REMAINING FIXTURES AND CABINETRY

.1 The contractor is to document photo the condition of the existing cabinetry and fixtures at takeover of the area of work and supply a digital copy to the consultant.

.2 The contractor is responsible for the protection of all damage caused during the construction process and it will be the responsibility of the contractor to make good to the acceptance of the Project Manager and Consultant.

1.7 CONTRACTOR USE OF PREMISES

.1 Limit use of premises for storage, and for access to allow:

.1 Owner Occupancy

.2 Work by other Contractors

.3 Public Usage

.2 Keep clear products or equipment which may **interfere** with operation of Building or other contractors.

.3 Assume responsibility for the protection and safekeeping of products under this contract.

.4 Co-ordinate use of premises under direction of Consultant and Departmental Representative.

.5 Obtain and pay for use of additional storage or work areas needed for operations under this Contract as required.

.6 Ensure safe practices and work area to prevent injury or damage to portions of existing work which remain.

.7 Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by Consultant.

1.8 OWNER OCCUPANCY

.1 Owner may partially occupy houses 9-15 premises during entire construction period for execution of normal operations

.2 House 5-15 will be un-occupied during construction.

.3 Co-Operate with Owner in scheduling operations to minimize conflict and to facilitate owner usage.

1.9 EXISTING SERVICES

.1 Notify Consultant and utility companies of intended interruption of services and obtain required permission. Pay fees and obtain certificates and permits required.

.2 Where Work involves breaking into or connecting to existing services, give 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 and vehicular traffic (if required).

.4 Establish location and extent of service lines in area of work before starting Work. Notify Consultant of findings.

.5 Submit schedule to and obtain approval from Consultant and building operations 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 when directed by Consultant or as required to maintain critical building and tenant systems.

.7 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.

.8 Where unknown services are encountered, immediately advise Consultant and confirm findings in writing.

.9 Protect, relocate or maintain existing active services. When inactive services are encountered, inform consultant and owner prior to capping off in manner approved by authorities having jurisdiction.

.10 Record locations on as-built drawings of maintained, re-routed and abandoned service lines.

.11 Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures

1.10 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.

.11 Other documents as specified.

1.11 CODES AND STANDARDS

.1 Materials shall be new and work shall conform to the minimum applicable standards of the Canadian General Standards board, the Canadian Standards Association, The National Building Code of Canada 2010, and all applicable Territorial and Municipal codes, and all standards listed below. In the case of conflict or discrepancy the most stringent requirement shall apply.

.2 Meet or exceed requirements of contract documents, specified standards, codes and referenced documents.

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, independent of finished surfaces and in accordance with relevant municipal, territorial 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 Departmental Representative 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 Closures: protect work temporarily until permanent enclosures are completed.

1.3 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING

.1 Execute work with least possible interference or disturbance to building operations occupants, public and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.

1.4 EXISTING SERVICES

.1 Notify, utility companies, Consultant, of intended interruption of services and obtain required permission.

.2 Where Work involves breaking into or connecting to existing services, give Departmental Representative 48 hours of notice for necessary interruption of mechanical or electrical service throughout course of work. Keep duration of interruptions minimum. Carry out interruptions after normal working hours of occupants, preferably on weekends.

1.5 SPECIAL REQUIREMENTS

.1 Submit schedule in accordance with Section 01 32 16.07 - Construction Progress Schedules - Bar (GANTT) Chart.

.2 Ensure that Contractor personnel employed on site become familiar with and obey regulations including safety, fire, traffic and security regulations.

.3 Keep within limits of work and avenues of ingress and egress.

1.6 SECURITY CLEARANCES

.1 Personnel employed on this project will be subject to security check. Obtain clearance, as instructed, for each individual who will be required to enter premises.

1.7 BUILDING SMOKING ENVIRONMENT

.1 Comply with smoking restrictions. Smoking is not allowed on the property.

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 Project Supplementary Conditions

1.2 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 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 Where costs under a cash allowance exceed amount of allowance, Contractor will be compensated for excess incurred and substantiated plus allowance for overhead and profit as set out in Contract Documents.

.6 Include progress payments on accounts of work authorized under cash allowances in Consultant's monthly certificate for payment.

.7 Amount of each allowance, for Work specified in respective specification Sections is as follows:

.1 Include an allowance of:

.1 5-15 Ayaruaq Street - $3,500.00 for purchase of light fixtures.

.2 5-15 Ayaruaq Street - $4,000.00 for roof repairs.

.3 5-15 Ayaruaq Street - $2,000.00 for radiator repairs

.4 9-15 Ayaruaq Street - $3,500.00 for purchase of light fixtures.

1.3 CONTINGENCY ALLOWANCE

.1 Include in Contract Price contingency allowance as follows

.1 5-15 Ayaruaq Street – Amount of $15,000.00 for unforeseen conditions

.2 9-15 Ayaruaq Street – Amount of $15,000.00 for unforeseen conditions.

.2 Do not include in Contract Price, additional contingency allowances for products, installation, overhead or profit.

1.4

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 ON-SITE DOCUMENTS

.1 Contract Documents

.2 Specifications

.3 Addenda

.4 Reviewed shop drawings

.5 Change orders

.6 Other modifications in contract

.7 Field test reports

.8 Copy of approved Work Schedule

.9 Manufacturers installation and application instructions

.10 Labour conditions and wage schedules

.11 Project Record Documents (for as-built purposes)

.12 Codes and Standards listed in 01 11 00

1.2 ADMINISTRATIVE

.1 Attend project meetings throughout the progress of the work at the call of Consultant.

.2 Provide physical space and make arrangements for meetings.

.3 Consultant will record the meeting minutes. Include significant proceedings and decisions. Identify actions by parties.

.4 Consultant will reproduce and distribute copies of minutes within three days after meetings and transmit to meeting participants, affected parties not in attendance, Project Manager, and Contractor.

.5 Representative of Contractor, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

1.3 PRECONSTRUCTION MEETING

.1 After award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities. Meeting will be held at the location and time designated by the departmental representative

.2 Departmental Representative, Engineer and Consultant, Contractor, major Subcontractors, will be in attendance. Others may be in attendance at the discretion of the departmental representative or the Contractor. Representatives of the local Building Manager may also be in attendance.

.3 Establish time and location of meeting and notify parties concerned minimum 2 days before meeting.

.4 Agenda to include:

.1 Appointment of official representative of participants in the Work.

.2 Schedule of Work: in accordance with Section 01 32 16.07 - Construction Progress Schedules - Bar (GANTT) Chart.

.3 Schedule of submission of shop drawings, samples, colour chips. Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.

.4 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences in accordance with Section 01 52 00 - Construction Facilities.

.5 Delivery schedule of specified equipment.

.6 Site security in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.

.7 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.

.8 Owner provided products.

.9 Record drawings in accordance with Section 01 33 00 - Submittal Procedures

.10 Maintenance manuals in accordance with Section 01 78 00 - Closeout Submittals

.11 Take-over procedures, acceptance, warranties in accordance with Section 01 78 00 - Closeout Submittals.

.12 Monthly progress claims, administrative procedures, photographs, hold backs.

.13 Appointment of inspection and testing agencies or firms.

.14 Insurances, transcript of policies.

.5 Comply with Departmental Representative’s allocation of mobilization areas of site; for field offices and sheds, for access, traffic and parking facilities.

.6 During construction coordinate use of site and facilities through Departmental Representatives procedures for intra-project communications: submittals, reports and records, schedules, coordination of drawings, recommendations, and resolution of ambiguities and conflicts.

.7 Comply with instruction of consultant for use of Temporary utilities and construction facilities.

.8 Coordinate field engineering and layout work with consultant.

1.4 PROGRESS MEETINGS

.1 During course of Work at the discretion of the Consultant and Departmental Representative.

.2 Representatives of the Contractor, major Subcontractors involved in the work and other as required and decided upon by the Departmental Representative or Contractor are to be in attendance. Contractor to notify all sub-contractors.

.3 Consultant will notify contractor min 5 days prior to meetings

.4 Consultant to record minutes of meetings and circulate to attending parties and affected parties not in attendance within 5 days after meeting.

.5 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 affect on construction schedule and on completion date.
.12 Other business.

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 Activity: element of Work performed during course of Project. Activity normally has expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.

.2 Bar Chart (GANTT Chart): graphic display of schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized project management system.

.3 Baseline: original approved plan (for project, work package, or activity), plus or minus approved scope changes.

.4 Construction Work Week: Monday to Friday, inclusive, will provide five day work week and define schedule calendar working days as part of Bar (GANTT) Chart submission.

.5 Duration: number of work periods (not including holidays or other nonworking periods) required to complete activity or other project element. Usually expressed as workdays or workweeks.

.6 Master Plan: summary-level schedule that identifies major activities and key milestones.

.7 Milestone: significant event in project, usually completion of major deliverable.

.8 Project Schedule: planned dates for performing activities and the planned dates for meeting milestones. Dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.

.9 Project Planning, Monitoring and Control System: overall system operated by RCMP to enable monitoring of project work in relation to established milestones.

1.2 REQUIREMENTS

.1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.

.2 Construction Progress Schedule to be Completed in Microsoft Project or Similar Software.

.3 Plan to complete Work in accordance with prescribed milestones and time frame.

.4 Limit activity durations to maximum of approximately 10 working days, to allow for progress reporting.

.5 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.

1.3 SUBMITTALS

.1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures .

.2 Submit to Consultant within 5 working days of Award of Contract as Master Plan for planning, monitoring and reporting of project progress.

.3 Submit Project Schedule to Consultant within 5 working days of receipt of acceptance of Master Plan.

1.4 PROJECT MILESTONES

1.5 MASTER PLAN

.1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart (GANTT).

.2 Consultant will review and return revised schedules within 5 working days.

.3 Revise impractical schedule and resubmit within 5 working days.

.4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

1.6 PROJECT SCHEDULE

.1 Develop detailed Project Schedule derived from Master Plan.

1.7 PROJECT SCHEDULE REPORTING

.1 Update Project Schedule on weekly basis reflecting activity changes and completions, as well as activities in progress.

.2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

1.8 PROJECT MEETINGS

.1 Discuss Project Schedule at regular site meetings, identify activities that are behind schedule and provide measures to regain slippage. Activities considered behind schedule are those with projected start or completion dates later than current approved dates shown on baseline schedule.

.2 Weather related delays with their remedial measures will be discussed and negotiated.

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 Consultant submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.

.2 Do not proceed with Work affected by submittal until review is complete.

.3 Present shop drawings, product data, samples and mock-ups in imperial units.

.4 Where items or information is not produced in imperial units converted values are acceptable.

.5 Review submittals prior to submission to Consultant. 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 considered rejected.

.6 Notify Consultant, 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 co-ordinated.

.8 Contractor's responsibility for errors and omissions in submission is not relieved by Engineer's, Consultant's review of submittals.

.9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Consultant 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 Submit shop drawings bearing stamp and signature of qualified professional engineer registered or licensed in the Territory of Nunavut, Canada.

.3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.

.4 Allow 14 days for Consultant's review of each submission.

.5 Adjustments made on shop drawings by Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Consultant prior to proceeding with Work.

.6 Make changes in shop drawings as Consultant may require, consistent with Contract Documents. When resubmitting, notify Consultant in writing of revisions other than those requested.

.7 Accompany submissions with transmittal letter, containing:

- .1 Date.
- .2 Project title and number.
- .3 Contractor's name and address.
- .4 Identification and quantity of each shop drawing, product data and sample.
- .5 Other pertinent data.

.8 Submissions include:

- .1 Date and revision dates.
- .2 Project title and number.
- .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.

.9 After Property Manager's, Engineer's, Consultant's review, distribute copies.

.10 Submit electronic copy of shop drawings for each requirement requested in specification Sections and as Consultant and Engineer may reasonably request.

.11 Submit electronic copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Consultant where shop drawings will not be prepared due to standardized manufacture of product.

.12 Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Consultant and Engineer.

.1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.

.2 Testing must have been within 3 years of date of contract award for project.

.13 Submit electronic copies of certificates for requirements requested in specification Sections and as requested by Consultant and Engineer

.1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.

.2 Certificates must be dated after award of project contract complete with project name.

.14 Submit electronic or 6 copies of manufacturers instructions for requirements requested in specification Sections and as requested by Consultant and Engineer.

.1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.

.15 Submit 6 copies of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Consultant and Engineer.

.1 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.

.16 Submit 6 copies of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Consultant and Engineer

.17 Delete information not applicable to project.

.18 Supplement standard information to provide details applicable to project.

.19 If upon review by Consultant and Engineer, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

.20 The review of shop drawings by and Consultant is for sole purpose of ascertaining conformance with general concept.

.1 This review shall not mean that Consultant approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or

omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.

.2 Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of sub-trades.

1.3 SAMPLES

.1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.

.2 Deliver samples prepaid to Consultants business address.

.3 Notify Consultant 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 Consultant are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Consultant prior to proceeding with Work.

.6 Make changes in samples which Consultant 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 NOT USED

.1 Not Used.

Part 2 Execution

2.1 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 Northwest Territories

.1 The Workers Compensation Act latest edition.

1.2 SUBMITTALS

.1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures .

.2 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:

.1 Results of site specific safety hazard assessment.

.2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan .

.3 Submit copies of Contractor's authorized representative's work site health and safety inspection reports to Consultant or authority having jurisdiction, as required.

.4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.

.5 Submit copies of incident and accident reports.

1.3 SAFETY ASSESSMENT

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

1.4 MEETINGS

.1 Schedule and administer Health and Safety meeting with Consultant prior to commencement of Work.

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 Consultant 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 The Workers Compensation Act, Workplace Safety Regulation, Northwest Territories and Nunavut WSCC - Workers Safety & Compensation Commission.

.2 Comply with Canada Labour Code, Canada Occupational Safety and Health Regulations.

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 Province having jurisdiction and advise RCMP verbally and in writing.

1.10 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 Consultant.

1.11 CORRECTION OF NON-COMPLIANCE

.1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Consultant.

.2 Provide Consultant with written report of action taken to correct non-compliance of health and safety issues identified.

.3 Consultant may stop Work if non-compliance of health and safety regulations is not corrected.

1.12 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 REFERENCES AND CODES

.1 Perform Work in accordance with National Building Code of Canada (NBC) including 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 Meet or exceed requirements of:

.1 Contract documents.

.2 Specified standards, codes and referenced documents.

1.2 HAZARDOUS MATERIAL DISCOVERY

.1 Asbestos: demolition of spray or trowel-applied asbestos is hazardous to health. Stop work immediately when material resembling spray or trowel-applied asbestos is encountered during demolition work. Notify consultant and Project Manager.

.2 PCB: Polychlorinated Biphenyl: stop work immediately when material resembling Polychlorinated Biphenyl is encountered during demolition work. Notify Consultant and Project Manager.

.3 Mould: stop work immediately when material resembling mould is encountered during demolition work. Notify Consultant and Project Manager.

1.3 BUILDING SMOKING ENVIRONMENT

.1 No smoking permitted.

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 Consultant 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 Consultant, 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 Consultant will order 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.

1.2 INDEPENDENT INSPECTION AGENCIES

.1 Independent Inspection/Testing Agencies may be engaged by consultant for purpose of inspecting and/or testing portions of Work.

.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 Project Manager or Consultant at no cost to Property Manager or Consultant. 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 Consultant 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 orderly sequence to not cause delays 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 Consultant 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 Consultant it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, project manager will deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which will be determined by Consultant.

1.6 REPORTS

.1 Submit electronic copies of inspection and test reports to Consultant.

.2 Provide copies to subcontractor of work being inspected or tested.

1.7 MOCK-UPS

.1 Prepare mock-ups for Work specifically requested in specifications. Include for Work of Sections required to provide mock-ups.

.2 Construct in locations acceptable to Consultant.

.3 Prepare mock-ups for Consultant's review with reasonable promptness and in orderly sequence, to not cause delays in Work.

.4 Failure to prepare mock-ups in ample time is not considered sufficient reason for extension of Contract Time and no claim for extension by reason of such default will be allowed.

.5 Specification section identifies whether mock-up may remain as part of Work or if it is to be removed and when.

1.8 MILL TESTS

.1 Submit mill test certificates as requested.

1.9 EQUIPMENT AND SYSTEMS

.1 Submit adjustment and balancing reports for mechanical, electrical and building equipment 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 SUBMITTALS

.1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.2 INSTALLATION AND REMOVAL

.1 Provide temporary utilities controls in order to execute work expeditiously.

.2 Remove from site all such work after use.

1.3 WATER SUPPLY

.1 Water is available for use by the contractor provided by the Building Owner

1.4 TEMPORARY HEATING AND VENTILATION

.1 Provide temporary heating as 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 21 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, to be used when available. Be responsible for damage to heating system if use is permitted.

.7 On completion of Work for which permanent heating system is used, replace filters, clean furnaces and power vacuum all ductwork inform Consultant of completion.

.8 Ensure Date of Substantial Performance and Warranties for heating system do not commence until entire system is in as near original condition as possible and is certified by Consultant.

.9 Maintain strict supervision of operation of temporary heating and ventilating equipment to:

.1 Conform with 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.

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

1.5 TEMPORARY POWER AND LIGHT

.1 Power is available for use by the contractor provided by the Building Owner.

.2 Electrical power and lighting systems installed under this Contract may be used for construction requirements only with prior approval of consultant 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 Contractor to furnish own Temporary phone, Fax and e-mail.

1.7 FIRE PROTECTION

.1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.

.2 Burning rubbish and construction waste materials is not permitted on site.

END OF SECTION

Part 1 General

1.1 REFERENCES

.1 Canadian Standards Association (CSA International)

.1 CSA-A23.1/A23.2-04, Concrete Materials and Methods of Concrete Construction/Methods of Test and Standard Practices for Concrete.

.2 CSA-0121-M1978(R2003), Douglas Fir Plywood.

.3 CAN/CSA-S269.2-M1987(R2003), Access Scaffolding for Construction Purposes.

.4 CAN/CSA-Z321-96(R2001), Signs and Symbols for the Occupational Environment.

.2 Public Works Government Services Canada (PWGSC) Standard Acquisition Clauses and Conditions (SACC)-ID: R0202D, Title: General Conditions 'C', In Effect as of: May 14, 2004.

1.2 SUBMITTALS

.1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.3 INSTALLATION AND REMOVAL

.1 Prepare site plan indicating proposed location and dimensions of area to be fenced and used by contractor, number of trailers used, avenues of ingress/egress to fenced are and details of fence installation

.2 Indicate use of supplemental or other staging area.

.3 Provide construction facilities in order to execute work expeditiously.

.4 Remove from site all such work after use.

1.4 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 weight or force that will endanger Work.

1.5 CONSTRUCTION PARKING

.1 Parking will be permitted on site provided it does not disrupt performance of Work or impede the operation of the detachment.

.2 Adequate parking must be maintained for public and building occupant access. This area is already defined and is not to be used for contractor parking.

.3 Provide and maintain adequate access to project site.

1.6 EQUIPMENT, TOOL AND MATERIALS STORAGE

.1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.

.2 Locate materials Required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.

1.7 SANITARY FACILITIES

.1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.

.2 Post notices and take precautions as required by local health authorities. Keep area and premises in sanitary condition.

1.8 CLEAN-UP

.1 Remove construction debris, waste materials, packaging material from work site daily.

.2 Clean dirt or mud tracked onto paved or surfaced roadways.

.3 Remove materials resulting from demolition as soon as possible from site.

.4 Stack stored new or salvaged material not in construction facilities.

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 1.59-97, Alkyd Exterior Gloss Enamel.

.2 CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood.

.2 Canadian Standards Association (CSA International)

.1 CSA-O121-M1978(R2003), Douglas Fir Plywood.

.3 Public Works Government Services Canada (PWGSC) Standard Acquisition Clauses and Conditions (SACC)-ID: R0202D, Title: General Conditions 'C', In Effect as Of: May 14, 2004.

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 DUST TIGHT SCREENS

.1 Provide dust tight screens or insulated 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.

1.4 ACCESS TO SITE

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

1.5 FIRE ROUTES

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

1.6 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 property manager and detachment commander 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 REFERENCES

.1 Within text of each specifications section, reference may be made to reference standards.

.2 Conform to these reference standards, in whole or in part as specifically requested in specifications.

.3 If there is question as to whether products or systems are in conformance with applicable standards, Project Manager and/or Consultant reserves right to have such products or systems tested to prove or disprove conformance.

.4 Cost for such testing will be born by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.

1.2 QUALITY

.1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.

.2 Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials and in otherwise utilizing recycled and recovered materials in execution of work.

.3 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.

.4 Should disputes arise as to quality or fitness of products, decision rests strictly with Project Manager based upon requirements of Contract Documents.

.5 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.

.6 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 AVAILABILITY

.1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for items. If delays in supply of products are foreseeable, notify Consultant 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 Consultant at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Consultant reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

1.4 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, lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.

.7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.

.8 Remove and replace damaged products at own expense and to satisfaction of Consultant.

.9 Touch-up damaged factory finished surfaces to Consultants satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.5 TRANSPORTATION

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

1.6 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 Consultant in writing, of conflicts between specifications and manufacturer's instructions, so that Project Manager will establish course of action.

.3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Consultant to require removal and re-installation at no increase in Contract Price or Contract Time.

1.7 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 Consultant if required Work is such as to make it impractical to produce required results.

.2 Do not employ anyone unskilled in their required duties. Consultant reserves the 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 the Consultant, whose decision is final.

1.8 CO-ORDINATION

.1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.

.2 Be responsible for coordination and placement of openings, sleeves and accessories.

1.9 CONCEALMENT

.1 In finished areas conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise.

.2 Before installation inform Consultant if there is interference. Install as directed by Consultant.

1.10 REMEDIAL WORK

.1 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Co-ordinate 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.

1.11 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.

1.12 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.

1.13 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.

1.14 PROTECTION OF WORK IN PROGRESS

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

1.15 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/or building occupants.

.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 NOT USED

.1 Not Used.

Part 3 Execution

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 General

1.1 SUBMITTALS

.1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit written request in advance of cutting or alteration which affects:

- .1 Structural integrity of elements of project.
- .2 Integrity of weather-exposed or moisture-resistant elements.
- .3 Efficiency, maintenance, or safety of operational elements. Note: Fire panel will alarm when hot cutting is done. Owner and building tenants requires notice when shutting down fire alarm system to do work. When alarm is off, contractor will provide fire watch.
- .4 Visual qualities of sight-exposed elements.
- .5 Work of Owner or separate contractor.

.3 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 01 33 00 - 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 Beginning of cutting or patching means acceptance of existing conditions.

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

.5 Provide protection from elements for areas which are to 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 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.

.6 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.

.7 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.

.8 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.

.9 Restore work with new products in accordance with requirements of Contract Documents.

.10 Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.

.11 At penetration of fire rated wall, ceiling or floor construction, completely seal voids with firestopping material in accordance with Section 07 8400 – Firestopping, full thickness of the construction element

.12 Refinish surfaces to match adjacent finishes: Refinish continuous surfaces to nearest intersection. Refinish assemblies by refinishing entire unit.

.13 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

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 daily regularly scheduled times or dispose of as directed by Consultant. Do not burn waste materials on site, unless approved by Consultant.

.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 Dispose of waste materials and debris off site.

.6 Clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.

.7 Store volatile waste in covered metal containers, and remove from premises at end of each working day.

.8 Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.

.9 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.

.10 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 including that caused by Owner or other Contractors.

.5 Remove waste materials from site at regularly scheduled times or dispose of as directed by Consultant. Do not burn waste materials on site, unless approved by Consultant.

.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, and floors.

.9 Clean lighting reflectors, lenses, and other lighting surfaces.

.10 Vacuum clean and dust building interiors, behind grilles, louvres and screens.

.11 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.

.12 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.

.13 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.

.14 Remove dirt and other disfiguration from exterior surfaces.

.15 Clean and sweep roofs, gutters, areaways, and sunken wells.

.16 Sweep and wash clean paved areas.

.17 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.

.18 Clean roofs, downspouts, and drainage systems.

.19 Remove debris and surplus materials from crawl areas and other accessible concealed spaces.

1.3 WASTE MANAGEMENT AND DISPOSAL

.1 Dispose of waste and separate waste materials for recycling as per requirements of local authorities.

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 AND DECLARATION

.1 Contractor's Inspection: Contractor and Subcontractors: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.

.1 Notify Consultant in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.

.2 Request Inspection.

.2 Consultant and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor to 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 Fire Commissioner, Utility companies HRDC Labour Programs-Fire Protection, Engineering Services and Local Authorities 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 Consultant and Contractor. If Work is deemed incomplete by Consultant, complete outstanding items and request reinspection.

1.2 CLEANING

.1 In accordance with Section 01 74 11 – Cleaning.

.2 Remove waste and surplus materials, rubbish and construction facilities from the site in accordance with local authorities.

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 SUBMITTALS

.1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.

.2 Prepare instructions and data using personnel experienced in maintenance and operation of described products.

.3 Copy will be returned after final inspection, with Consultant comments.

.4 Revise content of documents as required prior to final submittal.

.5 Two weeks prior to Substantial Performance of the Work, submit to the Consultant, four final copies of operating and maintenance manuals in English.

.6 Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.

.7 Furnish evidence, if requested, for type, source and quality of products provided.

.8 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.

.9 Pay costs of transportation.

.10 Supply one electronic and 5 copies of equipment manuals for all new items installed under this project

1.2 FORMAT

.1 Organize data as instructional manual.

.2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.

.3 When multiple binders are used correlate data into related consistent groupings. Identify contents of each binder on spine.

.4 Cover: identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.

.5 Arrange content by systems, under Section numbers and sequence of Table of Contents.

.6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.

.7 Text: manufacturer's printed data, or typewritten data.

.8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.

.9 Provide scaled CAD files in dwg format on CD.

1.3 CONTENTS - EACH VOLUME

.1 Table of Contents: provide title of project;

.1 Date of submission; names.

.2 Addresses, and telephone numbers of Consultant and Contractor with name of responsible parties.

.3 Schedule of products and systems, indexed to content of volume.

.2 For each product or system:

.1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.

.3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.

.4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.

.5 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.

.6 Training: refer to Section 01 79 00 - Demonstration and Training.

1.4 AS-BUILTS AND SAMPLES

.1 Maintain, at site for Consultant one record copy of:

.1 Contract Drawings.

.2 Specifications.

.3 Addenda.

.4 Change Orders and other modifications to Contract.

.5 Reviewed shop drawings, product data, and samples.

.6 Field test records.

.7 Inspection certificates.

.8 Manufacturer's certificates.

.2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.

.3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.

.4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.

.5 All copies of the documents must be turned over to consultant, **NO** copies may be maintained by the General Contractor or Trades.

1.5 EQUIPMENT AND SYSTEMS

.1 Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.

.2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.

.3 Include installed colour coded wiring diagrams.

.4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

.5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

.6 Provide servicing and lubrication schedule, and list of lubricants required.

.7 Include manufacturer's printed operation and maintenance instructions.

.8 Include sequence of operation by controls manufacturer.

.9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

.10 Provide installed control diagrams by controls manufacturer.

.11 Provide Contractor's co-ordination drawings, with installed colour coded piping diagrams.

.12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

.13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

.14 Include test and balancing reports as specified in Section 01 45 00 - Quality Control.

.15 Additional requirements: as specified in individual specification sections.

1.6 MATERIALS AND FINISHES

.1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.

.2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

.3 Moisture-Protection and Weather-Exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

.4 Additional Requirements: as specified in individual specifications sections.

1.7 SPARE PARTS

.1 Provide spare parts, in quantities specified in individual specification sections.

.2 Provide items of same manufacture and quality as items in Work.

.3 Deliver to site; place and store.

.4 Receive and catalogue items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.

.5 Obtain receipt for delivered products and submit prior to final payment.

1.8 SPECIAL TOOLS

.1 Provide special tools, in quantities specified in individual specification sections.

.2 Provide items with tags identifying their associated faction and equipment.

.3 Deliver to site; place and store

.4 Receive and catalogue items. Submit inventory listing to Consultant. Include approved listing in Maintenance Manual

1.9 MAINTENANCE MATERIALS

.1 Provide maintenance and extra materials, in quantities specified in individual specification sections.

.2 Provide items of same manufacture and quality as items in Work.

.3 Deliver to site; place and store.

.4 Receive and catalogue items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.

.5 Obtain receipt for delivered products and submit prior to final payment.

1.10 SPECIAL TOOLS

.1 Provide special tools, in quantities specified in individual specification section.

.2 Provide items with tags identifying their associated function and equipment.

.3 Deliver to site; place and store.

.4 Receive and catalogue items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.

1.11 STORAGE, HANDLING AND PROTECTION

.1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.

.2 Store in original and undamaged condition with manufacturer's seal and labels intact.

.3 Store components subject to damage from weather in weatherproof enclosures.

.4 Store paints and freezable materials in a heated and ventilated room.

.5 Remove and replace damaged products at own expense and to satisfaction of Consultant.

1.12 WARRANTIES AND BONDS

.1 Develop warranty management plan to contain information relevant to Warranties.

.2 Submit warranty management plan, 30 days before planned pre-warranty conference, to Property Manager and Consultant for approval.

.3 Warranty management plan to include required actions and documents to assure that Property Manager receives warranties to which it is entitled.

.4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.

.5 Submit, warranty information made available during construction phase, to Property Manager for approval prior to each monthly pay estimate.

.6 Assemble approved information in binder and submit upon acceptance of work. Organize binder as follows:

.1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.

.2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

.3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.

.4 Verify that documents are in proper form, contain full information, and are notarized.

.5 Co-execute submittals when required.

.6 Retain warranties and bonds until time specified for submittal.

.7 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.

.8 Include information contained in warranty management plan as follows:

.1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, subcontractors, manufacturers or suppliers involved.

.2 Listing and status of delivery of Certificates of Warranty for extended warranty items, to include roofs, HVAC balancing, pumps.

.3 Provide list for each warranted equipment, item, feature of construction or system indicating:

.1 Name of item.

.2 Model and serial numbers.

.3 Location where installed.

.4 Name and phone numbers of manufacturers or suppliers.

.5 Names, addresses and telephone numbers of sources of spare parts.

.6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.

.7 Cross-reference to warranty certificates as applicable.

.8 Starting point and duration of warranty period.

.9 Summary of maintenance procedures required to continue warranty in force.

.10 Cross-Reference to specific pertinent Operation and Maintenance manuals.

.11 Organization, names and phone numbers of persons to call for warranty service.

.12 Typical response time and repair time expected for various warranted equipment.

.4 Contractor's plans for attendance at 10 month post-construction warranty inspections.

.5 Procedure and status of tagging of equipment covered by extended warranties.

.6 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.

.9 Respond in a timely manner to oral or written notification of required construction warranty repair work.

.10 Written verification will follow oral instructions. Failure to respond will be cause for the property manager to proceed with action against Contractor.

1.13 PRE-WARRANTY CONFERENCE

.1 Meet with Consultant, to develop understanding of requirements of this section. Schedule meeting prior to contract completion, and at time designated by Consultant.

.2 Consultant will establish communication procedures for:

.1 Notification of construction warranty defects.

.2 Determine priorities for type of defect.

.3 Determine reasonable time for response.

.3 Provide name, telephone number and address of licensed and bonded company that is authorized to initiate and pursue construction warranty work action.

.4 Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action.

1.14 WARRANTY TAGS

.1 Tag, at time of installation, each warranted item. Provide durable, oil and water resistant tag approved by Property Manager or Consultant.

.2 Attach tags with copper wire and spray with waterproof silicone coating.

.3 Leave date of acceptance until project is accepted for occupancy.

.4 Indicate following information on tag:

.1 Type of product/material.
.2 Model number.
.3 Serial number.
.4 Contract number.
.5 Warranty period.
.6 Inspector's signature.
.7 Construction Contractor.

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 SECTION INCLUDES

.1 Equipment and systems.

.2 Materials and finishes.

.3 Spare parts.

.4 Maintenance manuals.

.5 Special tools.

.6 Storage, handling and protection.

1.2 RELATED SECTIONS

.1 Section 017800 - Closeout Submittals.

.2 Section 014500 - Quality Control.

1.3 EQUIPMENT AND SYSTEMS

.1 Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.

.2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.

.3 Include installed colour coded wiring diagrams.

.4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

.5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.

.6 Provide servicing and lubrication schedule, and list of lubricants required.

.7 Include manufacturer's printed operation and maintenance instructions.

.8 Include sequence of operation by controls manufacturer.

.9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.

.10 Provide installed control diagrams by controls manufacturer.

.11 Provide Contractor's coordination drawings, with installed colour coded piping diagrams.

.12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.

.13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

.14 Include test and balancing reports.

.15 Additional requirements: As specified in individual specification sections.

1.4 MATERIALS AND FINISHES

.1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.

.2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

.3 Moisture-protection and Weather-exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.

.4 Building Envelope: include copies of drawings of building envelope components, illustrating the interface with similar or dissimilar items to provide an effective air, vapour and thermal barrier between indoor and outdoor environments. Include an outline of requirements for regular inspections and for regular maintenance to ensure that on-going performance of the building envelope will meet the initial building envelope criteria.

.5 Additional Requirements: as specified in individual specifications sections.

1.5 SPARE PARTS

.1 Provide spare parts, in quantities specified in individual specification sections.

.2 Provide items of same manufacture and quality as items in Work.

.3 Deliver to site; place and store.

.4 Receive and catalogue all items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.

.5 Obtain receipt for delivered products and submit prior to final payment.

1.6 MAINTENANCE MATERIALS

.1 Provide maintenance and extra materials, in quantities specified in individual specification sections.

.2 Provide items of same manufacture and quality as items in Work.

.3 Deliver to site; place and store.

.4 Receive and catalogue all items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.

.5 Obtain receipt for delivered products and submit prior to final payment.

1.7 SPECIAL TOOLS

.1 Provide special tools, in quantities specified in individual specification section.

.2 Provide items with tags identifying their associated function and equipment.

.3 Deliver to site; place and store.

.4 Receive and catalogue all items. Submit inventory listing to Consultant. Include approved listings in Maintenance Manual.

1.8 STORAGE, HANDLING AND PROTECTION

.1 Store spare parts, maintenance materials, and special tools in manner to prevent damage or deterioration.

.2 Store in original and undamaged condition with manufacturer's seal and labels intact.

.3 Store components subject to damage from weather in weatherproof enclosures.

.4 Store paints and freezable materials in a heated and ventilated room.

.5 Remove and replace damaged products at own expense and to satisfaction of Consultant.

END OF SECTION

Part 1 General

1.1 DESCRIPTION

.1 Demonstrate operation and maintenance of equipment and systems to Owner's personnel two weeks prior to date of final inspection.

.2 Owner will provide list of personnel to receive instructions, and will co-ordinate their attendance at agreed-upon times.

1.2 QUALITY CONTROL

.1 When specified in individual Sections require manufacturer to provide authorized representative to demonstrate operation of equipment and systems, instruct Owner's personnel, and provide written report that demonstration and instructions have been completed.

1.3 SUBMITTALS

.1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit schedule of time and date for demonstration of each item of equipment and each system two weeks prior to designated dates, for Consultant approval.

.3 Submit reports within one week after completion of demonstration, that demonstration and instructions have been satisfactorily completed.

.4 Give time and date of each demonstration, with list of persons present.

1.4 CONDITIONS FOR DEMONSTRATIONS

.1 Provide copies of completed operation and maintenance manuals for use in demonstrations and instructions.

1.5 PREPARATION

.1 Verify that conditions for demonstration and instructions comply with requirements.

.2 Verify that designated personnel are present.

1.6 DEMONSTRATION AND INSTRUCTIONS

.1 Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, and maintenance of each item of equipment at agreed upon times, at the designated location.

.2 Instruct personnel in phases of operation and maintenance using operation and maintenance manuals as basis of instruction.

.3 Review contents of manual in detail to explain aspects of operation and maintenance.

.4 Prepare and insert additional data in operations and maintenance manuals when need for additional data becomes apparent during instructions.

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 SUMMARY

.1 Section Includes:

.1 This section is limited to portions of the Building Management Manual (BMM) provided to Departmental Representative by Contractor.

.2 Acronyms:

.1 BMM - Building Management Manual.
.2 HVAC - Heating, Ventilation and Air Conditioning.
.3 PI - Product Information.
.4 PV - Performance Verification.
.5 TAB - Testing, Adjusting and Balancing.
.6 WHMIS - Workplace Hazardous Materials Information System.

1.2 GENERAL REQUIREMENTS

.1 Standard letter size paper 216 mm x 279mm.

.2 Binders: vinyl hard covered, 3" "D" ring,(not "O" ring) loose leaf sized, with spine pocket. Identify contents of each binder on spine

.3 Methodology used to facilitate updating.

.4 Drawings, diagrams and schematics to be professionally developed.

.5 Electronic copy of data to be in a format accepted and approved by Property Manger (PDF).

1.3 APPROVALS

.1 Prior to commencement, co-ordinate requirements for preparation, submission and approval with Property Manager.

1.4 GENERAL INFORMATION

.1 Provide Consultant the following for insertion into appropriate Part and Section of BMM:

.1 Complete list of names, addresses, telephone and fax numbers of contractor, sub-contractors that participated in delivery of project - as indicated in Section 1.2 of BMM.
.2 Summary of architectural, structural, fire protection, mechanical and electrical systems installed and commissioned - as indicated in Section 1.4 of BMM.
.1 Including sequence of operation as finalized after commissioning is complete as indicated in Section 2.0 of BMM.
.3 Description of building operation under conditions of heightened security and emergencies as indicated in Section 2.0 of BMM.

.4 System, equipment and components Maintenance Management System (MMS) identification - Section 2.1 of BMM..

.5 Information on operation and maintenance of architectural systems and equipment installed and commissioned - Section 2.0 of BMM.

.6 Information on operation and maintenance of fire protection and life safety systems and equipment installed and commissioned - Section 2.0 of BMM.

.7 Information on operation and maintenance of mechanical systems and equipment installed and commissioned - Section 2.0 of BMM.

.8 Operating and maintenance manual - Section 3.2 of BMM.

.9 Final commissioning plan as actually implemented.

.10 Completed commissioning checklists.

.11 Commissioning test procedures employed.

.12 Completed Product Information (PI) and Performance Verification (PV) report forms, approved and accepted by Property Manager.

.13 Commissioning reports.

1.5 CONTENTS OF OPERATING AND MAINTENANCE MANUAL

.1 For detailed requirements refer to Section 01 78 00 - Closeout Submittals.

.2 Consultant to review and approve format and organization within 2 weeks of award of contract.

.3 Include original manufactures brochures and written information on products and equipment installed on this project.

.4 Record and organize for easy access and retrieval of information contained in BMM.

.5 Include completed PI report forms, data and information from other sources as required.

.6 Inventory directory relating to information on installed systems, equipment and components.

.7 Approved project shop-drawings, product and maintenance data.

.8 Manufacturer's data and recommendations relating: manufacturing process, installation, commissioning, start-up, O&M, shutdown and training materials.

.9 Inventory and location of spare parts, special tools and maintenance materials.

.10 Warranty information.

.11 Inspection certificates with expiration dates, which require on-going re-certification inspections.

.12 Maintenance program supporting information including:

.1 Recommended maintenance procedures and schedule.

.2 Information to removal and replacement of equipment including, required equipment, points of lift and means of entry and egress.

1.6 SUPPORTING DOCUMENTATION FOR INSERTION INTO SUPPORTING APPENDICES

.1 Provide RCMP supporting documentation relating to installed equipment and system, including:

- .1 General:
  - .1 Finalized commissioning plan.
  - .2 WHMIS information manual.
  - .3 Approved "as-built" drawings and specifications.
  - .4 Procedures used during commissioning.
  - .5 Cross-Reference to specification sections.
- .2 Architectural and structural:
  - .1 Inspection certificates, construction permits.
- .3 Fire prevention, suppression and protection:
  - .1 Test reports.
  - .2 Smoke test reports.
  - .3 PV reports.
- .4 Mechanical:
  - .1 Installation permits, inspection certificates.
  - .2 Piping pressure test certificates.
  - .3 Ducting leakage test reports.
  - .4 TAB and PV reports.
  - .5 Copies of posted instructions.
- .5 Electrical:
  - .1 Installation permits, inspection certificates.
  - .2 TAB and PV reports.
  - .3 Electrical work log book.
  - .4 Charts and schedules.
  - .5 Locations of cables and components.
  - .6 Copies of posted instructions.

1.7 LANGUAGE

.1 English and French Language to be in separate binders.

1.8 IDENTIFICATION OF FACILITY

.1 When submitting information to Departmental Representative for incorporation into BMM, use following system for identification of documentation:

- .1 To be supplied to successful contractor.

1.9 USE OF CURRENT TECHNOLOGY

.1 Use current technology for production of documentation. Emphasis on ease of accessibility at all times, maintain in up-to-date state, compatibility with user's requirements.

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 Standards Association (CSA International)

.1 CSA S350-M1980(R1998), Code of Practice for Safety in Demolition of Structures.

1.2 SUBMITTALS

.1 Submit shop drawings in accordance with Sections 01 33 00 - Submittal Procedures 01 00 10 - General Instructions.

1.3 SITE CONDITIONS

.1 Should material resembling spray or trowel-applied asbestos or other designated substance listed as hazardous be encountered, stop work, take preventative measures, and notify Consultant immediately.

.1 Do not proceed until written instructions have been received from Consultant.

Part 2 Products

2.1 NOT USED

.1 Not used.

Part 3 Execution

3.1 PREPARATION

.1 Inspect site with Consultant and verify extent and location of items designated for removal, disposal, alternative disposal, recycling, salvage and items to remain.

.2 Locate and protect utilities. Preserve active utilities traversing site in operating condition.

.3 Notify and obtain approval of utility companies before starting demolition.

3.2 PROTECTION

.1 Prevent movement, settlement, or damage to adjacent structures, utilities, and landscaping features and parts of building to remain in place. Provide bracing and shoring required.

.2 Keep noise, dust, and inconvenience to occupants to minimum.

.3 Protect building systems, services and equipment.

.4 Provide temporary dust screens, covers, railings, supports and other protection as required.

3.3 SALVAGE

.1 Refer to demolition drawings and specifications for items to be salvaged for reuse.

.2 Items to be stored in weather tight enclosure to ensure that no damaged is caused prior to re-installation

3.4 SITE REMOVALS

.1 Remove items as indicated.

3.5 DEMOLITION

.1 Remove parts of existing building to permit new construction.

.2 Trim edges of partially demolished building elements to tolerances as defined by Consultant to suit future use.

3.6 DISPOSAL

.1 Dispose of removed materials, except where specified otherwise, in accordance with authority having jurisdiction.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

.1 Section 06 10 00, 061500, 061753.

1.2 REFERENCES

.1 American National Standards Institute/National Particleboard Association (ANSI/NPA)

.1 ANSI/NPA A208.1-2009, Particleboard.

.2 ASTM International

.1 ASTM A123/A123M-09, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

.2 ASTM A653/A653M-11, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvanealled) by the Hot-Dip Process.

.3 ASTM C578-11a, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation.

.4 ASTM C1289-11, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.

.5 ASTM C1396/C1396M-11, Standard Specification for Gypsum Board.

.6 ASTM D1761-06, Standard Test Methods for Mechanical Fasteners in Wood.

.7 ASTM D5055-11, Standard Specification for Establishing and Monitoring Structural Capacities of Prefabricated Wood I-Joists.

.8 ASTM D5456-11, Standard Specification for Evaluation of Structural Composite Lumber Products.

.3 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-11.3-M87, Hardboard.

.2 CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type.

.3 CAN/CGSB-51.34-M86, Vapour Barrier, Polyethylene Sheet for Use in Building Construction and amendment.

.4 CAN/CGSB-71.26-M88, Adhesive for Field-Gluing Plywood to Lumber Framing for Floor Systems.

.4 CSA International

.1 CAN/CSA-A123.2-03(R2008), Asphalt Coated Roofing Sheets.

.2 CAN/CSA-A247-M86 (R1996), Insulating Fiberboard.

.3 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.

.4 CSA O112.9-10, Evaluation of Adhesives for Structural Wood Products (Exterior Exposure).

.5 CSA O121-08, Douglas Fir Plywood.

.6 CAN/CSA O122-06(R2011), Structural Glued-Laminated Timber.

.7 CSA O141-05(R2009), Softwood Lumber.

.8 CSA O151-09, Canadian Softwood Plywood.

.9 CSA O153-M1980 (R2008), Poplar Plywood.

.10 CSA O325-07, Construction Sheathing.

.11 CSA O437 Series-93(R2011), Standards on OSB and Waferboard.

.12 CAN/CSA-Z809-08, Sustainable Forest Management.

.5 Forest Stewardship Council (FSC)

.1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.

.6 National Lumber Grades Authority (NLGA)

.1 Standard Grading Rules for Canadian Lumber 2010.

.7 Sustainable Forestry Initiative (SFI)

.1 SFI-2010-2014 Standard.

.8 The Truss Plate Institute of Canada

.1 Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses 2007.

.9 Underwriters' Laboratories of Canada (ULC)

.1 CAN/ULC-S706-09, Standard for Wood Fibre Insulating Boards for Buildings.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:

.1 Submit manufacturer's instructions, printed product literature and data sheets for wood products and accessories and include product characteristics, performance criteria, physical size, finish and limitations.

.3 Shop Drawings:

.1 Submit drawings stamped and signed by professional engineer registered or licensed in Territory of Nunavut, Canada.

1.4 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 and ANSI standards.

.3 Sustainable Standards Certification:

.1 Certified Wood: submit listing of wood products and materials used in accordance with CAN/CSA-Z809 or FSC or SFI.

1.5 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements with manufacturer's written instructions.

.2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.3 Storage and Handling Requirements:

.1 Store materials off ground indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.

.2 Store and protect wood from nicks, scratches, and blemishes.

.3 Replace defective or damaged materials with new.

Part 2 Products

2.1 FRAMING STRUCTURAL AND PANEL MATERIALS

.1 Description:

.1 Sustainability Characteristics:

.1 Lumber, Finger Jointed Lumber, Glulam, I-Joists, Trusses, SCL, CAN/CSA-Z809 or FSC or SFI certified.

.2 Plywood. Particleboard OSB urea-formaldehyde free, CAN/CSA-Z809 or FSC or SFI certified.

.2 Lumber: softwood, S4S, moisture content 19% (S-dry) or less in accordance with following standards:

.1 CSA O141.

.2 NLGA Standard Grading Rules for Canadian Lumber.

.3 Glulam in accordance with Structural Glued-Laminated Timber CAN/CSA-O122.

.4 Wood I-joists in accordance with Prefabricated Wood I-Joists ASTM D5055.

.5 Light-frame trusses in accordance with "Truss Design and Procedures for Light Metal Connected Wood Trusses", The Truss Plate Institute of Canada.

.6 Structural Composite Lumber (SCL) in accordance with ASTM D5456.

.7 Framing and board lumber: in accordance with NBC.

.8 Furring, blocking, nailing strips, grounds, rough bucks, curbs, fascia backing and sleepers:

.1 Board sizes: "Standard" or better grade.

.2 Dimension sizes: "Standard" light framing or better grade.

.3 Post and timbers sizes: "Standard" or better grade.

.9 Plywood, OSB and wood based composite panels: to CSA O325.

.10 Douglas fir plywood (DFP): to CSA O121, standard construction.

.11 Canadian softwood plywood (CSP): to CSA O151, standard construction.

.12 Poplar plywood (PP): to CSA O153, standard construction.

.13 Interior mat-formed wood particleboard: to ANSI/NPA 208.1.

.14 Mat-formed structural panelboards (OSB wafer): to CAN O437.

.15 Insulating fiberboard sheathing: to CAN/CSA-A247 CAN/ULC-S706.

.16 Glass fibre board sheathing: non-structural, rigid, faced, fiberglass, insulating exterior sheathing board.

.17 Gypsum sheathing: to ASTM C1396/C1396M.

2.2 ACCESSORIES

.1 Exterior wall sheathing paper: to CAN/CGSB-51.32

.2 Polyethylene film: to CAN/CGSB-51.34, Type 1, 0.15 mm thick.

.3 Roll roofing: to CAN/CSA A123.2, Type S.

.4 Air seal: closed cell polyurethane or polyethylene.

.5 Sealants: in accordance with Section 07 92 00 - Joint Sealants.

.6 Subflooring adhesive: to CAN/CGSB-71.26, cartridge loaded.

.7 General purpose adhesive: to CSA O112.9.

.8 Nails, spikes and staples: to CSA B111.

.9 Bolts: 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.

.10 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.

.11 Joist hangers: minimum 1 mm thick sheet steel, galvanized ZF001 coating designation. Hangers to be sized by truss manufacturer.

.12 Roof sheathing H-Clips: formed "H" shape, thickness to suit panel material, extruded 6063-T6 aluminum alloy type approved by Consultant.

.13 Fastener Finishes:

.1 Galvanizing: to ASTM A123/A123M, ASTM A653, use galvanized fasteners for exterior work and treated lumber.

.14 Wood Preservative:

.1 Preservative Coating: in accordance with manufacturer's recommendations for surface conditions:

.1 Preservative: VOC limit 350 g/L maximum to SCAQMD Rule 1113.

.2 Coatings: VOC limit 350 g/L maximum to SCAQMD Rule 1113.

Part 3 Execution

3.1 EXAMINATION

.1 Verification of Conditions: verify conditions of substrates previously installed under other Sections or Contracts are acceptable for product installation in accordance with manufacturer's written instructions.

.1 Inform Consultant of unacceptable conditions immediately upon discovery.

.2 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Consultant.

3.2 PREPARATION

.1 Treat surfaces of material with wood preservative, before installation.

.2 Apply preservative by dipping, or by brush to completely saturate and maintain wet film on surface for minimum 3 minute soak on lumber and one minute soak on plywood.

.3 Re-treat surfaces exposed by cutting, trimming or boring with liberal brush application of preservative before installation.

3.3 MATERIAL USAGE

.1 Roof sheathing:

.1 Plywood, DFP or CSP sheathing grade or PP standard sheathing grade, square edge, 12.5 mm thick.

.2 Exterior wall sheathing:

.1 Plywood, DFP or CSP sheathing grade or PP standard sheathing grade, square edge, 12.5 mm thick.

.3 Subflooring:

.1 Plywood, DFP or CSP sheathing grade or PP standard sheathing grade, T and G edge, 19 mm thick.

3.4 INSTALLATION

.1 Install members true to line, levels and elevations, square and plumb.

.2 Construct continuous members from pieces of longest practical length.

.3 Install spanning members with "crown-edge" up.

.4 Select exposed framing for appearance. Install lumber panel materials so that grade-marks and other defacing marks are concealed or are removed by sanding where materials are left exposed.

.5 Install subflooring combined subfloor and underlay with panel end-joints located on solid bearing, staggered at least 800 mm.

.1 In addition to mechanical fasteners, floor panels secure floor subflooring to floor joists using glue and screws. Place continuous adhesive bead in accordance with manufacturer's instructions, single-bead on each joist and double-bead on joists where panel ends butt.

.6 Install all wall sheathing in accordance with manufacturer's printed instructions.

.7 Install all 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 steel fasteners.

.12 Install sleepers as indicated.

.13 Use dust collectors and high quality respirator masks when cutting or sanding wood panels.

.14 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.

.15 Countersink bolts where necessary to provide clearance for other work.

.16 Use nailing disks for soft sheathing as recommended by sheathing manufacturer.

3.5 CLEANING

.1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.

.1 Leave Work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3.6 PROTECTION

.1 Protect installed products and components from damage during construction.

.2 Repair damage to adjacent materials caused by rough carpentry installation.

END OF SECTION

Part 1 General

1.1 REFERENCES

.1 American National Standards Institute (ANSI)

- .1 ANSI A208.1-99, Particleboard.
- .2 ANSI A208.2-02, Medium Density Fibreboard (MDF).
- .3 ANSI/HPVA HP-1-2004, Standard for Hardwood and Decorative Plywood.

.2 American Society for Testing and Materials International (ASTM)

- .1 ASTM E1333-96(2002), Standard Test Method for Determining Formaldehyde Concentrations in Air and Emissions Rates from Wood Products Using a Large Chamber.

.3 Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI)

- .1 Architectural Woodwork Quality Standards Illustrated, 8th edition, Version 1.0 2003.

.4 Canada Green Building Council (CaGBC)

- .1 LEED Canada-NC Version 1.0-2004, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations.

.5 Canadian General Standards Board (CGSB)

- .1 CAN/CGSB-11.3-M87, Hardboard.

.6 Canadian Plywood Association (CanPly)

- .1 The Plywood Handbook 2005.

.7 Canadian Standards Association (CSA International)

- .1 CSA B111-74(R2003), Wire Nails, Spikes and Staples.
- .2 CAN/CSA-G164-M92(R2003), Hot Dip Galvanizing of Irregularly Shaped Articles.
- .3 CSA O121-M89(R2003), Douglas Fir Plywood.
- .4 CAN/CSA O141-91(R1999), Softwood Lumber.
- .5 CSA O151-04, Canadian Softwood Plywood.
- .6 CSA O153-M1980(R2003), Poplar Plywood.
- .7 CSA Z760-94, Life Cycle Assessment.

.8 Forest Stewardship Council (FSC)

- .1 FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.

.9 National Hardwood Lumber Association (NHLA)

- .1 Rules for the Measurement and Inspection of Hardwood and Cypress 1998.

.10 National Lumber Grades Authority (NLGA)

.1 Standard Grading Rules for Canadian Lumber 2005.

.11 South Coast Air Quality Management District (SCAQMD), California State (SCAQMD)

.1 SCAQMD Rule 1113-04, Architectural Coatings.

.2 SCAQMD Rule 1168-05, Adhesives and Sealants Applications.

.12 Underwriters Laboratories of Canada (ULC)

.1 CAN4-S104-80(R1985), Standard Method for Fire Tests of Door Assemblies.

.2 CAN4-S105-85(R1992), Standard Specification for Fire Door Frames, meeting the Performance Required by CAN4-S104.

1.2 SUBMITTALS

.1 Submit Submittal submissions: in accordance with Section 01 33 00 - Submittal Procedures .

.2 Shop Drawings Submittals: in accordance with Section 01 33 00 - Submittal Procedures .

.1 Indicate details of construction, profiles, jointing, fastening and other related details.

.2 Indicate materials, thicknesses, finishes and hardware.

.3 Submit samples in accordance with Section 01 33 00 - Submittal Procedures .

.1 Submit duplicate samples: sample size 150 x 150 mm or 150 mm long unless specified otherwise of panel materials.

1.3 QUALITY ASSURANCE

.1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

.1 Plywood, particleboard, OSB and wood based composite panels in accordance with CSA and ANSI standards.

1.4 DELIVERY, STORAGE, AND HANDLING

.1 Deliver, handle, store and protect materials in accordance with Section 01 61 00 - Common Product Requirements .

.1 Protect materials against dampness during and after delivery.

.2 Store materials in ventilated areas, protected from extreme changes of temperature or humidity.

Part 2 Products

2.1 LUMBER MATERIAL

.1 Softwood lumber: unless specified otherwise, S4S, moisture content 19% or less in accordance with following standards:

.1 CAN/CSA-O141.

.2 NLGA Standard Grading Rules for Canadian Lumber.

.3 AWMAC custom grade, moisture content as specified.

.4 Forest Stewardship Council (FSC) certified.

.2 Machine stress-rated lumber is acceptable.

.3 Hardwood lumber: moisture content 8% or less in accordance with following standards:

.1 National Hardwood Lumber Association (NHLA).

.2 AWMAC custom grade, moisture content as specified.

.4 Nails and staples: to CSA B111; galvanized to CAN/CSA-G164 for exterior work, interior humid areas and for treated lumber; plain finish elsewhere.

.5 Wood screws: plain, type and size to suit application.

.6 Splines: wood.

Part 3 Execution

3.1 INSTALLATION

.1 Do finish carpentry to Quality Standards of the Architectural Woodwork Manufacturers Association of Canada (AWMAC), except where specified otherwise.

.2 Scribe and cut as required, fit to abutting walls, and surfaces, fit properly into recesses and to accommodate piping, columns, fixtures, outlets, or other projecting, intersecting or penetrating objects.

.3 Form joints to conceal shrinkage.

3.2 CONSTRUCTION

.1 Fastening:

.1 Position items of finished carpentry work accurately, level, plumb, true and fasten or anchor securely.

.2 Design and select fasteners to suit size and nature of components being joined. Use proprietary devices as recommended by manufacturer.

.3 Set finishing nails to receive filler. Where screws are used to secure members, countersink screw in round smooth cut hole and plug with wood plug to match material being secured.

.4 Replace items of finish carpentry with damage to wood surfaces including hammer and other bruises.

.2 Standing and running trim:

.1 Butt and cope internal joints of baseboards to make snug, tight, joint. Cut right angle joints of casing and base with mitred joints.

.2 Fit backs of baseboards and casing snugly to wall surfaces to eliminate cracks at junction of base and casing with walls.

.3 Make joints in baseboard, where necessary using a 45 degrees scarf type joint.

.4 Install door and window trim in single lengths without splicing.

3.3 SCHEDULES

.1 All Window Casings to be replaced and be:

.1 Metrie – Model MP411 Casing – 15.9 x 76.2 Primed Finger Joint Pine

.2 All Baseboards to be removed and replaced and be:

.1 Metrie – Model MP412 Baseboard – 14.3 x 108 Primed Finger Joint Pine

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Shop fabricated casework.

.2 Wood trim, cabinet trim.

.3 Hardware and attachment accessories.

1.2 RELATED SECTIONS

.1 Section 06100 - Rough Carpentry: Wood blocking and curbing.

.2 Section 06200 - Finish Carpentry.

.3 Section 09910 - Paints and Coatings: Site finishing of finish carpentry items.

1.3 QUALITY ASSURANCE

.1 Fabricator: Company specializing in custom carpentry work with three (3) years documented experience.

.2 Perform work to AWMAC Quality Standards - Custom.

1.4 REGULATORY REQUIREMENTS

.1 Conform to applicable code for fire retardant requirements.

1.5 SUBMITTALS

.1 Submit shop drawings to requirements of Section 01330.

.2 Indicate on shop drawings, materials, component profiles, fastening methods, jointing details, finishes.

Part 2 Products

2.1 MATERIALS

.1 Softwood Lumber: AWMAC Custom grade; maximum moisture content of 6 percent, White Birch species.

.2 Softwood Plywood: APA grade; core materials of veneer or lumber; SPF species.

.3 Plastic Laminate: NEMA LD-3, 0.05 inch General Purpose; color, pattern, and surface finish as selected by RCMP Property Manager.

.4 Plastic Laminate Backing: NEMA LD-3, high pressure paper base laminate without a decorative finish; 0.02 inch thick, smooth surface finish.

2.2 ACCESSORIES

.1 Contact Adhesives: Water base type.

.2 Bolts, Nuts, Washers, Blind fasteners, Lags, and Screws: Size and type to suit application; plain finish.

.3 Primer: Alkyd primer sealer type.

.4 Plastic Edge Trim: Extruded convex shaped; smooth finish; self-locking serrated tongue; of width to match plywood thickness; same color as finish.

2.3 HARDWARE

.1 Shelf Standards, Brackets, and Rests: by manuf.

.2 Drawer and Door Pulls: Chrome, solid steel type, 1/4 inch diameter rod.

.3 Drawer Slides: By manufacturer.

.4 Hinges: as per manuf.

2.4 SHOP FINISHING

.1 Shop finish work stain and seal factory finishing.

2.5 COUNTER TOPS

.1 Counter Tops to Be Post Formed with a 180 Underwrap Profile

.2 Core Materials

.1 At counter tops with sinks fabricate from Douglas fir plywood (DFP)

.2 At all other counter tops may be fabricated from MDF.

.3 Shop install Plastic laminate

.1 Laminate Manufacturers – Nevarmar, Formica, Arborite

.2 Color to be chosen from manufacturers standard range

2.6 MANUFACTURERS

.1 Standard of Acceptance is as follows

.1 Manufacturer: Kitchen Kraft

.1 Collection: Integra Collection

.2 Door Style: Berkley
.3 Wood: Maple
.4 Finish: Natural
.5 Pulls: Crescent pull

.2 Or Approved Equal

Part 3 Execution

3.1 EXAMINATION

.1 Verify that site conditions are ready to receive work.

.2 Beginning of installation means acceptance of site conditions.

3.2 INSTALLATION

.1 Install work in accordance with AWMAC Custom Premium Quality Standard.

.2 Set and secure materials and components in place, plumb and level.

.3 Install components and trim, with screws and bolts with blind fasteners.

.4 Cover exposed edges of shelving and site made casework with plastic edging. Width of edging to match shelving.

.5 Apply plastic laminate finishes where indicated. Cap exposed edges with plastic laminate of same finish and pattern. Apply laminate backing sheet on reverse side of plastic laminate finished surfaces.

END OF SECTION

1.1 REFERENCES

.1 American Society for Testing and Materials International (ASTM)

.1 ASTM C208-95(2001), Specification for Cellulosic Fiber Insulating Board.

.2 ASTM C591-01, Standard Specification for Unfaced Preformed Rigid Cellular Polyisocyanurate Thermal Insulation.

.3 ASTM C612-04, Standard Specification for Mineral Fibre Block and Board Thermal Insulation.

.4 ASTM C726-05, Standard Specification for Mineral Fiber Roof Insulation Board.

.5 ASTM C728-05, Standard Specification for Perlite Thermal Insulation Board.

.6 ASTM C1126-04, Standard Specification for Faced or Unfaced Rigid Cellular Phenolic Thermal Insulation.

.7 ASTM C1289-05a, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.

.8 ASTM E96/E96M-05, Standard Test Methods for Water Vapour Transmission of Materials.

.2 Canadian Gas Association (CGA)

.1 CAN/CGA-B149.1-05, Natural Gas and Propane Installation Code Handbook.

.2 CAN/CGA-B149.2-05, Propane Storage and Handling Code.

.3 Canadian General Standards Board (CGSB)

.1 CGSB 71-GP-24M-77(R1983), Adhesive, Flexible, for Bonding Cellular polystyrene Insulation.

.4 Underwriters Laboratories of Canada (ULC)

.1 CAN/ULC-S604-M91, Standard for Type A Chimneys.

.2 CAN/ULC-S701-05, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Coverings.

.3 CAN/ULC-S702-97, Standard for Thermal Insulation, Mineral Fibre, for Buildings.

.4 CAN/ULC-S704-03, Standard for Thermal Insulation Polyurethane and Polyisocyanurate, Boards, Faced.

.5 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

1.2 ACTION AND INFORMATIONAL SUBMITTALS

.1 Product Data:

.1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.

.2 Manufacturer's Instructions:

.1 Submit manufacturer's installation instructions.

.3 Shop Drawings

.1 Submit shop drawings showing attachment details for Z-Girts and flashing

1.3 QUALITY ASSURANCE

.1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.

.2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.

.3 Convene pre-installation meeting one week prior to beginning work of this Section on-site installations in accordance with Section 01 32 16.06 - Construction Progress Schedule - Critical Path Method (CPM) Section 01 32 16.07 - Construction Progress Schedules - Bar (GANTT) Chart.

.1 Verify project requirements.

.2 Review installation and substrate conditions.

.3 Co-ordinate with other building subtrades.

.4 Review manufacturer's installation instructions and warranty requirements.

.4 Health and Safety Requirements: do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.

1.4 WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials for reuse recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

Part 2 Products

2.1 SUSTAINABLE REQUIREMENTS

2.2 INSULATION

.1 Foundations: Extruded Polystyrene Insulation.

.1 Expanded polystyrene (EPS): to CAN/ULC-S701.

.1 Acceptable Product Owens Corning or approved equivalent.

.1 Type: 4.

.2 Compressive strength: 30 psi to ASTM D1621.

.3 Thickness: as indicated.

.4 Edges: ship lapped.

.5 R Value: 5 per inch ASTM C518

.6 Water Absorption ≤0.7% to ASTM D2842

.7 Water Vapour Permeance: 0.6 perm max to ASTM E96

.8 Flexural Strength:≥ 60 PSI to ASTM C203

.2 Exterior Walls(Masonry, Wood and Steel Stud)

.1 Expanded polystyrene (EPS): to CAN/ULC-S701.

.1 Acceptable Product Owens Corning Formular C-300.

.1 Type: 4.

.2 Compressive strength: 30 psi to ASTM D1621.

.3 Thickness: as indicated.

.4 Edges: shiplapped.

.5 R Value: 5 per inch ASTM C518

.6 Water Absorption ≤0.7% to ASTM D2842

.7 Water Vapour Permeance: 0.6 perm max to ASTM E96

.8 Flexural Strength:≥ 60 PSI to ASTM C203

2.3 ADHESIVES

.1 Manufacturers approved adhesive to Blueskin membrane

2.4 ACCESSORIES

.1 Z-Girts Supports @ 600 O.C. Z Girts to be thermally Broken and 16 gauge.

.1 Girts to be attached to stud walls with 2- ¼" x 2" Tapcon Anchors @ 600 O.C.

.2 Install with smooth face outwards

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.2 WORKMANSHIP

.1 Install insulation after building substrate materials are dry.

.2 Install insulation to maintain continuity of thermal protection to building elements and spaces.

.3 Fit insulation tight around electrical boxes, plumbing and heating pipes and ducts, around exterior doors and windows and other protrusions.

.4 Keep insulation minimum 75 mm from heat emitting devices such as recessed light fixtures, and minimum 50 mm from sidewalls of CAN4-S604 type A chimneys CAN/CGA-B149.1 and CAN/CGA-B149.2 type B L vents.

.5 Cut and trim insulation neatly to fit spaces. Butt joints tightly, offset vertical joints. Use only insulation boards free from chipped or broken edges. Use largest possible dimensions to reduce number of joints.

.6 Offset both vertical and horizontal joints in multiple layer applications.

.7 Do not enclose insulation until it has been inspected and approved by Consultant.

3.3 EXAMINATION

.1 Examine substrates and immediately inform Departmental Representative DCC Representative Consultant in writing of defects.

.2 Prior to commencement of work ensure:

.1 Substrates are firm, straight, smooth, dry, free of snow, ice or frost, and clean of dust and debris.

3.4 RIGID INSULATION INSTALLATION

.1 Apply adhesive in accordance with manufacturer's recommendations.

.2 Leave insulation board joints unbonded over line of expansion and control joints. Bond a continuous 150 mm wide 0.15 mm modified bituminous membrane over expansion and control joints using compatible adhesive and primer before application of insulation.

3.5 PERIMETER FOUNDATION INSULATION

.1 Exterior application: extend board. Install on exterior face of perimeter foundation wall with adhesive.

3.6 CLEANING

.1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

END OF SECTION

Part 1 General

.1 .

1.2 REFERENCES

.1 American Society of Mechanical Engineers (ASME)

.1 ASME B18.6.3-2011, Machine Screws, Tapping Screws, and Metallic Drive Screws (Inch Series).

.2 ASTM International

.1 ASTM D2369-10e1, Test Method for Volatile Content of Coatings.

.2 ASTM D2832-92(2011), Standard Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.

.3 ASTM D5116-10, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.

.3 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type.

.2 CAN/CGSB-93.2-M91, Prefinished Aluminum Siding, Soffits and Fascia, for Residential Use.

.3 CAN/CGSB-93.3-M91, Prefinished Galvanized and Aluminum-Zinc Alloy Steel Sheet for Residential Use.

.4 CAN/CGSB-93.4-92, Galvanized and Aluminum-Zinc Alloy Coated Steel Siding Soffits and Fascia, Prefinished, Residential.

.5 CAN/CGSB-93.5-92, Installation of Metal Residential Siding, Soffits and Fascia.

.4 CSA International

.1 CSA B111-1974(R2003), Wire Nails, Spikes and Staples.

.5 Underwriters' Laboratories of Canada (ULC)

.1 CAN/ULC-S706-09, Standard for Wood Fibre Insulating Boards for Buildings.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:

.1 Submit manufacturer's instructions, printed product literature and data sheets for metal siding and include product characteristics, performance criteria, physical size, finish and limitations.

.3 Shop Drawings:

.1 Submit drawings stamped and signed by professional engineer registered or licensed in Territory of Nunavut, Canada.

.2 Indicate dimensions, profiles, attachment methods, schedule of wall elevations, trim and closure pieces, soffits, fascia, metal furring, and related work.

.4 Samples:

.1 Submit duplicate 100mm x 100 mm samples of siding material, of colour and profile specified.

1.4 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with manufacturer's written instructions.

.2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.3 Storage and Handling Requirements:

.1 Store materials off ground in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.

.2 Store and protect metal siding from nicks, scratches, and blemishes.

.3 Replace defective or damaged materials with new.

Part 2 Products

2.1 STEEL CLADDING AND COMPONENTS

.1 MATERIALS:

.1 Metal Wall System:

.1 Sub-girts: 16 ga - see section 06 21 13 – Board Insulation

.2 Steel Cladding:

.1 Profile: 7/8” corrugated

.2 Fabricated from Z275 galvanized sheet steel conforming to ASTM A653M Grade 230 or AZ150 Galvalume, sheet steel conforming to ASTM A792M Grade 230. having a nominal core thickness 22 GA

.3 Fasteners: Stainless steel , with exposed fasteners colour matched to cladding.

.3 Panel Finishes:

.1 Cladding coating: Prepainted with WeatherX™ on interior face

.4 Color

.1 Prefinished cladding colour to be selected from the manufacturer’s standard colour range. (2 colors of siding to be used)

.2 ACCESSORIES

.1 Flashing: In accordance with Section 07 62 00. Material to match cladding in exposed locations, galvanized material in concealed locations. Custom fabricated to suit architectural details, as required. Use preformed corner pieces only. Double back exposed edges.

.2 Closures: Metal closures to suit profiles selected, to manufacturer's recommendations.

.3 Sealants:

.1 Concealed: Tape or compound, non-skinning, non-drying, butyl rubber.

.2 Exposed: Acrylic co-polymer to CGSB 19GP-5M

.3 Soffit: to CAN/CGSB-93.4, Class plain:

.1 Finish coating: to match siding.

.2 Colour: colourselected by consultant .

.3 Gloss: to match siding.

.4 Thickness: 22 ga base metal thickness.

.5 Profile: flat sheet 'V' crimped for stiffness, preformed with elongated slits and small perforations insect screen cover at vents.

.4 Fascia facings and exposed trim: to CAN/CGSB-93.4, Class plain:

.1 Finish coating: to match siding.

.2 Colour: colour selected by Consultant.

.3 Thickness: 22 ga base metal thickness.

.4 Profile: manufacturer's standard as indicated.

2.2 FASTENERS

.1 Nails: CSA B111. Screws: ASME B18.6.3. Purpose made stainless steel.

2.3 CAULKING

.1 Sealants: in accordance with Section 07 92 00 - Joint Sealants.

2.4 SHEATHING PAPER

.1 Exterior wall sheathing paper: to CAN/CGSB-51.32, Typar - as indicated.

2.5 ACCESSORIES

.1 Exposed trim: inside corners, outside corners, cap strip, drip cap, undersill trim, starter strip and window/door trim of same material, colour gloss as cladding, with fastener holes pre-punched.

Part 3 Execution

3.1 EXAMINATION

.1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable in accordance with manufacturer's written instructions.

.1 Inform Consultant of unacceptable conditions immediately upon discovery.

.2 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Consultant.

3.2 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

3.3 INSTALLATION

.1 Install cladding in accordance with CGSB 93.5, and manufacturer's written instructions.

.2 Install one layer exterior wall sheathing paper horizontally by stapling lapping edges 150 mm.

.3 Install continuous starter strips, inside and outside corners, edgings, soffit, drip, cap, sill and window/door opening flashings as indicated.

.4 Install outside corners, fillers and closure strips with carefully formed and profiled work.

.5 Install soffit and fascia cladding as indicated.

.6 Maintain joints in exterior cladding, true to line, tight fitting, hairline joints.

.7 Attach components in manner not restricting thermal movement.

.8 Caulk junctions with adjoining work with sealant. Do work in accordance with Section 07 92 00 - Joint Sealants.

3.4 CLEANING

.1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.

.1 Leave Work area clean at end of each day.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3.5 PROTECTION

.1 Protect installed products and components from damage during construction.

.2 Repair damage to adjacent materials caused by preformed metal siding installation.

END OF SECTION

Part 1 General

1.1 RELATED SECTIONS

.1 Section 01 33 00 - Submittal Procedures.

.2 Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

1.2 REFERENCES

.1 The Aluminum Association Inc. (AA)

.1 Aluminum Sheet Metal Work in Building Construction-2000.

.2 AA DAF45-97, Designation System for Aluminum Finishes.

.2 American Society for Testing and Materials (ASTM International)

.1 ASTM A167-99, Specification for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet, and Strip.

.2 ASTM A240/A240M-02, Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications.

.3 ASTM A591/A591M-98, Standard Specification for Steel Sheet, Electrolytic Zinc-Coated, for Light Coating Mass Applications.

.4 ASTM A606-01, Standard Specification for Steel, Sheet and Strip, High-Strength, Low-Alloy, Hot-Rolled and Cold-Rolled, with Improved Atmospheric Corrosion Resistance.

.5 ASTM A653/A653M-01a, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

.6 ASTM A792/A792M-02, Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.

.7 ASTM B32-00, Standard Specification for Solder Metal.

.8 ASTM B370-98, Standard Specification for Copper Sheet and Strip for Building Construction.

.9 ASTM D523-89(1999), Standard Test Method for Specular Gloss.

.10 ASTM D822-01, Standard Practice for Filtered Open-Flame Carbon-Arc Exposures of Paint and Related Coatings.

.3 Canadian Roofing Contractors Association (CRCA)

.1 Roofing Specifications Manual 1997.

.4 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-37.5-M89, Cutback Asphalt Plastic Cement.

.2 CAN/CGSB-51.32-M77, Sheathing, Membrane, Breather Type.

.3 CAN/CGSB-93.1-M85, Sheet Aluminum Alloy, Prefinished, Residential.

.5 Canadian Standards Association (CSA International)

.1 CSA A123.3-98, Asphalt Saturated Organic Roofing Felt.

.2 CSA-A440-00/A440.1-00 - A440-00, Windows / Special Publication A440.1-00, User Selection Guide to CSA Standard A440-00, Windows.

.3 CSA B111-1974(R1998), Wire Nails, Spikes and Staples.

1.3 SAMPLES

.1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.

.2 Submit 50 x 50 mm samples of each type of sheet metal material, colour and finish.

Part 2 Products

2.1 PREFINISHED STEEL SHEET

.1 Zinc coated (galvanized) steel sheet similar to metal cladding / roofing: commercial quality to ASTM A 653/A 653M, with Z275 (G90) designation zinc coating and SMP finish. Sheet steel to be min 24 GA.

2.2 ACCESSORIES

.1 Isolation coating: alkali resistant bituminous paint.

.2 Plastic cement: to CAN/CGSB 37.5.

.3 Cleats: of same material, and temper as sheet metal, minimum 50 mm wide. same as sheet metal being secured.

.4 Fasteners: of same material as sheet metal, to CSA B111, ring thread flat head roofing nails of length and thickness suitable for metal flashing application.

.5 Washers: of same material as sheet metal, 1 mm thick with rubber packings.

.6 Flux: rosin, cut hydrochloric acid, or commercial preparation suitable for materials to be soldered.

.7 Touch-up paint: as recommended by prefinished material manufacturer.

2.3 FABRICATION

.1 Fabricate metal flashings and other sheet metal work in accordance with applicable CRCA 'FL' series details.

.2 Fabricate flashings and other sheet aluminum work in accordance with AA-Aluminum Sheet Metal Work in Building Construction.

.3 Form pieces in 2400 mm maximum lengths. Make allowance for expansion at joints.

.4 Hem exposed edges on underside 12 mm. Mitre and seal corners with sealant.

.5 Form sections square, true and accurate to size, free from distortion and other defects detrimental to appearance or performance.

.6 Apply isolation coating to metal surfaces to be embedded in concrete or mortar.

2.4 METAL FLASHINGS

.1 Form flashings, copings and fascias to profiles indicated steel to match roof and walls.

.2 Form eaves troughs and downpipes from 24 GA steel to be chosen from manufacturers standard color set.

Part 3 Execution

3.1 INSTALLATION

.1 Install sheet metal work in accordance with CRCA FL series details, FL

.2 Use concealed fastenings except where approved before installation.

.3 Provide underlay under sheet metal. Secure in place and lap joints 100 mm.

.4 Counterflash bituminous flashings at intersections of roof with vertical surfaces and curbs. Flash joints using S-lock forming tight fit over hook strips.

.5 Lock end joints and caulk with sealant.

.6 Install surface mounted reglets true and level, and caulk top of reglet with sealant.

.7 Turn top edge of flashing into recessed reglet or mortar joint minimum of 25 mm. Lead wedge flashing securely into joint.

.8 Caulk flashing at cap flashing with sealant.

.9 Install pans, where shown around items projecting through roof membrane.

3.2 EAVES TROUGHS AND DOWNPIPES

.1 Install eaves troughs and secure to building at 750 mm on centre as per manufacturers requirements through spacer ferrules. Slope eaves troughs to downpipes as indicated. Solder joints watertight.

.2 Install downpipes and provide goosenecks back to wall. Secure downpipes to wall with straps at 1500 mm on centre; minimum two straps per downpipe. Install splash pans as indicated.

END OF SECTION

Part 1 General

1.1 REFERENCES

.1 ASTM International

.1 ASTM C919-08, Standard Practice for Use of Sealants in Acoustical Applications.

.2 Canadian General Standards Board (CGSB)

.1 CGSB 19-GP-5M-1984, Sealing Compound, One Component, Acrylic Base, Solvent Curing (Issue of 1976 reaffirmed, incorporating Amendment No. 1).

.2 CAN/CGSB-19.13-M87, Sealing Compound, One-component, Elastomeric, Chemical Curing.

.3 CGSB 19-GP-14M-1984, Sealing Compound, One Component, Butyl-Polyisobutylene Polymer Base, Solvent Curing (Reaffirmation of April 1976).

.4 CAN/CGSB-19.17-M90, One-Component Acrylic Emulsion Base Sealing Compound.

.5 CAN/CGSB-19.24-M90, Multi-component, Chemical Curing Sealing Compound.

.3 General Services Administration (GSA) - Federal Specifications (FS)

.1 FS-SS-S-200-E(2)1993, Sealants, Joint, Two-Component, Jet-Blast-Resistant, Cold Applied, for Portland Cement Concrete Pavement.

.4 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

1.2 ACTION AND INFORMATIONAL SUBMITTALS

.1 Submit in accordance with Section 01 33 00 - Submittal Procedures.

.2 Product Data:

.1 Submit manufacturer's instructions, printed product literature and data sheets for joint sealants and include product characteristics, performance criteria, physical size, finish and limitations.

.2 Manufacturer's product to describe:

.1 Caulking compound.

.2 Primers.

.3 Sealing compound, each type, including compatibility when different sealants are in contact with each other.

.3 Samples:

.1 Submit samples of each type of material and colour.

.2 Cured samples of exposed sealants for each colour where required to match adjacent material.

.4 Manufacturer's Instructions:

.1 Submit instructions to include installation instructions for each product used.

1.3 CLOSEOUT SUBMITTALS

.1 Submit in accordance with Section 01 78 00 - Closeout Submittals.

.2 Operation and Maintenance Data: submit operation and maintenance data for incorporation into manual.

1.4 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with manufacturer's written instructions.

.2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.

.3 Storage and Handling Requirements:

.1 Store materials in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.

.2 Store and protect joint sealants from nicks, scratches, and blemishes.

.3 Replace defective or damaged materials with new.

1.5 SITE CONDITIONS

.1 Ambient Conditions:

.1 Proceed with installation of joint sealants only when:

.1 Ambient and substrate temperature conditions are within limits permitted by joint sealant manufacturer or are above 4.4 degrees C.

.2 Joint substrates are dry.

.3 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.

.2 Joint-Width Conditions:

.1 Proceed with installation of joint sealants only where joint widths are no more than those allowed by joint sealant manufacturer for applications indicated.

.3 Joint-Substrate Conditions:

.1 Proceed with installation of joint sealants only after contaminants capable of interfering with adhesion are removed from joint substrates.

1.6 ENVIRONMENTAL REQUIREMENTS

.1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of Material Safety Data Sheets (MSDS) acceptable to Health Canada.

.2 Conform to manufacturers recommended installation conditions for applications of sealants

.3 Ventilate area of work by use of portable supply and exhaust fans.

Part 2 Products

2.1 SEALANT MATERIALS

.1 Do not use caulking that emits strong odours, contains toxic chemicals or is not certified as mould resistant in air handling units.

.2 When low toxicity caulks are not possible, confine usage to areas which off gas to exterior, are contained behind air barriers, or are applied several months before occupancy to maximize off gas time.

.3 Where sealants are qualified with primers use only these primers.

.4 All sealants to be used in accordance with manufacturers recommended applications

.5 It remains the contractors responsibility to verify compatibility of the sealant with the substrate, primers, backer rods and weather conditions prior to installation.

.1 Bring any discrepancies with the above to the attention of the project manager.

2.2 SEALANT MATERIAL DESIGNATIONS

.1 Exterior joints in horizontal wearing (concrete) surfaces: Polyurethane, semi-self-levelling, moisture curing, non-staining, non-bleeding, colour as selected.

.1 ASTM C920
.2 Single Component
.3 Pourable
.4 Class – Cyclic Movement - 100/50
.5 CAN/CGSB – 19.13-M87
.6 Acceptable Product: Vulkem 45 SSL – Tremco Sealants, or approved equivalent.

.2 General exterior use: Silicone, neutral cure ultra-low modulus, moisture curing, nonstaining, nonbleeding, colour as selected.

.1 ASTM C920
.2 Single Component
.3 Non-Sag
.4 Class – Cyclic Movement - 100/50
.5 Class ‘A’
.6 ASTM C1248, C1382, E84
.7 CAN/CGSB – 19.13-M87
.8 Acceptable Product: Spectrem 1 – Tremco Sealants, or approved equivalent.

.3 Glazing: Silicone, neutral cure, medium modulus, colour as selected.

.1 ASTM C920
.2 Single Component
.3 Non-Sag
.4 Class – Cyclic Movement - 50
.5 Class 'A'
.6 ASTM C1248
.7 CAN/CGSB – 19.13-M87
.8 Acceptable Product: Spectrem 2 – Tremco Sealants, or approved equivalent.

.4 Air-Barrier to Window air-seal sealant: Silyl-terminated polyether polymer (STPe), moisture cure, medium modulus.

.1 Compatible with Air-Barrier system.
.2 ASTM C920
.3 Single Component
.4 Non-Sag
.5 Class – Cyclic Movement - 25
.6 Class 'A'
.7 Acceptable Product: Bakor HE925 BES, or approved equivalent.

.5 General interior use: painted gypsum, painted concrete, painted concrete block: Acrylic latex, colour as selected.

.1 Low VOC.
.2 Single Component
.3 Non-Sag
.2 Class – Cyclic Movement - 12.5
.3 Class 'A'
.4 CAN/CGSB 19-GP-14M
.5 Acceptable Product: Tremflex 834 – Tremco Sealants, or approved equivalent.

.6 Plumbing fixtures and general washroom / kitchen (wet-area) usage: sinks, tubs, urinals, water-closets, vanities: Silicone, acetoxy, moisture curing, with fungicide.

.1 ASTM C920
.2 Single Component
.3 Non-Sag
.4 Class – Cyclic Movement – 25
.5 Class 'A'
.6 CAN/CGSB – 19.13-M87
.7 Acceptable Product: Tremsil 200 – Tremco Sealants, or approved equivalent.

.7 Acoustical Sealant: to ASTM C919: Synthetic rubber, single-component, non-skinning, non-hardening.

.1 Single Component

.2 Non-Sag

.3 Class – Cyclic Movement – N/A

.4 CAN/CGSB 19.21 M87

.5 Acceptable Product: Acoustical Sealant – Tremco Sealants, or approved

.8 Preformed compressible and non-compressible back-up materials:

.1 Polyethylene, urethane, neoprene or vinyl foam:

.1 Extruded open closed cell foam backer rod.

.2 Size: oversize 30 to 50 %.

.2 Neoprene or butyl rubber:

.1 Round solid rod, Shore A hardness 70.

.3 High density foam:

.1 Extruded closed cell polyvinyl chloride (PVC), extruded polyethylene, closed cell, Shore A hardness 20, tensile strength 140 to 200 kPa, extruded polyolefin foam, 32 kg/m^3 density, or neoprene foam backer, size as recommended by manufacturer.

.4 Bond breaker tape:

.1 Polyethylene bond breaker tape which will not bond to sealant.

2.3 JOINT CLEANER

.1 Non-corrosive and non-staining type, compatible with joint forming materials and sealant in accordance with sealant manufacturer's written recommendations.

.2 Primer: in accordance with sealant manufacturer's written recommendations.

Part 3 Execution

3.1 EXAMINATION

.1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for joint sealants installation in accordance with manufacturer's written instructions.

.1 Visually inspect substrate.

.2 Inform Consultant of unacceptable conditions immediately upon discovery.

.3 Proceed with installation only after unacceptable conditions have been remedied

3.2 SURFACE PREPARATION

.1 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.

.2 Clean bonding joint surfaces of harmful matter substances including dust, rust, oil grease, and other matter which may impair Work.

.3 Do not apply sealants to joint surfaces treated with sealer, curing compound, water repellent, or other coatings unless tests have been performed to ensure compatibility of materials. Remove coatings as required.

.4 Ensure joint surfaces are dry and frost free.

.5 Prepare surfaces in accordance with manufacturer's directions.

3.3 PRIMING

.1 Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking.

.2 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.

3.4 BACKUP MATERIAL

.1 Apply bond breaker tape where required to manufacturer's instructions.

.2 Install joint filler to achieve correct joint depth and shape, with approximately 30% compression.

3.5 MIXING

.1 Mix materials in strict accordance with sealant manufacturer's instructions.

3.6 APPLICATION

.1 Sealant:

.1 Apply sealant in accordance with manufacturer's written instructions.

.2 Mask edges of joint where irregular surface or sensitive joint border exists to provide neat joint.

.3 Apply sealant in continuous beads.

.4 Apply sealant using gun with proper size nozzle.

.5 Use sufficient pressure to fill voids and joints solid.

.6 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities.

.7 Tool exposed surfaces before skinning begins to give slightly concave shape.

.8 Remove excess compound promptly as work progresses and upon completion.

.2 Curing:

.1 Cure sealants in accordance with sealant manufacturer's instructions.

.2 Do not cover up sealants until proper curing has taken place.

3.7 CLEANING

.1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.

.1 Leave Work area clean at end of each day.

.2 Clean adjacent surfaces immediately.

.3 Remove excess and droppings, using recommended cleaners as work progresses.

.4 Remove masking tape after initial set of sealant.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.

3.8 PROTECTION

.1 Protect installed products and components from damage during construction.

.2 Repair damage to adjacent materials caused by joint sealants installation.

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

.1 Exterior Doors: Insulated Steel

.2 Wood doors: non-rated.

1.2 RELATED SECTIONS

.1 Section 06200: Wood door frames.

.2 Section 08710 - Door Hardware.

.3 Section 08800 - Glazing.

.4 Section 09910 - Painting: Site finishing doors.

1.3 SUBMITTALS

.1 Submit under provisions of General Instructions.

.2 Product Data: Indicate door core materials and construction; veneer species, type and characteristics; factory machining criteria, factory finishing criteria.

.3 Include schedule identifying each unit, with door marks and numbers relating to numbering on drawings and door schedule.

.4 Indicate each type of door, material, steel core, thickness, mortises, reinforcements, location of exposed fasteners, openings, glazed louvered, arrangement of hardware and finishes.

1.4 QUALITY ASSURANCE

.1 Perform work in accordance with AWMAC Quality Standard, Custom Grade.

.2 Finish doors in accordance with AWMAC Quality Standard, to grades identified in schedule.

1.5 WARRANTY

.1 Provide warranty under provisions of Section 01005 to the following term:

.1 Exterior Doors: five (5) years.

.2 Interior Doors: two (2) years.

.2 Include coverage for delamination of veneer, warping beyond specified installation tolerances, defective materials, telegraphing core construction.

Part 2 Products

2.1 MANUFACTURERS

.1 Exterior Doors

.1 Duxton Doors and Windows: Strong Arm steel entry doors.

.2 Or approved equal.

.2 Interior Doors

.1 Masonite: wood veneer book matched oak Pre-finished Natural

.2 Premdoor: wood veneer book matched oak Pre-finished Natural.

2.2 DOOR TYPES

.1 Flush Exterior Doors: Insulated aluminium 6 panel doors, prehung type. Sheet Steel to commercial quality, with whipped zinc finish or mill phosphate finish. For mechanical room doors, delete embossed panels. Cores to be injected with rigid urethane bonded to steel skins. R value min R12. Overall door thickness 45mm.

.1 Door bumpers: single stud neoprene type, 3 per door

.2 Doors to be complete with bottom weather stripping and vinyl bulb magnetic weather stripping.

2.3 DOOR CONSTRUCTION

.1 Core Hollow: to CAN/DSA-0132.2.2.

.2 Steel Exterior doors: to ASTM A 526W25

2.4 FLUSH DOOR FACING

.1 Veneer Facing (Flush Interior Doors): AWMAC Custom quality species wood, with book matched grain, transparent finish.

2.5 ACCESSORIES

.1 Facing Adhesive: Type 3 - waterproof.

.2 Glazing Stops: Wood, of same species as door facing.

2.6 FABRICATION

.1 Fabricate non-rated doors in accordance with AWMAC Quality Standards requirements.

.2 Provide lock blocks at lock edge for hardware reinforcement.

.3 Factory pre-fit doors for frame opening dimensions identified on shop drawings.

2.7 FINISH

.1 Factory finish doors in accordance with approved sample.

2.8 STORAGE AND PROTECTION

.1 Protect doors from dampness. Arrange for delivery after work causing abnormal humidity has been completed.

.2 Store doors within well ventilated room, off floor, in accordance with manufacturer’s recommendations.

.3 Protect doors from scratches, handling and other damage.

Part 3 Execution

3.1 INSTALLATION

.1 Install doors in accordance with manufacturer's instructions.

.2 Adjust hardware for correct function

.3 Install stops.

3.2 INSTALLATION TOLERANCES

.1 Conform to NWWDA requirements for fit and clearance tolerances and maximum diagonal distortion.

END OF SECTION

PART 1 – GENERAL

1.1 SCOPE OF WORK

.1 This specification applies to buildings included in Part 9 of the National Building Code. This includes buildings of 3 stories or less used for residential occupancy.

.2 Remove and dispose of existing windows.

.3 Provide labour, material, equipment and services necessary and incidental to the general replacement of the windows. Replace window components as described herein.

1.2 REFERENCES

All reference standards shall be current issue or latest revision at the date of building permit issue. This specification refers to the following standards, specifications or publications:

.1 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-1.40-97, Anticorrosive Structural Steel Alkyd Primer.

.2 CAN/CGSB-12.8-97, Insulating Glass Units.

.3 SMA 1201R-2002 Specification for Insect Screens for Windows, Sliding Doors and Swinging Doors..

.4 CAN/CGSB-12.1-M, Tempered or Laminated Safety Glass

.5 CAN/CGSB-12.11-M, Wired Safety Glass

.6 CAN/CGSB-12.20-M, Structural Design of Glass for Buildings

.2 Canadian Standards Association (CSA) International

.1 AAMA/WDMA/CSA 101/I.S.2/A440-11, NAFS - North American Fenestration Standard for Windows, Doors, and Skylights.

.2 CSA A440S1-09, Canadian Supplement to AAMA/WDMA/CSA 101/1.S.2/A440, NAFS - North American Fenestration Standard for Windows, Doors, and Skylights.

.3 CAN/CSA-A440.4-07(R2012), Window, Door, and Skylight Installation

.4 CAN/CSA-A440.2/A440.3-09, Fenestration energy performance/User guide to CSA A440.2, Fenestration energy performance.

.5 CAN/CSA-Z91-02(R2013), Health and Safety Code for Suspended Equipment Operations.

.6 CAN/CSA-Z809-08(R2013), Sustainable Forest Management.

1.3 PERFORMANCE REQUIREMENTS

.1 Design frames in exterior walls to accommodate expansion and contraction within services temperature range of -40°C to 40°C.

.2 Window air tightness to meet the rating of A3 when tested in accordance with CAN/CSA-440 windows.

.3 Window water tightness shall meet the B5 rating when tested in accordance with CAN/CSA-440 windows.

.4 Structural performance shall incorporate minimum design pressure (DP) of 1440Pa with a maximum deflection of 1/175 of the span when tested in accordance with CAN/CSA-440 Windows.

.5 Wind load resistance for window shall meet the C3 rating or better when tested in accordance with CAN/CSA-A440 Windows.

.6 Performance requirement for ease of operation shall be 60 N to initiate movement and 30 N to maintain motion.

.7 The window condensation temperature index of the frame (I_f) shall be 77 or better and temperature index of the glass (I_g) shall be 77 or better when tested in accordance with CAN/CSA-A440 Windows.

.8 The fixed and operable window thermal transmittance U-Value shall be less than 1.7 W/(m^2x°C) when tested in accordance with AAMA 1503.1 and CAN/CSA-A440.2.

.9 Windows shall meet or exceed minimum requirements as listed in CAN/CSA-A440 Windows, Table 27.

.10 Windows shall satisfy egress requirements as detailed in the National Building Code and shall conform to the local Code Authorities having jurisdiction.

.11 Insect screens to be provided for all vent windows; Rating S1 as per Table 4, CSA A440.

.12 Resistance to Forced Entry: F20.

.13 Windows shall conform to the requirements of CSA A440, latest applicable edition.Prior to contract award, the low bidder shall provide the Owner with test reports for the proposed new windows completed by an independent technical source, tested to CSA A440.2 or AAMA 1503 or NFRC Certified Products Listing. A CPD or model number shall be provided.

1.4 SHOP DRAWINGS

.1 Submit shop drawings in accordance with Section 01 33 00 – Submittal Procedures.

.2 Indicate materials and details in full scale for head, jamb, mullion, sill and sash details, profiles of components, interior and exterior trim, junction between combination units, elevation of units, installation methods, anchorage details, fasteners, caulking, internal drainage details, description of accessories and related components. Indicate location of manufacturer's nameplates.

.3 The Contractor shall supply window shop drawings showing window and glass sizes in addition to screen placement and anchorage. Locking mechanisms for windows shall also be shown. Prior to review by the Project Manager/Consultant, shop drawings shall be firstly reviewed by the General Contractor.

.4 Provide manufacturer’s fabrication dimensions for all window components (cut sheets) for all window types and configurations.

.5 Provide a list of all window parts, including manufacturers names, extruder name and window series, and current sources of components.

.6 Indicate on shop drawings, dimensions, relation to construction of adjacent work, air and vapour seal with adjacent construction materials, component anchorage and locations, anchor methods, shim methods and materials, and hardware installation details. Include also opening dimensions, frames opening tolerances and affected related work and installation requirements. Provide shop drawings for anchor and shim methods and materials, sealed by an engineer registered in the Territory of Nunavut.

1.5 NOT USED

1.6 QUALIFICATIONS

.1 Manufacturer and installers are to be specialized in the manufacturing and installation respectively of fiberglass window system with a minimum of three years each of documented experience.

1.7 DELIVERY, STORAGE AND HANDLING

.1 Protect pre-finished surfaces with wrapping. Do not use adhesive papers or sprayed coatings which bond when exposed to sunlight or weather.

1.8 SAMPLES

.1 Prior to use in this project, upon request by the Owner, a minimum 300 mm x 300 mm (12”x12”) corner sample of windows shall be submitted to the Project Manager and Consultant for approval.

.2 Include frame, sash, sill, interlock, glazing and weather-proofing method, insect screens, surface finish and all hardware.

1.9 MAINTENANCE DATA

.1 Provide three (3) copies of operation and maintenance data, including cleaning instructions, for all windows and frames for incorporation into maintenance manual.

1.10 MAINTENANCE MATERIALS

.1 Prior to the completion of the Contract, the Contractor must supply the following maintenance materials to a representative of Departmental Representative:

.1 5% of each size of operable sash complete with hardware and glazing (minimum 1)

.2 5% of each size of screen (minimum 1)

.3 5% of all locks, crank hardware, rollers, guides, drain caps and other miscellaneous hardware.

1.12 WARRANTY

.1 Provide written warranty for a period of one year from the date of substantial completion for any defects relating to complete installation and workmanship.

.2 Provide written warranty against defects and malfunction, against material or manufacturing defects under normal usage for a period of twenty (20) years from the date of substantial performance.

.3 Provide written warranty for glazing seal against failure of the hermetic seal for a period of ten (10) years from the date of substantial performance. Date of manufacture to be unobtrusively marked on the interior right hand corner of each unit and shall be not more than one month prior to the date of installation.

.4 Provide written lifetime warranty for all operating hardware.

PART 2 - PRODUCTS

2.1 MATERIALS

.1 All windows by the same manufacturer, with sash and main frames of a type and size to suit the job conditions. General Contractor to verify site conditions prior to manufacturing

of windows. Each window location to be site measured as rough opening dimensions may vary.

.2 Isolate aluminum from the following components, by means of isolation pad or coating:

.2 Dissimilar metals except stainless steel, zinc, or white bronze of small area.

.3 Concrete, mortar and masonry.

.3 Exterior caulking shall be Dow Corning 795 high grade neutral cure silicone, or approved alternate as authorized by the Consultant and approved by window manufacturer. Colour shall match that of the material to which it is applied.

.4 All frames to be factory fabricated and shall be fully assembled before shipping to site.

.5 Mounting screws shall be 300 series stainless steel or 400 series stainless steel cadmium plated and of sufficient size and quantity to perform their intended function.

.6 Anchorage materials: non-corrosive.

.7 Weathering and glazing gaskets shall be extruded, black, closed cell or dense elastomer of durometer appropriate to the function.

.8 Glazing tapes shall be macro-polyisobutylene, highly adhesive and elastic with built in shim.

.9 Provide FIBERGLASS mullion caps, matching window units, complete with anchors for support to structure and installation of window units. Allow for erection tolerances and provide for movement of window units due to thermal expansion and contraction, including building deflections. Where mullion joint requires special condition provide alternate proposals, engineering, and other documentation to ensure integrity of the mullion joint. Provide reinforcing mullion plates at every joint secured to frames by screws.

.10 Hardware for locking mechanism shall not impact air leakage performance.

.11 All windows to be supplied with insect screens and all required/specified hardware, friction fit within operable windows.

.12 Screen frame: baked on enamel finish, extruded aluminum complete with corner keys and retainer spline. Casement and awning screen to include integral perimeter flange. Screens removable to the inside only.

.13 Screens: aluminum or galvanized or Fiberglass mesh.

.14 Jamb extensions: 18 mm (¾") FIBERGLASS jamb extensions to suit wall thickness. Jamb extensions to have factory edge adjacent to casings. End caps not permitted.

.15 Casings or finish trim: solid wood (or approved equal), minimum width to suit site conditions.

.16 Weather-stripping: compression type seal against sash, single weather seal at exterior.

2.2 SEALANT MATERIALS

.1 Caulking subcontractor must seal joints between windows and adjacent surfaces with sealant, in accordance with Specification Section 079200.

.2 Window manufacturer will provide written confirmation to the Consultant that the sealant materials are acceptable for use and will have no adverse affect on the window aesthetics, operation or long-term performance.

2.3 WINDOW TYPES

.1 All windows to be full frame replacements complete with brick mould and jamb extensions.

.2 PICTURE WINDOW

.1 Dry glazed interior stops, sealed unit to be removable to interior.

.3 SINGLE OPERATOR HORIZONTAL SLIDING WINDOW (GLIDER)

.1 Locking Hardware: Die cast housing cam lock complete with adjustable strike.

.2 Rolling Hardware: one pair dual brass, nylon or Lubex rollers.

.3 Sash track to include tapered block insert to increase contact pressure at meeting rail.

.4 SINGLE OPERATOR VERTICAL SLIDING WINDOW (SINGLE HUNG)

.1 Locking Hardware: Die cast housing cam lock complete with adjustable strike.

.2 Sash Balance: Adjustable Spiral Balance or Dual opposing stainless steel coil constant force sash balance.

.3 Sash pulls to be integral to sash extrusion or designated handle secured through a minimum of two FIBERGLASS walls. Sash pulls integrated with glazing stops not acceptable.

.4 Pivot bars to be fastened through two FIBERGLASS walls or one wall and screw boss, using FIBERGLASS screws.

.5 CASEMENT WINDOW

.1 Locking Hardware: Die cast multi point lever lock complete with die cast adjustable mushroom head rollers and keepers. Minimum 2 point lock on all sashes.

.2 Operating Hardware: Roto gear dual arm operator using sill mounting *or* flange mounting with reinforcing back plate. High-pressure zinc die cast housing and steel base plate, hardened steel drive worm and gear arm.

.6 AWNING WINDOW

.1 Locking Hardware: Die cast lock. Minimum two locks on all sashes.

.2 Operating Hardware: Roto gear scissor arm operator *or* roto gear pivot shoe operator. High-pressure zinc die cast housing and steel base plate, hardened steel drive worm and gear arm.

2.4 GLASS AND GLAZING MATERIALS

.1 Glaze windows in accordance with CAN/CSA-A440. Insulating glass units must carry Insulating Glass Manufacturers Association of Canada (IGMAC) Certification and be identified with IGMAC, the name of the manufacturer, the location where the units were made and the year of manufacture. Units must comply with the latest edition of CAN/CGSB 12.8, Insulating Glass.

.2 Glazing must have a written ten (10) year warranty against failure of the seal.

.3 Windows to be triple glazed, insulated glass (minimum ½" air space incorporating Argon

fill) and at the discretion of the Owner, incorporate Solarban 70XL low emissivity coating on surface 3. Other acceptable coatings : Cardinal LoE 366.

.4 Glazing thickness to be in accordance with Table A-9.6.1.3.(1) A for Hourly Wind Pressure (HWP) less than 0.55 kPa, in Appendix A, National Building Code, 2010.

.5 All glazing to incorporate Super Spacer Architectural S-Class foam tape glazing spacer or approved equal.

.6 Common area glazing units for both interior and exterior shall utilize glass conforming to CAN/CGSB-12.1-M, Tempered or Laminated Safety Glass or CAN/CGSB-12.11-M, Wired Safety Glass.

2.5 ACCESSORIES

.1 Brick mould and brick mould extensions to be manufactured from extruded FIBERGLASS profiles; matching frame nominal wall thickness. Type as detailed on drawings. Colour to be selected by Owner.

.2 Jamb, sill and head extensions to be made from cellular FIBERGLASS. Size, color and configuration of extensions as shown on drawings and as required on site.

2.6 FABRICATION

.1 Fabricate in accordance with CSA-A440 supplemented as follows:

.2 Fabricate units square and true with maximum tolerance of plus or minus 1.5 mm (0.06”) for units with a diagonal measurement of 1800 mm (71”) or less and plus or minus 3 mm (0.12”)for units with a diagonal measurement over 1800 mm. (71”).

.3 Frame face dimensions detailed are maximum permissible sizes.

.4 Manufacturer’s nameplates on windows are not acceptable.

.5 Brace frames to maintain squareness and rigidity during shipment and installation.

.6 Finish steel clips and reinforcement to be galvanized with 380 g/m^2 zinc coating to CSA G164.

.7 Fabricate framing from extrusions of size and shape shown on shop drawings.

.8 All framing joints shall be accurately machined, assembled, and sealed to provide neat weather tight connections.

.9 Coupling mullions shall be designed to provide a functional split to permit modular construction and allow for thermal expansion.

.10 Glass stops shall be lock-in screwless type.

.11 Elastomeric seal gasket shall be installed around the full perimeter of glass and sealed at the corners with silicone sealant.

.12 Air seal gasket must have adhesion with silicone sealant.

.13 All FIBERGLASS joints to be "welded corner" construction, frames and sashes.

.14 Drain hole covers for FIBERGLASS windows to be rigid or manufacturer to provide one extra hinged cover per window.

.15 Brick moulds and jamb extension to be installed using arrowhead slots, sealed and mechanically fastened to main frame.

.16 Provide horizontal and vertical galvanized steel or aluminum reinforcement as required to

achieve structural requirements as specified.

.17 Vertical and Horizontal sliding windows: sash and frame meeting rails to be reinforced with aluminum or galvanized steel channel, as required to meet structural requirements as specified.

.18 All windows within a tolerance of ±6 mm (± ¼") shall be fabricated to one dimension.

PART 3 - EXECUTION

3.1 WORKMANSHIP

.1 Install in accordance with CSA-A440.4 supplemented with installation instructions in this specification and manufacturers recommendations. Conflict between installation instructions in this specification and manufacturers instructions must be brought to the attention of the Owner and Consultant prior to installation.

3.2 PREPARATION

.1 All window sizes and measurements shall be taken from the jobsite. The Contractor shall check and verify all site dimensions, on an individual basis, prior to fabrication of windows. The Contractor shall not make any claim to the Owner for mis - measured or improperly measured work.

.2 Remove existing sash, tracks, frames, interior and exterior trims and discard off site. Relocate when possible on a daily basis.

.3 Examine openings into which windows are to be installed to ensure that it is satisfactory before commencement of work. Notify Owner of any rot, damage or deterioration that is evident prior to proceeding with the Work.

.4 Furr out existing openings to achieve ½" maximum shim space. All furring set into the original opening shall be bedded in acoustic sealant.

.5 Move furniture and appliances 4ft from the window and remove window coverings as required, to gain access to window area. The Owner will make arrangements to move fragile items.

3.3 INSTALLATION

.1 All Work shall be completed according to applicable CGSB standards and best industry practice.

.2 Windows shall be installed, glazed and adjusted by experienced personnel in accordance with the manufacturer's instructions and approved shop drawings.

.3 In addition to the manufacturer's installation instructions, the following installation procedures shall be followed:

.1 Fill the space between the window and the rough opening with specified low expansion urethane foam. Note that foam must not be used as a structural load bearing connection meant to resist lateral wind loads.

.2 Maintain continuous air and vapour barriers throughout the assembly, primarily in line with the inside pane of glass and heel bead of glazing compound.

.3 Ensure that the sheet air barrier membrane is adequately adhered to the indicated surfaces prior to the window installation.

.4 Drain water entering joints, condensation occurring in glazing channels or migrating moisture occurring within the system, to the exterior by a weep drainage network.

.5 The system is to accommodate without damage to the components or deterioration of the seals, movement between the window and the perimeter framing.

.4 All items in this section shall be set in their correct location and shall be set level, square, plumb and at proper elevations and in alignment with other work.

.5 Set window into opening plumb and square. Provide temporary shims at window sides and head to ensure proper alignment of window during fastening. Shim along sill at corners, at all vertical mullions and other locations as required to achieve shims at maximum 600 mm (24 inches) o/c.

.6 All windows to be mechanically fastened through side jambs and head, adjacent to shims. Do not fasten through sill. Fastening to be 150-300mm (6-12 inches) from each corner and at maximum 600mm (24 inches) o/c. All screw holes through FIBERGLASS to be predrilled; holes to be 2mm larger than screw diameter. Fasten with minimum #8 stainless steel pan head screws, length sufficient to penetrate framing material a minimum of 35mm (1½ "). Screws to be concealed at all possible locations. Exposed screws to be capped.

.7 Remove shims from side jambs and head of window.

.8 All existing flashing and drip mouldings to be replaced. Refer to detail drawings.

.9 Replace, at no extra cost to the Owner, all glass cracked or broken during the Work of this contract, or otherwise damaged prior to substantial performance. Any breakage due to improper setting and installation shall be replaced by the Contractor, at no extra cost to the Owner, for a period of one year following substantial performance.

.10 Adjust operating sashes and ventilators, screens, hardware and accessories for a tight fit at contact points and weather stripping for smooth operation and weather tight closure. Lubricate hardware and moving parts if necessary. Refer to manufacturer's instruction sheets.

.11 The Contractor shall ensure that damage done to the interior and exterior finishes, caused by the removal of existing windows, is kept to a minimum. The Contractor will be responsible to repair any damage caused, and to provide and finish any fillers required to fill between surface of new window and the existing surface of the exterior skin of the structure. The cost incurred to do this work will be considered as incidental to the Contract and will not be paid for separately.

3.4 CAULKING

.1 Seal joints between windows and exterior finish. Use foam backer rod to achieve 2:1 width:depth joint ratio.

.2 Apply sealant in accordance with Section 07 92 00 Joint Sealants.

3.5 RESTORATION OF INTERIOR AND EXTERIOR FINISHES

.1 Any and all finishes removed or damaged by the removal of the existing windows or installation of the new windows shall be repaired or replaced to original condition.

.2 All window casings to be replaced with new solid wood casings, minimum width to satisfy site conditions. Casings to be primed/painted or stained/varnished with as many coats as necessary to provide quality finish. Finish color to be selected by the Owner.

.3 The Contractor will be responsible for the removal and re-installation of existing window coverings. The cost for doing this will be considered as incidental to the contract. Reinstall all rails, rods, drapery, drapery tracks, blinds or any other window treatments removed to necessitate the installation of the new windows.

.4 The existing tenant-owned air-conditioners shall be removed, and back to tenant, and re-installed, custom-fitted, to the new window unit.

3.6 FINAL CLEANING

.1 Every piece of glass shall bear the manufacturer's names, type and thickness of the glass. Leave all labels on the glass until they have been inspected and approved by the owner. Labels shall not be removed until final cleaning; leaving no glue residue that may remain after the removal of the label.

.2 Protect installed windows from damage during construction. Protect new window units from incidental damages resulting from plaster, cement, stucco or other harmful contaminants. Do not apply masking tape, adhesives or other chemicals directly to window components. Consult with window manufacturer for product compatibility.

.3 All window components including glazing, shall be thoroughly cleaned, all imperfections corrected and all damaged glass replaced in accordance with manufacturer's instructions at the completion of the project.

.4 Clean the work area, remove and dispose of construction debris from site in accordance with all local regulations and bylaws on a daily basis.

END OF SECTION

Part 1 General

1.1 RELATED REQUIREMENTS

.1 Section .

1.2 REFERENCES

.1 American Society for Testing and Materials International (ASTM)

.1 ASTM F1303-04, Standard Specification for Sheet Vinyl Floor Covering with Backing.

.2 Canada Green Building Council (CaGBC)

.1 LEED Canada-NC Version 1.0-2004, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Package For New Construction and Major Renovations (including Addendum 2007).

.2 LEED Canada-CI Version 1.0-2007, LEED (Leadership in Energy and Environmental Design): Green Building Rating System Reference Guide For Commercial Interiors.

.3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

.4 South Coast Air Quality Management District (SCAQMD), California State

.1 SCAQMD Rule 1113-04, Architectural Coatings.

.2 SCAQMD Rule 1168-05, Adhesives and Sealants Applications.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Provide product data in accordance with Section 01 33 00 - Submittal Procedures.

.3 Provide samples in accordance with Section 01 33 00 - Submittal Procedures.

.1 Submit duplicate 300 x 300 mm sample pieces of sheet material, 300 mm long base, nosing, feature strips, treads, edge strips.

.4 Sustainable Design Submittals:

.1 LEED Canada-NC Version 1.0 CI Version 1.0 Submittals: in accordance with Section 01 35 21 - LEED Requirements.

.5 Closeout Submittals:

.1 Provide maintenance data for resilient flooring for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.4 SUSTAINABLE REQUIREMENTS

.1 Materials and products in accordance with Section 01 47 15 - Sustainable Requirements: Construction.

1.5 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.

.2 Waste Management and Disposal:

.1 Separate waste materials for reuse recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

1.6 AMBIENT CONDITIONS

.1 Maintain air temperature and structural base temperature at flooring installation area above 20 degrees for 48 hours before, during and 48 hours after installation.

1.7 MAINTENANCE

.1 Extra Materials:

.1 Provide extra materials of resilient sheet flooring and adhesives in accordance with Section 01 78 00 - Closeout Submittals.

.2 Provide 10 m^2 of each colour, pattern and type flooring material required for project for maintenance use.

.3 Extra materials one piece and from same production run as installed materials.

.4 Identify each roll of sheet flooring and each container of adhesive.

.5 Deliver to Departmental Representative DCC Representative Consultant, upon completion of the work of this section.

.6 Store where directed by Departmental Representative DCC Representative Consultant.

Part 2 Products

2.1 MATERIALS

.1 Resilient Sheet Flooring (RSF) :Standard of Acceptance Johnsonite Acczent Wood and Steel.

.1 Color from manufacturers standard range.

.2 Complies with requirements for ASTM F 1913 Standard Specification for Vinyl Sheet Floor Covering Without Backing.

.3 iQ construction: no wax, no finish for life of product.

.4 Roll/Sheet Width: 6' 6" (2 m)

.5 Wear layer/Overall thickness: .080" (2.0 mm).

.6 ASTM D 2047, Standard Test Method for Static Coefficient of Friction of Polish-Coated Flooring of 0.6 or greater.

.7 ASTM F 970, Standard Test Method for Static Load Limit – 250 PSI.

.8 ASTM E 648, Standard Test method for Critical Radiant Flux of 0.45 watts/cm^2 or greater, Class I

.9 Contains 25% pre-consumer recycled content

.10 100% Recyclable

.11 NSF-332 Platinum Certified

.12 Phthalate-free (except for recycled material)

.2 Primers and adhesives: of types recommended by resilient flooring manufacturer for specific material on applicable substrate, above, on or below grade.

.1 Rubber floor adhesives:

.2 Cove base adhesives:

.3 Sub-floor filler and leveller: white premix latex requiring water only to produce cementitious pasteas recommended by flooring manufacturer for use with their product.

.4 Metal edge strips:

.1 Aluminum extruded, smooth, polished stainless steel with lip to extend under floor finish, shoulder flush with top of adjacent floor finish.

.5 External corner protectors: stainless steel, type recommended by flooring manufacturer.

.6 Edging to floor penetrations: stainless steel , type recommended by flooring manufacturer.

.7 Sealer and wax: type recommended by resilient flooring material manufacturer for material type and location.

.8 Underlayment: install ½" underlayment plywood

.9 Adhesive:

.1 Johnsonite #925

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 SITE VERIFICATION OF CONDITIONS

.1 Ensure concrete floors are clean and dry by using test methods recommended by flooring manufacturer.

3.3 PREPARATION

.1 Clean floor and apply filler; trowel and float to leave smooth, flat hard surface. Prohibit traffic until filler cured and dry.

.2 Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.

.3 Prime and Seal concrete slab to resilient flooring manufacturer's printed instructions.

3.4 UNDERLAYMENT

.1 Install ½" underlayment plywood as per manufacturers instructions

3.5 APPLICATION: FLOORING

.1 Provide high ventilation rate, with maximum outside air, during installation, and for 48 to 72 hours after installation. If possible, vent directly to outside. Do not let contaminated air recirculate through district or whole building air distribution system. Maintain extra ventilation for at least one month following building occupation.

.2 Apply adhesive uniformly using recommended trowel. Do not spread more adhesive than can be covered by flooring before initial set takes place.

.3 Lay flooring with seams parallel to building lines to produce a minimum number of seams. Border widths minimum 1/3 width of full material.

.4 Run sheets in direction of traffic. Double cut sheet joints and continuously seal heat weld according to manufacturer's printed instructions.

.5 Heat weld seams of linoleum sheet flooring in accordance with manufacturer's printed instructions.

.6 As installation progresses, and after installation roll flooring with 45 kg minimum roller to ensure full adhesion.

.7 Cut flooring around fixed objects.

.8 Install feature strips and floor markings where indicated. Fit joints tightly.

.9 Install flooring in pan type floor access covers. Maintain floor pattern.

.10 Continue flooring over areas which will be under built-in furniture.

.11 Continue flooring through areas to receive movable type partitions without interrupting floor pattern.

.12 Terminate flooring at centreline of door in openings where adjacent floor finish or colour is dissimilar.

.13 Install metal edge strips at unprotected or exposed edges where flooring terminates.

3.6 FIELD QUALITY CONTROL

.1 Manufacturer's Field Services:

.1 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

3.7 CLEANING

.1 Proceed in accordance with Section 01 74 11 - Cleaning.

.2 Remove excess adhesive from floor, base and wall surfaces without damage.

.3 Clean, seal and wax floor and base surface to flooring manufacturer's printed instructions.

3.8 PROTECTION

.1 Protect new floors from time of final set of adhesive until final inspection.

.2 Prohibit traffic on floor for 48 hours after installation.

END OF SECTION

Part 1 General

1.1 REFERENCES

.1 American Society for Testing and Materials International (ASTM)

.1 ASTM F1066-04, Standard Specification for Vinyl Composition Floor Tile.

.2 ASTM F1344-04, Standard Specification for Rubber Floor Tile.

.2 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-25.20-95, Surface Sealer for Floors.

.2 CAN/CGSB-25.21-95, Detergent-Resistant Floor Polish.

.3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

.4 South Coast Air Quality Management District (SCAQMD), California State

.1 SCAQMD Rule 1168-05, Adhesives and Sealants Applications.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

.1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

.2 Provide product data in accordance with Section 01 33 00 - Submittal Procedures.

.3 Provide samples in accordance with Section 01 33 00 - Submittal Procedures.

.1 Submit duplicate tile in size specified, base, nosing, feature strips, treads, edge strips 300 mm long.

.4 Closeout Submittals:

.1 Provide maintenance data for resilient flooring for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.

1.3 DELIVERY, STORAGE AND HANDLING

.1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.

1.4 ENVIRONMENTAL REQUIREMENTS

.1 Maintain air temperature and structural base temperature at flooring installation area above 20 degrees C for 48 hours before, during and for 48 hours after installation.

1.5 MAINTENANCE

.1 Extra Materials:

.1 Provide maintenance materials of resilient tile flooring, base and adhesive in accordance with Section 01 78 00 - Closeout Submittals.

.2 Provide 12 m^2 of each colour, pattern and type flooring material required for this project for maintenance use.

.3 Extra materials from same production run as installed materials.

.4 Identify each container of floor tile and each container of adhesive.

.5 Deliver to occupant, upon completion of the work of this section.

.6 Store where directed by Departmental Representative.

Part 2 Products

2.1 MATERIALS

.1 High vinyl tile (VT) : to ASTM F1066, Composition 1 - non asbestos

.1 Johnsonite – ID Inspiration

.1 Color to be chosen from manufacturers standard colors

.2 Wear Layer Min 0.7 mm

.3 Warrantee Residential: Lifetime

.4 Tile Dimensions: 1000 x 167.

.2 Underlayment:

.1 Underlayment plywood ½” under all flooring

.3 Finish:

.1 Factory prefinished.

.4 Primers and adhesives: waterproof recommended by flooring manufacturer for specific material on applicable substrate, above, at or below grade.

.1 Flooring adhesives:

.1 Adhesive: maximum VOC limit 50 60 g/L to SCAQMD Rule 1168.

.2 Use adhesive as recommended in manufacturers installation instructions. (Johnsonite #926) for standard applications.

.5 Sub-floor filler and leveller: white premix latex requiring water only to produce cementitious paste as recommended by flooring manufacturer for use with their product.

.6 Metal edge strips: aluminum extruded, smooth, mill finish polished with lip to extend under floor finish, shoulder flush with top of adjacent floor finish.

.7 Resilient stair tread: Johnsonite Rubber stringers and risers Texture BMTR – Color to be chosen from manufacturers standard group.

Part 3 Execution

3.1 MANUFACTURER'S INSTRUCTIONS

.1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

3.2 INSPECTION

.1 Ensure concrete floors are dry, by using test methods recommended by tile manufacturer.

3.3 SUB-FLOOR TREATMENT

.1 Remove existing resilient flooring.

.2 Remove or treat old adhesives to prevent residual, old flooring adhesives from bleeding through to new flooring and/or interfering with the bonding of new adhesives.

.3 Clean floor and apply filler; trowel and float to leave smooth, flat hard surface. Prohibit traffic until filler cured and dry.

.4 Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes and other defects with sub-floor filler.

.5 Install underlayment

3.4 TILE APPLICATION

.1 Provide high ventilation rate, with maximum outside air, during installation, and for 48 to 72 hours after installation. If possible, vent directly to outside. Do not let contaminated air recirculate through district or whole building air distribution system. Maintain extra ventilation for at least one month following building occupation.

.2 Apply adhesive uniformly using recommended trowel in accordance with flooring manufacturer's instructions. Do not spread more adhesive than can be covered by flooring before initial set takes place.

.3 Lay flooring with joints parallel to building lines to produce symmetrical tile pattern. Border tiles minimum half tile width.

.4 Install flooring as per manuf. instrucitons

.5 Cut tile and fit neatly around fixed objects.

.6 Install feature strips and floor markings where indicated. Fit joints tightly.

.7 Install flooring in pan type floor access covers. Maintain floor pattern.

.8 Continue flooring through areas to receive movable type partitions without interrupting floor pattern.

.9 Terminate flooring at centerline of door in openings where adjacent floor finish or colour is dissimilar.

.10 Install metal edge strips at unprotected or exposed edges where flooring terminates.

3.5 FIELD QUALITY CONTROL

.1 Manufacturer's Field Services:

.1 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.

3.6 CLEANING

.1 Proceed in accordance with Section 01 74 11 - Cleaning.

.2 Remove excess adhesive from floor, base and wall surfaces without damage.

.3 Clean, seal and wax floor and base surface to flooring manufacturer's instructions. In carpeted areas clean, seal and wax base surface before carpet installation.

3.7 PROTECTION

.1 Protect new floors from until final waxing.

.2 Prohibit traffic on floor for 48 hours after installation.

END OF SECTION

Part 1 General

1.1 REFERENCES

.1 Health Canada/Workplace Hazardous Materials Information System (WHMIS)

.1 Material Safety Data Sheets (MSDS).

.2 Master Painters Institute (MPI)

.1 MPI Architectural Painting Specifications Manual, 2004.

.2 MPI - Maintenance Repainting Manual, 1998.

1.2 SUBMITTALS

.1 Submittals in accordance with Section 01 33 00 - Submittal Procedures 01 00 10 - General Instructions.

.2 Product Data:

.1 Submit product data and instructions for each paint and coating product to be used.

.2 Submit product data for the use and application of paint thinner.

.3 Submit two copies of Workplace Hazardous Materials Information System (WHMIS) Material Safety Data Sheets (MSDS) in accordance with Section 01 33 00 - Submittal Procedures 01 00 10 - General Instructions.

.4 Submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.

.5 Submit manufacturer's installation and application instructions.

1.3 STORAGE AND HANDLING

.1 Storage and Protection:

.1 Provide and maintain dry, temperature controlled, secure storage.

.2 Store materials and supplies away from heat generating devices.

.3 Store materials and equipment in well ventilated area within temperature as recommended by manufacturer.

.2 Fire Safety Requirements:

.1 Provide one 9 kg Type ABC dry chemical fire extinguisher adjacent to storage area.

.2 Store oily rags, waste products, empty containers and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site on a daily basis.

.3 Handle, store, use and dispose of flammable and combustible materials in accordance with National Fire Code of Canada requirements.

1.4 WASTE MANAGEMENT AND DISPOSAL

.1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management And Disposal.

.2 Remove from site and dispose of packaging materials at appropriate recycling facilities.

.3 Place materials defined as hazardous or toxic waste, including tubes and containers, in containers or areas designated for hazardous waste.

.4 Paint, stain and wood preservative finishes and related materials (thinners, and solvents) are regarded as hazardous products and are subject to regulations for disposal. Information on these controls can be obtained from Territorial Ministries of Environment and Regional levels of Government.

1.5 SITE CONDITIONS

.1 Heating, Ventilation and Lighting:

.1 Ventilate enclosed spaces continuously during and after painting process. Run ventilation system 24 hours per day during installation, and provide continuous ventilation for 7 days after completion of application of paint.

.2 Co-ordinate use of existing ventilation system with Property Manager and ensure its operation during and after application of paint as required.

.3 Provide minimum lighting level of 323 Lux on surfaces to be painted.

.2 Temperature, Humidity and Substrate Moisture Content Levels:

.1 Apply paint finishes when ambient air and substrate temperatures at location of installation can be satisfactorily maintained during application and drying process, within MPI and paint manufacturer's prescribed limits.

.2 Test concrete, masonry and plaster surfaces for alkalinity as required.

.3 Apply paint to adequately prepared surfaces, when moisture content is below paint manufacturer's prescribed limits.

.3 Additional application requirements:

.1 Apply paint finish in areas where dust is no longer being generated by related construction operations or when wind or ventilation conditions are such that airborne particles will not affect quality of finished surface.

.2 Apply paint in occupied facilities during silent hours only. Schedule operations to approval of Property Manager such that painted surfaces will have dried and cured sufficiently before occupants are affected.

Part 2 Products

2.1 MATERIALS

.1 Provide paint materials for paint systems from single manufacturer.

.1 Acceptable Manufacturers: Sherwin Williams, Benjamin Moore, Pittsburgh Paints.

.2 Or approved equivalent

.2 Conform to latest MPI requirements for all painting work including preparation and priming.

.3 Materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, thinners, solvents, etc.) in accordance with MPI - Architectural Painting Specification Manual and MPI - Maintenance Repainting Manual "Approved Product" listing.

.4 Use MPI listed materials having minimum E2 rating where indoor air quality (odour) requirements exist.

2.2 COLOURS

.1 Colour schedule will be based upon selection of 2 base colours and two accent colours.

2.3 MIXING AND TINTING

.1 Perform colour tinting operations prior to delivery of paint to site, in accordance with manufacturer's written instructions. Obtain written approval from Consultant for tinting of painting materials.

.2 Use and add thinner in accordance with paint manufacturer's recommendations. Do not use kerosene or similar organic solvents to thin water-based paints.

.3 Thin paint for spraying in accordance with paint manufacturer's instructions.

.4 Re-mix paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and colour and gloss uniformity.

2.4 GLOSS/SHEEN RATINGS

.1 Paint gloss is defined as sheen rating of applied paint, in accordance with following values:

	Gloss @ 60 degrees	Sheen @ 85 degrees
Gloss Level 1 - Matte Finish (flat)	Max. 5	Max. 10
Gloss Level 2 - Velvet-Like Finish	Max.10	10 to 35
Gloss Level 3 - Eggshell Finish	10 to 25	10 to 35
Gloss Level 4 - Satin-Like Finish	20 to 35	min. 35
Gloss Level 5 - Traditional Semi-Gloss Finish	35 to 70	
Gloss Level 6 - Traditional Gloss	70 to 85	
Gloss Level 7 - High Gloss Finish	More than 85	

.2 Gloss level ratings of painted surfaces as indicated and as noted on Finish Schedule.

2.5 EXTERIOR PAINTING

.1 Concrete Vertical Surfaces: (including horizontal soffits)

.1 EXT 3.1A - Latex semi gloss finish.

.2 Concrete Masonry Units: smooth and split face block and brickEXT 4.2A - Latex semi gloss finish.

.3 Structural Steel and Metal Fabrications: columns, beams, joists and miscellaneous metal.

.1 EXT 5.1D - Alkyd semi gloss finish.

.4 Galvanized Metal: high contact/high traffic areas (doors, frames, railings and handrails, etc.).

.1 EXT 5.3B - Alkyd semi gloss finish.

.5 Dimension Lumber: columns, beams, exposed joists, underside of decking, siding, fencing, etc.

.1 EXT 6.2B - Waterborne solid colour stain finish.
.2 EXT 6.2C - Alkyd semi gloss finish.
.3 EXT 6.2L - Semi-transparent stain finish.

.6 Dressed Lumber: doors, door and window frames, casings, battens, smooth facias, etc.

.1 EXT 6.3B - Alkyd semi gloss finish do not use flat finish on doors.
.2 EXT 6.3C - Solid colour stain finish do not use in high contact areas or on doors.
.3 EXT 6.3D - Semi-transparent stain finish do not use on doors.

2.6 INTERIOR PAINTING

.1 Structural Steel and Metal Fabrications: columns, beams, joists and miscellaneous metal.

.1 INT 5.1E Alkyd - semi gloss finish.

.2 Galvanized Metal: high contact/high traffic areas (doors, frames, railings and handrails, etc.).

.1 INT 5.3C - Alkyd semi gloss finish (over cementitious primer).

.3 Plaster and gypsum board: gypsum wallboard, drywall, "sheet rock" type material, etc.

.1 INT 9.2A - Latex semi gloss finish (over latex sealer).
.2 INT 9.2C - Alkyd semi gloss finish (over latex sealer).
.3 INT 9.2M - Institutional low odour/low VOC semi gloss finish.

Part 3 Execution

3.1 GENERAL

.1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and data sheet.

.2 Perform preparation and operations for interior painting in accordance with MPI - Architectural Painting Specifications Manual and MPI - Maintenance Repainting Manual except where specified otherwise.

3.2 EXAMINATION

.1 Investigate existing substrates for problems related to proper and complete preparation of surfaces to be painted. Report to Departmental Representative and General Contractor damages, defects, unsatisfactory or unfavourable conditions before proceeding with work.

.2 Conduct moisture testing of surfaces to be painted using properly calibrated electronic moisture meter, except test concrete floors for moisture using simple "cover patch test". Do not proceed with work until conditions fall within acceptable range as recommended by manufacturer.

3.3 PREPARATION

.1 Protection:

.1 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore surfaces as directed by RCMP Property Manager or Consultant.

.2 Protect items that are permanently attached such as Fire Labels on doors and frames.

.3 Protect factory finished products and equipment.

.2 Surface Preparation:

.1 Remove electrical cover plates, light fixtures, surface hardware on doors, bath accessories and other surface mounted equipment, fittings and fastenings prior to undertaking painting operations. Identify and store items in secure location and re-installed after painting is completed.

.2 Move and cover furniture and portable equipment as necessary to carry out painting operations. Replace as painting operations progress.

.3 Place "WET PAINT" signs in occupied areas as painting operations progress. Signs to approval of RCMP Property Manager.

.3 Clean and prepare surfaces in accordance with MPI - Architectural Painting Specification Manual and MPI - Maintenance Repainting Manual specific requirements and coating manufacturer's recommendations.

.4 Prevent contamination of cleaned surfaces by salts, acids, alkalis, other corrosive chemicals, grease, oil and solvents before prime coat is applied and between applications of remaining coats. Apply primer, paint, or pretreatment as soon as possible after cleaning and before deterioration occurs.

.5 Where possible, prime non-exposed surfaces of new wood surfaces before installation. Use same primers as specified for exposed surfaces.

.1 Apply vinyl sealer to MPI #36 over knots, pitch, sap and resinous areas.

.2 Apply wood filler to nail holes and cracks.

.3 Tint filler to match stains for stained woodwork.

.6 Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects visible from a distance up to 1000 mm.

.7 Clean metal surfaces to be painted by removing rust, loose mill scale, welding slag, dirt, oil, grease and other foreign substances in accordance with MPI requirements.

.8 Touch up of shop primers with primer as specified.

.9 Do not apply paint until prepared surfaces have been accepted by Consultant

3.4 APPLICATION

.1 Method of application to be as approved by Consultant. Conform to manufacturer's application instructions unless specified otherwise.

.2 Apply coats of paint continuous film of uniform thickness. Repaint thin spots or bare areas before next coat of paint is applied.

.3 Allow surfaces to dry and properly cure after cleaning and between subsequent coats for minimum time period as recommended by manufacturer.

.4 Sand and dust between coats to remove visible defects.

.5 Finish surfaces both above and below sight lines as specified for surrounding surfaces, including such surfaces as tops of interior cupboards and cabinets and projecting ledges.

3.5 SCHEDULE

.1 Paint all new interior casings with 1 coat primer and 2 coats semi gloss paint. Color to match existing trim color.

.2 Re-Paint as required to repair damage caused by window removal and installation.

END OF SECTION

VBU-87 – 9-15 Ayaruaq Street

Photo 1 Existing Kitchen

Photo 2 Existing Kitchen

Photo 3 Damaged Vinyl Covered Drywall

Photo 4: Typical Light

Photo 5 Existing Window

VBU-83 – 5-15 Ayaruaq Street

Photo 6 Front Elevation

Photo 7 Rear Elevation

Photo 8 Left Elevation

Photo 9 Left Elevation

Photo 10 Existing hand rail to be removed

Photo 11 Existing Kitchen

Photo 12Existing Window Sill

Photo 13 Existing Bathroom

New Stairs 7-11 and 7-15 Ayaruaq Street

Photo 14 Typical Stairs

End of Section