
Part 1 GENERAL

1.1 CODES

- .1 Perform Work to CURRENT Codes, Construction Standards and Bylaws, including Amendments up to the TENDER closing date.

1.2 DESCRIPTION OF WORK

- .1 Work under this Contract covers design, provision, and installation of new or used transportable buildings at Penticton Airport at Penticton, B.C., with all related works unless specifically excluded.
- .2 Work to be performed under this Contract includes, but is not limited to, the following items covered further in the Contract documents.
 - .1 Municipal permits
 - .2 Design and Preparation of site prior to installation of buildings
 - .3 Design and Provision of foundation and anchoring
 - .4 Connection of site services (gas, electricity, communication), electrical grounding of units on site, electrical interconnections of units
 - .5 Delivery and placement on site
 - .6 Design and Provision of free standing canopy (non-combustible construction)
 - .7 Design and Provision of landings, stairs, ramps, guard and hand rails, perimeter skirting, anchor tie downs
 - .8 Remedial work
- .3 Sustainability Requirements:
 - .1 Prevent construction activity pollution
 - .2 Commission building energy systems
 - .3 Use only non ozone depleting refrigerant
 - .4 Provide Storage and Collection of Recyclables
 - .5 Divert 75% of construction waste
 - .6 Provide materials with the highest recycled content in post consumer and post-industrial materials
 - .7 Use local/regional materials extracted and manufactured regionally
 - .8 Use low-emitting adhesives, sealants, paints and coatings, flooring systems and composite wood and agrifiber products

1.3 PROJECT REQUIREMENTS

- .1 This is a design-build project. The Contractor shall supply all labour and materials to design, unless otherwise specified, obtain permits, construct, and install the transportable buildings in accordance with the contract documents.
- .2 Work of all disciplines including Architectural, Structural, Mechanical, and Electrical shall be coordinated by the Design-Build Contractor. Design-Build Contractor shall provide coordinated drawings that clearly indicate fixing and mounting details of all components.

1.4 OTHER CONTRACTS

- .1 Another Contract is currently in progress at site for rehabilitation of the runway, part of the taxiway, and access roads. The contact information for this contractor is:
 - .1 Peter Bros.: Telephone (250) 492-2626.
- .2 Further Contracts may be awarded while this contract is in progress.
- .3 Cooperate with other Contractor in carrying out their respective works and carry out instructions from Departmental Representative.
- .4 Coordinate Work with that of other Contractor. If any part of work under this Contract depends for its proper execution or result upon work of another Contractor, report promptly to Departmental Representative, in writing, any defects which may interfere with proper execution of this Work.

1.5 CONTRACT DOCUMENTS

- .1 The Contract documents, drawings and specifications are intended to complement each other, and to provide for and include everything necessary for the completion of the work.
- .2 Drawings are, in general, diagrammatic and are intended to indicate the scope and general arrangement of the work.

1.6 DIVISION OF SPECIFICATIONS

- .1 The specifications are subdivided in accordance with the current 6-digit National Master Specifications System.
- .2 A division may consist of the work of more than 1 subcontractor. Responsibility for determining which subcontractor provides the labour, material, equipment and services required to complete the work rests solely with the Contractor.
- .3 In the event of discrepancies or conflicts when interpreting the drawings and specifications, the specifications govern.

1.7 TIME OF COMPLETION

- .1 **The schedule for the Overflow Shelter is critical to the operation of the airport. Complete the Overflow Shelter and connection corridor to the Air Terminal Building at the existing Hold Room within 4 weeks after Contract Award.**
- .2 Complete the entire project ready for use within 13 weeks after Contract Award.

1.8 HOURS OF WORK

- .1 Restrictive in area and time as follows:
 - .1 Perform work during normal working hours of 0800 to 1600, Monday through Friday except holidays. Work may be performed after normal working hours of, Monday through Friday, on weekends and holidays, with the prior approval of the Departmental Representative. Provide schedule for prior approval from the Departmental Representative.
 - .2 Work shall be organized such that all the Contractor's personnel are under the direct supervision of supervisory personnel provided by Transport Canada.
 - .3 Notify Departmental Representative of all after hours work, including weekends and holidays.

1.9 WORK SCHEDULE

- .1 Within 2 working days after Contract award, provide a schedule of work demonstrating how the Contractor will meet the completion deadline for the Overflow Shelter.**
- .2 Within 5 working days after Contract award, provide a “phasing bar chart” and a GANTT chart showing anticipated progress stages and final completion of the work for the entire project within the time period required by the Contract documents. Indicate the following:**
 - .1 Submission of shop drawings, product data, MSDS sheets and samples.**
 - .2 Commencement and completion of work of each section of the specifications or trade for each phase as outlined.**
 - .3 Indicate on all units the start and completion dates of manufacturing.**
 - .4 Final completion date within the time period required by the Contract documents.**
- .3 Do not change approved Schedules – without notifying Departmental Representative.**
- .4 Interim reviews of work progress based on work schedule will be conducted as decided by Departmental Representative and schedule updated by Contractor in conjunction with and to approval of Departmental Representative.**

1.10 COST BREAKDOWN

- .1 Before submitting the first progress claim, submit a breakdown of the Contract lump sum prices in detail as directed by the Departmental Representative and aggregating Contract price.**

1.11 CODES, BYLAWS, STANDARDS

- .1 Perform work in accordance with the National Building Code of Canada (NBC) 2010 and other indicated Codes, Construction Standards and/or any other Code or Bylaw of local application.**
- .2 Comply with applicable local bylaws, rules and regulations enforced at the location concerned. This includes Transport Canada – Civil Aviation Authority for any work airside.**
- .3 Meet or exceed requirements of Contract documents, specified standards, codes and referenced documents.**
- .4 In any case of conflict or discrepancy, the most stringent requirements shall apply.**

1.12 DOCUMENTS REQUIRED

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

- .9 Reviewed/approved samples
- .10 Manufacturers' installation and application instructions
- .11 One set of record drawings and specifications for "as-built" purposes
- .12 National Building Code of Canada 2010
- .13 Current construction standards of workmanship listed in technical Sections
- .14 Building Safety Plan

1.13 REGULATORY REQUIREMENTS

- .1 Provide inspection authorities having jurisdiction with plans and information required for issue of acceptance certificates.
- .2 Pay fees and obtain certificates and permits required.
- .3 Furnish inspection certificates in evidence that the work installed conforms to the requirements of the authority having jurisdiction.
- .4 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada and Health Canada.
- .5 Deliver copies of WHMIS data sheets to Departmental Representative on delivery of materials.

1.14 CONTRACTOR'S USE OF SITE

- .1 Use of site:
 - .1 Enclosed construction area only. See plans for clarification. All others with the permission of the Departmental Representative.
 - .2 Assume responsibility as Prime Contractor for performance of this work.
 - .3 Be responsible for coordination of all work activities on site.
- .2 Perform work in accordance with Contract documents. Ensure work is carried out in accordance with indicated phasing.
- .3 Do not unreasonably encumber site with material or equipment.

1.15 EXAMINATION

- .1 Examine site & be familiar & conversant with existing conditions likely to affect work
- .2 Provide photographs of surrounding properties, objects and structures liable to be damaged or be the subject of subsequent claims.

1.16 EXISTING SERVICES

- .1 Where work involves breaking into or connecting to existing services, carry out work at times directed by the authorities having jurisdiction.

1.17 LOCATION OF EQUIPMENT AND FIXTURES

- .1 Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space, and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .3 Inform Departmental Representative of impending installation and obtain his approval for actual locations.

- .4 Submit field drawings or shop drawings to indicate the relative position of various services and equipment when required by the Departmental Representative.

1.18 CUTTING AND PATCHING

- .1 Cut existing surfaces as required to accommodate new work.
- .2 Remove items so shown or specified.
- .3 Do not cut, bore, or sleeve load-bearing members.
- .4 Make cuts with clean, true, smooth edges. Make patches inconspicuous in final assembly.
- .5 Fit work airtight to pipes, sleeves, ducts and conduits.
- .6 Conceal pipes, ducts and wiring in raised floors, wall and ceiling construction of finished areas except where indicated otherwise.
- .7 Patch and make good surfaces cut, damaged or disturbed, to Departmental Representative's approval. Match existing material, colour, finish and texture.
- .8 Install firestops and smoke seals in accordance with ULC-S115, around pipe, ductwork, cables and other objects penetrating fire separations to provide fire resistance not less than the fire resistance of surrounding floor, ceiling, and wall assembly.
- .9 Making good is defined as matching construction and finishing materials and the adjacent surfaces such that there is no visible difference between existing and new surfaces when viewed from 1.5 metres in ambient light, and includes painting the whole surface to the next change in plane.
- .10 Provide supports to assure structural integrity of surroundings.

1.19 SETTING OUT OF WORK

- .1 Assume full responsibility for and execute complete layout of Work to locations, lines and elevations indicated.
- .2 Provide devices needed to lay out and construct work.
- .3 Supply such devices as straight edges and templates required to facilitate Departmental Representative's inspection of work.
- .4 Supply stakes and other survey markers required for laying out Work.

1.20 ACCEPTANCE OF SUBSTRATES

- .1 Each trade shall examine surfaces prepared by others and job conditions which may affect his work, and shall report defects to the Departmental Representative. Commencement of work shall imply acceptance of prepared work or substrate surfaces.

1.21 QUALITY OF WORK

- .1 Allow Departmental Representative access to Work for inspection purposes.
- .2 Ensure that quality workmanship is performed through use of skilled tradesmen, under supervision of qualified journeyman.
- .3 The workmanship, erection methods and procedures to meet minimum standards set out in the National Building Code of Canada 2010.
- .4 In cases of dispute, decisions as to standard or quality of work rest solely with the Departmental Representative, whose decision is final.

1.22 TEMPORARY UTILITIES

- .1 Provide the following temporary utilities in order to execute work expeditiously.
 - .1 Electrical power
 - .2 Lighting
 - .3 Sanitary facility
 - .1 Post notices and take such precautions as required by local health authorities. Keep areas and premises in sanitary condition.
 - .4 Potable water
 - .5 Telephone, fax, and data necessary for own use.
- .2 Arrange for connection temporary utilities with appropriate utility company. Pay all costs for installation, maintenance, and removal.
- .3 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies and authorities having jurisdiction, governing codes, regulations, and by-laws.
- .4 Night Work lighting:
 - .1 Shall be fit with adjustable glare shields to eliminate any direct night time illumination between the unit and the Control Tower, runway, taxiways, aircraft aprons.
 - .2 If requested by the Control Tower personnel, the Contractor shall adjust shields or reposition the lights to limit glare interference with Airport traffic or the Control Tower.
 - .3 The contractor shall always point sources away from the Control Tower.

1.23 CONSTRUCTION FACILITIES

- .1 Provide construction facilities in order to execute work expeditiously.
- .2 Remove from site all such work after use.
- .3 Confine work and operations of employees to areas defined by Contract Documents. Do not unreasonably encumber premises with products.
- .4 No parking is available on construction site.
- .5 Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment, and materials.
- .6 Locate materials not required to be stored in weatherproof sheds on site in a manner to cause least interference with work activities.

1.24 TEMPORARY BARRIERS

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Provide barricades at locations as indicated and as directed by Departmental Representative to separate active air traffic areas from the work site.
- .3 Remove any temporary fencing and barricades upon substantial completion of the work. Repair damage caused by installation and removal of fence and barricades to satisfaction of Departmental Representative.

1.25 WORKS COORDINATION

- .1 Coordinate work of subtrades.
 - .1 Designate one person to be responsible for review of contract documents and shop drawings and managing coordination of Work.
- .2 Convene meetings between subcontractors whose work interfaces and ensure awareness of areas and extent of interface required.
 - .1 Provide each subcontractor with complete plans and specifications for Contract, to assist them in planning and carrying out their respective work.
 - .2 Develop coordination drawings when required, illustrating potential interference between work of various trades and distribute to affected parties.
 - .1 Pay particular close attention to work that is overhead, within or near building structural elements, and adjacent buildings.
 - .2 Identify on coordination drawings, building elements, service lines, rough-in points and indicate location services entrance to site.
 - .3 Facilitate meeting and review coordination drawings. Ensure subcontractors agree and sign off on drawings.
 - .4 Publish minutes of each meeting.
 - .5 Plan and coordinate work in such a way to minimize quantity of service line offsets.
 - .6 Submit copy of coordination drawings and meeting minutes to Departmental Representative for information purposes.
- .3 Submit shop drawings and order of prefabricated equipment or rebuilt components only after coordination meeting for such items has taken place.
- .4 Work coordination:
 - .1 Ensure cooperation between trades in order to facilitate general progress of Work and avoid situations of spatial interference.
 - .2 Ensure that each trade provides all other trades reasonable opportunity for completion of Work and in such a way as to prevent unnecessary delays, cutting, patching and removal or replacement of completed work.
 - .3 Ensure disputes between subcontractors are resolved.
- .5 Departmental Representative is not responsible for, or accountable for extra costs incurred as a result of Contractor's failure to coordinate Work.

1.26 APPROVAL OF SHOP DRAWINGS, PRODUCT DATA AND SAMPLES

- .1 In accordance with Section 01 33 00, submit the requested shop drawings, product data, MSDS sheets and samples indicated in each of the technical Sections.
- .2 Allow sufficient time for the following:
 - .1 Review of product data.
 - .2 Approval of shop drawings.
 - .3 Review of re-submission.

1.27 PROJECT MEETINGS

- .1 Departmental Representative will arrange project meetings and assume responsibility for setting times and recording and distributing minutes.

1.28 TESTING AND INSPECTION

- .1 The Contractor will appoint and pay for the services of testing agency or testing laboratory as specified, and where required for the following:
 - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
 - .2 Inspection and testing performed exclusively for Contractor's convenience.
 - .3 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems:
 - .1 Mill tests and certificates of compliance.
 - .2 Tests specified to be carried out by Contractor under the Departmental Representative's supervision.
- .2 Where tests or inspections by designated testing laboratory reveal work is not in accordance with the Contract requirements, Contractor shall pay costs for additional tests or inspections as the Departmental Representative may require to verify acceptability of correct work.
- .3 Contractor shall furnish labour and facilities to:
 - .1 Notify Departmental Representative in advance of planned testing.
- .4 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .5 Pay costs for uncovering and making good work that is covered before required inspection or testing is completed and approved by Departmental Representative.
- .6 Provide Departmental Representative with 2 copies of testing laboratory reports as soon as they are available.

1.29 AS-BUILT DOCUMENTS

- .1 As work progresses, maintain accurate records to show all deviations from the Contract documents. Note on as-built specifications, drawings and shop drawings as changes occur.
- .2 Contractor shall provide Departmental Representative 2 hardcopies of as-built drawings and specifications. Provide 2 CDs of AutoCAD files and PDFs of as-built drawings & specifications, shop drawings and O&M manual. The documents shall be marked "As-Built" in the appropriate locations.

1.30 CLEANING

- .1 Maintain Work area in tidy condition, free from accumulation of waste products and debris.
- .2 Provide on site containers for collection off waste materials and debris.
- .3 Dispose of waste materials and debris off site. Comply with local ordinances and anti-pollution laws.
- .4 Ensure cleanup of the work area each day after completion of the days work.
- .5 Clean interior building areas when ready to receive finish painting and continue cleaning on an as-needed basis until building is sufficiently completed or ready for occupancy.

- .6 When Work is substantially performed:
 - .1 Remove surplus products, tools, and construction equipment not required for performance of remaining Work.
 - .2 Remove waste products and debris.
- .7 Prior to final inspection remove surplus products, tools, and construction equipment.
- .8 In preparation for interim and final inspections:
 - .1 Examine all sight-exposed interior and exterior surfaced and concealed spaces.
 - .2 Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials from sight-exposed interior and exterior finished surfaces, including glass and other polished surfaces.
- .9 Use cleaning materials and methods in accordance with instructions of the manufacturer of the surface to be cleaned.
- .10 Sweep and wash clean concrete sidewalks and paved areas.

1.31 DUST CONTROL

- .1 Provide temporary dust tight screens or partitions to localize dust generating activities, and for protection of workers, finished areas of work and public.
- .2 Protect furnishings within work area with 0.102 mm thick polyethylene film during construction. Remove film during non-construction hours and leave premises in clean, unencumbered and safe manner for normal daytime function.
- .3 Maintain and relocate protection until such work is complete.

1.32 ENVIRONMENTAL PROTECTION

- .1 Prevent extraneous materials from contaminating air beyond construction area, by providing temporary enclosures during work.
- .2 Clean tires of vehicles prior to leaving site. Do not permit dust and dirt accumulations on public roadways. Clean public roadways that become soiled with dust and dirt from site.
- .3 Do not dispose of waste or volatile materials into water courses, storm or sanitary sewers.
- .4 Ensure proper disposal procedures in accordance with all applicable provincial regulations.
- .5 Fires and burning of rubbish is not permitted on site.
- .6 Do not bury rubbish and waste material on site.
- .7 Spills of deleterious materials:
 - .1 Immediately contain, limit spread, and clean up in accordance with provincial regulatory requirements.
 - .2 Report immediately to Departmental Representative and other appropriate jurisdiction.
 - .3 Further information on dangerous good emergency clean up and precautions including a list of companies performing this work can be obtained from the Transport Canada 24-hour telephone number (613) 996-6666 collect.

1.33 MAINTENANCE MATERIALS, SPECIAL TOOLS AND SPARE PARTS

- .1 Specific requirements for maintenance materials, tools and spare parts are specified in Section 01 78 00.

1.34 ADDITIONAL DRAWINGS

- .1 The Departmental Representative may furnish additional drawings for clarification. These additional drawings have the same meaning and intent as if they were included with plans referred to in the Contract documents.
- .2 Upon request, Departmental Representative may furnish up to a maximum of 10 sets of Contract documents for use by the Contractor at no additional cost. Should more than 10 sets of documents be required the Departmental Representative will provide them at additional cost.

1.35 BUILDING SMOKING ENVIRONMENT

- .1 Smoking within the building is not permitted.

1.36 SYSTEM OF MEASUREMENT

- .1 The metric system of measurement (SI) will be employed on this Contract.

1.37 FAMILIARIZATION WITH SITE

- .1 Before submitting tender, visit site – as indicated in tender documents and become familiar with all conditions likely to affect the cost of the work.

1.38 SUBMISSION OF TENDER

- .1 Submission of a tender is deemed to be confirmation of the fact that the Tenderer has analyzed the Contract documents and inspected the site, and is fully conversant with all conditions.

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 RESTRICTED OR SECURE AREA

- .1 Any area on airport property to which access is restricted by sign and/or monitored is a secure or restricted area.
- .2 In general, access to the airside of the Airport is restricted to the access points indicated on the drawings or as subsequently approved by the Airport Manager. All personnel and vehicles entering or leaving the construction site must follow prescribed access routes and be under escort or surveillance.
- .3 Security measures shall be taken at the Contractor's expense to meet the Airport's security requirements.
- .4 The RCMP may, for security reasons, remove all of the Contractor's workforce from the Airport at any time. No assessment for temporary "Stop Work" periods will be payable by Transport Canada

1.2 CONTRACTOR'S RESPONSIBILITY

- .1 General Contractor and subcontractor shall be responsible for construction, personnel and vehicles employed on project and requiring access to restricted areas.
- .2 Personnel employed on this project will be subject to security check to ensure enhanced reliability clearance. Obtain requisite clearances, as instructed, for each individual required to enter the premises.
- .3 All Contract personnel and equipment must remain within designated work areas at all times.
- .4 Contractors shall be responsible for the security of their own equipment and materials.

1.3 PASSES AND KEYS

- .1 Passes are mandatory on airside and other restricted areas for all personnel engaged in work and are subject to AIRPORT RESTRICTED AREA ACCESS CLEARANCE.
- .2 Passes for personnel requiring access to restricted area will be made available on application to the Airport Manager.
- .3 Departmental Representative will provide one commissionaire (approved by Airport Manager) to have permanent passes and be present during all times phases of the project.
- .4 Permanent pass holders - Commissionaires shall provide ESCORT and SURVEILLANCE to temporary pass holders.
- .5 Personnel will be checked in at start of work shift and provided with a temporary pass which must be worn at all times. Pass must be returned at end of work shift and personnel checked out. The safekeeping of these passes, until returned, will be responsibility of Contractor.
- .6 On completion of project, passes will be returned to Airport Manager. A charge of \$500.00 will be issued for each pass not returned.

1.4 RESPONSIBLE PERSONNEL

- .1 Provide the Departmental Representative and the Airport Manager with a list of responsible personnel and phone numbers, and those of subcontractors, who may be contacted after working hours in case of emergency

1.5 DELIVERIES

- .1 Any delivery vehicle required to encroach on aircraft movement/ manoeuvring areas not closed to aircraft traffic must comply with the requirements of Section 013527.
- .2 Escort vehicle and trained escort personnel must be provided by Contractor.

1.6 EXISTING SECURITY BARRIERS

- .1 Security barriers, such as doors, fences, gates, locks, or door hardware, which are required to be removed, must be replaced, if practicable, at the end of each work day. If it is necessary to remove barriers for an extended period, enclose unprotected areas with temporary hoarding. Where the possibility exists that the restricted area may be left unprotected at the end of the work day, inform the Airport Manager immediately.
- .2 Failure to restore such security barriers when required will result in their restoration by other forces and the cost of such restoration being recovered from the Contractor.

1.7 DAILY SECURITY

- .1 Contractor shall be fully responsible for securing the premises and its contents throughout the construction period.
- .2 Ensure that access to the restricted area is secured at the end of each work day.
- .3 When work is to be done within the restricted area after scheduled working hours, notify the Airport Manager of area and times.
- .4 The Contractor shall follow the Airport Manager's instructions to maintain airport security during all phases of construction. Any work required to restore airport security will be carried out the Contractor's expense.

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 Departmental Representative submittals listed for review as per approved schedule. 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 SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Review submittals prior to submission to Departmental Representative. 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 Departmental Representative 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 Departmental Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative 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 Province of British Columbia, 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 5 days for Departmental Representative's review of each submission.
- .5 Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.

- .7 Accompany submissions with electronic transmittal information, 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 Departmental Representative's review, distribute copies.
- .10 Submit electronic copy of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
- .11 Submit electronic copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative 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 Departmental Representative.
 - .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 Departmental Representative.
 - .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 copies of manufacturers instructions for requirements requested in specification Sections and as requested by Departmental Representative.
 - .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 electronic copies of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .16 Submit electronic copies of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Departmental Representative.
- .17 Delete information not applicable to project.
- .18 Supplement standard information to provide details applicable to project.
- .19 If upon review by Departmental Representative 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 Public Works and Government Services Canada (PWGSC) is for sole purpose of ascertaining conformance with general concept.
 - .1 This review shall not mean that PWGSC 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 Departmental Representative's business address.
- .3 Notify Departmental Representative 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 Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in samples which Departmental Representative 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 PROGRESS PHOTOGRAPHS

- .1 Submit electronic digital photography in jpg format, standard resolution and as directed by Departmental Representative.
- .2 .Project identification: name and number of project and date of exposure indicated.
- .3 Number of viewpoints: 4 locations.
 - .1 Viewpoints and their location as determined by Departmental Representative.
 - .2 Frequency of photographic documentation: as directed by Departmental Representative and at a minimum as follows:
 - .1 Photographs of portable buildings prior to shipping.
 - .2 Upon completion of: excavation, foundation,
 - .3 Arrival on site of portable buildings.
 - .4 Prior to completing the two portable's joints.
 - .5 After stairs are installed.
 - .6 After project completion.

1.5 CERTIFICATES AND TRANSCRIPTS

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

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 Government of Canada:
 - .1 Canada Labour Code – Part II.
 - .2 Canada Occupational Health and Safety Regulations.
- .2 National Building Code of Canada (NBC):
 - .1 Part 8, Safety Measures at Construction and Demolition Sites.
- .3 Canadian Standards Association (CSA): as amended:
 - .1 CSA Z797-2009 Code of Practice for Access Scaffold.
 - .2 CSA S269.1-1975 (R2003) Falsework for Construction Purposes.
 - .3 CSA-S350-M1980 (R2003), Code of Practice for Safety in Demolition of Structures.
- .4 Fire Protection Engineering Services, HRSDC:
 - .1 FCC No. 301, Standard for Construction Operations.
 - .2 FCC No. 302, Standard for Welding and Cutting.
- .5 American National Standards Institute (ANSI):
 - .1 ANSI A10.3, Operations – Safety Requirements for Powder-Actuated Fastening Systems.
- .6 Province of British Columbia:
 - .1 Workers Compensation Act Part 3 - Occupational Health and Safety.
 - .2 Occupational Health and Safety Regulation.

1.2 RELATED SECTIONS

- .1 Refer to the following current NMS sections as required:
 - .1 General Instructions: Section 00 11 55
 - .2 Submittals procedures: Section 01 33 00

1.3 WORKERS' COMPENSATION BOARD COVERAGE

- .1 Comply fully with the Workers' Compensation Act, regulations and orders made pursuant thereto, and any amendments up to the completion of the work.
- .2 Maintain Workers' Compensation Board coverage during the term of the Contract, until and including the date that the Certificate of Final Completion is issued.

1.4 COMPLIANCE WITH REGULATIONS

- .1 PWGSC may terminate the Contract without liability to PWGSC where the Contractor, in the opinion of PWGSC, refuses to comply with a requirement of the Workers' Compensation Act or the Occupational Health and Safety Regulations.
- .2 It is the Contractor's responsibility to ensure that all workers are qualified, competent and certified to perform the work as required by the Workers' Compensation Act or the Occupational Health and Safety Regulations

1.5 SUBMITTALS

- .1 Submit to Departmental Representative submittals listed for review in accordance with Section 01 33 00.
- .2 Work effected by submittal shall not proceed until review is complete.

- .3 Submit the following:
 - .1 Health and Safety Plan.
 - .2 Copies of reports or directions issued by Federal and Provincial health and safety inspectors.
 - .3 Copies of incident and accident reports.
 - .4 Complete set of Material Safety Data Sheets (MSDS), and all other documentation required by Workplace Hazardous Materials Information System (WHMIS) requirements.
 - .5 Emergency Procedures.
- .4 The Departmental Representative will review the Contractor's site-specific project Health and Safety Plan and emergency procedures, and provide comments to the Contractor within 5 days after receipt of the plan. Revise the plan as appropriate and resubmit to Departmental Representative.
- .5 Medical surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of work, and submit additional certifications for any new site personnel to Departmental Representative.
- .6 Submission of the Health and Safety Plan, and any revised version, to the Departmental Representative is for information and reference purposes only. It shall not:
 - .1 Be construed to imply approval by the Departmental Representative.
 - .2 Be interpreted as a warranty of being complete, accurate and legislatively compliant.
 - .3 Relieve the Contractor of his legal obligations for the provision of health and safety on the project.

1.6 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
- .3 Assume responsibility as the Prime Contractor for work under this contract.

1.7 GENERAL CONDITIONS

- .1 Provide safety barricades and lights around work site as required to provide a safe working environment for workers and protection for pedestrian and vehicular traffic.
- .2 Ensure that non-authorized persons are not allowed to circulate in designated construction areas of the work site.
 - .1 Provide appropriate means by use of barricades, fences, warning signs, traffic control personnel, and temporary lighting as required.
 - .2 Secure site at night time [or provide security guard] as deemed necessary to protect site against entry.

1.8 REGULATORY REQUIREMENTS

- .1 Comply with specified codes, acts, bylaws, standards and regulations to ensure safe operations at site.
- .2 In event of conflict between any provision of the above authorities, the most stringent provision will apply. Should a dispute arise in determining the most stringent requirement, the Departmental Representative will advise on the course of action to be followed.

1.9 FILING OF NOTICE

- .1 The General Contractor is to complete and submit a Notice of Project as required by Provincial authorities.
- .2 Provide copies of all notices to the Departmental Representative.

1.10 HEALTH AND SAFETY PLAN

- .1 Conduct a site-specific hazard assessment based on review of Contract documents, required work, and project site. Identify any known and potential health risks and safety hazards.
- .2 Prepare and comply with a site-specific project Health and Safety Plan based on hazard assessment, including, but not limited to, the following:
 - .1 Primary requirements:
 - .1 Contractor's safety policy.
 - .2 Identification of applicable compliance obligations.
 - .3 Definition of responsibilities for project safety/organization chart for project.
 - .4 General safety rules for project.
 - .5 Job-specific safe work, procedures.
 - .6 Inspection policy and procedures.
 - .7 Incident reporting and investigation policy and procedures.
 - .8 Occupational Health and Safety Committee/Representative procedures.
 - .9 Occupational Health and Safety meetings.
 - .10 Occupational Health and Safety communications and record keeping procedures.
 - .2 Summary of health risks and safety hazards resulting from analysis of hazard assessment, with respect to site tasks and operations which must be performed as part of the work.
 - .3 List hazardous materials to be brought on site as required by work.
 - .4 Indicate engineering and administrative control measures to be implemented at the site for managing identified risks and hazards.
 - .5 Identify personal protective equipment (PPE) to be used by workers.
 - .6 Identify personnel and alternates responsible for site safety and health.
 - .7 Identify personnel training requirements and training plan, including site orientation for new workers.
- .3 Develop the plan in collaboration with all subcontractors. Ensure that work/activities of subcontractors are included in the hazard assessment and are reflected in the plan.

- .4 Revise and update Health and Safety Plan as required, and re-submit to the Departmental Representative.
- .5 Departmental Representative's review: the review of Health and Safety Plan by Public Works and Government Services Canada (PWGSC) shall not relieve the Contractor of responsibility for errors or omissions in final Health and Safety Plan or of responsibility for meeting all requirements of construction and Contract documents.

1.11 EMERGENCY PROCEDURES

- .1 List standard operating procedures and measures to be taken in emergency situations. Include an evacuation plan and emergency contacts (i.e. names/telephone numbers) of:
 - .1 Designated personnel from own company.
 - .2 Regulatory agencies applicable to work and as per legislated regulations.
 - .3 Local emergency resources.
 - .4 Departmental Representative [site staff].
- .2 Include the following provisions in the emergency procedures:
 - .1 Notify workers and the first-aid attendant, of the nature and location of the emergency.
 - .2 Evacuate all workers safely.
 - .3 Check and confirm the safe evacuation of all workers.
 - .4 Notify the fire department or other emergency responders.
 - .5 Notify adjacent workplaces or residences which may be affected if the risk extends beyond the workplace.
 - .6 Notify Departmental Representative [site staff].
- .3 Provide written rescue/evacuation procedures as required for, but not limited to:
 - .1 Work at high angles.
 - .2 Work in confined spaces or where there is a risk of entrapment.
 - .3 Work with hazardous substances.
 - .4 Underground work.
 - .5 Work on, over, under and adjacent to water.
 - .6 Workplaces where there are persons who require physical assistance to be moved.

1.12 HAZARDOUS PRODUCTS

- .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 the Departmental Representative and in accordance with the Canada Labour Code.
- .2 Where use of hazardous and toxic products cannot be avoided:
 - .1 Advise Departmental Representative beforehand of the product(s) intended for use. Submit applicable MSDS and WHMIS documents as per Section 01 33 00.

1.13 ELECTRICAL SAFETY REQUIREMENTS

- .1 Comply with authorities and ensure that, when installing new facilities or modifying existing facilities, all electrical personnel are completely familiar with existing and new electrical circuits and equipment and their operation.
 - .1 Before undertaking any work, coordinate required energizing and de-energizing of new and existing circuits with Departmental Representative.
 - .2 Maintain electrical safety procedures and take necessary precautions to ensure safety of all personnel working under this Contract, as well as safety of other personnel on site.

1.14 ELECTRICAL LOCKOUT

- .1 Develop, implement and enforce use of established procedures to provide electrical lockout and to ensure the health and safety of workers for every event where work must be done on any electrical circuit or facility.
- .2 Prepare the lockout procedures in writing, listing step-by-step processes to be followed by workers, including how to prepare and issue the request / authorization form. Have procedures available for review upon request by the Departmental Representative.
- .3 Keep the documents and lockout tags at the site and list in a log book for the full duration of the Contract. Upon request, make such data available for viewing by Departmental Representative or by any authorized safety representative.

1.15 OVERLOADING

- .1 Ensure no part of work is subjected to a load which will endanger its safety or will cause permanent deformation.

1.16 CONFINED SPACES

- .1 Carry out work in confined spaces in compliance with provincial regulations.

1.17 FIRE SAFETY AND HOT WORK

- .1 Obtain Departmental Representative's authorization before any welding, cutting or any other hot work operations can be carried out on site.
- .2 Hot work includes cutting/melting with use of torch, flame heating roofing kettles, or other open flame devices and grinding with equipment which produces sparks.

1.18 FIRE SAFETY REQUIREMENTS

- .1 Store oily/paint-soaked rags, waste products, empty containers and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site on a daily basis.
- .2 Handle, store, use and dispose of flammable and combustible materials in accordance with the National Fire Code of Canada.

1.19 FIRE PROTECTION AND ALARM SYSTEM

- .1 Fire protection and alarm systems shall not be:
 - .1 Obstructed.
 - .2 Shut off.
 - .3 Left inactive at the end of a working day or shift.
- .2 Do not use fire hydrants, standpipes and hose systems for purposes other than firefighting.

- .3 Be responsible/liable for costs incurred from the fire department, the building owner and the tenants, resulting from false alarms.

1.20 UNFORESEEN HAZARDS

- .1 Should any unforeseen or peculiar safety-related factor, hazard or condition become evident during performance of the work, immediately stop work and advise the Departmental Representative verbally and in writing.

1.21 POSTED DOCUMENTS

- .1 Post legible versions of the following documents on site:
 - .1 Health and Safety Plan.
 - .2 Sequence of work.
 - .3 Emergency procedures.
 - .4 Site drawing showing project layout, locations of the first-aid station, evacuation route and marshalling station, and the emergency transportation provisions.
 - .5 Notice of Project.
 - .6 Floor plans or site plans.
 - .7 Notice as to where a copy of the Workers' Compensation Act and Regulations are available on the work site for review by employees and workers.
 - .8 Workplace Hazardous Materials Information System (WHMIS) documents.
 - .9 Material Safety Data Sheets (MSDS).
 - .10 List of names of Joint Health and Safety Committee members, or Health and Safety Representative, as applicable.
- .2 Post all Material Safety Data Sheets (MSDS) on site, in a common area, visible to all workers and in locations accessible to tenants when work of this Contract includes construction activities adjacent to occupied areas.
- .3 Postings should be protected from the weather, and visible from the street or the exterior of the principal construction site shelter provided for workers and equipment, or as approved by the Departmental Representative.

1.22 MEETINGS

- .1 Attend health and safety pre-construction meeting and all subsequent meetings called by the Departmental Representative.

1.23 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by the Departmental Representative.
- .2 Provide Departmental Representative with written report of action taken to correct non-compliance with health and safety issues identified.
- .3 The Departmental Representative may issue a "stop work order" if non-compliance of health and safety regulations is not corrected immediately or within posted time. The General Contractor/subcontractors will be responsible for any costs arising from such a "stop work order".

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 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 Departmental Representative 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.

1.2 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 Departmental Representative 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 Departmental Representative at commencement of Work and should it subsequently appear that Work may be delayed for such reason, Departmental Representative reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.

1.3 STORAGE, HANDLING AND PROTECTION

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials and lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.

- .7 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 Departmental Representative.
- .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.4 TRANSPORTATION

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

1.5 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 Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative will establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

1.6 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 Departmental Representative if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative, whose decision is final.

1.7 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.

1.8 CONCEALMENT

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

1.9 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.

1.10 LOCATION OF FIXTURES

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

1.11 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.

1.12 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.

1.13 PROTECTION OF WORK IN PROGRESS

- .1 Adequately protect Work completed or in progress. Work damaged or defaced due to failure in providing such protection is to be removed and replaced, or repaired, as directed by Departmental Representative, at no increase in Contract Price or Contract Time.

1.14 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.
- .3 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility adhere to approved schedule and provide notice to affected parties.

Part 2 PRODUCTS

2.1 NOT USED

.1 Not Used.

Part 3 EXECUTION

3.1 NOT USED

.1 Not Used.

END OF SECTION

Part 1 GENERAL**1.1 RELATED WORK**

- .1 Refer to every technical section for waste management and disposal.

1.2 DEFINITIONS

- .1 Waste Audit (WA): relates to projected waste generation. Involves controlled separation of waste.
- .2 Waste Reduction Workplan (WRW): a written report which addresses opportunities for reduction, re-use or recycling of materials.
- .3 Materials Source Separation Program (MSSP): consists of a series of ongoing activities to separate re-usable and recyclable waste material into material categories from other types of waste at point of generation.

1.3 MATERIALS SOURCE SEPARATION

- .1 Before project start-up, prepare Materials Source Separation Program. Provide separate containers for re-usable and/or recyclable materials of the following:
 - .1 Gypsum board.
 - .2 Metals.
 - .3 Wood.
 - .4 Plastics
 - .5 Other materials as indicated in technical sections.
- .2 Implement Materials Source Separation Program for waste generated on project in compliance with approved methods and as approved by Departmental Representative.
- .3 Locate containers in locations, to facilitate deposit of materials without hindering daily operations.
- .4 Locate separated materials in areas which minimize material damage.

1.4 DIVERSION OF MATERIALS

- .1 Create a list of materials to be separated from the general waste stream and stockpiled in separate containers, to the approval of the Departmental Representative and consistent with applicable fire regulations.
 - .1 Mark containers.
 - .2 Provide instruction on disposal practices.

1.5 STORAGE, HANDLING AND APPLICATION

- .1 Do work in compliance with Waste Reduction Workplan.
- .2 Handle waste materials not re-used, salvaged, or recycled in accordance with appropriate regulations and codes.
- .3 Materials in separated condition: collect, handle, store on site, and transport off-site to an approved and authorized recycling facility.
- .4 Materials must be immediately separated into required categories for re-use or recycling.
- .5 Unless specified otherwise, materials for removal become the Contractor's property.
- .6 On-site sale of salvaged/recyclable material is not permitted.

- .7 Provide Departmental Representative with receipts indicating quantity of material delivered to landfill.
- .8 Provide Departmental Representative with receipts indicating quantity and type of materials sent for recycling.

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 REQUIREMENTS

- .1 Acceptance of Work Procedures:
 - .1 Contractor's Inspection: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
 - .1 Notify Departmental Representative in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
 - .2 Request Departmental Representative's Interim Completion inspection.
 - .2 Departmental Representative's Interim Completion Inspection:
 - .1 Departmental Representative and Contractor to inspect Work and identify defects and deficiencies.
 - .2 Contractor to correct Work as directed.
 - .3 Completion of Tasks: submit written certificates in English that tasks have been performed as follows:
 - .1 Work: completed and inspected for compliance with Contract Documents.
 - .2 Defects: corrected and deficiencies completed.
 - .3 Equipment and systems: tested, adjusted, and balanced and fully operational.
 - .4 Certificates required by Utility companies: submitted.
 - .5 Operation of systems: demonstrated to Owner's personnel.
 - .6 Work: complete and ready for final inspection.
 - .4 Declaration of Substantial Performance: when Departmental Representative considers deficiencies and defects corrected and requirements of Contract substantially performed, make application for Certificate of Substantial Performance.
 - .5 Commencement of Lien and Warranty Periods: date of Departmental Representative's acceptance of submitted declaration of Substantial Performance to be date for commencement for warranty period and commencement of lien period unless required otherwise by lien statute of Place of Work.
 - .6 Payment of Holdback: after issuance of Certificate of Substantial Performance of Work, submit application for payment of holdback amount in accordance with contractual agreement.
 - .7 Final Inspection:
 - .1 When completion of tasks are done, request Final Inspection of Work by Departmental Representative.
 - .2 When Work incomplete according to Departmental Representative, complete outstanding items and request re-inspection.

.8 Final Payment:

- .1 When Departmental Representative considers final deficiencies and defects corrected and requirements of Contract met, make application for final payment.
- .2 When Work deemed incomplete by Departmental Representative, complete outstanding items and request re-inspection.

1.2 FINAL CLEANING

- .1 Clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Remove surplus materials, excess materials, rubbish, tools and equipment.

2 PRODUCTS

2.1 NOT USED

- .1 Not Used.

3 EXECUTION

3.1 NOT USED

- .1 Not Used.

END OF SECTION

Part 1 GENERAL

1.1 RELATED REQUIREMENTS

- .1 Section 13 46 00 – Transportable Building

1.2 ADMINISTRATIVE REQUIREMENTS

- .1 Pre-warranty Meeting:
 - .1 Convene meeting one week prior to contract completion with contractor's representative and Departmental Representative to:
 - .1 Verify Project requirements.
 - .2 Review manufacturer's installation instructions and warranty requirements.
 - .2 Departmental Representative to establish communication procedures for:
 - .1 Notifying construction warranty defects.
 - .2 Determine priorities for type of defects.
 - .3 Determine reasonable response time.
- .2 Contact information for bonded and licensed company for warranty work action: provide name, telephone number and address of company authorized for construction warranty work action.
- .3 Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Two weeks prior to Substantial Performance of the Work, submit to the Departmental Representative, two final copies of operating and maintenance manuals in English.
- .3 Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work.
- .4 Provide evidence, if requested, for type, source and quality of products supplied.

1.4 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.
 - .1 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.
 - .1 Bind in with text; fold larger drawings to size of text pages.

- .9 Provide two digital copies containing: Shop Drawings, O&M Manual, As-built drawings in PDFs & CAD/Revit.

1.5 CONTENTS - PROJECT RECORD DOCUMENTS

- .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.

1.6 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS

- .1 Record information on set of black line opaque drawings, provided by Departmental Representative.
- .2 Use felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.
 - .5 Changes made by change orders.
 - .6 Details not on original Contract Drawings.
 - .7 References to related shop drawings and modifications.
- .5 Specifications: mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records.

1.7 FINAL SURVEY

- .1 Submit final site survey certificate certifying that elevations and locations of completed Work are in conformance, or non-conformance with Contract Documents.

1.8 EQUIPMENT AND SYSTEMS

- .1 Each Item of Equipment and Each System: include description of unit or system, and component parts.
 - .1 Give function, normal operation characteristics, and limiting conditions.
 - .2 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.
 - .1 Include regulation, control, stopping, shut-down, and emergency instructions.
 - .2 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 list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .13 Additional requirements: as specified in individual specification sections.

1.9 MATERIALS AND FINISHES

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
- .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.

1.10 MAINTENANCE MATERIALS

- .1 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 location as directed; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.
- .2 Extra Stock 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 location as directed; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment
- .3 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 location as directed; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 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 Departmental Representative.

1.12 WARRANTIES AND BONDS

- .1 Develop warranty management plan to contain information relevant to Warranties.
- .2 Submit warranty management plan, 10 days before planned pre-warranty conference, to Departmental Representative's approval.
- .3 Warranty management plan to include required actions and documents to assure that Owner 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 Departmental Representative 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 Conduct joint 4 month and 9 month warranty inspection, measured from time of acceptance, by Departmental Representative.
- .9 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, flooring and windows.
 - .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 4 and 9 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.
- .10 Respond in a timely manner to oral or written notification of required construction warranty repair work.
- .11 Written verification will follow oral instructions. Failure to respond will be cause for the Departmental Representative to proceed with action against Contractor.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION