

**Part 1            General**

**1.1                WORK COVERED BY CONTRACT DOCUMENTS**

- .1        Work of this Contract comprises of the general construction and the renovation for Churchill Unit located at the Regional Psychiatric Centre, Saskatoon, Saskatchewan; as indicated on the Drawings and as specified and further identified as Project No. R.079451.001.

.1 Contractor is responsible for the application and costs associated with all building permits and associated permits.

**1.2                CONTRACT METHOD**

- .1        Construct Work under a single, stipulated price contract.
- .2        Relations and responsibilities between Contractor and subcontractors and suppliers assigned by Departmental Representative are as defined in Conditions of Contract. Assigned Subcontractors must, in addition:
  - .1        Furnish to Contractor, bonds covering faithful performance of subcontracted work and payment of obligations thereunder when Contractor is required to furnish such bonds to the Departmental Representative.
  - .2        Purchase and maintain liability insurance to protect Contractor from claims for not less than limits of liability which Contractor is required to provide to Departmental Representative.

**1.3                WORK SEQUENCE**

- .1        Construct Work to accommodate Institution's continued use of adjacent premises during construction.
- .2        Coordinate Progress Schedule and coordinate occupancy during construction with Departmental Representative.
- .3        Maintain fire access / control and uninterrupted access for ambulance throughout construction.

**1.4                CONTRACTOR USE OF PREMISES**

- .1        Limit use of premises for Work, storage and for access, to allow:
  - .1        Final occupancy.
  - .2        Partial occupancy.
- .2        Co-ordinate use of premises under direction of Departmental Representative.
- .3        Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- .4        Remove or alter existing work to prevent injury or damage to portions of existing work which remain.

- .5 Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by Departmental Representative.
- .6 At completion of operations condition of existing work: equal to or better than that which existed before new work started.

### **1.5 OCCUPANCY**

- .1 Institution's personnel will occupy facility during entire construction period for execution of normal operations.
- .2 Co-operate with Departmental Representative in scheduling operations to minimize conflict and to facilitate usage.

### **1.6 PARTIAL OCCUPANCY**

- .1 Schedule and substantially complete designated portions of Work for occupancy prior to Substantial Performance of entire Work.
- .2 Institution's personnel will occupy designated areas for purpose of operation of facility.
- .3 Execute Certificate of Substantial Performance for each designated portion of Work prior to occupancy. Contractor shall allow:
  - .1 Access for Institutional personnel.
  - .2 Operation of electronic security and electrical systems.
- .4 On occupancy, Departmental Representative will provide for occupied areas:
  - .1 Operation of electronic security and electrical systems.
  - .2 Maintenance.
  - .3 Security.
- .5 Execute Partial Interim Certificate of Completion for each designated portion of Work prior to occupancy. Contractor shall allow:
  - .1 Access for Institution's personnel.
  - .2 Operation of electronic security and electrical systems.

### **1.7 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING**

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

### **1.8 EXISTING SERVICES**

- .1 Notify, Departmental Representative and utility companies of intended interruption of services and obtain required permission.
- .2 Known existing underground services are indicated on Drawings. Contractor to provide survey of underground services prior to the commencement of any Work.
- .3 Where Work involves breaking into or connecting to existing services, give Departmental Representative min. 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 Departmental Representative.
- .4 Provide alternative routes for personnel and vehicular traffic.
  - .5 Establish location and extent of service lines in area of work before starting Work. Notify Departmental Representative of findings.
  - .6 Submit schedule to and obtain approval from Departmental Representative 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.
  - .7 Provide temporary services, when directed by Departmental Representative, to maintain critical building systems.
  - .8 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.
  - .9 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
  - .10 Protect, relocate or maintain existing active services. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction.
  - .11 Record locations of maintained, re-routed and abandoned service lines.
  - .12 Construct barriers in accordance with Section 01 56 00- Temporary Barriers and Enclosures.

## **1.9 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.

**END OF SECTION**

**Part 1            General**

**1.1                ACCESS AND EGRESS**

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

**1.2                USE OF SITE AND FACILITIES**

- .1        Execute work with least possible interference or disturbance to normal use of premises. Make arrangements with 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        Refer to Section 01 52 00 – Construction Facilities for information on sanitary facilities.
- .5        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 occupants, public and normal use of premises. Arrange with Departmental Representative to facilitate execution of work.

**1.4                EXISTING SERVICES**

- .1        Notify, Departmental Representative and utility companies of intended interruption of services and obtain required permission.
- .2        Where Work involves breaking into or connecting to existing services, give Departmental Representative min. 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.
- .3        Provide for personnel and vehicular traffic.
- .4        Construct barriers in accordance with Section 01 56 00- Temporary Barriers and Enclosures .

**1.5                INSTITUTIONAL REQUIREMENTS**

- .1        Comply with the document “CSC Facilities Branch Security Requirements”, latest edition for Contractors working at the Saskatchewan Penitentiary Institution distributed by the Departmental Representative at the Pre-Tender site meeting. These Security Requirements generally cover restrictions / requirements including, but not limited to, contraband, prescription drugs, vehicles and their use, vehicle and worker searches, construction limits, security clearances, shipments to and from the site, tools and their use, and security and other hardware keys. Refer also to Section 01 35 13.

**1.6 BUILDING SMOKING ENVIRONMENT**

- .1 Comply with smoking restrictions. Smoking is not permitted. Refer to Section 01 35 13.

**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                APPOINTMENT AND PAYMENT**

- .1 Departmental Representative will appoint and pay for services of testing laboratory **except** follows:
  - .1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by Departmental Representative are specified under various sections.
  - .2 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
  - .3 Inspection and testing performed exclusively for Contractor's convenience.
  - .4 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.
  - .5 Mill tests and certificates of compliance.
  - .6 Tests specified to be carried out by Contractor under supervision of Departmental Representative.
  - .7 Concrete testing as indicated on structural drawings and specifications.
  - .8 Compaction testing as indicated on structural drawings and specifications.
  - .9 Refer to 05 12 23 – Structural Steel for Building for Quality Control Submissions
- .2 Where tests or inspections by designated testing laboratory reveal Work not in accordance with contract requirements, pay costs for additional tests or inspections as required by Departmental Representative to verify acceptability of corrected work.

**1.2                CONTRACTOR'S RESPONSIBILITIES**

- .1 Provide labour, equipment and facilities to:
  - .1 Provide access to Work for inspection and testing.
  - .2 Facilitate inspections and tests.
  - .3 Make good Work disturbed by inspection and test.
  - .4 Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.
- .2 Notify Departmental Representative sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
- .4 Pay costs for uncovering and making good Work that is covered before required inspection or testing is completed and approved by Departmental Representative.

**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     Schedule and administer bi-weekly (every two weeks) project meetings throughout the progress of the work, based on the approved meeting schedule established prior to the commencement of the work.
- .2     Prepare agenda for meetings.
- .3     Distribute written notice of each meeting four days in advance of meeting date to Departmental Representative.
- .4     A physical space at the Institution will be provided for project meetings. Contractor to coordinate scheduling with the Institutions Representative.
- .5     Preside at meetings.
- .6     Record the meeting minutes. Include significant proceedings and decisions. Identify actions by parties.
- .7     Reproduce and distribute copies of minutes within three days after meetings and transmit to meeting participants, affected parties not in attendance and Departmental Representative.
- .8     Representative of Contractor, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

**1.2                PRECONSTRUCTION MEETING**

- .1     Within 10 days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2     Departmental Representative, Contractor, major Subcontractors will be in attendance.
- .3     Establish time and location of meeting and notify parties concerned minimum 5 days before meeting.
- .4     Incorporate mutually agreed variations to Contract Documents into Agreement, prior to signing.
- .5     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 35 13 – Security Requirements.
  - .7     Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.
  - .8     Owner provided products.
  - .9     As-Built 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.
- .6 Comply with Departmental Representative's allocation of mobilization areas of site; for field offices and sheds, access, traffic, and parking facilities.
- .7 During construction coordinate use of site and facilities through Departmental Representative's procedures for intra-project communications: Submittals, reports and records, schedules, coordination of drawings, recommendations, and resolution of ambiguities and conflicts.
- .8 Comply with instructions of Departmental Representative for use of temporary utilities and construction facilities.
- .9 Coordinate field engineering and layout work with Departmental Representative.

**1.3 PROGRESS MEETINGS**

- .1 Bi-weekly from commencement of contract to project completion.
- .2 Contractor, major Subcontractors involved in Work Departmental Representative are to be in attendance.
- .3 Notify parties minimum 5 working days in advance prior to meetings.
- .4 Record minutes of meetings and circulate to attending parties and affected parties not in attendance within three 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.

**END OF SECTION**

## **Part 1           General**

### **1.1           DEFINITIONS**

- .1     Activity: an 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 Departmental Representative 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     Plan to complete Work in accordance with prescribed milestones and time frame.
- .3     Limit activity durations to maximum of approximately 10 working days, to allow for progress reporting.
- .4     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           ACTION AND INFORMATIONAL SUBMITTALS**

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

- .2 Submit to Departmental Representative within 5 working days of Award of Contract, a GANTT Chart to serve as a Master Plan for planning, monitoring and reporting of project progress.
- .3 Submit Project Schedule to Departmental Representative within 5 working days of receipt of acceptance of Master Plan.

#### **1.4 PROJECT MILESTONES**

- .1 Project Award: October 1, 2018
- .2 Substantial Performance: July 30, 2019
- .3 Final Performance: August 15, 2019

#### **1.5 MASTER PLAN**

- .1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart (GANTT).
- .2 Departmental Representative 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.
- .2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:
  - .1 Award.
  - .2 Shop Drawings, Samples.
  - .3 Permits.
  - .4 Mobilization.
  - .5 Excavation.
  - .6 Backfill.
  - .7 Slab on grade.
  - .8 Structural Steel.
  - .9 Interior Architecture (glazing replacement)
  - .10 Plumbing.
  - .11 Lighting.
  - .12 Electrical.
  - .13 Controls.
  - .14 Testing and Commissioning.

#### **1.7 PROJECT SCHEDULE REPORTING**

- .1 Update Project Schedule on monthly 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 Departmental Representative 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 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        For all sections of Work which require the Contractor or Sub Contractor to provide professional engineering services, the Contractor's or Sub Contractor's Registered Professional Engineer in the Province of Saskatchewan shall design and engineer components for the project which the Contractor's or Sub Contractor's Registered Professional Engineer is responsible for, and shall sign and seal all shop drawings and supporting documentation. The Contractor's or Sub Contractor's Registered Professional Engineer shall review all fabrication and installation of such components. At completion of the Work, each of the Contractor's and/or Sub Contractor's Registered Professional Engineers shall provide to the Consultant, a letter confirming that:
  - .1 All civil, structural, architectural, mechanical, electrical and other components are fabricated and erected in conformance with their design.
  - .2 All components are capable of supporting all the loads or capable of performance specified or indicated on the reviewed shop drawings.

- .3 All changes to the contract documents have been reviewed and are acceptable.
  - .4 All components have been designed, fabricated and installed to substantially comply with the applicable requirements of the National Building Code.
  - .5 All components have been designed and installed to conform with the seismic restraint requirements of the National Building Code 2015.
  - .6 The fabrication and installation of such components has been reviewed and accepted by the Contractor's and/or Sub Contractor's Registered Professional Engineers.
  - .7 All components are fabricated and erected in accordance with the reviewed shop drawings.
- .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 review of each submission for Departmental Representative.
  - .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 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 Departmental Representative's review, distribute copies.
- .10 Submit electronic copies (pdf format) of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
- .11 Submit electronic copies (pdf format) 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 (pdf format) 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 (pdf format) 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 (pdf format) 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 (pdf format) of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Departmental Representative.
- .16 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .17 Submit electronic copies (pdf format) of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Departmental Representative.
- .18 Delete information not applicable to project.

- .19 Supplement standard information to provide details applicable to project.
- .20 If upon review by Departmental Representative, no errors or omissions are discovered or if only minor corrections are made, the electronic 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.

### **1.3 SAMPLES**

- .1 Submit for review samples in as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Departmental Representative's office.
- .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 PHOTOGRAPHIC DOCUMENTATION**

- .1 Submit electronic copy of colour digital photography in jpg format, standard resolution with monthly with progress statement, unless as directed otherwise by Departmental Representative.
- .2 Project identification: name and number of project and date of exposure indicated.

### **1.5 CERTIFICATES AND TRANSCRIPTS**

- .1 Immediately after award of Contract, submit Workers' Compensation Board status.
- .2 Submit transcription of insurance immediately after award of Contract.

## **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                PURPOSE**

- .1        To ensure that both the construction project and the institutional operations may proceed without undue disruption or hindrance and that the security of the Institution is maintained at all times.

**1.2                DEFINITIONS**

- .1        "Contraband" means:
  - .1        an intoxicant, including alcoholic beverages, drugs and narcotics,
  - .2        a weapon or a component thereof, ammunition for a weapon, and anything that is designed to kill, injure or disable a person or that is altered so as to be capable of killing, injuring or disabling a person, when possessed without prior authorization,
  - .3        an explosive or a bomb or a component thereof,
  - .4        currency over the prescribed limit of \$50, and
  - .5        Drones or radio controlled flying objects or radio controlled wheeled toys
  - .6        any item not described in paragraphs (1) to (5) that could jeopardize the security of a Penitentiary or the safety of persons, when that item is possessed without prior authorization
- .2        "Unauthorized Smoking and related Items" means all smoking items including, but not limited to, cigarettes, cigars, tobacco, chewing or snuffing tobacco, cigarette making machines, matches and lighters.
- .3        "Commercial Vehicle" means any motor vehicle used for the shipment of material, equipment and tools required for the construction project.
- .4        "CSC" means Correctional Service Canada.
- .5        "Security Director" or "Director" means the Institutional Security Officer, Warden or Superintendent as applicable.
- .6        "Construction employees" means persons working for the general Contractor, the sub-contractors, equipment operators, material suppliers, testing and inspection companies and regulatory agencies.
- .7        "Departmental Representative" or "DR" means the Project Manager representing Correctional Service Canada (CSC).
- .8        "Perimeter" means the fenced or walled area of the institution that restrains the movement of the inmates.
- .9        "Construction limits" means the area as shown on the contract drawings that the contractor will be allowed to work within. This area may or may not be isolated from the security from the security area of this institution. The assigned laydown area will form part of the construction limits.

### **1.3 PRELIMINARY PROCEEDINGS**

- .1 Prior to the commencement of work, the Contractor will meet with the Security Director or appointed representative to:
  - .1 Discuss the nature and extent of all activities involved in the Project.
  - .2 Establish mutually acceptable security procedures in accordance with this instruction and the institution's particular requirements.
- .2 The Contractor will:
  - .1 Ensure that all construction employees are aware of the security requirements.
  - .2 Ensure that a copy of the security requirements is always prominently on display at the job site.
  - .3 Co-operate with institutional personnel to ensure that security requirements are observed by all construction employees.

### **1.4 CONSTRUCTION EMPLOYEES**

- .1 Submit to the Security Director a list of the names with date of birth of all construction employees to be employed on the construction site and a security clearance form for each employee.
- .2 Employees will not be admitted to the Institution without a valid security clearance and recent photo identification such as a provincial driver's license. Security clearances obtained from other CSC institutions are not valid at this institution.
- .3 The Director may require that facial photographs may be taken of construction employees and these photographs may be displayed at appropriate locations in the institution or in an electronic database for identification purposes. The Director may require that Photo ID cards be provided for all construction workers. ID cards will then be left at the designated entrance to be picked upon arrival at the institution and will be displayed prominently on the construction employees clothing at all times while employees are in the institution. Verify this requirement with the Departmental Representative.
- .4 Entry to Institutional Property will be refused to any person there may be reason to believe may be a security risk.
- .5 Any person employed on the construction site will be subject to immediate removal from Institutional Property if they:
  - .1 Appear to be under the influence of alcohol, drugs or narcotics.
  - .2 Behave in an unusual or disorderly manner.
  - .3 Are in possession of contraband.

### **1.5 VEHICLES**

- .1 All unattended vehicles on CSC property shall have windows closed; doors and trunks shall be locked and keys removed. The keys shall be securely in the possession of the owner or an employee of the company that owns the vehicle. The institution requires lockable gas caps on all vehicles and motorized equipment used in the construction area.
- .2 The Director may limit at any time the number and type of vehicles allowed within the Institution.

- .3 Drivers of delivery vehicles for material required by the project will not require security clearances, but must remain with their vehicle the entire time that the vehicle is in the Institution. The Director may require that these vehicles be escorted by Institutional staff or Commissionaires while in the Institution.
- .4 If the Director allows trailers to be left inside the secure perimeter of the Institution, these trailer doors will be locked at all times. All windows will be securely locked when left unoccupied. All trailer windows shall be covered with expanded metal mesh. All storage trailers inside and outside the perimeter must be locked when not in use.

## **1.6 PARKING**

- .1 The parking area(s) to be used by construction employees will be designated by the Director. Parking in other locations will be prohibited and vehicles may be subject to removal.

## **1.7 SHIPMENTS**

- .1 All shipments of project material, equipment and tools shall be addressed in the Contractor's name to avoid confusion with the institution's own shipments. The Contractor must have his own construction employees on site to receive any deliveries or shipments.
- .2 CSC staff will NOT accept any project related deliveries or shipments of any material, equipment or tools.

## **1.8 TELEPHONES**

- .1 No telephones, Facsimile machines and computers (with Internet connections) are permitted within the perimeter of the institution unless prior approval of the Director or DR is obtained.
- .2 The Director will ensure that approved telephones, facsimile machine and computers with Internet connections are located where they are not accessible to inmates. All computers will have an approved password protection that will stop an Internet connection to unauthorized personnel.
- .3 Wireless cellular and digital telephones, including but not limited to devices for telephone messaging, pagers, BlackBerries, telephone used as 2-way radios, are not permitted within the perimeter of the Institution unless approved by the Director. If wireless cellular telephones are permitted, the user will not permit their use by any inmate. Cellular telephones approved by the Departmental Representative must be signed in and out of the institution.
- .4 The Director may approve and restricted use of two-way radios.

## **1.9 WORK HOURS**

- .1 **Work hours within the Institution are: Monday to Friday 0800 hrs. to 1600 hrs.**
- .2 Work will not be permitted during weekends and statutory holidays without the permission of the Director or DR. A minimum of seven (7) days advance notice will be required to obtain the required permission. In case of emergencies or other

special circumstances, this advance notice may be waived or period shortened by the Director.

### **1.10 WORK OUTSIDE NORMAL WORK HOURS**

- .1 Work outside normal working hours will be allowed without permission of the Director. The CONTRACTOR to give a minimum of forty-eight (48) hours advanced notice to the DR explaining the reason for the extended work hours. If work outside of normal work hours is required because of an emergency, such as the completion of a concrete pour or work to make the construction safe and secure, the contractor will advise the DR as soon as this condition is known and follow the directions given by the DR. Costs to the Crown for such events will be back-charged to the Contractor.
- .2 When work outside normal work hours, weekend work or statutory holiday work is required and approved by the Director or DR, extra staff members may be posted by the to maintain the security surveillance. The DR may post extra staff for inspection of construction activities. The actual cost of this extra staff may be subject to reclamation by the Crown.

### **1.11 TOOLS AND EQUIPMENT**

- .1 Maintain and update on a daily basis a complete list of tools and equipment on the construction site. Make this inventory available for inspection when required. Tool lists are to include the following as well as any tool bits and any disposable too items such as disposable blades, etc.
  - .1 Explosive tools (Hilti-gun, etc).
  - .2 Bolt cutters
  - .3 Acids
  - .4 Bottle Jacks (hydraulic)
  - .5 Knives (other than approved hobby knives and cutlery)
  - .6 Metal Scissors
  - .7 Adjustable wrenches
  - .8 Tin snips
  - .9 Linesmen pilers
  - .10 Metal cutting devices
  - .11 Hacksaw blades, wrecking and cross bars
  - .12 Files
  - .13 Vice grip pliers with cutters in jaws
  - .14 Picks
  - .15 Portable, electrically driven power tools capable of cutting or drilling (skillsaws, jigsaws and drilling motors).
  - .16 Welding equipment and accessories
  - .17 Ropes, heavy duty cords
  - .18 Axes
  - .19 Ladders
  - .20 Gasoline, coal, oils (including turpentine)
  - .21 Lacquers and sealers
  - .22 Pure ammonia
  - .23 Pneumatic guns and staplers
  - .24 Propane cylinders

- .2 Non restricted tools:
  - .1 Includes tools which are used daily and are not usually expected to be used to facilitate escape.
- .3 Throughout the construction project maintain up-to-date the list of tools and equipment specified above.
- .4 Keep all tools and equipment under constant supervision, particularly power-driven and cartridge-driven tools, cartridges, files, saw blades, rod saws, wire, rope, ladders and any sort of jacking device.
- .5 Store all tools and equipment in approved secure locations.
- .6 Lock all toolboxes when not in use. Keys to remain in the possession of the construction employees of the Contractor.
- .7 Scaffolding shall be secured and locked when not erected and when erected, shall be secured in a manner agreed upon with the Institutional designate or DR.
- .8 All missing or lost tools or equipment shall be reported immediately to the Director.
- .9 The Director will ensure that the security staff members carry out checks of the Contractor's tools and equipment against the list provided by the Contractor. These checks may be carried out at the following intervals:
  - .1 At the beginning and conclusion of every construction project.
  - .2 Weekly, when the construction project extends longer than a one week period.
  - .3 The Contractor may be subject to random checks by security staff to ensure proper storage, inventory and security of tools throughout the project.
  - .4 Certain tools / equipment such as cartridges and hacksaw blades are highly controlled items. The Contractor will be given at the beginning of the day, a quantity that will permit one day's work. Used blades/cartridges will be returned to the DR's
- .9 Certain tools/equipment such as cartridges and hacksaw blades are highly controlled items. The contractor will be given at the beginning of the day, a quantity that will permit one day's work. Used blades/cartridges will be returned to the Departmental Representative at the end of each day.
- .10 If propane or natural gas is used for heating the construction, the institution will require that an employee of the contractor supervise the construction site during non-working hours.

## **1.12 KEYS**

- .1 Security Hardware Keys
  - .1 The Contractor will arrange with the security hardware supplier/installer to have the keys for the security hardware to be delivered directly to the Institution, specifically the Security Maintenance Officer (SMO).
  - .2 The SMO will provide a receipt to the Contractor for security hardware keys.
  - .3 The Contractor will provide a copy of the above-mentioned receipt to the Departmental Representative or designated site personnel.

- .2 Other Keys
  - .1 The Contractor will use standard construction cylinders for locks during the construction period.
  - .2 The Contractor will issue instructions to his construction employees and sub-trades, as necessary, to ensure safe custody of the construction keys.
  - .3 Upon completion of each phase of the construction, the CSC representative will, in conjunction with the lock manufacturer:
    - .1 Prepare an operational keying schedule
    - .2 Accept the operational keys and cylinders directly from the lock manufacturer.
    - .3 Arrange for removal and return of the construction cores and install the operational core in all locks.
  - .4 Upon putting operational security keys into use, the CSC construction escort shall obtain these keys as they are required from the SMO and open doors as required by the Contractor. The Contractor shall issue instructions to his construction employees advising them that all security keys shall always remain with the CSC construction escort.

#### **1.13 SECURITY HARDWARE**

- .1 Turn over all removed security hardware to the Director of the Institution for disposal or for safekeeping until required for re-installation.

#### **1.14 PRESCRIPTION DRUGS**

- .1 Employees of the Contractor who are required to take prescription drugs during the workday shall obtain approval of the Director to bring a one-day supply only into the Institution.

#### **1.15 SMOKING RESTRICTIONS**

- .1 Contractors and construction employees are not permitted to smoke inside correctional facilities or outdoors within the correctional facility grounds and must not possess unauthorized smoking items at any time.
- .2 Contractors and construction employees who are in violation of this policy will be requested to immediately cease smoking or dispose of any unauthorized smoking items and, if they persist, will be directed to leave the institution.
- .3 Smoking is only permitted outside the perimeter of a correctional facility in an area to be designated by the Departmental Representative.

#### **1.16 CONTRABAND**

- .1 Weapons, ammunition, explosives, alcoholic beverages, drugs and narcotics are prohibited on institutional property. **CSC has a “zero tolerance” policy for possession of contraband.**
- .2 The discovery of contraband on the construction site and the identification of the person(s) responsible for the contraband shall be reported immediately to the Director.
- .3 Contractors should be vigilant with both their staff and the staff of their sub-contractors and suppliers that the discovery of contraband may result in cancellation of the security clearance of the persons involved. Serious infractions may result in the removal of the

company from the Institution.

- .4 Presence of arms and ammunition in vehicles of contractors, sub-contractors and suppliers or employees will result in the immediate cancellation of the security clearances. **This can also lead to the cancellation of the construction contract.**

#### **1.17 SEARCHES**

- .1 All vehicles and persons entering institutional property will be subject to search.
- .2 When the Director suspects, on reasonable grounds, that an employee of the Contractor is in possession of contraband or unauthorized items, he may order that person to be searched.
- .3 All employees entering the Institution may be subject to spectrometric screening of personal effects for traces of contraband drug residue.

#### **1.18 ACCESS TO AND REMOVAL FROM INSTITUTIONAL PROPERTY**

- .1 Construction personnel and commercial vehicles will not be admitted to the institution after normal working hours, unless approved by the Director.

#### **1.19 MOVEMENT OF VEHICLES**

- .1 Escorted commercial vehicles will be allowed to enter or leave the institution during the following hours:
  - .1 0800 hrs. to 1530 hrs.
- .2 The Contractor will advise the Director twenty-four (24) hours in advance to the arrival on the site of heavy equipment such as concrete trucks, cranes, etc.
- .3 Vehicles being loaded with soil or other debris, or any vehicle considered impossible to search, must be under continuous supervision by CSC staff or Commissionaires working under the authority of the Director or DR.
- .4 Commercial vehicles will only be allowed access to institutional property when their contents are certified by the Contractor or his representative as being strictly necessary to the execution of the construction project.
- .5 Vehicles will be refused entry into the institutional property if, in the opinion of the Director, they contain any material/equipment that may jeopardize the security of the institution.
- .6 Private vehicles of construction employees will not be allowed within the security wall or fence of medium or maximum security institutions without the permission of the Director.

- .7 With prior approval of the Director, a vehicle may be used in the morning and evening to transport a group of employees to the work site. This vehicle will not remain within the Institution the remainder of the day.

With the approval of the Director, certain equipment may be permitted to remain on the construction site overnight or over the weekend. This equipment must be securely locked, with the battery removed (or a component that will disable the starting of the vehicle or equipment). The Director may require that the equipment be secured with a chain and padlock to another fixed object.

#### **1.20 MOVEMENT OF CONSTRUCTION EMPLOYEES ON INSTITUTIONAL PROPERTY**

- .1 Subject to the requirements of operational security, the Director will permit the Contractor and his employees as much freedom of action and movement as is possible.
- .2 However, notwithstanding paragraph above, the Director may:
  - .1 Prohibit or restrict access to any part of the institution.
  - .2 Allow access only under the direct supervision of a correctional officer.
  - .3 Allow access under the supervision of a Commissionaire.
- .3 During the lunch and coffee/health breaks, all construction employees will remain within the construction site. Construction employees are not permitted to eat in the staff lounge or the dining room of the institution.

#### **1.21 SURVEILLANCE AND INSPECTION**

- .1 Construction activities and all related movement of personnel and vehicles will be subject to surveillance and inspection by CSC security staff members to ensure that established security requirements are met.
- .2 CSC staff members will from time to time carry out random checks and searches to ensure that construction employees follow the security requirements. The CONTRACTOR is responsible for educating the subcontractors and trades on the security requirements.

#### **1.22 STOPPAGE OF WORK**

- .1 The Director may request, at any time, that the Contractor, his employees, subcontractors and their employees not enter or leave the work site with immediate effect due to a security situation occurring within the Institution. The Contractor's Site Supervisor will note the name of the staff member making the request and the time of the request and obey the order as quickly as possible. The Contractor will advise the Departmental Representative within 24 hours of this delay to progress of the work.

#### **1.23 CONTACT WITH INMATES**

- .1 Unless specifically authorized, it is forbidden to come into contact with inmates, to talk with them, to receive objects from them or to give them objects. Any employee doing any of the above will be removed from the site and his/her security clearance revoked immediately.
- .2 It is forbidden to take pictures of the inmates, of CSC staff members or of any part of the Institution other than those required as part of this contract.

- .3 Prior permission is required to carry a camera or a device capable of taking pictures into the Institution.

**1.24 COMPLETION OF CONSTRUCTION PROJECT**

- .1 Upon completion of the construction project or, when the project is turned over to CSC, the Contractor will remove all remaining construction material, tools and equipment that are not specified to remain in the Institution as part of the construction contract.
- .2 Upon closing the site office, the CONTRACTOR will do a final clean-up of the area. The CONTRACTOR will ensure all keys, ID's, etc. are returned and no ladders, equipment, material or tools are left behind.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCE STANDARDS**

- .1        Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2        Health Canada/Workplace Hazardous Materials Information System (WHMIS)
- .3        Province of Saskatchewan
  - .1        Occupational Health and Safety Act, 1993, S.S. - Updated 2012.

**1.2                ACTION AND INFORMATIONAL SUBMITTALS**

- .1        Submit 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.
- .3        Submit weekly to Departmental Representative.
- .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.
- .6        Submit WHMIS MSDS - Material Safety Data Sheets on products and materials listed elsewhere in specification.
- .7        Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor.
- .8        Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .9        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.
- .10      On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

**1.3                FILING OF NOTICE**

- .1        File Notice of Project with Provincial authorities prior to beginning of Work.
- .2        Contractor shall agree to install proper site separation and identification in order to maintain time and space at all times throughout life of project.

**1.4                SAFETY ASSESSMENT**

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

**1.5 MEETINGS**

- .1 Schedule and administer Health and Safety meeting with Departmental Representative prior to commencement of Work.

**1.6 REGULATORY REQUIREMENTS**

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

**1.7 PROJECT/SITE CONDITIONS**

- .1 Work at site will involve contact with appointed staff at Institution established by Departmental Representative.

**1.8 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 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

**1.9 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.

**1.10 COMPLIANCE REQUIREMENTS**

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

**1.11 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 Departmental Representative verbally and in writing.

**1.12 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 Departmental Representative.

**1.13 CORRECTION OF NON-COMPLIANCE**

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

**1.14 BLASTING**

- .1 Blasting or other use of explosives is not permitted.

**1.15 POWDER ACTUATED DEVICES**

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

**1.16 WORK STOPPAGE**

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

**Part 2 Products**

**2.1 NOT USED**

- .1 Not used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not used.

**END OF SECTION**

**Part 1            General**

**1.1                FIRES**

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

**1.2                DRAINAGE**

- .1        Provide temporary drainage and pumping required to keep excavations and site free from water.
- .2        Ensure pumped water into waterways, sewer or drainage systems is free of suspended materials.
- .3        Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

**1.3                SITE CLEARING AND PLANT PROTECTION**

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

**1.4                POLLUTION CONTROL**

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

**Part 2            Products**

**2.1                NOT USED**

- .1        Not Used.

**Part 3            Execution**

**3.1                CLEANING**

- .1    Progress Cleaning: clean in accordance with Section 01 74 11- Cleaning.
  - .1        Leave Work area clean at end of each day.
- .2    Ensure public waterways, storm and sanitary sewers remain free of waste and volatile materials disposal.
- .3    Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11- Cleaning.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCES TO REGULATORY REQUIREMENTS**

- .1 This Section references to laws, by laws, ordinances, rules, regulations, codes, orders of Authority Having Jurisdiction, and other legally enforceable requirements applicable to Work and that are; or become, in force during performance of Work.
- .2 Perform Work in accordance with Provincial Code and Standards and National Building Code of Canada (NBC) (latest edition) 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.
- .3 Perform work in accordance with the Technical Criteria for Correctional Institutions, issued by Facility Planning and Standard, Correctional Service Canada.
- .4 Specific design and performance requirements listed in specifications or indicated on Drawings may exceed minimum requirements established by referenced Building Code; these requirements will govern over the minimum requirements listed in Building Code
  - .1 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 Departmental Representative for abatement procedures.
- .2 Mould: stop work immediately when material resembling mould is encountered during demolition work. Notify Departmental Representative for abatement procedures.

**1.3 BUILDING SMOKING ENVIRONMENT**

- .1 Comply with smoking restrictions and municipal by-laws.

**1.4 QUALITY ASSURANCE**

- .1 Regulatory Requirements: Except as otherwise specified, Contractor shall apply for, obtain, and pay fees associated with, permits, licenses, certificates, and approvals required by regulatory requirements and Contract Documents, based on General Conditions of Contract and the following:
  - .1 Regulatory requirements and fees in force on date of Bid submission, and
  - .2 A change in regulatory requirements or fees scheduled to become effective after date of tender submission and of which public notice has been given before date of tender submission

**Part 2            Products**

**2.1                NOT USED**

.1                Not Used.

**2.2                PERMITS**

.1                Contractor is responsible for obtaining all necessary building permits.

**Part 3            Execution**

**3.1                NOT USED**

.1                Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                INSPECTION**

- .1     Allow Departmental Representative 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 Departmental Representative 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     Departmental Representative 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. If such Work is found in accordance with Contract Documents, Departmental Representative will pay cost of examination and replacement.

**1.2                INDEPENDENT INSPECTION AGENCIES**

- .1     Independent Inspection/Testing Agencies will be engaged by Departmental Representative for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by Departmental Representative.
- .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 Departmental Representative at no cost to Departmental Representative. Pay costs for retesting and reinspection.

**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 Departmental Representative 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 Departmental Representative 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 Departmental Representative it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner 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 Departmental Representative.

**1.6 REPORTS**

- .1 Submit electronic copies (pdf format) of inspection and test reports to Departmental Representative.
- .2 Provide copies to manufacturer or fabricator of material being inspected or tested.

**1.7 TESTS AND MIX DESIGNS**

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

**1.8 MILL TESTS**

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

**1.9 EQUIPMENT AND SYSTEMS**

- .1 Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.
- .2 Refer to appropriate Section for definitive requirements.

**END OF SECTION**

**Part 1            General**

**1.1                ACTION AND INFORMATIONAL 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                DEWATERING**

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

**1.4                WATER SUPPLY**

- .1        Departmental Representative will provide continuous supply of potable water for construction use.
- .2        Arrange for connection with appropriate utility company and pay costs for installation, maintenance and removal.
- .3        Provide temporary connections and run all temporary piping or hoses to job locations requiring water service. Disconnect and remove upon completion of Work.

**1.5                TEMPORARY HEATING AND VENTILATION**

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

- .2 Provide local exhaust ventilation to prevent harmful accumulation of hazardous substances into atmosphere of occupied areas.
- .3 Dispose of exhaust materials in manner that will not result in harmful exposure to persons.
- .4 Ventilate storage spaces containing hazardous or volatile materials.
- .5 Ventilate temporary sanitary facilities.
- .6 Continue operation of ventilation and exhaust system for time after cessation of work process to assure removal of harmful contaminants.
- .6 Permanent heating system of building is not to be used when available, unless otherwise approved by Departmental Representative. Be responsible for damage to heating system if use is permitted.
- .7 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.
- .8 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

## **1.6 TEMPORARY POWER AND LIGHT**

- .1 Departmental Representative will provide for temporary power during construction for temporary lighting and operating of power tools, to a maximum supply of 230 volts 30 amps.
- .2 Departmental Representative is not responsible for interruptions to temporary power which may occur.
- .3 Arrange for connection with appropriate utility company. Pay costs for installation, maintenance and removal.
- .4 Temporary power for electric cranes and other equipment requiring in excess of above is responsibility of Departmental Representative.
- .5 Temporary power shall not be used for welding. Use self-generator units for all welding power.
- .6 Provide and maintain temporary lighting throughout project. Ensure level of illumination on all floors and stairs is not less than 162 lx.
- .7 Connect to existing power supply in accordance with Canadian Electrical Code.
- .8 Electrical power and lighting systems installed under this Contract may be used for construction requirements only with prior approval of Departmental Representative 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.

**1.7 TEMPORARY COMMUNICATION FACILITIES**

- .1 Provide and pay for temporary telephone and data hook up necessary for own use and use of Departmental Representative.
- .2 Cellular telephones are **NOT** permitted on site.

**1.8 FIRE PROTECTION**

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

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

- 3.1 .1 Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCE STANDARDS**

- .1 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB 1.189-00 , Exterior Alkyd Primer for Wood.
  - .2 CGSB 1.59-97 , Alkyd Exterior Gloss Enamel.
- .2 CSA Group (CSA)
  - .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.
- .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                ACTION AND INFORMATIONAL 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 to be used, avenues of ingress/egress to fenced area and details of fence installation.
- .2 Identify areas which have to be gravelled to prevent tracking of mud.
- .3 Indicate use of supplemental or other staging area.
- .4 Provide construction facilities in order to execute work expeditiously.
- .5 Remove from site all such work after use.

**1.4                SCAFFOLDING**

- .1 Scaffolding in accordance with CAN/CSA-S269.2.
- .2 Provide and maintain ramps, platform, ladders, scaffolding and temporary stairs.

**1.5                HOISTING**

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

**1.6 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.

**1.7 CONSTRUCTION PARKING**

- .1 Parking will be permitted on site in an area designated by the Departmental Representative. Refer to Drawings for location.
- .2 Provide and maintain adequate access to project site.
- .3 If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good any damage resulting from Contractor's use.

**1.8 SECURITY**

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

**1.9 OFFICES**

- .1 If required and approved by the Departmental Representative, the Contractor may provide a site office trailer. Locate where approved by Departmental Representative.
- .2 Provide office heated to 22 degrees C, lighted 750 lx and ventilated, of sufficient size to accommodate site meetings and furnished with drawing laydown table.
- .3 Provide marked and fully stocked first-aid case in a readily available location.

**1.10 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 not required to be stored in weatherproof sheds on site in manner to cause least interference with work activities.

**1.11 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.
- .3 Locate sanitary facilities as directed by Departmental Representative.

**1.12 CONSTRUCTION SIGNAGE**

- .1 No signs or advertisement, other than warning signs are permitted on site.
- .2 Signs and notices for safety and instructions shall be in both official languages. Graphic symbols shall conform to CAN-Z321.

- .3 Maintain and approved signs and notices in good condition for duration of project and dispose of off site upon completion of Contract, or earlier if so directed by Departmental Representative.

**1.13 PROTECTION AND MAINTENANCE OF TRAFFIC**

- .1 Provide access and temporary relocated roads as necessary to maintain traffic.
- .2 Maintain and protect traffic on affected roads during construction period except as otherwise specifically directed by Departmental Representative.
- .3 Provide measures for protection and diversion of traffic, including provision of watch-persons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs
- .4 Protect travelling public from damage to person and property.
- .5 Contractor's traffic on roads selected for hauling material to and from site to interfere as little as possible with public traffic.
- .6 Verify adequacy of existing roads and allowable load limit on these roads. Contractor: responsible for repair of damage to roads caused by construction operations.
- .7 Construct access and haul roads necessary.
- .8 Haul roads: constructed with suitable grades and widths; sharp curves, blind corners, and dangerous cross traffic shall be avoided.
- .9 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.
- .10 Dust control: adequate to ensure safe operation at all times.
- .11 Location, grade, width, and alignment of construction and hauling roads: subject to approval by Departmental Representative.
- .12 Lighting: to assure full and clear visibility for full width of haul road and work areas during night work operations.
- .13 Provide snow removal during period of Work.
- .14 Remove, upon completion of work, haul roads designated by Departmental Representative.

**1.14 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 Store materials resulting from demolition activities that are salvageable.
- .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                REFERENCE STANDARDS**

- .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    CSA Group (CSA)
  - .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                HOARDING**

- .1    Erect temporary site enclosures using either purpose made galvanized metal construction or 38 x 89 mm construction grade lumber framing at 600 mm centres and 1200 x 2400 x 13 mm exterior grade fir plywood to CSA O121.
- .2    Apply plywood panels vertically flush and butt jointed.
- .3    Provide barriers around trees and plants designated to remain. Protect from damage by equipment and construction procedures.

**1.4                GUARD RAILS AND BARRICADES**

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

**1.5                WEATHER ENCLOSURES**

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

**1.6                DUST TIGHT SCREENS**

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

**1.7 ACCESS TO SITE**

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

**1.8 PUBLIC TRAFFIC FLOW**

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

**1.9 FIRE & AMBULANCE ROUTES**

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

**1.10 PROTECTION FOR OFF-SITE AND PUBLIC PROPERTY**

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

**1.11 PROTECTION OF BUILDING FINISHES**

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

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCE STANDARDS**

- .1        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, Departmental Representative 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        Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .3        Should disputes arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .4        Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .5        Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

**1.3                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 Prevent overloading of parts of building. Do not cut, drill or sleeve load bearing structural member, unless specifically indicated without written approval of Departmental Representative.

**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 and pedestrian and vehicular traffic.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

**1.15 FASTENERS – SECURITY TYPE**

- .1 All exposed fasteners in secure areas to be as follows:
  - .1 Provide security screws, security nuts, rivets, spanner screws or other equally secure approved devices for affixing various hardware items.
  - .2 Use only rivets, security screws, or security nuts at locations where maximum security against removal is required.
  - .3 Use spanner screws only at locations where security against removal is not as important, and where it is necessary to remove and repair items from time to time.
  - .4 Security screws and nuts to have an extra head which twists off when screw or nut is fully secured, leaving main head without holes or slots for insertion of tool for removal.
  - .5 Spanner screws to be tamper resistant Torx with pin requiring special spanner tool to remove screws.
  - .6 Round head screws not acceptable except at locations approved where material is not thick enough to permit counter-sinking.
  - .7 Standard screws not acceptable.
  - .8 Use fasteners compatible with material through which they pass.
  - .9 Exposed fastening devices to match finish of device fastened.

**1.16**

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCE STANDARDS**

- .1            Owner's identification of existing survey control points and property limits.

**1.2                QUALIFICATIONS OF SURVEYOR**

- .1            Qualified registered land surveyor, licensed to practise in Place of Work, acceptable to Departmental Representative.

**1.3                SURVEY REFERENCE POINTS**

- .1            Existing base horizontal and vertical control points are designated on drawings.
- .2            Locate, confirm and protect control points prior to starting site work. Preserve permanent reference points during construction.
- .3            Make no changes or relocations without prior written notice to Departmental Representative.
- .4            Report to Departmental Representative when reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
- .5            Require surveyor to replace control points in accordance with original survey control.

**1.4                SURVEY REQUIREMENTS**

- .1            Contractor to complete survey complete with existing grading and proposed grading based on slopes as provided on drawings. Review finding with Departmental Representative.
- .2            Known underground utilities are present. Contractor to complete underground services survey in area of scope of work and report finding to Departmental Representative. Contractor to provide drawings of underground services overlaid with concrete piling plan to Departmental Representative.
- .3            Contractor to provide As-Built survey.
- .4            Establish lines and levels, locate and lay out, by instrumentation.
- .5            Stake for grading, fill and topsoil placement and landscaping features.
- .6            Stake batter boards for foundations.
- .7            Establish Exercise Yard foundations, main post locations and floor elevations.
- .8            Establish lines and levels for mechanical and electrical work.

**1.5                EXISTING SERVICES**

- .1            Known underground utilities are present. Contractor to complete underground services survey in area of scope of work and report finding to Departmental Representative. Contractor to provide drawings of underground services overlaid with concrete piling plan to Departmental Representative.

- .2 Before commencing work, establish location and extent of service lines in area of Work and notify Departmental Representative of findings.
- .3 Refer to drawings for excavation requirements in areas of underground services

#### **1.6 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 approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Departmental Representative.

#### **1.7 RECORDS**

- .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .2 On completion of foundations and major site improvements, prepare a certified survey showing dimensions, locations, angles and elevations of Work.
- .3 Record locations of maintained, re-routed and abandoned service lines.
- .4 On completion of construction, Contractor to provide as-built AutoCAD drawings.

#### **1.8 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit name and address of Surveyor to Departmental Representative.
- .2 On request of Departmental Representative, submit documentation to verify accuracy of field engineering work.
- .3 Submit certificate signed by surveyor certifying and noting those elevations and locations of completed Work that conform, and do not conform, with Contract Documents.

#### **1.9 SUBSURFACE CONDITIONS**

- .1 Promptly notify Departmental Representative in writing if subsurface conditions at Place of Work differ materially from those indicated in Contract Documents, or a reasonable assumption of probable conditions based thereon.
- .2 After prompt investigation, should Departmental Representative determine that conditions do differ materially, instructions will be issued for changes in Work as provided in Changes and Change Orders.

### **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                ACTION AND INFORMATIONAL 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.
  - .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 Remove samples of installed Work for testing.
- .6 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.
- .7 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- .8 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.
- .9 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.
- .10 Restore work with new products in accordance with requirements of Contract Documents.
- .11 Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .12 At penetration of fire rated wall, ceiling, or floor construction, completely seal voids with firestopping material, purpose made for maintaining fire resistance rating of assembly being penetrated. Provide firestop system number from manufacturer upon request of the Departmental Representative.
- .13 Refinish surfaces to match adjacent finishes: Refinish continuous surfaces to nearest intersection. Refinish assemblies by refinishing entire unit.
- .14 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

**1.5 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

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1            General**

**1.1                PROJECT CLEANLINESS**

- .1      Maintain Work in tidy condition, free from accumulation of waste products and debris, including that caused by Departmental Representative or other Contractors.
- .2      Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Departmental Representative. Do not burn waste materials on site.
- .3      Clear snow and ice from access to building, Bank/pile snow in designated areas only.
- .4      Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .5      Provide on-site garbage and recycling containers for collection of waste materials and debris.
- .6      Provide and use marked separate bins for recycling. Refer to Section 01 74 21 – Waste Management and Disposal.
- .7      Remove waste material and debris from site and deposit in waste container at end of each working day.
- .8      Clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.
- .9      Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .10     Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .11     Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .12     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 Departmental Representative. Do not burn waste materials on site.
- .6      Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.

- .7 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.
- .8 Remove stains, spots, marks and dirt from decorative work, electrical and mechanical fixtures, furniture fitments, and walls.
- .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 Sweep and wash clean paved areas.
- .16 Clean equipment and fixtures to sanitary condition; clean or replace filters of mechanical equipment.
- .17 Remove snow and ice from access to building.

**1.3 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

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

Approved: 2017-04-25

**Part 1            General**

**1.1                REFERENCE STANDARDS**

- .1    American Society for Testing and Materials (ASTM):
  - .1        ASTM E1609 01, Standard Guide for Development and Implementation of a Pollution Prevention Program

**1.2                DEFINITIONS**

- .1    Clean Waste: Untreated and unpainted; not contaminated with oils, solvents, sealants or similar materials.
- .2    Construction and Demolition Waste: Solid wastes typically including building materials, packaging, trash, debris, and rubble resulting from construction and demolition
- .3    Hazardous: Exhibiting the characteristics of hazardous substances including properties such as ignitability, corrosiveness, toxicity or reactivity.
- .4    Non hazardous: Exhibiting none of the characteristics of hazardous substances, including properties such as ignitability, corrosiveness, toxicity, or reactivity.
- .5    Non toxic: Not poisonous to humans either immediately or after a long period of exposure.
- .6    Recyclable: The ability of a product or material to be recovered at the end of its life cycle and remanufactured into a new product for reuse by others.
- .7    Recycle: To remove a waste material from the project site to another site for remanufacture into a new product for reuse by others.
- .8    Recycling: The process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for the purpose of using the altered form; recycling does not include burning, incinerating, or thermally destroying waste.
- .9    Return: To give back reusable items or unused products to vendors for credit.
- .10    Reuse: To reuse a construction waste material in some manner on the project site.
- .11    Salvage: To remove a waste material from the project site to another site for resale or reuse by others.
- .12    Sediment: Soil and other debris that has been eroded and transported by storm or well production run off water.
- .13    Source Separation: The act of keeping different types of waste materials separate beginning from the first time they become waste.
- .14    Toxic: Poisonous to humans either immediately or after a long period of exposure.
- .15    Trash: Any product or material unable to be reused, returned, recycled, or salvaged.
- .16    Volatile Organic Compounds (VOC's): Chemical compounds common in and emitted by many building products over time through outgassing:
  - .1        Solvents in paints and other coatings;

- .2 Wood preservatives; strippers and household cleaners;
  - .3 Adhesives in particleboard, fiberboard, and some plywood; and foam insulation.
  - .4 When released, VOC's can contribute to the formation of smog and can cause respiratory tract problems, headaches, eye irritations, nausea, damage to the liver, kidneys, and central nervous system, and possibly cancer.
- .17 Waste: Extra material or material that has reached the end of its useful life in its intended use. Waste includes salvageable, returnable, recyclable, and reusable material.

### **1.3 ADMINISTRATIVE REQUIREMENTS**

- .1 Coordination: Coordinate waste management requirements with all Divisions of the Work for the project, and ensure that requirements of the Construction Waste Management Plan are followed.

### **1.4 SUBMITTALS**

- .1 Provide required information in accordance with Section 01 33 00 – Submittal Procedures.
- .2 Action Submittals: Provide the following submittals before starting any work of this Section:
  - .1 Submit 2 copies of the Contractors Waste Management Plan (WMP)

### **1.5 PROJECT CLOSEOUT SUBMISSIONS**

- .1 Diversion Documentation : Submit as constructed information in accordance with Section 01 78 00– Closeout Submittals as follows:

### **1.6 QUALITY ASSURANCE**

- .1 Resources for Development of Waste Management Plan (WMP)The following sources may be useful in developing the Draft Construction Waste Management Plan:
  - .1 Recycling Haulers and Markets: Investigate local haulers and markets for recyclable materials, and incorporate into WMP Plan .
  - .2 Waste-to-Energy Systems: Investigate local waste-to-energy incentives where systems for diverting materials from landfill for reuse or recycling are not available.

### **1.7 DELIVERY, STORAGE AND HANDLING**

- .1 Storage Requirements: Implement a recycling/reuse program that includes separate collection of waste materials as appropriate to the project waste and the available recycling and reuse programs in the project area.
- .2 Handling Requirements: Clean materials that are contaminated before placing in collection containers and ensure that waste destined for landfill does not get mixed in with recycled materials:
  - .1 Deliver materials free of dirt, adhesives, solvents, petroleum contamination, and other substances deleterious to recycling process.
  - .2 Arrange for collection by or delivery to the appropriate recycling or reuse facility.

- .3 Hazardous Waste and Hazardous Materials: Handle in accordance with applicable regulations.

**Part 2 Products**

**2.1 NOT USED**

- .1 Not Used.

**Part 3 Execution**

**3.1 WASTE MANAGEMENT PLAN (WMP) IMPLEMENTATION**

- .1 Manager: Contractor is responsible for designating an on site party or parties responsible for instructing workers and overseeing and documenting results of the [WMP Plan] for the project.
- .2 Distribution: Distribute copies of the Waste Management Plan (WMP) to the job site foreman, each Subcontractor , the Departmental Representative and other site personnel as required to maintain the Waste Management Plan (WMP).
- .3 Instruction: Provide on site instruction of appropriate separation, handling, and recycling, salvage, reuse, composting and return methods being used for the project to Subcontractor 's at appropriate stages of the project.
- .4 Separation Facilities: Lay out and label a specific area to facilitate separation of materials for potential recycling, salvage, reuse, composting and return:
  - .1 Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid contamination of materials.
  - .2 Hazardous wastes shall be separated, stored, and disposed of in accordance with local regulations.
- .5 Progressive Documentation: Submit a monthly summary of waste generated by the project to ensure that waste diversion goals are on track with project requirements:
  - .1 Monthly waste summary shall contain the following information:
    - .1 The amount in tonnes or m<sup>3</sup>and location of material landfilled,
    - .2 The amount in tonnes or m<sup>3</sup>and location of materials diverted from landfill, and
    - .3 Indication of progress based on total waste generated by the project with materials diverted from landfill as a percentage.

**3.2 SUBCONTRACTOR'S RESPONSIBILITY**

- .1 Subcontractor 's shall cooperate fully with the Contractor to implement the Waste Management Plan (WMP).

**END OF SECTION**

**Part 1            General**

**1.1                ADMINISTRATIVE REQUIREMENTS**

- .1    Acceptance of Work Procedures:
  - .1    Contractor's Inspection: Contractor: 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 inspection.
  - .2    Departmental Representative Inspection:
    - .1    Departmental Representative and Contractor to inspect Work and identify defects and deficiencies.
    - .2    Contractor to correct Work as directed.
  - .3    Completion 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, balanced and fully operational.
    - .4    Certificates required by Authority Having Jurisdiction: submitted.
    - .5    Operation of systems: demonstrated to Facility's personnel.
    - .6    Work: complete and ready for final inspection.
    - .7    Commissioning of electrical & security systems: completed in accordance with Requirements indicated on Electrical Drawings and submitted to the Electrical Engineer.
  - .4    Final Inspection:
    - .1    When completion tasks are done, request final inspection of Work by Departmental Representative, and Contractor.
    - .2    When Work incomplete according to 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 from the site in accordance with Section 01 74 21 – Construction/Demolition Waste Management and Disposal.

**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    Pre-warranty Meeting:
  - .1    Convene meeting one week prior to contract completion with Departmental Representative in accordance with Section 01 31 19- Project Meetings to:
    - .1    Verify Project requirements.
    - .2    Review warranty requirements and manufacturer's installation instructions.
  - .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.
  - .3    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.
  - .4    Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action.

**1.2                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, four 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.
- .5    Pay for costs of transportation of submittal submittals.

**1.3                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 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.

#### **1.4 CONTENTS - PROJECT RECORD DOCUMENTS**

- .1 Table of Contents for Each Volume: 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.
  - .1 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.

#### **1.5 AS -BUILT DOCUMENTS AND SAMPLES**

- .1 Maintain, in addition to requirements in General Conditions, at site Departmental Representative 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.
  - .1 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.
  - .1 Label each document "PROJECT RECORD" in neat, large, printed letters.

- .4 Maintain record documents in clean, dry and legible condition.
  - .1 Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.

## **1.6 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS**

- .1 Record information on set of black line opaque drawings, and in copy of Project Manual, 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.
  - .1 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 Referenced Standards 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 inspection certifications, manufacturer's certifications, field test records, required by individual specifications sections.
- .7 Provide digital photos, if requested, for site records.

## **1.7 FINAL SURVEY**

- .1 Submit final site survey certificate in accordance with Section 01 71 00- Examination and Preparation , certifying that elevations and locations of completed Work are in conformance, or non-conformance with Contract Documents.

## **1.8 EQUIPMENT AND SYSTEMS**

- .1 For 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 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.

## **1.9 MATERIALS AND FINISHES**

- .1 Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
  - .1 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.

**1.10 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 by Departmental Representative; 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 by Departmental Representative; 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 by Departmental Representative; place and store.
  - .4 Receive and catalogue items.
    - .1 Submit inventory listing to Departmental Representative.
    - .2 Include approved listings in Maintenance Manual.

**1.11 DELIVERY, STORAGE AND HANDLING**

- .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 for review by Departmental Representative.

**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 Departmental Representative's approval.

- .3 Warranty management plan to include required actions and documents to assure that Departmental Representative 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, submit upon acceptance of work and 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 11 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.
  - .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 Procedure and status of tagging of equipment covered by extended warranties.
- .5 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.
- .10 Respond in timely manner to oral or written notification of required construction warranty repair work.
- .11 Written verification to follow oral instructions.
  - .1 Failure to respond will be cause for the Departmental Representative to proceed with action against Contractor.

**1.13 WARRANTY TAGS**

- .1 Tag, at time of installation, each warranted item. Provide durable, oil and water resistant tag approved by Departmental Representative.
- .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                ADMINISTRATIVE REQUIREMENTS**

- .1     Demonstrate operation and maintenance of equipment and systems to Owner's personnel two weeks prior to date of final inspection.
- .2     Departmental Representative will provide list of personnel to receive instructions, and coordinate their attendance at agreed-upon times.
- .3     Preparation:
  - .1     Verify conditions for demonstration and instructions comply with requirements.
  - .2     Verify designated personnel are present.
  - .3     Ensure equipment has been inspected and put into operation in accordance with appropriate specification Section.
  - .4     Ensure testing, adjusting, and balancing has been performed in accordance with Mechanical and Electrical Divisions, and equipment and systems are fully operational.
- .4     Demonstration and Instructions:
  - .1     Demonstrate start-up, operation, control, adjustment, trouble-shooting, at the agreed upon 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 needed during instructions.

**1.2                ACTION AND INFORMATIONAL SUBMITTALS**

- .1     Provide 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 Departmental Representative's 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.
- .5     Provide copies of completed operation and maintenance manuals for use in demonstrations and instructions.

**1.3                QUALITY ASSURANCE**

- .1     When specified in individual Sections requiring manufacturer to provide authorized representative to demonstrate operation of equipment and systems:
  - .1     Instruct Owner's personnel.
  - .2     Provide written report that demonstration and instructions have been completed.

**Part 2            Products**

**2.1                NOT USED**

.1                Not Used.

**Part 3            Execution**

**3.1                NOT USED**

.1                Not Used.

**END OF SECTION**