

1 MINIMUM STANDARDS

- .1 Materials shall be new and work shall conform to the minimum applicable standards of the Canadian General Standards Board, the Canadian Standards Association, the National Building Code of Canada 2010 (NBC) and all applicable Provincial and Municipal codes. In the case of conflict or discrepancy the most stringent requirement shall apply.

2 SHOP DRAWINGS

- .1 Submit for the Departmental Representative's review, one copy of each shop drawing in electronic format.
- .2 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.
- .3 Submit drawings stamped and signed by professional engineer registered or licensed in the Province of Ontario Canada as required by specific specification sections.
- .4 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 coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .5 Allow a minimum of 7 days for Departmental Representative's review of each submission.
- .6 Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state this in writing to Departmental Representative prior to proceeding with Work.
- .7 Make changes in shop drawings as the Departmental Representative may require, consistent with the Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
- .8 Accompany submissions with transmittal letter, in, 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.
- .9 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.
- .10 After Departmental Representative's review, distribute copies.
- .11 Delete information not applicable to project.
- .12 Supplement standard information to provide details applicable to project.
- .13 If upon review by Departmental Representative no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of the Work may proceed.
- .14 The review is for the sole purpose of ascertaining conformance with the general design concept, and does not mean approval of the design details inherent in the shop drawings, responsibility for which shall remain with the Contractor. Such review shall not relieve the Contractor of responsibility for errors or omissions in the shop drawings or of his responsibility for meeting all requirements of the Contract Documents.
- .15 Do not commence manufacture or order materials before shop drawings are reviewed.

3 SAMPLES

- .1 Samples: examples of materials, equipment, quality, finishes, workmanship.
- .2 Where colour, pattern or texture is criterion, submit full range of samples.
- .3 Reviewed and accepted samples will become standard of workmanship and material against which installed work will be verified.

4 PRODUCT DATA

- .1 Product data: manufacturers catalogue sheets, brochures, literature, performance charts and diagrams, used to illustrate standard manufactured products.
- .2 Submit five (5) copies of product data.
- .3 Delete information not applicable to project.

- .4 Cross-reference product data information to applicable portions of Contract Documents.

5 TAXES

- .1 Pay all taxes properly levied by law (including Federal, Provincial and Municipal).

6 FEES, PERMITS, AND CERTIFICATES

- .1 Pay all fees and obtain all permits. Provide authorities with plans and information for acceptance certificates. Provide inspection certificates as evidence that work conforms to requirements of Authority having jurisdiction.

7 MEETINGS

- .1 Attend bi-weekly meetings throughout the progress of the Work at the call of the Departmental Representative.
- .2 Representatives of the Contractor, subcontractors and suppliers attending meetings shall be qualified and authorized to act on behalf of the party each represents.
- .3 Coordination Meetings
 - .1 Prior to commencement of construction work convene a meeting with affected trades and the Departmental Representative to review Contractor's proposed methodology for staging the construction, the removal of existing services, and installation of new services.
 - .2 Prior to commencement of construction work and the preparation interference drawings, convene a coordination meeting with all major trades and the Departmental Representative to review the integration of the building systems, their interrelationships, potential conflict areas, and strategies for their resolution.
 - .3 Convene a meeting with mechanical and electrical trades to review the placement of exposed wall and ceiling mounted devices, sensors, switches, and other similar items to plan a coordinated approach to arranging these items on walls and ceilings.
 - .4 During course of work attend regularly scheduled progress meetings.
 - .5 Contractor, major subcontractors involved in work and the Departmental Representative are to be in attendance.

8 FIRE SAFETY REQUIREMENTS

- .1 Comply with the National Building Code of Canada 2010 (NBC) for fire safety in construction and the National Fire Code of Canada 2010 (NFC) for fire prevention, firefighting and life safety in building in use.
- .2 Welding and cutting:
 - .1 Before welding, soldering, grinding and/or cutting work, obtain a permit from the Building Facilities Personnel as directed by the Departmental Representative. Store flammable liquids in approved CSA containers. No open flame shall be used unless authorized by the Departmental Representative.
 - .2 Ensure that smoke eaters and all other required safety equipment is provided by the related trade prior to commencing work.

- .3 Provide one (1) week notice prior to commencing cutting, welding or soldering procedure, provide to the Departmental Representative:
 - .1 Notice of intent, indicating devices affected, time and duration of isolation or bypass.
 - .2 Completed site Hot Work Permit.
 - .3 Return welding permit to the Departmental Representative immediately upon completion of procedures for which permit was issued. A fire watcher shall be assigned when welding or cutting operations are carried out in areas where combustible materials within 10m may be ignited by conduction or radiation. All work is to be coordinated with the Departmental representative in conjunction with onsite Security.
- .3 Where work requires interruption of fire alarms or fire suppression, extinguishing or protection systems:
 - .1 Complete form supplied by the Departmental Representative which describes the reason for isolation, location of work and anticipated duration of work. Contractor will sign document identifying request for fire protection/ alarm system isolation. Upon completion of work, the Contractor will indicate that all work is completed and will sign off and request reinstatement of the fire protection/ alarm system. Isolation of the fire protection/ alarm system shall not exceed eight (8) hours.
 - .2 Provide watchman service as required by the Departmental Representative. In general, watchman service is defined as an individual conversant with Fire Emergency Procedures, performing fire picket duty within an unprotected and unoccupied (no workers) area once per hour.
 - .3 Retain services of manufacturer for fire protection systems on daily basis to isolate and protect all devices relating to:
 - .1 Modification of fire alarms, fire suppression, extinguishing or protection systems; and/or
 - .2 Cutting, welding, soldering or other construction activities which might activate fire protection systems.
- .4 Immediately upon completion of work, restore fire protection systems to normal operation and verify that all devices are fully operational.
- .5 Inform fire alarm system monitoring agency and local Fire Department immediately prior to isolation and immediately upon restoration of normal operation.

9 FIELD QUALITY CONTROL

- .1 Refer to Section 01 45 00 - Quality Control.

10 HAZARDOUS MATERIALS

- .1 Comply with the requirements of the Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and the provision of Material Safety Data Sheets (MSDS) acceptable to Departmental Representative.
- .2 For work in occupied buildings give the Departmental Representative one (1) week notice for work involving designated substances (Ontario Bill 208) and before painting, caulking, installing carpet or using adhesives.

11 TEMPORARY UTILITIES

- .1 Existing services required for the work, excluding power required for space heating, may be used by the Contractor without charge. Ensure capacity is adequate prior to imposing additional loads. Connect and disconnect at own expense and responsibility.
- .2 The Contractor is responsible for providing a complete and functioning source of chilled water on a temporary basis so as to maintain cooling to the facilities and systems on the project site. Maintain chilled water availability at all times during the work:
 - .1 The Contractor shall produce proof of rental terms for the temporary chiller plant including pump, hoses, and all accessories demonstrating a contractual obligation binding upon the equipment rental agency to repair and return to service the temporary chilled water plant within a Maximum response time of 24h in the event of any component failure resulting in loss of chilled water service.
 - .2 The preceding shall apply during all statutory holidays and weekends.
 - .3 Provide proof of response time terms to the Departmental Representative.
 - .4 Submit as per Article 2 – **SHOP DRAWINGS**.
- .3 Notify the Departmental Representative and utility companies of intended interruption of services, obtain requisite permission.
- .4 Give the Departmental Representative four (4) weeks' notice related to each necessary interruption of any mechanical or electrical service throughout the course of the work. Keep duration of these interruptions to a minimum. Carry out all interruptions after normal working hours of the occupants or on weekends as required by the contract schedule.

12 REMOVED MATERIALS

- .1 Unless otherwise specified, materials for removal become the Contractor's property and shall be taken from site.
- .2 Comply with Environmental Code of Practice for Elimination of Fluorocarbons Emissions from Refrigeration and Air Conditioning Systems SOR/2003-289 S.9 in all aspects of dismantling of refrigeration equipment and recovery of ozone depleting substances.

13 PROTECTION

- .1 Protect finished work against damage until take-over.
- .2 Protect adjacent work against the spread of dust and dirt beyond the work areas. Refer to Article 29 - **CLEAN UP** for related requirements.
- .3 Protect operatives and other users of site from all hazards.

14 DUST PROTECTION OF CUSTOMER EQUIPMENT

- .1 The Hydraulic Building contains high pressure hydraulic pumping units that will remain operation at all times during the project. The contractor must protect this equipment from dust related to the construction:

- .2 Provide dust protection work-plan including sketches and proposed methods to the Departmental Representative.
- .3 Submit as per Article **2 – SHOP DRAWINGS**.

15 EXISTING SERVICES

- .1 Where work involves breaking into or connecting to existing services, carry out work at times directed by governing authorities, with minimum disturbance to pedestrian, vehicular traffic and building operations.
- .2 Establish location and extent of service lines in area of work before starting Work and notify Departmental Representative of findings.
- .3 Submit schedule to and obtain approval from Departmental Representative for any system shut-downs. At no time is the building to be shut down for a prolonged duration to implement the installation of the temporary services Chiller or new Chiller system. Adhere to approved schedule and provide notice to affected parties.
- .4 Provide the necessary temporary services to building and occupant systems.
- .5 Provide bridging over trenches which cross sidewalks or roads to permit normal traffic as approved by Departmental Representative.
- .6 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.
- .7 Protect, relocate or maintain existing active services. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction.
- .8 Record locations of maintained, re-routed and abandoned service lines.

16 USE OF SITE AND FACILITIES

- .1 Execute work with least possible interference or disturbance to the normal use of premises. Make arrangements with the Departmental Representative to facilitate work as stated. Refer to article **33- SCHEDULING** below for work that must be done during "off hours".
- .2 Maintain existing services to building throughout the construction of the new Chiller installation. Provide all of the necessary equipment to provide temporary chiller system including hoses, couplings, and power cables.
- .3 Maintain access to the buildings for personnel and vehicle access.
- .4 Where elevators, dumbwaiters, conveyors or escalators exist Contractor may use these at the Departmental Representative's discretion. Protect from damage, safety hazards and overloading of existing equipment.
- .5 There will be **NO** sanitary facilities available for the Contractor personnel. The contractor will be responsible to provide the number of portable sanitary units including the associated washing facilities for their workers. The contractor will be responsible to maintain and clean these units along with the disposal of the sewage on a regular basis.
- .6 Closures: Protect work temporarily until permanent enclosures completed.

- .7 Construction site area to be well-delineated, fenced, and marked to prevent public and employees entering construction zone and traffic zones. Refer to drawings for construction zone, available storage area and exiting path from the building that must be arranged and maintained in the area of the construction throughout the project.
- .8 Limited parking is available on site for Contractor and Sub-trades' vehicles. The Departmental Representative will designate specific parking spots for the Contractor's use. The Contractor will provide and maintain detailed description of vehicles including, make, colour, licence plate number and driver's name to the Departmental Representative. The contractor will be responsible to register their vehicles when signing in each day.
- .9 Delivery of equipment, materials etc. required to facilitate the work shall be scheduled 48 hours in advance of delivery. The Contractor will be required to notify the Departmental Representative at which time the Departmental Representative will provide the Contractor with appropriate access number.

17 SITE STORAGE

- .1 There is limited storage space available on the site for the Contractor to store materials and equipment required for the project. Drawings indicate a general area that the Contractor can use for this storage. The Contractor will be responsible to fence the area to protect building staff accessing the property to enter and exit the surrounding buildings.
- .2 Do not unreasonably encumber site with materials or equipment. Access to the surrounding buildings outside the defined construction zone must be maintained at all times.
- .3 Move stored products or equipment which interferes with operations of the Departmental Representative or other contractors.
- .4 Obtain and pay for use of storage containers as needed for operations.

18 CUT, PATCH AND MAKE GOOD

- .1 Cut existing surfaces as required to accommodate new work.
- .2 Remove all items so shown or specified.
- .3 Patch and make good surfaces cut, damaged or disturbed, to the Departmental Representative's approval. Match existing material, colour, finish and texture.
- .4 Install firestops and smoke seals in accordance with CAN/ULC-S115-11, Standard Method of Fire Tests of Firestop, around pipe, ductwork, cables, and other objects penetrating fire separations to provide fire resistance not less than the fire resistance rating of surrounding floor, ceiling, and wall assembly.
- .5 Refer to Section 02 41 99 - Demolition for Minor Works.

19 SLEEVES, HANGERS AND INSERTS

- .1 Co-ordinate setting and packing of sleeves and supply and installation of hangers and inserts. Obtain the Departmental Representative's approval before cutting into structure.

20 EXAMINATION

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

21 SIGNS

- .1 Provide common-use signs related to traffic control, information, instruction, use of equipment, public safety devices, etcetera, in both official languages or by the use of commonly-understood graphic symbols to the Departmental Representative's approval.
- .2 No advertising will be permitted on this project.

22 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.
- .2 The Contractor shall agree to install proper site separation and identification in order to maintain "Time and Space" at all times throughout the life of the project and when Building Operations staff requires access to equipment in order to operate the building, proper coordination and communication must exist between all parties involved.

23 SCAFFOLDS AND WORK PLATFORMS

- .1 Design, install, and inspect scaffolds and work platforms required for work in accordance with relevant municipal, provincial and other regulations.
- .2 Provide design drawings, signed and sealed by qualified Professional Engineer licensed in the province of Ontario, where prescribed.
- .3 Additions or modifications to scaffolding must be approved by Professional Engineer in writing.

24 WASTE MANAGEMENT

- .1 Comply with the Environmental Protection Act, Ontario Regulations O.Reg. 102/94 and O. Reg. 103/94 for waste management program on construction and demolition projects.
- .2 Comply with Environmental Code of Practice for Elimination of Fluorocarbons Emissions from Refrigeration and Air Conditioning Systems SOR/2003-289 S.7, S.8 in all aspects of the recovery of ozone depleting substances.
- .3 Conduct "waste audit" to determine waste generated during demolition or construction operations, prepare written "waste reduction work plan" and implement procedures to reduce, reuse and recycle materials to the extent possible.
- .4 Provide a "source separation program" to disassemble and collect in an orderly fashion the following "materials designated for alternative disposal" from the "general waste" stream.
 - .1 brick and Portland cement concrete.

- .2 cardboard (corrugated).
- .3 gypsum board (unfinished).
- .4 steel.
- .5 wood (not including treated or laminated wood).
- .5 Submit complete records to the Departmental Representative of all removals from site for both "materials designated for alternative disposal" and "general waste" including:
 - .1 Time and date of removal
 - .2 Description of material and quantities.
 - .3 Proof that materials have been received at an Approved Waste Processing Site or certified Waste Disposal Site as required.

25 OPERATIONS AND MAINTENANCE MANUALS

- .1 Two (2) weeks prior to any scheduled training, submit to the Departmental Representative six (6) copies of approved Operations Data and Maintenance Manual in both official languages, compiled as follows:
 - .1 Bind data in vinyl hard cover 3 "D" ring type loose leaf binders for 212 x 275 mm size paper. Binders must not exceed 75 mm thick or be more than 2/3 full.
 - .2 Enclose title sheet labelled "Operation Data and Maintenance Manual," Project Name, Project Number, Date and List of Contents. Project name must appear on binder face and spine.
 - .3 Organize contents into applicable sections of work to parallel project specifications breakdown. Mark each section by labelled tabs protected with celluloid covers fastened to hard paper dividing sheets.
- .2 Include following information plus data specified.
 - .1 Maintenance instruction for finished surface and materials.
 - .1 Copy of hardware and paint schedules.
- .3 Description: Operation of the equipment and systems defining start-up, shut-down and emergency procedures, and any fixed or adjustable set points that affect the efficiency of the operation. Include nameplate information such as make, size, capacity and serial number.
- .4 Maintenance: Use clear drawings, diagrams or manufacturers' literature which specifically apply and detail the following:
 - .1 lubrication products and schedules.
 - .2 trouble shooting procedures.
 - .3 adjustment techniques.
 - .4 operational checks.
- .5 Suppliers' names, addresses and telephone numbers and components supplied by them must be included in this section. Components must be identified by a description and manufacturers part number.
 - .1 Guarantees showing:
 - .1 Name and address of projects.
 - .2 Guarantee commencement date (date of Interim Certificate of Completion).
 - .3 Duration of guarantee.
 - .4 Clear indication of what is being guaranteed and what remedial action will be taken under guarantee.

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- .5 Signature and seal of Guarantor.
 - .2 Additional material used in project listed under various sections showing name of manufacturer and source of supply.
 - .6 Spare parts: List all recommended spares to be maintained on site to ensure optimum efficiency. List all special tools appropriate to unique application. All parts/tools detailed must be identified as to manufacturer, manufacturer part number and supplier (including address).
 - .7 Include one complete set of final shop drawings (bound separately) indicating corrections and changes made during fabrication and installation.
 - .8 Provide a soft copy of all manuals.
- 26 RECORDS**
- .1 As work progresses, maintain accurate records to show deviations from contract drawings.
 - .2 Just prior to the Departmental Representative's inspection for issuance of final certificate of completion, the Departmental Representative will review the white prints of the marked up contract drawings to verify that all deviations have been identified neatly inked in.
- 27 GUARANTEES AND WARRANTIES**
- .1 Before completion of work collect all manufacturer's guarantees and warranties and deposit with the Departmental Representative.
- 28 EXTENDED WARRANTY**
- .1 Refer to Section 07 52 00 – Modified Bituminous Membrane Roofing, Article **1.9 EXTENDED WARRANTY** for extended warranty requirements.
 - .2 Refer to Section 07 54 19 – Polyvinyl-Chloride Roofing, Article **1.9 EXTENDED WARRANTY** for extended warranty requirements.
 - .3 Refer to Section 23 74 00 – Packaged Outdoor HVAC Equipment, Article **1.6 EXTENDED WARRANTY** for extended warranty requirements.
- 29 CLEAN UP**
- .1 Clean up work area as work progresses. At the end of each work day and more often if ordered by the Departmental Representative, remove debris from site, neatly stack material for use, and clean up generally.
 - .2 Clean areas under contract to a condition at least equal to that previously existing and to approval of the Departmental Representative.
- 30 SECURITY CLEARANCES**
- .1 All personnel employed on this project will be subject to security check.

- .2 Personnel will be checked daily at start of work shift, required to sign in and given a pass which must be worn at all times. Pass must be returned at end of work shift and personnel checked out.

31 BUILDING SMOKING ENVIRONMENT

- .1 Smoking is not permitted in the Building. Obey smoking restrictions on building property.

32 TESTING LABORATORY SERVICES

- .1 The Departmental Representative will appoint and pay for costs of inspection and testing services, unless indicated otherwise.
- .2 Provide safe working areas and assist with testing procedures, including provisions for materials or services and co-ordination, as required by testing agency and as authorized by the Departmental Representative.
- .3 Where tests indicate non-compliance with specifications, contractor to pay for initial test and all subsequent testing of work to verify acceptability of corrected work.

33 SCHEDULING

- .1 On award of contract submit a construction schedule for work, indicating anticipated progress stages within time of completion. Refer to Section 01 32 16.07 - Construction Progress Schedule – Bar (GANTT) Chart.
- .2 All interruptions to chilled water shall be scheduled by date on the schedule for work. No shut-downs additional to those outlined in the item 4 below will be tolerated.
- .3 The Contractor shall submit a schedule of construction staging which will demonstrate how the facility servicing will remain operational during the construction. The following outlines the sequence for each project STAGE. The Contractor shall base their staging on this sequence or develop their own for review. The staging description does not identify all of the tasks associated with the completion and all the required works for the project completion, the Contractor is responsible for all works described on the contract documents. Each stage of construction must be completed prior to moving on to subsequent stages of construction.
- .4 STAGE – 1 – Mobilization & Temporary Chiller Preparation
 - .1 The works required to complete STAGE 1 of the project shall be completed within 3 weeks of award of the contract.
 - .2 Establish schedule, submittals, mobilize.
 - .3 All work associated with the Main Building may commence.
 - .4 Deliver temporary chiller to site and set in place.
 - .5 Install temporary chiller electrical feeder to panel E without connection.

.5 STAGE – 2 – Temporary Chiller Connection

- .1 The work required to complete STAGE 2 of the project shall be completed within 2 days of completion of Stage 1.
- .2 Hydraulic Building Shutdown #1 - isolate panel E from Main Building.
- .3 Connect temporary chiller electrical feeder inside panel E.
- .4 Perform Stage 2 mechanical demolition and new work, and connect temporary chiller to main building and hydraulic pumping units.
- .5 Disconnect existing chiller and associated equipment from panel E. Install new fan-coil feeders in Panel E, coil and secure temporarily.
- .6 Re-energize panel E.
- .7 Energize temporary chiller and place in service.

.6 STAGE – 3 – Demolition

- .1 The works required to complete STAGE 3 of the project shall be completed within 4 weeks of completion of Stage 2.
- .2 Mechanical demolition in Hydraulic Building.
- .3 Note that prior to de-energizing the existing rooftop exhaust fans for demolition of same and associated dampers and air intakes, the new fan-coil units AC-01 and AC-02 for Hydraulic Building cooling must be set in place (at least temporarily), connected, and placed in service to ensure cooling to the space. It is acceptable to relocate AC-01 and/or AC-02 without hydraulic building shutdown as required to complete the demolition during this stage (and stage 4 work) as long one of the two remain in service at all times.
- .4 Electrical demolition in Hydraulic Building.
- .5 Architectural, steel, and concrete demolition.

.7 STAGE – 4 – Construction and Preliminary Commissioning

- .1 The works required to complete STAGE 4 of the project shall be completed within 6 weeks of completion of Stage 3.
- .2 Perform Stage 4 architectural work and all steel and concrete work.
- .3 Perform Stage 4 mechanical work.
- .4 Hydraulic Building Shutdown #2 - Hydraulic Building shutdown for the purposes of electrical connections.
- .5 Complete Stage 4 electrical work.
- .6 Preliminary commissioning (pumps, controls).

.8 STAGE – 5 – Chiller Startup

- .1 The works required to complete STAGE 5 of the project shall be completed within 2 days of completion of Stage 4.
- .2 Hydraulic Building Shutdown Shutdown #3 - isolate panel E. Disconnect temporary chiller. Connect new chiller.
- .3 Start-up and commissioning of new chiller.

.9 STAGE – 6 – Final Commissioning, Demobilization, and Closeout.

- .1 The works required to complete STAGE 6 of the project shall be completed within 2 weeks of completion of Stage 4.

- .2 Removal of temporary chiller and connections.
- .3 Perform Stage 6 architectural work.
- .4 Final commissioning.
- .5 Complete site restoration, cleanup, and demobilization.
- .6 Closeout submittals.
- .10 Carry out work during "regular hour" Monday to Friday from 07:00 to 18:00 hours and on Saturdays, Sundays and statutory holidays.
- .11 Carry out work in occupied areas and work requiring interruptions of chilled water during "off hours" Monday to Friday from 20:30 to 07:00 hours and on Saturdays, Sundays, and statutory holidays.
- .12 Give the Departmental Representative 14 days' notice for work to be carried out during "off hours". Give the Departmental Representative 30 days' notice for work requiring any shutdowns to chilled water not previously identified on the schedule for the work.
- .13 Carry out the work in the Main Building during "off hours" Monday to Friday from 16:00 to 08:00 hours and on Saturdays, Sundays, and statutory holidays.
- .14 Carry out the noise generating work during "off hours" Monday to Friday from 19:00 to 06:00 hours and on Saturdays, Sundays, and statutory holidays Noise generating work includes:
 - .1 Core drilling.
 - .2 Drilling for equipment anchors.
 - .3 Construction activities on the roof of the Main Building.
 - .4 Saw cutting of structure.
- .15 Use of a crane on site to place and deliver any equipment must be scheduled 14 days in advance with the Departmental Representative. Crane shall not exceed height as directed and required by the Ottawa Airport Authority. Contractor shall confirm crane height with authorities and submit all details to the Departmental Representative for review.
- .16 Carry out work that will require a partial power shutdown in the building during 'Off Hours' Monday to Friday from 18:00 to 04:00 and on Saturdays, Sundays and statutory holidays. Coordinate power shutdown(s) with the Departmental Representative. Indicate planned power shutdowns on the project schedule. A minimum of 6 weeks' notice is required to arrange any equipment shutdown or isolation.

34 COST BREAKDOWN

- .1 Before submitting first progress claim submit breakdown of Contract Amount in detail as directed by the Departmental Representative and aggregating the Contract Amount. After approval by the Departmental Representative cost breakdown will be used as the basis of progress payments.

35 TRAFFIC PLAN

- .1 During construction, the Contractor shall maintain access and fire routes around the existing complex and maintain parking to the north of the construction area to ensure maximum number of parking spots.

- .2 Provide and maintain signs and other devices required to indicate construction activities or other temporary and unusual conditions resulting from Project Work which requires road user response.
- .3 Supply and erect signs, delineators, barricades and miscellaneous warning devices in accordance with Temporary Workplace Traffic Control Manual.
- .4 Place signs and other devices in locations recommended in Temporary Workplace Traffic Control Manual.
- .5 Meet with Departmental Representative prior to commencement of Work to prepare list of signs and other devices required for project. If situation on site changes, revise list to approval of Departmental Representative.
- .6 Continually maintain traffic control devices in use:
 - .1 Check signs daily for legibility, damage, suitability and location. Clean, repair or replace to ensure clarity and reflectance.
- .7 Remove or cover signs which do not apply to conditions existing from day to day

36 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