

**Part 1            General**

1.1            OWNER

- .1            The Owner is: City of Winnipeg

1.2            DRAWINGS AND SPECIFICATIONS

- .1            The work is to be executed in conformance with the drawings and specifications, which are to form a part of the contract documents. The drawings and specifications are complimentary, and what is called for in one is to be considered called for by both.
- .2            The arrangement and compilation of the drawings and specifications under the several sections and divisions is purely arbitrary and is intended to relate and clarify the work and shall be interpreted as a whole. The responsibility for the arrangement of the supply of the several and varied materials and labour wherever they may appear shall rest solely with the Contractor, and should be in accordance with the latest edition of Winnipeg Bid Depository Inc.
- .3            In the event of discrepancy between drawings and specifications, the Contractor is to assume the product, material, or method which is the more costly, unless such conflict is resolved by addendum.
- .4            The contractor is held responsible for the delivery of a completely weatherproof building. If for any reason the Contractor questions the weather tightness of any portion of the building as drawn or specified, he shall so state to the Contract Administrator prior to performing that portion of the Work. Failure to do so shall not relieve the Contractor from taking whatever subsequent remedial action may be necessary to weatherproof the building, and paying for same.

1.3            WORK BY OWNER

- .1            Work of Project which will be executed after completion of Work of this Contract, and which is specifically excluded from this Contract:
  - .1            Furniture

**END OF SECTION**

**Part 1**

**General**

1.1 RELATED REQUIREMENTS

- .2 Section 01 33 00 – Submittal Procedures
- .4 Section 01 45 00 – Quality Control
- .5 Section 01 52 00 – Construction Facilities
- .6 Section 01 56 00 – Temporary Barriers and Enclosures
- .7 Section 01 78 00 – Closeout Submittals

1.2 ADMINISTRATIVE

- .1 Contractor will schedule and administer project meetings throughout the progress of the work as required.
- .2 Prepare agenda for meetings.
- .3 Distribute written notice of each meeting five (5) Working days in advance of meeting date to all parties required to attend.
- .4 Provide physical space and make arrangements for meetings.
- .5 Preside at meetings.
- .6 Record accurate and complete 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 and, affected parties not in attendance.
- .8 Representative of Contractor, Subcontractor and suppliers attending meetings will be qualified and authorized to act on behalf of party each represents.

1.3 PRECONSTRUCTION MEETING

- .1 Within 15 days after award of Contract, request a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Contractor, major Subcontractors, Contract Administrator, Libraries, and the City will be in attendance.
- .3 Establish time and location of meeting and notify parties concerned minimum 5 days before meeting.
- .4 Agenda to include:
  - .1 Appointment of official representative of participants in the Work
  - .2 Schedule of submission of shop drawings, samples, colour chips. Submit submittals in accordance with Section 01 33 00 - Submittal Procedures.
  - .3 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences in accordance with Section 01 52 00 - Construction Facilities.

- .4 Site security in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.
- .5 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, administrative requirements.
- .6 City provided products.
- .7 Record drawings in accordance with Section 01 33 00 - Submittal Procedures.
- .8 Maintenance manuals in accordance with Section 01 78 00 – Closeout Submittals.
- .9 Take-over procedures, acceptance, warranties in accordance with Section 01 78 00 - Closeout Submittals.
- .10 Monthly progress claims, administrative procedures, photographs, and hold backs.
- .11 Appointment of inspection and testing agencies or firms in accordance with Section 01 45 00 – Quality Control.
- .12 Insurances, and transcript of policies.
- .5 Comply with Contractor's allocation of mobilization areas of Site; for field offices and sheds, for access, traffic, and parking facilities.
- .6 During construction co-ordinate use of Site and facilities through Contractor's procedures for intra-project communications: Submittals, reports and records, schedules, coordination of drawings, recommendations, and resolution of ambiguities and conflicts.
- .7 Comply with instructions of Contractor for use of temporary utilities and construction facilities.
- .8 Coordinate field engineering and layout Work with Contractor.

#### 1.4 PROGRESS MEETINGS

- .1 During course of Work and two weeks prior to project completion, schedule progress meetings monthly as required.
- .2 Contractor, major Subcontractors involved in Work, Contractor, Contract Administrator, Libraries and City are to be in attendance. Include costs for execution, preparation and reproduction of schedule submittals in bid documents
- .3 Notify parties minimum five (5) Working Days prior to meetings.
- .4 Contractor will record accurate and complete minutes of meetings and circulate to attending parties and affected parties not in attendance within three (3) Working 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.
- .6 Review of progress and status of Critical Path activities.

**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 Requirements**

1.1            GENERAL

- .1            Provide construction photographs in accordance with procedures and submission requirements specified in this Section.
- .2            Photographs shall be colour, in digital format.
- .3            Provide electronic copies of photos to the Contract Administrator, bi-weekly.

**Part 2            Execution**

2.1            PRE-CONSTRUCTION PHOTOGRAPHS

- .1            Viewpoints: interior and exterior locations of the existing building, prior to any demolition work.
  - .1            Number of viewpoints:
    - .1            Each side of building exteriors
    - .2            Interior of all existing rooms and finishes

2.2            PROGRESS PHOTOGRAPHS

- .1            Viewpoints: interior and exterior locations of the Work as determined by Contract Administrator, minimum 40 photographs per month.

2.3            FINAL PHOTOGRAPHS

- .1            Number of viewpoints:
  - .1            Each side of building.
  - .2            Interior of rooms and finishes.

**END OF SECTION**

- Part 1            General**
- 1.1            SECTION INCLUDES
- .1            Shop Drawings and product data.
  - .2            Samples.
  - .3            Certificates and transcripts.
- 1.2            RELATED SECTIONS
- .1            Section 01 45 00 – Quality Control
  - .2            Section 01 78 00 – Closeout Submittals
- 1.3            PRECONSTRUCTION SUBMITTALS
- .1            Submit for approval prior to first application for payment, a contract breakdown indicating amounts for individual portions of the work. This breakdown shall be detailed enough to provide progress claim evaluations and shall total to the amount of the Contract Price. Application for payment will not be processed until the Contract breakdown is approved by the Contract Administrator.
  - .2            Submit contact sheet with phone numbers, addresses, fax numbers, emails and contact person for all trades and suppliers working on this project.
  - .3            Submit Project Construction Schedule within 5 days of Contract award and prior to commencement of work on site.
- 1.4            ADMINISTRATIVE
- .1            Submit to Contract Administrator submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
  - .2            Work affected by submittal shall not proceed until review is complete.
  - .3            Present Shop Drawings, product data, samples and mock-ups in SI Metric units.
  - .4            Where items or information is not produced in SI Metric units converted values are acceptable.
  - .5            The Contractor is to review submittals prior to submission to Contract Administrator. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
  - .6            Notify Contract Administrator, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
  - .7            Verify field measurements and affected adjacent Work are coordinated.
  - .8            Contractor's responsibility for errors and omissions in submission is not relieved by Contract Administrator's review of submittals.
  - .9            Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Contract Administrator review.
  - .10          Keep one reviewed copy of each submission on site.

1.5 CONSTRUCTION SCHEDULE

- .1 Submit a construction schedule prior to the first application of payment that indicates the timing of major activities of the Work and provides sufficient detail of the critical events and their inter-relationship to demonstrate the Work will be performed in conformity with the Contract Time. Contract Administrator will review schedule and return reviewed copy within 10 days after receipt. Resubmit finalized schedule within 7 days after return of reviewed copy.
- .2 Include copies of letters from all sub-trades and major suppliers, confirming completion dates for their respective trades in the allotted schedule.
- .3 The Contractor shall monitor the progress of the Work relative to the construction schedule and update the schedule on a monthly basis.
- .4 The Contractor shall advise the Contract Administrator of any revisions required to the schedule as a result of extensions of the Contract Time as provided in C7 Changes in Work of the General Conditions of Construction.
- .5 Format:
  - .1 Prepare schedule in form of horizontal bar chart.
  - .2 Provide separate bar for each trade or operation
  - .3 Provide horizontal time scale identifying first work day of each week.
  - .4 Format for listings: Chronological order of start of each item of work.

1.6 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 the Work.
- .2 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.
- .3 The Contractor shall provide Shop Drawings to the Contract Administrator to review in an orderly sequence and sufficiently in advance so as to cause no delay in the Work or in the Work of Subcontractors.
- .4 Allow 7 days for Contract Administrator's review of each submission.
- .5 Adjustments made on Shop Drawings by Contract Administrator are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Contract Administrator prior to proceeding with Work.
- .6 Make changes in Shop Drawings as Contract Administrator may require, consistent with Contract Documents. When resubmitting, notify Contract Administrator in writing of any 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 shall 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.
    - .1 The Contractor represents by this that:
      - .1 The Contractor has determined and verified all applicable field measurements, field construction conditions, product requirements, catalogue numbers and similar data, or will do so and
      - .2 The Contractor has check and coordinated each Shop Drawing with the requirements of the Work and of the 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 Contract Administrator's review, distribute copies.
- .10 Submit 6 prints of Shop Drawings for each requirement requested in specification Sections and as Contract Administrator may reasonably request.
- .11 Submit 6 hardcopy or electronic copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Contract Administrator where Shop Drawings will not be prepared due to standardized manufacture of product.
- .12 Delete information not applicable to project.
- .13 Supplement standard information to provide details applicable to project.



- .14 If upon review by Contract Administrator, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If Shop Drawings are rejected, noted copy will be returned and resubmission of corrected Shop Drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.
  - .15 The Contract Administrator will review and return Shop Drawings in accordance with the schedule agreed upon, or, in the absence of such schedule, with reasonable promptness so as to cause no delay to the performance of the Work.
- 1.7 SAMPLES & MOCK-UPS
- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
  - .2 Construct field samples and mock-ups requested in the specifications at locations acceptable to Contract Administrator.
  - .3 Construct each sample or mock-up complete, including work of all trades required to finish Work.
  - .4 Deliver samples prepaid to Contract Administrator's business address.
  - .5 Notify Contract Administrator in writing, at time of submission of deviations in samples from requirements of Contract Documents.
  - .6 Where colour, pattern or texture is criterion, submit full range of samples.
  - .7 Adjustments made on samples by Contract Administrator are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Contract Administrator prior to proceeding with Work.
  - .8 Make changes in samples which Contract Administrator may require, consistent with Contract Documents.
  - .9 Reviewed and accepted samples or mock-ups will become standards of workmanship and material against which installed Work will be verified.
- 1.8 INSURANCE POLICIES
- .1 Submit transcription of insurance immediately after award of Contract.
- 1.9 CASH FLOW FORECAST
- .1 Submit to the Contract Administrator immediately after award of Contract, a cash flow forecast of approximate costs of the Work compiled on the monthly basis over the term of the Contract.
- 1.10 WORKERS' COMPENSATION BOARD
- .1 After award of Contract, submit to the Contract Administrator, in writing, with reasonable promptness, current financial status with the Workers' Compensation Board.
- 1.11 ROOF COMPONENT DECLARATION
- .1 Refer to the roofing section and submit written declaration that components of the roofing system are compatible.
- 1.12 RECORD DRAWINGS
- .1 Upon award of the Contract, Contract Administrator will provide a set of prints, which shall be used solely for the purpose of maintaining record drawings. Accurately and neatly record deviations from Contract Documents resulting from negotiated contract

changes, site conditions, and changes ordered by Contract Administrator, including Work Orders and Supplementary Instructions.

- .2 "Record" drawings to be maintained on a weekly basis to ensure they are up-to-date and accurate.
- .3 Record the locations of concealed components of mechanical and electrical services.
- .4 Identify drawings as "Project Record Copy". Maintain in new conditions and make available for inspection on site by Contract Administrator.
- .5 Pay costs to have information transferred to computer disk, in AutoCAD 2000 format, through Contract Administrator. Contractor to submit marked-up set of drawings to Contract Administrator showing information to be include on record drawings at least fifteen (15) working days prior to Substantial Performance of the Work.
- .6 Submit one (1) hard copy, and one (1) disk with copies in AutoCAD format and PDF format.

1.13 INSTRUCTION TO THE CITY'S PERSONNEL

- .1 In addition to start-up supervision and instruction to the City's personnel required of individual equipment manufacturers and systems noted, instruct the City's personnel in operation and maintenance of all equipment and systems.
- .2 Review instructions with the City's representative to ensure a thorough understanding of equipment and its operation.
- .3 Submit to the Contract Administrator a copy of written documentation that instruction has been provided, signed by the City's representative.

**END OF SECTION**

**Part 1            General**

1.1            RELATED SECTION

- .1            Section 01 51 00 – Temporary Utilities
- .2            Section 01 52 00 – Construction Facilities
- .3            Section 01 74 00 – Cleaning
- .4            Section 02 07 20 – Selective Site Demolition
- .5            Section 02 82 10 – Asbestos Abatement – General Provisions

1.2            EXISTING CONDITIONS

- .1            The existing building will be closed during the period that Work is in progress. Cooperate with the City so as to cause the least inconvenience and carry out all Work to maintain a suitable and safe environment.
- .2            Do not remove from the building, without the consent of the City, any of the City's furniture, equipment, tools, or non-building components.
- .3            The City will remove all loose furniture and portable equipment required to give free working space as required.

**Part 2            Products**

Not used.

**Part 3            Execution**

3.1            SCHEDULING OF WORK – GENERAL

- .1            Upon award of the Contract, Contractor can begin work on site with the following exceptions:
- .2            Contractor to coordinate Asbestos Abatement only. City to provide Abatement Contractor. Asbestos reports have been provided as part of Appendix A – Hazardous Building Assessment for Contractor's information for coordination purposes. Abatement coordination meeting will be held with Contractor, the City and Contract Administrator to coordinate Abatement procedures within the Work.

3.2            ACCESS AND EXITING

- .1            Contractor shall maintain exiting for the building as Authorities having Jurisdiction may reasonably require. The Contractor shall review temporary means of Egress with the Authority Having Jurisdiction.
- .2            Provide temporary ramps, railings, and hoarding from existing exit across the Site, if required by the Authority Having Jurisdiction.
- .3            Do not interfere with use of adjacent building areas. Maintain free and safe passage to and from.

3.3            TEMPORARY HEAT

- .1            Provide temporary heat to protect existing building spaces when permanent service is interrupted.

3.4            UTILITIES

- .1 Do not make changes to utility services until reasonably convenient for the City, and as allowed by scheduling of the Work.

**END OF SECTION**

**Part 1            General**

1.1            RELATED SECTIONS

- .1            Section 01 33 00 – Submittal Procedures

1.2            REFERENCES

- .1            Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations.
- .2            Health Canada/Workplace Hazardous Materials Information System (WHMIS).
  - .1            Material Safety Data Sheets (MSDS).
- .3            Province of Manitoba
  - .1            Workplace Safety and Health Act, R.S.M. 1987 or latest.

1.3            SUBMITTALS

- .1            Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2            Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work.

1.4            GENERAL REQUIREMENTS

- .1            Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning Work and continue to implement, maintain, and enforce plan until final demobilization from Site. Health and Safety Plan must address project specifications.
- .2            Contract Administrator may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.
- .3            Volatile Products and Waste
  - .1            Store flammable or combustible liquids or gases used on the construction site in ULC approved containers.
  - .2            Store volatile wastes in covered metal containers, and remove from premises daily.
  - .3            Provide adequate ventilation during use of volatile or noxious substances.
- .4            Overloading
  - .1            Ensure no part of Work is subjected to a load that will endanger its safety or will cause permanent deformation.
- .5            Falsework
  - .1            Design and construct falsework in accordance with CSA S269.1-1975 or latest.

**END OF SECTION**

**Part 1**

**General**

1.1

ASSOCIATIONS

- .1 AA - Aluminum Association, 900 19th Street N.W., Washington, D.C., U.S.A. 20006 URL <http://www.aluminum.org>
- .2 AASHTO - American Association of State Highway and Transportation Officials, 444 N Capitol Street N.W., Suite 249, Washington, D.C., U.S.A. 20001 URL <http://www.aashto.org>
- .3 ACEC Association of Consulting Engineers of Canada, 130 Albert Street, Ottawa, ON. K1P 5G4 URL <http://www.acec.ca>
- .4 AHA - American Hardboard Association, 1210W Northwest Hwy., Palatine, Illinois, U.S.A. 60067 URL : <http://www.ahreat.com>
- .5 AITC - American Institute of Timber Construction, 7012 S. Revere Parkway, Suite 140, Englewood, Colorado, U.S.A. 80112 URL <http://www.aitc-glulam.org>
- .6 AMCA - Air Movement and Control Association Inc., 30 West University Drive, Arlington Heights, Illinois, U.S.A. 60004-1893 URL <http://www.amca.org>
- .7 ANSI - American National Standards Institute, 11 West 42nd Street, New York, New York, U.S.A. 10036 URL <http://www.ansi.org>
- .8 APA - The Engineered Wood Association, P.O. Box 11700, Tacoma, Washington, U.S.A. 98411-0700 URL <http://www.apawood.org>
- .9 API - American Petroleum Institute, 1220 L St. Northwest, Washington, D.C., U.S.A. 20005-4070 URL <http://www.api.org>
- .10 ARI - Air Conditioning and Refrigeration Institute, 4301 North Fairfax Drive, Suite 425, Arlington, Virginia, U.S.A. 22203 URL <http://www.ari.org>
- .11 ASHRAE - American Society of Heating, Refrigeration and Air-Conditioning Engineers, 1791 Tullie Circle NE, Atlanta, Georgia, U.S.A. 30329 URL <http://www.ashrae.org>
- .12 ASME - American Society of Mechanical Engineers, United Engineering Centre, Three Park Avenue, New York, New York, U.S.A. 10016-5990 URL <http://www.asme.org>
- .13 ASPT Association for Asphalt Paving Technologists, 400 Selby Avenue, Suite 1, St. Paul, MN 55102 U.S.A. URL <http://www.asphalt.org>
- .14 ASTM - American Society for Testing and Materials, 100 Barr Harbor Drive West, Conshohocken, Pennsylvania 19428-2959 URL <http://www.astm.org>
- .15 AWCI - Association of the Wall and Ceiling Industries International, 803 West Broad Street, Suite 600, Falls Church, VA, U.S.A. 22046 URL <http://www.awci.org>
- .16 AWMAC - Architectural Woodwork Manufacturers Association of Canada, 516 4 Street West, High River, Alberta T1V 1B6 URL <http://www.awmac.com>
- .17 AWPA - American Wire Producer's Association, 6232 Roudsby, Alexandria, VA U.S.A. 22315-5285 URL <http://www.awpa.org>
- .18 AWPA - American Wood Preservers' Association, P.O. Box 5690, Grandbury Texas, U.S.A. 76049-0690 URL <http://www.awap.com>
- .19 AWS - American Welding Society, 550 N.W. LeJeune Road, Miami, Florida U.S.A. 33126 URL <http://www.amweld.org>
- .20 AWWA - American Water Works Association, 6666 W. Quincy Avenue, Denver, Colorado, U.S.A. 80235 URL <http://www.awwa.org>

- .21 CCA Canadian Construction Association, 75 Albert St., Suite 400 Ottawa, Ontario, K1P 5E7 URL <http://www.cca-acc.com>
- .22 CITC Canadian Institute of Timber Construction, 200 Cooper Street, Ottawa, Ontario K2P 0G1
- .23 CFFM - Canadian Forces Fire Marshal, 101 Colonel By Drive, 8NT MGen George R. Pearkes Bldg., Ottawa, Ontario K1A 0K2
- .24 CGA - Canadian Gas Association, 20 Eglinton Avenue West, Suite 1305, Toronto, Ontario M4R 1K8 URL <http://www.cga.ca>
- .25 CGSB - Canadian General Standards Board, Place du Portage, Phase III, 6B1, 11 Laurier Street, Hull, Quebec K1A 1G6 URL <http://w3.pwgsc.gc.ca/cgsb>
- .26 CISC - Canadian Institute of Steel Construction, 201 Consumers Road, Suite 300, Willowdale, Ontario M2J 4G8 URL <http://www.buildingweb.com/CISC>
- .27 CLA - Canadian Lumbermen's Association, 27 Goulburn Avenue, Ottawa, Ontario, K1N 8C7 URL <http://www.cla.ca>
- .28 CNLA - Canadian Nursery Landscape Association, RR #4, Stn. Main, 7856 Fifth Street, Milton, Ontario. L9T 2X8 URL <http://www.canadanursery.com>
- .29 CRCA - Canadian Roofing Contractors Association, 155 Queen Street, Suite 130C, Ottawa, Ontario K1P 6L1 URL <http://www.roofingcanada.com>
- .30 CSA - Canadian Standards Association International, 178 Rexdale Blvd., Toronto, Ontario M9W 1R3 URL <http://www.csa-international.org>
- .31 CSC - Construction Specifications Canada, 100 Lombard Street, Suite 200, Toronto, Ontario M5C 1M3 URL <http://www.csc-dcc.ca>
- .32 CSDFMA - Canadian Steel Door and Frame Manufacturing Association One Yonge Street, Suite 1400, Toronto, Ontario M5E 1J9
- .33 CSPI - Corrugated Steel Pipe Institute, 201 Consumers Road, Suite 306, Willowdale, Ontario M2J 4G8
- .34 CSSBI - Canadian Sheet Steel Building Institute, 652 Bishop St. N., Unit 2A, Cambridge, Ontario N3H 4V6 URL <http://www.cssbi.ca>
- .35 CUFCA Canadian Urethane Foam Contractor's Association
- .36 CWC - Canadian Wood Council, 1400 Blair Place, Suite 210, Ottawa, Ontario K1J 9B8 URL <http://www.cwc.ca>
- .37 EC - Environment Canada, Conservation and Protection, Ottawa, Ontario KIA 0H3 URL <http://www.ec.gc.ca>
- .38 EEMAC - Electrical and Electronic Manufacturers' Association of Canada, 5800 Explorer Drive, Suite 200, Mississauga, Ontario L4W 5K9 URL <http://www.electrofed.ca>
- .39 EIMA EIFS Industry Manufacturer's Association, 3000 Corporate Center Drive, Suite 270, Morrow, Georgia U.S.A. 30260 URL <http://www.eifsfacts.com>
- .40 FCC - Fire Commissioner of Canada, Place du Portage, Phase II, 165 rue Hotel de Ville, Hull Quebec K1A 0J2 URL <http://www.hrdc-drhc.gc.ca>
- .41 IEEE - Institute of Electrical and Electronics Engineers, 345 East 47th Street, New York, New York U.S.A. 10017 URL <http://www.ieee.org>
- .42 MPI - The Master Painters Institute, 4090 Graveley Street, Burnaby, BC V5C 3T6 URL <http://www.paintinfo.com>
- .43 MSS - Manufacturers Standardization Society of the Valve and Fittings Industry, 127 Park Street, N.E., Vienna, Virginia U.S.A.22180

- .44 NAAMM - National Association of Architectural Metal Manufacturers, 8 South Michigan Avenue, Suite 1000, Chicago, Illinois U.S.A. 60603 URL <http://www.naamm.org>
- .45 NABA - National Air Barrier Association, 400-283 Bannatyne Avenue, Winnipeg, Manitoba R3B 3B2
- .46 NEMA - National Electrical Manufacturers Association, 1300 N. 17th Street, Suite 1847, Rosslyn, Virginia 22209 URL <http://www.nema.org>
- .47 NFPA - National Fire Protection Association, 1 Batterymarch Park, P.O. Box 9101 Quincy, Massachusetts, U.S.A. 02269-9101 URL <http://www.nfpa.org>
- .48 NFSA - National Fire Sprinkler Association, 40 Jon Barrett Road, P.O. Box 1000, Patterson, New York, U.S.A. 12563 URL <http://www.nfsa.org>
- .49 NHLA - National Hardwood Lumber Association, P.O. Box 34518, Memphis, Tennessee, U.S.A 38184-0518 URL <http://www.natlhardwood.org>
- .50 NLGA - National Lumber Grades Authority, 406 First Capital Place, New Westminster, B.C. V3M 6G2
- .51 NRC - National Research Council, Montreal Road, Ottawa, Ontario K1A 0S2 URL <http://www.nrc.gc.ca>
- .52 NSPE National Society of Professional Engineers, 1420 King Street, Alexandria, VA U.S.A. 22314-2794 URL <http://www.nspe.org>
- .53 QPL - Qualification Program List, c/o Canadian General Standards Board, Place du Portage, Phase III, 6B1, 11 Laurier Street, Hull, Quebec K1A 1G6 URL <http://www.pwgsc.gc.ca/cgsb>
- .54 RAIC Royal Architectural Institute of Canada, 55 Murray Street, Suite 330, Ottawa, Ontario, K1N 5M3 URL <http://www.raic.org>
- .55 SCC - Standards Council of Canada, 200 Albert Street, Suite 2000, Ottawa, Ontario K1P 6N7 URL <http://www.scc.ca>
- .56 SSPC - The Society for Protective Coatings, 40 24th Street, Pittsburgh, Pennsylvania 15222-4656 URL <http://www.sspc.org>
- .57 TPI - Truss Plate Institute, 583 D'Onofrio Drive, Suite 200, Madison, WI, U.S.A. 53719 URL <http://www.tpinst.org>
- .58 UL - Underwriters' Laboratories, 333 Pfingsten Road, Northbrook, Illinois, U.S.A. 60062 URL <http://www.ul.com>
- .59 ULC - Underwriters' Laboratories of Canada, 7 Crouse Road, Toronto, Ontario M1R 3A9 URL <http://www.ulc.ca>

**END OF SECTION**



- Part 1            General**
- 1.1            SECTION INCLUDES
- .1            Inspection and testing, administrative and enforcement requirements.
  - .2            Tests and mix designs.
  - .3            Mock-ups.
  - .4            Mill tests.
  - .5            Equipment and system adjust and balance.
- 1.2            RELATED SECTIONS
- .1            Section 01 42 00 – References
  - .2            Section 01 78 00 – Closeout Submittals
- 1.3            INSPECTION
- .1            Allow Contract Administrator 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 Contract Administrator instructions, or law of Place of Work.
  - .3            The Contractor shall furnish promptly to the Contract Administrator two copies of certificates and inspection reports relating to the Work.
  - .4            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.
  - .5            The Contractor shall pay the cost of making any test or inspection, including the cost of samples required for such text or inspection, if such test or inspection is designated in the Contract Documents to be performed by the Contractor or is designated by the laws or ordinances applicable to the Place of the Work.
  - .6            Contract Administrator may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction. If such Work is found in accordance with Contract Documents, Contract Administrator shall pay cost of examination and replacement.
- 1.4            INDEPENDENT INSPECTION AGENCIES
- .1            Independent Inspection/Testing Agencies will be engaged by Contract Administrator for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by the City.
  - .2            Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
  - .3            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 Contract Administrator at no cost to Contract Administrator. Pay costs for re-testing and re-inspection.
- 1.5            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.
- 1.6 PROCEDURES
  - .1 Notify appropriate agency and Contract Administrator in advance of requirement for tests, in order that attendance arrangements can be made.
  - .2 Submit samples and/or Materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.
  - .3 Provide labour and facilities to obtain and handle samples and Materials on Site. Provide sufficient space to store and cure test samples.
- 1.7 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 Contract Administrator 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 Contract Administrator it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, the City may deduct from Contract Price difference in value between Work performed and that called for by Contract Documents, amount of which shall be determined by Contract Administrator.
- 1.8 REPORTS
  - .1 Submit 2 copies of inspection and test reports to Contract Administrator.
  - .2 Provide copies to Subcontractor of work being inspected or tested or manufacturer or fabricator of Material being inspected or tested.
- 1.9 TESTS AND MIX DESIGNS
  - .1 Furnish test results and mix designs as may be requested.
  - .2 The cost of tests and mix designs beyond those called for in Contract Documents or beyond those required by law of Place of Work shall be appraised by Contract Administrator and may be authorized as recoverable.
- 1.10 MOCK-UPS
  - .1 Prepare mock-ups for Work specifically requested in specifications. Include for Work of all Sections required to provide mock-ups.
  - .2 Prepare mock-ups for Contract Administrator's review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.
  - .3 Failure to prepare mock-ups in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
  - .4 If requested, Contract Administrator will assist in preparing a schedule fixing dates for preparation.
  - .5 Remove mock-up at conclusion of Work or when acceptable to Contract Administrator.
  - .6 Mock-ups may remain as part of Work.
- 1.11 MILL TESTS

- .1 Submit mill test certificates as required of specification Sections.
- 1.12 EQUIPMENT AND SYSTEMS
- .1 Submit adjustment and balancing reports for mechanical, electrical and building equipment systems.

**END OF SECTION**

- Part 1            General**
- 1.1            SECTION INCLUDES
- .1        Temporary utilities.
- 1.2            RELATED SECTIONS
- .1        Section 01 35 30 – Health and Safety Requirements
- .2        Section 01 52 00 – Construction Facilities
- .3        Section 01 56 00 – Temporary Barriers and Enclosures
- 1.3            INSTALLATION AND REMOVAL
- .1        Provide temporary utilities controls in order to execute Work expeditiously.
- .2        Remove from Site all such Work after use.
- 1.4            DEWATERING
- .1        Provide temporary drainage and pumping facilities to keep excavations and Site free from standing water.
- 1.5            WATER SUPPLY
- .1        Contractor to arrange for connection with appropriate utility company and pay all costs for installation, maintenance and removal. Include water costs in the base construction tender.
- 1.6            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 °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 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 may be used when available. Be responsible for damage to heating system if use is permitted.
  - .7 On completion of Work for which permanent heating system is used, replace filters as per manufacturers directions.
  - .8 Ensure Date of Substantial Performance and Warranties for heating system do not commence until entire system is in as near original condition as possible and is certified by Contract Administrator.
  - .9 Maintain strict supervision of operation of temporary heating and ventilating equipment to:
    - .1 Conform with applicable codes and standards.
    - .2 Enforce safe practices.
    - .3 Prevent abuse of services.
    - .4 Prevent damage to finishes.
    - .5 Vent direct-fired combustion units to outside.
  - .10 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.
- 1.7 TEMPORARY POWER AND LIGHT
- .1 Provide and pay for temporary power during construction for temporary lighting and operating of power tools, to a maximum supply of 230 volts 30 amps.
  - .2 Arrange for connection with appropriate utility company. Pay all costs for installation, maintenance and removal.
  - .3 Provide and maintain temporary lighting throughout project. Ensure level of illumination on all floors and stairs is not less than 162 lx.
  - .4 Electrical power and lighting systems installed under this Contract may be used for construction requirements only with prior approval of Contract Administrator 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.
- 1.8 TEMPORARY COMMUNICATION FACILITIES
- .1 Provide and pay for temporary telephone and fax hook up, lines and equipment necessary for own use and use of Contract Administrator.
- 1.9 FIRE PROTECTION
- .1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.
  - .2 Burning rubbish and construction waste materials is not permitted on Site.
- 1.10 SECURITY
- .1 The provision of security to Site and buildings at nights, weekends and non-Work periods is the sole responsibility of the Contractor.
  - .2 Provide plywood covers to all windows after installation and before full time occupancy.

**END OF SECTION**

- Part 1            General**
- 1.1            SECTION INCLUDES
- .1            Construction aids.
  - .2            Office and sheds.
  - .3            Parking.
  - .4            Project identification.
- 1.2            RELATED SECTIONS
- .1            Section 01 56 00 – Temporary Barriers and Enclosures
- 1.3            REFERENCES
- .1            Canadian Construction Association (CCA)
  - .2            Canadian Standards Association (CSA)
    - .1            CAN3-A23.1-/A23.2-94, Concrete Materials and Methods for Concrete Construction/Method of Test for Concrete or latest.
    - .2            CSA-0121-M1978, Douglas Fir Plywood or latest.
    - .3            CAN/CSA-Z321-96, Signs and Symbols for the Occupational Environment or latest.
- 1.4            INSTALLATION AND REMOVAL
- .1            Provide construction facilities in order to execute Work expeditiously.
  - .2            Remove from Site all such Work after use.
- 1.5            SCAFFOLDING
- .1            Provide and maintain scaffolding, ramps, ladders, swing staging, platforms and temporary stairs as required.
- 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 a weight or force that will endanger the Work.
- 1.7            CONSTRUCTION PARKING
- .1            Parking will be permitted on Site as defined on Site plans provided it does not disrupt performance of Work and any damage to property is repaired.
  - .2            Provide and maintain adequate access to project Site – front and rear entrances as per Site plan.
  - .3            Provide snow removal during period of Work as required.
- 1.8            OFFICES
- .1            Provide a heated Site trailer for on-Site supervisor and Contract Site meetings.
  - .2            Provide a clearly marked and fully stocked first aid case in a readily available location.

- .3 Subcontractors may provide their own offices as necessary. Contractor is to coordinate the locations of these offices.
- 1.9 EQUIPMENT, TOOL AND MATERIALS STORAGE
- .1 Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
  - .2 Locate materials not required to be stored in weatherproof sheds on Site in a manner to cause least interference with Work activities.
- 1.10 SANITARY FACILITIES
- .1 Provide sanitary facilities in accordance with governing regulations and ordinances.
  - .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.
  - .3 When permanent water and drain connections are completed, provide temporary water closets and urinals complete with temporary enclosures, inside building. Permanent facilities may be used on approval of Contract Administrator.
- 1.11 CONSTRUCTION SIGNAGE
- .1 No other signs or advertisements, other than warning signs, are permitted on Site without the permission of the Contract Administrator.

**END OF SECTION**

- Part 1            General**
- 1.1            SECTION INCLUDES
- .1            Barriers.
  - .2            Environmental Controls.
- 1.2            RELATED SECTIONS
- .1            Section 01 51 00 – Temporary Utilities
  - .2            Section 01 52 00 – Construction Facilities
- 1.3            REFERENCES
- .1            Canadian General Standards Board (CGSB)
    - .1            CGSB 1.59-97, Alkyd Exterior Gloss Enamel or latest.
    - .2            CAN/CGSB 1.189-00, Exterior Alkyd Primer for Wood or latest.
  - .2            Canadian Standards Association (CSA International)
    - .1            CSA-O121[M1978(R2003), Douglas Fir Plywood or latest.
- 1.4            INSTALLATION AND REMOVAL
- .1            Provide temporary controls in order to execute Work expeditiously.
  - .2            Remove from Site all such Work after use.
- 1.5            HOARDING
- .1            Erect temporary Site enclosures using wire fencing to 1800m height.
  - .2            Provide one lockable truck entrance gate and at least one pedestrian door as directed and conforming to applicable traffic restrictions on adjacent streets. Equip gates with locks and keys.
  - .3            Erect and maintain pedestrian walkways including roof and side covers from rear entrance to side street complete with signs and electrical lighting as required by law.
  - .4            Provide barriers around trees and plants designated to remain. Protect from damage by equipment and construction procedures.
- 1.6            GUARD RAILS AND BARRICADES
- .1            Provide secure, rigid guard rails and barricades around deep excavations, open shafts, open stair wells, open edges of floors and roofs.
  - .2            Provide as required by governing authorities.
- 1.7            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.
- 1.8            DUST TIGHT SCREENS



- .1 Provide dust tight screens 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.
- 1.9 ACCESS TO SITE
  - .1 Provide and maintain access roads, sidewalk crossings, ramps and construction runways as may be required for access to Work.
- 1.10 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.
- 1.11 FIRE ROUTES
  - .1 Maintain access to property including overhead clearances for use by emergency response vehicles.
- 1.12 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.
- 1.13 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 Contract Administrator locations and installation schedule 3 days prior to installation.
  - .4 Be responsible for damage incurred due to lack of or improper protection.

**END OF SECTION**

- Part 1            General**
- 1.1            SECTION INCLUDES
- .1            Product quality, availability, storage, handling, protection, and transportation.
  - .2            Manufacturer's instructions.
  - .3            Quality of Work, coordination and fastenings.
  - .4            Existing facilities.
- 1.2            RELATED SECTIONS
- .1            Section 01 42 00 – References
  - .2            Section 01 45 00 – Quality Control
- 1.3            REFERENCE STANDARDS
- .1            Within text of specifications, reference may be made to reference standards contained in Section 01 42 00 – References.
  - .2            Conform to these standards, in whole or in part as specifically requested in specifications.
  - .3            If there is question as to whether any product or system is in conformance with applicable standards, Contract Administrator reserves right to have such products or systems tested to prove or disprove conformance.
  - .4            The cost for such testing will be borne by the City in event of conformance with Contract Documents or by Contractor in event of non-conformance.
  - .5            Conform to latest date of issue of referenced standards in effect on date of submission of Bids, except where specific date or issue is specifically noted.
- 1.4            QUALITY
- .1            Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of Products provided.
  - .2            Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
  - .3            Should any dispute arise as to quality or fitness of products, decision rests strictly with Contract Administrator 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.
- 1.5            AVAILABILITY
- .1            Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify Contract Administrator of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.

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

#### 1.6 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 Contract Administrator.
- .9 Touch-up damaged factory finished surfaces to Contract Administrator's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

#### 1.7 TRANSPORTATION

- .1 Pay costs of transportation of products required in performance of Work.
- .2 Transportation cost of products supplied by The City will be paid for by Contractor. Unload, handle and store such products.

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

#### 1.9 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 Contract Administrator if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Contract Administrator 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 Contract Administrator, whose decision is final.
- 1.10 CO-ORDINATION
  - .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
  - .2 Be responsible for coordination and placement of openings, sleeves and accessories.
- 1.11 CONCEALMENT
  - .1 In finished areas, conceal pipes, ducts and wiring in floors, walls and ceilings, except where indicated otherwise. Advise Contract Administrator of any potential conflict areas prior to construction.
  - .2 Before installation, inform Contract Administrator if there is interference. Install as directed by Contract Administrator.
- 1.12 REMEDIAL WORK
  - .1 Perform remedial Work required to repair or replace parts or portions of Work identified as defective or unacceptable. Coordinate adjacent affected Work as required.
  - .2 Perform remedial Work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.
- 1.13 LOCATION OF FIXTURES
  - .1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.
  - .2 Inform Contract Administrator of conflicting installation. Install as directed.
- 1.14 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.
- 1.15 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.

1.16 PROTECTION OF WORK IN PROGRESS

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

1.17 EXISTING UTILITIES

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

**END OF SECTION**

**Part 1**

**General**

1.1

PROJECT CLEANLINESS

- .1 Maintain Work in tidy condition, free from accumulation of waste products and debris, other than that caused by the City or other Contractors.
- .2 Remove waste Materials from Site at regularly scheduled times or dispose of as directed by Contract Administrator. 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 dump containers for collection of waste Materials and debris.
- .6 Provide and use clearly marked separate bins for recycling.
- .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 finish 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.
- .13 Replace heading, ventilating and air conditioning filters if units were operated during construction.

1.2

FINAL CLEANING

- .1 When Work is Substantially Performed, remove surplus products, tools, and machinery and equipment not required for performance of remaining Work.
- .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3 Prior to final review, remove surplus products, tools, construction machinery and equipment.
- .4 Remove waste products and debris other than that caused by the City or other Contractors.
- .5 Remove waste Materials from Site at regularly scheduled times or dispose of as directed by Contract Administrator. Do not burn waste Materials on Site.
- .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .7 Clean and polish glass, mirrors, hardware, wall tile, stainless steel, chrome, porcelain enamel, baked enamel, plastic laminate, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass.

- .8 Remove stains, spots, marks and dirt from decorative Work, electrical and mechanical fixtures, furniture fitments, walls, and floors.
- .9 Clean lighting reflectors, lenses, and other lighting surfaces.
- .10 Vacuum clean and dust building interiors, behind grilles, louvres and screens.
- .11 Wax, seal, shampoo or prepare floor finishes, as recommended by manufacturer.
- .12 Inspect finishes, fitments and equipment and ensure specified Workmanship and operation.
- .13 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .14 Remove dirt and other disfiguration from exterior surfaces.
- .15 Clean and sweep roofs, gutters, areaways, and sunken wells.
- .16 Sweep and wash clean paved areas.
- .17 Clean equipment and fixtures to a sanitary condition; clean or replace filters of mechanical equipment.
- .18 Clean roofs, downspouts, and drainage systems.
- .19 Remove debris and surplus Materials from crawl areas and other accessible concealed spaces.
- .20 Remove snow and ice from access to building.

**END OF SECTION**

- Part 1            General**
- 1.1            SECTION INCLUDES
- .1            Administrative procedures preceding preliminary and final inspections of Work.
- 1.2            RELATED SECTIONS
- .1            Section 01 78 00 - Closeout Submittals
- 1.3            INSPECTION AND DECLARATION
- .1            Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
- .1            Notify Contract Administrator in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
- .2            Request Contract Administrator's Inspection.
- .2            Contract Administrator's Inspection: Contract Administrator and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.
- .3            Completion: submit written certificate that following have been performed:
- .1            Work has been completed and inspected for compliance with Contract Documents.
- .2            Defects have been corrected and deficiencies have been completed.
- .3            Equipment and systems have been tested, adjusted and balanced and are fully operational.
- .4            Certificates required by Fire Commissioner and Utility companies have been submitted.
- .5            Operation of systems have been demonstrated to the City's personnel.
- .6            Work is complete and ready for Final Inspection.
- .4            Final Inspection: when items noted above are completed, request final inspection of Work by Contract Administrator, and Contractor. If Work is deemed incomplete by Contract Administrator, complete outstanding items and request re-inspection.
- .5            Declaration of Substantial Performance: when Contract Administrator consider deficiencies and defects have been corrected and it appears requirements of Contract have been substantially performed, make application for certificate of Substantial Performance.
- .6            Commencement of Lien and Warranty Periods: date of the City's acceptance of submitted declaration of Total Performance shall be date for commencement for warranty period and commencement of lien period unless required otherwise by lien statute of Place of Work.
- .7            Final Payment: When Contract Administrator consider final deficiencies and defects have been corrected and as-built drawings and operation and maintenance manuals have been submitted, and it appears requirements of Contract have been totally performed, make application for final payment. If Work is deemed incomplete by Contract Administrator, complete outstanding items and request re-inspection.



- .8 Payment of Holdback: After issuance of certificate of Substantial Performance of Work, submit an application for payment of holdback amount.

**END OF SECTION**

- Part 1            General**
- 1.1            SECTION INCLUDES
- .1            As-built drawings, samples, and specifications.
  - .2            Equipment and systems.
  - .3            Product data, Materials and finishes, and related information.
  - .4            Operation and maintenance data.
  - .5            Spare parts, special tools and maintenance Materials.
  - .6            Warranties and bonds.
  - .7            Final site survey certificate.
- 1.2            RELATED SECTIONS
- .1            Section 01 45 00 – Quality Control
  - .2            Section 01 77 00 – Closeout Procedures
- 1.3            SUBMISSION
- .1            Prepare instructions and data by personnel experienced in maintenance and operation of described products.
  - .2            Copy will be returned after final inspection, with Contract Administrator's comments.
  - .3            Revise content of documents as required prior to final submittal.
  - .4            Two weeks prior to Substantial Performance of the Work, submit to the Contract Administrator, four final hard copies of operating and maintenance manuals in English and one digital copy on disk.
  - .5            Ensure spare parts, maintenance Materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.
  - .6            If requested, furnish evidence as to type, source and quality of products provided.
  - .7            Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
  - .8            Pay costs of transportation.
- 1.4            FORMAT
- .1            Organize data in the form of an instructional manual.
  - .2            Binders: vinyl, hard covered, 3 'D' ring, loose leaf with spine.
  - .3            When multiple binders are used, correlate data into related consistent groupings. Identify contents of each binder on spine.
  - .4            Cover: Identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
  - .5            Arrange content by systems under Section numbers and sequence of Table of Contents.
  - .6            Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.

- .7 Text: Manufacturer's printed data, or typewritten data.
  - .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- 1.5 CONTENTS - EACH VOLUME
- .1 Table of Contents: provide title of project;
    - .1 date of submission; names,
    - .2 addresses, and telephone numbers of Contract Administrator and Construction Manager 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 clearly identify specific products and component parts, and data applicable to installation; delete inapplicable information.
  - .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
  - .5 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.
- 1.6 AS-BUILTS AND SAMPLES
- .1 All As-Builts, (Architectural, Structural, Mechanical, Electrical): Contractor to submit 1 set of red line marked up drawings to Contract Administrators for transfer of information to CADD format for delivery to the City. Final Progress Certificate will not be released until this condition is complete. In addition to requirements in General Conditions, maintain at the site for Contract Administrator one record copy of:
    - .1 Contract Drawings (As built).
    - .2 Specifications.
    - .3 Addenda.
    - .4 Changes in Work.
    - .5 Reviewed Shop Drawings, product data, and samples.
    - .6 Field test records.
    - .7 Inspection certificates.
    - .8 Manufacturer's certificates.
  - .2 Store record documents and samples in field office apart from documents used for construction. Provide files, racks, and secure storage.
  - .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
  - .4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
  - .5 Keep record documents and samples available for inspection by Contract Administrator.

1.7 RECORDING ACTUAL SITE CONDITIONS

- .1 Record information on set of black line opaque drawings, and in copy of Project Manual, provided by Contract Administrator.
- .2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .4 Contract Drawings and Shop Drawings: legibly 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 in Work.
  - .6 Details not on original Contract Drawings.
  - .7 References to related Shop Drawings and modifications.
- .5 Specifications: legibly 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 in Work.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.

1.8 FINAL SURVEY

- .1 Contractor to provide Building Location Certificate at project completion.

1.9 EQUIPMENT AND SYSTEMS

- .1 Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .3 Include installed colour coded wiring diagrams.
- .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.

- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
  - .6 Provide servicing and lubrication schedule, and list of lubricants required.
  - .7 Include manufacturer's printed operation and maintenance instructions.
  - .8 Include sequence of operation by controls manufacturer.
  - .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
  - .10 Provide installed control diagrams by controls manufacturer.
  - .11 Provide Contractor's coordination diagrams, 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.
- 1.10 MATERIALS AND FINISHES
- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.
  - .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
  - .3 Moisture-protection and Weather-exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
  - .4 Additional Requirements: as specified in individual specifications sections.
- 1.11 SPARE PARTS
- .1 Provide spare parts, in quantities specified in individual specification sections.
  - .2 Provide items of same manufacture and quality as items in Work.
  - .3 Deliver to site; place and store.
  - .4 Receive and catalogue all items. Submit inventory listing to Contract Administrator. Include approved listings in Maintenance Manual.
  - .5 Obtain receipt for delivered products and submit prior to final payment.
- 1.12 MAINTENANCE MATERIALS
- .1 Provide maintenance and extra Materials, in quantities specified in individual specification sections.
  - .2 Provide items of same manufacture and quality as items in Work.
  - .3 Deliver to site; place and store in locations as directed by Construction Administrator.
  - .4 Receive and catalogue all items. Submit inventory listing to Contract Administrator. Include approved listings in Maintenance Manual.

- .5 Obtain receipt for delivered products and submit prior to final payment.
- 1.13 SPECIAL TOOLS
  - .1 Provide special tools, in quantities specified in individual specification section.
  - .2 Provide items with tags identifying their associated function and equipment.
  - .3 Deliver to site; place and store.
  - .4 Receive and catalogue all items. Submit inventory listing to Contract Administrator. Include approved listings in Maintenance Manual.
- 1.14 STORAGE, HANDLING AND PROTECTION
  - .1 Store spare parts, maintenance Materials, and special tools in manner to prevent damage or deterioration.
  - .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
  - .3 Store components subject to damage from weather in weatherproof enclosures.
  - .4 Store paints and freezable Materials in a heated and ventilated room.
  - .5 Remove and replace damaged products at own expense and to satisfaction of Contract Administrator.
- 1.15 WARRANTIES AND BONDS
  - .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 the applicable item of Work.
  - .4 Except for items put into use with the City's permission, leave date of beginning of time of warranty until the Date of Substantial Performance is determined.
  - .5 Verify that documents are in proper form, contain full information, and are notarized.
  - .6 Co-execute submittals when required.
  - .7 Retain warranties and bonds until time specified for submittal.

**END OF SECTION**