

**Part 1            General**

**1.1                WORK COVERED BY CONTRACT DOCUMENTS**

- .1        Work of this Contract comprises general construction of a toboggan shelter building, toboggan chutes, lookout tower, accessible ramp and exterior improvements at St.Vital Park in Winnipeg, MB.
- .2        The work of this contract generally includes, but is not limited to:
  - .1        Rough grading, excavation, and installation of granular material.
  - .2        Construction and installation of bench seating, at-grade deck, shelter building, ramp, stairs, roof deck, railings, upper deck.
  - .3        Construction and installation of toboggan chutes to City of Winnipeg standards.
  - .4        Installation of lighting and electric heaters.

**1.2                EXISTING SERVICES**

- .1        Notify Contract Administrator and utility companies of intended interruption of services and obtain required permission.
- .2        Where work involves breaking into or connecting to existing services, give Contract Administrator 48 hours notice for necessary interruption of mechanical or electrical service throughout course of work. Minimize duration of interruptions. Carry out work at times as directed by governing authorities with minimum disturbance to pedestrian, vehicular traffic, and tenant operations.
- .3        Establish location and extent of service lines in area of work before starting Work. Notify Contract Administrator of findings.
- .4        Submit schedule to and obtain approval from Contract Administrator for any shutdown or closure of active service or facility including power and communications services. Adhere to approved schedule and provide notice to affected parties.
- .5        Provide temporary services when directed by Contract Administrator to maintain critical building and tenant systems.
- .6        Where unknown services are encountered, immediately advise Contract Administrator 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.
- .9        Construct barriers in accordance with Section 01 56 00 – Temporary Barriers and Enclosures.

**1.3                CONTRACTOR USE OF PREMISES**

- .1 Contractor has use of Site with the following restrictions:
  - .1 Use Site for Work, for storage, and for access, limited to the areas indicated on the drawings or as directed by Contract Administrator.
- .2 Co-ordinate use of premises under direction of Contract Administrator.
- .3 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- .4 Assume full responsibility for protection and safekeeping of products under this Contract.

**1.4 DOCUMENTS REQUIRED**

- .1 Maintain at job site, one copy each document as follows:
  - .1 Contract Drawings.
  - .2 Specifications.
  - .3 Addenda.
  - .4 Reviewed Shop Drawings.
  - .5 List of Outstanding Shop Drawings.
  - .6 Change Orders.
  - .7 Other Modifications to Contract.
  - .8 Field Test Reports.
  - .9 Copy of Approved Work Schedule.
  - .10 Health and Safety Plan and Other Safety Related Documents.
  - .11 Other documents as specified.

**END OF SECTION**

**Part 1            General**

**1.1                RELATED REQUIREMENTS SPECIFIED ELSEWHERE**

- .1        Particular requirements for inspection and testing to be carried out by testing laboratory designated by Contract Administrator are specified under various sections.

**1.2                APPOINTMENT AND PAYMENT**

- .1        Contract Administrator will appoint and pay for services of testing laboratory except follows:
  - .1        Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
  - .2        Inspection and testing performed exclusively for Contractor's convenience.
  - .3        Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems.
  - .4        Mill tests and certificates of compliance.
  - .5        Tests specified to be carried out by Contractor under the supervision of Contract Administrator.
  - .6        Additional tests specified in the following paragraph.
- .2        Where tests or inspections by designated testing laboratory reveal Work not in accordance with contract requirements, pay costs for additional tests or inspections as required by Contract Administrator to verify acceptability of corrected work.

**1.3                CONTRACTOR'S RESPONSIBILITIES**

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

**END OF SECTION**

**Part 1 General**

**1.1 DEFINITIONS**

- .1 Activity: An element of Work performed during course of Project. An activity normally has an expected duration, and expected cost and expected resource requirements. Activities can be subdivided into tasks.
- .2 Bar Chart (GANTT Chart). A graphic display of schedule-related information. In typical bar chart, activities or other Project elements are listed down left side of chart, dates are shown across top, and activity durations are shown as date-placed horizontal bars. Generally Bar Chart should be derived from commercially available computerized project management system.
- .3 Baseline: Original approved plan (for Project, work package, or activity), plus or minus approved scope changes.
- .4 Construction Work Week: Monday to Friday, inclusive, will provide five day work week and define schedule calendar working days as part of Bar (GANTT) Chart submission.
- .5 Duration: Number of work periods (not including holidays or other nonworking periods) required to complete an activity or other Project element. Usually expressed as workdays or workweeks.
- .6 Master Plan: A summary-level schedule that identifies major activities and key milestones.
- .7 Milestone: A significant event in Project, usually completion of major deliverable.
- .8 Project Schedule: The planned dates for performing activities and the planned dates for meeting milestones. A dynamic, detailed record of tasks or activities that must be accomplished to satisfy Project objectives. Monitoring and control process involves using Project Schedule in executing and controlling activities and is used as basis for decision making throughout project life cycle.
- .9 Project Planning, Monitoring and Control System: Overall system operated by Contract Administrator to

**1.2 REQUIREMENTS**

- .1 Ensure Master Plan and Detail Schedules are practical and remain within specified Contract duration.
- .2 Plan to complete Work in accordance with prescribed milestones and time frame.
- .3 Limit activity durations to maximum of approximately 10 working days, to allow for progress reporting.
- .4 Ensure that it is understood that Award of Contract or time of beginning, rate of progress, Interim Certificate and Final Certificate as defined times of completion are of essence of this contract.

**1.3 SUBMITTALS**

- .1 Submit to Contract Administrator within 5 working days of Award of Contract Bar (GANTT) Chart as Master Plan for planning, monitoring and reporting of project progress.
- .2 Submit Project Schedule to Contract Administrator within 5 working days of receipt of acceptance of Master Plan.

#### **1.4 MASTER PLAN**

- .1 Structure schedule to allow orderly planning, organizing and execution of Work as Bar Chart (GANTT).
- .2 Contract Administrator will review and return revised schedules within 5 working days.
- .3 Revise impractical schedule and resubmit within 5 working days.
- .4 Accepted revised schedule will become Master Plan and be used as baseline for updates.

#### **1.5 PROJECT SCHEDULE**

- .1 Develop detailed Project Schedule derived from Master Plan.
- .2 Ensure detailed Project Schedule includes as minimum milestone and activity types as follows:
  - .1 Award.
  - .2 Shop Drawings, Samples.
  - .3 Permits.
  - .4 Mobilization.
  - .5 Demolitions
  - .6 Exterior Architecture (Curbs, Walls, Surfacing, Structures).

#### **1.6 PROJECT SCHEDULE REPORTING**

- .1 Update Project Schedule on weekly basis reflecting activity changes and completions, as well as activities in progress.
- .2 Include as part of Project Schedule, narrative report identifying Work status to date, comparing current progress to baseline, presenting current forecasts, defining problem areas, anticipated delays and impact with possible mitigation.

#### **1.7 PROJECT MEETINGS**

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

current approved dates shown on baseline schedule.

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

**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 78 00 - Closeout Submittals.
- .2    Other sections requesting submittals.
- .3    This section describes requirements applicable to all Sections within Divisions 03 to 32.

**1.3                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    Shop Drawings which require approval of any legally constituted authority having jurisdiction shall be provided to such authority by the Contractor for approval.
- .4    Present Shop Drawings, product data, samples and mock-ups in SI Metric units.
- .5    Where items or information is not manufactured or produced in SI Metric units, converted values within the metric measurement tolerances are acceptable.

**1.4                CO-ORDINATION OF SUBMISSIONS**

- .1    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 co-ordinated with requirements of Work and Contract Documents.
- .2    Submittals not stamped, signed, dated, identified as to specific project, and attesting to their being reviewed will be returned without being examined and shall be considered rejected.
- .3    Notify Contract Administrator, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .4    Contractor's responsibility for errors and omissions in submission is not relieved by Contract Administrator 's review of submittals.
- .5    Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Contract Administrator review.
- .6    Keep one (1) reviewed copy of each submission on Site.

- .7 Verify:
  - .1 Field measurements and dimension shop drawing accordingly.
  - .2 Affected adjacent Work are coordinated and note on submission.
  - .3 Catalogue numbers and similar data.
- .8 Coordinate submission of interrelated Shop Drawings with the requirements of the Work and the Contract Documents. Individual shop drawings will not be reviewed until all related shop drawings are available to the Contract Administrator.

## **1.5 SUBMITTALS, SHOP DRAWINGS AND PRODUCT DATA**

- .1 Where the Contract Administrator is required to review Shop Drawings, method samples, mock-ups, premature requests for Substantial Performance or Completion reviews, and completed “corrections” more than once and/ or enter into extended discussions or preparation of additional details or calculations to facilitate the Contractor’s work or that of the Contractor’s sub-trades, the additional consulting time shall be paid for by the Contractor. Similarly, if deficient workmanship or construction requires additional or unscheduled Site visits by the Contract Administrator, or other inspectors or reviewers, the additional time and disbursements based on the Contract Administrator’s hourly rates, etc. shall be paid by the Contractor.
- .2 The Contractor shall review all Shop Drawings before providing them to the Contract Administrator. The Contractor represents by this review 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 checked and co-ordinated each Shop Drawing with the requirements of the Work and of the Contract Documents.
  - .3 Allow ten (10) working days for Contract Administrator's review of each submission.
  - .4 Adjustments made by Contract Administrator on Shop Drawings and Submittals do not relieve the Contractor from compliance with the requirements of the Contract Documents and 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.
  - .5 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.
  - .6 Accompany submissions with duplicate transmittal letter, containing:
    - .1 Date.

- .2 Project title and number.
- .3 Contractor's name and address.
- .4 Identification, description, and quantity of each shop drawing, product data and sample.
- .5 Other pertinent data.
- .7 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.
  - .5 Identify details by reference to sheet and detail numbers shown on the Contract Drawings.
  - .6 Details of appropriate portions of Work as applicable:
    - .1 Specification Section number.
    - .2 Fabrication.
    - .3 Layout, showing dimensions, including identified field dimensions, and clearances.
    - .4 Setting or erection details.
    - .5 Capacities.
    - .6 Performance characteristics.
    - .7 Standards.
    - .8 Operating weight.
    - .9 Wiring diagrams.
    - .10 Single line and schematic diagrams.
    - .11 Relationship to other parts of the Work.

- .8 After Contract Administrator's review, distribute copies.
- .9 Submit electronic copy of Shop Drawings for each requirement requested in specification Sections and as Contract Administrator may reasonably request.
- .10 Submit electronic copy 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.
- .11 Delete information not applicable to project.
- .12 Supplement standard information to provide details applicable to project.
- .13 If upon review by Contract Administrator, no errors or omissions are discovered or if only minor corrections are made, an electronic copy will be returned and fabrication and installation of Work may proceed. If Shop Drawings are rejected, noted copy will be returned and re-submission of corrected Shop Drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

## **1.6 SAMPLES**

- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to Contract Administrator's business address.
- .3 Notify Contract Administrator in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Submit samples in an orderly sequence, so as to cause no delay in the work. Failure to submit samples in ample time is not to be considered sufficient reason for an extension of contract time and no claim for extension by reason of such default will be allowed.
- .5 Where colour, pattern or texture is criterion, submit full range of samples.
- .6 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.
- .7 Make changes in samples which Contract Administrator may require, consistent with Contract Documents.
- .8 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

## **1.7 MOCK-UP**

- .1 Erect mock-ups to Section 01 45 00 and as outlined in specific Sections.

## **1.8 PHOTO DOCUMENTATION**

- .1 The Contractor shall photograph and submit monthly colour pictures in digital format demonstrating the progress of the Work and at all concealed areas prior to being covered.
- .2 Submit two sets: one to the Contract Administrator and one to the Design Authority.
- .3 Submit 100 mm x 150 mm copies of each, labelled and in protective covers in three-ring binders to the Contract Administrator with the Contract Operation and Maintenance Manuals upon completion of the project.

**1.9 CERTIFICATES AND TRANSCRIPTS**

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

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCES**

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

**1.2                SUBMITTALS**

- .1        Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2        Submit Site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
  - .1        Results of site specific safety hazard assessment.
  - .2        Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
- .3        Submit 2 copies of Contractor's authorized representative's work site health and safety inspection reports to Contract Administrator and authority having jurisdiction, weekly.
- .4        Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .5        Submit copies of incident and accident reports.
- .6        Submit WHMIS MSDS - Material Safety Data Sheets.
- .7        Contract Administrator will review Contractor's Site-specific Health and Safety Plan and provide comments to Contractor within 5 days after receipt of plan. Revise plan as appropriate and resubmit plan to Contract Administrator within 5 days after receipt of comments from Contract Administrator.
- .8        Contract Administrators review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .9        Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Contract Administrator.
- .10      On-Site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

**1.3 FILING OF NOTICE**

- .1 File Notice of Project with Provincial authorities prior to beginning of Work.

**1.4 SAFETY ASSESSMENT**

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

**1.5 MEETINGS**

- .1 Schedule and administer Health and Safety meeting with Contract Administrator prior to commencement of Work.

**1.6 REGULATORY REQUIREMENTS**

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

**1.7 GENERAL REQUIREMENTS**

- .1 Develop written Site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Contract Administrator may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

**1.8 RESPONSIBILITY**

- .1 Be responsible for health and safety of persons on Site, safety of property on Site and for protection of persons adjacent to Site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with Site-specific Health and Safety Plan.

**1.9 COMPLIANCE REQUIREMENTS**

- .1 Comply with Workplace Safety and Health Act, Workplace Safety Regulation, Manitoba Reg. R.S.M 1987.

**1.10 UNFORSEEN HAZARDS**

- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to

Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Contract Administrator verbally and in writing.

**1.11 HEALTH AND SAFETY CO-ORDINATOR**

- .1 Employ and assign to Work, competent and authorized representative as Health and Safety Co-ordinator. Health and Safety Co-ordinator must:
  - .1 Have minimum 2 years' Site-related working experience specific to activities associated with health and safety.
  - .2 Have working knowledge of occupational safety and health regulations.
  - .3 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter Site to perform Work.
  - .4 Be responsible for implementing, enforcing daily and monitoring Site-specific Contractor's Health and Safety Plan.
  - .5 Be on Site during execution of Work.

**1.12 POSTING OF DOCUMENTS**

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on Site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Contract Administrator.

**1.13 CORRECTION OF NON-COMPLIANCE**

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

**1.14 POWDER ACTUATED DEVICES**

- .1 Use powder actuated devices only after receipt of written permission from Contract Administrator.

**1.15 WORK STOPPAGE**

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

**PART 2 Products**

**2.1 NOT USED**

.1 Not used.

**Part 3 Execution**

**3.1 NOT USED**

.1 Not used.

**END OF SECTION**

**Part 1            General**

**1.1                REFERENCES AND CODES**

- .1    Perform Work in accordance with National Building Code of Canada (NBC) including all amendments up to Bid closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2    Meet or exceed requirements of:
  - .1    Contract documents.
  - .2    Specified standards, codes and referenced documents.

**1.2                BUILDING SMOKING ENVIRONMENT**

- .1    Comply with smoking restrictions.

**PART 2           Products**

**2.1                NOT USED**

- .1    Not used.

**Part 3            Execution**

**3.1                NOT USED**

- .1    Not used.

**END OF SECTION**

**Part 1            General**

**1.1                SECTION INCLUDES**

- .1      Inspection and testing, administrative and enforcement requirements.
- .2      Tests and mix designs.
- .3      Mock-ups.
- .4      Written and electronic reports.
- .5      Equipment and system adjust and balance.
- .6      This section describes requirements applicable to all Sections within Divisions 03 to 32.

**1.2                REFERENCES**

- .1      ISO/IEC 17025:2005 - General Requirements for the Competence of Testing and Calibration Laboratories.
- .2      SCC (Standards Council of Canada).

**1.3                INSPECTION BY AUTHORITY**

- .1      Allow Authorities Having Jurisdiction 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 whenever portions of the Work are designated for special tests, inspections or approvals, either when described in the Contract Documents or when required by law in the Place of the Work.
- .3      If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.

**1.4                REVIEW BY CONTRACT ADMINISTRATOR**

- .1      Allow Contract Administrator access to Work.
- .2      Contract administrator may order any part of the Work to be reviewed or inspected if Work is suspected to be not in accordance with Contract Documents.
- .3      If, upon review such work is found not in accordance with Contract Documents, correct such Work and pay cost of additional review and correction.

**1.5                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 City of Winnipeg.
- .2 Provide equipment required for executing inspection and testing by appointed agencies.
- .3 Employment of inspection and testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
- .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and testing to ascertain full degree of defect. Correct defect and irregularities as advised by Contract administrator at no cost to City of Winnipeg. Pay costs for retesting and re-inspection.

#### **1.6 ACCESS TO WORK**

- .1 Allow inspection and testing agencies access to Work, off Site manufacturing and fabrication plants.
- .2 Cooperate to provide reasonable access and facilities for such access.

#### **1.7 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 materials required for testing, as specifically requested in specifications to the designated testing laboratory directly unless requested otherwise. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.
- .3 Provide labour and facilities to:
  - .1 Provide access to the work to be inspected and tested.
  - .2 Facilitate inspections and tests.
  - .3 Make good any work which was disturbed by the inspection and test.
  - .4 Provide storage on Site for a testing laboratory's exclusive use to store equipment and cure test samples.
- .4 Notify the Testing Agency sufficiently in advance of operations to allow for the assignment of laboratory personnel and for the scheduling of tests.

#### **1.8 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, City of Winnipeg may deduct from Contract Price the difference in value between Work performed and that called for by Contract Documents, amount of which shall be determined by Contract Administrator.

## **1.9 REPORTS**

- .1 Submit one (1) electronic copy of signed inspection and test reports to Contract administrator, Subcontractor of work being inspected or tested, and City of Winnipeg.

## **1.10 MOCK-UP**

- .1 Prepare mock-up for Work specifically requested in specifications. Include for Work of all Sections required to provide mock-ups.
- .2 Construct in all locations acceptable to Contract administrator or as specified in specific Section.
- .3 Prepare mock-ups for City of Winnipeg's and Contract administrator's review with reasonable promptness and in an orderly sequence, so as not to cause any delay in Work.
- .4 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.
- .5 Specification section identifies whether mock-up may remain as part of Work or if it is to be removed.

## **1.11 EQUIPMENT AND SYSTEMS**

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

**END OF SECTION**

**Part 1            General**

**1.1                INSTALLATION AND REMOVAL**

- .1    Provide temporary utilities controls in order to execute work expeditiously.
- .2    Remove from Site all such work after use.

**1.2                WATER SUPPLY**

- .1    Provide continuous supply of potable water for construction use.
- .2    Arrange for connection with appropriate utility company and pay all costs for installation, maintenance and removal.

**1.3                TEMPORARY POWER AND LIGHT**

- .1    Contractor will provide and pay for temporary power during construction for temporary lighting and operating of power tools, to a maximum supply of 230volts 30amps.
- .2    Arrange for connection with appropriate utility company. Pay all costs for installation, maintenance and removal.
- .3    Temporary power for electric cranes and other equipment requiring in excess of above is responsibility of Contractor.

**1.4                TEMPORARY COMMUNICATION FACILITIES**

- .1    Provide and pay for temporary telephone, fax., data hook up, lines, equipment necessary for own use.

**1.5                FIRE PROTECTION**

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

**END OF SECTION**

**Part 1 General**

**1.1 INSTALLATION AND REMOVAL**

- .1 Prepare Site plan indicating proposed location and dimensions of area to be fenced and used by Contractor, number of trailers to be used, avenues of ingress/egress to fenced area and details of fence installation.
- .2 Identify areas which have to be gravelled to prevent tracking of mud.
- .3 Indicate use of supplemental or other staging area.
- .4 Provide construction facilities in order to execute work expeditiously.
- .5 Remove from Site all such work after use.

**1.2 SCAFFOLDING**

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

**1.3 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.

**1.4 HOISTING**

- .1 Provide, operate and maintain hoists cranes required for moving of workers, materials and equipment.
- .2 Hoists and cranes shall be operated by qualified operator.

**1.5 SITE STORAGE/LOADING**

- .1 Confine work and operations of employees by Contract Documents. Do not unreasonably encumber premises with products.
- .2 Do not load or permit to load any part of Work with weight or force that will endanger Work.

**1.6 CONSTRUCTION PARKING**

- .1 Parking will be permitted on Site provided it does not disrupt performance of Work.
- .2 Provide and maintain adequate access to project Site.
- .3 Construction Parking areas to be designated by City of Winnipeg.

**1.7 OFFICES**

- .1 General Contractor and Subcontractors may at their discretion provide a Site trailer for use as their own offices. Location to be approved by Contract Administrator.
- .2 Provide marked and fully stocked first-aid case in a readily available location.

**1.8 EQUIPMENT, TOOL AND MATERIALS STORAGE**

- .1 Provide and maintain, in clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weatherproof sheds on Site in manner to cause least interference with work activities.
- .3 Handle and store products in a manner to prevent damage, deterioration and soiling and in accordance with manufacturer's recommendations when applicable.
- .4 Store sensitive products in weather tight, climate controlled, enclosures in an environment favourable to Product.
- .5 Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- .6 Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- .7 Remove and replace damaged products at own expense and to the satisfaction of the Contract Administrator

**1.9 SANITARY FACILITIES**

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

**1.10 CONSTRUCTION SIGNAGE**

- .1 No signs or advertising shall be allowed or displayed without the approval of the Contract Administrator and City of Winnipeg.
- .2 This project will not be used to advertise or promote systems, construction or assembly methods, tools or equipment used and/or incorporated therein without written approval of the Contract Administrator and City of Winnipeg.

**1.11 PROTECTION AND MAINTENANCE OF TRAFFIC**

- .1 Provide measures for protection and diversion of traffic, including provision of watchpersons and flag-persons, erection of barricades, placing of lights around and in front of equipment and work, and erection and maintenance of adequate warning, danger, and direction signs
- .2 Protect travelling public from damage to person and property.

- .3 Contractor's traffic on roads selected for hauling material to and from Site to interfere as little as possible with public traffic.
- .4 Verify adequacy of existing roads and allowable load limit on these roads.  
Contractor: responsible for repair of damage to roads caused by construction operations.
- .5 Provide necessary lighting, signs, barricades, and distinctive markings for safe movement of traffic.
- .6 Dust control: adequate to ensure safe operation at all times.
- .7 Provide snow removal during period of Work.

**1.12 CLEAN-UP**

- .1 Remove construction debris, waste materials, packaging material from work Site daily.
- .2 Clean dirt or mud tracked onto paved or surfaced roadways.

**END OF SECTION**

**Part 1 General**

**1.1 INSTALLATION AND REMOVAL**

- .1 Provide temporary controls in order to execute Work expeditiously.
- .2 Remove from Site all such work after use.

**1.2 HOARDING**

- .1 Erect temporary Site enclosure using new 1.2 m high snow fence wired to rolled steel "T" bar fence posts spaced at 2.4 m on centre. Provide one lockable truck gate. Maintain fence in good repair.
- .2 Barriers around trees and plants designated to remain to be provided by City of Winnipeg to protect from damage by equipment and construction procedures.

**1.3 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.

**1.4 WEATHER ENCLOSURES**

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

**1.5 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.

**1.6 ACCESS TO SITE**

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

**1.7 PUBLIC TRAFFIC FLOW**

- .1 Provide and maintain competent, traffic signals and barricades as required to perform Work and protect public.

**1.8 FIRE ROUTES**

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

---

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

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

**1.10 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 Be responsible for damage incurred due to lack of or improper protection.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCE STANDARDS**

- .1 Within text of each specifications section, reference may be made to reference standards. Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .2 If there is question as to whether any product or system is in conformance with applicable standards, Contractor reserves right to have such products or systems tested to prove or disprove conformance.
- .3 Cost for such testing will be born by Contractor in event of conformance with Contract Documents or by Contractor in event of non-conformance.
- .4 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.

**1.2 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.

**1.3 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.

**1.4 STORAGE, HANDLING AND PROTECTION**

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

**1.5 TRANSPORTATION**

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

**1.6 MANUFACTURER'S INSTRUCTIONS**

- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Contract Administrator in writing, of conflicts between specifications and manufacturer's instructions, so that Contractor 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.

**1.7 QUALITY OF WORK**

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced

and skilled in respective duties for which they are employed. Immediately notify 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.

### **1.8 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.

### **1.9 CONCEALMENT**

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

### **1.10 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.

### **1.11 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.

### **1.12 FASTENINGS**

- .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing

exterior work, unless stainless steel or other material is specifically requested in affected specification Section.

- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spilling or cracking of material to which anchorage is made are not acceptable.

### **1.13 FASTENINGS - EQUIPMENT**

- .1 Use fastenings of standard commercial sizes and patterns with material and finish suitable for service.
- .2 Use heavy hexagon heads, semi-finished unless otherwise specified. Use No. 304 stainless steel for exterior areas.
- .3 Bolts may not project more than one diameter beyond nuts.
- .4 Use plain type washers on equipment, sheet metal and soft gasket lock type washers where vibrations occur. Use resilient washers with stainless steel.

### **1.14 PROTECTION OF WORK IN PROGRESS**

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

### **1.15 EXISTING UTILITIES**

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and/or building occupants.

**END OF SECTION**

**Part 1            General**

**1.1                SECTION INCLUDES**

- .1      Subsurface conditions found.
- .2      Survey requirements.
- .3      Examination
- .4      Preparation

**1.2                REFERENCES**

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

**1.3                QUALIFICATIONS OF SURVEYOR**

- .1      Qualified registered land surveyor, licensed to practice in the Province of Manitoba, acceptable to Contract Administrator.

**1.4                SURVEY REFERENCE POINTS**

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

**1.5                SURVEY REQUIREMENTS**

- .1      Establish two permanent bench marks on Site, referenced to established bench marks by survey control points. Record locations, with horizontal and vertical data in Project Record Documents.
- .2      Establish lines and levels, locate and lay out, by instrumentation.
- .3      Stake for grading, fill and topsoil placement and landscaping features.
- .4      Stake slopes and berms.
- .5      Establish pipe invert elevations.
- .6      Stake batter boards for foundations.

- .7 Establish foundation column locations and floor elevations.
- .8 Establish lines and levels for mechanical and electrical work.

**1.6 EXISTING SERVICES**

- .1 Before commencing work, establish location and extent of service lines in area of Work and notify Contract Administrator of findings.
- .2 Remove abandoned service lines within 2m of structures. Cap or otherwise seal lines at cut-off points as directed by Contract Administrator.

**1.7 LOCATION OF EQUIPMENT AND FIXTURES**

- .1 Location of equipment, fixtures and outlets indicated or specified are to be considered as approximate.
- .2 Locate equipment, fixtures and distribution systems to provide minimum interference and maximum usable space and in accordance with manufacturer's recommendations for safety, access and maintenance.
- .3 Inform Contract Administrator of impending installation and obtain approval for actual location.
- .4 Submit field drawings to indicate relative position of various services and equipment when required by Contract Administrator.

**1.8 RECORDS**

- .1 Maintain a complete, accurate log of control and survey work as it progresses.
- .2 On completion of foundations and major Site improvements, prepare a certified survey showing dimensions, locations, angles and elevations of Work.
- .3 Record locations of maintained, re-routed and abandoned service lines.

**1.9 SUBMITTALS**

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

**1.10 SUBSURFACE CONDITIONS**

- .1 Promptly notify Contract Administrator in writing if subsurface conditions at Place of Work differ materially from those indicated in Contract Documents, or a reasonable assumption of probable conditions based thereon.

- .2 After prompt investigation, should Contract Administrator determine that conditions do differ materially, instructions will be issued for changes in Work as provided in Changes and Change Orders.

**END OF SECTION**

**Part 1 General**

**1.1 RELATED SECTIONS**

- .1 Individual product Sections: cutting and patching incidental to work of Section. Advance notification to other Sections required.

**1.2 SUBMITTALS**

- .1 Submit written request in advance of cutting or alteration which affects:
  - .1 Structural integrity of any element of Project.
  - .2 Integrity of weather-exposed or moisture-resistant elements.
  - .3 Efficiency, maintenance, or safety of any operational element.
  - .4 Visual qualities of sight-exposed elements.
  - .5 Work of The City or separate Contractor.
- .2 Include in request:
  - .1 Identification of Project.
  - .2 Location and description of affected Work.
  - .3 Statement on necessity for cutting or alteration.
  - .4 Description of proposed Work, and products to be used.
  - .5 Alternatives to cutting and patching.
  - .6 Effect on Work of The City or separate Contractor.
  - .7 Written permission of affected separate Contractor.
  - .8 Date and time work will be executed.

**1.3 MATERIALS**

- .1 Required for original installation.
- .2 Change in Materials: Submit request for substitution in accordance with Section 01 33 00 - Submittal Procedures.

**1.4 PREPARATION**

- .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- .2 After uncovering, inspect conditions affecting performance of Work.
- .3 Beginning of cutting or patching means acceptance of existing conditions.
- .4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.

- .5 Provide protection from elements for areas which may be exposed by uncovering work.

**1.5 EXECUTION**

- .1 Execute cutting, fitting, and patching to complete Work.
- .2 Fit several parts together, to integrate with other Work.
- .3 Uncover Work to install ill-timed Work.
- .4 Remove and replace defective and non-conforming Work.
- .5 Remove samples of installed Work for testing.
- .6 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.
- .7 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- .8 Employ original installer to perform cutting and patching for weather-exposed and moisture-resistant elements, and sight-exposed surfaces.
- .9 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.
- .10 Restore work with new products in accordance with requirements of Contract Documents.
- .11 Fit Work airtight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .12 At penetration of fire rated wall, ceiling, or floor construction, completely seal voids with firestopping material, full thickness of the construction element.
- .13 Refinish surfaces to match adjacent finishes: For continuous surfaces refinish to nearest intersection; for an assembly, refinish entire unit.
- .14 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

**END OF SECTION**

**Part 1            General**

**1.1                PROJECT CLEANLINESS**

- .1      Maintain Work in tidy condition, free from accumulation of waste products and debris, including 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      Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .4      Provide on-Site containers for collection of waste materials and debris.
- .5      Remove waste material and debris from Site at end of each working day.
- .6      Dispose of waste materials and debris off Site.
- .7      Clean interior areas prior to start of finish work, and maintain areas free of dust and other contaminants during finishing operations.
- .8      Store volatile waste in covered metal containers, and remove from premises at end of each working day.
- .9      Provide adequate ventilation during use of volatile or noxious substances. Use of building ventilation systems is not permitted for this purpose.
- .10     Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
- .11     Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.

**1.2                FINAL CLEANING**

- .1      When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
- .2      Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
- .3      Prior to final review, remove surplus products, tools, construction machinery and equipment.
- .4      Remove waste products and debris 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, acrylic, hardware, stainless steel, and mechanical and electrical fixtures. Replace broken, scratched or disfigured glass or acrylic

panels.

- .8 Remove stains, spots, marks and dirt from finished work, electrical and mechanical fixtures, Site furnishings, concrete, and wood.
- .9 Clean lighting reflectors, lenses, and other lighting surfaces.
- .10 Inspect finishes, fitments and equipment and ensure specified workmanship and operation.
- .11 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
- .12 Remove dirt and other disfiguration from exterior surfaces.
- .13 Sweep and wash clean paved areas.

**END OF SECTION**

**Part 1            General**

**1.1                SECTION INCLUDES**

- .1        Inspections and declarations.
- .2        Closeout submittals
- .3        Operation and maintenance manual format.
- .4        Contents each volume.
- .5        Recording actual Site conditions.
- .6        Record documents and samples.
- .7        Record documents.

**1.2                RELATED SECTIONS**

- .1        Section 01 33 00 - Submittal Procedures.
- .2        Section 01 45 00 - Quality Control.
- .3        Section 01 74 11 - Cleaning
- .4        Section 01 79 00 - Demonstration and Training.

**1.3                ADMINISTRATIVE REQUIREMENTS**

- .1        Acceptance of Work Procedures:
  - .1        Contractor's Inspection: Contractor: conduct inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
    - .1        Notify Contract Administrator in writing of satisfactory completion of Contractor's inspection and submit verification that corrections have been made.
    - .2        Request Contract Administrator's inspection.
  - .2        Contract Administrator's Inspection:
    - .1        Contract Administrator and Contractor to inspect Work and identify defects and deficiencies.
    - .2        Contractor to correct Work as directed.
  - .3        Completion Tasks: submit written certificates in English that tasks have been performed as follows:
    - .1        Work: completed and inspected for compliance with Contract Documents.

- .2 Defects: corrected and deficiencies completed.
- .3 Equipment and systems: tested, adjusted and balanced and fully operational.
- .4 Certificates required by Authorities Having Jurisdiction have been submitted.
- .5 Operation of systems: demonstrated to City of Winnipeg's personnel.
- .6 Work: complete and ready for final inspection.
- .4 Final Inspection:
  - .1 When completion tasks are done, request final inspection of Work by Contract Administrator, and Contractor.
  - .2 When Work incomplete according to City of Winnipeg Contract Administrator, complete outstanding items and request re-inspection.
- .5 Declaration of Substantial Performance: when Contract Administrator considers deficiencies and defects corrected and requirements of Contract substantially performed, make application for Certificate of Substantial Performance.
- .6 Commencement of Lien and Warranty Periods: date of City of Winnipeg's acceptance of submitted declaration of Substantial Performance to be date for commencement for warranty period and commencement of lien period unless required otherwise by lien statute of Place of Work.
- .7 Final Payment:
  - .1 When Contract Administrator considers final deficiencies and defects corrected and requirements of Contract met, make application for final payment.
  - .2 When Work 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 application for payment of holdback amount in accordance with contractual agreement.

#### **1.4 FINAL CLEANING**

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

**END OF SECTION**

**Part 1            General**

**1.1                ADMINISTRATIVE REQUIREMENTS**

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

**1.2                ACTION AND INFORMATIONAL SUBMITTALS**

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

**1.3                FORMAT**

- .1    Organize data as instructional manual.
- .2    Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279mm with spine and face pockets.
- .3    When multiple binders are used correlate data into related consistent groupings.
  - .1    Identify contents of each binder on spine.

- .4 Cover: identify each binder with type or printed title 'Operation and Maintenance Manuals'; list title of project and identify subject matter of contents.
- .5 Arrange content by systems and subdivided by MASTERFORMAT division and Section numbers and sequence of Table of Contents.
- .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
- .7 Text: manufacturer's printed data, or typewritten data.
- .8 Drawings: provide with reinforced punched binder tab.
  - .1 Bind in with text; fold larger drawings to size of text pages.
- .9 Provide 1:1 scaled CAD files in dxf and dwg format on DVD.

**1.4 CONTENTS - PROJECT RECORD DOCUMENTS**

- .1 Table of Contents for Each Volume: provide title of project;
  - .1 Date of submission; names.
  - .2 Addresses, and telephone numbers of Contract Administrator and Contractor with name of responsible parties.
  - .3 Schedule of products and systems, indexed to content of volume.
- .2 For each product or system:
  - .1 List names, addresses and telephone numbers of subcontractors and suppliers, including local source of supplies and replacement parts.
- .3 Product Data: mark each sheet to identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .5 Typewritten Text: as required to supplement product data.
  - .1 Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions specified in Section 01 45 00 - Quality Control.
- .6 Training: refer to Section 01 79 00 - Demonstration and Training.

**1.5 AS -BUILT DOCUMENTS AND SAMPLES**

- .1 Maintain, in addition to requirements in General Conditions, at Site for Contract Administrator one record copy of:
  - .1 Contract Drawings.
  - .2 Specifications.

- .3 Addenda.
- .4 Change Orders and other modifications to Contract.
- .5 Reviewed shop drawings, product data, and samples.
- .6 Field test records.
- .7 Inspection certificates.
- .8 Manufacturer's certificates.
- .2 Store record documents and samples in field office apart from documents used for construction.
  - .1 Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual.
  - .1 Label each document "RECORD DOCUMENTS" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition.
  - .1 Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Contract Administrator.

**1.6 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS**

- .1 Record information on set of black line opaque drawings, and in copy of Project Manual provided by Contract Administrator.
- .2 Use felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .3 Record information concurrently with construction progress.
  - .1 Do not conceal Work until required information is recorded.
- .4 Contract Drawings and shop drawings: mark each item to record actual construction, including:
  - .1 Measured depths of elements of foundation in relation to finish first floor datum.
  - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
  - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
  - .4 Field changes of dimension and detail.

- .5 Changes made by change orders.
- .6 Details not on original Contract Drawings.
- .7 References to related shop drawings and modifications.
- .5 Specifications: mark each item to record actual construction, including:
  - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
  - 2 Changes made by Addenda and change orders.
- .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.
- .7 Provide digital photos, if requested, for Site records.

## **1.7 EQUIPMENT AND SYSTEMS**

- .1 For each item of equipment and each system include description of unit or system, and component parts.
  - .1 Give function, normal operation characteristics and limiting conditions.
  - .2 Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .3 Include installed colour coded wiring diagrams.
- .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences.
  - .1 Include regulation, control, stopping, shut-down, and emergency instructions.
  - .2 Include summer, winter, and any special operating instructions.
- .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .6 Provide servicing and lubrication schedule, and list of lubricants required.
- .7 Include manufacturer's printed operation and maintenance instructions.
- .8 Include sequence of operation by controls manufacturer.
- .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .10 Provide installed control diagrams by controls manufacturer.

- .11 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .12 Building products, applied materials, and finishes: include product data, with catalogue number, size, composition, and colour and texture designations.
  - .1 Provide information for re-ordering custom manufactured products.
- .13 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .14 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.
- .15 Additional requirements: as specified in individual specifications sections.

## **1.8 MAINTENANCE MATERIALS**

- .1 Extra Stock Materials:
  - .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
  - .2 Provide items of same manufacture and quality as items in Work.
  - .3 Deliver to Site; place and store.
  - .4 Receive and catalogue items.
    - .1 Submit inventory listing to Contract Administrator.
    - .2 Include approved listings in Maintenance Manual.
  - .5 Obtain receipt for delivered products and submit prior to final payment.
- .2 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 location as directed; place and store.
  - .4 Receive and catalogue items.
    - .1 Submit inventory listing to Contract Administrator.
    - .2 Include approved listings in Maintenance Manual.

## **1.9 DELIVERY, STORAGE AND HANDLING**

- .1 Store maintenance materials, and special tools in manner to prevent damage or deterioration.
- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Store paints and freezable materials in a heated and ventilated room.
- .5 Remove and replace damaged products at own expense and for review by Contract Administrator.

**1.10 WARRANTIES AND BONDS**

- .1 Develop warranty management plan to contain information relevant to Warranties.
- .2 Submit warranty management plan, 30days before planned pre-warranty conference, to Contract Administrator approval.
- .3 Warranty management plan to include required actions and documents to assure that Contract Administrator receives warranties to which it is entitled.
- .4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.
- .5 Submit, warranty information made available during construction phase, to Contract Administrator for approval prior to each monthly pay estimate.
- .6 Assemble approved information in binder, submit upon acceptance of work and organize binder as follows:
  - .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
  - .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
  - .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of applicable item of work.
  - .4 Verify that documents are in proper form, contain full information, and are notarized.
  - .5 Co-execute submittals when required.
  - .6 Retain warranties and bonds until time specified for submittal.
  - .7 Except for items put into use with City of Winnipeg's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.

- .8 Conduct joint warranty inspection, measured from time of acceptance, by Contract Administrator.
- .9 Include information contained in warranty management plan as follows:
  - .1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, subcontractors, manufacturers or suppliers involved.
  - .2 Listing and status of delivery of Certificates of Warranty for extended warranty items.
  - .3 Provide list for each warranted equipment, item, feature of construction or system indicating:
    - .1 Name of item.
    - .2 Model and serial numbers.
    - .3 Location where installed.
    - .4 Name and phone numbers of manufacturers or suppliers.
    - .5 Names, addresses and telephone numbers of sources of spare parts.
    - .6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.
    - .7 Cross-reference to warranty certificates as applicable.
    - .8 Starting point and duration of warranty period.
    - .9 Summary of maintenance procedures required to continue warranty in force.
    - .10 Cross-Reference to specific pertinent Operation and Maintenance manuals.
    - .11 Organization, names and phone numbers of persons to call for warranty service.
    - .12 Typical response time and repair time expected for various warranted equipment.
  - .4 Contractor's plans for attendance at warranty inspection (prior to 12 month warranty expiration), post-construction.
  - .5 Procedure and status of tagging of equipment covered by extended warranties.

- .6 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.
- .10 Respond in timely manner to oral or written notification of required construction warranty repair work.
- .11 Written verification to follow oral instructions.
- .1 Failure to respond will be cause for the Contract Administrator to proceed with action against Contractor.

**1.11 WARRANTY TAGS**

- .1 Tag, at time of installation, each warranted item. Provide durable, oil and water resistant tag approved by Contract Administrator.
- .2 Attach tags with copper wire and spray with waterproof silicone coating.
- .3 Leave date of acceptance until project is accepted for occupancy.
- .4 Indicate following information on tag:
  - .1 Type of product/material.
  - .2 Model number.
  - .3 Serial number.
  - .4 Contract number.
  - .5 Warranty period.
  - .6 Inspector's signature.
  - .7 Construction Contractor.

**END OF SECTION**

**Part 1            General**

**1.1                SECTION INCLUDES**

- .1      Equipment and systems.
- .2      Materials and finishes.
- .3      Spare parts.
- .4      Maintenance manuals.
- .5      Special tools.
- .6      Storage, handling and protection.

**1.2                RELATED SECTIONS**

- .1      Section 01 78 00 - Closeout Submittals.
- .2      Section 01 45 00 - Quality Control.

**1.3                EQUIPMENT AND SYSTEMS**

- .1      Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
- .2      Panel board circuit directories: provide electrical service characteristics, controls, and communications.
- .3      Include installed colour coded wiring diagrams.
- .4      Maintenance Requirements: include routine procedures and guide for troubleshooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- .5      Provide servicing and lubrication schedule, and list of lubricants required.
- .6      Include manufacturer's printed operation and maintenance instructions.
- .7      Include sequence of operation by controls manufacturer.
- .8      Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .9      Provide installed control diagrams by controls manufacturer.
- .10     Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- .11     Include test and balancing reports.

- .12 Additional requirements: As specified in individual specification sections.

#### **1.4 MATERIALS AND FINISHES**

- .1 Building Products, Applied Materials, and Finishes: include product data, with catalogue number, size, composition, and colour and texture designations. Provide information for re-ordering custom manufactured products.
- .2 Instructions for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .3 Moisture-protection and Weather-exposed Products: include manufacturer's recommendations for cleaning agents and methods, precautions against detrimental agents and methods, and recommended schedule for cleaning and maintenance.
- .4 Additional Requirements: as specified in individual specifications sections.

#### **1.5 SPARE PARTS**

- .1 Provide spare parts, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to Site; place and store.
- .4 Contractor to Receive and catalogue all items.

#### **1.6 MAINTENANCE MATERIALS**

- .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
- .2 Provide items of same manufacture and quality as items in Work.
- .3 Deliver to Site ; place and store.
- .4 Contractor to receive and catalogue all items.

#### **1.7 SPECIAL TOOLS**

- .1 Provide special tools, in quantities specified in individual specification section.
- .2 Provide items with tags identifying their associated function and equipment.
- .3 Deliver to Site; place and store.
- .4 Contractor to receive and catalogue all items.

#### **1.8 STORAGE, HANDLING AND PROTECTION**

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

- .2 Store in original and undamaged condition with manufacturer's seal and labels intact.
- .3 Store components subject to damage from weather in weatherproof enclosures.
- .4 Store paints and freezable materials in a heated and ventilated room.
- .5 Remove and replace damaged products at own expense and to satisfaction of Contract Administrator.

**END OF SECTION**

**Part 1            General**

**1.1                DESCRIPTION**

- .1        Demonstrate scheduled operation and maintenance of equipment and systems to Operations personnel two weeks prior to date of substantial performance.
- .2        The City will provide list of personnel to receive instructions, and will coordinate their attendance at agreed-upon times.

**1.2                QUALITY CONTROL**

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

**1.3                SUBMITTALS**

- .1        Submit schedule of time and date for demonstration of each item of equipment and each system two weeks prior to designated dates, for Contract Administrator's approval.
- .2        Submit reports within one week after completion of demonstration, that demonstration and instructions have been satisfactorily completed.
- .3        Give time and date of each demonstration, with list of persons present.

**1.4                CONDITIONS FOR DEMONSTRATIONS**

- .1        Equipment has been inspected and put into operation in accordance with specification Section.
- .2        Testing, adjusting, and balancing has been performed and equipment and systems are fully operational.
- .3        Provide copies of completed operation and maintenance manuals for use in demonstrations and instructions.

**1.5                PREPARATION**

- .1        Verify that conditions for demonstration and instructions comply with requirements.
- .2        Verify that designated personnel are present.

**1.6                DEMONSTRATION AND INSTRUCTIONS**

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

- .2 Instruct personnel in all phases of operation and maintenance using operation and maintenance manuals as the basis of instruction.
- .3 Review contents of manual in detail to explain all aspects of operation and maintenance.
- .4 Prepare and insert additional data in operations and maintenance manuals when the need for additional data becomes apparent during instructions.

**END OF SECTION**