

## **DIVISION 01 – GENERAL REQUIREMENTS**

### **01 General Instructions**

- .1 **Work Under Contract:** It is intended that Work supplied under this Specification shall be complete in every detail for the purpose required. This Contract shall include by Contractor, materials not herein mentioned, but which may be found necessary to complete or perfect any portion of work in accordance with the requirements of the Contract
- .2 **Drawings and Specifications:**
  - a. The drawings and specifications are intended to be complementary so that the work shown on the drawings that are not mentioned in the specifications, or vice versa, are to be included. All notes on the drawings are intended to describe and provide for the works complete and finished in every respect to the satisfaction of the Consultant, and ready for use for the purpose for which they are intended, notwithstanding that every item necessarily involved may not be particularly mentioned or shown.
  - b. All dimension figures on drawings or in specifications are to be followed. The Contractor shall verify all dimensions on site. If any discrepancies or disagreement are apparent, report the same to the Consultant for adjustment before the work concerned is proceeded with. No deviation from drawings and specifications shall be made without written authority from the consultant.
  - c. The Contractor shall assume full responsibility for the interpretation of the drawings and specifications for all sub trades as to which sub trade provides required articles or materials to be built in or provided. Claims for extras based on differences in interpretation or the intent of the drawings or the specifications by sub trades will not be considered.
  - d. The Contractor shall be responsible for means and methods of placement and construction in order to achieve compliance with Contract in finished Work. Location of products and services is approximate unless specifically dimensioned and located on Drawings. Do not scale Drawings.
  - e. A requirement shown or called for on an engineering drawings or specification but not shown in the architectural documents, or vice versa, is nevertheless a requirement of the contract. Similarly a requirement called for on one drawing but not repeated on other drawings at the same location is a requirement of the contract.
- .3 **Use of Premises prior to Substantial Performance:** Owner shall have right to enter and occupy building, on whole or in part, for purpose of placing fittings and equipment, or for other use, prior to Substantial Performance if, in opinion of the Consultant, such entry and occupancy does not prevent or interfere with the Contractor in performance of the Work. Such entry shall in no way be considered as an acceptance of Work

in whole, or in part, nor shall it imply acknowledgement that terms of Agreement are fulfilled.

**.4 Examination of Site:**

- a. Carefully examine Place of the Work and investigate, at no cost or risk to owner, matters relating to nature of Work, means of access and egress, obstacles, rights and interests of other parties which may be interfered with during the execution of Work, conditions and limitations including obstructions, existing structures or facilities, local conditions, actual levels, character and nature of the Project, and any other consideration which may affect performance of the Work.
- b. Carry out complete field survey and confirm locations of underground public and Owner services. Locate poles, pipes, conduit, wires, fill pipes, vents, regulators, meters, and sanitary services work in inconspicuous locations. If not shown on Drawings, verify location of service work with Consultant before commencing installation.
- c. Inspected materials thoroughly upon receipt and report discrepancies, deficiencies and/or damages, in writing, to the supplier.

**.5 Standards and Codes:**

- a. Where no standard is referred to, provide materials, products and quality of work which meet requirements of applicable standards of CSA, CGSB, ULC, ASTM, NFPA, applicable regulations and building code.

**.6 Setting out of Work:**

- a. Existing bench mark, grades, lines, levels, and temporary, widely separated bench marks shall be established by the Contractor, who shall employ the services of a firm of Registered Land Surveyors licensed in the place of Work. Contractor shall provide record survey documents and survey logs.

**.7 Documents on Site:** Maintain at job site, one copy of each of the following:

- a. Contract Documents including Drawings, Specifications, Addenda, and other modifications to the Contract.
- b. 'Reviewed' or 'Reviewed as Modified' shop drawings.
- c. Project Construction and Shop Drawing Schedules.
- d. Site Instructions, Change Orders, Change Directives.
- e. Field Test Reports.
- f. Reports by Authorities having Jurisdiction.
- g. Building and other applicable permits.
- h. Daily log including: Excavation conditions, Start and finish date of each trade, Erection and removal dates of formwork, date, quantities and particulars of each concrete pour, and any other pertinent information
- i. Materials Safety Data Sheet pursuant to WHMIS (Occupational Health & Safety Act).

- j. As-built drawings recording as-built conditions, instructions, changes for structure, equipment, wiring, plumbing, etc., as called for in Section 01720 and Divisions 15 and 16, prior to being concealed.

**.8 Security:**

- a. Be responsible for security of construction site and material from time Work commences until ALL work is complete and accepted by Owner.
- b. Provide, erect and maintain all signs, hoardings, guard-rails, barriers, warning lights and other protection as required by all authorities having jurisdiction for safety of site. Be responsible for adequacy of protection.
- c. Conform to requirements of the Occupational Health and Safety Act and other special requirements of Contract Documents and authorities having jurisdiction. Provide approved hard hats for a reasonable number of Visitors to site.

**.9 Cleaning – Materials and Site:**

- a. Use only cleaning materials recommended by manufacturer of surface to be cleaned and as recommended by cleaning material manufacturer.
- b. Provide daily clean-up. Maintain clean egress routes at all times.
- c. Maintain project, grounds, and public properties free from accumulations of waste materials and rubbish.
- d. Vacuum and clean interior building areas and surfaces when ready to receive finishing painting, and continue vacuum cleaning on an as-needed basis until Substantial Performance.

**.10 Owner's Inspection and Testing**

- a. The *Contractor* will be responsible for testing and inspection services. The *Contractor* will submit to the *Consultant* 3 quotations from companies for testing and inspection services. The *Consultant* will, on behalf of *Owner*, appoint independent inspection and testing companies, representing, reporting and responsible to the *Owner* through the *Consultant*.
  - .1 Cost of independent inspection and testing company services will be authorized as a disbursement from the Cash Allowance.
  - .2 Independent inspection and testing company shall submit monthly invoice original to *Contractor* for review, relating invoices to tests and inspection reports. Provide original receipts for disbursements. Invoices for independent inspection and testing services shall be forwarded by *Contractor* to *Consultant* for inclusion in progress payment application.
  - .3 Additional testing services required because of changes in materials, proportions of mixes requested by *Contractor* or *Subcontractors* as well as additional testing services for materials occasioned by lack of identification or by failure of

such materials being replaced to meet requirements of the *Contract Documents* or testing of structure or elements including load testing, shall be carried out at no additional cost to the *Owner*.

- .4 Inspection and testing required by codes or ordinances, or by an authority having jurisdiction, and made by a legally constituted authority, shall be the responsibility of the *Contractor*.
- b. The *Contractor* will advise independent inspection testing companies in advance of when inspection is required and will schedule and organize their activities on the site.

## 02 Project Meetings

### .1 Administrative:

- a. Schedule and administer meetings every 2 weeks (or more often as required) with the Consultants throughout the progress of the Work. Schedules are to be updated every 2 weeks by Contractor for distribution at each meeting.
- b. Prepare agenda for and chair such meetings.
- c. Record the proceedings and submit proceedings to Consultant and Owner.
- d. Subcontractors and suppliers do not attend meetings unless authorized by the Owner or Consultant.

### .2 Preconstruction Meeting:

- a. Within 3 days after award of Contract, request a meeting of parties in Contract to discuss and resolve administrative procedures and responsibilities.

### .3 Start Up Meeting:

- a. Schedule a start up meeting within five days of award of contract and provide schedule of work. Provide bar type schedule showing construction progress by trade at that time.

## 03 Submittals

### .1 General Requirements:

- a. Provide 6 copies of all submittals and retain one reviewed copy at site at all times.
- b. Review of submittals by Consultant is for the sole purpose of ascertaining conformance with the general design concepts. The review shall not mean that Consultant approves the details design inherent in the submittals, responsibility for which shall remain with the submitting Contractor. Such review shall not relieve the Contractor of responsibility for errors or omissions in the submittals, or responsibility for meeting requirements of Contract Documents. Be responsible for dimensions to be confirmed and correlated at the Site, for information that pertains solely to fabrication processes or

to techniques of construction and installation, and for coordination of Work.

- c. Consultant's review and markings on submittals does not authorize Changes in the Work, Contract Price and Contract Time.
- d. Submittals which contain substitutions will be rejected.
- e. Submit copies of reviewed shop drawings to authorities having jurisdiction as required.
- f. Assume responsibility for any conflicts occurring in Work which results from lack of comparison and coordination of submittals of Work.

**.2 Schedule of Submittals:**

- a. Before commencement of Work, provide Consultant with a schedule of submittals required by Contract Documents.
- b. Make provisions in schedule for at least 10 working days for Consultant's review of submittals.

**.3 Schedule of Values:**

- a. Submit a schedule of values at commencement of work. Schedule of values shall be broken down Section by Section and Subcontractor by Subcontractor and shall be repeated on the monthly application for payment on approved form.

**.4 Application for Payment:**

- a. Submit with second and each draw thereafter a Statutory Declaration.
- b. Submit with each draw progress photos.
- c. All applications shall be reviewed on the next scheduled meeting after the application is received by the Architect. No payments will be approved until a site review is completed.

**.5 Engineered submittals:**

- a. Are to be prepared, sealed and signed under the direct control and supervision of a qualified professional engineer licenced in the jurisdiction in which the Place of Work is located, having in force professional liability insurance with a minimum coverage limit of \$1,000,000.00 per claim. Engineered submittals will be required for the following products:

- .1 \*This will be provided to Bidders as part of a Tender Addendum.

**.6 Mock Ups:**

- a. Mock-ups are to be sized according to work so as to allow for a reasonable review prior to commencement of work. Accepted mock-ups will establish minimum quality of workmanship and will serve as the standard by which subsequent Work will be compared for acceptance. Do not proceed with Work until each mock-up joint has been accepted. Do not dismantle mock-up until directed by Consultant. Provide mock ups of the following assemblies

- .1 \*This will be provided to Bidders as part of a Tender Addendum.

#### **04 Temporary Facilities**

##### **.1 Temporary Electrical Services:**

- a. Provide and maintain an adequate temporary electrical service for operation of electric pumps, mortars, vibrators and other power tools, hoisting and related construction and minimum 322lux of general illumination during construction period. Perform this Work in accordance with Section 76 of the Electrical Safety Code.
- b. Provide and maintain any and all components and equipment necessary to transform supply power to necessary temporary power voltage.
- c. Where final finish trades are performing Work provide illumination comparable to final illumination.

##### **.2 Temporary Sanitary Facilities:**

- a. Provide temporary sanitary facilities in accordance with OSHA guidelines.

##### **.3 Temporary Site Offices**

- a. Provide and maintain in clean condition during progress of Work, heated, lighted, and ventilated site office, of sufficient size to accommodate site meetings, and furnished with drawing layout table, filing cabinets, fax machine and telephone.

##### **.4 Temporary Heating and Ventilation:**

- a. Provide and pay for temporary heating, cooling, and ventilating required for duration of the Contract period including attendance, maintenance, and fuel, as required for continuous work as required to meet construction schedule.
- b. Provide temporary heat and ventilation in enclosed areas as require 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 proper storage, installation and curing of materials, in accordance with specified standards and manufacturer's requirements.
  - .5 Provide adequate ventilation to meet health regulations for safe working environment.

##### **.5 Temporary Enclosures:**

- a. Provide temporary enclosures of adequate construction to prevent dispersion of dust and dirt into other areas of existing building.
- b. Provide temporary weather tight enclosures for all exterior openings in building as soon as walls, floors, and roofs are built so as to protect all Work from weather and vandalism. Provide doors in enclosures as necessary to maintain fire exits.

##### **.6 Signs and Notices:**

- a. Provide safety signage and notices as required on hoardings and at entrances to the Place of Work.

**.7 Site Storage:**

- a. Locate site storage facilities only where authorized by the Owner.
- b. Exercise extreme caution in the storage of materials to prevent fire or which may create fire hazards. Thinners and solvents shall be stored in CSA approved metal safety containers in accordance with governing fire and safety regulations.

**.8 Protection of the Public:**

- a. Erect fencing, barricades, hoarding, notices and warning boards and maintain all lights, signals and protection of all kinds for protection of workers engaged on the Work, for protection of adjoining property and for protection of the public in accordance with requirements of jurisdictional authorities. Provide overhead hoarding in areas indicated on drawings.

**.9 Dust, Debris and Noise Control:**

- a. Control dust and dirt produced during demolition to prevent dispersion beyond the immediate work areas. Provide temporary enclosures and ventilation if required.

**.10 Temporary Cleaning:**

- a. Keep Site and building, including concealed spaces, free from accumulation of dirt, debris, garbage and excess material. Remove oily rags and waste from premises at end of each day, or more often if required.

**.11 Hoarding:**

- a. Provide hoarding as indicated on drawings and maintain for duration of construction. Provide lockable gate with sign with 'RESTRICTED ACCESS- CONSTRUCTION SITE' lettering.
- b. Provide dust control barriers at hoarding to satisfy requirements of authorities having jurisdiction.
- c. Engage and pay for professional engineer(s) registered in the province of Ontario to design and supervise construction and maintenance of hoardings, covered ways, protective canopies and project sign(s). Submit shop drawings of such work. Designs provided by Consultant of such work cover general location only.

**05 Products and Workmanship**

**.1 Warranties:**

- a. shall be for one year and shall commence at date of Substantial Performance; Shall be signed by both the Contractor and installer; Shall name the Owner not the Contractor or Consultant. Provide extended manufacturers warranties for the following:
  - .1 \*This will be provided to Bidders as part of a Tender Addendum.

**.2 Product Handling:**

- a. Handle and store all products in a manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's and supplier's recommendation and so as to ensure

preservation of their quality and fitness for Work, and protect from vandalism and theft.

- .3 **Manufacturer's Instructions:**
  - a. Unless otherwise indicated, clean, install or erect products in accordance with manufacturer's printed instructions. Obtain printed instruction directly from manufacturers.
- .4 **Project Superintendence:**
  - a. Provide at site at all times when work is being performed, qualified site superintendent. Site superintendent shall be full time on site with overall authority to speak for Contractor and represent Contractor.
- .5 **Concealment:**
  - a. In finished areas, conceal pipes, ducts and wiring in floors, walls and ceiling, except where indicated otherwise.
- .6 **Backing and support framing:**
  - a. Verify adequacies of backing and support framing prior to installation. Installation of work will be considered as an acceptance of all backing and support framing as adequate to the requirements of install work.
- .7 **Contradictory situations:**
  - a. Before installation, inform Consultant of any contradictory situation whether on site, between drawings, specifications etc, Install as directed by Consultants.
- .8 **Cutting and Remedial Work:**
  - a. Perform cutting and remedial Work required to make parts of Work come together. Coordinate Work to ensure this requirement is maintained. Obtain permission from Consultant before commencing any cutting.
- .9 **Fastenings:**
  - a. Prevent electrolytic action and corrosion between dissimilar metals and materials.
- .10 **Protection of Work in Progress:**
  - a. Take reasonable and necessary measure, including those required by authorities having jurisdiction, to provide protection.
  - b. Prevent overloading of any part of the building. Do not cut, drill or sleeve any load bearing structural member without written permission of Consultant, unless specifically indicated.
- .11 **Existing Utilities:**
  - a. When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with a minimum of disturbance to Work, and pedestrian and vehicular traffic.
  - b. Protect, relocate or maintain existing active services. When inactive services are encountered, cap off in a manner approved by authority having jurisdiction and stake otherwise record location of capped service.



**06 Contract Closeout / Take-over:**

- .1 Follow the procedures outlines in OAA/OGCA Document 100 (most current version). Prior to application for certificate of Substantial Performance, carefully inspect the work and ensure it is complete, that deficiencies are complete and/or corrected and the building is clean and in condition for occupancy.
- .2 During Substantial Performance review a list of deficiencies and defect will be compiled by Consultant. Correct listed deficiencies prior to application for certificate of Substantial Performance.
- .3 **Final Cleaning:** Immediately prior to approvals for Substantial Performance of the Work remove surplus products, tools, construction machinery and equipment not required for the performance of the remaining work, leaving the work thoroughly clean before date of Substantial Performance review process commences.
- .4 **Certification of Substantial Performance:** Submit approved shop drawings, operating instructions, as-built drawings, warranties and guaranteed, maintenance material, keys, spare parts and all other information and data required to allow the Owner to properly operate the premises, two (2) weeks prior to application for Certificate of Substantial Performance. Acceptance of the Work will be predicted on acceptance of this submission.
- .5 **Submit to owner:**
  - a. Full set of architectural, mechanical and electrical Record CAD drawings as applicable to the Work.
  - b. Ontario Hydro Certificate.
  - c. Copies of permits and certificates issued by authorities having jurisdiction over any part of Work.
- .6 **Deficiency Lists and Review:**
  - a. Provide to the Consultant a full deficiency list of all items not completed or requiring rectification prior to the Consultant commencing their deficiency review.
  - b. Deficiencies shall be made good before the Contract is considered complete.
  - c. Neither the Owner's representative nor Consultant will be responsible for issue of extensive lists of deficiencies. Contractor assumes prime responsibility for ensuring that items shown on Drawings and described in Specifications are complete. Any reviews to approve Certificates of Substantial Performance must be immediately cancelled if it becomes obvious that extensive deficiencies are outstanding.
- .7 **Declaration of Substantial Performance:**
  - a. Within fourteen (14) days of Consultant's certification of substantial performance of Contract, provide Consultant with exact copy of official certification as published in construction trade newspaper as required by the Construction Lien Act.

- .8 **Final Inspection for Completion of Project:**
  - a. Money shall be withheld for deficient work and will be released only when all deficiencies have been completed. No partial payment to be recognized until all work is completed.
- .9 **Ongoing Review:**
  - a. Provide ongoing review and attendance to building call-back, maintenance and repair problems during the warranty periods.
- .10 **End of Warranty Period Inspection:**
  - a. At the beginning of the twelfth (12<sup>th</sup>) month after Substantial Performance of the Work, Contractor and Consultant, along with key subcontractors as designated, shall carry out a complete review of building and its systems to determine which deficiencies are to be rectified under the warranty. The Contractor shall be responsible for timely written notification of all Owner and Consultant prior to such end of warranty period inspection and any delay in such notification shall extend such warranty period until proper notification is received by Owner/Consultant.

**07 Record and As-Built Drawings:**

- .1 Maintain drawings on one set and record accurately, in red ink, deviations from Contract documents as the Work progresses.
- .2 Failure to maintain records as on ongoing basis will be considered grounds for withholding a portion of payments.
- .3 Neatly transfer notations to second set of white prints and submit both sets to Consultant for review to establish that all changes to the Work have been noted two (2) weeks prior to application for certificate of Substantial Performance and Consultant's review.
- .4 After review and acceptance of 'as-built' prints by the Consultant and Owner, transfer the information recorded on the prints, to CAD Drawings. Return these CAD drawings plus (2) marked-up white prints to the Consultant. Transfer subsequent changes found by the Consultant or Owner to the 'Record' drawings.

**08 Operating and Maintenance Manuals:**

- .1 Before making application for Substantial Performance of Work, submit to Consultant four (4) copies of Maintenance manuals, consisting of shop drawings, warranties, and Project Data Book containing operating and maintenance data for supplied products, in English, made up as follows:
  - a. Bind data in vinyl hard covered, three (3) ring loose leaf binders for 213 x 275 mm (8-1/2 x 11") size paper.
  - b. Enclose title sheet, labelled as applicable, project name, date and list of contents.
  - c. Organize contents into applicable sections of work to parallel project specifications break-down. Mark each section by labelled tabs protected with celluloid covers fastened to hard paper dividing sheets.

- .2 **Shop Drawing Manual:** for each, submit one copy of each final accepted shop drawing issued for project of which have been recorded changes made during fabrication and installation caused by unforeseen conditions.
- .3 Provide a list of all warranties and expiry dates.
- .4 Submit copies of bonds, guarantees, warranties, and extended warranties together in one report binder, with warranties submitted in standard form as provided and directed by Consultant but not limited to:
  - a. Name and address of projects.
  - b. Warranty commencement date (date of Substantial Performance of the Work).
  - c. Duration of Warranty.
  - d. Clear indication of what is being warranted and what remedial action will be taken under warrant.
  - e. Authorized signature and seal of Contractor, and of any Subcontractor providing materials of labour for portion of Work warranted.
- .5 **Project Data Books:** including following information plus date specified in other sections:
  - a. Maintenance instructions for all finished surfaces and materials.
  - b. Copy of hardware and paint schedules.
  - c. Names, addresses and phone number of sub-contractors and suppliers.
  - d. Permits and Forms: Municipal Occupancy Permit: Statutory Declarations; Workplace Safety & Insurance Board Certificate: Certificates of Approval of the Work by local Building Department (if available); Ontario Hydro Certificate of Inspection.

**09 Maintenance Materials:**

- .1 Use unbroken cartons and containers, or if not supplied in cartons or containers, material shall be strongly packaged.
- .2 Provide 5% extra finishing materials in new unopened containers (for each colour of paint, floor tiles, wall tiles and ceiling tiles) for maintenance use, unless otherwise indicated. Store where directed. Clearly identify each box.

**10 Cash Allowances:**

- .1 Expenditures from Cash Allowances shall be directed by Consultant in writing.
- .2 Unexpended amounts from Cash Allowances shall be deducted from the Contract Price as completion of Work.
- .3 Cash allowances include supply and installation unless otherwise indicated.
- .4 Supply and install cash allowances include:
  - a. Net cost of Products
  - b. Delivery to the Place of Work
  - c. Unloading, storing, handling of Products on the Place of Work

- d. Installation, finishing and commissioning of Products
  - e. Applicable taxes and duties (excluding Value Added Taxes)
- .5 The following Cash Allowances are to be included in the Contract Price:

Well Drilling	\$25,000
Door Hardware, Supply & Install	\$30,000
Signage & Graphics	\$10,000
Supply and Install of IT Cabling & Network Gear	\$40,000

**END OF SECTION**