

PART 1 – General**1.1 RELATED SECTIONS**

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|----|----------------------------|------------------|
| .1 | Submittal procedures | section 01 33 00 |
| .2 | Closeout submittals | section 01 78 00 |
| .3 | Demonstration and training | section 01 79 00 |

1.2 PROJECT COORDINATION

- .1 It is the express intention of the specifications, drawings and any other document complementary thereto, to require from the Contractor a complete work and complies with the requirements of all these documents.
- .1 Ensure that all trades retained are qualified as mentioned in the general requirement document and according to their specific section describing the specialized work required.
- .2 Inform all trades about the terms and conditions of the contract, additional information concerning the general conditions and if any, the general requirement.
- .2 As soon as you are aware of it, report to the Departmental Representative, and confirm to him in writing, of any apparent deficiencies that would most likely affect the work of this contract. Any negligence on the part of the Contractor to report such defects in writing will render null and void any claim except in the case of defects that could reasonably have escaped his attention.
- .3 The requirements stated in the specifications and drawings are the responsibility of the Contractor who is responsible for the subcontracting some of the specialized and/or specific works, as described in the different sections of the specifications document.
- .4 Coordinate mechanical, electrical, structural work and other specialties and plan for execution.
- .5 Take all reasonable precautions to prevent the work from leading to labor disputes or other conflicts related to the project.
- .6 The Departmental Representative will at no time serve as an arbitrator or settle any disputes arising from the fact that the Contractor is assisted in his work by a specialized contractor (subcontractor).
- .7 Coordinate the progress of the work, the schedules, the parts to be submitted, the use of the construction site, the temporary services of public utility, the installations, and temporary protection.
- .8 During the course of the work, coordinate the use of the construction site and the installations respecting the all the communication methods, also the submission of documents required, the reports and files, the calendars, the drawings, the recommendations and the regulation as well to avoid any ambiguity or conflict.

1.3 CODES AND STANDARDS

- .1 Unless otherwise specified, execute the work in accordance with the codes and regulations in force (Provincial or local code). In the case of omissions or inconsistencies in the standards, the most stringent requirements will apply.
- .2 The contractor must comply with the laws and regulations in force, including the Highway Safety Code, and regulation.

1.4 FIELD ENGINEERING SERVICES

- .1 Surveyor's jurisdiction
 - .1 Qualified and approved surveyor deemed acceptable by the Departmental Representative.
 - .2 Prior to commencing site development work: identify, confirm and protect control points. Preserve permanent landmarks during construction.
- .2 Records
 - .1 Keep a detailed and accurate notebook as land surveying work progresses.

1.5 SITE MEETINGS

- .1 The Departmental Representative will arrange site coordination meetings as required and will set the hours, prepare and distribute the minutes. The Contractor will be represented by its Project Manager or Superintendent.

1.6 SUBMITTALS

- .1 Administrative tasks
 - .1 Submit to the Departmental Representative for verification the required documents, within a reasonable time and in the proper sequence, so as not to delay the execution of the work, submit the documents and samples required for verification, refer to Section 01 33 00 – Submittals procedures. A delay in this respect cannot constitute a sufficient reason to obtain an extension of the period of execution of the works and no request to that effect will be accepted.
 - .2 The work covered by the parts to be submitted must not be undertaken before all the parts have been checked.
 - .3 Review the parts to be submitted before handing them over to the Departmental Representative. This revision means that the necessary requirements have been determined and verified, or will be and that each part submitted has been reviewed and meets the requirements of the Work and the Contract Documents.
 - .4 Verify dimensions taken on site and ensure work on adjacent structures is coordinated.
- .2 **PROJECT FILE:**
 - .1 Documents on file
 - .1 Operation and Maintenance Manuals:

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- Submit to the Departmental Representative for verification of required documents, in accordance with **Section 01 78 00 – Closeout submittals**.
- .2 Following contract award, set aside one (1) set of plans and specifications as drawings for the project file. Note carefully and precisely the discrepancies with the contract documents caused by the inventory and changes required by the Departmental Representative. Note any changes during construction. Indicate on the drawings the location of the elements hidden in the concrete and in the ground. These drawings and specifications are for this purpose only and should not constitute a working copy.
 - .3 Once the work has been completed, submit the documents to be included in the project file to the Departmental Representative. Submit a draft before issuing the certificate of substantial completion of the work.
 - .4 Photographs Submission:
 - .1 All photos must be taken using a digital camera and include the features mentioned previously:
 - .2 Sort the photos according to the following guidelines:
 - .1 A directory by discipline (Architecture, civil, structure, mechanical, electrical)
 - .2 One directory per day
 - .3 Give two clearly identified copies of the CD or DVD at the end of the work, indicating the name and the project number, the date and its contents.
 - .2 Documents to be kept at the site
 - .1 Keep a copy on site for the Departmental Representative:
 - .1 contractual drawings ;
 - .2 estimate ;
 - .3 addenda;
 - .4 change orders and other changes to the contract ;
 - .5 Revised shop drawings, data sheets, and samples;
 - .6 records of field tests;
 - .7 inspection certificates;
 - .8 manufacturer's certificates;
 - .9 meetings minutes.
 - .2 Store documents and samples of the project file in the field offices, separately from the documents used for the works. Provide filing cabinets and shelves in a closed storage area.
 - .3 Label the documents and rank them according to the section number given in the table of contents of the project file. Write on the label of each document "PROJECT FILE" / "PROJECT FILE COPY" in capital letters printed.
 - .4 Keep the project file in a clean, dry and readable state. Do not use the project file for construction purposes.
 - .5 Record information as work progresses. Do not conceal books until the required information has been recorded.
 - .6 Contract Drawings and Shop Drawings: legibly identify each element to reflect the structures as they are, including the following:
 - .1 Measured depth of foundation elements in relation to the level of the finished first floor.
 - .2 Location, measured in the horizontal plane and vertical plane, of underground pipes and accessories in relation to permanent surface improvements.
 - .3 Location of internal piping and fixtures measured against visible and accessible construction elements.

- .4 Location and function of each valve, connected to the valve label number tables.
- .5 Field modifications to dimensions and details.
- .6 Modifications made by the modification orders or addendum with reference to addendum number or modification number.
- .7 Details Not on Original Contract Drawings.
- .8 References to shop drawings and related modifications.
- .7 Quote: legibly mark each element to reflect the structures as they are, including the following:
 - .1 Manufacturer, trade name and catalog number for each item actually installed, including optional items and alternatives.
 - .2 Changes made by addendum and amendment rider with reference to addendum number or amendment rider.

1.7 CALENDARS TO SUBMIT

- .1 Calendars required
 - .1 Work schedule (construction)
 - .2 Submission schedule for shop drawings, data sheets, and samples
 - .3 Schedule of corrective work (construction) following receipt of the certificate of substantial completion of the work.
 - .4 training schedule.
- .2 Presentation of the work schedule
 - .1 Prepare a calendar presented as a horizontal bar chart.
 - .2 Assign a separate bar to each operation or trade.
 - .3 Represent time on a horizontal linear scale identifying the first working day of each work week.
 - .4 Indicate the main milestones, especially all those who are on the critical path.
 - .5 Identify the number of workers expected on site for each week.
 - .6 Refer to Section 1.5 of **Section 01 11 10 - Summary of Work** for milestones.
 - .7 Submit the first calendars two (2) weeks after contract award
 - .8 Submit an electronic copy of the timelines for the execution of work mounted with the MS Projects software.
 - .9 The Departmental Representative will review the proposed schedules and return a revised copy of each two (2) weeks following receipt.
 - .10 Submit a final version of the schedules one (1) week after receipt of the revised copy.
 - .11 During the work, the schedule must be updated and submitted with each payment request by the Contractor to reflect the actual project schedule, depending on the changes
- .3 Presentation of the schedule of submission of shop drawings, data sheets, and samples
 - .1 Submit a list of quotations to be made according to the specifications, in the order of the quotation sections and a schedule of submission of shop drawings, data sheets and samples including columns to track the current submission dates, approval, etc. two (2) weeks following contract award
 - .2 Issue this list, updated, at intervals of one week.
 - .3 Group bids as per **Section 01 33 00 - Submittal Procedures**.
- .4 Presentation of the training calendar

- 1 Prepare a schedule of training days in the form of a schedule.
- 2 Identify the start and end time of each training by evaluating the number of hours required for each according to the content.
- 3 Present the calendar on a letter-size page, representing one week per page, in order to have an overview of all training.
- 4 Submit final schedule two (2) weeks prior to first training.
- 5 Refer to **Section 01 79 00 - Demonstration and Training**.

1.8 QUALITY CONTROL

- .1 The Departmental Representative and their authorized agents and representatives must have access to the work at all times. If parts of the work are being prepared at locations other than at the location of the work, the Departmental Representative or their authorized agents and representatives will be required to access these works while they are in progress.
- .2 If the contract documents, the Departmental Representative's instructions or the laws or ordinances in force at the site of the work require special tests, inspections or approvals, the Contractor shall give timely notice to the Departmental Representative requesting him to do the work. inspection required. The Departmental Representative must proceed with this inspection diligently. The Contractor will arrange for inspections to be done by other authorities and will provide timely notice to the Departmental Representative of the date and time.
- .3 If the Contractor recovers or allows to recover any part of the work before the required tests, inspections or special approvals have been made, completed or given, the Contractor shall, upon request, discover the part in question, complete the inspections or tests satisfactorily and to return the said part of the work to a state of repair at its own expense.
- .4 The Departmental Representative may order the special examination of any part or parts of the work that he considers do not comply with the requirements of the contract documents. If it is found after examination that the said part does not comply with the requirements of the contract documents, the Contractor must correct the said part of the work and pay the costs of the examination and corrections. If the work is found to be in accordance with the requirements of the contract documents, the Department must pay for the examination and reinstatement
- .5 The Contractor shall promptly provide the Departmental Representative with an electronic copy of all certificates and inspection reports relating to the work.

1.9 USE OF THE PREMISES

- .1 The City offers the Contractor the following municipal services, at current rates and according to local regulations:
 - .1 Aquaduct
 - .2 Sewage
 - .3 Household garbage collection
 - .4 The streets and roads of the City
 - .5 Public Safety

- .2 The Contractor must ensure that he obtains any authorization necessary for the execution of the work, including in particular the rights of use of the grounds other than that of the site of the work itself, as well as the required rights of way
- .3 If, in the course of the works, the Contractor must use private property or must pass through it, he must make his own arrangements with the authorities concerned. The Contractor shall be solely liable for all damages that he, his employees and his subcontractors may cause through their passage on private property, and shall repair them at his expense and to the satisfaction of the relevant authorities and the Department.
- .4 The Contractor must make the necessary agreements and pay the fees required by the authorities concerned, as the case may be, for access to the land required for the construction of the work and, more specifically, for:
 1. the establishment of the camp
 2. the establishment of a garage
 3. the storage of materials, vehicles, equipment, and machinery
 4. the use of loan banks.
- .5 Parking: It is forbidden to park the vehicles elsewhere than in the places provided for this purpose.
- .6 Materials and Construction Equipment: submit for approval by the Departmental Representative, the intended location of garbage containers, construction trailers or other external equipment required for the performance of the work.
- .7 Cleaning during the works:
 - .1 Keep the site in good order and cleanliness and free of waste materials and accumulated debris.
 - .2 Collect waste and debris materials, place them in containers and evacuate them at the end of each working day.
 - .3 Clean interior areas prior to finishing work and keep them free of dust and other contaminants during this work.
 - .4 Do not use garbage cans or other facilities of the Department to deposit garbage and debris from construction work. Provide this equipment and transport the waste and debris out of campus.

1.10 CONSTRUCTION CAMP

- .1 The installations must be kept in good condition. Camp must be safe.
- .2 Every construction camp must follow the following rules:
 - .1 The sharing or sale of alcohol between workers and Inuit is strictly prohibited.
 - .2 The use or sale of drugs is strictly prohibited.
 - .3 Inuit people are not allowed in the camp unless they are employed by the Contractor.

1.11 CUTTING AND PATCHING WHEN MODIFYING THE SITE

- .1 Replace any material, equipment or other accessories that may have been damaged by any cause beyond the control of the manufacturer or the trade.

- .2 Authorization
 - .1 Submit a written request in advance for cutting or modification work that will affect:
 - .1 the structural integrity of a project component;
 - .2 the integrity of elements exposed to weather or water repellents;
 - .3 the performance, maintenance or safety of an operating item;
 - .4 the aesthetic qualities of the apparent elements;
- .3 Inspection
 - .1 Check existing conditions including items that may be damaged or move during cutting and patching.
 - .2 After discovering the works, inspect the conditions likely to hinder the execution of the works.
 - .3 Starting the cutting and patching work implies acceptance of the existing conditions.
- .4 Work execution
 - .1 Carry out cutting, fitting and patching work including excavation and backfilling to obtain a finished work.
 - .2 Remove and replace defective or non-compliant works.
 - .3 Provide openings in structural members independent of the structure for mechanical and electrical penetrations.
 - .4 Execute the work so as not to damage the other works.
 - .5 Prepare the surfaces so that they are suitable for patching and finishing.
 - .6 Cut rigid materials using a masonry saw or hollow drill. It is forbidden to use pneumatic or percussion tools.
 - .7 Restore the works with new products in accordance with the requirements of the contract documents.
 - .8 Adjust the structures tightly around pipes, sleeves, ducts, ducts and other crossings.
 - .9 When crossing a floor, ceiling or wall as a fire separation, completely close the voids around the opening with a flame retardant, over the full thickness of the element being passed through.
 - .10 Finish surfaces to ensure consistency with adjacent finishes. In the case of continuous surfaces, finish to the nearest intersection; in the case of an assembly, finish it completely.

1.12 RESTRICTIONS AT WORK

- .1 Continuity of electrical services:
 - .1 When work is near an existing building, provide, install and connect the necessary wiring and conduits to ensure continuity of electrical services in buildings not directly affected by the work.

1.13 PARTS / SPARE / MAINTENANCE AND SURPLUS EQUIPMENT

- .1 Provide the quantities of replacement equipment and additional equipment required specified in the specific sections of the specification.
- .2 Provide replacement equipment of the same manufacturer and quality as that of the work.

- .3 Deliver, set up and store replacement equipment at the location designated by the Department.
- .4 Receive and list all equipment and submit the inventory to the Departmental Representative. This inventory must provide a description of the equipment, the quantities left, the storage locations for each and must be verified on site and signed by the Departmental Representative.
- .5 Keep a receipt listing all the delivered material and submit it before final payment.
- .6 Residual building material, with the exception of the additional equipment specified in the specifications, remains the sole property of the General Contractor. The Contractor may, at its discretion and at its convenience, dispose of this residual construction material.

1.14 EXECUTION REQUIREMENTS

- .1 Examination
 - .1 Before carrying out the specific work, make a review of the related works already completed and the existing conditions.
 - .2 Before implementing equivalent and/or accessory materials, check all dimensions to be taken on site and the conditions of the premises so that the implementation can perfectly adapt to existing or existing work.
 - .3 Before proceeding in the factory to manufacture a manufactured product to be integrated into the building, check on site all the dimensions that it will be necessary to take in order to ensure all the appropriate subjugations to devices or other materials already implemented. or planned to be in the building. This requirement is applicable despite the dimensions shown on the drawings.
 - .4 The beginning of the manufacturing of products specifically intended for the present project implies the acceptance of the position of the materials already implemented at the place where the manufactured product is planned. Assume the responsibility for modifications required to submit prior to the approval of the Departmental Representative.
 - .5 Any material that cannot be adapted to the conditions of the premises must be replaced at the expense of the Contractor.
 - .6 The requirements of this section apply, in particular, to the implications of normal deflections of structural concrete slabs for floors as an example of restoring the levels of other building elements.
 - .7 All contentious cases must be subject to the decision of the Departmental Representative before any construction or construction, otherwise, the Contractor will have to bear the consequent costs of decisions that will be made without the approval of the Departmental Representative.
- .2 Hot work:
 - .1 Before starting any work in the existing building requiring the use of a welding machine, obtain from the Departmental Representative the completed hot work permit.
 - .1 Hot work involves the use of open flames or that generates heat and/or sparks. Hot work includes brazing, cutting, grinding, welding, roof repair, etc.
 - .2 Observe all instructions and precautions stipulated.

1.15 CONTRACT CLOSURE

- .1 Final cleaning:

- .1 Before the inspection for the purpose of issuing the certificate of substantial completion of the work, remove surplus materials, tools, machinery and construction equipment that are no longer required for the performance of the work unless remains to be done.
 - .2 Evacuate waste materials and debris from the site at regular intervals. Do not burn construction materials on site.
 - .3 Sweep the work areas before the inspection work begins.
 - .4 Only use cleaning products recommended by the manufacturer of the surface to be cleaned, and the method recommended by the manufacturer of the cleaning product.
 - .5 Remove grease, dust, dirt, stains, labels, finger marks and other foreign matter from exposed, interior and exterior finished surfaces including glazing and other polished surfaces.
 - .6 Replace glass items that are broken, scratched or otherwise damaged.
 - .7 Clean reflectors and other lighting surfaces.
 - .8 Removes stains, stains, marks or dirt from decorative objects, mechanical or electrical appliances, furniture accessories, walls, ceilings and outdoor installations.
 - .9 Vacuum and dust the inside of the building and the back of the grilles, shutters, and screens.
 - .10 Wash, seal, polish, degrease or prepare floors according to the manufacturer's recommendations.
 - .11 Clear debris and surplus materials left in technical gaps and other accessible concealed spaces.
 - .12 Replace filters for heating, ventilation and air conditioning systems if the units have been working during construction and clean all (and other) ducts.
 - .13 Remove snow and ice from building access roads used to access the site.
 - .14 Sweep and wash walkways, steps and exterior surfaces.
- .2 Documents
- .1 Collect submitted and verified documents and documents prepared by subcontractors, suppliers, and manufacturers.
 - .2 Submit the appropriate documents before making a final payment claim, refer to **Section 01 78 00 – Closeout submittals**.
 - .3 Submit operation and maintenance manuals, as approved by the Departmental Representatives, and submit the final drawings to the project file.
 - .4 Perform the formalities for the transfer of the performance bond and the labor and material payment bond to the warranty period.
 - .5 Submit a final accounting report giving the adjusted total price of the contract, previous payments, and the outstanding balance.
- .3 Demonstration of the operation of systems
- .1 Comply with all requirements of **Section 01 79 00 - Demonstration and Training**. Anticipate the number of days required and coordinate with the subcontractors the dates of departure of the site according to these requirements.

1.18 REMAINS AND ANTIQUES

- .1 If an obvious archaeological discovery is made during the work, immediately notify the Departmental Representative and wait for written instructions before continuing work at this location.

PART 2 - PRODUCTS

Not applicable.

PART 3 - EXECUTION

Not applicable.

END OF SECTION

1.0 GENERAL

1.1 RELATED REQUIREMENTS SPECIFIED ELSEWHERE

- .1 Particular requirements for inspection and testing to be carried out by testing laboratory, under the Contractor's responsibility, are specified under various Technical Sections.

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1.2 APPOINTMENT AND PAYMENT

- .1 The Departmental Representative will appoint and pay for services of testing laboratory, except as follows:
 - .1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities, to be defined by the Departmental Representative and carried out by the Contractor.
 - .2 Inspection and testing performed exclusively for Contractor's convenience.
 - .3 Testing, adjustment and balancing of conveying systems, mechanical and electrical equipment and systems. – See Mechanical and Electrical documents.
 - .4 Mill tests and certificates of compliance.
 - .5 Tests specified to be carried out by the Contractor, under the supervision of Departmental Representative. Those tests are identified and described in other Technical Sections and include :
 - .1 In Structure:
 - .1 Concrete (03 30 00) Quality Assurance includes:
 - .1 Granulometry study of the local aggregates
 - .2 Preparation of the concrete mix formula
 - .3 Monitoring of the concrete pour and concrete sampling
 - .4 Preparation of a report proving results of Quality Assurance.
 - .2 Steel structure (05 12 23) Quality Assurance includes:
 - .1 Verification of bolt torque, plumbness and straightness
 - .2 Verification of welds
 - .3 Preparation of a report proving results of Quality Assurance.
 - .3 Glue-laminated structure (06 18 00) Quality Assurance includes:
 - .1 Verification of bolt torque, plumbness and straightness
 - .2 Preparation of a report proving results of Quality Assurance.
 - .4 Bored and socketed piles (31 63 19) Quality Assurance includes:
 - .1 Validation of pile boreholes before grouting
 - .2 Monitoring of the grouting of the piles and grouting samples.
 - .3 Preparation of a report proving results of Quality Assurance.

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- .2 In Civil:
 - .1 Aggregate Materials (31 05 16) Quality Assurance includes:
 - .1 Sampling of aggregates
 - .2 Preparation of a report proving results of Quality Assurance.
 - .2 Granular Sub-base (32 11 16.01) Quality Assurance includes:
 - .1 Validation of compaction
 - .2 Preparation of a report proving results of Quality Assurance.
 - .3 Aggregate Base-courses (32 11 23) Quality Assurance includes:
 - .1 Validation of compaction
 - .2 Preparation of a report proving results of Quality Assurance.
 - .2 Where tests or inspections by designated testing laboratory reveal Work not in accordance with contract requirements, the General Contractor is required to pay for additional tests or inspections as required by Departmental Representative 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 Repair Work disturbed by inspection and test.
 - .4 Provide storage on site for laboratory's exclusive use for storing equipment and curing test samples.
- .2 Notify Departmental Representative sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
- .3 Where testing is specified to be carried out by the Contractor, plan and hire the required testing laboratory, inform the Departmental Representative of the tests dates sufficiently in advance to allow presence of Departmental Representative. Coordinate testing with all project stakeholders. Deliver representative samples in required quantity to testing laboratory. Provide diligently to the Departmental Representative all testing results.
- .4 Pay costs for uncovering and making good Work that is covered before required inspection or testing is completed and approved by Departmental Representative.

2.0 PRODUCTS

- .1 Not Used

3.0 EXECUTION

- .1 Not Used

END OF SECTION

PART 1 – GENERAL**1.1 OVERVIEW**

- .1 This section specifies the requirements and general procedures for the submission of shop drawings, product descriptions and samples required by the Departmental Representative for verification purposes. Other additional specific requirements are formulated in the appropriate sections of the Technical Divisions.
- .2 Do not undertake work before the submitted documents or samples have been verified by the Departmental Representative
- .3 At the time of the submission of the documents or the samples, notify the Departmental Representative in writing of the deviations from the requirements of the contract documents, specifying the reasons for these exemptions.
- .4 The Contractor will not be released from any liability for deviations from the contractual requirements, even if the Departmental Representative has verified the submitted documents or samples, except in the event that the Contractor agrees in writing to a specific waiver.
- .5 Make all the changes that the Departmental Representative and considers appropriate in relation to the contract documents, and re-submit the documents or samples as directed by the Departmental Representative.
- .6 When re-submitting documents or samples, notify the Departmental Representative in writing of changes made other than those required by the Departmental Representative
- .7 Present shop drawings, product descriptions and samples in metric units of the International System (SI).
- .8 If the products or technical data are not provided in metric units, the converted values will be acceptable

1.2 REQUIREMENTS FOR THE SUBMISSION OF DOCUMENTS OR SAMPLES.

- .1 Coordinate the submission of the required documents or samples with the work requirements and contract documents. Documents or samples submitted individually will not be verified until all related information is available.
- .2 Submit documents and samples according to schedule.
- .3 Allocate ten (10) business days to allow the Departmental Representative to verify the submitted documents or sample
- .4 When the documents and samples to be submitted have been verified by the Departmental Representative and bear:
 - .1 The annotation "verified" without indication or "verified with remarks" the work of shaping and installation can then be undertaken, taking into account the corrections made

- .2 The annotation mentioning "not verified" or "correct and resubmit", documents must be corrected, resubmitted and re-verified as indicated before fabrication and installation work can begin.
- .5 The Letter of Transmittal provided in two (2) copies if shipped by mail and one (1) copy if transmitted by email and must contain the following information:
 - .1 The date;
 - .2 The designation and the project number;
 - .3 The name and address of the contractor;
 - .4 The name and number of shop drawings, product descriptions and samples submitted;
 - .5 The quote section that refers to documents or samples;
 - .6 Any other useful and necessary information;
- .6 Documents or samples submitted must also include the following information:
 - .1 The preparation and revision dates;
 - .2 The name and the project number;
 - .3 The name and the address:
 - .1 Of the sub-contractor;
 - .2 Of the supplier;
 - .3 Of the fabricant;
 - .4 the Contractor's seal with the signature of its authorized representative certifying that the documents or samples submitted have been approved, that the measures taken on site have been verified and that everything is in accordance with the contract documents;
 - .5 Details of the appropriate parts of the works, as required;
 - .1 The shaping details;
 - .2 Layout details showing dimensions, including those taken on site and required clearances and clearances;
 - .3 Installation details, as well as equipment bases (where required
 - .4 The capacity or power;
 - .5 Characteristics related to performance or performance;
 - .6 The standards that apply;
 - .7 The service weight;
 - .8 Wiring diagrams;
 - .9 Single and schematic diagrams;
 - .10 The relationship with adjacent structures.
- .7 Once the Departmental Representative has verified the submitted documents, one (1) copy will be returned to the Contractor for reproduction and distribution to the various stakeholders involved.

1.3 SHOP DRAWINGS

- .1 Shop drawings: original drawings or modified standard drawings, provided by the Contractor and illustrating the parts of works that apply to this work.
- .2 Maximum dimensions of boards: 850 x 625 mm
- .3 Submit one (1) copy of shop drawings if transmitted by email or two (2) copies of shop drawings if shipped by mail.
- .4 Make the necessary references to the appropriate parts of the contract documents.
- .5 Where applicable, submit shop drawings bearing the seal and signature of a recognized professional engineer in the province

1.4 PRODUCT DESCRIPTIONS (DATA SHEETS)

- .1 Product Descriptions: Manufacturer's catalog sheets, performance and performance charts and diagrams to illustrate standard manufactured products
- .2 Submit one (1) copies of product descriptions if transmitted by email or two (2) copies of product descriptions if shipped by mail.
- .3 Sheet dimensions: 215 x 280 mm, 3 modules maximum
- .4 Delete information that does not apply to this work.
- .5 Add to the standard information the additional information that applies to this work.
- .6 Make the necessary references to the appropriate parts of the contract documents, in particular to the specifications sections.

1.5 PRODUCT SAMPLES

- .1 Samples: examples of materials, material, quality, finishes or method of execution
- .2 Submit one (1) copy of each sample or as specified in Technical Sections.
- .3 If color, pattern or texture are to be used as selection criteria, submit complete range of product samples.
- .4 Once verified and approved samples of products and assemblies will serve as a quality standard for this work.

1.6 WORK SAMPLES

- .1 Samples: Work done on site using prescribed materials and method of execution.
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- .2 Carry out samples of structures at locations deemed acceptable by the Departmental Representative.
- .3 Once verified and approved the book samples will serve as a quality standard for this work.

1.7 REVIEW OF SHOP DRAWINGS

- .1 The Departmental Representative's review of shop drawings is only intended to ensure compliance with the general concept. This review does not imply that the Departmental Representative approves the detailed design attached to the shop drawings, which remains the responsibility of the submitting Contractor, and such as a review does not relieve the Contractor of its responsibility for any errors or omissions on the part of the Contractor. shop drawings or its responsibility to observe construction requirements and contract documents; Without limiting the foregoing general considerations, the Contractor is responsible for the dimensions to be confirmed and correlated on the site, to the manufacturing processes or the construction and installation techniques and also to the coordination of the work of all sub-contractors.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF THIS SECTION

SHOP DRAWING - IDENTIFICATION FORM

(This form has to be completed by the contractor)

PROJECT :

PROJECT N°:

OWNER (CLIENT) :

ARCHITECT : EVOQ

ENGINEER: SNC-LAVALIN

SUB-CONTRACTOR :

Address :

Responsible :

Phone Number:

E-mail :



ANCIENNEMENT / FORMERLY FGMDA

SUPPLIER :

Address:

Responsible :

Phone Number :

E-mail:

GENERAL CONTRACTOR :

Responsible :

Phone Number :

E-mail:

Approval:

(Signature)

MANUFACTURER :

Address:

Responsible :

Phone Number :

E-mail :

SUBMITTED PRODUCT :

AS SPECIFIED

☐

EQUIVALENT

☐

SUBSTITUTION

☐

DRAWING SEND FOR :

VERIFICATION

☐

INFORMATION

☐

COORDINATION

☐

OTHER

☐

EXPERTISE (discipline) :

SHOP DRAWING N°:

NUMBER OF PAGES:

SHIPPING TIME (after verification) :

DESCRIPTION OF THE SHOP DRAWING :

PLAN REFERENCES :

SPECIFICATION REFERENCES:

Volume: _____ Article : _____

Section: _____ Page : _____

OBSERVATIONS :

REV.

DATE ISSUED

Compliance Verification

Nature and extent of the audit (specify)

This audit does not constitute in any way a detailed and complete verification of the design.

☐ Verified

☐ Verified with remarks

☐ Correct and resubmit

☐ Not verified

Signature

Date:

Engineer ☐

Other ☐

Name

N° of OIQ membership

The verification of this document is restricted to the nature and extent indicated. It does not relieve in any way the person or the company that prepared it from their obligations of any nature whatsoever

PART 1 – GENERAL**1.1 OVERVIEW**

- .1 Provide digital and printed photographs of the construction in accordance with the requirements of this section.
- .2 Provide an e-mail address, an Internet connection, a digital camera and a computer at the construction site in order to be able to send the digital photographs.

1.2 DIGITAL PHOTOGRAPHS *ILLUSTRATING* THE PROGRESS OF THE WORK

- .1 Resolution: JPEG format, average compression, 1024 x 768 dots (pixels), 72 dpi (pixels / inches), maximum of 100 KB per photo.
- .2 Identifications: All photos must have the date (YYMMDD-001) indicating when they were taken and have to be followed by a second three (3) digit number, specifying the serial number. (ex: 080820-001, 080820-002, 080820-003 ... etc.)
- .3 Points of view : To be determined during the first start project meeting
- 4 Frequency : To be determined during the first project start meeting

1.3 DIGITAL PHOTOGRAPHS OF THE FINISHED WORK

- .1 Resolution : format JPEG, average compression, 1024 x 768 pixels, 72 dpi (pixels / inches), maximum of 100 KB per photo.
- .2 Identifications: All photos must have the date (YYMMDD-001) indicating when they have been taken and also have to be followed by a second three (3) digit number, specifying the serial number. (ex 080820-001, 080820-002, 080820-003 ... etc.)
- .3 Frequency : Every day
- .4 Points of view: Photos of details and overview. Photos must represent all jobs executed during the time period.

1.4 SUBMITTING THE PHOTOGRAPHS

- .1 Presentation : All photos must be taken using a digital camera and have the features listed above:
- .2 Sort the photos according to the following guidelines:
 - .1 A directory by discipline (Architecture, civil, structure, mechanics, electrical)
 - .2 One directory per day
- .3 Send two copies of a CD or DVD clearly identified at the end of the work. These copies must indicate the name, the project number, the date and its contents.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

END OF THIS SECTION

PART 1 GENERAL**1.1 SECTION INCLUDES**

- .1 Contractor shall manage his operations so that safety and security of the public and of site workers always take precedence over cost and scheduling considerations.

1.2 REFERENCES

- .1 Canada Labour Code - Part II, Canadian Occupational Safety and Health Regulations.
- .2 Canadian Standards Association (CSA)
- .3 Workplace Hazardous Materials Information System (WHMIS)
- .4 All legislation, regulations and standards applicable to the site and its related activities.

1.3 SUBMITTALS

- .1 Submit the documents required according to section 01 33 30 Documents and samples to be submitted.
- .2 Submit to Departmental Representative, the Workers' Compensation Board of Northwest Territories and Nunavut (WSCC) site-specific safety policy/program, as outlined in 1.7 at least 10 days prior to start of work. The Contractor must review his program during the course of the project if any change occurs in work methods or site conditions.
- .3 The Departmental Representative may, after receiving the program or at any time during the project, ask the Contractor to update or modify the program in order to better reflect the reality of the construction site and activities. The Contractor must make the required changes before work begins.
- .4 Submit to Departmental Representative within 24 hours a copy of any inspection report, correction notice or recommendation issued by federal or provincial inspectors.
- .5 Submit to Departmental Representative within 24 hours an investigation report for any accident involving injury and any incident exposing a potential hazard.
- .6 Submit to Departmental Representative all safety data sheets for hazardous material to be used at the site at least three days before they are to be used.
- .7 Emergency plan: The emergency plan, as defined in 1.7.3, shall be submitted to the Departmental Representative at the same time as the site-specific safety program.
- .8 Notice of site opening: Notice of site opening shall be submitted to the WSCC before work begins. A copy of such notice shall be submitted to Departmental Representative at the same time and another posted in full view at the site. During demobilization, a notice of site closing shall be submitted to the WSCC, with copy to Departmental Representative.
- .9 Permits: Obtain all required municipal, provincial and federal permits according to contractual clauses. Send a copy of each permit request and each permit to Departmental Representative without delay.
- .10 Certificate of compliance delivered by the WSCC: The certificate of compliance is a document delivered by the WSCC confirming that the contractor is in rule with the WSCC, i.e. that he had pay out all the benefits concerning this contract. This document must be delivered to Departmental Representative at the end of the work.

1.4 HAZARDS ASSESSMENT

- .1 The contractor must identify all hazards inherent in each task to be carried out at the site.

- .2 The contractor must plan and organize work so as to eliminate hazards at source or promote mutual protection so that reliance on individual protective gear can be kept to a minimum. Where individual protection against falling is required, workers shall use safety harness that meets standard Can - CSA- Z-259.10 - M90. Safety belts shall not be used as protection against falling.
- .3 Equipment, tools and protective gear which cannot be installed, fitted or used without compromising the health or safety of workers or the public shall be deemed inadequate for the work to be executed.
- .4 All mechanical equipment shall be inspected before delivery to the site.
- .5 For use of equipment for lifting persons or materials, ensure that the inspections required by the standards are met and be able to provide a copy of certificates of inspection upon request of the Owner.

1.5 MEETINGS

- .1 Contractor decisional representative must attend any meetings at which site safety and health issues are to be discussed.
- .2 Contractor shall keep minutes of these meetings and distribute to all present and to all concerned.

1.6 LEGAL AND REGULATORY REQUIREMENTS

- .1 Comply with all legislation, regulations and standards applicable to the site and its related activities.
- .2 Comply with specified standards and regulations to ensure safe operations at site containing hazardous or toxic materials.
- .3 Regardless of the publication date shown in the construction safety code, always use the most recent version.
- .4 At the site, the contractor shall take account of the following specific conditions:
 - .1 Waste evacuation.
 - .2 Power activated devices.
 - .3 Torching of membranes.
 - .4 Work in height.
 - .5 Hot work.
 - .6 Lifting material
 - .7 Sandblasting
 - .8 Welding and cutting.

1.7 SAFETY AND HEALTH MANAGEMENT

- .1 Acknowledge and assume all the tasks and obligations which customarily devolve upon a principal Contractor under the terms of the applicable legislation respecting Occupational Health and Safety and the applicable Safety Code for the construction industry.
- .2 Develop a site-specific safety program based on the hazards identified and apply it from the start of project work until close-out is completed. The safety program must take account of all information appearing in 1.7 and must be submitted to all parties concerned, in accordance with the provisions set forth in 1.2. At a minimum, the site-specific safety program must include :
 - .1 Company safety and health policy.

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- .2 A description of the work, total costs, schedule and projected workforce curve.
 - .3 Flow chart of safety and health responsibility.
 - .4 The physical and material layout of the site.
 - .5 First-aid and first-line treatment standards.
 - .6 Identification of site-specific hazards.
 - .7 Risk assessment for the tasks to be carried out, including preventive measures and the procedures for applying them.
 - .8 Training requirements.
 - .9 Procedures in case of accident/injury
 - .10 Written commitment from all parties to comply with the prevention program.
 - .11 A site inspection schedule based on the preventive measures.
 - .3 The contractor must draw up an effective emergency plan based on the characteristics and constraints of the site and its surroundings. Submit the emergency plan to all parties concerned, pursuant to the provisions of 1.2. The emergency plan must include:
 - .1 Evacuation procedure;
 - .2 Identification of resources (police, firefighters, ambulance services, etc.);
 - .3 Identification of persons in charge at the site;
 - .4 Identification of those with first-aid training;
 - .5 Training required for those responsible for applying the plan;
 - .6 Any other information needed, in the light of the site characteristics.

1.8 RESPONSIBILITIES

- .1 No matter the size of the construction site or how many workers are present at the workplace, designate a competent person to supervise and take responsibility for health and safety. Take all necessary measures to ensure the health and safety of persons and property at or in the immediate vicinity of the site and likely to be affected by any of the work.
- .2 Take all necessary measures to ensure application of and compliance with the safety and health requirements of the contract documents, applicable federal and provincial regulations and standards as well as the site-specific safety program, complying without delay with any order or correction notice issued by the WCBNTN.
- .3 Take all necessary measures to keep the site clean and in good order throughout the course of the work

1.9 COMMUNICATIONS AND POSTING

- .1 Make all necessary arrangements to ensure effective communication of safety and health information at the site. As they arrive on site, all workers must be informed of their rights and obligations pertaining to the site specific safety program. The Contractor must insist on their right to refuse to perform work which they feel may threaten their own health, safety or physical integrity or that of other persons at the site. The Contractor must keep and update a written record of all information transmitted with signatures of all affected workers.
- .2 The following information and documents must be posted in a location readily accessible to all workers:

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- .1 Notice of site opening;
 - .2 Identification of principal Contractor;
 - .3 Company OSH policy;
 - .4 Site-specific safety program;
 - .5 Emergency plan;
 - .6 Data sheets for all hazardous material used at the site;
 - .7 Minutes of site committee meetings;
 - .8 Names of site committee representatives;
 - .9 Names of those with first-aid training;
 - .10 Action reports and correction notices issued by the WCBNTN.

1.10 UNFORESEEN CIRCUMSTANCES

- .1 Whenever a source of danger not defined in the specifications or identified in the preliminary site inspection arises as a result of or in the course of the work, immediately suspend work, take appropriate temporary measures to protect the workers and the public and notify Departmental Representative, both verbally and in writing. Then the Contractor must modify or update the site specific safety program in order to resume work in safe conditions.

1.11 HEALTH/SAFETY/HYGIENE/ENVIRONMENTAL SPECIALISTS

- .1 As soon as work starts, the Contractor shall hire **the number of safety officers required by applicable legislation**, pursuant to the provisions of applicable Safety Code for the construction industry and give them the necessary authority to carry out the duties of this position, including authority to stop work on safety and health grounds.
- .2 As of start of work, hire a qualified person whose duties will be to ensure compliance with and application of all legislation, regulations and standards and all contractual requirements pertaining to the Place of Work.
- .3 The Contractor shall provide this person with the authority, resources and tools needed for performance of his/her duties.
- .4 The person selected shall meet requirements of the following:
 - .1 WSCC.
 - .2 PWGSC.
 - .3 Any other organization concerned.
- .5 The person selected shall:
 - .1 Have in-depth knowledge of legislation and regulations applicable to the site.
 - .2 Develop and disseminate a safety orientation program for all site workers.
 - .3 Ensure that no worker is admitted to the site without having taken the safety orientation program and met all the training requirements of the applicable legislation and the site specific safety program.
 - .4 Inspect the work and ensure compliance with all regulatory requirements and those of the contract documents or the site-specific safety program.

- .5 Keep a daily log of actions taken and submit a copy to Departmental Representative each week.

1.12 INSPECTION OF SITE AND CORRECTION OF HAZARDOUS SITUATIONS

- .1 Inspect the work site and complete the site inspection sheet at least once a week.
- .2 Immediately take all necessary measures to correct any lapses from legislative or regulatory requirements and any hazards identified by a government inspector, by the Departmental Representative, by the site safety and health coordinator or during routine inspections.
- .3 Submit to Departmental Representative written confirmation of all measures taken to correct lapses and hazardous situations.
- .4 Give the safety officer or, where there is no safety officer, the person assigned to safety and health responsibilities, full authority to order interruption and resuming of work as and when deemed necessary or desirable in the interests of safety and health. This person should always act so that the safety and health of the public and site workers and environmental protection take precedence over cost and scheduling considerations.
- .5 Without limiting the scope of sections 1.8 and 1.9, Departmental Representative may order cessation of work if, in his/her view, there is any hazard or threat to the safety or health of site personnel or the public or to the environment.

1.13 BLASTING

- .1 Blasting and other use of explosives are forbidden unless authorized in writing by Departmental Representative.
- .2 Any operation involving explosives must be carried out under the supervision of a qualified shot firer.
- .3 The purchase, carriage, storage and use of explosives must comply with all applicable federal and provincial legislation:
 - .1 Canada: Explosives Act (E-17), Explosives Regulations (C.R.C. CH. 599), Standard for Storage of Blasting Charges and Detonators, Transportation of Dangerous Goods Act and Regulations.
 - .2 Any other applicable territorial regulations
- .4 Contractor shall obtain all permits required pursuant to the legislation and regulations referred to above and keep copies on hand at the site.
- .5 Contractor shall facilitate inspection of the site, stored explosives and vehicles used to transport explosives by any government representatives or police officers whose jurisdiction encompasses explosives.

1.14 POWER ACTUATED DEVICES

- .1 Use of power hammers and other explosive-actuated devices must be authorized by Departmental Representative.
- .2 Any person using a power hammer shall hold a training certificate and meet all requirements of Section 7 of the Construction Safety Code (S-2.1, r. 6).
- .3 Any other explosive-actuated device shall be used in accordance with the manufacturer's directions and applicable standards and regulations.

PART 2 PRODUCTS

2.1 Not Used

PART 3 EXECUTION

3.1 Not Used

END OF SECTION

PART 1 GENERAL**1.1 SECTION INCLUDES**

- .1 Product quality, availability, storage, handling, protection, and transportation.
- .2 Manufacturer's instructions.
- .3 Quality of Work, coordination and fastenings.
- .4 Existing facilities.

1.2 REFERENCE STANDARDS

- .1 Within text of each specifications section, reference may be made to reference standards.
- .2 Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .3 If there is question as to whether any product or system is in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.
- .4 Cost for such testing will be borne by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.
- .5 Conform to latest date of issue of referenced standards in effect on date of submission of Tenders, except where specific date or issue is specifically noted.

1.3 QUALITY

- .1 Products, materials, equipment, devices, parts 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 Procurement policy is to acquire, in a cost effective manner, items containing the highest percentage of recycled and recovered materials practical consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials/equipment and in otherwise utilizing recycled and recovered materials in the execution of Work.
- .3 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve the Contractor of responsibility, but is precaution against oversight or error. The Contractor is to remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
- .4 Should disputes arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .5 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .6 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.

1.4 PRODUCT AVAILABILITY

- .7 Immediately upon signing the contract, review product delivery requirements and anticipate any foreseeable supply delays for items. If delays in supply of products are foreseeable, notify the Departmental Representatives of such, in order that substitutions or other remedial action may be authorized in ample

time to prevent delay in performance work.

1.5 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 and panels on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.6 TRANSPORTATION

- .1 Pay costs of transportation of products required in performance of Work. The Contractor is to assume cost of proper air or sea packaging.

1.7 MANUFACTURER'S INSTRUCTIONS

- .1 Unless otherwise indicated in specifications, install or erect products in accordance with manufacturer's instructions. Do not rely on labels or enclosures provided with products. Obtain written instructions directly from manufacturers.
- .2 Notify Departmental Representative in writing, of conflicts between specifications and manufacturer's instructions, so that Departmental Representative may establish course of action.
- .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes Departmental Representative to require removal and re-installation at no increase in Contract Price or Contract Time.

1.8 QUALITY OF WORK

- .1 Ensure Quality of Work is of highest standard, executed by workers experienced and skilled in respective duties for which they are employed. Immediately notify Departmental Representative if required Work is such as to make it impractical to produce required results.
- .2 Do not employ anyone unskilled in their required duties. Departmental Representative reserves right to require dismissal from site, workers deemed incompetent or careless.
- .3 Decisions as to standard or fitness of Quality of Work in cases of dispute rest solely with Departmental Representative, whose decision is final.

1.9 COORDINATION

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- .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
 - .2 The Contractor is responsible for coordination and placement of openings, sleeves and accessories.

1.10 CONCEALMENT

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

1.11 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.

1.12 LOCATION OF FIXTURES

- .1 Consider location of fixtures, outlets, and mechanical and electrical items indicated as approximate.
- .2 Inform Departmental Representative of conflicting installation. Install as directed.

1.13 FASTENINGS - GENERAL

- .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 anchoring. Wooden plugs or any other organic material are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.

1.14 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, unless otherwise specified.
- .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.

1.15 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 Departmental Representative.

1.16 EXISTING UTILITIES

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local
-

governing authorities, with minimum of disturbance to Work and pedestrian and vehicular traffic.

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

PART 2 PRODUCTS

2.1 Not Used

PART 3 EXECUTION

3.1 Not Used

END OF SECTION

PART 1 – General**1.0 Cleaning****.1 General:**

- .1 Keep the site clean and free of the accumulation of construction waste other than those collected by Departmental Representative or other contractors.
- .2 Use skilled labour for cleaning purposes, as per manufacturers' recommendations.
- .3 Obtain permits from authorities having jurisdiction for disposal of waste and debris.
- .4 Conduct cleaning and disposal operations to comply with local ordinances and anti-pollution laws.
- .5 The equipment or rubbish too heavy or too big to be placed in the container, must be dusted and disinfected or packaged before evacuated from the site.
- .6 Store volatile waste in covered metal containers. Remove from premises at end of each working day.
- .7 Provide adequate ventilation during use of volatile or noxious substances. Use of permanent building ventilation systems is not permitted for this purpose.
- .8 For waste management, see **Section 01 74 19**.

.2 Materials:

- .1 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning product manufacturer.

.3 Cleaning during construction:

- .1 Remove waste materials from site at daily regularly scheduled times or dispose of as directed by Departmental Representative.
- .2 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.
- .3 It is necessary to use waste containers, the location of which shall be determined in place by the Departmental Representative.
- .4 Keep passages and access routes completely clear of materials and equipment at all times.
- .5 Clean daily all access routes (roads and passages) used and soiled by the Contractor's vehicles and equipments.
- .6 Coordinate with the local municipal authorities removal of snow from access roads to place of work.
- .7 If need be, coordinate removal of snow before installation of temporary ventilation equipment.
- .8 Remove from crawl spaces and other concealed spaces debris or other surplus material.
- .9 Keep corridors and access routes clear of any materials or equipments at all times.
- .10 Clean interior areas prior to start of finishing work, and maintain areas free of dust and other contaminants during finishing operations.

.4 Final cleaning:

- .1 When construction work is almost over, remove scaffolding, temporary protection and surplus materials, tools and equipment not required for the rest of the work, and make good defects noted at this stage. However, before removing scaffolding, notify the Departmental Representative, so that they coordinate their inspections.
- .2 Do the final cleaning to prepare the site for Provisional Acceptance (Substantial Performance) to allow occupation of premises.
- .3 Prior to final review remove surplus products, tools, construction machinery and equipment.

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- .4 Maintain cleaning until Departmental Representative has taken possession of building or portions thereof.
 - .5 Remove waste materials from site at predetermined intervals or eliminate them according to the instructions of the Departmental Representative.
 - .6 Remove soil, grease, dust, dirt, stains, paint spots, labels, fingerprints, and other foreign materials, from interior and exterior finished surfaces including glass and other polished surfaces.
 - .7 Do not remove approval labels.
 - .8 Replace broken, cracked, scratched or otherwise damaged glass elements.
 - .9 Clean light fixtures, reflectors, lenses, and other fixture surfaces.
 - .10 Wash or clean and polish glass, stainless steel and other smooth surfaces. Use "CIP 100" and acetone to clean stainless steel surfaces.
 - .11 Clean manufactured articles in accordance with manufacturer's directions.
 - .12 Clean hardware, mechanical fixtures, cover plates, and equipment, including polishing of their finish metal, porcelain, vitreous and glass components.
 - .13 Vacuum clean, wash, seal, wax, degrease or prepare floor surfaces as recommended by manufacturer.
 - .14 Examine finishes, accessories and equipment to ensure that they satisfy the prescribed requirements as to function and quality of execution.
 - .15 Clean equipment and fixtures to meet sanitary conditions; clean or replace filters of mechanical equipment.

PART 2 - PRODUCTS

Not applicable.

PART 3 - EXECUTION

Not applicable.

END OF SECTION

PART 1 – GENERAL**1.1 WASTE MANAGEMENT OBJECTIVES**

- .1 The present section is written to exercise maximum control on the disposal of construction solid waste.
- .2 Protect environment and prevent pollution and environmental impacts.
- .3 Separate waste at the source for proper disposal at the garbage disposal site.
- .4 Separate, store and transport dangerous substance in order to dispose of them in an appropriate treatment site.

1.2 PROCEDURES

- .1 The Contractor is required to inform himself and conform to the municipal bylaws concerning the use of the garbage disposal site.
- .2 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and recyclable materials.
- .3 Provide separate closable containers to deposit reusable and recyclable materials and disposable materials.
- .4 Locate containers in locations, to facilitate deposit of materials without hindering daily operations.
- .5 Respect hours of operation of the garbage disposal site and pay off disposal according to the establish rates. Contractor shall contact the local authorities to enquire about them.
- .6 Store, identify, transport and dispose of dangerous substances as required by territorial and federal laws in application.
- .7 Before disposal of construction waste, offer recyclable and reusable materials to the Community. Coordinate with Departmental Representative.

1.3 STORAGE, HANDLING AND PROTECTION

- .1 Store, materials to be reused, recycled and salvaged in locations as directed by Departmental Representative.
- .2 Unless specified otherwise, materials for removal become Contractor's property.
- .3 Protect, stockpile and store salvaged items.
- .4 Transport and deliver non-salvageable items to licensed disposal facility.
- .5 Support affected structures. If safety of building is endangered, cease operations and immediately notify Departmental Representative.
- .6 Protect surface drainage, mechanical and electrical from damage and blockage.
- .7 Prevent contamination of materials to be salvaged and recycled.
 - .1 On-site source separation is recommended.

1.4 DISPOSAL OF WASTE

- .1 Do not bury rubbish or waste materials.
- .2 Do not dispose of waste, volatile materials, mineral spirits, oil, paint thinner into waterways, storm, or sanitary sewers.

.3 Keep records of dangerous material to be disposed of and construction waste including:

.1 Number and size of bins.

.2 Waste type of each bin.

.4 Remove materials from deconstruction as deconstruction/disassembly Work progresses.

1.5 USE OF SITE AND FACILITIES

.1 Execute work with least possible interference or disturbance to normal use of premises.

.2 Provide temporary security measures approved by Departmental Representative.

1.6 SCHEDULING

.1 Coordinate Work and waste disposal with other activities at site to ensure timely and orderly progress of Work

PART 2 PRODUCTS

2.1 Not used

PART 3 EXECUTION

3.1 Application

.1 Handle waste materials not reused, salvaged, or recycled in accordance with appropriate regulations and codes.

3.2 Cleaning

.1 Remove tools and waste materials on completion of Work, and leave work area in clean and orderly condition.

.2 Clean-up work area as work progresses.

.3 Source separate materials to be reused/recycled into specified sort areas.

END OF SECTION

PART 1 GENERAL**1.1 SECTION INCLUDES**

- .1 As-built, samples, and specifications.
- .2 Equipment and systems.
- .3 Product data, materials and finishes, and related information.
- .4 Operation and maintenance data.
- .5 Spare parts, special tools and maintenance materials.
- .6 Warranties and bonds.

1.2 SUBMITTALS

- .1 Prepare instructions and data using personnel experienced in maintenance and operation of described products.
- .2 Three (3) weeks prior to Substantial Performance of the Work, submit to the Departmental Representative, one (1) complete digital copy of operating and maintenance manuals in English.
- .3 Copy will be returned after inspection, with Departmental Representative's comments.
- .4 Revise content of documents as required prior to final submittal.
- .5 At Substantial Performance of the Work, submit to the Departmental Representative, four (4) revised final printed copies and four (4) digital copies on CD or DVD of operating and maintenance manuals in English.
- .6 Ensure spare parts, maintenance materials and special tools provided are new, undamaged or defective, and of same quality and manufacture as products provided in Work.
- .7 If requested, furnish evidence as to type, source and quality of products provided.
- .8 Defective products will be rejected, regardless of previous inspections. Replace products at own expense.
- .9 Pay costs of transportation.

1.3 FORMAT

- .1 Organize data in the form of an instructional manual.
 - .2 Binders: vinyl, hard covered, 3 'D' ring, loose leaf 219 x 279 mm with spine and face pockets.
 - .3 When multiple binders are used, correlate data into related consistent groupings. Identify contents of each binder on spine.
 - .4 Cover: Identify each binder with type or printed title 'Project Record Documents'; list title of project and identify subject matter of contents.
 - .5 Arrange content by systems, process flow, under Section numbers and sequence of Table of Contents.
 - .6 Provide tabbed fly leaf for each separate product and system, with typed description of product and major component parts of equipment.
 - .7 Text: Manufacturer's printed data, or typewritten data.
 - .8 Drawings: provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
 - .9 Provide as build drawings for all divisions with annotations.
 - .10 Provide video-recorded formation on DVD.
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1.4 CONTENTS - EACH VOLUME

- .1 Table of Contents: provide title of project;
 - .1 date of submission; names,
 - .2 addresses, and telephone numbers of Departmental Representative 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 clearly identify specific products and component parts, and data applicable to installation; delete inapplicable information.
- .4 Drawings: supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams.
- .5 Typewritten Text: as required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.
- .6 Training: Refer to Section 01 79 00 - Demonstration and Training.

1.5 AS-BUILTS AND SAMPLES

- .1 In addition to requirements in General Conditions, maintain at the site for Departmental Representative one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to the 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. Provide files, racks, and secure storage.
- .3 Label record documents and file in accordance with Section number listings in List of Contents of this Project Manual. Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition. Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.

1.6 RECORDING ACTUAL SITE CONDITIONS

- .1 Record information on set of drawings, and in copy of Project Manual.
 - .2 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
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- .3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
 - .4 Contract Drawings and shop drawings: legibly mark each item to record actual construction, including:
 - .1 Measured depths of elements of foundation in relation to finish first floor datum.
 - .2 Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.
 - .3 Measured locations of internal utilities and appurtenances, referenced to visible and accessible features of construction.
 - .4 Field changes of dimension and detail.
 - .5 Changes made by change orders.
 - .6 Details not on original Contract Drawings.
 - .7 References to related shop drawings and modifications.
 - .5 Specifications: legibly mark each item to record actual construction, including:
 - .1 Manufacturer, trade name, and catalogue number of each product actually installed, particularly optional items and substitute items.
 - .2 Changes made by Addenda and change orders.
 - .6 Other Documents: maintain manufacturer's certifications, inspection certifications, field test records, required by individual specifications sections.

1.7 EQUIPMENT AND SYSTEMS

- .1 Each Item of Equipment and Each System: include description of unit or system, and component parts. Give function, normal operation characteristics, and limiting conditions. Include performance curves, with engineering data and tests, and complete nomenclature and commercial number of replaceable parts.
 - .2 Panel board circuit directories: provide electrical service characteristics, controls, and communications.
 - .3 Include installed colour coded wiring diagrams.
 - .4 Operating Procedures: include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
 - .5 Maintenance Requirements: include routine procedures and guide for trouble-shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
 - .6 Provide servicing and lubrication schedule, and list of lubricants required.
 - .7 Include manufacturer's printed operation and maintenance instructions.
 - .8 Include sequence of operation by controls manufacturer.
 - .9 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
 - .10 Provide installed control diagrams by controls manufacturer.
 - .11 Provide Contractor's coordination drawings, with installed colour coded piping diagrams.
 - .12 Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
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.13 Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.

.14 Include test and balancing reports.

.15 Additional requirements: As specified in individual specification sections.

1.8 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.

1.9 SPARE PARTS

.1 Provide spare parts, in quantities specified in individual specification sections.

.2 Provide items of same manufacture and quality as items in Work.

.3 Deliver to location as directed; place and store.

.4 Receive and catalogue all items. Submit inventory listing to Departmental Representative. Include approved listings in Maintenance Manual.

.5 Obtain receipt for delivered products and submit prior to final payment.

1.10 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 location as directed; place and store.

.4 Receive and catalogue all items. Submit inventory listing to Departmental Representative. Include approved listings in Maintenance Manual.

.5 Obtain receipt for delivered products and submit prior to final payment.

1.11 SPECIAL TOOLS

.1 Provide special tools, in quantities specified in individual specification section.

.2 Provide items with tags identifying their associated function and equipment.

.3 Deliver to location as directed; place and store.

.4 Receive and catalogue all items. Submit inventory listing to Departmental Representative. Include approved listings in Maintenance Manual.

1.12 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.

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- .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 Departmental Representative.

1.13 WARRANTIES AND BONDS

- .1 Separate each warranty or bond with index tab sheets keyed to Table of Contents listing.
- .2 List subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.
- .3 Obtain warranties and bonds, executed in duplicate by subcontractors, suppliers, and manufacturers, within ten days after completion of the applicable item of work.
- .4 Except for items put into use with Owner's permission, leave date of beginning of time of warranty until the Date of Substantial Performance is determined.
- .5 Verify that documents are in proper form, contain full information, and are notarized.
- .6 Co-execute submittals when required.
- .7 Retain warranties and bonds until time specified for submittal.

PART 2 PRODUCTS

- 2.1 Not Used

PART 3 EXECUTION

- 3.1 Not Used

END OF SECTION

PART 1 GENERAL**1.1 SECTION INCLUDES**

- .1 Procedures for demonstration and instruction of equipment and systems to Department's personnel.

1.2 Description

- .1 Demonstrate schedule operation and maintenance of equipment and systems to Department's personnel at the latest two (2) days before substantial completion and once all tests have been completed.
- .2 Departmental Representative will provide list of personnel to receive instructions, and will coordinate their attendance at agreed-upon times.

1.3 QUALITY CONTROL

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

1.4 SUBMITTALS

- .1 Submit schedule of time and date for demonstration of each item of equipment and each system two week prior to designated dates, for Departmental Representative's approval.
- .2 Along with the schedule, submit short syllabus explaining the content of each demonstration, for Departmental Representative's approval.
- .3 Submit reports within one week after completion of demonstration, that demonstration and instructions have been satisfactorily completed.
- .4 Give time and date of each demonstration, with attendance list signed by trainer and all attendees.

1.5 CONDITIONS FOR DEMONSTRATIONS

- .1 Equipment has been inspected and put into operation.
- .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.

1.6 PREPARATION

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

1.7 DEMONSTRATION AND INSTRUCTIONS

- .1 Demonstrate start-up, operation, control, adjustment, trouble-shooting, servicing, and maintenance of each item of equipment 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.
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- .5 All formation to be video-recorded, transferred in DVD format and integrated in exploitation manuals. Videos shall comply to minimum quality standards (visually stable, clear sound, etc.).

1.8 TIME ALLOCATED FOR INSTRUCTIONS

- .1 Ensure amount of time required for instruction of each item of equipment or system as follows:
- .1 Heating Plant: 8 hours of instruction.
 - .2 Ventilation System: 4 hours of instruction.
 - .3 Control System: see specific section.
 - .4 Plumbing System: 8 hours of instruction.
 - .5 Electrical System: 4 hours of instruction.
 - .6 Fire Detection System: 8 hours of instruction.
 - .7 Door and Hardware: 4 hours of instruction.
 - .8 Access Systems: 4 hours
 - .9 Security cameras: 4 hours
 - .10 Wheelchair lift : 4 hours

PART 2 PRODUCTS

- 2.1 Not Used**

PART 3 EXECUTION

- 3.1 Not Used**

END OF SECTION