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GENERAL INSTRUCTIONS

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- .1 Within fourteen (14) days after Award of Contract, the Engineer will request a meeting in Cambridge Bay to discuss and resolve administrative procedures and responsibilities. The Project Officer will notify of time and place at contract award.
  - .2 Senior representatives of the Owner, Engineer, Hamlet, Contractor and major Subcontractors will attend.
  - .3 The agenda will include, but is not limited to, the following:
    - .1 Appointment of official representatives of participants in the work.
    - .2 Construction Safety.
    - .3 Construction and Progress Scheduling.
    - .4 Inspections and Site Meetings.
    - .5 Local/Inuit Involvement
    - .6 Schedule of submission of shop drawings and samples.
    - .7 Delivery of specified materials.
    - .8 Contemplated change notice, change orders, procedures, approvals required, administrative requirements.
    - .9 Owner provided products.
    - .10 Record drawings and O&M Manuals.
    - .11 Take-over procedures, acceptance, warranties, progress claims, administrative procedures, photographs, holdbacks.
    - .12 Appointment of inspection and testing agencies or firms.
    - .13 Insurances, transcript of policies.
  - .4 The Engineer will chair the meeting and record discussion and decisions and will circulate minutes to all parties present.
- .2 Progress Meetings:
- .1 During the course of work, progress meetings may be held as required by the project and will be called by the Engineer.
  - .2 The Contractor, major Subcontractors, the Engineer and the Owner are to be in attendance.
  - .3 Parties will be notified by the Engineer a minimum of five (5) days prior to the initial meeting;
  - .4 The Engineer will chair and record minutes of meetings and circulate to those attending parties and others affected within five (5) days after the meeting.
  - .5 The Agenda will include the following:
    - .1 Review, approval of minutes of previous meeting.
    - .2 Review of work progress since previous meeting.
    - .3 Field observations, problems, conflicts.

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- .4 Problems which impede construction schedule.
- .5 Progress, schedule, during succeeding work period.
- .6 Maintenance of quality standards.
- .7 Pending changes and substitutions.
- .8 Review proposed changes for effect on construction schedule and on completion date.
- .9 Review "Project Record Copy" of drawings.
- .10 Other business.

**1.20 Setting Out of Work**

- .1 The Contractor shall:
  - .1 Assume full responsibility for and execute complete layout of work to locations, lines and elevations indicated.
  - .2 Provide devices needed to lay out and construct work.
  - .3 Supply such devices as straight edges and templates required to facilitate Engineer's inspection of work.
  - .4 Supply stakes, nails, flagging, and other survey markers required for laying out work.
- .2 The Contractor shall notify the Engineer five days in advance of the layout of the site control. The Engineer shall be permitted 5 days to review this control prior to commencing the major works of the contract.

**1.21 Location of Equipment and Fixtures**

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

**1.22 Cutting and Patching**

- .1 Obtain Engineer's approval before cutting, boring or sleeving load-bearing members.
- .2 Cut and patch as required to make work fit.
- .3 Make cuts with clean, true, smooth edges.
- .4 Where new work connects with existing and where existing work is altered, cut, patch and make good to match existing work.

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**1.23 Additional Drawings**

Engineer may furnish additional drawings for clarification. These additional drawings have same meaning and intent as if they were included with plans referred to in Contract documents.

END OF SECTION

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ALLOWANCES

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**PART 1      GENERAL**

**1.1      Section Includes**

- .1      Contingency allowance.

**1.2      Contingency Allowance**

- .1      Include in Contract Price a contingency allowance of **\$ 50,000.00.**
- .2      Do not include in Contract Price, additional contingency allowances for products, installation, overhead or profit.
- .3      Expenditures under contingency allowance will be authorized in accordance with Change Orders.

END OF SECTION

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## SUBMITTAL PROCEDURES

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### **PART 1      GENERAL**

#### **1.1      Section Includes**

- .1      Shop drawings and product data.
- .2      Samples.
- .3      Certificates and transcripts.

#### **1.2      Related Sections**

- .1      Section 01450 - Quality Control.

#### **1.3      Administrative**

- .1      Submit to Engineer submittals listed for review. Submit with reasonable promptness and in orderly sequence so as to not cause delay in Work. Failure to submit in ample time is not considered sufficient reason for an extension of Contract Time and no claim for extension by reason of such default will be allowed.
- .2      Work affected by submittal shall not proceed until review is complete.
- .3      Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4      Where items or information is not produced in SI Metric units, converted values are acceptable.
- .5      Review submittals prior to submission to Engineer. This review represents that necessary requirements have been determined and verified, or will be, and that each submittal has been checked and coordinated with requirements of Work and Contract Documents. Submittals not stamped, signed, dated and identified as to specific project will be returned without being examined and shall be considered rejected.
- .6      Notify Engineer, in writing at time of submission, deviations from requirements of Contract Documents and state reasons for deviations.
- .7      Verify that field measurements and affected adjacent Work are coordinated.
- .8      Contractor's responsibility for errors and omissions in submission is not relieved by Engineer's review of submittals.
- .9      Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Engineer review.
- .10      Keep one reviewed copy of each submission on site.

#### **1.4      Shop Drawings and Product Data**

- .1      The term "shop drawings" means drawings, diagrams, illustrations, schedules, performance charts, brochures and other data that are to be provided by Contractor to illustrate details of a portion of Work.

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- .2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross-references to design drawings and specifications.
- .3 Allow 7 days for Engineer's review of each submission.
- .4 Adjustments made on shop drawings by Engineer are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Engineer prior to proceeding with Work.
- .5 Make changes in shop drawings as Engineer may require, consistent with Contract Documents. When resubmitting, notify Engineer in writing of any revisions other than those requested.
- .6 Accompany submissions with transmittal letter containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address.
  - .4 Identification and quantity of each shop drawing, product data and sample.
  - .5 Other pertinent data.
- .7 Submissions shall include:
  - .1 Date and revision dates.
  - .2 Project title and number.
  - .3 Name and address of:
    - .1 Subcontractor.
    - .2 Supplier.
    - .3 Manufacturer.
  - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
  - .5 Details of appropriate portions of Work as applicable:
    - .1 Fabrication.
    - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
    - .3 Performance characteristics.
    - .4 Standards.
    - .5 Single line and schematic diagrams.
    - .6 Relationship to adjacent work.
- .8 After Engineer's review, distribute copies.

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- .9 Submit 6 prints of shop drawings for each requirement requested in specification Sections and as consultant may reasonably request.
- .10 Submit 6 copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Engineer where shop drawings will not be prepared due to standardized manufacture of product.
- .11 Delete information not applicable to project.
- .12 Supplement standard information to provide details applicable to project.
- .13 If upon review by Engineer, no errors or omissions are discovered or if only minor corrections are made, copies will be returned and fabrication and installation of Work may proceed. If shop drawings are rejected, noted copy will be returned and resubmission of corrected shop drawings, through same procedure indicated above, must be performed before fabrication and installation of Work may proceed.

### **1.5 Certificates and Transcripts**

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

END OF SECTION

**PART 1 GENERAL****1.1 Requirements and Procedures**

- .1 This section specifies general requirements and procedures for contractor's submissions of shop drawings, product data, samples and mock-ups to Engineer for review. Additional specific requirements for submissions are specified in individual sections of Divisions 2 to 16.
- .2 Do not proceed with work until relevant submissions are reviewed by Engineer.
- .3 Present shop drawings, product data, samples and mock-ups in SI Metric units.
- .4 Where items or information is not produced in SI Metric units converted values are acceptable.
- .5 Contractor's responsibility for errors and omissions in submission is not relieved by Engineer's review of submissions.
- .6 Notify Engineer, in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Make any changes in submissions, which Engineer may require, consistent with Contract Documents and resubmit as directed by Engineer.

**1.2 Submission Requirements**

- .1 Coordinate each submission with requirements of work and Contract Documents. Individual submissions will not be reviewed until all related information is available.
- .2 Allow 5 working days for Engineer's review of each submission.
- .3 Accompany submissions with transmittal letter, containing:
  - .1 Date.
  - .2 Project title and number.
  - .3 Contractor's name and address, and subcontractor (if applicable)
  - .4 Identification and quantity of each shop drawing, product data and sample.
  - .5 Name, address and telephone numbers of supplier and manufacturer.
  - .6 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.

**1.3 Shop Drawings**

- .1 The term "Shop Drawings" shall mean any of the following:
  - .1 Original drawings or modified standard drawing prepared by the Contractor, or any of his subcontractors or equipment suppliers.

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SHOP DRAWING SAMPLES & MOCK-UPS

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- .2 Manufacturer's catalogue sheets, brochures, literature, performance charts and diagrams and similar documentation used to illustrate manufactured products.
- .2 Shop drawings shall clearly indicate details of construction of the work, including:
  - .1 Layout, showing dimensions, including identified field dimensions and clearances
  - .2 Setting or erection details
  - .3 Capacities
  - 4 Performance characteristics
- .3 Submit a minimum of six (6) copies of all shop drawings. After review, Engineer will distribute:
  - .1 One (1) copy to Engineer's files.
  - .2 Five (5) copies are to be retained by Contractor for future inclusion into Chapter 9 of Operations and Maintenance Manual. These copies are to be original manufacturer's brochures, etc., as specified in Section 01730 Operations and Maintenance Manual Section 2.4.6.

END OF SECTION

**PART 1 GENERAL**

**1.1 Section Includes**

- .1 Inspection and testing, administrative and enforcement requirements.

**1.2 Related Sections**

- .1 Section 01210 - Allowances
- .2 Section 01330 - Submittal Procedures

**1.3 Inspection**

- .1 Allow Engineer access to Work. If part of Work is in preparation at locations other than Place of Work, allow access to such Work whenever it is in progress.
- .2 Give timely notice requesting inspection if Work is designated for special tests, inspections or approvals by Engineer instructions, or law of Place of Work.
- .3 If Contractor covers or permits to be covered Work that has been designated for special tests, inspections or approvals before such is made, uncover such Work, have inspections or tests satisfactorily completed and make good such Work.
- .4 Engineer may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents

**1.4 Access to Work**

- .1 Allow inspection/testing agencies access to Work, off site manufacturing and fabrication plants.
- .2 Co-operate to provide reasonable facilities for such access.

**1.5 Rejected Work**

- .1 Remove defective Work, whether result of poor workmanship, use of defective products or damage and whether incorporated in Work or not, which has been rejected by Engineer as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
- .2 If in opinion of Engineer it is not expedient to correct defective Work or Work not performed in accordance with Contract Documents, Owner may deduct from Contract Price difference in value (amount shall be determined by Engineer) between Work performed and that called for by Contract Documents.

END OF SECTION

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TEMPORARY UTILITIES

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**PART 1        GENERAL**

**1.1            Section Includes**

- .1        Temporary utilities.

**1.2            Related Sections**

- .1        Section 01520 - Construction Facilities.
- .2        Section 01560 - Temporary Barriers and Enclosures.

**1.3            Installation and Removal**

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

**1.4            Dewatering**

- .1        Provide temporary drainage and pumping facilities to keep excavations and site free from standing water.

**1.5            Water Supply**

- .1        Arrange for connection with Hamlet and pay all costs for installation, maintenance and removal.
- .2        Pay for utility charges at prevailing rates.

**1.6            Temporary Heating and Ventilation**

- .1        Provide temporary heating required during construction period, including attendance, maintenance and fuel.
- .2        Provide temporary heat and ventilation in enclosed areas as required to:
  - .1        Facilitate progress of Work.
  - .2        Protect Work and products against dampness and cold.
  - .3        Prevent moisture condensation on surfaces.
  - .4        Provide ambient temperatures and humidity levels for storage, installation and curing of materials.
- .3        Pay costs for maintaining temporary heat, when using permanent heating system.
- .4        Maintain strict supervision of operation of temporary heating and ventilating equipment to:
  - .1        Conform to applicable codes and standards.
  - .2        Enforce safe practices.

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- .3 Prevent abuse of services.
- .4 Prevent damage to finishes.
- .5 Vent direct-fired combustion units to outside.

- .5 Be responsible for damage to Work due to failure in providing adequate heat and protection during construction.

### 1.7

#### **Temporary Power and Light**

- .1 Provide and pay for temporary power during construction for temporary lighting and operating of power tools
- .2 Arrange for connection with appropriate utility company. Pay all costs for installation, maintenance and removal.

### 1.8

#### **Fire Protection**

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

END OF SECTION

**PART 1 GENERAL****1.1 Section Includes**

- .1 Construction aids.
- .2 Parking.
- .3 Project identification.

**1.2 Related Sections**

- .1 Section 01510 - Temporary Utilities.
- .2 Section 01560 - Temporary Barriers and Enclosures.

**1.3 Installation and Removal**

- .1 Provide construction facilities in order to execute work expeditiously.
- .2 Remove from site all such work after use.

**1.4 Site Storage/Loading**

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

**1.5 Construction Parking**

- .1 Parking will be permitted at WTP and intake pumphouse site provided it does not disrupt performance of Work.
- .2 Provide and maintain adequate access to project site.

**1.6 Equipment, Tool and Materials Storage**

- .1 Provide and maintain, in a clean and orderly condition, lockable weatherproof sheds for storage of tools, equipment and materials.
- .2 Locate materials not required to be stored in weatherproof sheds on site in a manner to cause least interference with work activities.

**1.7 Sanitary Facilities**

- .1 Provide sanitary facilities for work force in accordance with governing regulations and ordinances.
- .2 Post notices and take such precautions as required by local health authorities. Keep area and premises in sanitary condition.

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CONSTRUCTION FACILITIES

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**1.8 Construction Signage**

- .1 Provide and erect, concurrent with delivery of materials, a project sign in a location designated by Consultant.
- .2 Construction sign 2438x 1219 mm, of wood frame and plywood construction painted with exhibit lettering produced by a professional sign painter.
- .3 Owner to provide sign FOB Yellowknife.
- .4 Contractor responsible to pick up and transport sign to work site.

END OF SECTION

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## SAFETY REQUIREMENTS

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### **PART 1      GENERAL**

#### **1.1      Construction Safety Measures**

- .1      Observe construction safety measures of the National Building Code 1995 Part 8, Territorial Government, Workers'/Workmen's Compensation Board and Municipal authority provided that in any case of conflict or discrepancy more stringent requirements shall apply.
- .2      Comply with the requirements of the Safety Act of the Nunavut Territories.

#### **1.2      Overloading**

- .1      Ensure no part of Work is subjected to loading that will endanger its safety or will cause permanent deformation.

#### **1.3      WHMIS**

- .1      Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, and storage, of hazardous materials; and regarding labeling of containers and provision of Material Safety Data Sheets (MSDS) acceptable to Labour Canada and Health and Welfare Canada.
- .2      Deliver copies of MSDS sheets to Engineer on delivery of materials.

#### **1.4      Sheeting and Shoring**

- .1      Provide sheeting and shoring as required for installation of underground works to provide construction safety for workmen in accordance with National and Territorial regulations.

#### **1.5      Propane Cylinders**

- .1      Propane cylinders shipped to site must be provided with a locked, tamper proof, closure cap for the operating valve.
- .2      Propane to be stored in accordance with Territorial regulations.

END OF SECTION

## TEMPORARY BARRIERS AND ENCLOSURES

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### **PART 1 GENERAL**

#### **1.1 Section Includes**

- .1 Barriers.
- .2 Environmental Controls.
- .3 Traffic Controls.
- .4 Fire Routes.

#### **1.2 Related Sections**

- .1 Section 01510 - Temporary Utilities.
- .2 Section 01520 - Construction Facilities.

#### **1.3 References**

- .1 Canadian General Standards Board (CGSB)
  - .1 CGSB 1.189M-84, Primer, Alkyd, Wood, Exterior.
  - .2 CGSB 1.59-97, Alkyd Exterior Gloss Enamel.
- .2 Canadian Standards Association (CSA)
  - .1 CSA-O121-M1978, Douglas Fir Plywood.

#### **1.4 Installation and Removal**

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

#### **1.5 Guard Rails and Barricades**

- .1 Provide secure, rigid guardrails and barricades around deep excavations, open shafts, open stairwells, open edges of floors and roofs.

#### **1.6 Weather Enclosures**

- .1 Provide weather tight closures to unfinished door and window openings, tops of shafts and other openings in floors and roofs.

#### **1.7 Access to Site**

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

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**1.8 Public Traffic Flow**

- .1 Provide and maintain competent signal flag operators, traffic signals, barricades and flares, lights, or lanterns as required to perform Work and protect the public.

**1.9 Fire Routes**

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

**1.10 Protection for Off-Site and Public Property**

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

END OF SECTION

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## ENVIRONMENTAL PROTECTION

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### **PART 1        GENERAL**

#### **1.1        Fires**

- .1        Fires and burning of rubbish on site is not permitted.

#### **1.2        Disposal of Wastes**

- .1        Do not bury rubbish and waste materials on site unless approved by Engineer.
- .2        Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.

#### **1.3        Drainage**

- .1        Provide temporary drainage and pumping as necessary to keep excavations and site free from water.
- .2        Do not pump water containing suspended materials into waterways, sewer or drainage systems.
- .3        Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

#### **1.4        Pollution Control**

- .1        Maintain temporary erosion and pollution control features installed under this contract.
- .2        Control emissions from equipment and plant to local authorities emission requirements.
- .3        Prevent sandblasting and other extraneous materials from contaminating air beyond application area, by providing temporary enclosures.
- .4        Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

END OF SECTION

## MATERIAL AND EQUIPMENT

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### **PART 1 GENERAL**

#### **1.1 General**

- .1 Use new material and equipment unless otherwise specified.
- .2 Provide material and equipment of specified design and quality, performing to published ratings and for which replacement parts are readily available.
- .3 Use products of one manufacturer for material and equipment of same type or classification unless otherwise specified.

#### **1.2 Manufacturers Instructions**

- .1 Unless otherwise specified, comply with manufacturer's latest printed instructions for materials and installation methods.
- .2 Notify Engineer in writing of any conflict between these specifications and manufacturers instructions. Engineer will designate which document is to be followed.

#### **1.3 Fastenings – General**

- .1 Provide metal fastenings and accessories in same texture, colour and finish as base metal in which they occur. Prevent electrolytic action between dissimilar metals. Use non-corrosive fasteners, anchors and spacers for securing exterior work.
- .2 Space anchors within limits of load bearing or shear capacity and ensure that they provide positive permanent anchorage. Wood plugs not acceptable.
- .3 Conceal fasteners where indicated. Space evenly and lay out neatly.
- .4 Fastenings which cause spalling or cracking are not acceptable.

#### **1.4 Fastenings – Equipment**

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

#### **1.5 Delivery and Storage**

- .1 Deliver, store and maintain packaged material and equipment with manufacturer's seals and labels intact.

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- .2 Prevent damage, adulteration and soiling of material and equipment during delivery, handling and storage. Immediately remove rejected material and equipment from site.
- .3 Store material and equipment in accordance with supplier's instructions.
- .4 Touch-up damaged factory finished surfaces to Engineer's satisfaction. Use primer or enamel to match original. Do not paint over nameplates.

### **PART 2 PRODUCTS**

#### **2.1 Materials**

- .1 Quality:
  - .1 Refer to GC 22.
  - .2 Unless otherwise stipulated elsewhere in the Contract Documents, the Contractor shall provide and pay for labour, products, tools, construction machinery and equipment, water, heat, light, power, transportation and other facilities and services necessary for the performance of the work in accordance with the Contract.
  - .3 Products, materials, equipment and articles (referred to as Products throughout the specifications) incorporated in the work shall be new, not damaged or defective, and of the best quality (compatible with specifications) for the purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
  - .4 Defective products, whenever identified prior to the completion of work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is a precaution against oversight or error. Remove and replace defective products at own expense and be responsible for delays and expenses caused by rejection.
  - .5 Should any dispute arise as to the quality or fitness of products, the decision rests strictly with the Engineer based upon the requirements of the Contract Documents.
  - .6 Unless otherwise indicated in the specifications, maintain uniformity of manufacture for any particular or like item.
- .2 Availability:
  - .1 Immediately upon signing Contract, review product delivery requirements and anticipate foreseeable supply delays for any items. If delays in supply of products are foreseeable, notify the Engineer of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of work.
  - .2 In the event of failure to notify the Engineer at commencement of work and should it subsequently appear that work may be delayed for such reason, the Engineer reserves the right to substitute more readily available products of similar character, at no increase in Contract Price.
- .3 Transportation:

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- .1 Pay costs of transportation and handling of products required in the performance of work.

### 2.2 Substitution

- .1 Further to Clause 6 of the Instructions to Tenderers:
  - .1 No substitutions will be permitted without prior written approval of Engineer.
  - .2 Proposals for substitution may only be submitted after award of contract. Such request must include statements of respective costs of items originally specified and the proposed substitution.
  - .3 Proposals will be considered by Engineer if:
    - .1 materials selected by tenderer from those specified, are not available;
    - .2 delivery date of materials selected from those materials specified would unduly delay completion of contract, or
    - .3 alternative material to those specified, which are brought to the attention of and considered by Engineer as equivalent to the material specified and will result in a credit to the Contract amount.
  - .4 Should proposed substitution be accepted either in part or in whole, assume full responsibility and costs when substitution affects other work on project. Pay for design or drawing changes required as result of substitution.
  - .5 Amounts of all credits arising from approval of substitutions will be determined by Engineer and Contract Price will be reduced accordingly.

END OF SECTION