

CONTENTS

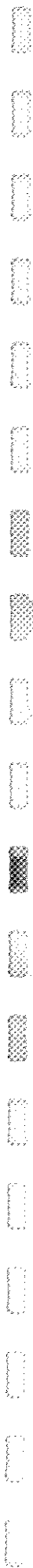
Section 01110	Summary of Work	1 to 2
Section 01200	Alternatives	1 to 2
Section 01310	Project Management and Coordination	1 to 4
Section 01320	Construction Progress Documentation	1 to 4
Section 01330	Submittal Procedures	1 to 3
Section 01340	Shop Drawings, Samples and Mock-ups	1 to 2
Section 01410	Regulatory Requirements	1
Section 01450	Quality Control	1 to 2
Section 01510	Temporary Utilities	1
Section 01520	Construction Facilities	1 to 2
Section 01545	Safety Requirements	1 to 2
Section 01560	Temporary Barriers and Enclosures	1
Section 01561	Environmental Protection	1 to 2
Section 01610	Basic Product Requirements	1 to 2
Section 01705	Health and Safety	1 to 2
Section 01721	Project Record Drawings	1 to 2
Section 01731	Operations and Maintenance Manual	1 to 3
Section 01770	Closeout Procedures	1 to 2
Section 01810	Commissioning	1 to 2
Section 01820	Demonstration and Training	1 to 2
Section 02072	Geotextiles	1 to 5
Section 02315	Excavating, Trenching and Backfilling	1 to 6
Section 02316	Rock Removal	1 to 2
Section 02317	Roadway Excavation, Embankment and Compaction	1 to 4
Section 02371	Rip-Rap	1

Government of Nunavut
P Lake Sewage Lagoon

Section 02379	Preservation of Water Courses	1
Section 02631	Manholes and Catch Basins	1 to 3
Section 02641	Pipe Culverts	1 to 4
Section 02661	Sewage Storage Lagoons	1 to 5
Section 02701	Aggregates: General	1 to 3
Section 02721	Granular Base	1 to 4
Section 02723	Granular Sub-Base	1 to 3
Section 02842	Steel Post Delineators	1 to 2
Section 02844	Steel W-Beam Guide Rail	1 to 2
Section 03302	Cast-in-place Concrete	1 to 2
Section 05500	Metal Fabrications	1 to 4
Section 06101	Rough Carpentry Short Form	1 to 2
Section 15011	High-Density Polyethylene Piping	1 to 2

SECTION 1 CONTENTS

Section 01110	Summary of Work	1 to 2
Section 01200	Alternatives	1 to 2
Section 01310	Project Management and Coordination	1 to 4
Section 01320	Construction Progress Documentation	1 to 4
Section 01330	Submittal Procedures	1 to 3
Section 01340	Shop Drawings, Samples and Mock-ups	1 to 2
Section 01410	Regulatory Requirements	1
Section 01450	Quality Control	1 to 2
Section 01510	Temporary Utilities	1
Section 01520	Construction Facilities	1 to 2
Section 01545	Safety Requirements	1 to 2
Section 01560	Temporary Barriers and Enclosures	1
Section 01561	Environmental Protection	1 to 2
Section 01610	Basic Product Requirements	1 to 2
Section 01705	Health and Safety	1 to 2
Section 01721	Project Record Drawings	1 to 2
Section 01731	Operations and Maintenance Manual	1 to 3
Section 01770	Closeout Procedures	1 to 2
Section 01810	Commissioning	1 to 2
Section 01820	Demonstration and Training	1 to 2



PART 1 GENERAL

1.1 Section Includes

- .1 Cape Dorset P-Lake Sewage Lagoon.
- .2 Work Covered by Contract Documents.
- .3 Contract Method.
- .4 Work by Others.
- .5 Contractor use of premises.

1.2 Work Covered by Contract Documents

- .1 Work of this Contract comprises general construction, located at Cape Dorset, Nunavut Territory; and further identified as:
 - .1 Site Clearing;
 - .2 Road Works;
 - .3 Berm Construction;
 - .4 Culvert supply and Installation.
 - .5 Discharge flume supply and installation
 - .6 Discharge piping and control structure supply and installation
 - .7 Road guardrails and delineators, supply and installation

1.3 Contract Method

- .1 Construct the Work under a single fixed price contract.
- .2 Payment will only be made for actual work completed and on materials complete and delivered to site in Cape Dorset NU.
- .3 Work to be completed prior to November 2006. Atmospheric temperatures in the winter months are expected to remain around minus forty degrees Celsius (-40°C).

1.4 Contractor Use of Premises

- .1 Contractor has unrestricted use of site.

PART 2 PRODUCTS

2.1 Not Used

- .1 Not used.

Government of Nunavut
P Lake Sewage Lagoon
Cape Dorset, NU
Contract #

Section 01110
Summary of Work
Page 2
November 2005

PART 3 EXECUTION

3.1 Not Used

.1 Not used.

END OF SECTION

PART 1 GENERAL

1.1 Section Includes

- .1 Product Installation Alternatives to Agreement.

1.2 Requirements

- .1 Referenced specification Sections stipulate pertinent requirements for products and methods to achieve the Work stipulated under each Alternative.
- .2 Coordinate affected related Work and modify surrounding Work to integrate the Work under each Alternative.

1.3 Award/Selection of Alternatives

- .1 Indicate variation of Bid Price for Alternatives described below and listed in Bid Form. Note that this form requests a 'difference' in Bid Price by adding to or deducting from the base Bid price.
- .2 Bids shall be evaluated on 'Base Bid' price. After determination of lowest Bidder, consideration will be given to Alternatives and Bid Price adjustments.

1.4 Alternatives

- .1 Further to Clause 8 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 may 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.

PART 2 PRODUCTS

2.1 Not Used

- .1 Not Used.

Government of Nunavut
P Lake Sewage Lagoon
Cape Dorset, NU
Contract #

Section 01200
Alternatives
Page 2
November 2005

PART 3 EXECUTION

3.1 Not Used

.1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 Section Includes

- .1 Coordination Work with other contractors.
- .2 Scheduled preconstruction and progress meetings.

1.2 Related Sections

- .1 Section 01110 - Summary of Work
- .2 Section 01810 - Commissioning.

1.3 Description

- .1 Coordination of progress schedules, submittals, use of site, temporary utilities, construction facilities, and construction Work, with progress of Work of other contractors under instructions of Engineer.
- .2 The following persons have been designated by the Department of Community and Government Services: Mr. Anjan Joshi, Project Officer, Projects, Pond Inlet, Nunavut, Ph: (867) 899-7312.

1.4 Construction Organization and Start-up

- .1 Within 15 days after award of Contract, attend a meeting of parties in contract to discuss and resolve administrative procedures and responsibilities.
- .2 Senior representatives of the Owner, Engineer, Contractor, Consultant, major Subcontractors, field inspectors and supervisors will be in attendance.
- .3 Meeting will be held in a location deemed suitable to all parties.
- .4 Agenda to include following:
 - .1 Appointment of official representative of participants in Work.
 - .2 Schedule of Work, progress scheduling.
 - .3 Schedule of submission of shop drawings, samples.
 - .4 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, fences.
 - .5 Delivery schedule of specified equipment.
 - .6 Site security in accordance with Section 01520 - Construction Facilities.
 - .7 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, and administrative requirements (GC).
 - .8 Record drawings in accordance with Section 01770 - Closeout Procedures.
 - .9 Maintenance in accordance with Section 01770 - Closeout Procedures.

- .10 Take-over procedures, acceptance, and warranties in accordance with Section 01770 - Closeout Procedures.
- .11 Monthly progress claims, administrative procedures, photographs, and holdbacks (GC).
- .12 Appointment of inspection and testing agencies or firms in accordance with Section 01450 - Quality Control.
- .13 Insurances and transcript of policies (GC).
- .5 Comply with Engineer's allocation of mobilization areas of site; for field offices and sheds, for access, and parking facilities.
- .6 During construction coordinate use of site and facilities through Engineer's procedures for intra-project communications: Submittals, reports and records, schedules, coordination of drawings, recommendations, and resolution of ambiguities and conflicts.
- .7 Comply with instructions of Engineer for use of temporary utilities and construction facilities.
- .8 Coordinate field engineering and layout work with Engineer.

1.5 On-Site Documents

- .1 Maintain at job site, one copy each of the following:
 - .1 Contract drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed shop drawings.
 - .5 Change orders.
 - .6 Other modifications to Contract.
 - .7 Field test reports.
 - .8 Copy of approved Work schedule.
 - .9 Manufacturers' installation and application instructions.
 - .10 Labour conditions and wage schedules.
 - .11 Approvals / Permits

1.6 Schedules

- .1 Submit preliminary construction progress schedule to Engineer coordinated with Engineer's project schedule.
- .2 After review, revise and resubmit schedule to comply with revised project schedule.
- .3 During progress of Work revise and resubmit as directed by Engineer.

1.7 Construction Progress Meetings

- .1 During course of Work, attend bi-weekly progress meetings.
- .2 Owner, Engineer, Consultant, Contractor and major subcontractors involved in Work are to be in attendance.
- .3 Notify parties a minimum of 5 days prior to meetings.
- .4 Record minutes of meetings and circulate to attending parties and affected parties not in attendance within 5 days after meeting.
- .5 Agenda to include following:
 - .1 Review, approval of minutes of previous meeting.
 - .2 Review of Work progress since previous meeting.
 - .3 Field observations, problems, conflicts.
 - .4 Problems which impede construction schedule.
 - .5 Review of off-site fabrication delivery schedules.
 - .6 Corrective measures and procedures to regain projected schedule.
 - .7 Revision to construction schedule.
 - .8 Progress schedule, during succeeding work period.
 - .9 Review submittal schedules; expedite as required.
 - .10 Maintenance of quality standards.
 - .11 Review proposed changes for affect on construction schedule and on completion date.
 - .12 Other business.

1.8 Closeout Procedures

- .1 Notify Engineer when Work is considered ready for Substantial Completion inspection.
- .2 In the event the facility is not ready for inspection or cannot be successfully commissioned on the date set for commissioning and the Contractor has not notified the Engineer in sufficient time to prevent unnecessary travel, the Contractor shall pay for travel and accommodation costs for subsequent trips by the Engineer and Owner and all of their agents and representatives.

PART 2 PRODUCTS

2.1 Not Used

- .1 Not Used.

Government of Nunavut
P Lake Sewage Lagoon
Cape Dorset, NU
Contract #

Section 01310
Project Management and Coordination
Page 4
November 2005

PART 3 EXECUTION

3.1 Not Used

.1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 Section Includes

- .1 Schedule, form, content.
- .2 Scheduled revisions.
- .3 Critical path scheduling.

1.2 Related Sections

- .1 Section 01770 - Closeout Procedures.

1.3 Schedules Required

- .1 Submit schedules as follows:
 - .1 Construction Progress Schedule.
 - .2 Submittal Schedule for Shop Drawings and Product Data.
 - .3 Submittal Schedule for Samples.
 - .4 Submittal Schedule for timeliness of Owner furnished Products.
 - .5 Product Delivery Schedule.
 - .6 Cash Allowance Schedule for purchasing Products.
 - .7 Shutdown or closure activity.
 - .8 Within ten working days after each March 31 and September 30 occurring between commencement of Work and final completion, and within ten working days after final completion, provide to Engineer:
 - .1 Statement of total person days of labour used on site in performance of Contract, including labour provided under sub-contracts, as of dates identified in General Conditions 23.1.
 - .2 Estimate of total value in dollars of material delivered to site and installed, including material provided and installed under sub-contracts, as of dates identified in General Conditions 23.1.

1.4 Format

- .1 Prepare schedule in form of a horizontal Gant bar chart.
- .2 Provide a separate bar for each major item of work trade or operation.
- .3 Split horizontally for projected and actual performance.
- .4 Provide horizontal time scale identifying first work day of each week.
- .5 Format for listings: chronological order of start of each item of work.

.6 Identification of listings: By Systems description.

1.5 Submission

- .1 Submit initial format of schedules within 15 working days after award of Contract.
- .2 Submit schedules in electronic format, forward through e-mail as pdf files.
- .3 Submit 2 copies to be retained by Engineer.
- .4 Engineer will review schedule and return review copy within 10 days after receipt.
- .5 Resubmit finalized schedule within 7 days after return of review copy.
- .6 Submit revised progress schedule with each application for payment.
- .7 Distribute copies of revised schedule to:
 - .1 Job site office.
 - .2 Subcontractors.
 - .3 Other concerned parties.
- .8 Instruct recipients to report to Contractor within 10 days, any problems anticipated by timetable shown in schedule.

1.6 Critical Path Scheduling

- .1 Include complete sequence of construction activities.
- .2 Include dates for commencement and completion of each major element of construction as follows.
 - .1 Site survey and layout
 - .2 Granular source permitting and development
 - .3 Site clearing.
 - .4 Road Works.
 - .5 Berm Construction.
 - .6 Culvert supply and Installation.
 - .7 Discharge flume supply and installation
 - .8 Discharge piping and control structure supply and installation
 - .9 Road guardrails and delineators, supply and installation
 - .10 Training and commissioning
- .3 Show projected percentage of completion of each item as of first day of month.
- .4 Indicate progress of each activity to date of submission schedule.
- .5 Show changes occurring since previous submission of schedule:

- .1 Major changes in scope.
- .2 Activities modified since previous submission.
- .3 Revised projections of progress and completion.
- .4 Other identifiable changes.
- .6 Provide a narrative report to define:
 - .1 Problem areas, anticipated delays, and impact on schedule.
 - .2 Corrective action recommended and its effect.
 - .3 Effect of changes on schedules of other prime contractors.

1.7 Progress Photographs

- .1 Sizes: Prints 100 x 150 mm.
- .2 Type: semi-matt colour with binding margin at one end.
- .3 Paper: single weight, mounted.
- .4 Number of prints required: 2 sets.
- .5 Identification: typewritten name and number of project and date of exposure on 25 x 50 mm white patch, reverse side.
- .6 Viewpoints: interior and exterior locations: viewpoints determined by Engineer.
- .7 Frequency: monthly with progress statement.
- .8 Submit all negatives of before final acceptance.
- .9 Insert negatives in envelopes and identify with name and number of project. Indicate exposure dates and view points of each frame of 35 mm film strips.

1.8 Submittals Schedule

- .1 Include schedule for submitting shop drawings, product data, samples.
- .2 Indicate dates for submitting, review time, resubmission time, last date for meeting fabrication schedule.
- .3 Include dates when delivery will be required for Owner-furnished products.
- .4 Include dates when reviewed submittals will be required from Consultant.

PART 2 PRODUCTS

2.1 Not Used

- .1 Not Used.

Government of Nunavut
P Lake Sewage Lagoon
Cape Dorset, NU
Contract #

Section 01320
Construction Progress Documentation
Page 4
November 2005

PART 3 EXECUTION

3.1 Not Used

.1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 Section Includes

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

1.2 Related Sections

- .1 Section 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 co-ordinated 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, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .7 Verify field measurements and affected adjacent Work are coordinated.
- .8 Contractor's responsibility for errors and omissions in submission is not relieved by 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 which are to be provided by Contractor to illustrate details of a portion of Work.

- .2 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been coordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .3 Allow 5 working 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, in duplicate, 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 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.

- .7 Operating weight.
- .8 Wiring diagrams.
- .9 Single line and schematic diagrams.
- .10 Relationship to adjacent work.
- .8 After Engineer's review, distribute copies.
- .9 Submit 8 prints of shop drawings for each requirement requested in specification Sections and as consultant may reasonably request.
- .10 Submit 8 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.
- .14 The review of shop drawings by the Engineer is for sole purpose of ascertaining conformance with general concept. This review shall not mean that the Engineer approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting all requirements of construction and Contract Documents. Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of all sub-trades.

PART 2 PRODUCTS

2.1 Not Used

- .1 Not Used.

PART 3 EXECUTION

3.1 Not Used

- .1 Not Used.

END OF SECTION

PART 1 GENERAL

1.1 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.

- .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 eight (8) copies of all shop drawings. After review, Engineer will distribute:
 - .1 Two (2) copy to Engineer's files.
 - .2 Six (6) Copies to be returned to the Contractor for inclusion within O&M manuals.
 - .3 The submissions of Shop Drawings to the Contractor is intended to supplement the O&M Manual and are not the sole intent of the six (6) copies. O&M Manual data and information shall conform to the requirements of Section 1731 – Operations and Maintenance Manual.

PART 2 PRODUCTS

2.1 Not Used

- .1 Not used.

PART 3 EXECUTION

3.1 Not Used

- .1 Not used.

END OF SECTION

PART 1 GENERAL

1.1 Section Includes

- .1 References and Codes.

1.2 References and Codes

- .1 Perform Work in accordance with National Building Code of Canada (NBC) including all amendments up to tender closing date and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply.
- .2 Meet or exceed requirements of:
 - .1 Contract documents.
 - .2 NU Public Health Act.
 - .3 Municipal Bylaws.
 - .4 Canadian Standards Association (CSA).
 - .5 Cold Regions Utilities Monograph.
 - .6 Water Supply for Public Fire Protection (Fire Underwriter's Survey).
 - .7 Nunavut Water Board
 - .8 Department of Fisheries and Oceans Canada (DFO)
 - .9 Indian and Northern Affairs Canada (INAC)

PART 2 PRODUCTS

2.1 Not Used

- .1 Not Used.

PART 3 EXECUTION

3.1 Not Used

- .1 Not Used.

END OF SECTION