

RETURN BIDS TO:
RETOURNER LES SOUMISSIONS À:
Bid Receiving Public Works & Government Services
Canada/Réception des soumissions Travaux publics et
Services gouvernementaux Canada
1713 Bedford Row
Halifax, N.S./Halifax, (N.E.)
B3J 1T3
Halifax
Bid Fax: (902) 496-5016

Revision to a Request for a Standing Offer
Révision à une demande d'offre à commandes
Regional Individual Standing Offer (RISO)
Offre à commandes individuelle régionale (OCIR)

The referenced document is hereby revised; unless
otherwise indicated, all other terms and conditions of the
Offer remain the same.

Ce document est par la présente révisé; sauf indication
contraire, les modalités de l'offre demeurent les mêmes.

Comments - Commentaires

Vendor/Firm Name and Address
Raison sociale et adresse du
fournisseur/de l'entrepreneur

Issuing Office - Bureau de distribution
Real Property Contracting
1713 Bedford Row
P.O. Box 2247/C.P.2247
Halifax, N.S./Halifax, (N.E.)
B3J 3C9
Halifax

Title - Sujet CONCRETE FLOOR/WALL SAWING	
Solicitation No. - N° de l'invitation W0102-12A128/A	Date 2012-06-11
Client Reference No. - N° de référence du client W0102-12-A128	Amendment No. - N° modif. 001
File No. - N° de dossier PWA-2-68012 (110)	CCC No./N° CCC - FMS No./N° VME
GETS Reference No. - N° de référence de SEAG PW-\$PWA-110-4893	
Date of Original Request for Standing Offer Date de la demande de l'offre à commandes originale 2012-06-07	
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2012-07-17	
Address Enquiries to: - Adresser toutes questions à: Collier, Susan	Buyer Id - Id de l'acheteur pwa110
Telephone No. - N° de téléphone (902) 496-5350 ()	FAX No. - N° de FAX (902) 496-5016
Delivery Required - Livraison exigée	
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:	
Security - Sécurité This revision does not change the security requirements of the Offer. Cette révision ne change pas les besoins en matière de sécurité de la présente offre.	

Instructions: See Herein

Instructions: Voir aux présentes

Acknowledgement copy required	Yes - Oui	No - Non
Accusé de réception requis	<input type="checkbox"/>	<input type="checkbox"/>
The Offeror hereby acknowledges this revision to its Offer. Le proposant constate, par la présente, cette révision à son offre.		
Signature	Date	
Name and title of person authorized to sign on behalf of offeror. (type or print) Nom et titre de la personne autorisée à signer au nom du proposant. (taper ou écrire en caractères d'imprimerie)		
For the Minister - Pour le Ministre		

Solicitation No. - N° de l'invitation

W0102-12A128/A

Amd. No. - N° de la modif.

001

Buyer ID - Id de l'acheteur

pwa110

Client Ref. No. - N° de réf. du client

W0102-12-A128

File No. - N° du dossier

PWA-2-68012

CCC No./N° CCC - FMS No/ N° VME

Amendement 001 est soulevée à intégrer ce qui suit:

insérer:

En vertu de l'annexe A - Énoncé des travaux

Ministère de la Défense nationale, devis de convention d'offre à commandes pour sciage de planchers et de murs de béton W0102-12A128, dossier n°L-G111-9900/1008

TOUTES LES AUTRES ET conditions restent les mêmes

DEPARTMENT OF NATIONAL DEFENCE



14 WING GREENWOOD

SPECIFICATION

CONCRETE CUTTING

14 WING GREENWOOD

GREENWOOD N.S.

CONTRACT MANAGER:
Mr. A MacDonald
Tel: 902-765-1494 Ext 1532

JOB NO. L-G111-9900/1008
CCID SOA A128

2012-03-18

PART 1 - GENERAL

- 1.1 DESCRIPTION OF WORK
- .1 Work of this Contract comprises the supply of all labour, materials and equipment and transportation to carryout all concrete and asphalt core drilling and saw cutting, located at 14 Wing Greenwood, Nova Scotia as indicated in specifications.
 - .2 Work of this Contract is located in an area where normal working hours are:
 - .1 0730 to 1600 hours, Monday to Friday inclusive.
 - .2 Work performed outside these hours to be approved by WCEO Representative.
- 1.2 CONTRACT METHOD
- .1 Construct Work under a single lump sum fixed price contract.
- 1.3 WORK SEQUENCE
- .1 Construct Work in stages to accommodate Owner's continued use of premises during construction.
 - .2 Maintain fire access/control.
 - .3 Work must be scheduled to maintain traffic along roadways at all times to allow for emergency vehicle access.
 - .4 At the pre-commencement meeting the Contractor will submit for approval a phased plan for construction indicating the work area and schedule for each phase.
- 1.4 CONTRACTOR USE OF PREMISES
- .1 Contractor has unrestricted use of site until Substantial Completion except as restricted by 14 Wing security requirements and hours of operation.
 - .2 Contractor shall restrict vehicle access to the site and limit other public access to the site using roadway barriers or other measures as required. Coordinate use of site under direction of WCEO Representative.
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- 1.4 CONTRACTOR USE OF PREMISES (Cont'd) .3 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.
- .4 Use of site for work and storage limited to the areas as directed by WCEO Representative.
- .5 Do not interfere with aerodrome aircraft landing, take-off, and marshalling activities.
- .6 Control Foreign Object Damage (FOD) on and around the work site.
- .7 At completion of operations condition of existing work: equal to or better than that which existed before new work started.
- 1.5 ALTERATIONS, ADDITIONS OR REPAIRS TO EXISTING BUILDING .1 Execute work with least possible interference or disturbance to building operations occupants, public and normal use of premises. Arrange with WCEO Representative to facilitate execution of work.
- 1.6 EXISTING SERVICES .1 Prior to commencing any excavation work notify WCEO Representative and establish location and state of buried utilities and structures. 14Wing to clearly mark such locations to prevent disturbances during work.
- .2 Where Work involves breaking into or connection to existing services, give WCEO Representative 14-day notice for necessary interruption of services throughout course of work.
- .3 Where unknown services are encountered, immediately advise WCEO Representative and confirm findings in writing.
- .4 Record locations of maintained, re-routed and abandoned service lines.
- 1.7 EXCAVATION PERMITS .1 Prior to commencing any excavation the Contractor is required to obtain an Excavation Permit through the WCEO Representative indicating all known buried utilities.
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- 1.8 ASBESTOS
DISCOVERY .1 Demolition of spray or trowel-applied asbestos can be hazardous to health. Should material resembling spray or trowel-applied asbestos be encountered in course of demolition work, stop work and notify WCEO Representative immediately. Do not proceed until written instructions have been received from WCEO Representative.
- 1.9 STANDARD
HOURS .1 The Contractor must maintain base hours for the work unless otherwise authorized by WCEO Representative. Work that involves temporary disruption of services will be scheduled through the WCEO Representative. Give WCEO Representative minimum 72 hours notice of any disruption of services.
- 1.10 WORK
SCHEDULE .1 Provide within 5 working days after Contract award, schedule showing anticipated progress stages and final completion of work within time period required by Contract documents.
- .2 Interim reviews of work progress based on work schedule will be conducted as decided by WCEO Representative and schedule updated by Contractor in conjunction with and to approval of WCEO Representative.
- 1.11 DOCUMENTS
REQUIRED .1 Maintain at job site, one copy each document as follows:
- .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Reviewed Shop Drawings.
 - .5 List of Outstanding Shop Drawings.
 - .6 Change Orders.
 - .7 Other Modifications to Contract.
 - .8 Field Test Reports.
 - .9 Copy of Approved Work Schedule.
 - .10 Health and Safety Plan and Other Safety Related Documents.
 - .11 Other documents as specified.
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1.12 IN-TRENCH
SURVEY

- .1 Conduct an in-trench survey to establish an accurate location of all underground sanitary services, storm drainage systems, water services, electrical services, specialty circuits, communication services, and fuel lines.
- .2 Data collection points for services in pipe or conduit shall be the center of pipe or conduit.
- .3 Data collection points of ducts and steam lines shall be adjacent edges of concrete duct.
- .4 Locate all abandoned, capped and existing exposed infrastructure within the trenched area.
- .5 Data collection points shall not exceed 10 meters on straight runs, 2 meter arcs shall not exceed 60 cm intervals, and 3 meter arcs shall not exceed 90 cm intervals.
- .6 Paint mark (water base) located services for inspection by WCEO Representative.
- .7 Services shall remain exposed until confirmation from the surveyor that data has been down loaded from the data collector and approval from WCEO Representative.
- .8 Survey shall be conducted using instrumentation to accuracy of 20 mm and supervised by a registered Nova Scotia Land Surveyor.
- .9 Survey shall be conducted using a data collection package and shall be tied in to a geodetic monument UTM, NAD 83, Zone 20.
- .10 Geodetic monument values and locations of the 14 Wing Greenwood Control Network will be provided by DND.
- .11 Upon completion of work provide locations in accordance with Section 01 78 00 - Closeout Submittals.

PART 2 - PRODUCTS

2.1 NOT USED .1 Not used.

PART 3 - EXECUTION

3.1 NOT USED .1 Not used.

PART 1 - GENERAL

- 1.1 Section Includes .1 Connecting to existing services.
- 1.2 Related Sections .1 Section 01 56 00 - Temporary Barriers and Enclosures.
.2 Section 01 35 35 - Special Procedures: DND Fire Safety Requirements.
- 1.3 Existing Services .1 Where Work involves breaking into or connecting to existing services, carry out Work at times directed by authorities having jurisdiction, with minimum of disturbance to aerodome activities.
.2 Before commencing work, establish location and extent of service lines in area of Work and notify WCEO Representative of findings.
.3 Submit schedule to and obtain approval from WCEO Representative for any shut-down or closure of active service or facility. Adhere to approved schedule and provide notice to affected parties.
.4 Where unknown services are encountered, immediately advise WCEO Representative and confirm findings in writing.
.5 Construct barriers in accordance with Section 01 56 00 - Temporary Barriers and Enclosures.
- 1.4 Hours of Work .1 Normal working hours at 14 Wing Greenwood are from 0730 hrs to 1600 hrs. Comply with hours of work at 14 Wing Greenwood.

PART 2 - PRODUCTS

Canadian National
14 Wing Greenwood NS.
Job No. L-G111-9900/1008

Work Restrictions

Section 01 14 00
Page 2
2012-03-18

PART 3 - EXECUTION

END

PART 1 - GENERAL

1.1 Section .1 Applications for payments.
Includes

1.2 Cost Breakdown .1 Before submitting first progress claim submit
breakdown of Contract price in detail as
directed by WCEO Representative. After
approval by WCEO Representative cost breakdown
will be used as basis for progress payment.

1.3 Measurement for .1 Notify WCEO Representative sufficiently in
Payment advance of operations to permit required
measurements for payment.

PART 2 - PRODUCTS

PART 3 - EXECUTION

PART 1 - GENERAL

- 1.1 Related Requirements Specified Elsewhere .1 Particular requirements for inspection and testing to be carried out by testing laboratory designated by WCEO Representative are specified under various sections.
- 1.2 Appointment and Payment .1 WCEO Representative will appoint and pay for services of testing laboratory except follows:
.1 Inspection and testing required by laws, ordinances, rules, regulations or orders of public authorities.
.2 Inspection and testing performed exclusively for Contractor's convenience.
.3 Tests specified to be carried out by Contractor under the supervision of WCEO Representative.
.4 Additional tests specified in the following paragraph.
.2 Where tests or inspections by designated testing laboratory reveal Work not in accordance with contract requirements, pay costs for additional tests or inspections as required by WCEO Representative to verify acceptability of corrected work.
- 1.3 Contractor's Responsibilities .1 Furnish labour, equipment and facilities to:
.1 Provide access to work to be inspected and tested.
.2 Facilitate inspections and tests.
.3 Make good Work disturbed by inspection and test.
.4 Provide storage on site for laboratory's exclusive use to store equipment and cure test samples.
.2 Notify WCEO Representative sufficiently in advance of operations to allow for assignment of laboratory personnel and scheduling of test.
.3 Where materials are specified to be tested, deliver representative samples in required quantity to testing laboratory.
.4 Pay costs for uncovering and making good Work that is covered before required inspection or
-

1.3 Contractor's .4 (Cont'd)
Responsibilities testing is completed and approved by WCEO
(Cont'd) Representative.

PART 2 - PRODUCTS

PART 3 - EXECUTION

PART 1 - GENERAL

- 1.1 Section Includes .1 Scheduled preconstruction, progress, meetings.
- 1.2 Related Sections .1 Section 01 11 00 - Summary of Work.
- 1.3 Description .1 Coordination of progress schedules, submittals, use of site, temporary utilities, construction facilities and construction Work, under instructions of WCEO Representative.
- 1.4 Project Meetings .1 WCEO Representative will schedule, administer, record, and distribute minutes of project meetings.
- .2 Representatives of the Contractor, major subcontractors, other subcontractors involved in work and others as required and decided upon by the WCEO Representative or Contractor are to be in attendance.
- 1.5 Construction Organization and Start-up .1 Within 7 working days after award of Contract, a meeting of parties in contract will be held to discuss and resolve administrative procedures and responsibilities, and review the design of this project.
- .2 Senior representatives of the Owner, WCEO Representative Contractor, major Subcontractors, field inspectors and supervisors will be in attendance.
- .3 WCEO Representative shall establish time and location of meeting and notify parties concerned minimum 7 working days before meeting.
- .4 Agenda to include following:
.1 Appointment of official representative of participants in Work.
-

- 1.5 Construction Organization and Start-up (Cont'd)
- .4 Agenda to include following: (Cont'd)
 - .2 Schedule of submission of design and shop drawings, samples, colour chips in accordance with Section 01 33 00 - Submittal Procedures.
 - .3 Requirements for temporary facilities, site sign, offices, storage sheds, utilities, in accordance with Section 01 51 00 - Temporary Utilities.
 - .4 Site security in accordance with Section 01 52 00 - Construction Facilities.
 - .5 Proposed changes, change orders, procedures, approvals required, mark-up percentages permitted, time extensions, overtime, and administrative requirements (GC).
 - .6 Record drawings in accordance with Section 01 78 00 - Closeout Submittals.
 - .7 Maintenance in accordance with Section 01 78 00 - Closeout Submittals.
 - .8 Take-over procedures, acceptance, and warranties in accordance with Section 01 77 00 - Closeout Procedures and 01 78 00 - Closeout Submittals.
 - .9 Monthly progress claims, administrative procedures, photographs, and holdbacks (GC).
 - .10 Appointment of inspection and testing agencies or firms in accordance with Section 01 45 00 - Quality Control.
 - .11 Insurances and transcript of policies (GC).
 - .5 Comply with WCEO Representative's allocation of mobilization areas of site; for field offices and sheds, for, access, traffic, and parking facilities.
 - .6 During construction coordinate use of site and facilities through WCEO Representative'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 WCEO Representative for use of temporary utilities and construction facilities.
 - .8 Coordinate field engineering and layout work with WCEO Representative.
-

- 1.6 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.
- 1.7 Schedules
- .1 Submit preliminary construction progress schedule in accordance with Section 01320 - Construction Progress Documents to WCEO Representative coordinated with WCEO Representative'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 WCEO Representative.
- 1.8 Construction Progress Meetings
- .1 During course of Work and up to two weeks prior to project completion WCEO Representative will schedule progress meetings bi-weekly or as required.
 - .2 Contractor, major subcontractors involved in work, WCEO Representative, Design Authority, and Owner are to be in attendance.
 - .3 WCEO Representative will notify parties minimum five working days prior to meetings.
 - .4 WCEO Representative will record minutes of meetings and circulate to attending parties and affected parties not in attendance within five working 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.
-

- 1.8 Construction Progress Meetings (Cont'd)
- .5 Agenda to include following: (Cont'd)
 - .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.
- 1.9 Submittals
- .1 Make submittal to WCEO Representative for review.
 - .2 Submit design and shop drawings, product data and samples in accordance with Section 01 33 00 for review for compliance with Contract Documents; for field dimensions and clearances, for relation to available space, and for relation to Work of other contracts. After review, revise and resubmit for transmittal to WCEO Representative.
 - .3 Submit requests for payment for review, and for transmittal to WCEO Representative.
 - .4 Submit requests for interpretation of Contract Documents, and obtain instructions through WCEO Representative.
 - .5 Process substitutions through WCEO Representative.
 - .6 Process change orders through WCEO Representative.
 - .7 Deliver closeout submittals for review and preliminary inspections, for transmittal to WCEO Representative.
- 1.10 Coordination Drawings
- .1 Provide information required by WCEO Representative for preparation of coordination drawings.
 - .2 Review and approve revised drawings for submittal to WCEO Representative.
-

1.11 Closeout
Procedures

- .1 Notify WCEO Representative when Work is considered ready for Substantial Performance.
- .2 Accompany WCEO Representative on preliminary inspection to determine items listed for completion or correction.
- .3 Comply with WCEO Representative's instructions for correction of items of Work listed in executed certificate of Substantial Performance and for access to Owner-occupied areas.
- .4 Notify WCEO Representative of instructions for completion of items of Work determined in WCEO Representative's Consultant's final inspection.

PART 2 - PRODUCTS

PART 3 - EXECUTION

PART 1 - GENERAL

- 1.1 Related Sections .1 Section 01 77 00 - Closeout Procedures.
- 1.2 Section Includes .1 Schedules, form, & contents.
.2 Scheduled revisions.
.3 Critical path scheduling.
- 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 Product Delivery Schedule.
.5 Shutdown or closure activity.
- 1.4 Format .1 Format for listings: Table of Contents of this specification chronological order of start of each item of work.
.2 Identification of listings: By specification Section numbers . Specification subjects Systems description.
.3 Prepare schedule in the form of a horizontal bar chart.
.4 Provide a separate bar for each activity.
.5 Provide horizontal time scale clearly identifying the first work day of each week.
- 1.5 Submission .1 Submit initial schedules within 10 working days after award of Contract.
.2 Submit two copies to the WCEO Representative.
.3 WCEO Representative will review schedule and return review copy within 5 days after receipt.
-

- 1.5 Submission (Cont'd)
- .4 Resubmit finalized schedule within 5 days after return of review copy.
 - .5 Submit revised progress schedules:
 - .1 Submit revised progress schedule with each application for payment and monthly.
 - .2 On request by WCEO Representative.
 - .6 Distribute schedule copies to:
 - .1 WCEO Representative.
 - .2 Subcontractors.
 - .3 Other concerned parties.
 - .7 Instruct recipients to report to the Contractor within 5 days, any problems anticipated by the timetable shown in the schedule.
- 1.6 Construction Progress Schedule
- .1 Include the complete sequence of construction activities.
 - .2 Include the dates for the commencement and completion of each activity of construction.
 - .3 Indicate percent progress of each activity to date of submission schedule.
 - .4 Indicate end of reporting month projected percentage of completion for each activity.
 - .5 Indicate schedule activity float times and project critical path.
 - .6 Show changes occurring since previous submission of schedule:
 - .1 Major changes in scope.
 - .2 Activities modified since previous submission.
 - .3 Revised progress projections and completion.
 - .4 Other identifiable changes.
 - .7 Provide a written account appended to the report to define:
 - .1 Problem areas, anticipated delays, and the impact on the schedule.
 - .2 Corrective action recommended and its effects.
 - .3 The effects of changes on the schedules of sub-contractors.
-

- 1.7 Submittals
Schedule
- .1 Include schedule for submitting shop drawings, product data, and samples.
 - .2 Indicate dates for submitting, review time, resubmission time, last date for meeting fabrication schedule.
 - .3 Include dates when reviewed submittals will be required from WCEO Representative.

PART 2 - PRODUCTS

PART 3 - EXECUTION

PART 1 - GENERAL

- 1.1 Section Includes
- .1 Shop drawings, and product data.
 - .2 Samples.
- 1.2 Related Sections
- .1 Section 01 45 00 - Quality Control.
 - .2 Section 01 78 00 - Closeout Submittals.
- 1.3 Administrative
- .1 Submit to WCEO Representative 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 WCEO Representative. 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 WCEO Representative, 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.
-

1.3 Administrative (Cont'd)

- .8 Contractor's responsibility for errors and omissions in submission is not relieved by WCEO Representative's review of submittals.
- .9 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by WCEO Representative 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. Indicate cross references to design drawings and specifications.
- .3 Allow 7 working days for WCEO Representative's review of each submission.
- .4 Adjustments made on shop drawings by Design Authority are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to WCEO Representative prior to proceeding with Work.
- .5 Make changes in shop drawings as WCEO Representative may require, consistent with Contract Documents. When resubmitting, notify WCEO Representative in writing of any revisions other than those requested.
- .6 Accompany submissions with transmittal letter, in quadruplicate, 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 with related specification sections.
 - .5 Other pertinent data.
- .7 Submissions shall include:
 - .1 Date and revision dates.
 - .2 Project title and number.

1.4 Shop Drawings .7
and Product Data
(Cont'd)

- Submissions shall include:(Cont'd)
- .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 Single line and schematic diagrams.
 - .8 Relationship to adjacent work.
 - .8 After WCEO Representative's review, distribute copies.
 - .9 Submit electronic copy of shop drawings for each requirement requested in specification Sections and as Design Authority may reasonably request.
 - .10 Submit electronic copy of product data sheets or brochures for requirements requested in specification Sections and as requested by WCEO Representative 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 WCEO Representative, 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.
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1.5 Samples

- .1 Submit for review samples in duplicate as requested in respective specification Sections. Label samples with origin and intended use.
- .2 Deliver samples prepaid to WCEO Representative's site office.
- .3 Notify WCEO Representative in writing, at time of submission of deviations in samples from requirements of Contract Documents.
- .4 Where colour, pattern or texture is criterion, submit full range of samples.
- .5 Adjustments made on samples by WCEO Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to WCEO Representative prior to proceeding with Work.
- .6 Make changes in samples which WCEO Representative may require, consistent with Contract Documents.
- .7 Reviewed and accepted samples will become standard of workmanship and material against which installed Work will be verified.

PART 2 - PRODUCTS

PART 3 - EXECUTION

PART 1 - GENERAL

- 1.1 Fire Department Briefing
- .1 WCEO Representative will coordinate arrangements for contractor to be briefed on Fire Safety at their pre-work conference by Fire Chief before any work is commenced.
 - .2 Permits are to be obtained for hot work and all hot work is to be closely coordinated with WCEO Representative.
- 1.2 Reporting Fires
- .1 Know location of nearest fire alarm box and telephone, including emergency phone number.
 - .2 Report immediately all fire incidents to Fire Department as follows:
 - .1 activate nearest fire alarm box; or
 - .2 telephone 911.
 - .3 Person activating fire alarm box will remain at box to direct Fire Department to scene of fire.
 - .4 When reporting fire by telephone, give location of fire, name or number of building and be prepared to verify the location.
- 1.3 Interior and Exterior Fire Protection and Alarm Systems
- .1 Fire protection and alarm system will not be:
 - .1 obstructed;
 - .2 shut-off; and
 - .3 left inactive at end of working day or shift without authorization from Fire Chief.
 - .2 Fire hydrants, standpipes and hose systems will not be used for other than fire-fighting purposes unless authorized by Fire Chief.
- 1.4 Fire Extinguishers
- .1 Supply fire extinguishers, as scaled by Fire Chief, necessary to protect work in progress and contractor's physical plant on site.
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- 1.6 Blockage of Roadways .1 Advise Fire Chief of any work that would impede fire apparatus response. This includes violation of minimum overhead clearance, as prescribed by Fire Chief, erecting of barricades and digging of trenches.
- 1.7 Smoking Precautions .1 Observe smoking regulations at all times.
- 1.8 Rubbish and Waste Materials .1 Rubbish and waste materials are to be kept to a minimum.
- .2 Burning of rubbish is prohibited.
- .3 Removal:
.1 Remove all rubbish from work site at end of work day or shift or as directed.
- .4 Storage:
.1 Store oily waste in approved receptacles to ensure maximum cleanliness and safety.
.2 Deposit greasy or oily rags and materials subject to spontaneous combustion in approved receptacles and remove as required in 1.8.3.1.
- 1.9 Flammable and Combustible Liquids .1 Handling, storage and use of flammable and combustible liquids are to be governed by the current National Fire Code of Canada.
- .2 Flammable and combustible liquids such as gasoline, kerosene and naphtha will be kept for ready use in quantities not exceeding 45 litres provided they are stored in approved safety cans bearing Underwriters Laboratory of Canada or Factory Mutual seal of approval. Storage of quantities of flammable and combustible liquids exceeding 45 litres for work purposes requires permission of Fire Chief.
- .3 Transfer of flammable and combustible liquids is prohibited within buildings or jetties.
- .4 Transfer of flammable and combustible liquids will not be carried out in vicinity of open flames or any type of heat-producing devices.
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1.9 Flammable and
Combustible Liquids
(Cont'd)

- .5 Flammable liquids having a flash point below 38°C such as naphtha or gasoline will not be used as solvents or cleaning agents.
- .6 Flammable and combustible waste liquids, for disposal, will be stored in approved containers located in a safe ventilated area. Quantities are to be kept to a minimum and Fire Department is to be notified when disposal is required.

1.10 Hazardous
Substances

- .1 Work entailing use of toxic or hazardous materials, chemicals and/or explosives, or otherwise creating hazard to life, safety or health, will be in accordance with National Fire Code of Canada.
- .2 Obtain from Fire Chief a "Hot Work" permit for work involving welding, burning or use of blow torches and salamanders, in buildings or facilities.
- .3 When Work is carried out in dangerous or hazardous areas involving use of heat, provide fire watchers equipped with sufficient fire extinguishers. Determination of dangerous or hazardous areas along with level of protection necessary for Fire Watch is at discretion of the Fire Chief. Contractors are responsible for providing fire watch service for work on a scale established and in conjunction with Fire Chief at pre-work conference.
- .4 Where flammable liquids, such as lacquers or urethanes are to be used, proper ventilation will be assured and all sources of ignition are to be eliminated. Fire Chief is to be informed prior to and at cessation of such work.

1.11 Questions
and/or
Clarification

- .1 Direct any questions or clarification on Fire Safety in addition to above requirements to Fire Chief.

1.12 Fire
Inspection

- .1 Site inspections by Fire Chief will be coordinated through WCEO Representative.
 - .2 Allow Fire Chief unrestricted access to work site.
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- 1.12 Fire Inspection (Cont'd)
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- .3 Co-operate with Fire Chief during routine fire safety inspection of work site.
 - .4 Immediately remedy all unsafe fire situations observed by Fire Chief.

PART 2 - PRODUCTS

PART 3 - EXECUTION

- 1 Fires .1 Fires and burning of rubbish on site not permitted.
- 2 Disposal of Wastes .1 Do not bury rubbish and waste materials on site unless approved by WCEO Representative.
- .2 Do not dispose of waste or volatile materials, such as mineral spirits, oil or paint thinner into waterways, storm or sanitary sewers.
- 3 Drainage .1 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.
- 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 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control for temporary roads.

PART 1 - GENERAL

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| <u>1.1 Section</u> | .1 | References and Codes. |
| <u>Includes</u> | .2 | Discovery of Asbestos. |
| <u>1.2 References and Codes</u> | .1 | National Building Code of Canada (NBC) 2010 including all amendments up to tender closing date. |
| | .2 | Specified standards, codes and referenced documents current edition including all amendments up to tender closing date. |
| | .3 | Perform Work in accordance with National Building Code of Canada (NBC) and other codes of provincial or local application provided that in case of conflict or discrepancy, more stringent requirements apply. |
| | .4 | Meet or exceed requirements of:
.1 Contract documents.
.2 Specified standards, codes and referenced documents. |
| <u>1.3 Construction Safety Measures</u> | .1 | Observe construction safety measures of National Building Code 2010 Part 8, Provincial Government, Workers'/Workmen's Compensation Board and municipal authority provided that in any case of conflict or discrepancy more stringent requirements shall apply. |
| | .2 | In event of conflict between any provisions of above authorities the most stringent provision will apply. |
| <u>1.4 Overloading</u> | .1 | Ensure no part of Work is subjected to loading that will endanger its safety or will cause permanent deformation. |
| <u>1.5 Scaffolding</u> | .1 | Design and construct scaffolding in accordance with CSA S269.2 |
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- 1.6 WHMIS .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada and Health and Welfare Canada.
- .2 Deliver copies of WHMIS data sheets to WCEO Representative on delivery of materials.
- 1.7 Hazardous Material Discovery .1 Asbestos: Demolition of spray or trowel-applied asbestos can be hazardous to health. Should material resembling spray or trowel-applied asbestos be encountered in course of demolition work, immediately stop work and notify WCEO Representative.
- 1.8 Building Smoking Environment .1 Comply with smoking restrictions.

PART 2 - PRODUCTS

PART 3 - EXECUTION

PART 1 - GENERAL

- 1.1 Section Includes .1 Inspection and testing, administrative and enforcement requirements.
- .2 Tests.
- .3 Mock-ups.
- 1.2 Related Sections .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 78 00 - Closeout Submittals.
- 1.3 Inspection .1 Allow WCEO Representative 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 WCEO Representative 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 WCEO Representative may order any part of Work to be examined if Work is suspected to be not in accordance with Contract Documents. If, upon examination such work is found not in accordance with Contract Documents, correct such Work and pay cost of examination and correction . If such Work is found in accordance with Contract Documents, WCEO Representative shall pay cost of examination and replacement.
- 1.4 Independent Inspection Agencies .1 Independent Inspection/Testing Agencies will be engaged by WCEO Representative for purpose of inspecting and/or testing portions of Work. Cost of such services will be borne by WCEO Representative.
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- 1.4 Independent Inspection Agencies (Cont'd)
- .2 Provide equipment required for executing inspection and testing by appointed agencies.
 - .3 Employment of inspection/testing agencies does not relax responsibility to perform Work in accordance with Contract Documents.
 - .4 If defects are revealed during inspection and/or testing, appointed agency will request additional inspection and/or testing to ascertain full degree of defect. Correct defect and irregularities as advised by WCEO Representative at no cost to WCEO Representative. Pay costs for retesting and reinspection.
- 1.5 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.
- 1.6 Procedures
- .1 Notify appropriate agency and WCEO Representative in advance of requirement for tests, in order that attendance arrangements can be made.
 - .2 Submit samples and/or materials required for testing, as specifically requested in specifications. Submit with reasonable promptness and in an orderly sequence so as not to cause delay in Work.
 - .3 Provide labour and facilities to obtain and handle samples and materials on site. Provide sufficient space to store and cure test samples.
- 1.7 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 WCEO Representative as failing to conform to Contract Documents. Replace or re-execute in accordance with Contract Documents.
 - .2 Make good other Contractor's work damaged by such removals or replacements promptly.
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- 1.8 Reports .1 Submit 4 copies of inspection and test reports to WCEO Representative.
- .2 Provide copies to Subcontractor of work being inspected or tested manufacturer or fabricator of material being inspected or tested.

PART 2 - PRODUCTS

PART 3 - EXECUTION

PART 1 - GENERAL

- 1.1 Section .1 Temporary utilities.
Includes
- 1.2 Related .1 Section 01 52 00 - Construction Facilities.
Sections .2 Section 01 56 00 - Temporary Barriers and Enclosures.
- 1.3 Water Supply .1 WCEO Representative will direct locations(s) available for connection to existing water supply.
.2 Water supply will be provided to the Contractor for this project at no cost to the contractor.
- 1.4 Temporary .1 Provide and pay for temporary telephone, fax, data hook up lines and equipment necessary for own use.
Communication Facilities
- 1.5 Fire Protection .1 Provide and maintain temporary fire protection equipment during performance of Work required by insurance companies having jurisdiction and governing codes, regulations and bylaws.
.2 Burning rubbish and construction waste materials is not permitted on site.

PART 2 - PRODUCTS

PART 3 - EXECUTION

PART 1 - GENERAL

- 1.1 PRECEDENCE .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.2 REFERENCES .1 Canadian Standards Association (CSA International)
.1 CAN/CSA-Z321-96, Signs and Symbols for the Occupational Environment.
.2 CAN/CSA-S269.2, Access Scaffolding for Construction Purposes.
- 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 SCAFFOLDING .1 Scaffolding in accordance with CAN/CSA-S269.2 and provincial regulations.
.2 Provide and maintain scaffolding, ladders, platforms and temporary stairs.
.3 Hoists to be installed and inspected per provincial regulations.
- 1.5 HOISTING .1 Provide, operate and maintain hoists cranes required for moving of workers, materials and equipment. Make financial arrangements with Subcontractors for use thereof.
.2 Hoists cranes shall be operated by qualified operator.
- 1.6 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.
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- 1.7 CONSTRUCTION PARKING
- .1 Parking will be limited to Contractor vehicles and equipment required to carry out work only, provided it does not disrupt performance of Work.
 - .2 Provide and maintain adequate access to project site.
- 1.8 SECURITY
- .1 Provide and pay for responsible security personnel to guard site and contents of site after working hours and during holidays. Such personnel are to be approved through the Enhanced Reliability Check (ERC) process .
- 1.9 OFFICES
- .1 Provide for the use of WCEO an office heated to 22°C, air conditioned to 25°C, lighted 750 lx and ventilated, of sufficient size to accommodate site meetings and furnished with drawing laydown table.
 - .2 Provide a clearly marked and fully stocked first-aid case in a readily available location.
 - .3 Contractors and Subcontractors may provide their own offices as necessary. Direct location of these offices.
- 1.10 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.
- 1.11 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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- 1.12 CONSTRUCTION SIGNAGE .1 No other signs or advertisements, other than warning signs, are permitted on site.
- .2 Signs and notices for safety and instruction shall be in both official languages Graphic symbols shall conform to CAN3-Z321.
- .3 Maintain approved signs and notices in good condition for duration of project, and dispose of off site on completion of project or earlier if directed by WCEO Representative.

PART 2 - PRODUCTS

- 2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

- 3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

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|-------------------------------------|----|---|
| <u>1.1 Related Sections</u> | .1 | Section 01 51 00 - Temporary Utilities. |
| | .2 | Section 01 52 00 - Construction Facilities. |
| <u>1.2 Installation and Removal</u> | .1 | Provide temporary controls in order to execute Work expeditiously. |
| | .2 | Remove from site all such work after use. |
| <u>1.3 Guards and Barriers</u> | .1 | Provide secure, rigid guards and barricades around deep excavations. |
| <u>1.4 Access to Site</u> | .1 | If authorized to use existing roads for access to project site, maintain such roads for duration of Contract and make good damage resulting from Contractors' use of roads. Control Foreign Object Damage (FOD) at all times. |
| | .2 | Clean roadways and parking areas where used by Contractor's equipment. Control Foreign Object Damage (FOD) at all times. |
| <u>1.5 Weather Enclosures</u> | .1 | Provide weather tight closures as required. |
| | .2 | Design enclosures to withstand wind pressure and snow loading. |
| | .3 | Repair all weather damage to existing building and make good to the full satisfaction of the WCEO Representative. |
| <u>1.6 Dust Controls</u> | .1 | Provide dust tight screens to localize dust generating activities when working in occupied areas. |
| | .2 | Provide protection of existing furnishings and personal property. |
| | .3 | Provide exhaust fans ducted to the exterior as required to prevent the transmission of |
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- 1.6 Dust Controls (Cont'd)
- .3 (Cont'd)
dust and odours from insulation, paint and other volatile liquids from the area of work to adjacent occupied areas.
 - .4 Maintain and relocate protection until such work is complete.
- 1.7 Protection of Building Finishes
- .1 Provide protection for finished and partially finished building finishes and equipment during performance of Work.
 - .2 Provide necessary screens, barriers, covers, chutes and hoardings.
 - .3 Be responsible for damage incurred due to lack of or improper protection.
- 1.8 Interior Barriers
- .1 In order to maintain continued occupancy of the existing building during the renovation work, the General Contractor is required to comply with the Canadian Forces Fire Marshall Operating Guidelines (FMOG-ENG-4005). These include, but are not limited to the following:
 - .1 Construction area shall be kept separate from occupied areas by a minimum 1-hour fire separation, in both the vertical and horizontal directions.
 - .2 Existing building life safety systems must be operational throughout construction.
 - .2 The General Contractor is required to submit for review and approval, a fire safety plan for the partially occupied portions of the building.

PART 2 - PRODUCTS

PART 3 - EXECUTION

- 1 References .1 Nova Scotia Provincial Department of Environment's "Handbook for Construction Sites" most recent edition.
- 2 Erosion and Sedimentation Control Plan .1 No work on site is to commence until the Contractor has submitted a marked up site plan and detailed scope indicating the Contractor's plan for protecting the site from erosion and Sedimentation migration and/or concerns.
- .2 Plan is to be reviewed by Engineer prior to the start of any work. Allow 5 days for Engineer to review.
- 3 Definitions .1 **Sediment:** soils and other surficial materials transported by surface water as a product of erosion.
- .2 **Erosion:** the process by which the ground surface is worn away by the action of wind and/or water. Detachment of soil particles by erosion agents, principally water, wind, ice and gravity.
- .3 **Watercourse:** any natural or improved stream, river, creek, brook, ditch, channel, canal, conduit, culvert, drain, gully, swale or wash in which waters flow either continuously or intermittently. Same as defined in the Nova Scotia Water Act and in CEPA.
- .4 **Stripping:** any activity which removes or significantly disturbs the vegetative surface cover including clearing, grubbing of stumps and root material 1 and top soil removal.
- .5 **Filter Fabric:** a synthetic material of woven or non-woven plastic description. Its purpose is to allow water to filter through while retaining fine soil particles and preventing them from being washed away.
- 4 General .1 Preserve all features of natural channels or watercourses. Any channel alteration(s) requires a permit from the Department of Environment.
- .2 Immediately after grading is complete establish permanent vegetation and surface
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- 4 General (Cont'd)
- .2 (Cont'd)
cover, and erosion controls in the area of construction.
 - .3 Capture and filter all surface run-off from exposed soils.
 - .4 Silt and sedimentation control installation to be in a timely fashion and maintained regularly to ensure intended results.
 - .5 Provide berms, sedimentation basins, traps and vegetative or screen filters to control sediments.
 - .6 Prevent erosion at source.
- 5 Protection
- .1 Work is not to proceed on the construction site until the sequence of construction has been decided on for all phases, the timing of work, the planning and provision of sedimentation controls are in place, the monitoring of controls and timings are approved by the Engineer.
 - .2 Perform a routine end of the day check to ensure all control practices are properly installed and in working order.
 - .3 Identify and protect catch basins or storm water receptors from being contaminated with sedimentation in areas of work and in a manner and schedule as approved by Engineer.
- 7 Filter Fabric Barrier
- .1 Use this type of barrier to be considered as temporary. Filter fabric barrier is more commonly referred to as a silt fence. Use to be limited to situations in which only sheet or overland flows are expected or there is that possibility during any phases of construction.
 - .2 Filter barriers are not to be used in a natural watercourse.
 - .3 For installation excavate a 100mm wide x 100 mm deep trench in a crescent shape across the flow path with ends pointing up slope.
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- 7 Filter Fabric Barrier (Cont'd)
- .4 Set wood stakes 50 mm square spaced 1 metre apart, securely into the ground along the downslope side of the trench.
 - .5 Install the filter fabric, cutting it to the desired and in the longest practical continuous piece as possible to avoid seams. All seamed areas to be overlapped by at least two stakes in and backed with straw bales.
 - .6 Staple the filter fabric to the upstream side of the stakes extending the bottom 200 mm into the trench.
 - .7 The filter fabric not to exceed 900 mm in height.
 - .8 Backfill using excavated trench materials and compact the soil in the trench over the bottom of the filter fabric.
 - .9 Clean out accumulated sediment at regular intervals and after severe rainstorms and promptly repair the barrier if undercutting or end flow has occurred.
 - .10 Remove the barrier once construction work has been completed and the area is stabilized with vegetation or hard cover.

PART 2 PRODUCTS .1 NOT USED

PART 3 EXECUTION .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 Related Sections
- .1 Section 01 45 00 - Quality Control.
- 1.3 Reference Standards
- .1 If there is question as to whether any product or system is in conformance with applicable standards, WCEO Representative reserves right to have such products or systems tested to prove or disprove conformance.
 - .2 The cost for such testing will be born by WCEO Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.
 - .3 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.
- 1.4 Quality
- .1 Products, materials, equipment and articles (referred to as products throughout specifications) incorporated in Work shall be new, not damaged or defective, and of best quality (compatible with specifications) for purpose intended. If requested, furnish evidence as to type, source and quality of Products provided.
 - .2 Defective products, whenever identified prior to completion of Work, will be rejected, regardless of previous inspections. Inspection does not relieve responsibility, but is precaution against oversight or error. Remove and replace defective products at own expense
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- 1.4 Quality (Cont'd)
- .2 (Cont'd)
and be responsible for delays and expenses caused by rejection.
 - .3 Should any dispute arise as to quality or fitness of products, decision rests strictly with WCEO Representative based upon requirements of Contract Documents.
 - .4 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
 - .5 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.
- 1.5 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 WCEO Representative of such, in order that substitutions or other remedial action may be authorized in ample time to prevent delay in performance of Work.
 - .2 In event of failure to notify WCEO Representative at commencement of Work and should it subsequently appear that Work may be delayed for such reason, WCEO Representative reserves right to substitute more readily available products of similar character, at no increase in Contract Price or Contract Time.
- 1.6 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.
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- 1.6 Storage, Handling and Protection (Cont'd)
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.
 - .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
 - .6 Store sheet materials, lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
 - .7 Store and mix paints in 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 WCEO Representative.
 - .9 Touch-up damaged factory finished surfaces to WCEO Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.
- 1.7 Transportation
- .1 Pay costs of transportation of products required in performance of Work.
- 1.8 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 WCEO Representative in writing, of conflicts between specifications and manufacturer's instructions, so that WCEO Representative may establish course of action.
 - .3 Improper installation or erection of products, due to failure in complying with these requirements, authorizes WCEO Representative to require removal and re-installation at no increase in Contract Price or Contract Time.
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- 1.9 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 WCEO 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. WCEO 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 WCEO Representative, whose decision is final.
- 1.10 Co-Ordination .1 Ensure cooperation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.
- 1.11 Fastenings .1 Provide metal fastenings and accessories in same texture, colour and finish as adjacent materials, unless indicated otherwise.
- .2 Prevent electrolytic action between dissimilar metals and materials.
- .3 Use non-corrosive hot dip galvanized steel fasteners and anchors for securing exterior work, unless stainless steel or other material is specifically requested in affected specification Section.
- .4 Space anchors within individual load limit or shear capacity and ensure they provide positive permanent anchorage. Wood, or any other organic material plugs are not acceptable.
- .5 Keep exposed fastenings to a minimum, space evenly and install neatly.
- .6 Fastenings which cause spalling or cracking of material to which anchorage is made are not acceptable.
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- 1.12 Protection of Work in Progress
- .1 Adequately protect Work completed or in progress. Work damaged or defaced due to failure in providing such protection is to be removed and replaced, or repaired, as directed by WCEO Representative, at no increase in Contract Price or Contract Time.
 - .2 Prevent overloading of any part of building. Do not cut, drill or sleeve any load bearing structural member without written approval of WCEO Representative unless specifically indicated.

PART 2 - PRODUCTS

- 2.1 Contractor's Options for Selection of Materials for Tendering
- .1 Materials specified by referenced standard, select any material that meets or exceeds the specified standard.
 - .2 Where materials are required to be listed on the "Canadian General Standards Board, Qualified Products List" select any manufacturer so listed.
 - .3 Materials specified by "Prescriptive" or "Performance" specification, select any material meeting or exceeding specification.
 - .4 When materials are specified by a Standard, Prescriptive or Performance specifications, upon request of the WCEO Representative, obtain from manufacturer an independent testing laboratory reporting, showing that the material or equipment meets or exceeds the specified requirements.
 - .5 The design and drawings are based upon the acceptable materials, or products. The acceptable materials, or products may not be identical in all aspects. A later claim by the Contractor for an addition to the contract price because of changes in work necessitated by use of acceptable materials, or products shall not be considered.

PART 3 - EXECUTION

PART 1 - GENERAL

- 1.1 SUBMITTALS
- .1 Submit to WCEO Representative copies of the following documents, including updates issued:
 - .1 Health and Safety Program as indicated in paragraph 1.9, prior to commencement of work on the work site.
 - .2 Reports or directions issued by authorities having jurisdiction, immediately upon issuance from that authority.
 - .3 Accident or Incident Reports, within 24 hrs of occurrence.
 - .2 Submit other data, information and documentation upon request by the WCEO Representative as stipulated elsewhere in this section.
- 1.2 COMPLIANCE REQUIREMENTS
- .1 Comply with the latest edition of the Occupational Health and Safety Act, and the Regulations made pursuant to the Act.
 - .2 Observe and enforce construction safety measures required by:
 - .1 National Building Code of Canada (latest edition).
 - .2 Provincial Worker's Compensation Board.
 - .3 Municipal statutes and ordinances.
 - .4 DND General Safety Handbook Version 2 2003.
 - .3 In event of conflict between any provisions of above authorities the most stringent provision shall apply.
 - .4 Provide and maintain Worker's Compensation Board coverage for all employees for the duration of the contract. Prior to commencement of the work, at the time of Interim Completion and prior to final payment, provide to the Engineer a letter of Clearance from the Workers' Compensation Board indicating that the Contractor's account is in good standing.
 - .1 Should the Contractor be a sole proprietor, provide documented proof in a form acceptable to the WCEO Representative, of an alternative means of personal coverage that meets or exceeds the requirements set out above for Worker's Compensation Board Coverage.
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- 1.3 RESPONSIBILITY .1 The Contractor is responsible for safety of persons and property on the work site and for protection of federal employees and the general public circulating adjacent to work site operations to extent that they may be affected by conduct of work.
- .2 The Contractor is to enforce compliance by workers and other persons granted access to work site with safety requirements of Contract Documents, applicable federal, provincial, and local statues, regulations, and ordinances, and with the Contractor's Health and Safety Program.
- .3 Should an unforeseen or peculiar safety related hazard or condition become evident during performance of work, immediately take measures to rectify the situation and prevent damage or harm. Advise the WCEO Representative verbally and in writing of the hazard or condition.

- 1.4 SITE CONTROL AND ACCESS .1 Control all work site access points and work site activities. Delineate and isolate the work site from adjacent and surrounding areas by use of appropriate means of maintain control of all work site access points.
- .2 Make provisions for granting permission to access onto work site to all persons who require access. Procedures for granting permission to access are to be in accordance with the Nova Scotia Occupational Health and Safety Act, and the Regulations made pursuant to the Act and the Contractor's Health and Safety Program.
- .3 Ensure persons granted access to the work site are in possession of and wear the minimum personal protective equipment (PPE) designated by the Contractor's Health and Safety Program. Ensure persons granted access to the work site are provided with, trained in the use of, and wear, appropriate PPE that are required above and beyond the designated minimums previously noted and as specifically related to the work site activity that they are involved in. Be responsible for the efficacy of the PPE that is provided above and beyond the designated minimums.
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1.4 SITE CONTROL
AND ACCESS
(Cont'd)

- .4 Erect signage at access points and at other strategic locations around the work site clearly identifying the work site area(s) as being "off-limits" to non-authorized persons. Signage must be professionally made with well understood graphic symbols and is not to be used as advertising but for the specific use as related to site safety and key contact information.
- .1 Information to be provided on the signage is as follows: Project Name/Description: Contractor Company Name: Project Superintendent's Name/Phone No.: WCEO Point of Contract name/Phone No.:
- .5 Secure the work site at all times to protect against un-authorized access.

1.5 FILING
OF NOTICE

- .1 File Notice of Project and any other required Notices with the Provincial Authorities prior to commencement of the work. Provide the WCEO Representative with a copy of the filed Notice(s) prior to commencement of the work.

1.6 PERMITS

- .1 Obtain permits, licenses and compliance certificates at appropriate times and frequencies as required by the authorities having jurisdiction.
- .2 Post all permits, licenses and compliance certificates on work site and provide copies to the WCEO Representative.

1.7 PROJECT/
SITE CONDITIONS

- .1 The following are the known hazardous substances and/or hazardous conditions at the work site which shall be considered as health or environmental hazards and shall be properly managed should they be encountered as part of the work:
- .1 All Telecom and Electrical manholes are considered confined spaces.
- .2 Contractors are required to be aware of the known hazardous substances and/or hazardous conditions and are to include in their tender price all work associated in working with, in and around the hazards.
- .2 The above lists shall not be construed as being complete and inclusive of all safety and
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1.7 PROJECT/
SITE CONDITIONS
(Cont'd)

- .2 (Cont'd)
health hazards encountered as a result of Contractor's operations during the course of work. Include above items into the hazard assessment program specified herein.

1.8 MEETINGS

- .1 Prior to commencement of work attend a pre-commencement meeting conducted by WCEO Representative. Ensure minimum attendance by contractor's site superintendent. WCEO Representative will advise of time, date and location of the meeting and will be responsible for recording and distributing the minutes.
- .2 Conduct site specific occupational health and safety meetings as required by the Nova Scotia Occupational Health and Safety Act, and the Regulations made pursuant to the Act.
- .3 Record and post minutes of all meetings in plain view on the work site. Make copies available to WCEO Representative upon request.

1.9 HEALTH AND
SAFETY PROGRAM

- .1 Contractors are required under Nova Scotia Occupational Health and Safety Act, and the Regulations made pursuant to the Act to have in place a Health and Safety Program. Compliance requirements for the content, detail and implementation of the program resides with the provincial authority. For the purpose of this contract the Health and Safety Program shall include a site-specific Health and Safety Plan that acknowledges, assesses and addresses the hazardous substances and/or hazardous conditions known and identified in paragraph 1.7 above, and on-going hazard assessments performed during the progress of work identifying and documenting new or potential health risks and safety hazards not previously known and identified.
- .2 Provide one copy of the Health and Safety Program to the WCEO Representative prior to commencement of work on the work site. The copy provided to the WCEO Representative is for the purpose of review against the contract requirements related to the known hazardous substances and/or hazardous conditions. The review is not to be construed to imply approval by the WCEO Representative that the
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1.9 HEALTH AND SAFETY PROGRAM (Cont'd)

- .2 (Cont'd)
program is complete, accurate and legislatively compliant with the Nova Scotia Occupational Health and Safety Act, and the Regulations made pursuant to the Act, and shall not relieve the Contractor of their legal obligations under such legislation.

1.10 ACCIDENT REPORTING

- .1 Investigate and report incidents and accidents as required by Nova Scotia Occupational Safety and Health Act, and the Regulations made pursuant to the Act.
- .2 For the purpose of this contract immediately investigate and provide a report to the WCEO Representative on incidents and accidents that involve:
- .1 A resulting injury that may or may not require medical aid but involves lost time at work by the injured person(s).
 - .2 Exposure to toxic chemicals or substances.
 - .3 Property damage.
 - .4 Interruption to adjacent and/or integral infrastructure operations with potential loss implications.
- .3 In the investigation and reporting of incidents and accidents, the Contractor is required to respond in a timely fashion to correct the action that was deemed to have caused the incident and/or accident and advise in writing on the action taken to prevent a re-occurrence of the incident and/or accident.

1.11 RECORDS ON SITE

- .1 Maintain on site a copy of the safety documentation as specified in this section and any other safety related reports and documents issued to or received from the authorities having jurisdiction.
- .2 Upon request, make copies available to the WCEO Representative.

1.12 BLASTING

- .1 Blasting or other use of explosives is not permitted.
-

- 1.13 WHMIS .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handing, storage, and disposal of hazardous materials; and regarding labelling and provision of material safety data sheets acceptable to Labour Canada and Health and Welfare Canada.
- .2 Deliver copies of WHMIS data sheets to WCEO Representative on delivery of materials.

PART 2 - PRODUCTS

- 2.1 NOT USED .1 Not Used.

PART 3 - EXECUTION

- 3.1 NOT USED .1 Not Used.

PART 1 - GENERAL

- | | | |
|---|----|---|
| <u>1.1 Related
Sections</u> | .1 | Section 01 32 00 - Construction Progress
Documentation. |
| <u>1.2 Existing
Services</u> | .1 | Before commencing work, establish location
and extent of service lines in area of Work
and notify Engineer of findings. |
| <u>1.3 Location of
Equipment and
Fixtures</u> | .1 | Location of equipment and fixtures indicated
or specified are to be considered as
approximate. |
| | .2 | Inform Engineer of impending installation and
obtain approval for actual location. |
| | .3 | Submit field drawings to indicate relative
position of various services and equipment
when required by Engineer. |
| <u>1.4 Records</u> | .1 | Maintain a complete, accurate log of control
work as it progresses. |
| <u>1.5 Submittals</u> | .1 | On request of Engineer, submit documentation
to verify accuracy of field engineering work. |

PART 2 - PRODUCTS

PART 3 - EXECUTION

PART 1 - GENERAL

- 1.1 Section .1 Progressive cleaning.
Includes .2 Final cleaning.
- 1.2 Related Section .1 Section 01 77 00 - Closeout Procedures.
- 1.3 Project Cleanliness .1 Maintain Work in tidy condition, free from accumulation of waste products and debris.
.2 Remove waste materials from site at regularly scheduled times or dispose of as directed by WCEO Representative. Do not burn waste materials on site.
.3 On a regular basis, and as directed by WCEO Representative, thoroughly clean work and adjacent site areas using magnetic pick-up to positively keep areas free of metallic objects.
.4 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
.5 Provide on-site containers for collection of waste materials and debris.
.6 Remove waste material and debris from site and deposit in waste container at end of each working day.
.7 Dispose of waste materials and debris off site in approved areas.
.8 Clean areas prior to start of finish work, and maintain areas free of dust and other contaminants during finishing operations.
.9 Store volatile waste in covered metal containers, and remove from premises at end of each working day.
.10 Provide adequate ventilation during use of volatile or noxious substances.
-

- 1.3 Project Cleanliness (Cont'd)
- .11 Use only cleaning materials recommended by manufacturer of surface to be cleaned, and as recommended by cleaning material manufacturer.
 - .12 Schedule cleaning operations so that resulting dust, debris and other contaminants will not fall on wet, newly painted surfaces nor contaminate building systems.
- 1.4 Final Cleaning
- .1 When Work is Substantially Performed, remove surplus products, tools, construction machinery and equipment not required for performance of remaining Work.
 - .2 Remove waste products and debris other than that caused by others, and leave Work clean and suitable for occupancy.
 - .3 Prior to final review, remove surplus products, tools, construction machinery and equipment.
 - .4 Remove waste products and debris.
 - .5 Remove waste materials from site at regularly scheduled times or dispose of as directed by WCEO Representative. Do not burn waste materials on site.
 - .6 Make arrangements with and obtain permits from authorities having jurisdiction for disposal of waste and debris.
 - .7 Remove stains, spots, marks and dirt from finished surfaces.
 - .8 Broom clean and wash exterior walks, steps and surfaces; rake clean other surfaces of grounds.
 - .9 Remove dirt and other disfiguration from exterior surfaces.
 - .10 Sweep and wash clean paved areas.

PART 2 - PRODUCTS

Canadian National Cleaning
14 Wing Greenwood NS.
Job No. L-G111-9900/1008

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PART 3 - EXECUTION

PART 1 - GENERAL

- 1.1 SECTION INCLUDES .1 Text, schedules and procedures for systematic Waste Management Program for construction, deconstruction, demolition, and renovation projects, including:
.1 Materials Source Separation Program (MSSP).
- 1.2 RELATED SECTIONS .1 Section 01 33 00 - Submittal Procedures.
- 1.3 PRECEDENCE .1 For Federal Government projects, Division 1 Sections take precedence over technical specification sections in other Divisions of this Project Manual.
- 1.4 DEFINITIONS .1 Materials Source Separation Program (MSSP): Consists of series of ongoing activities to separate reusable and recyclable waste material into material categories from other types of waste at point of generation.
- .2 Recyclable: Ability of product or material to be recovered at end of its life cycle and re-manufactured into new product for reuse by others.
- .3 Recycle: Process by which waste and recyclable materials are transformed or collected for purpose of being transferred into new products.
- .4 Recycling: Process of sorting, cleansing, treating and reconstituting solid waste and other discarded materials for purpose of using in altered form. Recycling does not include burning, incinerating, or thermally destroying waste.
- .5 Reuse: Repeated use of product in same form but not necessarily for same purpose. Reuse includes:
.1 Salvaging reusable materials from re-modelling projects, before demolition stage, for resale, reuse on current project or for storage for use on future projects.
-

- 1.4 DEFINITIONS (Cont'd)
- .5 Reuse: (Cont'd)
 - .2 Returning reusable items including pallets or unused products to vendors.
 - .6 Salvage: Removal of structural and non-structural materials from deconstruction/disassembly projects for purpose of reuse or recycling.
 - .7 Separate Condition: Refers to waste sorted into individual types.
 - .8 Source Separation: Acts of keeping different types of waste materials separate beginning from first time they became waste.
- 1.5 DOCUMENTS
- .1 Maintain at job site, one copy of following documents:
 - .1 Material Source Separation Plan.
- 1.6 SUBMITTALS
- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Prepare and submit following prior to project start-up:
 - .1 Submit 2 copies of Materials Source Separation Program (MSSP) description.
- 1.7 MATERIALS SOURCE SEPARATION PROGRAM (MSSP)
- .1 Prepare MSSP and have ready for use prior to project start-up.
 - .2 Implement MSSP for waste generated on project in compliance with approved methods and as reviewed by Departmental Representative.
 - .3 Provide on-site facilities for collection, handling, and storage of anticipated quantities of reusable and recyclable materials.
 - .4 Provide containers to deposit reusable and recyclable materials.
 - .5 Locate containers in locations, to facilitate deposit of materials without hindering daily operations.
 - .6 Locate separated materials in areas which minimize material damage.
-

1.7 MATERIALS
SOURCE SEPARATION
PROGRAM (MSSP)
(Cont'd)

- .7 Collect, handle, store on-site, and transport off-site, salvaged materials in separate condition.
.1 Transport to approved and authorized recycling facility.

1.8 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, store and catalogue salvaged items.
- .4 Separate non-salvageable materials from salvaged items. Transport and deliver non-salvageable items to licensed disposal facility.
- .5 Protect structural components not removed for demolition from movement or damage.
- .6 Support affected structures. If safety of building is endangered, cease operations and immediately notify Departmental Representative.
- .7 Protect surface drainage, mechanical and electrical from damage and blockage.
- .8 Separate and store materials produced during dismantling of structures in designated areas.
- .9 Prevent contamination of materials to be salvaged and recycled and handle materials in accordance with requirements for acceptance by designated facilities.
.1 On-site source separation is recommended.
.2 Remove co-mingled materials to off-site processing facility for separation.
.3 Provide waybills for separated materials.

1.9 DISPOSAL OF
WASTES

- .1 Do not bury rubbish or waste materials.
-

- 1.9 DISPOSAL OF WASTES
(Cont'd)
- .2 Do not dispose of waste, volatile materials, mineral spirits, oil or paint thinner into waterways, storm, or sanitary sewers.
 - .3 Keep records of construction waste including:
 - .1 Number and size of bins.
 - .2 Waste type of each bin.
 - .3 Total tonnage generated.
 - .4 Tonnage reused or recycled.
 - .5 Reused or recycled waste destination.
 - .4 Remove materials from deconstruction as deconstruction/disassembly Work progresses.
 - .5 Prepare project summary to verify destination and quantities on a material-by-material basis.
 - .6 Dispose of hazardous wastes in accordance with applicable regulations.
- 1.10 USE OF SITE AND FACILITIES
- .1 Execute work with least possible interference or disturbance to normal use of premises.
 - .2 Maintain security measures established by 14 Wing Greenwood.
- 1.11 SCHEDULING
- .1 Coordinate Work with other activities at site to ensure timely and orderly progress of Work.

PART 2 - PRODUCTS

- 2.1 NOT USED
- .1 Not Used.
-

PART 3 - EXECUTION

- 3.1 APPLICATION .1 Do Work in compliance with WRW.
- .2 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.

PART 1 - GENERAL

- 1.1 Section Includes .1 Administrative procedures preceding preliminary and final inspections of Work.
- 1.2 Related Sections .1 Section 01 78 00 - Closeout Submittals.
- 1.3 Inspection and Declaration .1 Contractor's Inspection: Contractor and all Subcontractors shall conduct an inspection of Work, identify deficiencies and defects, and repair as required to conform to Contract Documents.
.1 Notify Engineer in writing of satisfactory completion of Contractor's Inspection and that corrections have been made.
.2 Request Engineer's Inspection.
- .2 Engineer's Inspection: Engineer and Contractor will perform inspection of Work to identify obvious defects or deficiencies. Contractor shall correct Work accordingly.
- .3 Completion: submit written certificate that following have been performed:
.1 Work has been completed and inspected for compliance with Contract Documents.
.2 Defects have been corrected and deficiencies have been completed.
.3 Equipment and systems have been tested, adjusted and balanced and are fully operational.
.4 Work is complete and ready for Final Inspection.
- .4 Final Inspection: when items noted above are completed, request final inspection of Work by Engineer and Contractor. If Work is deemed incomplete by Engineer, complete outstanding items and request reinspection.
- .5 Declaration of Substantial Performance: when Engineer consider deficiencies and defects have been corrected and it appears requirements of Contract have been substantially performed, make application for certificate of Substantial Performance.
-

- 1.3 Inspection and Declaration
(Cont'd)
- .6 Commencement of Warranty Periods: date of Owner's acceptance of submitted declaration of Substantial Performance shall be date for commencement for warranty period.
- .7 Final Payment: When Owner and Engineer consider final deficiencies and defects have been corrected and it appears requirements of Contract have been totally performed, make application for final payment. If Work is deemed incomplete by Owner and Engineer, complete outstanding items and request reinspection.
- .8 Payment of Holdback: After issuance of certificate of Substantial Performance of Work, submit an application for payment of holdback amount in accordance with General Conditions.

PART 2 - PRODUCTS

PART 3 - EXECUTION

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 Submission
- .1 Prepare instructions and data by personnel experienced in maintenance and operation of described products.
 - .2 Copy will be returned after final inspection, with Engineer's comments.
 - .3 Revise content of documents as required prior to final submittal.
 - .4 Two weeks prior to Substantial Performance of the Work, submit to the Engineer, final copy of operating and maintenance manuals in English.
 - .5 Provide one hard copy format and one in electronic copy format.
 - .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 scaled CAD (2002)files in dwg format on CD/DVD.Submit in case.
- .10 Provide PDF format of Binders, one volume per PDF file, bookmark each separate product and system with description of product and major component parts of equipment. Submit in case.
- .11 PDF pages must be a direct scan from binder contents.
- .12 Case: CD/DVD case 135mm x 190mm x 12mm, display project title on end of case. Display title of project/subject matter of contents on front of case.

1.4 Contents - Each Volume

- .1 Table of Contents: provide title of project;
.1 date of submission; names,

-
- 1.4 Contents - Each .1 (Cont'd)
Volume
(Cont'd)
- .2 addresses, and telephone numbers of Consultant 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 specified in Section 01 45 00 - Quality Control.
- 1.5 As-builts and .1 In addition to requirements in General
Samples
- .1 In addition to requirements in General Conditions, maintain at the site for Engineer 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.
-

1.5 As-builts and
Samples
(Cont'd)

- .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 Engineer.

1.6 Recording
Actual Site
Conditions

- .1 Record information on set of black line opaque drawings, and in copy of Project Manual.
- .2 Record information on CDs in Autocad 2004 dwg files.
 - .1 provide one copy in Project Manual.
- .3 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .4 Provide felt tip marking pens, maintaining separate colours for each major system, for recording information.
- .5 Record information concurrently with construction progress. Do not conceal Work until required information is recorded.
- .6 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.
- .7 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.

1.6 Recording
Actual Site
Conditions
(Cont'd)

- .7 Specifications: (Cont'd)
 - .2 Changes made by Addenda and change orders.
- .8 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.

- 1.7 Equipment and Systems
(Cont'd)
- .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.
 - .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 as specified in Section 01 45 00 - Quality Control.
 - .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 site location as directed ; place and store.
-

- 1.9 Spare Parts (Cont'd)
- .4 Receive and catalogue all items. Submit inventory listing to Engineer. 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 site location as directed ; place and store.
 - .4 Receive and catalogue all items. Submit inventory listing to Engineer. 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 site location as directed ; place and store.
 - .4 Receive and catalogue all items. Submit inventory listing to Engineer. 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.
 - .3 Store components subject to damage from weather in weatherproof enclosures.
 - .4 Store paints and freezable materials in a heated and ventilated room.
-

1.12 Storage,
Handling and
Protection
(Cont'd)

- .5 Remove and replace damaged products at own expense and to satisfaction of Engineer .

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

PART 3 - EXECUTION