

Part 1 General**1.1 TAXES**

- .1 Pay all taxes properly levied by law (including Federal, Provincial and Municipal).

1.2 FEES, PERMITS and CERTIFICATES

- .1 Pay all fees and obtain all permits. Provide authorities with plans and information for acceptance certificates. Provide inspection certificates as evidence that work conforms to requirements of Authority having jurisdiction.

1.3 CONSTRUCTION PROGRESS SCHEDULE

- .1 Schedule and execute work with least possible interference or disturbance to the normal use of premises.
- .2 On award of contract submit bar chart construction schedule for work, indicating anticipated progress stages within time of completion. When the Departmental Representative has reviewed schedule, take necessary measures to complete work within scheduled time. Do not change schedule without notifying Departmental Representative.
- .3 Carry out the work and delivery of materials outside of "regular business hours". Work to be carried out Monday to Thursday from 23:30hr to 7:30hr, on Fridays from 23:30 to 9:30am and on Saturday and Sunday from 18:30 to 9:30am.
- .4 Give the Departmental Representative 48 hours notice for work to be carried out during "off hours".

1.4 FIRE SAFETY REQUIREMENTS

- .1 Comply with both the National Building Code of Canada 2010 and the National Fire Code of Canada 2010 for safety of persons in buildings in the event of a fire and the protection of buildings from the effects of fire, as follows;
 - .1 The National Building Code (NBC): for fire safety and fire protection features that are required to be incorporated in a building during construction.
 - .2 The National Fire Code (NFC):
 - .1 The on-going maintenance and use of the fire safety and fire protection features incorporated in buildings.
 - .2 The conduct of activities that might cause fire hazards in and around buildings.
 - .3 Limitations on hazardous contents in and around buildings.
 - .4 The establishment of fire safety plans.
 - .5 Fire safety at construction and demolition sites.
- .2 Welding and cutting:
 - .1 At least 48 hours prior to commencing cutting, welding or soldering procedure, provide to Departmental Representative:
 - .1 Notice of intent, indicating devices affected, time and duration of isolation or bypass.
 - .2 Completed welding permit as defined in FC 302.
 - .3 Return welding permit to Departmental Representative immediately upon completion of procedures for which permit was issued.

- .2 "Fire Watchers" as described in FC 302 shall be assigned when welding or cutting operations are carried out in areas where combustible materials within 10m may be ignited by conduction or radiation.
- .3 Where work requires interruption or cause activation of fire alarms or fire suppression, extinguishing or protection systems:
 - .1 Provide "Watchman Service" as described in FC 301; In general, watchman service is defined as an individual conversant with "Fire Emergency Procedures", performing fire picket duty within an unprotected and unoccupied (no workers) area once per hour.
 - .2 Retain services of manufacturer for fire protection systems on daily basis or as approved by Departmental Representative, to isolate and protect all devices relating to:
 - .1 modification of fire alarms, fire suppression, extinguishing or protection systems; and/or
 - .2 cutting, welding, soldering or other construction activities that might activate fire protection systems.
 - .3 Immediately upon completion of work, restore fire protection systems to normal operation and verify that all devices are fully operational.
 - .4 Inform fire alarm system monitoring agency and local Fire Department immediately prior to isolation and immediately upon restoration of normal operation.

1.5 EXAMINATION and PREPARATION

- .1 Examine site and conditions likely to affect work and be familiar and conversant with existing conditions.
- .2 Before commencing work, establish location and extent of services lines in area of work and notify Departmental Representative of findings.

1.6 SECURITY CHECK

- .1 All personnel employed on this project will be subject to security check. Obtain requisite clearance, as instructed, for each individual required to enter the premises.
- .2 Personnel will be checked daily at start of work shift and given a pass, which must be worn at all times. Pass must be returned at end of work shift and personnel checks out.

1.7 SECURITY ESCORT

- .1 All personnel employed on this project shall be escorted when executing work in non-public areas during normal working hours. Personnel shall be escorted in all areas after normal working hours.
- .2 Submit an escort request to Departmental Representative at least 14 days before the service is needed. For requests submitted within the time mentioned above, the Departmental Representative will pay for the costs of the security escort. The cost incurred by a late request will be charged to the Contractor.
- .3 Any escort request may be cancelled free of charge in notification of cancellation is given at least 4 hours before the scheduled time of the escort. The cost incurred by a late cancellation will be charged to the Contractor.
- .4 The calculation of costs will be based on the average hourly rate of a security officer for a minimum of 8 hours per day for a late service request and 4 hours for late cancellations.

1.8 COST BREAKDOWN

- .1 Before submitting first progress claim, submit breakdown of Contract Amount in detail as directed by Departmental Representative and aggregating the Contract Amount. After approval by Departmental Representative cost breakdown will be used as the basis of progress payments.

1.9 WASTE MANAGEMENT

- .1 Comply with Environmental Protection Act, Ontario Regulations: O. Reg. 102/94 – Waste Audits and Waste Reduction Work Plans; and O. Reg. 103/94 – Industrial, Commercial and Institutional Source Separation Programs; for waste management on construction and demolition projects.
- .2 Conduct "waste audit" to determine what waste will be generated during construction and demolition operations. Prepare written "waste reduction work plan" and implement the principles to reduce, reuse and recycle materials to the extent that is possible.
- .3 Submit complete records of all removals from site for both "materials designated for alternative disposal" and "general waste" including:
 - .1 time and date of removal;
 - .2 description of material and quantities; and
 - .3 proof that materials have been received at an approved Waste Processing Site or certified Waste Disposal Site as required.

Part 2 Products**2.1 NOT USED**

- .1 Not used.

Part 3 Execution**3.1 NOT USED**

- .1 Not used.

END OF SECTION

Part 1 General**1.1 RELATED REQUIREMENTS**

- .1 Not used.

1.2 ACCESS AND EGRESS

- .1 Not used.

1.3 EXISTING SERVICES

- .1 Notify, Departmental Representative and utility companies of intended interruption of services and obtain required permission.
- .2 Where Work involves breaking into or connecting to existing services, give Departmental Representative 7 days notice for necessary interruption of mechanical or electrical service throughout course of work. Keep duration of interruptions minimum. Carry out interruptions during working hours identified under Section 01 00 10.

1.4 SPECIAL REQUIREMENTS

- .1 Ensure Contractor's personnel employed on site become familiar with and obey regulations including safety, fire, traffic and security regulations.
- .2 Keep within limits of work and do not impede avenues of ingress and egress.

1.5 SMOKING ENVIRONMENT

- .1 Smoking is not permitted on site.

Part 2 Products**2.1 NOT USED**

- .1 Not Used.

Part 3 Execution**3.1 NOT USED**

- .1 Not Used.

END OF SECTION

PART 1 – GENERAL

1.1 REGULATORY REQUIREMENTS

- .1 An investigation into the presence of designated substances for removing existing carpets and re-installing carpets project at the Library and Archives Canada Building, 395 Wellington Street, Ottawa, Ontario, was performed in order to meet the requirements of the *Canada Labour Code* under Part II, Section 124 that every employer shall ensure that the health and safety at work of every person employed by the employer is protected. Furthermore, Section 125(1) (z.14) of the *Canada Labour Code* stipulates that the employer, to the extent that he controls the activity, will take all reasonable care to ensure that all persons granted access to the work place, other than the employer's employees, are informed of every known or foreseeable health and safety hazard to which they are likely to be exposed in the work place. In addition, it was performed to meet the requirements of Section 30 of the *Ontario Occupational Health and Safety Act, Revised Statutes of Ontario, 1990, Chapter 0.1*. By having a Designated Substances Report (DSR) conducted, the PWGSC Departmental Representative will be able to inform his or her employees, contractors, and tenants of any designated substances that may be present and possibly disturbed throughout the duration of the project. The informed Departmental Representative will then be able to impose appropriate health and safety precautions for all applicable personnel as required.
- .2 The designated substances identified in the *Occupational Health and Safety Act* and its corresponding regulations are:
 - .1 **Acrylonitrile:** “Designated Substances”
O. Reg 490/09 (as amended)
 - .2 **Arsenic:** “Designated Substances”
O. Reg 490/09 (as amended)
 - .3 **Asbestos:**
 - .1 “Designated Substances”
O. Reg 490/09 (as amended)
 - .2 “General – Waste Management”
O. Reg 347/90 (as amended)
 - .3 “Designated Substance – Asbestos on Construction Projects and in Buildings and Repair Operations”
O.Reg 278/05 (as amended)
 - .4 **Benzene:** “Designated Substances”
O. Reg 490/09 (as amended)
 - .5 **Coke Oven Emissions:** “Designated Substances” O. Reg 490/09 (as amended)

- .6 **Ethylene Oxide:** *"Designated Substances"*
O. Reg 490/09 (as amended)
- .7 **Isocyanates:** *"Designated Substances"*
O. Reg 490/09 (as amended)
- .8 **Lead:**
 - .1 *"Designated Substances"*
O. Reg 490/09 (as amended)
 - .2 *"General – Waste Management"*
O. Reg 347/90 (as amended)
 - .3 *Canada Consumer Product Safety Act's Surface Coating Materials Regulations SOR/2005-109* (as amended)
- .9 **Mercury:**
 - .1 *"Designated Substances"*
O. Reg 490/09 (as amended)
 - .2 *"General – Waste Management"*
O. Reg 347/90 (as amended)
- .10 **Silica:** *"Designated Substances"*
O. Reg 490/09 (as amended)
- .11 **Vinyl Chloride:** *"Designated Substances"*
O. Reg 490/09 (as amended)
- .3 All contractors requesting tenders from subcontractors shall furnish this report to subcontractors. **This report must be read in its entirety, including text and tables.**

1.2 VALIDITY DATE

- .1 A specialist of the Environmental Services of Professional and Technical Services Directorate, Real Property Branch, PWGSC, conducted the on-site survey for this report on May 20, 2015.
- .2 The work area is located at Library and Archives Canada Building, 395 Wellington Street, Ottawa, Ontario. The scope of the work proposed consists of removing existing carpets and re-installing new carpets on the third (3rd) floor at the Library and Archives Canada Building.
 - .1 The scope of work for this report involved a visual inspection of building materials and contents for the presence of suspected designated substances in the project area on May 20, 2015.
 - .2 From the visual inspection suspect materials were sampled and analyzed, where appropriate, for the above substances. On the basis of the visual inspection, a total of six (6) bulk samples of suspected asbestos containing materials were collected. Bulk ACM samples of

asbestos were collected in order to satisfy the requirements of *O. Reg. 278/05* (as amended).

The samples were then submitted for analysis to the Paracel Laboratories Ltd. (accredited by the Canadian Association for Laboratory Accreditation (CALA) and National Voluntary Laboratory Accreditation Program (NVLAP) located at 300-2319 St. Laurent Blvd., K1G 4J8, Ottawa, Ontario.

The bulk asbestos samples were analyzed using Polarized Light Microscopy (PLM). This analytical method complies with the United States Environmental Protection Agency (U.S. EPA) Method 600/R-93/116.

- .3 The visual inspection and sampling were limited to readily accessible areas. Destructive testing was not included in the investigation, but is recommended prior to any major demolition. Due to the nature of building construction, some inherent limitations exist as to the possible thoroughness of the designated substance survey. The survey did not include the demolition of floors, floor finishes, walls or other areas to examine concealed conditions. No confined space was accessed for the purpose of this report.
- .4 It is possible that the designated substances aforementioned are present in non-accessible areas and concealed spaces. No other areas outside the defined work boundaries have been assessed.
- .5 Prior to beginning work, it must be confirmed with the Departmental Representative that no additional designated substances have been brought to the project area.
- .6 In addition, the survey refers to polychlorinated biphenyls (PCBs) and halocarbons; however, it does not refer to other substances that may be present in the day-to-day usage for specialized equipment or areas in buildings (i.e. lead shields, fume hoods, etc.).
- .7 There is a possibility that materials which could not be reasonably identified within the scope of this assessment or which were not apparent during previous site visits may exist. Should any designated substance be encountered in the course of demolition, work must be stopped, precautionary measures taken, and the Departmental Representative must be notified immediately. **Do not proceed until written instructions have been received.**

PART 2 - DESIGNATED SUBSTANCES**2.1 SURVEY RESULTS**

.1 **ACRYLONITRILE:** Not Identified

.2 **ARSENIC:** Not Identified

.3 **ASBESTOS:** Not Identified

Asbestos is a naturally occurring material. In general, it has historically been intentionally added to many building materials in the construction industry to increase thermal or chemical resistance properties. More common uses are thermal insulation for pipes and boilers, structural steelwork fireproofing, floor tiles and in-wall and ceiling plasters. There are two classes of asbestos-containing materials: friable and non-friable. Friable asbestos-containing materials are loose in composition or can be easily crumbled using hand pressure. Non-friable asbestos-containing materials are more durable and are held together by a binder such as cement, vinyl or asphalt.

Representative bulk samples were collected on May 20, 2015. Analytical results indicate that the mastic below carpet within the project area does not contain asbestos. The results are shown in Table 1 below.

Table 1: Asbestos Sample Results by Polarized Light Microscopy (PLM)

Sample ID	Material	Location	Asbestos type	Asbestos content (%)
LAC308-AS-1A	Mastic	Room 308, 3 rd Floor	n/a	n/d
LAC308-AS-1B				
LAC308-AS-1C				
LAC302-AS-2A	Mastic	Room 302, 3 rd Floor	n/a	n/d
LAC302-AS-2B				
LAC302-AS-2C				

n/d = none detected, n/a = not applicable

.4 **BENZENE:** Not Identified

.5 **COKE OVEN EMISSIONS:** Not Identified

.6 **ETHYLENE OXIDE:** Not Identified

.7 **ISOCYANATES:** Not Identified

.8 **LEAD:** Not Identified

.9 **MERCURY:** Not Identified

.10 **SILICA:** Identified

Free crystalline silica is present in concrete within the project area.

- .11 **VINYL CHLORIDE MONOMER:** Not Identified
- .12 **POLYCHLORINATED BIPHENYLS (PCBs):** Not Identified
- .13 **HALOCARBONS:** Not Identified

2.2 RECOMMENDATIONS

1. SILICA

- .1 Silica is governed by the *Regulation 490/09* (as amended) under the *Ontario Occupational Health and Safety Act*. The regulation provides requirements for allowable exposure levels.
- .2 Silica dust can be generated through such processes as blasting, grinding, crushing, and sandblasting silica-containing material. Since silica is present in concrete within the project area, appropriate respiratory protection and ventilation must be donned during the demolition and modifications of these structures.
- .3 The Occupational Health and Safety Branch of the Ontario Ministry of Labour (MoL) has published the document entitled "*Guideline: Silica on Construction Projects*". This document classifies the disturbance of materials containing silica as Type 1, Type 2 or Type 3 work, and assigns different levels of respiratory protection and work procedures for each classification. These work procedures should be followed when performing work involving the disturbance of silica-containing materials.

2. CONTRACTORS DUTIES

The contractor must review the designated substance report and take the necessary precautions to protect the health and safety of the workers and the environment. As per Section 30(4) of the *Ontario Occupational Health and Safety Act*, the party hiring the contractor (i.e. Departmental Representative) shall ensure that the contractor and subcontractor (if any) for the project has received a copy of the designated substance report prior to entering a binding contract for the supply of work on the project. As per Section 27(2) (a, b, and c) of the *Ontario Occupational Health and Safety Act*, while onsite, the contractor supervisor shall exercise every reasonable precaution for the protection of a worker. If you have any questions about the designated substance report, please contact the Departmental Representative.

END OF SECTION

Part 1 General**1.1 ADMINISTRATIVE**

- .1 Submit to Departmental Representative submittals listed for review. Submit promptly and in orderly sequence to not cause delay in Work.
- .2 Do not proceed with Work affected by submittal until review is complete.
- .3 Review submittals prior to submission to Departmental 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 considered rejected.
- .4 Notify Departmental Representative in writing at time of submission, identifying deviations from requirements of Contract Documents stating reasons for deviations.
- .5 Verify field measurements and affected adjacent Work are co-ordinated.
- .6 Contractor's responsibility for errors and omissions in submission is not relieved by Departmental Representative's review of submittals.
- .7 Contractor's responsibility for deviations in submission from requirements of Contract Documents is not relieved by Departmental Representative review.
- .8 Keep one reviewed copy of each submission on site.

1.2 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 Submit drawings stamped and signed by professional engineer registered or licensed in the province of Ontario, Canada.
- .3 Indicate materials, methods of construction and attachment or anchorage, erection diagrams, connections, explanatory notes and other information necessary for completion of Work. Where articles or equipment attach or connect to other articles or equipment, indicate that such items have been co-ordinated, regardless of Section under which adjacent items will be supplied and installed. Indicate cross references to design drawings and specifications.
- .4 Allow 10 days for Departmental Representative's review of each submission.
- .5 Adjustments made on shop drawings by Departmental Representative are not intended to change Contract Price. If adjustments affect value of Work, state such in writing to Departmental Representative prior to proceeding with Work.
- .6 Make changes in shop drawings as Departmental Representative may require, consistent with Contract Documents. When resubmitting, notify Departmental Representative in writing of revisions other than those requested.
- .7 Accompany submissions with transmittal letter, containing:

- .1 Date.
- .2 Project title and number.
- .3 Contractor's name and address.
- .4 Identification and quantity of each shop drawing, product data and sample.
- .5 Other pertinent data.
- .8 Submissions include:
 - .1 Date and revision dates.
 - .2 Project title and number.
 - .3 Name and address of:
 - .1 Subcontractor.
 - .2 Supplier.
 - .3 Manufacturer.
 - .4 Contractor's stamp, signed by Contractor's authorized representative certifying approval of submissions, verification of field measurements and compliance with Contract Documents.
 - .5 Details of appropriate portions of Work as applicable:
 - .1 Fabrication.
 - .2 Layout, showing dimensions, including identified field dimensions, and clearances.
 - .3 Setting or erection details.
 - .4 Capacities.
 - .5 Performance characteristics.
 - .6 Standards.
 - .7 Operating weight.
 - .8 Wiring diagrams.
 - .9 Single line and schematic diagrams.
 - .10 Relationship to adjacent work.
- .9 After Departmental Representative's review, distribute copies.
- .10 Submit electronic copy of shop drawings for each requirement requested in specification Sections and as Departmental Representative may reasonably request.
- .11 Submit electronic copies of product data sheets or brochures for requirements requested in specification Sections and as requested by Departmental Representative where shop drawings will not be prepared due to standardized manufacture of product.
- .12 Submit electronic copies of test reports for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Report signed by authorized official of testing laboratory that material, product or system identical to material, product or system to be provided has been tested in accord with specified requirements.
 - .2 Testing must have been within 3years of date of contract award for project.
- .13 Submit electronic copies of certificates for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Statements printed on manufacturer's letterhead and signed by responsible officials of manufacturer of product, system or material attesting that product, system or material meets specification requirements.

- .2 Certificates must be dated after award of project contract complete with project name.
- .14 Submit electronic copies of manufacturers instructions for requirements requested in specification Sections and as requested by Departmental Representative.
 - .1 Pre-printed material describing installation of product, system or material, including special notices and Material Safety Data Sheets concerning impedances, hazards and safety precautions.
- .15 Submit electronic copies of Manufacturer's Field Reports for requirements requested in specification Sections and as requested by Departmental Representative.
- .16 Documentation of the testing and verification actions taken by manufacturer's representative to confirm compliance with manufacturer's standards or instructions.
- .17 Submit electronic copies of Operation and Maintenance Data for requirements requested in specification Sections and as requested by Departmental Representative.
- .18 Delete information not applicable to project.
- .19 Supplement standard information to provide details applicable to project.
- .20 If upon review by Departmental 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.
- .21 The review of shop drawings by Departmental Representative is for sole purpose of ascertaining conformance with general concept.
 - .1 This review shall not mean that the Departmental Representative approves detail design inherent in shop drawings, responsibility for which shall remain with Contractor submitting same, and such review shall not relieve Contractor of responsibility for errors or omissions in shop drawings or of responsibility for meeting requirements of construction and Contract Documents.
 - .2 Without restricting generality of foregoing, Contractor is responsible for dimensions to be confirmed and correlated at job site, for information that pertains solely to fabrication processes or to techniques of construction and installation and for co-ordination of Work of sub-trades.

Part 2 Products**2.1 NOT USED**

- .1 Not Used.

Part 3 Execution**3.1 NOT USED**

- .1 Not Used.

END OF SECTION

Part 1 General**1.1 SECTION INCLUDES**

- .1 Health and safety considerations required to ensure that PWGSC shows due diligence towards health and safety on construction sites, and meets the requirements laid out in PWGSC/RPB Departmental Policy DP 073 - Occupational Health and Safety - Construction.

1.2 REFERENCES

- .1 Canada Labour Code, Part 2, Canada Occupational Safety and Health Regulations
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .3 Province of Ontario
 - .1 Occupational Health and Safety Act, R.S.O. 1990 Updated 2005.

1.3 SUBMITTALS

- .1 Make submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit site-specific Health and Safety Plan: Within 7 days after date of Notice to Proceed and prior to commencement of Work. Health and Safety Plan must include:
 - .1 Results of site specific safety hazard assessment.
 - .2 Results of safety and health risk or hazard analysis for site tasks and operation found in work plan.
- .3 Submit electronic copies of Contractor's authorized representative's work site health and safety inspection reports to Departmental Representative and authority having jurisdiction, weekly.
- .4 Submit copies of reports or directions issued by Federal, Provincial and Territorial health and safety inspectors.
- .5 Submit copies of incident and accident reports.
- .6 Submit WHMIS MSDS - Material Safety Data Sheets.
- .7 Departmental Representative will review Contractor's site-specific Health and Safety Plan and provide comments to Contractor within 15 days after receipt of plan. Revise plan as appropriate and resubmit plan to Departmental Representative within 10 days after receipt of comments from Departmental Representative.
- .8 Departmental Representative's review of Contractor's final Health and Safety plan should not be construed as approval and does not reduce the Contractor's overall responsibility for construction Health and Safety.
- .9 Medical Surveillance: where prescribed by legislation, regulation or safety program, submit certification of medical surveillance for site personnel prior to commencement of Work, and submit additional certifications for any new site personnel to Departmental Representative.

- .10 On-site Contingency and Emergency Response Plan: address standard operating procedures to be implemented during emergency situations.

1.4 FILING OF NOTICE

- .1 File Notice of Project with Provincial authorities prior to beginning of Work.

1.5 SAFETY ASSESSMENT

- .1 Perform site specific safety hazard assessment related to project.

1.6 MEETINGS

- .1 Schedule and administer Health and Safety meeting with Departmental Representative prior to commencement of Work.

1.7 GENERAL REQUIREMENTS

- .1 Develop written site-specific Health and Safety Plan based on hazard assessment prior to beginning site Work and continue to implement, maintain, and enforce plan until final demobilization from site. Health and Safety Plan must address project specifications.
- .2 Departmental Representative may respond in writing, where deficiencies or concerns are noted and may request re-submission with correction of deficiencies or concerns.

1.8 RESPONSIBILITY

- .1 Be responsible for health and safety of persons on site, safety of property on site and for protection of persons adjacent to site and environment to extent that they may be affected by conduct of Work.
- .2 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific Health and Safety Plan.

1.9 COMPLIANCE REQUIREMENTS

- .1 Comply with Ontario Health and Safety Act, R.S.O.

1.10 UNFORSEEN HAZARDS

- .1 When unforeseen or peculiar safety-related factor, hazard, or condition occur during performance of Work, follow procedures in place for Employee's Right to Refuse Work in accordance with Acts and Regulations of Province having jurisdiction and advise Departmental Representative verbally and in writing.

1.11 HEALTH AND SAFETY CO-ORDINATOR

- .1 Employ and assign to Work, competent and authorized representative as Health and Safety Co-ordinator. Health and Safety Co-ordinator must:
 - .1 Have working knowledge of occupational safety and health regulations.
 - .2 Be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter site to perform Work.

- .3 Be responsible for implementing, enforcing daily and monitoring site-specific Contractor's Health and Safety Plan.
- .4 Be on site during execution of Work.

1.12 POSTING OF DOCUMENTS

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on site in accordance with Acts and Regulations of Province having jurisdiction, and in consultation with Departmental Representative.

1.13 CORRECTION OF NON-COMPLIANCE

- .1 Immediately address health and safety non-compliance issues identified by authority having jurisdiction or by Departmental Representative.
- .2 Provide Departmental Representative with written report of action taken to correct non-compliance of health and safety issues identified.
- .3 Departmental Representative may stop Work if non-compliance of health and safety regulations is not corrected.

1.14 BLASTING

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

1.15 POWDER ACTUATED DEVICES

- .1 Use powder actuated devices only after receipt of written permission from Departmental Representative.

1.16 WORK STOPPAGE

- .1 Give precedence to safety and health of public and site personnel and protection of environment over cost and schedule considerations for Work.

Part 2 Products**2.1 NOT USED**

- .1 Not used.

Part 3 Execution**3.1 NOT USED**

- .1 Not used.

END OF SECTION

Part 1 General**1.1 RELATED REQUIREMENTS**

- .1 Section 09 68 13 Tile Carpeting

1.2 REFERENCES

- .1 Definitions:
 - .1 Closed-loop Recycling: a product which is re-manufactured into the same product.
- .2 Reference Standards:
 - .1 Carpet and Rug Institute (CRI)
 - .1 CRI Carpet Installation Standard - 2011.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit control submittals.
- .3 Submit report outlining proposed dust control measures.
- .4 Submit carpet schedule using same room designations indicated on drawings.
- .5 Submit schedule of carpet recycling activities including the following:
 - .1 Sequence of carpet removal.
 - .2 Inventory of items to be removed and recycled.
 - .3 Recycling.
- .6 Sustainable Design Submittals:
 - .1 Construction Waste Management:
 - .1 Submit project Waste Management Plan highlighting recycling and salvage requirements.
 - .2 Submit calculations on end-of-project recycling rates, salvage rates, and landfill rates demonstrating that 50% of construction wastes were recycled or salvaged.

1.4 CLOSEOUT SUBMITTALS

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Submit schedule of carpet reclamation activities.
 - .1 Indicating the following:
 - .1 Detailed sequence of removal work.
 - .2 Areas of partial occupied floor space.
 - .3 Inventory of used carpet to be removed and reclaimed.
 - .4 Proposed packing and transportation measures.
- .3 Reclamation Agencies' records indicating receipt and disposition of used carpet.
- .4 Certification: Reclamation Agency to verify in writing that used carpet was removed and recycled in accordance with carpet manufacturers' reclamation program.

- .1 Indicate type of recycling program:
 - .1 Closed-loop.
 - .5 Record off-site removal of debris and materials and provide the following information regarding removed used carpet materials.
 - .1 Time and date of removal.
 - .2 Weight and quantity of materials.
 - .3 Final destination of materials.
- 1.5 QUALITY ASSURANCE SUBMITTALS**
 - .1 Certificates: submit from Reclamation Agency and Carpet remover certificates that used carpet was removed and recycled in accordance with Carpet Reclamation Program. Extraction of embodied energy by incineration is not acceptable.
- 1.6 ENVIRONMENT**
 - .1 Obtain written approval from Departmental Representative before performing operations which generate contaminants.
- Part 2 Products**
- 2.1 MATERIALS**
 - .1 Carpet adhesive removal solvents: in accordance with CRI Carpet Installation Standard.
 - .2 Used Carpet:
 - .1 Maintain possession of removed used carpet. Remove immediately from area of Work and place in container or trailer.
 - .3 Underlay Undercushion:
 - .1 Include recycling of carpet underlay undercushion as designated by Carpet Reclamation Agency.
- Part 3 Execution**
- 3.1 EXAMINATION**
 - .1 Examine and verify Work areas and conditions are suitable to perform work. Identify and report to Departmental Representative problems that will delay completion of Work.
 - .1 Do not proceed until problems or conditions have been corrected, and instructed by Departmental Representative.
- 3.2 PREPARATION**
 - .1 Provide, erect, and maintain barricade and lighting as required to protect general public in accordance with Section 01 51 00 - Temporary Utilities.
 - .2 Vacuum used carpet prior to removal.
- 3.3 CARPET REMOVAL**
 - .1 Remove used broadloom carpet in large pieces.
 - .1 Remove used carpet tile, pack in cardboard boxes and pack in trailer on pallets.

- .2 Pack only clean dry carpet tile. Clean is defined as carpet free from demolition debris, asbestos, garbage and tack strips.
- .3 Remove carpet adhesive according to CRI Carpet Installation Standard.

3.4 CONTAINER DISPOSAL

- .1 Place used carpet in containers supplied by reclamation agency. Containers to be front end loaded and fully enclosed from elements. Place only used commercial carpet in container.
 - .1 Containers to be locked and supervised at all times.
- .2 Maximize packing techniques of used carpet, container should hold between 1,500 to 2,500 m².
 - .1 Re-pack used carpet in cardboard boxes prior to placing in containers.
- .3 Co-ordinate with Reclamation Agency for pickup and drop off of replacement containers.
 - .1 Remove lock from container prior to pick up.

3.5 TRUCK TRAILER DISPOSAL

- .1 Place used carpet in trailer supplied by Reclamation Agency. Place only used commercial carpet in trailer.
 - .1 Keep trailer off limits to workers not involved in reclamation activities and from public
- .2 Maximize packing techniques of used carpet.
 - .1 Do not stack carpet tiles more than 1.828 m high on trailer.
- .3 Comply with Department of Transportation weight limit regulations.
 - .1 Maximum weight of used carpet on trailer is 20,455 kg.
- .4 Co-ordinate with Reclamation Agency for pickup and drop off of replacement trailer.
 - .1 Remove lock from trailer prior to pick up.

3.6 CARPET INSTALLATION

- .1 Install new carpet in accordance with Section 09 68 13 - Tile Carpeting.

3.7 CLEANING

- .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

3.8 PROTECTION

- .1 Protect installed products and components from damage during reclamation activities.
- .2 Repair damage to adjacent materials caused by reclamation activities installation.

END OF SECTION

Part 1 General**1.1 RELATED SECTIONS**

- .1 Section 01 33 00 – Submittal Procedures.

1.2 REFERENCES

- .1 Not used

1.3 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.4 TEMPORARY HEATING AND VENTILATION

- .1 Ventilating:
 - .1 Prevent accumulations of dust, fumes, mists, vapours or gases in areas occupied during demolition.

1.5 TEMPORARY POWER AND LIGHT

- .1 Departmental Representative will pay for temporary power during construction for temporary lighting and operating of power tools, to a maximum supply of 208 volts 20 amps.

1.6 TEMPORARY COMMUNICATION FACILITIES

- .1 Provide and pay for temporary telephone, fax, data hook up, lines and equipment necessary for own use.

1.7 FIRE PROTECTION

- .1 Provide and maintain temporary fire protection equipment during performance of Work required by governing codes, regulations and bylaws.

Part 2 Products**2.1 NOT USED**

- .1 Not Used.

Part 3 Execution**3.1 NOT USED**

- .1 Not Used.

END OF SECTION

Part 1 General**1.1 RELATED SECTIONS**

- .1 Section 01 00 10 – General Instructions
- .2 Section 01 33 00 – Submittal Procedures

1.2 REFERENCES

- .1 Canadian Standards Association (CSA International)
 - .1 CSA-0121-M1978(R2003), Douglas Fir Plywood.
 - .2 CAN/CSA-Z321-96(R2006), Signs and Symbols for the Occupational Environment.
- .2 Public Works Government Services Canada (PWGSC) Standard Acquisition Clauses and Conditions (SACC)-ID: R0202D, Title: General Conditions 'C', In Effect as of: May 14, 2004.

1.3 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.

1.4 INSTALLATION AND REMOVAL

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

1.5 SITE STORAGE/LOADING

- .1 Confine work and operations of employees as directed by Department Representative and by Contract Documents. Do not unreasonably encumber premises with demolition waste.
- .2 Traffic on site permitted for delivery and unloading of goods only.
- .3 Delivery of equipment / materials must be confirmed with a minimum of 24 hours advance notice.
- .4 Do not load or permit to load any part of Work with weight or force that will endanger Work.

1.6 CONSTRUCTION PARKING

- .1 Parking will not be permitted on site.

1.7 EQUIPMENT, TOOL AND MATERIALS STORAGE

- .1 Provide and maintain, in clean and orderly condition, lockable weatherproof containers for storage of tools, equipment and materials.

1.8 SANITARY FACILITIES

- .1 Existing sanitary facilities may be used by contractor. Facilities to be utilized in a clean and orderly manner.

1.9 CONSTRUCTION SIGNAGE

- .1 Signs and notices for safety and instruction in both official languages Graphic symbols to CAN/CSA-Z321.
- .2 No other signs or advertisements, other than warning signs, are permitted on site.
- .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 Departmental Representative.

1.10 CLEAN-UP

- .1 Remove demolition debris and waste materials, from work site daily.
- .2 Clean dirt or mud tracked into existing facility.
- .3 Construction materials to be stored only in the area of construction.

Part 2 Products**2.1 NOT USED**

- .1 Not Used.

Part 3 Execution**3.1 NOT USED**

- .1 Not Used.

END OF SECTION

Part 1 General**1.1 REFERENCES**

- .1 Within text of each specifications section, reference may be made to reference standards. Conform to these reference standards, in whole or in part as specifically requested in specifications.
- .2 If there is question as to whether products or systems are in conformance with applicable standards, Departmental Representative reserves right to have such products or systems tested to prove or disprove conformance.
- .3 Cost for such testing will be born by Departmental Representative in event of conformance with Contract Documents or by Contractor in event of non-conformance.

1.2 QUALITY

- .1 Products, materials, equipment and articles incorporated in Work shall be new, not damaged or defective, and of best quality for purpose intended. If requested, furnish evidence as to type, source and quality of products provided.
- .2 Procurement policy is to acquire, in cost effective manner, items containing highest percentage of recycled and recovered materials practicable consistent with maintaining satisfactory levels of competition. Make reasonable efforts to use recycled and recovered materials and in otherwise utilizing recycled and recovered materials in execution of work.
- .3 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 and be responsible for delays and expenses caused by rejection.
- .4 Should disputes arise as to quality or fitness of products, decision rests strictly with Departmental Representative based upon requirements of Contract Documents.
- .5 Unless otherwise indicated in specifications, maintain uniformity of manufacture for any particular or like item throughout building.
- .6 Permanent labels, trademarks and nameplates on products are not acceptable in prominent locations, except where required for operating instructions, or when located in mechanical or electrical rooms.

1.3 STORAGE, HANDLING AND PROTECTION

- .1 Handle and store products in manner to prevent damage, adulteration, deterioration and soiling and in accordance with manufacturer's instructions when applicable.
- .2 Store packaged or bundled products in original and undamaged condition with manufacturer's seal and labels intact. Do not remove from packaging or bundling until required in Work.
- .3 Store products subject to damage from weather in weatherproof enclosures.
- .4 Store cementitious products clear of earth or concrete floors, and away from walls.

- .5 Keep sand, when used for grout or mortar materials, clean and dry. Store sand on wooden platforms and cover with waterproof tarpaulins during inclement weather.
- .6 Store sheet materials, lumber on flat, solid supports and keep clear of ground. Slope to shed moisture.
- .7 Store and mix paints in heated and ventilated room. Remove oily rags and other combustible debris from site daily. Take every precaution necessary to prevent spontaneous combustion.
- .8 Remove and replace damaged products at own expense and to satisfaction of Departmental Representative.
- .9 Touch-up damaged factory finished surfaces to Departmental Representative's satisfaction. Use touch-up materials to match original. Do not paint over name plates.

1.4 TRANSPORTATION

- .1 Pay costs of transportation of products required in performance of Work.
- .2 Transportation cost of products supplied by Owner will be paid for by Departmental Representative. Unload, handle and store such products.

1.5 MANUFACTURER'S INSTRUCTIONS

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

1.6 QUALITY OF WORK

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

1.7 CO-ORDINATION

- .1 Ensure co-operation of workers in laying out Work. Maintain efficient and continuous supervision.
- .2 Be responsible for coordination and placement of openings, sleeves and accessories.

1.8 CONCEALMENT

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

1.9 REMEDIAL WORK

- .1 Refer to Section 01 73 00 - Execution Requirements.
- .2 Perform remedial work required to repair or replace parts or portions of Work identified as defective or unacceptable. Co-ordinate adjacent affected Work as required.
- .3 Perform remedial work by specialists familiar with materials affected. Perform in a manner to neither damage nor put at risk any portion of Work.

1.10 LOCATION OF FIXTURES

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

1.11 PROTECTION OF WORK IN PROGRESS

- .1 Prevent overloading of parts of building. Do not cut, drill or sleeve load bearing structural member, unless specifically indicated without written approval of Departmental Representative.

1.12 EXISTING UTILITIES

- .1 When breaking into or connecting to existing services or utilities, execute Work at times directed by local governing authorities, with minimum of disturbance to Work, and/or building occupants.
- .2 Protect, relocate or maintain existing active services. When services are encountered, cap off in manner approved by authority having jurisdiction. Stake and record location of capped service.

Part 2 Products**2.1 NOT USED**

- .1 Not Used.

Part 3 Execution**3.1 NOT USED**

- .1 Not Used.

END OF SECTION

Part 1 General**1.1 SUBMITTALS**

- .1 Submittals: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit written request in advance of cutting or alteration which affects:
 - .1 Structural integrity of elements of project.
 - .2 Integrity of weather-exposed or moisture-resistant elements.
 - .3 Efficiency, maintenance, or safety of operational elements.
 - .4 Visual qualities of sight-exposed elements.
 - .5 Work of Departmental Representative or separate contractor.
- .3 Include in request:
 - .1 Identification of project.
 - .2 Location and description of affected Work.
 - .3 Statement on necessity for cutting or alteration.
 - .4 Description of proposed Work, and products to be used.
 - .5 Alternatives to cutting and patching.
 - .6 Effect on Work of Departmental Representative or separate contractor.
 - .7 Written permission of affected separate contractor.
 - .8 Date and time work will be executed.

1.2 MATERIALS

- .1 Required for original installation.
- .2 Change in Materials: Submit request for substitution in accordance with Section 01 33 00 - Submittal Procedures.

1.3 PREPARATION

- .1 Inspect existing conditions, including elements subject to damage or movement during cutting and patching.
- .2 After uncovering, inspect conditions affecting performance of Work.
- .3 Beginning of cutting or patching means acceptance of existing conditions.
- .4 Provide supports to assure structural integrity of surroundings; provide devices and methods to protect other portions of project from damage.
- .5 Provide protection from elements for areas which are to be exposed by uncovering work; maintain excavations free of water.

1.4 EXECUTION

- .1 Execute cutting, fitting, and patching to complete Work.

- .2 Fit several parts together, to integrate with other Work.
- .3 Uncover Work to install ill-timed Work.
- .4 Remove and replace defective and non-conforming Work.
- .5 Provide openings in non-structural elements of Work for penetrations of mechanical and electrical Work.
- .6 Execute Work by methods to avoid damage to other Work, and which will provide proper surfaces to receive patching and finishing.
- .7 Cut rigid materials using masonry saw or core drill. Pneumatic or impact tools not allowed on masonry work without prior approval.
- .8 Restore work with new products in accordance with requirements of Contract Documents.
- .9 Fit Work to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- .10 Refinish surfaces to match adjacent finishes: Refinish continuous surfaces to nearest intersection. Refinish assemblies by refinishing entire unit.
- .11 Conceal pipes, ducts and wiring in floor, wall and ceiling construction of finished areas except where indicated otherwise.

Part 2 Products**2.1 NOT USED**

- .1 Not Used.

Part 3 Execution**3.1 NOT USED**

- .1 Not Used.

END OF SECTION

Part 1 General**1.1 ADMINISTRATIVE REQUIREMENTS**

- .1 Pre-warranty Meeting:
 - .1 Convene meeting two weeks prior to contract completion with contractor's representative and Departmental Representative:
 - .1 Verify Project requirements.
 - .2 Review manufacturer's installation instructions and warranty requirements.
 - .2 Departmental Representative to establish communication procedures for:
 - .1 Notifying construction warranty defects.
 - .2 Determine priorities for type of defects.
 - .3 Determine reasonable response time.
 - .3 Contact information for bonded and licensed company for warranty work action: provide name, telephone number and address of company authorized for construction warranty work action.
 - .4 Ensure contact is located within local service area of warranted construction, is continuously available, and is responsive to inquiries for warranty work action.

1.2 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Two weeks prior to Interim (Substantial) Performance of the Work, submit to the Departmental Representative four final copies of operating and maintenance manuals in English and French.
- .3 Provide spare parts, maintenance materials and special tools of same quality and manufacture as products provided in Work.
- .4 Provide evidence, if requested, for type, source and quality of products supplied.

1.3 FORMAT

- .1 Organize data as 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.
 - .1 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, 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.
 - .1 Bind in with text; fold larger drawings to size of text pages.

1.4 CONTENTS - PROJECT RECORD DOCUMENTS

- .1 Table of Contents for Each Volume: provide title of project;
 - .1 Date of submission; names.
 - .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 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.

1.5 AS -BUILT DOCUMENTS AND SAMPLES

- .1 Maintain, at site for Departmental Representative one record copy of:
 - .1 Contract Drawings.
 - .2 Specifications.
 - .3 Addenda.
 - .4 Change Orders and other modifications to 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.
 - .1 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.
 - .1 Label each document "PROJECT RECORD" in neat, large, printed letters.
- .4 Maintain record documents in clean, dry and legible condition.
 - .1 Do not use record documents for construction purposes.
- .5 Keep record documents and samples available for inspection by Departmental Representative.

1.6 RECORDING INFORMATION ON PROJECT RECORD DOCUMENTS

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

1.7 EQUIPMENT AND SYSTEMS

- .1 For each item of equipment and each system include description of unit or system, and component parts.
 - .1 Give function, normal operation characteristics and limiting conditions.
 - .2 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.
 - .1 Include regulation, control, stopping, shut-down, and emergency instructions.
 - .2 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 Include manufacturer's printed operation and maintenance instructions.
- .7 Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- .8 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.
- .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 MAINTENANCE MATERIALS

- .1 Spare Parts:
 - .1 Provide spare parts, in quantities specified in individual specification sections.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to location as directed; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.
- .2 Extra Stock Materials:
 - .1 Provide maintenance and extra materials, in quantities specified in individual specification sections.
 - .2 Provide items of same manufacture and quality as items in Work.
 - .3 Deliver to location as directed; place and store.
 - .4 Receive and catalogue items.
 - .1 Submit inventory listing to Departmental Representative.
 - .2 Include approved listings in Maintenance Manual.
 - .5 Obtain receipt for delivered products and submit prior to final payment.
- .3 Special Tools:
 - .1 Provide special tools, in quantities specified in individual specification section.
 - .2 Provide items with tags identifying their associated function and equipment.
 - .3 Deliver to [location as directed]; place and store.

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

1.10 DELIVERY, STORAGE AND HANDLING

- .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.
- .5 Remove and replace damaged products at own expense and for review by Departmental Representative.

1.11 WARRANTIES AND BONDS

- .1 Develop warranty management plan to contain information relevant to Warranties.
- .2 Submit warranty management plan, 30 days before planned pre-warranty conference, to Departmental Representative approval.
- .3 Warranty management plan to include required actions and documents to assure that Departmental Representative receives warranties to which it is entitled.
- .4 Provide plan in narrative form and contain sufficient detail to make it suitable for use by future maintenance and repair personnel.
- .5 Submit, warranty information made available during construction phase, to Departmental Representative for approval prior to each monthly pay estimate.
- .6 Assemble approved information in binder, submit upon acceptance of work and organize binder as follows:
 - .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 (10) days after completion of applicable item of work.
 - .4 Verify that documents are in proper form, contain full information, and are notarized.
 - .5 Co-execute submittals when required.
 - .6 Retain warranties and bonds until time specified for submittal.
- .7 Except for items put into use with Departmental Representative's permission, leave date of beginning of time of warranty until Date of Substantial Performance is determined.
- .8 Conduct joint 9 month warranty inspection, measured from time of acceptance, by Departmental Representative.

- .9 Include information contained in warranty management plan as follows:
 - .1 Roles and responsibilities of personnel associated with warranty process, including points of contact and telephone numbers within the organizations of Contractors, subcontractors, manufacturers or suppliers involved.
 - .2 Provide list for each warranted equipment, item, feature of construction or system indicating:
 - .1 Name of item.
 - .2 Model and serial numbers.
 - .3 Location where installed.
 - .4 Name and phone numbers of manufacturers or suppliers.
 - .5 Names, addresses and telephone numbers of sources of spare parts.
 - .6 Warranties and terms of warranty: include one-year overall warranty of construction. Indicate items that have extended warranties and show separate warranty expiration dates.
 - .7 Cross-reference to warranty certificates as applicable.
 - .8 Starting point and duration of warranty period.
 - .9 Summary of maintenance procedures required to continue warranty in force.
 - .10 Cross-Reference to specific pertinent Operation and Maintenance manuals.
 - .11 Organization, names and phone numbers of persons to call for warranty service.
 - .12 Typical response time and repair time expected for various warranted equipment.
 - .3 Contractor's plans for attendance at 9 month post-construction warranty inspections.
 - .4 Procedure and status of tagging of equipment covered by extended warranties.
 - .5 Post copies of instructions near selected pieces of equipment where operation is critical for warranty and/or safety reasons.
- .10 Respond in timely manner to oral or written notification of required construction warranty repair work.
- .11 Written verification to follow oral instructions.
 - .1 Failure to respond will be cause for the Departmental Representative to proceed with action against Contractor.

1.12 WARRANTY TAGS

- .1 Tag, at time of installation, each warranted item. Provide durable, oil and water resistant tag approved by Departmental Representative.
- .2 Attach tags with copper wire and spray with waterproof silicone coating.
- .3 Leave date of acceptance until project is accepted for occupancy.
- .4 Indicate following information on tag:
 - .1 Type of product/material.
 - .2 Model number.

- .3 Serial number.
- .4 Contract number.
- .5 Warranty period.
- .6 Inspector's signature.
- .7 Construction Contractor.

Part 2 Products

2.1 NOT USED

- .1 Not Used.

Part 3 Execution

3.1 NOT USED

- .1 Not Used.

END OF SECTION