

1 General

1.1 RELATED REQUIREMENTS

- .1 Section 02 80 00 - Hazardous Materials Remediation.

1.2 DEFINITIONS

- .1 Demolish: Detach items from existing construction and legally dispose of them off site, unless indicated to be removed and salvaged or removed and reinstalled.
- .2 Existing to Remain: Existing items of construction that are not removed and that are not otherwise indicated as being removed, removed and salvaged, or removed and reinstalled.
- .3 Hazardous Materials: dangerous substances, dangerous goods, hazardous commodities and hazardous products, include but not limited to: poisons, corrosive agents, flammable substances, ammunition, explosives, radioactive substances, or materials that endanger human health or environment if handled improperly.
- .4 Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.
- .5 Remove and Salvage: Detach items from existing construction and deliver them to Departmental Representative.

1.3 STANDARDS

- .1 Comply with National Building Code, Part 8, Construction Safety Measures at Construction and Demolition sites, and Provincial requirements.
- .2 Conform to all regulations as required by the Occupational Health and Safety Act and WorkSafeNB.

1.4 ADMINISTRATIVE REQUIREMENTS

- .1 Coordination:
- .1 Coordinate demolition work so that work of this Section adheres to aesthetic criteria established by the Drawings and specified dimensions with all elements in planes as drawn, maintaining their relationships with all other building elements.
- .2 Historic items, relics, and similar objects including, but not limited to, cornerstones and their contents, commemorative plaques and tablets, antiques, and other items of interest or value to Departmental Representative that may be encountered during demolition remain Departmental Representative's property:
- .1 Carefully remove and salvage each item or object in a manner to prevent damage and deliver promptly to Departmental Representative.
- .2 Coordinate with Departmental Representative's historical adviser, who will establish special procedures for removal and salvage.
- .2 Schedule:
- .1 Start demolition work only after shop drawing and product availability requirements specified in Section 01 10 10 – General Instructions have been met.

1.5 SITE CONDITIONS

- .1 Departmental Representative will occupy portions of building immediately adjacent to demolition area:
 - .1 Conduct demolition so that Departmental Representative's operations will not be disrupted.
 - .2 Provide not less than 72 hours notice to Departmental Representative of activities that will affect Departmental Representative's operations.
- .2 Maintain access to existing means of egress, walkways, corridors, exits, and other adjacent occupied or used facilities.
 - .1 Do not close or obstruct means of egress, walkways, corridors, exits, or other occupied or used facilities without written acceptance from authorities having jurisdiction.
- .3 Remove Hazardous materials in accordance with Section 02 80 00 - Hazardous Materials Remediation.

1.6 EXISTING CONDITIONS REPORT

- .1 Before starting demolition work, inspect existing work, photograph/video, and record all existing damage in a report.
- .2 Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
- .3 Include finish surfaces that may be misconstrued as damage caused by demolition operations.
- .4 Damage observed that is not recorded in report will be considered to have occurred as a result of execution of this work.
- .5 Submit copy of report to Departmental Representative.

1.7 DUST AND NOISE CONTROL

- .1 Keep noise, dust, and inconvenience to occupants to minimum.
- .2 Coordinate and schedule major demolition, and noisy work to limit disturbance to Departmental Representative's use.
- .3 Dust barriers:
 - .1 Provide dust barriers, as required to contain dust within demolition/construction areas. Maintain negative pressure within construction/demolition areas to further contain dust.
 - .2 Relocate dust barriers as required during execution of work.
- .4 Temporarily seal diffusers and grilles to prevent contamination of ductwork.

2 Products

2.1 EQUIPMENT

- .1 Provide equipment required for safe and proper demolition.

3 Execution

3.1 EXAMINATION

- .1 Examine the site and building and be fully informed as to requirements of the Contract Documents and applicable codes.

3.2 PREPARATION

- .1 Identify and mark all equipment and materials identified to be removed and salvaged, and to be removed and reinstalled. Separate and store items away from area of demolition and protect from accidental disposal.
- .2 Provide and maintain barricades, warning signs, protection for workmen and the public during full extent of Work. Read drawings carefully to ascertain extent of protection required.

3.3 PROTECTION

- .1 Damage to existing work:
 - .1 Be responsible for damage to existing work to remain, remove and salvage items, remove and reinstall items.
 - .2 Repair or otherwise make good all damage resulting from negligence, and inadequate protection.
 - .3 Provide new product where repair cannot be successfully accomplished.
- .2 Protection of in-place conditions:
 - .1 Prevent movement, settlement, and other damage to parts of building to remain.

3.4 DEMOLITION WORK

- .1 Demolish and dismantle work in a neat and orderly manner and in strict accordance with all regulations.
- .2 Remove parts of existing building as indicated and as required to permit new construction.
- .3 Demolish in a manner to minimize dusting and to prevent migration of dust.
- .4 Carefully remove and lower heavy objects.
- .5 Neatly trim edges of partially demolished elements.
- .6 Truck away materials as soon as possible after removal and in no case permit accumulation of material within existing building or site.
- .7 At end of each day's work, leave Work in safe condition so that no part is in danger of toppling or falling.
- .8 Demolish existing carpet, resilient flooring and adhesive remnants as follows:
 - .1 Vacuum existing carpet thoroughly, prior to removal, using vacuum equipped with power head/sweeper.
 - .2 Apply fine mist water spray to carpet as required to minimize dust generation during removal. Avoid spraying near electrical outlets.

- .3 Remove adhesive to the greatest extent possible using scrapping tools and as follows:
 - .1 Do not use solvent based cleaners to remove adhesive remnants.
 - .2 Lightly shot blast or grind floor using machine designed for purpose to remove adhesive remnants.
 - .3 Vacuum floor ready for application of skim coating.
- .4 Repair all slab depressions and damage with cementitious patching compound. Grind down high spots.
 - .1 Skim coat floor with minimum 1 mm thick cementitious floor underlayment compatible with new flooring materials.
- .5 Floor substrate shall be smooth, free from ridges and depressions, and adhesive remnants that could telegraph through new flooring materials.
- .9 Demolish existing ceramic tile finishes. Remove setting bed or adhesive to the greatest extent possible using mechanical scrapping tools and as follows:
 - .1 Saw cut edge of tile for clean and even transition joint between existing tile to remain and new flooring materials.
 - .2 Lightly shot blast or grind floor to remove remnants of setting materials.
 - .3 Vacuum floor ready for application of skim coating.
 - .4 Repair all slab depressions and damage with cementitious patching compound. Skim coat floor with minimum 1 mm thick cementitious floor underlayment compatible with new flooring materials.
- .10 Demolish completely all ceiling panels and suspension grid as indicated.
- .11 Arrange for electrical and mechanical trades to properly disconnect and reconnect lines and services or cap off abandoned lines and services.

3.5 MISCELLANEOUS REMOVALS AND REINSTALLATION

- .1 Remove all miscellaneous items as noted, and as required to carry out the work of this and other sections. Take precautions to prevent damage to items being reinstalled.
- .2 Remove extraneous fasteners, screw inserts, miscellaneous hangers and similar items. Patch fastener holes prior to application of new finishes.
- .3 Remove sealant beads, tape, paint ridges, gypsum ridges, and residues from surfaces.
- .4 Coordinate with painting trade for repainting prior to reinstallation where necessary.
- .5 Provide required fastenings. Reinstall unless noted otherwise. Use existing fastener holes where practical. Drill new holes where required, do not use impact type tools. Reinstall items square, plumb and aligned true to building lines.

3.6 ITEMS TO BE REMOVED AND REINSTALLED/SALVAGED

- .1 Remove and reinstall items:
 - .1 Carefully remove items to be removed and reinstalled, and store in secure area. Protect from damage at all times. Where specification section exists for similar products, install in accordance with applicable section. Reinstall items at time necessitated by schedule.
 - .1 Items indicated on drawings.

- .2 Remove and salvage items:
 - .1 Departmental Representative has identified the following items to be removed and salvaged. Departmental Representative reserves the right to identify other items to be removed and salvaged. Carefully remove items to be salvaged and store in secure area. Protect from damage at all times.
 - .1 Items indicated on drawings.
 - .2 Other items requested by Departmental Representative.

3.7 DISPOSAL OF MATERIALS

- .1 All materials resulting from demolition work, except items to be removed and salvaged, and items to be removed and reinstalled, shall become the property of the Contractor.
- .2 Permanently dispose of demolition materials off site, in locations acceptable to local authorities having jurisdiction.
- .3 Retain land fill slips and make available for viewing if requested by Departmental Representative.
- .4 No burning or selling at site will be permitted.

END OF SECTION

1 General

1.1 SUMMARY

- .1 Comply with requirements of this Section when:
 - .1 Altering, modifying, or otherwise performing work on items to remain that contain hazardous materials.
 - .2 Materials containing hazardous materials are scheduled to be removed.
- .2 Hazardous materials that are not scheduled to be removed or altered are to remain untouched.

1.2 RELATED REQUIREMENTS

- .1 Section 02 82 10 - Asbestos Abatement.
- .2 Section 02 83 11 - Lead-Base Paint Abatement.

1.3 REFERENCE STANDARDS

- .1 Province of New Brunswick Regulations.
 - .1 A Code of Practice for Working with Materials Containing Asbestos in New Brunswick (N.B. Regulation 92-106).
 - .2 NB Department of Environment and Local Government (NBDELG) Policy for disposal of building material containing lead-based paint (August 2011).
- .2 Ontario Ministry of Labour.
 - .1 Guideline - Lead on Construction Projects, April 2011.

1.4 QUALITY ASSURANCE

- .1 Regulatory Requirements: comply with Federal, Provincial/Territorial and local requirements pertaining to hazardous materials removal, provided that in case of conflict among those requirements or with these specifications more stringent requirement applies. Comply with regulations in effect at time work is performed.
- .2 Work on hazardous materials shall be performed only by an approved hazardous waste removal company.

1.5 HEALTH AND SAFETY

- .1 Safety Requirements: worker protection.
 - .1 Protective equipment and clothing to be worn by workers while in asbestos and lead abatement Work Area.
 - .2 Eating, drinking, chewing, and smoking are not permitted in Work Area.
 - .3 Ensure that no person required to enter Work Area that requires respirators has facial hair that affects seal between respirator and face.
 - .4 Ensure workers wash hands and face when leaving work area.

1.6 PROTECTION

- .1 Be responsible for, and make good, damage to existing works to remain.

2 Products

2.1 MATERIALS

- .1 Polyethylene 0.15 mm thick unless otherwise specified; in sheet size to minimize joints.
- .2 Tape: fibreglass - reinforced duct tape suitable for sealing polyethylene under dry conditions and wet conditions using amended water.
- .3 Waste Containers: of type required for hazardous material.
 - .1 Labelling requirements: affix pre-printed cautionary warning in both official languages that is visible when ready for removal to disposal site.
- .4 Other materials as required for Classification of hazardous material.

3 Execution

3.1 SITE VERIFICATION

- .1 Contractor is responsible to visit the site and refer to the Hazardous Materials Report to determine the appropriate Classification of abatement required.

3.2 HAZARDOUS MATERIALS REMOVAL

- .1 Work on hazardous materials shall be performed only by an approved hazardous waste removal company.
- .2 Perform hazardous materials removal in accordance with procedures outlined for its Classification.
- .3 The following hazardous materials have been identified as being present or potentially present:
 - .1 Friable asbestos containing materials:
 - .1 Materials:
 - .1 Drywall joint compound at gypsum board walls and ceilings.
 - .2 Removal and disposal:
 - .1 In accordance with Section 02 82 10 - Asbestos Abatement.
 - .2 Lead containing materials:
 - .1 Materials:
 - .1 Paint on the structure of following colours: Off-white, Green, Red-Brown Paint.
 - .2 Remove and disposal:
 - .1 In accordance with Section 02 83 11 - Lead-Base Paint Abatement.
- .4 Should any hazardous materials other than those identified be encountered, the Contractor shall stop work and notify the Departmental Representative immediately. Contractor should not proceed until directed to by Departmental Representative.

END OF SECTION

1 General

1.1 RELATED REQUIREMENTS

- .1 Section 02 40 00 - Selective Demolition.
- .2 Section 02 80 00 - Hazardous Materials Remediation.

1.2 REFERENCE STANDARDS

- .1 Province of New Brunswick Regulations.
 - .1 A Code of Practice for Working with Materials Containing Asbestos in New Brunswick (N.B. Regulation 92-106).

1.3 DEFINITIONS

- .1 Refer to Section 1 - Definitions in The Code for definitions pertaining to asbestos removal.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Provide abatement procedure schedule indicating Class of operation and methods of abatement.
- .3 Submit proof satisfactory to Departmental Representative that suitable arrangements have been made to dispose of asbestos-containing waste in accordance with requirements of authority having jurisdiction.
- .4 Submit Provincial and/or local requirements for Notice of Project Form.
- .5 Submit proof of Contractor's Asbestos Liability Insurance.
- .6 Submit necessary permits for transportation and disposal of asbestos-containing waste and proof that asbestos-containing waste has been received and properly disposed.
- .7 Quality Control:
 - .1 Provide proof satisfactory to Departmental Representative that employees have received appropriate training and education by a competent person in the hazards of asbestos exposure, good personal hygiene, entry and exit from Asbestos Work Area, aspects of work procedures and protective measures while working in Asbestos Work Areas, and the use, cleaning and disposal of respirators and protective clothing.
 - .2 Provide proof that supervisory personnel have attended asbestos abatement course, of not less than two (2) days duration, approved by Departmental Representative.
 - .3 Provide proof satisfactory to Departmental Representative that employees have respirator fitting and testing. Workers must be fit tested (irritant smoke test) with respirator that is personally issued.
- .8 Submit results of air quality testing.

1.5 QUALITY ASSURANCE

- .1 Regulatory Requirements:
 - .1 Comply with Federal, Provincial/Territorial, and local requirements pertaining to asbestos, provided that in case of conflict among these requirements or with these specifications, more stringent requirement applies. Comply with regulations in effect at time Work is performed.
- .2 Health and Safety:
 - .1 Perform construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.
 - .2 Ensure workers wear proper protective equipment and clothing as defined in The Code for Class of operation.
 - .3 Eating, drinking, chewing, and smoking are not permitted.
 - .4 Ensure workers wash hands and face when leaving Asbestos Work Area.
 - .5 Ensure that no person required to enter an Asbestos Work Area has facial hair that affects seal between respirator and face.
 - .6 Visitor Protection:
 - .1 Provide protective clothing and approved respirators to Authorized Visitors to Work Areas.
 - .2 Instruct Authorized Visitors in the use of protective clothing, respirators and procedures.
 - .3 Instruct Authorized Visitors in proper procedures to be followed in entering and exiting from Work Area.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Place materials defined as hazardous or toxic in designated containers. Label containers with appropriate warning labels. Secure against unauthorized removal and damage.
- .2 Transport hazardous materials in accordance with the Transportation of Dangerous Goods Act.
- .3 Dispose of hazardous materials in accordance with requirements of the New Brunswick Department of the Environment.
- .4 Provide manifests describing and listing waste created. Transport containers by approved means to licenced landfill for burial.

1.7 PERSONEL TRAINING

- .1 Before beginning Work, provide Departmental Representative satisfactory proof that every worker has had instruction and training in hazards of asbestos exposure, in personal hygiene and work practices, and in use, cleaning, and disposal of respirators and protective clothing.
- .2 Instruction and training related to respirators includes, following minimum requirements:
 - .1 Fitting of equipment.
 - .2 Inspection and maintenance of equipment.
 - .3 Disinfecting of equipment.
 - .4 Limitations of equipment.
- .3 Instruction and training must be provided by a competent, qualified person.

2 Products

2.1 MATERIALS

- .1 As required in The Code for Class of operation.

3 Execution

3.1 PROCEDURES

- .1 Do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .2 Asbestos abatement subcontractor shall determine Class of Operation required, based upon Hazardous Materials Report and site observations, and do abatement in accordance with measures and procedures as required by The Code for Class of Operation.

3.2 SUPERVISION

- .1 Minimum of one (1) Supervisor for every ten (10) workers is required.
- .2 Approved Supervisor must remain within Asbestos Work Area during disturbance, removal, or other handling of asbestos-containing materials.

3.3 PREPARATION

- .1 Signage:
 - .1 Before beginning Work, at each access to Asbestos Work Area, install warning signs in both official languages in upper case 'Helvetica Medium' letters reading as follows, where number in parentheses indicates font size to be used: 'CAUTION ASBESTOS HAZARD AREA (25 mm)/NO UNAUTHORIZED ENTRY (19 mm)/WEAR ASSIGNED PROTECTIVE EQUIPMENT (19 mm)/BREATHING ASBESTOS DUST MAY CAUSE SERIOUS BODILY HARM (7 mm)'.
- .2 Before beginning Work:
 - .1 Shut off and isolate HVAC system to prevent dust dispersal into other building areas. Conduct smoke tests to ensure duct work is airtight.
 - .2 Remove visible dust from surfaces in work area where dust is likely to be disturbed during course of work.
 - .3 Use HEPA vacuum or damp cloths where damp cleaning does not create hazard and is otherwise appropriate.
 - .4 Do not use compressed air to clean up or remove dust from any surface.
- .3 Prevent spread of dust from Asbestos Work Area using measures appropriate to work to be done.
 - .1 Use FR polyethylene drop sheets over flooring such as carpeting that absorbs dust and over flooring in work areas where dust or contamination cannot otherwise be safely contained.
 - .2 When removing asbestos containing material, erect enclosure of polyethylene sheeting around work area, shut off mechanical ventilation system serving work area and seal ventilation ducts to and from work area.

3.4 ABATEMENT

- .1 Remove loose material by HEPA vacuum; thoroughly wet friable material containing asbestos to be removed or disturbed before and during Work unless wetting creates hazard or causes damage.
 - .1 Use garden reservoir type low-velocity sprayer or airless spray equipment capable of producing mist or fine spray.
 - .2 Perform Work in a manner to reduce dust creation to lowest levels practicable.
- .2 Remove asbestos containing materials in accordance with applicable class of work.
- .3 Work is subject to visual inspection and air monitoring. Contamination of surrounding areas indicated by visual inspection or air monitoring will require complete enclosure and clean-up of affected areas.

3.5 AIR MONITORING

- .1 From beginning of Work until completion of cleaning operations, Contractor will be responsible:
 - .1 To take air samples on daily basis outside of work area enclosure in accordance with Health Canada recommendations.
 - .2 For monitoring inside enclosure in accordance with applicable Provincial Occupational Health and Safety Regulations.
 - .3 Record results of inside and outside air samples and submit results to Departmental Representative.
- .2 Use results of air monitoring inside work area to establish type of respirators to be used. Workers may be required to wear sample pumps for up to full-shift periods.
 - .1 If fibre levels are above safety factor of respirators in use, stop abatement, apply means of dust suppression, and use higher safety factor in respiratory protection for persons inside enclosure.
 - .2 If air monitoring shows that areas outside work area enclosures are contaminated, enclose, maintain and clean these areas, in same manner as that applicable to work areas.
- .3 Departmental Representative reserves the right to have independent 3rd party test air outside work areas for fibre content.

3.6 CLEANUP

- .1 Frequently during Work and immediately after completion of work, clean up dust and asbestos containing waste using HEPA vacuum or by damp mopping.
- .2 Place dust and asbestos containing waste in sealed dust tight waste bags. Treat drop sheets and disposable protective clothing as asbestos waste and wet and fold to contain dust and then place in waste bags.
- .3 Immediately before their removal from Asbestos Work Area and disposal, clean each filled waste bag using damp cloths or HEPA vacuum and place in second clean waste bag.
- .4 Seal and remove double bagged waste from site. Dispose of in accordance with requirements of Provincial/Territorial and Federal authority having jurisdiction. Supervise dumping and ensure that dump operator is fully aware of hazardous nature of material to be dumped and that guidelines and regulations for asbestos disposal are followed.

- .5 Perform final thorough clean-up of Asbestos Work Areas and adjacent areas affected by Work using HEPA vacuum.

END OF SECTION

1 General

1.1 RELATED REQUIREMENTS

- .1 Section 02 40 00 - Selective Demolition.
- .2 Section 02 80 00 - Hazardous Materials Remediation.

1.2 REFERENCE STANDARDS

- .1 Province of New Brunswick Regulations.
 - .1 NB Department of Environment and Local Government (NBDELG) Policy for disposal of building material containing lead-based paint (August 2011).
- .2 Ontario Ministry of Labour.
 - .1 Guideline - Lead on Construction Projects, April 2011.

1.3 DEFINITIONS

- .1 HEPA vacuum: High Efficiency Particulate Air filtered vacuum equipment with filter system capable of collecting and retaining fibres greater than 0.3 microns in any direction at 99.97% efficiency.
- .2 Authorized Visitors: Departmental Representative and representatives of regulatory agencies.
- .3 Occupied Area: areas of building or work site that is outside Work Area.
- .4 Sprayer: garden reservoir type sprayer or airless spray equipment capable of producing mist or fine spray. Must be appropriate capacity for scope of work.
- .5 Competent person: individuals capable of identifying existing lead hazards in workplace and taking corrective measures to eliminate them.
- .6 Lead in Dust: wipe sampling on vertical and/or horizontal surfaces, dust and debris is considered to be lead-contaminated if it contains more than 40 micrograms of lead in dust per square foot.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Provide abatement procedure schedule indicating Type of operation and methods of abatement.
- .3 Provide proof satisfactory to Departmental Representative that suitable arrangements have been made to dispose of lead-based paint waste in accordance with requirements of authority having jurisdiction.
- .4 Provide Provincial and/or local requirements for Notice of Project Form.
- .5 Provide proof of Contractor's General and Environmental Liability Insurance.
- .6 Quality Control:
 - .1 Provide proof satisfactory to Departmental Representative that employees have had instruction on hazards of lead exposure, respirator use, dress, entry and exit from Work Area, and aspects of work procedures and protective measures.
 - .2 Provide proof that supervisory personnel have attended lead abatement course, of not less than two (2) days duration, approved by Departmental Representative.

- .3 Provide proof satisfactory to Departmental Representative that employees have respirator fitting and testing. Workers must be fit tested (irritant smoke test) with respirator that is personally issued.

1.5 QUALITY ASSURANCE

- .1 Regulatory Requirements: comply with Federal, Provincial and local requirements pertaining to lead paint, in case of conflict among those requirements or with these specifications more stringent requirement applies. Comply with regulations in effect at time work is performed.
- .2 Health and Safety:
 - .1 Eating, drinking, chewing, and smoking are not permitted in Work Area.
 - .2 Ensure workers are fully protected with respirators and protective clothing during preparation of system of enclosures prior to commencing actual lead abatement.
 - .3 Ensure workers wash hands and face when leaving Work Area.
 - .4 Provide and post in Clean Change Room and in Equipment and Access Room the procedures described in this Section, in both official languages.
 - .5 Ensure no person required to enter Work Area has facial hair that affects seal between respirator and face.
 - .6 Visitor Protection:
 - .1 Provide protective clothing and approved respirators to Authorized Visitors to Work Areas.
 - .2 Instruct Authorized Visitors in use of protective clothing, respirators, and procedures.
 - .3 Instruct Authorized Visitors in proper procedures to be followed in entering and exiting from Work Area.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Disposal of lead waste generated by removal activities must comply with Federal, Provincial, and Municipal regulations. Dispose of lead waste in sealed double thickness 6 mil bags or leak proof drums. Label containers with appropriate warning labels.
- .2 Provide manifests describing and listing waste created. Transport containers by approved means to licensed landfill for burial.

2 Products

2.1 MATERIALS

- .1 Polyethylene: 0.15 mm unless otherwise specified; in sheet size to minimize joints.
- .2 FR polyethylene: 0.15 mm woven fibre reinforced fabric bonded both sides with polyethylene.
- .3 Tape: fibreglass - reinforced duct tape suitable for sealing polyethylene under dry conditions and wet conditions using amended water.
- .4 Lead waste containers: type acceptable to dump operator with tightly fitting covers and 0.15 mm sealable polyethylene liners.
 - .1 Label containers with pre-printed bilingual cautionary Warning Lead clearly visible when ready for removal to disposal site.

3 Execution

3.1 GENERAL

- .1 Do work in accordance with Lead on Construction Projects guidelines.
- .2 Lead abatement within this Section is based upon Type 2 operations. Other Types of removal operations may be required, depending upon abatement subcontractor's methods of removal. Lead abatement subcontractor shall determine Type of removal required, based upon Hazardous Materials Report and site observations, and do abatement in accordance with measures and procedures for the applicable type.

3.2 SUPERVISION

- .1 Minimum of one (1) Supervisor for every ten (10) workers is required.
- .2 Approved Supervisor must remain within Lead Work Area during disturbance, removal, or other handling of lead-based paints.

3.3 PREPARATION

- .1 Signage:
 - .1 At point of access to work areas install warning signs in both official languages in upper case "Helvetica Medium" letters reading as follows where number in parentheses indicates font size to be used:
 - .1 CAUTION LEAD HAZARD AREA (25 mm).
 - .2 NO UNAUTHORIZED ENTRY (19 mm).
 - .3 WEAR ASSIGNED PROTECTIVE EQUIPMENT AND RESPIRATOR (19 mm).
 - .4 BREATHING LEAD CONTAMINATED DUST CAUSES SERIOUS BODILY HARM (7 mm).
- .2 Before beginning work:
 - .1 Shut off and isolate HVAC system to prevent dust dispersal into other building areas. Conduct smoke tests to ensure duct work is airtight.
 - .2 Pre-clean fixed casework, and equipment within work areas, using HEPA vacuum and cover with polyethylene sheeting sealed with tape.
 - .3 Clean work areas using HEPA vacuum. If not practicable, use wet cleaning method. Do not use methods that raise dust, such as dry sweeping, or vacuuming using other than HEPA vacuum.
 - .4 Seal off openings, corridors, doorways, windows, skylights, ducts, grilles, and diffusers, with polyethylene sheeting sealed with tape.
 - .5 Cover floor surfaces in work area from wall to wall with FR polyethylene drop sheets to protect existing floor during removal.

3.4 ABATEMENT

- .1 Removal of lead-based paint to be performed by scraping or sanding using non-powered hand tools, or manual demolition of lead-painted plaster walls or building components by striking a wall with sledgehammer or similar tool.
- .2 Remove lead-based paint in small sections and pack as it is being removed in sealable 0.15 mm plastic bags and place in labelled containers for transport.

- .3 Seal filled containers. Clean external surfaces thoroughly by wet sponging. Remove from immediate working area to Staging Area. Clean external surfaces thoroughly again by wet sponging before moving containers to decontamination Washroom. Wash containers thoroughly in decontamination Washroom, and store in Holding Room pending removal to Unloading Room and outside. Ensure containers are removed from Holding Room by workers who have entered from uncontaminated areas dressed in clean coveralls.
- .4 After enclosing lead painted surfaces, wet clean work area and equipment and access room. During settling period no entry, activity, or ventilation will be permitted.

3.5 CLEANUP

- .1 Following specified cleaning procedures, and when lead wipe sampling is below acceptable concentrations proceed with final cleanup.
- .2 Remove polyethylene sheet by rolling it away from walls to centre of work area. Vacuum visible lead containing particles observed during cleanup, immediately, using HEPA vacuum equipment.
- .3 Place polyethylene seals, tape, cleaning material, clothing, and other contaminated waste in plastic bags and sealed labelled waste containers for transport.
- .4 Clean-up Work Areas, Equipment and Access Room, and other contaminated enclosures.
- .5 Clean-up sealed waste containers and equipment used in Work and remove from work areas, via Container and Equipment Decontamination Enclosure System, at appropriate time in cleaning sequence.
- .6 Conduct final check to ensure no dust or debris remains on surfaces as result of dismantling operations.

END OF SECTION