

PART 1 - GENERAL

1.1 PRECEDENCE

- .1 For Federal Government Projects, Division 1 Sections take precedence over technical specifications in other Divisions of this Project Manual.
- .2 Requirements of Section 01 47 15 - Sustainable Requirements: Construction apply where appropriate to all sections of the Specifications for this project.

1.2 RELATED REQUIREMENTS

- .1 Section 01 33 00 – Submittal Procedures
- .2 Section 01 35 29 – Health and Safety Requirements
- .3 Section 01 35 22 – VOC Requirements
- .4 Section 01 47 19 - Indoor Air Quality: During Construction
- .5 Division 4 - Masonry
- .6 Division 5 – Metals
- .7 Division 6 - Wood, Plastics and Composites
- .8 Division 7 - Thermal and Moisture Protection
- .9 Division 8 - Openings
- .10 Division 9 - Finishes
- .11 Division 10 - Specialties
- .12 Division 11 - Equipment
- .13 Division 12 - Furnishings
- .14 Division 21 - Fire Suppression
- .15 Division 22 - Plumbing
- .16 Division 23 - Heating, Ventilating and Air Conditioning
- .17 Division 26 - Electrical

1.3 REFERENCE STANDARDS

- .1 American National Standard Institute (ANSI)/American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
 - .1 ANSI/ASHRAE 52.2-2017, Method of Testing General Ventilation Air-Cleaning Devices for Removal Efficiency by Particulate Size (ANSI approved).
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-92.1-1989, Sound Absorptive Prefabricated Acoustical Units.
- .3 CSA Group
 - .1 AAMA/WDMA/CSA 101/I.S.2/A440-11, NAFS - North American Fenestration Standard/Specification for Windows, Doors, and Skylights.
 - .2 CAN/CSA-B45.0 Series02(R2008), Plumbing Fixtures.
 - .3 CAN/CSA-Z809-08, Sustainable Forest Management.
- .4 National Air Duct Cleaners Association (NADCA)
 - .1 NADCA ACR-2013, Assessment Cleaning and Restoration.
 - .2 NADCA Standard 05-1997, Requirements for the Installation of Service Openings in HVAC Systems.
- .5 National Research Council Canada (NRC)
 - .1 National Energy Code of Canada for Buildings 2015 (NECB).
- .6 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
 - .1 SCAQMD Rule 1113-A2011, Architectural Coatings.
 - .2 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.
- .7 Scientific Certification Systems (SCS)
 - .1 FloorScore Program 2012.
- .8 Sheet Metal and Air Conditioning National Contractors Association (SMACNA)
 - .1 IAQ Guideline for Occupied Buildings Under Construction, 2007.

1.4 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submittals required:
 - .1 Ensure Energy Report: indicates Energy Star ratings of new equipment and appliances.
 - .2 Submit Chlorofluorocarbon (CFC) inventory report.
 - .3 Submit CFC phase-out plan.
- .3 Submit 2 copies of WHMIS MSDS in accordance with Section 01 35 29 - Health and Safety Requirements. Indicate VOC emissions, prior to installation or use:
 - .1 Adhesives.
 - .2 Caulking compounds.
 - .3 Sealants.
 - .4 Insulating materials.

- .5 Fireproofing or fire stopping materials.
 - .6 Paints.
 - .7 Floor and wall patching or levelling materials.
 - .8 Lubricants.
Clear finishes for wood surfaces.
- .4 Construction Schedule:
- .1 Submit schedule of construction prior to start of work, in co-ordination with scheduling requirements, including:
 - .1 Sequence of finish applications and allowances for curing times.
 - .2 Identification of finish types. See Table A
 - .3 Schedule and duration of proposed temporary ventilation.
 - .4 Delivery schedules of manufactured materials which are anticipated to off-gas in timely manner, which will allow for airing of those materials prior to their scheduled installation.
 - .5 Indicate and schedule commissioning procedures and temporary usages of building mechanical systems, identifying types of filtration and schedule for filter replacement.

1.5 HAZARDOUS MATERIALS

- .1 Take measures to ensure chemical spills do not enter drains.

1.6 BUILDING ENVELOPE

- .1 Include insulation to optimize reduction of heat losses or heat gains through building envelope.
 - .1 Insulation to levels specified in National Energy Code of Canada for Buildings (NECB).
- .2 Maintain integrity of building envelope using air barriers and vapour retarders and avoid thermal bridging to provide thermal comfort and prevent condensation.

1.7 GENERAL BUILDING DESIGN

- .1 Indicate in writing to Departmental Representative.
 - .1 Compliance Report: indicating requirement to purchase energy efficient and reduced environmental impact products.
 - .2 Use Report: indicate understanding of requirement to use materials and methods of construction, which improve energy and water efficiency, reduce hazardous by-products, and use recycled materials, or materials which can be reused.
 - .3 Energy Report: to indicate that new equipment and appliances meet energy efficiency criteria.

1.8 INDOOR AIR QUALITY

- .1 IAQ Performance
 - .1 Comply with following minimum indoor air performance requirements. Total volatile organic compounds level requirements include formaldehyde:

- .1 Product emission rate measured in g/L.
- .2 Indoor Environmental Quality
 - .1 Reduce quantity of indoor air contaminants that are odorous or potentially irritating to provide installer and occupant health and comfort as indicated.
 - .2 Minimize cross-contamination of regularly occupied occupancy areas by chemical pollutants.
 - .1 Include drains plumbed for appropriate disposal of liquid waste in spaces where water and chemical concentrate mixing occurs.
- .2 Construction IAQ Management Plan: See Section 01 47 19 - Indoor Air Quality: During Construction.
- .3 Environmental Tobacco Smoke (ETS) Control
 - .1 Smoking will not be permitted at site during construction.
- .4 Carbon Dioxide (CO₂) Monitoring
 - .1 Provide carbon dioxide detectors to assess and monitor air quality and ventilation rates.

1.9 GENERAL CONSTRUCTION MATERIALS/PRACTICES

- .1 Materials and Resources:
 - .1 Incorporate reused building materials as indicated.
 - .2 Use products and services that meet criteria of EcoLogo guidelines.
 - .3 Provide list of non-endorsed products and services, provided the green labelled product or services are capable of meeting specified performance requirements.

1.10 CEILINGS

- .1 Utilize ceiling tiles (panels) that:
 - .1 Comply with CAN/CGSB-92.1.
 - .2 Have noise reduction coefficient (NRC) of at least 0.70 when tested on E400 mounting in accordance with CAN/CGSB-92.1.
 - .3 Contain, when calculated on 12-month rolling average:
 - .1 Over 75% recycled material by weight of finished product, if made from cellulose fibre.
 - .2 Over 35% recycled material by weight of finished product if made from glass fibre or mineral composition.

1.11 PAINTS, STAINS, AND VARNISHES

- .1 Use paints and coatings with VOC limits indicated in Section 01 35 22 – VOC Requirements.

1.12 SEALANTS, ADHESIVES AND COMPOUNDS

- .1 Use adhesives with VOC limits indicated in Section 01 35 22 – VOC Requirements.
- .2 Use sealant products with VOC limits indicated in Section 01 35 22 – VOC Requirements.

1.13 FLOORING

- .1 Resilient flooring: in compliance with FloorScore manufactured with recycled content.

1.14 HVAC EQUIPMENT

- .1 Identify sources of external contamination in writing to Departmental Representative.
- .2 Storage Tanks (existing), no changes
 - .1 Include on site storage tanks to federal guidelines and local codes.

1.15 LIGHTING

- .1 Integrate lighting controls as specified related to living quarters/work space using on/off switches c/w vacancy sensors and dimming controls.
- .2 Lighting Fixtures
 - .1 Include high efficiency LED lamps and luminaries with electronic drivers.

1.16 PLUMBING FIXTURES

- .1 Water Efficiency:
 - .1 Include showerheads, bathroom faucets with low flow models aerators.
 - .2 Service water heating is existing to remain.
 - .3 Use low-flow manual faucets as specified.
 - .4 New low flow toilets to CAN/CSA-B45.0, maximum 6 Litres/flush. Existing to remain.
 - .5 Include water saving showerheads: flow rates 9.5 l/min @ 5.5 kg/cm².

PART 2 - PRODUCTS

2.1 NOT USED

- .1 Not Used.

PART 3 - EXECUTION

3.1 NOT USED

- .1 Not Used.

END OF SECTION

