

PART 1 - GENERAL

- 1.1 REFERENCES
- .1 Canada Green Building Council (CaGBC)
    - .1 LEED Canada 2009 for Design and Construction-2010, LEED Canada 2009 for Design and Construction Leadership in Energy and Environmental Design Green Building Rating System Reference Guide.
  - .2 CSA Group
    - .1 CAN/CSA-B45 Series-02(R2013), Plumbing Fixtures, (Consists of B45.0, B45.1, B45.2, B45.3, B45.4, B45.5, B45.6, B45.7, B45.8 and B45.9).
    - .2 CSA B125.3-12, Plumbing Fittings.
    - .3 CSA B651-12, Accessible Design for the Built Environment.
  - .3 Green Seal (GS)
    - .1 GS-36-2013, Adhesives for Commercial Use.
  - .4 South Coast Air Quality Management District (SCAQMD)
    - .1 SCAQMD Rule 1168-A2011, Adhesive and Sealant Applications.
- 1.2 ACTION AND INFORMATIONAL SUBMITTALS
- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Product Data:
    - .1 Submit manufacturer's instructions, printed product literature and data sheets for washroom fixtures and include product characteristics, performance criteria, physical size, finish and limitations.
    - .2 Indicate fixtures and trim:
      - .1 Dimensions, construction details, roughing-in dimensions.
      - .2 Factory-set water consumption per flush at recommended pressure.
      - .3 (For water closets): minimum pressure required for flushing.
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1.2 ACTION AND  
INFORMATIONAL  
SUBMITTALS  
(Cont'd)

- .3 Sustainable Design Submittals:
- .1 LEED Canada submittals: in accordance with Section 01 35 21 - LEED Requirements.
  - .2 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 75% of construction wastes were recycled or salvaged.
  - .3 Recycled Content:
    - .1 Submit listing of recycled content products used, including details of required percentages or recycled content materials and products, showing their costs and percentages of post-consumer and post-industrial content, and total cost of materials for project.
    - .4 Regional Materials: submit evidence that project incorporates 30% of required percentage of regional materials and products, showing their cost, distance from project to furthest site of extraction or manufacture, and total cost of materials for project.
  - .5 Low-Emitting Materials:
    - .1 Submit listing of adhesives and sealants and paints and coatings used in building, showing compliance with VOC and chemical component limits or restriction requirements.

1.3 CLOSEOUT  
SUBMITTALS

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- .1 Include:
- .1 Description of fixtures and trim, giving manufacturer's name, type, model, year, capacity.
  - .2 Details of operation, servicing, maintenance.
  - .3 List of recommended spare parts.
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| <u>1.4 DELIVERY,<br/>STORAGE AND<br/>HANDLING</u> | .1 | Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.  |
|   | .2 | Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.  |
|   | .3 | Storage and Handling Requirements:<br>.1 Store materials indoors in dry location and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.<br>.2 Store and protect specified materials from nicks, scratches, and blemishes.<br>.3 Replace defective or damaged materials with new. |
|   | .4 | Develop Construction Waste Management Plan related to Work of this Section and in accordance with Section 01 35 21 - LEED Requirements.  |
|   | .5 | Packaging Waste Management: remove for reuse or return of pallets, crates, padding, banding, and packaging materials as specified in Construction Waste Management Plan in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.        |

PART 2 - PRODUCTS

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| <u>2.1 SUSTAINABLE<br/>MATERIAL</u> | .1 | Adhesives and sealants: maximum VOC limit 70 g/L to SCAQMD Rule 1168 and in accordance with Section 01 35 21 - LEED Requirements. |
| <u>2.2 MANUFACTURED<br/>UNITS</u>   | .1 | Fixtures: manufacture in accordance with CAN/CSA-B45 series.  |
|                                     | .2 | Trim, fittings: manufacture in accordance with CSA B125.3.  |
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- 2.2 MANUFACTURED UNITS  
(Cont'd)
- .3 Exposed plumbing brass to be chrome plated.
  - .4 Number, locations: as indicated.
  - .5 Fixtures in any one location to be product of one manufacturer and of same type.
  - .6 Trim in any one location to be product of one manufacturer and of same type.
  - .7 Water closets:

WC Type	Mounting		Bowl		Flush	Flush	Handicapped
	Wall	Floor	Elongated	Regular	Valve	Tank	
WC-1	X		X			X	X

- .1 WC-1: wall-mounted, flush tank, low flush, maximum 3.8 litres/flush.
  - .1 Bowl: vitreous china, syphon jet, elongated rim.
  - .2 See plumbing fixture schedule for more details.
- .8 Water Closet Seats.
  - .1 Seat: white, elongated, open front, moulded solid plastic, less cover, stainless steel check hinges, stainless steel insert post. See plumbing fixture schedule for more details.
- .9 Washroom Lavatories:
  - .1 L-3: wall-hung, for handicapped.
    - .1 Vitreous china, low shelf, with integral back, contoured front, shallow front basin, front overflow, soap depressions, supply openings on 299 mm centres, concealed supports. Sizes: 675 x 500 mm. See plumbing fixture schedule for more details.
- .10 Washroom Lavatory Trim:
  - .1 Chrome plated brass, combination supply and waste fittings, mixing spout, washerless, pop-up waste, tamperproof aerator, metal indexed handles.
    - .1 Provide accessories to limit maximum flow rate to 1.3 l/minute at 413 kPa.
    - .2 Waste fitting: pop-up. See plumbing fixture schedule for more details.

- 2.2 MANUFACTURED UNITS  
(Cont'd)
- .11 Fixture piping:
    - .1 Hot and cold water supplies to fixtures:
      - .1 Chrome plated flexible supply pipes with handwheel stop, reducers, escutcheon.
      - .2 Waste:
        - .1 Brass P trap with clean out on fixtures not having integral trap.
        - .2 Chrome plated in exposed places.
  - .12 Chair carriers:
    - .1 Factory manufactured floor-mounted carrier systems for wall-mounted fixtures.

PART 3 - EXECUTION

- 3.1 EXAMINATION
- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for washroom fixtures installation in accordance with manufacturer's written instructions.
    - .1 Visually inspect substrate in presence of Departmental Representative.
    - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
    - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.
- 3.2 INSTALLATION
- .1 Mounting heights:
    - .1 Standard: to manufacturer's recommendations as indicated.
    - .2 Wall-hung fixtures: as indicated, measured from finished floor.
    - .3 Barrier-free: to most stringent NBCCSA B651.
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- 3.3 ADJUSTING
- .1 Conform to water conservation requirements specified this section.
  - .2 Adjustments:
    - .1 Adjust water flow rate to design flow rates.
    - .2 Adjust pressure to fixtures to ensure no splashing at maximum pressures.
    - .3 Adjust flush valves to suit actual site conditions.
  - .3 Checks:
    - .1 Water closets: flushing action.
    - .2 Aerators: operation, cleanliness.
    - .3 Vacuum breakers, backflow preventers: operation under all conditions.
  - .4 Thermostatic controls:
    - .1 Verify temperature settings, operation of control, limit and safety controls.
- 3.4 CLEANING
- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
    - .1 Leave Work area clean at end of each day.
  - .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
  - .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.
    - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.