

PART E
SPECIFICATIONS

PART E - SPECIFICATIONS

GENERAL

E1. APPLICABLE SPECIFICATIONS, STANDARD DETAILS AND DRAWINGS

- E1.1 *The City of Winnipeg Standard Construction Specifications* in its entirety, whether or not specifically listed on Form B: Prices, shall apply to the Work.
- E1.1.1 *The City of Winnipeg Standard Construction Specifications* is available in Adobe Acrobat (.pdf) format on the Information Connection page at The City of Winnipeg, Corporate Finance, Materials Management Division internet site at <http://www.winnipeg.ca/matmgt>.
- E1.1.2 The version in effect three (3) Business Days before the Submission Deadline shall apply.
- E1.1.3 Further to GC:2.4(d), Specifications included in the Bid Opportunity shall govern over *The City of Winnipeg Standard Construction Specifications*.
- E1.2 The following Drawings are applicable to the Work:

<u>Drawing No.</u>	<u>Drawing</u>
E1.3	Furn./Floor Plan
E1.4	Electrical Plan
E1.5	Reflected Ceiling Plan

E2. SPECIFICATIONS

- E2.1 Supply/deliver to site 2 – 12'x60' staff lunchroom modular complex units as per specifications/floor plan attached.
- E2.2 Alternative 1 – New construction as per specs/floor plan
- E2.3 Alternative 2 – Used existing trailer modular unit, up to maximum of 5 years old, retro fitted to specs/floor plan.
- E2.4 Bid amount to include levelling, attaching units together, installation of tie downs and blocking.
- E2.5 Blocking to be 2'x2' cribs, constructed of 6"x6" rough pressure treated material situated approximately 10' on centre and 24" high.
- E2.6 Tie downs to be designed/sealed by a Structural Engineer with anchoring devices installed as per local building code requirements.
- E2.7 Interior and exterior joining completed including partition walls and water tightening of all surfaces.
- E2.8 Including all permits necessary for transporting and set up of structure

E3. CODE COMPLIANCE

- E3.1 The proposed building must comply with the National/Provincial Building codes and Safety Regulations. The electrical design must meet the Canadian Standards Association – Electrical Certification. The plumbing design must meet applicable provincial plumbing regulations. The heating design must meet all applicable provincial gas protection regulations.

E4. APPROVED EQUIPMENT

- E4.1 All plumbing fixtures and fittings, mechanical equipment, electrical devices, fixtures and equipment must be approved for use intended by C.S.A. and/or U.L.C.

E5. ARCHITECTURAL

E5.1 Structural

- (a) Modular wood framed unit, fully erected in manufacturing facility. All lumber kiln dried, SPF #2 and better.

E5.2 Design Criteria

- (a) Structural design is based on GE Capital Modular Space – supplied information and the requirements of Part #4 of the National Building Code. The principle criteria are:
- (i) Live floor load = 100 psf
 - (ii) Live roof load = 40 psf
 - (iii) Structural ceiling height = 9' ¼"
 - (iv) Finished ceiling height = 8'0"

E5.3 Floors – from exterior to interior

Undersheathing - 3/8" O.S.B. exterior sheathing, glued and stapled. All penetrations must be sealed and weathertight.

Joists & Plates - 2" x 10" spruce, 16" o.c., c/w joist hangers. Triple side plates, double end plates.

Insulation - 6" fibreglass (R-20), friction fit.

Sub-floor - 5/8" select tongue and groove plywood sheathing, glued, screwed and stapled.
Note: Plywood finish to be filled and sanded as required for floor covering application.

Floor Covering

- 1/8" x 12" x 12" vinyl composition tile, 100% interior floorspace coverage. Imperial texture (51899), cool white, as manufactured by Armstrong, applied with Armstrong approved adhesive. The pattern of the tile should be a 50% - offset. Note: Only minimum spread tolerances will be accepted.
- 2.0 mm vinyl, welded seam flooring (Tarkett), 100% interior floorspace coverage.

Joiners - Cut back at unit joint for seaming.

Floor Sealant - Applied at factory, to seal finished floor.

Floor Wax - Applied at factory, to seal finished floor.

E5.4 Walls

- (a) Optional Wood Finish
- (b) Stained 7/16" wood panel, grooved 8" o.c., c/w wood (7/16") fascia, painted with two (2) coats of semi-gloss, acrylic latex, Sherwin Williams "Driftwood".
- (c) Fascia painted with two (2) coats of semi-gloss acrylic latex, Sherwood Williams "Ironwood". All cut edges to be primed and painted.

E5.5 Exterior Trim

- (a) Fascia is (20" ends, 24" sides) wood panel applied vertically to line up with siding. (See drawing # GECMS-963). Note: Fascia does not slope.

- (b) Corner trim is 3" (cut from wood panel siding), painted with two (2) coats of semi-gloss, acrylic latex, Sherwin Williams "Driftwood".
- (c) F4/ step flashing, profile #136 c/w 1" x 4" starter, painted "Driftwood" to match siding.
- (d) All penetrations to wood siding surface (by fasteners), must be caulked and painted, as per manufacturer specifications.

E5.6 Building Paper

- (a) 15 lbs. On wood sided units only.

E5.7 Sheathing

- (a) 3/8" O.S.B. exterior sheathing, glued and stapled.

E5.8 Studs & Plates

- (a) 2" x 6" spruce, 16" o.c. perimeter walls.

E5.9 Insulation

- (a) 5 1/2" fibreglass (R-20).

E5.10 Vapour Barrier

- (a) 6 mil. Polyethylene.

E5.11 Finish

- (a) 1/2" (Raindrops Mist by Vipco), vinyl covered gyproc, flame spread rated at 20, screwed and nailed.

E5.12 Trim

- (a) Pre-finished 4" rubber cove base Johnsonite (Charcoal).
- (b) 1 1/2" vinyl covered, matching cove and divider molding, nail penetrations filled with "gray" matching putty.

E6. PARTITIONS

E6.1 Studs & Plates

- (a) 2" x 4" spruce, 16" o.c.
- (b) 2" x 6" spruce, 16" o.c. at plumbing walls (if applicable).

E6.2 Insulation

- (a) 3 1/2" fibreglass (R-12) if applicable.

E6.3 Finish

- (a) 1/2" (Raindrops Mist, Vipco), vinyl covered gyproc, flame spread rated at 20, screwed and nailed.

E6.4 Trim

- (a) Pre-finished 4" rubber cove base (Johnsonite, Charcoal).
- (b) 1 1/2" vinyl covered, matching cove and divider molding, nail penetrations filled with "gray" matching putty.

E7. PLENUM WALL

E7.1 Studs & Plates

- (a) 2" x 4" steel studs 16" o.c. c/w blocking spaced @ 24" vertical on each stud, single top and bottom plates.

E7.2 Finish (inside)

- (a) ½" type "X", fireguard drywall.

E7.3 Finish (outside)

- (a) ½" type "X", fireguard drywall, vinyl covered, "Raindrops Mist" (Vipco), flame spread at 20, with all vertical joints glued and sheets screwed at each stud.

E7.4 Trim

- (a) Same as above.

E8. ROOFS

E8.1 Finish

- (a) 45 mil., fully adhered, EPDM roofing, black, c/w aluminum termination bar, screwed. Note: termination bar **should not** splice at corners, but "wrap around" not let than 12" and should be placed on roof-line so that 1" of EPDM is exposed above the termination bar. EPDM should be overlapped to inside of beam, not less than 6" and temporarily fastened for closure at set up.

E8.2 Sheathing

- (a) 15/32" O.S.B. sheathing, screwed and sanded.

E8.3 Slope

- (a) 1" in 10' longitudinal, (1 ½" block-start end), peaked in middle unit.

E8.4 Beams

- (a) 2 only, structural to span 20' support intervals, (open area only), height to allow for upstand, sheathing, sloped wedges and coverage to base of T-grid framing.
- (b) 3/8" O.S.B. , full coverage to tie in upstand to base of beam.

E8.5 Joists

- (a) 2" x 8" spf, 16" oc, c/w joist hangers.

E8.6 Posts

- (a) 4 only, quad 2" x 4" studs.

E8.7 Insulation

- (a) 6" fibreglass (R-20).

E8.8 Vapour Barrier

- (a) 6 mil. Polyethylene.

E8.9 Cavity (total) Finish

- (a) ½" fireguard gyproc.

E8.10 Finish

- (a) Class A, suspended Armstrong, Prelude XL 15/16" T-bar ceiling, with fibreglass ceiling panels (FSR 25), 2' x 4' x 5/8" #2983 Pebble, white, Armstrong, clipped in place.
- (b) All cross-T's must be riveted to angle perimeter rail and the angle rail screwed to the belt rail around entire inside perimeter of unit.

E8.11 Joiners

- (a) Materials required for interior & exterior complexing of units.

E9. DOORS

E9.1 Exterior Doors

- (a) 2 only, (Gienow or Equivalent), 36" x 80" solid core steel, c/w handi-cap threshold c/w "Bone White" wood jamb and "White" prefinished brickmold c/w fixed 10" x 18" g/w glass window.
- (b) Door color to be "Bone White" (5000 QC273) Dofasco, exterior and interior on metal sided units.
- (c) Door color to be "Driftwood" exterior and "Bone White" interior on wood sided units.
- (d) Exterior drip caps (aluminum), painted "Bone White".

E9.2 Hardware

- (a) 2 only, Weiser passage set, c/w Weiser deadbolt (numbered), keyed to GE master, c/w oversized striker plate opening.
- (b) 2 only, check chains, wrapped with vinyl sleeve.
- (c) Exterior hinges to be NRP type, c/w 3 1/2" screw on each hinge, on unit side into framing studs.
- (d) All interior and exterior door hardware is brushed aluminum, including hinges.

E10. WINDOWS

E10.1 8 only, 46" x 36" sealed horizontal slider, c/w screen, (CWD or Equivalent) consol, pvc pre-finished, white c/w warm edge spacer bar.

E10.2 Optional

- (a) 8 only, 48" x 60" sealed units c/w bottom sealed horizontal slider, c/w screen, (CWD or Equivalent) consol pvc, pre-finished, white.
- (b) Wood sided units, c/w brick mold trim.
- (c) Interior jamb to be painted bone white.
- (d) Interior casing in pre-finished light oak wood.
- (e) Exterior drip caps (aluminum), painted "Bone White".

E10.3 Trim

- (a) Brickmold, color to be "Ironwood", on wood units only.

E11. DESIGN CRITERIA

- (a) Temperature differential (heating) - 60° C. (100° F.).
- (b) Temperature differential (cooling) - 8° C. (15° F.).

E12. HEATING/COOLING

E12.1 HVAC Unit

- (a) 2 only, LPG fired, Bard gas model (WAG 30A-A54C), exterior end-wall mounted, heating/cooling system. Unit to meet CSA and CGA approvals. Unit exterior color to be "gray" to match exterior siding.

E12.2 Location of Unit

- (a) Bard should be located toward the exterior door side of front end wall and the exterior window side of front endwall to allow for "straight" ducting with side take-offs from duct.
- (b) 2 only, wall mounted auto-switch-over thermostats.

E12.3 Supply Line

- (a) 2 only, ½" gas lines c/w "Fisher #R322/41" regulators and gas cocks.

E12.4 Ducts

- (a) Metal supply air ductwork, installed within the suspended ceiling, c/w 12" x 12" white supply diffusers in 24" (module size), E.H. Price, SCD/3B13.
- (b) Cavity above suspended ceiling will be used as a return air plenum to unit via plenum wall space.

E13. WASHROOMS – PLUMBING

E13.1 Fixtures

- (a) 2 only, water closet, c/w open front seat, male/female.
- (b) 1 only, disabled person water closet c/w grab rails.
- (c) 2 only, wall hung lavatory basins 17" x 20" c/w 4" center set faucets and chrome angled legs (blade handle on handicap), male/female.
- (d) 2 only, American Standard, counter mounted, lavatory basin c/w vanity counter (Formica #86602, SP42 "MAYA") c/w apron 6" and 4" center set faucet.
- (e) 2 only, toilet paper holders (roll type, surface mounted).
- (f) 1 only, 18" x 24" mirrors secured with clips.
- (g) 1 only, 18" x 30" mirror (mounted 36" AFF), secured with clips (handicap washroom).
- (h) 1 only, 6 gallon electric water heater c/w T&P valve and drain.

E13.2 Supply Lines

- (a) All supply lines to be concealed.
- (b) Type "M" copper pipe.
- (c) Copper and cast bronze fittings.
- (d) Water is distributed from one inlet.

E13.3 Hot Water

- (a) Available at all fixtures except water closets.

E13.4 DWV

- (a) All DWV lines to be concealed.
- (b) ABS plastic pipe and fittings.

- (c) All fixtures stub out under floor.

E13.5 Ventilation

- (a) 2 only, 60 cfm wall mounted exhaust fans, washrooms.

E14. DOORS

E14.1 Interior Doors

- (a) 2 only 36" x 80" solid core prefinished light oak doors c/w matching trim.
- (b) 2 only privacy locksets & closers.
- (c) All interior door hardware is brushed aluminum, including hinges.

E15. ELECTRICAL SPECIFICATIONS

E15.1 Design Criteria

- (a) Power supply – 120/240 volt AC, single phase, three wire, 60 Hertz.
- (b) Lighting levels – 70 foot candles (average).
- (c) Demand load – 16 kW estimated demand load.

E15.2 Service Entrance

- (a) Location
 - (i) Positioned underground.
 - (ii) Connection to service entrance by C.O.W.
- (b) Components
 - (i) 1 ¼" conduit stub down thru floor.

E15.3 Distribution

- (a) Loadcenter
 - (i) 1 only, main distribution panel, c/w door, shall be GE TMC3220CCU, recess panel in plenum wall, c/w a two pole 125 amp. Main breaker and branch breakers as required. 1" conduit stubbed through floor for sub-panel interconnect.
 - (ii) 1 only sub distribution panel c/w door, shall be GE TMC2010CCU, recess panel in plenum wall, c/w a two pole, 60 amp., main breaker and branch breakers as required. No exposed wire or conduit. 1" conduit, stubbed down through floor for interconnect to main panel.
- (b) Wiring
 - (i) Concealed, non-metallic, sheathed, copper cable, c/w #14 AWG conductors.
 - (ii) 17 only, U-ground, duplex receptacles (white).
 - (iii) 2 only, U-ground, duplex receptacles (white) in support posts.
 - (iv) 2 only, GFI, duplex receptacles (white) in washrooms.

E15.4 Lighting

- (a) Florescent
 - (i) 18 only, four lamp, 48" long, c/w diffusers, GE cool white lamps and 5' flex conduit pigtail.
 - (ii) All fixtures aligned parallel with roof joists.
- (b) Installation in T-grid

- (i) Hang fixtures with wire, at all four corners to structural ceiling and secure to T-grid with screw at each end.
- (c) Incandescent
 - (i) 2 only, exterior RWP-100, polished aluminum light fixture, c/w globe and GE 100 watt bulb.
 - (ii) 2 only, illuminated exit lights, mounted as per code.
 - (iii) 2 only, 2 lamp emergency light packs, mounted as per code.

E15.5 Communication

- (a) Telephone – 12 only, outlet installed with $\frac{3}{4}$ " plastic conduit stub-up to T-bar ceiling.
- (b) Backboard – 1 only, IVT Tel/Data cabinet #277 500 007 c/w 2" conduit stub-up into ceiling space and 1" conduit to end wall c/w LB.