

Part 1 General

1.1 Related Sections

- .1 Section 06101- Rough Carpentry Short Form: Strapping and grounds.
- .2 Section 06200 - Finish Carpentry.
- .3 Section 09900 – Finish Painting

1.2 References

- .1 Aluminum Association (AA)
 - .1 Aluminum Association Designation System for Aluminum Finishes-1997.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-11.3-M87, Hardboard.
 - .2 CGSB 41-GP-30M-82, Wall coverings, Vinyl-Coated Fabrics.
- .3 Canadian Standards Association (CSA)
 - .1 CAN/CSA-A247-M86, Insulating Fibreboard.
 - .2 CSA O121-M1978, Douglas Fir Plywood.
 - .3 CSA O151-M1978, Canadian Softwood Plywood.
 - .4 CAN3-O188.1-M78, Interior Mat-Formed Wood Particleboard.
- .4 Underwriters Laboratories of Canada (ULC)
 - .1 CAN/ULC-S102-[M88], Surface Burning Characteristics of Building Materials and Assemblies.

1.3 Shop Drawings

- .1 Submit shop drawings in accordance with Section 01330 - Submittal Procedures.
- .2 Indicate location, type, size, panel arrangement, backing, hardware, anchor or mounting details, frame or trim and accessories.

1.4 Samples

- .1 Submit samples in accordance with Section 01330 - Submittal Procedures.
- .2 Submit 300 x 300 mm sample of each type of tackboard

1.5 Regulatory Requirements

- .1 Surface burning characteristics of materials: listed and labelled by an organization accredited by Standards Council of Canada.

Part 2 Products

2.1 Materials

- .1 Utility sheet aluminum: plain,
- .2 Laminating adhesive: to manufacturer's standard.
- .3 Mounting adhesive: to manufacturer's standard.
- .4 Joint reinforcement: concealed mechanical jointing system to provide straight, rigid, continuously supported, tight butt, flush joints at surface.
- .5 Anchor clips, brackets and fasteners: concealed type
- .6 Facings
 - .1 Vinyl; pin-hole concealing type
- .7 Core
 - .1 Fibreboard: to CAN/CSA A247,

2.2 Components

- .1 Extruded aluminum: Aluminum Association alloy AA6063-T5. Minimum 1.5 mm wall thickness.
- .2 Tackboard trim to profiles detailed.

2.3 Accessories

- .1 Manufacturer's standard.

2.4 Fabrication

- .1 Fabricate tackboard panels to sizes indicated.
- .2 Factory laminate tackboards, consisting of facing sheet, with core, and backing sheet.
- .3 Wrap around edges and fasten to back face.
- .4 Make finished panels flat and rigid and fit with joint reinforcement.
- .5 Install trim on panels in factory. Make mitres and joints to hair-line fit, free of rough edges [with concealed brackets to reinforce and hold joints tight and flush]. [No exposed fasteners permitted].
- .6 Overlap trim 6 mm onto panels. Factory fit assemblies too large for shipment to site in one piece, disassemble for delivery and site assembly.

2.5 Finishes

- .1 Aluminum trim finishes.
 - .1 Finish exposed surfaces of aluminum components in accordance with Aluminum Association Designation System for Aluminum Finishes.
 - .1 Clear anodic finish:
 - .2 Appearance and properties of anodized finishes designated by the Aluminum Association as Architectural Class 1, Architectural Class 2, and Protective and Decorative.

Part 3 Execution

3.1 Installation

- .1 Install tackboards in accordance with manufacturer's instructions, parallel to floor with uniform vertical surface, plumb and level, to provide rigid, secure surface.
- .2 Install trim and framing around tackboard panels. Make mitres and joints to hair-line fit, free of rough edges. Use concealed brackets to reinforce and hold joints tight and flush. No exposed fasteners permitted. Overlap trim 6 mm onto panels.
- .3 Mechanical attachment:
 - .1 To concrete or solid masonry use lag screw and expansion bolts or screws and fibre plugs as appropriate for stresses involved.
 - .2 To hollow masonry use toggle bolts or equivalent.
 - .3 To wood or sheet metal use screws. Secure into framing members in stud walls.
- .4 Adhesive attachment.
 - .1 Apply self-stick adhesive foam tape strips over back surface at maximum [300] mm oc. Keep tape minimum 6 mm from edges.
 - .2 Use recommended adhesive applied using spot method with daubs 40 mm diameter x 25 mm high at 200 mm oc each way to adhere tackboard to wall. Press firmly into adhesive to ensure adhesion.

3.2 Cleaning

- .1 Clean surfaces after installation using manufacturer's recommended cleaning procedures.

END OF SECTION

Part 1 General

1.1 SUBMITTALS

- .1 Shop Drawings: Clearly indicating compartment layouts and dimensions, materials being supplied, connections, attachments, reinforcing, anchorage, hardware and location of exposed fastenings.
- .2 Samples: Submit one sample of each of hinge, latch, shoe, panel fitting and other hardware items and fasteners, and one sample corner section 200 mm x 200 mm (8" x 8") showing corner, edge and core construction.

Part 2 Products

2.1 MATERIALS

- .1 Type and Acceptable Manufacture: Overhead braced by Hadrian Manufacturing Inc., General Steel Systems, or Shanahan's.
- .2 Doors, Panels and Pilasters: 25 mm (1") thick doors and panels, 32 mm (1¼") thick pilasters, 0.8 mm (1/32") thick galvanized sheet steel pressure laminated to honeycomb kraft paper core.
 - .1 Prefinish work in baked enamel coating. Colour to match Dawn 970 by Shanahan's.
- .3 Pilaster Shoe: 0.8 mm (1/32") thick stainless steel, brushed finish.
- .4 Headrail: Extruded aluminium channel with clear anodized finish of anti-grip design.
- .5 Fasteners: One-way theft resistant screws of stainless steel or chrome plated brass/steel.
- .6 Levelling Mechanism: Threaded, adjustable, lockable bolts concealed by pilaster shoes.
- .7 Hinges: Concealed in door, bright polished, smooth, chrome plated non-ferrous metal, adjustable to hold door in any position when not latched.
- .8 Latch Set: Combination latch, door-stop, keeper and bumper, chrome plated non-ferrous metal, emergency access feature.
- .9 Wall and Connecting Brackets: Chrome plated non-ferrous metal or clear anodized aluminium.
- .10 Coat Hook: Combination hook and rubber door bumper, chrome plated non-ferrous metal.
- .11 Door Pull: Type suited for out swinging doors, chrome plated non-ferrous metal.
- .12 Concealed Reinforcement: Sheet steel patch spot welded, minimum 2 mm (14 gauge) at points to be tapped for fixings, minimum 2.5 mm (12 gauge) at pilasters and for anchoring grab bars.
- .13 Non-Ferrous Metal for Hardware and Accessories: Zamac 5 or other acceptable zinc alloy.

2.2 FABRICATION

- .1 Provide formed and closed edges for doors, panels and pilasters. Miter and weld corners and grind smooth.
- .2 Provide internal reinforcement at areas of attached hardware and fittings. Temporarily mark location of reinforcement for tissue holders and grab bars.
- .3 Provide concealed metal reinforcement for attachment of brackets, hardware and anchoring devices, and as required to produce adequate strength of assembly.
- .4 Provide cutouts and reinforcement to accept and support washroom accessories where required.

Part 3 Execution

3.1 INSTALLATION

- .1 Install work secure, plumb and square.
- .2 Leave 6 mm (1/4") space between wall and panel or end pilaster.
- .3 Anchor fixing brackets to masonry/concrete surfaces using screws and shields; to hollow walls using bolts and toggle type anchors; to steel supports with bolts in threaded holes.
- .4 Attach panel and pilaster to brackets with through type sleeve bolt and nut.
- .5 Equip each door with hinges, latch set, and each stall with coat hook mounted on door. Adjust and align hardware for easy, proper function.
- .6 Equip out swinging doors with door pulls on both sides of door.
- .7 Make good surfaces damaged during shipment or installation.

END OF SECTION

Part 1 General

1.1 Related Work

- .1 Section 01330 - Submittal Procedures.
- .2 Section 01780 - Closeout Submittals.

1.2 References

- .1 Aluminum Association, Inc. (AA)
 - .1 Designation System for Aluminum Finishes -1997.
- .2 American Society for Testing and Materials (ASTM)
 - .1 ASTM A653/A653M-01a] Standard Specification for Steel Sheet, Zinc-Coated, (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - .2 ASTM B32-[00], Standard Specification for Solder Metal.
 - .3 ASTM B456-[95], Standard Specification for Electrodeposited Coatings of Copper Plus Nickel Plus Chromium and Nickel Plus Chromium.
- .3 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-1.81-M90, Air Drying and Baking Alkyd Primer for Vehicles and Equipment.
 - .2 CAN/CGSB-1.88-92, Gloss Alkyd Enamel, Air Drying and Baking.
 - .3 CGSB 31-GP-107Ma-90, Non-Inhibited Phosphoric Acid Base Metal Conditioner and Rust Remover.
 - .4 CGSB 41-GP-6M-1983, Sheets, Thermosetting Polyester Plastics, Glass Fibre Reinforced. Reaffirmation of September 1976.
- .4 Canadian Standards Association (CSA)
 - .1 CAN/CSA-G164-M92(R1998)], Hot Dip Galvanizing of Irregularly Shaped Articles.
 - .2 CSAW47.2-M1987(R1998), Certification of Companies for Fusion Welding of Aluminum.
 - .3 CSA W59-M1989(R2001), Welded Steel Construction (Metal Arc Welding) (Imperial Version).
 - .4 CSA W59.2-M1991(R1998), Welded Aluminum Construction.
- .5 Canadian Sheet Steel Building Institute (CSSBI)
 - .1 Sheet Steel Facts # 6, Metallic Coated Sheet Steel for Structural Building Products-July 1995.
- .6 The Master Painters Institute (MPI)
 - .1 Architectural Painting Specification Manual - March 1998.

1.3 Shop Drawings

- .1 Submit shop drawings in accordance with Section 01330 - Submittal Procedures.
- .2 Submit shop drawings, catalogue sheets.
- .3 Indicate materials, thicknesses, sizes, finishes, colours, construction details, removable and interchangeable components, schedule of signs.
- .4 Submit drawn-to-scale details for individually fabricated lettering indicating word and letter spacing.

1.4 Samples

- .1 Submit samples in accordance with Section 01330 - Submittal Procedures.
- .2 Submit representative sample of [each type] sign, sign image and mounting method.

1.5 Quality Assurance

- .1 Welding Certification in accordance with CSA W47.2.

1.6 Maintenance Data

- .1 Provide maintenance data for illuminated signs for incorporation into manual specified in Section [01780 - Closeout Submittals].

Part 2 Products

2.1 Materials

- .1 Aluminum extrusions: to designation AA 6063-T5.
- .2 Sheet aluminum: anodizing quality.
- .3 Casting aluminum
- .4 Acrylic sheet: polymethylmethacrylate (PMMA) cast sheet suitable for intended use in sign fabrication, [translucent white] [transparent clear] [colours as indicated].
- .5 Fibreglass sheet: to CGSB 41-GP-6M, flat sheet, smooth finish, [colours as indicated].
- .6 Engraving sheet: lamicoid [3.2] mm thick plastic sheet, [black] [white] core.
- .7 Electrical components: CSA approved [as indicated].
- .8 Welding materials: to CSA W59.
- .9 Solder: to ASTM B32, Type [Sn50].

- .10 Adhesives, paints, sealants and solvents for [acrylic] [fibreglass] sheet: type recommended by sheet manufacturer for applicable condition.
- .11 Acrylic top-coat: clear, non-yellowing, exterior grade, satin finish, acrylic polyester resin protective coating, compatible with [acrylic] [fibreglass] [metal] surface of type recommended by sheet manufacturer.
- .12 Bituminous paint: to MPI [EXT 5.4D].

2.2 Sign Graphics

- .1 Sign graphics to be well defined, arranged for balanced appearance, and properly word and letter spaced.

2.3 Cut-out Letters

- .1 Cut letters and symbols from opaque aluminum sheet.
- .2 Helvetica]typeface, upper [nd lower case; sizes and thicknesses as indicated. Make corners cutter radius.
- .3 After fabrication finish aluminum with [[clear] [colour] anodizing] [baked enamel].

2.4 Cast Letters

- .1 Cast letters of solid aluminum accurately formed to profiles as detailed; with smooth faces free from surface defects or blemishes.
- .2 After fabrication finish letters with clear anodizing.

2.5 Wall Plates

- .1 Plastic wall plates:
 - .1 Fabricate from colouracrylic sheet 4.8 mm thick. Sizes as indicated.
 - .2 Sign graphics: apply by cut and spray.
- .2 Interchangeable mounting: supply wall plates with approved type, semi-concealed, retaining holders that permit quick but vandal-resistant interchange of sign face. No exposed fasteners permitted. Exposed portions to match sign face.
- .3 Fixed mounting: prepare wall plates for fixing by [surface fasteners with rosette covers] [concealed tamperproof clips to [Contract Administrator's] [Consultant's] approval] [self-stick foam tape]. Include back-up plates for fixing to uneven surfaces where required.
- .4 Bracket mounting: fabricate brackets for wall projecting or ceiling suspended sign plates as detailed: of [[clear] [white translucent] acrylic]] [[clear] [coloured] anodized aluminum], [4.8] mm thick.

2.6 Door Plates

- .1 Fabricate sign faces of clear anodized aluminum. Size as indicated.

- .2 Sign graphics: apply by silk screenengraving self-stick vinyl letters.
- .3 Interchangeable mounting: supply door plates with approved type, semi-concealed, retaining holders that permit quick but vandal-resistant interchange of sign face. No exposed fasteners permitted. Exposed portions to match sign face.
- .4 Fixed mounting: use self-stick foam tape.
- .5 Mounting on transparent surfaces: use self-stick foam tape. Include blank back-up plate for opposite side.
- .6 Washroom pictographs: cut-out figures without backgrounds.

2.7 Fabrication

- .1 Fabricate signs in accordance with details, specifications and shop drawings.
- .2 Build units square, true, accurate to size, free from visual or performance defects.
- .3 Accurately fit and securely join sections to obtain tight, closed joints.
- .4 Allow for thermal movement without distortion of components.
- .5 Exposed fasteners permitted only where indicated or approved by [Contract Administrator] [Consultant] and to be inconspicuous and same finish and colour as base material, or as noted.
- .6 Polish exposed edges of plastic and metal to smooth, slightly convex profile.
- .7 Do aluminum welding to CSA W59.2. Finish exposed welds flush and smooth.
- .8 Apply bituminous paint to aluminum in contact with dissimilar metals, concrete or masonry.
- .9 Manufacturer's nameplates on sign surface locations visible in completed work not acceptable.

2.8 Finishes

- .1 Anodized aluminum:
 - .1 Clear finish:
- .2 Galvanized finish: on irregular shaped articles, [381] g/m² zinc coating to CAN/CSA G164.

Part 3 Execution

3.1 Installation

- .1 Erect and secure signs plumb and level at elevations

- .2 Comply with sign manufacturer's installation instructions and approved shop drawings.
 - .3 Mechanical attachment:
 - .1 To concrete or solid masonry use lag screws and expansion bolts or screws and fibre plugs, as appropriate for stresses involved.
 - .2 To hollow masonry use toggle bolts or equivalent.
 - .3 To steel use bolts with nut and lock washers, self-tapping screws.
 - .1 Do [steel welding to CSA W59] [and] [aluminum welding to CSA W59.2]. Finish exposed welds flush and smooth.
 - .4 To wood use screws.
 - .5 Secure into framing members behind stud walls or above ceilings.
 - .6 Mechanical fasteners on exterior to be non-staining, non-ferrous type.
 - .7 Fabricate special fasteners as required for installation conditions.
 - .8 Mechanical fasteners and methods of attachment subject to Contract Administrator's approval. Obtain Contract Administrator's approval before fixing to structural steel.
 - .4 Adhesive attachment:
 - .1 Use self-stick adhesive foam tape to manufacturer's instructions to adequately fix sign and prevent "rocking". Keep tape maximum [1.6] mm from edges.
- 3.2 Cleaning**
- .1 Leave signs clean. Remove debris from interior of sign boxes.
 - .2 Touch up any damaged finishes.

END OF SECTION

Part 1 General

1.1 SUBMITTALS

- .1 Shop Drawings: Indicate the materials being supplied and all connections, attachments, reinforcing, anchorage and location of exposed fastenings.

Part 2 Products

2.1 LOCKERS

- .1 Fabricate work true to dimensions, square, plumb, level and free from distortion and defects detrimental to appearance and performance. Accurately fit members with hairline joints. Secure intersecting members with adequate fastenings.
- .2 Weld connections where possible; where not possible bolt connections or secure in an approved manner. Countersink exposed fastenings and cut off bolts flush with nuts, and make as inconspicuous as possible.
- .3 Locker Type: Stainless Steel, 300 mm x 450 mm x 800 mm overall size, single tier.
- .4 Bodies: 0.6 mm (26 gauge) stretcher levelled cold rolled stainless steel sheets, carefully formed and factory punched to provide necessary assembly holes. Bolts and nuts shall be complete with lock washers and nut cover, and cadmium plated. Welded construction will be accepted provided surfaces welded together are prime coated before assembly.
- .5 Panels, Trims and Sloping Tops: Same material, construction and finish as locker bodies.
- .6 Locker Frames: Formed channel section of 16 mm (16 gauge) thick stretcher levelled cold rolled stainless steel, corners notched and neatly welded. Provide two rubber door silencers per door on lock side of frame, 40 mm (1⁵/₈") from top and bottom of door. Incorporate ventilation slots at top and bottom.
- .7 Doors and Frames:
 - .1 Doors: Minimum 1.0 mm (20 gauge) thick stretcher levelled cold rolled stainless steel, fully enclosed panel and reinforced with internal 0.6 mm (26 gauge) thick stiffeners, running full length and width of door. Secure components by spot welding and/or special type fasteners to provide a rigid and whip free door.
 - .2 Door Frames: 1.6 mm (16 gauge) thick cold rolled stainless steel of box channel shape.
 - .3 Hinges: Hang doors on two heavy duty tamperproof hinges welded to door and designed to allow full 180 deg. swing.
- .8 Latching: Heavy duty hasp and plunger arrangement, minimum 3.5 mm thick for padlocking and friction catch.

- .9 Handles: Fully recessed, chrome plated and fitted for padlock use. Padlocks will be supplied by the City. Provide stainless steel or chrome plated inserts for the recessed handle area. Door shall be held closed with friction catch.
- .10 Number plates: Semi-recessed plates of anodized aluminium, numbered and lettered with die embossed numerals painted black as directed by the Contract Administrator.
- .11 Hooks: Equip each locker with three die-cast zinc wall hooks.
- .12 Finish: Remove grease and extraneous matter and then coat with iron phosphate and finish with minimum 1 mm thick DFT baked enamel finish.
- .1 Colour: To match Dawn 970 by Shanahan's.

Part 3 Execution

3.1 INSTALLATION

- .1 Examine surfaces to receive the Work of this Section and proceed only if conditions are satisfactory.
- .2 Install work true to dimensions, square, plumb and level. Accurately secure joints and intersecting members with adequate fastening.
- .3 Provide maximum number of lockers to fill completely the spaces indicated or as called for on the Drawings.
- .4 Panel and Trims: Cover strips, trim, base, false fronts, sloping tops and panels to complete banks of lockers.

END OF SECTION

- .5 Toilet Tissue Dispenser (TPD): Recessed multi-roll toilet paper dispenser, welded stainless steel construction, lockable cover, moulded plastic control delivery spindle, B-4388 by Bobrick.
- .6 Sanitary Napkin Disposal (NTW): Recessed, push door self closing type, welded stainless steel construction, satin finish, with embossed International graphic symbols; complete with leak proof plastic waste receptacle, B-35303 by Bobrick.
- .7 Grab Bars (GB1/GB2): 1.2 mm wall thickness stainless steel, peened grip, 40 mm dia., concealed fasteners, with wall escutcheons, non-rotating, installation to withstand downward pull of 2.2 N., sizes and shapes as detailed, B-6806-99 by Bobrick.

Part 3 Execution

3.1 INSTALLATION

- .1 Install and secure accessories rigidly in place.
- .2 Hollow masonry units: Use toggle bolts drilled into cell/wall cavity.
- .3 Solid masonry or concrete: Use bolt with lead expansion sleeve set into drilled hole.
- .4 Fill units full with necessary supplies shortly before Substantial Performance.

END OF SECTION