3.3 Structural

a) Structural performance, in relation to this standard, refers to properties that provide and maintain the integrity of the Product as installed.

3.3.1 Casework

a) When installing a manufacturer/supplier’s casework, installer shall obtain, review, and comply with all of the applicable manufacturer/supplier’s documented instructions for installation. If the manufacturer/supplier does not provide such documented instructions for installation or if such instructions are not applicable to a particular job, installer shall refer to the AWI Casework Installation Guidelines (available for download at http://www.awinet.org/standards) and follow the installation method set forth in those guidelines. Installer shall not install a manufacturer/supplier’s casework in any manner prohibited by the manufacturer in its instructions.

3.3.2 Wall and Ceiling Surfaces

a) Fastening shall be concealed wherever possible and should permit movement of panels resulting from changes in relative humidity.

b) Sufficient fastening is required to prevent panels from becoming dislodged.

c) For wall panels installed at 2743 mm [108"] or more above finished floor, and at all ceiling panels regardless of height, mechanical fasteners are required. Exposed fasteners shall be kept to a minimum.
d) Reveal strips set into panel grooves shall be permitted to float without adhesive or fasteners to accommodate expansion and contraction resulting from changes in relative humidity.

e) In expansion joints, the minimum reveal gap between panels shall be calculated as length of panel times 0.004 for all cores.

f) Unless otherwise indicated, joints designed to be caulked shall be approximately 3.2 mm [.125"] in width to permit satisfactory caulk penetration.

g) Sealants and adhesives shall be applied per manufacturer/supplier’s documented instructions.

h) Product shall be installed over suitable substrates based on the manufacturer/supplier’s documented instructions.

i) Expansion joints shall be provided per manufacturer/supplier’s documented instructions.

j) Inside corners of cut-outs shall be radiused to prevent splitting.

3.3.3 Standing and Running Trim

a) Outside miters shall be reinforced with mechanical fasteners.

b) Large, one-piece, or multi-component mouldings shall be installed with back blocking as needed to maintain aesthetic tolerances.

c) Running joints shall be either mitered or butted. If butted, joint shall be reinforced.

3.3.4 Passage Doors (within Integrated Door Systems)

a) Doors shall operate without binding after installation.

b) Utility or structural strength of doors shall not be impaired in fitting them to the opening, installing hardware, and preparing for glazing, louvers, trim, or other detailing.

3.3.4.1 Passage Doors, Fire Assembly

a) Fire door assemblies shall be prepared for locks, latches, hinges, remotely operated or monitored hardware, concealed closers, glass lights, vision panels, louvers, astragals, and laminated overlays in conformance to the manufacturer/supplier’s label service requirements. Removal of labels is prohibited.

b) On fire rated doors, in order to preserve the label, doors shall be trimmed per manufacturer/supplier’s documented instructions in accordance with NFPA 80. Fire rated doors shall be trimmed on the bottom rail only.
3.3.4.2 Passage Doors, Fitting
   a) Fitting for width requires door to be trimmed equally on both sides.
   
   b) When fitting for height, trimming top or bottom rails shall not exceed 19.1 mm [.750”].

3.3.4.3 Passage Doors, Clearance
   a) For field-fitted doors, clearance between the door and frame components shall be a maximum of 3.2 mm [.125"] on the hinge and lock sides, the top of the door, and between the meeting edges of doors in pairs.
   
   b) For non-rated doors, bottom clearance shall be a minimum of 6.4 mm [.250"] and a maximum of 15.9 mm [.625"] measured from the bottom of the door to the highest point of the finished floor or threshold that the door swings over.

3.3.4.4 Passage Doors, Leaf Hinges
   a) Hinges shall be installed per manufacturer/supplier’s documented instructions for location and weight of door.

3.3.4.5 Passage Doors, Cut-Outs
   a) Cut-outs shall be sealed and protected from moisture entering the door core.

3.3.5 Countertops
   a) Installer shall confirm that support for countertops meets the requirements shown in shop drawings. If not, the installer shall request direction from manufacturer/supplier.
   
   b) Product shall be installed per manufacturer/supplier’s documented instructions.
   
   c) Front and leading edges of top shall withstand a 34 kg [75 lb.] lifting force at any point.
   
   d) Water-resistant caulk shall be used at square butt joints of splashes and return ends, leaving a uniform bead not to exceed 3.2 mm [.125"] in width.

3.3.5.1 Countertops, Decorative Laminate
   a) Sink cut-outs shall not fall within 457 mm [18"] of discretionary installer joints.
   
   b) Cut-outs shall have a minimum radius of 6.4 mm [.250"] at inside corners.
   
   c) Cut-outs for sinks in wood-based substrates shall be sealed with at least one coat of color-tinted (for verification) water-resistant sealer or caulk.
3.3.5.2 Countertops, Decorative Laminate, Splashes

a) Assembly Type 1 - Wall Mount Splash (See Figure 11): Splash components shall be adhered to the wall, butt joined to the countertop, and sealed with water-resistant caulk between the countertop and splash edge so as to leave a uniform bead not to exceed 3.2 mm [.125"] in width along the joint.

b) Assembly Type 2 - Countertop Mount Splash (See Figure 12): Splash components shall be butt joined, securely attached with mechanical fasteners to the countertop, and sealed with water-resistant caulk between the countertop and splash edge so as to leave a uniform bead not to exceed 3.2 mm [.125"] in width along the joint. Exposed top and ends shall be scribed to the wall. Unsupported scribe span shall not exceed 12.7 mm [.500"] at ends and back walls.

3.3.5.3 Countertops, Solid Surface

a) Sealants and adhesives shall conform to the manufacturer/supplier's documented instructions.

b) Expansion joints shall be provided per manufacturer/supplier's documented instructions.

c) Cut-outs shall have a minimum radius of 6.4 mm [.250"] at inside corners.

d) At “L” and “U” configured corners, inside corners shall be smooth and rounded with seams offset a minimum of three times the inside corner radius, unless manufacturer/supplier's documented instructions indicate otherwise.

e) Hard seams shall be watertight, gap free, and inconspicuous.

f) Separate back splashes shall be securely attached to the wall and butt joined to the countertop with water-resistant clear (or color-compatible) caulk or adhesive so as to leave a uniform bead not to exceed 3.2 mm [.125"] in width along the joint.

3.3.5.4 Countertops, Epoxy Resin, Natural / Engineered Stone

a) Hard seams shall be watertight and gap free.

b) Separate back splashes shall be securely attached to the wall and butt joined to the countertop with water-resistant clear (or color-compatible) caulk or adhesive so as to leave a uniform bead not to exceed 3.2 mm [.125"] in width along the joint.

c) Sinks shall be installed per manufacturer/supplier's documented instructions to produce a secure and sealed joint.

3.3.5.5 Countertops, Solid and Veneered Wood
a) Separate back splashes shall be securely attached to the wall and butt joined to the countertop.

b) Sink cut-outs shall not fall within 457 mm [18"] of discretionary installer joints.

c) Cut-outs for sinks in wood-based substrates shall be sealed with at least one coat of color-tinted (for verification) water-resistant sealer or caulk.

3.3.5.6 Countertops, Solid Phenolic

a) Separate back splashes shall be securely attached to the wall and butt joined to the countertop with water-resistant clear (or color-compatible) caulk or adhesive so as to leave a uniform bead not to exceed 3.2 mm [.125"] in width along the joint.

b) Sinks shall be installed per manufacturer/supplier’s documented instructions to produce a secure and sealed joint.