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SECTION 06 20 00 - MILLWORK AND LAMINATED PLASTIC CASEWORK

PRODUCT REQUIREMENTS

MATERIALS

A. General: Provide materials that comply with requirements of the AWI quality standard for each type of woodwork and casework and quality grade indicated and, where the following products are part of interior woodwork, with requirements of the referenced product standards that apply to product characteristics indicated:

1. Texture: Smooth, flat, tight grain surface that will not telegraph grain through painted finish. Solid lumber stock, finger joints not acceptable. All wood and lumber shall be straight, flat, and true without bows, warps, splinters, cracks, nicks, or gouges.
2. AWI Custom Grade, Duty Level 3.

B. Wood Products shall Comply with the following:

1. Veneer-Faced Panel Products (Hardwood Plywood): Comply with DOC PS 1, ASTM D5456, and HPVA HP-1, made with adhesive containing no urea formaldehyde.

C. Adhesives shall be Low VOC; un-pigmented with no added formaldehyde. Moisture proof for any area subject to moisture of any type, condensation, or relative humidity over 90 percent. Type recommended by the manufacturer of components being bonded.
D. VOC Limits for Installation Adhesives and Glues: Use installation adhesives that comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

1. Wood Glues: 30 g/L.
2. Contact Adhesive: 250 g/L.

E. High-Pressure Decorative Laminate: NEMA LD 3, heavy wear grade.

1. Manufacturer: Subject to compliance with requirements, provide high-pressure decorative laminates by one of the following:

a. Formica Corporation.
b. WilsonArt.

F. Plastic Laminate and Edge Trim shall be selected by the Architect from full range of colors and patterns to meet project requirements for all surfaces indicated or intended to receive plastic laminate and edge trim.
G. Hardwood Plywood: Comply with HPVA HP-1,
H. Thermoset Decorative Overlay: Decorative surface of thermally fused polyester or melamine-impregnated web, bonded to specified medium density fiberboard substrate and complying with ALA 1992.
I. Solid Surfacing Material: Homogeneous solid sheets of filled plastic resin complying with the material and performance requirements of ANSI Z124.3, Type 5 or Type 6, without a precoated finish
J. Paneling Adhesives: Low VOC. Comply with paneling manufacturer's recommendations for adhesives.
K. All members of the base frame that are in contact with the finished floor shall be constructed of pressure treated solid wood of thickness indicated. Glued assemblies of thinner members to achieve the required thickness are not acceptable. Construction/assembly of the base frame assembly with particle board, OSB, or other types of engineered wood are not acceptable. Fastening shall be with Type 304 or 306 stainless steel fasteners.

HARDWARE

A. Hardware Standard: Comply with BHMA A156.9 for items indicated by reference to BHMA numbers or referenced to this standard.
B. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18. Match finish of door Hardware.
C. For concealed hardware provide manufacturer's standard finish that complies with product class requirements of BHMA A156.9.
D. Hinges: Concealed (European Type) Hinges: Self-closing, 170-deg. swing, 6-way adjustment. Doors Two hinges on doors less than 36. inches; 3 hinges on doors 36 inches to 60 inches; 4 hinges on doors 60 inches to 84 inches; 5 hinges on doors over 84 inches. When installed, hinges shall be capable of supporting a 100-pound test load located 1 inch from the outside edge of the door, and shall be able to withstand 100,000 full open/close cycles and still maintain original fit and alignment with no signs of rack, distortion, sag, or wobble. By Blum. Butt Hinges: Heavy duty, 2-3/4 inch, 5 knuckle , 0.095-inch thick steel.
E. Pulls: 4-inch satin aluminum wire pull, 1-1/2 inches deep, and 5/16 inches diameter.
F. Drawer Slides: Bottom-mounted, full extension, self-closing, steel drawer slides with smooth, hard impact-resistant, epoxy-coated finish, steel ball bearings complying with BHMA A156.9, Grade 1 and rated for the following loads: Slides shall be cradle-type that wrap the bottom edges of the drawer to support the drawer from the bottom.
G. Locks: Disk tumbler, chrome finish, removable core. Key into Owner's master keying system.
H. Grommets for cable passage through countertops: 1 inch OD brown, molded-plastic grommets with 3/4-inch hole and brown plastic cap with slot for wire passage.
I. Catches: Magnetic Catches: B03141.
J. Adjustable Shelf Standards: B04071. Shelf Rests for Standards: B04081.

LAMINATE-CLAD CABINETS (PLASTIC-COVERED CASEWORK)

A. Quality Standard: Comply with AWI Section requirements for laminate-clad cabinets. Custom Grade, Duty Level 3.
B. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:

1. Horizontal Surfaces: GP-50, 0.050-inch nominal thickness.
2. Vertical Surfaces: GP-28, 0.028-inch nominal thickness.
3. Edges:

a. PVC: 3 mm PVC machined to 1/8 inch radius applied with holt melt adhesive. Machine flush and buffed to remove all machine marks and eased (sharp corners removed). Clean up at easing shall be such that no overlap of the member eased is visible. Chip out of the laminate shall be invisible when viewed from 24 inches. Maintain maximum variation of 0.001 inch flushness with adjacent surfaces. All edge banding shall be free of bubbles, wrinkles, delamination, and adhesive residue.

4. Adhesive: Hot melt.

C. Materials for Semi-exposed Surfaces: Provide surface materials indicated below:

1. Surfaces Other Than Drawer Bodies: Melamine.
2. Drawer Sides and Backs: Solid hardwood plywood with shop-applied melamine finish.
3. Drawer Bottoms: Hardwood plywood, shop-finished.
4. Open Shelving: Melamine.

D. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the Architect's selections from manufacturer's full range of colors and finishes.

PLASTIC LAMINATE COUNTERTOPS

A. Quality Standard: Comply with AWI Section requirements for Custom Grade for countertops
B. Type of Top: High-pressure decorative laminate complying with the following:

1. Grade: GP-50, 0.050-inch (1.270-mm) nominal thickness.
2. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the Architect's selections from manufacturer's full range of colors and finishes.
Grain Direction: Parallel to cabinet fronts.
3. Edge Treatment: HPDL, GP-50, 0.050-inch nominal thickness. Match color, pattern and texture of adjacent surfaces.
4. Core Material: Plywood except use exterior grade plywood for units to receive sinks and in areas exposed to moisture.

C. Provide and install unbreakable 2 inch diameter grommets above each electrical and data outlet. Color of grommets shall match finish of adjacent surface of countertop. Surfaces of grommet shall be smooth and rounded to prevent wear and damage to cable and wire.

SOLID SURFACING MATERIAL COUNTERTOPS

A. Quality Standard: Comply with applicable AWI section.
B. Fabrication: Where solid surfaces are indicated on the Drawings, fabricate tops in one piece with shop-applied backsplashes and edges, unless otherwise indicated. Provide with integral sink. Comply with solid surfacing material manufacturer's recommendations for adhesives, sealers, fabrication, and finishing.

1. Install integral sink bowls in countertops in the shop.
2. Drill holes in countertops for plumbing fittings and soap dispensers in the shop.

C. Solid Surfacing Material Thickness: 1/2 inch (13 mm).
D. Colors, Patterns, and Finishes: Provide Architect's selections from manufacturer's full range of colors and finishes.

INTERIOR ORNAMENTAL WORK

A. Quality Standard: Comply with AWI Section 700.
B. Species: Wood shall be smooth and even, with clear, tight, flat, smooth and uniform grain free of defects that will be detrimental to the applied finish. Grain for painted wood shall not telegraph through a typical painted finish consisting of primer and 2 finish coats with an overall thickness of 6 mils.

1. Species For Painting: Hemlock, Douglas fir, or poplar.
2. Species For Staining: As indicated.

SUBMITTALS

A. Product data for each type of product and process specified and incorporated into items of architectural woodwork and casework during fabrication, finishing, and installation.
B. Shop drawings showing location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
C. Product certificates signed by woodwork and casework fabricator certifying that products comply with specified requirements.

QUALITY ASSURANCE

A. Quality Standard: comply with the AWI Quality Standard: "Architectural Woodwork and casework Quality Standards" of the Architectural Woodwork and casework Institute for grades of interior architectural woodwork, construction, finishes, and other requirements.
B. Fire-Test-Response Characteristics: Provide materials with the following fire-test-response characteristics as determined by testing identical products per ASTM test method indicated below by UL, Warnock Hersey, or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify fire-retardant-treated material with appropriate markings of applicable testing and inspecting agency in the form of separable paper label or, where required by authorities having jurisdiction, imprint on surfaces of materials that will be concealed from view after installation. Surface-Burning Characteristics: Not exceeding values indicated below, tested per ASTM E 84 for 30 minutes with no evidence of significant combustion. In addition, the flame front shall not progress more than 10-1/2 feet beyond the center line of the burner at any time during the test.

END OF SECTION 06 20 00

SECTION 08 83 00 - MIRRORS

PRODUCT REQUIREMENTS

A. Source Limitations for Mirrors: Obtain mirrors and mirror accessories from single source from single manufacturer.

SILVERED FLAT GLASS MIRRORS

A. Mirrors, General: ASTM C 1503 manufactured using copper-free, low-lead mirror coating process.
B. Annealed Monolithic Glass Mirrors: Mirror Glazing Quality, clear float glass with a minimum 91 percent visible light transmission. Nominal Thickness: 4.0 mm.
C. Tempered Glass Mirrors: Mirror Glazing Quality for blemish requirements and complying with ASTM C 1048 for Kind FT, Condition A, tempered float glass before silver coating is applied; clear. Nominal Thickness: 4.0 mm.
D. Laminated Mirrors: ASTM C 1172, Type II.

1. Glass for Outer Lite: Annealed float glass, Mirror Glazing Quality, clear float glass with a minimum 91 percent visible light transmission.
2. Nominal Thickness for Outer Lite: 4.0 mm.
Glass for Inner Lite: Tempered float glass; ASTM C 1048 Type I; Quality-Q3; Class I (clear), Kind FT, Condition A. Nominal Thickness: 4.0 mm.

MISCELLANEOUS MATERIALS

A. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.
B. Edge Sealer: Coating compatible with glass coating and approved by mirror manufacturer for use in protecting against silver deterioration at mirrored glass edges.
C. Mirror Mastic: An adhesive setting compound, asbestos-free, produced specifically for setting mirrors and certified by both mirror and mastic manufacturer as compatible with glass coating and substrates on which mirrors will be installed.
D. Film Backing for Safety Mirrors: Film backing and pressure-sensitive adhesive; both compatible with mirror backing paint as certified by mirror manufacturer.

MIRROR HARDWARE

A. Aluminum J-Channels: Aluminum extrusions with a return deep enough to produce a glazing channel to accommodate mirrors of thickness indicated and in lengths required to cover edges of mirrors in a single piece.
B. Aluminum J-Channels and Cleat: Aluminum extrusions with a return deep enough to produce a glazing channel to accommodate mirrors of thickness indicated and in lengths required to cover edges of mirrors in a single piece.
C. Mirror Bottom Clips: As indicated.
D. Mirror Top Clips: As indicated.
E. Plated Steel Hardware: Formed-steel shapes with plated finish indicated.

1. Profile: As indicated.
2. Finish: Brushed.

F. Fasteners: Fabricated of same basic metal and alloy as fastened metal and matching it in finished color and texture where fasteners are exposed.
G. Anchors and Inserts: Provide devices as required for mirror hardware installation. Provide toothed or lead-shield, expansion-bolt devices for drilled-in-place anchors. Provide galvanized anchors and inserts for applications on inside face of exterior walls and where indicated.

SUBMITTALS

A. Product Data: For each type of product.
B. Shop Drawings: Include mirror elevations, edge details, mirror hardware, and attachment details.

QUALITY ASSURANCE

A. Comply with mastic manufacturer's written installation instructions for preparation of substrates, including coating substrates with mastic manufacturer's special bond coating where applicable.
B. Install mirrors to comply with mirror manufacturer's written instructions and with referenced GANA publications. Mount mirrors accurately in place in a manner that avoids distorting reflected images.

WARRANTY

A. Special Warranty: Manufacturer agrees to replace mirrors that deteriorate within specified warranty period. Deterioration of mirrors is defined as defects developed from normal use that are not attributed to mirror breakage or to maintaining and cleaning mirrors contrary to manufacturer's written instructions. Defects include discoloration, black spots, and clouding of the silver film. Warranty Period: Five years from date of manufacture.

END OF SECTION 088300

SECTION 12 66 10 - TELESCOPING BLEACHERS – MANUALLY OPERATED

PRODUCT REQUIREMENTS

PERFORMANCE REQUIREMENTS

A. Telescoping stands Standard: ICC 300.
B. Accessibility Standard: Comply with applicable provisions in the DOJ's 2010 ADA Standards for Accessible Design and ICC A117.1.

TELESCOPING STANDS

A. Wall-Attached Telescoping Stands: Forward-folding system, in which the bleachers open in the forward direction by moving the front row away from the stack to the fully extended position and the rear of bleacher understructure permanently attaches to wall construction.
B. Operation: Manually operated.

COMPONENTS

A. Benches: Seats and skirts.

1. Material: Molded plastic with contour surfaces.

a. Color: As selected by Architect from manufacturer's standard.

2. Bench Height: Not less than 16 inches or more than 18 inches.
3. Bench Depth: 12 inches, unless noted otherwise on plans.

B. Wheelchair-Accessible Seating: Locate retractable truncated benches to provide wheelchair-accessible seating at locations indicated on Drawings.
C. Deck: Plywood, 3/4 inch thick.

1. Finish: Transparent.

D. Risers: Steel sheet with manufacturer's standard, rust-inhibiting coating or hot-dip galvanized finish.
E. Safety Rails: Steel, finished with manufacturer's standard powder coat system.

1. Self-storing mid-aisle handrails located at centerline of each aisle with seating on both sides.
2. End rails (guards) that are telescoping and self-storing.
3. Back rails (guards) along rear of units where required by ICC 300.
4. Removable front rails (guards) along front of units where required by ICC 300.
5. Removable rails around accessible seating cutouts and truncations.
6. Color: As selected by Architect from manufacturer's standard colors.

F. Understructure: Structural steel.

1. Finish: Manufacturer's standard rust-inhibiting finish.

G. Support Column Wheels: Non-marring, soft, rubber-face wheel assembly under each support column.

1.4 ACCESSORIES

A. Steps:

1. Slip-resistant, abrasive tread nosings and surfaces at aisles.
2. Intermediate aisle steps, fully enclosed, at each aisle.
3. Transitional top step, fully enclosed, at each aisle where last row of telescoping stands is adjacent to a cross aisle.
4. Removable front steps, fully enclosed, at each aisle, that engage with front row to prevent accidental separation or movement and are equipped with a minimum of four skid-resistant feet.

B. Closure Panels and Void Fillers: As necessary for clean appearance, code requirement compliance and functionality.

SUBMITTALS

A. Product Data: For each type of product.

1. Shop Drawings: For telescoping stands in both stacked and extended positions.
2. Include plans, elevations, sections, and attachment details.

B. Include diagrams for power, signal, and control wiring.
C. Samples: For each exposed product and for each color and texture specified.
D. Operation and maintenance data.

QUALITY ASSURANCE

A. INSTALLATION

1. Install telescoping stands according to ICC 300 and manufacturer's written instructions.

WARRANTY

A. The manufacturer shall warrant all work performed under these specifications to be free of defects for a period of one year.
B. All understructure components shall be warranted for a period of ten years.

END OF SECTION 12 66 10

SECTION 09 05 17 - SEALING CONCRETE SLABS AND FLOORS

PRODUCT REQUIREMENTS

A. Sealer: Where the finish schedule shows the floor to be sealed concrete, provide a colorless, clear, transparent sealer. Sealing product shall provide permanent sealing performance without having to make periodic re-applications for the life of the floor. Product: Ashford Formula by Curecrete Chemical Company, Inc. or a reviewed substitute with performance properties that are advertised and proven to be equal to the specified product. Surface sealers or membranes are not acceptable.
B. Patching and Repair Materials: High strength patching materials for repairing cracks, spalls, voids, depressions, etc. Materials shall be compatible with and will not interfere with the performance of the sealer and be recommended by the sealer manufacturer. All materials shall blend in with the concrete without contrast and be aesthetically acceptable to the Architect. Do not use gypsum based patching materials.
C. Accessories: Provide all required and necessary cleaners, sealers, etc. to prepare the concrete floor to be sealed.

QUALITY ASSURANCE

A. The sealer installer shall be responsible for any failures caused by inadequate inspection, testing, or surface preparation regardless of whether or not the procedure or procedures were not recommended by the sealer manufacturer.
B. Ensure that finished concrete complies with requirements specified in ASTM F710. Notify the Owner and Architect, in writing, of all unacceptable conditions.
C. The cementitious substrate shall be cured for a minimum of at least 28 days or as recommended by the floor system manufacturer, whichever is more stringent.
D. Ensure concrete substrate on or below grade are adequately waterproofed beneath and at the perimeter of the slab, and at the earth side of below-grade walls. Care should be taken not to rupture the vapor barrier during the installation.
E. Spray-apply sealer according to sealer manufacturer's recommendations by an applicator approved by the manufacturer. Apply sealer evenly, Keep surfaces damp. Do not allow sealer to puddle.

WARRANTY

A. The manufacturer shall have published warranty guaranteeing the sealing and performance properties of the sealer for the life of the concrete floor without having to make periodic re-applications of the sealer.

END OF SECTION 09 05 17

SECTION 09 22 26 - DRYWALL GRID SYSTEM

GENERAL

A. Metal suspension system for the support of gypsum drywall in ceiling, a soffit installation for interior and exterior finishes.
B. Install per manufacturer's written instructions.

PRODUCT REQUIREMENTS

APPROVED MANUFACTURERS

A. Suspension Systems:
1. Armstrong World Industries, Inc.

DRYWALL SUSPENSION SYSTEMS

A. Provide complete suspended drywall system. Coordinate with Drawings.

ACCESSORIES

A. Provide Axiom trim in dimensions and shapes as shown on drawings.

SUBMITTALS

A. Product Data: Submit manufacturer's technical data for each type of Metal Framing system required.
B. Shop Drawings: Layout and details of Metal Framing System. Show locations of items which are to be coordinated with, or supported by the metal suspension system.

WARRANTY

A. Warranty Period: Grid: 1 year from date of Substantial Completion.

END OF SECTION 09 22 26

SECTION 09 29 00 - GYPSUM BOARD ASSEMBLIES

PRODUCT REQUIREMENTS

A. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated, according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.
B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

A. Certainteed
B. Georgia-Pacific Corp.
C. Lafarge
D. National Gypsum Co.; Gold Bond Building Products Division
E. United States Gypsum Co.

INTERIOR GYPSUM BOARD

A. Gypsum Wallboard and Ceiling Board: ASTM C 1396/C 1396M 5/8" Type X unless noted otherwise. Provide Abuse and Impact Resistant Gypsum Board where noted, ASTM C 1629/C 1629M Level 1, 5/8"Type X.
B. Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces. Core: 5/8 inch, Type X. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

EXTERIOR GYPSUM BOARD FOR CEILINGS AND SOFFITS

A. Glass-Mat Gypsum Sheathing Board: ASTM C 1177/C 1177M, with fiberglass mat laminated to both sides and with manufacturer's standard edges. Core: 5/8 inch (15.9 mm), Type X.

TILE BACKING PANELS

A. Cementitious Backer Units: ANSI A118.9 and ASTM C 1288 or ASTM C 1325, with manufacturer's standard edges. Thickness: 5/8 inch (15.9 mm). Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.

TRIM ACCESSORIES

A. Interior Trim: ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized-steel sheet. Provide protection for all external gypboard corners.
2. Shapes: Cornerbead, expansion (control) joint and other shapes as required.

B. Exterior Trim: ASTM C 1047.

1. Material: rolled zinc. Provide protection for all external gypboard corners.
2. Shapes: Cornerbead, expansion (control) joint and other shapes as required.

JOINT TREATMENT MATERIALS

A. Comply with ASTM C 475/C 475M.
B. Joint Tape: As recommended by panel manufacturer.
C. Joint Compound As recommended by panel manufacturer and as required to achieve required finish.

AUXILIARY MATERIALS

A. Steel Drill Screws: ASTM C 1002 unless otherwise indicated. Use fasteners as recommended by the panel manufacturer.
B. Sound-Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing) Comply with mineral-fiber requirements of assembly for Fire-Resistance-Rated Assemblies.
C. Acoustical Sealant: Manufacturer's standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

SUBMITTALS

A. Product Data for each type of product specified.
B. Shop Drawings showing locations, fabrication, and installation of control and expansion joints including plans, elevations, sections, details of components, and attachments to other units of Work.

QUALITY ASSURANCE

A. Establish and maintain environmental conditions for applying and finishing gypsum board to comply with ASTM C 840 requirements or gypsum board manufacturer's recommendations, whichever are more stringent. Do not install gypsum wall board, sheet/board materials, or absorptive listed in this section until the structure is completely in the dry, including roof, windows, and doors are in place.
B. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
C. Gypsum Board Finish Levels: Finish panels to levels indicated below and according to ASTM C 840:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 2: Panels that are substrate for tile.
3. Level 3: Not Used.
4. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated. Primer and its application to surfaces are specified in Section 099100 "Painting."
5. Level 5: Where indicated on Drawings. Primer and its application to surfaces are specified in Section 099100 "Painting."

END OF SECTION 09 29 00

SECTION 09 30 13 - PORCELAIN TILE

PRODUCT REQUIREMENTS

TILE

A. Provide tile that complies with ANSI A137.1 for types, compositions and other characteristics indicated.
B. All tile to be ThruBody Porcelain Tile as indicated on drawings.
C. Static Coefficient of Friction: Tile on walkway surfaces shall be provided with the following values as determined by testing in conformance with ASTM C 1028. Level Surfaces and Stair Treads: Minimum of 0.6 (Wet).Ramp Surfaces: Minimum of 0.8 (Wet).

SETTING MATERIALS

A. Epoxy Adhesive: ANSI A118.3, thinset bond type.
B. Epoxy Grout: ANSI A118.8, 100 percent solids epoxy grout; color as selected.
C. Waterproofing Membrane at Floors to be in accordance with ANSI A118.10 and either Chlorinated Polyethylene Sheet with polyester fabric reinforcing (0.2 mm). or Complete waterproofing membrane required including base flashing and treatment at other termination points. Membrane must be compatible with mortars and/or adhesives.
D. Membrane at Walls: (0.1 mm) thick polyethylene film, ASTM D4397.
E. Cementitious Backer Board to meet ANSI A118.9; High density, cementitious, glass fiber reinforced with 2 inch (50 mm) wide coated glass fiber tape for joints and corners, thickness: 5/8 inch.

SUBMITTALS

A. Product Data: Manufacturer's data sheets on each product to be used.
B. Shop Drawings: Indicate tile layout, patterns, color arrangement, perimeter conditions, junctions with dissimilar materials, control and expansion joints, thresholds, ceramic accessories, and setting details.
C. Selection Samples: Color charts illustrating full range of colors and patterns.
D. Selection Samples: Samples of actual tiles for selection.

QUALITY ASSURANCE

A. Install cementitious backer board in accordance with ANSI A108.11 and board manufacturer's instructions. Tape joints and corners, cover with skim coat of dry-set mortar to a feather edge.
B. Install tile, grout, and mortar in accordance with applicable requirements of ANSI A108.1 through A108.13, manufacturer's instructions, and TCA Handbook recommendations.
C. Form internal angles square and external angles bullnosed.
D. Install thresholds where indicated.
E. Over interior concrete substrates, install in accordance with TCA Handbook Method F113, dry-set or latex-portland cement bond coat, with standard grout, unless otherwise indicated.
F. Install wall tile over cementitious backer units on studs, install in accordance with TCA Handbook Method W244, using membrane at toilet rooms.
G. Install wall tile Over interior concrete and masonry install in accordance with TCA Handbook Method W202 thin-set with dry-set or latex-portland cement bond coat.

END OF SECTION 09 30 13

SECTION 09 30 50 - TILE SETTING MATERIALS AND ACCESSORIES

GENERAL

SECTION INCLUDES

A. Uncoupling Membrane.
B. Waterproofing Membrane.
C. Floor drain, with integrated bonding flange.
D. Prefabriated shower components.
E. Setting materials.

SUBMITTALS

A. Submit under provisions of Section 01 30 00.
B. Product Data: Manufacturer's data sheets on eah product to be used, including:
1. Preparation instructions and recommendations.
2. Storage and handling requirements and recommendations.
3. Installation methods.
C. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150mm) long, representing actual product, color, and finish.
D. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

QUALITY ASSURANCE

A. Installer Qualifications: Company specializing in performing the work of this section with minimum five years experience.
B. Source Limitations for Setting Materials and Accessories: Obtain product of a uniform quality for each application condition from a single manufacturer.
C. Mock-Up: Provide a mock-up for evaluation of a surface preparation technques and application workmanship.
1. Finish areas designated by Architect.
2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
3. Refinish mock-up area as required to produce acceptable work.
D. Preinstallation Conference: Conduct conference at the Project site.
1. Convene one week prior to commencing work of this section.
2. Require attendance of installation material manufacturer, tile supplier, tile installer and installers of related work. Review installation procedures and coordination required with related work.
3. Meeting agenda includes but is not limited to:
a. Surface preparation.
b. Tile and installation material compatibility.
c. Edge protection, transition and pre-fabriated movement joint profiles.
d. Waterproofing techniques.
e. Crack isolation techniques.

PRODUCT REQUIREMENTS

MANUFACTURERS

A. Acceptable Manufacturer: Schluter Systems, L.P.
1. Contact: Kevin Musser (470) 727-2416 kmusser@schluter.com
B. Or Equal.

UNCOUPLING MEMBRANE

A. Schluter-DITRA: 1.8 inch (3 mm) thick, orange, high-density polyethylene membrane.
1. Grid Structure: 1/2 x 1/2 inch (12 x 12 mm) square cavities, each cut back in a dovetail configuration.
2. Anchoring Fleece: Polypropylene laminated to its underside.
3. Standards Compliance:
a. Conforms to definition for uncoupling membranes in the Tile Council of North America Handbook for Ceramic Tile Installation.
b. Meets of exceeds the requirements of the "American national standard specifications for load bearing, ,bonded, waterproof membranes for thin-set ceramic tile and dimension stone installation A118.10.
c. Listed by cUPC and is evaluated by ICC-ES. See Report No. ESR-2467.
4. Waterproofing Seaming Membrane: KERDI BAND Seams and Corners. Material to be 0.004 inch (0.1 m thick, orange polyethylene membrane, with polypropylene fleece laminated on both sides.

WATERPROOFING MEMBRANE

A. Schluter-KERDI: Polyethylene Membrane: 0.008 inch (0.2 mm) thick, orange with polypropylene fleece laminated on both sides.
1. Meets or exceeds requirements of the "American national standard specifications for load bearing, bonded, waterproof membranes for thin-set ceramic tile and dimension stone installation A118.10.
2. Corners and seals:
a. Provide matching preformed inside corners.
b. Provide matching preformed outside corners.
c. Provide matching preformed pipe seals.
d. Provide matching preformed mixing valve seals.
3. Listed by cUPC.
4. Evaluated by ICC-ES. See Report No. ESR-2467.
B. Schluter-KERDI-BAND: Seams and Corners material 0.004 inch (0.1 mm) thick, orange polyethylene membrae, with polypropylene fleece laminated on both sides.
1. Width: A required.

FLOOR DRAIN WITH INTEGRATED CONDING FLANGE

A. Schluter-KERDI-DRAIN: Plastic floor drain 11-25/32 inch (300 mm) diameter, trapezoid-perforated, integrated bonding flange
1. Polypropylene Fleece: Thermally laminated to the surface and hubbed connection to 2 inch (50 mm) drain pipe.
2. Grate assembly includes 4 x 4 inch (102 x 102 mm) square grate, height adjustment collar, and lateral adjustment ring with trapezoid perforations.
3. Listed by UPC: Meets requirements of "International Association of Plumbing and Mechanical Officials Interim Guide Criteria for Floor Drain with Integrated Bonding Flange" (IGC 195).
4. Listed by CSA: Meets requirements of the Canadian Standards Association standard, "Floor, Area, and Shower Drains, and Cleanouts for Residential Construction" (CSA B79), and referenced in method B422 and B422C of the Tile Council of North America Handbook for Ceramic Tile Installation.
5. Nominal Grate Size: 4 inch (100 mm) by 4 inch (100 mm) square.
6. Drain Outlet: 2 inch (50 mm) outlet.

PREFABRICATED SHOWER COMPONENTS

A. Schluter-KERDI-SHOWER-T/-TS/-TT: Trapezoid-imprinted, prefabricated, sloped tiles tray base, made of lightweight, self-extinguishing (HF-1 rating per UL-94) expanded polystyrene (PS 40).
1. Removable Recessed Section: 12-5/16 inch (313 mm) diameter.
2. Bonded Schluter KERDI Membrane: 0.008 inch (0.2 mm) thick.
3. Meets or exceeds the requirements of the Americn National Standard Specifications for load bearing, bonded, waterproof memberanes for thin-set ceramic tile and dimension stone installation A118.10.
4. Listed by cUPC.
5. Evaluated by ICC-ES (see Report No. ESR-2467).
6. Meets ANSI A118.10 as referenced in method B422 of the Tile Council of North America Handbook for Ceramic Tile Installation.
B. Schluter-KERDI-BOARD-SC: Prefabricated waterproof Shower Curb.
1. Rigid extruded polystyrene foam building element panel, with reinforcement material and polypropylene fleece webbing laminated on both sides for thin-set ceramic tile and dimension stone Installations.

SETTING MATERIALS

A. Schluter-ALL SET Modified Thin Set Mortar.
1. Description: specialized sag-resistant modified thin-set mortar specifically formulated for use with Schluter membranes and boards. It is engineered for use both under and over all DITRA and KERDI products. ALL-SET is suitable for use with ceramic, porcelain, and stone tile, including large and heavy tile, in conjunction with Schluter-Systems uncoupling and waterproofing membranes. Meets the requirements of ANSI A118.4T, A118.11, and A118.15T.

QUALITY ASSURANCE

A. Do not begin installation until substrates have been properly prepared.
B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
C. Clean surfaces thoroughly prior to installation.
D. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
E. Install in accordance with manufacturer's instruction.
F. Protect installed products until completion of project.
G. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION 09 30 50

SECTION 09 67 66 - FLUID-APPLIED ATHLETIC FLOORING

PRODUCT REQUIREMENTS

A. Basis of design shall be Action Synchro 6+2 as provided by Action Floor Systems, LLC. All components must be supplied by Action Floor Systems, LLC.

1. Technical Information

a. Force Reduction (CEN/TC 217 N375, DIN 18032) 13%
a. Energy Restitution (EN/TC 217) 52%
b. Ball Rebound (EN 12235, DIN 18032) 99%

B. Base Mat: Manufacturer's standard base mats of granulated recycled rubber in polyurethane binder.

1. Thickness: 6 mm.

C. Base-Mat Adhesive: Manufacturer's standard two-component polyurethane.

D. Base-Mat Sealer: Manufacturer's standard two-component polyurethane compound formulated for sealing base mat.

E. Body Coat(s): Two-component, self-leveling, pigmented, polyurethane containing no rubber fillers and no mercury.

F. Topcoat (Finish Coat): Manufacturer's standard pigmented polyurethane.

G. Game-Line and Marker Paint: Complete system including primer, if any, compatible with flooring and recommended in writing by flooring and paint manufacturers for use indicated.

H. Finishes:

1. Color: As selected by Architect from manufacturer's full range.
2. Surface Texture: Manufacturer's standard.

SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: For flooring. Show installation details including layout, colors, widths, and dimensions of game lines and markers and locations of athletic equipment floor inserts.

C. Samples: For each exposed product and for each color, gloss, and texture of floor specified.

D. Maintenance data.

E. Installer Qualifications: An installer who is approved, trained, or certified by fluid-applied athletic flooring manufacturer.

QUALITY ASSURANCE

A. Concrete Substrates: Prepare substrates according to manufacturer's written instructions to ensure adhesion of flooring.

1. Moisture Testing: Perform tests so that each test area does not exceed 200 sq. ft. and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.

a. Anhydrous Calcium Chloride Test: ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb. of water/1000 sq. ft. in 24 hours.
b. Relative Humidity Test: Using in situ probes, ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level measurement.

B. Remove substrate coatings and other substances that are incompatible with flooring system components and that contain soap, wax, oil, or silicone, using mechanical methods recommended in writing by manufacturer. Do not use solvents.

C. Use trowelable leveling and patching compound to fill cracks, holes, and depressions in substrates.

D. Treat nonmoving substrate cracks and control joints to prevent cracks from telegraphing (reflecting) through flooring, according to manufacturer's written instructions.

E. Protect substrate voids and joints to prevent flooring resins from flowing into or leaking through them.

F. Mix and apply flooring components according to manufacturer's written instructions.

1. At substrate expansion, isolation, and other moving joints, install continuous joint of same width through flooring.

G. Adhesively apply resilient base mats to substrate according to manufacturer's written instructions.

H. Apply game lines and markers in widths and colors according to requirements indicated on Drawings.

I. Curing: Allow new floor to cure at least 96 hours.

WARRANTY

A. Action Floor Systems, LLC warrants the products it ships to be free from defects in materials and workmanship for a period of one year and the flooring installer warrants the installation of the flooring to be free of defects in materials and workmanship for a period of one year. The exclusive remedy under this warranty shall be replacement of defective material supplied by Action Floor Systems, LLC or correction of defective installation by the flooring installer. All implied warranties of merchantability or fitness for intended use are limited to the period of this warranty. This warranty excludes consequential damages.

END OF SECTION 09 67 66

SECTION 09 51 23 - ACOUSTIC TILE CEILINGS

PRODUCT REQUIREMENTS

CEILING TILE

A. Seismic Performance: Suspended ceilings shall withstand the effects of earthquake motions determined according to ASCE/SEI 7. ASTM E580 (C,D) ASTM C636 (B)
B. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency. Flame-Spread Index: Class A according to ASTM E 1264. Smoke-Developed Index: 450 or less.
C. Regular Acoustical Lay-In Tile: 24 inches by 24 inches by 5/8 inch, tegular edge, non-directional fissured; classified as RH-90, unless indicated otherwise. Manufacturer's standard tiles shall comply with ASTM E 1264. Tile shall be constructed of materials and use processes to inhibit and retard growth of mold and mildew on surfaces. Use in classrooms, corridors, restrooms, etc. Provide one of the following or a reviewed substitute:

1. Armstrong Cortega.
2. USG Radar ClimaPlus, Item 2210.

D. Scrubbable: Vinyl faced, Armstrong Clean Room VL or approved substitute from USG of Celotex.
E. Moisture-Resistant Lay-In Tile: Ceramic and mineral fiber; perforated (fissured), 24 inches by 24 inches by 5/8 inch square cut lay-in. Use in shower areas. Provide one of the following or a reviewed substitute:

1. Armstrong Ceramaguard, Item 607.
2. USG Radar Ceramic ClimaPlus, Item 56644.

F. Light Reflectance (LR): .84.
G. Noise Reduction Coefficient (NRC): .55.

METAL SUSPENSION SYSTEM

A. Metal Suspension-System Standard: Manufacturer's standard, direct-hung, exposed grid, metal suspension system that complies with applicable requirements in ASTM C 635/C 635M.

ACCESSORIES

A. Attachment Devices: Size for five times the design load indicated in ASTM C 635/C 635M, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.
B. Seismic Clips: Manufacturer's standard seismic clips designed to secure acoustical tiles in-place during a seismic event.
C. Provide USG Compasso trim or approved equal.

SUBMITTALS

A. Product Data: For each type of product.

QUALITY ASSURANCE

A. ASCE/SEI 7 requires special inspections for suspended ceiling systems in seismic design Categories D, E, and F; verify requirements of authorities having jurisdiction.

END OF SECTION 09 51 23

MUSSMAN ARCHITECTS
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CONSULTANT LOGO

SEALS
STATE OF FLORIDA · PAUL GREGORY MUSSMAN · AR98980 · REGISTERED ARCHITECT
SEAL DATE: 10.07.2022

TREASURE COAST CLASSICAL ACADEMY

TCCA HIGH SCHOOL BUILDING
1400 SE COVE RD
STUART FLORIDA 34997

SHEET ISSUE:

NO.	DATE	DESCRIPTION	BY
0	10.07.22	Permit Submittal	MG

PRINCIPAL IN CHARGE: Approver
PROJECT ARCHITECT: Checker
DRAWN BY: MG

SHEET TITLE:
SPECIFICATIONS

SHEET NO. A1100
PROJ. NO. 022004

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