

Schott Hall Admissions Office Renovation

PHASE I

**1511 Herald Avenue
Cincinnati, Ohio 45207**

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**Owner, Architectural Design & Construction
Xavier Physical Plant**

**Mechanical, Electrical & Plumbing
KLH Engineers**



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SECTION 01 35 46 – ENVIRONMENTAL REQUIREMENTS FOR INDOOR AIR QUALITY CONTROL

PART 1- GENERAL

1.1 SUMMARY

A. This Section includes, but is not limited to, requirements for the following procedures:

1. Selection of products.

1.2 INTENT

A. It is the intent of the Owner to maintain a healthful environment for the present and future occupants of the building. Therefore, the Contractor shall conduct the Work in such a way as to avoid creating indoor air quality problems. Required procedures include:

1. Limiting use of products that may contribute to poor indoor air quality.

PART 2- PRODUCTS

2.1 PRODUCTS

A. Throughout the Work, use products, materials that contribute the minimum practicable dust, odors and contaminants to the indoor environment.

B. Products containing Volatile Organic Compounds (VOC's):

1. Comply with the following criteria for VOC limits for the following field-applied products.

- a. Adhesives: Refer to Technical Sections that include adhesives, including but not limited to those in Divisions 6 and 9, for specific requirements.

- 1) Wood Glues: 30 *giL*.
- 2) Metal to Metal Adhesives: 30 *giL*.
- 3) Adhesives for Porous Materials (Except Wood): 50 *giL*.
- 4) Subfloor Adhesives: 50 *giL*.
- 5) Plastic Foam Adhesives: 50 *giL*.
- 6) Contact Adhesive: 250 *giL*.
- 7) Plastic Cement Welding Compounds: 350 *giL*.
- 8) ABS Welding Compounds: 400 *giL*.
- 9) CPVC Welding Compounds: 490 *giL*.
- 10) PVC Welding Compounds: 510 *giL*.
- 11) Adhesive Primer for Plastic: 50 *giL*.
- 12) Gypsum Board and Panel Adhesives: 50 *giL*.
- 13) Ceramic Tile Adhesives: 65 *giL*.
- 14) VCT and Asphalt Tile Adhesives: 50 *giL*.

- 15) Cove Base Adhesives: 50 *giL*.
- 16) Rubber tile and other sheet flooring Flooring Adhesives: 60 giL.
- 17) Carpet Adhesives: 50 *giL*.
- 18) Carpet Pad Adhesives: 50 *giL*.
- 19) Multipurpose Construction Adhesives: 70 giL.
- 20) Fiberglass Adhesives: 80 *giL*.
- 21) Structural Glazing Adhesives: 100 *giL*.

b. Sealants: Refer to Division 7 Section "Joint Sealants", and other Technical Sections requiring sealants, for specific requirements.

- 1) Sealants: 250 giL.
- 2) Sealant Primers for Nonporous Substrates: 250 *giL*.
- 3) Sealant Primers for Porous Substrates: 775 *giL*.

END OF SECTION 01 35 46

SECTION 01 73 29 CUTTING AND PATCHING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This section includes administrative and procedural requirements for cutting and patching of existing surfaces and previously installed new surfaces, exclusive of what is specified in related sections below.
- B. Related Work
 - 1. Division 9 Section "Painting and Coating": Painting or touch-up painting of surfaces after cutting and patching work is performed.
 - 2. Division 22 - Plumbing: Cutting and patching of plumbing systems (but does not include walls, floors, ceilings, and structures).
 - 3. Division 23 - Heating, Ventilating and Air Conditioning: Cutting and patching of HVAC systems (but does not include walls, floors, ceilings, and structures).
- C. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.
 - 1. Requirements of this Section apply to mechanical and electrical installations. Refer to Division 21 through 27 Sections for other requirements and limitations applicable to cutting and patching mechanical and electrical installations.

1.2 WARRANTY

- A. Existing Warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used. Use materials whose installed performance will equal or surpass that of existing materials.

PART 3 – EXECUTION

3.1 INSPECTION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.

1. Before proceeding, meet at the Project Site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

3.2 PERFORMANCE

A. Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.

1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.

B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.

1. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.

3. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a diamond-core drill.

4. Where services are required to be removed, relocated, or abandoned, bypass utility services, such as pipe or conduit, before cutting. Cut-off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.

C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.

1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
3. Where removing walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
 - a. Where patching occurs in a smooth painted surface, extend final paint coat over entire unbroken surface containing the patch after the area has received primer and second coat.
4. Patch, repair, or rehang existing ceilings as necessary to provide an even plane surface of uniform appearance.
5. Trim and refinish existing wood doors as necessary to clear new floors.

D. Damaged Surfaces: Patch or replace any portion of an existing finished surface which is found to be damaged, lifted, discolored, or shows other imperfections, with matching material.

1. Provide adequate support of substrate prior to patching the finish.
2. Refinish patched portions of painted or coated surfaces in a manner to produce uniform color and texture over entire surface.
3. When existing surface finish cannot be matched, refinish entire surface to nearest intersections.

3.3 CLEANING

A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged pipe covering to its original condition.

END OF SECTION 01 73 29

SECTION 07 92 00 - JOINT SEALANTS

PART 1 - GENERAL

1.1 SUMMARY

Section Includes:

1. Interior joints in the following vertical surfaces and horizontal nontraffic surfaces:
 - a. Perimeter joints between interior wall surfaces and
 - frames of interior doors
 - penetrating MEP items.
 - b. Joints between plumbing fixtures and adjoining counters.
 - c. Joints between walls and counter/backsplashes.
 - d. Other joints as indicated.

1.2 PERFORMANCE REQUIREMENTS

- A. Provide elastomeric joint sealants that establish and maintain watertight and airtight continuous joint seals without staining or deteriorating joint substrates.
- B. Provide joint sealants for interior applications that establish and maintain airtight and water-resistant continuous joint seals without staining or deteriorating joint substrates.

1.3 ACTION SUBMITTALS

- A. Submit product data for each joint-sealant product indicated.
- B. Submit Samples for Initial Selection: Manufacturer's color charts consisting of strips of cured sealants showing the full range of colors available for each product exposed to view.
- C. Submit Samples for Verification: For each type and color of joint sealant required. Install joint sealants in 1/2 inch (13 mm) wide joints formed between two 6 inch (150 mm) long strips of material matching the appearance of exposed surfaces adjacent to joint sealants.
- D. Submit Product Certificates: Signed by manufacturers of joint sealants certifying that products furnished comply with requirements and are suitable for the use indicated.
- E. Product Data: For each joint-sealant product indicated. Include maximum VOC contents specified below.

F. Joint-Sealant Schedule: Include the following information:

1. Joint-sealant application, joint location, and designation.
2. Joint-sealant manufacturer and product name.
3. Joint-sealant formulation.
4. Joint-sealant color.

1.4 WARRANTY

- A. Special Installer's Warranty: Manufacturer's standard form in which Installer agrees to repair or replace joint sealants that do not comply with performance and other requirements specified in this Section within specified warranty period.

1. Warranty Period: Two years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS, GENERAL

- A. VOC Content of Interior Sealants: Sealants and sealant primers used inside the weatherproofing system shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):

1. Architectural Sealants: 250 g/L.
2. Sealant Primers for Nonporous Substrates: 250 g/L.
3. Sealant Primers for Porous Substrates: 775 g/L.

2.2 JOINT SEALANT BACKING

- A. Provide sealant backings of material and type that are nonstaining; are compatible with joint substrates, sealants, primers, and other joint fillers; and are approved for applications indicated by sealant manufacturer based on field experience and laboratory testing.
- B. Cylindrical Sealant Backings: ASTM C1330, of Type recommended by the sealant manufacturer for the particular application, and type of sealant used.

2.3 MISCELLANEOUS MATERIALS

- A. Primer: Material recommended by joint-sealant manufacturer where required for adhesion of sealant to joint substrates indicated, as determined from preconstruction joint-sealant-substrate tests and field tests.

- B. Cleaners for Nonporous Surfaces: Chemical cleaners acceptable to manufacturers of sealants and sealant backing materials.
- C. Masking Tape: Nonstaining, nonabsorbent material compatible with joint sealants and surfaces adjacent to joints.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer's written instructions.
 - 1. Remove laitance and form-release agents from concrete.
 - 2. Clean nonporous joint substrate surfaces with chemical cleaners or other means that do not stain, harm substrates, or leave residues capable of interfering with adhesion of joint sealants.
- B. Joint Priming: Prime joint substrates where recommended by joint-sealant manufacturer or as indicated by preconstruction joint-sealant-substrate tests or prior experience. Apply primer to comply with joint-sealant manufacturer's written instructions. Confine primers to areas of joint-sealant bond; do not allow spillage or migration onto adjoining surfaces.
- C. Masking Tape: Use masking tape where required to prevent contact of sealant or primer with adjoining surfaces that otherwise would be permanently stained or damaged by such contact or by cleaning methods required to remove sealant smears. Remove tape immediately after tooling without disturbing joint seal.

3.2 INSTALLATION

- A. Sealant Installation Standard: Comply with recommendations in ASTM C 1193 for use of joint sealants as applicable to materials, applications, and conditions indicated.
- B. Install sealant backings of kind indicated to support sealants during application and at position required to produce cross-sectional shapes and depths of installed sealants relative to joint widths that allow optimum sealant movement capability.
 - 1. Do not leave gaps between ends of sealant backings.
 - 2. Do not stretch, twist, puncture, or tear sealant backings.
 - 3. Remove absorbent sealant backings that have become wet before sealant application and replace them with dry materials.
- C. Install bond-breaker tape behind sealants where sealant backings are not used between sealants and backs of joints.
- D. Install sealants using proven techniques that comply with the following and at the same time backings are installed:

1. Place sealants so they directly contact and fully wet joint substrates.
 2. Completely fill recesses in each joint configuration.
 3. Produce uniform, cross-sectional shapes and depths relative to joint widths that allow optimum sealant movement capability.
- E. Tooling of Nonsag Sealants: Immediately after sealant application and before skinning or curing begins, tool sealants according to requirements specified in subparagraphs below to form smooth, uniform beads of configuration indicated; to eliminate air pockets; and to ensure contact and adhesion of sealant with sides of joint.
1. Remove excess sealant from surfaces adjacent to joints.
 2. Use tooling agents that are approved in writing by sealant manufacturer and that do not discolor sealants or adjacent surfaces.
 3. Provide concave joint profile per Figure 8A in ASTM C 1193, unless otherwise indicated.
- F. Clean off excess sealant or sealant smears adjacent to joints as the Work progresses by methods and with cleaning materials approved in writing by manufacturers of joint sealants and of products in which joints occur.

3.3 PROTECTION

A. Protect joint sealants during and after curing period from contact with contaminating substances and from damage resulting from construction operations or other causes so sealants are without deterioration or damage at time of Substantial Completion. If, despite such protection, damage or deterioration occurs, cut out and remove damaged or deteriorated joint sealants immediately so installations with repaired areas are indistinguishable from the original work.

3.4 ELASTOMERIC JOINT-SEALANT SCHEDULE

- A. Mildew-Resistant Silicone Sealant: Where joint sealants of this type are indicated, provide products formulated with fungicide that are intended for sealing interior ceramic tile joints and other nonporous substrates that are subject to in-service exposures of high humidity and temperature extremes, and that comply with ASTM C920 and the following:
1. Products: Provide one of the following or equal:
 - a. 786 Mildew Resistant; Dow Corning.
 - b. Sanitary SCS1700; GE Silicones.
 - c. 898 Silicone Sanitary Sealant; Pecora Corporation.
 - d. PST-611; Polymeric Systems, Inc.
 - e. Tremsil 600; Tremco.
 2. Type and Grade: S (single component) and NS (nonsag).
 3. Class: 25.
 4. Use Related to Exposure: NT (nontraffic).
 5. Uses Related to Joint Substrates: G, A, and, as applicable to joint substrates indicated, O.

3.5 NON-ELASTOMERIC JOINT-SEALANT SCHEDULE

A. Latex Sealant: Where joint sealants of this type are indicated, provide products complying with the following:

1. Products: Provide one of the following or equal:

- a. Chem-Calk 600; Bostik Inc.
- b. AC-20; Pecora Corporation.
- c. PSI-701; Polymeric Systems, Inc.
- d. Tremflex 834; Tremco.

2. Applications: Interior exposed joints in field painted vertical and overhead surfaces; at perimeter of hollow metal door frames; in gypsum drywall, plaster, and concrete masonry; and where indicated.

B. Preformed Foam Sealant: Where joint sealants of this type are indicated, provide products complying with the following:

1. Products: Provide one of the following or equal:

- a. Emseal 25V; Emseal Joint Systems, Ltd.
- b. Polytite Standard; Polytite Manufacturing Corporation.
- c. Blocoband HF; Salamander Industrial Products Inc.
- d. Wilseal 600; Sealform, Ltd.

END OF SECTION 07 92 00

SECTION 08 11 13
HOLLOW METAL DOORS AND FRAMES

PART 1 – GENERAL

1.1 SUMMARY

- A. Section includes:
 - 1. Hollow-metal frames.

1.2 DEFINITIONS

- A. Minimum Thickness: Minimum thickness of base metal without coatings according to NAAMM-HMMA 803 or SDI A250.8.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: Include elevations, door edge details, frame profiles, metal thicknesses, preparations for hardware, and other details.

1.4 INFORMATIONAL SUBMITTALS

- A. Product test reports.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Steel Doors and Frames:
 - a. Ceco Door Products; an Assa Abloy Group company.
 - b. Curries Company; an Assa Abloy Group company.
 - c. Kewanee Corporation (The).
 - d. Pioneer Industries, Inc.
 - e. Steelcraft; Allegion.
 - f. Windsor Republic Doors.

2.2 MATERIALS

- A. Hot-Rolled Steel Sheets: ASTM A569/A569M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.

- B. Cold-Rolled Steel Sheets: ASTM A366/A366M, Commercial Steel (CS), or ASTM A620/A620M, Drawing Steel (DS), Type B; stretcher-leveled standard of flatness.
- C. Electrolytic Zinc-Coated Steel Sheet: ASTM A591/A591M, Commercial Steel (CS), Class B coating; mill phosphatized; suitable for unexposed applications; stretcher-leveled standard of flatness where used for face sheets.
- D. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z (12G) coating designation; mill phosphatized.
- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- F. Power-Actuated Fasteners in Concrete: From corrosion-resistant materials.
- G. Grout: ASTM C 476, except with a maximum slump of 4 inches (102 mm), as measured according to ASTM C 143/C 143M.

2.3 INTERIOR DOORS AND FRAMES

- A. Heavy-Duty Doors and Frames: SDI A250.8, Level 2.
 - 1. Physical Performance: Level B according to SDI A250.4.
 - 2. Frames:
 - a. Materials: Uncoated steel sheet, minimum thickness of 0.053 inch (1.3 mm). 16 gauge
 - b. Construction: Full profile welded. Or KD (knock-down) for existing wall condition.
 - 3. Exposed Finish: Primed.
- B. Provide steel frames for doors with details indicated for type and profile. Conceal fastenings, unless otherwise indicated.

2.4 FABRICATION

- A. Fabricate steel door and frame units to comply with ANSI A250.8 and to be rigid and free from defects including warp and buckle. Where practical, fit and assemble units in manufacturer's plant. Clearly identify work that cannot be permanently factory assembled before shipment, to assure proper assembly at Project site.
- B. Hollow-Metal Frames: Where frames are fabricated in sections due to shipping or handling limitations, provide alignment plates or angles at each joint, fabricated of same thickness metal as frames.
 - 1. Borrowed Light Frames: Provide closed tubular members with no visible face seams or joints. Fasten members at crossings and to jambs by butt welding.
 - 2. Provide **countersunk**, flat- or oval-head exposed screws and bolts for exposed fasteners unless otherwise indicated.
 - 3. Floor Anchors: Weld anchors to bottoms of jambs with at least four spot welds per anchor; however, for slip-on drywall frames, provide anchor clips or countersunk

- holes at bottoms of jambs.
4. Jamb Anchors: Provide number and spacing of anchors as follows:
 - a. Stud-Wall Type: Locate anchors not more than 18 inches (457 mm) from top and bottom of frame. Space anchors not more than 32 inches (813 mm) o.c. and as follows:
 - 1) Three anchors per jamb up to 60 inches (1524 mm) high.
 - 2) Four anchors per jamb from 60 to 90 inches (1524 to 2286 mm) high.
 - 3) Five anchors per jamb from 90 to 96 inches (2286 to 2438 mm) high.
 - 4) Five anchors per jamb plus one additional anchor per jamb for each 24 inches (610 mm) or fraction thereof above 96 inches (2438 mm) high.
 5. Door Silencers: Except on weather-stripped frames/gasketed, drill stops to receive door silencers.
 - a. Single-Door Frames: Drill stop in strike jamb to receive three door silencers.
- C. Hardware Preparation: Factory prepare hollow-metal work to receive templated mortised hardware; include cutouts, reinforcement, mortising, drilling, and tapping according to SDI A250.6, the Door Hardware Schedule, and templates.
1. Reinforce doors and frames to receive non-templated, mortised, and surface-mounted door hardware.
 2. Comply with applicable requirements in SDI A250.6 and BHMA A156.115 for preparation of hollow-metal work for hardware.

2.5 FRAME ANCHORS

- A. Jamb Anchors:
 1. All frames shall be provided with jamb anchors as required for the type of wall construction into which the frames will be installed.
- B. Floor Anchors: Formed from same material as frames, minimum thickness of 0.042 inch (1.0 mm), and as follows:
 1. Monolithic Concrete Slabs: Clip-type anchors, with two holes to receive fasteners.

2.6 MATERIALS

- A. Hot-Rolled Steel Sheets: ASTM A569/A569M, Commercial Steel (CS), Type B; free of scale, pitting, or surface defects; pickled and oiled.
- B. Cold-Rolled Steel Sheets: ASTM A366/A366M, Commercial Steel (CS), or ASTM A620/A620M, Drawing Steel (DS), Type B; stretcher-leveled standard of flatness.
- C. Electrolytic Zinc-Coated Steel Sheet: ASTM A591/A591M, Commercial Steel (CS), Class B coating; mill phosphatized; suitable for unexposed applications; stretcher-leveled standard of flatness where used for face sheets.
- D. Frame Anchors: ASTM A 879/A 879M, Commercial Steel (CS), 04Z (12G) coating designation; mill phosphatized.

- E. Inserts, Bolts, and Fasteners: Hot-dip galvanized according to ASTM A 153/A 153M.
- F. Powder-Actuated Fasteners in Concrete: From corrosion-resistant materials.

2.7 STEEL FINISHES

- A. Prime Finish: Clean, pretreat, and apply manufacturer's standard primer.
 - 1. Shop Primer: SDI A250.10.

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Hollow-Metal Frames: Install hollow-metal frames of size and profile indicated. Comply with SDI A250.11 or NAAMM-HMMA 840 as required by standards specified.
 - 1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces, leaving surfaces smooth and undamaged.
 - a. At fire-rated openings, install frames according to NFPA 80.
 - b. Where frames are fabricated in sections because of shipping or handling limitations, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces.
 - c. Install frames with removable stops located on secure side of opening.
 - d. Remove temporary braces necessary for installation only after frames have been properly set and secured.
 - e. Check plumb, square, and twist of frames as walls are constructed. Shim as necessary to comply with installation tolerances.
 - 2. Floor Anchors: Provide floor anchors for each jamb and mullion that extends to floor, and secure with post-installed expansion anchors.
 - a. Floor anchors may be set with power-actuated fasteners instead of post-installed expansion anchors if so indicated and approved on Shop Drawings.
 - 3. Installation Tolerances: Adjust hollow-metal door frames for squareness, alignment, twist, and plumb to the following tolerances:
 - a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
 - b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
 - c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
 - d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.
- B. Glazing: Comply with installation requirements in Section 088000 "Glazing" and with hollow-metal manufacturer's written instructions.

1. Secure stops with countersunk flat- or oval-head machine screws spaced uniformly not more than 9 inches (230 mm) o.c. and not more than 2 inches (51 mm) o.c. from each corner.

3.2 ADJUSTING AND CLEANING

- A. Final Adjustments: Check and readjust operating hardware items immediately before final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including hollow-metal work that is warped, bowed, or otherwise unacceptable.
- B. Remove grout and other bonding material from hollow metal work immediately after installation.
- C. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- D. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

END OF SECTION 08 11 13

SECTION 08 14 16 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Solid-core doors with wood-veneer faces.
2. Factory finishing flush wood doors.

1.2 ACTION SUBMITTALS

A. Product data for each type of wood door, including details of core and edge construction, trim for openings.

1. Include factory-finishing specifications.
2. Low-Emitting Materials: Fabricate doors with adhesives and composite wood products that do not contain urea formaldehyde.

B. Shop Drawings: Submit shop drawings that indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in product data; location and extent of hardware blocking; and other pertinent data.

1. Indicate dimensions and locations of mortises and holes for hardware.
2. Indicate dimensions and locations of cutouts.
3. Indicate doors to be factory finished and finish requirements.
4. Indicate fire ratings for fire doors.

C. Samples for Verification: Submit samples as follows:

1. Corner sections of doors approximately 8 by 10 inches with door faces representing the typical range of color and grain for each species of veneer. Finish sample with same materials proposed for factory-finished doors.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. See drawings

2.2 DOOR CONSTRUCTION, GENERAL

A. Doors for Transparent Finish: Comply with the following requirements:

1. Grade: Premium, with Grade A faces.

2.3 FLUSH WOOD DOORS

- A. Flush Faced Wood Doors (Non-Fire-Rated): 1-3/4 inches thick, solid particleboard core, flush wood doors conforming to AWI Quality Standards, Premium Grade, Type PC-5.
1. Stiles: Laminated-edge construction for improved screw-holding capability, laminated to core with Type IT water-resistant glue; outer stile species to match face veneer.
 2. Rails: Mill-option hardwoods; 5 inch wide top rail (after trimming), suitable for attaching surface applied closer with steel screws.
 3. Lock Blocks: 4-1/2 inch by 10 inch lock blocks. Provide lock blocks at each stile for doors scheduled to have exit devices.
 4. Cross Bands: Oven-dried hardwoods (natural or engineered fiber), 1/16 inch minimum thickness, extending full width of door and laid with grain at right angles to face veneers.
 5. Face Veneers: HPM/AWI Grade A, no sapwood allowed, not less than 1/50 inch thick.
 6. Bond cross bands and face veneers to core with Type I exterior resin glue.

2.4 FABRICATTON

- A. Factory fit doors to suit frame-opening sizes indicated, with the following uniform clearances and bevels, unless otherwise indicated:
1. Clearances: Provide 1/8 inch (3.2 mm) at heads, jambs, and between pairs of doors. Provide 1/8 inch (3.2 mm) from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 1/4 inch (6.4 mm) from bottom of door to top of threshold.
- B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, DHI A115-W series standards, and hardware templates.
1. Coordinate measurements of hardware mortises in metal frames to verify dimensions and alignment before factory machining.

2.5 FACTORY FINISHING

- A. Comply with referenced AWI quality standard including Section 1500 "Factory Finishing."
- B. Finish wood doors at factory that are indicated to receive transparent finish.

PART 3- EXECUTION

3.1 EXAMINATION

- A. Examine installed door frames before hanging doors.

1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with plumb jambs and level heads.
2. Reject doors with defects.
3. Reject doors with excessive variation in veneer pattern & color.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

A. Hardware: For installation, see Division 08 Section, "Door Hardware."

B. Manufacturer's Written Instructions: Install wood doors to comply with manufacturer's written instructions, referenced quality standard, and as indicated.

1. Install fire-rated doors in corresponding fire-rated frames according to NFPA 80.

C. Job-Fit Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted with fire-rated doors. Machine doors for hardware. Seal cut surfaces after fitting and machining.

1. Clearances: Provide 1/8 inch (3.2 mm) at heads, jambs, and between pairs of doors. Provide 1/8 inch (3.2 mm) from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 1/4 inch (6.4 mm) from bottom of door to top of threshold.
2. Bevel non-fire-rated doors 1/8 inch in 2 inches (3-1/2 degrees) at lock and hinge edges.

D. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.

E. Factory-Finished Doors: Restore finish before installation, if fitting or machining is required at Project site.

3.3 ADJUSTING AND PROTECTING

A. Operation: Rehang or replace doors that do not swing or operate freely.

B. Finished Doors: Refinish or replace doors damaged during installation.

C. Protect doors as recommended by door manufacturer to ensure that wood doors are without damage or deterioration at the time of Substantial Completion.

END OF SECTION 08 14 16

SECTION 08 71 00
DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Mechanical door hardware for the following:
 - a. Swinging doors.

1.2 ACTION SUBMITTALS

A. Product Data: For each type of product indicated.

B. Other Action Submittals:

1. Door Hardware Schedule: Prepared by or under the supervision of Installer, detailing fabrication and assembly of door hardware, as well as installation procedures and diagrams. Coordinate final door hardware schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.
 - a. Format: Use same scheduling sequence and format and use same door numbers as in the Contract Documents.
 - b. Content: Include the following information:
 - 1) Identification number, location, hand, fire rating, size, and material of each door and frame.
 - 2) Locations of each door hardware set, cross-referenced to Drawings on floor plans and to door and frame schedule.
 - 3) Complete designations, including name and manufacturer, type, style, function, size, quantity, function, and finish of each door hardware product.
2. Keying Schedule: Prepared by or under the supervision of Installer, detailing Owner's final keying instructions for locks.
(Prepared by Xavier University and sent directly to KABA)

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Supplier of products and an employer of workers trained and approved by product manufacturers and an Architectural Hardware Consultant who is available during the course of the Work to consult with Contractor, Architect, and Owner about door hardware and keying.
- B. Door Hardware Supplier Qualifications: An experienced door hardware supplier with warehousing facility in Project's vicinity and who has on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with

Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying. Supplier recognized as an authorized distributor in good standing by the manufacturers of the primary materials.

1. Scheduling Responsibility: Review of door hardware schedule.

C. Means of Egress Doors: Latches do not require more than 15 lbf (67 N) to release the latch. Locks do not require use of a key, tool, or special knowledge for operation.

D. Accessibility Requirements: For door hardware on doors in an accessible route, comply with the U.S. Architectural & Transportation Barriers Compliance Board's ADA Accessibility Guidelines and ICC/ANSI A117.1.

1. Provide operating devices that do not require tight grasping, pinching, or twisting of the wrist and that operate with a force of not more than 5 lbf (22.2 N).
2. Comply with the following maximum opening-force requirements:
 - a. Interior, Non-Fire-Rated Hinged Doors: 5 lbf (22.2 N) applied perpendicular to door.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and note any discrepancies to the Construction Manager. Store the delivered hardware in designated secure location provided by the Construction Manager.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver permanent keys, cores, access control credentials, software and related accessories directly to Owner.

1.5 COORDINATION

- A. Coordinate quantity and arrangement of assemblies with ceiling space configuration and with components occupying ceiling space, including structural members, pipes, air-distribution components, raceways, cable trays, recessed lighting fixtures, and other items.
- C. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard, electrified and access control system hardware. Check Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.
- D. Door and Frame Preparation: Related Division 08 (Steel, Aluminum and Wood) doors and corresponding frames are to be prepared, reinforced and wired to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.6 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of door hardware that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. Provide door hardware for each door as scheduled in Part 3 below and on Drawings to comply with requirements in this Section.
 - 1. Door Hardware: Provide quantity, item, size, finish or color indicated, and products equivalent in function and comparable in quality to named products.
 - 2. Sequence of Operation: Provide electrified door hardware function, sequence of operation, and interface with other building control systems indicated.
- B. Designations: Requirements for design, grade, function, finish, size, and other distinctive qualities of each type of door hardware are indicated in Part 3 "Door Hardware Schedule" Article. Products are identified by using door hardware designations, as follows:
 - 1. Named Manufacturers' Products: Manufacturer and product designation are listed for each door hardware type required for the purpose of establishing minimum requirements. Manufacturers' names are abbreviated in Part 3 "Door Hardware Schedule" Article.

2.2 HINGES

- A. Hinges: BHMA A156.1. Provide template-produced hinges for hinges installed on hollow-metal doors and hollow-metal frames.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Butt Hinges:
 - 1) Hager Companies (HA)
 - 2) McKinney Products (MCK)

2.3 MECHANICAL LOCKS AND LATCHES

- A. Strikes: Provide manufacturer's standard strike for each lock bolt or latchbolt complying with requirements indicated for applicable lock or latch and with strike box and curved lip extended to protect frame; finished to match lock or latch.

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.
 2. Lock Throw: Comply with testing requirements for length of bolts to comply with labeled fire door requirements, and as follows:
 - a. Mortise Locks: Minimum 3/4-inch latchbolt throw.
 - b. Bored Locks: Minimum 1/2-inch latchbolt throw.
- B. Mortise Locks: BHMA A156.13; Grade 1; stamped steel case with steel or brass parts; Series 1000.
1. Basis-of-Design Product: Subject to compliance with requirements, **provide product indicated in Part 3** or comparable product by one of the following:
 - a. SARGENT Manufacturing Company; an ASSA ABLOY Group company.
 - b. Schlage Commercial Lock Division; an Ingersoll-Rand company.
 - c. Schlage Commercial Lock Division; an Ingersoll-Rand company.
 - d. Yale Security Inc.; an ASSA ABLOY Group company.

2.4 LOCK CYLINDERS

A. CYLINDERS AND KEYING

1. Provide patented and restricted, security cylinders utilizing a unique factory code pattern that is both geographically and time zoned protected. Manufacturers of cylinders to allow for the ability of the patented and restricted security keys to operate both security and conventional cylinders that are used together under the same facility master or grandmaster key system. End User is required to have the ability for on-site cylinder pinning and original key cutting. A letter of authorization by the End User is required to accompany purchases of any products which involve patented and restricted cylinders, keys and accessories.
2. Cylinders:
 - a. KABA (NO Substitution)
3. Standards: BHMA certified products complying with the following:
 - a. Cylinders: BHMA A 156.5, Grade 1.

2.5 KEYING

- A. Keying System: Factory registered, complying with guidelines in BHMA A156.28, Appendix A. Incorporate decisions made in keying conference. Provide for a keying system that matches the existing system.

2.6 MECHANICAL STOPS AND HOLDERS

- A. Wall- and Floor-Mounted Stops: BHMA A156.16; aluminum base metal.

1. Basis-of-Design Product: Subject to compliance with requirements, **provide product indicated in Part 3** or comparable product by one of the following:
 - a. Burns Manufacturing Incorporated.
 - b. Glynn-Johnson
 - c. IVES Hardware; an Ingersoll-Rand company.
 - d. Rockwood Manufacturing Company.
 - e. SARGENT Manufacturing Company; an ASSA ABLOY Group company.
 - f. Stanley Commercial Hardware; Div. of The Stanley Works.

2.7 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.8 FINISHES

- A. Provide finishes complying with BHMA A156.18 as indicated in door hardware schedule.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Mounting Heights: Mount door hardware units at heights required to comply with governing regulations.
 1. Standard Steel Doors and Frames: ANSI/SDI A250.8.
 2. Custom Steel Doors and Frames: HMMA 831.
 3. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
- B. Install each door hardware item to comply with manufacturer's written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work. Do not install surface-mounted items until finishes have been completed on substrates involved.
 1. Set units level, plumb, and true to line and location. Adjust and reinforce attachment substrates as necessary for proper installation and operation.
 2. Drill and countersink units that are not factory prepared for anchorage fasteners. Space fasteners and anchors according to industry standards.

- C. Hinges: Install types and in quantities indicated in door hardware schedule but not fewer than the number recommended by manufacturer for application indicated or one hinge for every 30 inches (750 mm) of door height, whichever is more stringent, unless other equivalent means of support for door, such as spring hinges or pivots, are provided.
- D. Lock Cylinders:
1. Furnish permanent cores to Owner for installation.
- E. Stops: Provide floor stops for doors unless wall or other type stops are indicated in door hardware schedule. Do not mount floor stops where they will impede traffic.
- F. Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.3 HARDWARE SCHEDULE (see door schedule on drawings for assignments)

MCK – McKinney
RO – Rockwood
SA – Sargent

Hardware Schedule

HW Set: 01

4	HINGES	TA2714 4.5x4.5	10B	MCK
1	OFFICE	70 8205 LNL	10B	SA
1	IC CORE	8850-25-1207	10B	KABA
1	WALL STOP	409	10B	RO

HW Set: 02

4	HINGES	TA2714 4.5x4.5	10B	MCK
1	OFFICE	70 8205 LNJ	10B	SA
1	IC CORE	8850-25-1207	10B	KABA
1	WALL STOP	409	10B	RO

END OF SECTION 08 71 00

SECTION 08 80 00 GLAZING

PART 1- GENERAL

1.1 SUMMARY

A. This section includes glazing for the following products and applications:

1. Interior borrowed lites.

PART 1- GENERAL

1.1 PERFORMANCE REQUIREMENTS

- A. Safety Glazing Labeling: Where safety glazing labeling is indicated, permanently mark glazing with certification label of the manufacturer. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.

1.2 SUBMITTALS

A. Submit Product Certificates: Signed by manufacturers of glass and glazing products certifying that products furnished comply with requirements.

B. Sample of glass and sealant / gasket.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who has completed glazing similar in material, design, and extent to that indicated for Project and whose work has resulted in construction with a record of successful in-service performance.

B. Safety Glass: Category II materials complying with testing requirements in 16 CFR 1201 and ANSI Z97.1.

1. Subject to compliance with requirements, permanently mark safety glass with certification label of Safety Glazing Certification Council or another certification agency acceptable to authorities having jurisdiction.

C. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.

1. GANA Publications: GANA'S "Glazing Manual" and "Laminated Glass Design Guide."
2. SIGMA Publications: SIGMA TM-3000, "Vertical Glazing Guidelines".

D. Installer's Warranty: All glass installed under the work of this section shall be guaranteed by the glazing subcontractor against leakage and sound penetration, caused by poor workmanship, caulking or sealant failure, for a period of two years subsequent to final acceptance by the Owner.

PART 2- PRODUCTS

2.1 GLASS PRODUCTS, GENERAL

A. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.

2.2 GLASS PRODUCTS

A. Heat-Treated Float Glass: ASTM C 1048; Type I; Quality-Q3; Class I (clear) unless otherwise indicated; of kind and condition indicated.

PART 3- EXECUTION

3.1 INSTALLATION (GLAZING)

- A. Comply with referenced FGMA standards and instructions of manufacturers of glass, glazing sealants, and glazing compounds.
- B. Protect glass from edge damage during handling and installation. Inspect glass during installation and discard pieces with edge damage that could affect glass performance.
- C. Set units of glass in each series with uniformity of pattern, draw, bow, and similar characteristics.
- D. Cut glazing tape to length and set against permanent stops, flush with sight lines to fit openings exactly, with stretch allowance during installation.
- E. Place setting blocks located at quarter points of glass with edge block no more than 6 inches from corners.
- F. Glaze vertically into labeled fire-rated metal frames or partition walls with same fire rating as glass and push against tape for full contact at perimeter of pane or unit.
- G. Place glazing tape on free perimeter of glazing in same manner described above.
- H. Install removable stop and secure without displacement of tape.
- I. Bed glazing material in glazing compound; entirely fill all recess and spaces. Provide visible glazing compound with smooth and straight edges.

END OF SECTION 08 80 00

SECTION 09 21 16
GYPSUM BOARD ASSEMBLIES

PART 1 – GENERAL

1.1 SUMMARY

A. This section includes the following:

1. Interior gypsum wallboard.
2. Non-load-bearing steel framing.
3. Sound Batt insulation

1.2 SUBMITTALS

- A. Product Data: For each type of product.
1. Submit manufacturer's limiting heights tables for non-load bearing studs indicating height limitations for all interior studs.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Subject to compliance with requirements, provide products of the following:

1. Steel Framing and Furring:
 - a. Clark Steel Framing Systems.
 - b. Dale Industries, Inc.; Dale/Incor.
 - c. Dietrich Industries, Inc.
 - d. MarinoWare; Division of Ware Ind.
 - e. National Gypsum Company.
 - f. Unimast, Inc.
2. Gypsum Board and Related Products:
 - a. American Gypsum Co.
 - b. CertainTeed Corporation.
 - c. G-P Gypsum Corp.
 - d. National Gypsum Company.
 - e. United States Gypsum Co.

2.2 STEEL PARTITION FRAMING

A. Components: As follows:

1. Comply with ASTM C 754 for conditions indicated.
2. Steel Sheet Components: Complying with ASTM C 645 requirements for metal and with manufacturer's standard corrosion-resistant zinc coating.

3. Steel Sheet Components for Wet or Corrosive Environments:
Complying with ASTM C 645 requirements for metal and with ASTM A 653/A 653M, G40 (Z120), hot-dip galvanized zinc coating.

B. Steel Studs and Runners: ASTM C 645.

1. Minimum Base Metal Thickness: 0.0312 inch (0.79 mm) (20 gauge).
2. Depth: As indicated, and as required to achieve partition deflection no greater than $L/360$ for given span.

C. Deep-Leg Deflection Track: ASTM C 645 top runner with 2 inch (50.8 mm) deep flanges.

D. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.

1. Minimum Base Metal Thickness: 0.0312 inch (0.79 mm).

E. Cold-Rolled Channel Bridging: 0.0538 inch (1.37 mm) bare steel thickness, with minimum 1/2 inch (12.7 mm) wide flange.

1. Depth: 1-1/2 inches (38.1 mm).
2. Clip Angle: 1-1/2 by 1-1/2 inch (38.1 by 38.1 mm), 0.068 inch (1.73 mm) thick, galvanized steel.

F. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

2.3 INTERIOR GYPSUM WALLBOARD

A. Panel Size: Provide in maximum lengths and widths available that will minimize joints in each area and correspond with support system indicated.

B. Gypsum Wallboard: ASTM C 36.

1. Regular Type:
 - a. Thickness: 5/8 inch thick, unless noted otherwise.
 - b. Long Edges: Tapered and featured (rounded or beveled) for prefilling.
 - c. Location: As indicated.

C. Type X:

- a. Thickness: 5/8 inch thick, unless noted otherwise.
- b. Long Edges: Tapered and featured (rounded or beveled) for prefilling.
- c. Location: Where required for fire-resistance-rated assembly. May also be used at all locations if approved manufacturer does not offer regular type in 5/8-inch thickness.

D. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining, latex sealant complying with ASTM C 834 that

effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E90.

Products: Subject to compliance with requirements, provide one of the following:

1. Acoustical Sealant for Exposed and Concealed Joints:
 - a. Pecora Corp.; AC-20 FTR Acoustical and Insulation Sealant.
 - b. United States Gypsum Co.; SHEETROCK Acoustical Sealant.
2. Acoustical Sealant for Concealed Joints:
 - a. Ohio Sealants, Inc.; Pro-Series SC-170 Rubber Base Sound Sealant.
 - b. Pecora Corp.; BA-98.
 - c. Tremco, Inc.; Tremco Acoustical Sealant.

2.4 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.
2. Shapes:
 - a. Cornerbead: Use at outside corners.
 - b. J-Bead: Use where indicated.
 - c. Drywall trim: Use where indicated.

2.5 JOINT TREATMENT MATERIALS

A. Comply with ASTM C 475.

B. Joint Tape:

1. Interior Gypsum Wallboard: Paper.

C. Joint Compound for Interior Gypsum Wallboard: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

2.6 AUXILIARY MATERIALS

A. Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.

C. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

1. Use zinc coated screws complying with ASTM F2329-13 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.

D. Sound Batt insulation: ASTM C 665, Type I (blankets without membrane facing) produced by combining thermosetting resins with mineral fibers manufactured from glass, slag wool, or rock wool.

1. Basis of design: 3 ½" thick Owens Corning unfaced sound attenuation batts fiberglass.

PART 3 – EXECUTION

3.1 INSTALLING STEEL FRAMING, GENERAL

- A. Installation Standards: ASTM C 754, and ASTM C 840 requirements that apply to framing installation.
- B. Install supplementary framing, blocking, and bracing at terminations in gypsum board assemblies to support equipment. Comply with details indicated and with gypsum board manufacturer's written recommendations or, if none available, with United States Gypsum's "Gypsum Construction Handbook."

3.2 APPLYING AND FINISHING PANELS, GENERAL

- A. Gypsum Board Application and Finishing Standards: ASTM C 840 and GA-216.
- B. Where acoustical sealant is noted at tops of partitions, allow for 1/2 " gap (maximum) between top of gypsum board and bottom of structure above. Fill w/ acoustical sealant per manufacturer's instructions.

3.3 INSTALLING TRIM ACCESSORIES

- A. For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- B. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.

3.4 FINISHING GYPSUM BOARD ASSEMBLIES

- A. Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.
- B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except those with trim having flanges not intended for tape.

D. Gypsum Board Finish Levels: Finish panels to levels indicated below, according to ASTM C 840, for locations indicated:

1. Level 1: Embed tape at joints in ceiling plenum areas, concealed areas, and where indicated, unless a higher level of finish is required for fire resistance-rated assemblies and sound-rated assemblies.

2. Level 2: Embed tape and apply separate first coat of joint compound to tape, fasteners, and trim flanges where panels are substrate for tile.

3. Level 4: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges at panel surfaces that will be exposed to view, unless otherwise indicated.

4. Level 5: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges, and apply skim coat of joint compound over entire surface. Provide Level 5 finish at the following areas:

- a. Wall surfaces that are lit with raking light or washed with lights.
- b. Walls that are perpendicular to an exterior wall that have a window coming right up to the intersection of the interior and exterior walls.

END OF SECTION 09 21 16

SECTION 09 51 00
ACOUSTICAL CEILINGS

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes the following:
1. Acoustical lay-in panel ceilings
 2. Exposed suspension systems.
 3. Salvaged grid.

1.2 SUBMITTALS

- A. Submit product data for each type of product specified.

1.3 EXTRA MATERIALS

- A. Furnish extra materials described below that match products installed, are packaged with protective covering for storage, and are identified with labels clearly describing contents.
1. Acoustical Ceiling Units: Furnish quantity of full size units equal to 2 percent of amount installed.
 2. Exposed Suspension System Components: Furnish quantity of each exposed component equal to 2 percent of amount installed.

PART 2 - PRODUCTS

2.1 ACOUSTICAL PANELS

- A. ACT: Mineral Fiber Acoustical Panel
1. Basis of Design Product: Armstrong World Industries Dune #1774
 2. Classification: ASTM E 1264 Type III; Form 2; Pattern C E, Fire Class A
 3. Size: 24 by 24 inches by 5/8 inch.
 4. Edge Detail: angled tegular
 5. Composition: wet formed mineral fiber with low formaldehyde content.
 6. Surface coating: Factory applied latex paint
 - a. Color: White
 - b. Light Reflectance: 0.86 minimum
 7. Acoustical Performance:
 - a. CAC: 35
 8. Recycled content: 56%
 9. Humiguard Plus

2.2 METAL SUSPENSION SYSTEMS

- A. Manufacturers: Subject to compliance with requirements, provide Basis of Design Product (or substitution FIELD VERIFY COMPATIBILITY FOR PATCHING DURING BIDDING):
Armstrong Prelude XL 15/16" exposed T system.
- B. Standard for Metal Suspension Systems: Provide metal suspension systems of type, structural classification and finish indicated which comply with applicable ASTM C635 requirements.

C. Finish: Baked polyester paint.

D. Color: White

E. Attachment Devices: Size for 5 times design load indicated in ASTM C635, Table 1, Direct Hung.

1. Concrete Inserts: Inserts formed from hot-dipped galvanized sheet steel and designed for attachment to concrete forms and for embedment in concrete, with holes or loops for attachment at hanger wires.

F. Hanger Wire: Galvanized carbon steel wire, ASTM A641, soft temper, prestretched, Class 1 coating, sized so that stress at 3 times hanger design load (ASTM C635, Table 1, Direct Hung), will be less than yield stress of wire, but provide not less than 12 gage.

1. Provide stainless steel hanger wire when aluminum suspension systems are indicated.

G. Edge Moldings and Trim: Metal or extruded plastic of types and profiles indicated or, if not indicated, provide manufacturer's standard molding for edges and penetrations of ceiling which fits with type of edge detail and suspension system indicated.

H. Accessories: Armstrong Adaptor Clip (GC3W) **Join new to existing grid.**

PART 3 – EXECUTION

3.1 INSTALLATION

- A. Install acoustical tile ceilings to comply with ASTM C 636/C 636M and seismic design requirements indicated, according to manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."
- B. Install edge moldings of type indicated at perimeter of acoustical ceiling area and at locations where necessary to conceal edges of acoustical units.
 1. Apply acoustical sealant in a continuous ribbon concealed on back of vertical legs of moldings before they are installed.
 2. Screw attach moldings to substrate at intervals not over 16 inches (400 mm) o.c. and not more than 3 inches (75 mm) from ends, leveling with ceiling suspension system to a tolerance of 1/8 inch in 12 feet (3.18 mm in 3.66 m). Miter corners accurately and connect securely.
 3. **Do not use exposed fasteners, including pop rivets, on moldings and trim.**
- C. For reveal-edged panels, rabbet all field-cut edges of panels to form reveal-edge of same depth and width as factory formed edges. Match profiles of factory-formed panel edges. Use only special cutting tool such as the "Reveal Border Saw" by Interior Systems for field cutting reveal-edge panels.
 1. Paint the cut panel edges remaining exposed after installation; match color of exposed panel surfaces using coating recommended for this purpose by acoustical panel manufacturer.

END OF SECTION 09 51 00

SECTION 09 68 13 – TILE CARPETING

PART I- GENERAL

1.1 SUMMARY

- A. This Section includes carpet tile products, accessories and installation.

1.2 SUBMITTALS

- A. Submit product data for each type of product indicated. Include manufacturer's written data on physical characteristics, durability, and fade resistance. Include installation methods.

- B. Shop Drawings: Show the following:
1. Columns, doorways, enclosing walls or partitions, built-in cabinets, and locations where cutouts are required in carpet tiles.
 2. Existing flooring materials to be removed.
 3. Existing flooring materials to remain.
 4. Carpet tile type, color, and dye lot.
 5. Type of subfloor.
 6. Type of installation.
 7. Pattern of installation.
 8. Pattern type, location, and direction.
 9. Type, color, and location of edge, transition, and other accessory strips.
 10. Transition details to other flooring materials.

- C. Samples: Submit samples for each of the following products and for each color and texture required. Label each sample with manufacturer's name, material description, color, pattern, and designation indicated on Drawings and in schedules.

1. Carpet Tile: Full-size sample.
2. Exposed Edge Stripping and Accessory: 12 inch (300 mm) long samples.

- D. Product Schedule: Submit schedule of carpet tile using same room and product designations indicated on Drawings and in schedules.

- E. Maintenance Data: Submit maintenance data for carpet tile. Include the following:

1. Methods for maintaining carpet tile, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.
2. Precautions for cleaning materials and methods that could be detrimental to carpet tile.

- F. Concrete Moisture Vapor Transmission Reduction System: Submit the following;

1. Plans showing the proposed moisture test and bond test locations, approved by the flooring manufacturer. Identify each location by a unique designation.
2. Test results for all moisture and bond tests.

G. Certification that all concrete substrate surfaces have been inspected and are free of coatings, curing agents, alkali, have the required texture and are in conformance with ASTM F710 and the flooring and underlayment manufacturers' requirements.

1.3 QUALITY ASSURANCE

A. Installer Qualifications: An experienced installer who is certified by the Floor Covering Installation Board or who can demonstrate compliance with its certification program requirements.

B. Fire-Test-Response Ratings: Where indicated, provide carpet tile identical to those of assemblies tested for fire response according to NFPA 253 by a qualified testing agency.

C. Single-Source Responsibility: Obtain each type of carpet from one source and by a single manufacturer.

1. Dye Lot: Provide each carpet type beginning from the start of a full dye lot.

D. Mockups: Before installing carpet tile, install mockups for each type of carpet tile installation required to demonstrate aesthetic effects and qualities of materials and execution. Install mockups to comply with the following requirements, using materials indicated for the completed Work:

1. Install mockups in the location and of the size indicated or, if not indicated, as directed by Architect.
2. Notify Architect seven days in advance of dates and times when mockups will be installed.
3. Demonstrate the proposed range of aesthetic effects and workmanship.
4. Obtain Owner and Architect's approval of mockups before starting work.
5. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed Work.
6. Approved mockups may become part of the completed Work if undamaged at time of Substantial Completion.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Comply with CRT 104, Section 5, "Storage and Handling".

B. Remove wrapping from carpet 24 hours prior to installation to allow "off-gassing" of carpet.

1.5 PROJECT CONDITIONS

A. Comply with CRI 104, Section 6.1, "Site Conditions; Temperature and

B. Environmental Limitations: Do not install carpet tile until wet work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

C. Do not install carpet tile over concrete slabs until slabs have cured and are sufficiently dry to bond with adhesive and concrete slabs have pH range recommended by carpet tile manufacturer.

D. Where items are indicated for installation on top of carpet tile, install carpet tile before installing these items.

1.6 EXTRA MATERIALS

A. Furnish extra materials described below, before installation begins, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Carpet Tile: Full-size units equal to 5 percent of amount installed for each type indicated, but not less than 10 sq. yd. (8.3 sq. m).

PART 2- PRODUCTS

2.1 CARPET CPT-1

A. See Room Finish Schedule drawing for basis of design.

2.2 INSTALLATION ACCESSORIES

A. Trowelable Leveling and Patching Compounds: Latex-modified, hydraulic-cement-based formulation provided by or recommended by carpet tile manufacturer.

B. Adhesives: Water-resistant, mildew-resistant, nonstaining type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet tile and that is recommended by carpet tile manufacturer.

PART 3- EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet tile performance. Verify that substrates and conditions are satisfactory for carpet tile installation and comply with requirements specified.

B. Concrete Subfloors: Verify that concrete slabs comply with ASTM F710 and the following:

1. Slab substrates are dry and free of curing compounds, sealers, hardeners, and other materials that may interfere with adhesive bond. Determine adhesion and dryness characteristics by performing bond and moisture tests.
 - a. Test concrete in accordance with ASTM Standard F-2170-02. Perform three (3) tests for each area under 2000 sq. ft., with one additional test for every additional 1000 sq. ft. Test locations shall be selected less than 5 feet from building perimeter, near window and door openings wherever possible. Pass threshold: Less than 85 percent ERH (Equilibrium Relative Humidity).
2. Subfloors are free of cracks, ridges, depressions, scale, and foreign deposits.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Comply with CRI 104, Section 6.2, "Site Conditions; Floor Preparation," and carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tile installation.
- B. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.
- C. Remove coatings, including curing compounds, and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, without using solvents. Use mechanical methods recommended in writing by carpet tile manufacturer.
- D. Concrete-Subfloor Preparation: Apply concrete-slab primer, according to manufacturer's directions, where recommended by the carpet manufacturer.
 1. Test concrete in accordance with ASTM Standard F-2170-02. Perform three (3) tests for each area under 2000 sq. ft., with one additional test for every additional 1000 sq. ft. Test locations shall be selected less than 5 feet from building perimeter, near window and door openings wherever possible. Pass threshold: less than 85% ERH (Equilibrium Relative Humidity).
- E. Broom and vacuum clean substrates to be covered immediately before installing carpet tile. After cleaning, examine substrates for moisture, alkaline salts, carbonation, or dust. Proceed with installation only after unsatisfactory conditions have been corrected.

3.3 INSTALLATION

- A. Comply with CRI 104, Section 13, "Carpet Modules (Tiles)".
- B. Installation Method: Glue-down; install every tile with releasable adhesive.
- C. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet tile manufacturer.

D. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.

E. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, nonstaining marking device.

F. Install pattern parallel to walls and borders.

3.4 CLEANING AND PROTECTION

- A. Perform the following operations immediately after installing carpet tile:
1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet tile manufacturer.
 2. Remove yarns that protrude from carpet tile surface.
 3. Vacuum carpet tile using commercial machine with face-beater element.
- B. Protect installed carpet tile to comply with CRI104, Section 15, "Protection of Indoor Installations".
- C. Protect carpet tile against damage from construction operations and placement of equipment and fixtures during the remainder of construction period. Use protection methods indicated or recommended in writing by carpet tile manufacturer.

END OF SECTION 09 68 13

SECTION 09 91 23 –INTERIOR PAINTING

PART 1 - GENERAL

1.1 SUMMARY

A. This section includes surface preparation and field painting of the following:

1. Exposed interior items and surfaces.
2. Surface preparation, priming, and finish coats specified in this section are in addition to shop priming and surface treatment specified in other sections.

B. Paint exposed surfaces whether or not colors are designated in "schedules," except where a surface or material is specifically indicated not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces. If color or finish is not designated, the Architect will select from colors or finishes available.

1. Painting includes field painting exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron work, and primed metal surfaces of mechanical and electrical equipment.

C. Painting is not required on prefinished items, finished metal surfaces, concealed surfaces, operating parts and labels.

1.2 SUBMITTALS

A. Submit samples of manufacturers' latest color chips for selection by the Architect. Colors shall be selected by Architect prior to commencement of the painting work.

B. Samples for Verification Purposes: Provide samples of each color and material to be applied, with texture to simulate actual conditions, on representative samples of the actual substrate. Define each separate coat, including block fillers and primers. Use representative colors when preparing samples for review. Resubmit until required sheen, color, and texture are achieved.

1. Provide a list of material and application for each coat of each sample. Label each sample as to location and application.
2. Submit samples for the Architect's review of color.

1.3 QUALITY ASSURANCE

A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to those indicated for the Project that have resulted in a construction record of successful in-service performance.

B. Single Source Responsibility: Provide primers and other undercoat paint produced by same manufacturer as finish coats. Use thinners approved by paint manufacturer, and use within recommended limits.

C. Coordination of Work: Review other sections in which primers are provided to ensure compatibility of the total systems for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.

1. Notify the Architect of problems anticipated using the materials specified.

D. Material Quality: Provide the manufacturer's best quality trade sale paint material of the various coating types specified. Paint material containers not displaying manufacturer's product identification will not be acceptable.

E. Provide products which comply with all state and local regulations controlling use of volatile organic compounds (VOCs).

1.4 MOCK-UPS

A. Before proceeding with the work, a representative room with permanent lighting shall be designated for the mockup and the walls finish painted in a white color. Samples of the various wall color schemes shall be prepared on 4 foot by 8 by 1/4" foot sheets of gypsum board (one color to each sheet) and exhibited in the mock-up room for Architect's approval.

1. If requested by Architect, prepare a new mock-up for each color as many as two more times, with minor tint adjustments, for final color approval.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Architectural Coating Products: Basis of design products are listed in the schedule. Substitutions will be considered if adequate documentation is provided during bidding.

2.2 MATERIALS

A. Provide paint products listed in schedules at end of this section for the various paint systems and substrates indicated.

B. Sealers and primers: As recommended by the finish paint manufacturer.

C. Spackle: An approved plaster filler.

D. Gypsum board joint compound finish system shall be as approved by gypsum board manufacturer.

E. Tinting material shall be of the best quality, universal colorants ground in propylene glycol, alkali proof, non-fading, lead-free colorants.

1. Tint all primers and undercoats to the approximate shade (lighter or darker, depending on color selected) of the finish coat. Where the color schedule calls for the use of "deeptones" it is the responsibility of the painting subcontractor to utilize the appropriate deep base primers for use on the surfaces for which they are intended.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions under which painting will be performed for compliance with requirements for application of paint. Do not begin paint application until unsatisfactory conditions have been corrected.

1. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.

3.2 PREPARATION

A. General Procedures: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items in place that are not to be painted, or provide surface-applied protection prior to surface preparation and painting. Remove these items if necessary for complete painting of the items and adjacent surfaces. Following completion of painting operations in each space or area, have items reinstalled by workers skilled in the trades involved.

1. Clean surfaces before applying paint or surface treatments. Remove oil and grease prior to cleaning. Schedule cleaning and painting so that dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

B. Surface Preparation: Clean and prepare surfaces to be painted in accordance with the manufacturer's instructions for each particular substrate condition and as specified.

1. Provide barrier coats over incompatible primers or remove and re-prime. Notify Architect in writing of problems anticipated with using the specified finish coat material with substrates primed by others.
2. Cementitious Materials: Prepare concrete masonry block surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
 - a. Use abrasive blast-cleaning methods if recommended by the paint manufacturer.
 - b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause blistering and burning of finish paint, correct this condition before application. Do not paint surfaces where moisture content exceeds that permitted in manufacturer's printed directions.
3. Ferrous Metals: Clean non-galvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale and other foreign substances. Use solvent or mechanical cleaning methods that comply with recommendations of the Steel Structures Painting Council.
 - a. Blast steel surfaces clean as recommended by the paint system manufacturer and in accordance with requirements of SSPC specification SSPS-SP 10.
 - b. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
 - c. Materials Preparation: Carefully mix and prepare paint materials in accordance with manufacturer's directions.
 1. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue.
 2. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film

into material. Remove film and, if necessary, strain material before using.

3. Use thinners approved by the paint manufacturer, and within recommended limits.

3.3 APPLICATION

A. Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.

B. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.

C. Paint colors, surface treatments, and finishes are indicated in "schedules."

D. Provide finish coats that are compatible with primers used.

E. The number of coats and film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required to produce an even smooth surface in accordance with the manufacturer's directions.

F. Apply additional coats when undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance. Give special attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners, receive a dry film thickness equivalent to that of flat surfaces.

G. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, convactor covers, covers for finned tube radiation, grilles, and similar components are in place. Extend coatings in these areas as required to maintain the system integrity and provide desired protection.

H. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only before final installation of equipment.

I. Paint interior surfaces or cuts, where visible through registers or grilles, with a flat, non-specular black paint.

J. Omit primer on metal surfaces that have been shop-primed and touch up painted.

K. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

1. Allow sufficient time between successive coats to permit proper drying. Do not recoat until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure and where application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

L. Minimum Coating Thickness: Apply materials at not less than the manufacturer's recommend spreading rate. Provide a total dry film thickness of the entire system as recommended by the manufacturer.

M. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.

N. Prime Coats: Before application of finish coats, apply a prime coat of material as recommended by the manufacturer to materials that are required to be painted or finished and have not been prime coated by others. Recoat primed and sealed surfaces where

evidence of suction spots or unsealed areas in first coat appears, to assure a finish coat with no burn through or other defects due to insufficient sealing.

O. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

P Completed Work: Match approved samples for color, texture and coverage. Remove, refinish, or repaint work not in compliance with specified requirements.

3.5 CLEANING AND PROTECTION

A. Cleanup: At the end of each work day, remove empty cans, rags, rubbish, and other discarded paint materials from the site.

B. Protect work of other trades, whether to be painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect.

C. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.7 PAINTING SCHEDULE

A. New Drywall PRIMER

1. First Coat (primer):

- a. PPG Series 6-2 /Quick Drying Interior Latex Primer

B. Ferrous Metal (new HM door frames)

1. First Coat (primer):

- a. PPG Series 90-709/712 Pitt-Tech High Performance Primer/Finish

C. Previously Painted or newly primed Gypsum Board.

1. Two Coats:

- a. PPG 16-310/ PITT-GLAZE® WB1 Interior Eggshell Pre-Catalyzed Water-Borne Acrylic Epoxy

D. Previously Painted or newly primed Drywall bulkheads & soffits

1. Two Coats:

- a. PPG Series 6-70 / Speedhide Interior Flat Wall Paint

E. Previously Painted or newly primed Metal (new HM door frames)

1. Two Coats (semi-gloss finish):

- a. PPG 6-1510 / SPEEDHIDE Interior / Exterior WB Alkyd Semi-Gloss

F. Grilles, Uncovered Runout, Housings and Accessories of Mechanical Equipment and Apparatus

1. First Coat (primer):

- a. P&L Tech-Gard Acrylic Metal Primer, Z190. b. Moore Acrylic Metal Primer M04.

- c. PPG Pitt-Tech High Performance Primer/Finish, Series 90-709/712.
 - d. S-W PrepRite Classic Interior Latex Primer, B28W101.
 - 2. Second and Third Coats (semi-gloss finish):
 - a. P&L Enducryl Acrylic Maintenance Enamel, Z2900.
 - b. Moore DTM Acrylic Semi-Gloss M29.
 - c. PPG Pitt-Tech Satin DTM Enamel, Series 90-474.
 - d. S-W DTM Acrylic Semi-Gloss Coating, B66-200 Series.
- I. Wood Transparent Finish (for wood door work surfaces)
 - 1. First Coat: OLYMPIC Premium Wood Conditioner
 - 2. Second Coat: Olympic 44500 low VOC oil stain.
 - 3. Third, Fourth, and Fifth Coats (transparent satin finish):
Olympic 42786 Polyurethane WB Varnish
- J. Wood Transparent Finish (for angled supports @ Typical Work Surfaces)
 - 1. First and Second Coats (transparent satin finish):
Olympic 42786 Polyurethane WB Varnish
- K. Wood Opaque Finish (for wall caps, baseboard, and painted shelves.)
 - 1. First Coat (Primer): PPG Paints 17-921 Seal Grip Acrylic Universal Primer
 - 2. Second and Third Coats: PPG Paints Breakthrough V56-410 Satin Finish
 - 3. Fourth Coat for Painted Shelves: PPG Paints Breakthrough V56-410 Satin Finish.

3.8 SAFETY COLOR CODE

- A. Markings shall be as designated by the University Standards.
 - 1. All exposed pipe lines, ducts, plenums, conduits, and hangers shall be stenciled and marked with flow arrows at entrance and exit of all pipes within such areas, and at not more than 20 foot intervals between.
 - 2. All concealed pipe lines which are accessible by access doors and ceiling removal, shall be banded at each point of entry, junction, or exit to the concealed space and banding shall be repeated at distances not to exceed 20 feet between identifying bands, and shall be repeated at each valve. Exception to the preceding: all condenser water (tower) lines shall receive two coats of primer their entire length.

END OF SECTION 09 90 00

SECTION 10 14 19 SIGNAGE

PART 1 – GENERAL

1.1 SUMMARY

- A. This section includes the following types of signs:

1. Room Identification signs.

1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For dimensional letter signs.
1. Include fabrication and installation details and attachments to other work.
 2. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
 3. Show message list, typestyles, graphic elements, and layout for each sign at least half size.
- C. Samples: For each exposed product and for each color and texture specified.
- D. Sign Schedule: Use same designations specified or indicated on Drawings or in a sign schedule.

1.3 PROJECT CONDITIONS

- A. Field Measurements: Take field measurements prior to preparation of shop drawings and fabrication to ensure proper fitting. Show recorded measurements on final shop drawings. Coordinate fabrication schedule with construction progress to avoid delay.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Basis of Design:
1. ASI Sign Systems, Inc. or equal

2.2 PANEL SIGNS

- A. Locations: Provide one room identification sign for each permanent room and as scheduled.
- B. Panel Signs: Comply with requirements indicated for materials, thicknesses, finishes, colors, designs, shapes, sizes, and details of construction.
1. Produce smooth, even, level sign panel surfaces, constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally.

C. Unframed Panel Signs: Fabricate signs with edges mechanically and smoothly finished to conform with the following requirements:

1. Room Identification Sign Dimensions: 7" X 7" (verify in field).
 - a. Match BLDG Standard – in style, materials, and color – except for spacing between tactile letters and braille which needs to be increased to 3/8" minimum. See image below. Provide inserts.



D. Graphic Content and Style: Provide sign copy that complies with the requirements indicated for size, style, spacing, content, position, material, finishes, and colors of letters, numbers, and other graphic devices.

E. Raised Copy: Machine-cut copy characters from matte-finished opaque acrylic sheet and chemically weld onto the acrylic sheet forming sign panel face. Produce precisely formed characters with square cut edges free from burrs and cut marks.

1. Panel Material: Matte-finished opaque acrylic sheet.
2. Raised Copy Thickness: Not less than 1/32 inch.

F. Wall-Mounted Panel Signs: Attach panel signs to wall surfaces using the methods indicated below:

1. Two-Face Tape: Clean bond-breaking materials from substrate surface and remove loose debris. Apply tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage. Keep strips away from edges to prevent visibility at sign edges. Place sign in position, and push to engage tape adhesive.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Locate sign units and accessories where indicated, using mounting methods of the type described and in compliance with the manufacturer's instructions.
 1. Install signs level, plumb, and at the height indicated, with sign surfaces free from distortion or other defects in appearance.

3.2 INTERIOR SIGN SCHEDULE / See drawings for locations of signage.

END OF SECTION 10 14 00