




TRO

P R O J E C T M A N U A L

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PROJECT	 <u>Maine Medical Center</u> Pediatric Exam Renovation Architect's Commission Number 4684
OWNER	Maine Medical Center 22 Bramhall Street Portland, Maine 04102-3175
ARCHITECT	The Ritchie Organization 80 Bridge Street Newton, Massachusetts 02458
CONSULTANTS	HVAC, Plumbing, Fire Protection, and Electrical Engineering The Ritchie Organization 80 Bridge Street Newton, Massachusetts 02458

ARCHITECTURE PLANNING ENGINEERING INTERIOR DESIGN

TRO/The Ritchie Organization

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SECTION 02070 - SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- A. Work of this Section includes the following:
1. Demolition and removal of designated building construction, equipment and fixtures.
 2. Demolition and removal of designated partitions casework, components and accessories.
 3. Remove designated flooring, base and ceiling finishes.
 4. Remove designated doors, frames, glazing, storefront framing and associated items.
 5. Remove designated window and door assemblies to rough openings.
 6. Demolition and removal of designated HVAC equipment, ductwork, supports, electrical and plumbing fixtures and equipment.

1.2 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.

1.3 PROJECT CONDITIONS

- A. Occupancy: Owner will occupy portions of the building immediately adjacent to selective demolition area. Conduct selective demolition so that Owner's operations will not be disrupted.
- B. Condition of Structures: Owner assumes no responsibility nor makes any claim as to the actual condition or structural adequacy of any existing construction to be demolished. The Contractor shall investigate and assure himself of the condition of the work to be demolished and shall take all precautions to ensure safety of persons and property.
- C. Salvage: Items of value which are not indicated to be returned to the Owner or reused on this project shall become the property of the Contractor. Storage or sale of items on the project site is prohibited.

- a. Ceilings which must be temporarily removed for mechanical, plumbing or fire protection work shall be carefully removed and stored for reinstallation when work has been completed.
5. Flooring: Completely remove existing flooring located in areas scheduled to receive new flooring surfaces and elsewhere as noted. Remove all layers of flooring down to the existing substrate. Other than for terrazzo floors, where existing flooring is installed in a setting bed, the existing setting bed shall be completely removed.
 - a. Remove resilient flooring and adhesive in strict accordance with the technical bulletin entitled " Recommended Work Practices for the Removal of Resilient Floor Covering", dated July 1990 and applicable updates, as issued by Resilient Floor Covering Institute, 966 Hungerford Drive, Suite 12B, Rockville, MD 20850.Tel: **(301) 340-8580**.
- D. Preparation of Existing Floors: Remove all foreign materials from existing floor surfaces by use of mechanical abraders, grinders or other methods required to clean the existing surfaces to a smooth clean finish acceptable for the application of new flooring surfaces or cementitious underlayment.
 1. Chemicals required for cleaning of floors shall be free of fumes and odors which will affect building occupants. Obtain Owner's approval for use of all such chemicals prior to start of work
- E. Except where noted otherwise, immediately remove demolished materials from site. Remove and promptly dispose of contaminated, vermin infested, or dangerous materials encountered.
- F. Broom clean floor slabs at completion of demolition work. Flooring materials indicated to remain shall be covered and protected from soiling and construction debris.
- G. Remove all debris from site and dispose of legally. Burning on site is not permitted.

END OF SECTION 02070

SECTION 02205 - EARTHWORK (Interior)

PART 1 - GENERAL

1.1 SUMMARY

- A. Excavate and backfill for all utilities to be installed under existing concrete slabs. Examine the Drawings and Specifications sections for Plumbing Work.
- B. Excess excavated material and all materials not satisfactory for re-use shall be removed from site.
- C. Provide suitable backfill material where required.

1.2 SUBMITTALS

- A. Material Test Reports: From a qualified testing agency indicating and interpreting test results for compliance of the following with requirements indicated:
 - 1. Classification according to **ASTM D 2487** of each on-site and borrow soil material proposed for use under this Section.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

PART 2 - PRODUCTS

2.1 FILL AND BACKFILL MATERIALS

- A. Backfill for piping:
 - 1. Sand: **ASTM C 33**; fine aggregate, natural, or manufactured sand.

2. All piping, jackets and bed shall be inspected, and tested prior to backfill of any nature. Provide all necessary anchors, thrust blocks, etc. for testing.
- B. Compaction Requirements for Backfill over Piping: Compaction to not less than 95% density compared to maximum laboratory tests **by** weight, per modified ASTM D-1557, latest editions, Method C.

END OF SECTION 02205

SECTION 03515 - SELF-LEVELING CONCRETE UNDERLAYMENT

PART 1 - GENERAL,

1.1 SUMMARY

- A. The work of this section includes, but is not limited to, self-leveling, concrete underlayment as required to achieve a level subfloor within the tolerances specified in the following areas:
 - 1. In each individual room, space or area where new flooring is scheduled to be installed, apply underlayment over existing substrate wherever required to achieve tolerance of levelness specified herein.
- B. Fill and level depressions in existing concrete slabs remaining after completion of demolition work.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data, installation instructions, use limitations and recommendations for each material used. Provide certifications stating that materials comply with requirements.
- B. Manufacturer Certificates: Signed by manufacturers of both underlayment and floor covering system certifying that products are compatible.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Source: Provide self-leveling concrete underlayment materials which are the products of one manufacturer. Provide secondary materials which are acceptable to the manufacturers of the primary materials.

PART 2 - PRODUCTS

2.1 MANUFACTURERS AND PRODUCTS

- A. Basis of Design: Self-leveling concrete underlayment is based on "Ardex K-15" by Ardex Engineered Cements, Inc., Aliquippa, PA **15001, (724) 857-6400**. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.

3.3 INSTALLATION

- A. General: Mix and apply underlayment components in strict accordance with manufacturer's written instructions and recommendations, except where more restrictive requirements are specified in this section.
- B. Mix product directly from sealed package with water in proportions recommended by manufacturer. Add coarse aggregate and mix again. Avoid overwatering.
- C. Pour or pump plastic underlayment onto subfloors and spread with a wide squeegee. Place sufficient material to cover highpoints with at least 1/8" of underlayment; featheredge where necessary to meet adjacent construction.
- D. **If** two or more layers of underlayment are applied, place second layer after first layer has set to walkable hardness.
- E. Where depressions occur, fill depressed area level with abutting surfaces.

END OF SECTION 03515

SECTION 03750 - CONCRETE PATCHING

PART 1 - GENERAL

1.1 SUMMARY

- A. Cut and remove designated portions of interior slab-on-grade as required for underslab work.
- B. Fill with concrete all existing openings in slabs and decks of floors and roofs where such openings are not required for the completion of the Work.

1.2 SUBMITTALS

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

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Concrete Materials:

1. Portland Cement: ANSIIASTM C 150, Type 1 unless other types specified in writing by Architect/Engineer.
 - a. Use one brand of cement throughout project, unless otherwise acceptable to Architect/Engineer.
2. Normal Weight Aggregates: ANSIIASTM C 33, **and** as herein specified. Provide aggregates from a single source for exposed concrete.
 - a. Local aggregates not complying with ANSI/ASTM C 33, but which have shown by special test or actual service to produce concrete of adequate strength and durability, may be used when acceptable to the Architect/Engineer.
3. Water: Potable and free of substances that may be deleterious to concrete or steel.

B. Bonding Agent:

1. Silpro C-21 Acrylic Latex manufactured by Silpro Masonry Systems, Inc., Ayer, MA (508) 772-4444.

END OF SECTION 03950

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide wood, nails, bolts, screws, framing anchors and other rough hardware, and other items needed, and perform rough carpentry for the construction shown on the Drawings, as specified herein, and as needed for a complete and proper installation.
- B. Furnish and install wood furring.
- C. Furnish and install blocking for:
 - 1. Toilet accessories furnished by other Sections.
 - 2. Wood blocking in conjunction with drywall partitions.
 - 3. Backing for wall mounted door stops.
 - 4. Wall mounted accessories and components noted as “future”.
 - 5. Other locations where wood blocking is indicated on the Drawings.
- D. Furnish and install wood spreaders at bottoms of door openings of steel door frames.

1.2 SUBMITTALS

- A. Product Data: Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.

PART 2 - PRODUCTS

2.1 GRADES OF LUMBER AND SPECIES

Grounds for plaster work	Redwood B and better
Wood blocking	Eastern Spruce No. 2 common; Southern Pine No. 2 common; Douglas Fir No. 2 common

2.2 MATERIALS

- A. Fire-Retardant – Treated Materials
 - 1. General: Provide fire-retardant-treated wood for all interior wood blocking, furring, framing and elsewhere that fire retardant treatment is indicated on Contract Drawings.

- B. Provide blocking and framing as indicated and as required to support facing materials, fixtures, specialty items, and trim.
- C. In addition to framing operations normal to the fabrication and erection indicated on the Drawings, install wood blocking and backing required for the work of other trades.
- D. Sort and carefully select lumber so that natural characteristics will not interfere with placing bolts or proper nailing, and will allow making of proper connections. Do not use materials with defects that interfere with function of member or pieces that are too small to use with minimum number of joints or optimum joint arrangement. Cut out and discard defects which render a piece unable to serve its intended function.
 - 1. Lumber may be rejected by the Architect, whether or not it has been installed, for excessive warp, twist, bow, crook, mildew, fungus, or mold; as well as for improper cutting and fitting.

3.2 FASTENING

- A. Use common wire nails or spikes, unless otherwise indicated. Select fasteners of size that will penetrate into the piece receiving the point of not less than $1/2$ the length of the nail or spike. Produce joints which are tight, true, and well nailed, with members assembled in accordance with the Drawings and with pertinent codes and regulations. Install fasteners without splitting wood; do not countersink nail heads; pre-bore as required.
 - 1. Remove split members and replace with members complying with the specified requirements.
- B. Bolting: Drill holes $1/16$ " larger in diameter than the bolts being used. Drill straight and true from one side only. Do not bear bolt threads on wood, but use washers under head and nut where both bear on wood, and use washers under all nuts.
- C. Screws: For lag screws and wood screws, prebore holes same diameter as root of threads, enlarging holes to shank diameter for length of shank.

3.3 INSTALLATION OF WOOD SPREADERS AT DOOR FRAMES

- A. During the installation of pressed metal door frames, after the steel spreader bar has been removed, install **2 x 4** wood spreaders at door opening, carefully dimensioned to permit square, true installation of door frames and doors.
- B. Spreaders shall remain in place until doors are installed.

END OF SECTION **06 100**

SECTION 06200 - FINISH CARPENTRY

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Interior standing and running trim.
 - 2. Interior hardwood paneling.
 - 3. Translucent plastic panels.
 - 4. Built-in seating units.

1.2 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product proposed to be provided under this Section.
- B. Shop Drawings: In sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades. Include construction details, material descriptions, dimensions of individual components and profiles, textures, and colors
- C. Samples for Verification:
 - 1. For each species and cut of lumber and panel products with applied finish, with 1/2 of exposed surface finished, 50 sq. in. for lumber and 8 by 10 inches for panels.

1.3 QUALITY ASSURANCE

- A. Reference Standard: Installation of work of this section shall conform to Architectural Woodwork Quality Standards, 7th Edition, published by the Architectural Woodwork Institute, Reston Virginia.
- B. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

- b. Series, Pattern, Color and Finish: As indicated in the Materials and Finishes Index Sheet.
- B. Mounting Hardware: Provide panel connectors, cables, and fasteners as required for a complete installation.
 1. Aluminum: Extruded bars and shapes, ASTM B 221, 6063-T52 alloy and temper.
 2. Stainless Steel: Bars and shapes, ASTM A 276, Type 304 (18-8).
 3. Wire Rope (Aircraft Cable): 1-by-19 wire rope made from wire complying with ASTM A 492, Type 316.
 4. Wire-Rope Fittings: Connectors of types indicated, fabricated from stainless steel, and with capability to sustain, without failure, a load equal to minimum breaking strength of wire rope with which they are used.
 - a. Suspended Panel Hardware: 3-Form Inc. # 0-15-200 4mm stainless cable system with # 0-15-260 panel connectors.
 - b. Hinged Glass Connector: Cat. No. GEN045 by C.R. Laurence Co., Inc., Los Angeles, CA (800)421-6144.
- C. Fabrication:
 1. Fabricate translucent panel frames to design and configurations as indicated on the drawings. Heat-form panels to radius indicated.
 2. Construct frames 'from aluminum or stainless steel shapes and bars as indicated. Form members by bending, coping, mitering, and welding. Miter and weld all corners of frames supporting translucent panels with all welded joints ground and polished smooth.
 3. Make up wire-rope assemblies in the shop to field-measured dimensions with fittings machine swaged. Provide 3/16-inch diameter wire rope cable complete with turnbuckles, deck toggles, clamps, jaws, O-rings and other fittings as required for attachment to other work.

2.4 BUILT-IN SEATING

- A. Fabricate complete with upholstered back and seat cushions as indicated and detailed on the Drawings.
 1. Comply with AWI Section 400 for wood veneer cabinets, Premium Grade.
 2. Wood Species: Select White Maple.
 3. Fabric (FAB-1): "Iguana" by Arc-Com, Orangeburg, **NY** 10962; (800) 223-5466.
 4. Foam: Molded high-density polyurethane foam padding complying with requirements of Boston Fire Marshall's office and local codes.

3.2 INSTALLATION

- A. Perform installation in accordance Section 1700 Installation of Woodwork, AWI Quality Standards, Premium Grade. All workmanship shall be of the best Cabinetmaker's work and all dressed smooth, nails set, cleaned and fine sandpapered ready for Painter's finish.
- B. Do not use materials that are unsound, warped, improperly treated or finished, inadequately seasoned, or too small to fabricate with proper jointing arrangements.
 - 1. Select wood members so that the color of adjacent members is similar and nearly uniform in appearance. The grain figure or other natural character markings shall be similar in character and appearance and shall match as closely as possible from one member to the other at the butting joint
 - 2. Running finish shall be in long lengths and jointed only where solid fastenings can be made.
- C. Do not install finish carpentry until the back of all interior finish wood and fittings where not exposed have been back-primed with one coat of paint.
- D. Install finish carpentry level, plumb, true, and aligned with adjacent materials. Use concealed shims where necessary for alignment.
 - 1. Scribe and cut finish carpentry to fit walls and adjoining work. Refinish and seal cuts as recommended by manufacturer.
 - 2. End joints shall be scarfed. Miter exterior comers and cope interior angles unless otherwise detailed.
 - 3. All joints shall be tight and formed to conceal shrinkage. Shop miters 4 inches or more from heel to point shall be glued and locked. Make dowels and tenons a driving fit. Make shop joints of interior work with waterproof glue or hot glue, under pressure.
 - 4. Attach wood trim to wood blocking with finish nails, and to steel framing with Type S trim head U.S. Gypsum screws. Countersink fasteners, fill surface flush with material to match wood, and sand where face fastening is unavoidable.
 - 5. Install to tolerance of 1/8 inch in 96 inches for level and plumb. Install adjoining finish carpentry with 1/32-inch maximum offset for flush installation and 1/16-inch maximum offset for reveal installation.
 - 6. Coordinate finish carpentry with materials and systems in or adjacent to it. Provide cutouts for mechanical and electrical items that penetrate finish carpentry. Do all cutting, scribing, patching, jobbing, etc., for all trades doing work in the building, in accordance with best building practice.

END OF SECTION 06200

SECTION 06402 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Plastic laminated casework
2. Wood veneered casework.
3. Plastic laminated countertops.
4. Shop finishing.

1.2 SUBMITTALS

A. Product Data: For each type of product indicated, including support brackets, cabinet hardware and accessories.

B. Shop Drawings: Show in sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades.

1. Show locations and sizes of concealed blocking and reinforcement specified in other Sections.
2. Show locations and sizes of cutouts and holes for items installed in architectural woodwork.

C. Samples for Verification:

1. Wood veneer panel: (2) 8 inch by 10 inch illustrating wood species, veneer layout, cut, expected range of color and finish.
2. Lumber: (2) 8 inch long pieces of each type of profile to be installed illustrating wood species, cut, expected range of color and finish.
3. High pressure laminate: (2) 8 inch by 10 inch samples of selected colors and patterns.

1.3 QUALITY ASSURANCE

A. Reference Standard: Architectural Woodwork Quality Standards of the Architectural Woodwork Institute (AWI), Seventh Edition, referred to herein as "AWI Quality Standards".

1. Perform all work in accordance with **AWI** Quality Standards, Section 400 Architectural Cabinets, for Premium Grade and **this** specification.
2. Casework construction not manufactured in accordance with the above referenced quality standards and these specifications is not acceptable.

- F. Apply plastic laminate to core edges prior to application of laminate to faces. Individually cut edges and face laminate material and apply in their final or near final sizes. All edges shall be eased.
- G. Provide all cutouts for sinks, fixtures and fittings located in plastic laminate casework. See casework, plumbing, mechanical and electrical drawings.

2.2 MATERIALS

- A. Plastic Laminate: High pressure decorative laminate (HPDL) for casework and countertops, conforming to **NEMA LD3.1** –, General Purpose: Grade HGS, nominal 0.048-inch thickness.
- B. Metal Laminates: Solid metal laminate for vertical application; nominal .025-inch thickness.
- C. Backing Sheets:
 - 1. Plastic Laminate Clad Casework and Countertops: Provide unfinished plastic laminate balancing (backer) sheet, conforming to NEMA LD3 undecorated laminate, Grade BKL, 0.020-inch nominal thickness.
- D. Furnish only laminates by the manufacturers listed on the Materials and Finishes Index Sheet:
- E. Cores: All cores shall be of particleboard, except cores for countertops in which sinks are located shall be plywood constructed with veneer core and hardwood veneers, fabricated with Type I waterproof adhesive, suitable for receiving plastic laminate.
 - 1. High Performance Particleboard Core:
 - a. Particleboard to be of **47** lb. density, and balanced construction with moisture content not to exceed 8%. All particleboards shall meet or exceed the requirements for general use grade per ANSI A208.1,
 - b. Particleboard shall meet the following Performance Requirements. Submit compliance data from the manufacturer prior to fabrication:
 - 1) Screw Holding, Face: 371 lbs.
 - 2) Modulus of Rupture: 2,400 psi.
 - 3) Modulus of Elasticity: 450,000 psi.
 - 4) Internal Bond: 90 psi.
 - 5) Surface Hardness: 900 lbs.
 - 6) In addition, particleboard shall be manufactured with Phenol Formaldehyde resins only (Urea Formaldehyde will not be accepted).
 - a) Formaldehyde Emission Levels: Conform with HUD 24 CFR Part 3280 with emission less than 0.3 PPM
 - 2. Plywood Core: EWA C-C Plugged EXT, fir plywood, sanded.
- F. Veneered Hardwood Panels: AWI Premium Grade, Plain Sliced, Select White Maple, Grade AA for transparent finish. Cores shall be particleboard or fiberboard with matching hardwood edge banding on exposed edges.
 - 1. Moisture Content: 6-8 percent.

2. Locks: Solid brass, US26D cylinder type pin tumbler. All doors and drawers where indicated on the drawings shall be provided with locks and shall be keyed as directed.
3. Drawer and Door Pulls: Shall be brass, US26D finish, round bar type 4" long with 1-5/16" projection, secured with machine screws from inside.
4. Drawer Slides: Full extension, ball-bearing slides with positive stop and rubber hold-in bumpers, zinc-finish, manufactured by Accuride International, Inc., Santa Fe Springs CA (310) 903-0200. :
 - a. Drawers up to 24" wide: No. 7432
 - b. File drawers and drawers greater than **24"**: No. 4032
 - c. Pencil drawers: No. 2006
5. Shelf Supports for Adjustable Shelving in Casework: Right-angle shelf rests, .060 inch steel; 1/2 inch wide by 1/2 inch high by 13/16 inch long, with hole to fasten to underside of shelf with wood screw; #X-73 as manufactured by Selby, or approved equal.
 - a. Finish: Nickel
6. Countertop Supports: Extruded aluminum brackets, prime coated for field finishing; Model EH-1824 as manufactured by Rakks, Millis, MA 02054 (800) 826-6006.
7. Grommets: 2-1/2 -inch diameter TG Series, plastic, color selected by Architect. Manufactured by Doug Mockett & Co., Inc., Manhattan Beach, CA (1-800-523-1269).
8. Wire Management Tray: "J" Style cable trunking, black plastic; Manufactured by Closet Masters, Inc. Timonium, MD (800) 897-1245.
9. Overhead Door Stop: Selby No. S-214N, nickel finish, 7-3/4 inches or 10 inches as required to suit condition.

2.3 CONSTRUCTION

A. Drawers:

1. Connections between backs, sides and front of drawer body shall be regular multiple drawer dovetails with joints glued.
2. Connection between drawer front and drawer body shall be with not less than **4** countersunk wood screws.
3. Drawer body shall be of **1/2** inch thick hardwood. Drawer bottoms shall be of 1/4 inch plywood.
4. Drawer fronts:
 - a. Plastic laminate casework shall have plastic laminate applied to both inside and outside of drawer fronts and to all edges. Install hardwood veneer where hardwood veneer casework is indicated.
5. Drawers shall slide on metal drawer slides.

B. Doors:

1. **All** cabinet doors shall have a core of particleboard of 3/4 inch thickness minimum.
2. Doors over 60 inch high shall be 1-3/8 inch thick, solid particleboard core, constructed in accordance with type PC-HPDL, Section 1300, Architectural Flush Doors, of AWI Quality Standards.
3. All surfaces of doors shall be laminated plastic. Install hardwood veneer where hardwood veneer casework is indicated.

3. Stain: Custom color to match existing adjacent hardwood panel and trim.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Trim scribes of the base and wall cabinets, and countertops to the walls and soffits. All cabinets and casework shall be set in place, leveled, plumbed, accurately scribed and secured to walls and floors.
 1. Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation.
- B. Secure all casework and all other wall mounted items to wall construction using toggle bolts or molly bolts attached to wood blocking located within stud partitions.
- C. The installation shall be complete, including all trim and hardware. Casework shall be left clean and free from defects. Workmanship shall be first-class.

EM) OF SECTION 06402

SECTION 06655 - SOLID POLYMER FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

- A. Work described in this section:
 - 1. Countertops and transaction tops.
 - 2. Other items indicated as "Solid Surfacing Material" or "SSM"

1.2 SUBMITTALS

- A. Product Data: For each product proposed to be provided under this Section.
- B. Shop Drawings: In sufficient detail to show fabrication, installation, anchorage, and interface of the work of this Section with the work of adjacent trades.
- C. Samples for Verification: 6-inch square samples of each color and pattern of solid-surfacing material required.
- D. Maintenance Data: Provide maintenance data for solid polymer fabrications, to include in maintenance manuals

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

PART 2 - PRODUCTS

2.1 MATERIAL

- A. Solid-Surfacing Material: Homogeneous solid sheets of filled plastic resin complying with material and performance requirements in ANSI 2124.3, for Type 6, without a precoated finish.
 - 1. Product: Corian" by DuPont Polymers, Wilmington, DE 19898; (800)426-7426.
 - 2. Pattern, Style and Color: As indicated on the Materials and Finishes Index Sheet.
- B. Joint adhesive: Manufacturer's standard two-part adhesive kit to create inconspicuous, non-porous joints.

SECTION 07210 - BUILDING INSULATION

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes glass-fiber blanket insulation at the following locations:
 - 1. Exterior infill constructed with metal studs.
 - 2. Interior partitions.
 - 3. Elsewhere that batt insulation is indicated **and** not specified in other specification sections.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated. Include manufacturer's specifications and other data needed to demonstrate compliance with specified requirements.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products of one of the following:
 - 1. Owens-Corning, Toledo, OH 43659; (800) 438-7465
 - 2. Johns Manville *Corp.*, Denver, CO 80217-5108; (800) 654-3103.
 - 3. Knauf Fiber Glass, Shelbyville, IN 46176; (800) 825-4434.

2.2 GLASS-FIBER BLANKET INSULATION

- A. Insulation for interior steel stud partitions and furred walls shall be any of the following:
 - 1. Unfaced glass fiber batts, minimum of 3-1/2 inch thick, conforming with ASTM C665, Type 1.
 - 2. U. S. Gypsum SAFB blanket insulation, minimum of 3-inch thick, unfaced.

- C. At all partitions extend insulation full height from floor to underside of overhead structure. If more than one length is required to fill cavity, provide lengths that will produce a snug fit between ends.

3.3 INSTALLATION OF BUILDING INSULATION

A. Partitions and walls furred with metal studs:

- 1. Install insulation after one layer of gypsum board has been installed on one side of the partition, attaching insulation to backside of wallboard with **9/16-inch** long staples applied through a minimum of 2-inch square heavy paper washer. Install insulation to full height of partition, and full width of framing.

B. Exterior wall constructed with metal studs:

- 1. Friction fit batts of the proper width and thickness to completely fill the cavities.
- 2. Fill all framing spaces, including behind electrical outlets and piping, to form a complete insulating blanket around the heated or cooled areas of the structure.
- 3. Cut insulation pieces to size with a utility knife to fit non-standard size cavities and to fit around conduit, outlets, and bridging, as required to avoid compressing the batts.

C. Exterior spandrel panels:

- 1. Install insulation to the inside of spandrel panels as indicated. Maintain minimum 1-inch air space or as recommended by glass manufacturer between spandrel glass and insulation. Insulation should not be placed directly against glass spandrel panels.
- 2. Install with insulation hangers and washers.
 - a. Apply hangers with adhesive at a rate of one clip for each square foot of insulation.
 - b. Install in strict accordance with insulation hanger manufacturer's written instructions.
 - c. Allow adhesive to cure thoroughly before installing insulation, a minimum of **24** to **48** hours.

END OF SECTION 07210

SECTION 07265 - WATER VAPOR EMISSION CONTROL SYSTEMS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the application of systems for the reduction of moisture vapor transmission and alkalinity control for interior concrete slabs at the following areas:
 - 1. All areas requiring installation of carpeting with thermoplastic vinyl backing systems.
 - 2. **All** other areas where water vapor transmission level is greater than 3 lbs/24 hrs per 1,000 as determined by the Owner.

1.2 SUBMITTALS

- A. Product Data: for each type of product and process specified, including manufacturer's specifications, installation instructions, independent test data, certification requirements and warranty information.
- B. Submit anhydrous calcium chloride testing according to ASTM F 1869-98, that shall be performed by the Owner's Special Inspector to the Architect, Owner, General Contractor, and Water Vapor Reduction System Manufacture's Representative.

1.3 QUALITY ASSURANCE

- A. Qualifications of Applicator: Employ an Applicator currently approved by the manufacturer, experienced in surface preparation and application of the material and subject to inspection and control of the manufacturer. Installer shall have no less than five (5) years experience installing the Koester water vapor reduction coating systems.
- B. Manufacturer's Qualification: Manufacturer shall have no less than five (5) years experience in manufacturing the same water vapor reduction system. The water vapor reduction system must be specifically formulated and marketed Internationally for water vapor reduction and alkalinity control without change of formulation or system design for a minimum period of five (5) years.

1.4 SCHEDULING

- A. Before installation of the receiving resilient sheet flooring materials over the interior concrete slabs, anhydrous calcium chloride testing shall be performed as per ASTM F 1869-98 by the Owner's Special Inspector to determine the level of water vapor transmission in the slab and the type of moisture vapor reduction system required.

2.4 AREAS NOT REQUIRING VAPOR REDUCTION SYSTEM

- A. Anhydrous calcium chloride testing performed by the Owner's Special Inspector for interior concrete slab areas receiving resilient sheet flooring material will determine where these systems might be required. Water vapor reduction system might be required on concrete floors with water vapor transmission level less than 3 lbs/24 hrs per 1,000sf or 5 lbs for some specific flooring systems, verify with flooring system manufacturer.
- B. Water vapor reduction system is not required on interior concrete slabs without floor finishes.

2.5 MIX DESIGNS

- A. Use clean containers and mix thoroughly as per manufacturer's requirements to obtain a homogeneous mixture. Use a low speed motor less than 400 rpm and a two bladed Jiffy mixing blade only. DO NOT AERATE. Mix ratios are measured by volume.
- B. VAP 1 8 2000 Mix Ratio: Mix Component A and B at a ratio of 2.4: 1.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Calcium Chloride Test Requirements: Anhydrous calcium chloride testing shall be performed by the Owner's Special Inspector as outlined in Section 01410 – Testing Laboratory Services.
 - 1. Initial Calcium Chloride Tests: Before installation of finish flooring systems over interior concrete slabs, the Owner's Special Inspector will make known the level of water vapor transmission in the slab in accordance to ASTM F 1869-98 to all parties involved. The Owner's Special Inspector will document the test results and provide recommendations on the type of moisture vapor reduction system to be utilized.
- B. Floor Treatment Calcium Chloride Tests: After proper cure of the final coat of the water vapor reduction system the Owner's Special Inspector shall provide calcium chloride tests to determine if the level of water vapor transmission and alkalinity are reduced to the Owner's specified levels in conjunction with the flooring manufacturers installation requirements. Contact Owner and water vapor reduction system Manufacturer's Representative concerning areas with a water vapor transmission level greater than the Owner's specified levels.
- C. Adhesion tests: The Owner's Special Inspector will verify proper adhesion of flooring adhesives, coatings, and leveling compounds to the final vapor reduction coating system for acceptability. Contact Manufacturer's Representatives for recommendations.

Up to 8 lbs./1000 sq.ft./24hr.	130 sq.ft./gal.
Up to 15 lbs./1000 sq.ft./24hr.	90 sq.ft./gal.
Up to 25 lbs./1000 sq.ft./24hr.	70 sq.ft./gal.

3. Apply one coat of VAP 1® 2000 at an average coverage rate of 90 to 130 sq.ft./gal. using a squeegee and or a 3/8-inch nap roller leaving NO areas untreated. Allow to cure a minimum of 12 hours before installing flooring system. (See additional application instructions in Koester technical data sheets.)
- B. Optional: VAP 1 Primer System Application; (For very porous surfaces to avoid out gasing / air displacement, see technical brochures.)
1. Dampen uncontaminated concrete surface, (SSD) Surface Saturated Dry, leaving NO standing water. Surfaces must be damp, not wet to the touch. Always use clean potable water to pre-dampen concrete surfaces. Only pre-dampen concrete prior to the first VAP Primer coat. DO NOT pre-dampen between subsequent coats of the VAP Systems.
 2. Spray VAP 1 Primer leaving no areas untreated. Back brush thoroughly.
 3. Avoid puddling and pinholes when back brushing.
 4. Provide continuous ventilation and air movement during curing process. No exceptions.
 5. Apply first VAP 1 Primer coat at a rate of 250 sf per gallon and allow to cure a minimum of 6 hours. (See additional application instructions in Koester technical data sheets.)
 6. Apply one coat of VAP 1® 2000 at an average coverage rate of 90 to 130 sf per gallon using a squeegee and or 3/8-inch nap roller leaving NO areas untreated. Allow to cure a minimum of 12 hours before installing flooring system. (See additional application instructions in Koester technical data sheets.)
- C. A cementitious underlayment system with an approved epoxy primer if required by the Owner, Floor Covering Installer, or the Floor Covering Manufacturer may be used to level and smooth surfaces after shotblasting the floor on top of the water vapor reduction system. The underlayment system utilized must be tested and approved (no exceptions) by the manufacturer of the underlayment system prior to installation. No underlayment system containing gypsum will be allowed. When water based adhesives are utilized in the floor covering installation, use an approved underlayment system with primer prior to the installation of the flooring system. Consult the adhesive manufacturer for their minimum recommended thickness of cementitious underlayment to absorb excess moisture in the adhesive. Leveling of the substrate shall not be considered part of the water vapor reduction system. No exceptions.
- D. For installation of resilient flooring directly over the water vapor reduction system, the contractor responsible for installing the floor covering system shall use 100% solids adhesives and or contact type adhesives with long working times that can be applied to substrates with a pH up to 10. The method of use is to apply the contact type adhesives to the substrate and allow the materials water to flash off prior to the flooring installation. Always test proper adhesion of adhesive to water vapor reduction system prior to installation of entire flooring systems. No exceptions.

END OF SECTION 07265

SECTION 07840 - FIRESTOPS AND SMOKESEALS

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:
 - 1. Install firestops and smoke seals at:
 - a. All penetrations through fire-resistive and smoke assemblies including, floors, fire rated partitions, smoke barriers, smoke partitions; and temporary partitions and barriers separating work areas from Owner's facilities.
 - b. Elsewhere that such firestopping and smoke seals are indicated, required by codes, regulations or governmental authorities having jurisdiction.
- B. Firestop and smoke seal systems in the work of this Section includes all labor, materials, equipment, and services necessary to complete the installation of Firestops and Smoke seals as required by code, as indicated on the Drawings, as specified herein and including, but not limited to, the following:
 - 1. Single component, Non-Combustible, Silicone Firestop Sealant, Intumescent firestop caulk (which remains flexible after curing), spray applied intumescent or intumescent non-firestop mastic, intumescent strips, or Putty for use in the following fire-rated and/or smoke barrier construction:
 - a. With penetrations subject to movement including conduit, cable, bundles, buss duct, and non-combustible pipe.
 - b. In control joints, in head of wall/floor assemblies, etc.
 - c. As a sealant or caulking for smoke barrier construction, fire and smoke dampers, fire door frames in walls.
 - 2. Cementitious Firestop Mortars for use:
 - a. In static (non-moving) penetrations such as cable trays, electrical and communication cable bundles, conduit, and non-combustible sleeves and pipes.
 - b. In filling cavities (openings) in fire rated assemblies.
 - 3. Firestop collars for use with through penetrations involving combustible plastic pipe or conduit.
 - 4. Firestop pillows for use for temporary sealing of openings and penetrations of any kind which need to be re-opened and re-sealed in a fast and safe manner.
 - 5. Mineral fiber, non-combustible insulation (safing) for use as damming material for tested and rated firestop system per manufacturer's requirements.
 - 6. Clips and closures as required for support and containment of dams and insulation materials.
 - 7. Firestopping sealant/mastic for construction joints at tops of partitions as specified above.

<p>WARNING FIRESTOP SYSTEM DO NOT DISTURB</p>
<p>SYSTEM # _____</p>
<p>CONTRACTOR _____</p>
<p>DATE _____</p>
<p>Manufacturer's name, address and teleuhone number</p>

3. Where application occurs at joints at partition tops, apply one label at 30 foot centers, on one side of partition.

1.4 PERFORMANCE CRITERIA

- A. Provide firestop systems and work to conform to Building Code Requirements in fire resistant wall and floor assemblies.
- B. Testing Requirements:
 1. All firestop/smokeseal systems shall be tested by a recognized, independent testing agency and shall conform to both Flame (F) and Temperature (T) requirements of ASTM E-814.
 2. Conform to UL Fire Hazard Classification Requirements.
- C. Firestops in place shall be of sufficient thickness, width, and density to provide a fire resistance rating at least equal to the floor, wall, or partition construction into which it is installed.
- D. Non-combustible dams shall be constructed:
 1. As necessary to achieve fire rating as tested and rated.
 2. In conformance with installation requirements for type of floor, wall, and partition construction.
 3. As recommended by firestop/smokeseal manufacturer.
- E. Combustible damming materials, if used, must be removed after proper curing.
- F. Provide firestop materials that are free of solvents, lead, ethylene glycol, PCB's and asbestos.
- G. In construction joints use only firestop systems that remain flexible after curing.
- H. Do not use firestop materials which re-emulsify.

2.4 FIRESTOP COLLAR (FOR USE WITH PLASTIC PIPE)

- A. Provide pre-manufactured fire protective pipe sleeve, Bio Fireshield Firestop Collar.
- B. Provide separated (two piece) firestop collar for application when plastic pipe system is already in place. Provide non-separated firestop collar for application prior to installation of plastic pipe system.
- C. Firestop collars shall have UL Classification as "fill, void, or cavity material" for through penetration firestop system when tested in accordance with ASTM E-814/UL1479.

2.5 FIRESTOP PILLOWS

- A. Provide Bio Fireshield Firestop Pillows.
- B. Firestop pillows shall have UL Classification as "fill, void, or cavity material" for through penetration firestop system when tested in accordance with ASTM E-814/UL1479.

2.6 GASKETS FOR ELECTRICAL OUTLET BOXES

- A. Provide Bio Fireshield Firestop Gaskets for protecting electrical outlet boxes which are not separated 24 inches horizontally on center.
- B. Firestop gaskets shall be UL classified as a "Wall opening Protective Material (CLN)".

2.7 MINERAL FIBER INSTALLATION (FIRE SAFING)

- A. Provide minimum 4 PCF Thermafiber as manufactured by Thermafiber LLC, minimum 4 PCF FBX Safing Insulation as manufactured by Fibrex, or approved equal to suit conditions and to comply with fire resistance and firestop manufacturer's requirements; galvanized steel safing clips as required for installation of safing insulation.
- B. Material shall be classified non-combustible per ASTM E-136.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for opening configurations, penetrating items, substrates, and other conditions affecting performance of work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

1. Add dry powder to water and mix with mechanical mixer or hand mixing tools. Add one **44** lb. bag mortar mix to 2.5 gallons ($\pm .5$ gallons) or clean, potable water. Average mixing time is 3 minutes. Average wet density is 70 PCF \pm 5 PCF.
 2. Do not apply if ambient or substrate temperature is less than 35°F during 24 hours after application.
 3. Wet all surfaces prior to application of firestop mortar.
 4. Mortar may be hand applied or pumped into the opening.
 5. Exposed surfaces shall be finished using conventional plastering tools prior to curing.
 6. When installation around layered cables, it is recommended to increase the fluidity of the firestop mortar to provide a better fill around the cables. Vibrate or move the cables slightly to prevent voids from forming between the cables.
 7. Allow 48 hours for initial cure prior to form removal. For full cure allow 27 days.
 8. Wet material may be cleaned with water. Dry material may require scraping or chipping.
- E. Installation of Firestop Collars (Plastic Pipe Only)
1. Firestop collars may be surface mounted to a slab or wall or imbedded in Bio Fireshield Novasit K-10 Firestop Mortar to a maximum depth of 2 inches.
 2. For wall penetrations with ABS pipe firestop collars must be installed on both sides of the penetration to provide a 3 hour F and T Rating. All other applications required installation on one side only to provide a **3** hour F and T Rating.
- F. Firesafing Insulation: Install firestopping safing insulation on safing clips spaced as needed between each stud and floor slab, leaving no voids. Secure safing clips to slab using fasteners recommended by insulation manufacturer. Install sealant over mineral wool in accordance with test requirements.
- G. Installation of firestopping sealant at partition tops:
1. Apply Bio Fireshield, Biostop 700 or Biostop 750 Firestop Mastic and Mineral wool filler in strict accordance with manufacturer's instructions. Install mineral wool backer insulation full depth of partitions.
 2. Similar systems produced by any of the other specified manufacturers may be used providing such systems comply with all criteria required for such application.
- H. Conclusion of work day: Wherever work is performed in areas which abut or are adjacent to Owner occupied areas, at the conclusion of the work day ensure that all penetrations and perimeter construction joints are firestopped and that there are no openings, penetrations or construction joints left unprotected

END OF SECTION 07270

SECTION 07920 - JOINT SEALANTS

PART 1 - GENERAL,

1.1 SUMMARY

- A. This Section includes joint sealants for the following applications, those specified by reference to this Section, and elsewhere as required to provide a positive barrier against passage of air and moisture.
- B. Caulk the following interior joints with sealant compound:
 - 1. Joints between plumbing fixtures and abutting surfaces.
 - 2. Both sides of door frames and view windows located in interior partitions.
 - 3. Perimeter of all casework.
 - 4. Wood bases: at joint between wood base and floor; at joint between wood base and walls.
 - 5. Wood wall trim: at joints between wood wall trim and walls.
 - 6. Wherever sealant is indicated on the drawings and where such sealant is not specified to be installed under other sections of the specifications

1.2 PERFORMANCE

- A. Performance and Design Requirements for Sealants: Provide sealants to maintain long term [20 year minimum] air tight and water tight seals. No cohesive or adhesive failures, nor cracking or bubbling of sealant surfaces are permitted.

1.3 SUBMITTALS

- A. Product Data: For each joint-sealant product indicated. Include manufacturer's specifications and other data needed to demonstrate compliance with specified requirements.
- B. Samples: Submit samples of each sealant and available colors of each type, each backing material, each primer, and each bond breaker proposed to be used.

1.4 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

2.3 BACKUP MATERIALS

- A. Backer rod for interior sealant applications, and elsewhere where “Backer Rod” is indicated on the Drawings, shall be non-absorbing, non-staining, extruded from a blend of polyolefin. Sof-Rod as manufactured by Applied Extrusion Technologies or Sof-Type, manufactured by I.T.P. Corp.

2.4 BOND-PREVENTIVE MATERIALS

- A. Use one of the materials described in the following paragraphs, as best suited for the application and as recommended by the manufacturer of the sealant used.
- B. Polyethylene Tape: Pressure sensitive adhesive, with the adhesive required only to hold tape to the construction materials as indicated.

2.5 MASKING TAPE

- A. For masking around joints, provide masking tape conforming to Federal Specification UU-T-106C.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine joints indicated to receive joint sealants, with Installer present, for compliance with requirements for joint configuration, installation tolerances, and other conditions affecting joint-sealant performance.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Surface Cleaning of Joints: Clean out joints immediately before installing joint sealants to comply with joint-sealant manufacturer’s written instructions. Remove all foreign material from joint substrates that could interfere with adhesion of joint sealant.
- B. Joint Priming: Prime joint substrates, where recommended in writing by joint-sealant manufacturer.
- C. Use masking tape where required to prevent contact of sealant 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.

SECTION 08 113 - STEEL FRAMES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes steel frames for the following:
 - 1. Doors.
 - 2. Interior view windows.

1.2 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, and finishes for each type of frame specified.
- B. Shop Drawings: Provide elevations of each frame design, details for each frame type including dimensioned profiles, locations of reinforcement, preparations for hardware, and details of anchorages, accessories, joints, and connections.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Source Limitations: Obtain steel frames through one source from a single manufacturer.
- C. Manufacturer's Qualifications: Products used in the work of this Section shall be produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products of the following
 - 1. Ceco Door Products. Milan, TN 38358; (888) 232-6366.
 - 2. Curries Company, Inc., Mason City, IA 50401; 641-423-1334.
 - 3. Republic Builders Products Corp. McKenzie, TN 38201; (800) 733-3667.
 - 4. Steelcraft Mfg. Co., Cincinnati, **OH**; (800) 243-9780
 - 5. Fleming Door Products, Ltd., Ajax, ON; (800) 263-7515
 - 6. De La Fontaine, Sherbrooke, PQ; 819-821-9230.

2.3 FINISH HARDWARE PREPARATION

- A. Prepare units to receive mortised and concealed finish hardware, including cutouts, reinforcing, drilling and tapping, in accordance with final Finish Hardware Schedule and templates provided by hardware suppliers. Comply with applicable requirements of ANSI A1 15.
- B. Reinforce units to receive surface-applied hardware. Drilling and tapping for surface-applied finish hardware may be done at site.
- C. Except as otherwise indicated on the Drawings, or as required to comply with governing regulations, install finish hardware as indicated in “Recommended Locations for Builders Hardware for Custom Steel Doors and Frames” by the Door and Hardware Institute.

2.4 SHOP FINISHING

- A. Clean, treat and paint exposed surfaces of interior fabricated hollow metal units. Clean surfaces of mill scale, rust, oil, grease, dirt and other foreign materials before the application of the shop coat of paint.
- B. Apply shop coat of prime paint of even consistency to provide a uniformly finished surface ready to receive field-applied paint.
- C. In lieu of prime coated paint indicated above, products manufactured by S. W. Fleming with hot-dipped galvanized finish will be acceptable.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of custom steel doors and frames.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory at the time of frame installation in preparation for wood spreader bar which will be installed under the work of Section 06100 - Rough Carpentry.

SECTION 08211 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes the following:

1. Standard wood doors.
2. Factory machining.
3. Factory glazing.
4. Factory finishing.

1.2 PERFORMANCE REQUIREMENTS

A. Comply with applicable requirements of the following standards unless otherwise indicated:

1. All doors shall be, at a minimum, in accordance with Architectural Woodwork Institute Quality Standards Guide Specifications and Quality Certification Program, Seventh Edition, Section 1300 Architectural Flush Doors, except as modified herein.
2. Non-Fire-Rated Wood Doors: All solid core flush wood doors shall be in accordance with Architectural Woodwork Institute "Quality Standards" Section 1300 Architectural Flush Doors and be PC-5ME Particle Core Door type construction for premium grade doors, with core, stile and rail components all glued together with no voids permitted.

1.3 SUBMITTALS

- A. Product Data: For each type of door. Include details of core and edge construction and trim for openings.
- B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details; location and extent of hardware blocking; requirements for factory finishing and other pertinent data.
- C. Samples for Verification: Factory finishes applied to actual door face materials, approximately 8 by 10 inches, for each material and finish. For each wood species and transparent finish, provide set of three samples showing typical range of color and grain to be expected in the finished work
- D. Certification: Submit certification signed by an Officer of the door manufacturing corporation, stating that the machining, glazing and finishing of the doors, except where field finishing is indicated shall be performed only in the factory of the door manufacturer

C. Particle Core Doors

1. Algoma Novodor:
 - a. Core: Particleboard conforming to ANSI A208.1, Grade LD-2.
 - b. Stile: 2 ply 1-3/8 inch nominal prior to factory trimming, glued to core, outer stile of same species as face veneer.
2. Marshfield DPC-1 Series.
 - a. Core: Particleboard conforming to ANSI **A208.1-LD-2**.
 - b. Stile: 1 ply 1-3/8 inch nominal TimberStrand Laminated Strand Lumber prior to factory trimming, glued to core, veneer banded in same specie as face veneer
3. Exposed top rails fabricated to produce a smooth finish:
 - a. Algoma: Maple, birch or basswood.
4. Wood reinforcing blocking:
 - a. Doors with surface mounted closers or automatic operators, provide adequate top rail blocking (minimum 5-1/2 inches high).
 - b. Surface mounted exit devices with vertical rods, provide 5-1/2 inch high bottom rail blocking for screw mounting.

2.3 DOOR FACINGS

A. Veneered doors for transparent finish:

1. Veneer Grade: A
2. Veneer Species: White Maple
3. Veneer Cut: Quarter sliced
4. Matching Between Individual Pieces of Veneer: **Slip** matched grain for transparent finish.
5. Assembly of Door Faces: Center Balanced match, minimum 6 inch widths.
6. Pairs: Provide pair matching for pairs of doors.

B. Paint grade doors:

1. Medium Density Overlay (MDO) face veneer for paint finishing.

2.4 GLAZING BEADS FOR VISION PANELS

A. Non-fire rated doors:

1. Algoma:
 - a. Doors with transparent finish: No. W-4 hardwood matching face veneers for species and color.
 - b. MDO doors for paint finish: W-4 hardwood suitable for painting
2. Marshfield:
 - a. Doors with transparent finish: No. W-6 hardwood matching face veneers for species and color.
 - b. MDO doors for paint finish: W-6 hardwood suitable for painting.

- F. Rabbet meeting stiles of pairs of doors located in smoke barriers.

2.7 GLAZING

- A. Install glass in strict accordance with manufacturer's printed instructions.
- B. Install glazing bead with mitered comers.
- C. Countersink nails and fill holes with color matched putty.

2.8 FINISHING

- A. Factory finish doors faced with wood veneers in accordance with AWI Finish System No. TR-6 Catalyzed Polyurethane, Premium Grade, with 2 top coats. Sheen: satin.
 - 1. Stain shall be custom color. Architect will furnish color sample for matching.
- B. MDO faced doors: Factory applied prime coat on faces, all edges and glazing beads. Primer shall be compatible with field applied paint. Coordinate with paint manufacturer approved by the Architect for field painting . Confirm **to** the Architect in writing that factory applied primer is compatible with approved paint manufacturer's products.

2.9 TOUCH-UP FINISHES

- A. Field touch-up of doors, scheduled for transparent finishes, will be performed by an authorized representative of the door fabricator.
- B. Field touch **up** includes the filling, repair, touch-up and refinishing of exposed job-made nail or screw holes, raw surfaces resulting from job fitting, job-inflicted scratches and mars, and final cleaning of the finished surfaces. Use materials as furnished by the door fabricator that blend in color and sheen and are compatible for field applications.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine doors and 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 level heads and plumb jambs.
 - 2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

SECTION **08311** - ACCESS PANELS

PART 1 - GENERAL

1.1 SUMMARY

- A. Access panels are include herein for information relative to the specifications for the types of access panels to be included in the project. Access panels are specified to be furnished under Division 15 - MECHANICAL and Division **16** - ELECTRICAL.

1.2 SUBMITTALS

- A. Product Data: For each product indicated, submit manufacturer's specifications and other data needed to demonstrate compliance with the specified requirements.

1.3 QUALITY ASSURANCE

- A. Source Limitations: Obtain doors and frames through one source from a single manufacturer.
- B. Fire-Rated Access Doors and Frames: Units complying with NFPA **80** that are identical to access door and frame assemblies tested for fire-test-response characteristics per the following test method and that are labeled and listed by UL, **ITS**, or another testing and inspecting agency acceptable to authorities having jurisdiction:

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 1. Milcor Inc., Holland, OH **43528** (800) **861-6452**.
 2. Karp Associates Inc., Maspeth, NY **11378** (800) **888-4212**.
 3. Elmdor/ Stoneman, City of Industry, CA **91744** (800) **488-8999**.

2.2 ACCESS PANELS

- A. Products: Products listed below are those of Milcor, Inc. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other manufacturers specified.
 1. Plaster walls and ceilings - Milcor Style **K**.

SECTION 08710 - FINISH HARDWARE

PART I - GENERAL

1.1 SUMMARY

- A. Provide finish hardware throughout the Work as shown on the Drawings, specified herein, and as needed for a complete and proper installation.

1.2 GENERAL REQUIREMENTS

- A. All hardware, as far as practical, shall be one manufacturer's make.
- B. Provide hardware by specified manufacturers only, except where the words "or approved equal" are indicated. The Architect will be the sole judge in determining the equality of products proposed for substitution from specified manufacturers.

1.3 SUBMITTALS

- A. Product Data: Provide manufacturer's specifications, catalog cuts, and other data needed to demonstrate compliance with the specified requirements.
- B. Hardware Schedule: Submit complete materials schedule of items proposed to be provided under this Section. Identify each hardware item by manufacturer's name, manufacturer's catalog number, and the locations of the item in the Work.
 - 1. Make the schedule in a form suitable to the Architect for reviewing submittal. Include in the schedule the Architect's hardware set number for each door opening as provided in the Hardware Set Numbers and Descriptions of this Section.
 - 2. Approval of the hardware list by the Architect will not relieve the Contractor from the responsibility for furnishing all required finish hardware.
- C. Templates: In a timely manner to ensure orderly progress of the Work, deliver templates or physical samples of the approved finish hardware items to pertinent manufacturers of interfacing items, such as doors and frames.

PART 2 - PRODUCTS

2.1 MATERIALS AND FINISH

- A. Materials and finishes shall be:
 - 1. Interior butts: Steel US26D

2.4 DOOR CLOSERS

- A. All door closers shall be manufactured by LCN or Sargent. All closers shall be sized at factory for size and location of door. Spring power for each closer shall be adjustable. Closers shall have separate adjustments for latch speed, general speed and hydraulic back-check. Closers with delayed action shall have back-check set at factory. Back-check shall be properly located for protection of door frame and hardware. All parallel arm closers shall have solid forged steel arms. All closers shall be of one manufacture and carry a manufacturer's five year warranty.
 - 1. All surface closers shall be provided with zero to two minute delayed action feature, manually adjusted after installation.
 - 2. Provide drop brackets where required.
 - 3. Closers shall have full covers.
- B. All door closers shall be adjusted by the installer in accordance with the manufacturer's templates and written instructions. All closers shall have back-check features adjusted at the time of installation. Closers shall conform to all applicable code requirements relative to setting closing speed for closers and maximum pressure for operating doors.
- C. Closers shall be as follows:
 - 1. Interior Doors
 - a. LCN 4011, except as otherwise indicated in hardware sets. Where parallel arm required, provide 4 111.
 - b. Sargent 281-0. Where parallel arm required, provide 281-P10 Arm. Sargent closers shall be provided without pressure relief valves (PRV).
- D. Do not locate closers on the side of doors facing corridors, passageways or similar type areas. Where it is necessary, due to certain conditions, and with the approval of the Architect, to have closers in corridors, provide such closers with parallel arms.

2.5 LOCKS, LATCHES AND BATH SETS

- A. Lock sets, latch sets, and bath sets shall be heavy-duty cylindrical type, 2-3/4" backset, six pin tumbler cylinder with lever handles.
- B. Heavy-duty lock set, latch sets, **and** bath sets shall be one of the following:

<u>Manufacturer</u>	<u>Series</u>	<u>Design</u>
Sargent	10-Line	Match existing.
- C. All hardware for fire-rated (labeled) doors shall be Underwriters Laboratories approved.

2.6 CYLINDERS

- A. Provide Medeco, high security, pick-resistant cylinders and keys for this project. The cylinders for all locksets shall be supplied in the Medeco restricted keyway. No other keyway by Medeco or any other lock manufacturer shall be accepted.

Set 9	Butts Closer Classroom Lock 10G37
Set 40	Butts 2 - Lever Pull 10U94 2-Roller Latches

END OF SECTION

SECTION 08711 - DOOR PROTECTION PLATES

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide door protection plates in locations indicated.

1.2 SUBMITTALS

- A. Product Data: For each product indicated, submit manufacturer's specifications and other data needed to demonstrate compliance with the specified requirements.
- B. Samples for Verification Purposes: 2-inch by 4-inch samples of protection plates. Prepare Samples from the same material to be used for the Work

PART 2 - PRODUCTS

2.1 ARMOR PLATES, KICK PLATES, PUSH PLATES

- A. Manufacturers: Subject to compliance with requirements, provide products of one of the following:
 - 1. Rockwood Manufacturing Co., Rockwood, PA 15557; (800) 458-2424.
 - 2. Baldwin Hardware Corp., Reading, PA 19612; (610) 777-7811.
 - 3. Or approved equal.
- B. Armor plates, kick plates and push plates shall be .050" thick, stainless steel with satin finish, US32D.
- C. Push plates shall be 4" x 16" high; kick plates shall be 12" high armor plates shall be 34" high.
- D. Armor and kick plates shall be 1" less the width of the door for double acting doors; 1-1/2" less the width of the door for pairs of doors; and 2" less the width of the door for single doors.
 - 1. Provide custom shape units where indicated on the Drawings.
- E. Edge guards shall be 36-inch high, 0,050-inch thick, stainless steel formed into angle shape with 7/8-inch leg on face of door.
- F. Bevel all edges.

SECTION 08800 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide glazing and glazing accessories where shown on the Drawings, as specified herein, and as needed for a complete and proper installation of glass for the following areas:
 - 1. Replacement glazing at designated exterior windows.
 - 2. Interior wood doors
 - 3. Interior view windows.
 - 4. Decorative film overlays.

1.2 PERFORMANCE REQUIREMENTS

- A. Work of this section shall withstand normal loads due to wind, temperature and normal impact without failure, breakage of glass or seals, fogging or other defects.
 - 1. Temperature Range: Glass and glazing shall function correctly and normally throughout an ambient temperature range of 100°F above and below installation temperature.
 - 2. Hermetic Seals: Insulated units shall be free from internal dirt, moisture, condensation, fogging, deterioration of protected internal glass coating [if any], and visual evidence of seal failure throughout the warranty period.
 - 3. Coated Glass: Coated glass shall be free from peeling, cracking, hazing, visual non-uniformity, and other defects throughout the warranty period.

1.3 SUBMITTALS

- A. Product Data: For each glass product and glazing material indicated.
- B. Samples: 12-inch- square samples for of each type insulating glass unit, and decorative film overlay specified for project.
- C. Certifications: Sealed glass unit manufacturer's certificate indicating conformance with above standards.
- D. Maintenance Data: For each type of decorative film overlay to include in maintenance manuals.

1.4 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

PART 2 - PRODUCTS

2.1 GLASS AND GLASS PRODUCTS

- A. Manufacturers: Except where other manufacturers are specified, glass and all glazing units shall be manufactured only by Viracon, Inc., Owatonna, MN (800) 533-2080, Interpane Coatings, Deerfield, WI 1-800-447-0185 or Guardian Industries Corp., Carleton, MI (800) 521-9040. No other manufacturer will be accepted.
1. Insulated glazed units shall be a “Single Source” product manufactured only at the factories of the manufacturers specified above. Insulated glazed units manufactured by fabricators other than the specified manufacturers will not be accepted.
- B. All glass shall conform to the specifications and standards listed above, and shall be factory labeled on each piece indicating the strength, type, thickness and quality. Labels shall remain on glass until final cleaning.
- C. General: Provide the type and thickness shown on the Drawings or as specified.
- D. Clear Float Glass: Type I - transparent, flat, Class 1 - clear, Quality q3, glazing select.
- E. Tempered or Heat Strengthened Glass: Prior to tempering or heat treating, cut glass to required sizes as determined by accurate measurements of the openings to be glazed, making allowances for required edge clearances. Cut and process edges in accordance with the glass manufacturers’ recommendations.
1. Provide tempered or heat-strengthened glass where indicated on the Drawings, and elsewhere **as** required by governmental agencies having jurisdiction.
 - a. Clear Heat Strengthened Glass: Provide ASTM C1048, Condition A, Type I, Class 1, Quality q3, kind HS.
 - b. Clear Tempered Glass: Provide ASTM C1048, Condition A, Type I, Class 1, Quality q3, kind FT.
 2. Fully tempered glass:
 - a. Comply with Fed Spec DD-G-1403 and ANSI 297.1.
 - b. Install tempered glass with no visible tong marks.
 - c. Permit minimum warpage practicable.
- F. Decorative Film Overlay: Translucent, dimensionally stable film, 2-mil- minimum thickness, with pressure-sensitive clear adhesive back for adhering to glass and releasable protective backing.
1. Products: 3M Consumer Safety and Light Management; Fasara Interior Design Film.
 - a. Pattern: **As** selected by the Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine framing glazing, with Installer present, for compliance with manufacturing and installation tolerances, minimum required face or edge clearances, and effective sealing between joints of glass-framing members.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Clean glazing channels and other framing members receiving glass immediately before glazing, making free from obstructions and deleterious substances which might impair the work. Remove protective coatings which might fail in adhesion or interfere with bond of sealants.

3.3 INSTALLATION

- A. General: Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
 - 1. Glass clearance dimensions shall be based on the type and thickness of the glass as determined by the G.A.N.A. Glazing Manual as hereinafter specified.
 - 2. All tempered glass shall be marked in such a manner as will permanently identify the manufacturer, thickness, type of material and conformance with test requirements of ANSI 297-1.
 - 3. Install tempered glass with no visible tong marks.
- B. Inspect each piece of glass immediately prior to start of installation.
 - 1. Do not install items which are improperly sized, have damaged edges, or are scratched, abraded, or damaged in any other manner.
 - 2. Do not remove labels from glass until so directed by the Architect.
 - 3. Install glass so distortion waves, if present, run in the horizontal direction.
 - 4. Glass shall be set without springing; provide proper clearance at all edges.
- C. Locate setting blocks at sills one quarter of the width of the glass in from each end of the glass, unless otherwise recommended by the glass manufacturer.
 - 1. Use blocks of proper size to support the glass in accordance with the manufacturers' recommendations.
 - 2. Provide spacers for all glass sizes larger than 50 united inches, to separate glass from stops; except where continuous glazing gaskets or felts are provided.
 - a. Locate spacers no more than **24"** apart, and no closer than 12" to a comer.

SECTION 09111 - INTERIOR METAL STUD SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes non-load-bearing steel framing members and accessories for the following applications:
1. Interior framing systems (e.g., supports for partition walls, framed soffits, furring, etc.).
 2. Provide deflection track assemblies at tops of metal stud partitions.
 - a. Provide fire-rated assemblies at fire-rated, corridor, and smoke partitions.

1.2 SUBMITTALS

- A. Product Data: For each product indicated, submit manufacturer's specifications and other data needed to demonstrate compliance with the specified requirements.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Fire-rated Deflection Track Assemblies:
1. Provide fire-rated deflection track systems conforming to Building Code Requirements in fire resistant wall and floor assemblies.
 2. Testing Requirements:
 - a. All firestop/smokeseal systems shall be tested by a recognized, independent testing agency and shall conform to both Flame (F) and Temperature (T) requirements of ASTM E-814 and UBC **43-6**.
 - b. Conform to **UL Fire Hazard Classification Requirements**.
 3. Fire-rated deflection track assemblies shall have fire resistance rating at least equal to the partition construction into which it is installed.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Manufacturers: Subject to compliance with requirements, provide products by one of following:

- a. Offset Configuration:
 - 1) “Shadowline” by Fire Trak Corp., at balanced and unbalanced fire-rated assembly partitions.
 - 2) “Cavity Shadowline” by Fire Trak Corp., at shaftwall and chase wall (double stud) partitions.
 - 3. Coordination: Verify with partition schedule on the Drawings to ensure proper depth of flange offsets at various partitions types.
- C. Radius Track Assemblies: Manufacturer’s standard C- shaped flexible steel track with banded flanges and screw attachments at every flange interval.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, and structural framing, for compliance with requirements and other conditions affecting performance.
 - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Install metal studs and accessories in strict accordance with the manufacturer’s recommendations, anchoring all components firmly into position. Also comply with requirements in ASTM C 840 that apply to framing installation.
- B. Accurately layout partition and wall lines from the dimensions shown on the Drawings.
- C. Except as indicated otherwise on the drawings, steel stud partitions shall be carried full height from floor to the underside of slab or deck above. Partitions shall be carried between structural joists, beams and other objects extending down from the underside of deck or slab and which occur at an angle to the partition. Wherever a partition occurs directly under and parallel with a steel joist, the joist shall be furred as required to be covered with wallboard on both sides.
- D. Pipe spaces where indicated shall be double partitions of size to accommodate the pipes.
- E. Deflection Track Installation:
 - 1. Isolate interior metal stud framing from building structure to prevent transfer of loading imposed by structural movement due to deflection.
 - a. Install deflection track top runner in accordance with manufacturer’s instructions and as required to attain lateral support and avoid axial loading.
 - b. Install fire-rated deflection track top runner in accordance with manufacturer’s instructions at top of fire-rated, corridor and smoke partitions.

I. Coordination:

1. Space the studs as specified to give proper support for the covering material. On curved partitions space framing closer together than normal to prevent flat areas between framing members.
2. Coordinate and provide required backing and other support for items to be mounted on the finished covering.
3. Coordinate requirements for pipes and other items designed to be housed within the partition and wall systems.

3.3 TOLERANCES

A. Installation Tolerance:

1. Vertical alignment (plumbness) of studs: 1/8 inches in 10 feet of the span.
2. Horizontal alignment (levelness) of walls: 1/8 inches in 10 feet of their length.
3. Spacing of studs: not more than plus or minus 1/8 inches from the designed spacing.

END OF SECTION 09111

SECTION 09260 - GYPSUM WALLBOARD SYSTEM

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide gypsum drywall and accessories.
- B. The work to be performed includes but is not limited to:
 - 1. Partitions:
 - a. Interior metal framed drywall partitions.
 - b. Furring with drywall all surfaces where furred gypsum wallboard is indicated on the drawings.
 - 2. Soffits:
 - a. Interior laterally-braced metal framed drywall soffits and fascias.
 - 3. Provide gypsum wallboard cladding strips, fire-safing, and firestopping compound as part of fire-resistant deflection track assembly at tops of the below listed interior partition types. (Note: Deflection track and studs provided under Section 09111 – Interior Metal Stud System).
 - a. Fire-rated partitions
 - b. Corridor partitions
 - 4. Installation of aluminum retainers for flush mounted vinyl acrylic comer guards.
 - 5. Other work specified herein.

1.2 SUBMITTALS

- A. Product Data: For each product indicated submit anufacturers' specifications and other data needed *to* demonstrate compliance with the specified requirements.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Fire rated partitions and construction joints at deflection tracks are based on tests listed on the Drawings. Construction of these partitions and construction joints shall conform to these tests and in addition, shall be in accordance with the details on the Drawings.
- C. Comply with requirements of ASTM E580 to meet State seismic requirements for bracing the ceiling suspension system.

2. Corner Beads: U.S. Gypsum "Dur-A-Bead"; Gold Bond 1-1/4 inch x 1-1/4 inch.
 3. Control Joints: U. S. Gypsum No. 093; Gold Bond "E-Z Strip".
- D. Grout: For metal door frames shall be "Durabond" Joint Compound, 100:2 "Red Top" Gypsum plaster-sand mix or "Structo-Lite" Gypsum plaster, as manufactured by U. S. Gypsum or approved equal.
- E. Adhesives, joint tape, joint compound and concealment compound, topping compound shall be of the types recommended by the wallboard manufacturer.
- F. **Caulking:** Acoustical sealant as recommended by the wallboard manufacturer.
- C. Accessories for Fire-Rated Deflection **Tracks:**
1. Fire-Safing: Mineral wool, 3.5 pcf density minimum.
 2. Firestopping Compound: Gypsum based free of asbestos and capable of maintaining an effective barrier against flame, smoke and gas. Provide required Flame (F) and Temperature (T) ratings, as tested by an independent testing agency in accordance with ASTM E-814, and conform to applicable governing codes. Provide Sta-Smooth FS-90 Fire Shield as manufactured by National Gypsum Company, Fire Stop Compound, as manufactured by United States Gypsum Company, or approved equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames and framing, for compliance with requirements and other conditions affecting performance.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

- A. Install all material in strict accordance with the approved manufacturer's written recommendations and instructions.
- B. Locations:
 1. Fire Rated Gypsum Wallboard: Applied in one-ply or two-ply on walls, partitions and ceilings where indicated, scheduled and as detailed to obtain fire ratings indicated.
 2. Water-Resistant Fire Rated Gypsum Wallboard: Shall be installed on all walls and partitions indicated or scheduled to receive glazed tile, unless otherwise indicated.

3.4 INSTALLATION ON WALLS

- A. Erection of Gypsum Wallboard: Apply wallboard with the lengths parallel to the studs. Where double layer application occurs, install first layer horizontally. Center abutting edges over the stud flanges. No two joints shall occur at the same stud and no joints shall occur between studs. Back all joints with metal framing.
- B. Screws for attaching wallboard to studs shall be spaced **8** inches on center at edges and at 12 inches on center in field of wallboard.
- C. Gypsum wallboard shall be held in firm contact with the framing member while fasteners are being driven. Fastening shall proceed from center portion of the wallboard toward edges and ends. Fasteners shall be set with the heads slightly below the surface of the wallboard in a dimple formed by the screwdriver. Avoid breaking the face paper of the wallboard; remove improperly driven and loose screws.
- D. For two-ply application the first layer shall be installed as previously specified, except fasteners shall be driven flush with surface of board and the joints will not be treated. The second layer shall be applied by screws fastening and/or adhesive to obtain fire rating specified. Screws shall be set as previously specified for single layer application for finishing.

3.5 INSTALLATION AT DEFLECTION TRACKS

- A. General: Do not fasten gypsum wallboard panels to top runner of deflection track assembly.
- B. Install fire-safing, gypsum wallboard cladding, and firestopping compound in accordance with deflection track manufacturer's instructions and details and in accordance with governing fire-resistance design requirements.

3.6 INSTALLING TRIM ACCESSORIES

- A. General: For trim with back flanges intended for fasteners, attach to framing with fasteners with 9/16 inch rosin coated staples 9 inches o.c. on both flanges along the entire length of the bead.
- B. Control Joints: Install control joints to isolate gypsum wallboard surfaces with dissimilar wall or ceilings, where new partitions abut structural elements (except floor), at partition runs exceeding **30** ft., and elsewhere as indicated on the drawings. Complete fill control joints with insulation.
- C. Interior Trim: Install in the following locations:
 - 1. Comerbead: Use at outside comers except where vinyl comer guards are required to be installed on vertical comers.
 - 2. L-Bead: Use where gypsum board abuts dissimilar materials, and elsewhere as indicated.

SECTION 09310 - CERAMIC TILE

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide ceramic tile where shown on the Drawings or as indicated in the Room Finish Schedule.
 - 1. Ceramic tile is designated in the Room Finish Schedule as "CT".
 - 2. Porcelain tile is designated in the Room Finish Schedule as "PORC-T"

1.2 PERFORMANCE REQUIREMENTS

- A. Static Coefficient of Friction: For tile installed on walkway surfaces, provide products with the following values as determined by testing identical products per ASTM C 1028:
 - 1. Level Surfaces: Minimum 0.6.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Verification:
 - 1. Full-size units of each type and composition of tile and for each color and finish required.
 - 2. Sample of specified grout in color or colors approved for completed work.

1.4 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Source Limitations for Tile: Obtain all tile of same type and color or finish from one source or producer.
 - 1. Obtain tile from same production run and of consistent quality in appearance and physical properties for each contiguous area.
- C. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from a single manufacturer and each aggregate from one source or producer.

F. Pattern, Style and Color: As indicated on the Materials and Finishes Index Sheet.

1. Patterns: Provide pattern and borders as indicated on the Drawings.

2.2 SETTING MATERIALS

A. Manufacturers: Subject to compliance with requirements, provide products of one of the following. No other manufacturer will be accepted.

1. Mapei Corporation, Deerfield Beach, FL 33442; (954) 246-8888.
2. Laticrete International, Inc., Bethany, CT 06524; (800) 243-4788.

B. Grout: Mapei Kerapoxy or Laticrete Latapoxy SP-100.

1. Color as selected by Architect from manufacturer's standards.
2. Color; custom color approved by Architect.

C. Dry Set Mortar: shall consist of Portland cement, sand and latex additive conforming to ANSI 118.4:

1. Mapei Kerabond with Keralastic latex additive.
2. Laticrete 3030 Porcelain-Bond with Laticrete Porcelain-Bond Admix latex additive.

D. Organic Adhesive for Organic Adhesive Set Method: shall be Type 1 in accordance with ANSI Specification A136.1:

1. Mapei Ultra/Mastic 1.
2. Laticrete Latamastic 15.

E. Cementitious Underlayment: Mapei Mapecem with Plani/Patch at feathered edges, or Laticrete 259 Rapid Thin-set Mortar with 3701 Latex Mortar Admix.

F. Sealants:

1. Two component polyurethane complying with Federal Specifications TT-S 0027e, Type I self leveling for horizontal surfaces and Type II, non sag for vertical surfaces.
 - a. Provide colors of exposed sealants to match colors of grout in tile adjoining sealed joints, unless otherwise indicated.
2. Provide flexible compressible type closed cell foam polyethylene or butyl rubber back-up rod, as required.

- E. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions, unless otherwise indicated.
- F. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- G. Grouting: Install in strict accordance with manufacturer's written instructions. Force grout into joints, avoiding air traps or voids; strike or tool joints of cushion edge tile to depth of cushion.
- H. Control Joints: Provide over all construction joints in subfloor; where subfloor materials change; where tile work abuts restraining surfaces such as perimeter walls, curbs, columns, pipes, etc.; and where tile abuts dissimilar materials.
- I. Caulked joints shall be raked out, cleaned and completely filled with sealant materials in accordance with the manufacturer's printed specifications.

3.4 TILE INSTALLATION SCHEDULE

- A. The American National Standard Specifications for the Installation of Ceramic Tile, 1988 edition, is hereby made a part of this specification and all work shall be installed in accordance with the various specification contained therein and as specified below and in accordance with the specifications of Mapei Corporation or Laticrete International, Inc.
- B. ANSI A108.4, Installation of Ceramic Tile with Water Resistant Organic Adhesives shall be used for installing:
 - 1. Ceramic tile over gypsum board (TCA installation method W242).
- C. ANSI A108.5, Installation of Ceramic Tile with Dry Set Portland Cement Mortar or Latex Portland Cement Mortar shall be used for installing:
 - 1. Ceramic tile and porcelain tile over concrete slabs-on-grade. (TCA installation method F113).

3.5 CLEANING AND PROTECTING

- A. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter. Remove epoxy grout residue from tile as soon as possible. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions.
- B. When recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear.

SECTION 09510 - ACOUSTICAL CEILINGS

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide braced acoustical ceilings as required to meet seismic requirements.
- B. Remove and reinstall existing acoustical ceiling systems as required for completion of the work.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Samples for Verification: Full size sample of each type, color, pattern and texture of acoustical panel required.
- C. Maintenance Data: Provide cleaning and maintenance data for the various types of acoustical ceilings to include in maintenance manuals.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Comply with requirements of ASTM E580 to meet State seismic requirements for bracing the ceiling suspension system.
- C. Source Limitations: Obtain each type of acoustical ceiling panel and supporting suspension system through one source from a single manufacturer.

1.4 COORDINATION

- A. Coordinate layout and installation of acoustical panels and suspension system with other construction that penetrates ceilings or is supported by them, including light fixtures, HVAC equipment, fire-suppression system, and partition assemblies.

1. Main Beam (unless otherwise indicated): 1-1/2 inch height with routs for cross tees 6 inches o.c.
2. Cross Tee (unless otherwise indicated): 1-1/2 inch height for 4 foot spans; minimum of 1 inch for 2-foot spans.
3. Steel: 0.015-inch minimum thickness, conforming to **ASTM A-366**.
4. Provide the following suspension systems, in accordance with corresponding acoustical ceiling tile type annotated in the "Ceiling Type" column of the following schedule.

Suspension System	Hemmed Wall Molding	Ceiling Type
15/16 inch wide exposed tee grid: Armstrong Prelude Chicago 200 Series; 1200 Cross Tees Donn DX	Armstrong No 7820 Chicago No. 1420 Donn No. M7	Type-1

- D. Finish: Chemically clean, electro-galvanize and bonderize all steel roll-formed parts. Provide a high-bake, low-sheen, satin finish on finished surfaces. Chemically clean, electro-galvanize and treat with chromatic conversion coating all steel stamped parts.
1. Color of grid shall exactly match color of acoustical panels.

2.3 OTHER MATERIALS

- A. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor, subject to the approval of the Architect.
- B. Accessories shall be specifically designed as an integral part of the grid system and shall be installed in strict accordance with manufacturer's recommendations.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, including structural framing to which acoustical panel ceilings attach or abut, with Installer present, for compliance with requirements specified in this and other Sections that affect ceiling installation and anchorage and with requirements for installation tolerances and other conditions affecting performance of acoustical panel ceilings.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.4 PATCHING OF EXISTING AREAS

- A. Patch and match existing acoustical ceilings in existing areas disturbed by new construction. Where acoustical panels, acoustical tiles and suspension system have been removed because of new construction and cannot be reinstalled, install new material to match the existing. Materials to be used for patching and matching shall be approved by the Architect. The installer shall visit the site, acquaint himself with the types of existing ceiling materials and the extent of replacement.

3.5 CLEANING

- A. Clean exposed surfaces of acoustical panel ceilings, including trim, edge moldings, and suspension system members. Completely remove fingerprints and traces of soil using only those cleaning methods and materials recommended for the purpose by the manufacturer of the material being cleaned.
- B. Remove and replace ceiling components that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION 095 10

SECTION 09660 - RESILIENT TILE FLOORING AND BASE

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide resilient tile flooring and base where shown on the Drawings, in Finish Schedules, as specified herein, and as needed for a complete and proper installation.
 - 1. Resilient tile flooring designated in the Room Finish Schedule as "VCT".
 - 2. Resilient base designated in the Room Finish Schedule as "RUB".
- B. Except as indicated otherwise, furnish and install resilient base on casework furnished under Section 06240.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated
- B. Samples for Verification:
 - 1. Resilient Floor Tile: Full-size units of each color and pattern of resilient floor tile required.
 - 2. Resilient Wall Base and Accessories: Manufacturer's standard-size Samples, but not less than 12 inches long, of each resilient product color and pattern required.
- C. Maintenance Data: Provide cleaning and maintenance data for the various types of resilient tile flooring to include in maintenance manuals.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Flooring system including floor covering material and adhesives shall have the ability to withstand water vapor transmission levels up to 3 lbs/24 hours per 1,000/sf, and pH levels up to 9.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Store resilient products and installation materials in dry spaces protected from the weather, with ambient temperatures maintained within range recommended by manufacturer, but not less than 50 deg F or more than 90 deg F. Store tiles on flat surfaces.

- C. Primer: Provide non-staining type as required and as recommended by the manufacturer of the material being installed.
- D. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor, subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for installation tolerances, moisture content, and other conditions affecting performance. Verify that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- B. Verify that alkalinity and moisture content of concrete slabs, building air temperature, and relative humidity are within the limits recommended by the manufacturers of the materials being used.
 - 1. Obtain copy of and review test results of alkalinity, adhesion and moisture testing of floors specified in Section 01456 - Testing Laboratory Services.
 - 2. Proceed with installation only after substrates are acceptable to the adhesive and flooring product manufacturers.

3.2 PREPARATION

- A. Comply with ASTM F710-92 and flooring manufacturer's recommendations for surface preparation. Remove substances incompatible with resilient flooring adhesive by method acceptable to manufacturer.
- B. Remove, by light sanding and grinding, all protruding edges, high spots. Ensure that substrate is free from paint, varnish, wax, oil, existing adhesive residue, or other foreign matter.
- C. Fill minor or local low spots, cracks, joints, holes, and other defects with trowelable underlayment. Apply, trowel and float finish subfloor underlayment and leave a smooth, level, hard surface. Acceptable level tolerance shall be 1/8 inch in 10 feet-0 inches when measured in all directions. Prohibit traffic from area until filler is cured.
- D. Vacuum clean substrate, and ensure that substrate is dry, clean and smooth prior to application of flooring.
- E. Apply primers as recommended by adhesive manufacturer's written instructions.

- C. Install base at sides and at toe space of cabinets. The height of the cove base at casework shall match that of the toe space. The height of the base at walls shall be **4** inches unless otherwise indicated on the Drawings.

3.5 PATCHING OF EXISTING AREAS

- A. Patch and match existing resilient floors and base in existing areas where scheduled, noted or disturbed by new construction. Resilient flooring and base used for patching and matching shall match the existing material for size, color and pattern. Submit samples to Architect for comparison and approval.

3.6 CLEANING AND PROTECTION

- A. At the completion of the work, all work shall be thoroughly cleaned, waxed and buffed using materials recommended by the manufacturer.
- B. All flooring and bases shall be protected from damage after laying, and any such material damaged by building operations shall be replaced before acceptance of the building.

END OF SECTION 09660

SECTION 09680 - CARPET

PART 1 - GENERAL

1.1 SUMMARY

- a. This Section includes carpet.
 - 1. Carpeting is designated in the Room Finish Schedule as "CPT".

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated. Include manufacturer's written data on physical characteristics, durability, and fade resistance. Include installation recommendations for each type of substrate.
- B. Samples: For each product specified, 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. Obtain the Architect's approval of these Samples prior to installation.
- C. Maintenance Data: For carpet to include in maintenance manuals. Include methods for maintaining carpet, including cleaning and stain-removal products and procedures and manufacturer's recommended maintenance schedule.

1.3 QUALITY ASSURANCE

- A. Qualifications of Installer: Carpet installation shall be done only by an installer having experience on similar installations and employing only experienced carpet layers skilled in this work.
- B. Carpet shall conform with or pass tests of the following Standards:
 - 1. ASTM D-2859 (Methenamine Reagent Pill Test).
 - 2. ASTM E-648 (Flooring Radiant Panel Test): Class I (Minimum Average CRF of 0.48).
 - 3. NBS Smoke Chamber Test: Maximum average of 450.
 - 4. AATCC- 134 (Electrostatic Propensity): Maximum electrostatic generation below level of human sensitivity.
- C. Flooring system including floor covering material and adhesives shall have the ability to withstand water vapor transmission levels up to 3 lbs/24 hours per 1,000/sf and pH levels up to 9.

- B. Adhesives:
 - 1. Accessories Adhesive: Provide a water-resistant, neoprene latex contact adhesive, as supplied by the manufacturer of the resilient accessories; Johnsonite #945.
 - 2. Seam Adhesive: Provide an acrylic latex emulsion as recommended for the purpose by the manufacturer of the selected carpet for the purpose of joining seams and butting cut edges at backing to form secure homogeneous chemically bonded seams.
- C. Floor Primer: As recommended by carpet manufacturer.
- D. Provide other materials, not specifically described but required for a complete and proper installation, as selected by the Contractor subject to the approval of the Architect.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for maximum moisture content, alkalinity range, installation tolerances, and other conditions affecting carpet performance. Examine carpet for type, color, pattern, and potential defects.
- B. Verify that alkalinity and moisture content of concrete slabs, building air temperature, and relative humidity are within the limits recommended by the manufacturers of the materials being used.
 - 1. Obtain copy of and review test results of alkalinity, adhesion and moisture testing of floors specified in Section 01456 - Testing Laboratory Services.
 - 2. Proceed with installation only after substrates are acceptable to the adhesive and flooring product manufacturers, and the Owner.

3.2 PREPARATION

- A. General: Comply with Carpet and Rug Institute standard for Installation of Commercial Carpet (CRI 104), and carpet manufacturer's written installation instructions for preparing substrates indicated to receive carpet installation.
- B. Clean floors of dust, dirt, solvents, oil, grease, paint, plaster and other substances detrimental to proper performance of adhesive and carpet. Allow floors to thoroughly dry.
- C. Ensure floors are level, with maximum surface variation of 1/8 inch in 10 feet noncumulative. Use trowelable leveling and patching compounds, according to manufacturer's written instructions, to fill cracks, holes, and depressions in substrates.
- D. Ensure concrete floors are free from scaling and irregularities and exhibit neutrality relative to acidity and alkalinity.

SECTION 09900 - PAINTING

PART 1 - GENERAL

1.1 SUMMARY

- A. Paint and finish the interior exposed surfaces listed on the Painting Schedule in Part 3 of this Section, as specified herein, and as needed for a complete and proper installation.
- B. Applied painted stenciled lettering on designated partitions.
- C. Work Not Included:
 - 1. Unless otherwise indicated, painting is not required on surfaces in concealed areas and inaccessible areas such as furred spaces, pipe spaces, and duct shafts.
 - 2. Metal surfaces of anodized aluminum, stainless steel, chromium plate, copper, bronze, and similar finished materials are not required to be painted under this Section except as may be so specified.
 - 3. Do not paint moving parts of operating units; mechanical or electrical parts such as valve operators; linkages; sensing devices; and motor shafts; unless otherwise indicated.
 - 4. Do not paint over required labels or equipment identification, performance rating, name, or nomenclature plates.
 - 5. The following items do not require painting, except as indicated otherwise:
 - a. All nonferrous or plated metal surfaces.
 - b. Factory finished acoustical surfaces (except existing acoustical surfaces in areas as hereinafter specified to be painted.)
 - c. All piping, ducts and conduit which are not exposed in the finished work.
 - d. All items and equipment with factory finish, except where primed only for finish painting or where factory finish is required to be painted out to match adjacent wall or ceiling finish.

1.2 DEFINITIONS

- A. "Paint" as used herein, means coating systems materials including primers, emulsions, epoxy, enamels, sealers, fillers, and other applied materials whether used as prime, intermediate, or finish coats.

1.3 SUBMITTALS

- A. Product Data: For each type **of** product indicated, include manufacturer's specifications and other data needed to demonstrate compliance with specified requirements.
- B. Product List: Complete materials list of all items indicated, include the following:

3. Benjamin Moore & Co., Montvale, NJ 07645; (201) 573-9600.
4. California Products, Inc., Andover, MA 01810; (978) 623-9980.
5. Pratt and Lambert Paints, Cleveland, OH 44115; (800) 289-7728.

- B. Basis of Design: Products listed are those of Duron Paints and Wallcovering. Subject to compliance with requirements, provide either the named product or a comparable product by one of the other listed manufacturers specified. Only products manufactured or furnished by the manufacturers listed herein shall be used on the project. No substitutions will be allowed.

2.2 PAINT MATERIALS

- A. All materials used on the work shall be exactly as hereinafter specified in brand and quality. No claim as to the unsuitability or unavailability of any material specified or unwillingness to use same, or the inability to produce first class work with same, will be entertained by the Architect unless such claims are made in writing to the Architect prior to receipt of bids. All paint, varnish, enamels, stains, paste fillers, linseed oil, shellac, turpentine and similar materials shall be delivered in the original containers with seals unbroken and labels intact. All materials shall be used only as specified by the manufacturer's directions label on the container.
- B. It shall be understood that the first quality products of one manufacturer shall be used for all coats of paint for the entire project. No deviation from this understanding will be permitted without specific authorization, in writing, by the Architect.
- C. Oil: Other than finishing oil, shall be pure raw linseed oil, well seasoned.
- D. Turpentine: Shall be Spirits of Turpentine meeting the requirements of Specifications ASTM D13-51.
- E. Spackling Compound: Shall be ready mixed spackling compound as manufactured by Savogram, Synkaloid, Rutland or United Gilsonite Laboratories.
- F. Provide paints of durable and washable quality. Do not use paint materials which will not withstand normal washing as required to remove pencil marks, ink, ordinary soil, and similar material without showing discoloration, loss of gloss, staining, or other damage.
- G. Colors and glosses: The Architect will select colors to be used in the various types of paint specified and will be sole judge of acceptability of the various glosses obtained from the materials proposed to be used in the Work. Tinting colors shall be Universal fluid tinting colors manufactured by the paint manufacturer of the paint being applied.
- H. Undercoats and thinners: Provide undercoat paint produced by the same manufacturer as the finish coat. Use only the thinners recommended by the paint manufacturer, and use only to the recommended limits. Insofar as practicable, use undercoat, finish coat, and thinner as parts of a unified system of paint finish.

B. Preparation of wood surfaces:

1. Clean all wood surfaces until they are free from dirt, oil, and all other foreign substance.
2. Smooth all finished wood surfaces exposed to view, using the proper sandpaper. Where so required, use varying degrees of coarseness in sandpaper to produce a uniformly smooth and unmarred wood surface.
3. Do not proceed with painting of wood surfaces until the moisture content of the wood is 12 percent or less as measured by a moisture meter.

C. Preparation of Gypsum Drywall and Plaster Surfaces:

1. All holes and cracks in surfaces shall be filled with spackling compound before painting. Do not use sandpaper on surfaces to the extent that would cut through the plaster top coating or gypsum wallboard facing. It should be used only as a smoother to blend the patch or crack to the wall. Before painting plaster or gypsum wallboard, the surfaces shall first be tested with a moisture testing device especially designed for this purpose. No paint or sealer shall be applied on surfaces when the moisture content exceeds 8%-9% as determined by the testing device. Test sufficient areas in each space as often as necessary to determine the proper moisture content for painting. Plaster surfaces shall be tested for the presence of alkali, and if present, the plaster shall be allowed to *dry* until no alkalinity is indicated by the test.

D. Preparation of metal surfaces:

1. Sand and clean surfaces as required by paint manufacturer's specifications prior to application of each coat of paint. Where rust or scale is present, it shall be wire brushed or sandpapered clean before painting. Shop coats of paint that have become matted shall be cleaned and touched up with primer specified. Before painting, zinc coated metal surfaces shall be thoroughly washed with turpentine or mineral spirits to remove all grease and oil, and then wiped thoroughly dry. Remove all crayon or other marks on piping steel and iron before painting same. Rub down varnished surfaces before applying other coats.
2. Equipment and items which have a factory applied baked enamel finish and which are required or indicated to be painted shall have their surfaces roughened with sandpaper, after which shall be applied a coat of liquid sander just prior to application of paint. Liquid sander shall be ~~as~~ recommended by the paint manufacturer.
3. On galvanized surfaces, use solvent for the initial cleaning and then treat the surface thoroughly with phosphoric acid etch. Remove all etching solution before proceeding.
4. Allow to dry thoroughly before application of paint.

E. Materials Preparation:

1. Mix and prepare painting materials in strict accordance with the manufacturers' recommendations.
2. Store materials not in actual use in tightly covered containers.
3. Maintain containers used in storage, mixing, and application of paint in a clean condition, free from foreign materials and residue.

6. Emergency lights
7. Fire extinguisher and fire accessory cabinets; all exposed to view surfaces.

3.4 PAINT APPLICATION

A. General:

1. Do not apply Painter's finish to any surface when the air or surface temperature is below 50 degrees Fahrenheit, above 90 degrees Fahrenheit or when the Relative Humidity is 85 percent or higher.
2. In order to minimize skipping, slightly vary the tint of each coat. Do not apply additional coats until the completed coat has been inspected and approved. Only the inspected and approved coats of paint will be considered in determining the number of coats applied.
3. Sand and dust between enamel coats to remove all defects visible to the unaided eye from a distance of five feet. On all removable panels and all hinged panels, paint the back sides to match the exposed sides.
4. Paint and varnish coats shall be well applied, evenly worked out and allowed to dry before subsequent coat is applied.
5. All Painter's finishes shall be applied with brushes, except:
 - a. Gypsum wallboard and plaster surfaces to be painted may be roller applied.
 - b. "Epoxy Coating": Prime coat and all finish coats shall be applied by roller. Roller shall be high quality, professional type suitable for application of epoxy coating, nap sizes as follows:
 - 1) Gypsum wallboard and plaster surfaces: 1/4 inch smooth.
6. Prime coated butts and prime coated hardware shall be painted in with the door frames.
7. Do not paint metal having plated finish or nonferrous metal, unless primed, shop coated or otherwise specifically required.
8. Store materials where directed. Oily rags, waste and empty cans shall be removed from site every night and under no circumstances left in unventilated rooms or allowed to accumulate. Furnish and lay drop cloths where necessary, and protect floors and adjacent work from damage.
9. Surfaces to be primed shall be dry, smooth and adequately protected from dampness. Seal pitch pockets, streaks and knots prior to priming.

B. Drying:

1. Allow sufficient drying time between coats. Modify the period as recommended by the material manufacturer to suit adverse weather conditions.
2. Oil-base and oleo-resinous solvent-type paints shall be considered dry for recoating when the paint feels firm, does not deform or feel sticky under moderate pressure of the thumb, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

C. Brush application: Brush out and work all brush coats onto surfaces in an even film. Cloudiness, spotting, holidays, laps, brush **marks**, runs, sags, ropiness, and other surface imperfections will not be acceptable.

D. Spray application:

2. Second Coat:
 - a. Duron - Plastic Kote Interior Acrylic Latex Semi-Gloss Enamel, series 22
 3. Third Coat:
 - a. Duron - Plastic Kote Interior Acrylic Latex Semi-Gloss Enamel, series 22
- D. Interior Gypsum Drywall Walls and Interior Plaster Walls
1. First Coat:
 - a. Duron - Interior Acrylic Latex Drywall Primer, 04-124
 2. Second Coat:
 - a. Duron - Plastic Kote Interior Acrylic Latex Eggshell Enamel, series 20
 3. Third Coat:
 - a. Duron - Plastic Kote Interior Acrylic Latex Eggshell Enamel, series 20
- E. Gypsum Drywall Ceilings and Plaster Ceilings
1. First Coat:
 - a. Duron - Interior Acrylic Latex Drywall Primer, 04-124
 2. Second Coat:
 - a. Duron - Plastic Kote Interior Flat Acrylic Latex, 17 series
- F. Interior Hardwood Trim (transparent finish)
- NOTE: For all open grain wood precede finish coat with one (1) coat of paste filler
1. First Coat:
 - a. Duron - McCloskey Tung Seal Oil Base Wood Stain, 1969 Natural
 2. Second Coat: (Sheen: GLOSS)
 - a. Duron - McCloskey Crystal Clear Polyurethane, Gloss
 3. Third Coat: (Sheen: SATIN)
 - a. Duron - McCloskey Crystal Clear Polyurethane, Gloss
- G. Interior Softwood or Poplar Trim (Opaque Finish)
1. First Coat - Primer:
 - a. Duron - Acrylic Enamel Undercoater, 04-123
 2. Second Coat:
 - a. Duron - Plastic Kote Interior Acrylic Latex Semi-Gloss Enamel, series 22
 3. Third Coat:
 - a. Duron - Plastic Kote Interior Acrylic Latex Semi-Gloss Enamel, series 22
- H. Interior Wood Doors MDO Facing (Opaque Finish)
1. First Coat:
 - a. Duron - Plastic Kote Interior Acrylic Latex Eggshell Enamel, series 20
 2. Second Coat:
 - a. Duron - Plastic Kote Interior Acrylic Latex Eggshell Enamel, series 20

3.7 EPOXY COATING

- A. Exposed interior surfaces marked "Epoxy Coating" in the Room Finish Schedule or as so noted on the drawings shall receive coatings as hereinafter specified. The special coating shall be installed in accordance with the manufacturer's directions and shall bear certification that it

SECTION 10262 – CORNER GUARDS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes corner guards of the following type:
 - 1. Vinyl corner guards.

1.2 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, impact strength, dimensions of individual components and profiles, and finishes for each type of corner guard.
- B. Samples for Verification: 12-inch long samples of corner guard assembly, showing the full range of color and texture variations expected.
- C. Maintenance Data: Provide manufacturer's recommended cleaning materials and methods for vinyl/acrylic covers to include in maintenance manuals.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Source Limitations: Obtain each type of wall protection material through one source from a single manufacturer.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Vinyl Corner Guards:
 - a. Construction Specialties, Inc. (**US**), Cranford, **NJ** 07016; (201) 272-5200.
 - b. Balco, Inc., Wichita, **KS** 67217; (316) 945-9328.
 - c. Pawling Corporation, Wassauc, **NH** 12592; (914) 373-9300.

- B. Examine walls to which corner guards will be attached for blocking, grounds, and other solid backing that have been installed in the locations required for secure attachment of support fasteners.

3.2 INSTALLATION

- A. General: Install the work of this Section in strict accordance with the manufacturer's recommendations as approved by the Architect, using only the approved mounting materials, and locating all components **firmly** into position, level, and plumb. Do not use materials with chips, cracks, voids, stains, or other defects that might be visible in the finished Work.
- B. Installation to conform to manufacturer's recommendations and approved details. Corner guard covers shall be hand "pressure-locked" over retainers.

END OF SECTION 10262

SECTION 10800 - TOILET ACCESSORIES

PART 1 - GENERAL

1.1 SUMMARY

- A. Provide toilet accessories where shown on the Drawings, as specified herein, and as needed for a complete and proper installation.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated, include construction details and dimensions, anchoring and mounting requirements, and material and finish descriptions.
- B. Product Schedule: Indicating types, quantities, sizes, and installation locations by room of each accessory required

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Source Limitations: Except as otherwise approved by the Architect, provide all products of this Section from a single manufacturer.

1.4 WARRANTY

- A. Manufacturer's Mirror Warranty: Written warranty, executed by mirror manufacturer agreeing to replace mirrors that develop visible silver spoilage defects within 15 years from date of Substantial Completion..

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide accessories by one of the following:
 1. American Specialties, Inc. (ASI), Yonkers, NY 10701, (914) 476-9000.
 2. Bobrick Washroom Equipment, Inc., Clifton Park, NY 12065, (518) 877-7444.
 3. General Accessory Manufacturing Co. (Gamco), Durant, OK, 74701, (800) 451-5766.

- B. Straight Grab Bars: Bars shall be peened with satin finished flange and bar ends, length as indicated.
 - 1. A.S.I. 3700 P Series
 - 2. Bobrick B-5806.99 Series
 - 3. Gamco No. 125 S Series

2.6 LOCKS

- A. All locks shall be keyed alike. Provide twelve keys.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.
- B. All work in this section shall be done in compliance with all applicable Federal, State and local codes including but not limited to Americans with Disabilities Act (ADA).
- C. Except for grab bars, all items that are fastened to steel stud partitions or metal furred walls shall be fastened to concealed wood blocking furnished and installed under the work of Section 06100, Rough Carpentry. Attach all items with properly sized stainless steel screws to assure a rigid and adequately secure anchorage.
- D. Furnish grab bars with anchor backplates. Anchor plates shall be 2 inch wide by $1/8$ inch thick by required length, cold rolled steel with $1/4$ inch diameter threaded rod by $2-1/2$ inch long welded to plate to suit location of flanges or secure plate to studs with three self tapping screws at each stud. Anchoring methods other than as specified herein shall be approved by the Architect.
- E. Provide formed stainless steel spacers or fillers at back of wall flanges to prevent gap from finished wall and flange of unit where accessories are mounted partially on or project above top of tile base and wainscot. Fabricate from 22 gage, 18-8 Type 304 stainless steel with exposed surfaces No. 4 finished to match accessory.

END OF SECTION 10800

SECTION 12484 - FLOOR MATS

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes floor mats.
 - 1. Floor mats are designated in the Room Finish Schedule as "WOM".

1.2 SUBMITTALS

- A. **Product Data:** Include manufacturer's specifications and installation instructions, construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of floor mat and frame specified.
- B. **Samples for Verification:** Submit samples for each type and color of exposed entrance mat, frames and accessories required. Provide 12-inch square samples of mat materials.
- C. **Maintenance Data:** For cleaning and maintaining floor mats to include in maintenance manuals.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.

1.4 COORDINATION

- A. **Installation:** Delay installation of mats until near time of substantial completion for the project.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. **Acceptable Manufacturer:** Provide floor mats as manufactured by Mats, Inc., Stoughton, MA, 02072; (800) 628-7462.

- B. Lay tile from center marks established with principal walls or general entrance area, discounting minor offsets, so that tile at opposite edges of flooring area are of equal width. Adjust as necessary to avoid use of cut widths less than 1/2 tile at room perimeters. Lay tile square to flooring area axis, quarter-turning tiles using directional arrows as marked on the underside of the tile, unless otherwise directed.
- C. Coordinate installation with adjacent work to ensure proper clearances and to prevent tripping hazards. Where indicated or required, provide vinyl transition strips as recommended by manufacturer.

END OF SECTION 12484

SECTION 12494 - ROLLER SHADES

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes chaindriven, manually operated roller shades, including all accessories and attachment hardware for a complete installation.

1.2 SUBMITTALS

- A. Product Data: For each type of roller shade indicated. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions.
- B. Samples: For each colored component of each type of roller shade indicated.
 - 1. Shade Material: Not less than 3 inches square, with specified treatments applied. Mark face of material.
- C. Product Certificates: Provide notarized affidavit from the manufacturer of each type of roller shade product, stating that the material supplied for the project shall be washable, inherently flame resistant, and shall remain flame resistant after repeated washing for the life of the fabric.
- D. Maintenance Data: For roller shades to include in maintenance manuals. Include the following:
 - 1. Methods for maintaining roller shades and finishes.
 - 2. Precautions about cleaning materials and methods that could be detrimental to fabrics, finishes, and performance.

1.3 QUALITY ASSURANCE

- A. Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specified requirements and the methods needed for proper performance of the work of this Section.
- B. Source Limitations: Obtain roller shades through one source from a single manufacturer.
- C. Fire-Test-Response Characteristics: Provide roller shade band materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
 - 1. Flame-Resistance Ratings: Passes NFPA 701.