SECTION 08211 - FLUSH WOOD DOORS

PART 1 - GENERAL

1.1 SUMMARY
A. This Section includes the following:
1. Solid core doors with hardboard faces.

1.2 SUBMITTALS
A. General: Submit each item in this Article according to the Conditions of the Contract and Division 1 Specification Sections.

B. Shop drawings indicating location and size of each door, elevation of each kind of door, details of construction, location and extent of hardware blocking, fire ratings, requirements for veneer matching and factory finishing and other pertinent data.
1. For factory-machined doors, indicate dimensions and locations of cutouts for locksets and other cutouts adjacent to light and louver openings.

1.3 QUALITY ASSURANCE
A. Quality Standard: Comply with the following standard:
1. AWI Quality Standard: "Architectural Woodwork Quality Standards" of the Architectural Woodwork Institute for grade of door, core, construction, finish, and other requirements.

B. Single-Source Responsibility: Obtain doors from one source and by a single manufacturer.

1.4 DELIVERY, STORAGE, AND HANDLING
A. Protect doors during transit, storage, and handling to prevent damage, soiling, and deterioration. Comply with requirements of referenced standard and manufacturer's instructions.

B. Identify each door with individual opening numbers as designated on shop drawings, using temporary, removable, or concealed markings.

1.5 PROJECT CONDITIONS
A. Conditioning: Do not deliver or install doors until conditions for temperature and relative humidity have been stabilized and will be maintained in storage and installation areas during the remainder of the construction period to comply with the following requirements applicable to Project's geographical location:
1. AWI quality standard Section 100-S-11 "Relative Humidity and Moisture Content."

1.6 WARRANTY
A. General Warranty: Door manufacturer's warranty specified in this Article shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by the Contractor under requirements of the Contract Documents.

B. Door Manufacturer's Warranty: Submit written agreement on door manufacturer's standard form signed by manufacturer, Installer, and Contractor, agreeing to repair or replace defective doors that have warped (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section or that show telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch span, or do not conform to tolerance limitations of referenced quality standards.
1. Warranty shall be in effect during the following period of time after date of Substantial Completion.
a. Solid Core Interior Doors: Life of installation.

PART 2 - PRODUCTS

2.1 MANUFACTURERS
A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering doors that may be incorporated in the Work include, but are not limited to, the following:
1. Solid Core Doors for installation in Hollow Metal Frames:
a. Algoma Hardwoods Inc.
b. Fenestra Corporation.
c. Weyerhauser Co.
d. Pella Corp.

2.2 INTERIOR FLUSH WOOD DOORS
A. Solid Core Doors for Opaque Finish: Comply with the following requirements:
1. Faces: Hardboard.
2. Construction: 5 or 7 plies.
3. Core: Particleboard
4. Grade: AWI Custom.

2.3 FABRICATION
A. Fabricate flush wood doors to comply with following requirements:
1. In sizes indicated for job-site fitting.

PART 3 - EXECUTION

3.1 EXAMINATION
A. Examine installed door frames prior to hanging door:
1. Verify that frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with plumb jambs and level heads.
2. Reject doors with defects.

B. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION
A. Hardware: For installation see Division 8 Section "Door Hardware."

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

C. Job-Fit Doors: Align and fit doors in frames with uniform clearances and bevels as indicated below; do not trim stiles and rails in excess of limits set by manufacturer or permitted with fire-rated doors. Machine doors for hardware. Seal cut surfaces after fitting and machining.
1. Fitting Clearances for Non-Fire-Rated Doors: Provide 1/8 inch at jambs and heads, 1/16 inch per leaf at meeting stiles for pairs of doors, and 1/8 inch from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 1/4-inch clearance from bottom of door to top of threshold.

D. Field-Finished Doors: Division 9 Section "Painting."

3.3 ADJUSTING AND PROTECTION
A. Operation: Rehang or replace doors that do not swing or operate freely.

B. Refinish or replace doors damaged during installation.

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

END OF SECTION 08211

SECTION 08710 - DOOR HARDWARE
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: Hardware Schedule.
B. Deliver keys to FedEx Office Center Manager.
C. For fire-rated openings provide hardware tested and listed by UL or FM (NFPA 80). On exit devices provide UL or FM label indicating "Fire Exit Hardware."
1.2 SUBMITTALS
A. Operation/Maintenance Data:
1. Deliver to FedEx Office, one (1) set of maintenance operation manuals and installation guides for locksets, exit devices, and door closers.
2. Contractor/Installer to furnish to the hardware supplier one installation/template guide from each hardware/carton.
B. Templates: Templates for door hardware items to be sent to related door and frame suppliers within three working days of receipt of approved hardware schedule.
C. Certification of Compliance: Submit any information necessary to indicate compliance to any or all of these specifications as required.
D. Keying Schedule: Indicate keying of all cylinders, exit devices, locksets, and padlocks. Include door and item numbers as set forth in the approved hardware schedule.
E. Close-out Requirement:
1. Two (2) copies of the keying schedule.
2. Two copies of Manufacturer's catalog data for each item of hardware furnished.
3. Provide one set of maintenance manuals and instruction sheets for each item of hardware furnished.
1.3 DELIVERY, STORAGE AND HANDLING
A. Packaging: Each unit of hardware shall be individually packaged in the manufacturer's original containers as required by the respective hardware manufacturers.
1. a. Packaging shall include factory original installation instructions,
2. fastenings and all items necessary for complete installation.
B. Wrapping: Wrap and cushion each item to prevent scratches & dents during delivery and storage.
C. Environmental Packaging: Hardware shipped to the job site is to be packaged in biodegradable packs, such as paper or cardboard boxes and wrapping. If non-biodegradable packing is utilized, such as plastic, plastic bags or polystyrene foam, then the Contractor will be responsible for the disposal of the non-biodegradable packing to a licensed or authorized collector for recycling of the material.
D. Markings: Each package shall be clearly marked on the outside, identifying contents with specific opening number corresponding to those listed in the hardware schedule. Include door and item number for each product.
E. Delivery: Except as dictated otherwise, deliver all hardware to the job site. The Contractor and Hardware Supplier's Representative shall check each item of hardware against the approved finish hardware schedule.
F. Storage: All hardware shall be stored in a locked storage space until ready for installation. Hardware shall be protected against damage after application and during construction period.
PART 2 - PRODUCTS
2.1 HARDWARE
A. Manufacturers:
1. Provide materials as specified without substitutions.
2. See Schedule on Drawings for approved manufacturers.
B. Fastenings
1. Furnish hardware with all necessary screws, bolts or other fastenings of suitable type and size to anchor the hardware in position for long life and heavy use. Fasteners shall include expansion shields, sex bolts, toggle bolts, or other approved anchors according to material to which it is applied and as recommended by the respective manufacturers.
a. Furnish Phillips flat-head screws except as otherwise indicated.
b. Thru-bolts (TB) to be verified with the Building Owner's Representative.
2. Design of all fastenings shall harmonize with hardware as to material and finish.
C. Hinges
1. All hinges to be of one manufacturer as hereafter listed for continuity and consideration of warranty.
2. Unless otherwise specified, furnish five-knuckle as specified; button tip, full mortise template type hinges with non-rising loose pins.
3. Out-swinging exterior doors to be furnished with hinges of solid bronze with non-removable pins (NRP).
4. Interior doors to be furnished with wrought steel, polished and plated to match specified finishes.
5. Furnish three hinges up to 90" high and one additional hinge for every 30" or fraction thereof.
6. Furnish standard weight hinges on doors up to 36" in width, and extra heavy weight on doors exceeding 36", or as indicated in the hardware schedule.
7. Furnish three 4-1/2" x 4-1/2" for all 1-3/4" thick doors up to 36" wide, and four 5" x 4-1/2" over 36" wide.
8. Where required, furnish hinges of sufficient width to clear trim and/or permit the door to swing 180 degrees as required by the specific opening.
D. Cylindrical Locks
1. All locksets, latchsets, trim, and cylinders to be of one (1) manufacturer as hereafter listed for continuity of design and consideration of warranty.
2. Locksets shall be per Appendix 3a.
3. Locksets and latches shall be heavy duty cylindrical type. Latchbolts shall have minimum of 1/2" projection.
4. Locks and latchsets shall be constructed with thru-bolted design and independent spring cartridge system for lever stability and operation.
5. Provide curved lip strikes with wrought boxes. Strikes shall be of sufficient length to protect trim or the inactive leaf of a pair of doors.
E. Storefront Systems
1. Hardware shall be as listed in the hardware sets.
F. Exit Devices
6. All exit devices, lever trim, and cylinders to be of one (1) manufacturer as hereafter listed and in the hardware sets for continuity of design and consideration of warranty.
7. Exit devices to be "UL" listed for life safety. All exit devices for labeled doors shall have "UL" label for "Fire Exit Hardware". All devices mounted on labeled wood doors are to be thru-bolted or per the manufacturer's listing requirements. All devices to conform to NFPA 80 and 101 requirements.
8. All exit devices to be of a heavy duty, chassis mounting design, with one piece removable covers, eliminating necessity of removing the device from the door for standard maintenance.
9. All trim to be thru-bolted to the lock stile case.
10. Lever trim to be the same as specified with locksets.
11. Exit devices shall be push pad devices finished to match that of the locksets. Push pad to be high impact resistant black lexan with a maximum 3" projection.
12. Rail assemblies of all exit devices to be of brass or bronze base material, plated to standard architectural finishes, or solid stainless steel, as required in the hardware schedule. Painted or anodized aluminum finishes will not be considered acceptable for heavy duty usage on this project.
G. Closers
1. All closers to be the product of a single manufacturer for continuity of design and consideration of warranty.
2. Delayed action (DA) required at restroom doors.
3. Closers shall be surface mounted, hydraulic type, with high strength cast case. Full rack and pinion constructed of heavy steel.
4. Size all closers in accordance with the manufacturer's recommendations at the building site.
5. Closers to have adjustable spring power, which allows for closer sizing. Closers to have separate tamper resistant, noncritical regulating screw valves for closing speed, latching speed and backcheck control as standard features.
6. Closer arms to be forged steel, interchangeable with all closers specified on this project for simplification of future Owner maintenance considerations.
7. Supply appropriate arm assembly for each closer so that closer body and arm are mounted on non-public side of door opening and on the interior side of exterior openings, except where otherwise detailed.
8. Furnish closers with special application and heavy-duty arms as specified in the hardware schedule or as otherwise called for to insure a proper-operating, long-lasting opening.
9. All closers to be rectangular, full cover type of nonferrous, noncorrosive material painted to match lockset finishes.
H. Door Stops
1. Place door stops in such a position that they permit maximum door swing, but do not present a hazard or obstruction.
I. Thresholds and Gasketing
1. All thresholds must be in accordance with the requirements of the ADA and ANSI A117.1.
a. Furnish thresholds with machine screws and lead anchors. Furnish all necessary anchoring devices for gasketing and seal.
b. Thresholds may require modification depending on final drawings and frame/floor details. Verify with Architect before ordering material.
2.2 KEYING
A. Furnish keys for all locks at time of turnover to Center Manager. Center Manager will be responsible for rekeying at time of turnover.
2.3 FINISHES
A. Special care shall be taken to coordinate the finish of the various manufacturers to insure a uniform finish. This finish shall match the finish of the locksets.
1. Plated hardware shall be BHMA626 (US26D) or as detailed in US32D.
B. Painted hardware items shall be lacquered to closely match plated hardware.
PART 3 - EXECUTION
3.1 EXECUTION INSPECTION
A. After installation has been completed, FedEx Office Project Manager will check the operation and adjustment of all hardware items. Recommended hardware adjustments shall be made by the Contractor/Installer.
3.2 INSTALLATION
A. Installation of finish hardware is specified under other sections. However, the following requirements apply to the work as follows:
1. Hardware shall be installed by a Qualified Mechanic skilled in the application of institutional grade builders hardware.
2. Install all hardware in full compliance with Manufacturer's instructions.
3. When cutting and fitting is required to install hardware onto or into surfaces which are to be painted or finished, install each item completely and then remove during application. After completion, reinstall each item.
4. Care shall be exercised not to mar or damage adjacent work.
5. Damaged work shall be repaired or replaced to the satisfaction of the FedEx Office Representative.
6. Provide adequate backing in stud partitions for the attachment of all respective finish hardware.
7. If door swing is changed from original drawings during construction, the contractor shall make necessary changes at no cost to FedEx Office.
8. Latches and bolts shall be installed to automatically engage strikes, whether activated by closers or manual push. In no instance should unusual manual pressure be required to engage latch or bolt in strikes.
9. Install locks with keyways in proper position, with levers, roses, and/or escutcheons firmly affixed. Adjust strikes after silencers and/or seal are in place.
10. Predrill pilot holes in wood for screws. Drill and tap for surface mounted hardware on metal. Set hinge leaf snug and flat in mortises, turn screws to flat seat (do not drive).
11. Closers are to have opening force adjusted so as to comply with current applicable handicapped accessibility requirements as follows:
a. Interior doors 5lbs. maximum pressure to operate; exterior doors 8-1/2 lbs. maximum pressure; fire doors 15 lbs. maximum pressure.
12. Mount closers and overhead stops/holders in accordance with the manufacturer's template for the degree of swing indicated on the Drawings (180 degree swing where conditions allow).
B. Hardware Locations: All hardware to be mounted between 30" and 44" in California (48" elsewhere). Review mounting locations with FedEx Office before issuing templates and door/hardware purchase orders. In general, mounting locations to be similar to SDI recommendations.
C. Threshold and Perimeter Seal:
12. Cut and fit thresholds to profile of door frames, with mitered corners and hairline joints. On exterior doors, set thresholds in a bed of sealant.
13. Before installation, carefully read manufacturer's instructions to assure tight and contiguous seal at the perimeter and corners of doors and frames.
14. Depending on final drawings and conditions, specified thresholds are subject to modification.
3.3 ADJUSTING AND CLEANING
A. At final completion, all hardware shall be left clean and free from disfigurement. Contractor shall make a final adjustment to all door closers and other items of hardware. Where hardware is found defective, repair or replace or otherwise correct as directed.
B. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Adjust hardware so that moving parts operate freely, without bind, or excessive play. Hardware shall be free of paint, corrosion, or damage of any kind.
3.4 PROTECTION
A. The Contractor is responsible for the proper protection of all items of hardware until FedEx Office accepts the project as complete.
END OF SECTION 08710

SECTION 09260 - GYPSUM BOARD ASSEMBLIES
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Fire resistant type gypsum board, joint treatment products and accessories as indicated on Drawings.
B. Fire-Resistance-Rated Assemblies: Provide materials and construction identical to assemblies tested according to ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
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. Perform Work in accordance with Gypsum Association Standards GA201 - Gypsum Board for Walls and Ceilings, GA216 - Recommended Specifications for the Application and Finishing of Gypsum Board and ASTM Standard C 840 - Specification for Application and Finishing of Gypsum Board.
C. Fire-Test-Response Characteristics: Where fire-rated gypsum board assemblies are indicated, provide materials and construction identical to those of assemblies tested for fire resistance per ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
D. Fire Resistance Ratings: As indicated by reference to Gypsum Association File Numbers in GA-600 "Fire Resistance Design Manual" or to design designations in UL "Fire Resistance Directory" or in the listing of another testing an inspecting agency acceptable to authorities having jurisdiction.
E. Use each type of gypsum board and other products and finishing material from one manufacturer that either supplies gypsum board and other panel products or from a manufacturer acceptable to the gypsum board manufacturer.
PART 2 - PRODUCTS
2.1 METAL FRAMING AND SUPPORTS
A. Manufacturers:
1. Clark Steel Framing.
2. Dale/Incor.
3. Dietrich Industries, Inc.
B. Suspended and Furred Ceilings: Comply with ASTM C 645 and ASTM C 754.
C. Partitions: Comply with ASTM C 645.
D. Slip Tracks:
1. SLP-TRK; Dietrich Industires, Inc.
2. Verti-Clip; The Steel Network; (919) 845-1025 or (888) 474-4876.
3.
E. Track Connections to Concrete Slab Floors:
1. Hilti Drywall Track Pins; (800) 879-8000 or www.us.hilti.com
a. X-ZF 22 P8T
b. X-ZF 14 THP
2. Simpson Strong Tie; (800) 999-5099 or www.simpsonanchors.com
a. PDP-100
b. PDPJ-22
3. Powers Fowl Trak-IT Pins; (914) 235-6300 or www.powers.com
a. .300 Head Drive Pins
b. 8mm Head Drive Pins
4. ITW/Ramset/Redhead TrakFast Pins; (800) 348-3231.
a. FPP034B
b. FPP078
2.2 GYPSUM BOARD
A. Manufacturers:
1. Domtar Gypsum.
2. Georgia-Pacific Corp.
3. Gold Bond Building Products Div., National Gypsum co.
4. United States Gypsum co.
B. Gypsum board products in maximum lengths available to minimize end-to-end butt joints.
1. Fire Rated type: Type "X", 5/8" thick with tapered edges, meeting requirements of ANSI/ASTM C 36. Use in both dry and moisture resistant assemblies.
2. Moisture Resistant type: Type "X" 5/8" minimum thick with tapered edges meeting requirements of ASTM C 630 unless otherwise indicated.
3. Ceiling Surfaces: Sag-resistant type, Type "X" 5/8" minimum thick with tapered edges meeting requirements of ANSI/ASTM C 36 unless otherwise indicated.
4. Fire-Rated Exterior Gypsum Soffit Board: Type "X", 5/8" thick with tapered edges, meeting requirements of ANSI/ASTM C 931 or C 630. Use in both dry and moisture resistant assemblies; elsewhere use either standard or type "X" or moisture resistant gypsum wallboard as required.
2.3 ACCESSORIES
A. Accessories: United States Gypsum or Gold Bond Building Products system of components and perforated tape.
1. Corner Bead: Formed galvanized steel angle, minimum base steel 0.014" thick, and complying with ASTM Standard C 1047.
2. Casing Bead: Formed galvanized steel trim, minimum base steel 0.014" thick, and complying with ASTM Standard C 1047.
3. Screws: Type "S" or "W" Bugle Head Screws complying with ASTM Standard C 954 or C 1002 or both with heads, length, threads, points, and finish as recommended by the manufacturer.
4. Joint Materials: Conform to ANSI/ASTM Standard C475 or Gypsum Association Standards GA 201 and GA 216; reinforcing tape, joint compound, adhesive and water.
B. Miscellaneous Materials: Auxiliary materials for gypsum board construction that comply with referenced standards.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install steel framing to comply with ASTM C 754 and with ASTM C 840 requirements that apply to framing installation.
1. Isolate steel framing from building structure, except at floor, to prevent structural movement from transferring loading to partitions.
2. Where studs are installed directly against exterior walls, install asphalt felt strips or foam gaskets between studs and wall.
B. Install and finish gypsum panels to comply with ASTM C 840 and GA-216.
1. Framing members:
a. Examine all surfaces to receive gypsum board, and make certain that framing is plumb and true.
b. The fastening surface of any framing or furring member shall not vary more than 1/8" from the plane of faces of adjacent framing or furring members.
2. Cutting:
a. Cut gypsum board by scoring or by sawing, working from the face side. When cutting by scoring, the paper face shall be cut with a knife.
b. Neatly cut gypsum board to fit all outlets and switch boxes. Where gypsum board meets projecting surfaces, scribe and cut neatly.
3. Application:
a. Apply single-layer gypsum board with long dimension parallel to framing members, and all abutting ends over framing members. Stagger end joint.
b. Provide moisture resistant gypsum board on surfaces within a 48 inch radius of a water source.
c. Screw spacing: Space screws at minimum of 8" on center around the perimeter and 12" on center on the intermediate studs. Space screws as required to meet fire rating requirements.
d. Gypsum board of the maximum practical length shall be used to minimize end joints. All end joints shall be neatly filed and staggered.
e. Joints on opposite side of the partitions shall be so arranged as to occur on different studs.
f. At door openings, cut gypsum board so that no joints occur within 12" of the upper corners of door openings.
g. Metal trim:
1) Install securely, plumb, and true in accordance with manufacturer's instructions.
2) Provide metal corner bead at all external angles.
3) Provide metal edge trim at all exposed edges of gypsum board face layer.
4. Finish: All walls shall be skim-coated to provide a smooth, texture-free finish.
C. Gypsum Board Installation:
1. Cut gypsum board by scoring or by sawing, working from the face side. When cutting by scoring, the paper face shall be cut with a knife.
2. Neatly cut gypsum board to fit all outlets and switch boxes. Where gypsum board meets projecting surfaces, scribe and cut neatly.
3. Apply single-layer gypsum board with long dimension parallel to framing members and all abutting ends over framing members. Stagger end joint.
4. Fasten gypsum board in place to wood or metal furring or framing with Bugle Head screws.
5. Screw Spacing: Space screws at minimum 8" on center around the perimeter and 12" on center on the intermediate studs. Space screws as required to meet fire-rating requirements.
6. Gypsum board of the maximum practical length shall be used to minimize end joints. All end joints shall be neatly filed and staggered. Joints on opposite side of the partitions shall be so arranged as to occur on different studs.
7. At door openings, cut gypsum board so that no joints occur within 12" of the upper corners of door openings.
8. Apply and finish gypsum board in accordance with GA 201, and GA 216, and per manufacturer's instructions. Fire rated assemblies (if any) must be finished as required to meet required rating.
9. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.
10. Tape, fill, and sand-exposed joints, edges, and corners to produce smooth surface ready to receive finishes.
11. Feather coats onto surfaces so that camber is maximum 1/16".
12. Tolerances: Maximum variation from true flatness: 1/8" in 10' in any direction.
END OF SECTION 09260

SECTION 09310 - CERAMIC TILE
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Floor Tiles: Static coefficient of friction not less than 0.6 for level surfaces and 0.8 for ramps, per ASTM C 1028.
PART 2 - PRODUCTS
2.1 CERAMIC TILE
A. Ceramic tile that complies with standard grade requirements of ANSI A137.1, "Specifications for Ceramic Tile." For product specifications, see Description of Finish Materials and Finish Schedule on Drawings.
B. Tile trim units that match characteristics of adjoining flat tile.
2.2 INSTALLATION MATERIALS AND ACCESSORIES
A. Setting and Grouting Materials: Comply with material standards in ANSI's "Specifications for the Installation of Ceramic Tile" that apply to materials and methods indicated.
B. For transitions from ceramic tile to carpeting, provide Schluter Systems extruded profiles.
1. Stepless transition: RENO-TK.
2. Transition to 1/4 inch tile: Item AETK 60 with anodized aluminum finish.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Comply with tile installation standards in ANSI's "Specifications for the Installation of Ceramic Tile" that apply to materials and methods indicated.
B. Comply with TCA's "Handbook for Ceramic Tile Installation."
1. Floor Tile Installation Method: TCA F113 (thin-set mortar bonded to concrete slab).
2. Wall Tile Installation Method: TCA W243 (thin-set mortar bonded to gypsum board).
C. Lay tile in grid pattern, unless otherwise indicated. Align joints where adjoining tiles on floor, base, walls, and trim are the same size.
D. 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.
E. Do not apply sealer to ceramic tile finish.
END OF SECTION 09310

SECTION 09511 - ACOUSTICAL PANEL CEILINGS
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Acoustical Panel Ceilings: ASTM E 1264, Class A materials, tested per ASTM E 84.
B. Fire-Rating Ceiling Assemblies: Tested per ASTM E 119, and listed in UL's "Fire Resistance Directory," in ITS' "Certification Listings," or in the listing of another qualified testing and inspecting agency.
PART 2 - PRODUCTS
2.1 ACOUSTICAL PANELS
A. Existing Acoustical Ceilings: Match existing in texture, shape, and color as closely as possible to provide an appearance indistinguishable from existing, unless other indicated on Drawings.
B. New Acoustical Ceilings: For product specification, see Description of Materials and Finish Schedules on Drawings.
2.2 CEILING SUSPENSION SYSTEM
A. Direct-hung; ASTM C 635, intermediate-duty structural classification.
B. Attachment Devices: Sized for 5 times the design load indicated in ASTM C 635, Table 1, Direct Hung, unless otherwise indicated.
PART 3 - EXECUTION
3.1 INSTALLATION OF CEILING SUSPENSION SYSTEM
A. Seismic Categories A & B: Comply with ASTM C 636.
B. Seismic Category C: Comply with CISCA recommendations for areas subject to light to moderate seismic activity (old zones 0-2).
C. Categories D, E, and F: Comply with CISCA recommendations for areas subject to severe seismic activity (old zones 3-4).
1. Additional requirements beyond CISCA:
a. Heavy duty T-bar grid system.
b. Perimeter angle shall be not less than 2 inches.
c. Grid shall be attached at two adjacent walls.
d. Opposite walls must have 3/4 inch clearance.
e. Ceiling areas over 1000 sq ft must have horizontal restraint wires or rigid bracing.
f. Ceiling areas over 2500 sq ft must have seismic separation joints (expansion joints) or full height partitions.
g. Unbraced ceilings must have 2 inch oversized trim rings for sprinklers and other penetrations.
h. Changes in ceiling plane must have positive bracing.
i. Cable trays and electrical conduits must be independently supported and braced.
j. Suspended ceilings shall be subject to special inspection.
D. Additional Requirements:
1. Free floating architectural components must have adequate "rattle room".
a. Minimum 12 inch clearance.
b. Must permit hangers to swing to a 45 degree angle without striking another object.
2. Suspension system integrity:
a. Minimum grid connection strength:
1) Seismic Design Category C: 60 lbs.
2) Seismic Design Categories D, E & F: 180 lbs.
3) Heavy duty tees.
b. Hanger wire requirements:
1) All Seismic Design Categories:
a) Connection to structure: Min. 100 lbs.
b) Min 12 ga at 4 foot spacing.
c) Min. 10 ga at 5 foot spacing.
d) Plumb within 1 in 6.
c. Splay bracing:
1) Seismic Design Category C: Not required unless ceiling weight exceed 2.5 lbs/sq ft
2) Seismic Design Categories D, E, and F:
a) 4-wire clusters with compression post required in areas over 1000 sq ft.
b) Minimum 200 lb connection strength.
c) Start within 6 feet of corner.
d) 12 feet on center.
d. Light fixtures in all Seismic Design Categories:
1) Less than 56 lbs.
a) 2 connectors attaching to grid.
b) 2 slack wires.
2) More than 56 lbs.
a) 2 connectors attaching to grid.
b) independent support to structure.
e. Mechanicals for all Seismic Design Categories:
1) Less than 20 lbs: 2 connectors attaching to grid.
2) More than 20 lbs but less than 56 lbs: 2 connections attaching grid and 2 slack wires.
3) More than 56 lbs: Independent support to structure.
f. Partition attachment:
1) Seismic Design Catetory C: Not permitted; ceiling must be free to float 3/8 inch in all directions.
2) Seismic Design Categories D, E, and F: Permitted with these qualifications:
a) May not be over 9 feet high or brace independently.
b) Seismic lateral force may not exceed 5 lbs/ sq ft.
c) Areas over 2500 sq ft must have seismic separation joints (expansion joints).
3. Perimeter panel retention:
a. Prevent grid from spreading at perimeters. In all Seismic Design Categories, spacer bars or some other method required at all walls.
b. Perimeter wires:
1) Seismic Design Category C: Not required if molding has minimum 7/8 inch horizontal flange.
2) Seismic Design Categories D, E, and F: Required at all cut ends; within 8 inches of the wall.
c. Wall molding:
1) Seismic Design Category C:
a) Minimum 7/8 inch horizontal flange or add perimeter wires.
b) Grid attachment to molding not permitted.
c) 3/8 inch clearance at all walls.
2) Seismic Design Categories D, E, and F:
a) Minimum 2 inch horizontal flange.
b) Grid attachement required at two adjacent walls.
c) 3/4 inch clearance at remaining walls.
END OF SECTION 09511

SECTION 09542 - FIBER REINFORCED PLASTIC COATED PANELS

PART 1GENERAL

1.1 SUMMARY
A. Section Includes:
1. Glass fiber reinforced plastic (FRP) coated panels.
2. FRP accessories.

B. Related Sections:
1. Section 09260 - Gypsum Board Systems: Gypsum board substrate.

1.2 QUALITY ASSURANCE
A. Regulatory Requirements:
1. Surface Burning Characteristics in Accordance with ASTM E-84 for Class C finish:
a. Flame Spread: Less than 200.
b. Smoke Density: Less than 450.

PART 2 PRODUCTS

2.1 FIBER REINFORCED PLASTIC COATED PANELS
A. Fiberglass Reinforced Plastic Coated Panel: UL flame spread Class C. Color to be selected by Architect
1. Kemlite Glasboard P Panels; Kemlite Company, Inc.
2. Structoglass Panels; Sequentia Incorporated.
3. Marlite Brand FRP; Marlite.
4. Kal-Lite; Kalwall Corporation

B. Where code requires Class A panels, provide the following:
1. Kemlite Fire-X Glasbord; Kemlite Company, Inc.
2. Structoglas Pyro-Panl; Sequentia Incorporated.
3. Marlite Brand Class A/1 Fire Rated FRP Panels; Marlite.
4. Kal-Lite LF&S; Kalwall Corporation.

C. Wall Trim: Manufacturer's standard moldings and trims.
1. Exception: Provide large 2 inch outside corner "M-960, manufactured by Marlite, in color to match FRP. Install with glue and nails.

D. Fasteners: Non-corroding truss head nylon drive rivets or stainless steel screws.

PART 3 EXECUTION

3.1 EXAMINATION
A. Examine surfaces and adjacent areas where products will be installed and verify that surfaces conform to product manufacturer's requirements for substrate conditions. Do not proceed until unsatisfactory conditions have been corrected.

B. Beginning of installation indicates acceptance of substrate conditions.

3.2 PREPARATION
A. Prepare substrate for product installation in accordance with manufacturer's published instructions.

3.3 INSTALLATION
A. Install FRP wall panels in accordance with manufacturer's published instructions.
1. Seal joints well at joints before applying trim.

B. Prefit each panel before securing in place. Cut panels with carbide-tipped power saw or swivel-head shear.

C. Provide manufacturer's recommended spacing between abutting panel ends, edges and trim. Provide minimum 1/8 inch space around pipes, electrical fittings, obstructions and other items penetrating panels. Fill joints with sealant.

D. Gypsum Board Substrate: Apply adhesive to gypsum board substrate and to panel backs as recommended by manufacturer with V-notch spreader. Provide 100 percent coverage of adhesive.

E. Install accessory panel trim pieces concurrently with installation of panels. Mitre cut accessory panel trim at corners to provide smooth transition. Set trim attached to adjacent panel ends and edges and seal with sealant.

F. Seal corner seams, and base junctures, and junctures between panels and wall with sealant. Remove excess sealant during installation.

G. Provide sealant around all openings, corners, and joints.

3.4 FIELD QUALITY CONTROL
A. Inspect fiber reinforced plastic coated panel installation, accessories, and fastening to substrate.

B. Correct deficiencies in Work which inspection indicates are not in compliance with Contract requirements.

END OF SECTION 09542

SECTION 09651 - RESILIENT TILE FLOORING
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: Product Data and color Samples.
B. Extra Materials: Deliver to Owner at least 1 box for each 50 boxes or fraction thereof, of each type and color of resilient floor tile installed.
PART 2 - PRODUCTS
2.1 RESILIENT FLOORING AND BASE
A. Flooring: For Vinyl Composition Tile (VCT) product specifications and Luxury Vinyl Tile, see Description of Finish Materials and Finish Schedule on Drawings.
B. Resilient Base: 4 inch vinyl base, Type TP, black; Mannington.
2.2 INSTALLATION ACCESSORIES
A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement- or blended hydraulic cement-based formulation provided or approved by flooring manufacturer for applications indicated.
B. Adhesives: Water-resistant type recommended by manufacturer to suit resilient products and substrate conditions indicated.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Lay out tiles from center marks established with principal walls, discounting minor offsets, so tile widths at opposite edges of room are equal to one another and are at least one-half of a tile.
B. Roll tile in two directions with 100-lb roller after laying.
C. Do not scrub or wash floor for five days after installation.
D. Install resilient base per manufacturer's written instructions.
END OF SECTION 09651

SECTION 096513.23 RESILIENT STAIR TREADS
PART 1 - GENERAL
1.01 SECTION INCLUDES
A. Flooring and accessories as shown on the drawings and schedules and as indicated by the requirements of this section.
1.02 RELATED DOCUMENTS
A. Drawings and General Provisions of the Contract (including General and Supplementary Conditions and Division 1 sections) apply to the work of this section.
B. ASTM D2240 Standard Test Method for Rubber Property - Durometer Hardness
C. ASTM E648 Standard Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source
D. ASTM-2169 "Standard Specification Resilient Stair Treads".
1.03 RELATED SECTIONS
A. Other Division 9 sections for floor finishes related to this section but not the work of this section.
B. Division 3 Concrete; not the work of this section.
C. Division 6 Wood and Plastics; not the work of this section.
D. Division 7 Thermal and Moisture Protection; not the work of this section.
1.04 QUALITY ASSURANCE AND REGULATORY REQUIREMENTS
A. Select an installer who is competent in the installation of Mannington Rubber/Vinyl Stair Treads with acrylic adhesive.
B. If required, provide rubber/vinyl stair treads and accessories supplied by one manufacturer, including leveling and patching compounds, and adhesives.
C. If required, provide rubber/vinyl stair treads material to meet the following fire test performance criteria as tested by a recognized independent testing laboratory:
a. ASTM E 648 Critical Radiant Flux of 0.45 watts per sq. cm. or greater, Class I.
b. ASTM E 662 (Smoke Generation) Maximum Specific Optical Density of 450 or less.
1.05 SUBMITTALS
A. Submit shop drawings, seaming plan, coving details, and manufacturer's technical data, installation and maintenance instructions ("Mannington's Stair Tread Installation Instructions,") for flooring and accessories.
B. Submit the manufacturer's standard samples showing the required colors for rubber tile flooring and applicable accessories.
C. If required, submit the manufacturer's certification that the rubber/vinyl flooring has been tested by an independent laboratory and complies with the required fire tests.
1.06 ENVIRONMENTAL CONDITIONS
A. Deliver materials in good condition to the jobsite in the manufacturer's original unopened containers that bear the name and brand of the manufacturer, project identification, and shipping and handling instructions.
B. Store materials in a clean, dry, enclosed space off the ground, and protected from the weather and from extremes of heat and cold. Protect adhesives from freezing. Store rubber/vinyl stair treads, adhesives and accessories in the spaces where they will be installed for at least 48 hours before beginning installation.
C. Maintain a minimum temperature in the spaces to receive the rubber/vinyl stair treads and accessories of 65°F (18°C) and a maximum temperature of 85°F (29°C) for at least 48 hours before, during, and for not less than 48 hours after installation. Thereafter, maintain a minimum temperature of 55°F (13°C) in areas where work is completed. Protect all materials from the direct flow of heat from hot-air registers, radiators, or other heating fixtures and appliances.
D. Install rubber/vinyl stair treads and accessories after the other finishing operations, including painting, have been completed. Close spaces to traffic during the installation of the flooring. Do not install flooring over concrete slabs until they are sufficiently dry to achieve a bond with the adhesive, in accordance with the manufacturer's recommended bond and moisture tests.
PART 2 PRODUCTS
2.01 STAIR TREAD MATERIALS
D. Stair Tread: ColorScape, ColorSpec and One-Step Visually Impaired Abrasive Strip Safety Stair Treads
1. Manufacturer/Products: Mannington Commercial; Visually Impaired Abrasive Strip Safety Tread
2. Products/Description: Thermoset Rubber TypeTS ColorScape stair tread with highly visible, full 2 inch abrasive strip in contrasting or non-contrasting colors.
A. Thickness: 1/8" (3.2 mm)
B. Lengths: [3' (914.4 mm)], [4' [(1219.2 mm)], [5' (1524 mm)], [6' (1828.8 mm)]
C. Nose: Square
D. Tread Color: 901 Night Black.
E. Abrasive Strip Color: Yellow/ Black hazard striping. (Note: Coordinate contrasting colors when required to meet regulations).
E. Nosing:
1. Manufacturer: Mannington Commercial.
2. Products/Description: 557 Visual Safety; Color to match stair tread.
F. Riser:
Manlifacturer: Mannington Commercial.
2. Products/ Description: 7" Rubber Riser Type TP;
A. Color: 901 Night Black
B. Thickness: 0.085"
C. Length: 50' Coil Rolls
D. Height: 7" Coved
G. Stringer:
1. Manufacturer: Mannington Commercial.
2. Products/ Description:
A. Thickness: 0.085"
B. Length: 50' Coil Rolls
C. Height: 10"

2.03 ADHESIVES
Provide [Mannington MR-911 Acrylic Adhesive] for installation of the stair treads. Optional: Mannington Nose Filler is optional and not required [MR-715 Solvent-Free Epoxy Nose Filler] under the nosing.
2.04 ACCESSORIES
B. For patching, smoothing, and leveling monolithic subfloors (concrete, terrazzo, quarry tile, ceramic tile, and certain metals), provide Mannington [MVP-2023 Cement-Based Underlayment].
C. For sealing joints between the top of wall base or integral cove cap and irregular wall surfaces such as masonry, provide plastic filler applied according to the manufacturer's recommendations.
C. Provide transition/reducing strips tapered to meet abutting materials.
D. Provide threshold of thickness and width as shown on the drawings.
E. Provide resilient edge strips of width shown on the drawings, of equal gauge to the flooring, homogeneous vinyl or rubber composition, tapered or bullnose edge, with color to match or contrast with the flooring, or as selected by the Architect from standard colors available.

PART 3 EXECUTION -These guidelines do not supersede Mannington's Installation Instructions.
3.01 INSPECTION
A. Examine subfloors prior to installation to determine that surfaces are smooth and free from cracks, holes, ridges, and other defects that might prevent adhesive bond or impair durability or appearance of the flooring material.
B. Inspect subfloors prior to installation to determine that surfaces are free from curing, sealing, parting and hardening compounds; residual adhesives; adhesive removers; and other foreign materials that might prevent adhesive bond. Visually inspect for evidence of moisture, alkaline salts, carbonation, dusting, mold, or mildew.
C. Report conditions contrary to contract requirements that would prevent a proper installation. Do not proceed with the installation until unsatisfactory conditions have been corrected.
D. Failure to call attention to defects or imperfections will be construed as acceptance and approval of the subfloor. Installation indicates acceptance of substrates with regard to conditions existing at the time of installation.
3.02 PREPARATION
A. Smooth concrete surfaces, removing rough areas, projections, ridges, and bumps, and filling low spots, control or construction joints, and other defects with Mannington [MVP-2023 Cement-Based Underlayment] as recommended by the flooring manufacturer.
B. Remove paint, varnish, oils, release agents, sealers, and waxes. Remove residual adhesives as recommended by the flooring manufacturer. Remove curing and hardening compounds not compatible with the adhesives used, as indicated by a bond test or by the compound manufacturer's recommendations for flooring. Avoid organic solvents.
C. Vacuum or broom-clean surfaces to be covered immediately before the application of flooring. Make subfloor free from dust, dirt, grease, and all foreign materials.
3.03 INSTALLATION OF FLOORING
A. Install flooring in strict accordance with the "Mannington Rubber Stair Tread Installation Instructions".
B. Install flooring wall to wall before the installation of floor-set cabinets, casework, furniture, equipment, movable partitions, etc. Extend flooring into toe spaces, door recesses, closets, and similar openings as shown on the drawings.
C. If required, install flooring on pan-type floor access covers. Maintain continuity of color and pattern within pieces of flooring installed on these covers. Adhere flooring to the subfloor around covers and to covers.
D. Scribe, cut, and fit to permanent fixtures, columns, walls, partitions, pipes, outlets, and built-in furniture and cabinets.
E. Install flooring with adhesives, tools, and procedures in strict accordance with the manufacturer's written instructions. Observe the recommended adhesive trowel notching, open times, and working times.
3.04 INSTALLATION OF ACCESSORIES
A. Apply top set wall base to walls, columns, casework, and other permanent fixtures in areas where top-set base is required. Install base in lengths as long as practical, with inside corners fabricated from base materials that are mitered or coped. Tightly bond base to vertical substrate with continuous contact at horizontal and vertical surfaces.
B. Fill voids with plastic filler along the top edge of the resilient wall base or integral cove cap on masonry surfaces or other similar irregular substrates.
C. Place resilient edge strips tightly butted to flooring, and secure with adhesive recommended by the edge strip manufacturer. Install edge strips at edges of flooring that would otherwise be exposed.
D. Apply [butt-type] [overlap] edge strips where shown on the drawings, [before] [after] flooring installation. Secure units to the substrate, complying with the edge strip manufacturer's recommendations.
3.05 CLEANING AND PROTECTION
A. Perform initial maintenance according to the latest edition of the manufacturer's maintenance and warranty literature. Protect installed flooring as recommended by the flooring manufacturer against damage from rolling loads, other trades, or the placement of fixtures and furnishings.
END OF SECTION 096513.23

SECTION 09652 - SHEET VINYL FLOOR COVERINGS
PART 1 - GENERAL (Not applicable)
PART 2 - PRODUCTS
2.1 SHEET VINYL FLOOR COVERING
A. For product specifications, see Description of Finish Materials and Finish Schedule on Drawings.
2.2 INSTALLATION ACCESSORIES
A. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement- or blended hydraulic cement-based formulation provided or approved by floor covering manufacturer for applications indicated.
B. Adhesives: Water-resistant type recommended by manufacturer to suit sheet vinyl floor covering and substrate conditions indicated.
C. Cove Strip: 1-inch- radius support for integral flash cove base provided or approved by floor covering manufacturer.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Maintain uniformity of sheet vinyl floor covering direction, and match edges for color shading and pattern at seams.
B. Arrange for a minimum number of seams and place them in inconspicuous and low-traffic areas, but in no case less than 6 inches away from parallel joints in flooring substrates.
C. Where indicated, cove sheet vinyl floor coverings up vertical surfaces, over cove support strip, to form integral base of height indicated, with top edge butted against and covered by cap molding.
END OF SECTION 09652

SECTION 09680 - CARPET
PART 1 - GENERAL
1.1 SECTION REQUIREMENTS
A. Submittals: Submit manufacturer's product literature and installation instructions.
PART 2 - PRODUCTS
2.1 MATERIALS
A. One of the following carpets:
1. Carpet Tiles: 24 inch by 24 inch Enhnaced Texture Loop, Solution dyed; Mannington Commercial; Style: Variations II, Color: Hoochi Coochi Coo.
a. Adhesive: Manninton Commercial, MT711 resealable adhesive.
2. Carpet Tiles: 24 inch by 24 inch modular tufted loop; Mannington Commcercial; Style: Ruffian, Color: Granite.
a. Adhesive: Manninton Commercial, MT711 resealable adhesive.
B. Transition Strip: Mannington; Style: 152, Color: Black.
PART 3 - EXECUTION
3.1 INSTALLATION
A. Install in accordance with manufacturer's printed installation instructions packed with carpet tiles.
END OF SECTION 09680

PROJECT COORDINATOR

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