

SECTION 09110**METAL STUDS AND FURRING****PART 1 GENERAL****1.01 RELATED WORK**

- A. Gypsum wallboard.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Metal studs, runners, and accessories shall be standard products. Provide minimum 20 gage studs, and as otherwise indicated on drawings.
- B. Hat-shaped metal furring shall be 7/8" deep, 1-3/8" face width, 24 gage, with dimpled faces.

PART 3 EXECUTION**3.01 INSTALLATION**

- A. Anchor bottom runners 24" o.c. with stub nails, powder driven fasteners or fasteners as approved by the Architect for the location.
- B. The ceiling runners shall consist of one set of runners anchored to building structural members, structural metal roof decking or ceiling suspension system as appropriate for the locations and as detailed. The second set of ceiling runners shall be secured to the tops of studs and nested into the anchored set of ceiling runners with no fastenings of any type between the two sets of ceiling runners. The nested runners shall have free movement lengthwise and 1/4" gap between runners nested vertically, and restrained laterally by the nesting position.
- C. Position studs vertically in the runners, spaced no greater than 16" o.c. Anchor studs to runner flanges with special fasteners or by positive screw engagement with 3/8" type S pan-head screws through each stud flange and runner flange. Splice studs where required by nesting with minimum 8" lap and secured with two screws in each flange.
- D. At suspended ceilings provide 3-5/8" metal studs as primary furring members, spaced 4' o.c., suspended from structural building members with 8 gage galvanized steel wire hangers spaced 4' o.c. Install hat-shaped furring members for gypsum board ceilings spaced 24' o.c. and wire tied or clipped to the metal stud furring members.
- E. Install hat-shaped metal furring to furring members for ceilings to receive gypsum wallboard, tied to supporting members with two loops of 16 gauge galvanized wire and spaced 16" o.c. Install metal furring to concrete masonry units 16" o.c. vertically secured with concrete nails on alternate sides of the furring.
- F. Provide doubled studs at expansion joints occurring in partitions where indicated.

END OF SECTION

SECTION 09250
GYP SUM WALLBOARD

PART 1 GENERAL**1.01 WORK REQUIRED**

- A. Provide gypsum wallboard construction, with taping and spackling ready for finish painting where scheduled.

1.02 RELATED WORK

- A. Metal furring and studs.
- B. Painting and finishing.
- C. Acoustical insulation.

1.03 DELIVERY AND STORAGE

- A. Deliver materials in original, unopened packages. Store in enclosed space providing protection from damage and from the elements. Remove damaged or deteriorated materials from the premises.

1.04 ENVIRONMENTAL CONDITIONS

- A. During the heating season when installing gypsum drywall and joint finishing, maintain temperatures within the building of 55 to 70 deg. F. Provide ventilation to carry off moisture.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Gypsum board conforming with ASTM C 1396/1396M shall be 5/8" thick x 48" wide, tapered edge; lengths shall be such to minimize number of joints in the finished work.
- B. Provide 5/8" thick Type "X" gypsum board to provide Underwriters Laboratories Designs for fire-rated assemblies.
- C. Casing beads shall have 5/8" edge protection by thickness of gypsum board with expanded flange, 1-1/4" wide.
- D. Corner beads shall be fabricated from .014" galvanized steel, with 1-1/4" x 1-1/4" wings, maximum lengths.
- E. Joint reinforcement tape and joint compound conforming with ASTM C 475/ C475M, tape shall be perforated paper tape standard. Materials shall be manufactured by the gypsum board manufacturer.
- F. Screws for securing to metal studs and furring channels shall be 1-1/8" self-tapping bugle-head.

PART 3 EXECUTION**3.01 PREPARATORY WORK**

- A. Insure that items to be built into walls have been completed and approved before beginning work specified in this Section. Insure that electric boxes are located and that all penetrations that will require accommodation are installed.
- B. Inspect stud framing to insure that studs are located on 16" centers, true and plumb, and ready to receive gypsum board.
- C. Insure that acoustical and insulation batts are securely in place before covering the cavities.

3.02 ERECTION OF GYPSUM WALLBOARD

- A. Install gypsum board on ceilings before installing gypsum board on walls.
- B. Ends and edges of gypsum wallboard shall occur over furring or wall stud members, except when joints are at right angles to framing members as in horizontal application or when the end joints are to be back-blocked.
- C. To minimize end joints, use wallboard of maximum practical lengths. Bring boards into contact, but do not force into place. Where ends or edges abut, they shall be back-blocked. Stagger end joints.
- D. Space fastenings not less than 7" o.c. on ceilings and 8" o.c. on walls; space 3/8" from edges and ends of wallboard. Fasteners shall not be staggered on adjoining edges or ends. While the fasteners are being driven, the wallboard shall be held in firm contact with the underlying support. Attachment shall proceed from central portion of the wallboard toward ends and edges. Drive fasteners home with the heads slightly below the surface of the gypsum wallboard. Do not break the paper face.
- E. At laminated construction, place first layer of gypsum wallboard with long dimension perpendicular to supports, fastened as specified for single layer application. Apply second layer with laminating adhesive or the approved joint compound spread with notched spreaders, size and spacing as recommended by the compound manufacturer to provide coverage. Place boards in place vertically with all joints offset from the previous layer, adhesive bonded, and screw fasten at edges only.
- F. Where partitions extend to the underside of metal decking, scribe the gypsum wallboard to fit the flutes of the decking. Where two hour fire rating is required laminate a second layer of gypsum wallboard, similarly scribed, to the first ply, extending not less than 4" below the underside of the metal decking. The assembly shall provide complete closure.

3.03 ACOUSTICAL TREATMENT

- A. Partitions indicated shall receive sound attenuation treatment, including acoustical sealants. Provide a bead of acoustical sealant around all penetrations through gypsum wallboard partitions. Apply buttered coat of sealant on backs of outlets and switch boxes occurring in partitions indicated to be acoustically treated. Provide bead of sealant against runner members before gypsum board sheets are installed.

3.04 TRIM

- A. Provide metal edge trim at perimeters of wallboard areas where they abut other construction. At exposed exterior corners, provide metal corner beads. Edges of wallboard having metal trim shall be fastened through flanges of metal with the specified fasteners.

3.05 FINISHING GYPSUM WALLBOARD

- A. Mix joint compound in compliance with the manufacturer's printed instructions.
- B. Apply compound in a thin uniform layer to all joints and interior corners to be reinforced. Immediately apply reinforcing tape centered over the joint and seated into compound. Insure that not less than 1/64" or more than 1/32" thickness of compound remains under the tape for bond in order to comply with the manufacturer's printed recommendations. Follow immediately with a thin skim coat to embed tape. Fold and embed tape in all interior corners to provide a true 90 deg. angle.
- C. Apply second coat of joint compound over embedding coat, filling panel taper flush with the surface and feather out at least 2" beyond the first coat. On joints with no taper, provide at least 4" taper on either side of tape. Apply finish coat 2" beyond second coat.
- D. Apply compound to fastener depressions, feathered out, until a total of three coats are applied.

- E. Beads and trim shall be covered with a coat of compound feathered out. Subsequent coats shall be extended slightly past the previous coat.
- F. Each application of finishing compound shall be allowed to dry before applying subsequent coats. Sand between coats to remove rough spots for a smooth finish. Finished coat shall be smooth, ready for paint application, and with no abrasion of the paper surface.

3.06 PATCHING

- A. Before finishes area applied by the painter, provide patching of gypsum drywall surfaces that have become damaged. Finished surfaces, after patching, shall be smooth, without protrusions, loose tape or trim edges.

END OF SECTION

SECTION 09510**ACOUSTICAL CEILINGS****PART 1 GENERAL****1.01 RELATED WORK**

- A. Lighting fixtures and connections under Division 16.
- B. Engraved plastic identification plates to locate concealed items above the ceiling will be provided under Division 15.

1.02 SUBMITTALS

- A. Submit complete shop drawings for each acoustical ceiling system for Architect's approval before starting installation.

1.03 REPLACEMENT UNITS

- A. Furnish for Using Agency's use ten replacement acoustical ceiling panels of each type. Units shall be furnished in a protective carton.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. The suspension system shall have galvanized 15/16" wide exposed tee, providing a maximum deflection of 1/360th of span. Exposed flanges shall have factory applied flat, baked enamel finish in color as approved by the Architect from the manufacturer's standard colors. Provide fire rated suspension system for rated ceiling areas.
- B. Acoustical Units - General: ASTM E 1264, Class A.
 - 1. Acoustical Panels Type 1: Painted mineral fiber, ASTM E 1264 Type III, with the following characteristics: Basis of design Armstrong, Tundra - tegular.
 - a. Other manufacturers meeting these specifications and are approved for use:
 - 1) Celotex.
 - 2) USG.
 - b. Size: 24 x 24 inches.
 - c. Thickness: 3/4 inches.
 - d. Light Reflectance: 80-90 percent, determined as specified in ASTM E 1264.
 - e. NRC Range: 0.60 to 0.75, determined as specified in ASTM E 1264.
 - f. Ceiling Attenuation Class (CAC): 33-35, determined as specified in ASTM E 1264.
 - g. Edge: Reveal edge, beveled tegular.
 - h. Surface Color: White.
 - i. Suspension System: Exposed grid.
 - j. Mold/Mildew Inhibitor: Both front and back treated with biocide, determined as specified in ASTM D 3273.
 - k. Stability: Humidity resistant up to 120 degrees F.

PART 3 EXECUTION**3.01 INSTALLATION**

- A. Provide threaded fasteners, angles, channels and supplementary framing approved on shop drawings to permit spacing of ceiling hangers within limitations imposed by the structural components of the ceiling systems.
- B. Locate fasteners to provide hanger spacing not over five feet o.c. along the line of the main runners, or provide main runners of size to carry applied loads based on other hanger spacings.
- C. Provide two additional hanger wires for each light fixture.

- D. Install suspension systems level along a line perpendicular to the slant within 1/8" in 12'-0". Space suspension members to receive the specified tile.
- E. Provide fasteners, angles, channels, and supplementary framing approved on shop drawings to provide support of equipment and light fixtures indicated to be installed within the acoustical tile ceilings.
- F. Install wall moulding on perimeter walls at finish ceiling height. Apply continuous bead of acoustical sealant between vertical leg of angle and wall before fastening. Place the bead at the upper edge of the angle to prevent extrusion onto visible surfaces.
- G. Coordinate installation of acoustical ceiling panels with the work of installing acoustical batts over the ceilings where indicated. Insure that batts are supported by the ceiling grid hanger wires and not on the acoustical panels.
- H. Install plastic identification plates on ceiling grids, provided under Division 15, at locations directed by the Architect. Fasten each plate with two round-head sheet metal screws.

3.02 CLEANING

- A. After installation is completed, clean or replace soiled and discolored surfaces and replace damaged acoustical tile.

END OF SECTION

SECTION 09650**RESILIENT FLOORING AND BASE****PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Resilient linoleum sheet flooring
 - 1. Homogeneous linoleum sheet flooring, adhesive and heat welded seams installation.
- B. Vinyl plank flooring
- C. Vinyl tile Tile
- D. Resilient base

1.02 REFERENCES

- A. American Society for Testing and Materials (ASTM):
 - 1. ASTM E 648-88 Test Method for Critical Radiant Flux of Floor Covering Systems Using a Radiant Energy Source.
 - 2. ASTM E 662-83 Test Method for Specific Density of Smoke Generated by Solid Materials.
 - 3. ASTM F 710-86 Practice for Preparing Concrete Floors and Other Monolithic Floors to Receive Resilient Flooring.
 - 4. ASTM F 970-87 Test Method for Static Load Limit.
- B. Centiva Installation Guidelines (Revised 2/19/09) available at www.centiva.com

1.03 SUBMITTALS

- A. See Section 01300 - Administrative Requirements, for submittal procedures.
- B. Product Data: Submit product data, including manufacturer's SPEC-DATA product sheet, for specified products.
- C. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, accessories, finish colors, patterns and textures.
- D. Samples: Submit selection and verification samples for finishes, colors, and textures.
- E. Closeout Submittals: Submit the following:
 - 1. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products, and precautions against cleaning materials and methods detrimental to finishes and performance.
 - 2. Warranty: Warranty documents specified herein.

1.04 QUALITY ASSURANCE

- A. Installer Qualifications: Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.
 - 1. For Forbo roll and tile products, engage installer certified as a Forbo "Master Mechanic."
 - 2. Certificate: When requested, submit certificate indicating qualification.
- B. Regulatory Requirements:
 - 1. Fire Performance Characteristics: Provide resilient linoleum sheet flooring with the following fire performance characteristics as determined by testing products in accordance with ASTM method indicated below by a certified testing laboratory or another testing and inspecting agency acceptable to authorities having jurisdiction:
 - a. Critical Radiant Flux: Class 1 Rating per NFPA 253 (ASTM 648) (0.45 watts/cm² or greater).
 - b. Smoke Density: Less than 450 per NFPA 258 (ASTM E 662).

C. Regulatory Requirements:

1. Fire Performance Characteristics: Provide resilient linoleum sheet flooring with the following fire performance characteristics as determined by testing products in accordance with ASTM method indicated below by a certified testing laboratory or another testing and inspecting agency acceptable to authorities having jurisdiction:
 - a. Critical Radiant Flux: Class 1 Rating per NFPA 253 (ASTM 648) (0.45 watts/cm² or greater).
 - b. Smoke Density: Less than 450 per NFPA 258 (ASTM E 662).

1.05 DELIVERY, STORAGE, AND HANDLING

- A. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- C. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.
 1. Material should be stored in areas that are fully enclosed, weathertight with the permanent HVAC system set at a uniform temperature of at least 68 degrees F (20 degrees C) for 72 hrs. prior to, during and after installation.

1.06 PROJECT CONDITIONS

- A. Environmental Requirements/Conditions: In accordance with manufacturer's recommendations, Areas to receive flooring shall be clean, fully enclosed, weathertight with the permanent HVAC set at a uniform temperature of at least 68 degrees F (20 degrees C). The flooring material should be conditioned in the same manner. Maximum temperature should not exceed 100 degrees F after installation.
- B. Temperature Requirements: Maintain air temperature in spaces where products will be installed for time period before, during, and after installation as recommended by manufacturer.
 1. Temperature Conditions: 68 degrees F (20 degrees C) for 72 hours prior to, during and after installation.
- C. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction

1.07 SEQUENCING AND SCHEDULING

- A. Finishing Operations: Install tile flooring after finishing operations, including painting and ceiling operations, have been completed.
- B. Concrete Curing: Do not install tile flooring over concrete substrates until substrates have cured and are dry to bond with adhesive as determined by resilient flooring manufacturer's recommended bond, moisture test, and pH test.

1.08 WARRANTY

- A. See Section 01780 - Closeout Submittals, for additional warranty requirements.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents. Correct defective Work within a five year period after Date of Substantial Completion.

1.09 MAINTENANCE

- A. Extra Materials: Deliver to Owner extra materials from same production run as products installed. Package products with protective covering and identify with descriptive labels. Comply

with Division 1 Closeout Submittals (Maintenance Materials) Section.

1. Quantity: Furnish quantity of flooring units equal to 5% of amount installed.
2. Delivery, Storage and Protection: Comply with Owner's requirements for delivery, storage and protection of extra materials.

PART 2 PRODUCTS

2.01 RESILIENT LINOLEUM SHEET FLOORING

- A. Manufacturer: Forbo Linoleum, Inc.
1. Proprietary Product(s): Marmoleum Dual Linoleum Sheet and Linoleum Adhesive.
 - a. Description: Homogeneous sheet linoleum of primarily natural materials consisting of linseed oil, wood flour, and rosin binders, mixed and calendered onto natural jute backing. Pattern and color shall extend throughout total thickness of material.
 - b. Width: 79" (2 Meters).
 - c. Length: 105 Linear Feet (32 Meters).
 - d. Gauge: .080" (2.0 MM), or 1/10" (2.5 MM), or 1/8" (3.2 MM).
 - e. Backing: Jute.
 - f. Pattern and Color: As selected by Architect from manufacturer's standard patterns and colors.
 - g. Adhesive: Forbo Linoleum, Inc., L910 Adhesive (US) or Forbo Linotack 414 (Canada).
 - h. Heat Welding Rod: Marmoweld color-matched or multi-color welding rod.

2.02 VINYL TILE FLOORING

- A. Manufacturer: Centiva
1. Proprietary Product(s): Event Tile
 - a. The Centiva Event Series shall be constructed with a .03" high density wearlayer. All products shall have an overall gauge of .120" (3 mm) nominal. See individual product specification for sizes offered in each line. The resilient tile shall be accordance with ASTM Specification F-1700 04, and shall be asbestos free. All products shall have a Commercial Limited 20-year manufactured in Wear Warranty and Residential Lifetime Wear Warranty. The adhesive shall be D-2001 (wet-set), PS 5000 Plus (pressure sensitive), or EP 2000 (epoxy). Installation shall be in accordance with the latest Centiva Installation Guidelines.
 - b. Classification: ASTM F 1700-04 Class III Solid Vinyl Tile
 - c. Overall Thickness: .120" / 3 mm (nominal)
 - d. Wearlayer Thickness: .032" clear, rigid high density PVC
 - e. Size: 18" x 18" plus additional custom sizes
 - f. Edge: Square
 - g. Surface Texture: Satin, Granite
 - h. Standard Colors: 26 designs/colors
 - i. Warranty: 20 years Commercial
 - j. Test Performance: ASTM E 648-04 Critical Radiant Flux Class1 CRF>0.45
 - 1) ASTM E 662-03 Smoke Density <450
 - 2) ASTM F 925-02 Chemical Reaction Excellent
 - 3) Slip Resistance ADA Compliant Varies with surface texture
 - 4) FTC Slip Resistant Classified Product

2.04 VINYL COMPOSITION TILE

- A. Vinyl Composition Tile: Homogeneous, with color extending throughout thickness, and:
1. Minimum Requirements: Comply with ASTM F 1066, of Class corresponding to type specified.
 2. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E 648 or NFPA 253.
 3. Size: 12 x 12 inch.
 4. Thickness: 0.125 inch.
 5. Slip resistant

2.05 RESILIENT BASE

- A. Resilient Base: ASTM F 1861, Type TS rubber, vulcanized thermoset; top set Style B, Cove, and as follows:
 - 1. Critical Radiant Flux (CRF): Minimum 0.45 watt per square centimeter, when tested in accordance with ASTM E 648 or NFPA 253.
 - 2. Height: 6 inch.
 - 3. Thickness: 0.125 inch thick.
 - 4. Finish: Matte.
 - 5. Length: Roll.
 - 6. Color: Solid color.
 - 7. Manufacturers: See finish schedule and drawings.

2.06 SOURCE QUALITY CONTROL

- A. Source Quality: Obtain flooring product materials from a single manufacturer.

PART 3 EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's product data, including product technical bulletins, product catalog installation instructions, and product carton instructions for installation.

3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions (which have been previously installed under other sections) are acceptable for product installation in accordance with manufacturer's instructions.
- B. Material Inspection: In accordance with manufacturer's installation requirements, visually inspect materials prior to installation. Material with visual defects shall not be installed and shall not be considered as a legitimate claim.

3.03 PREPARATION

- A. Adjacent Surfaces Protection: Protect adjacent work areas and finish surfaces from damage during product installation.
- B. Surface Preparation:
 - 1. General: Prepare floor substrate in accordance with manufacturer's instructions.
 - 2. Floor Substrate: Prepare floor substrate to be smooth, rigid, flat, level, permanently dry, clean and free of foreign materials such as dust, paint, grease, oils, solvent, curing and hardening compounds, sealers, asphalt and old adhesive residue.
 - 3. Concrete Floor Substrate: Concrete floor substrate shall have a minimum compressive strength of 3500 psi. A Portland based patching compound or leveler should be used to cover seams, cracks, indentations, and subfloor irregularities. Do not use or install flooring over gypsum-based leveling or patching materials. Do not use or install flooring over gypsum-based leveling or patching materials.
 - a. Reference Standard: Comply with ASTM F 710 Practice for Preparing Concrete Floors and Other Monolithic Floors to Receive Resilient Flooring.
- C. Concrete Moisture Test: Perform moisture tests on concrete floors regardless of the age or grade level with a minimum of three tests for the first 1000 square feet (93 m²). The test shall be a calcium chloride test. One test shall be conducted for every 1000 sq. ft. of flooring. The test shall be conducted around the perimeter of the room, at columns and where moisture may be evident. The moisture emission from the concrete shall not exceed 5.0 lbs. per 1000 sq. ft. (2.4kg/100 m²) in 24 hrs. For the most accurate results, the weight of the calcium chloride dish shall be made on the job site at the start and end of each test. A diagram of the area showing the location and results of each test shall be submitted to the architect, general contractor or end user. If the test results exceed the limitations, the installation shall not proceed

until the problem has been corrected.

- D. Concrete pH Test: Perform pH tests on concrete floors regardless of the age or grade level. If the pH is greater than 9, it must be neutralized prior to beginning the installation.

3.04 INSTALLATION

- A. Install in accordance with manufacturer's instructions and as follows.
- B. Adhesive Flooring Installation: Cut required length of linoleum flooring from roll, allowing enough material to extend up the wall 4 to 6 inches at either end. Layout and position sheet flooring so that any seams will fall at least 6 inches from underlayment joints or saw cuts in concrete substrate. Scribe and cut flooring material to shape of vertical surfaces, including walls and partitions. Apply adhesive and lay sheet flooring into wet adhesive and roll with a 100 pound roller. Install sheet flooring square with room axis.
 - 1. Adhesive, Seamless Flooring Installation: Rout out seams and heat weld together with complementary colored heat welding rod of complimentary composition in accordance with resilient flooring manufacturer's recommendations.
 - 2. Adhesive Flooring and Flash Coved Base Installation: Extend flooring up the wall in a flash-coved method to a height of 4 inches or 6 inches (102 or 152 mm), as indicated.
 - 3. Adhesive Material Installation: Use trowel as recommended by flooring manufacturer for specific adhesive. Spread at a rate of approximately 150 sq. ft./gal. (3.7 m²) as recommended by flooring manufacturer.
- C. Full Spread Adhesive Method Installation: Install tile flooring with full spread adhesive method from established area center marks, in order for tile at opposite edges of area to be of equal width. Avoid using cut tile widths at perimeter less than four inches of tile width. Install tiles square with room axis. Lay tile material into wet adhesive, as recommended by tile manufacturer.
- D. Full Spread Adhesive Method, Seamless Flooring Installation: Rout out seams and heat weld together with colored heat welding rod as indicated on the drawings in accordance with flooring manufacturer's recommendations.
- E. Special Considerations for Centiva Vinyl tile flooring: The Centiva Installation Guidelines (Revised 2/19/09) available at www.centiva.com shall be the basis of design.
- F. Do not install resilient flooring over expansion joints. Use expansion joint covers manufactured for use with resilient flooring. Refer to other specifications sections for expansion joint covers.
- G. Adhere resilient flooring to flooring substrate without producing open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, or other surface imperfections in completed flooring installation.
- H. Install flooring on covers for telephone and electrical ducts, and similar items occurring within finish floor areas. Maintain overall continuity of color and pattern with pieces of flooring installed on covers.
- I. Remove visible adhesive and other surface blemishes using cleaning methods recommended by floor manufacturer.
- J. Sweep and vacuum floor after installation.
 - 1. Do not wash floor until after time period recommended by tile flooring manufacturer.
 - 2. Damp mop tile flooring to remove black marks and soil.
- K. Do not wash floor until after time period recommended by tile flooring manufacturer.
- L. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer's instructions prior to owner's acceptance. Remove construction debris from project site and legally dispose of debris.

3.05 INITIAL CLEANING AND FINISHING

- A. Do not wash floor until after time period recommended by tile flooring manufacturer.

3.06 Remove visible adhesive and other surface blemishes using cleaning methods recommended by tile floor manufacturer.

- A. Damp-mop tile flooring to remove black marks and soil.

END OF SECTION

1.01 **SUBMITTALS**

Submit samples of carpet proposed to be used if other than that specified herein.

2.01 **MATERIALS**

- A. See Finish Schedule for specific carpet manufacturers.
- B. See manufacturer's recommendations for adhesives used during installations.
- C. At discontinuous edges of floor carpet where backing would otherwise be exposed, provide anchor trim A-3721-TD with 19/16" flange and 7/8" lip. To install metal strip, drill and use expanding aluminum nail.

D. 24" carpet tiles by Mannington Commercial

STYLE: LANDMARK / MODULAR

CONSTRUCTION: Pattern Loop

FACE FIBER: Antron Lumena® solution dyed nylon

DYE METHOD: Solution

GAUGE: 1/12

STITCHES PER ": 9.66

PILE THICKNESS: .127 inches

TUFTED YARN WEIGHT: 18 ounces per square yard

PRIMARY BACKING: 100% Woven Synthetic

SECONDARY BACKING: Infinity™ RE with a minimum 10% post-consumer and 20% p r e - consumer recycled content by total product weight.

WEAR WARRANTY: Lifetime Limited Wear Warranty

BACKING WARRANTY: Lifetime Limited Backing Warranty

METHENAMINE PILL TEST (ASTM-D-2859):

PASSES

FLOORING RADIANT PANEL TEST (ASTM-E-648):

CLASS I (DIRECT GLUE)

N.B.S. SMOKE CHAMBER TEST (ASTM-E-662):

<450 (FLAMMING MODE)

ELECTROSTATIC PROPENSITY TEST (AATCC 134):

< 3.0 KV

AVERAGE DENSITY: 5102

WEIGHT DENSITY: 91,842

STANDARD SIZE: 24 X 24 *(Shuffled)

***Other installation methods at owner's discretion**

CRI INDOOR AIR QUALITY CONTROL

GREEN LABEL PLUS ID: GLP7616

Antron Lumena® solution dyed nylon provides unsurpassed stain resistance and stain cleanability.

Antron Lumena® is protected by DuraTech® soil-resistance treatment which provides superior soil resistance durable for the useful life of the carpet. This fiber contains permanent static control.

RELEASEABLE ADHESIVE: MANNINGTON'S MT-711

CRI IAQ TESTING CERTIFICATION: PSA-970522

BOND WARRANTY: Lifetime Limited Warranty When Used With Mannington's / Modular Carpet Tile

3.01 PREPARATION OF SURFACES

In areas to be carpeted, fill any cracks, holes, trowel marks, or irregularities. Float low areas. Immediately prior to start of installation, remove all foreign matter, dust, and dirt by sweeping and vacuuming. During installation, keep clean surfaces being carpeted.

3.02 INSTALLATION

- A. Start layout near center of spaces using chalkline for first seam. Layout shall be started on a column centerline in large spaces.
- B. Cut each breadth long to permit it to turn up walls at least 1" on all sides.
- C. If fabric is not pre-trimmed at mill, remove selvage by using cutter in a vertical position to cut between the rows of pile. DO NOT undercut backing. Pull selvage off to the side to insure a good even edge for seam.
- D. Place the first breadth and use only nap-grip head on a knee kicker to bump into place along chalkline. Put the balance of the breadths into place, overlapping carpet at seams so that carpet will be compressed when installed.
- E. Check all seams for color and height. Variations shall be moved to outside or in the case of height variations, pressure sensitive tape may be used to build up low side of seam to give uniform pile height.
- F. Turn back all of the breadths halfway and use a pencil to mark seams. Use care not to shift breadth positions on floor.
- G. Using a trowel with notches 3/32" x 3/32" spaced 3/32" apart, spread adhesive on floor area to be covered by first breadth; do not spread adhesive beyond seam line.
- H. Unroll the first breadth into the adhesive using knee kicker to adjust carpet to chalkline.
- I. Spread adhesive for next breadth.
- J. Unroll breadth into the adhesive overlapped width to make a tight fit. To close any open areas in seam, start kicking carpet from the center of the width toward the opening and use a series of kicks to move the entire width into place. Do not stretch carpet.
- K. Use a stiff push broom to sweep any trapped air out at edge. DO NOT use a linoleum roller.
- L. If some parts of seam are so tight that the seam peaks, use kicker to move carpet toward center of breadth.
- M. Use point of knife to raise any pile trapped in seam.
- N. Any open area of seam found after adhesive has set shall be closed by applying seam

adhesive in open area. Close seam with kicker and stay nail carpet until adhesive has set.

- O. Using a rubber seam solvent on a scrap of carpet, clean seams of any adhesive before adhesive has hardened. Go over all seams using a firm pressure to help level as well as clean the seams.
- P. Fit carpet to all vertical surfaces before adhesive has set.
- Q. At cross seams, carpet shall be cut on pile line where weave will permit; otherwise, seam shall be double cut.
- R. Finish job shall have indiscernible seams and carpet fitted to vertical surface. No backing shall be exposed to view.

END OF SECTION

SECTION 09900**PAINTS AND COATINGS****PART 1 GENERAL****1.01 RELATED WORK**

- A. Wood doors are specified to be factory finished.

1.02 CONNECTING WORK

- A. Examine all surfaces to which painting and finishing is to be applied. Notify the Architect in writing of any surface not in condition or of any other defects which would be detrimental to the installation of the work.

1.03 DELIVERY AND STORAGE

- A. Store materials at the site in a space approved by the Architect. Mix paints in this space only. Keep the storage area neat and clean and accessible at all times.
- B. Take precautions to prevent fire. Provide fire extinguishers readily available within and adjacent to the storage space.

1.04 PROTECTION OF ADJACENT SURFACES

- A. Provide drop cloths to prevent paint material from falling on or marring any adjacent surface not scheduled to be painted.
- B. Before painting, remove hardware, accessories, plates, and lighting fixtures, or provide protection of same.

1.05 SAMPLES

- A. Submit samples of painting materials and specifications proposed for use for the Architect's approval before delivering any material to the site.
- B. Before surfaces are painted on site, apply 6' x 6' samples of the paint or representative area of specified finishes of each type and surface specified, for the Architect's approval before applying such finishes in their entirety. Any surfaces covered before the Architect has approved the quality and color of the paint shall be removed or re-coated if they do not meet the Architect's approval.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. Only material approved by the Architect shall be brought to the site.
- B. Deliver painting materials to the site in their original containers with seals unbroken, bearing the manufacturer's printed labels specifying trade name, brand, quality, and color formula number and name.
- C. Accessory painting materials, including but not limited to mineral spirits, linseed oil, turpentine, thinner, shellac, drier, and putty shall be pure and of the best quality.
- D. Colors for paints shall be of the same manufacturer as the materials in which they are to be mixed.
- E. Paint shall be ready-mixed and shall have labeled instructions for reducing. Thinning shall be done only in accordance with directions of the manufacturer. Job mixing or job tinting shall be done only when approved in writing by the Architect.
- F. Colors of finish coats of paint shall match those shown on the Finish Schedule.

- G. Any of the specific products listed below may be used after notifying the Architect. In the event it is found that the Contractor has applied unapproved materials, he shall remove all unapproved materials from the building site, remove such finishes from the surfaces, and refinish such surfaces with approved materials, all without additional cost to the Owner.
- H. In addition to those specifically identified herein, manufacturers are specified in the painting schedule and are identified as follows:
 - 1. Benjamin Moore & Company
 - 2. ICI Paints
 - 3. Glidden (Div. of ICI)
 - 4. Devco & Raynolds (Div. of ICI)
 - 5. PPG Industries, Coating & Resins Division
 - 6. Sherwin Williams Company
 - 7. Duron

PART 3 EXECUTION

3.01 PREPARATION OF SURFACES

- A. Clean and dust surfaces before commencing to paint. Remove all dirt and stains. Sandpaper rough spots, raised grain and splinters.
- B. Bare metal shall be cleaned of dust and dirt, and abraded shop coats shall be retouched before paint is applied. Greasy and oily metal surfaces shall be cleaned with benzene or mineral spirits before paint is applied.
- C. Scratches, cracks, holes, and defects in masonry surfaces shall be spackled and textured to match.
- D. Floors shall be broom cleaned before painting is started.
- E. Nails or screw holes, dents and hollow places, joints and cracks in woodwork shall be puttied up with putty colored to match adjoining surfaces after filler or prime coats have been applied.
- F. Dents, cracks, open joints and other irregularities in metal work to be painted shall be filled with Kwik Metal #1 Cold Solder, manufactured by Atomized Materials Co.; filler manufactured by A.L. Okun Co., Inc.; or Plastic Steel Type "A", manufactured by Devcon Corporation.

3.02 WORKMANSHIP AND APPLICATION

- A. Apply materials by skilled mechanics and apply by brushing or spraying based upon conditions. If materials are applied to concrete masonry units by spraying, apply the final coat (or an additional coat) by roller. Final coat of sprayed materials on surfaces other than masonry shall be rolled immediately.
- B. Apply ready-mixed materials according to the manufacturer's detailed instructions.
- C. Each coat of material shall be free of brush marks, runs and sags, crawlings, and defects. Undercoats on interior wood and metal surfaces shall be sanded to provide a smooth, even surface for the subsequent coats. Each coat shall be allowed to dry and harden before succeeding coat is applied.
- D. Paint and varnish shall not be applied to damp surfaces nor shall application be made under weather conditions unsuitable for producing a first-class job. Do not apply exterior paint at temperatures below 45 deg. F. or immediately following rain, frost, or dew.

- E. During the actual application and drying of the paint, and until date of Final Certificate, maintain a minimum temperature of 60 deg. F. This temperature shall be held constant to prevent condensation. Provide ventilation at all times so that the humidity cannot rise above the dew point at the coldest wall.
- F. Metal boxes, electrical plates, and iron or steel work in or adjacent to surfaces shall be painted to correspond with such surfaces.
- G. Apply additional coats when undercoats, stains, or other unsatisfactory conditions show through final coat of paint, until paint film is of uniform finish, color and appearance. Provide special attention to insure that surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
- H. Protect all work against paint damage by covering with heavy building paper or cloth secured in place.
- I. Keep wiping rags in fireproof containers.
- J. Prime coats removed or damaged during erection shall be replaced by field painting to provide smooth even primer coating.
- K. Upon completion of the work, remove surplus materials, empty packages, and debris from all finished and surfaces including hardware and mechanical equipment. Touch up finished work where abraded or damaged. Leave work clean, neat, and in perfect condition.

3.03 PAINTING SCHEDULE

- A. The following schedule shall not be considered inclusive; use as a guide for complete painting and finishing of the building, including recesses, returns, reveals, soffits, and haunches forming part of the particular surface, room, or space. The work also includes field painting of exposed bare and covered pipes and ducts (including color coding), and of hangers, exposed steel and ironwork, and primed metal surfaces of equipment installed under mechanical and electrical work, except as otherwise indicated. See requirements under "Materials" above.

3.04 Interior:

- A. All fire and/or smoke barriers or walls shall be permanently identified both sides with painted signs or stenciling above finished ceilings or in concealed spaces with letters minimum 2" high on a contrasting background, spaced a minimum of 12' o.c., with a minimum of one sign per wall or barrier. The hourly fire rating shall be included on all rated barriers or walls. Wording shall be: "(hour rating as applicable) HOUR FIRE WALL - PROTECT ALL OPENINGS." or "SMOKE BARRIER - PROTECT ALL OPENINGS".
- B. Gypsum board walls and gypsum board ceilings at Toilets and Custodial Closets (except as otherwise specified):
 - 1. Glidden - one coat 5018 UltraHide Primer-Sealer, two coats UH6800 UltraHide Eggshell.
 - 2. PPG - one coat Speedhide 6-2 Primer-Sealer, two coats Eggshell Latex Enamel 6-411.
 - 3. SW - one coat B28W200 Pro-Mar 200 Sealer, two coats B20W200 Pro-Mar 200 Eggshell.
 - 4. BM - one coat 216 Regal First Coat, two coats 319 Regal Aqua-Velvet Eggshell.
 - 5. Devoe - one coat 50801 Wondertones Latex, two coats 516xx Wonderspeed Eggshell.
- C. Gypsum board ceilings, except as otherwise specified:
 - 1. Glidden - one coat 5018 UltraHide Primer-Sealer, two coats UltraHide Flat Enamel.
 - 2. PPG - one coat Speedhide 6-2 Primer-Sealer, two coats Speedhide 6-70 Series Flat Wall Paint.
 - 3. SW - one coat B28W200 Pro-Mar 200 Sealer, two coats B32W201 Pro-Mar 200 Flat Enamel.
 - 4. BM - one coat 216 Regal First Coat, two coats Alkyd Sani-Flat #204.
 - 5. Devoe - one coat 50801 Wondertones Latex, two coats 21xx Velour Alkyd Flat Wall Paint.

- D. Ferrous metals over shop prime coat, including but not limited to hollow metal doors and frames and lintels:
1. ICI - one coat 4120 DevGuard Alkyd Metal Primer, two coats DevGuard Alkyd Gloss Industrial Enamel.
 2. BM - one coat M06 Primer, two coats 270 Moorecraft Gloss Alkyd.
 3. PPG - one coat Speedhide 6-21 Primer, two coats Speedhide 6-282 Gloss.
 4. SW - one coat Kem-Kromic Universal Metal Primer B50, two coats B54 Industrial Alkyd Gloss.
- E. Wood shelving:
1. Devoe - one coat 8801 Velour, two coats 509XX De-Vo-Ko Semi-Gloss.
 2. GL- one coat UH-400 UltraHide, two coats UH-8000 Semi-Gloss Enamel.
 3. BM - one coat 217 Alkyd Enamel Underbody, two coats 271 Moorecraft Semi Gloss.
 4. PPG - one coat Speedhide Quick-Drying Enamel Undercoater, two coats Wallhide Semi-gloss Enamel.
 5. SW - one coat B49W200 ProMar 200 Alkyd Enamel Undercoater, two coats B34W200 ProMar 200 Alkyd Gloss Enamel.

END OF SECTION