DIVISION 09 – FINISHES

SECTION 092216 - NON-STRUCTURAL METAL FRAMING

A. SECTION INCLUDES: Non-load-bearing steel framing systems for interior gypsum board assemblies and suspension systems for interior gypsum ceilings and soffits.

B. SUBMITTALS: Product Data for each type of product.

C. METAL FRAMING SYSTEMS:

1. Basis of Design Manufacturer: ClarkDietrich Building Systems LLC.
2. Comparable Products by Cemco.
3. Fire-Test-Response Characteristics: Provide materials and construction identical to those tested according to ASTM E 119.

D. STEEL STUDS AND RUNNERS: ASTM C 645. Provide either steel studs and runners or stamped steel studs and runners of equivalent minimum base-metal thickness.

1. Minimum Base-Metal Thickness: 30mil.
2. Depth: As indicated on Drawings.
3. Slip-Type Head Joints: Provide single long-leg runner system , double runner system, or deflection track in thickness not less than indicated for studs and in width required to accommodate depth of studs
4. Flat Strap and Backing Plate: Steel sheet for blocking and bracing in length and width indicated.
5. Hat-Shaped, Rigid Furring Channels: ASTM C 645, minimum 0.033 inch thickness and depth as indicated on the Drawings.
6. Resilient Furring Channels: 1/2-inch- deep, steel sheet members designed to reduce sound transmission, asymmetrical or hat-shaped.
7. Cold-Rolled Furring Channels: 0.053-inch uncoated-steel thickness, with minimum 1/2-inch- wide flanges, depth ¾ inches unless otherwise indicated.
8. Furring Brackets: Adjustable, corrugated-edge type of steel sheet with minimum uncoated-steel thickness of 0.033 inch.
9. Z-Shaped Furring: With slotted or non-slotted web, face flange of 1-1/4 inches, wall attachment flange of 7/8 inch, minimum uncoated-metal thickness of 0.018 inch, and depth required to fit insulation thickness indicated.
10. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power and other properties required to fasten steel members to substrates.
11. Isolation Strip at Exterior Walls: Provide asphalt saturated organic felt or foam gasket.

E. SUSPENSION SYSTEMS AND AUXILIARY MATERIALS:

1. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.062-inch- diameter wire, or double strand of 0.048-inch- diameter wire.
2. Hanger Attachments to Concrete: Anchors capable of sustaining a load equal to 5 times that imposed as determined by ASTM E 488, cast-in-place for new construction, post-installed expansion anchor in existing construction.

3. Powder-Actuated Fasteners: Capable of sustaining, a load equal to 10 times that imposed as determined by ASTM E 1190.
4. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.16 inch in diameter.
5. Carrying Channels: Cold-rolled, commercial-steel sheet with a base-metal thickness of 0.053 inch and minimum 1/2-inch- wide flanges, in depth indicated on the Drawings.

F. GYPSUM BOARD ASSEMBLIES INSTALLATION: Standard: ASTM C 754. Also comply with requirements in ASTM C 840 that apply to framing installation.

1. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

    a. Install bracing at terminations in assemblies. Do not bridge building control and expansion joints with non-load-bearing steel framing members. Frame both sides of joints independently.
    b. Install framing components with spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.
    c. Where studs are installed directly against exterior masonry walls or dissimilar metals at exterior walls, install isolation strip between studs and exterior wall.
    d. Install studs so flanges within framing system point in same direction.
    e. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
    f. Slip-Type Head Joints: Where framing extends to overhead structural supports, install to produce joints at tops of framing systems that prevent axial loading of finished assemblies.

2. DOOR OPENINGS: Screw vertical studs at jambs to jamb anchor clips on door frames; install runner track section (for cripple studs) at head and secure to jamb studs.

    a. Install two studs at each jamb unless otherwise indicated.
    b. Install cripple studs at head adjacent to each jamb stud, with a minimum 1/2-inch clearance from jamb stud to allow for installation of control joint in finished assembly. Extend jamb studs through suspended ceilings and attach to underside of overhead structure.

3. OTHER FRAMED OPENINGS: Frame openings other than door openings the same as required for door openings unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
4. FIRE-RESISTANCE-RATED PARTITIONS: Install framing to comply with fire-resistance-rated assembly indicated and support closures and to make partitions continuous from floor to underside of solid structure.

    a. Firestop Track: Where indicated, install to maintain continuity of fire-resistance-rated assembly indicated.

5. DIRECT FURRING AT CONCRETE: Attach to concrete or masonry with stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.

a. Erect insulation vertically and hold in place with Z-furring members spaced 24 inches o.c.

6. CORNERS: Except at exterior corners, securely attach narrow flanges of furring members to wall with concrete stub nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches o.c.

a. At exterior corners, attach wide flange of furring members to wall with short flange extending beyond corner; on adjacent wall surface, screw-attach short flange of furring channel to web of attached channel. At interior corners, space second member no more than 12 inches from corner and cut insulation to fit.

7. INSTALLATION TOLERANCE: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

G. INSTALLING SUSPENSION SYSTEMS: Install suspension system components according to spacings indicated, but not greater than spacings required by referenced installation standards for assembly types.

1. Isolate suspension systems from building structure where they abut or are penetrated by building structure to prevent transfer of loading imposed by structural movement.
2. Suspend hangers from building structure as follows:
3. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or suspension system.
4. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
5. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with locations of hangers, install supplemental suspension members and hangers in the form of trapezes or equivalent devices.
6. Do not attach hangers to steel roof deck.
7. Do not attach hangers to permanent metal forms. Furnish cast-in-place hanger inserts that extend through forms.
8. Do not attach hangers to rolled-in hanger tabs of composite steel floor deck.
9. Do not connect or suspend steel framing from ducts, pipes, or conduit.
10. Fire-Resistance-Rated Assemblies: Wire tie furring channels to supports.
11. Seismic Bracing: Sway-brace suspension systems with hangers used for support.
12. Installation Tolerances: Install suspension systems that are level to within 1/8 inch in 12 feet measured lengthwise on each member that will receive finishes and transversely between parallel members that will receive finishes.

END OF SECTION 092216

SECTION 092900 - GYPSUM BOARD

A. SECTION INCLUDES: Interior gypsum board for partitions and ceilings.

B. SUBMITTALS: Product Data for each type of product.

C. FIRE-RESISTANCE-RATED ASSEMBLIES: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.

D. GYPSUM BOARD:

1. Basis of Design Manufacturers: USG Corporation.
2. Comparable Products by Georgia Pacific.
3. Gypsum Wallboard: ASTM C 1396/C 1396M. Thickness as indicated on the Drawings.
4. Long Edges: Tapered.

E. Gypsum Board, Type X: ASTM C 1396/C 1396M, 5/8 inch thickness.

1. Flexible Gypsum Board: ASTM C 1396/C 1396M. Manufactured to bend to fit radii and to be more flexible than standard regular-type gypsum board of same thickness, ¼ inch thickness.
2. Gypsum Ceiling Board: ASTM C 1396/C 1396M, ½ inch thickness.
3. Moisture- and Mold-Resistant Gypsum Board: ASTM C 1396/C 1396M. With moisture- and mold-resistant core and paper surfaces. Thickness as indicated on the Drawings.
4. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.
5. Gypsum Board, Type C: ASTM C 1396/C 1396M. Manufactured to have increased fire-resistive capability. 5/8 inch thickness.

    a. Basis of Design Product: USG Firecode C Core.

F. MISCELLANEOUS MATERIALS:

1. Trim: ASTM C 1047, Galvanized or aluminum coated steel sheet.
2. Joint Treatment Materials: Comply with ASTM C 475/C 475M.
3. Joint Tape: Paper.
4. Joint Compound for Interior Gypsum Board: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.
5. Laminating Adhesive: Adhesive or joint compound recommended for directly adhering gypsum panels to continuous substrate.
6. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.
7. Sound Attenuation Blankets: ASTM C 665, Type I (blankets without membrane facing).
8. Basis of Design Product: Encapsulated Fiber Glass Batt Insulation by Johns Manville.
9. Acoustical Joint Sealant: ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings as demonstrated by testing according to ASTM E 90.

G. APPLYING AND FINISHING PANELS: Comply with ASTM C 840.

1. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.
2. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.
3. Install trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.

4. Control Joints: Install control joints according to ASTM C 840 and in specific locations approved by Architect for visual effect.
5. Prefill open joints, rounded or beveled edges, and damaged surface areas.
6. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

H. GYPSUM BOARD FINISH LEVELS: Finish panels to levels indicated below and according to ASTM C 840:

1. Level 1: Ceiling plenum areas, concealed areas, and where indicated.
2. Level 4: At panel surfaces that will be exposed to view unless otherwise indicated.
3. Level 5: Where indicated on Drawings.

I. Protect adjacent surfaces from drywall compound and texture finishes and promptly remove from floors and other non-drywall surfaces. Repair surfaces stained, marred, or otherwise damaged during drywall application.

J. Remove and replace panels that are wet, moisture damaged, and mold damaged.

END OF SECTION 092900

SECTION 093000 – TILING

A. SECTION INCLUDES:

1. Floor Installation: Thinset over crack isolation membrane.
2. Wall Installation: Thinset over gypsum board.
3. Shower Installation: Thinset over waterproofing membrane at walls and floor at shower stalls.

B. SUBMITTALS:

1. Product Data: For each type of product indicated.
2. Samples: For each type of tile and grout.

C. Provide Standard grade tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.

1. Tile for floors shall comply with requirements of FloorScore Standard.

D. INSTALLATION PRODUCTS: As indicated in the Schedule at the end of this section

1. Basis of Design Manufacturer: Mapei Corporation.
2. Comparable Products by Laticrete.

E. Multipart, Pourable Urethane Sealant for Use T: ASTM C 920.

1. Basis of Design Product: Sikaflex 2c.

F. Trowelable Underlayments and Patching Compounds: Latex-modified, portland cement-based formulation provided or approved by manufacturer of tile-setting materials for installations indicated.

G. GROUT SEALER: Manufacturer's standard silicone product for sealing grout joints and that does not change color or appearance of grout.

H. INSTALLATION: Examine substrates, areas, and conditions where tile will be installed, with Installer present. Verify that substrates for setting tile are firm, dry, clean, free of coatings that are incompatible with tile-setting materials including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.

1. Fill cracks, holes, and depressions in concrete substrates with trowelable leveling and patching compound recommended by tile-setting material manufacturer.
2. For tile exhibiting color variations, use factory blended tile or blend tiles at Project site before installing.
3. Comply with applicable TCA's "Handbook for Ceramic Tile Installation" .
4. For the following installations, follow procedures in the ANSI A108 Series of tile installation standards for providing 95 percent mortar coverage:

    a. Tile floors composed of tiles 8 by 8 inches or larger.
    b. Tile floors composed of rib-backed tiles.

5. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
6. Accurately form intersections and returns. 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.
7. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
8. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.

I. EXPANSION JOINTS: Provide expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated. Form joints during installation of setting materials, mortar beds, and tile. Do not saw-cut joints after installing tiles.

1. Where joints occur in concrete substrates, locate joints in tile surfaces directly above them.

J. GROUT SEALER: Apply grout sealer to cementitious grout joints in tile floors according to grout-sealer manufacturer's written instructions. As soon as grout sealer has penetrated grout joints, remove excess sealer and sealer from tile faces by wiping with soft cloth.

K. Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness and bonded securely to substrate.

L. TILE INSTALLATION SCHEDULE

1. FLOOR – CONCRETE SUBSTRATE: TCNA Method F125

a. Crack Isolation Membrane: Mapeguard 2
b. Dry-Set Portland Cement Mortar (thinset): Kerabond with Keralastic
c. Portland Cement grout: Keracolor Sanded or Unsanded, as applicable
d. If recommended by tile manufacturer, use epoxy tile instead of cement grout.

2. FLOORS – CONCRETE SUBSTRATE - WET AREAS: TCNA Method F122

a. Waterproofing Membrane: Mapeguard WP 200
b. Dry-Set Portland Cement Mortar (thinset): Kerabond with Keralastic
c. Epoxy grout: Kerapoxy

3. FLOORS – CONCRETE SUBSTRATE - LARGE FORMAT TILE: TCNA Method F128

a. Dry-Set Portland Cement Mortar (thinset): Kerabond **without** Keralastic
b. Uncoupling Membrane - installed over thinset over substrate: Schluter Ditra.
c. Dry-Set Portland Cement Mortar (thinset): Kerabond with Keralastic
d. Portland Cement Grout: Keracolor Sanded or Unsanded, as applicable.

4. WALLS – GYPSUM SUBSTRATE: TCNA Method W243 (do not use in wet areas)

a. Dry-Set Portland Cement Mortar (thinset): Ultraflex LFT, non-sagging
b. Portland Cement grout: Keracolor Sanded or Unsanded, as applicable
c. If recommended by tile manufacturer, use epoxy tile instead of cement grout.

5. WALLS – CEMENTITIOUS BOARD SUBSTRATE – LARGE FORMAT TILE: TCNA Method W244

a. Flexible Mortar System: Granirapid® System - WHITE
b. Fast-Setting Polymer Modified Grout: Ultracolor Plus with DropEffect

6. WALLS – CEMENTITIOUS BOARD SUBSTRATE – WET AREAS AND SHOWER WALLS: TCNA Method W244 C.

a. Waterproofing Membrane: Mapeguard WP 200.
b. Dry-Set Portland Cement Mortar (thinset): Ultraflex LFT, non-sagging
c. Epoxy grout: Kerapoxy

7. SHOWER FLOORS

a. Sheet waterproofing*:* NobleSeal TS by the Noble Company
b. Dry-Set Portland Cement Mortar (thinset): Kerabond with Keralastic
c. Epoxy grout: Kerapoxy
d. If recommended by tile manufacturer, use epoxy tile instead of cement grout.

END OF SECTION 093000

SECTION 095113 – ACOUSTICAL PANEL CEILINGS

A. SECTION INCLUDES: Acoustical panels and exposed suspension systems for ceilings.

B. SUBMITTALS:

1. Product Data: For each type of product.
2. Samples: For each exposed product and for each color and texture specified.
3. Field quality-control reports.

C. SEISMIC PERFORMANCE: Acoustical ceiling shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

D. SURFACE-BURNING CHARACTERISTICS: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Flame-Spread Index: Comply with ASTM E 1264 for Class A materials.
2. Smoke-Developed Index: 50 or less.

E. ACOUSTICAL PANEL STANDARD: Comply with ASTM E 1264.

F. METAL SUSPENSION SYSTEM STANDARD: Comply with ASTM C 635.

G. ATTACHMENT DEVICES: Size for five times the design load indicated in ASTM C 635, Table 1, "Direct Hung," unless otherwise indicated. Comply with seismic design requirements.

H. ACOUSTICAL PANELS AND SUSPENSION SYSTEMS PRODUCTS: As indicated in the Reflected Ceiling Plans.

I. INSTALLATION: Install acoustical panel ceilings to comply with ASTM C 636/C 636M and seismic design requirements indicated, according to manufacturer's written instructions and CISCA's "Ceiling Systems Handbook."

1. Measure each ceiling area and establish layout of acoustical panels to balance border widths at opposite edges of each ceiling. Avoid using less-than-half-width panels at borders, and comply with layout shown on reflected ceiling plans.
2. Arrange directionally patterned acoustical panels as indicated on reflected ceiling plans.

END OF SECTION 095113

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

A. SECTION INCLUDES: Resilient base and molding accessories.

B. SUBMITTALS:

1. Product Data: For each type of product.
2. Samples: For each exposed product and for each color and texture specified, not less than 12 inches long.

C. BASIS OF DESIGN PRODUCTS: As indicated in the Finish Schedule.

1. Thickness: 0.125 inch.
2. Height: 4 inches unless otherwise indicated.
3. Colors: As indicated on the Drawings.
4. Lengths: Coils in manufacturer's standard length.
5. Outside and Inside Corners: Preformed.

D. MOLDING ACCESSORIES:

1. Rubber – Basis of Design Manufacturer: Roppe Corporation.
2. Vinyl- Basis of Design Products: Burke Mercer Flooring Products or Roppe Corporation.
3. Profile and Dimensions: As indicated.
4. Locations: Provide molding accessories in areas indicated.

E. ADHESIVES: Water-resistant type recommended by resilient-product manufacturer for resilient products and substrate conditions indicated.

F. INSTALLATION: Prepare substrates according to manufacturer's written instructions to ensure adhesion of resilient products.

1. Do not install resilient products until they are the same temperature as the space where they are to be installed.

G. RESILIENT BASE INSTALLATION: Apply resilient base to walls, columns, pilasters, casework and cabinets in toe spaces, and other permanent fixtures in rooms and areas where base is required.

1. Install resilient base in lengths as long as practical without gaps at seams and with tops of adjacent pieces aligned.
2. Tightly adhere resilient base to substrate throughout length of each piece, with base in continuous contact with horizontal and vertical substrates.
3. Do not stretch resilient base during installation.
4. On masonry surfaces or other similar irregular substrates, fill voids along top edge of resilient base with manufacturer's recommended adhesive filler material.
5. Preformed Corners: Install preformed corners before installing straight pieces.

H. RESILIENT MOLDING ACCESSORIES: Butt to adjacent materials and tightly adhere to substrates throughout length of each piece. Install reducer strips at edges of floor covering that would otherwise be exposed.

I. Comply with manufacturer's written instructions for cleaning and protecting resilient products.

END OF SECTION 096513

SECTION 096519 - RESILIENT TILE FLOORING

A. SECTION INCLUDES: Resilient floor tile.

B. SUBMITTALS:

1. Product Data: For each type of product.
2. Samples: Full-size units of each color and pattern of floor tile required.

C. FIRE-TEST-RESPONSE CHARACTERISTICS: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.

1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.

D. Resilient tile flooring shall comply with requirements of FloorScore certification.

E. FLOORING PRODUCTS: As indicated in the Finish Schedules.

F. ACCESSORY MATERIALS:

1. Trowelable Leveling and Patching Compounds: Latex-modified, portland cement based or blended hydraulic-cement-based formulation provided or approved by floor tile manufacturer for applications indicated.
2. Adhesives: Water-resistant type recommended by floor tile and adhesive manufacturers to suit floor tile and substrate conditions indicated.
3. Floor Polish: Provide protective, liquid floor-polish products recommended by floor tile manufacturer.

G. INSTALLATION: Prepare substrates according to floor tile manufacturer's written instructions to ensure adhesion of resilient products.

1. Concrete Substrates: Prepare according to ASTM F 710.
2. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
3. Remove substrate coatings and other substances that are incompatible with adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by floor tile manufacturer. Do not use solvents.

H. ALKALINITY AND ADHESION TESTING: Perform tests recommended by floor tile manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 pH.

I. MOISTURE TESTING: Proceed with installation only after substrates pass testing according to floor tile manufacturer's written recommendations, but not less stringent than the following:

1. Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
2. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have a maximum 75 percent relative humidity level.

J. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

1. Do not install floor tiles until they are the same temperature as the space where they are to be installed.
2. Immediately before installation, sweep and vacuum clean substrates to be covered by resilient floor tile.

K. FLOOR INSTALLATION: Comply with manufacturer's written instructions for installing floor tile.

1. Lay out floor tiles from center marks established with principal walls, discounting minor offsets, so tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.
2. Lay tiles in pattern indicated.

3. Match floor tiles for color and pattern by selecting tiles from cartons in the same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed tiles, in pattern indicated.
4. Scribe, cut, and fit floor tiles to butt neatly and tightly to vertical surfaces and permanent fixtures including built-in furniture, cabinets, pipes, outlets, and door frames.
5. Extend floor tiles into toe spaces, door reveals, closets, and similar openings. Extend floor tiles to center of door openings.
6. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on floor tiles as marked on substrates. Use chalk or other nonpermanent marking device.
7. Adhere floor tiles to flooring substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.
8. Comply with manufacturer's written instructions for cleaning and protecting floor tile.

L. FLOOR POLISH: If recommended by tile manufacturer, remove soil, adhesive, and blemishes from floor tile surfaces and apply liquid floor polish.

1. Cover floor tile until Substantial Completion.

END OF SECTION 096519

SECTION 096543 - LINOLEUM FLOORING

A. SECTION INCLUDES: Linoleum floor tile and sheet flooring.

B. SUBMITTALS:

1. Product Data: For each type of product.
2. Samples: For each exposed product and for each color and pattern specified in manufacturer's standard size, but not less than 6-by-9-inch sections.
3. Heat-Welding Bead: Include manufacturer's standard-size Samples, but not less than 9 inches long, of each color required.
4. Maintenance data.

C. INSTALLATION: Prepare substrates according to linoleum flooring manufacturer's written instructions to ensure adhesion of flooring.

1. Concrete Substrates: Prepare according to ASTM F 710.
2. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
3. Remove substrate coatings and other substances that are incompatible with flooring adhesives and that contain soap, wax, oil, or silicone, using mechanical methods recommended by linoleum flooring manufacturer. Do not use solvents.

D. ALKALINITY AND ADHESION TESTING: Perform tests recommended by linoleum flooring manufacturer. Proceed with installation only after substrate alkalinity falls within range on pH scale recommended by manufacturer in writing, but not less than 5 or more than 9 <Insert number> pH.

E. MOISTURE TESTING: Perform tests recommended by linoleum flooring manufacturer, but not less stringent than the following:

1. Perform anhydrous calcium chloride test according to ASTM F 1869. Proceed with installation only after substrates have maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
2. Perform relative humidity test using in situ probes according to ASTM F 2170. Proceed with installation only after substrates have maximum 75 percent relative humidity level.

F. Fill cracks, holes, and depressions in substrates with trowelable leveling and patching compound; remove bumps and ridges to produce a uniform and smooth substrate.

G. Do not install flooring until it is the same temperature as space where it is to be installed.

1. Immediately before installation, sweep and vacuum clean substrates to be covered by flooring.

H. FLOORING INSTALLATION: Comply with manufacturer's written instructions for installing flooring.

1. Scribe and cut flooring to butt neatly and tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings.
2. Extend flooring into toe spaces, door reveals, closets, and similar openings.
3. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on flooring as marked on substrates. Use chalk or other nonpermanent marking device.
4. Adhere flooring to substrates using a full spread of adhesive applied to substrate to produce a completed installation without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, and other surface imperfections.

I. HEAT-WELDED SEAMS: For seamless installation, comply with ASTM F 1516. Rout joints and heat weld with welding bead to permanently fuse sections into seamless flooring. Prepare, weld, and finish seams to produce surfaces flush with adjoining flooring surfaces.

J. LINOLEUM FLOOR TILE INSTALLATION: Lay out linoleum floor tiles from center marks established with principal walls, discounting minor offsets, so floor tiles at opposite edges of room are of equal width. Adjust as necessary to avoid using cut widths that equal less than one-half tile at perimeter.

1. Lay floor tiles in pattern indicated.
2. Match linoleum floor tiles for color and pattern by selecting tiles from cartons in same sequence as manufactured and packaged, if so numbered. Discard broken, cracked, chipped, or deformed floor tiles.

K. LINOLEUM SHEET FLOORING INSTALLATION: Unroll linoleum sheet flooring and allow it to stabilize before cutting and fitting. Lay out linoleum sheet flooring as follows:

1. Maintain uniformity of flooring direction.
2. Minimize number of seams; place seams in inconspicuous and low-traffic areas, at least 6 inches away from parallel joints in flooring substrates.
3. Match edges of flooring for color shading at seams.
4. Avoid cross seams.

5. Eliminate deformations that result from hanging method used during drying process (stove bar marks).

L. INTEGRAL-FLASH-COVE BASE: Cove flooring to dimension indicated up vertical surfaces. Support flooring at horizontal and vertical junction with cove strip. Butt at top against cap strip.

M. Comply with manufacturer's written instructions for cleaning and protecting linoleum flooring.

N. FLOOR POLISH: If recommended by flooring manufacturer, remove soil, visible adhesive, and surface blemishes from linoleum flooring and apply liquid floor polish.

O. After allowing drying room film (yellow film caused by linseed oil oxidation) to disappear, cover linoleum flooring until Substantial Completion.

END OF SECTION 096543

SECTION 096813 - TILE CARPETING

A. SECTION INCLUDES: Modular carpet tile.

B. SUBMITTALS:

1. Product Data: For each type of product indicated.
2. Samples: For each exposed product and for each color and texture specified.
3. Product test reports.
4. Sample warranty.
5. Maintenance data.

C. INSTALLER QUALIFICATIONS: An experienced installer who is certified by the International Certified Floorcovering Installers Association at the Commercial II certification level.

D. FIRE-TEST-RESPONSE RATINGS: Where indicated, provide carpet tile identical to those of assemblies tested for fire response according to NFPA 253 by a qualified testing agency.

E. DELIVERY, STORAGE, AND HANDLING: Comply with CRI 104.

F. FIELD CONDITIONS: Comply with CRI 104 for temperature, humidity, and ventilation limitations.

G. SPECIAL WARRANTY FOR CARPET TILES: Manufacturer agrees to repair or replace components of carpet tile installation that fail in materials or workmanship within specified warranty period.

1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of substrate, vandalism, or abuse.
2. Failures include, but are not limited to, more than 10 percent edge raveling, snags, runs, dimensional stability, excess static discharge, loss of tuft bind strength, loss of face fiber, and delamination.
3. Warranty Period: 10 years from date of Substantial Completion.

H. CARPET TILE PRODUCTS: As indicated in the Finish Schedules.

1. EMISSIONS: Provide carpet tile that complies with testing and product requirements of CRI's "Green Label Plus" program.

I. TROWELABLE LEVELING AND PATCHING COMPOUNDS: Latex-modified, hydraulic-cement-based formulation provided or recommended by carpet tile manufacturer.

J. ADHESIVES: Water-resistant, mildew-resistant, non-staining, pressure-sensitive type to suit products and subfloor conditions indicated, that complies with flammability requirements for installed carpet tile and is recommended by carpet tile manufacturer for releasable installation.

K. INSTALLATION - 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 tile performance. Examine carpet tile for type, color, pattern, and potential defects.

L. CONCRETE SUBFLOORS: Verify that concrete slabs comply with ASTM F 710.

1. Proceed with installation only after unsatisfactory conditions have been corrected.
2. Preparation: Comply with CRI 104, Section 6.2, "Site Conditions; Floor Preparation," and with carpet tile manufacturer's written installation instructions for preparing substrates indicated to receive carpet tile installation.

M. INSTALLATION: Comply with CRI 104, Section 14, "Carpet Modules," and with carpet tile manufacturer's written installation instructions.

1. Installation Method: As recommended in writing by carpet tile manufacturer.
2. Maintain dye lot integrity. Do not mix dye lots in same area.
3. Cut and fit carpet tile to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture including cabinets, pipes, outlets, edgings, thresholds, and nosings. Bind or seal cut edges as recommended by carpet tile manufacturer.
4. Extend carpet tile into toe spaces, door reveals, closets, open-bottomed obstructions, removable flanges, alcoves, and similar openings.
5. Maintain reference markers, holes, and openings that are in place or marked for future cutting by repeating on finish flooring as marked on subfloor. Use nonpermanent, non-staining marking device.
6. Install pattern parallel to walls and borders.

N. Perform the following operations immediately after installing carpet tile:

1. Remove excess adhesive, seam sealer, and other surface blemishes using cleaner recommended by carpet tile manufacturer.
2. Remove yarns that protrude from carpet tile surface.
3. Vacuum carpet tile using commercial machine with face-beater element.
4. Protect installed carpet tile to comply with CRI 104, Section 16, "Protecting Indoor Installations."

END OF SECTION 096813

SECTION 097713 - STRETCHED-FABRIC WALL SYSTEMS

A. SECTION INCLUDES: Site-upholstered wall systems.

B. SUBMITTALS:

1. Product Data: For each type of product.
2. Shop Drawings: For each stretched-fabric system. Include installation and system details.
3. Samples: For each exposed product and for each color and texture specified.
4. Maintenance data.

C. INSTALLER QUALIFICATIONS: Manufacturer's authorized representative who is trained and approved for installation of systems required for this Project.

D. MOCKUPS: If directed by Architect, build mockup of typical wall area as directed by Architect.

E. LIGHTING: Do not install stretched-fabric systems until a permanent level of lighting or a lighting level of not less than 50 fc is provided on surfaces to receive stretched-fabric systems.

F. FABRIC WALL SYSTEM PRODUCTS: As indicated in the Finish Schedule.

1. Core: Mineral fiber board, thickness as indicated.
2. Acoustical Performance: As indicated.
3. Reveals and moldings: As indicated.
4. Fabric: As indicated.

G. FIRE-TEST-RESPONSE CHARACTERISTICS: Provide stretched-fabric systems meeting the following requirements as determined by testing identical products by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:

1. Surface-Burning Characteristics: Comply with ASTM E 84; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

    a. Flame-Spread Index: 25 or less.
    b. Smoke-Developed Index: 450 or less.

2. Fire Growth Contribution: Comply with acceptance criteria of local code and authorities having jurisdiction when tested according to NFPA applicable standard.

H. FRAME-EDGE CONSTRUCTION: Manufacturer's standard extruded plastic frame, with edge type indicated.

I. INSTALLATION PRODUCTS: Concealed on back of system, recommended by stretched-fabric system manufacturer to support weight of system, fabric tension, and as follows:

1. Fasteners: Manufacturer's standard.

J. INSTALLATION: Measure each area and establish layout of panels and joints of sizes indicated on Drawings within a given area.

1. Before installation, allow fabric to adjust and become stable in spaces where it will be installed in accordance with stretched-fabric system manufacturer's written instructions. Acclimatize fabric for minimum of 24 hours at ambient temperature and humidity conditions indicated for spaces when occupied for their intended use.
2. Install stretched-fabric systems in accordance with system manufacturer's written instructions.

3. Provide continuous perimeter frames of each profile indicated, designed to be inconspicuous when covered by fabric facing, with smooth edges, and with surface finish that will not telegraph through fabric facing.
4. Install framing around penetrations.
5. Tightly fit framing to adjacent construction and securely attach to substrate.
6. Install core material with full coverage, flush with face of stretched-fabric system frame.
7. Attach frame and core to substrate with adhesive or fasteners or both to support system and prevent deformation of components.
8. Fabric Installation: Apply fabric monolithically in continuous run over area, without joints or reveals, except where panel joints or midspan frames are indicated.
9. Fabric Seams: Sewn seams are not permitted.
10. Stretch and secure fabric to frame edges and so frame and frame attachment method are concealed by fabric unless otherwise indicated.
11. Stretch fabric taught and square without puckers, ripples, or distortions. Acclimatize and re-stretch if recommended by stretched-fabric system manufacturer. Repair distortions, wrinkles, and sagging.
12. Clip loose threads; remove pills and extraneous materials.

K. Clean panels on completion of installation to remove dust and other foreign materials according to manufacturer's written instructions.

END OF SECTION 097713

SECTION 099123 - INTERIOR PAINTING

A. SECTION INCLUDES: Surface preparation and the application of paint systems on interior substrates.

B. SUBMITTALS:

1. Product Data: For each type of product. Include preparation requirements and application instructions.
2. Samples: For each type of paint system and in each color and gloss of topcoat.
3. Product List: For each product indicated. Include printout of current "MPI Approved Products List" for each product category specified in Part 2, with the proposed product highlighted.

C. MOCKUPS: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.
2. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft.
3. Other Items: Architect will designate items or areas required.
4. Final approval of color selections will be based on mockups.
5. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

D. Basis of Design Manufacturer: Sherwin-Williams Company (The). Products included in the finish schedules in the Drawings are indicated to specify color only.

1. Paint Products are indicated in the Schedule at the end of this section.

E. MATERIAL COMPATIBILITY: Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.

1. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
2. Colors: As indicated in the Finish Schedule.

F. APPLICATION: Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

1. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

    a. Concrete: 12 percent.
    b. Masonry (Clay and CMU): 12 percent.
    c. Wood: 15 percent.
    d. Gypsum Board: 12 percent.
    e. Plaster: 12 percent.

2. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
3. Proceed with coating application only after unsatisfactory conditions have been corrected.
4. Application of coating indicates acceptance of surfaces and conditions.
5. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates indicated.

G. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
2. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
3. Remove incompatible primers and re-prime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

H. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."

1. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.
2. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
3. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

I. SCHEDULE OF PAINTING PRODUCTS:

1. Substrate - Steel:

   a. Primer, 1 coat: B66-310 Pro-Cryl.Universal Primer
   b. Finish: 2 coats: Pro Ind Acrylic SG B66-600 Series
   c. Sheen: Semi-gloss
   d. Location: Miscellaneous exposed steel.

2. Substrate - Interior of Mechanical Ducts:

   a. Primer, 1 coat: B66-310 Pro-Cryl Universal Primer
   b. Finish, 2 coats: ProMar 200 Zero HP EG B20-1950
   c. Color: Black.

3. Substrate - Gypsum Board:

   a. Flat Finish - Ceilings, except as scheduled for semi-gloss below:

      1) Primer, 1 coat: ProMar 200 Zero Primer B28W2600
      2) Finish, 2 coats: ProMar 200 Zero Flat B30-W2600

   b. Eggshell Finish - Walls, except as scheduled for semi-gloss below:

      1) Primer, 1 coat: ProMar 200 Zero Primer B28W2600
      2) Finish, 2 coats: ProMar 200 Zero EG BB41-2600

   c. Semi-gloss Finish - Ceilings and walls at service rooms, stair wells, and bathrooms without showers:

      1) Primer, 1 coat: ProMar 200 Zero Primer B28W2600
      2) Finish, 2 coats: Pro Ind Acrylic SG B66-600 Series

4. Substrate – Woodwork Opaque Finish:

   a. Primer, 1 coat: PrepRite ProBlock Sealer B51 Series
   b. Finish, 2 coats: All Surface Enamel Satin A41-1350

5. Substrate – Exposed Underdeck:

   a. Primer, 1 coat: Multi Surface Latex Primer B51W00450
   b. Finish, 2 coats: Pro Ind High Performance Acrylic B66 Series

END OF SECTION 099123

END OF DIVISION 09