

SECTION 092216 - NON-STRUCTURAL METAL FRAMING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
- B. STC-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 90 and classified per ASTM E 413 by a qualified independent testing and inspecting agency.

2.2 METAL FRAMING AND SUPPORTS

- A. Steel Framing Members, General: ASTM C 754.
 - 1. Steel Sheet Components: ASTM C 645. Thickness specified is minimum uncoated base-metal thickness.
 - 2. Protective Coating: manufacturer's standard corrosion-resistant zinc coating.
- B. Suspended Ceiling and Soffit Framing:
 - 1. Tie Wire: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, 0.0625-inch diameter, or double strand of 0.0475-inch- diameter wire.
 - 2. Wire Hangers: ASTM A 641/A 641M, Class 1 zinc coating, soft temper, and 0.162-inch diameter.
 - 3. Carrying Channels: Cold-rolled steel, 0.0538 inch thick, 1-1/2 inches deep.
 - 4. Furring Channels: Steel, rigid hat-shaped channels; 7/8 inch deep, 0.0179 inch thick.
 - 5. Grid Suspension System for Interior Ceilings: Interlocking, direct-hung system.
- C. Partition and Soffit Framing:
 - 1. Studs and Runners: In depth indicated and 0.0179 inch thick unless otherwise indicated or required by manufacturer for unsupported lengths indicated on the drawings.
 - 2. Flat Strap and Backing: 0.0179 inch thick.
 - 3. Rigid Hat-Shaped Furring Channels: In depth indicated and 0.0179 inch thick.
 - 4. Resilient Furring Channels: 1/2 inch deep, with single- or double-leg configuration.
 - 5. Cold-Rolled Furring Channels: 0.0538 inch thick, 3/4 inch deep.
 - 6. Z-Furring: In depth required by insulation, 1-1/4-inch face flange, 7/8-inch wall-attachment flange, and 0.0179 inch thick.

2.3 ACCESSORIES

- A. General: Comply with referenced installation standards.
 - 1. Fasteners for Metal Framing: Of type, material, size, corrosion resistance, holding power, and other properties required to fasten steel members to substrates.

- B. Acoustical Sealant for Concealed Joints: Nonsag, latex sealant complying with ASTM C 834.

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 and with United States Gypsum's "Gypsum Construction Handbook."
 - 1. Gypsum Plaster Assemblies: Also comply with ASTM C 841.
- B. Install supplementary framing, and blocking to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.
- C. Isolate steel framing from building structure, except at floor, to prevent transfer of loading imposed by structural movement.
 - 1. Where studs are installed directly against exterior walls, install asphalt-felt or foam-gasket isolation strip between studs and wall.
- D. Fire-Resistance-Rated Assemblies: Comply with requirements of listed assemblies.

END OF SECTION 092216

SECTION 092900 - GYPSUM BOARD

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 119 by an independent testing and inspecting agency acceptable to authorities having jurisdiction.
- B. STC-Rated Assemblies: Provide materials and construction identical to those tested in assemblies per ASTM E 90 and classified per ASTM E 413 by a qualified independent testing and inspecting agency.

2.2 PANEL PRODUCTS

- A. Provide in maximum lengths available to minimize end-to-end butt joints.
- B. Interior Gypsum Board: ASTM C 36/C 36M or ASTM C 1396/C 1396M, in thickness indicated, with manufacturer's standard edges. Regular type unless otherwise indicated, or as required for specific fire-resistance-rated assemblies. Sag-resistant type for ceiling surfaces.
- C. Exterior Gypsum Sheathing: ASTM C 931/C 931M or ASTM C 1396/C 1396M, in thickness indicated, with manufacturer's standard edges. Regular type unless otherwise indicated.
 - 1. Product: G-P Gypsum; Dens-Glas Gold, or equal.
- D. Water-Resistant Gypsum Backing Board: ASTM C 630/C 630M or ASTM C 1396/C 1396M, in thickness indicated. Regular type unless otherwise indicated. Type X where required for fire-resistance-rated assemblies and where indicated.
- E. Glass-Mat, Water-Resistant Gypsum Backing Board: ASTM C 1178/C 1178M, of thickness indicated. Regular type unless otherwise indicated. Type X where required for fire-resistance-rated assemblies and where indicated.
 - 1. Product: G-P Gypsum; Dens-Shield Tile Guard.

2.3 ACCESSORIES

- A. Trim Accessories: ASTM C 1047, formed from galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized-steel sheet. For exterior trim, use accessories formed from hot-dip galvanized-steel sheet, plastic, or rolled zinc.
 - 1. Provide cornerbead at outside corners unless otherwise indicated.
 - 2. Provide LC-bead (J-bead) at exposed panel edges.
 - 3. Provide control joints where indicated.
- B. Joint-Treatment Materials: ASTM C 475/C 475M.
 - 1. Joint Tape: Paper unless otherwise recommended by panel manufacturer.

2. Joint Compounds: Setting-type taping compound and drying-type, ready-mixed, compounds for topping. Use setting-type compounds at exterior soffits.
 3. Backer Unit Joint-Treatment Materials: Products recommended by backer unit manufacturer.
- C. Acoustical Sealant for Exposed and Concealed Joints: Nonsag, paintable, nonstaining latex sealant complying with ASTM C 834.
- D. Sound-Attenuation Blankets: ASTM C 665, Type I (unfaced).

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install gypsum board to comply with ASTM C 840.
1. Isolate gypsum board assemblies from abutting structural and masonry work. Provide edge trim and acoustical sealant.
 2. Single-Layer Fastening Methods: Fasten gypsum panels to supports with screws.
 3. Multilayer Fastening Methods: Fasten base layers and face layer separately to supports with screws.
- B. Install backer units to comply with ANSI A108.11.
- C. Fire-Resistance-Rated Assemblies: Comply with requirements of listed assemblies.
- D. Finishing Gypsum Board: ASTM C 840.
1. At concealed areas, unless a higher level of finish is required for fire-resistance-rated assemblies, provide Level 1 finish: Embed tape at joints.
 2. At substrates for tile, provide Level 2 finish: Embed tape and apply separate first coat of joint compound to tape, fasteners, and trim flanges.
 3. Unless otherwise indicated, provide Level 4 finish: Embed tape and apply separate first, fill, and finish coats of joint compound to tape, fasteners, and trim flanges.
- E. Glass-Mat, Water-Resistant Backing Panels: Finish according to manufacturer's written instructions.

END OF SECTION 092900

SECTION 093000 - TILING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data for each type of product indicated and Samples for tile, thresholds, and grout.
- B. Obtain tile of each type and color or finish from same production run for each contiguous area
- C. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.

PART 2 - PRODUCTS

2.1 CERAMIC TILE

- A. Ceramic tile that complies with Standard grade requirements in ANSI A137.1, "Specifications for Ceramic Tile."
- B. Tile Type: Unglazed, porcelain paver tile.
 - 1. Products:
 - a. New Basics Collection by Stonepeak Ceramics.
 - b. Porcelalto by Dal Tile
 - c. Cros-colors by Crossville
 - 2. Module Size: 12"x12" floor tile, 8"x8" wall tile, manufacturer's standard trim pieces.
 - 3. Finish: Matte, unglazed.
 - 4. Color and Pattern: As selected.
 - 5. Grout Color: As selected.

2.2 STONE THRESHOLDS

- A. Marble thresholds complying with ASTM C 503 fabricated to be not more than 1/2 inch above adjoining finished floor surfaces, with transition edges beveled on a slope of no greater than 1:2.
 - 1. Color: As selected.
 - 2. Finish: Polished.

2.3 INSTALLATION MATERIALS

- A. Cementitious Backer Units: ANSI A118.9 or ASTM C 1325, 1/2 inch thick.
- B. VOC Limit for Adhesives and Fluid-Applied Waterproofing Membranes: 65 g/L when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
- C. 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.
 - 1. Thin-Set Mortar Type: Polymer Modified Portland Cement. Products:
 - a. Laticrete 254 Platinum.
 - b. Mer-Krete 7d10 Multipurpose EGP Thin Set Mortar
 - c. Pro Spec Superior PermaFlex 600

2. Grout Type: Standard sanded cement unless otherwise indicated. Products:
 - a. Laticrete PermaColor Grout.
 - b. Mer-Krete Sanded ColorGrout
 - c. Pro Spec Sanded Tile Grout 700

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with TCA's "Handbook for Ceramic Tile Installation" for TCA installation methods specified in tile installation schedules. Comply with parts of ANSI A108 Series "Specifications for Installation of Ceramic Tile" that are referenced in TCA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.
 1. For installations indicated below, follow procedures in ANSI's "Specifications for the Installation of Ceramic Tile" for providing 95 percent mortar coverage.
 - a. Tile floors in wet areas.
 - b. Tile floors composed of tiles 8 by 8 inches or larger.
 - c. Tile floors composed of rib-backed tiles.
- B. 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.
- 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. Install cementitious backer units and treat joints according to ANSI A108.11.
- E. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot toward drains.
- F. Install waterproofing to comply with ANSI A108.13.
- G. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.
- H. Install stone thresholds in same type of setting bed as adjacent floor unless otherwise indicated. At locations where mortar bed (thickset) would otherwise be exposed above adjacent floor finishes, set thresholds in latex-portland cement mortar (thin set).
- I. Interior Floor Tile Installation Method(s):
 1. Over Concrete Subfloors: TCA F113 (thin-set mortar).
- J. Interior Wall Tile Installation Method(s):
 1. Over Concrete and Masonry: TCA W202 (thin-set mortar).
 2. Over Metal Studs or Furring: TCA W245 with thin-set mortar (thin-set mortar on glass-mat, water-resistant backer board).

END OF SECTION 093000

SECTION 095113 - ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and material Samples.

PART 2 - PRODUCTS

2.1 ACOUSTICAL PANELS

- A. Products:
 - 1. Armstrong: Cirrus Second Look #510 white.
 - 2. Equal by: Certainteed.
 - 3. Equal by: USG
- B. Classification: As follows, per ASTM E 1264:
 - 1. Type and Form: Type III, Form 1.
 - 2. Pattern: E (lightly textured)
 - 3. Color: White.
 - 4. Light Reflectance (LR) Coefficient: Not less than 0.85
 - 5. Noise Reduction Coefficient (NRC): Not less than 0.65
 - 6. Ceiling Attenuation Class (CAC): Not less than 35.
- C. Surface-Burning Characteristics: ASTM E 1264, Class A materials, tested per ASTM E 84.
- D. Edge Detail: Reveal sized to fit exposed flange of suspension system.
- E. Thickness: 3/4 inch.
- F. Modular Size: 24 by 48 inches.

2.2 CEILING SUSPENSION SYSTEM

- A. Wide-face, direct-hung system; ASTM C 635, intermediate-duty structural classification.
 - 1. Products:
 - a. Chicago Metallic Corporation: 200 Snap Grid
 - b. Equal by: CGC, a USG Company
 - c. Equal by Bailey Metal Products Limited
 - 2. Color: White.
- B. Attachment Devices: Sized for 5 times the design load indicated in ASTM C 635, Table 1, Direct Hung, unless otherwise indicated.
- C. Wire Hangers, Braces, and Ties: Zinc-coated carbon-steel wire; ASTM A 641/A 641M, Class 1 zinc coating, soft temper.
 - 1. Size: Provide yield strength at least 3 times the hanger design load (ASTM C 635, Table 1, Direct Hung), but not less than 0.135-inch- diameter wire.

- D. Hold-Down Clips: Manufacturer's standard product; spaced 24 inches o.c. on all cross tees. Provide in Vestibule 100, Vestibule 141, Vestibule 143, Elevator Lobby 129, & Corridor 148.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Ceiling Suspension System Installation: Comply with ASTM C 636 and CISCA's "Ceiling Systems Handbook."
- B. Install acoustical panels with undamaged edges and fit accurately into suspension system runners and edge moldings. Scribe and cut panels at borders and penetrations to provide a neat, precise fit.

END OF SECTION 095113

SECTION 096513 - RESILIENT BASE AND ACCESSORIES

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and Samples.

PART 2 - PRODUCTS

2.1 RESILIENT BASE

- A. Products:
 - 1. Flexco.
 - 2. Johnsonite.
 - 3. Roppe
- B. Color and Pattern: To be selected by Architect from Manufacturer's full range.
- C. ASTM F 1861, Type TV (vinyl).
- D. Group (Manufacturing Method): I (solid/homogeneous).
- E. Style: Cove (base with toe) @ VCT flooring; Straight (flat or toeless) @ carpet flooring..
- F. Minimum Thickness: 0.125 inch.
- G. Height: As noted in the Room Finish Schedule on the Drawings.
- H. Lengths: coils in manufacturer's standard lengths.
- I. Outside Corners: Job formed.
- J. Inside Corners: Job formed.
- K. Finish: As selected.

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 products and substrate conditions.
- C. Metal Edge Strips: Extruded aluminum with mill finish of width shown, of height required to protect exposed edges of tiles, and in maximum available lengths to minimize running joints.
- D. Floor Polish: Provide protective liquid floor polish products as recommended by resilient stair tread manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Prepare concrete substrates according to ASTM F 710. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
- B. Adhesively install resilient wall base and accessories.
- C. Install wall base in maximum lengths possible. Apply to walls, columns, pilasters, casework, and other permanent fixtures in rooms or areas where base is required.
- D. Install stair-tread-nose filler to nosing substrates that do not conform to tread contours.
- E. Install reducer strips at edges of floor coverings that would otherwise be exposed.

END OF SECTION 096513

SECTION 096519 - RESILIENT TILE FLOORING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and Samples.

PART 2 - PRODUCTS

2.1 VINYL COMPOSITION FLOOR TILE

- A. Products:
 - 1. Armstrong: Excelon.
 - 2. Mannington: Essentials.
 - 3. Flextile: FlexThru & FlexThru Plus.
- B. Color and Pattern: As selected by the Architect from the Manufacturer's full range.
- C. ASTM F 1066, Class 2 (through-pattern tile).
- D. Fire-Test Response: Critical radiant flux classification of Class I, not less than 0.45 W/sq. cm per ASTM E 648.
- E. Wearing Surface: Smooth.
- F. Thickness: 0.125 inch.
- G. Size: 12 by 12 inches.

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.
- C. Floor Polish: Protective liquid floor polish products as recommended by manufacturer.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Prepare concrete substrates according to ASTM F 710. Verify that substrates are dry and free of curing compounds, sealers, and hardeners.
- B. Lay out tiles so tile widths at opposite edges of room are equal and are at least one-half of a tile.
- C. Match tiles for color and pattern by selecting tiles from cartons in same sequence as manufactured and packaged. Lay tiles with grain running in one direction.

- D. Floor Polish: Remove soil, visible adhesive, and surface blemishes from floor tile surfaces before applying liquid floor polish.
 - 1. Apply two coats.

END OF SECTION 096519

SECTION 096813 - TILE CARPETING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and Samples.
- B. Extra Materials: Deliver to Owner carpet tiles equal to 5 percent of each type and color carpet tile installed, packaged with protective covering for storage.

PART 2 - PRODUCTS

2.1 CARPET TILE: C-1

- A. Products:
 - 1. J&J Commercial; Impulse II Modular, Style 7445M
 - 2. Shaw; Constellation Tile, Style 59326
 - 3. Patcraft & Designweave; Splash! Modular, Style 10074
- B. Fiber Content: 100 percent nylon 6
- C. Face Construction: Level-loop pile.
- D. Surface Pile Weight: 26 oz./sq.yd. excluding weight of backings.
- E. Primary Backing: Manufacturer's standard material.
- F. Secondary Backing: Manufacturer's standard material
- G. Size: 24 by 24 inches.
- H. Critical Radiant Flux Classification: Not less than 0.45 W/sq. cm per ASTM E 648.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with CRI 104.
- B. Installation Method: As recommended by manufacturer.
- C. Install borders parallel to walls.

END OF SECTION 096813

SECTION 096816 - SHEET CARPETING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals: Product Data and Samples.
- B. Extra Materials: Deliver to Owner full-width carpet equal to 5 percent of each type and color carpet installed, packaged with protective covering for storage.

PART 2 - PRODUCTS

2.1 CARPET C-2

- A. Products:
 - 1. J&J Commercial; Impulse II, Style 2445
 - 2. Shaw; Constellation, Style 60550
 - 3. Patcraft & Designweave; Splash!, Style 10060
- B. Fiber Content: 100 percent nylon 6
- C. Pile Characteristic: Level-loop pile.
- D. Face Weight: 26 o./sq. yd. excluding weight of backings.
- E. Primary Backing: Manufacturer's standard material.
- F. Secondary Backing: Manufacturer's standard material
- G. Width: 12 feet.
- H. Critical Radiant Flux Classification: Not less than 0.45 w/sq. cm per ASTM E 648.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Comply with CRI 104.
- B. Installation Method: Direct glue-down.
- C. Installation Method for Stairs: Glue down.
- D. Maintain uniformity of carpet direction and lay of pile. At doorways, center seams under door in closed position. Bind or seal cut edges as recommended by carpet manufacturer.
- E. Install pattern parallel to walls and borders.

END OF SECTION 096816

SECTION 099100 - PAINTING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

- A. Submittals:
 - 1. Product Data. Include printout of MPI's "MPI Approved Products List" with product highlighted.
 - 2. Samples.
- B. Extra Materials: Deliver to Owner 1 gal. of each color and type of finish coat paint used on Project, in containers, properly labeled and sealed.

PART 2 - PRODUCTS

2.1 PAINT

- A. Products:
 - 1. Sherwin Williams.
 - 2. Benjamin Moore.
 - 3. PPG Industries
- B. MPI Standards: Provide materials that comply with MPI standards indicated and listed in its "MPI Approved Products List."
- C. Material Compatibility: Provide materials that are compatible with one another and with substrates.
 - 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.
- D. Use interior paints and coatings that comply with the following limits for VOC content:
 - 1. Flat Paints and Coatings: 50 g/L.
 - 2. Nonflat Paints, Coatings: 150 g/L.
 - 3. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.
 - 4. Clear Wood Finishes, Varnishes: 350 g/L.
 - 5. Clear Wood Finishes, Lacquers: 550 g/L.
 - 6. Floor Coatings: 100 g/L.
 - 7. Shellacs, Clear: 730 g/L.
 - 8. Shellacs, Pigmented: 550 g/L.
 - 9. Stains: 250 g/L.
 - 10. Primers, Sealers, and Undercoaters: 200 g/L.
 - 11. Dry-Fog Coatings: 400 g/L.
 - 12. Zinc-Rich Industrial Maintenance Primers: 340 g/L.
 - 13. Pretreatment Wash Primers: 420 g/L.
- E. Colors: As selected.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove hardware, lighting fixtures, and similar items that are not to be painted. Mask items that cannot be removed. Reinstall items in each area after painting is complete.
- C. Clean and prepare surfaces in an area before beginning painting in that area. Schedule painting so cleaning operations will not damage newly painted surfaces.

3.2 APPLICATION

- A. Comply with recommendations in MPI's "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Paint exposed surfaces, new and existing, unless otherwise indicated.
 - 1. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces.
 - 2. Paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 - 3. Paint the back side of access panels.
 - 4. Color-code mechanical piping in accessible ceiling spaces.
 - 5. Do not paint prefinished items, items with an integral finish, operating parts, and labels unless otherwise indicated.
- C. Apply paints according to manufacturer's written instructions.
 - 1. Use brushes only for exterior painting and where the use of other applicators is not practical.
 - 2. Use rollers for finish coat on interior walls and ceilings.
- D. 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.
 - 1. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

3.3 EXTERIOR PAINT APPLICATION SCHEDULE

- A. Concrete Masonry Units:
 - 1. Semigloss Latex: Two coats over alkali-resistant primer: MPI EXT 4.2L.
- B. Steel:
 - 1. High-Gloss, Quick-Dry Enamel: Two coats over rust-inhibitive primer: MPI EXT 5.1A.
- C. Galvanized Metal:
 - 1. Gloss Latex: Two coats over waterborne galvanized-metal primer: MPI EXT 5.3H.
- D. Dressed Lumber: Including Existing architectural woodwork.
 - 1. Semigloss Latex: Two coats over primer: MPI EXT 6.3L.

- E. Plastic Trim:
 - 1. Semigloss Latex: Two coats.

3.4 INTERIOR PAINT APPLICATION SCHEDULE

- A. Concrete Masonry Units:
 - 1. Semigloss Latex: Two coats. At new construction, provide latex block filler: MPI INT 4.2A.
- B. Steel:
 - 1. High-Gloss, Quick-Dry Enamel: Two coats over quick-drying alkyd metal primer: MPI INT 5.1A.
- C. Dressed Lumber: Including architectural woodwork and doors.
 - 1. Semigloss Latex: Two coats over primer: MPI INT 6.3T.
- D. Wood Panel-Products:
 - 1. Semigloss Latex: Two coats over primer: MPI INT 6.3T.
- E. Gypsum Board:
 - 1. Satin throughout typical, Semigloss in restrooms, Latex: Two coats over primer/sealer: MPI INT 9.2A.

END OF SECTION 099100

SECTION 099350 - OPAQUE STAINED CONCRETE

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Stained concrete for floors.
 - 2. Sealer.

1.2 SUBMITTALS

- A. Product Data: For each product indicated.
- B. Samples for Initial Selection: Manufacturer's color charts.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: Trained and approved by Manufacturer of stain products.
- B. Manufacturer's Qualifications: Three year's experience manufacturing products required.
- C. Source Limitations: Obtain products from same source throughout Project.
- D. Field Samples: Locate at site and obtain approval before start of final work. Field samples shall be a minimum of 4 by 4 feet.
 - 1. Demonstrate range of colors, finishes, and workmanship, including sealing procedures.
 - 2. Approved field samples set quality standards for comparison with remaining work.
 - 3. Approved field samples may become part of the completed Work if undisturbed at completion of Project.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in original packaging with labels intact.
- B. Store in clean, dry and protected location, according to manufacturer's requirements.

1.5 PROJECT CONDITIONS

- A. Environmental Requirements: Comply with stain manufacturer's instructions.
 - 1. Do not apply stain if substrate, air, or product temperature is not between 50 to 90 deg F before and during installation.
 - 2. Do not apply stain if relative humidity is above 85 percent during installation.
 - 3. In hot weather, install stain in early morning or when substrates are shaded.
 - 4. Do not install stain if rain is predicted within 8 hours after installation.
 - 5. Substrates shall be uniformly dry, and free of standing water or ice.

PART 2 - PRODUCTS

2.1 OPAQUE STAIN: Three-component, polymerizing, penetrating stain designed for permanently coloring concrete floors.

- A. Product:
 - 1. Basis of Design: Butterfield Color® Renovatio™ Opaque Concrete Stain, or equal. Color as selected by Architect from manufacturer's full range.

2.2 CLEAR SEALER: Two-component, polymerizing, moderate-gloss.

- A. Product:
 - 1. Basis of Design: Butterfield Color® Renovatio™ Clear Seal.

- 2.3 SLIP-RESISTIVE ADDITIVE: Finely graded aggregate or polymer additive designed to add to sealer for slip-resistant surface.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrate and conditions for compliance with requirements.
- B. Do not proceed with stained concrete installation until unacceptable conditions are corrected.

3.2 MIXING

- A. Follow Manufacturer's instructions for mixing product

3.3 SUBSTRATE PREPARATION

- A. Protect surfaces not to be stained from run-off and tracking.
- B. Clean substrates thoroughly using CHO Concrete Cleaner and water with a scrub brush, according to manufacturer's instructions. Do not use muriatic acid to clean substrates before staining. Neutralize and flush residues from surface.
- C. For hard-troweled surfaces, open surface of substrates by sanding with 80-grit sanding disk or black scrubbing pad. Test sanding in an unobtrusive location to assure that excessive sanding does not expose sand and aggregate.
- D. Test substrates by spotting with water. If water beads, or does not penetrate surface, continue preparing substrates.
- E. Rinse until water is clear. Control, collect, and legally dispose of runoff.
- F. Allow substrates to dry thoroughly prior to application of stains.
- G. Divide substrates into small areas by natural stopping points, such as walls and joint lines.
- H. Protection: Protect substrates during the construction period as follows:
 - 1. Use safe-release blue painter's masking tape. Do not use adhesive or duct tape.
 - 2. Prevent petroleum products from staining substrates.
 - 3. Diaper hydraulic equipment.
 - 4. Do not park vehicles on substrates.
 - 5. Do not permit pipe-cutting equipment on substrates.
 - 6. Do not place steel reinforcing bars on substrates to avoid rust stains.
 - 7. Notify other trades of protection requirement before and after stain application.

3.4 STAINING

- A. Opaque Concrete Stain:
 - 1. Apply with a clean and dry Renovatio™ Application Brush.
 - 2. Maintain a wet edge, but do not allow stain to puddle.
 - 3. Periodically agitate stain in mixing pail/pan during application.
 - 4. Immediately re-brush initial application until opaque concrete stain is tack free.
 - 5. If needed, re-apply stain within 24 to 48 hours after initial application.
 - 6. Verify slip resistance before opening surfaces to traffic. If additional slip resistance is required, apply sealer with slip-resistant additive.
 - 7. After three hours, dispose of any unused mixed material.

3.5 SEALING

- A. Only use sealer from same manufacturer or opaque stain. Apply sealer according to manufacturer's instructions.

- B. Apply sealer with foam rollers or airless sprayer.
- C. Do not apply sealer until stain is tack free.
- D. Do not allow sealer to collect in joints or depressions.
- E. Apply slip resistant additive according to manufacturer's instructions before sealer is tack free.
- F. Verify adequacy of slip resistance before opening up surfaces to traffic.

3.6 PROTECTION

- A. Protect stained and sealed surfaces from moisture from any source for 14 hours after final application.
- B. Protect stained concrete from damage or deterioration until date of Substantial Completion.

END OF SECTION