

S P E C I F I C A T I O N S

MOB-II

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FOR

Baptist Medical Center South



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PART 1 - GENERAL

1.01 DESCRIPTION

- A. The work includes the partial wrecking of structures and the removal and disposal of demolished materials, as shown on the drawings and specified.

1.02 SUBMITTALS

- A. Schedule: Submit schedule of demolition prior to the start of work. Include in the schedule the coordination for shut-off, capping and continuation of utility services as required.
 - 1. Include a detailed sequence of demolition and removal work to ensure the uninterrupted progress of the Owner's operations.

1.03 JOB CONDITIONS

- A. Occupancy: Buildings and other structures to be partially demolished will be occupied during work.
- B. Condition of Structures: The Owner assumes no responsibility for the actual condition of structures to be demolished.
 - 1. Conditions existing at the time of inspection for bidding purposes will be maintained by the Owner in so far as practicable. However, variations within the structure may occur by Owner's removal and salvage operations prior to the start of the demolition work.
- C. Partial Removal: Items of salvable value to the Contractor may be removed from the structure as the work progresses. Salvaged items shall be transported from the site as they are removed. Storage or sale of removed items on the site shall not be permitted.
- D. Explosives: The use of explosives will not be permitted.
- E. Traffic: Conduct demolition operations and the removal of debris to ensure minimum interference with roads, streets, walks, and other adjacent occupied or used facilities. Do not close or obstruct streets, walks or other occupied or used facilities without permission from authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
- F. Protections: Ensure the safe passage of persons around the area of demolition. Conduct operations to prevent injury to adjacent buildings, structures, other facilities, and persons.
 - 1. Erect temporary construction walls to protect and secure building.
 - 2. Provide interior and exterior shoring, bracing, or support to prevent movement or settlement or collapse of structures to be demolished and adjacent facilities to remain.
- G. Damages: Promptly repair damages caused to adjacent facilities by demolition operations at no additional cost to the Owner.
- H. Utility Services: Maintain existing utilities, indicated to remain, keep in service, and protect against damage during demolition operations.
 - 1. Do not interrupt existing utilities serving occupied or used facilities, except when authorized in writing by authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to the governing authorities.

PART 2 - PRODUCTS

Not applicable.

PART 3 - EXECUTION

3.01 POLLUTION CONTROLS

- A. Use water sprinkling, temporary enclosures, and other suitable methods to limit the amount of dust and dirt rising and scattering in the air to the lowest practical level. Comply with governing regulations pertaining to environmental protection. Do not use water when it may create hazardous or objectionable conditions such as flooding and pollution.
- B. Clean adjacent structures and improvements of dust, dirt, and debris caused by demolition operations, as required by the governing authorities. Return adjacent areas to condition existing prior to the start of the work.

3.02 BUILDING DEMOLITION

- A. Demolish portions of buildings as indicated and remove from the site. Use such methods as required to complete the work within the limitations of governing regulations.
- B. Proceed with demolition in a systematic manner, from the top of the structure to the ground. Complete demolition work above each floor or tier before disturbing supporting members on lower levels.
- C. Demolish concrete and masonry in small sections.
- D. Remove structural framing members and lower to ground by means of hoists, derricks, or other suitable methods.
- E. Locate demolition equipment throughout and around the structure and remove materials so as to not impose excessive loads to supporting walls, floors or framing.
- F. Break up and remove concrete slabs-on-grade, unless otherwise shown to remain.

3.03 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Remove from the site debris, rubbish, and other materials resulting from demolition operations. Burning of removed materials from demolished structures will not be permitted on the site.
- B. Removal: Transport materials removed from demolished structures and dispose of off site daily and in a legal manner at appropriate land fill facility.
 - 1. Contractor shall pay all fees for disposal of materials demolished.

END OF SECTION

SECTION 05505
METAL FABRICATIONS

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The extent of metal fabrications (miscellaneous metal work) is shown on the drawings and specified herein.
- B. The types of metal fabrications include, but are not limited to, the following items:
 - 1. Miscellaneous framing and supports.
 - 2. Miscellaneous steel trim.

1.02 QUALITY ASSURANCE

- A. Field Measurements: Take field measurements prior to fabrication.
- B. Shop Assembly: Preassemble items in shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation.
- C. Certification of Welders: Welding of all structural steel shall be limited to welding operators whose competency has been tested to procedures contained in Structural Welding Code of American Welding Society. This stipulation applies to any piece, clip, or connector providing structural support.

1.03 SUBMITTALS

- A. Manufacturer's Data: Submit manufacturer's specifications, anchor details and installation instructions for products to be used in the fabrication of miscellaneous metal work, including paint products.
- B. Shop Drawings: Submit shop drawings for fabrication and erection of metal fabrications including specified proprietary items. Include plans, elevations, and details of sections and connections. Show anchorage and accessory items. Re-use of Contract Documents for shop drawings is prohibited.

PART 2 - PRODUCTS

2.01 MATERIALS AND COMPONENTS

- A. Metal Surfaces: For fabrications of miscellaneous metal work which will be exposed to view, use only materials which are smooth and free of surface blemishes including pitting, seam marks, roller marks, rolled trade names and roughness.
- B. Steel Plates, Shapes and Bars: ASTM A36 or A992.
- C. Steel Plates to be Bent or Cold Formed: ASTM A283, Grade C.
- D. Steel Tubing: Cold-formed, welded or seamless, ASTM A500, Grade B.
- E. Steel Bars and Bar-Size Shapes: ASTM A306, Grade 65, or ASTM A36.

- F. Cold-Finished Steel Bars: ASTM A108, grade as selected by fabricator.
- G. Carbon Steel Sheets:
 - 1. Cold-Rolled: ASTM A366.
 - 2. Galvanized: ASTM A526, with ASTM A525, G 90 Zinc coating.
- H. Aluminum Extrusions: ASTM B221, alloy 6063-T5 and 6063-T6 for pipe.
 - 1. Clear anodized finish AA-M10-C22-A31 (204R1).
- I. Aluminum Sheet or Plate: ASTM B209, alloy 6061-T4.
- J. Stainless Steel Bars and Shapes: ASTM A314, Type 304 (or 316 near ocean) with No. 2B finish unless otherwise shown.
- K. Stainless Steel Sheet or Plate: Type 316 with No. 2B finish.
- L. Castings:
 - 1. Gray Iron: ASTM A48, Class 30.
 - 2. Malleable Iron: ASTM A47, grade as selected.
- M. Steel Pipe: ASTM A53, type as selected. Provide Grade A, black finish unless galvanizing is required. Pipe shall be standard weight (Schedule 40), unless otherwise indicated. Finish with shop prime paint, except where galvanized finish is indicated.
- N. Nonshrink Nonferrous Grout: Meadows Seal-tight V-3, Sonneborn SonogROUT, or Thoro Thoroset, or approved equal.

2.02 FASTENERS

- A. General: Provide (zinc coated) fasteners for exterior use or where built into exterior walls. Select fasteners for the type, grade and class required and of material compatible with metal being fastened.
- B. Bolts and Nuts: Regular hexagon head type, ASTM A307, Grade A.
- C. Lag Bolts: Square head type, FS FF-B-561.
- D. Screws:
 - 1. Machine: Cadmium plated steel, FS FF-S-92.
 - 2. Wood: Flat head carbon steel, FS FF-S-111.
- E. Plain Washers: Round, carbon steel, FS FF-W-92.
- F. Masonry Anchorage Devices:
 - 1. Expansion shields, FA FF-S-325, galvanized steel.
 - 2. Toggle Bolts: Tumble-wing type, FS FF-B-588, type, class and style as required.
- G. Lock Washers: Helical spring type carbon steel, FS FF-W-84.

2.03 SHOP PRIMER

- A. Primer: Provide Tnemec No. 99 Red, ICI No. 4100 Devguard Primer, Sherwin Williams Kem Kromik or approved equal. Primer selected must be compatible with finish coats of paint. Coordinate selection of metal primer with finish paint requirements specified in

Division 9.

2.04 SHOP FABRICATION

- A. Workmanship: Use materials of size and thickness shown or, if not shown, of required size and thickness to produce strength and durability in finished product. Work to dimensions shown or accepted on shop drawings, using proven details of fabrication and support. Use type of materials shown or specified for various components of work.
- B. Form exposed work true to line and level with accurate angles and surfaces and straight sharp edges. Ease exposed edges to a radius of approximately 1/32 inches unless otherwise shown. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.
- C. Weld corners and seams continuously, complying with AWS recommendations. At exposed connections, grind exposed welds smooth and flush to match and blend with adjoining surfaces.
- D. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners wherever possible. Use exposed fasteners of type shown or, if not shown, Phillips flat-head screws or bolts.
 - 1. Provide for anchorage of type shown, coordinated with supporting structure. Fabricate and space anchoring devices to provide adequate support for intended use.
 - 2. Cut, reinforce, drill and tap miscellaneous metal work as indicated to receive finish hardware and similar items.

2.05 SHOP PRIMING

- A. Shop prime miscellaneous metal work, except members or portions of members to be embedded in concrete or masonry, surfaces and edges to be field welded, and galvanized surfaces, unless otherwise specified.
- B. Remove scale, rust and other deleterious materials before applying shop coat.
 - 1. Clean off heavy rust and loose mill scale in accordance with SSPC SP-2 "Hand Tool Cleaning", or SSPC SP-3 "Power Tool Cleaning", or SSPC SP-7 A "Brush-off Blast Cleaning".
 - 2. All steel that will remain exposed to view in finished structure shall be cleaned in conformance to SSPC SP-7 "Brush-off Blast Cleaning" minimum.
 - 3. Remove oil, grease and similar contaminants in accordance with SSPC SP-1 "Solvent Cleaning".
- C. Immediately after surface preparation, brush or spray on primer in accordance with manufacturer's instructions, and at a rate to provide uniform dry film thickness of 1.5 mils for each coat. Use painting methods which will result in full coverage of joints, welds, corners, edges and exposed surfaces.
- D. Apply one shop coat to fabricated metal items, except apply two coats of prime paint to surfaces inaccessible after assembly or erection. Change color of second coat to distinguish it from the first.

2.06 GALVANIZING

- A. Provide a zinc coating for those items shown or specified to be galvanized, as follows:
 - 1. ASTM A 153 for galvanizing iron and steel hardware.

2. ASTM A 123 for galvanizing rolled, pressed and forged steel shapes, plates, bars and strips 1/8 inch thick and heavier.
 3. ASTM A385 for galvanizing assembled steel products.
- B. Galvanizing Repair: ASTM A780, high zinc dust content compound for re-galvanizing welds in galvanized steel. Provide ZRC by ZRC Chemical Products Co. or Galvicon by Kenco Division of Southern Coatings.
- C. Zinc Metallized Coating: In lieu of galvanizing specified above, the contractor may at his option, provide zinc metallized coating for all metals indicated to receive galvanizing.
1. Interior: Provide thickness required for moderate exposure, SC 2.
 2. Exterior: Provide thickness required for severe exposure, SC 3.

2.07 MISCELLANEOUS FRAMING AND SUPPORTS

- A. Provide miscellaneous steel framing and supports which are not a part of structural steel framework, as required to complete work.
- B. Fabricate miscellaneous steel framing and support units to size, shapes and profiles shown or, if not shown, of required dimensions to receive adjacent other work to be retained by framing. Except as otherwise shown, furnish units fabricated from structural steel shapes, plates and steel bars, and of welded construction using mitered joints for field connection. Cut, drill and tap units to receive hardware and similar items.
1. Galvanize exterior miscellaneous framing and supports.

2.08 MISCELLANEOUS STEEL TRIM

- A. Provide shapes and sizes for profiles shown. Except as otherwise noted, fabricate units from structural steel shapes and plates and steel bars, with continuously welded joints and smooth exposed edges. Use concealed field splices wherever possible. Provide cutouts, fittings and anchorages as required for coordination of assembly and installation with other work.
1. Galvanize exterior miscellaneous steel trim.

PART 3 - EXECUTION

3.01 INSTALLATION - GENERAL

- A. Manufacturer's Directions: Set manufactured items according to printed directions of the manufacturer except as specified otherwise or modified by details.
- B. Insulating Metals: To prevent electrolysis, separate contacting surfaces of dissimilar metals with one ply of 15-pound asphalt-saturated felt.
- C. Galvanizing Repair: Repair damaged areas of galvanizing with galvanizing repair compound before and after installation.
- D. Furnish and use setting drawings, diagrams, templates, manufacturer's instructions and directions for installation of anchorages such as concrete inserts, anchor bolts and miscellaneous items having integral anchors, which are to be embedded in concrete or masonry.
- E. Fit exposed connections accurately together to form tight hairline joints. Weld connections

which are not to be left as exposed joints, but cannot be shop welded because of shipping size limitations. Grind exposed joints smooth and touch-up shop paint coat. Do not weld, cut or abrade the surfaces of exterior units which have been hot-dip galvanized after fabrication, and are intended for bolted or screwed field connections.

- F. Touch-Up Painting: Cleaning and touch-up painting of field welds, bolted connections and abraded areas of the shop paint on miscellaneous metal are specified in Division 9.

3.02 FABRICATED METAL ITEMS

- A. Install as detailed on drawings and approved shop drawings.

END OF SECTION

SECTION 06105
ROUGH CARPENTRY

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide carpentry work specified and shown on drawings.
- B. Provide nailers, blocking, grounds, sheathing, furring and other wood items required.

1.02 QUALITY ASSURANCE

- A. Lumber Standard: Comply with NBS Voluntary Product Standard PS 20, American Softwood Lumber Standard.
- B. Plywood Standard: Comply with U.S. Product Standard PS 1, Construction and Industrial Plywood.

1.03 SUBMITTALS

- A. Submit certification of lumber treatment.
- B. Submit certificate of inspection for species and grade for each type lumber.
- C. Submit certification for each type and grade of plywood.

1.04 PRODUCT HANDLING

- A. Keep materials dry during delivery and storage. Stack lumber and plywood, and provide air circulation within stacks.

PART 2 - PRODUCTS

2.01 LUMBER

- A. Nominal sizes are indicated, except where shown by detail dimensions to be actual sizes, provide dressed sizes as required by PS 20.
 - 1. Provide S4S lumber, unless otherwise shown or specified.
 - 2. Provide seasoned lumber with 19 percent maximum moisture content at time of dressing.

2.02 BOARDS NOT EXPOSED TO VIEW

- A. Provide Southern Pine No. 2 Boards and Studs (SPIB) with 19 percent maximum moisture content.

2.03 PLYWOOD

- A. Plywood shall conform to PS 1 and shall have APA Grade Marks. Provide fire retardant treated plywood.
- B. Backboards: Plywood for backing panels for electrical or telephone equipment shall be

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fire-retardant treated Exterior Grade Plywood, A-C-EXT-APA-PS 1, 3/4 inch unless otherwise indicated.

2.04 MISCELLANEOUS MATERIALS

- A. Fasteners and Anchorages: Provide size and type as indicated and as recommended by applicable standards, complying with applicable Federal Specifications for nails, staples, screws, bolts, nuts, washers and anchoring devices.
 - 1. Bolts and other fasteners for framing shall be hot dip galvanized. Electro-galvanize is not acceptable.
 - 2. Nails for exterior use shall be hot-dip galvanized.
 - 3. Nails for concealed framing shall be cement-coated.
- B. Building Paper: Asphalt saturated felt, non-perforated, ASTM 0225. Use 30 pound for application over wall and roof sheathing.
- C. Bolts, nuts and washers for exterior wood framing shall be hot-dip galvanized after fabrication, ASTM A153.

2.05 FIRE RETARDANT TREATMENT

- A. Provide fire retardant treated lumber and plywood where indicated. Lumber and plywood shall be pressure treated with Dricon fire retardant chemicals or approved equal with follow-up inspection provided by Underwriters' Laboratories, Inc.
- B. Treatment: Conform to AWWPA (American Wood Preservers' Assoc.) standards C 20 for lumber and C 27 for plywood. Treatment shall be by pressure impregnation of fire-retardant chemicals to achieve flame-spread rating required for U.L. Classification by U.L. test 723, ASTM E84 or NFPA 255.
- C. Provide Interior type A as applicable for location, type material and humidity.
- D. Provide UL label on each piece of fire-retardant lumber and plywood certifying a Class A/Class 1 flame-spread rating. Each piece shall carry a National Evaluation Services report number.
- E. Kiln-dry treated items to a maximum moisture content after treatment as follows:
 - 1. Lumber: 19 percent maximum.
 - 2. Plywood: 15 percent maximum.

PART 3 - EXECUTION

3.01 GENERAL

- A. Set carpentry work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.
- B. Securely attach carpentry work to substrates by anchoring and fastening as shown and as required by carpentry standards. Select fasteners of size that will not penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting of wood. Pre-drill as required.
- C. Do not rip or mill fire retardant treated lumber. Only end cuts, drilling holes and joining

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cuts are permitted unless the material carries a Underwriter's Laboratories, Inc. approved milling after treatment classification.

3.02 WOOD GROUNDS, NAILERS AND BLOCKING

- A. Provide wherever shown and where required for screeding or attachment of other work. Form to shapes as shown and cut as required for true line and level of work to be attached. Coordinate location with other work involved.
- B. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise shown. Build anchors into masonry during installation of masonry work. In concrete, set and anchor to formwork before concrete placement.
- C. Provide permanent grounds, where required, of dressed, pressure treated, key-beveled lumber not less than 1-1/2 inch wide and of the thickness required to bring face of grounds to exact thickness of finish material involved.

3.03 INSTALLATION OF PLYWOOD

- A. Unless otherwise shown, comply with the recommendations of the American Plywood Association (APA). Comply with applicable recommendations contained in Form No. E 30D, APA Design/Construction Guide - Residential and Commercial, for types of plywood panels and applications indicated.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide plastic laminate finished cabinetwork and counters, as specified and shown on the drawings.

1.02 QUALITY ASSURANCE

- A. Cabinetwork Quality Standards: Except as otherwise shown or specified, comply with specified provisions of AWI (Architectural Woodwork Institute) Quality Standards.
- B. Cabinetwork Quality Marking: Mark each unit with mill or fabricator identification and grade mark, located on surfaces which will not be exposed after installation.
- C. All cabinetwork shall be produced by a single firm.
- D. Glazing Standards: Comply with FGMA (Flat Glass Marketing Association) Glazing Manual and FGMA Sealant Manual except where more stringent requirements are indicated.

1.03 SUBMITTALS

- A. Cabinetwork Quality Certification: Submit manufacturer's certification, stating that the fabricated work conforms to AWI Grade specified.
- B. Shop Drawings: Submit shop drawings showing location of each item, dimensioned plans and elevations, large scale details, attachment devices and other components.
- C. Submit manufacturer's product data and installation instructions for each type of glass and each glazing material required.
- D. Samples: Submit the following samples:
 - 1. Plastic Laminate; 4" square, two of each color and type.
 - 2. Exposed Cabinet Hardware; One unit of each type and finish.
 - 3. Glass: Submit two 4" x 6" samples of each type required, including required edge finish.
 - 4. Glazing Frames: Submit two 8" long samples of each type, including required finish.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Protect cabinetwork, glazing and accessories during transit, delivery, storage and handling to prevent damage, soiling and deterioration.
- B. Do not deliver cabinetwork, until painting, wet work, grinding and similar operations which could damage, soil or deteriorate cabinetwork have been completed in installation areas.

1.05 JOB CONDITIONS

- A. Examination: Examine the substrates and conditions under which the work is to be installed and correct unsatisfactory conditions. Do not proceed with the work until unsatisfactory

conditions have been corrected.

- B. Conditioning: Do not install cabinetwork until the required temperature and relative humidity have been stabilized and will be maintained in installation areas.
- C. Maintain temperature and humidity in installation area as required to maintain moisture content of installed cabinetwork within a 1.0 percent tolerance of the optimum moisture content, from the date of installation through the remainder of the construction period. The fabricator of the cabinetwork shall determine the optimum moisture content and required temperature and humidity conditions.

PART 2 - PRODUCTS

2.01 MATERIALS AND FABRICATION

- A. Wood Moisture Content: Provide kiln-dried lumber and maintain optimum moisture content of 8 to 13 percent in solid hardwood and softwood through fabrication, installation, and finishing operations of interior work.
- B. Plastic Laminate Quality Standards: Comply with NEMA LD3; type, thickness, color, pattern and finish as indicated for each application.
 - 1. Fabrication shall be made using approved methods of the laminate manufacturer.
 - 2. Cutout inside corners shall have as large a radius as possible and concealed reinforcing.
 - 3. Forming of radius edges shall be done in strict accordance with manufacturer's recommendations and NEMA LD3.
- C. Cabinetwork Quality Standards: Comply with Section 400, 400B and 400C of AWI Quality Standards as applicable:
 - 1. Cabinetwork: AWI Section 400B, Custom Grade.
 - 2. Countertops: AWI Section 400C Custom Grade.
 - 3. All countertops and backsplashes shall be constructed of plywood in accordance with referenced standards.
- D. Measurements: Before proceeding with fabrication of cabinetwork required to be fitted to other construction, obtain measurements and verify dimensions and shop drawing details as required for accurate fit. Ample borders and edges shall be provided to allow for subsequent scribing and trimming of woodwork for accurate fit.

2.02 PLASTIC LAMINATE CLAD CABINETWORK AND COUNTERS

- A. Grade: AWI Custom Grade.
- B. Cabinet Construction Type: Flush Overlay.
- C. Plastic Laminate Type:
 - 1. Horizontal Surfaces: GP 50 (0.050" thick), General-Purpose Type (high-pressure).
 - 2. Vertical Surfaces: GP 28 and PF 30 (0.030" thick), General-Purpose Type (high-pressure).
 - 3. Cabinet and Drawer Linings: FL 20 (0.020" thick), Cabinet-Liner Type (high-pressure).
 - 4. Concealed Panel Backing: BK 20 (0.020" thick), Backer Type (high-pressure).
- D. Plastic Laminate Colors and Patterns: Refer to drawings.

- E. Fabricate exposed edges of cabinetwork, including edges of doors and drawers when open, with matching plastic laminate, except as otherwise indicated.
- F. All interior surfaces of cabinetwork, including doors and drawers, shall receive plastic laminate cabinet lining as specified herein.

2.03 PLASTIC LAMINATE COUNTERTOPS AND BACKSPLASH

- A. Grade: AWI Custom Grade except as specifically exceeded below.
- B. Plastic Laminate Types: Fire-rated type, 0.050" thick; UL tested and labeled ratings of 25 for flame spread, 25 for fuel contributed and 100 for smoke developed when bonded to wood plywood.
- C. Plastic Laminate Colors and Patterns: Refer to drawings.
- D. Fabricate all exposed edges with matching plastic laminate. Provide 2 inch radius corner at exposed countertop corners.

2.04 CABINET HARDWARE AND ACCESSORY MATERIALS

- A. General: Provide cabinet hardware and accessory materials associated with cabinetwork.
- B. Hardware Standards: Except as otherwise indicated, comply with ANSI A156-9 "American National Standard for Cabinet Hardware".
 - 1. Quality Level: Type 2, unless otherwise indicated.
- C. Cabinet Hardware Schedule: Provide cabinet hardware as required for a complete installation. Provide BMC standard cabinet hardware.
 - 1. Cabinet Pull: Hafele, 115.60.602 SS Wire Pull.
- D. Exposed Hardware Finish: Except where not available, provide exposed hardware with BHMA Code 626 satin chromium plate finish (US26D), where not available, provide either satin aluminum or satin stainless steel finish.

2.05 PASS-THRU WINDOW

- A. Unframed tempered 1/4 inch, obscure glass panels in an aluminum track/frame.
- B. Aluminum Finish: BHMA A156.14 clear anodized aluminum.
- C. Hardware: Rated for glass and as recommended by manufacturer for window size.
- D. Manufacturer:
 - 1. Engineered Products Company (EPCO): Assembly 16 with head, sill and jambs for 1/4 inch glass.
 - 2. Knape and Vogt (KV): Assembly No. P1092 with head, sill and jambs for 1/4 inch glass and Knob Pull No. 1088.

PART 3 - EXECUTION

3.01 PREPARATION FOR CABINETWORK

- A. Condition cabinetwork to average prevailing humidity conditions in installation areas prior

to installing.

- B. Prior to installation examine shop fabricated work for completion, and complete work as required, including back priming and removal of packing.

3.02 CABINETWORK INSTALLATION

- A. Install the work plumb, level, true and straight with no distortions. Shim as required using concealed shims. Install to a tolerance of 1/8" in 8'-0" for plumb and level.
- B. Scribe and cut work to fit adjoining work and refinish cut surfaces, or repair damaged finish at cuts.
- C. Install without distortion so that doors and drawers will fit openings properly and be accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete the installation of hardware and accessory items as indicated.
- D. Shelving: Complete the assembly of units and install in the areas indicated, including hardware and accessories as indicated.

3.03 ADJUSTMENT, CLEANING, FINISHING AND PROTECTION OF CABINETWORK

- A. Repair damaged and defective cabinetwork wherever possible to eliminate defects, functionally and visually. Where not possible to repair properly, replace cabinetwork.
- B. Clean hardware, lubricate and make final adjustments for proper operation.
- C. Clean exposed and semi-exposed surfaces. Touch-up shop-applied finishes to restore damaged or soiled areas.
- D. Protection: Protect and maintain conditions necessary to ensure that the work will be without damage or deterioration at the time of acceptance.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The work includes providing and installing fire and smoke barrier firestopping systems for pipe and conduit penetrations thru fire-rated walls, floors and other components, as indicated on the drawings.
- B. The work includes firestopping of new and existing pipes and conduits penetrating new fire-rated construction.
- C. The work includes firestopping of new pipes and conduits penetrating existing fire-rated construction.
- D. Refer to Section 05505, METAL FABRICATIONS for metal fabrications associated with firestopping of penetrations in walls and floors.

1.02 QUALITY ASSURANCE

- A. Firestopping Materials: Each material shall be tested approved and listed by UL in accordance with ASTM E119 and ASTM E814 as applicable to achieve a fire-rating as required for the wall, floor or roof penetration rating required per 3M's UL listed assembly designs.
- B. Firestopping shall be installed by applicators with a minimum two (2) years experience installing UL classified firestopping and approved by the product manufacturer for installation of the systems required.
 - 1. The General Contractor may utilize his own personnel to install firestopping materials only if the personnel used meet the qualifications stated above. Otherwise, the Contractor shall contract with a firm specializing in the installation of the type of firestopping systems specified.
- C. The General Contractor is responsible for coordinating with the Mechanical and Electrical sub-contractors to determine the locations and quantity of penetrations requiring fireproofing.
- D. The applicator is fully responsible for verifying compatibility of the system components with the type of construction being penetrated.
- E. All materials shall be installed in strict compliance with the product manufacturer's recommendations for installation and the UL rating indicated or required.
- F. UL Ratings shall be as shown on drawings and in compliance with UL designs as shown in Underwriters Laboratories Fire Resistance Directory.

1.03 SUBMITTALS

- A. Manufacturer's Product Data: Submit for each material and accessory required for use in firestopping, including instructions for installation.
- B. Manufacturer's Certification: Submit letter from product manufacturer certifying that each material has been tested by UL or other recognized testing laboratory and fully complies

with the fire rating design indicated.

- C. Shop Drawings: Submit shop drawings indicating each condition requiring firestopping. Include UL system, materials to be used, anchorage and method of installation for each condition and type of construction being penetrated.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Materials shall be delivered in original, unopened containers, clearly marked with manufacturer's name, brand, grade, type of material and UL label.
- B. Materials shall be stored in a clean, dry, ventilated location and carefully handled to avoid damage.

1.05 JOB CONDITIONS

- A. Examine substrate and conditions under which work is to be performed, and do not proceed with work until unsatisfactory conditions have been corrected.
- B. Contractor shall be responsible for verifying quantity, type and size of all new and existing piping and conduits penetrating new and existing fire rated construction and installing firestopping appropriate for the condition. Refer to the drawings for fire-rated construction.
- C. Contractor shall immediately apply firestopping materials to all new penetrations thru existing rated construction so that fire rating integrity is maintained at the end of each workday. Penetration holes shall not be left unprotected overnight.
- D. Surfaces not intended to receive firestopping materials shall be protected from damage during application. Should this protection not be effective, or not be provided, the respective surfaces shall be restored to their proper conditions by cleaning, repairing or replacing damaged surfaces or items.

PART 2 - PRODUCTS

2.01 MATERIAL TYPES

- A. Firestop Caulk: Provide non-sagging and self-leveling synthetic, intumescent, elastomeric fire barrier sealer capable of expanding when heated to completely seal the penetration.
- B. Wrap Strips: Provide 2 inch wide intumescent, elastomeric sheets for wrapping pipe or conduit and capable of expanding when heated to completely seal the penetration. Provide in widths and thickness required to comply with indicated fire rating.
- C. Moldable Putty: Provide one part, synthetic elastomer, intumescent fire resistive putty capable of expanding when heated to completely seal the penetration. Use only packages with a blue dot marked on the product box which indicates latest putty formulation.
- D. Composite Sheet: Provide rigid panels with heat reactive layer, which expands upon exposure to fire, sealing openings and forming a strong, insulating characteristic.
- E. Damming Material: Provide ceramic (alumina silica) fiber blankets.
- F. Pipe Sleeves: Galvanized steel, standard weight, Schedule 40 pipe, sized as indicated on the drawings.

- G. Metal Clips: 20 gage, "L" shaped metal clips, 1 inch wide by 2 inches long with bottom leg sized to close space between penetrant and wall opening.
- H. Install moldable putty firestop material where existing telephone cable racks penetrate new cable hole assemblies.

2.02 ACCEPTABLE MANUFACTURER AND PRODUCTS

- A. All firestopping materials shall be 3M products.

2.03 3M FIRE PROTECTION PRODUCTS (Basis of Design Only)

- A. Materials Schedule:

Product	Description
Intumescent Firestop Sealant	For use with concrete, masonry and drywall for penetrations of metal pipes, insulated steel pipes, plastic pipes, jacketed cables and cable bundles. Used where cables interface with the metal cover on floor hole assemblies.
Fire Block	Intumescent flexible block for temporary or permanent sealing of cables and cable tray penetrations in walls and floors. Max opening in wall -52" x 48"; floor -36" x 36". Use in concrete, masonry and gypsum wall assemblies. Fire Block is 2" x 8" x 5".
Firestop Putty Stick	An intumescent, non-hardening, firestop putty for single or bundled cable penetrations through concrete, masonry and gypsum wall assemblies. Used where cables interface with the metal cover on floor hole assemblies.
Firestop Putty Pad (6" x 7")	An intumescent moldable firestop putty to be applied between rows of cable and around the perimeter of the cable bundle at floor/wall penetration.
Firestop Putty Pad (7" x 7")	An intumescent moldable firestop putty to be applied between rows of cable and around the perimeter of the cable bundle at floor/wall penetration.

- B. Equivalent Hilti products may be used upon written approval of pricing advantage by BMC Project Manager.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Clean surfaces to be in contact with penetration firestop materials, of dirt, grease, oil, loose materials, rust, or other substances that may affect proper fitting, adhesion, or void the required fire rating.

3.02 INSTALLATION

- A. Install firestopping materials in accordance with the UL design indicated, and in accordance with manufacturer's recommendations and instructions.

- B. Gypsum Wallboard Partitions: Where annular space between the penetrant and gypsum wallboard is 3/16 inch or less, install specified fire caulk full depth of gypsum wallboard thickness. Where annular space exceeds 3/16 inch between penetrant and gypsum wallboard, install wrap strips on both sides of partition as required to reduce the annular space to 3/16 inch or less, and when required for compliance with fire rating indicated. Install wrap strips in accordance with manufacturer's recommendations.
- C. Masonry Partitions: Install damming material in opening, at depth required by product manufacturer, to provide a temporary support for intumescent material while in its uncured plastic state.
- D. Where indicated on drawings, install metal clips between wrap strip material and wall opening, at 120 degree centers around perimeter of penetrant, and in accordance with UL design indicated.
- E. Install caulk to depth required by product manufacturer for compliance with the fire rating indicated and annular space to be filled between penetrant and adjacent construction.
- F. Install all firestop materials in a neat workmanlike manner, avoiding migration of materials onto adjacent surfaces and items not intended to receive firestop materials.
- G. Install caulk only after all painting operations are complete. Caulk shall remain exposed to view after completion of final paint finish.

3.03 CLEANING AND PROTECTION

- A. Remove all excess or discarded materials from the premises immediately after completion of the work.
- B. Protect the completed firestopping work from damage or deterioration throughout the remainder of construction and from activities of other trades. Comply with product manufacturer's instructions for repair of minor damages. Remove and replace work which can not be successfully repaired.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide each type of sealant and calking indicated on drawings and specified herein.
- B. Uses and Locations of Sealants and Calking:
 - 1. Elastomeric Sealants: Use for all exterior joints and for interior joints subject to movement in buildings.
 - 2. Calking Compound: Use for interior joints, not subject to movement.
- C. Colors for exposed materials, adjacent surfaces shall match.

1.02 SUBMITTALS

- A. Submit manufacturer's product data and installation instructions for each type material required.

1.03 QUALITY ASSURANCE

- A. Sealants and calking shall be installed by skilled experienced applicators to deposit sealants in neat, uniform and continuous ribbons. Unsightly joints shall be removed and replaced for compliance.

PART 2 - PRODUCTS

2.01 ELASTOMERIC SEALANTS

- A. One-Component Polyurethane Sealant. ASTM C 920, Type S, Class 25, Grade P or NS as applicable. Provide one of the following:
 - 1. Dynatrol I; Pecora.
 - 2. Sonolastic NP 1; Sonneborn.
 - 3. Vulkem 116; Mameco.
 - 4. Sikaflex- 1a; Sika.

2.02 CALKING COMPOUND

- A. Acrylic-Latex Sealant: Comply with ASTM C 834 for interior use. Provide one of the following:
 - 1. AC-20; Pecora.
 - 2. Sonolac; Sonneborn.
 - 3. Acrylic-Latex; Dap.

2.03 MISCELLANEOUS MATERIAL

- A. Joint Primer-Sealer: Provide the type of joint primer-sealer recommended by the sealant manufacturer for the joint surfaces to be sealed.
- B. Sealant Backer Rod: Compressible rod stock of closed cell polyethylene or other material recommended by sealant manufacturer.

PART 3 - EXECUTION

3.01 JOINT PREPARATION

- A. Clean joint surfaces free of dirt and debris immediately before installation of sealant material.
- B. Prime or seal joint surfaces when recommended by sealant manufacturer. Do not allow primer-sealer to spill or migrate onto adjoining surfaces.

3.02 INSTALLATION

- A. Comply with manufacturer's printed instructions.
- B. Set backer rod at proper depth in the joint. Do not leave voids or gaps between the ends of joint filler units.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide steel frames specified and shown on drawings and schedules.

1.02 QUALITY ASSURANCE

- A. Provide steel frames manufactured by a single firm specializing in production of this type work, unless otherwise approved.
- B. Provide frames complying with the Steel Door Institute, Standard Steel Doors and Frames, SDI-100 and SDI 117 except as otherwise specified.
- C. Products. Provide steel frames as manufactured by one of the following:
 - 1. Mesker.
 - 2. Ceco Corp.
 - 3. Curries Mfg. Inc.
 - 4. Steelcraft Mfg. Co.
- D. Fire Rated Assemblies: Where fire-resistance classification is shown or scheduled for steel frames, provide tested fire-rated assemblies, complete with type of hardware to be used. Identify each frame with recognized testing laboratory labels, indicating applicable fire rating.
 - 1. Construct and install assemblies to comply with NFPA Standard No. 80, and SDI-118 as herein specified.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for fabrication and installation instructions.
- B. Shop Drawings: Submit shop drawings for fabrication and installation of steel frames. Include details of each frame type, conditions at openings, details of construction, location and installation requirements of finish hardware, reinforcements, glazing and details of joints and connections. Show anchorage and accessory items.
 - 1. Provide schedules using same reference numbers for details and openings as those on contract drawings.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Deliver frames cartoned or crated to provide protection during transit and job storage.
- B. Inspect frames upon delivery for specifications compliance and damage. Minor damages may be repaired provided repair work is equal in all respects to new work; otherwise, remove and replace damaged items.
- C. Store frames at building site under cover. Place units on at least 4 inches high wood sills or on the floor in a manner that will prevent rust and damage. Avoid use of non-vented plastic or canvas shelters which create a humidity chamber. If cardboard wrapper on frames become wet, remove carton immediately. Provide a ¼ inch space between stacked doors to

promote air circulation.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Hot-Rolled Steel Sheets and Strip: Commercial quality carbon steel, pickled and oiled, complying with ASTM A 569 and ASTM A 568.
- B. Cold-Rolled Steel Sheets: Commercial quality carbon steel, complying with ASTM A 366 and ASTM A 568.
- C. Supports and Anchors: Fabricate of not less than 18 gage galvanized sheet steel.
- D. Inserts, Bolts and Fasteners: Manufacturer's standard units, except hot-dip galvanize items to be built into exterior walls, complying with ASTM A 153, Class C or D as applicable.
- E. Shop-Applied Paint: For steel surfaces, use rust-inhibitive enamel or paint, either air-drying or baking, suitable as a base for specified finish paints.

2.02 FABRICATION, GENERAL

- A. Fabricate steel frame units to be rigid, neat in appearance and free from defects, warp or buckle. Unless otherwise specified, fit, assemble, and weld units in fabricator's plant.
- B. Fabricate frames, concealed stiffeners, reinforcement, edge channels and moldings from cold-rolled or hot-rolled steel, at fabricator's option.
- C. Exposed Fasteners: Provide countersunk flat Phillips heads for exposed screws and bolts. At exterior doors, all fasteners shall be stainless steel.
- D. Finish Hardware Preparation: Prepare frame units to receive specified finish hardware, including cutouts, reinforcing, drilling and tapping in accordance with final Finish Hardware Schedule and templates provided by hardware supplier. Comply with applicable requirements of ANSI A 115, Specifications for Door and Frame Preparation.
 - 1. Reinforce frame units to receive surface-applied hardware. Drilling and tapping for surface-applied finish hardware may be done at project site.
 - 2. Locate finish hardware as shown on final shop drawings or, if not shown, in accordance with "Recommended Locations for Builder's Hardware", published by the Door and Hardware Institute.
- E. Shop Painting: Clean, treat and paint exposed surfaces of fabricated frame units, including galvanized surfaces.
 - 1. Clean steel surfaces of mill scale, rust, oil, grease, dirt and other foreign materials before the application of shop coat of prime paint.
 - 2. Apply shop coat of prime paint of even consistency to provide a uniformly finished surface ready to receive field-applied paint.

2.03 STEEL FRAMES

- A. Provide steel frames of the types and styles indicated on drawings or schedules: Frames for interior door openings shall be 16 gage steel.
- B. Provide steel frames for doors and other openings, as shown on the drawings. Conceal

fastenings, unless otherwise indicated.

- C. Knock-Down Frames: May be used in metal stud drywall partitions.
- D. Door Silencers: Drill stops to receive three silencers on strike jambs of single door frames and one silencer at the head of each door in double door frames. Manufacturer's "stick-on" silencers will not be acceptable.
- E. Frame Anchors: Provide frame anchors specifically designed for attachment to the type of wall construction in which the frame is installed. Provide welded-in anchors for scheduled fire rated openings.
 - 1. In metal stud construction, provide minimum 18 gage anchors suitably designed for attachment to closed steel studs. Securely weld anchors to inside of frame jambs.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine substrate and conditions under which steel frame units are to be installed. Do not proceed with work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. General: Install frame units and accessories in accordance with final shop drawings and manufacturer's data, and as specified herein.
- B. Placing Door Frames: Comply with the provisions of SDI-105, Recommended Erection Instructions for Steel Frames, unless otherwise indicated.
 - 1. Place frames as indicated on the drawings and prior to construction of enclosing walls. Set frames accurately in position, plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is completed, remove temporary braces and spreaders leaving surfaces smooth and undamaged.
 - 2. In metal stud partitions, locate wall anchors in jambs at hinge and strike levels. In closed steel stud partitions, attach studs to wall anchors with self-tapping screws:
 - a. Frame openings up to 7 feet high shall have 3 anchors per jamb.
 - 3. Where required, install fire-rated frames in accordance with NFPA Standard No. 80.

3.03 ADJUST AND CLEAN

- A. Final Adjustments: Check and readjust operating finish hardware items prior to final inspection. Leave work in complete and proper operating condition. Remove and replace defective work, including doors or frames which are warped, bowed or otherwise damaged.
- B. Prime Coat Touch-Up: Immediately after erection, sand smooth any rusted or damaged areas of prime coat and apply touch-up of compatible air-drying primer.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The types of interior doors required include the following:
 - 1. Solid core flush wood doors with veneer faces to match building standard.
- B. Shop priming/sealing and finishing of wood doors to match building standard.
- C. Factory-preparation for hardware (pre-machining) for wood doors.

1.02 QUALITY ASSURANCE

- A. General: Comply with the requirements of the following standards unless otherwise indicated.
- B. Non-Fire Rated Wood Doors: NWMA Industry Standard 1.S. 1 "Wood Flush Doors" of the National Woodwork Manufacturer's Association.
 - 1. Factory mark each door with NWMA "Quality Certified" Seal of Approval for conformance with NWMA 1.S. 1.
- C. Fire-Rated Wood Doors: Where fire-resistance classifications are shown or scheduled for wood door assemblies, provide doors which comply with the requirements of NFPA No. 80 "Standard for Fire Doors and Windows" and which have been tested and rated with single point hardware by UL, or Warnock Hersey. Provide twenty (20) minute rated C-label doors where C-label doors are required. Provide UL or label on each door and panel.

1.03 WARRANTY

- A. Warranty: Submit written agreement in door manufacturer's standard form signed by the manufacturer agreeing to repair or replace defective doors which have warped (bow, cup or twist) or which show photographing of construction below in face veneers, or do not conform to tolerance limitations of NWMA.
 - 1. The warranty shall also include refinishing and reinstallation which may be required due to repair or replacement of defective doors.
 - 2. Warranty shall be in effect during the following period of time after the date of acceptance.
 - a. Solid Core Flush Interior Doors: Life of installation.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Protect wood doors during transit, storage and handling to prevent damage, soiling and deterioration. Comply with the "On-Site Care" recommendations of NWMA pamphlet "Care and Finishing of Wood Doors" and with manufacturer's instructions.
- B. Provide protective coverings for shop-finished doors at the factory prior to shipping. Use heavy paper cartons and mark with identification required for proper installation.

PART 2 - PRODUCTS

2.01 MATERIALS AND COMPONENTS

- A. General: Provide wood doors complying with the applicable requirements of NWMA 1.S. 1 for the kinds and types of doors indicated and as further specified.
 - 1. Exposed Surfaces: Provide the kind shown or scheduled and as further specified. Provide same exposed surface material on both faces of each door, unless otherwise indicated.
 - 2. Fire-rated Doors: Provide exposed faces and edges to match non-fire-rated doors in the same area of the building, unless otherwise indicated. Provide trim for openings (if any) which have been tested and listed for the kind of door and rating indicated.

2.02 GENERAL FABRICATION REQUIREMENTS

- A. Openings: Cut and trim openings through doors and panels as shown. Comply with the applicable requirements of the referenced standard for the kind(s) of doors required.
 - 1. Light Openings: Factory cut openings: Trim openings for non-fire-rated doors with solid wood moldings of the profile to match existing.

2.03 INTERIOR SOLID CORE FLUSH WOOD DOORS

- A. General: Provide PC-7 solid core wood doors.
 - 1. Type I waterproof bond.
 - 2. Core Construction: Solid wood block, wood particleboard, or mineral with wood lock blocks, as required by door manufacturer to comply with specified warranty period.
 - 3. Face Panels: Manufacturer's standard three-ply face panels.
 - 4. Finish: BMC Standard
- B. Exposed Surfaces for Transparent Finish: Provide manufacturer's standard thickness face veneers of the following quality.
 - 1. Quality: NWMA I.S. 1 Premium grade face veneers of the species and cut to match the building standard. Provide exposed edges and other exposed solid wood components of the same species and color as face veneers.

2.04 PREFITTING AND PREPARATION FOR HARDWARE

- A. Pre-fit and pre-machine wood doors at the factory.
- B. Comply with the tolerance requirements of NWMA for pre-fitting. Machine doors for hardware requiring cutting of doors. Comply with final hardware schedules and door frame shop drawings and with hardware templates and other essential information required to ensure proper fit of doors and hardware.
- C. Take accurate field measurements of hardware mortises in metal frames to verify dimensions and alignment before proceeding with machining in the factory.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine door frames and verify that frames are the correct type and have been installed as required for proper hanging of corresponding doors. Do not proceed with installation until unsatisfactory conditions have been corrected.
 - 1. Install fire-rated wood doors in corresponding fire-rated frames in accordance with the requirements of NFPA No. 80.

3.02 INSTALLATION

- A. Condition doors to average prevailing humidity in installation area prior to hanging.
- B. Hardware: For installation see Division 8, Hardware Specifications.
- C. Manufacturer's Instructions: Install wood doors in accordance with manufacturer's instructions and as shown.
- D. Job Fit Doors: Align doors to frame for proper fit and uniform clearance at each edge and machine for hardware. Seal cut surfaces after fitting and machining.
 - 1. Bevel non-fire rated doors 1/8 inch in 2 inch at lock and hinge edges.
 - 2. Bevel fire-rated doors 1/16 inch in 2 inch at lock edge.
- E. Pre-fit Doors: Fit to frames and machine for hardware to whatever extent not previously worked at factory as required for proper fit and uniform clearance at each edge.
 - 1. Clearance: For non-fire doors provide clearances of 1/8 inch at jambs and heads; 1/8 inch at meeting stiles for pairs of doors, and 1/2 inch from bottom of door to top of decorative floor finish or covering. Where threshold is shown or scheduled, provide 1/4 inch clearance from bottom of door to top of threshold.
 - 2. Clearances for Fire-Rated Doors: Provide in compliance with the limitations of the authority having jurisdiction.

- F. Shop-Finished Doors: Restore finish on edges of shop-finished doors before installation, if fitting or machining is required at the job site.

3.03 ADJUST AND CLEAN

- A. Operation: Re-hang or replace doors which do not swing or operate freely.
- B. Finished Doors: Refinish or replace doors damaged during installation.
- C. Protection and Completed Work: Protect installed wood doors from damage or deterioration until acceptance of the work.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide access doors, including access panels, hinged panels, and hinged doors that are indicated and required in walls and partitions to provide access for adjustment and maintenance of valves, equipment, controls and other devices.
- B. All access doors shall conform to the requirements of this section.
- C. All access doors for the project shall be by the same manufacturer to assure uniformity. Contractor shall coordinate access doors for all work on the project.
- D. Access doors and access panels in mechanical ductwork are specified in Division 15.

1.02 LOCATION, SIZE AND QUANTITY

- A. Provide access doors in locations and sizes shown on drawings.
- B. Provide access doors not shown, but required, to provide access for the adjustment and maintenance of valves, equipment, controls, and other devices.
- C. Determine exact sizes, quantities and locations of access doors by the functions and positions of the valves, controls, equipment and other devices requiring access.
- D. When normal maintenance requires removal of an item for which an access door is provided, access door shall be sized for removal of the item.
- E. Location of each access door shall be determined after the item is in place.

1.03 QUALITY ASSURANCE

- A. Fire-Resistance Ratings: Where access doors are indicated or required in fire rated construction, provide access door assembly with panel door, frame, hinge, and latch from manufacturer listed in Underwriters' Laboratories, Inc. "Classified Building Materials Index".
 - 1. Provide UL label on each fire-rated access door.

1.04 SUBMITTALS

- A. Manufacturer's Data: Submit manufacturer's technical data and installation instructions for each type of access door assembly.

PART 2 - PRODUCTS

2.01 MANUFACTURER

- A. Milcor Div-Inryco products are specified to establish design, quality and type required. Provide access doors as manufactured by one of the following:

ADA 201114

1. Milcor Div-Inryco, Inc.
2. Birmingham Ornamental Iron Co.

2.02 MATERIALS AND FABRICATION

- A. Furnish access door assemblies manufactured as an integral unit, complete with all parts and anchors, ready for installation.
- B. Fabricate units of continuous welded steel construction. Grind welds smooth and flush with adjacent surfaces. Furnish attachment devices and fasteners of the type required to secure assemblies to types of construction shown.
- C. Frames: Fabricate from 16 gage steel.
- D. Finish: Chemically bonded prime coat of baked enamel, unless otherwise specified.

2.03 FIRE-RATED ACCESS DOORS

- A. Provide Milcor Fire Rated Access Door, (size as required) 20 gage steel, sandwich type insulated door panel, with automatic closing mechanism and continuous hinge with stainless steel pin.
- B. Provide anchors and accessories required for installation in each type construction; conform to 3/4 hour "C" label UL rating.
- C. Latching Device: Self latching device; one for each door size up to 36 inches x 36 inches and two (2) for each door larger. Provide interior latch release. Provide latch with direct action knurled knob.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions under which access doors are to be installed. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Comply with manufacturer's instructions.
- B. Coordinate installation with work of other trades.
- C. Set frames accurately in position and securely attach to supports with face panels plumb or level in relation to adjacent finish surfaces.
- D. Adjust hardware and panels after installation for proper operation.
- E. Remove and replace panels or frames which are warped, bowed or otherwise damaged.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Finish hardware is hereby defined to include all items known commercially as finish hardware, required for proper operation of swing doors, except special type of unique hardware specified in other sections.

1.02 QUALITY ASSURANCE

- A. Fire Rated Openings: Provide hardware for fire-rated openings in compliance with NFPA Standard No. 80. Provide only hardware which has been tested and listed by UL for the types and sizes of doors required, and complies with the requirements of the door and door frame labels.

1.03 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for each item of hardware. Include whatever information may be necessary to show compliance with requirements, and instructions for installation and for maintenance of operating parts and exposed finishes. Wherever needed, furnish templates to fabricators of other work which is to receive finish hardware such as doors and steel door frames.
- B. Hardware Schedule (Refer to drawings):
 - 1. Submit copies of the hardware schedule for review. Schedule format shall be similar to the one included at the end of this section and shall include manufacturer's model numbers of proposed products.

PART 2 - PRODUCTS

2.01 MATERIALS AND FABRICATION

- A. Provide concealed fasteners for hardware units which are exposed when the door is closed, except to the extent no standard units of the type specified are available with concealed fasteners. Do not use through bolts for installation where the bolt head or the nut on the opposite face is exposed in other work, except where it is not otherwise feasible to adequately reinforce the work.
- B. Tools for Maintenance: Furnish a complete set of specialized tools as needed for Owner's continued adjustment, maintenance, removal and replacement of builders hardware.
- C. Base Metals: Produce hardware units of basic metal and forming method indicated, using manufacturer's standard metal alloy, composition, temper and hardness, but in no case of lesser commercially recognized quality than specified for applicable hardware units by applicable ANSI A156 series standard for each type hardware item and with ANSI A156.18 for finish designations indicated. Do not furnish "optional" materials or forming methods for those indicated, except as otherwise specified.

2.02 HINGES, BUTTS AND PIVOTS

- A. Hinges: Heavy weight, full mortise, ball bearing type. Provide only template-produced stainless steel units. Provide non-removable pins on tenant entry doors.
 - 1. Acceptable manufacturers:
 - a. Hager
 - b. Lawrence
 - c. Stanley

2.03 LOCK CYLINDERS AND KEYING

- A. Cylinders: Provide building standard, Yale.

2.04 LOCKS AND LATCHES

- A. Match building standard type, finish and keying, Yale.
- B. Trim Design: Lever style. Match building standard.

2.05 CLOSERS

- A. Size of Units: Except as otherwise indicated, comply with the manufacturer's recommendations for size of door control unit, depending upon size of door, exposure to weather and anticipated frequency of use. Where parallel arms are indicated for closers, provide closer unit one size larger than recommended for use with standard arms.
- B. Provide surface-applied closers complying with BHMA Grade 1, single acting rack and pinion mechanism, helical spring actuated, hydraulic checking, dual speed control and key operated valve. Provide one of the following:
 - 1. LCN "Smoothie", #4000 series.
 - 2. Norton, #7500 series.
 - 3. Corbin-Russwin, #DC2000 series.
 - 4. Yale, #4400 series.

2.06 MISCELLANEOUS

- A. Metal Threshold: 5 inch wide extruded aluminum, rabbeted type (1/2 inch high) with grooved tread. Mill finish.
 - 1. Provide one of the following:
 - a. Pemko, #2005AV.
 - b. Zero, #65A.
 - c. Hagar #630SAV.
- B. Stop: Furnish one (1) for preventing the door from striking the wall or other portion of the building when open. Dome shape suitable for fastening to wall, BHMA types L-22102, Model No. 50WBY Glynn-Johnson, subject to Architect's acceptance.
 - 1. Where indicated or required to be floor mounted, provide BHMA Type L-12141 and L-12161.
- C. Silencers: Glynn-Johnson No. 64 or Hager No. 307D. Unless otherwise indicated, install three in jamb of each single swing door frame and two at head of each door in pair door frames.
- D. Pocket Door Frame Assembly: Heavy duty rated for up to 200-pound door. Include

aluminum track, ball bearing rollers (two (2) per door), track stop, door stop, door guide and door frame kit for 3-5/8 inch stud wall.

1. Provide recessed door pulls on face and edge.
2. Manufacturer: Johnson Hardware 100PD Hardware and 1175 Frame Kit.

2.09 HARDWARE FINISHES

- A. All exposed hardware shall match building standard. Provide matching finishes for hardware units at each door or opening, to the greatest extent possible. In general, match items to the manufacturer's standard finish for the latch and lockset for color and texture.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Mount hardware units at heights indicated in "Recommended Locations for Builders' Hardware" by the Door and Hardware Institute (DHI), except as otherwise specifically indicated or required to comply with governing regulations, and except as may be otherwise indicated on the drawings.
- B. Install each hardware item in compliance with the manufacturer's instructions and recommendations. Do not install surface-mounted items until finishes have been completed on the substrate.
- C. Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- D. Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.
- E. Cut and fit threshold to profile of door frames, with mitered corners and hair-line joints. Join units with concealed welds or concealed mechanical joints.
- F. Screw metal thresholds to substrate with No. 10 or larger screws, of the proper type for permanent anchorage and of bronze or stainless steel which will not corrode in contact with the threshold metal.
- G. Locate closers indoors and conceal from spaces of primary importance. Consult Architect regarding questionable locations. Adjust for proper closing speed and to require a force of maximum twenty (20) lbs. to open door.
- H. Locate door stops to strike door at latch and to prevent door and hardware from striking wall or other portion of the building.

3.02 ADJUST AND CLEAN

- A. Adjust and check each operating item of hardware and each door, to ensure proper operation or function of every unit. Replace units which cannot be adjusted to operate freely and smoothly as intended for the application indicated.
- B. Instruct Owner's Personnel in proper adjustment and maintenance of hardware and hardware finishes, during the final adjustment of hardware.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide gypsum drywall work shown on drawings and specified herein.
- B. Work required includes the following:
 - 1. Screw-type metal studs.
 - 2. Metal furring.
 - 3. Sound attenuation blankets.
 - 4. Gypsum drywall work and accessories.
- C. Refer to Section 07275, PIPE PENETRATION FIRESTOPPING and the drawings for requirements of fire rated penetrations.

1.02 QUALITY ASSURANCE

- A. Fire-resistance Ratings: Where indicated, provide assemblies that have been tested, approved and listed by Underwriters Laboratories, Inc., Factory Mutual or other testing agency acceptable to local authorities and code.
- B. Industry Standards: Comply with applicable requirements of the following Documents by the Gypsum Association (GA) and ASTM Standards, except where more stringent requirements are specified or indicated including recommendations of the manufacturer:
 - 1. GA-600 Fire Resistance Design Manual.
 - 2. ASTM C36 Gypsum Wallboard.
 - 3. ASTM C475 Joint Treatment Materials for Gypsum Wallboard Construction.
 - 4. ASTM C514 Nails for Application of Gypsum Wallboard.
 - 5. ASTM C630 Water-Resistant Gypsum Backing Board.
 - 6. ASTM C645 Non-Load Bearing Steel Studs, Runners (Track) and rigid Furring Channels for Screw application of Gypsum Board.
 - 7. ASTM C754 Installation of Steel Framing Members to Receive Screw-Attached Gypsum Wallboard, Backing Board or Water-Resistant Back Board.
 - 8. ASTM C840 Application and Finishing of Gypsum Board.
 - 9. ASTM C954 Steel Drill Screws for Application of Gypsum Board to Steel Studs from 0.033 inches to 0.112 inch thickness.

1.03 SUBMITTALS

- A. Submit manufacturer's product data, specifications and installation instructions for each product, system and component.
- B. Submit shop drawings for details not in manufacturer's data.
- C. Submit a copy of the test(s) reports for each proposed Fire-Resistance Rated assembly.

1.04 PRODUCT HANDLING

- A. Deliver materials in sealed containers and bundles, fully identified with manufacturer's name, brand, type and grade. Store in a dry, well ventilated space, protected from the weather and off the ground.

1.05 JOB CONDITIONS

- A. Examine the substrates and the spaces to receive gypsum wallboard systems and the conditions under which they are to be installed. Do not proceed with the installation until unsatisfactory conditions have been corrected.
- B. Maintain ambient temperature at the temperature and for time period recommended by material manufacturer. Maintain for not less than twenty-four (24) hours before wallboard finishing, during installation and until compounds have fully cured.

PART 2 - PRODUCTS

2.01 STEEL STUD FRAMING

- A. Steel Studs: Conform to ASTM C 645. Provide minimum 25 gage unless otherwise noted, galvanized steel studs of the size and spacing shown on drawings. Gage of metal shall be increased in accordance with ASTM C 754, Table 3 or manufacturer's limiting height tables so that deflection shall not exceed L/240 at 5 pound per square foot.
- B. Stud Accessories: Provide accessories fabricated from galvanized steel.
 - 1. Runners: Provide type recommended by stud manufacturer to match studs, for floor and ceiling support of studs, and for abutment to other work.
 - 2. Stud System Accessories: Provide stud manufacturer's standard reinforcements, fasteners and other accessories.
- C. Fasteners for Steel: Conform to ASTM C 954. Provide size as recommended by gypsum board manufacturer.
- D. Metal Furring: Conform to ASTM C 645. Provide hat-shaped furring members fabricated from 25 gage galvanized steel.

2.02 GYPSUM WALLBOARD

- A. General: Comply with ASTM C 36, as specified and recommended.
- B. Fire Retardant Gypsum Wallboard: Conform to ASTM C 36. Provide Type X, Fire-Resistant Rated, with long edges tapered. Provide for all partition installations.
 - 1. Sheet Size: Maximum length available by 4'-0" wide.
 - 2. Thickness: 5/8 inch.
 - 3. Provide one of the following:
 - a. Fire-Shield; National Gypsum.
 - b. Firestop; Georgia-Pacific.
 - c. Firecode; USG.
- C. Fire Retardant Water-Resistant Gypsum Wallboard: Conform to ASTM C 630. Provide Type X with long edges tapered.
 - 1. Sheet Size: Maximum length available by 4'-0" wide.
 - 2. Thickness: 5/8 inch.
 - 3. Provide one of the following:
 - a. Fire-Shield Moisture Resistant (MR) Board: National Gypsum.
 - b. Fireguard Moisture-Guard Gypsum Board: Georgia-Pacific.
 - c. Sheetrock Brand Gypsum Panels, Water Resistant, with Firecode Core: United States Gypsum Company.

- D. Regular Gypsum Wallboard: Conform to ASTM C 36. Provide regular type, with long edges tapered. Provide for installation over existing gypsum wallboard partitions.
 - 1. Sheet Size: Maximum length available by 4'-0" wide.
 - 2. Thickness: 5/8 inch.
 - 3. Provide one of the following:
 - a. Regular Gypsum Wallboard; National Gypsum.
 - b. GP Regular Gypsum Wallboard; Georgia-Pacific.
 - c. Sheetrock, Regular; USG.
- E. Sound Attenuation Blankets: ASTM C 665, Type I, semi-rigid mineral fiber blanket, unfaced, 2.5 per cubic foot, flame spread 15 (ASTM E 84), 3 inch thickness. Provide one of the following:
 - 1. Thermafiber; U.S. Gypsum.
 - 2. Sound Control Batts: CertainTeed.

2.03 TRIM ACCESSORIES

- A. Provide vinyl trim accessories of the type.
 - 1. "L" Type Casing Trim.
 - 2. Corner Beads.
 - 3. "J" Type Casing Trim at Exposed Edges of Gypsum Board.

2.04 JOINT TREATMENT MATERIALS

- A. Comply with ASTM C 475.
- B. Joint Tape: U.S. Gypsum Perf-A-Tape, or approved equal.
- C. Joint Compound: U.S. Gypsum All-Purpose Ready-Mixed Joint Compound, vinyl type, or approved equal.

2.05 MISCELLANEOUS MATERIALS

- A. Fastening to Wood: Nails conforming to ASTM C 514 or screws conforming to ASTM C 954.
- B. Fastening to Metal: Screws conforming to ASTM C 954.
- C. Concealed Acoustical Sealant: Provide mastic type, non-shrinking, non-drying, non-migrating and non-staining.
- D. Exposed Acoustical Sealant: Provide latex, acrylic, or acrylic-latex type that is permanently elastic and paintable.
- E. Laminating Adhesive: Provide adhesive as recommended by gypsum board manufacturer, ASTM C 557.

PART 3 - EXECUTION

3.01 INSTALLATION OF STEEL FRAMING

- A. Comply with ASTM C 754, and manufacturer's printed instructions.
- B. Do not bridge building expansion joints with support system. Frame both sides of joints

with studs or furring and other support as required.

- C. Space studs and metal furring vertically at 24 inches o.c., unless otherwise indicated on the drawings.
- D. Terminate partition stud system at structural support or substrate above, unless otherwise indicated on the drawings.
- E. Door Frames: Install a minimum of two jamb studs at door jambs. Space jack studs over head of frames at same spacing as partition studs.
- F. Powder Actuated Fastenings: Shall not be used unless authorized in writing by Owner's representative.
- G. Fire Rated Assemblies: Space framing members and fasteners to conform to the test report of each fire rated assembly. Extend the partitions to construction above. Refer to the drawings and Section 07275, PIPE PENETRATION FIRESTOPPING for penetration requirements and details of items passing thru rated assemblies.

3.02 GYPSUM WALLBOARD INSTALLATION

- A. Comply with ASTM C 840, manufacturer's printed instructions and the requirements specified and indicated for fire-resistance ratings.
 - 1. Application to Steel Framing and Furring: ASTM C 840, System VIII.
- B. Space fasteners in wallboard in accordance with ASTM C 840.

3.03 INSTALLATION OF WALLBOARD TRIM ACCESSORIES

- A. Use the same screw fasteners to anchor trim accessory flanges as required to fasten gypsum board to the supports. Stapling or crimping flanges is not permitted.
- B. Install metal edge trim where indicated and whenever edge of wallboard would otherwise be exposed or semi-exposed. Install "L-type" trim where work is tightly abutted to other work, and where edge of gypsum board is exposed to view.
- C. Install metal corner beads at external corners of gypsum board work.

3.04 WALLBOARD FINISHING

- A. General: Comply with ASTM C 840. Apply joint compound treatment at wallboard joints, flanges of trim accessories, penetrations, fastener heads, surface defects and elsewhere as required to prepare work for painting or other decoration. Pre-fill open joints and beveled edges, using type of compound recommended by manufacturer.
 - 1. Apply joint tape at joints between wallboards, except where a trim accessory is to be provided.
 - 2. Apply joint compound in three coats, not including pre-fill of openings in base. Sand after second coat and after last coat.
- B. Partial Finishing: Omit third coat on concealed work.
- C. Comply with requirements of Level 4 Finish.

3.05 PROTECTION OF WORK

- A. Protect the gypsum wallboard work from damage and deterioration during the remainder of the construction period.
- B. Repair and touch-up areas damaged by work of other trades prior to final acceptance.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide ceramic wall tile work shown on drawings, in schedules and specified.

1.02 QUALITY ASSURANCE

- A. Tile, mortar and grout shall be produced by member companies of the Tile Council of America (TCA) or TCA Licensees.

1.03 APPLICABLE STANDARDS

- A. American National Standards Institute (ANSI) standard specifications for:
 1. Installation of Ceramic Tile with Water-Resistant Organic Adhesives, ANSI A 108.4.
 2. Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar, ANSI A 108.5.
 3. Dry-Set Portland Cement Mortar, ANSI A 118.1.
 4. Latex-Portland Cement Mortar, ANSI A 118.4.
 5. Organic Adhesives for Installation of Ceramic Tile, ANSI A 136.1.
 6. Ceramic Tile, ANSI A 137.1.
- B. The Tile Council of America (TCA).
 1. Handbook for Ceramic Tile Installation.

1.04 SUBMITTALS

- A. Manufacturer's Data: Submit technical data and installation instructions for all materials required. Include certifications and other data as may be required to show compliance with these specifications.
- B. Samples for Verification:
 1. Submit two (2) samples of each type and color of tile required, not less than 12 inches square on hardboard backing, and grouted as specified.
 2. Submit one (1) full-size sample of each tile accessory.
 3. Submit samples of trim and other units for approval when requested.

1.05 PRODUCT DELIVERY AND STORAGE

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact. Store in accordance with manufacturer's directions.

1.06 JOB CONDITIONS

- A. Maintain temperature during and after tile installation in accordance with referenced ANSI Standards, TCA Handbook and manufacturer's printed instructions.

PART 2 - PRODUCTS

2.01 TILE

- A. Ceramic Wall Tile: Refer to drawings.

2.02 MORTAR, THIN-SET TYPE

- A. Thin-set Portland Cement Mortars: Pre-sanded portland cement and additives, factory packaged requiring only the addition of water for mixing. Mortars shall be TCA licensed products and produced by TCA Member Companies or TCA Licensees. Use only the type of thin-set mortar to set the type of tile for which it is labeled. Provide one of the following:
 - 1. Dry-set Portland Cement Mortar: Conform to ANSI A 118.1. Use for setting tile on masonry, regular gypsum board, cured portland cement mortar setting bed, portland cement leveling coat, plaster and concrete. Do not use over water-resistant gypsum board.
 - 2. Latex Portland Cement (L.P.C.) Mortar: Conform to ANSI A 118.4. Use for setting tile on masonry, cured portland cement mortar setting bed, portland cement leveling coat, plaster and concrete.
- B. Organic Adhesive: Conform to ANSI A 136.1, Type 1.
 - 1. Use for setting tile on regular and water-resistant gypsum board.
 - 2. Do not use for exterior work.
 - 3. Provide primer-sealer as recommended by adhesive manufacturer.

2.03 GROUT MATERIALS

- A. Polymer-Modified Tile Grout, ANSI A118.7.
 - 1. Manufacturer's: Subject to compliance provide by one of the following:
 - a. C-Cure
 - b. Laticrete International, Inc.
 - c. MAPEI Corporation
 - d. TEC: A subsidiary of H.B. Fuller Company.

2.04 MISCELLANEOUS MATERIALS

- A. Metal Edge Strips: L-Shape, height to match tile and setting-bed thickness, metallic or combination of metal and PVC or neoprene base, designed specifically for flooring and wall applications, aluminum exposed edge material.
 - 1. Products:
 - a. Schluter Systems: Schluter-Schiene
- B. Metal Transition Strips: Angle type, height to match tile and setting bed thickness, designed specifically for flooring applications, anodized aluminum exposed-edge material.
 - 1. Products:
 - a. Schluter Systems: Schluter-Reno-U
 - b. Schluter Systems: Schluter-Reno-TK
- C. Grout Sealer: Manufacturer's standard product for sealing grout joints and that does not change color or appearance of grout.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Custom Building Product: Tile Lab Surfaceguard Penetrating Sealer.
 - b. TEC; A subsidiary of H.B. Fuller Company; Grout Guard Penetrating Silicone Grout Sealer.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine the substrate and the conditions under which ceramic tile is to be installed. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. General: Comply with the applicable requirements of ANSI A 108.1 and TCA Handbook except as otherwise shown or specified.
- B. Installation of thin-set tile shall conform to the following:
 - 1. Dry-Set and Latex Portland Cement Mortar Set Wall Tile. ANSI A 108.5.
 - 2. Organic Adhesive Set Tile: ANSI A 108.4.
- C. Handle, store, mix and apply proprietary setting and grouting materials in compliance with the manufacturer's instructions.
- D. Extend tile work into recesses and behind equipment and fixtures to form a complete covering without interruptions, except as otherwise shown.
- E. Terminate work neatly at obstructions, edges and corners without disruption of pattern or joint alignment.
- F. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, and built-in items for straight, aligned joints. Fit tile closely to electrical outlets, piping, and fixtures so that plates, escutcheons, and covers overlap tile.
- G. Jointing Pattern: Unless otherwise shown or indicated by color and pattern scheduled, lay tile in grid pattern. Align joints when adjoining tiles on floor, base, walls and trim are the same size. Layout tile work and center field tile in both directions on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths.

3.03 CLEAN-UP

- A. Clean grout and setting materials from face of tile while materials are workable. Tile face and grout shall be clean and free of all foreign matter.
- B. Finished tile installation shall be clean and free of cracked, chipped, broken, un-bonded, or otherwise defective tile work.

3.04 PROTECTION

- A. When recommended by tile manufacturer, apply a coat of neutral protective cleaner to completed tile walls.
- B. Protect exterior corners with temporary board covering.
- C. Before final inspection, remove protective coverings and rinse neutral cleaner from all tile surfaces.

3.05 INSTALLATION SCHEDULE

- A. Install Tile in accordance with the following TCA Handbook Details.
- B. Interior Wall Installations, Metal Studs or Furring:
 - 1. Tile installation W244: Thin-set mortar on cementitious backer units or fiber cement underlayment: TCNA W244.
 - a. Tile Type: Wall Tile.
 - b. Thin-Set Mortar: Latex-Portland Cement Mortar.
 - c. Grout: Plymer-Modified Sanded Grout.

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide ceramic floor tile work shown on drawings, in schedules and specified.

1.02 QUALITY ASSURANCE

- A. Tile and proprietary mortar and grout materials shall be produced by member companies of the Tile Council of America (TCA) or TCA Licensees.

1.03 APPLICABLE STANDARDS

- A. American National Standards Institute (ANSI) Standard Specification for:
 1. Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar, ANSI 108.5.
 2. Dry-Set Portland Cement Mortar, ANSI A 118.1.
 3. Latex-Portland Cement Mortar, ANSI A 118.4.
 4. Ceramic Tile, ANSI A 137.1.

- B. The Tile Council of America (TCA):
 1. Handbook for Ceramic Tile Installation.

1.04 SUBMITTALS

- A. Manufacturer's Data: Submit technical data and installation instructions for all materials required. Include certifications and other data as may be required to show compliance with these specifications.
- B. Samples for Verification:
 1. Submit two (2) samples of each type and color of tile required, not less than 12 inches square on hardboard backing, and grouted as specified.
 2. Submit two (2), 6 inch long samples of marble threshold.
 3. Submit samples of trim and other units for approval when requested.

1.05 PRODUCT DELIVERY AND STORAGE

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact. Store in accordance with manufacturer's directions.

1.06 JOB CONDITIONS

- A. Maintain temperature during and after tile installation in accordance with referenced ANSI Standards, TCA Handbook and Manufacturer's printed instructions.

PART 2 - PRODUCTS

2.01 TILE

- A. Ceramic Floor Tile: Refer to drawings. Standard Grade, cushion edge units, complying with ANSI A 137.1.
- B. Slip-Resistant Units: ASTM C1028, 0.5 (wet and dry).

2.02 MARBLE THRESHOLDS

- A. Provide sound Group "A" marble with an abrasive hardness of not less than 10.0, when tested in accordance with ASTM C 241. Furnish white marble for thresholds, unless otherwise scheduled.

2.03 MORTAR, THIN-SET TYPE

- A. Thin-set Portland Cement Mortars: Shall be factory prepared, TCA Licensed products produced by TCA Member Companies or TCA Licensees. Mortar shall be factory packaged requiring only the addition of water for mixing. Use only type of thin-set mortar to set types of tile for which it is labeled. Provide one of the following:
 - 1. Dry-Set Mortar: Portland cement and additives conforming to ANSI A118.1
 - 2. Latex-Portland Cement Mortar: Portland cement and latex additives conforming to ANSI A 118.4.

2.04 GROUT MATERIALS

- A. Polymer-Modified Tile Grout, ANSI A118.7.
 - 1. Manufacturer's: Subject to compliance provide by one of the following:
 - a. C-Cure
 - b. Laticrete International, Inc.
 - c. MAPEI Corporation
 - d. TEC: A subsidiary of H.B. Fuller Company.

2.05 MISCELLANEOUS MATERIALS

- A. Metal Edge Strips: L-Shape, height to match tile and setting-bed thickness, metallic or combination of metal and PVC or neoprene base, designed specifically for flooring and wall applications, aluminum exposed edge material.
 - 1. Products:
 - a. Schluter Systems: Schluter-Schiene
- B. Metal Transition Strips: Angle type, height to match tile and setting bed thickness, designed specifically for flooring applications, anodized aluminum exposed-edge material.
 - 1. Products:
 - a. Schluter Systems: Schluter-Reno-U
 - b. Schluter Systems: Schluter-Reno-TK
- C. Grout Sealer: Manufacturer's standard product for sealing grout joints and that does not change color or appearance of grout.
 - 1. Products: Subject to compliance with requirements, provide one of the following:
 - a. Custom Building Product: Tile Lab Surfaceguard Penetrating Sealer.
 - b. TEC; A subsidiary of H.B. Fuller Company; Grout Guard Penetrating Silicone Grout Sealer.

2.06 WATER PROOF MEMBRANE

- A. Tile manufacturer standard product complying with ANSI A118.10. Include reinforcement and accessories as required.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine the substrate and the conditions under which ceramic tile is to be installed. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. General: Comply with the applicable requirements of ANSI A 108.1 and TCA Handbook except as otherwise shown or specified.
- B. Install tile by thin-set method with Dry-set Portland Cement Mortar or Latex Portland Cement Mortar in accordance with ANSI A 108.5.
- C. Handle, store, mix and apply proprietary setting and grouting materials in compliance with the manufacturer's instructions.
- D. Extend tile work into recesses and under equipment and fixtures, to form a complete covering without interruptions, except as otherwise shown. Terminate work neatly at obstructions, edges and corners without disruption of pattern or joint alignment.
- E. 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, and fixtures so that plates, escutcheons and covers overlap tile.
- F. Set marble thresholds in the same type setting bed as field tile, unless otherwise detailed.
- G. Jointing Pattern: Unless otherwise shown, lay tile in grid pattern. Align joints when adjoining tiles on floor, base, walls and trim are the same size. Layout tile work and center field tiles in both directions in each space or area. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise shown.

3.03 WATERPROOFING INSTALLATION

- A. Install waterproofing to comply with ANSI A108.13 and waterproofing manufacturer's written instructions to produce waterproof membrane of uniform thickness and bonded securely to substrate.
- B. Do not install tile or setting materials over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

3.04 CLEAN-UP

- A. Clean grout and setting materials from face of tile while materials are workable. Tile face and joints shall be clean and free of all foreign matter.

- B. Tile shall be cleaned only with solutions permitted by the tile and grout manufacturer's printed instructions. Protect metal surfaces, and plumbing fixtures from effects of cleaning. Flush the surface with clean water before and after cleaning.
- C. Finished tile installation shall be clean and free of cracked, chipped, broken, un-bonded, or otherwise defective tile work.

3.05 PROTECTION

- A. When recommended by tile manufacturer, apply a protective coat of neutral protective cleaner to completed tile work.
- B. Protect installed tile work with kraft paper or other heavy covering during the construction period to prevent damage and wear.
- C. Prohibit all foot and wheel traffic from using tiled floors for at least three (3) days.
- D. Before final inspection, remove protective coverings and rinse neutral cleaner from all tile surfaces.

3.06 INSTALLATION SCHEDULE

- A. Install tile in accordance with the following TCA Handbook Details, except as otherwise indicated on drawings.
- B. Interior floor installations, concrete subfloor:
 - 1. Tile installation F12: Thin-set Mortar on Waterproof Membrane: TCNA F122.
 - a. Tile Type: Floor Tile.
 - b. Thin-Set Mortar: Latex-Portland Cement Mortar.
 - c. Grout: Polymer-Modified Sanded Grout.

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The extent of resilient tile flooring and accessories is shown on the drawings, schedules, and herein specified.
- B. The types of accessories include the following:
 - 1. Standard top-set cove vinyl base for tile and carpet.
 - 2. Vinyl accessories for carpet flooring.

1.02 QUALITY ASSURANCE

- A. Provide resilient floor tile as per the Finish Schedule, including recommended primers, adhesives and edging strips, as required.
- B. Provide vinyl accessories produced by a single manufacturer.

1.03 SUBMITTALS

- A. Manufacturer's Data: Submit manufacturer's technical information, including installation and maintenance instructions, for each type of resilient tile and accessory.
- B. Samples: Submit manufacturer's sample for each type and color of tile required. Submit one 6 inch long by full height sample of each type of vinyl accessory required.
- C. Maintenance Stock: Upon completion of work, provide one percent extra tiles of type and color installed in the project, but not less than one full carton. Leave in the building where directed by the Owner.

1.04 DELIVERY AND STORAGE

- A. Deliver materials to the project site in the manufacturers' original unopened containers, clearly marked to indicate pattern, gage, lot number and sequence of manufacture.
- B. Carefully handle all materials and store in original containers at not less than 70 degrees F for at least 48 hours before start of installation.

1.05 JOB CONDITIONS

- A. Continuously heat spaces to receive tile to a temperature of 70 degrees F, for at least 48 hours prior to installation whenever project conditions are such that heating is required. Maintain 70 degrees F temperature continuously during and after installation as recommended by the tile manufacturer, but for not less than 48 hours. Maintain a temperature of not less than 55 degrees F in areas where work is completed.
- B. Contractor shall not use a heating medium which makes use of an open flame for applying heat to soften tiles during installation. Refer to SECTION 01005, GENERAL REQUIREMENTS for storage and use of combustible materials.
- C. Contractor to install new tile flooring over existing concrete subfloor where indicated on

the drawings. Contractor shall prepare the existing substrate as recommended by tile manufacturer to ensure proper adhesion of new tile flooring material and to ensure a smooth flat surface without protrusions, bumps, cracks or voids in the finish tile work.

1.06 VENTILATION

- A. During and for a minimum of 24 hours after tile (adhesive removal) operations, Contractor shall provide temporary fans or other mechanical means to ventilate and exhaust fumes and odor from the building.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Colors and Patterns: Refer to drawings. Provide tile units with uniformly distributed color and pattern throughout the thickness of the tile. Variation in shades and off pattern matches between containers will not be acceptable.
- B. Vinyl Composition Tile: ASTM F 1066, Composition 1, Class 2, 12 inch x 12 inch x 1/8 inch thick.
- C. Vinyl Base: Provide base complying with FS SS-W-40, Type II, vinyl.
 - 1. Color: Refer to drawings.
 - 2. Acceptable Manufacturers: Johnsonite.
- D. Carpet Accessories: Provide solid vinyl accessories of size and profile indicated and specified. Color to be selected by Architect.
 - 1. Carpet Reducer: Provide one piece, tile/carpet joiner, transition strip. Provide one of the following:
 - a. Mercer #150.
 - b. Roppe, #159.
- E. Adhesives: Waterproof, stabilized type as recommended by the tile manufacturer for the type of service indicated.
- F. Concrete Slab Primer: Non-Staining type recommended by the tile manufacturer.
- G. Floor Patching Resurfacer: Latex or acrylic epoxy type leveling compound. Provide one of the following:
 - 1. MAPEI.
 - 2. Laticrete by Crossfield Products Corp.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions under which resilient tile work is to be placed. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Subfloors: Prior to start of laying the tile units, broom clean or vacuum all surfaces to be covered and inspect the subfloor. Start of laying tile will indicate acceptance of subfloor

conditions and full responsibility for the completed work.

1. Use patching resurfacer specified herein to level irregular existing floors and filling cracks and depressions.
2. Grind down any high spots.

3.03 INSTALLATION

- A. Install tile and accessories only after all finishing operations, including painting, have been completed and permanent heating system is operating. Moisture content of concrete slabs, building air temperature and relative humidity must be within limits recommended by tile manufacturer.
- B. Place tile units with adhesive cement in strict compliance with the manufacturer's recommendation. Butt tile units tightly to vertical surfaces, thresholds, floor drains, and vinyl accessories. Scribe around obstructions to produce neat joints laid tight, even and in straight, parallel lines.
- C. Lay tile from the center of room and square to room axis. Adjust as necessary to avoid use of cut widths less than 1/2 tile at room perimeters.
- D. Match tiles for color and pattern by using tile from cartons in the same sequence as manufactured and packaged. Cut tile neatly to and around all penetrations. Broken, cracked, chipped or deformed tile are not acceptable.
- E. Tightly cement tile to subfloor without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks through tile, or other surface imperfections.
- H. Lay all tile with grain running in the same direction.
- I. Install base in as long lengths as practicable. Tightly bond base to backing throughout the length of each piece, with continuous contact at horizontal and vertical surfaces. Do not stretch material during installation.
 1. Provide base with either preformed corner units or, at Contractor's option, field fabricate corners as recommended by base manufacturer. If field fabricated corners are used, scribe the back of outside corners to ensure base remains in contact with the substrate and neatly miter inside corners free of any voids or gaps in the coves.
 2. No joints allowed in base within 8 inches of a corner.

3.04 CLEANING AND PROTECTION

- A. Remove all excess adhesive or other surface blemishes from the work using neutral type cleaners as recommended by the manufacturer. Protect installed flooring from damage by use of heavy Kraft paper or other covering.
- B. Cleaning: After completion of the project and just prior to the final inspection of the work, thoroughly clean new tile floors and accessories in accordance with tile manufacturer's instructions.
- C. Apply wax finish and buff with the type of material, number of coats and buffing procedures in compliance with the tile manufacturer's instructions.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide and install glue-down sheet carpet tiles specified and indicated on the drawings and finish schedule.

1.02 QUALITY ASSURANCE

- A. Carpet shall be installed by a firm with not less than five (5) years of experience laying carpet of the type specified.

1.03 SUBMITTALS

- A. Manufacturer's Product Data: Submit carpet manufacturer's product data specifications and installation instructions for each type of carpet required. Include other data as may be necessary to show compliance with specified requirements.
- B. Warranty: Submit two (2) copies of manufacturer's written warranty. Refer hereinafter for specific warranty requirements.

1.04 MAINTENANCE STOCK

- A. Furnish 5 percent of total of each type carpet installed to Owner for maintenance. Carpet shall be in standard sizes, packaged and clearly labeled as to the contents. Deliver to the job site and store where directed by the Owner.

1.05 JOB CONDITIONS

- A. Space Enclosure: Do not install carpet until space has been enclosed, until wet-work in the space has been completed and is nominally dry, until work above ceilings has been completed, and ambient conditions of temperature and humidity will be continuously maintained at values near those indicated for final occupancy.
- B. Existing Floor Surfaces: Prior to start of carpet work, clean and prepare existing concrete floor surfaces scheduled to receive new carpet in accordance with the carpet manufacturer's recommendations to insure removal of oil, grease, dirt, adhesive residue and other foreign substances that may interfere with the proper adhesion of the new carpet.

1.06 PRODUCT DELIVERY AND STORAGE

- A. Deliver carpet in protective wrapping and store inside, protected from weather, moisture and soiling.

1.07 WARRANTY

- A. Provide a minimum two (2) year written warranty for replacement of all defective materials and a one year written warranty for workmanship and installation, including any relaying which may be required.

PART 2 - PRODUCTS

2.01 CARPET

- A. Refer to drawings.

2.02 CARPET ACCESSORIES

- A. Installation Adhesive: Water resistance, release type as recommended by carpet manufacturer, which complies with flammability requirements for installed carpet.
- B. Vinyl Accessories: Refer to Section 09665, RESILIENT TILE FLOORING.
- C. Miscellaneous Materials: As recommended by manufacturers of carpet and other carpeting products.

PART 3 - EXECUTION

3.01 GENERAL

- A. Comply with the manufacturer's instructions and recommendations. Maintain directions of pattern and texture, including lay of pile.
- B. Install carpet reducer strips at every location where edge of carpet is exposed to traffic or abuts tile flooring.
- C. Adjust and trim carpet in accordance with recognized installation practices. Secure edges as shown or as recommended by the carpet manufacturer.

3.02 CARPET INSTALLATION

- A. Cut and fit sections of carpet of each room or space, prior to application of adhesive.
- B. Apply adhesive, and separate release agent, in accordance with manufacturer's instructions. Butt and sew carpet edges tightly together, eliminate air pockets, and roll to ensure uniform bond everywhere.
- C. Remove adhesive from carpet face promptly upon exposure.

3.03 CLEANING AND PROTECTION

- A. Remove all excess adhesive or other surface blemishes from the work using cleaners recommended by the carpet manufacturer.
- B. Vacuum carpet using commercial machine with face beater element. Remove spots and/or replace carpet where spots cannot be removed.
- C. Protect carpet from soiling and damage until time of acceptance by the Owner.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide painting work specified and shown on the drawings. The word paint means to apply paint materials or refers to the paint materials specified including primers, undercoats, sealers, fillers, stains and the finish coats of paint material.
- B. The work includes painting of interior existing painted surfaces and new exposed unfinished items and surfaces throughout the project, unless otherwise specified or shown on drawings. Where items and surfaces are not specifically identified but are not specifically excluded from the painting work, paint the same as specified for adjacent similar surfaces and items.
- C. Colors: Refer to drawings.
- D. Coordinate painting with all other sections for surfaces and items specified to be shop primed and for items to be factory and shop finished.
- E. Work Time, Existing Building: All painting work inside existing building areas shall be performed at a time acceptable to the Owner.

1.02 PAINTING WORK NOT INCLUDED

- A. Surface preparation and priming of items and surfaces specified in other sections to be shop primed.
- B. Surfaces and items specified in other sections to be factory or shop finished.

1.03 SURFACES AND ITEMS NOT TO BE PAINTED

- A. The following surfaces shall not be painted unless scheduled herein or indicated on drawings.
 - 1. Concealed wall and ceiling surfaces and inaccessible surfaces.
 - 2. Factory finished items.
 - 3. Fire rating labels.
 - 4. Equipment identification labels.
 - 5. Air conditioning ducts and hangers.
 - 6. Galvanized steel surface that will be concealed in completed work.
 - 7. Non-ferrous metals, stainless steel, chrome surfaces and anodized aluminum.
 - 7. Moving parts of mechanical, electrical, and plumbing equipment and items.

1.04 SURFACES AND ITEMS TO BE PAINTED

- A. Surface preparation and priming of ferrous metals furnished without shop prime that will be concealed in the finished work.
- B. Surface preparation, priming and final painting of ferrous metals furnished without shop prime that will be exposed in the finished work.

- C. Surface preparation, priming and final painting of galvanized surfaces that occur on painted finish surfaces and/or will be exposed in the finished work.
- D. Touch up all damaged primer before application of finish coats.
- E. Paint all new unfinished surfaces and items exposed to view, unless specifically indicated not to be painted.
- F. Repaint all painted surfaces damaged, patched, disturbed and uncovered by work of this contract. When extent of surfaces to be painted is not indicated, paint entire area where damaged or patched area occurs, and extend full height in both directions to nearest horizontal break and nearest vertical break such as corners, offset or trim.
- G. Paint all wall mounted exposed electric conduit, panels, boxes and other devices that occur on painted finish surfaces.
- H. Paint all existing painted surfaces scheduled or indicated on the drawings.
- I. Paint all new and existing door frames which occur in partitions scheduled to be painted.

1.05 SUBMITTALS

- A. Manufacturer's Product Data: Submit for each type paint material required, including surface preparation and application instructions.
- B. Samples: Submit color chips for color selection.
- C. List of Materials: Submit a typewritten list with each paint material and each surface to which it is to be used. Identify with manufacturer's paint name and catalog number.

1.06 DELIVERY AND STORAGE

- A. Deliver all materials to the project site in original, new, unopened containers bearing manufacturer's name and labeled with manufacturer's number, color and contents by volume.
- B. Store paint materials, tools and equipment in accordance with manufacturer's recommendations and local safety regulations. Remove used cloths from building every night. Refer to Section 01005, GENERAL REQUIREMENTS for storage and use of combustible materials.

1.07 JOB CONDITIONS

- A. Apply paint materials only when the temperature of surfaces, air temperature and weather conditions are within manufacturer's recommended limits.
- B. It is the responsibility of the paint supplier and the paint applicator to verify compatibility of primers, that are provided under other sections, with finish coats specified herein. If lifting occurs when surfaces are painted, remove paint and primer, clean and apply compatible primer and finish coats.
- C. During all painting operations, Contractor shall provide adequate ventilation for removal of paint fumes.

PART 2 - PRODUCTS

2.01 PAINT, GENERAL

- A. Material Compatibility:
 - 1. 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.

2.02 PRIMER/SEALERS

- A. Interior Latex Primer/Sealer: White, pigmented, waterborne latex sealer used on new interior plaster, concrete and gypsum wallboard surfaces.
 - 1. ICI Paints; Prep-n-Prime Interior Latex Wall Primer No. 1000-1200.
- B. Waterborne Galvanized-Metal Primer: Waterborne metal primer, composed of anticorrosive pigments and acrylic resins, for cleaned/etched galvanized metal.
 - 1. ICI Paints; Devco Coatings Devflex WB DTM Primer Finish No. 90-712.

2.03 LATEX PAINTS

- A. High Performance Architectural Latex (semi-gloss): High performance architectural latex coating, gloss level 5 – semi-gloss.
 - 1. ICI Paints; Dulux Professional Semi-Gloss Int. Wall and Trim Enamel No. 1406-0110.
- B. High Performance Architectural Latex (low sheen):
 - 1. ICI Paints; ICI Dulux Int. Acrylic Low Sheen Eggshell No. 14030.

2.04 WOOD PRIMERS

- A. Interior Latex-Based Wood Primer:
 - 1. ICI Paints; Prep-n-Prime 100% Acrylic Latex Primer No. 2000-1200.

2.05 FLOOR COATINGS

- A. Interior/Exterior Clear Concrete Floor Sealer (waterbased):
 - 1. PPG; Perma-Crete Plex-Seal WB No. 46200 (or comparable equal).

PART 3 – EXECUTION

3.01 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
 - 1. Use applicators and techniques suited for paint and substrate indicated.
 - 2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces, before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
 - 3. Paint front and backsides of access panels, removable of hinged covers, and similar hinged items to match exposed surfaces.
 - 4. Where wall base will be installed, extend paint no more than 1/2 inch below top of base.

3.02 INTERIOR PAINTING SCHEDULE

- A. Dressed Lumber Substrates.
 - 1. High-Performance Architectural Latex System:
 - a. Prime Coat: Interior Latex-Based Wood Primer.
 - b. Intermediate Coat: High Performance Architectural Latex Matching Topcoat.
 - c. Topcoat: High Performance Architectural Latex (semi-gloss).

- B. Gypsum Board Substrates (Paint Finish):
 - 1. High-Performance Architectural Latex System:
 - a. Prime Coat: Interior Latex Primer/Sealer.
 - b. Intermediate Coat: High Performance Architectural Latex Matching Topcoat.
 - c. Topcoat: High Performance Architectural Latex (low sheen).

- C. Concrete Substrates, if recommended by flooring manufacturer.
 - 1. Clear Sealer System:
 - a. Prime Coat: Concrete Floor Sealer (water based).
 - b. Topcoat: Concrete Floor Sealer (water based).

- D. Galvanized Metal Substrates.
 - 1. High Performance Architectural Latex System:
 - a. Prime Coat: Waterborne Galvanized Primer.
 - b. Intermediate Coat: High Performance Architectural Latex Matching Topcoat.
 - c. Topcoat: High Performance Architectural Latex Semi-Gloss.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. The extent of portable fire extinguishers are shown on the drawings.
- B. Types: Wall Bracket with Extinguisher.

1.02 QUALITY ASSURANCE

- A. Unless otherwise acceptable to the Architect, furnish all portable fire extinguishers by only one manufacturer.
- B. Manufacturer: Provide portable fire extinguishers and brackets manufactured by one of the following:
 - 1. Potter-Roemer.
 - 2. Larsen's.

1.03 SUBMITTALS

- A. Manufacturer's Data: Submit manufacturer's technical data and installation instructions for all portable fire extinguishers.

PART 2 - PRODUCTS

2.01 FIRE EXTINGUISHERS

- A. Provide U. L. approved and labeled fire extinguishers for each location as shown on the drawings.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine the substrates and conditions under which the fire fighting devices are to be installed, and do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

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- A. Install where shown on the drawings adjusting location so bracket anchors into stud. Securely fasten brackets to structure, square and plumb, in accordance with manufacturer's instructions. Wherever exact location of surface-mounted units is not shown, locate as directed by Architect.
- B. If installation of fire extinguisher bracket interferes with other wall mounted equipment, notify Architect for direction.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide each type of toilet accessory as specified and shown on drawings.
- B. The type of toilet accessories provided by Contractor include the following:
 - 1. Framed mirror.
 - 2. Grab bars.
 - 3. Mop and broom holder.
- C. The type of toilet accessories supplied by Tenant and installed by Tenant include the following:
 - 1. Toilet tissue dispenser.
 - 2. Soap dispenser.
 - 3. Paper towel dispenser.
 - 4. Trash receptical.

1.02 QUALITY ASSURANCE

- A. Inserts and Anchorages: Coordinate location of blocking required within walls. Provide blocking for all items including tenant furnished items.
- B. All accessories shall be products of one manufacturer.

1.03 PRODUCTS

- A. Manufacturer's name or label on exposed faces of unit will not be permitted, except where otherwise specified.

1.04 SUBMITTALS

- A. Manufacturer's Data: Submit specifications, technical data and installation instructions for each toilet accessory.
- B. Setting Drawings: Provide drawings, templates, instructions and directions for installation of anchorage devices in other work.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Stainless Steel: AISI, Type 302 or 304, with polished No. 4 finish, unless otherwise shown or specified.
- B. Chromium Plating: Nickel and chromium electro-deposited on metal, ASTM B 456, Type SC 2.
- C. Mirror Glass: ASTM C 1036, Type I, Class I, Quality q², 1/4 inch thick, with silver coating, copper protective coating, and non-metallic paint coating. Guarantee for five years against silver spoilage.

2.02 ACCESSORIES

- A. Manufacturer: Bobrick product numbers are listed to establish the standard of quality. Other acceptable manufacturers are:
 - 1. Accessory Specialties, Inc.
 - 2. Bradley Corp.
- B. Framed Mirror: Surface-mounted, stainless steel channel frame, 18 inches wide x 30 inches high.
 - 1. Bobrick; B-165 1830.
- C. Toilet Compartment Grab Bars: 1-1/4 inches or 1-1/2 diameter with 1-1/2 inches clearance, peened grip, polished ends, concealed mounting.
 - 1. Bobrick.
- D. Mop and Broom Holder: Surface mounted, unit face dimensions of 24 inches long x 5 inches high with 3 holders. Mount one unit at each janitor's receptor or service sink.
 - 1. Bobrick; B-223.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine the areas and conditions under which toilet accessories are to be installed. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

- A. Use concealed fastenings wherever possible.
- B. Provide blocking in wall, anchors, bolts and other necessary anchorages, and attach accessories securely to walls and partitions in locations as shown on the drawings or specified herein. Install units plumb and level, securely anchored in locations shown.
- C. Install concealed mounting devices and fasteners fabricated of the same material as the accessories, or of galvanized steel, as recommended by manufacturer.
- D. Install exposed mounting devices and fasteners finished to match the accessories.
- E. Provide theft-resistant fasteners for all exposed accessory mountings.
- F. Secure toilet room accessories in accordance with the manufacturer's instructions for each item and each type of substrate construction.
- G. Install one mop and broom holder in janitor closet.

3.03 CLEANING

- A. Clean installed accessories at completion of work with nonabrasive materials.

END OF SECTION

PART 1 - GENERAL

1.01 DESCRIPTION

- A. Provide and install building standard blinds on all exterior glazing.

1.02 SUBMITTALS

- A. Product Data: Submit manufacturer's specifications and installation instructions for each type of blind unit required. Include methods of installation for each type of opening and supporting structure.
- B. Samples:
 - 1. Submit samples of each exposed metal finish, cords, tapes, and tassels required.

PART 2 - PRODUCTS

2.01 MATERIALS AND COMPONENTS

- A. Provide building standard blinds. Contractor shall obtain bids from the following manufacturers and provide pricing to BMC Project Manager:
 - 1. Draper.
 - 2. Mecco Shades
- B. Color: Building standard.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Install horizontal blinds on all exterior glazing accordance with the manufacturer's instructions. Provide intermediate supports at intervals to permit easy entrance and removal of head, and to ensure level head and slat position.
- B. Provide adequate clearance between sash and divisions between blinds to permit unencumbered operation of sash hardware.
- C. Divisions between blinds are permitted only at mullions of continuous windows or openings where more than one blind for one opening occurs.

END OF SECTION