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architecture + engineering

ARCHITECT:

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PROJECT:

Martin's Famous Pastry Shoppe

Transportation Cafe (Job #1730)

Chambersburg, PA

DATE:

May 13, 2019

ADDENDUM #4

SPECIFICATIONS:

- 01 10 00 Summary (revised specification attached dated 5/13/19) 4.01
 - A. REVISE section 1.2-D
- 4.02 09 30 00 Tiling (revised specification attached dated 5/13/19)
 - A. REVISE section 1.3 Submittals
 - B. REVISE section 2.3 Accessories
 - C. REVISE section 3.3 Installation
- 4.03 06 41 00 Architectural Wood Casework (revised specification attached dated 5/13/19)
 - A. REVISE section 2.3 Hardware
- 4.04 08 71 00 Door Hardware (revised specification attached dated 5/13/19)
 - A. REVISE hardware schedule
- 4.05 09 21 16 Gypsum Board Assemblies (revised specification attached dated 5/13/19)
 - A. REVISE section 2.2
 - B. REVISE section 3.2-E

Martin's Famous Pastry Shoppe Transportation Cafe #1730 Chambersburg, PA Addendum #4 Page 2

- 4.06 09 77 00 Fiberglass Reinforced Plastic Panels (added specification attached dated 5/13/19)
 - A. ADD entire specification
- 4.08 Division 22-Plumbing (all specification sections in division 22 has been deleted)
- 4.09 Division 23-Heating, Ventilation and AC (all specification sections has been deleted in division 23)

DRAWINGS:

- 4.10 Sheet 000 Cover Sheet (added per addendum #4 dated 5/13/19)
 - A. ADD cover sheet.
- 4.11 Sheet A001 Demolition Floor Plan (revision #1 dated 5/13/19)
 - A. REVISE schedule and add proposed relocated door numbers.
- 4.12 Sheet A101 First Floor Plan (revision #1 dated 5/13/19)
 - A. REVISE scope as noted with additional schedules and finish clarifications to include ceramic tile in contract.
- 4.13 Sheet A701 Interior Elevations (revision #1 dated 5/13/19)
 - A. REVISE Finishes and details as noted and add general note.
- 4.14 Sheet A702 Interior Elevations (revision #1 dated 5/13/19)
 - A. REVISE Finishes and details as noted.
- 4.15 Sheet A801 Enlarged Floor Furniture & Wall Finish Plans (revision #1 dated 5/13/19)
 - A. REVISE Finishes and details as noted.
- 4.16 Sheet A901 Reflected Ceiling Plan (revision #1 dated 5/13/19)
 - A. ADD bulkhead information as noted.,

Martin's Famous Pastry Shoppe Transportation Cafe #1730 Chambersburg, PA Addendum #4 Page 3

- 4.17 Sheet S101 Roof Framing Plan and Details (deleted from specification 5/13/19)
 - A. DELETE Entire sheet from set.
- 4.18 All P-Series All P-series drawings have been deleted per addendum #4 dated 5/13/19
- 4.19 All M-series All M-series drawings have been deleted per addendum #4 dated 5/13/19
- 4.20 Sheet E101 Electrical Renovation Plan (revision #3 dated 5/13/19)
 - A. ADDED Keyed note #4
 - B. REVISE receptacle heights
 - C. ADDED lighting keyed note #7
- 4.21 Sheet E102 Enlarged Mezzanine Power Plan (revision #2 dated 5/13/19)
 - A. REVISE keyed notes 3,4, and 5
 - B. DELETE Noted power connections
- 4.22 Sheet E103 Roof Power Plan (revision #2 dated 5/13/19)
 - A. Delete Entire sheet
- 4.23 Sheet E501 Luminaire Schedule and Details (revision #2 dated 5/13/19)
 - A. REVISE Luminaire D-1

END OF ADDENDUM #4

SECTION 01 10 00

SUMMARY

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Work by Owner.
- B. Owner supplied products.
- C. Contract Limits.
- D. Owner occupancy.

1.2 WORK BY OWNER

- A. Work by Owner's forces and/or separately let contracts will tentatively be scheduled to coincide with contractor's construction schedule but the responsibility for establishing final work schedule and providing owner with written schedule with exact early, preferred, and late start delivery dates will be contractor's responsibility and any project completion delays by contractor's lack of this scheduling management performance will be considered as delay in construction completion for purpose of withholding payment.
- B. Owner's Responsibilities
 - 1. Contact product suppliers and coordinate product delivery dates.
 - 2. Receive products at site; inspect for completeness or damage. Condition and damage to be documented.
 - 3. Handle, install, and finish products.
 - 4. Assemble, set-up, install all products per manufacturer's instructions.
 - 5. Repair or replace items damaged after receipt.
- C. Contractor's Responsibilities
 - 1. Provide Hi-Lift and operator to unload products.
 - 2. Provide temporary storage within building until installation.
 - 3. Contractor's insurance shall be extended to cover these materials once on site.
- D. Work under these contracts includes:
 - 1. All Flooring.
 - 2. HVAC Systems, demolition related to HVAC and associated electrical wiring.
 - 3. All plumbing and demolition related to plumbing systems.

1.3 OWNER SUPPLIED PRODUCTS

A. Owner's Responsibilities:

- 1. Purchase products and give contacts to Contractor for scheduling deliveries.
- 2. Submit claims for transportation damage and replace damaged, defective, or deficient items.
- 3. Arrange for manufacturer's warranties, inspections, and service.

B. Contractor's Responsibilities:

- 1. Contact product suppliers and coordinate product delivery dates.
- 2. Receive and unload products at site; inspect for completeness or damage jointly with Owner. Condition and damage to be documented.
- 3. Handle, store, install and finish products.
- 4. Assemble, set-up, install all products per manufacturer's instructions. Turn over a minimum of three copies of all instructions to the Owner for inclusion in maintenance manuals.
- 5. Repair or replace items damaged after receipt.
- C. Items furnished by Owner for installation by Contractor. Items will be bid as a separate Contract as provided by the Owner and are not part of this Contract.

1.4 CONTRACT LIMITS

A. General Building Contractor will be responsible for all work shown on the Construction Documents.

1.5 OWNER OCCUPANCY

- A. Owner reserves the right to establish legal phase occupancy schedule after review of contractor's proposed construction schedule or at any time during construction.
 Partial/phased occupancy by Owner will constitute substantial completion of area occupied for purpose of reduction of retainage.
- B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner occupancy.

PART 2 PRODUCTS

Not Used.

PART 3 EXECUTION

Not Used.

END OF SECTION

SECTION 06 41 00

ARCHITECTURAL WOOD CASEWORK

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes custom-fabricated cabinet units; counter tops; cabinet hardware; preparation for installing utilities in cabinets.
- B. Related Sections:
 - 1. Section 01 30 00 Administrative Requirements.
 - 2. Section 01 33 00 Submittal Procedures.
 - 3. Section 01 40 00 Quality Requirements.
 - 4. Section 06 10 53 Miscellaneous Rough Carpentry: Grounds and support framing.
 - 5. Section 06 20 00 Finish Carpentry: Related trim not specified in this section.
 - 6. Section 09 90 00 Painting and Coating: Site finishing of cabinet.

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI A156.9 Cabinet Hardware.
 - 2. ANSI A208.1 Mat-Formed Wood Particleboard.
- B. Architectural Woodwork Institute:
 - 1. AWI Quality Standards Illustrated.
- C. ASTM International:
 - 1. ASTM F1667 Standard Specification for Driven Fasteners: Nails, Spikes, and Staples.
- D. Federal Specification Unit:
 - 1. FS A-A-1936 Adhesive, Contact, Neoprene Rubber.
- E. Hardwood Plywood and Veneer Association:
 - 1. HPVA HP-1 American National Standard for Hardwood and Decorative Plywood.

1.3 SUBMITTALS

A. Section 01 33 00 - Submittal Procedures: Submittal procedures.

- B. Shop Drawings: Indicate materials, component profiles and elevations, assembly methods, joint details, fastening methods, accessory listings, hardware location and schedule of finishes.
- C. Product Data: Submit data for hardware accessories.
- D. Samples:
 - 1. Submit two, 8 x 10 inch size samples, illustrating cabinet finish.
 - 2. Submit two, 8 x 10 inch size samples, illustrating counter top finish.
 - 3. Submit samples of drawer pulls, hinges, illustrating hardware finish and style.

1.4 QUALITY ASSURANCE

A. Perform work in accordance with AWI (Architectural Woodwork Institute) Architectural Woodwork Quality Standards Illustrated, Custom.

1.5 QUALIFICATIONS

A. Fabricator: Company specializing in performing Work of this section with minimum three years documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 Product Requirements: Product storage and handling requirements.
- B. Protect units from moisture damage.

1.7 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 Product Requirements.
- B. During and after installation of Work of this section, maintain same temperature and humidity conditions in building spaces as will occur after occupancy.

1.8 FIELD MEASUREMENTS

A. Verify field measurements prior to fabrication.

PART 2 PRODUCTS

- 2.1 COMPONENTS (All cabinets to be premium grade Cherry)
 - A. Hardwood Lumber: NHLA; AWI Premium; average moisture content of 8 percent; Species and grade as follows:
 - 1. Cabinet Frame and trim for stain finish; Select white birch

- B. Hardwood Plywood: Graded in accordance with AWI with core materials of veneer, type of glue recommended for application, of quality suitable for stain finish.
- C. Plywood Face Veneer: Same species as exposed lumber, unless otherwise indicated, selected for grain and color compatible with exposed solid lumber, no defects. Edgeboard exposed edges with solid wood of same species as face veneer.
- D. Particleboard: ANSI, A208.1, mat formed particle board, Grade 1-M-2, with medium density of 45pcf.
- E. Hardboard: Pressed wood fiber with resin binder, tempered grade, 1/4 inch thick, smooth two sides.
- F. High Pressure Decorative Laminate: NEMA LD 3, GP50, General Purpose type; color, pattern, and surface texture as selected by owner.
- G. Laminate Backing Sheet: LD 3 BK20 backing grade, undecorated plastic laminate.

2.2 ACCESSORIES

- A. Adhesive for High Pressure Decorative Laminates: Type recommended by laminate manufacturer to suit application.
- B. Fasteners: Size and type to suit application.
- C. Bolts, Nuts, Washers, Lags, Pins, and Screws: Of size and type to suit application.
- D. Concealed Joint Fasteners: Threaded steel.

2.3 HARDWARE

- A. Supports for built in shelving: No. 345 (L Shape), manufactured by Knape and Vogt.
- B. Drawer and Door Pulls:
 - 1. Hafele: Bella Italaliana. Model: 111.59.401.
 - 2. Mat Chrome finish
- C. Catches: No. CD 35, manufactured by Stanley.
- D. Drawer Slides:
 - 1. Knape and Vogt No. 8450FM Soft Close.
- E. Hinges: Concealed with soft close.
- F. Drawer Locks: Drawer Locks: National Cabinet Lock.

- G. Shelf Standards: Knape and Vogt, No. 80
- H. Shelf Brackets: Knape and Vogt, No.180

2.4 FABRICATION

- A. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.
- B. Cap exposed high pressure decorative laminate finish edges with material of same finish and pattern.
- C. Door and Drawer Fronts:
 - 1. All others use 3/4 inch thick; reveal overlay style.
- D. When necessary to cut and fit on site, fabricate materials with ample allowance for cutting. Furnish trim for scribing and site cutting.
- E. Apply high pressure decorative laminate finish in full uninterrupted sheets consistent with manufactured sizes. Fit corners and joints hairline; secure with concealed fasteners.
- F. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces.
- G. Mechanically fasten back splash to counter tops with steel brackets at 16 inches on center.
- H. Fabricate cabinets and counter tops with cutouts for plumbing fixtures, inserts, appliances, outlet boxes, fixtures and fittings. Verify locations of cutouts from on-site dimensions. Seal cut edges.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Verify adequacy of backing and support framing.
- C. Verify location and sizes of utility rough-in associated with work of this section.

3.2 INSTALLATION

- A. Set and secure casework in place; rigid, plumb, and level.
- B. Use fixture attachments in concealed locations for wall mounted components.

- C. Use concealed joint fasteners to align and secure adjoining cabinet units and counter tops.
- D. Carefully scribe casework abutting other components, with maximum gaps of 1/32 inch. Do not use additional overlay trim for this purpose.
- E. Secure cabinet and counter bases to floor using appropriate angles and anchorages.
- F. Countersink anchorage devices at exposed locations. Conceal with solid wood plugs of species to match surrounding wood; finish flush with surrounding surfaces.

3.3 ADJUSTING

- A. Section 01 70 00 Execution Requirements: Testing, adjusting and balancing.
- B. Adjust moving or operating parts to function smoothly and correctly.

3.4 CLEANING

- A. Section 01 70 00 Execution Requirements: Final cleaning.
- B. Clean casework, counters, shelves, hardware, fittings, and fixtures.

3.5 SCHEDULE

A. All millwork in areas to be Premium Grade.

END OF SECTION

SECTION 08 71 00

DOOR HARDWARE

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Hardware for wood and hollow metals doors.
 - 2. Provide door gaskets, including weatherstripping and seals.
 - 3. Thresholds.
- B. Related Sections:
 - 1. Section 01 30 00 Administrative Requirements.
 - 2. Section 01 33 00 Submittal Procedures.
 - 3. Section 01 40 00 Quality Requirements.
 - 4. Section 08 12 14 Standard Steel Frames
 - 5. Section 08 13 14 Standard Steel Doors.
 - 6. Section 08 14 16 Flush Wood Doors.

1.2 REFERENCES

- A. National Fire Protection Association:
 - 1. NFPA 80 Standard for Fire Doors, Fire Windows.
 - 2. NFPA 101 Life Safety Code.
 - 3. NFPA 252 Standard Methods of Fire Tests of Door Assemblies.
- B. Underwriters Laboratories Inc.:
 - 1. UL 10B Fire Tests of Door Assemblies.
 - 2. UL 305 Panic Hardware.
- C. Builders Hardware Manufacturers Association:
 - 1. BHMA A156 Series.
- D. Door Hardware Institute
 - 1. DHI A115 Series.
 - 2. DHI WDHS.3 Architectural Hardware for Wood Flush Doors.

1.3 SUBMITTALS

- A. Section 01330 Submittal Procedures: Requirements for submittals.
- B. Shop Drawings:

- 1. Indicate locations and mounting heights of each type of hardware, schedules, catalog cuts, electrical characteristics and connection requirements.
- 2. Submit manufacturer's parts lists, templates and schedules.
- 3. Manufacturer's Installation Instructions: Submit special procedures, and perimeter conditions requiring special attention.

1.4 CLOSEOUT SUBMITTALS

- A. Section 01700 Execution Requirements: Closeout procedures.
- B. Project Record Documents: Record actual locations of installed cylinders and their master key code.
- C. Operation and Maintenance Data: Submit data on operating hardware, lubrication requirements, and inspection procedures related to preventative maintenance.
- D. Keys: Deliver with identifying tags to Owner by security shipment direct from hardware supplier.
- E. Warranty: Submit minimum two year warranty for all hardware and ensure forms have been completed in Owner's name and registered with manufacturer.

1.5 QUALITY ASSURANCE

- A. Perform Work in accordance with the following requirements:
 - 1. AWI.
 - 2. BHMA A156 Series.
 - 3. DHI A115 Series.
 - 4. DHI WDHS.3.
 - 5. NFPA 80.
 - 6. NFPA 101.
 - 7. UL 10B.
 - 8. UL 305.
- B. Manufacturer: Company specializing in manufacturing products specified in this section with minimum five years documented experience.
- C. Hardware Supplier: Company specializing in supplying commercial/institutional door hardware with minimum three years documented experience.

D. Hardware Supplier Personnel: Employ Architectural Hardware Consultant (SHC) to assist in work of this Section.

1.6 REGULATORY REQUIREMENTS

A. Products requiring Electrical Connection: Listed and classified by Underwriters' Laboratories, Inc., testing firm acceptable to authority having jurisdiction as suitable for purpose specified and indicated.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 01600 Product Requirements: Product storage and handling requirements.
- B. Package hardware items individually with necessary fasteners, instructions, and installation templates, when necessary; label and identify each package with door opening code to match hardware schedule.

1.8 COORDINATION

- A. Section 01300 Administrative Requirements: Coordination and project conditions.
- B. Coordinate Work with other directly affected sections involving manufacture or fabrication of internal reinforcement for door hardware and recessed items.
 - 1. Provide templates or actual hardware as required to ensure proper preparation of doors and frames.
- C. Sequence installation to accommodate required utility connections.
- D. Coordinate Owner's keying requirements during course of Work.

1.9 MAINTENANCE MATERIALS

- A. Section 01700 Execution Requirements: Maintenance materials.
- B. Furnish special wrenches and tools applicable for each different and for each special hardware component.
- C. Furnish maintenance tools and accessories supplied by hardware component manufacturer.

PART 2 PRODUCTS

2.1 DOOR HARDWARE

- A. Manufacturers:
 - 1. Hinge Manufacturers:
 - a. McKinney.
 - 2. Latch Sets Manufacturers:
 - a. Yale.
 - 3. Exit Device Manufacturers:
 - a. Yale
 - 4. Push/Pull Manufacturers:
 - a. Trimco
 - b. Rockwood
 - 5. Cylinder Lock Manufacturers:
 - a. Yale.
 - 6. Closers Manufacturers:
 - a. Yale.
 - 7. Door Controls and Overhead Holders Manufacturers:
 - a. Sargent.
 - 8. Manual Bolts Manufacturers:
 - a. H. B. Ives.
 - b. Rockwood.
 - 9. Gasketing and Thresholds Manufacturers:
 - a. Mckinney
 - 10. Protection Plate Manufacturers:
 - a. Trimco.
 - b. Rockwood.

2.2 KEYING

- A. Door Locks: Keyed differently and master keyed. Owner to determine keying requirements.
- B. Include construction keying.
- C. Supply keys in the following quantities:
 - 1. 6 master keys.
 - 2. 2 construction keys.
 - 3. 3 change keys for each lock.

2.3 KEY CABINET

- A. Cabinet Construction: 20 gage steel construction, piano hinged door equipped with Model K-207 manufactured by American Device Manufacturing Co.
- B. Finish: Baked Enamel, finish in standard color.

2.4 FINISHING

A. Identified in Schedule at end of Section.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01300 Administrative Requirements: Coordination and project conditions.
- B. Verify doors and frames are ready to receive door hardware and dimensions are as indicated on shop drawings.
- C. Verify electric power is available to power operated devices and is of correct characteristics.

3.2 INSTALLATION

- A. Install hardware in accordance with manufacturer's instructions.
- B. Coordinate mounting heights with door and frame manufacturers. Use templates provided by hardware item manufacturer.

3.3 FIELD QUALITY CONTROL

- A. Section 01700 Execution Requirements: Testing, adjusting, and balancing.
- B. Architectural Hardware Consultant will inspect installation and certify hardware and installation has been furnished and installed in accordance with manufacturer's instructions and as specified.

3.4 ADJUSTING

- A. Section 01700 Execution Requirements: Testing, adjusting, and balancing.
- B. Adjust hardware for smooth operation.

3.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 01700 Execution Requirements: Protecting installed construction.
- B. Do not permit adjacent work to damage hardware or hardware finish.

HARDWARE SCHEDULE

HARDWARE SET NO. 1 (door 102)

1 Lockset ND50PD RHO US26D Schlage

END OF SECTION

SECTION 09 21 16

GYPSUM BOARD ASSEMBLIES

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Metal stud wall framing.
 - 2. Metal furring.
 - 3. Suspended gypsum board ceiling.
 - 4. Gypsum board and joint treatment.
 - 5. Gypsum sheathing.
 - 6. Acoustic insulation.
 - 7. Expansion/control joints.
 - 8. Cementitious Backerboard

B. Related Sections:

- 1. Section 01 30 00 Administrative Requirements.
- 2. Section 01 33 00 Submittal Procedures.
- 3. Section 01 40 00 Quality Requirements
- 4. Section 06 10 53 Miscellaneous Rough Carpentry.
- 5. Section 07 21 16 Blanket Insulation.
- 6. Section 07 84 00 Firestopping.
- 7. Section 07 90 00 Joint Sealers.
- 8. Section 08 12 14 Standard Steel Frames.
- 9. Section 09 90 00 Painting and Coating: Surface finish.

1.2 REFERENCES

A. ASTM International:

- 1. ASTM C36C36M Standard Specification for Gypsum Wallboard.
- 2. ASTM C79/C79M Standard Specification for Gypsum Sheathing Board.
- 3. ASTM C442/C442M Standard Specification for Gypsum Backing Board and Coreboard.
- 4. ASTM C475 Standard Specification for Joint Compound and Joint Tape for Finishing Gypsum Board.
- 5. ASTM C630/C630M Standard Specification for Water-Resistant Gypsum Backing Board.
- 6. ASTM C645 Standard Specification for Nonstructural Steel Framing Members.
- 7. ASTM C754 Standard Specification for Installation of Steel Framing Members to Receive Screw-Attached Gypsum Panel Products.
- 8. ASTM C840 Standard Specification for Application and Finishing of Gypsum Board

- 9. ASTM C931/C931M Standard Specification for Exterior Gypsum Soffit Board.
- 10. ASTM C1002 Standard Specification for Steel Drill Screws for the Application of Gypsum Panel Products or Metal Plaster Bases.
- 11. ASTM C1280 Standard Specification for Application of Gypsum Sheathing.
- 12. ASTM E84 Standard Test Method for Surface Burning Characteristics of Building Materials.
- 13. ASTM E90 Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
- 14. ASTM E119 Standard Test Methods for Fire Tests of Building Construction and Materials.
- B. Gypsum Association:
 - 1. GA 214 Recommended Levels of Gypsum Board Finish.
 - 2. GA 216 Application and Finishing of Gypsum Board.
 - 3. GA 600 Fire Resistance Design Manual Sound Control.
- C. Intertek Testing Services (Warnock Hersey Listed):
 - 1. WH Certification Listings.
- D. National Fire Protection Association:
 - 1. NFPA 255 Standard Method of Test of Surface Burning Characteristics of Building Materials.
- E. Underwriters Laboratories Inc.:
 - 1. UL Fire Resistance Directory.
 - 2. UL 723 Tests for Surface Burning Characteristics of Building Materials.

1.3 SUBMITTALS

- A. Section 01 33 00 Submittal Procedures: Requirements for submittals.
- B. Product Data: Submit data on metal framing, gypsum board, joint tape and compound, texture finish materials, and all accessories.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with ASTM C840, ASTM C1280, GA-214, GA-216, and GA-600.
- B. Maintain one copy of each document on site. Refer to drawings for specific locations where GA-600 and UL numbers apply.

1.5 QUALIFICATIONS

A. Installer: Company specializing in performing Work of this section with minimum three years documented experience.

1.6 MOCKUP

A. Section 01 40 00 - Quality Requirements: Requirements for mockup.

PART 2 PRODUCTS

2.1 GYPSUM BOARD ASSEMBLIES

- A. Manufacturers:
 - 1. G-P Gypsum Corp.
 - 2. United States Gypsum Co.
 - 3. Gold Bond Building Products.
- B. Substitutions: Section 01 60 00 Product Requirements. Substitutions permitted.

2.2 COMPONENTS

- A. Framing Materials:
 - 1. Studs and Tracks: ASTM C645; galvanized sheet steel.
 - 2. Resilient Furring to be Dietrich model RCSD.
 - 3. Z Furring Channels: ASTM C645; minimum 25 gage galvanized sheet steel; size, length, and profile as shown on drawings.
 - 4. Fasteners: Drywall screws meeting ASTM C1002 of proper length for attachment being made.
 - 5. Suspended drywall framing system: ASTM C645. 640C drywall framing system for non-rated application as manufactured by Chicago Metallic. All components electro-galvanized.
 - 6. Anchorage to Substrate: Tie wire, nails, screws, and other metal supports, of type and size to suit application; to rigidly secure materials in place.
- B. Gypsum Board Materials:
 - 1. Fire Rated Gypsum Board: ASTM C36/C36M; fire resistive Type X or C, UL rated as scheduled; 5/8 inch thick, maximum available length in place; ends square cut, tapered edges.
 - 2. Cementitious Board: ASTM C1178; 5/8 inch thick,

2.3 ACCESSORIES

- A. Acoustic Insulation: ASTM C665; preformed glass fiber, friction fit type, unfaced, thickness as shown on drawings.
- B. Acoustic Sealant: Non-hardening, non-skinning, for use in conjunction with gypsum board; AC-20 manufactured by Pecora Corp.
- C. Corner Beads: Metal or paper which is to be used at returns at windows and all outside corners.

- D. Edge Trim: GA-216 and GA-201; Type LC bead.
- E. Joint Materials: ASTM C475; joint compound, adhesive, and water.
- F. Patching Compound: Durabond 90 Joint Compound as manufactured by U. S. Gypsum Co.
- G. Fasteners: ASTM C1002, Screw Type as required by manufacturer for proper attachment to supporting substrate.
- H. Expansion/control joints.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Verify site conditions are ready to receive work and opening dimensions are as indicated on shop drawings.

3.2 INSTALLATION

- A. Metal Stud Installation:
 - 1. Install studs in accordance with ASTM C754.
 - 2. Refer to Drawings for indication of partitions extending stud framing through ceiling to structure above. Maintain clearance under structural building members to avoid deflection transfer to studs. Provide extended leg ceiling runners.
 - 3. Door Opening Framing: Install double 20 gage studs at door frame jambs.
- B. Wall Furring Installation:
 - 1. Erect wall furring for direct attachment to concrete masonry walls.
 - 2. Erect furring channels vertically; space maximum as shown on drawings.
 - 3. Secure in place on alternate channel flanges at maximum 24 inches on center.
 - 4. Shim as required to maintain wall plane tolerances.
- C. Furring For Fire Ratings: Install furring as required for fire resistance ratings indicated.
- D. Shaft Wall Framing: To appropriate GA-600 and UL requirements.
- E. Ceiling Framing Installation:
 - 1. Install in accordance with manufacturer's instructions.
 - 2. Coordinate location of hangers with other work.
 - 3. Install ceiling framing independent of walls, columns, and above ceiling work.

- 4. Reinforce openings in ceiling suspension system which interrupt main carrying channels or furring channels, with lateral channel bracing. Extend bracing minimum 24 inches past each end of openings.
- 5. Laterally brace entire suspension system.

F. Expansion/Control Joints:

- 1. Control joints to be installed in ceilings exceeding 2500 sq ft in area and in partition, wall and wall furring runs exceeding 30 feet. Distance between ceiling control joints are not to exceed 50 ft in either direction, and a control joint should be installed where ceiling framing or furring changes direction. Distance between control joints in walls or wall furring should not exceed 30 ft and a control joint should be installed where an expansion joint occurs in base exterior wall. Wall or partition height door frames may be considered a control joint. Whenever possible, control joints should coincide with any building control joints.
- 2. See drawings for expansion/control joint installation details.

3.3 ACOUSTIC ACCESSORIES INSTALLATION

- A. Install resilient channels at maximum 24 inches on center. Locate joints over framing members.
- B. Place acoustic insulation in partitions tight within spaces, around cut openings, behind and around electrical and mechanical items within or behind partitions, and tight to items passing through partitions.
- C. Install acoustic sealant within partitions in accordance with manufacturer's instructions.
- D. Install acoustic sealant at gypsum board perimeter at:
 - 1. Metal Framing: Two beads.
 - 2. Seal penetrations of partitions by conduit, pipe, duct work, rough-in boxes, and accessories.

3.4 GYPSUM BOARD INSTALLATION

- A. Install gypsum board in accordance with GA-216, and UL Fire Resistance Directory where applicable. Non-rated applications per manufacturer's instructions.
- B. Erect single layer standard gypsum board in most economical direction, with ends and edges occurring over firm bearing.
- C. Erect single layer fire rated gypsum board in accordance with GA 600 or UL Fire Resistance Directory, with edges and ends occurring over firm bearing.

- D. Erect exterior gypsum sheathing in accordance manufacturer's instructions.
- E. Use screws when fastening gypsum board to metal furring or framing.
- F. Erect multiple layers in accordance with GA-600 or UL Fire Resistance Directory.
- G. Treat cut edges and holes in moisture resistant gypsum board and exterior gypsum soffit board with sealant.
- H. Place expansion/control joints in accordance with manufacturer's instructions.
- I. Place corner beads at external corners. Use longest practical length. Place edge trim where gypsum board abuts dissimilar materials.

3.5 JOINT TREATMENT

- A. Tape, fill, and sand exposed joints, edges, and corners to produce smooth surface ready to receive finishes. Finish in accordance with GA214 Level 4.
- B. Feather coats on to adjoining surfaces so that camber is maximum 1/16 inch.
- C. Taping, filling, and sanding is not required at surfaces behind adhesive applied ceramic tile except at fire rated walls.

3.6 ERECTION TOLERANCES

- A. Section 01 40 00 Quality Requirements: Tolerances.
- B. Maximum Variation of Finished Gypsum Board Surface from Flat Surface: 1/8 inch in 10 feet in any direction.

END OF SECTION

SECTION 09 30 00

TILING

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes ceramic, for wall applications; cementitious backer board as tile substrate and ceramic accessories.
- B. Related Sections:
 - 1. Section 01 30 00 Administrative Requirements
 - 2. Section 01 33 00 Submittal Procedures.
 - 3. Section 01 40 00 Quality Requirements.
 - 4. Section 07 90 00 Joint Protection.
 - 5. Section 09 21 16 Gypsum Board Assemblies: Cementitious Backer Board.

1.2 REFERENCES

- A. American National Standards Institute:
 - 1. ANSI A108.1 Installation of Ceramic Tile, A collection.
 - 2. ANSI A108.5 Specifications for Ceramic Tile Installed with Latex-Portland Cement Mortar.
 - 3. ANSI A108.6 Specifications for Ceramic Tile Installed with Chemical-Resistant, Water-Cleanable Tile-Setting and -Grouting Epoxy.
 - 4. ANSI A108.9 Specifications for Ceramic Tile Installed with Modified Epoxy Emulsion Mortar/Grout.
 - 5. ANSI A108.10 Specifications for Installation of Grout in Tilework.
 - 6. ANSI A118.1 Standard Specification for Dry-Set Portland Cement Mortar.
 - 7. ANSI A118.3 Chemical-Resistant, Water-Cleanable, Tile-Setting and -Grouting Epoxy and Water-Cleanable Tile-Setting Epoxy Adhesive.
 - 8. ANSI A118.4 Latex-Portland Cement Mortar.
 - 9. ANSI A118.6 Ceramic Tile Grouts.
 - 10. ANSI A118.9 Test Methods and Specifications for Cementitious Backer Units.
 - 11. ANSI A137.1 Ceramic Tile.
- B. Tile Council of America:
 - 1. TCA Handbook for Ceramic Tile Installation including all large format tile recommendateions.

1.3 SUBMITTALS

- A. Section 01 33 00 Submittal Procedures: Submittal procedures.
- B. Refer Submittals to Owner's Representative
- C. Product Data: Submit instructions for using grouts.
- D. Samples: Submit tile and grout samples illustrating pattern and color variations.
- E. Provide 4'x4' sample installation of each tile type.

1.4 CLOSEOUT SUBMITTALS

- A. Section 01 70 00 Execution and Closeout Requirements: Closeout procedures.
- B. Operation and Maintenance Data: Submit recommended cleaning methods, cleaning materials, stain removal methods, and polishes and waxes.

1.5 QUALITY ASSURANCE

A. Perform Work in accordance with TCA Handbook and ANSI A108 Series/A118 Series.

1.6 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years experience.
- B. Installer: Company specializing in performing Work of this section with minimum three years experience.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 Product Requirements: Product storage and handling requirements.
- B. Protect adhesives and grouts from freezing or overheating.

1.8 ENVIRONMENTAL REQUIREMENTS

- A. Section 01 60 00 Product Requirements.
- B. Do not install adhesives and grouts in unventilated environment.

C. Maintain ambient and substrate temperature of 50 during installation of mortar materials.

1.9 EXTRA MATERIALS

- A. Section 01 70 00 Execution and Closeout Requirements: Spare parts and maintenance products.
- B. Supply three percent of each size, color, and surface finish of tile specified.

PART 2 PRODUCTS

- 2.1 TILE
 - A. Manufacturers and models chosen by Owner or Architect. Per drawings.

2.2 COMPONENTS

- A. Ceramic Tile: ANSI A137.1.
- B. Ceramic Wall Tile: ANSI A137.1.
- C. Base: Per drawings

2.3 ACCESSORIES

- A. Mortar Materials:
 - 1. Mortar Bond Coat Materials:
 - a. Prolite Premium large format tile mortar.
 - b. Compatible with porcelain tile.
- B. Grout Materials:
 - 1. Epoxy Grout: ANSI A118.3,
- C. Cementitious Backer Board: ANSI A118.9; Specified in Section 09 21 16, 5/8 inch thick; 2 inch wide coated glass fiber tape for joints and corners.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Verify surfaces are ready to receive work.

3.2 PREPARATION

- A. Protect surrounding work from damage.
- B. Vacuum clean surfaces.
- C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.
- D. Install cementitious backer board. Tape joints and corners, cover with skim coat of dryset mortar to feather edge.
- E. Field applied temporary protective coating. Coat tile per manufacturer's instructions.1. Grout release.

3.3 INSTALLATION

- A. Install tile, thresholds, and grout in accordance with applicable requirements of ANSI A108.1 through A108.10, and TCA Handbook recommendations for large format tile.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
- C. Place thresholds and edge strips at exposed tile edges and locations indicated.
- D. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor, base and wall joints.
- E. Place tile with joints uniform in width, subject to variance in tolerance allowed in tile size. Make joints watertight, without voids, cracks, excess mortar, or excess grout.
- F. Form internal angles coved and external angles bullnosed.
- G. Install ceramic accessories rigidly in prepared openings.

- H. Sound tile after setting. Replace hollow sounding units.
- I. Keep control joints free of adhesive or grout.
- J. Allow tile to set for a minimum of 48 hours prior to grouting.
- K. Grout tile joints.
- L. Apply sealant to junction of tile and dissimilar materials and junction of dissimilar planes.
- M. Installation Wall Tile:
 - 1. Over cementitious backer units install in accordance with TCA Handbook Method W244.
 - 2. Provide 3/8inch mortar bed and install per TCA large format tile.

3.4 CLEANING

- A. Section 01 70 00 Execution and Closeout Requirements; Final cleaning.
- B. Clean tile and grout surfaces.

3.5 PROTECTION OF INSTALLED CONSTRUCTION

- A. Section 01 70 00 Execution and Closeout Requirements: Protecting installed construction.
- B. Do not permit traffic over finished floor surface for 4 days after installation.

END OF SECTION

SECTION 09 77 00

SPECIAL WALL SURFACES

FIBERGLASS REINFORCED PLASTIC PANELS

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Fiberglass reinforced plastic panels.
- B. Related Sections:
 - 1. Section 01 40 00 Quality Requirements.
 - 2. Section 09 21 16 Gypsum Board Assemblies: Substrate.

1.2 REFERENCES

- A. ASTM International 2003:
 - 1. ASTM D2583 Test Method for Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor.

1.3 SYSTEM DESCRIPTION

A. Performance Requirements: Provide fiberglass reinforced plastic (FRP) panels which have been manufactured and installed to maintain performance criteria stated by manufacturer without defects, damage, or failure.

1.4 SUBMITTALS

- A. Section 01 33 00 Submittal Procedures: Requirements for submittals.
- B. Shop Drawings: Submit shop drawings showing layout, profiles, and product components, including anchorage, accessories, finish colors, patterns and textures. Indicate location and dimension of joints and fastener attachment.
- C. Samples: Submit selection and verification samples for finishes, colors and textures. Submit two samples of each type of panel, trim, and fastener.
- D. Manufacturer's installation instructions.

1.5 QUALITY ASSURANCE

A. Provide panels, moldings, and adhesive only from manufacturer specified to ensure warranty and color harmonization of accessories.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Section 01 60 00 Product Requirements: Product storage and handling requirements.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact. Package sheets on skids or pallets for shipment to job site.
- C. Storage and Protection: Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer. Store panels indoors in a dry place at the project site.
- D. Handling: Remove foreign matter from face of panel by use of a soft bristle brush, avoiding abrasive action.

1.7 PROJECT CONDITIONS

- A. Environmental Requirements:
 - 1. Installation shall not begin until building is enclosed, permanent heating and cooling equipment is in operation, and residual moisture from gypsum or concrete work has dissipated.
 - 2. During installation, and for not less than 48 hours before, maintain an ambient temperature and relative humidity within limits required by type of adhesive used and recommendation of adhesive manufacturer.
 - 3. Provide ventilation to disperse fumes during application of adhesive as recommended by adhesive manufacturer.

1.8 WARRANTY

A. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official.

PART 2 PRODUCTS

2.1 FIBERGLASS REINFORCED PLASTIC (FRP) PANELS

- A. Manufacturer:
 - 1. Kemlite Company.

2. Section 01 25 00 – Substitution Procedures. Substitutions permitted.

2.2 MATERIALS

- A. Wall Panels: Kemlite Glasboard Panels with Surfaseal Surface Protection.
 - 1. Rating: Class C.
 - 2. Panel Thickness: 0.09 inches.
 - 3. Panel Size: 4 feet by 10 feet.
 - 4. Barcol Hardness (scratch resistance): 55 as per ASTM D2583.
 - 5. Complies with ICBO Report Number 4583.
- B. Color: Chosen by Architect
- C. Moldings:
 - 1. Harmonizing PVC moldings to match panel color selected by Owner.
- D. Adhesive: As recommended by manufacturer.
- E. Sealant: As recommended by manufacturer.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01 30 00 Administrative Requirements: Coordination and project conditions.
- B. Examine backup surfaces to determine that corners are plumb and straight, surfaces smooth, uniform, clean, free from foreign matter, screws countersunk, joints and cracks filled flush and smooth with the adjoining surfaces.
- C. Do not begin installation until backup surfaces are in a satisfactory condition.

3.2 INSTALLATION

- A. Cut and drill panels with carbide tipped saw blades or drill bits, or cut with snips.
- B. Install panels with manufacturer's recommended gap for panel field and corner joints.
- C. Predrill fastener holes in panels with 1/8 inch oversize.
- D. For trowel type and application of adhesive, follow adhesive manufacturer's recommendations.

E. Using products acceptable to panel manufacturer, install FRP system in accordance with panel manufacturer's printed instructions.

3.3 CLEANING

- A. Section 01 70 00 Execution Requirements: Final Cleaning.
- B. Remove any adhesive or excessive sealant from face using solvent or cleaner recommended by panel manufacturer.

3.4 PROTECTION

A. Protection: Protect installed product and finish surfaces from damage during construction.

END OF SECTION