



Addendum #03

Date: May 24, 2016

Project: Education & Humanities Accessible Toilet Room Renovations

Contract: FD-15-060

The work herein shall be considered part of the bid documents for the referenced project and carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Acknowledge receipt of addendum on the bid form as indicated.

Clarifications:

1. Addendum #01 was posted to the state bidding site on May 4, 2016, prior to the pre-bid meeting.
2. All bids will **ONLY** be accepted in the **Office of Planning & Construction Room 101 in the Facilities Management Building**, 1200 N. DuPont Highway, Dover, DE 19901-2277, until **2:00PM EST**. local time on **May 26, 2016**.

Changes to Specifications:

1. Section 02 41 19/3.1C Has been deleted.
2. Section 08 71 00 Door Hardware.
3. Section 09 00 00 Finish Schedule.
4. Section 09 30 13 Ceramic Tile.
5. Section 09 391 23 Interior Painting.
6. Section 10 21 13.17 Phenolic-Core Toilet Compartments.
7. Section 12 36 61.16 Solid Surfacing Countertops.

Changes to Drawings:

1. Sheet M-101
 - I. TOILET WOMEN'S RM. D-108
 - a. RELOCATE HWC-1 FROM THE WEST WALL TO NORTH WALL. REFER TO ARCHITECTURAL DRAWINGS.
Final piping configurations to be determined in the field, prior to the start of construction
 - b. RELOCATE HWC-2 FROM SOUTH WALL TO WEST WALL. REFER TO ARCHITECTURAL DRAWINGS.

- c. ***Final piping configurations to be determined in the field, prior to the start of construction***
- d. CONNECT/EXTEND THE EXISTING PNEUMATIC CONTROLS TO A NEW THERMOSTAT.

II. TOILET MEN'S RM. D-121

- a. RELOCATE HWC-3 FROM THE WEST WALL TO SOUTH WALL. REFER TO ARCHITECTURAL DRAWINGS.
Final piping configurations to be determined in the field, prior to the start of construction
- b. RELOCATE HWC-4 FROM NORTH WALL TO WEST WALL. REFER TO ARCHITECTURAL DRAWINGS.
- c. ***Final piping configurations to be determined in the field, prior to the start of construction***
- d. CONNECT/EXTEND THE EXISTING PNEUMATIC CONTROLS TO A NEW THERMOSTAT.

General Information:

- 1. None.

Questions and Answers:

- 1. **Question:** According to spec section 02 41 19/3.1C we are to “Engage a professional engineer to perform an engineering survey of condition of building to determine whether removing an element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.” Was this the intent for us to hire an engineer to see if the work can proceed, wasn't this done during design? If we are to provide this service can you give us an allowance for this?

Answer: This requirement shall be deleted from specification section. (See revised specifications section)

- 2. **Question:** There is no Hardware Spec section 087100 along with a hardware schedule, please provide this information so that our suppliers can provide the correct price for the quality and operation of hardware that the college wishes to have installed.

Answer: Specification section “08 71 00 Door Hardware” was added. (See revised specifications section)

3. **Question:** The flooring schedule just tells us “Mohawk Group/Lees style TBD” please provide more information as this gives a broad range of cost and options to bid competitively.
- Answer:** Specification section “09 00 00 Finish Schedule” was revised. (See revised specifications section)
4. **Question:** The Finish Schedule just tells us two different tile manufacturers for all ceramic tile CT-1 thru CT-6b with some sizes listed, please provide a more detail for the tile that is to be provided as this is too broad of a price range to bid competitively.
- Answer:** Specification section “09 00 00 Finish Schedule” was revised. (See revised specifications section)
5. **Question:** Room finish key on sheet A101 does not correspond with the interior elevations shown on sheet A-401 nor with the finish schedule in the specification 09 00 00, Please clarify if the specifications apply or the drawings and which drawing is correct.
- Answer:** Drawing has been revised. (See revised attached revised drawings)
6. **Question:** In the specification there are two specs listed for painting 09 91 00 and 09 91 23 which is listed in the table of contents however the later section does not list any specific painting requirements, manufactures, or product information. Please provide direction on which spec we are to adhere to.
- Answer:** Specification section 09 91 00 has been deleted. Interior Paint Specification section 09 91 23 has been revised.
7. **Question:** Can you please provide a timeline as to the expectations for each bathroom to be off line and how many can be offline at a time. During our walk through the small bathrooms in the education training area had kids present, what is the schedule for this area?
- Answer:** This will be based upon the schedule submitted with the bid. Please be advised that the University reserves the right to reject any bid submitted without a viable construction schedule.

8. **Question:** With children being present in the building during our walk-thru and according to the EPA and DHSS RRP guidelines when was this building constructed (pre 1978) if so who will sign off on the lead safe work practices?
- Answer:** All environmental abatement will be completed by owner under a separate contract.
9. **Question:** Can DSU give us an idea of how many Toilet Rooms can be closed at once? Please note TR's with shared chase walls will have to be completed at the same time.
- Answer:** This is subjective to the bidders approach at completing the contract. The schedule submitted with the bid shall sufficiently detail the bidders intended approach.
10. **Question:** Section 011000 Summary 1.7-G speaks about background checks but there is no criteria for background checks in the specification manual. Please clarify.
- Answer:** Strike reference to paragraph 1.7-G. Refer to Division 00 Specifications for contractor requirements.
11. **Question:** Please provide material allowances for all floor and wall finishes listed as TBD in the Finish Schedule.
- Answer:** Specification section "09 00 00 Finish Schedule" was revised to clarify all materials listed as "TBD". (See revised specifications section)
12. **Question:** Please provide Solid Surface material pricing group.
- Answer:** Specification section "09 00 00 Finish Schedule" was revised to clarify solid surface selections. (See revised specifications section)
13. **Question:** Ceramic Tile spec covers only tiles specified as CT 1 and CT 2 however the floor plans and finish schedule reference tile finishes CT-1 through CT-7. Please clarify or provide allowances for the tile not referenced in the ceramic tile spec.
- Answer:** Specification section "09 00 00 Finish Schedule" and "09 30 13 Ceramic Tile" was revised to clarify CT-1 through CT-7 selections. Additionally a typical tile elevation was added to the drawings (see detail 25/A-401)

END

DIVISION 02 – EXISTING CONDITIONS

02 41 19 SELECTIVE DEMOLITION

DIVISION 03 – CONCRETE

03 30 00 CAST-IN-PLACE CONCRETE

DIVISION 05 – METALS

05 52 13 PIPING AND TUBE RAILING

DIVISION 06 – WOOD, PLASTICS AND COMPOSITES

06 10 53 MISC. ROUGH CARPENTRY
06 20 23 INTERIOR FINISHED CARPENTRY

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

07 24 13 EXTERIOR INSULATION AND FINISH SYSTEM
07 92 00 JOINT SEALANTS
07 92 19 ACOUSTICAL JOINT SEALANTS
07 95 13.13 INTERIOR EXPANSION JOINT COVER ASSEMBLIES

DIVISION 08 – OPENINGS

08 11 13 HOLLOW METAL DOORS AND FRAMES
08 71 00 DOOR HARDWARE

DIVISION 09 – FINISHES

09 00 00 FINISH SCHEDULE
09 22 16 NON-STRUCTURAL METAL FRAMING
09 29 00 GYPSUM BOARD
09 30 13 CERAMIC TILING
09 51 13 ACOUSTICAL PANEL CEILINGS
09 65 13 RESILIENT BASE AND ACCESSORIES
09 65 19 RESILIENT TILE FLOORING
09 68 13 TILE CARPETING
09 91 23 INTERIOR PAINTING

DIVISION 10 – SPECIALTIES

10 21 13.17 PHENOLIC-CORE TOILET COMPARTMENTS
10 28 00 TOILET ACCESSORIES
10 44 16 FIRE EXTINGUISHERS

DIVISION 12 – FURNISHINGS

12 36 61.16 SOLID SURFACING COUNTERTOPS

SECTION 00 01 15 – LIST OF DRAWINGS

G-000	COVER SHEET
S-301	STRUCTURAL FOUNDATION SECTIONS
A-100	OVERALL FLOOR PLANS
AD101	FLOOR PLANS, DEMOLITION
A-101	FLOOR PLANS NEW WORK
A-201	REFLECTED CEILING PLANS – NEW WORK
A-401	INTERIOR ELEVATIONS
A-601	PARTITION TYPES, DOOR SCHEDULE AND DOOR DETAILS
M-001	ABBREVIATIONS, LEGENDS AND GENERAL NOTES
M-101	PARTIAL MECHANICAL REMOVAL & NEW WORK PLANS
M-102	PARTIAL MECHANICAL REMOVAL & NEW WORK PLANS
M-103	PARTIAL MECHANICAL REMOVAL & NEW WORK PLANS
P-001	LEGEND, ABBREVIATIONS, GENERAL AND WORK NOTES
P-401	1ST FLOOR PLUMBING SYSTEM REMOVAL AND NEW WORK PLANS
P-402	2ND FLOOR PLUMBING SYSTEM REMOVAL AND NEW WORK PLANS
P-601	PLUMBING SCHEDULE
FP401	AUTOMATIC FIRE SUPPRESSION SYSTEM PLANS
E-001	LEGEND, ABBREVIATIONS, GENERAL AND WORK NOTES
E-401	PARTIAL 1ST & 2ND FLOOR PLANS REMOVAL WORK
E-402	PARTIAL 1ST & 2ND FLOOR PLANS NEW WORK

END OF SECTION

SECTION 087100 – DOOR HARDWARE

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes commercial door hardware for the following:
 - 1. Swinging doors.
- B. Door hardware includes, but is not necessarily limited to, the following:
 - 1. Mechanical door hardware.
- C. Related Sections:
 - 1. Division 08 Section “Door Hardware Schedule”.
 - 2. Division 08 Section “Hollow Metal Doors and Frames”.
- D. Codes and References: Comply with the version year adopted by the Authority Having Jurisdiction.
 - 1. ANSI A117.1 - Accessible and Usable Buildings and Facilities.
 - 2. ICC/IBC - International Building Code.
 - 3. NFPA 70 - National Electrical Code.
 - 4. NFPA 80 - Fire Doors and Windows.
 - 5. NFPA 101 - Life Safety Code.
 - 6. NFPA 105 - Installation of Smoke Door Assemblies.
 - 7. State Building Codes, Local Amendments.
- E. Standards: All hardware specified herein shall comply with the following industry standards:
 - 1. ANSI/BHMA Certified Product Standards - A156 Series
 - 2. UL10C – Positive Pressure Fire Tests of Door Assemblies

1.2 SUBMITTALS

- A. Product Data: Manufacturer's product data sheets including installation details, material descriptions, dimensions of individual components and profiles, operational descriptions and finishes.
- B. Door Hardware Schedule: Prepared by or under the supervision of supplier, detailing fabrication and assembly of door hardware, as well as procedures and diagrams. Coordinate the final Door Hardware Schedule with doors, frames, and related work to ensure proper size, thickness, hand, function, and finish of door hardware.

1. Format: Comply with scheduling sequence and vertical format in DHI's "Sequence and Format for the Hardware Schedule."
2. Organization: Organize the Door Hardware Schedule into door hardware sets indicating complete designations of every item required for each door or opening. Organize door hardware sets in same order as in the Door Hardware Sets at the end of Part 3. Submittals that do not follow the same format and order as the Door Hardware Sets will be rejected and subject to resubmission.
3. Content: Include the following information:
 - a. Type, style, function, size, label, hand, and finish of each door hardware item.
 - b. Manufacturer of each item.
 - c. Fastenings and other pertinent information.
 - d. Location of door hardware set, cross-referenced to Drawings, both on floor plans and in door and frame schedule.
 - e. Explanation of abbreviations, symbols, and codes contained in schedule.
 - f. Mounting locations for door hardware.
 - g. Door and frame sizes and materials.
 - h. Warranty information for each product.
4. Submittal Sequence: Submit the final Door Hardware Schedule at earliest possible date, particularly where approval of the Door Hardware Schedule must precede fabrication of other work that is critical in the Project construction schedule. Include Product Data, Samples, Shop Drawings of other work affected by door hardware, and other information essential to the coordinated review of the Door Hardware Schedule.

C. Informational Submittals:

1. Product Test Reports: Indicating compliance with cycle testing requirements, based on evaluation of comprehensive tests performed by manufacturer and witnessed by a qualified independent testing agency.

D. Operating and Maintenance Manuals: Provide manufacturers operating and maintenance manuals for each item comprising the complete door hardware installation in quantity as required in Division 01, Closeout Submittals.

1.3 QUALITY ASSURANCE

- A. Manufacturers Qualifications: Engage qualified manufacturers with a minimum 5 years of documented experience in producing hardware and equipment similar to that indicated for this Project and that have a proven record of successful in-service performance.
- B. Installer Qualifications: A minimum 3 years documented experience installing both standard and electrified door hardware similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.

- C. Door Hardware Supplier Qualifications: Experienced commercial door hardware distributors with a minimum 5 years documented experience supplying both mechanical and electromechanical hardware installations comparable in material, design, and extent to that indicated for this Project. Supplier recognized as a factory direct distributor by the manufacturers of the primary materials with a warehousing facility in Project's vicinity. Supplier to have on staff a certified Architectural Hardware Consultant (AHC) available during the course of the Work to consult with Contractor, Architect, and Owner concerning both standard and electromechanical door hardware and keying.
- D. Each unit to bear third party permanent label demonstrating compliance with the referenced standards.
- E. Pre-Submittal Conference: Conduct coordination conference in compliance with requirements in Division 01 Section "Project Meetings" with attendance by representatives of Supplier(s), Installer(s), and Contractor(s) to review proper methods and the procedures for receiving, handling, and installing door hardware.
 - 1. Prior to installation of door hardware, conduct a project specific training meeting to instruct the installing contractors' personnel on the proper installation and adjustment of their respective products. Product training to be attended by installers of door hardware (including electromechanical hardware) for aluminum, hollow metal and wood doors. Training will include the use of installation manuals, hardware schedules, templates and physical product samples as required.
 - 2. Inspect and discuss electrical roughing-in, power supply connections, and other preparatory work performed by other trades.
 - 3. Review sequence of operation narratives for each unique access controlled opening.
 - 4. Review and finalize construction schedule and verify availability of materials.
 - 5. Review the required inspecting, testing, commissioning, and demonstration procedures
- F. At completion of installation, provide written documentation that components were applied to manufacturer's instructions and recommendations and according to approved schedule.

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Inventory door hardware on receipt and provide secure lock-up and shelving for door hardware delivered to Project site. Do not store electronic access control hardware, software or accessories at Project site without prior authorization.
- B. Tag each item or package separately with identification related to the final Door Hardware Schedule, and include basic installation instructions with each item or package.
- C. Deliver, as applicable, permanent keys, cylinders, cores, access control credentials, software and related accessories directly to Owner via registered mail or overnight package service. Instructions for delivery to the Owner shall be established at the "Keying Conference".

1.5 COORDINATION

- A. Templates: Obtain and distribute to the parties involved templates for doors, frames, and other work specified to be factory prepared for installing standard and electrified hardware. Check

Shop Drawings of other work to confirm that adequate provisions are made for locating and installing hardware to comply with indicated requirements.

- B. Door and Frame Preparation: Doors and corresponding frames are to be prepared, reinforced and pre-wired (if applicable) to receive the installation of the specified electrified, monitoring, signaling and access control system hardware without additional in-field modifications.

1.6 WARRANTY

- A. General Warranty: Reference Division 01, General Requirements. Special warranties specified in this Article shall not deprive Owner of other rights Owner may have under other provisions of the Contract Documents and shall be in addition to, and run concurrent with, other warranties made by Contractor under requirements of the Contract Documents.
- B. Warranty Period: Written warranty, executed by manufacturer(s), agreeing to repair or replace components of standard and electrified door hardware that fails in materials or workmanship within specified warranty period after final acceptance by the Owner. Failures include, but are not limited to, the following:
 - 1. Structural failures including excessive deflection, cracking, or breakage.
 - 2. Faulty operation of the hardware.
 - 3. Deterioration of metals, metal finishes, and other materials beyond normal weathering.
 - 4. Electrical component defects and failures within the systems operation.
- C. Standard Warranty Period: One year from date of Substantial Completion, unless otherwise indicated.
- D. Special Warranty Periods:
 - 1. Ten years for mortise locks and latches.
 - 2. Twenty five years for manual surface door closer bodies.

1.7 MAINTENANCE SERVICE

- A. Maintenance Tools and Instructions: Furnish a complete set of specialized tools and maintenance instructions as needed for Owner's continued adjustment, maintenance, and removal and replacement of door hardware.

PART 2 - PRODUCTS

2.1 SCHEDULED DOOR HARDWARE

- A. General: Provide door hardware for each door to comply with requirements in Door Hardware Sets and each referenced section that products are to be supplied under.
- B. Designations: Requirements for quantity, item, size, finish or color, grade, function, and other distinctive qualities of each type of door hardware are indicated in the Door Hardware Sets at the end of Part 3. Products are identified by using door hardware designations, as follows:

- C. Named Manufacturer's Products: Product designation and manufacturer are listed for each door hardware type required for the purpose of establishing requirements. Manufacturers' names are abbreviated in the Door Hardware Schedule.
- D. Substitutions: Requests for substitution and product approval for inclusive mechanical and electromechanical door hardware in compliance with the specifications must be submitted in writing and in accordance with the procedures and time frames outlined in Division 01, Substitution Procedures. Approval of requests is at the discretion of the architect, owner, and their designated consultants.

2.2 HANGING DEVICES

- A. Hinges: ANSI/BHMA A156.1 certified butt hinges with number of hinge knuckles as specified in the Door Hardware Sets.
 - 1. Quantity: Provide the following hinge quantity, unless otherwise indicated:
 - a. Two Hinges: For doors with heights up to 60 inches.
 - b. Three Hinges: For doors with heights 61 to 90 inches.
 - c. Four Hinges: For doors with heights 91 to 120 inches.
 - d. For doors with heights more than 120 inches, provide 4 hinges, plus 1 hinge for every 30 inches of door height greater than 120 inches.
 - 2. Hinge Size: Provide the following, unless otherwise indicated, with hinge widths sized for door thickness and clearances required:
 - a. Widths up to 3'0": 4-1/2" standard or heavy weight as specified.
 - b. Sizes from 3'1" to 4'0": 5" standard or heavy weight as specified.
 - 3. Hinge Options: Comply with the following where indicated in the Hardware Sets or on Drawings:
 - a. Non-removable Pins: Provide set screw in hinge barrel that, when tightened into a groove in hinge pin, prevents removal of pin while door is closed; for the all out-swinging lockable doors.
 - 4. Acceptable Manufacturers:
 - a. Bommer Industries (BO).
 - b. Hager Companies (HA).
 - c. McKinney Products (MK).

2.3 DOOR OPERATING TRIM

- A. Door Push Plates and Pulls: ANS/BHMA A156.6 certified door pushes and pulls of type and design specified in the Hardware Sets. Coordinate and provide proper width and height as required where conflicting hardware dictates.
 - 1. Push/Pull Plates: Minimum .050 inch thick, size as indicated in hardware sets, with beveled edges, secured with exposed screws unless otherwise indicated.

2. Door Pull and Push Bar Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door unless otherwise indicated.
3. Offset Pull Design: Size, shape, and material as indicated in the hardware sets. Minimum clearance of 2 1/2-inches from face of door and offset of 90 degrees unless otherwise indicated.
4. Fasteners: Provide manufacturer's designated fastener type as indicated in Hardware Sets.
5. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).

2.4 CYLINDERS AND KEYING

- A. General: Cylinder manufacturer to have minimum (10) years experience designing secured master key systems and have on record a published security keying system policy.
- B. Source Limitations: Obtain each type of keyed cylinder and keys from the same source manufacturer as locksets and exit devices, unless otherwise indicated.
 1. Acceptable Manufacturers:
 - a. Schlage (SC).
 - b. No Substitution.
- C. Cylinders: Original manufacturer cylinders complying with the following:
 1. Mortise Type: Threaded cylinders with rings and cams to suit hardware application.
 2. Rim Type: Cylinders with back plate, flat-type vertical or horizontal tailpiece, and raised trim ring.
 3. Bored-Lock Type: Cylinders with tailpieces to suit locks.
 4. Mortise and rim cylinder collars to be solid and recessed to allow the cylinder face to be flush and be free spinning with matching finishes.
 5. Keyway: Match Facility Standard.
- D. Security Cylinders: ANSI/BHMA A156.5, Grade 1, patented security cylinders and keys able to be used together under the same facility master or grandmaster key system. Cylinders are to be factory keyed.
 1. Acceptable Manufacturers:
 - a. Schlage Lock (SC) - Primus Everest.
 - b. No Substitution.
- E. Keying System: Each type of lock and cylinders to be factory keyed.
 1. Conduct specified "Keying Conference" to define and document keying system instructions and requirements.

2. Furnish factory cut, nickel-silver large bow permanently inscribed with a visual key control number as directed by Owner.
3. Existing System: Key locks to Owner's existing system.

F. Key Quantity: Provide the following minimum number of keys:

1. Change Keys per Cylinder: Two (2)
2. Master Keys (per Master Key Level/Group): Five (5).
3. Construction Keys (where required): Ten (10).

G. Key Registration List (Bitting List):

1. Provide keying transcript list to Owner's representative in the proper format for importing into key control software.
2. Provide transcript list in writing or electronic file as directed by the Owner.

2.5 MECHANICAL LOCKS AND LATCHING DEVICES

A. Mortise Locksets, Grade 1 (Heavy Duty): ANSI/BHMA A156.13, Series 1000, Operational Grade 1 certified. Locksets are to be manufactured with a corrosion resistant steel case and be field-reversible for handing without disassembly of the lock body.

1. Acceptable Manufacturers:
 - a. Corbin Russwin Hardware (RU) – ML2000 Series.
 - b. Sargent Manufacturing (SA) – 8200 Series.
 - c. Schlage (SC) – L9000 Series.

2.6 AUXILIARY LOCKS

A. Mortise Deadlocks, Large Case: ANSI/BHMA A156.13, Series 1000, Grade 1, certified large case mortise type deadlocks constructed of heavy gauge wrought corrosion resistant steel. One piece stainless steel bolts with a 1" throw. Deadlocks to be products of the same source manufacturer and keyway as other locksets.

1. Acceptable Manufacturers:
 - a. Corbin Russwin Hardware (RU) - ML2000 Series.
 - b. Sargent Manufacturing (SA) - 8200 Series.
 - c. Schlage (SC) - L9460 Series.

2.7 LOCK AND LATCH STRIKES

A. Strikes: Provide manufacturer's standard strike with strike box for each latch or lock bolt, with curved lip extended to protect frame, finished to match door hardware set, unless otherwise indicated, and as follows:

1. Flat-Lip Strikes: For locks with three-piece antifriction latchbolts, as recommended by manufacturer.

2. Extra-Long-Lip Strikes: For locks used on frames with applied wood casing trim.
3. Aluminum-Frame Strike Box: Provide manufacturer's special strike box fabricated for aluminum framing.
4. Double-lipped strikes: For locks at double acting doors. Furnish with retractable stop for rescue hardware applications.

B. Standards: Comply with the following:

1. Strikes for Mortise Locks and Latches: BHMA A156.13.
2. Strikes for Bored Locks and Latches: BHMA A156.2.
3. Strikes for Auxiliary Deadlocks: BHMA A156.5.
4. Dustproof Strikes: BHMA A156.16.

2.8 DOOR CLOSERS

A. All door closers specified herein shall meet or exceed the following criteria:

1. General: Door closers to be from one manufacturer, matching in design and style, with the same type door preparations and templates regardless of application or spring size. Closers to be non-handed with full sized covers including installation and adjusting information on inside of cover.
2. Standards: Closers to comply with UL-10C for Positive Pressure Fire Test and be U.L. listed for use of fire rated doors.
3. Cycle Testing: Provide closers which have surpassed 15 million cycles in a test witnessed and verified by UL.
4. Size of Units: Comply with manufacturer's written recommendations for sizing of door closers depending on size of door, exposure to weather, and anticipated frequency of use. Where closers are indicated for doors required to be accessible to the physically handicapped, provide units complying with ANSI ICC/A117.1.
5. Closer Arms: Provide heavy duty, forged steel closer arms unless otherwise indicated in Hardware Sets.
 - a.
6. Closers shall not be installed on exterior or corridor side of doors; where possible install closers on door for optimum aesthetics.
7. Closer Accessories: Provide door closer accessories including custom templates, special mounting brackets, spacers and drop plates, and through-bolt and security type fasteners as required for proper installation.

B. Door Closers, Surface Mounted (Large Body Cast Iron): ANSI/BHMA A156.4, Grade 1 surface mounted, heavy duty door closers with complete spring power adjustment, sizes 1 thru 6; and fully operational adjustable according to door size, frequency of use, and opening force. Closers to be rack and pinion type, one piece cast iron body construction, with adjustable backcheck and separate non-critical valves for closing sweep and latch speed control.

1. Acceptable Manufacturers:

- a. LCN Closers (LC) - 4040XP Series.
- b. Norton Door Controls (NO) – 9500 Series.
- c. Sargent Manufacturing (SA) - 281 Series.

2.9 ARCHITECTURAL TRIM

A. Door Protective Trim

1. General: Door protective trim units to be of type and design as specified below or in the Hardware Sets.
2. Size: Fabricate protection plates (kick, armor, or mop) not more than 2" less than door width (LDW) on stop side of single doors and 1" LDW on stop side of pairs of doors, and not more than 1" less than door width on pull side. Coordinate and provide proper width and height as required where conflicting hardware dictates. Height to be as specified in the Hardware Sets.
3. Protection Plates: ANSI/BHMA A156.6 certified protection plates (kick, armor, or mop), fabricated from the following:
 - a. Stainless Steel: 300 grade, 050-inch thick.
4. Options and fasteners: Provide manufacturer's designated fastener type as specified in the Hardware Sets. Provide countersunk screw holes.
5. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).

2.10 DOOR STOPS AND HOLDERS

- A. General: Door stops and holders to be of type and design as specified below or in the Hardware Sets.
- B. Door Stops and Bumpers: ANSI/BHMA A156.16, Grade 1 certified door stops and wall bumpers. Provide wall bumpers, either convex or concave types with anchorage as indicated, unless floor or other types of door stops are specified in Hardware Sets. Do not mount floor stops where they will impede traffic. Where floor or wall bumpers are not appropriate, provide overhead type stops and holders.
 1. Acceptable Manufacturers:
 - a. Ives (IV).
 - b. Rockwood Manufacturing (RO).
 - c. Trimco (TC).

2.11 ARCHITECTURAL SEALS

- A. General: Thresholds, weatherstripping, and gasket seals to be of type and design as specified below or in the Hardware Sets. Provide continuous weatherstrip gasketing on exterior doors and provide smoke, light, or sound gasketing on interior doors where indicated. At exterior applications provide non-corrosive fasteners and elsewhere where indicated.
- B. Smoke Labeled Gasketing: Assemblies complying with NFPA 105 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for smoke control ratings indicated, based on testing according to UL 1784.
 - 1. Provide smoke labeled perimeter gasketing at all smoke labeled openings.
- C. Fire Labeled Gasketing: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated, based on testing according to UL-10C.
 - 1. Provide intumescent seals as indicated to meet UL10C Standard for Positive Pressure Fire Tests of Door Assemblies, and UBC 7-2, Fire Tests of Door Assemblies.
- D. Sound-Rated Gasketing: Assemblies that are listed and labeled by a testing and inspecting agency, for sound ratings indicated.
- E. Replaceable Seal Strips: Provide only those units where resilient or flexible seal strips are easily replaceable and readily available from stocks maintained by manufacturer.
- F. Acceptable Manufacturers:
 - 1. National Guard Products (NG).
 - 2. Pemko Manufacturing (PE).
 - 3. Reese Enterprises, Inc. (RE).

2.12 FABRICATION

- A. Fasteners: Provide door hardware manufactured to comply with published templates generally prepared for machine, wood, and sheet metal screws. Provide screws according to manufacturers recognized installation standards for application intended.

2.13 FINISHES

- A. Standard: Designations used in the Hardware Sets and elsewhere indicate hardware finishes complying with ANSI/BHMA A156.18, including coordination with traditional U.S. finishes indicated by certain manufacturers for their products.
- B. Provide quality of finish, including thickness of plating or coating (if any), composition, hardness, and other qualities complying with manufacturer's standards, but in no case less than specified by referenced standards for the applicable units of hardware.
- C. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine scheduled openings, with Installer present, for compliance with requirements for installation tolerances, labeled fire door assembly construction, wall and floor construction, and other conditions affecting performance.
- B. Notify architect of any discrepancies or conflicts between the door schedule, door types, drawings and scheduled hardware. Proceed only after such discrepancies or conflicts have been resolved in writing.

3.2 PREPARATION

- A. Hollow Metal Doors and Frames: Comply with ANSI/DHI A115 series.
- B. Wood Doors: Comply with ANSI/DHI A115-W series.

3.3 INSTALLATION

- A. Install each item of mechanical and electromechanical hardware and access control equipment to comply with manufacturer's written instructions and according to specifications.
 - 1. Installers are to be trained and certified by the manufacturer on the proper installation and adjustment of fire, life safety, and security products including: hanging devices; locking devices; closing devices; and seals.
- B. Mounting Heights: Mount door hardware units at heights indicated in following applicable publications, unless specifically indicated or required to comply with governing regulations:
 - 1. Standard Steel Doors and Frames: DHI's "Recommended Locations for Architectural Hardware for Standard Steel Doors and Frames."
 - 2. Wood Doors: DHI WDHS.3, "Recommended Locations for Architectural Hardware for Wood Flush Doors."
 - 3. Where indicated to comply with accessibility requirements, comply with ANSI A117.1 "Accessibility Guidelines for Buildings and Facilities."
 - 4. Provide blocking in drywall partitions where wall stops or other wall mounted hardware is located.
- C. Retrofitting: Install door hardware to comply with manufacturer's published templates and written instructions. Where cutting and fitting are required to install door hardware onto or into surfaces that are later to be painted or finished in another way, coordinate removal, storage, and reinstallation of surface protective trim units with finishing work specified in Division 9 Sections. Do not install surface-mounted items until finishes have been completed on substrates involved.
- D. Thresholds: Set thresholds for exterior and acoustical doors in full bed of sealant complying with requirements specified in Division 7 Section "Joint Sealants."

- E. Storage: Provide a secure lock up for hardware delivered to the project but not yet installed. Control the handling and installation of hardware items so that the completion of the work will not be delayed by hardware losses before and after installation.

3.4 FIELD QUALITY CONTROL

- A. Field Inspection: Supplier will perform a final inspection of installed door hardware and state in report whether work complies with or deviates from requirements, including whether door hardware is properly installed, operating and adjusted.

3.5 ADJUSTING

- A. Initial Adjustment: Adjust and check each operating item of door hardware and each door to ensure proper operation or function of every unit. Replace units that cannot be adjusted to operate as intended. Adjust door control devices to compensate for final operation of heating and ventilating equipment and to comply with referenced accessibility requirements.

3.6 CLEANING AND PROTECTION

- A. Protect all hardware stored on construction site in a covered and dry place. Protect exposed hardware installed on doors during the construction phase. Install any and all hardware at the latest possible time frame.
- B. Clean adjacent surfaces soiled by door hardware installation.
- C. Clean operating items as necessary to restore proper finish. Provide final protection and maintain conditions that ensure door hardware is without damage or deterioration at time of owner occupancy.

3.7 DEMONSTRATION

- A. Instruct Owner's maintenance personnel to adjust, operate, and maintain mechanical and electromechanical door hardware.

3.8 DOOR HARDWARE SETS

- A. The hardware sets represent the design intent and direction of the owner and architect. They are a guideline only and should not be considered a detailed hardware schedule. Discrepancies, conflicting hardware and missing items should be brought to the attention of the architect with corrections made prior to the bidding process. Omitted items not included in a hardware set should be scheduled with the appropriate additional hardware required for proper application and functionality.
- B. Manufacturer's Abbreviations:

1. MK - McKinney
2. SC - Schlage
3. RO - Rockwood
4. RF - Rixson
5. LC - LCN Closers
6. PE - Pemko

Hardware Schedule

Set: 1.0

Doors: A119.1, A119.2

3 Hinge	TA2714	US26D	MK
1 Mortise Lock	L9040 06A L283-722	626	SC
1 Kick Plate	K1050 10" 4BE CSK	US32D	RO
1 Door Stop	403 (or) 441CU	US26D	RO
3 Silencer	609		RO

Set: 2.0

Doors: A114.1, A114.2, A120.1, A120.2

3 Hinge	TA2714	US26D	MK
1 Mortise Lock	L9040 06A L283-722	626	SC
1 Surface Overhead Stop	10-X36	630	RF
1 Kick Plate	K1050 10" 4BE CSK	US32D	RO
3 Silencer	609		RO

Set: 3.0

Doors: A201.1, A203.1, B105.1, B106.1, D108.1, D121.1

3 Hinge (heavy weight)	T4A3786	US26D	MK
1 Pull Plate	BF 110x70C	US32D	RO
1 Push Plate	70C	US32D	RO
1 Kick Plate	K1050 10" 4BE CSK	US32D	RO
1 Mop Plate	K1050 4" 4BE CSK	US32D	RO
1 Door Stop	403 (or) 441CU	US26D	RO
3 Silencer	609		RO

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TOILET ROOM RENOVATIONS

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END OF SECTION 087100

SECTION 090000 – FINISH SCHEDULE

FLOORING/BASE

Carpet

Basis of Design:

CPT-1: Auditorium Lobby Rm. D102

Manufacturer: Shaw Contract Group
Style: Diffuse 59575
Color: Nomad
Tile Size: 24" x 24"
Installation Method: Random
Fiber Type: Eco Solution Q Nylon
Surface Texture: Multi-level Pattern Loop
Pile Thickness: 0.092"
Gauge: 1/12
Dye Method: 100% Solution Dyed
Backing System: Eco Worx

CPT-2: Auditorium Ramps Rm. D102

Manufacturer: Shaw Contract Group
Style: Disperse Tile
Color: Nomad
Tile Size: 24" x 24"
Installation Method: Random
Fiber Type: Eco Solution Q Nylon
Surface Texture: Multi-level Pattern Loop
Pile Thickness: 0.092"
Gauge: 1/12
Dye Method: 100% Solution Dyed
Backing System: Eco Worx

Ceramic & Porcelain Tile

Basis of Design:

CT-1: All bathroom floors, except Auditorium bathrooms

Manufacturer: Daltile
Style: Keystones
Color: Desert Gray Speckle #D200
Tile Size: 2" x 2"

CT-2: All bathroom walls, except Auditorium bathrooms - (Field Tile)

Manufacturer: Daltile
Style: Semi-gloss Commercial Wall Tile
Color: Desert Gray X114
Tile Size: 4 1/4" x 4 1/4"

- CT-2a: All bathroom wall accent tile, except Auditorium bathrooms
Manufacturer: Daltile
Style: Semi-gloss Commercial Wall Tile
Color: Biscuit #K175 & Artic White #0190 * See attached Elev. For pattern.
Tile Size: 4"x4"
- CT-3: All bathrooms cove base tile, except Auditorium bathrooms
Manufacturer: Daltile
Style: Semi-gloss Commercial Wall Tile
Color: Desert Gray X114
Tile Size: 4 1/4" x 4 1/4" cove base tile
- CT-4: Auditorium bathroom floors, Rms. D108 & D121
Manufacturer: Garden State Tile
Style: Porcelain Collection - Silk
Color: Rm. D108: Silk White. Rm. D121: Silk Taupe
Tile Size: 12" x 24"
- CT-5: Auditorium bathroom cove base tile, Rms. D108 & D121
Manufacturer: Daltile
Style: Permabrites
Color: Desert Gray 6464
Tile Size: 3" x 3"
- CT-6: Auditorium bathroom walls, Rms. D108 & D121 (Field Tile)
Manufacturer: Daltile
Style: Permabrites
Color: Desert Gray 6464
Tile Size: 3" x 3"
- CT-6a: Auditorium bathroom walls, accent tile, Mens Rm. D121
Manufacturer: Daltile
Style: Permabrites
Color: Glass Almond #6465 & Elemental Tan #6466 * See attached Elev. for pattern
Tile Size: TBD
- CT-6b: Auditorium bathroom walls, accent tile, Womens Rm. D108
Manufacturer: Daltile
Style: Permabrites
Color: Suede Gray #6453 & Artic White #6470
Tile Size: 3" x 3"
- CT-7: Corridor outside bathrooms B105 & B106
Manufacturer: Crossville
Style: Crosscolor Mingle Series
Color: Mica
Tile Size: 8"x8"

Vinyl Composite Tile

Basis of Design:

Size: 12" x 12"

VCT-1: Flooring outside bathrooms with new doors

Manufacturer: Mannington Commercial

Style: Designer Essentials

Color: New Geranium 228

VCT-2: Flooring in Ticket Office Rm. D104

Manufacturer: Mannington Commercial

Style: Designer Essentials

Color: 209 Dark Chocolate

4" Resilient Rubber Cove Wall Base

Basis of Design:

RB-1: Auditorium Lobby Rm. D102

Manufacturer: Roppe

Style: Pinnacle

Color: #194 Burnt Umber

RB-2: Elevator Lobby Rm. A200

Manufacturer: Roppe

Style: Pinnacle

Color: To match existing.

RB-3: Flooring outside Bathrooms A114a & b, A116a & b, A119a & b, A120a & b

Manufacturer: Roppe

Style: Pinnacle

Color: To match existing.

PAINT

Basis of Design Manufacturer: Sherwin Williams, unless otherwise noted.

PT-1: Color: Silver Strand SW7057. Auditorium Bathrooms

PT-2: Color: Network Gray. Auditorium Lobby

PT-3: Color: Plum Brown SW 6272. Auditorium Lobby door frames & handrail

PT-4: Color: Folkstone SW6005. Auditorium Lobby Partitions @ drinking fountain.

PT-5: Color: Semi-gloss Folkstone SW6005. Auditorium Lobby wood trim

PT-6: Color: Mindful Gray SW7016. Bathroom walls

PT-7: Color: Georgian Blue Revival SW7609. Wall color, Elevator Lobby, A200, & drinking fountain niche.

PT-8: Color: Building Standard. Wall color outside bathrooms A114a&b, A116a&b, A119a&b, A120a&b, A201 & A203

PT-9: Color: Building Standard. Wall color outside bathrooms, B105/B106

PLASTIC LAMINATE

Basis of Design:

- PL-1: Bathroom millwork under countertops.
Manufacturer: Wilsonart
Color: TBD

SOLID SURFACE MATERIAL

- SS-1: Bathroom countertops Auditorium, Women's Bathroom D-108.
Manufacturer: Meganite
Style/Color: Portland Rain 744A
- SS-2: Bathroom Countertops – Auditorium Men's Bathroom D-121
Manufacturer: Meganite
Style/Color: Moonstone Granite 674
- SS-3: Ledge cap @ Auditorium Ramp
Manufacturer: Meganite
Style/Color: Moscada Granite 751

END OF SECTION 090000

SECTION 093013 - CERAMIC TILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

1. Ceramic tile.
2. Stone thresholds.
3. Waterproof membrane.
4. Crack isolation membrane for tile.
5. Surface preparation materials
6. Tile setting mortars and adhesives

- B. Related Requirements:

1. Section 079200 "Joint Sealants" for sealing of expansion, contraction, control, and isolation joints in tile surfaces.

1.3 DEFINITIONS

- A. General: Definitions in the ANSI A108 series of tile installation standards and in ANSI A137.1 apply to Work of this Section unless otherwise specified.
- B. ANSI A108 Series: ANSI A108.01, ANSI A108.02, ANSI A108.1A, ANSI A108.1B, ANSI A108.1C, ANSI A108.4, ANSI A108.5, ANSI A108.6, ANSI A108.8, ANSI A108.9, ANSI A108.10, ANSI A108.11, ANSI A108.12, ANSI A108.13, ANSI A108.14, ANSI A108.15, ANSI A108.16, and ANSI A108.17, which are contained in its "Specifications for Installation of Ceramic Tile."
- C. Module Size: Actual tile size plus joint width indicated.
- D. Face Size: Actual tile size, excluding spacer lugs.

1.4 PERFORMANCE REQUIREMENTS

- A. Static Coefficient of Friction: For tile installed on walkway surfaces, provide products meeting code requirements and testing identical products per ASTM C 1028 for the following:
 1. Level Surfaces: Minimum 0.70.

1.5 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.
 - 1. Review requirements in ANSI A108.01 for substrates and for preparation by other trades.
 - 2. Meeting Agenda includes but is not limited to;
 - a. Tile and installation material compatibility.
 - b. Grouting procedure.
 - c. Maintenance and cleaning products and methods.
 - d. Surface preparation.

1.6 ACTION SUBMITTALS

- A. Product Data: For each type of product.
 - 1. Ceramic tile.
 - 2. Marble thresholds.
 - 3. Setting Materials
 - 4. Grout
 - 5. Waterproofing membrane
 - 6. Crack solution membrane
 - 7. Primer.
 - 8. Self-leveling underlayment
 - 9. Patching compounds.
 - 10. Tile cleaner.
- B. Shop Drawings: Show locations of each type of tile and tile pattern. Show widths, details, and locations of expansion, contraction, control, and isolation joints in tile substrates, finished tile surfaces, locations of all floor drains including sloped slab locations, and marble threshold locations.
- C. Samples for Initial Selection: For tile, grout, and accessories involving color selection.
- D. Samples for Verification:
 - 1. Full-size units of each type and composition of tile and for each color and finish required.
 - 2. Assembled samples mounted on a rigid panel, with grouted joints, for each type and composition of tile and for each color and finish required. Make samples at least 12 inches square, but not fewer than four tiles. Use grout of type and in color or colors approved for completed Work.
 - 3. Full-size units of each type of trim and accessory for each color and finish required.
 - 4. Stone thresholds in 6-inch lengths.

1.7 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Master Grade Certificates: For each shipment, type, and composition of tile, signed by tile manufacturer and Installer.

- C. Product Certificates: For each type of product.

1.8 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match and are from same production runs as products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Tile and Trim Units: Furnish quantity of full-size units equal to 3 percent of amount installed for each type, composition, color, pattern, and size indicated.
 - 2. Grout: Furnish quantity of grout equal to 3 percent of amount installed for each type, composition, and color indicated.

1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Comply with requirements in ANSI A137.1 for labeling tile packages.
- B. Deliver and store materials on site at least 24 hours before work begins in a heated and dry storage facility on site.
- C. Store tile and cementitious materials on elevated platforms, under cover, and in a dry location.
- D. Store aggregates where grading and other required characteristics can be maintained and contamination can be avoided.
- E. Store liquid materials in unopened containers and protected from freezing.
- F. Handle tile that has temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.10 FIELD CONDITIONS

- A. Environmental Limitations: Do not install tile until construction in spaces is complete and ambient temperature and humidity conditions are maintained at the levels indicated in referenced standards and manufacturer's written instructions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Source Limitations for Tile: Obtain tile of each type and color or finish from one source or producer.
 - 1. Obtain tile of each type and color or finish from same production run and of consistent quality in appearance and physical properties for each contiguous area.

- B. Source Limitations for Setting and Grouting Materials: Obtain ingredients of a uniform quality for each mortar, adhesive, and grout component from one manufacturer and each aggregate from one source or producer.
- C. Source Limitations for Other Products: Obtain each of the following products specified in this Section from a single manufacturer for each product:
 - 1. Stone thresholds.
 - 2. Waterproof membrane.
 - 3. Crack isolation membrane

2.2 PRODUCTS, GENERAL

- A. ANSI Ceramic Tile Standard: Provide tile that complies with ANSI A137.1 for types, compositions, and other characteristics indicated.
 - 1. Provide tile complying with Standard grade requirements unless otherwise indicated.
- B. ANSI Standards for Tile Installation Materials: Provide materials complying with ANSI A108.02, ANSI standards referenced in other Part 2 articles, ANSI standards referenced by TCNA installation methods specified in tile installation schedules, and other requirements specified.
- C. ISO 13007 Standards for Ceramic Tiles, Grouts and Adhesives: Provide materials complying with ISO 13007-1, 13007-2, 13007-3, 13007-4.
- D. Factory Blending: For tile exhibiting color variations within ranges, blend tile in factory and package so tile units taken from one package show same range in colors as those taken from other packages and match approved Samples.
- E. Mounting: For factory-mounted tile, provide back- or edge-mounted tile assemblies as standard with manufacturer unless otherwise indicated.
 - 1. Where tile is indicated for installation in wet areas, do not use back- or edge-mounted tile assemblies unless tile manufacturer specifies in writing that this type of mounting is suitable for installation indicated and has a record of successful in-service performance.

2.3 TILE PRODUCTS

- A. Ceramic Tile Type CT-1: Factory-mounted unglazed porcelain mosaic tile.
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide Daltile; Division of Dal-Tile International Inc.; "Keystones" or comparable product by one of the following:
 - 2. Composition: ceramic mosaic porcelain.
 - 3. Module Size: 2 by 2 inches.
 - 4. Thickness: 1/4 inch.
 - 5. Face: Plain with cushion edges.
 - 6. Surface: Smooth, without abrasive admixture.

7. Tile Color and Pattern: See Finish Schedule Spec Section 090000:
 8. Grout Color: As selected by Architect from manufacturer's full range.
- B. Ceramic Tile Type CT-2, CT-2a, and CT-3: Factory-mounted glazed ceramic wall tile.
1. Basis-of-Design Product: Subject to compliance with requirements, provide Daltile; Division of Dal-Tile International Inc.; "Semi Gloss" product by one of the following:
 2. Module Size: 4-1/4 by 4-1/4 inches.
 3. Thickness: 5/16 inch.
 4. Face: Plain with cushion edges.
 5. Finish: Semi-gloss glazed.
 6. Tile Color and Pattern: See Finish Schedule Spec Section 090000.
 7. Grout Color: As selected by Architect from manufacturer's full range.
8. Trim Units: Coordinated with sizes and coursing of adjoining flat tile where applicable and matching characteristics of adjoining flat tile. Provide shapes as follows, Retain shape requirements from options in subparagraphs below that suit installation methods. Revise or supplement subparagraphs to suit Project.
- a. External Corners for Thin-Set Mortar Installations: Surface bullnose, same size as adjoining flat tile.
 - b. Internal Corners: Field-buttet square corners. For coved base and cap use angle pieces designed to fit with stretcher shapes.
- C. Ceramic Tile Type: CT-4: Factory Glazed Porcelain Tile.
1. Basis of Design Product: Subject to compliance with requirements, provide:
 - a. Garden State Tile; Porcelain Collection Silk
 2. Composition: ceramic mosaic porcelain.
 3. Module Size: 12" x 24" inches.
 4. Thickness: 1/4 inch.
 5. Face: Plain with cushion edges.
 6. Surface: Smooth, without abrasive admixture.
 7. Tile Color and Pattern: See Finish Schedule Spec Section 090000:
 8. Grout Color: As selected by Architect from manufacturer's full range.
- D. Ceramic Tile Type: CT-5, CT-6, CT-6a, CT-6b: Factory Glazed Porcelain Tile.
1. Basis of Design Product: Subject to compliance with requirements, provide:
 - a. Daltile, Permabrites
 2. Composition: ceramic mosaic porcelain.
 3. Module Size: 3" x 3" inches.
 4. Thickness: 1/4 inch.
 5. Face: Plain with cushion edges.
 6. Surface: Smooth, without abrasive admixture.
 7. Tile Color and Pattern: See Finish Schedule Spec Section 090000:
 8. Grout Color: As selected by Architect from manufacturer's full range.

- E. Ceramic Tile Type: CT-7: Factory Glazed Porcelain Tile.
 - 1. Basis of Design Product: Subject to compliance with requirements, provide:
 - a. Crossville, Crosscolor Mingle Series
 - 2. Composition: ceramic mosaic porcelain.
 - 3. Module Size: 8" x 8" inches.
 - 4. Thickness: 1/4 inch.
 - 5. Face: Plain with cushion edges.
 - 6. Surface: Smooth, without abrasive admixture.
 - 7. Tile Color and Pattern: See Finish Schedule Spec Section 090000:
 - 8. Grout Color: As selected by Architect from manufacturer's full range.

2.4 THRESHOLDS

- A. General: Fabricate to sizes and profiles indicated or required to provide transition between adjacent floor finishes.
 - 1. Bevel edges at 1:2 slope, with lower edge of bevel aligned with or up to 1/16 inch above adjacent floor surface. Finish bevel to match top surface of threshold. Limit height of threshold to 1/2 inch or less above adjacent floor surface.
- B. Marble Thresholds: ASTM C 503, with a minimum abrasion resistance of 12 per ASTM C 1353 or ASTM C 241 and with honed finish.
 - 1. Description: As selected by Architect from manufacturer's full range.

2.5 SURFACE PREPARATION MATERIALS

- A. General: Manufacturer's standard product, selected from the following, and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.
- B. Reduced-preparation, self-leveling underlayment: for smoothing and repairing interior floors before the installation of floor coverings from feather edge to up to 2"
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. MAPEI Corporation; Ultraplan Easy
 - 1) Requires primer – MAPEI-Corporation; Primer T
- C. Cementitious Patching Compound;
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. MAPEI Corporation; Mapecem Quickpatch

2.6 WATERPROOF MEMBRANE

- A. General: Manufacturer's standard product, selected from the following that complies with ANSI A118.10 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.
- B. Fluid-Applied Membrane: Liquid-latex rubber or elastomeric polymer.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - a. MAPEI Corporation; Mapelastic HPG

2.7 CRACK ISOLATION MEMBRANE

- A. General: Manufacturer's standard product, selected from the following that complies with ANSI A118.10 and is recommended by the manufacturer for the application indicated. Include reinforcement and accessories recommended by manufacturer.
- B. Fabric-Reinforced, Fluid-Applied Membrane: System consisting of liquid-latex rubber or elastomeric polymer and fabric reinforcement.
 - 1. Products: Subject to compliance with requirements, provide the following:
 - MAPEI Corporation; Mapelastic HPG with MAPEI Fiberglass Mesh.

2.8 SETTING MATERIALS

- A. Non-sag, medium-bed and thin-set, Polymer modified single component mortar: ANSI A118.4, A118.11 and ISO 13007 C2TES1P1;
 - 1. Basis-of-Design Product: Subject to compliance with requirements, provide MAPEI Corporation; Ultraflex LFT or comparable product by one of the following:
 - a. Laticrete International, Inc.
 - b. TEC; a subsidiary of H. B. Fuller Company.

2.9 GROUT MATERIALS

- A. High-Performance, fast-setting, sanded polymer-modified tile grout: ANSI A118.7.
 - 1. Basis of Design Product: Subject to compliance with requirements, provide MAPEI Ultracolor Plus.
 - 2. Colors: Owner shall select grout colors from full range of manufacture's standard colors.

2.10 MISCELLANEOUS MATERIALS

- A. Tile Cleaner: A neutral cleaner capable of removing soil and residue without harming tile and grout surfaces, specifically approved for materials and installations indicated by tile and grout manufacturers.

1. Basis of Design Product: Subject to compliance with requirements, provide MAPEI UltraCare Concentrated Tile & Grout Cleaner.

2.11 MIXING MORTARS AND GROUT

- A. Mix mortars and grouts to comply with referenced standards and mortar and grout manufacturers' written instructions.
- B. Add materials, water, and additives in accurate proportions.
- C. Obtain and use type of mixing equipment, mixer speeds, mixing containers, mixing time, and other procedures to produce mortars and grouts of uniform quality with optimum performance characteristics for installations indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
 1. Verify that substrates for setting tile are firm; dry; clean; free of coatings that are incompatible with tile-setting materials, including curing compounds and other substances that contain soap, wax, oil, or silicone; and comply with flatness tolerances required by ANSI A108.01 for installations indicated.
 2. Verify that concrete substrates for tile floors installed with thinset mortar comply with surface finish requirements in ANSI A108.01 for installations indicated.
 - a. Verify that surfaces that received a steel trowel finish have been mechanically scarified.
 - b. Verify that protrusions, bumps, and ridges have been removed by sanding or grinding.
 3. Verify that installation of grounds, anchors, recessed frames, electrical and mechanical units of work, and similar items located in or behind tile has been completed.
 4. Verify that joints and cracks in tile substrates are coordinated with tile joint locations; if not coordinated, adjust joint locations in consultation with Architect.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.
- C. Beginning installation constitutes Contractor's acceptance of substrates and conditions.

3.2 PREPARATION

- A. Fill cracks, holes, and depressions in concrete substrates for tile floors installed with thinset mortar with trowelable leveling and patching compound specifically recommended by tile-setting material manufacturer.

- B. Where indicated, prepare substrates to receive waterproofing by applying a reinforced mortar bed that complies with ANSI A108.1A and is sloped 1/4 inch per foot toward drains.
- C. Blending: For tile exhibiting color variations, verify that tile has been factory blended and packaged so tile units taken from one package show same range of colors as those taken from other packages and match approved Samples. If not factory blended, either return to manufacturer or blend tiles at Project site before installing.

3.3 CERAMIC TILE INSTALLATION

- A. Comply with TCNA's "Handbook for Ceramic, Glass, and Stone Tile Installation" for TCNA installation methods specified in tile installation schedules. Comply with parts of the ANSI A108 series "Specifications for Installation of Ceramic Tile" that are referenced in TCNA installation methods, specified in tile installation schedules, and apply to types of setting and grouting materials used.
 - 1. For the following installations, follow procedures in the ANSI A108 series of tile installation standards for providing 95 percent mortar coverage:
 - a. Tile floors in wet areas.
- B. Extend tile work into recesses and under or behind equipment and fixtures to form complete covering without interruptions unless otherwise indicated. Terminate work neatly at obstructions, edges, and corners without disrupting pattern or joint alignments.
- C. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, fixtures, and other penetrations so plates, collars, or covers overlap tile.
- D. Provide manufacturer's standard trim shapes where necessary to eliminate exposed tile edges.
- E. Where accent tile differs in thickness from field tile, vary setting-bed thickness so that tiles are flush.
- F. Jointing Pattern: Lay tile in grid pattern unless otherwise indicated. Lay out tile work and center tile fields in both directions in each space or on each wall area. Lay out tile work to minimize the use of pieces that are less than half of a tile. Provide uniform joint widths unless otherwise indicated.
 - 1. For tile mounted in sheets, make joints between tile sheets same width as joints within tile sheets so joints between sheets are not apparent in finished work.
 - 2. Where adjoining tiles on floor, base, walls, or trim are specified or indicated to be same size, align joints.
 - 3. Where tiles are specified or indicated to be whole integer multiples of adjoining tiles on floor, base, walls, or trim, align joints unless otherwise indicated.
- G. Joint Widths: Unless otherwise indicated, install tile with the following joint widths:
 - 1. Ceramic Mosaic Tile: 1/16 inch.

2. Glazed Wall Tile: 1/16 inch.
3. Porcelain Collection Silk, per manufacturer's recommendations.

H. Lay out tile wainscots to dimensions indicated or to next full tile beyond dimensions indicated.

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

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

J. Stone Thresholds: Install stone thresholds in same type of setting bed as adjacent floor unless otherwise indicated.

1. At locations where mortar bed (thickset) would otherwise be exposed above adjacent floor finishes, set thresholds in latex-portland cement mortar (thin set).
2. Do not extend cleavage membrane] waterproofing under thresholds set in latex-portland cement mortar. Fill joints between such thresholds and adjoining tile set on cleavage membrane waterproofing with elastomeric sealant.

3.4 WATERPROOFING INSTALLATION

- A. Install waterproofing to comply with ANSI A108.13 and manufacturer's written instructions to produce waterproof membrane of uniform thickness that is bonded securely to substrate.
- B. Allow waterproofing to cure and verify by testing that it is watertight before installing tile or setting materials over it.

3.5 CRACK ISOLATION MEMBRANE INSTALLATION

- A. Install crack isolation membrane to comply with ANSI A108.17 and manufacturer's written instructions to produce membrane of uniform thickness that is bonded securely to substrate.
- B. Allow crack isolation membrane to cure before installing tile or setting materials over it.

3.6 ADJUSTING AND CLEANING

- A. Remove and replace tile that is damaged or that does not match adjoining tile. Provide new matching units, installed as specified and in a manner to eliminate evidence of replacement.
- B. Cleaning: On completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.
 1. Remove grout residue from tile as soon as possible.
 2. Clean grout smears and haze from tile according to tile and grout manufacturer's written instructions but no sooner than 10 days after installation. Use only cleaners recommended by tile and grout manufacturers and only after determining that cleaners are safe to use by testing on samples of tile and other surfaces to be cleaned. Protect metal surfaces and

plumbing fixtures from effects of cleaning. Flush surfaces with clean water before and after cleaning.

3.7 PROTECTION

- A. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage, and wear. If recommended by tile manufacturer, apply coat of neutral protective cleaner to completed tile walls and floors.
- B. Prohibit foot and wheel traffic from tiled floors for at least seven days after grouting is completed.
- C. Before final inspection, remove protective coverings and rinse neutral protective cleaner from tile surfaces.

3.8 INTERIOR CERAMIC TILE INSTALLATION SCHEDULE

- A. Interior Floor Installation – Existing Concrete Subfloor
 - 1. Ceramic Tile Installation TCNA F205-14 and F205-14A: On-Ground Concrete, Cementitious Self Leveling Underlayment Ceramic Tile, with waterproofing membrane.
 - a. Ceramic Tile Type: CT-1, CT-4, CT-7.
 - b. Setting Bed: Premium non-sag, medium-bed and thin-set, Polymer modified single component mortar.
 - c. Grout: High-Performance, fast-setting, sanded polymer-modified tile grout.
 - d. Crack Isolation Membrane
 - e. Waterproofing Membrane
- B. Interior Wall Installations, Wood or Metal Studs or Furring:
 - 1. Ceramic Tile Installation TCNA W244C-14: Thin-set mortar over Cement Backer Board
 - a. Ceramic Tile Type: CT-2, CT-2a, CT-3, CT-5, CT-6, CT-6a, CT-6b.
 - b. Setting Bed: Premium non-sag, medium-bed and thin-set, Polymer modified single component mortar.
 - c. Grout: High-Performance, fast-setting, sanded polymer-modified tile grout.

END OF SECTION 093013

SECTION 099123 - INTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes surface preparation and the application of paint systems on the following interior substrates:
- B. Related Requirements:
 - 1. Section 055000 "Metal Fabrications" for shop priming metal fabrications.
 - 2. Section 055113 "Metal Pan Stairs" for shop priming metal pan stairs.
 - 3. Section 055116 "Metal Floor Plate Stairs" for shop priming metal floor plate stairs.
 - 4. Section 055119 "Metal Grating Stairs" for shop priming metal grating stairs.
 - 5. Section 055213 "Pipe and Tube Railings" for shop priming painting pipe and tube railings.
 - 6. Section 099600 "High-Performance Coatings" for tile-like coatings.
 - 7. Section 099300 "Staining and Transparent Finishing" for surface preparation and the application of wood stains and transparent finishes on interior wood substrates.

1.3 DEFINITIONS

- A. MPI Gloss Level 1: Not more than five units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.
- B. MPI Gloss Level 2: Not more than 10 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- C. MPI Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.
- D. MPI Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.
- E. MPI Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.
- F. MPI Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.
- G. MPI Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product. Include preparation requirements and application instructions.
 - 1. Include Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
 - 2. Indicate VOC content.
- B. Samples for Initial Selection: For each type of topcoat product.
- C. Samples for Verification: For each type of paint system and in each color and gloss of topcoat.
 - 1. Submit Samples on rigid backing, 8 inches square.
 - 2. Apply coats on Samples in steps to show each coat required for system.
 - 3. Label each coat of each Sample.
 - 4. Label each Sample for location and application area.
- D. Product List: Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules. Include color designations.

1.5 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
 - 1. Paint: 5 percent, but not less than 1 gal. of each material and color applied.

1.6 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 - 1. Architect will select one surface to represent surfaces and conditions for application of each paint system.
 - a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft..
 - b. Other Items: Architect will designate items or areas required.
 - 2. Final approval of color selections will be based on mockups.
 - a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.
 - 3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
 - 4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F.
 - 1. Maintain containers in clean condition, free of foreign materials and residue.
 - 2. Remove rags and waste from storage areas daily.

1.8 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F.
- B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturers: Basis of Design; Subject to compliance with requirements, provide products by one of the following:
 - 1. Sherwin-Williams Company (The).
- B. Products: Subject to compliance with requirements, provide product listed in the Interior Painting Schedule in Spec Section 090000 for the paint category indicated.

2.2 PAINT, GENERAL

- A. MPI Standards: Products shall comply with MPI standards indicated and shall be listed in its "MPI Approved Products Lists."
- B. Material Compatibility:
 - 1. Materials for use within each paint system shall be compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
 - 2. For each coat in a paint system, products shall be recommended in writing by topcoat manufacturers for use in paint system and on substrate indicated.
- C. Colors: See Finish Schedule Spec Section 090000.

2.3 SOURCE QUALITY CONTROL

- A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

1. Owner will engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
 1. Concrete: 12 percent.
 2. Fiber-Cement Board: 12 percent.
 3. Masonry (Clay and CMUs): 12 percent.
 4. Wood: 15 percent.
 5. Gypsum Board: 12 percent.
 6. Plaster: 12 percent.
- C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.
- D. Plaster Substrates: Verify that plaster is fully cured.
- E. Spray-Textured Ceiling Substrates: Verify that surfaces are dry.
- F. Verify suitability of substrates, including surface conditions and compatibility, with existing finishes and primers.
- G. Proceed with coating application only after unsatisfactory conditions have been corrected.
 1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates and paint systems indicated.

- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
 - 1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- E. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.
- F. Steel Substrates: Remove rust, loose mill scale, and shop primer, if any. Clean using methods recommended in writing by paint manufacturer, but not less than the following:
 - 1. SSPC-SP 2.
 - 2. SSPC-SP 3.
 - 3. SSPC-SP 7/NACE No. 4.
 - 4. SSPC-SP 11.
- G. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and areas where shop paint is abraded. Paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
- H. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
- I. Aluminum Substrates: Remove loose surface oxidation.
- J. Wood Substrates:
 - 1. Scrape and clean knots, and apply coat of knot sealer before applying primer.
 - 2. Sand surfaces that will be exposed to view, and dust off.
 - 3. Prime edges, ends, faces, undersides, and backsides of wood.
 - 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.
- K. Cotton or Canvas Insulation Covering Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates.

3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and to recommendations in "MPI Manual."
 - 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 or hinged covers, and similar hinged items to match exposed surfaces.
 - 4. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
 - 5. Primers specified in painting schedules may be omitted on items that are factory primed or factory finished if acceptable to topcoat manufacturers.

- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.

- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

- E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:
 - 1. Paint the following work where exposed in equipment rooms:
 - a. Equipment, including panelboards and switch gear.
 - b. Uninsulated metal piping.
 - c. Uninsulated plastic piping.
 - d. Pipe hangers and supports.
 - e. Metal conduit.
 - f. Plastic conduit.
 - g. Tanks that do not have factory-applied final finishes.
 - h. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.

 - 2. Paint the following work where exposed in occupied spaces:
 - a. Equipment, including panelboards.
 - b. Uninsulated metal piping.
 - c. Uninsulated plastic piping.
 - d. Pipe hangers and supports.
 - e. Metal conduit.
 - f. Plastic conduit.

- g. Duct, equipment, and pipe insulation having cotton or canvas insulation covering or other paintable jacket material.
 - h. Other items as directed by Architect.
3. Paint portions of internal surfaces of metal ducts, without liner, behind air inlets and outlets that are visible from occupied spaces.

3.4 FIELD QUALITY CONTROL

- A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.
- 1. Contractor shall touch up and restore painted surfaces damaged by testing.
 - 2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 INTERIOR PAINTING SCHEDULE

- A. Concrete Substrates, Nontraffic Surfaces:
- 1. Latex System MPI INT 3.1A:
 - a. Prime Coat: Primer, alkali resistant, water based, MPI #3.
 - 1) Sherwin Williams recommended product.
 - b. Prime Coat: Latex, interior, matching topcoat.
 - c. Intermediate Coat: Latex, interior, matching topcoat.
 - d. Topcoat: Latex, interior, flat (MPI Gloss Level 1), MPI #53.
 - 1) Sherwin Williams

- e. Topcoat: Latex, interior (MPI Gloss Level 2), MPI #44.
 - 1) Sherwin Williams
 - f. Topcoat: Latex, interior (MPI Gloss Level 3), MPI #52.
 - 1) Sherwin Williams
 - g. Topcoat: Latex, interior (MPI Gloss Level 4), MPI #43.
 - 1) Sherwin Williams
 - h. Topcoat: Latex, interior, semi-gloss (MPI Gloss Level 5), MPI #54.
 - 1) Sherwin Williams
 - i. Topcoat: Latex, interior, gloss (MPI Gloss Level 6, except minimum gloss of 65 units at 60 degrees), MPI #114.
 - 1) Sherwin Williams
2. Latex over Latex Aggregate System MPI INT 3.1B:
- a. Prime Coat: Textured coating, latex, flat, MPI #42.
 - 1) Sherwin Williams
 - b. Intermediate Coat: Latex, interior, matching topcoat.
 - c. Topcoat: Latex, interior, flat (MPI Gloss Level 1), MPI #53.
 - 1) Sherwin Williams
 - d. Topcoat: Latex, interior (MPI Gloss Level 2), MPI #44.
 - 1) Sherwin Williams
 - e. Topcoat: Latex, interior (MPI Gloss Level 3), MPI #52.
 - 1) Sherwin Williams
 - f. Topcoat: Latex, interior (MPI Gloss Level 4), MPI #43.
 - 1) Sherwin Williams
 - g. Topcoat: Latex, interior, semi-gloss (MPI Gloss Level 5), MPI #54.
 - 1) Sherwin Williams
 - h. Topcoat: Latex, interior, gloss (MPI Gloss Level 6, except minimum gloss of 65 units at 60 degrees), MPI #114.

- 1) Sherwin Williams.
3. Latex Aggregate System MPI INT 3.1N:
 - a. Prime Coat: As recommended in writing by topcoat manufacturer.
 - b. Intermediate Coat: As recommended in writing by topcoat manufacturer.
 - c. Topcoat: Textured coating, latex, nonflat, MPI #41.
 - 1) Sherwin Williams.
 - d. Topcoat: Textured coating, latex, flat, MPI #42.
 - 1) Sherwin Williams.
4. Institutional Low-Odor/VOC Latex System MPI INT 3.1M:
 - a. Prime Coat: Primer sealer, interior, institutional low odor/VOC, MPI #149.
 - 1) Sherwin Williams.
 - b. Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
 - c. Topcoat: Latex, interior, institutional low odor/VOC, flat (MPI Gloss Level 1), MPI #143.
 - 1) Sherwin Williams.
 - d. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 2), MPI #144.
 - 1) Sherwin Williams.
 - e. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 3), MPI #145.
 - 1) Sherwin Williams.
 - f. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 4), MPI #146.
 - 1) Sherwin Williams.
 - g. Topcoat: Latex, interior, institutional low odor/VOC, semi-gloss (MPI Gloss Level 5), MPI #147.
 - 1) Sherwin Williams.
 - h. Topcoat: Latex, interior, institutional low odor/VOC, gloss (MPI Gloss Level 6), MPI #148.
 - 1) Sherwin Williams.
5. High-Performance Architectural Latex System MPI INT 3.1C:

- a. Prime Coat: Primer, alkali resistant, water based, MPI #3.
- b. Intermediate Coat: Latex, interior, high performance architectural, matching topcoat.
- c. Topcoat: Latex, interior, high performance architectural (MPI Gloss Level 2), MPI #138.
- d. Topcoat: Latex, interior, high performance architectural (MPI Gloss Level 3), MPI #139.
- e. Topcoat: Latex, interior, high performance architectural (MPI Gloss Level 4), MPI #140.
- f. Topcoat: Latex, interior, high performance architectural, semi-gloss (MPI Gloss Level 5), MPI #141.

B. Concrete Substrates, Traffic Surfaces:

1. Latex Floor Enamel System MPI INT 3.2A:

- a. Prime Coat: Floor paint, latex, matching topcoat.
- b. Intermediate Coat: Floor paint, latex, matching topcoat.
- c. Topcoat: Floor paint, latex, low gloss (maximum MPI Gloss Level 3), MPI #60.
 - 1) Sherwin Williams.

2. Alkyd Floor Enamel System MPI INT 3.2B:

- a. Prime Coat: Floor enamel, alkyd, matching topcoat.
- b. Intermediate Coat: Floor enamel, alkyd, matching topcoat.
- c. Topcoat: Floor enamel, alkyd, gloss (MPI Gloss Level 6), MPI #27.
 - 1) Sherwin Williams.

3. Concrete Stain System MPI INT 3.2E:

- a. First Coat: Stain, interior, for concrete floors, matching topcoat.
- b. Topcoat: Stain, interior, for concrete floors, MPI #58.
 - 1) Sherwin Williams.

C. Cement Board Substrates:

1. Latex System MPI INT 3.3A:

- a. Prime Coat: Primer, alkali resistant, water based, MPI #3.
- b. Intermediate Coat: Latex, interior, matching topcoat.
- c. Topcoat: Latex, interior, flat (MPI Gloss Level 1), MPI #53.
- d. Topcoat: Latex, interior (MPI Gloss Level 2), MPI #44.

- e. Topcoat: Latex, interior (MPI Gloss Level 3), MPI #52.
 - f. Topcoat: Latex, interior (MPI Gloss Level 4), MPI #43.
 - g. Topcoat: Latex, interior, semi-gloss (MPI Gloss Level 5), MPI #54.
 - h. Topcoat: Latex, interior, gloss (MPI Gloss Level 6, except minimum gloss of 65 units at 60 degrees), MPI #114.
2. Institutional Low-Odor/VOC Latex System MPI INT 3.3G:
- a. Prime Coat: Primer sealer, interior, institutional low odor/VOC, MPI #149.
 - b. Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
 - c. Topcoat: Latex, interior, institutional low odor/VOC, flat (MPI Gloss Level 1), MPI #143.
 - d. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 2), MPI #144.
 - e. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 3), MPI #145.
 - f. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 4), MPI #146.
 - g. Topcoat: Latex, interior, institutional low odor/VOC, semi-gloss (MPI Gloss Level 5), MPI #147.
 - h. Topcoat: Latex, interior, institutional low odor/VOC, gloss (MPI Gloss Level 6), MPI #148.
3. High-Performance Architectural Latex System MPI INT 3.3B:
- a. Prime Coat: Primer, alkali resistant, water based, MPI #3.
 - b. Intermediate Coat: Latex, interior, high performance architectural, matching topcoat.
 - c. Topcoat: Latex, interior, high performance architectural (MPI Gloss Level 2), MPI #138.
 - d. Topcoat: Latex, interior, high performance architectural (MPI Gloss Level 3), MPI #139.
 - e. Topcoat: Latex, interior, high performance architectural (MPI Gloss Level 4), MPI #140.
 - f. Topcoat: Latex, interior, high performance architectural, semi-gloss (MPI Gloss Level 5), MPI #141.

D. CMU Substrates:

1. Latex System MPI INT 4.2A:
 - a. Block Filler: Block filler, latex, interior/exterior, MPI #4.
 - 1) Sherwin Williams.
 - b. Intermediate Coat: Latex, interior, matching topcoat.
 - c. Topcoat: Latex, interior, flat (MPI Gloss Level 1), MPI #53.
 - 1) Sherwin Williams.
 - d. Topcoat: Latex, interior (MPI Gloss Level 2), MPI #44.
 - 1) Sherwin Williams.
 - e. Topcoat: Latex, interior (MPI Gloss Level 3), MPI #52.
 - 1) Sherwin Williams.
 - f. Topcoat: Latex, interior (MPI Gloss Level 4), MPI #43.
 - 1) Sherwin Williams.
 - g. Topcoat: Latex, interior, semi-gloss (MPI Gloss Level 5), MPI #54.
 - 1) Sherwin Williams.
 - h. Topcoat: Latex, interior, gloss (MPI Gloss Level 6, except minimum gloss of 65 units at 60 degrees), MPI #114.
 - 1) Sherwin Williams.
2. Latex Aggregate System MPI INT 4.2B:
 - a. Prime Coat: Primer for textured coating, latex, flat, as recommended in writing by topcoat manufacturer.
 - b. Intermediate Coat: Intermediate coat for textured coating, latex, flat, as recommended in writing by topcoat manufacturer.
 - c. Topcoat: Textured coating, latex, nonflat, MPI #41.
 - 1) Sherwin Williams.
 - d. Topcoat: Textured coating, latex, flat, MPI #42.
 - 1) Sherwin Williams.
3. Institutional Low-Odor/VOC Latex System MPI INT 4.2E:
 - a. Block Filler: Block filler, latex, interior/exterior, MPI #4.
 - 1) Sherwin Williams.

- b. Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
- c. Topcoat: Latex, interior, institutional low odor/VOC, flat (MPI Gloss Level 1), MPI #143.
 - 1) Sherwin Williams.
- d. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 2), MPI #144.
 - 1) Sherwin Williams.
- e. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 3), MPI #145.
 - 1) Sherwin Williams.
- f. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 4), MPI #146.
 - 1) Sherwin Williams.
- g. Topcoat: Latex, interior, institutional low odor/VOC, semi-gloss (MPI Gloss Level 5), MPI #147.
 - 1) Sherwin Williams.
- h. Topcoat: Latex, interior, institutional low odor/VOC, gloss (MPI Gloss Level 6), MPI #148.
 - 1) Sherwin Williams.

E. Steel Substrates:

- 1. Latex System, Alkyd Primer MPI INT 5.1Q:
 - a. Prime Coat: Primer, alkyd, quick dry, for metal, MPI #76.
 - 1) Sherwin Williams.
 - b. Prime Coat: Primer, alkyd, anti-corrosive, for metal, MPI #79.
 - 1) Sherwin Williams.
 - c. Prime Coat: Shop primer specified in Section where substrate is specified.
 - d. Intermediate Coat: Latex, interior, matching topcoat.
 - e. Topcoat: Latex, interior, flat (MPI Gloss Level 1), MPI #53.
 - 1) Sherwin Williams.
 - f. Topcoat: Latex, interior (MPI Gloss Level 2), MPI #44.
 - 1) Sherwin Williams.

- g. Topcoat: Latex, interior (MPI Gloss Level 3), MPI #52.
 - 1) Sherwin Williams.
- h. Topcoat: Latex, interior (MPI Gloss Level 4), MPI #43.
 - 1) Sherwin Williams.
- i. Topcoat: Latex, interior, semi-gloss (MPI Gloss Level 5), MPI #54.
 - 1) Sherwin Williams.
- j. Topcoat: Latex, interior, gloss (MPI Gloss Level 6, except minimum gloss of 65 units at 60 degrees), MPI #114.
 - 1) Sherwin Williams.

F. Stainless-Steel Substrates:

- 1. High-Performance Architectural Latex System MPI INT 5.6G:
 - a. Prime Coat: Primer, bonding, solvent based, MPI #69.
 - 1) Sherwin Williams.
 - b. Intermediate Coat: Latex, interior, high performance architectural, matching topcoat.
 - c. Topcoat: Latex, interior, high performance architectural (MPI Gloss Level 2), MPI #138.
 - 1) Sherwin Williams.
 - d. Topcoat: Latex, interior, high performance architectural (MPI Gloss Level 3), MPI #139.
 - 1) Sherwin Williams.
 - e. Topcoat: Latex, interior, high performance architectural (MPI Gloss Level 4), MPI #140.
 - 1) Sherwin Williams.
 - f. Topcoat: Latex, interior, high performance architectural, semi-gloss (MPI Gloss Level 5), MPI #141.
 - 1) Sherwin Williams.

G. Wood Substrates: Wood trim and wood board paneling.

- 1. Institutional Low-Odor/VOC Latex System MPI INT 6.3V:
 - a. Prime Coat: Primer, latex, for interior wood, MPI #39.

- 1) Sherwin Williams.
- b. Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
- c. Topcoat: Latex, interior, institutional low odor/VOC, flat (MPI Gloss Level 1), MPI #143.
 - 1) Sherwin Williams.
- d. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 2), MPI #144.
 - 1) Sherwin Williams.
- e. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 3), MPI #145.
 - 1) Sherwin Williams.
- f. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 4), MPI #146.
 - 1) Sherwin Williams.
- g. Topcoat: Latex, interior, institutional low odor/VOC, semi-gloss (MPI Gloss Level 5), MPI #147.
 - 1) Sherwin Williams.
- h. Topcoat: Latex, interior, institutional low odor/VOC, gloss (MPI Gloss Level 6), MPI #148.
 - 1) Sherwin Williams.

H. Gypsum Board and Plaster Substrates:

- 1. Institutional Low-Odor/VOC Latex System MPI INT 9.2M:
 - a. Prime Coat: Primer sealer, interior, institutional low odor/VOC, MPI #149.
 - 1) Sherwin Williams.
 - b. Intermediate Coat: Latex, interior, institutional low odor/VOC, matching topcoat.
 - c. Topcoat: Latex, interior, institutional low odor/VOC, flat (MPI Gloss Level 1), MPI #143.
 - 1) Sherwin Williams.
 - d. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 2), MPI #144.
 - 1) Sherwin Williams.

- e. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 3), MPI #145.
 - 1) Sherwin Williams.
- f. Topcoat: Latex, interior, institutional low odor/VOC (MPI Gloss Level 4), MPI #146.
 - 1) Sherwin Williams.
- g. Topcoat: Latex, interior, institutional low odor/VOC, semi-gloss (MPI Gloss Level 5), MPI #147.
 - 1) Sherwin Williams.
- h. Topcoat: Latex, interior, institutional low odor/VOC, gloss (MPI Gloss Level 6), MPI #148.
 - 1) Sherwin Williams.

END OF SECTION 099123

SECTION 102113.17 - PHENOLIC-CORE TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:

- 1. Phenolic-core toilet compartments configured as toilet enclosures and urinal privacy screens.

- B. Related Requirements:

- 1. Section 061053 "Miscellaneous Rough" Carpentry for blocking.
 - 2. Section 102800 "Toilet Accessories" for accessories mounted on toilet compartments.

1.3 ACTION SUBMITTALS

Product Data: For each type of product. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for toilet compartments.

- 1. Phenolic-core units.
 - 2. Hardware and accessories.
 - 3. Overhead bracing.
 - 4. Anchorage and fasteners.

- B. Shop Drawings: For toilet compartments.

- 1. Include plans, elevations, sections, details, and attachment details.
 - 2. Show locations of cutouts for compartment-mounted toilet accessories.
 - 3. Show locations of centerlines of toilet fixtures.
 - 4. Show locations of floor drains.

- C. Samples for Initial Selection: For each type of toilet compartment material indicated.

- 1. Include Samples of hardware and accessories involving material and color selection.

- D. Samples for Verification: For the following products, in manufacturer's standard sizes unless otherwise indicated:

- 1. Each type of material, color, and finish required for toilet compartments, prepared on 6-inch square Samples of same thickness and material indicated for Work.

2. Each type of hardware and accessory.

E. Product Schedule: For toilet compartments, prepared by or under the supervision of supplier, detailing location and selected colors for toilet compartment material.

1.4 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of toilet compartment.

1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For toilet compartments to include in maintenance manuals.

1.6 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Door Hinges: Two hinge(s) with associated fasteners.
2. Latch and Keeper: Two latch (es) and keeper(s) with associated fasteners.
3. Door Bumper: Two door bumper(s) with associated fasteners.
4. Door Pull: Two door pull(s) with associated fasteners.
5. Fasteners: Ten fasteners of each size and type.

1.7 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of toilet fixtures, walls, columns, ceilings, and other construction contiguous with toilet compartments by field measurements before fabrication.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

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

1. Flame-Spread Index: 200 or less.
2. Smoke-Developed Index: 450 or less.
3. Self-Ignition Temperature: Not less than 600 degrees F.
4. Smoke Density: Not more than 75
5. Burning Rate: Not over 2.5 inches per minute

B. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines for Buildings and Facilities and ICC A117.1 for toilet compartments designated as accessible.

2.2 PHENOLIC-CORE TOILET COMPARTMENTS

- A. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Bradley Corporation; Mills Partitions; Phenolic-Series 400-Sentinel.
 - 2. Global Steel Products Corp.; Floor Anchored/Overhead Braced Toilet Compartments Phenolic.
 - 3. Metpar Corp.; Solid Phenolic Corinthian, Type FP-500.
- B. Toilet-Enclosure Style: Overhead Braced.
- C. Urinal-Privacy Screen Style: Floor and Wall Mounted.
- D. Door, Panel, and Pilaster Construction: Solid phenolic-core panel material with melamine facing on both sides fused to substrate during panel manufacturer (not separately laminated), and with eased and polished edges. Provide minimum 3/4-inch thick doors and pilasters and minimum 1/2-inch thick panels.
- E. Pilaster Shoes and Sleeves (Caps): Formed from stainless-steel sheet, not less than 0.031-inch nominal thickness and 3 inches high, finished to match hardware.
- F. Urinal-Screen Post: Manufacturer's standard post design of material matching the thickness and construction of pilasters with shoe and sleeve (cap) matching that on the pilaster.
- G. Brackets (Fittings):
 - 1. Full-Height (Continuous) Type: Manufacturer's standard design; Stainless Steel.
- H. Phenolic-Panel Finish:
 - 1. Facing Sheet Finish: One color and pattern in each room.
 - 2. Color and Pattern: As selected by Architect from manufacturer's full range, with manufacturer's standard dark color core.

2.3 HARDWARE AND ACCESSORIES

- A. Hardware and Accessories: Manufacturer's standard design, and accessories.
 - 1. Material: Stainless steel.
 - 2. Hinges: Manufacturer's standard continuous style, allowing emergency access by lifting door.
 - 3. Latch and Keeper: Manufacturer's standard surface-mounted latch unit designed for emergency access and with combination rubber-faced door strike and keeper. Provide units that comply with regulatory requirements for accessibility at compartments designated as accessible.
 - 4. Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors.
 - 5. Door Pull: Manufacturer's standard unit at out-swinging doors that complies with regulatory requirements for accessibility. Provide units on both sides of doors at compartments designated as accessible.

- B. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with anti-grip profile and in manufacturer's standard finish.
- C. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel, finished to match the items they are securing, with theft-resistant-type heads. Provide sex-type bolts for through-bolt applications. For concealed anchors, use stainless-steel, hot-dip galvanized-steel, or other rust-resistant, protective-coated steel compatible with related materials.

2.4 MATERIALS

- A. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.
- B. Stainless-Steel Castings: ASTM A 743/A 743M.

2.5 FABRICATION

- A. Fabrication, General: Fabricate toilet compartment components to sizes indicated. Coordinate requirements and provide cutouts for through-partition toilet accessories where required for attachment of toilet accessories.
- B. Overhead-Braced Units: Provide manufacturer's standard corrosion-resistant supports, leveling mechanism, and anchors at pilasters to suit floor conditions. Provide shoes at pilasters to conceal supports and leveling mechanism.
- C. Door Size and Swings: Unless otherwise indicated, provide 24-inch wide in-swinging doors for standard toilet compartments and 36-inch wide out-swinging doors with a minimum 32-inch wide clear opening for compartments designated as accessible.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas and conditions, with Installer present, for compliance with requirements for fastening, support, alignment, operating clearances, and other conditions affecting performance of the Work.
 - 1. Confirm location and adequacy of blocking and supports required for installation.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. General: Comply with manufacturer's written installation instructions. Install units rigid, straight, level, and plumb. Secure units in position with manufacturer's recommended anchoring devices.
 - 1. Maximum Clearances:

- a. Pilasters and Panels: 1/2 inch.
 - b. Panels and Walls: 1 inch.
2. Full-Height (Continuous) Brackets: Secure panels to walls and to pilasters with full-height brackets.
- a. Locate bracket fasteners so holes for wall anchors occur in masonry or tile joints.
 - b. Align brackets at pilasters with brackets at walls.
- B. Overhead-Braced Units: Secure pilasters to floor and level, plumb, and tighten. Set pilasters with anchors penetrating not less than 1-3/4 inches into structural floor unless otherwise indicated in manufacturer's written instructions. Secure continuous head rail to each pilaster with no fewer than two fasteners. Hang doors to align tops of doors with tops of panels, and adjust so tops of doors are parallel with overhead brace when doors are in closed position.
- C. Urinal Privacy Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.
- 3.3 ADJUSTING
- A. Hardware Adjustment: Adjust and lubricate hardware according to hardware manufacturer's written instructions for proper operation. Set hinges on in-swinging doors to hold doors open approximately 30 degrees from closed position when unlatched. Set hinges on out-swinging doors to return doors to fully closed position.

END OF SECTION 102113.17

SECTION 123661.16 - SOLID SURFACING COUNTERTOPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section Includes:
 - 1. Solid surface material countertops.
 - 2. Solid surface material backsplashes.
 - 3. Solid surface material end splashes.
 - 4. Solid surface material apron fronts.
 - 5. Solid surface material sinks.

1.3 ACTION SUBMITTALS

- A. Product Data: For countertop materials and sinks.
- B. Shop Drawings: For countertops. Show materials, finishes, edge and backsplash profiles, methods of joining, and cutouts for plumbing fixtures.
 - 1. Show locations and details of joints.
 - 2. Show direction of directional pattern, if any.
- C. Samples for Initial Selection: For each type of material exposed to view.
- D. Samples for Verification: For the following products:
 - 1. Countertop material, 6 inches square.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator.

1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For solid surface material countertops to include in maintenance manuals. Include Product Data for care products used or recommended by Installer and names, addresses, and telephone numbers of local sources for products.
- B. Warranty: Executed special warranty specified in this Section.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate countertops similar to that required for this Project, and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Fabricator of countertops.

1.7 FIELD CONDITIONS

- A. Field Measurements: Verify dimensions of countertops by field measurements after base cabinets are installed but before countertop fabrication is complete.

1.8 COORDINATION

- A. Coordinate locations of utilities that will penetrate countertops or backsplashes.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace solid-surfacing countertops that fail in materials or workmanship within specified warranty period.
 - 1. Warranty Period: 10 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 SOLID SURFACE COUNTERTOP MATERIALS

- A. Solid Surface Material: Homogeneous-filled plastic resin complying with ICPA SS-1.
- B. Products: Basis of Design Products; Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Wilsonart International Meganite.
- C. Integral Sink Bowls: Comply with CSA B45.5/IAPMO Z124.
 - 1. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to, the following:
 - a. Basis of Design: "Corian" Lavatories 810P or equal.
- D. Colors and Patterns: See Finish Schedule Spec Section 090000.

2.2 COUNTERTOP FABRICATION

- A. Fabricate countertops according to solid surface material manufacturer's written instructions and to the AWI/AWMAC/WI's "Architectural Woodwork Standards."
- B. Configuration:
 - 1. Front: Straight 1-1/2-inch bullnose
 - 2. Backsplash: Radius edge with 3/8-inch radius.
 - 3. End Splash: Radius edge with 3/8-inch radius.
- C. Countertops: 1/2-inch thick, solid surface material with front edge built up with same material.
- D. Backsplashes: 1/2-inch thick, solid surface material.
- E. Fabricate tops with shop-applied edges and backsplashes unless otherwise indicated. Comply with solid surface material manufacturer's written instructions for adhesives, sealers, fabrication, and finishing.
 - 1. Install integral sink bowls in countertops in the shop.
- F. Joints: Fabricate countertops without joints.
- G. Cutouts and Holes:
 - 1. Under counter Plumbing Fixtures: Make cutouts for fixtures in shop using template or pattern furnished by fixture manufacturer. Form cutouts to smooth, even curves.
 - a. Provide vertical edges, slightly eased at juncture of cutout edges with top and bottom surfaces of countertop and projecting 3/16 inch into fixture opening.
 - b. Provide vertical edges, rounded to 3/8-inch radius at juncture of cutout edges with top surface of countertop, slightly eased at bottom, and projecting 3/16 inch into fixture opening.
 - c. Provide 3/4-inch full bullnose edges projecting 3/8 inch into fixture opening.
 - 2. Counter-Mounted Plumbing Fixtures: Prepare countertops in shop for field cutting openings for counter-mounted fixtures. Mark tops for cutouts and drill holes at corners of cutout locations. Make corner holes of largest radius practical.
 - 3. Fittings: Drill countertops in shop for plumbing fittings, under counter soap dispensers, and similar items.

2.3 INSTALLATION MATERIALS

- A. Adhesive: Product recommended by solid surface material manufacturer. Adhesives shall not contain urea formaldehyde.
- B. Sealant for Countertops: Comply with applicable requirements in Section 079200 "Joint Sealants."

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Before installing solid-surfacing countertops, examine shop-fabricated work for completion and complete work as required.
- B. Examine substrates to receive solid surface material countertops and conditions under which countertops will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of countertops.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.
- D. Beginning installation constitutes Contractor's acceptance of substrates and conditions.

3.2 INSTALLATION

- A. Install countertops level to a tolerance of 1/8 inch in 8 feet maximum. Do not exceed 1/64-inch difference between planes of adjacent units.
- B. Fasten countertops by screwing through corner blocks of base units into underside of countertop. Predrill holes for screws as recommended by manufacturer. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's written instructions. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
- C. Fasten sub tops to cabinets by screwing through sub-tops into corner blocks of base cabinets. Shim as needed to align sub tops in a level plane.
- D. Secure countertops to sub tops with adhesive according to solid surface material manufacturer's written instructions. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's written instructions. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
- E. Install backsplashes and end splashes by adhering to wall and countertops with adhesive. Mask areas of countertops and splashes adjacent to joints to prevent adhesive smears.
- F. Install aprons to backing and countertops with adhesive. Mask areas of countertops and splashes adjacent to joints to prevent adhesive smears. Fasten by screwing through backing. Predrill holes for screws as recommended by manufacturer.
- G. Complete cutouts not finished in shop. Mask areas of countertops adjacent to cutouts to prevent damage while cutting. Make cutouts to accurately fit items to be installed, and at right angles to finished surfaces unless beveling is required for clearance. Ease edges slightly to prevent snipping.
 - 1. Seal edges of cutouts in particleboard sub tops by saturating with varnish.
- H. Apply sealant to gaps at walls; comply with Section 079200 "Joint Sealants."

"END OF SECTION 123661.16