Bldg 1000 Bathroom Renovation

Bid No. B14-11

***Specifications***

Bid RFI Questions Due:
Friday, May 9th, 2014 3:00PM
Gale Stevens, Buyer
gasteven@cabrillo.edu

Bid Documents: Gale Stevens, Buyer  831-477-5613
Project Manager: Jon Salisbury, Innovative Construction Services, Inc.
Engineer/Architect: Scott Haggblade, Urfer and Associates
SECTION 10801 - TOILET ACCESSORIES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section Includes:

1. Public-use washroom accessories.

1.3 SUBMITTALS

A. Product Data: For each type of product indicated. Include the following:

1. Construction details and dimensions.
2. Anchoring and mounting requirements, including requirements for cutouts in other work and substrate preparation.
3. Material and finish descriptions.
4. Features that will be included for Project.
5. Manufacturer's warranty.

B. Samples: Full size, for each accessory item to verify design, operation, and finish requirements.

1. Approved full-size Samples will be returned and may be used in the Work.

C. Maintenance Data: For toilet and bath accessories to include in maintenance manuals.

D. Warranty: Sample of special warranty.

1.4 QUALITY ASSURANCE

A. Source Limitations: For products listed together in the same Part 2 articles, obtain products from single source from single manufacturer.

1.5 COORDINATION

A. Coordinate accessory locations with other work to prevent interference with clearances required for access by people with disabilities, and for proper installation, adjustment, operation, cleaning, and servicing of accessories.
1.6 WARRANTY

A. Special Mirror Warranty: Manufacturer's standard form in which manufacturer agrees to replace mirrors that develop visible silver spoilage defects and that fail in materials or workmanship within specified warranty period.

1. Warranty Period: 15 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Stainless Steel: ASTM A 666, Type 304, 0.031-inch (0.8-mm) minimum nominal thickness unless otherwise indicated.

B. Brass: ASTM B 19, flat products; ASTM B 16/B 16M, rods, shapes, forgings, and flat products with finished edges; or ASTM B 30, castings.

C. Steel Sheet: ASTM A 1008/A 1008M, Designation CS (cold rolled, commercial steel), 0.036-inch (0.9-mm) minimum nominal thickness.

D. Galvanized-Steel Sheet: ASTM A 653/A 653M, with G60 (Z180) hot-dip zinc coating.


F. Fasteners: Screws, bolts, and other devices of same material as accessory unit and tamper-and-theft resistant where exposed, and of galvanized steel where concealed.

G. Chrome Plating: ASTM B 456, Service Condition Number SC 2 (moderate service).

H. Mirrors: ASTM C 1503, Mirror Glazing Quality, clear-glass mirrors, nominal 6.0 mm thick.


2.2 PUBLIC-USE WASHROOM ACCESSORIES

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. A & J Washroom Accessories, Inc.
2. American Specialties, Inc.
5. GAMCO Specialty Accessories; a division of Bobrick Washroom Equipment, Inc.
6. Tubular Specialties Manufacturing, Inc.
B. Selections: Accessories are indicated on Drawings as Basis of Design. Provide comparable accessories that are equal or better, as decided by Architect.

2.3 UNDERLAVATORY GUARDS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Plumberex Specialty Products, Inc.
2. Truebro by IPS Corporation.

B. Underlavatory Guard:
   1. Description: Insulating pipe covering for supply and drain piping assemblies that prevent direct contact with and burns from piping; allow service access without removing coverings.

2.4 FABRICATION

A. General: Fabricate units with tight seams and joints, and exposed edges rolled. Hang doors and access panels with full-length, continuous hinges. Equip units for concealed anchorage and with corrosion-resistant backing plates.

B. Keys: Provide universal keys for internal access to accessories for servicing and resupplying. Provide minimum of 4 keys to Owner's representative.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install accessories according to manufacturers' written instructions, using fasteners appropriate to substrate indicated and recommended by unit manufacturer. Install units level, plumb, and firmly anchored in locations and at heights indicated.

B. Grab Bars: Install to withstand a downward load of at least 250 lbf, when tested according to ASTM F 446.

3.2 ADJUSTING AND CLEANING

A. Adjust accessories for unencumbered, smooth operation. Replace damaged or defective items.

B. Remove temporary labels and protective coatings.

C. Clean and polish exposed surfaces according to manufacturer's written recommendations.
SECTION 10155 - TOILET COMPARTMENTS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
A. Section Includes:
   1. Stainless-steel toilet compartments configured as toilet enclosures and urinal screens.

1.3 SUBMITTALS
A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes.
B. Shop Drawings: For toilet compartments. Include plans, elevations, sections, details, and attachments to other work.
   1. Show locations of cutouts for compartment-mounted toilet accessories.

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

2.2 STAINLESS-STEEL UNITS
A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
1. Accurate Partitions Corporation.
2. All American Metal Corp.
4. Ampco, Inc.
5. Bradley Corporation; Mills Partitions.
6. Flush Metal Partition Corp.
8. Global Steel Products Corp.
9. Hadrian Manufacturing Inc.
11. Metpar Corp.
13. Sanymetal; a Crane Plumbing company.
15. Weis-Robart Partitions, Inc.

B. Toilet-Enclosure Style: Floor anchored.

C. Urinal-Screen Style: Wall hung flat panel.

D. Door, Panel, and Pilaster Construction: Seamless, metal facing sheets pressure laminated to core material; with continuous, interlocking molding strip or lapped-and-formed edge closures; corners secured by welding or clips and exposed welds ground smooth. Exposed surfaces shall be free of pitting, seam marks, roller marks, stains, discolorations, telegraphing of core material, or other imperfections.

1. Core Material: Manufacturer's standard sound-deadening honeycomb of resin-impregnated kraft paper in thickness required to provide finished thickness of 1 inch (25 mm) for doors and panels and 1-1/4 inches (32 mm) for pilasters.
2. Tapping Reinforcement: Provide concealed reinforcement for tapping (threading) at locations where machine screws are used for attaching items to units.

E. Urinal-Screen Construction:

1. Flat-Panel Urinal Screen: Matching panel construction.

F. Facing Sheets and Closures: Stainless-steel sheet of nominal thicknesses as follows:

1. Pilasters, Braced at Both Ends: Manufacturer's standard thickness, but not less than 0.038 inch (0.95 mm).
2. Pilasters, Unbraced at One End: Manufacturer's standard thickness, but not less than 0.050 inch (1.27 mm).
3. Panels: Manufacturer's standard thickness, but not less than 0.031 inch.
4. Doors: Manufacturer's standard thickness, but not less than 0.031 inch.
5. Flat-Panel Urinal Screens: Thickness matching the panels.

G. Pilaster Shoes and Sleeves (Caps): Stainless-steel sheet, not less than 0.031-inch (0.79-mm) nominal thickness and 3 inches (76 mm) high, finished to match hardware.
H. Urinal-Screen Post: Manufacturer's standard post design of material matching the thickness and construction of pilasters or 1-3/4-inch-square, aluminum tube with satin finish; with shoe and sleeve (cap) matching that on the pilaster.

I. Brackets (Fittings):
   1. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel.

J. Stainless-Steel Finish: No. 4 bright, directional polish on exposed faces. Protect exposed surfaces from damage by application of strippable, temporary protective covering before shipment.

2.3 ACCESSORIES

A. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories.
   2. Hinges: Manufacturer's standard paired, self-closing type that can be adjusted to hold doors open at any angle up to 90 degrees.
   3. Latch and Keeper: Manufacturer's standard recessed 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. Coat Hook: Manufacturer's standard combination hook and rubber-tipped bumper, sized to prevent in-swinging door from hitting compartment-mounted accessories.
   5. Door Bumper: Manufacturer's standard rubber-tipped bumper at out-swinging doors.
   6. 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. Anchorages and Fasteners: Manufacturer's standard exposed fasteners of stainless steel or chrome-plated steel or brass, 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.

2.4 FABRICATION

A. Floor-Anchored Units: Provide manufacturer's standard corrosion-resistant anchoring assemblies with leveling adjustment nuts at pilasters for structural connection to floor. Provide shoes at pilasters to conceal anchorage.

B. Door Size and Swings: Unless otherwise indicated, provide 24-inch- (610-mm-) wide, in-swinging doors for standard toilet compartments and 36-inch- (914-mm-) wide, out-swinging doors with a minimum 32-inch- (813-mm-) wide, clear opening for HC compartments (one in each restroom).
C. Urinal Screens: Extend from wall as shown on drawings and at least twelve inches. Unless indicated otherwise, units shall be 54 inches high (x 12” minimum) and mounted between five and six inches from floor. Mount within one inch of supporting wall on stainless steel hangers.

PART 3 - EXECUTION

3.1 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 (13 mm).
   b. Panels and Walls: 1 inch (25 mm).

B. Floor-Anchored Units: Set pilasters with anchors penetrating not less than 2 inches (51 mm) into structural floor unless otherwise indicated in manufacturer's written instructions. Level, plumb, and tighten pilasters. Hang doors and adjust so tops of doors are level with tops of pilasters when doors are in closed position.

C. Urinal Screens: Attach with anchoring devices to suit supporting structure. Set units level and plumb, rigid, and secured to resist lateral impact.

3.2 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 10155
SECTION 03301 - CAST-IN-PLACE CONCRETE FLOORS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 DEFINITIONS
A. Cementitious Materials: Portland cement alone or in combination with one or more of the following: blended hydraulic cement, fly ash and other pozzolans, ground granulated blast-furnace slag, and silica fume; subject to compliance with requirements.

1.3 SUBMITTALS
A. Steel Reinforcement Shop Drawings: Placing drawings that detail fabrication, bending, and placement. Include bar sizes, lengths, material, grade, bar schedules, bent bar diagrams, bar arrangement, splices and laps, mechanical connections, tie spacing, and supports for concrete reinforcement.

1.4 QUALITY ASSURANCE
A. Manufacturer Qualifications: A firm experienced in manufacturing ready-mixed concrete products and that complies with ASTM C 94/C 94M requirements for production facilities and equipment.
   1. Manufacturer certified according to NRMCA's "Certification of Ready Mixed Concrete Production Facilities."
B. Source Limitations: Obtain each type or class of cementitious material of the same brand from the same manufacturer's plant, obtain aggregate from single source, and obtain admixtures from single source from single manufacturer.

1.5 DELIVERY, STORAGE, AND HANDLING
A. Steel Reinforcement: Deliver, store, and handle steel reinforcement to prevent bending and damage
PART 2 - PRODUCTS

2.1 STEEL REINFORCEMENT

A. Reinforcing Bars: ASTM A 615/A 615M, Grade 60, deformed.

B. Plain-Steel Wire: ASTM A 82/A 82M, galvanized.

2.2 REINFORCEMENT ACCESSORIES

A. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars and welded wire reinforcement in place. Manufacture bar supports from steel wire, plastic, or precast concrete according to CRSI's "Manual of Standard Practice," of greater compressive strength than concrete and as follows:

1. For concrete surfaces exposed to view where legs of wire bar supports contact forms, use CRSI Class 1 plastic-protected steel wire or CRSI Class 2 stainless-steel bar supports.

2.3 CONCRETE MATERIALS

A. Cementitious Material: Use the following cementitious materials, of the same type, brand, and source, throughout Project:

1. Portland Cement: ASTM C 150, Type I

B. Normal-Weight Aggregates: ASTM C 33, Class 3M coarse aggregate or better, graded.

1. Maximum Coarse-Aggregate Size: 1 inch nominal.
2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.


2.4 FIBER REINFORCEMENT

A. Synthetic Micro-Fiber: Monofilament or fibrillated polypropylene micro-fibers engineered and designed for use in concrete, complying with ASTM C 1116/C 1116M, Type III, 1/2 to 1-1/2 inches long.

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. Monofilament Micro-Fibers:

      1) Axim Italcementi Group, Inc.; Fibrasol II P.
      2) Euclid Chemical Company (The), an RPM company; Fiberstrand.
3) FORTA Corporation; FORTA Econo-Mono.
5) Metalcrete Industries; Polystrand 1000.
6) Nycon, Inc.; ProConM.
7) Propex Concrete Systems Corp.; Fibermesh 150.
8) Sika Corporation; Sika Fiber PPM.

b. Fibrillated Micro-Fibers:
   1) Axim Italcementi Group, Inc.; Fibrasol F.
   2) Euclid Chemical Company (The), an RPM company; Fiberstrand F.
   3) FORTA Corporation; FORTA Econo-Net or Ultra-Net.
   5) Nycon, Inc.; ProConF.
   6) Propex Concrete Systems Corp.; Fibermesh 300.
   7) Sika Corporation; Sika Fiber PPF.

2.5 CURING MATERIALS

A. Evaporation Retarder: Waterborne, monomolecular film forming, manufactured for application to fresh concrete.
   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. Axim Italcementi Group, Inc.; CATEXOL CimFilm.
      b. BASF Construction Chemicals - Building Systems; Confilm.
      c. ChemMasters; SprayFilm.
      d. Conspec by Dayton Superior; Aquafilm.
      e. Dayton Superior Corporation; Sure Film (J-74).
      f. Edoco by Dayton Superior; BurkeFilm.
      g. Euclid Chemical Company (The), an RPM company; Eucobar.
      h. Kaufman Products, Inc.; Vapor-Aid.
      i. Lambert Corporation; LAMBCO Skin.
      j. L&M Construction Chemicals, Inc.; E-CON.
      k. Meadows, W. R., Inc.; EVAPRE.
      l. Metalcrete Industries; Waterhold.
      m. Nox-Crete Products Group; MONOFILM.
      n. Sika Corporation; SikaFilm.
      o. SpecChem, LLC; Spec Film.
      p. Symons by Dayton Superior; Finishing Aid.
      q. TK Products, Division of Sierra Corporation; TK-2120 TRI-FILM.
      r. Unitex; PRO-FILM.
      s. Vexcon Chemicals, Inc.; Certi-Vex Envio Set.

B. Absorptive Cover: AASHTO M 182, Class 2, burlap cloth made from jute or kenaf, weighing approximately 9 oz./sq. yd. (305 g/sq. m) when dry.
C. Moisture-Retaining Cover: ASTM C 171, polyethylene film or white burlap-polyethylene sheet.

D. Water: Potable.

2.6 RELATED MATERIALS

A. Bonding Agent: ASTM C 1059/C 1059M, Type II, non-redispersible, acrylic emulsion or styrene butadiene.

2.7 CONCRETE MIXTURES, GENERAL

A. Prepare design mixtures for each type and strength of concrete, proportioned on the basis of laboratory trial mixture or field test data, or both, according to ACI 301.

1. Minimum Compressive Strength: 3000 psi at 28 days.
2. Slump Limit: 5.
3. Synthetic Micro-Fiber: Uniformly disperse in concrete mixture at manufacturer's recommended rate, but not less than 1.0 lb/cu. yd...

2.8 FABRICATING REINFORCEMENT

A. Fabricate steel reinforcement according to CRSI's "Manual of Standard Practice."

2.9 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, mix, and deliver concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116M, and furnish batch ticket information.

PART 3 - EXECUTION

3.1 EMBEDDED ITEMS

A. Place and secure anchorage devices and other embedded items required for adjoining work that is attached to or supported by cast-in-place concrete. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.

3.2 STEEL REINFORCEMENT

A. General: Comply with CRSI's "Manual of Standard Practice" for placing reinforcement.

B. Clean reinforcement of loose rust and mill scale, earth, and other foreign materials that would reduce bond to concrete.
C. Accurately position, support, and secure reinforcement against displacement. Locate and support reinforcement with bar supports to maintain minimum concrete cover. Do not tack weld crossing reinforcing bars.

1. Weld reinforcing bars according to AWS D1.4/D 1.4M, where indicated.

D. Set wire ties with ends directed into concrete, not toward exposed concrete surfaces.

3.3 CONCRETE PLACEMENT

A. Before placing concrete, verify that installation of reinforcement, and embedded items is complete and that required inspections have been performed.

B. Do not add water to concrete during delivery, at Project site, or during placement unless approved by Architect.

C. Before test sampling and placing concrete, water may be added at Project site, subject to limitations of ACI 301.

1. Do not add water to concrete after adding high-range water-reducing admixtures to mixture.

D. Deposit concrete continuously in one layer. If a section cannot be placed continuously, provide construction joints as indicated. Deposit concrete to avoid segregation.

3.4 FINISHING SURFACES

A. Smooth (metal) trowel surfaces to become floors.

3.5 CONCRETE PROTECTING AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures. Comply with ACI 306.1 for cold-weather protection and ACI 301 for hot-weather protection during curing.

B. Evaporation Retarder: Apply evaporation retarder to unformed concrete surfaces if hot, dry, or windy conditions cause moisture loss approaching 0.2 lb/sq. ft. x h before and during finishing operations. Apply according to manufacturer's written instructions after placing, screeding, and bull floating or darbying concrete, but before float finishing.

C. Begin curing immediately after finishing concrete. Cure unformed surfaces, including floors and slabs.

D. Cure concrete according to ACI 308.1, by one or a combination of the following methods:
1. Moisture Curing: Keep surfaces continuously moist for not less than seven days with the following materials:
   a. Absorptive cover, water saturated, and kept continuously wet. Cover concrete surfaces and edges with 12-inch lap over adjacent absorptive covers.

2. Moisture-Retaining-Cover Curing: Cover concrete surfaces with moisture-retaining cover for curing concrete, placed in widest practicable width, with sides and ends lapped at least 12 inches, and sealed by waterproof tape or adhesive. Cure for not less than seven days. Immediately repair any holes or tears during curing period using cover material and waterproof tape.

3. Curing Compound: Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating and repair damage during curing period.
   a. Removal: After curing period has elapsed, remove curing compound without damaging concrete surfaces by method recommended by curing compound manufacturer.

4. Curing and Sealing Compound: Apply uniformly to steps in a continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Repeat process 24 hours later and apply a second coat. Maintain continuity of coating and repair damage during curing period.

3.6 CONCRETE SURFACE REPAIRS

A. Defective Concrete: Repair and patch defective areas when approved by Architect. Remove and replace concrete that cannot be repaired and patched to Architect's approval.

B. Patching Mortar: Mix dry-pack patching mortar, consisting of one part portland cement to two and one-half parts fine aggregate passing a No. 16 sieve, using only enough water for handling and placing.

END OF SECTION 03300
SECTION 09250 - GYPSUM BOARD

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 ACTION SUBMITTALS
A. Product Data: For each type of product.

1.3 DELIVERY, STORAGE AND HANDLING
A. Store materials inside under cover and keep them dry and protected against weather, condensation, direct sunlight, construction traffic, and other potential causes of damage. Stack panels flat and supported on risers on a flat platform to prevent sagging.

1.4 FIELD CONDITIONS
A. Environmental Limitations: Comply with ASTM C 840 requirements or gypsum board manufacturer's written recommendations, whichever are more stringent.
B. Do not install panels that are wet, those that are moisture damaged, and those that are mold damaged.
   1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
   2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.

PART 2 - PRODUCTS

2.1 GYPSUM BOARD, GENERAL
A. Size: Provide maximum lengths and widths available that will minimize joints in each area and that correspond with support system indicated.
2.2 INTERIOR GYPSUM BOARD

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. American Gypsum.
2. CertainTeed Corp.
3. Georgia-Pacific Gypsum LLC.
4. Lafarge North America Inc.
6. PABCO Gypsum.
7. Temple-Inland.
8. USG Corporation.

B. Gypsum Board, Type X: ASTM C 1396/C 1396M.

1. Thickness: 5/8 inch (15.9 mm).
2. Long Edges: Tapered for prefilling.

2.3 TRIM ACCESSORIES

A. ASTM C 1047.

1. Material: Galvanized or aluminum-coated steel sheet, rolled zinc, plastic, or paper-faced galvanized steel sheet.

2.4 JOINT TREATMENT MATERIALS

A. General: Comply with ASTM C 475/C 475M.

B. Joint Tape:

1. Interior Gypsum Board: Paper.

C. Joint Compound: For each coat use formulation that is compatible with other compounds applied on previous or for successive coats.

1. Prefilling: At open joints, and damaged surface areas, use setting-type taping compound.
2. Embedding and First Coat: For embedding tape and first coat on joints, fasteners, and trim flanges, use all-purpose] compound.
   a. Use setting-type compound for installing paper-faced metal trim accessories.
3. Fill Coat: For second coat, use sandable topping compound.
4. Finish Coat: For third coat, use setting-type, sandable topping compound.
5. Skim Coat: For final coat of Level 5 finish, use setting-type, sandable topping compound.
2.5 AUXILIARY MATERIALS

A. General: Provide auxiliary materials that comply with referenced installation standards and manufacturer's written recommendations.

B. Steel Drill Screws: ASTM C 1002, unless otherwise indicated.

1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.

C. Acoustical Joint Sealant: Manufacturer’s standard nonsag, paintable, nonstaining latex sealant complying with ASTM C 834. Product effectively reduces airborne sound transmission through perimeter joints and openings in building construction as demonstrated by testing representative assemblies according to ASTM E 90.

1. Products: Subject to compliance with requirements, provide one of the following:
   a. Accumetric LLC; BOSS 824 Acoustical Sound Sealant.
   b. Grabber Construction Products; Acoustical Sealant GSC.
   d. USG Corporation; SHEETROCK Acoustical Sealant.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates including welded hollow-metal frames and framing, with Installer present, for compliance with requirements and other conditions affecting performance.

B. Examine panels before installation. Reject panels that are wet, moisture damaged, and mold damaged.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 APPLYING AND FINISHING PANELS, GENERAL

A. Comply with ASTM C 840.

B. Install panels with face side out. Butt panels together for a light contact at edges and ends with not more than 1/16 inch (1.5 mm) of open space between panels. Do not force into place.

C. Locate edge and end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Do not place tapered edges against cut edges or ends. Stagger vertical joints on opposite sides of partitions. Do not make joints other than control joints at corners of framed openings.
D. Form control and expansion joints with space between edges of adjoining gypsum panels.

E. Cover both faces of support framing with gypsum panels in concealed spaces (above ceilings, etc., except in chases braced internally.
   1. Unless concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. (0.7 sq. m) in area.
   2. Fit gypsum panels around ducts, pipes, and conduits.
   3. Where partitions intersect structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by structural members; allow 1/4- to 3/8-inch-wide joints to install sealant.

F. Isolate perimeter of gypsum board applied to non-load-bearing partitions at structural abutments, except floors. Provide 1/4- to 1/2-inch- (6.4- to 12.7-mm-) wide spaces at these locations and trim edges with edge trim where edges of panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

G. Sound control: Seal construction at perimeters, behind control joints, and at openings and penetrations with a continuous bead of acoustical sealant. Install acoustical sealant at both faces of partitions at perimeters and through penetrations. Comply with ASTM C 919 and with manufacturer's written recommendations for locating edge trim and closing off sound-flanking paths around or through assemblies, including sealing partitions above acoustical ceilings.

3.3 APPLYING INTERIOR GYPSUM BOARD

A. Single-Layer Application:
   1. On ceilings, apply gypsum panels before wall/partition board application to greatest extent possible and at right angles to framing unless otherwise indicated.
   2. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing) unless otherwise indicated or required by fire-resistance-rated assembly, and minimize end joints.
      a. Stagger abutting end joints not less than one framing member in alternate courses of panels.
   3. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
   4. Fastening Methods: Apply gypsum panels to supports with steel drill screws.

3.4 INSTALLING TRIM ACCESSORIES

A. General: For trim with back flanges intended for fasteners, attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
3.5 FINISHING GYPSUM BOARD

A. General: Treat gypsum board joints, interior angles, edge trim, control joints, penetrations, fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration. Promptly remove residual joint compound from adjacent surfaces.

B. Prefill open joints, rounded or beveled edges, and damaged surface areas.

C. Apply joint tape over gypsum board joints, except for trim products specifically indicated as not intended to receive tape.

D. Gypsum Board Finish: Match existing smooth finish in visible areas.

3.6 PROTECTION

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

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

1. Indications that panels are wet or moisture damaged include, but are not limited to, discoloration, sagging, or irregular shape.
2. Indications that panels are mold damaged include, but are not limited to, fuzzy or splotchy surface contamination and discoloration.
SECTION 09111 - NON-LOAD-BEARING STEEL FRAMING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes non-load-bearing steel framing members for the following applications:

1. Interior framing systems (e.g., supports for partition walls).

1.3 SUBMITTALS

A. Product Data: For each type of product indicated.

PART 2 - PRODUCTS

2.1 NON-LOAD-BEARING STEEL FRAMING, GENERAL

A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.

1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal, unless otherwise indicated.


2.2 STEEL FRAMING FOR FRAMED ASSEMBLIES

A. Steel Studs and Runners: ASTM C 645.


2. Single Long-Leg Runner System: ASTM C 645 top runner with 2-inch- (50.8-mm-) deep flanges in thickness not less than indicated for studs, installed with studs friction fit into top runner and with continuous bridging located within 12 inches (305 mm) of the top of studs to provide lateral bracing.
2.3 AUXILIARY MATERIALS

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

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance.
   1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Coordination with Sprayed Fire-Resistive Materials:
   1. Remove sprayed fire-resistive materials only to extent necessary for installation of non-load-bearing steel framing. Protect adjacent fire-resistive materials from damage.

3.3 INSTALLATION, GENERAL

A. Installation Standard: ASTM C 754, except comply with framing sizes and spacing indicated.
   1. Gypsum Plaster Assemblies: Also comply with requirements in ASTM C 841 that apply to framing installation.

3.4 INSTALLING FRAMED ASSEMBLIES

A. Install studs so flanges within framing system point in same direction.

B. Install tracks (runners) at floors and overhead supports. Extend framing full height to structural supports or substrates above suspended ceilings, except where partitions are indicated to terminate at suspended ceilings. Continue framing around ducts penetrating partitions above ceiling.
   1. Other Framed Openings: Frame openings other than door openings the same as required for door openings, unless otherwise indicated. Install framing below sills of openings to match framing required above door heads.
C. Installation Tolerance: Install each framing member so fastening surfaces vary not more than 1/8 inch from the plane formed by faces of adjacent framing.

END OF SECTION 09111
SECTION 10802 – HAND DRYERS

GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 COORDINATION
A. Provide electrical wiring, conduits, and all required other devices, all of which must be completely unexposed, in compliance with California Electrical Code., to make hand dryers properly and completely operational.

PART 2 - PRODUCTS

2.1 HAND DRYERS
A. World Dryer K-973 SMARTdri, with ten second dry time, brushed stainless steel (120 volts).

PART 3 - EXECUTION

3.1 INSTALLATION
A. Install per manufacturer's written instructions and as directed by College Project Representative.

3.2 ADJUSTING AND CLEANING
A. Adjust for proper operation and timing.
B. Remove temporary labels and protective coatings.
C. Clean and polish exposed surfaces according to manufacturer’s written recommendations.

END OF SECTION 10802
SECTION 09912 - PAINTING

PART 1 - GENERAL

1.1 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

B. Samples for Initial Selection: For each type of topcoat product.

1.2 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Paint: 1 gal. of each material and color applied.

1.3 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 (7 deg C).

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.4 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).

B. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by the following:

1. Benjamin Moore & Co.
2. Dunn-Edwards Corporation.
3. ICI Paints.
2.2 PAINT, GENERAL

A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."

B. Material Compatibility:
   1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
   2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

C. Colors: Match existing as approved by Architect in field.

2.3 PRIMERS/SEALERS

A. Primer Sealer, compatible with top coats.

2.4 METAL PRIMERS

A. Primer, Rust-Inhibitive, Water Based: MPI #107.

2.5 WATER-BASED PAINTS

A. Epoxy, Interior, Semi-Gloss (Gloss Level 5):

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. Gypsum Board: 12 percent.

C. Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

D. 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 Manual" applicable to substrates 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 painting, 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. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

E. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

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

C. 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.

3.4 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.

END OF SECTION 09912
SECTION 15400 - PLUMBING

PART 1 - GENERAL

1.1 SYSTEM DESCRIPTION

1. Scope: Provide all materials, labor and equipment for complete and operational plumbing systems including all piping, fittings, hangers, sleeves and sealing, insulation, fixtures, and water heaters.

1.2 SUBMITTALS –

A. Submit as the minimum the following:

1. Pipe and fittings for all systems
2. Valves
3. Hangers and supports
4. Plumbing fixtures
5. Cleaning and chlorination procedure and certified test reports of final test samples
6. Trap primers (provide at all floor drains)

PART 2 - PRODUCTS

2.1 PIPING MATERIALS

A. Domestic Hot and Cold Water:

1. Copper Type L, ASTM B88, w/ wrought copper fittings, lead free sweat joints.
2. Pipes 2” and larger shall be brazed using 15% silver content solder.

B. Sanitary Waste and Vents:

1. Cast iron.
2. Slope all waste piping at ¼” per foot or greater
3. Slope all vent piping back to waste line
4. Cleanouts:
a. Provide cleanouts where shown and where required by code or for good access for cleaning:

b. Cleanouts shall be furnished with brass countersunk plugs with lead seal for sanitary waste lines and matching plugs or removable caps or plugs for other piping in accordance with manufacturer's recommendations for the particular pipe material.

c. Tee handle wrench shall be furnished to suit plugs.

d. Stainless steel cover shall be provided in walls

e. Clean outs shall be installed at a minimum of 100 feet on 4" and larger and 50 feet on 3" and smaller. In addition, a cleanout will be installed at all lateral changes of direction.

f. All restrooms shall have cleanouts at last fixture on a system that would include restrooms with an individual fixture of a bank of fixtures.

C. Relief Valve Drain: Copper Type L, ASTM B88, w/ wrought copper fittings, lead free sweat joints.

2.2 PIPE SUPPORTS:

A. All component model numbers noted are Cooper B-line. Substitutions are allowed in accordance with provisions in specifications for acceptance of substitutions.

B. All piping shall be seismically braced in where required by and in accordance with SMACNA Seismic Restraint Guidelines, latest edition. Braces shall be in the lateral and axial directions. Slack cable braces shall be used for hangers required to move as part of thermal expansion provisions and shall not interfere with that movement.

C. All insulated piping shall be supported with the use of calcium silicate insulated pipe supports to prevent collapse of insulation except that pipes ¾" and smaller may use adjustable clevis hanger with galvanized sheet metal shield (B-3151 or equal).

D. All supports shall be manufactured of steel components. Use of plumbers tape, metal strap, plastic hangers or other types is not allowed.

E. All copper pipe shall be isolated from steel hangers and supports using factory Vibra-Cushion strip or plastic coated hangers. Field wrapping of pipe with tape is not acceptable.

F. Adjustable Steel Swivel Ring: Figure B-3170 or equal.

G. Adjustable Steel Swivel J-hanger: Figure B-3690 or equal.

H. Adjustable Steel Clevis Hangers: Figure B-3100, B-3104 or equal.
I. Pipe Clamps: Figure B-200 Tubing/Pipe Clamp, Figure B-2000 Series clip-in pipe clamps

J. Strut: B-11, B-22, and B-52, 12 gauge. Size as required for piping load and span.

K. Structural steel tubes and shapes as specified on details, fully hot-dipped galvanized after cutting and welding. Required field welds and cuts shall be coated with cold galvanizing compound.

2.3 PIPE INSULATION

A. Insulate all recirculated domestic hot water and hot water return piping.

B. Insulation: Owens Corning preformed fiberglass pipe insulation w/ all-service jacket conforming to ASTM C547, thermal conductivity 0.23 Btu-in/hr-sf-°F at 75°F. Thickness as follows:

   I. Domestic Hot Water Supply and Return: 1” thickness

C. Provide white PVC one-piece pre-formed fitting covers at all fittings (tees, elbows, etc.)

2.4 VALVES

A. Domestic hot and cold water: Full port bronze ball valves, chrome plated bronze ball, Nibco or equal

2.5 FIXTURES

A. All fixtures shall be white, with acid-resistant finish.

B. Wall hung Toilets: American Standard Aft-Wall, or equal.

C. Floor mounted Toilets: American Standard Huron back spud (no equal).

D. Toilet seats: American Standard, extra heavy duty solid, open front, less cover.

E. Lavatories: Gerber 12-651 Wall hung, single hole.


G. Urinals: American Standard Washout Model 6590001.020

PART 3 - EXECUTION

3.1 PIPING INSTALLATION

A. General:
1. Where galvanically dissimilar pipe materials interconnect, appropriate manufactured adapters or flanged connections with suitable gaskets shall be provided.

2. Piping shall be protected from damage and contamination during transport and construction. Exposed ends of piping shall be kept sealed prior to and during erection and at the end of each working day.

3. Copper tubing and piping shall be cut with dedicated wheel cutter. Cut ends shall be square to form proper seating in socket fittings. All cut ends shall be reamed and deburred. All piping needs to be flushed in compliance with current plumbing code.

4. Water System Piping: Piping shall be arranged, pitched, and valved for complete drainage and control of each system. Isolation valves to be installed per floor, per room per fixture.

B. Vents and Drains:

1. Vents shall be pitched to drain, collected at risers where practical, offset toward the center of the building, and extended through the roof. All traps and sumps shall be vented.

2. Relief Valve Drain: Union shall be installed on drain line on discharge side of relief valve within 3 inches (3") of relief valve.

3. Liquid Waste: Waste pipe centerline shall be located within 1 (1") inch of its corresponding fixture centerline where the waste pipe passes through the wall.

4. Cast Iron Piping: Install per pipe manufacturer's recommendations, including preparation of pipe fittings for jointing, and installation.

3.2 BRAZING AND SOLDERING

A. Brazing: Use fifteen (15) percent silver, 80 percent copper and five (5) percent phosphorus for the following:

1. Domestic water pipe: 2 inches and larger.

2. Copper pipe: three inches (3") and larger.

3. Underground, or under floor piping.

4. No solder fittings underground.

B. Soldering: Use 95-5, tin-antimony solder for other copper piping

C. Preparation/Installation:

1. Clean surfaces to be joined, of oil, grease, rust and oxides. Clean socket or fitting
and end of pipe thoroughly with emery cloth to remove dust and oxides. After cleaning and before assembly or heating, apply Handy or Aircosil Flux to joint surface and spread evenly.

2. Cut copper tubing with copper tub cutters, size with sizing tool, and thoroughly clean before application of flux and solder.

3. All joints that show evidence of overheating, cracking, poor penetration or other defects of fit-up or workmanship shall be replaced as directed by the Project Manager at Contractor's expense.

3.3 FIXTURE AND TRIM INSTALLATION

A. General:

B. Stops: All fixtures shall be provided with stops. All stops not integral with flush valves or faucets shall be accessible and located as inconspicuously as possible below the fixture. Install stop off to the side of the unit behind recessed panel.

3.4 FIELD QUALITY CONTROL

A. General

1. Any deviation from the cleaning, installation testing, and certification requirements herein shall be approved in writing by the Project Manager.

B. All materials and workmanship shall be subject to inspection and examination by the Project Manager and/or Project Manager's representative at any place where fabrication or erection is carried on.

C. The Project Manager and/or the Project Manager's representative, reserves the right to reject all or any part of the system that does not conform to the requirements herein. Rejected materials or equipment shall be returned at the Contractor's expense for re-cleaning and certification.

D. The Project Manager and/or the Project Manager's representative reserve the right to remove random samples of the installed work sufficient to establish the quality of materials and workmanship. If such samples indicate materials and workmanship do not meet the contract specification, the Contractor shall be required to replace or re-clean the installed work at no expense to the College. The College will reimburse the Contractor on a time and materials basis for such work if the system proves to be installed to specification.

E. All testing shall be done in the presence of the Project Manager and/or the Project Manager's representative.

F. Upon completion of this work, all systems shall be adjusted for use. Should any piece of apparatus or any material or work fail in any of these tests, it shall be immediately removed and replaced by new materials. The defective portion of the
work shall be replaced by the Contractor in the presence of the Project Manager and/or the Project Manager's representative at no expense to the College.

G. Any leaks found shall be repaired in the following manner:

1. Brazed joint - Cut out and re-braze
2. Cast Iron - Remove/Re-install
3. Screw joint - Taken apart and re-done (do not use compound)

H. Pipe Testing:

1. All piping shall be tested as noted below unless more stringent testing is specified in other applicable sections.
2. Test pressures shall be maintained until all leaks have been identified.
3. Defective piping shall be repaired or replaced until tests are accomplished successfully.
4. Test gauges shall be installed at convenient process connections. After completion of testing, the gauges and source connection shall be removed and the specified process attachments replaced.

3.5 CLEANING

A. General Cleaning Requirements: All pipe, fittings, valves, and system-related materials shall be cleaned before use. Contractor shall indicate in writing when each system is sufficiently clean for consideration by the Project Manager and/or the Project Manager’s representative for acceptance. Tie-in to central systems shall not occur prior to receipt of written acceptance from the Project Manager and/or the Project Manager's representative.

B. Water Pipe Cleaning: All domestic cold and hot water piping shall be cleaned and disinfected as follows:

1. The Contractor shall employ an agency licensed to certify the disinfecting operation to provide the orthotolidine testing equipment and make tests, take water samples, procure bacteriological analysis, and issue written approval of satisfactory disinfection results to the College representative.
2. The Contractor shall furnish labor, equipment, materials, and transportation to disinfect domestic hot and/or water systems in conformity with procedure and standards described herein.
3. Disinfecting agent shall be chlorine gas (approved type for water system disinfection, and approved chlorinator), or hypochlorite, calcium or sodium, powdered or aqueous "Purex", "Clorox", or similar commercial product with 5.25 to sixteen percent (5.25-16%) available chlorine in water solution.
4. 3/4 inch service cock or valve shall be provided within three feet of the service connection for introducing a sterilizing agent into the lines.

5. After final pressure tests, each fixture or outlet shall be left wide open until flow shows only clear water.

6. With system full of water and under "main" pressure, all faucets shall be opened to permit simultaneous trickle flow.

7. The disinfectant shall be injected through the service cock by means of pump or other pressure device at a slow, even, continuous rate until an orthotolidine test at each outlet shows chlorine residual concentration of at least fifty (50) parts per million (PPM).

8. All outlets and valves shall be closed, including service valve at main, and injection cock, to retain chlorinated water. This condition shall be maintained for twenty-four (24) hours.

9. An orthotolidine test, after twenty-four (24) hour period, shall indicate a chlorine residual concentration of not less than 50 PPM. If not, the disinfection procedure shall be repeated until this standard is attained.

10. After satisfactory completion of above test, the system shall be flushed out until orthotolidine tests show chlorine residual of less than 0.5 PPM.

11. After satisfactory completion of disinfection procedure, the College may issue a temporary approval for immediate use of the piping system pending results of a bacteriological analysis of water samples.

12. After final flushing, water samples shall be bacteriologically tested and shall provide negative for coli-aero-genes organisms.

13. Analysis shall indicate total plate count less than one-hundred (100) bacteria per cubic centimeter, or equal to the control sample.

14. If the analysis results are not satisfactory, the disinfection procedure shall be repeated until the specific standards are met.

3.6 PAINTING

A. All pipes exposed in occupied spaces shall be cleaned, primed and painted to match existing. Color to be approved by the College and the Architect.

END OF SECTION
SECTION 07181 - RESINOUS FLOORING AND WALL COATING

PART 1 - GENERAL

A. SUBMITTALS

1. Product Data: Submit manufacturer's technical data, installation instructions, and general recommendations for each resinous material required. Include certification indicating compliance of materials with requirements.

2. Samples: Submit, for verification purposes, 4-inch square samples of each type of resinous material required, applied to a rigid backing, in color and finish indicated.
   a. For initial selection of colors and finishes, submit manufacturer's color charts showing full range of colors and finishes available.

C. QUALITY ASSURANCE

1. Single Source Responsibility: Obtain primary resinous wall and flooring materials including primers, resins, hardening agents, finish or sealing coats from a single manufacturer with not less than ten years of successful experience in manufacturing and installing principal materials described in this section. Contractor shall have completed at least five projects of similar size and complexity; Tera Lite or approved equal.

2. Pre-Installation Conference: General contractor shall arrange a meeting not less than thirty days prior to starting work. Attendance shall include College Representative, and Manufacturer/Installer’s Representative.

D. DELIVERY, STORAGE AND HANDLING

1. Material shall be stored in a dry, enclosed area protected from exposure to moisture. Temperature of storage area shall be maintained between 60 and 85°F.

E. WARRANTY

1. Manufacturer shall furnish a single, written warranty covering both material and workmanship for a period of one (1) full year from date of installation.

PART 2 - PRODUCTS

A. COLORS AND NON-SKID SURFACE TEXTURE

1. Colors: As selected by College Representative from manufacturer's standard colors.

2. Surface texture: As selected by College Representative.

B. RESINOUS FLOORING SYSTEM

1. Resinous Coating Systems by Tera Lite, Inc., San Jose, California (408)288-
a. Floors: Tera-Gem III DQ CQ Special Seamless flooring system (SSF) ¼” minimum thickness. Provide two seal coats of Tera-Gem III Sealer to all areas. Primer to provide floor leveling and slope to drain as needed.

b. Walls: Tera-Gem III Wall and Floor Coating System (W&F), minimum of 30 mils thick. Provide metal cove recommended by manufacturer at floor.

C. JOINT SEALANT MATERIALS

1. Type produced by manufacturer of resinous flooring system for type of service and joint condition indicated.

PART 3 - EXECUTION

A. PREPARATION

1. Substrate: Concrete shall be at least 28 days old with less than 10 pounds of hydrostatic pressure moisture. If wetter than that, provide vapor barrier (Tera Lite Aquafin SG3 or equal). Prepare concrete by grinding to remove non-concrete material and to prepare texture for flooring. Remove all dust and debris before application.

B. APPLICATION

1. General: Apply each component of resinous flooring system in compliance with manufacturer's directions to produce a uniform monolithic wearing surface of thickness indicated, uninterrupted except at divider strips, sawn joints or other types of joints (if any), indicated or required.

C. FIELD QUALITY CONTROL

1. The right is reserved to invoke the following material testing procedure at any time, and any number of times during period of flooring application.

   a. The Owner will engage service of an independent testing laboratory to sample materials being used on the job site. Samples of material will be taken, identified and sealed, and certified in presence of Contractor.

   b. Testing laboratory will perform tests for any of characteristics specified, using applicable testing procedures referenced herein, or if none referenced, in manufacturer's product data.

   c. If test results show materials being used do not comply with specified requirements, Contractor may be directed by Owner to stop work; remove non-complying materials; pay for testing; reapply flooring materials to properly prepared surfaces which had previously been coated with unacceptable materials.

D. CURING, PROTECTION AND CLEANING

1. Cure resinous flooring materials in compliance with manufacturer's directions, taking care to prevent contamination during stages of application and prior to completion of curing process. Close area of application for a minimum of 24 hours.

2. Cleaning: Remove temporary covering and clean resinous flooring just prior to final inspection. Use cleaning materials and procedures recommended by resinous flooring manufacturer.
END OF SECTION 071813