#### SECTION 095126-WOOD PANEL CEILINGS

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

Drawings and general conditions of Contract, including General and Supplementary Conditions and Divisions-1 Specification sections apply to work of this section.

#### 1.2 SUMMARY

#### A. Section Includes:

- 1. Wood veneer ceiling panels.
- 2. Exposed grid suspension system.
- 3. Wire hangers, fasteners, main runners, wall angle moldings and accessories.

#### B. Related Sections:

- 1. Section 06 42 00 (06420) Wood Paneling
- 2. Section 09 51 00 (09510) Acoustical Ceilings
- 3. Section 09 20 00 (09250) Plaster and Gypsum Board
- 4. Divisions 23 (15) HVAC
- 5. Division 26 (16) Sections Electrical Work

#### C. Alternates

- 1. Prior Approval: Unless otherwise provided for in the Contract documents, proposed product substitutions may be submitted no later than TEN (10) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability and approved products will be set forth by the Addenda. If included in a Bid are substitute products which have not been approved by Addenda, the specified products shall be provided without additional compensation.
- 2. Submittals which do not provide adequate data for the product evaluation will not be considered. The proposed substitution must meet all requirements of this section, including but not neccessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); panel design, size, composition, color, and finish; suspension system component profiles and sizes; compliance with the referenced standards.

#### 1.3 REFERENCES

#### A. American Society for Testing and Materials (ASTM):

- 1. ASTM A 641 Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
- 2. ASTM A 653 Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot- Dip Process.
- 3. ASTM A 1008 Standard Specification for Steel, Sheet, Cold Rolled, Carbon, Structural, High-Strength Low-Alloy and High-Strength Low-Alloy with Improved Formability.

- 4. ASTM C 423 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
- 5. ASTM C 635 Standard Specification for Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
- 6. ASTM C 636 Recommended Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels.
- 7. ASTM E 84 Standard Test Method for Surface Burning Characteristics of Building Materials.
- 8. ASTM E 1264 Classification for Acoustical Ceiling Products.
- B. CISCA Seismic Zones (0-2) (3-4) Ceilings and Interior Systems Construction Association Guidelines for Seismic Restraint for Direct Hung Suspended Ceiling Assemblies.

#### 1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each type of ceiling unit and suspension system required.
- B. Installation Instructions: Submit manufacturer's installation instructions as referenced in Part 3, Installation.
- C. Samples: Minimum 3 1/2 inch x 5 1/2 inch samples of specified acoustical panel; 8 inch long samples of exposed wall molding and suspension system, including main runner and 4 foot cross tees.
- D. Shop Drawings: Layout and details of ceilings. Show locations of items which are to be coordinated with, or supported by the ceilings.
- E. Certifications: Manufacturer's certifications that products comply with specified requirements, including laboratory reports showing compliance with specified tests and standards.
- F. All products not conforming to manufacturer's current published values must be removed, disposed of and replaced with complying product at the expense of the Contractor performing the work.

#### 1.5 QUALITY ASSURANCE

- A. Single-Source Responsibility: Provide ceiling panel units and grid components by a single manufacturer.
- B. Fire Performance Characteristics: Identify ceiling components with appropriate markings of applicable testing and inspecting organization.
  - 1. Surface Burning Characteristics: As follows, tested per ASTM E 84 and complying with ASTM E 1264 for Class A products.

a. Flame Spread: 25 or less

b. Smoke Developed: 50 or less

- 2. HPVA (Hardwood Plywood and Veneer Association) certification and audit program per ASTM E-84 tunnel test.
- C. Woodworking Standards: Manufacturer must comply with specified provisions of Architectural Woodworking Institute quality standards.

D. Coordination of Work: Coordinate ceiling work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store ceiling components in a dry interior location in their cartons prior to installation to avoid damage. Store cartons in a flat, horizontal position. The protectors between the panels should not be removed until installation.
- B. Do not store in unconditioned spaces with humidity greater than 55 percent or lower than 25 percent percent relative humidity and temperatures lower than 50 degrees F or greater than 86 degrees F. Panels must not be exposed to extreme temperatures, for example, close to a heating source or near a window with direct sunlight.
- C. Handle ceiling units carefully to avoid chipped edges or damage to units in any way.

#### 1.7 PROJECT CONDITIONS

- A. Wood veneer ceiling materials should be permitted to reach room temperature and have a stabilized moisture content for a minimum of 72 hours before installation. (Remove plastic wrap to allow panels to climatize).
- B. The wood veneer panels should not be installed in spaces where the temperature or humidity conditions vary greatly from the temperatures and conditions that will be normal in the occupied space.
- C. As interior finish products, the wood veneer panels are designed for installation in temperature conditions between 50 degrees F and 86 degrees F, in spaces where the building is enclosed and HVAC systems are functioning and will be in continuous operation. Relative humidity should not fall below 25 percent or exceed 55 percent.

#### 1.8 WARRANTY

- A. Wood Veneer Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace panels that fail within the warranty period. Failures include, but are not limited to:
  - 1. Ceiling Panels: Defects in materials or factory workmanship
  - 2. Grid System: Rusting and manufacturer's defects

#### B. Warranty Period:

- 1. Wood veneer panels: One (1) year from date of installation.
- 2. Grid: Ten years from date of installation.
- C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

#### 1.9 MAINTENANCE

A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.

- 1. Ceiling Units: Furnish quality of full-size units equal to 2.0 percent of amount installed.
- 2. Exposed Suspension System Components: Furnish quantity of each exposed suspension component equal to 1.0 percent of amount installed.

#### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Ceiling Panels:
  - 1. Armstrong World Industries, Inc.
- B. Suspension Systems:
  - 1. Armstrong World Industries, Inc.

#### 2.2.0 WOOD VENEER CEILING UNITS

- A. Ceiling Panels Type AP-1:
  - 1. Surface Texture: Smooth
  - 2. Composition: Wood
  - 3. Finish: Manufacturer's standard natural veneer
  - 4. Species: Natural Variations Maple
  - 5. Size: 72in X 24in X 3/4in
  - 6. Perforation Options:
  - 7. Edge Banding and Trim: To match face veneer
  - 8. Edge Profile: Concealed (1/4 inch reveal visual)
  - 9. Edge Banding and Trim: To match face veneer
  - 10. Noise Reduction Coefficient (NRC): ASTM C 423:
    - 1. W4 perforation: 0.65 (with acoustical infill)
  - 11. Ceiling Attenuation Class (CAC): ASTM C 1414:
    - 1. W4 perforation: 28
  - 12. Flame Spread: ASTM E 1264; Class A (HPVA Certified with audit program per ASTM E84)
  - 13. Recycle Content: 92% Pre-Consumer
  - 14. Dimensional Stability: Standard
  - 15. Acceptable Product: WoodWorks Concealed, Item# 5984W4, as manufactured by Armstrong World Industries.

#### B. Accessories:

- 1. Fiberglass Infill Panel (fiberglass infill) #8200100
- 2. BioAcoustic Infill Panel, #5479 (Beige) or #5823 (Black)

- 3. Edge Banding for field-modified panels: Pre-finished pressure sensitive adhesive banding is available 15/16 inch and 3/4 inch wide and in 50 foot lengths, #6408\_\_\_\_
- 4. Perimeter Trim 6" Woodworks Concealed Veneer Wrapped Aluminum Trim 6" x 10' (Natural Variations Beech)(Natural Variations Maple)(Natural Variations Light Cherry)(Natural Variations Dark Cherry)(Bamboo Patina)(Bamboo Native)(Black painted)

#### 2.3.0 SUSPENSION SYSTEMS

- A. Components: All main beams and cross tees shall be commercial quality hot dipped galvanized steel (galvanized steel, aluminum, or stainless steel) as per ASTM A 653. Main beams and cross tees are double-web steel construction with 15/16 in type exposed flange design. Exposed surfaces chemically cleansed, capping prefinished galvanized steel (aluminum or stainless steel) in baked polyester paint. Main beams and cross tees shall have rotary stitching (exception: extruded aluminum or stainless steel).
  - 1. Structural Classification: ASTM C 635 Heavy Duty
  - 2. Color: TechBlack or as chosen by architect from manufacturer's list of available colors.
  - 3. Acceptable Product: Prelude XL 15/16" Exposed Tees manufactured by Armstrong World Industries, Inc.
- B. Attachment Devices: Size for five times design load indicated in ASTM C 635, Table 1, Direct Hung unless otherwise indicated.
- C. Wire for Hangers and Ties: ASTM A 641, Class 1 zinc coating, soft temper, pre-stretched, with a yield stress load of at least time three design load, but not less than 12 gauge.
- D. Accessories
  - 1. T-Bar Hook, Item #5986
  - 2. Wood Screws, #91070A244
  - 3. Safety Cable, #6091
  - 4. Support Hanger, #SH12

#### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out.
- B. Proper design for both supply air and return air, maintenance of the HVAC filters and building interior space are essential to minimize soiling. Before starting the HVAC system, make sure supply air is properly filtered and the building interior is free of construction dust.

#### 3.2 PREPARATION

A. Measure each ceiling area and establish layout of acoustical units to balance border widths at opposite edges of each ceiling. Avoid use of less than half width units at borders, and comply with reflected ceiling plans. Coordinate panel layout with mechanical and electrical fixtures.

#### 3.3 INSTALLATION

- A. Install suspension system and panels in compliance with ASTM C636; CISCA Seismic Guidelines; approved construction drawings; with the authorities having jurisdiction; and in accordance with the manufacturer's installation instructions.
- B. Suspend main beam from overhead construction with hanger wires spaced 4 feet on center along the length of the main runner. Install hanger wires plumb and straight. The suspension system must be leveled to within 1/4 inch in 10 feet and must be square to within 1/16 inch in 2 feet.
- C. Install main beams 48 inches on center with 48 inch cross tees every 24 inches at 90 degrees to the main beam. Install the 24 inch cross tees at midpoints of the 48 inch cross tees.
- D. Install wall moldings at intersection of suspended ceiling and vertical surfaces. Miter corners where wall moldings intersect or install corner caps.
- E. Follow the instructions found in "WoodWorks Concealed Installation Instructions", LA-297524 for border treatment of the WoodWorks Concealed panels. The face of the suspension system rests directly on the molding or trim flange.
- F. Cut panel edges that are exposed to view will have to be treated to look like factory edges. Prefinished peel and stick edge banding is recommended for this purpose.

#### 3.4 ADJUSTING AND CLEANING

- A. Replace damaged and broken panels.
- B. Clean exposed surfaces of ceilings panels, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage. Remove and replace work that cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.

END OF SECTION-095126

#### SECTION 097714-WOOD VENEER WALL PANELS

#### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

Drawings and general conditions of Contract, including General and Supplementary Conditions and Divisions-1 Specification sections apply to work of this section.

#### 1.2 SUMMARY

#### A. Section Includes:

1. Acoustical wall panels and installation components.

#### B. Related Sections:

- 1. Section 092000 (09200) Plaster and Gypsum Board
- 2. Division 26 (16) Sections Electrical Work

#### C. Alternates

- 1. Prior Approval: Unless otherwise provided for in the Contract documents, proposed product substitutions may be submitted no later than TEN (10) working days prior to the date established for receipt of bids. Acceptability of a proposed substitution is contingent upon the Architect's review of the proposal for acceptability and approved products will be set forth by the Addenda. If included in a Bid are substitute products which have not been approved by Addenda, the specified products shall be provided without additional compensation.
- 2. Submittals which do not provide adequate data for the product evaluation will not be considered. The proposed substitution must meet all requirements of this section, including but not necessarily limited to, the following: Single source materials suppliers (if specified in Section 1.5); Panel design, size, composition, color, and finish; installation system component profiles and sizes; Compliance with the referenced standards.

#### 1.3 REFERENCES

#### A. Test Methods:

- 1. ASTM C 423 Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
- 2. ASTM E 84/CAN/ULC S102 Standard Test Method for Surface Burning Characteristics of Building Materials.
- 3. CAN/ULC S102 Standard Test Method for Surface Burning Characteristics of Building Materials.

#### 1.4 SUBMITTALS

- A. Product Data: Submit manufacturer's technical data for each type of acoustical wall panel required.
- B. Samples: Minimum 3 inch x 3 inch samples of specified acoustical wall substrate; minimum 4 inch long samples of attachment method including trim and decorative accents.
- C. Shop Drawings: Submit shop drawings showing how panels are to be laid out on the walls, details of trim members and width of panels. Width of panels and location of vertical seams are critical.

#### 1.5 QUALITY ASSURANCE

- A. Single-Source Responsibility: Provide acoustical panel units and installation components by a single manufacturer.
- B. Fire Performance Characteristics: Identify acoustical wall components with appropriate markings of applicable testing and inspecting organization.
  - 1. Surface Burning Characteristics: As follows, tested per ASTM E 84,

a. Flame Spread: 25 or lessb. Smoke Developed: 50 or less

C. Coordination of Work: Coordinate acoustical wall work with installers of related work including, but not limited to building insulation, gypsum board, light fixtures, mechanical systems, electrical systems, and sprinklers.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver acoustical wall panels to project site in original, unopened packages and store them in a fully enclosed space where they will be protected against damage from moisture, direct sunlight, surface contamination, and other causes.
- B. Before installing acoustical wall panels, permit them to reach room temperature and a stabilized moisture content.
- C. Handle acoustical wall panels carefully to avoid chipping edges or damaged units in any way.

#### 1.7 PROJECT CONDITIONS

A. Space Enclosure:

Wood veneer wall panel materials should be permitted to reach room temperature and have a stabilized moisture content for a minimum of 72 hours before installation.

The wood veneer panels should not be stored or installed in spaces where the temperature or humidity conditions vary greatly from the temperatures and conditions that will be normal in the occupied space.

As interior finish products, the wood veneer panels are designed for installation in temperature conditions between 50 degrees F and 86 degrees F, in spaces where the building is enclosed and HVAC systems are functioning and will be in continuous operation. Relative humidity should not fall below 25 percent or exceed 55 percent.

#### 1.8 WARRANTY

- A. Wall Panel: Submit a written warranty executed by the manufacturer, agreeing to repair or replace acoustical panels that fail within the warranty period. Failures include, but are not limited to:
  - 1. Wall Panels: Manufacturer's defects
- B. Warranty Period:
  - 1. Wall panels: One (1) year from date of substantial completion.
- C. The Warranty shall not deprive the Owner of other rights the Owner may have under other provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the Contractor under the requirements of the Contract Documents.

#### 1.9 MAINTENANCE

- A. Extra Materials: Deliver extra materials to Owner. Furnish extra materials described below that match products installed. Packaged with protective covering for storage and identified with appropriate labels.
  - 1. Wall Panels: Furnish quantity of full-size units equal to 5.0 percent of amount installed.

#### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Acoustical Wall Panels:
  - 1. Armstrong World Industries, Inc.

#### 2.2 ACOUSTICAL WALL PANELS

- A. Wall Panels: Type AWP-1:
  - 1. Surface Texture: Smooth
  - 2. Composition: Particle Board
  - 3. Finish: Natural Variations (Dark Cherry)

- 4. Size: 24 inches X 96 inches X 3/4 inch
- 5. Edge Profile: K2C2 both vertical edges for interface (panels intended for Z clip installation should be ordered with no kerfs in any edges).
- 6. Noise Reduction Coefficient (NRC): ASTM C 423;
  - a. W1 Perforation: Unperforated, N/A
  - b. W4 Perforation: 0.55 (D Mounting with Acoustical Fleece), 0.80 (D Mounting with 1 inch Fiberglass Backer)
- 7. Flame Spread: ASTM E84 (HPVA), Class A
- 8. Dimensional Stability: Standard space must be enclosed with HVAC systems operating at all times.
- 9. Acceptable Product: Woodworks Walls, item #(5818W1NDC) (5818W4NDC), as manufactured by Armstrong World Industries.

#### B. Wall Panel Accessories:

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1. Decorative Accent Trims and Splines
<ul> <li>a. Reverse Bead Accent Trim: Item #5850C, 8 foot, 9 foot or 10 foot (solid wood)</li> <li>b. Reveal Accent Trim: Item #5850K, 8 foot, 9 foot or 10 foot, Black or Natural Anodized</li> <li>c. Wall Installation Spline (concealed): Item #5858BLY, 8 foot, 9 foot or 10 foot, Black Aluminum</li> </ul>
2. Moldings:
a. 4 inch Base Molding: Item #5855, 8 feet 4 inches, Solid Wood b. 6 inch Base Molding: Item #5856, 8 feet 4 inches, Solid Wood c. 1.15 inch Finish Molding: Item #5849, (8 feet 4 inches)(9 feet 4 inches)(10 feet 2 inches), Solid Wood d. 1.875 inch Finish Molding: Item #5907, (8 feet 4 inches)(9 feet 4 inches)(10 feet 2 inches), Solid Wood e. Inside Corner Molding: Item #5867, (8 feet 4 inches)(9 feet 4 inches)(10 feet 2 inches), Solid Wood
C. Decorative Corners and Splines:
a. Peak Corner: Item #58581, (8feet)(9 feet)(9 feet 10 inches), Solid Wood b. Bullnose Corner, Item #5852, (8 feet)(9 feet)(9 feet 10 inches), Solid Wood c. Reverse Bead Corner, Item #5853, (8 feet)(9 feet)(9 feet)(9 feet 10 inches), Solid Wood d. Chamfered Corner, Item #5854, (8 feet)(9 feet)(9 feet 10 inches), Solid Wood e. Corner Installation Spline (concealed), (8 feet)(9 feet)(9 feet 10 inches), Plastic or Aluminum
D. Chair Rail Accessories:
a. Mounting Rail: Item #5861, 8 feet 4 inches, Solid Wood b. Rail Insert: Item #5863, 8 feet 4 inches, Solid Wood c. Rail Insert-Aluminum: Item #5963NA, 8 feet, Solid Wood and Aluminum d. Rail Cap: Item #5864, 8 feet 4 inches, Solid Wood e. Fasel Ledge, Item #5866, 8 feet 4 inches, Solid Wood

#### PART 3 - EXECUTION

#### 3.1 EXAMINATION

A. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer's printed recommendations.

#### 3.2 PREPARATION

A. Measure each wall area and establish layout of acoustical units to balance border widths at opposite edges of each wall. Coordinate panel layout with mechanical and electrical fixtures.

#### 3.3 INSTALLATION

A. Install wall panels by attaching the panels to an existing wall per the manufacturer's instructions, LA 297712, and in accordance with the authorities having jurisdiction.

#### 3.4 ADJUSTING AND CLEANING

- A. Replace damaged and broken panels.
- B. Use a clean, dry, soft, white cloth to wipe off any dirt or greasy fingerprints. If this does not clean the panel, use a damp clean soft white cloth or sponge with a mild detergent to wipe the panel.

END OF SECTION 097714

#### SECTION 102113 - 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. Solid-polymer toilet compartments configured as toilet enclosures and urinal screens.

#### B. Related Sections:

- 1. Section 055000 "Metal Fabrications" for supports that attach ceiling-hung compartments floor-and-ceiling-anchored compartments and post-to-ceiling screens to overhead structural system.
- 2. Section 061035 "Miscellaneous Rough Carpentry" for blocking and overhead support of floor-and-ceiling-anchored compartments.
- 3. Section 102800 "Toilet, Bath, and Laundry Accessories" for toilet tissue dispensers, grab bars, purse shelves, and similar accessories.

#### 1.3 ACTION 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.
  - 2. Show locations of reinforcements for compartment-mounted grab bars.
  - 3. Show locations of centerlines of toilet fixtures.
  - 4. Show ceiling grid and overhead support or bracing locations.
- C. Samples for Initial Selection: For each type of unit indicated. 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 units, prepared on 6-inch- (152-mm-) square Samples of same thickness and material indicated for Work.
  - 2. Each type of hardware and accessory.

#### 1.4 INFORMATIONAL SUBMITTALS

A. Product Certificates: For each type of toilet compartment, from manufacturer.

#### 1.5 CLOSEOUT SUBMITTALS

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

#### 1.6 QUALITY ASSURANCE

- A. Comply with requirements in GSA's CID-A-A-60003, "Partitions, Toilets, Complete."
- B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84, or another standard acceptable to authorities having jurisdiction, by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  - 1. Flame-Spread Index: 25 or less.
  - 2. Smoke-Developed Index: 450 or less.
- C. Regulatory Requirements: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) and Architectural Barriers Act (ABA) Accessibility Guidelines for Buildings and Facilities" and ICC/ANSI A117.1 for toilet compartments designated as accessible.

#### 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 MATERIALS

- A. Aluminum Castings: ASTM B 26/B 26M.
- B. Aluminum Extrusions: ASTM B 221 (ASTM B 221M).
- C. Steel Sheet: Commercial steel sheet for exposed applications; mill phosphatized and selected for smoothness.
  - 1. Electrolytically Zinc Coated: ASTM A 879/A 879M, 01Z (03G).
  - 2. Hot-Dip Galvanized: ASTM A 653/A 653M, either hot-dip galvanized or galvannealed.
- D. Stainless-Steel Sheet: ASTM A 666, Type 304, stretcher-leveled standard of flatness.
- E. Stainless-Steel Castings: ASTM A 743/A 743M.

F. Adhesives: Manufacturer's standard product that complies with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

#### 2.2 PHENOLIC-CORE UNITS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
  - 1. Accurate Partitions Corporation.
  - 2. American Sanitary Partition Corporation.
  - 3. Ampco, Inc.
  - 4. Bobrick Washroom Equipment, Inc.
  - 5. Bradley Corporation; Mills Partitions.
  - 6. Flush Metal Partition Corp.
  - 7. General Partitions Mfg. Corp.
  - 8. Global Steel Products Corp.
  - 9. Knickerbocker Partition Corporation.
  - 10. Metpar Corp.
  - 11. Partition Systems Incorporated of South Carolina.
  - 12. Rockville Partitions Incorporated.
  - 13. Sanymetal; a Crane Plumbing company.
  - 14. Shanahan's Limited.
  - 15. Tex-Lam Manufacturing, Inc.
  - 16. Weis-Robart Partitions, Inc.
- B. Toilet-Enclosure Style: Overhead braced.

#### 2.3 SOLID-POLYMER UNITS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide product indicated on Drawings or comparable product by one of the following:
  - 1. Accurate Partitions Corporation.
  - 2. Ampco, Inc.
  - 3. Bradley Corporation; Mills Partitions.
  - 4. Comtec Industries/Capitol Partitions.
  - 5. General Partitions Mfg. Corp.
  - 6. Global Steel Products Corp.
  - 7. Hadrian Manufacturing Inc.
  - 8. Knickerbocker Partition Corporation.
  - 9. Metpar Corp.
  - 10. Partition Systems Incorporated of South Carolina.
  - 11. Rockville Partitions Incorporated.
  - 12. Santana Products, Inc.
  - 13. Sanymetal; a Crane Plumbing company.
  - 14. Weis-Robart Partitions, Inc.

- B. Toilet-Enclosure Style: Overhead braced.
- C. Urinal-Screen Style: Wall hung.
- D. Door, Panel and Pilaster Construction: Solid, high-density polyethylene (HDPE) or polypropylene (PP) panel material, not less than 1 inch (25 mm) thick, seamless, with eased edges,no-sightline system, and with homogenous color and pattern throughout thickness of material.
  - 1. Integral Hinges: Configure doors and pilasters to receive integral hinges.
  - 2. Heat-Sink Strip: Manufacturer's standard continuous, stainless-steel strip fastened to exposed bottom edges of solid-polymer components to prevent burning.
  - 3. Color and Pattern: One color and pattern as selected by Architect from manufacturer's full range.
  - 4. Anit-graffiti finish.
- E. Pilaster Shoes and Sleeves (Caps): Manufacturer's standard design; stainless steel.
- F. Brackets (Fittings):
  - 1. Full-Height (Continuous) Type: Manufacturer's standard design; stainless steel.
    - a. Polymer Color and Pattern: Matching panel, Contrasting with panel, as indicated by manufacturer's designations, Contrasting with panel, as selected by Architect from manufacturer's full range.

#### 2.4 ACCESSORIES

- A. Hardware and Accessories: Manufacturer's standard design, heavy-duty operating hardware and accessories.
  - 1. Material: Stainless steel.
  - 2. Hinges: Manufacturer's standard continuous, cam type that swings to a closed or partially open position.
  - 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. Overhead Bracing: Manufacturer's standard continuous, extruded-aluminum head rail with antigrip profile and in manufacturer's standard finish.
- C. 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.

#### 2.5 FABRICATION

- A. 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.
- B. Door Size and Swings: Unless otherwise indicated, provide 24-inch- (610-mm-) wide, inswinging 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 compartments designated as accessible.

#### 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).
  - 2. Stirrup Brackets: Secure panels to walls and to pilasters with no fewer than three brackets attached at midpoint and near top and bottom of panel.
    - a. Locate wall brackets 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 (44 mm) 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 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 102113

HOUSTON COMMUNITY COLLEGE FELIX FRAGA ACADEMIC CENTER LEVEL 3 RENOVATION

301 NORTH DRENNAN ST., HOUSTON, TEXAS 77003

### APRIL 22, 2013 HOUSTON COMMUNITY COLLEGE SYSTEM

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**CONSULTANTS** 

5/16/2013

INFRASTRUCTURE ASSOCIATES 6117 RICHMOND AVE. SUITE 200 HOUSTON, TEXAS 77057

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MECHANICAL, ELECTRICAL PLUMBING ENGINEERS

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COVER SHEET AND INDEX OF DRAWINGS

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A0.02 CODE COMPLIANCE & GENERAL NOTES

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A2.20 ENLARGED PLANS A2.30 REFLECTED CEILING PLAN

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A2.31 CEILING DETAILS A3.00 DOOR AND FRAME TYPES DOOR AND FRAME SCHEDULE

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MECHANICAL DRAWINGS

**ELECTRICAL DRAWINGS** E1.01 SCHEDULES, NOTES AND LEGEND

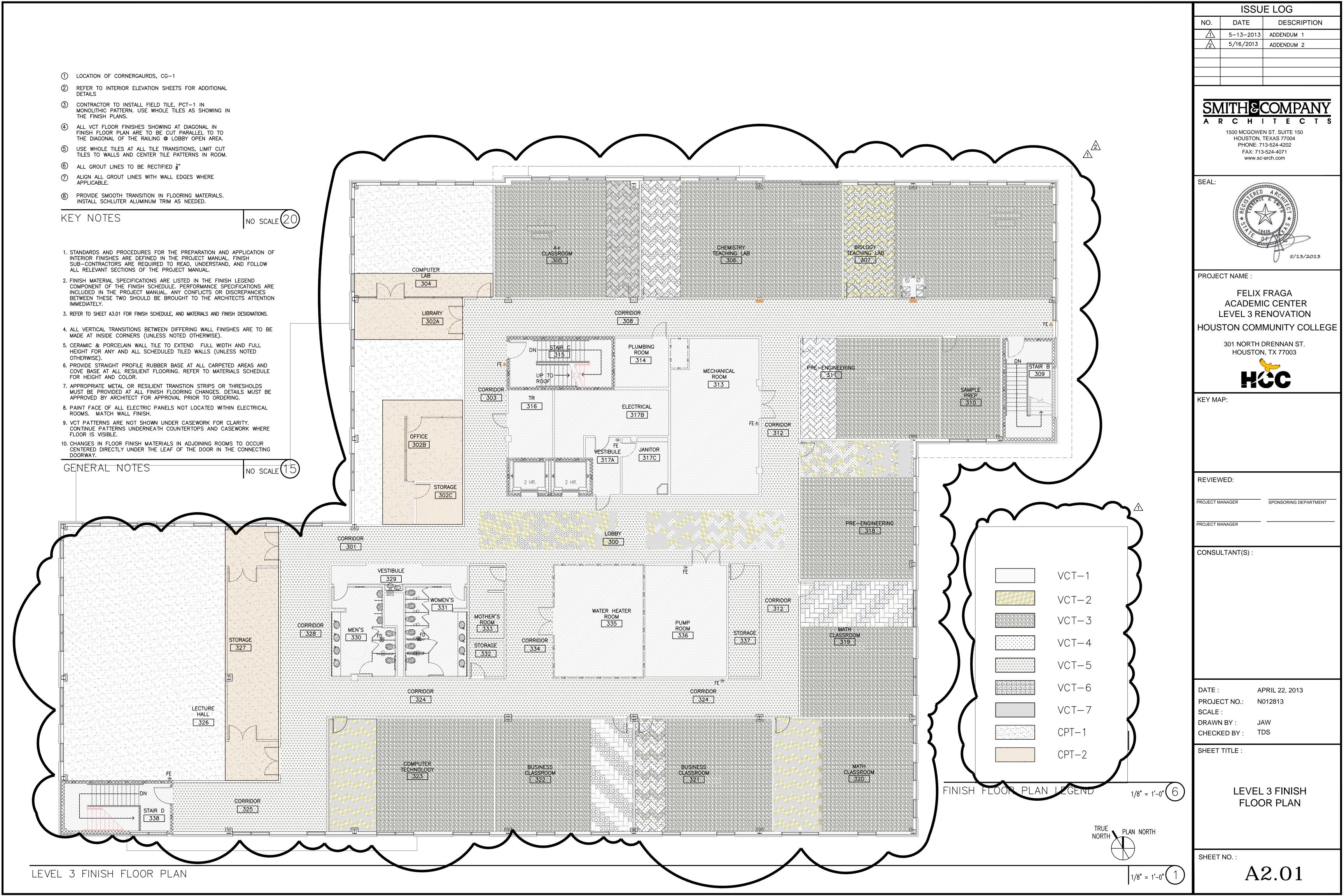
E1.10 ONE LINE DIAGRAM E1.11 PANEL SCHEDULES E2.01 FLOOR PLAN - POWER E3.01 FLOOR PLAN - LIGHTING

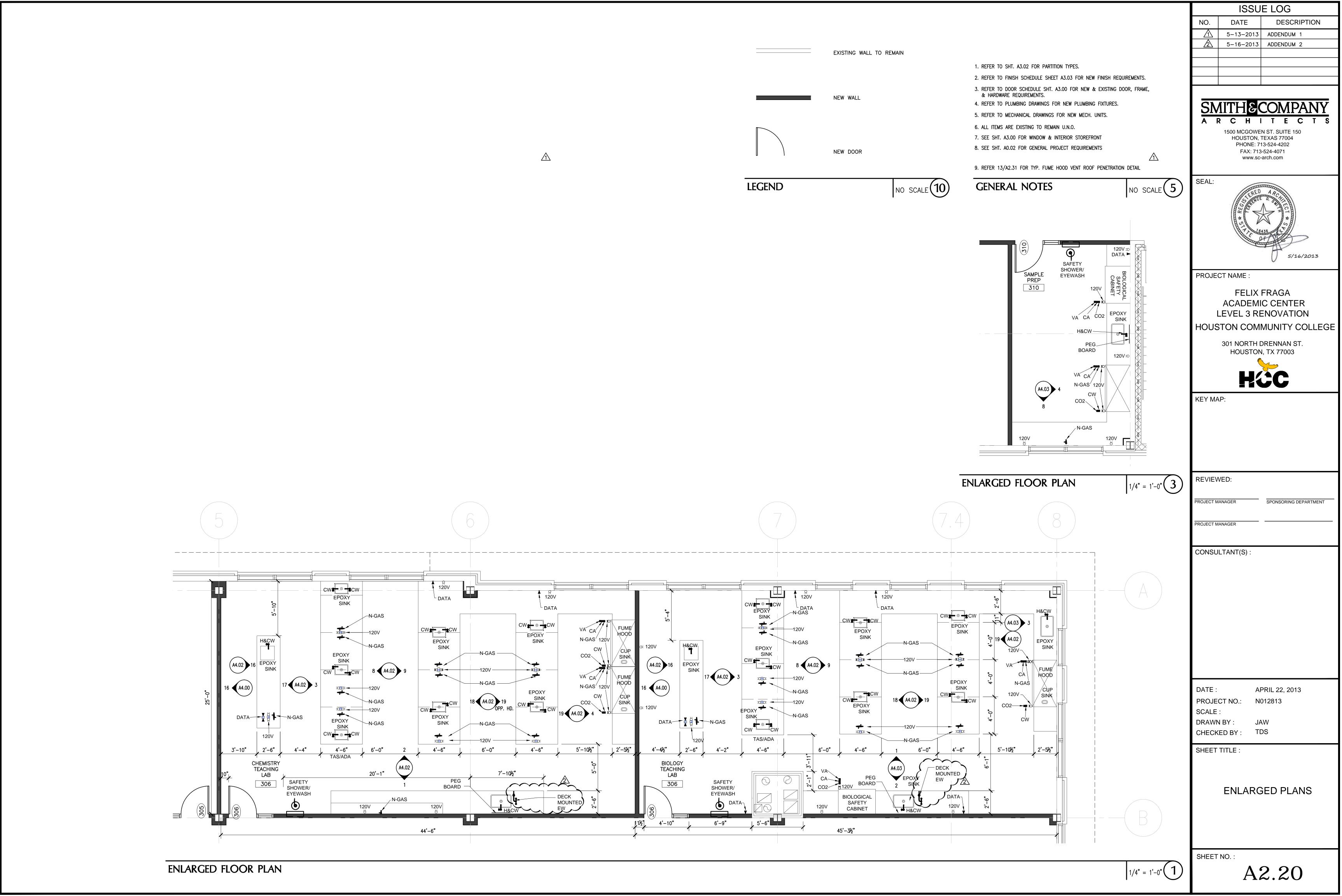
E1.02 SPECIFICATIONS AND NOTES

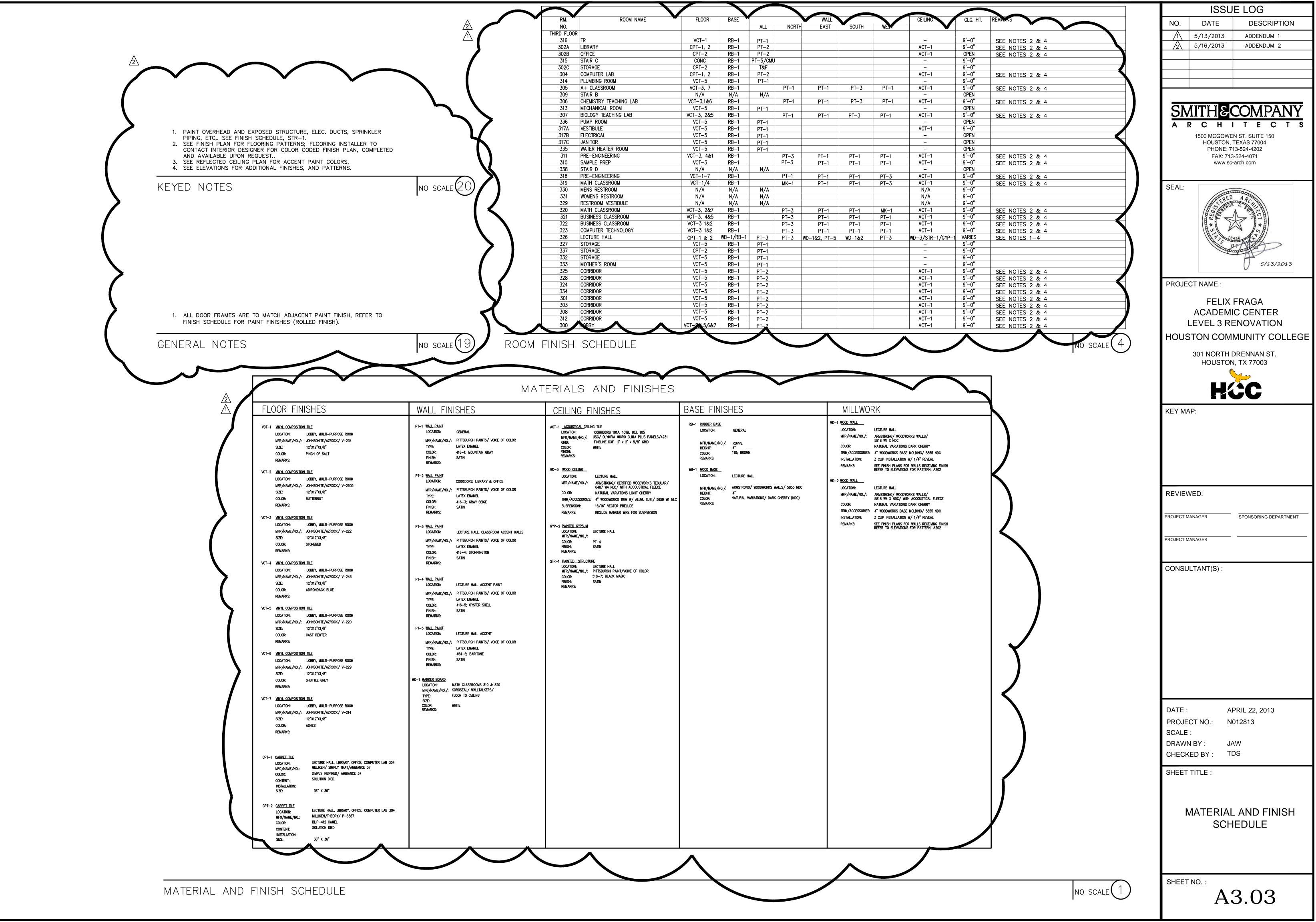
PLUMBING DRAWINGS

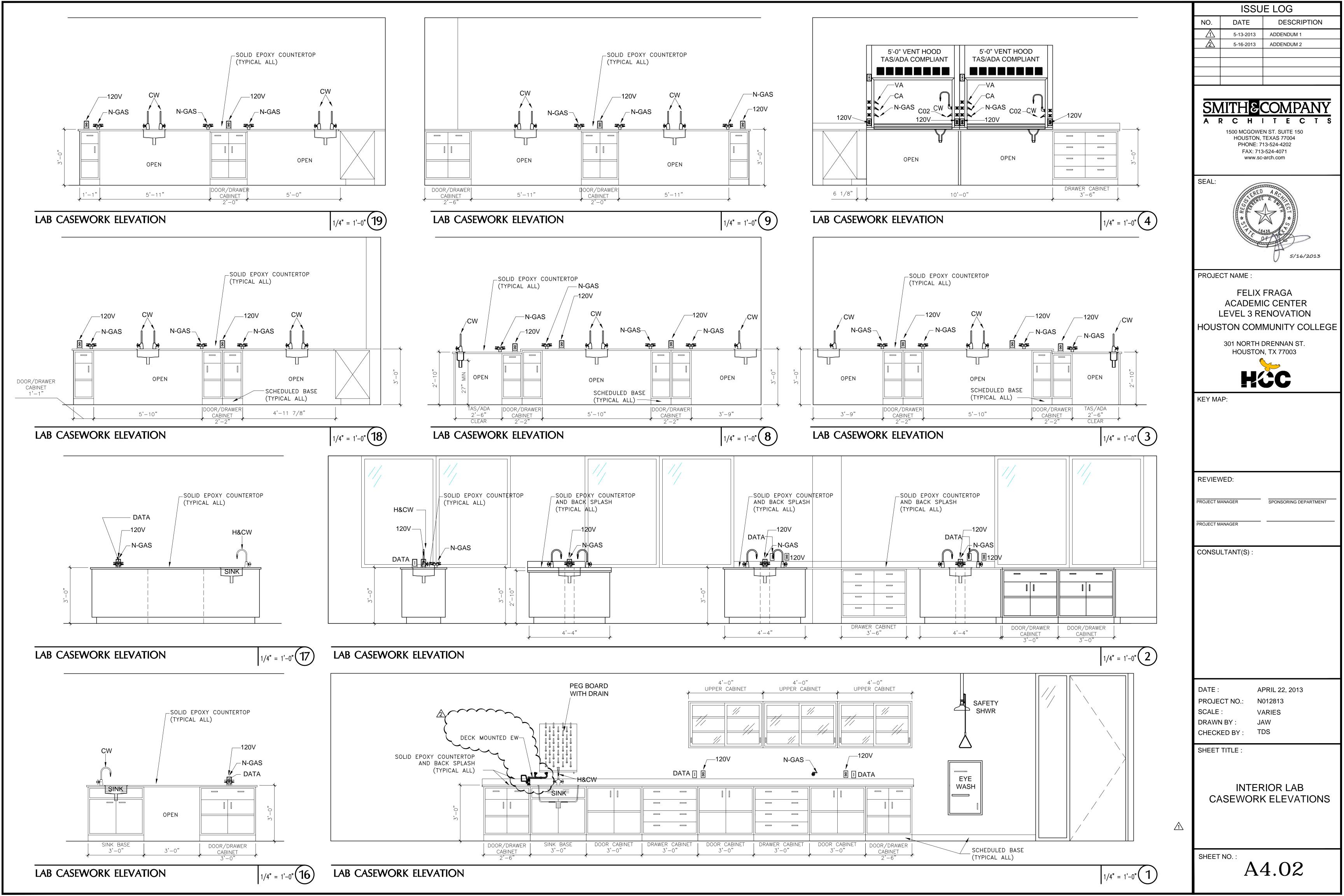
P1.01 SCHEDULES AND NOTES P2.01 FLOOR PLAN - SANITARY AND VENT PIPING FIRE PROTECTION DRAWING

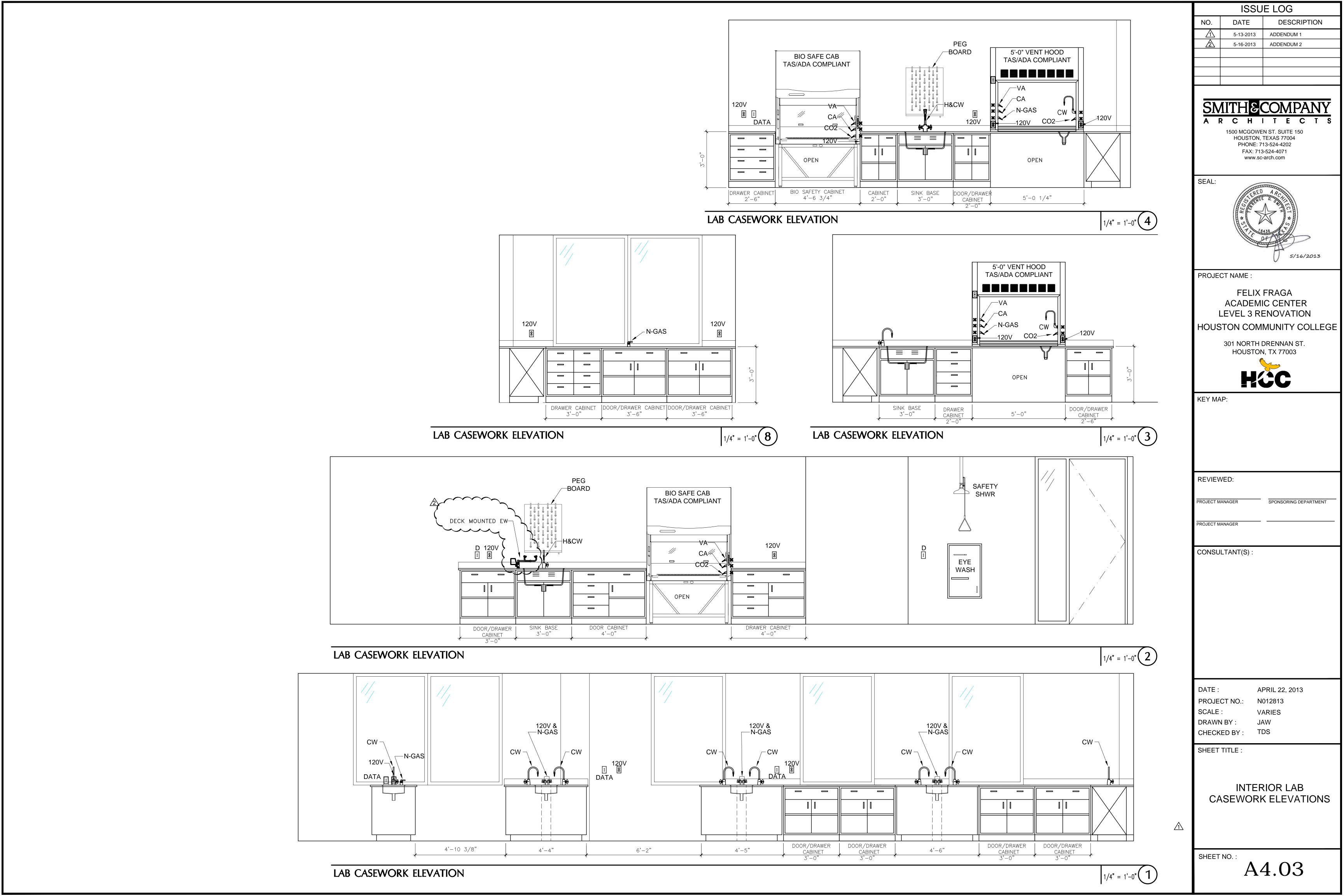
FP1.01 FIRE PROTECTION SYSTEM













#### **ADDENDUM NO. 2**

DATE: May 16<sup>th</sup> 2013

PROJECT: Felix Fraga Academic Center Level 3

Renovation

LOCATION: 301 N. Drennan St. Houston, Texas 77003

PROJECT NO.

DISTRIBUTION:
DELIVERED VIA: 05/16/2013

NO. PAGES: 3

PREPARED BY: Smith & Company Architects, Inc

This addendum forms a part of the Specifications for the Felix Fraga Academic Center Level 3 Renovation for Houston Community College, documents posted on April 22, 2013 for the subject project and modifies/add to them as noted below.

#### **CHANGES TO PROJECT MANUAL**

#### **SPECIFICATIONS**

- 1. Section 102113 TOILET COMPARTMENTS, dated April 22, 2013 replace the section with the attached section, dated May 16, 2013.
- 2. Section TABLE OF CONTENTS dated April 22, 2013, Add Section 097714-WOOD VENEER WALL PANELS, Pages 5, Dated May 16, 2013.
- 3. Section TABLE OF CONTENTS dated April 22, 2013, Add Section 095126 WOOD PANEL CEILINGS, Pages 6, Dated May 16, 2013.
- 4. Add attached Section 095126 WOOD PANEL CEILINGS, Dated May 16, 2013.
- 5. Add attached Section 097714-WOOD VENEER WALL PANELS, Dated May 16, 2013.

#### **CHANGES TO DRAWINGS**

1. Replace Sheet A000-Cover & Sheet Index of Drawings, Dated April 22, 2013, Replace with attached Sheet A000-Cover & Sheet Index of Drawings, Dated May 16<sup>th</sup>, 2013.



- 2. Replace Sheet A201-Level 3 Finish Floor Plan, Dated May 13, 2013, Replace with attached Sheet A201-Level 3 Finish Floor Plan, Dated May 16<sup>th</sup>, 2013.
- 3. Replace Sheet A220 -Enlarged Plans and Lab Legend, Dated May 13, 2013, Replace with attached Sheet A220 -Enlarged Plans and Lab Legend, Dated May 16<sup>th</sup>, 2013.
- 4. Replace Sheet A303 -Finish and Material Schedule, Dated May 13, 2013, Replace with attached Sheet A303 -Finish and Material Schedule, Dated May 16<sup>th</sup>, 2013.
- 5. Replace Sheet A402-Interior Lab Casework Elevations, Dated May 13, 2013, Replace with attached Sheet A402-Interior Lab Casework Elevations, Dated May 16<sup>th</sup>, 2013.
- 6. Sheet A2.20-Enlarged plans- add and install the following Chemical Storage cabinets, Qty 1 Cabinet, in Chemistry Teaching Lab 306. (Location in room to be determined).
  - -Mott Manufacturing (or approved equal)
  - -Vented Solvent Storage Unit Model No. 6453160 -36" X 54"
  - -With self closing / latching doors
  - -With vent ports on cabinet side(s)
- 7. Sheet A2.20-Enlarged plans- add and install the following Chemical Storage cabinets, Qty 1 Cabinet, in Biology Teaching Lab 307. (Location in room to be determined).
  - -Mott Manufacturing (or approved equal)
  - -Vented Solvent Storage Unit Model No. 6453160 -36" X 54"
  - -With self closing / latching doors
  - -With vent ports on cabinet side(s)
- 8. Sheet A2.20-Enlarged plans- add and install the following Chemical Storage cabinets, Qty 1 Cabinet, in Sample Prep 310 –. (Location in room to be determined).
  - -Mott Manufacturing (or approved equal)
  - -Vented Solvent Storage Unit Model No. 6453160 -36" X 54"
  - -With self closing / latching doors
  - -With vent ports on cabinet side(s)
- 9. Replace Sheet P1-01 Schedule, Notes, and Legend, Dated April 22, 2013, Replace with attached Sheet P1-01 Schedule, Notes, and Legend, Dated May 16<sup>th</sup>, 2013.
- Replace Sheet P2-01 Floor Plan Sanitary and Vent Piping, Dated April 22, 2013, Replace with attached Sheet P2-01 - Floor Plan - Sanitary and Vent Piping, Dated May 16<sup>th</sup>, 2013.
- Replace Sheet P3-01 Floor Plan Domestic and Gas Piping, Dated April 22, 2013, Replace with attached Sheet P3-01 - Floor Plan - Domestic and Gas Piping, Dated May 16<sup>th</sup>, 2013.
- 12. Add attached Sheet P4-01-Riser Diagrams, dated May 16<sup>th</sup>, 2013.



13. Replace Sheet P5-01 - Details, Dated April 22, 2013, Replace with attached Sheet P5-01-Details, Dated May 16<sup>th</sup>, 2013.

END OF ADDENDUM NO. 2

# **PIPING** MATERIAL S

ACID WASTE AND VENT PIPING: BELOW GRADE- SCHEDULE 40, ASTM D4101 ACID RESISTANT POLYPROPYLENE PIPE AND FITTINGS WITH FULL SOCKET FUSION WELD JOINTS, ORION OR APPROVED EQUAL GSR FUSEAL, ENFIELD AND ZURN.

ACID WASTE AND VENT PIPING: ABOVE GRADE (EXPOSED OR IN RETURN AIR PLENUM)- SCHEDULE 40, ASTM D3222, E84, ACID AND FIRE RESISTANT PVDF POLYVINYLIDENE FLUORIDE PIPE AND FITTINGS WITH FULL SOCKET FUSION WELD JOINTS, ORION OR APPROVED EQUAL GEORGE FISCHER, ENFIELD AND ZURN. OR PIPING MAY BE SCHOTT SCIENTIFIC/KIMAX, U.L CLASSIFIED CHEMICALLY RESISTANT BOROSILICATE GLASS.

ACID WASTE AND VENT PIPING: ABOVE GRADE (CONCEALED AND NOT IN RETURN AIR PLENUM)- SCHEDULE 40, ASTM D4101, ASTM E84, ACID RESISTANT, FLAME RETARDANT, POLYPROPYLENE PIPE. ORION OR APPROVED EQUAL GEORGE FISCHER, ENFIELD AND ZURN. OR PIPING MAY BE SCHOTT SCIENTIFIC/KIMAX, U.L CLASSIFIED CHEMICALLY RESISTANT BOROSILICATE GLASS.

DOMESTIC WATER: TYPE "L" COPPER TUBING WITH WROUGHT COPPER FITTINGS AND 95/5 (TIN/ANTIMONY) SOLDER JOINTS.

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NOTE: SCREWED JOINTS WILL NOT BE PERMITTED. NATURAL GAS: SCHEDULE 40 BLACK STEEL WITH CLASS 150 BLACK MALLEABLE SHALL BE PAINTED WITH GALVANIC PAINT. IRON WELDED FITTINGS. ROOF MOUNTED

A. ALL WELDING FITTINGS SHALL BE FACTORY-MADE AND SHALL BE FULL LINE SIZE, FOR EACH TEE, BRANCH, ELBOW ETC., WITH REDUCERS AFTER FITTINGS, IF REQUIRED.

NATURAL GAS PIPING SYSTEMS:

I. PIPING: ASTM A53 OR AI06, GRADE B.
A. NPS 8 AND SMALLER: SCHEDULE 40
B. NPS 10 AND LARGER: STD 0.375 WALL THICKNESS
2. JOINT CONSTRUCTION:
A. NPS 2 AND SMALLER: FORGED SOCKET WELDED STEEL.
B. NPS 2-1/2 AND LARGER: BUTT WELDED STEEL WITH FLANGED SERVICE CONNECTIONS.
C. GAS PIPING INSTALLED WITHIN BUILDINGS AND ENCLOSURES SHALL BE ALL WELDED CONSTRUCTION.
THREADED CONNECTIONS PERMITTED ONLY FOR SERVICE AND FINAL EQUIPMENT CONNECTIONS.
3. FITTINGS:
A. ANSI/ASME BI6. 9 BUTT WELDED WROUGHT-STEEL
B. ANSI/ASME BI6. II SOCKET WELDED FORGED STEEL
C. ANSI/ASME BI6. II BI6. 5 FLANGED FITTINGS, CLASS 125 OR 150
4. VALVES: BALL OR PLUG TYPE, PRESSURE CLASS 150 MINIMUM
A. WORKING PRESSURE LESS THAN I.0 PSIG: CSA CERTIFIED
B. WORKING PRESSURE I.0 PSIG AND GREATER: ANSI/ASME BI6. 33 AND CSA CERTIFIED.

CO2, VACUUM, AND COMPRESSED AIR: PROVIDE SOFT ANNEALED SEAMLESS TUBING COPPER TO ASTM B-75 CLEANED AND CAPPED BY THE MANUFACTURER, CONFORMING TO ASTM B88 WITH SWAGELOK FITTING JOINTS FOR INSTALLATION WITHIN LAB AREA. FITTINGS SHALL BE SWAGELOK FITTINGS AT VALVES CONNECTIONS. TUBING WALL THICKNESS SHALL BE SUITABLE FOR THE SWAGELOK FITTINGS AND SHALL NOT BE LESS THAN THE FOLLOWING WALL THICKNESS:

TUBE
O.D (INCHES)
3/8
1/2
5/8
5/8
3/4
7/8 WALL THICKNESS (INCHES) 0.035 0.041 0.052 0.062 0.062 0.073 0.083 0.104 0.125 0.167

ن. ت FIRE PROTECTION SYSTEM: SCHEDULE 40 BLACK STEEL PIPE WITH CLASS 150 BLACK MALLEABLE IRON SCREWED FITTINGS. PIPING 2 1/2" AND LARGER SHALL BE JOINED WITH VICTAULIC FITTINGS UTILIZING ROLL GROOVES. VICTAULIC REDUCING COUPLINGS "FIT" OR "PRESS FIT" SYSTEMS AND STRAP TYPE MECHANICAL TEES SHALL NOT BE USED.

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THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL OFFSETS. INSTALL PIPING AS CLOSE AS POSSIBLE TO LOCATIONS SHOWN. WHERE INTERFERENCE'S WITH COMPONENTS OF OTHER TRADE'S WORK (STRUCTURAL FOUNDATIONS OR OTHER BUILDING ELEMENTS) REQUIRE ROUTINGS AND LOCATIONS THAT VARY FROM THOSE SHOWN, THE CONTRACTOR SHALL OBTAIN PROJECT ENGINEER'S APPROVAL PRIOR TO INSTALLATION. NO ADDITIONAL COST SHALL BE GRANTED FOR THESE CHANGES.

BEFORE BEGINNING EXCAVATIONS OR DEMOLITION OF ANY NATURE WHATSOEVER, CONTRACTOR SHALL LOCATE ALL SERVICES AND UTILITIES OCCURRING WITHIN THE BOUNDS OF THE PROJECT. THE CONTRACTOR SHALL THEN PROCEED WITH CAUTION IN HIS WORK SO THAT NO UTILITY OR LINE SERVING AREAS THAT ARE TO REMAIN BE DAMAGED WITH A RESULTANT LOSS OF SERVICE. VERIFY THE SOURCE AND SERVICE OF EACH AND EVERY LINE ENCOUNTERED AND RECORD SERVICE, SIZE AND LOCATION ON RECORD DRAWINGS.

ROUGH-IN PLUMBING PIPING USING DIMENSIONS SHOWN ON ARCHITECTURAL DRAWINGS. LOCATION SHALL ALLOW INSTALLATION OF FIXTURES WITHOUT THE NEED TO FURR-OUT WALLS.

ى ت PROVIDE CLEANOUTS IN EXCESS OF THOSE SHOWN WHICH ARE REQUIRED BY THE PLUMBING CODE.

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1500 MCGOWEN ST. SUITE 150 HOUSTON, TEXAS 77004 PHONE: 713-524-4202 FAX: 713-524-4071 www.sc-arch.com

INDIVIDUAL FIXTURE SUPPLY AND DRAIN SERVICES ARE NOT SHOWN DUE TO DRAWING SPACE LIMITATIONS. CONTRACTOR SHALL PROVIDE ALL SERVICES FOR A COMPLETE FIRST CLASS INSTALLATION.

6 FURNISH AND INSTALL ALL NECESSARY VALVES, TRAPS, GAUGES, STRAINERS, UNIONS, ETC. FOR EACH PIECE EQUIPMENT HAVING PLUMBING CONNECTIONS TO FACILITATE PROPER FUNCTIONING AND SERVICING.

SEAL ALL PENETRATIONS THROUGH RATED WALLS, FLOORS AND CEILINGS WITH A UL LISTED ASSEMBLY PROVIDE A RATING EQUAL TO OR GREATER THAN THE RATING OF THE WALL, FLOOR OR CEILING.

EACH CONTRACTOR SHALL VISIT THE SITE AND ASCERTAIN FOR HIMSELF THE CONDITIONS TO BE MET THERE IN IMPLEMENTING HIS WORK AND MAKE DUE PROVISIONS FOR THE SAME. IT IS ASSUMED THAT THE CONTRACTOR HAS VISITED THE PREMISES AND THAT HIS COST ESTIMATE COVERS ALL NECESSARY LABOR AND MATERIALS TO PROPERLY ACCOMPLISH HIS WORK. FAILURE ON THE PART OF THE CONTRACTOR TO COMPLY WITH THIS REQUIREMENT SHALL NOT BE CONSIDERED JUSTIFICATION FOR OMISSIONS OR FAULTY WORK OR FOR THE PAYMENT OF ADDITIONAL COMPENSATION.

FIELD VERIFY EXISTING AND FUTURE GRADES WITHIN AREAS WHERE WORK IS BEING DONE.

<u>-</u>0. VERIFY EXACT LOCATION OF EQUIPMENT PRIOR TO INSTALLATION OF FLOOR DRAINS. RELOCATION DUE MISPLACEMENT SHALL BE AT CONTRACTORS EXPENSE.

INSULATE PIPING AS FOLLOWS:
DOMESTIC COLD WATER PIPING:
INSULATE AND VAPOR SEAL ALL COLD AND
(EXCEPTION: ALL PIPING EXPOSED TO THE SOFTENED SHALL BE PROVIDED WITH ALUMINUM). INSULATION.

DOMESTIC HOT WATER PIPING: INSULATE ALL HOT WATER PIPE WITH GLASS FIBER PIPE INSULATION WITH FACTORY-APPLIED

DRAINS:
INSULATE AND VAPOR SEAL ALL ABOVEGROUND P-TRAPS AND HORIZONTAL DRAIN PIPING RECEIVING
CONDENSATE OR ICE MAKER DRAINAGE WITH 1/2" GLASS PER FIBER INSULATION.
INSULATE AND VAPOR SEAL ROOF DRAIN AND OVERFLOW ROOF DRAIN SUMP, PIPING AND FITTINGS FROM
DRAIN TO VERTICAL LEADER WITH 1/2" GLASS FIBER INSULATION.
A.D.A. ACCESSIBLE LAVATORIES AND SINKS:
INSULATE ALL EXPOSED DRAIN PIPING AND WATER SUPPLY PIPING BENEATH A.D.A. COMPLIANT LAVATORIES
& SINKS WITH FULLY MOLDED CLOSED CELL VINYL INSULATION KIT AS MANUFACTURED BY TRUEBRO, BROCAR
OR MCGUIRE.

SUPPORT UNBURIED PIPE AS FOLLOWS:

HORIZONTAL PIPING:
HUBLESS CAST IRON SOIL PIPING SHALL BE SUPPORTED AT LEAST AT EVERY OTHER JOINT EXCEPT THAT WHEN
THE DEVELOPED LENGTH BETWEEN SUPPORTS EXCEEDS FOUR FEET, THEY SHALL BE PROVIDED AT EACH JOINT.
SUPPORTS SHALL ALSO BE PROVIDED AT EACH HORIZONTAL BRANCH CONNECTION. SUPPORTS SHALL BE PLACED
IMMEDIATELY ADJACENT TO THE COUPLING. SUSPENDED LINES SHALL BE BRACED TO PREVENT HORIZONTAL
MOVEMENT.

COPPER TUBING SHALL BE SUPPORTED AT NOT MORE THAN SIX FOOT INTERVALS FOR PIPING 1-1/2" AND AND NINE FOOT INTERVALS FOR PIPING 2" AND LARGER IN DIAMETER. HANGERS FOR NON-INSULATED COPPER PIPING SHALL HAVE A COPPER FINISH. IN POTENTIALLY DAMP LOCATIONS, NON-INSULATED COPPER PIPING HANGERS OR SUPPORTS SHALL BE PLASTIC-COATED. STEEL PIPING SHALL BE SUPPORTED AT INTERVALS OF NO GREATER THAN 6 FEET FOR 1/2" PIPING, 8 FEET FOR

VERTICAL PIPING: PROVIDE RISER CLAMP AT BASE AND AT EACH FLOOR LEVEL PIPING SHALL BE SUPPORTED AT INTERVALS OF NO GREATER I" PIPING AND 10 FEET FOR 1-1/4" AND LARGER PIPING.

MARKING AND IDENTIFICATION: IDENTIFY EACH PIPE WITH LABELING AT THE FOLLOWING LOCATIONS.

-AT EACH BRANCH TAKE-OFF FROM A MAIN -ON EACH SIDE OF A WALL PENETRATION -EVERY 20' OF STRAIGHT RUN OF PIPE -AT EQUIPMENT CONNECTIONS IF MORE THAN

DOMESTIC HOT WATER: 10' FROM

INDICATE DELIVERED WATER TEMPERATURE ON DOMESTIC HOT WATER SUPPLY AND RETURN LINES.

MEDIUM PRESSURE GAS PIPING: MEDIUM PRESSURE GAS PIPING (14" WIC TO 5 PI) SHALL BE IDENTIFIED BY THE STATEMENT, "WARNING TO 5 PI NATURAL GAS." THESE LABELS SHALL BE PLACED AT INTERVALS NOT EXCEEDING 30 FEET. ALL REGULATORS MEDIUM PRESSURE LINES SHALL HAVE IDENTIFICATION TAGS IN ACCORDANCE WITH APPLICABLE CODES.

7

SLEEVES:

FLOORS: PROVIDE UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE ABOVE GRADE FLOORS.

WALLS: PROVIDE UL FIRE RATED ASSEMBLIES WERE PIPES PENETRATE FIRE RATED WALLS.

WHERE PIPING PASSES THROUGH NON CEILING OR WALL, CLOSE OFF SPACE BETWEEN PIPE OR DUCT AND CONSTRUCTION WITH NORMAL GYPSUM WALLBOARD, REPAIR PLASTER SMOOTHED AND FINISHED TO MATCH REMAINDER OF WALL.

INSTALL CHROME OR STAINLESS STEEL ESCUTCHEONS WHERE PIPING PASSES THROUGH FINISHED SURFACE STAINLESS STEEL ESCUTCHEONS WHERE PIPING PASSES THROUGH FINISHED SURFACES

## G RADE 9F HORIZONTAL DRAINA G П **PIPING**

HORIZONTAL DRAINAGE PIPING SHALL RUN IN PRACTICAL ALIGNMENT AND UNIFORM SLOPE OF NOT LESS THAN ONE-FOURTH (1/4) OF AN INCH PER FOOT OR TWO PERCENT (2) TOWARD POINT OF DISPOSAL PROVIDED THAT, WHERE IT IS IMPRACTICAL DUE TO THE DEPTH OF THE STREET SEWER OR TO THE STRUCTURAL FEATURES OR TO THE ARRANGEMENT OF ANY BUILDING OR STRUCTURE TO OBTAIN A SLOPE OF ONE-FOURTH (1/4) OF AN INCH PER FOOT OR TWO PERCENT, ANY SUCH PIPE OR PIPING FOUR (4) INCHES OR LARGER IN DIAMETER MAY HAVE A SLOPE OF NOT LESS THAN ONE EIGHTH (1/8) OF AN INCH OR ONE (1) PERCENT, WHEN FIRST APPROVED BY THE ADMINISTRATIVE AUTHORITY.

**PLUMBING** 

FIXTURE

**SCHEDULE** 

<u>N</u>O

DATE

DESCRIPTION

ISSUE LOG

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5/15/2013

**ADDENDA #2** 

FCO_	WCO.		TMV_	VB-				LABOR TURRE	}	SK				SK-2					SK-	MARK
FLOOR	EYE WASH (SAFETY FIXTURE)  WALL CLEANOUT	SHOWER (SAFETY FIXTURE)	EMERGENCY THERMOSTATIC MIXING VALVE	VALVE BOX		GT-3	<u>GT-2</u>	LABORATORY GT-I TURRETS		CUP SINK				CUP SINK (CW ONLY)					SINGLE BOWL SINK (HW & CW)	M DESCRIPTION
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SCREW. COVER PLATE SHALL BE FLUSH TO FINISH WALL. COORDINATE WITH ARCHITECTURAL DRAWINGS FOR CASEWORK LOCATIONS, COVER PLATE SHALL THEN BE FLUSHED WITH CASE WORK'S FINISH BACK WALL.  4.04.0 J.R. SMITH, WITH SCREWED PLUG AND FLASHING RING AND COVER PLATE WITH SECURING SCREW. COVER PLATE SHALL BE FLUSH TO FINISH FLOOR, AND SUITABLE FOR FLOOR COVERING INSTALLED.	DECK MOUNTED EMERGENCY EYE WASH FIC ANTI-SURGE HEADS IN SAFETY GREEN NED ON, PUSH TYPE BRASS BALL VALVE SO ARCHITECTURAL DRAWINGS FOR EXACT MENT AND INSTALLATION MUST BE IN ACHIT AND INSTALL COMPLETE WITH DECK MING AND INSTALL COMPLETE WITH DECK MING AND FLASHING RING AND COVERNOON PLUG AND FLASHING RING RING RING AND FLASHING RING RING RING RING RING RING RING R	8356WCC HAWS, BARRIER-FREE COMBINATION SHOWER AND EYE/FACE WASH SHALL INCLUDE AN AXION MSRI EYE/FACE WASH HEAD SHALL FEATURE INVERTED DIRECTIONAL LAMINAR FLOW WHICH ACHIEVES ZERO VERTICAL VELOCITY SUPPLIED BY AN INTEGRAL FLOW CONTROL. UNIT SHALL ALSO INCLUDE THE AXION MSR HYDRODYNAMIC DESIGN STAINLESS STEEL SHOWERHEAD WITH FLOW CONTROL, A FULLY RECESSED WALL MOUNTED 18 GAUGE, TYPE 304 STAINLESS STEEL DEEP-DRAWN CABINET, WHEEL CHAIR ACCESSIBILITY, AND POLISHED CHROME-PLATED BRASS PULL-DOWN VALVE WITH EASY ACCESS IN-LINE STRAINER. UNIT SHALL ALSO INCLUDE BRASS PIPE AND FITTINGS, A DRAIN PAN, A FRONT-ACCESS MAINTENANCE PANEL, UNIVERSAL SIGN, I" NPT(F) INLET AND 2" NPT(F) DRAIN. OPERATING PRESSURE IS 30 - 90 PSI (2.1 - 6.2 BAR).	TM-5125 LEONARD, DURA-TROL® SOLID BIMETAL THERMOSTAT DIRECTLY LINKED TO VALVE PORTING. DURA-TROL® IS HIGHLY RESPONSIVE AND CANNOT BE DAMAGED BY EXTREMES IN TEMPERATURE, PRIMARY VALVE CAN BE SET TO THE CORRECT TEMPERATURE FOR THE APPLICATION. LOCKING TEMPERATURE REGULATOR TO PREVENT ACCIDENTAL MOVEMENT SET FOR 85°F (29°C), PRIMARY MIXING VALVE WILL CLOSE DOWN ON FAILURE OF COLD WATER SUPPLY, PRIMARY MIXING VALVE WITH SPECIAL INTERNAL COLD WATER BYPASS CAPABLE OF 40 GPM (151 L/MIN) @ 30 PSI (2.1 BAR) UPON FAILURE OF HOT WATER SUPPLY, ADJUSTABLE HIGH TEMPERATURE LIMIT STOP SET FOR 90°F (32°C), DIAL THERMOMETER (RANGE 0 TO 140°F, -10 TO 60°C), UNION ANGLE CHECKSTOPS WITH STRAINERS ON INLETS, STAINLESS STEEL BELLOWS THERMOSTAT IS FACTORY LOCKED @ 90°F, 32°C(ADJUSTABLE FROM 40°F TO 100°F, 4°C TO 32°C) TO ALLOW COLD WATER TO ENTER THE OUTLET SIDE OF THE PRIMARY MIXING VALVE.	MI-VB MIFAB, VALVE BOX, 12" X 12" X 4", MATERIAL, 14 GAGE SATINOAT STEEL DOOR AND AND 16 GAGE SATINCOAT STEEL BOX AND FRAME.	INDEX AS REQUIRED EACH TURRET (CA - COMPRESSED AIR [AIR], VAC VACUUM [VAC], NG NATURAL GAS [GAS], N2 NITROGEN [N2]).  LABORATORY GAS TURRETS AND FUME HOODS FIXTURES AND OUTLETS INSTALLED ON THE LAB CASEWORK ARE SPECIFIED ELSEWARE. HOWEVER PLUMBING CONTRACTOR SHALL BE REQUIRED TO INSTALL THESE OUTLETS AND RESPONSIBLE TO CONNECT TO CORRESPONDING SERVICE.	3.) GAS / VACUUM / COMPRESED AIR DOUBLE TURRET [DECK]: 980-909CAGCP CHICAGO FAUCETS, TURRET WITH SINGLE BALL VALVES @ 90°, LEVER HANDLES WITH AIR, GAS AND VAC SERVICE BUTTONS, E7TC - REMOVABLE SERRATED HOSE NOZZLE, 957-003K - 3/8" NPT INLET SHANK - ASSEMBLED TO TURRET.	2.) GAS / VACUUM / COMPRESED AIR DOUBLE TURRET [DECK]: 982-WSV909CAGCP CHICAGO FAUCETS, TURRET WITH TWO BALL VALVES @ 90°, LEVER HANDLES WITH AIR, GAS AND VAC SERVICE BUTTONS, E7TC - REMOVABLE SERRATED HOSE NOZZLE, 957-003K - 3/8" NPT INLET SHANK - ASSEMBLED TO TURRET.	I.) GAS / VACUUM / COMPRESED AIR SINGLE TURRET [WALL]: 986-WSV909AGVCP CHICAGO FAUCETS, TURRET WITH SINGLE BALL VALVE, LEVER HANDLE WITH AIR, GAS AND VAC SERVICE BUTTONS, E7T - REMOVABLE SERRATED HOSE NOZZLE 957-003K - 3/8" NPT INLET SHANK - ASSEMBLED TO TURRET.	#588991 GEORG FISCHER, 6" U-BEND JOINT IS FACTORY FUSED, I-I/2" - 4" U-BEND JOINT MUST	SINK IS TO BE EPOXY TYPE, PROVIDED AND INSTALLED BY CASE WORK. ALL PLUMBING UTILITIES LISTED BELOW SHELL BE INSTALLED BY PLUMBING CONTRACTOR. VALVES AND FAUCET SHALL BE SUPPLIED WITH FUME HOOD AND PROVIDED AND INSTALLED BY CASE WORK.	#588991 GEORG FISCHER, 6" U-BEND JOINT IS FACTORY FUSED, 1-1/2" - 4" U-BEND JOINT MUST BE FUSED IN THE FIELD	SEAMLESS BRASS TAILPIECE, CAST BRASS LOCK AND COUPLING NUT.	), 5-3/4" C-C RIGID ONLY IOZZLE OUTLET, METAL V	D BY CASE WORK. ALL PI UMBING CONTRACTOR.	#588991 GEORG FISCHER, 6" U-BEND JOINT IS FACTORY FUSED, 1-1/2" - 4" U-BEND JOINT MUST BE FUSED IN THE FIELD	153LT MCGUIRE, WROUGHT BRASS CHROME PLATED BAR SINK STRAINER WITH 1-1/2"X4" SEAMLESS BRASS TAILPIECE, CAST BRASS LOCK AND COUPLING NUT.	BV2165 MCGUIRE, QUARTER-TURN BRASS BALL VALVE SUPPLY / WHEEL HANDLE.	930-317SAM CHICAGO FAUCETS, DECK MOUNTED, 6"C-C RIGID/SWING ATMOSPHERIC VACUUM BREAKER GOOSENECK SPOUT, <u>E7FCJKCP</u> 0.7 GPM SERRATED HOSE NOZZLE OUTLET, 4"METAL WRISTBLADE HANDLES WITH SECURED RED AND BLUE SERVICE BUTTONS.	SINK IS TO BE EPOXY TYPE, PROVIDED AND INSTALLED BY CASE WORK. ALL PLUMBING UTILITIES LISTED BELOW SHELL BE INSTALLED BY PLUMBING CONTRACTOR.	REMARKS

HOUSTON COMMUNITY COLLEGE

301 NORTH DRENNAN ST. HOUSTON, TX 77003

FELIX FRAGA
ACADEMIC CENTER
LEVEL 3 RENOVATION

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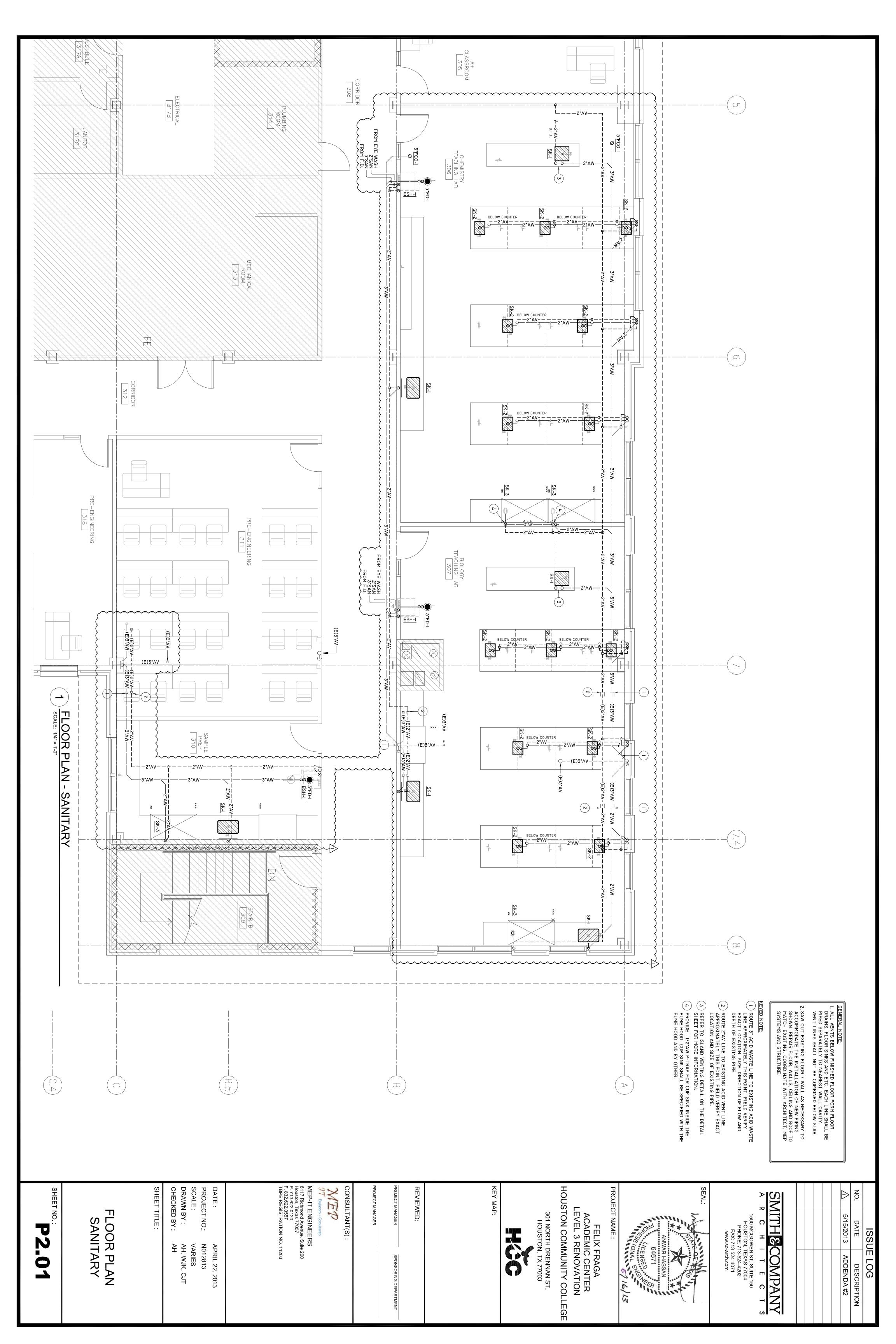
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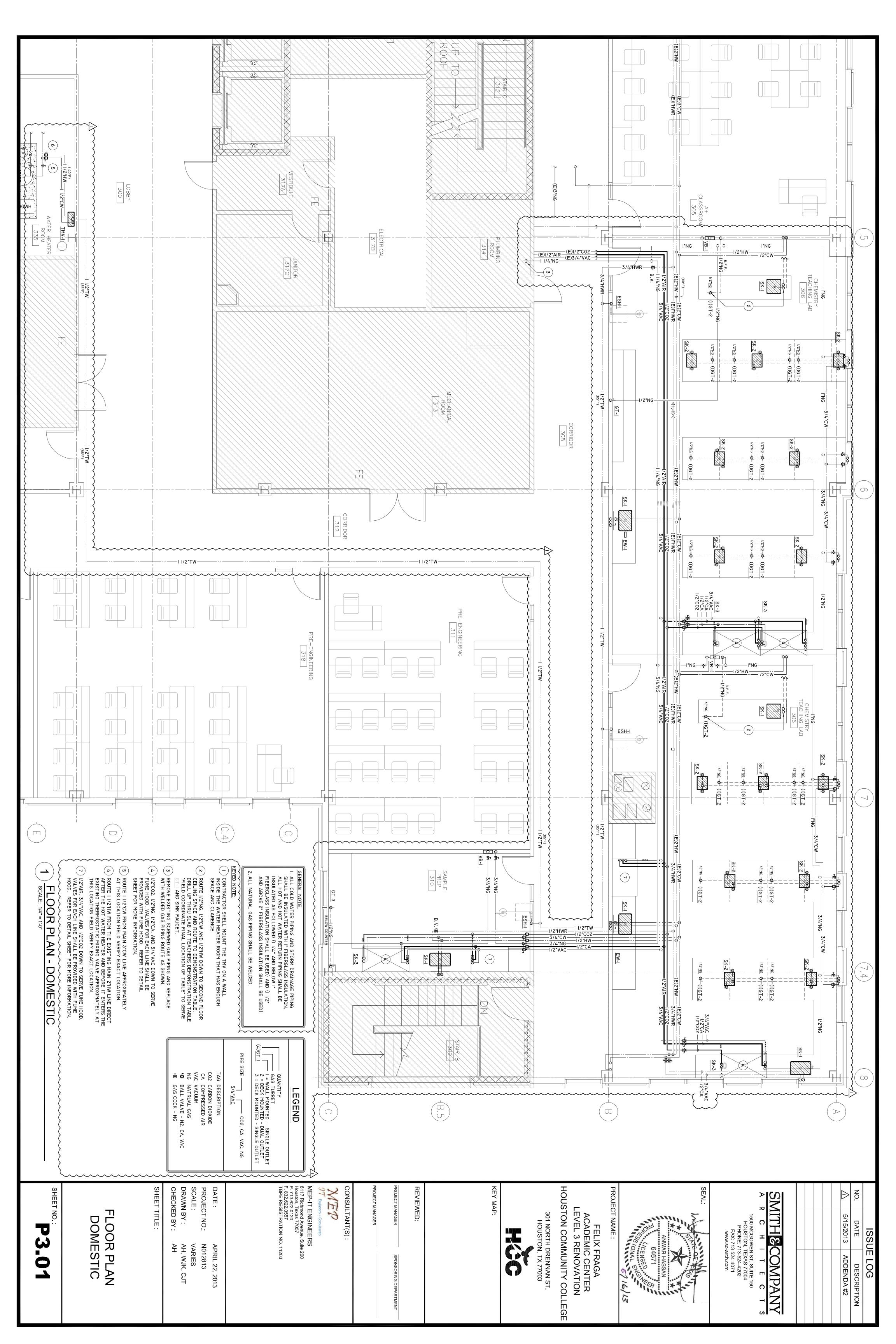
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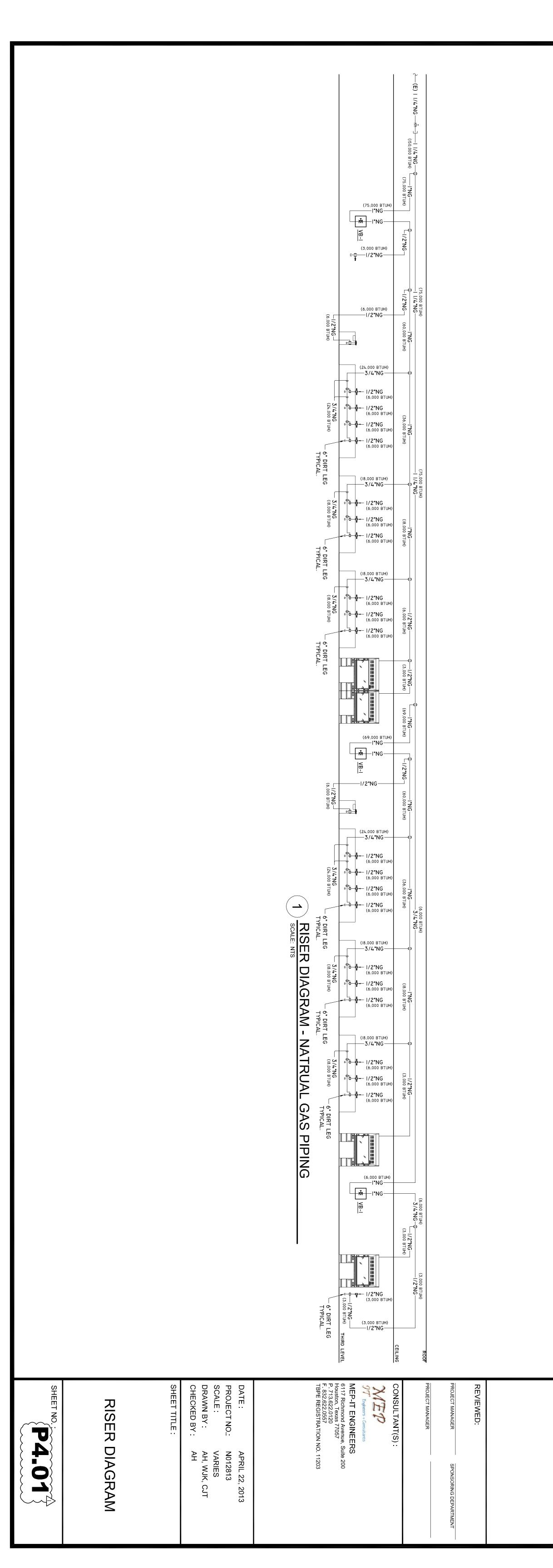
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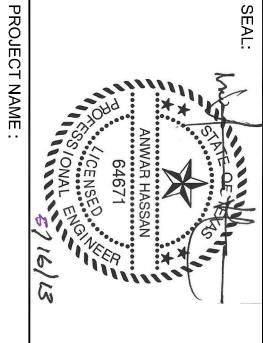
SCHEDULE, NOTES, AND LEGEND

SHEET NO 94









KEY MAP:

HOUSTON COMMUNITY COLLEGE

301 NORTH DRENNAN ST. HOUSTON, TX 77003

FELIX FRAGA ACADEMIC CENTER LEVEL 3 RENOVATION

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