



Addendum #1

Project: HCC Alief Renovation
Date: 10/29/12

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Prozign Architects

To: Glenn Jarrett, Project Manager, HCC

Contents of Addendum:

Q &A: This Document

Approved Substitutions:

Montel – Aetnastak Cantilever Library Shelving System

Revised Drawings: AD.104, AS.102, A.104, A.207, A.401, A.501, A.604, AF.105

Specifications: 06 22 00 Finish Carpentry and Millwork
08 80 00 Glazing
12 36 20 Laboratory Casework
10 11 00 Visual Display Surfaces

Other Documents: Asbestos Survey

SECTION 06 22 00 - FINISH CARPENTRY AND MILLWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes finish carpentry and millwork items including, but not limited to:
 - 1. Plastic-laminate cabinets.
 - 2. Plastic-laminate countertops.
 - 3. Upholstered millwork.
 - 4. Closet and utility shelving.
 - 5. Installation of:
 - a. Finish hardware.
 - b. Wood doors.

- B. Related Sections include the following:
 - 1. Division 05 Section "Cold-Formed Metal Framing".
 - 2. Division 05 Section "Miscellaneous Metals".
 - 3. Division 06 Section "Rough Carpentry".
 - 4. Division 06 Section "Finish Carpentry and Millwork".
 - 5. Division 07 Section "Joint Sealants".
 - 6. Division 08 Section "Flush Wood Doors".
 - 7. Division 08 Section "Door Hardware".
 - 8. Division 09 Section "Gypsum Wallboard Assemblies".
 - 9. Division 09 Section "Flooring Sections": For floor finishes abutting millwork.
 - 10. Division 09 Section "Painting".
 - 11. Division 22 Section "Plumbing".
 - 12. Division 26 Section "Electrical".

1.2 SUBMITTALS

- A. Product Data: Manufacturer's specifications and other data needed to prove compliance with specified requirements.

- B. Shop Drawings: Indicate size, material, veneer, and AWI grade construction details. Show locations and installation procedure of each millwork item. Include details of joints, attachments, and clearances.

- C. Samples:
 - 1. Plastic Laminate; 8 by 10 inches, for each type, color, pattern, and surface finish.
 - 2. Melamine, 8 by 10 inches, for each type, color, pattern, and surface finish.
 - 3. Upholstery fabric; 24 inches square for each type, color, and pattern.
 - 4. Padding, if any; 12 inches square for each type.

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FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

D. Manufacturer's installation instructions.

1.3 MINIMUM COMPLIANCE STANDARDS

A. The following document governs the work, except where more restrictive items are specified.

1. Architectural Woodwork Institute (AWI) "Quality Standards".

1.4 QUALITY ASSURANCE

A. This Section outlines only minimum standards and requirements. Bring all conflicts and discrepancies to the attention of the Architect and do not start work until such conflicts and discrepancies are clarified and corrected.

1.5 PROJECT CONDITIONS

A. Environmental Limitations: Do not deliver or install millwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.

B. Field Measurements: Where millwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.

2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

PART 2 - PRODUCTS

2.2 MATERIALS

A. General: Provide materials that comply with requirements of AWI's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.

B. Panel Products: Comply with the following:

1. Softwood Plywood: DOC PS 1.

E. Thermoset Decorative Panels: Particleboard or medium-density fiberboard finished with thermally fused, melamine-impregnated decorative paper complying with LMA SAT-1.

1. Pattern/Color/Texture/Manufacturer: As indicated on Finish Schedule or if not indicated as selected by Architect from manufacturer's full range.

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HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

- F. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or, if not indicated, as required by woodwork quality standard.
 - 1. Pattern/Color/Texture/Manufacturer: As indicated on Finish Schedule or if not indicated as selected by Architect from manufacturer's full range.
- G. Upholstery Materials: Upholstery Grade fabric.
 - 1. Pattern/Color/Texture/Manufacturer: As indicated on Finish Schedule or if not indicated as selected by Architect from manufacturer's full range.
- H. Other Materials: Provide other materials, not specifically described, but required for a complete and proper installation.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this Article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified.
 - 1. Do not use treated materials that do not comply with requirements of referenced woodworking standard or that are warped, discolored, or otherwise defective.
 - 2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
 - 3. Identify fire-retardant-treated materials with appropriate classification marking of UL, U.S. Testing, Timber Products Inspection, or another testing and inspecting agency acceptable to authorities having jurisdiction.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Comply with performance requirements of AWPA C20 (lumber) and AWPA C27 (plywood). Use the following treatment type:
 - 1. Interior Type A: Low-hygroscopic formulation.
 - 2. Mill lumber after treatment within limits set for wood removal that do not affect listed fire-test-response characteristics, using a woodworking plant certified by testing and inspecting agency.
 - 3. Mill lumber before treatment and implement special procedures during treatment and drying processes that prevent lumber from warping and developing discolorations from drying sticks or other causes, marring, and other defects affecting appearance of treated woodwork.
 - 4. Kiln-dry materials before and after treatment to levels required for untreated materials.

2.4 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets as indicated on Drawings, except for items specified in Division 8 Section, Door

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HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

Hardware. If not indicated on Drawings or specified in Division 8 Section, Door Hardware, comply with the following subject to approval of Architect.

2.5 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Wood furring, blocking, shims, and hanging strips concealed within other construction before woodwork installation is specified in Section 06 10 00 "Rough Carpentry". Wood furring, blocking, shims, and hanging strips for installing woodwork items which is not concealed within other construction before woodwork installation are a part of this Section.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.
- C. Adhesives, General: Do not use adhesives that contain urea formaldehyde.
- D. Adhesive for Bonding Plastic Laminate: Unpigmented contact cement.
 - 1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.
- G. Other Materials: Provide other materials, not specifically described, but required for a complete and proper installation.

2.5 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Unless otherwise indicated, provide Premium-grade interior woodwork complying with referenced quality standard.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- C. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.
- D. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members and Rails: 1/16 inch.
- E. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

1. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.
- F. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
1. Seal edges of openings in countertops with a coat of varnish.
- 2.6 PLASTIC-LAMINATE CABINETS
- A. Grade: Premium.
- B. AWI Type of Cabinet Construction: As indicated.
- C. Reveal Dimension: As indicated.
- D. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:
1. Horizontal Surfaces Other Than Tops: Grade HGS.
 2. Postformed Surfaces: Grade HGP.
 3. Vertical Surfaces: Grade VGS.
 4. Edges: Grade HGS.
- E. Materials for Semiexposed Surfaces:
1. Surfaces Other Than Drawer Bodies: Thermoset decorative panels.
 2. Drawer Sides and Backs: Solid-hardwood lumber.
 3. Drawer Bottoms: Hardwood plywood.
- F. Concealed Backs of Panels with Exposed Plastic Laminate Surfaces: High-pressure decorative laminate, Grade BKL.
- G. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
1. As indicated on Finish Schedule or if not indicated as selected by Architect from manufacturer's full range.
- H. Provide dust panels of 1/4 inch plywood or tempered hardboard above compartments and drawers, unless located directly under tops.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

2.7 PLASTIC-LAMINATE COUNTERTOPS

- A. Grade: Premium.
- B. High-Pressure Decorative Laminate Grade: HGS.
- C. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
 - 1. As indicated on Finish Schedule or if not indicated as selected by Architect from manufacturer's full range.
- D. Edge Treatment: Same as laminate cladding on horizontal surfaces, unless indicated otherwise.
- E. Core Material:
 - 1. 3/4 inch thick, unless indicated otherwise.
 - 2. At all lavatory or sink counters use treated plywood comply with P.S. 51, Type II (water resistant).
- F. Backer Sheet: Provide plastic-laminate backer sheet, Grade BKL, on underside of countertop substrate.

2.8 UPHOLSTERED MILLWORK FABRICATION

- A. Fabricate fabric-covered items with molded padding beneath fabric, if indicated or required, and with fabric covering free of welts, creases, stretch lines, and wrinkles. For each upholstered component, install fabric pile and pattern run in a consistent direction.
- B. Fabric: Upholstery Grade
- C. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of upholstered millwork complying with the following requirements:
 - 1. As indicated on Finish Schedule or if not indicated as selected by Architect from manufacturer's full range.
- D. Padding Material: If indicated or required shall be of type, density, and thickness recommended by fabricator to suit application.

2.9 CLOSET AND UTILITY SHELVING

- A. Shelf Material: 3/4-inch thermoset decorative panel with PVC or polyester edge banding.
- B. Cleats: 3/4-inch solid lumber.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

- C. Rods: 1-1/2 inch diameter hardwood dowel, unless indicated otherwise, complete with plastic rod holders and attachment hardware and screws.

2.10 SHOP FINISHING

- A. Grade: Provide finishes of same grades as items to be finished.
- B. General: Drawings indicate items that are required to be shop finished. Finish such items at fabrication shop as specified in this Section. Refer to Section 09 90 00, "Painting" for finishing architectural woodwork not indicated to be shop finished.
- C. Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.
- D. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork. Apply two coats to back of paneling and to end-grain surfaces. Concealed surfaces of plastic-laminate-clad woodwork do not require backpriming when surfaced with plastic laminate, backing paper, or thermoset decorative panels.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.
- B. Before installing finish carpentry and millwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

- A. Grade: Install finish carpentry and millwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.
- B. Assemble finish carpentry and millwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.
- C. Install finish carpentry and millwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.
- D. Scribe and cut finish carpentry and millwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- E. Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with chemical treatment manufacturer's written instructions, including those for adhesives used to install woodwork.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

- F. Anchor finish carpentry and millwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails for exposed fastening, countersunk and filled flush with finish carpentry and millwork and matching final finish if transparent finish is indicated.
- G. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.
1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 2. Maintain veneer sequence matching of cabinets with transparent finish.
 3. Unless hanging cleats are indicated on Drawings, fasten wall cabinets through back, near top and bottom, at ends and not more than 16 inches o.c. with No. 10 wafer-head screws sized for 1-inch penetration into wood framing, blocking, or hanging strips, or No. 10 wafer-head sheet metal screws through metal backing or metal framing behind wall finish.
- H. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.
1. Install countertops with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 2. Secure backsplashes to tops with concealed metal brackets at 16 inches o.c. and to walls with adhesive.
 3. Calk space between backsplash and wall with sealant specified in Section, 07 92 00, "Joint Sealants".
- I. Upholstered Millwork: Install upholstered items in locations indicated and fastened securely to substrates according to manufacturer's written installation instructions.

3.3 FINISH HARDWARE INSTALLATION

- A. The supplier will mark each item hardware for location. Protect the markings until each item is installed. If any item is delivered to the job not properly marked, return it to the supplier for marking before attempting to install it.
- B. Check markings on hardware for proper location. Install and make necessary adjustments for proper working order. Any hardware damaged by improper adjustment or careless abuse will be replaced by the Contractor at his expense.
- C. Provide clean, properly sized and accurately placed mortises and drilled holes for all mortise hardware such as locksets and for cylindrical locks where specified only.
- D. Fit all surface-applied hardware accurately.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

- E. After hardware is installed, protect exposed surfaces by use of heavy paper and masking tape and maintain until job completion.
- F. Remove all finish hardware except that which is primed for painting before painter's finish is applied. Permanently replace and re-adjust for proper function after painter's finish has dried hard.
- G. Millwork contractor shall be responsible for hardware on millwork.

3.4 PLASTIC LAMINATE FACED WOOD DOOR INSTALLATION

- A. Protect all doors during handling.
- B. Refer to Section 08 71 00, "Door Hardware" for hardware requirements.
- C. Install doors in accordance with manufacturer's instructions.
- D. Install and adjust doors for smooth, quiet operation.

3.5 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean woodwork on exposed and semiexposed surfaces.
- D. Clean upholstery of dirt, dust, grease, and other matter detrimental to good appearance. Remove loose threads and repair minor abrasions and imperfections in finishes.
- E. Replace upholstery fabric damaged during installation.

END OF SECTION

SECTION 08 80 00 - GLAZING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes glazing for the following products and applications, including those specified in other Sections where glazing requirements are specified by reference to this Section:

1. Aluminum Windows.
2. Hollow Metal Doors and Frames.
3. Flush Wood Doors.
4. Aluminum Entrances and Storefronts.
5. Interior borrowed lites.
6. Solar control window film.

- B. Related Sections include the following:

1. Division 07 Section "Joint Sealants".
2. Division 08 Section "Hollow Metal Doors and Frames".
3. Division 08 Section "Flush Wood Doors".
4. Division 08 Section "Aluminum-Framed Entrances and Storefronts".
5. Division 08 Section "Automatic Entrance Doors".
6. Division 08 Section "Mirrors".

1.2 PERFORMANCE REQUIREMENTS

- A. Delegated Design: Design glass, including comprehensive engineering analysis according to ASTM E 1300 and ICC's 2006 International Building Code by a qualified professional engineer, using the following design criteria:

1. Design Wind Pressures: As indicated on Drawings.
2. Vertical Glazing: For glass surfaces sloped 15 degrees or less from vertical, design glass to resist design wind pressure based on glass type factors for short-duration load.
3. Thickness of Patterned Glass: Base design of patterned glass on thickness at thinnest part of the glass.
4. Differential Shading: Design glass to resist thermal stresses induced by differential shading within individual glass lites.

1.3 PRECONSTRUCTION TESTING

- A. Preconstruction Adhesion and Compatibility Testing: Test each glazing material type, tape sealant, gasket, glazing accessory, and glass-framing member for adhesion to and compatibility with elastomeric glazing sealants.

1. Testing will not be required if data are submitted based on previous testing of current sealant products and glazing materials matching those submitted.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

1.4 SUBMITTALS

- A. Product Data: For each glass product and glazing material indicated.
- B. Samples:
 - 1. For each type of glass product other than clear monolithic vision glass; 12 inches square.
 - 2. For each color (except black) of exposed glazing sealant indicated; 3 inches long.
 - 3. For each type and color of solar control window film; 12 inches square.
- C. Glazing Schedule: List glass types and thicknesses for each size opening and location. Use same designations indicated on Drawings.
- D. Delegated-Design Submittal: For glass indicated to comply with performance requirements and design criteria, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- E. Preconstruction adhesion and compatibility test report.

1.5 QUALITY ASSURANCE

- A. This Section outlines only minimum standards and requirements. Bring all conflicts and discrepancies to the attention of the Architect and do not start work until such conflicts and discrepancies are clarified and corrected.
- B. Glazing Publications: Comply with published recommendations of glass product manufacturers and organizations below, unless more stringent requirements are indicated. Refer to these publications for glazing terms not otherwise defined in this Section or in referenced standards.
 - 1. IGMA Publication for Insulating Glass: SIGMA TM-3000, "North American Glazing Guidelines for Sealed Insulating Glass Units for Commercial and Residential Use".
- C. Safety Glazing Labeling: Where safety glazing labeling is indicated, permanently mark glazing with certification label of [the SGCC or another certification agency acceptable to authorities having jurisdiction]. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.
- D. Insulating-Glass Certification Program: Permanently marked either on spacers or on at least one component lite of units with appropriate certification label of IGCC.

1.6 WARRANTY

- A. Manufacturer's Special Warranty for Coated-Glass Products: Manufacturer's standard form in which coated-glass manufacturer agrees to replace coated-glass units that deteriorate within specified warranty period. Deterioration of coated glass is defined as defects developed from normal use that are not attributed to glass breakage or to maintaining and cleaning coated glass contrary to manufacturer's written instructions. Defects include peeling, cracking, and other indications of deterioration in coating.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

1. Warranty Period: Ten (10) years from date of Substantial Completion.

- B. Manufacturer's Special Warranty on Insulating Glass: Manufacturer's standard form in which insulating-glass manufacturer agrees to replace insulating-glass units that deteriorate within specified warranty period. Deterioration of insulating glass is defined as failure of hermetic seal under normal use that is not attributed to glass breakage or to maintaining and cleaning insulating glass contrary to manufacturer's written instructions. Evidence of failure is the obstruction of vision by dust, moisture, or film on interior surfaces of glass.
 1. Warranty Period: Ten (10) years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 GLASS PRODUCTS, GENERAL

- A. Thickness: Where glass thickness is indicated, it is a minimum. Provide glass lites in thicknesses as needed to comply with requirements indicated.

- B. Strength: Where float glass is indicated, provide annealed float glass, Kind HS heat-treated float glass, or Kind FT heat-treated float glass as needed to comply with "Performance Requirements" Article. Where heat-strengthened glass is indicated, provide Kind HS heat-treated float glass or Kind FT heat-treated float glass as needed to comply with "Performance Requirements" Article. Where fully tempered glass is indicated, provide Kind FT heat-treated float glass.

- C. Thermal and Optical Performance Properties: Provide glass with performance properties specified, as indicated in manufacturer's published test data, based on procedures indicated below:
 1. U-Factors: Center-of-glazing values, according to NFRC 100 and based on LBL's WINDOW 5.2 computer program, expressed as Btu/sq. ft. x h x deg F.
 2. Solar Heat-Gain Coefficient and Visible Transmittance: Center-of-glazing values, according to NFRC 200 and based on LBL's WINDOW 5.2 computer program.
 3. Visible Reflectance: Center-of-glazing values, according to NFRC 300.

2.2 GLASS PRODUCTS

- A. Float Glass: ASTM C 1036, Type I, Quality-Q3, Class I (clear) unless otherwise indicated.

- B. Heat-Treated Float Glass: ASTM C 1048; Type I; Quality-Q3; Class I (clear) unless otherwise indicated; of kind and condition indicated.

- C. Uncoated Tinted Float Glass: Class 2, complying with other requirements specified.
 1. Tint Color: Gray.
 2. Visible Light Transmittance: Percent minimum as selected by Architect from manufacturer's full range.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

- D. Tempered Patterned Glass: ASTM C 1048, Kind FT (fully tempered), Type II, Class 1 (clear), Form 3; Quality-Q6, Finish F1 (patterned one side).

2.3 INSULATING GLASS

- A. Insulating-Glass Units: Factory-assembled units consisting of sealed lites of glass separated by a dehydrated interspace, qualified according to ASTM E 2190, and complying with other requirements specified.

- 1. Sealing System: Dual seal.
- 2. Spacer: Manufacturer's standard spacer material and construction.

2.4 GLAZING GASKETS

- A. Dense Compression Gaskets: Molded or extruded gaskets of profile and hardness required to maintain watertight seal, made from one of the following:

- 1. Neoprene complying with ASTM C 864.
- 2. EPDM complying with ASTM C 864.
- 3. Silicone complying with ASTM C 1115.
- 4. Thermoplastic polyolefin rubber complying with ASTM C 1115.

- B. Soft Compression Gaskets: Extruded or molded, closed-cell, integral-skinned neoprene, EPDM, silicone, or thermoplastic polyolefin rubber gaskets complying with ASTM C 509, Type II, black; of profile and hardness required to maintain watertight seal.

- 1. Application: Use where soft compression gaskets will be compressed by inserting dense compression gaskets on opposite side of glazing or pressure applied by means of pressure-glazing stops on opposite side of glazing.

2.5 GLAZING SEALANTS

- A. General:

- 1. Compatibility: Provide glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
- 2. Suitability: Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
- 3. VOC Content: For sealants used inside of the weatherproofing system, not more than 250 g/L when calculated according to 40 CFR 59, Subpart D.
- 4. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

- B. Glazing Sealant: Neutral-curing silicone glazing sealant complying with ASTM C 920, Type S, Grade NS, Class 100/50, Use NT.

2.6 GLAZING TAPES

- A. Back-Bedding Mastic Glazing Tapes: Preformed, butyl-based, 100 percent solids elastomeric tape; nonstaining and nonmigrating in contact with nonporous surfaces; with or without spacer rod as recommended in writing by tape and glass manufacturers for application indicated; and complying with ASTM C 1281 and AAMA 800 for products indicated below:
 - 1. AAMA 804.3 tape, where indicated.
 - 2. AAMA 806.3 tape, for glazing applications in which tape is subject to continuous pressure.
 - 3. AAMA 807.3 tape, for glazing applications in which tape is not subject to continuous pressure.

- B. Expanded Cellular Glazing Tapes: Closed-cell, PVC foam tapes; factory coated with adhesive on both surfaces; and complying with AAMA 800 for the following types:
 - 1. AAMA 810.1, Type 1, for glazing applications in which tape acts as the primary sealant.
 - 2. AAMA 810.1, Type 2, for glazing applications in which tape is used in combination with a full bead of liquid sealant.

2.7 SOLAR CONTROL WINDOW FILM

- A. Type: Antimony Tin Oxide.

- B. Performance:
 - 1. Visible Light Transmission: 67%
 - 2. Visible Light Reflectance Interior: 9%
 - 3. Visible Light Reflectance Exterior: 9%
 - 4. Glare Reduction: 25%
 - 5. Shading Coefficient: 0.53
 - 6. Total Solar Transmittance: 27%
 - 7. Total Solar Reflectance: 19%
 - 8. Total Solar Absorption: 54%
 - 9. Ultraviolet Rejection: 99.9%
 - 10. IR Rejection: 92%
 - 11. Total Solar Energy Rejection: 54%

- C. Approved Product/Manufacturer: "IRIS 70" manufactured by GeoShield architectural window film, Baton Rouge, LA; (800) 234-6133, or Architect approved equal.

2.8 MISCELLANEOUS GLAZING MATERIALS

- A. Cleaners, Primers, and Sealers: Types recommended by sealant or gasket manufacturer.

- B. Setting Blocks: Elastomeric material with a Shore, Type A durometer hardness of 85, plus or minus 5.

- C. Spacers: Elastomeric blocks or continuous extrusions of hardness required by glass manufacturer to maintain glass lites in place for installation indicated.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

- D. Edge Blocks: Elastomeric material of hardness needed to limit glass lateral movement (side walking).
- E. Cylindrical Glazing Sealant Backing: ASTM C 1330, Type O (open-cell material), of size and density to control glazing sealant depth and otherwise produce optimum glazing sealant performance.

2.9 INSULATING-GLASS TYPES

A. Low-E-coated, clear insulating glass:

- 1. Overall Unit Thickness: 1 inch.
- 2. Outdoor Lite: 1/4 inch thick clear float glass with PPG Solarban 60 Low-E coating on the Number 2 surface as viewed from exterior.
- 3. Interspace Content: 1/2 inch thick air.
- 4. Indoor Lite: 1/4 inch thick clear float glass.
- 5. Low-E Coating: On second surface as viewed from exterior.
- 6. Performance: SHGC of 0.40, and U-Value of 0.51, unless indicated otherwise.
- 7. Provide annealed, heat-strengthened, and tempered glass as required by Code.
- 8. Location: As scheduled on Drawings.

B. Low-E-coated, tinted insulating glass:

- 1. Overall Unit Thickness: 1 inch.
- 2. Outdoor Lite: 1/4 inch thick gray tinted (PPG Graylite) float glass.
- 3. Interspace Content: 1/2 inch thick air.
- 1. Indoor Lite: 1/4 inch thick clear float glass with PPG Solarban 60 Low-E coating on the Number 3 surface as viewed from exterior.
- 2. Performance: SHGC of 0.17, and U-Value of 0.31, unless indicated otherwise.
- 3. Provide annealed, heat-strengthened, and tempered glass as required by Code.
- 4. Location: As scheduled on Drawings.

PART 3 - EXECUTION

3.1 GLAZING, GENERAL

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Adjust glazing channel dimensions as required by Project conditions during installation to provide necessary bite on glass, minimum edge and face clearances, and adequate sealant thicknesses, with reasonable tolerances.
- C. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

- D. Apply primers to joint surfaces where required for adhesion of sealants, as determined by preconstruction testing.
- E. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- F. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- G. Provide spacers for glass lites where length plus width is larger than 50 inches (1270 mm).
- H. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

3.2 TAPE GLAZING

- A. Position tapes on fixed stops so that, when compressed by glass, their exposed edges are flush with or protrude slightly above sightline of stops.
- B. Install tapes continuously, but not necessarily in one continuous length. Do not stretch tapes to make them fit opening.
- C. Cover vertical framing joints by applying tapes to heads and sills first and then to jambs. Cover horizontal framing joints by applying tapes to jambs and then to heads and sills.
- D. Place joints in tapes at corners of opening with adjoining lengths butted together, not lapped. Seal joints in tapes with compatible sealant approved by tape manufacturer.
- E. Apply heel bead of elastomeric sealant.
- F. Center glass lites in openings on setting blocks and press firmly against tape by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings.
- G. Apply cap bead of elastomeric sealant over exposed edge of tape.

3.3 GASKET GLAZING (DRY)

- A. Cut compression gaskets to lengths recommended by gasket manufacturer to fit openings exactly, with allowance for stretch during installation.
- B. Insert soft compression gasket between glass and frame or fixed stop so it is securely in place with joints miter cut and bonded together at corners.
- C. Installation with Drive-in Wedge Gaskets: Center glass lites in openings on setting blocks and press firmly against soft compression gasket by inserting dense compression gaskets formed and installed to lock in place against faces of removable stops. Start gasket applications at corners and work toward centers of openings. Compress gaskets to produce a weathertight seal without

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.

- D. Installation with Pressure-Glazing Stops: Center glass lites in openings on setting blocks and press firmly against soft compression gasket. Install dense compression gaskets and pressure-glazing stops, applying pressure uniformly to compression gaskets. Compress gaskets to produce a weathertight seal without developing bending stresses in glass. Seal gasket joints with sealant recommended by gasket manufacturer.
- E. Install gaskets so they protrude past face of glazing stops.

3.4 SEALANT GLAZING (WET)

- A. Install continuous spacers, or spacers combined with cylindrical sealant backing, between glass lites and glazing stops to maintain glass face clearances and to prevent sealant from extruding into glass channel and blocking weep systems until sealants cure. Secure spacers or spacers and backings in place and in position to control depth of installed sealant relative to edge clearance for optimum sealant performance.
- B. Force sealants into glazing channels to eliminate voids and to ensure complete wetting or bond of sealant to glass and channel surfaces.
- C. Tool exposed surfaces of sealants to provide a substantial wash away from glass.

3.5 SOLAR CONTROL WINDOW FILM INSTALLATION

- A. Clean glass and install solar control window film in accordance with manufacturer's instructions for complete coverage of glass indicated to receive solar control window film.

3.6 CLEANING AND PROTECTION

- A. Protect exterior glass from damage immediately after installation by attaching crossed streamers to framing held away from glass. Do not apply markers to glass surface. Remove nonpermanent labels and clean surfaces.
- B. Protect glass and solar control window film from contact with contaminating substances resulting from construction operations. If, despite such protection, contaminating substances do come into contact with glass and solar control window film, remove substances immediately as recommended in writing by glass and solar control window film manufacturers.
- C. Examine glass surfaces adjacent to or below exterior concrete and other masonry surfaces at frequent intervals during construction, but not less than once a month, for buildup of dirt, scum, alkaline deposits, or stains; remove as recommended in writing by glass manufacturer.
- D. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

- E. Remove and replace solar control window film that is wrinkled, scratched, does not provide full coverage of glass, or that is damaged from natural causes, accidents, and vandalism, during construction period.

END OF SECTION

SECTION 10 11 00 - VISUAL DISPLAY SURFACES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes porcelain enamel markerboards and accessories where indicated.
- B. Related Sections include work of other sections, including Division 01 Sections, as required to properly execute the work and as necessary to maintain satisfactory progress of the work

1.2 SUBMITTALS

- A. Product Data: For each type of visual display board indicated.
- B. Shop Drawings: Include plans, elevations, sections, dimensions, details, and attachments to other work.
 - 1. Show location of special-purpose graphics for visual display surfaces, if any.
 - 2. Include sections of typical trim members.
 - 3. Show anchors, grounds, reinforcement, accessories, layout, and installation details.
- C. Samples for Initial Selection: For each type of visual display surface indicated and as follows:
 - 1. Actual sections of porcelain-enamel face sheet required.
- D. Samples for Verification: Of the following products, showing color and texture or finish selected. Where finishes involve normal color and texture variations, include Sample sets showing the full range of variations expected. Prepare Samples from the same material to be used for the Work.
 - 1. Visual Display Boards: Sample panels not less than 8-1/2 by 11 inches, mounted on the substrate indicated for the final Work. Include a panel for each type, color, and texture required.
 - 2. Aluminum Trim and Accessories: Samples of each finish type and color, on 6-inch long sections of extrusions and not less than 4-inch squares of sheet or plate. Include Sample sets showing the full range of color variations expected.
- E. Qualification Data: For Installer.
- F. Maintenance Data: For visual display surfaces to include in maintenance manuals.
- G. Warranties: Special warranties specified in this Section.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

1.3 QUALITY ASSURANCE

- A. This Section outlines only minimum standards and requirements. Refer to the Drawings, and other sections of the specifications for additional requirements. Bring all conflicts and discrepancies to the attention of the Architect and do not start work until such conflicts and discrepancies are clarified and corrected
- B. Source Limitations: Obtain visual display boards through one source from a single manufacturer.
- C. Installer: Company specializing in performing work of this Section with minimum three (3) years experience and approved by manufacturer.
- D. Product Options: Drawings indicate size, profiles, and dimensional requirements of visual display boards and are based on the products indicated. Other manufacturers' products with equal performance characteristics may be considered. Refer to Section 01 60 00, "Product Requirements".
 - 1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval and only to the extent needed to comply with performance requirements. Where modifications are proposed, submit comprehensive explanatory data to Architect for review.
- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Section 01 31 00, "Project Management and Coordination".

1.4 DELIVERY, STORAGE, AND HANDLING

- A. Deliver factory-built visual display boards, including factory-applied trim where indicated, completely assembled in one piece without joints, where possible. If dimensions exceed maximum manufactured panel size, provide two or more pieces of equal length as acceptable to Architect. When overall dimensions require delivery in separate units, prefit components at the factory, disassemble for delivery, and make final joints at the site.
- B. Store visual display units vertically with packing materials between each unit.

1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify field measurements before preparation of Shop Drawings and before fabrication to ensure proper fitting. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Allow for trimming and fitting where taking field measurements before fabrication might delay the Work.
 - 2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating visual display boards without field measurements. Coordinate wall construction to ensure actual dimensions correspond to established dimensions.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

1.6 WARRANTY

- A. Special Warranty for Porcelain-Enamel Face Sheets: Manufacturer's standard form in which manufacturer agrees to repair or replace porcelain-enamel face sheets that fail in materials or workmanship within specified warranty period.
1. Failures include, but are not limited to, the following:
 - a. Surfaces lose original writing and erasing qualities.
 - b. Surfaces become slick or shiny.
 - c. Surfaces exhibit crazing, cracking, or flaking.
 2. Warranty Period: 50 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Specifications are based on products of Claridge Products and Equipment, Inc., or Architect approved equal. Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following, or Architect approved equal. Other manufacturers must have a minimum of ten (10) years experience manufacturing products meeting or exceeding the specifications for manufacture, appearance, performance, function and design, and comply with Division 01 requirements regarding substitutions to be considered.
1. Platinum Visual Systems, A Division of ABC School Equipment, Inc.
 2. Ghent Manufacturing
 3. Marsh Industries, Inc.
 4. MooreCo, Inc. ("MooreCo") (Best-Rite)
 5. Newline Products, Inc.
 6. PolyVision Corporation

2.2 MATERIALS

- A. Porcelain Enamel Markerboards: Balanced, high-pressure-laminated, porcelain enamel markerboards of 3-ply construction consisting of face sheet, core material, and backing.
1. Face Sheet: 0.024-inch, "Vitracite," porcelain enamel clad, Type 1, stretcher-leveled aluminized-steel face sheet, or Architect approved equal in accordance with Paragraph 2.1. Fuse porcelain enamel coating to steel at approximately 1000 deg F.
 - a. Cover Coat: Provide manufacturer's standard matte-finish cover coat, with color selected by Architect from manufacturer's full range.
 - b. Markings: Lines or marks, if any, shall be as indicated or selected by Architect from manufacturer's full range. Markings shall be fused on markerboards in color selected by Architect from manufacturer's full range.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

2. Core: 3/8-inch thick, particleboard core material complying with requirements of ANSI A208.1, Grade 1-M-1.
3. Backing Sheet: 0.015-inch thick, aluminum-sheet backing.
4. Laminating Adhesive: Manufacturer's standard, moisture-resistant, thermoplastic-type adhesive.
5. Sizes: One (1) piece length through 16 feet length. Provide manufacturer's spline where boards are adjoined to make single length.
6. Locations: As indicated.

2.3 ACCESSORIES

- A. Metal Trim and Accessories: Fabricate frames and trim of not less than 0.062-inch thick, extruded-aluminum alloy, size and shape as indicated, to suit type of installation. Provide straight, single-length units. Keep joints to a minimum. Miter corners to a neat, hairline closure.
 1. Where size of visual display boards or other conditions require support in addition to normal trim, provide structural supports or modify trim as indicated or as selected by Architect from manufacturer's standard structural support accessories to suit conditions indicated.
 2. Field-Applied Trim: Manufacturer's standard snap-on trim with no visible screws or exposed joints.
 3. Markertray: Manufacturer's standard, continuous, solid, extrusion-type, aluminum tray with ribbed section and smoothly curved exposed ends for each markerboard.
- B. Other Materials: Provide other materials, not specifically described, but required for a complete and proper installation.

2.4 FABRICATION

- A. Porcelain Enamel Markerboards: Laminate facing sheet and backing sheet to core material under pressure with manufacturer's recommended flexible, waterproof adhesive.

2.5 METAL FINISHES

- A. General: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations relative to applying and designating finishes.
- B. Finish designations prefixed by AA conform to the system established by the Aluminum Association for designating aluminum finishes.
- C. Class II, Clear Anodic Finish: AA-M12C22A31 (Mechanical Finish: nonspecular as fabricated; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class II, clear coating 0.010 mm or thicker) complying with AAMA 607.1, unless indicated or directed otherwise.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine wall surfaces, with Installer present, for compliance with requirements and other conditions affecting installation of visual display boards.
- B. Bring unsatisfactory conditions to the attention of the Architect and do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Deliver factory-built visual display boards completely assembled in one piece without joints, where possible. If dimensions exceed panel size, provide two (2) or more pieces of equal length as acceptable to Architect. When overall dimensions require delivery in separate units, prefit components at the factory, disassemble for delivery, and make final joints at the site. Use splines at joints to maintain surface alignment.
- B. Coordinate Project-site-assembled units with grounds, trim, and accessories. Join parts with a neat, precision fit.
- C. Install visual display boards true, level, and plumb in accordance with manufacturer's printed instructions. Rigidly anchored to backup materials. Fasten with screws in lead shield on masonry walls and toggle bolts on gypsum board construction. Set without mastic on gypsum board partitions. Use concealed fasteners where possible.

3.3 CLEANING AND PROTECTION

- A. Clean visual display surfaces according to manufacturer's written instructions. Attach one cleaning label to visual display surface in each room.
- B. Touch up factory-applied finishes to restore damaged or soiled areas.
- C. Cover and protect visual display surfaces after installation and cleaning until Substantial Completion of Project.

END OF SECTION

SECTION 12 36 20 - LABORATORY CASEWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes wood laboratory casework with aluminum with epoxy laboratory countertops , anchorages, and accessories indicated or required.
- B. Related Sections include the following:
 - 1. Division 06 Section "Rough Carpentry": for blocking in walls where secured to walls.
 - 2. Division 09 Section "Resilient Wall Base and Accessories": for base where indicated or required to be attached to casework.
 - 3. Division 22 - Plumbing sections: for connecting service utilities at indicated point. Piping and wiring for service fittings within laboratory casework up to point of connection are specified in this Section.
 - 4. Division 26 - Electrical sections: for connecting service utilities at indicated point. Conduit and wiring for service fittings within laboratory casework up to point of connection are specified in this Section.

1.2 DEFINITIONS

- A. Exposed Portions of Casework: Surfaces visible when doors and drawers are closed, including bottoms of cabinets more than 48 inches above floor, and visible surfaces in open cabinets or behind glass doors.
 - 1. Ends of cabinets indicated to be installed directly against and completely concealed by walls or other cabinets after installation shall not be considered exposed.
- B. Semi-exposed Portions of Casework: Surfaces behind opaque doors, such as interiors of cabinets, shelves, dividers, interiors and sides of drawers, and interior faces of doors. Tops of cases 78 inches or more above floor are defined as semi-exposed.
 - 1. Concealed portions of casework include sleepers, web frames, dust panels, and other surfaces not usually visible after installation.

1.3 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For wood laboratory casework. Include plans, elevations, sections, details, and attachments to other work.
 - 1. Indicate locations of blocking and reinforcements required for installing laboratory casework.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

2. Indicate locations and types of service fittings, together with associated service supply connection required.
 3. Include details of utility spaces showing supports for conduits and piping, if any.
 4. Include details of exposed conduits, if required, for service fittings.
 5. Indicate locations of and clearances from adjacent walls, doors, windows, and other building components, and other laboratory equipment.
- C. Samples for Verification: For each type of finish, including countertop material, in manufacturer's standard sizes.
- D. Qualification Data: For testing agency.
- E. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating compliance of laboratory casework finishes and countertops with requirements specified for chemical and physical resistance.

1.4 QUALITY ASSURANCE

- A. This Section outlines only minimum standards and requirements. Refer to the Drawings and other sections of the specifications for additional requirements. Bring all conflicts and discrepancies to the attention of the Architect and do not start work until such conflicts and discrepancies are clarified and corrected.
- B. Testing Agency Qualifications: An independent agency qualified for testing indicated.
- C. Source Limitations: Obtain laboratory casework, including countertops, sinks, service fittings, and accessories, through one source from a single manufacturer.
- D. Laboratory Casework: Drawings indicate sizes, configurations, and extent of laboratory casework.
- E. Product Standard: Comply with SEFA 8, "Laboratory Furniture-Casework, Shelving and Tables-Recommended Practices".
- F. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100, by a testing agency acceptable to authorities having jurisdiction, and marked for intended use.
- G. Pre-installation Conference: Conduct pre-installation conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination".

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver laboratory casework in factory packing, marked with manufacturer and product name, and location of installation using same designations indicated on Drawings.
- B. Protect finished surfaces during handling and installation with protective covering of polyethylene film or other suitable material.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install wood laboratory casework until building is enclosed, wet work and utility roughing-in are complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Where laboratory casework are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Notify Architect of discrepancies. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.7 COORDINATION

- A. Coordinate layout and installation of framing and reinforcements for support of wood laboratory casework.

1.8 EXTRA MATERIALS

- A. Furnish complete touchup kit for each type and color of wood laboratory casework provided. Include scratch fillers, stains, finishes, and other materials necessary to perform permanent repairs to damaged laboratory casework finish.

PART 2 - PRODUCTS

2.1 APPROVED MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following, or Architect approved equal. Other manufacturers must have a minimum of five (5) years experience manufacturing the products meeting or exceeding the specifications and comply with Division 01 requirements regarding substitutions to be considered.

1. Wood Laboratory Casework:

- a. Fisher Hamilton L.L.C.
- b. Kewaunee Scientific Corporation.
- c. Leonard Peterson & Co., Inc.
- d. Sheldon Laboratory Systems.

2. Epoxy Countertops:

- a. Durcon Incorporated.
- b. Laboratory Tops, Inc.
- c. Prime Industries, Inc.
- d. Thermo Fisher Scientific Inc. (Epoxy Products)

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

2.2 CABINET MATERIALS

A. General:

1. Maximum Moisture Content for Lumber: 7 percent for hardwood and 12 percent for softwood.
2. Hardwood Plywood: HPVA HP-1, either veneer core or particle core, unless otherwise indicated.
3. Edgebanding for Wood-Veneered Construction: Minimum 1/4-inch thick, solid wood of same species as face veneer.
 - a. Colors: As selected by Architect from manufacturer's full range.

B. Exposed Materials:

1. General: Provide materials that are selected and arranged for compatible grain and color. Do not use materials adjacent to one another that are noticeably dissimilar in color, grain, figure, or natural character markings.
2. Wood Species and Veneer Cut: Red oak, plain sliced, unless indicated or directed otherwise.
3. Stain Colors and Finishes: As selected by Architect from manufacturer's full range.

C. Semiexposed Materials:

1. Plywood: Hardwood plywood of same species as exposed plywood. Grade B faces, Grade J crossbands, and backs of same species as faces. Semiexposed backs of plywood with exposed faces shall be same species as faces.
2. Plastic Laminate: Type VGS, matching adjacent exposed plastic laminate.

D. Concealed Materials:

1. Plywood: Hardwood plywood. Concealed backs of plywood with exposed or semiexposed faces shall be same species as faces.

E. Other Materials: Provide other materials, not specifically described, but required for a complete and proper installation.

2.3 CABINET DESIGN

- A. Flush overlay with recessed finger pulls machined into the faces of doors and drawers.
- B. Grain Direction: Vertical on doors, horizontal on drawer fronts.

2.4 CABINET FABRICATION (As applicable)

- A. Construction: Provide wood-faced laboratory casework of the following minimum construction:

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

1. Bottoms and Ends of Cabinets, and Shelves: 3/4-inch thick plywood. Exposed front edges of bottoms and ends of cabinets shall be banded with solid wood.
 2. Exposed front edge of shelves shall be banded with 1/4-inch thick Ash. Shelves when wider than 36 inches shall be 1 inch thick.
 3. Base Cabinet Top Frames: 3/4-by-2-inch solid wood with mortise and tenon or doweled connections, glued and pinned or screwed.
 4. Base Cabinet Stretchers: 3/4-by-4-1/2-inch panel product strips or solid wood boards at front and back of cabinet, glued and pinned or screwed. May be provided as an option to base cabinet top frames.
 5. Backs of Cabinets: 3/4-inch thick plywood where exposed, 1/2-inch thick plywood dadoed into sides, bottoms, and tops where not exposed.
 6. Drawer Fronts: 3/4-inch thick solid hardwood.
 7. Drawer Sides and Backs: 1/2-inch thick solid wood, with glued dovetail or multiple-dowel joints.
 8. Drawer Bottoms: 1/4-inch thick plywood glued and dadoed into front, back, and sides of drawers. Use 1/2-inch thick material for drawers more than 24 inches wide.
 9. Doors 48 Inches or Less in Height: Flush overlay solid doors shall be 3/4-inch Grade A Red oak plywood with 1/4-inch Red oak banding all four sides.
- B. Leg Shoes: Vinyl or rubber, black, open-bottom type.
- C. Utility-Space Framing: Laboratory casework manufacturer's standard steel framing units consisting of 2 steel slotted channels complying with MFMA-2, not less than 1-5/8 inches square by 0.0966 inch thick, and connected together at top and bottom by U-shaped brackets made from 1-1/4-by-1/4-inch steel flat bars. Framing units may be made by welding specified channel material into rectangular frames instead of using U-shaped brackets.
- D. Filler Strips and Utility-Space Closure Panels: Provide as needed to close spaces between cabinets and walls, ceilings, and indicated equipment. Fabricate from same material and with same finish as cabinet fronts.
- E. Access Panels: As applicable, provide access panels at each side of square stem at octagonal casework for easy access to utilities within the cavity and for easy maintenance of laboratory fittings. Locate these access panels behind drawers or provide removable epoxy resin type countertop at top of square stem at octagonal laboratory casework for easy access to laboratory fittings and utility connections.

2.5 WOOD FINISH

- A. Preparation: Sand lumber and plywood for laboratory casework construction before assembling. Sand edges of doors, drawer fronts, and molded shapes with profile-edge sander. Sand casework after assembling for uniform smoothness at least equivalent to that produced by 220 grit sanding and without machine marks, cross sanding, or other surface blemishes.
- B. Staining: Remove all wood dust and abrasive particles by compressed air and apply stain to exposed and semiexposed surfaces as necessary to match approved Samples. Apply stain in a manner that will produce a consistent appearance. Apply wash-coat sealer before applying stain to closed-grain wood species.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

C. Chemical-Resistant Finish: Apply laboratory casework manufacturer's standard three-coat, chemical-resistant, transparent finish consisting of sealer and catalyzed topcoat(s). Sand and wipe clean between coats. Topcoat(s) may be omitted on concealed surfaces.

1. Chemical and Physical Resistance of Finish System: Finish complies with acceptance levels of cabinet surface finish tests in SEFA 8. Acceptance level for chemical spot test shall be no more than four Level 3 conditions.

a. Wood Casework Finish (Interiors): Interior surface and unexposed exteriors shall have two coats of a chemical resistant acrylic finish.

b. Wood Casework Finish (Exteriors): Exterior and exposed interiors surfaces shall be protected with multiple coats of an acrylic, chemical resistant finish. Prior to the finish surfaces shall be coated with a non-fiber lifting stain to achieve the desired color. The color coat shall be thoroughly dried. The surface shall be lightly sanded and coated with the acrylic finish to secure the desired appearance.

c. Performance Tests: Test consists of placing 10 drops of chemical on finished surface and covering with watch glass for 60 minutes.

Key: 1 = Excellent No Effect
2 = Good Slight Effect
3 = Fair Moderate Effect

d.	Reagents	Time in Minutes	Test Rating
e.	Acetone	60	3
f.	Benzene	60	2
g.	Ethyl Acetate	60	2
h.	Ethyl Alcohol	60	3
i.	Ethyl Ether	60	1
j.	Gasoline	60	1
k.	Hydrochloric Acid 37%	60	1
l.	Hydrogen Peroxide 30%	60	1
m.	Methanol	60	3
n.	Methyl Ethyl Ketone	60	2
o.	Naphtha, VM&P	60	1
p.	Nitric Acid 75%	60	1
q.	Phosphoric Acid 75% ^q	60	1
r.	Sodium Hydroxide 40%	60	1
s.	Sodium Hydrochlorite 5.25%	60	1
t.	Toluene	60	1
u.	Bleach (Full Strength)	60	1

2.6 CABINET HARDWARE

A. General: Provide laboratory casework manufacturer's standard satin-finish, commercial-quality, heavy-duty hardware complying with requirements indicated for each type.

B. Hinges: Stainless-steel, 5-knuckle hinges complying with BHMA A156.9, Grade 1, with antifriction bearings and rounded tips. Provide 2 for doors 48 inches or less in height; 3 for doors more than 48 inches in height.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

- C. Pulls: Full-width recessed solid hardwood channels, matching exposed wood of cabinets.
- D. Door Catches: For doors on all cabinets shall be double action spring tension nylon roller catch with 3-5 lb. pull.
- E. Drawer Slides: Epoxy-coated, full-extension, self-closing, heavy-duty drawer slides; designed to prevent rebound when drawers are closed; with nylon-tired, ball-bearing rollers; and complying with BHMA A156.9, Type B05091, and rated for 100 lbf. The glides shall have automatic closing within the final 3 inches and have stops to prevent the accidental removal of the drawer.
- C. Label Holders: Stainless steel, aluminum, or chrome plated; sized to receive standard label cards approximately 1 by 2 inches, attached with screws or rivets. Provide on all drawers.
- D. Locks: Cam type, brass with chrome-plated finish; complying with BHMA A156.11, Type E07281, unless indicated or directed otherwise.
 - 1. Provide minimum of two keys per lock and two master keys.
 - 2. Provide on all drawers and doors.
- E. Adjustable Shelf Supports: Mortise-type, powder-coated steel standards and shelf rests complying with BHMA A156.9, Types B04071 and B04091.

2.7 COUNTERTOPS

- A. Countertops, General: Provide units with smooth surfaces in uniform plane free of defects. Make exposed edges and corners straight and uniformly beveled. Provide front and end overhang of 1 inch, with continuous drip groove on underside 1/2 inch from edge.
- B. Epoxy Countertops: Factory molded of modified epoxy-resin formulation with smooth, nonspecular finish.
 - 1. Physical Properties:
 - a. Flexural Strength: Not less than 10,000 psi.
 - b. Modulus of Elasticity: Not less than 2,000,000 psi.
 - c. Hardness (Rockwell M): Not less than 100.
 - d. Water Absorption (24 Hours): Not more than 0.02 percent.
 - e. Heat Distortion Point: Not less than 260 deg F.
 - 2. Chemical Resistance: Epoxy-resin material has the following ratings when tested with indicated reagents according to NEMA LD 3, Test Procedure 3.4.5:
 - a. No Effect: Acetic acid (98 percent), acetone, ammonium hydroxide (28 percent), benzene, carbon tetrachloride, dimethyl formamide, ethyl acetate, ethyl alcohol, ethyl ether, methyl alcohol, nitric acid (70 percent), phenol, sulfuric acid (60 percent), and toluene.
 - b. Slight Effect: Chromic acid (60 percent) and sodium hydroxide (50 percent).

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

3. Color: As selected by Architect from manufacturer's full range.
4. Countertop Fabrication: Fabricate with factory cutouts for sinks and with butt joints assembled with epoxy adhesive and prefitted, concealed metal splines.
5. Countertop Configuration: As indicated.
6. Countertop Construction: Epoxy composition not less than 1/4 inch thick, laminated to backing.

2.8 ACCESSORIES (As indicated or required)

- A. Reagent Shelves: Provide as indicated, fabricated from same material as adjacent countertop, unless otherwise indicated.
- B. Upright Rod Assembly and Metal Crossbar: Aluminum or stainless steel. Unless noted otherwise in the documents provide two vertical rods and 1 horizontal crossbar, 3/4 inch in diameter and 36 inches long, unless otherwise indicated; 2 flush socket receptacles and 2 crossbar clamps. Ends of vertical rods are tapered to fit receptacles; other rod ends are rounded.
- C. Burette Rods: Aluminum or stainless-steel rods, 1/2 inch in diameter and 18 inches long, threaded on 1 end to fit tapered plug adapter for flush socket receptacle. Provide with tapered plug adapter and receptacle.
- D. Greenlaw Arm Assembly: Aluminum or stainless-steel vertical rod, tapered on one end to fit flush socket receptacle. Adjustable crossbar of hardwood with black, acid-resistant finish, secured to upright with adjustable clamp. Provide with receptacle.

2.9 WATER SERVICE FITTINGS (As indicated or required)

- A. Service Fittings: Provide units that comply with SEFA 7, "Laboratory and Hospital Fixtures--Recommended Practices". Provide fittings complete with washers, locknuts, nipples, and other installation accessories. Include wall and deck flanges, escutcheons, handle extension rods, and similar items.
 1. Provide units that comply with recommendations in SEFA 7, Section 11, "Vandal-Resistant Faucets and Fixtures".
- B. Materials: Fabricated from cast or forged red brass, unless otherwise indicated.
 1. Reagent-Grade Water Service Fittings: Polypropylene, PVC, or PVDF for parts in contact with water.
- C. Finish: Chromium plated, unless indicated or directed otherwise.
- D. Water Valves and Faucets: Provide units complying with ASME A112.18.1, with renewable seats, designed for working pressure up to 80 psig.
 1. Vacuum Breakers: Provide ASSE 1035 vacuum breakers on water fittings with serrated outlets.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

2. Aerators: Provide aerators on water fittings that do not have serrated outlets.
 - E. Ground-Key Cocks: Tapered core and handle of one-piece forged brass, ground and lapped, and held in place under constant spring pressure. Provide units designed for working pressure up to 40 psig, with serrated outlets.
 - F. Hand of Fittings: Furnish right-hand fittings unless fitting designation is followed by "L". Coordinate with Drawings and confer with Architect.
- 2.10 ELECTRICAL SERVICE FITTINGS (As indicated or required)
- A. Service Fittings, General: Provide units complete with metal housings, receptacles, terminals, switches, pilot lights, device plates, accessories, and gaskets required for mounting on laboratory casework.
 - B. Receptacles: Comply with NEMA WD 1, NEMA WD 6, FS W-C-596, and UL 498. Duplex type, Configuration 5 20R.
 1. Receptacle Grade: Hospital grade, unless otherwise indicated.
 2. GFCI Receptacles: Comply with UL 943, Hospital grade.
 - C. Switches: Comply with FS W-C-896 and UL 20. Provide single-pole, double-pole, or 3-way switches as required; rated 120 to 277-V ac; and in amperage capacities to suit units served.
 1. Provide pilot lights adjacent to toggle switches where noted as "PL" next to switch identification.
 2. Provide thermal-overload switches, single or double pole, as required, with maximum overcurrent trip setting to suit particular motor controlled.
 - D. Pedestal-Type Fittings: Cast-aluminum housings with sloped single face or two faces, as indicated, with neoprene gasket under base and with concealed mounting holes in base for attaching to laboratory casework. Provide holes tapped for conduits.
 - E. Line-Type Fittings: Provide with cast-metal boxes with threaded holes for mounting on rigid steel conduit. Provide cover plates the same size as boxes.
 - F. Recessed-Type Fittings: Provide with galvanized steel boxes.
 - G. Finishes for Service-Fitting Components: Provide housings or boxes for pedestal- and line-type fittings with manufacturer's standard baked-on, chemical-resistant enamel in color as selected by Architect from manufacturer's full range.
 1. Color of Receptacles and Switches: As selected by Architect, unless otherwise indicated or required by NFPA 70.
 - H. Cover Plates: Provide satin finish, Type 304, stainless-steel cover plates with formed, beveled edges.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

- I. Cover-Plate Identification: Use 1/4-inch high letters, unless otherwise indicated. On stainless steel or chrome-plated metal, stamp or etch plate and fill in letters with black enamel. Provide on all cover plates.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances, location of reinforcements, and other conditions affecting performance of wood laboratory casework.
 - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF CABINETS

- A. Install level, plumb, and true; shim as required, using concealed shims. Where laboratory casework abuts other finished work, apply filler strips and scribe for accurate fit, with fasteners concealed where practical.
- B. Utility-Space Framing: Secure to floor with two fasteners at each frame. Fasten to partition framing, wood blocking, or metal reinforcements in partitions and to base cabinets.
- C. Base Cabinets: Adjust top rails and subtops within 1/16 inch of a single plane. Fasten cabinets to utility-space framing, partition framing, wood blocking, or reinforcements in partitions with fasteners spaced not more than 24 inches o.c. Fasten adjacent cabinets together with joints flush, tight, and uniform. Align similar adjoining doors and drawers to a tolerance of 1/16 inch.
 - 1. Where base cabinets are installed away from walls, fasten to floor at toe space at not more than 24 inches o.c. and at sides of cabinets with not less than 2 fasteners per side

D. Install hardware uniformly and precisely. Set hinges snug and flat in mortises.

E. Adjust laboratory casework and hardware so doors and drawers align and operate smoothly without warp or bind and contact points meet accurately. Lubricate operating hardware as recommended by manufacturer.

3.3 INSTALLATION OF COUNTERTOPS

- A. Abut top and edge surfaces in one true plane with flush hairline joints and with internal supports placed to prevent deflection. Locate joints only where shown on Shop Drawings.
- B. Field Jointing: Where possible, make in the same manner as shop jointing using dowels, splines, adhesives, and fasteners recommended by manufacturer. Prepare edges to be joined in shop.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
ISSUE DATE: 08.06.12**

1. Use concealed clamping devices for field joints in plastic-laminate countertops. Locate clamping devices within 6 inches of front and back edges and at intervals not exceeding 24 inches. Tighten according to manufacturer's written instructions to exert a uniform heavy pressure at joints.

C. Fastening:

1. Secure epoxy countertops to cabinets with epoxy cement, applied at each corner and along perimeter edges at not more than 48 inches o.c.
2. Where necessary to penetrate countertops with fasteners, countersink heads approximately 1/8 inch and plug hole flush with material equal to countertop in chemical resistance, hardness, and appearance

D. Provide required holes and cutouts for service fittings.

E. Seal unfinished edges and cutouts in plastic-laminate countertops with heavy coat of polyurethane varnish.

F. Provide scribe moldings for closures at junctures of countertop, curb, and splash, with walls as recommended by manufacturer for materials involved. Match materials and finish to adjacent laboratory casework. Use chemical-resistant, permanently elastic sealing compound where recommended by manufacturer.

G. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

3.4 INSTALLATION OF ACCESSORIES

- A. Install accessories according to Shop Drawings and manufacturer's written instructions.
- B. Securely fasten adjustable shelving supports, stainless-steel shelves, and pegboards to partition framing, wood blocking, or reinforcements in partitions.
- C. Install shelf standards plumb and at heights to align shelf brackets for level shelves. Install shelving level and straight, closely fitted to other work where indicated.

3.5 INSTALLATION OF SERVICE FITTINGS

- A. Comply with requirements in Divisions 22 and 26 Sections for installing water piping, electrical devices, and wiring.
- B. Install fittings according to Shop Drawings and manufacturer's written instructions. Set bases and flanges of sink- and countertop-mounted fittings in sealant recommended by manufacturer of sink or countertop material. Securely anchor fittings, piping, and conduit to laboratory casework, unless otherwise indicated.

**HOUSTON COMMUNITY COLLEGE
HCC ALIEF CAMPUS MAIN BUILDING,
FIRST, SECOND & FOURTH FLOORS RENOVATION
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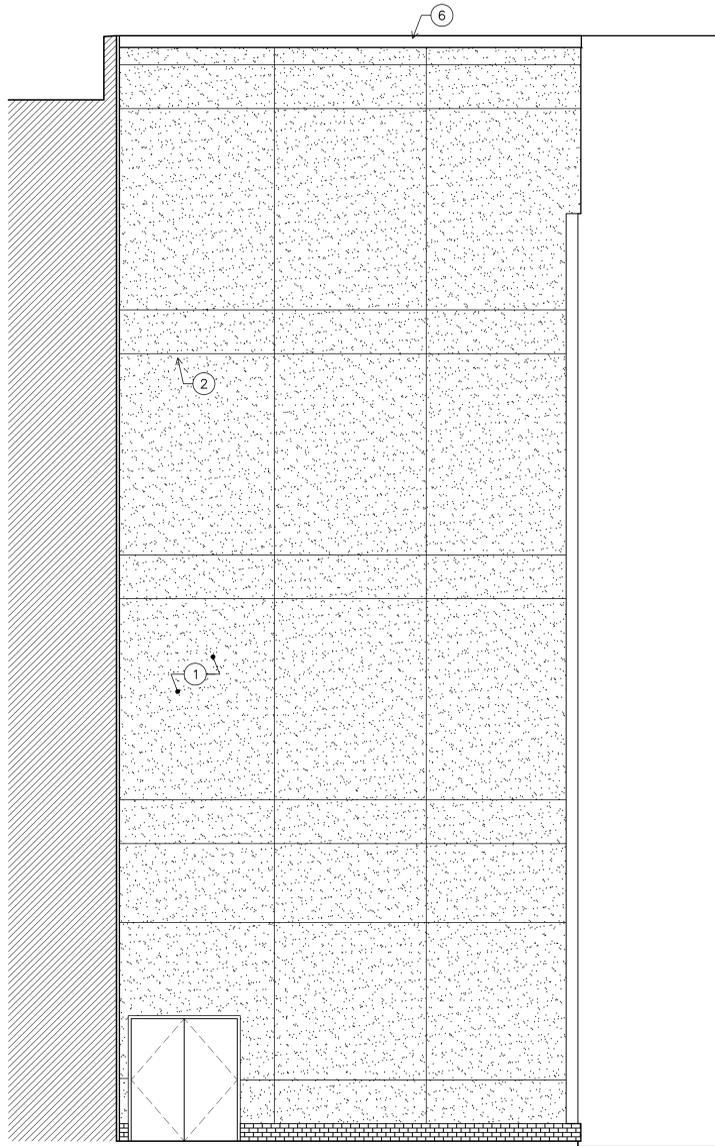
3.6 CLEANING AND PROTECTING

- A. Clean finished surfaces, touch up as required, and remove or refinish damaged or soiled areas to match original factory finish, as approved by Architect.
- B. Protect countertop surfaces during construction with 6-mil plastic or other suitable water-resistant covering. Tape to underside of countertop at minimum of 48 inches o.c..

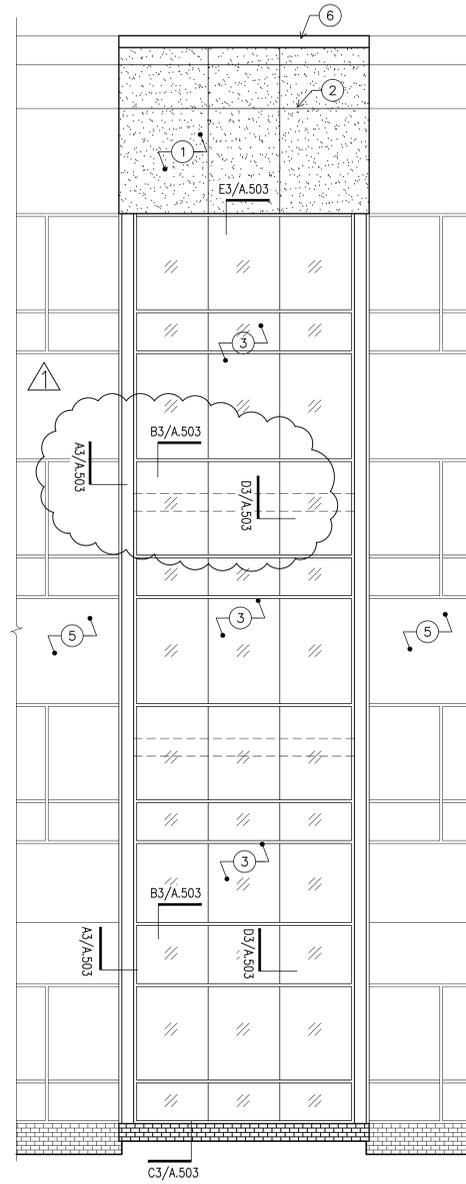
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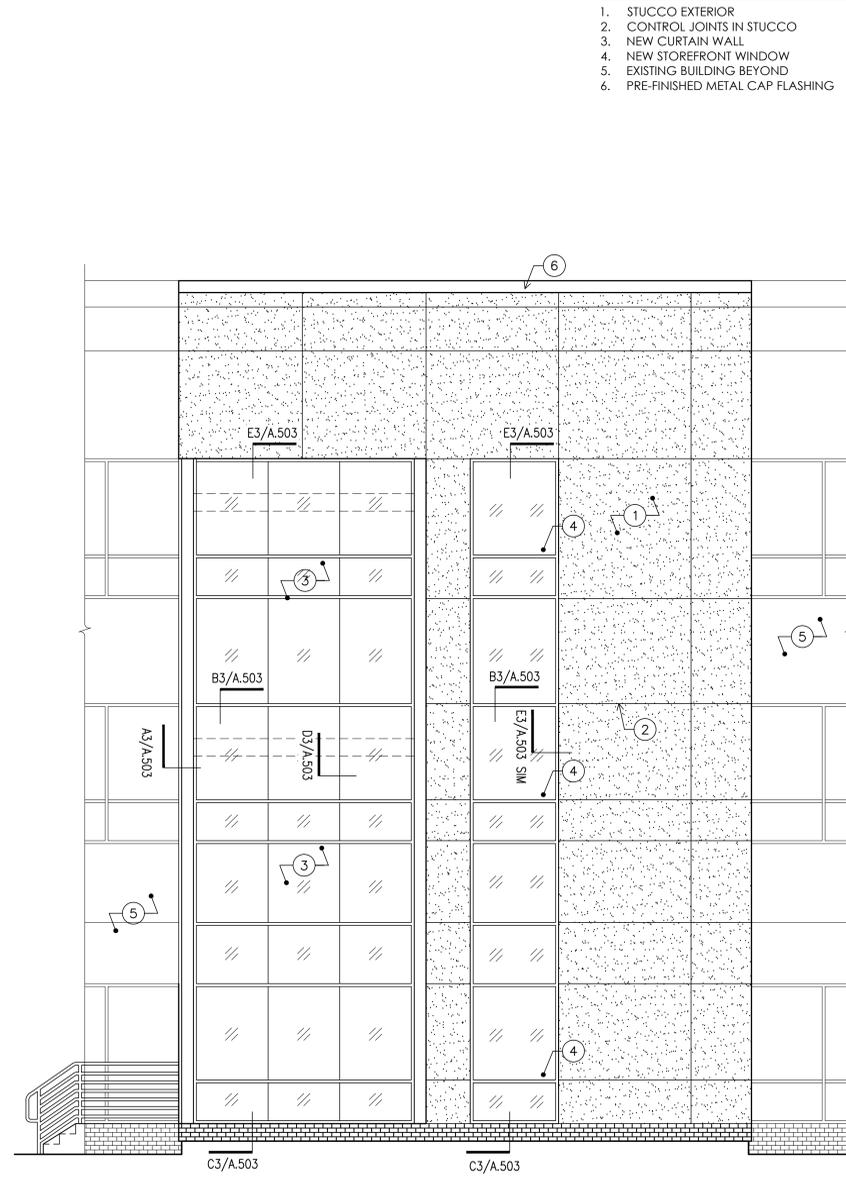
1. STUCCO EXTERIOR
2. CONTROL JOINTS IN STUCCO
3. NEW CURTAIN WALL
4. NEW STOREFRONT WINDOW
5. EXISTING BUILDING BEYOND
6. PRE-FINISHED METAL CAP FLASHING



1 STAIR TOWER ELEVATION
 1/4"=1'-0"



2 STAIR TOWER ELEVATION
 1/4"=1'-0"



3 STAIR TOWER ELEVATION
 1/4"=1'-0"

10-9-12	ISSUED FOR PERMIT
10-17-12	ISSUED FOR BID
10-31-12	BID ADDENDUM #1

DATE	DATE	DESCRIPTION

PROFESSIONAL SEALS



OCTOBER 17, 2012

A207 Stair Tower Elevations.dwg

JOB ABBREV. HCC-UT-ALIEF

DRAWN BY EIN/RMS CHECKED BY RC

JOB NO. 1397 SCALE N.T.S.

DATE 10/31/2012 ISSUE INTERIM REVIEW

SHEET CONTENTS

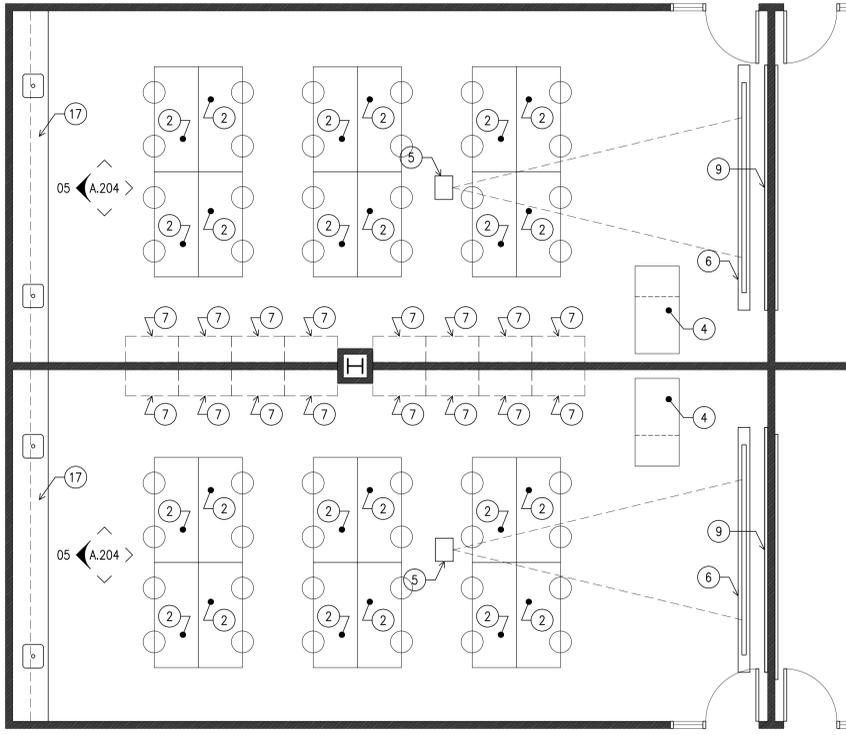
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DRAWING NUMBER

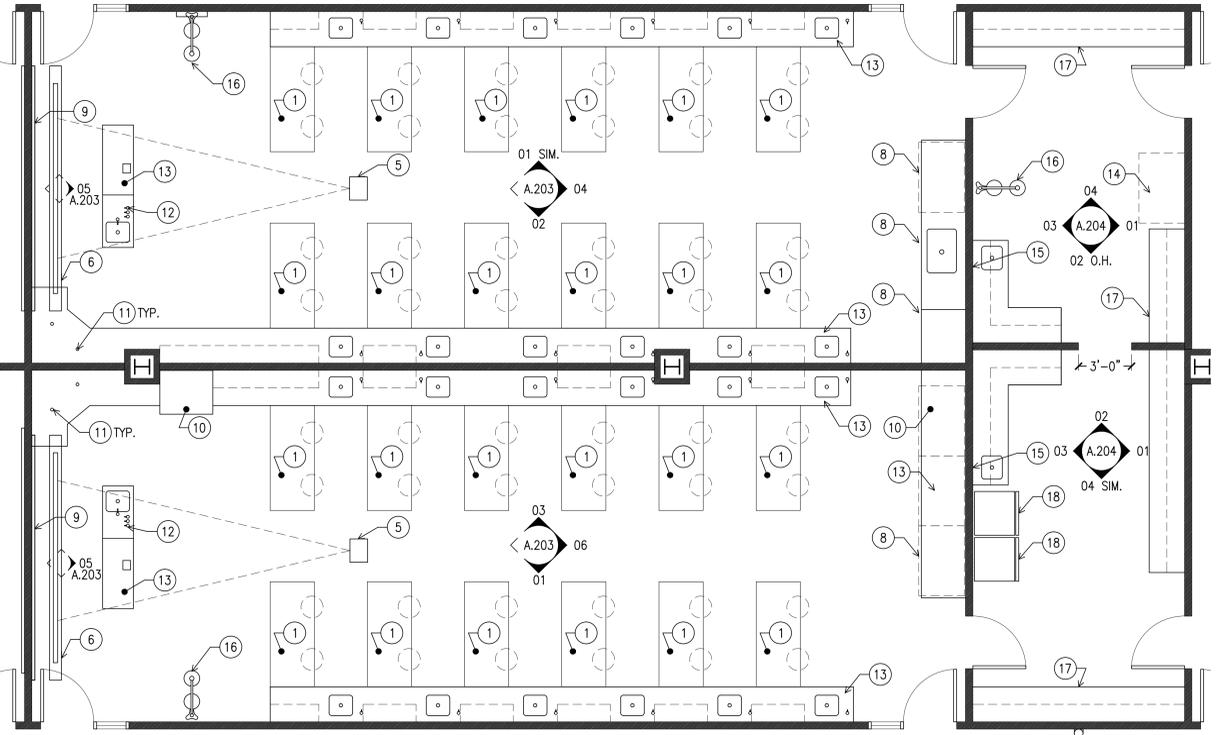
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KEY NOTES

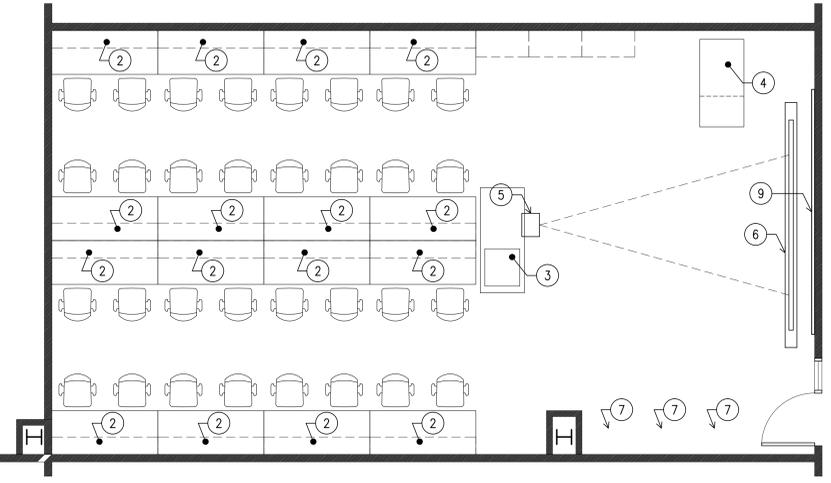
- FURNITURE NOT IN CONTRACT - SHOWN FOR REFERENCE PURPOSES ONLY.
- ENGINEERING LAB WORK STATIONS PROVIDED BY UTI
- LOCATION OF PRINT STATIONS AND PLOTTERS FOR ENGINEERING LABS. PROVIDE REQUIRED POWER AND DATA
- LOCATION OF STANDARD MTS TEACHING STATION WITH POWER AND DATA PROVIDED FROM FLOOR BOXES
- CEILING MOUNTED PROJECTOR OFOI, PROVIDE POWER, DATA, AND CONTROLS FROM PROJECTOR TO MTS OR CONF. TABLE COORDINATE LOCATIONS WITH OWNER
- MOTORIZED DROP DOWN PROJECTOR SCREEN CFCI
- LOCKABLE METAL STORAGE CABINETS OFOI
- FUME HOOD, 48" CFCI
- 12' X 4' WHITE DRY ERASE BOARD, TOP AT 7'-0" AFF
- MICROSCOPE CABINETS, REFER TO ELEVATIONS
- GROMMET HOLES IN WORK TOP W/ BLACK PLASTIC COVERS
- PROVIDE GAS, WATER AND VAC IN COUNTERTOP
- EPOXY RESIN WORK TOP OVER PLYWOOD MILLWORK W/ INTEGRAL SINKS
- ICE MACHINE OFOI, PROVIDE WATER AND WALL DRAIN
- DEIONIZER, WALL MOUNTED, REFER TO PLUMBING DRAWINGS
- EMERGENCY EYEWASH AND SHOWER
- PL. LAM. MILLWORK, RE: ELEVATIONS
- REFRIGERATOR, OFOI, PROVIDE WATER
- NEW WATER CLOSET
- NEW URINAL
- NEW PAPER TOWEL HOLDER
- NEW TOILET PAPER HOLDER
- NEW SANITARY NAPKIN DISPOSAL
- NEW ADA GRAB BARS
- NEW TOILET PARTITIONS
- NEW DRINKING FOUNTAIN
- NEW ADA PLUMBING FIXTURES
- ADA ACCESS CONTROL PUSH BUTTON
- LOCATION OF PRINT/COPY MACHINE, PROVIDE REQUIRED POWER AND DATA
- PLYWOOD END CAP PANEL, PAINTED WHITE
- FROSTED ACRYLIC PANEL FIXED TO FRAME
- ALUMINUM SUPPORT FRAME
- METAL SHELVING UNITS W/SOLID SELF TOP
- CUSTOM MANUFACTURED METAL SHELVING UNIT
- MILLWORK SEATING UNIT
- METAL PANEL SEATING UNIT



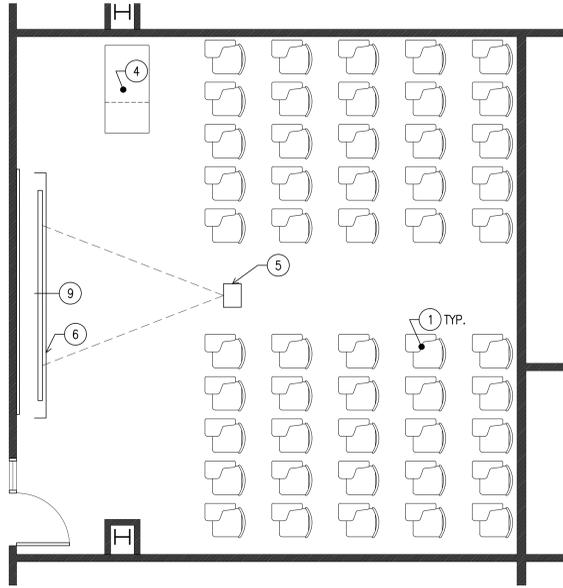
01 UTT MECHANICAL ENGINEERING LABS - ENLARGED PLAN
1/4"=1'-0"



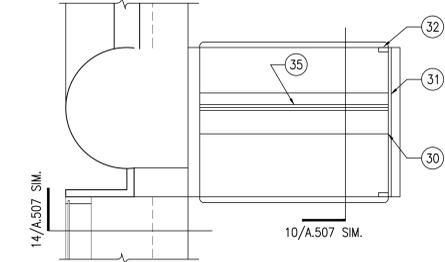
03 BIOLOGY LAB AND GEOLOGY/PHYSICS LAB - ENLARGED PLAN
1/4"=1'-0"



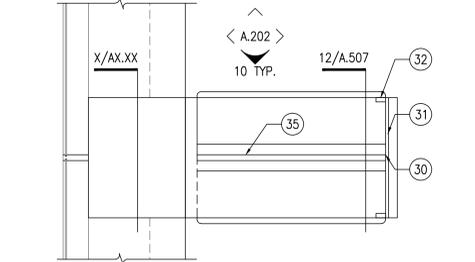
02 TYP. UTT ELECTRICAL ENGINEERING LAB - ENLARGED PLAN
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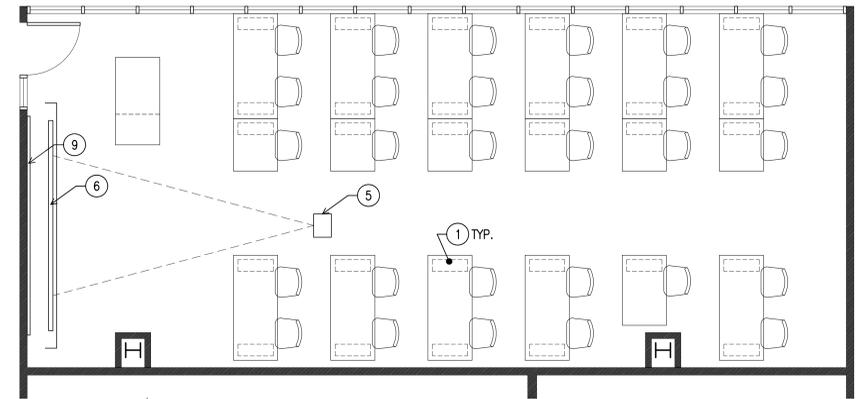
04 TYP. CLASSROOM - ENLARGED PLAN
1/4"=1'-0"



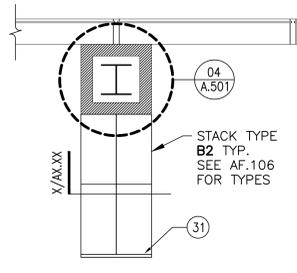
10 OPEN STUDY MILLWORK
1/2"=1'-0"



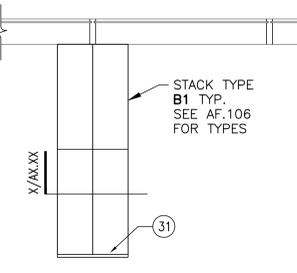
11 OPEN STUDY MILLWORK
1/2"=1'-0"



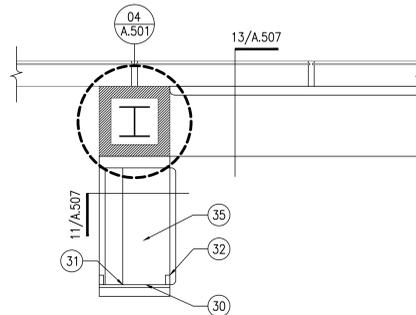
05 COMPUTER LAB - ENLARGED PLAN
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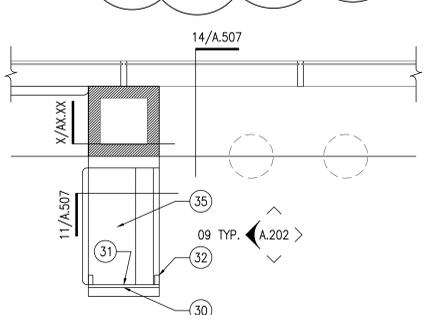
06 LIBRARY MILLWORK
1/2"=1'-0"



07 LIBRARY MILLWORK
1/2"=1'-0"



08 OPEN STUDY MILLWORK
1/2"=1'-0"



09 OPEN STUDY MILLWORK
1/2"=1'-0"

10-9-12	ISSUED FOR PERMIT
10-17-12	ISSUED FOR BID
10-31-12	BID ADDENDUM #1

DATE	DATE	DESCRIPTION



JOB ABBREV.	HCC-UT-ALIEF
DRAWN BY	EIN/RMS
CHECKED BY	RC
JOB NO.	1397
SCALE	N.T.S.
DATE	10/29/2012
ISSUE	PERMIT

SHEET CONTENTS
2nd FLOOR
ENLARGED PLANS

DRAWING NUMBER
A.401

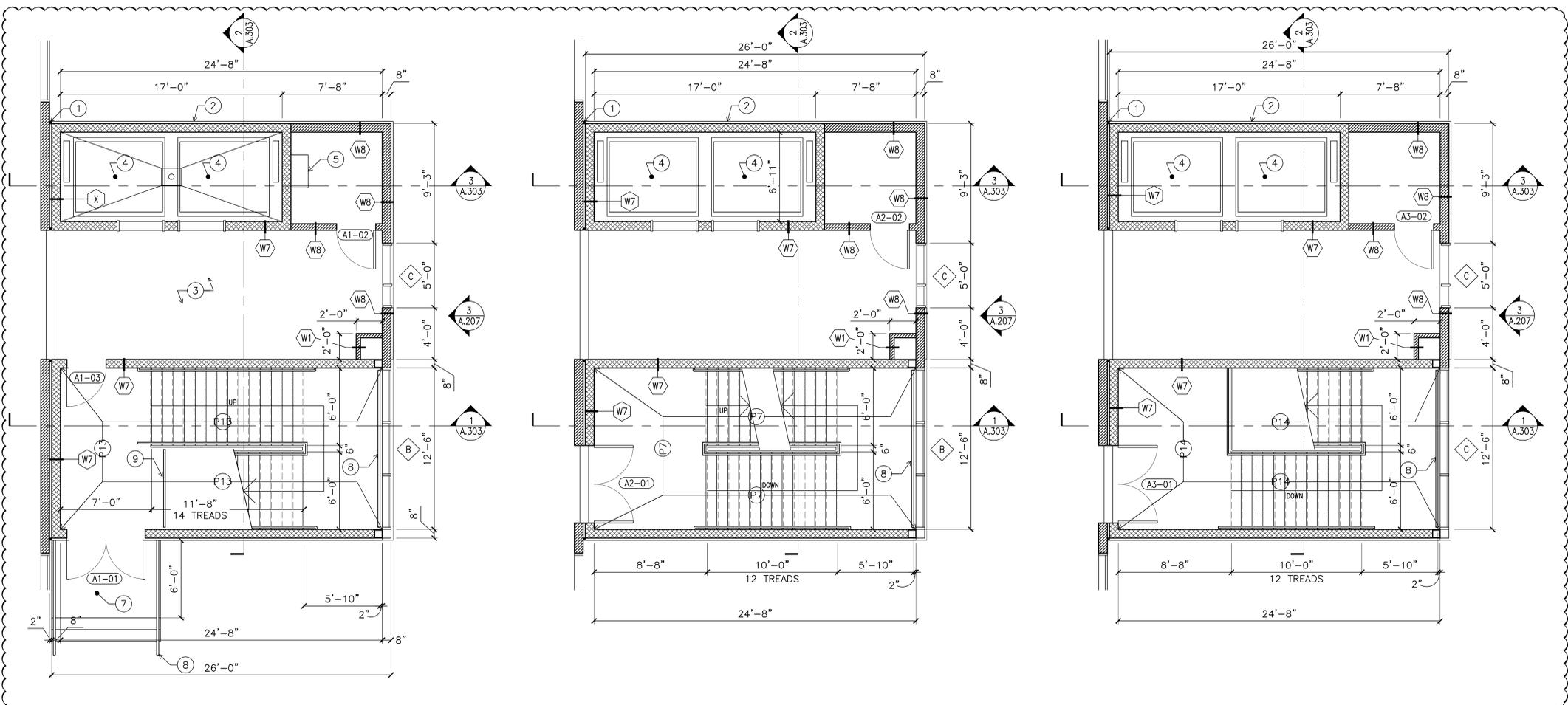
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GENERAL NOTES

1. REFER TO SHEET A2.05 FOR ADDITIONAL STAIR AND HANDRAIL NOTES AND DETAILS

KEYNOTES

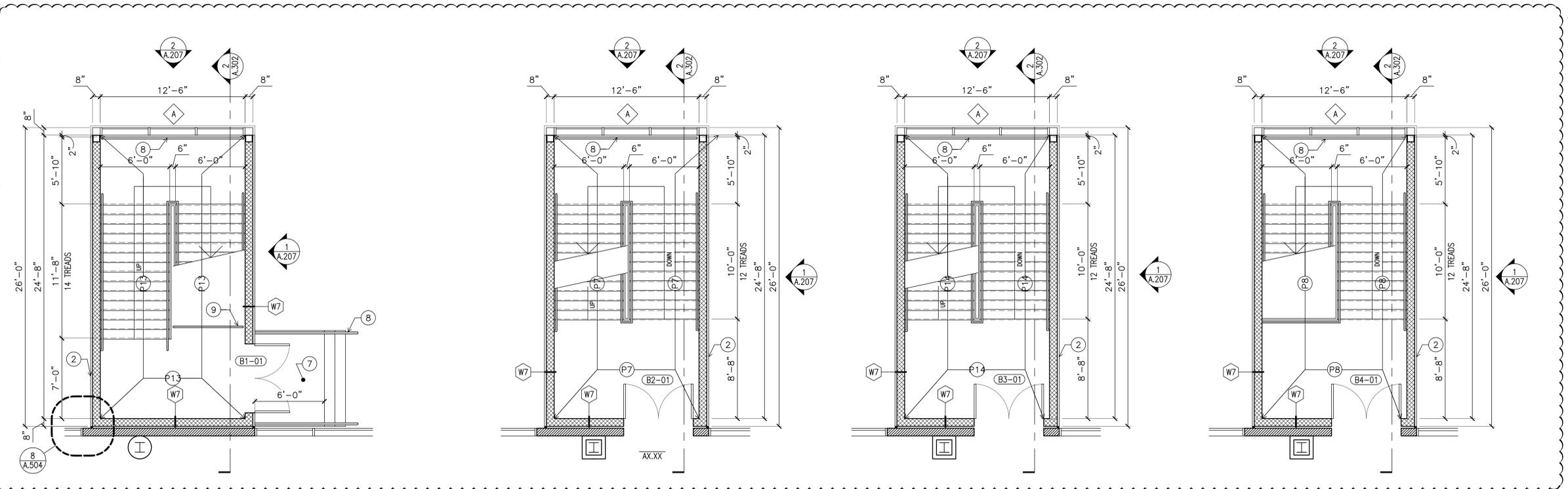
1. CONTINUOUS EXPANSION JOINT BETWEEN EXISTING BUILDING AND NEW STAIR TOWERS.
2. STUCCO EXTERIOR
3. NEW ELEVATOR LOBBY
4. NEW MRL ELEVATORS. HOISTWAY SIZE BASED ON THYSEN KRUPP SYNERGY MODEL 855
5. ELEVATOR MACHINE ROOM EQUIPMENT. VERIFY EXACT LOCATION WITH ELEVATOR MANUFACTURER.
6. CONCRETE LANDING AND STEPS. VERIFY HEIGHT AND COORDINATE REQUIRED NUMBER OF STEPS WITH ARCHITECT.
7. CODE-COMPLIANT HANDRAILS ON BOTH SIDES OF EXTERIOR STAIR
8. 1-1/2" x 1-1/2" SQUARE STEEL GUARD RAILS WITH 3/16" GRADE 316 STAINLESS STEEL CABLES AT 4" O.C. MAX.
9. 1-1/2" x 1-1/2" SQUARE STEEL GUARD RAILS



1 NEW STAIR 1 - FIRST FLOOR
1/4"=1'-0"

2 NEW STAIR 1 - SECOND FLOOR
1/4"=1'-0"

3 NEW STAIR 1 - THIRD FLOOR
1/4"=1'-0"



4 NEW STAIR 2 - FIRST FLOOR
1/4"=1'-0"

5 NEW STAIR 2 - SECOND FLOOR
1/4"=1'-0"

6 NEW STAIR 2 - THIRD FLOOR
1/4"=1'-0"

7 NEW STAIR 2 - FORTH FLOOR
1/4"=1'-0"

10-9-12 ISSUED FOR PERMIT
10-17-12 ISSUED FOR BID
10/31/12 BID REVISION #1

DATE DESCRIPTION
PROFESSIONAL SEALS



OCTOBER 17, 2012

JOB ABBREV. HCC-UT-ALIEF
DRAWN BY EIN/RMS CHECKED BY RC
JOB NO. 1397 SCALE N.T.S.
DATE 10/31/2012 ISSUE PERMIT

STAIR TOWERS
ENLARGED PLANS

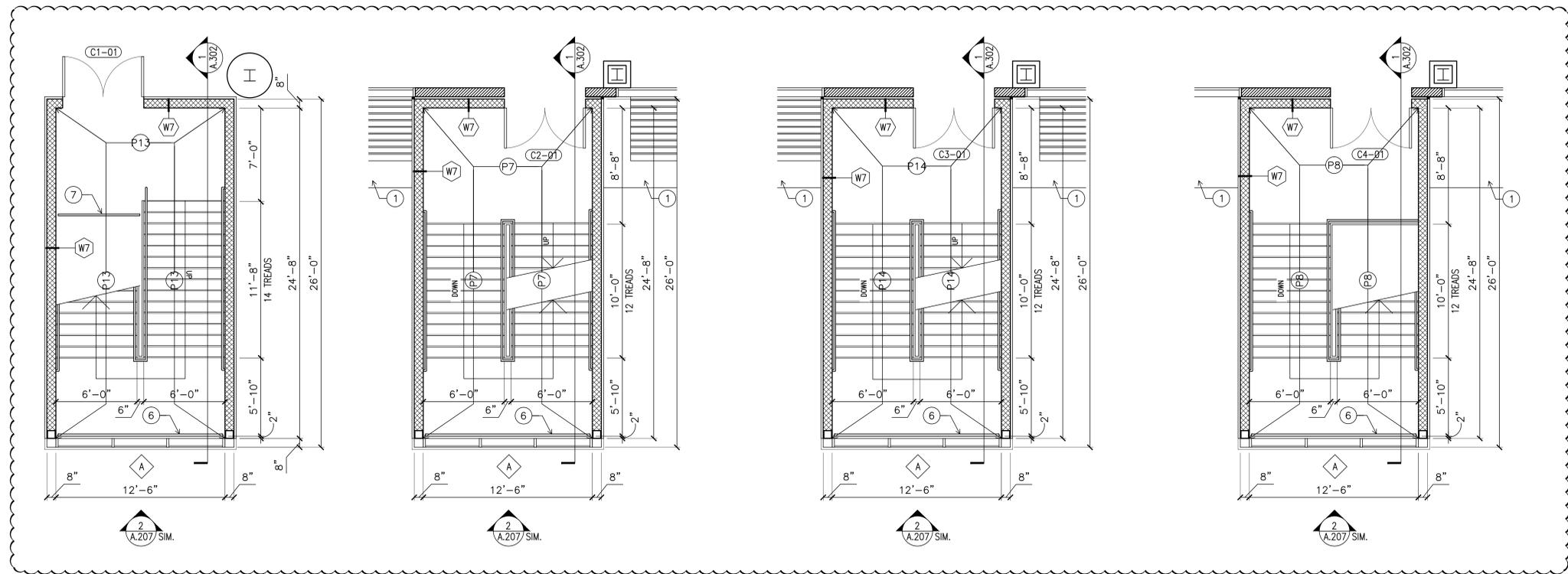
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GENERAL NOTES

1. REFER TO SHEET A2.05 FOR ADDITIONAL STAIR AND HANDRAIL NOTES AND DETAILS

KEYNOTES

1. CONTINUOUS EXPANSION JOINT BETWEEN EXISTING BUILDING AND NEW STAIR TOWERS.
2. STUCCO EXTERIOR
3. NEW ELEVATOR LOBBY
4. NEW MRL ELEVATORS. HOISTWAY SIZE BASED ON THYSSEN KRUPP SYNERGY MODEL 855
5. ELEVATOR MACHINE ROOM EQUIPMENT. VERIFY EXACT LOCATION WITH ELEVATOR MANUFACTURER.
6. 1-1/2" x 1-1/2" SQUARE STEEL GUARD RAILS WITH 3/16" GRADE 316 STAINLESS STEEL CABLES AT 4" O.C. MAX.
7. 1-1/2" x 1-1/2" SQUARE STEEL GUARD RAILS



1 NEW STAIR 3 - FIRST FLOOR
 1/4"=1'-0"

2 NEW STAIR 3 - SECOND FLOOR
 1/4"=1'-0"

3 NEW STAIR 3 - THIRD FLOOR
 1/4"=1'-0"

4 NEW STAIR 3 - FORTH FLOOR
 1/4"=1'-0"

10-9-12	ISSUED FOR PERMIT
10-17-12	ISSUED FOR BID
10/31/12	BID REVISION # 1

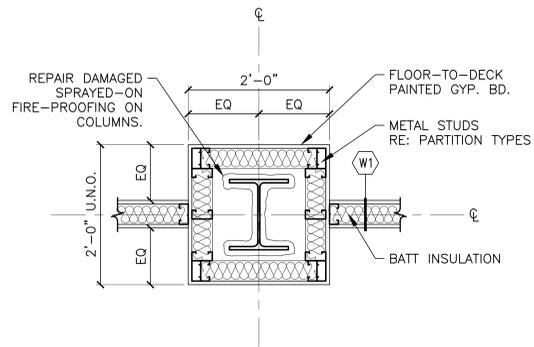
DATE	DESCRIPTION

PROFESSIONAL SEALS

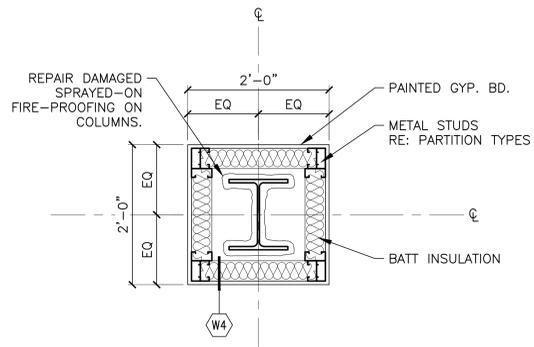
JOB ABBREV.	HCC-UT-ALIEF
DRAWN BY	EIN/RMS
CHECKED BY	RC
JOB NO.	1397
SCALE	N.T.S.
DATE	10/31/2012
ISSUE	PERMIT

STAIR TOWERS
 ENLARGED PLANS

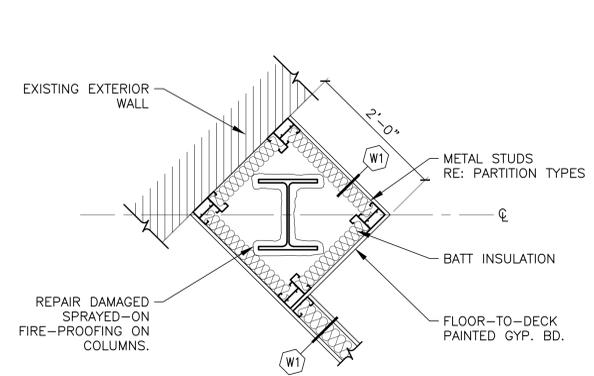
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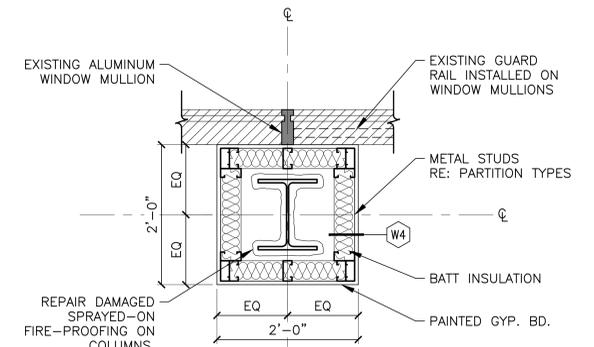
01 COLUMN ENCLOSURE DETAIL
1"=1'-0"



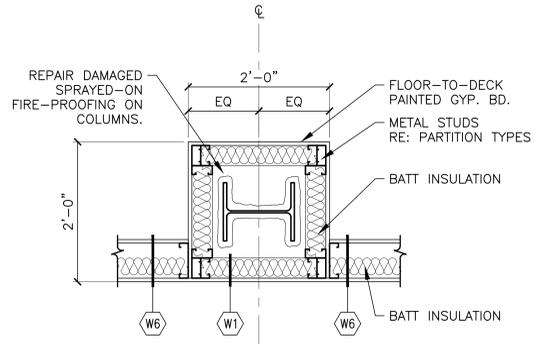
02 COLUMN ENCLOSURE DETAIL
1"=1'-0"



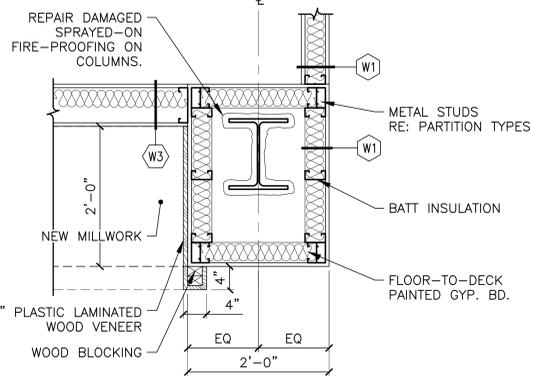
03 COLUMN ENCLOSURE DETAIL
1"=1'-0"



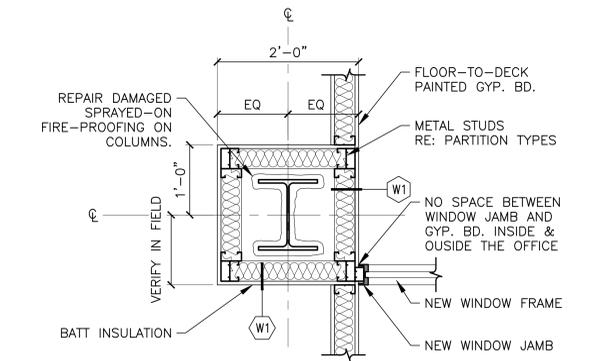
04 COLUMN ENCLOSURE DETAIL
1"=1'-0"



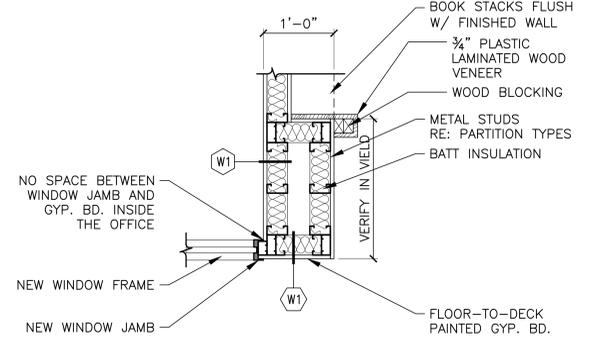
05 COLUMN ENCLOSURE DETAIL
1"=1'-0"



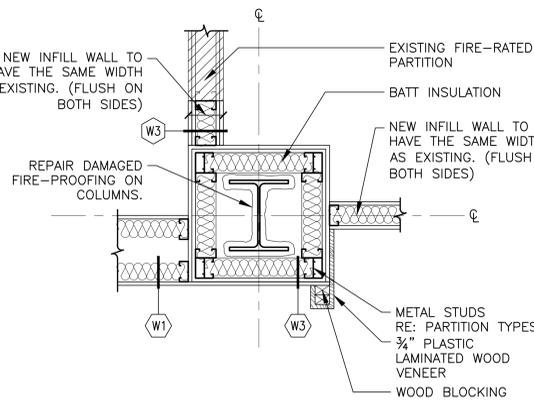
06 COLUMN ENCLOSURE DETAIL
1"=1'-0"



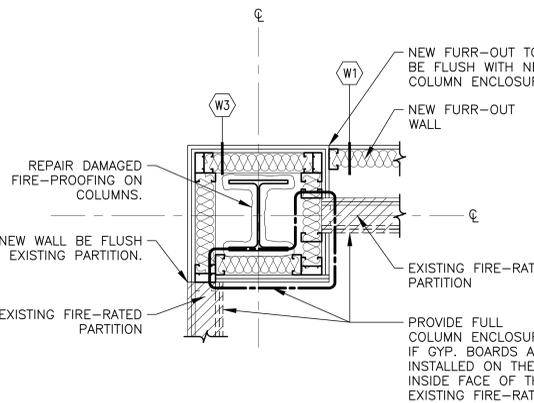
07 COLUMN ENCLOSURE DETAIL
1"=1'-0"



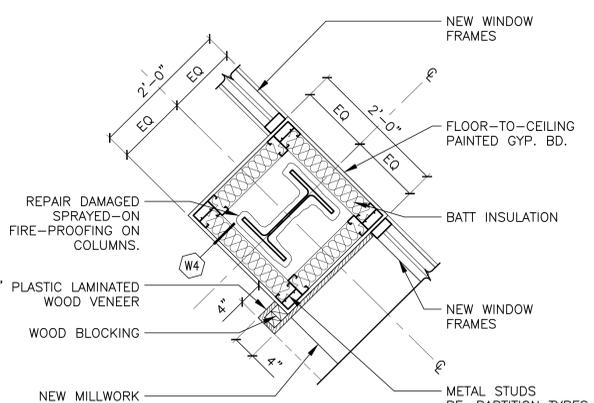
08 PARTITION CORNER DETAIL
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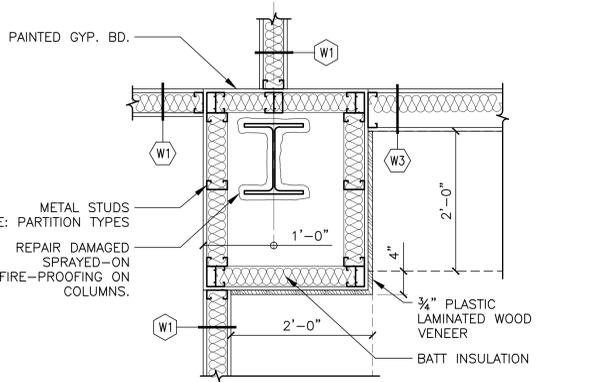
09 FIRE-RATED COLUMN ENCLOSURE DETAIL
1"=1'-0"



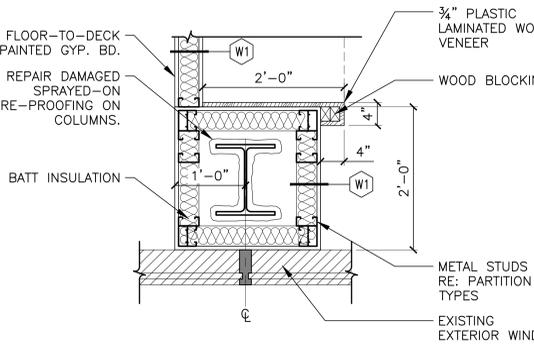
10 FIRE-RATED COLUMN ENCLOSURE DETAIL
1"=1'-0"



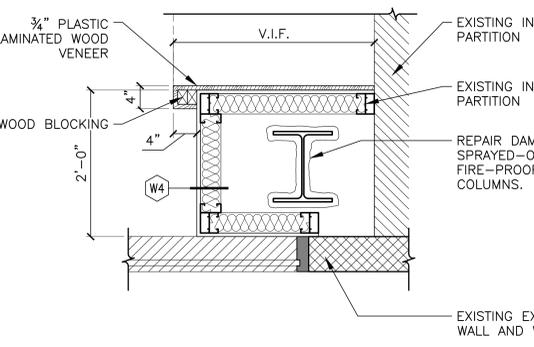
12 COLUMN ENCLOSURE DETAIL
1"=1'-0"



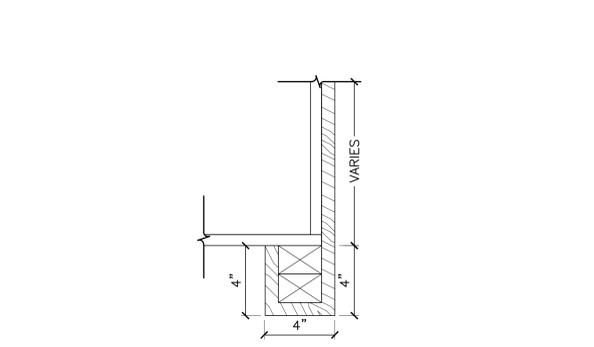
13 COLUMN ENCLOSURE DETAIL
1"=1'-0"



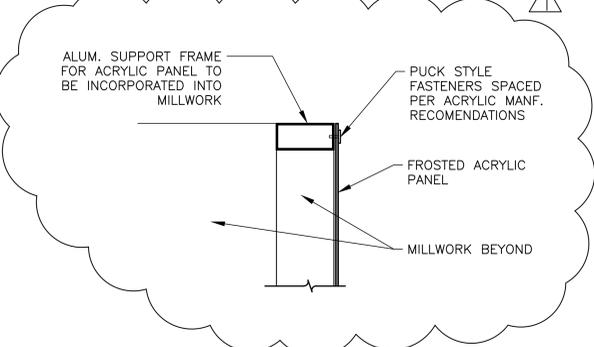
14 COLUMN ENCLOSURE DETAIL
1"=1'-0"



15 COLUMN ENCLOSURE DETAIL
1"=1'-0"



16 VENEERED EXTRUDED FRAME DETAIL
3"=1'-0"



17 ACRYLIC PANEL FRAME DETAIL
3"=1'-0"

10-9-12 ISSUED FOR PERMIT
10-17-12 ISSUED FOR BID
10-31-12 BID ADDENDUM #1

DATE DESCRIPTION
PROFESSIONAL SEALS



OCTOBER 17, 2012

JOB ABBREV. HCC-UT-ALIEF
DRAWN BY EIN/RMS CHECKED BY RC
JOB NO. 1397 SCALE N.T.S.
DATE 10/31/2012 ISSUE PERMIT

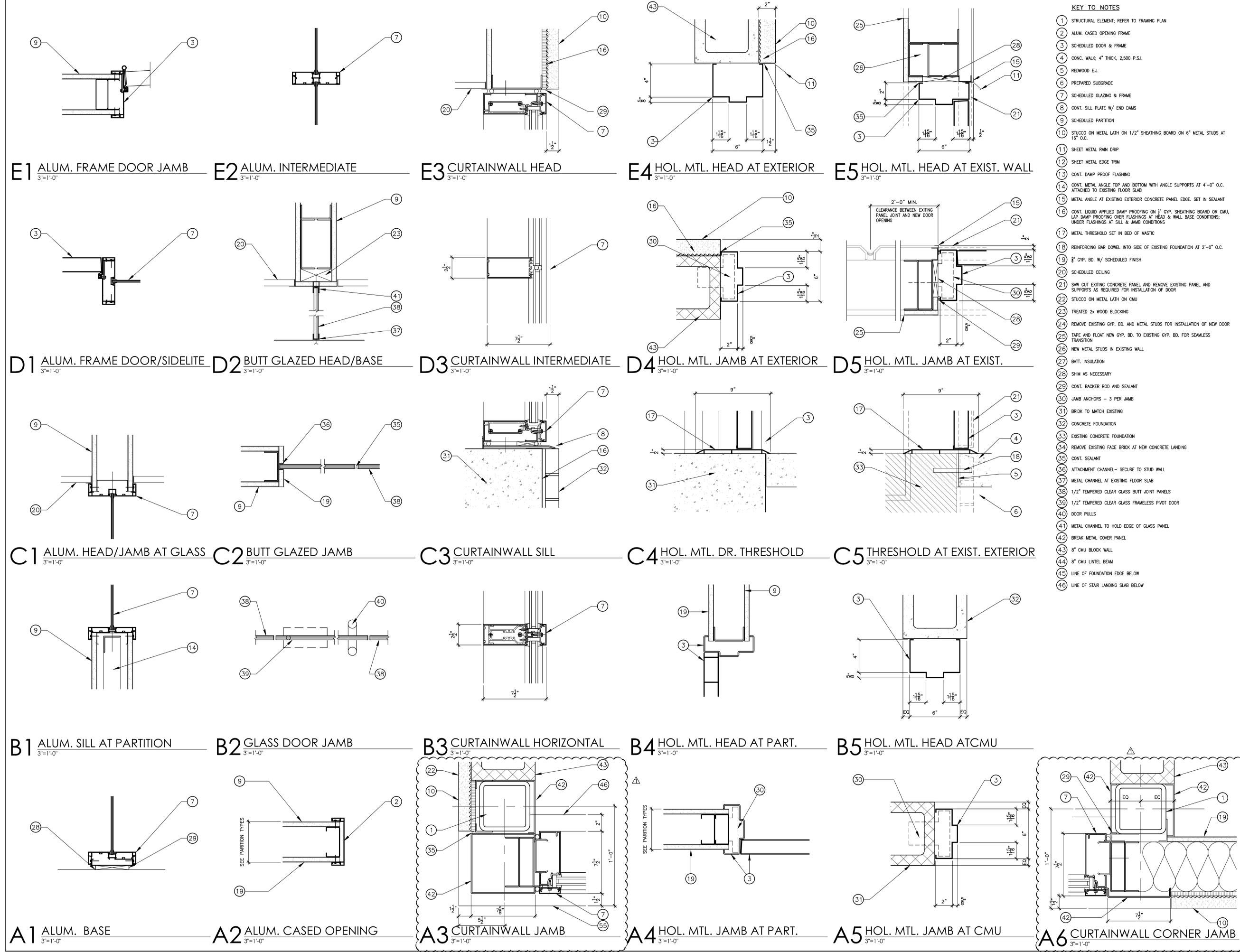
BUILDING DETAILS

DRAWING NUMBER
A.501

Username: ROBERT CHAPPUIS Date/Time: 10/31/2012 2:22 PM Filename: F:\Projects\1397 - HCC Alief - UT Tyler Buildings\Drawings\501-A501-Building Details.dwg

KEY TO NOTES

- 1 STRUCTURAL ELEMENT; REFER TO FRAMING PLAN
- 2 ALUM. CASSED OPENING FRAME
- 3 SCHEDULED DOOR & FRAME
- 4 CONC. WALK; 4" THICK, 2,500 P.S.I.
- 5 REDWOOD E.J.
- 6 PREPARED SUBGRADE
- 7 SCHEDULED GLAZING & FRAME
- 8 CONT. SILL PLATE W/ END DAMS
- 9 SCHEDULED PARTITION
- 10 STUCCO ON METAL LATH ON 1/2" SHEATHING BOARD ON 6" METAL STUDS AT 16" O.C.
- 11 SHEET METAL RAIN DRIP
- 12 SHEET METAL EDGE TRIM
- 13 CONT. DAMP PROOF FLASHING
- 14 CONT. METAL ANGLE TOP AND BOTTOM WITH ANGLE SUPPORTS AT 4'-0" O.C. ATTACHED TO EXISTING FLOOR SLAB
- 15 METAL ANGLE AT EXISTING EXTERIOR CONCRETE PANEL EDGE, SET IN SEALANT
- 16 CONT. LIQUID APPLIED DAMP PROOFING ON 3/4" GYP. SHEATHING BOARD OR CMU, LAP DAMP PROOFING OVER FLASHINGS AT HEAD & WALL BASE CONDITIONS; UNDER FLASHINGS AT SILL & JAMB CONDITIONS
- 17 METAL THRESHOLD SET IN BED OF MASTIC
- 18 REINFORCING BAR DOWEL INTO SIDE OF EXISTING FOUNDATION AT 2'-0" O.C.
- 19 8" GYP. BD. W/ SCHEDULED FINISH
- 20 SCHEDULED CEILING
- 21 SAW CUT EXISTING CONCRETE PANEL AND REMOVE EXISTING PANEL AND SUPPORTS AS REQUIRED FOR INSTALLATION OF DOOR
- 22 STUCCO ON METAL LATH ON CMU
- 23 TREATED 2x WOOD BLOCKING
- 24 REMOVE EXISTING GYP. BD. AND METAL STUDS FOR INSTALLATION OF NEW DOOR
- 25 TAPE AND FLOAT NEW GYP. BD. TO EXISTING GYP. BD. FOR SEAMLESS TRANSITION
- 26 NEW METAL STUDS IN EXISTING WALL
- 27 BATT. INSULATION
- 28 SHIM AS NECESSARY
- 29 CONT. BACKER ROD AND SEALANT
- 30 JAMB ANCHORS - 3 PER JAMB
- 31 BRICK TO MATCH EXISTING
- 32 CONCRETE FOUNDATION
- 33 EXISTING CONCRETE FOUNDATION
- 34 REMOVE EXISTING FACE BRICK AT NEW CONCRETE LANDING
- 35 CONT. SEALANT
- 36 ATTACHMENT CHANNEL - SECURE TO STUD WALL
- 37 METAL CHANNEL AT EXISTING FLOOR SLAB
- 38 1/2" TEMPERED CLEAR GLASS BUTT JOINT PANELS
- 39 1/2" TEMPERED CLEAR GLASS FRAMELESS PIVOT DOOR
- 40 DOOR PULLS
- 41 METAL CHANNEL TO HOLD EDGE OF GLASS PANEL
- 42 BREAK METAL COVER PANEL
- 43 8" CMU BLOCK WALL
- 44 8" CMU LINTEL BEAM
- 45 LINE OF FOUNDATION EDGE BELOW
- 46 LINE OF STAIR LANDING SLAB BELOW



10-9-12 ISSUED FOR PERMIT
10-17-12 ISSUED FOR BID
10/31/12 BID REVISION #1

DATE DATE DESCRIPTION
PROFESSIONAL SEALS



OCTOBER 17, 2012

JOB ABBREV. HCC-UT-ALIEF
DRAWN BY EIN/RMS CHECKED BY RC
JOB NO. 1397 SCALE N.T.S.
DATE 10/12/2012 ISSUE PERMIT
SHEET COMMENTS

DOOR & WINDOW DETAILS

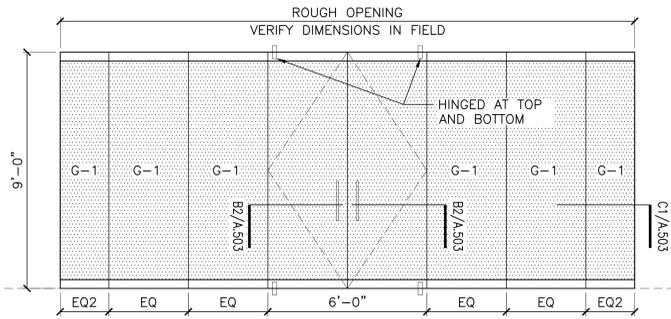
DRAWING NUMBER

A.503

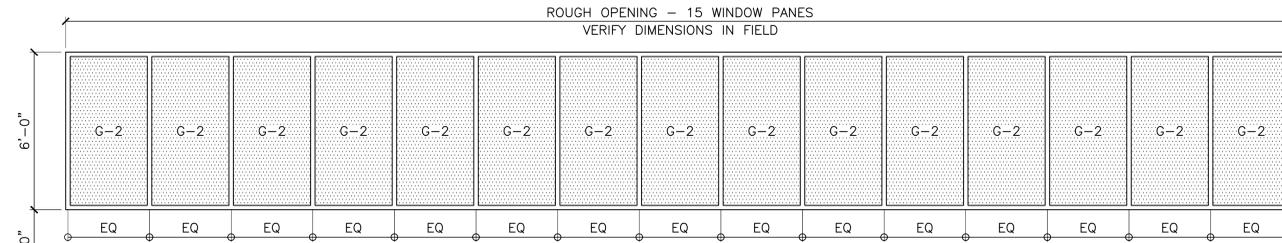
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INTERIOR WINDOW GLAZING TYPES

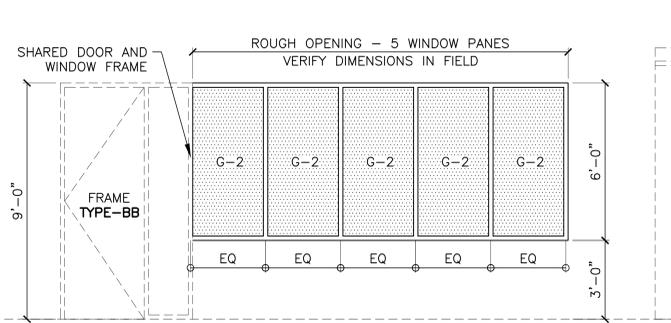
TAG	FINISH TYPE
G-1	1/2" TEMPERED GLASS
G-2	1/4" CLEAR GLASS



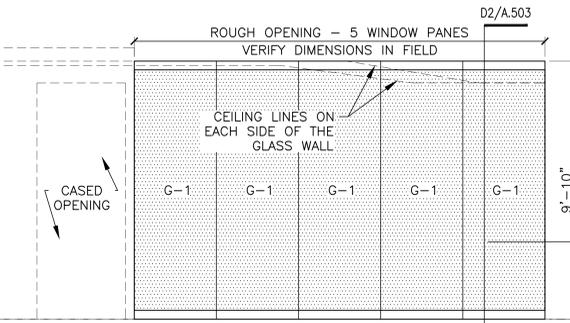
WINDOW TYPE-1



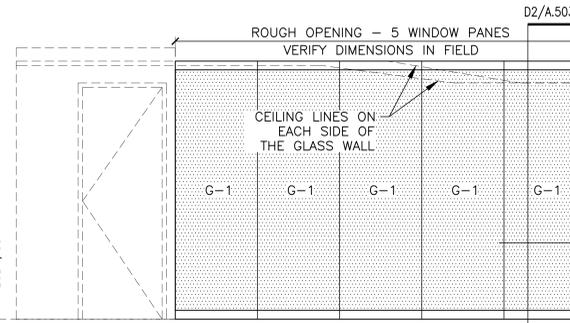
WINDOW TYPE-2



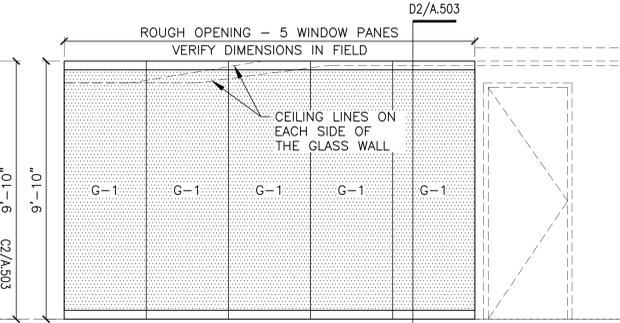
WINDOW TYPE-3



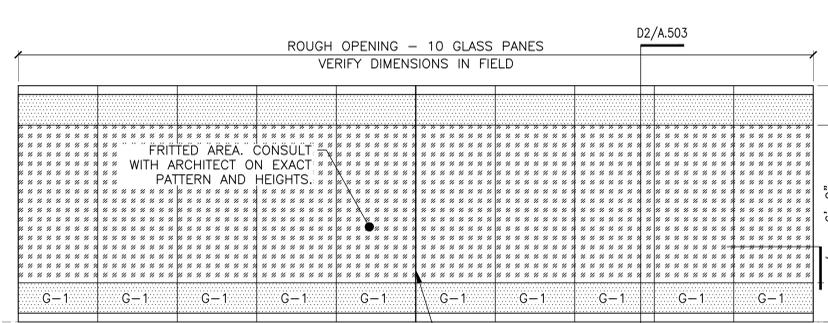
WINDOW TYPE-4



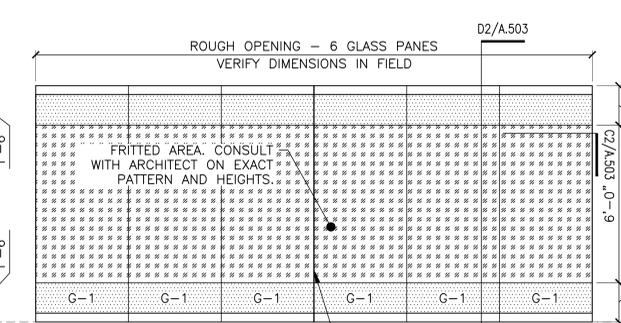
WINDOW TYPE-5



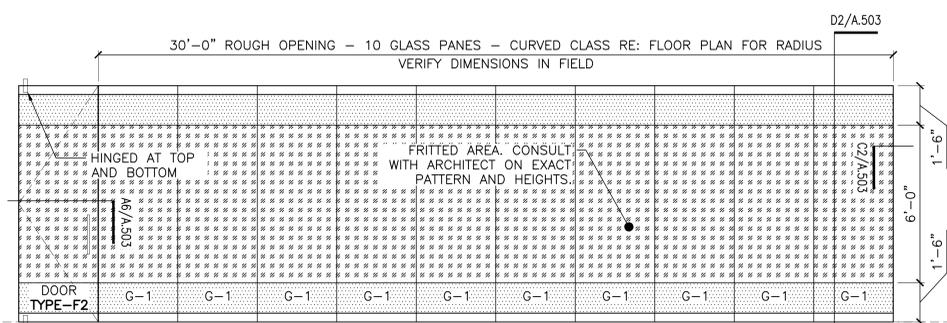
WINDOW TYPE-6



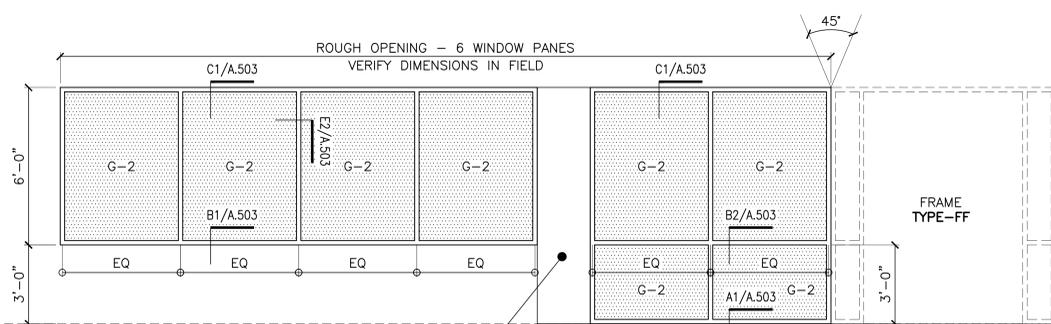
WINDOW TYPE-7



WINDOW TYPE-8



WINDOW TYPE-9



WINDOW TYPE-10

10-9-12	ISSUED FOR PERMIT
10-17-12	ISSUED FOR BID
10-31-12	BID ADDENDUM #1

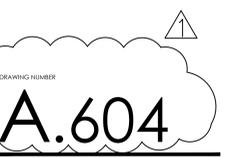
DATE: 10/31/2012 ISSUE: PERMIT



OCTOBER 17, 2012

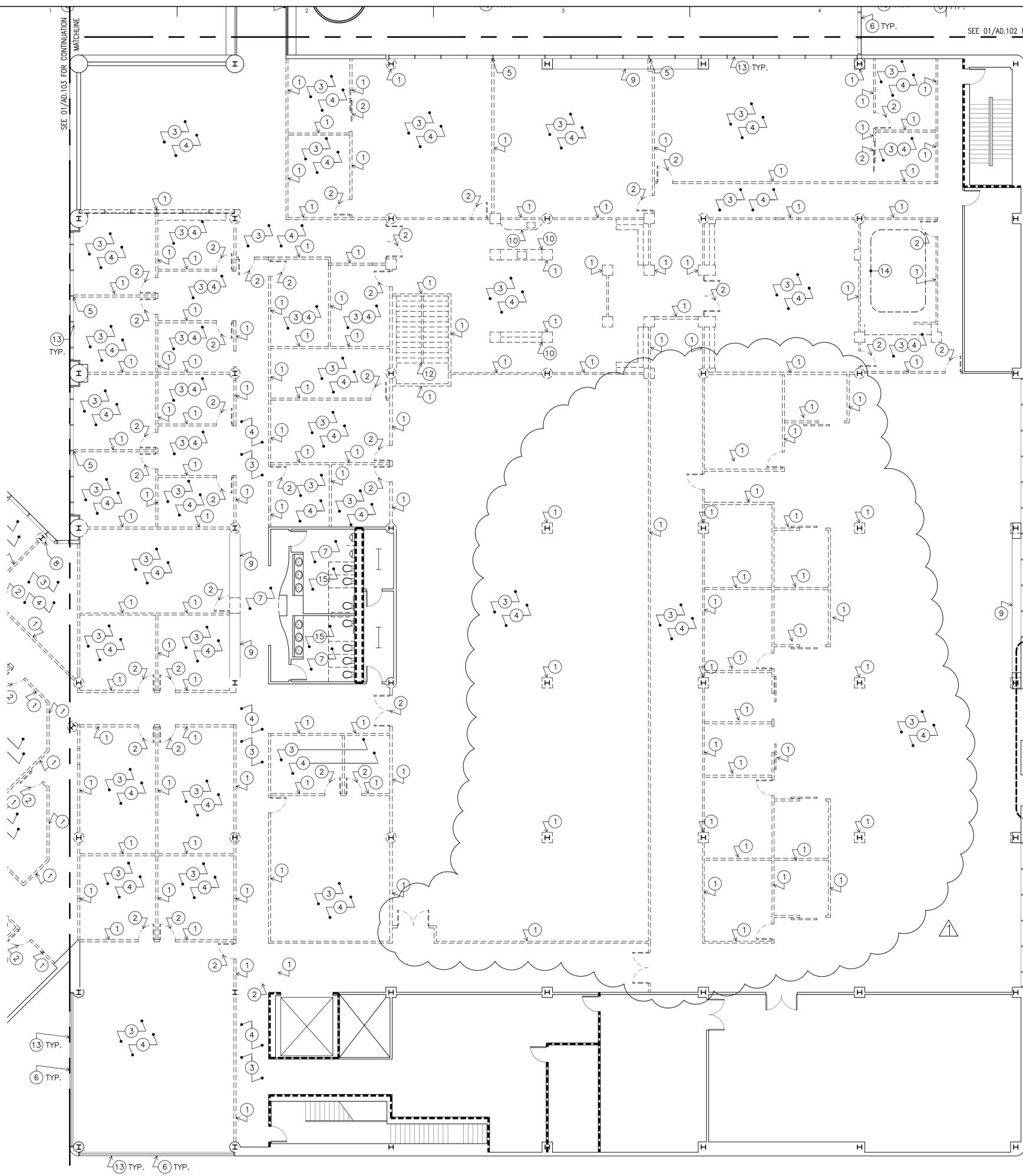
JOB ABBREV: HCC-UT-ALIEF
 DRAWN BY: EIN/RMS CHECKED BY: RC
 JOB NO.: 1397 SCALE: 3/8" = 1'-0"
 DATE: 10/31/2012 ISSUE: PERMIT

SHEET CONTENTS
 INTERIOR WINDOW TYPES
 AND GLAZING SCHEDULE



Username: ROBERT CHRUSLAS Date/Time: 10/31/2012 2:17 PM
 F:\Projects\1397 - HCC Alief - UT Tyler\Buildout\Drawings\604-605 Window Types.dwg

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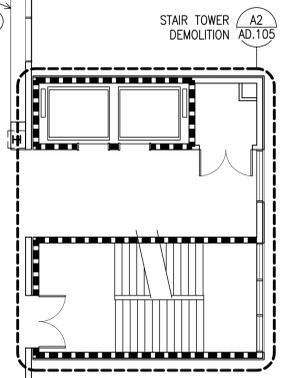


SEE 01/AD.102 FOR CONTINUATION
MATCHLINE

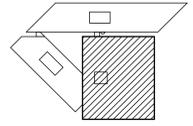
- LEGEND**
- EXISTING WALLS TO BE REMOVED
 - EXISTING WALLS TO REMAIN
 - - - EXISTING DOOR TO BE REMOVED
 - - - EXISTING DOOR TO REMAIN
 - - - EXISTING 2-HR FIRE-RATED WALL

- KEY NOTES**
1. EXISTING WALL TO BE REMOVED.
 2. EXISTING DOOR TO BE REMOVED.
 3. EXISTING CEILING TILES, LIGHT FIXTURES AND CEILING GRID TO BE REMOVED. PREPARE TO INSTALL NEW CEILING GRID.
 4. EXISTING FLOOR FINISHES TO BE REMOVED. PREPARE TO INSTALL NEW FINISHES AND THRESHOLDS.
 5. CLEAN DAMAGED WINDOW MULLIONS, FRAMES, HANDRAILS AND PREPARE TO REFINISH.
 6. CLEAN EXISTING WINDOWS. PREPARE TO APPLY NEW U.V. FILM.
 7. EXISTING GYP. BOARD CEILING AND LIGHTING FIXTURES TO REMAIN. PREPARE CEILING FOR NEW FINISH.
 8. EXISTING COLUMN ENCLOSURE TO BE REMOVED.
 9. EXISTING BRACING CASEMENT TO REMAIN. PATCH AND FILL ALL DAMAGED AREAS. PREPARE TO APPLY NEW FINISHES.
 10. ALL EXISTING PLUMBING FIXTURES AND FITTINGS TO BE REMOVED.
 11. REMOVE EXISTING PORTIONS OF THE FLOWER BOX AND GLASS GUARD RAILS TO INSTALL NEW WINDOW FRAME. RE: NEW CONSTRUCTION.
 12. STAIRS TO THE THIRD FLOOR TO BE REMOVED.
 13. REMOVE ALL EXISTING HANDRAIL INSTALLED ON WINDOW MULLIONS. PATCH AND FILL AS REQUIRED.
 14. ALL MECHANICAL/ELECTRICAL EQUIPMENT AND LIGHTING FIXTURES INSIDE THIS ROOM TO BE RELOCATED TO NEW CONSTRUCTION. RE: NEW CONSTRUCTION.
 15. EXISTING WALL AND FLOOR FINISHES, PARTITIONS, AND FIXTURES TO BE REMOVED. PREPARE SURFACES FOR NEW FINISH.

- GENERAL NOTES**
1. ALL EXISTING FIRE EQUIPMENT ON WALLS TO BE REMOVED AND INSTALLED IN NEW LOCATIONS.
 2. REMOVE ONLY NON-LOAD-BEARING CONSTRUCTION AND PARTITIONS. CONTRACTOR TO VERIFY, PRIOR TO REMOVAL, THAT NO STRUCTURAL COMPONENTS, I.E. BEARING WALLS, BEAMS, HEADERS, ETC. SUPPORTING FLOOR, ROOF OR CEILING JOISTS ARE DESIGNATED FOR REMOVAL. CONTACT THE ARCHITECT PRIOR TO REMOVAL OF ANY CONSTRUCTION IN QUESTION OR DEVIATING FROM THE DESIGN INTENT. CONTRACTOR'S NON-CONTACT OF ARCHITECT PRIOR TO REMOVAL OF ANY WORK INDICATES HIS COMPLETE UNDERSTANDING THAT NO LOAD BEARING OR STRUCTURAL WORK IS BEING ALTERED UNDER THIS CONTRACT.
 3. REMOVE ALL FINISHES, DECOR, ORNAMENTS, ETC. FROM ALL WALLS TO REMAIN



01 2nd FLOOR PARTIAL DEMOLITION PLAN
1/8"=1'-0"



PROZIGN ARCHITECTS
701 Shepherd, Suite 200 | Houston, TX 77007
P [713] 977-6060 | F [713] 977-6086

HCC HOUSTON COMMUNITY COLLEGE
2811 Hayes Rd. | Houston, TX | 77082

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DATE: _____ DATE: _____ DESCRIPTION: _____

PROFESSIONAL SEALS

 OCTOBER 17, 2012

JOB ABBREV. HCC-UT-ALIEF
 DRAWN BY EIN/RMS CHECKED BY RC
 JOB NO. 1397 SCALE N.T.S.
 DATE 10/31/2012 ISSUE PERMIT
 SHEET CONTENTS
 2nd FLOOR DEMOLITION PLAN

DRAWING NUMBER
AD.104

1st FLOOR FINISH SCHEDULE

INDICATES FINISHES TO BE APPLIED TO SPECIFIC WALLS. ORIENTATION SAME AS FLOOR PLAN

ROOM NO.	ROOM NAME / OCCUPANT	FLOOR				BASE				WALL			CEILING				CEILING HEIGHT
		FLOOR TILE	CARPET	CERAMIC TILE	EXIST. TO REMAIN	RUBBER BASE	CERAMIC TILE	EXIST. TO REMAIN	NO BASE	PAINTED GWB	CERAMIC TILE	EXIST. TO REMAIN	AC-TILE	PAINTED GYP. BOARD	EXPOSED STRUCT.	EXIST. TO REMAIN	
1010	UTT CIVIL ENGINEERING MATERIALS LAB	VCT-1				RB-1				P1, P3			ACT-1				9'-0"
1011	SHARED PREP/STORAGE	VCT-1				RB-1				P1, P5			ACT-1				9'-0"
1012	UTT CIVIL ENGINEERING HYDRO & ENV LAB	VCT-1				RB-1				P1, P4			ACT-1				9'-0"

2nd FLOOR FINISH SCHEDULE

INDICATES FINISHES TO BE APPLIED TO SPECIFIC WALLS. ORIENTATION SAME AS FLOOR PLAN

ROOM NO.	ROOM NAME / OCCUPANT	FLOOR				BASE				WALL			CEILING				CEILING HEIGHT
		FLOOR TILE	CARPET	CERAMIC TILE	EXIST. TO REMAIN	RUBBER BASE	CERAMIC TILE	EXIST. TO REMAIN	NO BASE	PAINTED GWB	CERAMIC TILE	EXIST. TO REMAIN	AC-TILE	PAINTED GYP. BOARD	EXPOSED STRUCT.	EXIST. TO REMAIN	
2001	CORRIDOR		CP-3			RB-2				WP1, P7			ACT-2				VARIES 4
2002	BUILDING OPS				X				X							X	EXISTING
2003	MENS RESTROOM			CT-7			CT-1			P1	CT1,2,3,4			P1			9'-0"
2004	WOMENS RESTROOM			CT-8			CT-1			P1	CT1,2,5,6			P1			9'-0"
2005	CORRIDOR		CP-2			RB-2				P1,P12			ACT-3				VARIES 4
2006	CORRIDOR		CP-2			RB-2				P1,P12			ACT-3				VARIES 4
2007	CORRIDOR		CP-2			RB-2				P1,P12			ACT-3				VARIES 4
2008	CORRIDOR		CP-2			RB-2				P1,P12			ACT-3				VARIES 4
2009A	UTT ADMIN		CP-2			RB-3				P1,P10,P11			ACT-3				9'-0"
2009B	COFFEE BAR	RT-1				RB-4				P10			ACT-3				9'-0"
2009C	UTT CONF		CP-2			RB-3				P1, P10			ACT-3				9'-0"
2009D	UTT OFFICE		CP-2			RB-3				P1, P11			ACT-3				9'-0"
2009E	UTT OFFICE		CP-2			RB-3				P1, P11			ACT-3				9'-0"
2009F	UTT STORAGE	VCT-1				RB-1				P1			ACT-1				9'-0"
2011	UTT OFFICE		CP-3			RB-4				P1, P9			ACT-1				9'-0"
2012	UTT OFFICE		CP-3			RB-4				P1, P8			ACT-1				9'-0"
2013	UTT OFFICE		CP-3			RB-4				P1, P7			ACT-1				9'-0"
2014	UTT OFFICE		CP-3			RB-4				P1, P8			ACT-1				9'-0"
2015	UTT OFFICE		CP-3			RB-4				P1, P9			ACT-1				9'-0"
2016	IT ROOM				X				X							X	EXISTING
2017	ELECTRICAL				X				X							X	EXISTING
2018	JANITOR				X				X							X	EXISTING
2019	UTT FAC. WORKROOM	RT-1				RB-4				P1,P3			ACT-1				9'-0"
2020	UTT STORAGE	VCT-1				RB-1				P1			ACT-1				9'-0"
2021	UTT CLASSROOM		CP-3			RB-1				P1, P4			ACT-1				9'-0"
2022	UTT CLASSROOM		CP-3			RB-1				P1, P5			ACT-1				9'-0"
2023	UTT CLASSROOM		CP-3			RB-1				P1, P6			ACT-1				9'-0"
2024	UTT OFFICE		CP-3			RB-4				P1, P7			ACT-1				9'-0"
2025	UTT OFFICE		CP-3			RB-4				P1, P8			ACT-1				9'-0"
2026	UTT OFFICE		CP-3			RB-4				P1, P9			ACT-1				9'-0"
2027	UTT OFFICE		CP-3			RB-4				P1, P9			ACT-1				9'-0"
2028	UTT OFFICE		CP-3			RB-4				P1, P8			ACT-1				9'-0"
2029	UTT OFFICE		CP-3			RB-4				P1, P7			ACT-1				9'-0"
2030A	HCC LIBRARY		CP-1			RB-2				P1,P2,P7			ACT-3,ACT-2				VARIES 4
2030B	LIBRARY CHECKOUT		CP-1			RB-2				P1, P7			ACT-3				9'-0"
2030C	LIBRARY WORKROOM		CP-1			RB-2				P1			ACT-1				9'-0"
2030D	LIBRARY COMPUTER CLASSROOM	VCT-1				RB-1				P1, P3			ACT-1				9'-0"
2030E	LIBRARY OFFICE		CP-2			RB-1				P1, P3			ACT-1				9'-0"
2030F	LIBRARY OFFICE		CP-2			RB-1				P1, P3			ACT-1				9'-0"
2030G	LIBRARY OFFICE		CP-2			RB-1				P1, P3			ACT-1				9'-0"
2030H	LIBRARY OFFICE		CP-2			RB-1				P1, P3			ACT-1				9'-0"
2030I	LIBRARY STUDY		CP-2			RB-1				P1			ACT-2				9'-0"
2030J	LIBRARY STUDY		CP-2			RB-1				P1			ACT-2				9'-0"
2030K	LIBRARY STUDY		CP-2			RB-1				P1			ACT-2				9'-0"
2030L	LIBRARY STUDY		CP-2			RB-1				P1			ACT-2				9'-0"
2030M	HCC LIBRARY		CP-1			RB-2				P1,P2,P7			ACT-3				VARIES 4
2030N	HCC LIBRARY		CP-1			RB-2				P1,P2,P7			ACT-3				VARIES 4
2031	IT ROOM				X				X							X	9'-0"
2032	ELECTRICAL				X				X							X	9'-0"
2033	JANITOR				X				X							X	9'-0"
2034	WOMENS RESTROOM			CT-8			CT-1			P1	CT1,2,5,6			P1			9'-0"
2035	MENS RESTROOM			CT-7			CT-1			P1	CT1,2,3,4			P1			9'-0"
2036	CORRIDOR		CP2,CP3			RB-2				WP1, P7			ACT-2				VARIES 4
2038	CORRIDOR		CP-2			RB-2				P1, P7			ACT-3				VARIES 4
2039	UTT CLASSROOM		CP-3			RB-1				P1, P6			ACT-1				9'-0"
2040	UTT CLASSROOM		CP-3			RB-1				P1, P5			ACT-1				9'-0"
2041	UTT CLASSROOM		CP-3			RB-1				P1, P4			ACT-1				9'-0"
2042	UTT SENIOR STUDIO	RT-1				RB-4				P1, P7			ACT-1				9'-0"
2043	HCC OPEN STUDY		CP-1			RB-2				P1,P2			ACT-3				9'-0"
2044	HCC OPEN STUDY		CP-1			RB-2				P1,P2,P12			ACT-3				9'-0"
2045	UTT SEMINAR		CP-3			RB-1				P1, P3			ACT-1				9'-0"
2046	UTT ELECTRICAL ENG. STORAGE	VCT-1				RB-1				P1			ACT-1				9'-0"
2047	HCC CLASSROOM		CP-3			RB-1				P1, P4			ACT-1				9'-0"
2048	HCC CLASSROOM		CP-3			RB-1				P1, P5			ACT-1				9'-0"
2049	BUILDING OPS				X				X							X	9'-0"
2050	MENS RESTROOM			CT-7			CT-1			P1	CT1,2,3,4			P1			9'-0"
2051	WOMENS RESTROOM			CT-8			CT-1			P1	CT1,2,5,6			P1			9'-0"
2052	BUILDING OPS				X				X							X	9'-0"
2053	BUILDING OPS				X				X							X	9'-0"
2054	UTT ELECTRICAL ENG. ELECTRONICS LAB	VCT-1				RB-1				P1, P6			ACT-1				9'-0"
2055	UTT ELECTRICAL ENG. POWER SYSTEMS LAB	VCT-1				RB-1				P1, P5			ACT-1				9'-0"
2056	UTT ELECTRICAL ENG. COMP ENG LAB	VCT-1				RB-1				P1, P4			ACT-1				9'-0"
2057	UTT ELECTRICAL ENG. MICROPROCESSORS LAB	VCT-1				RB-1				P1, P3			ACT-1				9'-0"
2058	UTT COMP LAB	VCT-1				RB-1				P1, P3			ACT-1				9'-0"
2059	HCC CLASSROOM		CP-3			RB-1				P1, P4			ACT-1				9'-0"
2060	HCC CLASSROOM		CP-3			RB-1				P1, P5			ACT-1				9'-0"
2061	HCC CLASSROOM		CP-3			RB-1				P1, P6			ACT-1				9'-0"

GENERAL NOTES

- SEE FINISH PLANS FOR EXACT FINISH TYPES AND LOCATIONS.
- SEE ENLARGED FINISH PLANS FOR EXACT FINISHES AND PATTERNS.
- SEE RESTROOM INTERIOR ELEVATIONS FOR EXACT FINISHES AND PATTERNS.
- SEE REFLECTED CEILING PLANS FOR EXACT CEILING HEIGHTS.
- SEE REFLECTED CEILING PLANS FOR EXACT ACOUSTICAL CEILING TILE TYPES AND LOCATIONS.
- NEW PAINT FOR ENTIRE PAINT-ABLE AREA OF ATRIUMS; CONSULT WITH ARCHITECT ON PAINT COLORS AND LOCATIONS

FINISH TYPE SCHEDULE

PAINTS (P)	
TAG	FINISH TYPE
P-1	GLIDDEN PROFESSIONAL, "ATMOSPHERE", ORDER #A0157, SEMI-GLOSS
P-2	RAL K7 CLASSIC, "TRAFFIC GREY B", ORDER #RAL7043, MATTE
P-3	GLIDDEN PROFESSIONAL, "DIAMOND BLUE", ORDER #A1261, SEMI-GLOSS
P-4	GLIDDEN PROFESSIONAL, "WINDY HILL", ORDER #A1263, SEMI-GLOSS
P-5	GLIDDEN PROFESSIONAL, "PACIFIC COAST", ORDER #A1265, SEMI-GLOSS
P-6	GLIDDEN PROFESSIONAL, "MILANO", ORDER #A1267, SEMI-GLOSS
P-7	GLIDDEN PROFESSIONAL, "APPLE VALLEY", ORDER #A0922, SEMI-GLOSS
P-8	GLIDDEN PROFESSIONAL, "MEADOW FLOWER", ORDER #A0920, SEMI-GLOSS
P-9	GLIDDEN PROFESSIONAL, "AUGUST MOON", ORDER #A0918, SEMI-GLOSS
P-10	GLIDDEN PROFESSIONAL, "SPICE ISLAND", ORDER #A0621, SEMI-GLOSS
P-11	GLIDDEN PROFESSIONAL, "BUTTERSCOTCH TEMPEST", ORDER #A0620, SEMI-GLOSS
P-12	GLIDDEN PROFESSIONAL, "BLUE LIGHT", ORDER #A1359, SEMI-GLOSS
P-13	GLIDDEN PROFESSIONAL, "NEON LIGHT", ORDER #A0923, SEMI-GLOSS
P-14	GLIDDEN PROFESSIONAL, "SPOTLIGHT", ORDER# A0921, SEMI-GLOSS

CERAMIC TILES (CT)	
TAG	FINISH TYPE
CT-1	DALTILE FESTIVA, "MATTE ARTIC WHITE", 0790, 3"x6"
CT-2	DALTILE FESTIVA, "DESERT GRAY", X714, 3"x6"
CT-3	DALTILE FESTIVA, "BERMUDA DT", QF55, 3"x6"
CT-4	DALTILE FESTIVA, "GREEN APPLE DT", QF30, 3"x6"
CT-5	DALTILE FESTIVA, "AMETHYST DT", QF51, 3"x6"
CT-6	DALTILE FESTIVA, "CROCUS", QF70, 3"x6"
CT-7	DALTILE KEYSTONES, "SPA", D148, 2"x2", MATTE
CT-8	DALTILE KEYSTONES, "MINT ICE", D152, 2"x2", MATTE

VINYL COMPOSITE TILES (VCT)	
TAG	FINISH TYPE
VCT-1	AZROCK COLLECTION, "FUR", V-290, 12"x24", 1/8" GAUGE, ASTM F1066

ACOUSTICAL CEILING TILES (ACT)	
TAG	FINISH TYPE
ACT-1	2'x2'x3/4", USG, FROST, 450, WHITE
ACT-2	ARMSTRONG INFUSIONS, "CALM WATER", SM5405CTCW
ACT-3	HUNTER DOUGLAS CONTRACT, TECHSTYLE E PANELS, CLASSIC (CLIPPED), "WHITE" W/ ACOUSTICAL COATING

RUBBER BASES (RB)	
TAG	FINISH TYPE
RB-1	ROPPE WALL BASE, "SILVER GRAY", P108
RB-2	ROPPE WALL BASE, "ICEBERG", 197
RB-3	ROPPE WALL BASE, "CHARCOAL", 123
RB-4	ROPPE WALL BASE, "SMOKE", P174

CARPET TILES (CP)	
TAG	FINISH TYPE
CP-1	MILLIKEN, "SLAM W/AZUL FREESTYLE", MONOLITHIC INSTALLATION
CP-2	MILLIKEN, "SLAM W/AZUL MIXTAPE", MONOLITHIC INSTALLATION
CP-3	MILLIKEN, "SLAM W/AZUL TEMPO", MONOLITHIC INSTALLATION

MODULAR RESILIENT TILE (RT)	
TAG	FINISH TYPE
RT-1	JOHNSONITE MODULAR RESILIENT TILE, "GREY ASH", 1009 WG TILE
RT-2	JOHNSONITE MODULAR RESILIENT TILE, "BROWN ASH", 1010 TILE

LAMINATES (PLAM)	
TAG	FINISH TYPE
PLAM-1	WILLSONART LAMINATE, "ASIAN NIGHT" #7949K-18
PLAM-2	WILLSONART LAMINATE, "ASIAN SAND", #7952K-18
PLAM-3	WILLSONART LAMINATE, "DESIGNER WHITE", #D354-60 GLOSS

SOLID SURFACE (SS)	
TAG	FINISH TYPE
SS-1	AVONITE SURFACES STUDIO COLLECTION, "FROSTED GLASS", K3-8480, SATIN 02/08
SS-2	AVONITE SURFACES STUDIO COLLECTION, "ARGENT", K3-8565, GLOSS 04/08
SS-3	AVONITE SURFACES STUDIO COLLECTION, "BLUE PEARL", K3-8000, GLASS 04/08

