

SECTION 009113 – ADDENDUM 03

1.1 PROJECT INFORMATION

- A. Project Name: Clark State College Rhodes Hall (RH) Renovations Phase 4
 - 1. Project Location: Clark State College, 570 Leffel Lane, Springfield, OH 45505.
- B. Owner: Clark State College, 570 Leffel Lane, Springfield, OH 45505.
- C. Owner Project Number: CLT-21RHP4>.
- D. Architect: emersion Design, 310 Culvert Street, Suite 100, Cincinnati, OH 45202.
- E. Architect Project Number: 052201.
- F. Date of Addendum: April 14, 2023.

1.2 NOTICE TO BIDDERS

- A. This Addendum is issued to all registered plan holders pursuant to the Instructions to Bidders and Conditions of the Contract. This Addendum serves to clarify, revise, and supersede information in the Project Manual, Drawings, and previously issued Addenda. Portions of the Addendum affecting the Contract Documents will be incorporated into the Contract by enumeration of the Addendum in the Owner/Contractor Agreement.
- B. The Bidder shall acknowledge receipt of this Addendum in the appropriate space on the Bid Form.
- C. The date for receipt of bids is unchanged by this Addendum (*previously extended to the following date by Addendum 01*).
 - 1. Bid Date: April 19th @ 2:00pm.

1.3 ATTACHMENTS

- A. This Addendum includes the following attached Documents and Specification Sections:
 - 1. Section 123553.19 – Wood Laboratory Casework, dated March 2023, reissued.
- B. This Addendum includes the following attached Drawing Sheets:
 - 1. Sheet I-101 – RHODES 200 LEVEL FURNITURE PLAN, reissued.
 - 2. Sheet I-601 – CASEWORK AND EQUIPMENT SCHEDULES, reissued.

1.4 REVISIONS TO SPECIFICATION SECTIONS

- A. Specification Section 074219 – Metal Composite Material Wall Panels, (not reissued).

1. Paragraph 2.05 Finishes: Delete text “Two-Coat Fluoropolymer” and add “Three-Coat Mica Fluoropolymer”.

1.5 REVISIONS TO DRAWING SHEETS

- A. Sheet I-101 – RHODES 200 LEVEL FURNITURE PLAN, (reissued).
 1. Drawing A1, Geology Room 231
 - a. Tag “T2” added to Instructor’s Station
- B. Sheet I-601 – CASEWORK AND EQUIPMENT SCHEDULE, (reissued).
 1. Casework Schedule
 - a. Room 231 tag T2 - Revise model number Instructor’s Station to T21WC363060 instructor station / sink on right / include work top T21WT013060R & fixture package T31FP (all electric fixtures and fittings).
 - b. Room 312 tag T2 - Revise model number Instructor’s Station to T21WC363060 instructor station / sink on right / include work top T21WT013060R & fixture package T31FP (all electric fixtures and fittings).
Room 312 tag T3 - Revise model number 4 Student Table to T84WC313860 4 student table / include cabinet assembly G76W243714 / work top T84WT013860R, & fixture package T84FP (all electric fixtures and fittings).
 - c. Room 314 tag T2 - Revise model number Instructor’s Station to T31WC363060 instructor station / sink on left / include work top T31WT013060R & fixture package T31FP (all electric fixtures and fittings).
Room 314 tag T4 - Revise model number 2 Student Table to T44WC312460 / include cabinet assembly G75W242114, work top T44WT012460R & fixture package T44FP (all electric fixtures and fittings).
 - d. Room 316 tag T2 - Revise model number Instructor’s Station to T31WC363060 instructor station / sink on left / include work top T31WT013060R & fixture package T31FP (all electric fixtures and fittings).
Room 316 tag T4 - Revise model number 2 Student Table to T44WC312460 / include cabinet assembly G75W242114, work top T44WT012460R & fixture package T44FP (all electric fixtures and fittings).
- C. Sheet I-112 – RHODES 300 LEVEL FINISH PLAN, (not reissued).
 1. Drawing A1
 - a. Add tag “RF3” to rooms 312A Physics Storage/Prep and 316A Chem Prep Lab/Office.

1.6 REQUESTS FOR INFORMATION – RESPONSES

- A. ARCHITECTURAL
 1. Section 088000 glass spec provides (1) glass type, IG-1. Please confirm that glass spec is for glass type IG-2 as it’s shown on sheet A-601.
 - a. *IG-1 in spec is same as IG-2, IG-2 is to be tempered.*
 2. Please provide a glass spec or color for the spandrel glass (glass type SP-1).
 - a. *Insulated spandrel glass units are to match existing insulated spandrel glass units at first floor of Rhodes Hall and coordinate with IG-2 for visual continuity.*

Provide heat treated insulated glass unit with low e coating and opaci-coat-300 spandrel coating.

3. Please confirm all glass in insulated glass units is to be “Ultraclear” in lieu of standard clear glass. There is significant difference in cost.
 - a. *Insulated glass units are to match existing insulated glass units at first floor of Rhodes Hall. Ultraclear does not need to be used – standard clear with low e coating can be utilized. Front glass in insulated glass unit is to match existing utilizing tinted bronze/ gray.*
4. Who are the approved manufacturers for the casework in the classrooms?
 - a. *Basis of design for Lab casework is Kewaunee, refer specification Section 12 35 53.19*
5. Please provide product data for furniture items CH101, TB201 and T2.
 - a. *Furniture FFE procurement document is attached for reference.*
6. Are the chairs/benches (and tables?) shown on sheet I-103 Owner Furnished/Owner Installed? If by the GC, please provide specifications or product data for them.
 - a. *Chairs, benches, and tables are to be provided and installed by the GC. Furniture FFE procurement document is attached for reference.*
7. Please provide a specification or product data for the 5 precast planters shown on A-100.and A1/A-520.
 - a. *Basis of design is Park Warehouse reinforced concrete planter TF4135 72” diameter with weatherstone finish.*
8. In Lab 312, there are 5 tables with Keynote <6>; in the Keynote Legend on that page it indicates these are student tables by the FFE package but in the Casework schedule, it looks like these could be Item T3 - Kewaunee tables T84W313860. Which way should these tables be handled?
 - a. *The (5) five student tables in Lab 312 are T3 – Kewaunee table T84W313860. Refer attached sheet I-601.*
9. In Lab 312 there is an instructor’s Station, Keynote item <1> and the Keynote Legend references to Casework Legend on I-601, but there is not a description of the Instructor’s Station in the Casework Schedule; can this information be provided?
 - a. *The instructor’s station in Lab 312 is T2 – Kewaunee T21WC363060. Refer attached sheet I-601.*
10. In Lab 314 & 316 there is an instructor’s Station, Keynote item <7> and the Keynote Legend references a Standing Height Teacher’s Station, but does not provide any additional reference beyond that; can additional details on this station or a Kewaunee model# be provided?
 - a. *Please refer I-601, both Labs have T1 – Kewaunee T31WC363060 Instructor’s Stations.*
11. Is GC responsible for asbestos abatement or will owner remove?
 - a. *GC is responsible for all hazardous material testing, identification, and hazardous material abatement within work area including exterior elevation work. Previous testing results are included with the specifications for reference but may not encompass hidden or exterior locations. All environmental remediation and disposal shall be accomplished in accordance with all local, state and federal laws while building is occupied.*
12. Do exterior columns need to be painted?

- a. *Yes, all exterior precast columns need to be painted per keynote 1 (Repair spalled concrete and paint all exposed surfaces of existing precast column, typ.) on Drawing Sheet– A-201 Rhodes Hall Exterior Elevations. Paint to be MPI approved three coat system with Basis of Design Sherwin Williams. Provide one coat Base Primer MPI#3 Loxon LX02W0050 and two coats Exterior Acrylic Loxon Self Cleaning LX13W0051 to match color of new metal rainscreen panels. Exterior Painting with three coat system to include all existing exposed brick/ masonry to remain, rooftop ductwork outside of new metal roof screen and as base bid at north elevation (if alternate 1 is not accepted) to be same three coat system.*
13. Demolition scope second floor ceiling-
 - a. *Limited removal of ceiling in second floor classrooms for new piping and floor penetrations to third floor labs will need to be coordinated with Clark State. The ceiling within these spaces is to be returned to existing condition.*
14. Will Clark State remove or want to save flammable cabinet and acid waste cabinet in Chemistry Lab?
 - a. *Demo and remove both existing flammable cabinet and venting in southwest corner and acid storage cabinet along north wall of Chemistry Lab 316.*

END OF DOCUMENT 009113

SECTION 123553.19 - WOOD LABORATORY CASEWORK

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
1. Wood laboratory casework.
 2. Auxiliary cabinets.
 3. Countertops.
 4. Laboratory Accessories
 5. Water and laboratory gas service fittings.
 6. Electrical and communication service fittings.

1.2 DEFINITIONS

- A. Concealed Surfaces of Casework: Include sleepers, web frames, dust panels, and other surfaces not usually visible after installation.
- B. Exposed Surfaces 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 are defined as "exposed" except ends are defined as "concealed" where installed directly against and completely concealed by walls or other cabinets.
- C. Semiexposed Surfaces of Casework: Surfaces behind opaque doors, such as cabinet interiors, shelves, and dividers; interiors and sides of drawers; and interior faces of doors. Tops of cases 78 inches or more above floor and bottoms of cabinets more than 24 inches but less than 48 inches above floor are defined as "semiexposed."

1.3 COORDINATION

- A. Coordinate layout and installation of framing and reinforcements for support of laboratory casework.
- B. Coordinate installation of laboratory casework with installation of laboratory equipment.

1.4 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Shop Drawings: For laboratory casework.
1. Include plans, elevations, sections, and attachments to other work including blocking and reinforcements required for installation.
 2. Indicate types and sizes of casework.
 3. Indicate manufacturer's catalog numbers for casework.

4. Show fabrication details, including types and locations of hardware.
 5. Indicate locations and types of service fittings.
 6. Include details of utility spaces showing supports for conduits and piping.
 7. Include details of support framing system.
 8. Include details of exposed conduits, if required, for service fittings.
 9. Indicate locations of and clearances from adjacent walls, doors, windows, other building components, and laboratory equipment.
 10. Include coordinated dimensions for laboratory equipment specified in other Sections.
- C. Keying Schedule: Include schematic keying diagram, and index each key set to unique designations that are coordinated with the Contract Documents.
- D. Samples: For casework finishes and materials requiring color selection.
- E. Samples for Initial Selection: For casework finishes and materials requiring color selection.
- F. Samples for Verification: For each type of casework, exposed-hardware, and countertop-material finish, in manufacturer's standard sizes.
- G. Delegated Design Submittals: For laboratory casework indicated to comply with seismic performance requirements, including analysis data signed and sealed by the qualified professional engineer responsible for their preparation.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For manufacturer.
- B. Product Test Reports:
1. Casework: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating compliance of laboratory casework with requirements of specified product standard.
 2. Countertop Surface Material: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating compliance of laboratory countertop surface material with requirements specified for chemical and physical resistance.

1.6 MAINTENANCE MATERIAL SUBMITTALS

- A. Furnish complete touchup kit for each type and color of casework finish provided. Include fillers, stains, finishes, and other materials necessary to perform permanent repairs to damaged laboratory casework finish.
- B. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Cabinet Mounting Clips and Related Hardware: Quantity equal to 5 percent of amount installed, but no fewer than 20 of each type.
 2. Modular Countertop Units: Two extra units of each length and material installed.

1.7 QUALITY ASSURANCE

- A. **Manufacturer Qualifications:** A qualified manufacturer that produces casework of types indicated for this Project that has been tested for compliance with SEFA 8 W.

1.8 DELIVERY, STORAGE, AND HANDLING

- A. Protect finished surfaces during handling and installation with protective covering of polyethylene film or other suitable material.

1.9 FIELD CONDITIONS

- A. **Environmental Limitations:** Do not deliver or install laboratory casework until building is enclosed, utility roughing-in and wet-work are complete, and HVAC system is operating and maintaining temperature and relative humidity at levels planned for building occupants during the remainder of the construction period.
- B. **Field Measurements:** Where laboratory casework is indicated to fit to existing construction, verify dimensions of existing construction by field measurements before fabrication and indicate measurements on Shop Drawings. Provide fillers and scribes to allow for trimming and fitting.
- C. Locate concealed framing, blocking, and reinforcements that support casework by field measurements before enclosing them, and indicate measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 SOURCE LIMITATIONS

- A. Obtain laboratory casework from single source from single manufacturer unless otherwise indicated.
- B. Obtain countertops sinks accessories and service fittings from casework manufacturer.
- C. **Product Designations:** Drawings indicate sizes and configurations of laboratory casework by referencing designated manufacturer's catalog numbers. Other manufacturers' laboratory casework of similar sizes and similar door and drawer configurations and complying with the Specifications may be considered. See Section 016000 "Product Requirements."

2.2 PERFORMANCE REQUIREMENTS

- A. **System Structural Performance:** Laboratory casework and support framing system to withstand the effects of the following gravity loads and stresses without permanent deformation, excessive deflection, or binding of drawers and doors:
 - 1. Support Framing System: 600 lb/ft.
 - 2. Suspended Base Cabinets (Internal Load): 160 lb/ft.
 - 3. Work Surfaces (Including Tops of Suspended Base Cabinets): 160 lb/ft.

4. Wall Cabinets (Upper Cabinets): 160 lb/ft.
 5. Shelves: 40 lb/sq. ft.
- B. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design laboratory casework installation.
- C. Seismic Performance: Laboratory casework installation to withstand the effects of earthquake motions determined according to ASCE/SEI 7.
1. Design earthquake spectral response acceleration, short period (Sds) for Project is indicated on structural drawings.
 2. Component Importance Factor: 1.0.

2.3 CASEWORK, GENERAL

- A. Casework Product Standard: Comply with SEFA 8 W, "Laboratory Grade Wood Casework."
- B. Flammable Liquid Storage: Where cabinets are indicated for solvent or flammable liquid storage, provide units that are listed and labeled as complying with requirements in NFPA 30 by a testing and inspecting agency acceptable to authorities having jurisdiction or FM Approvals.
- C. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

2.4 WOOD LABORATORY CASEWORK

- A. Manufacturers: Subject to compliance with requirements, products complying with this specification may be provided by the following manufacturers. All products specified in this section shall be the provided by a single manufacturer. Corrosives and flammable liquid/solvent storage cabinets may also be provided by the manufacturers listed with their descriptions.
1. Laboratory Casework:
 - a. Basis of Design: Kewaunee Scientific Corporation, P.O. Box 1842, Statesville, NC 28687-1842, Tel 704 873-7202. Kewaunee Signature Series Wood Laboratory Furniture Educational Assemblies
 - b. Fisher Hamilton, L.L.C., 1316 18th Street, Two Rivers, WI 54241 Tel: 920 793-1121.
 - c. Mott Manufacturing Limited., 452 Hardy Road, P. O. Box 1120, Brantford, ON, Canada N3T 5T3 Tel: 519 752-7825
 2. Corrosives and Flammable Liquid/Solvent Storage Cabinets:
 - a. Basis of Design: Kewaunee Scientific Corporation, P.O. Box 1842, Statesville, NC 28687-1842, Tel 704 873-7202. Kewaunee Signature Series Wood Laboratory Furniture Educational Assemblies
 - b. Justrite Manufacturing Company, 2454 Dempster St., Suite 300, Des Plaines, IL 60016 Tel: 800 798-9250.
 - c. Eagle Manufacturing Company, 2400 Charles St., Wellsburg, WV 26070 Tel: 304 737-3171.
- B. Design: Contemporary full overlay with square edges.
1. Provide 1/8-inch reveals between doors and drawers that are adjacent.
 2. Provide sloped top of matching wood veneer at all tall and wall cabinets.

- C. Wood Species: White maple.
 - 1. Wood Stain Colors and Finishes: As selected by Architect from casework manufacturer's full range.
- D. Cut: Plain sliced/sawn.
- E. Veneer Matching:
 - 1. Provide veneers for each cabinet from a single flitch, book and running matched.
- F. Grain Direction:
 - 1. Doors: Vertical with continuous vertical matching.
 - 2. Drawer Fronts: Vertical with continuous vertical matching.
 - 3. Face Frame Members: Lengthwise.
 - 4. End Panels: Vertical.
 - 5. Bottoms and Tops of Units: Side to side.
 - 6. Knee Space Panels: Vertical.
 - 7. Aprons: Horizontal.
- G. Shelves
 - 1. Provide adjustable shelves per type below:
 - a. Tall cabinets – 10 adjustable shelves
 - b. Wall cabinets – 3 adjustable shelves
 - c. Base cabinets – 2 adjustable shelves
- H. 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. Plywood: Hardwood plywood, either veneer core or particleboard core with face veneer of species indicated. Grade A exposed faces, at least 1/50 inch thick, and Grade J crossbands. Provide backs of same species as faces.
 - 3. Solid Wood: Clear hardwood lumber of species indicated.
 - 4. Edgebanding: Solid wood, minimum 1/8 inch thick and of same species as face veneer.
- I. Semiexposed Materials:
 - 1. Wood: Provide solid wood or hardwood plywood for semiexposed surfaces unless otherwise indicated.
 - a. Solid Wood: Sound hardwood lumber, selected to eliminate appearance defects, of same species as exposed solid wood.
 - b. Plywood: Hardwood plywood of same species as exposed plywood. Provide backs of same species as faces.
 - 1) Grade: B faces and Grade J crossbands.
- J. Concealed Materials:
 - 1. Solid Wood: With no defects affecting strength or utility.
 - 2. Plywood: Hardwood plywood. Provide backs of same species as faces.
 - 3. Particleboard.
 - 4. MDF.
 - 5. Hardboard.

2.5 WOOD CABINET MATERIALS

- A. General:
 - 1. Maximum Moisture Content for Lumber: 7 percent for hardwood and 12 percent for softwood.
- B. Hardwood Plywood: HPVA HP-1, particleboard core except where veneer core is indicated.
- C. MDF: Medium-density fiberboard, ANSI A208.2, Grade 130.
- D. Particleboard: ANSI A208.1, Grade M-2.
- E. Hardboard: ANSI A135.4, Class 1 tempered.

2.6 AUXILIARY CABINETS

- A. Acid Storage-Cabinet Lining: 1/4-inch- thick, glass-fiber cement board complying with ASTM C1186.
- B. Tempered Glass for Glazed Doors: Clear tempered glass complying with ASTM C1048, Kind FT, Condition A, Type I, Class 1, Quality-Q3; not less than 5.0 mm thick.

2.7 CABINET HARDWARE

- A. General: Provide laboratory casework manufacturer's standard, commercial-quality, heavy-duty hardware complying with requirements indicated for each type.
- B. Butt Hinges: Concealed, Stainless-steel, five-knuckle hinges complying with ANSI/BHMA A156.9, Grade 1, with antifriction bearings and rounded tips. Provide two for doors 48 inches high or less and three for doors more than 48 inches high.
- C. Frameless Concealed Hinges (European Type): ANSI/BHMA A156.9, Type B01602, self-closing. Provide two for doors 48 inches high or less and three for doors more than 48 inches high.
 - 1. Degrees of Opening: 135.
- D. Hinged-Door and Drawer Pulls: stainless steel, back-mounted pulls. Provide two pulls for drawers more than 24 inches wide.
 - 1. Design: Wire pulls as selected from manufacturer's full range.
 - 2. Overall Size: 1-1/4 by 4-1/2 as selected from manufacturer's full range.
- E. Sliding-Door Pulls: Stainless steel recessed flush pulls.
 - 1. Design and Size: Round, 3/4-inch diameter by 3/16 inch deep as selected from manufacturer's full range.
- F. Drawer Slides: ANSI/BHMA A156.9.
 - 1. Heavy Duty (Grade 1HD-100): Side mount.
 - a. Type: Full extension.
 - b. Material: Zinc-plated ball bearing slides.

- c. Motion Feature: Self-closing mechanism.
2. General-purpose drawers; provide 100 load capacity.
3. File drawers; provide 150 lb load capacity.
- G. Locks: Cam type, brass with chrome-plated finish; complying with ANSI/BHMA A156.11, Type E07281.
 1. Tumbler: Disc.
 2. Lock Locations: Provide on drawers and doors.
 3. Keying: Key each lock separately.
 - a. Master key for up to 225
 4. Key Quantity: Minimum of two keys per lock.
 5. Master Key System: Key locks to be operable by master key.
 - a. Master Keys: Provide two
- H. Sliding-Door Hardware Sets: Laboratory casework manufacturer's standard, to suit type and size of sliding-door units.
- I. Adjustable Shelf Supports: ANSI/BHMA A156.9, powder-coated steel [standards, mortise type, and shelf rests, Type B04071 and Type B04091.

2.8 COUNTERTOPS

- A. General: Provide laboratory tabletops and countertops with integral sink as indicated on Drawings.
- B. Epoxy: Factory-molded, modified epoxy-resin formulation with smooth, nonspecular finish.
 1. Physical Properties:
 - a. Flexural Strength: Not less than 10,000 psi (70 MPa).
 - b. Modulus of Elasticity: Not less than 2,000,000 psi (1400 MPa).
 - 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 (127 deg C).
 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).
 3. Color: Black as selected by Architect from epoxy manufacturer's full range.

2.9 WOOD CABINET FABRICATION

- A. Construction: Provide wood-faced laboratory casework complying with SEFA 8 W.
 1. Bottoms of Base Cabinets and Tall Cabinets: 3/4-inch- (19-mm-) thick, veneer-core hardwood plywood.

2. Tops and Bottoms of Wall Cabinets and Tops of Tall Cabinets: 1-inch- (25-mm-) thick, veneer-core hardwood plywood.
 3. Ends of Cabinets: 3/4-inch- (19-mm-) thick, hardwood plywood.
 4. Shelves: 1-inch- (25-mm-) thick, veneer-core hardwood plywood.
 5. Base Cabinet Top Frames: 3/4-by-2-inch (19-by-50-mm) solid wood with mortise and tenon or doweled connections, glued and pinned or screwed.
 6. Exposed Backs of Cabinets: 3/4-inch- (19-mm-) thick, particleboard- hardwood plywood.
 7. Unexposed Backs of Cabinets: 1/4-inch- (6.4-mm-) thick, hardwood plywood dadoed into sides, bottoms, and tops unless otherwise indicated.
 8. Drawer Fronts: 3/4-inch- (19-mm-) thick, particleboard-hardwood plywood or solid hardwood.
 9. Stiles and Rails of Glazed Doors More Than 48 Inches (1200 mm) High: 1-1/16-inch- (27-mm-) thick, solid wood with hardwood face veneers and crossbands.
- B. Tables: Solid-hardwood legs, not less than 2 inches (50 mm) square with solid-hardwood stretchers as needed to comply with product standard. Bolt stretchers to legs and cross-stretchers, and bolt legs to table aprons. Provide leveling device at bottom of each leg.
1. Leg Shoes: Black vinyl or rubber, open-bottom, slip-on type.
- C. Removable Backs: Provide backs that can be removed from within cabinets at utility spaces.
- D. Filler and Closure Panels: Provide where indicated and as needed to close spaces between casework and walls, ceilings, and equipment. Fabricate from same material and with same finish as adjacent exposed casework surfaces unless otherwise indicated.
1. Provide knee-space panels (modesty panels) at spaces between base cabinets, where cabinets are not installed against a wall or where space is not otherwise closed.
 2. Provide utility-space closure panels at spaces between base cabinets where utility space would otherwise be exposed, including spaces below countertops.
 3. Provide closure panels at ends of utility spaces where utility space would otherwise be exposed.

2.10 LABORATORY ACCESSORIES

- A. Undercabinet Task-Light Luminaires:
1. Quantity: one / 8 ft
 2. Lamp Type: LED with switch and heavy-duty cord and plug.
 3. Finish: Baked enamel.
 4. Diffusers: Virgin acrylic with high resistance to yellowing and other changes from aging, heat, and UV radiation.
- B. Refrigerator
1. Basis of Design: Insignia 4.9 Cu. Ft. Mini Fridge with Bottom Freezer
Model: NS-CF49BMSS2 , SKU: 6445074
 2. Finish: Stainless Steel
 3. Dimensions: 48" high x 19.75" wide
 4. Light type: LED

2.11 WOOD FINISH

- A. Preparation: Sand lumber and plywood before assembling. Sand edges of doors, drawer fronts, and molded shapes with profile-edge sander. Sand 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 fibers and dust and apply stain to exposed and semiexposed surfaces as necessary to match approved Samples. Apply stain to produce a consistent appearance. Apply wash-coat sealer before applying stain to closed-grain wood species.
- C. Chemical-Resistant Finish: Apply laboratory casework manufacturer's standard three-coat, chemical-resistant, transparent finish. 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 W. Acceptance level for chemical spot test to be no more than for Level 3 conditions.

2.12 COUNTERTOP FABRICATION

- 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 (25 mm).
- B. Sinks, General: Provide sizes indicated or laboratory casework manufacturer's closest standard size of equal or greater volume, as approved by Architect.
 - 1. Outlets: Provide with strainers and tailpieces, NPS 1-1/2 (DN 40), unless otherwise indicated.
 - 2. Overflows: For each sink except cup sinks, provide overflow of standard beehive or open-top design with separate strainer. Height 2 inches (50 mm) less than sink depth. Provide in same material as strainer.
- C. Epoxy:
 - 1. Countertops and Tabletops: Fabricate with factory cutouts for sinks, holes for service fittings and accessories, and butt joints assembled with epoxy adhesive and concealed metal splines.
 - a. Flat Configuration: 1 inch (25 mm) thick with continuous drip groove on underside 1/2 inch (13 mm) from overhang edge.
 - 1) Edges and Corners: slightly eased edge.
 - 2) Backsplash: Applied.
 - b. Construction: Uniform throughout full thickness.
 - 2. Sinks: Molded in one piece with smooth surfaces, coved corners, and bottom sloped to outlet; 1/2-inch (13-mm) minimum thickness.
 - a. Provide with polypropylene strainers and tailpieces.
 - b. Provide integral sinks in epoxy countertops, bonded to countertops with invisible joint line.
 - c. Provide sinks for underside installation with manufacturer's recommended adjustable support system for table- and cabinet-type installations.

- D. Cup Sinks: Provide in material indicated, 3-by-6-inch (75-by-150-mm) oval.
 - 1. Epoxy Cup Sinks: Provide with polypropylene strainers and integral tailpieces.

2.13 WATER AND LABORATORY GAS SERVICE FITTINGS

- A. Service Fittings: Provide units that comply with SEFA 7, "Recommended Practices for Fixtures." 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 "Vandal-Resistant Faucets and Fixtures" recommendations in SEFA 7.
- 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 otherwise indicated.
 - 1. Provide chemical-resistant powder coating in laboratory casework manufacturer's standard metallic brown, aluminum, white, or other color as approved by Architect.
- D. Water Valves and Faucets: Provide units complying with ASME A112.18.1, with renewable seats, designed for working pressure up to 80 psig (550 kPa).
 - 1. Vacuum Breakers: Provide ASSE 1035 vacuum breakers on water fittings with serrated outlets.
 - 2. Aerators: Provide aerators on water fittings that do not have serrated outlets.
 - 3. Self-Closing Valves: Provide self-closing valves where indicated.
- E. Ball Valves: Chrome-plated ball and PTFE seals. Handle requires no more than 5 lbf (22 N) to operate. Provide units designed for working pressure up to 75 psig (520 kPa), with serrated outlets.
 - 1. Lever Safety Handles: Where ball valves are indicated for fuel-gas use, provide handles that must be pulled up before being turned on.
- F. Needle Valves: Provide units with renewable, self-centering, floating cones and renewable seats of stainless steel or Monel metal, with removable serrated outlets.
 - 1. Provide units designed for working pressure up to 125 psig (860 kPa).
- G. Hand of Fittings: Furnish right-hand fittings unless fitting designation is followed by "L."
- H. Remote-Control Valves: Provide needle valves, straight-through or angle type as indicated for fume hoods and where indicated.
- I. Handles: Provide three- or four-arm, forged-brass handles for valves unless otherwise indicated.
 - 1. Provide lever-type handles for ground-key cocks. Lever handle aligns with outlet when valve is closed and is perpendicular to outlet when valve is fully open.
 - 2. Provide lever-type handles for ball valves unless otherwise indicated. Lever handle aligns with outlet when valve is closed and is perpendicular to outlet when valve is fully open.
 - 3. Provide knurled, molded-plastic handles for needle valves.

- J. Service-Outlet Identification: Provide color-coded plastic discs with embossed identification, secured to each service-fitting handle to be tamper resistant. Comply with SEFA 7 for colors and embossed identification.
- K. 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.
- L. Line-Type Fittings: Provide with cast-metal boxes with threaded holes for mounting on rigid steel conduit. Provide cover plates same size as boxes.
- M. Recessed-Type Fittings: Provide with galvanized-steel boxes.
- N. 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.

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 the Work.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION OF CASEWORK

- A. Comply with installation requirements in SEFA 2. Install level, plumb, and true in line; 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. Do not exceed the following tolerances:
 - 1. Variation of Tops of Base Cabinets from Level: 1/16 inch in 10 feet (1.5 mm in 3 m).
 - 2. Variation of Bottoms of Upper Cabinets from Level: 1/8 inch in 10 feet (3 mm in 3 m).
 - 3. Variation of Faces of Casework from a True Plane: 1/8 inch in 10 feet (3 mm in 3 m).
 - 4. Variation of Adjacent Surfaces from a True Plane (Lippage): 1/32 inch (0.8 mm).
 - 5. Variation in Alignment of Adjacent Door and Drawer Edges: 1/16 inch (1.5 mm).
- 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: Fasten cabinets to utility-space framing, partition framing, wood blocking, or reinforcements in partitions, with fasteners spaced not more than 16 inches (400 mm) o.c. Bolt adjacent cabinets together with joints flush, tight, and uniform.

1. Where base cabinets are installed away from walls, fasten to floor at toe space at not more than 24 inches (600 mm) o.c. and at sides of cabinets with not less than two fasteners per side.
- D. Wall Cabinets: Fasten to hanging strips, masonry, partition framing, blocking, or reinforcements in partitions. Fasten each cabinet through back, near top, at not less than 16 inches (400 mm) o.c.
- E. Install hardware uniformly and precisely.
- F. Adjust operating 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. Comply with installation requirements in SEFA 2. Abut top and edge surfaces true in plane with flush hairline joints and with internal supports placed to prevent deflection. Locate joints where indicated on Shop Drawings.
- B. Field Jointing: Where possible, make in same manner as shop-made joints, using dowels, splines, fasteners, adhesives, and sealants recommended by manufacturer. Shop prepare edges for field-made 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 (1200 mm) o.c.
 2. Where necessary to penetrate countertops with fasteners, countersink heads approximately 1/8 inch (3 mm) and plug hole flush with material equal to countertop in chemical resistance, hardness, and appearance.
- D. Provide holes and cutouts required for service fittings.
- E. 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.
- F. Dress joints smooth, remove surface scratches, and clean entire surface.

3.4 INSTALLATION OF SINKS

- A. Comply with installation requirements in SEFA 2.
- B. Underside Installation of Epoxy Sinks: Use laboratory casework manufacturer's recommended adjustable support system for table- and cabinet-type installations. Set top edge of sink unit in sink and countertop manufacturers' recommended chemical-resistant sealing compound or adhesive, and firmly secure to produce a tight and fully leakproof joint. Adjust sink and

securely support to prevent movement. Remove excess sealant or adhesive while still wet and finish joint for neat appearance.

3.5 INSTALLATION OF LABORATORY ACCESSORIES

- A. Install accessories in accordance with Shop Drawings, installation requirements in SEFA 2, 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.
- D. Securely fasten pegboards to partition framing, wood blocking, or reinforcements in partitions.






3.6 INSTALLATION OF SERVICE FITTINGS



- A. Comply with requirements in other Sections for installing water and laboratory gas service fittings and electrical devices.
- B. Install fittings in accordance with Shop Drawings, installation requirements in SEFA 2, 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 to laboratory casework unless otherwise indicated.

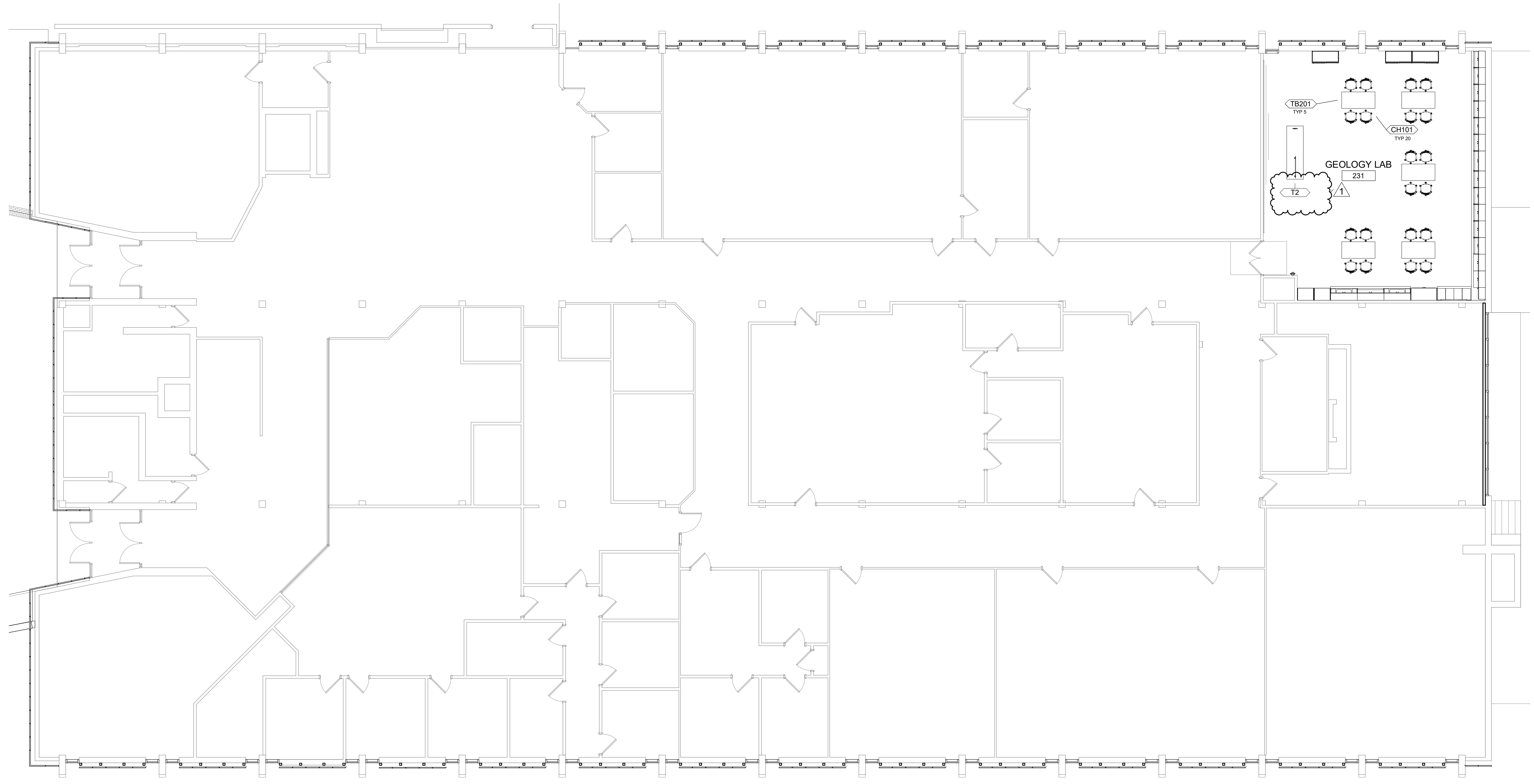
3.7 CLEANING AND PROTECTING

- 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 a minimum of 48 inches o.c.

END OF SECTION 123553.19

Code	Description	Photo	Manf.	Product	Specifications & Finishes	Contact	QTY	Sale Price	Total
TB201									
	Flip top mobile lab table		Enwork	Zori	Laminate table with PVC edge band. Flip-top Top: Laminate to be selected Edge: to be selected Base: T-Leg on casters finish TBD Dimensions: 30"d x 60" L, seated height	Jenny Wagner BLG jenny@blgreps.com 513-936-8475	5 @	=	
	Flip top mobile lab table		Steelcase	Groupwork	Laminate table with PVC edge band. Flip-top Top: Laminate to be selected Edge: to be selected Base: T-Leg on casters finish TBD Dimensions: 30"d x 60" L, seated height	Andrea Akin LOTH aakin@lothinc.com 513-307-6722	5 @	=	
	Flip top mobile lab table		Haworth	Planes	Laminate table with PVC edge band. Flip-top Top: Laminate to be selected Edge: to be selected Base: T-Leg on casters finish TBD Dimensions: 30"d x 60" L, seated height	Joe Kimmey RCF Group joe.kimmey@thercfgroup.com 513-641-6480	5 @	=	
TB202	BASIS OF DESIGN, OR EQUAL								
	30" Exterior Table		Landscape Forms	Parc Centre	17" diameter solid steel baseplate, bolted to ground. 5/16" solid steel plate table top welded to heavy duty steel wall tubing. All parts powdercoated. Color: Titanium	Kendra Brown kendrab@landscapeforms.com 269-276-4440	2 @	=	
TB203	BASIS OF DESIGN, OR EQUAL								
	24" Exterior Table		Landscape Forms	Parc Centre	17" diameter solid steel baseplate, bolted to ground. 5/16" solid steel plate table top welded to heavy duty steel wall tubing. All parts powdercoated. Color: Titanium	Kendra Brown kendrab@landscapeforms.com 269-276-4440	7 @	=	

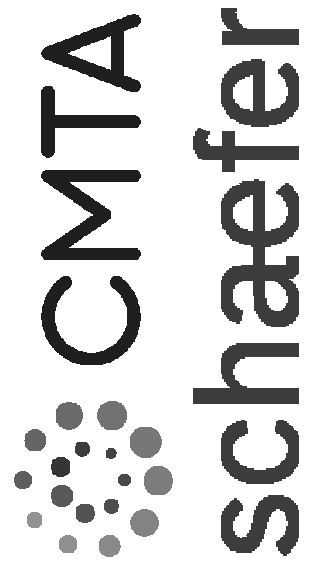
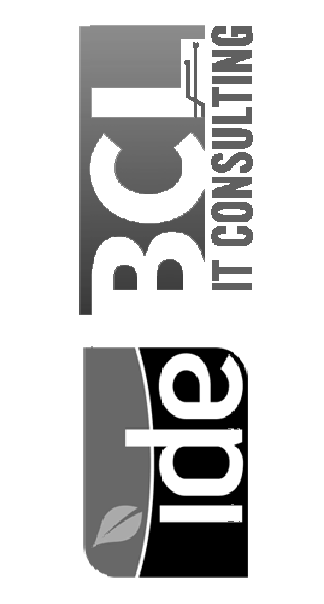
CH101	BASIS OF DESIGN, OR EQUAL									
	Basic Sit/Stand Stool		Cramer	Rhino	Molded Rhino skin seat resists chemical & physical damage. Height Adjustable. Supports 300lbs, 10 year 3 shift warranty	Mike Castellini Dan Binford Associates mac.sr@mac.com 513-221-4800	80	@		=
CH102	BASIS OF DESIGN, OR EQUAL									
	120 degree bench bolted to concrete		VPI	Rundo	High performance concrete seat. Color: White Powder coated galvanized steel base standard RAL 7016 color. Product #: RND-180	Dario Tainer tainerd@gmail.com 847-940-7072 412 Kellburn rd. suite 312 Deerfield IL 60015	4	@		=
CH103	BASIS OF DESIGN, OR EQUAL									
	45 degree bench bolted to concrete		VPI	Rundo	High performance concrete seat. Color: White Powder coated galvanized steel base standard RAL 7016 color. Product #: RND-390	Dario Tainer tainerd@gmail.com 847-940-7072 412 Kellburn rd. suite 312 Deerfield IL 60015	6	@		=
CH104	BASIS OF DESIGN, OR EQUAL									
	90 degree bench bolted to concrete		VPI	Rundo	High performance concrete seat. Color: White Powder coated galvanized steel base standard RAL 7016 color. Product #: RND-300	Dario Tainer tainerd@gmail.com 847-940-7072 412 Kellburn rd. suite 312 Deerfield IL 60015	6	@		=



A1 RHODES 200 LEVEL FURNITURE PLAN
SCALE: 1/8" = 1'-0"

GENERAL FURNITURE NOTES

1. REFER TO ELECTRICAL/TELECOM PLANS AND REFLECTED CEILING PLANS POWER AND DATA LOCATIONS.
2. VENDOR RESPONSIBLE FOR ALL COMPONENTS, CORRECT SIZES, FINAL QUANTITIES, FURNITURE "FIT", ETC. TO PROVIDE COMPLETE USABLE, FUNCTIONING UNITS.
3. FURNITURE CONTRACTOR SHALL COORDINATE REQUIREMENTS WITH ELECTRICAL AND TELECOMMUNICATIONS CONTRACTORS PRIOR TO ORDERING FURNITURE.



EMERSON DESIGN
 ARCHITECTURE INTERIORS SUSTAINABILITY ENGINEERING
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 513.841.9189
 emersondesign.com

MARK	REVISION	DATE	DESCRIPTION
1	Revision 1		

DESIGNED BY: J. CHENG	CHECKED BY: J. SWEENEY	DATE: 03/13/2023	PROJECT NO.:
DRAWN BY: M. WANG	PROJECT MANAGER: S. MARSHALL	PROJECT NO.:	202201
SHEET NO.:	ASSEMBLY:	FILE NAME:	
3042	As indicated		

CLARK STATE COLLEGE RHODES HALL RENOVATIONS
 PHASE 4
 570 LEFFEL LANE
 SPRINGFIELD, OH 45505
 RHODES 200 LEVEL FURNITURE PLAN



SHEET IDENTIFICATION

I-101

EQUIPMENT SCHEDULE							
TYPE MARK	ROOM	MANUFACTURER	MODEL	DESCRIPTION	HEIGHT	WIDTH	COMMENTS
TB1	314	Egan Visual	MDTS9648	TACKBOARD	4' - 0"	8' - 0"	
TB2	231	Egan Visual	MDTS4848	TACKBOARD	4' - 0"	4' - 0"	
MB1	314	Egan Visual	MDWP12048	DRY ERASE MARKER BOARD	4' - 0"	20' - 0"	
MB2	316	Egan Visual	-	DRY ERASE MARKER BOARD	3' - 6"	17' - 0"	EXISTING TO REMAIN
MB3	312	Egan Visual	-	DRY ERASE MARKER BOARD	4' - 0"	21' - 0"	EXISTING TO REMAIN
MB4	231	Egan Visual	-	DRY ERASE MARKER BOARD	4' - 0"	26' - 0"	EXISTING TO REMAIN

CASEWORK SCHEDULE									
QTY	TAG	ROOM	MODEL	DESCRIPTION	SIZE			COMMENTS	
					HEIGHT	WIDTH	DEPTH		
11	B1	231	E41W362230-	BASE CABINET - 2 DOOR 2 DRAWER	2' - 10 3/4"	2' - 6"	1' - 9 1/4"		
1	B2	231	E41W362236-	BASE CABINET - 2 DOOR 2 DRAWER	2' - 10 3/4"	3' - 0"	1' - 9 1/4"		
1	B3	231	E41W362246-	BASE CABINET - 2 DOOR 2 DRAWER	2' - 10 3/4"	4' - 0"	1' - 9 1/4"		
2	B6	231	D30W362230	BASE UNIT - 4 DRAWER	2' - 10 3/4"	2' - 6"	1' - 9 1/4"		
2	B9	231	D32W312230	BASE UNIT - 8 DRAWER	3' - 0"	2' - 6"	2' - 0"		
1	C1	231	-	EPOXY COUNTERTOP	3' - 0"	5' - 10 1/16"	2' - 1"		
1	C2	231	-	EPOXY COUNTERTOP	3' - 0"	37' - 5"	2' - 1"		
1	C3	231	-	EPOXY COUNTERTOP - SINK OPENING	3' - 0"	12' - 0"	2' - 1"		
2	SB2	231	G00W362246	BASE UNIT - SINK UNIT	2' - 10 3/4"	3' - 6"	1' - 9 1/4"		
1	T2	231	T21WC363060	INSTRUCTOR STATION SINK ON RIGHT	3' - 0"	7' - 11"	4' - 1"	INCLUDE WORK TOP T21WT01306R & FIXTURE PACKAGE T31FP (ALL ELECTRIC FIXTURES AND FITTINGS)	
3	TC1	231	S11W842248	TALL CABINET - SLIDING GLASS PANEL	7' - 0"	4' - 0"	1' - 10"		
1	TC2	231	S21W842248	TALL CABINET - SWINGING GLASS PANELS	7' - 0"	4' - 0"	1' - 10"		
1	TC3	231	S00W842230	TALL STORAGE CUBBY - 12 COMPARTMENTS	7' - 0"	2' - 6"	1' - 10"		
13	W1	231	W25W301230	WALL UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS	2' - 6"	2' - 6"	1' - 0"		
1	W2	231	W25W301236	WALL UNIT - 2 DOOR	2' - 6"	3' - 0"	1' - 0"		
3	W5	231	W20W301248	WALL UNIT - 2 DOOR GLASS PANEL	2' - 6"	4' - 0"	1' - 0 3/4"		
1	W6	231	W25W301221	WALL UNIT - 1 DOOR	2' - 6"	1' - 9"	1' - 0"		

11	B1	312	E41W362230-	BASE CABINET - 2 DOOR 2 DRAWER	2' - 10 3/4"	2' - 6"	1' - 9 1/4"	
1	B2	312	E41W362236-	BASE CABINET - 2 DOOR 2 DRAWER	2' - 10 3/4"	3' - 0"	1' - 9 1/4"	
2	B3	312	E41W362246-	BASE CABINET - 2 DOOR 2 DRAWER	2' - 10 3/4"	4' - 0"	1' - 9 1/4"	
2	B6	312	D30W362230	BASE UNIT - 4 DRAWER	2' - 10 3/4"	2' - 6"	1' - 9 1/4"	
2	B8	312	B00W362236	BASE UNIT - 3 OPEN CUBBIES	2' - 10 3/4"	3' - 0"	1' - 10"	
1	C4	312	-	EPOXY COUNTERTOP	3' - 0"	5' - 8 1/4"	2' - 1"	
1	C5	312	-	EPOXY COUNTERTOP	3' - 0"	37' - 6"	2' - 1"	
1	C6	312	-	EPOXY COUNTERTOP - SINK OPENING	3' - 0"	11' - 6"	2' - 1"	
1	SB1	312	G00W362242	BASE UNIT - SINK UNIT	2' - 10 3/4"	3' - 6"	1' - 9 1/4"	
1	T2	312	T21WC363060	INSTRUCTOR STATION SINK ON RIGHT	3' - 0"	7' - 11"	4' - 1"	INCLUDE WORK TOP T21WT01306R & FIXTURE PACKAGE T31FP (ALL ELECTRIC FIXTURES AND FITTINGS)
1	T8	312	T84WC31860	4 STUDENT TABLE	2' - 7"	5' - 0"	3' - 2"	INCLUDE CABINET ASSEMBLY G75W243714, WORK TOP T84WT013860R & FIXTURE PACKAGE T84FP (ALL ELECTRIC FIXTURES AND FITTINGS)
3	TC1	312	S11W842248	TALL CABINET - SLIDING GLASS PANEL	7' - 0"	4' - 0"	1' - 10"	
1	TC2	312	S21W842248	TALL CABINET - SWINGING GLASS PANELS	7' - 0"	4' - 0"	1' - 10"	
2	TC3	312	S00W842230	TALL STORAGE CUBBY - 12 COMPARTMENTS	7' - 0"	2' - 6"	1' - 10"	
13	W1	312	W25W301230	WALL UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS	2' - 6"	2' - 6"	1' - 0"	
1	W2	312	W25W301236	WALL UNIT - 2 DOOR	2' - 6"	3' - 0"	1' - 0"	
1	W4	312	W20W301242	WALL UNIT - 2 DOOR GLASS PANEL	2' - 6"	3' - 0"	1' - 0 3/4"	
1	W5	312	W20W301248	WALL UNIT - 2 DOOR GLASS PANEL	2' - 6"	4' - 0"	1' - 0 3/4"	
1	W6	312	W25W301224	WALL UNIT - 2 DOOR	2' - 6"	2' - 0"	1' - 0"	

1	B2	312A	E41W362236-	BASE CABINET - 2 DOOR 2 DRAWER	2' - 10 3/4"	3' - 0"	1' - 9 1/4"	
1	B3	312A	E41W362246-	BASE CABINET - 2 DOOR 2 DRAWER	2' - 10 3/4"	4' - 0"	1' - 9 1/4"	
1	C7	312A	-	EPOXY COUNTERTOP	3' - 0"	13' - 6"	2' - 1"	
1	C8	312A	-	EPOXY COUNTERTOP - SINK OPENING	3' - 0"	7' - 6"	2' - 1"	
1	SB1	312A	G00W362242	BASE UNIT - SINK UNIT	2' - 10 3/4"	3' - 6"	1' - 9 1/4"	
1	W1	312A	W25W301230	WALL UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS	2' - 6"	2' - 6"	1' - 0"	
1	W2	312A	W25W301236	WALL UNIT - 2 DOOR	2' - 6"	3' - 0"	1' - 0"	
1	W4	312A	W20W301242	WALL UNIT - 2 DOOR GLASS PANEL	2' - 6"	3' - 6"	1' - 0 3/4"	
1	W5	312A	W20W301248	WALL UNIT - 2 DOOR GLASS PANEL	2' - 6"	4' - 0"	1' - 0 3/4"	

4	B3	314	E41W362248-	BASE CABINET - 2 DOOR 2 DRAWER	2' - 10 3/4"	4' - 0"	1' - 9 1/4"	
1	B4	314	D30W362212	BASE UNIT - 4 DRAWER	2' - 10 3/4"	1' - 0"	1' - 9 1/4"	
2	B5	314	G93W361624-	BASE UNIT - 4 DRAWER	2' - 10 3/4"	2' - 0"	1' - 3 1/4"	
4	B6	314	D30W362230	BASE UNIT - 4 DRAWER	2' - 10 3/4"	2' - 6"	1' - 9 1/4"	
2	B7	314	E40W362224L	BASE CABINET - 1 DOOR 1 DRAWER	2' - 10 3/4"	2' - 0"	1' - 9 1/4"	
2	B11	314	E43W362236L	BASE UNIT - 1 DOOR 4 DRAWER	2' - 10 3/4"	3' - 0"	1' - 9 1/4"	
1	B20	314	D30W342224	ADA BASE UNIT - 4 DRAWER	2' - 8 3/4"	2' - 0"	1' - 9 1/4"	
1	C15	314	-	EPOXY COUNTERTOP - SINK OPENING	3' - 0"	8' - 0"	2' - 1"	
1	C16	314	-	EPOXY COUNTERTOP - SINK OPENING	3' - 0"	3' - 11"	2' - 1"	
1	C17	314	-	EPOXY COUNTERTOP	3' - 0"	5' - 0"	2' - 1"	
1	C18	314	-	EPOXY COUNTERTOP	3' - 0"	3' - 0"	2' - 1"	
1	C19	314	-	EPOXY COUNTERTOP	3' - 0"	2' - 11"	2' - 1"	
1	C20	314	-	EPOXY COUNTERTOP	3' - 0"	13' - 3 9/16"	2' - 1"	
1	C21	314	-	EPOXY COUNTERTOP	3' - 0"	7' - 0"	2' - 1"	
1	C22	314	-	EPOXY COUNTERTOP	3' - 0"	1' - 2 9/16"	2' - 1"	
1	C23	314	-	EPOXY COUNTERTOP	3' - 0"	14' - 0"	2' - 1"	
2	SB2	314	G00W362246	BASE UNIT - SINK UNIT	2' - 10 3/4"	3' - 6"	1' - 9 1/4"	
1	T1	314	T31WC363060	INSTRUCTOR STATION SINK ON LEFT	3' - 0"	7' - 11"	4' - 1"	INCLUDE WORK TOP T31WT013060R & FIXTURE PACKAGE T31FP (ALL ELECTRIC FIXTURES AND FITTINGS)
10	T4	314	T44WC312460	2 STUDENT TABLE	2' - 0"	5' - 0"	2' - 0"	INCLUDE CABINET ASSEMBLY G75W242114, WORK TOP T44WT012460R & FIXTURE PACKAGE T44FP (ALL ELECTRIC FIXTURES AND FITTINGS)
2	TC1	314	S11W842248	TALL CABINET - SLIDING GLASS PANEL	7' - 0"	4' - 0"	1' - 10"	
2	TC3	314	S00W842230	TALL STORAGE CUBBY - 12 COMPARTMENTS	7' - 0"	2' - 6"	1' - 10"	
4	TC4	314	S11W842248	TALL CABINET - SLIDING PANEL	7' - 0"	4' - 0"	1' - 10"	
1	W2	314	W25W301236	WALL UNIT - 2 DOOR	2' - 6"	3' - 0"	1' - 0"	
2	W7	314	W25W301224L	WALL UNIT - 1 DOOR	2' - 6"	2' - 0"	1' - 0"	

5	B5	316	G93W361624-	BASE UNIT - 4 DRAWER	2' - 10 3/4"	2' - 0"	1' - 3 1/4"	
2	B6	316	D30W362230	BASE UNIT - 4 DRAWER	2' - 10 3/4"	2' - 6"	1' - 9 1/4"	
2	B10	316	G36W362236-	BASE UNIT - 6 DRAWER	2' - 10 3/4"	3' - 0"	1' - 10 1/4"	
1	B12	316	G80W362236	BASE UNIT - AOD STORAGE FUME HOOD	2' - 10 3/4"	3' - 0"	1' - 9 1/4"	
3	B13	316	G08W362236	BASE UNIT - FUME HOOD	2' - 10 3/4"	3' - 0"	1' - 9 1/4"	
1	B14	316	G88W362236	BASE UNIT - SOLVENT STORAGE FUME HOOD	2' - 10 3/4"	3' - 0"	1' - 9 1/4"	
1	B15	316	G35W362236	BASE UNIT - VACUUM PUMP STORAGE FUME HOOD	2' - 10 3/4"	3' - 0"	1' - 9 1/4"	
2	B16	316	G08W362236	ADA BASE UNIT - FUME HOOD	2' - 8 3/4"	3' - 0"	1' - 9 1/4"	
2	B17	316	G93W361619-	BASE UNIT - 4 DRAWER	2' - 10 3/4"	1' - 6"	1' - 3 1/4"	
3	B18	316	D30W362218	BASE UNIT - 4 DRAWER	2' - 10 3/4"	1' - 6"	1' - 9 1/4"	
1	B19	316	D30W362218	ADA BASE UNIT - 4 DRAWER	2' - 8 3/4"	1' - 6"	1' - 9 1/4"	
1	C9	316	-	EPOXY COUNTERTOP	3' - 0"	7' - 7"	2' - 1"	
1	C10	316	-	EPOXY COUNTERTOP	3' - 0"	12' - 10 3/8"	2' - 1"	
1	C11	316	-	EPOXY COUNTERTOP	3' - 0"	5' - 11 5/8"	2' - 1"	
1	C12	316	-	EPOXY COUNTERTOP	3' - 0"	7' - 0"	2' - 1"	
1	C13	316	-	EPOXY COUNTERTOP	3' - 0"	6' - 0 11/16"	2' - 1"	
1	C14	316	-	EPOXY COUNTERTOP	3' - 0"	20' - 6 3/8"	2' - 1"	
3	FH1	316	V50F72SBGM-G1.F4.S.SA-L.O.S.W	TRUIVIEW TEACHING FUME HOOD	5' - 1 1/4"	6' - 0"	2' - 9 1/4"	1, 2
1	FH2	316	V52F72SBGM-G1.F5.S.SA-L.O.S.W	ADA TRUIVIEW TEACHING FUME HOOD	5' - 1 1/4"	6' - 0"	2' - 9 1/4"	1, 2
1	T1	316	T31WC363060	INSTRUCTOR STATION SINK ON LEFT	3' - 0"	7' - 11"	4' - 1"	INCLUDE WORK TOP T31WT013060R & FIXTURE PACKAGE T31FP (ALL ELECTRIC FIXTURES AND FITTINGS)
10	T4	316	T44WC312460	2 STUDENT TABLE	2' - 0"	5' - 0"	2' - 0"	INCLUDE CABINET ASSEMBLY G75W242114, WORK TOP T44WT012460R & FIXTURE PACKAGE T44FP (ALL ELECTRIC FIXTURES AND FITTINGS)
4	TC1	316	S11W842248	TALL CABINET - SLIDING GLASS PANEL	7' - 0"	4' - 0"	1' - 10"	
2	TC3	316	S00W842230	TALL STORAGE CUBBY - 12 COMPARTMENTS	7' - 0"	2' - 6"	1' - 10"	

3	B2	316A	E41W362236-	BASE CABINET - 2 DOOR 2 DRAWER	2' - 10 3/4"	3' - 0"	1' - 9 1/4"	
1	B21	316A	E41W362242-	BASE CABINET - 2 DOOR 2 DRAWER	2' - 10 3/4"	3' - 6"	1' - 9 1/4"	
1	C24	316A	-	EPOXY COUNTERTOP	3' - 0"	6' - 0 9/16"	2' - 1"	
1	C25	316A	-	EPOXY COUNTERTOP - SINK OPENING	3' - 0"	14' - 3 1/2"	2' - 1"	
1	C26	316A	-	EPOXY COUNTERTOP	3' - 0"	3' - 5 1/4"	2' - 1"	
1	SB1	316A	G00W362242	BASE UNIT - SINK UNIT	2' - 10 3/4"	3' - 6"	1' - 9 1/4"	
1	TA1	316A	A02W052260	BOX APRON W/ 2 DRAWER	4' - 10 1/2"	5' - 0"	1' - 8 5/8"	
1	TC2	316A	S21W842248-	TALL CABINET - SWINGING GLASS PANELS	7' - 0"	4' - 0"	1' - 10"	
2	TL1	316A	A21W3622	LEG ASSEMBLY WITH STRETCHER AND SHOE	2' - 11"	2' - 1/2"	1' - 9 1/4"	
2	W1	316A	W25W301230	WALL UNIT WITH TWO ADJUSTABLE SHELVES AND TWO HINGED DOORS	2' - 6"	2' - 6"	1' - 0"	
3	W3	316A	W20W301236	WALL UNIT - 2 DOOR GLASS PANEL	2' - 6"	3' - 0"	1' - 0 3/4"	
2	W4	316A	W20W301242	WALL UNIT - 2 DOOR GLASS PANEL	2' - 6"	3' - 6"	1' - 0 3/4"	

FUME HOOD SCHEDULE																					
QTY	TAG	MODEL	DESCRIPTION	ROOM	DIMENSIONS			MATERIAL		AIR FOILS		SASH		SERVICE FITTINGS		SINKS		EXHAUST			
					HEIGHT	INTERIOR DEPTH	WIDTH	EXTERIOR	WORK SURFACE	LINER	AIRFOILS	MATERIAL	OPERATION HEIGHT	OPERATION	LEFT	RIGHT	TYPE	LOCATION	MATERIAL	SYSTEM	VOLUME
3	FH1	V50F72SBGM-G1.F4.S.SA-L.O.S.W	TRUIVIEW TEACHING FUME HOOD	316	57"	24"	72"	M	R												