

Addendum

No. SEVEN Date: 01.25.19

Project:

A Science and Band Building at
Vina High School for the
Franklin County Board of Education
Russellville, Alabama

McKee Project No. 18-144

A7.1 GENERAL MODIFICATIONS:

The following changes and/or substitutions to the plans and specifications are hereby made a part of same and are incorporated in full force as part of the contract.

Bidders shall acknowledge receipt of this Addendum in writing on their Proposal Forms.

- A. Refer to the **Advertisement for Bids, Change** as follows:

Sealed proposal will be received for the above referenced project by Mr. Greg Hamilton, Superintendent, at The Franklin County Board Of Education, Russellville, Alabama, until **Tuesday, February 12, 2019 @ 2:00 PM**, then opened and read aloud.

A7.2 SPECIFICATION MODIFICATIONS:

- A. Refer to Section **12345, Wood Casework (Revised 1.25.19)**, herein.
- B. The following manufactures are hereby approved subject to the plans and specifications:

Section **15700-15 & 16, Heating, Ventilating and Air Conditioning** – Bryant,
478.718.6616

A7.3 DRAWING MODIFICATIONS:

- A. See the attached Revised Drawings as follows:

Sheet G0.0 (dated 1.25.19)

END OF ADDENDUM SEVEN

SECTION 12345 - WOOD CASEWORK (Revised 1.25.19)

PART 1 – GENERAL

1.1 SUMMARY

- A. Related Documents:
 - 1. Drawings and provisions of the contract including General Conditions Supplementary Conditions and Division 1, apply to this section.
- B. Section Includes:
 - 1. Furnish and install plastic laminate casework and accessories as shown and listed on drawings and specified herein. Includes all countertops, sink cutouts, splashes, supports, shelving, and filler panels necessary for a complete casework installation.
- C. Related Requirements to be Performed by Others:
 - 1. Division 06 Section: “Rough Carpentry” for blocking within walls to adequately support casework.
 - 2. Division 06 Section: “Finish Carpentry”/Millwork.
 - 3. Division 07 Section: “Preformed Joint Seals” for caulking of casework and/or countertops to abutting walls.
 - 4. Division 08 Section: “Finish Hardware” for cabinet locks keyed or master keyed to building locks.
 - 5. Division 09 Section: “Resilient Base and Accessories” for resilient base applied to manufactured casework.
 - 6. Division 22 Section: “Plumbing” for furnishing, installation, and hook-up of sinks, fixtures, outlets, strainers, tailpieces, traps, vacuum breakers, and stops shall be performed by the plumbing contractor to state and local codes. In all cases, sink cutouts shall be by the casework contractor.
 - 7. Division 23 Section: “Heating, Ventilating, and Air-Conditioning” for furnishings, installation, and final connections of all ductwork to range hoods shall be by the HVAC contractor.
 - 8. Division 26 Section: “Electrical” for the electrical contractor to state and local codes shall perform electrical furnishing, installation, and final connections of wiring, conduit, and/or electrical items within casework.

1.2 REFERENCES

- A. ANSI-A135: for all hardboard.
- B. ANSI-A161.2-1998: for performance of fabricated high-pressure decorative laminate countertops.
- C. ANSI-A208.1-2016: for grade M-3i mat-formed wood particleboard.
- D. BHMA A156.9: for grade-1 hinge requirements.
- E. NEMA 3 LD-2005: for performance requirements of high pressure laminates.
- F. SEFA 8PL Recommended Practices: for cabinet construction.
- G. AWS: American Woodworking Standards, Edition 2.

1.3 DEFINITIONS

- A. Exposed:

1. In casework, surfaces visible when drawers and opaque doors (if any) are closed; behind clear glass doors; bottoms of cabinets 42" or more above finished floor; and tops of cabinets less than 78" above finished floor.
- B. Semi-Exposed:
 1. In casework, surfaces that become visible when opaque doors are open or drawers are extended; bottoms of cabinets more than 30" or tops of cabinets less than 42" above finished floor.

1.4 SUBMITTALS

- A. Shop Drawings:
 1. Comply with Division 1.
 2. Include catalog numbers and specifications of Case Systems, Midland, Michigan.
 3. Submit three sets of laser quality, 11 x 17 shop drawings consisting of:
 - a. Finish, hardware, construction options selection sheet.
 - b. Small scale floor plan showing casework in relation to the building.
 - c. Large scale elevations and plan views.
 - d. Cross-sections; service runs; locations of blocking within walls (blocking is done by others); rough-in requirements and, sink centerlines
 4. Approved shop drawings to be returned to manufacturer at least 60 days before production.
 5. Project Architect and Construction Manager must approve all items prior to fabrication and delivery of casework.
 6. Manufacturer and/or Manufacturer's rep verifies all critical building dimensions prior to fabrication.
- B. Samples:
 1. Submit one set of laminate color brochures or webpage reference from standard laminate manufacturers Wilsonart, Formica, Pionite, and Nevamar.
 2. Submit one edge color sample chain.
 3. Submit one set of interior colors samples.
 4. Submit catalog showing construction details, material specifications and hardware specifications of all items used.
- C. Warranty:
 1. Provide sample warranty document stating specified terms as referenced in 1.8.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Acceptance Requirements:
 1. Deliver casework once painting, and similar requirements have been completed that will not damage casework. This includes ensuring spaces are enclosed and weather tight.
 2. All casework shall be blanket wrapped or covered with cardboard and foam for protection during shipping.
- B. Storage and Handling:
 1. Casework must be protected from dust, dirt and/or other trades.

2. Countertops are stacked, properly supported and spaced evenly to avoid warping. Large pieces are stacked first on the pallets with shorter pieces stacked on top.

1.7 SITE CONDITIONS

- A. Ambient Conditions:
 1. Do not deliver or install the casework until concrete, masonry, and drywall/plaster work is dry; ambient relative humidity is maintained between 25 – 55% prior to delivery and throughout the life of installation; and the temperature is controlled above 55°F.
 2. Casework shall not be stored or installed in non-climate controlled conditions.
 3. If ambient conditions are not met at the time of requested delivery, the general contractor or owner must provide Case Systems a letter releasing manufacturer from any liability and responsibility from any warranty or damage resulting from not complying with required ambient conditions.

1.8 WARRANTY

- A. Case Systems shall offer a One-Year warranty to the original owner against defective material and workmanship.
 1. The warranty specifically does not cover any product or hardware, which has been incorrectly installed, including poor climate conditions, exposed to excessive loads or abuse.
 2. All non-casework items supplied, but not manufactured at Case Systems including, but not limited to sinks, fixtures, apparatus, fume hoods, keyboard trays, lights, power outlets, and power strips shall be covered under the original manufacturers' warranty.

PART 2– PRODUCTS

2.1 MANUFACTURERS

- A. Basis-of-Design Product: **Case Systems**, 2700 James Savage Road, Midland, Michigan 48642 (989) 496-9510 and/or approved dealers.
- B. Approved Equals:
 1. TMI
 2. Memphis Plywood
 3. Stevens Industries
- C. Substitution Limitations:
 1. Substitutions will be considered only when other manufacturers submit substitution requests in accordance with procurement substitution and/or substitution procedures, or provide a comparable product with the following support information detailed below:
 - a. Written documentation stating specification compliance regarding construction, materials, and standard of quality and manufacturing techniques.
 - b. Note all deviations to the drawings and/or specifications in writing.
 - c. Provide the Architect with a full-scale base cabinet not less than ten days prior to bid date. The sample shall represent typical construction

and materials for the product the casework manufacturer proposes, meeting the quality standards set forth by this specification. The sample may be impounded by the owner and retained until completion of the casework installation.

- d. The owner, or its designated representative, reserves the right to reject any proposal that in his opinion fails to meet the criteria established by this specification. Such a decision shall be final.

2.2 MATERIALS

A. Provide Plastic Laminate Faced Cabinets Manufactured with:

1. Particleboard Core:

- a. All particleboard shall be Grade M-3i and shall meet or exceed all requirements as set by ANSI-A208.1-2016.

Modulus of Rupture	2176 psi
Modulus of Elasticity	362600 psi
Internal Bond	73 psi
Linear Expansion	0.40%
Thickness Tolerance	+/- 0.008"
Face Screw Holding	225 pounds Min

2. Low Emitting Core shall be:

- a. ULEF/FSC (No added Urea Formaldehyde) M-2 Particleboard:
 - i. For casework core having recycled content.
 - ii. For casework core being manufactured without the use of urea formaldehyde.
 - iii. For products having chain-of-custody certificates certifying that the wood used in the casework complies with FSC requirements.

B. Joinery:

1. Mechanical Joinery:

- a. All cabinet body components shall be secured utilizing concealed interlocking mechanical fasteners. Construction must meet requirements in the AWS Manual, Edition 2, including errata through 2016 and appendix section.

C. Surface Material:

- 1. Acceptable laminate color, pattern, and finish as either scheduled or otherwise indicated on drawings or as selected by Architect from manufacturer's standards types and nominal thickness including:
 - a. Tango Thermally Fused.
 - b. Cabinet decorative liner grade CLS.
 - c. Non-decorative backer grade BKH.
 - d. Thermally fused melamine laminate.

D. Edge banding:

1. PVC

- a. Shall be applied utilizing hot melt adhesive and radiused by automatic trimmers. Edging shall be available in a variety of color options.

E. Adhesives:

1. PVA

- a. Adhesive shall be mechanically applied.
- b. ULEF, no VOC
- 2. EVA
 - a. Adhesive shall be mechanically applied.

2.3 FABRICATION

- A. General Cabinet Body Construction:
 - 1. Cabinet Box Style shall be: Reveal Overlay.
 - 2. Cabinet Box Core shall be: Particleboard.
 - 3. Bottoms and ends of cabinets, and tops of tall cabinets and tops and bottoms of wall cabinets (all structural components) shall be $\frac{3}{4}$ "-inch thick.
 - 4. All panels shall be manufactured with balanced construction.
 - 5. Fixed interior components such as fixed shelves, dividers, and cubicle compartments shall be full $\frac{3}{4}$ " thick and attached with concealed interlocking mechanical fasteners.
 - 6. Cabinet body exterior surfaces shall be: Tango Thermally Fused.
 - 7. Cabinet body interior surfaces shall be: Thermally Fused.
 - 8. Cabinet body front edge shall be: .020" PVC. Mounting stretchers are $\frac{3}{4}$ " thick structural components fastened to end panels and back by mechanical fasteners, and are concealed by the cabinet back.
 - 9. When the rear of a cabinet is exposed, a separate finished $\frac{3}{4}$ " thick decorative laminate back panel may be specified.
 - 10. Backs of cabinets are $\frac{1}{2}$ " thick surfaced both sides for balanced construction and fully captured on both sides and bottom.
 - 11. A 5mm diameter row hole pattern 32mm (1- $\frac{1}{4}$ ") on center shall be bored in cabinet ends for adjustable shelves. This row hole pattern shall also serve for hardware mounting and replacement and/or relocation of cabinet components.
 - 12. An upper $\frac{3}{4}$ " thick stretcher shall be located behind the back panel and attached between the end panels with mechanical fasteners. This stretcher is also fastened to the full sub-top thus capturing the back panel.
- B. Base Cabinet Construction:
 - 1. All base cabinets, except sink cabinets, shall have a solid $\frac{3}{4}$ " thick sub-top of core (as specified above), fastened between the ends with interlocking mechanical fasteners.
 - 2. Sink cabinets with a split removable back panel shall have a formed metal front brace, and steel corner gussets shall be utilized to support and securely fasten top in all four corners. Front brace shall be powder coated black.
- C. Tall Cabinet Construction:
 - 1. All tall cabinets shall be provided with an intermediate fixed shelf to maintain internal dimensional stability under heavy loading conditions as well as an intermediate $\frac{3}{4}$ " thick stretcher located behind the back panel and be secured between the cabinet ends with mechanical fasteners. The stretcher shall be secured to the shelf through the back with #8 x 2" plated flat head screws.
- D. Wall Cabinet Construction:
 - 1. All wall cabinet bottoms shall be $\frac{3}{4}$ "-inch thick core (type specified above), mechanically fastened between end panels and secured to the bottom back stretcher. A lower $\frac{3}{4}$ " thick stretcher shall be located behind the back panel and attached between the end panels with mechanical fasteners. The

- stretcher is also secured through the back and into the cabinet bottom. Wall cabinets over 36" in width shall receive a fixed intermediate partition.
2. All wall cabinet exterior bottoms shall be: Match Standard Interior.
 3. All wall cabinet tops shall be: ¾-inch.
- E. Tall and Wall Cabinet Top Edges shall be: Raw.
- F. Tall, Wall and Hutch Tops shall be: CLS to Match Standard Interior.
- G. Tall, Wall and Hutch Upper Door Reveal shall be: 15mm Reveal.
- H. Toe Base of Cabinet:
1. Individual bases shall be constructed of: Particleboard factory applied to base and tall cabinets and shall support and carry the load of the end panels, and the cabinet bottom, directly to the floor. The base shall be let in from the sides and back of the cabinet to allow cabinets to be installed tightly together and tight against a wall, also to conceal the top edge of applied vinyl base molding (not supplied by casework manufacturer). There shall be a front to back center support for all bases over 30" wide.
 2. Toe Base Height: 96mm.
 3. Toe Base Shall be: Attached.
- I. Drawer Fronts and Solid Doors:
1. All drawer fronts and solid door components shall be: Particleboard surfaced both sides for balanced construction.
 2. Options shall be: True ¾" Core.
 3. Surfaces shall be: Tango Thermally Fused.
 4. Door and drawer front edge shall be: 3mm PVC.
- J. Drawer Boxes:
1. Drawer box constructed with a full 1/2" thick core shall be: Particleboard non-racking, non-deflecting platform bottom that is carried directly by "L" shaped, bottom mount drawer glides.
 2. Drawer box at finished interiors shall be: Surface to Match Standard Interior.
 3. Slides are secured with 1-1/4" long screws driven through the platform and into the sides. Drawer box sides, backs, sub-front, and bottom shall be 1/2". The top edge shall be nominal 1mm (.020") PVC matching the drawer color. Drawer box corners shall be joined with fluted hardwood dowels and glue spaced at a minimum of 32mm on center. Drawer box fronts shall be removable and attached to drawer box sub-front with screws from inside of drawer. Horizontal parting rails between drawers shall be 3/4" thick core, with balanced surfaces, secured to and further reinforcing cabinet ends. File drawer box shall have full-height sides supporting a heavy-duty support rail for hanging file folders.
- K. Doors:
1. Solid Doors shall be: ¾" thick core.
- L. Shelves:
1. Adjustable:
 - a. Adjustable shelves shall be: Particleboard core, with balanced surfaces.
 - b. Adjustable shelves in closed cabinets shall be: ¾" Shelves, 1" for Shelves Over 36" Wide and Open Cabinets.
 - c. All adjustable shelves in open cabinets shall be: 1" thick, except for special use cabinets such as mail, cubical, instrument or locker type units.
 - d. Adjustable shelf edge on open cabinets shall be: .020" Match Edge at Front.

- e. Adjustable shelf edge on closed cabinets shall be: .020" Match Edge at Front.
 - f. Adjustable shelf shall be set back 15mm from the front.
2. Fixed:
- a. Fixed shelves shall be: Particleboard.
 - b. Fixed shelf surfaces on closed cabinets shall be: Match Interior Selections.
- M. Countertops: Epoxy Resin Countertops: Countertops are to be flat, black, 1" thick with beveled, rounded top, front edge and all corners, with 1" thick, 4" high applied backsplash/curbs (unless otherwise noted), constructed of the same material and located at the rear of tops and on end returns. Ends of countertop to be square. Backsplash/curbs shall be bonded to top surface to form a square joint. Joints are to be sealed water-tight with corrosion resistant could. Front overhangs should be equal to 1" at cabinet fronts and side overhangs at exposed units shall be ¾", with a drip groove on the underside ½" from the edge. Tops should be manufactured of one piece and cut to the maximum lengths possible. Fabricate with factory cutouts for sinks and with butt joints assembled with silicone.
- N. Sinks: Molded Epoxy Resin Sinks: Sinks shall "drop-in" style with inside corners and bottoms covered for easy cleaning. Sinks shall be of epoxy resin modified and compounded with selected materials and designed to provide the same performance requirements as specified for the epoxy resin countertops. Sinks shall be non-glaring black color. Epoxy sinks furnished with polypropylene sink outlets.
- a. Sink Sizes: Sizes shall be as designated on the drawings.
 - b. Basis of Design for ADA designated sink: Synergy Sink by Sheldon Laboratory Systems. The *only* acceptable approved equal is Durcon epoxy sink model #A26 ADA sink. Refer to "F" under 2.6 Technical Products for more detail.
- ADA sink designated in lab shall come equipped with a deck flange for countertop mounting of dual purpose eyewash/drench hose. Flange shall have handle locator guide to position spray heads and handle facing forward at all times. Unit shall have (2) polypropylene GS-Plus™ spray heads mounted side-by-side with integral "flip-top" dust covers, internal flow control and filter to remove impurities from water flow. Hose shall be 8 feet reinforced PVC, 300 PSI maximum working pressure. Valve shall be forged brass squeeze valve activated by stainless steel lever handle. Valve shall have replaceable stainless steel seat for exceptional durability. Locking clip shall engage when the handle is depressed, providing "hands-free" operation. Unit shall include ANSI compliant sign.
- 1) Performance: Unit shall be fully factory assembled and hydrostatically tested to meet or exceed ANSI Z358.1 – 2014, as both an eyewash and a drench hose.
 - 2) Fixture: WaterSaver, model number EW1022; Watersaver AP3600 thermostatic mixing valve to be provided by plumbing contractor.

2.4 LABORATORY SERVICE FIXTURES AND FITTINGS

- A. Vandal-Resistant Fittings: Provide vandal-resistant faucets and fittings specifically designed to prevent student damage and provide extra protection from student vandalism.

All service fittings shall conform to SEFA 7-2010, Recommended Practices for Laboratory Service Fittings, Para 14.0-14.3 for Vandal Resistant Fittings.

Each fitting shall resist turning, bending, breakage, and unintended disassembly through acts of vandalism or physical abuse.

- B. Vandal-Resistant Construction features shall include: All threaded connections that will not require field service shall be secured with a suitable adhesive so as to be non-removable.

All goosenecks and spouts shall be constructed of heavy duty pipe or tubing that is sufficient to resist bending and breakage.

Faucet bodies and turret bases shall be provided with locking pins or other means to prevent the fixture from being turned on the worksurface.

Outlet fittings (such as aerators or serrated hose ends) shall either be of Vandal-resistant design or shall be secured in place with an adhesive. Index buttons shall be tamperproof.

Water fitting provided with serrated hose ends shall be furnished with vacuum breakers to prevent contamination of the potable water system through backflow or back-siphonage.

Fittings for laboratory gases shall be furnished with ball valves and shall also be provided with internal check valves to prevent backflow through the valve.

Water fittings shall have valve packing nuts secured with set screws. Integral Vacuum Breaker covers shall be secured with screws that may be removed only by maintenance personnel.

- C. Gas Fixtures

Provide gas fittings in multiple service faucets forged brass lever handle, non-removable serrated hose end, and color coded index button.

- D. Water Faucets and Valves:

Provide units that comply with SEFA 7 – 2010, Laboratory Service Fittings – Recommended Practices, and also complying with ANSI/ASME A112.18.1 – 2005 and certified by CSA International under CAN/CSA B.125.1 – 05.

Provide units fabricated from cast or forged brass unless otherwise indicated.

Provide fittings complete with threaded mounting shanks, locknuts, and washers. Include necessary flanges, escutcheons, extension rods, etc.

Provide units complying with ADA accessible requirements where indicated on Drawings.

One faucet shall be provided with 4" wrist-blade handles at ADA sinks.

All faucets shall be provided with aerators unless specifically noted to have serrated hose ends.

If serrated hose ends are required on water faucets, provide unit with vacuum breaker.

Water faucets shall have self-contained renewable compression valve units with stainless steel valve seats. Compression unit valve stem shall be sealed with molded TFE stem packing to prevent leakage. Provide color coded index buttons.

E. All Water and Gas Service Fixtures shall have Black Powder Coat Epoxy Finish.

F. Multiple Service Water/Gas Fixture Combination Faucets

- a. Watersaver Faucet Co. No. VR5300WSA
 - Combination Cold Water/Gas Fixture with Aerator
 - Black powder coat epoxy finish
 - Color coded nylon handles for cold water
 - Vandal-resistant

G. Drain Fittings:

- a. Sink Fittings: Sinks shall be provided with 1-1/2" Dia. X 3" threaded Polypropylene Sink Outlet with locknut, removable disc strainer, and sink stopper.

H. Electrical Fixtures:

- a. Electrical fixtures that are a part of, or installed in the Lab Equipment shall be approved by the National Board of Underwriters and must conform to City and State Building Codes.
- b. Knock-out boxes when indicated in casework or casework aprons, shall be installed in the Lab Equipment.
- c. Receptacles shall be grounded type, 20-amp heavy duty industrial grade.

2.5 ACCESSORIES

A. Hardware:

1. Hinges:

- a. 5-Knuckle Hinges / Reveal Overlay: Standard: Hinges shall be: .095" thick steel five-knuckle hospital-tip, institutional Grade (Grade 1 per ANSI/BHMA A156.9) quality with .187" diameter tight pin. Each hinge shall be secured with a minimum of nine No. 8 screws. Hinge shall permit door to swing 270 degrees without binding. Doors less than 48" in height shall have two hinges. Doors over 48" in height shall have three hinges.

2. Pulls:

- a. One pull shall be: located at the centerline of the drawer, regardless of width, to ensure ease of operation and maximize drawer slide life.
 - i. Anodized aluminum wire pull, 8mm diameter with 96mm O.C. mounting holes.

- ii.
- 3. Drawer Slides:
 - a. Self-closing, bottom mount epoxy coated with captive roller and positive in stop. Slide shall have 100 lb. load rating, must be: self-closing and must prevent drawer fronts from contacting the cabinet body. Drawer slides must meet or exceed Grade 1 requirements per ANSI A156.9/BHMA with full extension slides on file and paper storage.
 - b. File drawer: Full extension, bottom mount epoxy coated with captive roller and positive in stop. Slide shall have 100lb. load rating, must be: full extension, and prevent drawer fronts from contacting the cabinet body. Drawer slides must meet or exceed Grade 1 requirements per ANSI/BHMA.
- 4. Shelf Clips:
 - i. Shelf clips shall be injected molded clear plastic, with a double pin engagement 32mm on center and shall have 3/4" and 1" anti-tip locking tabs as approved in AWI 400B-T-9 for premium Grade.
 - ii. Shelf clips shall be: single pin plastic shelf clip with anti-tip locking tabs, used for all 1/4" hardboard shelves.
- 5. Catches:
 - a. Chain Pulls shall be zinc plated, spring loaded door catch used to hold door securely shut.
 - b. Chain Stops shall be zinc plated, looped chain used to limit door swing as specified, mounting plate at each end of chain shall use (4) #7 x 5/8" screws to secure to cabinet door and end panel. They shall be on cabinets at adjoining walls and where casework and countertops can interfere with the door swing of the tall cabinet.
 - c. Elbow Catch shall be chrome plated, spring loaded, used to hold non-locking door securely shut.
 - d. Roller Catch, (not used with self-closing hinges) shall have: heavy-duty, spring-loaded roller, with molded plastic bumper mounted at door top to keep door securely shut.
 - e. Magnetic Catch, (not used with self-closing hinges) shall have: white plastic housing with two 32mm spaced, elongated holes for screw-attachment to allow adjustability.
 - f. Catches shall be: Magnetic at Base and Wall, 1 Roller at Tall.

2.6 TECHNICAL PRODUCTS

General: The following equipment list is provided to accurately describe specific Technical Products shown on the drawings.

A. INSTRUCTOR'S DEMONSTRATION DESK

96" L. x 31" W. x 36" H. Work top shall be 1" epoxy resin. Base cabinets include (1) sink cabinet, (1) seven drawer cabinet and (1) 24" knee space. Services include (1) VR5800WSA combination hot water/cold water/gas fixture; (1) G.F.I. duplex electrical outlet; (1) epoxy resin sink (16" X 16" X 18") I. D. with 1-1/2" sink outlet, strainer and stopper; (2) upright rod sockets in top; (1) upright rod assembly. Trap not included. Finished back shall be provided.

Instructor's demonstration desk shall come equipped with a deck flange for countertop mounting of dual purpose eyewash/drench hose. Flange shall have handle locator guide to position spray heads and handle facing forward at all times. Unit shall have (2) polypropylene GS-Plus™ spray heads mounted side-by-side with integral "flip-top" dust covers, internal flow control and filter to remove impurities from water flow. Hose shall be 8 feet reinforced PVC, 300 PSI maximum working pressure. Valve shall be forged brass squeeze valve activated by stainless steel lever handle. Valve shall have replaceable stainless steel seat for exceptional durability. Locking clip shall engage when the handle is depressed, providing "hands-free" operation. Unit shall include ANSI compliant sign.

- 1) Performance: Unit shall be fully factory assembled and hydrostatically tested to meet or exceed ANSI Z358.1 – 2014, as both an eyewash and a drench hose.
- 2) Fixture: WaterSaver, model number EW1022; Watersaver AP3600 thermostatic mixing valve to be provided by plumbing contractor.

B. Student Utility Tables

Provide a quantity of fourteen (14) student tables measuring 60" L. x 30" W. x 36" H. Provide quantity of two (2) tables measuring 60" L. x 30" W. x 34" H. for ADA purposes. Hardwood fully framed with rails 3/4" X 4" with diagonal corner braces tenoned and screwed to inner face of rails. The corner braces shall be metal, grooved and screwed with four screws. Table legs shall be properly fitted into position and securely fastened to diagonal corner brace with nut, washer and 3-1/2" x 5/16 carriage bolt completely running through the leg providing a positive system whereby bolt can be tightened without depending upon screw holding power of the table legs. (NO other fastening method is approved) Legs shall be 2-1/4" square of solid laminated hardwood, thoroughly glued, and corners rounded. Legs shall be equipped with 7/16" grip ring stem caster with 4" soft rubber wheel. Caster break is a thread lock type. Top to be 1" epoxy resin.

C. SC8051 ACID STORAGE CABINET

31"W. x 36 5/8"H. x 20"D. Cabinet is constructed of one-inch (1") thick, high-density, 9-ply, exterior grade plywood finished with multiple coats of epoxy paint. Cabinet bottom constructed as a liquid-tight, two-inch (2") trough to contain accidental spills. Top is recessed to include a liquid-tight polypropylene tray. Tray will hold 3 gallons of spilled liquid and can be used as a dispensing area. Interior is fully lined with 1/8" thick polypropylene and all screws and fasteners are to be plastic. Cabinet has an interlocking door assembly, lock hasps and padlock with two keys' and one fixed shelf. The word "ACID" is printed on the cabinet in six-inch (6") red letters. Unit furnished with wooden door handle and four leveling feet. Cabinet complies with all O.S.H.A. and National Fire Protection Association standards. Capacity: (30) 2.5 liter or (90) 500ml bottles.

D. SC7131 FLAMMABLE STORAGE CABINET

43"W. x 44 5/8"H. x 18"D. Cabinet is constructed of one-inch (1") thick, high-density, 9-ply, exterior grade plywood finished with yellow epoxy paint (inside and out) and 10" x 10" hazard labels on the doors. Unit furnished with continuous piano-type hinges on doors, lock with two keys, two (2) adjustable shelves mounted on metal shelf standards and supports, and corrosion-resistant hardware. Cabinet floor constructed as a two-inch (2") liquid-tight trough to contain spillage. Cabinet complies with all O.S.H.A and National Fire Protection Association standards. Capacity: 45 gallons.

E. SAFETY GOGGLE CABINET

24-5/8" L. x 12" D. x 25-1/8" H. High gloss steel cabinet with steel interior has a capacity for (36) pairs of safety goggles. Automatic timer controls (2) germicidal lamps. Locks included. Goggles and glasses are not included. Needs electrical source.

F. **Synergy Sink** by Sheldon Laboratory Systems

Molded sink with 1" top work surface are epoxy resin.

The sink is a two tiered trapezoidal shape where the base of the trapezoid is curved to match the curve of the counter top. The deep rear section is to allow larger lab items access and cleaning. The width of the rear is 22.5" wide and the width of the front is 28 .375". The ADA section of the sink is 4.75" deep and has integrated drain grooves. The rear section is a minimum of 11.5" deep and the overall length front to back dimension is minimum of 22". Sink shall hold a minimum of 19 gallons. The deep section shall be large enough to set a dissection tray flat in the basin, and enough depth to accommodate a minimum of 15 inches of standing height for cleaning beakers.

Sink can be mounted at ADA height and incorporate compliant casework and metal knee panel. Rough in services are contained behind the knee panel.

Sink can be mounted in 34" working height and incorporate appropriate casework and rough in are to contain services required.

Fixtures are mounted to have anti splash characteristic flowing on the sloped portion of the sink.

Approved equal for Synergy Sink: Durcon model #A26 ADA sink. Sink must be bi-level and ADA accessible. Sinks must provide a sink bowl with a minimum of 18" x 15" x 5"/11" clearance that allows for the cleaning of dissection trays and other standard science apparatus. Sink bowl shall allow a minimum of 14" in height for glassware cleaning; clearance of 14" shall be from sink bottom to faucet bib. Sink bowl shall be designed to hold a minimum of 14 gallons of water.

G. Drying Rack

Drying racks are 1" phenolic resin with (32) white plastic pegs 5" long and 3/8" diameter with stainless steel drip trough.

H. Fume Hood

FUME HOODS: EDU-M-60 Mobile ductless fume hood

MATERIALS - GENERAL

- A. Exterior: Manufacturer's standard steel superstructure with epoxy finish and clear front, rear and side panels. Locking casters and pull handles allow for easy mobility
 - 1. Front safety panel shall be double hinged to allow access to hood interior providing a constant face velocity of 100 FPM airflow in the closed position. Hinges are self locking to prevent accidental closing when loading and unloading.
- B. Work surface: Manufacturer's standard polypropylene material.
- C. Glazing: Acrylic or polycarbonate panels.

HOOD CONSTRUCTION AND COMPONENTS

- A. General: Dynamic filter chamber designed to collect, retain and dispose of hazardous fumes with complete safety, minimum purging of air from room supply, and minimum turbulence within hood chamber. Provide fume hood with integrated centrifugal fan motor/blower assembly mounted beneath the work surface. A clear internal baffle creates a smooth and optimal airflow pattern. Compact fluorescent lighting is mounted above the work zone in a vapor-proof compartment.
- B. Hood dimensions: 60 inches wide by 28.5 inches deep by 79 inches high with an internal height of 31.5 inches.
- C. Filtration: Manufacturer's standard "Multiplex" filtration system consisting of a pre-filter and main filter
 - 1. Electrostatic pre-filter: 99.5% effective electrostatic pre-filters (2) accessible from inside the filter chamber to contain the release of any particulates.
 - 2. Main filter: EDU multilayered carbon filters (2) for acid, amine, organic and solvent vapors
 - 3. Filter door: must have ID window to display filter type and installation date. Door must be key-locked to prevent unauthorized access or accidental exposure.
 - 4. Filter clamping system ensures a proper seal and allows filters to be replaced without disassembly or special tools. A track-and-wheel system allows used filters to slide out and into a bag for safe disposal.
- D. Fan control: Variable
- E. Cup sink, cold water faucet and gas petcock installed on the worktop. Control valves are mounted outside of the hood and are color coded.
- F. A duplex outlet (5A) will be located on the outside of the hood.
- G. Cable pass-through ports: located on rear wall, provided with removable caps.
- H. Fluorescent lighting: must be integrated into the fan/filter section in a

sealed, vapor-proof chamber to prevent exposure or interaction with chemical vapors.

- I. Unit will operate on 110v, 60hz power. A 6ft NEMA 5-15P cord is provided.
- J. Reports: All units are supplied with individual test reports, certificate of compliance, and a user manual that includes operating and troubleshooting procedures, a maintenance log and chemical compatibility data.
- K. Warranty: Legacy Limited Lifetime Warranty
(www.airscience.com/warranty)

QUALITY ASSURANCE:

Air Science's EDU-M-60 model is specified as the basis of design, quality and layout. Any other manufacturers wishing approval must meet all requirements of the specification and submit within (5) days of bid for prior approval. Approved manufacturers will be listed by addendum prior to bid. Only manufacturers meeting the standards in the specification will be acceptable.

2.7 FINISHES

- A. Plastic Laminate Casework Colors:
 - 1. Thermally Fused Melamine Laminate that meets performance requirements of ANSI/NEMA 3 LD – 2005 for GP-28.
 - a. Light Beige or Fashion Grey or Frosty White
 - 2. Tango Thermally Fused Melamine colors shall be selected from manufacturer's 20 standard color options.
 - 3. Cabinet Liner .020" thick, high-pressure cabinet liner conforming to ANSI/NEMA 3 LD – 2005, Grade CLS. Surface texture shall be similar to exterior finish. Color shall match interior.
 - a. Light Beige or Fashion Grey or Frosty White.
 - 4. Edges:
 - a. Select color from 20 Tango standard color options.
- B. Epoxy Resin Countertops shall be: Black.
- C. Round Grommets shall be in one of our standard colors: Black or Almond or Grey or White.

PART 3 – EXECUTION

3.1 INSTALLERS

- A. Installation shall be: by casework manufacturer's authorized representative.

3.2 INSTALLATION

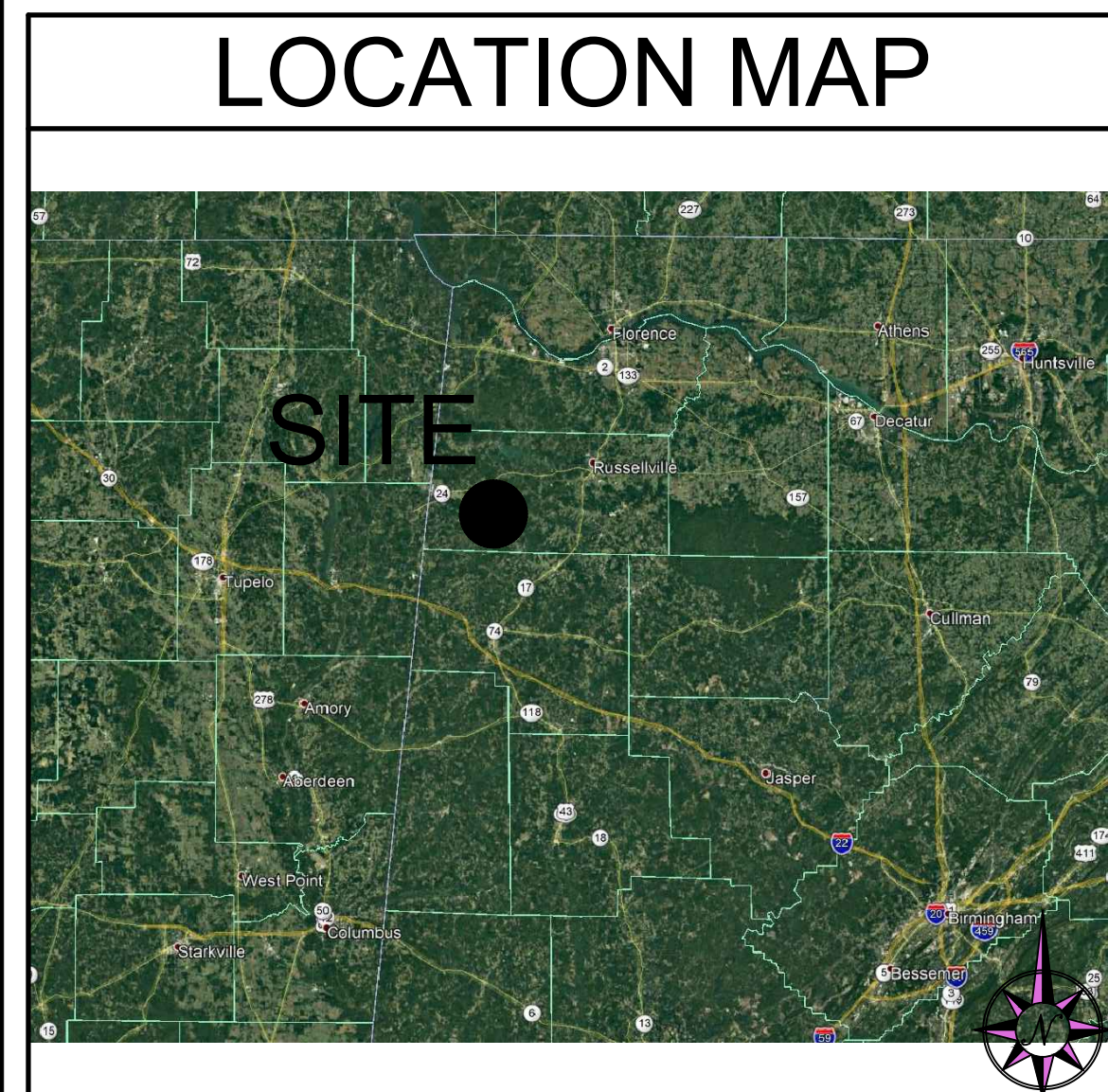
- A. Casework shall not be: installed until concrete, masonry, and drywall/plaster work is dry.
 - 1. If ambient conditions are not met at the time of requested delivery, the general contractor or owner must provide Case Systems a letter that

releases manufacturer from any liability and responsibility from any warranty or damage resulting from not complying with required ambient conditions.

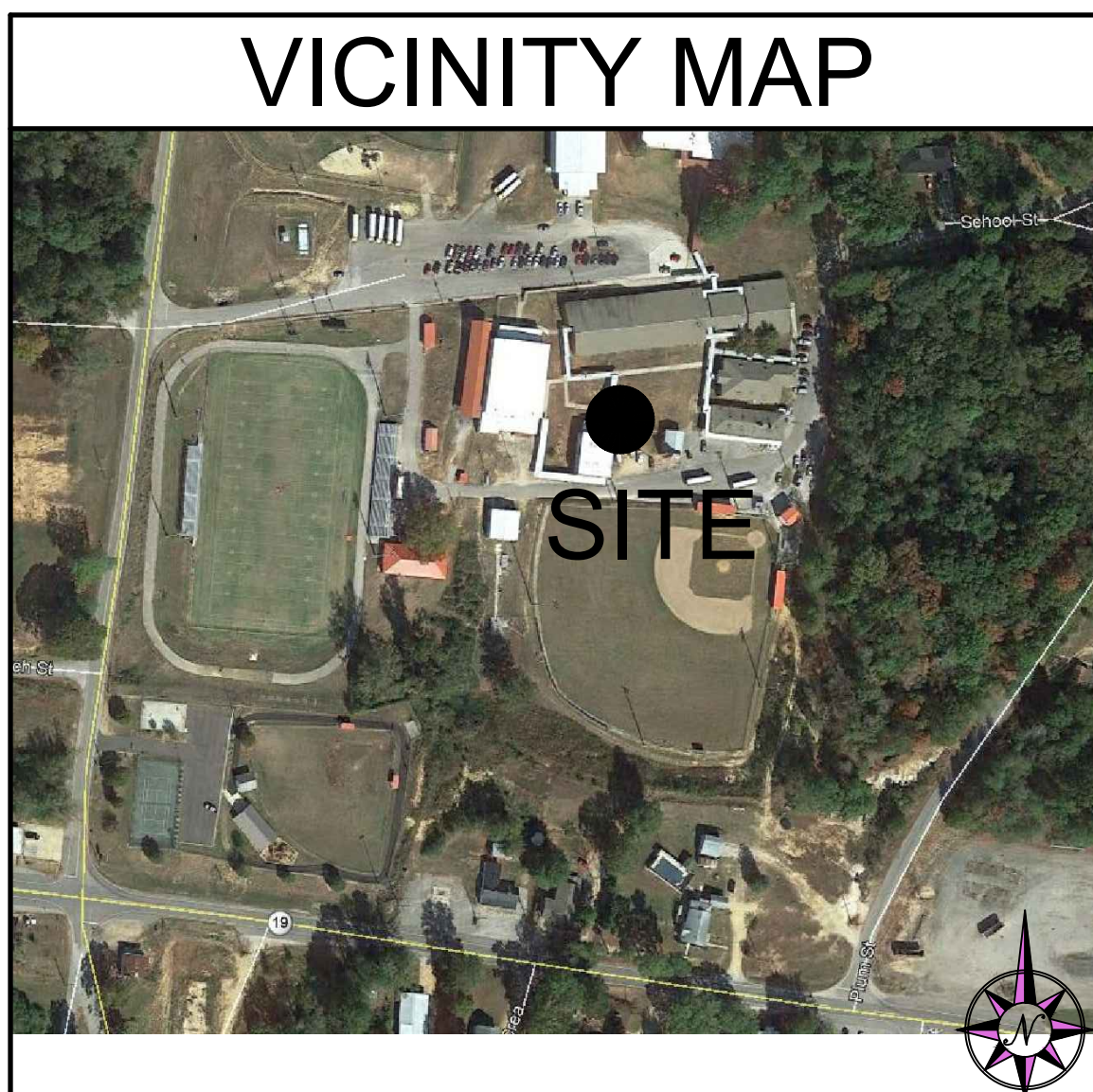
- B. Casework shall be: installed plumb and true and is to be securely anchored in place.
- C. The casework contractor shall verify all critical building dimensions prior to fabrication of casework.
- D. Provide all labor for unloading, distribution, and installation of casework and related items as specified.
- E. All casework shall be: securely anchored to horizontal wall blocking, not to plaster lathe or wall board.
- F. The casework manufacturer shall re-configure the casework arrangements to dimensions requiring 2-1/2" or less of filler at each end of wall-to-wall elevations, and to ensure a complete and satisfactory installation.
- G. The casework installer shall remove all debris, sawdust, scraps, and leave casework spaces clean.
- H. All casework must be installed by casework installer plumb and level, adjust all doors, drawers and hardware to comply with manufacturers specifications and operate properly.

END OF SECTION

a Science and Band Building at Vina High School for the Franklin County Board of Education Russellville, Alabama



CONTACTS		
<p>OWNER Franklin County Board of Education 500 North Coffee Avenue Russellville, Alabama 35653 Phone: (256) 332.1360</p>	<p>ARCHITECTURAL Mckee and Associates 631 South Hull Street Montgomery, Alabama 36104 Phone: (334) 834.9933</p>	<p>CIVIL Professional Engineering Consultants 822 South McDonough Street Montgomery, Alabama 36104 Phone: (334) 262.7307</p>
<p>STRUCTURAL Blackburn, Daniels, O'Barr Consulting Structural Engineers 1005 Browns Hill Road Lowndesboro, Alabama 36752 Phone: (334) 265.0206</p>	<p>PLUMBING and MECHANICAL Zgouvas, Eiring and Associates 800 South McDonough Street Montgomery, Alabama 36104 Phone: (334) 263.4406</p>	<p>ELECTRICAL Gunn and Associates 3102 Highway 14 Millbrook, AL 36054 Phone: (334) 285.1273</p>



Index to Drawings					
General		Architectural		Electrical	
G0.0	Title Sheet and Index to Drawings	A2.0	Floor Plan	E0.1	Electrical Legend and Notes
G0.1	Life Safety, Legends, etc.	A2.1	Reflected Ceiling Plan	E0.2	Electrical Legend and Notes
		A2.2	Roof Plan and Details	E1.1	Site Plan - Electrical
		A3.0	Door, Window, and Finish Schedules	E1.2	Site Patching Details
		A3.1	Door and Window Details	E2.1	Floor Plan - Lighting
		A4.0	Exterior Elevations	E2.2	Lighting Controls, Details, & Notes
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		Plumbing		E5.1	Lighting Schedule, Details, & Notes
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		P3	Plumbing Plans, Gas Piping	E6.2	Communications Riser Diagram, Details, and Notes
		Mechanical		E7.1	Power Riser Diagram, Details, and Notes
		M1	HVAC Floor Plan, Large Scale Mechanical Room Plan, and Sections	E7.2	Grounding Details and Notes
		M2	HVAC Schedules		
		M3	HVAC Details & O.A. Calculations		

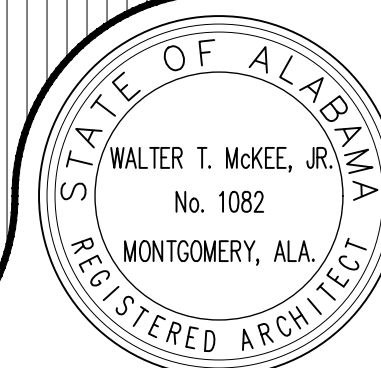
Science and Band Building

at
Vina High School
for the

Franklin County Board of Education
Russellville, Alabama

MCKEE and ASSOCIATES
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SHEET TITLE : Design Team, Location & Vicinity Maps, and Index to Drawings

JOB NO. : 18-144

DRAWN BY :

DATES : 7 September 2018
25 January 2019

SHEET NO. : **G0.0**