

**ADDENDUM NO. 2**

Issued: March 29, 2016

Project: Three Trails Elementary  
11801 E 32nd St  
Independence, Missouri 64052

Project No. 16016

Owner: Independence School District  
201 North Forest Avenue  
Independence, Missouri 64050

Bidding Documents Issued: March 13, 2016

This Addendum is hereby made a part of the Contract Documents to the same extent as if it were originally included therein. Receipt of this Addendum shall be acknowledged on the Proposal Form.

Any Specification Sections and Drawings attached herein shall hereby be made a part of the Contract Documents. This Addendum includes these 1 pages and the following attachments:

Project Manual:

081416 Flush wood Doors .....	4 pages
101100 Visual Display Surfaces.....	4 pages

**PROJECT MANUAL REVISIONS**

**A1 SECTION 081416 – FLUSH WOOD DOORS**

A1.1 INSERT new Section 081416 Flush Wood Doors dated March 29, 2016.

**A2 SECTION 101100 – VISUAL DISPLAY SURFACES**

A2.1 INSERT new Section 101100 Visual Display Surfaces dated March 29, 2016.

**END OF ADDENDUM NO. 2**

## SECTION 081416 - FLUSH WOOD DOORS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  - 1. Solid-core doors with wood-veneer faces.
  - 2. Factory finishing flush wood doors.
  - 3. Factory fitting flush wood doors to frames and factory machining for hardware.
- B. Related Requirements:
  - 1. Section 081113 "Hollow Metal Doors and Frames" for hollow metal frames.
  - 2. Section 087100 "Door Hardware" for hardware in flush wood doors.
  - 3. Section 088000 "Glazing" for glass view panels in flush wood doors.
  - 4. Section 099123 "Interior Painting" for field finishing wood doors.

#### 1.2 PREINSTALLATION MEETINGS

- A. Preinstallation Conference: Conduct conference at Project site.

#### 1.3 ACTION SUBMITTALS

- A. For each type of door. Include details of core and edge construction and trim for openings. Include factory-finishing specifications.
- B. Shop Drawings: Indicate location, size, and hand of each door; elevation of each kind of door; construction details not covered in Product Data; and the following:
  - 1. Dimensions and locations of blocking.
  - 2. Dimensions and locations of mortises and holes for hardware.
  - 3. Dimensions and locations of cutouts.
  - 4. Undercuts.
  - 5. Requirements for veneer matching.
  - 6. Doors to be factory finished and finish requirements.
- C. Samples for Initial Selection: For factory-finished doors.
- D. Samples for Verification:
  - 1. Factory finishes applied to actual door face materials, approximately 8 by 10 inches, for each material and finish.
  - 2. Corner sections of doors, approximately 8 by 10 inches, with door faces and edges representing actual materials to be used.
    - a. Provide Samples for each species of veneer and solid lumber required.
    - b. Finish veneer-faced door Samples with same materials proposed for factory-finished doors.
  - 3. Frames for light openings, 6 inches long, for each material, type, and finish required.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Sample Warranty: For special warranty.
- B. Certificates: For door manufacturer as set forth in Quality Assurance article.

#### 1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is a certified participant in AWI's Quality Certification Program.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Comply with requirements of referenced standard and manufacturer's written instructions.

- B. Package doors individually to prevent damage to the doors and the factory finish.
- C. Mark each door on top rail with opening number used on Shop Drawings.
- D. Coordinate and deliver factory-primed flush wood doors to Architectural Woodwork Contractor for application of markerboard laminate, deliver these doors in timely manner to avoid delaying project.

#### 1.7 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install doors until spaces are enclosed and weathertight, wet work in spaces is complete and dry, and HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during remainder of construction period or as recommended by the manufacturer in writing to ensure compliance with wood door warranty.

#### 1.8 WARRANTY

- A. Special Warranty: Manufacturer agrees to repair or replace doors that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Warping (bow, cup, or twist) more than 1/4 inch in a 42-by-84-inch section.
    - b. Telegraphing of core construction in face veneers exceeding 0.01 inch in a 3-inch span.
  - 2. Warranty shall also include installation and finishing that may be required due to repair or replacement of defective doors.
  - 3. Warranty Period for Solid-Core Interior Doors: Life of installation.

### PART 2 - PRODUCTS

#### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Algoma Hardwoods, Inc.
  - 2. Eggers Industries.
  - 3. Graham Wood Doors; an Assa Abloy Group company.
  - 4. Marshfield Door Systems, Inc.
  - 5. Mohawk Doors; a Masonite company.
  - 6. Oshkosh Door Company.
  - 7. VT Industries, Inc.

#### 2.2 FLUSH WOOD DOORS, GENERAL

- A. Quality Standard: In addition to requirements specified, comply with WDMA I.S.1-A, "Architectural Wood Flush Doors."
  - 1. Provide labels indicating that doors comply with requirements of grades specified.
- B. WDMA I.S.1-A Performance Grade:
  - 1. Extra Heavy Duty unless otherwise indicated
- C. Fire-Rated Wood Doors: Doors complying with NFPA 80 that are listed and labeled by a qualified testing agency, for fire-protection ratings indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.
  - 1. Cores: Provide core specified or mineral core as needed to provide fire-protection rating indicated.
  - 2. Edge Construction: Provide edge construction with intumescent seals concealed by outer stile. Comply with specified requirements for exposed edges.
  - 3. Pairs: Provide fire-retardant stiles that are listed and labeled for applications indicated without formed-steel edges and astragals. Provide stiles with concealed intumescent seals. Comply with specified requirements for exposed edges.
- D. Smoke- and Draft-Control Door Assemblies: Listed and labeled for smoke and draft control, based on testing according to UL 1784.

- E. Particleboard-Core Doors:
  1. Particleboard: ANSI A208.1, Grade LD-2, made with binder containing no urea-formaldehyde.
  2. Provide doors with structural-composite-lumber cores instead of particleboard cores for doors indicated to receive exit devices.
  
- F. Structural-Composite-Lumber-Core Doors:
  1. Structural Composite Lumber: WDMA I.S.10.
    - a. Screw Withdrawal, Face: 700 lbf.
    - b. Screw Withdrawal, Edge: 400 lbf.
  
- G. Mineral-Core Doors:
  1. Core: Noncombustible mineral product complying with requirements of referenced quality standard and testing and inspecting agency for fire-protection rating indicated.
  2. Blocking: Provide composite blocking with improved screw-holding capability approved for use in doors of fire-protection ratings indicated and as follows:
    - a. 5-inch top-rail blocking.
    - b. 5-inch bottom-rail blocking, in doors indicated to have protection plates.
    - c. 5-inch midrail blocking, in doors indicated to have armor plates.
    - d. 5-inch midrail blocking, in doors indicated to have exit devices.
  3. Edge Construction: At hinge stiles, provide laminated-edge construction with improved screw-holding capability and split resistance. Comply with specified requirements for exposed edges.
    - a. Screw-Holding Capability: 550 lbf per WDMA T.M.-10.

### 2.3 VENEER-FACED DOORS FOR TRANSPARENT FINISH

- A. Interior Solid-Core Doors (081416.A01):
  1. Grade: Premium, with Grade A faces.
  2. Species: Red Oak.
  3. Cut: Plain sliced (flat sliced).
  4. Match between Veneer Leaves: Book match.
  5. Assembly of Veneer Leaves on Door Faces: Center-balance match.
  6. Pair and Set Match: Provide for doors hung in same opening or separated only by mullions.
  7. Exposed Vertical Edges: Applied wood edges of same species as faces and covering edges of crossbands.
  8. Core: Particleboard or Structural composite lumber.
  9. Construction: Five plies. Faces are bonded to core using a hot press.

### 2.4 LIGHT FRAMES

- A. Metal Frames for Light Openings in Doors: Manufacturer's standard frame formed of 0.048-inch- thick, cold-rolled steel sheet; with baked-enamel- or powder-coated finish.

### 2.5 FABRICATION

- A. Factory fit doors to suit frame-opening sizes indicated. Comply with clearance requirements of referenced quality standard for fitting unless otherwise indicated.
  1. Comply with NFPA 80 requirements for fire-rated doors.
  
- B. Factory machine doors for hardware that is not surface applied. Locate hardware to comply with DHI-WDHS-3. Comply with final hardware schedules, door frame Shop Drawings, BHMA-156.115-W, and hardware templates.
  1. Coordinate with hardware mortises in metal frames to verify dimensions and alignment before factory machining.
  
- C. Openings: Factory cut and trim openings through doors.
  1. Light Openings: Trim openings with moldings of material and profile indicated.
  2. Glazing: Factory install glazing in doors indicated to be factory finished. Comply with applicable requirements in Section 088000 "Glazing."
  3. Louvers: Factory install louvers in prepared openings.

## 2.6 FACTORY FINISHING

- A. General: Comply with referenced quality standard for factory finishing. Complete fabrication, including fitting doors for openings and machining for hardware that is not surface applied, before finishing.
  - 1. Finish faces, all four edges, edges of cutouts, and mortises. Stains and fillers may be omitted on bottom edges, edges of cutouts, and mortises.
- B. Factory finish doors that are indicated to receive transparent finish.
- C. Transparent Finish:
  - 1. Grade: Premium.
  - 2. Finish: Provide one of the following finishes:
    - a. AWI's "Architectural Woodwork Standards" System 10, UV curable, water based polyurethane.
    - b. WDMA TR-6 catalyzed polyurethane.
  - 3. Staining: As selected by Architect from manufacturer's full range.
  - 4. Effect: Semi-filled finish, produced by applying an additional finish coat to partially fill the wood pores.
  - 5. Sheen: Satin.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine doors and installed door frames, with Installer present, before hanging doors.
  - 1. Verify that installed frames comply with indicated requirements for type, size, location, and swing characteristics and have been installed with level heads and plumb jambs.
  - 2. Reject doors with defects.
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Hardware: For installation, see Section 087100 "Door Hardware."
- B. Installation Instructions: Install doors to comply with manufacturer's written instructions and referenced quality standard, and as indicated.
  - 1. Install fire-rated doors according to NFPA 80.
  - 2. Install smoke- and draft-control doors according to NFPA 105.
- C. Factory-Fitted Doors: Align in frames for uniform clearance at each edge.
- D. Factory-Finished Doors: Restore finish before installation if fitting or machining is required at Project site.

### 3.3 ADJUSTING

- A. Operation: Rehang or replace doors that do not swing or operate freely.
- B. Finished Doors: Replace doors that are damaged or that do not comply with requirements. Doors may be repaired or refinished if Work complies with requirements and shows no evidence of repair or refinishing.

## END OF SECTION 081416

## SECTION 101100 - VISUAL DISPLAY UNITS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
  1. Magnetic Markerboards (101100.A02).

#### 1.2 DEFINITIONS

- A. Visual Display Board Assembly: Visual display surface that is factory fabricated into composite panel form, either with a perimeter frame; includes markerboards.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for visual display boards.
- B. Shop Drawings: For visual display surfaces. Include plans, elevations, sections, details, and attachments to other work.
  1. Show locations of panel joints. Show locations of field-assembled joints for factory-fabricated units too large to ship in one piece.
  2. Show locations of special-purpose graphics for visual display surfaces.
  3. Show dimensioned layout and elevation of each area, indicate number of panels for each layout.
  4. Include sections of typical trim members.
  5. [Include illustrations of each type of mounting system.](#)
- C. Samples for Verification: For each type of visual display unit indicated.
  1. Visual Display Panel: Not less than 8-1/2 by 11 inches, with facing, core, and backing indicated for final Work. Include one panel for each type, color, and texture required.
  2. Trim: 6-inch- long sections of each trim profile.
- D. Product Schedule: For visual display surfaces. Use same designations as indicated on Drawings.

#### 1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For qualified Installer.
- B. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for surface-burning characteristics of fabrics.
- C. Warranties: Sample of special warranties.

#### 1.5 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For visual display units to include in maintenance manuals.

#### 1.6 QUALITY ASSURANCE

- A. Source Limitations: Obtain visual display surfaces from a single source from a single manufacturer for each type of board.
- B. Surface-Burning Characteristics: As determined by testing identical products according to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
  1. Flame-Spread Index: 25 or less.
  2. Smoke-Developed Index: 50 or less.
- C. Pre-installation Conference: Conduct conference at Project site.

## 1.7 DELIVERY, STORAGE, AND HANDLING

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

## 1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install visual display surfaces until spaces are enclosed and weathertight, wet work in spaces is complete and dry, work above ceilings is complete, and temporary HVAC system is operating and maintaining ambient temperature and humidity conditions at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Verify actual dimensions of construction contiguous with visual display surfaces by field measurements before fabrication.
  - 1. Allow for trimming and fitting where taking field measurements before fabrication might delay the Work.

## 1.9 WARRANTY

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

## PART 2 - PRODUCTS

### 2.1 MATERIALS, GENERAL

- A. Porcelain-Enamel Face Sheet: Porcelain-enamel-clad, ASTM A 463/A 463M, Type 1, stretcher-leveled aluminized steel, with 0.024-inch uncoated thickness; with porcelain-enamel coating fused to steel at approximately 1000 deg F.
  - 1. Low Gloss Finish: Reflective; wipes clean with dry cloth or standard eraser.
- B. Particleboard: ANSI A208.1, Grade M-1, made with binder containing no urea formaldehyde.
- C. Extruded Aluminum: ASTM B 221, Alloy 6063.
- D. Laminating Adhesives: Manufacturer's standard.

### 2.2 MAGNETIC MARKERBOARD ASSEMBLIES

- A. Porcelain-Enamel Markerboards (101100.A02): Balanced, high-pressure, factory-laminated markerboard assembly of three-ply construction consisting of backing sheet, core material, and porcelain-enamel face sheet.
  - 1. Basis of Design: Subject to compliance with requirements, provide products by Claridge Products or one of the following manufacturers meeting the specified product characteristics:
    - a. Marsh Industries, Inc.; Visual Products Group.
    - b. PolyVision Corporation; a Steelcase company.
  - 2. Particleboard Core: 3/8 inch to 1/2 inch thick; with 0.005 inch thick, aluminum foil backing.
  - 3. Laminating Adhesive: Manufacturer's standard, moisture-resistant thermoplastic type.
  - 4. Writing Surface: Low Gloss Porcelain Enamel Steel surface recommended by manufacturer for projections.
    - Basis of Design: "LCS-III" by Claridge Products.
      - a. Color: White
      - b. Maintenance: Manufacturer's cleaning recommendations shall allow the use of non-proprietary cleaners and shall include instructions for removal of permanent markers.

- c. Magnetic Surface: Writing surface shall be magnetic and compatible with standard magnetic document fastening products.
- 5. Frames: Fabricated from not less than 0.062 inch thick, extruded aluminum; 1-1/4 to 1-1/2 inch flat style trim with mitered corners; factory applied. Basis of Design: "1300 Series" by Claridge Products.
  - a. Color: Satin Anodized Aluminum
- 6. Markertray: Manufacturer's standard, continuous:
  - a. Solid Type: Extruded aluminum with ribbed section and smoothly curved exposed ends.
- 7. Map Rail: Provide the following accessories:
  - a. Display Rail: Continuous and integral with map rail; fabricated from cork approximately 1 to 1-1/2 inches wide.
  - b. End Stops: Located at each end of map rail.
  - c. Map Hooks and Clips: Two map hooks with flexible metal clips for every 48 inches of map rail or fraction thereof.
  - d. Flag Holder: One for each room.
- 8. Accessories: Provide the following additional accessories:
  - a. Dry Erase Marker Set – Six colors including: blue, green, red, brown, orange and black markers. Provide one set for each MB.
  - b. Magnetic Erasers: Manufacturer's standard black magnetic erasers. Provide one eraser for each MB.
  - c. Magnets: Manufacturer's standard, silver disk "Rare Earth" magnets, provide 1 package of 12 for each MB.
  - d. Mounting accessories: Provide each magnetic dry erase markerboard with manufacturer's standard mechanical fasteners and hanging rail. Provide fasteners suitable to wall substrate.

## 2.3 FABRICATION

- A. Porcelain-Enamel Visual Display Assemblies: Laminate porcelain-enamel face sheet and backing sheet to core material under heat and pressure with manufacturer's standard flexible, waterproof adhesive.
- B. Visual Display Boards: Factory assemble all components of visual display boards.
- C. Aluminum Frames and Trim: Fabricate units straight and of single lengths, keeping joints to a minimum. Miter corners to a neat, hairline closure.

## 2.4 ALUMINUM FINISHES

- A. Clear Anodic Finish: AAMA 611, AA-M12C22A31, Class II, 0.010 mm or thicker.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Installer present, for compliance with requirements for installation tolerances, surface conditions of wall, and other conditions affecting performance of the Work.
- B. Examine walls and partitions for proper preparation and backing for visual display surfaces.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions for surface preparation.
- B. Clean substrates of substances that could impair the performance of and affect the smooth, finished surfaces of visual display boards, including dirt, mold, and mildew.

### 3.3 INSTALLATION, GENERAL

- A. General: Install visual display surfaces in locations and at mounting heights indicated on Drawings, or if not indicated, at heights indicated below. Keep perimeter lines straight, level, and plumb. Provide grounds, clips, backing materials, adhesives, brackets, anchors, trim, and accessories necessary for complete installation.



1. Mounting Height: 32 inches above finished floor to top of markertray.

3.4 INSTALLATION OF FACTORY-FABRICATED VISUAL DISPLAY BOARDS AND ASSEMBLIES

A. Visual Display Boards: Attach concealed clips, hangers, and grounds to wall surfaces and to visual display boards with fasteners at not more than 16 inches o.c. Secure both top and bottom of boards to walls. Do NOT adhesively apply visual display boards to wall substrates.

3.5 CLEANING AND PROTECTION

A. Clean visual display surfaces according to manufacturer's written instructions. Attach one cleaning label to visual display surface in each room.

B. Touch up factory-applied finishes to restore damaged or soiled areas.

C. Cover and protect visual display surfaces after installation and cleaning.

**END OF SECTION 101100**