

EXHIBIT B –INTERIOR SIGN SPECS (9 pages)

IFB # 88820 – SIGNAGE SERVICESRELATED DOCUMENTS

- A. Pima County sign type standards, sheets 1 thru 4.

1.2 SUMMARY

- A. This Section includes the following:
1. Flush modular frames with inserts
  2. Flush modular frames – single unit
  3. Directories
  4. Dimensional letters.

1.3 DEFINITIONS

- A. ADA-ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act (ADA) Accessibility Guidelines for Buildings and Facilities; Architectural Barriers Act (ABA) Accessibility Guidelines."

1.4 SUBMITTALS (The following may be required for projects performed under this contract)

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Show fabrication and installation details for signs.
1. Show sign mounting heights, locations of supplementary supports to be provided by others, and accessories.
  2. Provide message list, typestyles, graphic elements, including tactile characters and Braille, layout for each sign.
- C. Samples for Initial Selection: Manufacturer's color charts consisting of actual units or sections of units showing the full range of colors available for the following:
1. Aluminum.
  2. Acrylic sheet.
  3. Plastic molded
  4. Die-cut vinyl characters and graphic symbols.
- D. Samples for Verification: For each of the following products and for the full range of color, texture, and sign material indicated, of sizes indicated:
1. Dimensional Characters: Full-size Samples of each type of dimensional character (letter, number, and graphic element).
  2. Aluminum: For each form, finish, and color, on 6-inch- (150-mm-) long sections of extrusions and squares of sheet at least 4 by 4 inches (100 by 100 mm).
  3. Acrylic Sheet: 8 by 10 inches (200 by 250 mm) for each color required.
- E. Sign Schedule: Use same designations indicated on Drawings.
- F. Warranty: Special warranty, if applicable.

## 1.5 QUALITY ASSURANCE

- A. Source Limitations for Signs: Obtain each sign type indicated from one source from a single manufacturer.
- B. Regulatory Requirements: Comply with applicable provisions in ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

## 1.6 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit installation of signs in exterior locations to be performed according to manufacturers' written instructions and warranty requirements.
- B. Field Measurements: Verify field conditions prior to fabrication and indicate measurements on Shop Drawings.

## 1.7 COORDINATION

- A. Coordinate placement of anchorage devices with templates for installing signs.

## 1.8 WARRANTY

- A. Manufacturer's warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
  - 1. Failures include, but are not limited to, the following:
    - a. Deterioration of finishes beyond normal weathering for exterior signs.
    - b. Deterioration of embedded graphic image colors and sign lamination beyond normal weathering for exterior signs...
  - 2. Warranty Period: 5 years from date of Substantial Completion.
- B. Sign contractor / vendor warranty.
  - 1. Warranty Period: 2 years for labor and installation from date of Substantial Completion

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Aluminum Castings: ASTM B 26/B 26M, of alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated.
- B. Aluminum Sheet and Plate: ASTM B 209 (ASTM B 209M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 5005-H32.

- C. Aluminum Extrusions: ASTM B 221 (ASTM B 221M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated, and with at least the strength and durability properties of Alloy 6063-T5.
- D. Bronze Castings: ASTM B 584, Alloy UNS No. C86500 (No. 1 manganese bronze).
- E. Bronze Plate: ASTM B 36/B 36M.
- F. Copper Sheet: ASTM B 152/B 152M.
- G. Acrylic Sheet: ASTM D 4802, Category A-1 (cell-cast sheet), Type UVA (UV absorbing).
- H. Applied Vinyl: Die-cut characters from vinyl film of nominal thickness of 3 mils (0.076 mm) with pressure-sensitive adhesive backing, suitable for exterior applications.

## 2.2 PANEL SIGNS – FLUSH MODULAR FRAMES W/ INSERTS

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Innerface Architectural Signage, Inc. Signature series flush modular frames with inserts, or an equal product:
- B. Flush modular frames with flush modular inserts: Provide sign complying with the following requirements:
  1. Module/Style: See Pima county sign types
  2. Letter Color: White
  3. Sign Color: #5 Slate
  4. Corners: Square
  5. Perimeter stripe: white
  6. Mounting: Flat surface mount
  7. Innerdot with modular insert
- C. **Panel sign schedule:**
  - 1A.: Sign Type D.**
  - 1B.: Sign Type E.**
  - 1C.: Sign Type F.**
  - 1D.: Sign Type G.**
  - 1E.: Sign Type H.**
  - 1F.: Sign Type J-5**
  - 1G.: Sign Type J-6**

## 2.3 PANEL SIGNS- FLUSH MODULAR FRAMES – SINGLE UNIT

- A. Basis-of-Design Product: Subject to compliance with requirements, provide Innerface Architectural Signage, Inc. Signature series flush modular frames - single unit or an equal product by one of the following:
  1. ACE Sign Systems, Inc.
  2. Advance Corporation; Braille-Tac Division.
  3. Allen Industries Architectural Signage
  4. APCO Graphics, Inc.

5. Best Sign Systems Inc.
6. Bunting Graphics, Inc.
7. Gemini Incorporated.
8. Howard Industries Architectural signage
9. Vomar Products, Inc.

B. Single unit Signs: Provide a sign panel complying with the following requirements:

1. Module/Style: See Pima county sign types
2. Letter color: White
3. Sign color: #5 Slate
4. Perimeter stripe: White
5. Corners: Square
6. Mounting: Flat surface mount
7. Single Unit

C. Panel Sign Schedule:

**2A.: Sign Type A**

**2B.: Sign Type B**

**2C.: Sign Type C**

## 2.4 DIRECTORIES

A. Basis-of-Design Product: Subject to compliance with requirements, provide Innerface Architectural Signage, Inc. Signature series flush modular frames with inserts, or an equal product:

1. Main Directory Modules: Flush modular frames with flush modular inserts.
  - a. Module/Style: As specified on drawings.
  - b. Letter color: White
  - c. Sign color: #5 Slate
  - d. Corners: Square
  - e. Mounting:
    - 1) Flat surface
    - 2) Pedestal
  - f. **Directory sign schedule, flat-surface mount:#3A.**

3A	Directory: Main Directory Module, flat surface mount	Inner face module 17.100: Approx. 32"w. x 25"h, 50 lines	each	3
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2. Secondary Directory Modules: Flush modular frames with flush modular inserts.
  - a. Module/Style: As specified on drawings.
  - b. Letter color: White
  - c. Sign color: #5 Slate
  - d. Corners: Square
  - e. Mounting: Flat surface
  - f. **Directory sign schedule: #3B**

3B	Directory: Secondary Directory Module, flat surface mount	Inner face module 15.100: Approx. 28"w. x 25"h, 10 lines	each	3
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3. Overhead Directory Modules.
  - a. Module/Style: As specified on drawings.
  - b. Letter color: White
  - c. Sign color: #5 Slate
  - d. Corners: Square
  - e. Mounting:
    - 1) Flat surface
    - 2) Ceiling – double sided
  - f. **Directory sign schedule:**
    - #3C, flat –surf.mtd 12”h x 3”w, 2 lines**
    - #3D, Ceiling – double-sided 12”h x 3”w, 2 lines**

## 2.5 DIMENSIONAL LETTERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
  1. ACE Sign Systems, Inc.
  2. Advance Corporation; Braille-Tac Division.
  3. A. R. K. Ramos.
  4. Bunting Graphics, Inc.
  5. Charleston Industries, Inc.
  6. Gemini Incorporated.
  7. Grimco, Inc.
  8. Innerface Sign Systems, Inc.
  9. Metal Arts; Div. of L&H Mfg. Co.
  10. Mills Manufacturing Company.
  11. Mohawk Sign Systems.
  
- B. Cast letters: Produce characters with smooth flat faces, sharp corners, and precisely formed lines and profiles, free of pits, scale, sand holes, and other defects. Cast lugs into back of characters and tap to receive threaded mounting studs. Alloy and temper recommended by sign manufacturer for casting process used and for use and finish indicated. Comply with the following requirements.
  1. Letter material: As indicated.
  2. Thickness: As indicated.
  3. Color(s): As indicated.
  4. Mounting: Concealed studs, non-corroding for substrates encountered.
  
- C. Aluminum Extrusions: Comply with the following requirements:
  1. Finish: Anodized or baked enamel
  2. Thickness: As indicated.
  3. As selected from manufacturer's full range
  4. Mounting: Concealed studs, non-corroding for substrates encountered.
  5. **Dimensional letters schedule:**
    - 4A. 4”ht., 2 Lines – 25 characters.**
    - 4B. 6”ht., 2 Lines – 25 characters.**

- D. Molded Plastic letters: Injection molded (Minnesota letters) and as follows:
1. Integral Color: Selected from manufacturer's full range.
  2. Mounting: Concealed studs, non-corroding for substrates encountered.
  3. **Dimensional letters schedule:**
    - 4C. 4"ht., 2 lines – 25 characters
    - 4D. 6"ht., 2 lines – 25 characters
- E. Cutout letters: Provide letters with square-cut, smooth, eased edges. Comply with the following requirements:
1. Acrylic: 0.25 inch (6.35 mm) thick.
    - a. Color: Selected from manufacturer's full range.
  2. Aluminum Sheet: 0.25 inch (6.35 mm), or .050 inch (12.7 mm) thick.
    - a. Finish: Anodized or Painted.
    - b. Color: as indicated on drawings
  3. Bronze Sheet: 0.125 inch (3.18 mm) or 0.25 inch (6.35 mm) thick.
  4. Vinyl: Pressure sensitive, 3.0 mils (0.09 mm) thick.
    - a. Color: Selected from manufacturer's full range.
    - b. Interior and exterior applications.

## 2.6 FABRICATION

- A. Plaques and Secondary Directories: Routed 1/8 inch (3 mm) thick styrene backplate with a laser cut 1/16 inch (1.6 mm) thick non-glare acrylic polished edge faceplate. Faceplate is reverse screened using Nazdar 9700 Series screen print ink. Backplate is assembled to the faceplate with 3M VHB double sided foam tape .05 inch (1.3 mm) thick in various widths.
- B. Ceiling Mounted Directional Units: 3/8 inch (10 mm) thick unit: 1/4 inch (6 mm) thick black gloss acrylic laminated on both sides with 1/32 inch (.08 mm) vertical grade laminate using 3M water-base adhesive. Mounting hardware includes a dark bronze aluminum and a galvanized steel u-channel, galvanized decking screws, post binding screws, and threaded 1/4 inch (6 mm)-20 x 4 inch (102 mm) long round head zinc plated steel screws. Surface applied high performance vinyl copy.
- C. Main Directories: Hand fabricated box made of 5/8 inch (16 mm) and 1 inch (25 mm) thick fiberboard, 3/4 inch (102 mm) luan, staples, yellow wood glue, vertical grade laminate and 3M dark red solvent-based contact adhesive. Faceplate is 1/4 inch (6 mm) thick clear acrylic with vertical grade laminate and 3M Isotech tape with surface screened copy. Faceplate is attached to box with Velcro tape or a black continuous hinge. Inside of box has 26 gauge steel sign blank painted black. Cleat mounting hardware includes 3/4 inch thick fiberboard interlocking cleats, 1/4 inch (6 mm)-20 x 4 inch (102 mm) flat head zinc plated steel screws
- D. Vinyl Inserts and Main Directory Strips
1. Vinyl Inserts: Calendered matte/matte .010 mil thick vinyl diecut with a Patented punched keyhole for removal. Lettered with high performance vinyl.

2. Main Directory Strips: Routed 1/16 inch (1.6 mm) thick standard grade laminate or laser cut 1/16 inch (1.6 mm) thick back sprayed acrylic using Matthews polyurethane acrylic paints with surface applied high performance vinyl copy. Acrylic strips are laminated on the reverse side with 1 mil clear polyester over laminating film. Strips have 1/2 inch (12.5 mm) or 3/4 inch (102 mm) wide black magnetic tape applied to back for mounting.
- E. Innerdot: 1/16 inch (1.6 mm) diameter clear acrylic raster placed in holes drilled to 1/32 inch (.08 mm) deep in faceplate. Raised characters are 1/32 inch (.08 mm) styrene or 1/32 inch (.08 mm) thick. Sign Products molded plastic letters painted with Matthews polyurethane acrylic paints depending on color. Characters adhered to faceplate with IPS Weld-On #4.
- F. Single Units: Processed photopolymer, .035 inch (.08 mm) thick on .024 inch (.04 mm) thick aluminum backer, hand routed to size. Surface is primed with PPG epoxy primer and painted with Matthews polyurethane acrylic paint. Raised areas of the painted photopolymer are screened with NazDar System 2 screen print ink. Finished single unit face is attached to 1/8 inch (3 mm) thick black styrene backplate of the same shape with 3M Isotec adhesive.

## 2.7 FINISHES, GENERAL

- A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
- B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- C. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

## 2.8 ALUMINUM FINISHES

- A. Clear Anodic Finish: Manufacturer's standard Class 1 clear anodic coating.
- B. Color Anodic Finish: Manufacturer's standard Class 1 integrally colored or electrolytically deposited color anodic coating.
- C. Baked-Enamel Finish: Apply baked enamel complying with paint manufacturer's written instructions for cleaning, conversion coating, and painting.

## 2.9 COPPER-ALLOY FINISHES

- A. Sheet or Plate Finish: Smooth specular, buffed finish.
  1. Raised Finish: Polished.
  2. Recessed Finish: Etched, painted.

- B. Cast- Bronze Character Finishes: Manufacturer's standard satin finish with exposed surfaces free from porosity, burrs, and rough spots; with returns finished with fine-grain air blast.
- C. Cast-Bronze Plaque Finishes: Exposed surfaces free of porosity, burrs, and rough spots; with returns finished with fine-grain air blast.
  - 1. Raised Areas: Hand-tool and buff borders and raised copy to produce manufacturer's standard satin finish.
  - 2. Background Finish: As indicated.
- D. Clear Protective Coating: Coat exposed surfaces of copper alloys with manufacturer's standard, clear organic coating specially designed for coating copper-alloy products.

## 2.10 ACRYLIC SHEET FINISHES

- A. Colored Coatings for Acrylic Sheet: For copy, background, and frame colors, provide colored coatings, including inks, dyes, and paints, that are recommended by acrylic manufacturers for optimum adherence to acrylic surface and that are UV and water resistant for five years for application intended.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- B. Verify that items, including anchor inserts, are sized and located to accommodate signs.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.2 INSTALLATION

- A. Locate signs and accessories where indicated, using mounting methods of types described and complying with manufacturer's written instructions.
  - 1. Install signs level, plumb, and at heights indicated, with sign surfaces free of distortion and other defects in appearance.
  - 2. Interior Wall Signs: Install signs on walls adjacent to latch side of door where applicable. Where not indicated or possible, such as double doors, install signs on nearest adjacent walls. Locate to allow approach within 3 inches (75 mm) of sign without encountering protruding objects or standing within swing of door.
- B. Wall-Mounted (flat surface) Signs: Comply with sign manufacturer's written instructions except where more stringent requirements apply.
  - 1. Double Sided Foam Tape 1 inch (25 mm) wide black or white 3M double-sided foam tape.
  - 2. Backplate Screws Routed 1/8 inch (3 mm) thick black styrene backplate with a counter sunk screw holes. Supplied with drywall screws and anchors

3. Backplate Glass CNC routed 1/8 inch (3 mm) thick gloss black acrylic with 3M, 1 inch (25 mm) wide black double sided foam tape.
- C. Dimensional letters: Mount characters using standard fastening methods to comply with manufacturer's written instructions for character form, type of mounting, wall construction, and condition of exposure indicated. Provide heavy paper template to establish character spacing and to locate holes for fasteners.
1. Flush Mounting: Mount characters with backs in contact with wall surface.
  2. Projected Mounting: Mount characters at projection distance from wall surface indicated.

### 3.3 CLEANING AND PROTECTION

- A. After installation, clean soiled sign surfaces according to manufacturer's written instructions. Protect signs from damage until acceptance by Owner.

END OF EXHIBIT B