



**SPECIAL PROVISIONS
FOR
SIGNAGE**

**Polk County
EDP-PA26(002)--7Y-77**

**Effective Date
October 15, 2024**

THE STANDARD SPECIFICATIONS, SERIES 2023, ARE AMENDED BY THE FOLLOWING MODIFICATIONS AND ADDITIONS. THESE ARE SPECIAL PROVISIONS AND THEY SHALL PREVAIL OVER THOSE PUBLISHED IN THE STANDARD SPECIFICATIONS.

231033.01 DESCRIPTION.

A. General.

The work of this section consists of the installation of the following:

1. Information hub sign at Scott site and Type 1 (Kiosk) at Birdland, Harriet and Prospect sites
2. Park sign
3. Pedestal signs – Sign Type 2 at Scott site and Type 2 (Panel) at Birdland, Harriet and Prospect sites
4. Donor plaques

B. Action Submittals.

1. Product Data: For each type of product.
2. Shop Drawings: For panel signs.
 - a. Include fabrication and installation details and attachments to other work.
 - b. Show sign mounting heights, locations of supplementary supports to be provided by other installers, and accessories.
 - c. Show message list, typestyles, graphic elements, including raised characters and Braille, and layout for each sign at least half size.
3. Samples for Verification: For each type of sign assembly showing all components and with the required finish(es), in manufacturer's standard size unless otherwise indicated and as follows:
 - a. Material Samples: For each type of material provide a sample representing material and finish, and color not less than 12 inches square.

- b. Type Face: For each type of type face provide full size sample not less than 12 inches square.
 - c. Graphics: For each type of printed graphic provide full size sample not less than 12 inches square.
 - d. Paint Colors: For each color of paint, submit draw-down sample.
 4. Product Schedule: Use same designations indicated on Drawings or specified.
 5. Templates for placement of sign-anchorage devices embedded in permanent construction.
- C. Informational Submittals.**
Sample Warranty: For special warranty.
- D. Closeout Submittals.**
Manufacturer's Recommended Maintenance Instructions: For inclusion in operations and maintenance manuals submitted to the Engineer.
- E. Field Conditions.**
Field Measurements: Verify locations of anchorage devices embedded in permanent construction by other installers by field measurements before fabrication and indicate measurements on Shop Drawings.
- F. Warranty.**
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.
 - b. Deterioration of embedded graphic image.
 - c. Separation or delamination of sheet materials and components.
 2. Warranty Period: 5 years from date of Substantial Completion.
 3. Manufacturer's standard warranties for specified products shall be transferred to the City of Des Moines upon acceptance of the project.

231033.02 MATERIALS.

A. Performance Requirements.

1. Perform structural design of signage in accordance with AASHTO LRFD 9th edition, series of 2014 structural requirements. Submit design drawings stamped by a structural engineer licensed within the state of Iowa. Structural design shall be incidental to the Signage bid items.
2. Accessibility Standard: Comply with applicable provisions in the USDOJ's "2010 ADA Standards for Accessible Design", the ABA standards of the Federal agency having jurisdiction and ICC A117.1

B. Park Sign and Donor Plaques.

1. Stainless-Steel Bars and Shapes: ASTM A276, Type 304.
2. Stainless-Steel Sheet: ASTM A240/A240M or ASTM A666, Type 304, stretcher-leveled standard of flatness.

3. Acrylic Sheet: ASTM D4802, category as standard with manufacturer for each sign, Type UVF (UV filtering).
4. Graphic content for signs: Provided by the Contracting Authority

C. Informational Hub and Pedestal Signs.

1. **Hot Dipped Galvanized Steel (Scott Avenue Site).**
 - a. Steel Shapes and Plates: ASTM A36 for Carbon Structural Steel
 - b. Tube Steel: ASTM A500, Grade B.
 - c. Hot Dip Galvanizing according to ASTM A123.
 - d. Article 4100.7 of the Standard Specifications.
2. **Weathering Steel (Birdland, Harriet, and Prospect Sites).**
 - a. Shapes and Plates: ASTM A588.
 - b. Tubes: ASTM A847.
3. Aluminum Sheet and Plate: ASTM B209, alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.
4. Tape: 45 MM black, red release lined, very conformable double-coated modified acrylic foam tape.
5. Fiberglass Embedded Panel: Multiple laminations of glass-fiber-reinforced polyester resin with UV-light stable, colorfast, nonfading, weather- and stain-resistant, colored polyester gel coat, and with manufacturer's standard matte finish.
6. Paints and Coatings for Sheet Materials: Inks, dyes, and paints that are recommended by manufacturer for optimum adherence to surface and are UV and water resistant for colors and exposure indicated. Paint: Polyacrylic Paint ASTM D5098-05A.
7. Vinyl-Characters Pre-spaced characters die cut from 3 to 3.5 mil thick, weather-resistant vinyl film with release liner on the back and carrier film on the front for on-site alignment and application.
8. Artwork: Provided by the Contracting Authority.

D. Accessories.

1. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signs, noncorrosive and compatible with each material joined, and complying with the following unless otherwise indicated:
 - a. Use concealed fasteners and anchors unless indicated to be exposed.
 - b. For exterior exposure, furnish stainless-steel or hot-dip galvanized devices unless otherwise indicated.
 - c. **Exposed Metal-Fastener Components, General.**
 - 1) Fabricated from same basic metal and finish of fastened metal unless otherwise indicated.
 - 2) Fastener Heads: For nonstructural connections, use countersunk screws and bolts with tamper-resistant Allen-head slots unless otherwise indicated.
 - a. Sign Mounting Fasteners:
 - 1) Concealed Studs: Concealed (blind), threaded studs welded or brazed to back of sign material or screwed into back of sign assembly unless otherwise indicated.
 - 2) Projecting Studs: Threaded studs with sleeve spacer, welded or brazed to back of sign material or screwed into back of sign assembly, unless otherwise indicated.

- 3) Through Fasteners: Exposed metal fasteners matching sign finish, with type of head indicated, and installed in predrilled holes.
- d. Inserts: Furnish inserts to be set by other installers into concrete or masonry work.
2. Post-Installed Anchors: Fastener systems with bolts of same basic metal as fastened metal, if visible, unless otherwise indicated; with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC01, ICC-ES AC193, ICC-ES AC58, or ICC-ES AC308 as appropriate for the substrate.
 - a. Uses: Securing signs with imposed loads to structure.
 - b. Type: Torque-controlled, expansion anchor, torque-controlled, adhesive anchor, or adhesive anchor.
 - c. Material for Interior Locations: Carbon-steel components zinc-plated to comply with ASTM B633 or ASTM F1941 Class Fe/Zn 5, unless otherwise indicated.
 - d. Material for Exterior or Interior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 stainless-steel bolts, ASTM F593, and nuts, ASTM F594.
3. Anchor Rods: ASTM F1554, Grade 36 Headed Anchor Rod, Hot Dip Galvanized.
4. Grout: Non-shrink, non-metallic, natural aggregate construction grout with minimum dry-pack compressive strength of 7000 psi at 3 days complying with ASTM C1107.

E. Fabrication.

1. Provide manufacturer's standard sign assemblies according to requirements indicated.
 - a. Preassemble signs in the shop to greatest extent possible. Disassemble signs and assemblies only as necessary for shipping and handling limitations. Clearly mark units for reassembly and installation; apply markings in locations concealed from view after final assembly.
 - b. Mill joints to a tight, hairline fit. Form assemblies and joints exposed to weather to resist water penetration and retention.
 - c. Comply with AWS for recommended practices in welding and brazing. Provide welds and brazes behind finished surfaces without distorting or discoloring exposed side. Clean exposed welded and brazed connections of flux, and dress exposed and contact surfaces.
 - d. Conceal connections if possible; otherwise, locate connections where they are inconspicuous.
 - e. Internally brace signs for stability, to meet structural performance loading without oil-canning or other surface deformation, and for securing fasteners.
 - f. Provide rabbets, lugs, and tabs necessary to assemble components and to attach to existing work. Drill and tap for required fasteners. Use concealed fasteners where possible; use exposed fasteners that match sign finish.
2. Shop-Applied Vinyl: Align vinyl film in final position and apply to surface. Firmly press film from the middle outward to obtain good bond without blisters or fishmouths.
3. Cutout Characters: Characters with uniform faces; square-cut, smooth, eased edges; precisely formed lines and profiles. Remove charring from cutting operations. On stainless steel surfaces, restore and blend finish imperfections due to cutting or grinding.

F. General Finish Requirements.

1. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

2. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

G. Stainless-Steel Finishes.

1. Surface Preparation: Remove tool and die marks and stretch lines, or blend into finish.
2. Polished Finishes: Grind and polish surfaces to produce uniform finish, free of cross scratches.
 - a. When polishing is completed, passivate and rinse surfaces. Remove embedded foreign matter and leave surfaces chemically clean.
 - b. Dull Satin Finish: No. 6.

H. Sign Footings.

1. Reinforced concrete footings conforming to Section 2403 of the Standard Specifications.
2. Size: As indicated on the plans.
3. See plans for reinforcing and embedments.

231033.03 CONSTRUCTION.

A. Examination.

1. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.
2. For informational hub and panel signs, verify soil conditions meet minimum net allowable bearing pressure of 1500 pounds per square foot.
3. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.
4. Verify that anchorage devices embedded in permanent construction are correctly sized and located to accommodate signs.
5. Proceed with installation only after unsatisfactory conditions have been corrected.

B. Installation.

1. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.
 - a. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
 - b. Install signs so they do not protrude or obstruct according to the accessibility standard.
 - c. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
2. Accessible Signage: Install in locations on walls as indicated on Drawings and according to the accessibility standard.

C. Sign Footings.

1. Install footings where shown on the plans, prior to paving operations.

2. Verify anchorages and embedments locations with the sign fabricator prior to placement of concrete.
3. Install footings per Section 2403 of the Standard Specifications.

D. Mounting Methods.

1. **Concealed Studs:** Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
 - a. **Masonry Substrates:** Fill holes with adhesive. Leave recess space in hole for displaced adhesive. Place sign in position and push until flush to surface, embedding studs in holes. Temporarily support sign in position until adhesive fully sets.
 - b. **Thin or Hollow Surfaces:** Place sign in position and flush to surface, install washers and nuts on studs projecting through opposite side of surface, and tighten.
2. **Projecting Studs:** Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
 - a. **Masonry Substrates:** Fill holes with adhesive. Leave recess space in hole for displaced adhesive. Place spacers on studs, place sign in position, and push until spacers are pinched between sign and substrate, embedding the stud ends in holes. Temporarily support sign in position until adhesive fully sets.
 - b. **Thin or Hollow Surfaces:** Place spacers on studs, place sign in position with spacers pinched between sign and substrate, and install washers and nuts on stud ends projecting through opposite side of surface, and tighten.
3. **Through Fasteners:** Drill holes in substrate using predrilled holes in sign as template. Countersink holes in sign if required. Place sign in position and flush to surface. Install through fasteners and tighten.
4. **Brackets:** Remove loose debris from substrate surface and install backbar or bracket supports in position so that signage is correctly located and aligned.
5. **Adhesive:** Clean bond-breaking materials from substrate surface and remove loose debris. Apply linear beads or spots of adhesive symmetrically to back of sign and of suitable quantity to support weight of sign after cure without slippage. Keep adhesive away from edges to prevent adhesive extrusion as sign is applied and to prevent visibility of cured adhesive at sign edges. Place sign in position, and push to engage adhesive. Temporarily support sign in position until adhesive fully sets.
6. **Two-Face Tape:** Clean bond-breaking materials from substrate surface and remove loose debris. Apply tape strips symmetrically to back of sign and of suitable quantity to support weight of sign without slippage. Keep strips away from edges to prevent visibility at sign edges. Place sign in position and push to engage tape adhesive.
7. **Baseplate Mounting.**
 - a. **Preset Anchor Bolts:** Set post baseplate in position over anchor bolts projecting from concrete foundation, shim and support post to prevent movement, place washers and nuts, and tighten. Fill shim space with nonshrink, nonmetallic grout, mixed and placed to comply with manufacturer's written instructions.
 - b. **Drilled-in-Place Anchor Bolts:** Set post baseplate in position over concrete foundation, locate and drill anchor holes, shim and support post to prevent movement, place washers and anchor bolts, and tighten. Fill shim space with nonshrink, nonmetallic grout, mixed and placed to comply with manufacturer's written instructions.

E. Adjusting and Cleaning.

1. Remove and replace damaged or deformed signs and signs that do not comply with specified requirements. Replace signs with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
2. Remove temporary protective coverings and strippable films as signs are installed.
3. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by the Engineer.

231033.04 METHOD OF MEASUREMENT.

A. Signs, Special.

Signs, Special is a lump sum bid item and will not be measured.

B. Signs, Donor.

Signs, Donor will be measured as a square footage of signs installed.

231033.05 BASIS OF PAYMENT.

A. Signs, Special.

Payment shall be the contract lump sum price for Signs, Special. Concrete and reinforcing for sign footings shall be incidental to this bid item. Payment shall be considered full payment for all materials, labor, and equipment for installation of each sign assembly.

B. Signs, Donor.

Payment shall be the contract unit price for each square foot of Signs, Donor measured. All hardware, nuts, bolts, equipment and miscellaneous material necessary for installation shall be incidental to the Signs, Donor bid item. Payment shall be considered full compensation for all materials, labor, and equipment required for the installation of Signs, Donor.