

**SECTION 10436
PANEL AND POST AND PYLON SIGNAGE**

PART 1 - GENERAL

1.1 SUMMARY

- A. This Section includes the following:
 - 1. Non-illuminated Panel and Post signs.
 - 2. Internal illumination Pylon (Cabinet and Post) signs.

1.2 PERFORMANCE REQUIREMENTS

- A. Structural Performance: Provide panel and post & pylon signs capable of withstanding wind loads of 130 miles per hour.
- B. Thermal Movements: Provide panel and post & pylon signs that allow for thermal movements resulting from the following maximum change (range) in ambient and surface temperatures by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects. Base engineering calculation on surface temperatures of materials due to both solar heat gain and nighttime-sky heat loss.
 - 1. Temperature Change (Range): 120 degrees F, ambient; 180 degrees F, material surfaces.

1.3 DEFINITIONS

- A. ADA and ABA Accessibility Guidelines: U.S. Architectural & Transportation Barriers Compliance Board's "Americans with Disabilities Act" (ADA) 2010 ADA Standards for Accessible Design, Title II; and "Architectural Barriers Act" (ABA) Accessibility Guidelines."

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated in Plans.
- B. Shop Drawings: Show fabrication and installation details for panel and post and pylon signage.
 - 1. Include plans, elevations, sections, details, and attachments to other work.
 - 2. Provide message schedule, location plans and scaled layouts at 3/4"= 1'-0" for every sign face, including the approved SunRail logo and various Symbols as noted in Plans.
 - 3. Show locations of electrical service connections and shut-off switch for internally illuminated pylon signs.
 - 4. For installed products indicated to comply with design loads, include structural analysis data signed and sealed by the qualified professional engineer responsible for their preparation.
- C. Samples for Verification: For each of the following:

1. Provide full size digital print mock-ups for each sign type – “simulated paint colors” using Pantone Matching System specifications. Include reflective vinyl where indicated. SunRail logo does not need to be back-lit for the pylon mock-up.
2. Provide two color samples for every color, minimum 4” square, on the same aluminum sign face material to be used for full size fabrication, including clear coat finish. One set of samples to be kept by the Engineer and one set to be kept by the contractor.
3. Provide full size mock up of the SunRail logo, surface-mounted on acrylic, back-lit per specifications. Provide a dark environment for this review and evaluation.
4. Provide 6” long samples of pylon cabinet extrusion & each panel and post extrusion – by SignComp or approved equivalent.
5. Provide full size prototype of Sign Type F, including extrusions, reveals, base plate cover and two-tone painted post.
6. Provide full size base plate prototype for 6” diameter post.

D. Message Schedule: Use same designations indicated in the Plans. Verify all messages with Engineer prior to fabrication.

E. Qualification data: For fabricator and installer

F. Maintenance Data: For all signs – to be included in maintenance manuals.

G. Warranty: Manufacturer’s warranty.

1.5 QUALITY ASSURANCE

A. Regulatory Requirements: Comply with applicable provisions in ADA and ABA Accessibility Guidelines and ICC (International Code Council) A1171.1.

B. Electrical Components, Devices, and Accessories: Comply with Underwriters Laboratories (UL) listing and labeling in accordance with, and acceptable to, authorities having jurisdiction.

C. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.

1.6 PROJECT CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit installation of signs to be performed according to manufacturers' written instructions and warranty requirements.

B. Field Measurements: Indicate measurements on Shop Drawings.

1.7 COORDINATION

A. Coordinate installation of anchorages for panel and post & pylon signage. Furnish setting drawings, templates, and directions for installing anchorages and other items that are to be embedded in concrete.

1.8 WARRANTY

- A. Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of panel and post & pylon signs that fail in materials or workmanship within specified warranty period.
 - 1. Failures include, but are not limited to, the following:
 - a. Deterioration of metal finishes beyond normal weathering.
 - b. Deterioration of acrylic finishes beyond normal weathering.
 - c. Deterioration of vinyl graphic images, symbols, logos, text, colors and laminations beyond normal weathering.
 - 2. Warranty Period: Five years following the date of Final Acceptance.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Aluminum Sheet and Plate: (American Society for Testing and Materials) ASTM B 209 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.
- B. Aluminum Extrusions: ASTM B 221 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.
- C. Acrylic Sheet: ASTM D 4802, Category A-1, Type UVA (UV Absorbing).
 - 1. Vandal resistant Lexan to be used for the large, back-lit SunRail logo.
 - 2. Plexiglas brand to be used for backlit letterforms.
- D. Digitally Printed SunRail logo Vinyl Decal (translucent, backlit) for Fabricated Aluminum Cabinet and Post Signs:
 - 1. Translucent White 2-mil graphic film.
 - 2. Print image at 300 dpi at 100% with solvent-based inks.
 - 3. Over-laminate for ultraviolet and physical protection.
- E. Digitally Printed SunRail logo Vinyl Decal (opaque, non-illuminated) for Fabricated Aluminum Panel and Post Signs:
 - 1. Opaque White 2-mil graphic film with adhesive.
 - 2. Print image at 300 dpi at 100% with solvent-based inks.
 - 3. Over-laminate for ultraviolet and physical protection.
- F. Reflective Vinyl for Text and Symbols (opaque, non-illuminated) for all Fabricated Aluminum Panel Signs:
 - 1. 7-mil reflective graphic film.

- G. Paint: Acrylic polyurethane; vandal-resistant automotive-grade paint with UV protection.
 - 1. Undercoats: Types recommended by paint manufacturer.
 - 2. Color Coats: Acrylic polyurethane; see Color Schedule in the Plans.
 - 3. Top Coats: Acrylic polyurethane satin clear with UV protection as prescribed by paint manufacturer. Apply on top of all painted surfaces and vinyl graphics.

2.2 PANEL AND POST AND PYLON (CABINET AND POST) SIGNS

- A. Sign Types:
 - 1. Non-illuminated Panel and Post signs
 - 2. Internally illuminated Pylon (Cabinet and Post) Signs

2.3 NON-ILLUMINATED PANEL AND POST SIGNS

- A. Message Panels: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner.
 - 1. Continuously weld joints and seams unless other methods are indicated; grind, fill, and dress welds and seams to produce smooth, flush, exposed surfaces with welds minimally visible after final finishing.
- B. Message Panel Materials:
 - 1. Aluminum Sheet: 1/8" thick.
 - a. Panel Finish: Painted.
 - b. Color: See Color Schedule in the Plans.
- C. Message Panel Extruded Frames:
 - 1. An extensive catalog of aluminum extrusions in various sizes and configurations are to be used for all Panels and Cabinets unless otherwise noted or approved.
 - a. Frame Finish: Painted.
 - b. Color: See Color Schedule in the Plans.
 - 2. Edge Condition: Square
 - 3. Corner Condition: Square
 - 4. Mitered
 - 5. Concealed anchors, bolts and screws.

2.4 INTERNALLY ILLUMINATED PYLON (CABINET AND POST) SIGNS

- A. Message Panels: Provide smooth sign panel surfaces constructed to remain flat under installed conditions within a tolerance of plus or minus 1/16 inch measured diagonally from corner to corner.

1. Continuously weld joints and seams unless other methods are indicated; grind, fill, and dress welds and seams to produce smooth, flush, exposed surfaces with welds minimally visible after final finishing.
- B. Message Panel Materials:
1. Aluminum Sheet: 1/8" thick.
 - a. Panel Finish: Painted.
 - b. Color: See Color Schedule in the Plans.
- C. Message Panel Extruded Frames:
1. An extensive catalog of aluminum extrusions in various sizes and configurations are to be used for all Panels and Cabinets unless otherwise noted or approved.
 - a. Frame Finish: Painted.
 - b. Color: See Color Schedule in the Plans.
 2. Edge Condition: Square
 3. Corner Condition: Square
 4. Mitered
 5. Concealed anchors, bolts and screws.
 6. Illumination: Even illumination without hot spots or dark areas is required. T-5 Slimline fluorescent tube lighting – 6" on-center, is required unless otherwise approved. Include transformers, insulators and other UL approved components as needed. Make provisions for servicing and concealing connections to electrical supply.
 7. Provide shut-off switch for servicing concealed within frame
 8. Provide full size example of UL listing label. Minimum size required. Black and White text or Black on silver metal finish preferred.

2.5 POSTS FOR ALL PANEL & PYLON SIGNS

- A. General: Fabricate posts to lengths required for mounting method indicated.
1. Baseplate Method: Provide posts with baseplates welded to the bottom of posts.
 - a. Provide anchor bolts of size required for connecting posts to concrete foundations.
 - b. Provide plate cover as indicated on Plans

- B. Aluminum Posts: All posts are to be Round. Manufacturer's standard ¼ inch thick extruded-aluminum tubing. Include post caps, top and bottom.
 - 1. Post Finish: Painted.
 - a. Post Color: See Color Schedule in the Plans.
 - 1) Two-tone color scheme. Mask and spray.
 - 2) Very important that color breaks for posts match up with color breaks for channel spacers (reveals), panel frames & faces, and cabinet frames & faces.
 - b. Post Sizes: As indicated on Plans.
 - 1) Sign Type A – 8” diameter posts
 - 2) Sign Type A1 – 6” diameter posts
 - 3) Sign Type A2 – 6” diameter posts
 - 4) Sign Type B & C – 7” diameter posts
 - 5) Sign Type E & F – 6” diameter posts

2.6 FABRICATION

- A. General: Provide panel and post and pylon signs of configurations indicated.
 - 1. Welded Connections: Comply with AWS standards for recommended practices in shop welding. Provide welds behind finished surfaces as needed without distortion or discoloration of exposed side. Clean exposed welded surfaces of welding flux and dress exposed and contact surfaces.
 - 2. Mill joints to tight, hairline fit. Form joints exposed to weather to exclude water penetration.
 - 3. Conceal fasteners if possible; otherwise, locate fasteners where they will be inconspicuous, unless part of the design aesthetic.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine finished signs and posts, landscape conditions and architectural conditions with Installer present for compliance with requirements for installation tolerances and other conditions affecting performance of work, especially when signs are installed on architectural platforms with other trades present.
- B. Verify that footers are sized and located properly to accommodate signs.
- C. Verify that electrical power is located properly for illuminated pylons.
- D. Verify that architectural conditions are suitable prior to installation to avoid damage by other trades after installation has been completed.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Pre-placement Inspection: Before placing concrete, inspect and complete formwork installation, reinforcing steel, and items to be embedded or cast-in. Notify other trades sufficiently in advance, to permit installation of their work, cooperate with other trades in setting such work. All aforementioned work must be completed and the Engineer and/or Department notified at least 24 hours prior to concrete placement to allow time for adequate inspection. Moisten wood forms immediately before placing concrete where form coating is not used.
- B. Excavation: Excavate for sign foundation to elevations and dimensions indicated. Reconstruct subgrade that is not firm, undisturbed, or compacted soil, or that is damaged by freezing temperatures, frost, rain, accumulated water, or construction activities by excavating a further 12 inches backfilling with satisfactory soil, and compacting to original subgrade elevation.
- C. Set anchor bolts and other embedded items required for installation of signs. Use approved templates furnished by suppliers of items to be attached.
- D. 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. Coordinate installations with the Engineer.

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 the Engineer.

3.4 CLEAN-UP

- A. Remove from time to time, as directed, all rubbish and debris resulting from the Work and upon completion of the Work remove all unused materials, equipment and similar construction-related items, and perform such final cleaning services as may be necessary to leave the completed Work in a condition acceptable to the Engineer.

END OF SECTION 10436