

# EXHIBIT A

## Bid No. 6881

All Prospective Vendors submitting a bid package must be registered on the City's "Electronic Vendors List", and must be listed on the "Electronic Bidders List" If the Vendor is not listed on the Electronic Bidders List the bid package will not be considered or accepted.

The City of Riverside payment process is through an electronic transfer process. Contractors or Suppliers must be set up for this payment process in order to be compensated for materials and or services.

**City of Riverside**  
**Finance Department**  
**Purchasing Division**  
**REQUEST FOR BID**

BID NO. 6881

DUE DATE: September 15, 2010 before 2:00 p.m.

Electronic Bid Only

**Internally Illuminated Street Name Sign Replacement Project**  
**(Materials Only)**

Riverside, California

**PART 7**  
**TRAFFIC SIGNALS, LIGHTING AND ELECTRICAL SYSTEMS**

**7-1.01 Description.** Furnishing Street Name Signs Panels, Frames, Brackets, Sheeting and Film, and payment therefore shall conform to the provisions in Section 86 "Signals, Lighting and Electrical Systems," of the State Standard Specifications and these Special Provisions (See Section 2-5 herein).

**7-1.04 Equipment List and Drawing.** Equipment list and drawings of electrical equipment and material shall conform to the provisions in Section 86-1.04, "Equipment List and Drawings", of the State Standard Specifications and these Special Provisions. The Caltrans HC-30 form or one similar shall be submitted to the Engineer. Also, see required submittal with the bid proposal.

All equipment and material that the Contractor proposes to provide shall conform to these specifications and the contract exhibits. A list of substitute equipment and/or materials along with a written descriptive summary, describing the functions of the components, which the Contractor proposes to provide, shall be submitted along with Contractor's bid proposal. The list shall be complete as to the name of manufacturer, size, and identifying number of each item. The list shall be supplemented by such other data as may be required. Substitution shall not be allowed for products governed by the State of California Department of Transportation Pre-Qualified Products List (QPL). Refer to Section 7-3 and 7-4 of these Special Provisions.

If these Special Provisions specify manufacturers' names along with the term "City approved equal", the following shall apply:

If the Contractor proposes to furnish equipment and/or material other than that specified in the Contract Special Provisions, a sample of the item(s) must be submitted to the Engineer to determine its equality. The item(s) must be reviewed prior to the delivery and will not be accepted unless approved by the Engineer. Judgment shall be based on intended use, maintenance, quality and interchangeability, if applicable.

In all cases, the judgment of the Engineer shall be final as to whether substitute equipment and/or materials, recommended by the Contractor, conform to the intent of these specifications and are acceptable for use.

**7-7.06 Internally Illuminated Street Name Signs.** Internally illuminated street name signs shall conform to Section 86-6.065, "Internally Illuminated Street Name Signs", of the State Standard Specifications. The internally illuminated street name sign panels and frames shall be per the Exhibits "A", "B", "C" and "D", and these Special Provisions.

3M Diamond Grade 3 (ASTM XI) Translucent Reflective Sheeting Series 4090T shall be used in the production of the internally illuminated street name sign panels, or a City approved equal. Refer to Sec. 7-1.04 of this PART 7 regarding "City approved equal".

MESSAGE. The message, as shown on the exhibits, shall be displayed on both sign

panels. Letters shall be 8" upper case and 6" lower case.

A shop drawing of the "Message" for each sign shall be submitted for approval prior to fabrication.

### **Electronic Street Name Sign Location Map**

(a) DESCRIPTION.

- i. This work shall consist of providing an Internet-based Traffic Sign Inventory site to the City that will allow tracking traffic signs installed under the terms of this contract.
- ii. The Internet site shall include all specific requirements outlined in this specification and shall be accessible by City designated individuals only, by use of an interactive password security system.

(b) SITE COMPONENTS.

**The Internet-based Sign Inventory site shall consist of the following components.**

- a. The Internet site shall be constructed on a base map provided by the City, of the City jurisdiction using an Arc-info or similar type style base map of sufficient accuracy for the project. The base map shall indicate all applicable roadways within City right-of-way and shall designate such roadways by proper name.
- b. The Internet site shall include navigation capabilities to pan and zoom different views at various locations and resolutions on the base map, allowing for viewing the project area and reported information.
- c. The Internet site shall be a secure site, accessible from a typical personal computer, and shall be accessible by password only. Passwords shall be granted to individuals at the City's discretion.

(c) ADDITIONAL REQUIREMENTS.

Within the data table, there shall be the ability to link a "pdf" associated to that specific feature. Tabular data shall include the ability to sort the data in ascending or descending order based on the column heading. All tabular data (generated through query, search, or spatial select) shall be downloadable into a format consistent with Microsoft Excel or agency defined format.

The Web Site shall include a search function that queries the data by, but not limited to, Date of installation, Sign ID, Current Condition Assessment, Sign Age. The result of the search shall be plotted on the map and displayed in tabular data.

The Web Site shall have the flexibility to add new attributes that the City deems necessary. The initial data reported on web site for each sign component shall consist of:

- A Unique Identifier for each sign and for each post
- GPS Coordinates
- Date of installation
- Sign Orientation
- Street Name and Block No. on the respective sign panel.
- Sign Condition

The Web Site shall include a contact option to directly send an email to the contractor to inquire or ask a question about any of the sign components, schedule for completion or other information included in the project.

The Web Site shall be fully functional within 45 working days of the notice to proceed on the contract and after receipt of the City provided base map. Data on the web site shall be updated on a regular basis to report progress of work on the contract.

If at any time during the contract the City requests the data files, the Contractor shall provide within 30 days from request. At the termination of the contract the Contractor shall provide all City's data in a format consistent with Microsoft Excel.

### **Fabrication**

The Contractor shall fabricate Street Name Signs based on the City provided inventory to be provided to the Contractor after bid award. Inventory will include Street Names, Suffixes, Block Numbers and any other artwork needed.

**General Requirements.** All parts used in constructing highway signs shall be new and shall conform to the requirements of these Specifications, the Exhibits and the ASTM Standards for Sign Supports for highway signs, luminaires and traffic signals, latest edition. If any departures of materials and fabrication from the Exhibits or Specifications are deemed necessary by the Contractor, details of such departures, and the reasons, therefore, shall be submitted to the Engineer for approval. No such departure shall be made without the prior written approval of the Engineer. The Contractor shall furnish the City notarized certified copies of the chemical and physical properties of all materials incorporated in the structures and accessories that are required for this work.

**Aluminum and Composite material signs.** Aluminum and composite material mounted signs shall conform to the requirements of the following Specifications, unless otherwise specified:

- (a) Extruded shapes (sign panels), bars, rods, ASTM B 221, Alloy 6063, T6.
- (b) Structural shapes, ASTM B 308, Alloy 6061-T6.
- (e) Bolts other than anchor bolts, ASTM B 211, Alloy 2024-T4. Chromate sealed anodic coating at least 5  $\mu$ m (0.0002 in.) thick shall be applied to all finished bolts.
- (d) Nuts, ASTM B 211, Alloy 6262-T9 for 5/16 in.(8 mm) and larger, and Alloy

- 2024-T4 for 1/4 in.(6 mm) and under, tamper-proof type.
- (e) Washers, ASTM B 209, Alloy Alclad 2024-T4.
- (f) Weld filler wire, ASTM B 285, Alloy ER5356 or ER5556.
- (g) Flange splicing material, ASTM B 209, Alloy 6061-T6.
- (h) Rivets, ASTM B 316, Alloy 6053-T6.
- (i) Shims, ASTM B 209, Alloy 1100-0.

(a) General.

Before fabrication, sign face drawings shall be submitted in .pdf or hard copy format to agency for approval. No changes to the design file are necessary when dimensional discrepancies are less than .25 inches.

Fabrication of all signs and supports shall be in accordance with the details shown on the exhibits and drawings, and be consistent with manufacturers' recommendations. Any departure from the Exhibits or sign face drawings shall be submitted in the form of shop drawings. Work shall be done in a uniform, workmanlike manner.

All fabrication of steel components specified to be galvanized, including the forming of holes or perforations shall be completed prior to galvanization.

All signs shall be fabricated in a plant operated by a fabricator who has the necessary experience to manufacture quality signs meeting these Specifications. The Contractor shall furnish the City the name of the fabricators of the signs before fabrication is started and, if requested by the City, information shall be furnished as to the fabricator's qualifications and experience. (Certification by sheeting manufacturer required)

(b) Multiple Panel Signs-Extruded Panels

Multiple panel signs shall be made of extruded sections. All extruded sections shall be 12 in.(30 cm)wide, mounted horizontally and shall have no vertical joints. All panels shall be flat and straight within commercial tolerances established by the aluminum industry.

(c) Cutting (Metals).

Materials 1/2 in.(13 mm) thick or less may be sheared, blanked, sawed or milled. Materials over 1/2 in.(13 mm) thick shall be sawed or milled. Cut edges shall be true and smooth and free from excessive burrs or ragged breaks. Re-entrant cuts shall be filleted by drilling prior to cutting. Flame cutting will not be permitted for aluminum.

(d) Bolt Holes (In Metals).

Bolt Holes shall either be drilled to finished size, or they may be blanked to finished size provided the diameter of the blanked hole is at least twice the thickness of the metal being blanked.

(e) Preparation of Signs Surfaces.

All fabrication including cutting, welding and punching of holes,, shall be complete prior

to surface preparation. Prior to painting or application of reflective sheeting to the aluminum, sign panels shall be treated in strict accordance with the following procedure and composite material sign panels shall be treated per the manufacturer's recommendations:

1. Preliminary Cleaning.

A complete submersion in a six per cent solution of an inhibited alkaline cleaner at 160 to 180° F(71 to 82° C) for 3 minutes followed by a cold water rinse.

2. Etching.

Preliminary cleaning shall be followed by a surface etch by immersion for three minutes in a 6 to 8% dilute phosphoric acid solution followed by spraying with a cold water rinse and immersion for 1 minute in circulating hot water at 180° F(82° C).

3. Handling.

No metal shall be handled, except by device or clean canvas gloves, between all cleaning and etching operations and the application of paint and/or reflective sheeting. There shall be no opportunity for metal to come in contact with grease, oils, or other contaminating substances after cleaning and etching and prior to the application of paint and/or reflective sheeting.

(f) Shop Painting and Reflectorization.

All legends, borders and background shall be of the color and placed on the sign as shown on the approved drawings.

1. Application.

Reflective sheeting shall be applied to properly treated base panels with mechanical equipment in a manner specified for the manufacture of traffic signs by the sheeting manufacturer.

Sign faces comprising two or more pieces or panels of reflective sheeting shall be carefully matched for color at the time of sign fabrication to provide uniform appearance and brilliance, both day and night. Nonconformance may result in non-uniform shading and an undesirable contrast between adjacent widths of applied sheeting which will not be acceptable. Splices shall be held to a minimum. When spliced, adhesive coated sheeting may be butt spliced; the gaps shall not exceed 1/16 in.(800 µm). (For 12" aluminum extrusions, the retroreflective sheeting width shall be 12.75". Sheetting shall extend a minimum of 0.375" beyond panel face and be tightly adhered to panel edge.

2. Digital Printing

All numbers, letters and borders on signs shall be digitally printed (directly or through reverse image) before the sheeting is attached to the panels, unless otherwise approved by the Engineer. All digital printing shall be done in a workmanlike manner and as recommended by the manufacturer of the reflective sheeting. Exception



allowed for symbols, borders and legends that are different than background color.

Appropriate manufacturer's recommended over-laminate films must be used in digitally printing. Any noticeable deviation from the shades shall be cause for rejection of any sign.

Digitally printed sign shall meet the following requirement for legends, borders, and accessories:

(a) Digitally Printed Signing Materials

Signing materials must be of Type XI with transparent over-laminate UV protection film.

(b) Image Durability

Durability of the imaging materials shall be equal to that of the base reflective sheeting.

**Reflective Sheeting.** Reflective sheeting shall meet the requirements of AASHTO M 268 and the supplementary requirements for fungus resistance of AASHTO M 268. The sheeting material shall have a pre-coated pressure activated adhesive backing protected by a removable liner.

Reflective Sheeting for all signs with a GREEN, or BLUE background shall be Micro-prismatic Lens material meeting or exceeding the minimum levels of performance as specified in the table below. The Engineer reserves the right to do quality assurance checks through the Contractor's work site after installation of the traffic signs. If traffic signs are identified that do not meet the requirements outlined in this specification or the material requirements for sheeting materials, the Contractor shall take action to correct the deficiencies and the City may sample additional signs to their satisfaction until acceptance of the individual work order performance is verified. After this verification, the City will then accept from the Contractor the performance and warranty bond for each particular work order. All retroreflective sheeting shall meet or exceed the requirements for ASTM Type XI, as specified by ASTM D4956. For transparent colored overlay films on white sheeting, the coefficients of retroreflection shall not be less than 70% of the values for the corresponding color in ASTM D4956.

The Engineer reserves the right to do quality assurance checks through the Contractor's work site after installation of the traffic signs. If traffic signs are identified that do not meet the requirements outlined in this specification or the material requirements for sheeting materials, the Contractor shall take action to correct the deficiencies and the City may sample additional signs to their satisfaction until acceptance of the individual work order performance is verified. After this verification, the City will then accept from the Contractor the performance and warranty bond for each particular work order. All background material shall meet or exceed the requirements for Type XI, as specified by AASHTO M 268, with the following changes:

**TABLE 1**

Minimum Coefficient of Retroreflection RA for new sheeting (cd/lux/m2)	Observation Angle **	
	-4° Entrance Angle *	
White	580	420
Yellow	435	315
Red	87	63
Green	58	42
Blue	26	19
Brown	17	13
Fluorescent Yellow	350	250
Fluorescent Yellow Green	460	340
Fluorescent Orange	175	125

\* Entrance Angle – The angle from the illumination axis to the retroreflector axis. The retroreflector axis is an axis perpendicular to the retroreflective surface.

\*\* Observation Angle – The angle between the illumination axis and the observation axis

**Legends, Borders and Accessories.** Letters, numerals, symbols, borders and route markers shall conform to the MUTCD:

**Type A (Direct Applied Copy)**

Cut letters, numerals, symbols, borders, route markers and other features of the sign message from the type and color of the retroreflective sheeting or electronic cuttable film specified and apply to the sign face base sheeting according to the retroreflective sheeting manufacturer's instructions. All background and copy shall be of pre-coated pressure sensitive adhesive reflective sheeting conforming to ASTM Type XI per ASTM D4956.

**Type B (Demountable)** is not permitted. Demountable copy is defined as any letters, numerals, symbols, borders, route markers or other features of the sign message which are manufactured by applying retroreflective sheeting to an aluminum blank which is separate from the base sign and attached by the use of mechanical fasteners..

**Type C (Digitally Printed Sign Faces)**

Signs may be manufactured using digital printing processes for all or a portion of the sign face.

Opaque or transparent inks shall be of the type and quality recommended by the retroreflective sheeting manufacturer.

Any digitally printed areas of the sign face shall be protected using a protective overlay film of the type and quality recommended by the retroreflective sheeting manufacturer.

All digitally printed areas of the sign face that have colors defined by ASTM D4956 shall carry a matched component system warranty equal to that of the base sheeting.

For digitally printed traffic colors, the initial coefficient of retroreflection shall not be less than 70% of the values for the corresponding color as shown in Table 1.

For RMS projects that include special or custom colors that are digitally printed and which are not defined by ASTM D4965 the following warranty shall be provided. For a period of 8 years after manufacture, digitally printed graphics and non-standard colors shall not excessively fade, discolor, crack, craze, peel, blister or lose reflectivity such that the signs become visually unsuitable for their intended purpose.

## **7-10 PAYMENT**

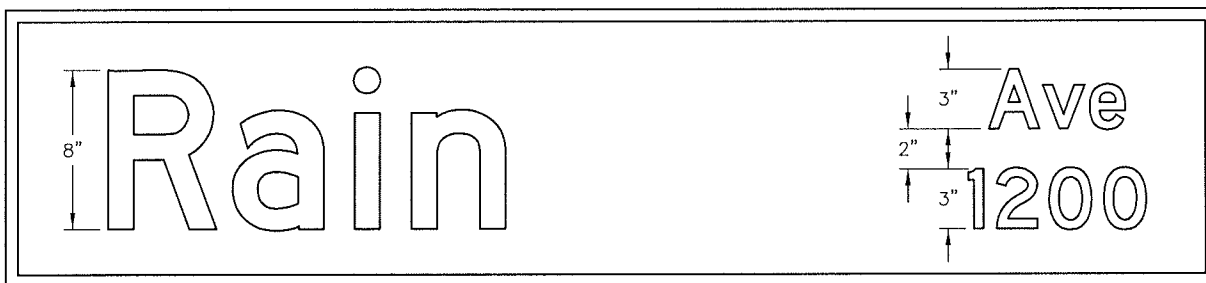
Payment for traffic signals and lighting shall conform to the provisions in Section 86-8.01, "Payment", of the State Standard Specifications and these Special Provisions.

Payment for the Standard Seventy-Two inch (72"), Standard Ninety-Six inch (96"), and Seventy-Two inch (72") Veterans Memorial Highway panels shall be at the Contract unit price and shall include payment for sign drawings (submittals), fabrication, reflective sheeting, film, Electronic Street Name Sign Location Map and appurtenances necessary to provide a complete panel which includes Street Name, Street Suffix and Block Number. The City will provide the street name sign details including Street Name, Street Suffix and Block Number required to fabricate signs after contract award.

Payment for the Historic Sign Frame with Brackets shall be at the Contract unit price and shall include two (2) brackets per frame, See Exhibit "D". Payment for 3M #1175 Blue Transparent Film and 3M DG3 4090T Sheeting shall be at the Contract unit price. It is the intent of this contract for City forces to fabricate the Historic Signs.

**In addition to these specifications, 99% of the components must be American Made.**

EXHIBIT "A"  
Standard Panel Layout

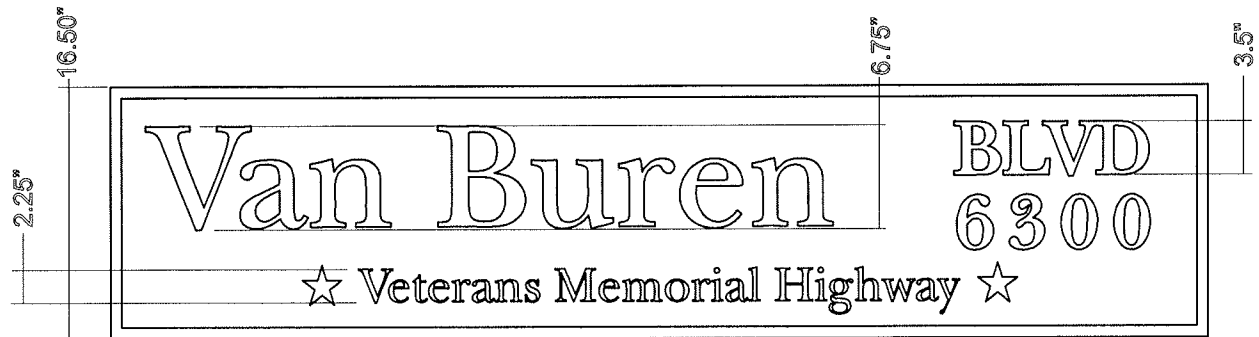


Letters are reverse cut in 3M 1177 Green Transparent Electrocut Film and laid on top of 3M DG3 4090 White on illuminated box panel.  
Font: Highway Gothic

Suffix Abbreviations:	Bld	Pkwy
	Ave	St
	Ln	Way
	Ct	Rd
	Pl	Dr

## EXHIBIT "B"

### Veterans Memorial Highway Panel Layout



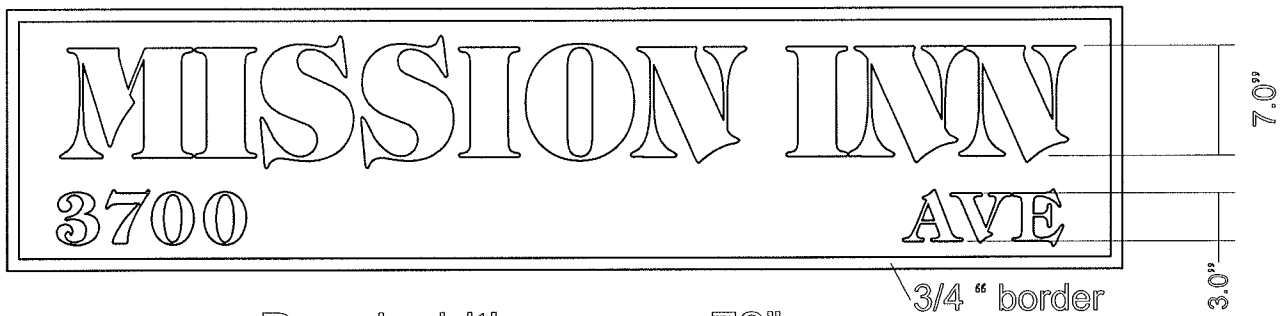
Panel width approx. 72"

Letters are reverse cut in 3M 1177 Green Transparent Electrocut Film and laid on top of 3M DG3 4090 White on illuminated box panel.

Fonts: Baskerville Bold and Baskerville (Veterans Memorial Highway)

EXHIBIT "C"

Magnolia and Market Side Street Panel Layout



Panel width approx. 72"

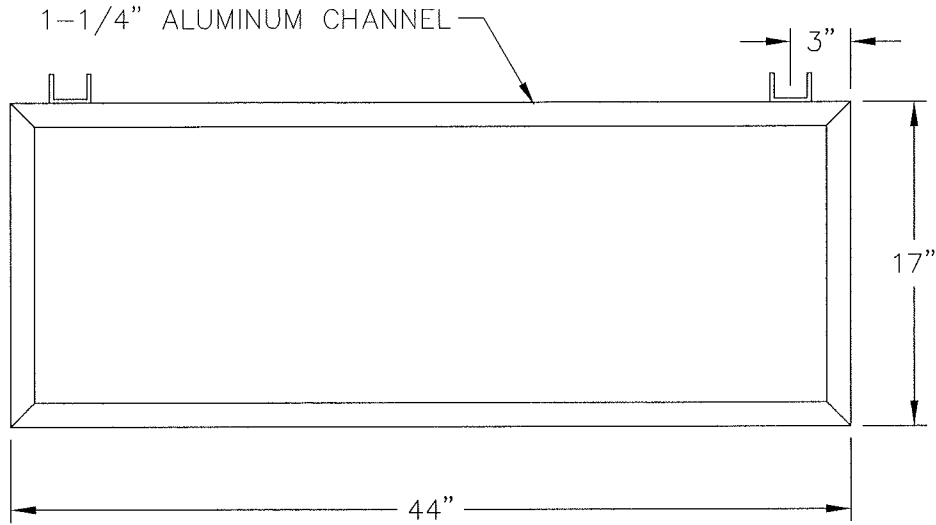
Letters are reverse cut in 3M 1175 Blue Transparent Electrocut Film and laid on top of 3M DG3 4090 White on illuminated box panel.

Fonts: MISSION INN: Tiffany Heavy

Block No. and Suffix: Tiffany Bold

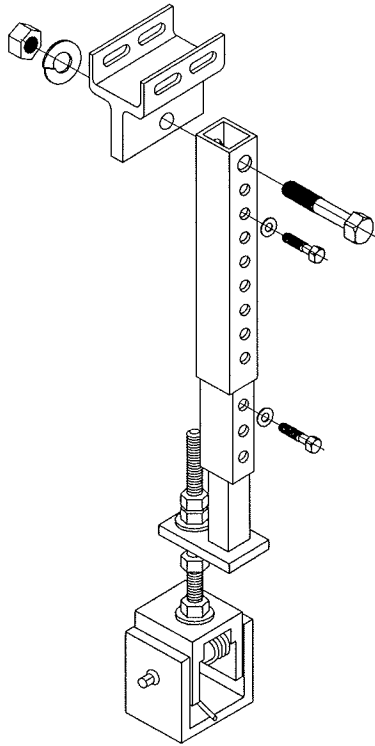
# EXHIBIT "D"

## SSG FRAME (MAGNOLIA & MARKET)

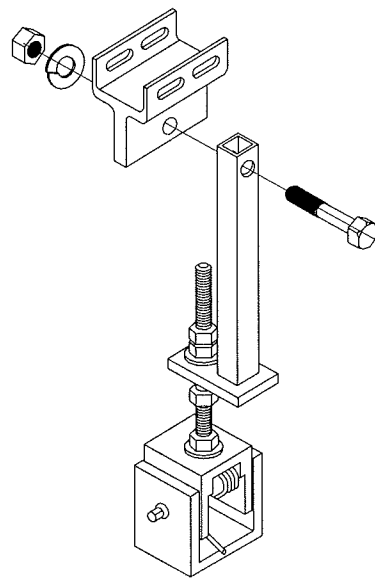


### GENERAL NOTES:

1. FRAME / HARDWARE ONLY, PLUS (2) 1.25" X 1.25" X 12"L CHANNEL PIECES - SHIPPED LOOSE



PART # HRD-EZL-208  
NOT TO SCALE



PART # HRD-EZL-608  
NOT TO SCALE

### ORDERING INFORMATION:

SAFEMWAY SIGN COMPANY  
PHONE: (800) 637-7233  
FAX: (760) 246-5512