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National Park Service | U.S. Department of the Interior

NPS *UniGuide* Sign Standards

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# Visitor Information Sign System

## VIS and Wayside Hardware Specification Manual



Office of NPS Identity | NPS *UniGuide* Sign Program  
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## Disclosure Statement NPS *UniGuide* Standards

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# VIS System Overview

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## Introduction

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Signs are the most frequently used means of communicating with park visitors. The National Park Service UniGuide Sign Standards provide design and fabrication guidelines for a full range of park signs including Park Identity, Motorist Guidance and Visitor Information (VIS).

It is estimated that approximately 75% of all park signs fall into the Visitor Information (VIS) category. VIS Signs are designed to present information in a consistent, attractive, convenient, and flexible format. Such information may involve pedestrian or bicycle and (low-speed) motorist guidance, regulations, resource protection, instructions and general information, fee information, safety warnings, maps, and interpretation. VIS Signs may also be used to identify parks (or park areas, features, or facilities) when more monumental identification signs are not required.

The flexible system of post and frame hardware components may be configured in a variety of ways to hold modular sign panels and other accessories. VIS hardware is available in a range of durable materials to suit local conditions, all selected for vandal resistance, low maintenance, and long life-cycle performance.

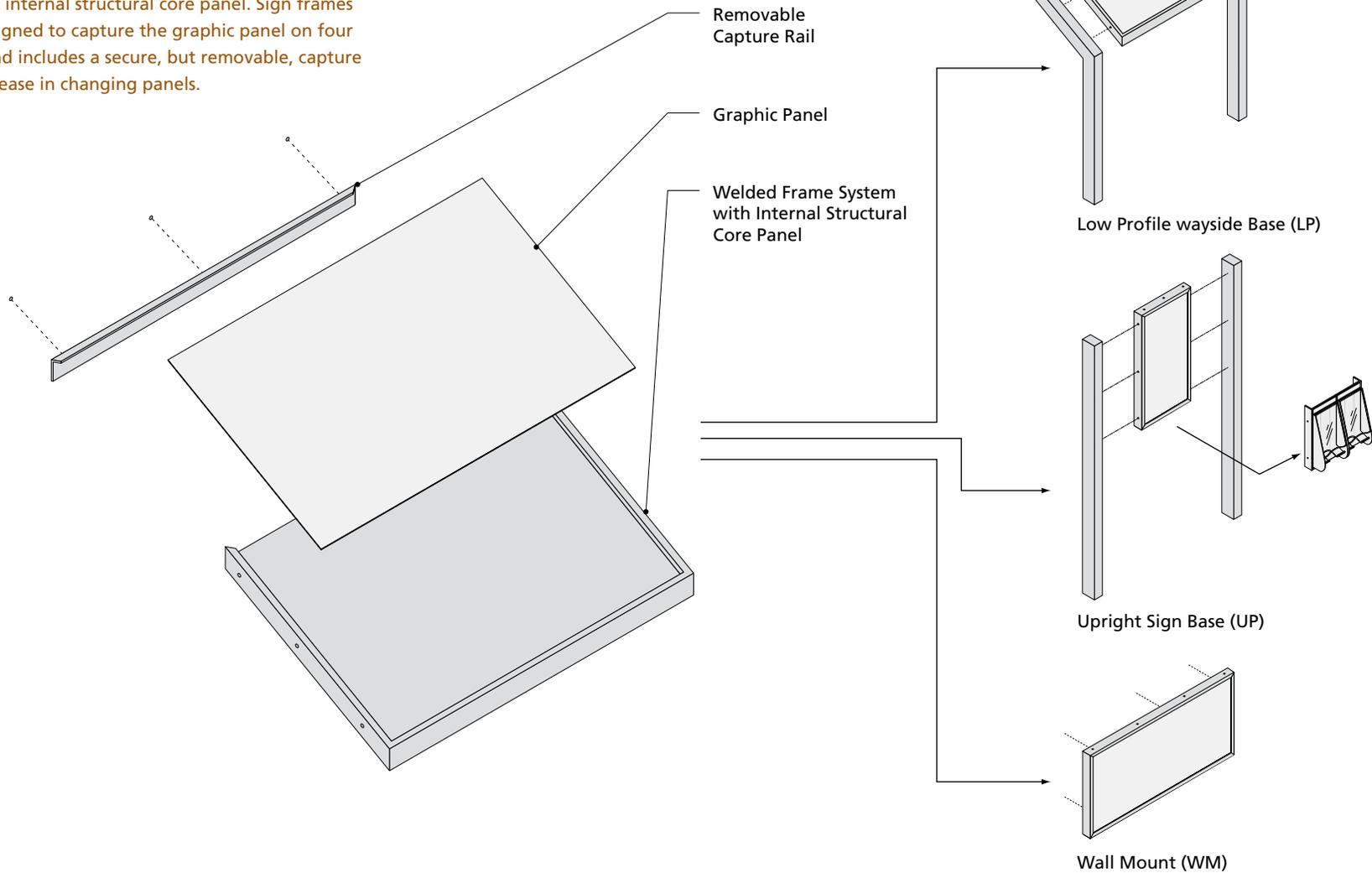
Sign frames are designed to hold graphic panels made from a variety of materials including porcelain enamel, fiberglass embedment, polycarbonate embedment, high pressure laminate, digitally printed adhesive vinyl on aluminum substrates with protective overlaminates, or computer cut retro-reflective sheeting.

Besides supporting sign panels, VIS hardware is designed to accommodate a number of accessories including bulletin cases, brochure holders, and posting displays.

This manual provides details and information on the specification and fabrication of VIS hardware.

# VIS System Overview

The VIS system consists of a welded frame and core panel that can be attached to posts to create Low Profile wayside bases, Upright Sign Bases, or for Wall Mount displays. The system consists of an aluminum extrusion or a break-formed steel frame with an internal structural core panel. Sign frames are designed to capture the graphic panel on four sides and includes a secure, but removable, capture rail for ease in changing panels.



Accessories that can be attached to upright bases include bulletin cases, brochure holders, and miscellaneous post displays.

# VIS Hardware Assembly Series

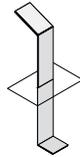
The chart to the right provides an overview of the base hardware available in the VIS system.

All VIS bases are available in a variety of material options including weathering steel, galvanized steel, and painted aluminum. Painted aluminum bases are available in three paint color finishes.

The material and finish appropriate for a specific base depends primarily on the sign's purpose and its location. Weathering steel is an excellent choice for low maintenance in many forested and desert sites; galvanized steel is very durable in coastal and other salt-water and corrosive environments; and painted aluminum may be a good choice for an urban environment.

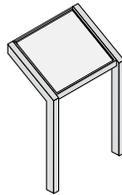
## TS Series - Trailsides

Low to the ground, Trailsides are an excellent choice for plant ID markers, site markers, trail guides, and anywhere a small discreet sign is required.



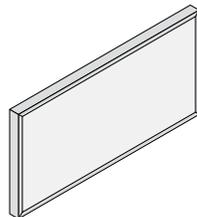
## LP Series - Low Profile

The Low Profile base is the preferred style for NPS interpretive outdoor exhibits. Available in a variety of material finishes and sizes the base's simple, unadorned form makes it appropriate for any park landscape.



## WM Series - Wall Mount

Wall Mount frames are designed to display information on vertical surfaces. Frames are available in a variety of materials and sizes.



## UP Series - Uprights

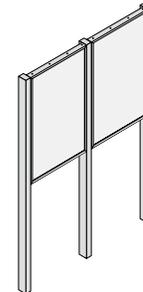
Designed to stand vertically so they attract attention, Upright bases typically provide practical information to visitors rather than site-specific interpretation. Like the Low Profile base, Upright bases are available in a variety of

material finishes and sizes. Bases can be fabricated as a single unit, double or triple inline unit, and tri-sided and four-sided units. The single unit and inline bases can be configured for one or two-sided display. All of the uprights, (in

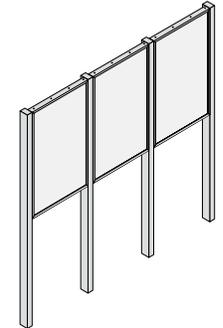
certain preset sizes) are available with or without a roof structure. Each base is designed to hold panels or other accessories including bulletin cases.



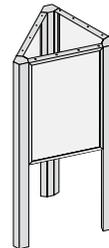
Upright Base



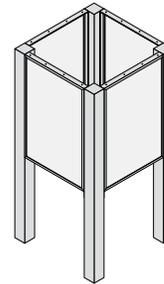
Upright Inline 2



Upright Inline 3



Upright Tri (Tri-Side)



Upright Quad (Four-Side)

# VIS Hardware Base Material Options

VIS base hardware is available in three standard material options: weathering steel, galvanized steel, and painted aluminum. For painted aluminum bases there are three standard color choices.



## Weathering Steel

Weathering steel is an excellent material option for many NPS sites. Over time, with exposure to the elements, the bases turn a golden brown.

The bases are virtually maintenance free and do not require painting once installed.

Weathering steel bases can last well over 15 years.

Bases shipped are not pre weathered. When they arrive the bases are black and begin the weathering process when exposed to the elements.



## Galvanized Steel

Galvanized steel is an excellent choice for saltwater and other marine sites. Prior to final fabrication the base legs and frame are hot dipped galvanized which imparts a protective finish to the steel.

The bases are virtually maintenance free, show little if any sign of rust inhibition, and do not require painting once installed.

Galvanized steel bases can last well over 15 years.

When they arrive the bases have a shiny silver finish. Over time the bases patina to a dull grey.



## Aluminum

Aluminum bases are a good all around choice for many NPS sites. Aluminum bases are primed and painted.

The bases are not maintenance free and do require occasional field cleaning and touch up to keep them looking good.

Aluminum bases are available in three standard paint colors. All bases are painted with a coarse spatter coat finish for added durability.

## Standard Aluminum Paint Finish Colors



**NPS Dark Brown  
Matthews Paint  
MP63856 with  
Spatter Finish**



**NPS Medium Grey  
Matthews Paint  
MP63850 with  
Spatter Finish**



**NPS Brown  
Matthews Paint  
MP63848 with  
Spatter Finish**

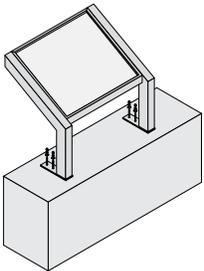
**Note: Colors shown are for representation only. Actual color chips should be matched to the specification for accuracy.**

# VIS Hardware Mounting Options

The chart to the right provides a basic overview of the hardware installation options available in the VIS system. Refer to the fabrication details for more information.

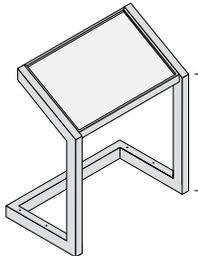
## Cap Mount (CM)

Wall mounted bases use a modified baseplate that facilitates installation on low walls.



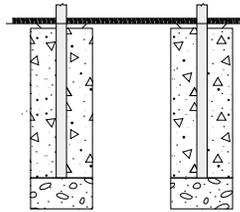
## Sled Base (SB)

The sled base allows the frame and post to be free standing. For security the base can be mounted with threaded rods.



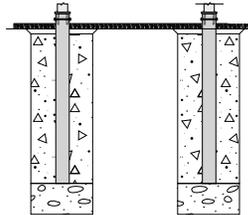
## Direct Embedment (DE)

Direct embedment is the typical mounting method for all VIS hardware. Post depth is typically 30" to 36" and posts are secured with concrete.



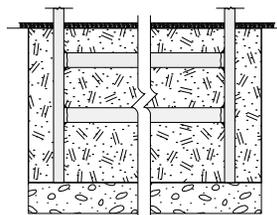
## Direct Embedment Socket Mount (SM)

Socket mounting allows the VIS base to be removed. Oversized sleeves are secured in the ground and the base can slide in and out. This is an excellent choice for park areas with huge snowfall or flood conditions.



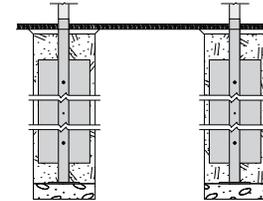
## Direct Embedment Stabilizer Bars (SB)

Stabilizer bars are a mounting accessory for direct embedment. The bars are welded to each base leg and prevent racking due to loose and shifting soil. This is a good choice for seashore conditions.



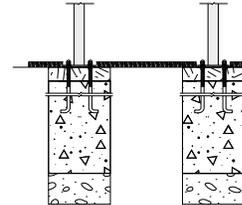
## Direct Embedment Stabilizer Fins (SF)

Stabilizer fins are another mounting accessory for direct embedment. Plates are attached to each base leg. The fins allow installation of the base without the use of concrete.



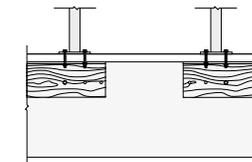
## Baseplate Mount (BP)

Baseplate mounting allows installation where a deep footer is not practical. The base features a welded baseplate that attaches to imbedded j-bolts or all-thread rods.



## Deck Mount (DM)

Deck mount hardware uses a baseplate and anchors to install the base on wooden decks and walkways. Deck mounts are typically custom and site specific.



# VIS Panels

VIS graphic panels are designed to provide an attractive and consistent way to present a broad range of messages. This includes park and facility identity, park regulations, safety warnings, information, interpretation, pedestrian guidance, low speed motorist guidance, and other wayfinding information including maps. The modular grids and design

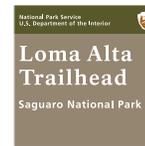
standards of VIS signs allows presentation of content in discrete, easily comprehended “eyefuls” which aids in visitor comprehension and retention of information.

Please refer to the *Visitor Information System, Panel Specification Manual* for more information.

Panels may be produced in porcelain enamel, high pressure laminate, fused polycarbonate, fiberglass embedment, digitally printed adhesive vinyl, or computer cut retro-reflective sheeting.

Selection of material is based on life-cycle cost, budget, exposure to wear, and need for retro-reflective legends if viewed from an automobile. Production methods include digital printing, screen printing, and adhesive-backed computer-cut vinyl.

## Park Identity and Entrance Signs



## Park Fee Signs

Dry Tortugas National Park	
Entrance Fee (Valid for 7 Days with Receipt)	
Per Person (Age 16+)	\$20
Seasonal / Annual Passes	
Dry Tortugas Seasonal (July-September)	\$35
Interagency Annual (Multiple Federal Fee Areas)	\$80
Lifetime Passes (U.S. Citizens / Permanent Residents)	
Interagency Senior (Age 62+)	\$10
Interagency Access (Permanently Disabled)	Free

## Informational Signs



## Warning and Danger Signs

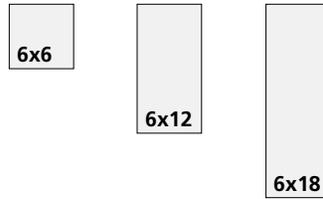


# 6" and 12" Series Panel Sizes

A modular system of panels is available to fit all the VIS hardware bases. Panel dimensions are specified by width(w) x height(h). Panels are specified in nominal dimensions. Fabricated panels are undercut by 1/16" on each side. For example, a 6" x 6" panel is 5 7/8" x 5 7/8". Post size is determined by panel or base size. Refer to the VIS Post Hardware charts in the fabrication details.

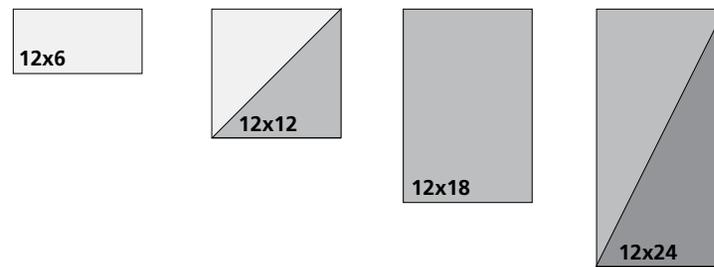
## 6" Series Panels

VIS Hardware Assembly Series: TS and UP

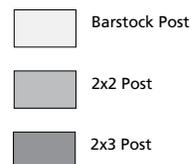
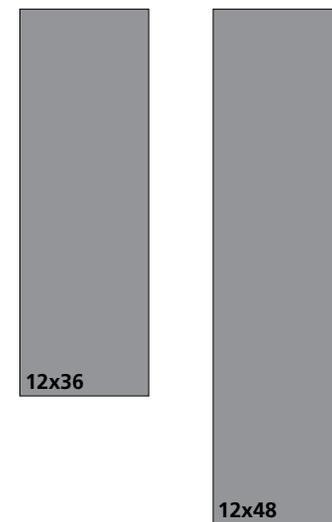


## 12" Series Panels

VIS Hardware Assembly Series: LP and UP



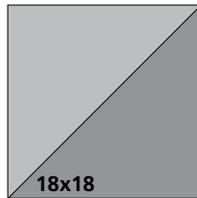
VIS Hardware Assembly: UP



# 18" and 24" Series Panel Sizes

## 18" Series Panels

VIS Hardware Assembly Series: LP and UP

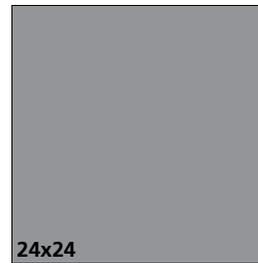
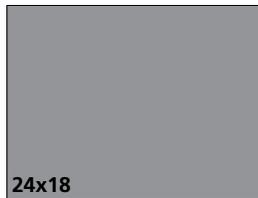
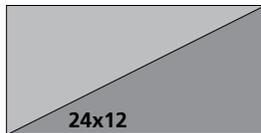


VIS Hardware Assembly Series: UP

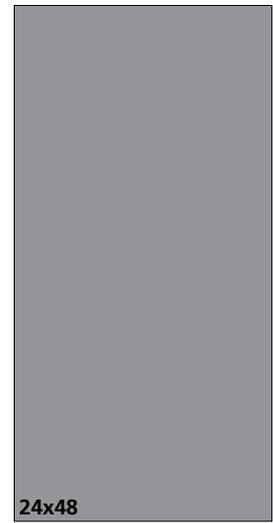
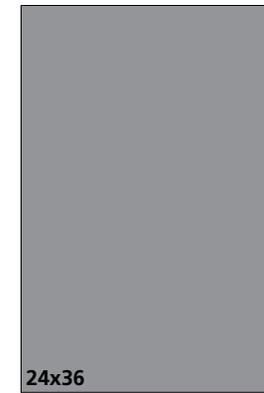


## 24" Series Panels

VIS Hardware Assembly Series: LP and UP



VIS Hardware Assembly Series: UP



-  Barstock Post
-  2x2 Post
-  2x3 Post

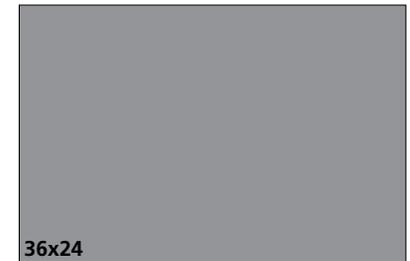
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# 36" Series Panel Sizes

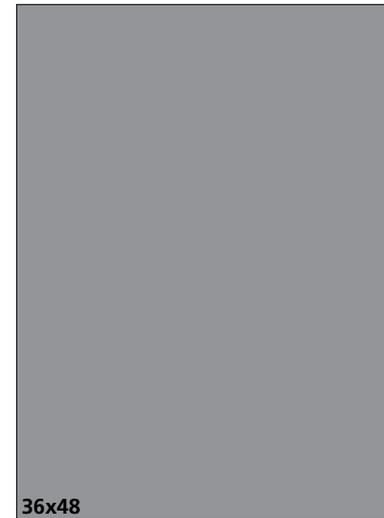
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## 36" Series Panels

VIS Hardware Assembly Series: LP and UP



VIS Hardware Assembly Series: UP

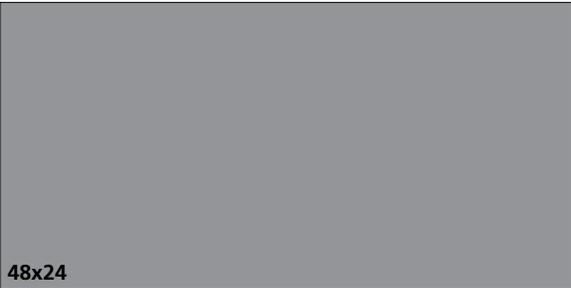
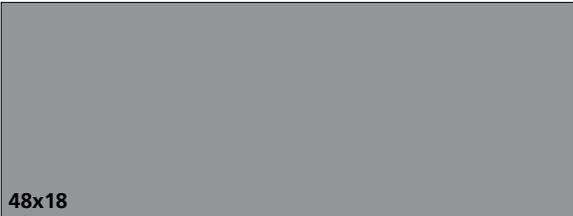


-  Barstock Post
-  2x2 Post
-  2x3 Post

# 48" Series Panel Sizes

## 48" Series Panels

VIS Hardware Assembly Series: LP and UP



-  Barstock Post
-  2x2 Post
-  2x3 Post

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# VIS Hardware Assembly Codes

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Although the VIS is a system of simple components, material choices, panel sizes, and mounting options offer a multitude of fabrication options. In order to adequately describe a base and its attributes a code system has been created to aid in specification of base hardware.

The code system provides the information necessary to describe the base, its size, mounting, and other options for fabrication. A sample specification code might look like this:

**UP\_24x36\_WS\_DE\_PF\_BC**

The code breaks down as follows:

## **UP**

This is the frame type. UP is the specification code for an upright base.

## **24x36**

This is nominal frame size or bulletin case size. In this case a 24 x 36 bulletin case mounts to the base.

## **WS**

This is the material type. This frame will be made from weathering steel.

## **DE**

This is the mounting type. This frame will be a direct embed.

## **PF**

This is the mounting accessory. This frame posts will have post fins for inground stabilization.

## **BC**

This is the base accessory. In this case the base will have a bulletin case instead of a panel.

## **How to Specify a VIS Base**

With the code system it is easy to specify the base type. For this exercise it is assumed all the decisions about the base have been made including the size, panel content, material mounting, and location.

Use the Code Charts on the page 16 to specify your base.

### **Step 1. Choose Base Type**

From the VIS Hardware Assembly Chart choose the correct assembly code. If necessary refer to the VIS Hardware Assembly Descriptions on page 7.

### **Step 2. Choose Nominal Panel Size**

If necessary refer to Panel Size Charts, beginning page 11.

### **Step 3. Choose Base Material**

Weathering steel, galvanized steel, or painted aluminum.

### **Step 4. Choose Mounting Method**

### **Step 5. Choose Mounting Accessory (If Required)**

### **Step 6. Choose Base Accessory**

This could be a bulletin case, brochure dispenser, or roof structure for a tri or quad upright.

### **Step 7. Additional Notes**

Here you would indicate additional information for the fabricator including custom requests or modifications and colors.

# VIS Hardware Assembly Codes Charts

## VIS Hardware Assembly Type

Code	Descriptions
TS	Trailside Base
WM	Wall Mount
LP	Low Profile Wayside Base
UP	Upright Base
UPN2	Upright Inline 2 (Double)
UPN3	Upright Inline 3 (Triple)
UPTR	Upright Tri-Sided (Kiosk)
UPQU	Upright Quad-Sided (Kiosk)

## VIS Material Options Chart

Code	Descriptions
WS	Weathering Steel
GS	Galvanized Steel
AL	Painted Aluminum

## VIS Hardware Mounting Type

Code	Descriptions
DE	Direct Embedment
BP	Base Plate
SM	Socket Mount
SB	Sled Base (Free Standing)
DM	Deck Mount
WM	Wall Mount

## VIS Hardware Mounting Accessory

Code	Descriptions
PF	Post Fins (Embed w/o Concrete)
SB	Stabilizer Bars (For Shifting Soils)

## VIS Hardware Accessory

Code	Descriptions
BC	Bulletin Case
BH	Brochure Holder
MP	Miscellaneous posting
RS	Roof Structure (Upright Only)
SK	Strap Kit

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# Section I

## Trailside Series (TS)

Trailside Series Overview (TS)	18
Trailside Base Sizes	19
6" Series	

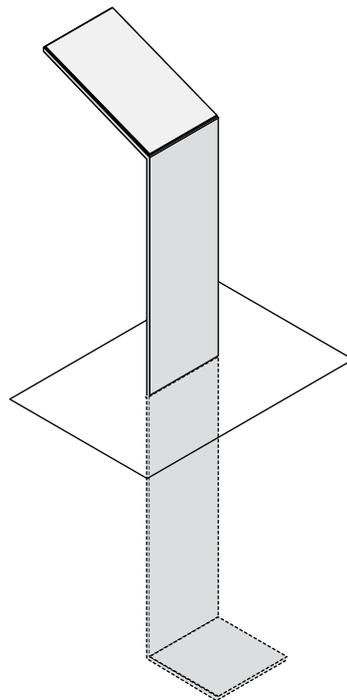
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## Trailside Series Overview (TS)

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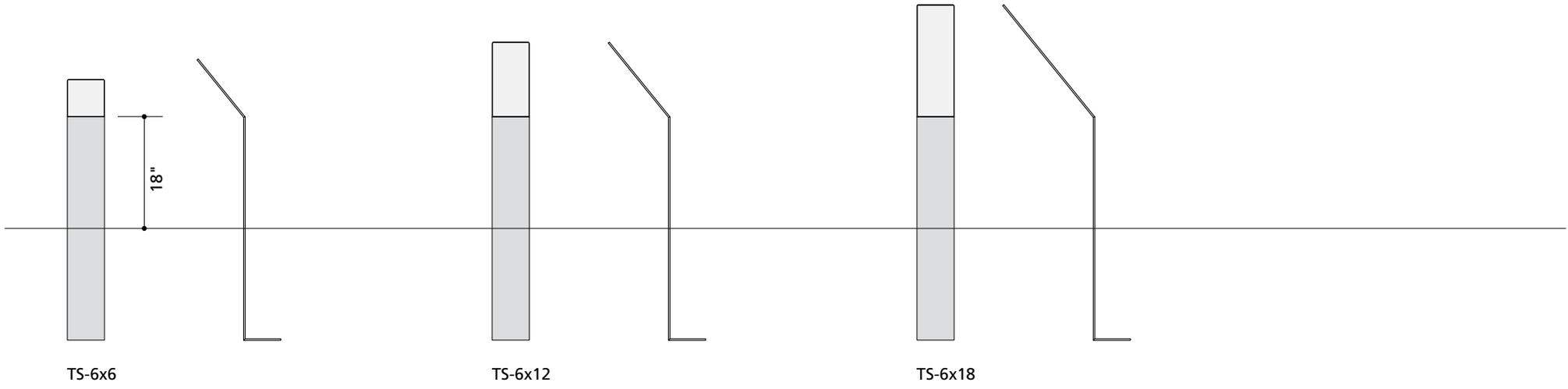
Small and simply formed, NPS “trailside” exhibits bases offer an unobtrusive way to provide brief interpretive message or important safety information with minimal impact on the landscape. Trailsides are available in weathering steel, galvanized steel, or painted aluminum and can accommodate

several types of graphic panels, attached with stainless steel barrel nuts as shown on page 58. The final assembly is mounted by direct embedment into the ground. The angled tab at the bottom of the base prevents uplift and removal once the base is installed.



**6" Series**

Scale: 1/2" = 1'



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# Section II

## Wall Mount Series (WM)

Wall Mount Series Overview (WM)	21
Wall Mount Frame Sizes	22
12" Series	
18" Series	
24" Series	
36" Series	
48" Series	

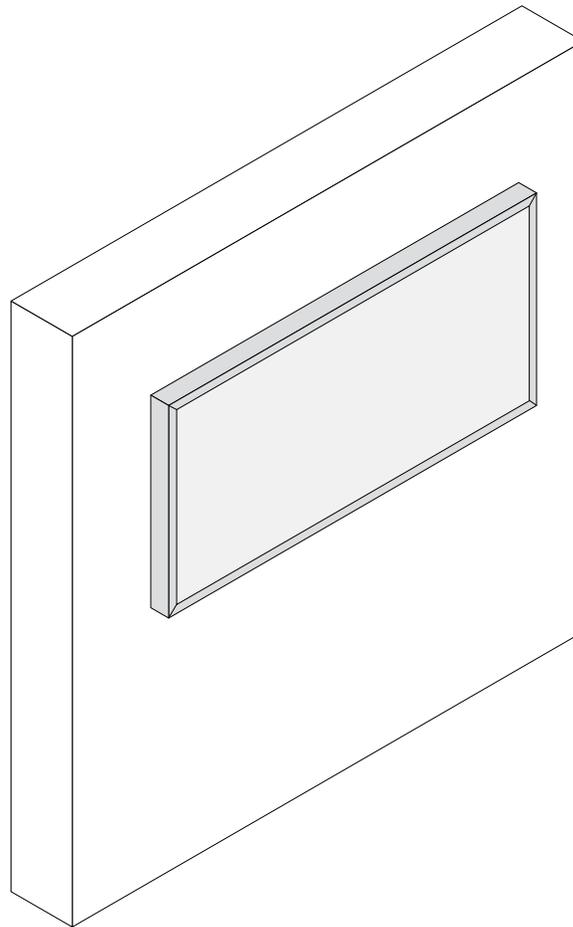
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## Wall Mount Series Overview (WM)

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When possible and permitted, graphic panels may be mounted on walls or buildings rather than on a free-standing exhibit base by using the frame assembly illustrated here. These frames are available in weathering steel, galvanized

steel, or in painted aluminum and includes all required mounting hardware (see page 63 for mounting details). The top frame member is secured by a replaceable set screw which can be easily removed to allow panel replacement.

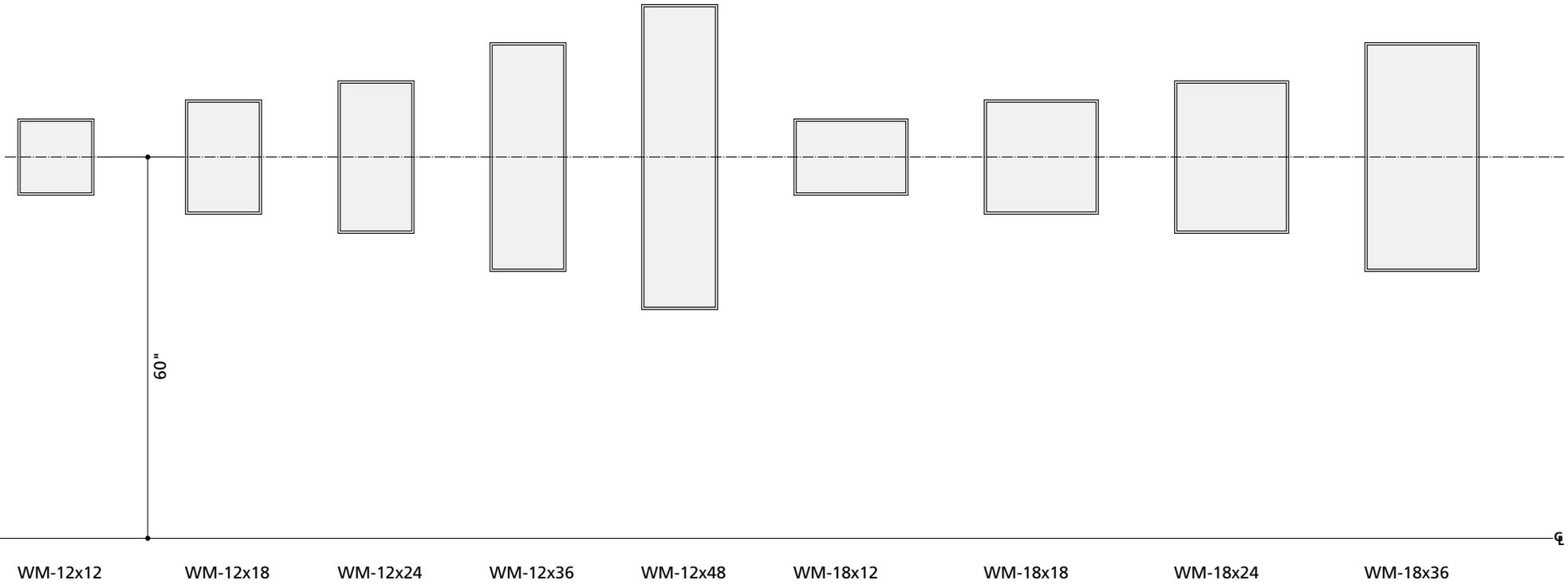


**12" Series**

Scale: 1/2" = 1'

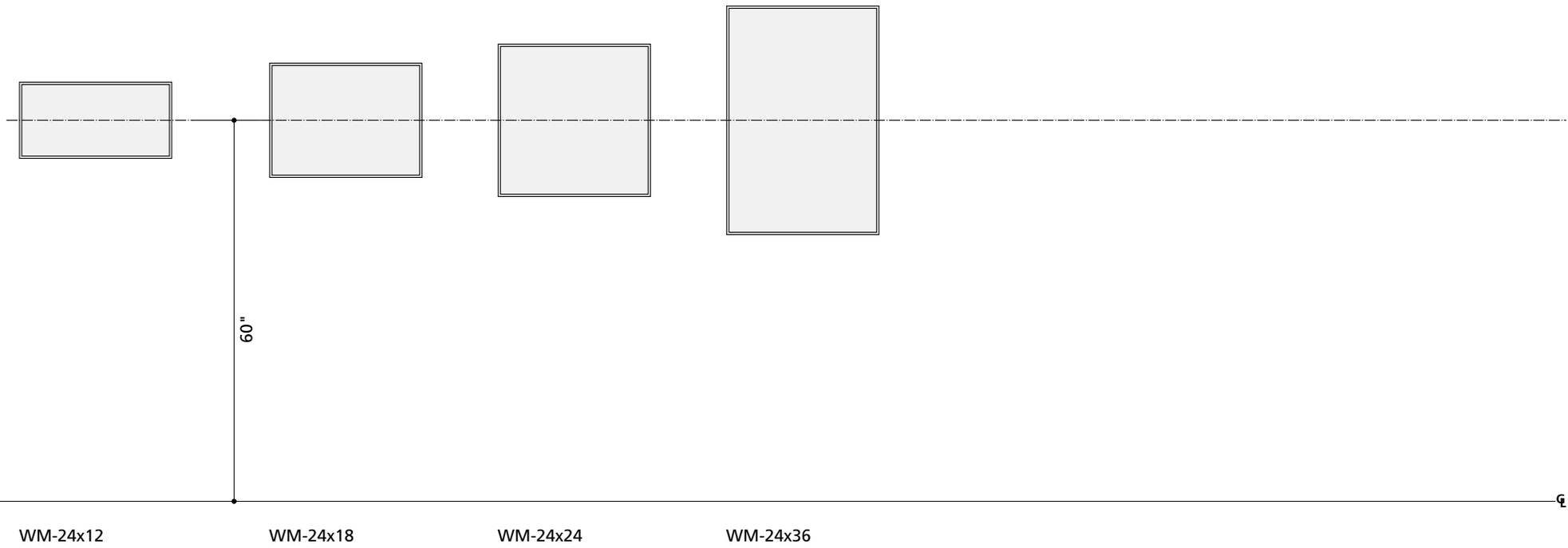
**18" Series**

Scale: 1/2" = 1'



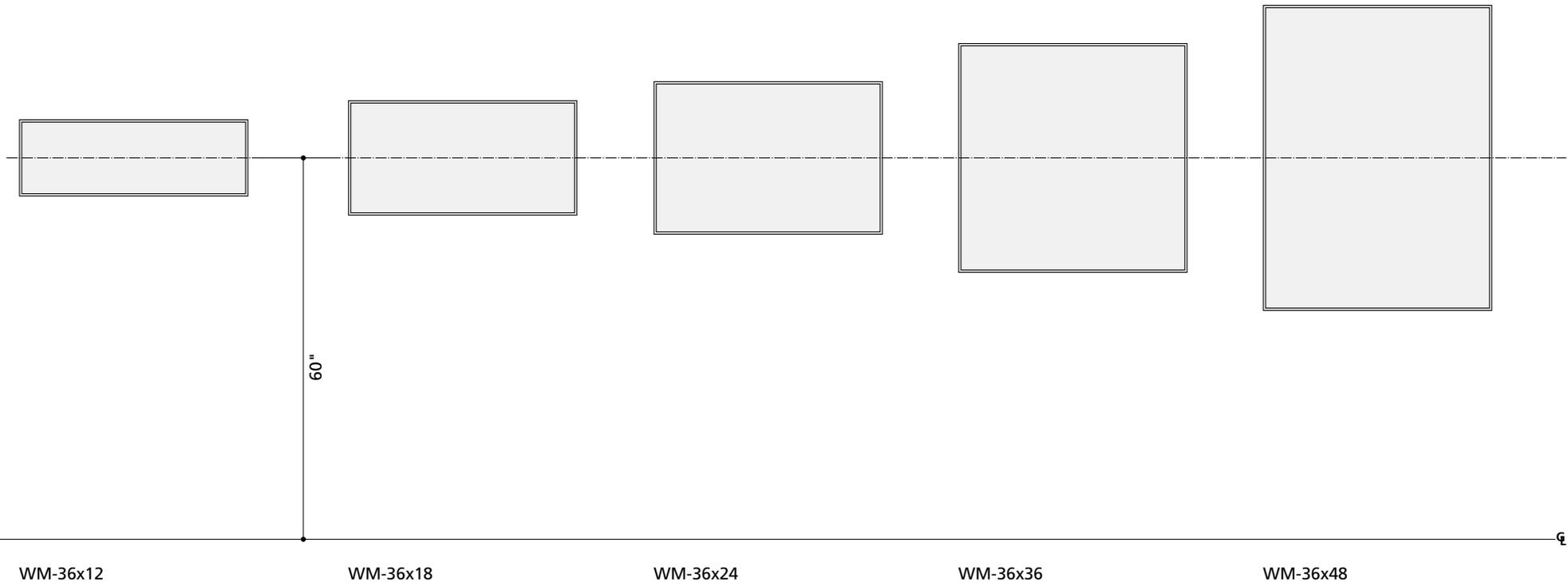
**24" Series**

Scale: 1/2" = 1'



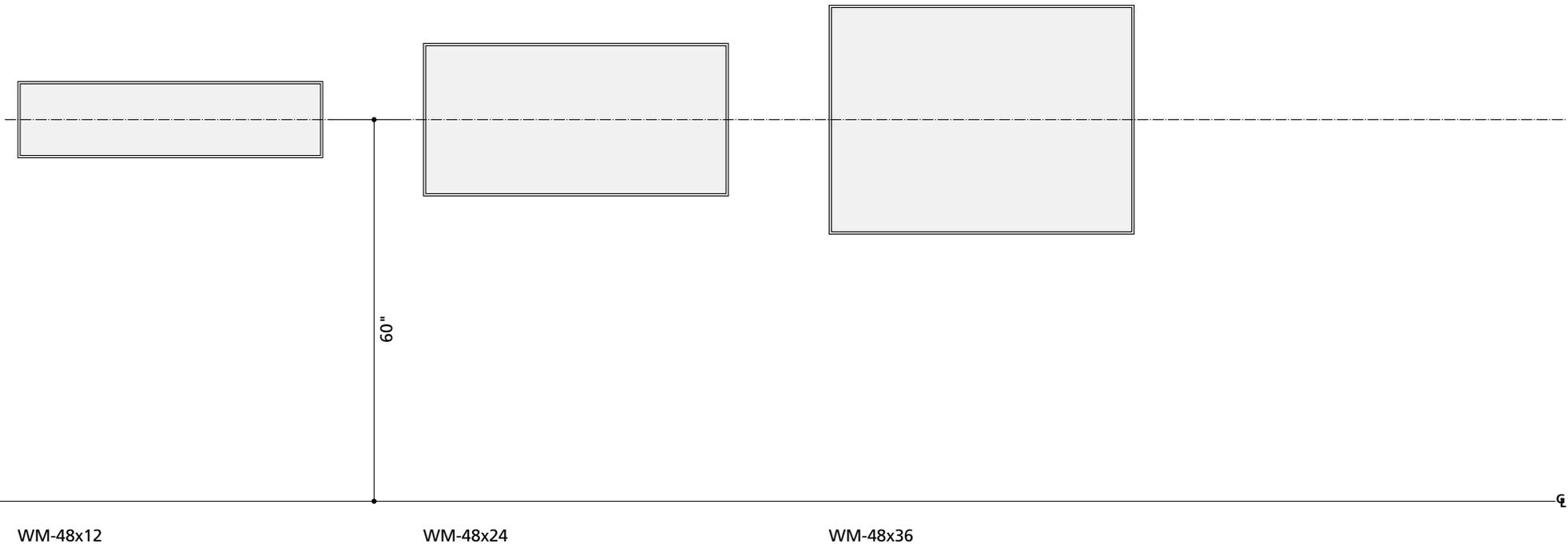
**36" Series**

Scale: 1/2" = 1'



**48" Series**

Scale: 1/2" = 1'



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# Section III

## Low Profile Series / Wayside Series (LP)

Low Profile Overview (LP)	27
Low Profile Base Sizes	28
6" Series	
12" Series	
18" Series	
24" Series	
36" Series	
48" Series	

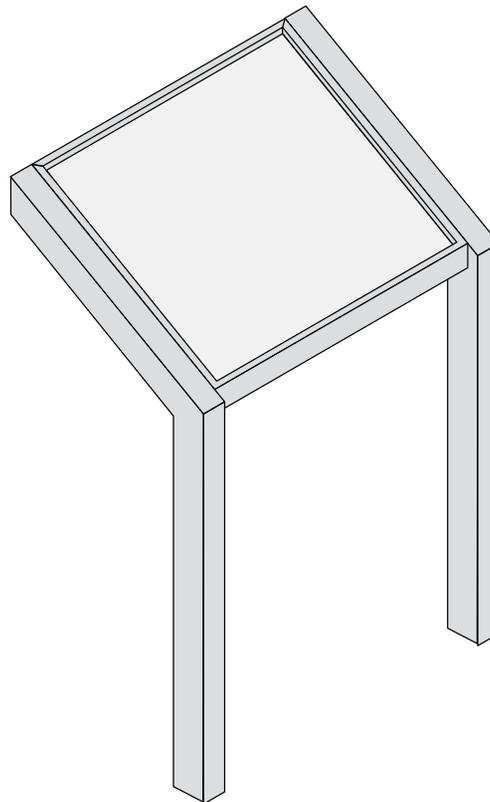
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## Low Profile Series Overview (LP)

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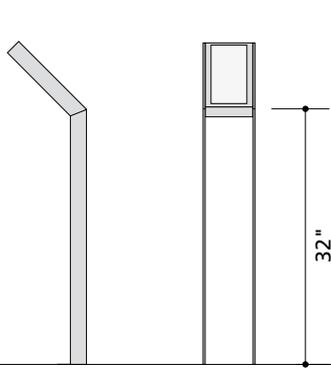
NPS “low-profile” wayside exhibit bases are designed to diminish their presence on the landscape by using the least material required to securely hold an exhibit panel. Panels are positioned at a 45-degree angle to permit visitors a clear view of the feature that the exhibit interprets. Bases are available in three materials, appropriate to a variety of landscapes: weathering steel for forested or desert environments; galvanized steel for coastal zones; and painted aluminum (in three standard colors) for urban

areas. The first two materials require little maintenance. The legs of most wayside bases are directly embedded into the ground, although other mounting methods are available to accommodate site conditions. As illustrated on the following pages, NPS waysides bases come in a wide range of panel sizes which are held within a full-frame assembly. The top frame member is secured by a replaceable set screw which can be easily removed to allow panel replacement.

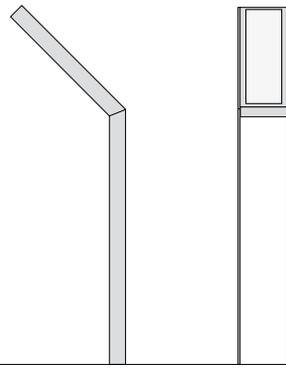


**6" Series**

Scale: 1/2" = 1'



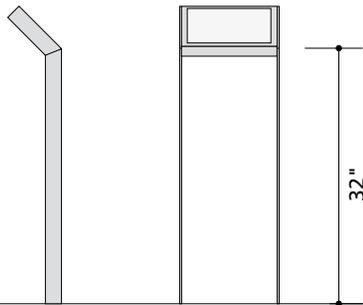
LP-6x12  
*Barstock Post*



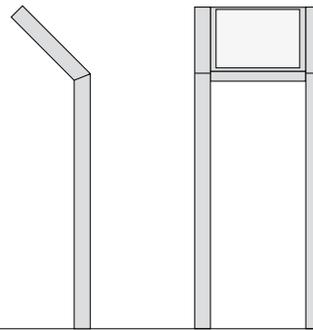
LP-6x12  
*Barstock Post*

**12" Series**

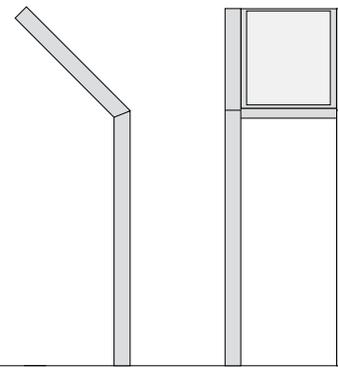
Scale: 1/2" = 1'



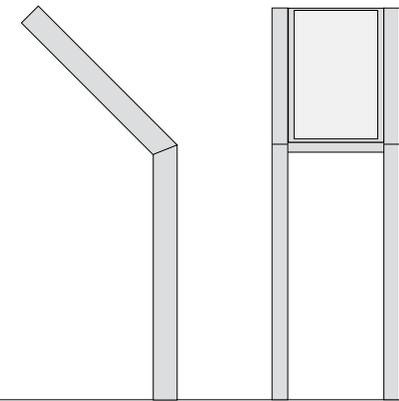
LP-12x6  
*Barstock Post*



LP-12x12  
*Barstock Post*  
*2x2 Post*



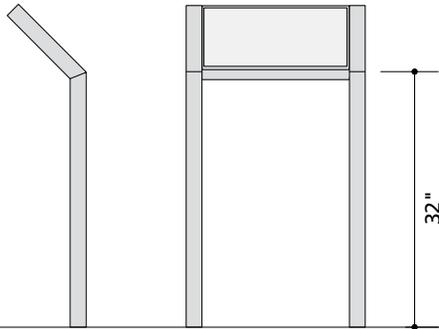
LP-12x18  
*2x2 Post*



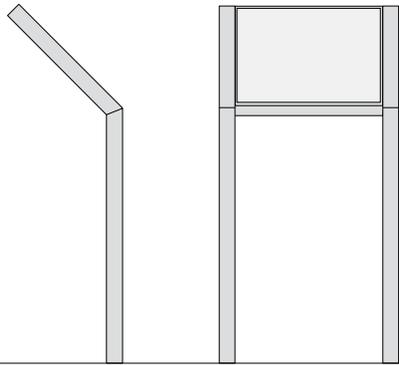
LP-12x24  
*2x3 Post*

**18" Series**

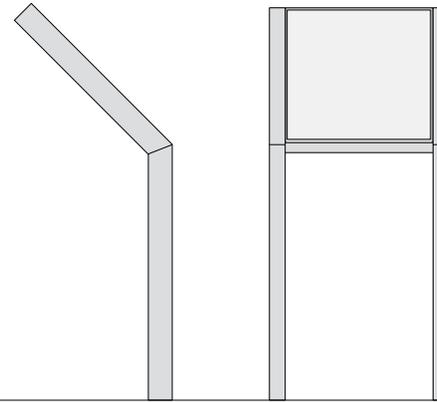
Scale: 1/2" = 1'



LP-18x12  
2x2 Post



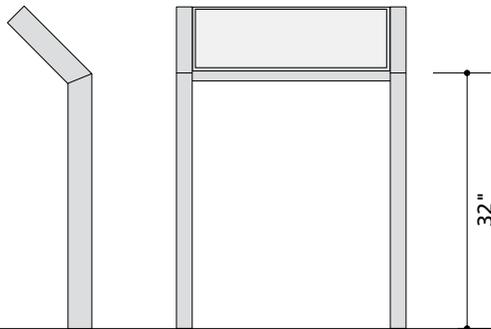
LP-18x18  
2x2 Post  
2x3 Post



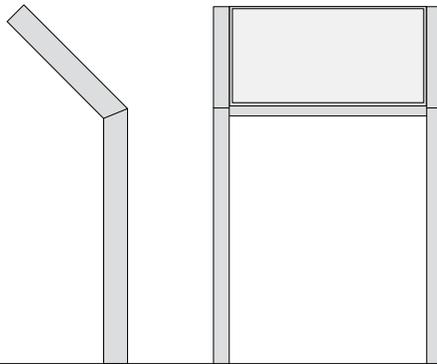
LP-18x24  
2x3 Post

**24" Series**

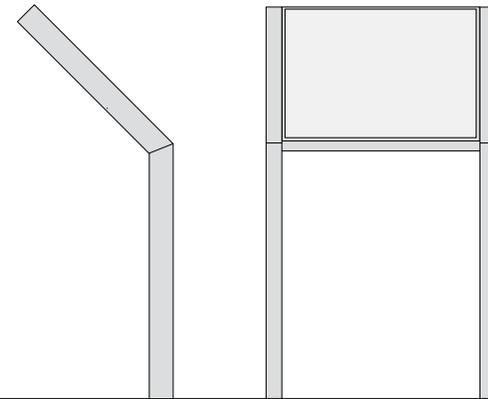
Scale: 1/2" = 1'



LP-24x12  
2x2 Post  
2x3 Post



LP-24x18  
2x3 Post



LP-24x24  
2x3 Post

**36" Series**

Scale: 1/2" = 1'



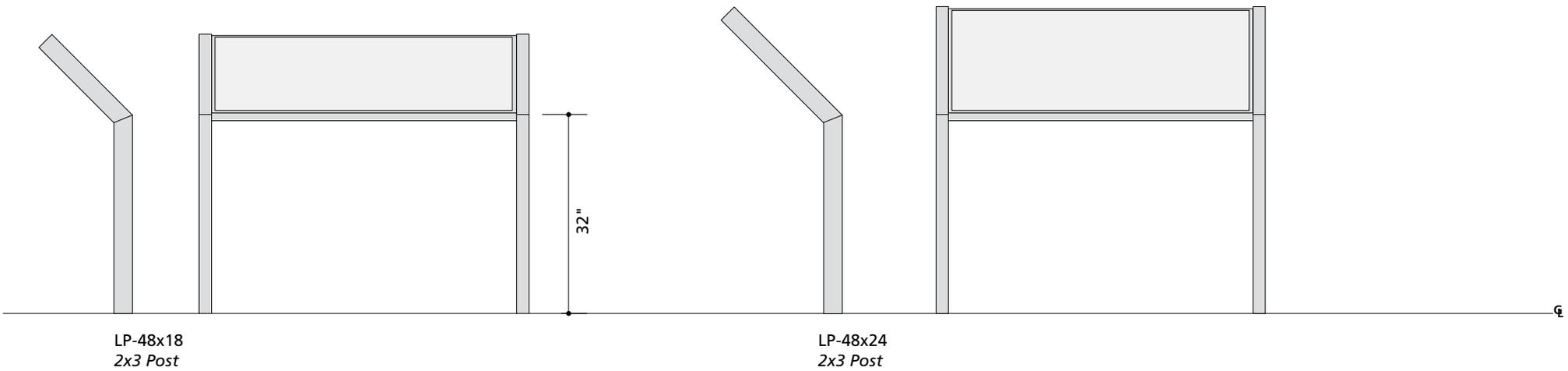
LP-36x12  
2x3 Post

LP-36x18  
2x3 Post

LP-36x24  
2x3 Post

**48" Series**

Scale: 1/2" = 1'



LP-48x18  
2x3 Post

LP-48x24  
2x3 Post

---

# Section IV

## Upright Series Architecture (UP)

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Upright Inline 3 Base Sizes	40	Upright Tri Series	
24" Series		UprightQuad Series	
36" Series			

---

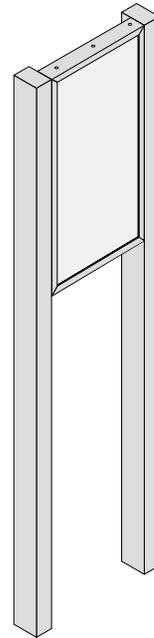
## Upright Series Overview (UP)

---

NPS “upright” bases—which are designed to stand vertically so they attract attention—typically present more general information than the interpretive messages their “low-profile” counterparts offer. Upright bases are typically used at trailheads or boat ramps, near visitor centers, in parking areas or campgrounds, and at similar points of assembly or access. Bases are available in three materials, appropriate to a variety of landscapes: weathering steel for forested or desert environments; galvanized steel for coastal zones; and painted aluminum (in three standard

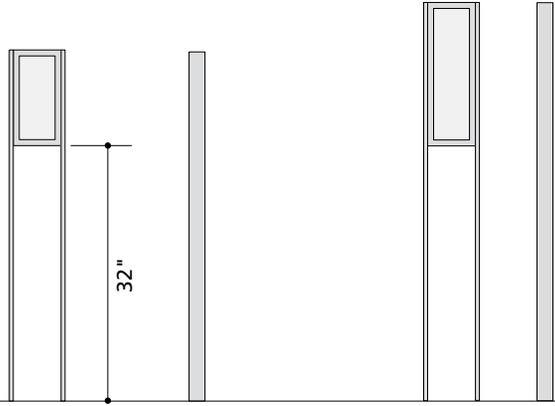
colors) for urban areas. The first two materials require little maintenance. The legs of most upright bases are directly embedded into the ground, although other mounting methods are available to accommodate site conditions. As illustrated on the following pages, NPS upright bases come in a wide range of panel sizes which are held within a full-frame assembly. The top frame member is secured by a replaceable set screw which can be easily removed to allow panel replacement.

This illustration shows a single exhibit panel. (Note: The single panel shown here can be “double-sided” in order to have two display surfaces.) The Upright Series hardware can also support a bulletin case or other accessories (on one or both sides) as illustrated elsewhere in this manual.



**6" Series**

Scale: 1/2" = 1'

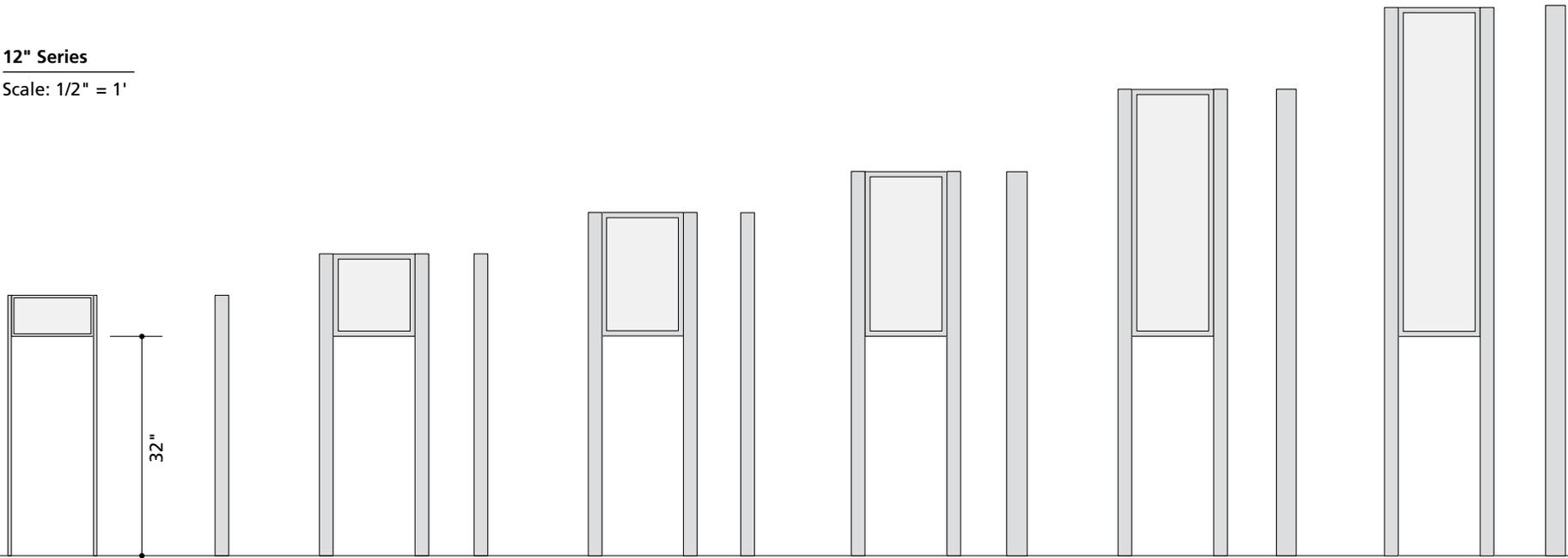


UP-6x12  
*Barstock Post*

UP-6x18  
*Barstock Post*

**12" Series**

Scale: 1/2" = 1'



UP-12x6  
*Barstock Post*

UP-12x12  
*Barstock Post or  
2x2 Post*

UP-12x18  
*2x2 Post*

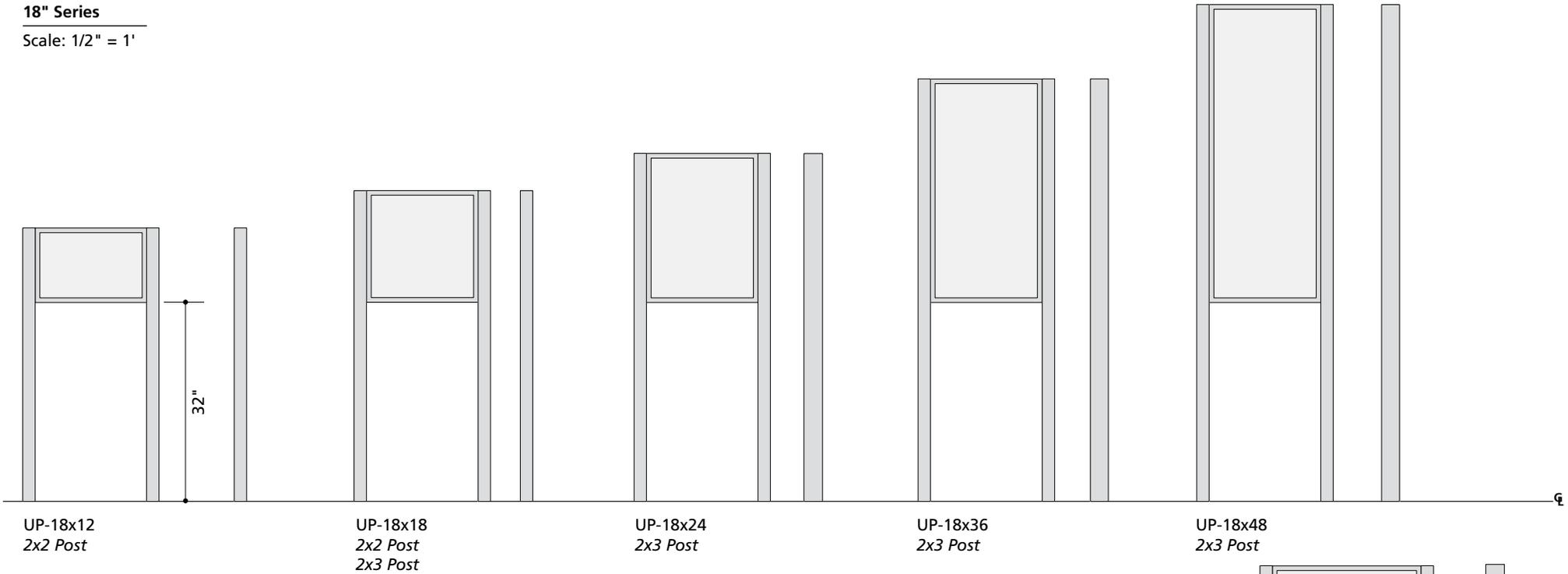
UP-12x24  
*2x2 Post  
2x3 Post*

UP-12x36  
*2x3 Post*

UP-12x48  
*2x3 Post*

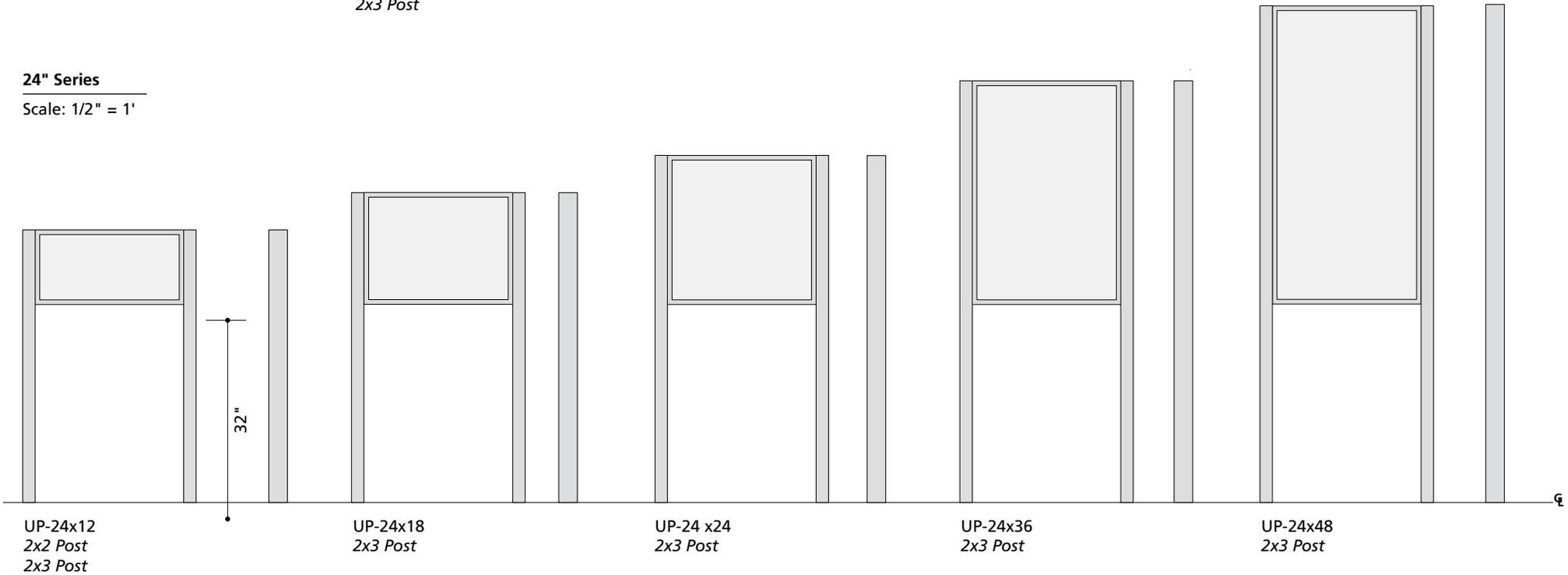
**18" Series**

Scale: 1/2" = 1'



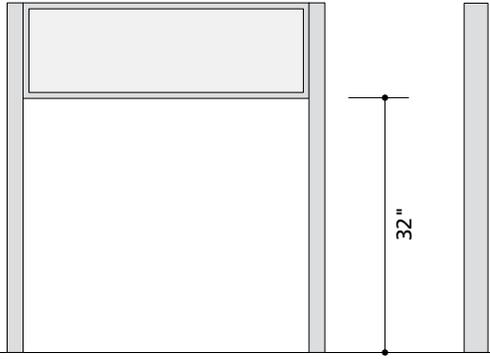
**24" Series**

Scale: 1/2" = 1'



**36" Series**

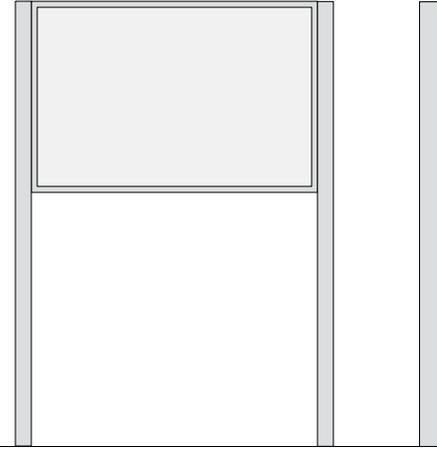
Scale: 1/2" = 1'



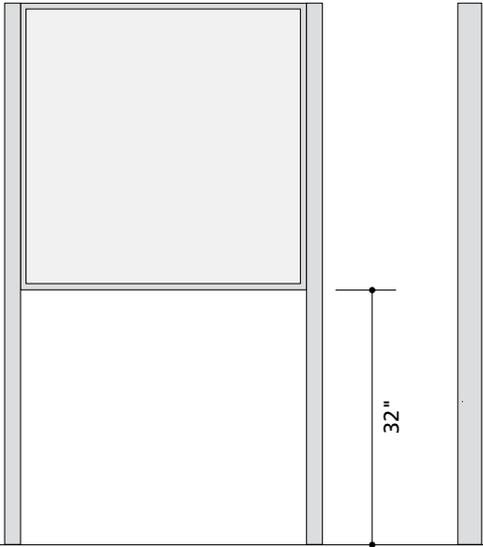
UP-36x12  
2x3 Post



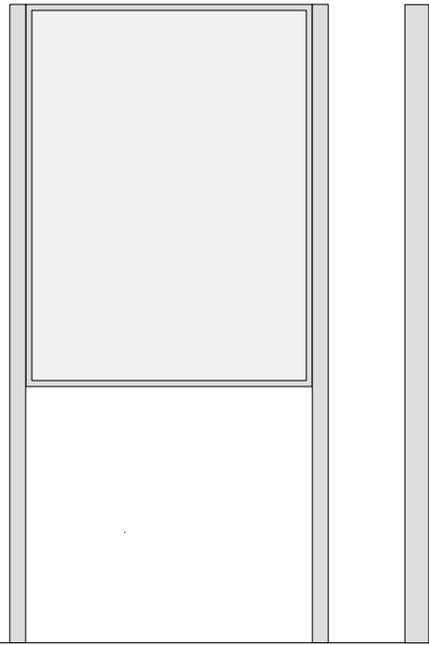
UP-36x18  
2x3 Post



UP-36x24  
2x3 Post



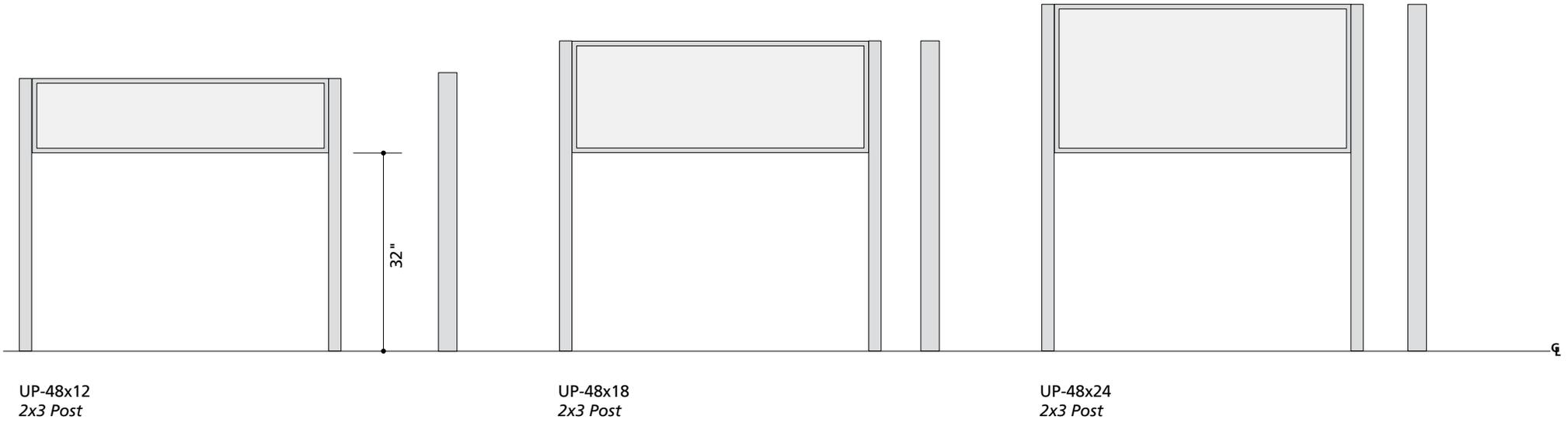
UP-36x36  
2x3 Post



UP-36x48  
2x3 Post

**48" Series**

Scale: 1/2" = 1'



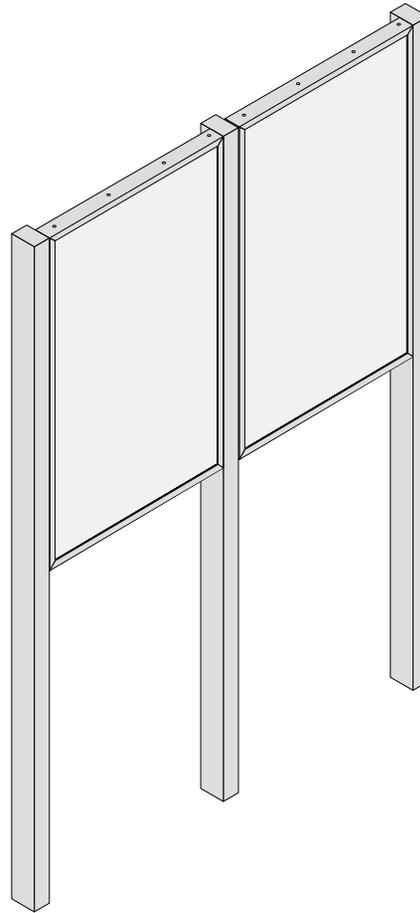
---

## Upright Inline 2 Series Overview (UPN2)

---

When more information needs to be displayed than a single exhibit can accommodate, two upright panels can be used. The material and color options for this configuration are the same as those available for the single panel assembly presented on page 31.

The Inline 2 Series hardware can support a bulletin case or other accessories in addition to exhibit panels. Both sides of the assembly can carry panels or accessories.

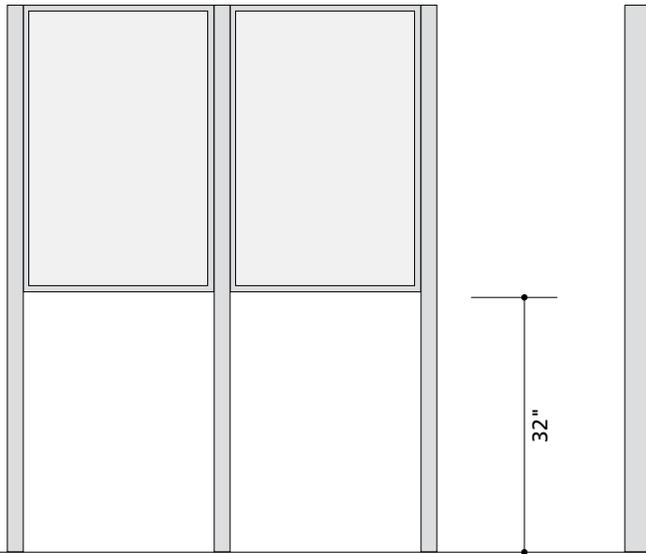


**24" Series**

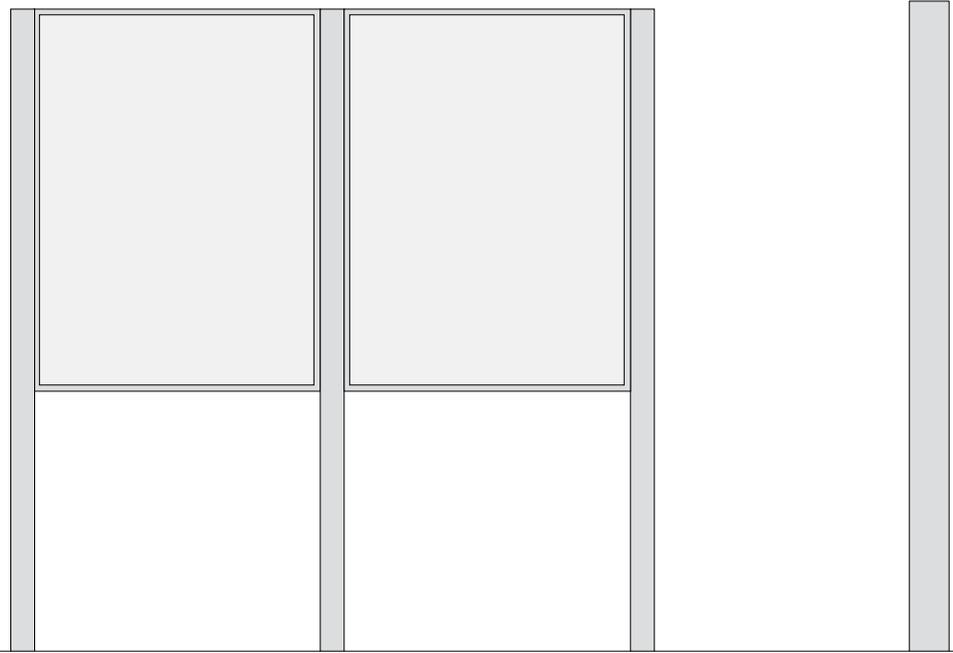
Scale: 1/2" = 1'

**36" Series**

Scale: 1/2" = 1'



UPN2-24x36  
2x3 Posts



UPN2-36x48  
3x5 Posts

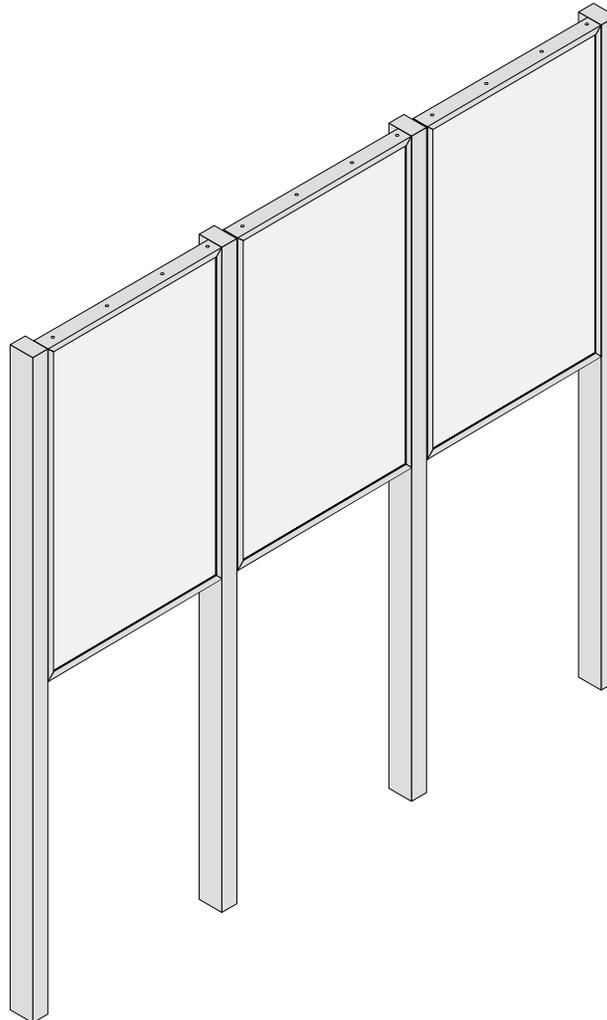
---

## Upright Inline 3 Series Overview (UPN3)

---

When more information needs to be displayed than one or two exhibits can accommodate, three upright panels can be used. The material and color options for this configuration are the same as those available for the single panel assembly presented on page 31.

The Inline 3 Series hardware can support a bulletin case or other accessories in addition to exhibit panels. Both sides of the assembly can carry panels or accessories.



**36" Series**

Scale: 1/2" = 1'



UPN3-36x48  
3x5 Posts

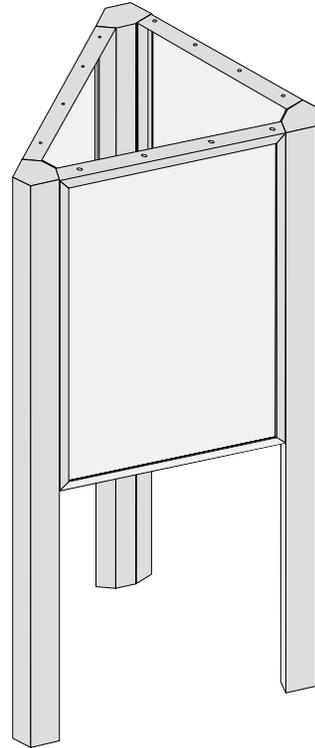
---

## Upright Tri-Side Series Overview (UPTR)

---

Upright structures can be configured in a tri-sided arrangement. The Tri-Sided Series can support exhibit panels, bulletin cases and other accessories. The Upright Tri Series, like all NPS hardware, is typically embedded directly into

the ground, although other mounting methods are available to accommodate site conditions. The Tri-Sided Series is available in weathering or galvanized steel, or in painted aluminum.

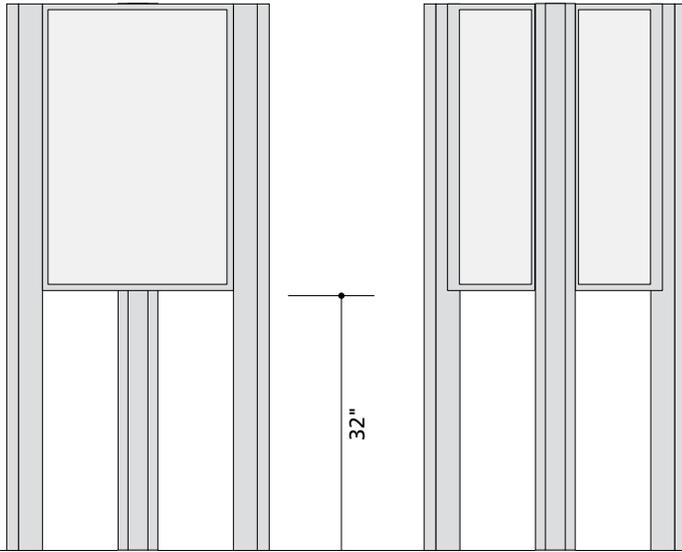


**24" Series**

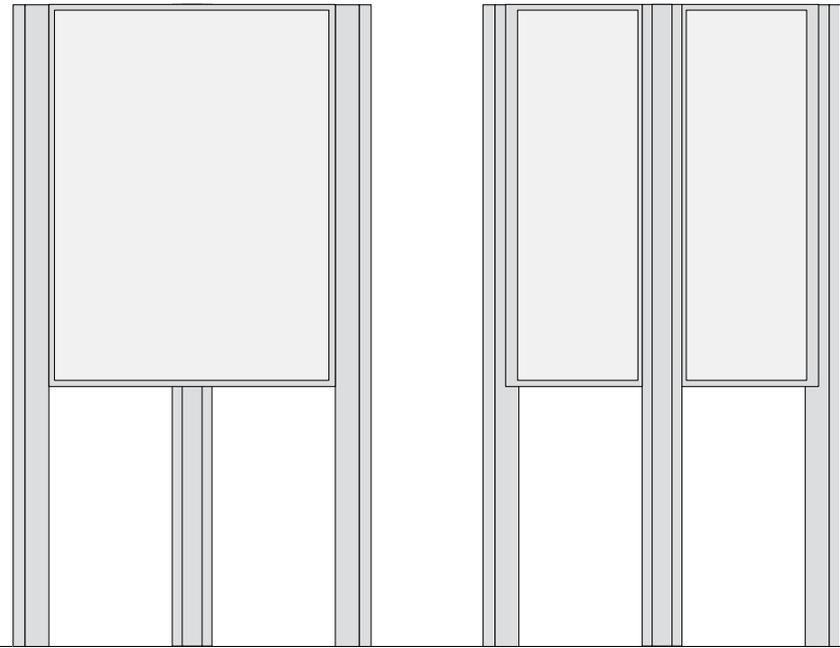
Scale: 1/2" = 1'

**36" Series**

Scale: 1/2" = 1'



UPTR-24x36  
*Custom Posts*



UPTR-36x48  
*Custom Posts*

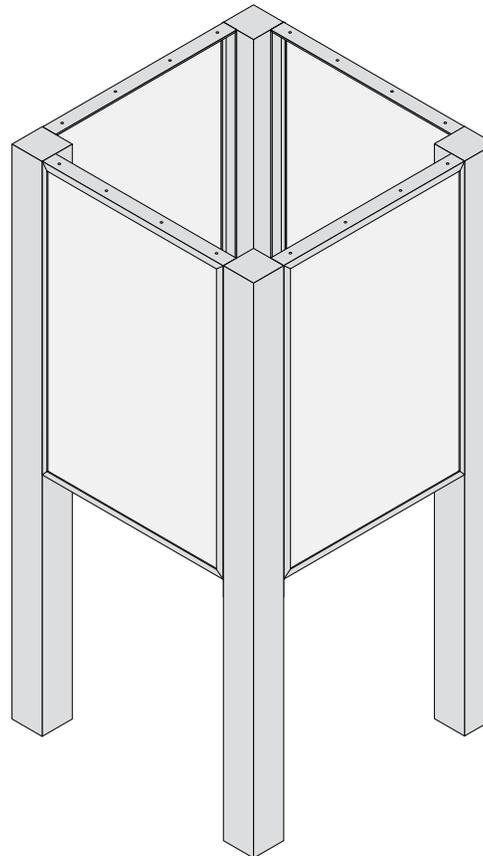
---

## Upright Quad-Sided Series Overview (UPQU)

---

Upright structures can be configured in a four-sided arrangement. The Quad-Sided Series can support exhibit panels, bulletin cases and other accessories in addition to exhibit panels. The Quad Series, like all NPS hardware,

is typically embedded directly into the ground, although other mounting methods are available to accommodate site conditions. The Quad-Sided Series is available in weathering or galvanized steel, or in painted aluminum.

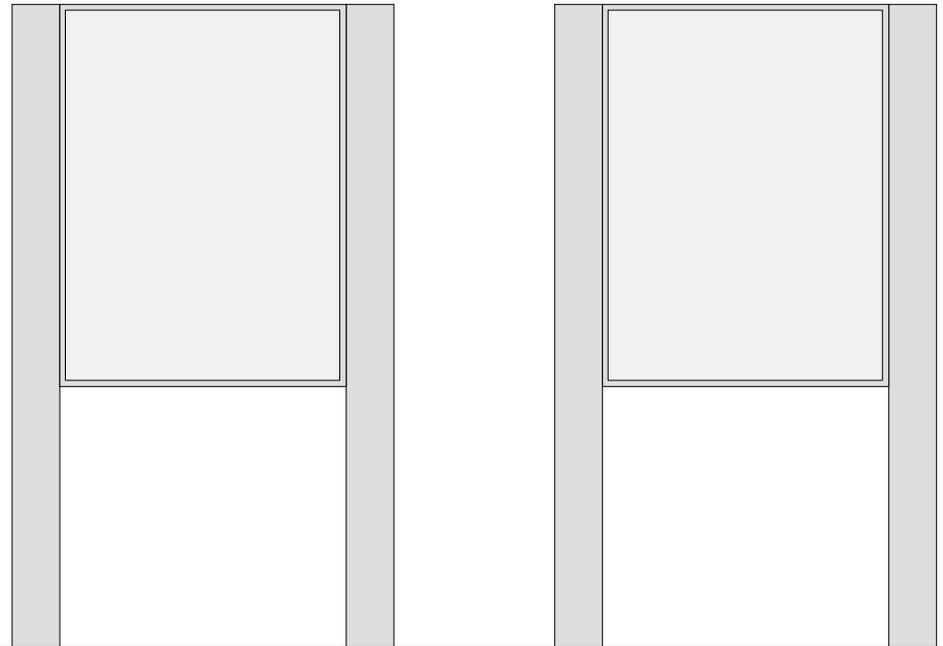
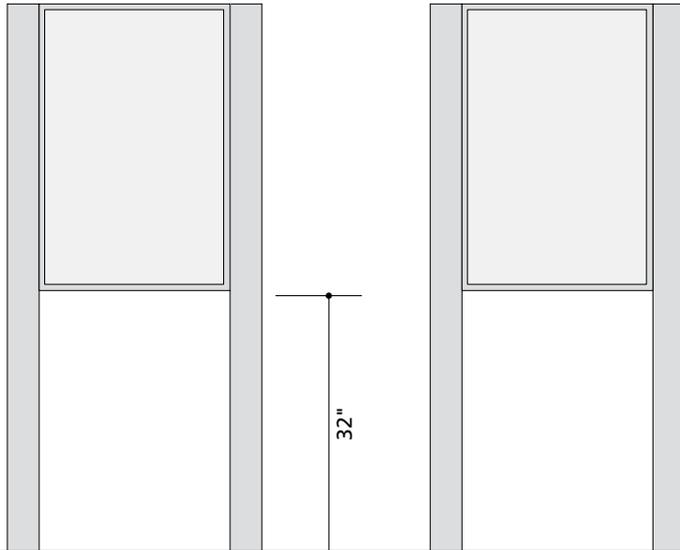


**24" Series**

Scale: 1/2" = 1'

**36" Series**

Scale: 1/2" = 1'



UPQU-24x36  
4x4 Posts

UPQU-36x48  
6x6 Posts

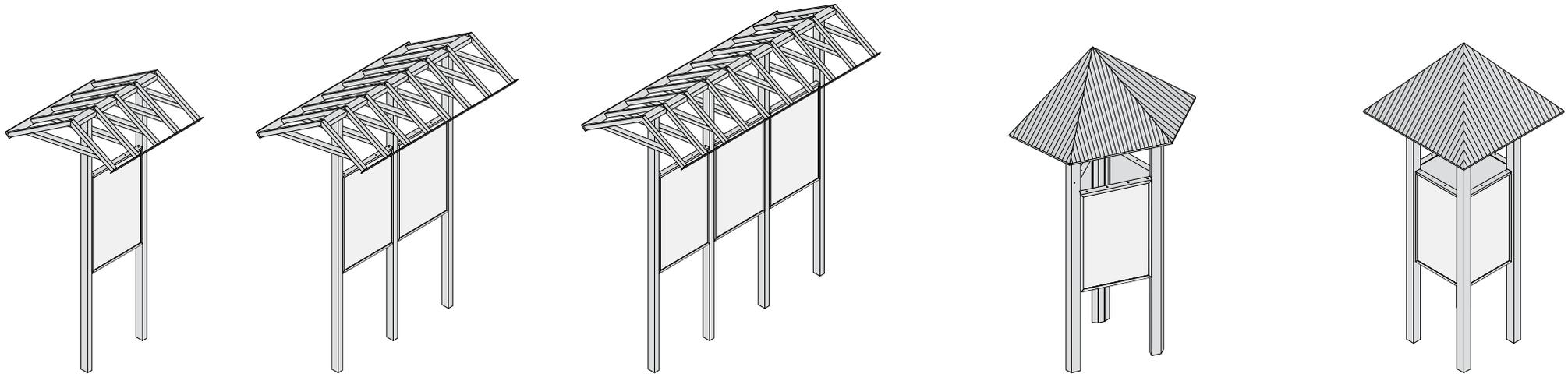
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## Upright Roof Overview

---

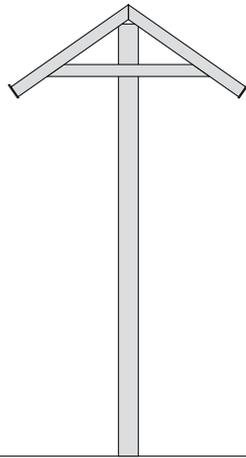
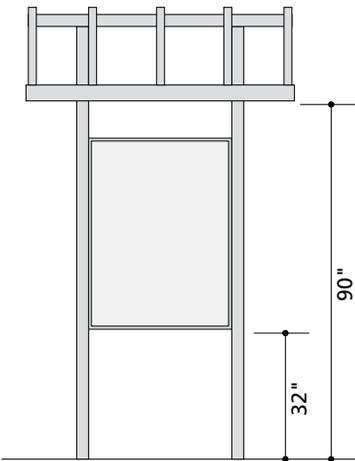
Single, inline, tri, or quad upright exhibits (in 36 x 48 panel sizes only) can include a roof structure to protect panels, bulletin cases, and other accessories, and to provide shade for park visitors. Inline assemblies are typically delivered with the roof substructure (as shown below) but without

roof surface materials, which are obtained and applied by the park. However, the Tri and the Quad Series can be ordered with an aluminum roof (also see below) finished to match the other parts of the structure. (Note: all roofed structures are currently available only in painted aluminum.)

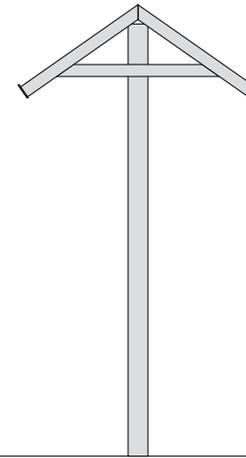
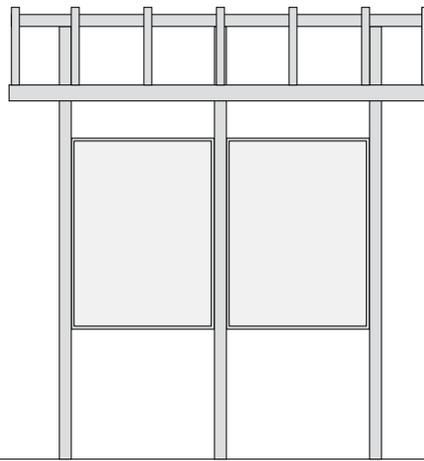


**36" Series**

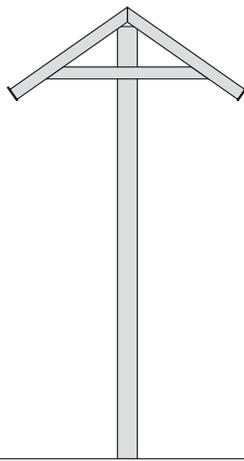
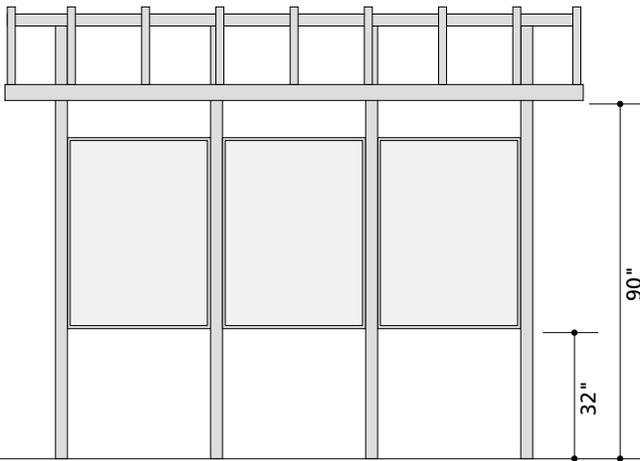
Scale: 1/2" = 1'



UP-36x48 with Roof  
3x5 Post



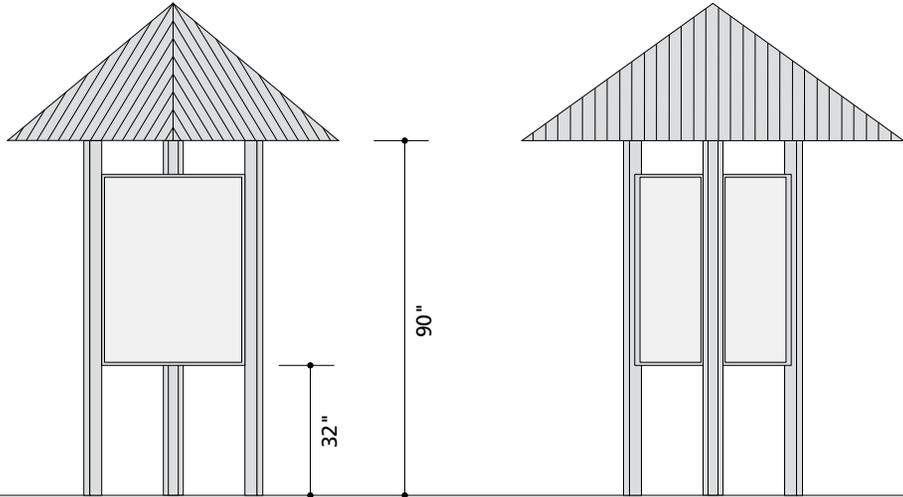
UPN2-36x48 with Roof  
3x5 Post



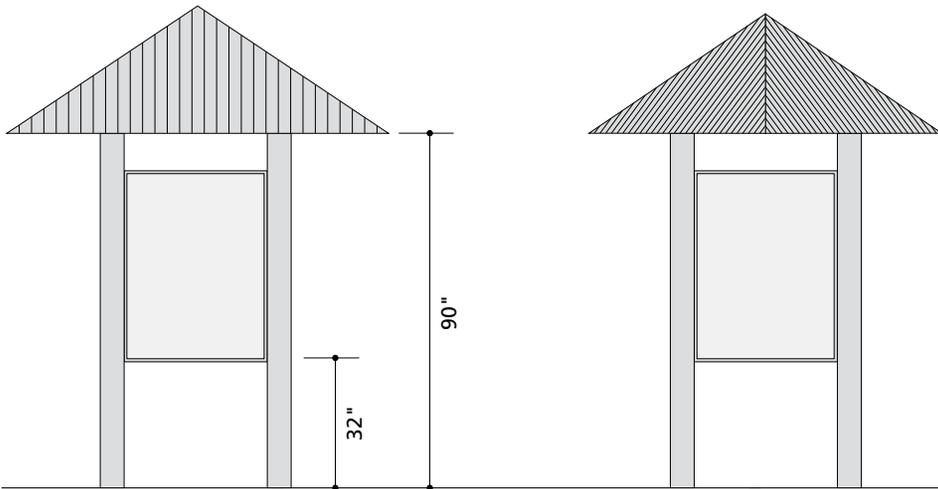
UPN3-36x48 with Roof  
3x5 Post

**36" Series**

Scale: 1/4" = 1'



UPTR-36x48 with Roof  
Custom Post



UPQU-36x48 with Roof  
6x6 Post

---

# Section V

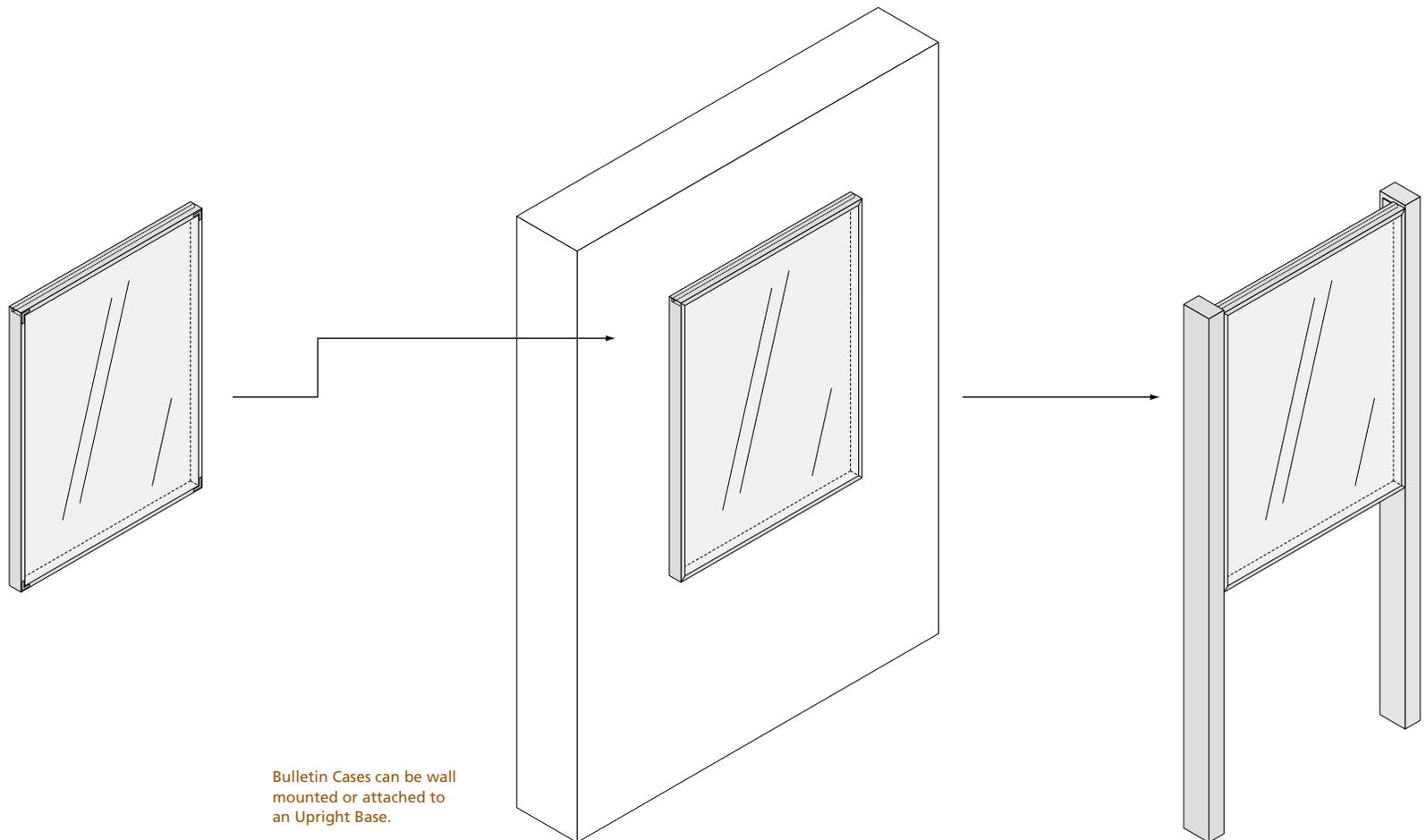
## VIS Hardware Accessories

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## VIS Hardware Accessory Overview

The VIS System offers a set of accessories, including a bulletin case as shown below, and holders for brochures or miscellaneous postings as illustrated on the next page.

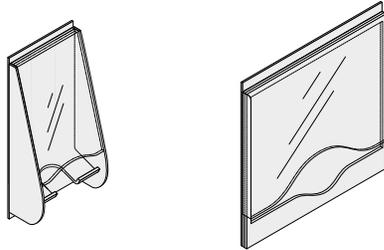
The bulletin case can be mounted on a wall, or attached to a free-standing vertical base. For more information about the bulletin case see page 51.



Bulletin Cases can be wall mounted or attached to an Upright Base.

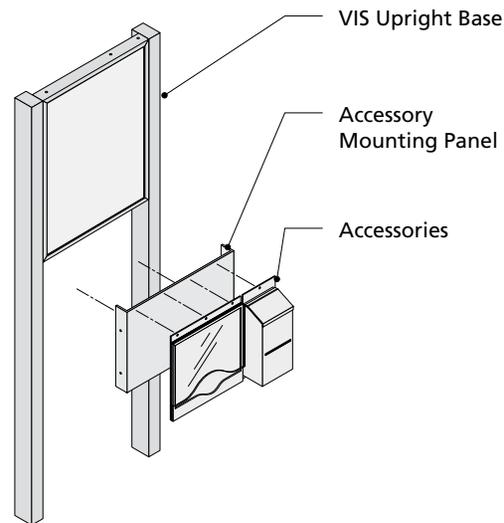
## VIS Hardware Accessory Overview - Continued

Upright accessories include a brochure holder and miscellaneous posting.



Brochure Holder (BH)

Miscellaneous Posting (MP)



Accessories are attached to an upright base using an accessory mounting panel.

The accessory mounting panel is securely attached to the post legs and each accessory mounts using tamper proof hardware.

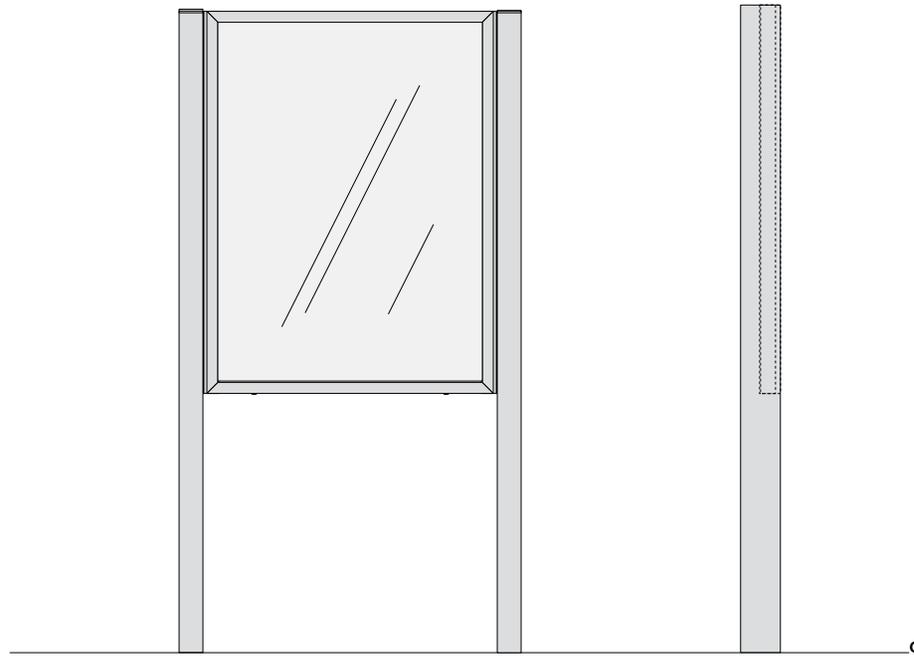
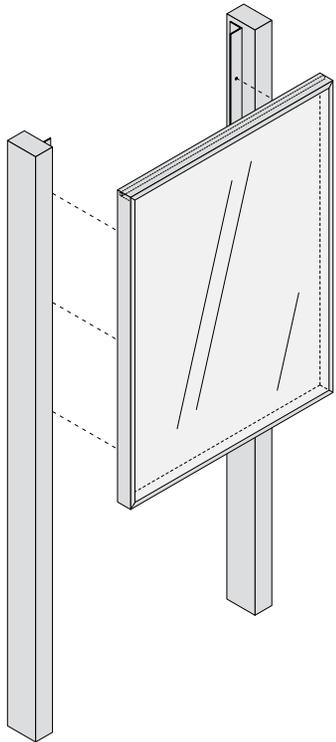
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## Bulletin Case

---

Visitor information that needs to be posted quickly or changed frequently is best presented in a bulletin case. Designed to be installed on legs or attached directly to a wall, the standard NPS bulletin case features a continuous-hinge door with double locks, 3/16" clear Lexan fronts, and a back

panel of powder-coated steel. Information postings are held in place by magnets. The bulletin case is constructed to provide maximum protection from the elements and is ventilated to reduce interior condensation.



**24" Series**

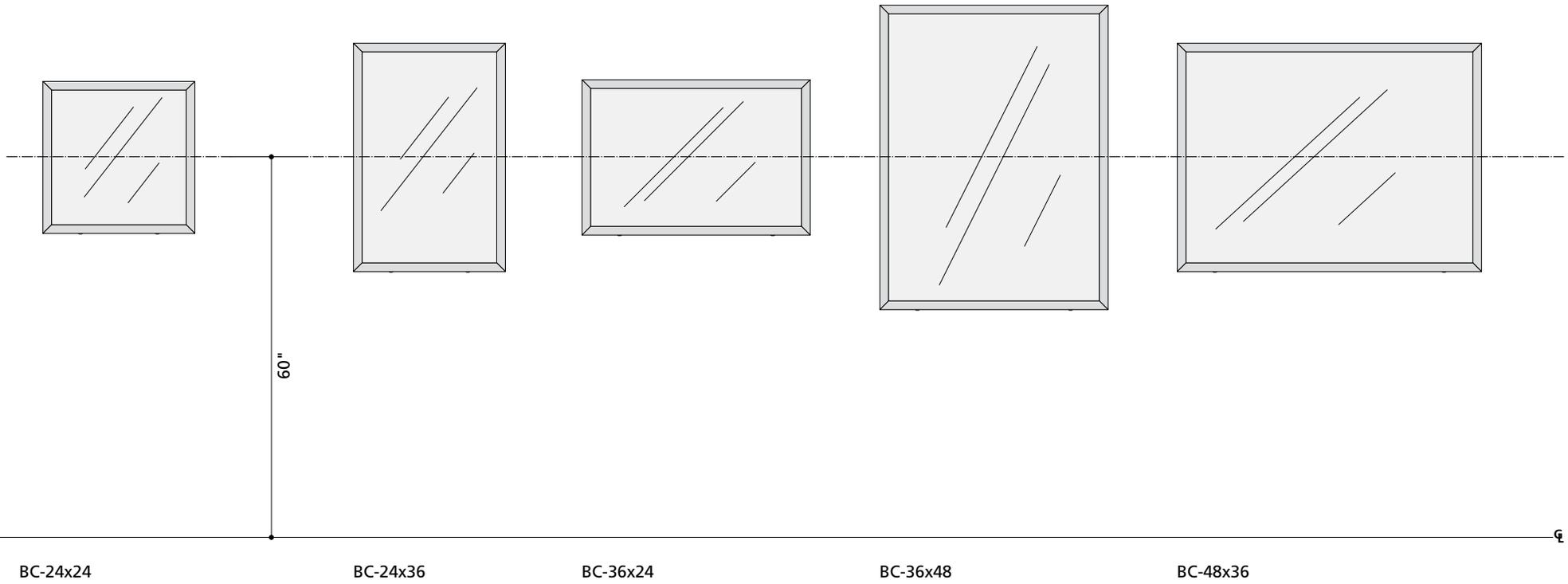
Scale: 1/2" = 1'

**36" Series**

Scale: 1/2" = 1'

**48" Series**

Scale: 1/2" = 1'



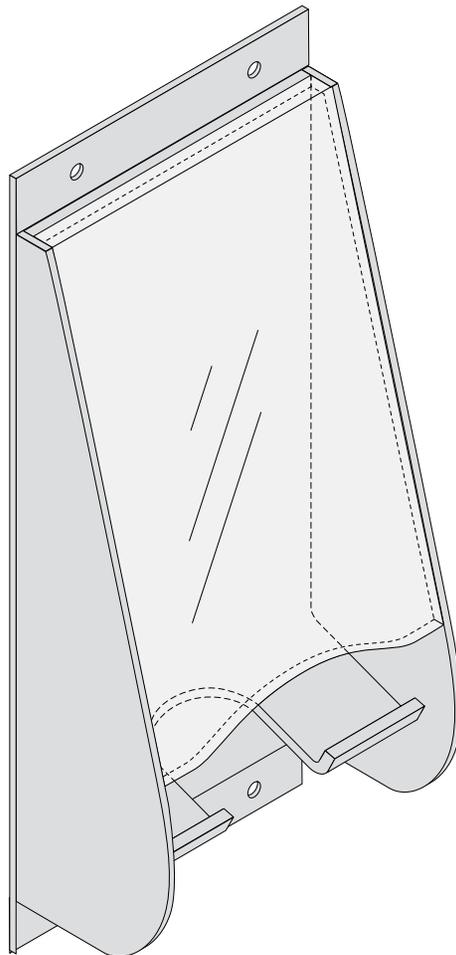
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## Brochure Holder

---

The standard NPS brochure holder is designed to make official park folders (or trail guides) readily available while providing them with limited protection from the elements. The holder can be used alone to carry between 25 and 40

brochures (depending on their thickness), or can be used in multiples to accommodate more. A clear Lexan cover allows the top brochure to be easily seen by visitors.



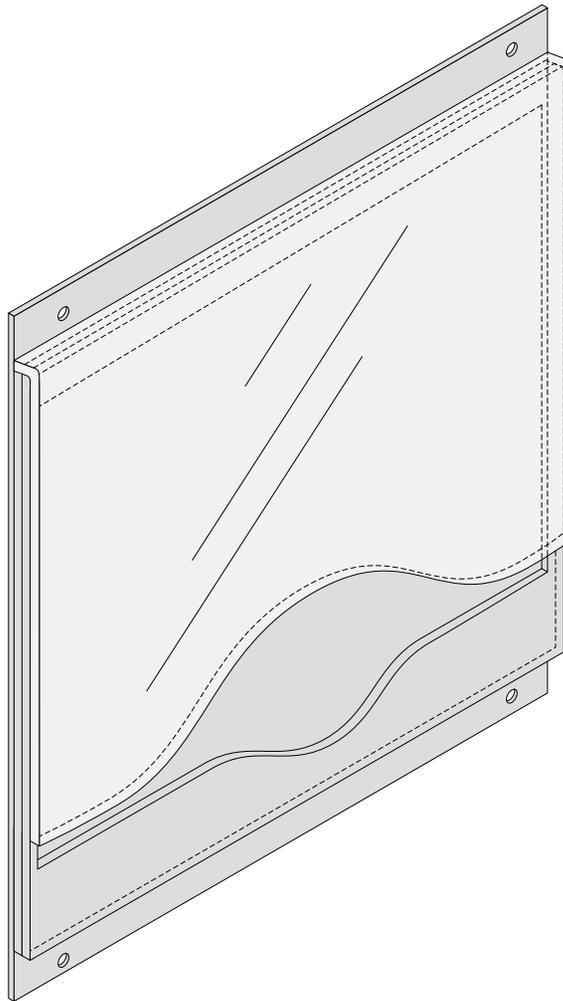
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## Miscellaneous Posting

---

Designed to hold an 8.5 x 11 inch sheet, the miscellaneous posting holder allows information to be printed by computer on paper or card stock and easily mounted for viewing. The Lexan cover provides limited protection from the elements,

allowing posting to be displayed for weeks or longer. Such postings could include schedules that change periodically, timely information about closures or emergencies, or other messages that need to be displayed quickly.



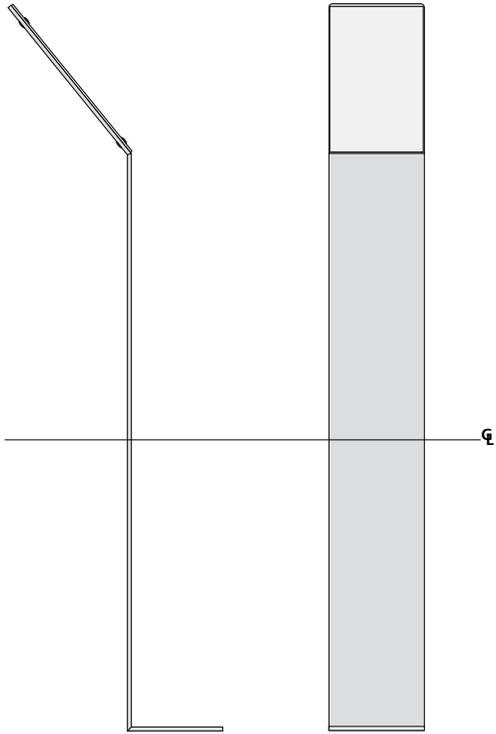
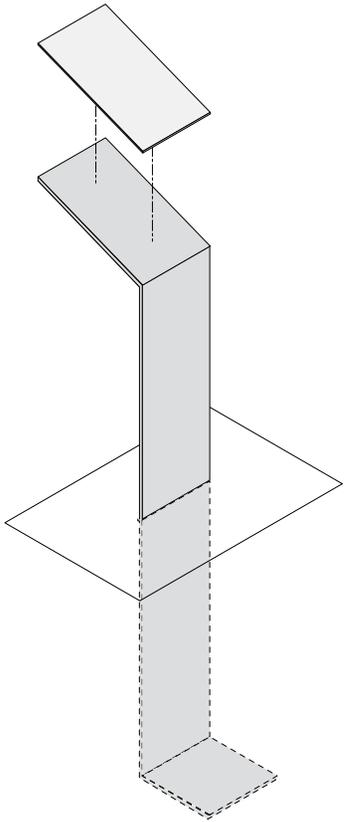
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# Section VI

## VIS Fabrication Detail Drawings

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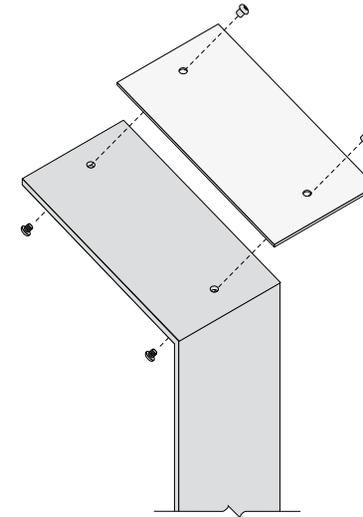
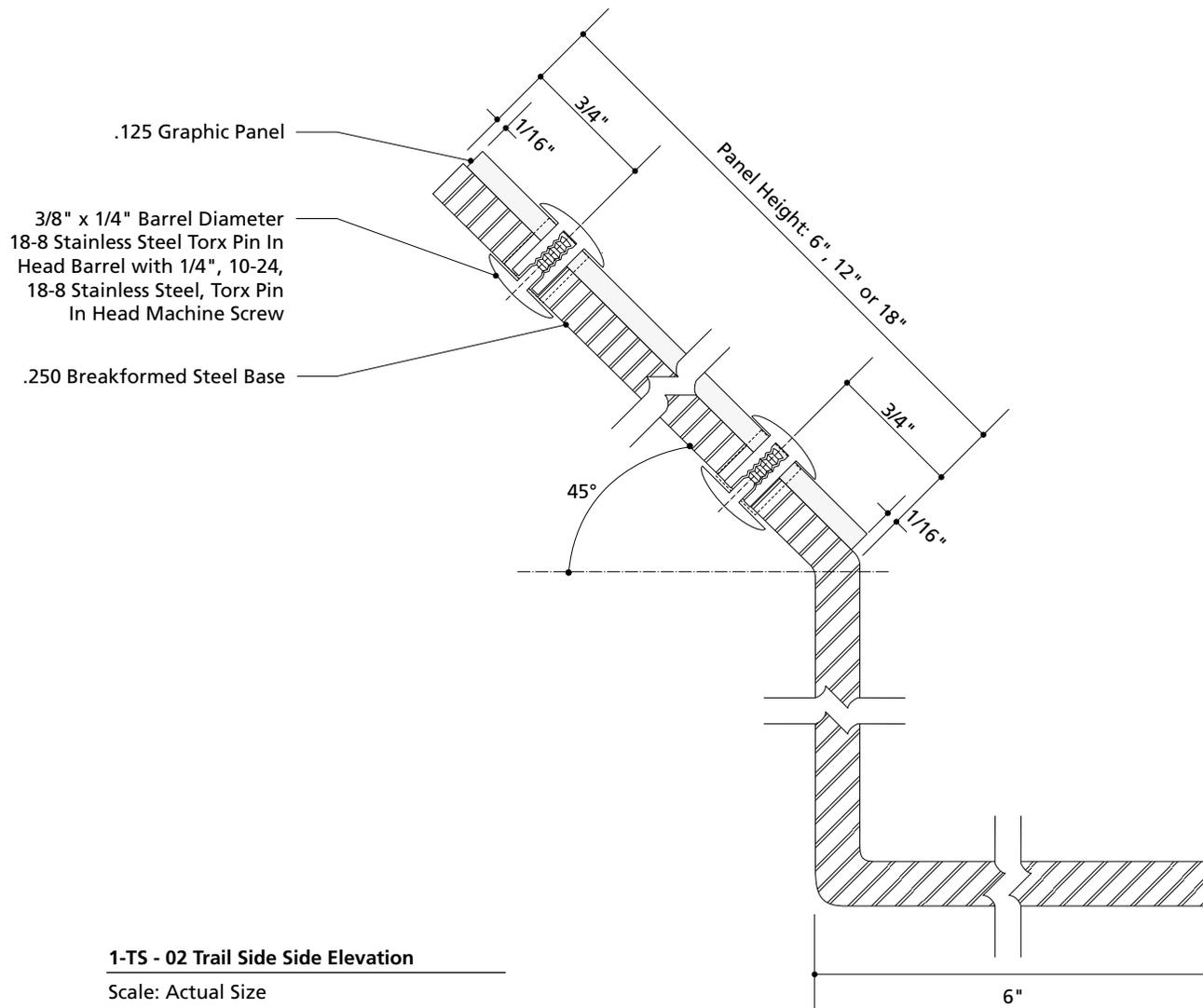
# Trailside (TS)





# Trailside (TS)

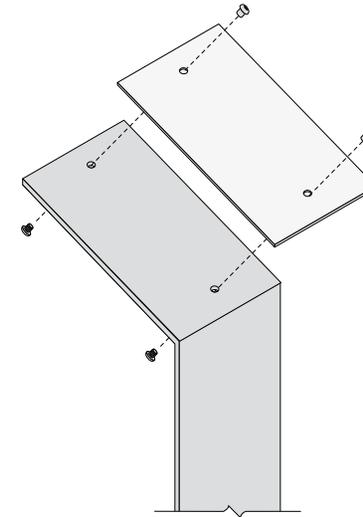
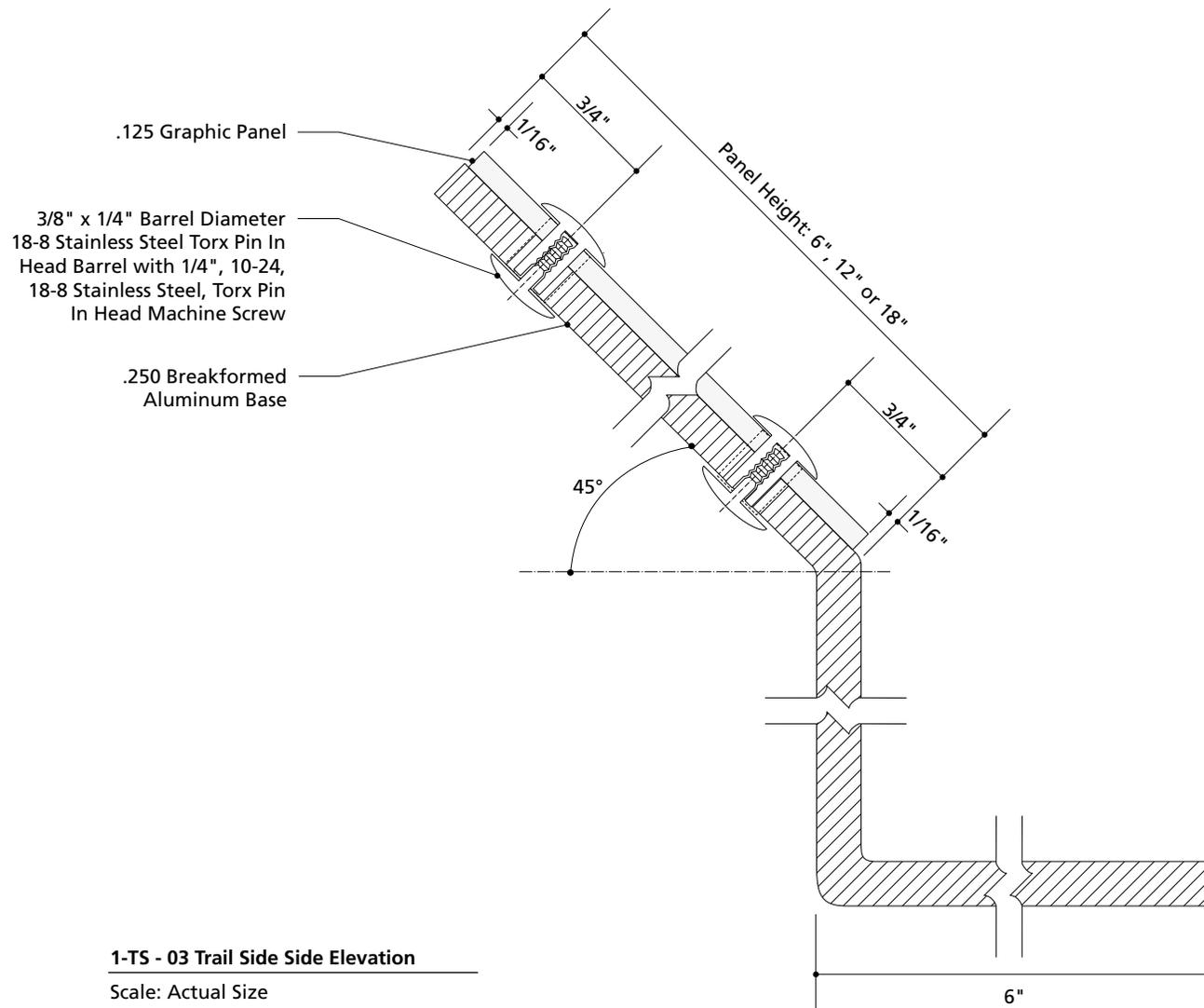
## Steel Fabrication



2-TS - 02 Connection Detail  
Scale: 1-1/2" = 1' - 0"

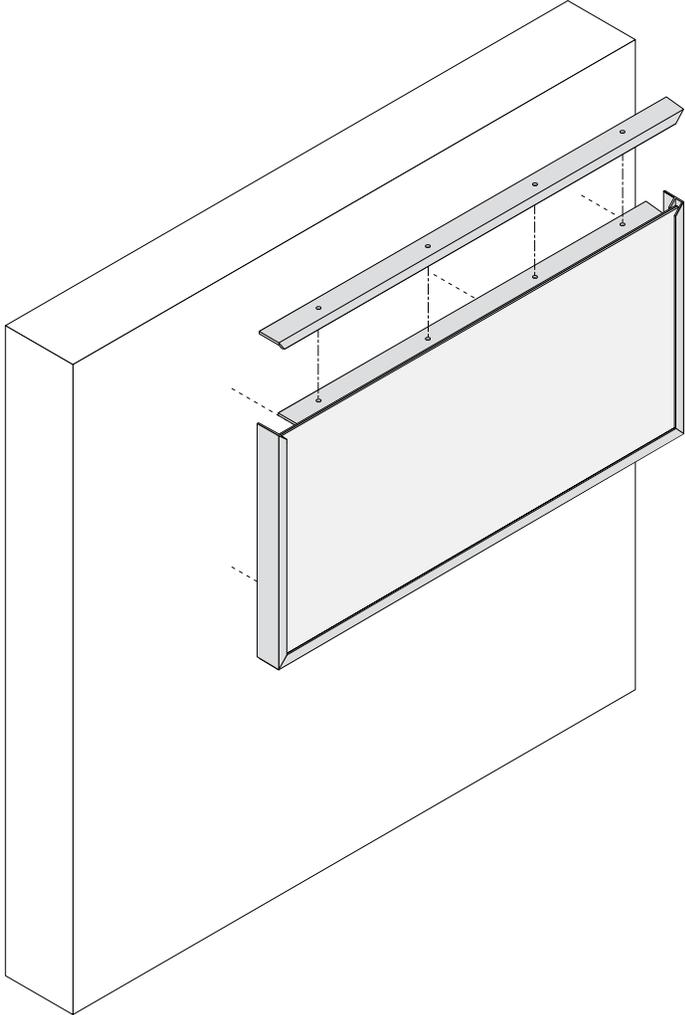
# Trailside (TS)

## Aluminum Fabrication



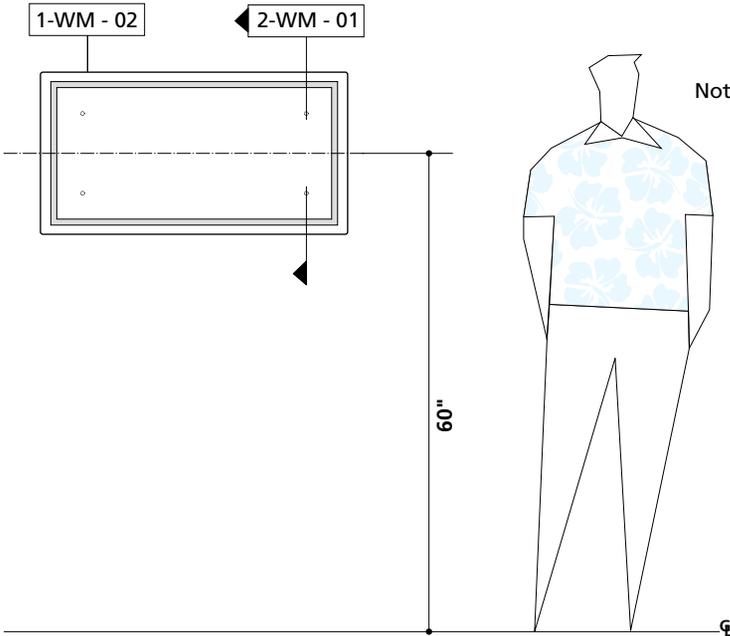
**2-TS - 03 Connection Detail**  
Scale: 1-1/2" = 1"-0"

# Wall Mount (WM)



# Wall Mount (WM)

## Steel Fabrication



**1-WM - 01 Wall Mount Elevation**

Scale: 1/2" = 1'-0"

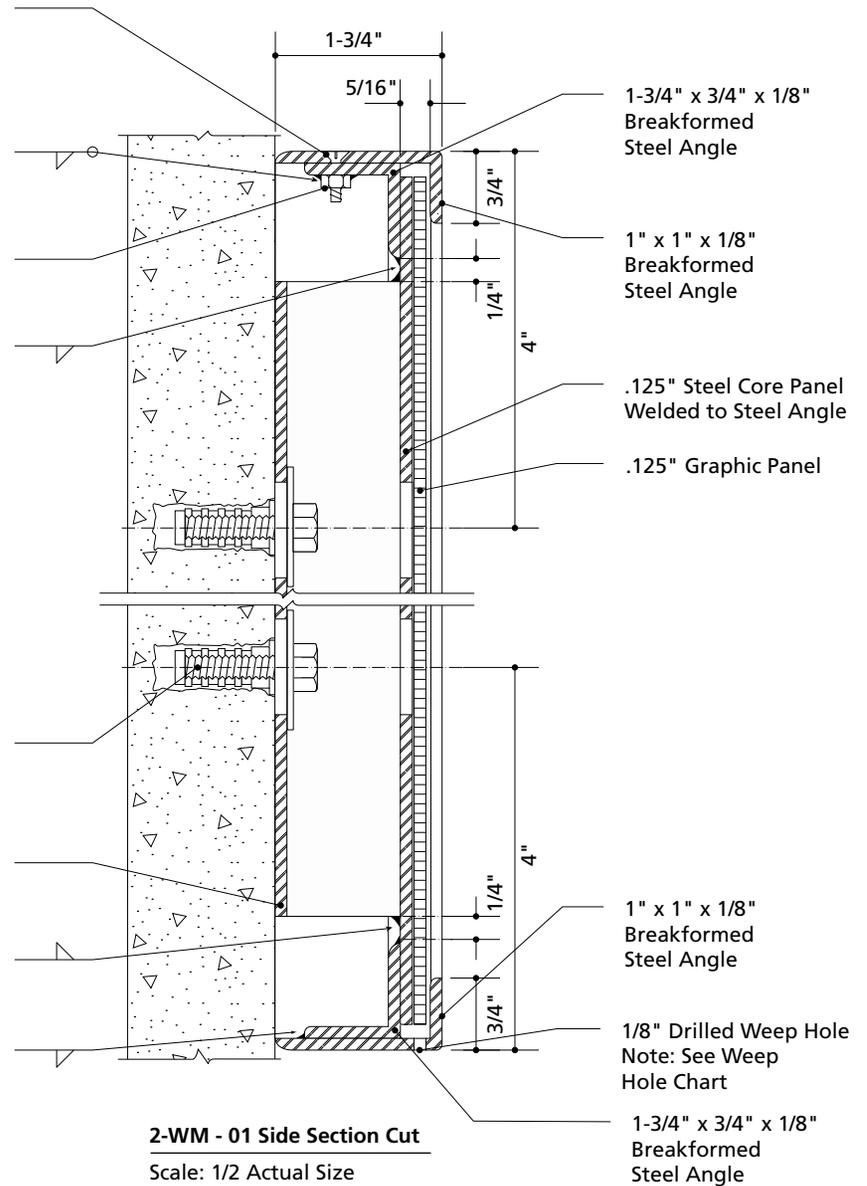
General Note:  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

1/4"-20x3/8" 18-8 Stainless Steel Counter Sunk Flathead, Phillips Machine Screw.  
Note: Top of Frame is Connected by Screws and is Removable

1/4"-20, 18-8 Stainless Steel Machine Screw Nut Welded to Steel Angle

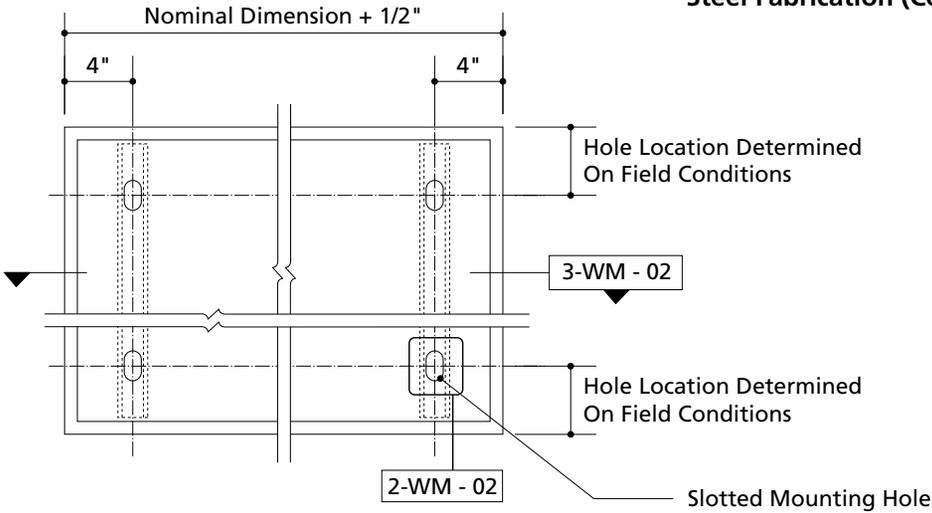
5/16"-18 x 2" Long Zinc Plated Wej-it Stud

.125" Steel Continuous C-Channel Welded to Core Panel  
Note: Channel Length Based on Sign Size



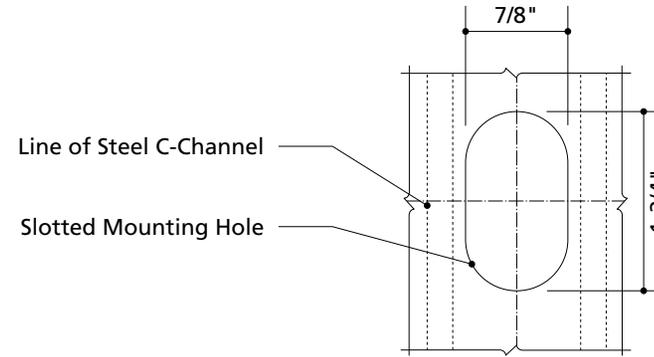
# Wall Mount (WM)

## Steel Fabrication (Continued)



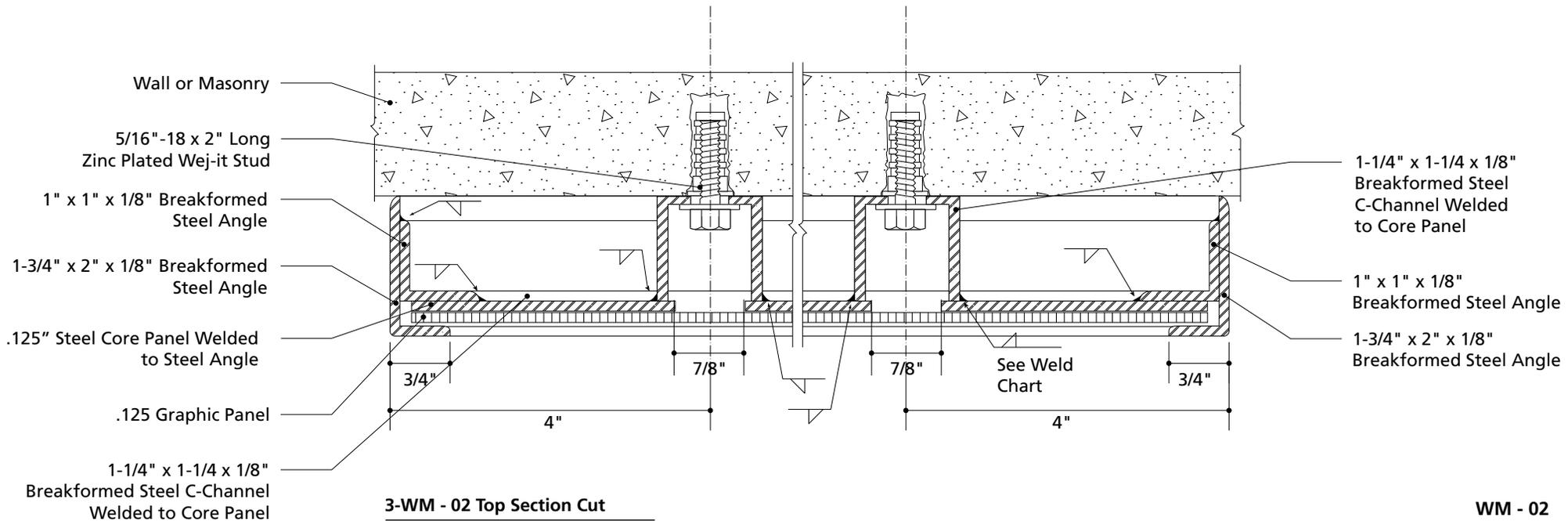
**1-WM - 02 Frame Mounting Hole Locations**

Scale: 1" = 1'-0"



**2-WM - 02 Detail at Slotted Hole**

Scale: 1/2 Actual Size

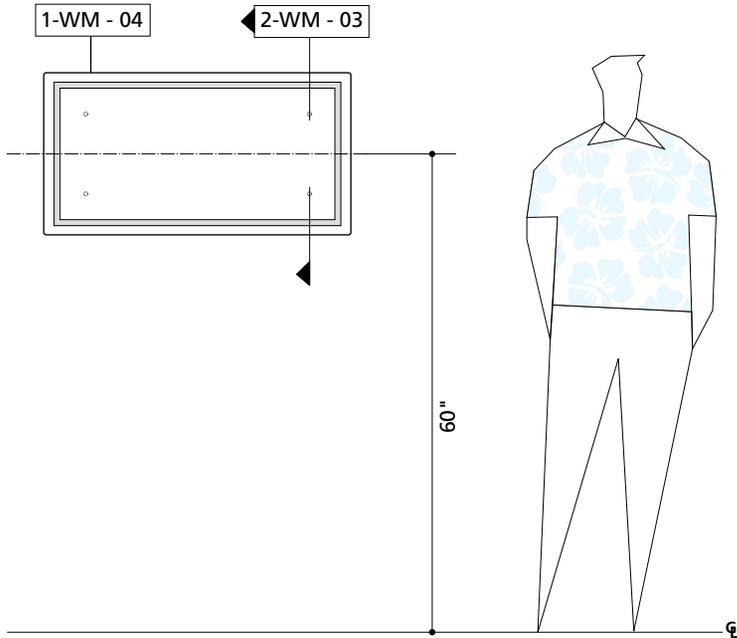


**3-WM - 02 Top Section Cut**

**WM - 02**

# Wall Mount (WM)

## Aluminum Fabrication



**1-WM - 03 Wall Mount Elevation**

Scale: 1/2" = 1'-0"

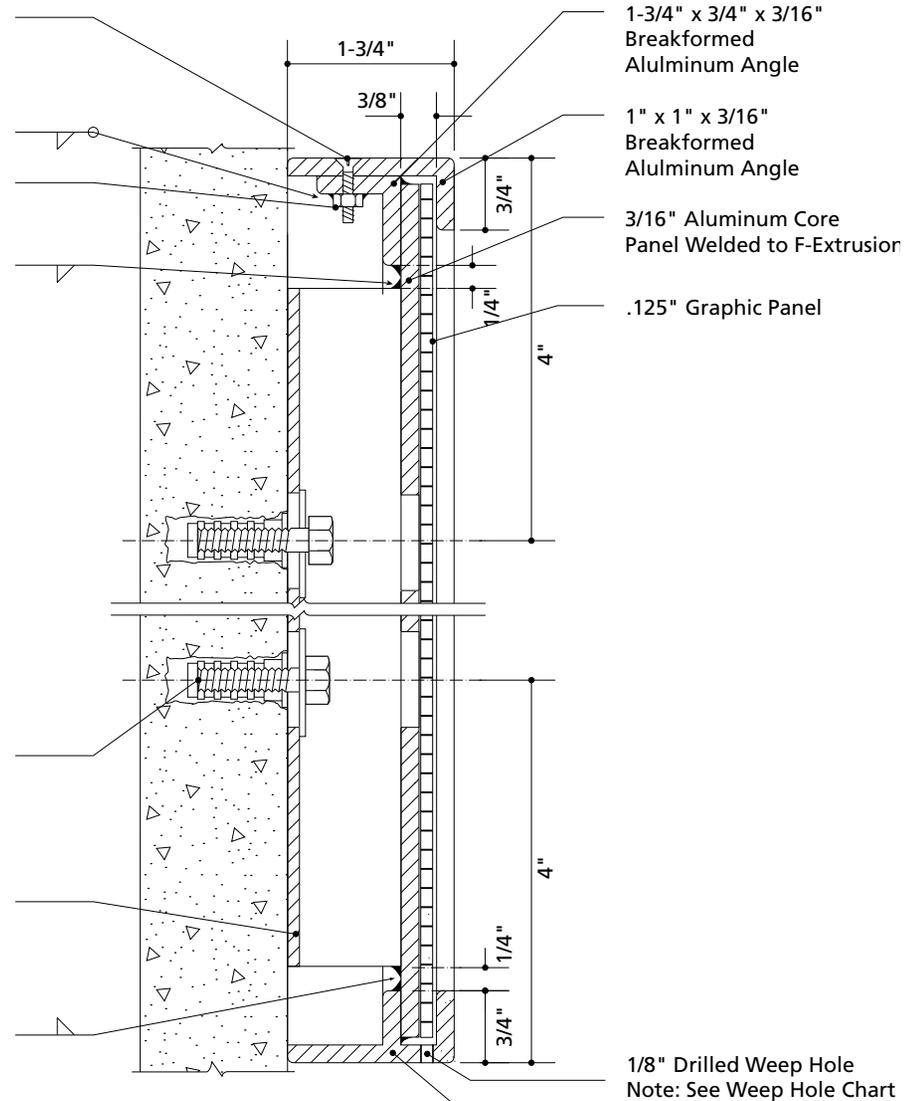
**General Note:**  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

1/4"-20 x 5/8" Long 6061-T6 Aluminum, Counter Sunk Flat Head, Phillips Head Machine Screw.  
Note: Top of Frame is Connected by Screws and is Removable

1/4"-20, 6061-T6 Aluminum Hex Nut Welded to Aluminum Angle

5/16"-18 x 2" Long Zinc Plated Wej-it Stud

.125" Aluminum Continuous C-Channel Welded to Core Panel  
Note: Channel Length Based on Sign



**2-WM - 03 Side Section Cut**

Scale: 1/2 Actual Size

1-3/4" x 3/4" x 3/16" Breakformed Aluminum Angle

1" x 1" x 3/16" Breakformed Aluminum Angle

3/16" Aluminum Core Panel Welded to F-Extrusion

.125" Graphic Panel

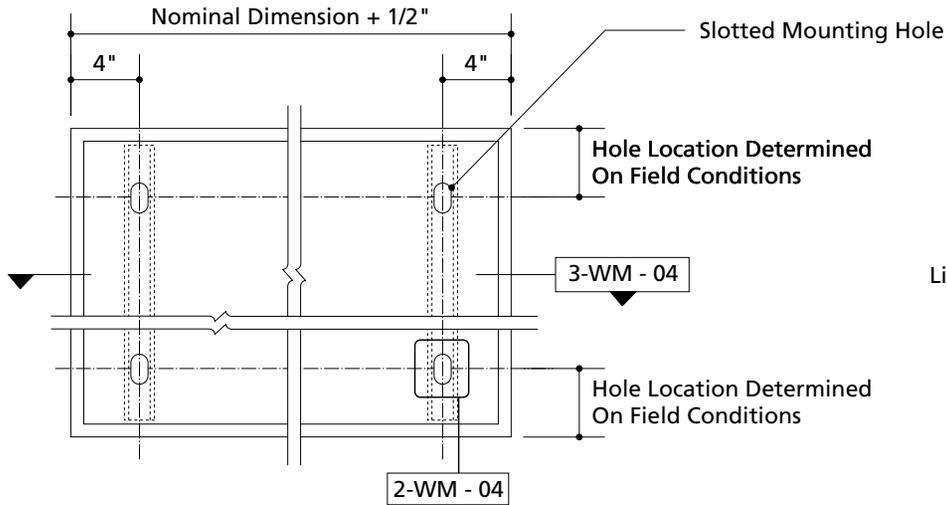
1/8" Drilled Weep Hole  
Note: See Weep Hole Chart

NPS Standard  
3/16" Aluminum

**WM - 03**

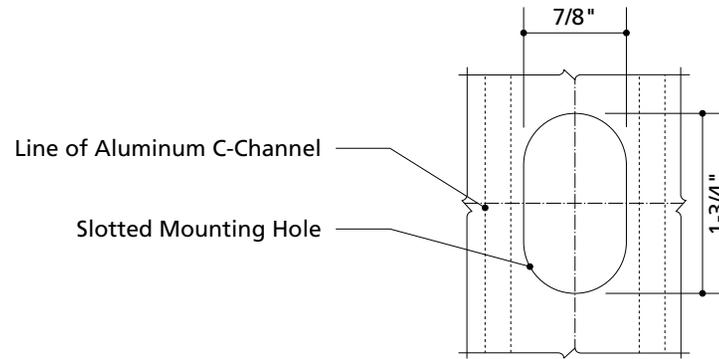
# Wall Mount (WM)

## Aluminum Fabrication (Continued)



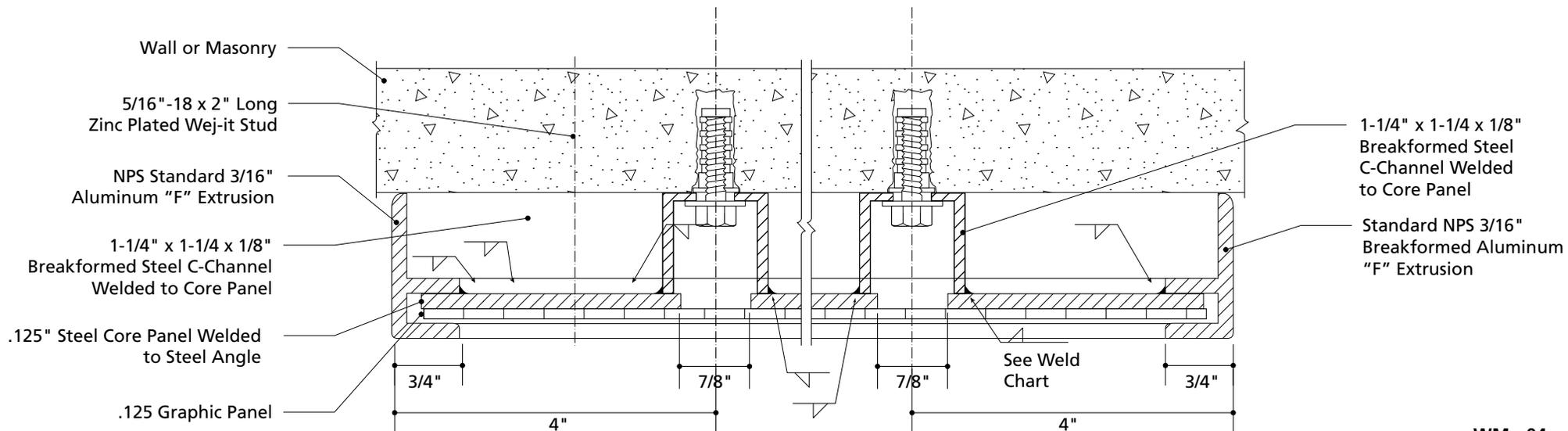
**1-WM - 04 Frame Mounting Hole Locations**

Scale: 1" = 1'-0"



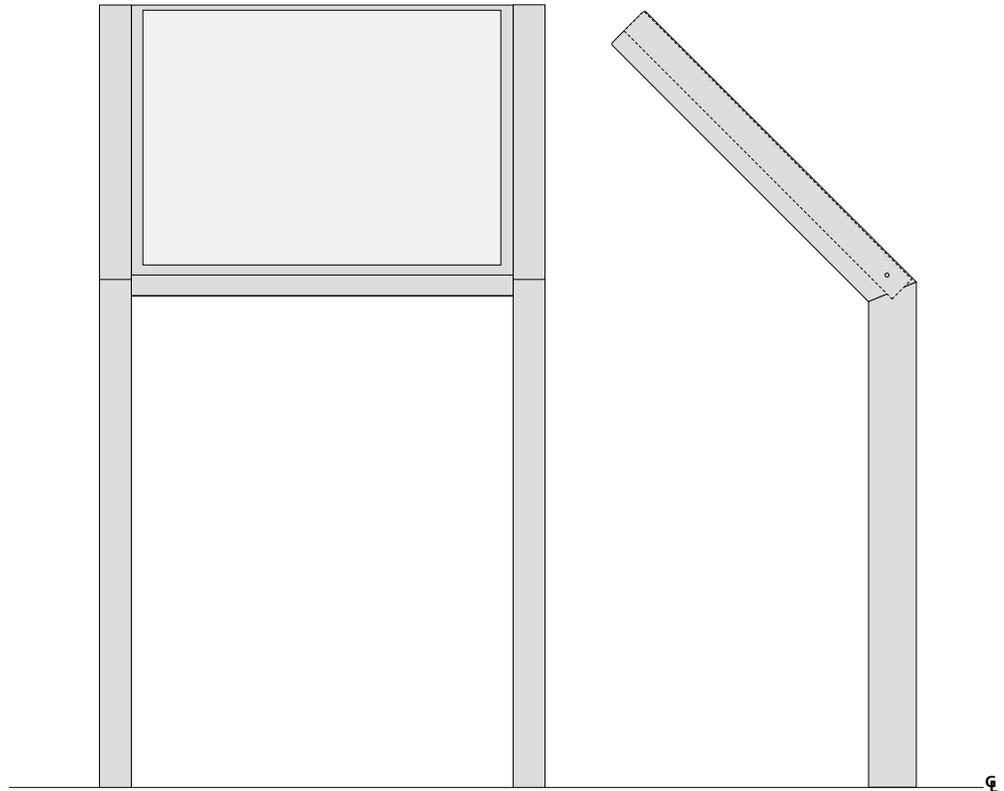
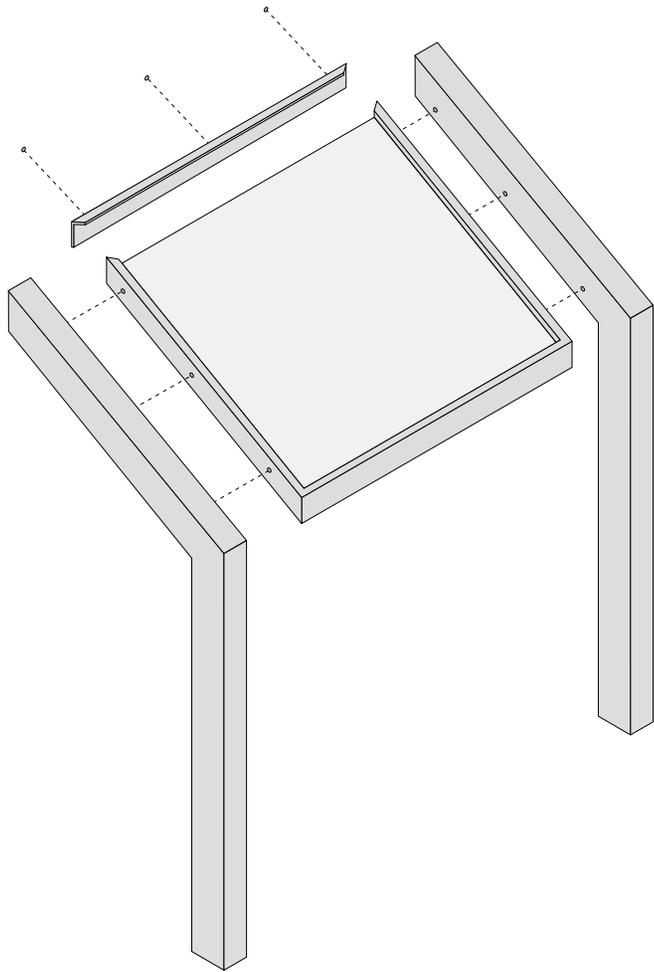
**2-WM - 04 Detail at Slotted Hole**

Scale: 1/2 Actual Size



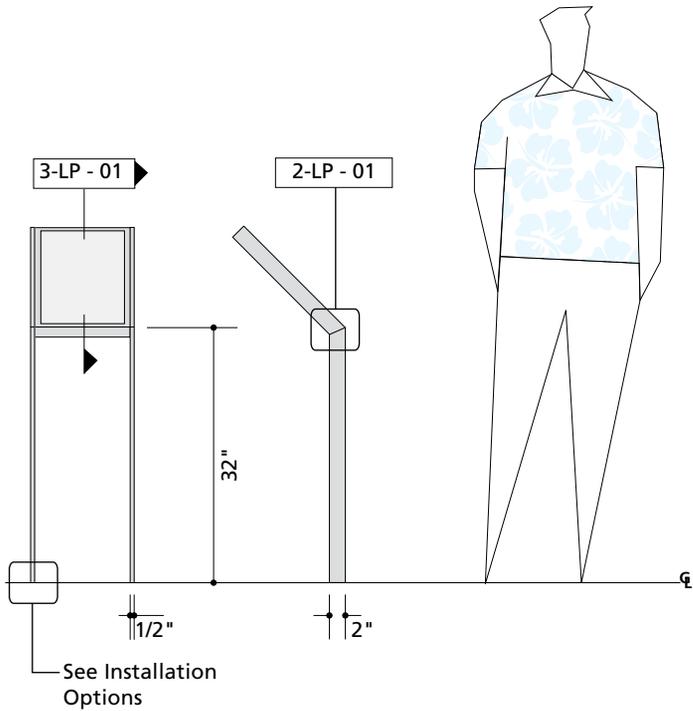
**WM - 04**

## Low Profile (LP)



# Low Profile (LP): Barstock Post

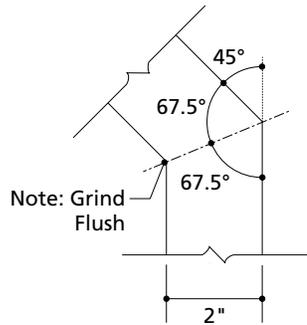
## Steel Fabrication



**1-LP - 01 Low Profile Elevation**

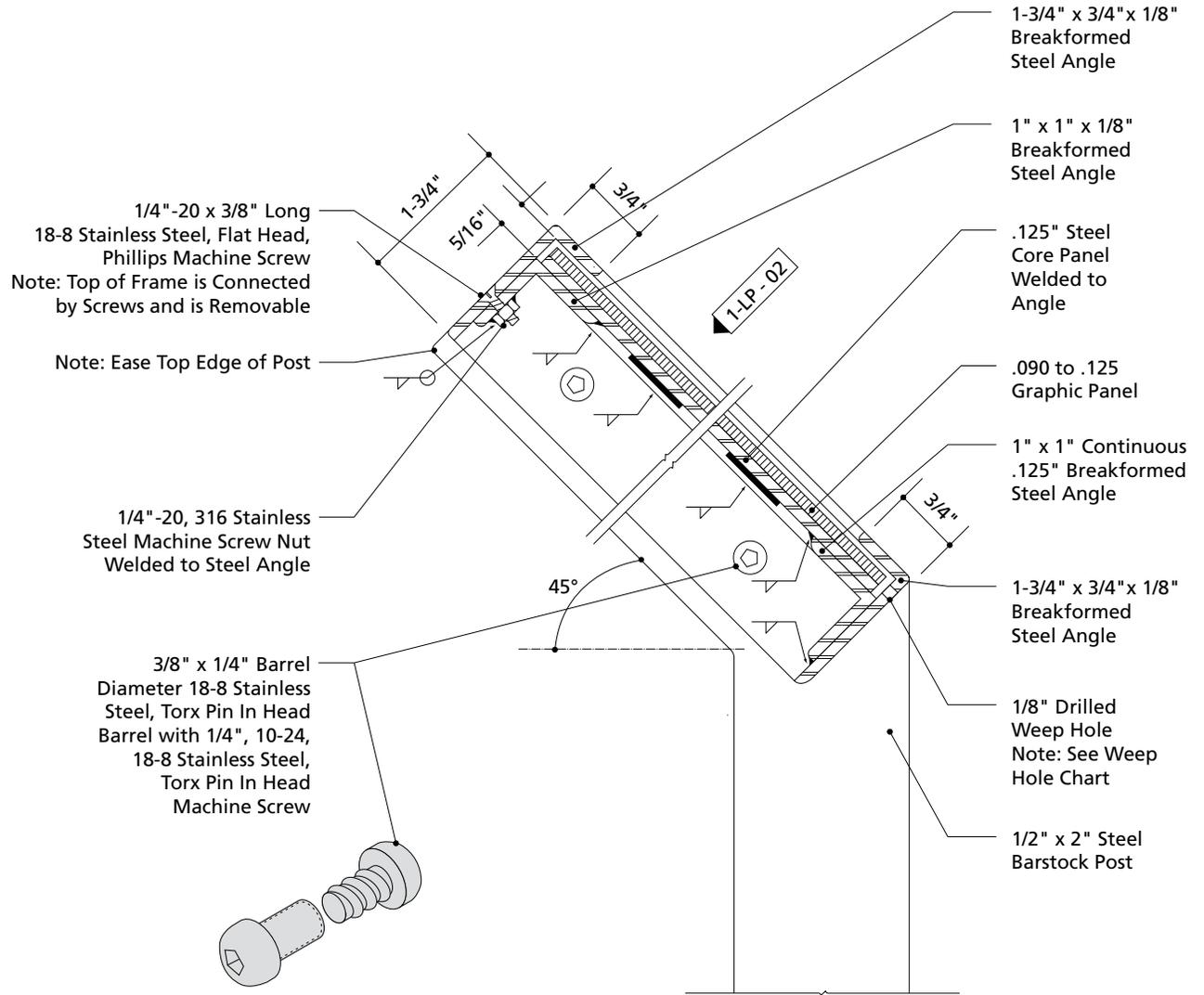
Scale: 1/2" = 1' - 0"

General Note:  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.



**2-LP - 01 Post Detail**

Scale: 3" = 1' - 0"

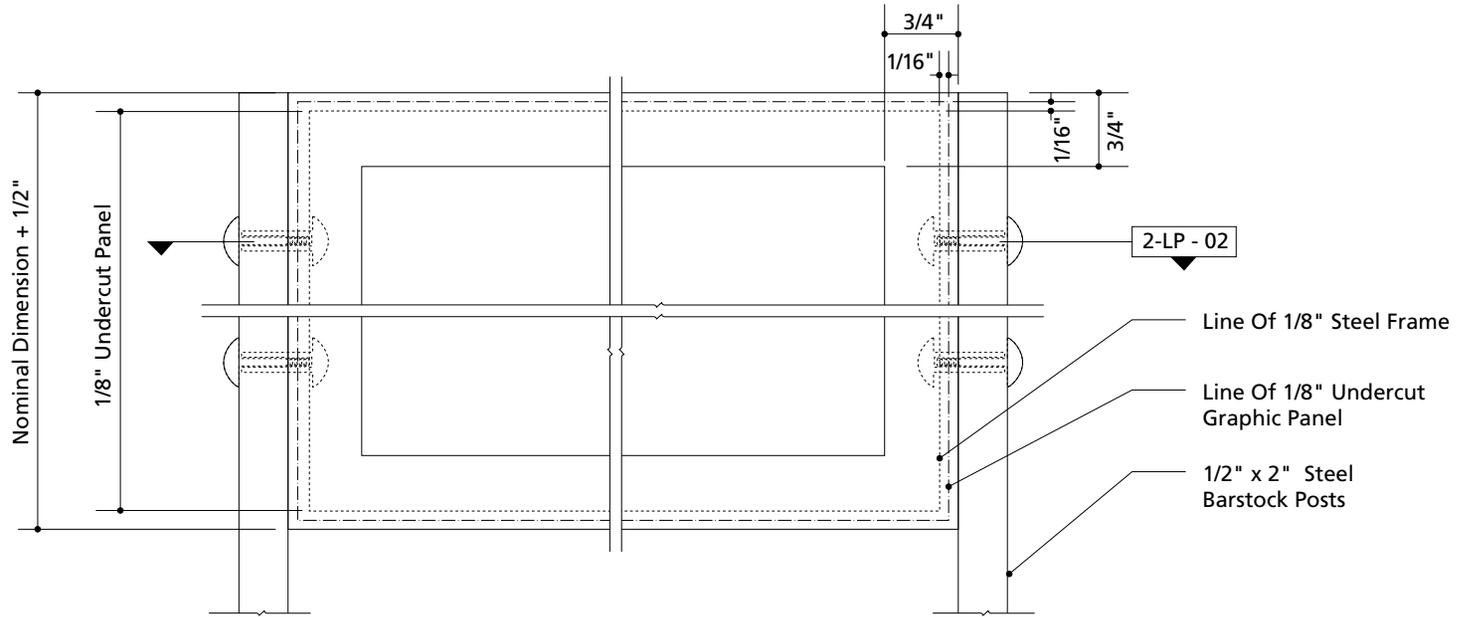


**3-LP - 01 Side Section Cut**

Scale: 1/2 Actual Size

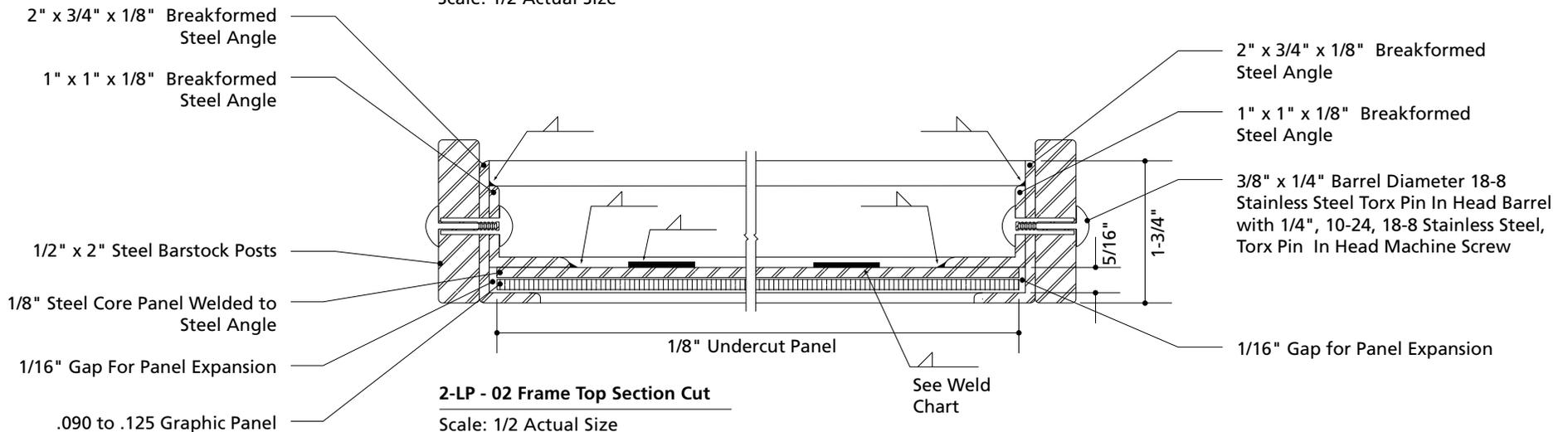
# Low Profile (LP): Barstock Post

## Steel Fabrication (Continued)



**1-LP - 02 Frame Front Elevation**

Scale: 1/2 Actual Size

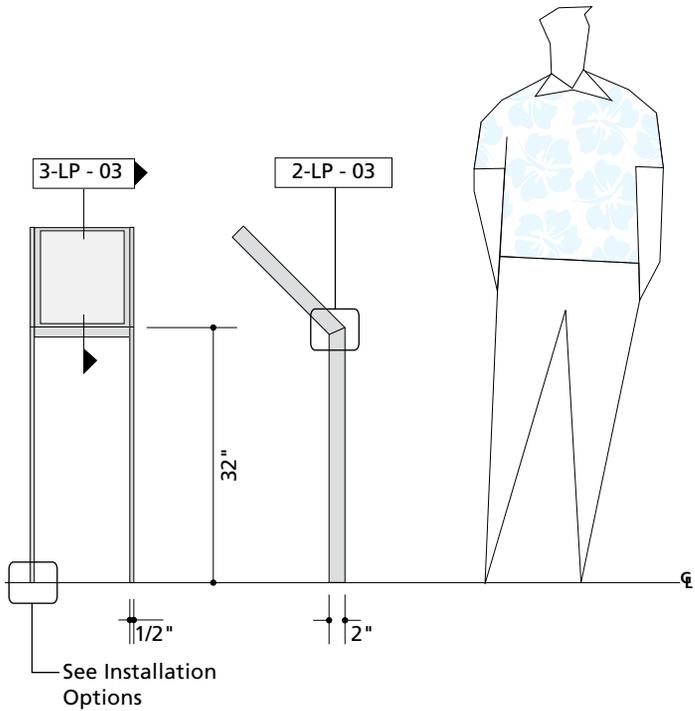


**2-LP - 02 Frame Top Section Cut**

Scale: 1/2 Actual Size

# Low Profile (LP): Barstock Post

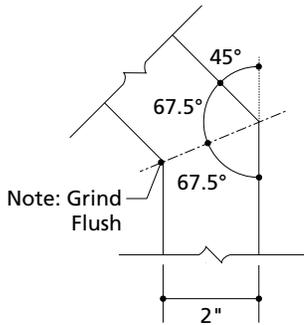
## Aluminum Fabrication



**1-LP - 03 Low Profile Elevation**

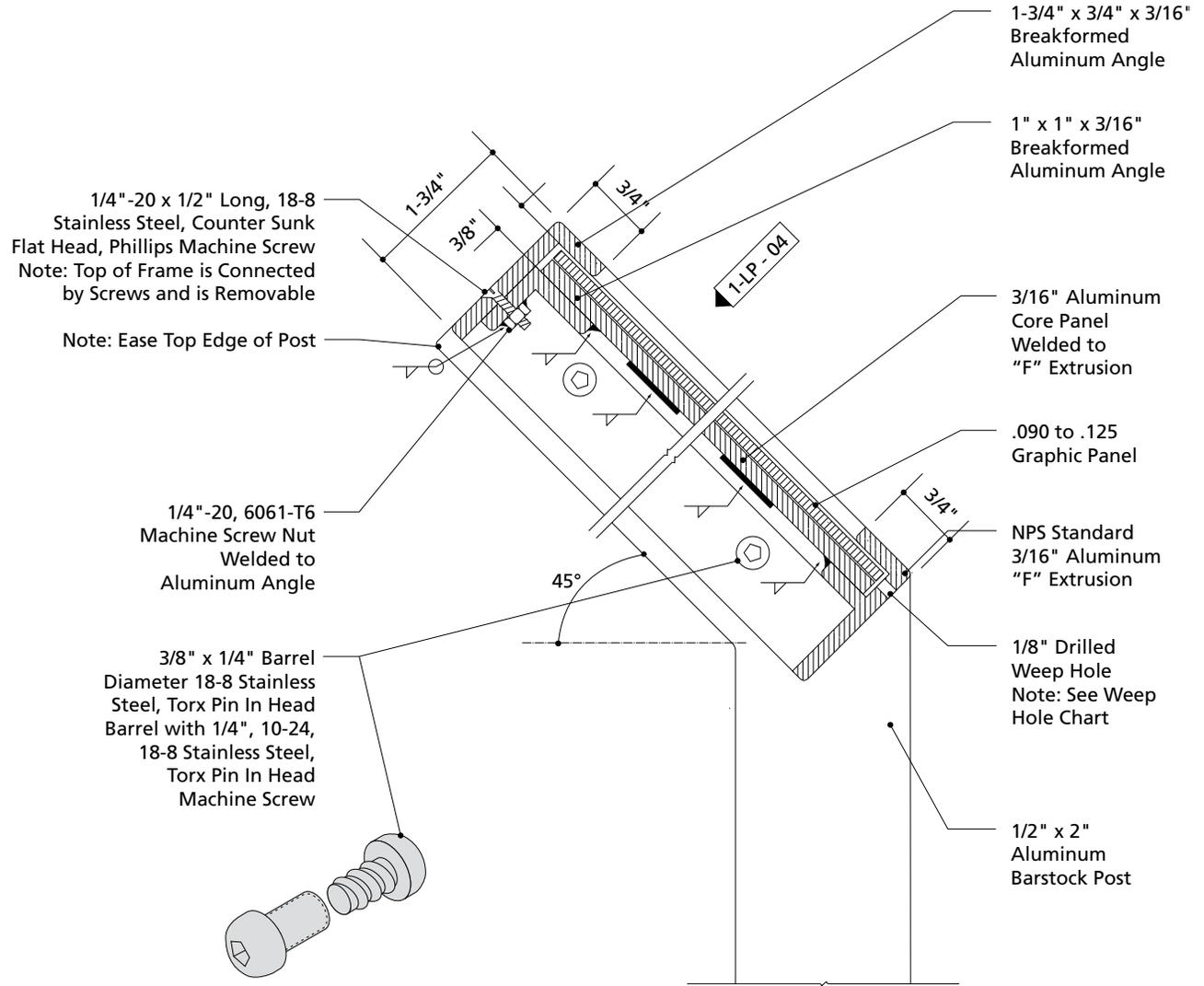
Scale: 1/2" = 1' - 0"

General Note:  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.



**2-LP - 03 Post Detail**

Scale: 3" = 1' - 0"

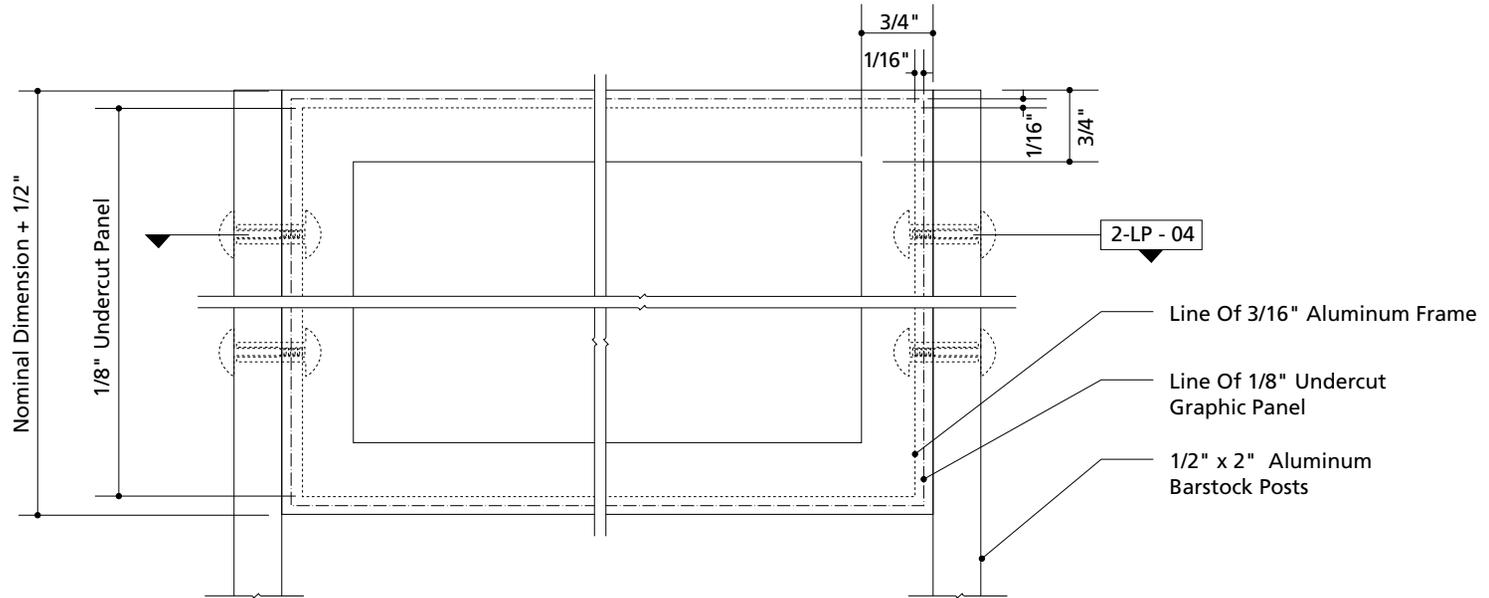


**3-LP - 03 Side Section Cut**

Scale: 1/2 Actual Size

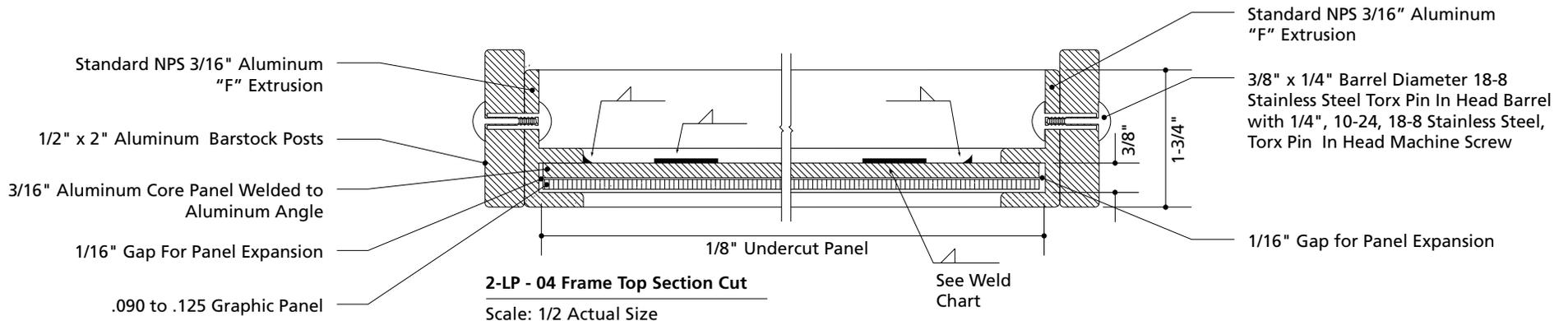
# Low Profile (LP): Barstock Post

## Aluminum Fabrication (Continued)



**1-LP - 04 Frame Front Elevation**

Scale: 1/2 Actual Size



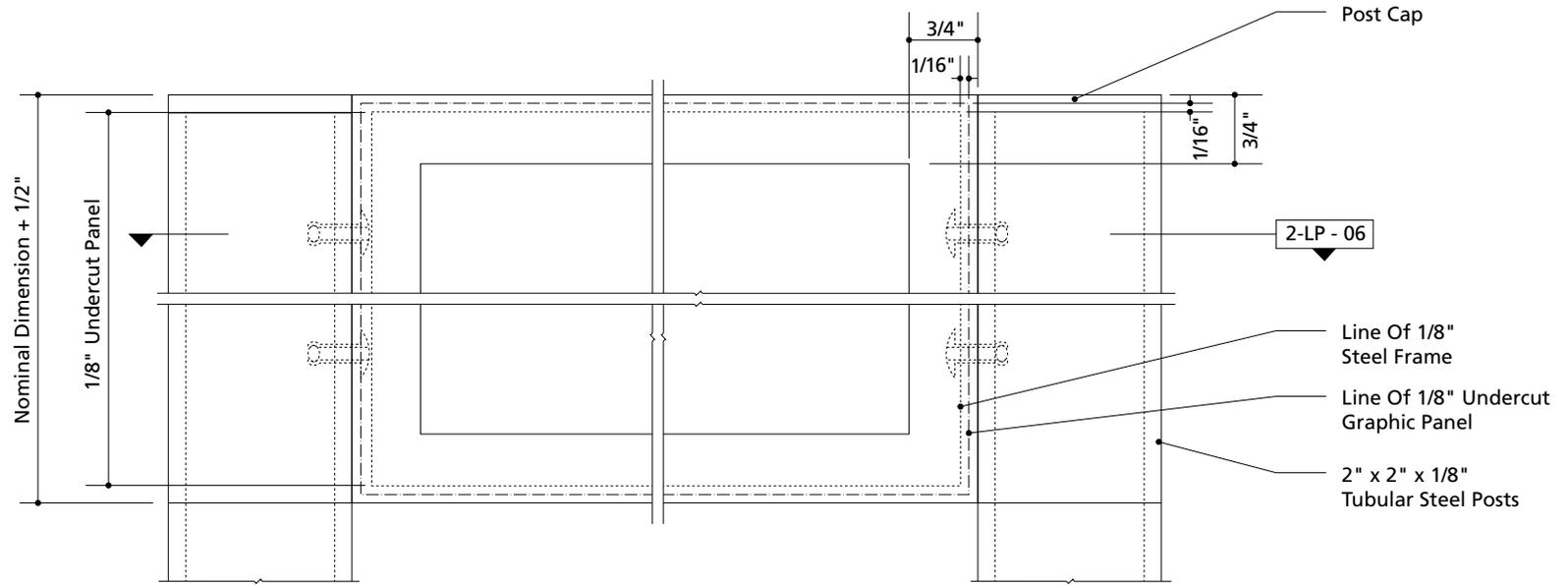
**2-LP - 04 Frame Top Section Cut**

Scale: 1/2 Actual Size



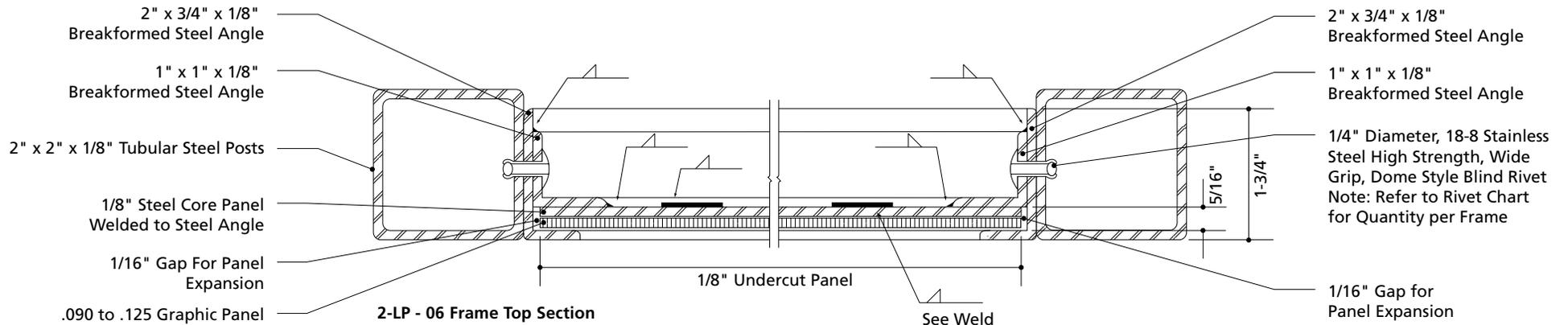
# Low Profile (LP): 2" x 2" Post

## Steel Fabrication (Continued)



**1-LP - 06 Frame Front Elevation**

Scale: 1/2 Actual Size



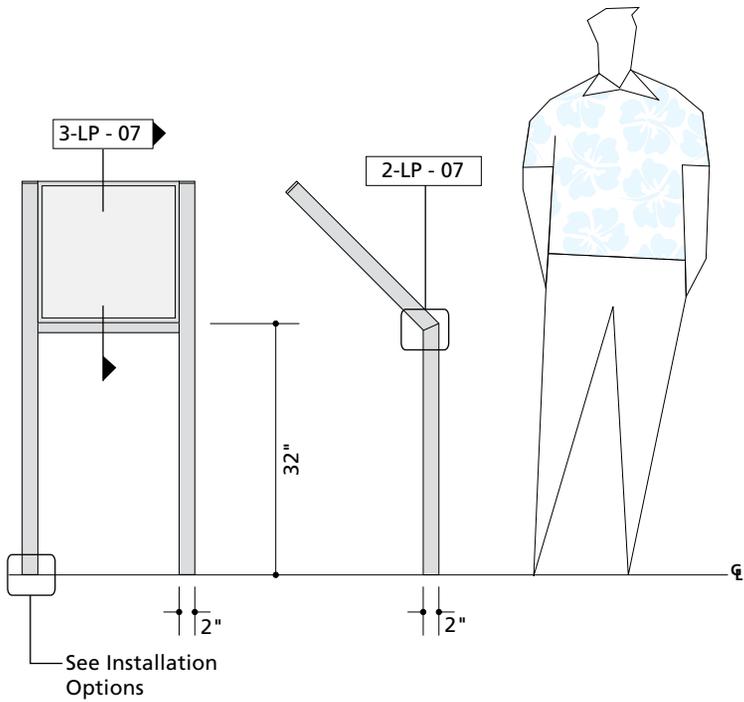
**2-LP - 06 Frame Top Section**

Scale: 1/2 Actual Size

See Weld Chart

# Low Profile (LP): 2" x 2" Post

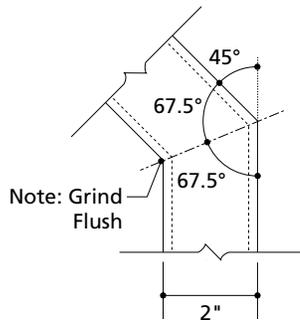
## Aluminum Fabrication



**1-LP - 07 Low Profile Elevation**

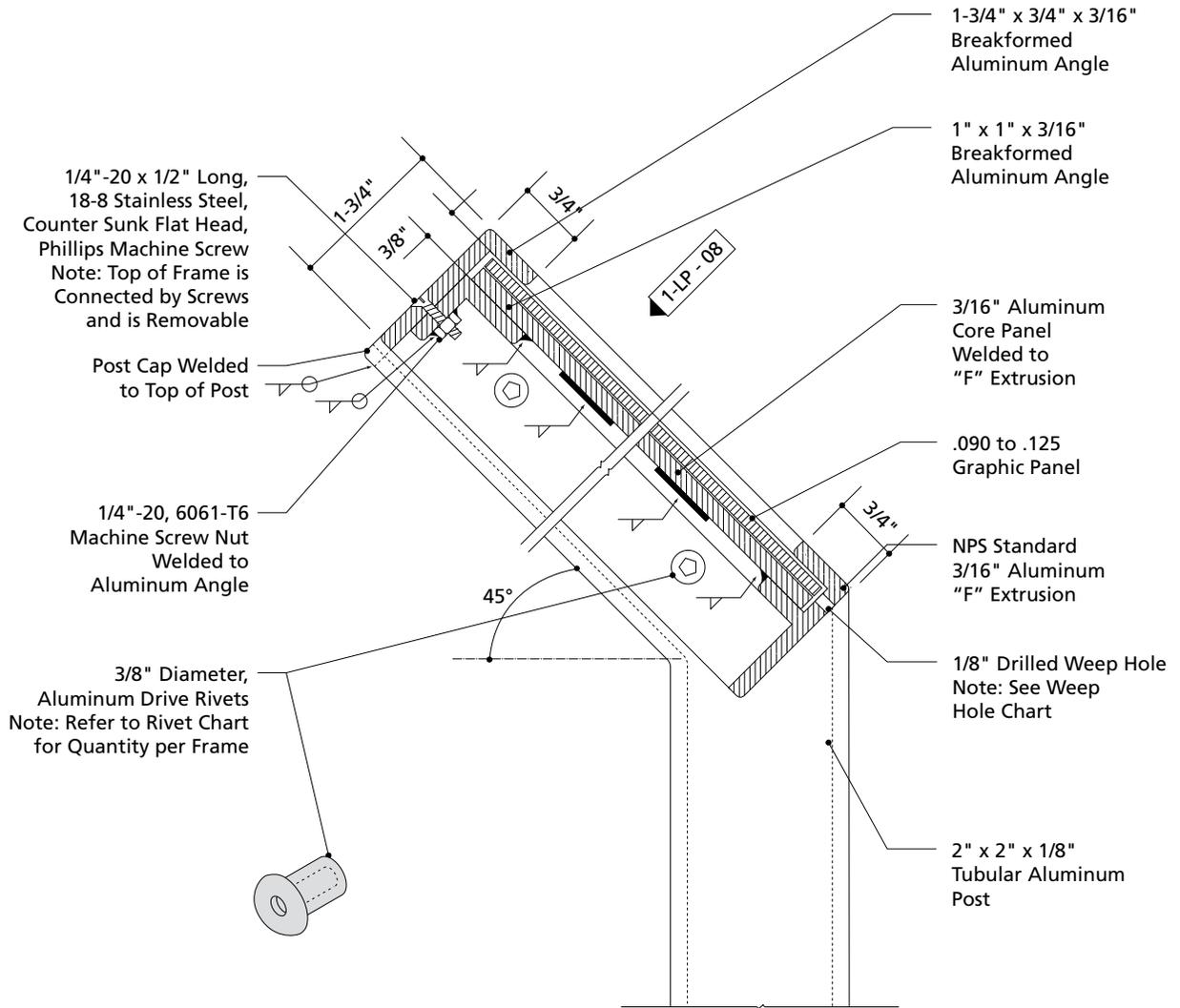
Scale: 1/2" = 1' - 0"

General Note:  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.



**2-LP - 07 Post Detail**

Scale: 3" = 1' - 0"

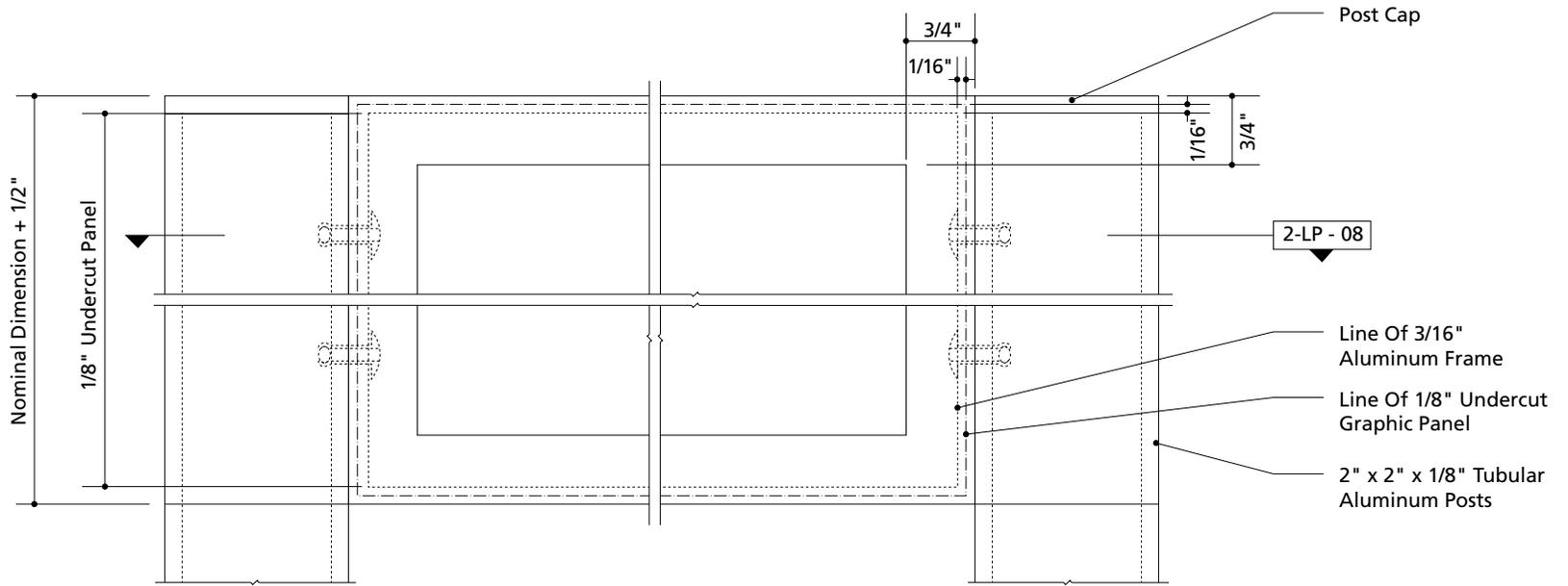


**3-LP - 07 Side Section Cut**

Scale: 1/2 Actual Size

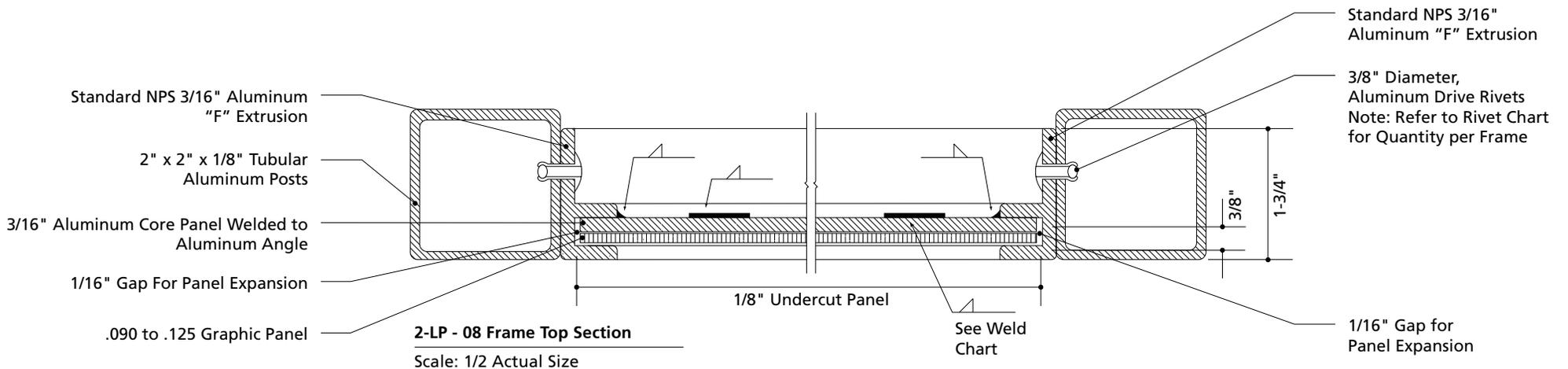
# Low Profile (LP): 2" x 2" Post

## Aluminum Fabrication (Continued)



**1-LP - 08 Frame Front Elevation**

Scale: 1/2 Actual Size

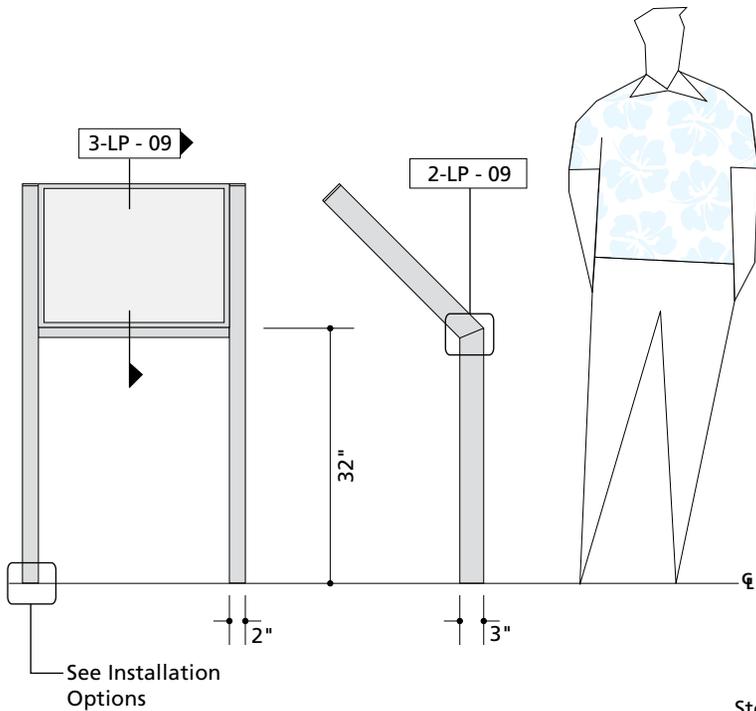


**2-LP - 08 Frame Top Section**

Scale: 1/2 Actual Size

# Low Profile (LP): 2" x 3" Post

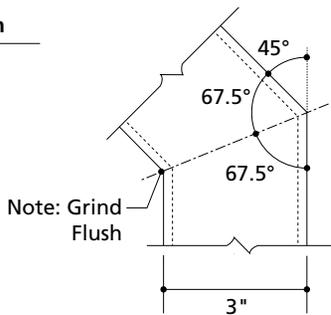
## Steel Fabrication



**1-LP - 09 Low Profile Elevation**

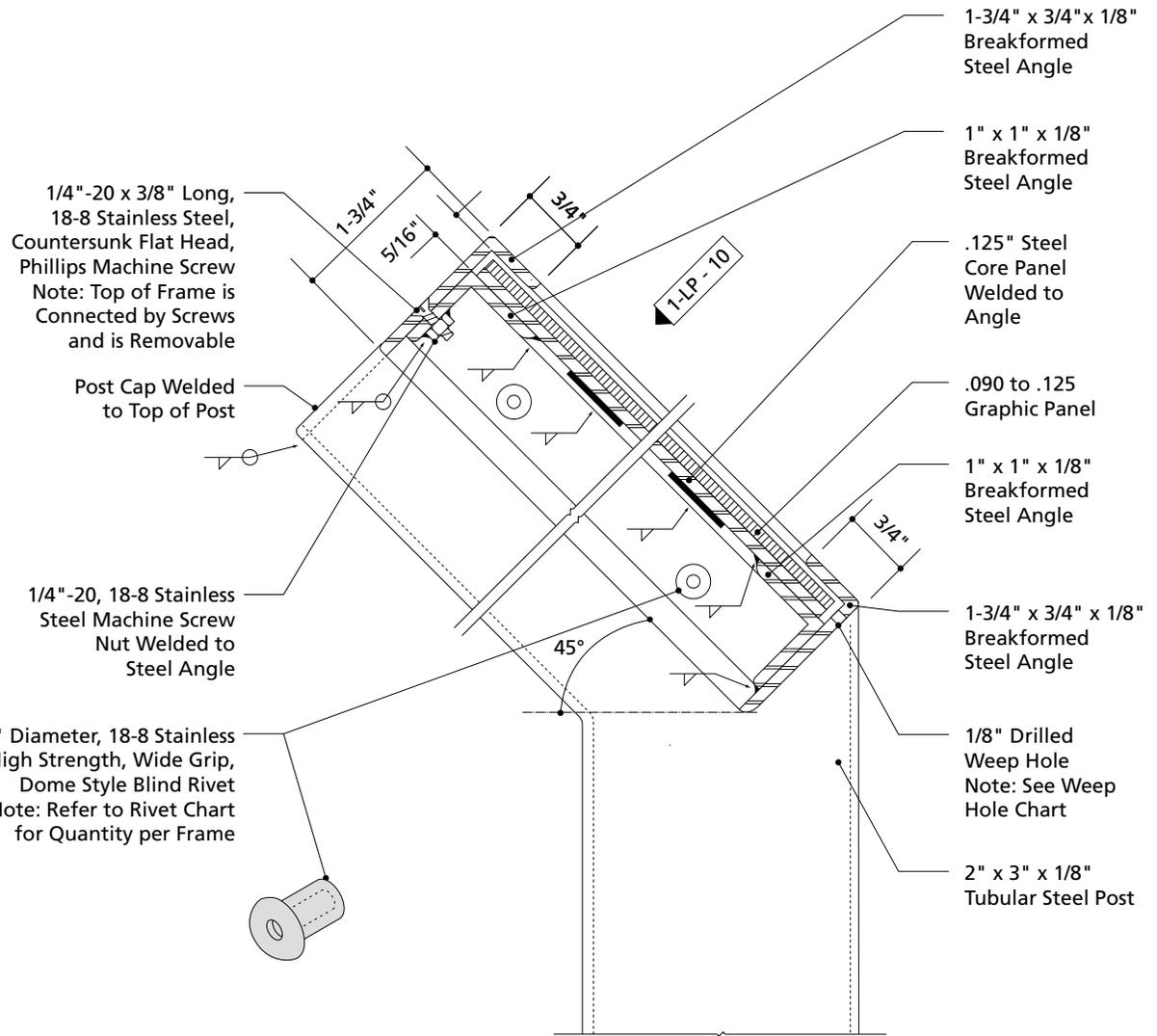
Scale: 1/2" = 1' - 0"

General Note:  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.



**2-LP - 09 Post Detail**

Scale: 3" = 1' - 0"

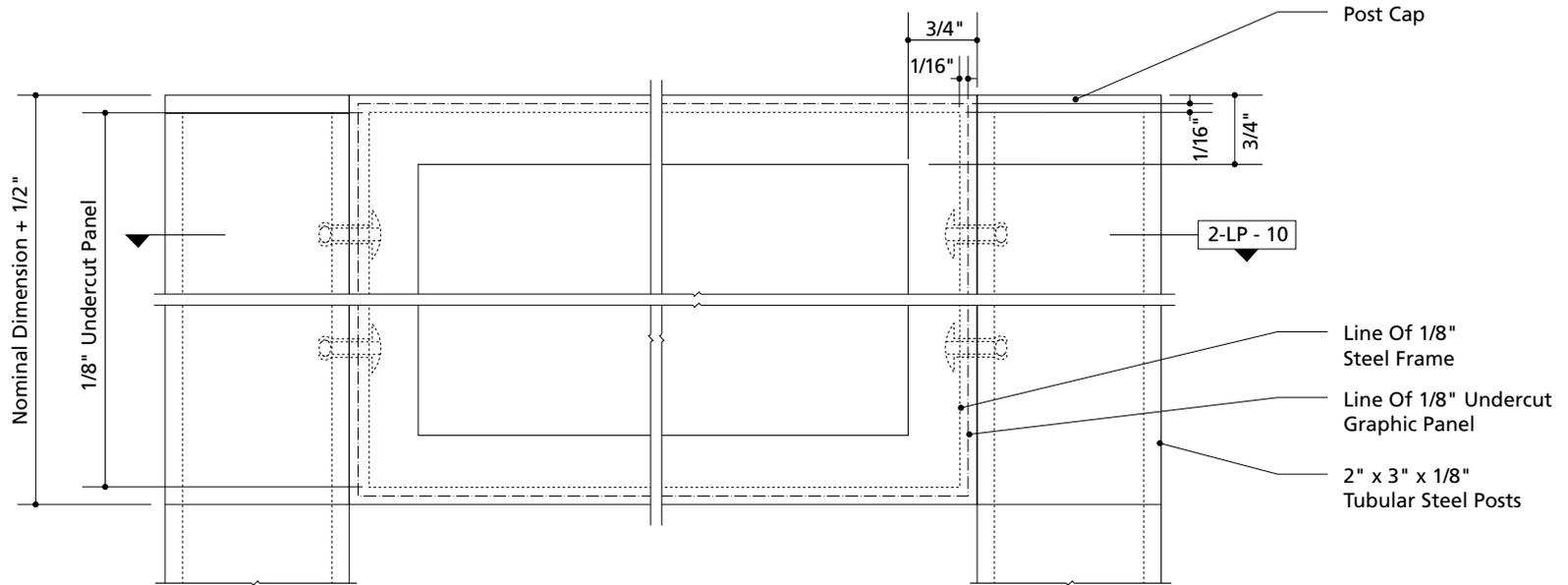


**3-LP - 09 Side Section Cut**

Scale: 1/2 Actual Size

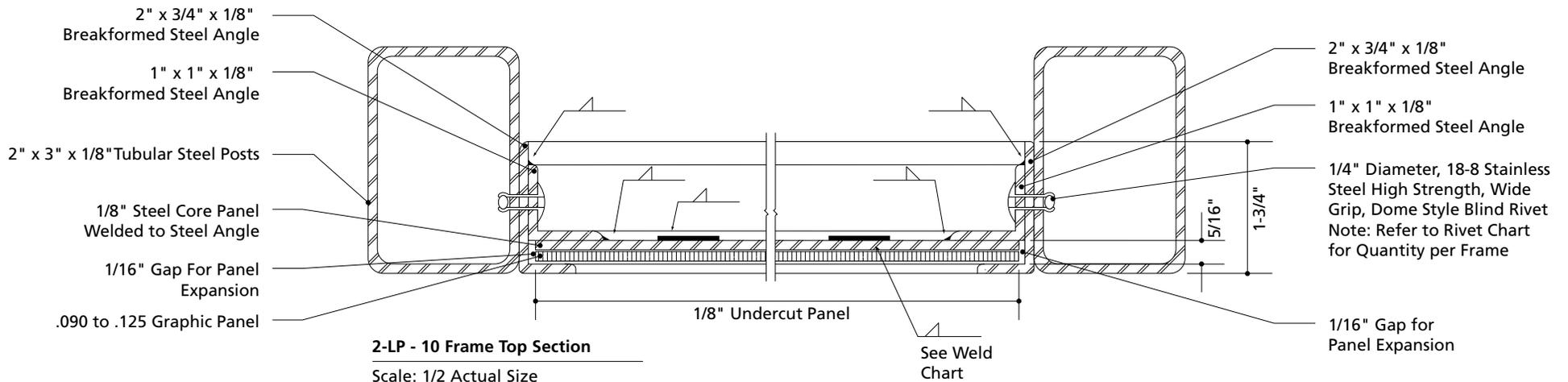
# Low Profile (LP): 2" x 3" Post

## Steel Fabrication (Continued)



**1-LP - 10 Frame Front Elevation**

Scale: 1/2 Actual Size

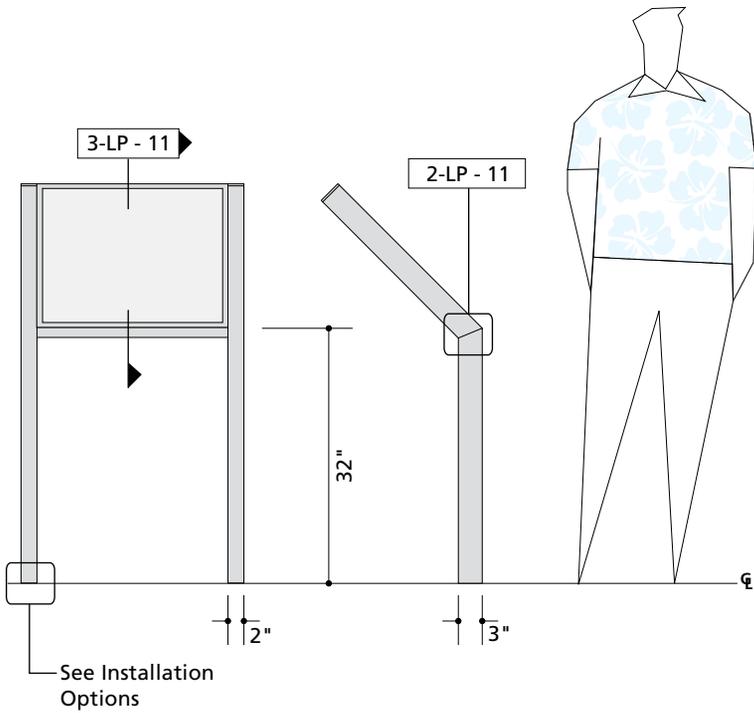


**2-LP - 10 Frame Top Section**

Scale: 1/2 Actual Size

# Low Profile (LP): 2" x 3" Post

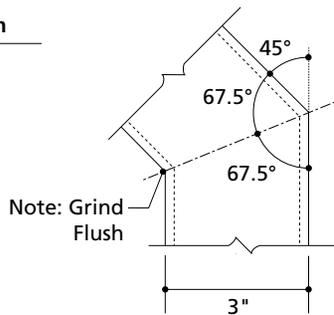
## Aluminum Fabrication



**1-LP - 11 Low Profile Elevation**

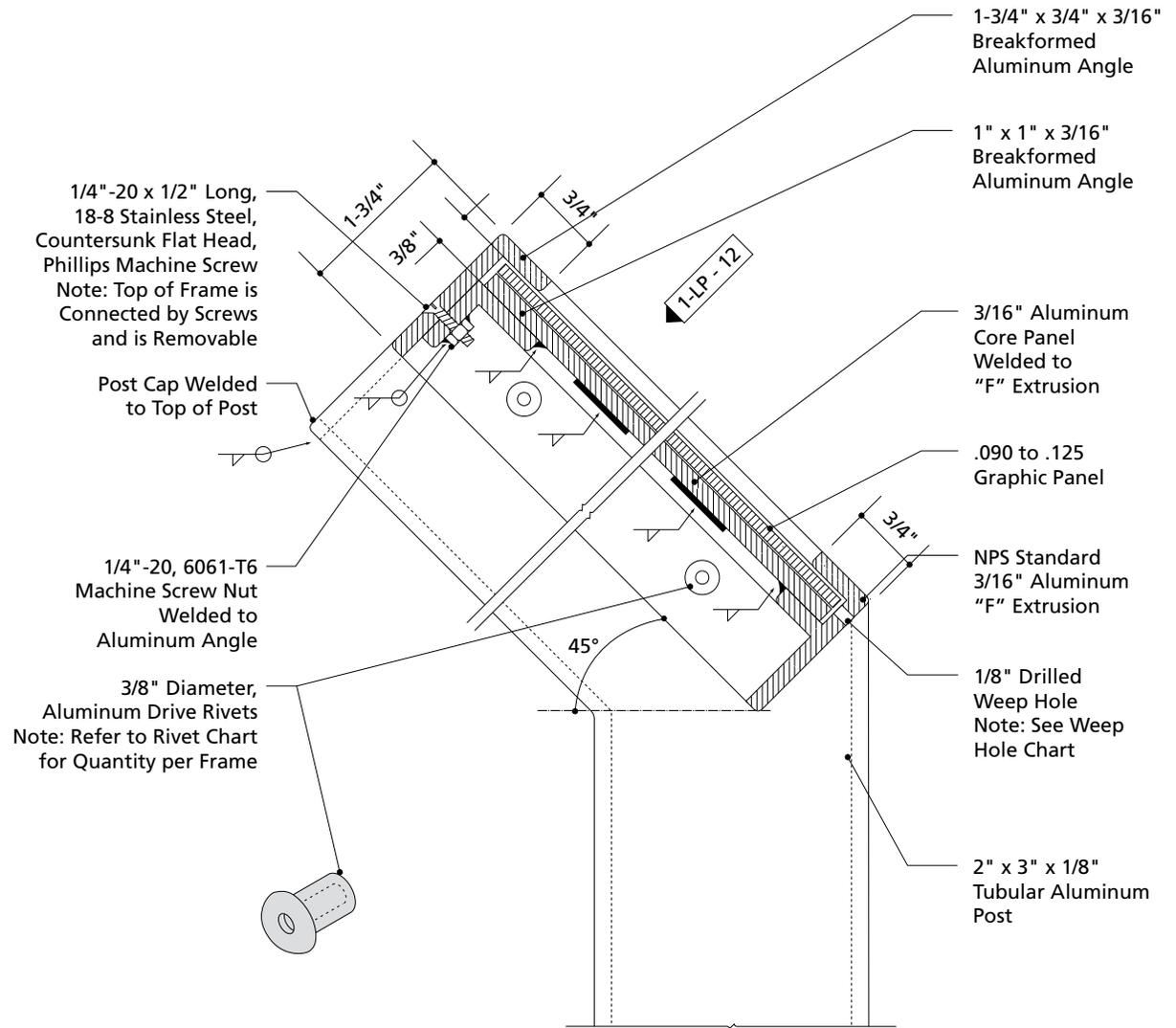
Scale: 1/2" = 1' - 0"

General Note:  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.



**2-LP - 11 Post Detail**

Scale: 3" = 1' - 0"

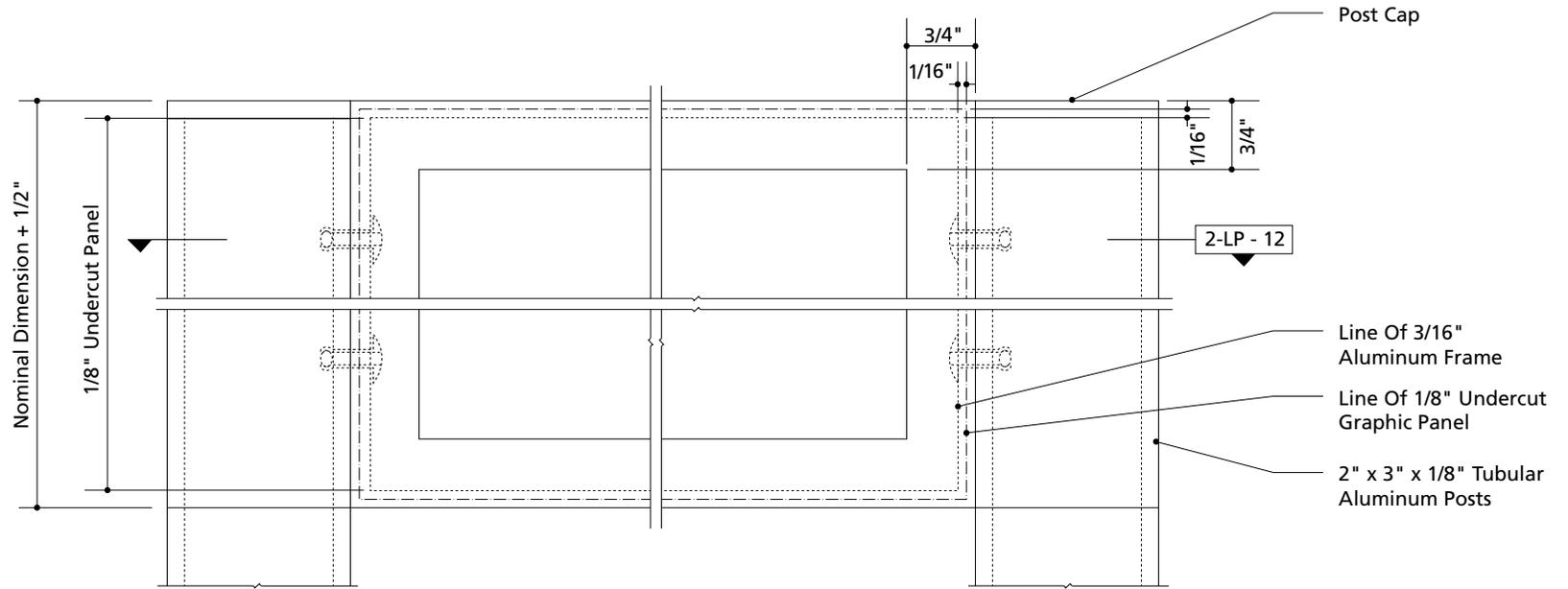


**3-LP - 11 Side Section Cut**

Scale: 1/2 Actual Size

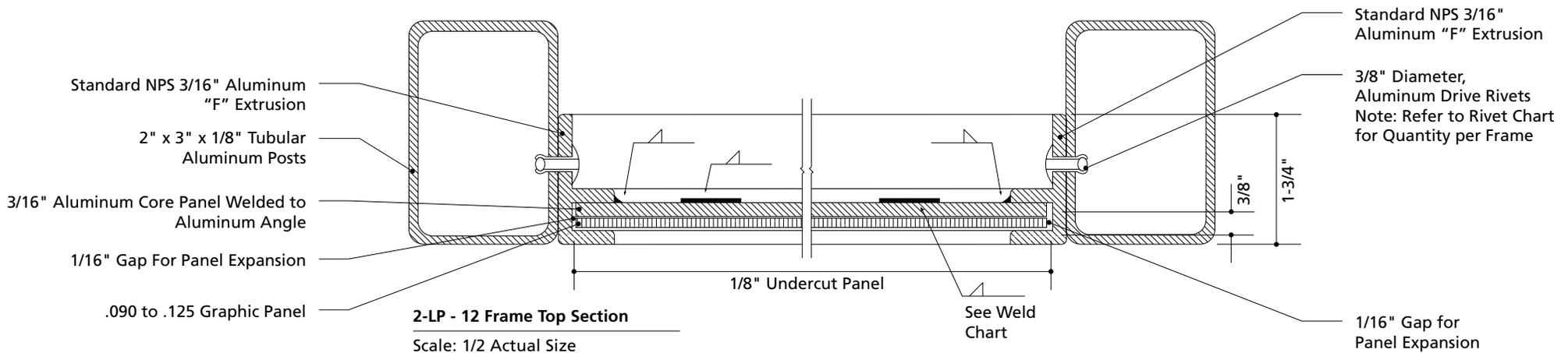
# Low Profile (LP): 2" x 3" Post

## Aluminum Fabrication (Continued)



**1-LP - 12 Frame Front Elevation**

Scale: 1/2 Actual Size



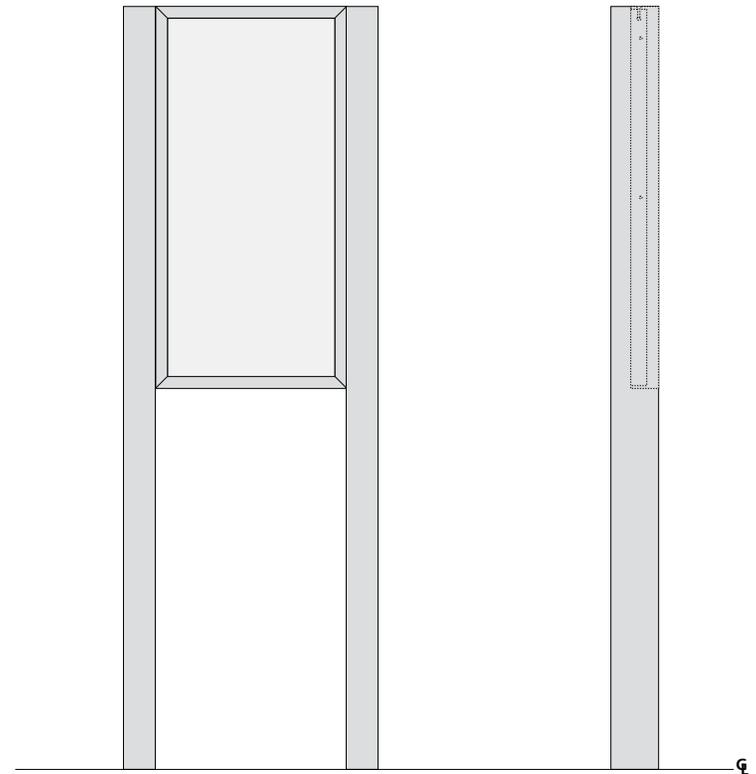
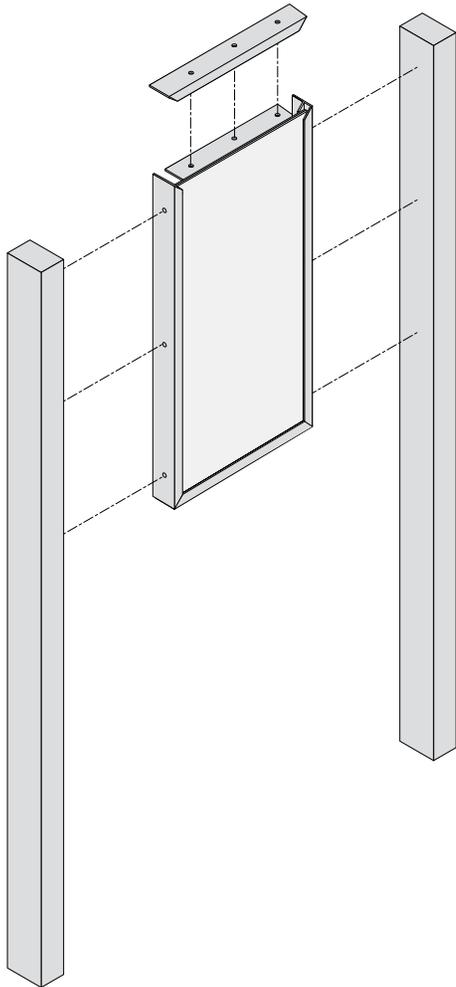
**2-LP - 12 Frame Top Section**

Scale: 1/2 Actual Size

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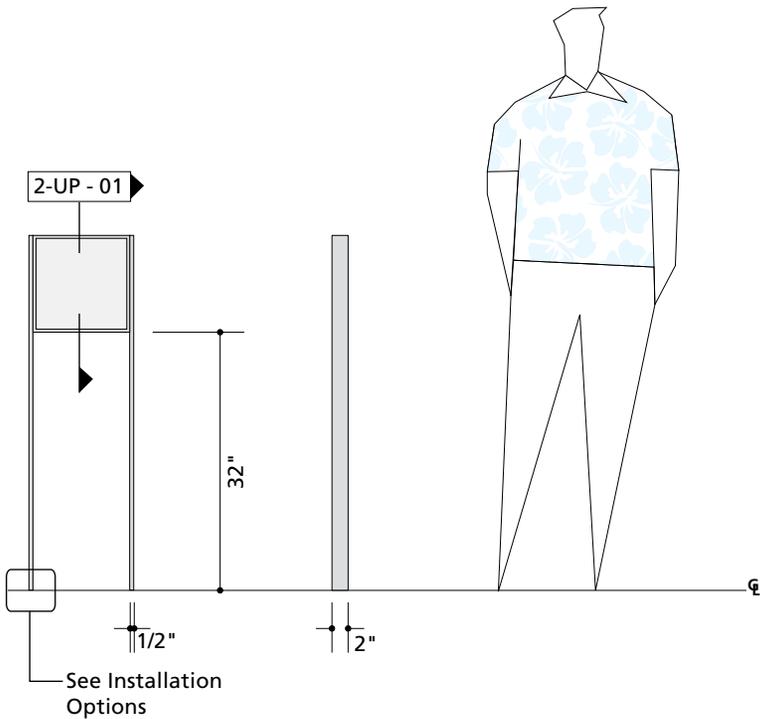
## Upright Series (UP)

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# Upright Series (UP): Barstock Post

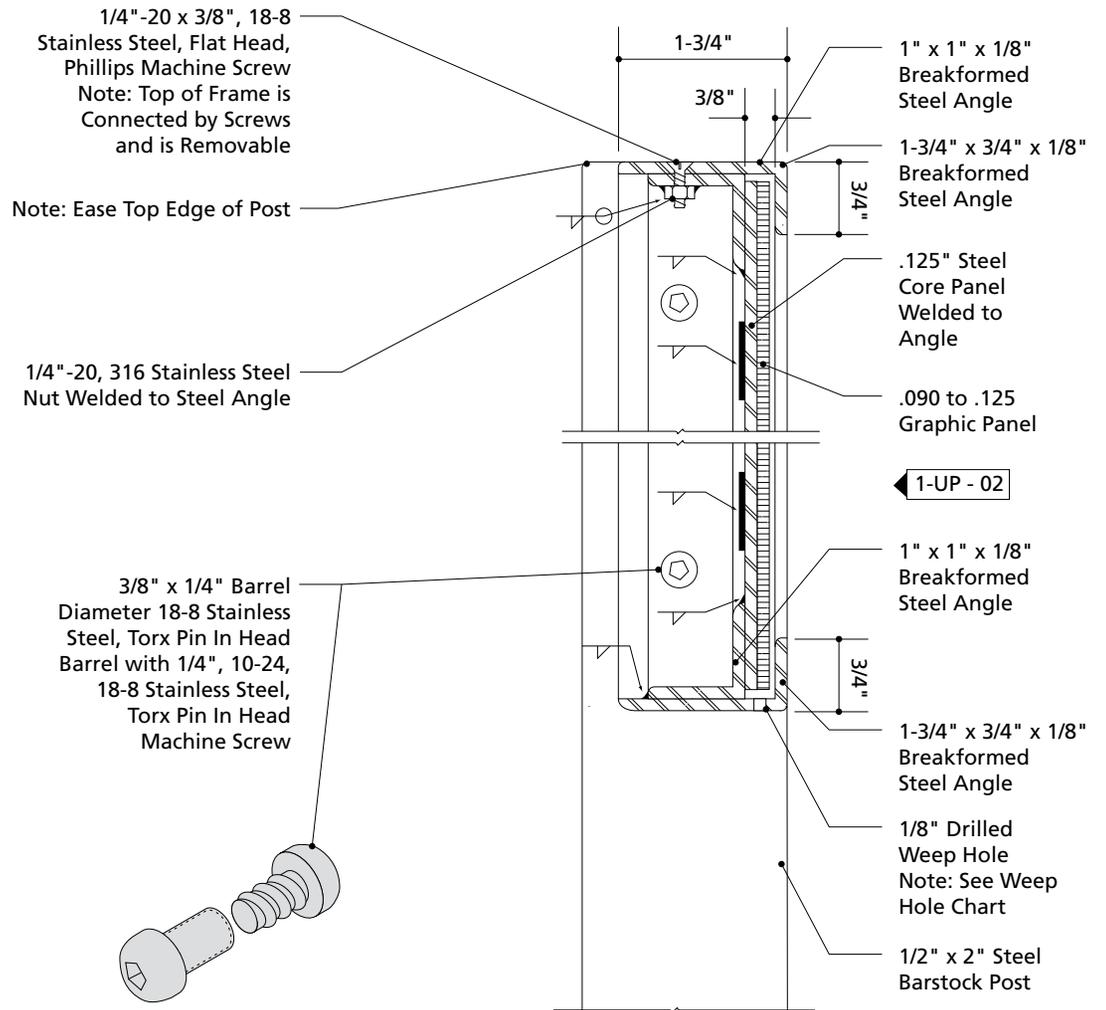
## Single-sided Steel Fabrication



**1-UP - 01 Upright Elevation**

Scale: 1/2" = 1' - 0"

General Note:  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

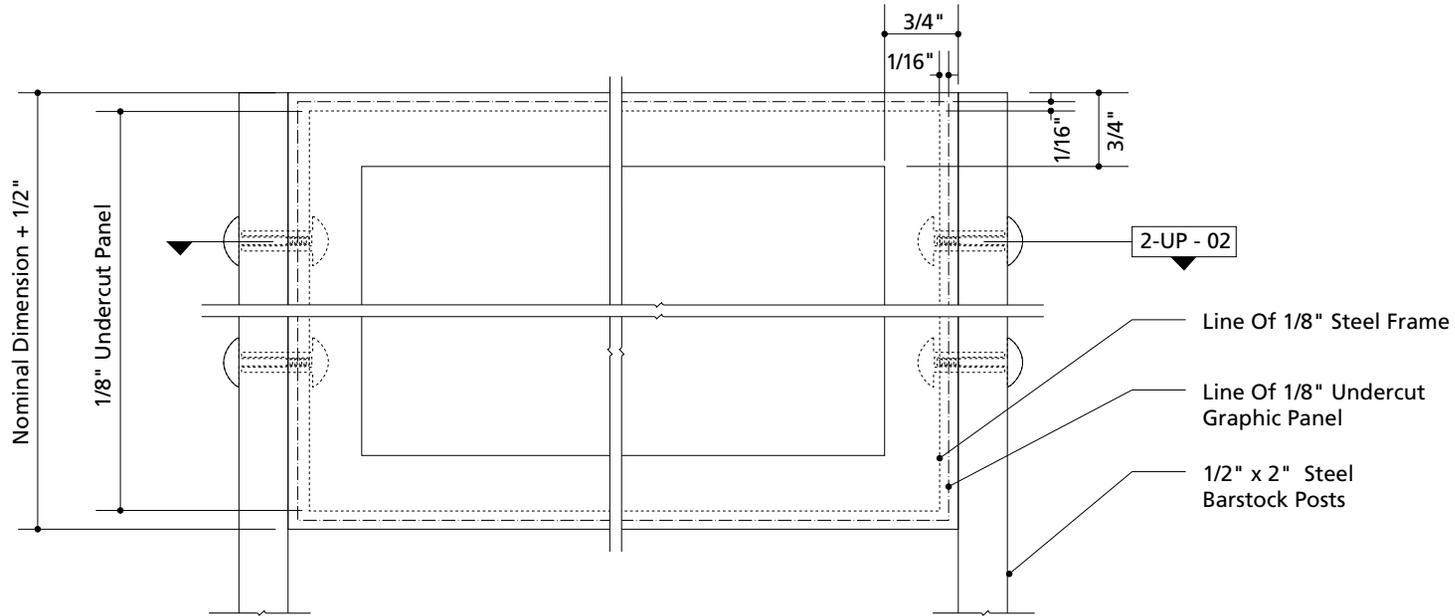


**2-UP - 01 Side Section Cut**

Scale: 1/2 Actual Size

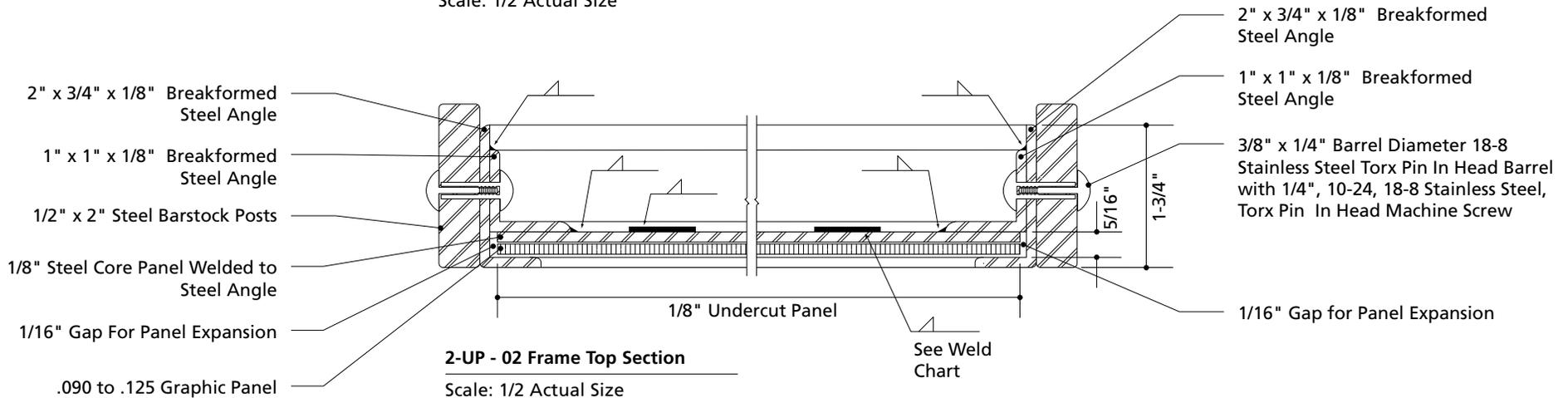
# Upright Series (UP): Barstock Post

## Single-sided Steel Fabrication (Continued)



**1-UP - 02 Frame Front Elevation**

Scale: 1/2 Actual Size

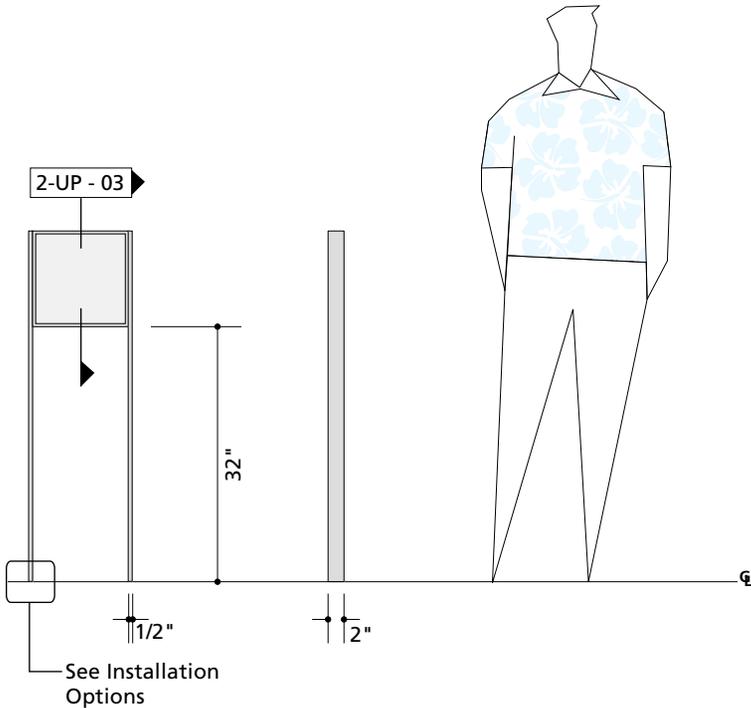


**2-UP - 02 Frame Top Section**

Scale: 1/2 Actual Size

# Upright Series (UP): Barstock Post

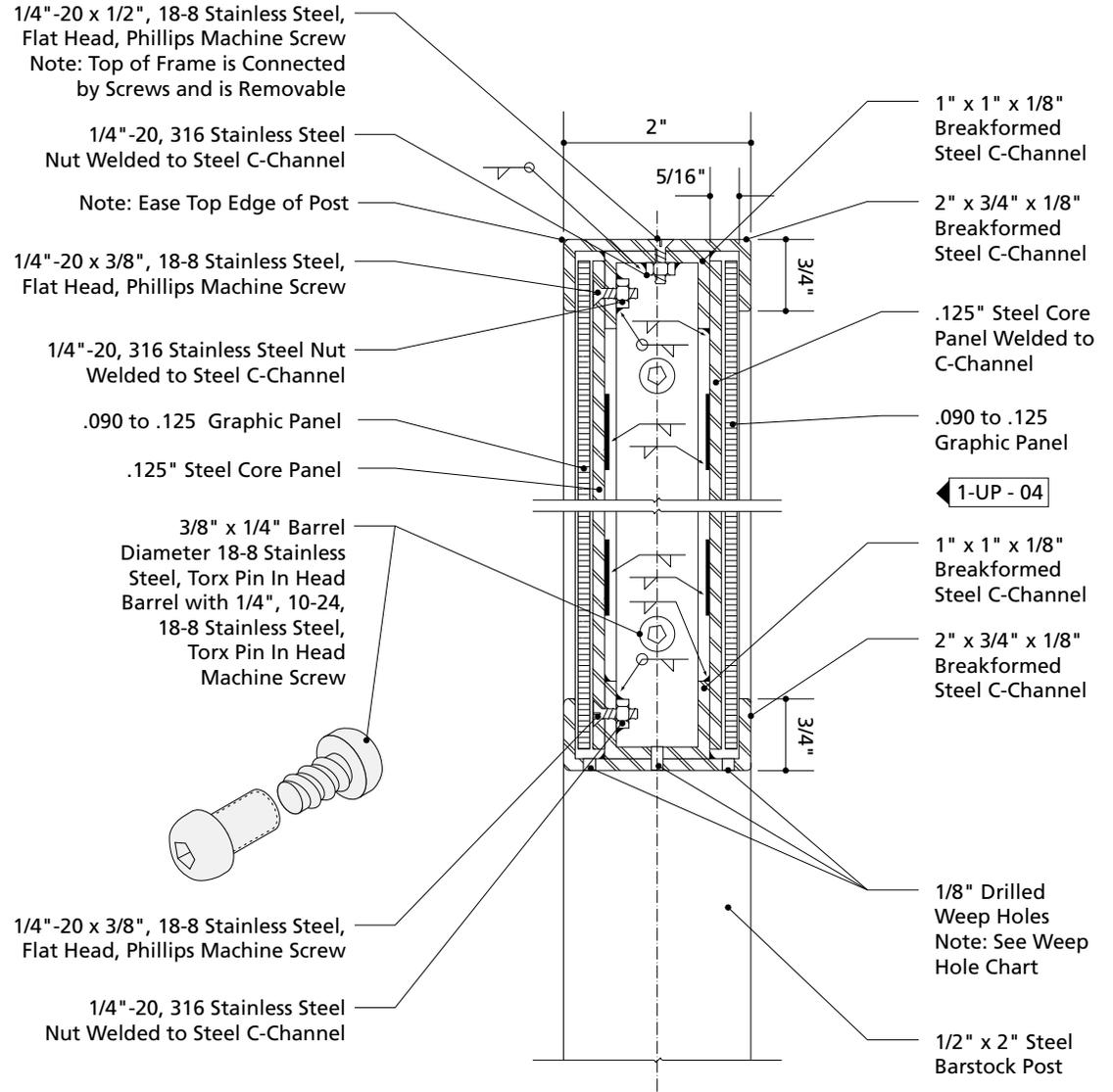
## Double-sided Steel Fabrication



**1-UP - 03 Upright Elevation**

Scale: 1/2" = 1'-0"

General Note:  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.



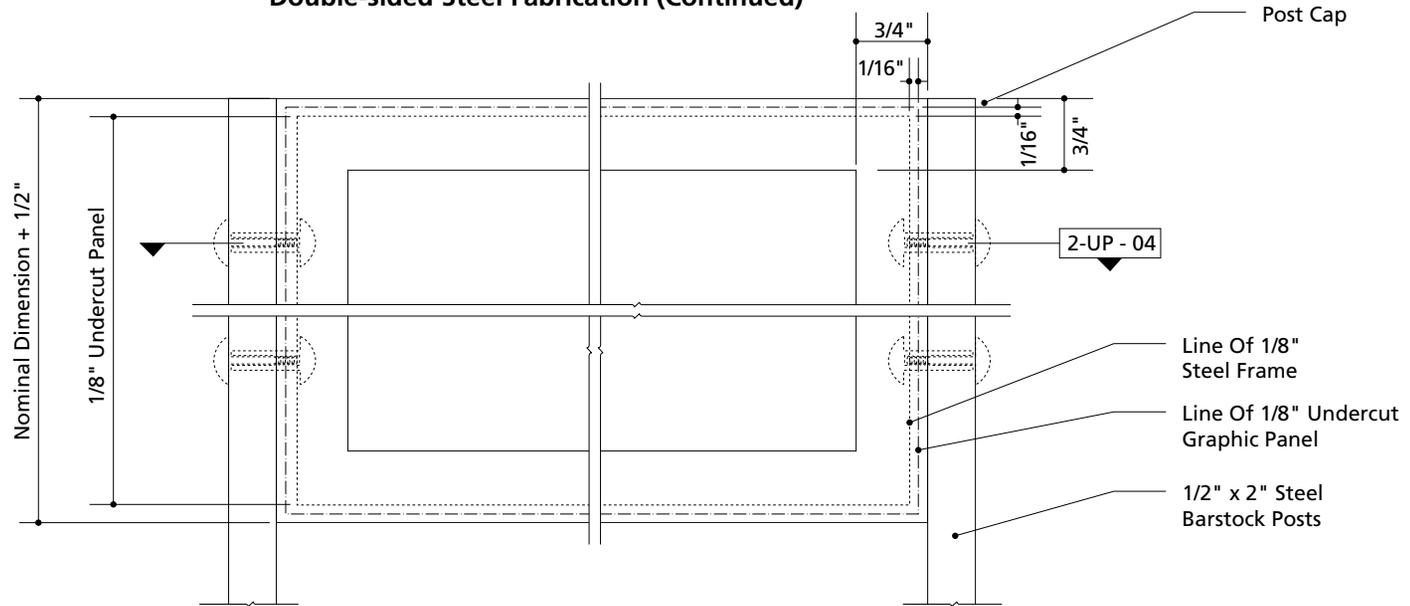
**2-UP - 03 Side Section Cut**

Scale: 1/2 Actual Size

UP - 03

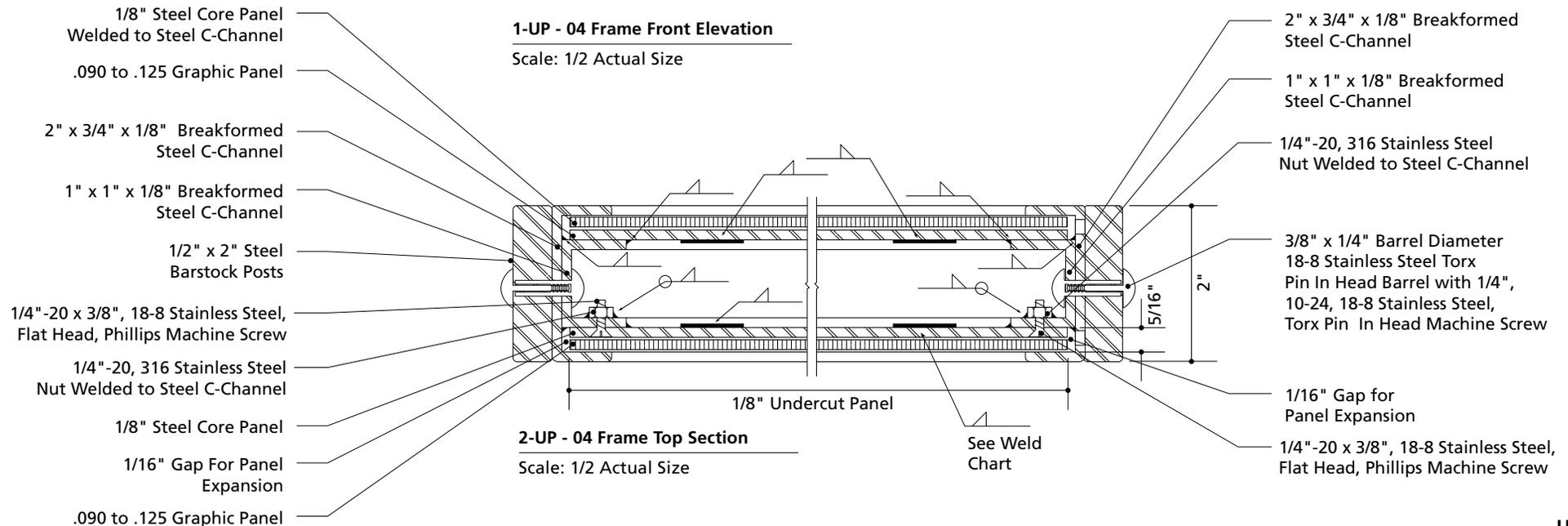
# Upright Series (UP): Barstock Post

## Double-sided Steel Fabrication (Continued)



**1-UP - 04 Frame Front Elevation**

Scale: 1/2 Actual Size



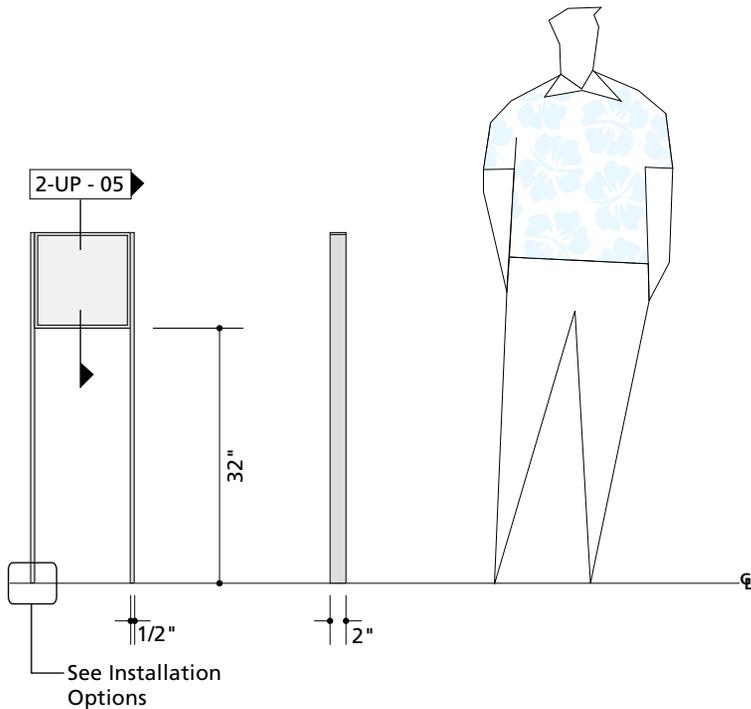
**2-UP - 04 Frame Top Section**

Scale: 1/2 Actual Size

See Weld Chart

# Upright Series (UP): Barstock Post

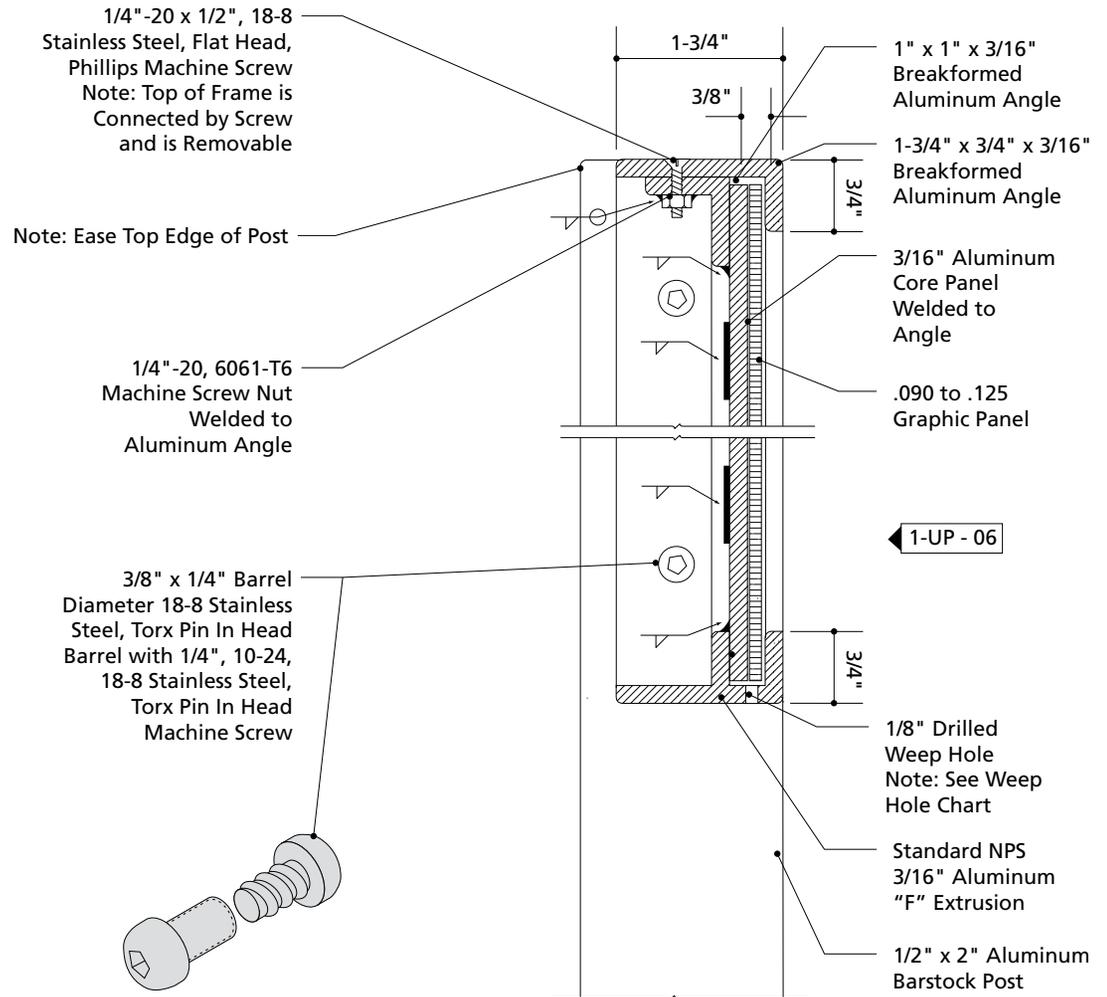
## Single-sided Aluminum Fabrication



**1-UP - 05 Upright Elevation**

Scale: 1/2" = 1' -0"

**General Note:**  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

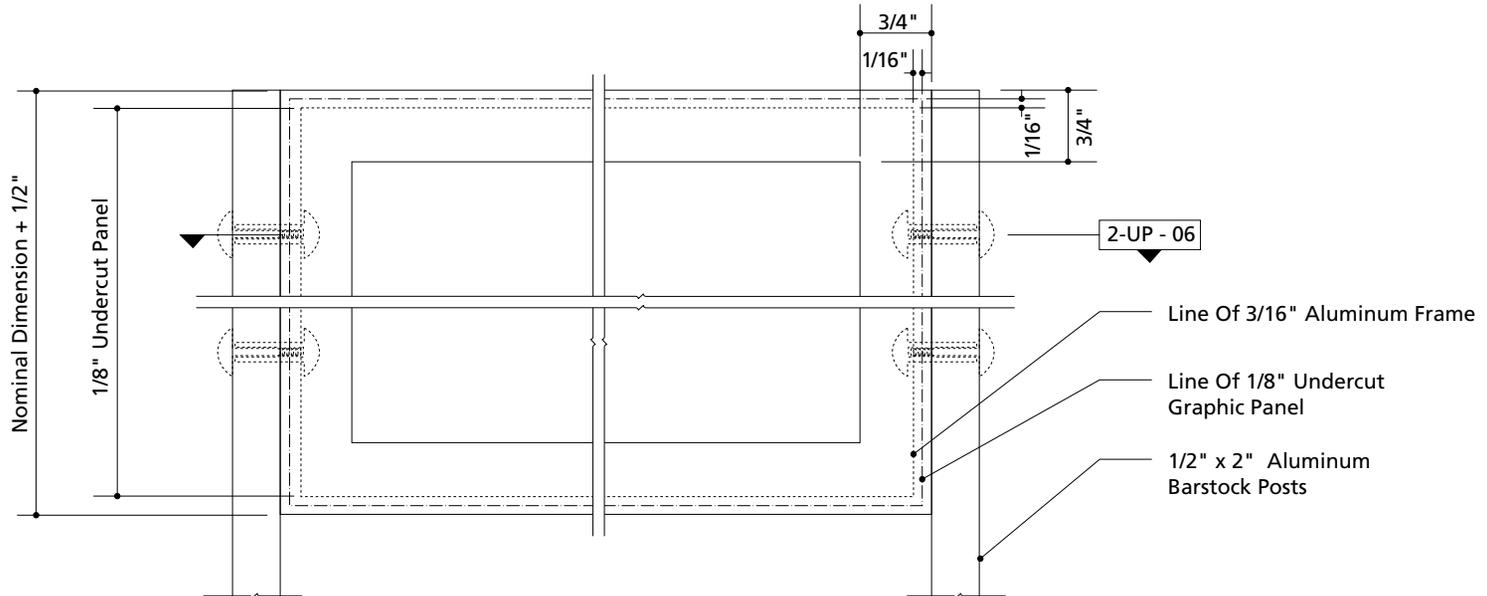


**2-UP - 05 Side Section Cut**

Scale: 1/2 Actual Size

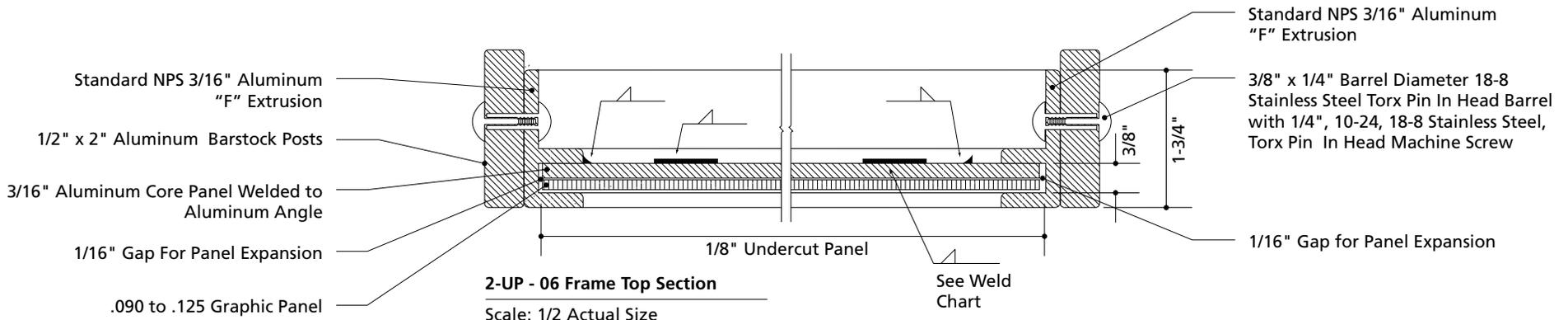
# Upright Series (UP): Barstock Post

## Single-sided Aluminum Fabrication (Continued)



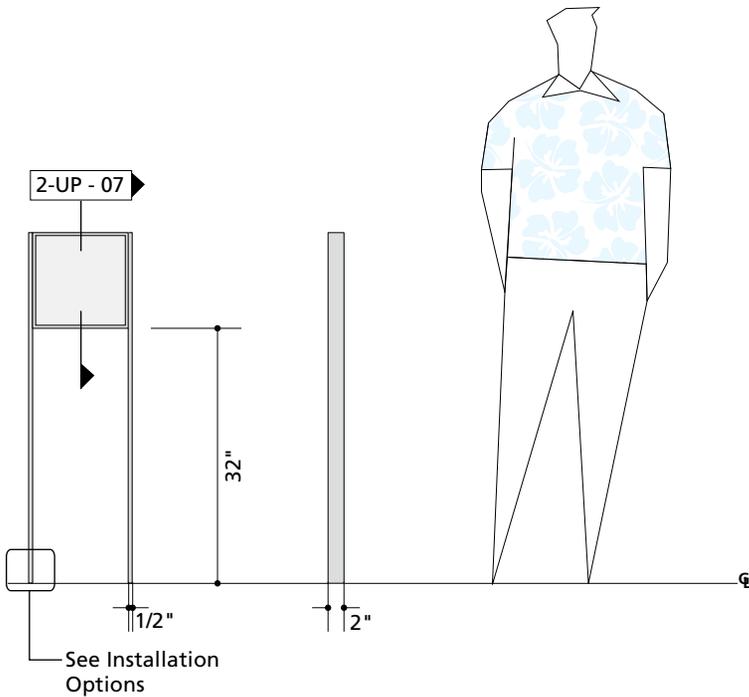
**1-UP - 06 Frame Front Elevation**

Scale: 1/2 Actual Size



# Upright Series (UP): Barstock Post

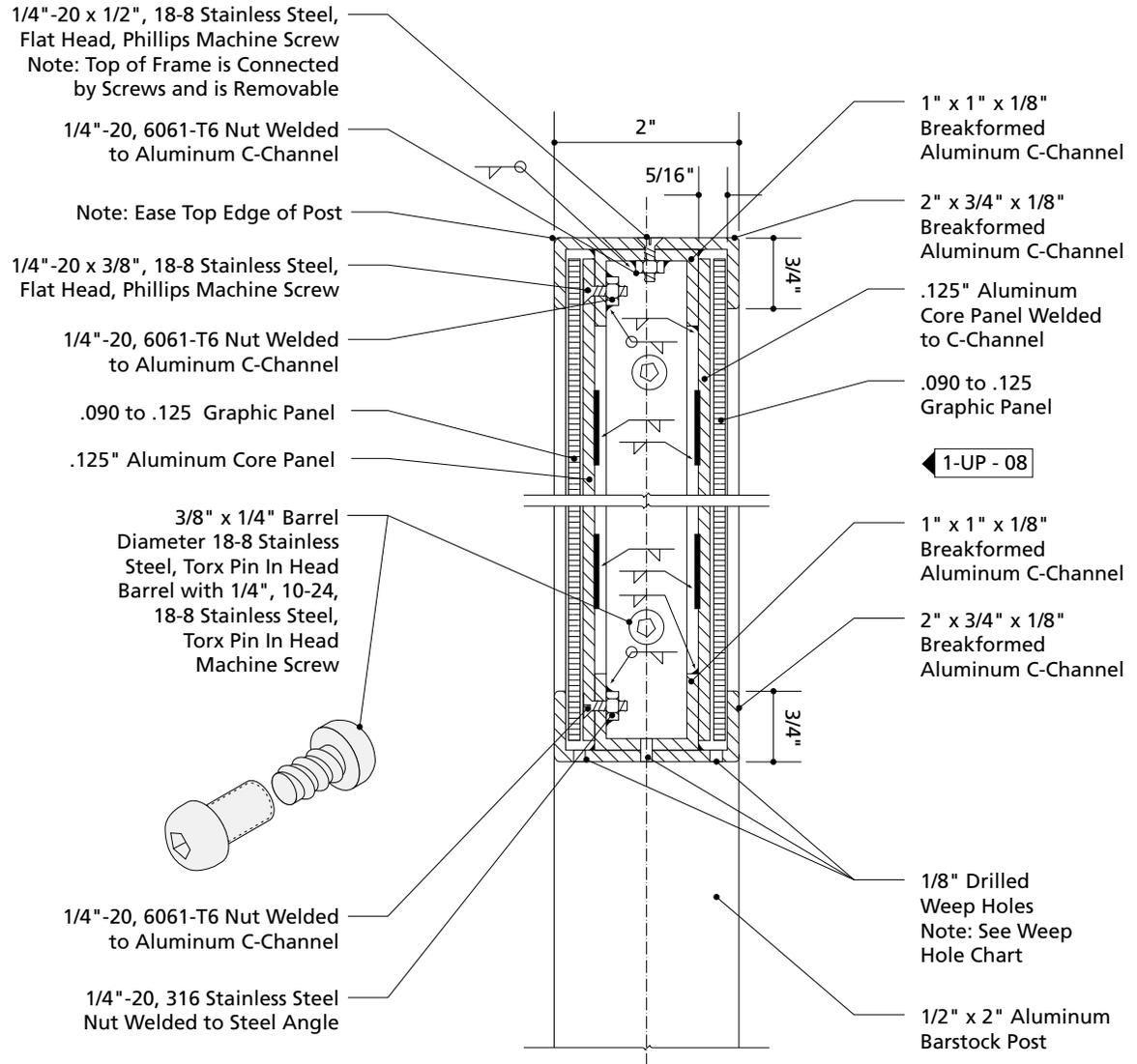
## Double-sided Aluminum Fabrication



**1-UP - 07 Upright Elevation**

Scale: 1/2" = 1' - 0"

**General Note:**  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

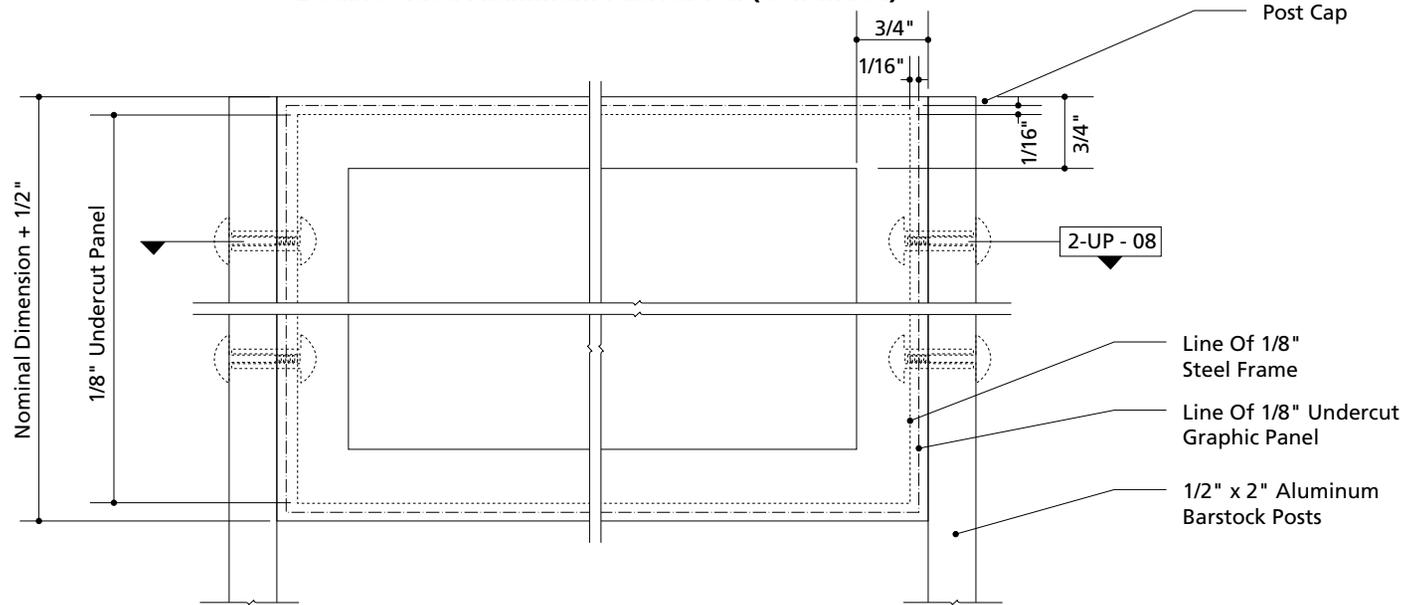


**2-UP - 07 Side Section Cut**

Scale: 1/2 Actual Size

# Upright Series (UP): Barstock Post

## Double-sided Aluminum Fabrication (Continued)



- 1/8" Aluminum Core Panel Welded to Aluminum C-Channel
- .090 to .125 Graphic Panel
- 2" x 3/4" x 1/8" Breakformed Aluminum C-Channel
- 1" x 1" x 1/8" Breakformed Aluminum C-Channel
- 1/2" x 2" Aluminum Barstock Posts
- 1/4"-20 x 3/8", 18-8 Stainless Steel, Flat Head, Phillips Machine Screw
- 1/4"-20, 5056 Nut Welded to Aluminum C-Channel
- 1/8" Aluminum Core Panel
- 1/16" Gap For Panel Expansion
- .090 to .125 Graphic Panel

**1-UP - 08 Frame Front Elevation**

Scale: 1/2 Actual Size

- Line Of 1/8" Steel Frame
- Line Of 1/8" Undercut Graphic Panel
- 1/2" x 2" Aluminum Barstock Posts

- 2" x 3/4" x 1/8" Breakformed Aluminum C-Channel
- 1" x 1" x 1/8" Breakformed Aluminum C-Channel
- 1/4"-20, 5056 Nut Welded to Aluminum C-Channel
- 3/8" x 1/4" Barrel Diameter 18-8 Stainless Steel Torx Pin In Head Barrel with 1/4", 10-24, 18-8 Stainless Steel, Torx Pin In Head Machine Screw
- 1/16" Gap for Panel Expansion
- 1/4"-20 x 3/8", 18-8 Stainless Steel, Flat Head, Phillips Machine Screw

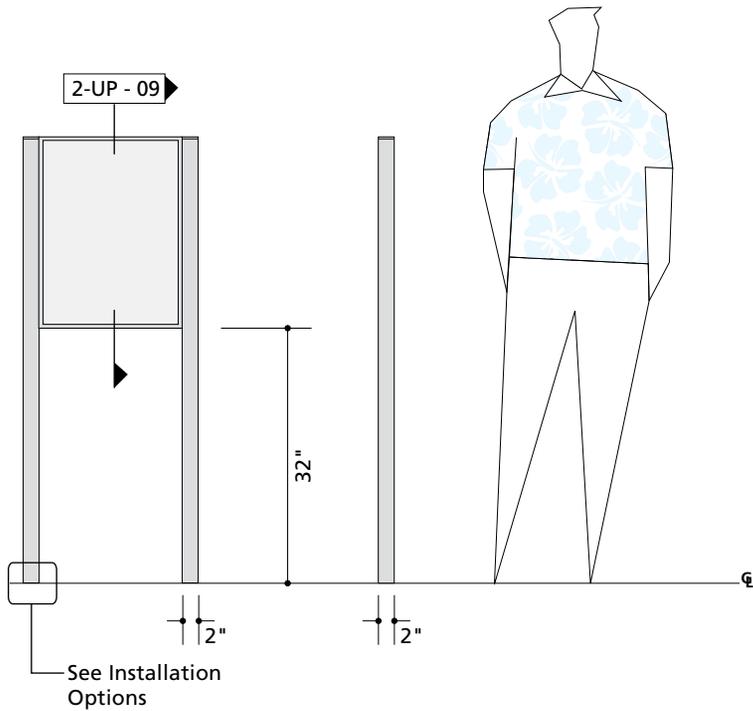
**2-UP - 08 Frame Top Section**

Scale: 1/2 Actual Size

See Weld Chart

# Upright Series (UP): 2" x 2" Post

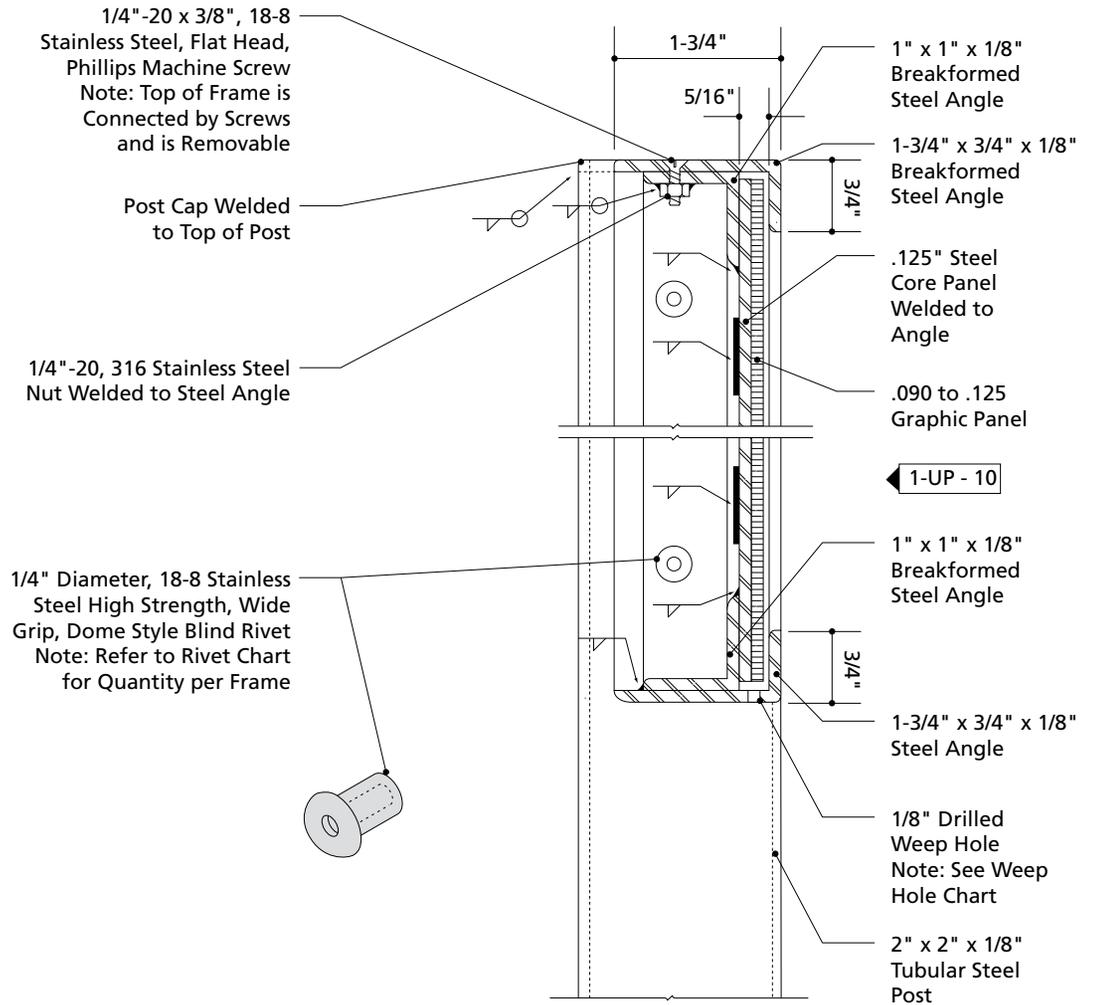
## Single-sided Steel Fabrication



**1-UP - 09 Upright Elevation**

Scale: 1/2" = 1' -0"

**General Note:**  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

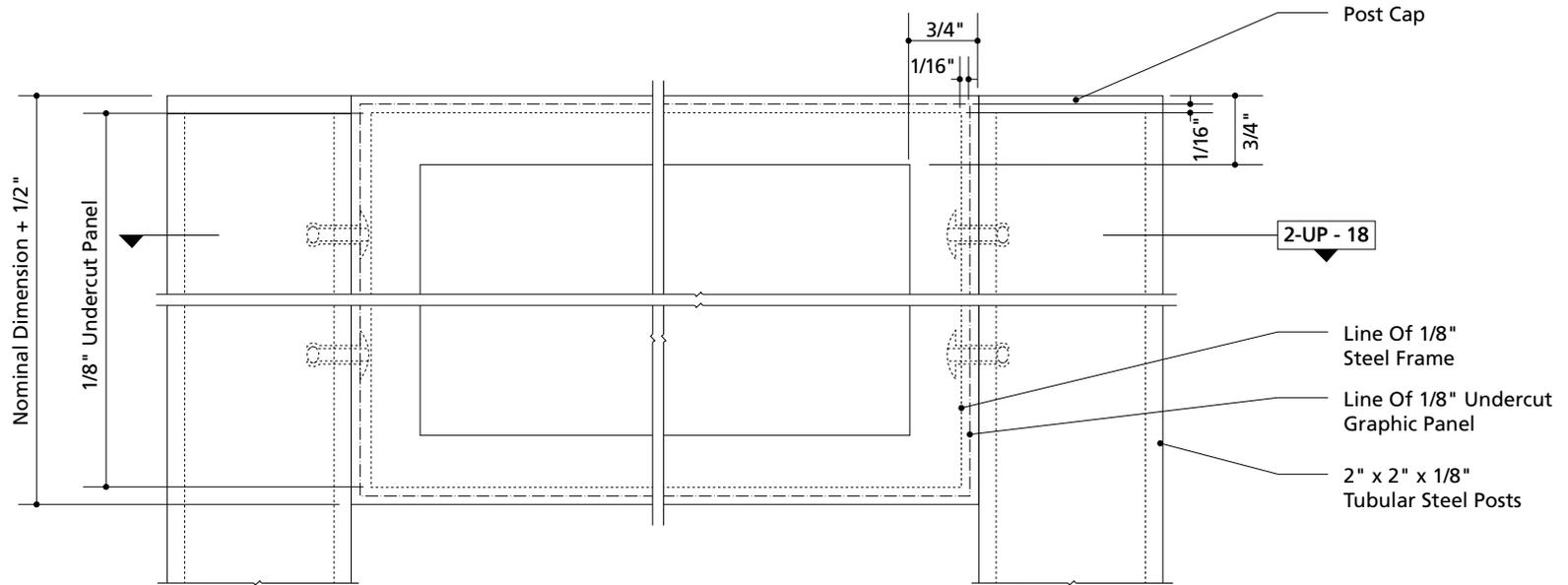


**2-UP - 09 Side Section Cut**

Scale: 1/2 Actual Size

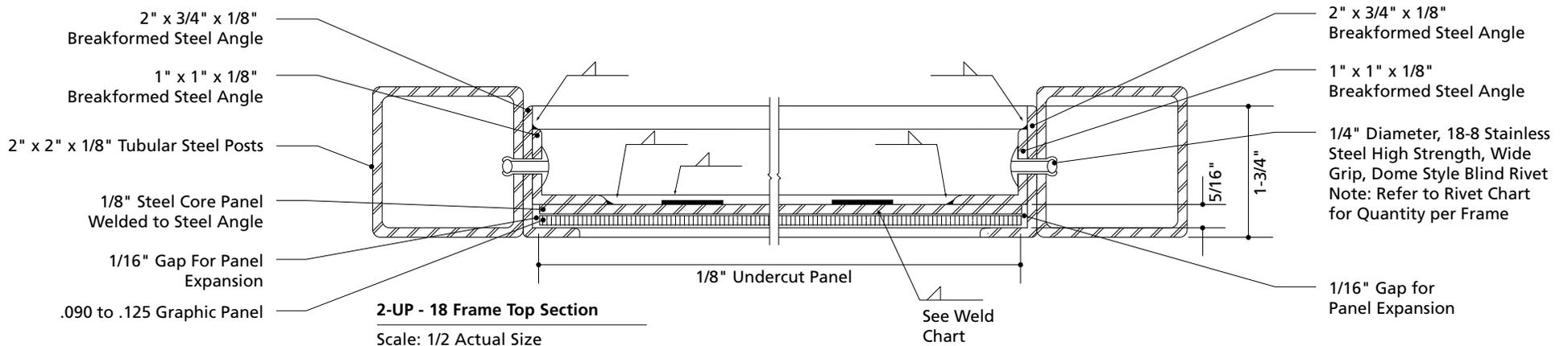
# Upright Series (UP): 2" x 2" Post

## Single-sided Steel Fabrication (Continued)



**1-UP - 18 Frame Front Elevation**

Scale: 1/2 Actual Size



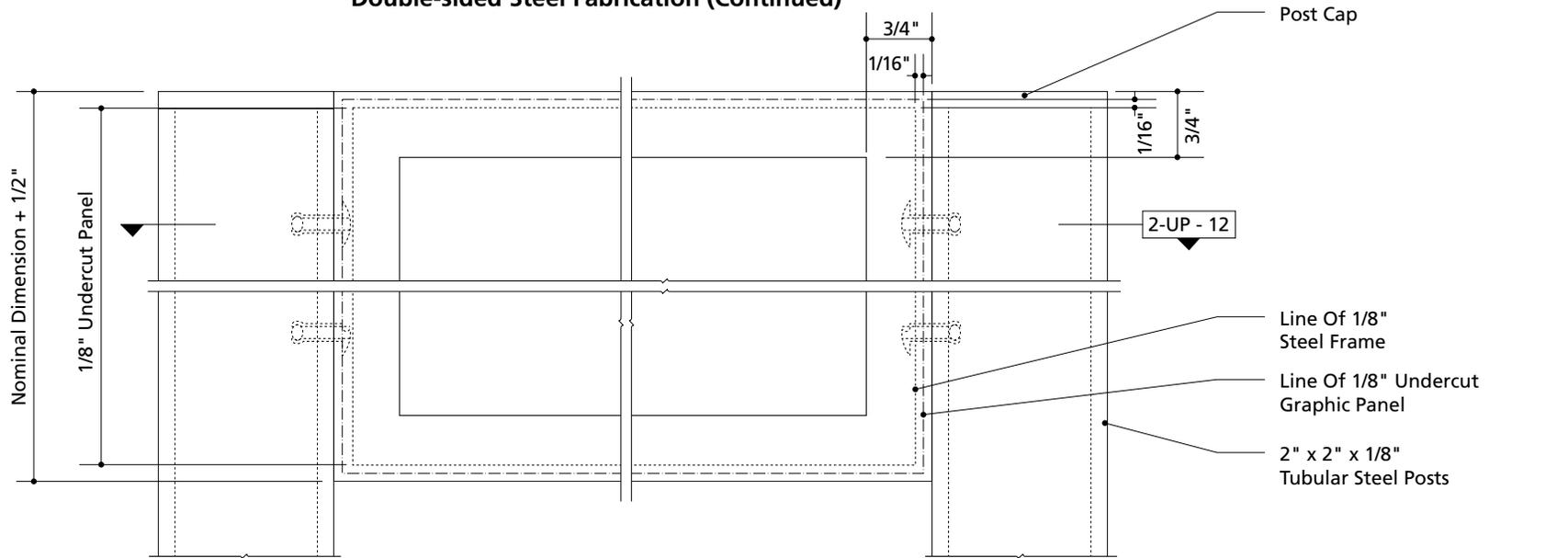
**2-UP - 18 Frame Top Section**

Scale: 1/2 Actual Size



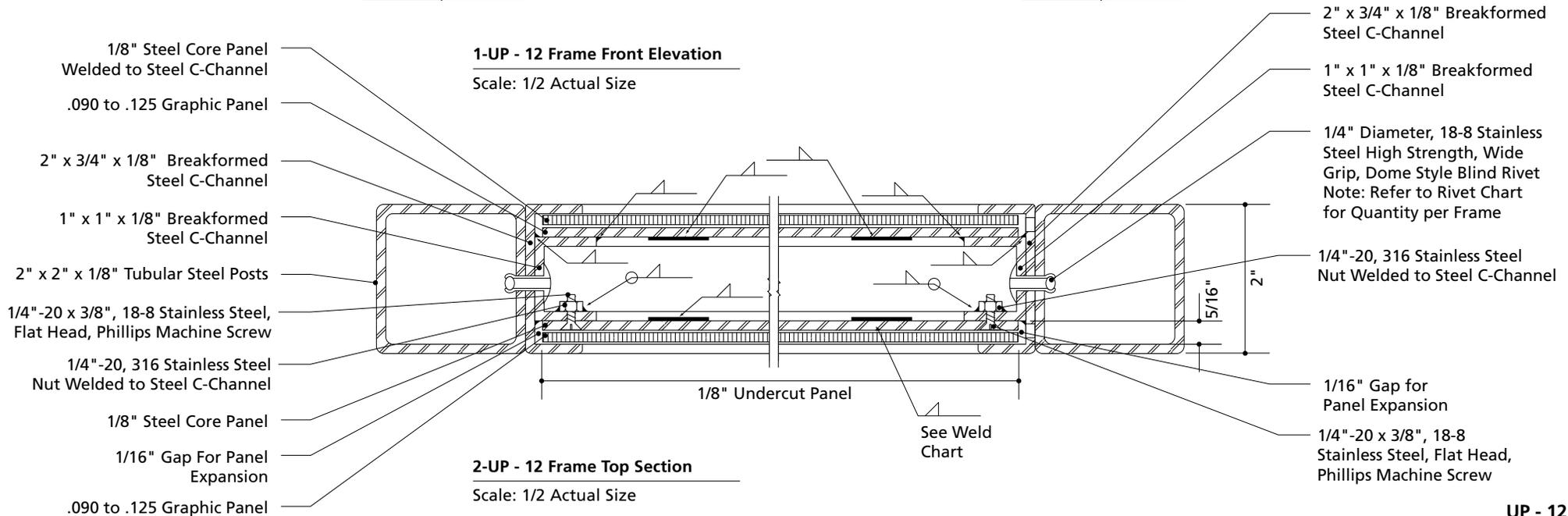
# Upright Series (UP): 2" x 2" Post

## Double-sided Steel Fabrication (Continued)



**1-UP - 12 Frame Front Elevation**

Scale: 1/2 Actual Size

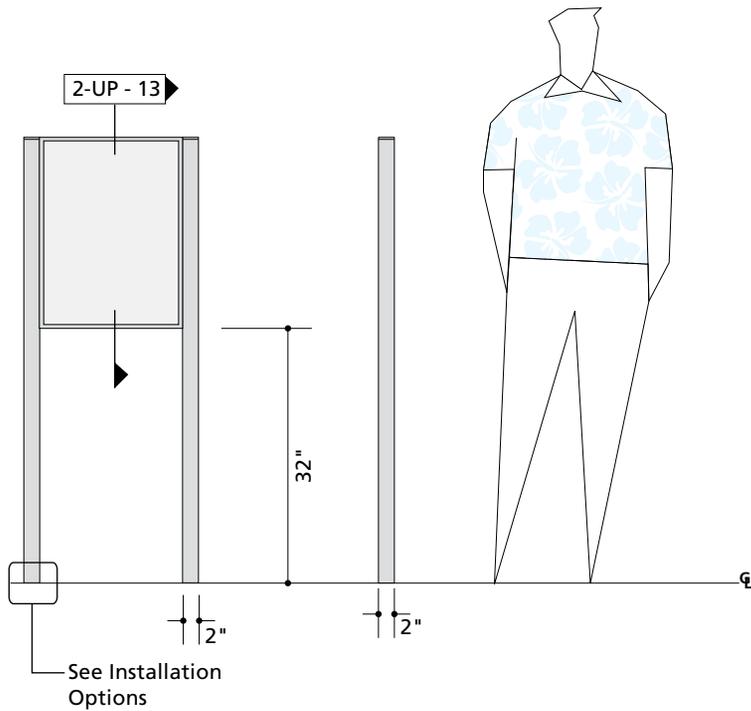


**2-UP - 12 Frame Top Section**

Scale: 1/2 Actual Size

# Upright Series (UP): 2" x 2" Post

## Single-sided Aluminum Fabrication

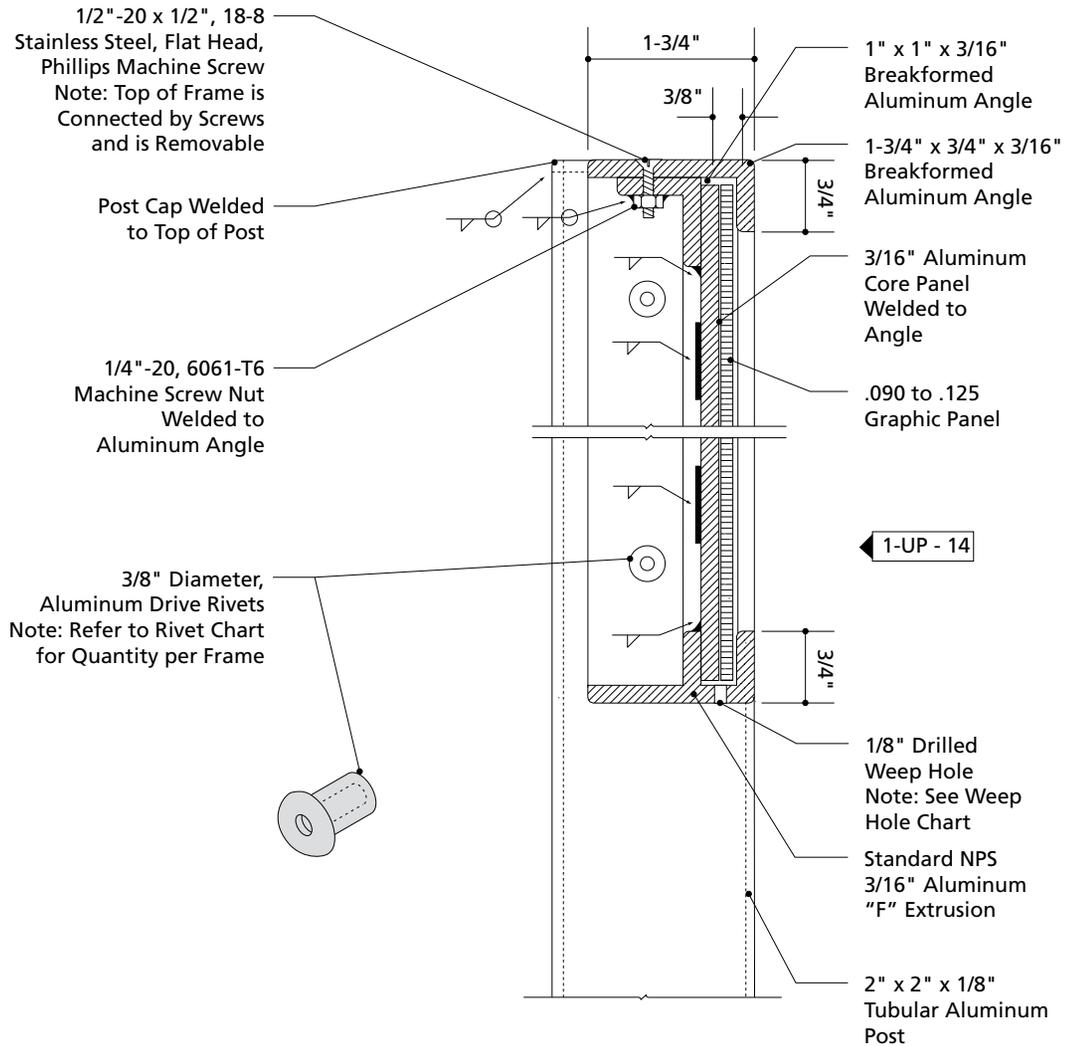


**1-UP - 13 Upright Elevation**

Scale: 1/2" = 1' - 0"

**General Note:**

All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

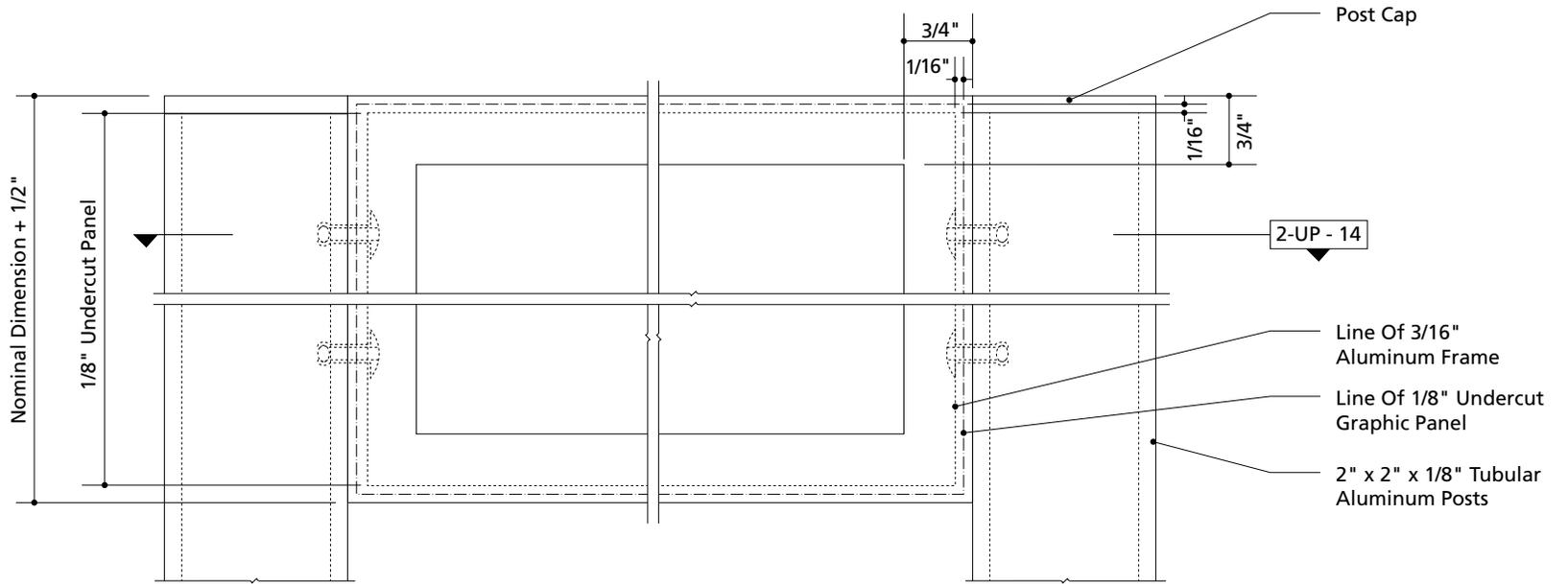


**2-UP - 13 Side Section Cut**

Scale: 1/2 Actual Size

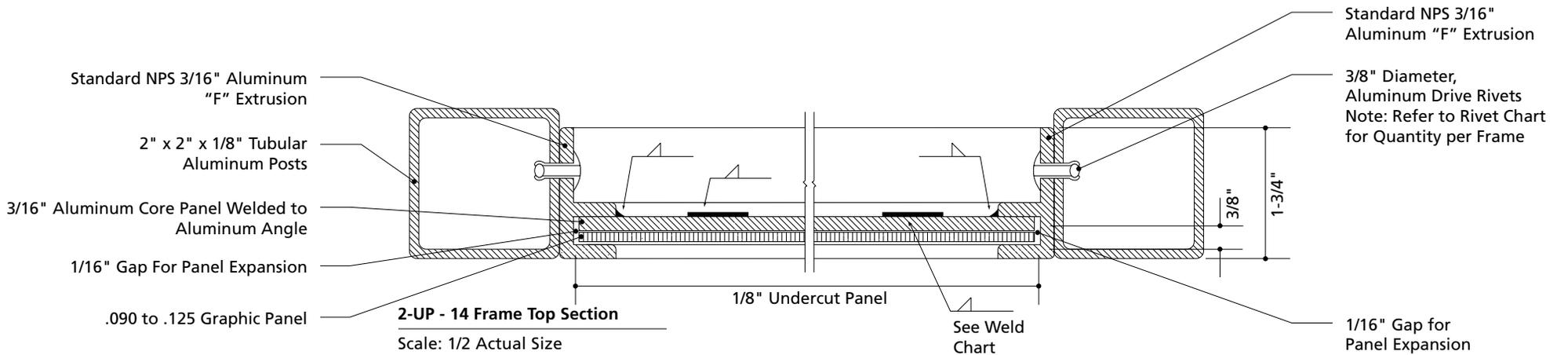
# Upright Series (UP): 2" x 2" Post

## Single-sided Aluminum Fabrication (Continued)



**1-UP - 14 Frame Front Elevation**

Scale: 1/2 Actual Size

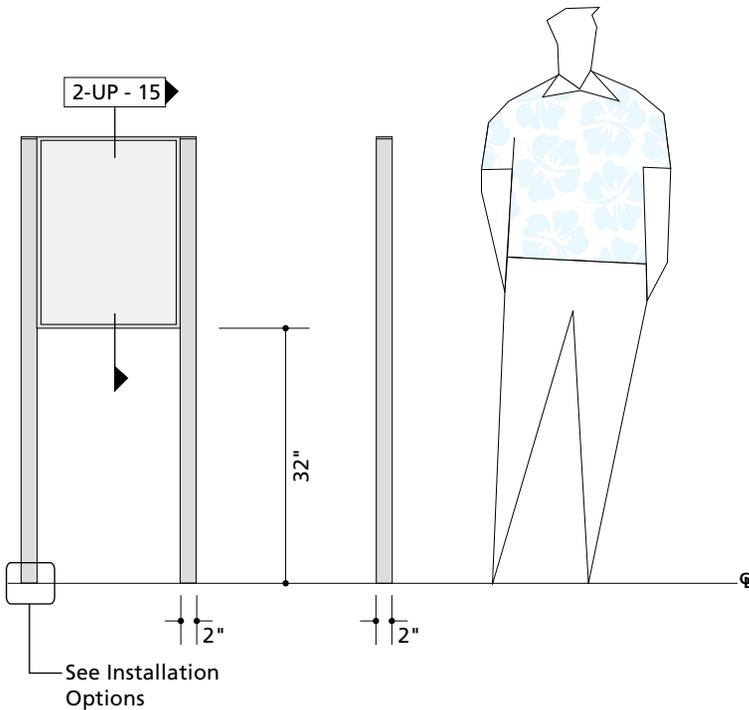


**2-UP - 14 Frame Top Section**

Scale: 1/2 Actual Size

# Upright Series (UP): 2" x 2" Post

## Double-sided Aluminum Fabrication



**1-UP - 15 Upright Elevation**

Scale: 1/2" = 1' - 0"

General Note:  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

1/4"-20 x 1/2", 18-8 Stainless Steel, Flat Head, Phillips Machine Screw  
Note: Top of Frame is Connected by Screws and is Removable

1/4"-20, 6061-T6 Nut Welded to Aluminum C-Channel

Note: Ease Top Edge of Post

1/4"-20 x 3/8", 18-8 Stainless Steel, Flat Head, Phillips Machine Screw

1/4"-20, 6061-T6 Nut Welded to Aluminum C-Channel

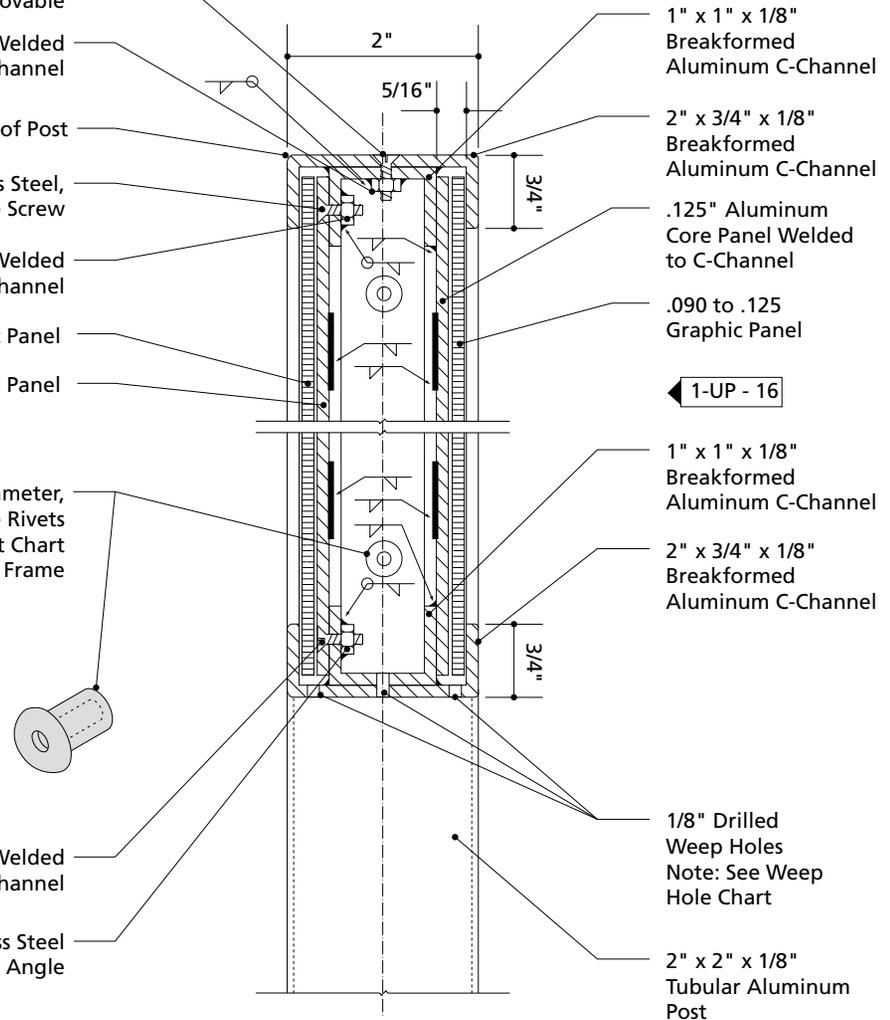
.090 to .125 Graphic Panel

.125" Aluminum Core Panel

3/8" Diameter, Aluminum Drive Rivets  
Note: Refer to Rivet Chart for Quantity per Frame

1/4"-20, 6061-T6 Nut Welded to Aluminum C-Channel

1/4"-20, 316 Stainless Steel Nut Welded to Steel Angle

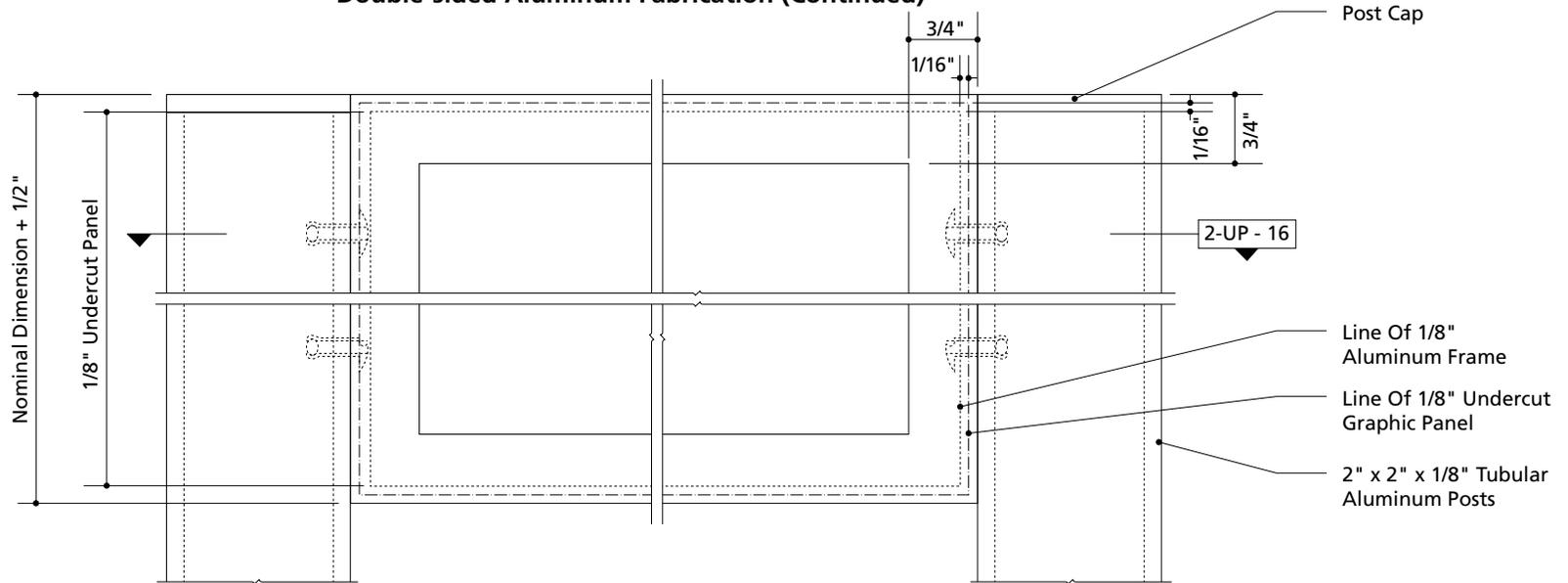


**2-UP - 15 Side Section Cut**

Scale: 1/2 Actual Size

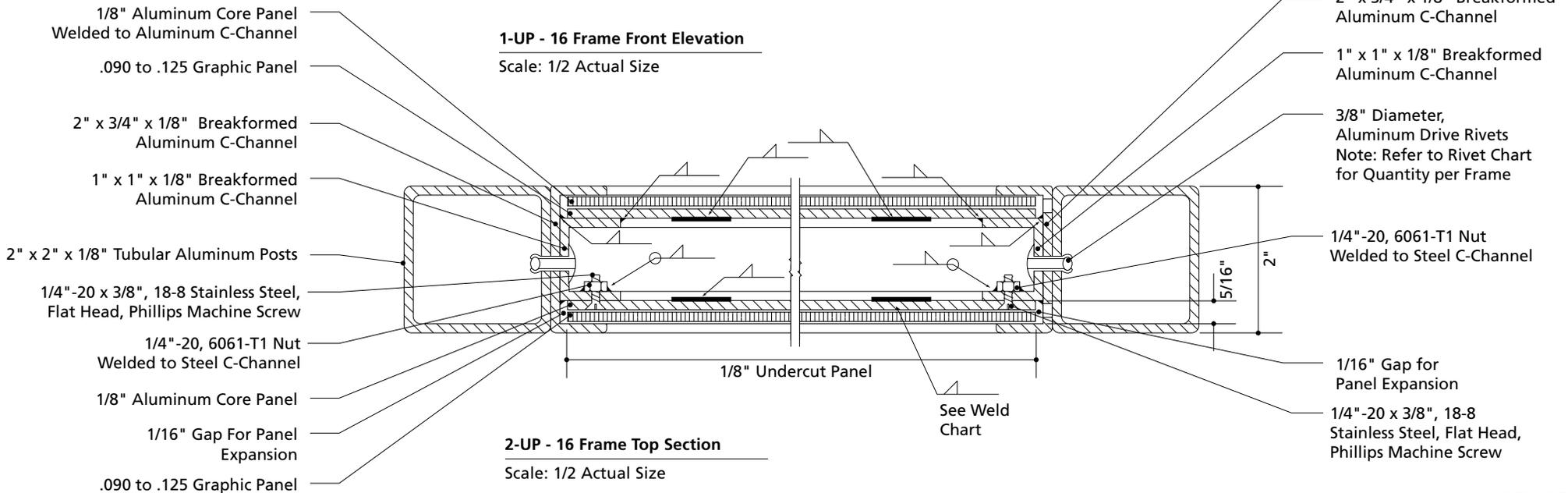
# Upright Series (UP): 2" x 2" Post

## Double-sided Aluminum Fabrication (Continued)



**1-UP - 16 Frame Front Elevation**

Scale: 1/2 Actual Size

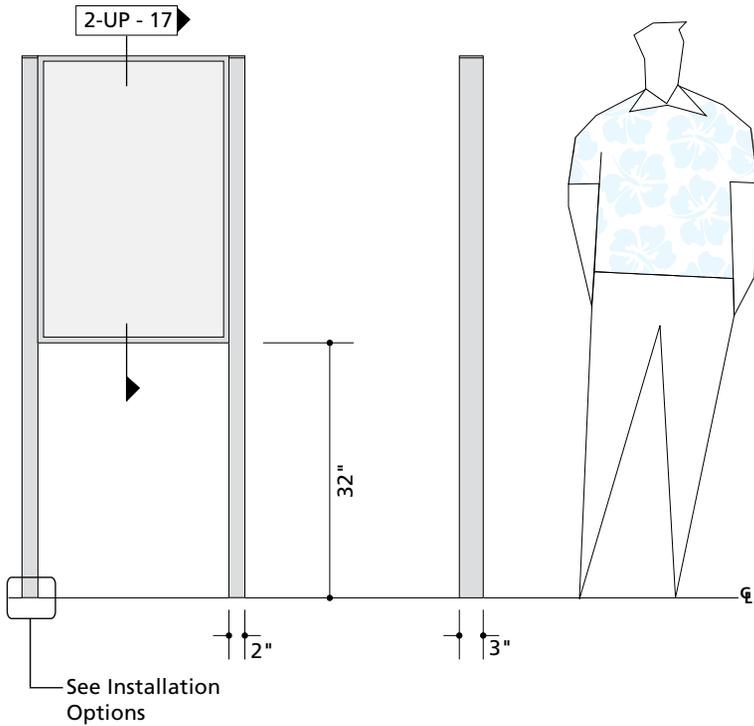


**2-UP - 16 Frame Top Section**

Scale: 1/2 Actual Size

# Upright Series (UP): 2" x 3" Post

## Single-sided Steel Fabrication

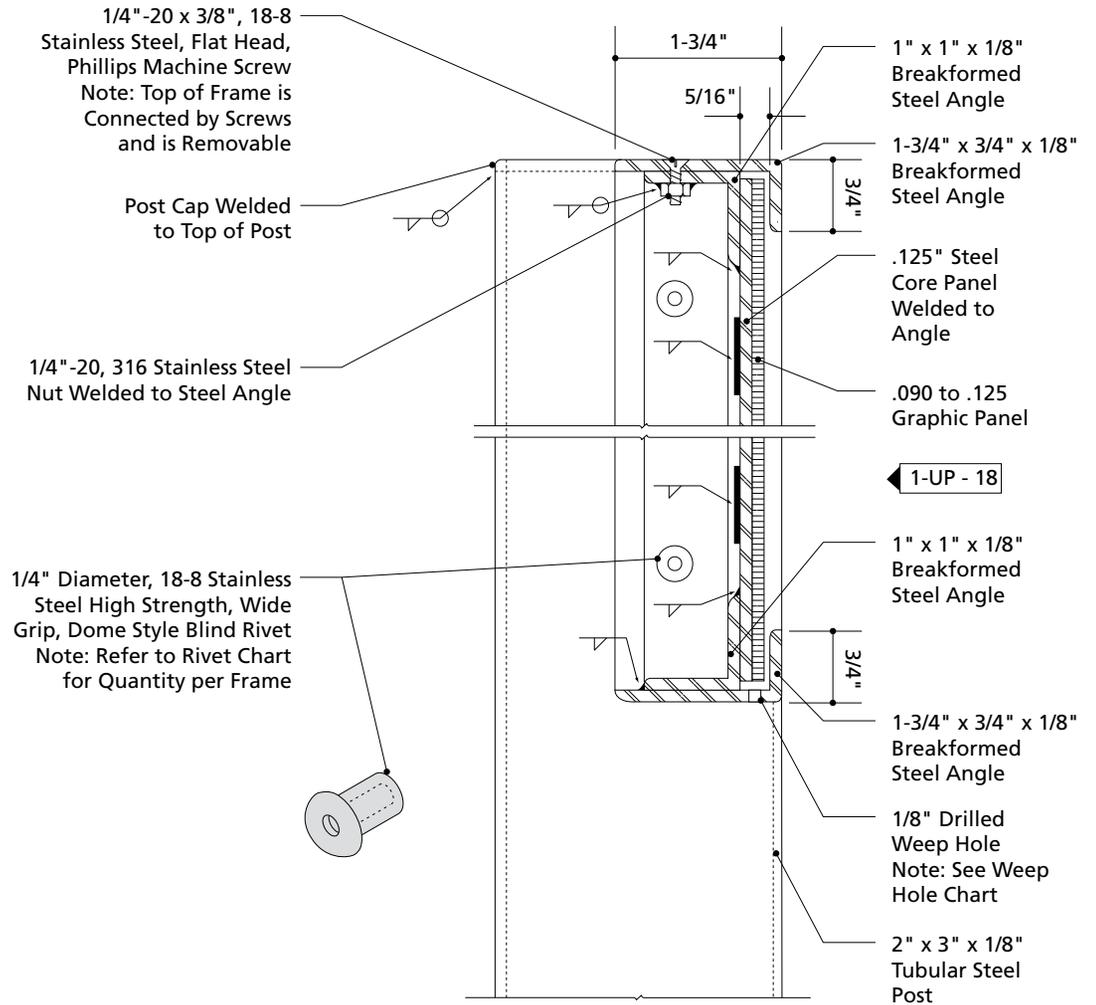


**1-UP - 17 Upright Elevation**

Scale: 1/2" = 1' - 0"

**General Note:**

All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

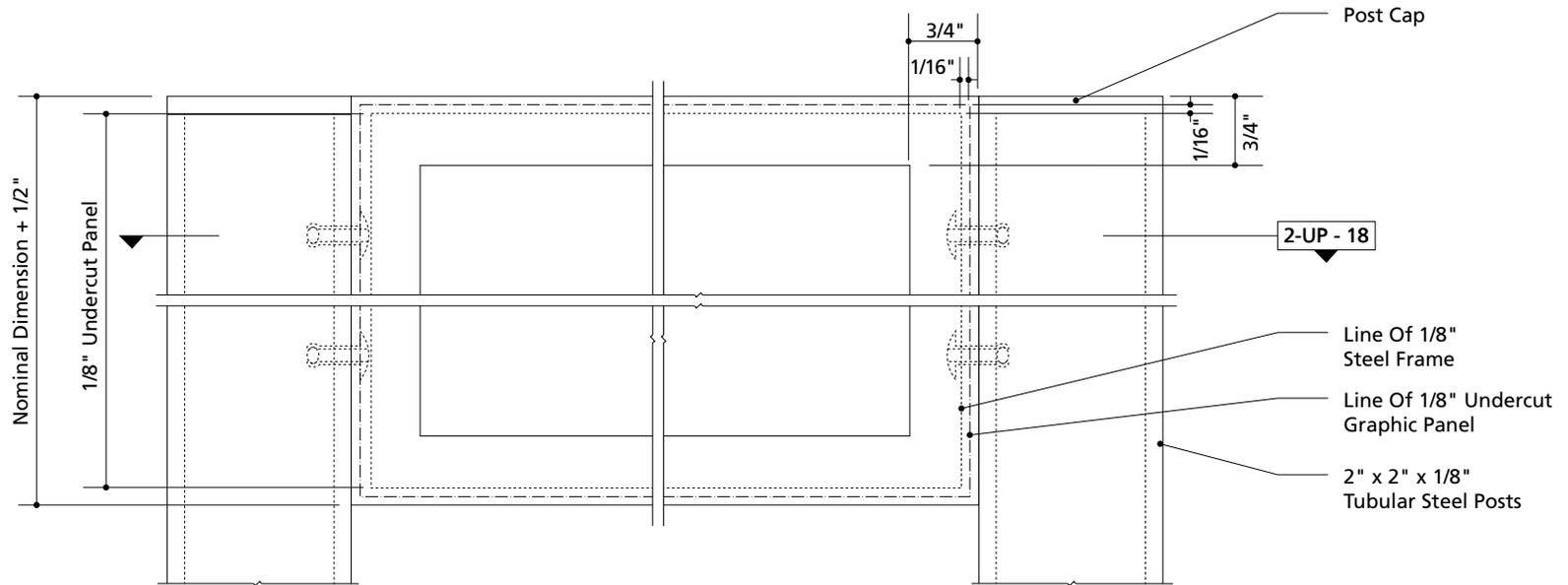


**2-UP - 17 Side Section Cut**

Scale: 1/2 Actual Size

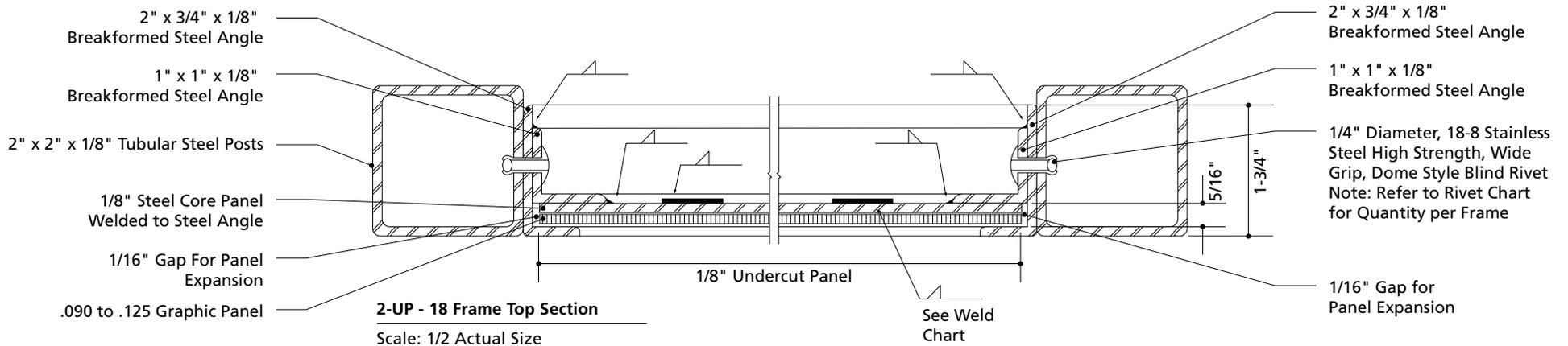
# Upright Series (UP): 2" x 3" Post

## Single-sided Steel Fabrication (Continued)



**1-UP - 18 Frame Front Elevation**

Scale: 1/2 Actual Size

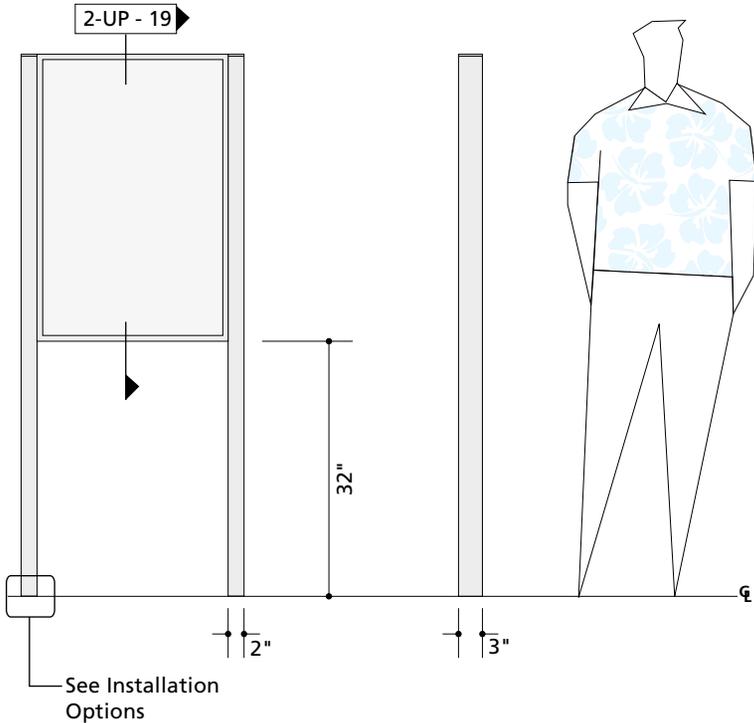


**2-UP - 18 Frame Top Section**

Scale: 1/2 Actual Size

# Upright Series (UP): 2" x 3" Post

## Double-sided Steel Fabrication

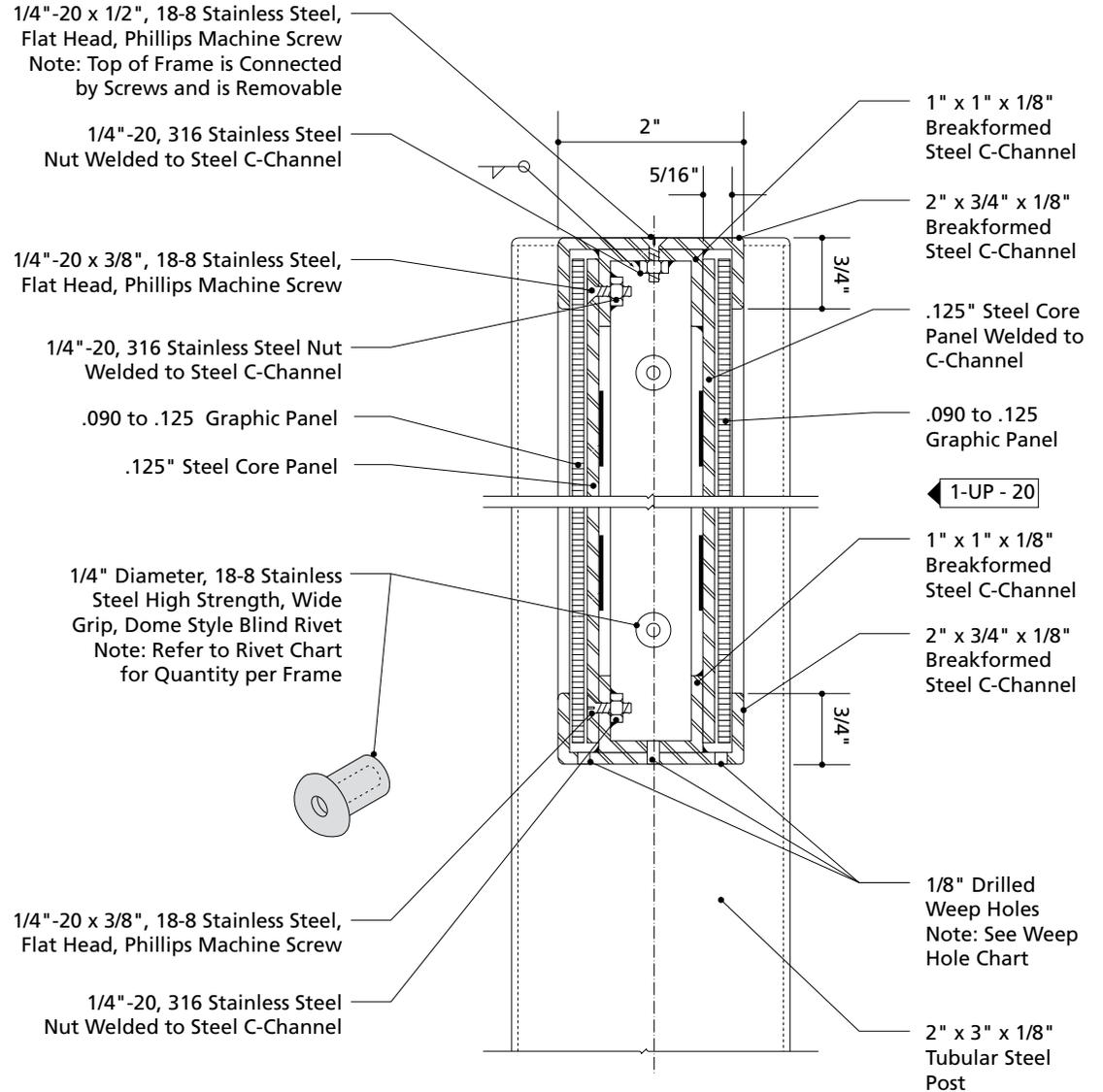


**1-UP - 19 Upright Elevation**

Scale: 1/2" = 1' - 0"

**General Note:**

All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

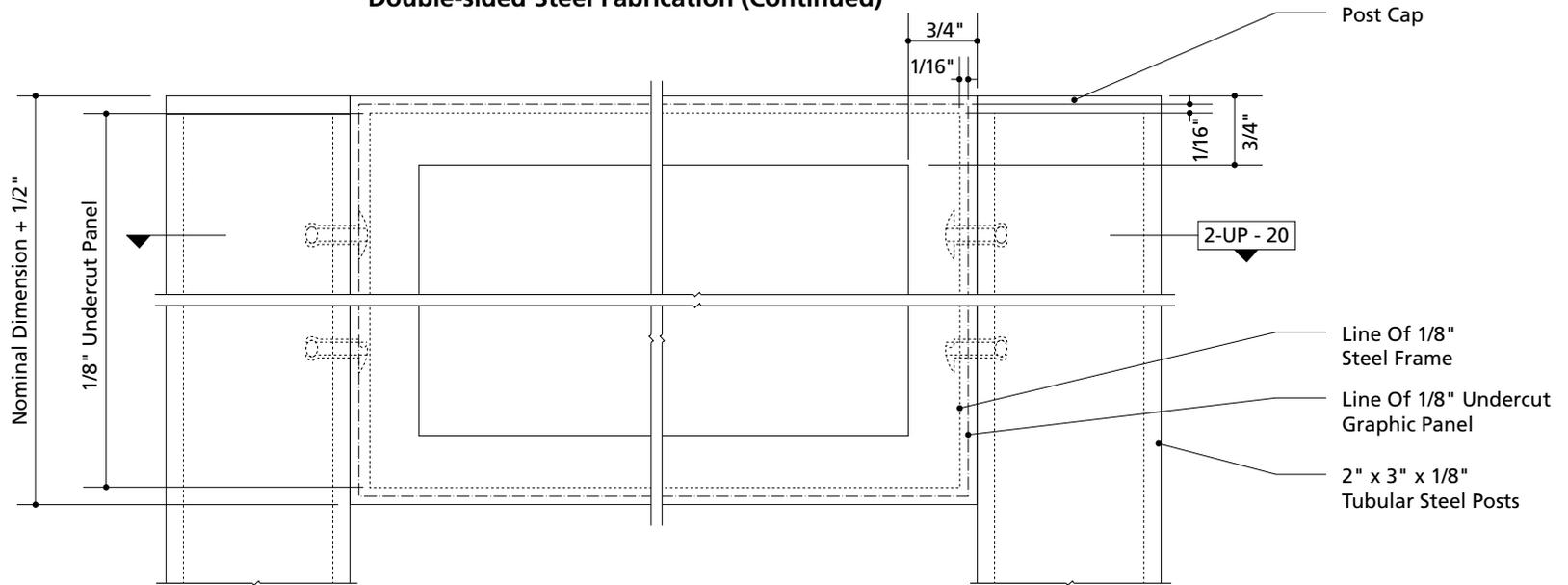


**2-UP - 19 Side Section Cut**

Scale: 1/2 Actual Size

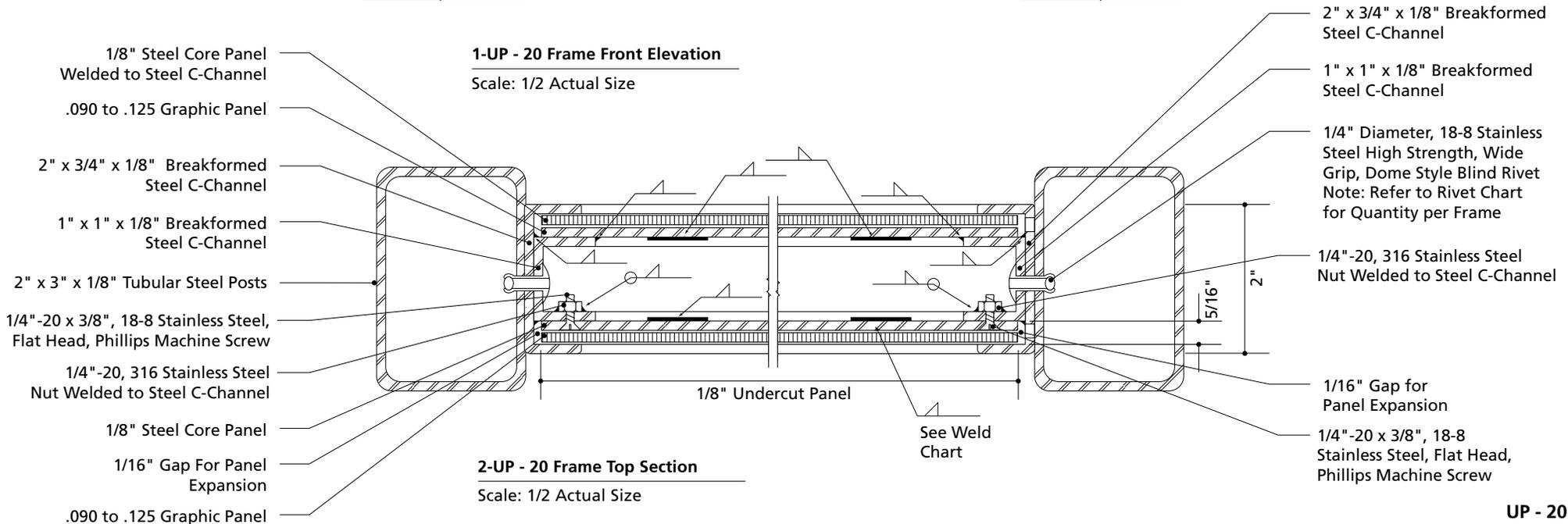
# Upright Series (UP): 2" x 3" Post

## Double-sided Steel Fabrication (Continued)



**1-UP - 20 Frame Front Elevation**

Scale: 1/2 Actual Size



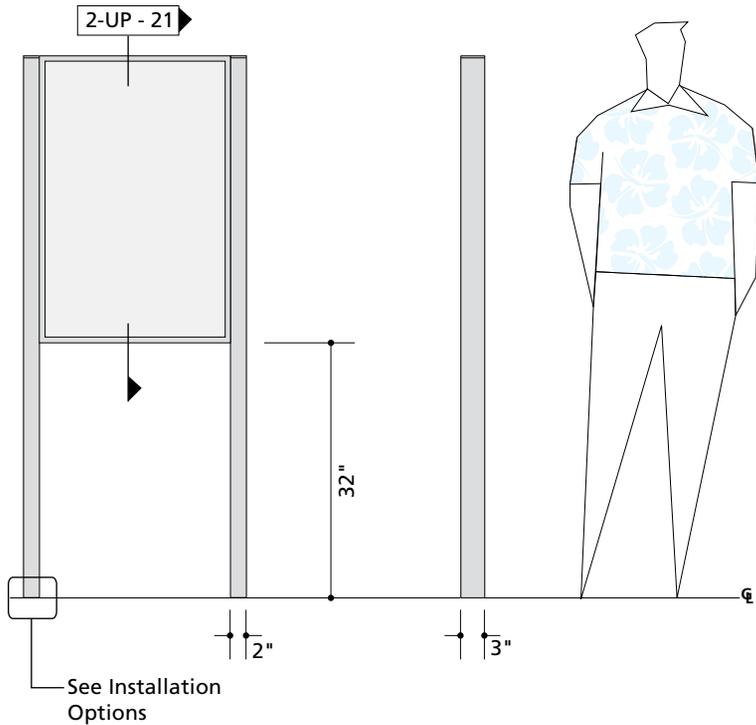
**2-UP - 20 Frame Top Section**

Scale: 1/2 Actual Size

UP - 20

# Upright Series (UP): 2" x 3" Post

## Single-sided Aluminum Fabrication

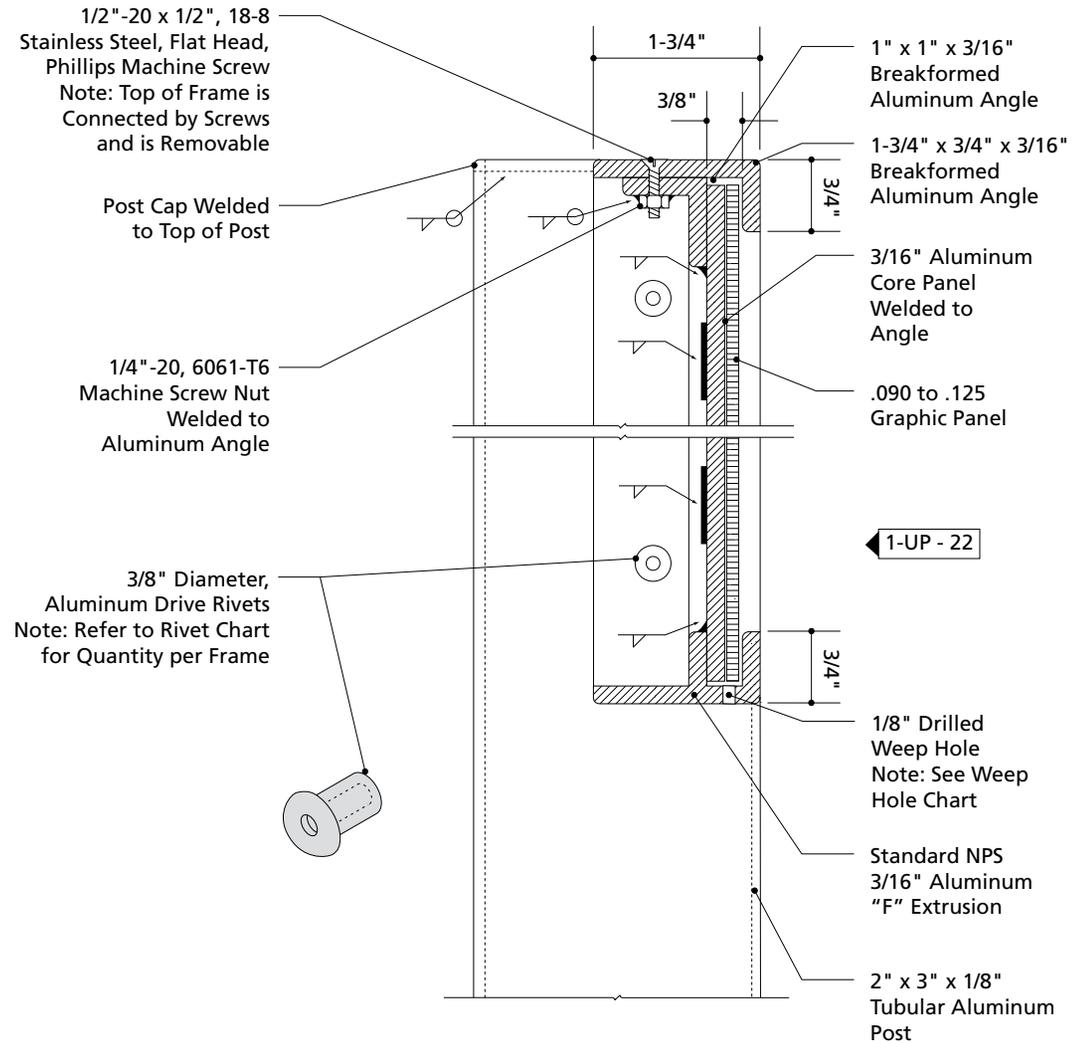


**1-UP - 21 Upright Elevation**

Scale: 1/2" = 1' -0"

**General Note:**

All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

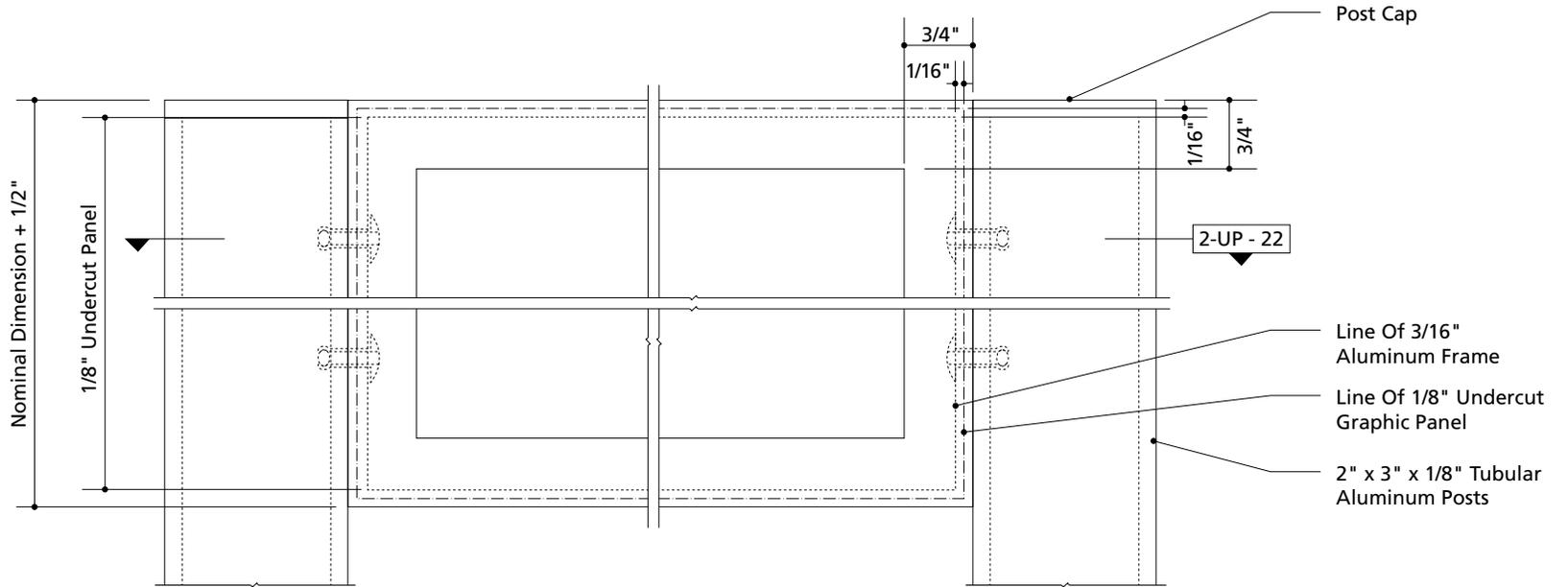


**2-UP - 21 Side Section Cut**

Scale: 1/2 Actual Size

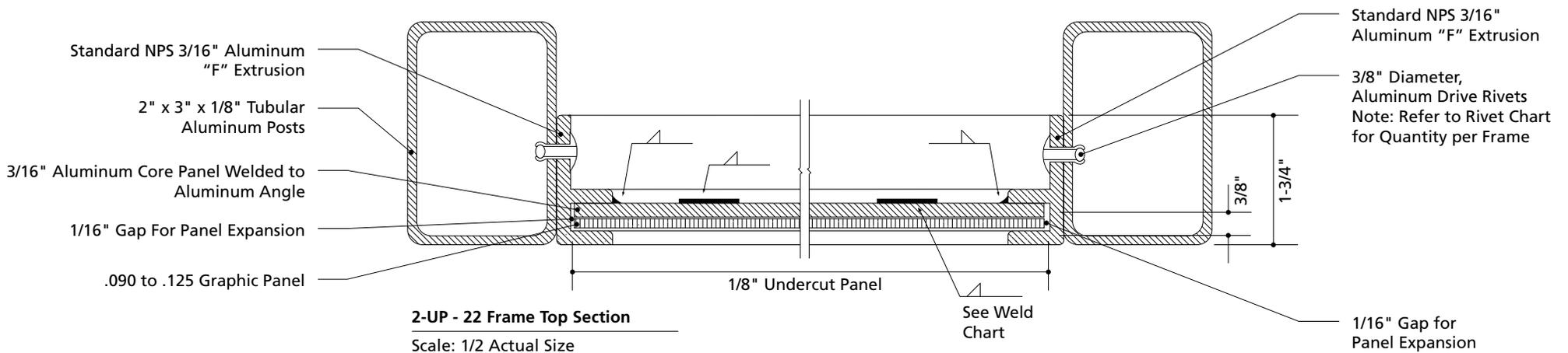
# Upright Series (UP): 2" x 3" Post

## Single-sided Aluminum Fabrication (Continued)



**1-UP - 22 Frame Front Elevation**

Scale: 1/2 Actual Size

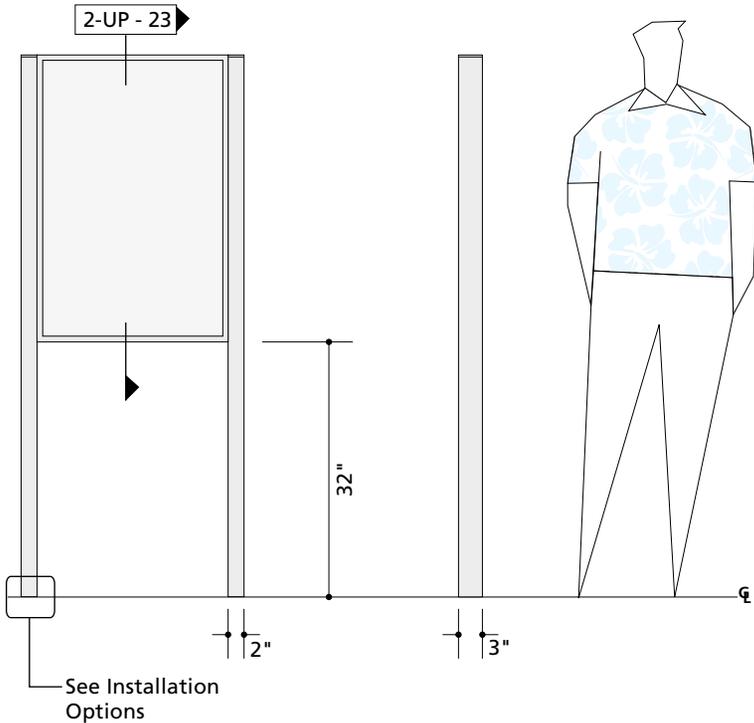


**2-UP - 22 Frame Top Section**

Scale: 1/2 Actual Size

# Upright Series (UP): 2" x 3" Post

## Double-sided Aluminum Fabrication



**1-UP - 23 Upright Elevation**

Scale: 1/2" = 1' -0"

General Note:  
All breakformed steel and aluminum frame edges shall be eased to prevent sharp edges and allow paint adherence.

1/4"-20 x 1/2", 18-8 Stainless Steel, Flat Head, Phillips Machine Screw  
Note: Top of Frame is Connected by Screw and is Removable

1/4"-20, 6061-T6 Nut Welded to Aluminum C-Channel

Note: Ease Top Edge of Post

1/4"-20 x 3/8", 18-8 Stainless Steel, Flat Head, Phillips Machine Screw

1/4"-20, 6061-T6 Nut Welded to Aluminum C-Channel

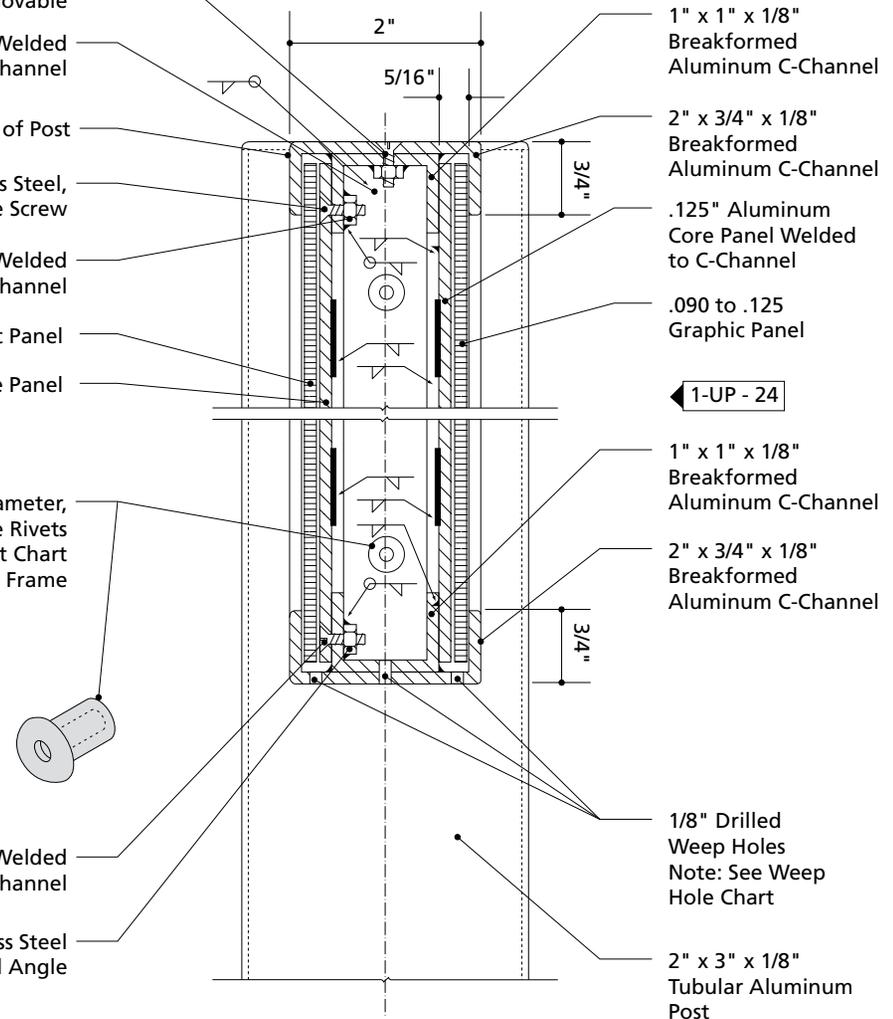
.090 to .125 Graphic Panel

.125" Aluminum Core Panel

3/8" Diameter, Aluminum Drive Rivets  
Note: Refer to Rivet Chart for Quantity per Frame

1/4"-20, 6061-T6 Nut Welded to Aluminum C-Channel

1/4"-20, 316 Stainless Steel Nut Welded to Steel Angle

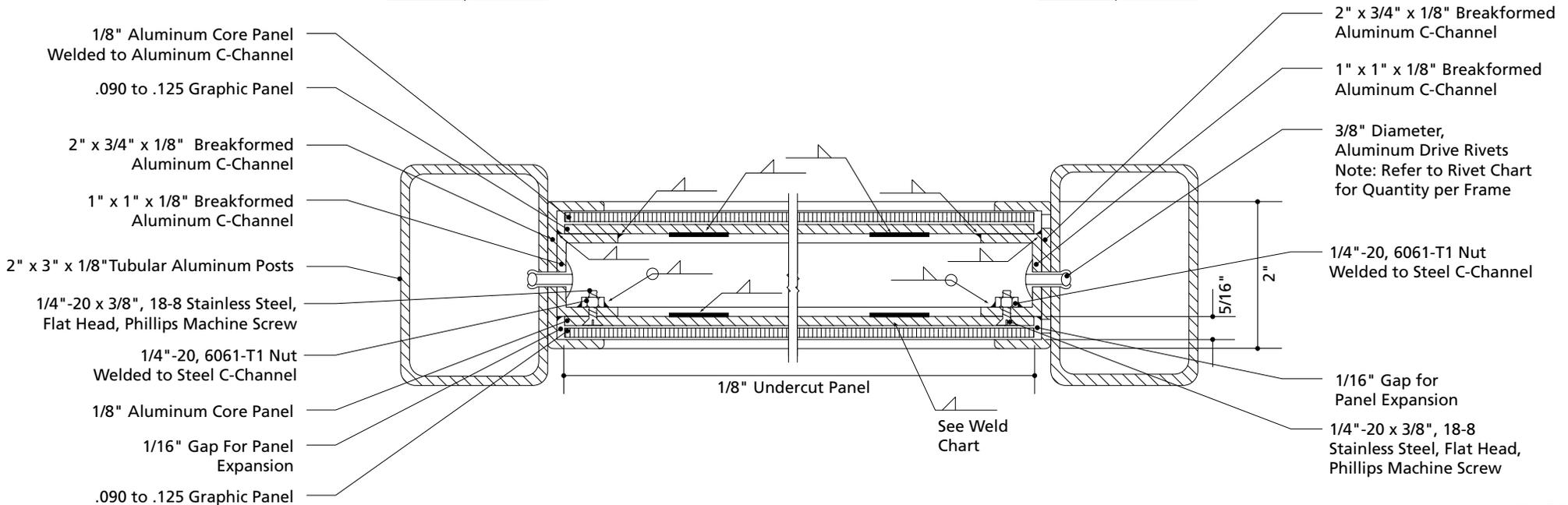
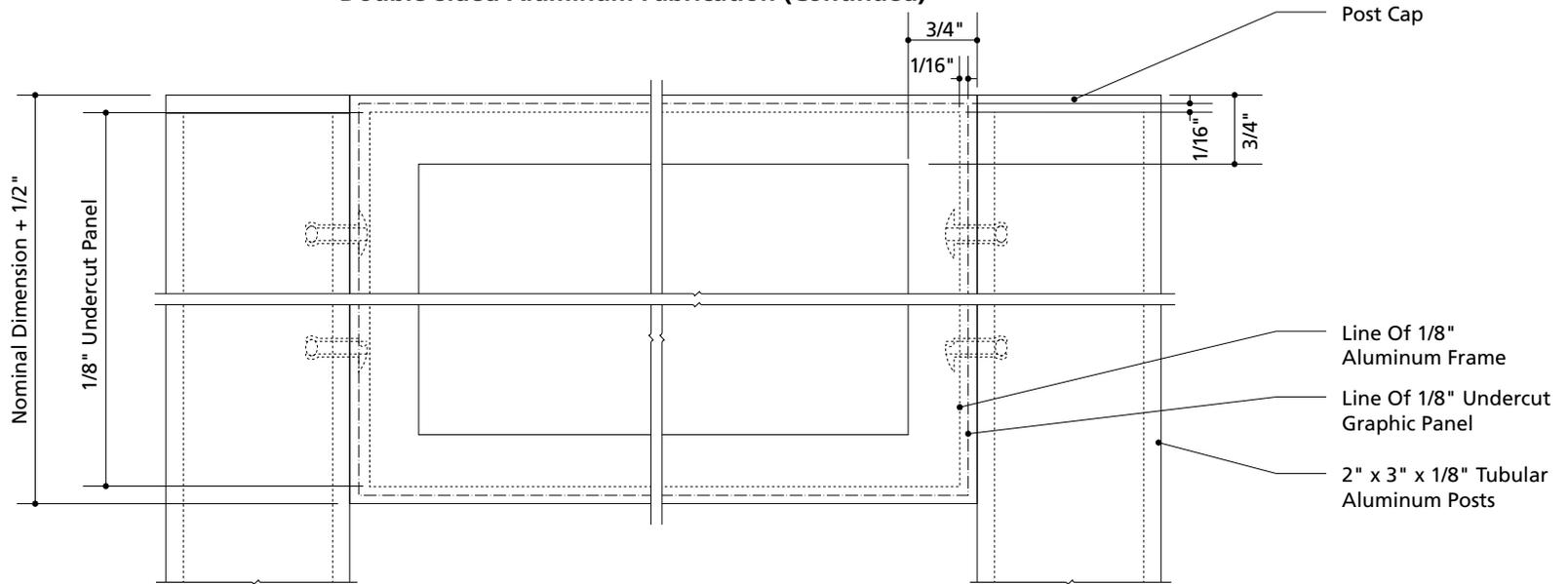


**2-UP - 23 Side Section Cut**

Scale: 1/2 Actual Size

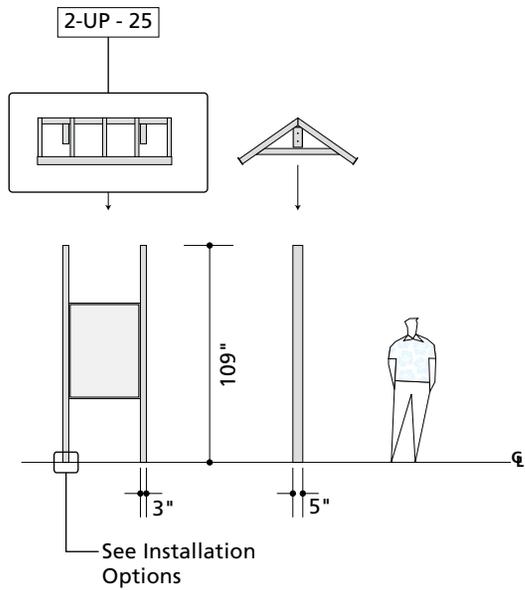
# Upright Series (UP): 2" x 3" Post

## Double-sided Aluminum Fabrication (Continued)



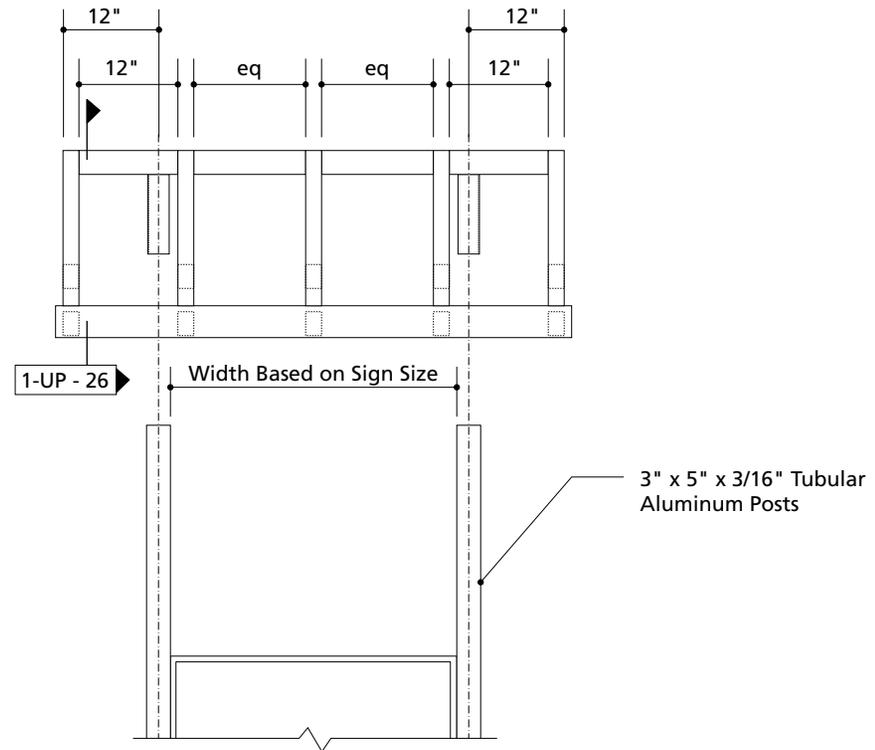
# Upright Series (UP) with Roof

## Aluminum Fabrication



**1-UP - 25 36" x 48" Upright with Roof Elevation**

Scale: 1/8" = 1'-0"

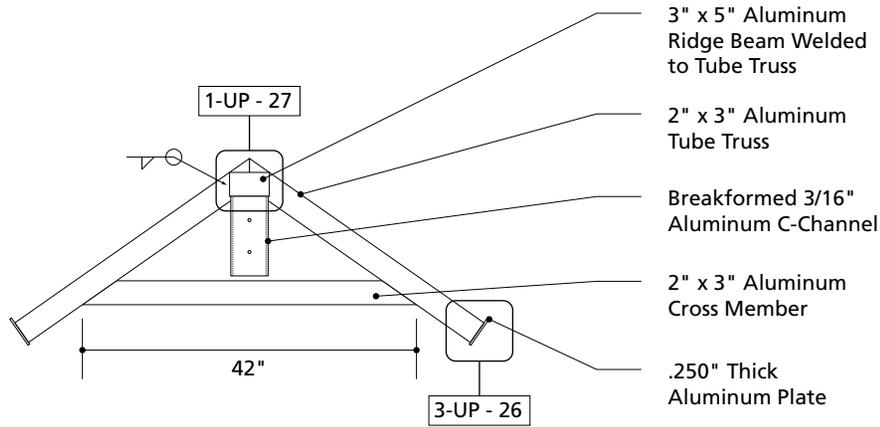


**2-UP - 25 Roof Front Elevation**

Scale: 1/2" = 1'-0"

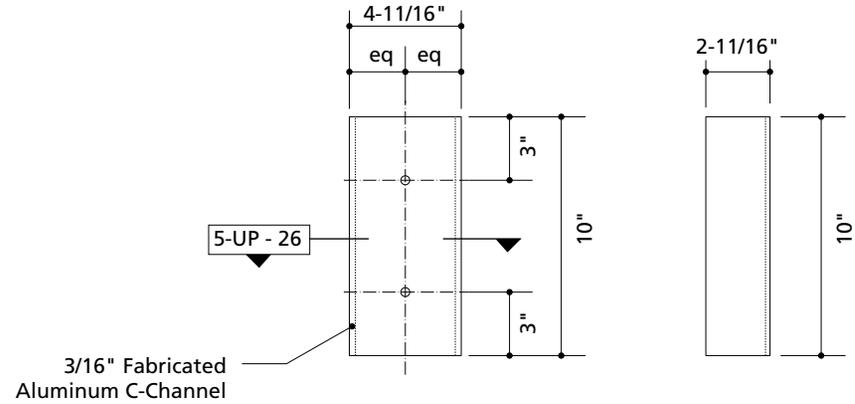
# Upright Series (UP) with Roof

## Aluminum Fabrication (Continued)



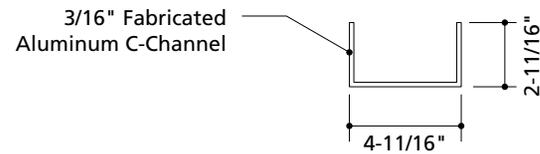
**1-UP 26 Roof Cross Section**

Scale: 1/2" = 1'-0"



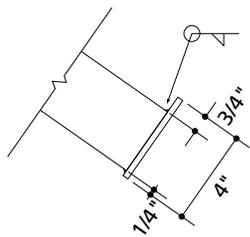
**2-UP - 26 C-Channel Front and Side Elevation**

Scale: 1/2" = 1'-0"



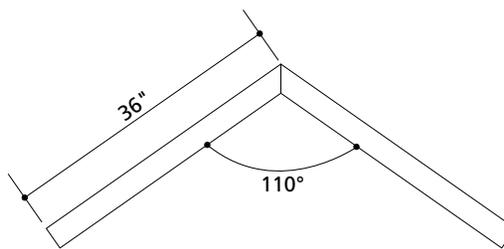
**5-UP - 26 C-Channel Section Cut**

Scale: 1/2" = 1'-0"



**3-UP - 26 Truss-Plate Connection Detail**

Scale: 1-1/2" = 1'-0"

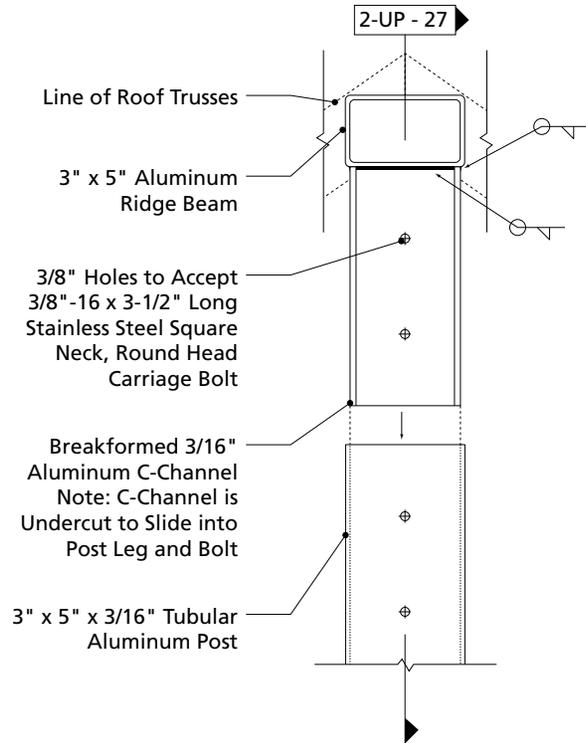


**4-UP - 26 Aluminum Tube Truss Detail**

Scale: 1/2" = 1'-0"

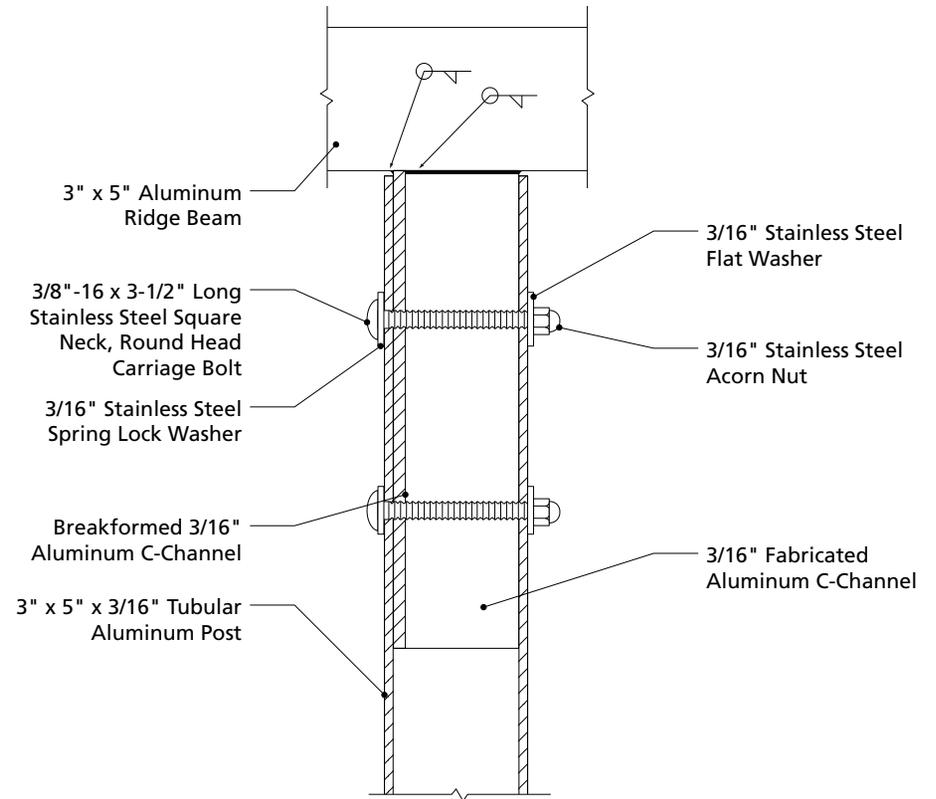
# Upright Series (UP) with Roof

## Aluminum Fabrication (Continued)



**1-UP - 27 Post/Truss Cross Section**

Scale: 1-1/2" = 1'-0"

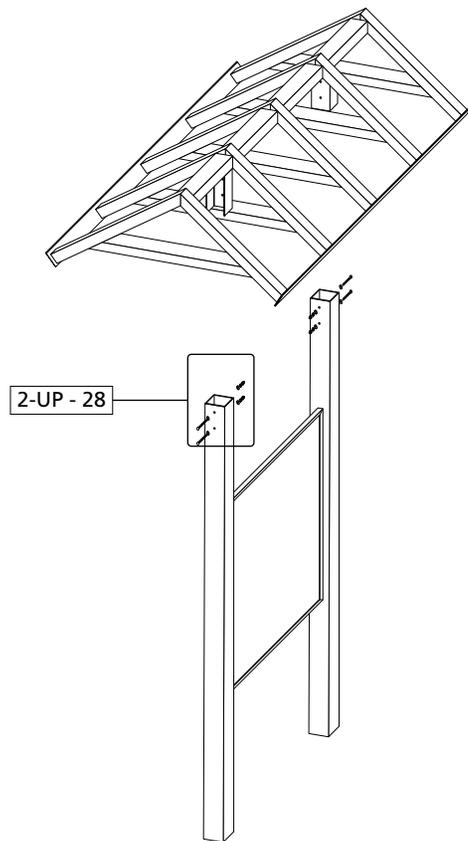


**2-UP - 27 Post Connection Cross Section**

Scale: 3" = 1'-0"

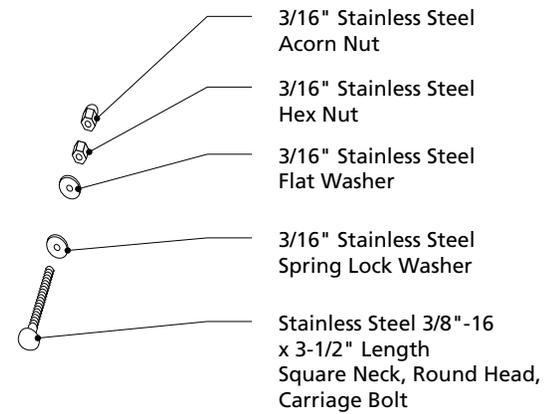
# Upright Series (UP) with Roof

## Aluminum Fabrication (Continued)



**1-UP - 28 Exploded View**

Scale: 1/4" = 1'-0"



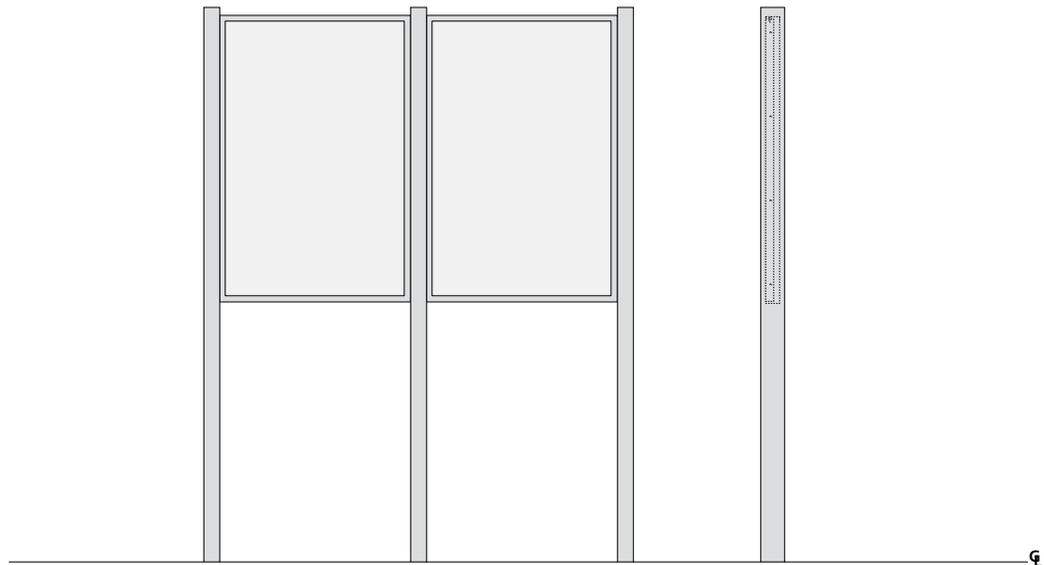
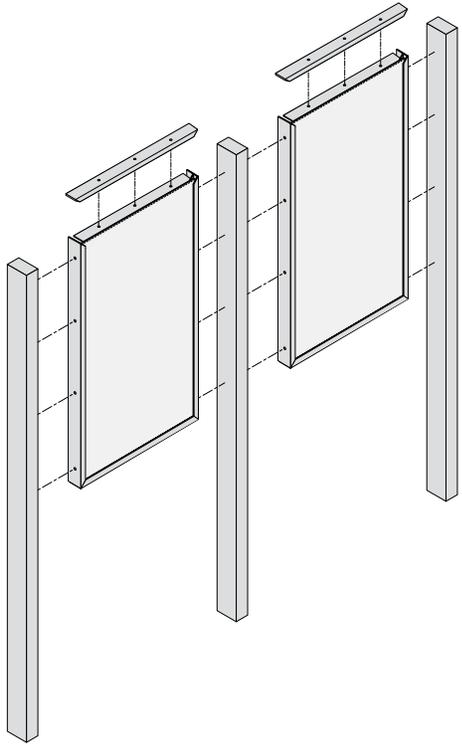
**2-UP - 28 Connection Hardware**

Scale: 3" = 1'-0"

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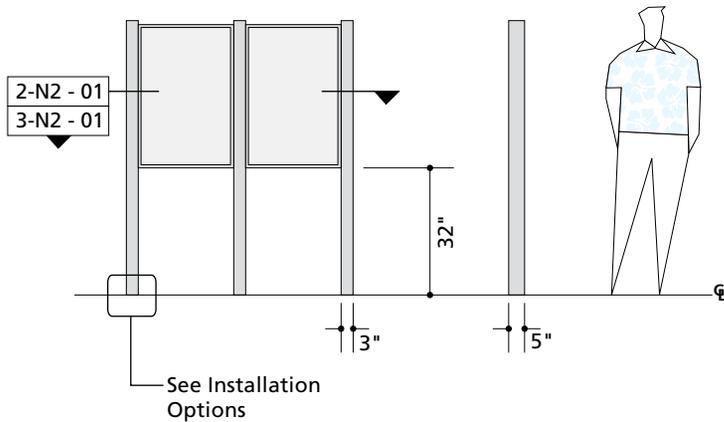
## Upright Inline 2 Series (UPN2)

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# Upright Inline 2 Series (UPN2)

## Steel Fabrication

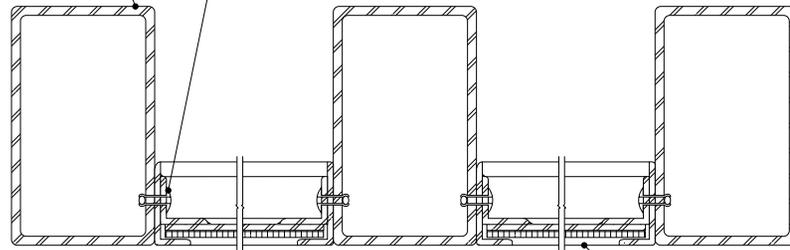


**1-N2 - 01 Upright Inline 2 Elevation**

Scale: 1/4" = 1'-0"

3" x 5" x 3/16"  
Tubular Steel Posts

1/4" Diameter, 18-8 Stainless Steel High Strength,  
Wide Grip, Dome Style Blind Rivet  
Note: Refer to Rivet Chart for Quantity per Frame



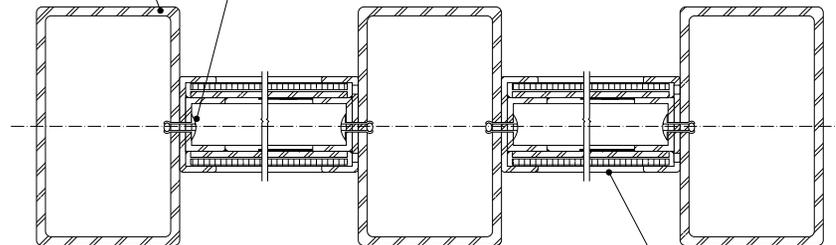
**2-N2 - 01 Single-sided Steel Top Section Cut**

Scale: 3" = 1'-0"

See Upright Single-sided  
Steel Fabrication  
Frame Drawing for Details

3" x 5" x 3/16"  
Tubular Steel Posts

1/4" Diameter, 18-8 Stainless Steel High Strength,  
Wide Grip, Dome Style Blind Rivet  
Note: Refer to Rivet Chart for Quantity per Frame



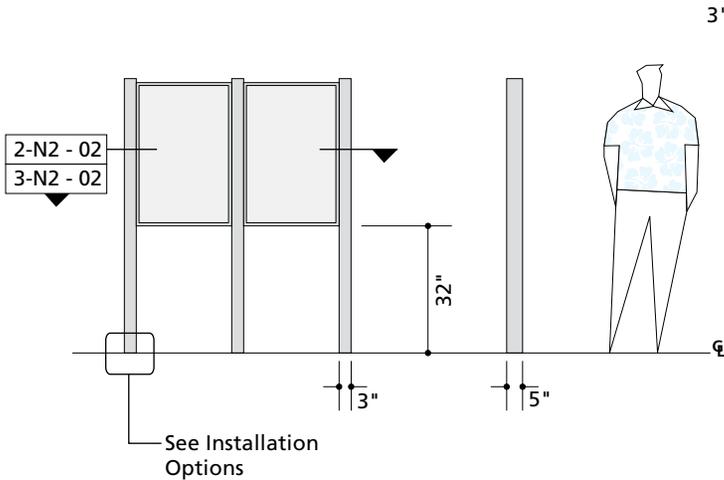
**3-N2 - 01 Double-sided Steel Top Section Cut**

Scale: 3" = 1'-0"

See Upright Double-sided  
Steel Fabrication  
Frame Drawing for Details

# Upright Inline 2 Series (UPN2)

## Aluminum Fabrication

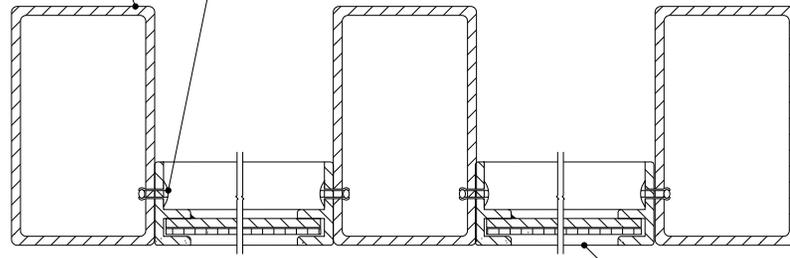


**1-N2 - 02 Upright Inline 2 Elevation**

Scale: 1/4" = 1'-0"

3" x 5" x 3/16" Tubular Aluminum Posts

3/8" Diameter, Aluminum Drive Rivets  
Note: Refer to Rivet Chart for Quantity per Frame



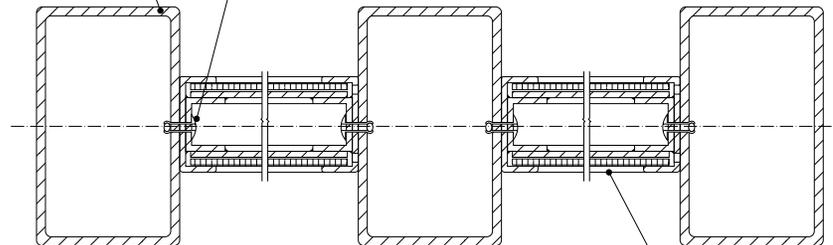
**2-N2 - 02 Single-sided Steel Top Section Cut**

Scale: 3" = 1'-0"

See Upright Single-sided Aluminum Fabrication Frame Drawing for Details

3" x 5" x 3/16" Tubular Aluminum Posts

3/8" Diameter, Aluminum Drive Rivets  
Note: Refer to Rivet Chart for Quantity per Frame



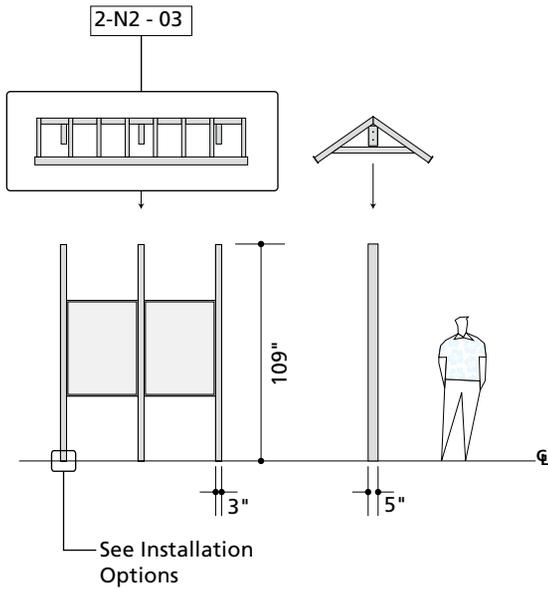
**3-N2 - 02 Double-sided Steel Top Section Cut**

Scale: 3" = 1'-0"

See Upright Double-sided Aluminum Fabrication Frame Drawing for Details

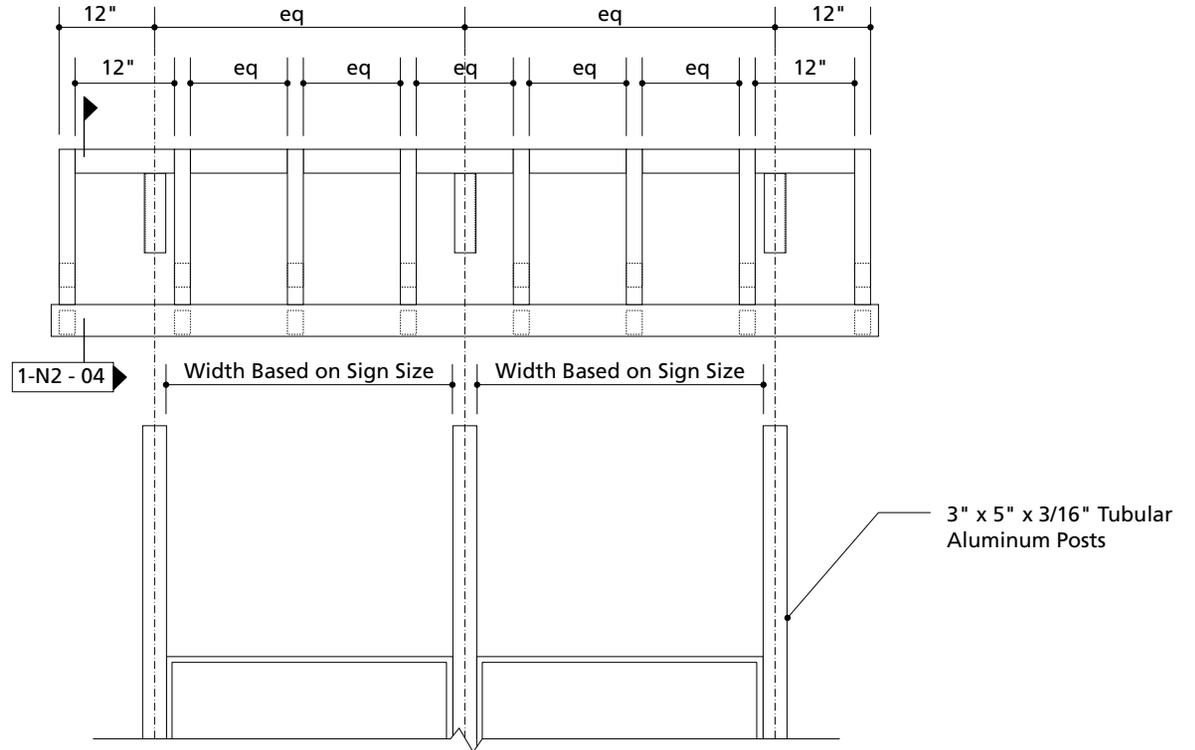
# Upright Inline 2 Series (UPN2) with Roof

## Aluminum Fabrication



**1-N2 - 03 36" x 48" Upright Inline 2 with Roof Elevation**

Scale: 1/8" = 1'-0"

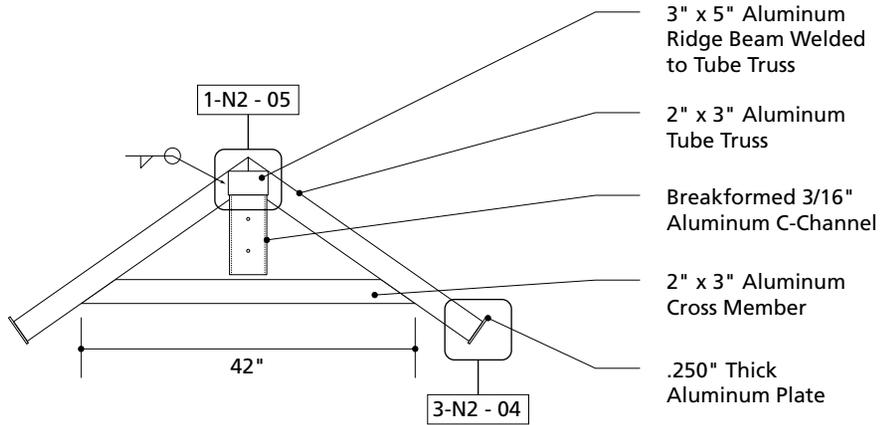


**2-N2 - 03 Roof Front Elevation**

Scale: 1/2" = 1'-0"

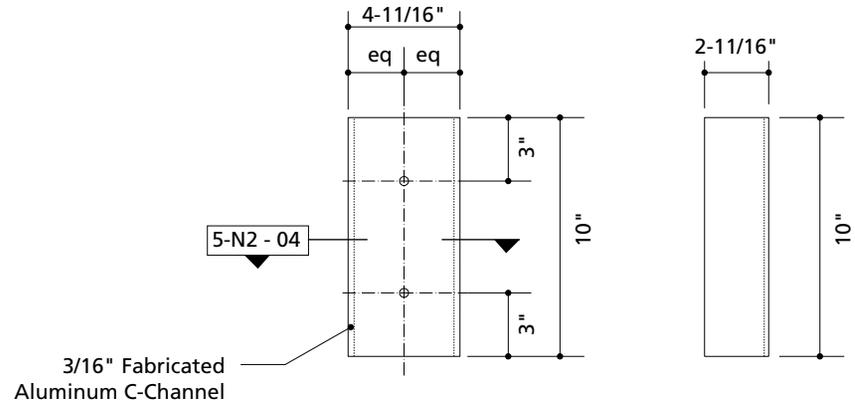
# Upright Inline 2 Series (UPN2) with Roof

## Aluminum Fabrication (Continued)



**1-UP 26 Roof Cross Section**

Scale: 1/2" = 1'-0"



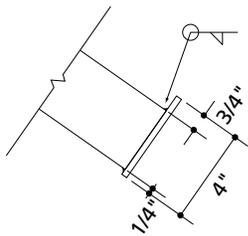
**2-N2 - 04 C-Channel Front and Side Elevation**

Scale: 1/2" = 1'-0"



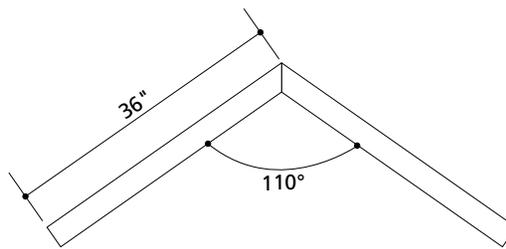
**5-N2 - 04 C-Channel Section Cut**

Scale: 1/2" = 1'-0"



**3-N2 - 04 Truss-Plate Connection Detail**

Scale: 1-1/2" = 1'-0"

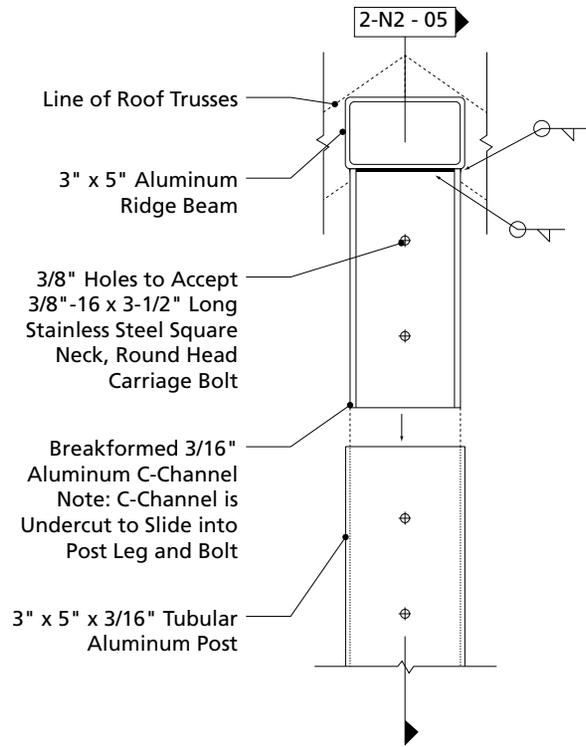


**4-N2 - 04 Aluminum Tube Truss Detail**

Scale: 1/2" = 1'-0"

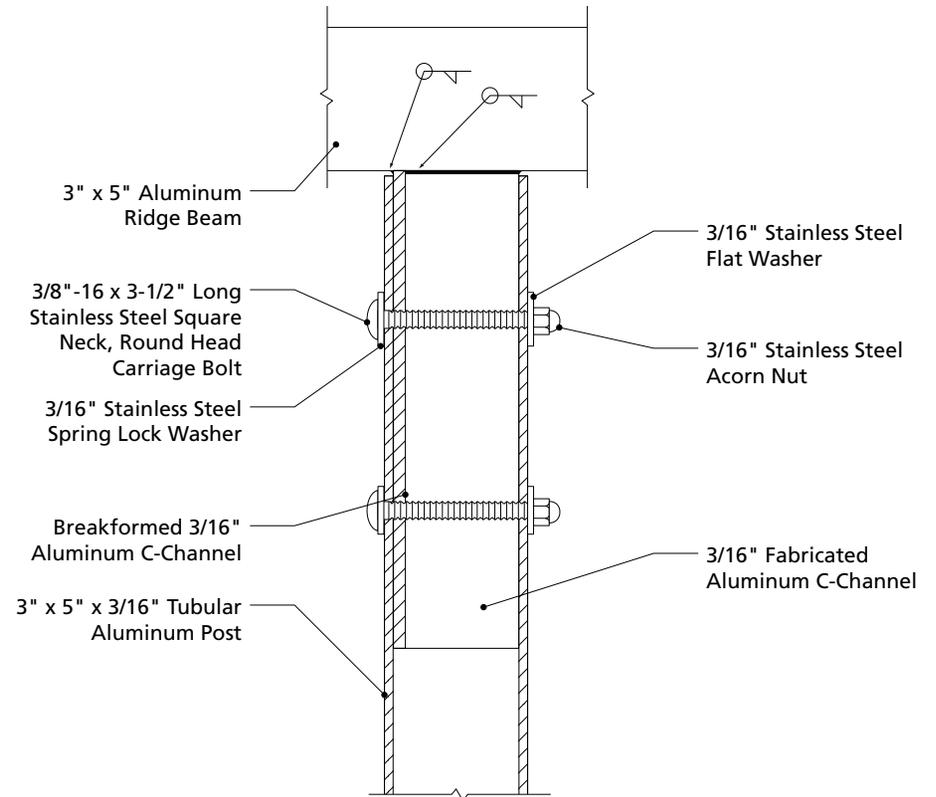
# Upright Inline 2 Series (UPN2) with Roof

## Aluminum Fabrication (Continued)



**1-N2 - 05 Post/Truss Cross Section**

Scale: 1-1/2" = 1'-0"

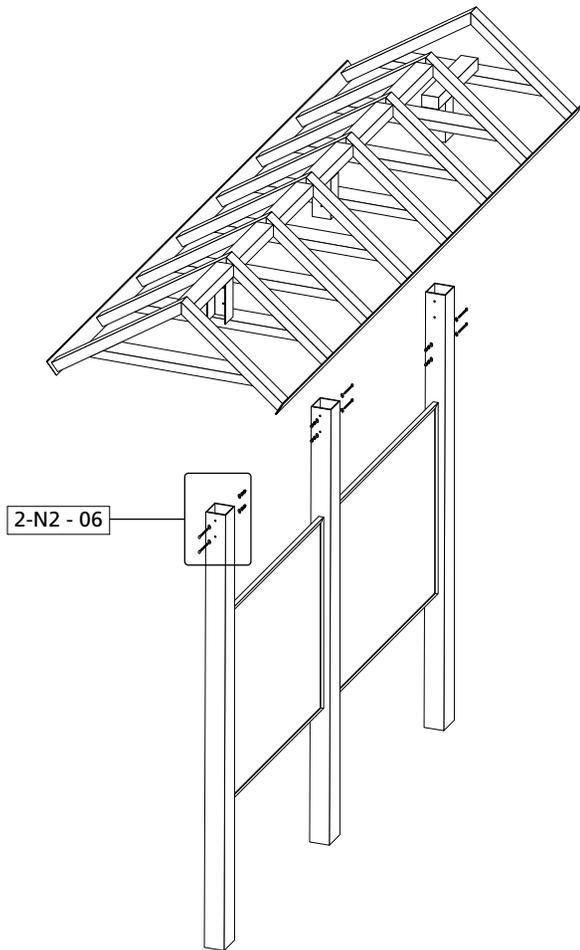


**2-N2 - 05 Post Connection Cross Section**

Scale: 3" = 1'-0"

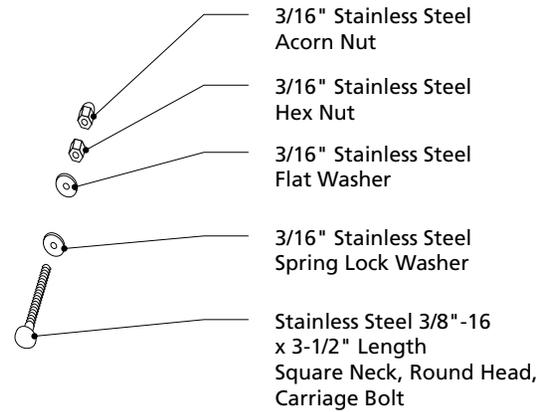
# Upright Inline 2 Series (UPN2) with Roof

## Aluminum Fabrication (Continued)



**1-N2 - 06 Exploded View**

Scale: 1/4" = 1'-0"



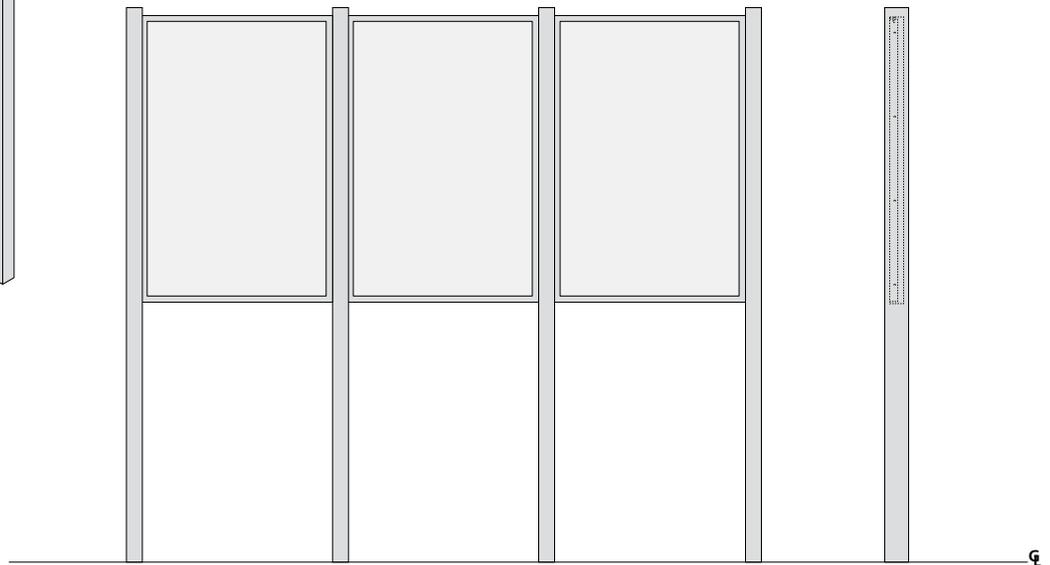
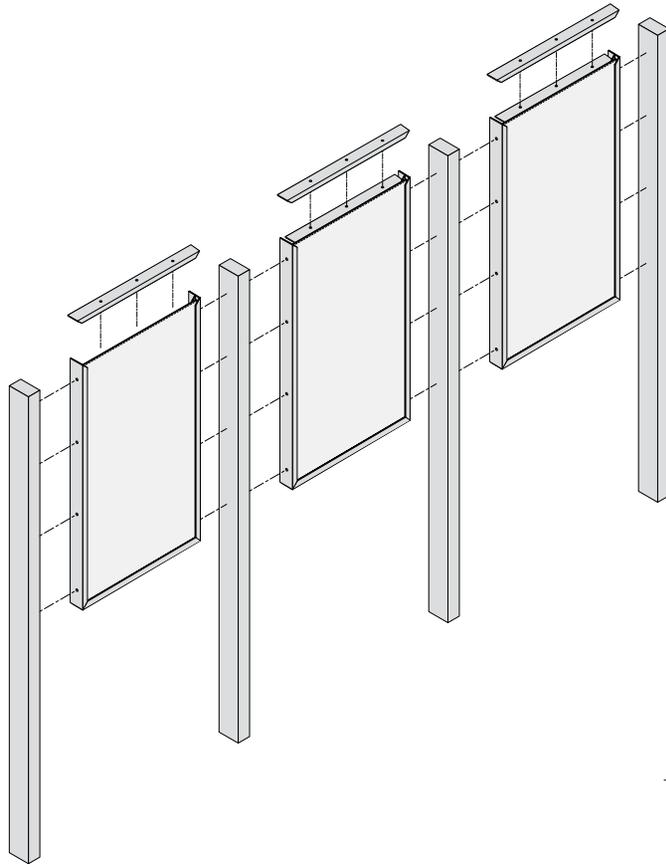
**2-N2 - 06 Connection Hardware**

Scale: 3" = 1'-0"

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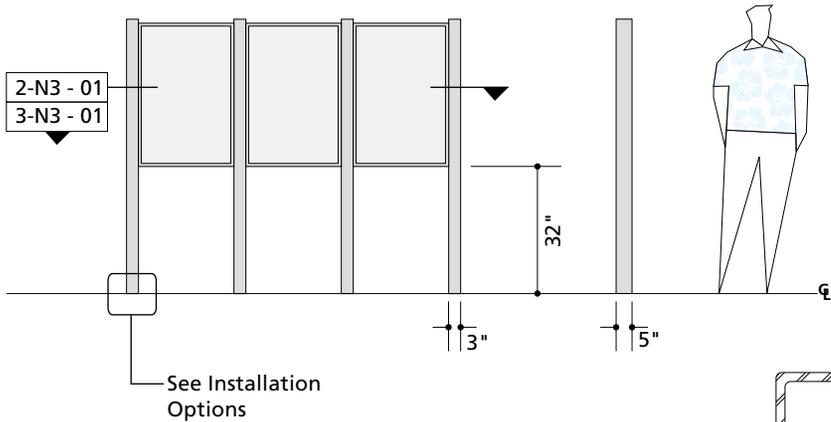
## Upright Inline 3 Series (UPN3)

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# Upright Inline 3 Series (UPN3)

## Steel Fabrication

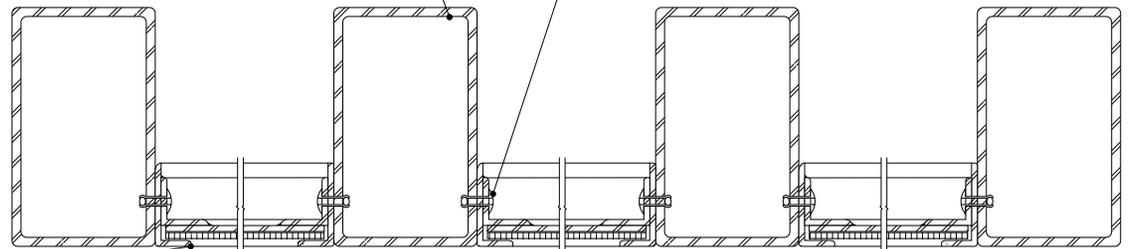


**1-N3 - 01 Upright Inline 3 Elevation**

Scale: 1/4" = 1'-0"

3" x 5" x 3/16"  
Tubular Steel Posts

1/4" Diameter, 18-8 Stainless Steel High Strength,  
Wide Grip, Dome Style Blind Rivet  
Note: Refer to Rivet Chart for Quantity per Frame



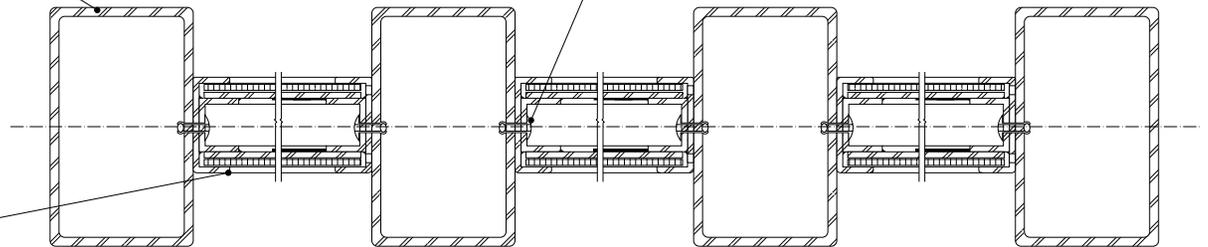
See Upright Single-sided  
Steel Fabrication  
Frame Drawing for Details

**2-N3 - 01 Single-sided Steel Top Section Cut**

Scale: 3" = 1'-0"

3" x 5" x 3/16"  
Tubular Steel Posts

1/4" Diameter, 18-8 Stainless Steel High Strength,  
Wide Grip, Dome Style Blind Rivet  
Note: Refer to Rivet Chart for Quantity per Frame



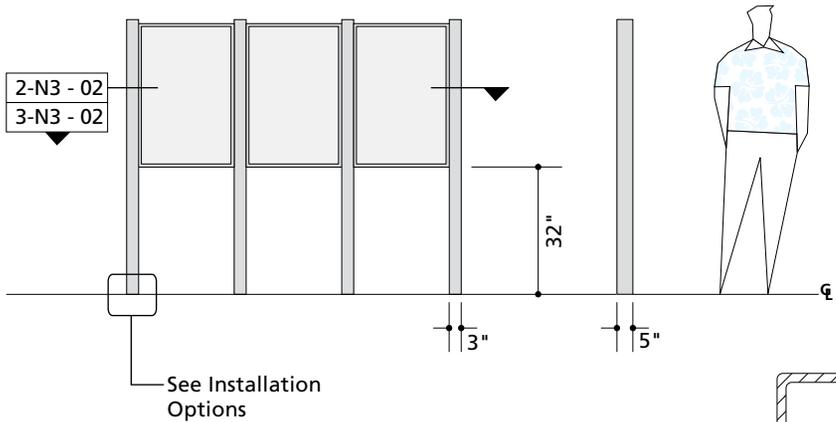
See Upright Double-sided  
Steel Fabrication  
Frame Drawing for Details

**3-N3 - 01 Double-sided Steel Top Section Cut**

Scale: 3" = 1'-0"

# Upright Inline 3 Series (UPN3)

## Aluminum Fabrication

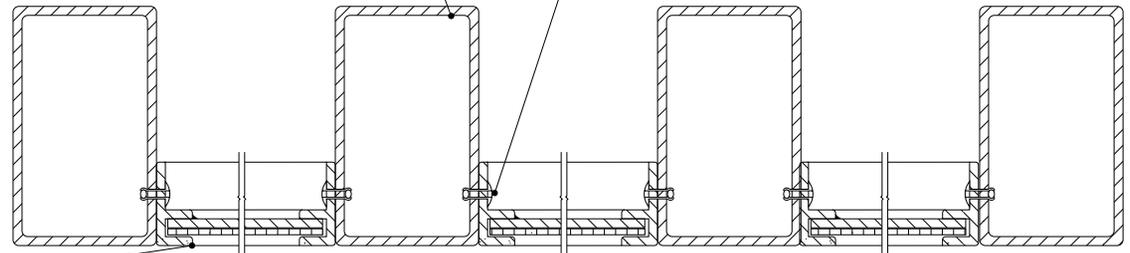


**1-N3 - 02 Upright Inline 3 Elevation**

Scale: 1/4" = 1'

3" x 5" x 3/16" Tubular Aluminum Posts

3/8" Diameter, 5056 Aluminum High Strength, Wide Grip, Dome Style Blind Rivet  
Note: Refer to Rivet Chart for Quantity per Frame



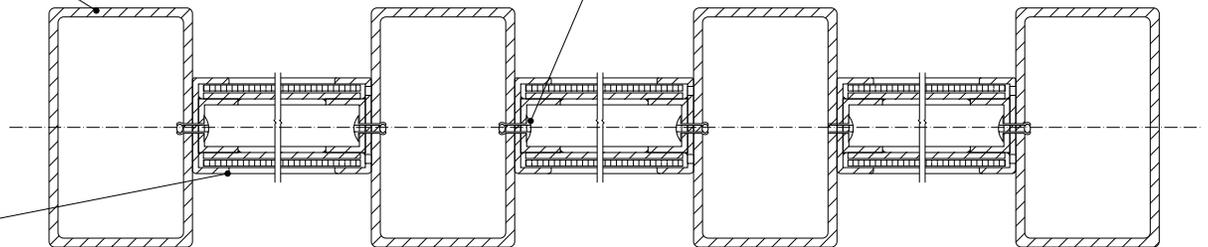
See Upright Single-sided Aluminum Fabrication Frame Drawing for Details

**2-N3 - 02 Single-sided Steel Top Section Cut**

Scale: 3" = 1'-0"

3" x 5" x 3/16" Tubular Aluminum Posts

3/8" Diameter, 15056 Aluminum High Strength, Wide Grip, Dome Style Blind Rivet  
Note: Refer to Rivet Chart for Quantity per Frame



See Upright Double-sided Aluminum Fabrication Frame Drawing for Details

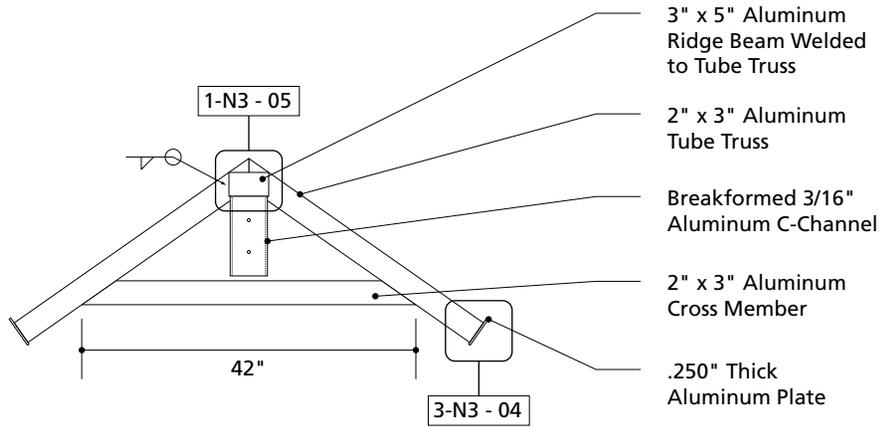
**3-N3 - 02 Double-sided Steel Top Section Cut**

Scale: 3" = 1'-0"



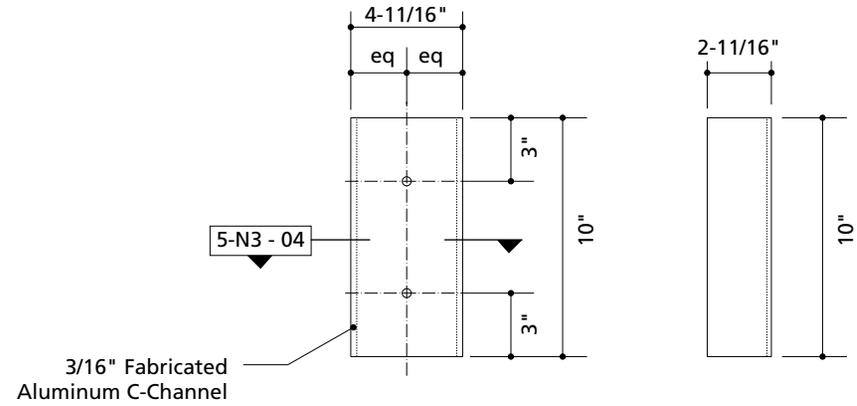
# Upright Inline 3 Series (UPN3) with Roof

## Aluminum Fabrication (Continued)



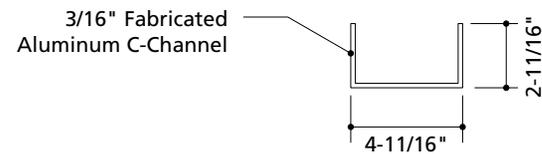
**1-UP 26 Roof Cross Section**

Scale: 1/2" = 1'-0"



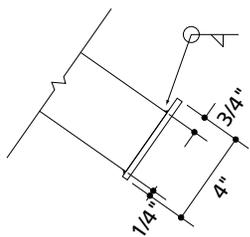
**2-N3 - 04 C-Channel Front and Side Elevation**

Scale: 1/2" = 1'-0"



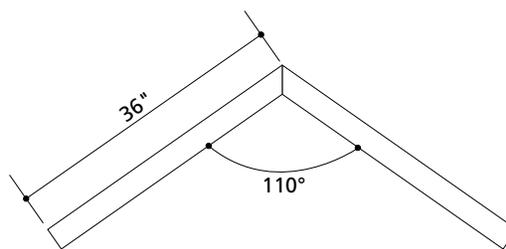
**5-N3 - 04 C-Channel Section Cut**

Scale: 1/2" = 1'-0"



**3-N3 - 04 Truss-Plate Connection Detail**

Scale: 1-1/2" = 1'-0"

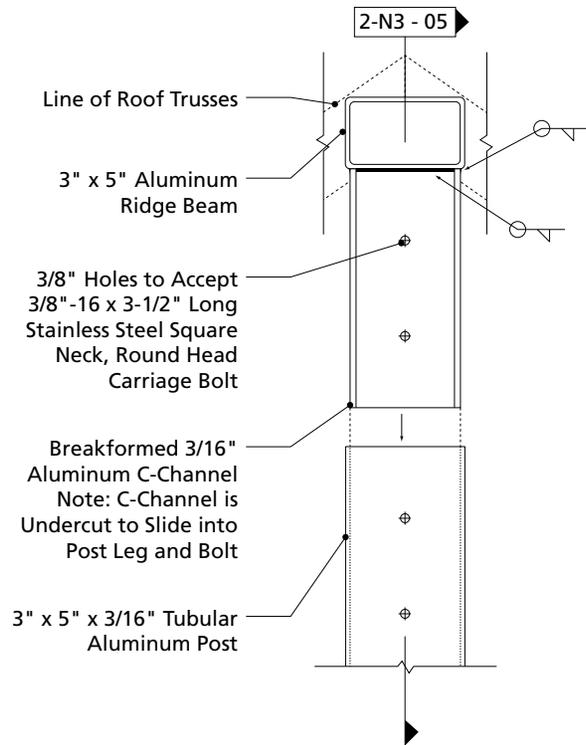


**4-N3 - 04 Aluminum Tube Truss Detail**

Scale: 1/2" = 1'-0"

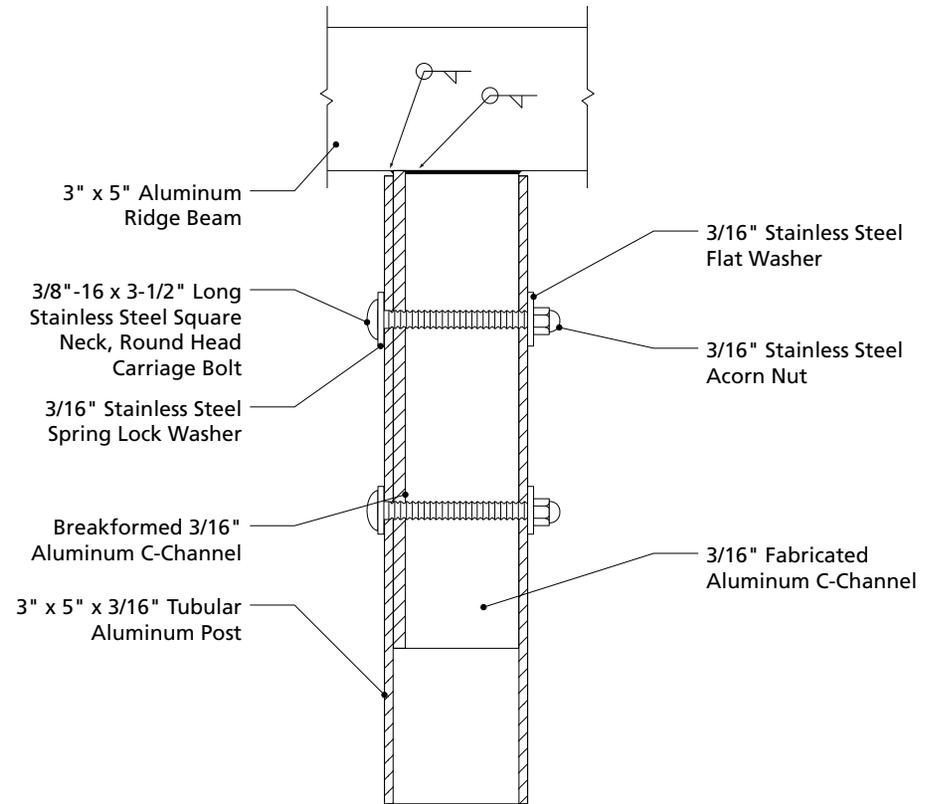
# Upright Inline 3 Series (UPN3) with Roof

## Aluminum Fabrication (Continued)



**1-N3 - 05 Post/Truss Cross Section**

Scale: 1-1/2" = 1'-0"

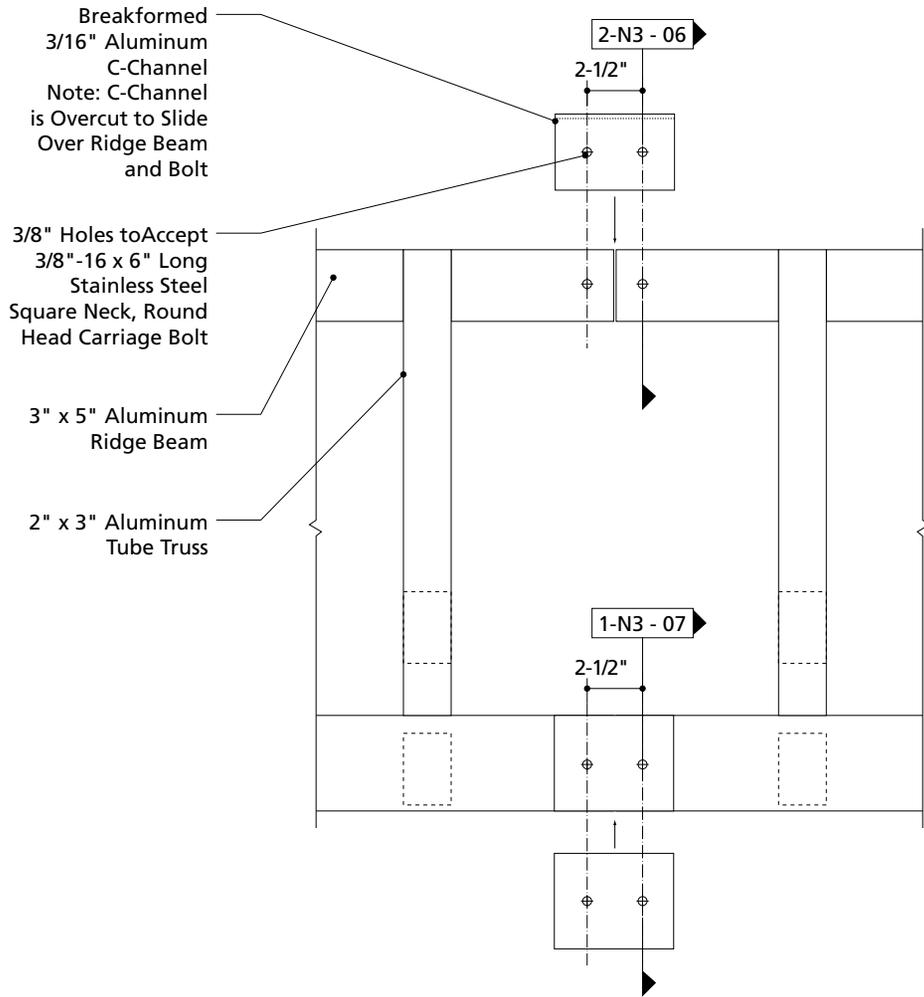


**2-N3 - 05 Post Connection Cross Section**

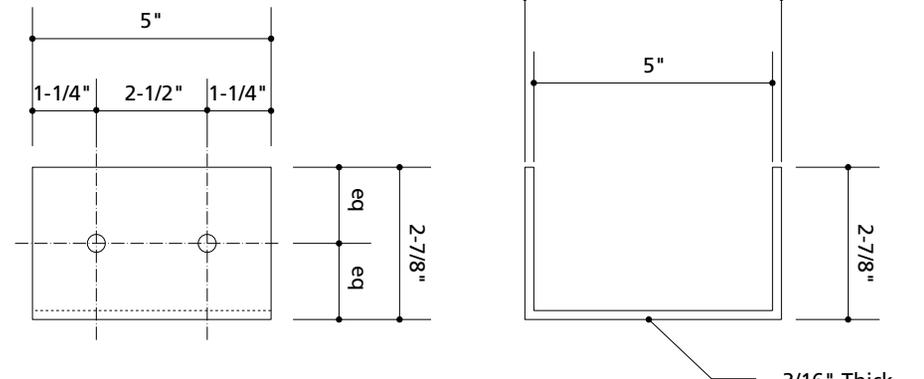
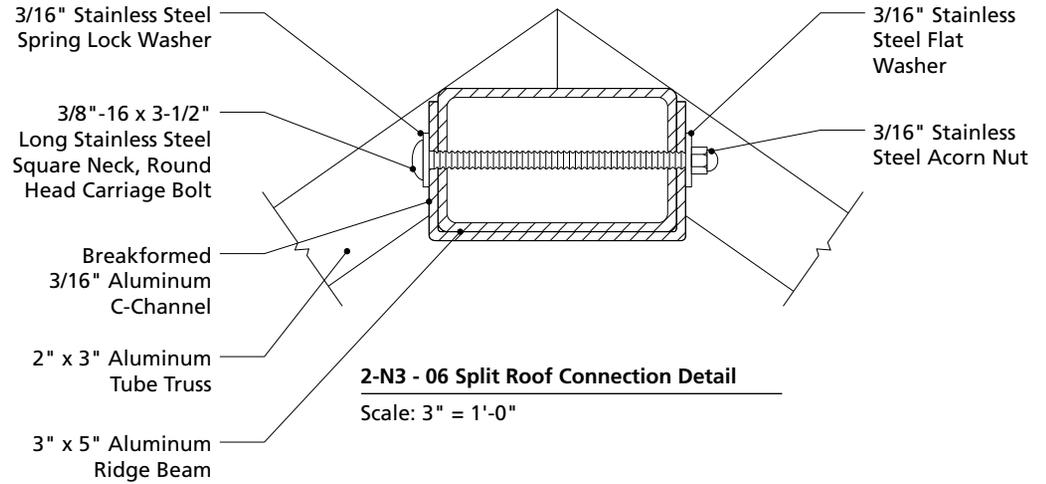
Scale: 3" = 1'-0"

# Upright Inline 3 Series (UPN3) with Roof

## Aluminum Fabrication (Continued)



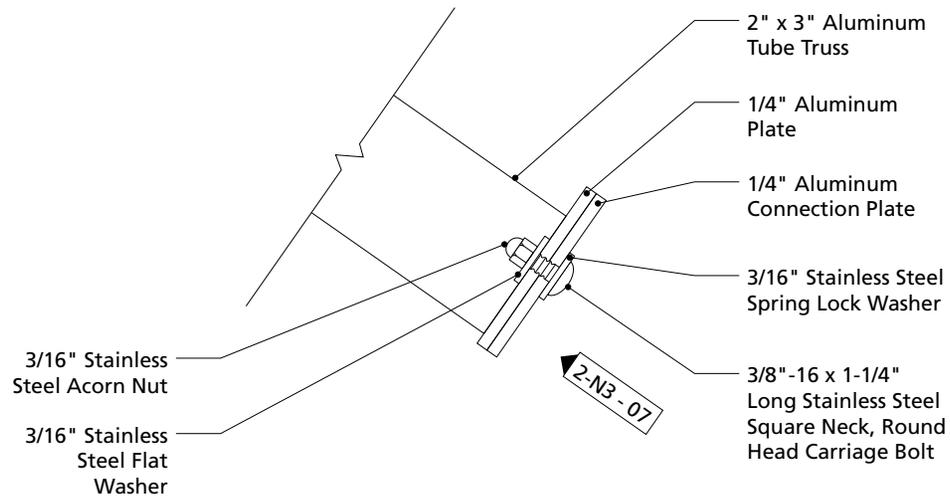
**1-N3 - 06 Split Roof Connection Front Elevation**  
Scale: 1-1/2" = 1'-0"



**3-N3 - 06 C-Channel Front and Side Elevations**  
Scale: 1-1/2" = 1'-0"

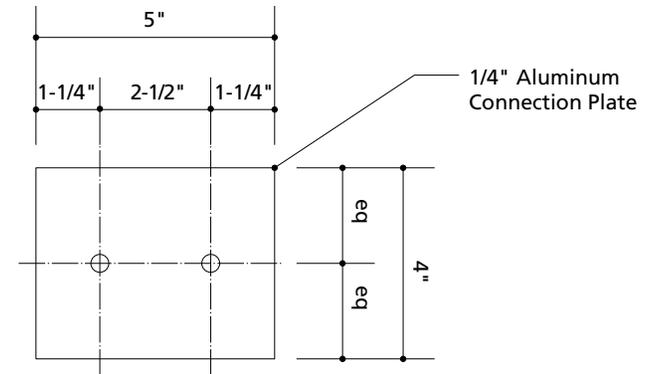
# Upright Inline 3 Series (UPN3) with Roof

## Aluminum Fabrication (Continued)



**1-N3 - 07 Split Roof Connection Detail**

Scale: 3" = 1'-0"

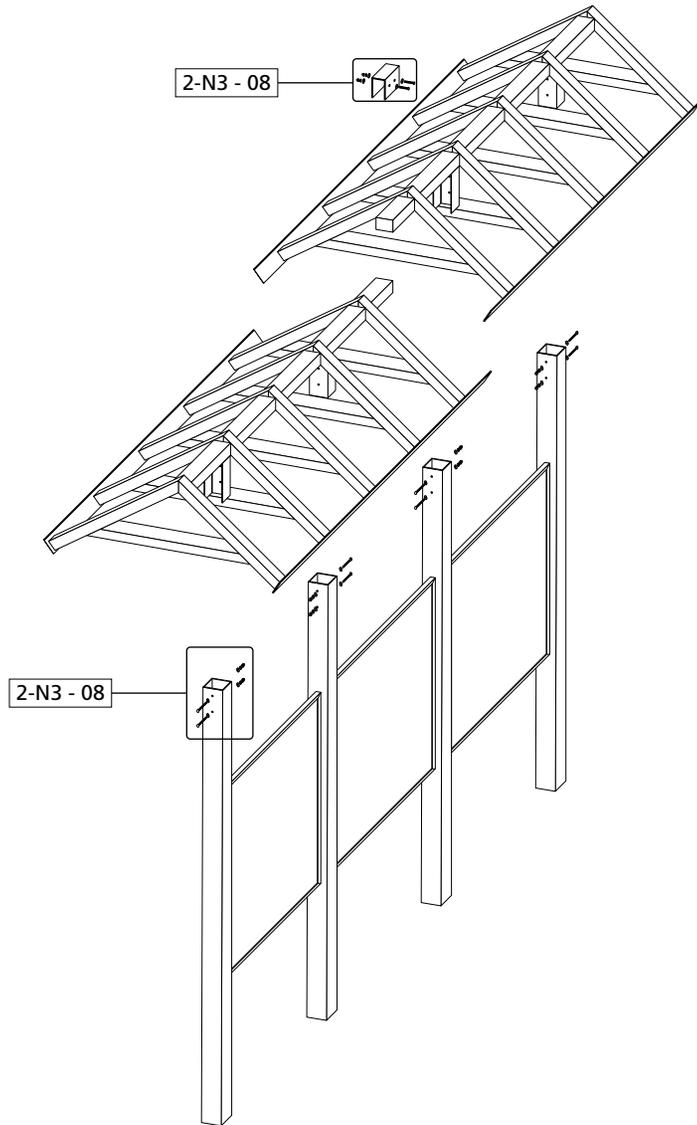


**2-N3 - 07 Connection Plate Elevation**

Scale: 3" = 1'-0"

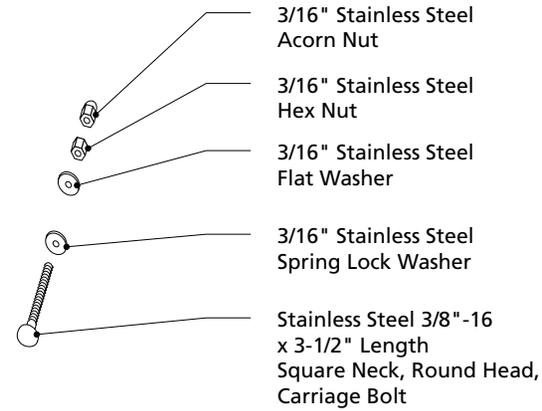
# Upright Inline 3 Series (UPN3) with Roof

## Aluminum Fabrication (Continued)



**1-N3 - 08 Exploded View**

Scale: 1/4" = 1'-0"



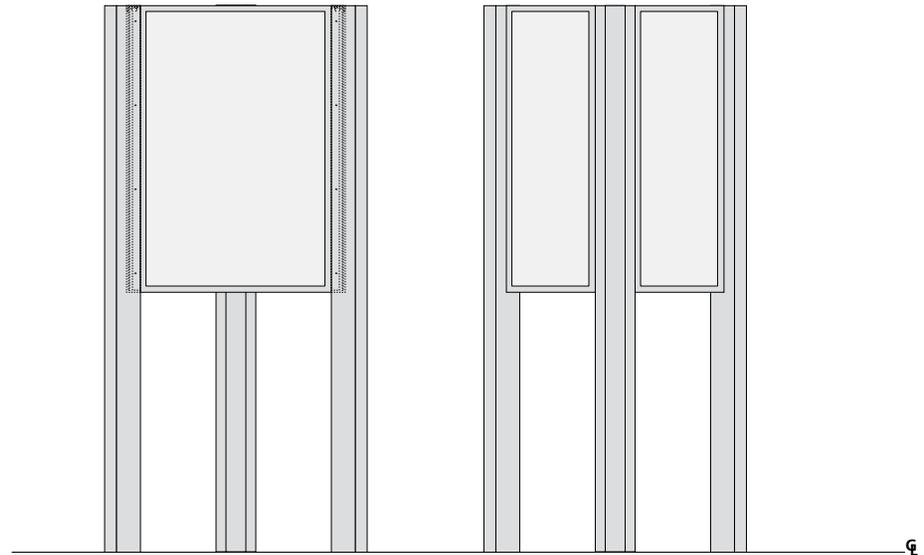
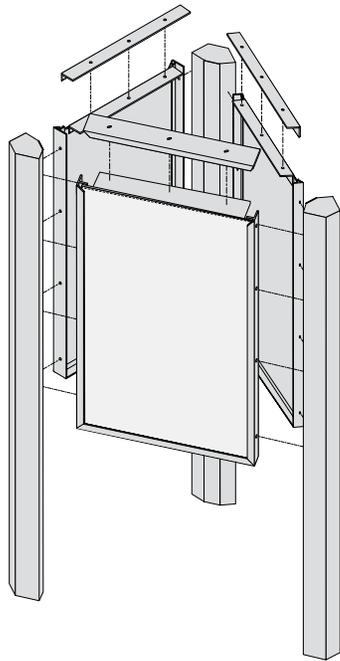
**2-N3 - 08 Connection Hardware**

Scale: 3" = 1'-0"

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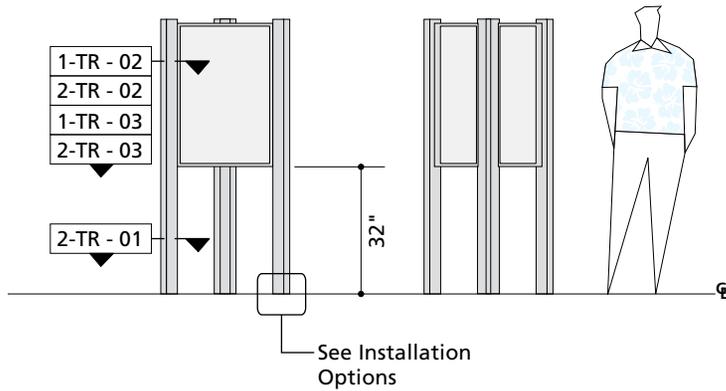
## Upright Tri-Sided Series (UPTR)

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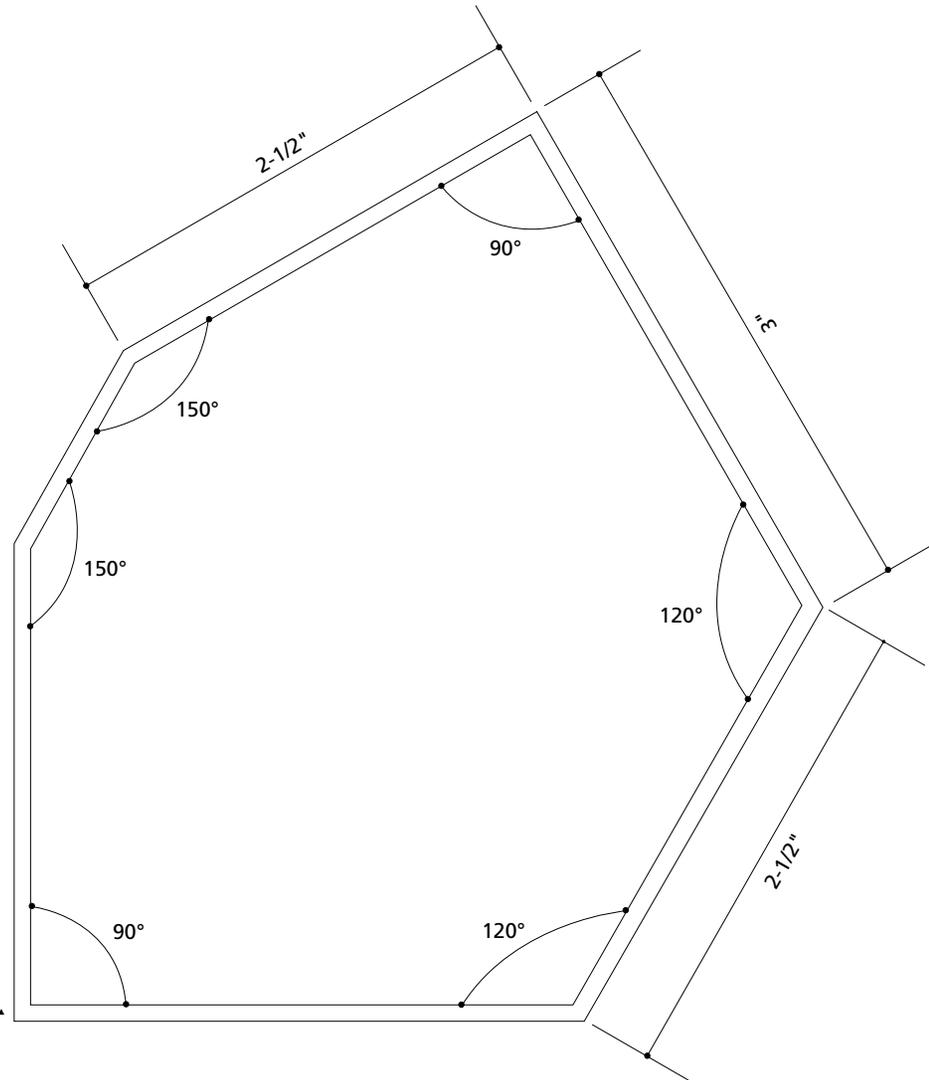
# Upright Tri-Sided Series (UPTR)

## Post Fabrication



**1-TR - 01 Upright Tri-Sided Elevation**

Scale: 1/4" = 1'-0"

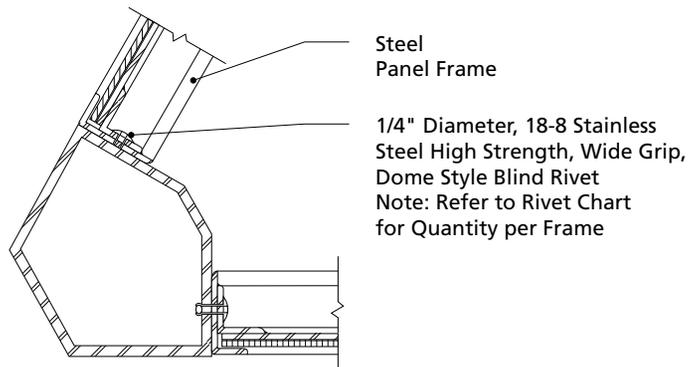


**2-TR - 01 Post Dimension, Plan View**

Scale: Actual Size

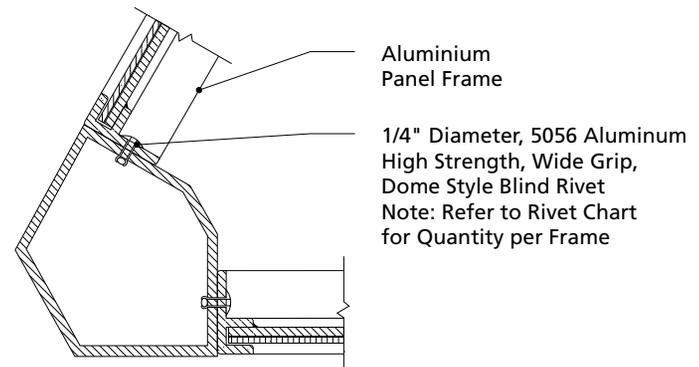
# Upright Tri-Sided Series (UPTR)

## Steel Fabrication



**1-TR - 02 Steel Frames Top Section Cut**

Scale: 3" = 1'-0"

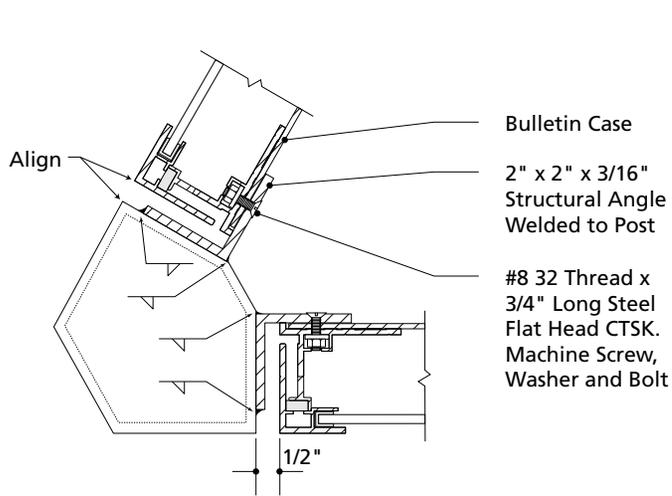


**2-TR - 02 Aluminum Frames Top Section Cut**

Scale: 3" = 1'-0"

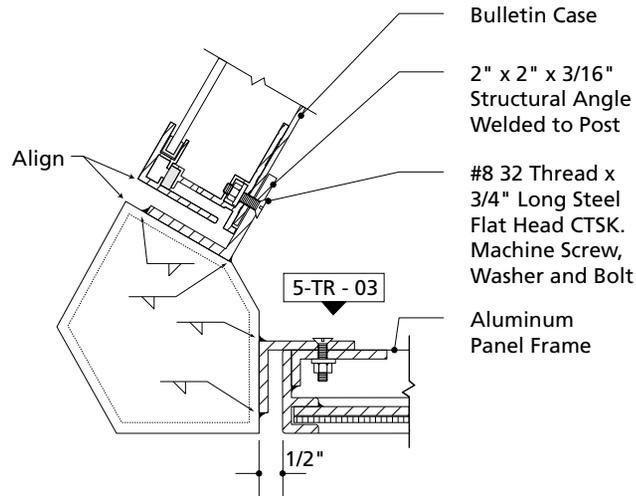
# Upright Tri-Sided Series (UPTR)

## Aluminum Fabrication



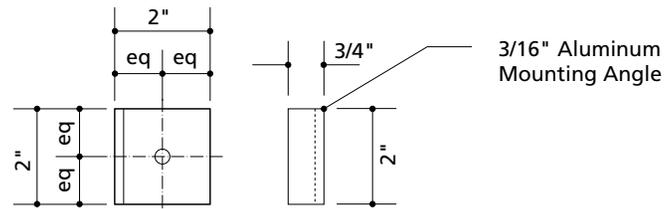
**1-TR - 03 Bulletin Cases Top Cross Section**

Scale: 3" = 1'-0"



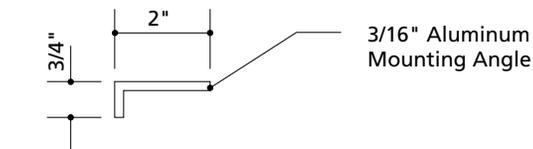
**2-TR - 03 Bulletin Cases, Panel Frames Top Cross Section**

Scale: 3" = 1'-0"



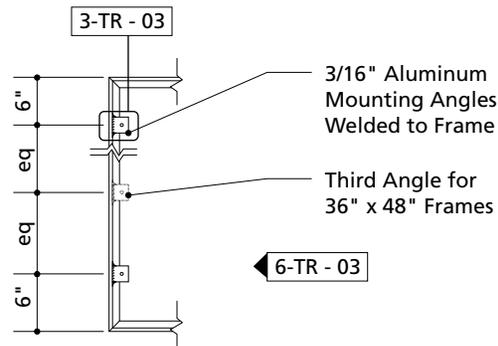
**3-TR - 03 Mounting Angle Front and Side Elevations**

Scale: 3" = 1'-0"



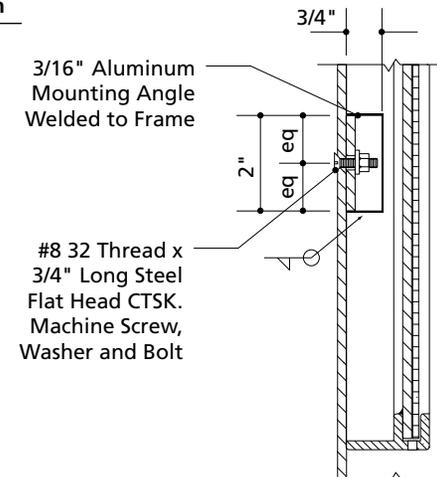
**4-TR - 03 Mounting Angle Plan View**

Scale: 3" = 1'-0"



**5-TR - 03 Frame Back, Mounting Detail**

Scale: 1/2" = 1'-0"

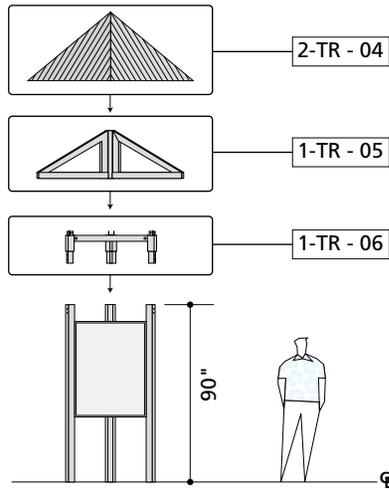


**6-TR - 03 Frame Side Section**

Scale: 3" = 1'-0"

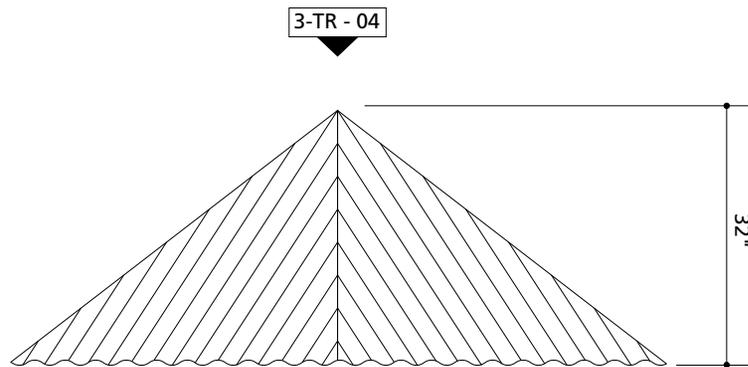
# Upright Tri-Sided Series (UPTR) with Roof

## Aluminum Fabrication



**1-TR - 04 36" 48" Upright Tri-Sided Elevation**

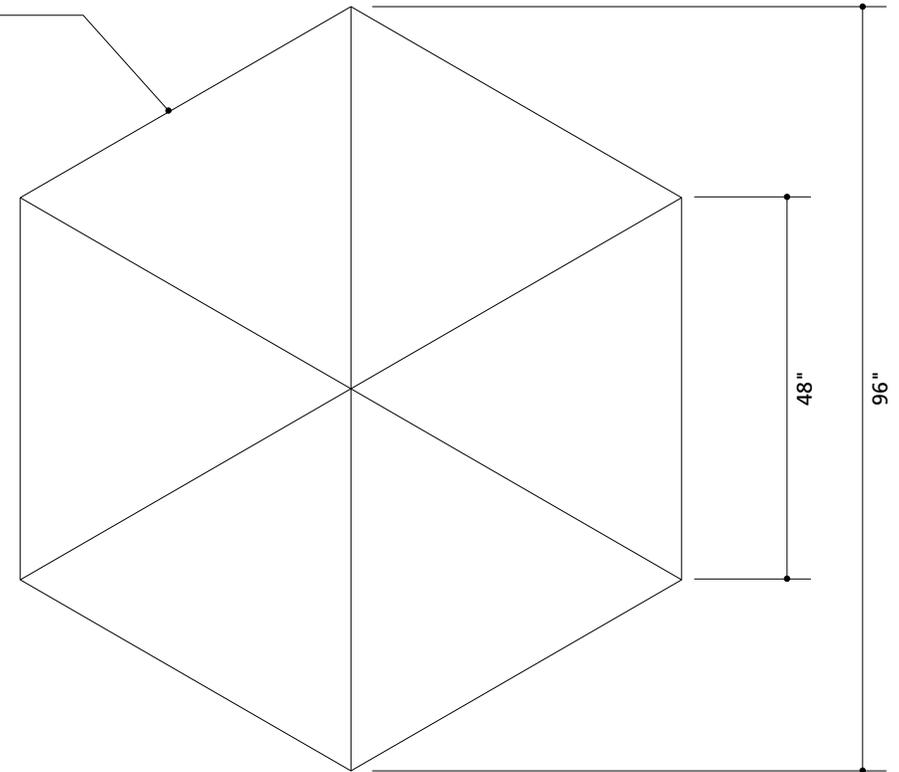
Scale: 1/8" = 1'-0"



**2-TR - 04 Roof Cap Elevation**

Scale: 1/2" = 1'-0"

3/16" Corrugated Sheet Aluminum

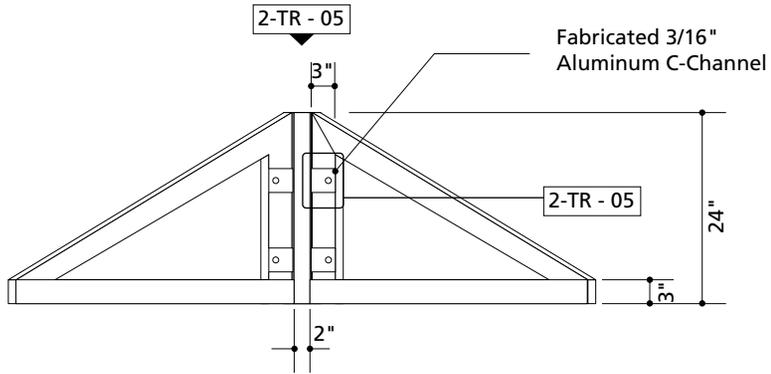


**3-TR - 04 Roof Cap Plan View**

Scale: 1/2" = 1'-0"

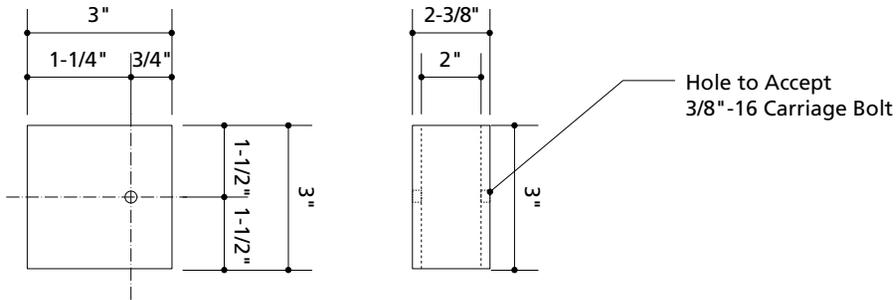
# Upright Tri-Sided Series (UPTR) with Roof

## Aluminum Fabrication (Continued)



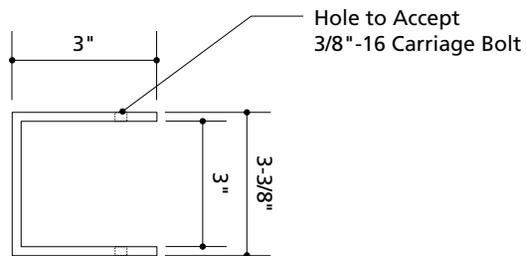
**1-TR - 05 Spider Roof Elevation**

Scale: 1/2" = 1'-0"



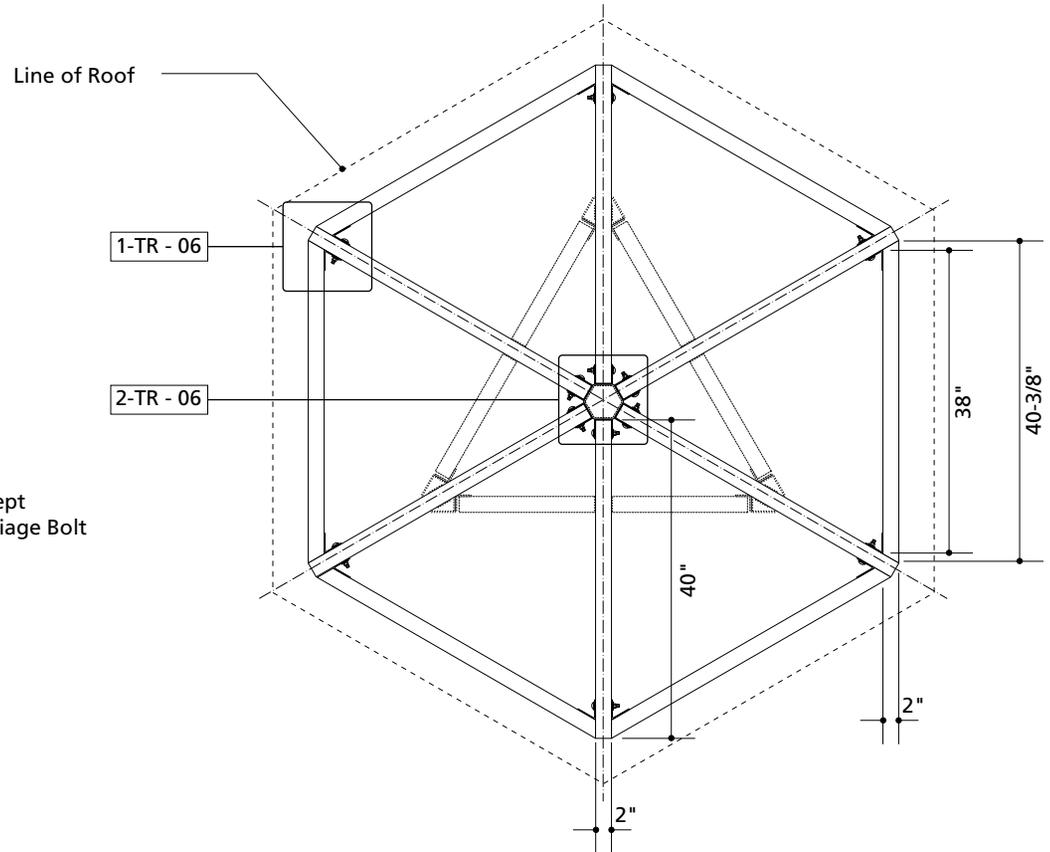
**1-TR - 05 C-Channel Front and Side Elevations**

Scale: 3" = 1'-0"



**1-TR - 05 C-Channel Plan View**

Scale: 3" = 1'-0"

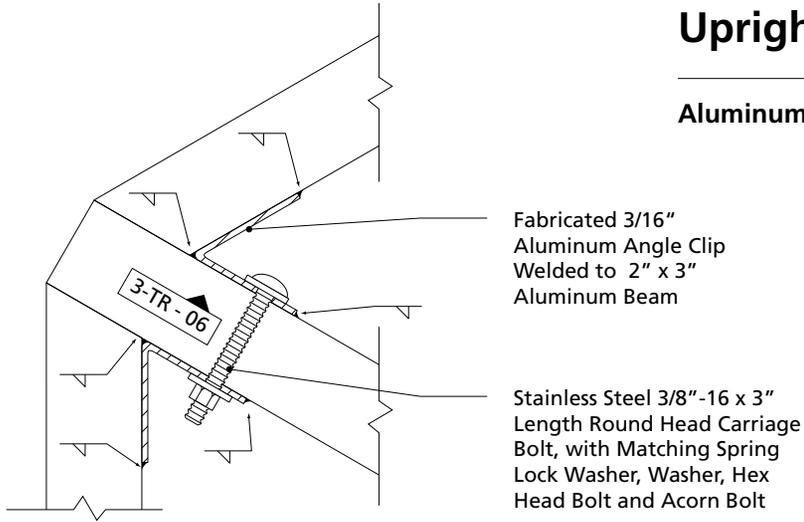


**2-TR - 05 Spider Roof Plan View**

Scale: 1/2" = 1'-0"

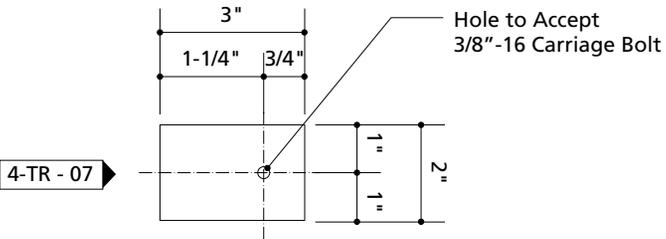
# Upright Tri-Sided Series (UPTR) with Roof

## Aluminum Fabrication (Continued)



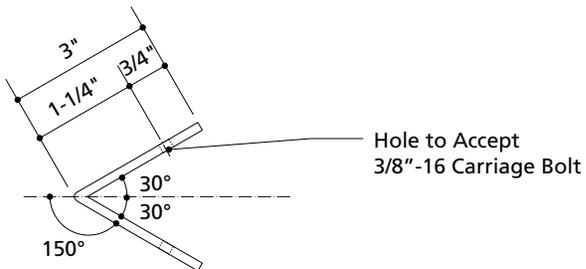
**1-TR - 06 Connection Detail**

3" = 1'-0"



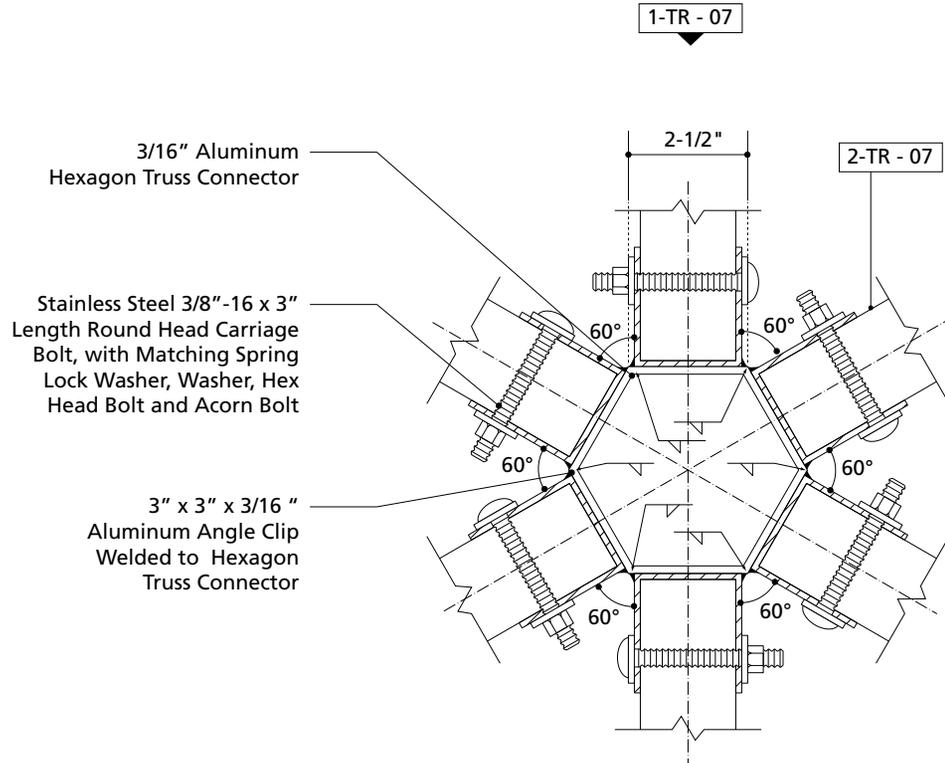
**3-TR - 06 Angle Clip Front Elevation**

Scale: 3" = 1'-0"



**4-TR - 06 Angle Clip Plan View**

Scale: 3" = 1'-0"

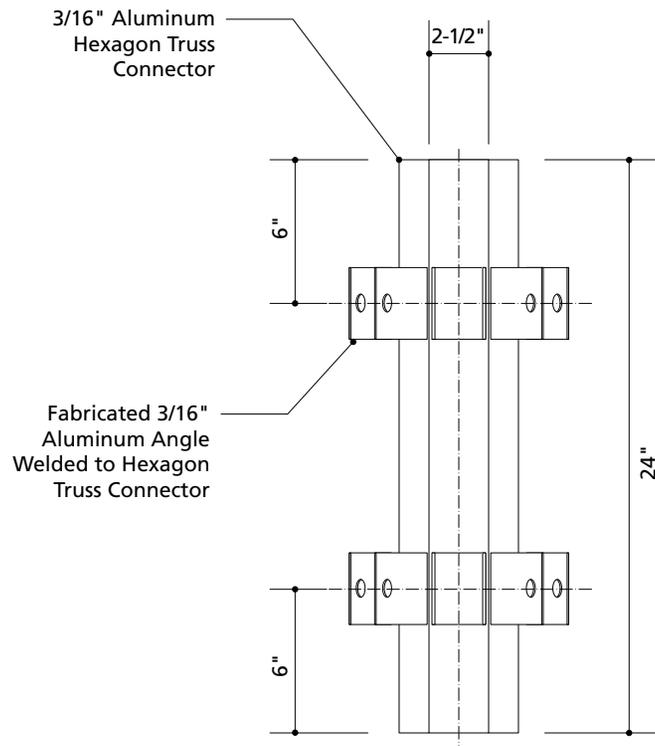


**2-TR - 06 Connection Detail**

3" = 1'-0"

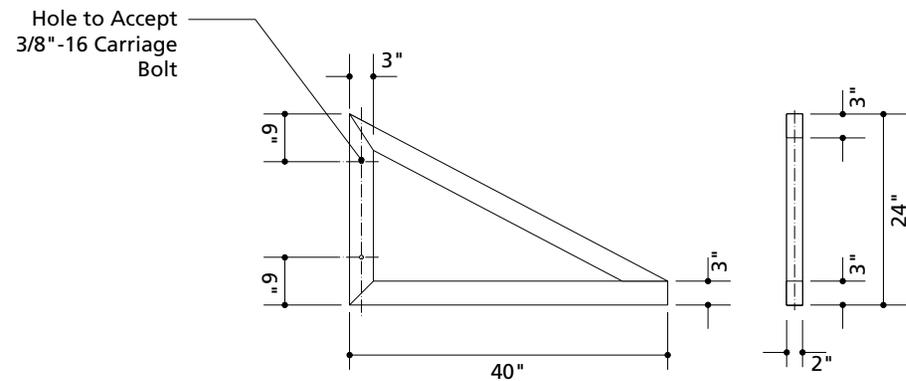
# Upright Tri-Sided Series (UPTR) with Roof

## Aluminum Fabrication (Continued)



**1- TR - 07 Hexagon Truss Connector Elevation**

1-1/2" = 1'-0"

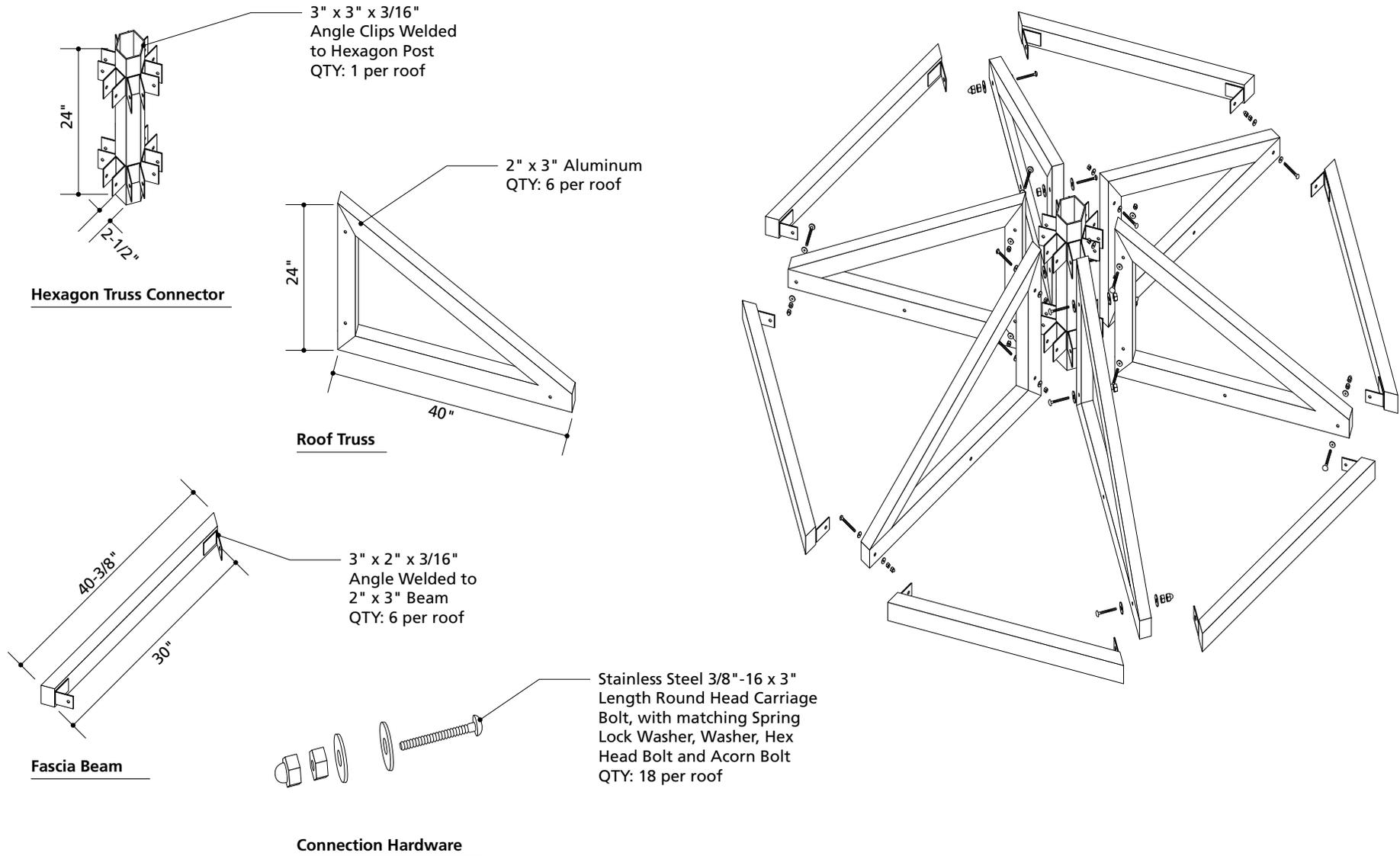


**2- TR - 07 Roof Truss Front and Side Elevations**

1/2" = 1'-0"

# Upright Tri-Sided Series (UPTR) with Roof

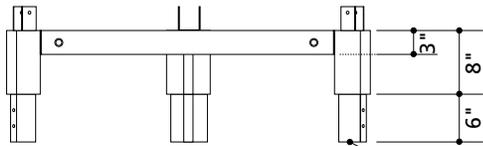
## Aluminum Fabrication (Continued)



# Upright Tri-Sided Series (UPTR) with Roof

## Aluminum Fabrication (Continued)

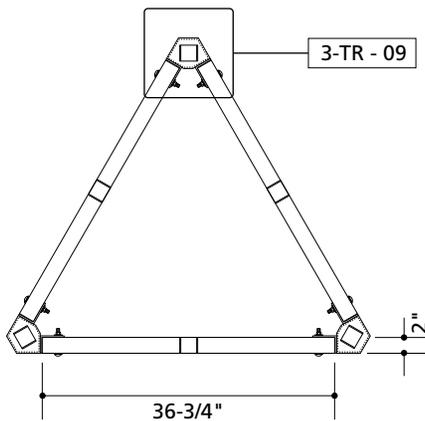
2-TR - 09



**1-TR - 09 Roof Base Elevation**

Scale: 1/2" = 1'-0"

Note: Post Bottom is Undercut to Slide Into Upright Posts



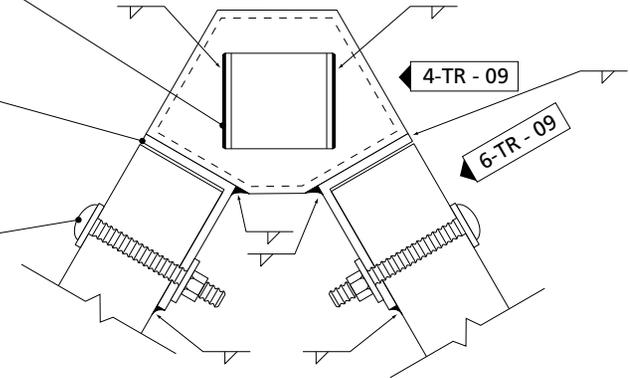
**2-TR - 09 Roof Base Plan View**

Scale: 1/2" = 1'-0"

Fabricated 3/16" Aluminum C-Channel Welded to Aluminum Post

Fabricated 3/16" Aluminum Angle Welded to Hexagon Post

Stainless Steel 3/8"-16 x 3" Length Round Head Carriage Bolt, with Matching Spring Lock Washer, Washer, Hex Head Bolt and Acorn Bolt

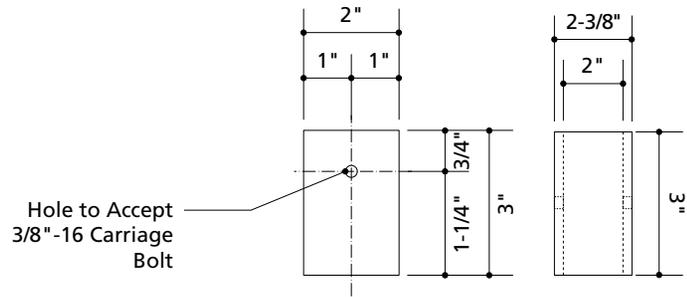


**3-TR - 09 Connection Detail**

Scale: 3" = 1'-0"

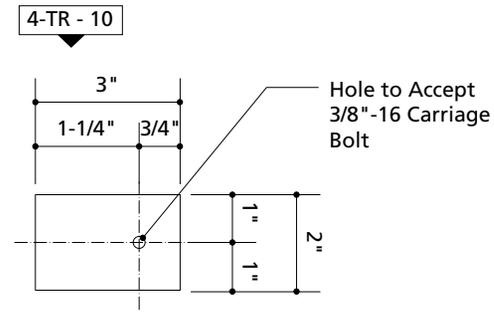
# Upright Tri-Sided Series (UPTR) with Roof

## Aluminum Fabrication (Continued)



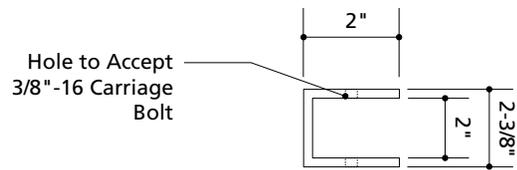
**1-TR - 10 C-Channel Front and Side Elevations**

Scale: 3" = 1'-0"



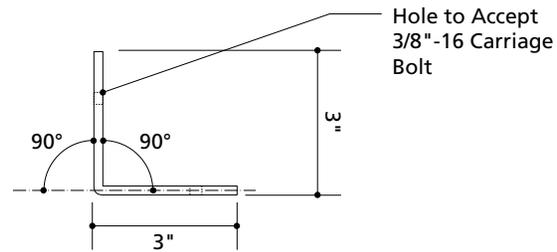
**3-TR - 10 Angle Clip Front Elevation**

Scale: 3" = 1/2" = 1'-0"



**2-TR - 10 C-Channel Plan View**

Scale: 3" = 1'-0"

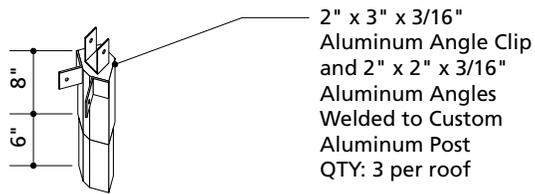


**4-TR - 10 Angle Clip Plan View**

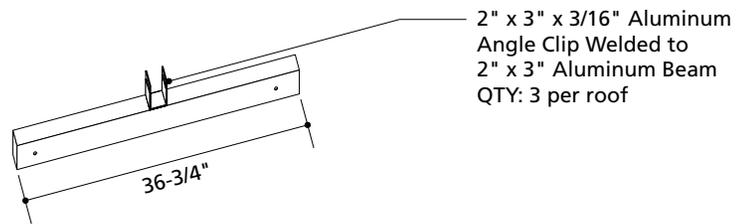
Scale: 3" = 1/2" = 1'-0"

# Upright Tri-Sided Series (UPTR) with Roof

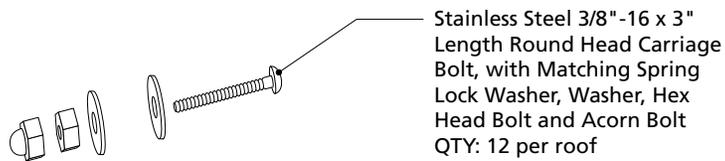
## Aluminum Fabrication (Continued)



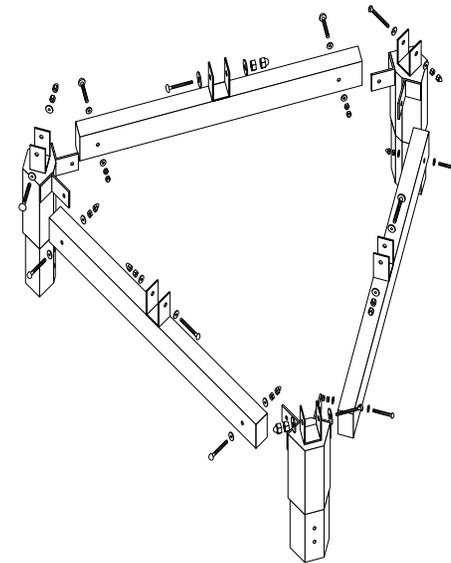
Post Extender



Fascia Beam



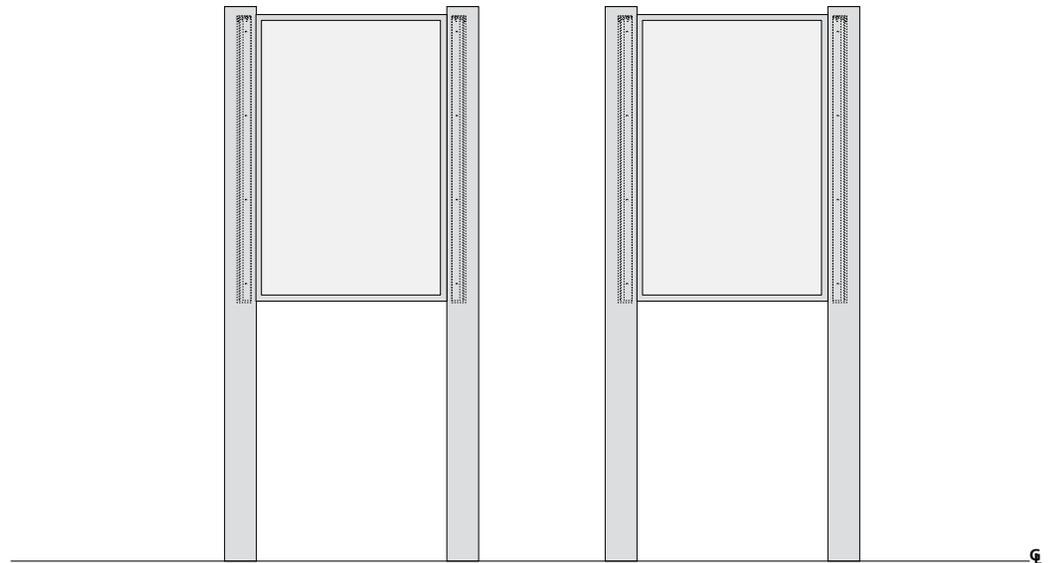
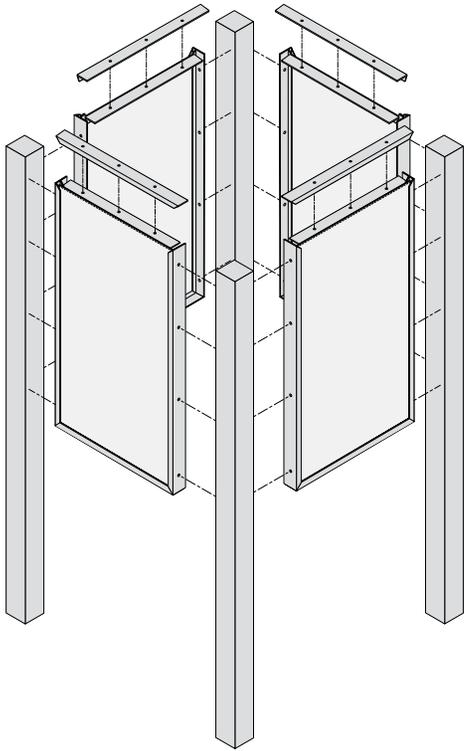
Connection Hardware



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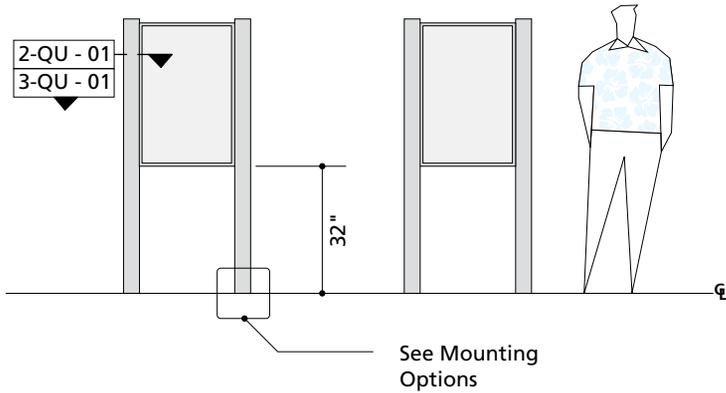
## Upright Quad Series (UPQU)

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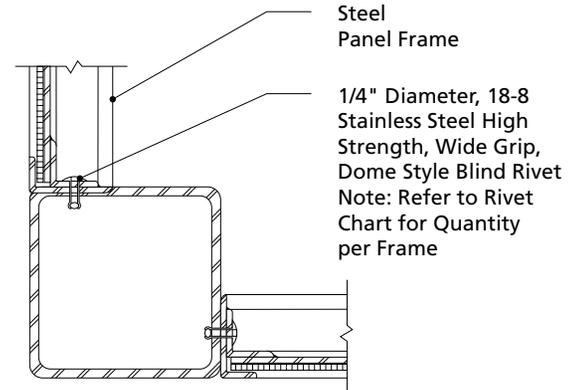
# Upright Quad Series (UPQU)

## Steel Fabrication



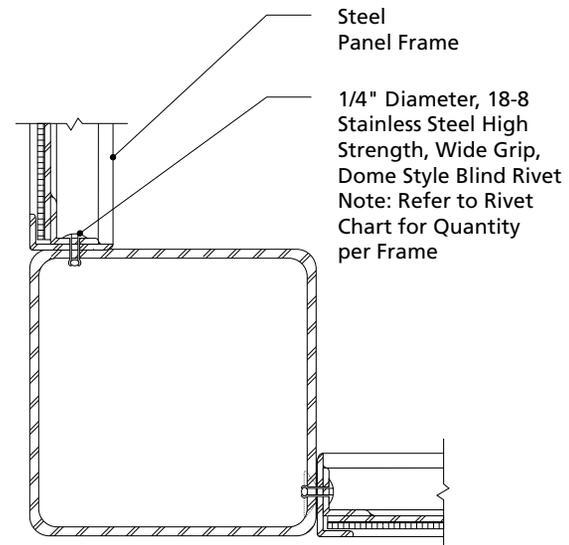
**1-QU - 01 Upright Quad Elevation**

Scale: 1/4" = 1'-0"



**2-QU - 01 Steel Panel Frames, 4" x 4" Post**

Scale: 3" = 1'-0"

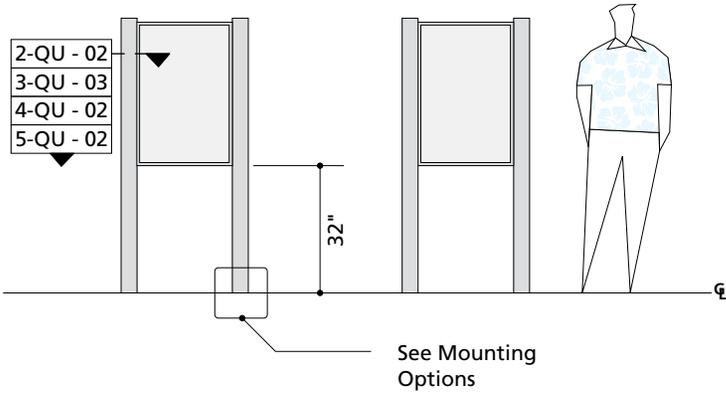


**3-QU - 01 Steel Panel Frames, 6" x 6" Post**

Scale: 3" = 1'-0"

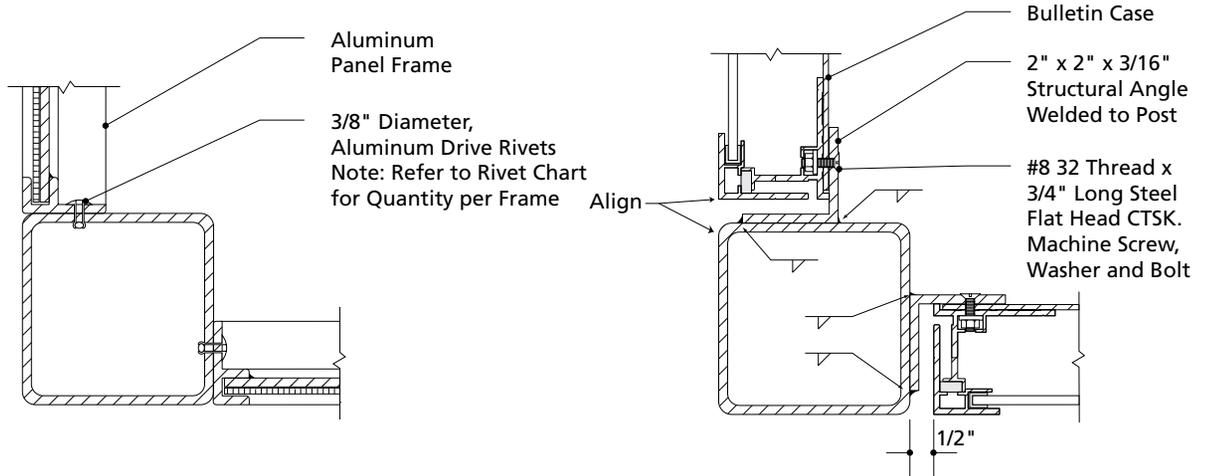
# Upright Quad Series (UPQU)

## Aluminum Fabrication



**1-QU - 02 Upright Quad Elevation**

Scale: 1/4" = 1'-0"

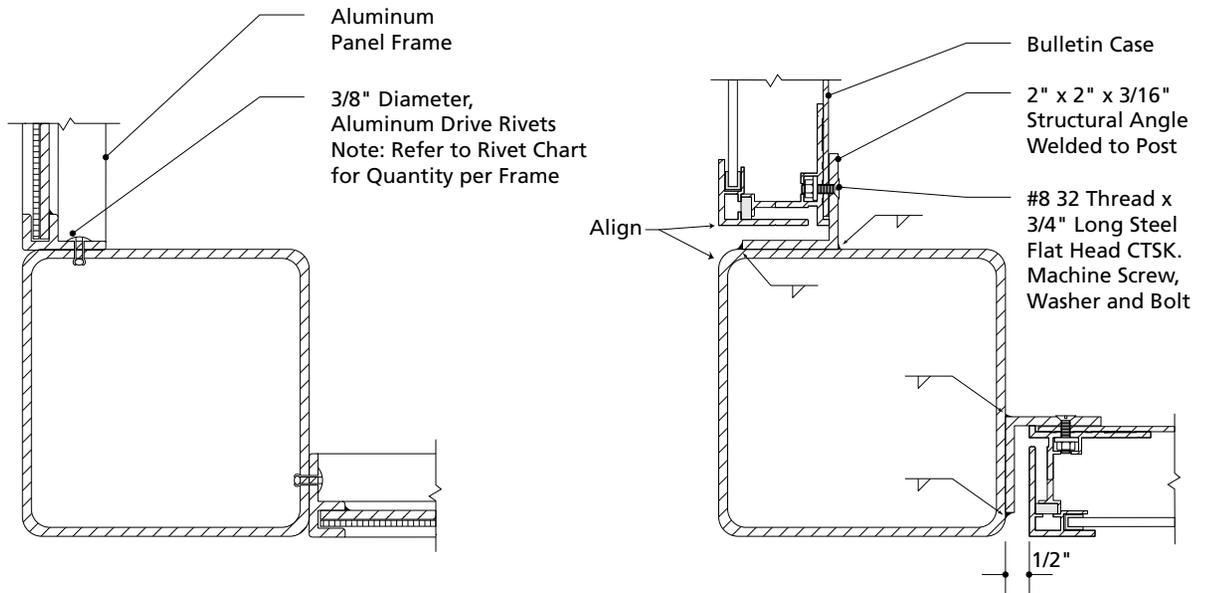


**2-QU - 02 Aluminum Panel Frames, 4" x 4" Post**

Scale: 3" = 1'-0"

**3-QU - 02 Bulletin Cases, 4" x 4" Post**

Scale: 3" = 1'-0"



**4-QU - 02 Aluminum Panel Frames, 6" x 6" Post**

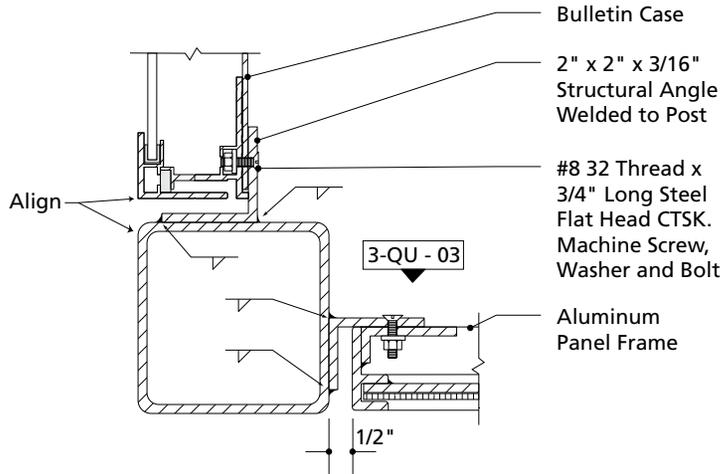
Scale: 3" = 1'-0"

**5-QU - 02 Bulletin Cases, 6" x 6" Post**

Scale: 3" = 1'-0"

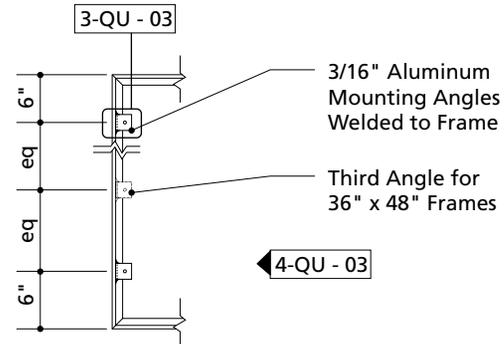
# Upright Quad Series (UPQU)

## Aluminum Fabrication (Continued)



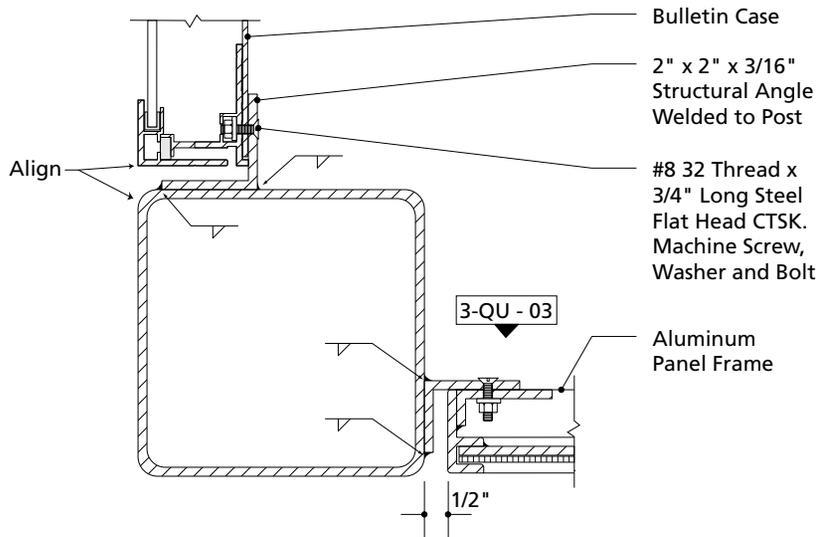
**1-QU - 03 Bulletin Cases and Panel Frames, 4" x 4" Post**

Scale: 3" = 1'-0"



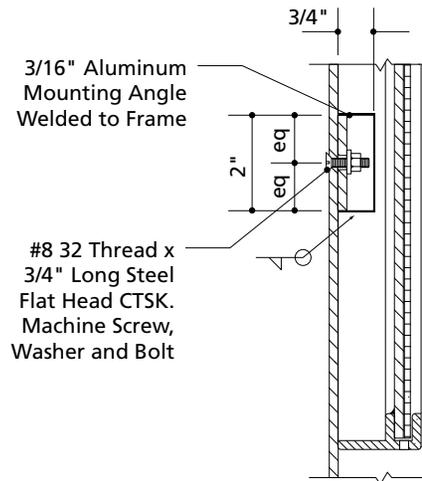
**3-QU - 03 Frame Back, Mounting Detail**

Scale: 1/2" = 1'-0"



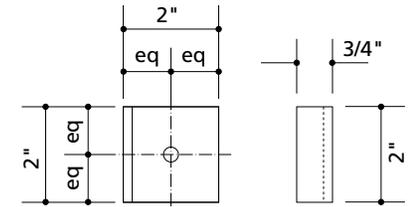
**2-QU - 03 Bulletin Cases and Panel Frames, 6" x 6" Post**

Scale: 3" = 1'-0"



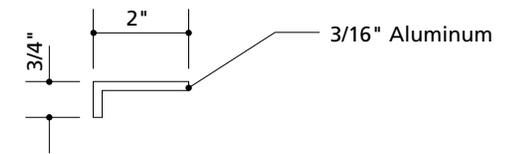
**4-QU - 03 Frame Side Section**

Scale: 3" = 1'-0"



**3-QU - 03 Mounting Angle Front and Side Elevations**

Scale: 3" = 1'-0"

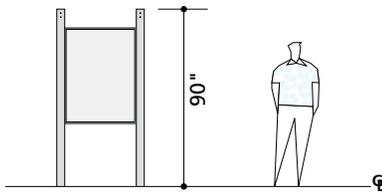
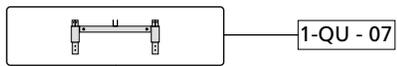
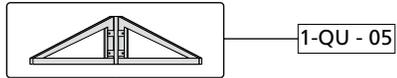
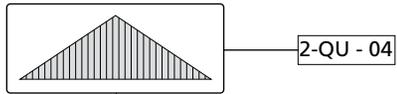


**5-QU - 03 Mounting Angle Plan View**

Scale: 3" = 1'-0"

# Upright Quad Series (UPQU) with Roof

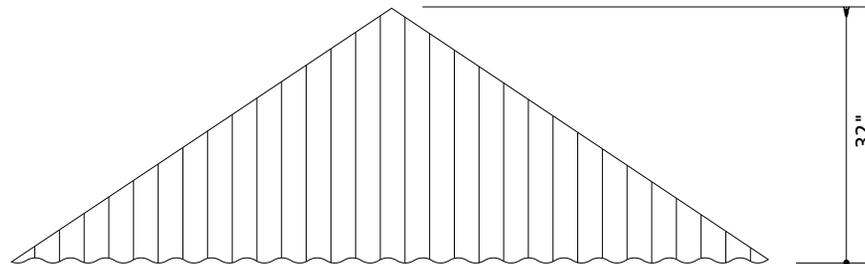
## Aluminum Fabrication



**1-QU - 04 36" 48" Upright Tri-Sided Elevation**

Scale: 1/8" = 1'-0"

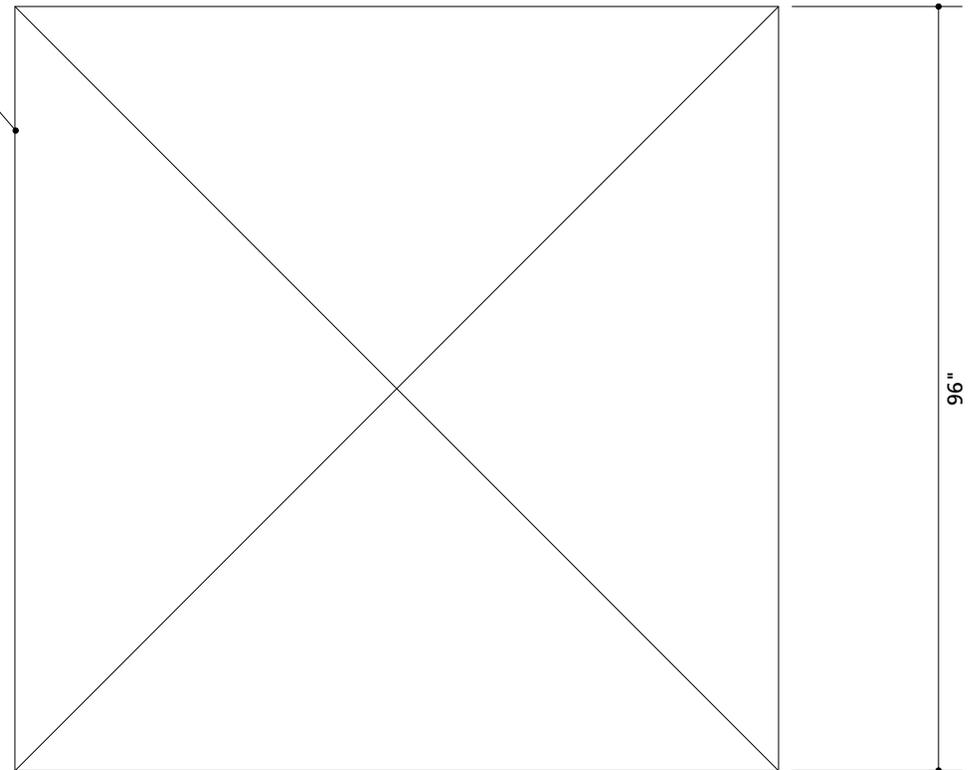
**3-QU - 04**



**2-QU - 04 Roof Cap Elevation**

Scale: 1/2" = 1'-0"

3/16" Corrugated Sheet Aluminum

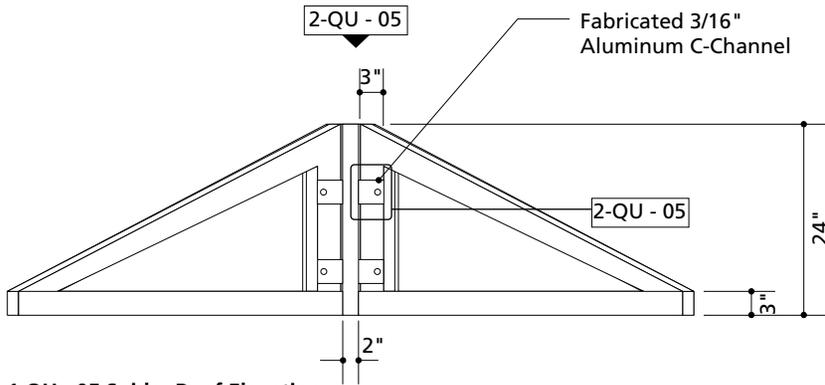


**3-QU - 04 Roof Cap Plan View**

Scale: 1/2" = 1'-0"

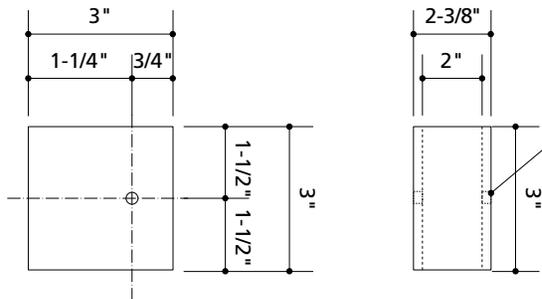
# Upright Quad Series (UPQU) with Roof

## Aluminum Fabrication (Continued)



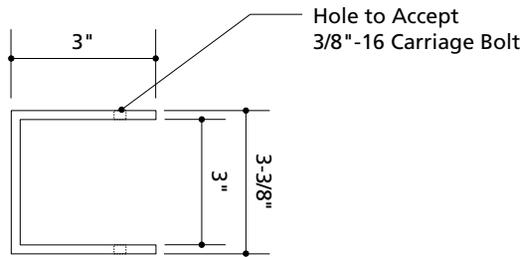
1-QU - 05 Spider Roof Elevation

Scale: 1/2" = 1'-0"



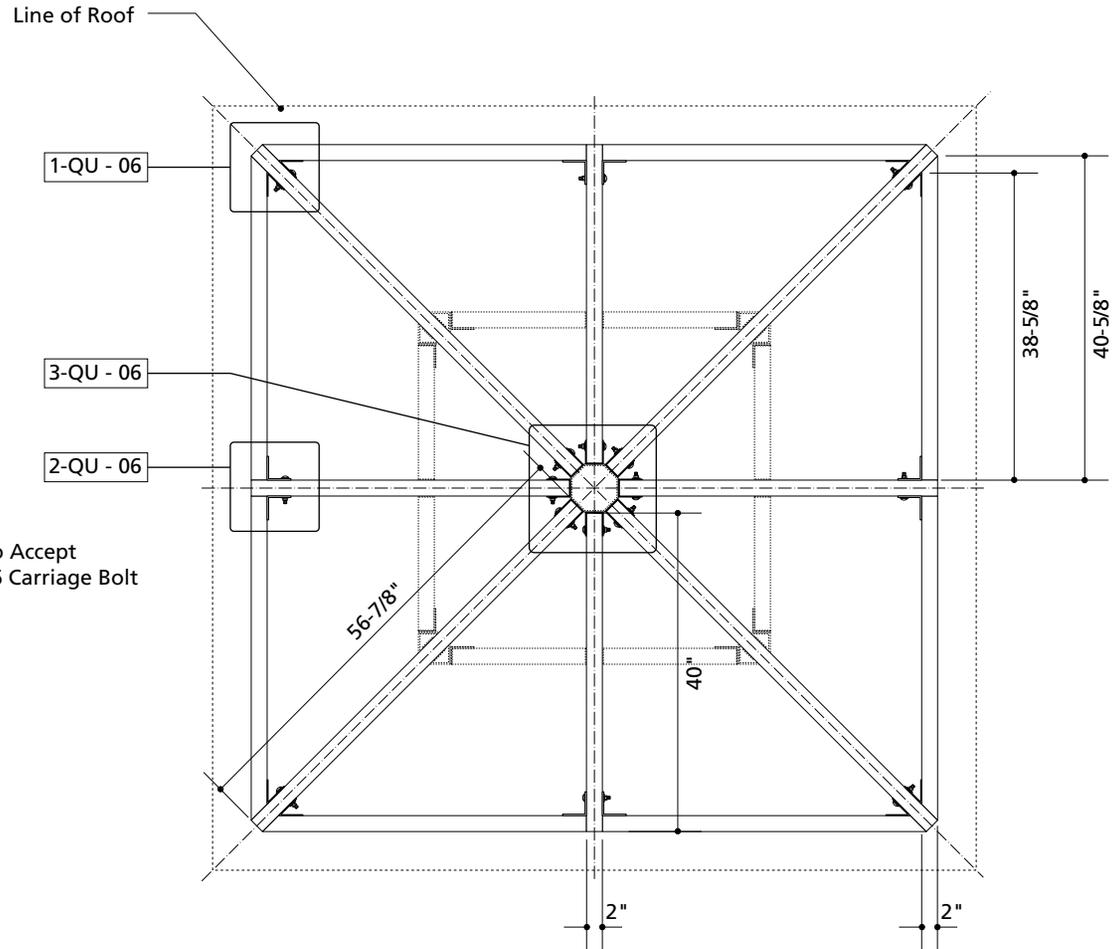
1-QU - 05 C-Channel Front and Side Elevations

Scale: 3" = 1'-0"



1-QU - 05 C-Channel Plan View

Scale: 3" = 1'-0"

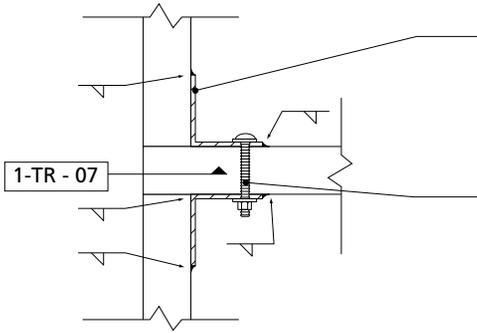


2-QU - 05 Spider Roof Plan View

Scale: 1/2" = 1'-0"

# Upright Quad Series (UPQU) with Roof

## Aluminum Fabrication (Continued)

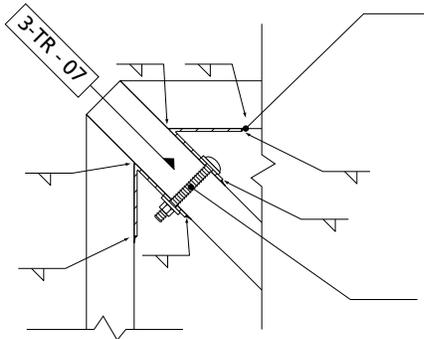


Fabricated 3/16" Aluminum Angle Clip Welded to 2" x 3" Aluminum Beam

Stainless Steel 3/8" - 16 x 3" Round Head Carriage Bolt, with Matching Spring Washer, Washer and Hex Head Bolt

**1-QU - 06 Connection Detail at Middle**

1-1/2" = 1'-0"

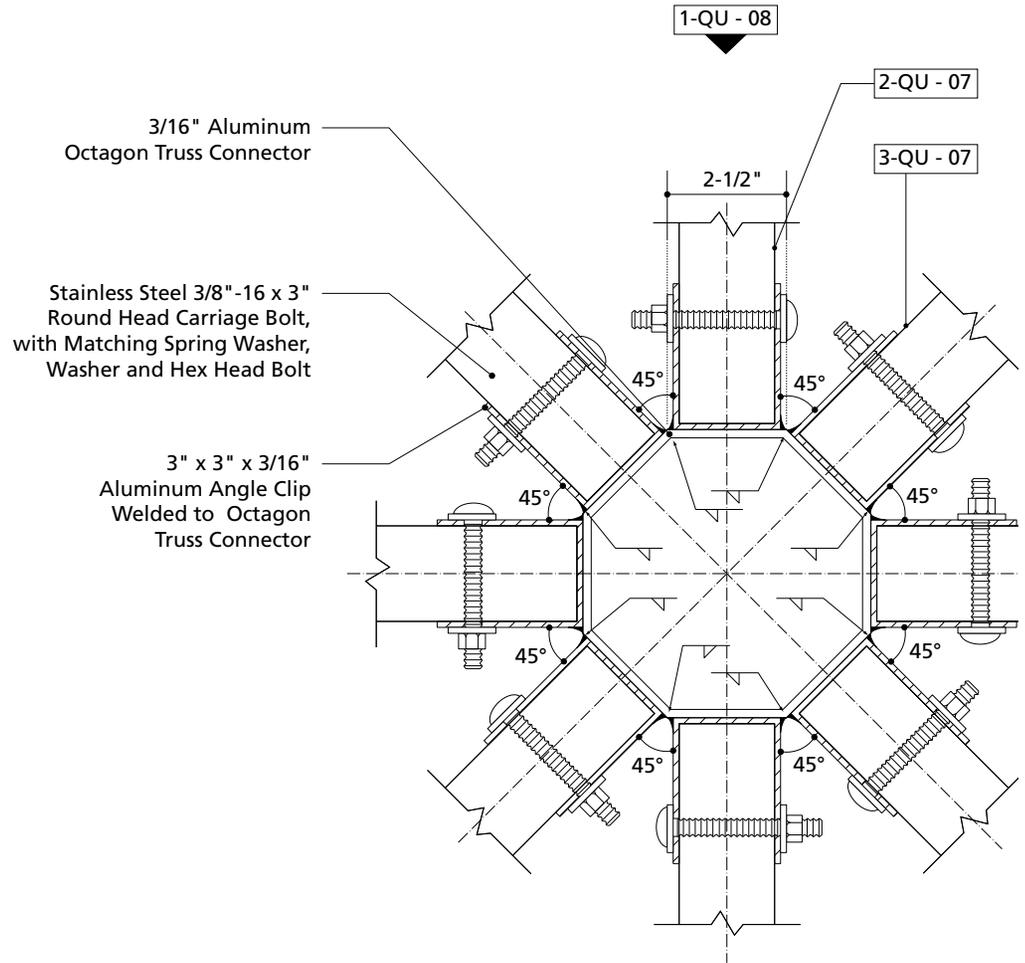


Fabricated 3/16" Aluminium Angle Clip Welded to 2" x 3" Aluminum Beam

Stainless Steel 3/8" - 16 x 3" Round Head Carriage Bolt, with Matching Spring Washer, Washer and Hex Head Bolt

**2-QU - 06 Connection Detail at Corner**

1-1/2" = 1'-0"



3/16" Aluminum Octagon Truss Connector

Stainless Steel 3/8" - 16 x 3" Round Head Carriage Bolt, with Matching Spring Washer, Washer and Hex Head Bolt

3" x 3" x 3/16" Aluminum Angle Clip Welded to Octagon Truss Connector

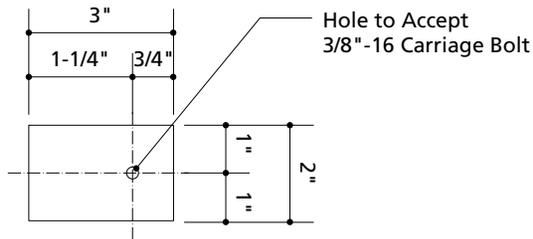
**3-QU - 06 Connection Detail at Center**

3" = 1'-0"

# Upright Quad Series (UPQU) with Roof

## Aluminum Fabrication (Continued)

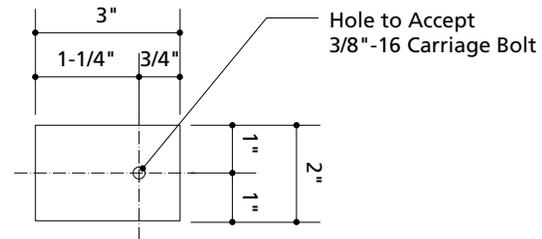
2-TR - 07



**1-TR - 07 Angle Clip Front Elevation**

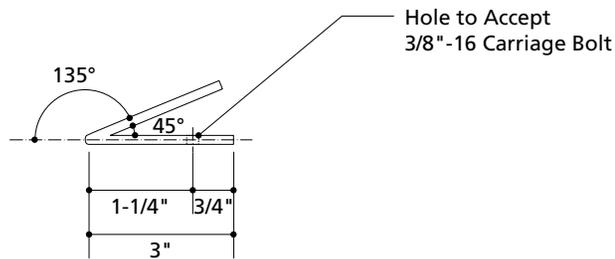
Scale: 3" = 1'-0"

4-TR - 07



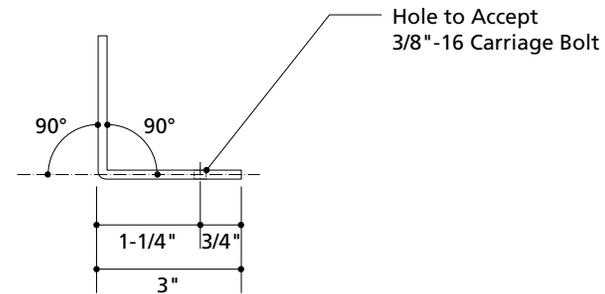
**3-TR - 07 Angle Clip Front Elevation**

Scale: 3" = 1'-0"



**2-TR - 07 Angle Clip Plan View**

Scale: 3" = 1'-0"

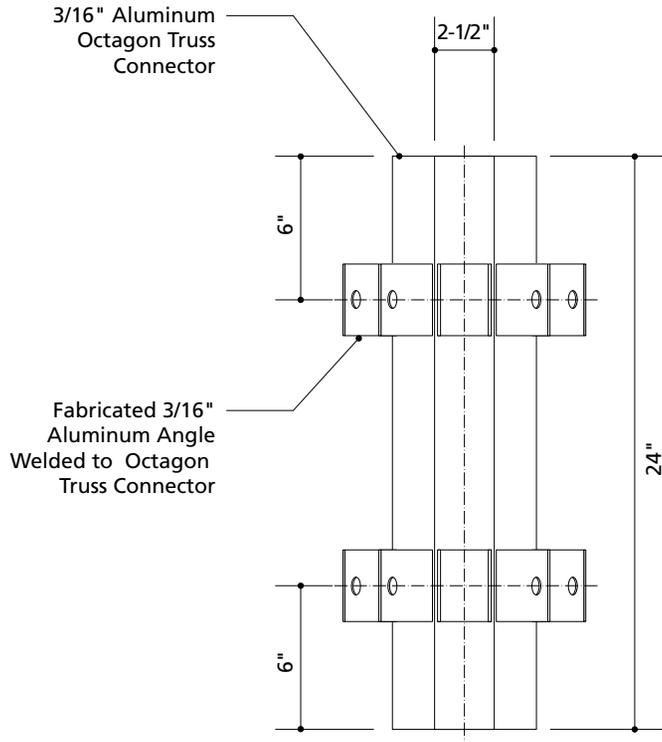


**4-TR - 07 Angle Clip Plan View**

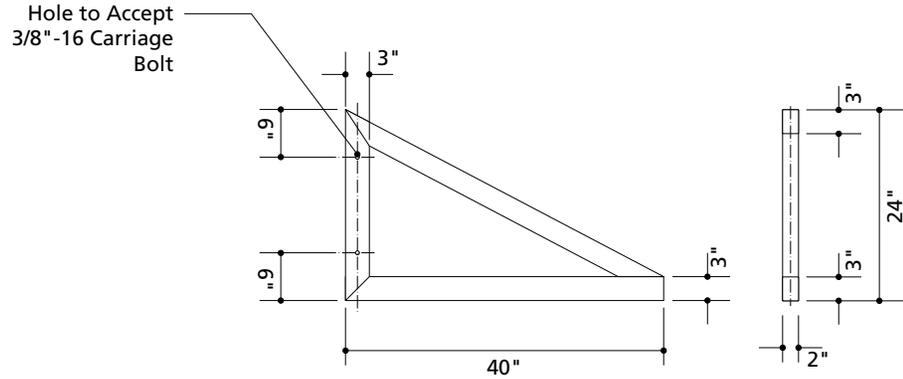
Scale: 3" = 1'-0"

# Upright Quad Series (UPQU) with Roof

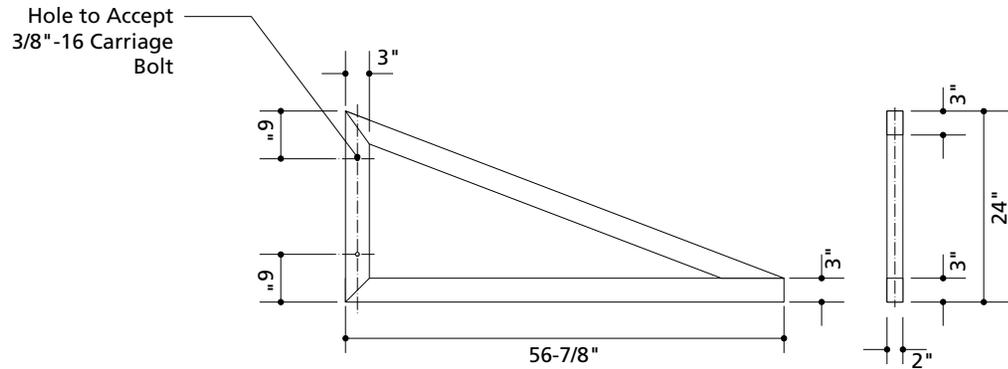
## Aluminum Fabrication (Continued)



**1-QU - 08 Octagon Truss Connector Elevation**  
 1-1/2" = 1'-0"



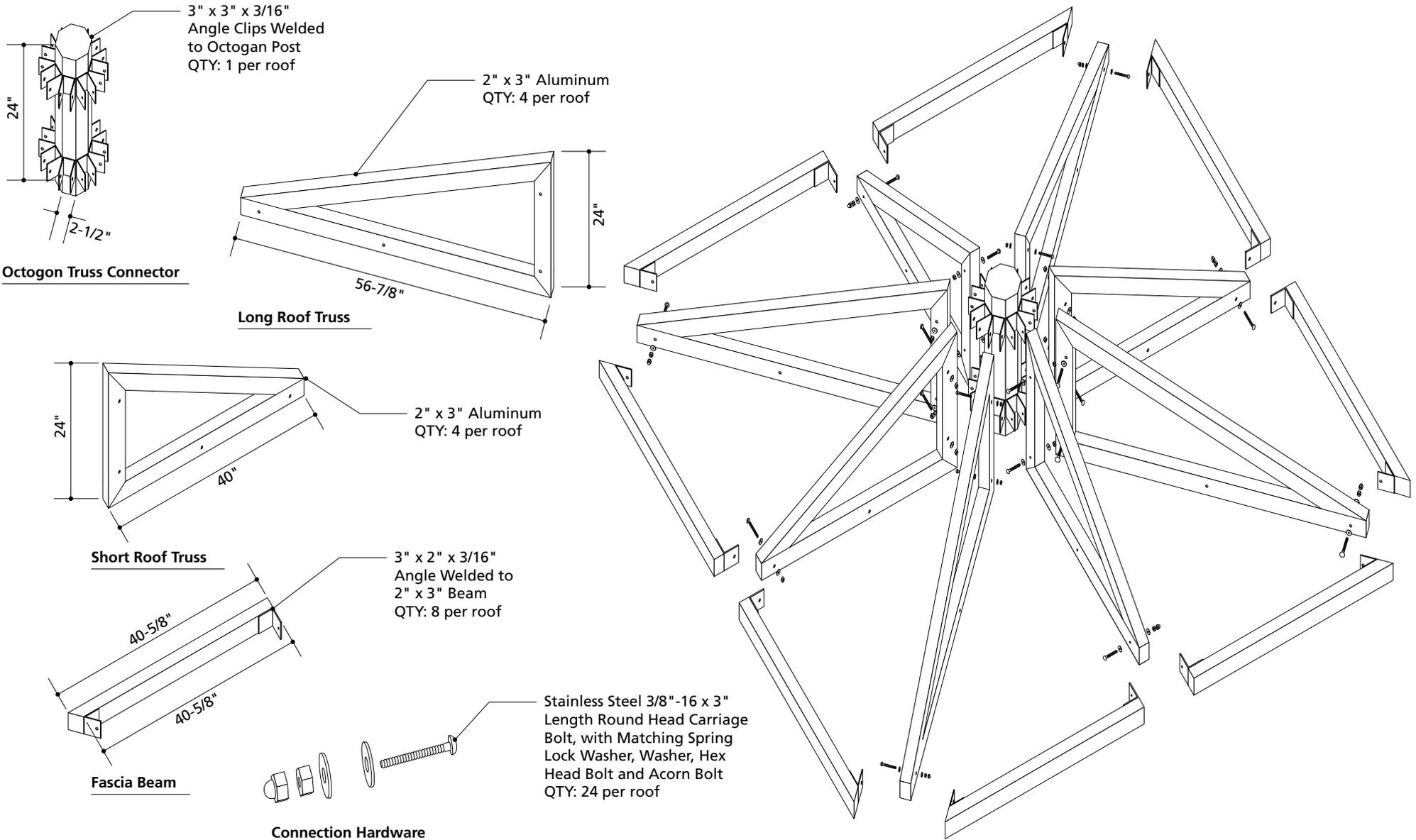
**2-QU - 08 Roof Structure Front and Side Elevations**  
 1/2" = 1'-0"



**3-QU - 08 Roof Structure Front and Side Elevations**  
 1/2" = 1'-0"

# Upright Quad Series (UPQU) with Roof

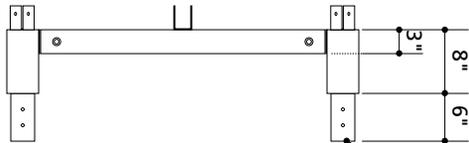
## Aluminum Fabrication (Continued)



# Upright Quad Series (UPQU) with Roof

## Aluminum Fabrication (Continued)

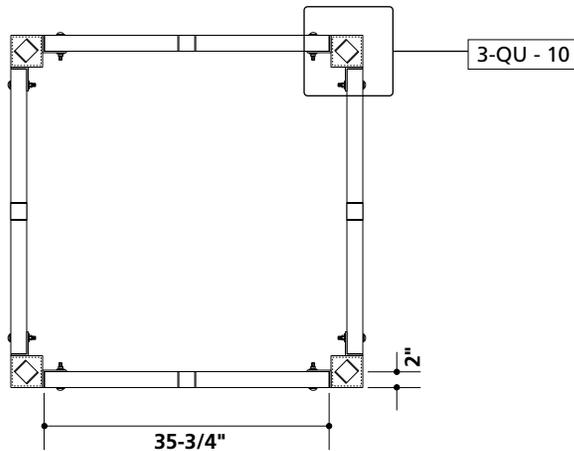
2-QU - 10



**1-QU - 10 Roof Base Elevation**

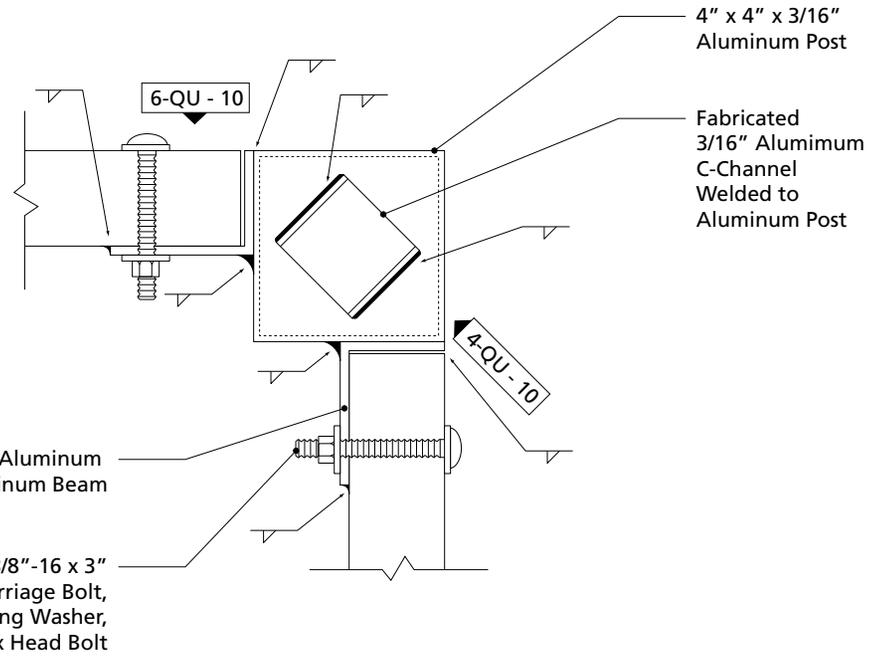
Scale: 1/2" = 1'

Note: Post Bottom is Undercut to Slide Into Upright Posts



**2-QU - 10 Roof Base Plan View**

Scale: 1/2" = 1'

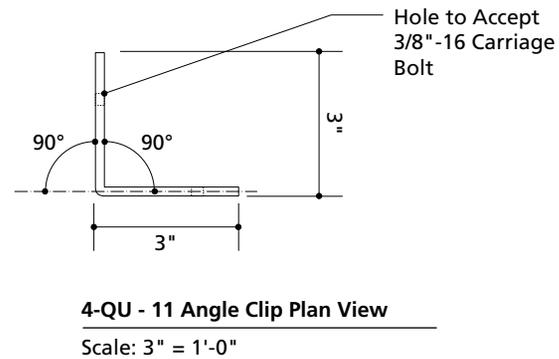
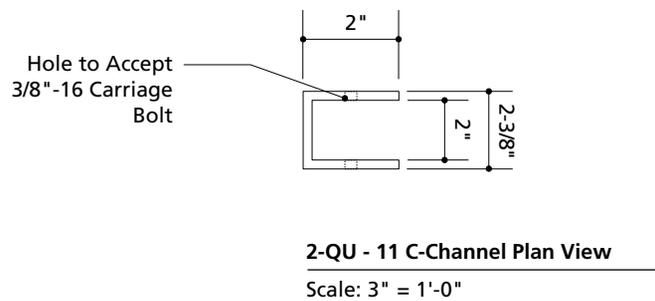
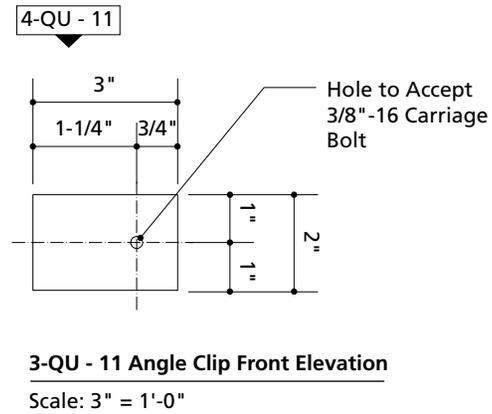
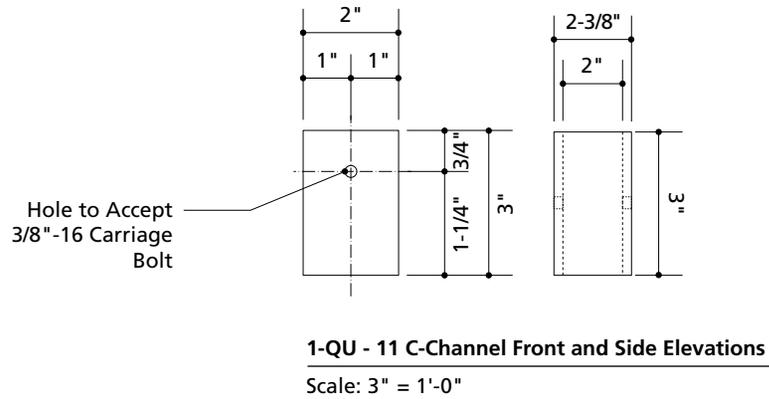


**3-QU - 10 Connection Detail**

Scale: 3" = 1'

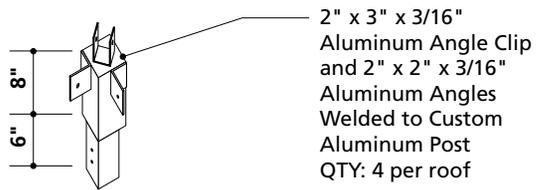
# Upright Quad Series (UPQU) with Roof

## Aluminum Fabrication (Continued)

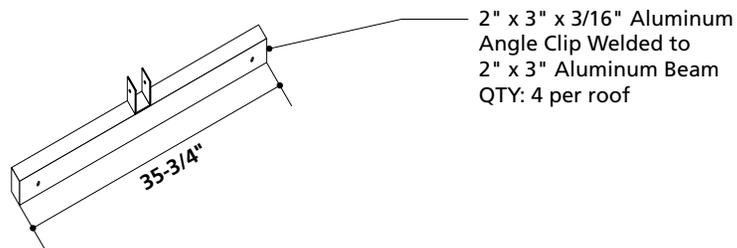


# Upright Quad Series (UPQU) with Roof

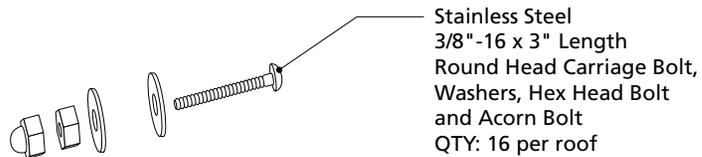
## Aluminum Fabrication (Continued)



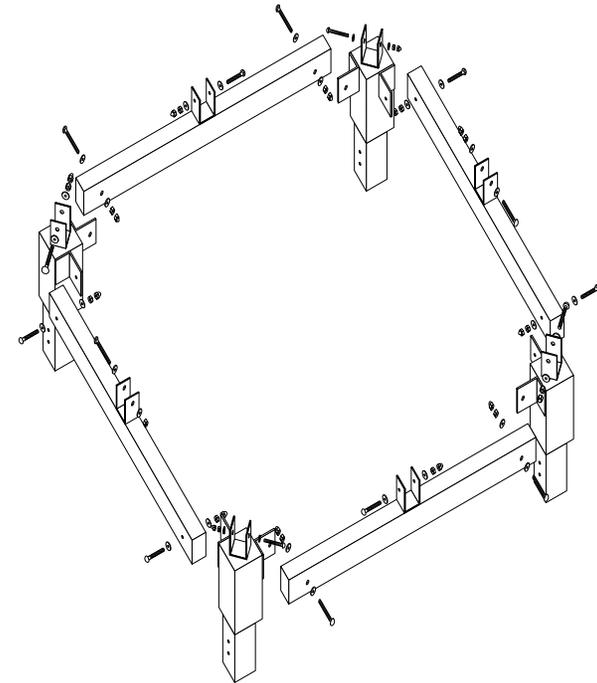
**Post Extender**



**Fascia Beam**



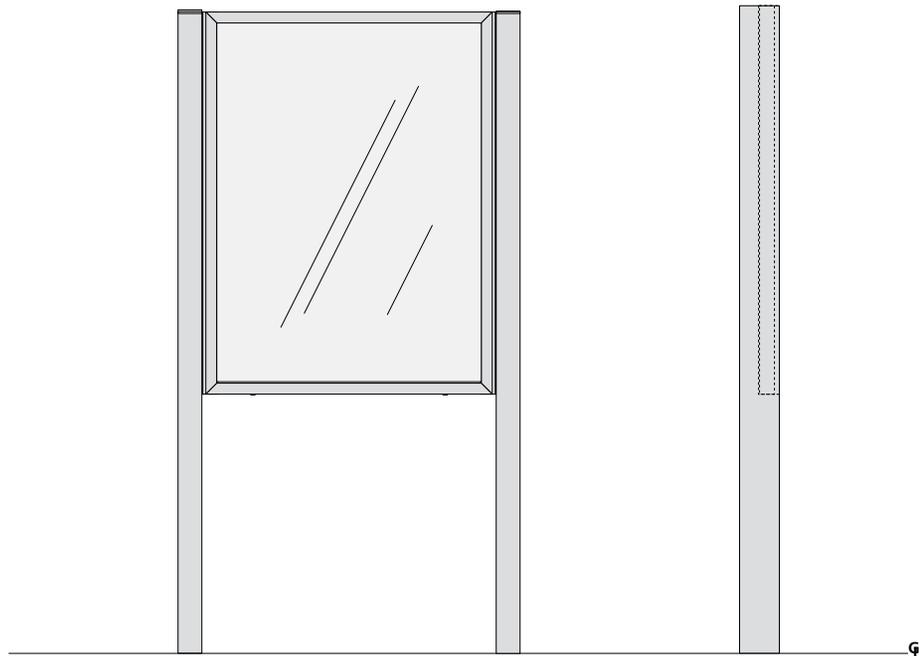
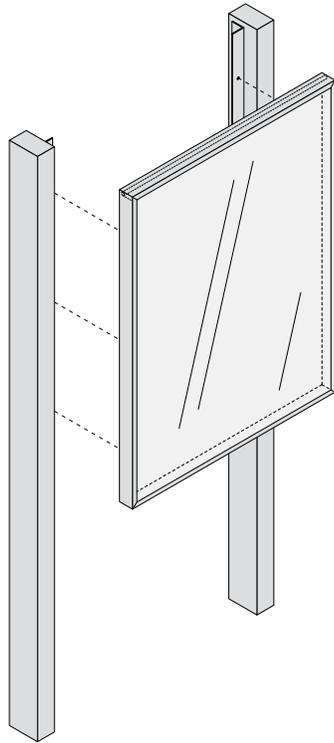
**Connection Hardware**



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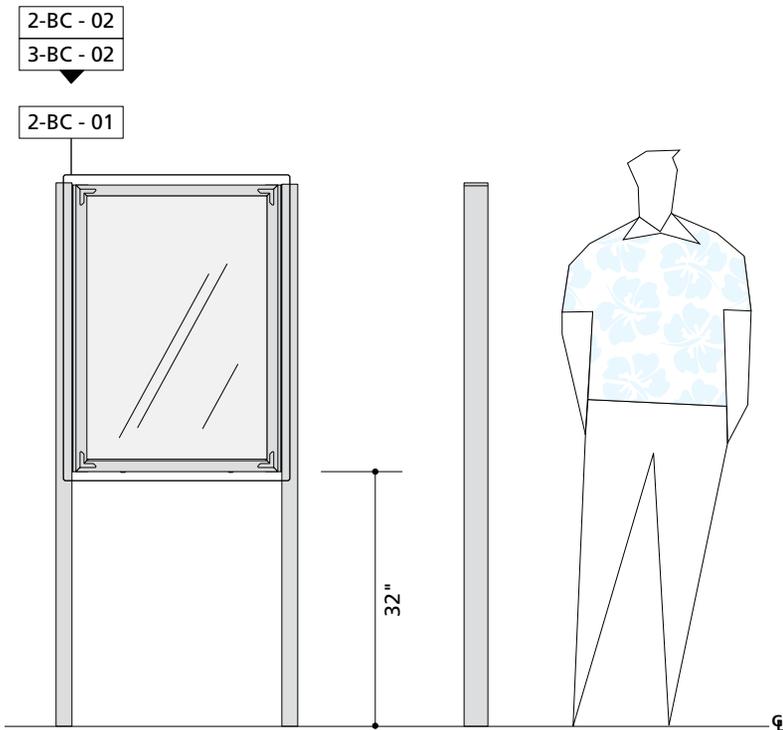
## Bulletin Case with Posts (BC)

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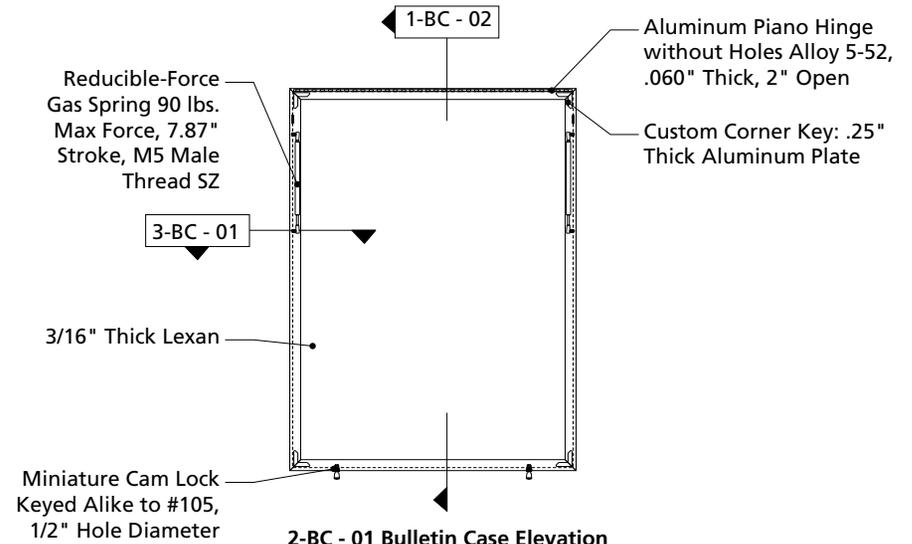
# Bulletin Case with Posts (BC)

## Aluminum Fabrication



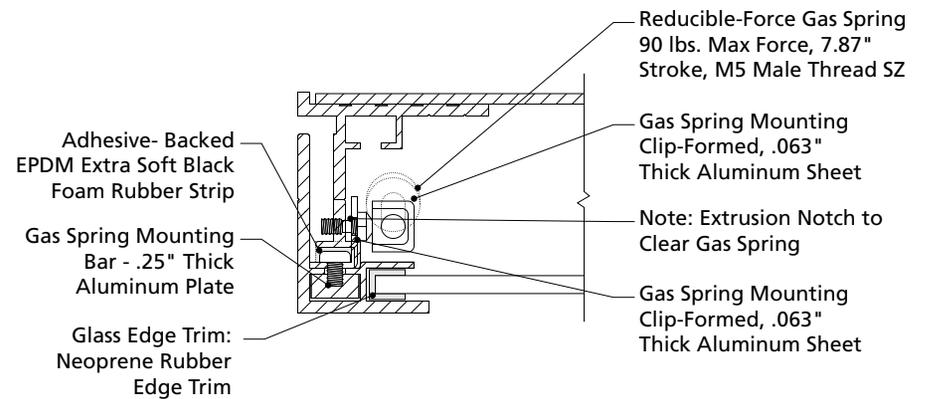
**1-BC - 01 Bulletin Case Elevation**

Scale: 1/2" = 1'-0"



**2-BC - 01 Bulletin Case Elevation**

Scale: 1/2" = 1'-0"

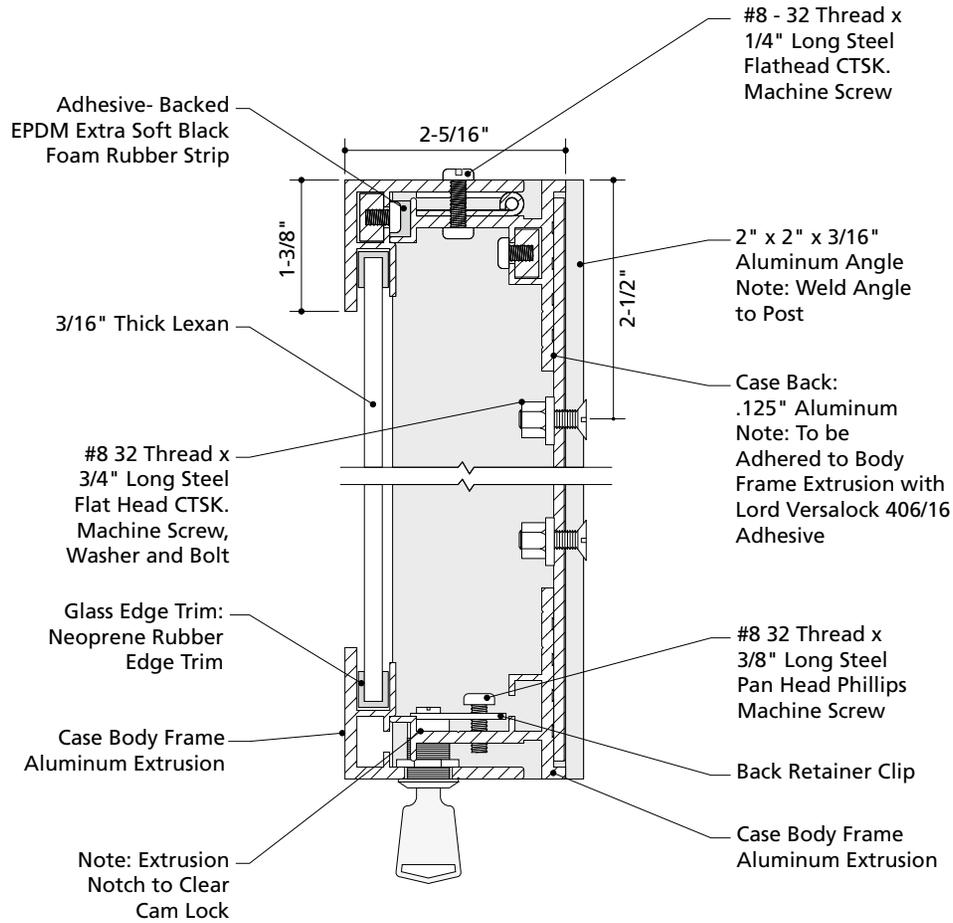


**3-BC - 01 Bulletin Case Section**

Scale: 1/2 Actual Size

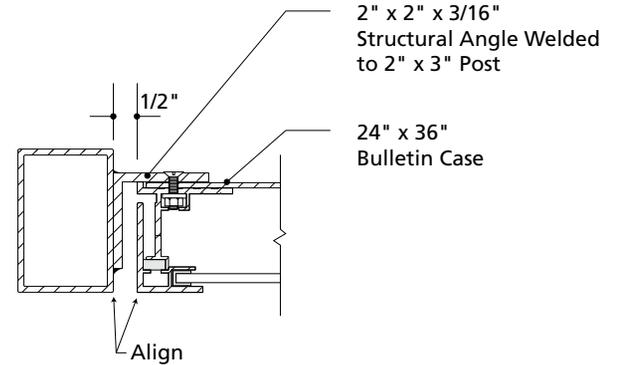
# Bulletin Case with Posts (BC)

## Aluminum Fabrication (Continued)



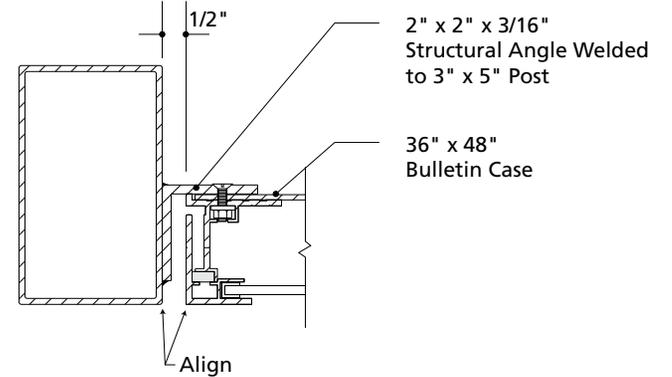
**1-BC - 02 Bulletin Case Section**

Scale: 1/2 Actual Size



**2-BC - 02 24" x 36" Bulletin Case, Plan View**

Scale: 3" = 1'-0"



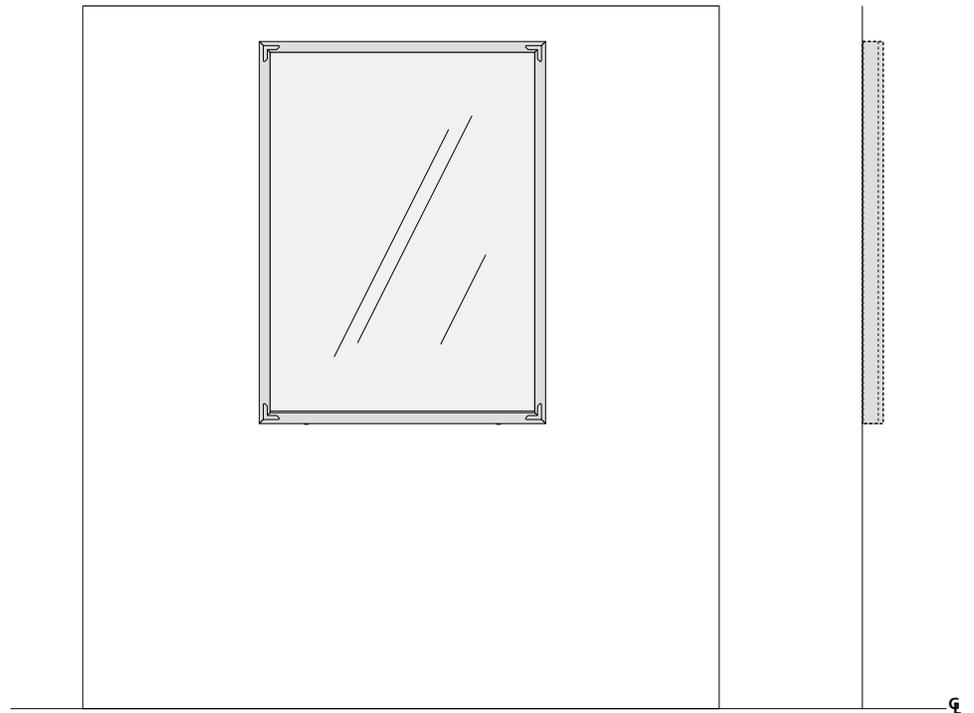
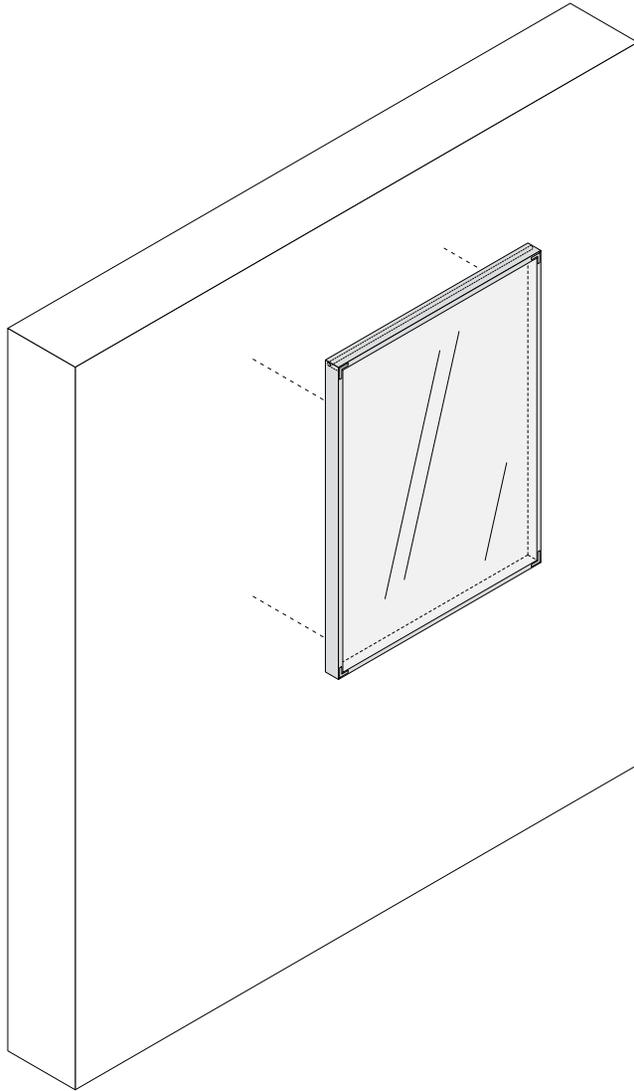
**3-BC - 02 36" x 48" Bulletin Case, Plan View**

Scale: 3" = 1'-0"

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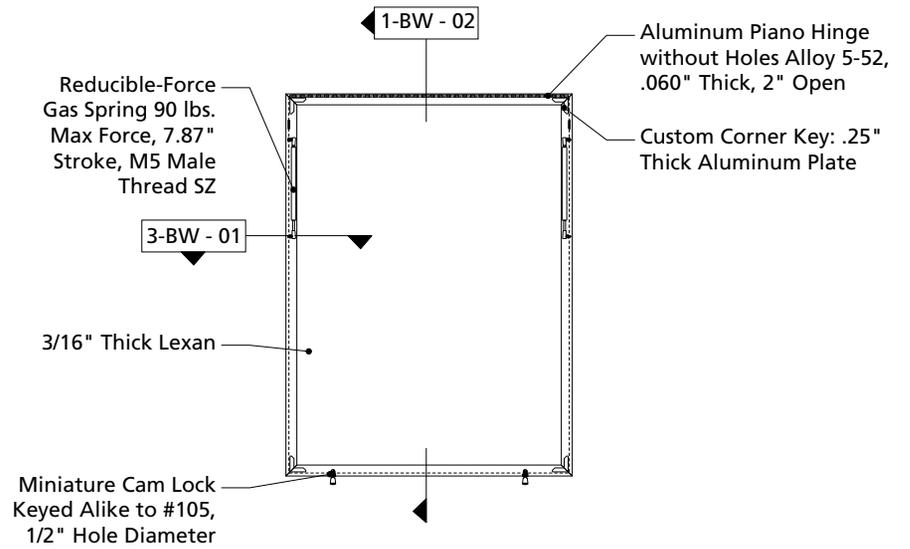
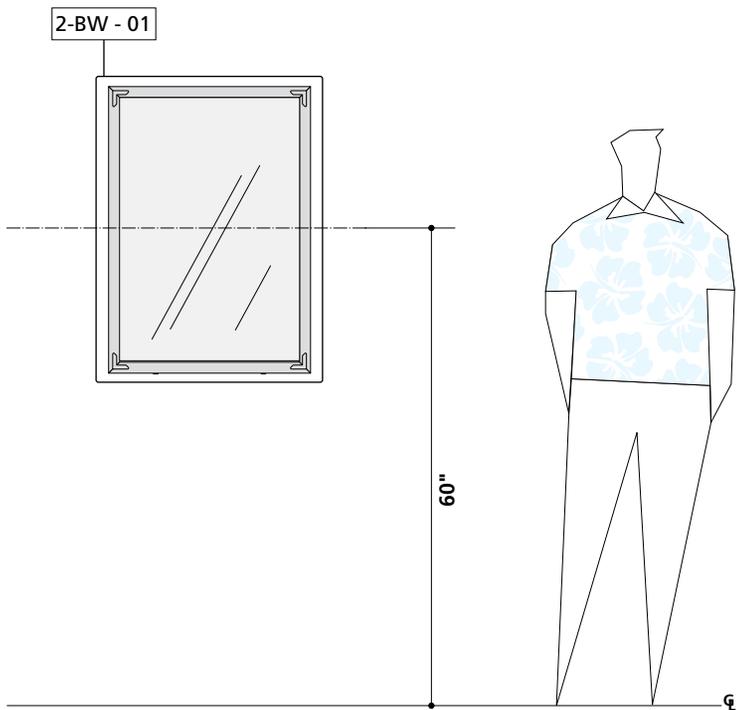
## Bulletin Case Wall Mount (BC)

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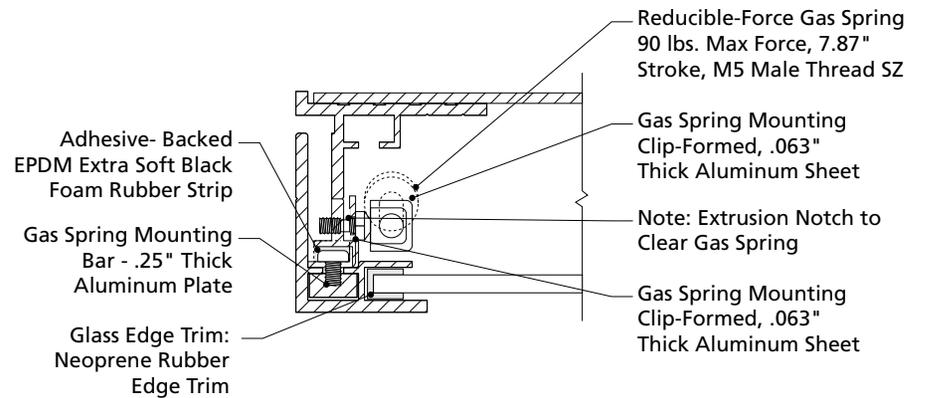
# Bulletin Case Wall Mount (BC)

## Aluminum Fabrication



**2-BW - 01 Bulletin Case Elevation**

Scale: 1/2" = 1'-0"

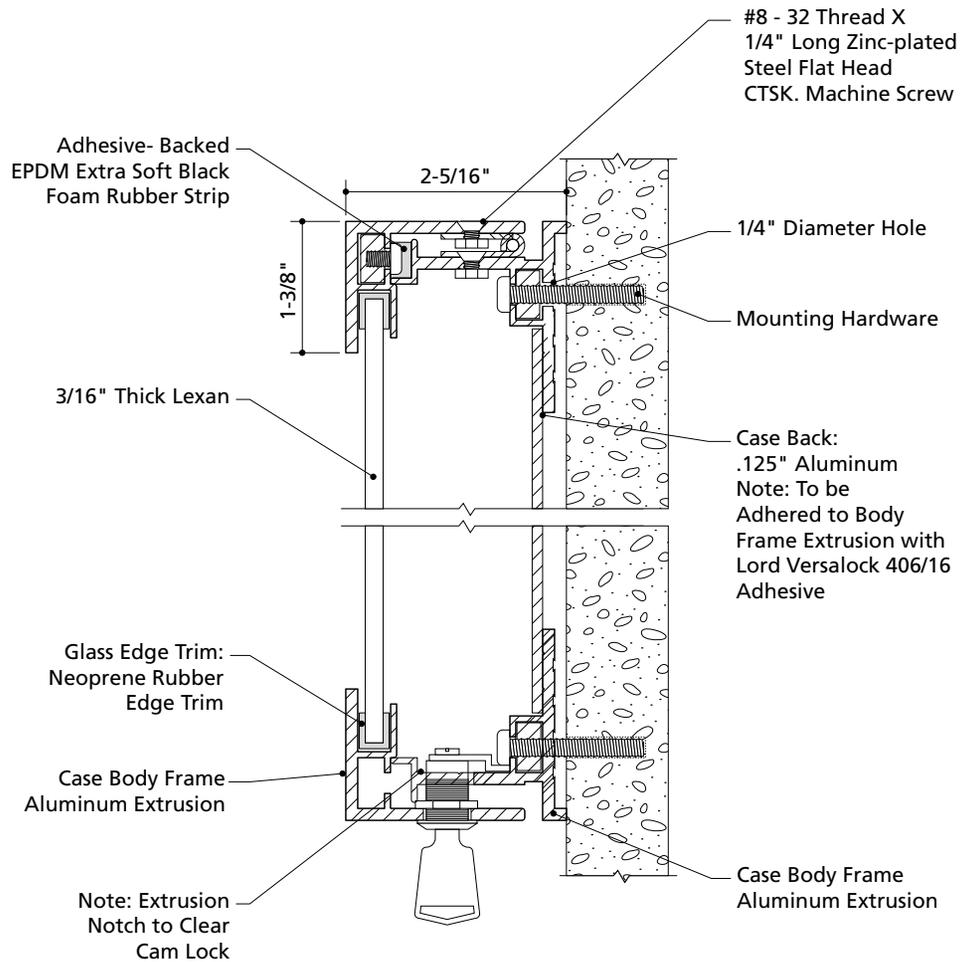


**3-BW - 01 Bulletin Case Section**

Scale: 1/2 Actual Size

# Bulletin Case Wall Mount (BC)

## Aluminum Fabrication (Continued)



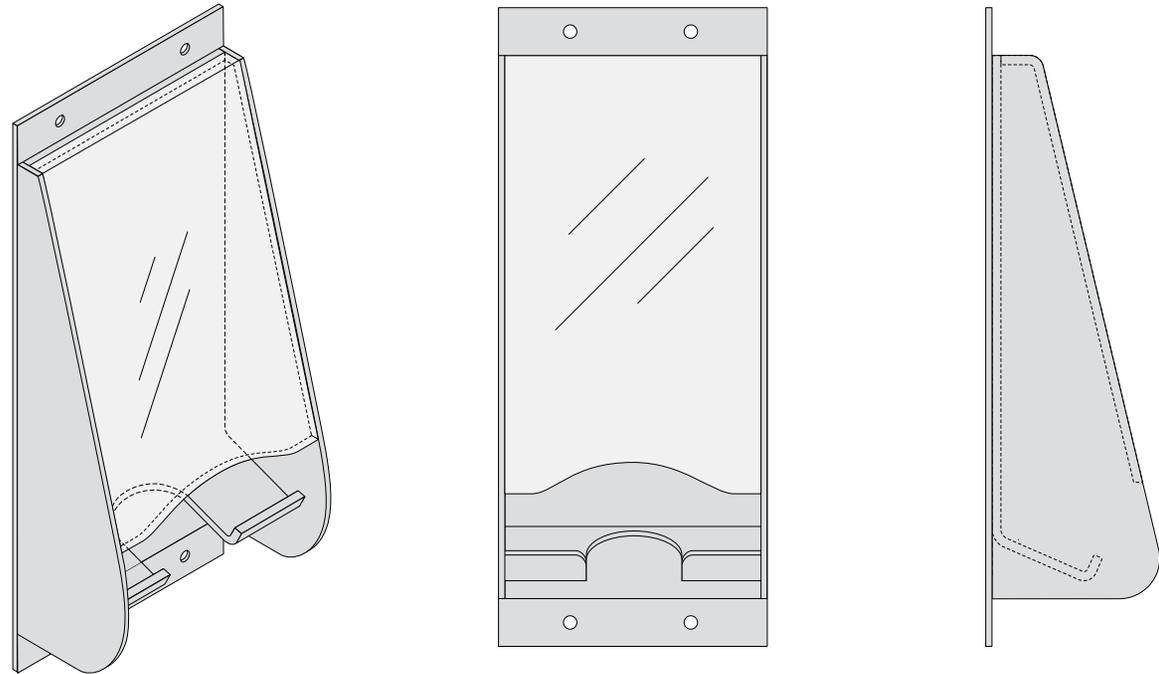
**1-BW - 02 Bulletin Case Section**

Scale: 1/2 Actual Size

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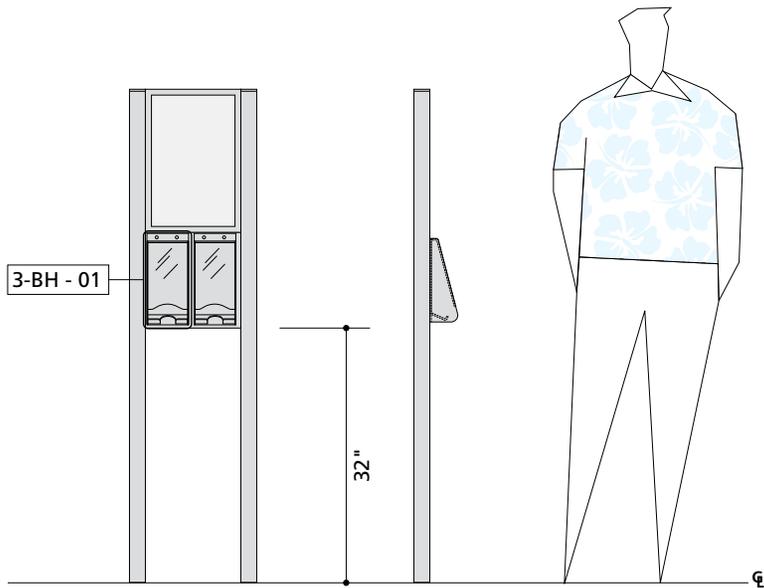
## Brochure Holder (BH)

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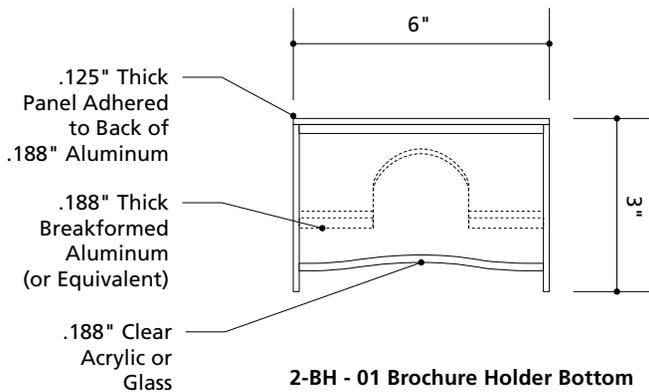
# Brochure Holder (BH)

## Fabrication Using Accessory Add-On Panel Mounting



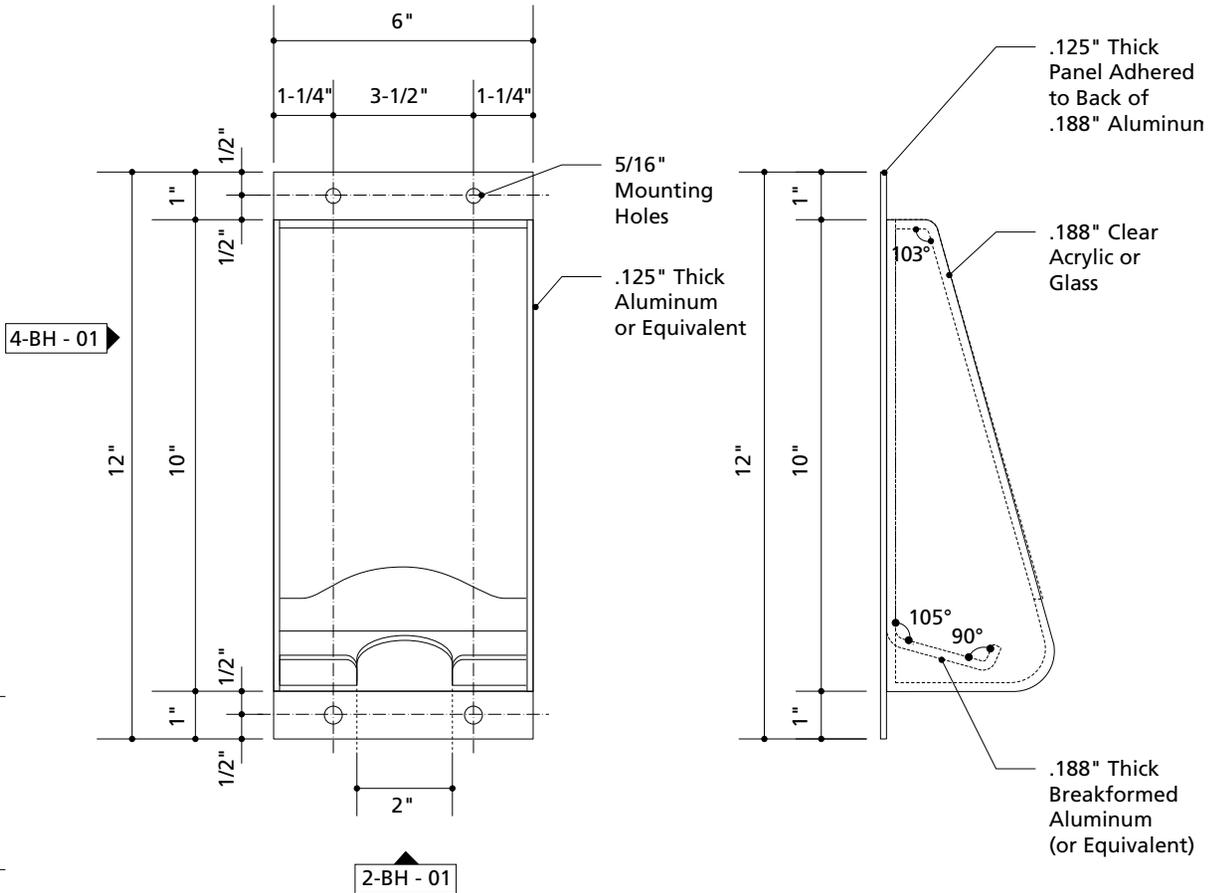
**1-BH - 01 UP with Brochure Holder Elevation**

Scale: 1/2" = 1'-0"



**2-BH - 01 Brochure Holder Bottom**

Scale: 3" = 1'-0"



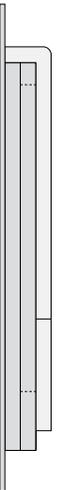
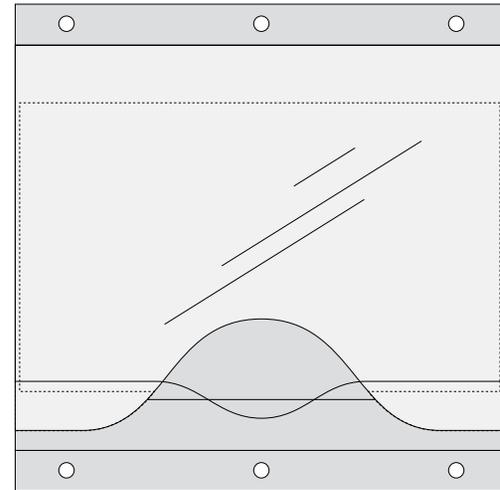
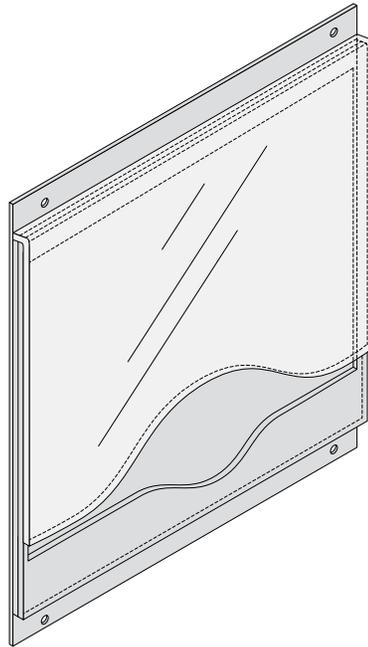
**3-BH - 01 Front Elevation**

Scale: 3" = 1'-0"

**4-BH - 01 Side Elevation**

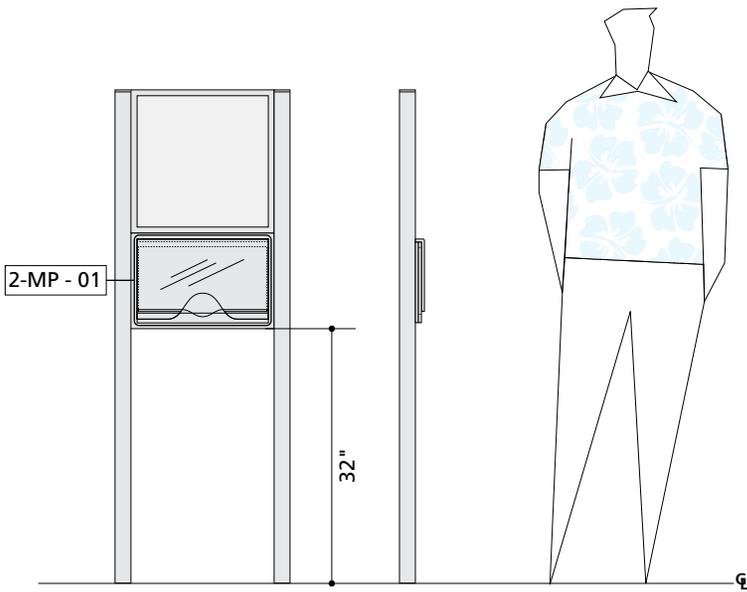
Scale: 3" = 1'-0"

## Miscellaneous Posting (MP)



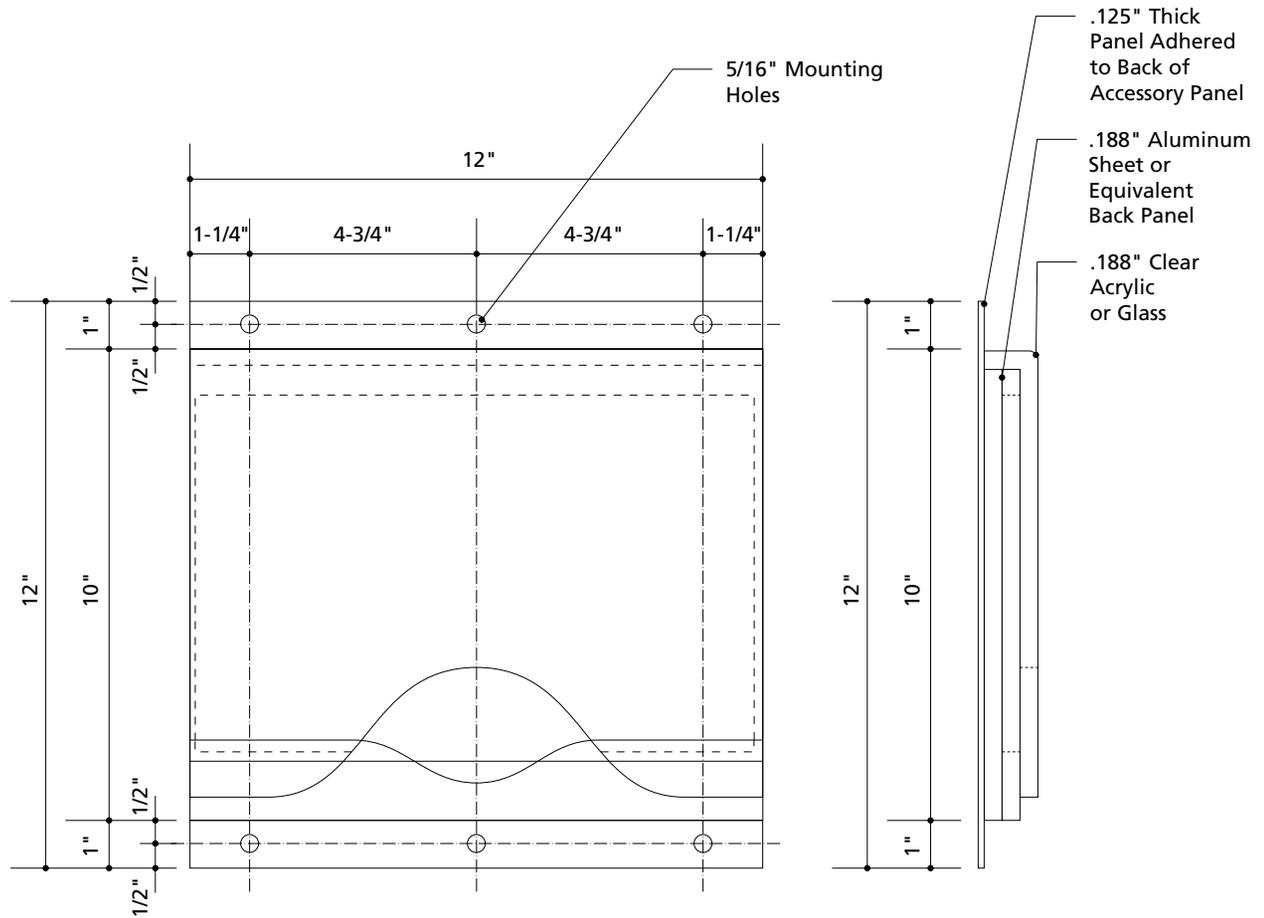
# Miscellaneous Posting (MP)

## Fabrication Using Accessory Add-On Panel Mounting



**1-MP - 01 Upright with Miscellaneous Post Display**

Scale: 1/2" = 1'-0"



**2-MP - 01 Front Elevation**

Scale: 3" = 1'-0"

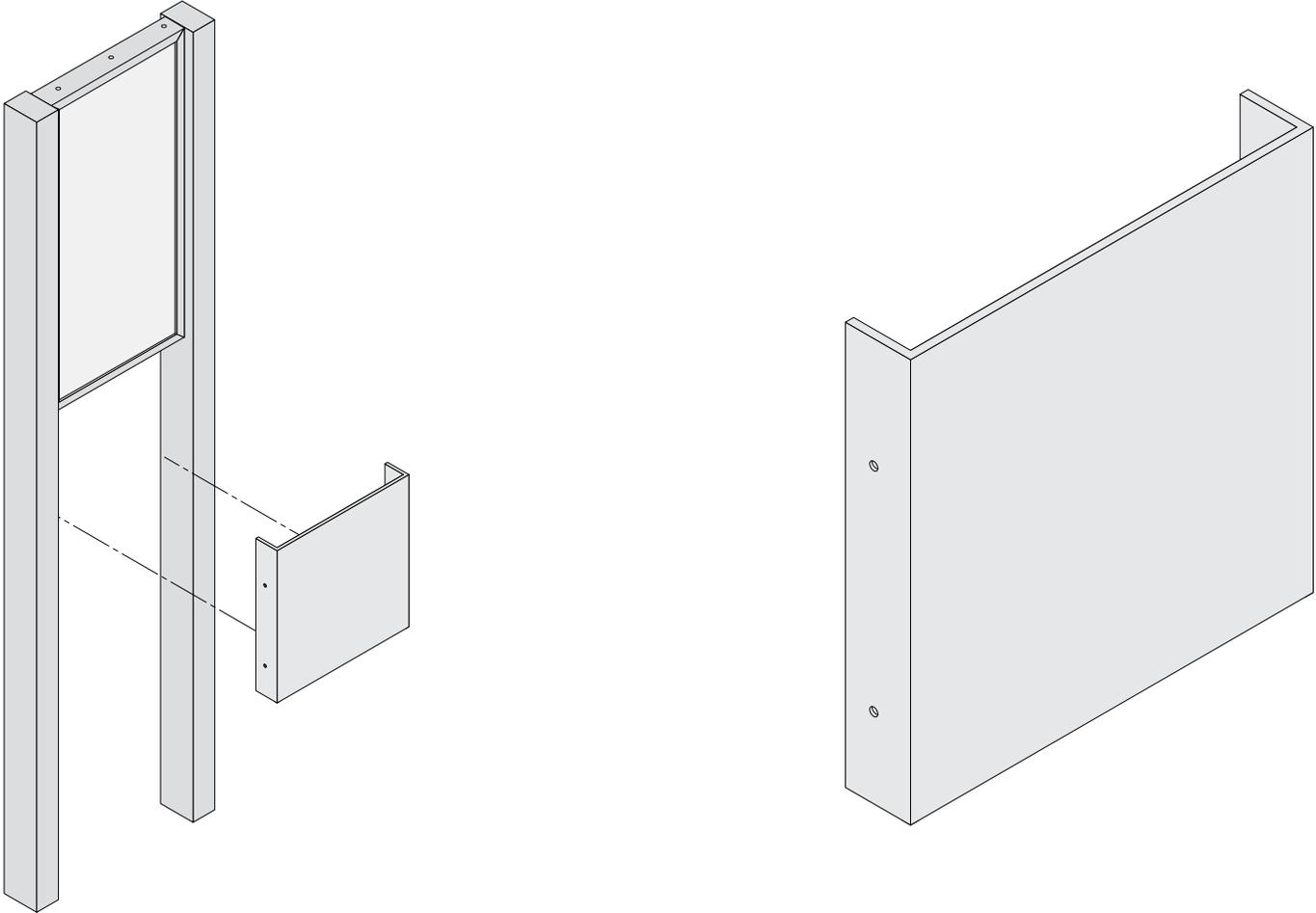
**3-MP - 01 Side Elevation**

Scale: 3" = 1'-0"

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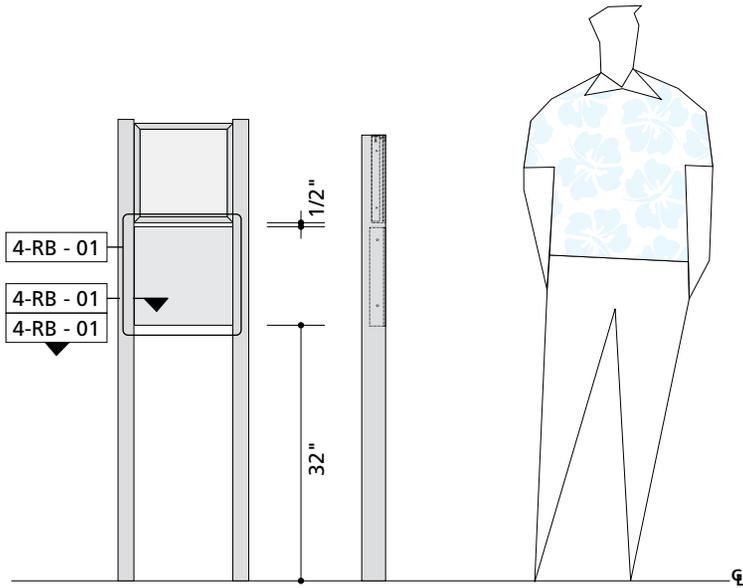
# Accessory Add-On Panel

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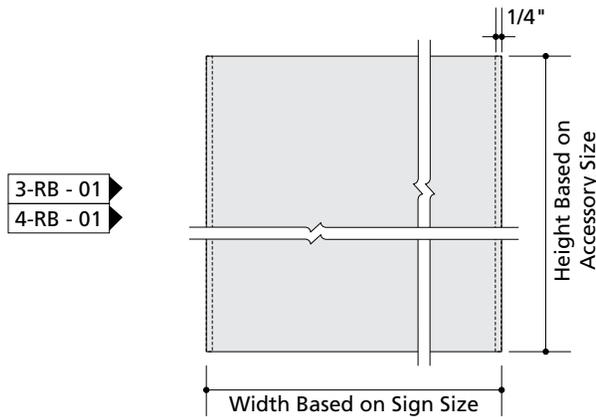
# Accessory Add-On Panel

## Aluminum and Steel Fabrication



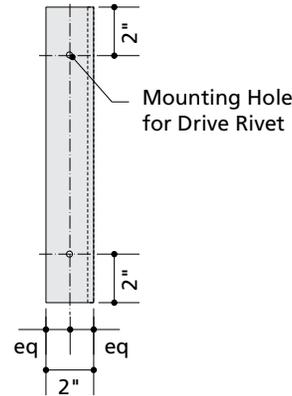
**1-MP - 01 Upright with Accessory Add On Panel Elevation**

Scale: 1/2" = 1'-0"



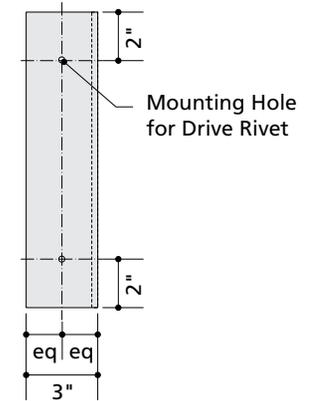
**2-MP - 01 Front Elevation**

Scale: 1-1/2" = 1'-0"



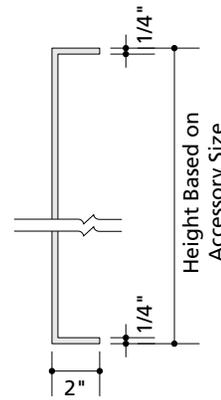
**3-MP - 01 Side Elevation (2" x 2" Post)**

Scale: 1-1/2" = 1'-0"



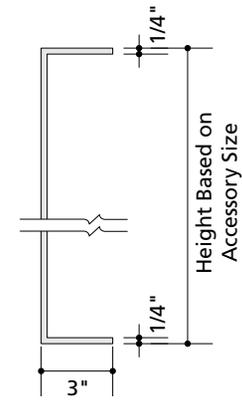
**4-MP - 01 Side Elevation (2" x 3" Post)**

Scale: 1-1/2" = 1'-0"



**5-MP - 01 Plan View (2" x 2" Post)**

Scale: 1-1/2" = 1'-0"

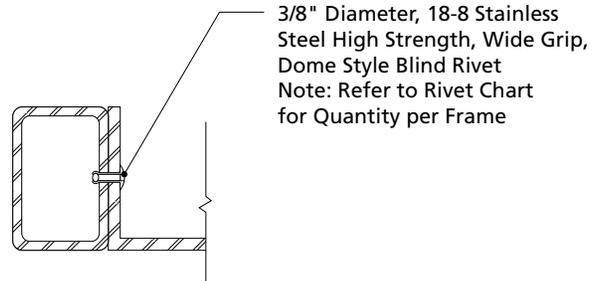


**6-MP - 01 Plan View (2" x 3" Post)**

Scale: 1-1/2" = 1'-0"

# Accessory Add-On Panel

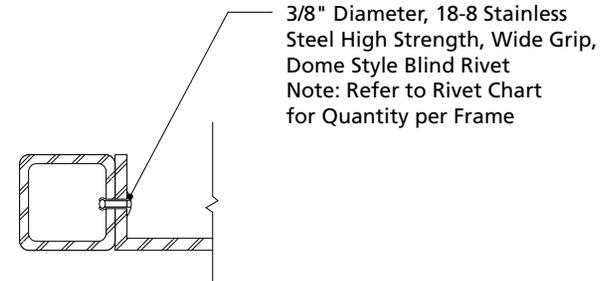
## Aluminum and Steel Fabrication (Continued)



3/8" Diameter, 18-8 Stainless Steel High Strength, Wide Grip, Dome Style Blind Rivet  
Note: Refer to Rivet Chart for Quantity per Frame

**1-MP - 01 2" x 2" Steel Post Connection**

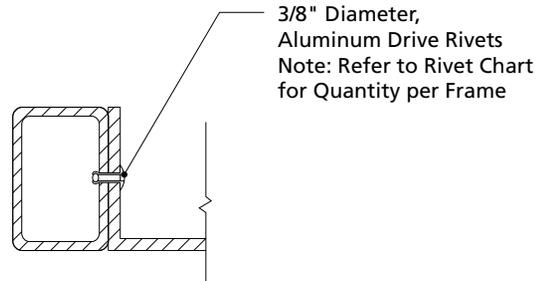
Scale: 3" = 1'-0"



3/8" Diameter, 18-8 Stainless Steel High Strength, Wide Grip, Dome Style Blind Rivet  
Note: Refer to Rivet Chart for Quantity per Frame

**2-MP - 01 2" x 3" Steel Post Connection**

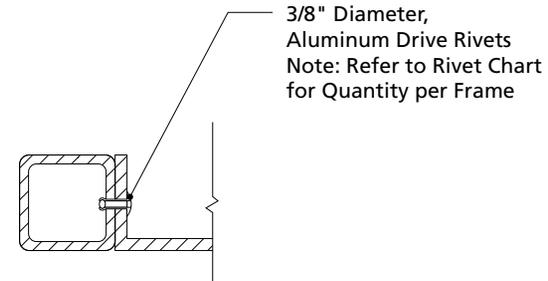
Scale: 3" = 1'-0"



3/8" Diameter, Aluminum Drive Rivets  
Note: Refer to Rivet Chart for Quantity per Frame

**3-MP - 01 2" x 2" Aluminum Post Connection**

Scale: 3" = 1'-0"



3/8" Diameter, Aluminum Drive Rivets  
Note: Refer to Rivet Chart for Quantity per Frame

**4-MP - 01 2" x 3" Aluminum Post Connection**

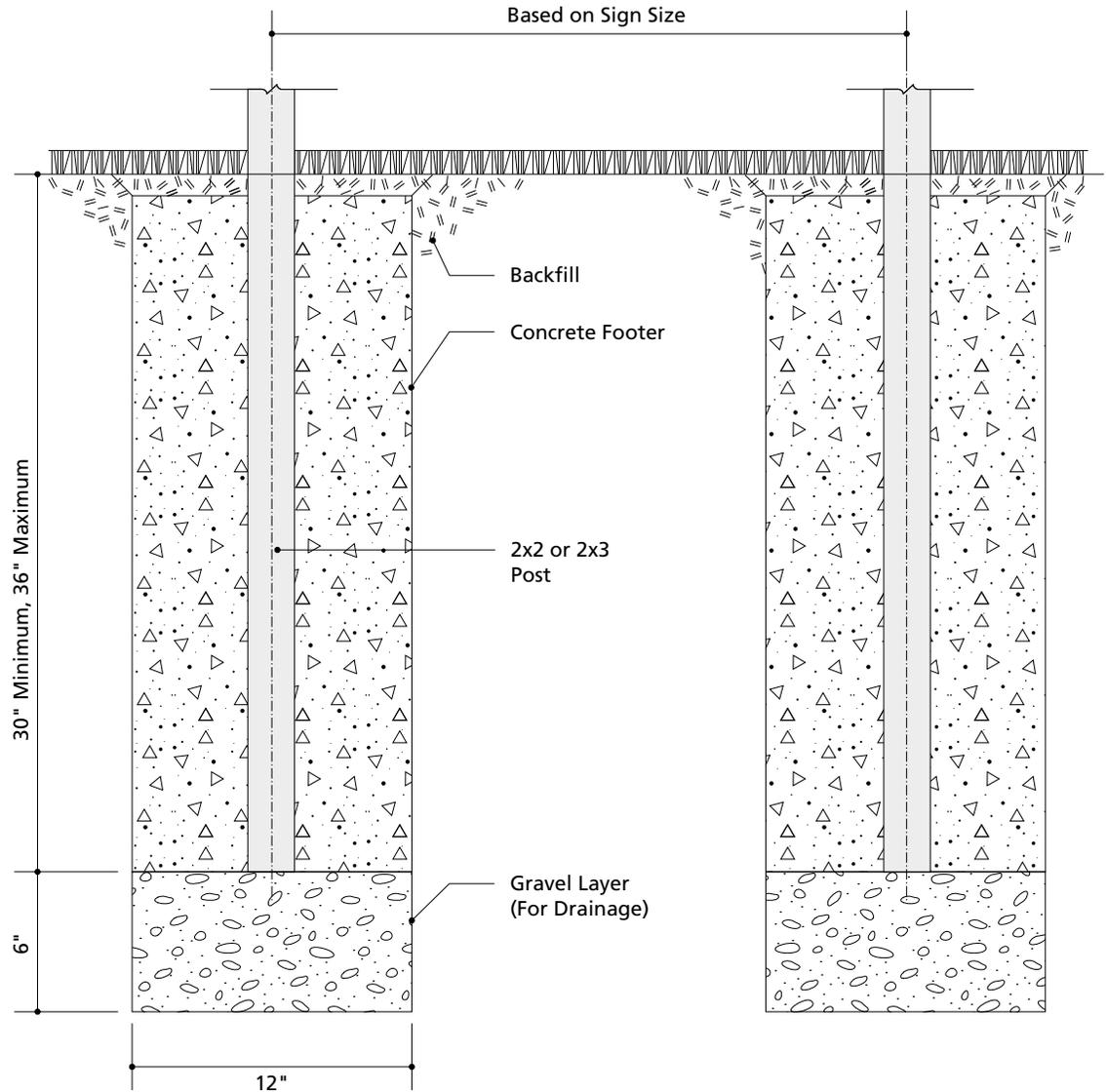
Scale: 3" = 1'-0"

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# Installation Options

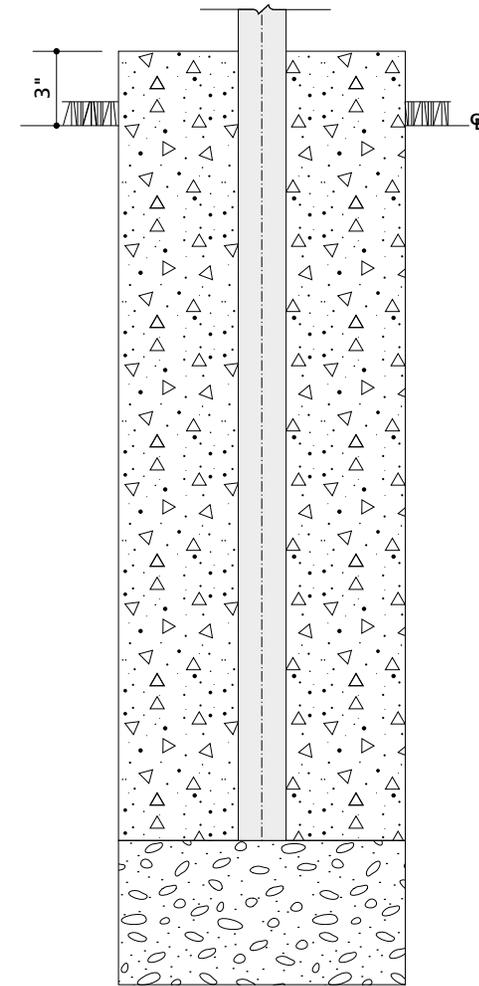
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# Direct Embedment (DE)



**1-IO - 01 Direct Embedment**

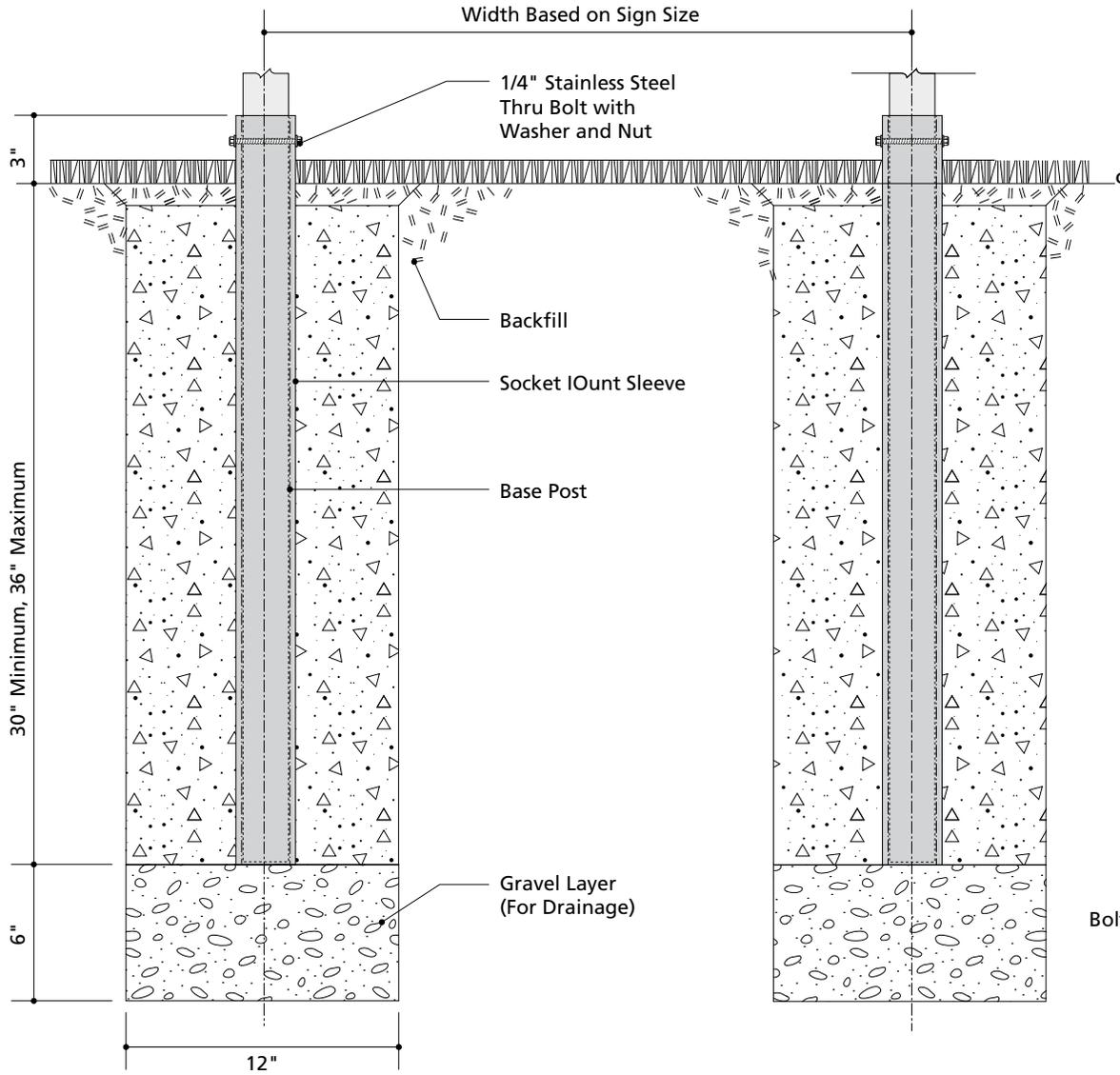
Scale: 1-1/2" = 1'-0"



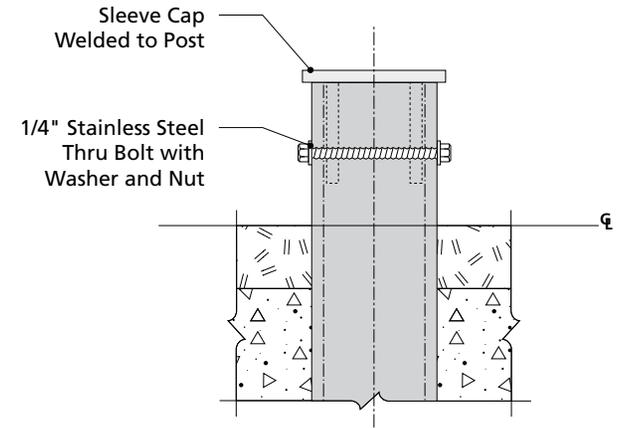
**2-IO - 01 Direct Embedment with Mow Ring**

Scale: 1-1/2" = 1'-0"

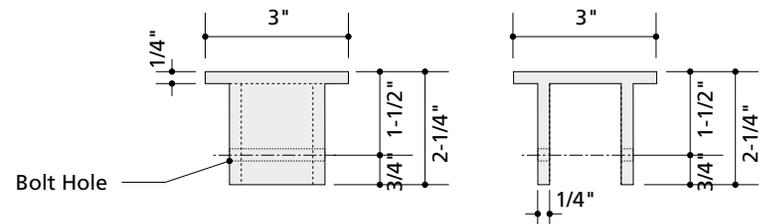
# Direct Embedment with Socket Mount (SM)



**1-IO - 02 Direct Embedment with Socket Mount**  
Scale: 1-1/2" = 1'-0"

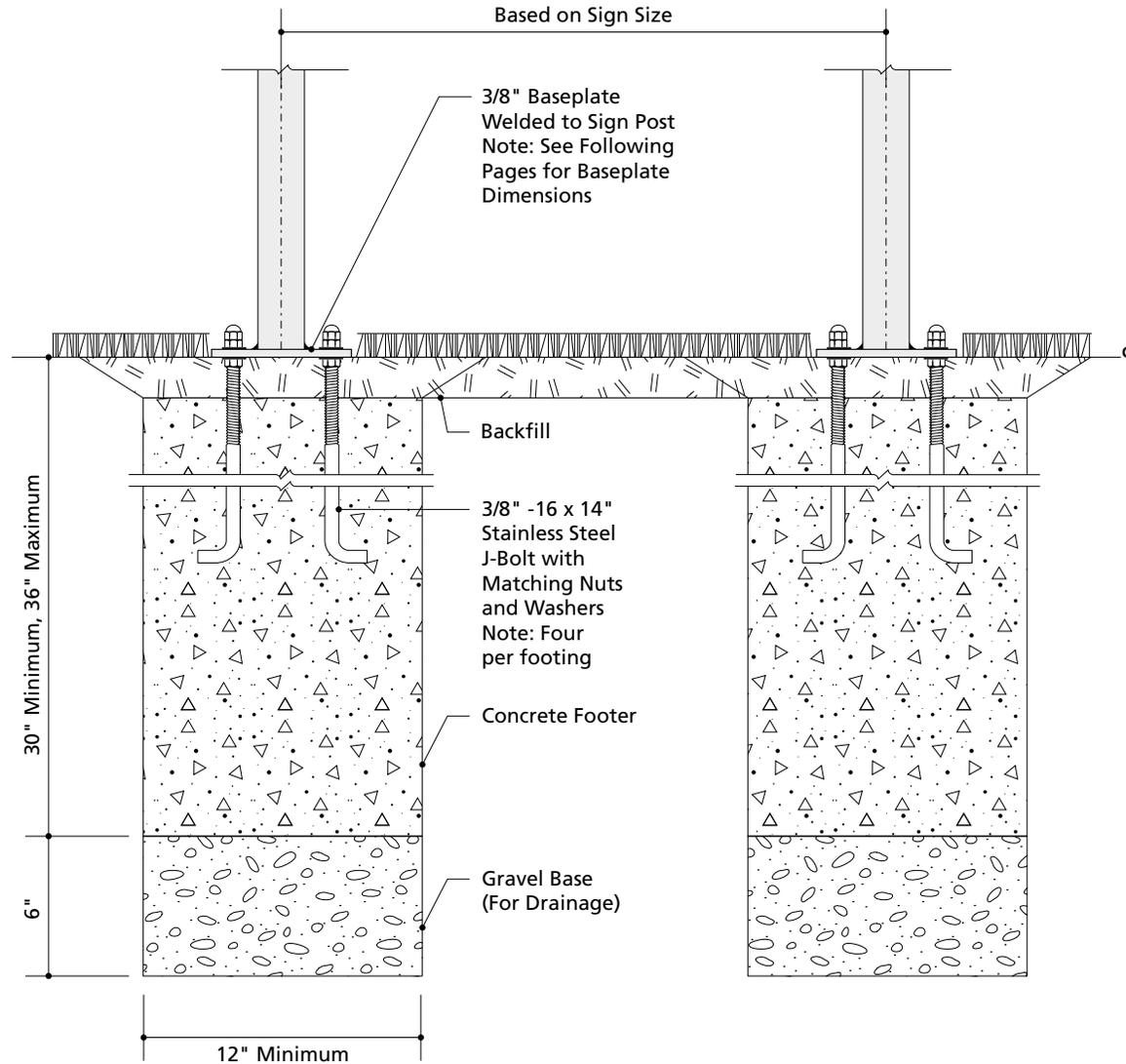


**2-IO - 01 Socket Cap Detail**  
Scale: 3" = 1'-0"



**2-IO - 01 Socket Cap Front and Side Elevations**  
Scale: 3" = 1'-0"

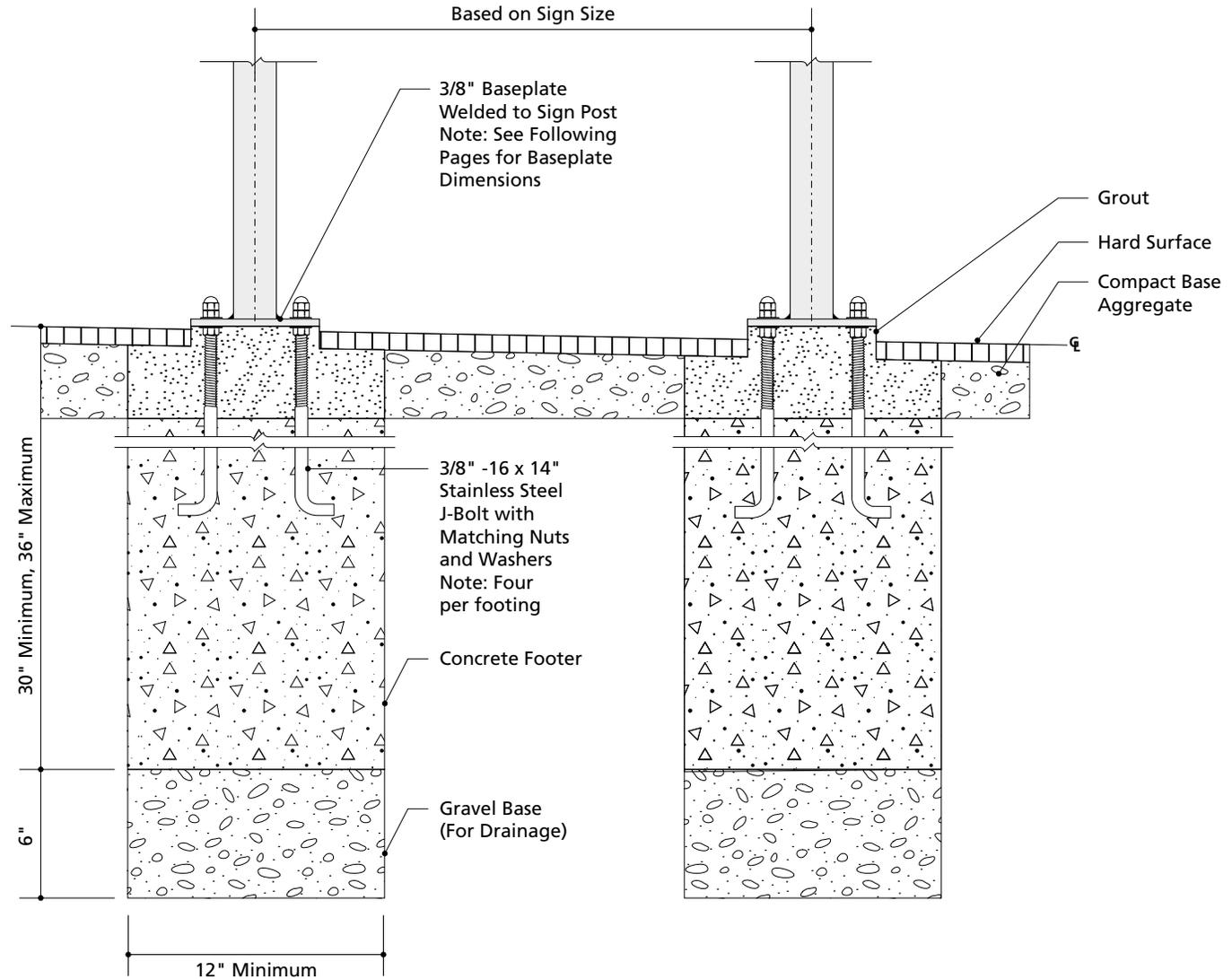
# Upright Series Baseplate Mount (BP): Landscape



**1-IO - 03 Baseplate Mount: Landscape, Elevation**

Scale: 1-1/2" = 1'-0"

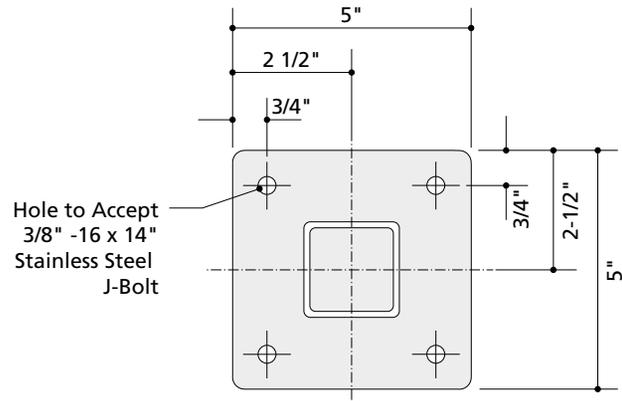
# Upright Series Baseplate Mount (BP): Hard Surface



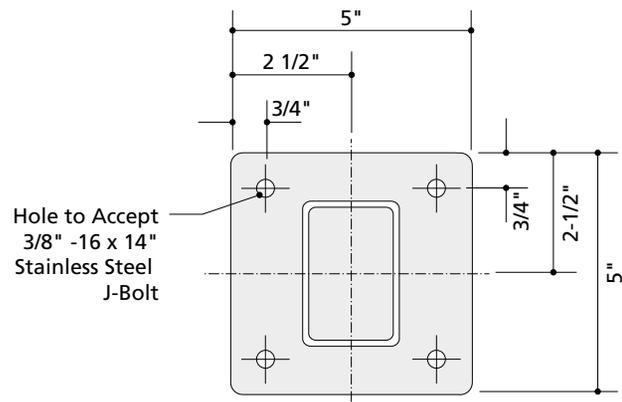
**1-IO - 04 Baseplate Mount: Hard Surface, Elevation**

Scale: 1-1/2" = 1'-0"

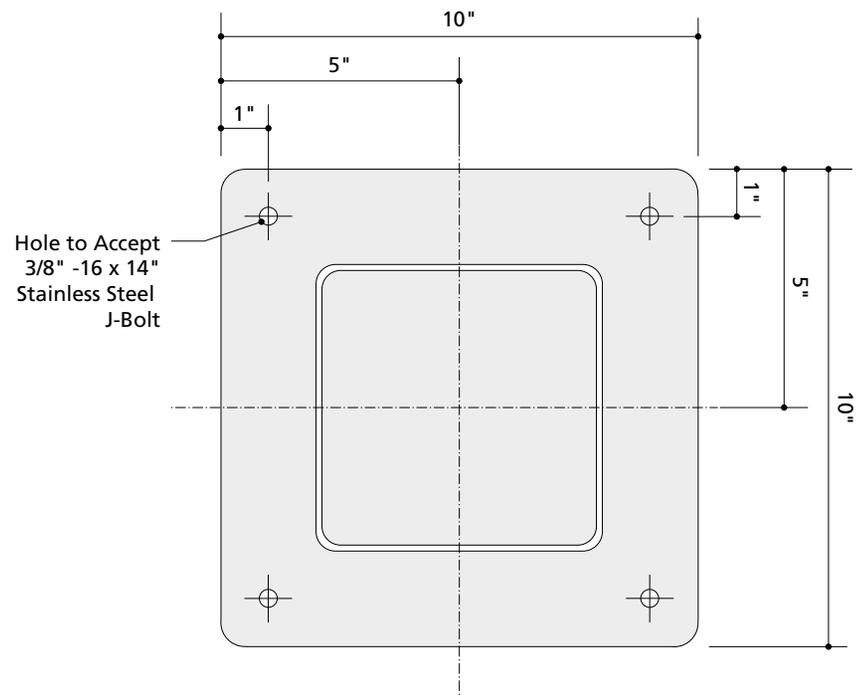
# Baseplates



**1-IO - 05 Baseplate Plan View, 2" x 2" Post**  
Scale: 3" = 1'-0"

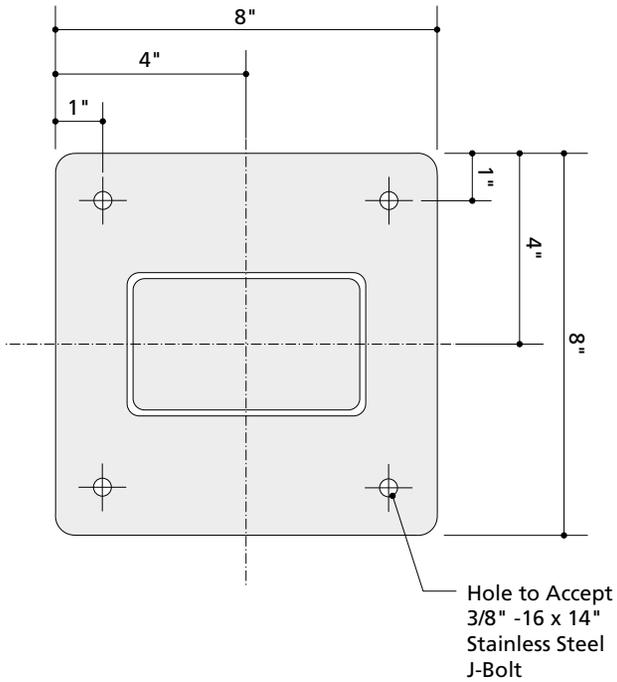


**2-IO - 05 Baseplate Plan View, 2" x 3" Post**  
Scale: 3" = 1'-0"

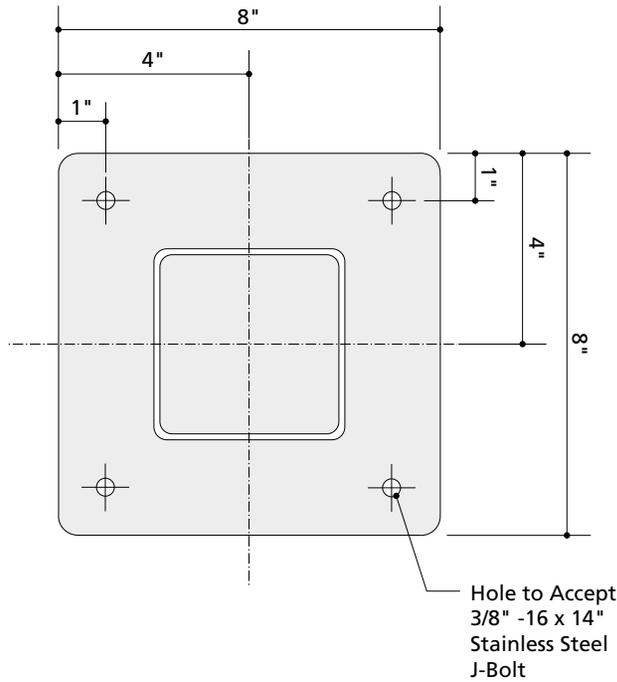


**3-IO - 05 Baseplate Plan View, 6" x 6" Post**  
Scale: 3" = 1'-0"

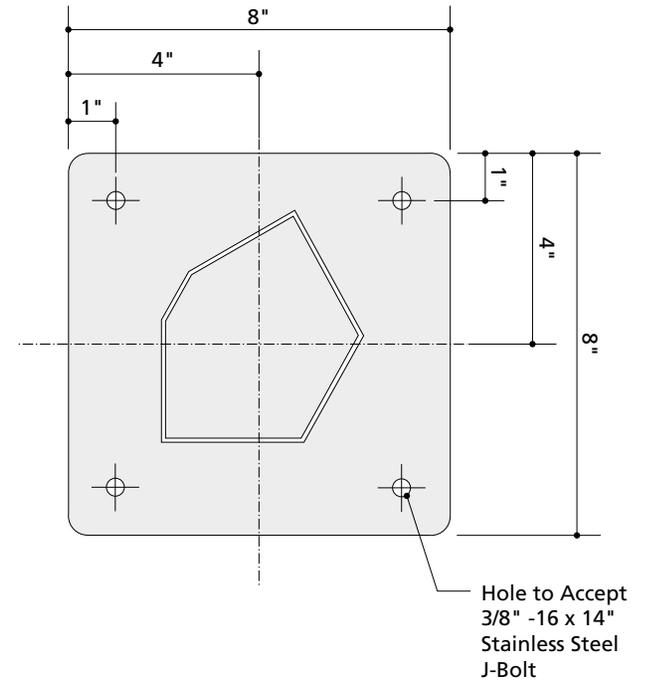
# Baseplates



**1-IO - 06 Baseplate Plan View, 3" x 5" Post**  
Scale: 3" = 1'-0"

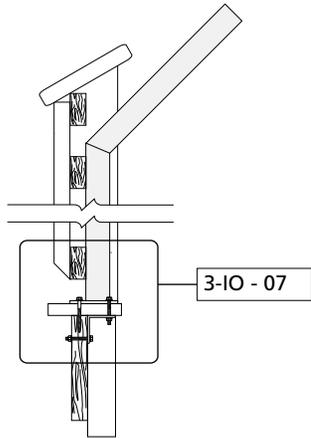


**2-IO - 06 Baseplate Plan View, 4" x 4" Post**  
Scale: 3" = 1'-0"



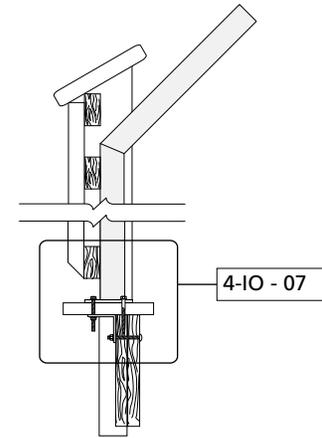
**3-IO - 06 Baseplate Plan View, UP Tri Post**  
Scale: 3" = 1'-0"

# Deck Mount (DM)



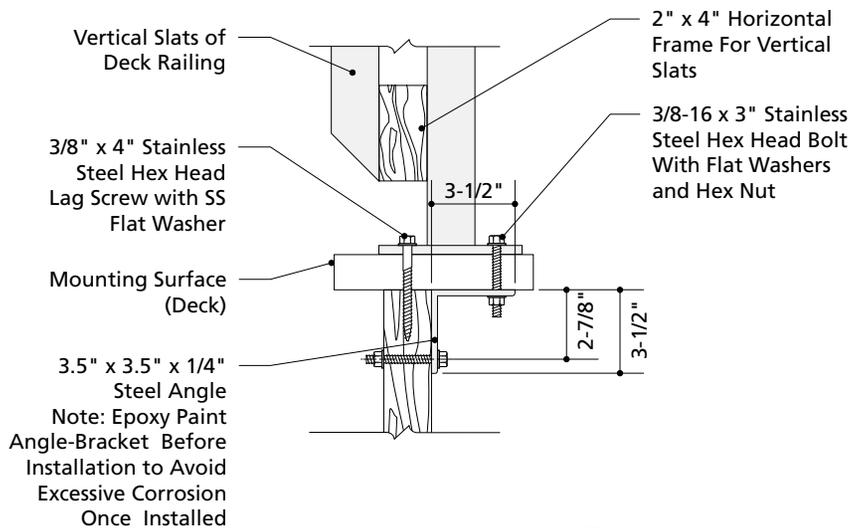
**1-IO - 07 Deck Mount Inside of Post, Side Elevation**

Scale: 1/2" = 1'-0"



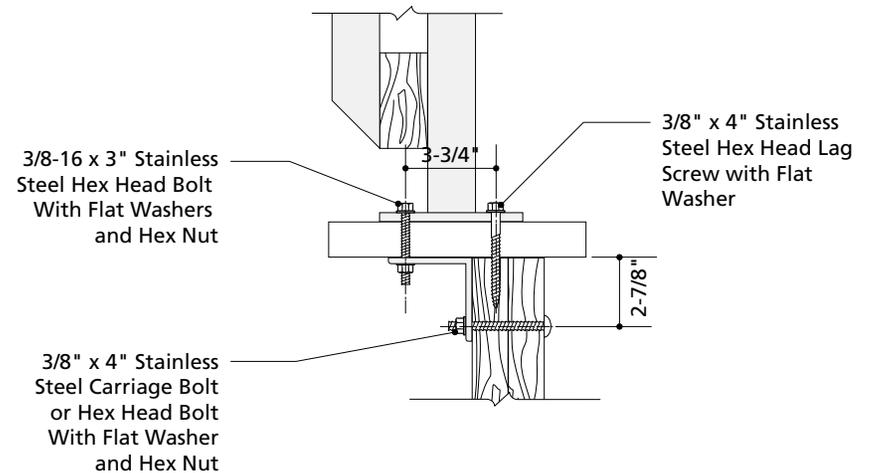
**2-IO - 07 Deck Mount Outside of Post, Side Elevation**

Scale: 1/2" = 1'-0"



**3-IO - 07 Connection Detail**

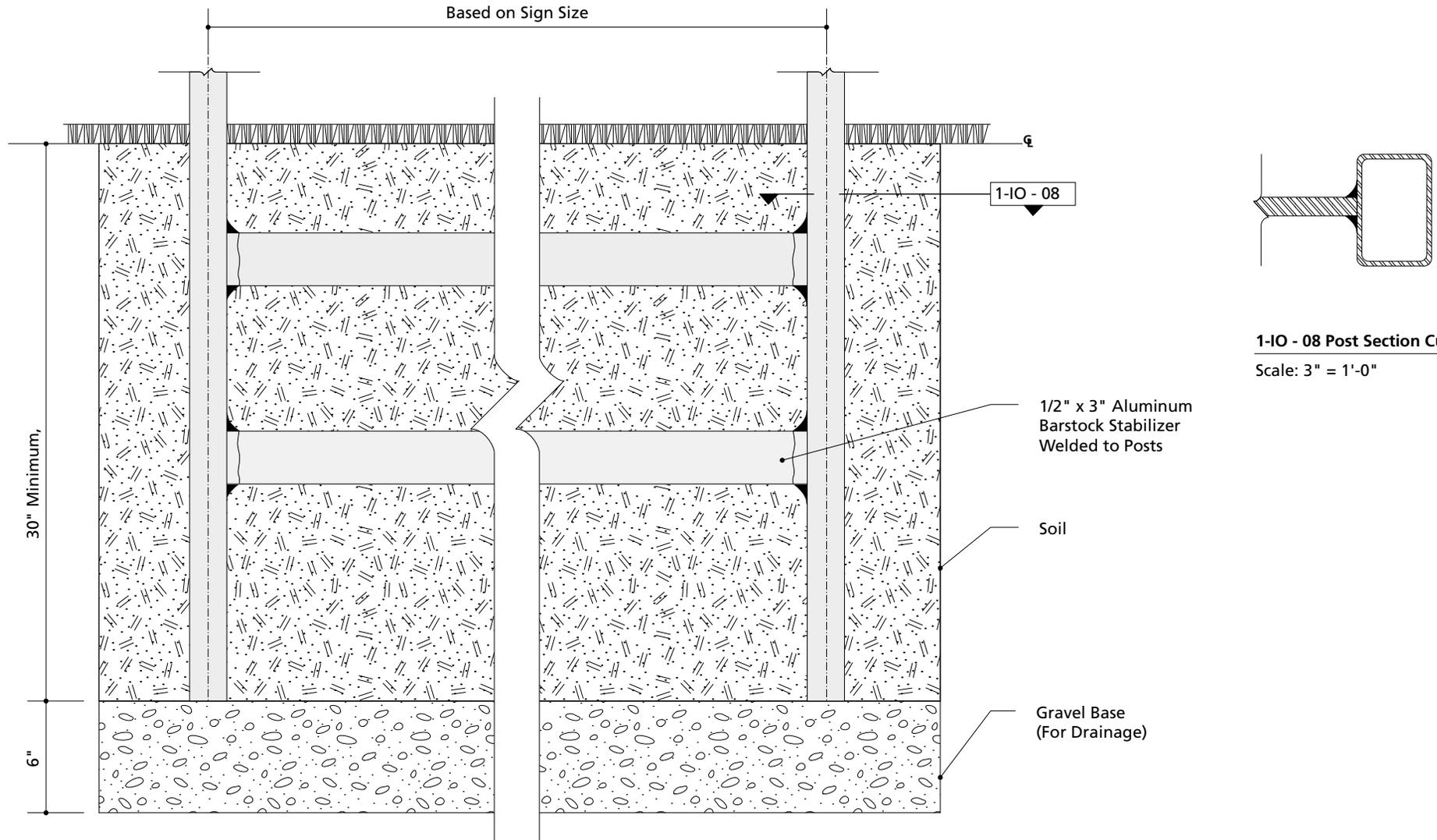
Scale: 1-1/2" = 1'-0"



**4-IO - 07 Connection Detail**

Scale: 1-1/2" = 1'-0"

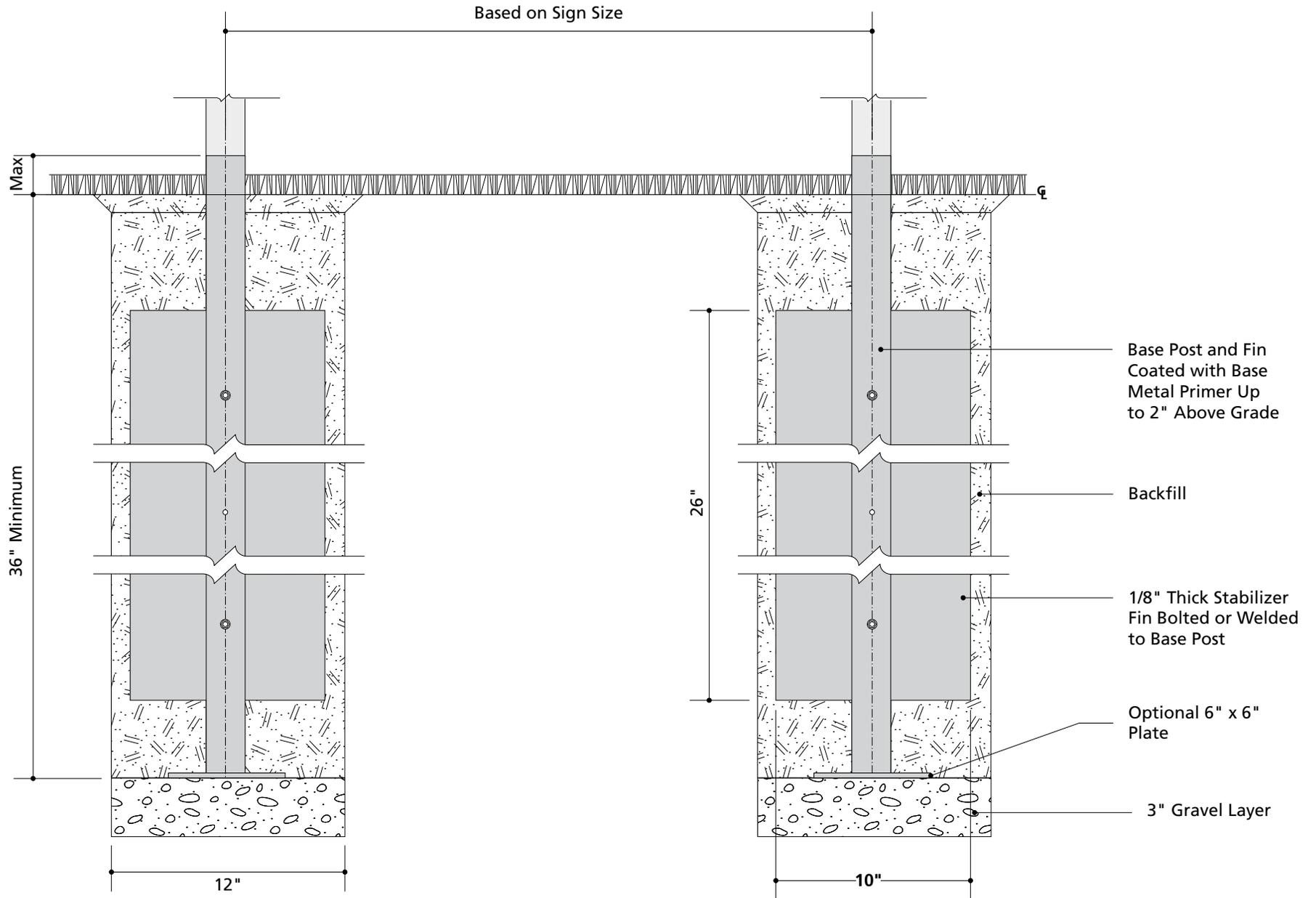
# Direct Embed with Stabilizer Bars (SB)



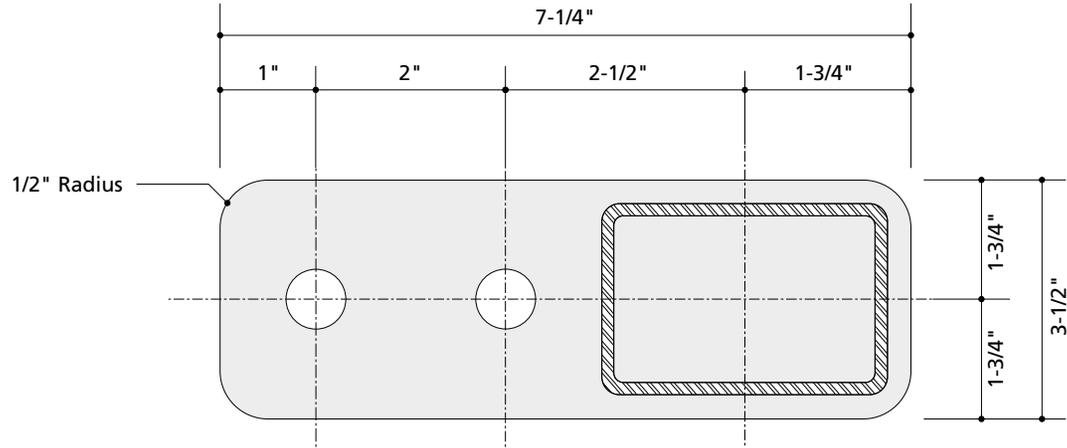
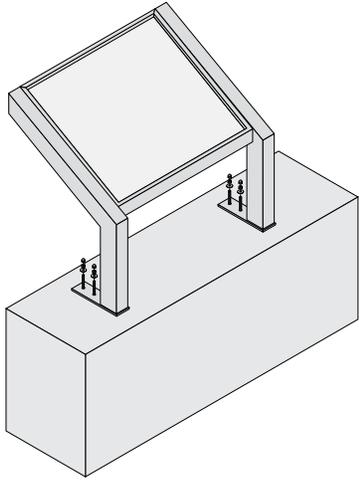
**1-IO - 08 Direct Embed with Stabilizer Bars**

Scale: 1-1/2" = 1'-0"

# Direct Embed with Stabilizer Fins (SF)

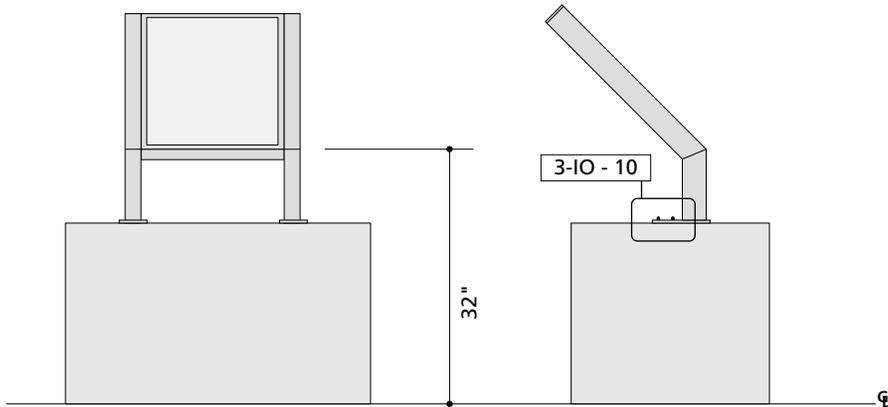


# Low Profile Series Wall Cap Mount (CM)



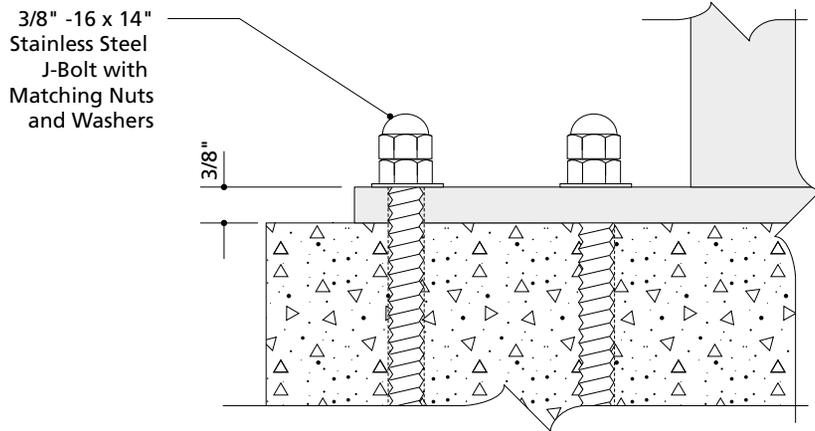
**2-IO - 10 Baseplate Plan View**

Scale: 1/2 Actual Size



**1-IO - 10 Low Profile Wall Cap Mount Elevationz**

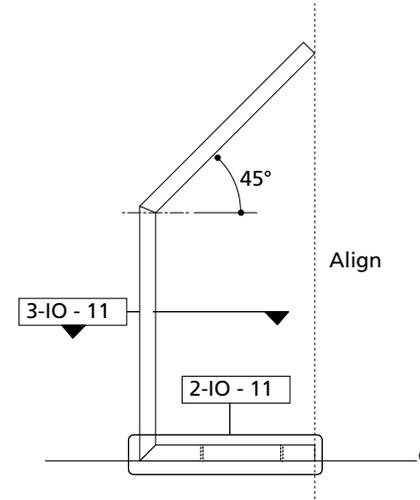
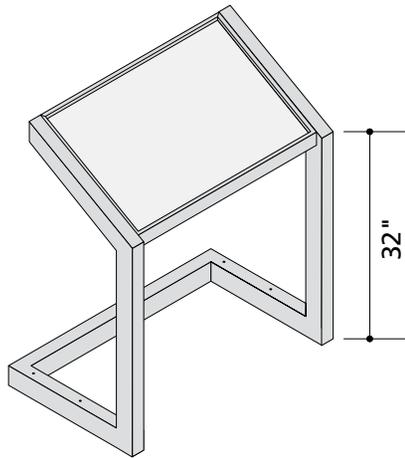
Scale: 1/2" = 1'-0"



**3-IO - 10 Mounting Detail**

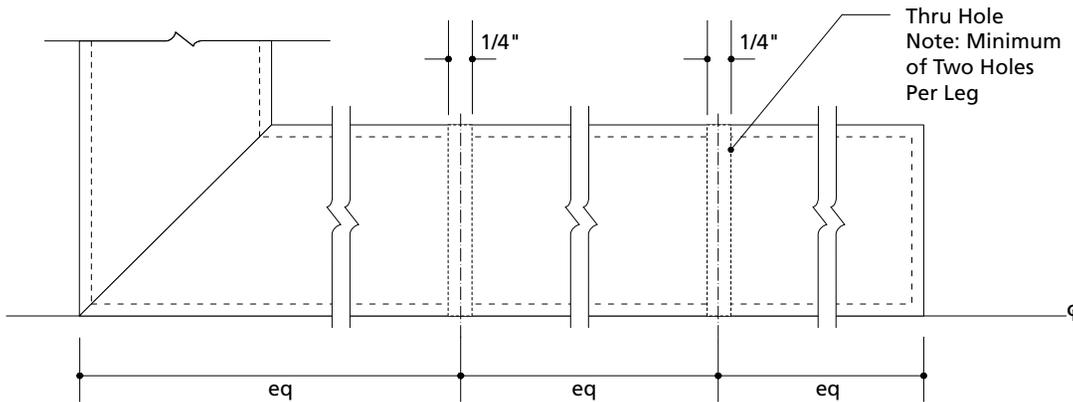
Scale: 1/2 Actual Size

# Low Profile Series Sled Base (SB)



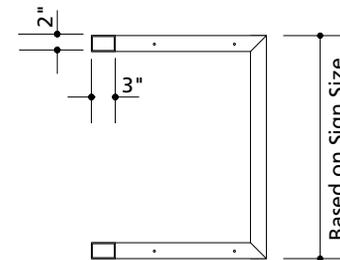
**1-IO - 11 Low Profile Sled Base Side Elevation**

Scale: 1/2" = 1' 0"



**2-IO - 10 Mounting Hole Detail**

Scale: 1/2 Actual Size

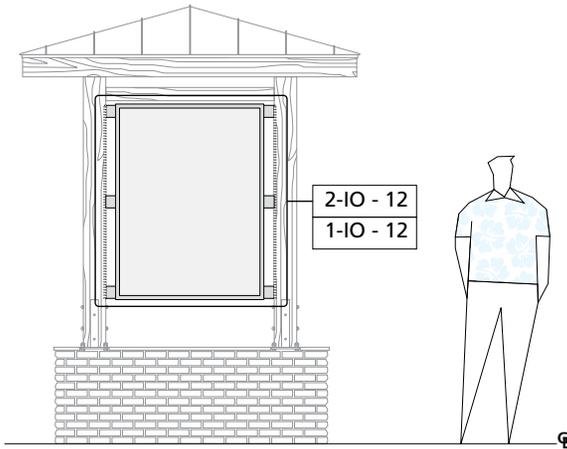


**3-IO - 11 Top Section**

Scale: 1/2" = 1' 0"

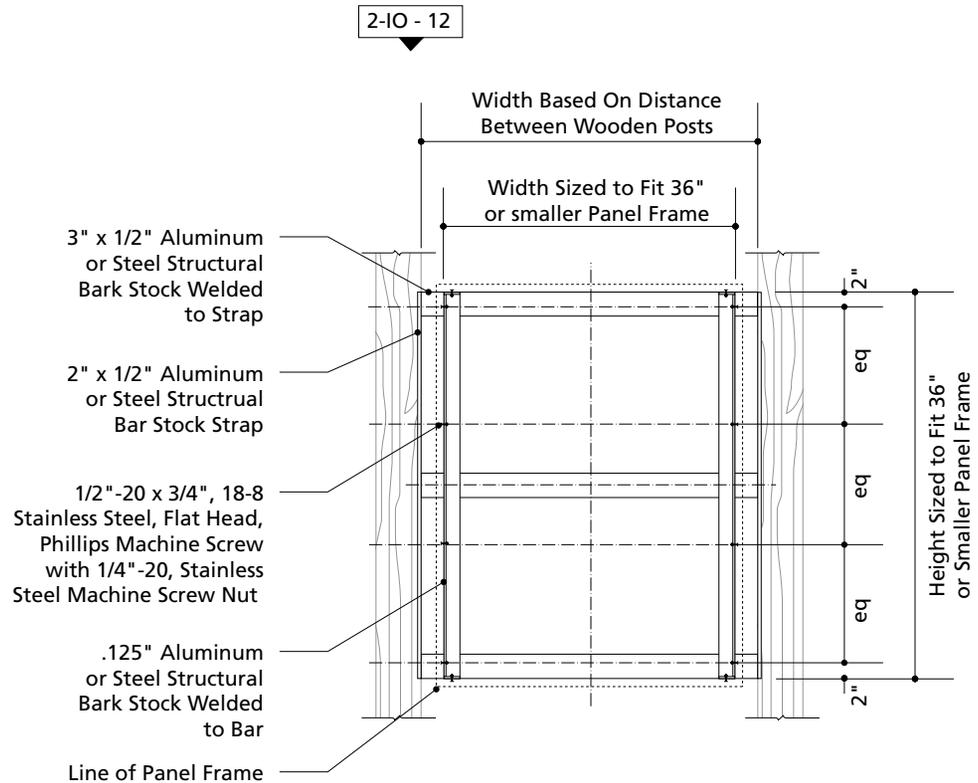
# Strap Kit (SK)

## Aluminum and Steel Fabrication



**1-IO - 12 Wood Kiosk with Strap Kit Elevation**

Scale: 1/2"=1'-0"



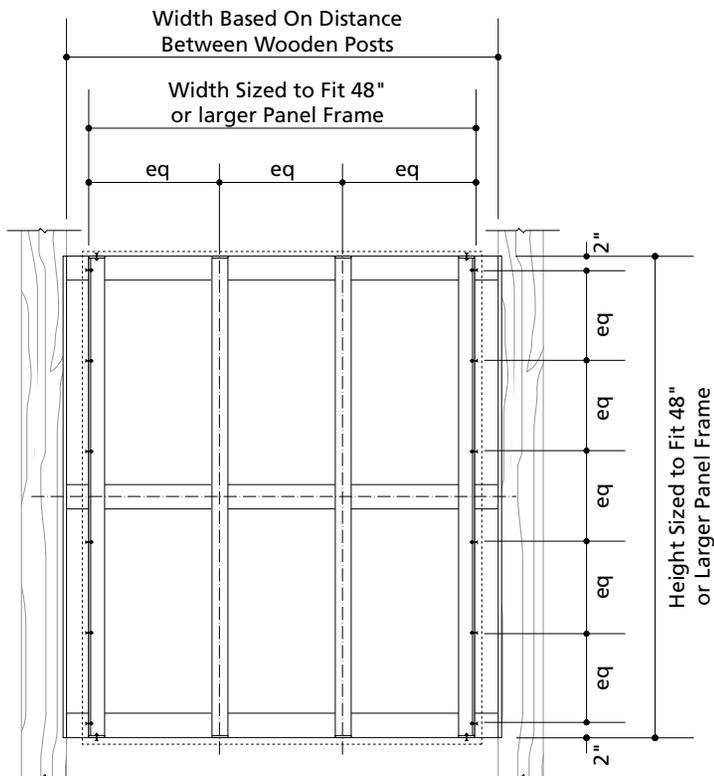
**2-IO - 12 Strap Elevation (36" or Smaller Panels)**

Scale: 1/2"=1'-0"

# Strap Kit

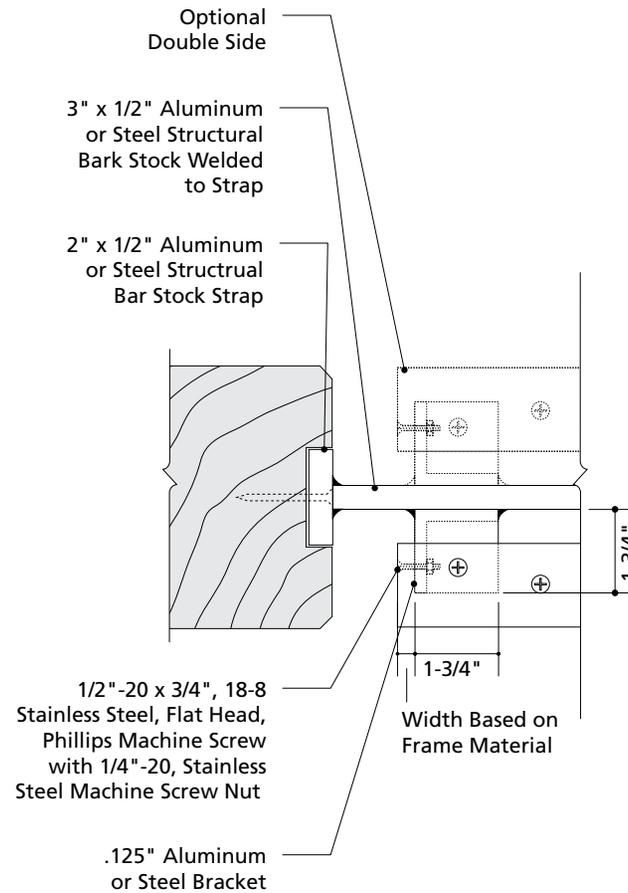
## Aluminum and Steel Fabrication Continued

2-IO - 13



**1-IO - 13 Strap Elevation (48" or Larger Panels)**

Scale: 1/2"=1'-0"



**2-IO - 13 Strap Connection Detail, Plan View**

Scale: 3"=1'-0"

---

# Reference Charts

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## VIS Post Size Charts

### Low Profile Hardware Post Chart

#### Panel Width

		6	12	18	24	36	48
Panel Height	6	NA	2 x 2	2 x 2	2 x 3	2 x 3	2 x 3
		BS	BS	BS			
	12	NA	2 x 2	2 x 2	2 x 3	2 x 3	2 x 3
		BS	BS				
	18	NA	2 x 2	2 x 2	2 x 3	2 x 3	2 x 3
		BS					
	24	NA	2 x 3	2 x 3	2 x 3	2 x 3	2 x 3

### Upright Hardware Post Chart

#### Panel Width

		6	12	18	24	36	48
Panel Height	6	NA	2 x 2	2 x 2	2 x 3	2 x 3	NA
		BS	BS	BS			
	12	2 x 2	2 x 2	2 x 2	2 x 3	2 x 3	2 x 3
		BS	BS				
	18	2 x 2	2 x 2	2 x 2	2 x 3	2 x 3	2 x 3
		BS					
	24	NA	2 x 3	2 x 3	2 x 3	2 x 3	2 x 3
	36	NA	2 x 3	2 x 3	2 x 3	2 x 3	NA
48	NA	2 x 3	2 x 3	2 x 3	2 x 3	NA	

### Inline and Quad Hardware Post Chart

#### Panel Size

		24 x 36	36 x 48
Kiosk Type	n2	2 x 3	3 x 5
	n3	2 x 3	3 x 5
	Quad	4 x 4	6 x 6

# VIS Weld and Rivets Charts

### Weld Joints Per Frame Chart

Panel Width

		6	12	18	24	36	48
Panel Height	12	2 0 2	2 2 2	2 2 2	2 2 2	2 4 2	2 4 2
	18	2 0 2	2 2 2	2 2 2	2 2 2	2 4 2	2 4 2
	24	N/A	2 2 2	2 2 2	2 2 2	2 4 2	2 4 2
	36	N/A	3 2 3	3 2 3	3 2 3	3 3 3	N/A
	48	N/A	3 2 3	3 2 3	3 2 3	3 3 3	N/A

### Rivets Per Frame Chart

Panel Width

		6	12	18	24	36	48
Panel Height	12	2 2 2	2 3 3	3 2 2	2 2 2	2 2 2	2 2 2
	18	3 3 3	3 3 3	3 3 3	3 3 3	3 3 3	3 3 3
	24	N/A	3 3 3	3 3 3	3 3 3	3 3 3	3 3 3
	36	N/A	3 3 3	3 3 3	3 3 3	3 3 3	N/A
	48	N/A	3 3 3	3 3 3	3 3 3	3 3 3	N/A

### Top Rail Screw Location for Top Rails Chart

Rail Length

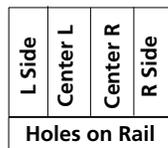
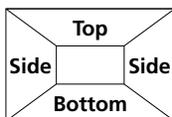
6	12	18	24	36	48
2 3 3	3 3 3	3 3 3	3 3 eq eq 3 3	3 3 eq eq 3 3	3 3 eq eq 3 3
• •	• •	• •	• •	• • • •	• • • •

### Weep Hole Location Chart

Panel Width

6	12	18	24	36	48
2 3 3	3 3 3	3 3 3	3 3 eq eq 3 3	3 3 eq eq 3 3	3 3 eq eq 3 3
• •	• •	• •	• •	• • • •	• • • •

Numbers are in inches.



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# Section VII

## Specifications

General Requirements	179
Materials Overview	182

## General Requirements



The Visitor Information System (VIS) consists of a standard group of post-and-frame components and accessories that are fabricated from aluminum or steel and mechanically assembled. Refer to the VIS Sign Fabrication Drawings for specific details and fabrication guidelines.

### Frames

The VIS System includes a fabricated panel capture frame with a removable top rail cap and a structural core panel. The frame is designed to contain and capture the graphic panel on four sides. Frames can be configured for one or two-sided display.

Frames fabricated in aluminum utilize an NPS standard “F” extrusion welded to a solid sheet aluminum core panel for structural rigidity. The frame features a removable top extrusion secured with tamper proof hardware to allow installation and removal of graphic panels.

Two-sided frames utilize a break-formed channel system with floating internal core panels for structural rigidity. The top channel is removable and secured with tamper proof hardware.

Frames fabricated from steel (including one and two-sided structures in weathering and galvanized material) utilize a break-formed channel system with floating internal core panels for structural rigidity.

### Posts

The VIS system features aluminum and steel tubular posts. Posts material for upright and low profile bases includes tubular aluminum and carbon steel in 2" x 2", 2" x 3" sizes, and 1/2" x 2" bar stock. Carbon steel can be galvanized for marine environments.

### Panels

Sign panels are inserted into the frame in front of the core panel. The sign frames accommodate a variety of graphic panel types including porcelain enamel, fiberglass embedment, polycarbonate embedment, high pressure laminate, digitally printed adhesive vinyl on aluminum with protective overlaminates, or computer cut retro-reflective sheeting on aluminum. The frame system can accommodate panel thicknesses from .090 up to .125.

Signs and sign assemblies shall be manufactured using materials and fabrication processes as described in these specifications and in the companion technical drawings.



### Dimensions

Inch dimensions are used for legend size and all related dimensions including layout grids, panel sizes, post lengths, mounting height, and post drilling for connection of panel to post. All hardware, machine parts (cast caps, mechanical fasteners, connection details), and materials (tube, dimensional lumber) are specified in inches. Dimension for assembly and panels are listed by length x width.

**Note: Panel dimensions described in this manual are nominal. Nominal sizes are used for ease of specification. Fabricated panels shall be undercut by 1/16" on each side. For example a specified, nominal 24" x 36" panel, shall be fabricated to a finished size of 23-7/8" x 35-7/8".**

Frames shall be fabricated to allow an expansion tolerance of 1/16" on all sides. The outer dimensions of the frame and core panel assemblies shall be 1/2" larger than the specified nominal size. For example a nominal 36" x 24" assembly shall be fabricated to an outer dimension of 36 1/2" x 24 1/2". This leaves 1/8" of expansion on all four sides.

### Hardware

The contractor shall provide all hardware, including screws, rivets, wej-it studs, threaded rods and j-bolts as required to fully assemble and install each base or assembly structure.

### Material Options and Substitutions

All materials shall be new and of first quality. Materials shall meet or exceed the standards and specifications herein or by reference. All materials and fabrication methodology shall comply with this specification or be an "approved equal".

A limited number of materials have been specified by manufacturer's trade name. These products are specified as examples and not to limit use of alternative products and suppliers that are of equal or superior quality.

### Function

These specifications are provided as a guideline for the fabrication, assembly, and installation of VIS signs for the UniGuide Program of the National Park Service. Material and fabrication specifications are provided for each structure. All signs shall be fabricated to the specifications described in this chapter. Additional instructions and requirements including modifications to structures and details shall be provided within individual contracts that describe the performance of specific sign fabricators and suppliers.

### Sign Identification Codes

Signs within the VIS system are identified by a series of reference code numbers that indicate the type of sign, sign panel/frame size, material mounting type, mounting accessory, and accessory. Refer to the Overview section of this manual for a description of the VIS Code System.

### Reference Standards

American Society for Testing and Materials standard specification for Aluminum and Aluminum Alloy Sheet and Plate (ASTM- 6061-T5 extruded shapes with Type 2: Black anodized finish, and 3003-H16, 3003-H14, 2024-T3, 6061-T6, and 5052-H34 aluminum plate).



American Society for Testing and Materials standard specification for Stainless Steel tube and structural shapes (ASTM- 316L and 18-8).

American Society for Testing and Materials standards for Weathering Steel ASTM-588 (A-847 as a tube product).

American Society for Testing and Materials, and American Institute for Hollow Structural Sections standards (HSS) for ASTM-500; Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes.

American Society for Testing and Materials standard specification D-523 for paint gloss and D-4587 for accelerated weathering cycles for paint.

American Society for Testing and Materials: Standards for threaded steel rod and “J” bolts

### Structural Engineering

All structures have been engineered to meet typical conditions for all national parks. Special conditions that are outside these parameters shall be engineered on a site specific basis.

### Quality of Materials

All materials shall be new and of first quality. Materials shall meet or exceed the standards and specifications herein or by reference. Factory seconds shall not be accepted. All materials shall comply with this specification or approved equal.

### UniGuide Engineering

The following criteria have been used as the standards governing material specifications, assemblies and footings for all NPS VIS signs unless otherwise specified or engineered.

Wind Pressure : 20 PSF \*\*\*

Soil: 1-TSF (2 KSF)-Minimum \* \*\*

Frost Depth : 36" Maximum unless otherwise noted

Concrete: 3000 PSI. / 28 days

\* For all direct embedment footings, backfill in 6" lifts tamped to 95% compaction.

\*\* Subgrade materials are assumed to be organic free sand/ gravel/silt, or mixture of same, with bearing capacity of 1-TSF (2 KSF) min, subject to inspection.

\*\*\* Exceptions include sign placements along the Gulf of Mexico and in the region of Cape Hattaras, with installations engineered site specific to the location.

If these criteria are not adequate for a specific sign location, modifications shall be made to conform to the specified site conditions in order to maintain structural integrity. Modifications may include, but are not limited to, thicker panels, larger dimension sign posts, additional structural bracing or components, or larger footing configuration and additional steel rebar.

The design of the structural requirements of special one-of-a-kind signs shall conform to the basic assembly specifications for similar sign types. The modified assembly shall fulfill the requirements of local criteria for wind pressure, soil, and frost depth.

# Materials Overview



This section covers material specifications for all components used in the UniGuide Visitor Information System.

## Aluminum

### Aluminum Frame Extrusions

Extruded aluminum (6061-T6 or 6063-T6/T651), NPS standard “F” channel extrusion. Refer to Chapter VI for drawings and additional information.

Extruded aluminum (6061-T6 or 6063-T6/T651), NPS standard angle top frame extrusion. Refer to Chapter VI for drawings and additional information.

Extruded aluminum (6061-T6 or 6063-T6/T651), NPS standard angle bracket extrusion. Refer to Chapter VI for drawings and additional information.

### Aluminum Posts

2" x 2" x 1/8" wall tubular aluminum (6063-T6) posts with 1/8"- 3/16" corner radius for upright and lowprofile assemblies.

3" x 2" x 1/8" wall tubular aluminum (6063-T6) posts with 1/8"- 3/16" corner radius for upright and lowprofile bases, and 24" x 36" double and triple inline assemblies.

1/2" x 2" aluminum barstock (6063-T) for upright and low profile assemblies.

4" x 4" x 1/8" wall tubular aluminum (6063-T6) posts for 24" x 36" and 36" x 48" upright quad post assemblies.

3" x 5" x 1/8" wall tubular aluminum (6063-T6) posts with 1/8"- 3/16" corner radius for 36" x 48" double and triple inline assemblies.

6" x 6" x 1/8" wall tubular aluminum (6063-T6) posts with 1/8"- 3/16" corner radius for 36" x 48" upright quad assemblies with roof structure.

1/4" flat sheet aluminum (5052-H32 or 6061-T6/T651) for trailside assemblies.

### Aluminum Core Panels

3/16" flat sheet aluminum (5052-H32 or 6061-T6/T651) core panel for upright and low profile bases.

### Aluminum Break-formed C-Channel

.125" sheet aluminum (5052-H32 or 6061-T6/T651) for breakforming C-channels and angles for two-sided frame applications and channels for wall mounts.

### Aluminum Baseplates

3/8" plate aluminum (5052-H32 or 6061-T6/T651) for machined drilling of baseplates for base mounting with j-bolts. See drawings in Section VI for base plate details.

### Aluminum Hardware

3/8" drive rivets to attach aluminum frame to post legs.

### Stabilizer Plates and Fins

6" x 6" x 1/4" sheet aluminum (5052-H32 or 6061-T6/T651) stabilizer plates welded to bottom of posts to mitigate settling of tubular aluminum upright and low profile posts (as specified).



1/8" x 10" x 26" 1/4" sheet aluminum (5052-H32 or 6061-T6/T651) stabilizer fins welded or bolted to posts to stabilize embedment of tubular aluminum uprights and low profile posts (as specified).

## Weathering Steel

### Weathering Steel Posts

2" x 2" x 1/8" wall tubular weathering steel (A-847) for upright and low profile bases.

2" x 3" x 1/8" wall tubular weathering steel (A-847) for upright and low profile bases, and 24" x 36" double and triple inline assemblies.

1/2" x 2" barstock (A-847) for upright and low profile bases.

4" x 4" x 1/8" wall tubular weathering steel (A-847) for 24" x 36" and 36" x 48" upright quad post assemblies.

3" x 5" x 1/8" wall tubular weathering steel (A-847) for 36" x 48" double and triple inline assemblies.

6" x 6" x 1/8" wall tubular weathering steel (A-847) for 36" x 48" upright quad assemblies with roof structure.

1/8" weathering steel plate (A-847) for fabricated posts for upright tri-side assemblies.

1/4" weathering steel plate (A-847) for trailside assemblies.

### Steel Core Panels (Painted)

1/8" steel plate (A-36) for painted core panel.

### Weathering Steel Break-formed C-Channel

1/8" weathering steel plate (A-847) for breakforming C-channels and angles for two-sided frame applications for upright assemblies and frames for low profile assemblies.

### Weathering Steel Baseplates

3/8" weathering steel plate (A-847) for welded baseplates for assemblies with tubular uprights and bar stock uprights.

### Steel Hardware

3/8" pop rivets to attach steel frame to post legs.

### Stabilizer Plates and Fins

6" x 6" x 11-gauge steel plate (A-847) stabilizer plated welded to bottom of posts to mitigate settling of tubular steel uprights (as specified).

1/8" x 10" x 26" steel plate (A-847) stabilizer fins welded or bolted to posts to stabilize embedment of tubular steel uprights (as specified).

### Stabilizer Bars

1/2" steel plate (A-847) for stabilizer bars to prevent post rack and torque (as specified).

## Galvanized Steel

### Galvanized Steel Posts

**Note: at the election of the contractor, A-847 material can be galvanized in-lieu of A-500-B material.**

2" x 2" x 1/8" wall tubular steel (A500B) for upright and low profile bases.



2" x 3" x 1/8" wall tubular steel (A500B) for upright and low profile bases, and 24" x 36" double and triple inline assemblies.

1/2" x 2" barstock (A500B) for upright and low profile bases.  
4" x 4" x 1/8" wall tubular steel (A500B) for 24" x 36" and 36" x 48" upright quad post assemblies.

3" x 5" x 1/8" wall tubular steel (A500B) for 36" x 48" double and triple inline assemblies.

6" x 6" x 1/8" wall tubular steel (A500B) for 36" x 48" upright quad assemblies.

1/8" steel plate (A36) for galvanized fabricated posts for upright tri-side assemblies.

1/4" steel plate (A36) for galvanized trailside assemblies.

#### **Steel Core Panels (Painted)**

1/8" steel plate (A-36) for galvanized core panel.

#### **Galvanized Steel Break-formed C-Channel**

1/8" steel plate (A36) for for breakforming C-channels and angles for two-sided frame applications for upright assemblies and frames for low profile assemblies.

#### **Galvanized Steel Baseplates**

3/8" steel plate (A36) for welded baseplates for machined drilling of baseplates for base mounting with j-bolts. See drawings in Section VI for base plate details.

1/4" x 2" steel plate (A-36) welded baseplate straps for wood upright assemblies.

#### **Steel Hardware**

3/8" pop rivets to attach steel frame to post legs.

#### **Stabilizer Plates and Fins**

6" x 6" x 11-gauge steel plate (A-36) stabilizer plates welded to bottom of posts to mitigate settling of tubular steel uprights (as specified).

1/8" x 10" x 26" steel plate (A-36) stabilizer fins welded or bolted to posts to stabilize embedment of tubular steel uprights.

#### **Stabilizer Bars**

1/2" steel plate (A-36) for stabilizer bars to prevent post rack and torque (as specified).

### **Hardware**

#### **Frame Rail Attachment**

1/4-20 x 1" stainless steel socket head cap screws (with stainless steel washer; see below) for rail attachment to upright (McMaster Carr 92196A542).

#### **Inline**

10-24 x 1.5" button head, socket head stainless steel bolts to hold cover panel on fabricated upright for inline (McMaster Carr 92949A251) with No.12 stainless steel flat washer (McMaster Carr 92141A013).



### Wall Mounted Assemblies

1/4"-20 x 1" stainless steel round head screw (McMaster Carr 91783A533) with stainless steel flat washer (McMaster Carr 92141A029) and wall anchor for attaching assembly.

### Stabilizer blade

3/8" x 3" zinc plated hex head machine bolt (McMaster Carr 91236A636), with galvanized washer and offset washers for mounting stabilizer blade.

### Anchor bolts and baseplate attachment

3/8"-16 x 14" stainless steel (18-8) "J" bolts (McMaster Carr-91615A140), with stainless steel hex nut (McMaster Carr-91849A031) for leveling and heavy duty stainless steel 1" dia. washer (McMaster Carr-98019A200) for mounting with concrete footing.

3/8"-16 threaded stainless steel rod (18-8) (McMaster Carr-98920A031) cut for 3.5" positive embedment, or standard 3/8" x 5-1/8" HILTI-HVA rod with chisel point and embedment mark.

HILTI-HVA adhesive anchor system (or equal) for 3/8" x 3-1/2" embedment.

3/8" flat washers (McMaster Carr 92141A031) and hex nuts (McMaster Carr 91845A031), thin nuts (McMaster Carr 91847A031), and stainless steel (304) finishing acorn nut (McMaster Carr-92994A031) for baseplate attachment.

3/8"-16 x 2" stainless steel button head socket cap screw

(McMaster Carr-92949A632) with companion washer (McMaster Carr-98019A200) for attachment of baseplate to mounting stem.

3/8"-16 stainless steel (18-8) heavy hex nut welded to bottom of stem footing baseplate for mounting bolt attachment (McMaster Carr-91849A031) Bolts for mounting to deck.

3/8" x 4" zinc plated hex head lag screw (McMaster Carr-91478A640) to attach baseplates to wood decks.

3/8" x 3" zinc plated hex head machine bolt (McMaster Carr 91236A636), washers and hex nuts to through bolt baseplates to wood decks.

3/8" x 4" zinc plated carriage bolt (McMaster Carr-93548A636), washers and hex nuts to through bolt supporting "L" brackets to wood decks.

3/8" x 8" zinc plated carriage bolt (McMaster Carr-93545A652), washers and hex nuts to through bolt C.1 upright to face of deck joist.

### Bulletin Cabinet

- 0.5" x 1.375" aluminum "L" shape frame assembly (2-screws, backing plate, tapped front plate) hardware (Nielsen 2400).
- (304) stainless steel continuous hinge with drilled holes. plain finish, 0.040 thick, 1-1/16" open wide (McMaster Carr 1658A417) for bulletin cabinet.



- #4-40 x 3/16" long (18-8) stainless steel flat head Phillips machine screw, with undercut head (McMaster Carr 91771A111).
- 3/16" – (18-8) stainless steel flat, socket head machine screw, 8-32 thread (McMaster Carr 92210A192) Accessories.
- 1-1/16" x 0.040" thick aluminum continuous hinge (McMaster Carr 1581A66) for trash bag dispenser.
- 8-32 x 1/4" stainless steel low head socket cap screw (McMaster Carr 93615A317) for keyhole attachment of folder holders and campsite permit display.
- 10-32 x 2" alloy steel, flat socket head screw (McMaster Carr 91253A018) with 1/2" plate washer and nut to secure for trash bag dispenser.
- 0.1875" clear polycarbonate sheet material for bulletin cabinet face.
- 0.1875" CRL vinyl glazing gasket for clear 3/16" polycarbonate sheet of bulletin display cabinet (0752C).
- Vinyl weather stripping for bulletin cabinet door (specification to be determined)
- 0.1875" and 0.1" acrylic sheet (clear and black) for brochure dispenser, campsite permit display, and camp registration display.

## Paint

All aluminum VIS bases, posts, and frame components shall be primed and painted

## Cleaning and Preparing the Metal

The surface of all aluminum post and frame components shall be properly prepared to ensure strong adhesion of the primer and topcoat. All oil, dirt, rust, metal burrs and any foreign materials shall be removed. All components shall be free of defects. All welded joints shall be ground smooth and clean. All dust or residue from abrasive cleaners or solvent cleaners shall be removed. A light scuffing/sanding shall provide "tooth" for the primer to adhere to the metal surfaces.

Prior to primer application, apply a generous portion of 45-330SP Speed Prep Cleaner, (or approved equal) to all metal surfaces. Application of the cleaner shall be in strict accordance with *Matthews Product Bulletin MPC111*, or in strict accordance with the manufacturer's application procedures and recommendations.

## Primer Application

Aluminum posts and frames that will be installed in coastal locations or other environments with corrosive conditions shall be primed with Matthews White Epoxy Primer 274-908SP and hardener 274-909, (or approved equal). The primer coats shall be applied in strict accordance with *Matthews Product Bulletin MPC125*, or in strict accordance with the primer manufacturer's application procedures and recommendations.

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### **Color Finish Topcoat**

Unless otherwise specified on approved drawings a semi gloss spattercoat textured finish shall be the standard for all NPS VIS aluminum bases. Paint application shall be applied in two parts: the first top coat color application followed by a second spattercoat textured color finish. The spattercoat finish shall be medium coarse and applied per approved samples. The color topcoat finish shall be Matthews VOC MAP, (or approved equal). Apply in strict accordance with *Matthews Product Bulletin MPC107*, or in strict accordance with the paint manufacturer's application procedures and recommendations.

### **Paint Color Finish**

All paint colors used on NPS VIS bases are custom mixed colors with specific formulas. All colors have been matched utilizing Matthews Paint. All bases shall be painted using Matthews Paint or approved equal. Where approved equals are supplied the final colors shall be matched and approved prior to application.

#### **NPS Brown**

Matthews Paint, MP63848 w/Spattercoat.

#### **NPS Medium Grey**

Matthews Paint, MP63850 w/Spattercoat

#### **NPS Dark Brown**

Matthews Paint, MP63856 w/Spattercoat