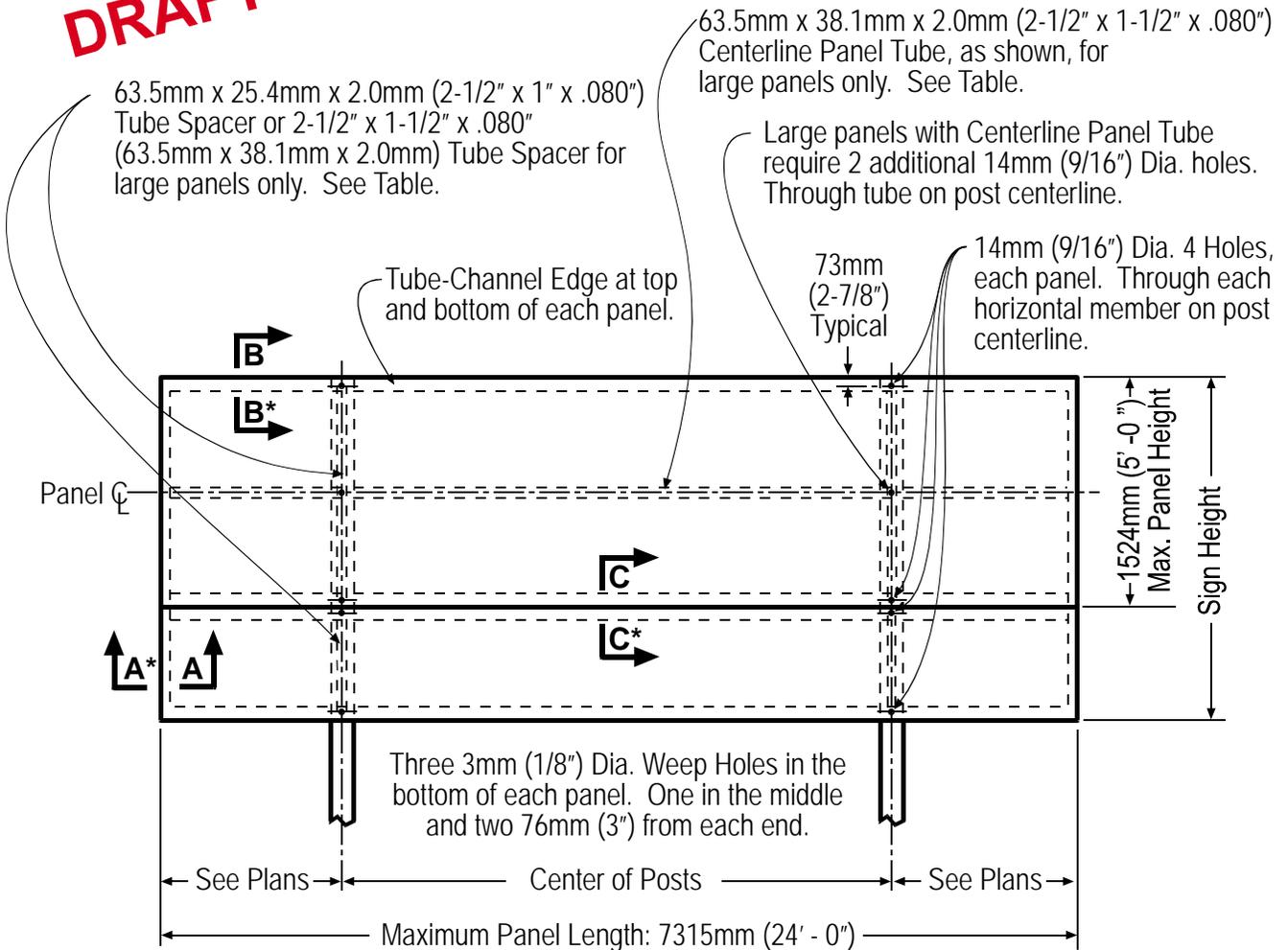


**SINGLE HORIZONTAL LAMINATED ALUMINUM SIGN PANEL**  
**Type H Panel (64mm (2-1/2") Thick)**

**DRAFT**



\* For Section A-A, Channel Edge; Section B-B, Tube-Channel Edge;  
and Section C-C, Tube-Channel Closure, See Plate 5.

**NO SCALE**

**FACE VIEW OF LAMINATED PANEL**

ALL HORIZONTAL MEMBERS ARE CONTINUOUS

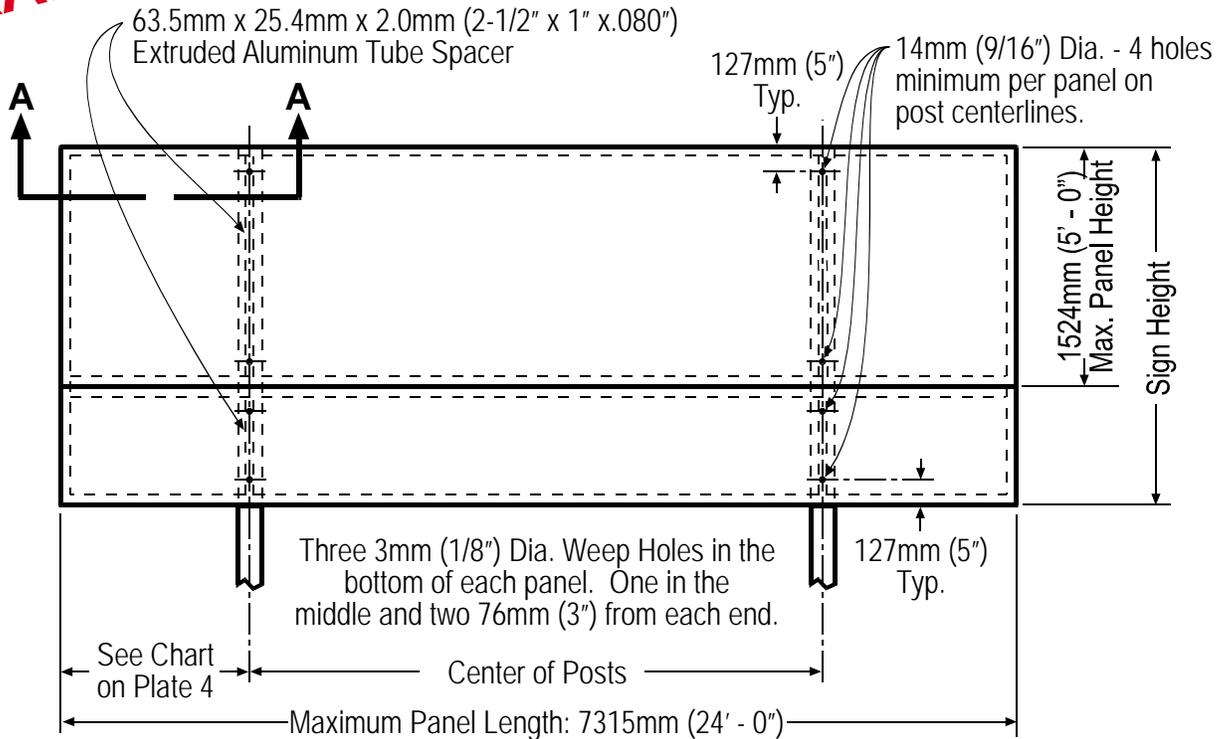
**TABLE**

ANY PANEL WITHIN THE FOLLOWING DIMENSIONS IS CONSIDERED A LARGE PANEL	
PANEL HEIGHT	PANEL LENGTH
1524mm (60")	5182mm (17'-0") to 7315mm (24'-0")
1372mm (54")	5791mm (19'-0") to 7315mm (24'-0")
1219mm (48")	6401mm (21'-0") to 7315mm (24'-0")
1067mm (42")	7315mm (24'-0")

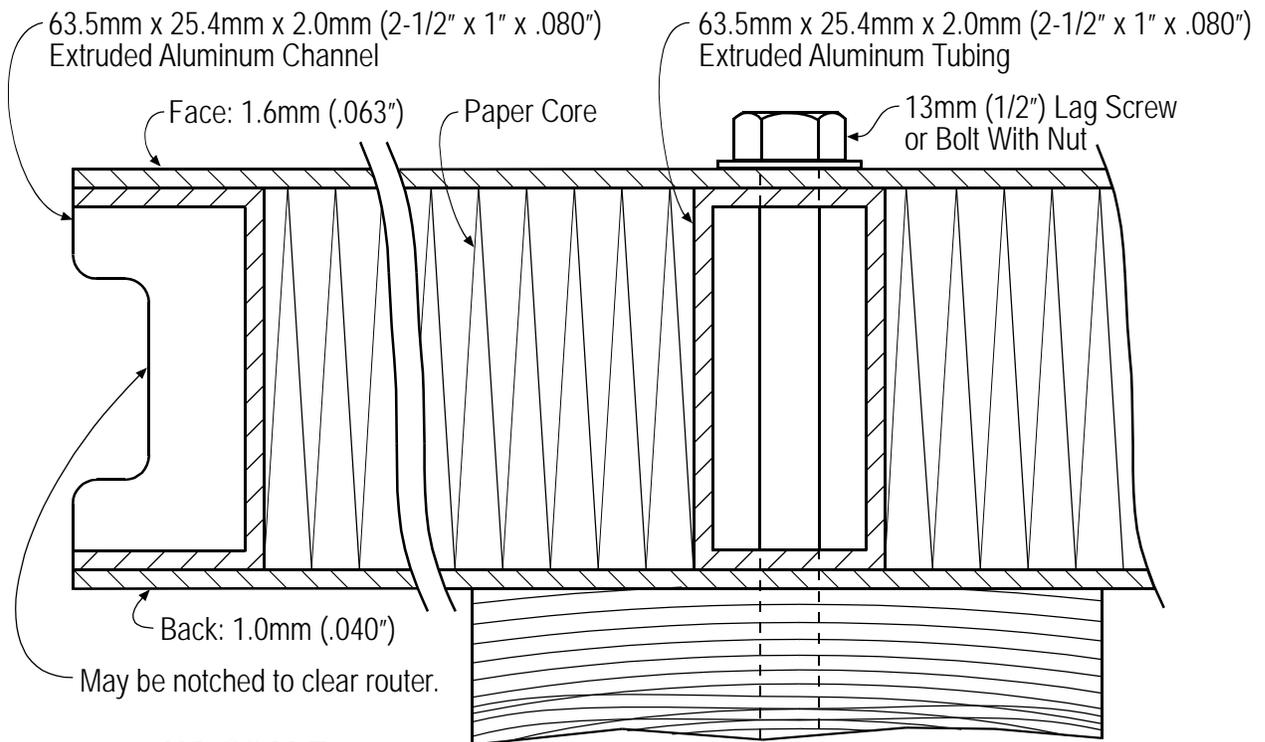
**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

**SINGLE HORIZONTAL LAMINATED ALUMINUM SIGN PANEL**  
**Type B Panel (64mm (2-1/2") Thick)**

**DRAFT**



**FACE VIEW OF LAMINATED PANEL**



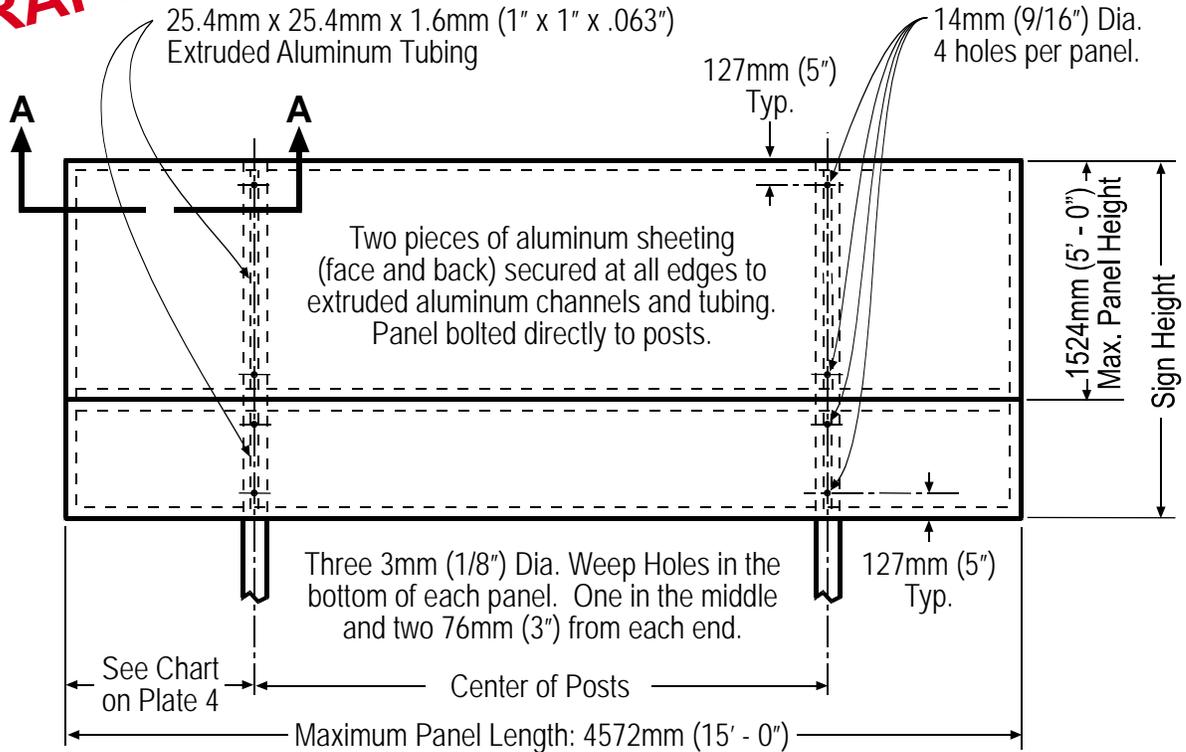
**NO SCALE**

**SECTION A-A**

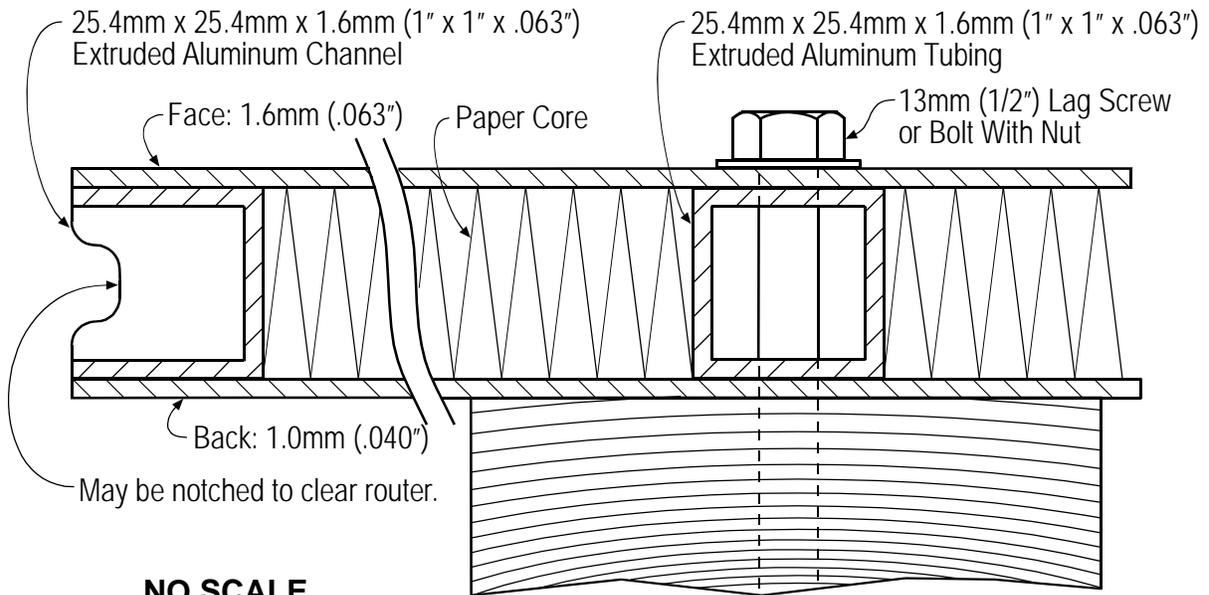
**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

**SINGLE HORIZONTAL LAMINATED ALUMINUM SIGN PANEL**  
**Type B (25mm (1") Panel Thickness)**

**DRAFT**



**FACE VIEW OF LAMINATED PANEL**

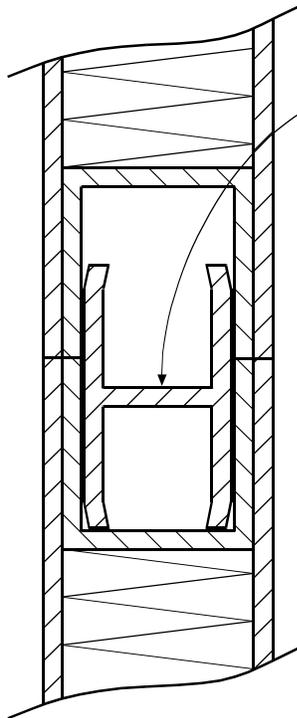


**NO SCALE**

**SECTION A-A**

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

**SEAM CLOSURE "H" SECTION EXTRUSION  
FOR MULTI-HORIZONTAL LAMINATED PANEL ALUMINUM SIGNS**



Typical Closure Extrusion

**DRAFT**

**NO SCALE**

Panel Length	Closure Length	Pieces & Lengths Required
1067mm (42")	914mm (36")	1-914mm (36")
1219mm (48")	1067mm (42")	1-1067mm (42")
1372mm (54")	1219mm (48")	1-1219mm (48")
1524mm (60")	1372mm (54")	1-1372mm (54")
1676mm (66")	1524mm (60")	1-1524mm (60")
1829mm (72")	1676mm (66")	1-1676mm (66")
1981mm (78")	1829mm (72")	2-914mm (36")
2134mm (84")	1981mm (78")	1-914mm (36"), 1-1067mm (42")
2286mm (90")	2134mm (84")	2-1067mm (42")
2438mm (96")	2286mm (90")	1-1067mm (42"), 1-1219mm (48")
2591mm (102")	2438mm (96")	2-1219mm (48")
2743mm (108")	2591mm (102")	1-1219mm (48"), 1-1372mm (54")
2896mm (114")	2743mm (108")	2-1372mm (54")
3048mm (120")	2896mm (114")	1-1372mm (54"), 1-1524mm (60")
3200mm (126")	3048mm (120")	2-1524mm (60")
3351mm (132")	3200mm (126")	1-1524mm (60"), 1-1676mm (66")
3505mm (138")	3353mm (132")	2-1676mm (66")
3658mm (144")	3505mm (138")	2-1219mm (48"), 1-1067mm (42")
3810mm (150")	3658mm (144")	3-1219mm (48")
3962mm (156")	3810mm (150")	2-1219mm (48"), 1-1372mm (54")
4115mm (162")	3962mm (156")	2-1372mm (54"), 1-1219mm (48")
4267mm (168")	4115mm (162")	3-1372mm (54")
4420mm (174")	4267mm (168")	2-1372mm (54"), 1-1524mm (60")
4572mm (180")	4420mm (174")	2-1524mm (60"), 1-1372mm (54")
4724mm (186")	4572mm (180")	3-1524mm (60")
4877mm (192")	4724mm (186")	2-1676mm (66"), 1-1372mm (54")
5029mm (198")	4877mm (192")	2-1676mm (66"), 1-1524mm (60")
5182mm (204")	5029mm (198")	3-1676mm (66")
5334mm (210")	5182mm (204")	3-1219mm (48"), 1-1524mm (60")
5486mm (216")	5334mm (210")	3-1372mm (54"), 1-1219mm (48")
5639mm (222")	5486mm (216")	4-1372mm (54")
5791mm (228")	5639mm (222")	3-1372mm (54"), 1-1524mm (60")
5944mm (234")	5791mm (228")	3-1524mm (60"), 1-1219mm (48")
6096mm (240")	5944mm (234")	3-1524mm (60"), 1-1372mm (54")
6248mm (246")	6096mm (240")	4-1524mm (60")
6401mm (252")	6248mm (246")	3-1676mm (66"), 1-1219mm (48")
6553mm (258")	6401mm (252")	3-1676mm (66"), 1-1372mm (54")
6706mm (264")	6553mm (258")	3-1676mm (66"), 1-1524mm (60")
6858mm (270")	6706mm (264")	4-1676mm (66")
7010mm (276")	6858mm (270")	5-1372mm (54")
7163mm (282")	7010mm (276")	4-1372mm (54"), 1-1524mm (60")
7315mm (288")	7163mm (282")	3-1372mm (54"), 2-1524mm (60")

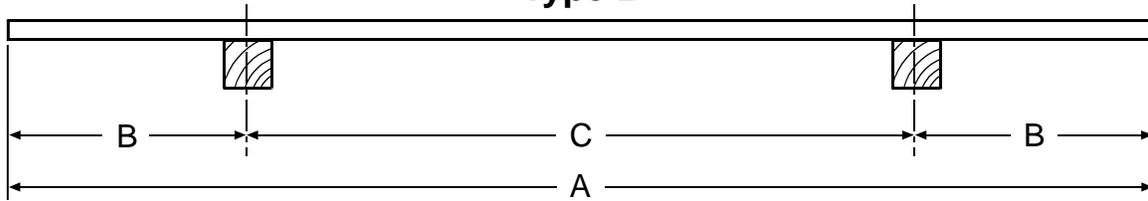
"H" sections will be set in 76mm (3") from edge of panels to allow for rivet clearance in borders. Standard lengths in stock; 914mm (36"), 1067mm (42"), 1219mm (48"), 1373mm (54"), 1524mm (60") and 1676mm (66").

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

**DRAFT**

**STANDARD POST SPACING TABLE  
FOR HORIZONTAL LAMINATED PANEL ALUMINUM SIGNS**

**Type B**



**PLAN VIEW**

**NO SCALE**

**25mm (1") PANEL**

Length of Sign <b>A</b>	Number of Posts	Overhang <b>B</b>	Post Spacing <b>C</b>
1372mm(4'-6")	2	152mm(6")	1067mm(3'-6")
1524mm(5'-0")	2	229mm(9")	1067mm(3'-6")
1676mm(5'-6")	2	305mm(12")	1067mm(3'-6")
1829mm(6'-0")	2	305mm(12")	1219mm(4'-0")
1981mm(6'-6")	2	381mm(15")	1219mm(4'-0")
2134mm(7'-0")	2	381mm(15")	1372mm(4'-6")
2286mm(7'-6")	2	457mm(18")	1372mm(4'-6")
2438mm(8'-0")	2	457mm(18")	1524mm(5'-0")
2591mm(8'-6")	2	508mm(20")	1575mm(5'-2")
2743mm(9'-0")	2	559mm(22")	1626mm(5'-4")
2896mm(9'-6")	2	584mm(23")	1727mm(5'-8")
3048mm(10'-0")	2	610mm(24")	1829mm(6'-0")
3200mm(10'-6")	2	610mm(24")	1981mm(6'-6")
3353mm(11'-0")	2	610mm(24")	2134mm(7'-0")
3503mm(11'-6")	2	686mm(27")	2134mm(7'-0")
3658mm(12'-0")	2	762mm(30")	2134mm(7'-0")
3810mm(12'-6")	2	762mm(30")	2286mm(7'-6")
3962mm(13'-0")	2	762mm(30")	2438mm(8'-0")
4115mm(13'-6")	2	762mm(30")	2591mm(8'-6")
4267mm(14'-0")	2	762mm(30")	2743mm(9'-0")
4420mm(14'-6")	2	914mm(36")	2591mm(8'-6")
4572mm(15'-0")	2	914mm(36")	2743mm(9'-0")

**64mm (2-1/2") PANEL**

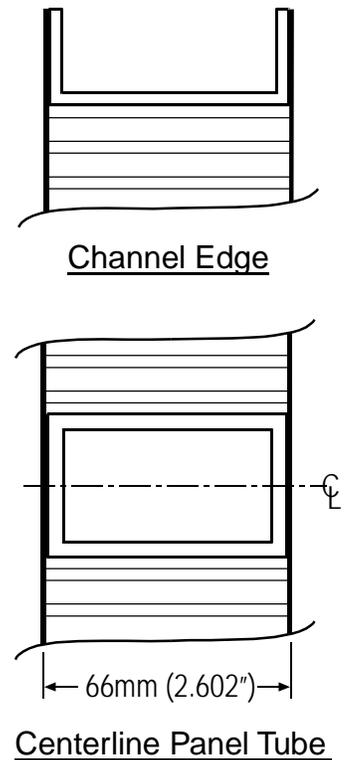
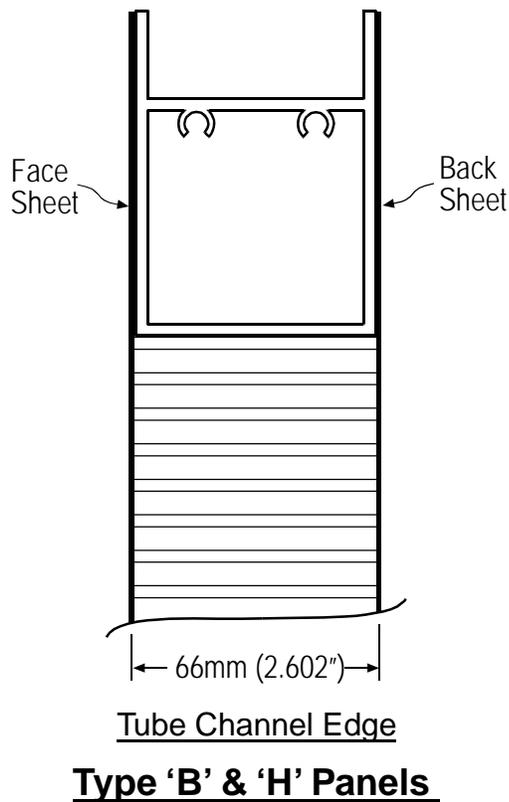
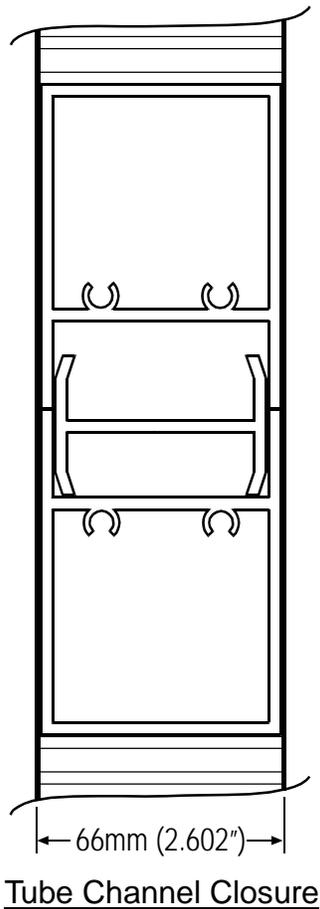
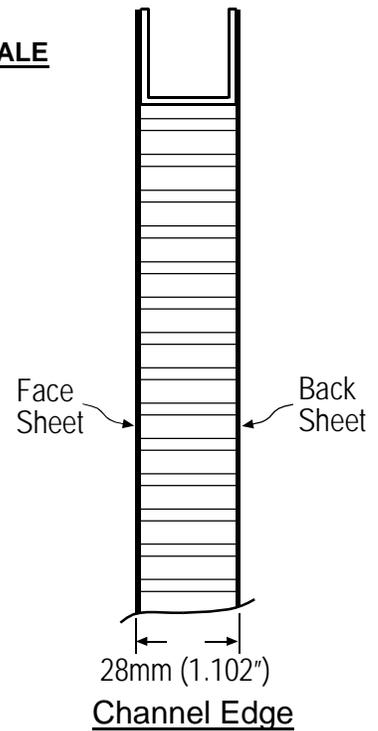
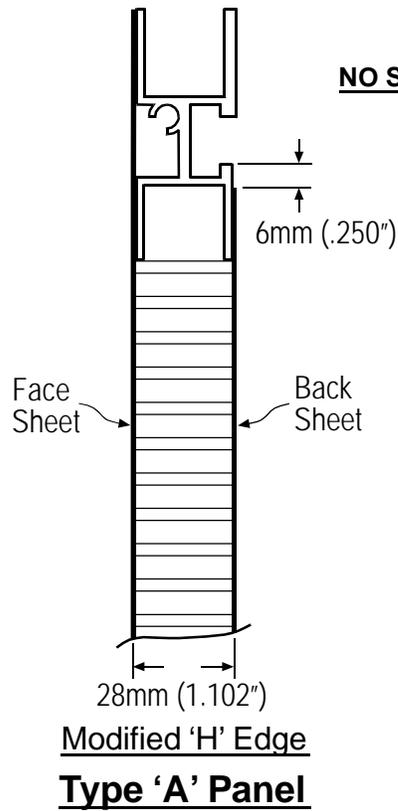
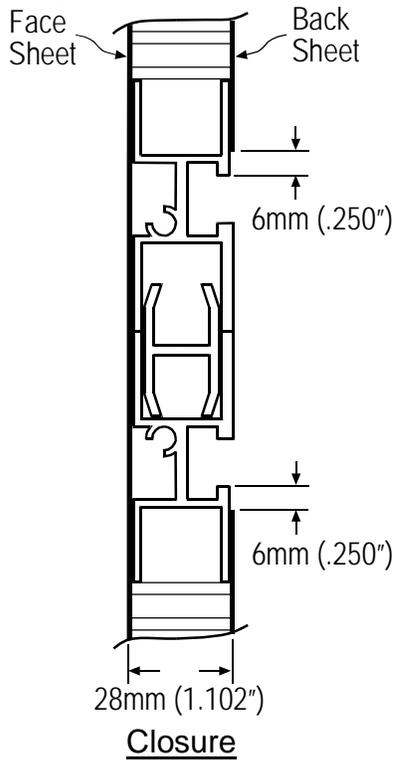
Length of Sign <b>A</b>	Number of Posts	Overhang <b>B</b>	Post Spacing <b>C</b>
4724mm(15'-6")	2	914mm(36")	2896mm(9'-6")
4877mm(16'-0")	2	991mm(39")	2896mm(9'-6")
5029mm(16'-6")	2	991mm(39")	3048mm(10'-0")
5182mm(17'-0")	2	991mm(39")	3200mm(10'-6")
5334mm(17'-6")	2	1067mm(42")	3200mm(10'-6")
5486mm(18'-0")	2	1067mm(42")	3353mm(11'-0")
5639mm(18'-6")	2	1143mm(45")	3353mm(11'-0")
5791mm(19'-0")	2	1143mm(45")	3505mm(11'-6")
5944mm(19'-6")	2	1143mm(45")	3658mm(12'-0")
6096mm(20'-0")	2	1229mm(48")	3658mm(12'-0")
6248mm(20'-6")	2	1229mm(48")	3810mm(12'-6")
6401mm(21'-0")	2	1295mm(51")	3810mm(12'-6")
6553mm(21'-6")	2	1295mm(51")	3962mm(13'-0")
6706mm(22'-0")	2	1295mm(51")	4115mm(13'-6")
6858mm(22'-6")	2	1372mm(54")	4115mm(13'-6")
7010mm(23'-0")	2	1372mm(54")	4267mm(14'-0")
7163mm(23'-6")	2	1372mm(54")	4420mm(14'-6")
7315mm(24'-0")	2	1448mm(57")	4420mm(14'-6")

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

**DRAFT**

# LAMINATED PANEL DETAILS

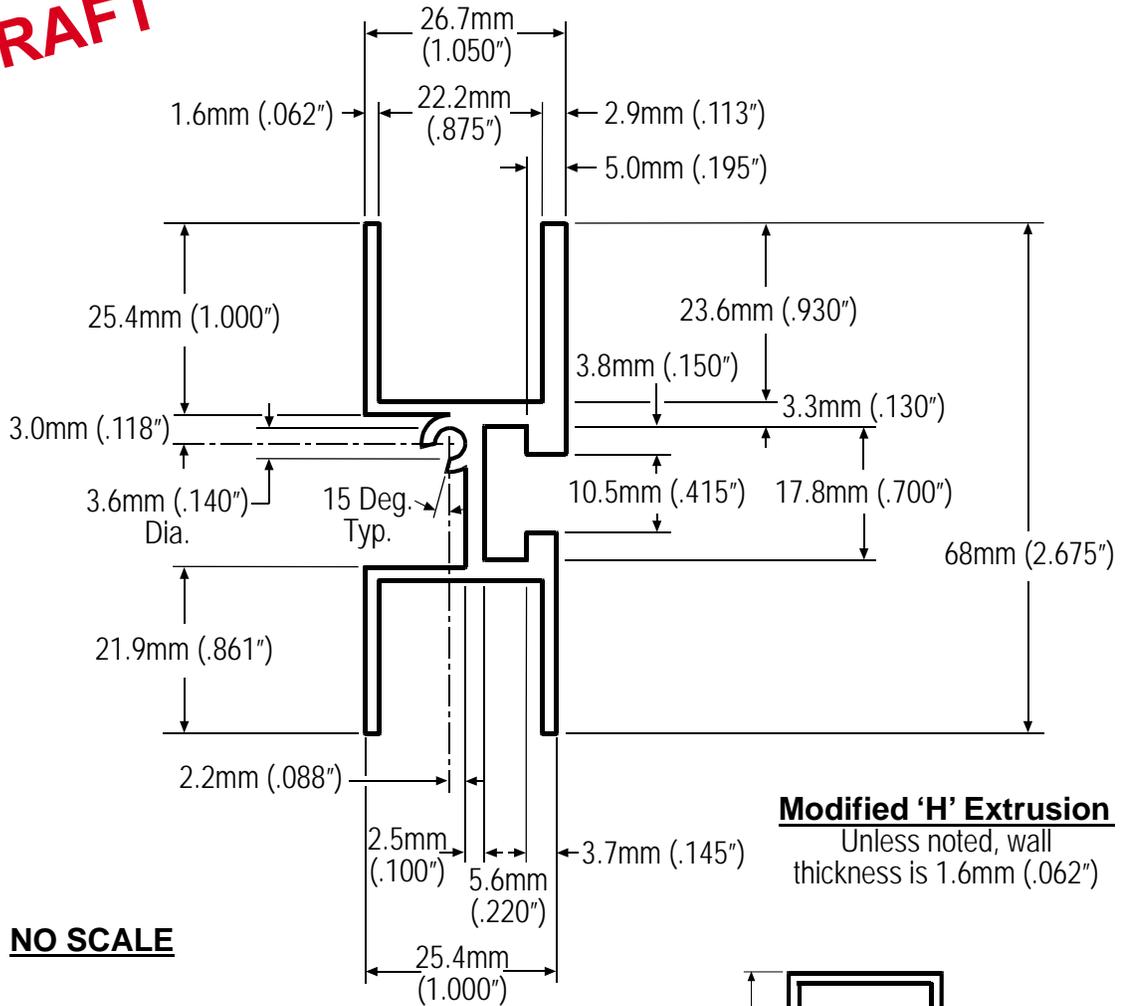
**Plate 5**  
Rev. 4/23/02



**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

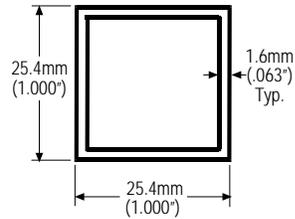
**LAMINATED PANEL DETAILS**  
**Extrusions for Type A Panels**

**DRAFT**

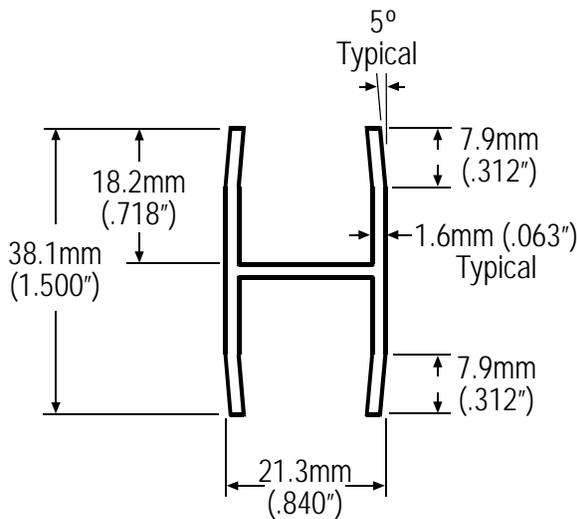


**Modified 'H' Extrusion**  
Unless noted, wall thickness is 1.6mm (.062")

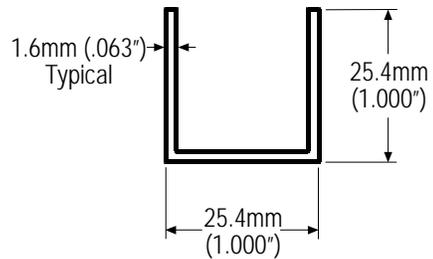
**NO SCALE**



**Tube Extrusion**



**Closure Extrusion**



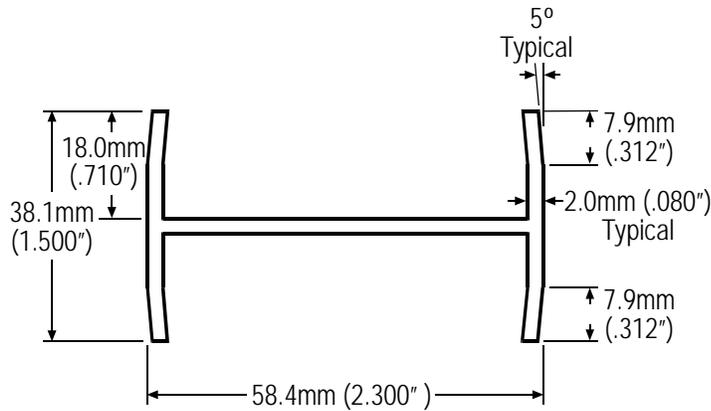
**Channel Extrusion**

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

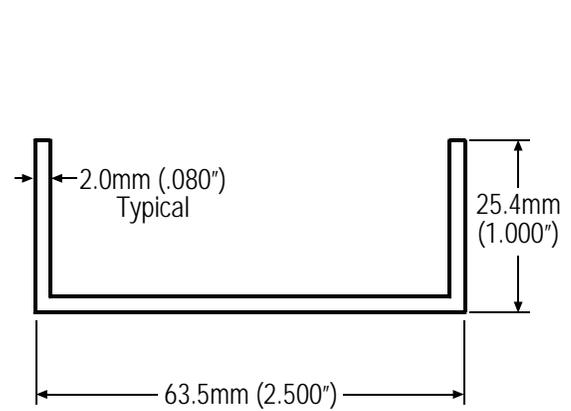
# LAMINATED PANEL DETAILS

## Extrusions for Type 'B' and 'H' Panels

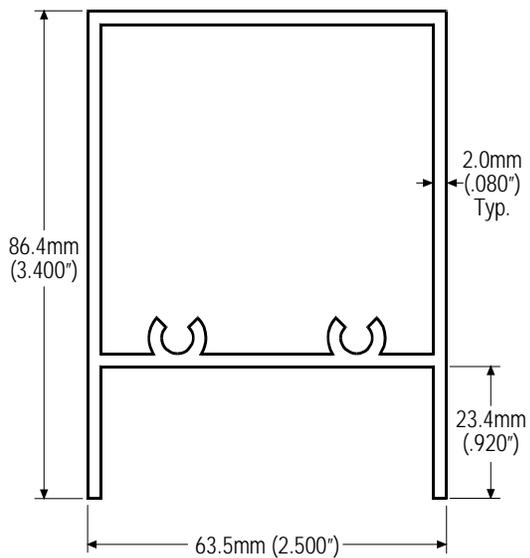
**DRAFT**



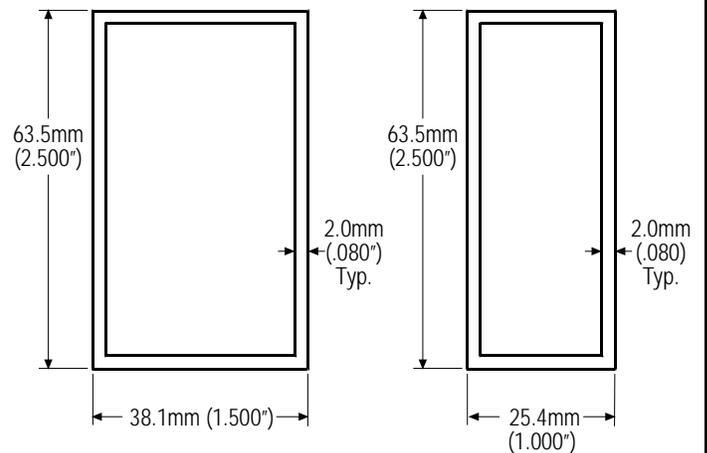
**Closure Extrusion**



**Channel Extrusion**



**Tube Channel Extrusion**



**Tube Extrusions**

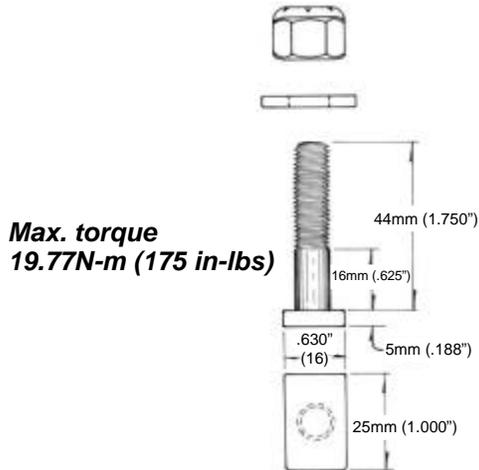
**NO SCALE**

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

# OVERHEAD TYPE A LAMINATED PANEL TYPE A-1 MOUNTING HARDWARE

FOR TRUSS AND LIGHTWEIGHT SIGN STRUCTURES

UNIT - 2 Clamps, 2 Rectangular Head Bolts with Flat Washer and Hexagon Stop Nut



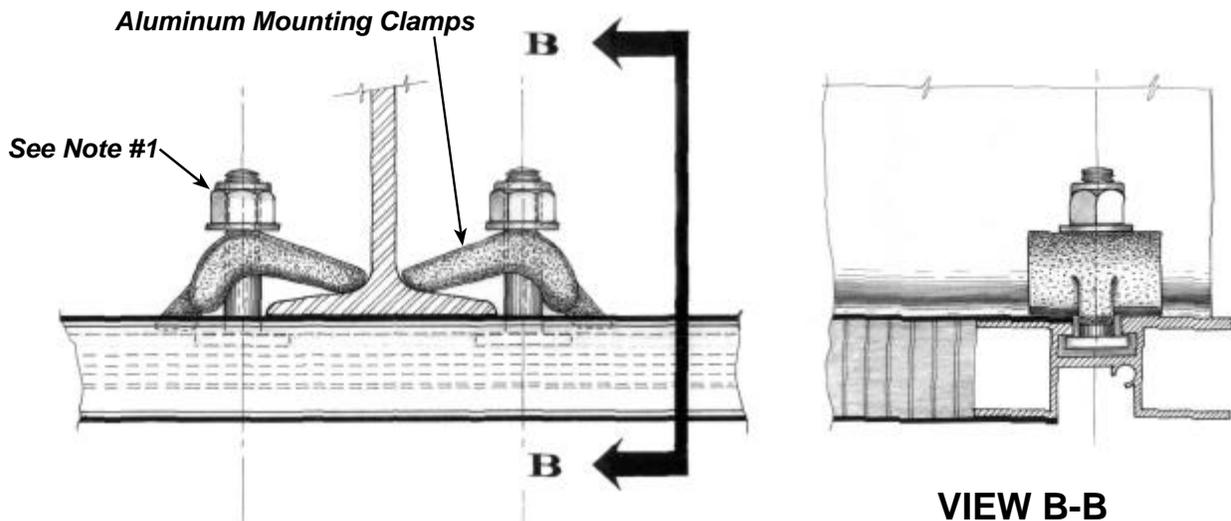
**DRAFT**



Aluminum Mounting Clamps

10mm (3/8") x 44mm (1.750") - 16 threads, 18-8 Stainless Steel bolt with 16mm (.630") x 25mm (1.00") head, hexagon stop nut with nylon insert and flat washer.

## BOLTED CONNECTIONS TO VERTICAL SUPPORTS



Note #1: 10mm (3/8") x 44mm (1.750") - 16 threads, 18-8 Stainless Steel bolt with 16mm (.630") x 25mm (1.00") head, hexagon stop nut with nylon insert and flat washer.

**VIEW B-B**

**NO SCALE**

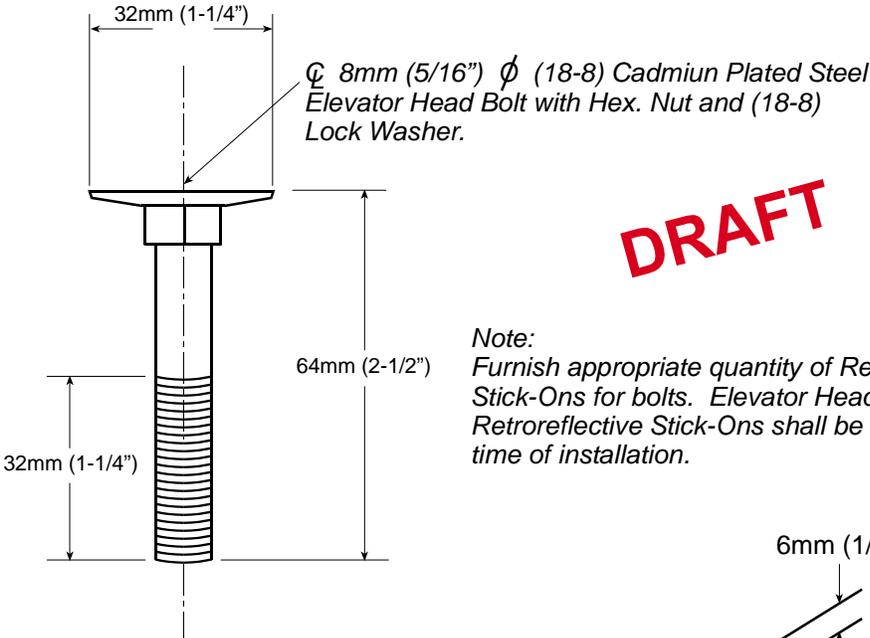
### ALTERNATIVE MATERIAL:

Should material described be unavailable due to material shortages, other materials may be used providing prior approval obtained from the Engineer.

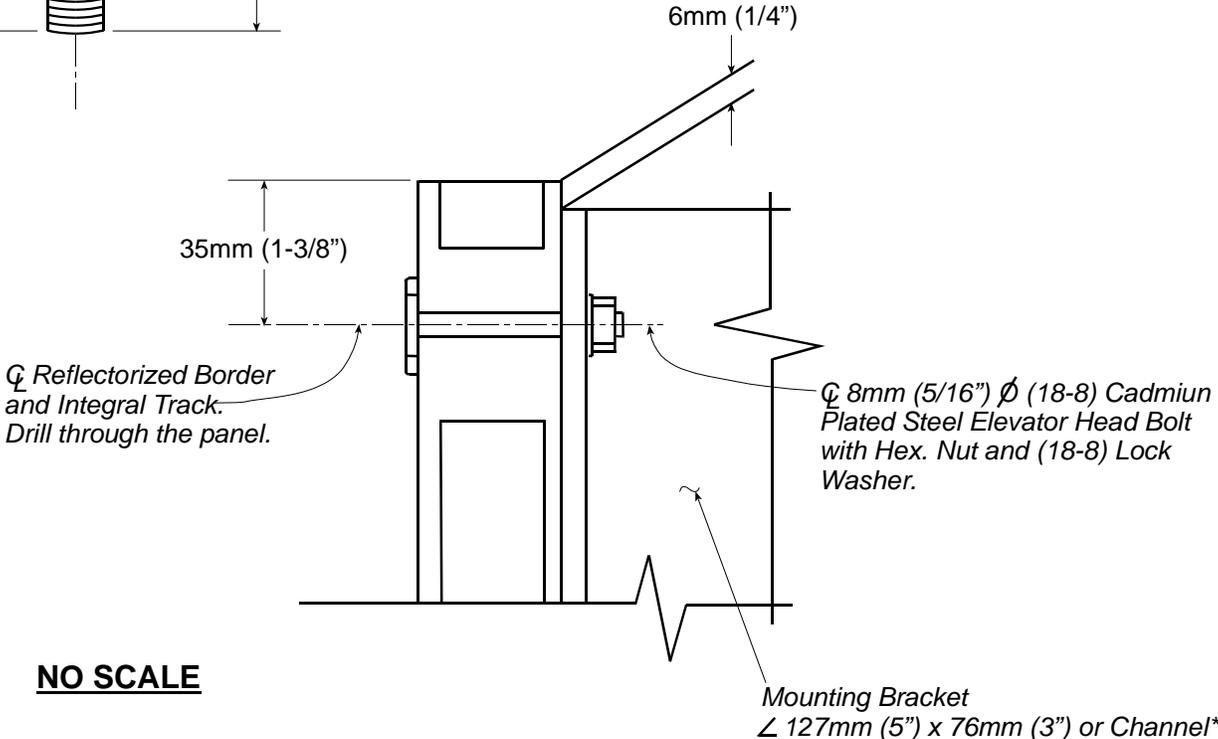
**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

**OVERHEAD SIGN TYPE A LAMINATED PANEL  
TYPE A-2 MOUNTING HARDWARE**  
For Box Beam Closed Truss, Bridge Mounted and Tubular Overhead signs.

\*UNIT - 1 Elevator Head Bolt with Hex. Nut and Lock Washer.  
For channel mounting bracket, add Beveled Washer.



Note:  
Furnish appropriate quantity of Retroreflective Stick-Ons for bolts. Elevator Head Bolts and Retroreflective Stick-Ons shall be applied at time of installation.



ALTERNATIVE MATERIAL:  
Should material described be unavailable due to material shortages, other materials may be used providing prior approval obtained from the Engineer.

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

**OVERHEAD TYPE A LAMINATED PANEL  
MOUNTING HARDWARE QUANTITY CHART**

**DRAFT**

**TYPE A-1 HARDWARE**

SIGN STRUCTURE TYPE	SIGN LENGTH	SIGN HEIGHT (see note)	*UNITS REQUIRED
Truss, Lightweight & Box Beam	4572mm(180") or Less	1270mm(50") - 1524mm(60")	4
"	4877mm(192") - 7315mm(288")	1270mm(50") - 1524mm(60")	6
"	4572mm(180") or Less	1778mm(70") - 3048mm(120")	8
"	4877mm(192") - 7315mm(288")	1778mm(70") - 3048mm(120")	12

\*UNIT - 2 Clamps, 2 Rectangular Head Bolts with Washers and Stop Nuts.  
Provide 1 each extra Bolt, Washer & Nut for each 2-12 Clamps provided.

**TYPE A-2 HARDWARE**

SIGN STRUCTURE TYPE	SIGN LENGTH	SIGN HEIGHT (see note)	*UNITS REQUIRED
Bridge Mounted & Tubular	4267mm(168") or Less	1270mm(50") - 1524mm(60")	9
"	4572mm(180") - 7315mm(288")	1270mm(50") - 1524mm(60")	13
"	6096mm(240") - 7315mm(288")	1270mm(50") - 1524mm(60")	13
"	4267mm(168") or Less	1778mm(70") - 3048mm(120")	17
"	4572mm(180") - 7315mm(288")	1778mm(70") - 3048mm(120")	25
"	6096mm(240") - 7315mm(288")	1778mm(70") - 3048mm(120")	26

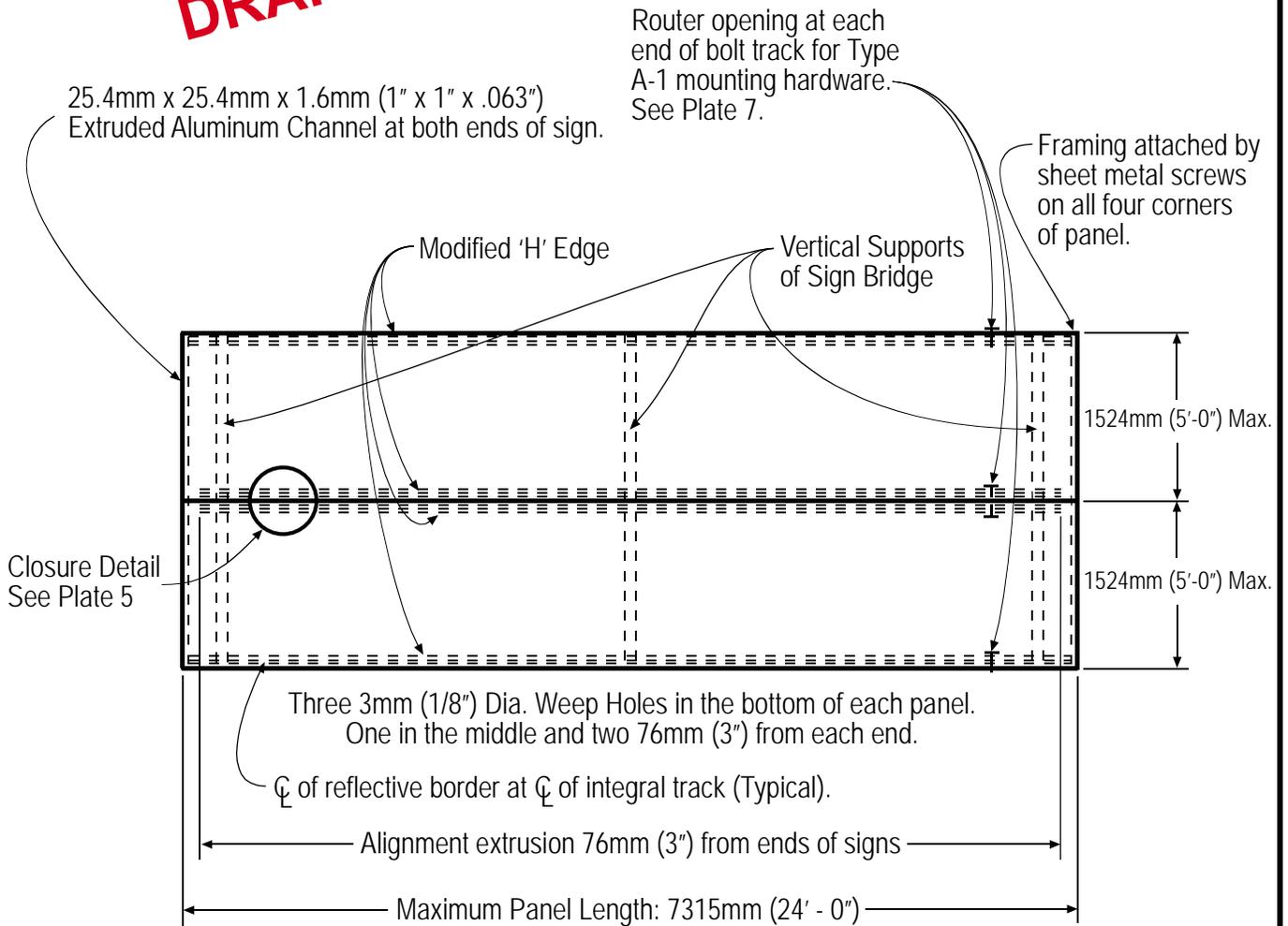
\*UNIT - 1 Elevator Head Bolt with Hex. Nut, Beveled Washer and Lock Washer

NOTE: Sign heights 2794mm (110") and 3048mm (120") may be fabricated in 3 panel sections in height to avoid message being placed on a horizontal seam. Mounting hardware quantities shall be increased accordingly.

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

**TYPE 'A' PANEL**  
**Single or Multiple Panel Overhead**  
**Horizontal - Laminated Integral Track**  
**1.6mm (.063") Face and 1.0mm (.040") Back**

**DRAFT**



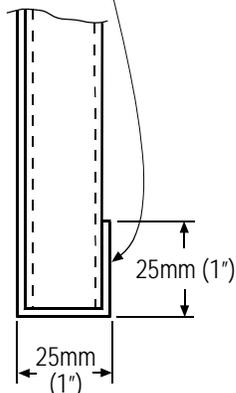
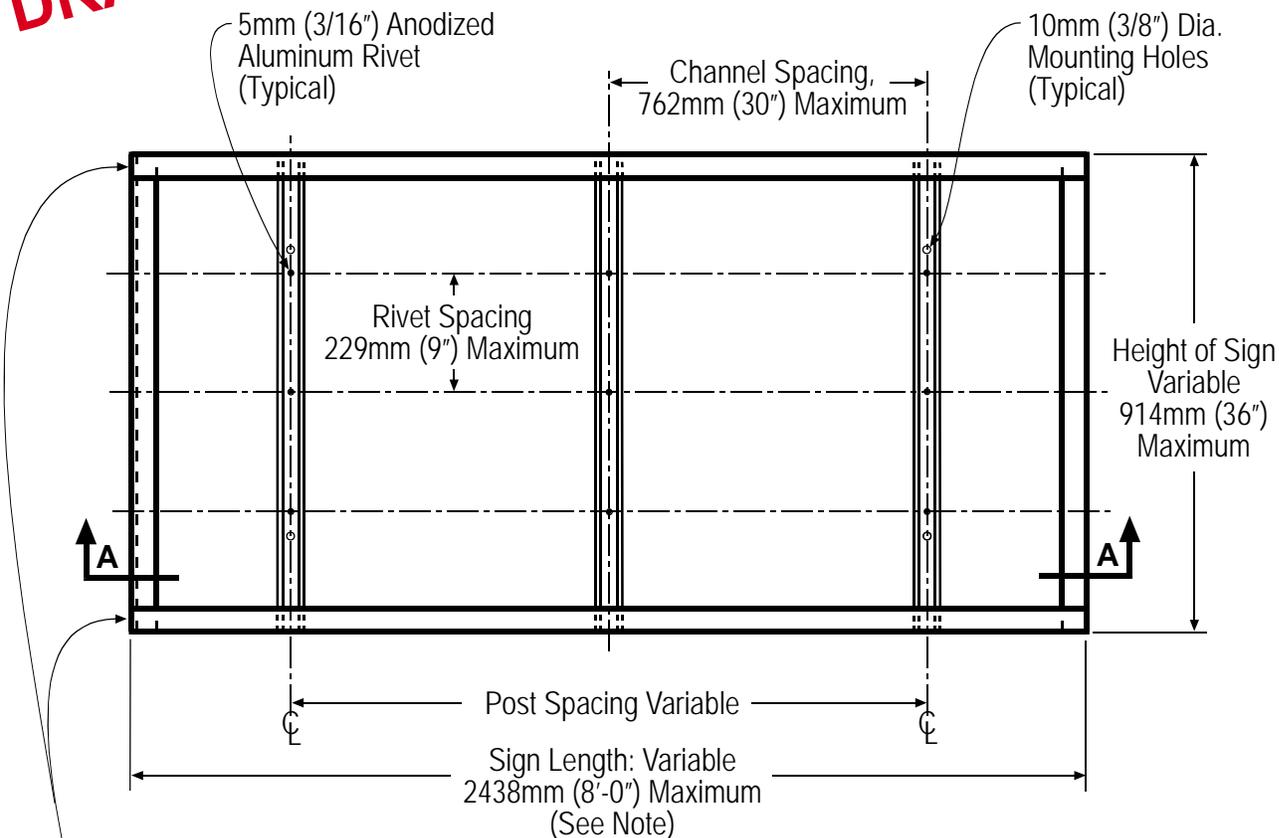
NOTE:  
All panels 25mm (1") thick, 1219mm (4'-0") to 7315mm (24'-0") long in 305mm (12") increments.  
Minimum supports shown.

**NO SCALE**

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

# FRAMING DETAIL FOR FORMED SINGLE SHEET ALUMINUM SIGNS (Ground Mount)

**DRAFT**



Form flange in skin at top and bottom edges.

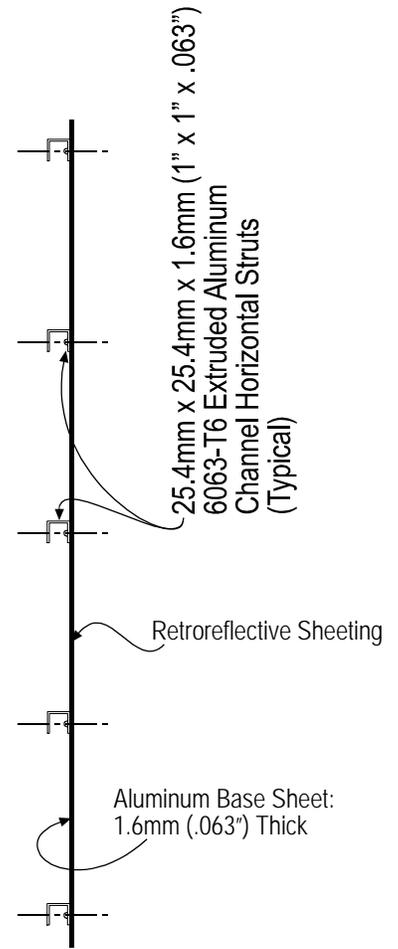
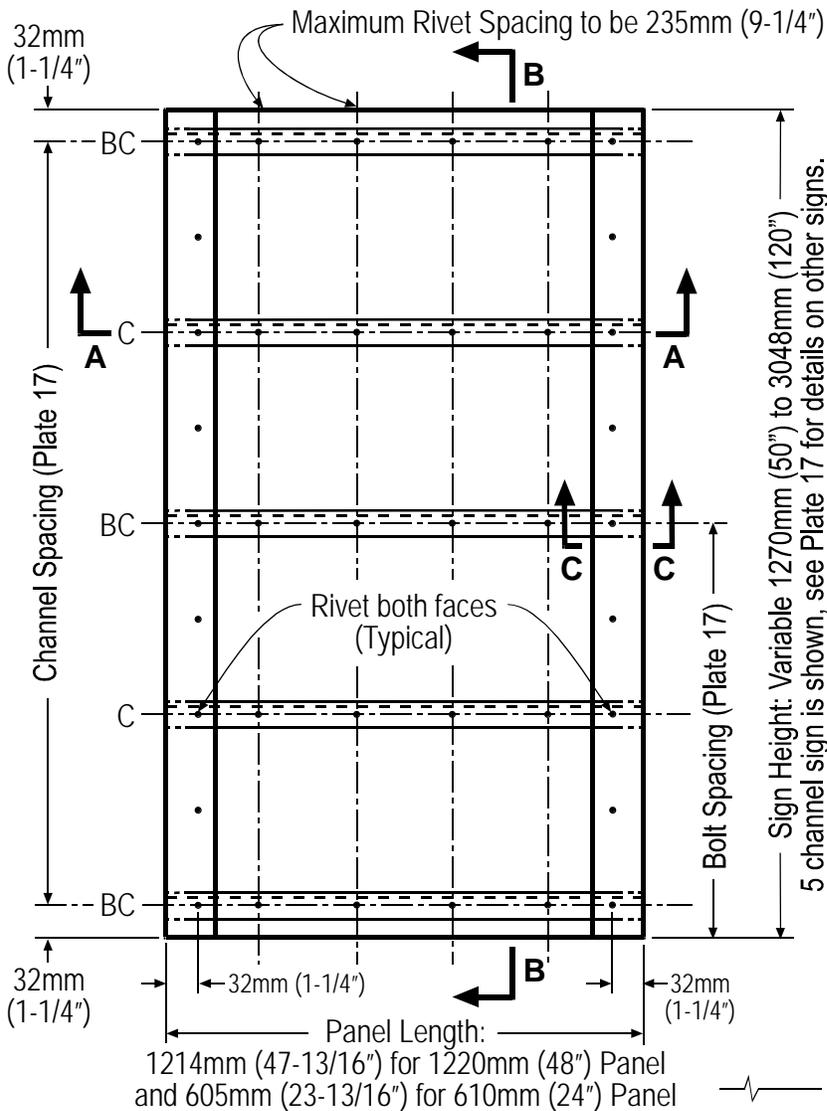
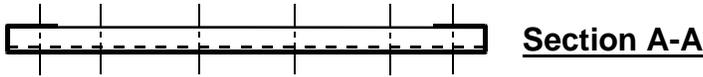
**NO SCALE**

NOTE:  
Sign size to be graduated in 152mm (6") increments, both vertically and horizontally.  
Area of sign not to exceed 1.86m<sup>2</sup> (20 sq.ft.).

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

# OVERHEAD FORMED PANEL

**DRAFT**

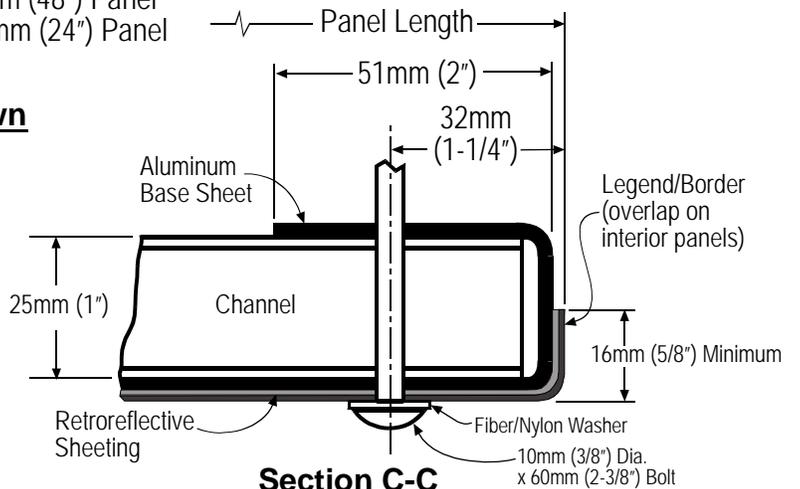


**Section B-B**

**ELEVATION**  
**Back Side Shown**

**NO SCALE**

NOTES:  
"BC" indicates location of bolt and channel.  
11mm (7/16") Dia. Hole for 10mm (3/8") Bolt.  
"C" indicates location of channel.  
5mm (3/16") Anodized Aluminum Rivets.



**Section C-C**  
**FORMED EDGE DETAIL**

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

**DRAFT**

**CHANNEL & BOLT HOLE LOCATION**

PANEL DEPTH	DIMENSION "A"	DIMENSION "B"	DIMENSION "C"	TOTAL NO. OF CHANNELS PER PANEL
1270mm(50")	603mm(23-3/4")	-	-	3
1524mm(60")	730mm(28-3/4")	-	-	3
1778mm(70")	476mm(18-3/4")	762mm(30")	-	4
2032mm(80")	476mm(18-3/4")	508mm(20")	-	5
2286mm(90")	476mm(18-3/4")	762mm(30")	508mm(20")	5
2540mm(100")	476mm(18-3/4")	762mm(30")	-	5
2794mm(110")	476mm(18-3/4")	508mm(20")	762mm(30")	6
3048mm(120")	476mm(18-3/4")	762mm(30") <td 508mm(20")	6	

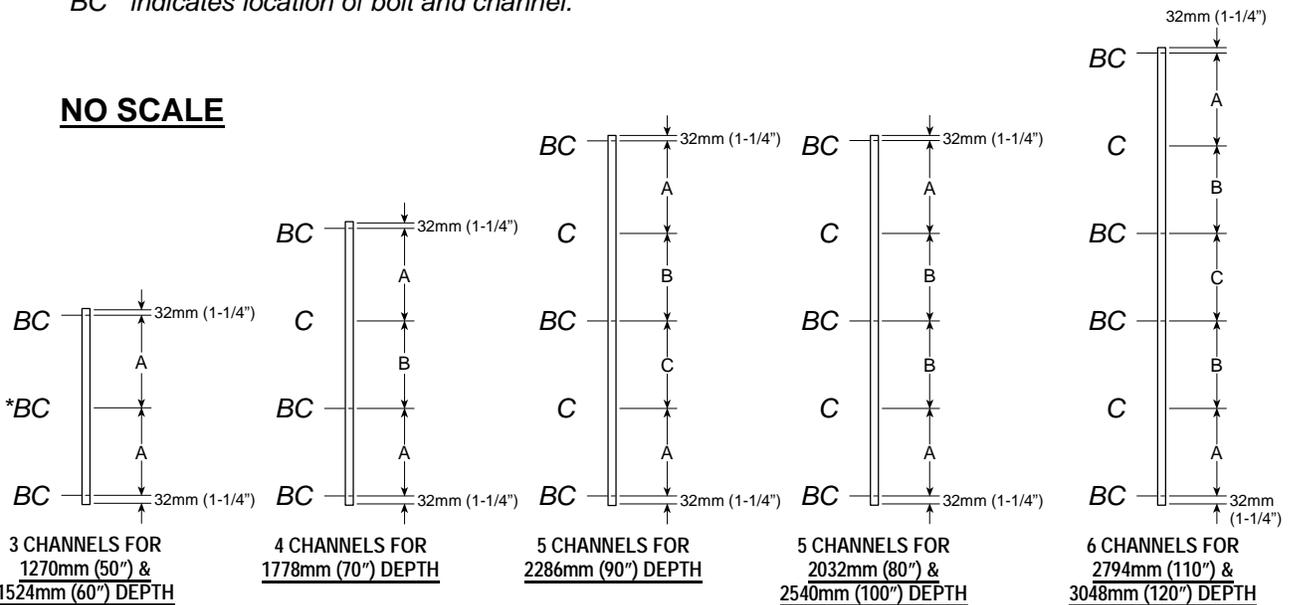
**OVERHEAD FORMED PANEL**

**NOTE:**

"C" indicates location of channel.

"BC" indicates location of bolt and channel.

**NO SCALE**

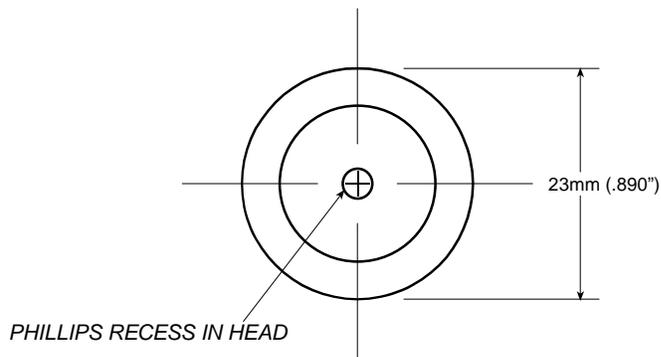


**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

**DRAFT**

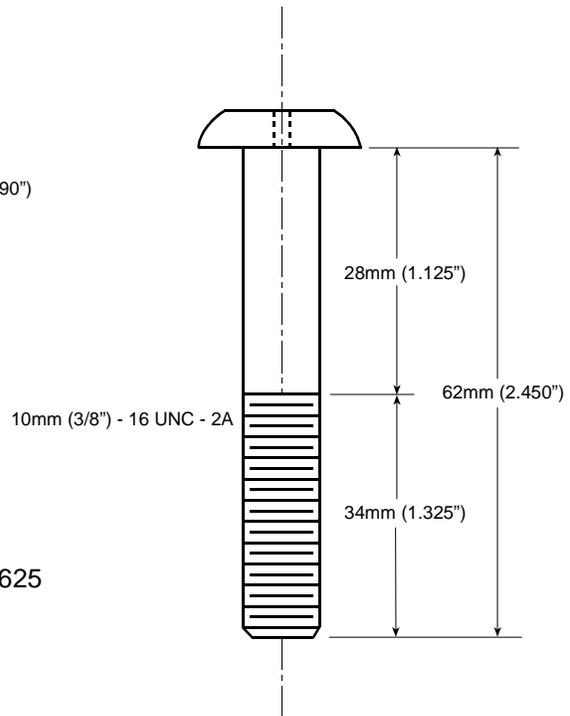
### OVERHEAD FORMED PANEL TYPE A-3 MOUNTING HARDWARE

UNIT - 1 Truss Head Bolt, 1 Nylon Insert Locknut, 1 Washer (Fiber/Nylon), 1 Washer (Aluminum)

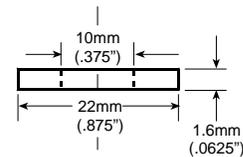


#### TRUSS HEAD BOLT

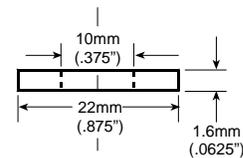
2024 ALUMINUM ALLOY PER QQ-A-430  
ANODIZE INTERSTATE GREEN PER MIL-A-8625



#### WASHER FIBER/NYLON

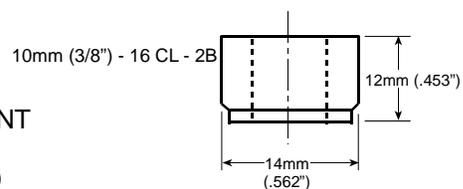


#### WASHER 2024 ALUMINUM ALLOY CLEAR ANODIZE PER MIL-A-8625



#### LOCKNUT WITH ZYTEL 101 NYLON INSERT

2911-T3 ALUMINUM ALLOY OR EQUIVALENT  
ANODIZE PER MIL-A-8625  
MAXIMUM TORQUE - 6.78 N-m (60 ft-lbs)



**NO SCALE**

#### ALTERNATIVE MATERIAL:

Should material described be unavailable due to material shortages, other materials may be used providing prior approval obtained from the Engineer.

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.

**DRAFT**

**OVERHEAD FORMED PANEL  
MOUNTING HARDWARE  
QUANTITY CHART**

TYPE A-3

SIGN LENGTH	SIGN HEIGHT	* UNITS REQUIRED
2438mm(96")	1270mm(50")	8
3048mm(120")-3657mm(144")	1270mm(50")	12
4267mm(168")-4877mm(192")	1270mm(50")	16
5486mm(216")-6096mm(240")	1270mm(50")	20
6706mm(264")-7315mm(288")	1270mm(50")	24
7925mm(312")-8534mm(336")	1270mm(50")	28
9144mm(360")-9754mm(384")	1270mm(50")	32
10363mm(408")-10973mm(432")	1270mm(50")	36
11582mm(456")-12192mm(480")	1270mm(50")	40
12802mm(504")-13411mm(528")	1270mm(50")	44
14021mm(552")-14630mm(576")	1270mm(50")	48
2438mm(96")	1524mm(60") - 2540mm(100")	12
3048mm(120")-3657mm(144")	1524mm(60") - 2540mm(100")	18
4267mm(168")-4877mm(192")	1524mm(60") - 2540mm(100")	24
5486mm(216")-6096mm(240")	1524mm(60") - 2540mm(100")	30
6706mm(264")-7315mm(288")	1524mm(60") - 2540mm(100")	36
7925mm(312")-8534mm(336")	1524mm(60") - 2540mm(100")	42
9144mm(360")-9754mm(384")	1524mm(60") - 2540mm(100")	48
10363mm(408")-10973mm(432")	1524mm(60") - 2540mm(100")	54
11582mm(456")-12192mm(480")	1524mm(60") - 2540mm(100")	60
12802mm(504")-13411mm(528")	1524mm(60") - 2540mm(100")	66
14021mm(552")-14630mm(576")	1524mm(60") - 2540mm(100")	72
2438mm(96")	2794mm(110") - 3048mm(120")	16
3048mm(120")-3657mm(144")	2794mm(110") - 3048mm(120")	24
4267mm(168")-4877mm(192")	2794mm(110") - 3048mm(120")	32
5486mm(216")-6096mm(240")	2794mm(110") - 3048mm(120")	40
6706mm(264")-7315mm(288")	2794mm(110") - 3048mm(120")	48
7925mm(312")-8534mm(336")	2794mm(110") - 3048mm(120")	56
9144mm(360")-9754mm(384")	2794mm(110") - 3048mm(120")	64
10363mm(408")-10973mm(432")	2794mm(110") - 3048mm(120")	72
11582mm(456")-12192mm(480")	2794mm(110") - 3048mm(120")	80
12802mm(504")-13411mm(528")	2794mm(110") - 3048mm(120")	88
14021mm(552")-14630mm(576")	2794mm(110") - 3048mm(120")	96

\* UNIT - 1 Truss Head Bolt, 1 Nylon Insert Locknut, 1 Washer

**Note:** Metric equivalents calculated using a factor of 25.4 millimeters per inch.