

DIMENSIONS AND SPECIFICATIONS						
Model	WIDTH	HEIGHT	WEIGHT	WEIGHT w/ETN	DIM "A"	DIM "B"
1604	28'	8' 3/16"	650	712	4'	10'
1606						
3615						
3617						
3618	24'	8' 3/16"	570	632	4'	8'
3619						
7630						
7631						
7632						
3685	24'	8' 3/16"	N/A	740	4'	8'
7605*						
7615*	24'	10' 6 9/32"	730	792	4'	8'
7625*						
7685	24'	8' 3/16"	N/A	740	4'	8'
3621	20'	8' 3/16"	520	582	1'	9'
3682	20'	8' 3/16"	N/A	690	1'	9'

- General Notes:**
- Column steel to be grade A992 (50 ksi steel minimum).
 - Bracing steel to be ASTM A500 Grade B minimum (see note 1 on sheets 4-6).
 - Minimum bolt grade: A307
 - All welds to conform to AWS standards
 - The dimensions in the charts on sheets 4-6 are calculated using the requirements specified in IBC 2009, and the Manual of Steel Construction (13th Edition). Soil lateral bearing pressure is considered to be 150 psf/f.
 - The weights of signs to be calculated using 4.3 lb/sq. ft of sign area.
 - The weights of Nevco message centers to be calculated using 8.5 lb/sq ft.
 - The weights of Nevco video displays to be calculated using 9.5 lbs/sq. ft.
 - The weights of Nevco arches to be calculated using 7.7 lbs/sq. ft.

Important. Read before installation.

This is not an engineered drawing. It is intended for representational purposes only. The dimensions called out on this drawing are intended to be used as a guide only, and are not intended to be suitable for all conditions. Adding signs or other components around the scoreboard beyond the scope of this drawing or increasing the display height from the ground will affect the installation requirements. Nevco recommends that you consult a professional engineer or architect familiar with the area before attempting installation. They can verify that the selected mounting beams or posts along with the brackets, screws, and other hardware items provided by others or Nevco are adequate for your local soil conditions, wind loads and other local codes. If procedures are used that are not covered in this drawing, careful analysis of the installation is urged.

Outdoor Scoreboard Installation 3 Column Multi-Section		 NEVCO Nevco, Inc. Greenville, Illinois 62246			
			Drawing No. 241-0358		
Drawn	DBB	Date	12/12/14	Sheet	1 of 8

Exposure C

20 FEET WIDE INSTALLATIONS

90 MPH WIND ZONES

Exposure B

20 FEET WIDE INSTALLATIONS

Rev A

Column and Pier Requirements (Based on ASCE 7-05 Exposure C for 90mph Wind Load)

Display Height	Pier Dia	Pier Depth	Col. Length	Unbraced Column	Braced Column *
8	2' (3')	8'6" (7'6")	25'6" (24'6")	W8 x 24	W8 x 18
10	2' (3')	9'6" (8')	28'6" (27')	W8 x 28	W8 x 21
12	2' (3')	10' (9')	31' (30')	W10 x 33	W10 x 22
14	2' (3')	11' (9'6")	34' (32'6")	W10 x 39	W10 x 26
16	2' (3')	11'6" (10')	36'6" (35')	W14 x 43	W12 x 26
18	2' (3')	12' (10'6")	39' (37'6")	W8 x 48	W12 x 30
20	2' (3')	13' (11')	42' (40')	W10 x 49	W14 x 34
22	2' (3')	14'6" (11'6")	45'6" (42'6")	W10 x 60	W18 x 35
25	3' (4')	12'6" (11')	46'6" (45')	W12 x 65	W16 x 40
30	3' (4')	14'6" (12'6")	53'6" (51'6")	W12 x 87	W16 x 50
35	3' (4')	16'6" (14')	60'6" (58')	W12 x 106	W21 x 55
40	3' (4')	19' (16')	68' (65')	W14 x 120	W21 x 62

Column and Pier Requirements (Based on ASCE 7-05 Exposure B for 90mph Wind Load)

Display Height	Pier Dia	Pier Depth	Col. Length	Unbraced Column	Braced Column *
8	2' (3')	7'6" (6'6")	24'6" (23'6")	W8 x 21	W8 x 15
10	2' (3')	8' (7')	27' (26')	W8 x 24	W8 x 18
12	2' (3')	9' (7'6")	30' (28'6")	W8 x 28	W8 x 21
14	2' (3')	9'6" (8')	32'6" (31')	W10 x 33	W10 x 22
16	2' (3')	10' (8'6")	35' (33'6")	W8 x 35	W10 x 22
18	2' (3')	10'6" (9')	37'6" (36')	W10 x 39	W10 x 26
20	2' (3')	11' (9'6")	40' (38'6")	W10 x 45	W12 x 26
22	2' (3')	12' (10'6")	43' (41'6")	W10 x 49	W12 x 30
25	3' (4')	11' (10')	45' (44')	W10 x 60	W14 x 34
30	3' (4')	12' (11')	51' (50')	W12 x 72	W16 x 40
35	3' (4')	13'6" (12')	57'6" (56')	W12 x 87	W14 x 48
40	3' (4')	15'6" (13')	64'6" (62')	W12 x 106	W18 x 55

Exposure C

24 FEET WIDE INSTALLATIONS

Column and Pier Requirements (Based on ASCE 7-05 Exposure C for 90mph Wind Load)

Display Height	Pier Dia	Pier Depth	Col Length	Unbraced Column	Braced Column *
8'	2' (3')	9' 6" [8' 6"]	27' [26']	W12 x 26	W8 x 21
10'	2' (3')	10' 6" [9']	30' [28' 6"]	W10 x 33	W14 x 22
12'	2' (3')	11' 6" [10']	33' [31' 6"]	W10 x 39	W12 x 26
14'	2' (3')	12' [10' 6"]	36' [33' 6"]	W14 x 43	W12 x 30
16'	2' (3')	13' 6" [11']	39' [36' 6"]	W10 x 49	W14 x 34
18'	2' (3')	14' 6" [12']	42' [39' 6"]	W12 x 53	W18 x 35
20'	2' (3')	16' [12' 6"]	45' 6" [42']	W14 x 61	W16 x 40
22'	2' (3')	14' (11')	46' (43')	W12 x 65	W14 x 43
25'	3' (4')	12'6" (10'6")	47'6" (45'6")	W12 x 79	W18 x 50
30'	3' (4')	14'6" (12'6")	54'6" (52'6")	W24 x 104	W21 x 55
35'	3' (4')	16'6" (14')	61'6" (59')	W14 x 120	W21 x 68
40'	3' (4')	19' (16')	69' (66')	W14 x 145	W24 x 76

Exposure B

24 FEET WIDE INSTALLATIONS

Column and Pier Requirements (Based on ASCE 7-05 Exposure B for 90mph Wind Load)

Display Height	Pier Dia.	Pier Depth	Col. Len.	Unbraced Column	Braced Column *
8'	2' (3')	8' 6" [7']	26' [24' 6"]	W8 x 24	W8 x 18
10'	2' (3')	9' [8']	28' 6" [27' 6"]	W12 x 26	W8 x 21
12'	2' (3')	10' [8' 6"]	31' 6" [30']	W10 x 33	W10 x 22
14'	2' (3')	10' 6" [9']	34' [32' 6"]	W8 x 35	W10 x 26
16'	2' (3')	11' [9' 6"]	36' 6" [35']	W14 x 43	W12 x 26
18'	2' (3')	12' [10' 6"]	39' 6" [38']	W14 x 48	W12 x 30
20'	2' (3')	13' [11']	42' 6" [40' 6"]	W10 x 49	W14 x 30
22'	2' (3')	14' (11')	46' (43')	W10 x 60	W14 x 34
25'	3' (4')	12'6" (10'6")	47'6" (45'6")	W12 x 65	W16 x 40
30'	3' (4')	14'6" (12'6")	54'6" (52'6")	W12 x 87	W16 x 50
35'	3' (4')	16'6" (14')	61'6" (59')	W12 x 106	W21 x 55
40'	3' (4')	19' (16')	69' (66')	W14 x 120	W21 x 62

Exposure C

28 FEET WIDE INSTALLATIONS

Column and Pier Requirements (Based on ASCE 7-05 Exposure C for 90mph Wind Load)

Display Height	Pier Dia	Pier Depth	Col Length	Unbraced Column	Braced Column *
8	2' (3')	10' (8'6")	27'6" (26')	W8 x 28	W10 x 22
10	2' (3')	11' (9'6")	30'6" (29')	W10 x 33	W10 x 26
12	2' (3')	12' (10')	33'6" (31'6")	W10 x 39	W12 x 26
14	2' (3')	13' (11')	36'6" (34'6")	W10 x 45	W14 x 30
16	2' (3')	14'6" (11'6")	40' (37')	W12 x 53	W14 x 34
18	2' (3')	16' (12'6")	43'6" (40')	W10 x 60	W16 x 40
20	2' (3')	17' (13'6")	46'6" (43')	W12 x 65	W14 x 43
22	2' (3')	18'6" (14'6")	50'6" (46'6")	W12 x 72	W14 x 48
25	3' (4')	16' (13'6")	51' (48'6")	W12 x 87	W18 x 50
30	3' (4')	19'6" (16'6")	59'6" (56'6")	W14 x 109	W21 x 62
35	3' (4')	22' (18'6")	67' (63'6")	W14 x 132	W24 x 68
40	3' (4')	25' (21')	75' (71')	W14 x 159	W24 x 84

Exposure B

28 FEET WIDE INSTALLATIONS

Column and Pier Requirements (Based on ASCE 7-05 Exposure B for 90mph Wind Load)

Display Height	Pier Dia	Pier Depth	Col Length	Unbraced Column	Braced Column *
8	2' (3')	8'6" (7'6")	26' (25')	W8 x 24	W8 x 18
10	2' (3')	9'6" (8')	29' (27'6")	W8 x 28	W8 x 21
12	2' (3')	10'6" (9')	32' (30'6")	W10 x 33	W14 x 22
14	2' (3')	11' (9'6")	34'6" (33')	W10 x 39	W10 x 26
16	2' (3')	12' (10')	37'6" (35'6")	W10 x 45	W12 x 30
18	2' (3')	12'6" (11')	40' (38'6")	W10 x 49	W14 x 30
20	2' (3')	14' (11'6")	43'6" (41')	W12 x 53	W14 x 34
22	2' (3')	15' (11'6")	47' (43'6")	W10 x 60	W16 x 36
25	3' (4')	13' (11')	48' (46')	W12 x 72	W16 x 40
30	3' (4')	15'6" (13')	55'6" (53')	W12 x 96	W18 x 55
35	3' (4')	18' (15')	63' (60')	W14 x 109	W21 x 62
40	3' (4')	20'6" (17')	70'6" (67')	W14 x 132	W21 x 68

Chart Notes:

- * Requires that braces be placed approximately 10' from ground level that spans both columns. See detail on sheet 5. If display height is taller than 10', braces must be installed at each 10' increment in display height.
- Wind loading figured at **Exposure "C" - Open terrain** with scattered obstructions having heights generally less than 30 feet. This category includes flat open country, grasslands, and all water surfaces in hurricane prone areas.
- Wind loading figured at **Exposure "B" - Urban and suburban areas**, wooded areas, or other terrain with numerous closely spaced obstructions having the size of single-family dwellings or larger. These areas prevail in the upwind direction for a distance of 2600 feet or 20 times the structure height, whichever is greater.

Outdoor Scoreboard
Installation
3 Column
Multi-Section



Nevco, Inc.
Greenville, Illinois 62246

Drawing No. 241-0358

Drawn DBB Date 12/12/14

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Exposure C

20 FEET WIDE INSTALLATIONS

130 MPH WIND ZONES

Exposure B

20 FEET WIDE INSTALLATIONS

Rev A

Column and Pier Requirements (Based on ASCE 7-05 Exposure C for 130mph Wind Load)

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col. Length, Unbraced Column, Braced Column *. Rows 8-40.

Column and Pier Requirements (Based on ASCE 7-05 Exposure B for 130mph Wind Load)

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col. Length, Unbraced Column, Braced Column *. Rows 8-40.

Exposure C

24 FEET WIDE INSTALLATIONS

Exposure B

24 FEET WIDE INSTALLATIONS

Column and Pier Requirements (Based on ASCE 7-05 Exposure C for 130mph Wind Load)

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col Len, Unbraced Column, Braced Column *. Rows 8-40.

Column and Pier Requirements (Based on ASCE 7-05 Exposure B for 130mph Wind Load)

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col. Len., Unbraced Column, Braced Column *. Rows 8-40.

Exposure C

28 FEET WIDE INSTALLATIONS

Exposure B

28 FEET WIDE INSTALLATIONS

Column and Pier Requirements (Based on ASCE 7-05 Exposure C for 130mph Wind Load)

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col Len, Unbraced Column, Braced Column *. Rows 8-40.

Column and Pier Requirements (Based on ASCE 7-05 Exposure B for 130mph Wind Load)

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col Len, Unbraced Column, Braced Column *. Rows 8-40.

Chart Notes:

- 1. * Requires that braces be placed approximately 10' from ground level that spans both columns. See detail on sheet 5. If display height is taller than 10', braces must be installed at each 10' increment in display height.
2. Wind loading figured at Exposure "C" - Open terrain with scattered obstructions having heights generally less than 30 feet. This category includes flat open country, grasslands, and all water surfaces in hurricane prone areas.
3. Wind loading figured at Exposure "B" - Urban and suburban areas, wooded areas, or other terrain with numerous closely spaced obstructions having the size of single-family dwellings or larger. These areas prevail in the upwind direction for a distance of 2600 feet or 20 times the structure height, whichever is greater.

Outdoor Scoreboard Installation 3 Column Multi-Section



Nevco, Inc. Greenville, Illinois 62246

Drawing No. 241-0358

Drawn DBB Date 12/12/14

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Exposure C
20 FEET WIDE INSTALLATIONS

150 MPH WIND ZONES

Exposure B
20 FEET WIDE INSTALLATIONS

Rev A

Column and Pier Requirements (Based on ASCE 7-05 Exposure C for 150mph Wind Load)

Column and Pier Requirements (Based on ASCE 7-05 Exposure B for 150mph Wind Load)

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col. Length, Unbraced Column, Braced Column *. Rows 8-40.

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col. Length, Unbraced Column, Braced Column *. Rows 8-40.

Exposure C
24 FEET WIDE INSTALLATIONS

Exposure B
24 FEET WIDE INSTALLATIONS

Column and Pier Requirements (Based on ASCE 7-05 Exposure C for 150mph Wind Load)

Column and Pier Requirements (Based on ASCE 7-05 Exposure B for 150mph Wind Load)

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col Length, Unbraced Column, Braced Column *. Rows 8-40.

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col. Length, Unbraced Column, Braced Column *. Rows 8-40.

Exposure C
28 FEET WIDE INSTALLATIONS

Exposure B
28 FEET WIDE INSTALLATIONS

Column and Pier Requirements (Based on ASCE 7-05 Exposure C for 150mph Wind Load)

Column and Pier Requirements (Based on ASCE 7-05 Exposure B for 150mph Wind Load)

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col Length, Unbraced Column, Braced Column *. Rows 8-40.

Table with 6 columns: Display Height, Pier Dia, Pier Depth, Col Length, Unbraced Column, Braced Column *. Rows 8-40.

Chart Notes:

- 1. * Requires that braces be placed approximately 10' from ground level that spans both columns. See detail on sheet 5. If display height is taller than 10', braces must be installed at each 10' increment in display height.
2. Wind loading figured at Exposure "C" - Open terrain with scattered obstructions having heights generally less than 30 feet. This category includes flat open country, grasslands, and all water surfaces in hurricane prone areas.
3. Wind loading figured at Exposure "B" - Urban and suburban areas, wooded areas, or other terrain with numerous closely spaced obstructions having the size of single-family dwellings or larger. These areas prevail in the upwind direction for a distance of 2600 feet or 20 times the structure height, whichever is greater.

Outdoor Scoreboard Installation
3 Column Multi-Section



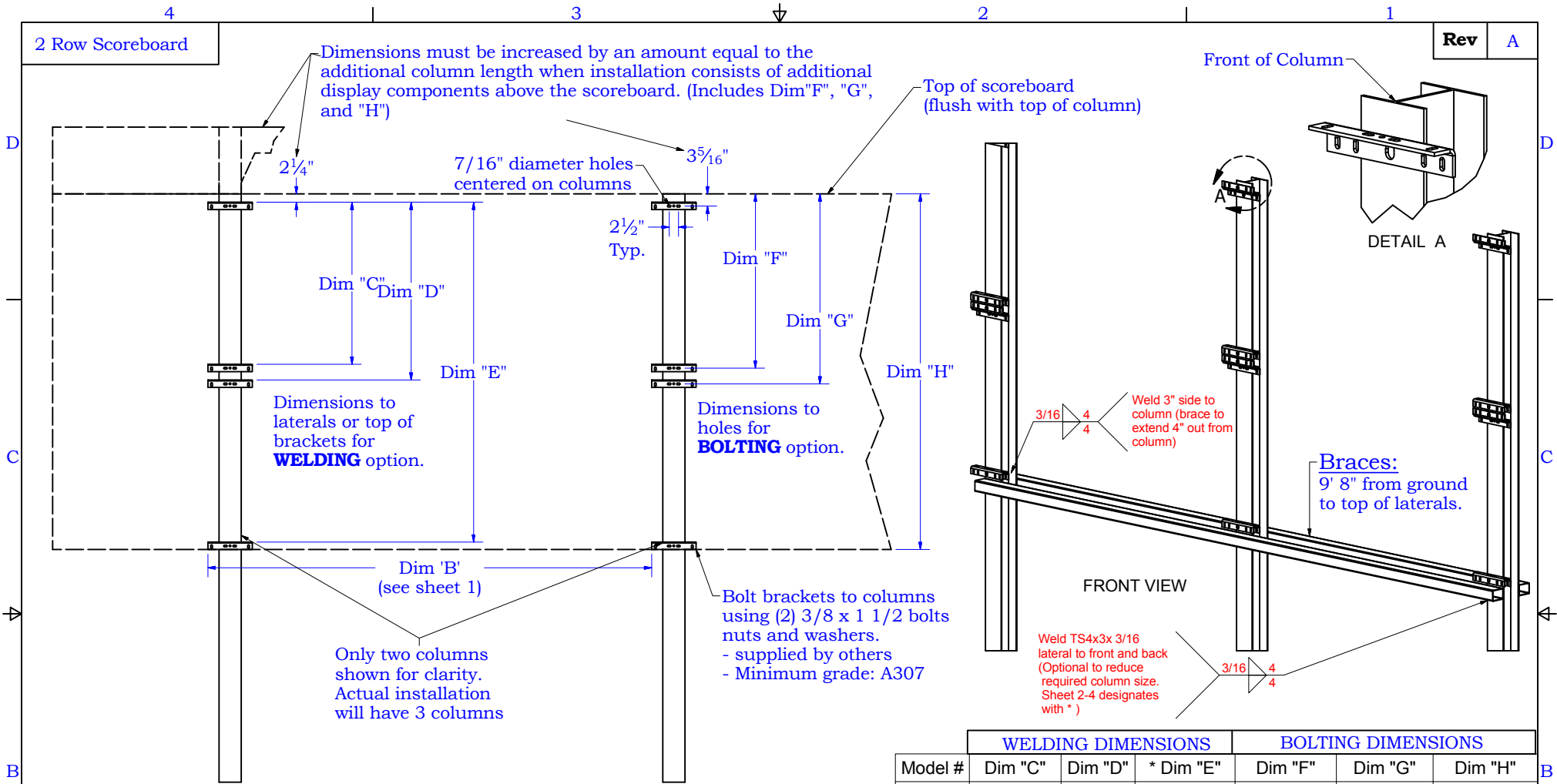
Nevco, Inc.
Greenville, Illinois 62246

Drawing No. 241-0358

Drawn DBB

Date 12/12/14

Sheet of 8



NOTE: Minimum bolt grade is A307 (not required if welding brackets to columns)

- Required Hand Tools:**
1. Phillips head screw driver/drill with phillips driver.
 2. 9/16" wrench
 3. Ratchet wrench and 9/16" socket
 4. Level
 5. Tape measure

HARDWARE SUPPLIED BY OTHERS	
Description	Quantity
3/8 x 1 1/2 Bolt	24
3/8 Flat Washer	48
3/8 Lock Washer	24
3/8 Nut	24
3/8-16 eye bolts (see sheet 6)	2

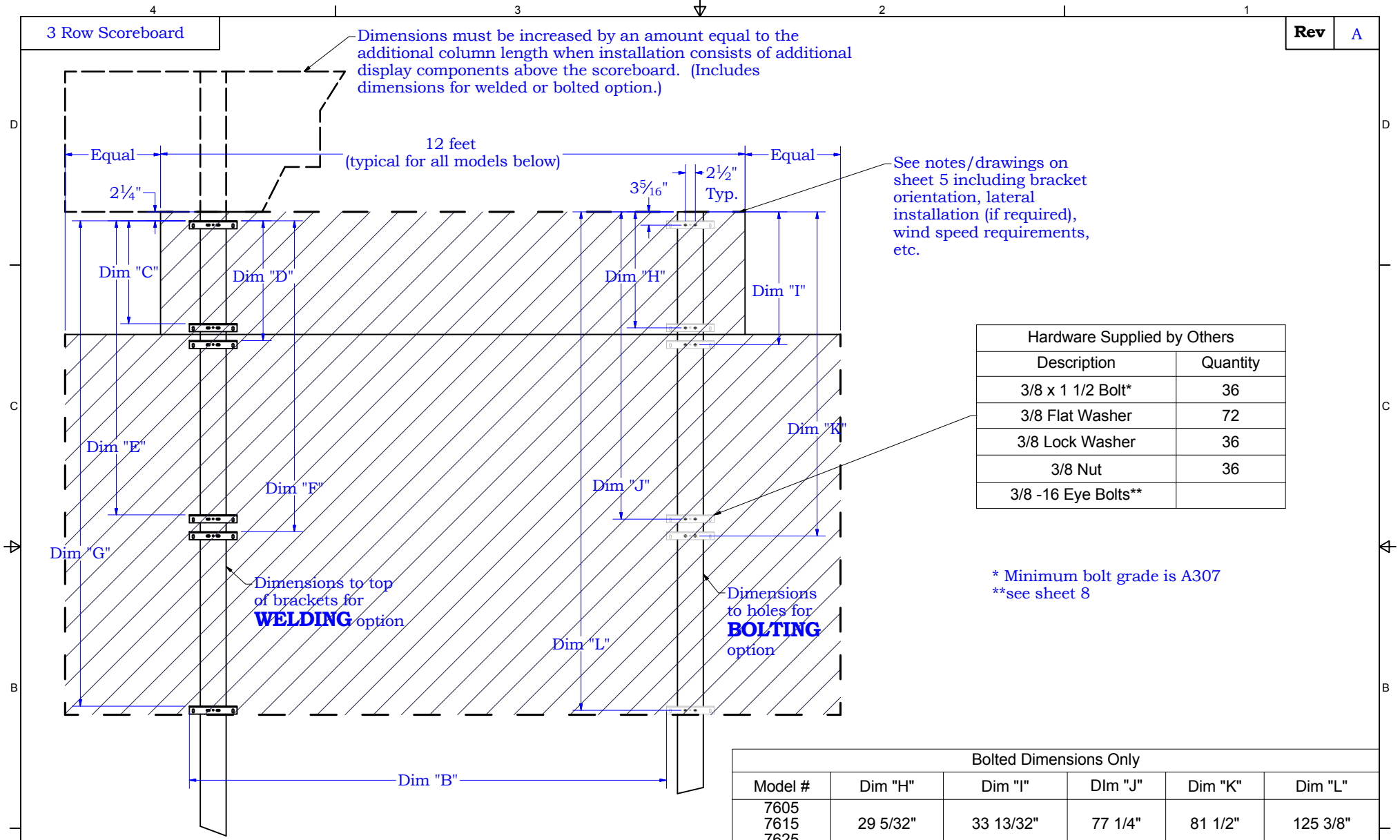
- Notes:**
- 1) If welding brackets to columns, According to IBC standards, all welds are to be performed by AWS certified welder. The city in which the display is installed may waive this standard. Contact local officials if necessary.
 - 2) **FOR HIGH WIND AREAS:** For installations in wind zones higher than 150 mph, brackets must be welded to columns.
 - 3) Dimensions above should be taken from the top of the **SHORTEST** column, marked and leveled across to other column.
 - 4) Brackets shipped in separate container.

Model #	WELDING DIMENSIONS			BOLTING DIMENSIONS		
	Dim "C"	Dim "D"	* Dim "E"	Dim "F"	Dim "G"	Dim "H"
1604	43 7/8"	48 1/8"	91 15/16"	47 5/32"	51 7/16"	95 1/4"
1606						
3615						
3617						
3618						
3619						
3621						
3622						
3682						
3685						
7630						
7631						
7632						
7685						

Outdoor Scoreboard Installation 3 Column Multi-Section		<p>Neveco, Inc. Greenville, Illinois 62246</p>	
Drawn DBB	Date 12/12/14	Sheet 5 of 8	

3 Row Scoreboard

Dimensions must be increased by an amount equal to the additional column length when installation consists of additional display components above the scoreboard. (Includes dimensions for welded or bolted option.)




See notes/drawings on sheet 5 including bracket orientation, lateral installation (if required), wind speed requirements, etc.

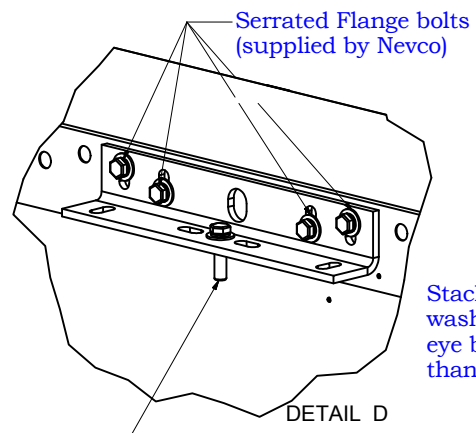
Hardware Supplied by Others	
Description	Quantity
3/8 x 1 1/2 Bolt*	36
3/8 Flat Washer	72
3/8 Lock Washer	36
3/8 Nut	36
3/8 -16 Eye Bolts**	

* Minimum bolt grade is A307
 **see sheet 8

Bolted Dimensions Only					
Model #	Dim "H"	Dim "I"	Dim "J"	Dim "K"	Dim "L"
7605					
7615	29 5/32"	33 13/32"	77 1/4"	81 1/2"	125 3/8"
7625					

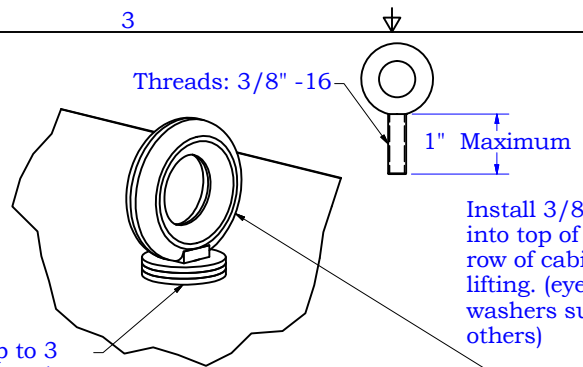
Welding Dimensions Only					
Model #	Dim "C"	Dim "D"	Dim "E"	Dim "F"	Dim "G"
7605					
7615	25 7/8"	30 3/32"	73 15/16"	78 3/16"	122 1/16"
7625					

Outdoor Scoreboard Installation 3 Column Multi-Section		 Nevco, Inc. Greenville, Illinois 62246	
Drawn DBB	Date 12/12/14	Sheet 6	of 8



Serrated Flange bolts (supplied by Nevco)

DETAIL D

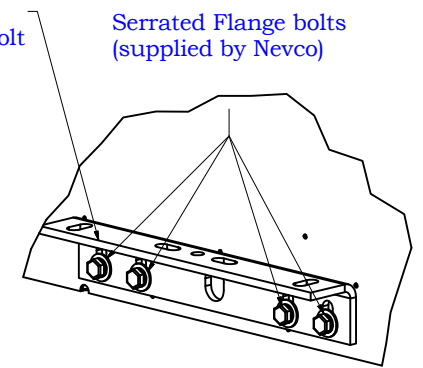


Threads: 3/8" -16
1" Maximum

DETAIL E

Install 3/8-16 eye bolts into top of board (lower row of cabinets 1st) for lifting. (eye bolts and washers supplied by others)

Slide bottom bracket up and tighten one bolt to hold in place



Serrated Flange bolts (supplied by Nevco)

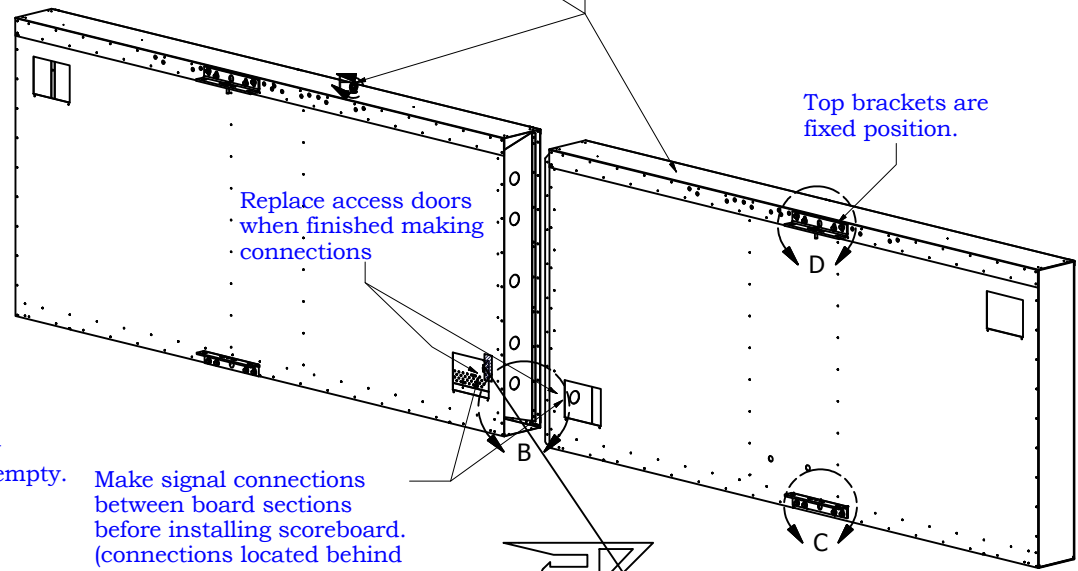
DETAIL C

Install 3/8 x 1 1/4 bolt and nut (no washer) in center hole of top brackets. These will serve as hangers during installation. (supplied by Nevco)

Stack up to 3 washers under eye bolt if longer than 1"

Replace access doors when finished making connections

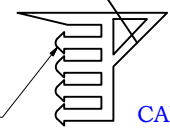
Top brackets are fixed position.



WARNING: Do not leave any screw locations empty.

Make signal connections between board sections before installing scoreboard. (connections located behind access doors with "SPLICE ENCLOSURE" label)

Secure connections to hangers located inside cabinets.



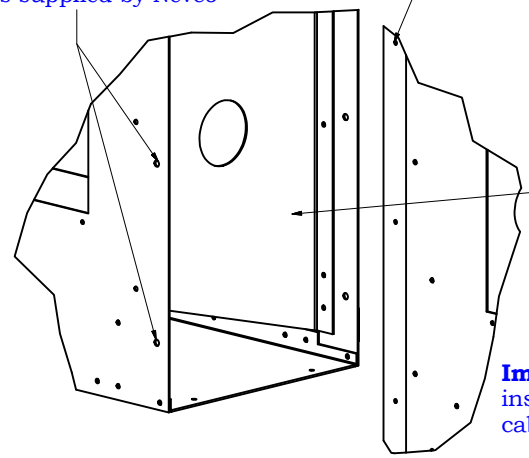
CABLE HANGER

Screw sections together front and back using screws supplied by Nevco


Insert extended flange into mating section (make sure both flanges of male end go to inside of female end)

Important: Screw sections together prior to installing board onto columns. (Upper row of cabinets and lower row of cabinets do not connect)

- Notes:
- 1) Signal connections from lower row of cabinets to upper row should be made after both rows have been installed on columns. (see sheet 7 for details)
 - 2) Make sure all bracket bolts are tight before installing scoreboard.



DETAIL B

Outdoor Scoreboard Installation 3 Column Multi-Section		 NEVCO Nevco, Inc. Greenville, Illinois 62246
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Note: Details below show only two columns for clarity. Actual installation will have 3 columns.

Remove eye bolts from first row and install on second row

Spreader bar preferred for lifting (see installation instructions for more details)

Make power/signal connection between upper and lower rows of cabinets after board has been installed.

- connections located behind access doors
- Pull cables from lower section into upper section (connections must be made and permanently located in upper section)

CABLE HANGER

Tighten all bracket bolts on first row before installation of second row

WARNING:
Do not lift scoreboards with any other additional weight attached such as laterals or other structural components

Install top row and tighten all bracket bolts.

Secure connections to hangers located inside cabinets.

Scoreboard

Bolt installed in top brackets of each row will serve as hanger

STEP ONE
Install First Row

STEP TWO
Install Second Row

2 Bolts required per bracket set

Hanging Detail

Upper Section

Lower Section

Detail F

Detail G

Scoreboard Top

Scoreboard Bottom

Column

Outdoor Scoreboard Installation
3 Column
Multi-Section



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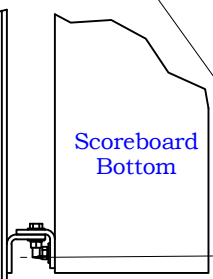
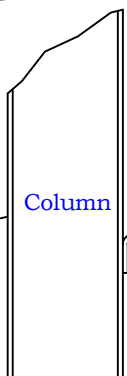
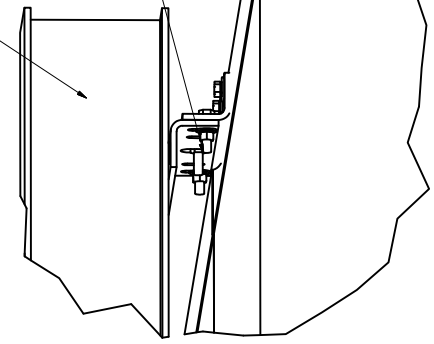
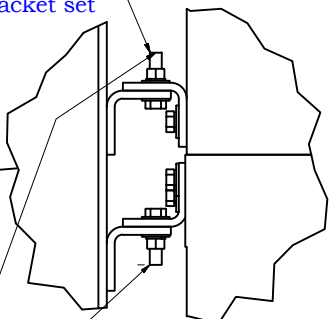
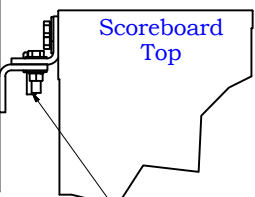
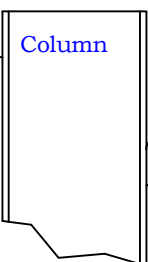
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Side View
Scoreboard Installation

Detail H



Bolt brackets together using bolts, nuts, washers and lock washers supplied by Nevco. (3/8 x 1 3/4 bolts)

