Introduction

Appendix D provides quantity data for Two Post Truss structures. The following outlines the typical breakdown.

Span Portion of Truss Frame (From Table 1) _____

Cantilever Portion of Truss Frame= _____ (Span) x _____ (Cantilever) / _____ (Span) = _____

Sign Panel Attachment System

Removable Sign Panel Frames (From Table 2)

_____ (Sign 1) + _____ (Sign 2) + _____ (Sign 3) + _____ (Sign 4) = _____

Laminated Panel Mounting Beams (From Table 3)

_____ (Sign 1) + _____ (Sign 2) + _____ (Sign 3) + _____ (Sign 4) = _____

Walkway assembly (assume 75 plf*) 75 x (_____) = _____
If walkway nominally stops at column add extra 2'

Posts (From Table 4)

Left _____ (Case for "h") + (_____ ("h") - 18.75') x _____ (Column) = _____

Right _____ (Case for "h") + (_____ ("h") - 18.75') x _____ (Column) = _____

Juncture Connection Frame width from Std Plan S11 = _____

(From Table 5) _____ (Left) + _____ (Right) = _____

Anchor Bolts and Nuts (From Table 6) _____ (Left) + _____ (Right) = _____

Base Plate Gussets (From Table 7) _____ (Left) + _____ (Right) = _____

Base Plate (From Table 8) _____ (Left) + _____ (Right) = _____

Subtotal _____

Add 3.5% for Galvanizing _____

Total _____

* Walkway assembly includes grating, brackets, safety railing, safety cable, light

Table 1: Truss Quantity (pounds)

Span	Panel Depth				
	70”	80”	90”	100”	110”, 120”
40’	5,157	5,344	5,520	5,520	5,520
42’	5,415	5,611	5,796	5,796	5,796
44’	5,673	5,878	6,072	6,072	6,072
46’	5,931	6,145	6,348	6,348	6,348
48’	6,189	6,413	6,624	6,624	6,624
50’	6,446	6,680	6,900	6,900	6,900
52’	6,704	6,947	7,176	7,176	7,176
54’	6,962	7,214	7,452	7,452	7,452
56’	7,220	7,481	7,728	7,728	7,728
58’	7,478	7,749	8,004	8,004	8,004
60’	7,736	8,016	8,280	8,280	8,280
62’	7,994	8,283	8,556	8,556	8,556
64’	8,252	8,550	8,832	8,832	8,832
66’	8,509	8,817	9,108	9,108	9,108
68’	8,767	9,085	9,384	9,384	9,384
70’	9,025	9,352	9,660	9,660	9,660
72’	10296	10368	10,800	11,196	11,196
74’	10582	10656	11,100	11,507	11,507
76’	10868	10944	11,400	11,818	11,818
78’	11,154	11,232	11,700	12,129	12,129
80’	11,440	11,520	12,000	12,440	12,440
82’	11,726	11,808	12,300	12,751	12,751
84’	12,012	12,096	12,600	13,062	13,062
86’	12,298	12,384	12,900	13,373	13,373
88’	12,584	12,672	13,200	13,684	13,684
90’	12,870	12,960	13,500	13,995	13,995
92’	13,156	13,248	13,800	14,306	14,306

Span	Panel Depth				
	70”	80”	90”	100”	110”, 120”
94’	13,442	13,536	14,100	14,617	14,617
96’	13,728	13,824	14,400	14,928	14,928
98’	14,014	14,112	14,700	15,239	15,239
100’	14,300	14,400	15,000	15,550	15,550
102’	19,411	19,870	20,533	20,533	20,533
104’	19,791	20,259	20,935	20,935	20,935
106’	20,172	20,649	21,338	21,338	21,338
108’	20,553	21,038	21,741	21,741	21,741
110’	20,933	21,428	22,143	22,143	22,143
112’	21,314	21,818	22,546	22,546	22,546
114’	21,694	22,207	22,948	22,948	22,948
116’	22,075	22,597	23,351	23,351	23,351
118’	22,456	22,986	23,754	23,754	23,754
120’	22,836	23,376	24,156	24,156	24,156
122’	23,217	23,766	24,559	24,559	24,559
124’	23,597	24,155	24,961	24,961	24,961
126’	23,978	24,545	25,364	25,364	25,364
128’	24,359	24,935	25,767	25,767	25,767
130’	24,739	25,324	26,169	26,169	26,169
132’	25,120	25,714	26,572	26,572	26,572
134’	25,500	26,103	26,974	26,974	26,974
136’	25,881	26,493	27,377	27,377	27,377
138’	26,262	26,883	27,780	27,780	27,780
140’	26,642	27,272	28,182	28,182	28,182
142’	27,023	27,662	28,585	28,585	28,585
144’	27,403	28,051	28,987	28,987	28,987
145’	27,785	28,442	32,150	32,150	32,150

Note: Quantities are for truss frame only (Chord splices included for spans exceeding 76 feet’). Look up span length without adding anything for cantilever. Cantilever specified as greater than 3 feet can be accounted for using the method in the examples.

Table 2. Removable Sign Panel Frame (pounds)

Panel Length (feet)	Panel Depth (inches)							
	50”	60”	70”	80”	90”	100”	110”	120”
4’	82	88	95	101	108	115	119	126
6’	128	139	150	161	172	183	194	205
8’	141	152	163	174	187	198	209	220
10’	183	198	214	229	247	262	280	295
12’	196	214	229	245	260	278	293	311
14’	236	258	280	300	322	344	364	386
16’	251	271	293	315	335	357	379	399
18’	295	322	348	375	399	428	454	481
20’	311	335	364	388	414	443	467	494
24’	375	408	439	472	505	538	571	602
26’	414	452	489	527	564	602	639	677
28’	432	472	507	547	582	622	659	697
30’	476	520	562	604	646	690	732	776
32’	518	564	613	659	708	754	802	851
34’	536	582	631	679	725	774	822	869
36’	575	628	681	734	791	840	893	946
38’	591	644	697	750	800	853	906	959
40’	604	657	712	763	816	869	922	974

Table 3. Mounting Beams for Laminated Panel Type A on Overhead Sign Truss Quantities (pounds)

Panel Length (feet)	Panel Depth (inches)							
	50”	60”	70”	80”	90”	100”	110”	120”
4’ to 15’	79	93	106	119	130	143	154	168
15’-5” to 24’	119	139	159	176	194	214	234	251
24’-3” to 32’-9”	161	185	209	236	260	284	311	335
33’ to 40’	201	231	262	293	324	357	388	419

For mounting beam spacing and numbers see Standard Plans.

Appendix D: Quantities – Two Post

Table 4. Post Quantities (pounds per post)

Post Type *	Panel Depth (inches)						Column "A"
	70"	80"	90"	100"	110"	120"	lb/ft
I-S	1922	1982	2044	2103	2103	2103	76.20
II-S	2213	2282	2352	2421	2421	2421	87.76
III-S	2504	2582	2661	2738	2738	2738	99.25
IV-S	2795	2881	2970	3056	3056	3056	110.75
V-S	3331	3435	3541	3644	3644	3644	132.32
VI-S	--	--	6814	7013	7013	7013	254.22
VII-S	--	--	6814	7013	7013	7013	254.22

*Note: Weight is for each post of a 2 post truss. Quantities include post (length from base plate to top of truss) and split plates. Quantities are based on "h" = 18 feet-9 inches. Column "A" in pounds per foot to be added or subtracted from weights shown on table. (See example)

Table 5. Juncture Connections (pounds per post)

Post Type	Frame Width (inches)			
	24"	30"	36"	42"
I-S	509	500	661	739
II-S	558	553	728	813
III-S	608	701	796	888
IV-S	657	761	761	963
V-S	758	877	996	1116
VI-S	758	877	996	1116
VII-S	758	877	996	1116

Juncture Connection weight includes upper and lower chord connection (cap plates and ring, wedge plates and no angles)

Table 6. Anchor Bolts and Nuts (pounds per post)

Post Type	Weight per post (pounds)
I-S	668
II-S	668
III-S	668
IV-S	780
V-S	1140
VI-S	1140
VII-S	1140

Table 7. Gussets for Post (pounds per post)

Post Type	Weight per post (pounds)
I-S	126
II-S	126
III-S	126
IV-S	126
V-S	126
VI-S	150
VII-S	150

Table 8. Base Plate (lb)

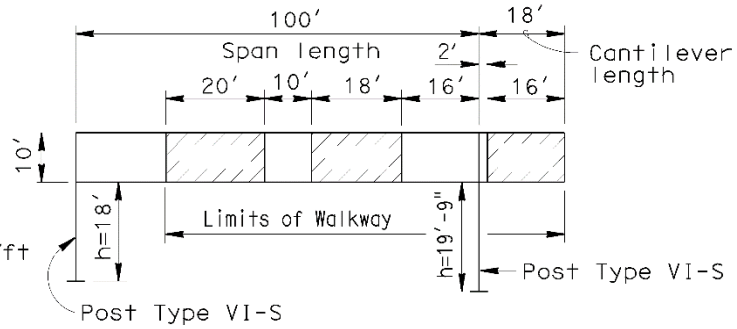
Post Type	Weight per post (pounds)
I-S	516
II-S	516
III-S	611
IV-S	712
V-S	862
VI-S	1283
VII-S	1283

Example 1

EXAMPLE

Given :

Sign panel depth	= 10′
Span length	= 100′
Cantilever length	= 18′
Sign panel length	= 20′
Sign panel length	= 16′
Sign panel length	= 18′
Left post type VI-S	= 18′
Right post type VI-S	= 19′-9"
Walkway assembly	= 75.0 lb/ft
Span=100 ft,	
Frame width STD Plan S11	= 3′



Use laminated panels

Appendix D: Quantities – Two Post

Example 1: 100 feet Span, 18 feet Overhang, Laminated Panels

Span Portion of Truss Frame (From Table 1) 15,549

Cantilever Portion of Truss Frame= 15,549 (Span) x 18' (Cantilever) / 100' (Span) = 2,799

Sign Panel attachment system

Removable Sign Panel Frames (From Table 2)

0 (Sign 1) + 0 (Sign 2) + 0 (Sign 3) + 0 (Sign 4) = 0

Laminated Panel Mounting Beams (From Table 3)

251 (Sign 1) + 251 (Sign 2) + 251 (Sign 3) + 0 (Sign 4) = 753

Walkway assembly (assume 75 plf) 75 x (20' + 10' + 18' + 16' + 18') = 6,150

If walkway nominally stops at column add extra 2'

Posts (From Table 4)

Left 7,013 (Case for "h") + (18' ("h") - 18.75') x 254.22 (Column 'A') = 6,822

Right 7,013 (Case for "h") + (19.75' ("h") - 18.75') x 254.22 (Column 'A') = 7,267

Juncture Connection Frame width from Std Plan S11 = 3' (36")

(From Table 5) 996 (Left) + 996 (Right) = 1,992

Anchor Bolts and Nuts (From Table 6) 1,140 (Left) + 1,140 (Right) = 2,280

Base Plate Gussets (From Table 7) 150 (Left) + 150 (Right) = 300

Base Plate (From Table 8) 1,283 (Left) + 1,283 (Right) = 2,566

Subtotal 46,478

Add 3.5% for Galvanizing 1,627

Total 48,105

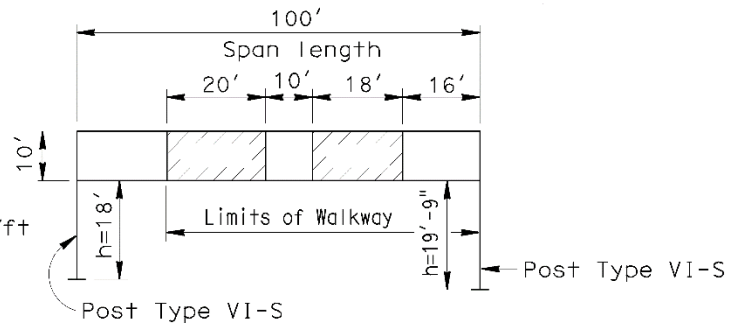
* Walkway assembly includes grating, brackets, safety railing, safety cable, light

Example 2

EXAMPLE

Given :

Sign panel depth	= 10′
Span length	= 100′
Cantilever length	= 0′
Sign panel length	= 20′
Sign panel length	= 18′
Left post type VI-S	= 18′
Right post type VI-S	= 19′-9"
Walkway assembly	= 75.0 lb/ft
Span=100 ft,	
Frame width STD Plan S11	= 3′



Use formed panels

Example 2: 100 feet Span, No Overhang, Formed Panels

Span Portion of Truss Frame (From Table 1) 15,549

Cantilever Portion of Truss Frame= ____ (Span) x 0’ (Cantilever) / ____ (Span) = 0

Sign Panel attachment system

Removable Sign Panel Frames (From Table 2)

494 (Sign 1) + 481 (Sign 2) + 0 (Sign 3) + 0 (Sign 4) = 975

Laminated Panel Mounting Beams (From Table 3)

0 (Sign 1) + 0 (Sign 2) + 0 (Sign 3) + 0 (Sign 4) = 0

Walkway assembly (assume 75 plf) 75 x (20’ + 10’ + 18’ + 16’ + 2’) = 4,950

If walkway nominally stops at column add extra 2’

Posts (From Table 4)

Left 7,013 (Case for “h”) + (18’ (“h”) - 18.75’) x 254.22 (Column ‘A’) = 6,822

Right 7,013 (Case for “h”) + (19.75’ (“h”) - 18.75’) x 254.22 (Column ‘A’) = 7,267

Juncture Connection Frame width from Std Plan S11 = 3’ (36”)

(From Table 5) 996 (Left) + 996 (Right) = 1,992

Anchor Bolts and Nuts (From Table 6) 1,140 (Left) + 1,140 (Right) = 2,280

Base Plate Gussets (From Table 7) 150 (Left) + 150 (Right) = 300

Base Plate (From Table 8) 1,283 (Left) + 1,283 (Right) = 2,566

Subtotal 42,701

Add 3.5% for Galvanizing 1,495

Total 44,196

* Walkway assembly includes grating, brackets, safety railing, safety cable, light fixture