



JEI Structural Engineering

Glazing Systems
Fast, Friendly, Affordable

Created October 13, 2020

Value Added Extra

For Client Use Only

Wind Load Charts w/ Unbraced Length Effects

Kawneer 1600 Wall System®1 Curtain Wall



Instructions3

Kawneer 162-001 ADM15 20ft Span 3ft Lb5

Kawneer 162-001 ADM15 20ft Span 6ft Lb6

Kawneer 162-001 ADM15 20ft Span 10ft Lb7

Kawneer 162-002 ADM15 20ft Span 3ft Lb8

Kawneer 162-002 ADM15 20ft Span 6ft Lb9

Kawneer 162-002 ADM15 20ft Span 10ft Lb10

Kawneer 162-003 ADM15 20ft Span 3ft Lb11

Kawneer 162-003 ADM15 20ft Span 6ft Lb12

Kawneer 162-003 ADM15 20ft Span 10ft Lb13

Kawneer 162-004 ADM15 20ft Span 3ft Lb14

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Kawneer 162-064 ADM15 30ft Span 3ft Lb17

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Kawneer 162-064 ADM15 30ft Span 10ft Lb19

Kawneer 162-065 ADM15 30ft Span 3ft Lb20

Kawneer 162-065 ADM15 30ft Span 6ft Lb21

Kawneer 162-065 ADM15 30ft Span 10ft Lb22

Kawneer 162-094 ADM15 20ft Span 3ft Lb23

Kawneer 162-094 ADM15 20ft Span 6ft Lb24

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Kawneer 162-095 ADM15 20ft Span 3ft Lb26

Kawneer 162-095 ADM15 20ft Span 6ft Lb27

Kawneer 162-095 ADM15 20ft Span 10ft Lb28



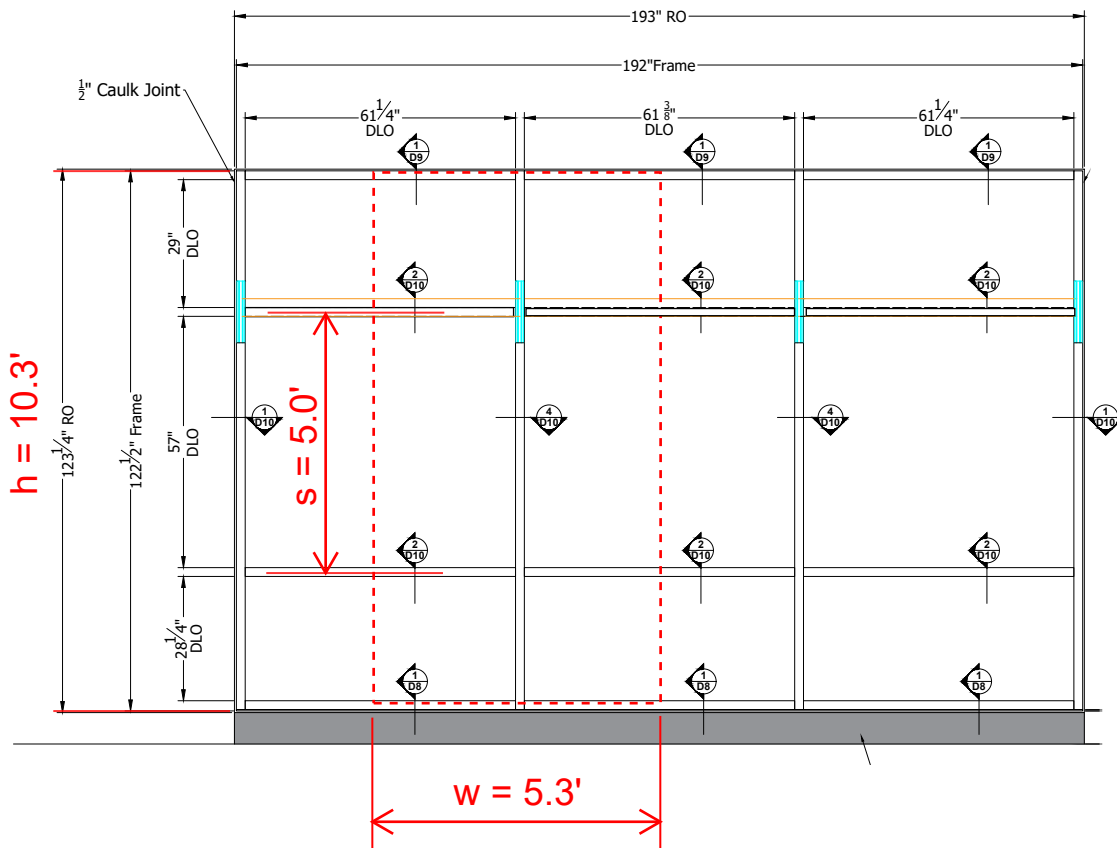
Step 1 - Make sure that max horizontal mullion spacing (s) is not more than chart maximum (12'-0" in this case.)

Step 2 - Enter the chart on the horizontal axis with your spacing or tributary width (w) of the vertical mullion.

Step 3 - Enter the chart on the vertical axis with the maximum span height (h) of the mullion.

Step 4 - Ensure that the intersection is below the design wind load indicated by colored line.

Example





Wind Load Chart including Unbraced Length Effects

Kawneer 162-001 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 12'-0" ^①

IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

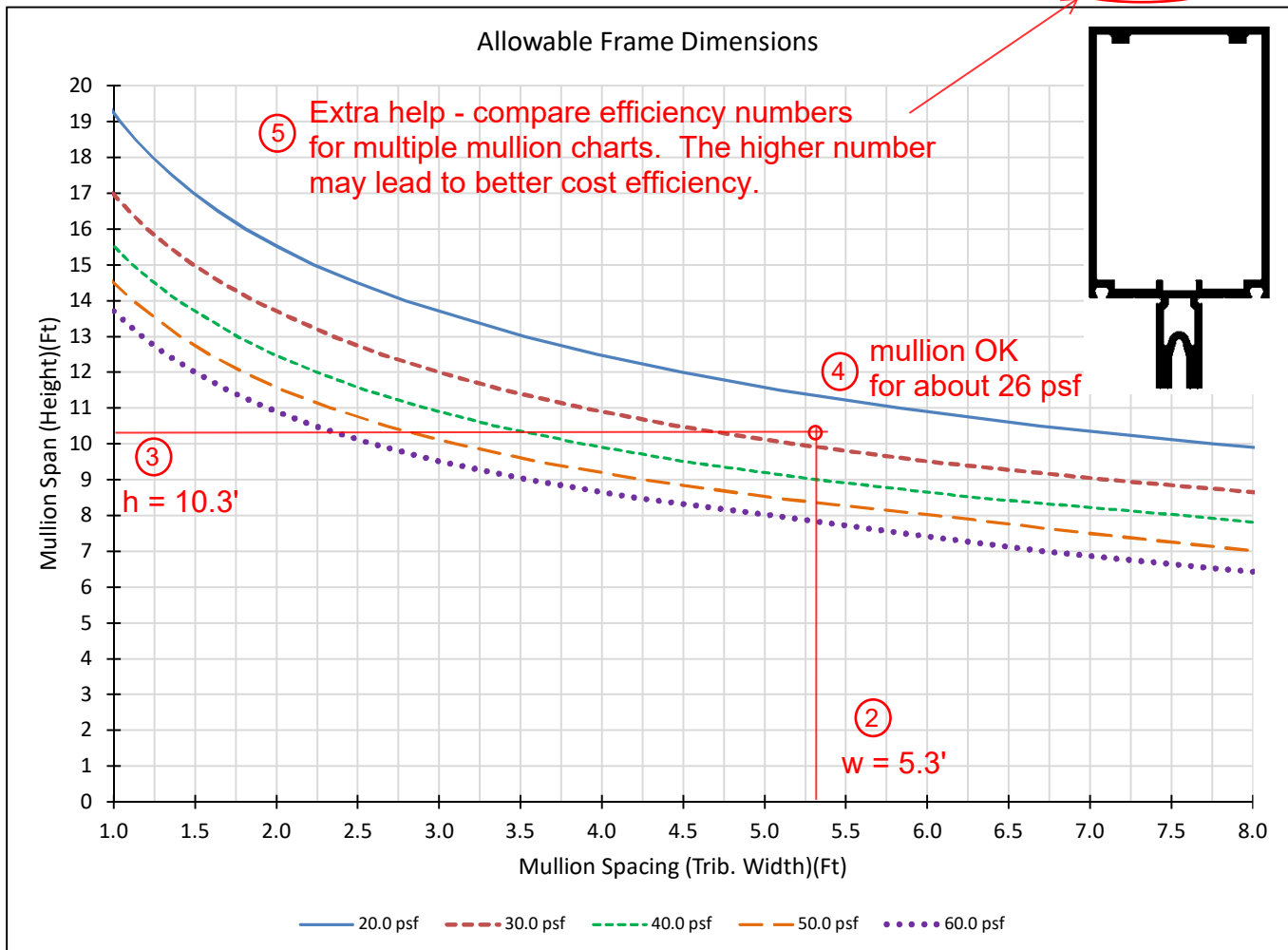
s = 5'

E =	10100 ksi	A =	1.787 in ²
I _{x, alum} =	5.036 in ⁴	Z _{x, alum} =	2.649 in
S _{x, alum} =	1.993 in ³	wt =	2.147 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	5.036 in ⁴		

Curves are based on deflection limits of L/175 for $\leq 13'6"$ or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Spacing (ft)	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1172	1172	1172





Wind Load Chart including Unbraced Length Effects

Kawneer 162-001 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 3'-0"

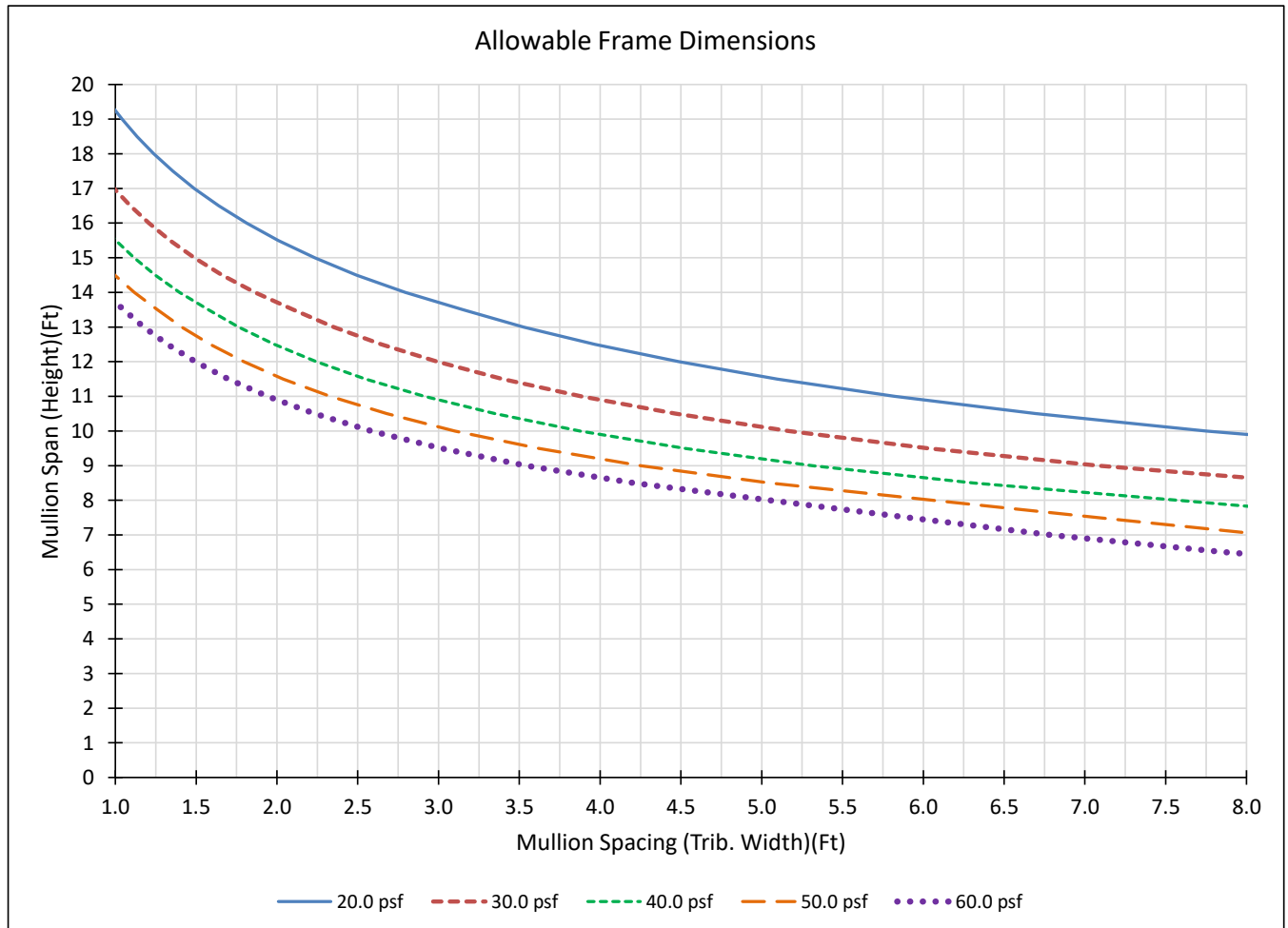
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	1.787 in ²
I _{x, alum} =	5.036 in ⁴	Z _{x, alum} =	2.649 in
S _{x, alum} =	1.993 in ³	wt =	2.147 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	5.036 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1172	1172	1172



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-001 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 6'-0"

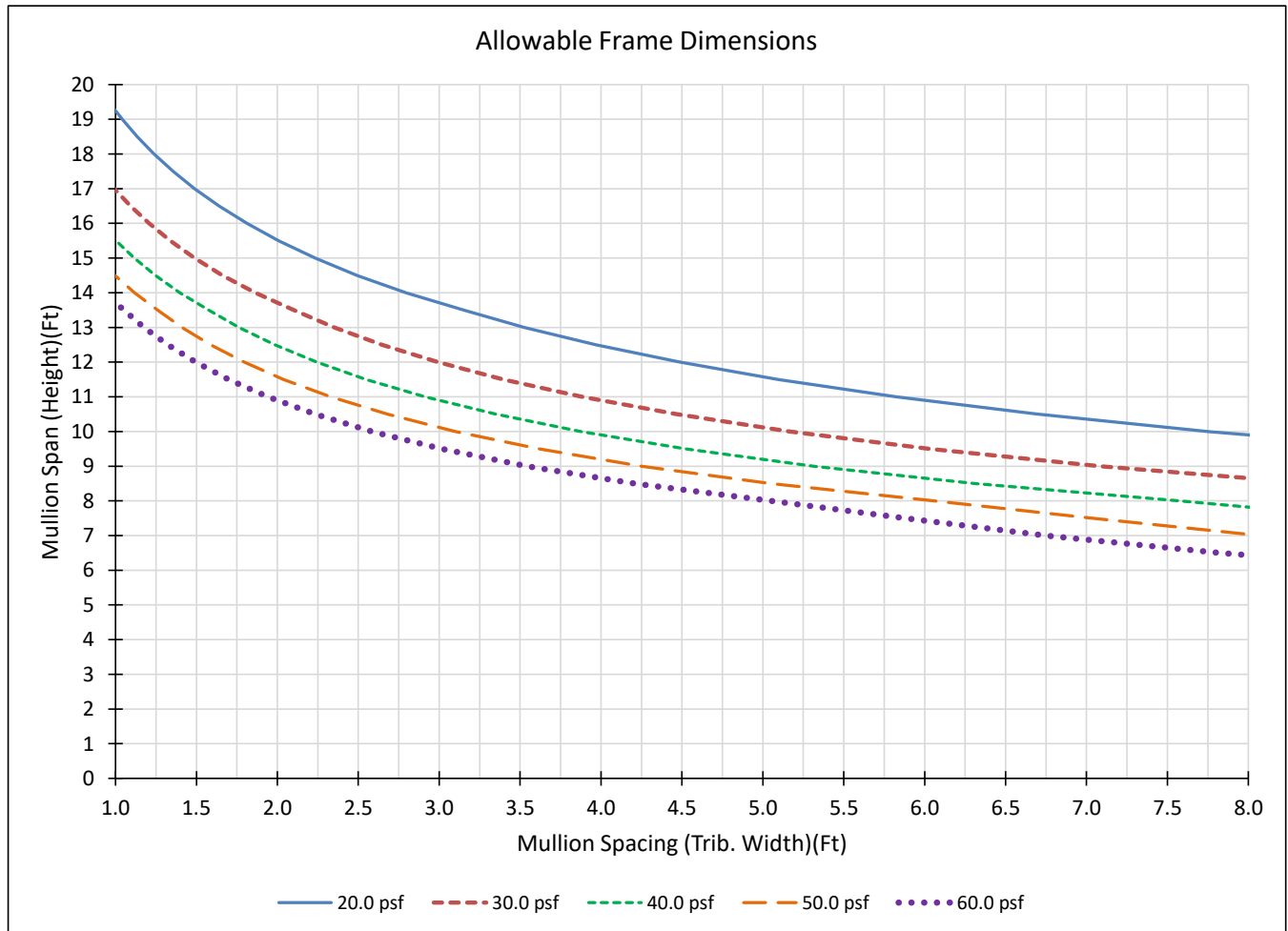
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	1.787 in ²
I _{x, alum} =	5.036 in ⁴	Z _{x, alum} =	2.649 in
S _{x, alum} =	1.993 in ³	wt =	2.147 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	5.036 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-001 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 10'-0"

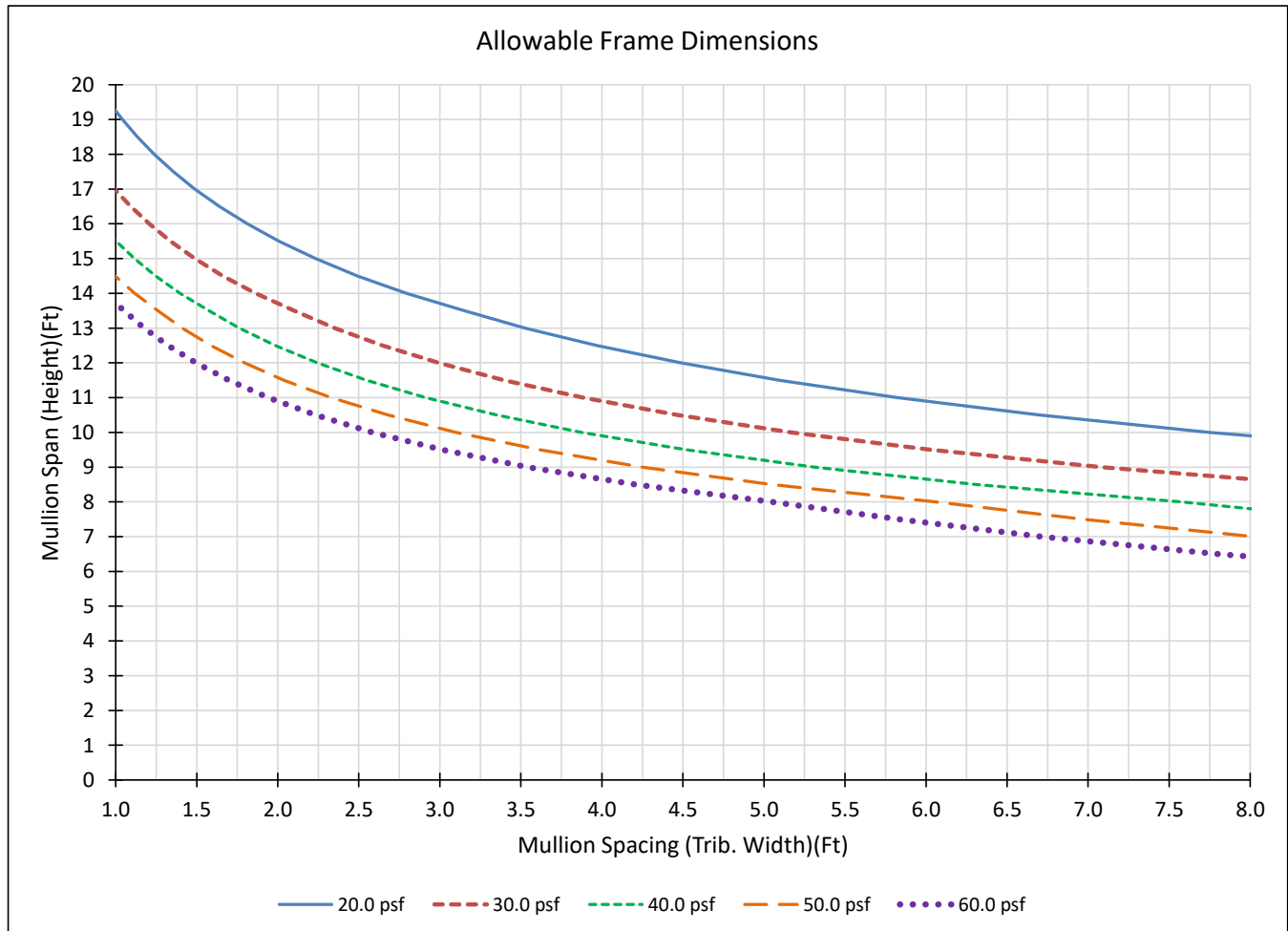
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E = 10100 ksi A = 1.787 in²
I_{x, alum} = 5.036 in⁴ Z_{x, alum} = 2.649 in
S_{x, alum} = 1.993 in³ wt = 2.147 lb/ft
Reinforcing: **No Reinforcing**
I_{x, steel} = 0.000 in⁴ S_{x, steel} = 0.000 in³
I_{combined} = 5.036 in⁴

Curves are based on deflection limits of L/175 for L ≤ 13'6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1172	1172	1172



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Wind Load Chart including Unbraced Length Effects

Kawneer 162-002 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 3'-0"

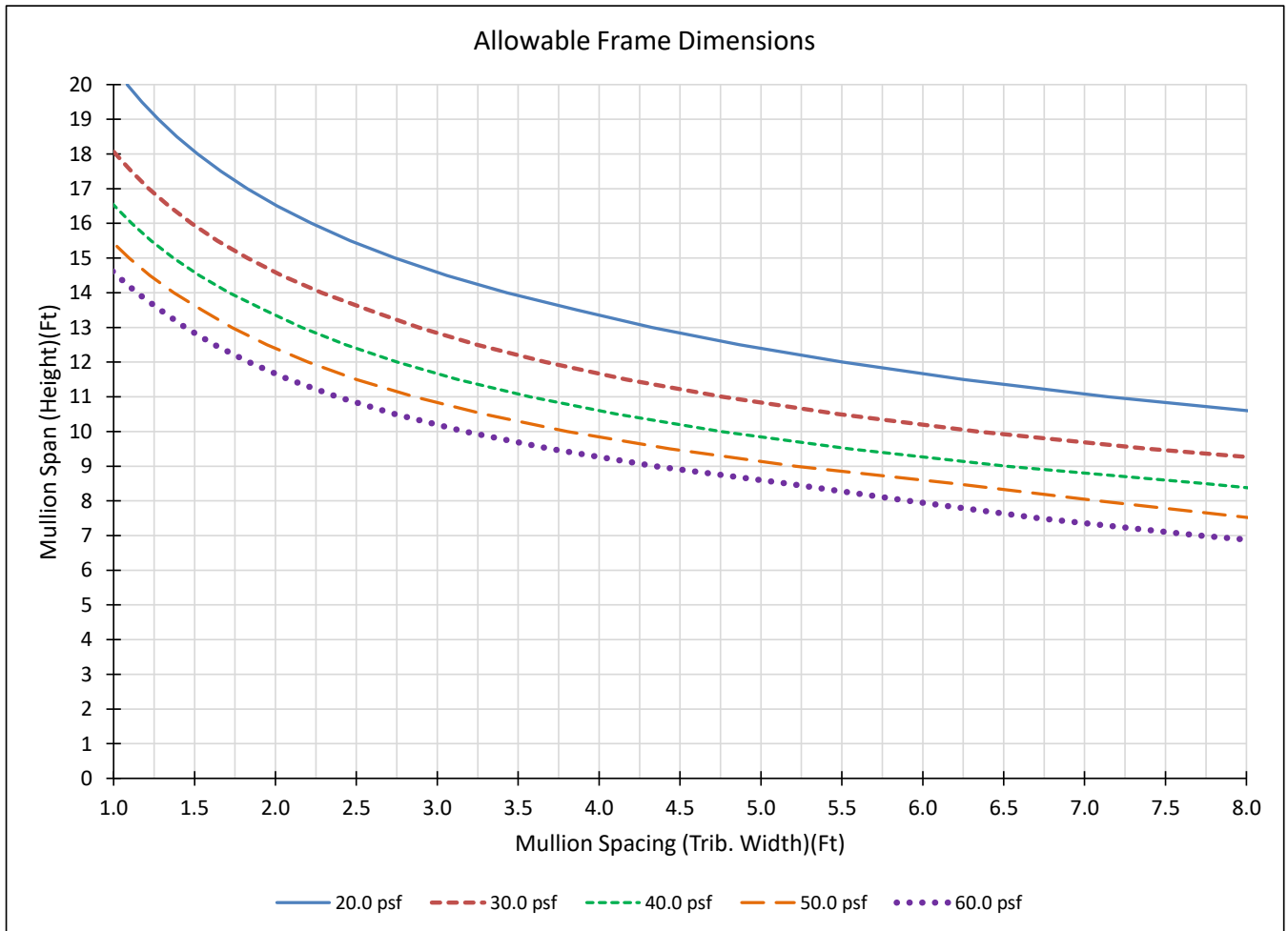
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	2.036 in ²
I _{x, alum} =	6.179 in ⁴	Z _{x, alum} =	3.248 in
S _{x, alum} =	2.265 in ³	wt =	2.446 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	6.179 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1169	1169	1169



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-002 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 6'-0"

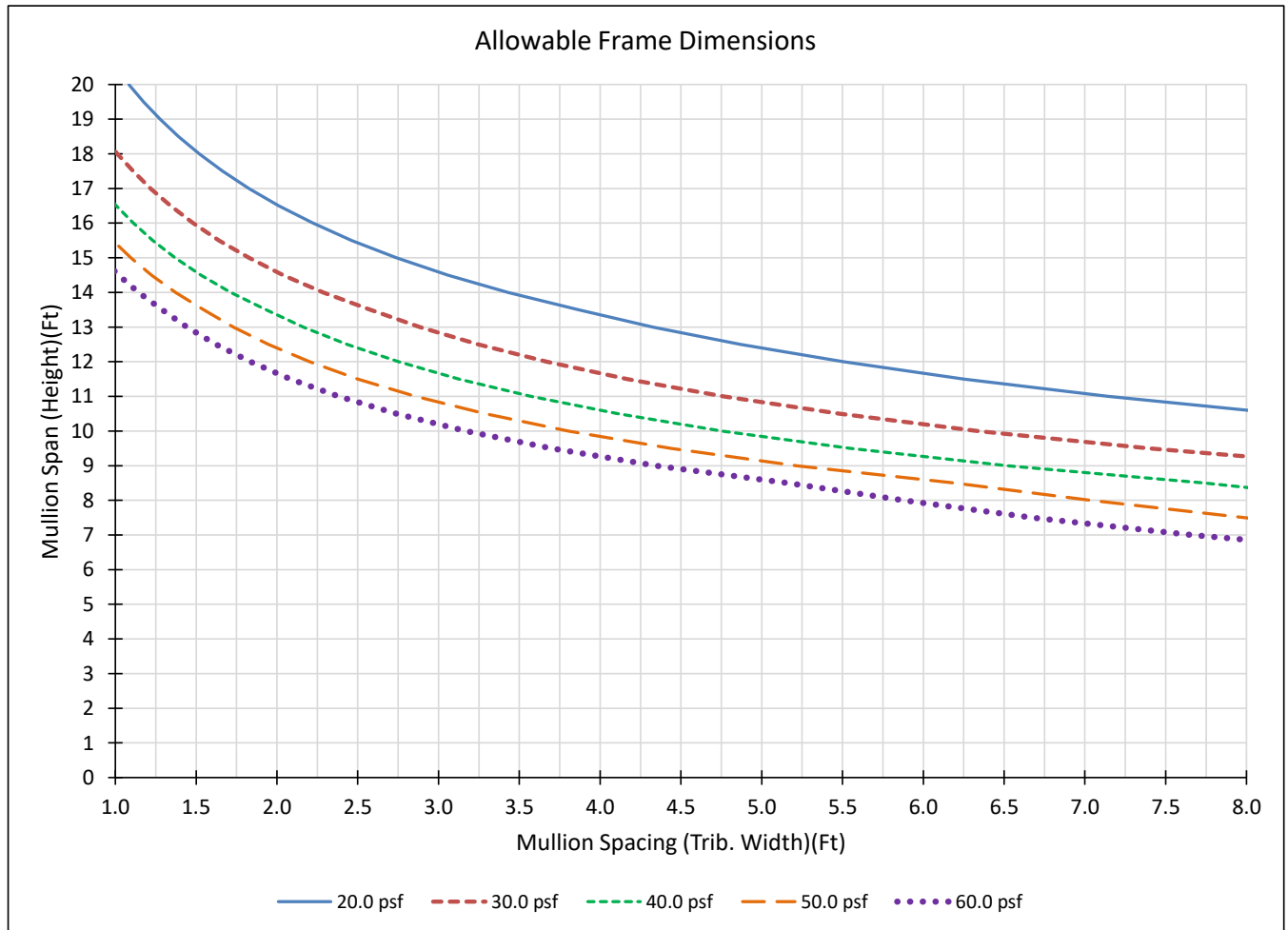
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

$E = 10100 \text{ ksi}$ $A = 2.036 \text{ in}^2$
 $I_{x, \text{alum}} = 6.179 \text{ in}^4$ $Z_{x, \text{alum}} = 3.248 \text{ in}$
 $S_{x, \text{alum}} = 2.265 \text{ in}^3$ $wt = 2.446 \text{ lb/ft}$
 Reinforcing: **No Reinforcing**
 $I_{x, \text{steel}} = 0.000 \text{ in}^4$ $S_{x, \text{steel}} = 0.000 \text{ in}^3$
 $I_{\text{combined}} = 6.179 \text{ in}^4$

Curves are based on deflection limits of $L/175$ for $L \leq 13'6"$ or $L/240 + 1/4"$ for $L > 13'6"$ and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1169	1169	1169



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-002 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 10'-0"

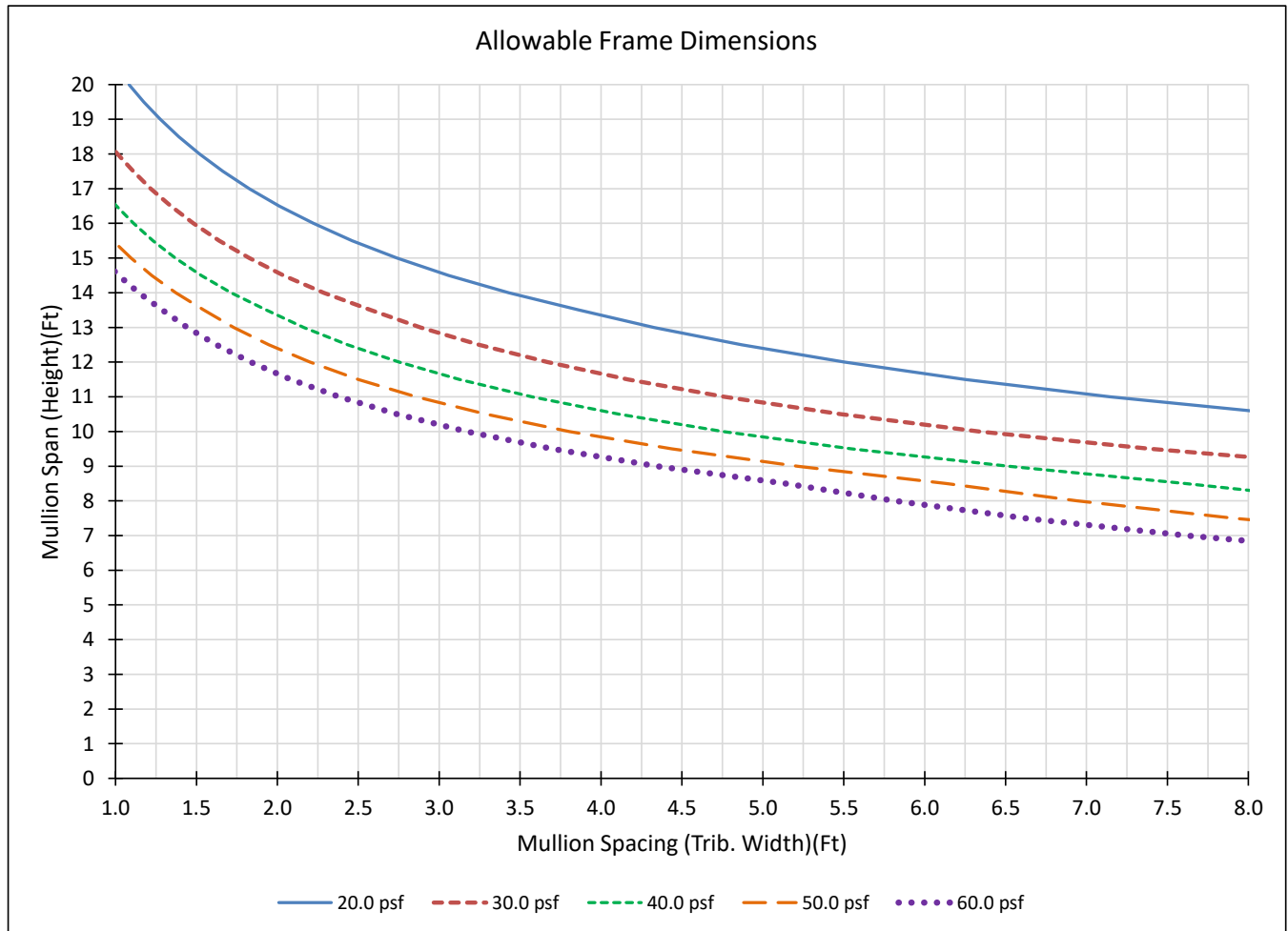
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	2.036 in ²
I _{x, alum} =	6.179 in ⁴	Z _{x, alum} =	3.248 in
S _{x, alum} =	2.265 in ³	wt =	2.446 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	6.179 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1169	1169	1169



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-003 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 3'-0"

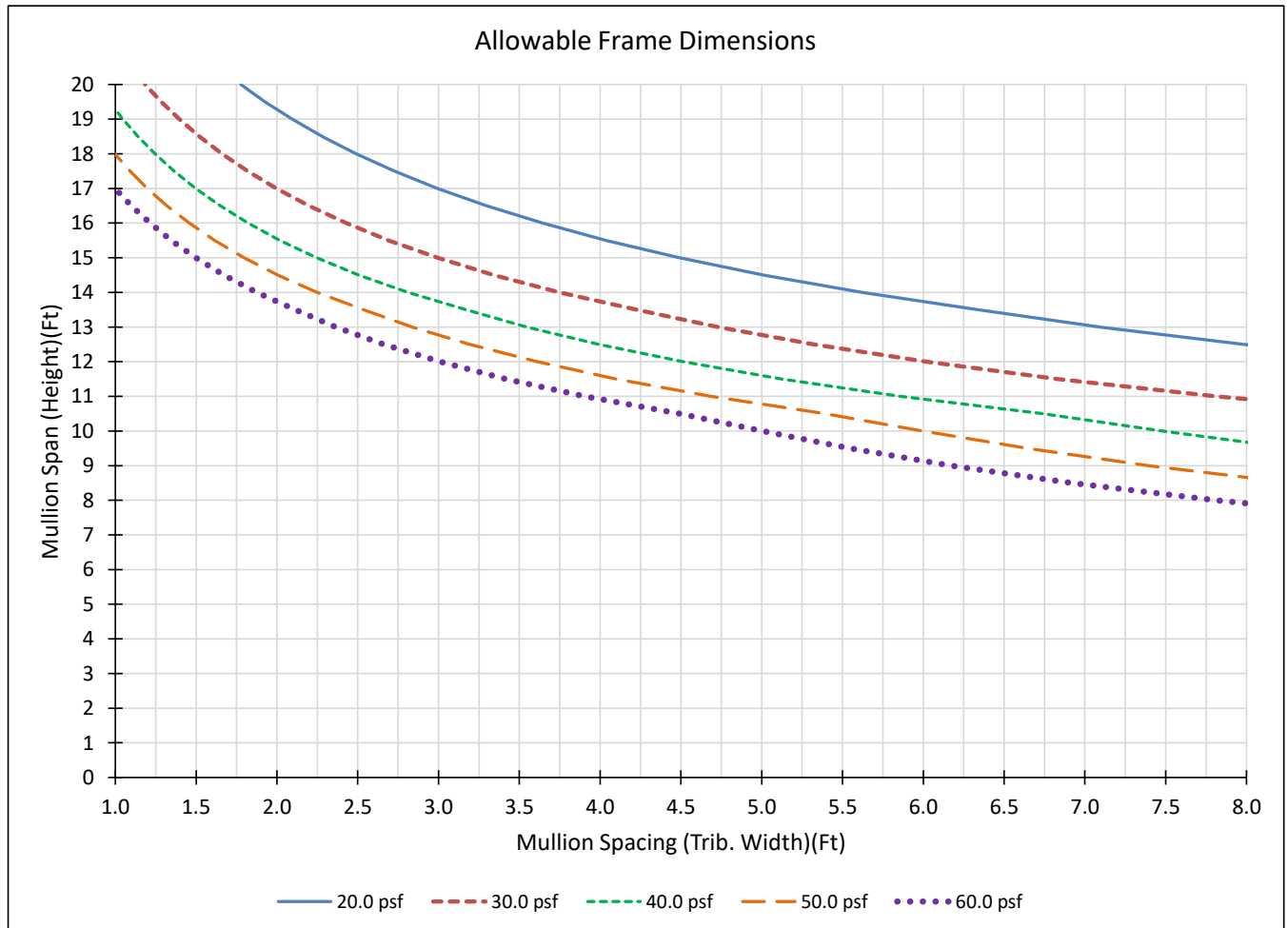
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	2.088 in ²
I _{x, alum} =	10.130 in ⁴	Z _{x, alum} =	4.103 in
S _{x, alum} =	3.029 in ³	wt =	2.509 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	10.130 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1509	1509	1509



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-003 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 6'-0"

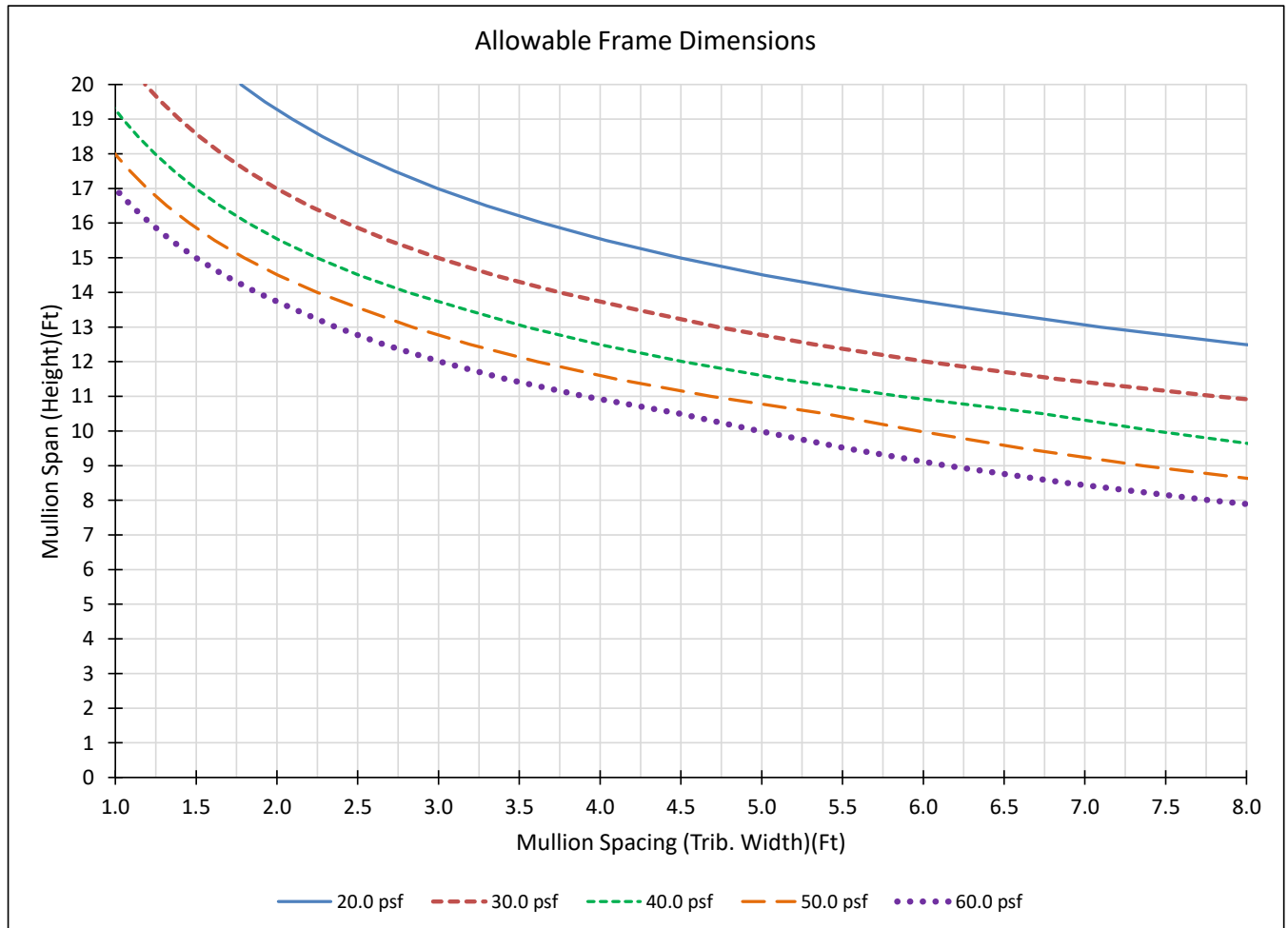
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	2.088 in ²
I _{x, alum} =	10.130 in ⁴	Z _{x, alum} =	4.103 in
S _{x, alum} =	3.029 in ³	wt =	2.509 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	10.130 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

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	Efficiency Number:	1509	1509	1509



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Wind Load Chart including Unbraced Length Effects

Kawneer 162-003 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 10'-0"

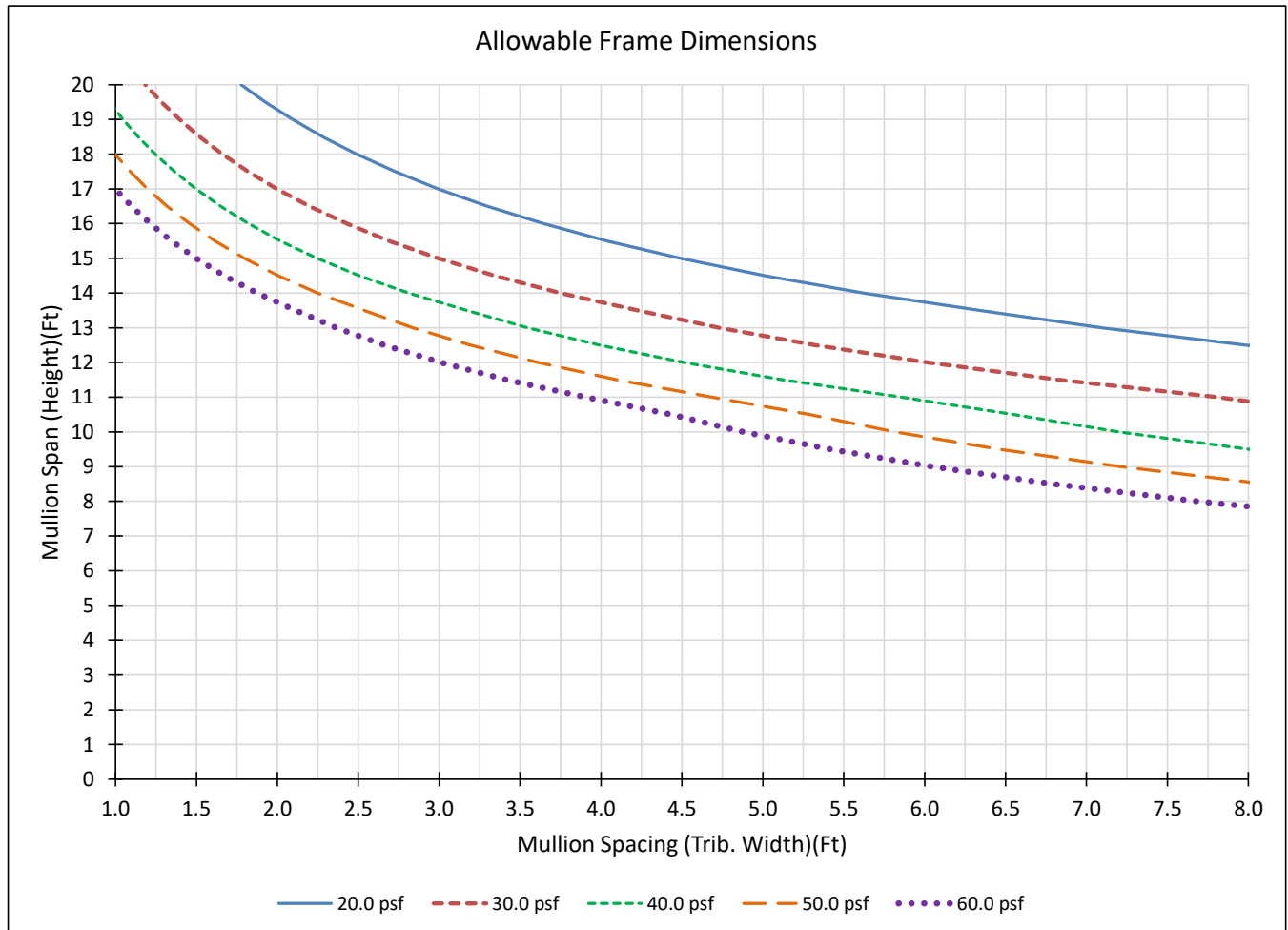
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	2.088 in ²
I _{x, alum} =	10.130 in ⁴	Z _{x, alum} =	4.103 in
S _{x, alum} =	3.029 in ³	wt =	2.509 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	10.130 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

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	Efficiency Number:	1509	1509	1509



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Wind Load Chart including Unbraced Length Effects

Kawneer 162-004 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 3'-0"

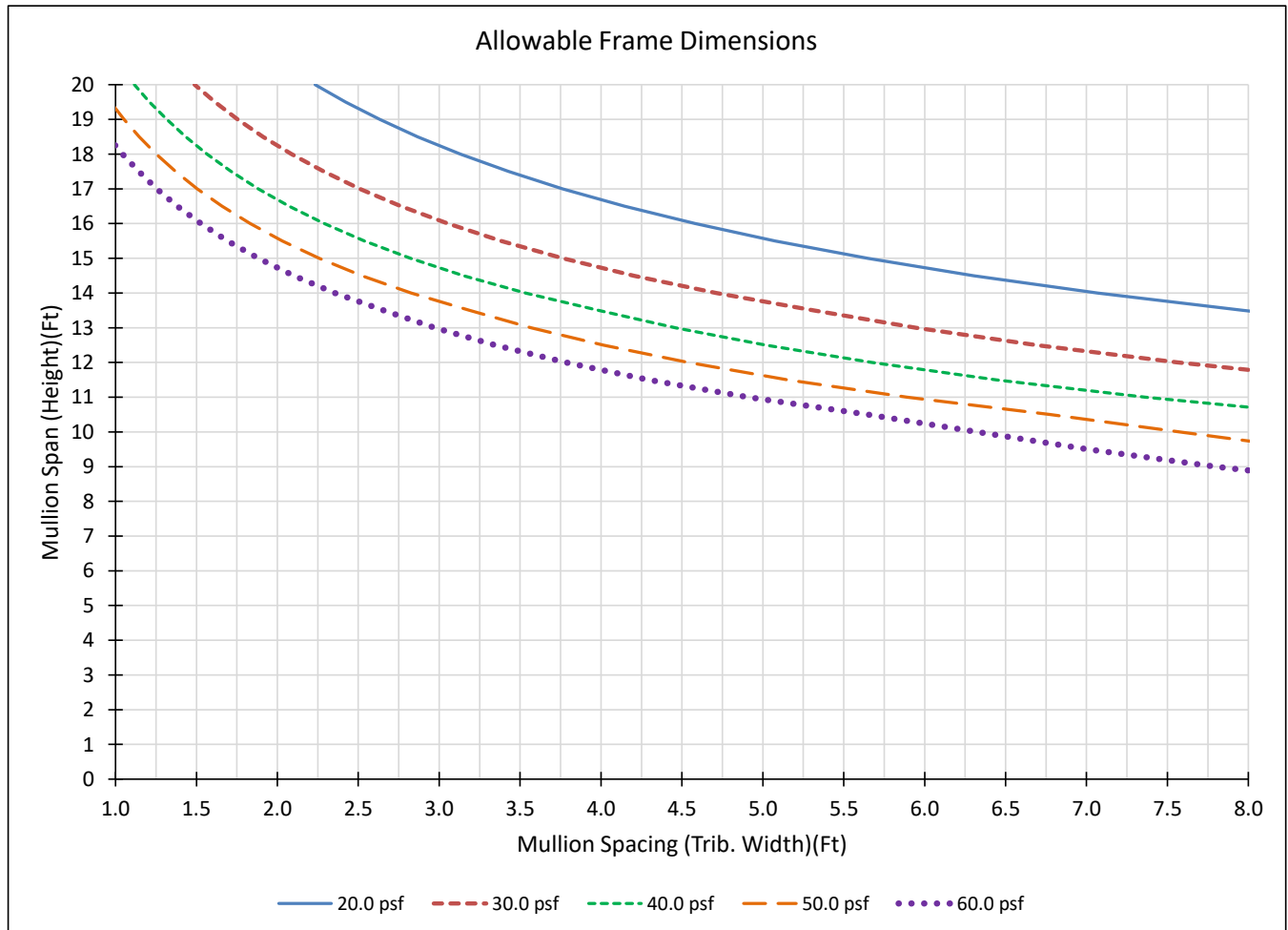
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	2.412 in ²
I _{x, alum} =	12.735 in ⁴	Z _{x, alum} =	5.052 in
S _{x, alum} =	3.791 in ³	wt =	2.898 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	12.735 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1652	1652	1652



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

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Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 6'-0"

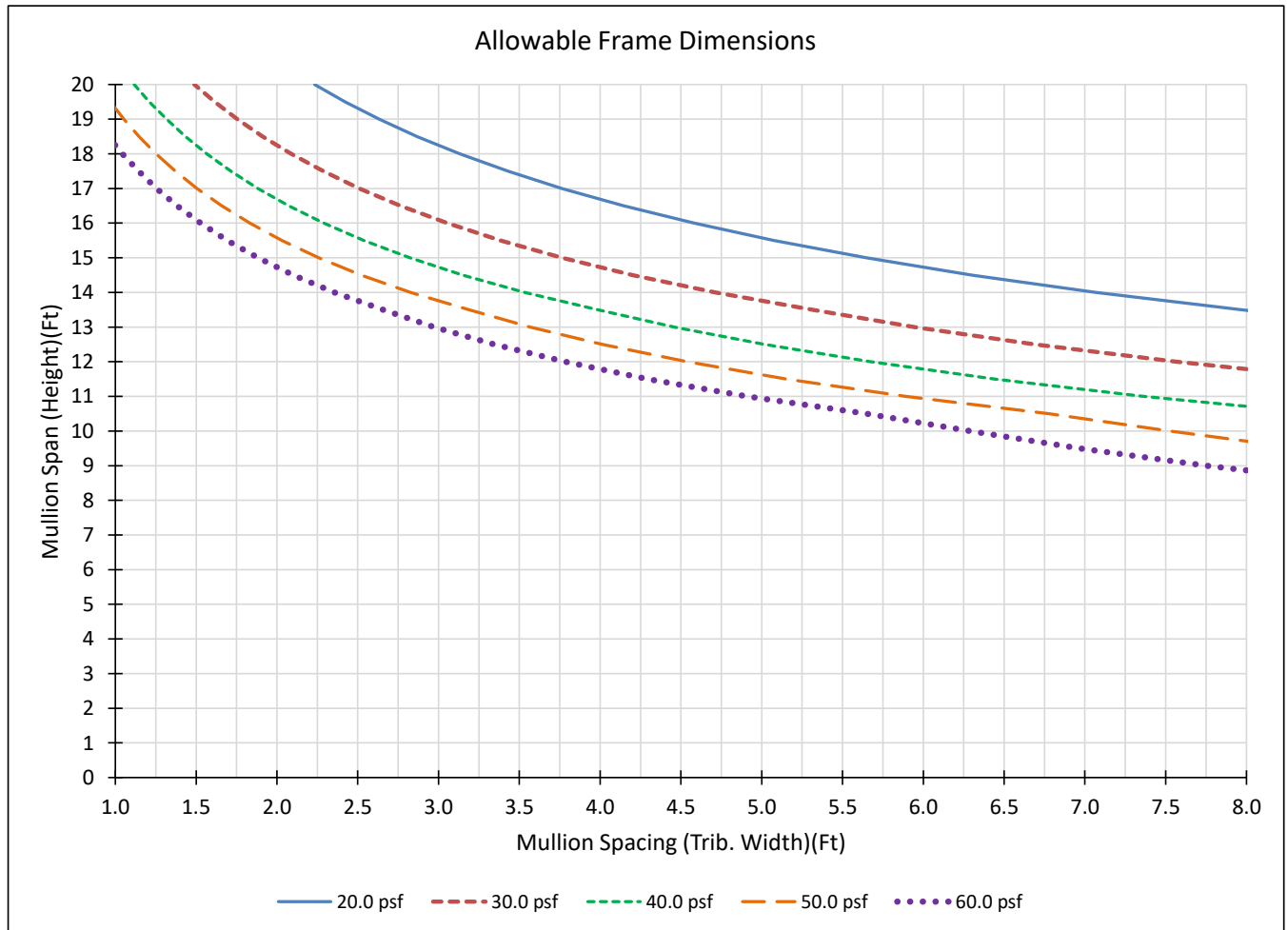
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

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I _{x, alum} =	12.735 in ⁴	Z _{x, alum} =	5.052 in
S _{x, alum} =	3.791 in ³	wt =	2.898 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	12.735 in ⁴		

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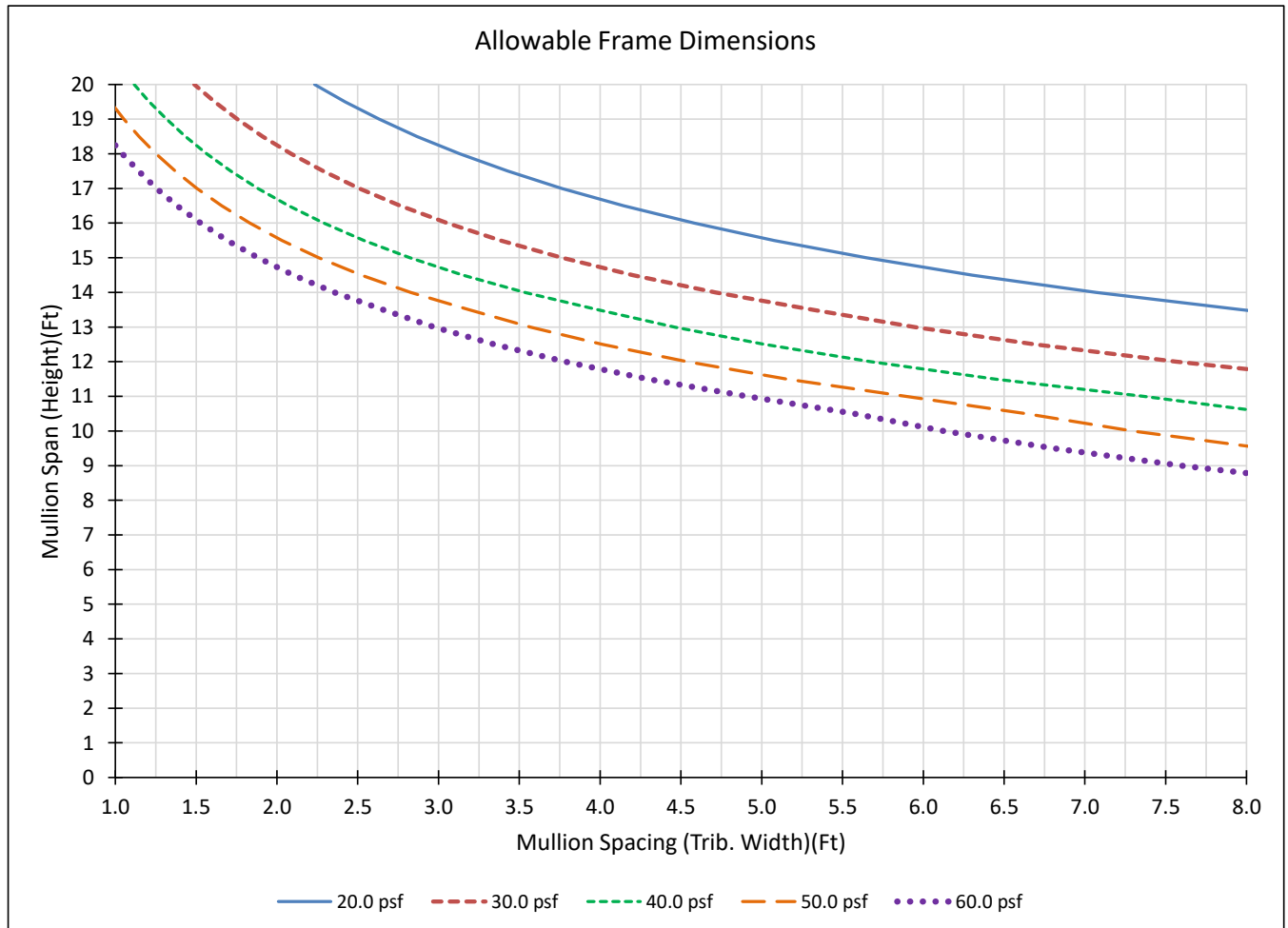
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S _{x, alum} =	3.791 in ³	wt =	2.898 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	12.735 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1652	1652	1652



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-064 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 3'-0"

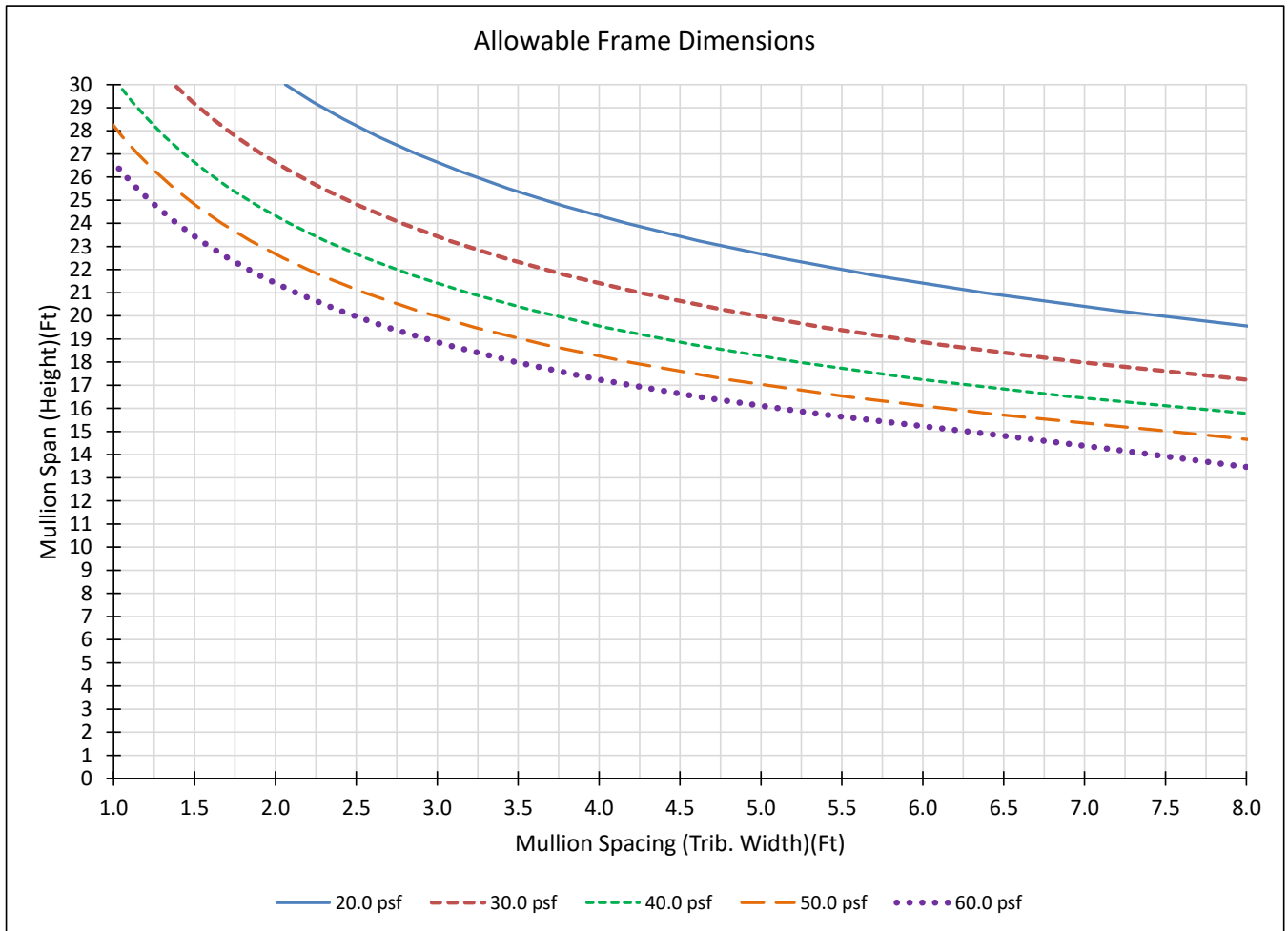
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	4.169 in ²
I _{x, alum} =	42.514 in ⁴	Z _{x, alum} =	11.913 in
S _{x, alum} =	8.824 in ³	wt =	5.009 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	42.514 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	2192	2192	2192



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-064 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 6'-0"

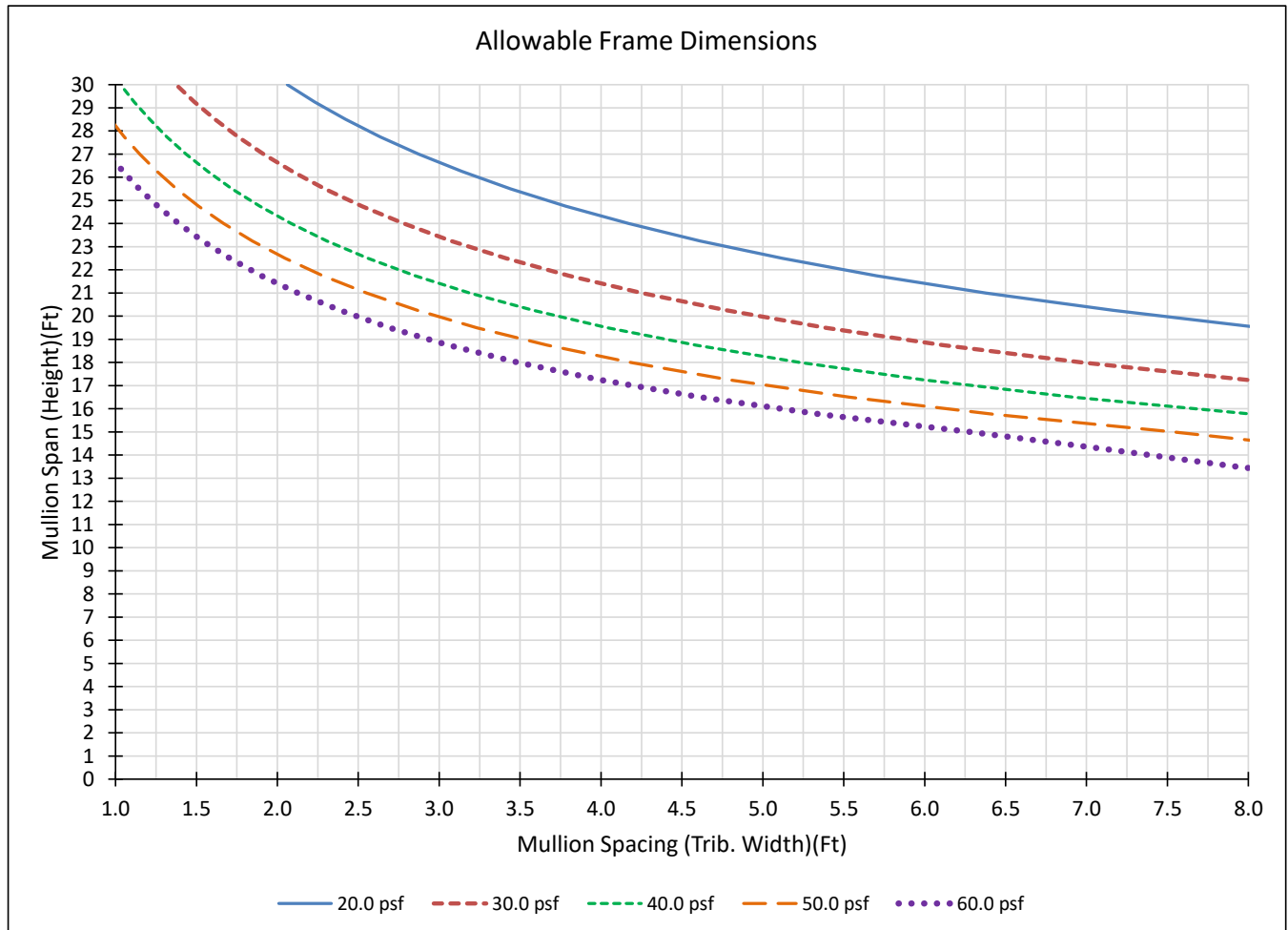
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	4.169 in ²
I _{x, alum} =	42.514 in ⁴	Z _{x, alum} =	11.913 in
S _{x, alum} =	8.824 in ³	wt =	5.009 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	42.514 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	2192	2192	2192



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-064 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 10'-0"

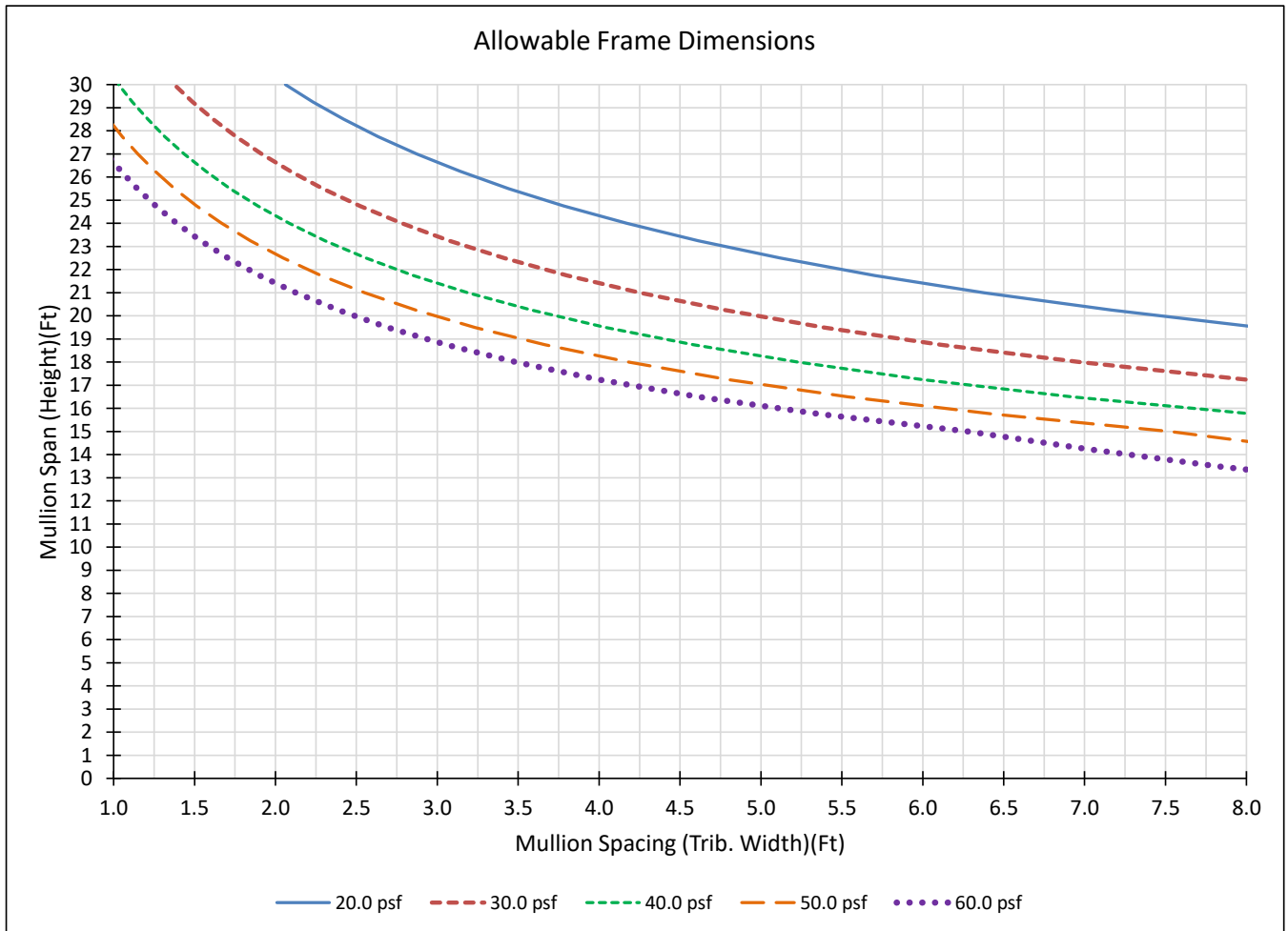
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	4.169 in ²
I _{x, alum} =	42.514 in ⁴	Z _{x, alum} =	11.913 in
S _{x, alum} =	8.824 in ³	wt =	5.009 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	42.514 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	2192	2192	2192



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-065 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 3'-0"

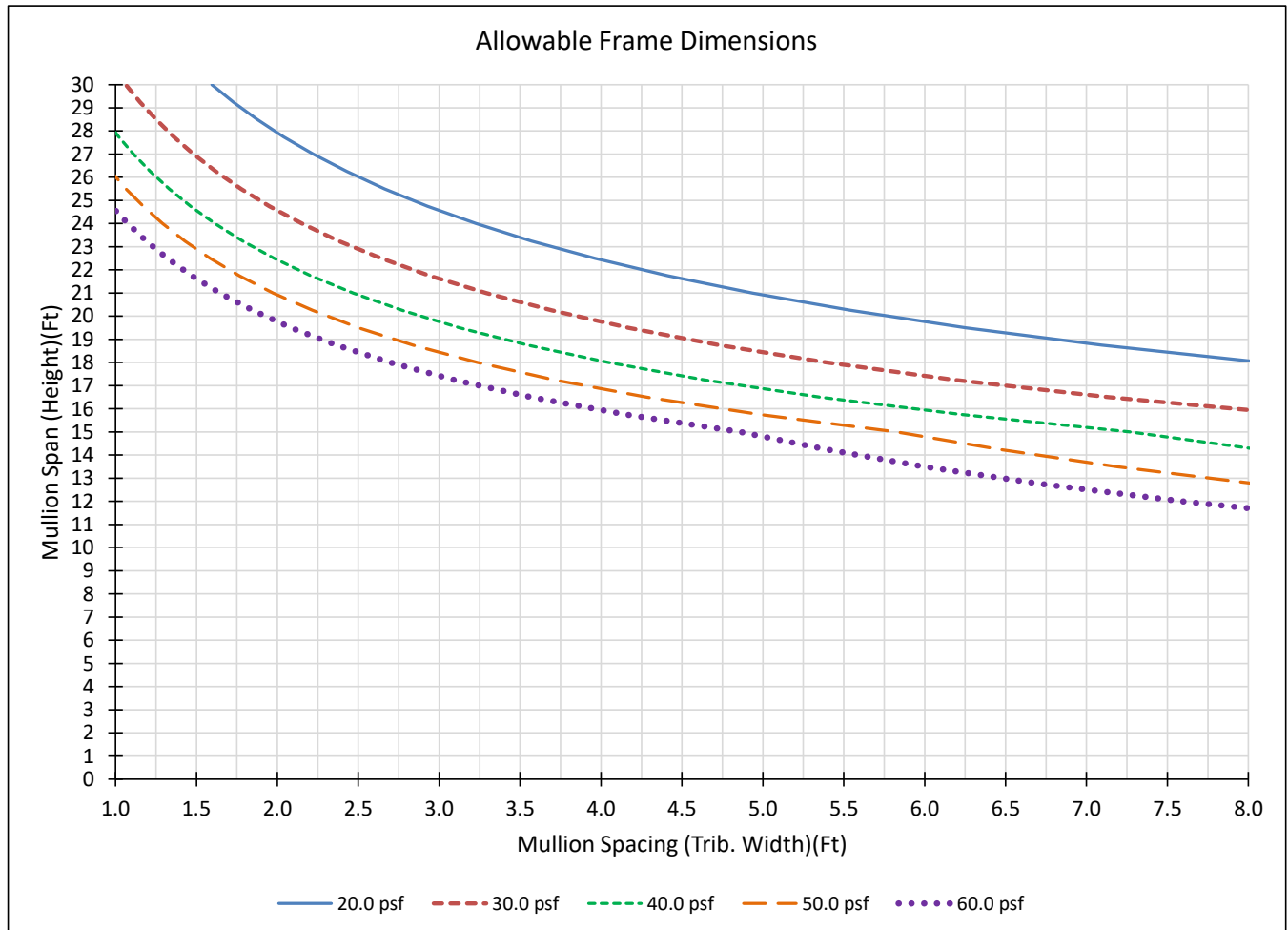
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	3.830 in ²
I _{x, alum} =	32.896 in ⁴	Z _{x, alum} =	10.046 in
S _{x, alum} =	6.542 in ³	wt =	4.601 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	32.896 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1795	1795	1795



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-065 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 6'-0"

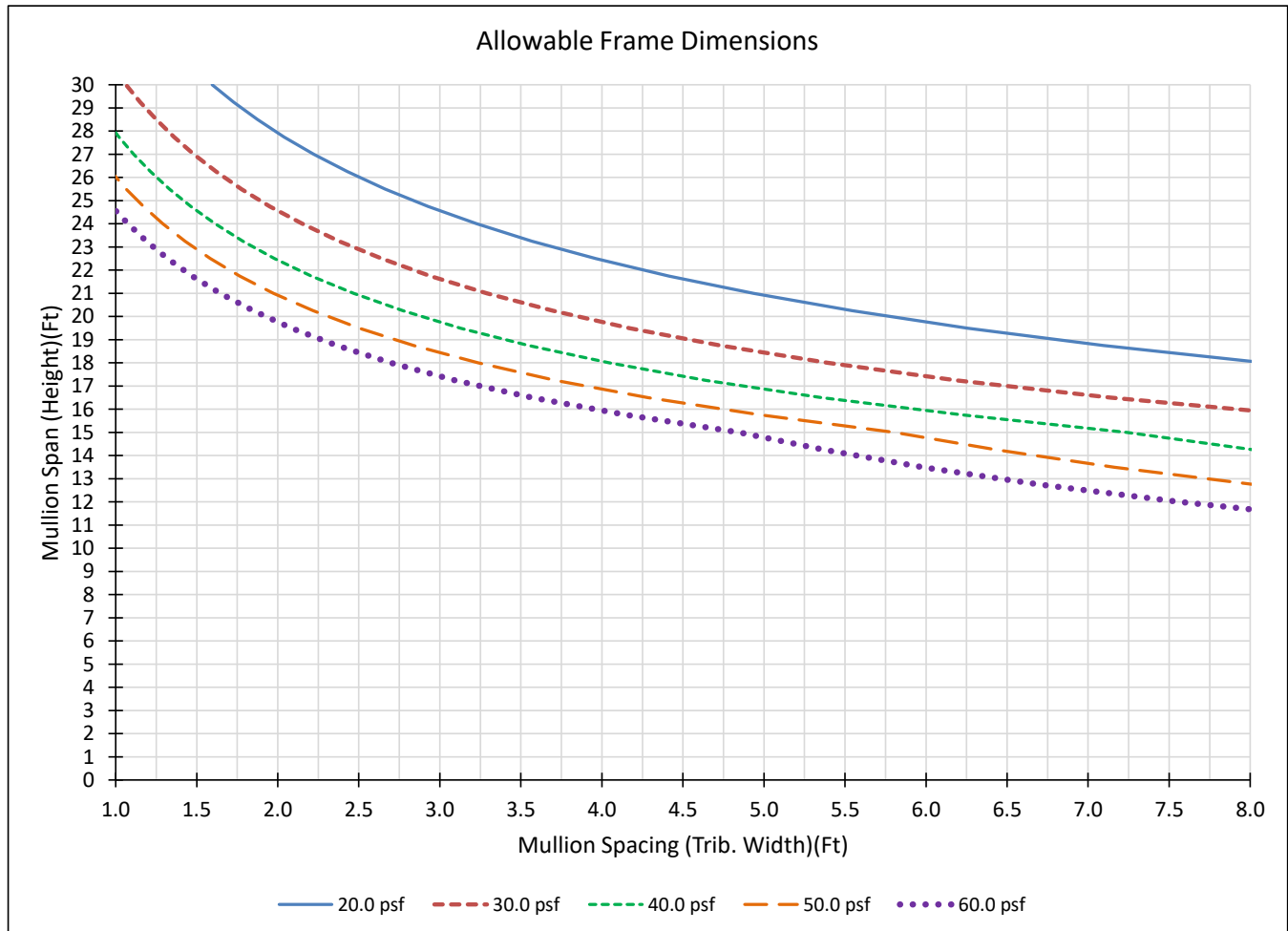
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	3.830 in ²
I _{x, alum} =	32.896 in ⁴	Z _{x, alum} =	10.046 in
S _{x, alum} =	6.542 in ³	wt =	4.601 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	32.896 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1795	1795	1795



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-065 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 10'-0"

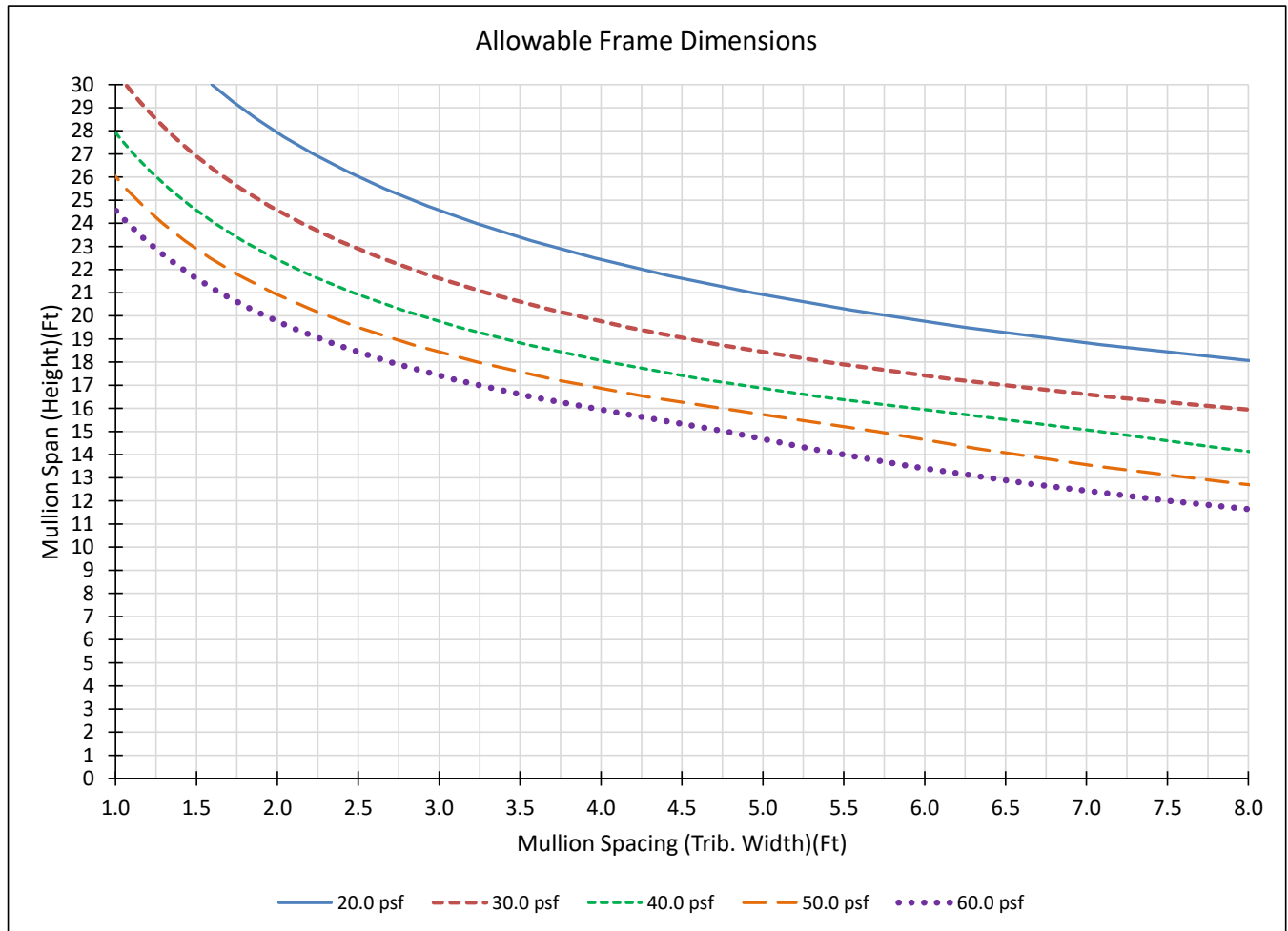
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	3.830 in ²
I _{x, alum} =	32.896 in ⁴	Z _{x, alum} =	10.046 in
S _{x, alum} =	6.542 in ³	wt =	4.601 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	32.896 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	1795	1795	1795



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-094 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 3'-0"

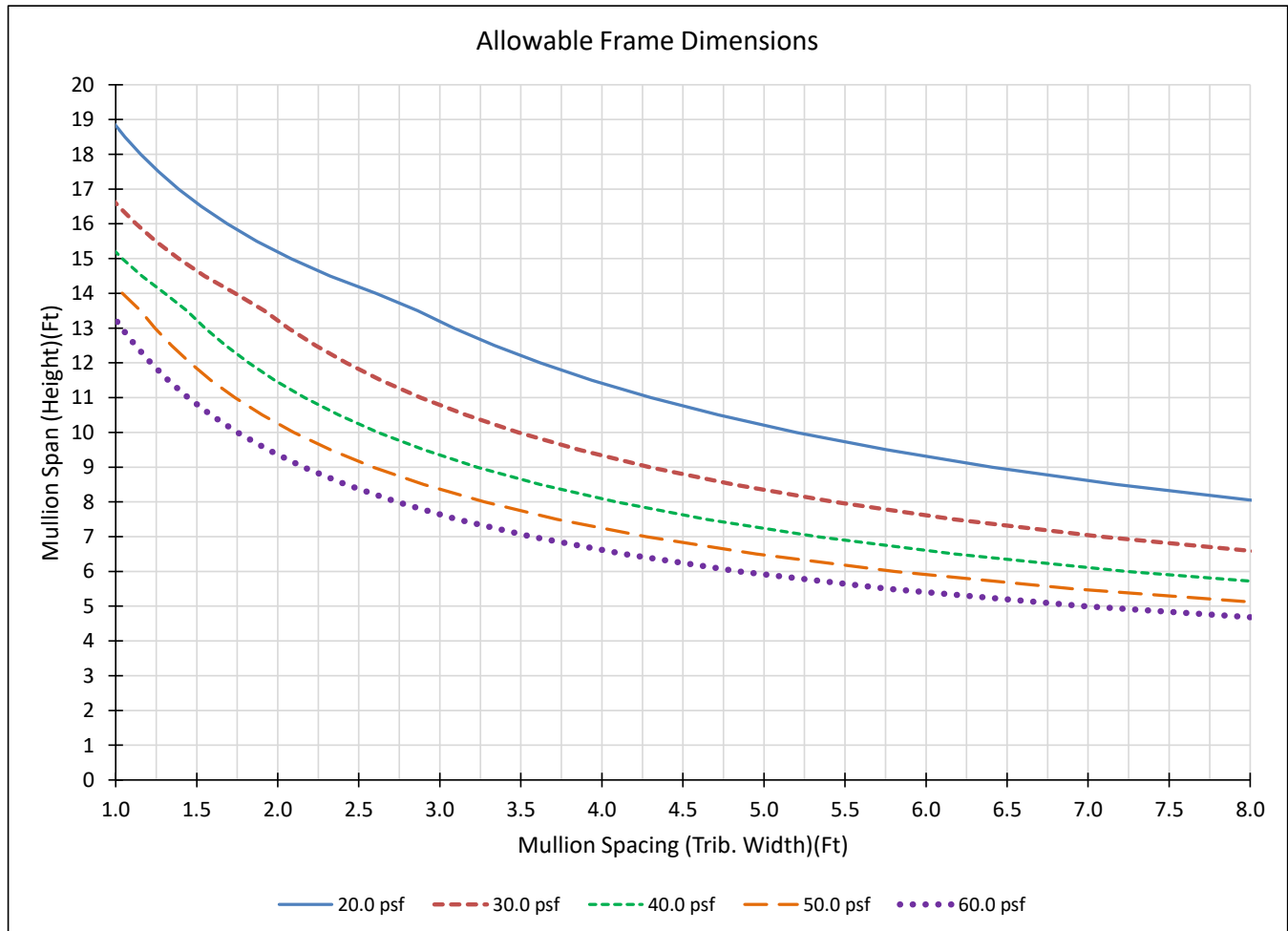
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E = 10100 ksi A = 1.513 in²
 $I_{x, \text{alum}}$ = 4.694 in⁴ $Z_{x, \text{alum}}$ = 2.191 in
 $S_{x, \text{alum}}$ = 1.725 in³ wt = 1.818 lb/ft
 Reinforcing: **No Reinforcing**
 $I_{x, \text{steel}}$ = 0.000 in⁴ $S_{x, \text{steel}}$ = 0.000 in³
 I_{combined} = 4.694 in⁴

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	726	726	489



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-094 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 6'-0"

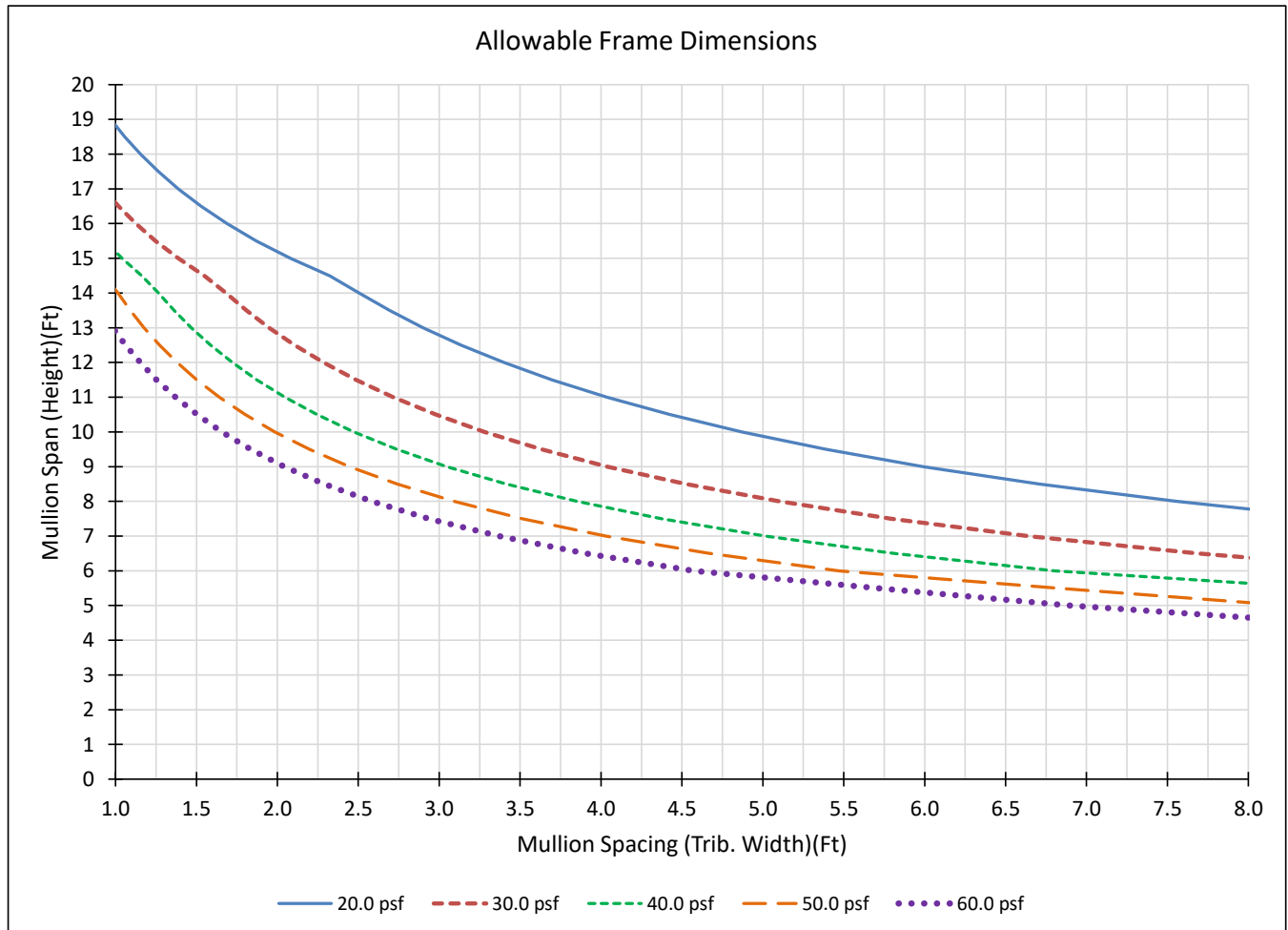
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	1.513 in ²
I _{x, alum} =	4.694 in ⁴	Z _{x, alum} =	2.191 in
S _{x, alum} =	1.725 in ³	wt =	1.818 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	4.694 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	726	726	489



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-094 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 10'-0"

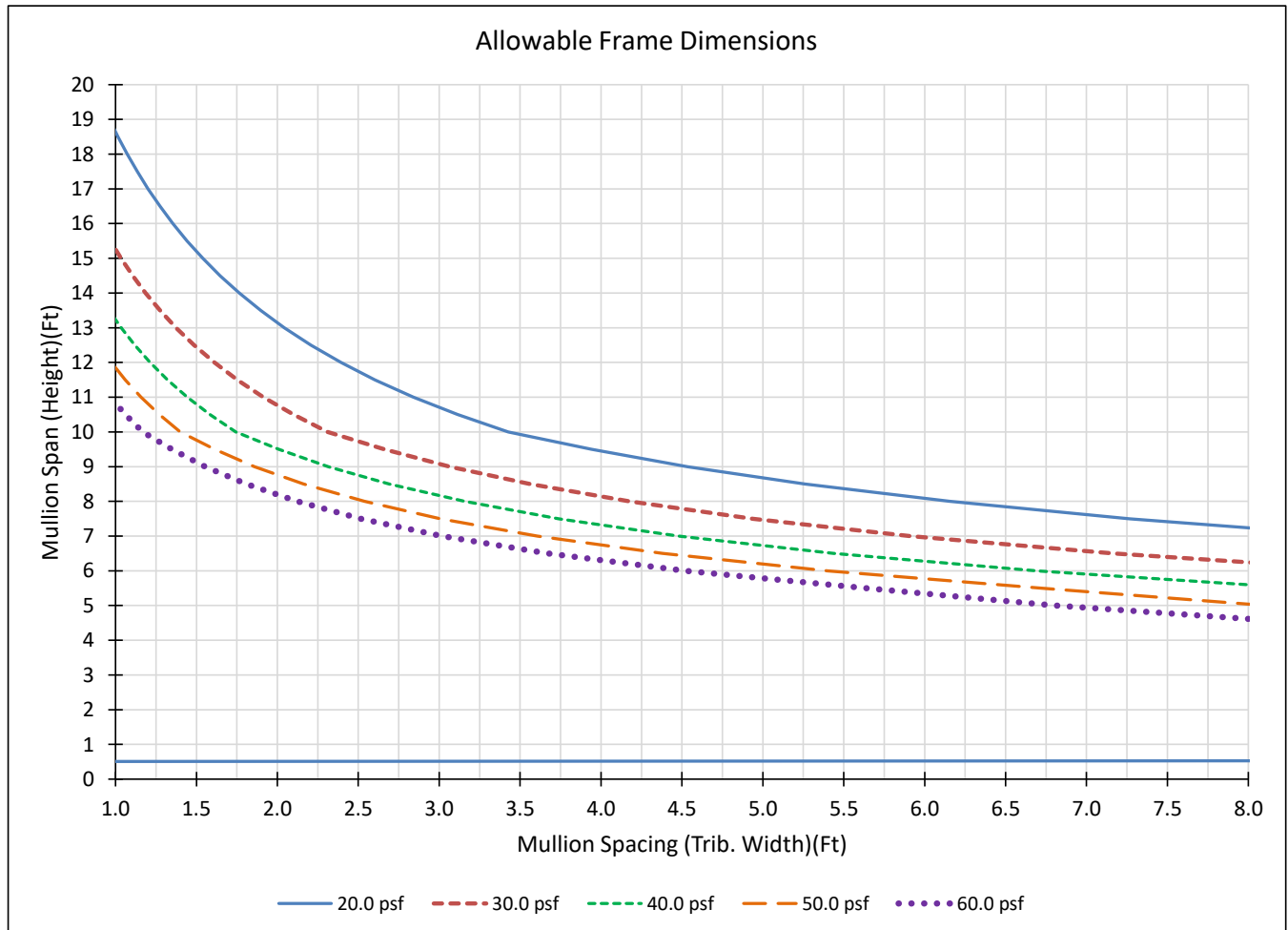
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	1.513 in ²
I _{x, alum} =	4.694 in ⁴	Z _{x, alum} =	2.191 in
S _{x, alum} =	1.725 in ³	wt =	1.818 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	4.694 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	726	726	489



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-095 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 3'-0"

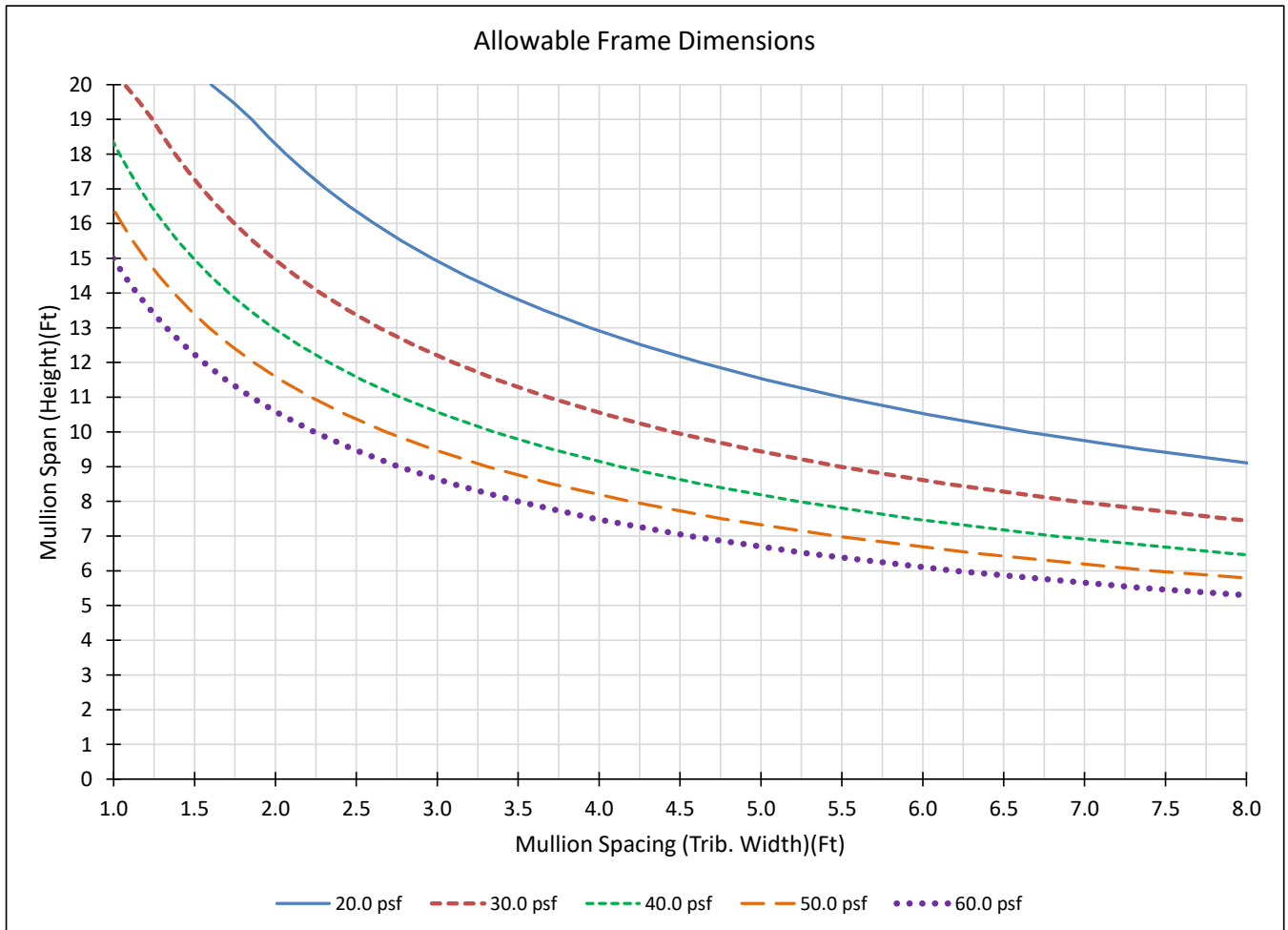
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	1.663 in ²
I _{x, alum} =	9.139 in ⁴	Z _{x, alum} =	3.306 in
S _{x, alum} =	2.521 in ³	wt =	1.998 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	9.139 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	846	846	464



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-095 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 6'-0"

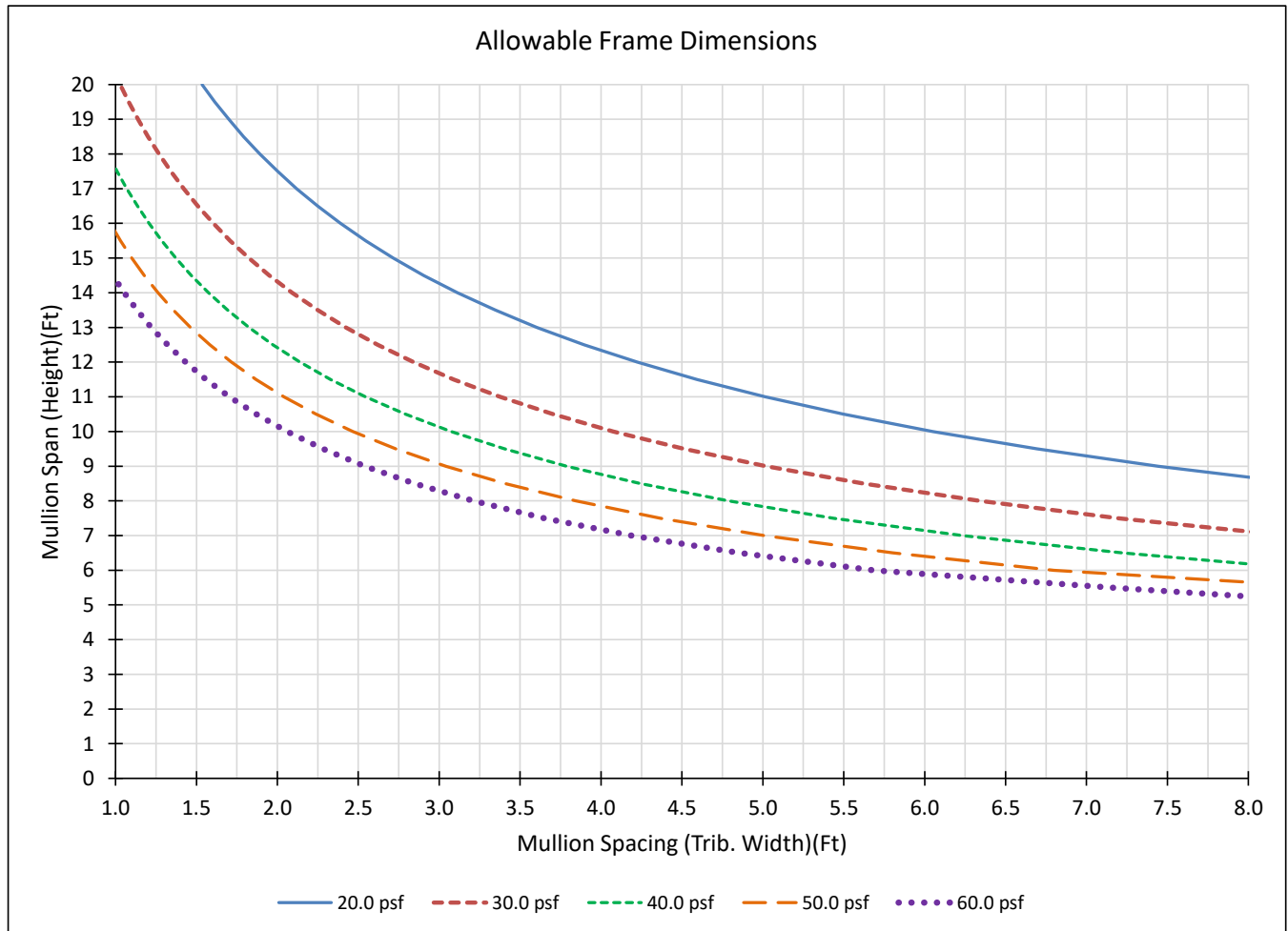
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E = 10100 ksi A = 1.663 in²
 $I_{x, \text{alum}}$ = 9.139 in⁴ $Z_{x, \text{alum}}$ = 3.306 in
 $S_{x, \text{alum}}$ = 2.521 in³ wt = 1.998 lb/ft
 Reinforcing: **No Reinforcing**
 $I_{x, \text{steel}}$ = 0.000 in⁴ $S_{x, \text{steel}}$ = 0.000 in³
 I_{combined} = 9.139 in⁴

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):		
	2.5 ft	5.0 ft	10.0 ft
	846	846	464



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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Wind Load Chart including Unbraced Length Effects

Kawneer 162-095 6063-T6 Aluminum

Maximum Horizontal Mullion Center Line Spacing (Unbraced Length) = 10'-0"

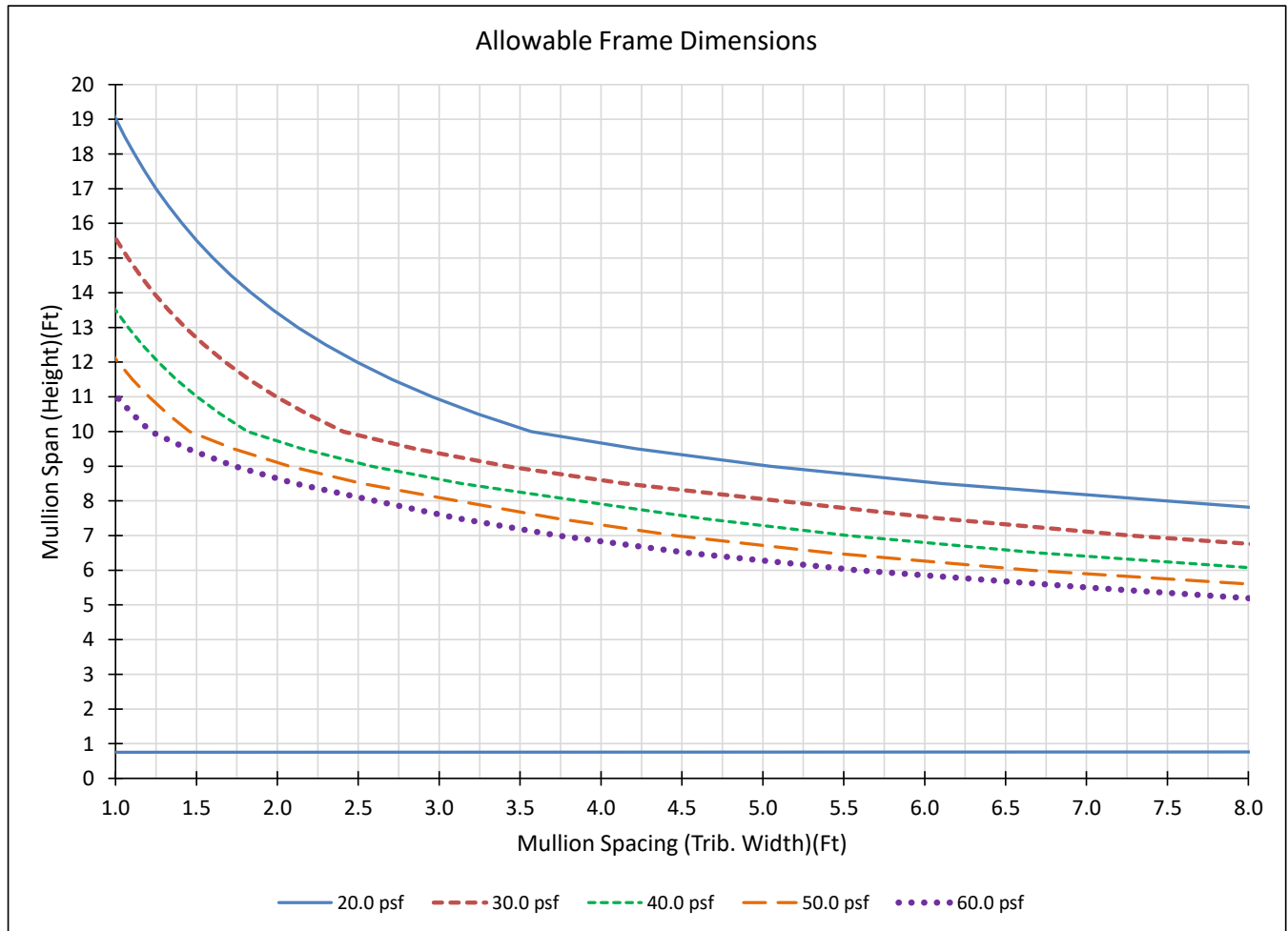
IBC 2015 - ASCE7-10 ASD - 2015 Aluminum Design Manual

E =	10100 ksi	A =	1.663 in ²
I _{x, alum} =	9.139 in ⁴	Z _{x, alum} =	3.306 in
S _{x, alum} =	2.521 in ³	wt =	1.998 lb/ft
Reinforcing:	No Reinforcing		
I _{x, steel} =	0.000 in ⁴	S _{x, steel} =	0.000 in ³
I _{combined} =	9.139 in ⁴		

Curves are based on deflection limits of L/175 for L ≤ 13'-6" or L/240 + 1/4" for L > 13'-6" and limiting stress (moment) according to Chapters B, C & F of the listed Aluminum Design Manual version.

If mullion span < max horizontal spacing, horizontals are not required.

JEI Efficiency Number (Higher is better)	Horizontal Mullion Spacing (ft):	2.5 ft	5.0 ft	10.0 ft
	Efficiency Number:	846	846	464



Using this chart: Plot the mullion height (span) and the intended mullion spacing. If mullion spacing is uneven, add the DLO width on each side of the mullion and divide by 2. Plotted points below a given curve are acceptable for that design pressure (PSF). Plotted points above a given curve will require a heavier mullion or reinforcing for that design pressure (PSF).

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