TROPICAL

TROPICAL FOREST PRODUCTS DECK
AND ATRINGER MATERIAL SPANS
STRUCTURAL REVIEW & CALCULATIONS

Scope:

Structural engineering calculations have been prepared which evaluate the performance of the product based on comparative and/or rational analysis to qualify the following design criteria:

- Maximum allowable stringer span and decking span.
- Maximum allowable beam spans based on various combinations of dead, live, wind / snow loads for decking applications
- Note: evaluation is for spans of product only. No connections or designs of any systems are included in this evaluation and shall be performed by others on a site-specific basis using these base criteria as a guide.

Material Sizes:

The TROPICAL FOREST PRODUCTS decking system is a variety of tropical hardwoods that can be used with the following sizes:

Deck Thickness:
- 0.75"
- 1"
- 1.5"
- 2.5"
- 3.5"

Beam and Stinger Sizes (Actual):
- 1.5" x 5.5", 1.5" x 7.25", 1.5" x 9.25", 1.5" x 11.15"
- 2.5" x 5.5", 2.5" x 7.25", 2.5" x 9.25", 2.5" x 11.15"
- 3.5" x 5.5", 3.5" x 7.25", 3.5" x 9.25", 3.5" x 11.15"
- 5.5" x 5.5", 5.5" x 7.25", 5.5" x 9.25", 5.5" x 11.15"

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General Notes:

1) This system has been designed and shall be fabricated in accordance with the definitions and requirements of the 2015 International Residential Code and International Building Code including considerations pertaining to the use of Naturally Durable Wood.
2) This document has been developed specifically to address the technical performance of TROPICAL FOREST PRODUCTS brand products only and should not be relied on for products which cannot be verified as carrying the TROPICALFORESTPRODUCTS brand through confirming documentation.
3) Engineering express is not certifying any wood species parameters without applicable testing proof. The minimum required thresholds are shown below. These thresholds must be verified separately and are by others, and assuming all the parameters can be proven by the manufacturer, only then can we confirm these span charts valid for the intent of the Code.
4) TROPICAL FOREST PRODUCTS – Naturally Durable Hardwoods Species shall meet the following minimum technical standards.
    a. Material shall be graded as per TROPICAL FOREST PRODUCTS Grading Standards defined as Premium Select, FEQ, COM SEL / FAS
    b. Shall be tested to NFPA class B or better Fire Rating as per ASTM E84 testing standards
    c. Shall be tested to US Forest Products Laboratory Class 2 or better durability rating
    d. Shall be tested to meet or exceed minimum structural properties as per ASTM D245
    e. Modules of elasticity shall be independently verified per code to be equal to or greater than the below
    f. Shall be certified to meet or exceed minimum Allowable design values listed below:
        - A minimum Bending Strength (Fb) of 2100 psi
        - A minimum Modulus of Elasticity (E) of 2180 ksi
        - A minimum Compression Parallel to Grain of 1700 psi
        - A minimum Compression Perpendicular to Grain of 1030 psi
        - A minimum Shear parallel to Grain of 305 psi
        - A maximum Density of 70 lbs. / cu. Ft.
        - A minimum Specific Gravity of 0.67
5) These are a sample of the species list we used under our analysis, and their required properties (including but not limited to:
    a. TROPICALFORESTPRODUCTS Ipe, Garapa, Cumaru, Tigerwood, Jatoba, Angelim Pedra, Purpleheart, Massaranduba, Balau, Ekki

IN ALL CONDITIONS IT IS THE RESPONSIBILITY OF THE PERMIT HOLDER TO ENSURE THE HOST STRUCTURE CAN WITHSTAND THE RATED FORCES BY A COMPLETE SITE-SPECIFIC DESIGN BY OTHERS.

THIS DOCUMENT IS NOT TO BE CONSIDERED A DESIGN APPROVAL AND IS INTENDED AS A DESIGN AID TO OTHERS ONLY.

NO WARRANTY OF ANY KIND, EXPRESSED OR IMPLIED, IS OFFERED BY THIS ENGINEER AS TO THE INTEGRITY OF THE HOST STRUCTURE TO CARRY DESIGN FORCE LOADS INCURRED BY THIS SYSTEM.

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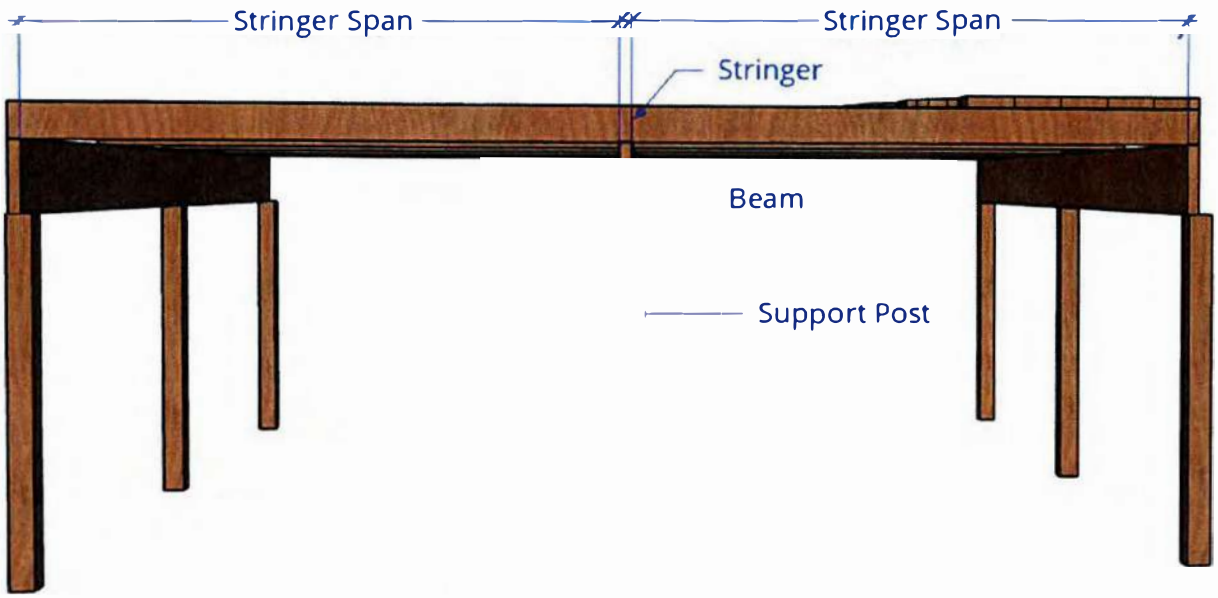

Figure 1: Stringer Span

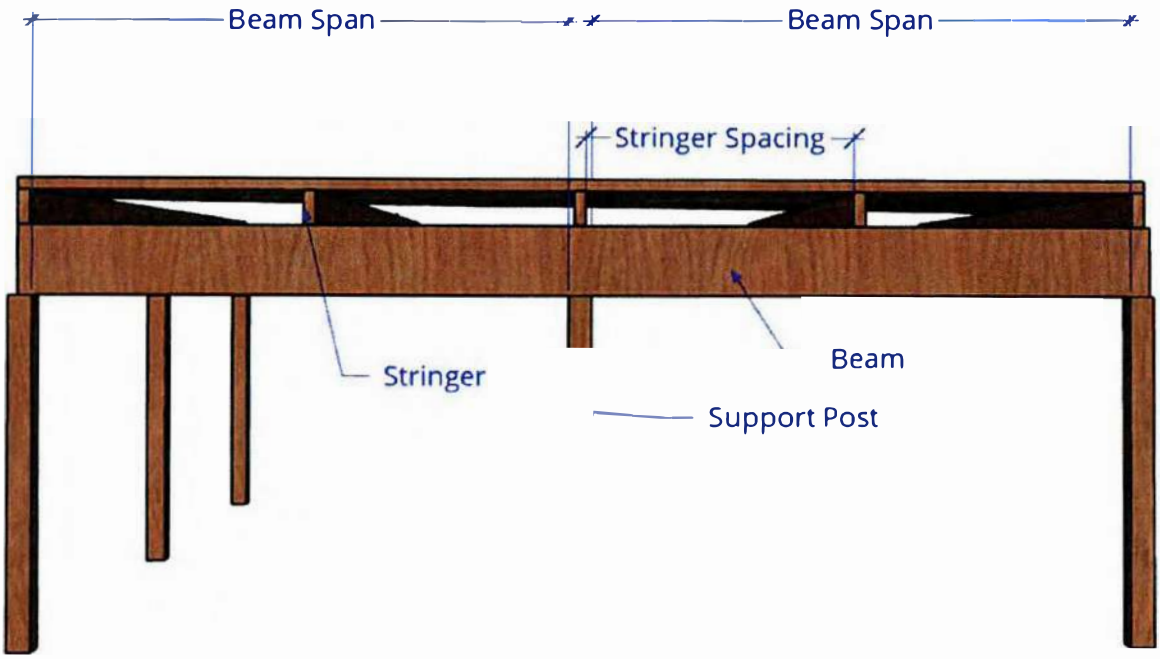

Figure 2: Beam Span

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Decking Span:

Deck Max Span (Support to Support)

Deck Thickness	Live Load		
	60 psf	100 psf	500 psf
0.75 in	27 in	24 in	12 in
1.00 in	39 in	33 in	18 in
1.50 in	57 in	48 in	27 in
2.50 in	96 in	81 in	48 in
3.50 in	135 in	114 in	66 in

GENERAL NOTES:

1. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
2. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
3. Loads utilized for the above (3) tables are as follows: DL = (Max Density * Deck Thicknes) psf, LL = See Table, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
4. Deflection limits for joists and beams are determined as follows:
   Deck – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
5. Deck capacities are shall be independently verified to meet Allowable Design Values described on page 1.
6. Allowable deck bending stress utilized was 2,100 psi.
7. Dead Load Utilized = 20.42 psf or less
8. Required wind pressure shall be calculated and certified by others on a site-specific basis.

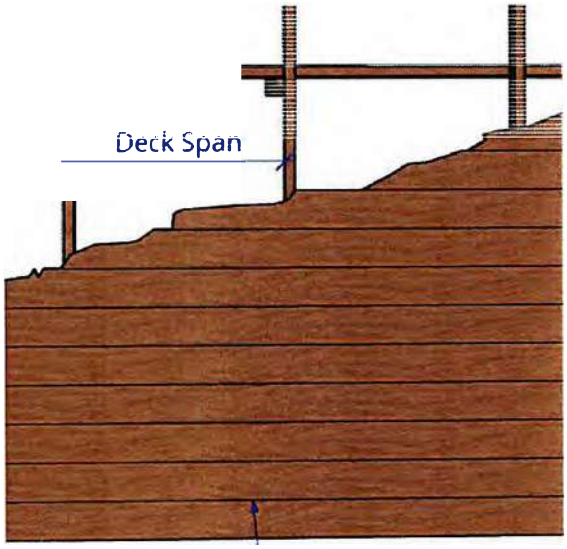

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TABLE 1: BEAM & STRINGER SPANS
WITH ≤ 1.5" DECK THICKNESS

*ALL SIZES ARE ACTUAL NOT NOMINAL

LL 100 PSF

BEAM SPAN (SINGLE BEAM BETWEEN POSTS)

1.5" Deck Thickness	STR. SIZES / STR. SPANS	STRINGER @ 1.5" X 5.5"				STRINGER @ 2.5" X 5.5"				STRINGER @ 3.5" X 5.5"				STRINGER @ 5.5" X 5.5"			
		3'-0"	4'-0"	5'-0"	6'-0"	4'-0"	5'-0"	6'-0"	7'-0"	5'-0"	6'-0"	7'-0"	8'-0"	6'-0"	7'-0"	8'-0"	9'-0"
BEAM SIZES	1.5" X 5.5"	7'-7"	6'-10"	6'-1"	5'-7"	6'-10"	6'-1"	5'-7"	5'-2"	6'-1"	5'-7"	5'-2"	4'-10"	5'-5"	5'-1"	4'-9"	4'-6"
	2.5" X 5.5"	9'-0"	8'-2"	7'-7"	7'-2"	8'-2"	7'-7"	7'-2"	6'-8"	7'-7"	7'-2"	6'-8"	6'-3"	6'-6"	6'-1"	5'-9"	5'-10"
	3.5" X 5.5"	10'-1"	9'-2"	8'-6"	7'-10"	9'-2"	8'-6"	8'-0"	7'-7"	8'-6"	8'-0"	7'-7"	7'-3"	7'-7"	7'-1"	6'-8"	6'-11"
	5.5" X 5.5"	11'-9"	10'-8"	9'-11"	9'-1"	10'-8"	9'-11"	9'-4"	8'-10"	9'-11"	9'-4"	8'-10"	8'-6"	9'-2"	8'-7"	8'-0"	7'-9"
	1.5" X 7.25"	10'-1"	9'-0"	8'-1"	7'-4"	9'-0"	8'-0"	7'-4"	6'-9"	8'-0"	7'-3"	6'-9"	6'-4"	7'-3"	6'-9"	6'-4"	5'-11"
	2.5" X 7.25"	11'-11"	10'-10"	10'-1"	9'-5"	10'-10"	10'-1"	9'-5"	8'-9"	10'-1"	9'-5"	8'-9"	8'-2"	8'-8"	8'-2"	7'-8"	7'-2"
	3.5" X 7.25"	13'-4"	12'-1"	11'-3"	10'-7"	12'-1"	11'-3"	10'-7"	10'-1"	11'-3"	10'-7"	10'-1"	9'-7"	10'-1"	9'-7"	9'-1"	8'-8"
	5.5" X 7.25"	15'-6"	14'-1"	13'-1"	12'-4"	14'-1"	13'-1"	12'-4"	11'-8"	13'-1"	12'-4"	11'-8"	11'-2"	11'-8"	11'-2"	10'-9"	10'-2"
	1.5" X 9.25"	12'-10"	11'-6"	10'-4"	9'-5"	11'-5"	10'-3"	9'-4"	8'-8"	10'-2"	9'-4"	8'-7"	8'-1"	9'-2"	8'-7"	7'-7"	6'-11"
	2.5" X 9.25"	15'-3"	13'-10"	12'-10"	12'-1"	13'-10"	12'-10"	12'-0"	11'-2"	12'-10"	12'-0"	11'-2"	10'-5"	11'-1"	10'-5"	9'-10"	9'-3"
	3.5" X 9.25"	17'-0"	15'-6"	14'-4"	13'-6"	15'-6"	14'-4"	13'-6"	12'-10"	14'-4"	13'-6"	12'-10"	12'-3"	12'-10"	12'-3"	11'-7"	13'-9"
	5.5" X 9.25"	19'-10"	18'-0"	16'-8"	15'-8"	18'-0"	16'-8"	15'-8"	14'-11"	16'-8"	15'-8"	14'-11"	14'-3"	14'-11"	14'-3"	13'-9"	13'-0"
	1.5" X 11.25"	15'-7"	14'-0"	12'-6"	11'-5"	13'-11"	12'-5"	11'-4"	10'-6"	12'-5"	11'-4"	10'-6"	9'-10"	11'-4"	10'-6"	9'-10"	9'-2"
	2.5" X 11.25"	18'-6"	16'-10"	15'-7"	14'-8"	16'-10"	15'-7"	14'-8"	13'-7"	15'-7"	14'-8"	13'-7"	12'-8"	14'-7"	13'-6"	12'-7"	11'-9"
	3.5" X 11.25"	20'-9"	18'-10"	17'-6"	16'-5"	18'-10"	17'-6"	16'-5"	15'-7"	17'-6"	16'-5"	15'-7"	14'-11"	16'-5"	15'-7"	14'-11"	14'-1"
	5.5" X 11.25"	24'-1"	21'-11"	20'-4"	19'-1"	21'-11"	20'-4"	19'-1"	18'-2"	20'-4"	19'-1"	18'-2"	17'-4"	19'-1"	18'-2"	17'-4"	16'-8"

1.5" Deck Thickness	STR. SIZES / STR. SPANS	STRINGER @ 3.5" X 5.5"				STRINGER @ 5.5" X 5.5"											
		5'-0"	6'-0"	7'-0"	8'-0"	6'-0"	7'-0"	8'-0"	9'-0"	10'-0"	11'-0"	12'-0"	13'-0"	14'-0"	15'-0"	16'-0"	17'-0"
BEAM SIZES	1.5" X 5.5"	6'-1"	5'-6"	5'-1"	4'-9"	5'-5"	5'-1"	4'-9"	4'-6"	4'-3"	4'-1"	3'-11"	3'-9"	3'-7"	3'-6"	3'-4"	3'-3"
	2.5" X 5.5"	7'-7"	7'-1"	6'-7"	6'-2"	7'-1"	6'-6"	6'-1"	5'-10"	5'-7"	5'-4"	5'-2"	5'-0"	4'-10"	4'-8"	4'-7"	4'-5"
	3.5" X 5.5"	8'-6"	8'-0"	7'-7"	7'-3"	8'-0"	7'-7"	7'-2"	6'-11"	6'-8"	6'-5"	6'-2"	6'-0"	5'-10"	5'-8"	5'-6"	5'-5"
	5.5" X 5.5"	9'-11"	9'-4"	8'-10"	8'-6"	9'-4"	8'-10"	8'-5"	8'-2"	7'-11"	7'-8"	7'-5"	7'-3"	7'-0"	6'-10"	6'-8"	6'-6"
	1.5" X 7.25"	8'-0"	7'-3"	6'-9"	6'-4"	7'-3"	6'-9"	6'-4"	5'-11"	5'-8"	5'-5"	5'-3"	5'-1"	4'-11"	4'-9"	4'-8"	4'-6"
	2.5" X 7.25"	10'-1"	9'-5"	8'-9"	8'-2"	9'-5"	8'-9"	8'-2"	7'-8"	7'-4"	7'-1"	6'-10"	6'-7"	6'-5"	6'-3"	6'-1"	5'-11"
	3.5" X 7.25"	11'-3"	10'-7"	10'-1"	9'-7"	10'-7"	10'-1"	9'-7"	9'-1"	8'-9"	8'-5"	8'-2"	7'-11"	7'-8"	7'-6"	7'-3"	7'-1"
	5.5" X 7.25"	13'-1"	12'-4"	11'-8"	11'-2"	12'-4"	11'-8"	11'-2"	10'-9"	10'-4"	10'-0"	9'-9"	9'-6"	9'-3"	9'-0"	8'-10"	8'-7"
	1.5" X 9.25"	10'-2"	9'-4"	8'-7"	8'-1"	9'-4"	8'-7"	8'-1"	7'-7"	7'-3"	6'-11"	6'-8"	6'-6"	6'-3"	6'-1"	5'-11"	5'-9"
	2.5" X 9.25"	12'-10"	12'-0"	11'-1"	10'-5"	12'-0"	11'-1"	10'-5"	9'-10"	9'-5"	9'-0"	8'-8"	8'-5"	8'-2"	7'-11"	7'-8"	7'-6"
	3.5" X 9.25"	14'-4"	13'-6"	12'-10"	12'-3"	13'-6"	12'-10"	12'-3"	11'-7"	11'-2"	10'-10"	10'-6"	10'-3"	9'-11"	9'-8"	9'-6"	9'-3"
	5.5" X 9.25"	16'-8"	15'-8"	14'-11"	14'-3"	15'-8"	14'-11"	14'-3"	13'-9"	13'-3"	12'-10"	12'-6"	12'-2"	11'-11"	11'-8"	11'-5"	11'-2"
	1.5" X 11.25"	11'-4"	10'-6"	9'-10"	9'-3"	10'-6"	9'-10"	9'-3"	8'-9"	8'-5"	8'-2"	7'-11"	7'-8"	7'-6"	7'-3"	7'-1"	6'-11"
	2.5" X 11.25"	14'-7"	13'-6"	12'-7"	11'-11"	13'-6"	12'-7"	11'-11"	11'-3"	10'-9"	10'-4"	10'-0"	9'-9"	9'-6"	9'-3"	9'-0"	8'-9"
	3.5" X 11.25"	16'-5"	15'-7"	14'-11"	14'-1"	15'-7"	14'-11"	14'-1"	13'-6"	13'-0"	12'-6"	12'-1"	11'-9"	11'-6"	11'-3"	10'-11"	10'-8"
	5.5" X 11.25"	19'-1"	18'-2"	17'-4"	16'-8"	18'-2"	17'-4"	16'-8"	16'-0"	15'-5"	14'-11"	14'-6"	14'-1"	13'-9"	13'-5"	13'-2"	12'-11"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $^{3}\frac{L_{os}{}^{3} * t_1}{t_2}$ or ^{2}
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 21 psf or less, LL = 100 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

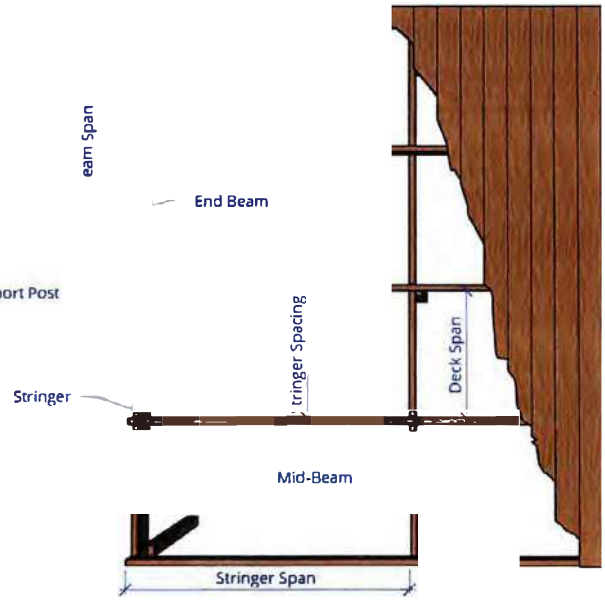

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TABLE 2: BEAM & STRINGER SPANS WITH ≤ 1.5" DECK THICKNESS

LL 100 PSF

*ALL SIZES ARE ACTUAL NOT NOMINAL

BEAM SPAN (SINGLE BEAM BETWEEN POSTS)

1.5" Deck Thickness	STR. SIZES	STR. SPANS	STRINGER @ 1.5" X 7.25"					STRINGER @ 2.5" X 7.25"						STRINGER @ 3.5" X 7.25"						STRINGER @ 5.5" X 7.25"					
			4'-0"	5'-0"	6'-0"	8'-0"	9'-0"	4'-0"	6'-0"	8'-0"	9'-0"	10'-6"	12'-0"	5'-0"	6'-0"	8'-0"	10'-6"	12'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"
BEAMS	1.5" X 5.5"		6'-10"	6'-1"	5'-7"	4'-10"	4'-7"	6'-9"	5'-6"	4'-9"	4'-6"	4'-2"	3'-10"	6'-0"	5'-6"	4'-9"	4'-3"	3'-10"	5'-5"	4'-8"	4'-2"	3'-10"	3'-6"
	2.5" X 5.5"		8'-2"	7'-7"	7'-2"	6'-3"	5'-10"	8'-2"	7'-2"	6'-2"	5'-10"	5'-5"	5'-0"	7'-7"	7'-1"	6'-2"	5'-6"	5'-0"	7'-0"	6'-0"	5'-5"	4'-11"	4'-7"
	3.5" X 5.5"		9'-2"	8'-6"	8'-0"	7'-3"	6'-11"	9'-2"	8'-0"	7'-3"	6'-11"	6'-5"	5'-10"	8'-6"	8'-0"	7'-3"	6'-6"	5'-11"	8'-0"	7'-2"	6'-5"	5'-10"	5'-5"
	5.5" X 5.5"		10'-8"	9'-11"	9'-4"	8'-6"	8'-2"	10'-8"	9'-4"	8'-6"	8'-2"	7'-9"	7'-5"	9'-11"	9'-4"	8'-6"	7'-10"	7'-5"	9'-4"	8'-6"	7'-10"	7'-4"	6'-9"
	1.5" X 7.25"		9'-0"	8'-1"	7'-4"	6'-4"	6'-0"	8'-11"	7'-3"	6'-4"	5'-11"	5'-6"	5'-1"	7'-11"	7'-3"	6'-3"	5'-7"	5'-2"	6'-3"	5'-2"	5'-0"	4'-8"	
	2.5" X 7.25"		10'-10"	10'-1"	9'-5"	8'-3"	7'-9"	10'-10"	9'-5"	8'-2"	7'-8"	7'-1"	6'-7"	10'-1"	9'-4"	8'-1"	7'-3"	6'-7"	8'-1"	7'-2"	6'-6"	6'-0"	
	3.5" X 7.25"		12'-1"	11'-3"	10'-7"	9'-7"	9'-2"	12'-1"	10'-7"	9'-7"	9'-1"	8'-5"	7'-10"	11'-3"	10'-7"	9'-7"	8'-7"	7'-10"	9'-5"	8'-5"	7'-8"	7'-2"	
	5.5" X 7.25"		14'-1"	13'-1"	12'-4"	11'-2"	10'-9"	14'-1"	12'-4"	11'-2"	10'-9"	10'-2"	9'-9"	13'-1"	12'-4"	11'-2"	10'-4"	9'-9"	11'-2"	10'-4"	9'-8"	8'-11"	
	1.5" X 9.25"		11'-6"	10'-3"	9'-5"	8'-2"	7'-8"	11'-5"	9'-4"	8'-1"	7'-7"	7'-0"	6'-6"	10'-1"	9'-3"	8'-0"	7'-2"	6'-6"	7'-11"	7'-1"	6'-5"	5'-11"	
	2.5" X 9.25"		13'-10"	12'-10"	12'-1"	10'-6"	9'-11"	13'-10"	12'-0"	10'-5"	9'-10"	9'-1"	8'-5"	12'-10"	11'-11"	10'-4"	9'-3"	8'-5"	11'-9"	10'-2"	9'-1"	8'-4"	7'-8"
	3.5" X 9.25"		15'-6"	14'-4"	13'-6"	12'-3"	11'-8"	15'-6"	13'-6"	12'-3"	11'-7"	10'-9"	9'-11"	14'-4"	13'-6"	12'-2"	10'-11"	10'-0"	13'-6"	12'-0"	10'-9"	9'-10"	9'-1"
	5.5" X 9.25"		18'-0"	16'-8"	15'-8"	14'-3"	13'-9"	18'-0"	15'-8"	14'-3"	13'-9"	13'-0"	12'-3"	16'-8"	15'-8"	14'-3"	13'-3"	12'-3"	15'-8"	14'-3"	13'-3"	12'-3"	11'-5"
	1.5" X 11.25"		13'-11"	12'-6"	11'-5"	9'- 1"	9'-4"	13'-10"	11'-4"	9'-10"	9'-3"	8'-7"	7'-11"	12'-3"	11'-3"	9'-9"	8'-8"	7'-1	11'-1"	9'-7"	8'-7"	7'-10"	7'-3"
	2.5" X 11.25"		16'-10"	15'-7"	14'-8"	12'-9"	12'-0"	16'-10"	14'-7"	12'-8"	11'-11"	11'-1"	10'-3"	15'-7"	14'-5"	12'-6"	11'-3"	10'-3"	14'-3"	12'-4"	11'-1"	10'-1"	9'-4"
	3.5" X 11.25"		18'-10"	17'-6"	16'-5"	14'	14'-2"	18'-10"	16'-5"	14'-11"	14'-1"	13'-1"	12'-1"	17'-6"	16'-5"	14'-10"	13'-3"	12'-1"	16'-5"	14'-7"	13'-1"	11'-11"	11'-1"
	5.5" X 11.25"		21'-11"	20'-4"	19'-1"	17'-4"	16'-8"	21'-11"	19'-1"	17'-4"	16'-8"	15'-10"	14'-6"	20'-4"	19'-1"	17'-4"	16'-1"	14'-6"	19'-1"	17'-4"	16'-1"	14'-5"	12'-5"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}^3 * t_1}{t_2}}$ or $\sqrt[2]{\frac{L_{os}^2 * t_1}{t_2}}$
   b. New Beam Length (in):
      I. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 23 psf or less, LL = 100 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

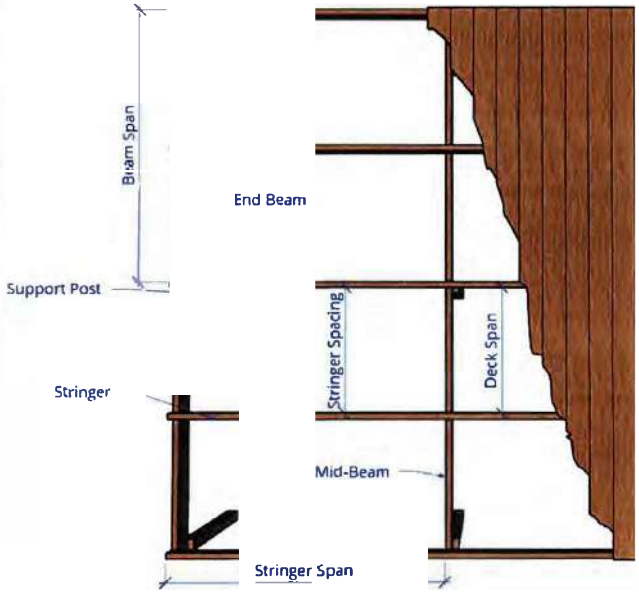

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TABLE 3: BEAM & STRINGER SPANS WITH ≤ 1.5" DECK THICKNESS

*ALL SIZES ARE ACTUAL NOT NOMINAL

LL 100 PSF

BEAM SPAN (SINGLE BEAM BETWEEN POSTS)

1.5" Deck Thickness	STR. SIZES	STRINGER @ 1.5" X 9.25"					STRINGER @ 2.5" X 9.25"					STRINGER @ 3.5" X 9.25'					STRINGER @ 5.5" X 9.25"				
	STR. SPANS	4'-0"	6'-0"	8'-0"	10'-0"	11'-6"	6'-0"	8'-0"	10'-0"	12'-0"	13'-6"	8'-0"	10'-0"	12'-0"	14'-0'	15'-6"	10'-0"	12'-0"	14'-0"	16'-0"	18'-0"
B	1.5" X 5.5"	6'-10"	5'-7"	4'-10"	4'-4"	4'-0"	5'-6"	4'-9"	4'-3"	3'	3'-8"	4'-9"	4'-3"	3'-10"	3'-7"	3'-5"	4'-2"	3'-9"	3'-6"	3'-3"	3'-1"
E	2.5 X 5.5"	8'-2"	7'-2"	6'-2"	5'-7"	5'-2"	7'-1"	6'-2"	5'-6"	5'-0"	4'-9"	6'-1"	5'-5"	5'-0"	4'-7"	4'-4"	5'-4"	4'-10"	4'-6"	4'-3"	4'-0"
A	3.5" X 5.5"	9'-2"	8'-0"	7'-3"	6'-7"	6'-2"	8'-0"	7'-3"	6'-6"	5'-	5'-7"	7'-2"	6'-5"	5'-11"	5'-5"	5'-2"	6'-4"	5'-9"	5'-4"	5'-0"	4'-9"
M	5.5" X 5.5"	10'-8"	9'-4"	8'-6"	7'-10"	7'-6"	9'-4"	8'-6"	7'-10"	7'-5"	7'-0"	8'-6"	7'-10"	7'-4"	6'-10'	6'-6"	7'-10"	7'-3"	6'-8"	6'-3"	5'-11"
	1.5" X 7.25"	9'-0"	7'-4"	6'-4"	5'-8"	5'-3"	7'-3"	6'-3"	5'-7"	5'-2"	4'-10"	6'-3"	5'-7"	5'-1"	4'-8"	4'-6"	5'-5"	5'-0"	4'-7"	4'-4"	4'-1"
	2.5" X 7.25"	10'-10"	9'-5"	8'-2"	7'-4"	6'-10"	9'-4"	8'-1"	7'-3"	6' 7	6'-3"	8'-0"	7'-2"	6'-7"	6'-1"	5'-9"	7'-1"	6'-5"	5'-11"	5'-7"	5'-3"
	3.5" X 7.25"	12'-1"	10'-7"	9'-7"	8'-8"	8'-1"	10'-7"	9'-7"	8'-7"	7' 0	7'-5"	9'-6"	8'-6"	7'-9"	7'-2'	6'-10"	8'-4"	7'-7"	7'-1"	6'-7"	6'-3"
	5.5" X 7.25"	14'-1"	12'-4"	11'-2"	10'-4"	9'-11"	12'-4"	11'-2"	10'-4"	9'-9"	9'-3"	11'-2"	10'-4"	9'-9"	9'-0"	8'-7"	10'-4"	9'-6"	8'-10"	8'-3"	7'-9"
S	1.5" X 9.25"	11'-5"	9'-4"	8'-1"	7'-3"	6'-9"	9'-3"	8'-0"	7'-2"	6'-7"	6'-2"	7'-11"	7'-1"	6'-6"	6'-0"	5'-8"	7'-0"	6'-4"	5'-11"	5'-6"	5'-2"
I	2.5" X 9.25"	13'-10"	12'-0"	10'-5"	9'-4"	8'-9"	11'-11"	10'-4"	9'-3"	8'-5"	8'-0"	10'-3"	9'-2"	8'-4"	7'-9"	7'-4"	9'-0"	8'-3"	7'-7"	7'-1"	6'-8
Z	3.5" X 9.25"	15'-6"	13'-6"	12'-3"	11'-1"	10'-4"	13'-6"	12'-3"	10'-11"	10'-0"	9'-5"	12'-1"	10'-10"	9'-11"	9'-2"	8'-9"	10'-8"	9'-9"	9'-0"	8'-5"	7'-11'
E	5.5" X 9.25"	18'-0"	15'-8"	14'-3"	13'-3"	12'-8"	15'-8"	14'-3"	13'-3"	12'-5"	11'-9"	14'-3"	13'-3"	12'-5"	11'-6'	10'-11"	13'-3"	12'-2"	11'-3"	10'-6"	9'-8"
S	5 X 11.25"	13' 1'	1'-4"	9'-10"	8'-10"	8'-3"	11'-3"	9'-9"	8'-9"	8'-0"	7'-6"	9'-8"	8'-8"	7'-11"	7'-4"	6'-11"	8'-6"	7'-9"	7'-2"	6'-8"	6'-4"
	2.5" X 11.25"	16'-10	14'-8"	12'-8"	11'-4"	10'-7"	14'-6"	12'-7"	11'-3"	10'-3"	9'-8"	12'-5"	11'-2"	10'-2"	9'-5"	9'-0"	10'-11'	10'-0"	9'-3"	8'-8"	8'-2"
	3.5" X 11.25"	18'-10"	16'-5"	14'-11"	13'-5"	12'-6"	16'-5"	14'-10"	13'-3"	12'-2"	11'-5"	14'-8"	13'-2"	12'-0"	11'-2'	10'-7"	12'-11'	11'-10"	10'-11"	10'-3"	9'-8"
		21'-11"	19'-1"	17'-4"	16'-1"	15'-1"	19'-1"	17'-4"	16'-1"	14'-5"	12'-10"	17'-4"	16'-1"	14'-4"	12'-4'	11'-2"	16'-1"	14'-2"	12'-3"	10'-10"	9'-8"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}^3 * t_1}{t_2}}$ or $\sqrt[2]{\frac{L_{os}^2 * t_1}{t_2}}$
   b New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 24 psf or less, LL = 100 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

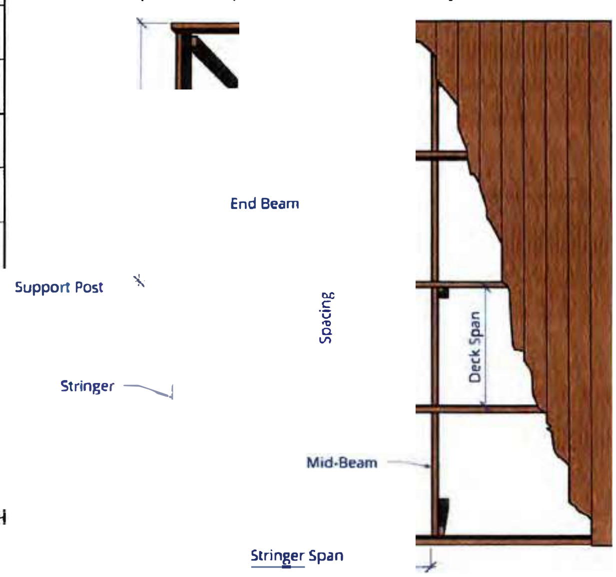

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TABLE 4: BEAM & STRINGER SPANS
WITH ≤ 1.5" DECK THICKNESS

*ALL SIZES ARE ACTUAL NOT NOMINAL

LL 100 PSF

BEAM SPAN (SINGLE BEAM BETWEEN POSTS)

.5" Deck hickness	STR. SIZES	STR. SPANS	STRINGER @ 1.5" X 11.25"				STRINGER @ 2.5" X 11.25"				STRINGER @ 3.5" X 11.25"				STRINGER @ 5.5" X 11.25"			
			6'-0"	8'-0"	10'-0"	12'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-6"	10'-0"	12'-0"	14'-0"	16'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"
BEAMS	2.5" X 5.5"	5'-6"	4'-9"	4'-3"	3'-11"	3'-7"	4'-9"	4'-3"	3'-10"	3'-7"	3'-3"	4'-2"	3'-10"	3'-6"	3'-4"	3'-9"	3'-5"	3'-3"	3'-0"	2'-11"
		7'-2"	6'-2"	5'-6"	4'-8"	5'-1"	6'-1"	5'-6"	5'-0"	4'-7"	4'-3"	5'-5"	5'-0"	4'-7"	4'-3"	4'-10"	4'-6"	4'-2"	3'-11"	3'-9"
	3.5" X 5.5"	8'-0"	7'-3"	6'-7"	5'-6"	6'-0"	7'-3"	6'-6"	5'-11"	5'-6"	5'-0"	6'-5"	5'-11"	5'-5"	5'-1"	5'-8"	5'-3"	4'-11"	4'-8"	4'-5"
		9'-4"	8'-6"	7'-10"	7'-5"	6'-11"	8'-6"	7'-10"	7'-5"	6'-10"	6'-4"	7'-10"	7'-4"	6'-9"	6'-4"	7'-2"	6'-7"	6'-2"	5'-10"	5'-7"
	5.5" X 5.5"	7'-4"	6'-4"	5'-8"	5'-2"	4'-9"	6'-3"	5'-7"	5'-1"	4'-9"	4'-4"	5'-6"	5'-0"	4'-8"	4'-4"	4'-11"	4'-7"	4'-3"	4'-0"	3'-10"
	1.5" X 7.25"	9'-5"	8'-2"	7'-4"	6'-8"	6'-2"	8'-1"	7'-3"	6'-7"	6'-1"	5'-7"	7'-2"	6'-6"	6'-0"	5'-8"	6'-4"	5'-11"	5'-6"	5'-2"	4'-11"
	2.5 X 7.25"	10'-7"	9'-7"	8'-8"	7'-11"	7'-4"	9'-6"	8'-6"	7'-9"	7'-3"	6'-8"	8'-5"	7'-8"	7'-2"	6'-8"	7'-6"	7'-0"	6'-6"	6'-2"	5'-10"
	3.5" X 7.25"	12'-4"	11'-2"	10'-4"	9'-9"	9'-2"	11'-2"	10'-4"	9'-9"	9'-0"	8'-4"	10'-4"	9'-8"	8'-11"	8'-4"	9'-5"	8'-9"	8'-2"	7'-8"	7'-4"
SIZES	2.5" X 9.25"	9'-4"	8'-1"	7'-3"	6'-7"	6'-1"	8'-0"	7'-2"	6'-6"	6'-0"	5'-7"	7'-1"	6'-5"	6'-0"	5'-7"	6'-4"	5'-10"	5'-5"	5'-2"	4'-10"
		12'-0"	10'-5"	9'-4"	8'-6"	7'-11"	10'-3"	9'-2"	8'-5"	7'-9"	7'-2"	9'-1"	8'-4"	7'-8"	7'-2"	8'-2"	7'-6"	7'-0"	6'-8"	6'-4"
	3.5" X 9.25"	13'-6"	12'-3"	11'-0"	10'-1"	9'-4"	12'-2"	10'-11"	9'-11"	9'-2"	8'-6"	10'-9"	9'-10"	9'-1"	8'-6"	9'-7"	8'-11"	8'-4"	7'-10"	7'-5"
	5.5" X 9.25"	15'-8"	14'-3"	13'-3"	12'-5"	11'-8"	14'-3"	13'-3"	12'-5"	11'-6"	10'-6"	13'-3"	12'-3"	11'-5"	10'-8"	12'-0"	11'-2"	10'-5"	9'-8"	8'-8"
	1.5" X 11.25"	11'-4"	9'-10"	8'-9"	8'-0"	7'-5"	9'-8"	8'-8"	7'-11"	7'-4"	6'-9"	8'-7"	7'-10"	7'-3"	6'-9"	7'-8"	7'-1"	6'-8"	6'-3"	5'-11"
	2.5" X 11.25"	14'-7"	12'-8"	11'-4"	10'-4"	9'-7"	12'-6"	11'-2"	10'-3"	9'-6"	8'-9"	11'-1"	10'-1"	9'-4"	8'-9"	9'-11"	9'-2"	8'-7"	8'-1"	7'-8"
		16'-5"	14'-11"	13'-5"	12'-3"	11'-4"	14'-9"	13'-3"	12'-1"	11'-2"	10'-4"	13'-1"	11'-11"	11'-1"	10'-4"	11'-8"	10'-10"	10'-2"	9'-7"	8'-9"
		19'-1"	17'-4"	16'-1"	14'-5"	12'-5"	17'-4"	16'-1"	14'-4"	12'-4"	10'-6"	16'-1"	14'-3"	12'-3"	10'-10"	14'-1"	12'-3"	10'-9"	9'-7"	8'-8"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\frac{\sqrt[3]{L_{os}^3 * t_1}}{t_2}$ or $\frac{L_{os}^2 * t_1}{t_2}$
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 26 psf or less, LL = 100 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

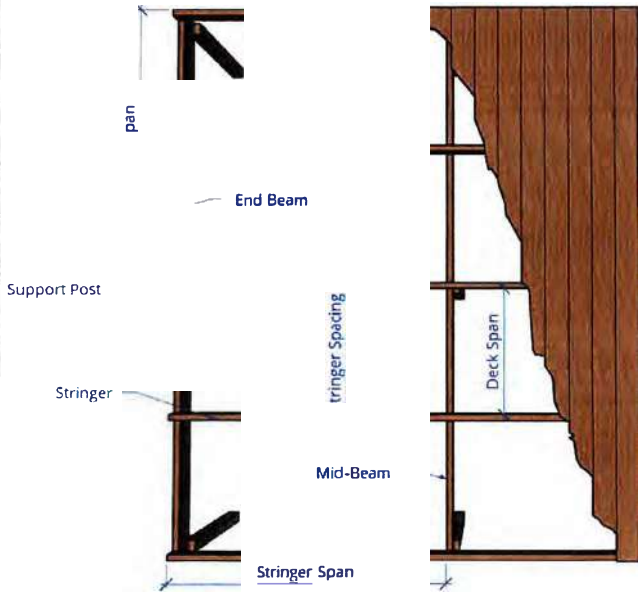

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TABLE 5: BEAM & STRINGER SPANS WITH ≤ 3.5" DECK THICKNESS

*ALL SIZES ARE ACTUAL NOMINAL

LL 100 PSF

BEAM SPAN (SINGLE BEAM OR BETWEEN POSTS)

3.5", Deck Thickness	STR. SIZES	STRINGER @ 1.5" X 5.5"				STRINGER @ 2.5" X 5.5"				STRINGER @ 3.5" X 5.5"				STRINGER @ 5.5" X 5.5"			
		3'-0"	4'-0"	5'-0"	6'-0"	4'-0"	5'-0"	6'-0"	7'-0"	5'-0"	6'-0"	7'-0"	8'-0"	6'-0"	7'-0"	8'-0"	9'-0"
BEAM	1.5" X 5.5"	7'-6"	6'-8"	5'-10"	5'-4"	6'-6"	5'-9"	5'-3"	4'-11"	5'-9"	5'-3"	4'-10"	4'-7"	5'-2"	4'-10"	4'-6"	4'-3"
	2.5" X 5.5"	9'-0"	8'-2"	7'-6"	6'-10"	8'-2"	7'-6"	6'-10"	6'-4"	7'-5"	6'-9"	6'-3"	5'-11"	6'-9"	6'-3"	5'-10"	5'-6"
	3.5" X 5.5"	10'-1"	9'-2"	8'-6"	8'-0"	9'-2"	8'-6"	8'-0"	7'-6"	8'-6"	7'-10"	7'-5"	6'-11"	7'-10"	7'-4"	6'-11"	6'-6"
	5.5" X 5.5"	11'-9"	10'-8"	9'-11"	9'-4"	10'-8"	9'-11"	9'-4"	8'-10"	9'-11"	9'-4"	8'-10"	8'-6"	9'-4"	8'-10"	8'-6"	8'-1"
	7.5" X 7.25	9'-11"	8'-7"	7'-8"	7'-0"	8'-6"	7'-8"	7'-0"	6'-5"	7'-7"	6'-11"	6'-5"	6'-0"	6'-4"	5'-11"	5'-7"	5'-2"
MAX	2.5" X 7.25"	11'-11"	10'-0"	9'-0"	8'-4"	10'-0"	9'-0"	8'-4"	7'-10"	9'-9"	8'-11"	8'-3"	7'-9"	8'-0"	7'-4"	6'-11"	6'-6"
		13'-4"	12'-1"	10'-11"	10'-2"	12'-1"	10'-11"	10'-2"	9'-6"	11'-3"	10'-2"	9'-6"	8'-11"	10'-2"	9'-2"	8'-8"	8'-2"
		15'-6"	14'-1"	12'-8"	11'-9"	14'-1"	12'-8"	11'-9"	10'-11"	13'-0"	11'-9"	11'-0"	10'-4"	11'-9"	10'-7"	10'-0"	9'-6"
	1.5" X 9.25"	12'-7"	11'-5"	10'-3"	9'-6"	11'-5"	10'-3"	9'-6"	8'-11"	10'-7"	9'-6"	8'-11"	8'-3"	9'-6"	8'-7"	8'-1"	7'-8"
SIZES	2.5" X 9.25"	15'-3"	13'-10"	12'-5"	11'-6"	13'-10"	12'-5"	11'-6"	10'-8"	12'-9"	11'-6"	10'-8"	9'-11"	11'-6"	10'-4"	9'-9"	9'-3"
	3.5" X 9.25"	17'-0"	15'-6"	14'-0"	13'-0"	15'-6"	14'-0"	13'-0"	12'-1"	14'-5"	13'-0"	12'-1"	11'-3"	13'-0"	11'-8"	11'-0"	10'-5"
	5.5" X 9.25"	20'-0"	18'-2"	16'-5"	15'-3"	18'-2"	16'-5"	15'-3"	14'-2"	16'-11"	15'-3"	14'-2"	13'-2"	15'-3"	13'-8"	12'-11"	12'-3"
	1.5" X 11.25"	15'-4"	13'-4"	11'-11"	10'-11"	13'-4"	11'-11"	10'-11"	10'-2"	12'-4"	11'-11"	10'-2"	9'-6"	11'-11"	10'-0"	9'-4"	8'-10"
	2.5" X 11.25"	18'-6"	16'-0"	14'-4"	13'-2"	16'-0"	14'-4"	13'-2"	12'-3"	14'-10"	13'-2"	12'-3"	11'-5"	13'-2"	12'-0"	11'-3"	10'-7"
	3.5" X 11.25"	20'-9"	18'-0"	16'-1"	14'-9"	18'-0"	16'-1"	14'-9"	13'-8"	16'-7"	14'-9"	13'-8"	12'-9"	14'-9"	13'-5"	12'-6"	11'-9"
	5.5" X 11.25"	24'-1"	21'-0"	18'-9"	17'-2"	21'-0"	18'-9"	17'-2"	15'-11"	19'-4"	17'-2"	15'-11"	14'-10"	17'-2"	15'-7"	14'-7"	13'-8"

3.5", Deck Thickness	STR. SIZES	STRINGER @ 1.5" X 5.5"				STRINGER @ 2.5" X 5.5"				STRINGER @ 3.5" X 5.5"				STRINGER @ 5.5" X 5.5"			
		3'-0"	4'-0"	5'-0"	6'-0"	4'-0"	5'-0"	6'-0"	7'-0"	5'-0"	6'-0"	7'-0"	8'-0"	6'-0"	7'-0"	8'-0"	9'-0"
BEAM	1.5" X 5.5"	7'-6"	6'-8"	5'-10"	5'-4"	6'-6"	5'-9"	5'-3"	4'-11"	5'-9"	5'-3"	4'-10"	4'-7"	5'-2"	4'-10"	4'-6"	4'-3"
	2.5" X 5.5"	9'-0"	8'-2"	7'-6"	6'-10"	8'-2"	7'-6"	6'-10"	6'-4"	7'-5"	6'-9"	6'-3"	5'-11"	6'-9"	6'-3"	5'-10"	5'-6"
	3.5" X 5.5"	10'-1"	9'-2"	8'-6"	8'-0"	9'-2"	8'-6"	8'-0"	7'-6"	8'-6"	7'-10"	7'-5"	6'-11"	7'-10"	7'-4"	6'-11"	6'-6"
	5.5" X 5.5"	11'-9"	10'-8"	9'-11"	9'-4"	10'-8"	9'-11"	9'-4"	8'-10"	9'-11"	9'-4"	8'-10"	8'-6"	9'-4"	8'-10"	8'-6"	8'-1"
	7.5" X 7.25	9'-11"	8'-7"	7'-8"	7'-0"	8'-6"	7'-8"	7'-0"	6'-5"	7'-7"	6'-11"	6'-5"	6'-0"	6'-4"	5'-11"	5'-7"	5'-2"
MAX	2.5" X 7.25"	11'-11"	10'-0"	9'-0"	8'-4"	10'-0"	9'-0"	8'-4"	7'-10"	9'-9"	8'-11"	8'-3"	7'-9"	8'-0"	7'-4"	6'-11"	6'-6"
		13'-4"	12'-1"	10'-11"	10'-2"	12'-1"	10'-11"	10'-2"	9'-6"	11'-3"	10'-2"	9'-6"	8'-11"	10'-2"	9'-2"	8'-8"	8'-2"
		15'-6"	14'-1"	12'-8"	11'-9"	14'-1"	12'-8"	11'-9"	10'-11"	13'-0"	11'-9"	11'-0"	10'-4"	11'-9"	10'-7"	10'-0"	9'-6"
	1.5" X 9.25"	12'-7"	11'-5"	10'-3"	9'-6"	11'-5"	10'-3"	9'-6"	8'-11"	10'-7"	9'-6"	8'-11"	8'-3"	9'-6"	8'-7"	8'-1"	7'-8"
SIZES	2.5" X 9.25"	15'-3"	13'-10"	12'-5"	11'-6"	13'-10"	12'-5"	11'-6"	10'-8"	12'-9"	11'-6"	10'-8"	9'-11"	11'-6"	10'-4"	9'-9"	9'-3"
	3.5" X 9.25"	17'-0"	15'-6"	14'-0"	13'-0"	15'-6"	14'-0"	13'-0"	12'-1"	14'-5"	13'-0"	12'-1"	11'-3"	13'-0"	11'-8"	11'-0"	10'-5"
	5.5" X 9.25"	20'-0"	18'-2"	16'-5"	15'-3"	18'-2"	16'-5"	15'-3"	14'-2"	16'-11"	15'-3"	14'-2"	13'-2"	15'-3"	13'-8"	12'-11"	12'-3"
	1.5" X 11.25"	15'-4"	13'-4"	11'-11"	10'-11"	13'-4"	11'-11"	10'-11"	10'-2"	12'-4"	11'-11"	10'-2"	9'-6"	11'-11"	10'-0"	9'-4"	8'-10"
	2.5" X 11.25"	18'-6"	16'-0"	14'-4"	13'-2"	16'-0"	14'-4"	13'-2"	12'-3"	14'-10"	13'-2"	12'-3"	11'-5"	13'-2"	12'-0"	11'-3"	10'-7"
	3.5" X 11.25"	20'-9"	18'-0"	16'-1"	14'-9"	18'-0"	16'-1"	14'-9"	13'-8"	16'-7"	14'-9"	13'-8"	12'-9"	14'-9"	13'-5"	12'-6"	11'-9"
	5.5" X 11.25"	24'-1"	21'-0"	18'-9"	17'-2"	21'-0"	18'-9"	17'-2"	15'-11"	19'-4"	17'-2"	15'-11"	14'-10"	17'-2"	15'-7"	14'-7"	13'-8"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}^3 * t_1}{t_2}}$. or $\sqrt[2]{\frac{L_{os}^2 * t_1}{t_2}}$
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 33 psf or less, LL = 100 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

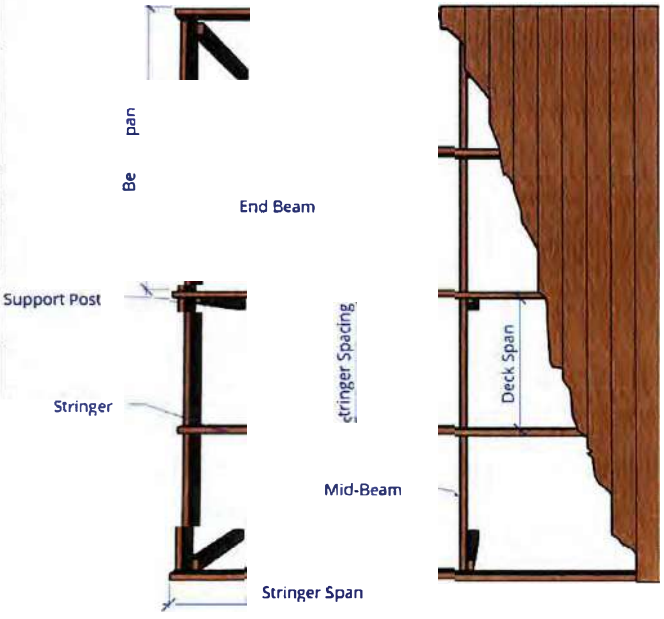

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TABLE 6: BEAM & STRINGER SPANS WITH ≤ 3.5" DECK THICKNESS

*ALL SIZES ARE ACTUAL NOT NOMINAL

LL 100 PSF

BEAM SPAN (SINGLE BEAM BETWEEN POSTS)

3.5" Deck Thickness	STR. SIZES / STR. SPANS	STRINGER @ 1.5" X 7.25"						STRINGER @ 2.5" X 7.25"						STRINGER @ 3.5" X 7.25"						STRINGER @ 5.5" X 7.25"					
		4'-0"	5'-0"	6'-0"	8'-0"	9'-0"	4'-0"	6'-0"	8'-0"	9'-0"	10'-6"	5'-0"	6'-0"	8'-0"	10'-0"	12'-0"	6'-0"	8'-0"	10'-0"	12'-0"	14'-0"
BEAM SIZE	1.5" X 5.5"	6'-6"	5'-10"	5'-4"	4'-7"	4'-4"	6'-5"	5'-3"	4'-7"	4'-4"	4'-0"	5'-9"	5'-3"	4'-6"	4'-1"	3'-8"	5'-2"	4'-6"	4'-0"	3'-8"	3'-4"
	2.5" X 5.5"	8'-2"	7'-6"	6'-10"	5'-11"	5'-7"	8'-2"	6'-10"	5'-11"	5'-7"	5'-2"	7'-5"	6'-9"	5'-10"	5'-3"	4'-9"	6'-8"	5'-9"	5'-2"	4'-8"	4'-4"
	3.5" X 5.5"	9'-2"	8'-6"	8'-0"	7'-0"	6'-7"	9'-2"	8'-0"	7'-0"	6'-7"	6'-1"	8'-6"	8'-0"	6'-11"	6'-2"	5'-8"	7'-10"	6'-10"	6'-1"	5'-7"	5'-2"
	5.5" X 5.5"	10'-8"	9'-11"	9'-4"	8'-6"	8'-2"	10'-8"	9'-4"	8'-6"	8'-2"	7'-7"	9'-11"	9'-4"	8'-6"	7'-9"	7'-1"	9'-4"	8'-6"	7'-8"	7'-0"	6'-6"
	1.5" X 7.25"	8'-7"	7'-8"	7'-0"	6'-1"	5'-9"	8'-6"	6'-11"	6'-0"	5'-8"	5'-3"	7'-7"	6'-11"	6'-0"	5'-4"	4'-10"	6'-10"	5'-11"	5'-3"	4'-10"	4'-5"
	2.5" X 7.25"	10'-10"	9'-10"	9'-0"	7'-10"	7'-4"	10'-10"	8'-11"	7'-9"	7'-4"	6'-9"	9'-9"	8'-11"	7'-8"	6'-11"	6'-4"	8'-9"	7'-7"	6'-10"	6'-2"	5'-9"
	3.5" X 7.25"	12'-1"	11'-3"	10'-7"	9'-3"	8'-9"	12'-1"	10'-7"	9'-2"	8'-8"	8'-0"	11'-3"	10'-6"	9'-1"	8'-2"	7'-5"	10'-4"	9'-0"	8'-1"	7'-4"	6'-10"
	5.5" X 7.25"	14'-1"	13'-1"	12'-4"	11'-2"	10'-9"	14'-1"	12'-4"	11'-2"	10'-9"	10'-0"	13'-1"	12'-4"	11'-2"	10'-2"	9'-4"	12'-4"	11'-2"	10'-1"	9'-2"	8'-6"
	1.5" X 9.25"	10'-11"	9'-9"	8'-11"	7'-9"	7'-3"	10'-10"	8'-10"	7'-8"	7'-3"	6'-8"	9'-8"	8'-10"	7'-7"	6'-10"	6'-3"	8'-8"	7'-6"	6'-9"	6'-2"	5'-8"
	2.5" X 9.25"	13'-10"	12'-7"	11'-6"	10'-0"	9'-5"	13'-10"	11'-5"	9'-11"	9'-4"	8'-8"	12'-5"	11'-4"	9'-10"	8'-10"	8'-0"	11'-2"	9'-8"	8'-8"	7'-11"	7'-4"
	3.5" X 9.25"	15'-6"	14'-4"	13'-6"	11'-9"	11'-1"	15'-6"	13'-6"	11'-8"	11'-0"	10'-3"	14'-4"	13'-5"	11'-7"	10'-5"	9'-6"	13'-2"	11'-6"	10'-3"	9'-4"	8'-8"
	5.5" X 9.25"	18'-0"	16'-8"	15'-8"	14'-3"	13'-9"	18'-0"	15'-8"	14'-3"	13'-9"	12'-9"	16'-8"	15'-8"	14'-3"	13'-0"	11'-11'	15'-8"	14'-3"	12'-10	11'-9"	10'-10"
	1.5" X 11.25"	13'-3"	11'-11"	10'-10"	9'-5"	8'-10"	13'-2"	10'-9"	9'-4"	8'-10"	8'-2"	11'-9"	10'-8"	9'-3"	8'-4"	7'-7"	10'-7"	9'-2"	8'-2"	7'-6"	6'-11"
	2.5" X 11.25"	16'-10"	15'-3"	14'-0"	12'-1"	11'-5"	16'-10"	13'-10"	12'-0"	11'-4"	10'-6"	15'-1"	13'-9"	11'-11"	10'-8"	9'-9"	13'-7"	11'-9"	10'-7"	9'-8"	8'-11"
	3.5" X 11.25"	18'-10"	17'-6"	16'-5"	14'-4"	13'-6"	18'-10"	16'-4"	14'-3"	13'-5"	12'-5"	17'-6"	16'-3"	14'-1"	12'-8"	11'-7"	16'-0"	13'-11"	12'-6"	11'-5"	10'-7"
	5.5" X 11.25"	21'-11"	20'-4"	19'-1"	17'-4"	16'-8"	21'-11"	19'-1"	17'-4"	16'-8"	15'-0"	20'-4"	19'-1"	17'-4"	15'-9"	13'-2"	19'-1"	17'-4"	15'-7"	13'-1"	11'-3"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}{}^3 * t_1}{t_2}}$ or $\sqrt[2]{\frac{L_{os}{}^2 * t_1}{t_2}}$
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 35 psf or less, LL = 100 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others

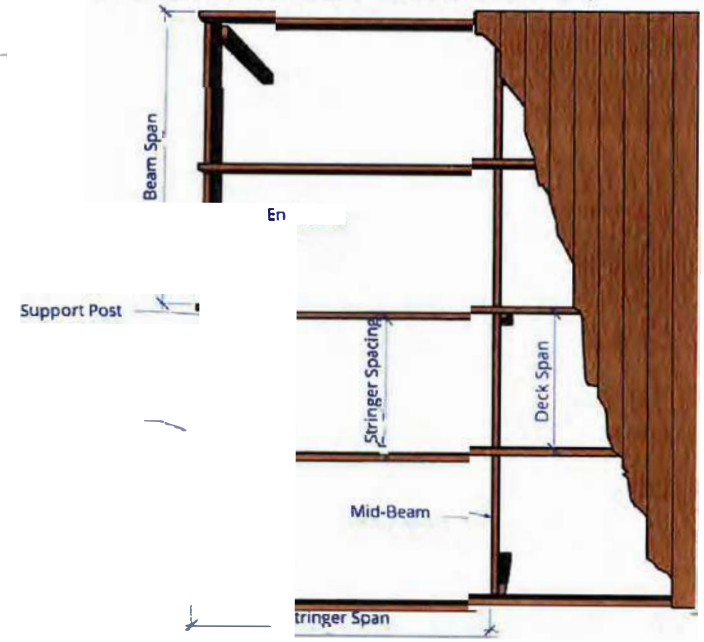

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TABLE 7: BEAM & STRINGER SPANS WITH ≤ 3.5" DECK THICKNESS

*ALL SIZES ARE A UAL NOT NOM NAL

LL 100 PSF

BEAM SPAN (SINGLE BEAM BETWEEN POSTS)

3.5" Deck Thickness	STR. SIZES	STRINGER @ 1.5" X 9.25"					STRINGER @ 2.5" X 9.25"					STRINGER @ 3.5" X 9.25"					
	STR. SPANS	4'-0"	6'-0"	8'-0"	10'-0"	11'-6"	6'-0"	8'-0"	10'-0"	12'-0"	13'-6"	8'-0"	10'-0"	12'-0"	14'-0"	15'-6"	16'-0"
BEAM SIZES	1.5" X 5.5"	6'-6"	5'-3"	4'-7"	4'-1"	3'-10"	5'-3"	4'-6"	4'-1"	3'-8"	3'-6"	4'-6"	4'-0"	3'-8"	3'-5"	3'-3"	3'-1"
	2.5" X 5.5"	8'-2"	6'-10"	5'-11"	5'-3"	4'-11"	6'-9"	5'-10"	5'-3"	4'-9"	4'-6"	5'-10"	5'-2"	4'-9"	4'-5"	4'-2"	4'-0"
	3.5" X 5.5"	9'-2"	8'-0"	7'-0"	6'-3"	5'-10"	8'-0"	6'-11"	6'-2"	5'-8"	5'-4"	6'-10"	6'-2"	5'-7"	5'-2"	4'-11"	4'-9"
	5.5" X 5.5"	10'-8"	9'-4"	8'-6"	7'-10"	7'-4"	9'-4"	8'-6"	7'-9"	7'-1"	6'-8"	8'-6"	7'-8"	7'-0"	6'-6"	6'-2"	6'-0"
	1.5" X 7.25"	8'-6"	7'-0"	6'-0"	5'-5"	5'-0"	6'-11"	6'-0"	5'-4"	4'-11"	4'-7"	5'-11"	5'-4"	4'-10"	4'-6"	4'-3"	4'-1"
	2.5" X 7.25"	10'-10"	9'-0"	7'-10"	7'-0"	6'-6"	8'-11"	7'-9"	6'-11"	6'-4"	5'-11"	7'-8"	6'-10"	6'-3"	5'-9"	5'-6"	5'-4"
	3.5" X 7.25"	12'-1"	10'-7"	9'-3"	8'-3"	7'-8"	10'-6"	9'-2"	8'-2"	7'-6"	7'-0"	9'-1"	8'-1"	7'-5"	6'-10"	6'-6"	6'-4"
	5.5" X 7.25"	14'-1"	12'-4"	11'-2"	10'-4"	9'-8"	12'-4"	11'-2"	10'-3"	9'-4"	8'-10"	11'-2"	10'-2"	9'-3"	8'-7"	8'-2"	7'-11"
	1.5" X 9.25"	10'-11"	8'-11"	7'-9"	6'-11"	6'-5"	8'-10"	7'-8"	6'-10"	6'-3"	5'-11"	7'-7"	6'-9"	6'-2"	5'-9"	5'-5"	5'-3"
	2.5" X 9.25"	13'-10"	11'-6"	9'-11"	8'-11"	8'-4"	11'-4"	9'-10"	8'-10"	8'-1"	7'-7"	9'-9"	8'-9"	8'-0"	7'-5"	7'-0"	6'-10"
	3.5" X 9.25"	15'-6"	13'-6"	11'-9"	10'-6"	9'-10"	13'-5"	11'-8"	10'-5"	9'-6"	9'-0"	11'-6"	10'-4"	9'-5"	8'-9"	8'-4"	7'-11"
	5.5" X 9.25"	18'-0"	15'-8"	14'-3"	13'-2"	12'-3"	15'-8"	14'-3"	13'-0"	11'-11"	11'-3"	14'-3"	12'-11"	11'-10"	10'-11"	10'-2"	9'-7"
	1.5" X 11.25"	13'-3"	10'-10"	9'-5"	8'-5"	7'-10"	10'-9"	9'-4"	8'-4"	7'-7"	7'-2"	9'-3"	8'-3"	7'-6"	7'-0"	6'-7"	6'-5"
	2.5" X 11.25"	16'-10"	13'-11"	12'-1"	10'-10"	10'-1"	13'-10"	12'-0"	10'-9"	9'-10"	9'-3"	11'-10"	10'-8"	9'-9"	9'-0"	8'-7"	8'-3"
	3.5" X 11.25"	18'-10"	16'-5"	14'-3"	12'-9"	11'-11"	16'-3"	14'-2"	12'-8"	11'-7"	10'-11"	14'-0"	12'-7"	11'-6"	10'-8"	10'-1"	9'-9"
	5.5" X 11.25"	21'-11"	19'-1"	17'-4"	15'-9"	13'-9"	19'-1"	17'-4"	15'-8"	13'-1"	11'-8"	17'-4"	15'-6"	13'-0"	11'-3"	10'-2"	9'-10"

3.5" Deck Thickness	STR. SIZES	STRINGER @ 3.5" X 9.25"					
	STR. SPANS	10'-0"	12'-0"	14'-0"	15'-6"	16'-0"	18'-0"
BEAM SIZES	1.5" X 5.5"	3'-7"	3'-4"	3'-1"	2'-11"	2'-10"	2'-7"
	2.5" X 5.5"	4'-8"	4'-4"	4'-0"	3'-10"	3'-9"	3'-6"
	3.5" X 5.5"	5'-6"	5'-1'	4'-9"	4'-6"	4'-5"	4'-2"
	5.5" X 5.5"	6'-	6'-5"	6'-0"	5'-8"	5'-7"	5'-4"
	1.5" X 7.25"	4'-9"	4'-5"	4'-1"	3'-11"	3'-10"	3'-7"
	2.5" X 7.25"	6'-2"	5'-8"	5'-4"	5'-0"	4'-11"	4'-8"
	3.5" X 7.25"	7'-3"	6'-9"	6'-4"	5'-11"	5'-9"	5'-5"
	5.5" X 7.25"	9'-	8'-5"	7'-11"	7'-5"	7'-3"	6'-11"
	1.5" X 9.25"	6'-	5'-7"	5'-3"	4'-11"	4'-9"	4'-6"
	2.5" X 9.25"	7'- 0"	7'-3"	6'-10"	6'-5"	6'-3"	5'-11"
	3.5" X 9.25"	9'-3"	8'-7"	0'-9"	9'- 0"	8'-9"	8'-4"
	5.5" X 9.25"	11'-7"	10'-0"	9'-5"	8'-9"	8'-7"	8'-2"
	1.5" X 11.25"	7'-5"	6'-10'	6'-5"	6'-0"	5'-11"	5'-8"
	2.5" X 11.25"	9'-7"	8'-10"	8'-3"	7'-10"	7'-8"	7'-4"
	3.5" X 11.25"	1'-3"	10'-5"	9'-9"	8'-10"	8'-8"	8'-3"
	5.5" X 11.25"	2'-11"	1'-2"	9'-10"	9'-9"	9'-7"	9'-3"

3.5" Deck Thickness	STR. SIZES	STRINGER @ 3.5" X 9.25"					
	STR. SPANS	10'-0"	12'-0"	14'-0"	15'-6"	16'-0"	18'-0"
BEAM SIZES	1.5" X 5.5"	3'-11"	3'-8"	3'-5"	3'-3"	3'-1"	2'-11"
	2.5" X 5.5"	5'-1"	4'-9"	4'-5"	4'-2"	4'-0"	3'-10"
	3.5" X 5.5"	6'-0"	5'-7"	5'-2"	4'-11"	4'-9"	4'-6"
	5.5" X 5.5"	7'-7"	7'-0"	6'-6"	6'-2"	6'-0"	5'-8"
	1.5" X 7.25"	5'-3"	4'-10"	4'-6"	4'-3"	4'-1"	3'-11"
	2.5" X 7.25"	6'-9"	6'-3"	5'-9"	5'-6"	5'-4"	5'-0"
	3.5" X 7.25"	8'-0"	7'-5"	6'-10"	6'-6"	6'-4"	5'-11"
	5.5" X 7.25"	10'-0"	9'-3"	8'-7"	8'-2"	7'-11"	7'-5"
	1.5" X 9.25"	6'-8"	6'-2"	5'-9"	5'-5"	5'-3"	4'-11"
	2.5" X 9.25"	8'-7"	8'-0"	7'-5"	7'-0"	6'-10"	6'-5"
	3.5" X 9.25"	10'-2"	9'-5"	8'-9"	8'-4"	8'-0"	7'-7"
	5.5" X 9.25"	12'-8"	11'-7"	10'-11"	10'-2"	9'- 0'	8'-9"
	1.5" X 11.25"	8'-1"	7'-6"	7'-0"	6'-7"	6'-5"	6'-0"
	2.5" X 11.25"	10'-5"	9'-9"	9'-0"	8'-7"	8'-3"	7'-10"
	3.5" X 11.25"	12'-4"	11'-6"	10'-8"	10'-1"	9'-9"	8'-10"
	5.5" X 11.25"	15'-2"	13'-0"	11'-3"	10'-2"	9'-10"	8'-9"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}{}^3 * t_1}{t_2}}$ or t_2^2
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 36 psf or less, LL = 100 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

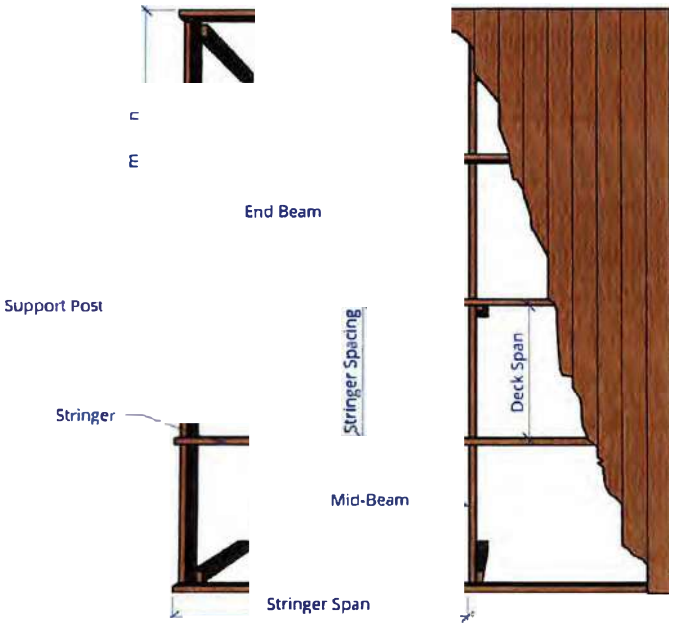

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TABLE 8: BEAM & STRINGER SPANS
WITH ≤ 3.5" DECK THICKNESS

*ALL SIZES ARE ACTUAL NOT NOMINAL

LL 100 PSF

BEAM SPAN (SINGLE BEAM BETWEEN POSTS)

3.5" Deck Thickness	STR. SIZES	STR. SPANS	STRINGER @ 1.5" X 11.25"				STRINGER @ 2.5" X 11.25"				STRINGER @ 3.5" X 11.25"				STRINGER @ 5.5" X 11.25"			
		6'-0"	8'-0"	10'-0"	12'-0"	14'-0"	8'-0"	10'-0"	12'-0"	14'-0"	16'-6"	10'-0"	12'-0"	14'-0"	16'-0"	12'-0"	14'-0"	16'-0"	18'-0"	20'-0"
BEAMS	2.5" X 5.5"	5'-3"	4'-7"	4'-1"	3'-9"	3'-5"	4'-6"	4'-0"	3'-8"	3'-5"	3'-2"	4'-0"	3'-8"	3'-4"	3'-2"	3'-7"	3'-4"	3'-1"	2'-11"	2'-9"
	3.5" X 5.5"	6'-10"	5'-11"	5'-3"	4'-10"	4'-5"	5'-10"	5'-3"	4'-9"	4'-5"	4'-1"	5'-2"	4'-8"	4'-4"	4'-1"	4'-7"	4'-3"	4'-0"	3'-9"	3'-7"
	5.5" X 5.5"	8'-0"	7'-0"	6'-3"	5'-8"	5'-3"	6'-11"	6'-2"	5'-8"	5'-3"	4'-10"	6'-1"	5'-7"	5'-2"	4'-10"	5'-5"	5'-1"	4'-9"	4'-5"	4'-3"
	1.5"	9'-4"	8'-6"	7'-10"	7'-2"	6'-7"	8'-6"	7'-9"	7'-1"	6'-6"	6'-0"	7'-8"	7'-0"	6'-6"	6'-1"	6'-10"	6'-4"	5'-11"	5'-7"	5'-4"
	2.5"	6'-11"	6'-0"	5'-5"	4'-11"	4'-7"	5'-11"	5'-4"	4'-10"	4'-6"	4'-2"	5'-3"	4'-10"	4'-5"	4'-2"	4'-8"	4'-4"	4'-1"	3'-10"	3'-8"
		9'-0"	7'-9"	6'-11"	6'-4"	5'-10"	7'-8"	6'-11"	6'-3"	5'-10"	5'-4"	6'-10"	6'-3"	5'-9"	5'-5"	6'-1"	5'-8"	5'-3"	5'-0"	4'-8"
		10'-7"	9'-2"	8'-3"	7'-6"	6'-11"	9'-1"	8'-2"	7'-5"	6'-11"	6'-4"	8'-1"	7'-4"	6'-10"	6'-4"	7'-2"	6'-8"	6'-3"	5'-11"	5'-7"
		12'-4"	11'-2"	10'-3"	9'-5"	8'-8"	11'-2"	10'-2"	9'-4"	8'-7"	7'-11"	10'-1"	9'-2"	8'-6"	7'-11"	9'-0"	8'-4"	7'-10"	7'-4"	7'-0"
	2.5" X 9.25"	8'-10"	7'-8"	6'-11"	6'-3"	5'-10"	7'-7"	6'-10"	6'-2"	5'-9"	5'-3"	6'-9"	6'-2"	5'-8"	5'-4"	6'-0"	5'-7"	5'-2"	4'-11"	4'-8"
	3.5" X 9.25"	11'-5"	9'-11"	8'-10"	8'-1"	7'-6"	9'-10"	8'-9"	8'-0"	7'-5"	6'-10"	8'-8"	7'-	7'-4"	6'-10"	7'-9"	7'-2"	6'-9"	6'-4"	6'-0"
	5.5" X 9.25"	13'-6"	11'-9"	10'-6"	9'-7"	8'-10"	11'-7"	10'-4"	9'-6"	8'-9"	8'-1"	10'-3"	9'-5"	8'-8"	8'-1"	9'-2"	8'-6"	8'-0"	7'-6"	7'-1"
	1.5" X 11.25"	15'-8"	14'-3"	13'-1"	12'-0"	11'-1"	14'-3"	13'-0"	11'-10"	11'-0"	9'-7"	12'-10"	11'-9"	10'-10"	9'-10"	11'-6"	10'-8"	9'-10"	8'-9"	7'-11"
	2.5" X 11.25"	10'-9"	9'-4"	8'-4"	7'-8"	7'-1"	9'-3"	8'-3"	7'-7"	7'-0"	6'-5"	8'-2"	7'-6"	6'-11"	6'-6"	7'-4"	6'-9"	6'-4"	6'-0"	5'-8"
		13'-11"	12'-1"	10'-9"	9'-10"	9'-2"	11'-11"	10'-8"	9'-9"	9'-0"	8'-4"	10'-7"	9'-8"	8'-11"	8'-4"	9'-5"	8'-9"	8'-2"	7'-9"	7'-4"
		16'-5"	14'-3"	12'-9"	11'-8"	10'-9"	14'-1"	12'-7"	11'-6"	10'-8"	9'-7"	12'-6"	11'-5"	10'-7"	9'-10"	11'-2"	10'-4"	9'-8"	8'-9"	7'-11"
		19'-1"	17'-4"	15'-8"	13'-1"	11'-3"	17'-4"	15'-7"	13'-0"	11'-2"	9'-6"	15'-5"	12'-11"	11'-2"	9'-10"	12'-10"	11'-1"	9'-9"	8'-8"	7'-10"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}{}^3 * t_1}{t_2}}$ or t_2
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 38 psf or less, LL = 100 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

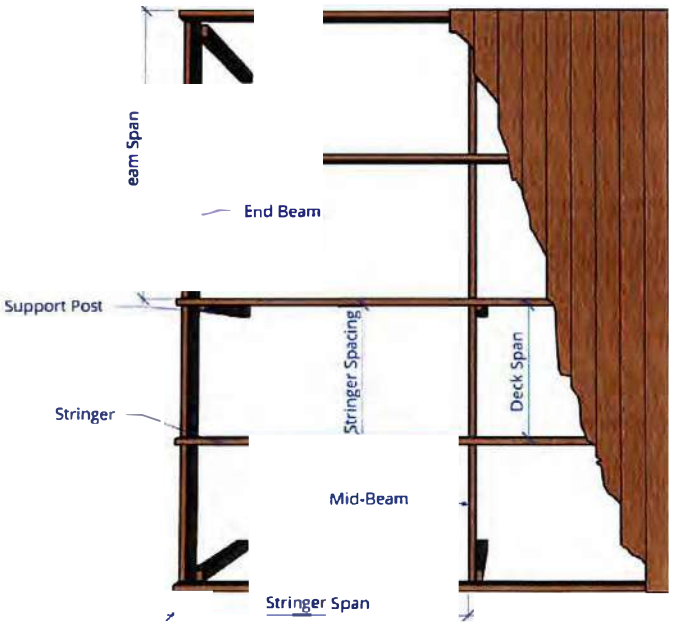

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TABLE 9: BEAM & STRINGER SPANS WITH ≤ 1.5" DECK THICKNESS

LL 500 PSF

*ALL SIZES ARE ACTUAL NOT NOMINAL

NOT TO SCALE (BEAM SPAN (SINGLE BEAM BETWEEN POSTS))

1.5" Deck Thickness	STR SIZES	STRINGER @ 1.5" X 5.5"								STRINGER @ 2.5" X 5.5"								STRINGER @ 3.5" X 5.5"							
	STR. SPANS	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"
BEAM SIZES	1.5" X 5.5"	6'-4"	5'-2"	4'-6"	4'-0"	3'-8"	3'-5"	3'-2"	3'-0"	6'-4"	5'-2"	4'-6"	4'-0"	3'-8"	3'-5"	3'-2"	3'-0"	6'-4"	5'-2"	4'-6"	4'-0"	3'-8"	3'-5"	3'-2"	3'-0"
	2.5" X 5.5"	7'-7"	6'-8"	5'-10"	5'-2"	4'-9"	4'-5"	4'-1"	3'-10"	7'-7"	6'-8"	5'-10"	5'-2"	4'-9"	4'-5"	4'-1"	3'-10"	7'-7"	6'-8"	5'-10"	5'-2"	4'-9"	4'-5"	4'-1"	3'-10"
	3.5" X 5.5"	8'-6"	7'-5"	6'-9"	6'-2"	5'-7"	5'-2"	4'-10"	4'-7"	8'-6"	7'-5"	6'-9"	6'-2"	5'-7"	5'-2"	4'-10"	4'-7"	8'-6"	7'-5"	6'-9"	6'-2"	5'-7"	5'-2"	4'-10"	4'-7"
	5.5" X 5.5"	9'-11"	8'-8"	7'-10"	7'-3"	6'-10"	6'-6"	6'-1"	5'-11"	9'-11"	8'-8"	7'-10"	7'-3"	6'-10"	6'-6"	6'-1"	5'-11"	9'-11"	8'-8"	7'-10"	7'-3"	6'-10"	6'-6"	6'-1"	5'-11"
	1.5" X 7.25"	8'-5"	6'-10"	5'-11"	5'-4"	4'-10"	4'-6"	4'-2"	4'-0"	8'-5"	6'-10"	5'-11"	5'-4"	4'-10"	4'-6"	4'-2"	4'-0"	8'-5"	6'-10"	5'-11"	5'-4"	4'-10"	4'-6"	4'-2"	4'-0"
	2.5" X 7.25"	10'-1"	8'-9"	7'-8"	6'-10"	6'-3"	5'-10"	5'-5"	5'-2"	10'-1"	8'-9"	7'-8"	6'-10"	6'-3"	5'-10"	5'-5"	5'-2"	10'-1"	8'-9"	7'-8"	6'-10"	6'-3"	5'-10"	5'-5"	5'-2"
	3.5" X 7.25"	11'-3"	9'-10"	8'-11"	8'-1"	7'-5"	6'-10"	6'-5"	6'-1"	11'-3"	9'-10"	8'-11"	8'-1"	7'-5"	6'-10"	6'-5"	6'-1"	11'-3"	9'-10"	8'-11"	8'-1"	7'-5"	6'-10"	6'-5"	6'-1"
	5.5" X 7.25"	13'-1"	11'-5"	10'-4"	9'-7"	9'-1"	8'-7"	8'-0"	7'-8"	13'-1"	11'-5"	10'-4"	9'-7"	9'-1"	8'-7"	8'-0"	7'-8"	13'-1"	11'-5"	10'-4"	9'-7"	9'-1"	8'-7"	8'-0"	7'-8"
	1.5" X 9.25"	10'-9"	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	5'-4"	5'-1"	10'-9"	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	5'-4"	5'-1"	10'-9"	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	5'-4"	5'-1"
	2.5" X 9.25"	12'-10"	11'-2"	9'-9"	8'-9"	8'-0"	7'-5"	6'-11"	6'-6"	12'-10"	11'-2"	9'-9"	8'-9"	8'-0"	7'-5"	6'-11"	6'-6"	12'-10"	11'-2"	9'-9"	8'-9"	8'-0"	7'-5"	6'-11"	6'-6"
	3.5" X 9.25"	14'-4"	12'-6"	11'-5"	10'-4"	9'-6"	8'-9"	8'-2"	7'-9"	14'-4"	12'-6"	11'-5"	10'-4"	9'-6"	8'-9"	8'-2"	7'-9"	14'-4"	12'-6"	11'-5"	10'-4"	9'-6"	8'-9"	8'-2"	7'-9"
	5.5" X 9.25"	16'-8"	14'-7"	13'-3"	12'-3"	11'-7"	10'-11"	9'-7"	11'-7"	16'-8"	14'-7"	13'-3"	12'-3"	11'-7"	10'-11"	9'-7"	11'-7"	16'-8"	14'-7"	13'-3"	12'-3"	11'-7"	10'-11"	9'-7"	11'-7"
	1.5" X 11.25"	13'-0"	10'-8"	9'-3"	8'-3"	7'-7"	7'-0"	6'-6"	7'-6"	13'-0"	10'-8"	9'-3"	8'-3"	7'-7"	7'-0"	6'-6"	7'-6"	13'-0"	10'-8"	9'-3"	8'-3"	7'-7"	7'-0"	6'-6"	7'-6"
	2.5" X 11.25"	15'-7"	13'-8"	11'-11"	10'-8"	9'-9"	9'-0"	8'-5"	9'-8"	15'-7"	13'-8"	11'-11"	10'-8"	9'-9"	9'-0"	8'-5"	9'-8"	15'-7"	13'-8"	11'-11"	10'-8"	9'-9"	9'-0"	8'-5"	9'-8"
	3.5" X 11.25"	17'-6"	15'-3"	13'-10"	12'-7"	11'-6"	10'-8"	9'-8"	11'-6"	17'-6"	15'-3"	13'-10"	12'-7"	11'-6"	10'-8"	9'-8"	11'-6"	17'-6"	15'-3"	13'-10"	12'-7"	11'-6"	10'-8"	9'-8"	11'-6"
	5.5" X 11.25"	20'-4"	17'-9"	16'-1"	14'-11"	12'-9"	12'-8"	10'-11"	12'-3"	20'-4"	17'-9"	16'-1"	14'-11"	12'-9"	12'-8"	10'-11"	12'-3"	20'-4"	17'-9"	16'-1"	14'-11"	12'-9"	12'-8"	10'-11"	12'-3"

1.5" Deck Thickness	STR SIZES	STRINGER @ 3.5" X 5.5"								STRINGER @ 5.5" X 5.5"							
	STR. SPANS	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"
BEAM SIZES	1.5" X 5.5"	6'-4"	5'-2"	4'-6"	4'-0"	3'-8"	3'-5"	3'-2"	3'-0"	6'-4"	5'-2"	4'-6"	4'-0"	3'-8"	3'-5"	3'-2"	3'-0"
	2.5" X 5.5"	7'-7"	6'-8"	5'-10"	5'-2"	4'-9"	4'-5"	4'-1"	3'-10"	7'-7"	6'-8"	5'-10"	5'-2"	4'-9"	4'-5"	4'-1"	3'-10"
	3.5" X 5.5"	8'-6"	7'-5"	6'-9"	6'-2"	5'-7"	5'-2"	4'-10"	4'-7"	8'-6"	7'-5"	6'-9"	6'-2"	5'-7"	5'-2"	4'-10"	4'-7"
	5.5" X 5.5"	9'-11"	8'-8"	7'-10"	7'-3"	6'-10"	6'-6"	6'-1"	5'-11"	9'-11"	8'-8"	7'-10"	7'-3"	6'-10"	6'-6"	6'-1"	5'-11"
	1.5" X 7.25"	8'-5"	6'-10"	5'-11"	5'-4"	4'-10"	4'-6"	4'-2"	4'-0"	8'-5"	6'-10"	5'-11"	5'-4"	4'-10"	4'-6"	4'-2"	4'-0"
	2.5" X 7.25"	10'-1"	8'-9"	7'-8"	6'-10"	6'-3"	5'-10"	5'-5"	5'-2"	10'-1"	8'-9"	7'-8"	6'-10"	6'-3"	5'-10"	5'-5"	5'-2"
	3.5" X 7.25"	11'-3"	9'-10"	8'-11"	8'-1"	7'-5"	6'-10"	6'-5"	6'-1"	11'-3"	9'-10"	8'-11"	8'-1"	7'-5"	6'-10"	6'-5"	6'-1"
	5.5" X 7.25"	13'-1"	11'-5"	10'-4"	9'-7"	9'-1"	8'-7"	8'-0"	7'-8"	13'-1"	11'-5"	10'-4"	9'-7"	9'-1"	8'-7"	8'-0"	7'-8"
	1.5" X 9.25"	10'-9"	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	5'-4"	5'-1"	10'-9"	8'-9"	7'-7"	6'-9"	6'-2"	5'-9"	5'-4"	5'-1"
	2.5" X 9.25"	12'-10"	11'-2"	9'-9"	8'-9"	8'-0"	7'-5"	6'-11"	6'-6"	12'-10"	11'-2"	9'-9"	8'-9"	8'-0"	7'-5"	6'-11"	6'-6"
	3.5" X 9.25"	14'-4"	12'-6"	11'-5"	10'-4"	9'-6"	8'-9"	8'-2"	7'-9"	14'-4"	12'-6"	11'-5"	10'-4"	9'-6"	8'-9"	8'-2"	7'-9"
	5.5" X 9.25"	16'-8"	14'-7"	13'-3"	12'-3"	11'-7"	10'-11"	9'-7"	11'-7"	16'-8"	14'-7"	13'-3"	12'-3"	11'-7"	10'-11"	9'-7"	11'-7"
	1.5" X 11.25"	13'-0"	10'-8"	9'-3"	8'-3"	7'-7"	7'-0"	6'-6"	7'-6"	13'-0"	10'-8"	9'-3"	8'-3"	7'-7"	7'-0"	6'-6"	7'-6"
	2.5" X 11.25"	15'-7"	13'-8"	11'-11"	10'-8"	9'-9"	9'-0"	8'-5"	9'-8"	15'-7"	13'-8"	11'-11"	10'-8"	9'-9"	9'-0"	8'-5"	9'-8"
	3.5" X 11.25"	17'-6"	15'-3"	13'-10"	12'-7"	11'-6"	10'-8"	9'-8"	11'-6"	17'-6"	15'-3"	13'-10"	12'-7"	11'-6"	10'-8"	9'-8"	11'-6"
	5.5" X 11.25"	20'-4"	17'-9"	16'-1"	14'-11"	12'-9"	12'-8"	10'-11"	12'-3"	20'-4"	17'-9"	16'-1"	14'-11"	12'-9"	12'-8"	10'-11"	12'-3"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\frac{{}^{3}L_{os}{}^{3}*t_1}{t_2}$ or $\sqrt[2]{\frac{L_{os}{}^{2}*t_1}{t_2}}$
   b. New Beam Length (in):
      $$L_{ob} + \frac{(t_2 - t_1)}{12} * 6$$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 41 psf or less, LL = 500 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows.
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.

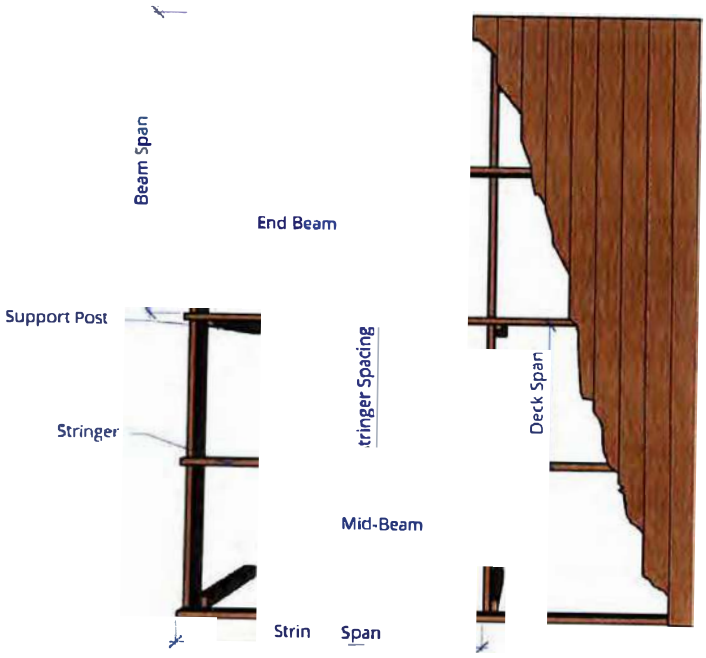

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TABLE 10: BEAM & STRINGER SPANS WITH ≤ 1.5" DECK THICKNESS

*ALL SIZES ARE A UAL NOT NOMINAL

LL 500 PSF

BEAM SPAN (SINGLE BEAM BETWEEN POSTS)

1.5" Deck Thickness	STR. SIZES	STR. SPANS	STRINGER @ 1.5" X 7.25"					STRINGER @ 2.5" X 7.25"					STRINGER @ 3.5" X 7.25"					STRINGER @ 5.5" X 7.25"				
			2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	4'-6"	5'-0"	6'-0"	6'-6"	4'-0"	5'-0"	6'-0"	7'-0"	8'-0"
BEAM SIZES	1.5" X 5.5"		4'-0"	3'-8"	3'-5"	3'-2"	3'-0"	3'-5"	3'-2"	3'-0"	2'-10"	2'-8"	3'-0"	2'-10"	2'-7"	2'-6"	3'-2"	2'-10"	2'-7"	2'-4"	2'-3"
	2.5" X 5.5"		5'-2"	4'-9"	4'-5"	4'-1"	3'-10"	4'-5"	4'-1"	3'-10"	3'-8"	3'-6"	3'-10"	3'-8"	3'-4"	3'-2"	4'-1"	3'-8"	3'-4"	3'-1"	2'-10"
	3.5" X 5.5"		6'-2"	5'-7"	5'-2"	4'-10"	4'-7"	5'-2"	4'-10"	4'-7"	4'-4"	4'-2"	4'-7"	4'-4"	3'-11"	3'-10"	4'-10"	4'-4"	3'-11"	3'-8"	3'-5"
	5.5" X 5.5"		7'-3"	6'-10"	6'-6"	6'-1"	5'-9"	6'-6"	6'-1"	5'-9"	5'-5"	5'-2"	5'-9"	5'-5"	5'-0"	4'-9"	6'-1"	5'-5"	4'-11"	4'-7"	4'-3"
	1.5" X 7.25"		5'-4"	4'-10"	4'-6"	4'-2"	3'-11"	4'-6"	4'-2"	3'-11"	3'-9"	3'-7"	3'-11"	3'-9"	3'-5"	3'-3"	4'-2"	3'-9"	3'-5"	3'-2"	2'-11"
	2.5" X 7.25"		6'-10"	6'-3"	5'-10"	5'-5"	5'-1"	5'-9"	5'-5"	5'-1"	4'-10"	4'-7"	5'-1"	4'-10"	4'-5"	4'-3"	5'-5"	4'-10"	4'-5"	4'	3'-10"
	3.5" X 7.25"		8'-1"	7'-5"	6'-10"	6'-5"	6'-1"	6'-10"	6'-5"	6'-0"	5'-9"	5'-6"	6'-0"	5'-9"	5'-3"	5'-0"	6'-5"	5'-8"	5'-2"	4'- 0"	4'-6"
	5.5" X 7.25"		9'-7"	9'-1"	8'-7"	8'-0"	7'-7"	8'-7"	8'-0"	7'-7"	7'-2"	6'-10"	7'-7"	7'-2"	6'-5"	5'-11"	8'-0"	7'-2"	6'-5"	5'-6"	4'-10"
	1.5" X 9.25"		6'-9"	6'-2"	5'-9"	5'-4"	5'-1"	5'-9"	5'-4"	5'-1"	4'-9"	4'-7"	5'-1"	4'-9"	4'-4"	4'-2"	5'-4"	4'-9"	4'-4"	4'-0"	3'-9"
	2.5" X 9.25"		8'-9"	8'-0"	7'-5"	6'-11"	6'-6"	7'-5"	6'-11"	6'-6"	6'-2"	5'-	6'-6"	6'-2"	5'-8"	5'-5"	6'-11"	6'-2"	5'-7"	5'-2'	4'-10"
	3.5" X 9.25"		10'-4"	9'-5"	8'-9"	8'-2"	7'-9"	8'-9"	8'-2"	7'-9"	7'-4"	7'-0"	7'-9"	7'-4"	6'-5"	5'-11"	8'-2"	7'-3"	6'-5"	5'-6"	4'-10"
	5.5" X 9.25"		12'-3"	11'-7"	11'-0"	9'-7"	8'-7"	10'-11"	9'-7"	8'-6"	7'-8'	7'-0"	8'-6"	7'-8"	6'-5"	5'-11"	9'-7"	7'-8"	6'-5"	5'-6"	4'-10"
	1.5" X 11.25"		8'-3"	7'-6"	7'-0"	6'-6"	6'-2"	7'-0"	6'-6"	6'-2"	5'- 0"	5'-7"	6'-6"	6'-2"	5'-4"	5'-1"	6'-6"	5'-10"	5'-3"	4'	4'-7"
	2.5" X 11.25"		10'-8"	9'-9"	9'-0"	8'-5"	7'-11"	9'-0"	8'-5"	7'-11"	7'-6'	7'-0"	8'-5"	7'-11"	6'-5"	5'-11"	8'-4"	7'-6"	6'-5"	5'-6"	4'-10"
	3.5" X 11.25"		12'-7"	11'-6"	10'-8"	9'-8"	8'-7"	10'-8"	9'-7"	8'-7"	7'-8"	7'-0"	9'-7"	8'-7"	7'-0"	6'-5"	9'-7"	7'-8"	6'-5"	5'-6"	4'-10"
	5.5" X 11.25"		14'-11"	12'-9"	10'-11"	9'-7"	8'-6"	10'-11"	9'-7"	8'-6"	7'-8"	7'-0"	8'-6"	7'-8"	6'-5"	5'-11"	9'-6"	7'-8"	6'-5"	5'-6"	4'-9"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}^3 * t_1}{t_2}}$ or $\sqrt[2]{\frac{L_{os}^2 * t_1}{t_2}}$
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 26 psf or less, LL = 500 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

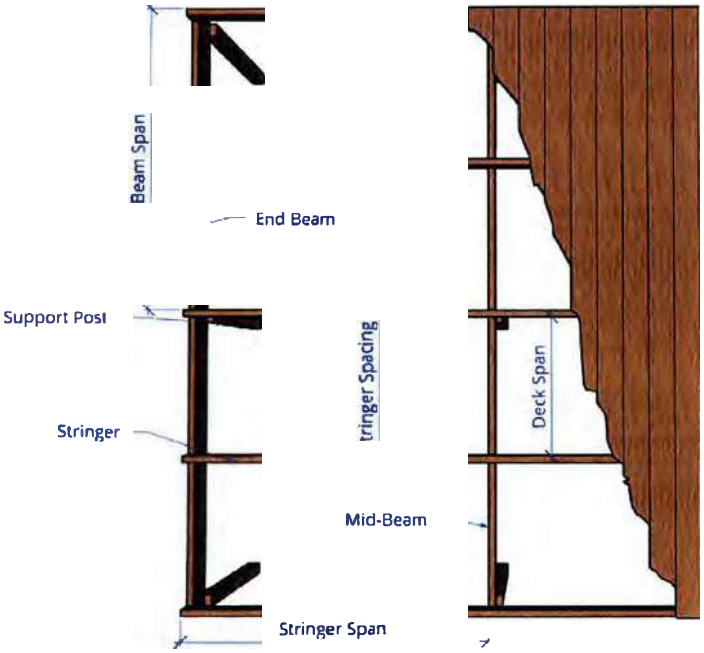

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TABLE 11: BEAM & STRINGER SPANS WITH ≤ 1.5" DECK THICKNESS

*ALL SIZES ARE ACTUAL NOT NOMINAL

LL 500 PSF

BEAM SPAN (SINGLE BEAM BETWEEN POSTS) - STRINGER @ 1.5" X 9.25" | STRINGER @ 2.5" X 9.25" | STRINGER @ 3.5" X 9.25" | STRINGER @ 5.5" X 9.25"

1.5" Deck Thickness	STR. SIZES	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	4'-0"	5'-0"	6'-0"	6'-6"	7'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-6"	4'-0"	6'-0"	8'-0"	9'-0"	10'-6"
BEAM SIZES	STR. SPANS																				
	1.5" X 5.5"	3'-5"	3'-2"	3'-0"	2'-10"	2'-8"	3'-2"	2'-10"	2'-7"	2'-6"	2'-5"	3'-2"	2'-10"	2'-7"	2'-5"	2'-2"	3'-2"	2'-7"	2'-3"	2'-1"	1'-11"
	2.5" X 5.5"	4'-5"	4'-1"	3'-10"	3'-8"	3'-6"	4'-1"	3'-8"	3'-4"	3'-2"	3'-1"	4'-1"	3'-8"	3'-4"	3'-1"	2'-9"	4'-1"	3'-4"	2'-10"	2'-8"	2'-6"
	3.5" X 5.5"	5'-2"	4'-10"	4'-7"	4'-4"	4'-2"	4'-10"	4'-4"	3'-11"	3'-10"	3'-8"	4'-10"	4'-4"	3'-11"	3'-8"	3'-4"	4'-10"	3'-11"	3'-5"	3'-2"	3'-0"
	5.5" X 5.5"	6'-6"	6'-1"	5'-9"	5'-5"	5'-2"	6'-1"	5'-5"	5'-0"	4'-9"	4'-7"	6'-1"	5'-5"	4'-11"	4'-7"	4'-2"	6'-0"	4'-11"	4'-3"	4'-0"	3'-8"
BEAM SIZES	1.5" X 7.25"	4'-6"	4'-2"	3'-11"	3'-9"	3'-7"	4'-2"	3'-9"	3'-5"	3'-3"	3'-2"	4'-2"	3'-9"	3'-5"	3'-2"	2'-10"	4'-2"	3'-5"	2'-11"	2'-9"	2'-7"
	2.5" X 7.25"	5'-10"	5'-5"	5'-1"	4'-10"	4'-7"	5'-5"	4'-10"	4'-5"	4'-3"	4'-1"	5'-5"	4'-10"	4'-5"	4'-1"	3'-8"	5'-4"	4'-5"	3'-9"	3'-7"	3'-4"
	3.5" X 7.25"	6'-10"	6'-5"	6'-1"	5'-9"	5'-6"	6'-5"	5'-9"	5'-3"	5'-0"	4'-10"	6'-5"	5'-9"	5'-3"	4'-10"	4'-4"	6'-4"	5'-2"	4'-6"	4'-3"	3'-8"
	5.5" X 7.25"	8'-7"	8'-0"	7'-7"	7'-2"	6'-10"	8'-0"	7'-2"	6'-5"	5'-11"	5'-6"	7'-2"	6'-5"	5'-6"	5'-6"	4'-6"	8'-0"	6'-5"	4'-10"	4'-3"	3'-8"
	1.5" X 9.25"	5'-9"	5'-4"	5'-1"	4'-9"	4'-7"	5'-4"	4'-9"	4'-4"	4'-2"	4'-0"	5'-4"	4'-9"	4'-4"	4'-0"	3'-8"	5'-4"	4'-4"	3'-9"	3'-6"	3'-3"
	2.5" X 9.25"	7'-5"	6'-11"	6'-6"	6'-2"	5'-11"	6'-11"	6'-2"	5'-8"	5'-5"	5'-3"	6'-11"	6'-2"	5'-7"	5'-2"	4'-6"	6'-10"	5'-7"	4'-10"	4'-3"	3'-8"
	3.5" X 9.25"	8'-9"	8'-2"	7'-9"	7'-4"	7'-0"	8'-2"	7'-4"	6'-5"	5'-11"	5'-6"	8'-2"	7'-3"	6'-5"	5'-6"	4'-6"	8'-1"	6'-5"	4'-10"	4'-3"	3'-8"
	5.5" X 9.25"	10'-11"	9'-7"	8'-7"	7'-8"	7'-0"	9'-7"	7'-8"	6'-5"	5'-11"	5'-6"	9'-7"	7'-8"	6'-5"	5'-6"	4'-6"	9'-7"	6'-5"	4'-9"	4'-3"	3'-8"
	1.5" X 11.25"	7'-0"	6'-6"	6'-2"	5'-10"	5'-7"	6'-6"	5'-10"	5'-4"	5'-1"	4'-11"	6'-6"	5'-10"	5'-4"	4'-11"	4'-5"	6'-6"	5'-3"	4'-7"	4'-3"	3'-8"
	2.5" X 11.25"	9'-0"	8'-5"	7'-11"	7'-6"	7'-0"	8'-5"	7'-6"	6'-5"	5'-11"	5'-6"	8'-5"	7'-6"	6'-5"	5'-6"	4'-6"	8'-4"	6'-5"	4'-10"	4'-3"	3'-8"
	3.5" X 11.25"	10'-8"	9'-8"	8'-7"	7'-9"	7'-0"	9'-7"	7'-8"	6'-5"	5'-11"	5'-6"	9'-7"	7'-8"	6'-5"	5'-6"	4'-6"	9'-7"	6'-5"	4'-10"	4'-3"	3'-8"
	5.5" X 11.25"	10'-11"	9'-7"	8'-6"	7'-8"	7'-0"	9'-7"	7'-8"	6'-5"	5'-11"	5'-6"	9'-7"	7'-8"	6'-5"	5'-6"	4'-6"	9'-7"	6'-4"	4'-9"	4'-3"	3'-8"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}{}^3 * t_1}{t_2}}$ or $\sqrt[2]{\frac{L_{os}{}^2 * t_1}{t_2}}$
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 29 psf or less, LL = 500 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

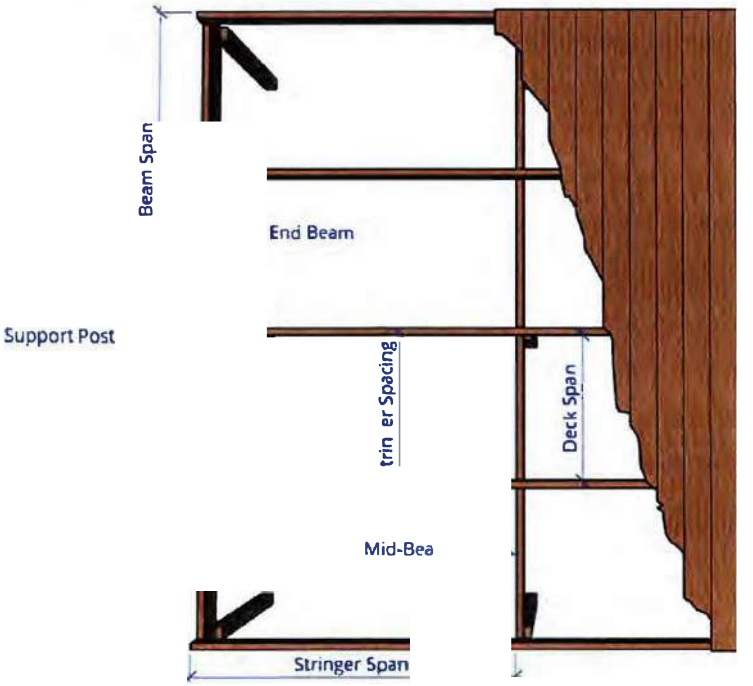

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TABLE 12: BEAM & STRINGER SPANS WITH ≤ 1.5" DECK THICKNESS

*ALL SIZES ARE ACTUAL NOT NOM NAL

LL 500 PSF

GODS BEAM SPAN (SINGLE BEAM BE

1.5" Deck Thickness	STR. SIZES / STR. SPANS	STRINGER @ 1.5" X 11.25"						STRINGER @ 2.5" X 11.25"						STRINGER @ 3.5" X 11.25"						STRINGER @ 5.5" X 11.25"					
		4'-0"	5'-0"	6'-0"	6'-6"	7'-0"	4'-0"	6'-0"	7'-0"	8'-0"	9'-0"	4'-0"	6'-0"	8'-0"	9'-0"	10'-6"	4'-0"	6'-0"	8'-0"	10'-0"	12'-6"
BEAM SIZES	1.5" X 5.5"	3'-2"	2'-10"	2'-7"	2'-6"	2'-5"	3'-2"	2'-7"	2'-5"	2'-3"	2'-1"	3'-2"	2'-7"	2'-3"	2'-1"	1'-11"	3'-2"	2'-7"	2'-2"	2'-0"	1'-9"
	2.5" X 5.5"	4'	3'-8"	3'-4"	3'-3"	3'-1"	4'-1"	3'-4"	3'	2'-11		4'-1"	3'-4"	2'-10"	2'-8"	2'-6"	4'-	3'-4"	2'-10"	2'-7"	2'-3"
	3.5" X 5.5"	4'-10	4'-4"	4'-0"	3'-10"	3'-8"	4'-10"	3'-11"	3'-8"	3'-5"	3'-3"	4'-10"	3'-11"	3'-5"	3'-3"	3'-0"	4'-10"	3'-11"	3'-5"	3'-0"	2'-8"
	5.5" X 5.5"	6'	5'-5"	5'-0"	4'-9"	4'-7"	6'-1"	4'-11"	4'-7"	4'-3"	4'-1"	6'-1"	4'-11"	4'-3"	4'-0"	3'-8"	6'-0"	4'-11"	4'-3"	3' 10"	3-
	1.5" X 7.25"	4'-2"	3'-9"	3'-5"	3'-3"	3'-2"	4'-2"	3'-5"	3'-2"	2'	2'-9"	4'-2"	3'-5"	2'-11"	2'-9"	2'-7"	4'-2"	3'-5"	2'-11"	2'-7"	2'-4"
	2.5" X 7.25"	5'-5"	4'-10"	4'-5"	4'-3"	4'-1"	5'-5"	4'-5"	4'-5"	3' 0"	3'-7"	5'-5"	4'-5"	3'-10"	3'-7"	3'-4"	5'-4'	4'-4"	3'-9"	3'-5"	3'-0"
		6'-5"	5'-9"	5'-3"	5'-0"	4'-10"	6'-5"	5'-3"	4'-10"	4'-6"	4'-3"	6'-4"	5'-2"	4'-6"	4'-3"	3'-8"	6'-4"	5'-2"	4'-6"	3'-10"	3-
		8'-0"	7'-2"	6'-5"	5'-11"	5'-6"	8'-0"	6'-5"	5'-6"	4'- 0"	4'-3"	8'-0"	6'-5"	4'-10"	4'-3"	3'-8"	7'-11"	6'-5"	4'-10"	3'-10"	3'
		5'-4"	4'-9"	4'-4"	4'-2"	4'-0"	5'-4"	4'-4"	4'-0"	3'-9"	3'-7"	5'-4"	4'-4"	3'-9"	3'-6"	3'-3"	5'-4	4'-4"	3'-9"	3'-4	3'-0"
	2.5" X 9.25"	6'-11"	6'-2"	5'-8"	5'-5"	5'-3"	6'-11"	5'-8"	5'-3"	4'-10"	4'-3"	6'-11"	5'-7"	4'-10"	4'-3"	3'-8"	6'-10"	5'-7"	4'-10"	3'-10"	3'
	3.5 X 9.25	8'-2"	7'-4"	6'-5"	5'-11"	5'-6"	8'-2"	6'-5"	5'-6"	4'- 0"	4'-3"	8'-2"	6'-5"	4'-10"	4'-3"	3'-8"	8'	6'-5"	4'-10"	3'-10'	3'
	5.5' X 9.25	9'-7"	7'-8"	6'-5"	5'-11"	5'-6"	9'-7"	6'-5"	5'-6"	4'- 0"	4'-3"	9'-7"	6'-5"	4'-10"	4'-3"	3'-8"	9'-7"	6'-5"	4'-10"	3'-10"	3'-
	1.5' X 1.25	6'-6"	5'-10"	5'-4"	5'-1"	4'-11"	6'-6"	5'-4	4'-11"	4'-7"	4'-3"	6'-6"	5'-3"	4'-7"	4'-3"	3'-8"	6'-5"	5'-3"	4'-7"	3'-10"	3'-
	2.5 X 11.25"	8'-5"	7'-6"	6'-5"	5'-1	5'-6"	8'-5"	6'-5"	5'-6"	4'- 0"	4'-3"	8'-4"	6'-5"	4'-10"	4'-3"	3'-8"	8'-4"	6'-5"	4'-10"	3'-10"	3'-
		9'-7"	7'-8"	6'-5"	5'-1	5'-6"	9'-7"	6'-5"	5'-6"	4'- 0"	4'-3"	9'-7"	6'-5"	4'-10"	4'-3"	3'-8"	9'-7"	6'-5"	4'-10"	3'-10"	3'-
		9'-7"	7'-8"	6'-5"	5'-1	5'-6"	9'-7"	6'-5"	5'-6"	4'-9'	4'-3"	9'-7"	6'-5"	4'-9"	4'-3"	3'-8"	9'-7"	6'-5"	4'-9"	3'-10"	3'-

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}{}^3 * t_1}{t_2}}$ or $\sqrt{}_{t_2}$
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 31 psf or less, LL = 500 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

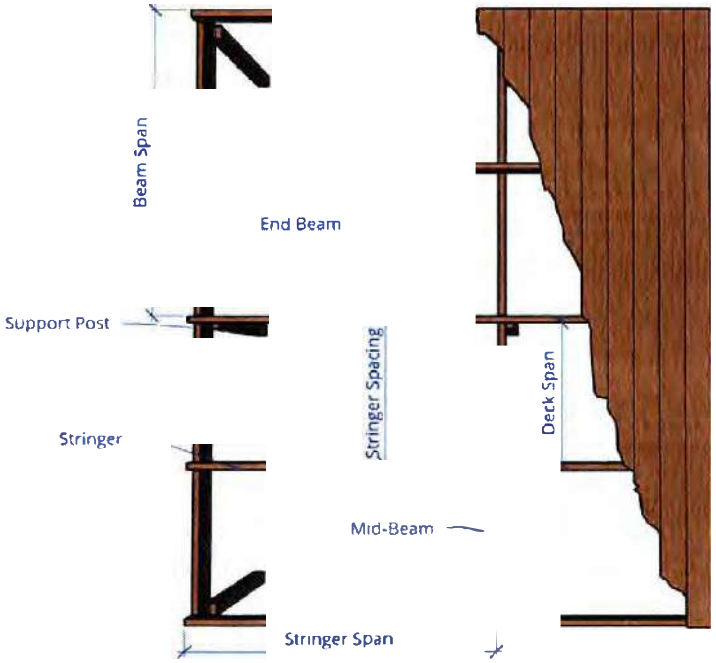

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TABLE 13: BEAM & STRINGER SPANS WITH ≤ 3.5" DECK THICKNESS

*ALL SIZES ARE ACTUAL NOT NOMINAL

LL 500 PSF

IRONWOODS BEAM SPAN (SINGLE BEAM BETWEEN POSTS)

3.5" Deck Thickness	STR. SIZES	STR. SPANS	STRINGER @ 1.5" X 5.5"						STRINGER @ 2.5" X 5.5"						STRINGER @ 3.5" X 5.5"						STRINGER @ 5.5" X 5.5"					
			1'-0"	1'-6"	2'-0"	2'-6"	3'-0"	4'-0"	2'-0"	2'-6"	3'-0"	4'-0"	5'-0"	6'-0"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	6'-0"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	6'-0"
BEAM SIZES	1.5" X 5.5"		6'-4"	5'-2"	4'-5"	4'-0"	3'-8"	3'-2"	4'-5"	4'-0"	3'-7"	3'-2"	2'-10"	2'-6"	3'-4"	3'-4"	3'-2"	2'-11"	2'-10"	2'-7"	3'-4"	3'-4"	3'-2"	2'-11"	2'-9"	2'-7"
	2.5" X 5.5"		7'-7"	6'-8"	5'-9"	5'-2"	4'-8"	4'-1"	5'-9"	5'-2"	4'-8"	4'-1"	3'-7"	3'-3"	4'-4"	4'-4"	4'-1"	3'-10"	3'-7"	3'-4"	4'-4"	4'-4"	4'-1"	3'-10"	3'-7"	3'-4"
	3.5" X 5.5"		8'-5"	7'-5"	6'-9"	6'-1"	5'-7"	4'-10"	6'-9"	6'-1"	5'-7"	4'-10"	4'-3"	3'-11"	5'-2"	5'-2"	4'-10"	4'-6"	4'-3"	3'-11"	5'-2"	5'-2"	4'-10"	4'-6"	4'-3"	3'-11"
	5.5" X 5.5"		9'-11"	8'-8"	7'-10"	7'-3"	6'-10"	6'-0"	7'-10"	7'-3"	6'-10"	6'-0"	5'-5"	4'-11"	6'-5"	6'-5"	6'-0"	5'-8"	5'-5"	4'-11"	6'-5"	6'-5"	6'-0"	5'-8"	5'-5"	4'-11"
	1.5" X 7.25"		8'-4"	6'-9"	5'-11"	5'-3"	4'-10"	4'-2"	5'-10"	5'-3"	4'-9"	4'-2"	3'-8"	3'-4"	4'-5"	4'-5"	4'-2"	3'-11"	3'-8"	3'-4"	4'-5"	4'-5"	4'-2"	3'-11"	3'-8"	3'-4"
	2.5" X 7.25"		10'-1"	8'-9"	7'-7"	6'-9"	6'-2"	5'-4"	7'-7"	6'-9"	6'-2"	5'-4"	4'-9"	4'-4"	5'-9"	5'-9"	5'-4"	5'-1"	4'-9"	4'-4"	5'-9"	5'-9"	5'-4"	5'-1"	4'-9"	4'-4"
	3.5" X 7.25"		11'-3"	9'-10"	8'-11"	8'-0"	7'-4"	6'-4"	8'-11"	8'-0"	7'-4"	6'-4"	5'-8"	5'-2"	6'-9"	6'-9"	6'-4"	6'-0"	5'-8"	5'-2"	6'-9"	6'-9"	6'-4"	6'-0"	5'-8"	5'-2"
	5.5" X 7.25"		13'-1"	11'-5"	10'-4"	9'-7"	9'-1"	7'-11"	10'-4"	9'-7"	9'-1"	7'-11"	7'-1"	6'-5"	8'-6"	8'-6"	7'-11"	7'-6"	7'-1"	6'-5"	8'-6"	8'-6"	7'-11"	7'-6"	7'-1"	6'-5"
	1.5" X 9.25"		10'-7"	8'-8"	7'-6"	6'-9"	6'-2"	5'-4"	7'-6"	6'-8"	6'-1"	5'-3"	4'-9"	4'-4"	5'-8"	5'-8"	5'-3"	5'-0"	4'-9"	4'-4"	5'-8"	5'-8"	5'-3"	5'-0"	4'-9"	4'-4"
	2.5" X 9.25"		12'-10"	11'-2"	9'-8"	8'-8"	7'-11"	6'-10"	9'-8"	8'-8"	7'-11"	6'-10"	6'-1"	5'-6"	7'-4"	7'-4"	6'-10"	6'-5"	6'-1"	5'-6"	7'-4"	7'-4"	6'-10"	6'-5"	6'-1"	5'-6"
	3.5" X 9.25"		14'-4"	12'-6"	11'-5"	10'-3"	9'-4"	8'-1"	11'-5"	10'-3"	9'-4"	8'-1"	7'-3"	6'-10"	8'-8"	8'-8"	8'-1"	7'-7"	7'-3"	6'-10"	8'-8"	8'-8"	8'-1"	7'-7"	7'-3"	6'-10"
	5.5" X 9.25"		16'-8"	14'-7"	13'-3"	12'-3"	11'-7"	9'-5"	13'-3"	12'-3"	11'-7"	9'-5"	8'-6"	7'-9"	10'-8"	10'-8"	9'-5"	8'-10"	8'-4"	7'-9"	10'-8"	10'-8"	9'-5"	8'-10"	8'-4"	7'-9"
	1.5" X 11.25"		12'-11"	10'-6"	9'-2"	8'-2"	7'-5"	6'-5"	9'-1"	8'-2"	7'-5"	6'-5"	5'-9"	5'-3"	6'-11"	6'-11"	6'-5"	6'-1"	5'-9"	5'-3"	6'-11"	6'-11"	6'-5"	6'-1"	5'-9"	5'-3"
	2.5" X 11.25"		15'-7"	13'-7"	11'-9"	10'-6"	9'-7"	8'-4"	11'-9"	10'-6"	9'-7"	8'-4"	7'-5"	6'-9"	8'-11"	8'-11"	8'-4"	7'-10"	7'-5"	6'-9"	8'-11"	8'-11"	8'-4"	7'-10"	7'-5"	6'-9"
	3.5" X 11.25"		17'-6"	15'-3"	13'-10"	12'-5"	11'-4"	9'-10"	13'-10"	12'-5"	11'-4"	9'-10"	9'-0"	8'-2"	10'-6"	10'-6"	9'-10"	9'-3"	9'-0"	8'-2"	10'-6"	10'-6"	9'-10"	9'-3"	9'-0"	8'-2"
	5.5" X 11.25"		20'-4"	17'-9"	16'-1"	14'-11"	12'-6"	10'-8"	16'-1"	14'-8"	12'-4"	10'-8"	9'-8"	8'-10"	12'-8"	12'-8"	11'-8"	10'-11"	10'-3"	9'-4"	12'-8"	12'-8"	11'-8"	10'-11"	10'-3"	9'-4"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}{}^3 * t_1}{t_2}}$ or $\sqrt[2]{\frac{L_{os}{}^2 * t_1}{t_2}}$
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 52.5 psf or less, LL = 500 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

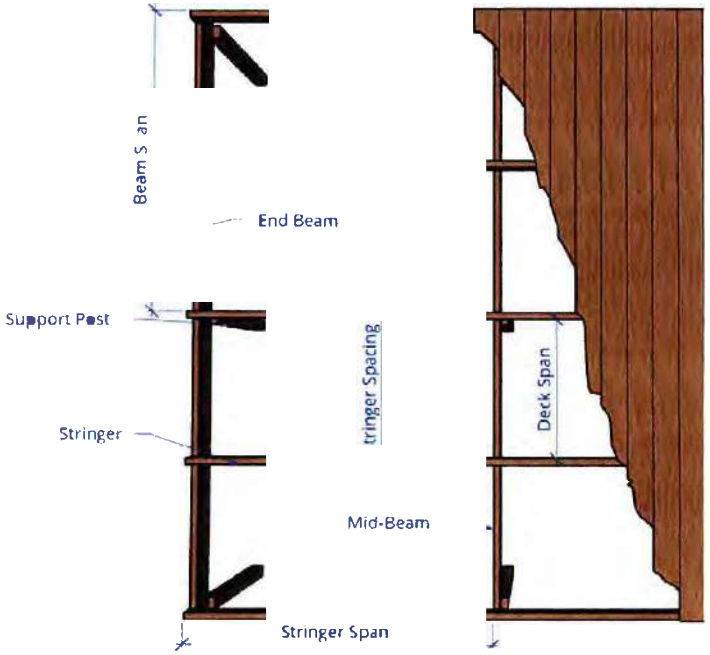

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TABLE 14: BEAM & STRINGER SPANS WITH ≤ 3.5" DECK THICKNESS

LL 500 PSF

*ALL SIZES ARE ACTUAL NOT NOM NAL

IRONWOODS BEAM SPAN (SINGLE BEAM BETWEEN POSTS)

3.5" Deck Thickness	BEAM SIZES	STRINGER @ 1.5" X 7.25"									STRINGER @ 2.5 X 7.25"									STRINGER @ 3.5" X 7.25"									STRINGER @ 5.5 X 7.25								
		2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	7'-6"	8'-0"
2.5" X 5.5"		4'-5"	4'-0"	3'-8"	3'-4"	3'-2"	3'-2"	2'-10"	2'-8"	2'-5"	3'-2"	2'-	2'-10"	2'-8"	2'-7"	2'-5"	2'-4"	2'-3"	2'-2"	3'-2"	3'-2"	2'-10"	2'-8"	2'-7"	2'-5"	2'-4"	2'-3"	2'-2"	3'-2"	3'-2"	2'-10"	2'-8"	2'-7"	2'-5"	2'-4"	2'-3"	2'-2"
3.5" X 5.5"		5'-9"	5'-2"	4'-8"	4'-4"	4'-1"	4'-	3'-10"	3'-5"	3'-2"	4'-1"	3'-10"	3'-7"	3'-5"	3'-4"	3'-2"	3'-0"	2'-11"	2'-10"	4'-1"	4'-0"	3'-7"	3'-5"	3'-4"	3'-2"	3'-0"	2'-11"	2'-10"	4'-1"	4'-0"	3'-7"	3'-5"	3'-4"	3'-2"	3'-0"	2'-11"	2'-10"
5.5" X 5.5"		6'-9"	6'-1"	5'-7"	5'-2"	4'-10"	4'-10"	4'-6"	4'-1"	3'-10"	4'-9"	4'-6"	4'-3"	4'-1"	3'-11"	3'-9"	3'-7"	3'-6"	3'-4"	4'-9"	4'-9"	4'-3"	4'-1"	3'-11"	3'-9"	3'-7"	3'-6"	3'-4"	4'-9"	4'-9"	4'-3"	4'-1"	3'-11"	3'-9"	3'-7"	3'-6"	3'-4"
1.5" X 7.25"		7'-10"	7'-3"	6'-10"	6'-5"	6'-0"	6'-0"	5'-8"	5'-5"	5'-2"	6'-0"	5'-8"	5'-5"	5'-2"	4'-11"	4'-9"	4'-7"	4'-5"	4'-3"	6'-0"	5'-8"	5'-5"	5'-2"	4'-11"	4'-9"	4'-7"	4'-5"	4'-3"	6'-0"	5'-8"	5'-5"	5'-2"	4'-11"	4'-9"	4'-7"	4'-5"	4'-3"
2.5" X 7.25"		5'-10"	5'-3"	4'-10"	4'-5"	4'-2"	4'-2"	3'-11"	3'-8"	3'-6"	4'-2"	3'-11"	3'-8"	3'-6"	3'-4"	3'-3"	3'-1"	3'-0"	2'-11"	4'-2"	4'-2"	3'-8"	3'-6"	3'-4"	3'-3"	3'-1"	3'-0"	2'-11"	4'-2"	4'-2"	3'-8"	3'-6"	3'-4"	3'-3"	3'-1"	3'-0"	2'-11"
3.5" X 7.25"		7'-7"	6'-9"	6'-2"	5'-8"	5'-4"	5'-4"	5'	4'-9"	4'-7"	5'-4"	5'	4'-9"	4'-7"	4'-4"	4'-2"	4'-0"	3'-10"	3'-8"	5'-4"	5'-4"	4'-9"	4'-7"	4'-4"	4'-2"	4'-0"	3'-10"	3'-8"	5'-4"	5'-4"	4'-9"	4'-7"	4'-4"	4'-2"	4'-0"	3'-10"	3'-8"
5.5" X 7.25"		8'	8'-0"	7'-4"	6'-9"	6'-4"	6'-4"	6'-0"	5'-8"	5'-5"	6'-4"	6'-0"	5'-8"	5'-5"	5'-2"	4'-11"	4'-9"	4'-7"	4'-5"	6'-4"	6'-4"	5'-8"	5'-5"	5'-2"	4'-11"	4'-9"	4'-7"	4'-5"	6'-4"	6'-4"	5'-8"	5'-5"	5'-2"	4'-11"	4'-9"	4'-7"	4'-5"
5.5" X 7.25"		10'-4"	9'-7"	9'-1"	8'-6"	7'-11"	7'-	7'-6"	7'-1"	6'-9"	7'-	7'-6"	7'-1"	6'-9"	6'-6"	6'-3"	6'-0"	5'-10"	5'-8"	7'-	7'-	7'-1"	6'-9"	6'-6"	6'-3"	6'-0"	5'-10"	5'-8"	7'-	7'-	7'-1"	6'-9"	6'-6"	6'-3"	6'-0"	5'-10"	5'-8"
2.5" X 9.25"		7'-6"	6'-9"	6'-1"	5'-8"	5'-4"	5'-3"	5'-0"	4'-9"	4'-6"	5'-3"	5'-0"	4'-9"	4'-6"	4'-4"	4'-2"	4'-0"	3'-10"	3'-8"	5'-3"	5'-3"	4'-9"	4'-6"	4'-4"	4'-2"	4'-0"	3'-10"	3'-8"	5'-3"	5'-3"	4'-9"	4'-6"	4'-4"	4'-2"	4'-0"	3'-10"	3'-8"
3.5" X 9.25"		9'-8"	8'-8"	7'-11"	7'-4"	6'-10"	6'-10"	6'-5"	6'-1"	5'-10"	6'-10"	6'-5"	6'-1"	5'-10"	5'-7"	5'-4"	5'-2"	4'-11"	4'-9"	6'-10"	6'-10"	6'-1"	5'-10"	5'-7"	5'-4"	5'-2"	4'-11"	4'-9"	6'-10"	6'-10"	6'-1"	5'-10"	5'-7"	5'-4"	5'-2"	4'-11"	4'-9"
5.5" X 9.25		11'-5"	10'-3"	9'-4"	8'-8"	8'-1"	8'-1"	7'-8"	7'-3"	6'-10"	8'-1"	7'-8"	7'-3"	6'-10"	6'-7"	6'-4"	6'-1"	5'-10"	5'-7"	8'-1"	8'-1"	7'-3"	6'-10"	6'-7"	6'-4"	6'-1"	5'-10"	5'-7"	8'-1"	8'-1"	7'-3"	6'-10"	6'-7"	6'-4"	6'-1"	5'-10"	5'-7"
1.5" X 11.25"		13'-3"	12'-3"	11'-7"	10'-9"	9'-5"	9'-4"	8'-4"	7'-6"	6'-11"	9'-4"	8'-4"	7'-6"	6'-11"	6'-6"	6'-3"	6'-0"	5'-9"	5'-7"	9'-4"	9'-4"	7'-6"	6'-11"	6'-6"	6'-3"	6'-0"	5'-9"	5'-7"	9'-4"	9'-4"	7'-6"	6'-11"	6'-6"	6'-3"	6'-0"	5'-9"	5'-7"
2.5" X 11.25"		9'-2"	8'-2"	7'-5"	6'-11"	6'-5"	6'-5"	6'-	5'-9"	5'-6"	6'-5"	6'-	5'-9"	5'-6"	5'-3"	5'-0"	4'-10"	4'-8"	4'-6"	6'-5"	6'-5"	5'-9"	5'-6"	5'-3"	5'-0"	4'-10"	4'-8"	4'-6"	6'-5"	6'-5"	5'-9"	5'-6"	5'-3"	5'-0"	4'-10"	4'-8"	4'-6"
3.5" X 11.25"		11'-9"	10'-6"	9'-7"	8'-11"	8'-4"	8'-4"	7'-11"	7'-5"	6'-11"	8'-4"	7'-11"	7'-5"	6'-11"	6'-8"	6'-5"	6'-2"	5'-11"	5'-8"	8'-4"	8'-4"	7'-5"	6'-11"	6'-8"	6'-5"	6'-2"	5'-11"	5'-8"	8'-4"	8'-4"	7'-5"	6'-11"	6'-8"	6'-5"	6'-2"	5'-11"	5'-8"
3.5" X 11.25"		13'-10"	12'-5"	11'-4"	10'-6"	9'-5"	9'-5"	8'-4"	7'-6"	6'-11"	9'-5"	8'-4"	7'-6"	6'-11"	6'-8"	6'-5"	6'-2"	5'-11"	5'-8"	9'-5"	9'-5"	7'-6"	6'-11"	6'-8"	6'-5"	6'-2"	5'-11"	5'-8"	9'-5"	9'-5"	7'-6"	6'-11"	6'-8"	6'-5"	6'-2"	5'-11"	5'-8"
		16'-1"	14'-11"	13'-10"	12'-9"	11'-6"	11'-6"	10'-2"	9'-1"	8'-5"	11'-6"	10'-2"	9'-1"	8'-5"	8'-1"	7'-10"	7'-6"	7'-3"	7'-0"	11'-6"	11'-6"	9'-1"	8'-5"	8'-1"	7'-10"	7'-6"	7'-3"	7'-0"	11'-6"	11'-6"	9'-1"	8'-5"	8'-1"	7'-10"	7'-6"	7'-3"	7'-0"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}{}^3 * t_1}{t_2}}$ or $\sqrt{\frac{L_{os}{}^2 * t_1}{t_2}}$
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 38 psf or less, LL = 500 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.

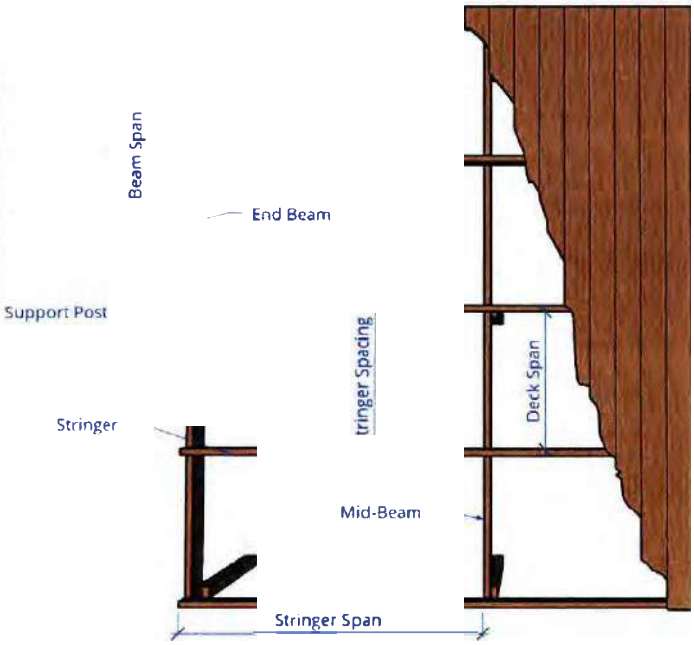

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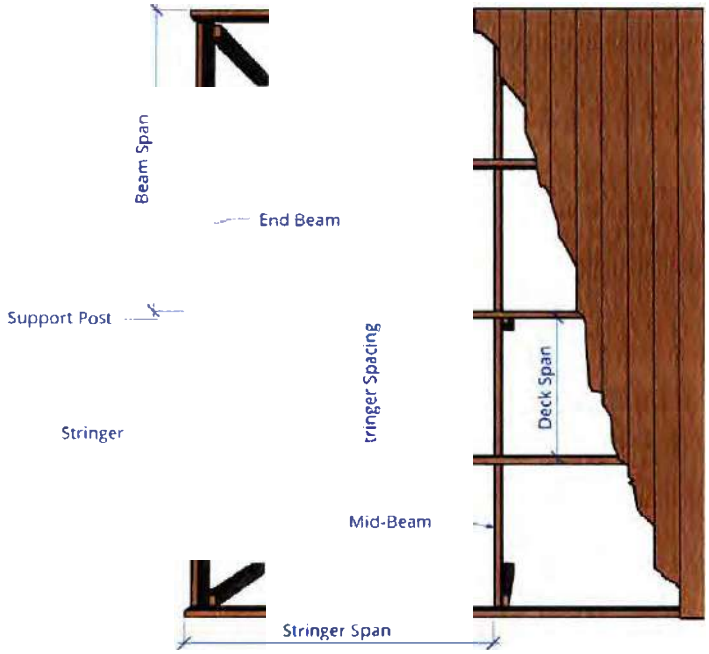
TABLE 15: BEAM & STRINGER SPANS WITH ≤ 3.5" DECK THICKNESS

IRONWOODS BEAM SPAN (SINGLE BEAM BETWEEN POSTS) | *ALL SIZES ARE ACTUAL NOT NOMINAL | LL 500 P F

BEAMS		STR. SIZES	STRINGER @ 1.5" X 9.25"					STRINGER @ 2.5" X 9.25"					STRINGER @ 3.5 X 9.25					STRINGER @ 5.5" X 9.25"				
3.5" Deck Thickness		STR. SPANS	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	4'-0"	5'-0	5'-6"	6'-0"	7'-0"	4'-0"	5'-0"	6'-0"	7'-0"	8'-6"	4'-0"	6'-0"	6'-0"	9'-0"	10'-6"
2.5 X 5.5			3'-4"	3'-2"	2'-	2'-10"	2'-8"	3'-2"	2'-10"	2'-8"	2'-7"	2'-4"	3'-	2'-9"	2'-6"	2'-4"	2'-2"	3'-	2'-6"	2'-2'	2'	1'-11
3.5" X 5.5			4'-4"	4'-	3'-10"	3'-7"	3'-5"	4'-	3'-7"	3'-5"	3'-4"	3'-	4'-0"	3'-7"	3'-3"	3'	2'-9"	4'-0"	3'-3"	3'-1	2'-8"	2'-6"
5.5" X 5.5			5'-2"	4'-10"	4'-6"	4'-4"	4'-	4'- 0"	4'-3"	4'-	3'-11	3'-7"	4'-9"	4'-3"	3'-11"	3'-7"	3'-3	4'-9"	3'-1	3'-4"	3'-2"	2'- 1"
			6'-5"	6'-0"	5'-8"	5'-5"	5'-2"	6'-0"	5'-5"	5'-2"	4'- 1"	4'-6"	6'-0"	5'-4"	4'-11	4'-6	4'-1"	6'-0"	4'-1	4'-3"	4'-0"	3'-7"
1.5" X 7.25"			4'-5"	4'-2"	3'- 1"	3'-8"	3'-6"	4'-2"	3'-8"	3'-6"	3'-4"	3'-	4'-2"	3'-8"	3'-4"	3'-	2' 0"	4'	3'-4"	2'-11"	2'-9"	2'-6"
2.5" X 7.25"			5'-9"	5'-4"	5'-	4'-9"	4'-7	5'-4"	4'-9"	4'-7"	4'-4"	4'-0"	5'-4"	4'-9"	4'-4"	4'-0"	3'-8"	5'-4"	4'-4"	3'-9"	3'-6"	3'-3"
3.5" X 7.25"			6'-9"	6'-4"	6'-0"	5'-8"	5'-5"	6'-4"	5'-8"	5'-5"	5'-2"	4'-9"	6'-4	5'-8"	5'-2"	4'-9"	4'-	6'-3"	5'-2"	4'-5"	4'-2"	3'-7"
5.5" X 7.25			8'-6"	7'-	7'-6"	7'	6'-9"	7'-11"	7'-1	6'-9"	6'-3"	5'-5"	7'-11	7'-1	6'-3"	5'-4"	4'-5"	7'-11"	4'-5"	4'-8"	4'-2	3'-7
1.5" X 9.25"			5'-8"	5'-4"	5'-0"	4'-9"	4'-6"	5'-3"	4'-9"	4'-6"	4'-4"	4'-0"	5'-3"	4'-9"	4'-4"	4'-0"	3'-7"	5'-3"	4'-3"	3'-8"	3'-6"	3'-3"
2.5 X 9.25"			7'-4"	6' 0"	6'-5"	6'	5'-10"	6'-10"	6'-	5'-10"	5'-7"	5'-2"	6' 0"	6'	5'-7"	5'-2"	4'-5"	6'-9"	5'-6"	4'-9"	4'-2"	3'-7"
3.5 X 9.25"			8'-8"	8'-	7'-8"	7'-3"	6'-10"	8'-	7'-3"	6'-10"	6'-3"	5'-5"	8'-	7'-3"	6'-3"	5'-5"	4'-5"	8'-0"	6'-3"	4'-8"	4'-2	3'-7"
5.5" X 9.25"			0'-9'	9'-5"	6'-4"	7'-6"	6'-10"	9'-5"	7'-6"	6'-10"	6'-3"	5'-4"	9'-5"	7'-6"	6'-3"	5'-4"	4'-5"	9'-5"	6'-3"	4'-8"	4'-2"	'-7"
1.5" X 11.25"			6'-5"	6'-5"	6'-	5'-9"	5'-6"	6'-5"	5'-9"	5'-6"	5'-3"	4' 0"	6'-5"	5'-9"	5'-3"	10"	4'-5"	6'-5"	5'-3"	4'-6"	4'-2"	3'-7"
2.5" X 11.25"			8'- 1'	8'-4"	7'-10"	7'-5"	6'-10"	8'-4	7'-5"	6'-10"	6'-3	5'-5"	8'-3"	7'-5"	6'-3"	5'-5"	4'-5"	8'-3"	6'-3"	4'-8"	4'-2"	3'-7"
3.5" X 11.25"			0'-6"	9'-5"	8'-5"	7'-6"	6'-10"	9'-5"	7'-6"	6'-10"	6'-3"	5'-5"	9'-5"	7'-6"	6'-3"	5'-4"	4'-5"	9'-5"	6'-3"	4'-8"	4'-2"	3'-7"
			0'-8"	9'-4"	8'-4"	7'-6"	6'-10"	9'-	7'-6"	6'-10"	6'-3"	5'-4"	9'-4	7'-6"	6'-3"	5'-4"	4'-5"	9'-4"	6'-3"	4'-8"	4'-2	3'-7"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}{}^3 * t_1}{t_2}}$ or t_2
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
      - L_{ob} = Original Beam Length (in.)
      - t_1 = Original Spacing (12 in.)
      - t_2 = New Spacing (in.)
2. All loads and load combinations are determined using ASCE 7. DL = Dead Load, LL = Live Load, SL = Snow Load, WL_g = Wind Load, & WL_u = Uplift Wind Load.
3. Maximum total load (TL) determined from the governing case of the following:
   TL = DL + LL
   TL = DL + SL
   TL = DL + 0.75*LL+0.75*SL
   TL = 0.6*DL + 0.6*WL_u
4. Loads utilized for the table are as follows: DL = 40 psf or less, LL = 500 psf, SL+WL_g = 20 psf, where absolute uplift wind load (WL_u) is not greater than WL_g.
5. Deflection limits for stringer and beams are determined as follows:
   Stringer – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
   Beams – Live load deflection is limited to L/360, total deflection is limited to L/240, where L is the span length.
6. Stringer and beam capacities are shall be independently verified to meet Allowable Design Values described on page 2.
7. If a beam is provided as an intermediate stringer support (Mid-Beam) then its span selected above, or modified by note 8, should be multiplied by 0.60 for a dropped beam and 0.70 for a flush beam.
8. Required wind pressure shall be verified by others.



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TROPICAL

TABLE 16: BEAM & STRINGER SPANS WITH ≤ 3.5" DECK THICKNESS

IRONWOODS BEAM SPAN (SINGLE BEAM BETWEEN POSTS) — *ALL SIZES ARE ACTUAL NOT NOMINAL — LL 500 P F

3.5" Deck Thickness	STR. SIZES	STRINGER @ 1.5" X 11.25"					STRINGER @ 2.5" X 6"					STRINGER @ 3.5" X 11.25"					STRINGER @ 5.5" X 11.25"				
	R. SPANS	4'-0"	6'-0"	5'-6"	6'-0"	6'-6"	4'-0"	5'-0"	6'-0"	6'-6"	5'-0"	6'-0"	8'-0"	9'-0"	10'-6"	6'-0"	8'-0"	10'-0"	11'-0"	12'-6"
BEAMS	1.5" X 5.5"	3'-2"	2'-10"	2'-8"	2'-7"	2'-5"	3'-	2'-9"	2'-7"	2'-5"	3'-3"	2'-6"	2'-2"	2'-1"	1'-	2'-6"	2'-2"	1'-11"	1'-10"	1'-9"
	2.5" X 5.5"	4'-	3'-7"	3'-5"	3'-4"	3'-2"	4'-	3'-7"	3'-4"	3'-2"	4'-3"	3'-3"	2'-10"	2'-8"	2'-6"	3'-3"	2'-10"	2'-6	2'-5"	2'-3"
	3.5" X 5.5	4'-10"	4'-3"	4'	3'- 1	3'-0"	4'-9"	4'-3"	3'-11"	3'-8"	5'-0"	4'-3	3'-4"	3'-2"	2'-11"	3'-11"	3'-4"	3'-0"	2'-10"	2'-8"
	5.5" X 5.	6'-0"	5'-5"	5'-2"	'- 1"	4'-9"	6'-0"	5'-4"	4'-11"	4'-8"	6'-0"	4'-3	4'-	3'-7"	3'-4"	4'-11"	4'-3"	4'-0"	3'-9"	3'-6"
	1.5" X 7.25"	4'-2"	3'-8"	3'-6"	3'-4"	3'-3"	4'-2"	3'-8"	3'-4"	3'-2"	4'-3"	3'-4"	2'-10"	2'-8"	2'-6"	3'-4"	2'-11"	2'-7"	2'-5"	2'-4"
	2.5" X 7.25"	5'-4"	4'-9"	4'-7"	4'-4"	4'-2"	5'-4"	4'-9"	4'-4"	4'-2"	5'-2"	4'-4"	3'-8"	3'-4"	3'-3"	4'-4"	3'-9"	3'-4"	3'-2"	3'-0"
		6'-4"	5'-8"	5'-5"	5'-2"	5'-0"	6'-4"	5'-8"	5'-2"	4'-11"	6'-3"	5'-2"	4'-5"	4'-2"	4'-0"	5'-	4'-5	3'-9"	3'-5"	3'-3"
		7'-	7'-1"	6'-9"	6'-3"	5'-9"	7'-1"	6'-3"	5'-8"	5'-4"	7'-1"	6'-3"	4'-11"	4'-8"	4'-5"	6'-3"	4'-8"	4'-3"	3'-9	3'-5"
SLIDERS		5'-4"	4'-9	4'-6"	4'-4"	4'-2"	5'-3"	4'-9"	4'-4"	4'-2"	5'-3"	4'-4"	3'-9"	3'-6"	3'-3"	4'-4"	3'-8"	3'-4"	3'-2"	2'-
	2.5" X 9.25"	6'-10"	6'-1	5'-10"	5'-7"	5'-4"	6'-10"	6'	5'-7"	5'-4"	6'-3"	4'-8"	4'-5"	4'-2"	3'-7"	5'-7"	4'-8"	3'-9"	3'-5"	3'-0"
	3.5" X 9.25"	8'-	7'-3"	6'-10"	6'-3"	5'-10"	8'-	7'-3"	6'-3	5'-7"	7'-3"	4'-8"	4'-5"	4'-2"	3'-7"	6'-3"	4'-8"	3'-9"	3'-5"	3'-0"
	5.5" X 9.25"	9'-5"	7'-6"	6'-10"	6'-3"	5'-9"	9'-5"	7'-6"	6'-3"	5'-9"	7'-6"	6'-3"	4'-8"	4'-5"	3'-7"	6'-3"	4'-8"	3'-9"	3'-5"	3'-0"
	1.5" X 11.25"	6'-5"	5'-9"	5'-6"	5'-3"	5'-	6'-5"	5'-9"	5'-3"	4'-6	5'-9"	5'-3"	4'-6	4'-5"	3'-7"	5'-3"	4'-6"	3'-7"	3'-5"	3'-0"
	2.5" X 11.25"	8'-4"	7'-5"	6'-10"	6'-3"	5'-10"	8'-4"	7'-5"	6'-3"	4'-6	7'-5"	6'-3"	4'-6	4'-5"	3'-7"	6'-3"	4'-8"	3'-9"	3'-5"	3'-0"
	3.5" X 11.25"	9'-5"	7'-6"	6'-10"	6'-3"	5'- 0"	9'-5"	7'-6"	6'-3"	4'-8"	7'-6"	6'-3"	4'-8"	4'-5"	3'-7"	6'-3"	4'-8"	3'-9	3'-5"	3'-0"
	5.5 X 11.25	9'-4"	7'-6"	6'-10"	6'-3"	5'-9"	9'-4"	7'-6"	6'-3"	4'-8"	7'-6"	6'-3"	4'-8"	4'-5"	3'-7"	6'-3"	4'-8	3'-9	3'-5"	3'-0"

GENERAL NOTES:

1. Stringer Spacing for the table is at 24" on center (o.c.). To use larger stringer spacing, both the stringer and beam must be adjusted as follows:
   a. New Stringer Length (in.) = Min of:
      i. $\sqrt[3]{\frac{L_{os}{}^3 * t_1}{t_2}}$ or $\sqrt[2]{\frac{L_{os}{}^2 * t_1}{t_2}}$
   b. New Beam Length (in):
      i. $L_{ob} + \frac{(t_2 - t_1)}{12} * 6$
   c. Where
      - L_{os} = Original Stringer Length (in.)
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      - t_1 = Original Spacing (12 in.)
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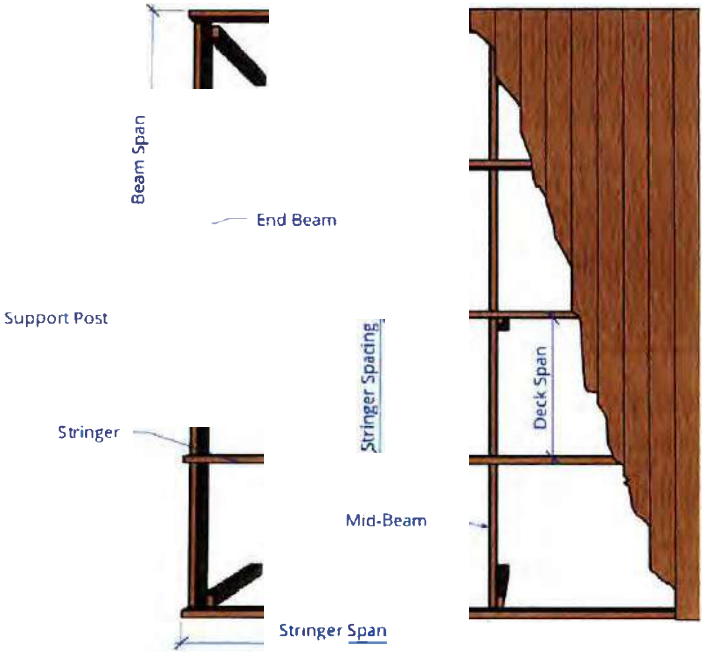

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