

DATE:	7/30/2026	COMPANY:	Wanskus Architecture, P.C.
STRUCALC BUILD:	StruCalc Pro	DESIGNED BY:	JOHN P. WANSKUS, RA, AIA, NCARB
CUSTOMER:	DANIEL FORNES	REVIEWED BY:	JOHN P. WANSKUS, RA, AIA, NCARB
PROJ. ADDRESS:	7870 NW 163rd STREET MIAMI LAKES, FL 33016	PROJECT NAME:	FORNES
LEVEL:	NOT YET ASSIGNED	LOADING:	ASD
MEMBER NAME:	GIRDER	CODE:	8th Ed. (2023) Florida Building Code
MEMBER TYPE:	ROOF BEAM	NDS:	2018 NDS
MATERIAL:	Solid Sawn		
Southern Pine	No. 2	8" Dia.	DRY

BEAM PROPERTIES

Start (ft): 0 End (ft): 12.67 Member Slope (in): 8/12 Actual Length (ft): 15.23

Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lb _f /ft)			Creep Factor
50.27	201.06	201.06	14.99	1	0.55	1

STRENGTH PROPERTIES

	F _b (psi)	F _t (psi)	F _v (psi)	F _c (psi)	F _c ⊥ (psi)	E (psi) x10 ³	E _{min} (psi) x10 ³
Base Values	850	550	165	525	375	1200	440
Adjusted Values	850	550	165	525	375	1200	440
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
C _i	1	1	1	1	1	1	1
C _F	1	1	1	1	1	1	1

Bending Adjustment Factors C_{fu} = 1 C_r = 1

BEAM DATA

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	12.67	0	12.67	6.699999	1.00	1.00	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (90.5%)	14.1	148.5	12.67	D	0.9
Bending Stress Y (psi)	PASS (44.2%)	426.7	765.0	6.335	D	0.9
Deflection Y (in)	PASS (73.0%)	0.258	0.956 (=L/180)	6.335	D+L	
Compressive Stress (psi)	PASS (98.6%)	5.6	404.0	0	D	0.9
Tensile Stress (psi)	PASS (98.9%)	5.6	495.0	12.67	D	0.9
Bearing Stress (psi)	PASS (93.1%)	26.0	375.0	0	D-0.6W(-)	1.6
Bending-Compression (Unit)	PASS (44.2%)	0.56	1.00	6.208	D	0.9
Bending-Tension (Unit)	PASS (44.2%)	0.56	1.00	6.462	D	0.9

REACTIONS

Units for V: lb_f Units for M: lb_f-ft

Y axis	DEAD	WIND +	WIND -	TOTAL
A	602	329	-329	602
B	602	329	-329	602

Reaction Location

A	B
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LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lb _f /ft)		20	20	0	12.67	Dead	Y
Uniform (lb _f /ft)	Uniform	45.95	45.95	0	12.67	WindPlus	Y
Uniform (lb _f /ft)	Uniform	-45.96	-45.96	0	12.67	WindMinus	Y
Uniform (lb _f /ft)	RAFTERS	49	49	0	12.67	Dead	Y
Self Weight (lb _f /ft)	-	14.99	14.99	0	12.67	Dead	Y