

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:	PURLINS			CODE:	8th Ed. (2023) Florida Building Code		
MEMBER TYPE:	FLOOR JOIST			NDS:	2018 NDS		
MATERIAL:	Solid Sawn						
Southern Pine	No. 2	3" Dia.	18 (in) O.C.	DRY			

BEAM PROPERTIES

Start (ft): 0	End (ft): 5	Member Slope (in): 0/12	Actual Length (ft): 5	O.C. Spacing (in): 18		
Area	I _x	I _y	BSW	Lams	G	K _{cr}
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
7.07	3.98	3.98	5.43	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	925	550	175	1350	565	1400	510
Adjusted Values	1064	550	175	1350	565	1400	510
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 = 1.15

BEAM DATA

		Unbraced Length (ft)		Beam End				
Span	Length (ft)	Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	5	0	5	0	1.00	0.99	0.99	0.99

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	DURATION FACTOR CD
Shear Stress Y (psi)	PASS (92.8%)	20.3	280.0	0	D+0.6W(+)	1.6
Bending Stress Y (psi)	PASS (13.6%)	1470.2	1702.0	2.5	D+0.6W(+)	1.6
Deflection Y (in)	PASS (85.4%)	0.049	0.333 (=L/180)	2.5	0.42W(+)	
Bearing Stress (psi)	PASS (97.9%)	11.9	565.0	0	D+0.6W(+)	1.6

REACTIONS

	Units for V: lbf		Units for M: lbf-ft	
Y axis	DEAD	WIND +	WIND -	TOTAL
A	39	115	-115	39
B	39	115	-115	39
Reaction Location				
A				B

LOAD LIST

Type	Name	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)		10	10	0	5	Dead	Y
Uniform (lbf/ft)	Purlin	45.95	45.95	0	5	WindPlus	Y
Uniform (lbf/ft)	Purlin	-45.95	-45.95	0	5	WindMinus	Y
Self Weight (lbf/ft)	-	5.43	5.43	0	5	Dead	Y