

DATE:	9/3/2021	COMPANY:	Schumacher Homes
VITRUVIUS BUILD:	StruCalc	DESIGNED BY:	Dan Fishtorn
CUSTOMER:	Barnes DU700 021 0840	REVIEWED BY:	Dan Fishtorn
PROJ. ADDRESS:	--	PROJECT NAME:	Barnes DU700 021 0840
LEVEL:	Main Floor	LOADING:	LRFD
MEMBER NAME:	Garage Door Header	CODE:	2018 International Building Code
MEMBER TYPE:	FLOOR BEAM	NDS:	2018 NDS
MATERIAL:	Structural Composite Lumber		
Louisiana Pacific	2.0E LVL	(2) 1.75 X 14	DRY

Garage Door Header DIAGRAM



BEAM PROPERTIES

Start (ft): 0 End (ft): 16 Member Slope: 0/12 Actual Length (ft): 16

Area	Ix	Iy	BSW	Lams	Cfn	Kcr
(in ²)	(in ⁴)	(in ⁴)	(lbf/ft)			Creep Factor
49	800.33	12.51	13.95	2	9	1

STRENGTH PROPERTIES

	Fb (psi)	Ft (psi)	Fv (psi)	Fc (psi)	Fc⊥ (psi)	E (psi) x10 ³	Emin (psi) x10 ³
Base Values	2900	1800	285	3200	750	2000	1000
Adjusted Values	6261	3888	616	6912	1127	2000	1496
K _F *φ	2.16	2.16	2.16	2.16	1.5	1	1.5
C _M	1	1	1	1	1	1	1
C _T	1	1	1	1	1	1	1
Bending Adjustment Factors	C _V = 0.98C _r = 1 Volume factor Is applied on a load combination basis And Is Not reflected in the adjusted values						

BEAM DATA

Span	Length (ft)	Unbraced Length (ft)		Beam End				
		Top	Bottom	Elev. Diff (ft)	CL(Top)	CL(Bottom)	CL(Left)	CL(Right)
1	16	0	16	0	1.00	0.25	1.00	1.00

PASS-FAIL

	PASS/FAIL	MAGNITUDE	STRENGTH	LOCATION (ft)	LOAD COMBO	TIME EFFECT λ
Shear Stress Y (psi)	PASS (85.2%)	72.7	492.5	0	1.2D+1.6L+0.5Lr	0.8
Bending Stress Y (psi)	PASS (79.8%)	996.6	4923.8	8	1.2D+1.6L+0.5Lr	0.8
Deflection (in)	PASS (63.7%)	0.193 (=L/993)	0.533 (=L/360)	8	D+L	
Bearing Stress (psi)	PASS (89.1%)	123.3	1127.3	0	1.2D+1.6L+0.5Lr	0.8

REACTIONS

Units for V: lbf Units for M: lbf-ft

Y axis	DEAD	LIVE	LIVE ROOF	SNOW	WIND +	WIND -	SEISMIC +	SEISMIC -	ICE	RAIN	EARTH
A	784	896	0	0	0	0	0	0	0	0	0
B	784	896	0	0	0	0	0	0	0	0	0

Reaction Location

A

B

LOAD LIST

Type	Left Magnitude	Right Magnitude	Load Start (ft)	Load End (ft)	Load Type	Direction
Uniform (lbf/ft)	112	112	0	16	Live	Y
Uniform (lbf/ft)	84	84	0	16	Dead	Y
Self Weight (lbf/ft)	13.95	13.95	0	16	Dead	Y