

KeyBeam® 4.600d  
kmBeamEngine 4.6026  
Materials Database 1454

**Member Data**

**Description:** Beam A  
header at new bumpout

Member Type: Beam  
Top Lateral Bracing: Continuous  
Bottom Lateral Bracing: None  
Moisture Condition: Dry  
Deflection Criteria: L/360 live, L/240 total  
Deck Connection: Nailed  
Filename: 21 Concord S

Application: Floor

Standard Load:

Live Load: 40 PLF

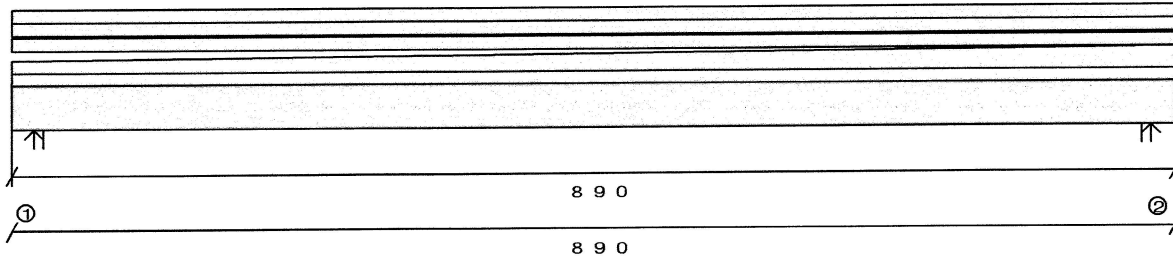
Dead Load: 12 PLF

Building Code: IBC/IRC

Member Weight: 6.6 PLF

**Other Loads**

Type (Description)	Side	Begin	End	Trib. Width	Other Start	End	Dead Start	End	Category
Replacement Uniform (PLF) 2d floor load 6.5' trib @ 40/12	Top	0' 0.00"	8' 9.00"		260		78		Live
Additional Uniform (PLF) wgt of wall above	Top	0' 0.00"	8' 9.00"		0		80		Live
Additional Uniform (PLF) ceiling load 6.5' trib @ 10/10	Top	0' 0.00"	8' 9.00"		65		65		Live
Additional Tapered (PLF) load from hip roof	Top	0' 0.00"	8' 9.00"		60	780	12	156	Snow
Additional Uniform (PLF) load from roof of bumpout	Top	0' 0.00"	8' 9.00"		90		25		Snow



**Bearings and Reactions**

	Location	Type	Material	Input Length	Min Required	Gravity Reaction	Gravity Uplift
1	0' 0.000"	Wall	SPF #1/#2 2x or 4x End-Grain (1150psi)	3.000"	1.500"	3570#	--
2	8' 9.000"	Wall	SPF #1/#2 2x or 4x End-Grain (1150psi)	3.000"	1.500"	4531#	--

**Maximum Load Case Reactions**

Used for applying point loads (or line loads) to carrying members

	Live	Snow	Dead
1	1364#	1635#	1320#
2	1364#	2647#	1523#

**Design spans**

8' 4.750"

**Product: MASTER PLANK 2900Fb 1.75x9.5 2 ply**

**PASSES DESIGN CHECKS**

Connect members with 2 rows of 0.131 x 3.5" nails at 12.0" oc

NOTE: Design assumes member is ripped to 8.50" deep

Design assumes continuous lateral bracing along the top chord.

Design assumes no lateral bracing along the bottom chord.

**Allowable Stress Design**

	Actual	Allowable	Capacity	Location	Loading
Positive Moment	8513.#	12335.#	69%	4.79'	Total Load D+0.75(L+S)
Shear	3607.#	7299.#	49%	7.86'	Total Load D+0.75(L+S)
Max. Reaction	4531.#	9135.#	49%	8.75'	Total Load D+0.75(L+S)
TL Deflection	0.3341"	0.4198"	L/301	4.39'	Total Load D+0.75(L+S)
LL Deflection	0.2168"	0.2799"	L/464	4.39'	Total Load 0.75(L+S)

Control: TL Deflection

DOLs: Live=100% Snow=115% Roof=125% Wind=160%

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D Webster  
Hood Distribution  
Ayer, MA  
Milton, VT  
Manchester, CT

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\*\*\*Passing is defined as when the member, floor joist, beam or girder, shown on this drawing meets applicable design criteria for Loads, Loading Conditions, and Spans listed on this sheet. The design must be reviewed by a qualified designer or design professional as required for approval. This design assumes product installation according to the manufacturer's specifications.