How to read the... MiTek 20/20 Engineering Drawing

Roof Truss

- **A** Cumulative Dimensions
- **B** Panel Length (feet-inches-sixteenths)
- **C** Slope
- **D** Plate Size and Orientations
- **E** Overall Truss Height
- **F** Bearing Location
- **G** Truss Span (feet-inches-sixteenths)
- **H** Plate Offsets
- **I** Design Loading (PSF)
- **J** Spacing O.C. (feet-inches-sixteenths)
- **K** Duration of Load for Plate and Lumber Design
- **L** Code
- **M** Top Chord, Bottom Chord and Web maximum combined stress indicies
- **N** Deflections (inches) and Span to Deflection ratio
- **O** Input Span to Deflection Ratio
- **P** MiTek Plate Allowables (PSI)
- **Q** Lumber Requirements
- **R** Reaction (pounds)
- **S** Maximum Bearing Required (inches)
- **T** Maximum Uplift and/or Horizontal Reaction if Applicable
- **U** Required Member Bracing
- **V** Member Axial Forces for Load Case 1
- **W** Notes
- **X** Additional Loads/Load Cases
- **Y** Truss Weight

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Job	Truss	Truss Type	Qty	Ply	MiTek Web Site
WEB SITE	ROOF1	ROOF TRUSS	13	1	MiTek Engineering Drawing Explained Job Reference (optional)

MiTek Industries, Inc., Chesterfield, MO 63017, Chip Dean — 6.000 s Feb 16 2004 MiTek Industries, Inc. Wed Feb 18 15:06:38 2004 Page 1

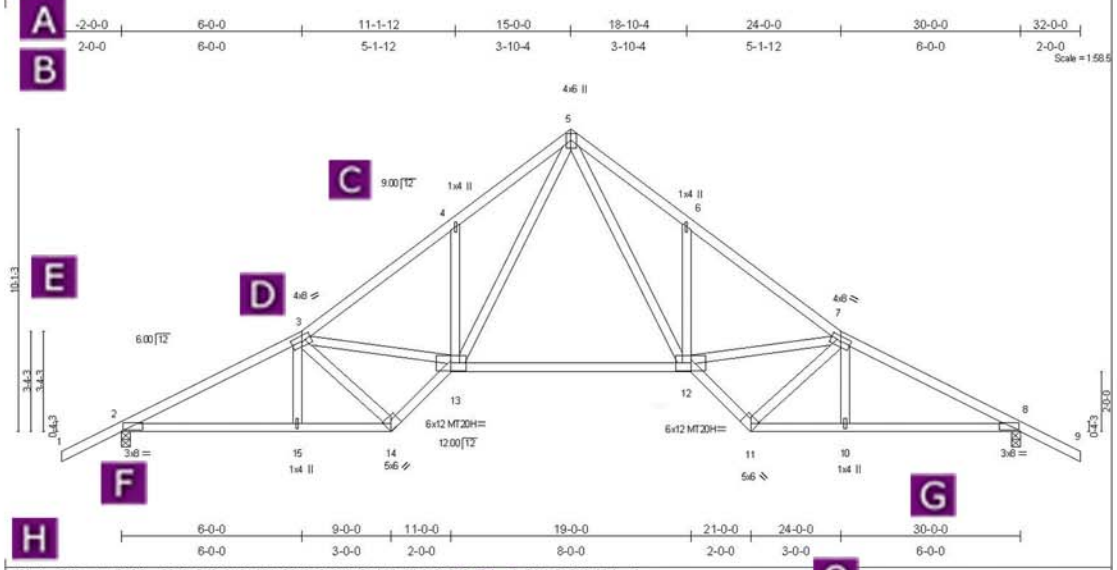

Plate Offsets (X,Y): [2:0-8-8,0-0-10], [8:0-8-8,0-0-10], [11:0-2-8,Edge], [14:0-2-8,Edge]

LOADING (psf)		SPACING	2-0-0	CSI		DEFL	in	(loc)	l/defl	L/d	PLATES	GRIP
TCLL	30.0	Plates Increase	1.15	TC	0.38	Vert(LL)	-0.21	12-13	>999	240	MT20	244/190
TCDL	10.0	Lumber Increase	1.15	BC	0.57	Vert(TL)	-0.52	12-13	>688	180	MT20H	187/143
BCLL	0.0	Rep Stress Incr	YES	WB	0.55	Horz(TL)	0.21	8	n/a	n/a		
BCDL	10.0	Code IBC2000/TPI2002		(Matrix)								

Weight: 182 lb

LUMBER
TOP CHORD 2 X 4 SYP No.2
BOT CHORD 2 X 4 SYP No.2
WEBS 2 X 4 SYP No.3

BRACING
TOP CHORD Structural wood sheathing directly applied or 3-5-14 oc purlins.
BOT CHORD Rigid ceiling directly applied or 10-0-0 oc bracing.

REACTIONS (lb/size) 2=1657/0-3-8, 8=1657/0-3-8
Max Horz 2=183(load case 4)
Max Uplift2=-101(load case 5), 8=-101(load case 6)

FORCES (lb) - Maximum Compression/Maximum Tension
TOP CHORD 1-2=0/70, 2-3=-2712/26, 3-4=-2759/53, 4-5=-2715/184, 5-6=-2715/104, 6-7=-2759/29, 7-8=-2712/27, 8-9=0/70
BOT CHORD 2-15=-78/2314, 14-15=-82/2311, 13-14=-56/1703, 12-13=0/1401, 11-12=0/1703, 10-11=0/2311, 8-10=0/2314
WEBS 3-15=0/197, 3-14=-1521/45, 3-13=0/884, 4-13=-354/172, 5-13=-156/1578, 5-12=-103/1578, 6-12=-354/172, 7-12=0/884, 7-11=-1521/0, 7-10=0/197

NOTES
1) Unbalanced roof live loads have been considered for this design.
2) Wind: ASCE 7-98; 90mph; h=25ft; TCDL=6.0psf; BCDL=6.0psf; Category II; Exp B; enclosed; MWFRS gable end zone; cantilever left and right exposed ; end vertical left and right exposed; Lumber DOL=1.33 plate grip DOL=1.33.
3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads.
4) All plates are MT20 plates unless otherwise indicated.
5) This truss requires plate inspection per the Tooth Count Method when this truss is chosen for quality assurance inspection.
6) One RT7 USP connectors recommended to connect truss to bearing walls due to uplift at jt(s) 2 and 8.

LOAD CASE(S) Standard

ALL 50 STATES REGISTERED PROFESSIONAL ENGINEER — MiTek

SAMPLE:
NOT FOR PRODUCTION

MiTek