CITY OF SACRAMENTO

Permit No: 0311514

1231 I Street, Sacramento, CA 95814

Insp Area: 2
Thos Bros: 336 G1

Site Address: 35 ZEPHYR COVE CR SAC
Parcel No: 031-0462-037

Sub-Type: RES
Housing (Y/N): N

CONTRACTOR	***OWNER***	***ARCHITECT***
ZIMMERMAN REROOFING CO. 3675 R ST. SACRAMENTO, CA. 95816	MICHAEL COLLINS 35 ZEPHYR COVE CIR SACRAMENTO CA 95831	

Nature of Work: TEAR OFF, RESHEET & REROOF 24 SQ LT WT TILE FOR SFR

CONSTRUCTION LENDING AGENCY : I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name_____ Lender'sAddress_____

LICENSED CONTRACTORS DECLARATION: I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class C39 License Number 763169 Date 8-13-03 Contractor Signature Billy Cny

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500.00);

____ I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

____ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

____ I am exempt under Sec._____ B & PC for this reason:_____

Date_____ Owner Signature_____

IN ISSUING THIS BUILDING PERMIT, the applicant represents, and the city relies on the representation of the applicant, that the applicant verified all measurements and locations shown on the application or accompanying drawings and that the improvement to be constructed does not violate any law or private agreement relating to permissible or prohibited locations for such improvements. This building permit does not authorize any illegal location of any improvement or the violation of any private agreement relating to location of improvements.

I certify that I have read this application and state that all information is correct. I agree to comply with all city and county ordinances and state laws relating to building construction and herby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 8-13-03 Applicant/Agent Signature Billy Cny

PAID
CITY OF SACRAMENTO
AUG 13 2003
NEIGHBORHOODS, PLANNING
AND DEVELOPMENT SERVICES

WORKER'S COMPENSATION DECLARATION: I hereby affirm under penalty of perjury one of the following declarations:

____ I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

X I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier STATE FUND Policy Number 713-02 UNIT 0002021 Exp Date 10/01/2003

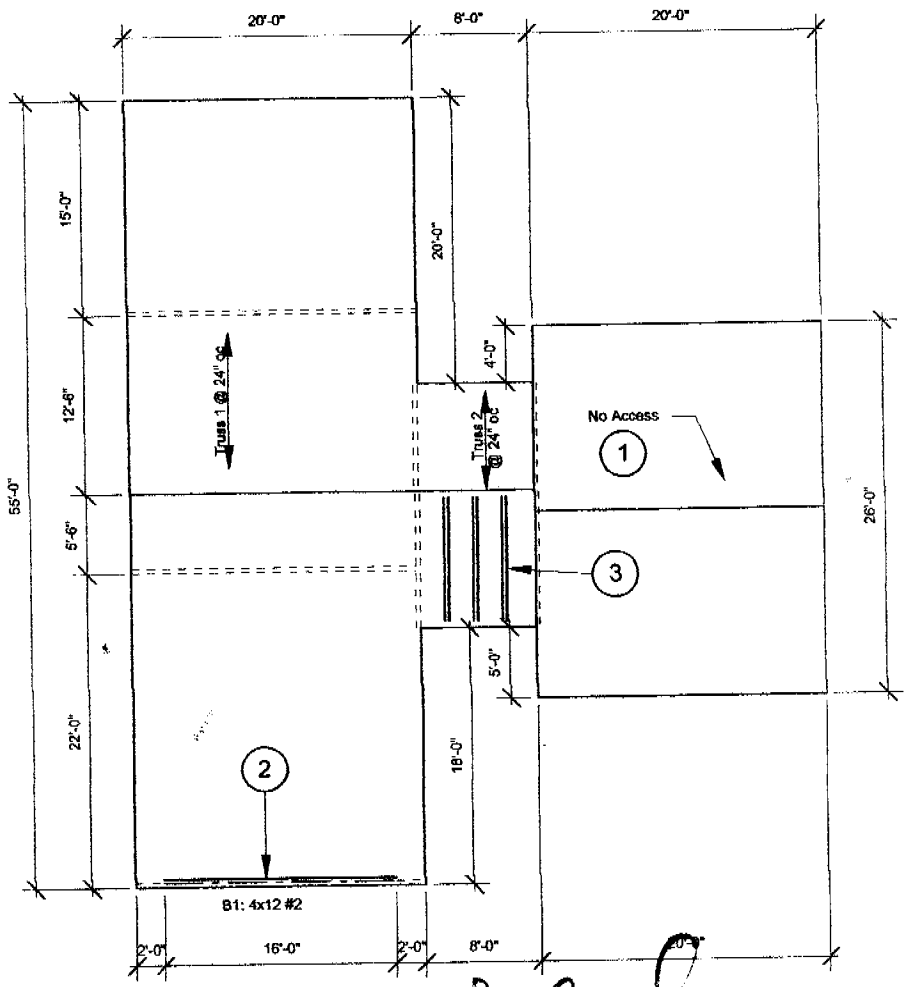
____ (This section need not be completed if the permit is for $100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of Section 3700 of the Labor Code, I shall forthwith comply with those provisions.

Date 8-13-03 Applicant Signature Billy Cny

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.

~~THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.~~

35 ZEPHYR COVE CR 0311514 R

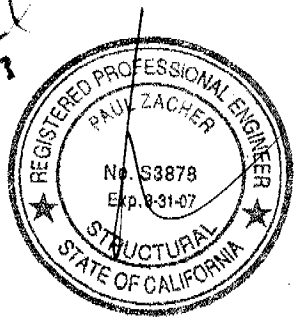


N

This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the same without written permission from the Building Inspection Division.

The approval of this plan and specification SHALL NOT be held to permit or approve the violation of any City Ordinance or State Law.

8/6/03



FRAMING NOTES:

1. No Access. See "Recommendations" for truss requirements. SEE P. 2
2. Scab a 1 3/4" x 11 1/4" LVL to the existing 4x12 beam. See detail 2.
3. Scab a 2x4 DF#2 x 10'-6" long rafter to the top chord of the existing truss #2 (total 3). See detail 2.

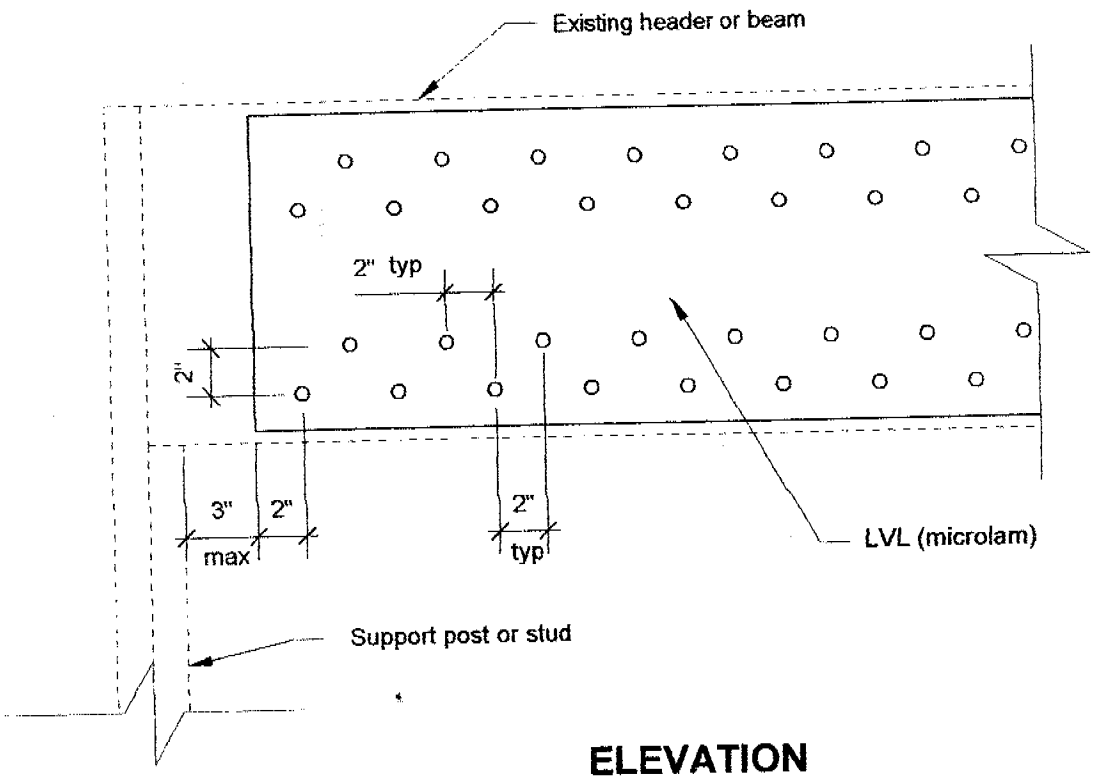
Notes:

A. This is a reroof project. The new roofing material shall be a Light Weight Concrete Tile. The tile shall weigh less than or equal to 7.3 psf.
B. All rafters are 2x6 DF#2 and hips and valleys are 2x8 DF#2 unless otherwise noted.
C. All existing rafter, hips, valleys, rafter ties, and purlins are braced per UBC Section 2320.1 "Roof and Ceiling Framing" unless otherwise shown.
D. All structural wood members that were observed appear to be in sound condition and without structural defect.

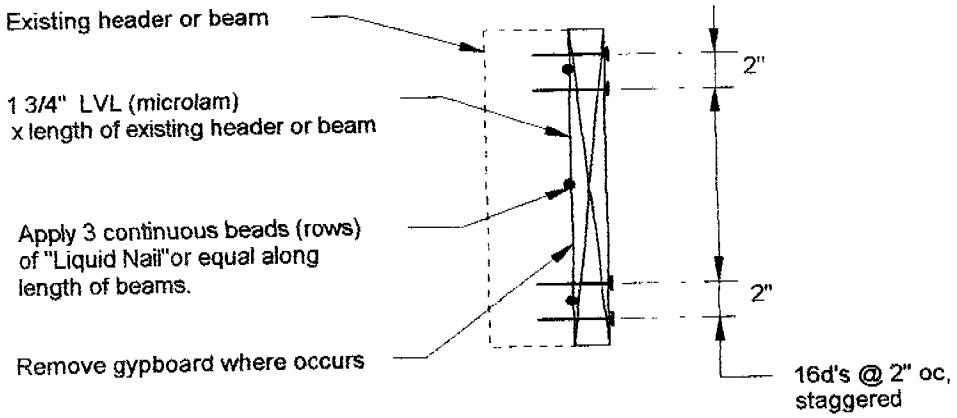
1 ROOF PLAN - COLLINS

Not to Scale

15



ELEVATION

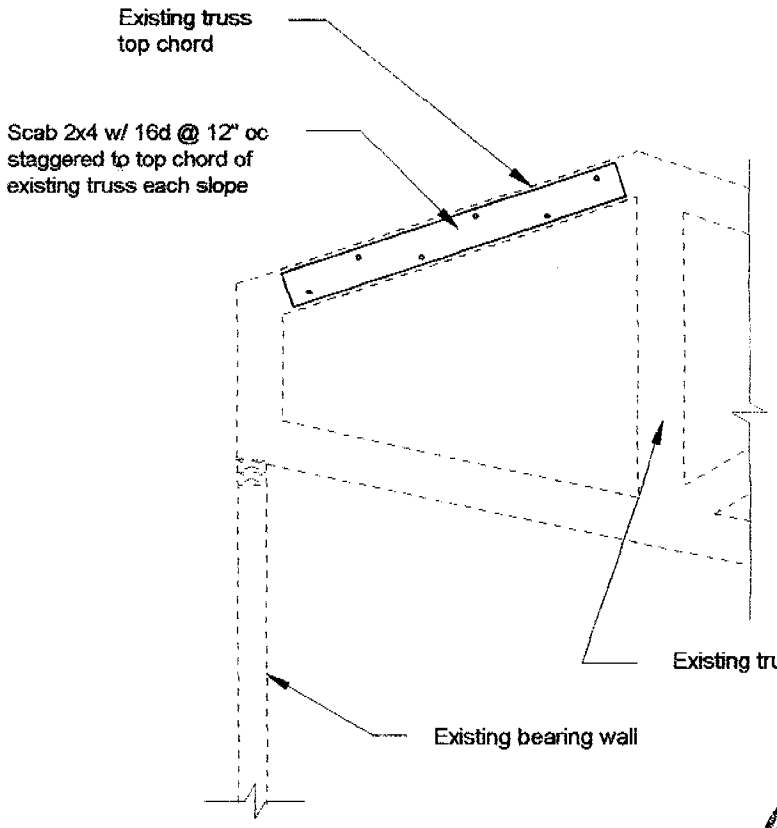


SECTION

REGISTERED PROFESSIONAL ENGINEER
PAUL ZACHER
No. S3878
Exp. 3-31-07
STRUCTURAL
STATE OF CALIFORNIA

2 **HEADER DETAIL**

scale: 1 1/2" = 1'-0"



REGISTERED PROFESSIONAL ENGINEER
PAUL ZACHER
No. S3878
Exp. 3-31-07
STRUCTURAL
STATE OF CALIFORNIA

3 TRUSS REINFORCEMENT DETAIL

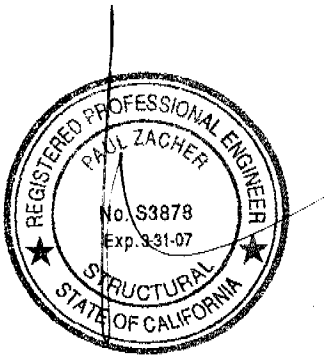
scale: 1/2" = 1'-0"

Collins

Paul Zacher – Structural Engineers, Inc
4701 Lakeside Way
Fair Oaks, CA 95628

TEL: 916.961.3960
FAX: 916.961.6552

July 29, 2003



Zimmerman Roofing
3675 R Street
Sacramento, CA 95816
TEL: (916) 454-3667
FAX: (916) 691-1943

Attn.: Mr. Jeff Tucker,

re: Job 2003294: COLLINS

Subject: Structural Investigation Report of the Roof for the Residence located at 35 Zephyr Cove Circle, Sacramento, CA 95831.

As requested by Mr. Jeff Tucker, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site July 29, 2003. The investigation was made to determine the existing condition of the structure. All information, data and analysis contained within this report are based on the 1997 Uniform Building Code with 2001 CBC Title 24 Amendments.

The following is based on visual observations with no subsurface investigation being made.

DESCRIPTION:

Type of Facility:	Residence.
Year Built:	Estimated 1980's vintage.
Occupancy:	Residential.
No. of Stories:	One.
Dimensions:	Approximately 2000 square feet.

CONSTRUCTION:

Roof:

The roof covering will consist of a Light Weight Concrete Tile over 7/16" solid sheathing. The roof structure is framed with pre-engineered wood trusses spaced at 24" on center. One area had no access and was not inspected.

CONCLUSIONS:

Roof:

The roof structure currently lacks sufficient structural capacity for the applied live and dead loads. See "Recommendations" for location and repair to bring the roof structure up to the required capacity.

Paul Zacher – Structural Engineers, Inc
4701 Lakeside Way
Fair Oaks, CA 95628

TEL: 916.961.3960
FAX: 916.961.6552

RECOMMENDATIONS:

If any of the following recommendations do not correspond to actual field conditions, the engineer of record shall be notified for further investigation and evaluation before continuing work.

Roof Structure:

1. After the roofing material has been removed, the contractor shall supply the engineer with diagrams showing the member sizes and span lengths. The engineer shall then determine if the structure can adequately support the applied dead and live loads and a supplemental report shall be issued. See detail 1.
2. Scab a 1 3/4" x 11 1/4" LVL to the existing header. See details 1 and 2.
3. Scab a 2x4 DF#2 x 10'-6" long rafter to the top chord of the existing truss. See details 1 and 3.

It shall be noted that small hairline cracking may occur at exterior stucco and interior gypboard finished walls that are load bearing or distributing roof strut loads. These cracks are a natural occurrence as the existing structure re-distributes the new roof weight. They are cosmetic in nature and are not an indication of a structural hazard or failure.

It shall be noted that some deflection of the rafters may be evident after installation of the tile. The existing roof framing has deflected but this may not be readily evident due to the uneven nature of the existing roofing material. Concrete tile is a very consistent and uniform product and when installed in an even plane, even small deflections can become apparent. This is only a cosmetic issue and not a structural concern.

The inspection consisted of visual observation only, made solely to determine the structural capacity of the existing roof. Analysis does not determine any effects on the overall structure under lateral forces or effects on the foundation unless specifically noted in the calculations and in this document. No warranties, expressed or implied, are made or intended in conjunction with this report. The inspection was made only to the portions that were accessible. The specific items noted were those that were observable and there may be defects that are not observable, or are hidden by architectural and structural materials.

If you have any questions on the above, do not hesitate to call.

Sincerely,

Paul Zacher, P.E., S.E.
file

DESIGN LOADING:

Roof Pitch	6	in 12
Pitch Adjustment Factor	1.12	

The dead and live load on truss top chord is placed along the length of the top chord. Therefore, the live load is as follows:

Live Load on top chord	14.3

LOCATION: TOP CHORD

MATERIAL	WEIGHT	
Light Weight Tile	7.30	psf
Roofing felt	0.30	psf
7/16" OSB/ plywood	1.30	psf
1x4 skip sht'g	1.09	psf
2x4 truss @ 24" oc	0.64	psf
Total Load	10.6	psf

LOCATION: BOTTOM CHORD

MATERIAL	WEIGHT	
Batt/blown insul	0.50	psf
2x4 truss @ 24" oc	1.28	psf
1/2" Gypboard	2.50	psf
Load	4.3	psf

P.K. Zacher, S.E.
4701 Lakeside Way
Fair Oaks, CA 95628
TEL: (916) 961-3960
FAX: (916) 961-6552

Job #: 03_294

Date: 07/29/2003

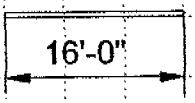
LOADING:

B1

Dr = 14.9 psf x 11'-0" = 164 plf

Lr = 16.0 psf x 11'-0" = 176 plf

4 x 12 #2 + 1-3/4" x 11-1/4" LVL



Paul Zacher - Structural Engr's
4701 Lakeside Way
Fair Oaks, CA 95628
TEL: (916) 961-3960
FAX: (916) 961-6552

Title :
Dsgnr:
Description :
Scope :

Job #
Date: 8:26AM, 30 JUL 03

Timber Beam & Joist

c:\documents and settings\paul zacher\desktop

Description RAFTERS AND BEAMS

Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

		B1
Timber Section		4x12#2 + 1
Beam Width	in	5.250
Beam Depth	in	11.250
Le: Unbraced Length	ft	0.00
Timber Grade		ustom. DF#2 + LVL
Fb - Basic Allow	psi	1,450.0
Fv - Basic Allow	psi	158.0
Elastic Modulus	ksi	1,666.7
Load Duration Factor		1.250
Member Type		Manuf/Pine
Repetitive Status		No

Center Span Data

Span	ft	16.00
Dead Load	#/ft	164.00
Live Load	#/ft	176.00

Results

Ratio = 0.6505

Mmax @ Center	in-k	130.56
@ X =	ft	8.00
fb : Actual	psi	1,179.0
Fb : Allowable	psi	1,812.5
		Bending OK
fv : Actual	psi	61.3
Fv : Allowable	psi	197.5
		Shear OK

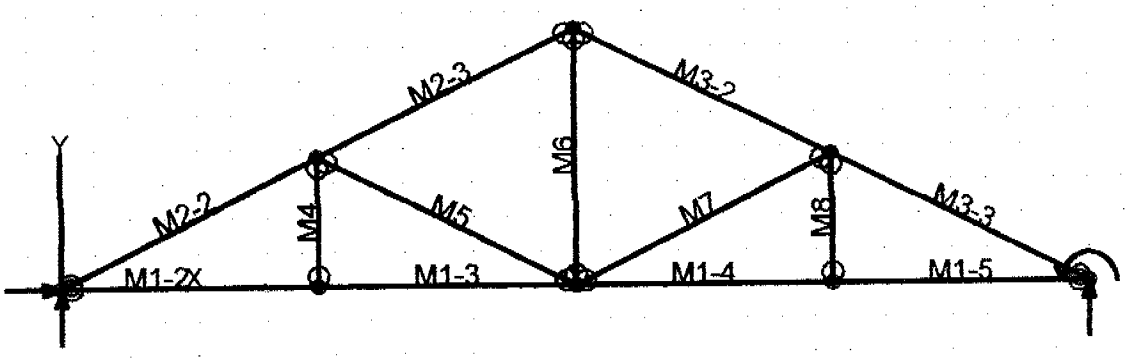
Reactions

@ Left End	DL	lbs	1,312.00
	LL	lbs	1,408.00
	Max. DL+LL	lbs	2,720.00
@ Right End	DL	lbs	1,312.00
	LL	lbs	1,408.00
	Max. DL+LL	lbs	2,720.00

Deflections

Ratio OK

Center DL Defl	in	-0.233
L/Defl Ratio		824.3
Center LL Defl	in	-0.250
L/Defl Ratio		768.1
Center Total Defl	in	-0.483
Location	ft	8.000
L/Defl Ratio		397.6


Y
M2-2
M2-3
M3-2
M3-3
M4
M5
M6
M7
M8
M1-2X
M1-3
M1-4
M1-5

Truss 1

VisualAnalysis 4.00 Report
Company: Paul Zacher - Structural Engineers Engineer: Paul Zacher
File: C:\Documents and Settings\Paul Zacher\Desktop\Ong03_323\Truss 1.vap

Nodes

Node	X ft	Y ft	Fix DX	Fix DY	Fix RZ
N1	30.00	0.00	No	Yes	Yes
N2	0.00	0.00	Yes	"	No
N3	15.00	7.50	No	No	"
N4	7.50	0.00	"	"	"
N5	15.00	0.00	"	"	"
N6	22.50	0.00	"	"	"
N7	7.50	3.75	"	"	"
N8	22.50	3.75	"	"	"

Member Elements

Member	Section	Material	Length ft
M1-2	SS2x4	Wood	7.50
M1-3	"	"	7.50
M1-4	"	"	7.50
M1-5	"	"	7.50
M2-2	"	"	8.39
M2-3	"	"	8.39
M3-2	"	"	8.39
M3-3	"	"	8.39
M4	"	"	3.75
M5	"	"	8.39
M6	"	"	7.50
M7	"	"	8.39
M8	"	"	3.75

Section Properties

Category	Section	Ax in^2	Iz in^4	Sz(+y) in^3	Sz(-y) in^3
Wood Sha	SS2x4	5.25	5.36	3.06	3.06

Material Properties

Material	Strength psi	Elasticity psi	Poisson	Density lb/ft^3
Wood	-NA-	1700000.00	0.36	40.47

Load Combination Summary

Equation Case: UBC97 12.8a
Combination: 1D+1Lr
Contributing Cases & Source
Dead Load (Dead loads)
Roof Live Load (Roof Live loads)

Nodal Reactions

Node	Load Case	FX lb	FY lb	MZ lb-ft
N1	UBC97 12.8a	-NA-	**903.00**	**0.00**
N2	"	**0.00**	903.00	-NA-

Member Results

Member	Fx lb	Vy lb	Mz lb-ft	Dx in	Dy in
M1-2	1456.34	-36.78	-33.94	0.01	-0.12
"	1456.34	-15.28	31.10	0.01	-0.12
"	1456.34	6.22	42.42	0.00	-0.08
"	**1456.34**	27.72	0.00	0.00	0.00
M1-3	1456.34	-33.22	-41.22	0.03	-0.13
"	1456.34	-11.72	14.93	0.02	-0.14
"	1456.34	9.78	17.36	0.02	-0.14
"	1456.34	31.28	-33.94	0.01	-0.12
M1-4	1456.34	-31.28	-33.94	0.04	-0.12
"	1456.34	-9.78	17.36	0.04	-0.14
"	1456.34	11.72	14.93	0.03	-0.14
"	1456.34	33.22	-41.22	0.03	-0.13
M1-5	1456.34	-27.72	0.00	0.06	0.00
"	1456.34	-6.22	42.42	0.05	-0.08
"	1456.34	15.28	31.10	0.05	-0.12
"	1456.34	36.78	-33.94	0.04	-0.12
M2-2	**-1694.0**	131.57	0.00	0.00	0.00
"	-1636.3	16.19	**206.38**	-0.01	-0.25
"	-1578.6	-99.19	90.39	-0.01	-0.24
"	-1520.9	**-214.57**	**-347.97**	-0.02	-0.13
M2-3	-1123.0	**214.57**	-347.97	-0.02	-0.13
"	-1065.3	99.19	90.39	-0.02	-0.28
"	-1007.6	-16.19	206.38	-0.03	**-0.34**
"	-949.94	-131.57	0.00	-0.03	-0.13
M3-2	-1123.0	-214.57	-347.97	0.07	-0.10
"	-1065.3	-99.19	90.39	0.07	-0.25
"	-1007.6	16.19	206.38	0.08	-0.31
"	-949.94	131.57	0.00	0.08	-0.10
M3-3	-1694.0	-131.57	0.00	0.05	0.03
"	-1636.3	-16.19	206.38	0.06	-0.23
"	-1578.6	99.19	90.39	0.06	-0.21
"	-1520.9	214.57	-347.97	0.07	-0.10
M4	68.05	0.00	0.00	0.12	0.01
"	68.05	0.00	0.00	0.12	0.02
"	68.05	0.00	0.00	0.12	0.03
"	68.05	0.00	0.00	**0.12**	**0.04**
M5	-612.51	0.00	0.00	0.09	-0.10
"	-612.51	0.00	0.00	0.09	-0.10
"	-612.51	0.00	0.00	0.09	-0.10
"	-612.51	0.00	0.00	0.09	-0.09
M6	614.29	0.00	0.00	**-0.13**	-0.03
"	614.29	0.00	0.00	-0.13	-0.03
"	614.29	0.00	0.00	-0.13	-0.03
"	614.29	0.00	0.00	-0.13	-0.03
M7	-612.51	0.00	0.00	-0.04	-0.12
"	-612.51	0.00	0.00	-0.04	-0.12
"	-612.51	0.00	0.00	-0.03	-0.13
"	-612.51	0.00	0.00	-0.03	-0.13

Member	Fx lb	Vy lb	Mz lb-ft	Dx in	Dy in
M8	68.05	0.00	0.00	0.12	0.02
"	68.05	0.00	0.00	0.12	0.03
"	68.05	0.00	0.00	0.12	0.04
"	68.05	0.00	0.00	0.12	0.04

BENDING & COMP: TRUSS 1 - MEMBER 8-3

Design based on 1997 UBC 2321 Division V and ANSI/TPI 1-1995

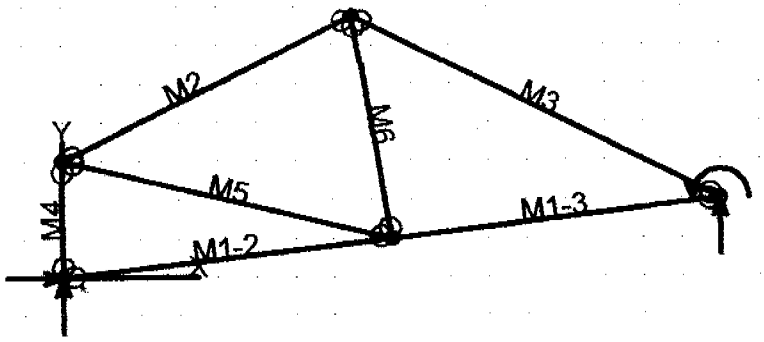
Grading:

2x or 4x Doug-fir larch: No. 2

Assumptions:

Solid sheathing on top chord of truss. Therefore,
continuous lateral support is provided along compression face
Maximum center-center spacing = 24"

Width, b	1.5	inches
Depth, d	3.5	inches
Length	8.39	feet
Max Axial Comp, C	812	lbs
Max Reaction, R	201	lbs
Max Moment, M	288	ft-lbs
Max LL Deflection	0.04	inches
Max TL Deflection	0.07	inches
LL Defl Criteria = L/	240	
TL Defl Criteria = L/	180	
Duration factor, Cd	1.25	
Repetitive Factor, Cr	1.15	
Size Factor, Cf bending	1.5	1.5 for 2x4, 1.3 for 2x6
Size Factor, Cf comp	1.15	1.15 for 2x4, 1.1 for 2x6
Buckling Factor, CT =	1.23	
fc =	155	psi
Fce=	759	psi
Fc*=	2084	psi
F'c=	690	psi
fb=	1128	psi
F'b=Fb*=	2156	psi
Shear D/C ratio	0.48 < 1.0, Member OK	
Interaction equation:		
(fc/F'c)^2 +		
fb/ (F'b(1-fc/Fce)) =	0.71 < 1.0, Member OK	
Live Load defl ratio	0.10 < 1.0, Member OK	
Total Load defl ratio	0.13 < 1.0, Member OK	


M2
M6
M3
M5
M4
M1-3
M1-2

Truss 2

VisualAnalysis 4.00 Report
Company: Paul Zacher - Structural Engineers Engineer: Paul Zacher
File: C:\Documents and Settings\Paul Zacher\Desktop\Collins03_294\Truss 2.vap

Nodes

Node	X ft	Y ft	Fix DX	Fix DY	Fix RZ
N1	0.00	0.00	Yes	Yes	No
N2	7.50	6.75	No	No	"
N3	0.00	3.00	"	"	"
N4	17.00	2.00	"	Yes	Yes
N5	8.50	1.00	"	No	No

Member Elements

Member	Section	Material	Length ft
M1-2	SS2x4	Wood	8.56
M1-3	"	"	8.56
M2	"	"	8.39
M3	"	"	10.62
M4	"	"	3.00
M5	"	"	8.73
M6	"	"	5.84

Section Properties

Category	Section	Ax in^2	Iz in^4	Sz(+y) in^3	Sz(-y) in^3
Wood Sha	SS2x4	5.25	5.36	3.06	3.06

Material Properties

Material	Strength psi	Elasticity psi	Poisson	Density lb/ft^3
Wood	-NA-	1700000.00	0.36	40.47

Load Combination Summary

Equation Case: UBC97 12.8a
Combination: 1D+1Lr
Contributing Cases & Source
Dead Load (Dead loads)
Roof Live Load (Roof Live loads)

Nodal Reactions

Node	Load Case	FX lb	FY lb	MZ lb-ft
N1	UBC97 12.8a	**0.00**	**496.40**	-NA-
N4	"	-NA-	496.40	**0.00**

Node	Load Case	FX lb	FY lb	MZ lb-ft

Member Results

Member	Fx lb	Vy lb	Mz lb-ft	Dx in	Dy in
M1-2	-3.25	27.64	0.00	0.00	0.00
"	-0.40	3.44	44.30	-0.00	-0.05
"	2.44	-20.76	19.59	-0.00	-0.05
"	5.29	-44.96	**-74.13**	0.00	-0.02
M1-3	372.95	44.96	-74.13	0.00	-0.02
"	375.80	20.76	19.59	0.00	-0.05
"	378.65	-3.44	44.30	0.00	-0.05
"	381.49	-27.64	0.00	0.00	-0.00
M2	-512.03	167.03	0.00	-0.00	**-0.00**
"	-456.35	55.68	311.13	-0.00	-0.43
"	-400.68	-55.68	311.13	-0.00	-0.43
"	-345.00	-167.03	0.00	-0.01	-0.02
M3	**-525.78**	**-211.58**	0.00	0.00	0.00
"	-455.26	-70.53	499.18	0.01	-1.09
"	-384.73	70.53	**499.18**	0.01	**-1.10**
"	-314.20	**211.58**	0.00	**0.01**	-0.01
M4	-468.57	0.00	0.00	0.00	0.00
"	-468.57	0.00	0.00	0.00	0.00
"	-468.57	0.00	0.00	0.00	0.00
"	-468.57	0.00	0.00	0.00	0.00
M5	393.74	0.00	0.00	0.00	-0.01
"	393.74	0.00	0.00	0.00	-0.01
"	**393.74**	0.00	0.00	0.00	-0.00
"	393.74	0.00	0.00	0.01	-0.02
M6	-44.49	0.00	0.00	-0.02	0.00
"	-44.49	0.00	0.00	-0.02	0.00
"	-44.49	0.00	0.00	-0.02	0.00
"	-44.49	0.00	0.00	**-0.02**	0.00

BENDING & COMP: TRUSS 2 - MEMBER 3

Design based on 1997 UBC 2321 Division V and ANSI/TPI 1-1995

Grading:

2x or 4x Doug-fir larch: No. 2

Assumptions:

Solid sheathing on top chord of truss. Therefore,
continuous lateral support is provided along compression face
Maximum center-center spacing = 24"

Width, b	3	inches
Depth, d	3.5	inches
Length	10.62	feet
Max Axial Comp, C	455	lbs
Max Reaction, R	70	lbs
Max Moment, M	499	ft-lbs
Max LL Deflection	0.27	inches
Max TL Deflection	0.55	inches
LL Defl Criteria = L/	240	
TL Defl Criteria = L/	180	
Duration factor, Cd	1.25	
Repetitive Factor, Cr	1.15	
Size Factor, Cf bending	1.5	1.5 for 2x4, 1.3 for 2x6
Size Factor, Cf comp	1.15	1.15 for 2x4, 1.1 for 2x6
Buckling Factor, CT =	1.29	
fc =	43	psi
Fce=	497	psi
Fc*=	2084	psi
F'c=	470	psi
fb=	978	psi
F'b=Fb*=	2156	psi
Shear D/C ratio	0.08	< 1.0, Member OK
Interaction equation:		
(fc/F'c)^2 +		
fb/ (F'b(1-fc/Fce)) =	0.51	< 1.0, Member OK
Live Load defl ratio	0.51	< 1.0, Member OK
Total Load defl ratio	0.78	< 1.0, Member OK