

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0012565
Insp Area: 2

Site Address: 39 PEBBLE RIVER CR SAC
Parcel No: 031-0390-058

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

CONTRACTOR
OLD COUNTRY ROOFING
8296 ALPINE AVE
SACRAMENTO CA 95826

OWNER
ALBERTSON DANIEL & CHRISTINE
39 PEBBLE RIVER CIR
SACRAMENTO, CA 95831

ARCHITECT

Nature of Work: REROOF T/O SRSHT 29SQ INSTALL LITE WT TILE

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's Address _____

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 C-39 License Number 622731 Date 10/19/00 Contractor Signature TM

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 hereby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 10/19/00 Applicant/Agent Signature TM

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.

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 LEGION INSURANCE Policy Number WC3-0298525 Exp Date 07/01/2001

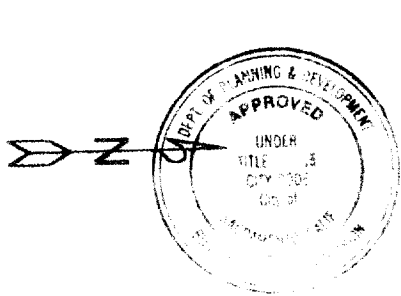
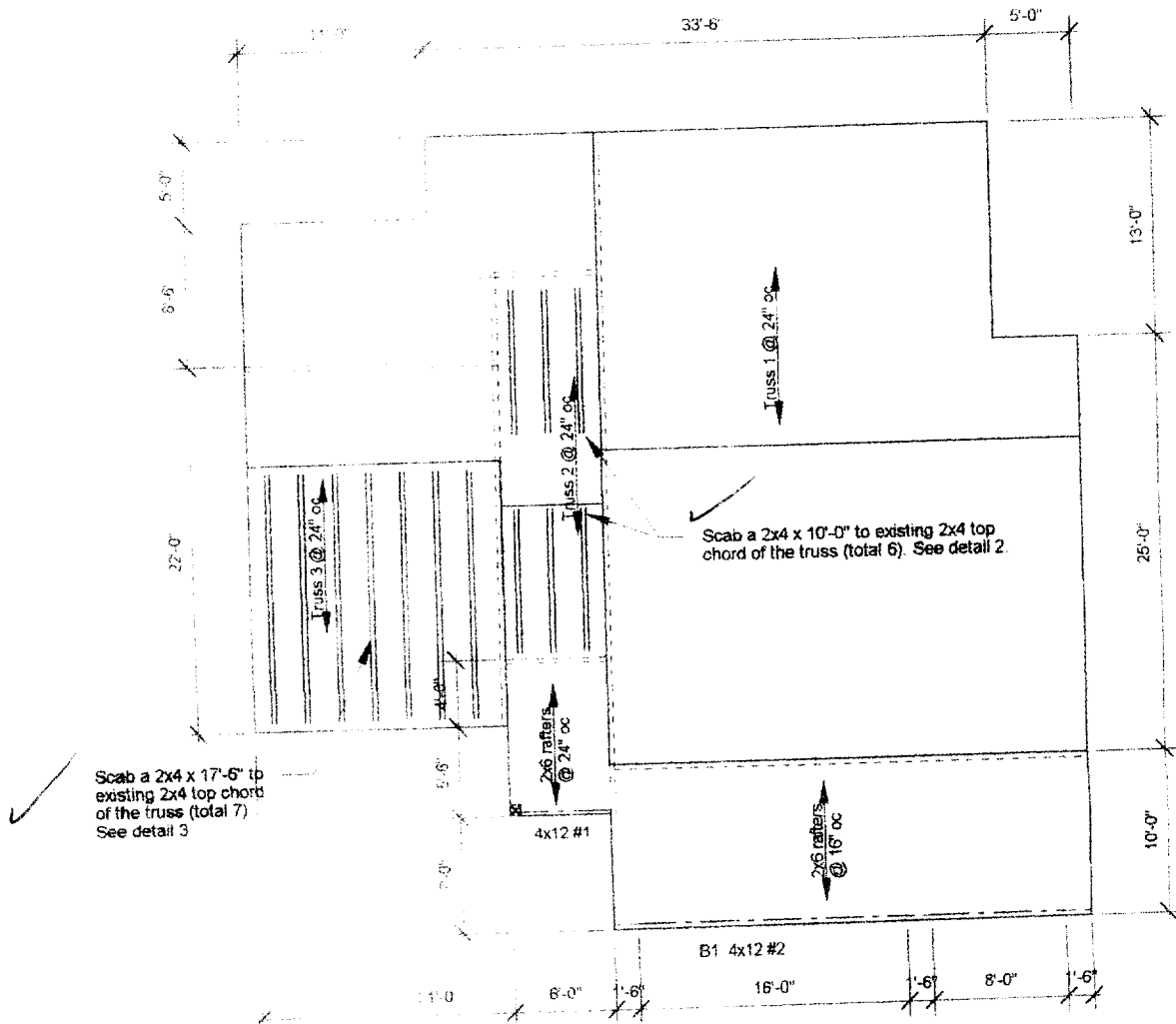
_____, (This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to be exempt from the workers' compensation laws of California and agree that if I should become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

Date 10/19/00 Applicant Signature Very Meri

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.

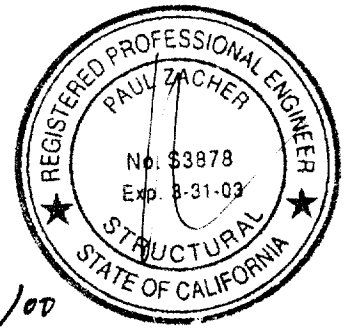
THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.

CO / 2565 R.
 39 PEBBLE RIVER CIRCLE

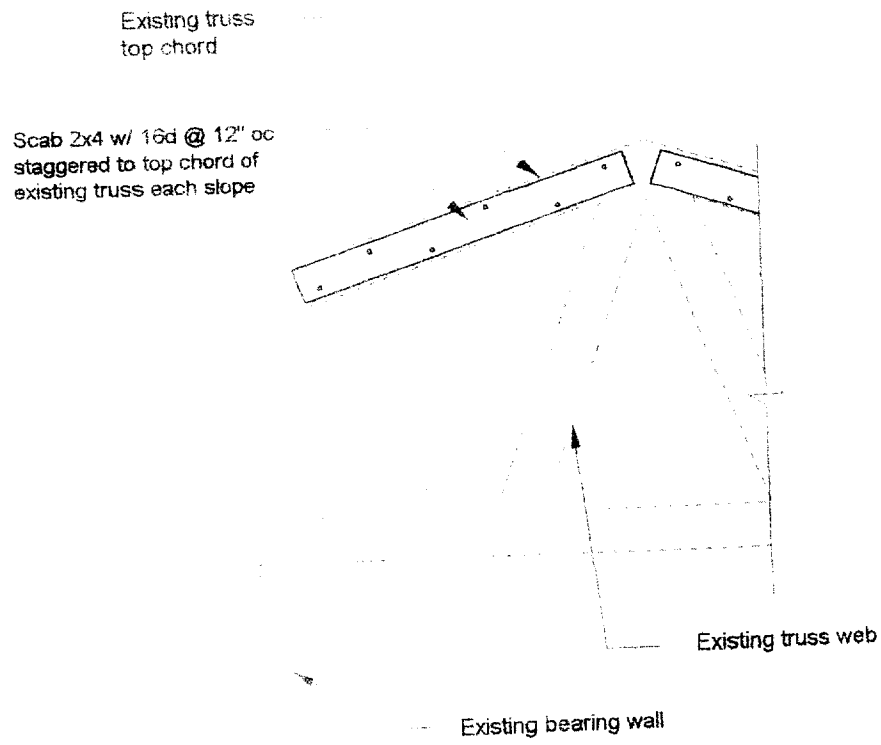


This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the same without written permission from the Building Inspection Division.

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



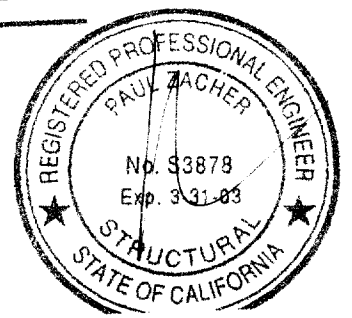
- Notes
1. This is a reroof project. The new roofing material shall be a Light Weight Concrete Tile. The tile shall weigh less than or equal to 7.3 psf.
 2. All structural wood members that were observed appear to be in sound condition and without structural defect.

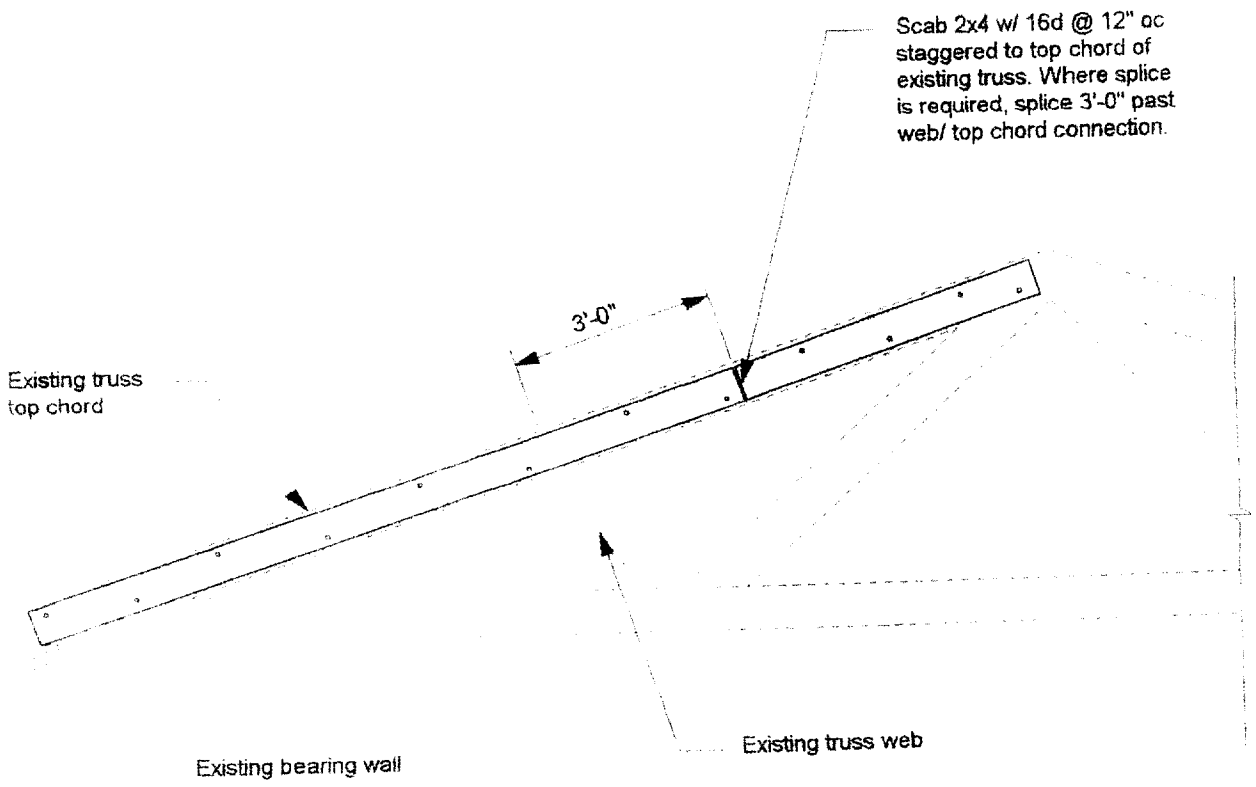


2

TRUSS REINFORCEMENT DETAIL

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

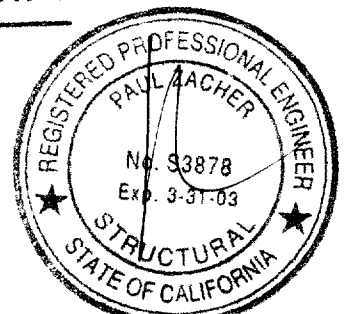




3

TRUSS REINFORCEMENT DETAIL

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



2/17

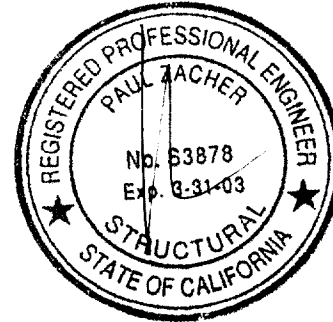
Albertson

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

TEL: 916.961.3960
FAX: 916.961.6552

October 3, 2000

Old Country Roofing
8296 Alpine Avenue
Sacramento, CA 95826
TEL: (916) 453-8484
FAX: (916) 453-8487



Attn: Mr. George Frank,

re Job 2000 331 ALBERTSON

Subject: Structural Investigation Report of the Roof for the Residence located at 39 Pebble River Circle, Sacramento, CA 95831

As requested by Mr. George Frank, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site October 3, 2000. 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.

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:	Two.
Dimensions:	Approximately 3000 square feet with a first story plate height of 8 feet.

CONSTRUCTION:

Roof
The roof covering will consist of a Light Weight Concrete Tile over 1/2" solid sheathing. The living area is conventionally framed with 2x6 rafters spaced at 16" on center and with pre-engineered wood trusses spaced at 24" on center.

CONCLUSIONS:

Roof
The living area lacks sufficient structural capacity for the applied live and dead loads. The garage has sufficient structural capacity for the applied live and dead loads.

1/20

Albertson

Paul Zacher – Structural Engineers
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.

Living Area:

1. Scab a 2x4 DF#2 rafter to the existing pre-engineered truss top chord with 16d's @ 12" on center.
See details 1 and 2.


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

LOCATION: ROOF

<u>MATERIAL</u>	<u>WEIGHT</u>	
Light Weight Tile	7.30	psf
Roofing felt	0.30	psf
1/2" OSB/ plywood	1.50	psf
1x4 skip sht'g	1.09	psf
2x6 rafters @ 24" oc	<u>1.00</u>	psf
Load	11.2	psf
Roof Pitch Adjustment	<u>1.32</u>	psf
Total Load	12.5	psf

LOCATION: TOP CHORD

<u>MATERIAL</u>	<u>WEIGHT</u>	
Light Weight Tile	7.30	psf
Roofing felt	0.30	psf
1/2" OSB/ plywood	1.50	psf
1x4 skip sht'g	1.09	psf
2x4 truss @ 24" oc	<u>1.28</u>	psf
Load	11.5	psf
Roof Pitch Adjustment	<u>1.35</u>	psf
Total Load	12.8	psf

LOCATION: BOTTOM CHORD

<u>MATERIAL</u>	<u>WEIGHT</u>	
Batt/blown insul	0.50	psf
2x4 truss @ 24" oc	0.64	psf
1/2" Gypboard	<u>2.50</u>	psf
Load	3.6	psf

4701 Lakeside Way
Fair Oaks, CA 95628
TEL: (916) 961-3960
FAX: (916) 961-6552

P K Zacher S E

Job # 002194

Date 8/15/00

W24011-2

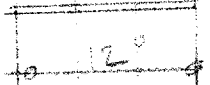
FFFF

CE 12' 8" WF - 2 25' WF

2 x 6" 2

LE 16' 5" WF - 1 2'

15/32



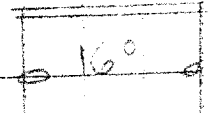
#1

CE 12' 8" WF - 5' 12' 5" WF

4 x 12" 2

LE 20' 0" WF - 30'

6 1/2 / 80



Paul Zacher - Structural Engineers
 4701 Lakeside Way
 Fair Oaks
 TEL: (916) 961-3960
 FAX: (916) 961-6552

Title :
 Dsgnr:
 Description :
 Scope :

Job #
 Date: 1:39PM, 3 AUG 00

Timber Beam & Joist

c:\enercalc\test\ecw\Calculations

Description RAFTERS AND BEAMS

Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

	rafter	B1
Timber Section	2x6	4x12
Beam Width	in: 1.500	3.500
Beam Depth	in: 5.500	11.250
Le: Unbraced Length	ft: 0.00	0.00
Timber Grade	Douglas Fir - Larch, Douglas Fir	Larch,
Fb - Basic Allow	psi: 875.0	875.0
Fv - Basic Allow	psi: 95.0	95.0
Elastic Modulus	ksi: 1,600.0	1,600.0
Load Duration Factor	1.250	1.250
Member Type	Sawn	Sawn
Repetitive Status	Repetitive	No

Center Span Data

	ft	12.00	16.00
Span			
Dead Load	#/ft	25.00	63.00
Live Load	#/ft	32.00	80.00

Results

Ratio = 0.9956 0.6182

Mmax @ Center	in-k	12.31	54.91
@ X =	ft	6.00	8.00
Fb - Actual	psi	1,628.0	743.8
Fb - Allowable	psi	1,635.2	1,203.1
		Bending OK	Bending OK
Fv - Actual	psi	57.7	38.7
Fv - Allowable	psi	118.8	118.8
		Shear OK	Shear OK

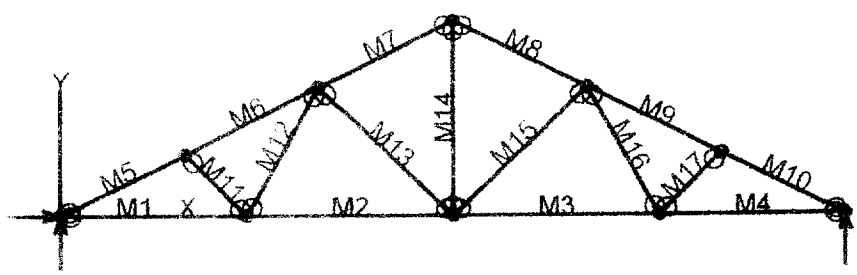
Reactions

@ Left End	DL	lbs	150.00	504.00
	LL	lbs	192.00	640.00
	Max. DL+LL	lbs	342.00	1,144.00
@ Right End	DL	lbs	150.00	504.00
	LL	lbs	192.00	640.00
	Max. DL+LL	lbs	342.00	1,144.00

Deflections

Ratio OK Deflection OK

Center DL Defl	in	-0.351	-0.140
L/Defl Ratio		410.8	1,373.3
Center LL Defl	in	-0.449	-0.178
L/Defl Ratio		320.9	1,081.5
Center Total Defl	in	-0.799	-0.317
Location	ft	6.000	8.000
L/Defl Ratio		180.2	605.0



VisualAnalysis 3.50.c Report

12/10/80 12:20:35

Project: Truss 1

File: C:\Program Files\IES\VA35\truss 1.vap

Company: PK Associates Engineers

Engineer: Paul Zacher

Default Units: Feet, Pounds, Degrees (Fahrenheit), Seconds.

Nodes

Node	X ft	Y ft	Fix	DX	Fix	DY	Fix	RZ
N1	0.00	0.00	Yes	Yes	No			
N2	9.00	0.00	No	No				
N3	19.00	0.00	"	"				
N4	29.00	0.00	"	"				
N5	38.00	0.00	"	Yes				
N6	6.00	3.00	"	No				
N7	32.00	3.00	"	"				
N8	11.50	6.25	"	"				
N9	25.50	6.25	"	"				
N10	19.00	9.50	"	"				

Member Elements

Member	Section	Material	Length ft
M1	SS2x4	Wood	9.00
M2	"	"	10.00
M3	"	"	10.00
M4	"	"	9.00
M5	"	"	7.1
M6	"	"	7.27
M7	"	"	7.27
M8	"	"	7.27
M9	"	"	7.27
M10	"	"	6.71
M11	"	"	4.24
M12	"	"	7.16
M13	"	"	7.02
M14	"	"	6.50
M15	"	"	8.02
M16	"	"	7.16
M17	"	"	4.24

Section Properties

Category	Section	Ax in ²	Iz in ⁴	Sy+ in ³	Sy- in ³
Wood Sha	SS2x4	5.25	5.26	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: Equation Case 1
 Combination: 1D+1L+1Lr
 Contributing Cases & Source
 Service Case 1 (Dead loads)
 Service Case 2 (Roof Live Loads)

Member Uniform Loads

This item is empty. Check the selection state, or report properties.

Nodal Reactions

Node	Load Case	FX lbs	FY lbs	MZ lb-ft
11	Equation Case 1	0.00	1238.80	-NA-
12	"	-NA	1238.80	-NA-

Member Results

Member	Axial lbs	Vy lbs	Mz lb-ft	Dy in
11	2140.26	-40.01	-52.31	-0.2083
12	2140.26	-17.21	33.3578	-0.1962
13	2140.26	5.5881	50.7934	-0.1366
14	2140.26	28.3881	0.0000	-0.0000
15	1697.25	-39.24	-64.74	-0.2342
16	1697.25	-13.91	23.6361	-0.2638
17	1697.25	11.4231	27.7813	-0.2581
18	1697.25	38.7564	-52.31	-0.2083
19	1697.25	-36.76	-52.31	-0.2083
20	1697.25	-11.42	27.7813	-0.2581
21	1697.25	13.9102	23.6361	-0.2638
22	1697.25	39.2436	-64.74	-0.2342
23	2140.26	-28.39	0.0000	-0.0000
24	2140.26	-5.5881	50.7934	-0.1366
25	2140.26	17.2119	33.3578	-0.1962
26	2140.26	40.0119	-52.31	-0.2083
27	-2455.62	125.47	0.0000	0.0000
28	-2404.10	22.4339	164.79	-0.1790
29	-2352.58	-80.80	99.7518	-0.2199
30	-2301.06	-183.64	-195.11	-0.1839
31	-2186.39	160.39	-195.11	-0.1839
32	-2130.57	48.7640	57.5416	-0.2333
33	-2074.76	-62.86	40.4679	-0.2433
34	-2018.95	-174.49	-246.33	-0.2325
35	-1493.31	201.33	-246.33	-0.2325
36	-1437.49	89.7083	105.50	-0.3518
37	-1381.68	-21.92	187.61	-0.3781
38	-1325.87	-133.54	0.0000	-0.2205
39	-1493.31	-201.33	-246.33	-0.1890
40	-1437.49	-89.71	105.50	-0.3083
41	-1381.68	21.9162	187.61	-0.3344
42	-1325.87	133.54	0.0000	-0.1769
43	-2186.39	-160.39	-195.11	-0.1403
44	-2130.57	-48.76	57.5416	-0.1898
45	-2074.76	62.8605	40.4679	-0.1997
46	-2018.95	174.49	-246.33	-0.1890
47	-2455.62	125.47	0.0000	0.0436
48	-2404.10	-22.43	164.79	-0.1354

	-1351.54	0.0000	0.0000	-0.111463
	-1301.54	0.0000	0.0000	-0.111403
0.1	-362.84	0.0000	0.0000	-0.0790
	-362.84	0.0000	0.0000	-0.0721
	-362.84	0.0000	0.0000	-0.0953
	-362.84	0.0000	0.0000	-0.0785
0.2	-381.88	0.0000	0.0000	-0.1686
	-381.88	0.0000	0.0000	-0.1640
	-381.88	0.0000	0.0000	-0.0980
	-381.88	0.0000	0.0000	-0.0644
0.3	-626.54	0.0000	0.0000	-0.1351
	-626.54	0.0000	0.0000	-0.1092
	-626.54	0.0000	0.0000	-0.1233
	-626.54	0.0000	0.0000	-0.1174
0.4	-947.01	0.0000	0.0000	-0.0487
	-947.01	0.0000	0.0000	-0.0487
	-947.01	0.0000	0.0000	-0.0487
	-947.01	0.0000	0.0000	-0.0487
0.5	-626.54	0.0000	0.0000	-0.2026
	-626.54	0.0000	0.0000	-0.1967
	-626.54	0.0000	0.0000	-0.1908
	-626.54	0.0000	0.0000	-0.1850
0.6	-381.88	0.0000	0.0000	-0.0838
	-381.88	0.0000	0.0000	-0.0696
	-381.88	0.0000	0.0000	-0.0542
	-381.88	0.0000	0.0000	-0.0394
0.7	-362.84	0.0000	0.0000	-0.1979
	-362.84	0.0000	0.0000	-0.1810
	-362.84	0.0000	0.0000	-0.1542
0.8	-362.84	0.0000	0.0000	-0.1474

BENDING & COMP: TRUSS 1 - MEMBER 5

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

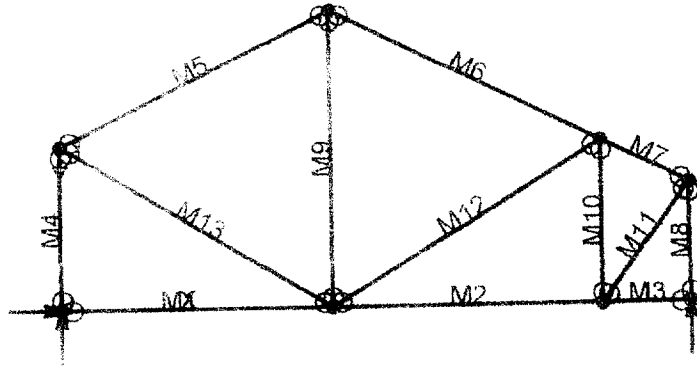
Grading:

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	9.71 feet
Max Axial Comp. C	2301 lbs
Max Reaction, R	183 lbs
Max Moment, M	195 ft-lbs
Max LL Deflection	0.08 inches
Max TL Deflection	0.18 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 =	1.20
fc =	438 psi
Fce =	1085 psi
Fc* =	1869 psi
F'c =	911 psi
fb =	764 psi
F'b = Fb* =	1887 psi
Shear D/C ratio	0.44 < 1.0, Member OK
Interaction equation:	
(fc/F'c)^2 +	
fb/(F'b(1-fc/Fce)) =	0.91 < 1.0, Member OK
Live Load defl ratio	0.24 < 1.0, Member OK
Total Load defl ratio	0.40 < 1.0, Member OK



VisualAnalysis 3.50.c Report

08/23/00 12:51:47

Project: Truss 2

File: C:\Program Files\IES\VA35\truss 2.rap

Company: PK Associates Engineer

Engineer: Paul Zacher

Default Units: Feet, Pounds, Degrees, Fahrenheit, Seconds.

Nodes

Node	X ft	Y ft	Fix	DX	Fix	DY	Fix	RZ
1	0.00	0.00	Yes		Yes		No	
2	9.25	0.00	No		No		Y	
3	18.50	0.00	"		"		"	
4	21.50	0.00	"		Yes		"	
5	0.00	5.63	"		No		"	
6	9.25	10.25	"		"		"	
7	18.50	5.63	"		"		"	
8	21.50	4.13	"		"		"	

Member Elements

Member	Section	Material	Length ft
M1	SS2x4	Wood	9.25
M2	"	"	9.25
M3	"	"	3.00
M4	"	"	5.63
M5	"	"	10.24
M6	"	"	10.24
M7	"	"	3.25
M8	"	"	4.13
M9	"	"	10.25
M10	"	"	5.63
M11	"	"	3.13
M12	"	"	10.83
M13	"	"	10.83

Section Properties

Category	Section	Ax in ²	Iz in ⁴	Sy+ in ³	Sy- 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: Equation Case 1
 Combination: +1D+1L+1Lr
 Contributing Cases & Source

Service Case Dead loads
 Service Case (Roof Live loads)

Member Uniform Loads

This item is empty. Check the selection state, or report properties.

Nodal Reactions

Node	Load Case	FX lbs	FY lbs	MZ lb-ft
11	Equation Case 1	-0.00	700.90	-NA-
11	"	-NA-	700.90	-NA-

Member Results

Member	Axial lbs	Vy lbs	Mz lb-ft	Dy in
11	0.0000	-42.81	-70.87	-0.0188
12	0.0000	-19.39	24.8227	-0.0608
13	0.0000	4.0546	48.4474	-0.0687
14	0.0000	27.4879	0.0000	-0.0000
15	412.16	-30.98	-32.37	-0.0123
16	412.16	-7.5488	26.8999	-0.0446
17	412.16	15.8846	14.0489	-0.0391
18	412.16	39.3179	-70.87	-0.0188
19	0.0000	-0.6263	0.0000	-0.0000
20	0.0000	6.9737	-3.1927	-0.0027
21	0.0000	14.5737	-13.97	-0.0061
22	0.0000	22.1737	-32.37	-0.0123
23	-673.41	0.0000	0.0000	0.0010
24	-673.41	0.0000	0.0000	-0.0007
25	-673.41	0.0000	0.0000	-0.0003
26	-673.41	0.0000	0.0000	0.0000
27	-529.86	238.28	0.0000	-0.0050
28	-450.37	79.4251	546.23	-1.1382
29	-370.95	-79.43	546.23	-1.1430
30	-291.53	-038.28	0.0000	-0.0192
31	-552.86	-284.38	-476.80	-0.0156
32	-473.41	-125.53	229.37	-0.5494
33	-394.00	33.3212	387.30	-0.5683
34	-314.57	192.17	0.0000	-0.0172
35	-428.34	64.8754	0.0000	-0.0027
36	-402.82	116.59	-101.49	-0.0307
37	-376.84	167.91	-260.41	0.0388
38	-351.10	219.43	-476.80	-0.0156
39	-700.27	0.0000	0.0000	0.0017
40	-700.27	0.0000	0.0000	0.0029
41	-700.27	0.0000	0.0000	0.0040
42	-700.27	0.0000	0.0000	0.0051
43	-113.95	-0.0000	-0.0000	0.0000
44	-113.95	-0.0000	-0.0000	0.0007
45	-113.95	-0.0000	-0.0000	0.0015
46	-113.95	-0.0000	0.0000	0.0022
47	-513.57	-0.0000	0.0000	-0.0025
48	-513.57	-0.0000	-0.0000	0.0001
49	-513.57	-0.0000	-0.0000	0.0026
50	-513.57	-0.0000	-0.0000	0.0051
51	700.75	0.0000	0.0000	0.0037
52	700.75	0.0000	0.0000	0.0062
53	700.75	0.0000	0.0000	0.0088
54	700.75	0.0000	0.0000	0.0114

M	-52.90	0.0000	0.0000	0.0125
	52.90	0.0000	0.0000	0.0157
	52.90	0.0000	0.0000	0.0199
	-52.90	0.0000	0.0000	0.0150
R	429.89	-0.0000	-0.0000	0.0038
	429.89	-0.0000	-0.0000	0.0079
	429.89	-0.0000	-0.0000	0.0120
	429.89	0.0000	0.0000	0.0160

BENDING & COMP: TRUSS 2 - MEMBER6

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

Grading:

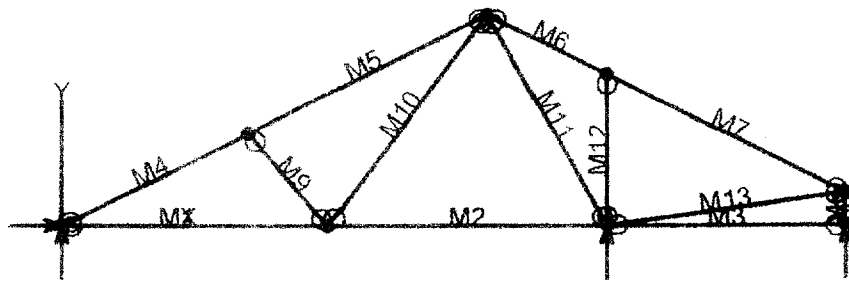
2x or 4x

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	10.34 feet
Max Axial Comp. C	552 lbs
Max Reaction, R	284 lbs
Max Moment, M	476 ft-lbs
Max LL Deflection	0.08 inches
Max TL Deflection	0.18 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 =	1.30
fc =	53 psi
Fce=	497 psi
Fc*=	1869 psi
F'c=	466 psi
fb=	933 psi
F'b=Fb*=	1887 psi
Shear D/C ratio	0.34 < 1.0, Member OK
Interaction equation: (fc/F'c)^2 +	
fb/ (F'b(1-fc/Fce)) =	0.57 < 1.0, Member OK
Live Load defl ratio	0.15 < 1.0, Member OK
Total Load defl ratio	0.26 < 1.0, Member OK



VisualAnalysis 3.50.c Report

11/22/00 13:14:00

Project: Truss 3

File: C:\Program Files\IES\VA35\truss 3.rap

Company: PK Associates Engineers

Engineer: Paul Kachner

Default Units: Feet, Pounds, Degrees, Fahrenheit, Seconds.

Nodes

Node	X ft	Y ft	Fix	DX	Fix	DY	Fix	RZ
N1	0.00	0.00	Yes		Yes		No	
N2	10.00	0.00	No		No			
N3	20.50	0.00	"		Yes			
N4	29.50	0.00	"		"			
N5	7.00	3.50	"		No			
N6	29.50	1.25	"		"			
N7	16.00	8.00	"		"			
N8	20.50	5.75	"		"			

Member Elements

Member	Section	Material	Length ft
M1	SS2x4	Wood	10.00
M2	"	"	10.50
M3	"	"	9.00
M4	"	"	7.83
M5	"	"	10.06
M6	"	"	5.09
M7	"	"	10.06
M8	"	"	1.25
M9	"	"	4.61
M10	"	"	10.00
M11	"	"	9.18
M12	"	"	5.75
M13	"	"	5.09

Section Properties

Category	Section	Ax in ²	Iz in ⁴	Sy+ in ³	Sy- 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: Equation Case 1
 Combination: -1D+1L+1Lr
 Contributing Cases & Source

Service Case (Dead Loads)
 Service Case (Roof Live Loads)

Member Uniform Loads

This item is empty. Check the selection state, or report properties.

Nodal Reactions

Node	Load Case	FX lbs	FY lbs	MZ lb-ft
81	Equation Case 1	0.00	572.38	-NA-
82	"	-NA-	1276.11	-NA-
83	"	-NA-	74.91	-NA-

Member Results

Member	Axial lbs	Vy lbs	Mz lb-ft	Dy in
81	815.70	-45.37	-73.70	-0.0460
82	815.70	-20.04	35.1018	-0.1073
83	815.70	5.2969	59.6676	-0.1091
84	815.70	30.6303	0.0000	-0.0000
85	98.0796	-40.08	-75.42	-0.0000
86	98.0796	-13.48	17.8871	-0.0398
87	98.0796	13.1167	18.5286	-0.0556
88	98.0796	39.7167	-73.70	-0.0460
89	0.0000	-25.80	-0.0000	-0.0000
90	0.0000	-0.9976	43.0218	-0.0495
91	0.0000	18.8024	17.8146	-0.0352
92	0.0000	42.6024	-75.42	-0.0000
93	-971.86	119.78	0.0000	-0.0000
94	-911.76	-0.4503	154.84	-0.1151
95	-851.65	-120.66	-3.1332	-0.0640
96	-791.55	-240.87	-473.92	-0.0491
97	-661.59	278.93	-473.92	-0.0491
98	-584.32	124.38	201.15	-0.4891
99	-507.04	-30.18	359.13	-0.5896
100	-429.75	-184.74	0.0000	-0.0157
101	180.14	203.56	-440.92	-0.0025
102	218.77	-126.28	-154.47	0.0578
103	257.41	-49.00	-17.70	0.0251
104	296.05	28.3794	0.0000	-0.0227
105	187.91	-188.01	0.0000	0.0641
106	265.18	-33.46	370.13	-0.5922
107	342.46	121.10	223.16	-0.4905
108	419.74	275.65	-440.92	-0.0025
109	-49.13	0.0000	0.0000	0.0092
110	-49.13	0.0000	0.0000	0.0103
111	-49.13	0.0000	0.0000	0.0113
112	-49.13	0.0000	0.0000	0.0124
113	-535.80	0.0000	0.0000	-0.0216
114	-535.80	0.0000	0.0000	-0.0214
115	-535.80	0.0000	0.0000	-0.0211
116	-535.80	0.0000	0.0000	-0.0209
117	614.87	0.0000	0.0000	-0.0364
118	614.87	0.0000	0.0000	-0.0264
119	614.87	0.0000	0.0000	-0.0165
120	614.87	0.0000	0.0000	-0.0066
121	-714.37	0.0000	0.0000	-0.0174
122	-714.37	0.0000	0.0000	-0.0080
123	-714.37	0.0000	0.0000	-0.0014

	-214.57	0.0000	0.0000	0.0108
	-535.77	0.0000	0.0000	-0.0124
	535.77	0.0000	0.0000	-0.0031
	-535.77	0.0000	0.0000	-0.0058
	-535.77	0.0000	0.0000	-0.0026
	-254.57	-0.0000	0.0000	-0.0017
	-254.57	-0.0000	-0.0000	-0.0018
	-254.57	-0.0000	-0.0000	-0.0018
	-254.57	-0.0000	-0.0000	-0.0014

BENDING & COMP: TRUSS 3 - MEMBER 4

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

Grading

1x 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	5 inches
Depth, d	3.5 inches
Length	7.85 feet
Max Axial Comp. C	791 lbs
Max Reaction, R	240 lbs
Max Moment, M	473 ft-lbs
Max LL Deflection	0.02 inches
Max TL Deflection	0.04 inches
LL Defl Criteria = L/240	240
TL Defl Criteria = L/180	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, C _T	1.23
f _c =	75 psi
F _{ce} =	818 psi
F _c * =	1869 psi
F' _c =	726 psi
f _b =	927 psi
F' _b = F _b * =	1887 psi
Shear D/C ratio	0.29 < 1.0, Member OK
Interaction equation	
(f _c /F' _c) ² +	
f _b / (F' _b (1 - f _c /F _{ce})) =	0.55 < 1.0, Member OK
Live Load defl ratio	0.05 < 1.0, Member OK
Total Load defl ratio	0.08 < 1.0, Member OK