

**CITY OF SACRAMENTO**

1231 I Street, Sacramento, CA 95814

**Permit No: 0115411**

**Insp Area: 4**  
**Thos Bros: 277 E3**

**Site Address: 17 SHADY LAKE CT SAC**  
**Parcel No: 250-0404-005**

**Sub-Type: REP**  
**Housing (Y/N): N**

**CONTRACTOR**

**OWNER**

CAZAREZ JOSE/ROBERTO LEON  
17 SHADY LAKE CT  
SACRAMENTO CA 95834-1516

**ARCHITECT**

**Nature of Work: REMOVE EXIST. ROOFING, INSTALL NEW LIGHT WEIGHT CONCRETE TILE ROOF 24 SQ**

**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 \_\_\_\_\_ License Number \_\_\_\_\_ Date \_\_\_\_\_ Contractor Signature \_\_\_\_\_

**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);

*[Signature]* 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 12-05-01 Owner Signature *[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 12-05-01 Applicant/Agent Signature *[Signature]*

**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 \_\_\_\_\_ Policy Number \_\_\_\_\_ Exp Date \_\_\_\_\_

(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 12-05-01 Applicant Signature *[Signature]*

**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.**



DEPARTMENT OF  
NEIGHBORHOODS, PLANNING  
AND DEVELOPMENT SERVICES

CITY OF SACRAMENTO  
CALIFORNIA

1231 I STREET  
ROOM 200  
SACRAMENTO, CA  
95814-2904

DEVELOPMENT SERVICES  
DIVISION

916-264-7619  
FAX 916-264-7046

EXHIBIT 1

I have read and am familiar with the contents of the City's Standard  
Owner-Builder Notification and Owner-Builder Verification, as required by  
California Health and Safety Code Section 19830 and 19831. I authorize my  
agent(s) Rogelio Vazquez  
to sign the Owner-Builder Verification on my behalf.

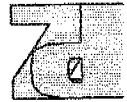
Signature Jose Carrazes  
Print Name Jose Carrazes  
Address 17 SHADY LAKE COURT  
SCTO. CA 95834  
Telephone 916 564 2489

City of Sacramento



Cazares

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



TEL: 916.961.3960  
FAX: 916.961.6552

RECOMMENDATIONS:

None.

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.

**DESIGN LOADING:**

Roof Pitch 4 in 12  
Pitch Adjustment Factor 1.05

**LOCATION: ROOF**

<u>MATERIAL</u>	
Light Weight Tile	7.00 psf
Roofing felt	0.30 psf
1/2" OSB/ plywood	1.50 psf
2x6 rafters @ 24" oc	1.00 psf
<b>Load</b>	<u>9.8 psf</u>
Roof Pitch Adjustment	0.53 psf
<b>Total Load</b>	10.3 psf

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 15.2

**LOCATION: TOP CHORD**

<u>MATERIAL</u>	
Light Weight Tile	7.00 psf
Roofing felt	0.30 psf
1/2" OSB/ plywood	1.50 psf
2x4 truss @ 24" oc	0.64 psf
<b>Total Load</b>	<u>9.4 psf</u>

**LOCATION: BOTTOM CHORD**

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

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

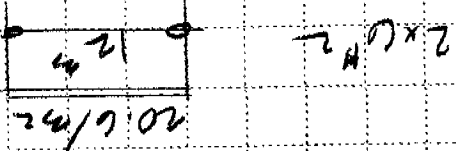
P.K. Zacher, S.E.  
 Job #: 01-380  
 Date: 11/28/01

LOADING

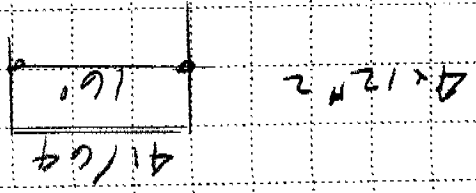
PAFNEY

Op = 10.7 pcf = 2' = 20.6 pcf  
 Lp = 16.0' = 32'

B1  
 Op = 10.7 pcf = 4' = 41 pcf  
 Lp = 16.0' = 64'



2x6/m2



4x12/m2

Job #  
Date: 6:59AM, 28 NOV 01

Title:  
Dsgnr:  
Description:

Scope:

Paul Zacher - Structural Engineers

4701 Lakeside Way

Fair Oaks

TEL: (916) 961-3960

FAX: (916) 961-6552

### Timber Beam & Joist

c:\enercalc\test.ecw\Calculations

Rev: 510304  
User: RW-0602844, Ver: 5.1.1, 22-Jun-1999, Wm32  
(c) 1983-99 ENERCALC

### Description RAFTERS AND BEAMS

### Timber Member Information

Calculations are designed to 1997 NDS and 1997 UBC Requirements

Timber Section	4x12	rafter	B1
Beam Width	11.250		
Beam Depth	5.500		
Le: Untraced Length	0.00		
Timber Grade	875.0	ouglas Fir - Larch, ouglas Fir - Larch,	
Fv - Basic Allow	95.0		
Elastic Modulus	1,600.0		
Load Duration Factor	1.250	Sawn	No
Member Type	1.250	Sawn	No
Repetitive Status	Repetitive		

### Center Span Data

Span	12.25	ft
Dead Load	21.20	#/ft
Live Load	32.00	#/ft
Ratio =	0.9684	
	0.4539	

### Results

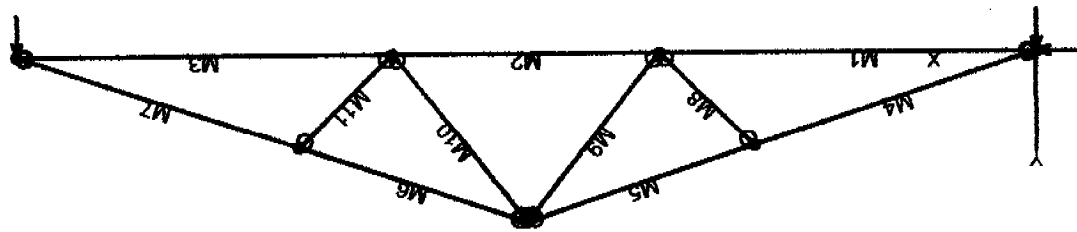
Mmax @ Center @ X =	11.97	in-k
Fb: Actual	1,583.5	psi
Fb: Allowable	1,635.2	psi
Fv: Actual	54.1	psi
Fv: Allowable	1,203.1	psi
Bending OK	118.8	psi
Shear OK	28.4	psi
Shear OK	118.8	psi

### Reactions

@ Left End DL	129.85	lbs
LL	196.00	lbs
Max. DL+LL	325.85	lbs
@ Right End DL	129.85	lbs
LL	196.00	lbs
Max. DL+LL	325.85	lbs

### Deflections

Center DL Defl	-0.323	in
L/Defl Ratio	455.4	
Center LL Defl	-0.487	in
L/Defl Ratio	301.7	
Center Total Defl	-0.810	in
L/Defl Ratio	6.125	
Location	8.000	ft
L/Defl Ratio	181.5	





# VisualAnalysis 3.50.c Report

11/28/01 06:20:10

Project: Truss 1

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

Company: PK Associates Engineers

Engineer: Paul Zacher

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

## Nodes

Node	X	Y	Fix	DX	DY	Fix	RZ
N1	0.00	0.00	Yes	Yes	Yes	No	No
N2	8.00	0.00	No	No	No	No	No
N3	13.67	0.00	No	No	No	No	No
N4	21.67	0.00	Yes	Yes	Yes	No	No
N5	10.83	3.61	No	No	No	No	No
N6	6.00	2.00	No	No	No	No	No
N7	15.67	2.00	No	No	No	No	No

## Member Elements

Member	Section	Material	Length
M1	SS2X4	Wood	8.00
M2	"	"	5.67
M3	"	"	8.00
M4	"	"	6.32
M5	"	"	5.09
M6	"	"	5.10
M7	"	"	6.32
M8	"	"	2.83
M9	"	"	4.59
M10	"	"	4.59
M11	"	"	2.83

## Section Properties

Category	Section	AX	I <sub>x</sub> <sup>2</sup>	I <sub>y</sub> <sup>2</sup>	S <sub>y</sub> <sup>+</sup>	S <sub>y</sub> <sup>-</sup>
Wood	Sha SS2X4	5.25	5.36	3.06	3.06	3.06

## Material Properties

Material	Strength	Elasticity	Poisson	Density
Wood	psi	psi	lb/ft <sup>3</sup>	lb/ft <sup>3</sup>
Wood	-NA- 170000.00	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	Axial lbs	VY lbs	MZ lb-ft	DY in
M1	1539.60	-38.04	-29.15	-0.1342
"	1539.60	-15.11	41.5698	-0.1431
"	1539.60	7.8230	51.2863	-0.1027
"	1539.60	30.7563	0.0000	-0.0000
M2	1012.39	-24.38	-29.14	-0.1342
"	1012.39	-8.1248	1.5024	-0.1336
"	1012.39	8.1292	1.4982	-0.1335
"	1012.39	24.3832	-29.15	-0.1342
M3	1539.68	-30.76	-0.0000	-0.0000
"	1539.68	-7.8246	51.2904	-0.1027
"	1539.68	15.1088	41.5782	-0.1431
"	1539.68	38.0421	-29.14	-0.1342
M4	-1664.52	124.92	0.0000	-0.0000
"	-1630.52	22.9235	155.31	-0.1419
"	-1596.52	-79.08	96.1163	-0.1679
"	-1562.52	-181.08	-177.57	-0.1277
M5	-1392.96	158.04	-177.57	-0.1277
"	-1365.59	75.9327	20.6186	-0.1455
"	-1338.22	-6.1773	79.8091	-0.1581
"	-1310.85	-88.29	-0.0000	-0.1335
M6	-1393.23	-158.28	-177.82	-0.1148
"	-1365.86	-76.00	21.0002	-0.1329
"	-1338.49	6.2785	80.2736	-0.1456
"	-1311.12	88.5585	0.0000	-0.1207
M7	-1664.59	-124.88	0.0000	0.0129
"	-1630.59	-22.88	155.22	-0.1289
"	-1596.59	79.1158	95.9505	-0.1549
"	-1562.59	181.12	-177.82	-0.1148
M8	-379.15	0.0000	0.0000	0.0832
"	-379.15	0.0000	-0.0786	0.0000
"	-379.15	0.0000	0.0740	0.0000
"	-379.15	0.0000	-0.0694	0.0000
M9	419.98	0.0000	0.0000	-0.0987
"	419.98	0.0000	0.0000	-0.0978
"	419.98	0.0000	0.0000	-0.0968
"	419.98	0.0000	0.0000	-0.0958
M10	419.95	0.0000	0.0000	-0.0668
"	419.95	0.0000	0.0000	-0.0658
"	419.95	0.0000	0.0000	-0.0649
"	419.95	0.0000	0.0000	-0.0639
M11	-378.49	-0.0000	0.0000	-0.1121
"	-378.49	-0.0000	-0.1075	0.0000
"	-378.49	-0.0000	-0.1029	0.0000
"	-378.49	-0.0000	-0.0982	0.0000

**Member Results**

Node	Load case	FX lbs	FY lbs	MZ lb-ft
N1	Equation Case 1	0.00	675.64	-NA-
N4	"	-NA-	675.62	-NA-

**Nodal Reactions**

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

**Member Uniform Loads**

**BENDING & COMP: TRUSS 1 - MEMBER 4**

Design based on 1997 UBC 2321 Division V and ANSIT/P1 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 6.32 feet

Max Axial Comp, C 1562 feet

Max Reaction, R 181 feet

Max Moment, M 177 feet

Max LL Deflection 0.06 feet

Max TL Deflection 0.12 feet

LL Defl Criteria = L/240

TL Defl Criteria = L/180

Duration factor, Cd 1.25

Repetitive Factor, Cr 1.15

Size Factor, CT bending 1.5 1.5 for 2x4, 1.3 for 2x6

Size Factor, CT comp 1.15 1.15 for 2x4, 1.1 for 2x6

Buckling Factor, CT =

fc =

Fce =

Fc\* =

F'c =

fb =

Fb = Fb\* =

Shear D/C ratio

Interaction equation:

$(f_c/F'c)^2 +$

$f_b/(F'b(1-f_c/F'ce)) =$

Live Load defl ratio

Total Load defl ratio

0.50 < 1.0, Member OK

0.19 < 1.0, Member OK

0.28 < 1.0, Member OK

0.44 < 1.0, Member OK

2156 psi

694 psi

1057 psi

2084 psi

1275 psi

298 psi

1.17

1.15 1.15 for 2x4, 1.1 for 2x6

1.5 1.5 for 2x4, 1.3 for 2x6

1.15

1.25

180

240

0.12 feet

0.06 feet

177 feet

181 feet

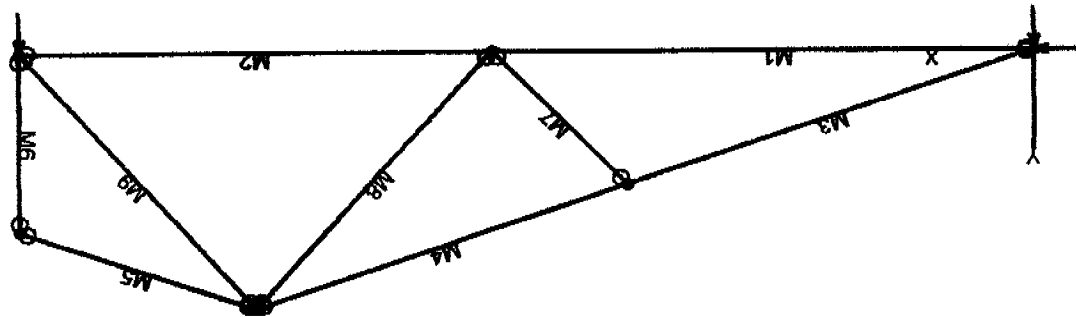
1562 feet

6.32 feet

3.5 inches

1.5 inches

01



# VisualAnalysis 3.50.c Report

11/28/01 06:24:37

Project: Truss 2

File: Untitled.vap

Company: PK Associates Engineers

Engineer: Paul Zacher

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

## Nodes

Node	X	Y	Fix DX	Fix DY	Fix RZ
N1	0.00	0.00	Yes	Yes	No
N2	8.00	0.00	No	No	"
N3	15.00	0.00	"	Yes	"
N4	6.00	2.00	"	No	"
N5	11.50	3.83	"	"	"
N6	15.00	2.67	"	"	"

## Member Elements

Member	Section	Material	Length
--------	---------	----------	--------

ft

M1	SS2x4	Wood	8.00
M2	"	"	7.00
M3	"	"	6.32
M4	"	"	5.80
M5	"	"	3.69
M6	"	"	2.67
M7	"	"	2.83
M8	"	"	5.19
M9	"	"	5.19

## Section Properties

Category	Section	Ax	Ix	Sy+	Sy-
Wood	Sha SS2x4	5.25	5.36	3.06	3.06

## Material Properties

Material	Strength	Elasticity	Poisson	Density
Wood	psi	psi	lb/ft <sup>3</sup>	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

Member	Axial	VY	MZ	Member
M1	937.95	-40.54	-49.14	937.95
"	937.95	-17.61	28.2395	-0.0673
"	937.95	5.3236	44.6211	-0.0603
"	937.95	28.2569	0.0000	-0.0000
M2	320.26	-23.08	0.0000	-0.0000
"	320.26	-3.0127	30.3236	-0.0360
"	320.26	17.0540	13.9420	-0.0447
"	320.26	37.1207	-49.14	-0.0429
M3	-1028.77	120.24	0.0000	-0.0000
"	-994.77	18.2442	145.44	-0.1042
"	-960.77	-83.76	76.3866	-0.1009
"	-926.77	-185.76	-207.17	-0.0478
M4	-746.00	175.99	-207.17	-0.0478
"	-714.89	82.4901	42.0939	-0.0740
"	-683.78	-11.01	111.15	-0.0808
"	-652.67	-104.51	-0.0000	-0.0194
M5	-29.58	-89.25	0.0000	-0.0002
"	-9.8600	-29.75	72.9471	-0.0272
"	9.8600	29.7500	72.9471	-0.0351
"	29.5800	89.2500	0.0000	-0.0238
M6	-94.02	-0.0000	0.0000	0.0005
"	-94.02	-0.0000	-0.0000	0.0047
"	-94.02	-0.0000	-0.0000	0.0089
"	-94.02	-0.0000	-0.0000	0.0131
M7	-403.99	-0.0000	0.0000	-0.0288
"	-403.99	-0.0000	-0.0000	-0.0270
"	-403.99	-0.0000	-0.0000	-0.0251
"	-403.99	-0.0000	-0.0000	-0.0232
M8	492.18	-0.0000	0.0000	-0.0364
"	492.18	-0.0000	-0.0000	-0.0277
"	492.18	-0.0000	-0.0000	-0.0190
"	492.18	-0.0000	-0.0000	-0.0103
M9	-474.75	-0.0000	0.0000	-0.0205
"	-474.75	-0.0000	-0.0000	-0.0104
"	-474.75	-0.0000	-0.0000	-0.0004
"	-474.75	-0.0000	-0.0000	0.0097

Member Results

Node	Load Case	FX	FY	MZ
N1	Equation Case 1	0.00	467.66	-NA-
N3	"	-NA-	467.56	-NA-

Nodal Reactions

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

13

**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 1.5 inches

Depth, d 3.5 inches

Length 6.32 feet

Max Axial Comp, C 926 feet

Max Reaction, R 185 feet

Max Moment, M 207 feet

Max LL Deflection 0.02 feet

Max TL Deflection 0.04 feet

LL Defl Criteria = L/240

TL Defl Criteria = L/180

Duration factor, Cd 1.25

Repetitive Factor, Cr 1.15

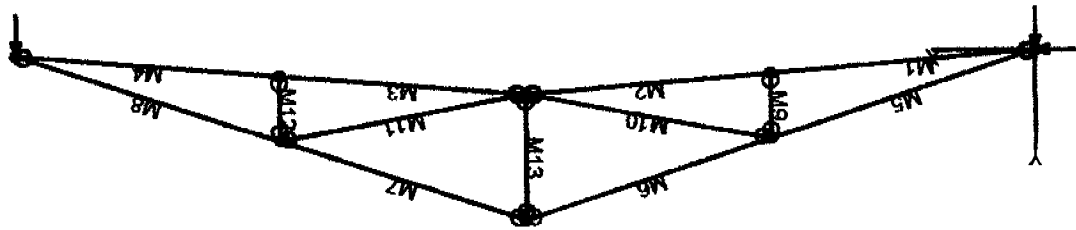
Size Factor, Cf bending 1.5 1.5 for 2x4, 1.3 for 2x6

Size Factor, Cf comp 1.15 1.15 for 2x4, 1.1 for 2x6

Buckling Factor, CT = 1.17

Fc = 176 psi

Fce = 1275 psi





# VisualAnalysis 3.50.c Report

11/28/01 06:30:47

Project: Truss 3

File: C:\Program Files\IBS\VA35\truss 3.vap

Company: PK Associates Engineers

Engineer: Paul Zacher

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

## Nodes

Node	X	Y	FX	FX	FX	FX	FX	FX	FX
N1	0.00	0.00	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N2	6.00	0.50	No	No	No	No	No	No	No
N3	17.17	0.50	No	No	No	No	No	No	No
N4	23.17	0.00	Yes	Yes	Yes	Yes	Yes	Yes	Yes
N5	11.58	0.96	No	No	No	No	No	No	No
N6	6.00	2.00	No	No	No	No	No	No	No
N7	17.17	2.00	No	No	No	No	No	No	No
N8	11.58	3.86	No	No	No	No	No	No	No

## Member Elements

Member	Section	Material	Length
M1	SS2x4	Wood	6.02
M2	"	"	5.60
M3	"	"	5.61
M4	"	"	6.02
M5	"	"	6.32
M6	"	"	5.88
M7	"	"	5.89
M8	"	"	6.32
M9	"	"	1.50
M10	"	"	5.68
M11	"	"	5.69
M12	"	"	1.50
M13	"	"	2.90

## Section Properties

Category	Section	Ax	Iz	Sy+	Sy-
		in <sup>2</sup>	in <sup>4</sup>	in <sup>3</sup>	in <sup>3</sup>
Wood	Sha SS2x4	5.25	5.36	3.06	3.06

## Material Properties

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

## Load Combination Summary

Equation Case: Equation Case 1

Combination: +1D+1L+1LL

Member	Axial	VY	MZ	DY
M1	2180.01	28.9423	0.0000	-0.0000
"	2181.44	11.7423	40.7393	-0.1174
"	2182.88	-5.4577	47.0457	-0.2058
"	2184.31	-22.66	18.9191	-0.2606
M2	2180.56	20.6149	18.9191	-0.2605
"	2181.88	4.6189	42.3916	-0.2906
"	2183.20	-11.38	36.0852	-0.2942
"	2184.52	-27.37	0.0000	-0.2757
M3	2180.74	-20.67	18.8584	-0.2513
"	2182.06	-4.6501	42.4576	-0.2814
"	2183.38	11.3746	36.1715	-0.2851
M4	2180.22	-28.93	-0.0000	0.0094
"	2184.70	27.3992	0.0000	-0.2664
"	2181.65	-11.73	40.7191	-0.1079
"	2183.08	5.4678	47.0052	-0.1964
"	2184.52	22.6678	18.8584	-0.2512
M5	-2300.21	23.0343	151.76	-0.1865
"	-2267.41	-75.37	96.6027	-0.2597
"	-2234.61	-173.77	-165.49	-0.2656
M6	-1530.52	165.40	-165.49	-0.2656
"	-1500.02	73.8911	68.6469	-0.3210
"	-1469.52	-17.62	123.81	-0.3369
"	-1439.01	-109.13	-0.0000	-0.2734
M7	-1530.25	-165.66	-165.81	-0.2298
"	-1499.74	-73.98	69.0410	-0.2856
"	-1469.24	17.6932	124.31	-0.3015
"	-1438.73	109.37	0.0000	-0.2375
M8	-2333.21	-121.38	-0.0000	0.0360
"	-2300.41	-22.98	151.66	-0.1505
"	-2267.61	75.4168	96.3869	-0.2236
"	-2234.81	173.82	-165.81	-0.2297
M9	45.3699	-0.0000	-0.0000	0.0392
"	45.3699	-0.0000	-0.0000	0.0480
"	45.3699	-0.0000	-0.0000	0.0568
"	45.3699	-0.0000	-0.0000	0.0656
M10	-788.56	-0.0000	-0.0000	-0.2569
"	-788.56	-0.0000	-0.0000	-0.2519
"	-788.56	-0.0000	-0.0000	-0.2468
"	-788.56	-0.0000	-0.0000	-0.2417
M11	-788.72	0.0000	0.0000	-0.2778
"	-788.72	0.0000	0.0000	-0.2727
"	-788.72	0.0000	0.0000	-0.2677

**Member Results**

Node	Load Case	RX	FY	MZ
N1	Equation Case 1	-0.00	700.77	-NA-
N4	"	-NA-	700.75	-NA-

**Nodal Reactions**

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

**Member Uniform Loads**

Contributing Cases & Source  
 Service Case 1 (Dead Loads)  
 Service Case 2 (Roof Live Loads)



**BENDING & COMP. TRUSS 3 - MEMBERS**  
 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 6.32 feet

Max Axial Comp, C 2234 feet

Max Reaction, R 173 feet

Max Moment, M 165 feet

Max LL Deflection 0.03 feet

Max TL Deflection 0.26 feet

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 = 1.17

fc = 426 psi

Fce = 1275 psi

Fc\* = 2084 psi

F'c = 1057 psi

fb = 647 psi

F'b = F'b\* = 2156 psi

Shear D/C ratio 0.42 < 1.0, Member OK

Interaction equation:

$(f_c/F'_c)^2 +$

$f_b/(F'_b(1-f_c/F'_c)) =$

Live Load defl ratio 0.09 < 1.0, Member OK

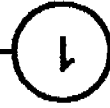
Total Load defl ratio 0.61 < 1.0, Member OK

0.61 < 1.0, Member OK	0.42 < 1.0, Member OK
0.09 < 1.0, Member OK	2156 psi
0.62 < 1.0, Member OK	647 psi
	1057 psi
	2084 psi
	1275 psi
	426 psi
	1.17
	1.15 1.15 for 2x4, 1.1 for 2x6
	1.5 1.5 for 2x4, 1.3 for 2x6
	1.15
	1.25
	180
	240
	0.26 feet
	0.03 feet
	165 feet
	173 feet
	2234 feet
	6.32 feet
	3.5 inches
	1.5 inches

# ROOF PLAN - CAZARES

Not to Scale

19



- Notes:
- A. This is a re-roof project. The new roofing material shall be a Light Weight Concrete Tile. The tile shall weigh less than or equal to 7.0 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.

