

CITY OF SACRAMENTO  
1231 I Street, Sacramento, CA 95814

Permit No: 0107010  
Insp Area: 4

Site Address: 645 PELICAN WY SAC  
Parcel No: 262-0333-003

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

CONTRACTOR

OWNER

ARCHITECT

GOMEZ JESUS O/MARIA D  
645 PELICAN WY  
SACRAMENTO CA 95833

Nature of Work: REROOF T/O INSTALL LT WT CONCRETE 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 \_\_\_\_\_ 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)

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 6-3-6 \_\_\_\_\_  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 6-3-6 \_\_\_\_\_  Applicant Agent 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 capacity subject to the workers' compensation laws of California and agree that if I should become subject to the workers' compensation provisions of the Labor Code, I shall forthwith comply with those provisions.

Date 6-3-6 \_\_\_\_\_  Applicant 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.

OWNER-BUILDER VERIFICATION

ATTENTION PROPERTY OWNERS

An owner-builder building permit has been applied for in your name and bearing your signature.

Please complete and return this information in the envelope provided at your earliest opportunity to avoid unnecessary delay in processing and issuing your building permit. No building permit will be issued until this verification is received.

1. I personally plan to provide the major labor and materials for construction of the proposed Improvement (yes) or no \_\_\_\_\_
2. I (have) have not) \_\_\_\_\_ signed an application for A building permit for the proposed work.
3. I have contracted with the following person (firm) to provide the proposed construction:

Name \_\_\_\_\_ Address \_\_\_\_\_  
City \_\_\_\_\_ Telephone \_\_\_\_\_  
Contractors License No. \_\_\_\_\_

4. I plan to provide portions of the work, but I have hired the following person to coordinate, Supervise, and provide the major work

Name \_\_\_\_\_ Address \_\_\_\_\_  
City \_\_\_\_\_ Telephone \_\_\_\_\_  
Contractors License No. \_\_\_\_\_

5. I will provide some of the work but I have contracted (hired) the following to provide the Work indicated:

Name	Address	Phone	Type of work
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Signed [Signature]

Job Address 645 PELICAN NY

Permit No. 0107010

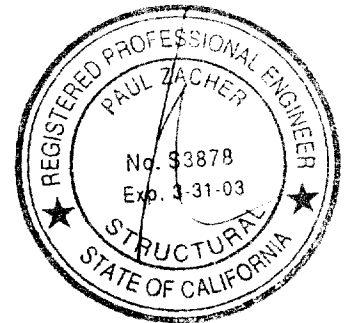
Gomez

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

TEL: 916.961.3960  
FAX: 916.961.6552

May 31, 2001

Gomez  
645 Pelican Way  
Sacramento, CA 95833  
TEL: (916) 929-6054



Attn: Mr Gomez,

re: Job 2001\_148: GOMEZ

Subject Structural Investigation Report of the Roof for the Residence located at 645 Pelican Way,  
Sacramento, CA 95833

As requested by Mr. Gomez, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site May 31, 2001. 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 1970's vintage.  
Occupancy: Residential  
No. of Stories: Two  
Dimensions: Approximately 2500 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 framed with pre-engineered wood trusses spaced at 24" on center.

**CONCLUSIONS:**

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



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.

**ISSUED**

JUN 04 2001

Sacramento Building Division

Gomez



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 x 11'-6" long rafter to the top chord of the existing truss. 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	4	in 12
Pitch Adjustment Factor	1.05	

**LOCATION: ROOF**

<u>MATERIAL</u>	<u>WEIGHT</u>	
Light Weight Tile	7.00	psf
Roofing felt	0.30	psf
1x4 skip sht'g	1.09	psf
1/2" OSB/ plywood	1.50	psf
2x4 rafters @ 24" oc	<u>0.64</u>	psf
	Load	10.5 psf
Roof Pitch Adjustment	<u>0.57</u>	psf
Total Load	11.1	psf

**LOCATION: TOP CHORD**

<u>MATERIAL</u>	<u>WEIGHT</u>	
Light Weight Tile	7.00	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>0.64</u>	psf
	Load	10.5 psf
Roof Pitch Adjustment	<u>0.57</u>	psf
Total Load	11.1	psf

**LOCATION: BOTTOM CHORD**

<u>MATERIAL</u>	<u>WEIGHT</u>	
Batt/blown insul	0.50	psf
2x4 truss @ 24" oc	1.28	psf
1/2" Gypboard	<u>2.50</u>	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 #: \_\_\_\_\_

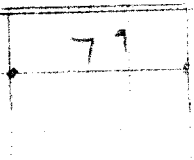
Date: 5/1/10

WOODWORK

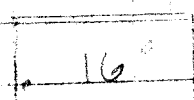
RAFTERS

DR 150 - 4" 6" PSF 2x4#2  
LP 150 - 4" 6" PSF

222/142



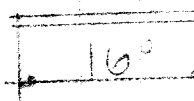
182/64



B1

DR 150 - 4" 6" PSF 4x12#2  
LP 150 - 4" 6" PSF  
DW 150 - 4" 6" PSF

25/64



B2

DR 111 PSF - 4" 6" PSF 4x12#1  
LP 111 PSF - 4" 6" PSF

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

Title :  
 Dsgnr:  
 Description :  
 Scope :

Job #  
 Date: 8:49AM, 31 MAY 01

Rev: 510304  
 User: KW 0601244 ver: 1.3.22 Jun 1999, Win95  
 (c) 1983-99 ENERCALC

## 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	B2
<b>Timber Section</b>	2x4	4x14	4x12
Beam Width	in 1.500	3.500	3.500
Beam Depth	in 3.500	13.250	11.250
Le: Unbraced Length	ft 0.00	0.00	0.00
<b>Timber Grade</b>	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch
Fb - Basic Allow	psi 875.0	875.0	1,000.0
Fv - Basic Allow	psi 95.0	95.0	95.0
Elastic Modulus	ksi 1,600.0	1,600.0	1,700.0
Load Duration Factor	1.250	1.250	1.250
Member Type	Sawn	Sawn	Sawn
Repetitive Status	Repetitive	No	No

#### Center Span Data

Span	ft	7.75	16.00	16.00
Dead Load	#/ft	22.20	182.00	45.00
Live Load	#/ft	32.00	64.00	64.00

#### Results

Ratio = 0.8451 0.8433 0.4123

Mmax @ Center	in-k	4.88	94.46	41.86
@ X =	ft	3.87	8.00	8.00
fb : Actual	psi	1,594.5	922.4	566.9
Fb : Allowable	psi	1,886.7	1,093.8	1,375.0
		Bending OK	Bending OK	Bending OK
fv : Actual	psi	55.7	55.0	29.5
Fv : Allowable	psi	118.8	118.8	118.8
		Shear OK	Shear OK	Shear OK

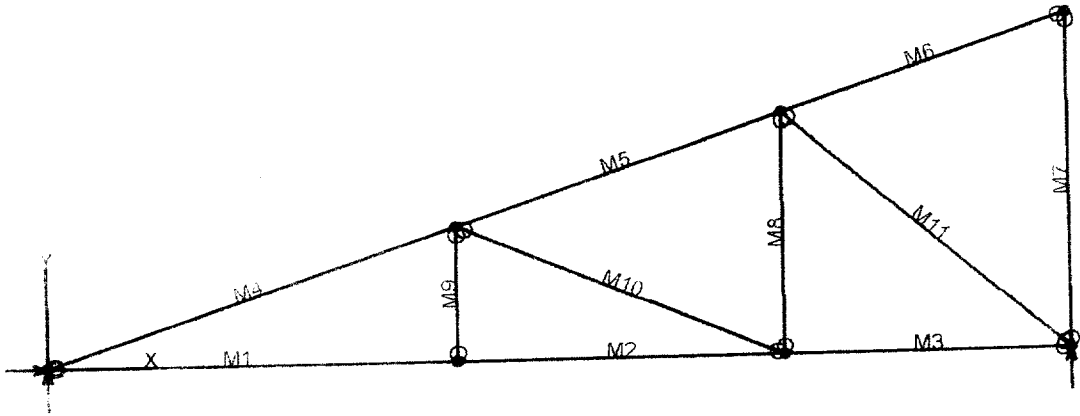
#### Reactions

@ Left End	DL	lbs	86.02	1,456.00	360.00
	LL	lbs	124.00	512.00	512.00
	Max. DL+LL	lbs	210.02	1,968.00	872.00
@ Right End	DL	lbs	86.02	1,456.00	360.00
	LL	lbs	124.00	512.00	512.00
	Max. DL+LL	lbs	210.02	1,968.00	872.00

#### Deflections

Ratio OK Deflection OK Deflection OK

Center DL Defl	in	-0.210	-0.247	-0.094
L/Defl Ratio		442.6	776.7	2,042.8
Center LL Defl	in	-0.303	-0.087	-0.134
L/Defl Ratio		307.0	2,208.6	1,436.4
Center Total Defl	in	-0.513	-0.334	-0.228
Location	ft	3.875	8.000	8.000
L/Defl Ratio		181.3	574.6	843.4





# VisualAnalysis 3.50.c Report

05/31/01 08:51:00

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	10.00	0.00	No		No		"	
N3	18.00	0.00	"		"		"	
N4	25.00	0.00			Yes		"	
N5	10.00	3.33			No		"	
N6	18.00	6.00			"		"	
N7	25.00	8.33			"		"	

## Member Elements

Member	Section	Material	Length ft
M1	SS2x4	Wood	10.00
M2	"	"	8.00
M3	"	"	7.00
M4	SS2x4x4	"	10.54
M5	SS2x4	"	8.44
M6	"	"	7.38
M7	"	"	8.33
M8	"	"	6.00
M9	"	"	3.33
M10	"	"	8.67
M11	"	"	9.22

## Section Properties

Category	Section	Ax in <sup>2</sup>	Iz in <sup>4</sup>	Sy+ in <sup>3</sup>	Sy- in <sup>3</sup>
Wood Sha	SS2x4	10.50	10.72	6.13	6.13
"	SS2x4	5.25	5.36	3.06	3.06

## Material Properties

Material	Strength psi	Elasticity psi	Poisson	Density lb/ft <sup>3</sup>
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
N1	Equation Case 1	0.00	821.62	-NA-
N4	"	-NA-	821.62	-NA-

## Member Results

Member	Axial lbs	Vy lbs	Mz lb-ft	Dy in
M1	1633.46	-49.44	64.36	0.1279
"	1633.46	-20.77	57.4076	-0.1943
"	1633.46	7.8970	73.8621	-0.1666
"	<b>1633.46</b>	36.5636	0.0000	-0.0000
M2	1633.46	-31.34	39.85	-0.0748
"	1633.46	-8.4029	17.9792	-0.0996
"	1633.46	14.5304	4.8091	-0.1137
"	1633.46	37.4638	-64.36	-0.1279
M3	744.46	-24.41	0.0000	-0.0000
"	744.46	-4.3400	33.4207	-0.0509
"	744.46	15.7067	20.1362	-0.0713
"	744.46	35.7934	39.85	-0.0748
M4	<b>-1797.82</b>	228.76	0.0000	-0.0000
"	-1737.66	48.0976	<b>484.76</b>	<b>-0.4915</b>
"	-1677.50	-132.57	336.38	-0.4776
"	-1617.33	<b>-313.24</b>	<b>-445.16</b>	-0.1304
M5	-863.49	<b>235.69</b>	445.16	-0.1304
"	-815.25	91.1601	13.2613	-0.1068
"	-767.02	-53.37	66.3757	-0.1124
"	-718.78	-197.91	285.82	-0.0681
M6	76.04	228.44	-285.82	-0.0681
"	-33.94	101.97	19.49	-0.1880
"	8.1524	-24.49	214.96	-0.2000
"	50.2478	-156.96	0.0000	0.0052
M7	-159.10	-0.0000	0.0000	-0.0218
"	-159.10	-0.0000	0.0000	0.0010
"	-159.10	-0.0000	0.0000	0.0238
"	-159.10	-0.0000	0.0000	<b>0.0465</b>
M8	437.17	0.0000	0.0000	0.0015
"	437.17	0.0000	0.0000	0.0142
"	437.17	0.0000	0.0000	0.0268
"	437.17	0.0000	0.0000	0.0395
M9	86.9001	-0.0000	-0.0000	0.0220
"	86.9001	-0.0000	0.0000	0.0245
"	86.9001	-0.0000	0.0000	0.0271
"	86.9001	-0.0000	0.0000	0.0297
M10	-962.93	-0.0000	0.0000	-0.1063
"	-962.93	-0.0000	0.0000	-0.0888
"	-962.93	-0.0000	0.0000	-0.0713
"	-962.93	-0.0000	0.0000	-0.0538
M11	-980.51	-0.0000	0.0000	-0.0531
"	-980.51	-0.0000	0.0000	-0.0253
"	-980.51	-0.0000	0.0000	0.0025
"	-980.51	-0.0000	0.0000	0.0303

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

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

#### **Grading:**

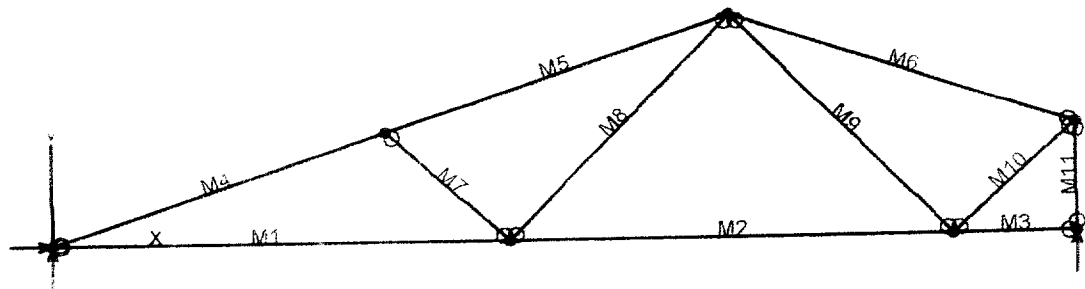
2x or 4x

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	10.54 feet
Max Axial Comp. C	1617 lbs
Max Reaction, R	313 lbs
Max Moment, M	445 ft-lbs
Max LL Deflection	0.06 inches
Max TL Deflection	0.13 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 =	154 psi
Fce=	504 psi
Fc* =	2084 psi
F'c=	476 psi
fb=	872 psi
F'b=Fb* =	2156 psi
Shear D/C ratio	0.38 < 1.0, Member OK
Interaction equation (fc/F'c)^2 +	
fb/ (F'b(1-fc/Fce)) =	0.69 < 1.0, Member OK
Live Load defl ratio	0.11 < 1.0, Member OK
Total Load defl ratio	0.19 < 1.0, Member OK



# VisualAnalysis 3.50.c Report

CS/31/01 08:59:58

Project: Truss 2

File: C:\Program Files\IES\VA35\truss 2.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 Fix
N1	0.00	0.00	Yes	Yes	No	No
N2	9.25	0.00	No	No	"	"
N3	18.25	0.00	"	"	"	"
N4	20.75	0.00	"	Yes	"	"
N5	6.75	2.25	"	No	"	"
N6	20.75	2.25	"	"	"	"
N7	13.75	4.58	"	"	"	"

## Member Elements

Member	Section	Material	Length ft
M1	SS2x4	Wood	9.15
M2	"	"	9.00
M3	"	"	2.50
M4	"	"	7.12
M5	"	"	7.38
M6	"	"	7.38
M7	"	"	3.36
M8	"	"	6.42
M9	"	"	6.42
M10	"	"	3.36
M11	"	"	2.25

## Section Properties

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

## Material Properties

Material	Strength psi	Elasticity psi	Poisson	Density lb/ft <sup>3</sup>
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
N1	Equation Case 1	-0.00	681.93	-NA-
N4	"	NA	681.89	-NA-

## Member Results

Member	Axial lbs	Vy lbs	Mz lb-ft	Dy in
M1	1476.99	-46.66	-63.68	-0.0957
"	1476.99	-20.14	39.1017	-0.1350
"	1476.99	6.3740	60.3285	-0.1157
"	<b>1476.99</b>	32.8906	0.0000	-0.0000
M2	745.40	-36.21	-41.25	-0.0257
"	745.40	-10.41	28.4792	-0.0826
"	745.40	15.3922	21.0026	-0.1017
"	745.40	41.1922	-63.68	-0.0957
M3	0.0000	5.7503	0.0000	-0.0000
"	0.0000	12.9170	-7.7930	-0.0069
"	0.0000	20.0836	-21.54	-0.0148
"	0.0000	27.2503	-41.25	-0.0257
M4	<b>-1606.44</b>	148.67	0.0000	-0.0000
"	-1565.79	26.7156	207.25	-0.2001
"	-1525.14	-95.23	126.00	<b>-0.2048</b>
"	-1484.49	<b>-217.18</b>	-243.76	-0.1001
M5	-1257.00	184.04	-243.76	-0.1001
"	-1214.90	57.5693	52.5404	-0.1124
"	-1170.81	-68.90	38.6115	-0.0935
"	-1130.71	-195.36	<b>-285.55</b>	-0.0591
M6	-502.06	-151.00	0.0000	0.0011
"	-459.97	-24.53	<b>215.05</b>	-0.2013
"	-417.87	101.94	119.85	-0.1866
"	-275.78	<b>228.40</b>	-285.55	-0.0633
M7	-460.72	0.0000	0.0000	-0.0623
"	-460.72	0.0000	0.0000	-0.0611
"	-460.72	0.0000	0.0000	-0.0600
"	-460.72	0.0000	0.0000	-0.0589
M8	555.24	0.0000	0.0000	-0.0802
"	555.24	0.0000	0.0000	-0.0670
"	555.24	0.0000	0.0000	-0.0538
"	555.24	0.0000	0.0000	-0.0405
M9	-451.91	0.0000	0.0000	-0.0499
"	-451.91	0.0000	0.0000	-0.0327
"	-451.91	0.0000	0.0000	-0.0156
"	-451.91	0.0000	0.0000	0.0015
M10	576.73	0.0000	0.0000	-0.0374
"	576.73	0.0000	0.0000	-0.0276
"	576.73	0.0000	0.0000	-0.0178
"	576.73	0.0000	0.0000	-0.0080
M11	-687.64	0.0000	0.0000	0.0096
"	-687.64	0.0000	0.0000	0.0156
"	-687.64	0.0000	0.0000	0.0215
"	-687.64	0.0000	0.0000	<b>0.0274</b>

## **BENDING & COMP: TRUSS 2 - MEMBER 4**

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

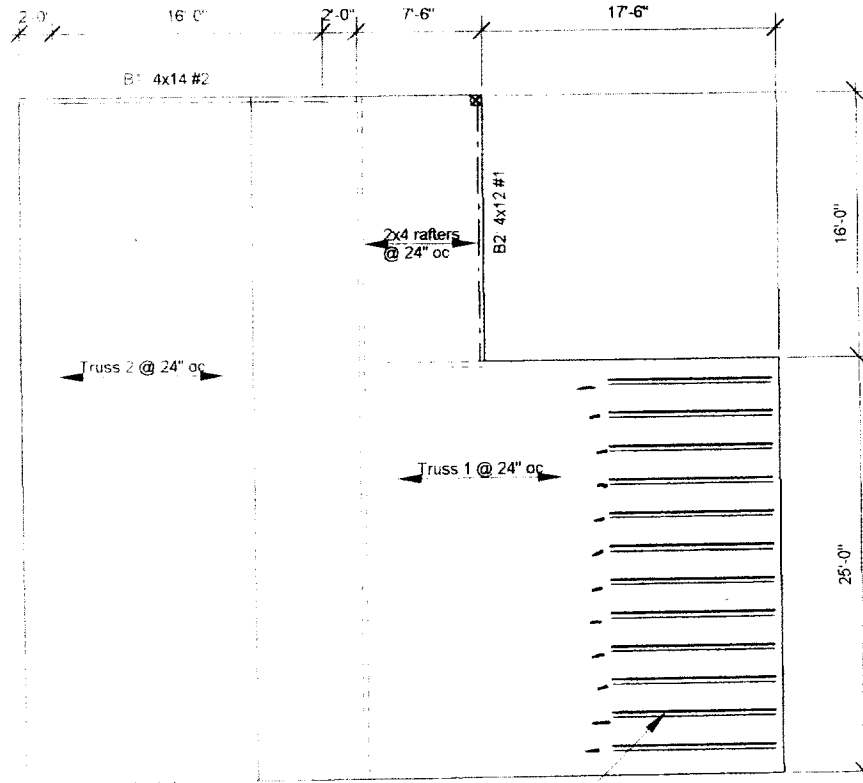
### Grading:

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

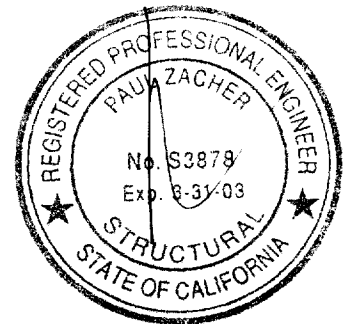
### Assumptions:

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	7.12 feet
Max Axial Comp. C	1484 lbs
Max Reaction, R	217 lbs
Max Moment, M	243 ft-lbs
Max LL Deflection	0.04 inches
Max TL Deflection	0.10 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 =	283 psi
Fce=	1023 psi
Fc*=	2084 psi
F'c=	891 psi
fb=	952 psi
F'b=Fb*=	2156 psi
Shear D/C ratio	0.52 < 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	0.11 < 1.0, Member OK
Total Load defl ratio	0.21 < 1.0, Member OK



Scab a 2x4 x 11'-6" to top chord of the existing truss (total 12). See detail 2.



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 7.0 psf.
- 2 All structural wood members that were observed appear to be in sound condition and without structural defect

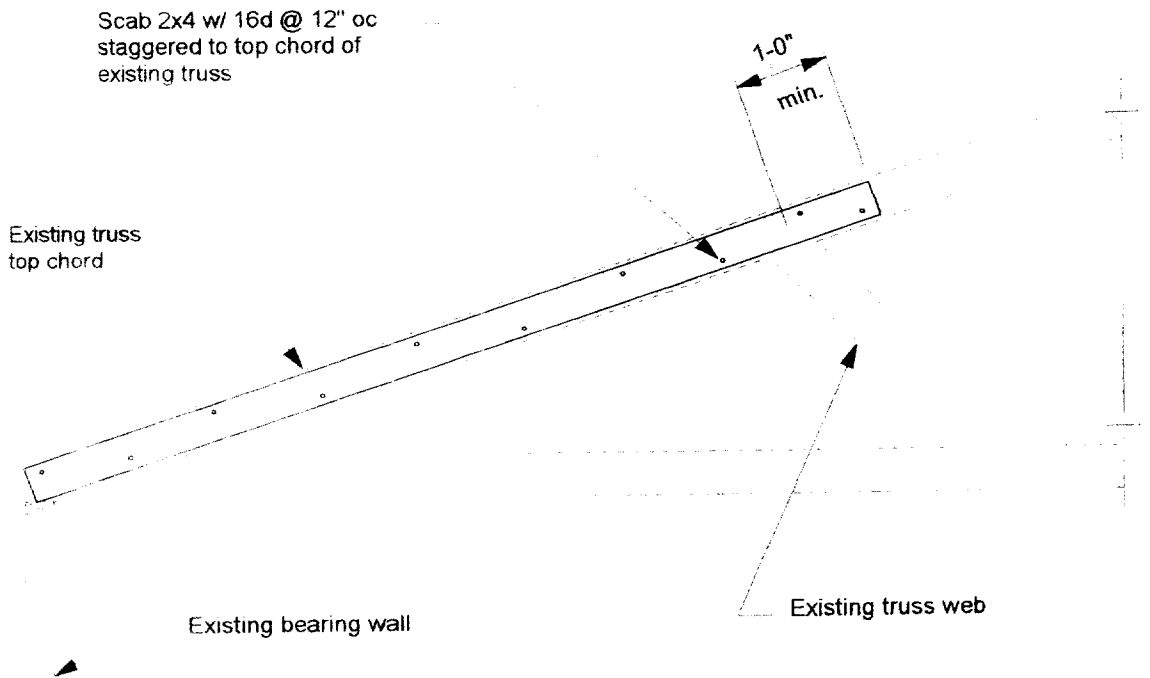
1

ROOF PLAN - GOMEZ

Not to Scale







2

**TRUSS REINFORCEMENT DETAIL**

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

