

CITY OF SACRAMENTO

1231 I Street, Sacramento, CA 95814

Permit No: 0318351

Insp Area: 4
Thos Bros: 277 E5

Site Address: 964 REGATTA DR SAC
Parcel No: 262-0320-046

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

CONTRACTOR
VALLEY CONSTRUCTION
PO BOX 1164
FAIR OAKS, CA 95628

OWNER
WHITEFIELD PAUL H & KATE
964 REGATTA DR
SACRAMENTO CA 95833

ARCHITECT

Nature of Work: REROOF T/O RESHT SNGL STRY 25 SQ INSTALL STD 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 C39 License Number 674523 Date 11/25 Contractor Signature George Deagan

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 _____

PAID
CITY OF SACRAMENTO
NOV 25 2003
BUILDING PERMIT

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 above-mentioned property for inspection purposes.

Date 11/25/03 Applicant/Agent Signature George Deagan

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 STATE FUND Policy Number 229-0022752 Exp Date 01/01/2004

(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 11/25/03 Applicant Signature George Deagan

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.

ROOFING QUESTIONNAIRE

Applicant's name: VALLEY CONST Phone: 916 984 1058

Project Address: 964 REGATTA DR (262.0320.046)

Please check the appropriate boxes. Only check a box if it accurately and completely describes your proposed work, otherwise leave boxes blank.

1. ROOFING TYPE

a. The existing roofing material is composition shingle, wood shake or shingle, tile or metal. The new roofing material shall be:

Existing Proposed

25 year laminated dimensional composition
wood shake or shingle
tile STANDARD WT
metal that simulates one of the above listed materials

b. The existing roofing material is built up, foam or membrane with a roof pitch of 2:12 or less. The new roofing material shall be:

Existing Proposed

Built up
Foam
Membrane

2. GUTTERS

a. The existing gutters are fascia gutters.

- There is no change proposed to existing gutters.
 New fascia gutters shall be provided.
 Gutters shall be repaired and/or replaced to match existing.

b. The existing gutters are Ogee gutters.

- There is no change proposed to existing gutters.
 New Ogee gutters shall be provided.
 Gutters shall be repaired and/or replaced to match existing.

c. There are no existing gutters.

- No new gutters are proposed.
 New Ogee gutters shall be provided.

3. RAFTER TAILS

a. There are no exposed rafter tails.

b. There are exposed rafter tails.

- There is no change or cutting proposed to existing rafter tails.
 Rafter tails shall be repaired and replaced to match existing.

By signing below, the applicant certifies that this form accurately describes the proposed work.

Applicant's signature: George Vasquez

Date: 11/25/03

For City Staff use only

Counter Staff

Jose J. Hernandez

- In a DR District Meets DR criteria? Yes No (route to DR staff)
 In a P area or listed (route to P staff)
 Not in DR/P area

EXPANDED NORTH

Whitfield

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

TEL: 916.961.3960
FAX: 916.961.6552

October 30, 2003

Whitfield
964 Regatta Drive
Sacramento, CA 95833
TEL: (916) 924-1322

Attn.: Ms. Whitfield,

re: Job 2003529: WHITFIELD

Subject: Structural Investigation Report of the Roof for the Residence located at 964 Regatta Drive, Sacramento, CA 95833.



As requested by Ms. Whitfield, 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 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: Two.
Dimensions: Approximately 2000 square feet.

CONSTRUCTION:

Roof:
The roof covering will consist of a Standard Weight Concrete Tile over 7/16" solid sheathing. The roof structure is framed with pre-engineered wood trusses spaced at 24" on center.

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.

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
City of Sacramento

NOV 25 2003

NORTH PERMIT
CENTER

RECEIVED
CITY OF SACRAMENTO
BUILDING INSPECTION DIVISION
OCT 31 2003

Whitfield



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. Scab a 2x4 DF#2 x 10'-0" 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

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>	<u>WEIGHT</u>	
Standard Weight Tile	10.30	psf
Roofing felt	0.30	psf
7/16" OSB/ plywood	1.30	psf
1x4 skip sht'g	1.09	psf
2x4 truss @ 24" oc	<u>0.64</u>	psf
Total Load	13.6	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.

Job #: 03_529

Date: 10/30/2003

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

LOADING:

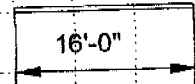
B1

4 x 12 #2

Dr = 17.9 psf x 4'-0" = 72 plf

Lr = 16.0 psf x 4'-0" = 64 plf

72 / 64



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: 2:04PM, 30 OCT 03

Rev: 560160
 User: KW-0602844, Ver 5.6.1, 25-Oct-2002
 (c)1983-2002 ENERCALC Engineering Software

Timber Beam & Joist

c:\documents and settings\paul zacher\desktop

Description **RAFTERS AND BEAMS**

Calculations are designed to 1997 NDS and 1997 UBC Requirements

Timber Member Information

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

Center Span Data

Span	ft	16.00
Dead Load	#/ft	72.00
Live Load	#/ft	64.00

Results

Ratio = 0.5879

Mmax @ Center	in-k	52.22
@ X =	ft	8.00
fb : Actual	psi	707.4
Fb : Allowable	psi	1,203.1
		Bending OK
fv : Actual	psi	36.8
Fv : Allowable	psi	118.8
		Shear OK

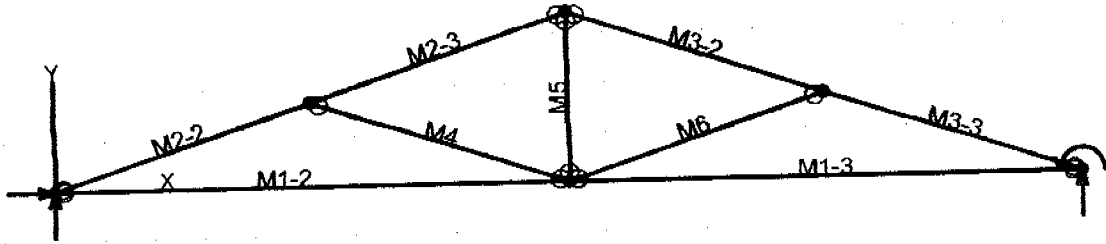
Reactions

@ Left End	DL	lbs	576.00
	LL	lbs	512.00
	Max. DL+LL	lbs	1,088.00
@ Right End	DL	lbs	576.00
	LL	lbs	512.00
	Max. DL+LL	lbs	1,088.00

Deflections

Ratio OK

Center DL Defl	in	-0.160
L/Defl Ratio		1,201.7
Center LL Defl	in	-0.142
L/Defl Ratio		1,351.9
Center Total Defl	in	-0.302
Location	ft	8.000
L/Defl Ratio		636.2



Truss 1

VisualAnalysis 4.00 Report

Company: Paul Zacher - Structural Engineers Engineer: Paul Zacher

File: C:\Documents and Settings\Paul Zacher\Desktop\Whitfield03_529\Truss 1.vap

Nodes

Node	X ft	Y ft	Fix DX	Fix DY	Fix RZ
N1	0.00	0.00	Yes	Yes	No
N2	20.50	0.00	No	"	Yes
N3	10.25	3.42	"	No	No
N4	10.25	0.00	"	"	"
N5	5.13	1.71	"	"	"
N6	15.38	1.71	"	"	"

Member Elements

Member	Section	Material	Length ft
M1-2	SS2x4	Wood	10.25
M1-3	"	"	10.25
M2-2	"	"	5.40
M2-3	"	"	5.40
M3-2	"	"	5.40
M3-3	"	"	5.40
M4	"	"	5.40
M5	"	"	3.42
M6	"	"	5.40

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
				7

N1	UBC97 12.8a	0.00	682.65	-NA-
N2	"	-NA-	682.65	0.00

Member Results

Member	Fx lb	Vy lb	Mz lb-ft	Dx in	Dy in
M1-2	1587.37	-53.16	-93.14	0.02	-0.13
"	1587.37	-23.78	38.26	0.01	-0.18
"	1587.37	5.60	69.31	0.01	-0.16
"	1587.37	34.99	0.00	0.00	0.00
M1-3	1587.37	-34.99	0.00	0.04	0.00
"	1587.37	-5.60	69.31	0.04	-0.16
"	1587.37	23.78	38.26	0.03	-0.18
"	1587.37	53.16	-93.14	0.02	-0.13
M2-2	-1710.7	111.96	0.00	0.00	0.00
"	-1679.3	17.97	116.92	-0.00	-0.09
"	-1648.0	-76.02	64.65	-0.01	-0.13
"	-1616.6	-170.01	-156.83	-0.01	-0.13
M2-3	-1163.8	170.01	-156.83	-0.01	-0.13
"	-1132.4	76.02	64.65	-0.01	-0.17
"	-1101.1	-17.97	116.92	-0.02	-0.18
"	-1069.7	-111.96	0.00	-0.02	-0.13
M3-2	-1163.8	-170.01	-156.83	0.05	-0.11
"	-1132.4	-76.02	64.65	0.06	-0.16
"	-1101.1	17.97	116.92	0.06	-0.17
"	-1069.7	111.96	0.00	0.06	-0.12
M3-3	-1710.7	-111.96	0.00	0.04	0.01
"	-1679.3	-17.97	116.92	0.05	-0.08
"	-1648.0	76.02	64.65	0.05	-0.11
"	-1616.6	170.01	-156.83	0.05	-0.11
M4	-566.27	0.00	0.00	0.06	-0.12
"	-566.27	0.00	0.00	0.06	-0.11
"	-566.27	0.00	0.00	0.07	-0.11
"	-566.27	0.00	0.00	0.07	-0.11
M5	464.78	0.00	0.00	-0.13	-0.02
"	464.78	0.00	0.00	-0.13	-0.02
"	464.78	0.00	0.00	-0.13	-0.02
"	464.78	0.00	0.00	-0.13	-0.02
M6	-566.27	0.00	0.00	-0.02	-0.13
"	-566.27	0.00	0.00	-0.02	-0.13
"	-566.27	0.00	0.00	-0.02	-0.13
"	-566.27	0.00	0.00	-0.02	-0.12

BENDING & COMP: TRUSS 1 - MEMBER 2-2

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

Grading:

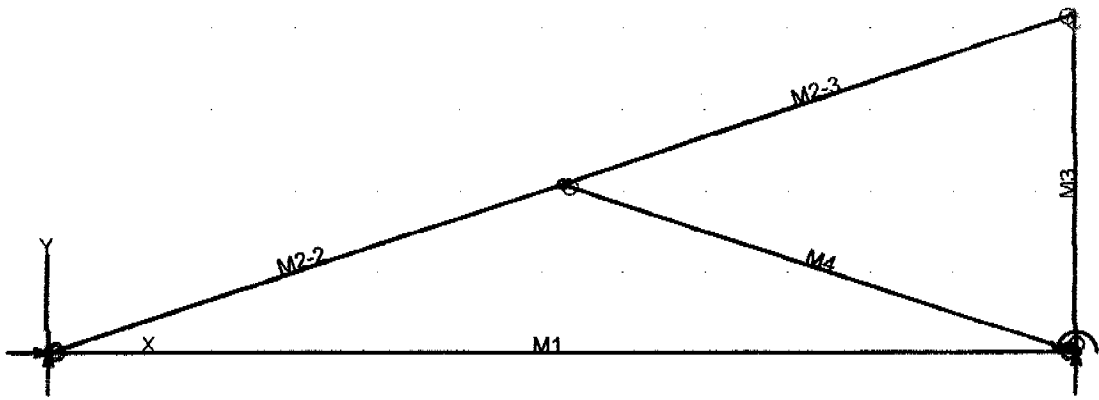
2x or 4x

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	5.4 feet
Max Axial Comp, C	1616 lbs
Max Reaction, R	170 lbs
Max Moment, M	156 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 =	1.15
fc =	308 psi
Fce =	1709 psi
Fc* =	2084 psi
F'c =	1290 psi
fb =	611 psi
F'b = Fb* =	2156 psi
Shear D/C ratio	0.41 < 1.0, Member OK
Interaction equation:	
(fc/F'c) ² +	
fb / (F'b(1-fc/Fce)) =	0.40 < 1.0, Member OK
Live Load defl ratio	0.22 < 1.0, Member OK
Total Load defl ratio	0.36 < 1.0, Member OK



Truss 2

VisualAnalysis 4.00 Report

Company: Paul Zacher - Structural Engineers Engineer: Paul Zacher

File: C:\Documents and Settings\Paul Zacher\Desktop\Whitfield03_529\Truss 2.vap

Nodes

Node	X ft	Y ft	Fix	DX	Fix	DY	Fix	RZ
N1	0.00	0.00	Yes		Yes		No	
N2	12.50	0.00	No		"		Yes	
N3	12.50	4.17	"		No		No	
N4	6.25	2.09	"		"		"	

Member Elements

Member	Section	Material	Length ft
M1	SS2x4	Wood	12.50
M2-2	"	"	6.59
M2-3	"	"	6.59
M3	"	"	4.17
M4	"	"	6.59

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	416.25	-NA-
N2	"	-NA-	416.25	0.00

Member Results

Member	Fx lb	Vy lb	Mz lb-ft	Dx in	Dy in
M1	672.65	-53.75	0.00	0.01	0.00
"	672.65	-17.92	149.25	0.01	-0.45
"	672.65	17.92	149.25	0.00	-0.45
"	672.65	53.75	0.00	0.00	0.00
M2-2	-752.79	131.01	0.00	0.00	0.00
"	-714.56	16.38	161.75	-0.00	-0.11
"	-676.32	-98.24	71.86	-0.00	-0.10
"	-638.08	-212.86	-269.66	-0.01	-0.04
M2-3	-71.01	212.86	-269.66	-0.01	-0.04
"	-32.77	98.24	71.86	-0.01	-0.10
"	5.47	-16.38	161.75	-0.01	-0.11
"	43.70	-131.01	0.00	-0.01	0.00
M3	-138.10	0.00	0.00	0.00	-0.01
"	-138.10	0.00	0.00	0.00	-0.00
"	-138.10	0.00	0.00	0.00	0.01
"	-138.10	0.00	0.00	0.00	0.01
M4	-709.09	0.00	0.00	0.01	-0.02
"	-709.09	0.00	0.00	0.01	-0.01
"	-709.09	0.00	0.00	0.01	0.00
"	-709.09	0.00	0.00	0.02	-0.03

BENDING & COMP: TRUSS 2 - MEMBER 2-2

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

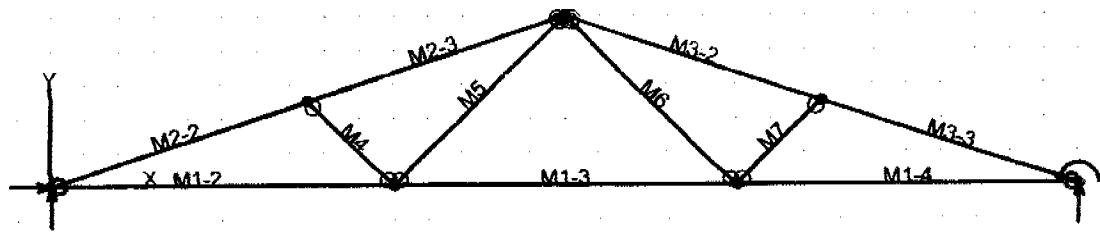
Grading:

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	6.59 feet
Max Axial Comp, C	638 lbs
Max Reaction, R	212 lbs
Max Moment, M	269 ft-lbs
Max LL Deflection	0.02 inches
Max TL Deflection	0.04 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 =	1.18
fc =	122 psi
Fce=	1180 psi
Fc*=	2084 psi
F'c=	997 psi
fb=	1054 psi
F'b=Fb*=	2156 psi
Shear D/C ratio	0.51 < 1.0, Member OK
Interaction equation:	
(fc/F'c)^2 +	
fb/ (F'b(1-fc/Fce)) =	0.56 < 1.0, Member OK
Live Load defl ratio	0.06 < 1.0, Member OK
Total Load defl ratio	0.09 < 1.0, Member OK



Truss 3

VisualAnalysis 4.00 Report

Company: Paul Zacher - Structural Engineers Engineer: Paul Zacher

File: C:\Documents and Settings\Paul Zacher\Desktop\Whitfield03_529\Truss 3.vap

Nodes

Node	X ft	Y ft	Fix	DX	Fix	DY	Fix	RZ
N1	0.00	0.00	Yes		Yes		No	
N2	30.00	0.00	No		"		Yes	
N3	15.00	5.00	"		No		No	
N4	10.00	0.00	"		"		"	
N5	20.00	0.00	"		"		"	
N6	7.50	2.50	"		"		"	
N7	22.50	2.50	"		"		"	

Member Elements

Member	Section	Material	Length ft
M1-2	SS2x4	Wood	10.00
M1-3	"	"	10.00
M1-4	"	"	10.00
M2-2	"	"	7.91
M2-3	"	"	7.91
M3-2	"	"	7.91
M3-3	"	"	7.91
M4	"	"	3.54
M5	"	"	7.07
M6	"	"	7.07
M7	"	"	3.54

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	999.00	-NA-
N2	"	-NA-	999.00	0.00

Member Results

Member	Fx lb	Vy lb	Mz lb-ft	Dx in	Dy in
M1-2	2386.60	-49.82	-68.25	0.03	-0.28
"	2386.60	-21.16	50.02	0.02	-0.29
"	2386.60	7.51	72.77	0.01	-0.21
"	2386.60	36.18	0.00	0.00	0.00
M1-3	1490.65	-43.00	-68.25	0.05	-0.28
"	1490.65	-14.33	27.27	0.05	-0.32
"	1490.65	14.33	27.27	0.04	-0.32
"	1490.65	43.00	-68.25	0.03	-0.28
M1-4	2386.60	-36.18	0.00	0.08	0.00
"	2386.60	-7.51	72.77	0.07	-0.21
"	2386.60	21.16	50.02	0.06	-0.29
"	2386.60	49.82	-68.25	0.05	-0.28
M2-2	-2568.6	158.71	0.00	0.00	0.00
"	-2522.7	21.15	236.83	-0.01	-0.30
"	-2476.9	-116.41	111.31	-0.02	-0.34
"	-2431.0	-253.97	-376.57	-0.03	-0.26
M2-3	-2177.0	253.97	-376.57	-0.03	-0.26
"	-2131.2	116.41	111.31	-0.03	-0.43
"	-2085.3	-21.15	236.83	-0.04	-0.49
"	-2039.5	-158.71	0.00	-0.05	-0.28
M3-2	-2177.0	-253.97	-376.57	0.11	-0.24
"	-2131.2	-116.41	111.31	0.11	-0.40
"	-2085.3	21.15	236.83	0.12	-0.47
"	-2039.5	158.71	0.00	0.13	-0.25
M3-3	-2568.6	-158.71	0.00	0.08	0.03
"	-2522.7	-21.15	236.83	0.09	-0.28
"	-2476.9	116.41	111.31	0.10	-0.31
"	-2431.0	253.97	-376.57	0.11	-0.24
M4	-567.90	0.00	0.00	0.22	-0.18
"	-567.90	0.00	0.00	0.22	-0.16
"	-567.90	0.00	0.00	0.22	-0.15
"	-567.90	0.00	0.00	0.22	-0.14
M5	699.17	0.00	0.00	-0.18	-0.22
"	699.17	0.00	0.00	-0.17	-0.23
"	699.17	0.00	0.00	-0.17	-0.23
"	699.17	0.00	0.00	-0.17	-0.22
M6	699.17	0.00	0.00	0.23	-0.17
"	699.17	0.00	0.00	0.23	-0.17
"	699.17	0.00	0.00	0.23	-0.16
"	699.17	0.00	0.00	0.24	-0.16
M7	-567.90	0.00	0.00	-0.16	-0.24
"	-567.90	0.00	0.00	-0.16	-0.22
"	-567.90	0.00	0.00	-0.16	-0.21
"	-567.90	0.00	0.00	-0.16	-0.20

BENDING & COMP: TRUSS 3 - MEMBER 2-2

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

Grading:

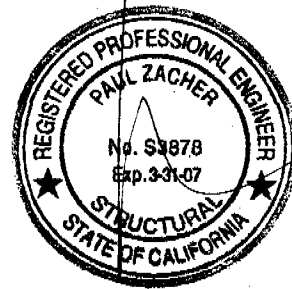
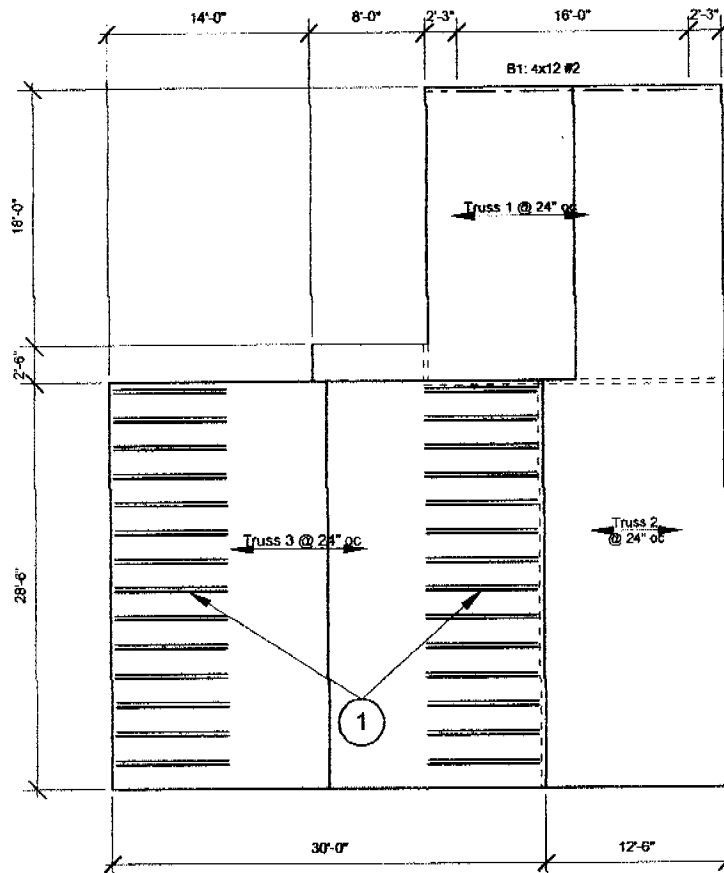
2x or 4x

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	7.91 feet
Max Axial Comp, C	2431 lbs
Max Reaction, R	253 lbs
Max Moment, M	376 ft-lbs
Max LL Deflection	0.13 inches
Max TL Deflection	0.26 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 =	1.22
fc =	232 psi
Fce=	844 psi
Fc*=	2084 psi
F'c=	758 psi
fb=	737 psi
F'b=Fb*=	2156 psi
Shear D/C ratio	0.30 < 1.0, Member OK
Interaction equation:	
(fc/F'c)^2 +	
fb/ (F'b(1-fc/Fce)) =	0.56 < 1.0, Member OK
Live Load defl ratio	0.33 < 1.0, Member OK
Total Load defl ratio	0.49 < 1.0, Member OK



FRAMING NOTES:

1. Scab a 2x4 DF#2 x 10'-0" long rafter to the top chord of the existing truss #3 (total 28). See detail 2.

Notes:

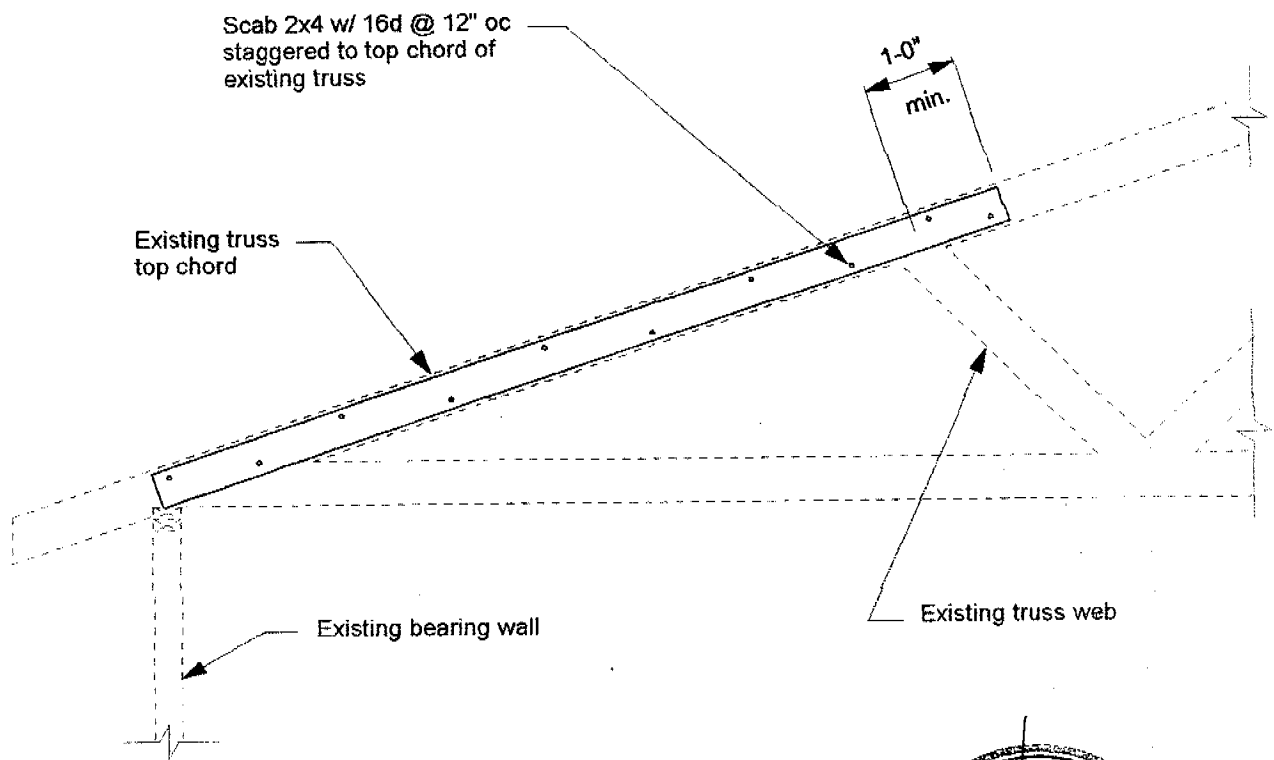
- A. This is a reroof project. The new roofing material shall be a Standard Weight Concrete Tile. The tile shall weigh less than or equal to 10.3 psf.
- B. All structural wood members that were observed appear to be in sound condition and without structural defect.



ROOF PLAN - WHITFIELD

Not to Scale

18



2

TRUSS REINFORCEMENT DETAIL

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