

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0106967
Insp Area: 2

Site Address: 452 DEER RIVER WY SAC
Parcel No: 031-0320-011

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

CONTRACTOR
ZIMMERMAN ROOFING, INC
3675 R STREET
SACRAMENTO, CA 95816

OWNER
NISHIZAKI TERRY T/CATHLEEN J
452 DEER RIVER WY
SACRAMENTO CA 95831

ARCHITECT

Nature of Work: TPO REROOF WITH 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. Code).

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 8 of the Business and Professions Code and my license is in full force and effect.

License Class C-39 License Number 597559 Date 4/4/01 Contractor Signature [Signature]

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractor 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 & P 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 4/4/01 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 STANBURY BROS. PLANNING AND DEVELOPMENT SERVICES Policy Number 713-00-2021 Exp Date 10/01/2001

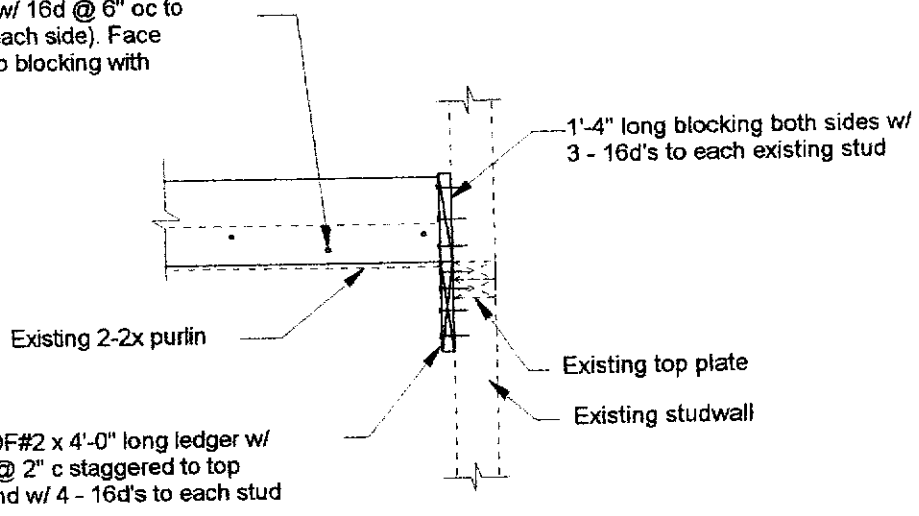
_____, (This section need not be completed if the permit is for \$100 or less) I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the workers' compensation laws of California and agree that if I should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

Date 4/4/01 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.

2 - LVL's w/ 16d @ 6" oc to purlin (1 each side). Face nail LVL to blocking with 4 - 16d's.

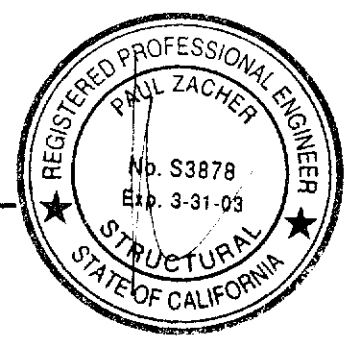


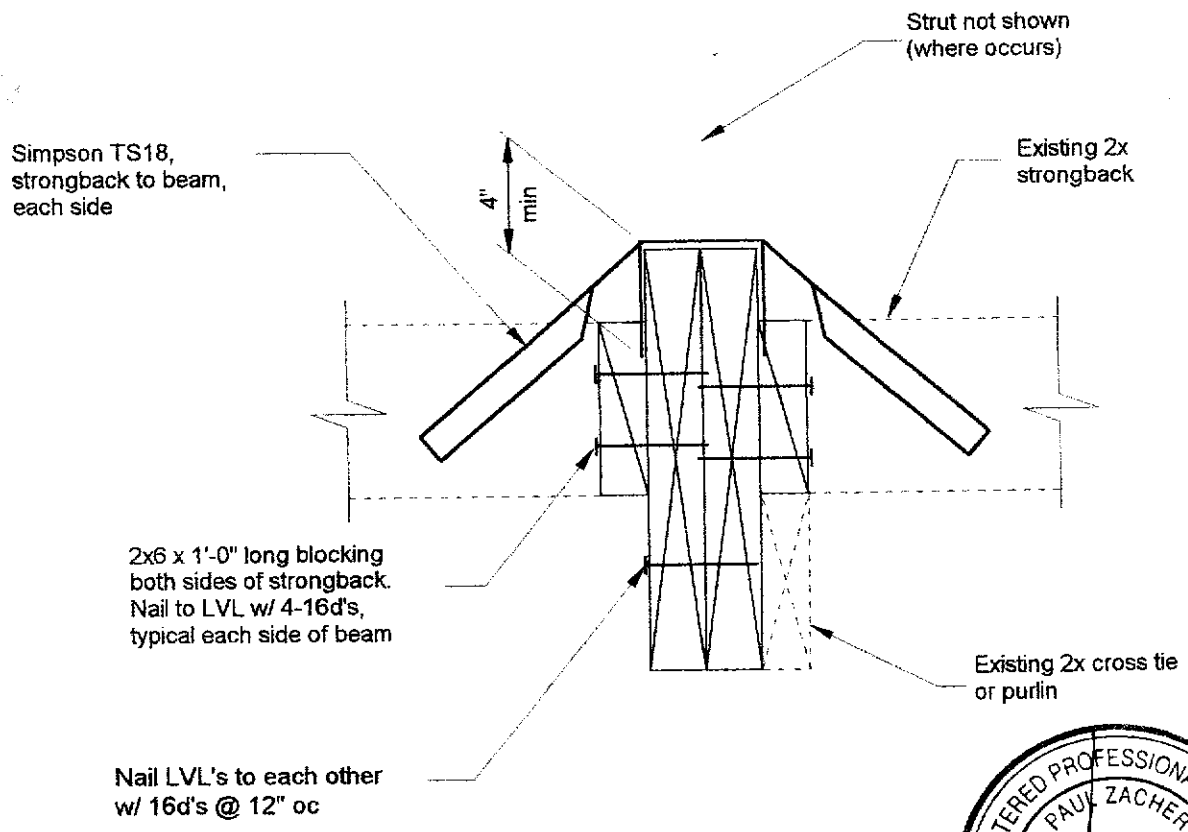
2x10 DF#2 x 4'-0" long ledger w/ 16d's @ 2" c staggered to top plate and w/ 4 - 16d's to each stud

2

LEDGER CONNECTION

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

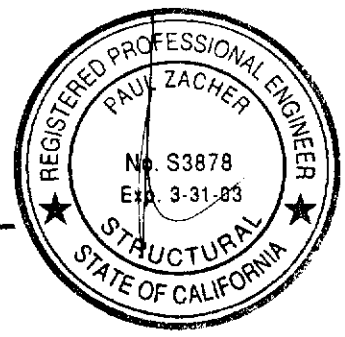




3

STRONGBACK DETAIL

No scale



Nishizaki 452 DEER RIVER WAY



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

TEL: 916.961.3960
FAX: 916.961.6552

May 25, 2001

Zimmerman Roofing
3675 R Street
Sacramento, CA 95816
TEL: 916.454.3667
FAX: 916.455.3784



Attn.: Mr. Jeff Tucker,

re: Job 2001_125: NISHIZAKI

Subject: Structural Investigation Report of the Roof for the Residence located at 452 Deer River Way, Sacramento, CA 95831.

As requested by Mr. Jeff Tucker, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site May 25, 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: One.
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 conventionally framed with 2x6 rafters spaced at 24" on center with 2x6 purlins supported at no more than 6'-0" on center by 2x4 struts bearing on walls below except for the vaulted ceiling areas. The vaulted ceiling is constructed of 2x6 rafters spaced at 24" on center supported at the ridge by a 6x beam. The garage area is framed with 2x6 rafters spaced at 24" on center and 2x6 cross ties spaced at 4'-0" on center.

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Nishizaki



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

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CONCLUSIONS:

Roof:

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

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.

Garage:

1. Scab 2 - 1 3/4" x 11 1/4" LVL's to the existing 2x6 purlin and nail together with 16d's @ 12" oc. The ends of the LVL may be clipped as required to meet the slope of the rafters. The support at the interior wall shall be a 2x10 x 4'-0" long ledger attached to the double top plate with 16d's @ 2" oc staggered. See details 1, 2 and 3.

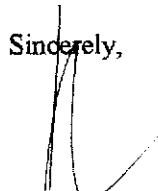
It shall be noted that small hairline cracking may occur at exterior stucco and interior gypboard finished walls that are load bearing or distributing roof strut loads. These cracks are a natural occurrence as the existing structure re-distributes the new roof weight. They are cosmetic in nature and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

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

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

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

Sincerely,


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

Job #: 01-125

Date: 5/25/01

LOADING

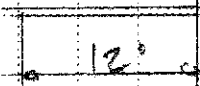
ROOF

DP = 122 pLF = 2' = 244 pLF

2x6 #2

LP = 16.0' = 32'

244/32



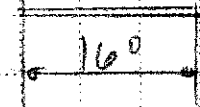
B1

DP = 122 pLF = 5' = 61 pLF

4x12 #2

LP = 16.0' = 80'

61/80



B2

DP = 122 pLF = 4' = 49 pLF

4x8 #1

LP = 16.0' = 64'

49/64



B3

DP = 15.5 pLF = 10' = 155 pLF

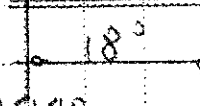
6x14 #1

LP = 16.0' = 160'

R₂ = 1395/1440

1395/1440

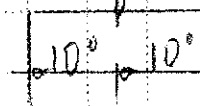
155/160



B4

Po/L = 1395/1440 = B2

6x14 #1



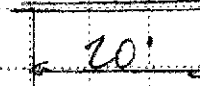
B5

DP = 122 pLF = 8' = 98 pLF

2-1 3/4" x 11 1/4" LVL

LP = 16.0' = 8' = 128'

98/128



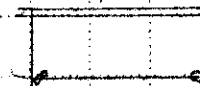
VAULT

DP = 15.5 pLF = 2' = 31 pLF

2x6 #2

LP = 16.0' = 32'

31/32



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

Title :
 Dsgnr:
 Description :
 Scope :

Job #
 Date: 2:14PM, 25 MAY 01

Rev. 510304
 User: RW-0602844, Ver 5.1.3, 22-Jun-1999, Win32
 (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	B3	B4	B5	vault
Timber Section	2x6	4x12	4x8	6x14	6x14	LVL:3.500x	2x6
Beam Width	in 1.500	3.500	3.500	5.500	5.500	3.500	1.500
Beam Depth	in 5.500	11.250	7.250	13.500	13.500	11.250	5.500
Le: Unbraced Length	ft 0.00	0.00	0.00	0.00	0.00	0.00	0.00
Timber Grade	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Russ Joist - MacMil	Douglas Fir - Larch
Fb - Basic Allow	psi 875.0	875.0	1,000.0	1,350.0	1,350.0	2,600.0	875.0
Fv - Basic Allow	psi 95.0	95.0	95.0	85.0	85.0	285.0	95.0
Elastic Modulus	ksi 1,600.0	1,600.0	1,700.0	1,600.0	1,600.0	1,900.0	1,600.0
Load Duration Factor	1.250	1.250	1.250	1.250	1.250	1.250	1.250
Member Type	Sawn	Sawn	Sawn	Sawn	Sawn	Manuf/Pine	Sawn
Repetitive Status	Repetitive	No	No	No	No	No	Repetitive

Center Span Data

Span	ft	12.00	16.00	9.00	18.00	20.00	20.00	10.50
Dead Load	#/ft	24.40	61.00	49.00	155.00		98.00	31.00
Live Load	#/ft	32.00	80.00	64.00	160.00		128.00	32.00
Point #1 DL	lbs					1,395.00		
LL	lbs					1,440.00		
@ X	ft					10.000		

Results Ratio =

	Ratio =	0.9852	0.6096	0.2985	0.5502	0.6113	0.5651	0.8425
Mmax @ Center	in-k	12.18	54.14	13.73	153.09	170.10	135.60	10.42
@ X =	ft	6.00	8.00	4.50	9.00	10.00	10.00	5.25
fb : Actual	psi	1,610.9	733.4	447.8	916.4	1,018.2	1,836.7	1,377.7
Fb : Allowable	psi	1,635.2	1,203.1	1,500.0	1,665.6	1,665.6	3,250.0	1,635.2
		Bending OK	Bending OK	Bending OK	Bending OK	Bending OK	Bending OK	Bending OK
fv : Actual	psi	57.1	38.2	26.2	50.4	28.6	78.5	55.3
Fv : Allowable	psi	118.8	118.8	118.8	106.3	106.3	356.3	118.8
		Shear OK	Shear OK	Shear OK	Shear OK	Shear OK	Shear OK	Shear OK

Reactions

@ Left End DL	lbs	146.40	488.00	220.50	1,395.00	697.50	980.00	162.75
LL	lbs	192.00	640.00	288.00	1,440.00	720.00	1,280.00	168.00
Max. DL+LL	lbs	338.40	1,128.00	508.50	2,835.00	1,417.50	2,260.00	330.75
@ Right End DL	lbs	146.40	488.00	220.50	1,395.00	697.50	980.00	162.75
LL	lbs	192.00	640.00	288.00	1,440.00	720.00	1,280.00	168.00
Max. DL+LL	lbs	338.40	1,128.00	508.50	2,835.00	1,417.50	2,260.00	330.75

Deflections Ratio OK Deflection OK Deflection OK Deflection OK Deflection OK Deflection OK Deflection OK

Center DL Defl	in	-0.342	-0.135	-0.038	-0.203	-0.223	-0.447	-0.255
L/Defl Ratio		420.9	1,418.4	2,821.2	1,064.5	1,077.8	536.8	494.5
Center LL Defl	in	-0.449	-0.178	-0.050	-0.209	-0.230	-0.584	-0.263
L/Defl Ratio		320.9	1,081.5	2,160.0	1,031.3	1,044.2	411.0	479.1
Center Total Defl	in	-0.791	-0.313	-0.088	-0.412	-0.453	-1.031	-0.518
Location	ft	6.000	8.000	4.500	9.000	10.000	10.000	5.250
L/Defl Ratio		182.1	613.6	1,223.4	523.8	530.4	232.8	243.3

5

Ledger

LEDGER DESIGN:

WOOD TO WOOD CONNECTION: Ledger to double top plate

Assumptions:

1. Point load from beam is equally distributed to each supporting stud.
2. Allowable foundation pressure is 1000 plf.

Width, b	1.5 inches	
Depth, d	9.25 inches	
Maximum reaction	2260 lbs	
Base design values:		
Shear, Fv	95 psi	
Bending, Fb	875 psi	
Comp. perp. to grain, Fc	625 psi	
Mod of elasticity, E	1600000 psi	
Load duration factor, Cd	1.25	
Size factor, Cf	1.10	
Allowable shear, Fv'	119 psi	Horizontal Shear OK
Actual shear, fv	65 psi	
Allowable bending, Fb'	1203 psi	Bending OK
Actual bending, fb	105 psi	
Length of ledger required	2.26 feet	
Length of ledger used	2.67 feet	
Number of nails required	18 16d's ledger to top plate	