

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0106454
Insp Area: 2

Site Address: 774 LA CONTENTA WY SAC
Parcel No: 031-0340-069

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

CONTRACTOR
ZIMMERMAN ROOFING, INC
4675 R STREET
SACRAMENTO, CA 95816

OWNER
YOUNG ROBERT EUGENE
774 LA CONTENTA WY
SAC CA. 95831

ARCHITECT

Nature of Work: TO 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, C.A.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 557559 Date 5/24/01 Contractor Signature [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 Professions 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 5/24/01 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:

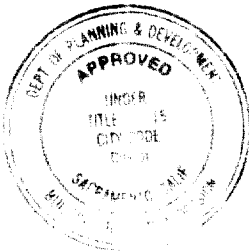
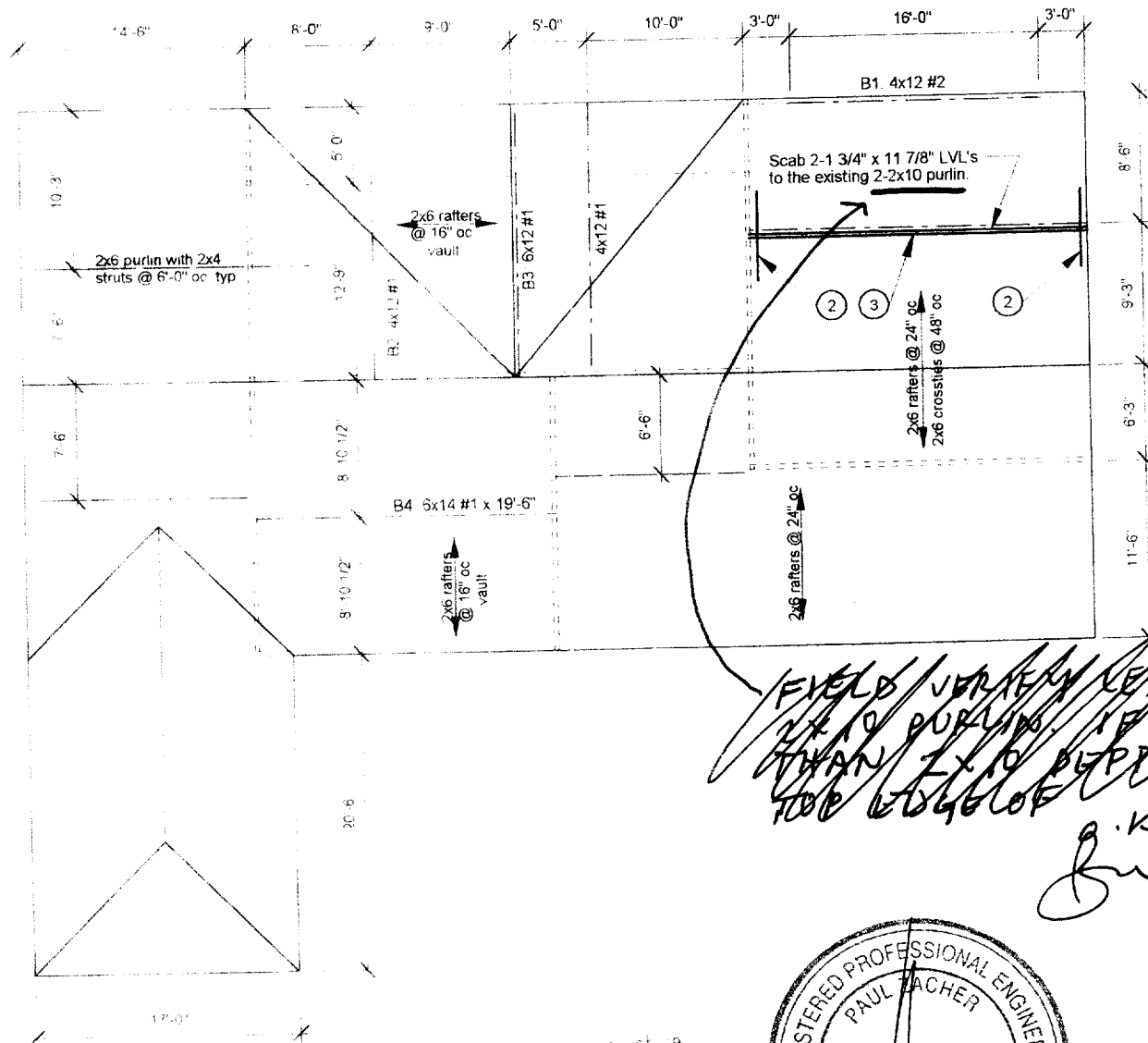
Carrier STATE FUND Policy Number 713-00-2021 Exp Date 10/01/2001

_____, (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 5/24/01 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.

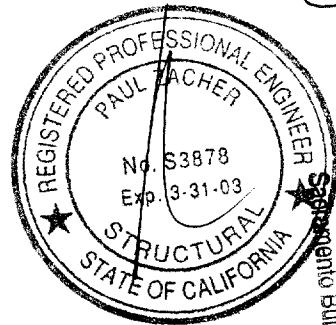
THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.



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 approval from the Building Department.

The approval of this plan and specifications shall not be construed as approval of the violation of any laws or code of State Law.

Bulal
9/21/01



ISSUED
MAY 24 2001
Serrano Building Division

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 rafters are 2x6 DF#2 and hips and valleys are 2x8 DF#2 unless otherwise noted.
3. All existing rafter, hips, valleys, rafter ties, and purlins are braced per UBC Section 2320.12 "Roof and Ceiling Framing" unless otherwise shown.
4. All structural wood members that were observed appear to be in sound condition and without structural defect.

1

ROOF PLAN - YOUNG

Not to Scale



APPLY DIRECTLY TO
EXISTING FRAMING
REPLACE MODIFIED 1-HR.
FIREWALL SEPARATION
BETWEEN HOUSE AND
GARAGE WHERE OCCURS

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

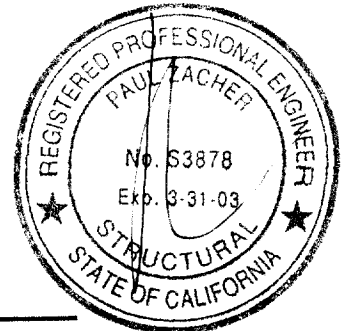
1'-4" long blocking both sides w/
3 - 16d's to each existing stud

Existing 2-2x purlin

Existing top plate

Existing studwall

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"

Simpson TS18,
strongback to beam,
each side

4"
min

Strut not shown
(where occurs)

Existing 2x
strongback

2x6 x 1'-0" long blocking
both sides of strongback.
Nail to beam w/ 4-16d's,
typical each side of beam

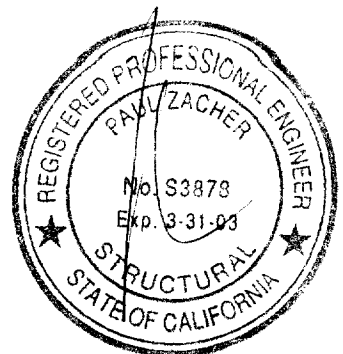
Existing 2x cross tie
or ceiling joist

Nail beam to cross tie/
ceiling joist w/ 16d @ 12" oc

3

STRONGBACK DETAIL

No scale



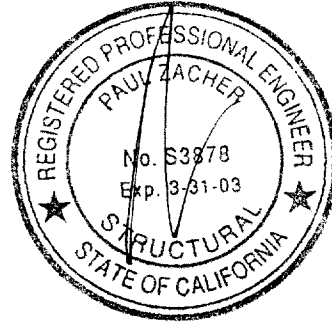
Young

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

TEL: 916.961.3960
FAX: 916.961.6552

May 18, 2001

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



Attn: Mr. Jeff Tucker,

re: Job 2001 133 YOUNG

Subject: Structural Investigation Report of the Roof for the Residence located at 774 La Contenta,
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 17, 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 2000 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 16" on center supported mid-span and at the ridge by 4x or 6x beams. The garage area is framed with 2x6 rafters spaced at 24" on center and 2x6 cross ties spaced at 4'-0" on center

Young

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4701 Lakeside Way
Fair Oaks, CA 95628

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FAX: 916.961.6552

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 a 2 - 1 3/4" x 11 7/8" LVL's to the existing 2 – 2x10 purlin and nail together with 16d's @ 6" oc. The support at the walls shall be a 2x10 x 4'-0" long ledger attached to the double top plate with 16d's @ 2" oc staggered. Provide strap ties at the interrupted crossties. 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

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
2x6 rafters @ 24" oc	<u>1.00</u>	psf
	Load	10.9 psf
	Roof Pitch Adjustment	<u>0.59</u> psf
	Total Load	11.5 psf

LOCATION: VAULT

<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
2x6 rafters @ 16" oc	1.51	psf
Batt/blown insul	0.50	psf
1/2" Gypboard	<u>2.50</u>	psf
	Load	14.4 psf
	Roof Pitch Adjustment	<u>0.78</u> psf
	Total Load	15.2 psf

Job #: 01-1000

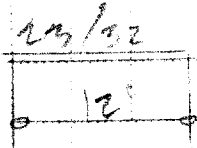
Date: 5/18/91

1000.20

1000.20

OR - 11' 5" x 11' 5" 2000 SF
LR - 10.5' x 10.5' 1100

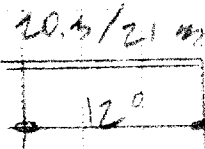
2x6 #2



1000.21

OR - 15' 0" x 15' 0" 225 SF
LR - 16.0' x 16.0' 256

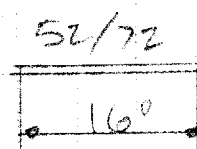
2x6 #2



1000.22

OR - 11' 5" x 11' 5" 132 SF
LR - 10.5' x 10.5' 110

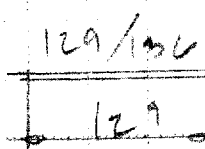
4x12 #2



1000.23

OR - 15' 0" x 15' 0" 225 SF
LR - 16.0' x 16.0' 256

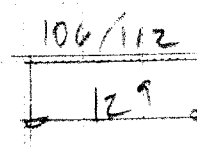
4x12 #1



1000.24

OR - 15' 2" x 15' 2" 230 SF
LR - 13.0' x 13.0' 169

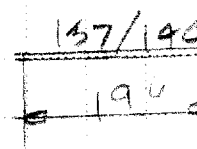
6x12 #1



1000.25

OR - 15' 2" x 15' 2" 230 SF
LR - 16.0' x 16.0' 256

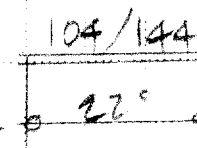
6x14 #1



1000.26

OR - 15' 0" x 15' 0" 225 SF
LR - 16.0' x 16.0' 256

2 - 1 3/4 x 11 7/8



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 4701 Lakeside Way
 Fair Oaks
 TEL: (916) 961-3960
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Title :
 Dsgnr:
 Description :
 Scope :

Job #
 Date: 11:57AM, 18 MAY 01

Rev: 510304
 User: HW-0602844, Ver: 9.1.3, 28 Jun 1999, Win95
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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	vault	B1	B2	B3	B4	B5
Timber Section	2x6	2x6	4x12	4x12	6x12	6x14	LVL:3.500x
Beam Width	in: 1.500	1.500	3.500	3.500	5.500	5.500	3.500
Beam Depth	in: 5.500	5.500	11.250	11.250	11.500	13.500	11.875
Le: Unbraced Length	ft: 0.00	0.00	0.00	0.00	0.00	0.00	4.00
Timber Grade	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Douglas Fir - Larch	Truss Joist - MacMil
Fb - Basic Allow	psi: 875.0	875.0	875.0	1,000.0	1,350.0	1,350.0	2,600.0
Fv - Basic Allow	psi: 95.0	95.0	95.0	95.0	85.0	85.0	285.0
Elastic Modulus	ksi: 1,600.0	1,600.0	1,600.0	1,700.0	1,600.0	1,600.0	1,900.0
Load Duration Factor	1.250	1.250	1.250	1.250	1.250	1.250	1.250
Member Type	Sawn	Sawn	Sawn	Sawn	Sawn	Sawn	Manuf/Pine
Repetitive Status	Repetitive	Repetitive	No	No	No	No	No

Center Span Data

	ft	ft	ft	ft	ft	ft	ft
Span	12.00	12.00	16.00	12.75	12.75	19.50	22.00
Dead Load #/ft	23.00	20.30	52.00	129.00	106.00	137.00	104.00
Live Load #/ft	32.00	21.30	72.00	136.00	112.00	144.00	144.00

Results

	Ratio =	0.9607	0.7266	0.5361	0.6366	0.2655	0.5760	0.6856
Mmax @ Center	in-k	11.88	8.99	47.62	64.62	53.16	160.28	180.05
@ X =	ft	6.00	6.00	8.00	6.37	6.37	9.75	11.00
fb Actual	psi	1,570.9	1,188.2	645.0	875.3	438.5	959.4	2,188.8
Fb Allowable	psi	1,635.2	1,635.2	1,203.1	1,375.0	1,687.5	1,665.6	3,192.6
		Bending OK	Bending OK	Bending OK	Bending OK	Bending OK	Bending OK	Bending OK
fv Actual	psi	55.7	42.1	33.6	55.1	28.2	49.1	89.8
Fv Allowable	psi	118.8	118.8	118.8	118.8	106.3	106.3	356.3
		Shear OK	Shear OK	Shear OK	Shear OK	Shear OK	Shear OK	Shear OK

Reactions

	lbs	lbs	lbs	lbs	lbs	lbs	lbs
@ Left End DL	138.00	121.80	416.00	822.37	675.75	1,335.75	1,144.00
LL	192.00	127.80	576.00	867.00	714.00	1,404.00	1,584.00
Max. DL+LL	330.00	249.60	992.00	1,689.37	1,389.75	2,739.75	2,728.00
@ Right End DL	138.00	121.80	416.00	822.37	675.75	1,335.75	1,144.00
LL	192.00	127.80	576.00	867.00	714.00	1,404.00	1,584.00
Max. DL+LL	330.00	249.60	992.00	1,689.37	1,389.75	2,739.75	2,728.00

Deflections

	Ratio OK	Deflection OK	Deflection OK	Deflection OK	Deflection OK	Deflection OK	Deflection OK
Center DL Defl	in: -0.322	-0.285	-0.115	-0.109	-0.057	-0.247	-0.591
L/Defl Ratio	446.5	505.9	1,663.8	1,408.3	2,707.5	947.3	446.9
Center LL Defl	in: -0.449	-0.299	-0.160	-0.115	-0.060	-0.260	-0.818
L/Defl Ratio	320.9	482.2	1,201.7	1,335.8	2,562.5	901.3	322.8
Center Total Defl	in: -0.771	-0.583	-0.275	-0.223	-0.116	-0.507	-1.409
Location	ft: 6.000	6.000	8.000	6.375	6.375	9.750	11.000
L/Defl Ratio	186.7	246.9	697.7	685.5	1,316.5	461.9	187.4

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	2728 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	59 psi	
Allowable bending, Fb'	1203 psi	Bending OK
Actual bending, fb	85 psi	
Length of ledger required	2.728 feet	
Length of ledger used	4 feet	
Number of nails required	21 16d's ledger to top plate	