

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0014802
Insp Area: 1

Site Address: 33 SARATOGA CR SAC
Parcel No: 293-0061-013

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

CONTRACTOR
A.L. SEASON ROOFING
9538 POWER HOUSE RD
NEWCASTLE CA 95655

OWNER
ALLEN BRADFORD H & BONNIE
33 SARATOGA CR
SACRAMENTO CA 95825

ARCHITECT

Nature of Work: 34 SQ T/O REROOF W LTWT 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.

X License Class C-37 License Number 45784 Date 12-15-00 Contractor Signature James R. Blah

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 _____

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.

X Date 12-15-00 Applicant/Agent Signature James R. Blah

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.

JB 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 1342106-99 Exp Date 10/01/2000

____ (This section need not be completed if the value of the work 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.

X Date 12-15-00 Applicant Signature James R. Blah

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.

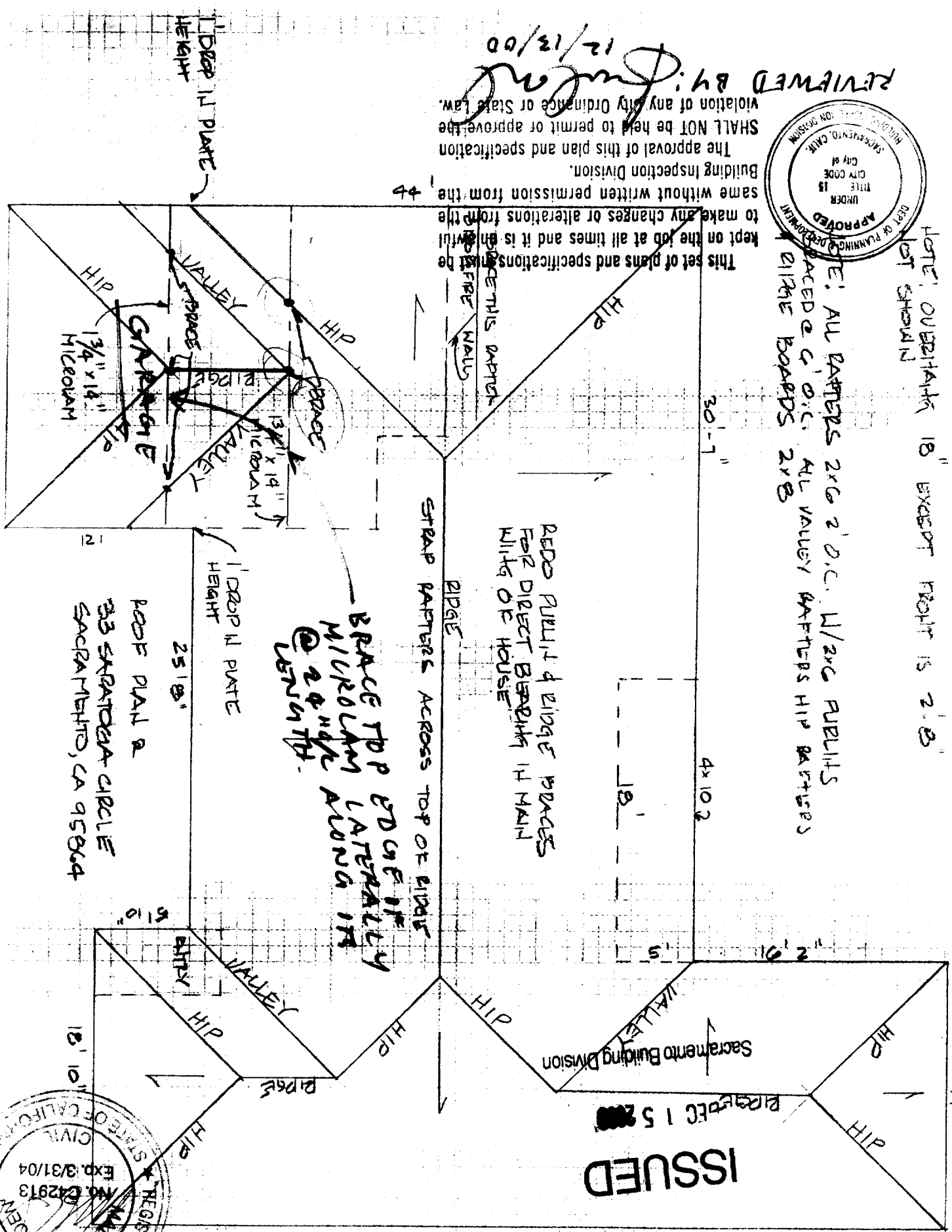
NOTE: OVERHANG 18" EXCEPT FRONT IS 2'-3"
 LOT SHOWN



ALL RAFTERS 2x6 2" O.C. W/2x6 RIBBLITS
 SPACED @ 6" O.C. ALL VALLEY RAFTERS HIP RAFTERS
 2x8 BOARDS 2x8

REVIEWED BY: [Signature]
 12/13/00
 The approval of this plan and specification SHALL NOT be held to permit or approve the violation of any City Ordinance or State Law.
 Building Inspection Division.

This set of plans and specifications shall 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.

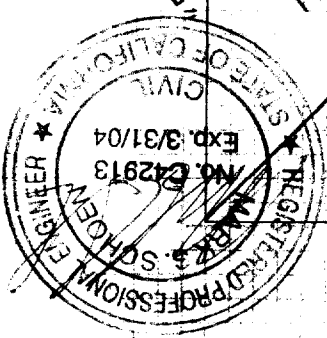


RAFTERS RIBBLIT & RIDGE BRACES FOR DIRECT BRACING IN MAIN W/1/2 OF HOUSE

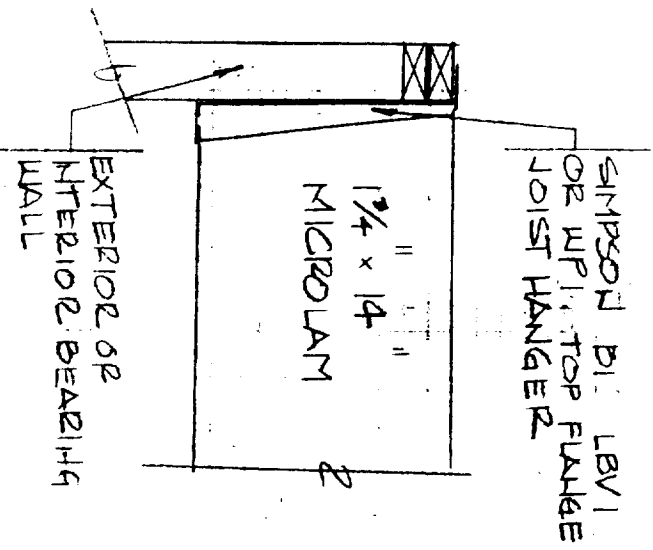
BRACE TOP EDG OF MICROLAM LATERALLY @ 24" ON CENTER LENGTH

ROOF PLAN & 33 SERRATED CIRCLE SACRAMENTO, CA 95864

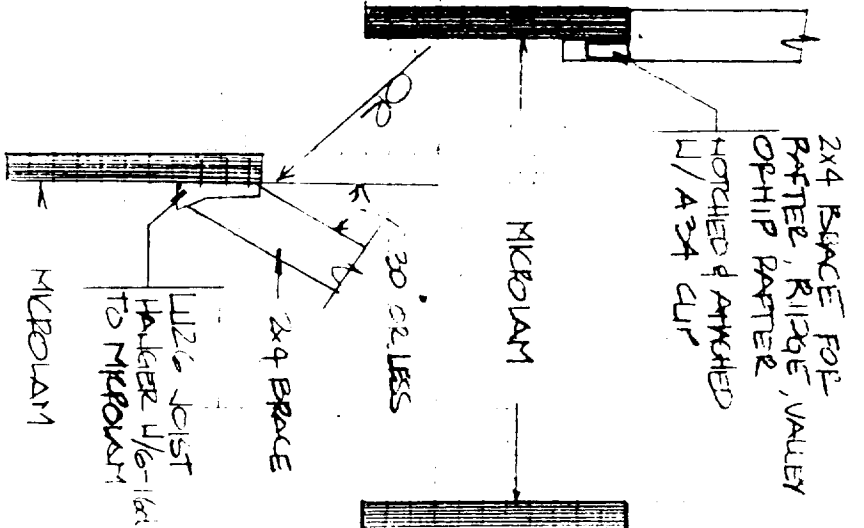
ISSUED
 PROJECT 15 2000



MICROLAM SUPPORT
BEARING WALL

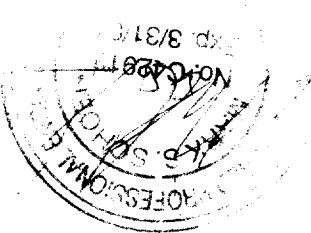


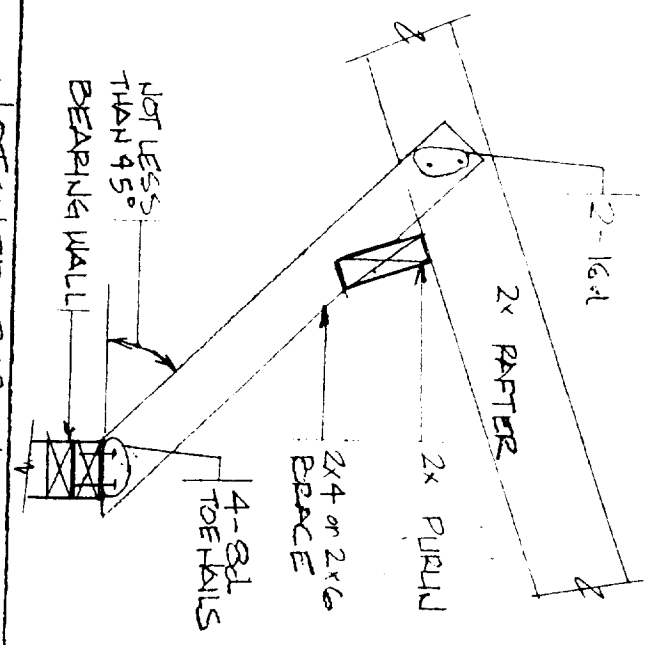
BRACE SUPPORT
MICROLAM



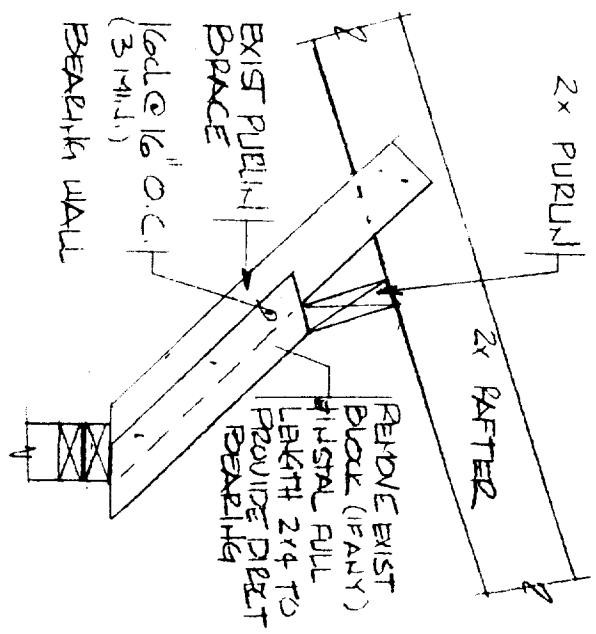
BRACE TOP OF MICROLAM
4" O.C. FROM OTHER
STRUCTURE & ATTACH W/A 3x4

NOTE: BRACES SHOULD PROVIDE
DIRECT BEARING TO SUPPORTED
MEMBER (SEE RULLIN & RIDGE
BRACE DETAILS)

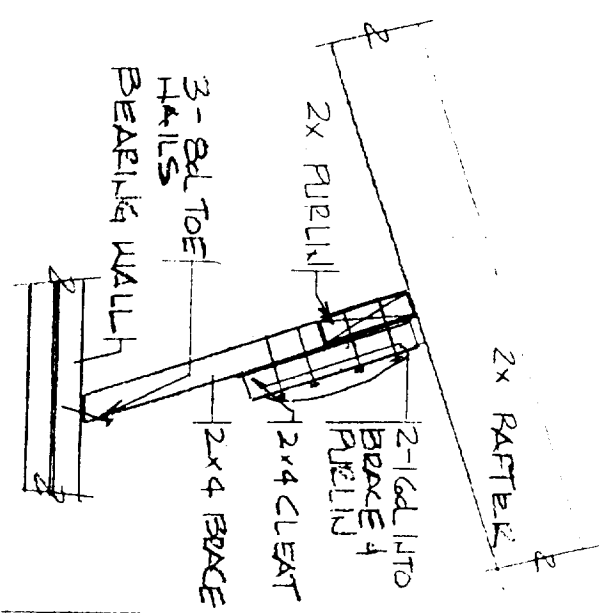




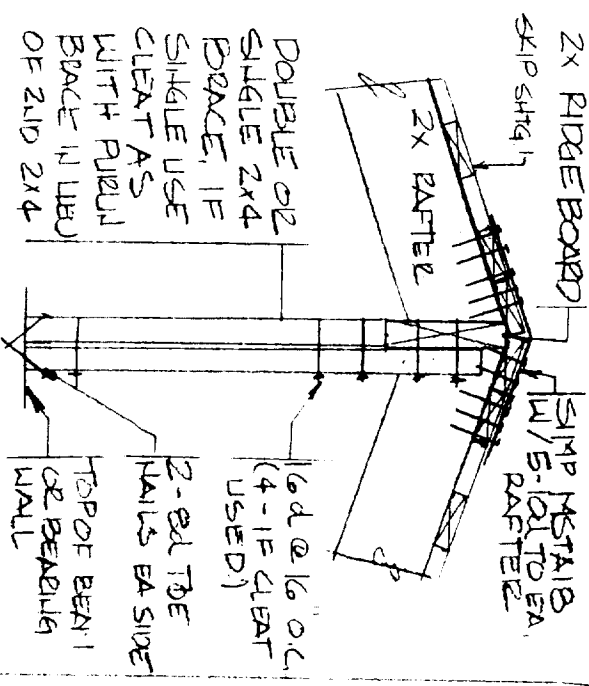
NOTCHED PURLIN BRACE



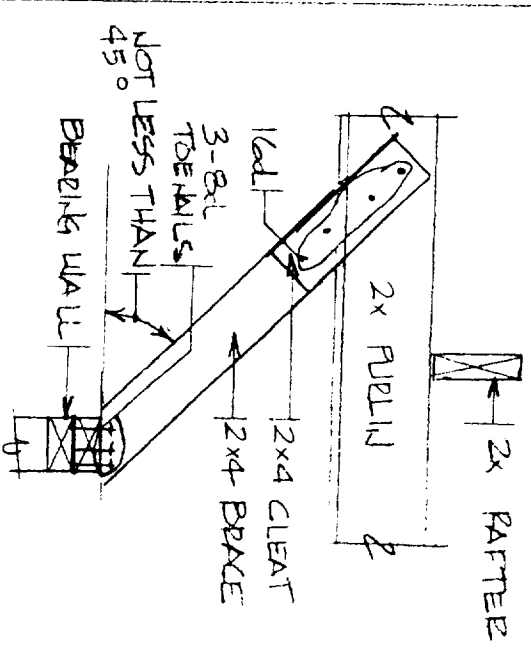
EXISTING BRACE MODIFIED FOR DIRECT BEARING



CLEATED PURLIN BRACE (END VIEW)



CLEATED PURLIN BRACE (SIDE VIEW)



DOUBLE OR SINGLE 2x4 BRACE, IF SINGLE USE CLEAR AS WITH PURLIN BRACE IN LINE OF 2x16 2x4

NOTE: BRACE MAY LEAN IN LINE W/ RIDGE BUT @ ANGLE NOT FLATTER THAN 45°

DOUBLE OR SINGLE NOTCHED BRACE W/ 1/2\"/>



WALL DISPLACED TO SIDE OF RIDGE

SCHOEN ENGINEERING
9524 BEDINGTON WAY
SACRAMENTO, CA 95827
Licensed by the California State
Board for Engineers and Land Surveyors
(916) 369 6866
LIC.# C042913

November 21, 2000

Jim Blake
All Seasons Roofing
9835 Power House Road
New Castle, CA 95658

SUBJECT: Reroof at 33 Saratoga Circle, Sacramento, CA 95864

Dear Jim:

On November 6th 2000 I inspected the roof structure of the residence at the above mentioned address. The roof was made up of 2x6 Douglas fir No.2 rafters @ 2' o.c. with a max. span of 10' in the garage, 11' in the attic areas of the house. At the back porch there was a 4x10 Douglas fir No. 2 support beam spanning 18' supporting 4' of roof area per foot.

The following modifications will be necessary prior to reroofing.

- * The purlin and ridge braces in the house are framed so as to run by the supported member and then rely on nailing and a 2x4 block nailed to the brace underneath the purlin or ridge board. These are not adequate to support the proposed roof loads and should be redone. These braces should either be replaced by braces providing direct bearing for the supported member or modified to provide direct bearing(see sketch for details).
- * Along the ridge of the main wing of the house the opposing rafter pairs should be tied across the top of the ridge with Simpson MSTA18 steel strap ties, with 5-10d common nails into each rafter. The ties can be installed on top of the existing skip sheathing(see attached detail).
- * In the garage the ridge and valley rafters should be supported by 1-3/4"x14" Microlam beams installed between the side walls of the garage in two locations. The ridge and valley rafters should be supported by 2x4 braces off of the Microlams(see sketch for details and plan for location).
- * The first rafter in back of the garage fire wall should be braced at about mid span off of the fire wall with a 2x4 brace(brace should provide direct bearing for the rafter. See purlin brace detail).

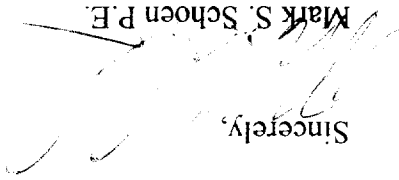


It is my finding that with the above mentioned modifications this structure is adequate for the following : 1/2" plywood or OSB installed over the existing skip sheathing; 30lb. tarred felt; 1x2 batts; Lightweight concrete tile weighing 7.3 lbs./sq.ft.

NOTE: it is possible when reroofing that the increased load to structural elements also supporting wall, ceiling and floor finishes could cause some minor cosmetic cracking of these finishes. This is typical of wood framed structures and does not of itself indicate structural inadequacy of these members.

This report deals with the structural adequacy of roof supporting members that were readily observable. It does not address any structure that was covered by wall finishes, buried in the ground or was otherwise not observable. Any such structures were assumed to conform to standard construction specifications in the Uniform Building Code. Also, it does not address any existing deflection or warping of roof surfaces, nor is it guaranteed that any structural modifications that may be listed in this report will remove such deflections or warping. The repair of such deflections or warping to improve architectural appearance is at the option of the building owner and the roofing contractor.

I would like to thank you for allowing me to provide my services in this matter. Please let me know if I may be of further assistance.

Sincerely,

Mark S. Schoen P.E.

MSS:mss
S-ENG2000\ASRF002

Calculation for the required section modulus and moment of inertia for simple span wood beams. Dead load(dI) and Live load(lI) are in pounds per square ft. Spans(l) and Tributary load length or spacing(sp) are in ft. Section moduli are in inches cubed and Moments of inertia are in inches to the 4th power. Allowable stress (Fy) is in lbs./sq.in. per Manufacturer's specifications. Section modulus shape factor reduction and load modification are per U.B.C. 1997 edition.

MICROLAM SUPPORT BEAM

| | | | |
|---|-------------|--------------|-------------------|
| rdI := 11 | --- | rlI := 16 | ra := 9 |
| fdI := 8 | flI := 40 | fa := 0 | ra := 174.6 |
| WdI := 14 · $\frac{1.75}{1.44}$ · 35 | WdI = 5.955 | E := 1900000 | Fb := 2600 · 1.25 |
| wt := ra · (rdI + rlI) + fa · (fdI + flI) + WdI | | | |

S min. required = $(wt) \cdot l^2 \cdot \frac{1.5}{I} = 43.245$

I min. required = $\frac{5 \cdot (wt) \cdot \frac{1}{(1.12)^4}}{\frac{12}{12 \cdot 384 \cdot E \cdot l} \cdot \frac{180}{180}} = 322.884$

Use 1-3/4"x14" Microlam beam:

$S := Cf \cdot w \cdot \frac{d^2}{6}$ $w := 1.75$ $d := 14$ $Cf := \frac{d}{12} = \frac{1}{9}$

$I := w \cdot \frac{d^3}{12}$

S = 56.196 > 42 I = 400.167 > 322 therefore 1-3/4"x14" MLB is O.K.



Calculation for the required area, section modulus and moment of inertia for simple span wood beams. Dead load(d) and Live load(l) are in pounds per square ft., Spans(l) and Tributary load length or spacing(sp) are in ft., Areas are in sq.in., Section moduli are in inches cubed and Moments of inertia are in inches to the 4th power. Allowable stresses (Fy),(Fv),(Fb),(Fv) are in lbs./sq.in. per 1997 U.B.C.

4X10 DOUGLAS FIR NO. 2 PORCH BEAM

$$r_{dl} = 11 \quad r_{ll} = 16 \quad r_{la} = 0$$

$$f_{dl} = 9 \quad f_{ll} = 40 \quad f_{la} = \frac{2}{0}$$

$$w_t = (r_{la} \cdot r_{dl} + r_{ll}) + r_{la} \cdot (f_{dl} + f_{ll}) + 8$$

$$C_d = 1.25 \quad C_r = 1$$

$$F_b = 1203 \text{ lbs} \quad F_{bp} = F_b \cdot C_d \cdot C_r \cdot C_t$$

$$E_w = 1700000 \quad E_v = 95 \cdot C_d$$

$$CF = 1.1 \quad I = 18 \quad r_{a-l} = 72$$

$$A \text{ min. required} = \frac{w_t \cdot l}{3} \cdot \frac{2}{F_v} = 13.187$$

$$S \text{ min. required} = \frac{w_t \cdot l^2}{1.5} \cdot \frac{F_{bp}}{F_b} = 46.858$$

$$I \text{ min. required} = \frac{5 \cdot w_t \cdot l^4}{(1.12)^4} = 134.308$$

$$I = 12.384 \cdot E_w \cdot l \cdot \frac{1.80}{12}$$

Check Beam properties:

$$CF = \left(\frac{d}{12} \right)^{\frac{9}{16}}$$

$$A = w \cdot d$$

$$S = w \cdot CF \cdot \frac{d^2}{6}$$

$$I = w \cdot \frac{d^4}{12}$$

$$Stiffw = I \cdot E_w$$

A = 32.375 > 13 S = 51.376 > 47 I = 230.84 > 134 therefore O.K.

