

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0109173
Insp Area: 2

Site Address: 563 RIVERGATE WY SAC
Parcel No: 031-0770-040

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

CONTRACTOR
NOR CAL ROOFING
8322 YVONNE WY
FAIR OAKS CA 95628

OWNER
FANAKA MICKEY M/KIKUNO
563 RIVERGATE WY
SACRAMENTO CA 95831

ARCHITECT

Nature of Work: REROOF TO RESHT 41 SQ HOUSE & GARAGE. INSTALL LIGHT 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 C37 License Number 684832 Date 7-19-01 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 _____ 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 7-19-01 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 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 comply with those provisions.

Date 7-19-01 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.

ISSUED

JUL 19 2001

SACRAMENTO, CALIFORNIA

SCHOEN ENGINEERING

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



July 10, 2001

Mickey Tanaka
559 Rivergate Way
Sacramento, CA 95831



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.

SUBJECT: Reroof at 563 Rivergate Way, Sacramento, CA 95831

Mickey:

On June 28th 2001 I inspected the roof structure of your residence at the above mentioned address. The roof was made up of 2x6 D.F. No. 2 rafters @ 2' o.c. with a max. span of 11'-4" in the garage and 11' in the house. There was a 4x12 front porch beam spanning 13'-4". There was a 4x14 garage door header spanning 16'-3".

The following modifications will be necessary prior to reroofing:

- * At the main ridge of the house at the West hip the existing diagonal ridge brace should be doubled. Also, along the main ridge the rafters should be tied across the top of the ridge with Simpson MST18 steel strap ties and nailed to each rafter with 5-10d common nails(see sketch for details).
- * In the back slope of the main wing of the house at the West end there was a purlin brace installed off of the top of a 4x12 beam. The brace was at too shallow of an angle and would have a tendency to push the top of the beam over. This can be fixed by reinstalling the brace, and supporting it with a hanger at the bottom of the side of the beam(see the plan for location and sketch for details).
- * In the garage the intersection of the hip and valley at the end of the garage ridge is not properly supported. In this area install a doubled 1-3/4"x14' Microlam roof support beam between the back bearing wall and the front wall at the garage door. The valley rafter, hip rafter and ridge board can be supported off of this beam. The garage door opening should have a 1-3/4"x14' Microlam carry beam fastened to the back side of the opening flush with the top plate to support the end of the roof support beam(see plan for location and sketch for details).

[Handwritten Signature]
7/19/01

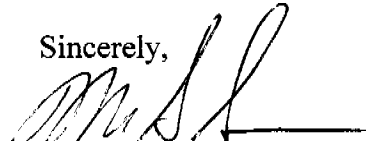
It is my finding that with the above mentioned modifications that this structure is adequate for the following : ½" plywood or OSB installed over the existing skip sheathing; 30lb. tarred felt; 1x2 batts; Concrete tile weighing 7.3 lbs./sq.ft.

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.

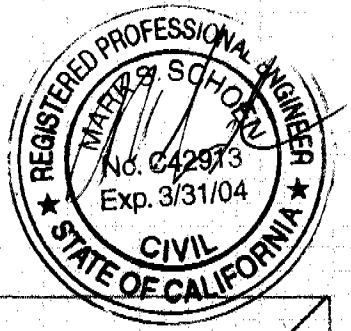
I would like to thank you for allowing me to provide my services in this matter. Please let me know if I may be of further assistance.

Sincerely,



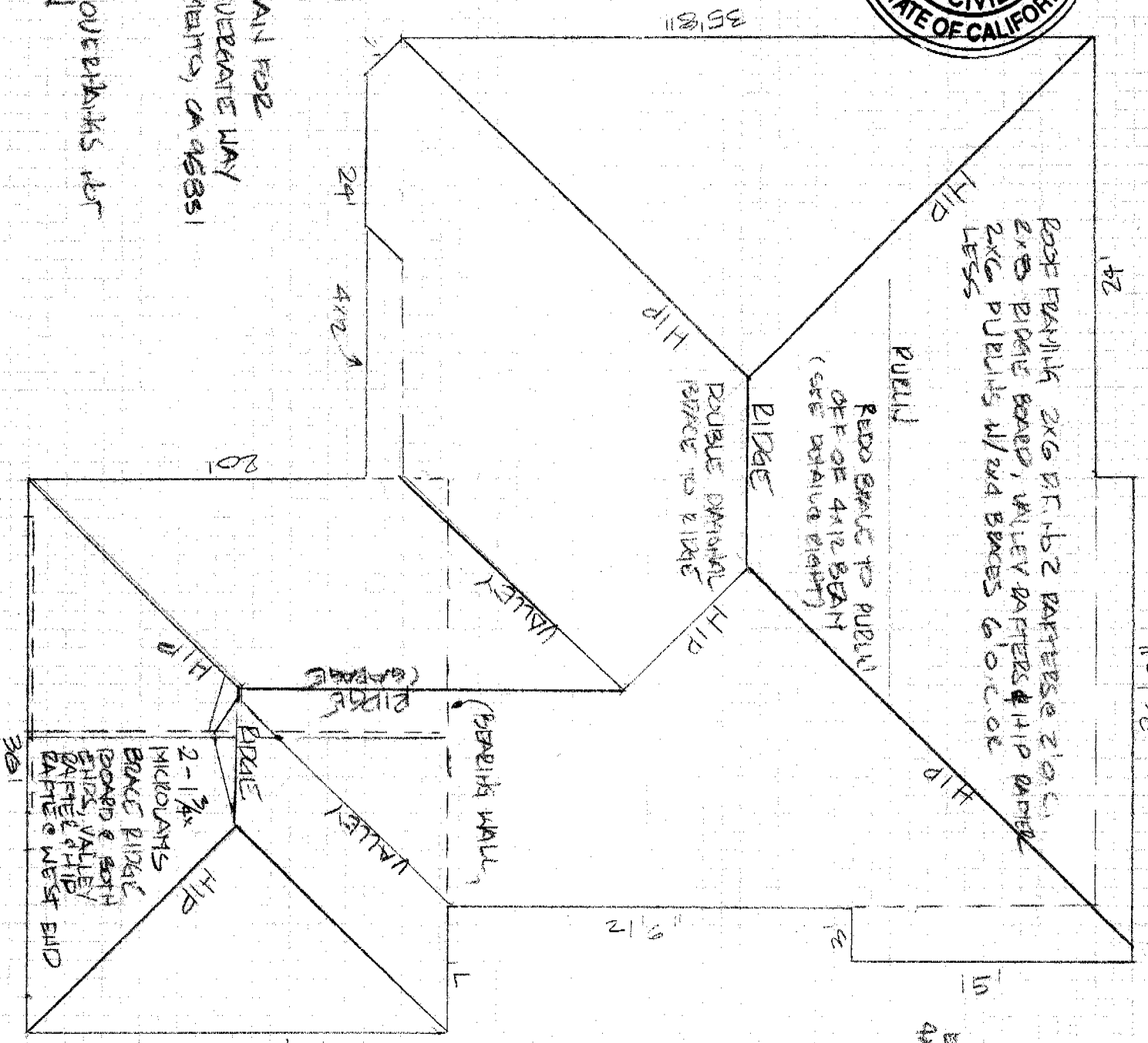
Mark S. Schoen P.E.

MSS:mss
S-ENG2001/MT001



ROOF PLAN FOR
563 LIVERATE WAY
SACRAMENTO, CA 95831

NOTE OVERHANGS NOT
SHOWN

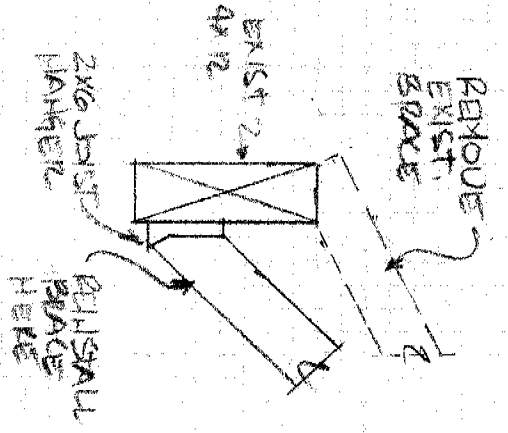


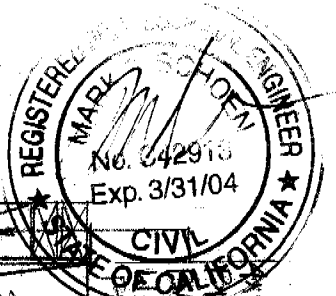
ROOF FRAMING 2X6 R.F. 12 RAFTERS @ 2' O.C.
2X6 PURLINS W/ 2X4 BRACES @ 10' O.C.
LESS

REDD SPACE TO PURLIN
OFF OF 4" R BEAM
(SEE DETAIL ON RIGHT)

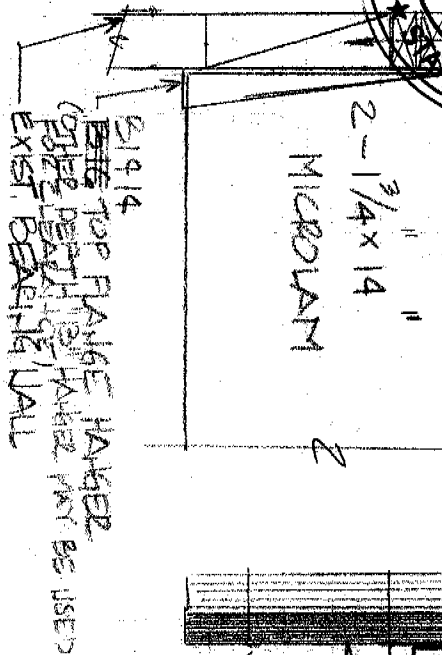
2-1 3/4" MIDPOUNDS
BRACE RIDGE
BOARD & BOTH
ENDS, VALLEY
RAFTER WEST END

BRACE REINFORCATION



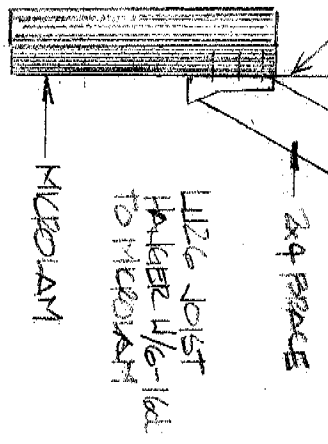
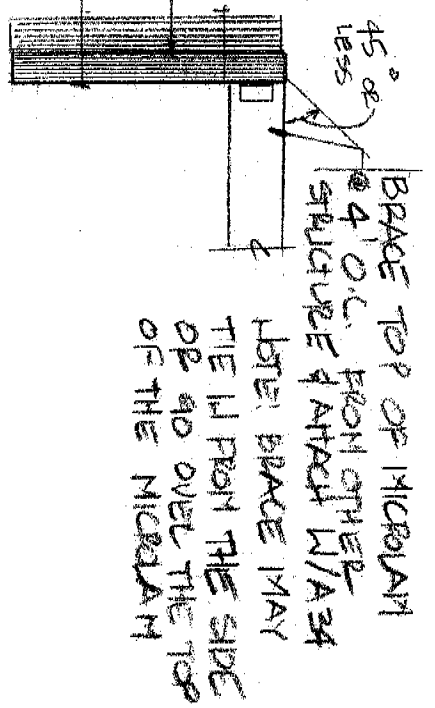
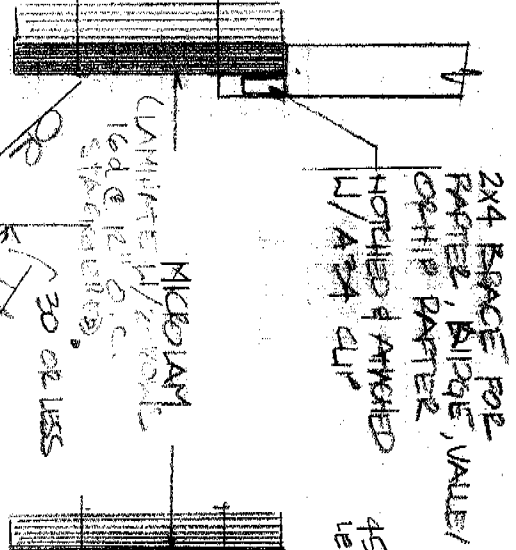


8, 4x10, or 4x12 BLOCK
 STUDS TO PROVIDE
 BACKING FOR HANGER. HAIL
 1/2" LAG COMMON NAILS
 FROM STUDS TO BLOCK



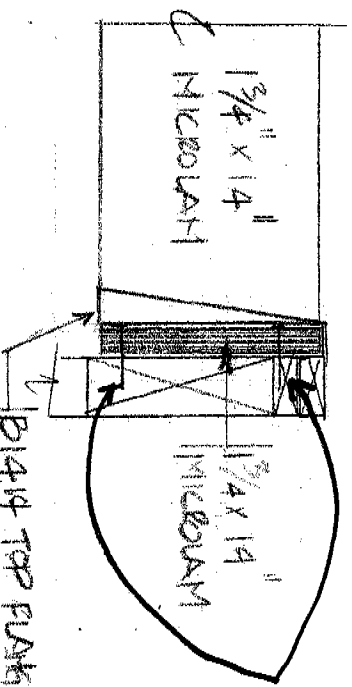
MICROLAM BEAM SUPPORT
@ EXTERIOR WALL

NOTE: BEAM MAY BE SUPPORTED ON HANGER
 AS SHOWN HERE OR RAKED ON
 TOP OF PATE AS IN THE



NOTE: 2x4 BRACES MAY BE
 DOUBLED W/ DOUBBLE
 HANGERS

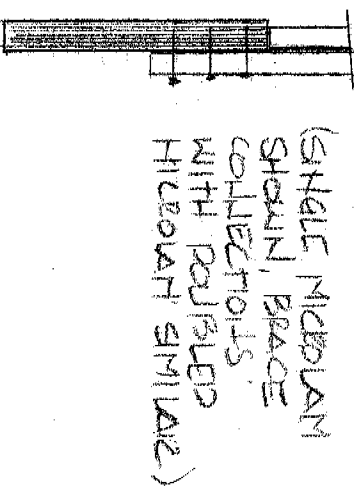
NOTE: AS WITH RIBBED AND
 RIGID BRACES, VALLEY & HIP
 RAFTER BRACES SHOULD
 PROVIDE DIRECT BEARING SUPPORT.
 (SEE RIBBED BRACE DETAILS)

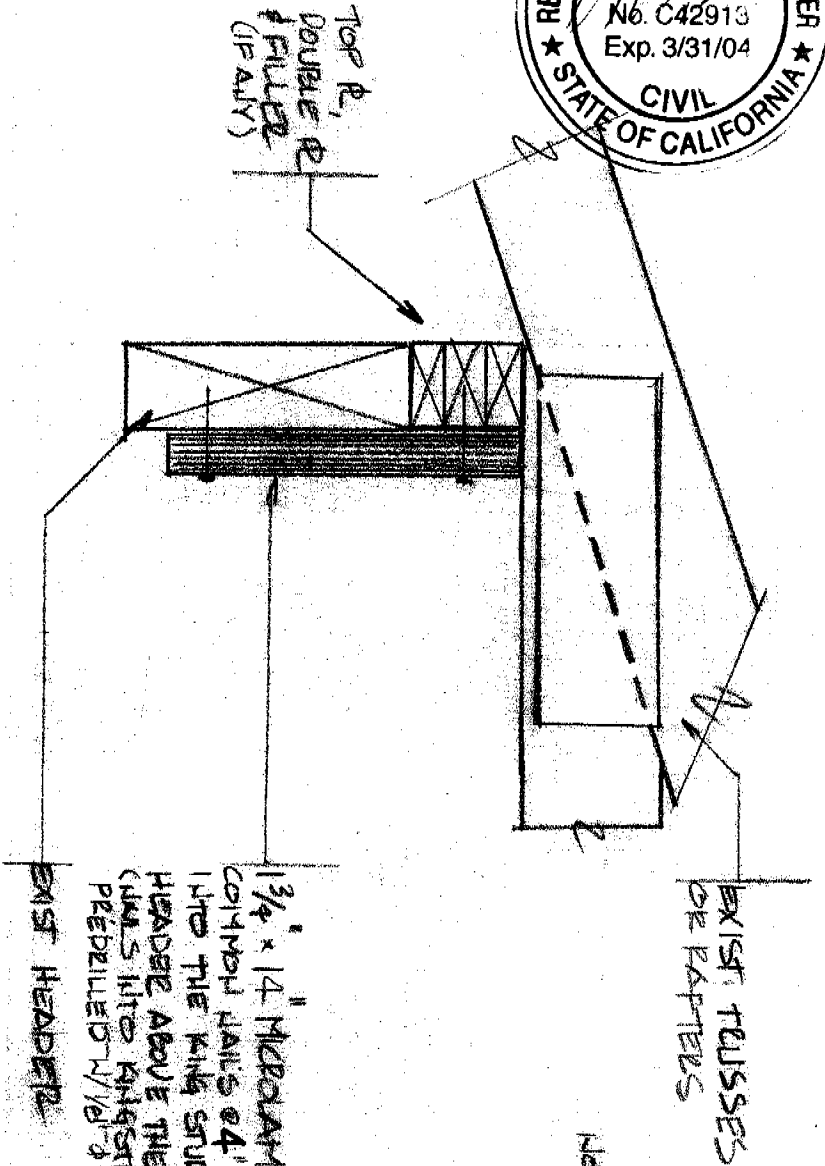


MICROLAM BEAM SUPPORT
@ GARAGE DOOR

BRACE TO MICROLAM DETAILS

(NOTE: IT MAY NOT BE NECESSARY TO USE ALL DETAILS)





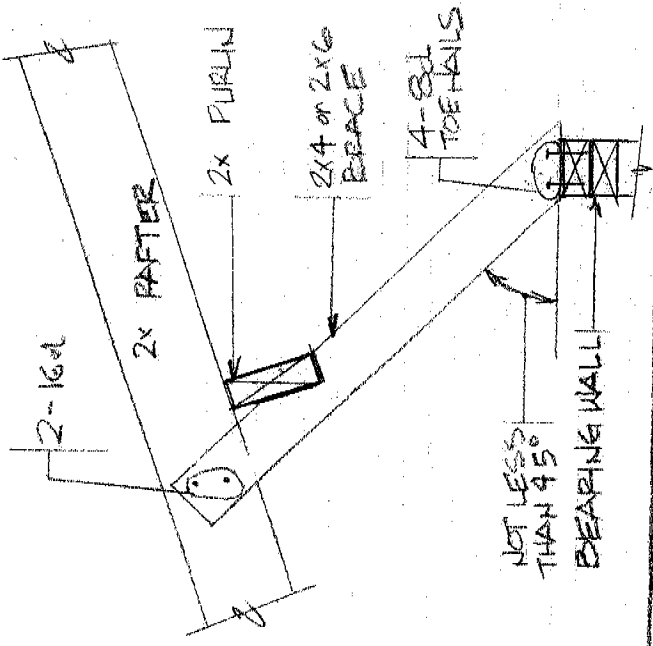
CARRY BEAM FOR ROOF SUPPORT
ROOF

NOTE: IF PLYWOOD SHEATHING IS INSTALLED ON THE KINGSTUD REMOVE THE BACKSIDE OF THE MEDIUM TO FIT OVER THE PLYWOOD. DO NOT REMOVE PLYWOOD

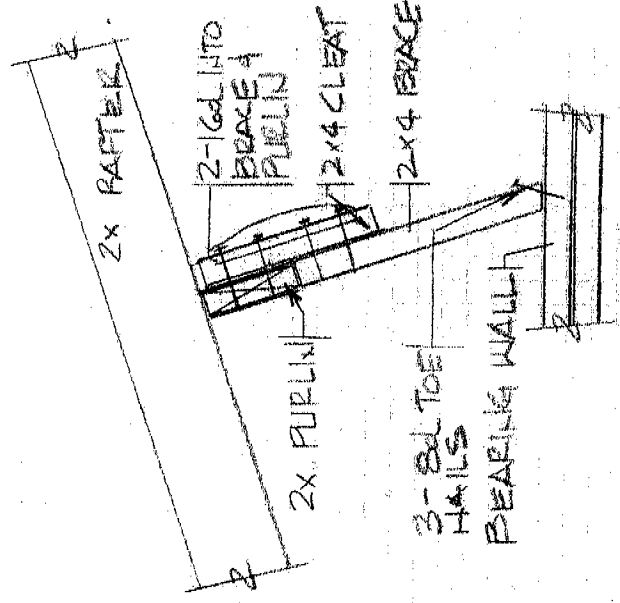
3/4" x 14" MEDIUM W/2 ROWS OF 6d COMMON NAILS @ 4" O.C. FIELD, 8-16d INTO THE KING STUD & 8-16d INTO THE HEADER ABOVE THE TRIMMER STUDS (NAILS INTO KINGSTUD SHOULD BE PREDRILLED W/ 1/8" DRILL BIT)

NOTE: IF THERE ARE CHIPPED STUDS ABOVE HEADER @ 16" O.C. 2-16d COM. NAILS INTO EA STUD MAY BE SUBSTITUTED FOR BOTTOM ROW OF NAILS

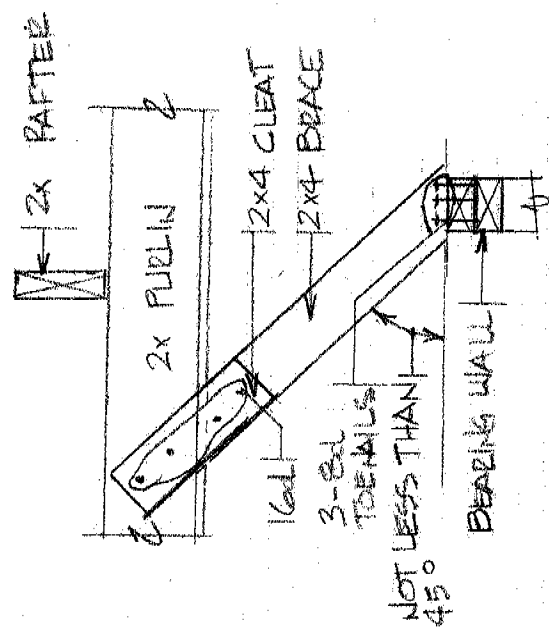
NOTE: THE EXACT POSITION OF THE MEDIUM DOES NOT HAVE TO BE AS SHOWN. IT MAY BE SHIFTED UP OR DOWN TO AVOID INTERFERING WITH GARBAGE POLE OPERATION OR HANDICAP. DO NOT CUT OR HOLE MEDIUM (EXCEPT AS NOTED) WITHOUT FIRST CONSULTING ENGINEER.



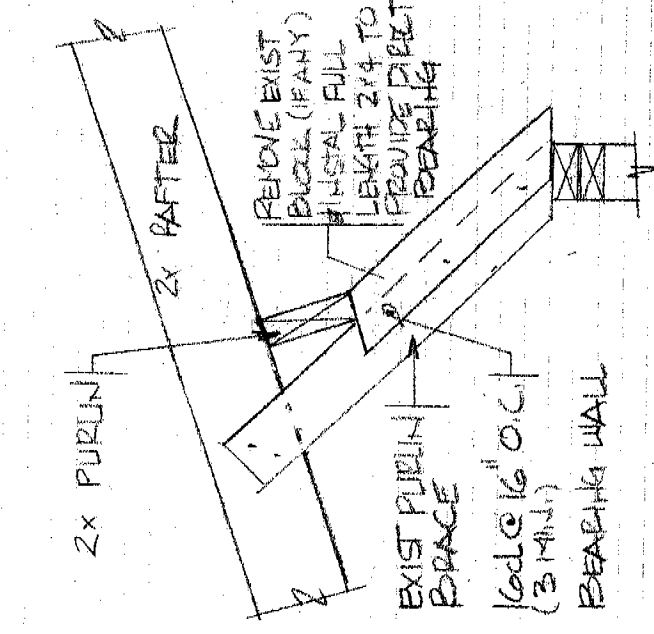
NOTCHED PURLIN BRACE



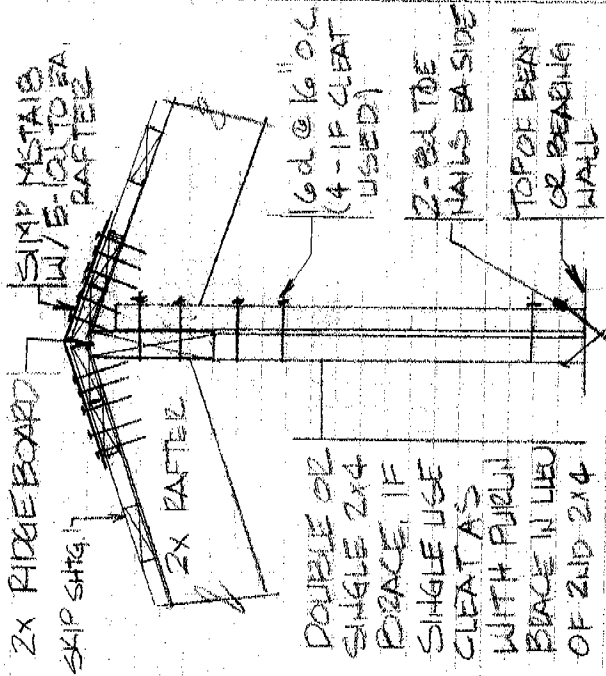
CLEATED PURLIN BRACE (END VIEW)



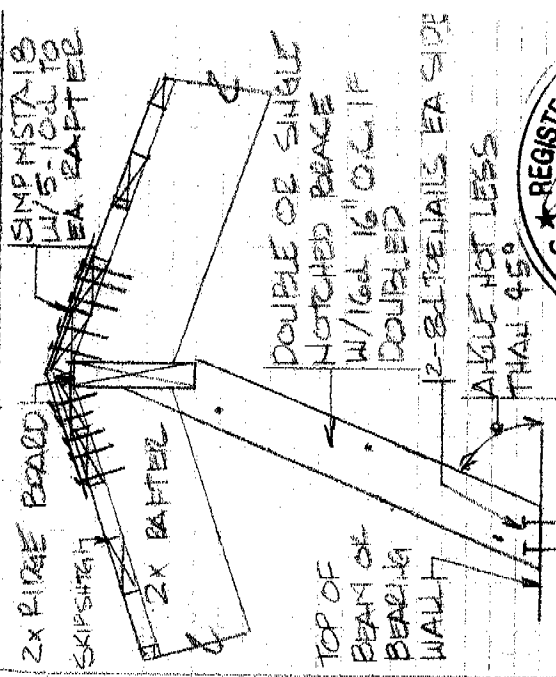
CLEATED PURLIN BRACE (SIDE VIEW)



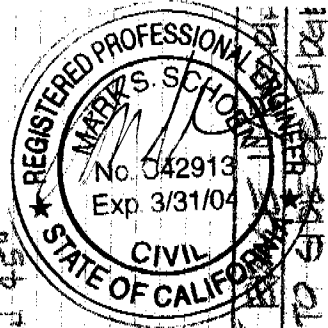
EXISTING BRACE MODIFIED FOR DIRECT BEARING



RIDGE BRACE W/ BEARING WALL DIRECTLY UNDER RIDGE



HOTCHED RIDGE WALL DISPLACED TO SIDE OF RAKE



Calculation for the required section modulus and moment of inertia for simple span wood beams. Dead load(Dl) and Live load(LL) 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. .

MICROLAM GARAGE ROOF SUPPORT BEAM SUPPORT BEAM

Superimposed roof dead and live loads:

Tile dead load: DLt := 7.5 Live load: LL := 16
 Truss spacing: sp := 2 Truss dead load: Rdl := $\frac{2}{sp}$
 Skip shtg. dead load: skshtg := 1 Plywood felt & batts dead load: ply := 1.5
 Ceiling dead load: clg := 0 misl. dead load: msl := 1
 Total dead load: DL := DLt + Rdl + skshtg + ply + clg + msl DL = 12
 Superimposed floor dead and live loads

FLL := 9 FDL := 40

Roof trib area: rta := 160 Floor trib area: fta := 0

Length: l := 21.833·12

Point load: pl := (DL + LL)·rta + (FDL + FLL)·fta Point load live load only: pld := LL·rta + FLL·fta

Application of point load $a := \frac{l}{2}$ $b := l - a$

Fy := 2600·1.25 E := 1900000 Fv := 295·1.25

End reactions: $R1 := pl \cdot \frac{b}{l}$ R1 = 2240 $R2 := pl \cdot \frac{a}{l}$ R2 = 2240

A min. required = $R1 \cdot \frac{3}{2} \cdot \frac{1}{Fv} = 9.112$ $R2 \cdot \frac{3}{2} \cdot \frac{1}{Fv} = 9.112$

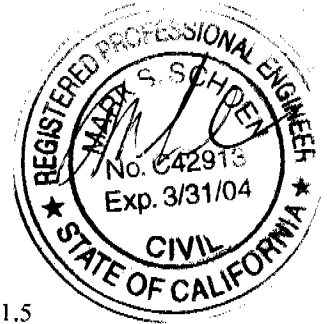
S min. required = $pl \cdot a \cdot \frac{b}{l \cdot Fy} = 90.288$

I min. required = $pl \cdot a \cdot b \cdot (a + 2 \cdot b) \cdot \frac{(3 \cdot a \cdot (a + 2 \cdot b))^5}{27 \cdot E \cdot \frac{1}{240} \cdot l} = 809.252$

Beam section properties: w := 3.5 d := 14

A := w·d S := $w \cdot \frac{d^2}{6}$ I := $w \cdot \frac{d^3}{12}$

 A = 49 > 9 S = 114.333 > 90 I = 800.333 = (approx) 809 therefore O.K.



MICROLAM CARRY BEAM AT GARAGE DOOR FOR SUPPORT BEAM



Length: $l := 16.33 \cdot 12$

Point load: $pl := 2240$ (reaction from beam above)

Application of point load

$$a := 4 \cdot 12 \quad b := l - a$$

$F_y := 2600 \cdot 1.25$ $E := 1900000$ $F_v := 295 \cdot 1.25$

End reactions: $R1 := pl \cdot \frac{b}{l}$ $R1 = 2057.106$ $R2 := pl \cdot \frac{a}{l}$ $R2 = 182.894$

A min. required = $R1 \cdot \frac{3}{2} \cdot \frac{1}{F_v} = 8.368$ $R2 \cdot \frac{3}{2} \cdot \frac{1}{F_v} = 0.744$

S min. required = $pl \cdot a \cdot \frac{b}{l \cdot F_y} = 30.382$

I min. required = $pl \cdot a \cdot b \cdot (a + 2 \cdot b) \cdot \frac{(3 \cdot a \cdot (a + 2 \cdot b))^5}{27 \cdot E \cdot \frac{1}{240} \cdot l} = 357.116$

Beam section properties: $w := 1.75$ $d := 14$

$A := w \cdot d$ $S := w \cdot \frac{d^2}{6}$ $I := w \cdot \frac{d^3}{12}$

-- A = 24.5 > 9 S = 57.167 > 90 I = 400.167 > 357 therefore O.K.

Number of 16 d common nails at ends of Microlam to king stud and garage door header:

$$\frac{2057}{108 \cdot 1.25} = 15.237$$

Use two cols. of 8-16 d common nails predrilled one into existing header and one into king stud:

Calculation for the required area, section modulus and moment of inertia for simple span wood beams. Dead load(dl) and Live load(ll) 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),(Fb),(Fv) are in lbs./sq.in. per 1991 U.B.C.



4x12 DOUGLAS FIR NO. 2 PORCH BEAM

rdl := 12 rll := 14 rta := 7 l := 13.33
 fdl := 30 fll := 40 fta := 0 rta·l = 93.31
 wt := (rta·(rdl + rll) + fta·(fdl + fll)) + 10 Cd := 1.25
 Fb := 1250 Fbp := Fb·Cd Fbp = 1562.5 Ew := 1700000 Fv := 95·Cd

A min. required =
$$\frac{l \cdot \frac{wt}{2}}{Fv} \cdot \left(\frac{3}{2}\right) = 16.164$$

S min. required =
$$wt \cdot l^2 \cdot \frac{1.5}{Fbp} = 32.752$$

I min. required =
$$5 \cdot wt \cdot \frac{(l \cdot 12)^4}{12 \cdot 384 \cdot Ew \cdot l \cdot \frac{12}{240}} = 120.38$$

Check Beam properties:

CF := $\left(\frac{12}{d}\right)^{\frac{1}{9}}$ A := w·d w := 3.5 d := 11.25
 S := w·CF· $\frac{d^2}{6}$ I := w· $\frac{d^3}{12}$ Stiffw := I·Ew

 - A = 39.375 > 16 S = 74.359 > 33 I = 415.283 > 120 therefore O.K.
