

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 9712845
Insp Area: 2

Site Address: 6731 ORLEANS WY SAC
Parcel No: 0300530068

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

CONTRACTOR
W S CONTRACTOR
7131 WITCHINGHOUR
CITRUS HEIGHTS CA
Phone: 916-725-4877

OWNER
AUSBROOKS BERNARD/PATRICIA S
6731 ORLEANS WY
SACRAMENTO CA 95831
Phone:

ARCHITECT
Phone:

Nature of Work: PARTIAL REROOF - 30 YR DIM COMP - 29 SQ

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 B License Number 570 556 Date 9/16/97 Contractor Signature Warren Sabrin

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 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 or 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 or 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.

Date 9/16/97 Applicant/Agent Signature Warren Sabrin

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 exp 1-1-98 Policy Number 229-13846
am

____ (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 9/16/97 Applicant Signature Warren Sabrin

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.



DEPARTMENT OF
PLANNING AND DEVELOPMENT

CITY OF SACRAMENTO
CALIFORNIA

1231 I STREET
ROOM 200
SACRAMENTO, CA
95814-2998

Permit Services
916-264-7619
FAX 916-264-7046

TILE ROOF WORKSHEET

This worksheet must be filled out whenever any type of tile roof is applied for.

If the answer to question #5 is yes, a written engineering report from a registered engineer must be provided with each application.

1. BRAND AND MODEL OF TILE DURALITE LT WT.
2. TILE WEIGHT PER SQUARE 666
3. WEIGHT OF ROOF SYSTEM PER SQUARE 544
4. TOTAL WEIGHT OF ROOF SYSTEM 1210
5. DOES TOTAL WEIGHT OF ROOF SYSTEM EXCEED 750# PER SQUARE? ~~YES~~ NO
6. ROOF SLOPE 4/12

PLEASE PROVIDE A SEPARATE WORKSHEET FOR EACH APPLICATION INVOLVING A TILE ROOF.

Paul Zacher-Structural Engineer
4701 Lakeside Way
Fair Oaks, CA 95628
TEL: 916.961.3938
FAX: 916.961.3938

August 27, 1997

Parsons Roofing Company
6740 Fruitridge Road
Sacramento, CA 95820
TEL: 916.81.3487
FAX: 916.383.1400

Attn.: Mr. Del Parsons,

re: Job 97117

Subject: Structural Investigation Report of the Roof for the Residence located at 1445 Joel Court, Sacramento, CA..

As requested by Mr. Del Parsons, this is a report to determine what needs should be addressed to correct any structural deficiencies of the roof. Paul Zacher visited the site August 27, 1997. The investigation was made to determine the existing condition of the structure.

The following is based on visual observations with no subsurface investigation being made.

DESCRIPTION:

Type of Facility: Residence.
Year Built: Estimated 1960's vintage.
Occupancy: Residential.
No. of Stories: One.
Dimensions: Approximately 1400 square feet with a first story plate height of 8 feet.

CONSTRUCTION:

Roof:

The roof covering will consist of Monier Duralite Shake Tile over 1/2" solid sheathing. The living area is conventionally framed with 2x4 rafters spaced at 24" on center with 2x4 purlins supported at no more than 4'-0" on center by 2x4 struts bearing on walls below. The garage area framed with 2x6 rafters spaced at 24" on center and 2x6 cross ties (ceiling joists) spaced at 4'-0" on center.

1/12

CONCLUSIONS:

Roof:

The living and garage areas lack sufficient structural capacity for the applied live and dead loads.

RECOMMENDATIONS:

Living Area:

1. Add a 1/2" OSB gusset plate adjacent to each existing strut and rafter connection (4'-0" on center) and attach it with 8d's at 6" on center at the edges. See details 1 and 5.
2. Scab a 2x10 x 12'-0" long purlin adjacent to the existing 2x4 purlin. Attach it with 16d's @ 6" on center. See detail 1.
3. Provide a 1 3/4" x 14" x 19'-0" long parallam beam. The beam shall be supported at each end by the bearing walls below. See details 1 and 4.
4. Provide additional 2x4 struts from the existing purlins to the bearing walls or beam below. The maximum spacing between the new and existing struts shall not exceed 4'-0" on center. The unbraced length of the struts shall not exceed 8'-0" and the minimum slope of the struts shall not be less than 45 degrees from the horizontal. See detail 1.

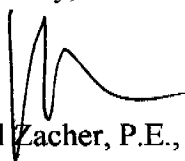
Garage:

5. Add a 2x6 rafter adjacent to the existing 2x6 rafter where the span of the existing rafters is greater than 12'-0". Nail the new rafter to the existing with 16d commons at 12" on center.
6. Scab either a 1 3/4" x 14" parallam beam to the bottom chord of the existing built-up truss with 16d's at 12" on center. The at the stud wall will be a 2x8 DF#2 x 4'-0" long nailer attached to the double top plate below with 16d's @ 2" oc staggered. See details 3 and 4.

The inspection consisted of visual observation only, made solely to determine the structural capacity of the existing roof. 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 which 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>	
Monier Duralite Shake	7.40	psf
Roofing felt	0.50	psf
1/2" OSB/ plywood	1.50	psf
1x4 skip sht'g	1.09	psf
2x6 rafters @ 24" oc	<u>1.00</u>	psf
Load	11.5	psf
Roof Pitch Adjustment	<u>0.62</u>	psf
Total Load	12.1	psf

BEAM DESIGN FOR UNIFORM LOAD: RAFTER

(Values for DF Larch #2)

Width, b	1.5 inches
Depth, d	3.5 inches
Length of beam	7.67 feet
Dead load roof	12.1 psf
Live load roof	16 psf
Contributory width of roof load	2 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	240
Toal load defl ratio	180
Total dead load	24.2 plf
Total live load	32 plf

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	1.50
Repetitive factor, Cr	1.15

Dead load reaction	93 lbs
Live load reaction	123 lbs
Total load reaction	216 lbs

Allowable shear, Fv'	119 psi
Actual shear, fv	57 psi
Allowable bending, Fb'	1887 psi
Actual bending, fb	1619 psi
Allowable live load defl	0.38 inches
Actual live load defl	0.29 inches
Allowable total load defl	0.51 inches
Actual total load defl	0.51 inches
Bearing length req'd	0.23 inches

Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK

BEAM DESIGN FOR UNIFORM LOAD: RAFTER

(Values for DF Larch #2)

Width, b	1.5 inches
Depth, d	5.5 inches
Length of beam	12 feet
Dead load roof	12.1 psf
Live load roof	16 psf
Contributory width of roof load	2 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	240
Total load defl ratio	180
Total dead load	24.2 plf
Total live load	32 plf

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	1.30
Repetitive factor, Cr	1.15

Dead load reaction	145 lbs
Live load reaction	192 lbs
Total load reaction	337 lbs

Allowable shear, Fv'	119 psi
Actual shear, fv	57 psi
Allowable bending, Fb'	1635 psi
Actual bending, fb	1605 psi
Allowable live load defl	0.60 inches
Actual live load defl	0.45 inches
Allowable total load defl	0.80 inches
Actual total load defl	0.79 inches
Bearing length req'd	0.36 inches

Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK

BEAM DESIGN FOR UNIFORM LOAD: PURLIN

(Values for DF Larch #2)

Width, b	1.5 inches
Depth, d	9.25 inches
Length of beam	10 feet
Dead load roof	12.1 psf
Live load roof	16 psf
Contributory width of roof load	7 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	240
Total load defl ratio	180
Total dead load	84.7 plf
Total live load	112 plf

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
Repetitive factor, Cr	1.15

Dead load reaction	424 lbs
Live load reaction	560 lbs
Total load reaction	984 lbs

Allowable shear, Fv'	119 psi
Actual shear, fv	90 psi
Allowable bending, Fb'	1384 psi
Actual bending, fb	1379 psi
Allowable live load defl	0.50 inches
Actual live load defl	0.16 inches
Allowable total load defl	0.67 inches
Actual total load defl	0.28 inches
Bearing length req'd	1.05 inches

Horizontal Shear OK

Bending OK

Live Load Deflection OK

Total Load Deflection OK

PARALLAM BEAM

Width	1.75 inches
Depth	14 inches
Length of beam	19 feet
Dead load roof	12.1 psf
Live load roof	16 psf
Contributory width of roof load	7 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	360
Toal load defl ratio	240
Total dead load	84.7 plf
Total live load	112 plf

Base design values:

Shear, Fv	290 psi
Bending, Fb	2900 psi
Comp. perp. to grain, Fc	650 psi
Mod of Elasticity, E	2000000 psi
Load duration factor, Cd	1.25
Volume factor, Cv	1.00

Dead load reaction	805 lbs
Live load reaction	1064 lbs
Total load reaction	1869 lbs

Allowable shear, Fv'	363 psi
Actual shear, fv	100 psi
Allowable bending, Fb'	3625 psi
Actual bending, fb	1863 psi
Allowable live load defl	0.63 inches
Actual live load defl	0.41 inches
Allowable total load defl	0.95 inches
Actual total load defl	0.72 inches

Horizontal Shear OK
 Bending OK
 Live Load Deflection OK
 Total Load Deflection OK

Bearing length req'd	1.64 inches
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WOOD COLUMN DESIGN:

(Values for DF Larch #1)

Width, b	3.5 inches
Depth, d	5.5 inches
Length	8 feet
Dead load	805 lbs
Live Load	1064 lbs
Load duration factor, Cd	1.25
Base design values:	
Comp. parallel, Fc	1450 psi
Mod of Elasticity, E	1600000 psi
Size Factor, Cf	1.10

Allow parallel, Fc'	589 psi
Actual parallel, fc	97 psi

Post OK

PARALLAM: GARAGE

Width	1.75 inches
Depth	14 inches
Length of beam	20 feet
Dead load roof	12.1 psf
Live load roof	16 psf
Contributory width of roof load	10 feet
Dead load floor	0 psf
Live load floor	0 psf
Contributory width of floor load	0 feet
Dead load wall	0 plf
Live load defl ratio	240
Toal load defl ratio	180
Total dead load	121 plf
Total live load	160 plf

Base design values:

Shear, Fv	290 psi
Bending, Fb	2900 psi
Comp. perp. to grain, Fc	650 psi
Mod of Elasticity, E	2000000 psi
Load duration factor, Cd	1.25
Volume factor, Cv	1.00

Dead load reaction	1210 lbs
Live load reaction	1600 lbs
Total load reaction	2810 lbs

Allowable shear, Fv'	363 psi
Actual shear, fv	152 psi
Allowable bending, Fb'	3625 psi
Actual bending, fb	2949 psi
Allowable live load defl	1.00 inches
Actual live load defl	0.72 inches
Allowable total load defl	1.33 inches
Actual total load defl	1.26 inches

Horizontal Shear OK
 Bending OK
 Live Load Deflection OK
 Total Load Deflection OK

Bearing length req'd 2.47 inches

WOOD COLUMN DESIGN:

(Values for DF Larch #1)

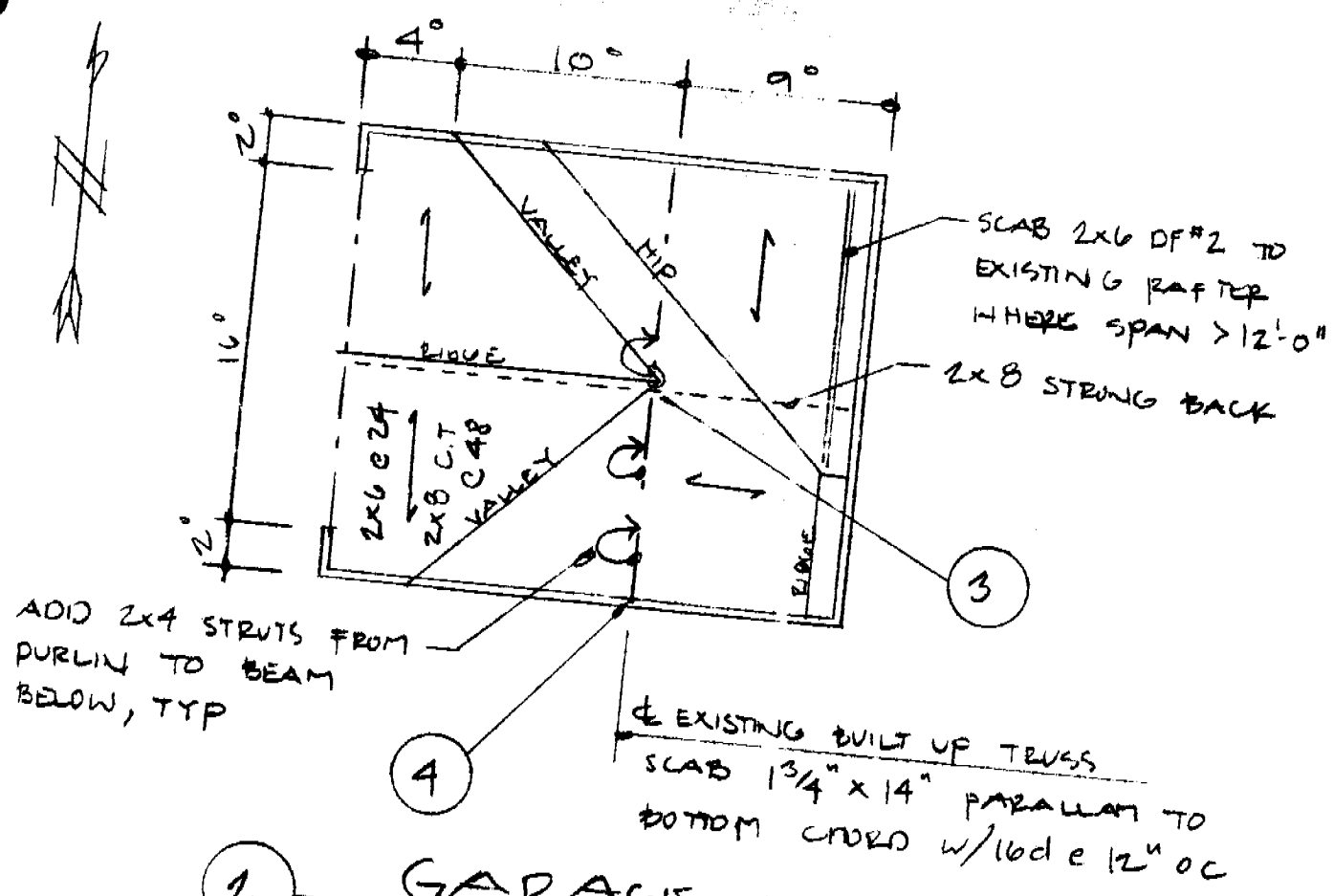
Width, b	3.5 inches
Depth, d	5.5 inches
Length	8 feet
Dead load	1210 lbs
Live Load	1600 lbs
Load duration factor, Cd	1.25

Base design values:

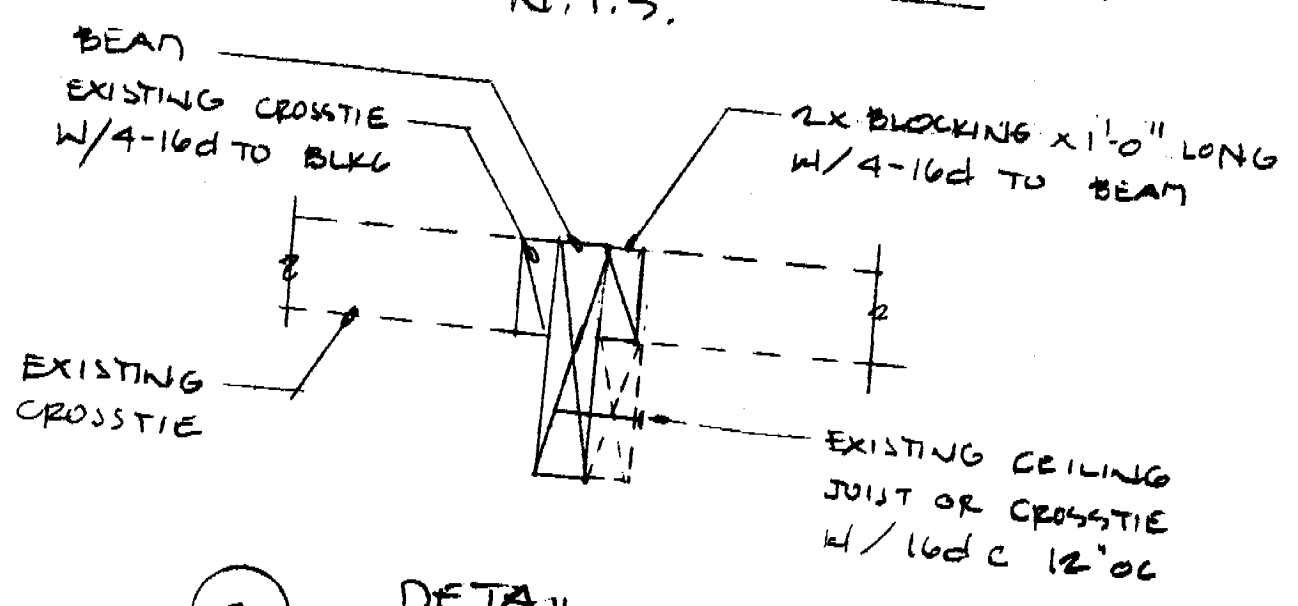
Comp. parallel, Fc	1450 psi
Mod of Elasticity, E	1600000 psi
Size Factor, Cf	1.10

Allow parallel, Fc'	589 psi
Actual parallel, fc	146 psi

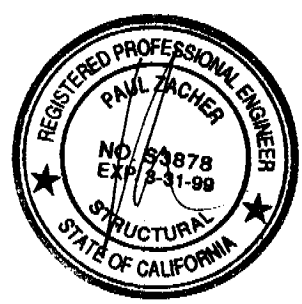
Post OK



2 GARAGE ROOF PLAN
N.T.S.



3 DETAIL
N.T.S.



LEDGER DESIGN:

WOOD TO WOOD CONNECTION: Ledger to double top plate

Assumptions:

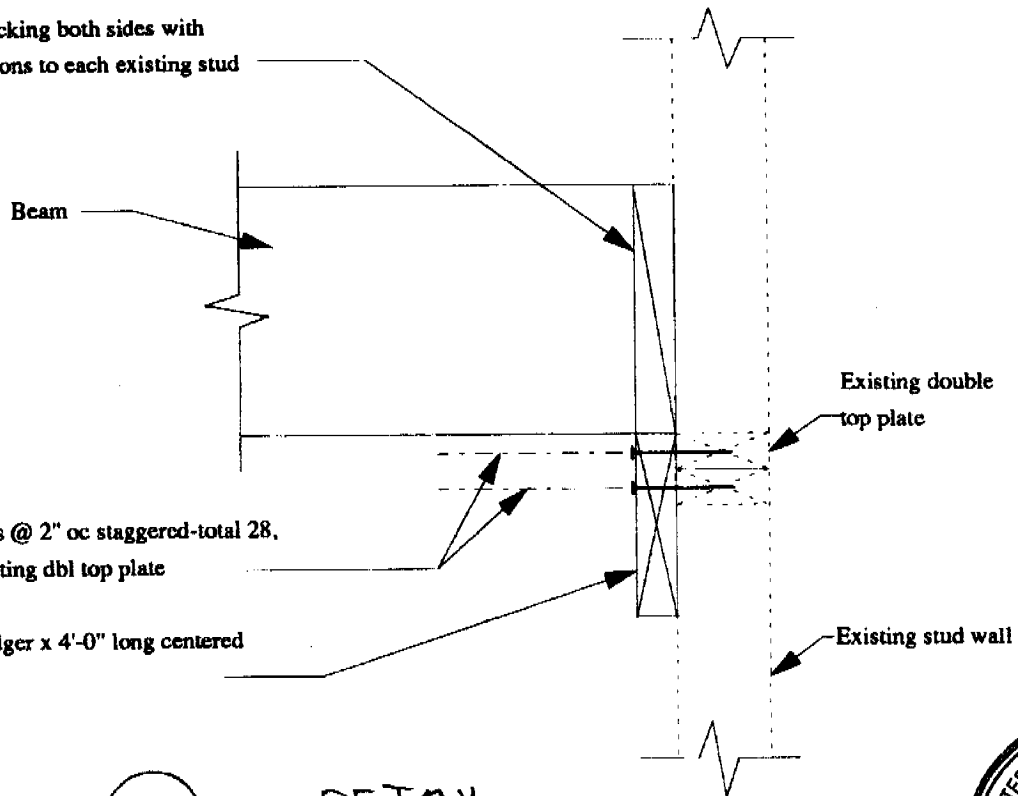
1. Point load from beam is equally distributed to each supporting stud.
2. Allowable foundation pressure is 1000 plf.
3. All nails shall be common nails.

Ledger width, b	1.5 inches	
Ledger depth, d	7.25 inches	
Maximum reaction	2810 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	1.20	
Allowable shear, Fv'	119 psi	Horizontal Shear OK
Actual shear, fv	78 psi	
Allowable bending, Fb'	1313 psi	Bending OK
Actual bending, fb	142 psi	
Length of ledger required	2.81 feet	
Length of ledger used	4 feet	
Number of nails required	27 16d commons ledger to top plate	

1'-4" long blocking both sides with
4 - 16d commons to each existing stud

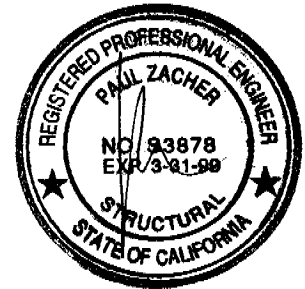
16d commons @ 2" oc staggered-total 28,
ledger to existing dbl top plate

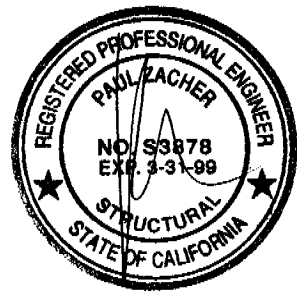
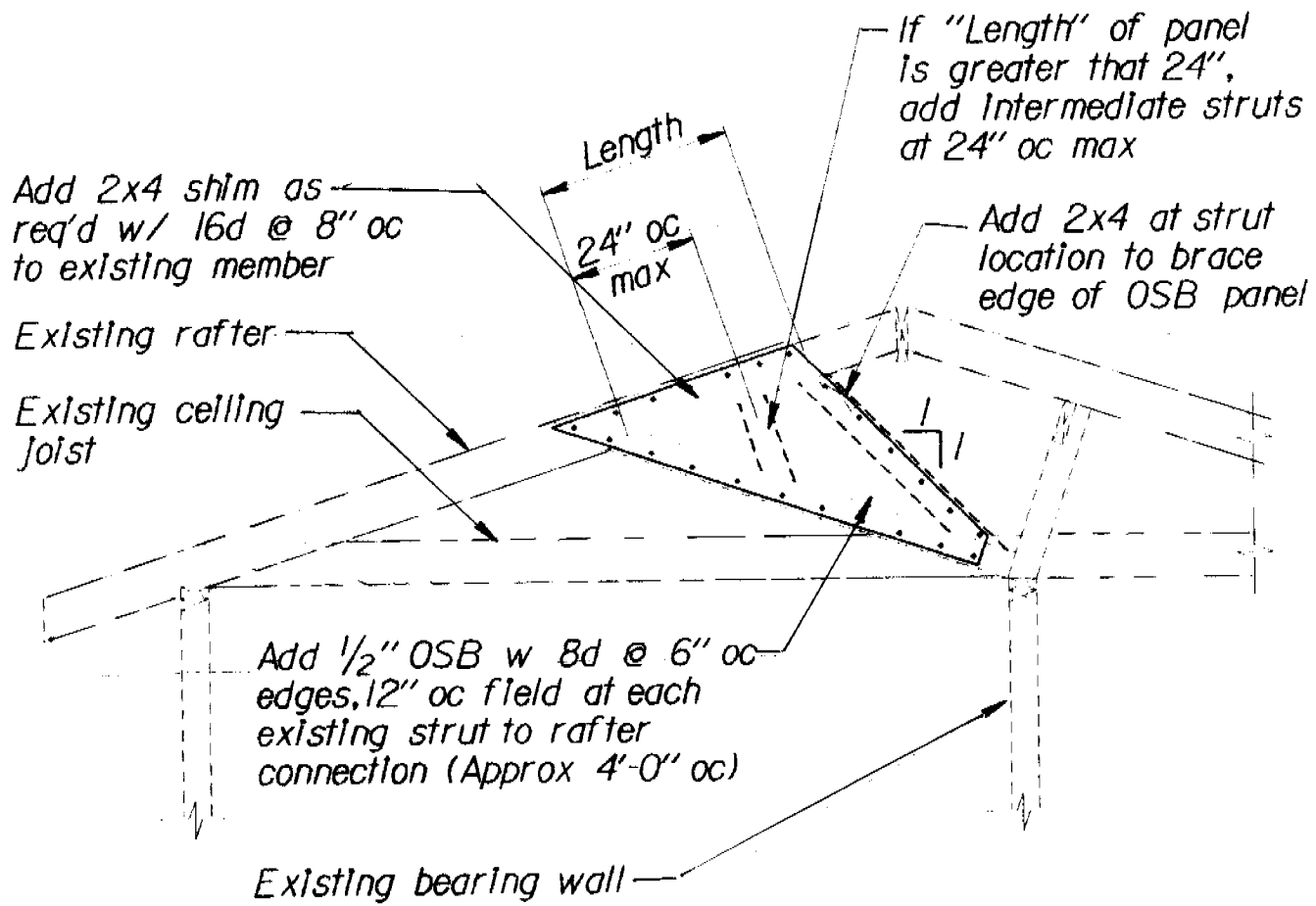
2x8 DF#2 ledger x 4'-0" long centered
under beam



4

DETAIL
N.T.S

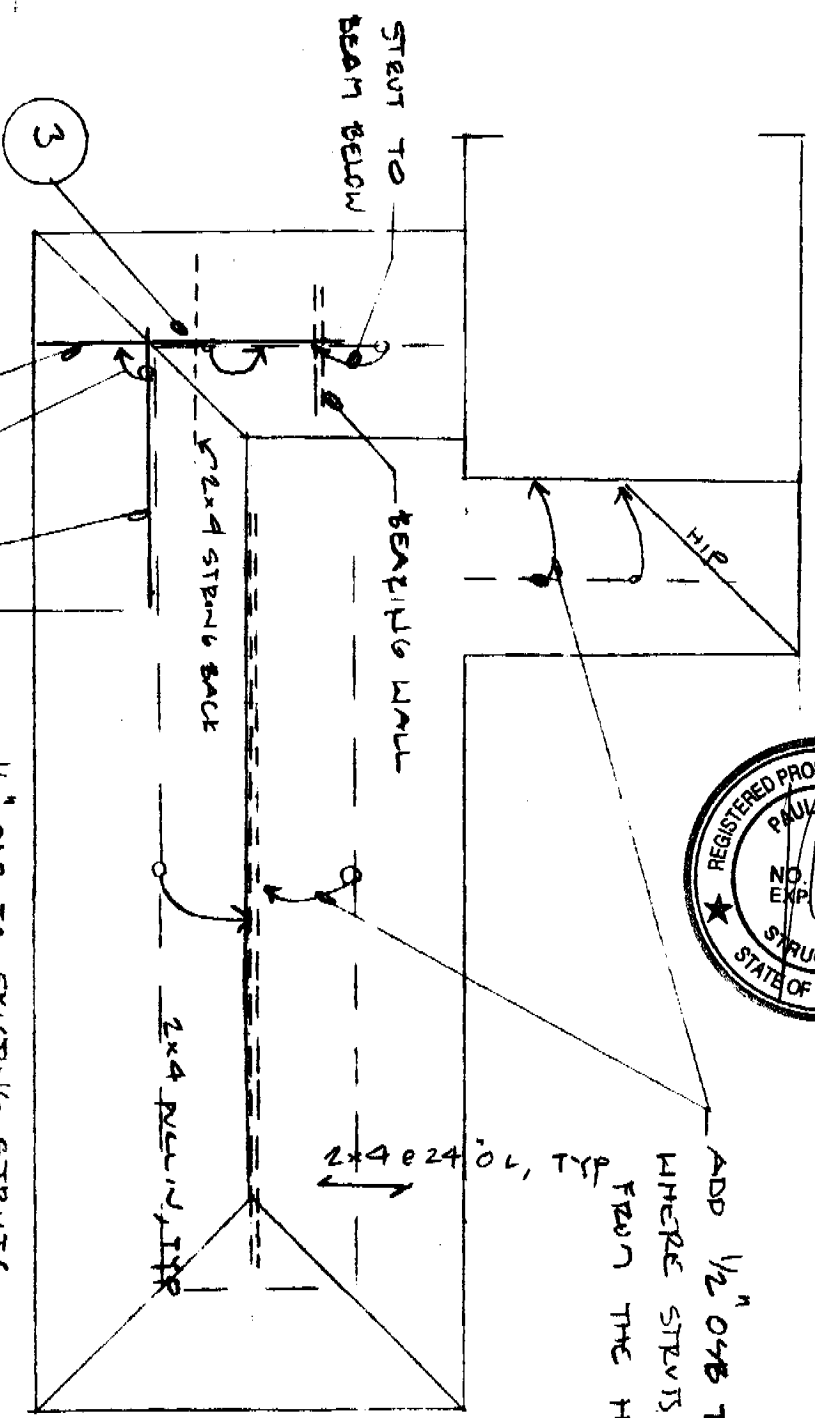




5 STRUT REINFORCEMENT DETAIL

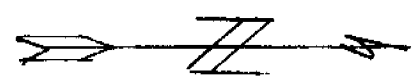
1/2" - 1'-0"

5



ADD 1/2" OSB TO EXISTING STRUTS, TYP WHERE STRUTS ARE LESS THAN 45° FROM THE HORIZONTAL

5



- ADD 1/2" OSB TO EXISTING STRUTS
- SCAB 2X10 OF #2 TO EXISTING 2X4 PURLIN W/16d @ 6" oc
- PROVIDE 2X4 STRUT FROM PURLIN TO BEAM BELOW, TYP
- PROVIDE 1 3/4" x 14" x 19'-0" LONG PARALLEL BEAM,

1 ROOF PLAN

N.T.S.