

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 9906525
Insp Area: 2

Site Address: 7685 GREENHAVEN DR SAC
Parcel No: 031-0490-025

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

CONTRACTOR
SOUTH SEA ROOFING
854 HAZEL CREST CT
SACRAMENTO CA 95624

OWNER
YAMADA CRAIG S/MONICE J
6161 COLGATE CT
SACRAMENTO CA 95831-2101

ARCHITECT

Nature of Work: TEAR OFF SHAKE AND REROOF W/LIGHTWEIGHT TILE 27 SQRS

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 _____ License Number 16503 Date 7/23/99 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 3 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 _____ 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 _____ 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 forthwith comply with those provisions.

X Date _____ 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.

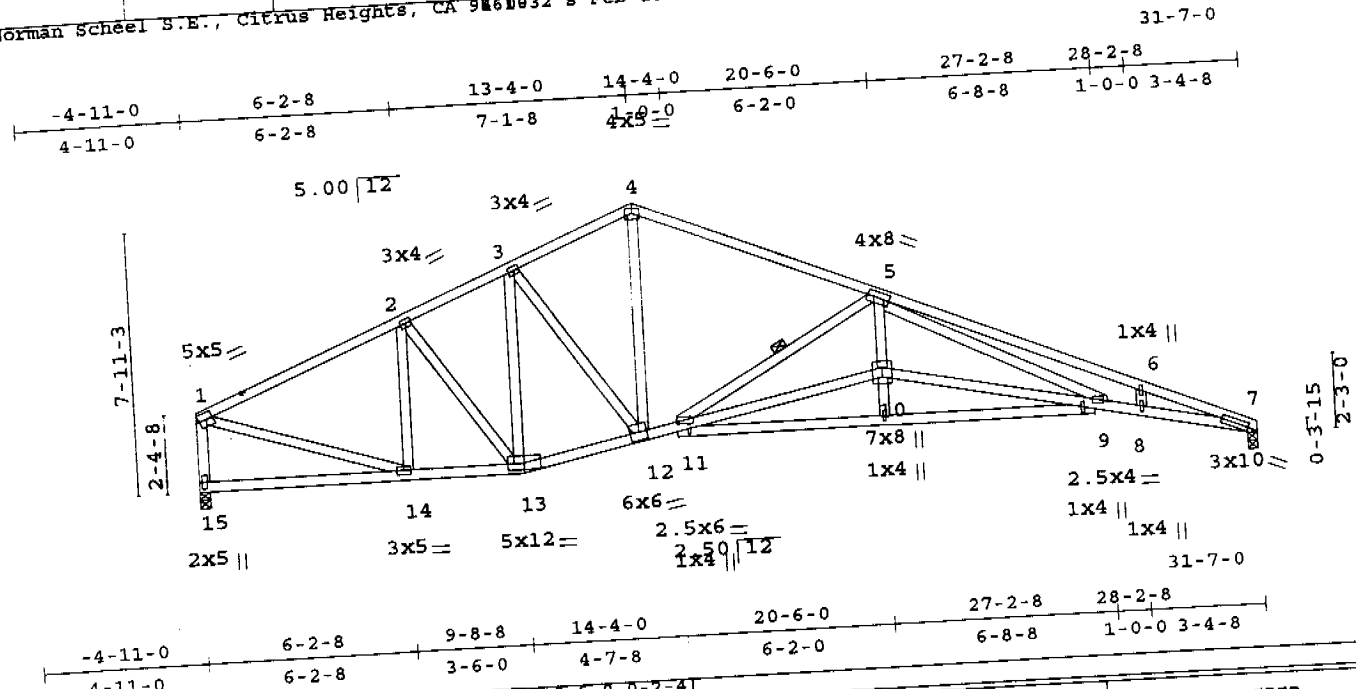


Plate Offsets (X,Y): [7:0-3-5,0-1-8], [13:0-6-0,0-2-4]

| | | | | | |
|----------------------|----------------------|------------|-------------------------------|---------------|----------------|
| LOADING (psf) | SPACING 2-0-0 | CSI | DEFL (in) (loc) l/defl | PLATES | GRIP |
| TCLL 16.0 | Plates Increase 1.15 | TC 0.87 | Vert (LL) -0.3310-11 >999 | M20 | 186/148 |
| TCDL 11.0 | Lumber Increase 1.15 | BC 0.98 | Vert (TL) -0.7210-11 >521 | | |
| BCLL 0.0 | Rep Stress Incr YES | WB 0.90 | Horz (TL) 0.30 7 n/a | | |
| BCDL 7.0 | Code UBC/ICBO | (Matrix) | 1st LC LL Min l/defl = 360 | | Weight: 181 lb |

LUMBER
 TOP CHORD 2 X 4 DF No.1&Btr-G *Except*
 4-7 2 X 4 DF SS-G
 BOT CHORD 2 X 4 DF No.1&Btr-G
 WEBS 2 X 4 DF Std-G

BRACING
 TOP CHORD Sheathed.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 on center bracing.
 WEBS 1 Row at midpt 5-11

REACTIONS (lb/size) 15=1065/0-3-8, 7=1065/0-3-8

FORCES (lb) - First Load Case Only
 TOP CHORD 1-2=-1314, 2-3=-1284, 3-4=-1401, 4-5=-1467, 5-6=-4173, 6-7=-4162, 1-15=-1018
 BOT CHORD 14-15=100, 13-14=1154, 12-13=1193, 11-12=1154, 10-11=3417, 9-10=3410, 8-9=3896, 7-8=3855
 WEBS 3-13=-374, 4-12=727, 5-11=-2377, 5-10=1571, 2-14=-266, 2-13=-26, 1-14=1117, 3-12=265, 5-9=532, 6-8=-192

- NOTES**
- 1) This truss has been checked for unbalanced loading conditions.
 - 2) All plates are M20 plates unless otherwise indicated.
 - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads per Table No. 16-B, UBC-94.
 - 4) A plate rating reduction of 20% has been applied for the green lumber members.
 - 5) Bearing at joint(s) 7 considers parallel to grain value using ANSI/TPI 1-1995 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 6) This truss has been designed for both UBC-94 and ANSI/TPI 1-1995 plating criteria.

LOAD CASE(S) Standard

NOT FOR FABRICATION
 FOR CALCULATION PURPOSES ONLY
 NOT FOR FABRICATION



10/10

James A. Sanders, P.E.
5330 Illinois Avenue
Fair Oaks, CA 95628
916-967-9058

September 9, 1999

TO WHOM IT MAY CONCERN:

Subject: Roof evaluation for 7685 Greenhaven Drive, Sacramento

Introduction:

This Roof evaluation is a limited structural assessment of the subject property prior to the installation of a new roof covering. The owners, M/M Kwong, purpose to use MonierLifeTile Premium Duralite, which is rated by the manufacturer at approximately 6 PSF.

The structure is a 2-story, single family, residence with light wood, conventional framing, and consists of approximately 2400 SF. There are many horizontal and vertical offsets. The First Floor is slab-on-grade. The Roof is "gable style" with 5:12 pitch and medium shake supported by five, unique styles of manufactured wood trusses. There is an attached 3-car Garage. No alterations/additions appear to have been made since the original construction, Circa 1985.

Scope:

This structural assessment is required by the Uniform Building Code and/or the local building inspection jurisdiction, and is limited to the following primary structural elements:

1. Manufactured Roof Trusses @ 24" o.c.
2. Damaged Truss at Skylight
3. Conventionally framed 2x6 Rafters @ 24" o.c.
4. Flush 5 1/8 x 28.5 GluLam Beam supporting Second Floor over Garage.
5. 4x12 Overhead Garage Door Header *See sketches sheet 5 &*
6. Barge Overhangs *See work required, sheet 3, #1-4.*

Structural engineering consultant & Civil Engineer

Reviewed by MPT P 9/13/99

2/10



Findings:

1. The five configurations of Roof Truss were computer analyzed by an independent engineering firm. Several of the connector plates at the supports could not be adequately measured in the field due to inaccessibility, and will need to be field verified by the roofing contractor after "tear-off" prior to re-roofing. The Trusses are satisfactory (See attached computer data), subject to field verification of Truss connectors joining the top and bottom chords at the exterior supports (Bearing Walls).

2. The Skylight in the Master bathroom ceiling was not installed properly. The Truss manufacturer provided an extra Truss to accommodate the Skylight, but the framing crew did not utilize it. The intended/proper installation would require installing a complete Truss on each side of the Skylight. Instead they "sistered" or spliced the extra Truss adjacent to the regularly spaced Truss adjacent to the Skylight, and cut the top and bottom chords of the regularly spaced Truss that conflicted with the Skylight. The altered Truss is not effective.

3. The lumber grading stamps on conventionally framed or "cut" 2x6 Rafters are concealed with gypsum board or paint. However, based on this consultants extensive experience in construction, these can be regarded as #2/btr DF. The allowable Rafter span for the purposed Roof is approximately 11'. Spans of existing 2x6 Rafters @ 24" o.c. do not exceed the allowable span.

4. The flush 5 1/8x28.5 GLB supporting the Second Story over the Garage was exposed in the field. This Beam does not exceed the allowable stresses or deflection (L/240). The Posts supporting the Beam were not exposed, but based on this consultant's experience, they are probably 4x4's. The Foundations under the support Posts are concealed under concrete Slabs-On-Grade. The increased Foundation loading would not have a significant impact on the existing Footing, since the additional dead load could be assigned and distributed to the continuous, 2-story Foundation, which acts together with the supplemental Spread Footing.

5. The 4x12 x 16' Overhead Garage Door Header will adequately support the new Roof covering.

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JWS

6. The Barge Overhangs are supported with Outriggers @ 36" o.c., and are satisfactory.

Recommendations:

- ① — 1. Manufactured Roof Trusses: Field verify (after "tear-off") that connector plates joining the top and bottom Truss chords are at least 3"x 8".
 - ② — 2. Install a 4x12 SS DF Flush Beam(s) as necessary at the Ceiling over the Master Bath supported on the southerly exterior Bearing Wall and the interior Partition Wall located approximately 13', 16', and 23' from the rear exterior Bearing Wall. Install supports under each end of the 4x12 to prevent deflection contact with the bottom chords of the Trusses. Install 2-4x8 Blocks at the Ridge between the Trusses on each side of the cut Truss. Install 2x8 #1/btr DF Rafters on each side of the Skylight [Four (4) total] from front to rear. The existing framing will provide a sufficient Tie for these new Rafters. Provide lateral support for the 4x12 Headers to prevent rotation. *Field verify that roof bearing is to a bearing wall*
 - ③ — Support the new 2x8 Rafters at or near the Ridge with 2x4 Posts/Struts at 45°, minimum, down to the 4x12 Flush Beam(s) and other interior Partition Walls running perpendicular to the Trusses with the intent of distributing the Roof load from the new Rafters as much as possible
 - ④ — (Retrofit for the Ceiling is not recommended, since the new roof covering and additional weight will have no impact on the Ceiling support at the Skylight. However this would be a good time to make this repair.)
- 3. Conventionally framed Rafters: None
 - 4. Flush 5 1/8x28.5 Flush GluLam Beam supporting Second Story over the Garage: None
 - 5. Overhead Garage Door Header: None
 - 6. Barges: None

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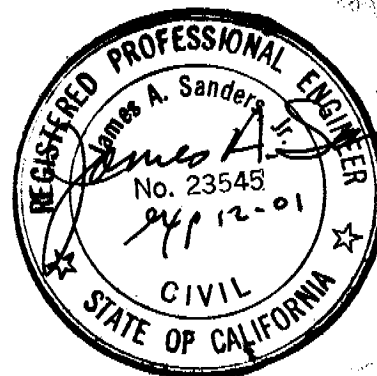
JMS

These recommendations are based on applying engineering judgement and building construction experience for using non-dedicated, interior Partition Walls to distribute and transfer design Roof loads down to the Foundation. This is compatible with the "spirit and purpose" of the Uniform Building Code, since this practice has been allowed through past years. The rationale is based on taking a small concentrated load from a tributary Roof area and distributing it over a larger area and transferring it down through stiff, 8' deep beams (Partition Walls), which for this building transfers the load to a Slab-On-Grade and finally the soil.

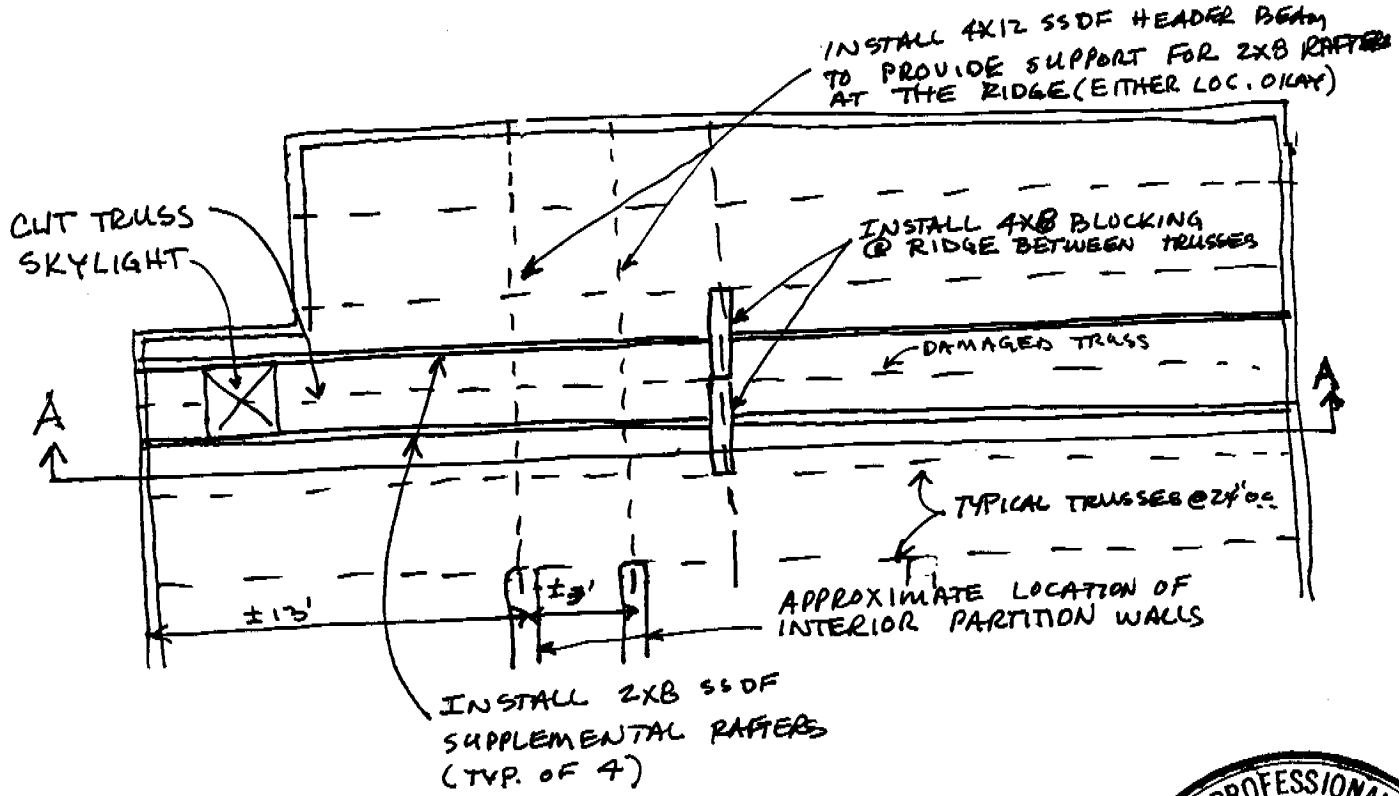
Notice to Roofing Contractor and Owner:

A. As with any building material subjected to loading, there will be deflection associated with concrete tile roofing material. The Uniform Building Code establishes the maximum allowable deflection under maximum design loading. Furthermore, pre-existing deflection will be more noticeable with concrete tile than with wood shakes, etc., since concrete tiles are uniformly shaped and wood shakes are very inconsistently shaped.

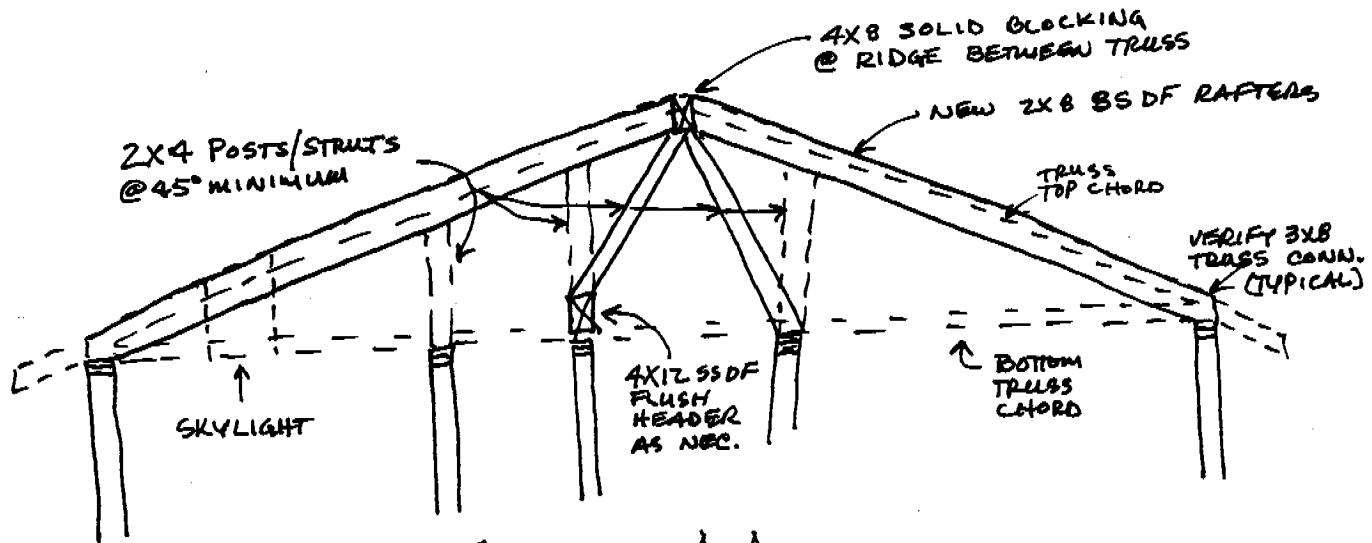
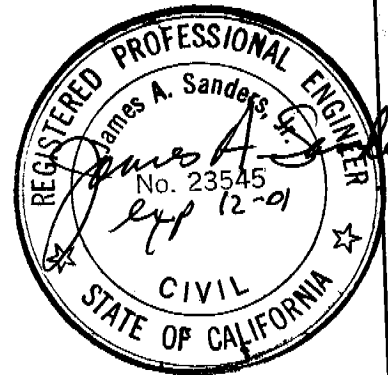
B. Calculations to support the findings in this report are available on request.



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PLAN VIEW OF ROOF RETROFIT
NTS



SECTION A-A
NTS
S/

| | | | |
|--------------|---|---------------|------------|
| Proj. No. 99 | Project: 7685 GREENHAVEN DR. - LEE/KUONG RES. | Date: 9-10-99 | Shr: 1/1/1 |
|--------------|---|---------------|------------|

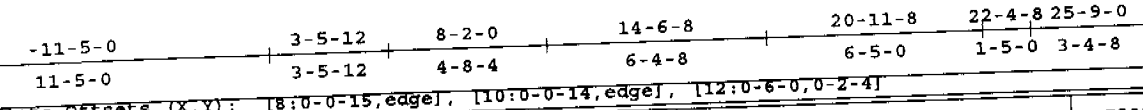
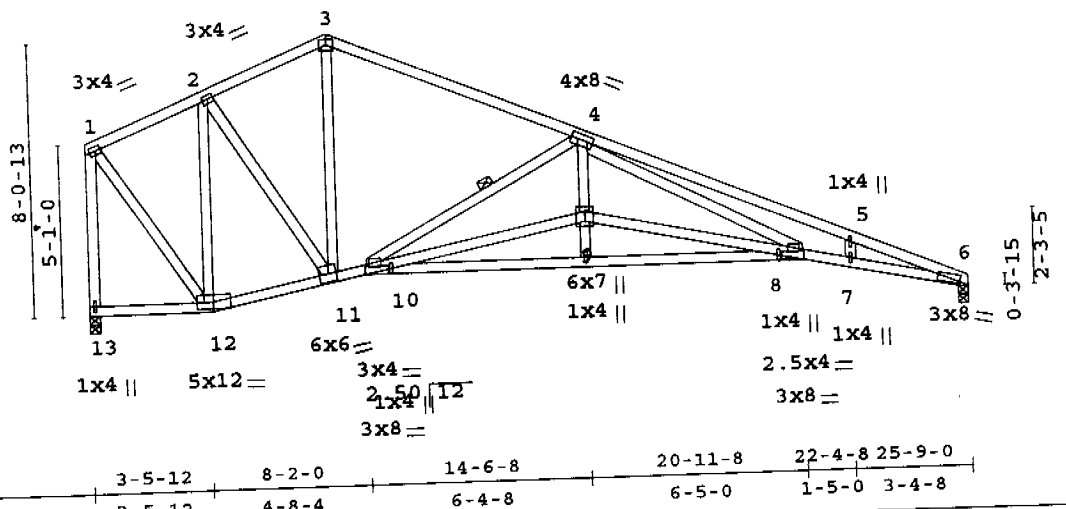
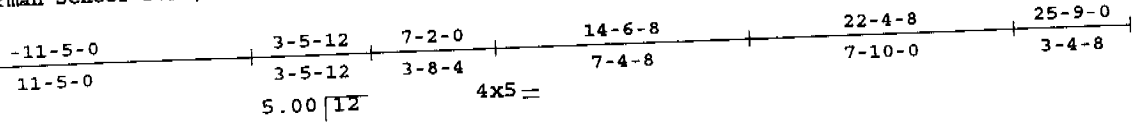


Plate Offsets (X,Y): [8:0-0-15,edge], [10:0-0-14,edge], [12:0-6-0,0-2-4]

| LOADING (psf) | SPACING | 2-0-0 | CSI | DEFL (in) (loc) | 1/defl | PLATES | GRIP |
|---------------|-----------------|----------|----------|-----------------|--------------|--------|----------------|
| TCLL 16.0 | Plates Increase | 1.15 | TC 0.82 | Vert (LL) -0.31 | 9-10 >984 | M20 | 186/148 |
| TCDL 11.0 | Lumber Increase | 1.15 | BC 0.91 | Vert (TL) -0.70 | 9-10 >439 | | |
| BCLL 0.0 | Rep Stress Incr | YES | WB 0.69 | Horz (TL) 0.26 | 6 n/a | | |
| BCDL 7.0 | Code | UBC/ICBO | (Matrix) | 1st LC LL Min | 1/defl = 360 | | Weight: 155 lb |

LUMBER
 TOP CHORD 2 X 4 DF No.2-G *Except*
 3-6 2 X 4 DF No.1&Btr-G
 BOT CHORD 2 X 4 DF No.2-G *Except*
 9-12 2 X 4 DF SS-G, 6-9 2 X 4 DF No.1&Btr-G
 WEBS 2 X 4 DF No.2-G

BRACING
 TOP CHORD Sheathed or 2-6-11 on center purlin spacing.
 BOT CHORD Rigid ceiling directly applied or 5-0-0 on center bracing.
 WEBS 1 Row at midpt 4-10

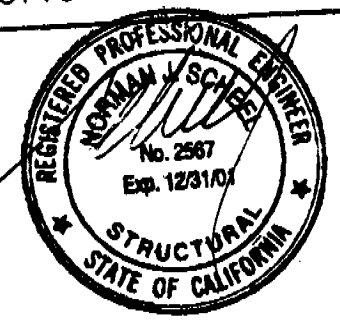
REACTIONS (lb/size) 13=866/0-3-8, 6=866/0-3-8

FORCES (lb) - First Load Case Only
 TOP CHORD 1-2=-459, 2-3=-825, 3-4=-885, 4-5=-3186, 5-6=-3156
 BOT CHORD 12-13=-0, 11-12=437, 10-11=629, 9-10=2486, 8-9=2467, 7-8=2970, 6-7=2915
 WEBS 2-12=-830, 2-11=650, 3-11=279, 4-10=-1965, 4-9=1205, 5-7=-240, 4-8=554, 1-13=-807, 1-12=686

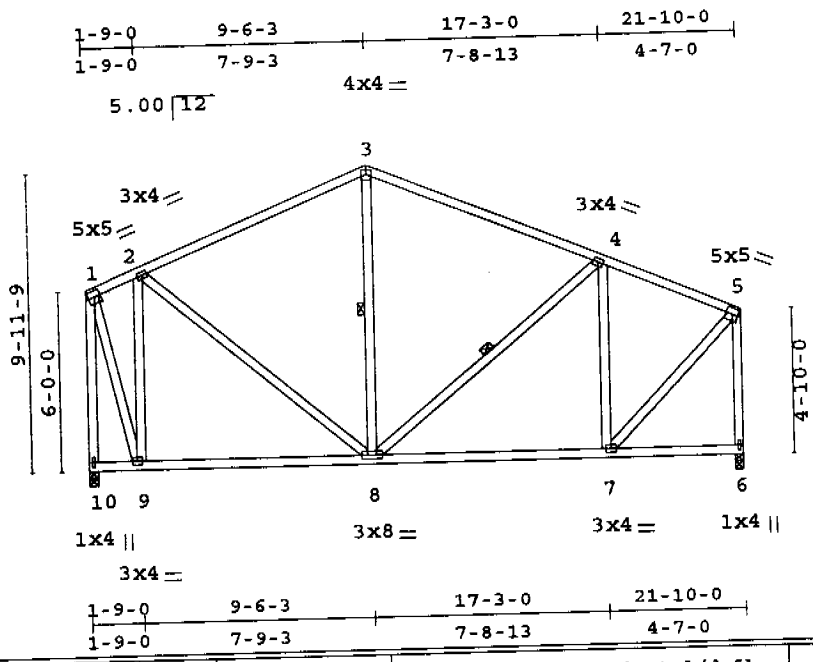
- NOTES**
- 1) This truss has been checked for unbalanced loading conditions.
 - 2) All plates are M20 plates unless otherwise indicated.
 - 3) This truss has been designed for a 10.0 psf bottom chord live load nonconcurrent with any other live loads per Table No. 16-B, UBC-94.
 - 4) A plate rating reduction of 20% has been applied for the green lumber members.
 - 5) Bearing at joint(s) 6 considers parallel to grain value using ANSI/TPI 1-1995 angle to grain formula. Building designer should verify capacity of bearing surface.
 - 6) This truss has been designed for both UBC-94 and ANSI/TPI 1-1995 plating criteria.

LOAD CASE(S) Standard

**NOT FOR FABRICATION
 FOR CALCULATION PURPOSES ONLY
 NOT FOR FABRICATION**



6/



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|---------------|------|------|---------|-----------------|-----|------|------|------------------------|-----------|----------------------|-------|------|--------|------|------|----------------|
| LOADING (psf) | TCLL | 16.0 | SPACING | 2-0-0 | CSI | TC | 0.71 | DEFL (in) (loc) l/defl | Vert (LL) | -0.10 | 8-9 | >999 | PLATES | M20 | GRIP | 186/148 |
| | TCDL | 11.0 | | Plates Increase | | 1.25 | BC | | 0.65 | Vert (TL) | -0.18 | 8-9 | | >999 | | Weight: 147 lb |
| | BCLL | 0.0 | | Lumber Increase | | 1.25 | WB | | 0.34 | Horz (TL) | 0.01 | 6 | | n/a | | |
| | BCDL | 7.0 | | Rep Stress Incr | | NO | Code | | UBC/ICBO | 1st LC LL Min l/defl | = 360 | | | | | |

LUMBER
 TOP CHORD 2 X 4 DF No.2-G
 BOT CHORD 2 X 4 DF No.2-G
 WEBS 2 X 4 DF No.2-G *Except*
 1-10 2 X 4 DF Std-G, 5-6 2 X 4 DF Std-G

BRACING
 TOP CHORD Sheathed or 6-0-0 on center purlin spacing, except end verticals.
 BOT CHORD Rigid ceiling directly applied or 6-0-0 on center bracing.
 WEBS 1 Row at midpt 3-8, 4-8

REACTIONS (lb/size) 10=732/0-3-8, 6=732/0-3-8

FORCES (lb) - First Load Case Only
 TOP CHORD 1-2=-183, 2-3=-435, 3-4=-435, 4-5=-434, 1-10=-721, 5-6=-701
 BOT CHORD 9-10=-0, 8-9=169, 7-8=401, 6-7=0
 WEBS 2-9=-542, 2-8=301, 3-8=-84, 4-8=1, 4-7=-329, 1-9=630, 5-7=577

- NOTES**
- 1) This truss has been checked for unbalanced loading conditions.
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 - 5) This truss has been designed for both UBC-94 and ANSI/TPI 1-1995 plating criteria.
- LOAD CASE(S) Standard

NOT FOR FABRICATION
 FOR CALCULATION PURPOSES ONLY
 NOT FOR FABRICATION



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| | | | | | |
|-----|-------|------------|-----|-----|-------------|
| JOB | Truss | Truss Type | QTY | PLY | |
| | SSS | MOD. QUEEN | 1 | 1 | JIM SANDERS |

Norman Scheel S.E., Citrus Heights, CA 9560932 8 Feb 18 1999 Mitek Industries, Inc. Tue Aug 31 11:23:15 1999 Page 1

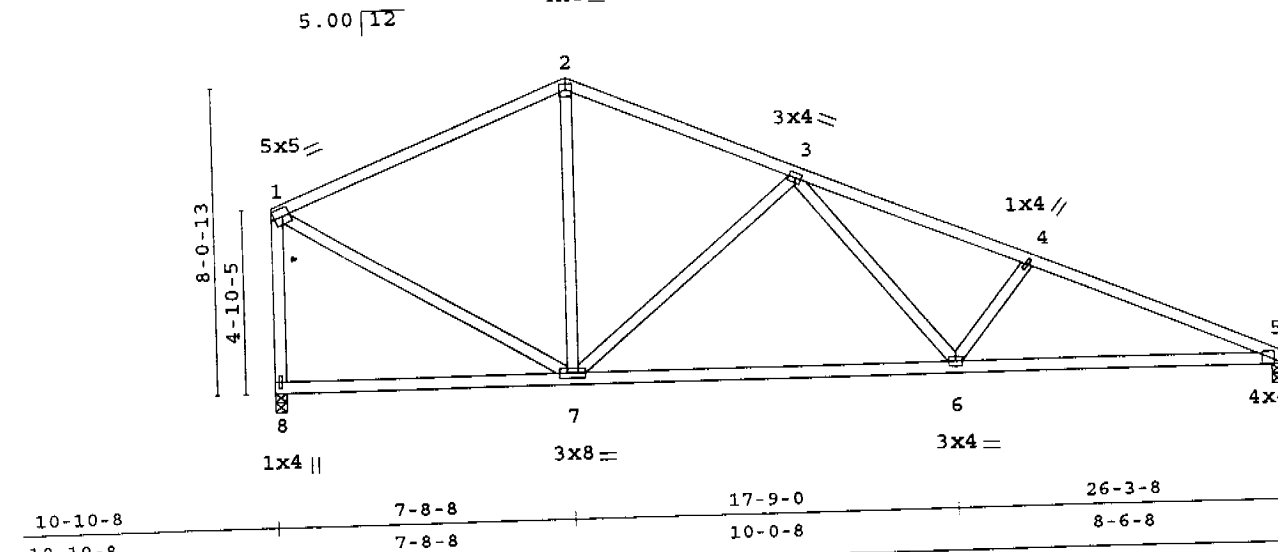
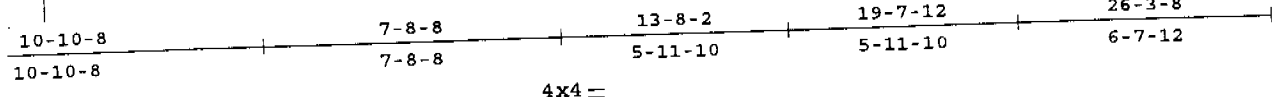


Plate Offsets (X,Y): [5:0-2-9,edge]

| | | | | | | |
|---------------|-----------------|----------|---------|----------------------------|--------|----------------|
| LOADING (psf) | SPACING | 2-0-0 | CSI | DEFL (in) (loc) 1/defl | PLATES | GRIP |
| TCLL 16.0 | Plates Increase | 1.15 | TC 0.69 | Vert (LL) -0.26 6-7 >999 | M20 | 186/148 |
| TCDL 11.0 | Lumber Increase | 1.15 | BC 0.69 | Vert (TL) -0.47 6-7 >661 | | |
| BCLL 0.0 | Rep Stress Incr | YES | WB 0.66 | Horz (TL) 0.03 5 n/a | | |
| BCDL 7.0 | Code | UBC/ICBO | | 1st LC LL Min 1/defl = 360 | | Weight: 125 lb |

LUMBER
TOP CHORD 2 X 4 DF No.1&Btr-G
BOT CHORD 2 X 4 DF No.1&Btr-G
WEBS 2 X 4 DF Std-G

BRACING
TOP CHORD Sheathed or 4-8-1 on center purlin spacing, except end verticals.
BOT CHORD Rigid ceiling directly applied or 6-0-0 on center bracing.

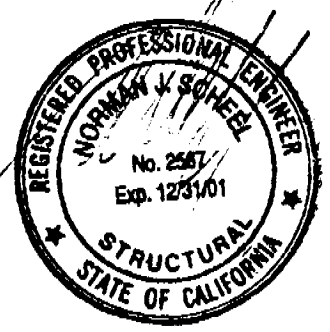
REACTIONS (lb/size) 5=884/0-3-8, 8=884/0-3-8

FORCES (lb) - First Load Case Only
TOP CHORD 1-2=-661, 2-3=-661, 3-4=-1454, 4-5=-1652, 1-8=-831
BOT CHORD 7-8=-0, 6-7=1055, 5-6=1518
WEBS 1-7=715, 2-7=143, 3-7=-593, 3-6=471, 4-6=-300

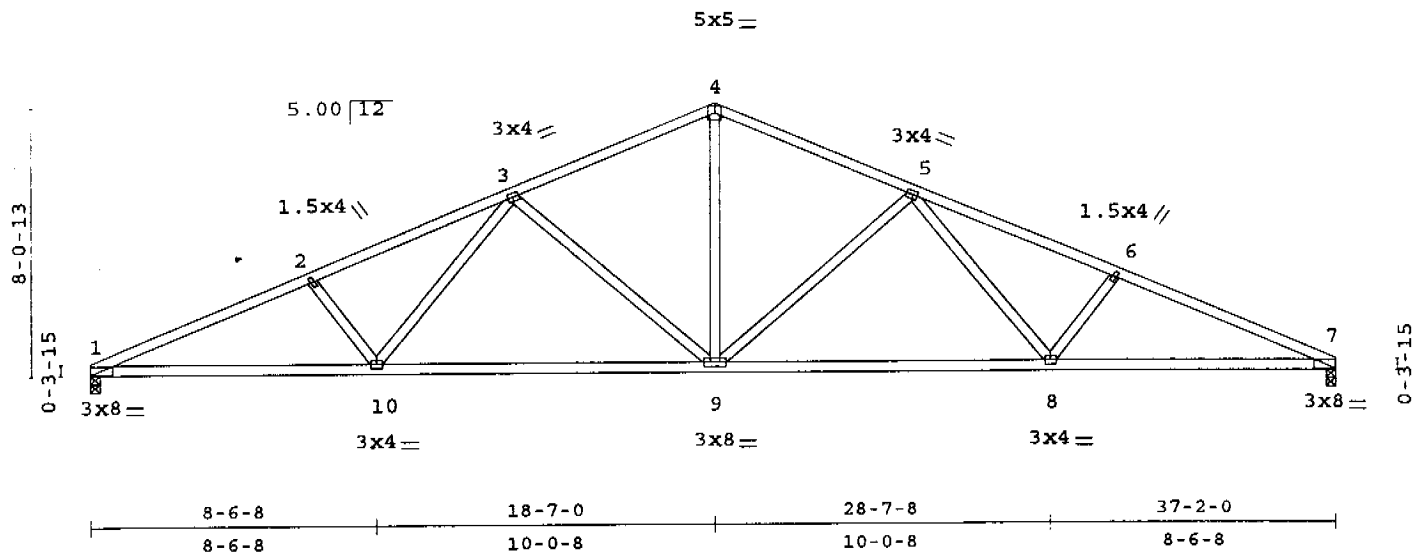
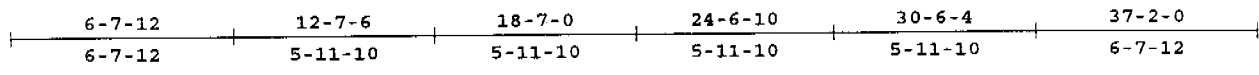
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 - 5) This truss has been designed for both UBC-94 and ANSI/TPI 1-1995 plating criteria.

LOAD CASE(S) Standard

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NOT FOR FABRICATION



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| | | | | |
|----------------------|----------------------|------------|-------------------------------|--------------------|
| LOADING (psf) | SPACING 2-0-0 | CSI | DEFL (in) (loc) 1/defl | PLATES GRIP |
| TCLL 16.0 | Plates Increase 1.15 | TC 0.41 | Vert (LL) -0.31 8-9 >999 | M20 186/148 |
| TCDL 11.0 | Lumber Increase 1.15 | BC 0.84 | Vert (TL) -0.61 8-9 >723 | |
| BCLL 0.0 | Rep Stress Incr YES | WB 0.66 | Horz (TL) 0.10 7 n/a | |
| BCDL 7.0 | Code UBC/ICBO | | 1st LC LL Min 1/defl = 360 | Weight: 162 lb |

LUMBER
 TOP CHORD 2 X 4 DF No.1&Btr-G
 BOT CHORD 2 X 4 DF No.1&Btr-G
 WEBS 2 X 4 DF Std-G

BRACING
 TOP CHORD Sheathed or 3-7-8 on center purlin spacing.
 BOT CHORD Rigid ceiling directly applied or 10-0-0 on center bracing.

REACTIONS (lb/size) 1=1254/0-3-8, 7=1254/0-3-8

FORCES (lb) - First Load Case Only
 TOP CHORD 1-2=-2589, 2-3=-2393, 3-4=-1612, 4-5=-1612, 5-6=-2393, 6-7=-2589
 BOT CHORD 1-10=2379, 9-10=1928, 8-9=1928, 7-8=2379
 WEBS 2-10=-290, 3-10=460, 3-9=-587, 4-9=918, 5-9=-587, 5-8=460, 6-8=-290

- NOTES**
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9/