

CITY OF SACRAMENTO
1231 I Street, Sacramento, CA 95814

Permit No: 0011200
Insp Area: 4

Site Address: 2217 ABLE CT SAC
Parcel No: 225-0114-016

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

CONTRACTOR
STEVEN ELLERMAN
1600 KITCHNER RD SUITE E
SAC, CA 95822

OWNER
FAVRAT

ARCHITECT

Nature of Work: PATIO COVER

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 D-03 + B License Number 765792 Date 9-20-00 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 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 9-20-00 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 EXEMPT 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 9-20-00 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.

Date of Request: _____

By: _____

**CITY OF SACRAMENTO DEVELOPMENT SERVICES DIVISION
PLANNING AND ZONING INFORMATION REQUEST**

X Project Address: 2317 ABLE CT

Assessor's Parcel Number: 325-0114-016

Previous Use _____

X Description of Request/Proposed Use: ALUMINUM WOODGRAIN PATIO
SUNBATH STRUCTURE COVER

Is This a Change of Use? _____

Zoning Designation: R1PUD

Prior Applications for Project Site(P#, Z#, DRPB#): _____

Comments: _____

Are There Any Planning Issues?: (circle one) YES NO → *OK on lot corner of 2nd driveway*

* Staff Site Plan Check Required? (Circle one) YES NO

* Field Inspection Required? (Circle one) YES NO

* Design Review/Preservation Required?: (Circle one) YES NO *OK PAVED?*

Planning Review by/Date: [Signature] 09-20-00

A list of items that must be reviewed by Planning is provided on the reverse side of this form.

MICROFILM AFTER FINAL



ICBO Evaluation Service, Inc.

5360 WORKMAN MILL ROAD • WHITTIER, CALIFORNIA 90601-2299

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EVALUATION REPORT

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ER-2621P

Reissued April 1, 2000

Filing Category: MISCELLANEOUS STRUCTURES (156)

ATTACHED AND FREESTANDING PATIO COVERS AND COMMERCIAL ROOF STRUCTURES

AMERIMAX BUILDING PRODUCTS, INC
1140 ALL PRO DRIVE
ELKHART, INDIANA 46514

1.0 SUBJECT

Attached and Freestanding Patio Covers and Commercial Roof Structures

2.0 DESCRIPTION

2.1 General:

The patio covers and commercial roof structures include free-standing and attached designs. The walls must be unenclosed. Allowable loads and a summary of plans under this report are shown in Table 1.

2.2 Materials:

2.2.1 Aluminum: The aluminum is available in roll-formed and extruded shapes of various alloys and tempers, complying with Chapter 20 of the UBC.

2.2.2 Steel: The steel is various grades of galvanized, cold-formed steel complying with ASTM A 653.

2.3 Installation:

The structures are erected and framed in the manner set forth in the attached plans.

2.4 Identification:

Each structure bears a permanent decal or identifying tag stating the allowable roof live load, the horizontal wind load, the uplift wind load, the name of the manufacturer and the model number.

3.0 EVIDENCE SUBMITTED

Plans, calculations, and reports of transverse load tests and fastener tests.

4.0 FINDINGS

That the Attached and Freestanding Patio Covers and Commercial Roof Structures of Amerimax Building Products, Inc., described in this report comply with the 1997 Uniform Building Code™, subject to the following conditions:

- 4.1 Construction is in accordance with the attached plans, dated February 8, 2000, and the *Uniform Building Code*.
- 4.2 The 10 psf (479 Pa) live load patio covers are in compliance with Appendix Chapter 31, Division III, of the code.

This report is subject to re-examination in one year.

TABLE 1

DRAWING NUMBER	NO. OF PAGES	TYPE OF STRUCTURE	SUPPORT METHOD	DESIGN LOAD (psf)			PERMITTED ENCLOSURE (based on horizontal wind calculations)
				Roof Live [or (Snow)]	Horizontal Wind ¹	Wind Uplift ¹	
GEN	1	General notes	—	10, 20 (20 to 60)	10.2 to 28.7	10.16 to 64.18	—
PS-	2	Structural configurations	Attached and freestanding	—	—	—	May not be enclosed
PS-	3	Roof panel spans, header spans, column spacing, column type, footing size	—	10, 20 (20 to 60)	—	7.5 to 64.18	—
DET	4	Component parts and details	Attached and freestanding	—	—	—	May not be enclosed
DET	4	Component parts and details	Attached and freestanding	—	—	—	May not be enclosed

¹10 psf = 47.88 Pa; 1 mph = 1.61 km/h.

¹Horizontal wind and wind-uplift loads developed with a basic wind speed of 70 or 90 mph, Exposures B and C, in accordance with Chapter 16, Division III, of the UBC.

²Roof live or horizontal wind and wind-uplift loads developed with a 70 or 90 mph basic wind speed, in accordance with Appendix Chapter 31, Division III, of the UBC.

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This report is based upon independent tests or other technical data submitted by the applicant. The ICBO Evaluation Service, Inc., technical staff has reviewed the test results and/or other data, but does not possess test facilities to make an independent verification. There is no warranty by ICBO Evaluation Service, Inc., expressed or implied, as to any "Finding" or other matter in the report or as to any product covered by the report. This disclaimer includes, but is not limited to, merchantability.

SOLID AND LATTICE

SOLID 16' PROTECTION BY 15' WIDE

LATTICE 16' PROTECTION BY 7' WIDE 9' TUBES

SCULPT RADIUS 1 CORNER OF LATTICE

SOLID TO HAVE FAN BEAM

EXTEND LIGHT BOX WIRE AND HOOK UP

CUSTOMERS FAN

^{MOUNT}
APPROXIMATELY 9' ON STUCCO WALL

MAKE ALL RAFTER ENDS MATCH

3 POST ON CONCRETE

1 FOOT OVERHANG

YOU NEED TO PICK-UP 2 "4X8"
VINYL LATTICE SHEETS

EVERYTHING
STANDARD WE

15 STRIPS
WITH TAILS
EVEN
WITH LITTLE BRICKS
16' QUERTR

TONGUE & GROOVE
2217 ARBLE CT
SAFORD, OR, 95535
419-7633

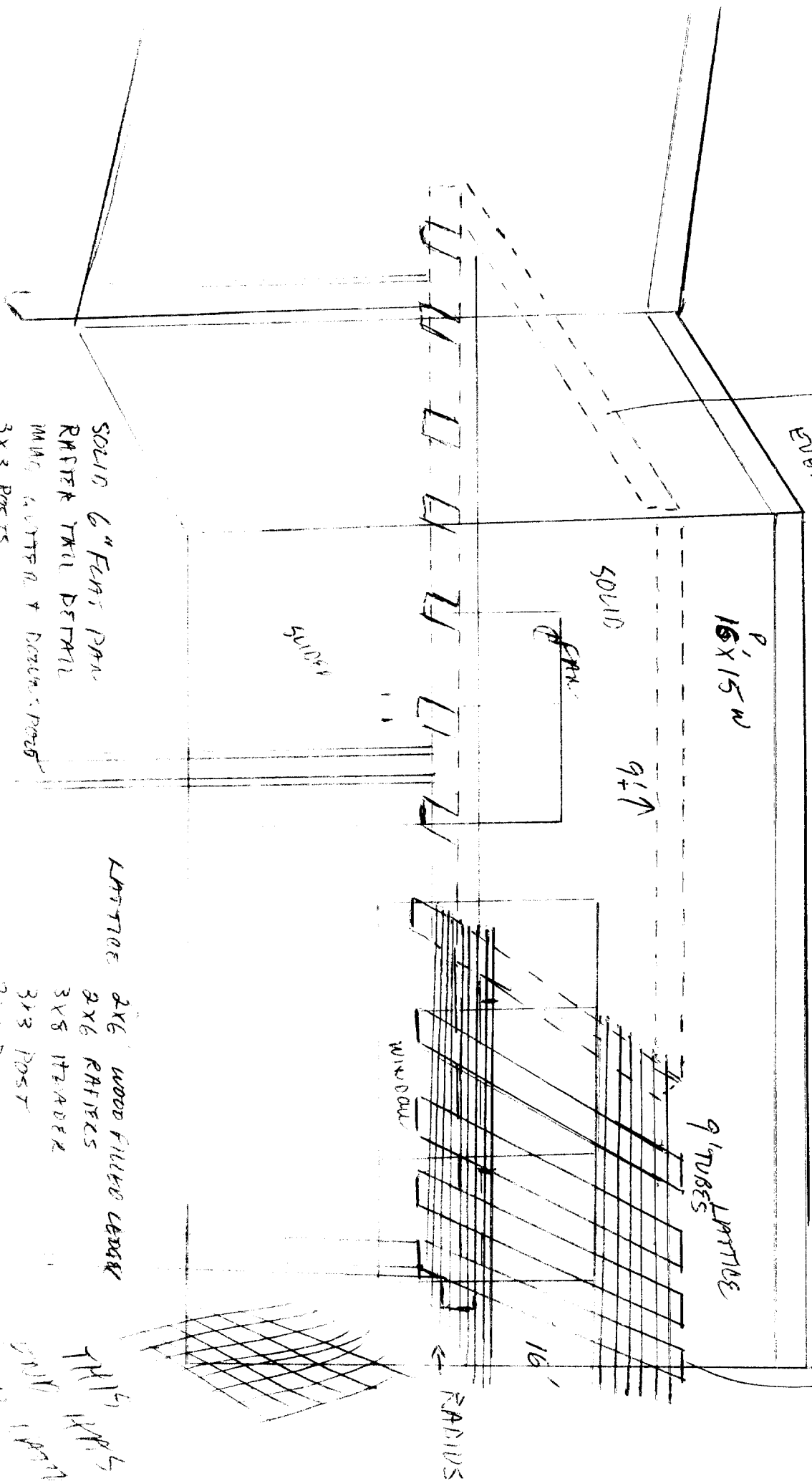
LATTICE
16' x 7'

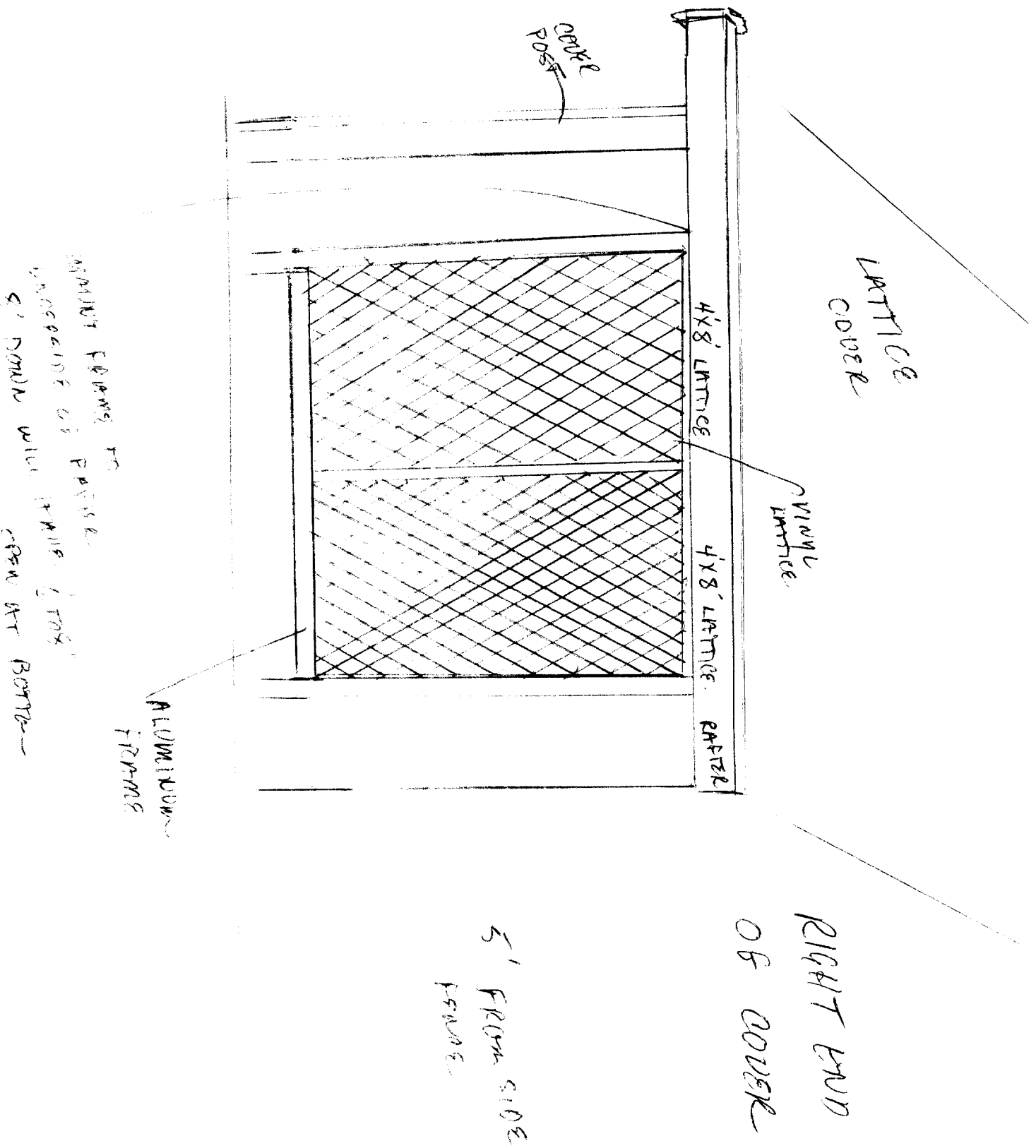
RAPIDS
16'

SOLID 6" FERN PAN
RAFTER TAIL DETAIL
MANG. GUTTER & DOWNSPOUT
3 x 3 POSTS
2 x 6 POST W/ P+G
3 x 8 INTEROSER

LATTICE 2x6 WOOD FILLED LEADER
2x6 RAFTERS
3x8 TRADER
3x3 POST
2x6 POST W/ P+G
1x3x1x6 LATTICE TUBES

16' x 16'
16' x 16'
16' x 16'





LATTICE COVER

WIND LATTICE

RIGHT END OF COVER

ADJUST FRAMES TO COMPENSATE FOR SWELL & SHRINK

OPEN AT BOTTOM

ALUMINUM FRAMES

5' FROM SIDE FRAME

OPEN ROSE

4x8' LATTICE

4x8' LATTICE

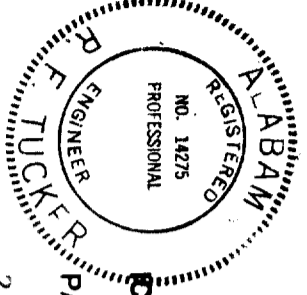
RATTLE

FCBO ES EVALUATION REPORT NO ER-2621P

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Registered Professional Engineer under the laws of the State of Minnesota.

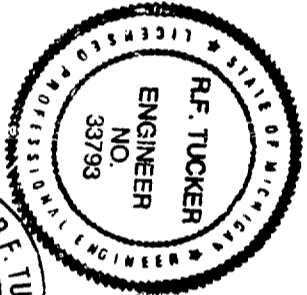
R. F. TUCKER

Registration No. 22

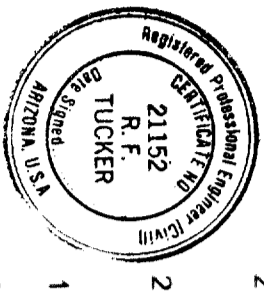
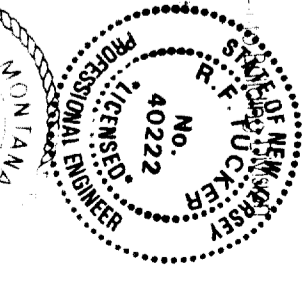
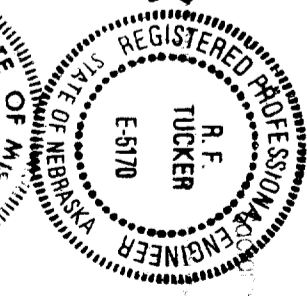
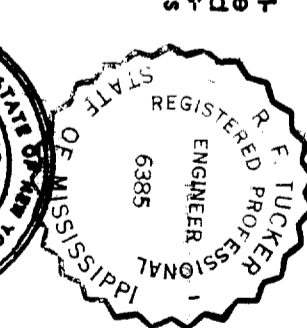


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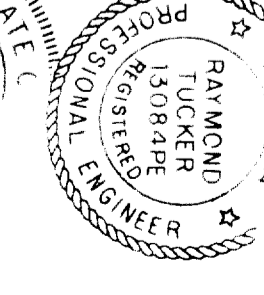
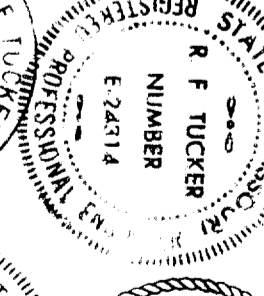
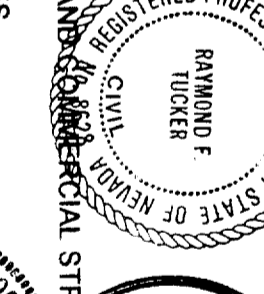
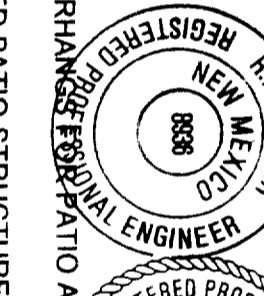


STRUCTURAL CONFIGURATIONS



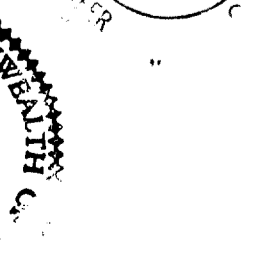
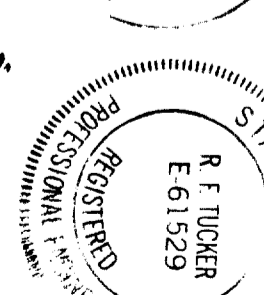
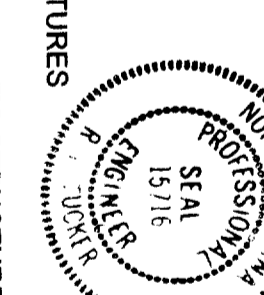
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1.0 ROOF PANEL SPANS AND OVERHANGS
2.0 FREESTANDING AND ATTACHED PATIO STRUCTURES

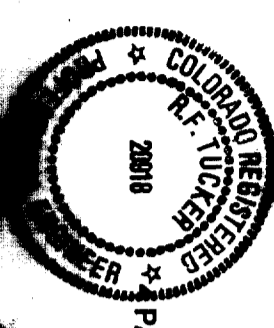
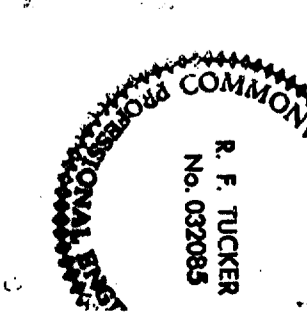
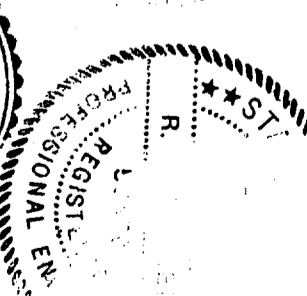
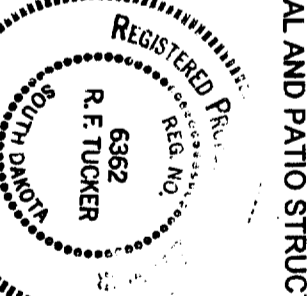
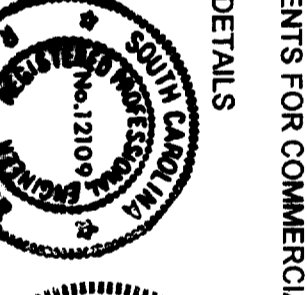
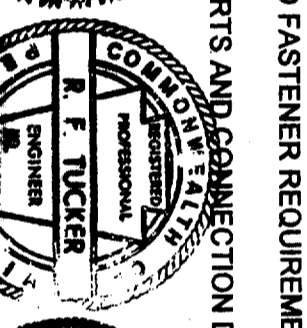


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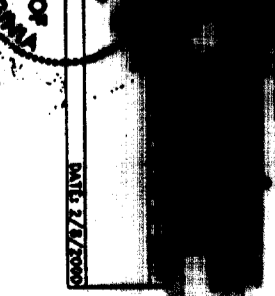
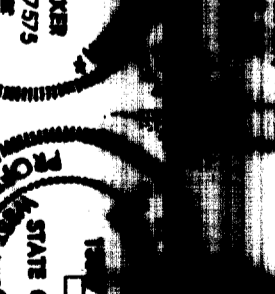
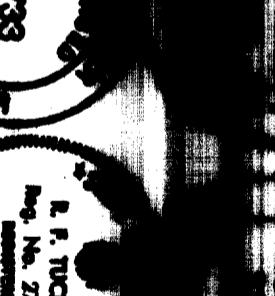
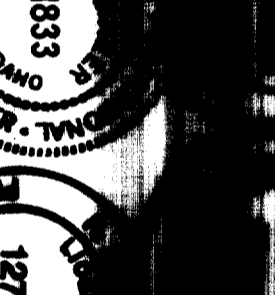
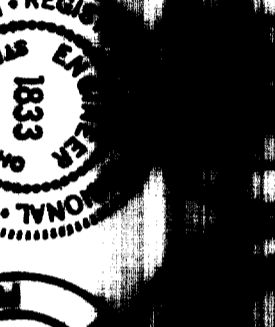
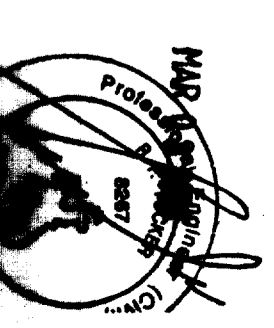
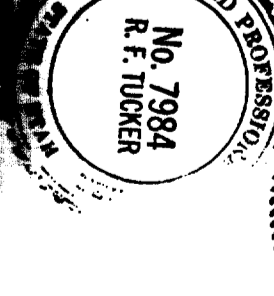
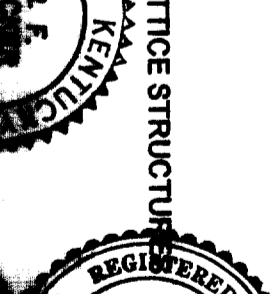
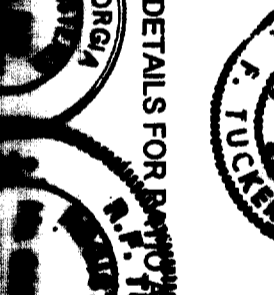
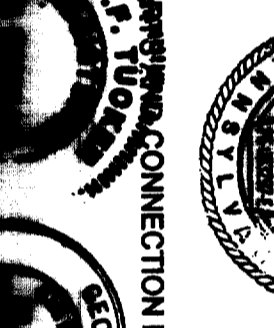
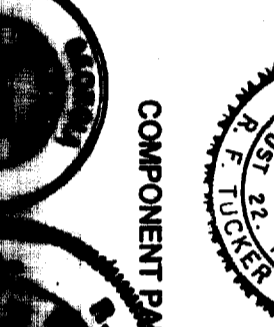
3.0 FREESTANDING AND ATTACHED COMMERCIAL STRUCTURES
4.0 FREESTANDING AND ATTACHED LATTICE PATIO STRUCTURES
5.0 FREESTANDING AND ATTACHED LATTICE COMMERCIAL STRUCTURES
6.0 COLUMN AND FASTENER REQUIREMENTS FOR COMMERCIAL AND PATIO STRUCTURES



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COMPONENT PARTS AND CONNECTION DETAILS FOR PATIO AND COMMERCIAL LATTICE STRUCTURES



GENERAL NOTES:
(CONTINUED FROM SHEET NO. 1)

NOTE: EXPOSURE "B" HAS TERRAIN WHICH HAS BUILDINGS, FOREST OR SURFACE IRREGULARITIES COVERING AT LEAST 20 PERCENT OF THE GROUND LEVEL AREA EXTENDING ONE MILE OR MORE FROM THE SITE. "C" HAS TERRAIN WHICH IS FLAT AND GENERALLY OPEN, EXTENDING ONE-HALF MILE OR MORE FROM THE SITE, IN ANY FULL QUADRANT.

5. CONCRETE MIX: $f_c=2500$ PSI 28 DAYS. APPENDIX CHAPTER 31 DIVISION III PATIO STRUCTURES MAY BE ATTACHED TO CONCRETE SLAB WITHOUT FOOTINGS WHEN THE COLUMN LOAD IS 750# OR LESS. CONCRETE SHALL BE A MINIMUM OF 3.5 INCHES THICK AND NO CRACKS WITHIN 2'-6" OF COLUMNS. COLUMNS SHALL BE SET BACK A MINIMUM OF 4 INCHES FROM EDGE OF SLAB.

6. FOOTINGS HAVE BEEN DESIGNED FOR CLASS 5 SOIL. ALLOWABLE SOIL BEARING PRESSURE OF 1000 POUNDS PER SQUARE FOOT. STRUCTURES SUPPORTED BY FLAGPOLE TYPE COLUMNS ARE NOT ADVERSELY AFFECTED BY A 1/2 INCH LATERAL GROUND MOVEMENT AND FOOTINGS FOR THOSE STRUCTURES HAVE BEEN DESIGNED FOR AN ALLOWABLE LATERAL SOIL BEARING PRESSURE OF 200 POUNDS PER SQUARE FOOT PER FOOT OF DEPTH. SOILS OF ORGANIC CLAYS OR SILTS REQUIRE A SOIL INVESTIGATION AND SPECIALLY DESIGNED FOOTINGS. FILLS MUST BE PLACED UNDER A LABORATORY CONTROLLED COMPACTION SUBJECT TO APPROVAL OF THE BUILDING OFFICIAL.

7. ALUMINUM BOLTS TO BE 2024-T4.

8. COMMERCIAL STRUCTURES MAY BE USED FOR PARKING OF MOTOR VEHICLES PER LOCAL BUILDING CODES. APPENDIX CHAPTER 31 DIVISION III PATIO STRUCTURES MAY NOT BE USED FOR PARKING OF MOTOR VEHICLES.

9. FREESTANDING STRUCTURES SHALL NOT BE ENCLOSED IN ANY MANNER.

10. STEEL BOLTS SHALL BE ASTM A-307.

11. ALTERNATE ALUMINUM ALLOYS OF EQUAL OR HIGHER STRENGTHS MAY BE USED.

12. STEEL FASTENERS SHALL BE EITHER STAINLESS, GALVANIZED OR DOUBLE CADMIUM PLATED "AN" BOLTS.

13. HIGH STRENGTH BOLTS SHALL BE ASTM A-325.

14. EMBEDDED COLUMN SURFACES SHALL BE CLEAN AND FREE FROM OILY SURFACES.

15. PATIO STRUCTURES ARE DESIGNED IN ACCORDANCE WITH APPENDIX CHAPTER 31 DIVISION III OF THE UNIFORM BUILDING CODE.

16. HEADER SPICES SHALL NOT BE LOCATED NEARER TO THE END OF THE STRUCTURE THAN THE FIRST INTERIOR COLUMN.

17. PATIO STRUCTURES MAY BE ENCLOSED WITH INSECT SCREENING.
18. STRUCTURES MAY BE ATTACHED TO RAFTER OVERHANGS PER SCHEDULE.
19. WHERE ALUMINUM ALLOY PARTS ARE IN CONTACT WITH DISSIMILAR METALS OTHER THAN STAINLESS, ALUMINIZED OR GALVANIZED STEEL, OR ABSORBENT BUILDING MATERIALS, LIKELY TO BE CONTINUOUSLY OR INTERMITTENTLY WET, THE FACING SURFACES SHALL BE PAINTED OR OTHERWISE SEPARATED IN ACCORDANCE WITH U.B.C. SECTION 2004.3.
20. ALL SCREWS CONFORM TO ANSI B18-6-4 AND SAE J933.

GENERAL NOTES FOR LATTICE STRUCTURES:

(PERTAINS TO LATTICE STRUCTURES ON DRAWINGS 97SC02 AND 97LT01 THRU 97LT06.)

1. SEE GENERAL NOTES, SHEET 1, SECTION 4 FOR LEVELLOAD AND WIND LOADS.
2. OPEN LATTICE STRUCTURES SHALL NOT BE ENCLOSED.

REGISTERED PROFESSIONAL ENGINEER
R. F. TUCKER
NO. 26019
STATE OF CALIFORNIA
EXPIRES 3/31/02
ENGINEERS STAMP

DATE: **MAR 03 2000**

REVISION	DATE	REVISION

Amertimax Engineering Services
1140 All Pro Drive
Eden, N.C. 27024

PROJECT NO: 97GN02
SHEET: 2 OF 2

1.0 ROOF PANEL SPANS AND OVERHANGS FOR PATIO AND COMMERCIAL STRUCTURES

3 1/2" x 12" ROOF PANEL DESIGN SPAN FOR PATIO STRUCTURES

LIVE LOAD (PSF)	PANEL TYP	12' HEIGHT		
		70 MPH	90 MPH	OVER HANG
10	0.018	16'-7"	16'-2"	7'-10"
	0.024	16'-6"	16'-5"	6'-7"
	0.032	20'-6"	20'-4"	6'-4"
	0.036	21'-4"	21'-4"	9'-10"
20	0.018	11'-11"	11'-11"	5'-8"
	0.024	13'-5"	13'-5"	6'-5"
	0.032	15-11"	15-11"	7-6"
	0.036	17-0"	17-0"	7-10"
25	0.018	10'-8"	10'-8"	5'-2"
	0.024	12'-3"	12'-3"	5-11"
	0.032	14-3"	14-3"	6-11"
	0.036	15-3"	15-3"	7-3"
30	0.018	9'-10"	9'-10"	4'-8"
	0.024	11-3"	11-3"	5-5"
	0.032	13-1"	13-1"	6-4"
	0.036	14-0"	14-0"	6-10"
40	0.018	8'-7"	8'-7"	4'-1"
	0.024	9-10"	9-10"	4-8"
	0.032	11-5"	11-5"	5-7"
	0.036	12-3"	12-3"	5-11"
60	0.018	7-1"	7-1"	3-4"
	0.024	8-1"	8-1"	3-10"
	0.032	9-5"	9-5"	4-6"
	0.036	10-1"	10-1"	4-10"

TABLE 1.1

2 1/2" x 18" STRUCTURAL PANEL FOR PATIO COVERS

LIVE LOAD (PSF)	PANEL TYP	12' HEIGHT		
		70 MPH	90 MPH	OVER HANG
10	0.018	12'-4"	11'-11"	5'-8"
	0.024	12'-4"	11'-11"	5'-8"
	0.032	14'-10"	14'-10"	4'-3"
	0.036	15'-11"	15'-11"	5'-10"
20	0.018	8'-0"	8'-0"	3'-10"
	0.024	8'-0"	8'-0"	3'-10"
	0.032	10'-7"	10'-7"	3'-0"
	0.036	11'-5"	11'-5"	3'-0"
30	0.018	7'-4"	7'-4"	3'-6"
	0.024	7'-4"	7'-4"	3'-6"
	0.032	9'-5"	9'-5"	3'-0"
	0.036	10'-1"	10'-1"	2'-5"
40	0.018	6'-5"	6'-5"	2'-5"
	0.024	6'-5"	6'-5"	2'-5"
	0.032	8-5"	8-5"	2-2"
	0.036	9-0"	9-0"	4-0"
60	0.018	4-1"	4-1"	1-10"
	0.024	4-1"	4-1"	1-10"
	0.032	6-3"	6-3"	2-2"
	0.036	7-0"	7-0"	3-0"

TABLE 1.2

2 1/2" x 12" STEEL PANEL DESIGN SPAN FOR PATIO STRUCTURES

LIVE LOAD (PSF)	PANEL TYP	12' HEIGHT		
		70 MPH	90 MPH	OVER HANG
10	0.018	14'-8"	14'-8"	5-5"
	0.024	14'-8"	14'-8"	5-5"
	0.032	16'-2"	16'-2"	4-0"
	0.036	17-4"	17-4"	4-4"
20	0.018	10'-5"	10'-5"	4-10"
	0.024	10'-5"	10'-5"	4-10"
	0.032	11-8"	11-8"	5-4"
	0.036	12-2"	12-2"	5-4"
25	0.018	9'-8"	9'-8"	3-10"
	0.024	9'-8"	9'-8"	3-10"
	0.032	10-11"	10-11"	5-0"
	0.036	10-11"	10-11"	5-0"
30	0.018	8'-5"	8'-5"	3-0"
	0.024	8'-5"	8'-5"	3-0"
	0.032	9-7"	9-7"	3-8"
	0.036	10-1"	10-1"	4-4"
40	0.018	6-5"	6-5"	2-5"
	0.024	6-5"	6-5"	2-5"
	0.032	7-10"	7-10"	1-8"
	0.036	8-10"	8-10"	1-8"
60	0.018	4-1"	4-1"	1-8"
	0.024	4-1"	4-1"	1-8"
	0.032	5-10"	5-10"	1-8"
	0.036	6-3"	6-3"	3-11"

TABLE 1.3

2 1/2" x 6" ROOF PANEL DESIGN SPAN FOR PATIO STRUCTURES

LIVE LOAD (PSF)	PANEL TYP	12' HEIGHT		
		70 MPH	90 MPH	OVER HANG
10	0.018	13-3"	13-3"	6-5"
	0.024	14-5"	14-4"	6-11"
	0.032	16-3"	16-3"	7-10"
	0.036	18-5"	18-5"	8-7"
20	0.018	10-5"	10-5"	5-0"
	0.024	11-9"	11-9"	5-8"
	0.032	13-1"	13-1"	6-10"
	0.036	14-1"	14-1"	7-1"
25	0.018	9-8"	9-8"	4-8"
	0.024	10-5"	10-5"	5-0"
	0.032	11-9"	11-9"	5-8"
	0.036	12-3"	12-3"	6-11"
30	0.018	8-8"	8-8"	4-1"
	0.024	9-5"	9-5"	4-8"
	0.032	10-7"	10-7"	5-1"
	0.036	11-3"	11-3"	5-11"
40	0.018	7-8"	7-8"	3-7"
	0.024	8-8"	8-8"	4-1"
	0.032	9-9"	9-9"	4-8"
	0.036	10-7"	10-7"	5-1"
60	0.018	5-10"	5-10"	2-9"
	0.024	6-11"	6-11"	3-3"
	0.032	7-0"	7-0"	3-0"
	0.036	8-5"	8-5"	4-0"

TABLE 1.4

2 1/2" x 12" ROOF PANEL DESIGN SPAN FOR PATIO STRUCTURES

LIVE LOAD (PSF)	PANEL TYP	12' HEIGHT		
		70 MPH	90 MPH	OVER HANG
10	0.018	12-4"	12-0"	5-10"
	0.024	14-5"	14-5"	6-7"
	0.032	15-9"	15-9"	7-3"
	0.036	16-5"	16-5"	7-6"
20	0.018	8-11"	8-11"	4-3"
	0.024	11-4"	11-4"	5-3"
	0.032	12-7"	12-7"	5-9"
	0.036	13-1"	13-1"	6-0"
25	0.018	8-0"	8-0"	3-10"
	0.024	10-5"	10-5"	4-10"
	0.032	11-8"	11-8"	5-4"
	0.036	12-2"	12-2"	5-4"
30	0.018	7-4"	7-4"	3-4"
	0.024	9-4"	9-4"	4-7"
	0.032	10-11"	10-11"	5-0"
	0.036	11-4"	11-4"	5-8"
40	0.018	6-5"	6-5"	3-0"
	0.024	8-4"	8-4"	4-0"
	0.032	9-8"	9-8"	4-7"
	0.036	10-4"	10-4"	4-8"
60	0.018	4-1"	4-1"	2-9"
	0.024	6-10"	6-10"	3-3"
	0.032	7-10"	7-10"	3-8"
	0.036	8-3"	8-3"	3-11"

TABLE 1.5

3 1/2" x 12" PANEL ALLOW. DESIGN SPAN FOR COMMERCIAL STRUCTURES

LIVE LOAD (PSF)	PANEL TYP	EXP. B. EXPOSURE C	MAX OVER HANG		
			70 MPH	90 MPH	MAX OVER HANG
20	0.018	11-11"	11-11"	5-6"	
	0.024	13-5"	13-5"	6-5"	
	0.032	15-11"	15-11"	7-6"	
	0.036	16-11"	16-11"	7-9"	
25	0.018	10-5"	10-5"	5-2"	
	0.024	12-3"	12-3"	5-11"	
	0.032	14-3"	14-3"	6-11"	
	0.036	15-3"	15-3"	7-3"	
30	0.018	9-10"	9-10"	4-5"	
	0.024	11-3"	11-3"	5-5"	
	0.032	13-1"	13-1"	6-4"	
	0.036	14-0"	14-0"	6-9"	
40	0.018	8-7"	8-7"	4-1"	
	0.024	9-10"	9-10"	4-8"	
	0.032	11-5"	11-5"	5-8"	
	0.036	12-2"	12-2"	5-11"	
60	0.018	7-1"	7-1"	3-4"	
	0.024	8-1"	8-1"	3-10"	
	0.032	9-5"	9-5"	4-6"	
	0.036	10-1"	10-1"	4-10"	

TABLE 1.6

2 1/2" x 12" STEEL PANEL ALLOW. SPAN FOR COMMERCIAL STRUCTURES

LIVE LOAD (PSF)	PANEL TYP	EXP. B. EXPOSURE C	MAX OVER HANG		
			70 MPH	90 MPH	MAX OVER HANG
20	0.018	12-1"	12-1"	4-4"	
	0.024	14-1"	14-1"	4-4"	
	0.032	16-11"	16-11"	4-0"	
	0.036	18-11"	18-11"	3-9"	
25	0.018	10-11"	10-11"	3-4"	
	0.024	12-0"	12-0"	3-9"	
	0.032	14-0"	14-0"	2-1"	
	0.036	15-9"	15-9"	3-5"	
30	0.018	9-0"	9-0"	2-1"	
	0.024	10-0"	10-0"	2-1"	
	0.032	11-0"	11-0"	1-5"	
	0.036	12-2"	12-2"	2-11"	
40	0.018	8-2"	8-2"	1-5"	
	0.024	9-2"	9-2"	1-5"	
	0.032	10-2"	10-2"	1-5"	
	0.036	11-1"	11-1"	1-10"	
60	0.018	4-1"	4-1"	1-10"	
	0.024	5-5"	5-5"	2-2"	
	0.032	6-5"	6-5"	3-0"	
	0.036	7-0"	7-0"	4-3"	

2 1/2" x 6" ROOF PANEL ALLOW. SPAN FOR COMMERCIAL STRUCTURES

LIVE LOAD (PSF)	PANEL TYP	EXP. B. EXPOSURE C	MAX OVER HANG		
			70 MPH	90 MPH	MAX OVER HANG
20	0.018	9-8"	9-8"	4-8"	
	0.024	10-5"	10-5"	4-10"	
	0.032	11-9"	11-9"	5-6"	
	0.036	14-1"	14-1"	6-8"	
25	0.018	8-8"	8-8"	4-2"	
	0.024	9-5"	9-5"	4-6"	
	0.032	10-7"	10-7"	5-1"	
	0.036	12-4"	12-4"	6-1"	
30	0.018	7-5"	7-5"	3-7"	
	0.024	8-5"	8-5"	4-1"	
	0.032	9-9"	9-9"	4-8"	
	0.036	11-8"	11-8"	5-7"	
40	0.018	6-8"	6-8"	3-3"	
	0.024	7-8"	7-8"	3-3"	
	0.032	8-8"	8-8"	4-0"	
	0.036	10-2"	10-2"	4-10"	
60	0.018	4-1"	4-1"	1-10"	
	0.024	5-5"	5-5"	2-2"	
	0.032	6-5"	6-5"	3-0"	
	0.036	7-0"	7-0"	4-0"	

TABLE 1.9

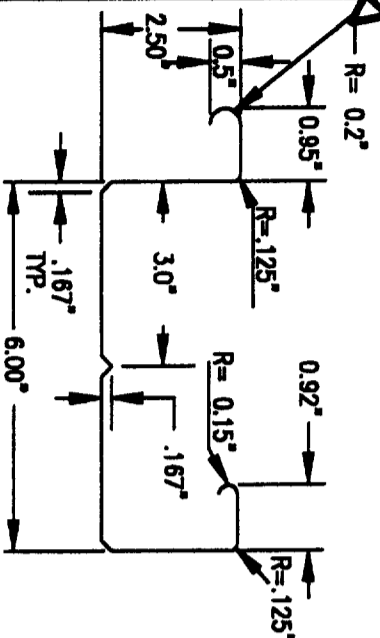
2 1/2" x 18" ROOF PANEL ALLOW. SPAN FOR COMMERCIAL STRUCTURES

LIVE LOAD (PSF)	PANEL TYP	EXP. B. EXPOSURE C	MAX OVER HANG		
			70 MPH	90 MPH	MAX OVER HANG
20	0.018	8-8"	8-8"	4-0"	
	0.024	10-11"	10-11"	4-0"	
	0.032	12-1"	12-1"	4-0"	
	0.036	14-1"	14-1"	4-0"	
25	0.018	7-1"	7-1"	3-4"	
	0.024	9-0"	9-0"	3-4"	
	0.032	10-11"	10-11"	3-9"	
	0.036	11-5"	11-5"	2-1"	
30	0.018	6-0"	6-0"	2-1"	
	0.024	7-0"	7-0"	2-1"	
	0.032	8-4"	8-4"	1-5"	
	0.036	9-2"	9-2"	2-11"	
40	0.018	5-2"	5-2"	1-5"	
	0.024	6-2"	6-2"	1-5"	
	0.032	7-2"	7-2"	1-5"	
	0.036	8-2"	8-2"	1-5"	
60	0.018	3-2"	3-2"	1-5"	
	0.024	4-2"	4-2"	1-5"	
	0.032	5-2"	5-2"	1-5"	
	0.036	6-2"	6-2"	2-11"	

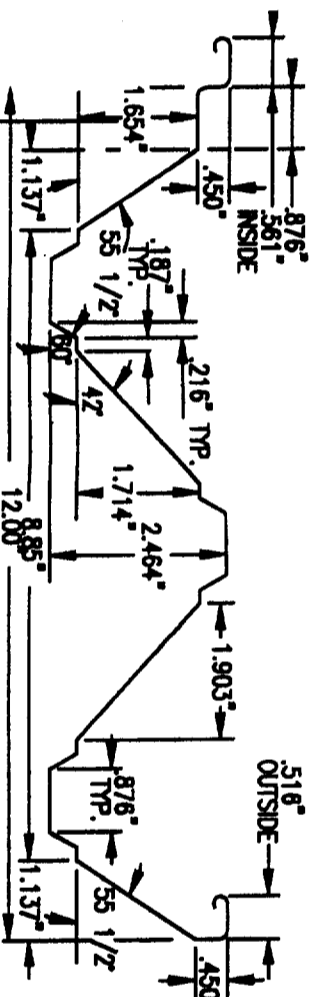
TABLE 1.7

2 1/2" x 18" ROOF PANEL ALLOW. DESIGN SPAN FOR COMMERCIAL STRUCTURES

LIVE LOAD (PSF)	PANEL TYP	EXP. B. EXPOSURE C	MAX OVER HANG		
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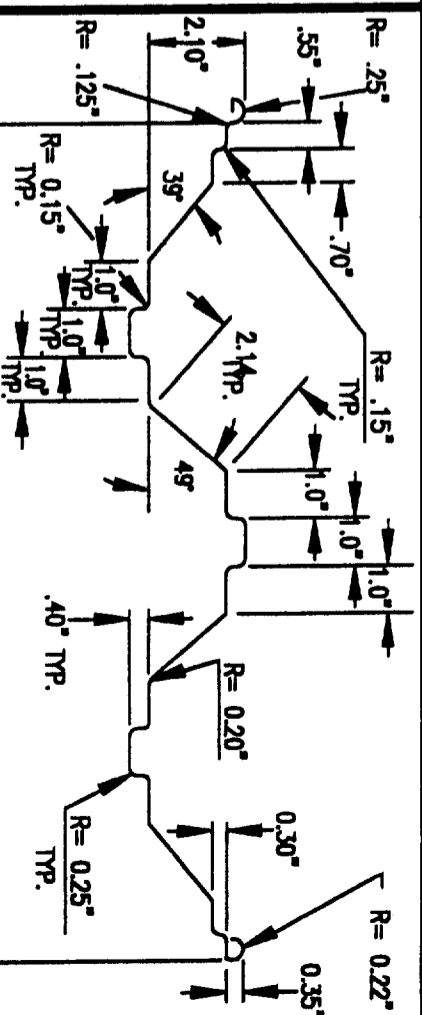


(A) 6" FLAT PAN
(3006-H391 ALUM. ALLOY)



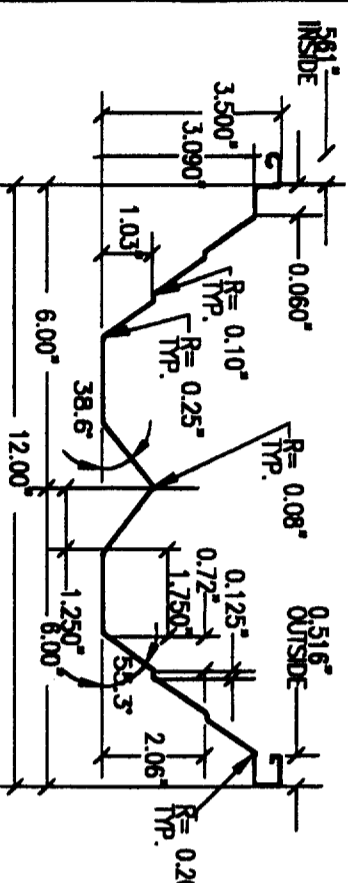
(B) 12" STRUCTURAL PANEL (3006-H391 ALUM. ALLOY)

FOR STEEL PANEL: ASTM A 653 GRADE 80 STRUCTURAL QUALITY
 F_y = 80 KSI STEEL
 30 GA GALV T=0.0157
 28 GA GALV T=0.0187

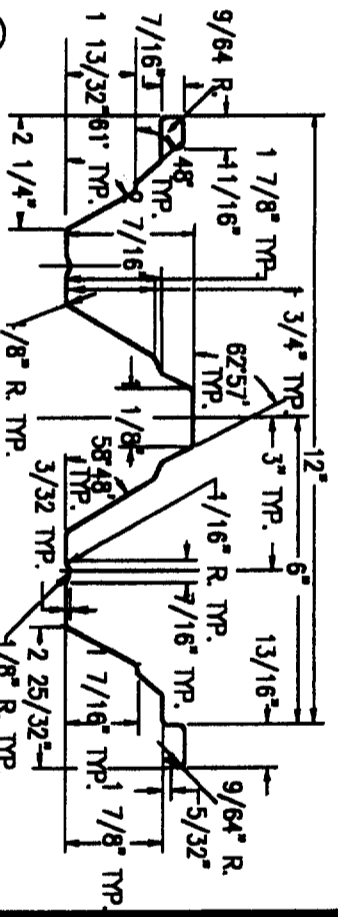


(C) 18" STRUCTURAL PANEL (3006-H391 ALUM. ALLOY)

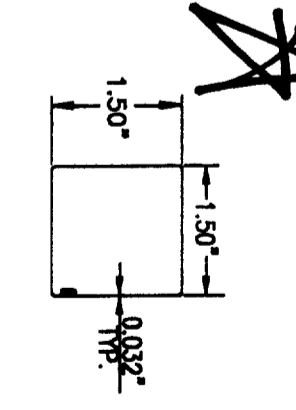
FOR STEEL PANEL: ASTM A 653 GRADE 50, 50 CLASS 1
 30 GA GALV. T=0.0157"



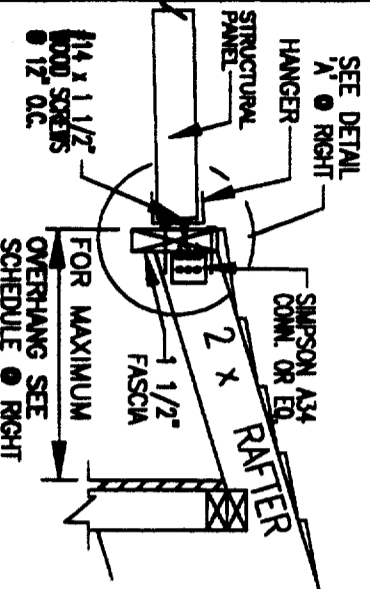
(D) 3 1/2" X 12" STRUCTURAL PANEL



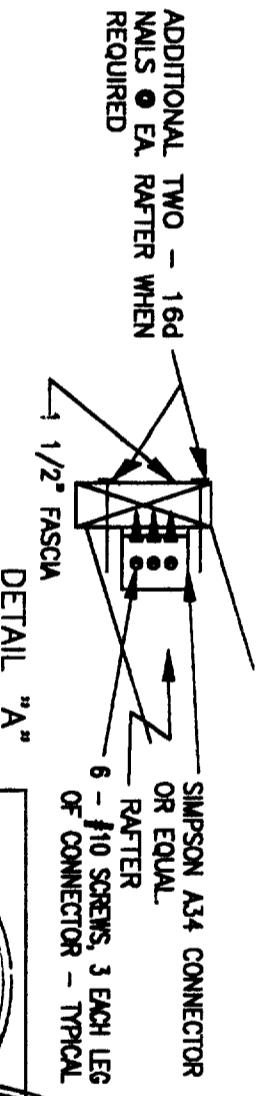
(E) 1 1/2" SQUARE COLUMN (3003-H16 ALUM. ALLOY)



(F) 3" SQUARE COLUMN (3003-H16 ALUM. ALLOY)



(G) ALTERNATE EAVE ATTACHMENT

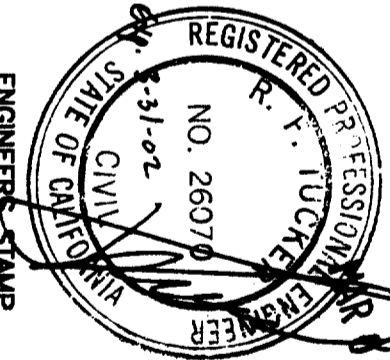


DETAIL "A"

SCHEDULE FOR MAXIMUM RAFTER OVERHANGS FOR AWING PROJECTIONS

RAFTER SIZE (INCHES)	18' O.C.	24' O.C.	30' O.C.	36' O.C.	42' O.C.	48' O.C.	54' O.C.	60' O.C.
2 x 4	10	10	10	10	10	10	10	10
2 x 6	15	15	15	15	15	15	15	15
2 x 8	20	20	20	20	20	20	20	20
2 x 10	25	25	25	25	25	25	25	25
2 x 12	30	30	30	30	30	30	30	30
3 x 8	35	35	35	35	35	35	35	35
3 x 10	40	40	40	40	40	40	40	40
3 x 12	45	45	45	45	45	45	45	45
4 x 6	50	50	50	50	50	50	50	50
4 x 8	55	55	55	55	55	55	55	55
4 x 10	60	60	60	60	60	60	60	60
4 x 12	65	65	65	65	65	65	65	65
5 x 6	70	70	70	70	70	70	70	70
5 x 8	75	75	75	75	75	75	75	75
5 x 10	80	80	80	80	80	80	80	80
5 x 12	85	85	85	85	85	85	85	85
6 x 6	90	90	90	90	90	90	90	90
6 x 8	95	95	95	95	95	95	95	95
6 x 10	100	100	100	100	100	100	100	100
6 x 12	105	105	105	105	105	105	105	105
7 x 6	110	110	110	110	110	110	110	110
7 x 8	115	115	115	115	115	115	115	115
7 x 10	120	120	120	120	120	120	120	120
7 x 12	125	125	125	125	125	125	125	125
8 x 6	130	130	130	130	130	130	130	130
8 x 8	135	135	135	135	135	135	135	135
8 x 10	140	140	140	140	140	140	140	140
8 x 12	145	145	145	145	145	145	145	145
9 x 6	150	150	150	150	150	150	150	150
9 x 8	155	155	155	155	155	155	155	155
9 x 10	160	160	160	160	160	160	160	160
9 x 12	165	165	165	165	165	165	165	165
10 x 6	170	170	170	170	170	170	170	170
10 x 8	175	175	175	175	175	175	175	175
10 x 10	180	180	180	180	180	180	180	180
10 x 12	185	185	185	185	185	185	185	185
11 x 6	190	190	190	190	190	190	190	190
11 x 8	195	195	195	195	195	195	195	195
11 x 10	200	200	200	200	200	200	200	200
11 x 12	205	205	205	205	205	205	205	205
12 x 6	210	210	210	210	210	210	210	210
12 x 8	215	215	215	215	215	215	215	215
12 x 10	220	220	220	220	220	220	220	220
12 x 12	225	225	225	225	225	225	225	225

REQUIRES ADDITIONAL 2 - 16d NAILS EACH RAFTER



Amerimax
 ENGINEERING SERVICES
 1140 All Pro Drive
 Elkhart, IN 46514

ICBO ES EVALUATION REPORT NO. ER-2621P

DATE: 2/8/2000

SCALE: NONE

PROJECT: PART COMPONENT PARTS & CONNECTION DETAILS

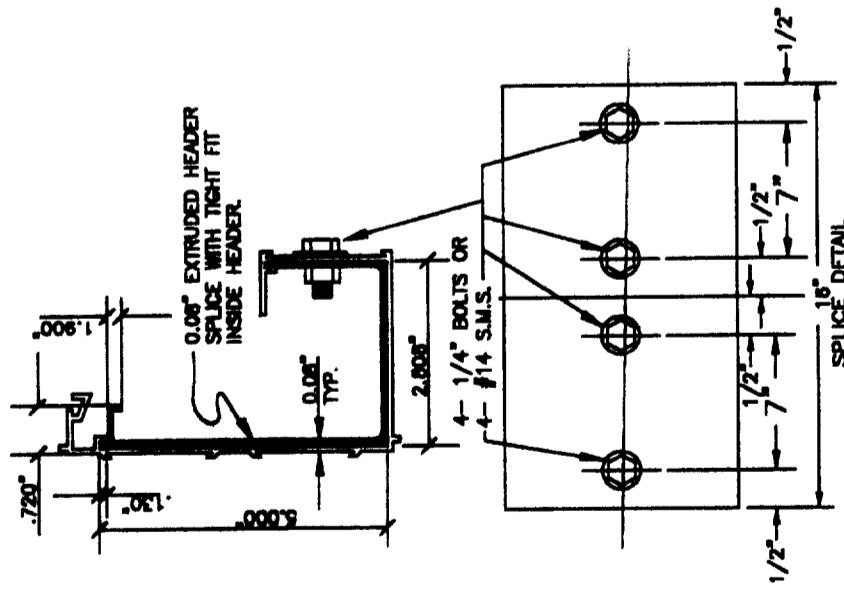
DATE: 2/8/2000

REVISION: 97CD01

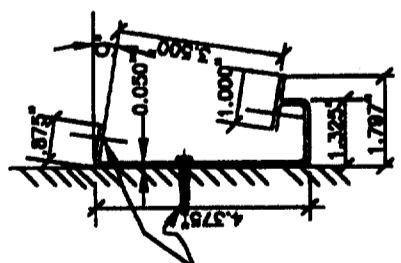
SHEET: 1 OF 9

STRUCTURAL PANELS + TYP. CONNECTION DETAILS

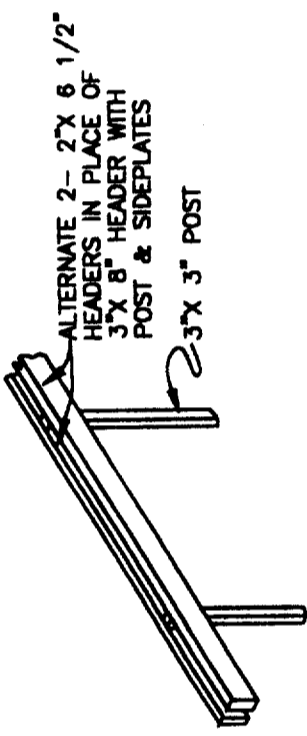
NO.	DATE	REVISION



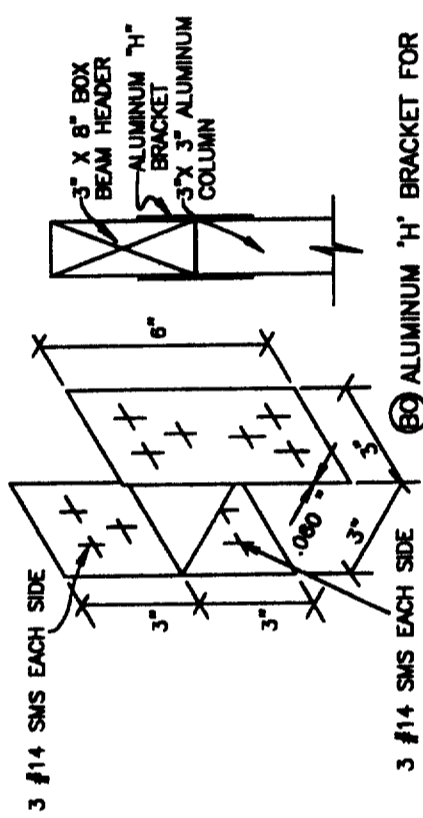
BJ 5 1/2" EXTRUDED HEADER SPLICE
(6061-T6 ALUM. ALLOY)



BM 3 1/2" "G" RAIL
(6063-T6 ALUM. ALLOY)

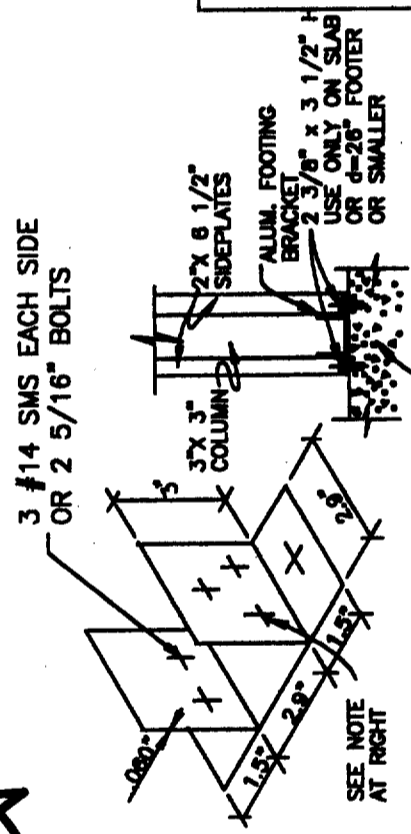


BK ALTERNATE 2-2" X 6 1/2" HEADERS

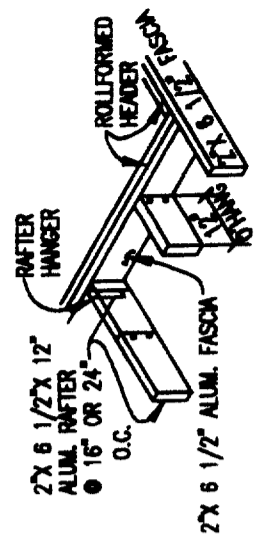


BL ALTERNATE-DECORATIVE FASCIA TRIM

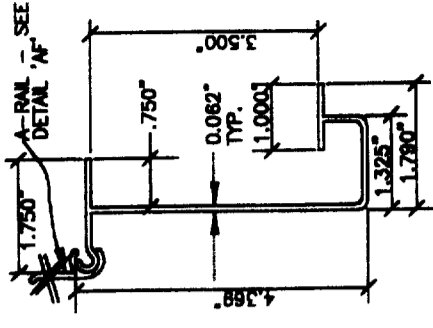
BO ALUMINUM "H" BRACKET FOR CONNECTING COLUMN TO HEADER
(6063-T6 ALUM. ALLOY)



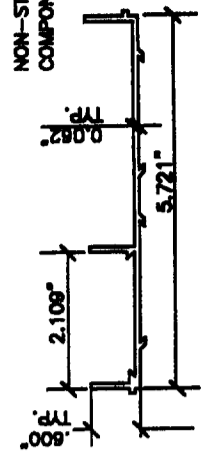
BN ALUMINUM FOOTING BRACKET FOR CONNECTING COLUMN TO CONC. SLAB OR FOOTING
(6063-T6 ALUM. ALLOY)



BP 3 1/2" "J" HANGER
(6063-T6 ALUM. ALLOY)



BQ 5 1/2" EXTRUDED SIDE FASCIA
(6063-T6 ALUM. ALLOY)



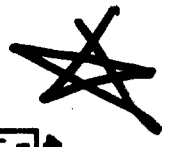
BR 3 1/2" "G" RAIL
(6063-T6 ALUM. ALLOY)

REVISION	DATE	REVISION	DATE	REVISION	DATE

Amerimax Engineering Services
1140 All Pro Drive
Elkhart, IN 46514

DRAWING OR PART NUMBER: 97CD09
SCALE: NONE
DATE: 2/8/2000
ICBO ES EVALUATION REPORT NO. ER-2621P
DRAWING OR PART COMPONENT PARTS & CONNECTION DETAILS
SHEET 9 OF 9

REGISTERED PROFESSIONAL ENGINEER
R. TUCKER
NO. 26079
STATE OF CALIFORNIA
MAR 0 2000
ENGINEERS STAMP
OKP 3-31-02



4.0 FREESTANDING AND ATTACHED LATTICE PATIO STRUCTURES

LINE	TRUSS WIDTH	MAXIMUM COLUMN SPACING				3" x 6" STEEL C BEAM	CONCRETE FOOTING SIZE	ATTACHED COLUMN	LATTICE COLUMN	TYPE
		FOR ATTACHED LATTICE ON SLAB	FOR ATTACHED LATTICE ON SLAB	ALL OTHERS	ALL OTHERS					
10	4	21'-1"	22'-0"	25'-7"	26'-5"	27	22	C	C	
	5	16'-10"	17'-7"	17'-7"	21'-0"	28	24	C	C	
	6	14'-1"	14'-5"	17'-0"	17'-0"	28	25	C	C	
	7	12'-1"	12'-7"	14'-7"	15'-0"	28	26	C	C	
	8	10'-7"	11'-0"	12'-0"	13'-1"	28	26	C	C	
	9	8'-4"	8'-0"	10'-3"	10'-6"	27	27	C	C	
	10	7'-0"	7'-4"	9'-4"	9'-5"	27	27	C	C	
	11	5'-5"	5'-2"	7'-4"	7'-4"	27	27	C	C	
	12	4'-8"	4'-3"	6'-1"	6'-1"	27	27	C	C	
	13	4'-8"	4'-3"	5'-5"	5'-5"	27	27	C	C	
	14	4'-8"	4'-3"	5'-1"	5'-1"	27	27	C	C	
	15	4'-8"	4'-3"	4'-10"	4'-10"	27	27	C	C	
	16	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	17	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	18	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	19	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	20	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	21	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	22	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	23	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	24	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	25	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	26	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	27	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	28	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	29	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	30	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	31	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	32	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	33	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	34	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	35	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	36	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	37	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	38	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	39	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	
	40	4'-8"	4'-3"	4'-5"	4'-5"	27	27	C	C	

LINE	TRUSS WIDTH	0.095" x 5" x 6" BOX BEAM				12" OR LESS	CONCRETE FOOTING SIZE	ATTACHED COLUMN	LATTICE COLUMN	TYPE
		MAXIMUM COLUMN SPACING	FREE	FTR	MAXIMUM COLUMN SPACING					
10	4	11'-2"	28	17	17'-0"	20	21	A	A	
	5	8'-11"	25	16	14'-5"	21	21	A	A	
	6	7'-0"	23	17	11'-11"	20	20	A	A	
	7	6'-4"	23	18	10'-2"	21	21	A	A	
	8	5'-7"	23	18	8'-11"	21	21	A	A	
	9	4'-11"	25	18	7'-11"	21	21	A	A	
	10	4'-5"	25	19	7'-2"	21	21	A	A	
	11	4'-7"	22	14	6'-2"	18	18	A	A	
	12	4'-7"	22	15	5'-11"	16	16	A	A	
	13	4'-7"	22	15	4'-11"	16	16	A	A	
	14	4'-7"	22	15	4'-11"	16	16	A	A	
	15	4'-7"	22	15	4'-11"	16	16	A	A	
	16	4'-7"	22	15	4'-11"	16	16	A	A	
	17	4'-7"	22	15	4'-11"	16	16	A	A	
	18	4'-7"	22	15	4'-11"	16	16	A	A	
	19	4'-7"	22	15	4'-11"	16	16	A	A	
	20	4'-7"	22	15	4'-11"	16	16	A	A	
	21	4'-7"	22	15	4'-11"	16	16	A	A	
	22	4'-7"	22	15	4'-11"	16	16	A	A	
	23	4'-7"	22	15	4'-11"	16	16	A	A	
	24	4'-7"	22	15	4'-11"	16	16	A	A	
	25	4'-7"	22	15	4'-11"	16	16	A	A	
	26	4'-7"	22	15	4'-11"	16	16	A	A	
	27	4'-7"	22	15	4'-11"	16	16	A	A	
	28	4'-7"	22	15	4'-11"	16	16	A	A	
	29	4'-7"	22	15	4'-11"	16	16	A	A	
	30	4'-7"	22	15	4'-11"	16	16	A	A	
	31	4'-7"	22	15	4'-11"	16	16	A	A	
	32	4'-7"	22	15	4'-11"	16	16	A	A	
	33	4'-7"	22	15	4'-11"	16	16	A	A	
	34	4'-7"	22	15	4'-11"	16	16	A	A	
	35	4'-7"	22	15	4'-11"	16	16	A	A	
	36	4'-7"	22	15	4'-11"	16	16	A	A	
	37	4'-7"	22	15	4'-11"	16	16	A	A	
	38	4'-7"	22	15	4'-11"	16	16	A	A	
	39	4'-7"	22	15	4'-11"	16	16	A	A	
	40	4'-7"	22	15	4'-11"	16	16	A	A	

LINE	LOAD	CLEANSIPS FOR 2 X 8 RAFTER			OVER	HANG	TYPE
		TRUSS	2" O.C.	4" O.C.			
10	0.036	25'-4"	11'-5"	6'-0"	10	6'-0"	
20	0.042	14'-6"	8'-4"	6'-7"	20	6'-7"	
25	0.042	18'-10"	8'-11"	6'-7"	25	6'-7"	
30	0.036	11'-5"	8'-11"	6'-10"	30	6'-10"	
40	0.036	8'-0"	8'-11"	6'-10"	40	6'-10"	
60	0.042	7'-4"	8'-11"	6'-10"	60	6'-10"	

COL	COLUMN SCHEDULE	MAX COLUMN HEIGHT	MAX COLUMN LENGTH
A	0.025" x 3" SQUARE ALUM COLUMN	11'-4"	8'-0"
B	0.025" x 3" SQUARE ALUM COLUMN	12'-0"	8'-0"
C	0.027" x 3" SQUARE ALUM COLUMN	12'-0"	8'-0"
D	0.040" x 3" SQUARE ALUM COLUMN	12'-0"	8'-0"
E	5" COVER EAVE STEEL 0.040"	12'-0"	8'-0"
F	5" SQUARE STEEL COLUMN	12'-0"	8'-0"
G	5" SQUARE STEEL COLUMN	12'-0"	8'-0"
H	5" SQUARE STEEL COLUMN	12'-0"	8'-0"
J	5" SQUARE STEEL COLUMN	12'-0"	8'-0"

FOR 10 PSF DOUBLE RAFTERS MAY BE USED 48" O.C.

TABLE 4.3

TABLE 4.5

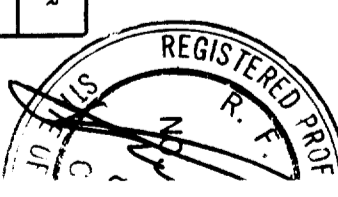
TABLE 4.2

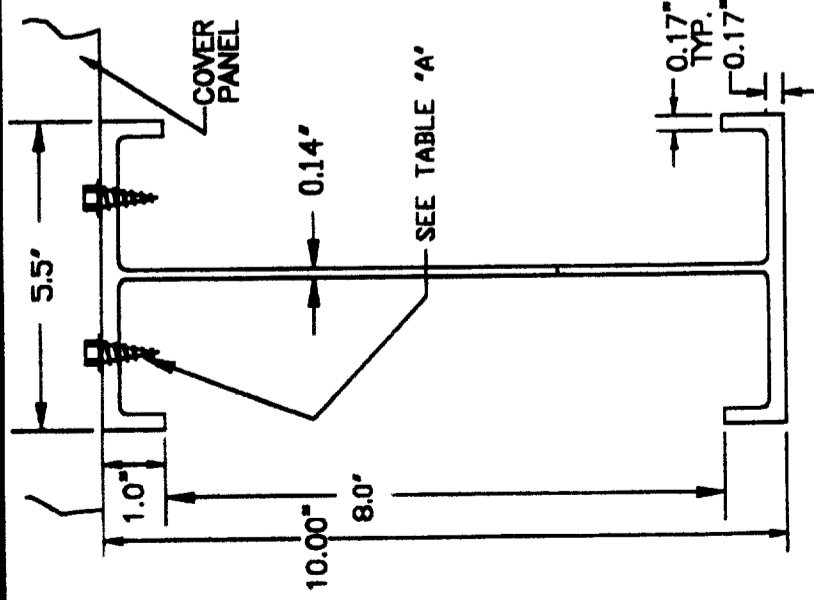
TABLE 4.1

ALL COLUMNS MAY BE REPLACED WITH A STRONGER COLUMN
 'X' MAY BE REPLACED WITH 'Y'
 'S' MAY BE REPLACED WITH 'C', ETC.
 LINEAR INTERPOLATION FOR ALL CALCULATIONS IS ALLOWED

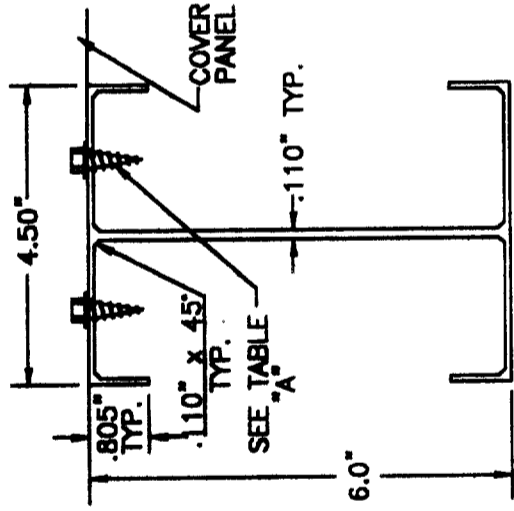
Amerimax
 BUILDING PRODUCTS, INC.
 1140 ALL PRO DRIVE
 ELKHART, IN 46514

ICBO EE EVALUATION REPORT EE-2521P
 HEADER SPANS, COLUMN SPACING,
 FOOTER SIZE AND COLUMN TYPE FOR
 FREESTANDING AND ATTACHED
 LATTICE PATIO STRUCTURES.
 SHEET 6 OF 8 DATE: 2/8/2000

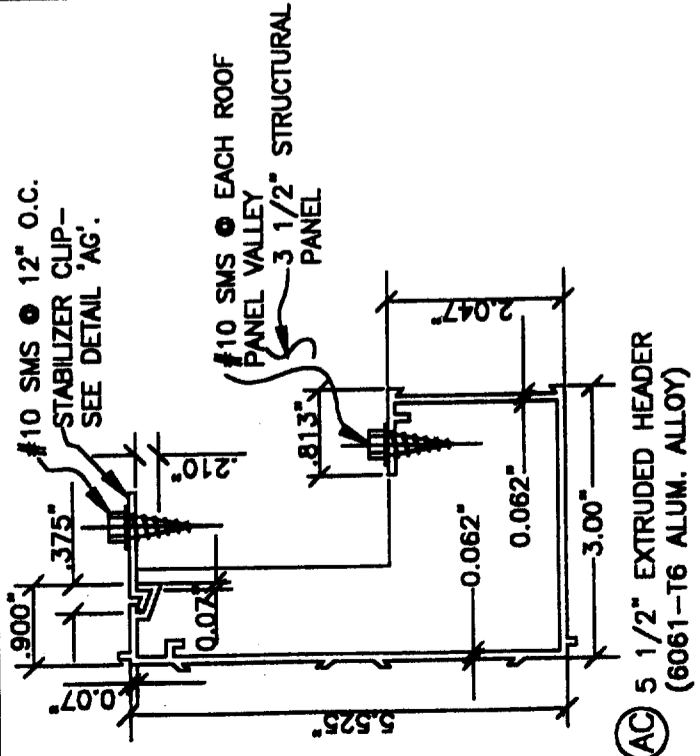




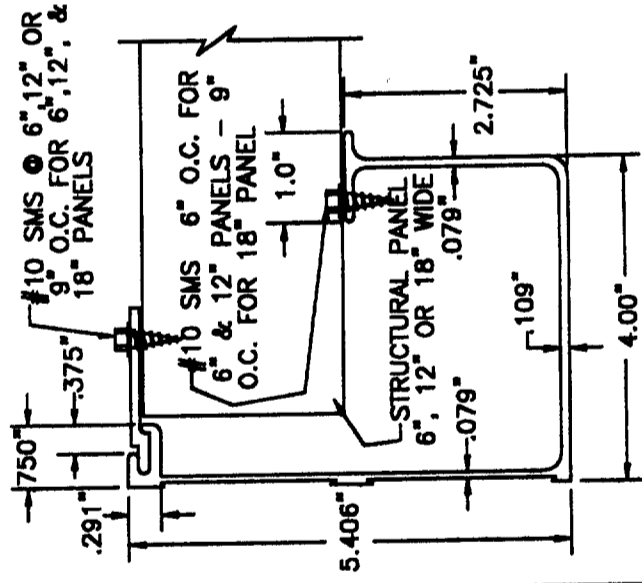
(Y) 10" X 5 1/2" W BEAM HEADER
(6061-T6 ALUM. ALLOY)



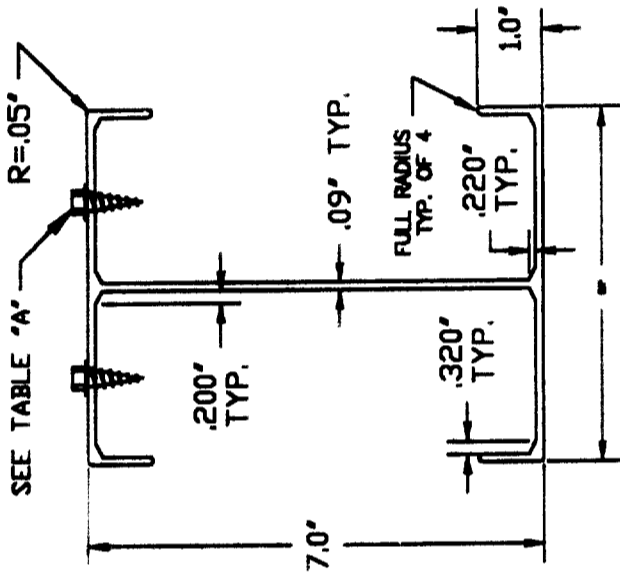
(Z) 6" W BEAM HEADER
(6061-T6 ALUM. ALLOY)



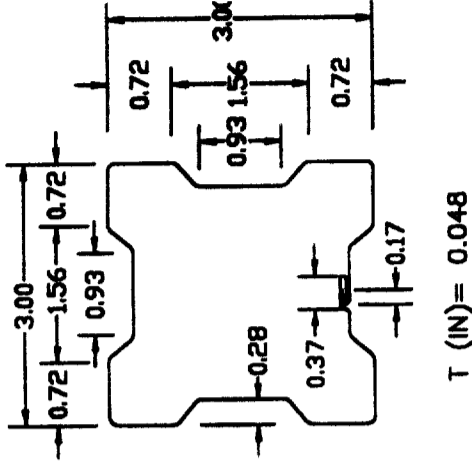
(AC) 5 1/2" EXTRUDED HEADER
(6061-T6 ALUM. ALLOY)



(AD) ALASKAN EXTRUDED HEADER
(6061-T6 ALUM. ALLOY)



(AA) 7" X 5 1/2" W BEAM HEADER
(6061-T6 ALUM. ALLOY)



(AB) 3" X 3" HEADER (STEEL)
(A-653 Fy=40 KSI STEEL)

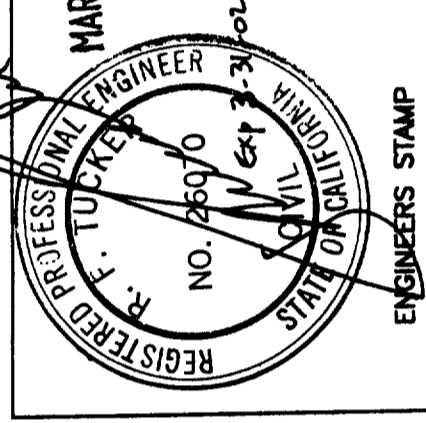
FASTENERS REQUIRED FOR PANEL TO HEADER CONNECTIONS

TABLE 'A'

MAX. WIND LOAD	HEADER DESCRIPTION	MAX. TRIB WIDTH	FASTENING SCHEDULE	NOT
90 MPH PATIO	ALL FASCIA STEEL CLOVER, C BEAMS, I BEAMS STEEL CLOVER, C BEAMS, I BEAMS	10' 12' 21'	2-#10 SMS PER 12" PANEL 2-#14 SMS PER 12" PANEL 3-#14 SMS PER 12" PANEL	
70 MPH EXP C AND 90 MPH EXP B	ALL FASCIA STEEL CLOVER, C BEAMS, I BEAMS STEEL CLOVER, C BEAMS, I BEAMS	10' 16' 16'	2-#10 SMS PER 12" PANEL 3-#14 SMS PER 12" PANEL 2-#14 SMS PER 12" PANEL	SEE
90 MPH EXP C	ALL FASCIA STEEL CLOVER, C BEAMS, I BEAMS STEEL CLOVER, C BEAMS, I BEAMS	10' 16' 16'	2-#14 SMS PER 12" PANEL 4-#14 SMS PER 12" PANEL 3-#14 SMS PER 12" PANEL	SEE

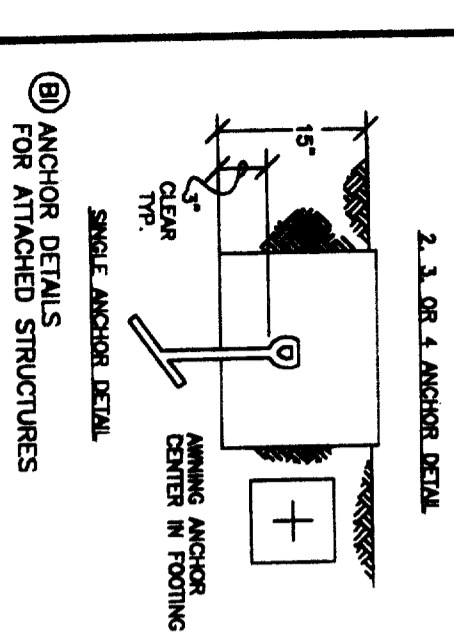
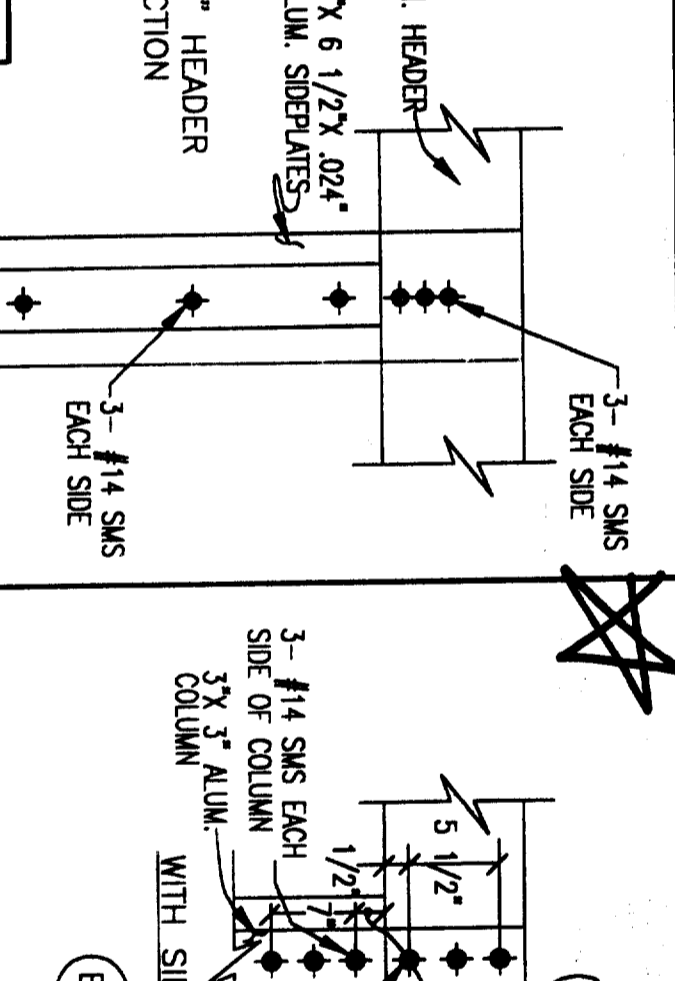
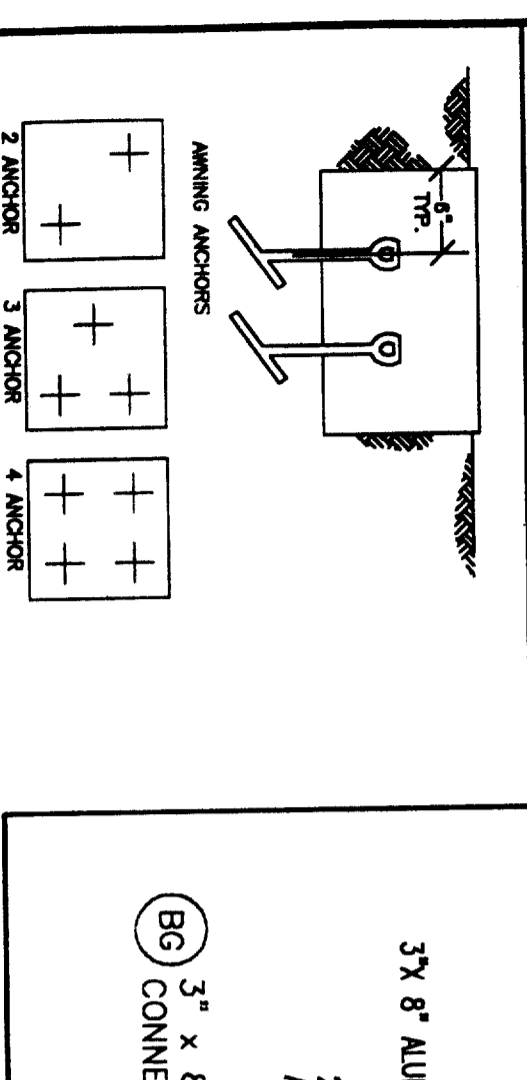
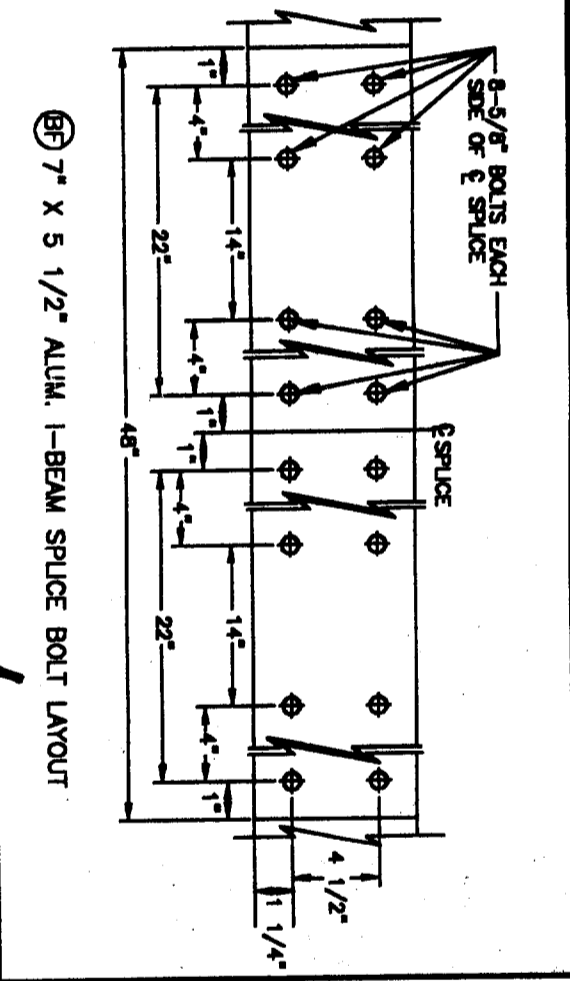
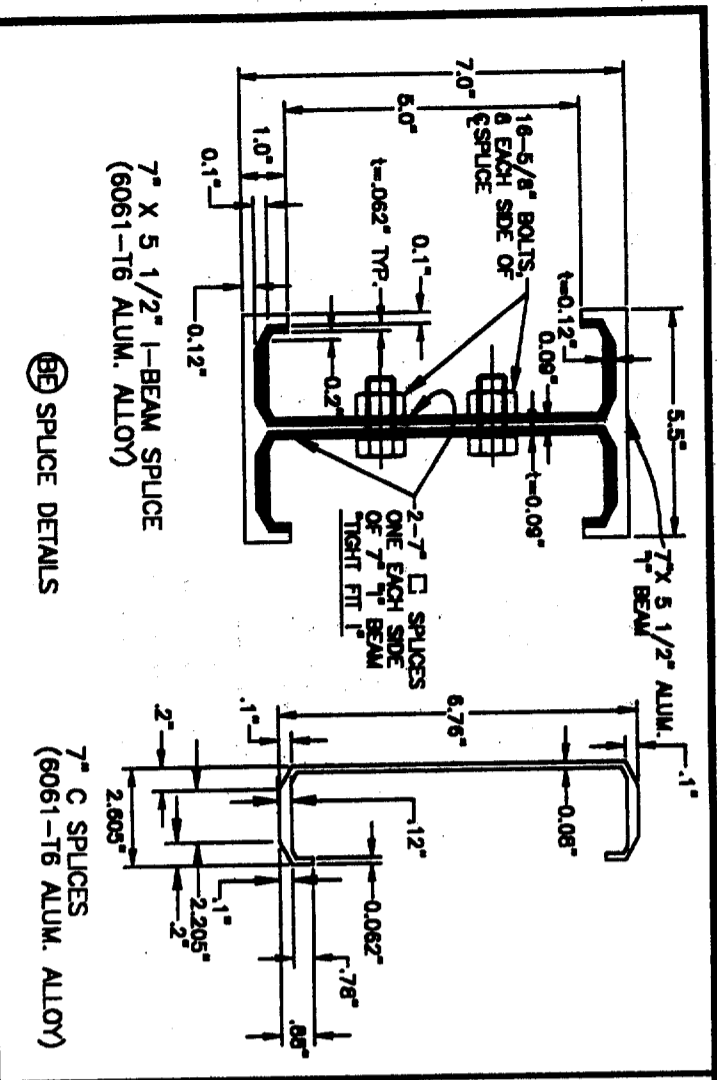
#1 .018 & .024 PANI
#2 .032 & .036 PANI

(AE) 6" PANEL USE 50% LESS SCREWS
18" PANELS USE 50% MORE SCREWS

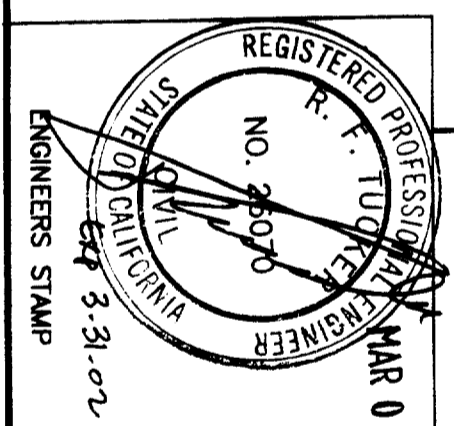


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ICBBO ES EVALUATION REPORT NO. ER-262
DRAWING OR PART COMPONENT PARTS & CONNECTION DE
SCALE: NONE
DATE: 2/8/2000
SHEET NUMBER: 97CD04
SHEET: 4 OF 4



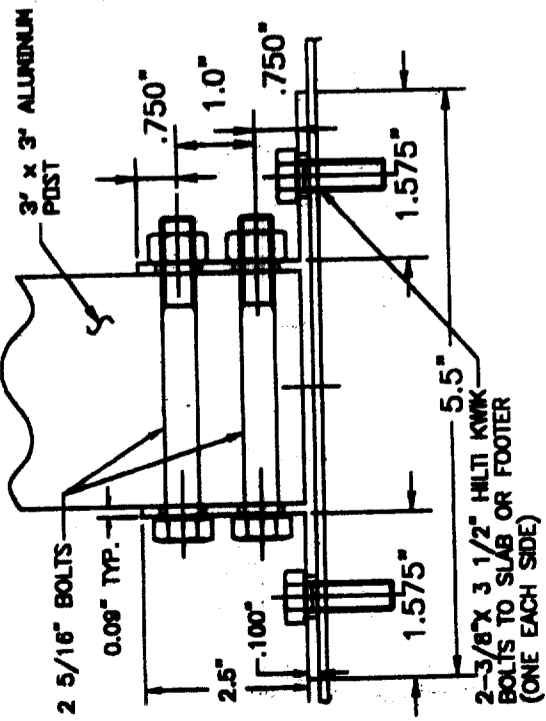
FOOTING "d" (IN)	ALTERNATE FOOTING SIZE	NO. OF ANCHORS
18	12" X 12" X 15"	1
20	15" X 15" X 15"	1
22	18" X 18" X 15"	1
24	20" X 20" X 15"	1
26	20" X 20" X 15"	1
28	24" X 24" X 15"	2
30	24" X 24" X 15"	2
32	24" X 24" X 15"	3
34	24" X 24" X 15"	4
36	24" X 24" X 15"	4



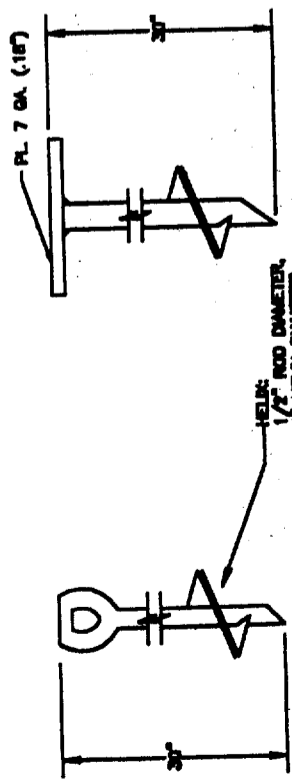
DATE	REVISION	DATE	REVISION
MAR 03 2008			

DATE: 2/8/2000	SCALE: NONE	DRAWING OR PART NAME: DRAWING PARTS & CONNECTION D	SHEET: 8 OF
DATE: 2/8/2000	SCALE: NONE	DRAWING OR PART NAME: DRAWING PARTS & CONNECTION D	SHEET: 8 OF

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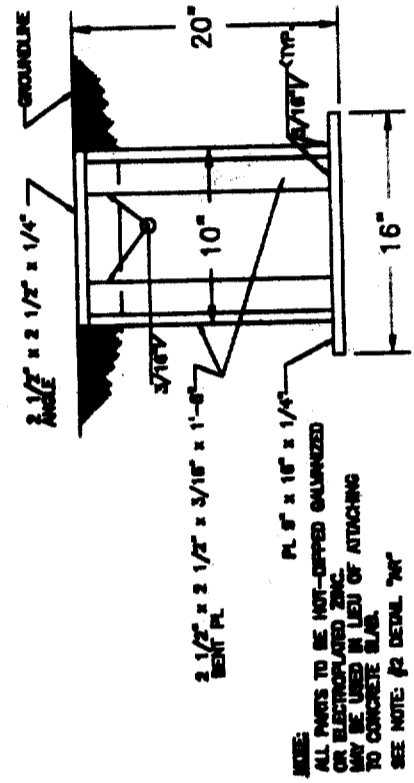
(AN) ALTERNATE 3" SQ. COLUMN CONNECTOR BRACKET (6063-T6 ALUM. ALLOY)



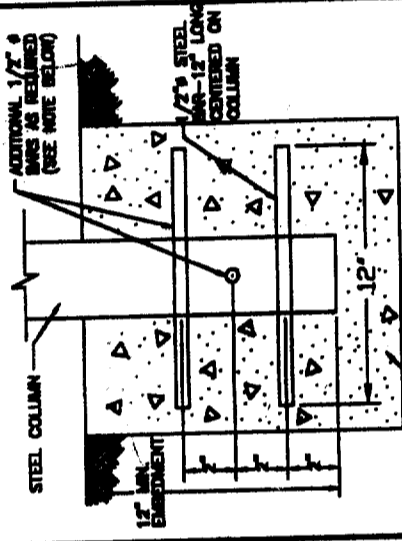
ALTERNATE TO CONCRETE SLAB ATTACHMENT

- NOTES:**
1. ALL PARTS TO BE HOT-DIPPED GALVANIZED OR ELECTROPLATED ZINC. MAY BE USED IN LIEU OF ATTACHING TO CONCRETE SLAB.
 2. FABRICATION OF ANCHORS AND SAFETY SEWERS IS BEYOND THE SCOPE OF THIS REPORT. FABRICATION DETAILS AND QUALITY CONTROL PROGRAM MUST BE SUBMITTED TO BUILDING OFFICIAL FOR APPROVAL.
 3. ANCHOR TYPES MAY BE USED IN THE FOLLOWING TYPES OF SOIL: SAND, GRAVEL, CLAY, SANDY GRAVEL, SILTY GRAVEL, SILTY SAND, CLAYEY SAND, CLAYEY GRAVEL, SANDY CLAY, SILTY CLAY, AND CLAYEY SILT.

(AP) ANCHORING ANCHOR

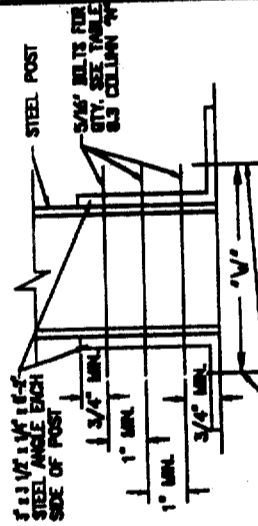


(AP) SAFETY STAKE (ALTERNATE TO CONCRETE SLAB ATTACHMENT)



- NOTE:**
1. 1/2" ϕ STEEL BAR FOR FOOTINGS UP TO 36" CURE. USE 3/4" ϕ BARS FOR FOOTINGS UP TO 48" CURE. AND 3 - 1/2" ϕ BARS FOR FOOTINGS UP TO 84" CURE.

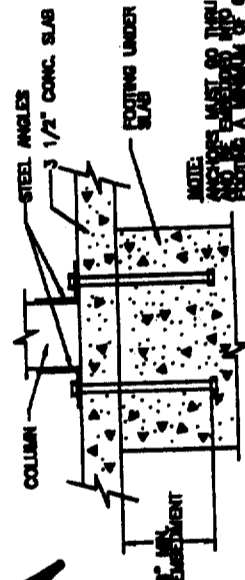
(AT) ALTERNATE FREESTANDING STRUCTURE COLUMN TO FOOTING CONNECTION DETAIL



- FOR FASTENER SIZE INTO FOOTING SEE SCHEDULE **(A)**

FASTENER SIZE	REQUIRED "W" (WIDTH)
1/4"	MINIMUM 3"
3/8"	4 1/2"
1/2"	6"
5/8"	7 1/2"
3/4"	8"

(AS) ATTACHED STRUCTURE COLUMN TO FOOTING CONNECTION DETAIL "d" = 18" TO 32" HILTI FASTENER ALTERNATE



(AU) COLUMN CONNECTION DETAIL FOR SLAB & FOOTING ATTACHMENT

SCHEDULE T¹ - COLUMN TO FOOTING CONNECTIONS FOR 18" TO 42" FOOTING SIZES

FOOTING SIZE "d" (INCHES)	HILTI FASTENER (OR EQUAL) SIZE	CONNECTION TO COLUMN TUBE	REQUIRED TENSION FOR ANCHOR BOLTS
18"	2-1/4" x 2" d	1-5/16" BOLT	4300#
20"	2-3/8" x 2 1/2"		5800#
22"		2-5/16" BOLTS	6500#
24"		2-3/8" BOLTS	7900#
26"	2-1/2" x 3 1/2"	3-5/16" BOLTS	13300#
28"			13300#
30"			16700#
32"	2-5/8" x 4" d		20800#
34"			N/A
36"			N/A
38"			N/A
40"			N/A
42"		3-3/8" BOLTS	N/A

"d" SIZE IN ANCHOR BOLT OR HILTI FASTENER SIZES INDICATES DEPTH OF EMBEDMENT. EXAMPLE: 2 1/2" INDICATES 2 1/2" EMBEDMENT ANCHOR OR EQUAL TO HILTI FASTENERS. ALTERNATE MUST BE ICBO APPROVED TO PROVIDE ALLOWABLE TENSION EQUAL TO READ TENSION FOR ANCHOR BOLT VALUES SHOWN. HILTI INDICATES HILTI KB-II ANCHOR BOLTS PER ICBO E.S. EV #4627.

(AV) FOOTING SCHEDULE

DATE	REVISION	DATE	REVISION



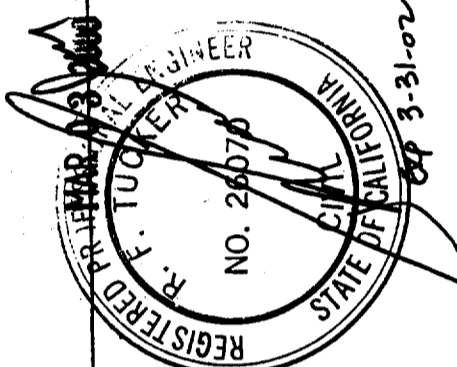
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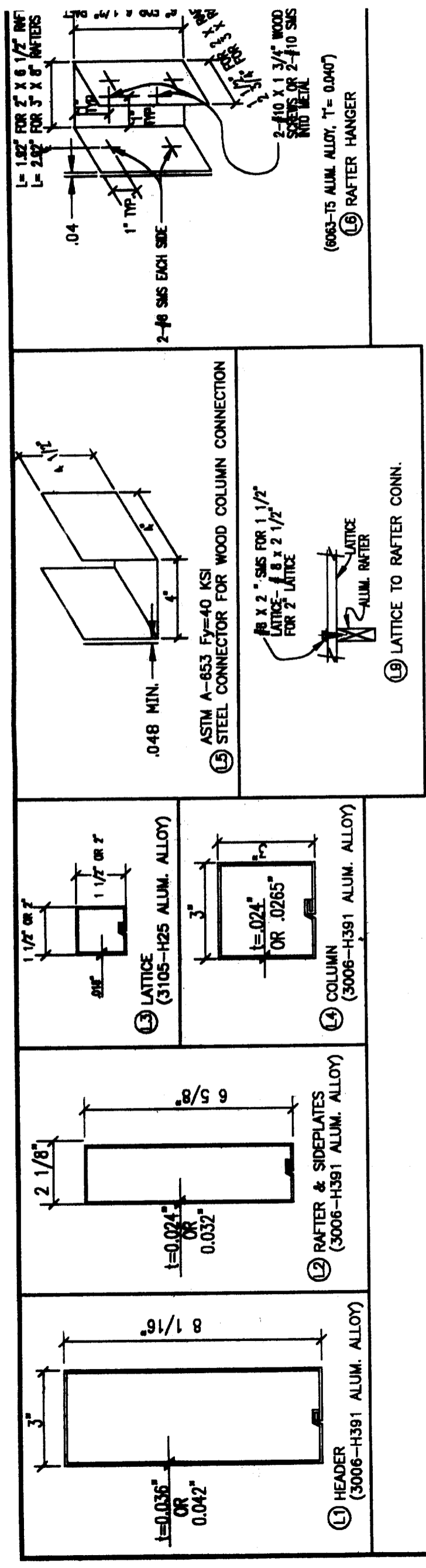
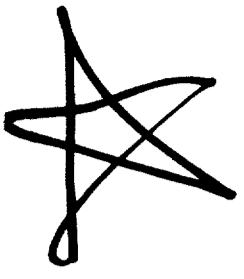
DRAWN BY: KG
SCALE: NONE
DATE: 2/8/2000

ICBO ES EVALUATION REPORT NO. ER-262
DRAWING OR PART COMPONENT PARTS & CONNECTION DETAIL
DRAWING NUMBER: 97CD06

DATE: 2/8/2000
DRAWING NUMBER: 97CD06

ENGINEERS STAMP
SHEET 6 OF 6





HEADER GAGE	HEADER	DETAIL	MAXIMUM WIND LOAD	MAX TRIB	FASTENING
.042	3' x 8"	L1	90 MPH PATIO	6'	2-#8 SMS EACH BRKT. 3-#8 SMS EACH BRKT.
.036	3' x 8"	L1	90 MPH PATIO	10'	2-#8 SMS EACH BRKT. 4-#8 SMS EACH BRKT.
.032	DBL 2 x 6	L11	90 MPH PATIO	10'	3-#8 SMS EACH BRKT.
.094	8' STEEL C	L23	90 MPH PATIO 90 EXP C	22' 10'	2-#14 SMS EACH BRKT. 2-#14 SMS EACH BRKT.

MAR 03 2000

REGISTERED PROFESSIONAL ENGINEER
R. F. JUCKER
 NO. 26070
 CIVIL
 STATE OF CALIFORNIA
 EX. 3-31-02

ENGINEERS STAMP

DATE	REVISION	DATE	REVISION

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 Elkhart, IN 46514

OWNER: KG
 SCALE: NONE
 DATE: 2/8/2000

ICBO ES EVALUATION REPORT NO. ER-262
 DRAWING COMPONENT PARTS & CONNECTION DETAIL
 OR PART FOR PATIO & COMMERCIAL LATTICE STRUCTURE
 DRAWING NUMBER: 97LT01
 SHEET: 1 OF 1

1/4" x 4" LAG SCREW
 SEE TABLE 8.5 COLUMN
 ANCA FOR QUANTITY
 ALL 10 PSF USE 1 LAG
 PER STUD 16" O/C

WOOD LEDGER- 2 X DEPTH
 OF RAFTER
 2-#8 SMS
 EACH SIDE

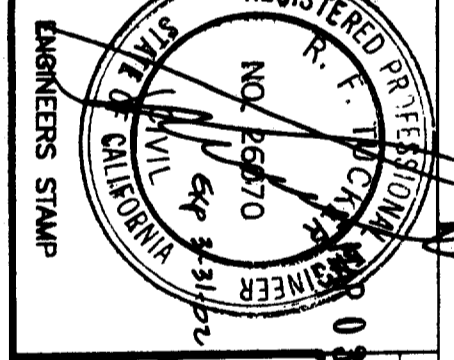
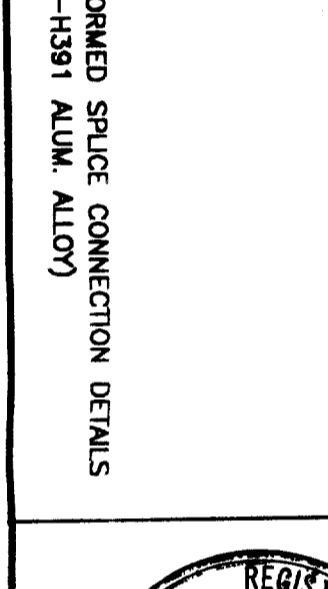
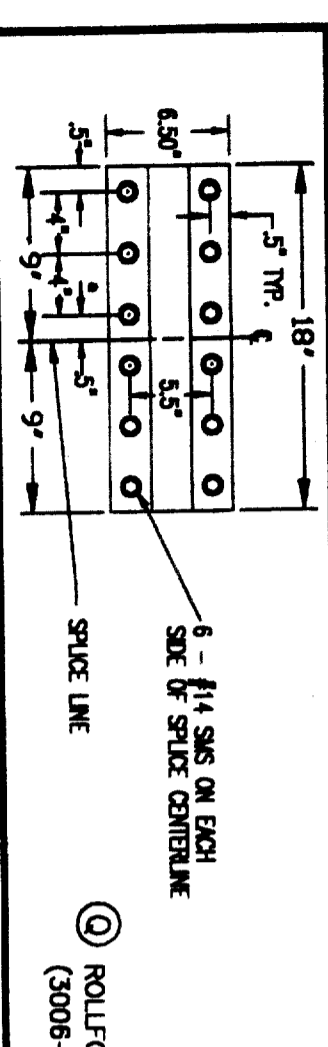
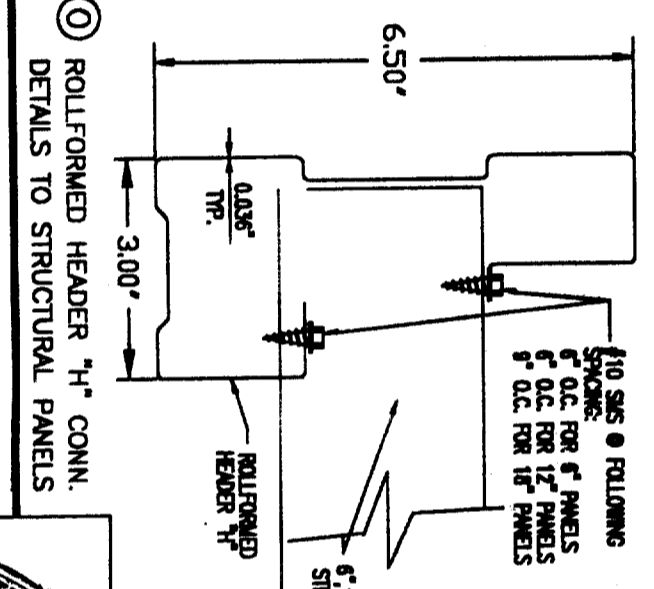
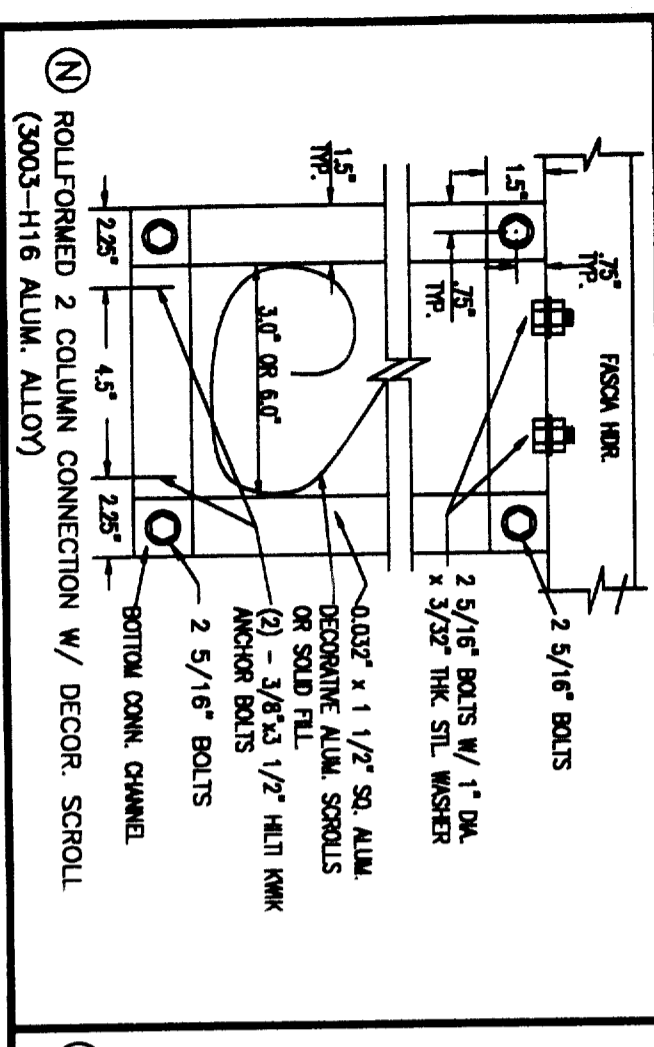
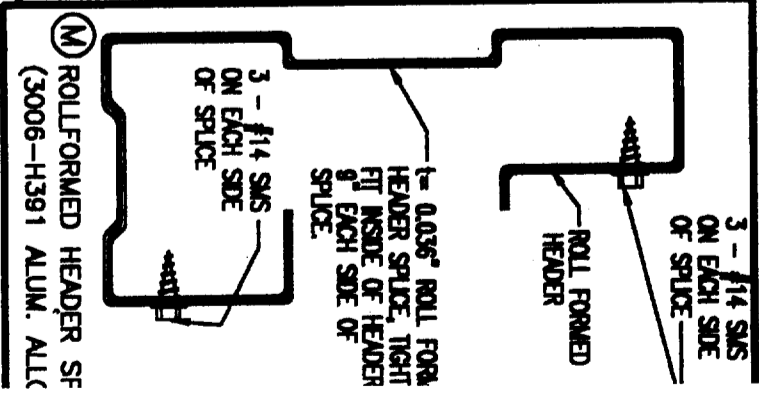
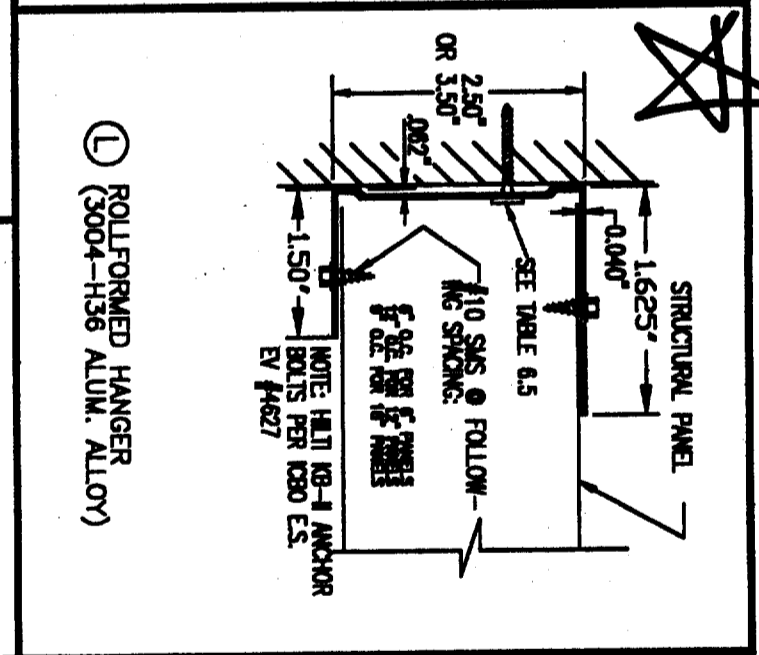
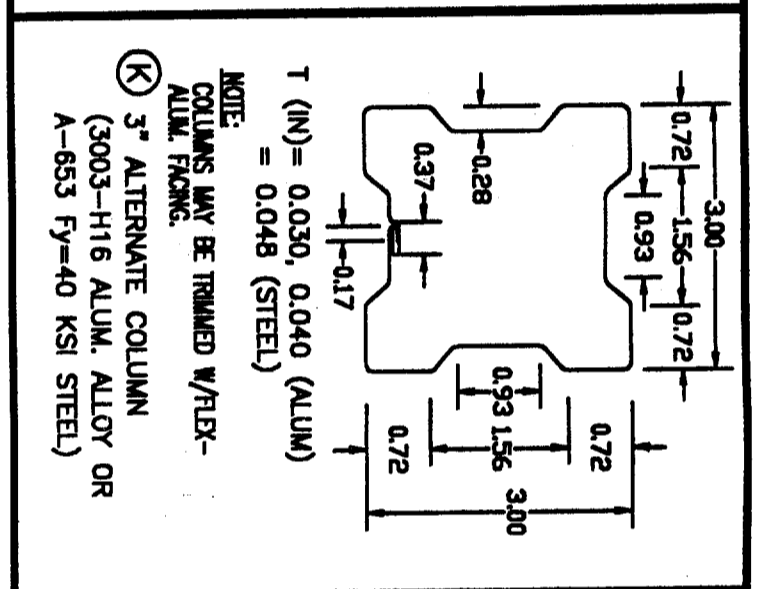
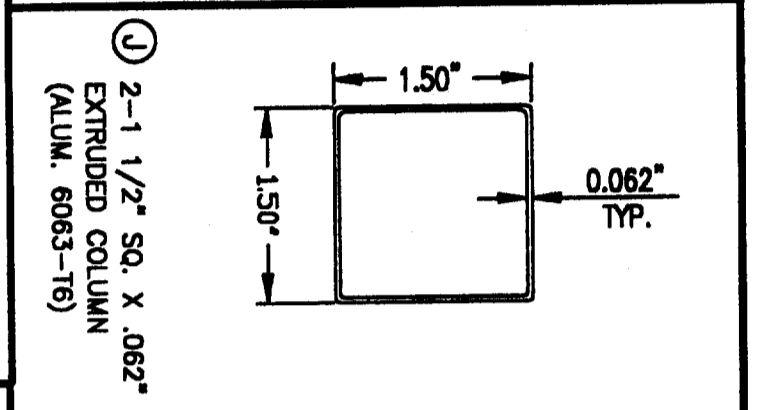
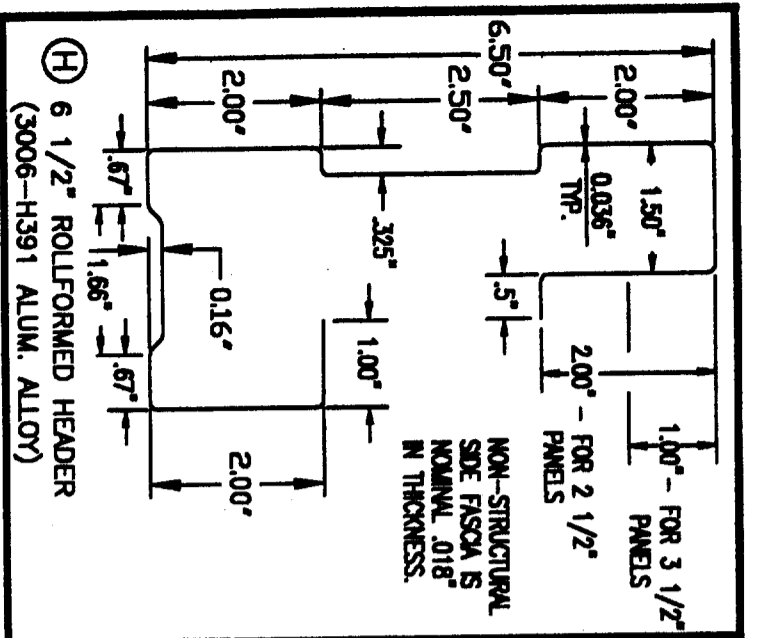
EXISTING STRUCTURE

2-#10 X 1" SCREW
 EACH SIDE

ALUM. RAFTER

ALT. SIMPSON HANGER
 SHOWN UPPER PER I.C.B.O.
 E.S. EV. #1258

(L8) ALTERNATE RAFTER TO WALL CONN.



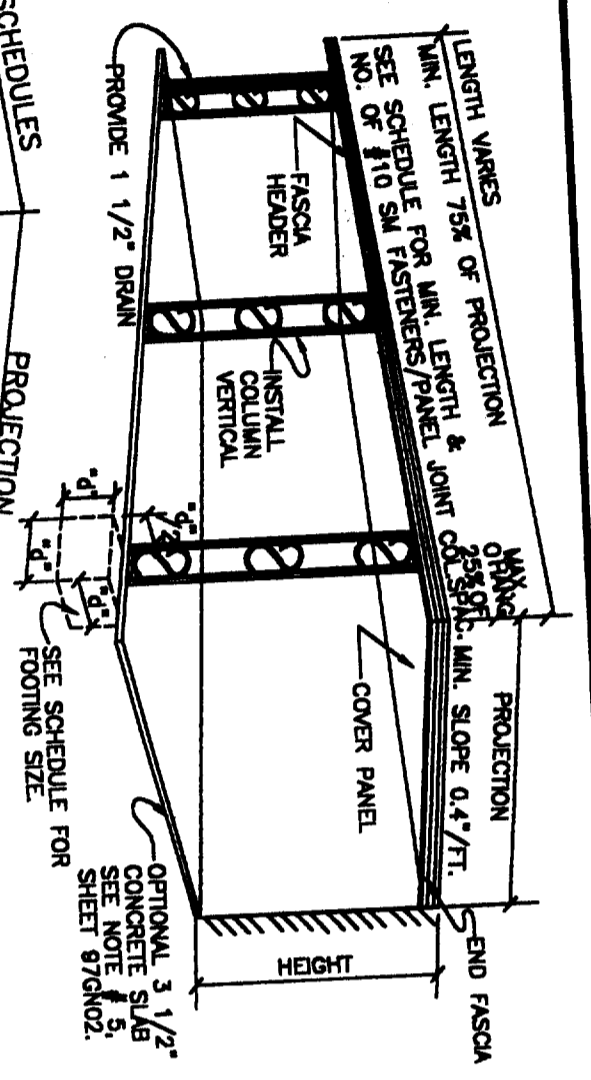
DATE	REVISION	DATE	REVISION
03/2000			

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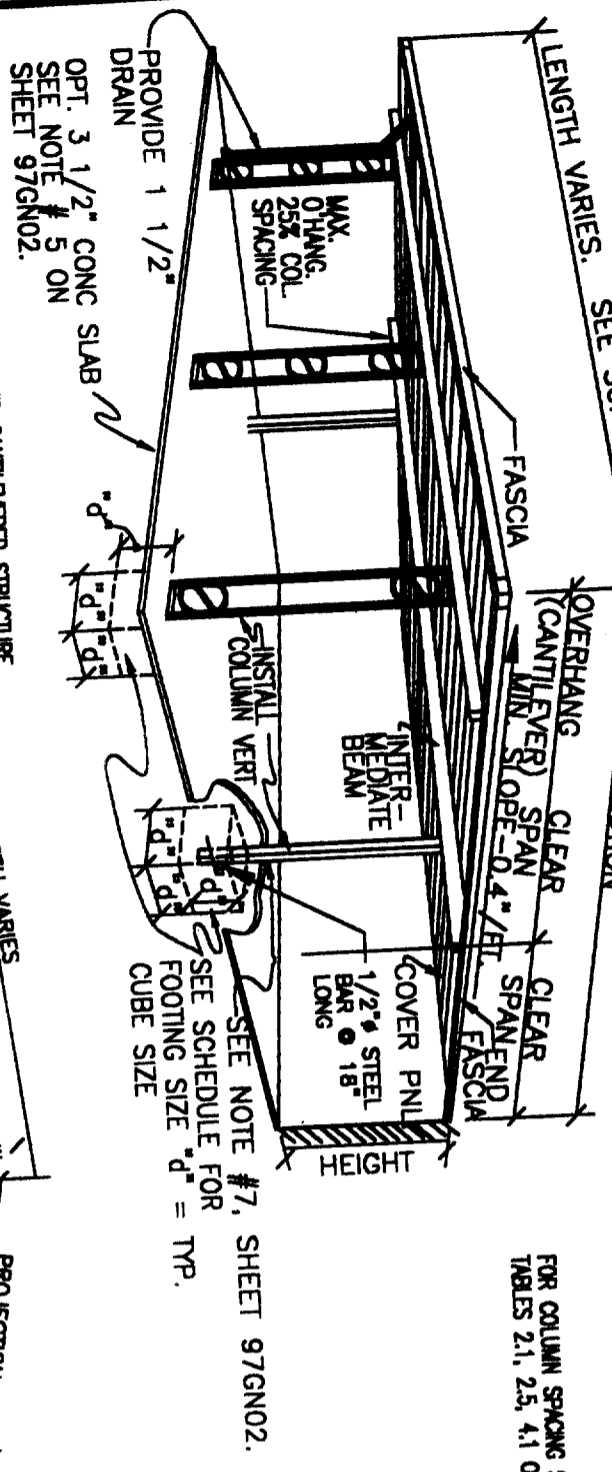
DRAWN BY: KG
 SCALE: NONE
 DATE: 2/8/2000

PROJECT: I080 ES EVALUATION REPORT NO. ER-2621
 SHEET: 2 OF 2

SINGLE SPAN ATTACHED STRUCTURE

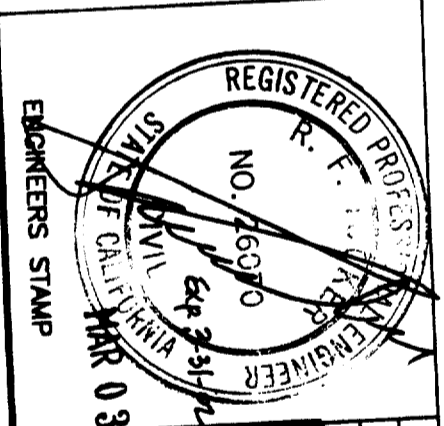
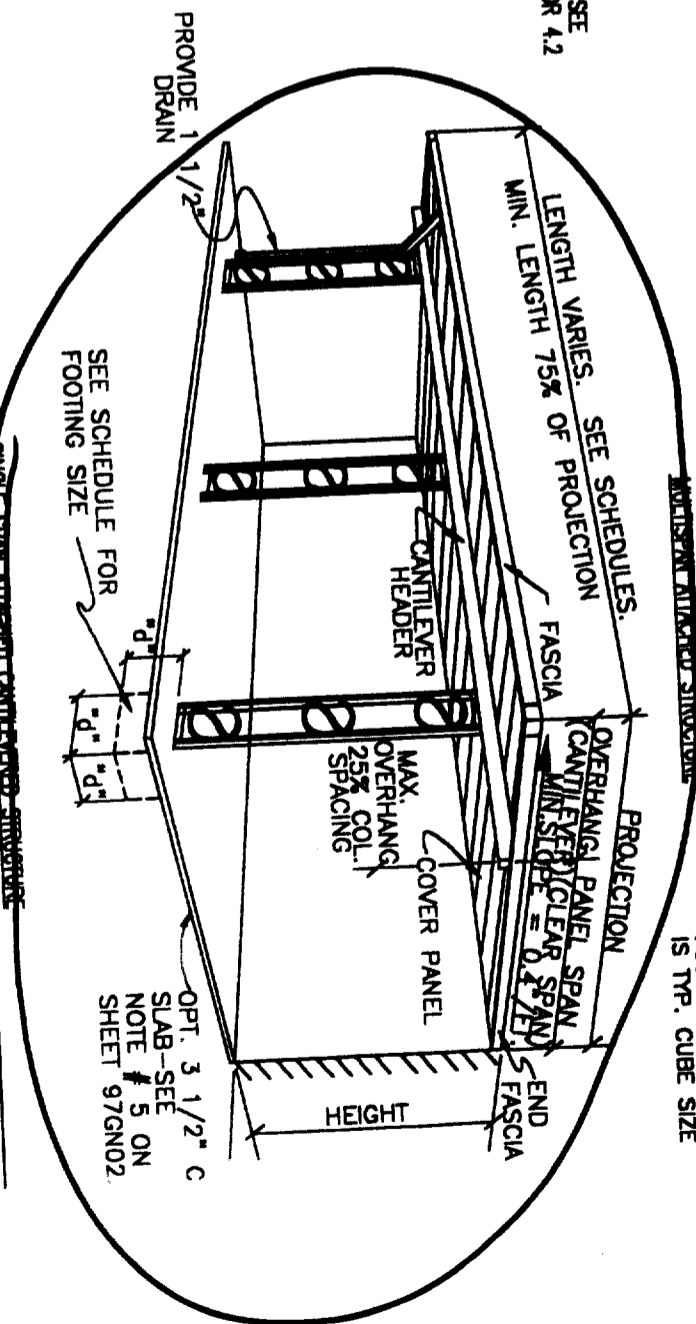
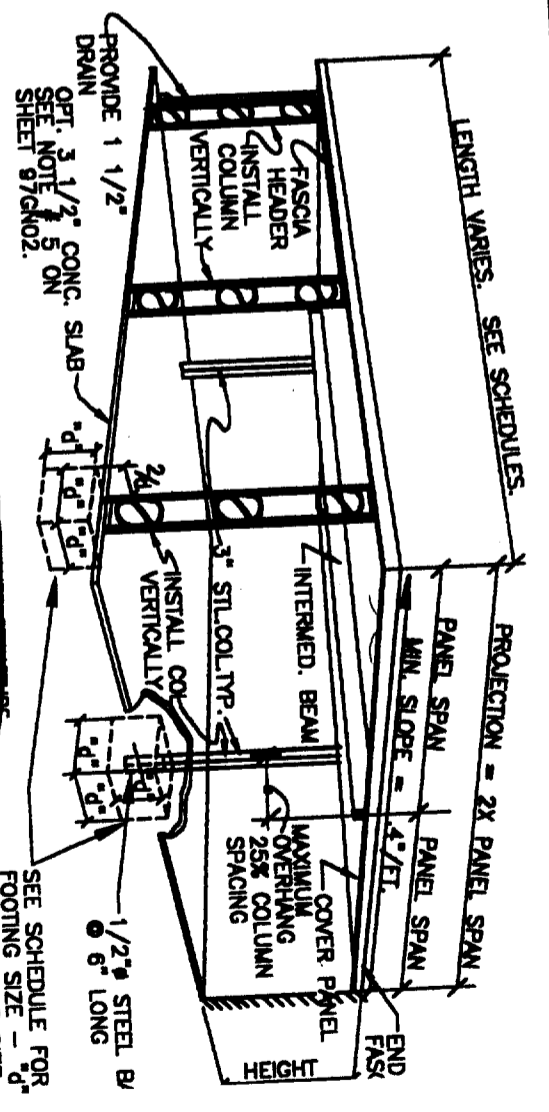
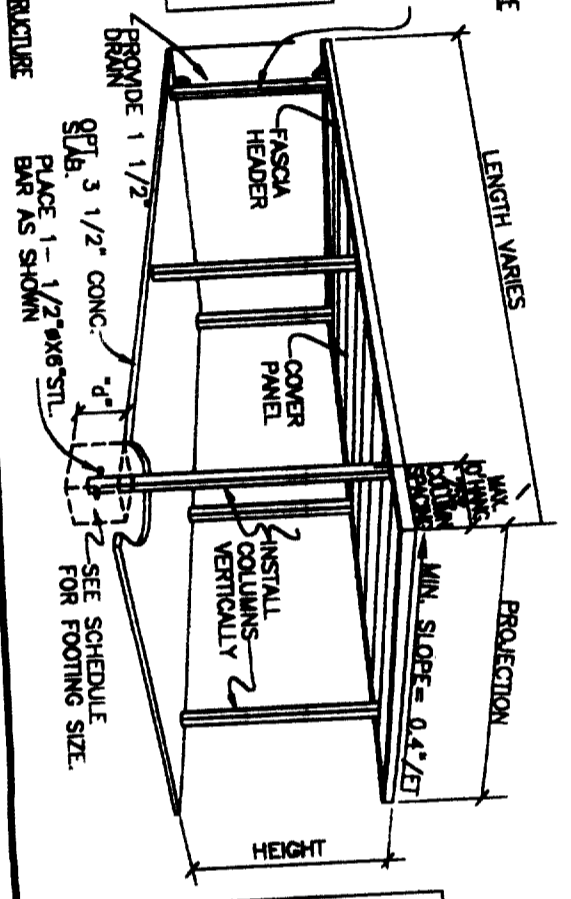


FOR COLUMN SPACING SEE TABLES 2.1, 2.5, 4.1 OR 4.2



NOTE: PATIO WIDTH VARIES W/ SELECTION OF HEADER, NUMBER OF COLUMNS AND LOADING CONDITIONS. SEE SCHEDULES FOR MAX. COLUMN SPACING.

SINGLE SPAN PRESTRESSING STRUCTURE



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 CHECKED BY: NONE
 DATE: 2/9/2000
 PROJECT NO.: 97SC01
 SHEET 1 OF 1