CITY OF SACRAMENTO

1231 I Street, Sacramento, CA 95814

Permit No: 9905579
Insp Area: 2

Site Address: 8574 MONTPELIER WY SAC
Parcel No: 117-1190-047

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

CONTRACTOR
PACIFIC BUILDERS
5421 87TH ST
SACRAMENTO CA 95826

OWNER
DAVIS BRIAN J/ANN MARIE BO
8574 MONTPELIER WY
SACRAMENTO CA 95823

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'sAddress ______________________

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 21-1469 Date 6-1-99 Contractor Signature ______

OWNER-BUILDER DECLARATION: I hereby affirm under penalty of perjury that I am exempt from the contractors License Law for the following reason (Sec. 7031.5, Business and Professions Code; any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to its issuance, also requires the applicant for such permit to file a signed statement that he or she is licensed pursuant to the provisions of the Contractors License Law (Chapter 9 (commencing with Section 7000) of Division 8 of the Business and Professions Code) or that he or she is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than five hundred dollars ($500.00);

_____ I, as a owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec. 7044, Business and Professional Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or herself or through his/her own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he/she did not build or improve for the purpose of sale.)

_____ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractors License Law).

_____ I am exempt under Sec.__________ B & PC for this reason:______________________

Date______________ Owner Signature______________________ NEIGHBORHOODS, PLANNING AND DEVELOPMENT SERVICES

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 herby authorize representative(s) of this city to enter upon the abovementioned property for inspection purposes.

Date 6-1-99 Applicant/Agent Signature ______

WORKER'S COMPENSATION DECLARATION: I hereby affirm under penalty of perjury one of the following declarations:

_____ I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, forthe 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:

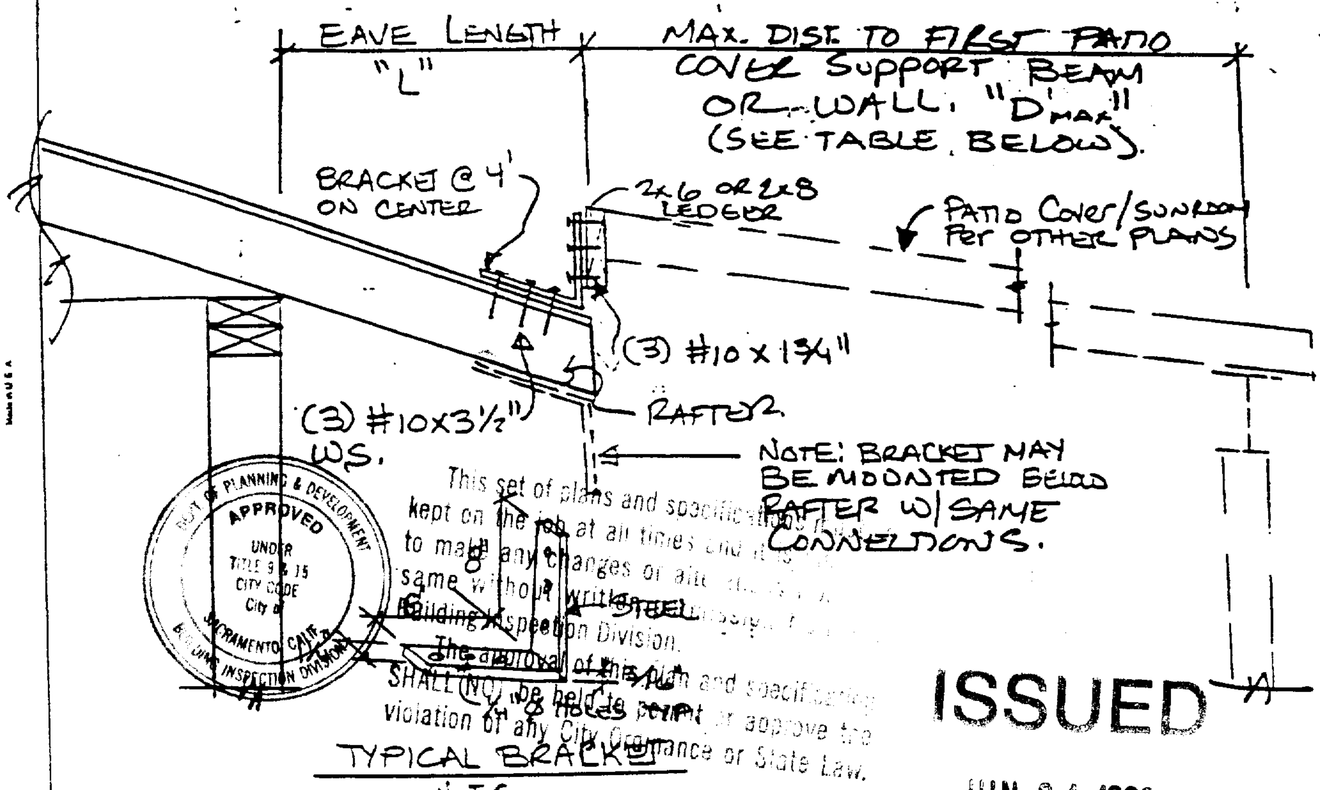
Carrier STATE FUND Policy Number 692-98 UNIT 0002300 Exp Date 10/01/1999

_____ (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 6-1-99 Applicant Signature ______

WARNING: FAILURE TO SECURE WORKER'S COMPENSATION COVERAGE IS UNLAWFUL AND SHALL SUBJECT AN EMPLOYER TO CRIMINAL PENALTIES AND CIVIL FINES UP TO ONE HUNDRED THOUSAND DOLLARS ($100,000) IN ADDITION TO THE COST OF COMPENSATION, DAMAGES AS PROVIDED FOR IN SECTION 3706 OF THE LABOR CODE, INTEREST AND ATTORNEY'S FEE.

THIS PERMIT SHALL EXPIRE BY LIMITATION IF WORK IS NOT COMMENCED WITHIN 180 DAYS.



ROOF LIVE LOAD (PSF)	RAFTER SPACING (IN)	"L" EAVE LENGTH (IN)	"Dmax" MAX DISTANCE TO FIRST PATIO COVER SUPPORT BEAM OR WALL
10	16	12	38'-10"
		16	29'-8"
		24	18'-3"
	24	12	25'-11"
		16	19'-3"
		24	12'-2"
20	16	12	22'-6"
		16	17'-3"
		24	10'-2"
	24	12	15'-0"
		16	11'-6"
		24	6'-8"

THIS DIMENSION SHOWN DOES NOT INCREASE THE ALLOWABLE SPAN OF ROOF AS SHOWN OF PATIO COVER PLAN

NOTE: THIS DETAIL IS INTEND FOR USE WITH PATIO COVERS/SUNROOMS THAT ARE USED Per 1994 UBC, APPX 31, DIV III

REGISTERED PROFESSIONAL ENGINEER JEFFREY E. ... No. C 037407 Exp. 12/31/99 CIVIL STATE OF CALIFORNIA

98-823

STANDARD DETAIL FOR SUPPORT OF PATIO COVER @ EXISTING 2x4 (MIN) #2DF EAVE

JOB #:	DATE
97-704	8/20/97

PACIFIC CONSULTING ENGINEERS
2150 BELL AVE., SUITE 145
SACRAMENTO, CA 95838

Reviewed by Matt P. 6/1/99

DESIGN: CONNECTION TO TOP OR BOTTOM OF EAVE FOR SUPPORT OF LATTICE COVER, PATIO COVER OR SUNROOM STRUCTURES INSTALLED PER REQUIREMENTS OF 1994 UBC APPENDIX 31 DIV. III

LOADS

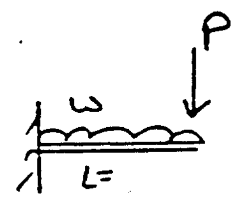
LIVE LOAD = 10, 20 PSF DEAD LOAD = 5 PSF (COVER)

WIND: 80 mph − P_{UP} = 13 PSF DEAD LOAD (EAVE) = 10 PSF

FIND MAX ALLOWABLE LOADS TO 2x4 EAVE (#2 DF).

$$V_{ALL} = \frac{1.5(3.5)}{1.5}(95)(1.25) = 416^{\#}$$

$$M_{ALL} = \frac{3.06\,in^3\,(875)\overbrace{(1.5)}^{SIZE}\overbrace{(1.25)}^{LDF}}{12} = 418^{1\text{-}\#}$$



$$\Delta_{ALL} = \frac{L(12)}{180}$$

$$V_{ACT} = P + wL \le 416^{\#} \Rightarrow P_{MAX} = 416^{\#} - wL \quad (1)$$

$$M_{ACT} = \frac{wl^2}{2} + PL \le 418 \Rightarrow P_{MAX} = \frac{418 - \frac{wL^2}{2}}{L} \quad (2)$$

EI = 857500

$$\Delta_{ACT} = \left[\frac{wL^4}{8EI} + \frac{PL^3}{3EI}\right](1728) \le \frac{L(12)}{180} = \frac{L}{15}$$

$$\Rightarrow P_{MAX} = \left[\frac{L}{15(1728)} - \frac{wL^4}{8EI}\right]\left(\frac{3EI}{L^3}\right) \quad (3)$$

USE P_{MIN} FROM 3 CASES.

FIND MAX TRIB WIDTH FROM COVER

$$P_{MIN} = \text{TRIB WIDTH}\,(\overbrace{LL + 5PSF}^{\text{TO COVER}})\left(\frac{SPACING}{12}\right)$$

MAX TRIB WIDTH $= \dfrac{P\left(\frac{12}{SPACING}\right)}{(LL + 5PSF)}$

MAX DST. TO FIRST PATIO COVER SUPPORT. = 2 × (TRIBUTARY WIDTH)

PACIFIC CONSULTING ENGINEERS
2?50 BELL AVE., SUITE 145
SACRAMENTO, CA 95???

SEE COMPUTER PRINT OUT NEXT PAGE

TABLE 1: MAXIMUM POINT LOAD TO 2x4 #2 DF EAVE

EAVE LENGTH (INCHES)	10 PSF ROOF LIVE LOAD									
	16 " RAFTER SPACING 26.67 = w, PLF			LOAD TO USE	MAX TRIB WIDTH FROM COVER	24 " RAFTER SPACING 40.00 = w, PLF			LOAD TO USE	MAX TRIB WIDTH FROM COVER
	(V)	(M)	(DEFL)			(V)	(M)	(DEFL)		
12	388.96	405.37	982.48	388.96	19.45	375.63	398.70	977.48	375.63	12.965278
16	380.07	296.25	968.77	296.25	14.81	362.29	287.36	956.92	287.36	9.8749367
24	362.29	182.68	912.48	182.68	9.13	335.63	169.35	872.48	169.35	6.089464

EAVE LENGTH (INCHES)	20 PSF ROOF LIVE LOAD									
	16 " RAFTER SPACING 40 = w, PLF			LOAD TO USE	MAX TRIB WIDTH FROM COVER	24 " RAFTER SPACING 60 = w, PLF			LOAD TO USE	MAX TRIB WIDTH FROM COVER
	(V)	(M)	(DEFL)			(V)	(M)	(DEFL)		
12	375.63	398.70	977.48	375.63	11.27	355.63	388.70	969.98	355.63	7.51
16	362.29	287.36	956.92	287.36	8.62	335.63	274.03	939.14	274.03	5.75
24	335.63	169.35	872.48	169.35	5.08	295.63	149.35	812.48	149.35	3.39

	2x4 #2 DF (BASIC)	1.25	1.33	2x6 #2 DF
V(all)	332:50	415.63	442.23	
M(all)	334.96	418.70	445.50	
EI	8575000			

CONNECTION OF BRACKET TO EAVE RAFTER

TMAX = 389# (IF BRACKET MOUNTED TO BOTTOM OF EAVE.

TALL (#10 WS w/ 1½" PENET) = (95#/IN) (1.5") = 142#/SCREW

MIN # OF SCREWS = $\frac{389\#}{142}$ = 2.73 ⇒ USE (3) #10 W.S. FROM BRACKET TO EAVE RAFTER

CONNECTION OF LEDGER TO BRACKET

VMAX = 389#

VALL (#10 WS) = (143#/SCREW)(1.25) = 178.75#/SCREW

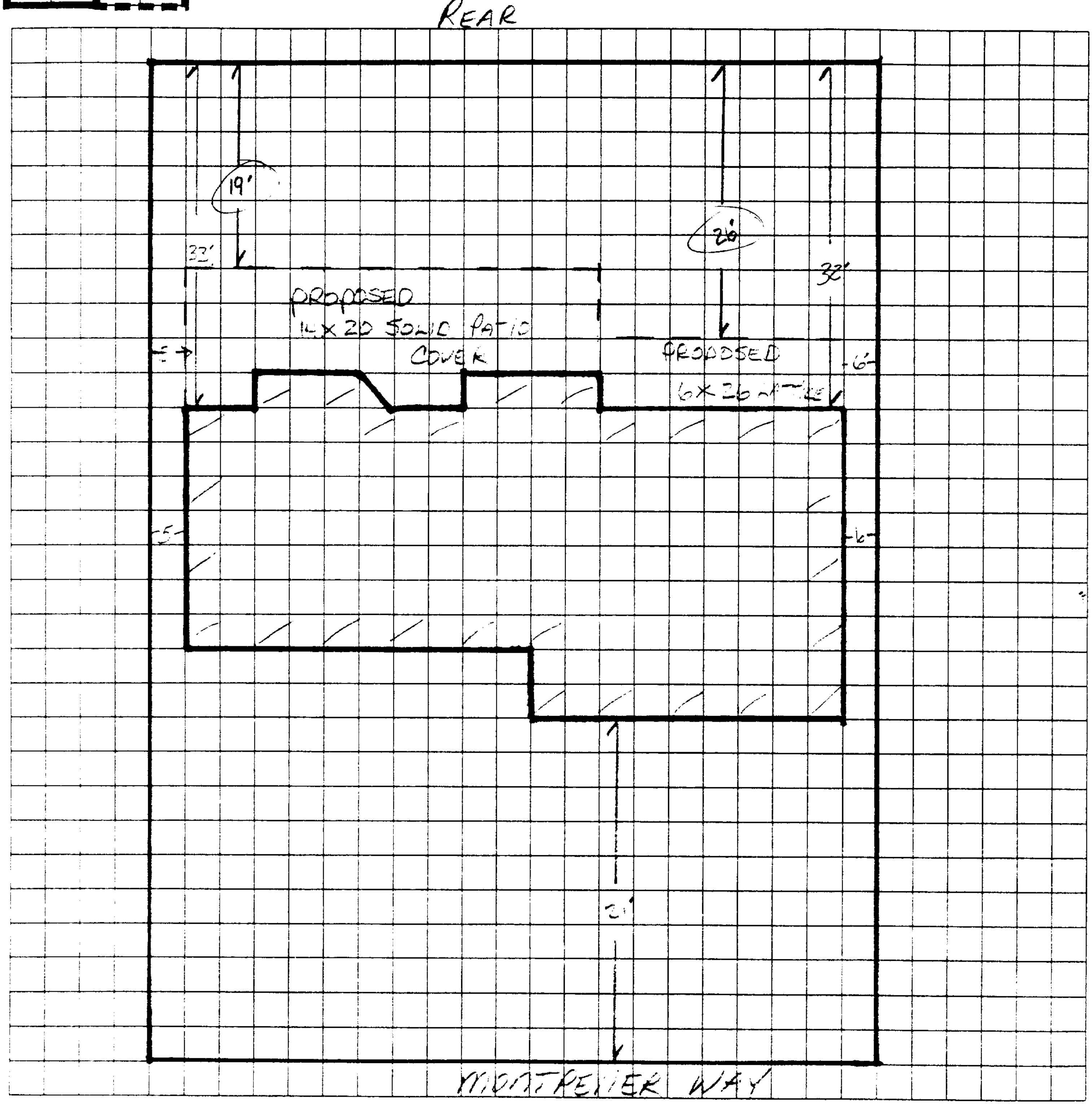
MIN # OF SCREWS = $\frac{389}{179}$ = 2.17 ⇒ USE (3) #10 W.S. FROM BRACKET TO LEDGER

PACIFIC CONSULTING ENGINEERS
BELL AVE., SUITE 145
SACRAMENTO, CA

Setbacks + lot
Coverage Okay
M May 6-1-99

PACIFIC® BUILDERS
5421 84th Street
Sacramento, CA 95826
(916) 383-3168

Work Sheet



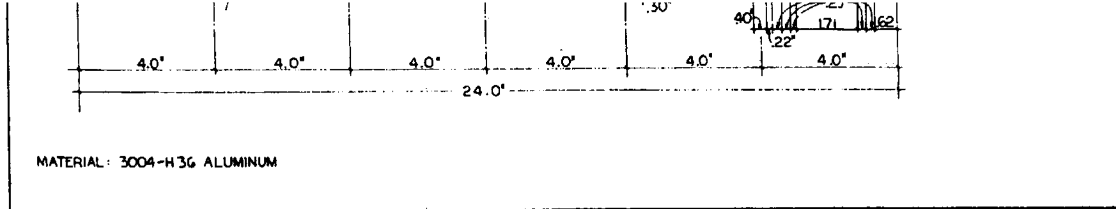
Name: M/M Reyian

Address: 8574 Montpelier Way

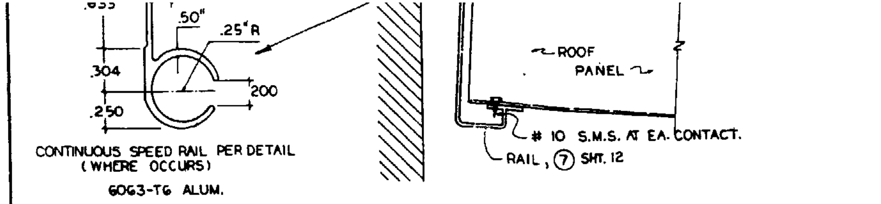
City: Sacto CA 95828

Phone:

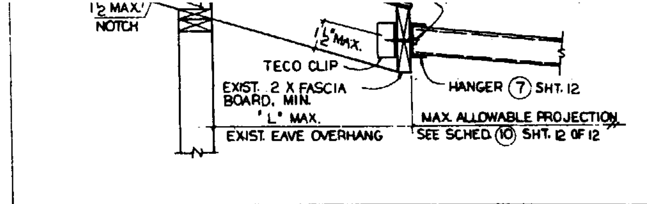
Diagram and Size approved by customer



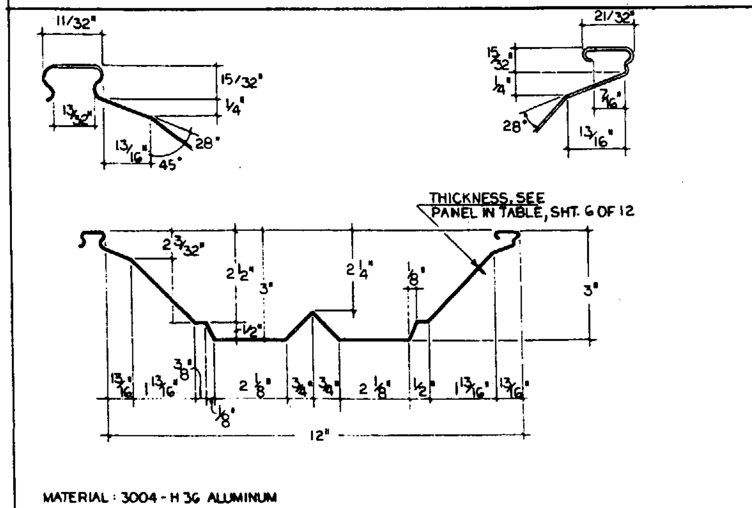
24" ROOF PANEL (1)



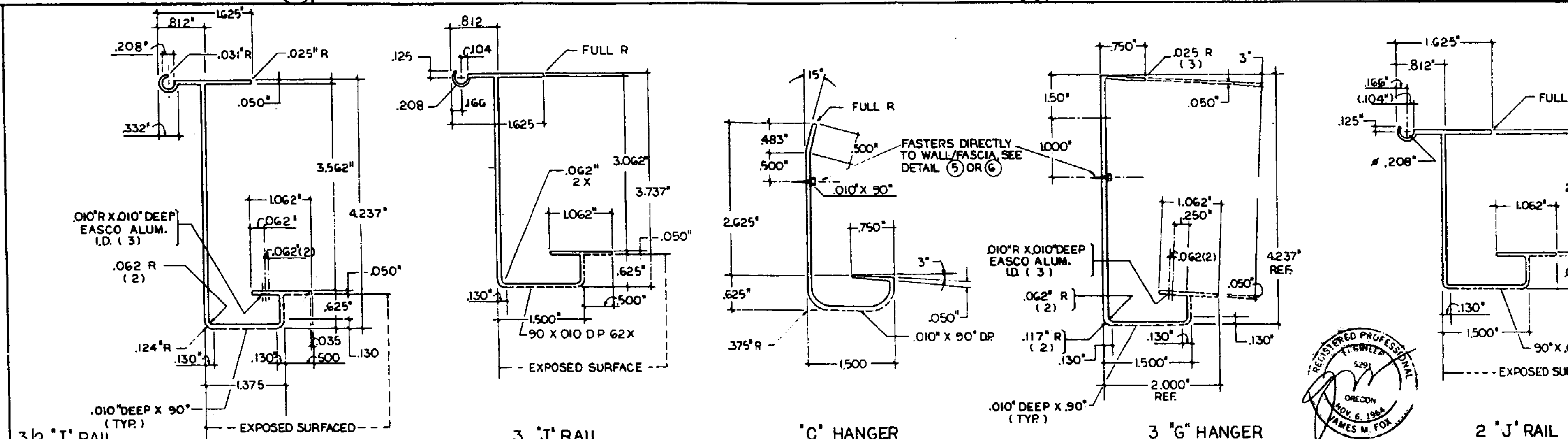
"J" RAIL ATTACHMENT (5)



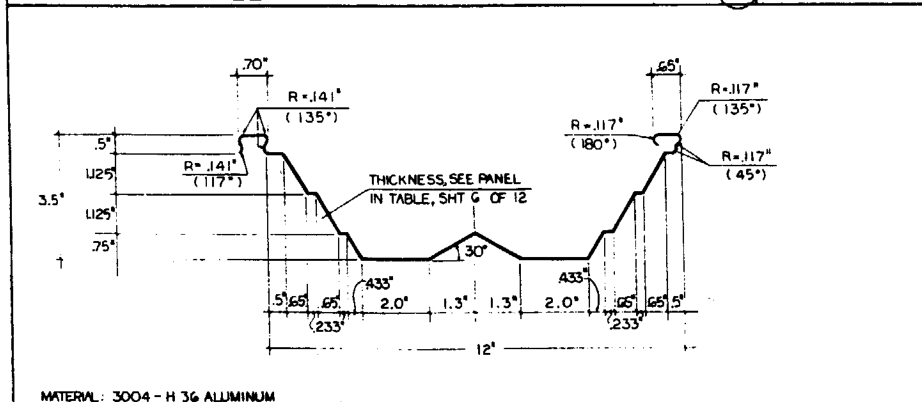
EXISTING EAVE ATTACHMENT



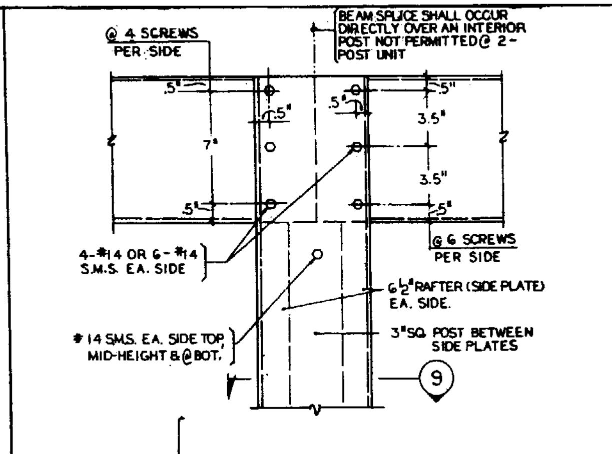
12" X 3" W PANEL (2)



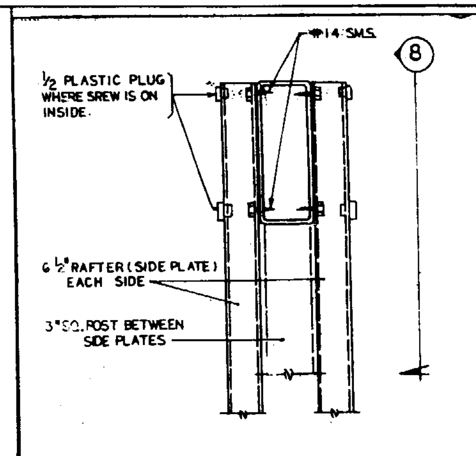
HANGER & RAIL PROFILES ALUMINUM ALLOY 6063-T6



12" X 3 1/2" W PANEL (3)



BEAM / HEADER TO POST CONN. (8)



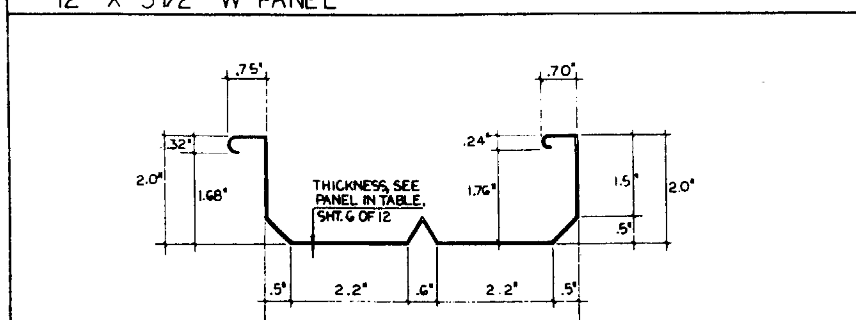
BEAM / HEADER TO POST CONN. (9)

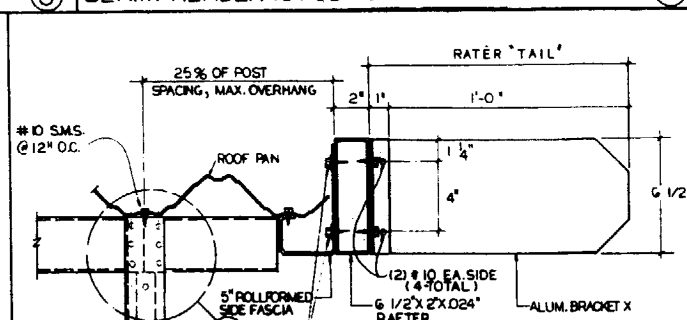
HANGER / RAIL FASTENER TO FASCIA, WALL, (STUD, MASONRY OR CONC.)									
WIND DESIGN	AT 2 X FASCIA W/ SIMPSON A35			AT WOOD STUD 16" O.C.			AT MASONRY OR CONCRETE		
	L.L.= 10	L.L.= 20	L.L.= 30	L.L.= 10	L.L.= 20	L.L.= 30	L.L.= 10	L.L.= 20	L.L.= 30
70	A	C	C	E	H	H	J	J	K
90	B	C	C	E	H	H	J	J	K
100	C	C	C	F	H	H	J	J	K
110	D	C	C	6	H	H	J	J	K

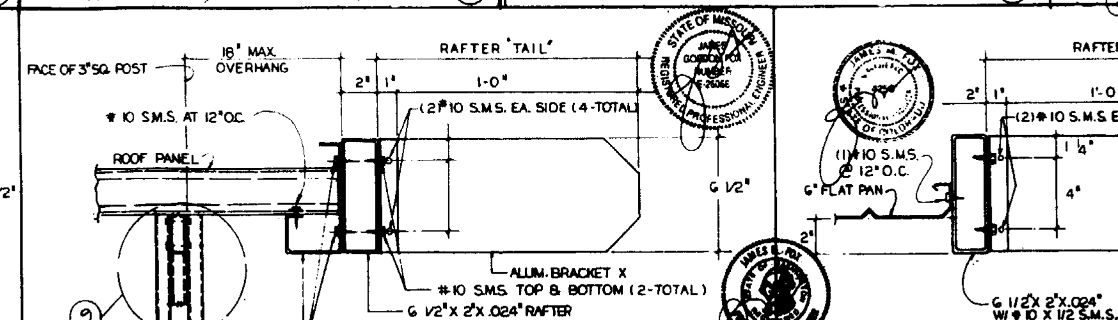
FASTENER SIZE AND TYPE	DESCRIPTION	DESCRIPTION
	A-1/4"0 x 1 1/2" @ 12" O.C.	F-7/16"0 x 2 1/2" @ 16"O.C.
	B-3/8"0 x 1 1/2" @ 16" O.C.	G-7/16"0 x 2 1/2" @ 12"O.C.
	C-3/8"0 x 1 1/2" @ 12" O.C.	H- 3/8"0 x 2 1/2" @ 12"O.C.
	D-7/16"0x 1 1/2" @ 12" O.C.	J- 1/4"0 x 1 1/8" @ 16"A.B.
	E-3/8"0 x 2 1/2" @ 16" O.C.	K- 1/4"0 x 1 1/8" @ 12"A.B.

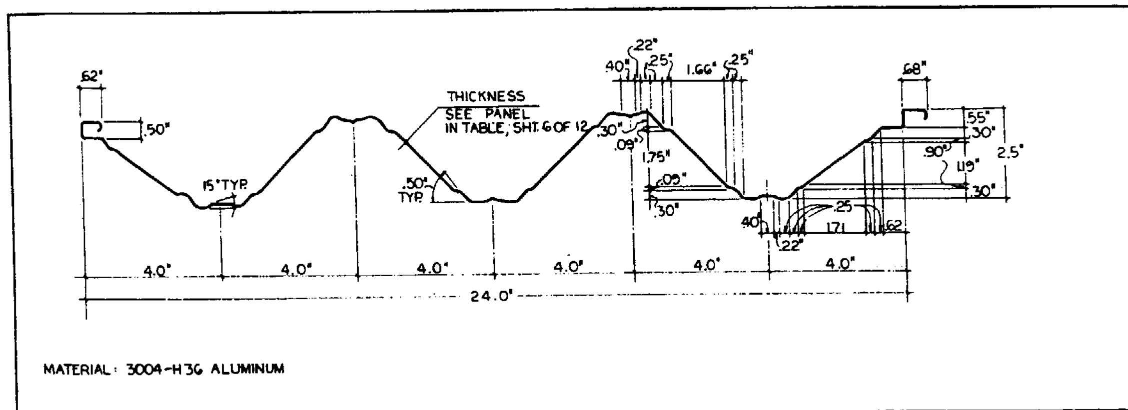
EXISTING EAVE					
EXISTING RAFTER			ALLOWABLE DECK SPAN		
RAFTER SIZE	SPACING	OVERHANG			
2" X 4" FULL OR 2" X 6" NOTCHED	16"O.C.	1'-6"	14'-5"		
		2'-0"	8'-5"		
	24"O.C.	1'-6"	8'-2"		
		2'-0"	3'-9"		
2" X 6"FULL OR 2" X 8"NOTCHED	24" O.C.	2'-0"	17'-5"		
2" X 8" FULL	24" O.C.	2'-0"	23"-1"		

ATTACHED SCHEDULE (10)

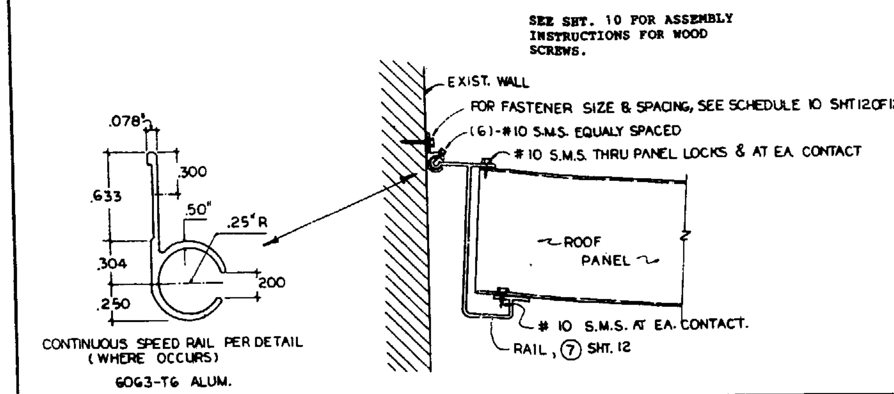




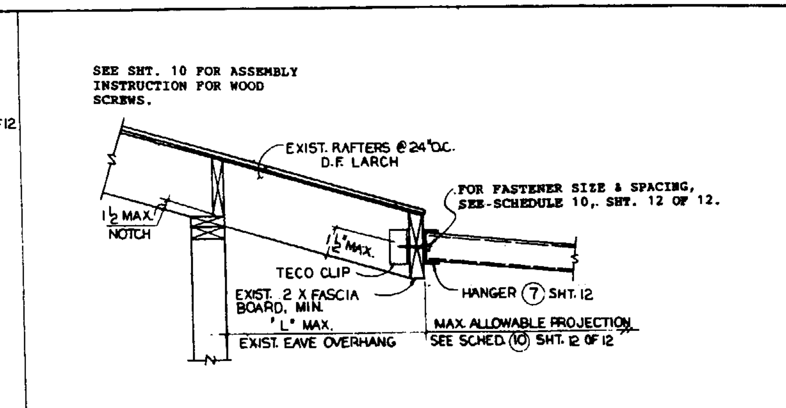




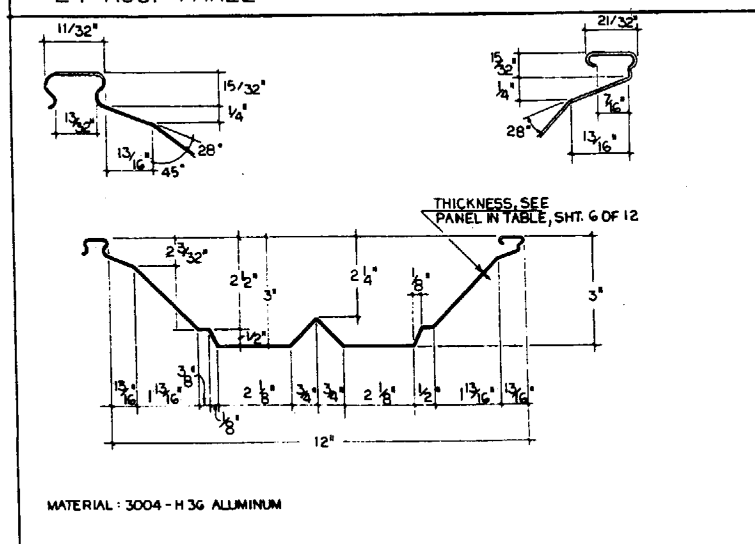
24" ROOF PANEL (1)



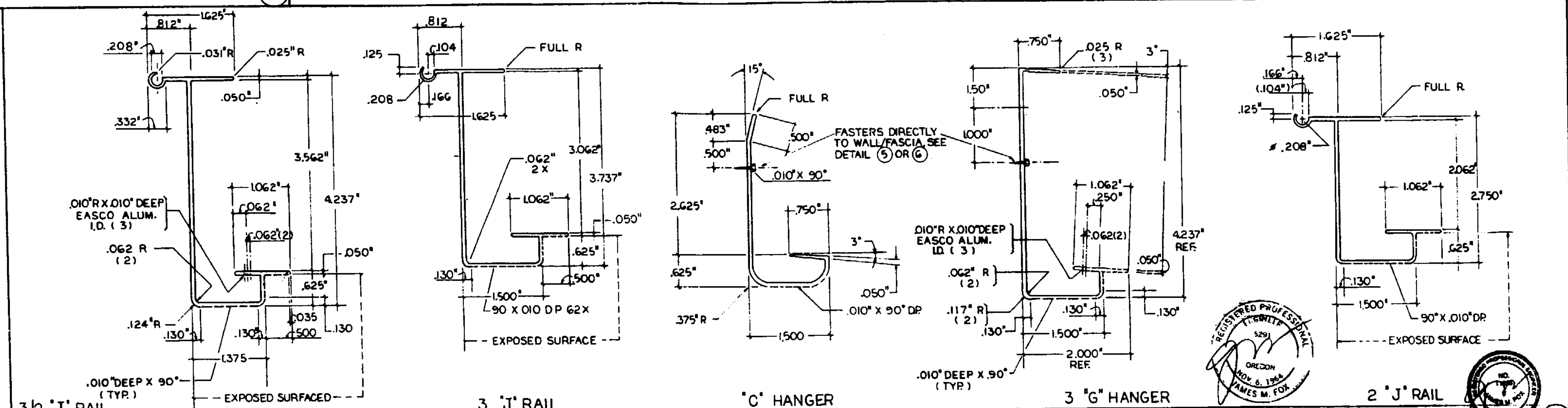
"J" RAIL ATTACHMENT (5)



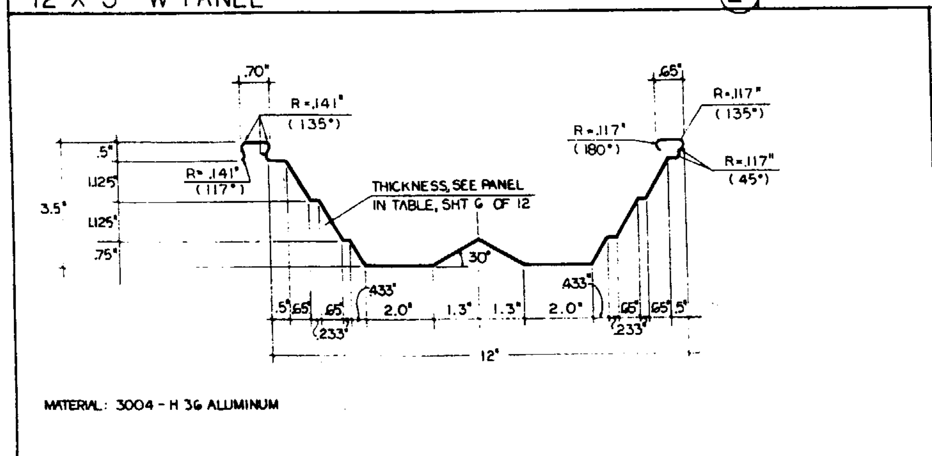
EXISTING EAVE ATTACHMENT (6)



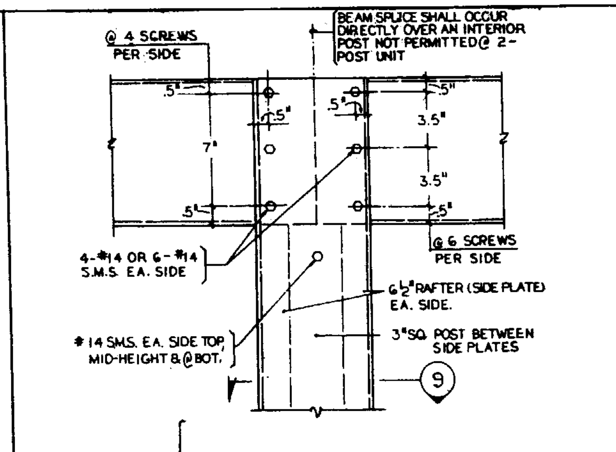
12" X 3" W PANEL (2)



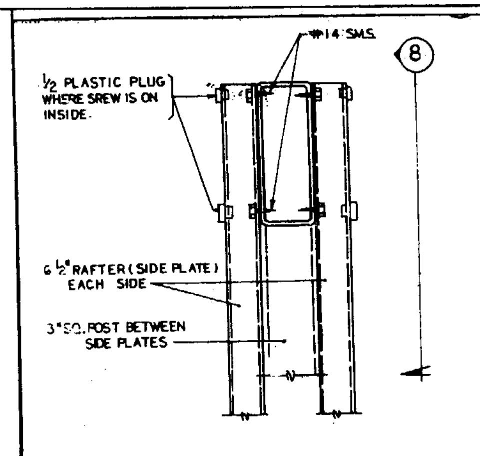
HANGER & RAIL PROFILES ALUMINUM ALLOY 6063-T6 (7)



12" X 3 1/2" W PANEL (3)



BEAM / HEADER TO POST CONN. (8)



BEAM / HEADER TO POST CONN. (9)

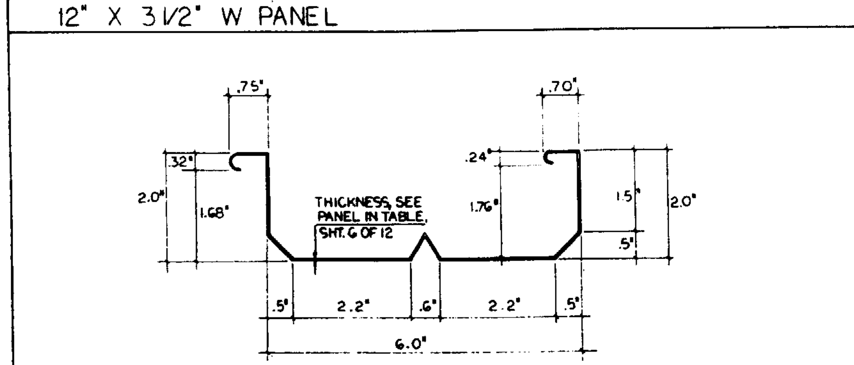
HANGER / RAIL FASTENER TO FASCIA, WALL, (STUD, MASONRY OR CONC.)									
WIND DESIGN	AT 2 X FASCIA W/ SIMPSON A35			AT WOOD STUD 16" O.C.			AT MASONRY OR CONCRETE		
	L.L.= 10	L.L.= 20	L.L.= 30	L.L.= 10	L.L.= 20	L.L.= 30	L.L.= 10	L.L.= 20	L.L.= 30
70	A	C	C	E	H	H	J	J	K
90	B	C	C	E	H	H	J	J	K
100	C	C	C	F	H	H	J	J	K
110	D	C	C	6	H	H	J	J	K

FASTENER SIZE AND TYPE	DESCRIPTION	DESCRIPTION
	A-1/4"0 x 1 1/2" @ 12" O.C.	F-7/16"0 x 2 1/2" @ 16"O.C.
	B-3/8"0 x 1 1/2" @ 16" O.C.	G-7/16"0 x 2 1/2" @ 12"O.C.
	C-3/8"0 x 1 1/2" @ 12" O.C.	H- 3/8"0 x 2 1/2" @ 12"O.C.
	D-7/16"0x 1 1/2" @ 12" O.C.	J- 1/4"0 x 1 1/8" @ 16"A.B.*
	E-3/8"0 x 2 1/2" @ 16" O.C.	K- 1/4"0 x 1 1/8" @ 12"A.B.*

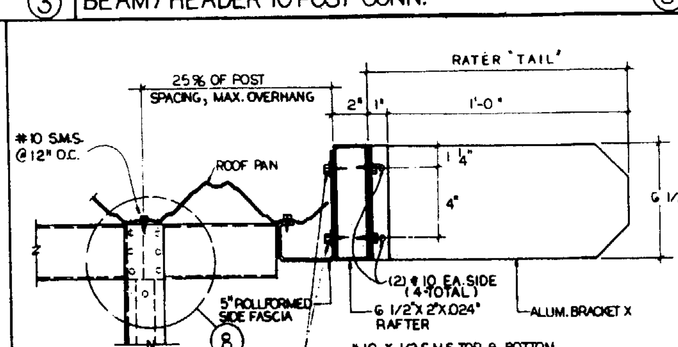
* HILTI KB - II

EXISTING EAVE					
EXISTING RAFTER			ALLOWABLE DECK SPAN		
RAFTER SIZE	SPACING	OVERHANG			
2" X 4" FULL OR 2" X 6" NOTCHED	16"O.C.	1'-6"	14'-5"		
		2'-0"	8'-5"		
	24"O.C.	1'-6"	8'-2"		
		2'-0"	3'-9"		
2" X 6"FULL OR 2" X 8"NOTCHED	24" O.C.	2'-0"	17'-5"		
2" X 8" FULL	24" O.C.	2'-0"	23"-1"		

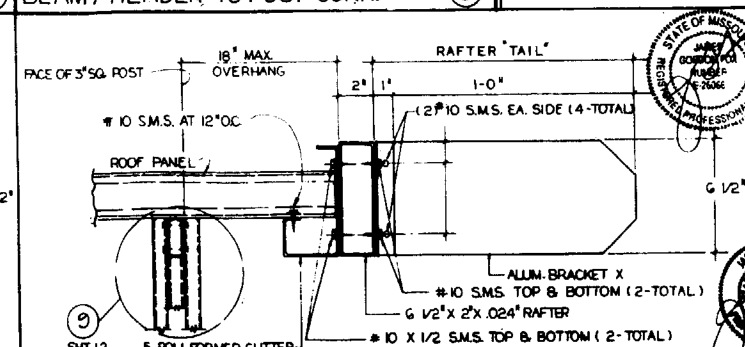
ATTACHED SCHEDULE (10)



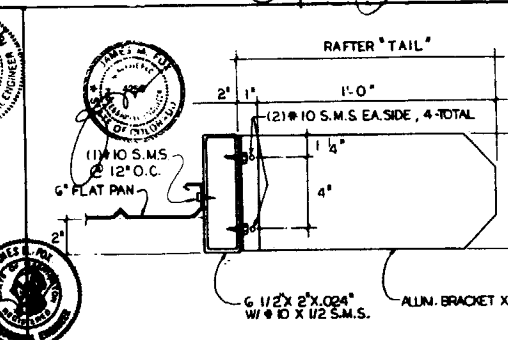
6" X 2" FLAT PANEL (4)



RAFTER "TAIL" AT SIDES (11)

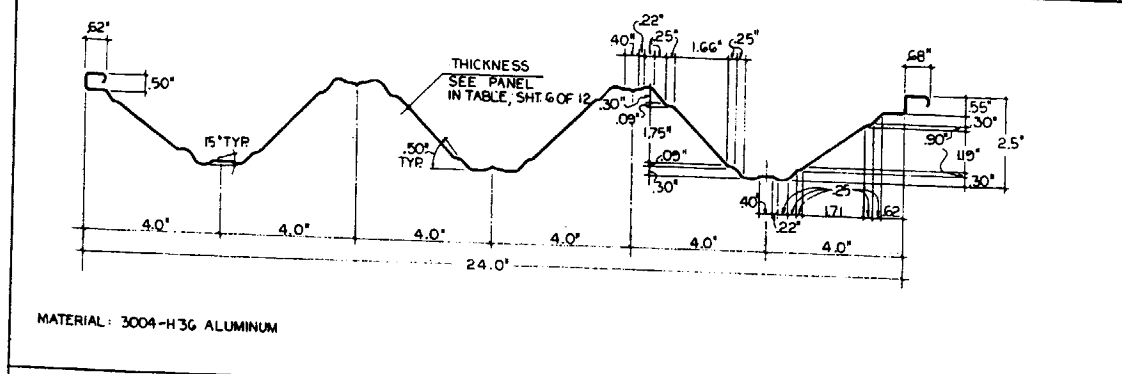


RAFTER "TAIL" AT FRONT (12)

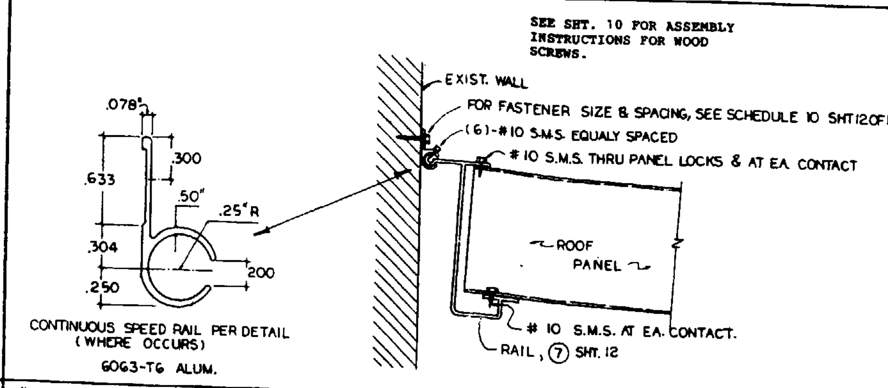


RAFTER "TAIL" W/ 6" X 2" FLAT PANEL (13)

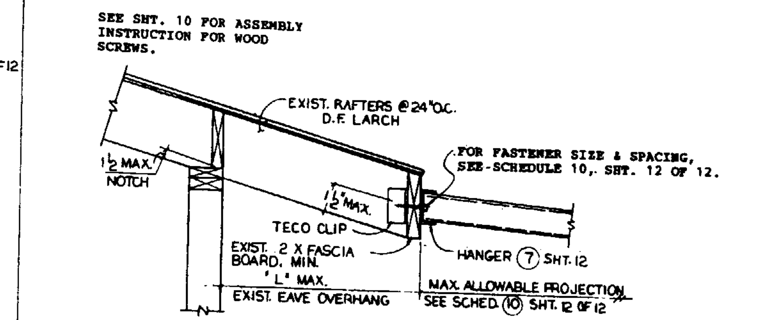
I.C.B.O. E.S. EVALUATION REPORT NO. 5038	DATE 7-12-92 SCALE NOTED DRAWN BY K.K.	(1) 10-15 K.K. CHANGED SHT. # 8 TO 12	FOX ENGINEERING JAMES M. FOX, STRUCTURAL ENGINEER 8000 TELEGRAPH RD. DOWNEY, CALIFORNIA 90240	COMPONENTS & DETAIL CONN. FOR: ROOFED-TYPE-PATIO COVERS	ALUMA-LATTICE PATIO COVER (AS MFG. BY) VALLEY ALUMINUM COMPANY 5802 W. LINCOLN ST. PHOENIX, ARIZONA 85009 (602) 278-6224 JOB NO. 92-17287 SHEET 12 OF 12



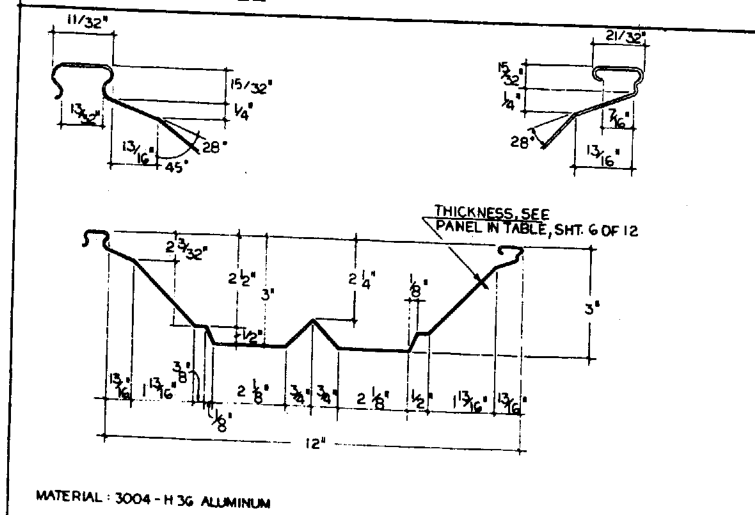
24" ROOF PANEL (1)



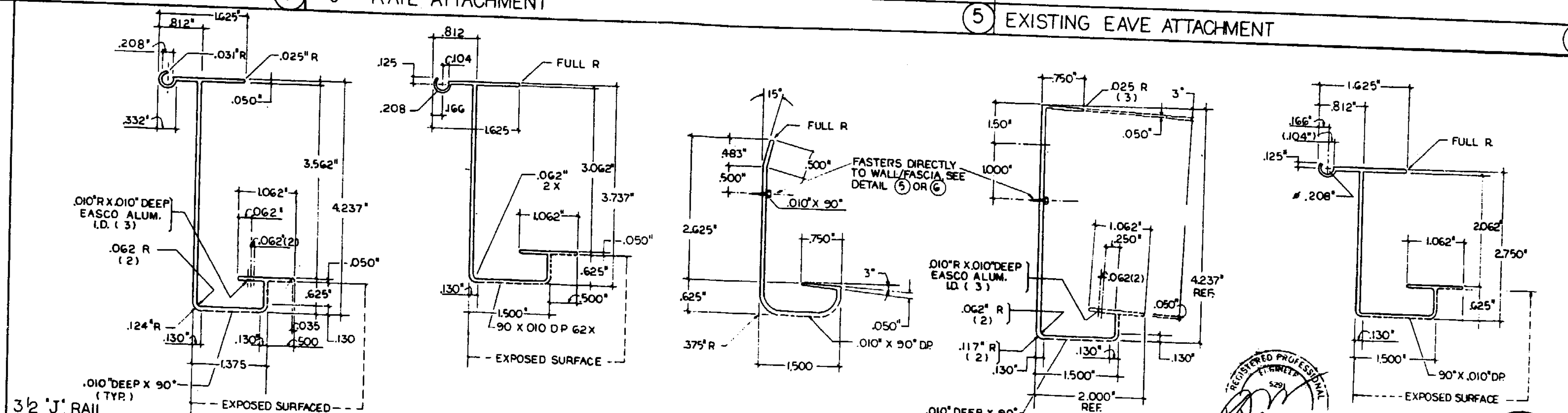
"J" RAIL ATTACHMENT (5)



EXISTING EAVE ATTACHMENT (6)



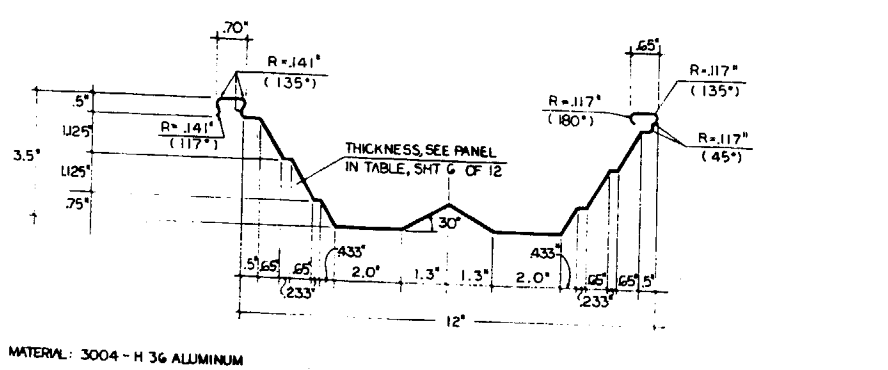
12" X 3" W PANEL (2)



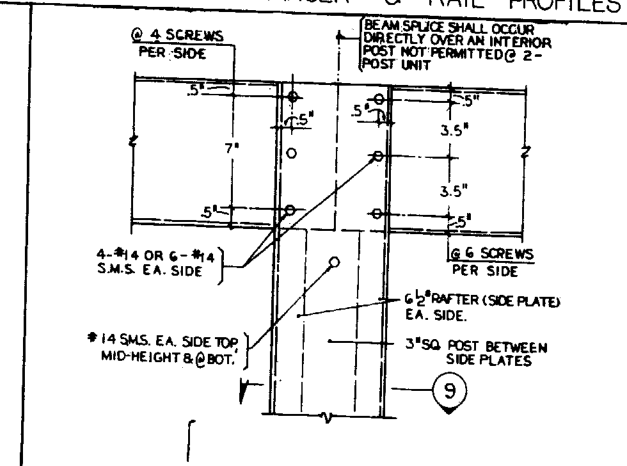
3½ "J" RAIL — 3 "J" RAIL — "C" HANGER — 3 "G" HANGER — 2 "J" RAIL

HANGER & RAIL PROFILES

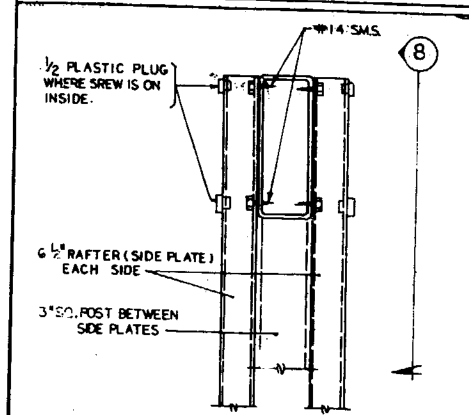
ALUMINUM ALLOY 6063-T6 (7)



12" X 3 1/2" W PANEL (3)



BEAM / HEADER TO POST CONN. (8)



BEAM / HEADER TO POST CONN. (9)

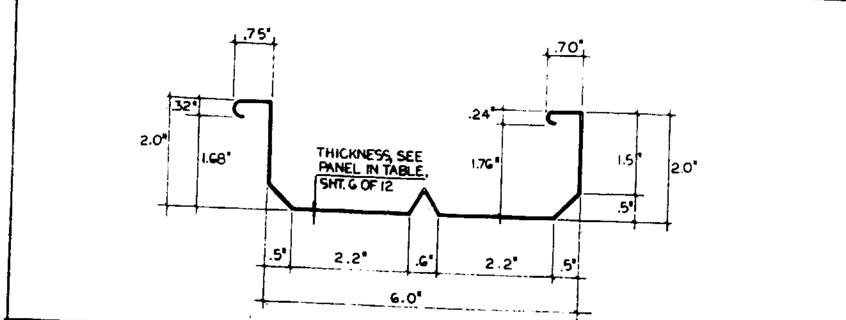
HANGER / RAIL FASTENER TO FASCIA, WALL, (STUD, MASONRY OR CONC.)									
WIND DESIGN	AT 2 X FASCIA W/ SIMPSON A35			AT WOOD STUD 16" O.C.			AT MASONRY OR CONCRETE		
	L.L.= 10	L.L.= 20	L.L.= 30	L.L.= 10	L.L.= 20	L.L.= 30	L.L.= 10	L.L.= 20	L.L.= 30
70	A	C	C	E	H	H	J	J	K
90	B	C	C	E	H	H	J	J	K
100	C	C	C	F	H	H	J	J	K
110	D	C	C	6	H	H	J	J	K

FASTENER SIZE AND TYPE	
DESCRIPTION	DESCRIPTION
A-1/4"0 x 1 1/2" @ 12" O.C.	F-7/16"0 x 2 1/2" @ 16"O.C.
B-3/8"0 x 1 1/2" @ 16" O.C.	G-7/16"0 x 2 1/2" @ 12"O.C.
C-3/8"0 x 1 1/2" @ 12" O.C.	H- 3/8"0 x 2 1/2" @ 12"O.C.
D-7/16"0x 1 1/2" @ 12" O.C.	J- 1/4"0 x 1 1/8" @ 16"A.B.*
E-3/8"0 x 2 1/2" @ 16" O.C.	K- 1/4"0 x 1 1/8" @ 12"A.B.*

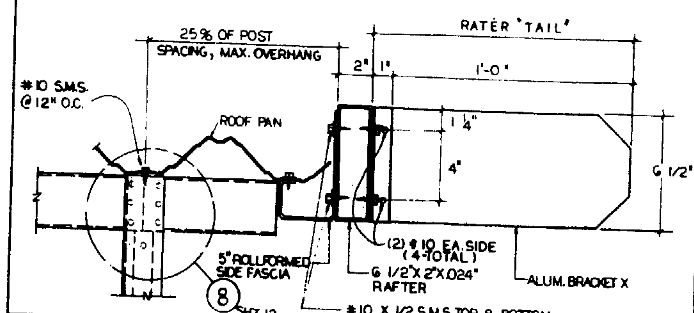
* HILTI KB - II

EXISTING EAVE					
EXISTING RAFTER			ALLOWABLE DECK SPAN		
RAFTER SIZE	SPACING	OVERHANG			
2" X 4" FULL OR 2" X 6" NOTCHED	16"O.C.	1'-6"	14'-5"		
		2'-0"	8'-5"		
	24"O.C.	1'-6"	8'-2"		
		2'-0"	3'-9"		
2" X 6"FULL OR 2" X 8"NOTCHED	24" O.C.	2'-0"	17'-5"		
2" X 8" FULL	24" O.C.	2'-0"	23"-1"		

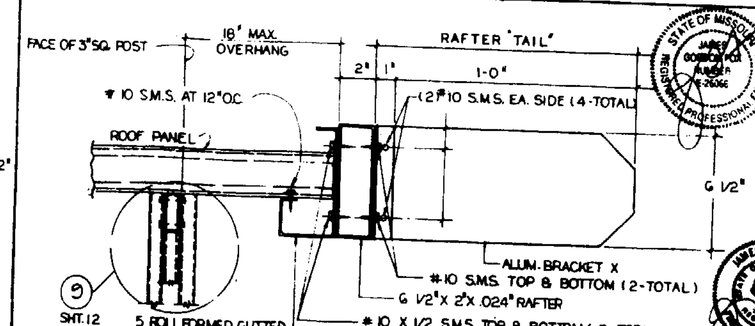
ATTACHED SCHEDULE (10)



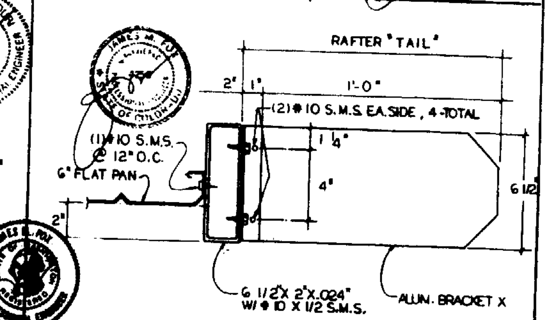
6" X 2" FLAT PANEL (4)



RAFTER "TAIL" AT SIDES (11)



RAFTER "TAIL" AT FRONT (12)



RAFTER "TAIL" W/ 6" X 2" FLAT PANEL (13)

I.C.B.O. E.S. EVALUATION REPORT NO. 5038	DATE 7-12-92 SCALE NOTED DRAWN BY K.K.	△ 10-15 K.K. CHANGED SHT. # 8 TO 12

FOX ENGINEERING
JAMES M. FOX, STRUCTURAL ENGINEER
8060 TELEGRAPH RD. DOWNEY, CALIFORNIA 90240

COMPONENTS & DETAIL CONN. FOR:
ROOFED-TYPE-PATIO COVERS

ALUMA-LATTICE PATIO COVER (AS MFR. BY)
VALLEY ALUMINUM COMPANY
(602) 278-6224

JOB NO. 92-17287
SHEET 12 OF 12

ATTACHED LATTICE / COMMERCIAL STRUCTURES — TABLE A

POST SIZES AND FOOTING SIZES WIND = 22.3/37.6/27/45.5 UPLIFT = 29.2/49.2/35.3/59.5

L.L.	WIND SPEED & EXPOSURE	POST SIZE — MAX. POST HEIGHT 8'-7"	11'-0"	14'-6"	18'-0"	FOOTING SIZE — MAX. POST HEIGHT 8'-7" NO SLAB[1]	8'-7" W/SLAB	11'-0" NO SLAB[2]	11'-0" W/SLAB	14'-6" NO SLAB	14'-6" W/SLAB	18'-0" NO SLAB	18'-0" W/SLAB
L.L. = 20 P.S.F.	100 B	3"SQ.X.082"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3'-2"SQ.X18"	18"øX 2'-10"	3'-5"SQ.X18"	18"øX 3'-0"	3'-8"SQ.X18"	18"øX 3'-4"	3'-11"SQ.X18"	18"øX 3'-8"
	100 C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3 1/2"SQ.X.188"	3'-6"SQ.X.18"	18"øX 3'-0"	3'-9"SQ.X18"	18"øX 3'-4"	4'-1"SQ.X 18"	18"øX 3'-8"	4'-4"SQ.X18"	18"øX 3'-11"
	110 B	3"SQ.X.125"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3'-4"SQ.X18"	18"øX 3'-0"	3'-7"SQ.X18"	18"øX 3'-4"	3'-10"SQ.X18"	18"øX 3'-8"	4'-2"SQ.X18"	18"øX 4'-0"
	110 C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3 1/2"SQ.X.25"	3'-7"SQ.X18	18"øX 3'-2"	3'-10"SQ.X18	18"øX 3'-5"	4'-2"SQ.X18"	18"øX 3'-9"	4'-6"SQ.X18"	18"øX 4'-0"
L.L. = 30 P.S.F.	100 B	3"SQ.X.069"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3'-10"SQ.X18	18"øX 2'-8"	3'-2"SQ.X18"	18"øX 2'-10"	3'-6"SQ.X18"	18"øX 3'-2"	3'-8"SQ.X18	18"øX 3'-4"
	100 C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3 1/2 SQ.X.188"	3'-6"SQ.X18	18"øX 3'-0"	3'-9"SQ.X18"	18"øX 3'-4"	4'-1"SQ.X18"	18"øX 3'-8"	4'-4"SQ.X18	18"øX 3'-11"
	110 B	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3'-2"SQ.X18	18"øX 2'-10"	3'-5"SQ.X18"	18"øX 3'-0"	3'-8"SQ.X18	18"øX 3'-4"	3'-11"SQ.X18	18"øX 3'-7"
	110 C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3 1/2"SQ.X.25"	3'-7"SQ.X18	18"øX 3'-2"	3'-7"SQ.X18	18"øX 3'-5"	4'-2"SQ.X18"	18"øX 3'-9"	4'-6"SQ.X18	18"øX 4'-0"

NOTE: REFER TO SHT. 8 & 12 FOR CROSS-SECTIONS & DETAIL CONNS.

TABLE FOOTNOTES:

1. CONCRETE SLAB (EXISTING OR NEW) COMPLETELY SURROUNDS NEW FOOTING.
2. CONCRETE SLAB DOES NOT EXIST AND NO SLAB WILL BE CONSTRUCTED AS PART OF THIS INSTALLATION.

FREESTANDING LATICE / COMMERCIAL STRUCTURES — TABLE B

POST SIZE AND FOOTING SIZES WIND = 22.3/37.6/27/45.5 UPLIFT - 29.2/49.2/35.3/59.5

L.L.	WIND SPEED & EXPOSURE	POST SIZE — MAXIMUM POST HEIGHT 8'-7"	11'-0"	14'-6"	18'-0"	FOOTING SIZE — MAXIMUM POST HEIGHT 8'-7" NO SLAB[2]	8'-7" W/ SLAB[1]	11'-0" NO SLAB	11'-0" W/ SLAB	14'-6" NO SLAB	14'-6" NO SLAB	18'-0" W/ SLAB	18'-0" NO SLAB
L.L. = 20 P.S.F.	100-B	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3'-2"SQ.X18"	18"øX 2'-10"	3'-5"SQ.X18"	18"øX 3'-0"	3'-9"SQ.X18"	18"øX 3'-4"	4'-0"SQ.X18"	18"øX 3'-7"
	100-C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3 1/2"SQ.X.188"	3'-6"SQ.X18"	18"øX 3'-1"	3'-9"SQ.X18"	18"øX 3'-4"	4'-1"SQ.X18"	18"øX 3'-8"	4'-4"SQ.X18"	18"øX 3'-11"
	110-B	3"SQ.X.125"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3'-4"SQ.X18"	18"øX 2'-11"	3'-7"SQ.X18"	18"øX 3'-2"	3'-10"SQ.X18"	18"øX 3'-5"	4'-2"SQ.X18"	18"øX 3'-9"
	110-C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3 1/2"SQ.X.25"	3'-7"SQ.X18"	18"øX 3'-2"	3'-10"SQ.X18	18"øX 3'-6"	4'-2"SQ.X18	18"øX 3'-10"	4'-6"SQ.X18	18"øX 4'-1"
L.L. = 30 P.S.F.	100-B	3"SQ.X.069"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3'-0"SQ.X18"	18"øX 3'-7"	3'-2"SQ.X18	18"øX 2'-10"	3'-6"SQ.X18"	18"øX 3'-2"	3'-8"SQ.X18	18"øX 3'-4"
	100-C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3 1/2"SQ.X.188"	3'-6"SQ.X18"	18"øX 3'-1"	3'-9"SQ.X18	18"øX 3'-4"	4'-1"SQ.X18	18"øX 3'-8"	4'-4"SQ.X18	18"øX 3'-11"
	110-B	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3'-2"SQ.X18"	18"øX 2'-10"	3'-5"SQ.X18	18"øX 3'-0"	3'-8"SQ.X18"	18"øX 3'-4"	3'-11"SQ.X18	18"øX 3'-7"
	110-C	3"SQ.X 188"	3 1/2"SQ.X.188"	3"SQ.X 188"	3 1/2"SQ.X.25"	3'-7"SQ.X18	18"øX 3'-2"	3'-10"SQ.X18	18"øX 3'-6"	4'-2"SQ.X18	18"øX 3'-10"	4'-6"SQ.X18	18"øX 4'-1"

NOTE REFER TO SHT. 9 & 12 FOR CROSS-SECTIONS & DETAIL CONNS.

TABLE FOOTNOTES:

1. CONCRETE SLAB (EXISTING OR NEW) COMPLETELY SURROUNDS NEW FOOTING.
2. CONCRETE SLAB DOES NOT EXIST AND NO SLAB WILL BE CONSTRUCTED AS PART OF THIS INSTALLATION.

FASTENER CONNECTION (ATTACHED & FREESTANDING) TABLE C

RAFTER TO BEAM CONNECTION

DETAIL	WIND SPEED & EXPOSURE 100 B — TO RAFT.	100 B — TO BEAM	100 C — TO RAFT.	100 C — TO BEAM	WIND SPEED & EXPOSURE 110 B — TO RAFT.	110 B — TO BEAM	110 C — TO RAFT.	110 C — TO BEAM
	L.L.= 20 P.S.F. & 30 P.S.F.				L.L.= 20 P.S.F. & 30 P.S.F.			
10 SHT 11	(2)-14 S.M.S. EA. LEG (4-TOTAL)	(2)-1/4-14 TEKS, EA. LEG. (4-TOTAL)	(2)-14 S.M.S. EA. LEG (4-TOTAL)	(2)-1/4-14 TEKS, EA. LEG. (4-TOTAL)	(2)-14 S.M.S. EA. LEG (4-TOTAL)	(2)-1/4-14 TEKS EACH LEG. (4-TOTAL)	(2)-14 S.M.S. EA. LEG (4-TOTAL)	(2)-1/4-14 TEKS, EACH LEG. (4-TOTAL)

BEAM TO POST CONNECTION (ATTACHED & FREESTANDING) TABLE D

L.L.	WIND SPEED & EXPOSURE	TO BEAM 22 SHT. 11	TO POST 22 SHT 11	L.L.	WIND SPEED & EXPOSURE	TO BEAM 22 SHT. 11	TO POST 22 SHT. 11
L.L. = 20 P.S.F.	100-B	(3)-5/8"ø M.B.S	(3)-3/4"ø M.B.S	L.L. = 30 P.S.F.	100-B	(3)-5/8"ø M.B.S	(3) 3/4"ø M.B.S
	100-C	(3)-3/4"ø M.B.S	(3)-1"ø M.B.S		100-C	(3) 3/4"ø M.B.S	(3) 1"ø M.B.S
	110-B	(3)-3/4"ø M.B.S	(3)-1"ø M.B.S		110-B	(3) 3/4"ø M.B.S	(3) 3/4"ø M.B.S
	110-C	(3)-1"ø M.B.S	(3)-1"ø M.B.S		110-C	(3) 1"ø M.B.S	(3) 1"ø M.B.S

ASSEMBLY INSTRUCTIONS FOR FASTENERS TO WOOD STRUCTURES:

LAG SCREWS - LEAD HOLES FOR LAG SCREWS SHALL BE BORED AS FOLLOWS: THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 75 PERCENT IN WOOD AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION. THE THREADED PORTION OF THE LAG SCREW SHALL BE INSERTED IN ITS LEAD HOLE BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. SOAP OR OTHER LUBRICANT SHALL BE USED ON THE LAG SCREWS OR IN THE LEAD HOLES TO FACILITATE INSERTION AND PREVENT DAMAGE TO THE LAG SCREW.

WOOD SCREWS - LEAD HOLES FOR WOOD SCREWS LOADED IN WITHDRAWAL SHALL HAVE A DIAMETER EQUAL TO APPROXIMATELY 70 PERCENT OF THE WOOD SCREW ROOT DIAMETER IN WOOD. LEAD HOLES FOR WOOD SCREWS LOADED LATERALLY SHALL BE BORED AS FOLLOWS: THE PART OF THE LEAD HOLE RECEIVING THE SHANK SHALL BE ABOUT SEVEN-EIGHTS THE DIAMETER OF THE SHANK AND THAT RECEIVING THE THREADED PORTION SHALL BE ABOUT SEVEN-EIGHTS THE DIAMETER OF THE SCREW AT THE ROOT OF THE THREAD. THE WOOD SCREW SHALL BE INSERTED IN ITS LEAD HOLE BY TURNING WITH A SCREW DRIVER OR OTHER TOOL, NOT BY DRIVING WITH A HAMMER. SOAP OR OTHER LUBRICANT SHALL BE USED ON WOOD SCREWS OR IN THE LEAD HOLES TO FACILITATE INSERTION AND TO PREVENT DAMAGE TO THE WOOD SCREW.

GENERAL NOTES AND SPECIFICATIONS:

1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1982 edition of the Aluminum Construction manual.
2. Alternate aluminum alloys may be substituted for those shown, provided they are registered with the Aluminum Association and have equal or greater yield and ultimate strengths.
3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i. Concrete slab shall have 3½" minimum thickness and shall be in good condition.
4. All footings shall bear on firm, natural un-disturbed soil or certified fill. Design vertical soil bearing pressure = 1,000 P.S.F.
5. All steel members shall be hot-dip galvanized or electroplated and conform to A.S.T.M. A-446, Grade C.
6. Aluminum fasteners shall be 2024-T4. All other fasteners shall be galvanized steel or cadmium plated. All bolts shall conform to A.S.T.M. A-307 and have standard cut plate washers. Holes for bolts shall be bolt diameter plus 1/16" maximum.
7. Expansion bolts shall be Hilti Kwik Bolts KB II carbon steel or equal per I.C.B.O. E.R.No. 4627. All bolts shall have a minimum concrete edge distance of 6 bolt diameters.
8. Each installation shall bear an identifying tag giving the name and address of the manufacturer, design loads and enclosability.
9. All items pertaining to each particular installation shall be circled, i.e., project, post spacing, footing detail, etc.
10. Open lattice patio cover shall not be enclosed with any type of solid material, and the design loads have only been applied to the horizontal projected area of the lattice, rafters, beams, etc. per I.C.B.O. criteria.
11. For all detail references, see Sheet 11 of 12

JAMES M. FOX REGISTERED PROFESSIONAL ENGINEER STRUCTURAL

I.C.B.O. E.S. EVALUATION REPORT NO. 5038

DATE 10-15-92
SCALE NONE
DRAWN BY K.K.

FOX ENGINEERING
JAMES M. FOX, STRUCTURAL ENGINEER
8060 TELEGRAPH RD. DOWNEY, CALIFORNIA 90240
(310) 806-1327 (310) 927-3600 FAX: (310) 927-3600

JAMES M. FOX, SE 816

ATTACHED & FREE. LATTICE-TYPE COMMERCIAL STRUCTURES
L.L.= 20 & 30 PSF
WIND SPEED & EXPOSURE = 100-B, 100-C, 110-B & 110 C

ALUMA-LATTICE PATIO COVER
(AS MFG. BY)
VALLEY ALUMINUM COMPANY
5602 W. LINCOLN ST. PHOENIX, ARIZONA 85009
(602) 278-6224

JOB NO. 92-19287

ATTACHED LATTICE / COMMERCIAL STRUCTURES — TABLE A

POST SIZES AND FOOTING SIZES WIND = 22.3/37.6/27/45.5 UPLIFT = 29.2/49.2/35.3/59.5

L.L.	WIND SPEED & EXPOSURE	POST SIZE, MAX. POST HEIGHT 8'-7"	11'-0"	14'-6"	18'-0"	FOOTING SIZE, MAX. POST HEIGHT 8'-7" NO SLAB[1]	8'-7" W/SLAB	11'-0" NO SLAB[2]	11'-0" W/SLAB	14'-6" NO SLAB	14'-6" W/SLAB	18'-0" NO SLAB	18'-0" W/SLAB
L.L. = 20 P.S.F.	100 B	3"SQ.X.082"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3'-2"SQ.X18"	18"ø X 2'-10"	3'-5"SQ.X18"	18"ø X 3'-0"	3'-8"SQ.X18"	18"ø X 3'-4"	3'-11"SQ.X18"	18"ø X 3'-8"
	100 C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3 1/2"SQ.X.188"	3'-6"SQ.X.18"	18"ø X 3'-0"	3'-9"SQ.X18"	18"ø X 3'-4"	4'-1"SQ.X 18"	18"ø X 3'-8"	4'-4"SQ.X18"	18"ø X 3'-11"
	110 B	3"SQ.X.125"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3'-4"SQ.X18	18"ø X 3'-0"	3'-7"SQ.X18"	18"ø X 3'-4"	3'-10"SQ.X18	18"ø X 3'-8"	4'-2"SQ.X18"	18"ø X 4'-0"
	110 C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3 1/2"SQ.X.25"	3'-7"SQ.X.18	18"ø X 3'-2"	3'-10"SQ.X18	18"ø X 3'-5"	4'-2"SQ.X18	18"ø X 3'-9"	4'-6"SQ.X18"	18"ø X 4'-0"
L.L. = 30 P.S.F.	100 B	3"SQ.X.069"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3'-10"SQ.X18	18"ø X 2'-8"	3'-2"SQ.X18"	18"ø X 2'-10"	3'-6"SQ.X18"	18"ø X 3'-2"	3'-8"SQ.X18	18"ø X 3'-4"
	100 C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3 1/2 SQ.X.188"	3'-6"SQ.X18	18"ø X 3'-0"	3'-9"SQ.X18"	18"ø X 3'-4"	4'-1"SQ.X18"	18"ø X 3'-8"	4'-4"SQ.X18"	18"ø X 3'-11"
	110 B	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3'-2"SQ.X18	18"ø X 2'-10"	3'-5"SQ.X18"	18"ø X 3'-0"	3'-8"SQ.X18"	18"ø X 3'-4"	3'-11"SQ.X18	18"ø X 3'-7"
	110 C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3 1/2"SQ.X.25"	3'-7"SQ.X.18	18"ø X 3'-2"	3'-7"SQ.X18"	18"ø X 3'-5"	4'-2"SQ.X18"	18"ø X 3'-9"	4'-6"SQ.X18	18"ø X 4'-0"

NOTE: REFER TO SHT. 8 & 12 FOR CROSS-SECTIONS & DETAIL CONNS.

TABLE FOOTNOTES:

1. CONCRETE SLAB (EXISTING OR NEW) COMPLETELY SURROUNDS NEW FOOTING.
2. CONCRETE SLAB DOES NOT EXIST AND NO SLAB WILL BE CONSTRUCTED AS PART OF THIS INSTALLATION.

FREESTANDING LATICE / COMMERCIAL STRUCTURES — TABLE B

POST SIZE AND FOOTING SIZES WIND = 22.3/37.6/27/45.5 UPLIFT = 29.2/49.2/35.3/59.5

L.L.	WIND SPEED & EXPOSURE	POST SIZE, MAXIMUM POST HEIGHT 8'-7"	11'-0"	14'-6"	18'-0"	FOOTING SIZE, MAXIMUM POST HEIGHT 8'-7" NO SLAB[2]	8'-7" W/ SLAB[1]	11'-0" NO SLAB	11'-0" W/ SLAB	14'-6" NO SLAB	14'-6" NO SLAB	18'-0" W/ SLAB.	18'-0" NO SLAB
L.L. = 20 P.S.F.	100-B	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3'-2"SQ.X18"	18"ø X 2'-10"	3'-5"SQ.X18"	18"ø X 3'-0"	3'-9"SQ.X18"	18"ø X 3'-4"	4'-0"SQ.X18"	18"ø X 3'-7"
	100-C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3 1/2"SQ.X.188"	3'-6"SQ.X18"	18"ø X 3'-1"	3'-9"SQ.X18"	18"ø X 3'-4"	4'-1"SQ.X18"	18"ø X 3'-8"	4'-4"SQ.X18	18"ø X 3'-11"
	110-B	3"SQ.X.125"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3'-4"SQ.X18"	18"ø X 2'-11"	3'-7"SQ.X18	18"ø X 3'-2"	3'-10"SQ.X18	18"ø X 3'-5"	4'-2"SQ.X18	18"ø X 3'-9"
	110-C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3 1/2"SQ.X.25"	3'-7"SQ.X18"	18"ø X 3'-2"	3'-10"SQ.X18	18"ø X 3'-6"	4'-2"SQ.X18	18"ø X 3'-10"	4'-6"SQ.X18	18"ø X 4'-1"
L.L. = 30 P.S.F.	100-B	3"SQ.X.069"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3'-0"SQ.X.18"	18"ø X 3'-7"	3'-2"SQ.X18	18"ø X 2'-10"	3'-6"SQ.X18"	18"ø X 3'-2"	3'-8"SQ.X18	18"ø X 3'-4"
	100-C	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3 1/2"SQ.X.188"	3'-6"SQ.X18"	18"ø X 3'-1"	3'-9"SQ.X18	18"ø X 3'-4"	4'-1"SQ.X18	18"ø X 3'-8"	4'-4"SQ.X18	18"ø X 3'-11"
	110-B	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.188"	3'-2"SQ.X18"	18"ø X 2'-10"	3'-5"SQ.X18	18"ø X 3'-0"	3'-8"SQ.X18"	18"ø X 3'-4"	3'-11"SQ.X18	18"ø X 3'-7"
	110-C	3"SQ.X.188"	3 1/2"SQ.X.188"	3"SQ.X.188"	3 1/2"SQ.X.25"	3'-7"SQ.X18"	18"ø X 3'-2"	3'-10"SQ.X18	18"ø X 3'-6"	4'-2"SQ.X18"	18"ø X 3'-10"	4'-6"SQ.X18	18"ø X 4'-1"

NOTE: REFER TO SHT. 9 & 12 FOR CROSS-SECTIONS & DETAIL CONNS.

TABLE FOOTNOTES:

1. CONCRETE SLAB (EXISTING OR NEW) COMPLETELY SURROUNDS NEW FOOTING.
2. CONCRETE SLAB DOES NOT EXIST AND NO SLAB WILL BE CONSTRUCTED AS PART OF THIS INSTALLATION.

FASTENER CONNECTION (ATTACHED & FREESTANDING) TABLE C

RAFTER TO BEAM CONNECTION

DETAIL	WIND SPEED & EXPOSURE 100 B, L.L.= 20 P.S.F. & 30 P.S.F.: TO RAFT.	100 B: TO BEAM	100 C: TO RAFT.	100 C: TO BEAM	WIND SPEED & EXPOSURE 110 B, L.L.= 20 P.S.F. & 30 P.S.F.: TO RAFT.	110 B: TO BEAM	110 C: TO RAFT.	110 C: TO BEAM
(10) SHT. 11	(2) - 14 S.M.S. EA. LEG (4 - TOTAL)	(2) - 1/4 - 14 TEKS, EA. LEG. (4 - TOTAL)	(2) - 14 S.M.S. EA. LEG (4 - TOTAL)	(2) - 1/4 - 14 TEKS, EA. LEG. (4 - TOTAL)	(2) - 14 S.M.S. EA. LEG (4 - TOTAL)	(2) - 1/4 - 14 TEKS EACH LEG. (4 - TOTAL)	(2) - 14 S.M.S. EA. LEG (4 - TOTAL)	(2) - 1/4 - 14 TEKS, EACH LEG. (4 - TOTAL)

BEAM TO POST CONNECTION (ATTACHED & FREESTANDING) TABLE D

L.L.	WIND SPEED & EXPOSURE	TO BEAM (22) SHT. 11	TO POST (22) SHT. 11	L.L.	WIND SPEED & EXPOSURE	TO BEAM (22) SHT. 11	TO POST (22) SHT. 11
L.L. = 20 P.S.F.	100-B	(3) - 5/8"ø M.B.*	(3) - 3/4"ø M.B.*	L.L. = 30 P.S.F.	100-B	(3) - 5/8"ø M.B.*	(3) 3/4"ø M.B.*
	100-C	(3) - 3/4"ø M.B.*	(3) - 1"ø M.B.*		100-C	(3) 3/4"ø M.B.*	(3) 1"ø M.B.*
	110-B	(3) - 3/4"ø M.B.*	(3) - 1"ø M.B.*		110-B	(3) 3/4"ø M.B.*	(3) 3/4"ø M.B.*
	110-C	(3) - 1"ø M.B.*	(3) - 1"ø M.B.*		110-C	(3) 1"ø M.B.*	(3) 1"ø M.B.*

ASSEMBLY INSTRUCTIONS FOR FASTENERS TO WOOD STRUCTURES:

LAG SCREWS - LEAD HOLES FOR LAG SCREWS SHALL BE BORED AS FOLLOWS: THE LEAD HOLE FOR THE THREADED PORTION SHALL HAVE A DIAMETER EQUAL TO 75 PERCENT IN WOOD AND A LENGTH EQUAL TO AT LEAST THE LENGTH OF THE THREADED PORTION. THE THREADED PORTION OF THE LAG SCREW SHALL BE INSERTED IN ITS LEAD HOLE BY TURNING WITH A WRENCH, NOT BY DRIVING WITH A HAMMER. SOAP OR OTHER LUBRICANT SHALL BE USED ON THE LAG SCREWS OR IN THE LEAD HOLES TO FACILITATE INSERTION AND PREVENT DAMAGE TO THE LAG SCREW.

WOOD SCREWS - LEAD HOLES FOR WOOD SCREWS LOADED IN WITHDRAWAL SHALL HAVE A DIAMETER EQUAL TO APPROXIMATELY 70 PERCENT OF THE WOOD SCREW ROOT DIAMETER IN WOOD. LEAD HOLES FOR WOOD SCREWS LOADED LATERALLY SHALL BE BORED AS FOLLOWS: THE PART OF THE LEAD HOLE RECEIVING THE SHANK SHALL BE ABOUT SEVEN-EIGHTS THE DIAMETER OF THE SHANK AND THAT RECEIVING THE THREADED PORTION SHALL BE ABOUT SEVEN-EIGHTS THE DIAMETER OF THE SCREW AT THE ROOT OF THE THREAD. THE WOOD SCREW SHALL BE INSERTED IN ITS LEAD HOLE BY TURNING WITH A SCREW DRIVER OR OTHER TOOL, NOT BY DRIVING WITH A HAMMER. SOAP OR OTHER LUBRICANT SHALL BE USED ON WOOD SCREWS OR IN THE LEAD HOLES TO FACILITATE INSERTION AND TO PREVENT DAMAGE TO THE WOOD SCREW.

GENERAL NOTES AND SPECIFICATIONS:

1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1982 edition of the Aluminum Construction manual.
2. Alternate aluminum alloys may be substituted for those shown, provided they are registered with the Aluminum Association and have equal or greater yield and ultimate strengths.
3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i. Concrete slab shall have 3½" minimum thickness and shall be in good condition.
4. All footings shall bear on firm, natural un-disturbed soil or certified fill. Design vertical soil bearing pressure = 1,000 P.S.F.
5. All steel members shall be hot-dip galvanized or electroplated and conform to A.S.T.M. A-446, Grade C.
6. Aluminum fasteners shall be 2024-T4. All other fasteners shall be galvanized steel or cadmium plated. All bolts shall conform to A.S.T.M. A-307 and have standard cut plate washers. Holes for bolts shall be bolt diameter plus 1/16" maximum.
7. Expansion bolts shall be Hilti Kwik Bolts KB II carbon steel or equal per I.C.B.O. E.R.No. 4627. All bolts shall have a minimum concrete edge distance of 6 bolt diameters.
8. Each installation shall bear an identifying tag giving the name and address of the manufacturer, design loads and enclosability.
9. All items pertaining to each particular installation shall be circled, i.e., project, post spacing, footing detail, etc.
10. Open lattice patio cover shall not be enclosed with any type of solid material, and the design loads have only been applied to the horizontal projected area of the lattice, rafters, beams, etc. per I.C.B.O. criteria.
11. For all detail references, see Sheet 11 of 12

I.C.B.O. E.S. EVALUATION REPORT NO. 5038

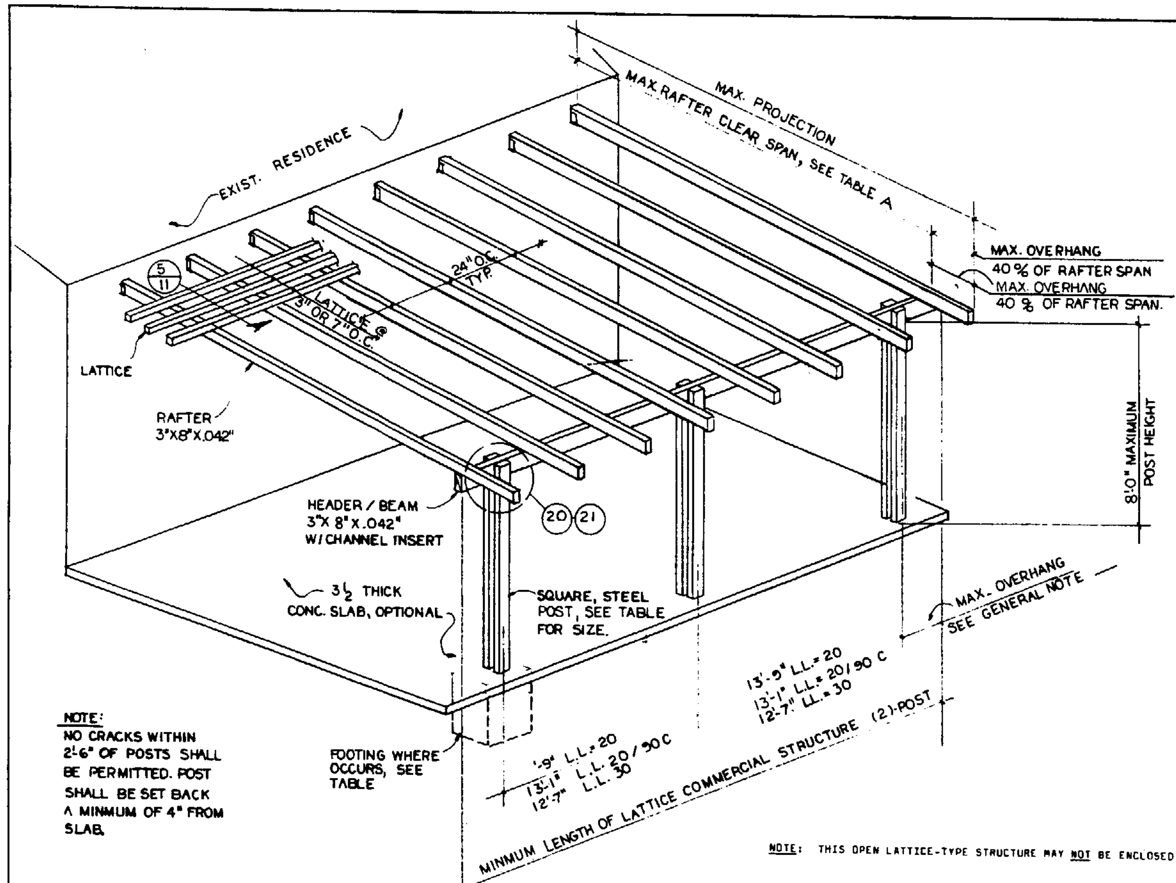
DATE 10-15-92
SCALE NONE
DRAWN BY K.K.

FOX ENGINEERING
JAMES M. FOX, STRUCTURAL ENGINEER
8060 TELEGRAPH RD. DOWNEY, CALIFORNIA 90240
(310) 806-1387 (310) 927-3800 FAX: (310) 927-3800
JAMES M. FOX, SE 916

ATTACHED & FREE. LATTICE-TYPE COMMERCIAL STRUCTURES
L.L. 20 & 30 PSF
WIND SPEED & EXPOSURE = 100-B, 100-C, 110-B & 110 C

ALUMA-LATTICE PATIO COVER
(AS MFG. BY)
VALLEY ALUMINUM COMPANY
5602 W. LINCOLN ST. PHOENIX, ARIZONA 85009 (602) 278-6224

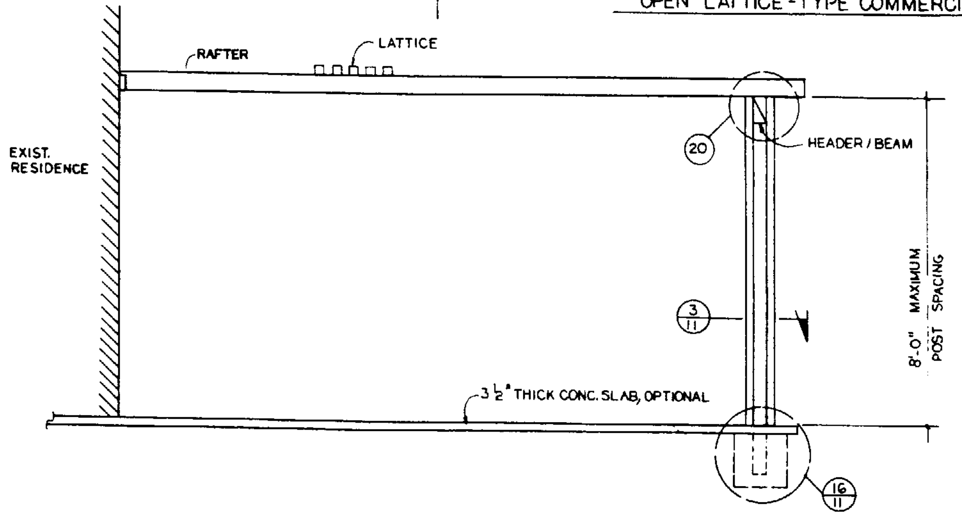
JOB NO. 92-19287



NOTE: NO CRACKS WITHIN 2'-6" OF POSTS SHALL BE PERMITTED. POST SHALL BE SET BACK A MINIMUM OF 4" FROM SLAB.

NOTE: THIS OPEN LATTICE-TYPE STRUCTURE MAY NOT BE ENCLOSED.

OPEN LATTICE-TYPE COMMERCIAL



CROSS - SECTION

GENERAL NOTES AND SPECIFICATIONS:

1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1982 edition of the Aluminum Construction manual.
2. Alternate aluminum alloys may be substituted for those shown, provided they are registered with the Aluminum Association and have equal or greater yield and ultimate strengths.
3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i. Concrete slab shall have 3½" minimum thickness and shall be in good condition.
4. All footings shall bear on firm, natural un-disturbed soil or certified fill. Design vertical soil bearing pressure = 1,000 P.S.F.
5. All steel members shall be hot-dip galvanized or electroplated and conform to A.S.T.M. A-446, Grade C.
6. Aluminum fasteners shall be 2024-T4. All other fasteners shall be galvanized steel or cadmium plated. All bolts shall conform to A.S.T.M. A-307 and have standard cut plate washers. Holes for bolts shall be bolt diameter plus 1/16" maximum.
7. Expansion bolts shall be Hilti Kwik Bolts KB II carbon steel or equal per I.C.B.O. E.R.No. 4627. All bolts shall have a minimum concrete edge distance of 8 bolt diameters.
8. Each installation shall bear an identifying tag giving the name and address of the manufacturer, design loads and enclosability.
9. All items pertaining to each particular installation shall be circled, i.e., project, post spacing, footing detail, etc.
10. Open lattice patio cover shall not be enclosed with any type of solid material, and the design loads have only been applied to the horzontal projected area of the lattice, rafters, beams, etc. per I.C.B.O. criteria.
11. For all detail references, see Sheet 11 of 12

MAXIMUM ALLOWABLE RAFTER SPAN - 3"X8"X.042" — A

L.L. = 20 PSF								
WIND SPEED & EXPOSURE								
70 B	70 C	90 B	90 C	100 B	100 C	110 B	110 C	
17'-9"	17'-9"	17'-9"	17'-3"	17'-9"	14'-1"	16'-10"	12'-9"	
40%	40%	40%	6'-0"	7'-0"	5'-7"	6'-8"	5'-0"	MAX. OVERHANG
L.L. = 30 P.S.F.								
WIND SPEED & EXPOSURE								
70 B	70 C	90 B	90 C	100 B	100 C	110 B	110 C	
14'-9"	14'-9"	14'-9"	14'-9"	14'-9"	14'-1"	14'-9"	12'-9"	
40%	40%	40%	40%	5'-10"	5'-7"	5'-10"	5'-0"	MAX. OVERHANG

MAXIMUM ALLOWABLE HEADER/BEAM SPAN - 3"x8"x .042" W/CHANNEL INSERT — B

L.L. 20 P.S.F.							
WIND SPEED & EXPOSURE							
70 B	70 C	90 B	90 C	100 B	100 C	110 B	110 C
13'-9"	13'-9"	13'-9"	13'-1"	13'-9"	12'-3"	13'-6"	11'-10"
L.L. = 30 P.S.F.							
WIND SPEED & EXPOSURE							
70 B	70 C	90 B	90 C	100 B	100 C	110 B	110 C
12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-3"	12'-7"	11'-10"

ATTACHED LATTICE / COMMERCIAL STRUCTURES — TABLE A

POST SIZES AND FOOTING SIZES — WIND = 11/18.5/18.1/30.6 P.S.F. UPLIFT = 14.35/24.2/23.7/40 P.S.F.

POST SIZE — MAX. POST HEIGHT

L.L.	WIND SPEED & EXPOSURE	8'-7"	11'-0"	14'-6"	18'-0"
20 PSF	70-B	3"SQ.X.062"	3"SQ.X.062"	3"SQ.X.083"	3"SQ.X.083"
20 PSF	70-C	3"SQ.X.083"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"
20 PSF	90-B	3"SQ.X.083"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"
20 PSF	90-C	3"SQ.X.125"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"
30 PSF	70-B	3"SQ.X.062"	3"SQ.X.062"	3"SQ.X.062"	3"SQ.X.083"
30 PSF	70-C	3"SQ.X.062"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.125"
30 PSF	90-B	3"SQ.X.062"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.125"
30 PSF	90-C	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"

FOOTING SIZE — MAX. POST HEIGHT

L.L.	WIND SPEED & EXPOSURE	8'-7" NO SLAB[2]	8'-7" W/SLAB[1]	11'-0" NO SLAB	11'-0" W/SLAB	14'-6" NO SLAB	14'-6" W/SLAB	18'-0" NO SLAB	18'-0" W/SLAB
20 PSF	70-B	2'-6" SQ. X 18"	18" ø X 2'-3"	2'-8" SQ. X 18"	18" ø X 2'-5"	2'-11" SQ. X 18"	18" ø X 2'-8"	3'-2" SQ. X 18"	18" ø X 2'-10"
20 PSF	70-C	3'-0" SQ. X 18"	18" ø X 2'-7"	3'-2" SQ. X 18"	18" ø X 2'-11"	3'-6" SQ. X 18"	18" ø X 3'-2"	3'-8" SQ. X 18"	18" ø X 3'-4"
20 PSF	90-B	3'-0" SQ. X 18"	18" ø X 2'-7"	3'-2" SQ. X 18"	18" ø X 2'-11"	3'-5" SQ. X 18"	18" ø X 3'-1"	3'-8" SQ. X 18"	18" ø X 3'-4"
20 PSF	90-C	3'-4" SQ. X 18"	18" ø X 3'-0"	3'-7" SQ. X 18"	18" ø X 3'-2"	3'-11" SQ. X 18"	18" ø X 3'-6"	4'-2" SQ. X 18"	18" ø X 3'-9"
30 PSF	70-B	2'-4" SQ. X 18"	18" ø X 2'-2"	2'-6" SQ. X 18"	18" ø X 2'-3"	2'-9" SQ. X 18"	18" ø X 2'-6"	2'-11" SQ. X 18"	18" ø X 2'-8"
30 PSF	70-C	2'-10" SQ. X 18"	18" ø X 2'-6"	3'-0" SQ. X 18"	18" ø X 2'-8"	3'-3" SQ. X 18"	18" ø X 2'-11"	3'-6" SQ. X 18"	18" ø X 3'-2"
30 PSF	90-B	2'-9" SQ. X 18"	18" ø X 2'-6"	3'-0" SQ. X 18"	18" ø X 2'-8"	3'-3" SQ. X 18"	18" ø X 2'-11"	3'-6" SQ. X 18"	18" ø X 3'-2"
30 PSF	90-C	3'-4" SQ. X 18"	18" ø X 2'-11"	3'-7" SQ. X 18"	18" ø X 3'-2"	3'-10" SQ. X 18"	18" ø X 3'-6"	4'-1" SQ. X 18"	18" ø X 3'-9"

TABLE FOOTNOTES:
1. CONCRETE SLAB (EXISTING OR NEW) COMPLETELY SURROUNDS NEW FOOTING.
2. CONCRETE SLAB DOES NOT EXIST AND NO SLAB WILL BE CONSTRUCTED AS PART OF THIS INSTALLATION.

FASTENER CONNECTION TABLE — B

RAFTER TO BEAM CONNECTION

DETAIL	70-B TO RAFT.	70-B TO BEAM	70-C TO RAFT.	70-C TO BEAM	90-B TO RAFT.	90-B TO BEAM	90-C TO RAFT.	90-C TO BEAM
	L.L. = 20 P.S.I. & 30 P.S.I.				L.L. = 20 P.S.I. & 30 P.S.I.			
14 SHT. 11	(2)-#14 S.M.S. EA. LEG (4-TOTAL)	(2)-#10-16 X 3/4 TEKS EA. LEG (4-TOT.) W/ 1 1/2" SQ. X 1/4 WASHER PLATE, ALUM. ALLOY 6061-T6	(2)-#14 S.M.S. EACH LEG (4-TOTAL)	(2)-#10-16 X 3/4 TEKS EACH LEG (4-TOT.) W/ 1 1/2 SQ. X 1/4 WASHER PLATE, ALUM. ALLOY 6061-T6	(2)-#14 S.M.S. EACH LEG (4-TOTAL)	(2)-#10-16 X 3/4 TEKS EACH LEG (4-TOT) W/ 1 1/2 SQ. X 1/4 WASHER PLATE, ALUM. ALLOY 6061-T6	(2)-#14 S.M.S. EACH LEG (4-TOTAL)	(2)-#10-16 X 3/4 TEKS EACH LEG. (4-TOT) W/ 1 1/2 SQ. X 1/4 WASHER PLATE, ALUM. ALLOY 6061-T6

POST TYPES

1. 3" SQ. POST + (2) - 2"X G 1/2" X .024" W/(8)-#14 S.M.S.
2. 3" SQ. POST + (2) - 2"X G 1/2" X .032" W/(8)-#14 S.M.S.
3. 3" SQ. POST + (2) 2"X G 1/2" X .024" W/(12)-#14 S.M.S.
4. 3" SQ. POST + (2) - 2"X G 1/2" X .032" W/(12)-#14 S.M.S.

NOTE: POST TYPES 1 AND 3 ARE USED FOR SLAB CONDITION. POST TYPES 2 AND 4 ARE USED FOR FOOTING CONDITION.

BEAM TO POST CONNECTION — TABLE C

L.L.	WIND SPEED & EXPOSURE	TO BEAM	TO POST
20	70-B	4	4
20	70-C (22, SHT. 11)	(3)-5/8" ø	(3)-5/8" ø
20	90-B (22)	(3)-1/2" ø	(3)-1/2" ø
20	90-C (22)	(3)- 1" ø	(3)- 1" ø
30	70-B	2	2
30	70-C (22, SHT. 11)	(2)-5/8" ø	(2)-5/8" ø
30	90-B (22)	(2)-5/8" ø	(2)-5/8" ø
30	90-C (22)	(2)- 1" ø	(2)- 1" ø

I.C.B.O. E.S. EVALUATION REPORT NO. 5038

DATE 5-15-92 · SCALE NOTED · DRAWN BY K.K.

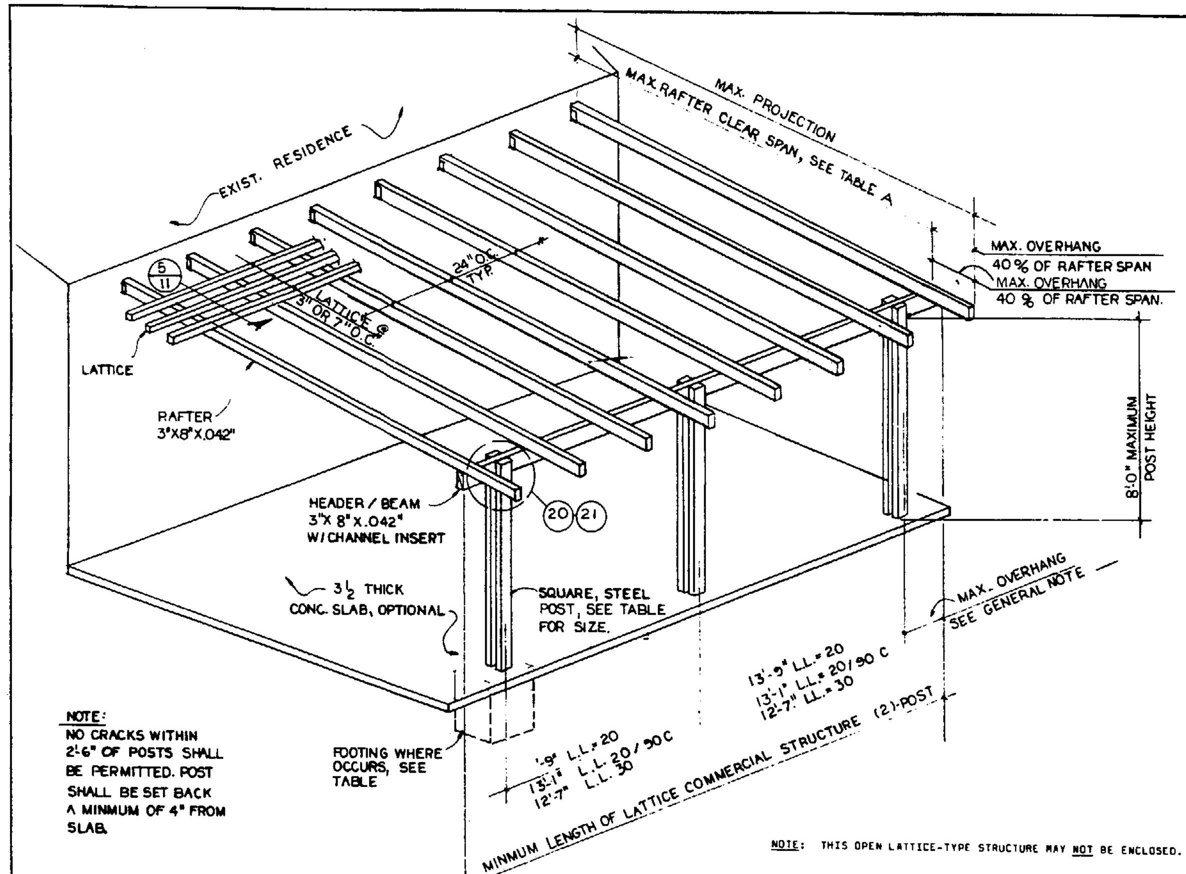
REV.	DATE	BY	DESCRIPTION
1	10 15	K K	CHANGED SHT. # 5 TO 8

FOX ENGINEERING
JAMES M. FOX, STRUCTURAL ENGINEER
8060 TELEGRAPH RD. DOWNEY, CALIFORNIA 90240
(310) 869-1367 · (310) 927-2880 · FAX: (310) 927-2809
JAMES M. FOX, SE 816

ATTACHED LATTICE - TYPE COMMERCIAL STRUCTURES L.L. 20 & 30 PSF WIND SPEED & EXPOSURE = 70 B, 70 C, 90 B & 90 C

ALUMA-LATTICE PATIO COVER (AS MFG. BY) VALLEY ALUMINUM COMPANY 3602 W. LINCOLN ST. PHOENIX, ARIZONA 85009 (602) 278-6224

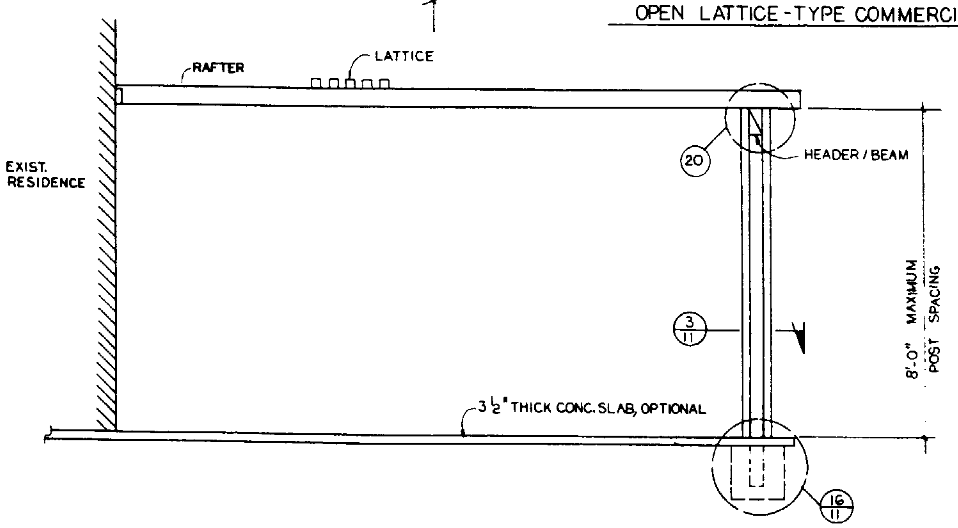
JOB NO. 92-19287



NOTE: NO CRACKS WITHIN 2'-6" OF POSTS SHALL BE PERMITTED. POST SHALL BE SET BACK A MINIMUM OF 4" FROM SLAB.

NOTE: THIS OPEN LATTICE-TYPE STRUCTURE MAY NOT BE ENCLOSED.

OPEN LATTICE-TYPE COMMERCIAL



CROSS-SECTION

GENERAL NOTES AND SPECIFICATIONS:

1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1982 edition of the Aluminum Construction manual.
2. Alternate aluminum alloys may be substituted for those shown, provided they are registered with the Aluminum Association and have equal or greater yield and ultimate strengths.
3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i. Concrete slab shall have 3½" minimum thickness and shall be in good condition.
4. All footings shall bear on firm, natural un-disturbed soil or certified fill. Design vertical soil bearing pressure = 1,000 P.S.F.
5. All steel members shall be hot-dip galvanized or electroplated and conform to A.S.T.M. A-446, Grade C.
6. Aluminum fasteners shall be 2024-T4. All other fasteners shall be galvanized steel or cadmium plated. All bolts shall conform to A.S.T.M. A-307 and have standard cut plate washers. Holes for bolts shall be bolt diameter plus 1/16" maximum.
7. Expansion bolts shall be Hilti Kwik Bolts KB II carbon steel or equal per I.C.B.O. E.R.No. 4627. All bolts shall have a minimum concrete edge distance of 6 bolt diameters.
8. Each installation shall bear an identifying tag giving the name and address of the manufacturer, design loads and enclosability.
9. All items pertaining to each particular installation shall be circled, i.e., project, post spacing, footing detail, etc.
10. Open lattice patio cover shall not be enclosed with any type of solid material, and the design loads have only been applied to the horizontal projected area of the lattice, rafters, beams, etc. per I.C.B.O. criteria.
11. For all detail references, see Sheet 11 of 12

MAXIMUM ALLOWABLE RAFTER SPAN - 3"X8"X.042" — A

	70 B	70 C	90 B	90 C	100 B	100 C	110 B	110 C	
L.L. = 20 PSF — WIND SPEED & EXPOSURE	17'-9"	17'-9"	17'-9"	17'-3"	17'-9"	14'-1"	16'-10"	12'-9"	
	40%	40%	40%	6'-0"	7'-0"	5'-7"	6'-8"	5'-0"	MAX. OVERHANG
L.L. = 30 P.S.F. — WIND SPEED & EXPOSURE	14'-9"	14'-9"	14'-9"	14'-9"	14'-9"	14'-1"	14'-9"	12'-9"	
	40%	40%	40%	40%	5'-10"	5'-7"	5'-10"	5'-0"	MAX. OVERHANG

MAXIMUM ALLOWABLE HEADER/BEAM SPAN - 3"X8"X.042" — B (W/CHANNEL INSERT)

	70 B	70 C	90 B	90 C	100 B	100 C	110 B	110 C
L.L. 20 P.S.F. — WIND SPEED & EXPOSURE	13'-9"	13'-9"	13'-9"	13'-1"	13'-9"	12'-3"	13'-6"	11'-10"
L.L. = 30 P.S.F. — WIND SPEED & EXPOSURE	12'-7"	12'-7"	12'-7"	12'-7"	12'-7"	12'-3"	12'-7"	11'-10"

ATTACHED LATTICE / COMMERCIAL STRUCTURES — TABLE A

POST SIZES AND FOOTING SIZES — WIND = 11/18.5/18.1/30.6 P.S.F. UPLIFT = 14.35/24.2/23.7/40 P.S.F.

	WIND SPEED & EXPOSURE	POST SIZE — MAX. POST HEIGHT 8'-7"	11'-0"	14'-6"	18'-0"	FOOTING SIZE — MAX. POST HEIGHT 8'-7" NO SLAB [2]	8'-7" W/SLAB [1]	11'-0" NO SLAB	11'-0" W/SLAB	14'-6" NO SLAB	14'-6" W/SLAB	18'-0" NO SLAB	18'-0" W/SLAB
L.L. 20 PSF	70-B	3"SQ.X.062"	3"SQ.X.062"	3"SQ.X.083"	3"SQ.X.083"	2'-6" SQ. X 18"	18" Ø X 2'-3"	2'-8" SQ. X 18"	18" Ø X 2'-5"	2'-11" SQ. X 18"	18" Ø X 2'-8"	3'-2" SQ. X 18"	18" Ø X 2'-10"
	70-C	3"SQ.X.083"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3'-0" SQ. X 18"	18" Ø X 2'-7"	3'-2" SQ. X 18"	18" Ø X 2'-11"	3'-6" SQ. X 18"	18" Ø X 3'-2"	3'-8" SQ. X 18"	18" Ø X 3'-4"
	90-B	3"SQ.X.083"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3'-0" SQ. X 18"	18" Ø X 2'-7"	3'-2" SQ. X 18"	18" Ø X 2'-11"	3'-5" SQ. X 18"	18" Ø X 3'-1"	3'-8" SQ. X 18"	18" Ø X 3'-4"
	90-C	3"SQ.X.125"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3'-4" SQ. X 18"	18" Ø X 3'-0"	3'-7" SQ. X 18"	18" Ø X 3'-2"	3'-11" SQ. X 18"	18" Ø X 3'-6"	4'-2" SQ. X 18"	18" Ø X 3'-9"
L.L. 30 PSF	70-B	3"SQ.X.062"	3"SQ.X.062"	3"SQ.X.062"	3"SQ.X.083"	2'-4" SQ. X 18"	18" Ø X 2'-2"	2'-6" SQ. X 18"	18" Ø X 2'-3"	2'-9" SQ. X 18"	18" Ø X 2'-6"	2'-11" SQ. X 18"	18" Ø X 2'-8"
	70-C	3"SQ.X.062"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.125"	2'-10" SQ. X 18"	18" Ø X 2'-6"	3'-0" SQ. X 18"	18" Ø X 2'-8"	3'-3" SQ. X 18"	18" Ø X 2'-11"	3'-6" SQ. X 18"	18" Ø X 3'-2"
	90-B	3"SQ.X.062"	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.125"	2'-9" SQ. X 18"	18" Ø X 2'-6"	3'-0" SQ. X 18"	18" Ø X 2'-8"	3'-3" SQ. X 18"	18" Ø X 2'-11"	3'-6" SQ. X 18"	18" Ø X 3'-2"
	90-C	3"SQ.X.083"	3"SQ.X.125"	3"SQ.X.188"	3"SQ.X.25"	3'-4" SQ. X 18"	18" Ø X 2'-11"	3'-7" SQ. X 18"	18" Ø X 3'-2"	3'-10" SQ. X 18"	18" Ø X 3'-6"	4'-1" SQ. X 18"	18" Ø X 3'-9"

TABLE FOOTNOTES:

1. CONCRETE SLAB (EXISTING OR NEW) COMPLETELY SURROUNDS NEW FOOTING.
2. CONCRETE SLAB DOES NOT EXIST AND NO SLAB WILL BE CONSTRUCTED AS PART OF THIS INSTALLATION.

FASTENER CONNECTION TABLE — B

RAFTER TO BEAM CONNECTION

DETAIL	70-B TO RAFT.	70-B TO BEAM	70-C TO RAFT.	70-C TO BEAM	90-B TO RAFT.	90-B TO BEAM	90-C TO RAFT.	90-C TO BEAM
	L.L. = 20 P.S.I. & 30 P.S.I.				L.L. = 20 P.S.I. & 30 P.S.I.			
(14) SHT. 11	(2)-#14 S.M.S. EA. LEG (4-TOTAL)	(2)-#10-16 X 3/4 TEKS EA. LEG (4-TOT.) W/ 1 1/2" SQ. X 1/4 WASHER PLATE, ALUM. ALLOY 6061-T6	(2)-#14 S.M.S. EACH LEG (4-TOTAL)	(2)-#10-16 X 3/4 TEKS EACH LEG (4-TOT.) W/ 1 1/2 SQ. X 1/4 WASHER PLATE, ALUM. ALLOY 6061-T6	(2)-#14 S.M.S. EACH LEG (4-TOTAL)	(2)-#10-16 X 3/4 TEKS EACH LEG (4-TOT) W/ 1 1/2 SQ. X 1/4 WASHER PLATE, ALUM. ALLOY 6061-T6	(2)-#14 S.M.S. EACH LEG (4-TOTAL)	(2)-#10-16 X 3/4 TEKS EACH LEG. (4-TOT) W/ 1 1/2 SQ. X 1/4 WASHER PLATE, ALUM. ALLOY 6061-T6

POST TYPES

1. 3"SQ. POST + (2) - 2"X 6 1/2" X .024" W/ (8)-# 14 S.M.S.
2. 3"SQ. POST + (2) - 2"X 6 1/2" X .032" W/ (8)-# 14 S.M.S.
3. 3"SQ. POST + (2) 2"X 6 1/2" X .024" W/ (12)-# 14 S.M.S.
4. 3"SQ. POST + (2) - 2"X 6 1/2" X .032" W/ (12)-#14 S.M.S.

NOTE: POST TYPES [1] AND [3] ARE USED FOR SLAB CONDITION. POST TYPES [2] AND [4] ARE USED FOR FOOTING CONDITION.

BEAM TO POST CONNECTION — TABLE C

	WIND SPEED & EXPOSURE	TO BEAM	TO POST		WIND SPEED & EXPOSURE	TO BEAM	TO POST
L.L. = 20	70-B	[4]	[4]	L.L. = 30	70-B	[2]	[2]
	70-C (22) SHT. 11	(3)-5/8" Ø	(3)-5/8" Ø		70-C (22) SHT. 11	(2)-5/8" Ø	(2)-5/8" Ø
	90-B (22)	(3)-1/2" Ø	(3)-1/2" Ø		90-B (22)	(2)-5/8" Ø	(2)-5/8" Ø
	90-C (22)	(3)-1" Ø	(3)-1" Ø		90-C (22)	(2)-1" Ø	(2)-1" Ø

I.C.B.O. E.S. EVALUATION REPORT NO. 5038

DATE 5-15-92 | SCALE NOTED | DRAWN BY K.K.

REVISION 1: 10 15 K.K. CHANGED SHT.# 5 TO 8

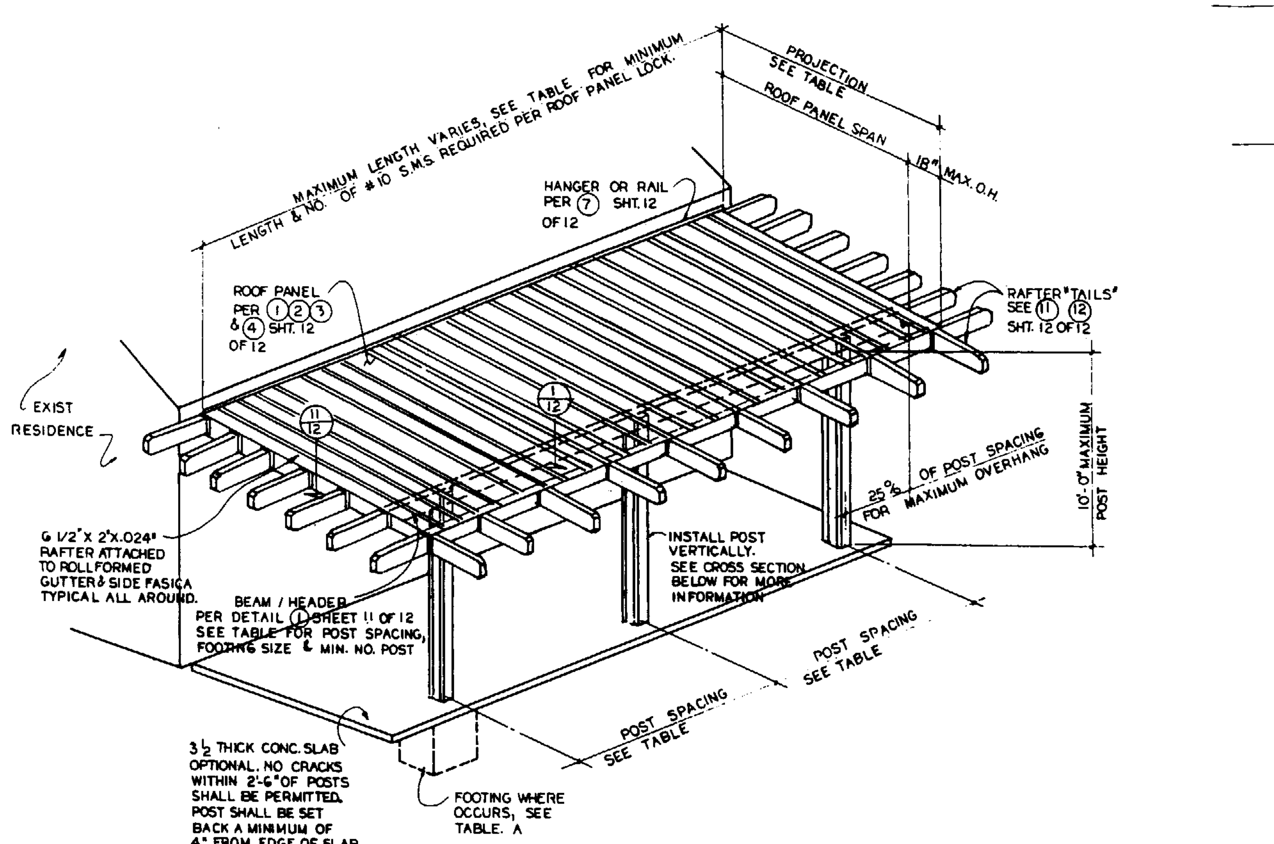
FOX ENGINEERING
JAMES M. FOX, STRUCTURAL ENGINEER
8060 TELEGRAPH RD. DOWNEY, CALIFORNIA 90240

ATTACHED LATTICE - TYPE COMMERCIAL STRUCTURES L.L. 20 & 30 PSF WIND SPEED & EXPOSURE = 70 B, 70 C, 90 B & 90 C

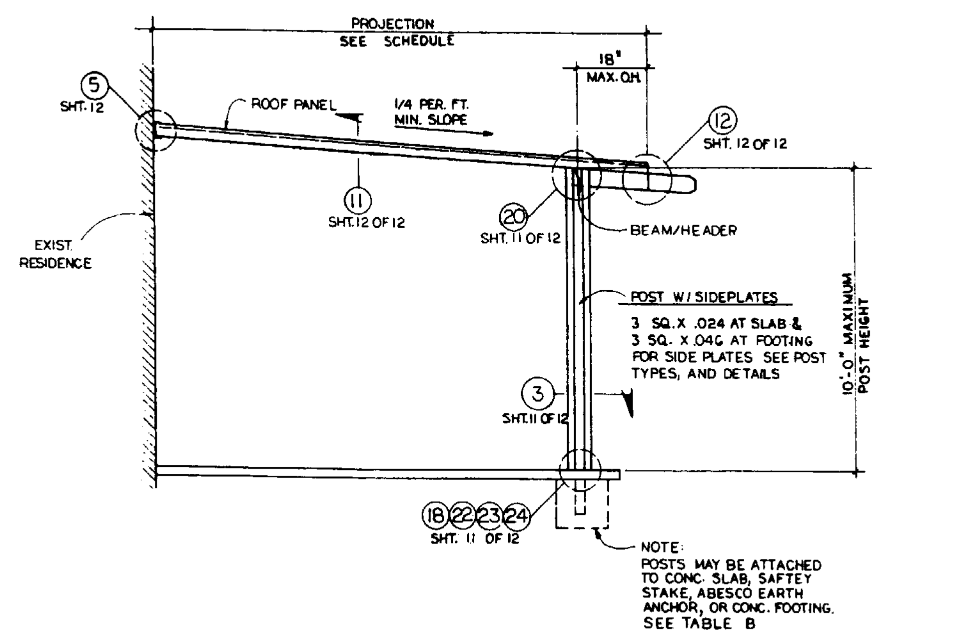
ALUMA-LATTICE PATIO COVER (AS MFG. BY) VALLEY ALUMINUM COMPANY
W. LINCOLN ST. ... ARIZONA 85009 (602) 278-6224

JOB NO. 92-19287

SHEET 8 OF 12



ATTACHED ROOFED-TYPE PATIO COVER



NOTE:
SHEET 6 & 7 INCLUDE L.L. 10, 20 & 30 P.S.F. WITH WIND SPEEDS OF 70, 90, 100 & 110 M.P.H.

ATTACHED LATTICE PATIO COVERS (WIND SPEED = 70 & 90 MPH) TABLE A

WIND = 10/15 P.S.F. UPLIFT = 10/15 P.S.F.

L.L.	PROJECTION INCLUDES 18" MAX. O/HANG	ROOFED COVER PANEL "THICKNESS" 12"x3½" 70 M.P.H.	12"x3½" 90 M.P.H.	12"x3" 70 M.P.H.	12"x3" 90 M.P.H.	6"x2" FLAT 70 M.P.H.	6"x2" FLAT 90 M.P.H.	24"x2½" TRI 70 MPH	24"x2½" TRI 90 MPH	3 X 8 X 042 BEAM / HEADER POST SPACING ON FOOTING	ON SLAB 70 MPH [1]	ON SLAB 90 MPH [1]	FOOTING SIZE [2] 70 MPH	FOOTING SIZE 90 MPH	3 X 8 X 042 INSERT BEAM / HEADER POST SPACING ON FOOTING	ON SLAB 70 MPH	ON SLAB 90 MPH	FOOTING SIZE 70 MPH	FOOTING SIZE 90 MPH	MIN. NO OF POSTS POST TYPE 70: 1	2[3]	3	4	POST TYPE 90: 1	2	3	4	UNENCLOSED MIN. LENGTH	UNENCLOSED #10 SMS. LOCK	ENCLOSED MIN. LENGTH [4]	ENCLOSED #10 SMS. LOCK [4]
L.L. = 10	8'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	12'-5"	12'-5"	8'-11"	20	23	28'-9"	12'-5"	8'-11"	26	30	2	2	2	-	3	2	-	-	6'-0"	2	12'-0"/16'-0"	4/5
	9'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	11'-11"	11'-11"	8'-2"	20	23	27'-5"	11'-11"	8'-2"	26	30	2	2	2	-	3	2	-	-	6'-9"	2	13'-6"/18'-0"	4/6
	10'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	11'-5"	11'-4"	7'-6"	20	23	26'-3"	11'-4"	7'-6"	27	31	2	-	-	-	3	2	-	-	7'-6"	2	15'-0"/20'-0"	5/7
	11'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	10'-11"	10'-6"	6'-11"	20	23	25'-3"	10'-6"	6'-11"	27	31	2	2	-	-	3	2	2	-	8'-3"	2	16'-6"/22'-0"	5/7
	12'-0"	.018"	.018"	.020"	.020"	.020"	.024"	.018"	.018"	10'-6"	9'-9"	6'-5"	21	24	24'-4"	9'-9"	6'-5"	27	31	3	2	-	-	4	3	3	2	9'-0"	2	18'-0"/24'-0"	5/8
	13'-0"	.018"	.018"	.020"	.020"	.020"	.024"	.018"	.025"	10'-2"	9'-1"	6'-0"	21	24	23'-6"	9'-1"	6'-0"	28	32	3	2	-	-	4	3	3	2	9'-9"	2	19'-6"/26'-0"	6/8
	14'-0"	.018"	.018"	.020"	.025"	.020"	.032"	.025"	.025"	9'-10"	8'-6"	5'-7"	21	24	22'-9"	8'-6"	5'-7"	28	32	3	2	-	-	4	3	3	2	10'-6"	2	21'-0"/28'-0"	6/9
	15'-0"	.018"	.018"	.020"	.025"	.024"	.032"	-	-	9'-7"	8'-0"	5'-3"	21	25	22'-1"	8'-0"	5'-3"	28	32	3	2	-	-	4	3	3	2	11'-3"	2	22'-6"/30'-0"	7/10
	16'-0"	.018"	.018"	.025"	.025"	.024"	.032"	-	-	9'-4"	7'-7"	5'-0"	22	25	21'-5"	7'-7"	5'-0"	29	33	3	2	-	-	5	3	3	2	12'-0"	2	24'-0"/32'-0"	7/10
	17'-0"	.018"	.018"	.025"	.028"	.032"	.032"	-	-	9'-1"	7'-2"	4'-8"	22	25	20'-10"	7'-2"	4'-8"	29	33	3	2	-	-	5	3	3	2	12'-9"	2	25'-6"/34'-0"	7/11
	18'-0"	.024"	.024"	.028"	.028"	-	-	-	-	8'-10"	6'-9"	4'-6"	22	25	20'-4"	6'-9"	4'-6"	29	33	4	3	2	-	5	4	3	3	13'-6"	2	27'-0"/36'-0"	8/11
	19'-0"	.024"	.024"	.032"	.032"	-	-	-	-	8'-7"	6'-5"	4'-3"	22	25	19'-10"	6'-5"	4'-3"	29	33	4	3	3	2	5	4	4	3	14'-3"	2	28'-6"/38'-0"	8/12
	20'-0"	.028"	.028"	.040"	.040"	-	-	-	-	8'-5"	6'-2"	4'-1"	22	26	19'-4"	6'-2"	4'-1"	29	34	4	3	3	2	6	4	4	3	15'-0"	2	30'-0"/40'-0"	9/13
	21'-0"	.032"	.032"	-	-	-	-	-	-	8'-2"	5'-10"	3'-10"	23	26	18'-11"	5'-10"	3'-10"	30	34	4	3	3	2	6	4	4	3	15'-9"	2	31'-6"/42'-0"	9/13
L.L. = 20	8'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	9'-0"	7'-3"	7'-3"	18	20	20'-9"	7'-3"	7'-3"	23	27	2	2	2	-	3	2	-	-	6'-0"	2	12'/16'	4/5
	9'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	8'-7"	6'-7"	6'-7"	18	21	19'-10"	6'-7"	6'-7"	24	27	2	2	2	-	3	2	-	-	6'-9"	2	13'-6"/18'	4/6
	10'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.025"	.025"	8'-3"	6'-0"	6'-0"	18	21	19'-0"	6'-0"	6'-0"	24	27	2	-	-	-	3	2	-	-	7'-6"	2	15'/20'	5/7
	11'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.025"	.025"	7'-11"	5'-7"	5'-7"	19	21	18'-3"	5'-7"	5'-7"	24	28	2	2	-	-	3	2	2	-	8'-3"	2	16'-6"/22'	5/7
	12'-0"	.018"	.018"	.025"	.025"	.024"	.024"	-	-	7'-7"	5'-2"	5'-2"	19	21	17'-7"	5'-2"	5'-2"	25	28	3	2	-	-	4	3	3	2	9'-0"	2	18'/24'	5/8
	13'-0"	.024"	.024"	.028"	.028"	.032"	.032"	-	-	7'-4"	4'-10"	4'-10"	19	22	17'-0"	4'-10"	4'-10"	25	29	3	2	-	-	4	3	3	2	9'-9"	2	19'-6"/26'	6/8
	14'-0"	.024"	.024"	.032"	.032"	-	-	-	-	7'-2"	4'-6"	4'-6"	19	22	16'-5"	4'-6"	4'-6"	25	29	3	2	-	-	4	3	3	2	10'-6"	2	21'/28'	6/9
	15'-0"	.028"	.028"	.040"	.040"	-	-	-	-	6'-11"	4'-3"	4'-3"	19	22	16'-0"	4'-3"	4'-3"	25	29	3	2	-	-	4	3	3	2	11'-3"	2	22'-6"/30'	7/10
	16'-0"	.032"	.032"	-	-	-	-	-	-	6'-9"	4'-0"	4'-0"	20	22	15'-6"	4'-0"	4'-0"	26	29	3	2	-	-	5	3	3	2	12'-0"	2	24'/32'	7/10
	17'-0"	.040"	.040"	-	-	-	-	-	-	6'-7"	3'-10"	3'-10"	20	23	15'-1"	3'-10"	3'-10"	26	30	3	2	-	-	5	3	3	2	12'-9"	2	25'-6"/34'	7/11
L.L. = 30	8'-0"	.018"	.018"	.020"	.020"	.024"	.024"	.018"	.018"	7'-5"	4'-11"	4'-11"	17	19	17'-1"	4'-11"	4'-11"	22	25	2	2	2	-	3	2	-	-	6'-0"	2	12'/16'	4/5
	9'-0"	.018"	.018"	.020"	.020"	.024"	.024"	.025"	.025"	7'-1"	4'-5"	4'-5"	17	19	16'-4"	4'-5"	4'-5"	22	25	2	2	2	-	3	2	-	-	6'-9"	2	13'-6"/18'	4/6
	10'-0"	.018"	.018"	.025"	.025"	.032"	.032"	-	-	6'-9"	4'-1"	4'-1"	17	20	15'-8"	4'-1"	4'-1"	23	26	2	-	-	-	3	2	-	-	7'-6"	2	15'/20'	5/7
	11'-0"	.024"	.024"	.028"	.028"	.032"	.032"	-	-	6'-6"	3'-9"	3'-9"	17	20	15'-0"	3'-9"	3'-9"	23	26	2	2	-	-	3	2	2	-	8'-3"	2	16'-6"/22'	5/7
	12'-0"	.024"	.024"	.032"	.032"	-	-	-	-	6'-3"	3'-6"	3'-6"	18	20	14'-6"	3'-6"	3'-6"	23	26	3	2	-	-	4	3	3	2	9'-0"	2	18'/24'	5/8
	13'-0"	.028"	.028"	.040"	.040"	-	-	-	-	6'-1"	3'-3"	3'-3"	18	20	14'-0"	3'-3"	3'-3"	23	27	3	2	-	-	4	3	3	2	9'-9"	2	19'-6"/26'	6/8
	14'-0"	.032"	.032"	-	-	-	-	-	-	5'-10"	3'-1"	3'-1"	18	20	13'-7"	3'-1"	3'-1"	24	27	3	2	-	-	5	3	3	2	10'-6"	2	21'/28'	6/9
	14'-6"	.040"	.040"	-	-	-	-	-	-	5'-9"	2'-11"	2'-11"	18	21	13'-4"	2'-11"	2'-11"	24	27	3	2	-	-	5	3	3	2	11'-0"	2	25'-6"/34'	7/10

TABLE FOOTNOTES:
1. 3½" THICK CONCRETE SLAB, NO CRACKS WITHIN 2'-6" OF POSTS SHALL BE PERMITTED. POST SHALL BE SET BACK A MINIMUM OF 4" FROM EDGE OF SLAB.
2. FOOTING SIZE IS A CUBE, I.E., 20 - 20" X 20" X 20" deep.
3. TOTAL MINIMUM NUMBER OF #10 S.M.S. PER POST TO BEAM CONNECTION FOR DETAILS 19 & 20.
4. MINIMUM LENGTH AND NUMBER OF SHEET METAL SCREWS ABOVE DIAGONAL LINE IS FOR 70 MPH WIND. MINIMUM LENGTH AND NUMBER OF SHEET METAL SCREWS BELOW DIAGONAL LINE IS FOR 90 M.P.H. WIND.

POST BASE CONNECTION TABLE B

DETAIL SHT. 11	WIND SPEED = 70 M.P.H. ON SLAB [5,6]	70 M.P.H. ON FOOTING [5] 8"x.042"	70 M.P.H. ON FOOTING [5] 8"x.042" W/INSERT	WIND SPEED = 90 M.P.H. ON SLAB [5,6]	90 M.P.H. ON FOOTING [5] 8"x.042"	90 M.P.H. ON FOOTING [5] 8"x.042" W/INSERT
(7) & (24) L.L. = 10	(4)-#14 S.M.S. TO POST & 5/8"Ø x 2 3/4" EMBED. ANCHORS TO SLAB W/ 2"x 3"x 3/16" STEEL GALVANIZE WASHER PLATE.	—	—	(4)-#14 S.M.S. TO POST & 5/8"Ø x 2 3/4" EMBED. ANCHORS TO SLAB W/ 2"x 3"x 3/16" STEEL GALVANIZE WASHER PLATE.	—	—
(7) & (24) L.L. = 20 & 30	(4)-#14 S.M.S. TO POST & 5/8"Ø x 2 1/2" EMBED. ANCHORS TO SLAB W/ 2"x 3"x3/16" STEEL GALVANIZE WASHER PLATE.	—	—	(4)-#14 S.M.S. TO POST & 3/8"Ø x 2 1/2" EMBED. ANCHORS TO SLAB W/ 2"x 3"x3/16" STEEL GALVANIZE WASHER PLATE.	—	—
(8) & (24) L.L. = 10	(4)-#14 S.M.S. TO POST & (2)-3/8"Ø x 2 1/2" EMBEDMENT TO SLAB W/1"x 2"x 3/16" STL.GALV. WASHER PLATE.	—	—	(4)-#14 S.M.S. TO POST & (2)-3/8"Ø x 2 1/2" EMBEDMENT TO SLAB W/1"x 2"x 3/16" STL.GALV. WASHER PLATE.	—	—
(8) & (24) L.L. = 20 & 30	(4)-#14 S.M.S. TO POST & (2)-1/4"Ø x 2" EMBEDMENT TO SLAB W/ 1"x 2" x 3/16" STEEL GALV. WASHER PL.	—	—	(4)-#14 S.M.S. TO POST & (2)-1/4"Ø x 2" EMBEDMENT TO FTG. W/ 1"x 2" x 3/16" STEEL GALV. WASHER PL.	—	—
(7) L.L. 20	—	(4)-#14 S.M.S. TO POST & 5/8"Ø x 2 3/4" EMBED. ANCHORS TO FTG. W/2"x 3"x 3/16" STEEL GALVANIZE. WASHER PLATE.	—	—	—	—
(7) L.L.=30	—	(4)-#14 S.M.S. TO POST & 1/2"Ø x 2 1/4" EMBED. ANCHOR TO FTG. W/2"x 3"x 3/16" STEEL GALVANIZE WASHER PLATE.	—	—	(4)-#14 S.M.S. TO POST & 5/8"Ø x 2 3/4" EMBED. ANCHORS TO FTG. W/2"x 3"x 3/16" STEEL GALVANIZE WASHER PLATE.	—
(8) LL=20	—	(4)-#14 S.M.S. TO POST & (2)-3/8"Ø x 2 1/2" EMBED. ANCHOR TO FTG. W/1 1/16" x 2"x 3/16"STL. GALV. WASHER PL.	—	—	—	—

POST BASE CONNECTION CONT. (ON FOOT'G ONLY)

DETAIL SHT. 11	WIND SPEED = 70 M.P.H. 8"x.042" [5]	70 M.P.H. 8"x.042" W/INSERT	WIND SPEED = 90 M.P.H. 8"x.042" [5]	90 M.P.H. 8"x.042" W/INSERT
(8) L.L.=30	(4)-#14 S.M.S. TO POST & (2)-1/4"Ø x 2" EMBEDMENT TO FTG. W/ 1"x 2" x 3/16" STEEL GALV. WASHER PL.	—	(4)-#14 S.M.S. TO POST & (2)-3/8"Ø x 2 1/2" EMBED. ANCHOR TO FTG. W/ 2" x 3"x 3/16"STL. GALV. WASHER PL.	—
(19) L.L.=10	(2)-1/4"Ø THRU BOLTS TO POST & (2)-3/8"Øx4 1/4" EMBED.W/1"x 2"x 3/16"STL. GALV. WASHER PLATE.	(2)-1/2"Ø THRU BOLTS TO POST & (2)-5/8"Ø x 7" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.	(2)-3/8"Ø THRU BOLTS TO POST & (2)-1/2"Ø x 6" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.	(2)-3/4"Ø THRU BOLTS TO POST & (2)-3/4"Ø x 8" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.
(19) L.L.=20	—	(2)-3/8"Ø THRU BOLTS TO POST & (2)-1/2"Ø x 6" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.	(2)-1/4"Ø THRU BOLTS TO POST & (2)-3/8"Øx4 1/4" EMBED.W/1"x 2"x 3/16"STL. GALV. WASHER PLATE	(2)-1/2"Ø THRU BOLTS TO POST & (2)-5/8"Ø x 7" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.
(19) L.L.=30	(2)-1/4"Ø THRU BOLTS TO POST & (2)-3/8"Øx4 1/4" EMBED.W/1"x 2"x 3/16"STL. GALV. WASHER PLATE.	—	—	(2)-3/8"Ø THRU BOLTS TO POST & (2)-1/2"Ø x 6" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.

5. CONCRETE ANCHOR BOLT SHALL BE KWIK-BOLT II, CARBON STEEL AS MANUFACTURED BY HILTI, INC. IN CONFORMANCE WITH I.C.B.O. E.S. REPORT NO. 4627.
6. POST MAY BE ATTACHED TO SAFTY STAKE STAKE, (17) SHT. 11 OR EARTH ANCHOR, (18) SHT. 11

POST TYPES

1. 3"SQ. POST + (2) - 2"x 6 1/2" X .024" W/ (8)-# 14 S.M.S.
2. 3"SQ. POST + (2) - 2"x 6 1/2" X.032" W/ (8)-#14 S.M.S.
3. 3"SQ. POST + (2) 2"x 6 1/2" X.024" W/ (12)-#14 S.M.S.
4. 3"SQ. POST + (2) - 2"x 6 1/2" X.032" W/ (12)-#14 S.M.S.

NOTE:
POST TYPES [1] AND [3] ARE USED FOR SLAB CONDITION. POST TYPES [2] AND [4] ARE USED FOR FOOTING CONDITION.

GENERAL NOTES AND SPECIFICATIONS:

1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1982 edition of the Aluminum Construction manual.
2. Alternate aluminum alloys may be substituted for those shown, provided they are registered with the Aluminum Association and have equal or greater yield and ultimate strengths.
3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i. Concrete slab shall have 3½" minimum thickness and shall be in good condition.
4. All footings shall bear on firm, natural un-disturbed soil or certified fill. Design vertical soil bearing pressure = 1,000 P.S.F.
5. All steel members shall be hot-dip galvanized or electroplated and conform to A.S.T.M. A-446, Grade C.
6. Aluminum fasteners shall be 2024-T4. All other fasteners shall be galvanized steel or cadmium plated. All bolts shall conform to A.S.T.M. A-307 and have standard cut plate washers. Holes for bolts shall be bolt diameter plus 1/16" maximum.
7. Expansion bolts shall be Hilti Kwik Bolts KB II carbon steel or equal per I.C.B.O. E.R.No. 4627. All bolts shall have a minimum concrete edge distance of 6 bolt diameters.
8. Each installation shall bear an identifying tag giving the name and address of the manufacturer, design loads and enclosability.
9. All items pertaining to each particular installation shall be circled, i.e., project, post spacing, footing detail, etc.
10. Open lattice patio cover shall not be enclosed with any type of solid material, and the design loads have only been applied to the horizontal projected area of the lattice, rafters, beams, etc. per I.C.B.O. criteria.
11. For all detail references, see Sheet 12 of 12.

I.C.B.O. E.S. EVALUATION REPORT NO. 5038

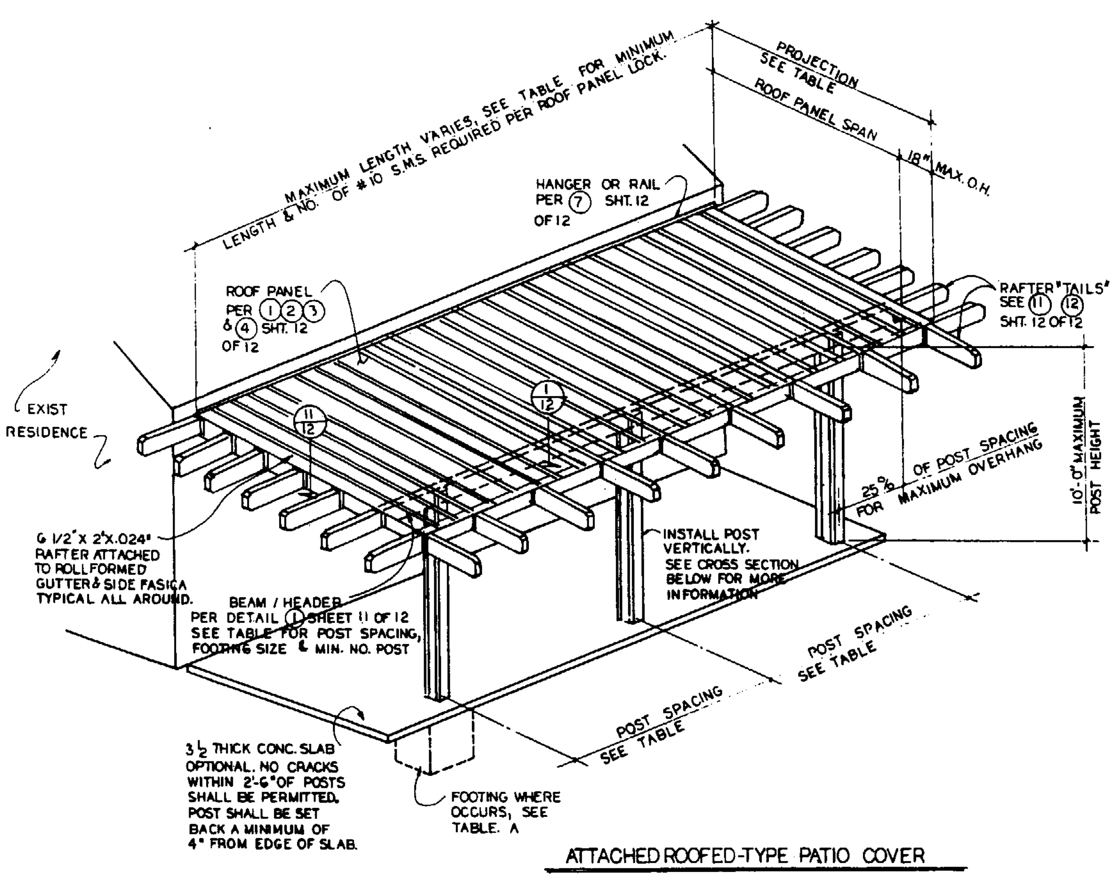
DATE 7-7-92 | SCALE NOTED | DRAWN BY K.K. | △ 10-15 K.K. CHANGED SHT.# 4 TO 6

FOX ENGINEERING
JAMES M. FOX, STRUCTURAL ENGINEER
8060 TELEGRAPH RD. DOWNEY, CALIFORNIA 90240
(310) 806-1337 (310) 927-2880 FAX: (310) 927-2880
JAMES M. FOX, SE 816

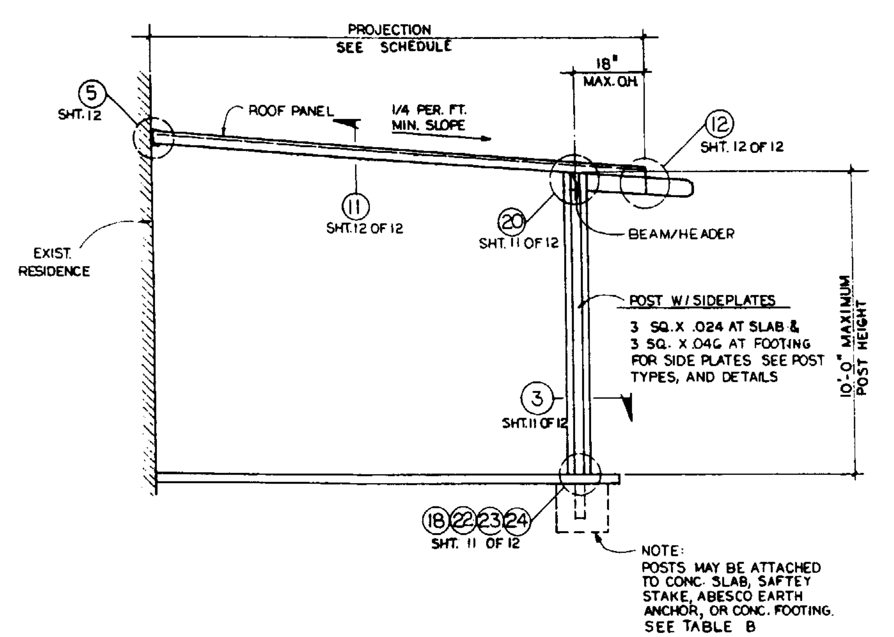
ATTACHED ROOFED-TYPE PATIO COVER W/18" MAX. O.H. L.L. 10, 20 & 30 P.S.F. WIND SPEED = 70 & 90 M.P.H.

ALUMA-LATTICE PATIO COVER
(AS MFG. BY)
VALLEY ALUMINUM COMPANY
3602 W. LINCOLN ST. PHOENIX, ARIZONA 85009 (602) 278-6224

JOB NO. 92-19287



ATTACHED ROOFED-TYPE PATIO COVER



NOTE:
SHEET 6 & 7 INCLUDE L.L. 10, 20 & 30 P.S.F. WITH WIND SPEEDS OF 70, 90, 100 & 110 M.P.H.

ATTACHED LATTICE PATIO COVERS (WIND SPEED = 70 & 90 MPH) TABLE A

MAXIMUM POST SPACING & FOOTING SIZE — WIND = 10/15 P.S.F. UPLIFT = 10/15 P.S.F.

L.L.	PROJECTION INCLUDES 18" MAX. O/HANG	ROOFED COVER PANEL "THICKNESS" 12"x3½" 70 M.P.H.	12"x3½" 90 M.P.H.	12"x3" 70 M.P.H.	12"x3" 90 M.P.H.	6"x2" FLAT 70 M.P.H.	6"x2" FLAT 90 M.P.H.	24"x2½" TRI 70 MPH	24"x2½" TRI 90 MPH	3 X 8 X 042 BEAM / HEADER POST SPACING ON FOOTING	ON SLAB[1] 70MPH.	ON SLAB[1] 90MPH.	FOOTING SIZE[2] 70MPH	FOOTING SIZE[2] 90MPH	3 X 8 X 042 INSERT BEAM / HEADER POST SPACING ON FOOTING	ON SLAB 70MPH	ON SLAB 90MPH	FOOTING SIZE 70MPH	FOOTING SIZE 90MPH	USE FOR BOTH INSERT BEAM/HEADER & BEAM/HEADER MIN. NO OF POSTS POST TYPE 70 1	2[3]	3	4	POST TYPE 90 1	2	3	4	UNENCLOSED MIN. LENGTH	#10 SMS. LOCK	ENCLOSED MIN.[4] LENGTH	#10 S.M.S. LOCK[4]
L.L. = 10	8'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	12'-5"	12'-5"	8'-11"	20	23	28'-9"	12'-5"	8'-11"	26	30	2	2	2	-	3	2	-	-	6'-0"	2	12'-0"/16'-0"	4/5
	9'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	11'-11"	11'-11"	8'-2"	20	23	27'-5"	11'-11"	8'-2"	26	30	2	2	2	-	3	2	-	-	6'-9"	2	13'-6"/18'-0"	4/6
	10'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	11'-5"	11'-4"	7'-6"	20	23	26'-3"	11'-4"	7'-6"	27	31	2	-	-	-	3	2	-	-	7'-6"	2	15'-0"/20'-0"	5/7
	11'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	10'-11"	10'-6"	6'-11"	20	23	25'-3"	10'-6"	6'-11"	27	31	2	2	-	-	3	2	2	-	8'-3"	2	16'-6"/22'-0"	5/7
	12'-0"	.018"	.018"	.020"	.020"	.020"	.024"	.018"	.018"	10'-6"	9'-9"	6'-5"	21	24	24'-4"	9'-9"	6'-5"	27	31	3	2	-	-	4	3	3	2	9'-0"	2	18'-0"/24'-0"	5/8
	13'-0"	.018"	.018"	.020"	.020"	.020"	.024"	.018"	.025"	10'-2"	9'-1"	6'-0"	21	24	23'-6"	9'-1"	6'-0"	28	32	3	2	-	-	4	3	3	2	9'-9"	2	19'-6"/26'-0"	6/8
	14'-0"	.018"	.018"	.020"	.025"	.020"	.032"	.025"	.025"	9'-10"	8'-6"	5'-7"	21	24	22'-9"	8'-6"	5'-7"	28	32	3	2	-	-	4	3	3	2	10'-6"	2	21'-0"/28'-0"	6/9
	15'-0"	.018"	.018"	.020"	.025"	.024"	.032"	-	-	9'-7"	8'-0"	5'-3"	21	25	22'-1"	8'-0"	5'-3"	28	32	3	2	-	-	4	3	3	2	11'-3"	2	22'-6"/30'-0"	7/10
	16'-0"	.018"	.018"	.025"	.025"	.024"	.032"	-	-	9'-4"	7'-7"	5'-0"	22	25	21'-5"	7'-7"	5'-0"	29	33	3	2	-	-	5	3	3	2	12'-0"	2	24'-0"/32'-0"	7/10
	17'-0"	.018"	.018"	.025"	.028"	.032"	.032"	-	-	9'-1"	7'-2"	4'-8"	22	25	20'-10"	7'-2"	4'-8"	29	33	3	2	-	-	5	3	3	2	12'-9"	2	25'-6"/34'-0"	7/11
	18'-0"	.024"	.024"	.028"	.028"	-	-	-	-	8'-10"	6'-9"	4'-6"	22	25	20'-4"	6'-9"	4'-6"	29	33	4	3	2	-	5	4	3	3	13'-6"	2	27'-0"/36'-0"	8/11
	19'-0"	.024"	.024"	.032"	.032"	-	-	-	-	8'-7"	6'-5"	4'-3"	22	25	19'-10"	6'-5"	4'-3"	29	33	4	3	3	2	5	4	4	3	14'-3"	2	28'-6"/38'-0"	8/12
	20'-0"	.028"	.028"	.040"	.040"	-	-	-	-	8'-5"	6'-2"	4'-1"	22	26	19'-4"	6'-2"	4'-1"	29	34	4	3	3	2	6	4	4	3	15'-0"	2	30'-0"/40'-0"	9/13
	21'-0"	.032"	.032"	-	-	-	-	-	-	8'-2"	5'-10"	3'-10"	23	26	18'-11"	5'-10"	3'-10"	30	34	4	3	3	2	6	4	4	3	15'-9"	2	31'-6"/42'-0"	9/13
L.L. = 20	8'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	9'-0"	7'-3"	7'-3"	18	20	20'-9"	7'-3"	7'-3"	23	27	2	2	2	-	3	2	-	-	6'-0"	2	12'/16'	4/5
	9'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.018"	.018"	8'-7"	6'-7"	6'-7"	18	21	19'-10"	6'-7"	6'-7"	24	27	2	2	2	-	3	2	-	-	6'-9"	2	13'-6"/18'	4/6
	10'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.025"	.025"	8'-3"	6'-0"	6'-0"	18	21	19'-0"	6'-0"	6'-0"	24	27	2	-	-	-	3	2	-	-	7'-6"	2	15'/20'	5/7
	11'-0"	.018"	.018"	.020"	.020"	.020"	.020"	.025"	.025"	7'-11"	5'-7"	5'-7"	19	21	18'-3"	5'-7"	5'-7"	24	28	2	2	-	-	3	2	2	-	8'-3"	2	16'-6"/22'	5/7
	12'-0"	.018"	.018"	.025"	.025"	.024"	.024"	-	-	7'-7"	5'-2"	5'-2"	19	21	17'-7"	5'-2"	5'-2"	25	28	3	2	-	-	4	3	3	2	9'-0"	2	18'/24'	5/8
	13'-0"	.024"	.024"	.028"	.028"	.032"	.032"	-	-	7'-4"	4'-10"	4'-10"	19	22	17'-0"	4'-10"	4'-10"	25	29	3	2	-	-	4	3	3	2	9'-9"	2	19'-6"/26'	6/8
	14'-0"	.024"	.024"	.032"	.032"	-	-	-	-	7'-2"	4'-6"	4'-6"	19	22	16'-5"	4'-6"	4'-6"	25	29	3	2	-	-	4	3	3	2	10'-6"	2	21'/28'	6/9
	15'-0"	.028"	.028"	.040"	.040"	-	-	-	-	6'-11"	4'-3"	4'-3"	19	22	16'-0"	4'-3"	4'-3"	25	29	3	2	-	-	4	3	3	2	11'-3"	2	22'-6"/30'	7/10
	16'-0"	.032"	.032"	-	-	-	-	-	-	6'-9"	4'-0"	4'-0"	20	22	15'-6"	4'-0"	4'-0"	26	29	3	2	-	-	5	3	3	2	12'-0"	2	24'/32'	7/10
	17'-0"	.040"	.040"	-	-	-	-	-	-	6'-7"	3'-10"	3'-10"	20	23	15'-1"	3'-10"	3'-10"	26	30	3	2	-	-	5	3	3	2	12'-9"	2	25'-6"/34'	7/11
L.L. = 30	8'-0"	.018"	.018"	.020"	.020"	.024"	.024"	.018"	.018"	7'-5"	4'-11"	4'-11"	17	19	17'-1"	4'-11"	4'-11"	22	25	2	2	2	-	3	2	-	-	6'-0"	2	12'/16'	4/5
	9'-0"	.018"	.018"	.020"	.020"	.024"	.024"	.025"	.025"	7'-1"	4'-5"	4'-5"	17	19	16'-4"	4'-5"	4'-5"	22	25	2	2	2	-	3	2	-	-	6'-9"	2	13'-6"/18'	4/6
	10'-0"	.018"	.018"	.025"	.025"	.032"	.032"	-	-	6'-9"	4'-1"	4'-1"	17	20	15'-8"	4'-1"	4'-1"	23	26	2	-	-	-	3	2	-	-	7'-6"	2	15'/20'	5/7
	11'-0"	.024"	.024"	.028"	.028"	.032"	.032"	-	-	6'-6"	3'-9"	3'-9"	17	20	15'-0"	3'-9"	3'-9"	23	26	2	2	-	-	3	2	2	-	8'-3"	2	16'-6"/22'	5/7
	12'-0"	.024"	.024"	.032"	.032"	-	-	-	-	6'-3"	3'-6"	3'-6"	18	20	14'-6"	3'-6"	3'-6"	23	26	3	2	-	-	4	3	3	2	9'-0"	2	18'/24'	5/8
	13'-0"	.028"	.028"	.040"	.040"	-	-	-	-	6'-1"	3'-3"	3'-3"	18	20	14'-0"	3'-3"	3'-3"	23	27	3	2	-	-	4	3	3	2	9'-9"	2	19'-6"/26'	6/8
	14'-0"	.032"	.032"	-	-	-	-	-	-	5'-10"	3'-1"	3'-1"	18	20	13'-7"	3'-1"	3'-1"	24	27	3	2	-	-	5	3	3	2	10'-6"	2	21'/28'	6/9
	14'-6"	.040"	.040"	-	-	-	-	-	-	5'-9"	2'-11"	2'-11"	18	21	13'-4"	2'-11"	2'-11"	24	27	3	2	-	-	5	3	3	2	11'-0"	2	25'-6"/34'	7/10

TABLE FOOTNOTES:
1. 3½" THICK CONCRETE SLAB, NO CRACKS WITHIN 2'-6" OF POSTS SHALL BE PERMITTED. POST SHALL BE SET BACK A MINIMUM OF 4" FROM EDGE OF SLAB.
2. FOOTING SIZE IS A CUBE, I.E., 20 - 20" X 20" X 20" deep.
3. TOTAL MINIMUM NUMBER OF #10 S.M.S. PER POST TO BEAM CONNECTION FOR DETAILS 19 & 20.
4. MINIMUM LENGTH AND NUMBER OF SHEET METAL SCREWS ABOVE DIAGONAL LINE IS FOR 70 MPH WIND. MINIMUM LENGTH AND NUMBER OF SHEET METAL SCREWS BELOW DIAGONAL LINE IS FOR 90 M.P.H. WIND.

POST BASE CONNECTION — TABLE B

DETAIL SHT. 11	WIND SPEED = 70 M.P.H. ON SLAB[5,6]	WIND SPEED = 70 M.P.H. ON FOOTING[5] 8"X .042"	WIND SPEED = 70 M.P.H. ON FOOTING[5] 8"X.042" W/ INSERT	WIND SPEED = 90 M.P.H. ON SLAB[5,6]	WIND SPEED = 90 M.P.H. ON FOOTING[5] 8"X .042"	WIND SPEED = 90 M.P.H. ON FOOTING[5] 8"X.042" W/ INSERT
7 & 24 L.L. = 10	(4)- #14 S.M.S. TO POST & 5/8"Ø x 2 3/4" EMBED. ANCHORS TO SLAB W/ 2"x 3"x 3/16" STEEL GALVANIZE WASHER PLATE.	—	—	(4)- #14 S.M.S. TO POST & 5/8"Ø x 2 3/4" EMBED. ANCHORS TO SLAB W/ 2"x 3"x 3/16" STEEL GALVANIZE WASHER PLATE.	—	—
7 & 24 L.L. = 20 & 30	(4)- #14 S.M.S. TO POST & 5/8"Ø x 2 1/2" EMBED. ANCHORS TO SLAB W/ 2"x 3"x3/16" STEEL GALVANIZE WASHER PLATE.	—	—	(4)- #14 S.M.S. TO POST & 3/8"Ø x 2 1/2" EMBED. ANCHORS TO SLAB W/ 2"x 3"x3/16" STEEL GALVANIZE WASHER PLATE.	—	—
8 & 24 L.L. = 10	(4)- #14 S.M.S. TO POST & (2)- 3/8"Ø x 2 1/2" EMBEDMENT TO SLAB W/1"x 2"x 3/16" STL. GALV. WASHER PLATE.	—	—	(4)- #14 S.M.S. TO POST & (2)- 3/8"Ø x 2 1/2" EMBEDMENT TO SLAB W/1"x 2"x 3/16" STL. GALV. WASHER PLATE.	—	—
8 & 24 L.L. = 20 & 30	(4)- #14 S.M.S. TO POST & (2)- 1/4"Ø x 2" EMBEDMENT TO SLAB W/ 1"x 2" x 3/16" STEEL GALV. WASHER PL.	—	—	(4)- #14 S.M.S. TO POST & (2)- 1/4"Ø x 2" EMBEDMENT TO FTG. W/ 1"x 2" x 3/16" STEEL GALV. WASHER PL.	—	—
7 L.L. 20	—	(4)- #14 S.M.S. TO POST & 5/8"Ø x 2 3/4" EMBED. ANCHORS TO FTG. W/2"x 3"x 3/16" STEEL GALVANIZE WASHER PLATE.	—	—	—	—
7 L.L. = 30	—	(4)- #14 S.M.S. TO POST & 1/2"Ø x 2 1/4" EMBED. ANCHOR TO FTG. W/2"x 3"x 3/16" STEEL GALVANIZE WASHER PLATE.	—	—	(4)- #14 S.M.S. TO POST & 5/8"Ø x 2 3/4" EMBED. ANCHORS TO FTG. W/2"x 3"x 3/16" STEEL GALVANIZE WASHER PLATE.	—
8 LL = 20	—	(4)- #14 S.M.S. TO POST & (2)- 3/8"Ø x 2 1/2" EMBED. ANCHOR TO FTG. W/1 WG" x 2"x 3/16" STL. GALV. WASHER PL.	—	—	—	—

POST BASE CONNECTION CONT. (ON FOOT'G ONLY)

DETAIL SHT. 11	WIND SPEED = 70 M.P.H. 8"X .042"[5]	WIND SPEED = 70 M.P.H. 8"X.042" W/ INSERT	WIND SPEED = 90 M.P.H. 8"X .042"[5]	WIND SPEED = 90 M.P.H. 8"X.042" W/ INSERT
8 LL = 30	(4)- #14 S.M.S. TO POST & (2)- 1/4"Ø x 2" EMBEDMENT TO FTG. W/ 1"x 2" x 3/16" STEEL GALV. WASHER PL.	—	(4)- #14 S.M.S. TO POST & (2)- 3/8"Ø x 2 1/2" EMBED. ANCHOR TO FTG. W/ 2" x 3"x 3/16" STL. GALV. WASHER PL.	—
19 L.L. = 10	(2)- 1/4"Ø THRU BOLTS TO POST & (2)-3/8"Øx4 1/4" EMBED. W/1"x 2"x 3/16" STL. GALV. WASHER PLATE.	(2)- 1/2"Ø THRU BOLTS TO POST & (2)- 5/8"Ø x 7" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.	(2)- 3/8"Ø THRU BOLTS TO POST & (2)- 1/2"Ø x 6" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.	(2)- 3/4"Ø THRU BOLTS TO POST & (2)- 3/4"Ø x 8" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.
19 L.L. = 20	—	(2)- 3/8"Ø THRU BOLTS TO POST & (2)- 1/2"Ø x 6" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.	(2)- 1/4"Ø THRU BOLTS TO POST & (2)-3/8"Øx4 1/4" EMBED. W/1"x 2"x 3/16" STL. GALV. WASHER PLATE.	(2)- 1/2"Ø THRU BOLTS TO POST & (2)- 5/8"Ø x 7" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.
19 L.L. = 30	(2)- 1/4"Ø THRU BOLTS TO POST & (2)-3/8"Øx4 1/4" EMBED. W/1"x 2"x 3/16" STL. GALV. WASHER PLATE.	—	—	(2)- 3/8"Ø THRU BOLTS TO POST & (2)- 1/2"Ø x 6" EMBED. ANCHORS W/1"x 2"x 3/16" STEEL GALVANIZE WASHER PLATE.

5. CONCRETE ANCHOR BOLT SHALL BE KWIK-BOLT II, CARBON STEEL AS MANUFACTURED BY HILTI, INC. IN CONFORMANCE WITH I.C.B.O. E.S. REPORT NO. 4627.
6. POST MAY BE ATTACHED TO SAFTY STAKE STAKE, 17 SHT. 11 OR EARTH ANCHOR, 18 SHT. 11

POST TYPES

1. 3"SQ. POST + (2) - 2"X 6 1/2" X .024" W/ (8)-# 14 SMS.
2. 3"SQ. POST + (2) - 2"X 6 1/2" X .032" W/ (8)-#14 S.M.S.
3. 3"SQ. POST + (2) 2"X 6 1/2" X .024" W/ (12)-#14 S.M.S.
4. 3"SQ. POST + (2) - 2"X 6 1/2" X .032" W/ (12)-#14 S.M.S.

NOTE:
POST TYPES 1 AND 3 ARE USED FOR SLAB CONDITION. POST TYPES 2 AND 4 ARE USED FOR FOOTING CONDITION.

GENERAL NOTES AND SPECIFICATIONS:

1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1982 edition of the Aluminum Construction manual.
2. Alternate aluminum alloys may be substituted for those shown, provided they are registered with the Aluminum Association and have equal or greater yield and ultimate strengths.
3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i. Concrete slab shall have 3½" minimum thickness and shall be in good condition.
4. All footings shall bear on firm, natural un-disturbed soil or certified fill. Design vertical soil bearing pressure = 1,000 P.S.F.
5. All steel members shall be hot-dip galvanized or electroplated and conform to A.S.T.M. A-446, Grade C.
6. Aluminum fasteners shall be 2024-T4. All other fasteners shall be galvanized steel or cadmium plated. All bolts shall conform to A.S.T.M. A-307 and have standard cut plate washers. Holes for bolts shall be bolt diameter plus 1/16" maximum.
7. Expansion bolts shall be Hilti Kwik Bolts KB II carbon steel or equal per I.C.B.O. E.R.No. 4627. All bolts shall have a minimum concrete edge distance of 8 bolt diameters.
8. Each installation shall bear an identifying tag giving the name and address of the manufacturer, design loads and enclosability.
9. All items pertaining to each particular installation shall be circled, i.e., project, post spacing, footing detail, etc.
10. Open lattice patio cover shall not be enclosed with any type of solid material, and the design loads have only been applied to the horizontal projected area of the lattice, rafters, beams, etc. per I.C.B.O. criteria.
11. For all detail references, see Sheet 12 of 12.

I.C.B.O. E.S. EVALUATION REPORT NO. 5038

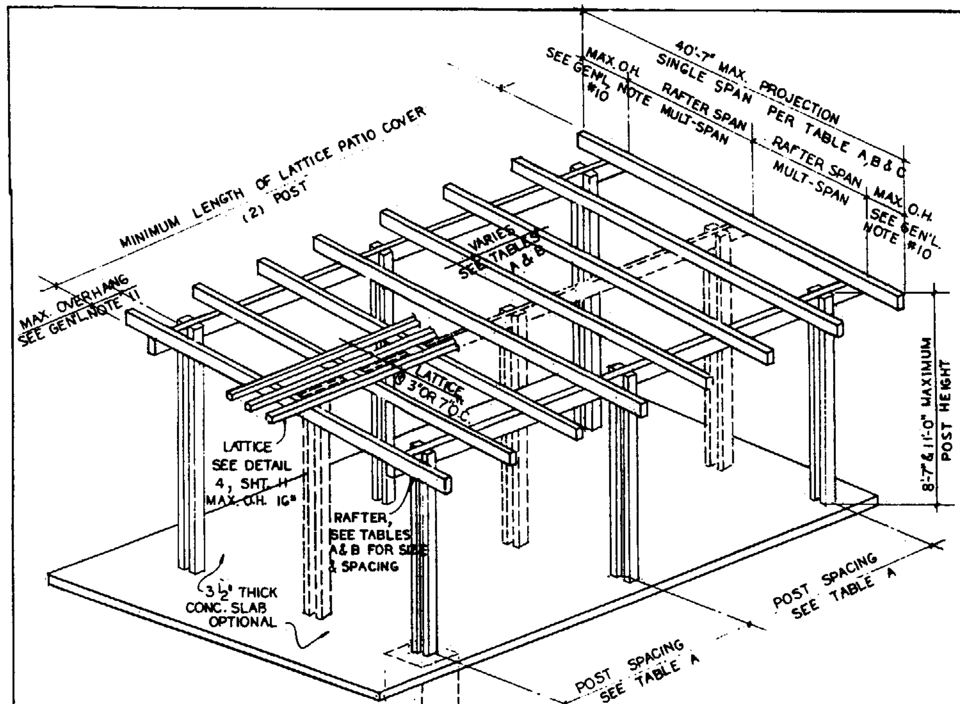
DATE 7-7-92
SCALE NOTED
DRAWN BY K.K.
△ 10-15 K.K. CHANGED SHT. # 4 TO 6

FOX ENGINEERING
JAMES M. FOX, STRUCTURAL ENGINEER
8000 TELEGRAPH RD. DOWNEY, CALIFORNIA 90240
(310) 806-1337 (310) 927-2900 FAX: (310) 927-2900
JAMES M. FOX, SE 516

ATTACHED ROOFED - TYPE PATIO COVER W/ 18" MAX. O.H.
L.L. 10, 20 & 30 P.S.F.
WIND SPEED = 70 & 90 M.P.H.

ALUMA-LATTICE PATIO COVER
(AS MFG. BY)
VALLEY ALUMINUM COMPANY
3602 W. LINCOLN ST. PHOENIX, ARIZONA 85009 (602) 278-6224

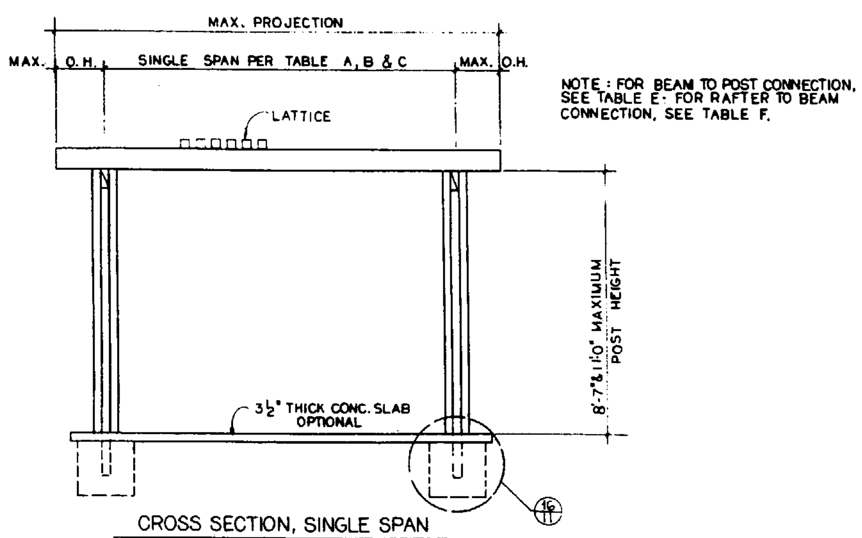
JOB NO. 92-19287
SHEET 6 OF 12



NOTE:
NO CRACKS WITHIN 2'-6" OF POSTS SHALL BE PERMITTED. POST SHALL BE SET BACK A MINIMUM OF 4" FROM EDGE OF SLAB.

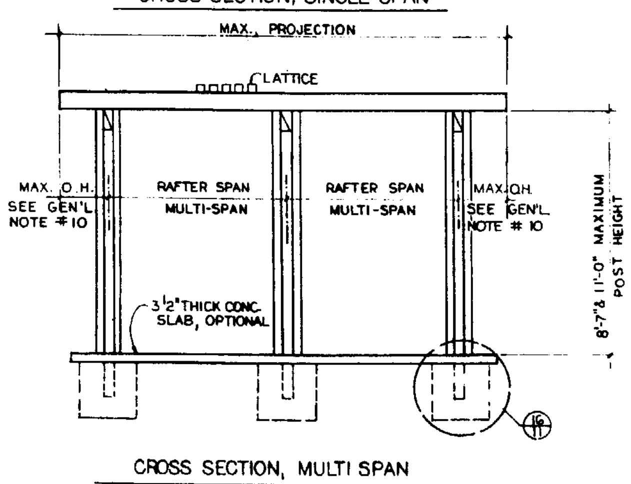
NOTE: THIS OPEN LATTICE-TYPE STRUCTURE MAY NOT BE ENCLOSED.

OPEN LATTICE-TYPE PATIO COVER



NOTE: FOR BEAM TO POST CONNECTION, SEE TABLE E. FOR RAFTER TO BEAM CONNECTION, SEE TABLE F.

CROSS SECTION, SINGLE SPAN



CROSS SECTION, MULTI SPAN

FREESTANDING LATTICE PATIO COVER WITH OVERHANG (WIND SPEED = 70 & 90 M.P.H.) TABLE A

MAXIMUM POST SPACING AND FOOTING SIZE

3" X 8" X .042" HEADER / BEAM — FOOTING SIZE

TRIBUTARY WIDTH	MAXIMUM POST SPACING	MAX. POST HEIGHT = 8'-7", 70 MPH, W/SLAB [1]	8'-7", 70 MPH, NO SLAB [2]	8'-7", 90 MPH, W/SLAB	8'-7", 90 MPH, NO SLAB	MAX. POST HEIGHT = 11'-0", 70 MPH, W/SLAB	11'-0", 70 MPH, NO SLAB	11'-0", 90 MPH, W/SLAB	11'-0", 90 MPH, NO SLAB
LIVE LOAD 10 = P.S.F. [3]									
5'-0"	14'-6"	18"ø x 24" (1)	28" SQ. x 18" (3)	18"ø x 28" (1)	33" SQ. x 18" (1)				
6'-0"	13'-3"	18"ø x 24" (1)	26" SQ. x 18" (1)	18"ø x 28" (1)	30" SQ. x 18" (1)				
7'-0"	12'-3"	18"ø x 24" (1)	26" SQ. x 18" (1)	18"ø x 26" (1)	30" SQ. x 18" (1)				
8'-0"	11'-5"	18"ø x 24" (1)	26" SQ. x 18" (1)	18"ø x 26" (1)	29" SQ. x 18" (1)				
9'-0"	10'-10"	18"ø x 24" (1)	25" SQ. x 18" (1)	18"ø x 26" (1)	29" SQ. x 18" (1)				
10'-0"	10'-4"	18"ø x 24" (1)	25" SQ. x 18" (1)	18"ø x 26" (1)	28" SQ. x 18" (1)				
11'-0"	9'-10"	18"ø x 24" (1)	25" SQ. x 18" (1)	18"ø x 26" (1)	29" SQ. x 18" (1)				
12'-0"	9'-5"	18"ø x 24" (1)	26" SQ. x 18" (1)	18"ø x 26" (1)	30" SQ. x 18" (1)				
13'-0"	9'-0"	18"ø x 24" (1)	27" SQ. x 18" (1)	18"ø x 28" (1)	30" SQ. x 18" (1)				
14'-0"	8'-8"	18"ø x 24" (1)	27" SQ. x 18" (1)	18"ø x 28" (1)	31" SQ. x 18" (1)				
15'-0"	8'-5"	18"ø x 26" (1)	28" SQ. x 18" (1)	18"ø x 28" (1)	32" SQ. x 18" (1)				
16'-0"	8'-2"	18"ø x 26" (1)	28" SQ. x 18" (1)	18"ø x 30" (1)	32" SQ. x 18" (1)				
17'-0"	7'-11"	18"ø x 26" (1)	29" SQ. x 18" (1)	18"ø x 32" (1)	33" SQ. x 18" (1)				

3" X 8" X .042" W/ INSERT HEADER / BEAM — FOOTING SIZE

TRIBUTARY WIDTH	MAXIMUM POST SPACING	MAX. POST HEIGHT = 8'-7", 70 MPH, W/SLAB	8'-7", 70 MPH, NO SLAB	8'-7", 90 MPH, W/SLAB	8'-7", 90 MPH, NO SLAB	MAX. POST HEIGHT = 11'-0", 70 MPH, W/SLAB	11'-0", 70 MPH, NO SLAB	11'-0", 90 MPH, W/SLAB	11'-0", 90 MPH, NO SLAB
5'-0"	31'-11"	18"ø x 32" (2)	36" SQ. x 18" (2)	18"ø x 36" (3)	41" SQ x 18 (3)				
6'-0"	30'-10"	18"ø x 32" (2)	35" SQ. x 18" (2)	18"ø x 36" (3)	41" SQ x 18 (3)				
7'-0"	29'-4"	18"ø x 32" (2)	35" SQ. x 18" (2)	18"ø x 36" (3)	40" SQ x 18 (3)				
8'-0"	25'-8"	18"ø x 30" (2)	33" SQ. x 18" (2)	18"ø x 34" (3)	38" SQ x 18 (3)				
9'-0"	24'-3"	18"ø x 30" (2)	33" SQ. x 18" (2)	18"ø x 34" (3)	37" SQ x 18 (3)				
10'-0"	23'-2"	18"ø x 30" (1)	32" SQ. x 18" (1)	18"ø x 32" (3)	37" SQ x 18 (4)				
11'-0"	22'-2"	18"ø x 30" (1)	32" SQ. x 18" (1)	18"ø x 32" (4)	36" SQ x 18 (4)				
12'-0"	21'-3"	18"ø x 28" (1)	31" SQ. x 18" (1)	18"ø x 32" (4)	36" SQ x 18 (4)				
13'-0"	20'-5"	18"ø x 28" (1)	31" SQ. x 18" (1)	18"ø x 32" (4)	35" SQ x 18 (4)				
14'-0"	19'-8"	18"ø x 28" (1)	30" SQ. x 18" (1)	18"ø x 32" (4)	35" SQ. x 18 (4)				
15'-0"	19'-2"	18"ø x 26" (1)	30" SQ. x 18" (1)	18"ø x 32" (4)	35" SQ x 18 (4)				
16'-0"	18'-6"	18"ø x 26" (1)	30" SQ. x 18" (1)	18"ø x 32" (4)	34" SQ x 18 (4)				
17'-0"	18'-0"	18"ø x 26" (1)	30" SQ. x 18" (1)	18"ø x 32" (4)	34" SQ x 18 (4)				

MAXIMUM RAFTER SPAN & OVERHANG TABLE B

RAFTER SIZE (AT 24" O.C.)	WIND SPEED 70 M.P.H. MAX. CLEAR SPAN	70 M.P.H. MAX. OVERHANG	90 M.P.H. MAX. CLEAR SPAN	90 M.P.H. MAX. OVERHANG
2 X 6 1/2 X .024"	12'-4"	4'-4"	12'-4"	4'-4"
2 X 6 1/2 X .032"	16'-6"	5'-9"	16'-6"	5'-9"
2 X 6 1/2 X .040"	20'-7"	7'-3"	20'-7"	7'-3"
3 X 8 X .042"	23'-11"	8'-4"	23'-11"	8'-4"

BEAM TO POST CONNECTION TABLE E

DETAIL SHT. 11	HEADER / BEAM	WIND SPEED = 70 LIVE LOAD 10	20	30	WIND SPEED = 90 LIVE LOAD 10	20	30
20 & 21	3x8x.042	[2]	-	-	[2]	-	-
20 & 21	3x8x.042 W/INSERT	[2]	[2]	[2]	[4]	[4]	[2]

RAFTER TO BEAM CONNECTION TABLE F

DETAIL SHT. 11	WIND SPEED = 70 TO RAFTER	WIND SPEED = 70 TO BEAM	WIND SPEED = 90 TO RAFTER	WIND SPEED = 90 TO BEAM
14	(2)-#10 SMS EA. LEG. (4-TOTAL)	(2)-#10 S.M.S. W/1 1/2 X 3 X 1/4 WASH. PLT. EA. LEG. (4-TOTAL)	(2)-#10 S.M.S. EACH LEG. (4 TOTAL)	(2)-#10 S.M.S W/1 1/2 X 3 X 1/4 WASHER PLT. EACH LEG. (4-TOTAL)
15	(2)-#10 SMS EA. SIDE OF RAFT. (4-TOT.)	(4)-#10 S.M.S. EA. SIDE OF RAFTER W/3"X 3"X1/4" WASH PLT. (4-TOT)	(2)-#10 S.M.S. EA. SIDE OF RAFTER. (4-TOTAL)	(4)-#10 S.M.S. EA. SIDE OF RAFTER W/3"X3"X 1/4" WASHER PLT. (4-TOTAL)

FREESTANDING LATTICE PATIO COVER WITH OVERHANG (WIND SPEED = 70 & 90 MPH) SINGLE SPAN TABLE C

RAFTER SIZE (AT 24" O.C.)	PROJECTION	MAXIMUM RAFTER SPAN (CLEAR)	MAXIMUM RAFTER OVERHANG	MAXIMUM POST SPACING WITH 3 X 8 X .042 W/ INSERT	MAX. POST HEIGHT = 8'-7", 70 M.P.H., W/ SLAB	8'-7", 70 M.P.H., NO SLAB	8'-7", 90 M.P.H., W/ SLAB	8'-7", 90 M.P.H., NO SLAB	MAX. POST HEIGHT = 11'-0", 70 M.P.H., W/ SLAB	11'-0", 70 M.P.H., NO SLAB	11'-0", 90 M.P.H., W/ SLAB	11'-0", 90 M.P.H., NO SLAB
L.L. = 20 P.S.F.					L.L. = 20 P.S.F.						L.L. = 20 P.S.F.	
3 X 8 X .042"	31'-9"	17'-9"	7'-0"	13'-9"	18"ø x 26" (1)	30" SQ x 18" (1)	18"ø x 30" (1)	33" SQ x 18" (1)	18"ø x 28" (1)	32" SQ x 18" (1)	18"ø x 32" (2)	36" SQ x 18" (2)
L.L. 30 P.S.F.					L.L. 30 P.S.F.						L.L. 30 P.S.F.	
3 X 8 X .042"	26'-5"	14'-9"	5'-10"	12'-7"	18"ø x 24" (1)	28" SQ x 18" (1)	18"ø x 28" (1)	32" SQ x 18" (1)	18"ø x 28" (1)	30" SQ x 18" (1)	18"ø x 30" (1)	34" SQ x 18" (1)

FREESTANDING LATTICE PATIO COVER WITH OVERHANG (WIND SPEED = 70 & 90 M.P.H.) MULTI-SPAN TABLE D

RAFTER SIZE (AT 24" O.C.)	PROJECTION	MAXIMUM RAFTER SPAN (CLEAR)	MAXIMUM RAFTER OVERHANG	MAXIMUM POST SPACING WITH 3 X 8 X .042 W/ INSERT	MAX. POST HEIGHT 8'-7", 70 M.P.H., W/ SLAB	8'-7", 70 M.P.H., NO SLAB	8'-7", 90 M.P.H., W/ SLAB	8'-7", 90 M.P.H., NO SLAB	MAX. POST HEIGHT 11'-0", 70 M.P.H., W/SLAB	11'-0", 70 M.P.H., NO SLAB	11'-0", 90 M.P.H., W/ SLAB	11'-0", 90 M.P.H., NO SLAB
L.L. = 20 P.S.F.					L.L. = 20 P.S.F.						L.L. = 20 P.S.F.	
3 X 8 X .042"	31'-9"	17'-9"	7'-9"	13'-7"	18"ø x 26" (1)	30" SQ x 18" (1)	18"ø x 30" (1)	34" SQ x 18" (1)	18"ø x 28" (1)	32" SQ x 18" (1)	18"ø x 32" (2)	36" SQ x 18" (2)
L.L. = 30 P.S.F.					L.L. = 30 P.S.F.						L.L. = 30 P.S.F.	
3 X 8 X .042"	26'-5"	14'-9"	5'-10"	12'-5"	18"ø x 24" (1)	28" SQ x 18" (1)	18"ø x 28" (1)	32" SQ x 18" (1)	18"ø x 26" (1)	30" SQ x 18" (1)	18"ø x 30" (2)	34" SQ x 18" (2)

TABLE FOOTNOTES:

1. CONCRETE SLAB (EXISTING OR NEW) COMPLETELY SURROUNDS NEW FOOTING.
2. CONCRETE SLAB DOES NOT EXIST AND NO SLAB WILL BE CONSTRUCTED AS PART OF THIS INSTALLATION.
3. POST SIZE
   (1) 3" SQ. x .062"
   (2) 3" SQ. x .083"
   (3) 3" SQ. x .125"
   (4) 3" SQ. x .188"

NOTE:
POST TYPES [1] AND [3] ARE USED FOR SLAB CONDITION. POST TYPES [2] AND [4] ARE USED FOR FOOTING CONDITION.

POST TYPES

[1] 3" SQ. POST + (2) - 2" X 6 1/2" X .024" W/ (8)-# 14 S.M.S.

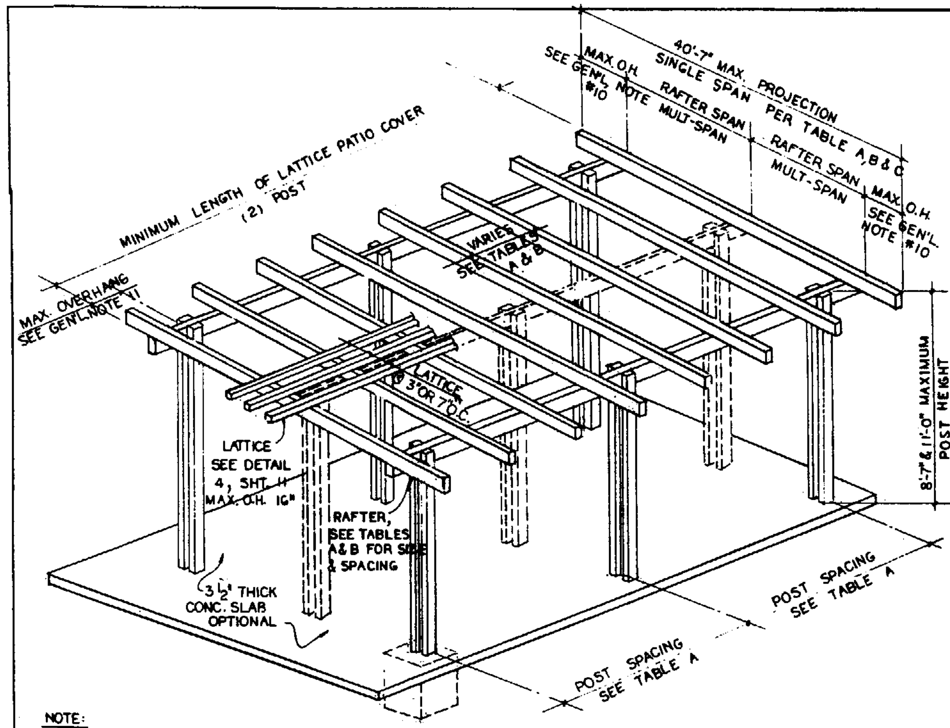
[2] 3" SQ. POST + (2) - 2" x 6 1/2" X .032" W/ (8)-#14 S.M.S.

[3] 3" SQ POST + (2) 2" X 6 1/2" X 024" W/ (12)-# 14 S.M.S.

[4] 3" SQ. POST + (2) - 2" X 6 1/2" X .032" W/ (12)-#14 S.M.S.

GENERAL NOTES AND SPECIFICATIONS:

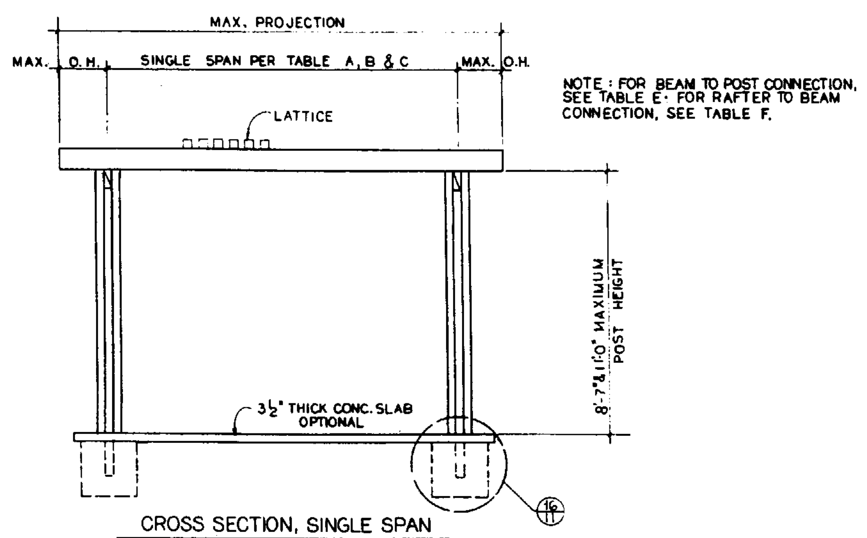
1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1982 edition of the Aluminum Construction manual.
2. Alternate aluminum alloys may be substituted for those shown, provided they are registered with the Aluminum Association and have equal or greater yield and ultimate strengths.
3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i. Concrete slab shall have 3½" minimum thickness and shall be in good condition.
4. All footings shall bear on firm, natural un-disturbed soil or certified fill. Design vertical soil bearing pressure = 1,000 P.S.F.
5. All steel members shall be hot-dip galvanized or electroplated and conform to A.S.T.M. A-446, Grade C.
6. Aluminum fasteners shall be 2024-T4. All other fasteners shall be galvanized steel or cadmium plated. All bolts shall conform to A.S.T.M. A-307 and have standard cut plate washers. Holes for bolts shall be bolt diameter plus 1/16" maximum.
7. Expansion bolts shall be Hilti Kwik Bolts KB II carbon steel or equal per I.C.B.O. E.R. No. 4627. All bolts shall have a minimum concrete edge distance of 6 bolt diameters.
8. Each installation shall bear an identifying tag giving the name and address of the manufacturer, design loads and enclosability.
9. All items pertaining to each particular installation shall be circled, i.e., project, post spacing, footing detail, etc.
10. Open lattice patio cover shall not be enclosed with any type of solid material, and the design loads have only been applied to the horizontal projected area of the lattice, rafters, beams, etc. per I.C.B.O. criteria.
11. For all detail references, see Sheet 11 of 12.



NOTE: NO CRACKS WITHIN 2'-6" OF POSTS SHALL BE PERMITTED. POST SHALL BE SET BACK A MINIMUM OF 4" FROM EDGE OF SLAB.

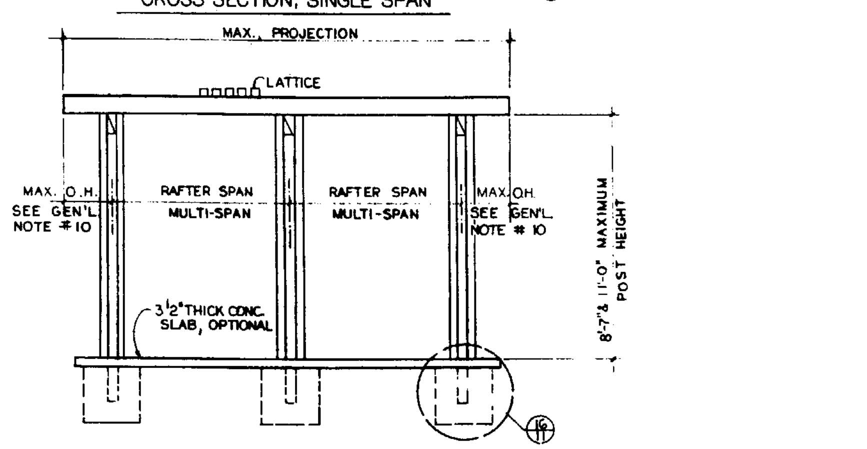
NOTE: THIS OPEN LATTICE-TYPE STRUCTURE MAY NOT BE ENCLOSED.

OPEN LATTICE-TYPE PATIO COVER



NOTE: FOR BEAM TO POST CONNECTION, SEE TABLE E. FOR RAFTER TO BEAM CONNECTION, SEE TABLE F.

CROSS SECTION, SINGLE SPAN



CROSS SECTION, MULTI SPAN

FREESTANDING LATTICE PATIO COVER WITH OVERHANG (WIND SPEED = 70 & 90 M.P.H.) TABLE A

MAXIMUM POST SPACING AND FOOTING SIZE

TRIBUTARY WIDTH	3" X 8" X .042" HEADER / BEAM: MAXIMUM POST SPACING	FOOTING SIZE: MAX. POST HEIGHT = 8'-7", 70 MPH, W/ SLAB [1]	8'-7", 70 MPH, NO SLAB [2]	8'-7", 90 MPH, W/ SLAB	8'-7", 90 MPH, NO SLAB	11'-0", 70 MPH, W/ SLAB	11'-0", 70 MPH, NO SLAB	11'-0", 90 MPH, W/ SLAB	11'-0", 90 MPH, NO SLAB	3" X 8" X .042" W/ INSERT HEADER / BEAM: MAXIMUM POST SPACING	FOOTING SIZE: MAX. POST HEIGHT = 8'-7", 70 MPH, W/ SLAB	8'-7", 70 MPH, NO SLAB	8'-7", 90 MPH, W/ SLAB	8'-7", 90 MPH, NO SLAB	11'-0", 70 MPH, W/ SLAB	11'-0", 70 MPH, NO SLAB	11'-0", 90 MPH, W/ SLAB	11'-0", 90 MPH, NO SLAB
LIVE LOAD 10 = P.S.F. [3]																		
5'-0"	14'-6"	18"ø x 24" (1)	28" SQ. x 18" (3)	18"ø x 28" (1)	33" SQ. x 18" (1)					31'-11"	18"ø x 32" (2)	36" SQ. x 18" (2)	18"ø x 36" (3)	41" SQ x 18 (3)				
6'-0"	13'-3"	18"ø x 24" (1)	26" SQ. x 18" (1)	18"ø x 28" (1)	30" SQ. x 18" (1)					30'-10"	18"ø x 32" (2)	35" SQ. x 18" (2)	18"ø x 36" (3)	41" SQ x 18 (3)				
7'-0"	12'-3"	18"ø x 24" (1)	26" SQ. x 18" (1)	18"ø x 26" (1)	30" SQ. x 18" (1)					29'-4"	18"ø x 32" (2)	35" SQ. x 18" (2)	18"ø x 36" (3)	40" SQ x 18 (3)				
8'-0"	11'-5"	18"ø x 24" (1)	26" SQ. x 18" (1)	18"ø x 26" (1)	29" SQ. x 18" (1)					25'-8"	18"ø x 30" (2)	33" SQ. x 18" (2)	18"ø x 34" (3)	38" SQ x 18 (3)				
9'-0"	10'-10"	18"ø x 24" (1)	25" SQ. x 18" (1)	18"ø x 26" (1)	29" SQ. x 18" (1)					24'-3"	18"ø x 30" (2)	33" SQ. x 18" (2)	18"ø x 34" (3)	37" SQ x 18 (3)				
10'-0"	10'-4"	18"ø x 24" (1)	25" SQ. x 18" (1)	18"ø x 26" (1)	28" SQ. x 18" (1)					23'-2"	18"ø x 30" (1)	32" SQ. x 18" (1)	18"ø x 32" (3)	37" SQ x 18 (4)				
11'-0"	9'-10"	18"ø x 24" (1)	25" SQ. x 18" (1)	18"ø x 26" (1)	29" SQ. x 18" (1)					22'-2"	18"ø x 30" (1)	32" SQ. x 18" (1)	18"ø x 32" (4)	36" SQ x 18 (4)				
12'-0"	9'-5"	18"ø x 24" (1)	26" SQ. x 18" (1)	18"ø x 26" (1)	30" SQ. x 18" (1)					21'-3"	18"ø x 28" (1)	31" SQ. x 18" (1)	18"ø x 32" (4)	36" SQ x 18 (4)				
13'-0"	9'-0"	18"ø x 24" (1)	27" SQ. x 18" (1)	18"ø x 28" (1)	30" SQ. x 18" (1)					20'-5"	18"ø x 28" (1)	31" SQ. x 18" (1)	18"ø x 32" (4)	35" SQ x 18 (4)				
14'-0"	8'-8"	18"ø x 24" (1)	27" SQ. x 18" (1)	18"ø x 28" (1)	31" SQ. x 18" (1)					19'-8"	18"ø x 28" (1)	30" SQ. x 18" (1)	18"ø x 32" (4)	35" SQ. x 18 (4)				
15'-0"	8'-5"	18"ø x 26" (1)	28" SQ. x 18" (1)	18"ø x 28" (1)	32" SQ. x 18" (1)					19'-2"	18"ø x 26" (1)	30" SQ. x 18" (1)	18"ø x 32" (4)	35" SQ x 18 (4)				
16'-0"	8'-2"	18"ø x 26" (1)	28" SQ. x 18" (1)	18"ø x 30" (1)	32" SQ. x 18" (1)					18'-6"	18"ø x 26" (1)	30" SQ. x 18" (1)	18"ø x 32" (4)	34" SQ x 18 (4)				
17'-0"	7'-11"	18"ø x 26" (1)	29" SQ. x 18" (1)	18"ø x 32" (1)	33" SQ. x 18" (1)					18'-0"	18"ø x 26" (1)	30" SQ. x 18" (1)	18"ø x 32" (4)	34" SQ x 18 (4)				

MAXIMUM RAFTER SPAN & OVERHANG TABLE B

RAFTER SIZE (AT 24" O.C.)	70 M.P.H. MAX. CLEAR SPAN	70 M.P.H. MAX. OVERHANG	90 M.P.H. MAX. CLEAR SPAN	90 M.P.H. MAX. OVERHANG
2 X 6 1/2 X .024"	12'-4"	4'-4"	12'-4"	4'-4"
2 X 6 1/2 X .032"	16'-6"	5'-9"	16'-6"	5'-9"
2 X 6 1/2 X .040"	20'-7"	7'-3"	20'-7"	7'-3"
3 X 8 X .042"	23'-11"	8'-4"	23'-11"	8'-4"

BEAM TO POST CONNECTION TABLE E

DETAIL SHT. 11	HEADER / BEAM	WIND SPEED=70, LIVE LOAD 10	20	30	WIND SPEED=90, LIVE LOAD 10	20	30
(20) & (21)	3x8x.042	[2]	-	-	[2]	-	-
(20) & (21)	3x8x.042 W/INSERT	[2]	[2]	[2]	[4]	[4]	[2]

RAFTER TO BEAM CONNECTION TABLE F

DETAIL SHT. 11	WIND SPEED=70 TO RAFTER	WIND SPEED=70 TO BEAM	WIND SPEED = 90 TO RAFTER	WIND SPEED = 90 TO BEAM
(14)	(2)#10 S.M.S. EA. LEG. (4-TOTAL)	(2)-#10 S.M.S. W/ 1 1/2 X 3 X 1/4 WASH. PLT. EA. LEG. (4-TOTAL)	(2)-#10 S.M.S. EACH LEG. (4 TOTAL)	(2)-#10 S.M.S W/ 1 1/2 X 3 X 1/4 WASHER PLT. EACH LEG. (4-TOTAL)
(15)	(2)-#10 SMS EA. SIDE OF RAFT. (4-TOT.)	(4)-#10 S.M.S. EA. SIDE OF RAFTER W/ 3"X 3"X 1/4" WASH. PLT. (4-TOT)	(2)-#10 S.M.S. EA. SIDE OF RAFTER. (4-TOTAL)	(4)-#10 S.M.S. EA. SIDE OF RAFTER W/ 3"X 3"X 1/4" WASHER PLT. (4-TOTAL)

FREESTANDING LATTICE PATIO COVER WITH OVERHANG (WIND SPEED=70 & 90 MPH) SINGLE SPAN TABLE C

RAFTER SIZE (AT 24" O.C.)	PROJECTION	MAXIMUM RAFTER SPAN (CLEAR)	MAXIMUM RAFTER OVERHANG	MAXIMUM POST SPACING WITH 3 X 8 X .042 W/ INSERT	FOOTING SIZE: MAX. POST HEIGHT = 8'-7", 70 M.P.H. W/ SLAB	8'-7", 70 M.P.H. NO SLAB	8'-7", 90 M.P.H. W/ SLAB	8'-7", 90 M.P.H. NO SLAB	11'-0", 70 M.P.H. W/ SLAB	11'-0", 70 M.P.H. NO SLAB	11'-0", 90 M.P.H. W/ SLAB	11'-0", 90 M.P.H. NO SLAB
L.L. = 20 P.S.F.					L.L. = 20 P.S.F.				L.L. = 20 P.S.F.			
3 X 8 X .042"	31'-9"	17'-9"	7'-0"	13'-9"	18"ø x 26" (1)	30" SQ x 18" (1)	18"ø x 30" (1)	33" SQ x 18" (1)	18"ø x 28" (1)	32" SQ x 18" (1)	18"ø x 32" (2)	36" SQ x 18" (2)
L.L. 30 P.S.F.					L.L. 30 P.S.F.				L.L. 30 P.S.F.			
3 X 8 X .042"	26'-5"	14'-9"	5'-10"	12'-7"	18"ø x 24" (1)	28" SQ x 18" (1)	18"ø x 28" (1)	32" SQ x 18" (1)	18"ø x 28" (1)	30" SQ x 18" (1)	18"ø x 30" (1)	34" SQ x 18" (1)

FREESTANDING LATTICE PATIO COVER WITH OVERHANG (WIND SPEED = 70 & 90 MPH.) MULTI-SPAN TABLE D

RAFTER SIZE (AT 24" O.C.)	PROJECTION	MAXIMUM RAFTER SPAN (CLEAR)	MAXIMUM RAFTER OVERHANG	MAXIMUM POST SPACING WITH 3 X 8 X .042 W/ INSERT	FOOTING SIZE: MAX. POST HEIGHT 8'-7", 70 M.P.H. W/ SLAB	8'-7", 70 M.P.H. NO SLAB	8'-7", 90 M.P.H. W/ SLAB	8'-7", 90 M.P.H. NO SLAB	11'-0", 70 M.P.H. W/ SLAB	11'-0", 70 M.P.H. NO SLAB	11'-0", 90 M.P.H. W/ SLAB	11'-0", 90 M.P.H. NO SLAB
L.L. = 20 P.S.F.					L.L. = 20 P.S.F.				L.L. = 20 P.S.F.			
3 X 8 X .042"	31'-9"	17'-9"	7'-9"	13'-7"	18"ø x 26" (1)	30" SQ x 18" (1)	18"ø x 30" (1)	34" SQ x 18" (1)	18"ø x 28" (1)	32" SQ x 18" (1)	18"ø x 32" (2)	36" SQ x 18" (2)
L.L. = 30 P.S.F.					L.L. = 30 P.S.F.				L.L. = 30 P.S.F.			
3 X 8 X .042"	26'-5"	14'-9"	5'-10"	12'-5"	18"ø x 24" (1)	28" SQ x 18" (1)	18"ø x 28" (1)	32" SQ x 18" (1)	18"ø x 26" (1)	30" SQ x 18" (1)	18"ø x 30" (2)	34" SQ x 18" (2)

TABLE FOOTNOTES:

1. CONCRETE SLAB (EXISTING OR NEW) COMPLETELY SURROUNDS NEW FOOTING.
2. CONCRETE SLAB DOES NOT EXIST AND NO SLAB WILL BE CONSTRUCTED AS PART OF THIS INSTALLATION.
3. POST SIZE
   (1) 3" SQ. x .062"
   (2) 3" SQ. x .083"
   (3) 3" SQ. x .125"
   (4) 3" SQ. x .188"

NOTE: POST TYPES [1] AND [3] ARE USED FOR SLAB CONDITION. POST TYPES [2] AND [4] ARE USED FOR FOOTING CONDITION.

POST TYPES

- [1] 3" SQ. POST + (2) - 2" X 6 1/2" X .024" W/ (8)-#14 S.M.S.
- [2] 3" SQ. POST + (2) - 2" x 6 1/2" X .032" W/ (8)-#14 S.M.S.
- [3] 3" SQ. POST + (2) 2" X 6 1/2" X .024" W/ (12)-#14 S.M.S.
- [4] 3" SQ. POST + (2) - 2" X 6 1/2" X .032" W/ (12)-#14 S.M.S.

GENERAL NOTES AND SPECIFICATIONS:

1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1982 edition of the Aluminum Construction manual.
2. Alternate aluminum alloys may be substituted for those shown, provided they are registered with the Aluminum Association and have equal or greater yield and ultimate strengths.
3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i. Concrete slab shall have 3½" minimum thickness and shall be in good condition.
4. All footings shall bear on firm, natural un-disturbed soil or certified fill. Design vertical soil bearing pressure = 1,000 P.S.F.
5. All steel members shall be hot-dip galvanized or electroplated and conform to A.S.T.M. A-446, Grade C.
6. Aluminum fasteners shall be 2024-T4. All other fasteners shall be galvanized steel or cadmium plated. All bolts shall conform to A.S.T.M. A-307 and have standard cut plate washers. Holes for bolts shall be bolt diameter plus 1/16" maximum.
7. Expansion bolts shall be Hilti Kwik Bolts KB II carbon steel or equal per I.C.B.O. E.R.No. 4627. All bolts shall have a minimum concrete edge distance of 6 bolt diameters.
8. Each installation shall bear an identifying tag giving the name and address of the manufacturer, design loads and enclosability.
9. All items pertaining to each particular installation shall be circled, i.e., project, post spacing, footing detail, etc.
10. Open lattice patio cover shall not be enclosed with any type of solid material, and the design loads have only been applied to the horizontal projected area of the lattice, rafters, beams, etc. per I.C.B.O. criteria.
11. For all detail references, see Sheet 11 of 12.

I.C.B.O. E.S. EVALUATION REPORT NO. 5038	DATE 7-28-92 SCALE NOTED DRAWN BY K.K.	△ 10-15 K.K. CHANGED SHT. # 3 TO 4	FOX ENGINEERING JAMES M. FOX, STRUCTURAL ENGINEER 8080 TELEGRAPH RD. DOWNEY, CALIFORNIA 90240 (310) 806-1387 (310) 927-3900 FAX: (310) 927-3900 JAMES M. FOX, SE 819	FREESTANDING LATTICE-TYPE PATIO COVER L.L.=10 20 & 30 P.S.F. WIND SPEED = 70 & 90 M.P.H.	ALUMA-LATTICE PATIO COVER (AS MFG. BY) VALLEY ALUMINUM COMPANY 3602 W. LINCOLN ST. PHOENIX, ARIZONA 85009 (602) 278-6224

JOB NO. 92-19287

SHEET 4 OF 12

ATTACHED LATTICE PATIO COVERS (WIND SPEED = 100 & 110 M.P.H.)

TABLE A

MAXIMUM POST SPACING & FOOTING SIZE — WIND = 19 / 23 P.S.F. UPLIFT 19 / 23 P.S.F.

	PROJECTION INCLUDES 24 MAXIMUM OVERHANG	RAFTER SIZE 24 O.C.	3" X 8" X .042" BEAM / HEADER: POST SPACING ON SLAB[1]	POST SPACING ON FOOT'G	FOOTING SIZE 100 M.P.H.	FOOTING SIZE 110 M.P.H.	MINIMUM NUMBER OF POSTS, POST TYPE 100 M.P.H.: 1[2]	2	3	4	POST TYPE 110 M.P.H.: 1	2	3	4	3" X 8" X .042" + CHANNEL INSERT BEAM HEADER: POST SPACING ON SLAB[1]	POST SPACING ON FOOT'G	FOOTING SIZE 100 MPH	FOOTING SIZE 110 MPH	MINIMUM NUMBER OF POSTS, POST TYPE 100 MPH: 1[2]	2	3	4	POST TYPE 110 M.P.H.: 1	2	3	4	BEAM HEADER TO POST CONNECTION NO. OF SCREWS[3] 100 M.P.H.	110 M.P.H.
L.L. = 10 P.S.F.	10'-0"	2"X6 1/2"X.024"	6'-3"	10'-4"	25	25	6	3	3	2	7	4	4	2	6'-3"	23'-11"	32	32	6	-	3	2	7	-	4	2	8 / 12	8 / 12
	11'-0"	2"X6 1/2"X.024"	5'-9"	10'-0"	25	25	6	4	3	2	8	4	4	3	5'-9"	23'-1"	33	33	6	-	3	2	8	-	4	3	8 / 12	8 / 12
	12'-0"	2"X6 1/2"X.032"	5'-5"	9'-8"	25	25	7	4	4	2	8	4	4	3	5'-5"	22'-3"	33	33	7	-	4	2	8	-	4	3	8 / 12	8 / 12
	13'-0"	2"X6 1/2"X.032"	5'-1"	9'-4"	25	25	7	4	4	3	9	5	5	3	5'-1"	21'-7"	33	33	7	-	4	3	9	-	5	3	8 / 12	8 / 12
	14'-0"	2"X6 1/2"X.032"	4'-9"	9'-1"	26	26	8	4	4	3	9	5	5	3	4'-9"	20'-11"	34	34	8	-	4	3	9	-	5	3	8 / 12	8 / 12
	15'-0"	2"X6 1/2"X.040"	4'-6"	8'-10"	26	26	8	4	4	3	10	5	5	3	4'-6"	20'-4"	34	34	8	-	4	3	10	-	5	-	8 / -	8 / -
	16'-0"	2"X6 1/2"X.040"	4'-3"	8'-7"	26	26	9	5	5	3	10	6	5	3	4'-3"	19'-9"	34	34	9	-	5	3	10	-	5	-	8 / -	8 / -
	17'-0"	2"X6 1/2"X.040"	4'-0"	8'-4"	26	26	9	5	5	3	11	6	6	4	4'-0"	19'-3"	35	35	9	-	5	9	11	-	6	-	8 / -	8 / -
	18'-0"	3"X8"X.042"	3'-10"	8'-1"	26	26	9	5	5	3	11	6	6	4	3'-10"	18'-9"	35	35	9	-	5	3	11	-	6	-	8 / -	8 / -
	19'-0"	3"X8"X.042"	3'-8"	7'-11"	27	27	10	5	5	3	12	6	6	4	3'-8"	18'-4"	35	35	10	-	5	3	12	-	6	-	8 / -	8 / -
	20'-0"	3"X8"X.042"	3'-6"	7'-9"	27	27	10	6	5	3	12	7	7	4	3'-6"	17'-11"	35	35	10	-	5	3	12	-	7	-	8 / -	8 / -
L.L. = 20 P.S.F.	8'-0"	2 X 6 1/2 X.024	7'-3"	10'-4"	23	23	5	3	3	2	6	3	3	2	7'-3"	22'-7"	30	30	5	-	3	2	6	-	3	2	8 / 12	8 / 12
	9'-0"	2 X 6 1/2 X.024	6'-0"	10'-0"	24	24	6	3	3	2	7	4	4	2	6'-8"	21'-8"	30	30	6	-	3	2	7	-	4	2	8 / 12	8 / 12
	10'-0"	2 X 6 1/2 X.024	6'-3"	6'-8"	24	24	6	3	3	2	7	4	4	2	6'-3"	20'-10"	31	31	6	-	3	2	7	-	4	2	8 / 12	8 / 12
	11'-0"	2 X 6 1/2 X.024	5'-9"	9'-8"	25	25	6	4	3	2	8	4	4	3	5'-9"	20'-1"	31	31	6	-	3	2	8	-	4	3	8 / 12	8 / 12
	12'-0"	2 X 6 1/2 X.032	5'-5"	9'-4"	25	25	7	4	3	2	8	4	4	3	5'-5"	19'-5"	32	32	7	-	4	2	8	-	4	3	8 / 12	8 / 12
	13'-0"	2 X 6 1/2 X.032	5'-1"	9'-0"	25	25	7	4	4	3	9	5	5	3	5'-1"	18'-9"	32	32	7	-	4	3	9	-	5	3	8 / 12	8 / 12
	14'-0"	2 X 6 1/2 X.032	4'-9"	8'-9"	25	25	8	4	4	3	9	5	5	3	4'-9"	18'-3"	32	32	8	-	4	3	9	-	5	3	8 / 12	8 / 12
	15'-0"	2 X 6 1/2 X.040	4'-6"	8'-6"	26	26	8	4	4	3	10	5	5	3	4'-6"	17'-8"	32	32	8	-	4	3	10	-	5	-	8 / 12	8 / 12
	16'-0"	2 X 6 1/2 X.040	4'-3"	8'-3"	26	26	9	5	5	3	10	6	5	3	4'-3"	17'-3"	33	33	9	-	5	3	10	-	5	-	8 / 12	8 / 12
L.L. = 30 P.S.F.	8'-0"	2 X 6 1/2 X.024	7'-3"	9'-0"	22	22	5	3	3	2	6	3	3	2	7'-3"	18'-9"	28	28	5	3	3	2	6	3	3	2	8 / 8	8 / 8
	9'-0"	2 X 6 1/2 X.024	6'-8"	8'-8"	23	23	6	3	3	2	7	4	4	2	6'-8"	18'-0"	29	29	6	3	3	2	7	4	4	2	8 / 8	8 / 8
	10'-0"	2 X 6 1/2 X.032	6'-2"	8'-4"	23	23	6	3	3	2	7	4	4	2	6'-2"	17'-4"	29	29	6	3	3	2	7	4	4	2	8 / 8	8 / 8
	11'-0"	2 X 6 1/2 X.032	5'-9"	8'-0"	23	23	6	4	3	2	8	4	4	3	5'-9"	16'-8"	29	29	6	4	3	2	8	4	4	3	8 / 8	8 / 8
	12'-0"	2 X 6 1/2 X.032	5'-4"	7'-9"	23	23	7	4	3	2	8	4	4	3	5'-4"	16'-1"	30	30	7	4	4	2	8	4	4	3	8 / 8	8 / 8
	13'-0"	2 X 6 1/2 X.040	5'-0"	7'-6"	24	24	7	4	4	3	9	5	5	3	5'-0"	15'-7"	30	30	7	-	4	3	9	-	5	3	8 / 12	8 / 12
	14'-0"	2 X 6 1/2 X.040	4'-9"	7'-3"	24	24	8	4	4	3	9	5	5	3	4'-8"	15'-1"	30	30	8	-	4	3	9	-	5	3	8 / 12	8 / 12

2" x 6 1/2" & 3 x 8 RAFTER THICKNESS & SPACING — TABLE B

	PROJECTION	18" O.C.	20" O.C.	22" O.C.
L.L. = 20 P.S.F.	8'-0"	.024"	.024"	.024"
	9'-0"	.024"	.024"	.024"
	10'-0"	.024"	.024"	.032"
	11'-0"	.032"	.032"	.032"
	12'-0"	.032"	.032"	.032"
	13'-0"	.032"	.032"	.040"
	14'-0"	.032"	.040"	.040"
	15'-0"	.040"	.040"	.040"
	16'-0"	.040"	.040"	.042"
L.L. = 30 P.S.F.	8'-0"	.024"	.024"	.032"
	9'-0"	.032"	.032"	.032"
	10'-0"	.032"	.032"	.032"
	11'-0"	.032"	.032"	.040"
	12'-0"	.040"	.040"	.040"
	13'-0"	.040"	.040"	.040"
	14'-0"	.040"	.042"	.042"

FASTENER / ANCHOR BOLT CONNECTION — TABLE C

RAFTER TO BEAM CONNECTION

DETAIL	WIND SPEED = 100 M.P.H. TO RAFTER	WIND SPEED = 100 M.P.H. TO BEAM	WIND SPEED = 110 M.P.H. TO RAFTER	WIND SPEED = 110 M.P.H. TO BEAM
(14) SHT. 11	(2)-#10 S.M.S. EA. LEG (4-TOTAL)	(2)-#14 S.M.S. W/1 1/2" X 1/8" WASHER PLT. EA. LEG. (4-TOTAL)	(2)-#10 S.M.S. EACH LEG (4-TOTAL)	(2)-#14 S.M.S. W/1 1/2" X 1/8" WASHER PLT. EA. LEG. (4-TOTAL)
(15) SHT. 11	(2)-#10 S.M.S. EA. SIDE OF RAFTER (4-TOTAL)	(4)-#12 S.M.S. W/ 1/8" X 1" SQ. WASHER, EA.	(2)-#14 S.M.S. EA. SIDE OF RAFTER (4-TOTAL)	(4)-#12 S.M.S. W/ 1/8" X 1" SQ. WASHER, EA.

BEAM TO POST CONNECTION

DETAIL	WIND SPEED = 100 M.P.H. ON SLAB	WIND SPEED = 100 M.P.H. ON FTG.	WIND SPEED = 110 M.P.H. ON SLAB	WIND SPEED = 110 M.P.H. ON FTG.
(20) & (21)	[1]	[2] 3" X 8" X .040" W/ INSERT, SEE FOOTNOTE 4 & 5	[1]	[2] 3" X 8" X .040" W/ INSERT, SEE FOOTNOTE 4 & 5

POST BASE CONNECTION

DETAIL	WIND SPEED 100 M.P.H. ON SLAB	WIND SPEED 100 M.P.H. ON FTG[2]	WIND SPEED 110 M.P.H. ON SLAB	WIND SPEED 110 M.P.H. ON FTG.[2]
(7) & (24) SHT. 11	(2)-#12 S.M.S. OR TEKS. EA. SIDE OF POST (4-TOT.) & (1)-3/8"ø X 2 1/2" EMBED. ANCHOR BOLT W/ 3" X 1/4" WASHER PLATE		(2)-#12 S.M.S. OR TEKS. EA. SIDE OF POST (4-TOT.) & (1)-3/8"ø X 2 1/2" EMBED. ANCHOR BOLT W/ 3" X 1/4" WASHER PLT.	
(8) & (23) SHT. 11		(2)-#14 S.M.S. OR TEKS EA. SIDE OF POST (4-TOTAL) & (2)-5/8 ø X 4 EMBED. ANCHOR BOLT W/ 1/4 STL. GALV. WASHER PLT.		(2)-#14 S.M.S. OR TEKS. EA. SIDE OF POST (4-TOTAL) & (2)-5/8 ø X 4 EMBED. ANCHOR BOLT W/ 1/4 STL. GALV. WASHER PLT.

DETAIL	WIND SPEED 100 M.P.H. ON SLAB	WIND SPEED 100 M.P.H. ON FTG.	WIND SPEED 110 M.P.H. ON SLAB	WIND SPEED 110 M.P.H. ON FTG.
(17) & (18) SHT. 11	(2)-#12 S.M.S. OR TEKS. EA. SIDE OF POST (4-TOTAL) & 3/8"ø A.B. GALV. W/ 1" SQ. X 1/4" STL. GALV. WASHER PLT.		(2)-#12 S.M.S. OR TEKS. EA. SIDE OF POST (4-TOTAL) & 3/8"ø A.B. GALV. W/ 1" SQ. X 1/4" STL. GALV. WASHER PLT.	
(6) SHT. 11		L.L. = 10: (2)-5/8"ø M.B.[6] & (2)-3/4"ø X 8" CONC. EMBED. A.B.[5]; L.L. = 20 & 30: (2)-1/2"ø M.B.[6] & (2)-3/4"ø X 8" CONC. EMBED. A.B.[5]		L.L. = 10: (2)-5/8"ø M.B.[6] & (2)-3/4"ø X 8" CONC. EMBED. A.B.[5]; L.L. = 20 & 30: (2)-1/2"ø M.B.[6] & (2)-3/4"ø X 8" CONC. EMBED. A.B.[5]

NOTE: POST TYPES [1] AND [3] ARE USED FOR SLAB CONDITION. POST TYPES [2] AND [4] ARE USED FOR FOOTING CONDITION.

POST TYPES

[1] 3" SQ. POST + (2) - 2" X 6 1/2" X .024" W/ (8)-#14 S.M.S.

[2] 3" SQ. POST + (2) - 2" X 6 1/2" X .032" W/ (8)-#14 S.M.S.

[3] 3" SQ. POST + (2) 2" X 6 1/2" X .024" W/ (12)-#14 S.M.S.

[4] 3" SQ. POST + (2) - 2" X 6 1/2" X .032" W/ (12)-#14 S.M.S.

TABLE FOOTNOTES:

1. POST MAY BEAR ON CONCRETE SLAB, SAFETY STAKE OR ABESCO ANCHOR.
2. POST TYPES [1] AND [3] MAY BE USED AT CONCRETE SLAB, SAFETY STAKE OR ABESCO ANCHOR. POST TYPES [2] AND [4] SHALL BE USED AT FOOTINGS. SEE POST TYPE SCHEDULE, THIS SHEET.
3. TOTAL MINIMUM NUMBER OF #10 SHEET METAL SCREWS PER POST TO BEAM CONNECTION FOR DETAILS (20) AND (21)
4. FOR 3" X 8" X .040" BEAM W/INSERT, USE [4] FOR L.L. 10 PSF, 16' MAX. PROJECTION; USE [4] FOR L.L. = 20 P.S.F.; [2] FOR L.L. = 30 P.S.F., 12' MAX. PROJECTION; [4] FOR L.L. = 30 P.S.F. 14' MAX. PROJECTIONS AND DETAIL (22) W/(2) - 5/8"ø M.B. EACH TO BEAM HEADER & POST.
5. FOR 3" X 8" X .040" BEAM W/ INSERT USE DETAIL (6) SHEET 11 FOR POST BASE CONN. & DETAIL (12), SHEET 11 FOR POST / BEAM HEADER CONN.

GENERAL NOTES AND SPECIFICATIONS:

1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1982 edition of the Aluminum Construction manual.
2. Alternate aluminum alloys may be substituted for those shown, provided they are registered with the Aluminum Association and have equal or greater yield and ultimate strengths.
3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i. Concrete slab shall have 3½" minimum thickness and shall be in good condition.
4. All footings shall bear on firm, natural un-disturbed soil or certified fill. Design vertical soil bearing pressure = 1,000 P.S.F.
5. All steel members shall be hot-dip galvanized or electroplated and conform to A.S.T.M. A-446, Grade C.
6. Aluminum fasteners shall be 2024-T4. All other fasteners shall be galvanized steel or cadmium plated. All bolts shall conform to A.S.T.M. A-307 and have standard cut plate washers. Holes for bolts shall be bolt diameter plus 1/16" maximum.
7. Expansion bolts shall be Hilti Kwik Bolts KB II carbon steel or equal per I.C.B.O. E.R.No. 4627. All bolts shall have a minimum concrete edge distance of 8 bolt diameters.
8. Each installation shall bear an identifying tag giving the name and address of the manufacturer, design loads and enclosability.
9. All items pertaining to each particular installation shall be circled, i.e.. project, post spacing, footing detail, etc.
10. Open lattice patio cover shall not be enclosed with any type of solid material, and the design loads have only been applied to the horzontal projected area of the lattice, rafters, beams, etc. per I.C.B.O. criteria.
11. For all detail references, see Sheet 11 of 12

I.C.B.O. E.S. EVALUATION REPORT NO. 5038

DATE 10-15-92
SCALE NOTE
DRAWN BY K.K.

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ATTACHED, LATTICE-TYPE PATIO COVER W/24" MAX. O.H.
L.L. = 10, 20 & 30 P.S.F.
WIND SPEED = 100 & 110 M.P.H.

ALUMA-LATTICE PATIO COVER
(AS MFG. BY)
VALLEY ALUMINUM COMPANY
3602 W. LINCOLN ST. PHOENIX, ARIZONA 85009 (602) 278-6224

JOB NO. 92-17287

SHEET 2 OF 12

ATTACHED LATTICE PATIO COVERS (WIND SPEED = 100 & 110 M.P.H.)

TABLE A

L.L.	PROJECTION INCLUDES 24 MAXIMUM OVERHANG	RAFTER SIZE 24 O.C.	MAXIMUM POST SPACING & FOOTING SIZE WIND = 19 / 23 P.S.F. UPLIFT 19 / 23 P.S.F. — 3" X 8" X .042" BEAM / HEADER: POST SPACING ON SLAB[1]	ON FOOTG	FOOTING SIZE 100 M.P.H.	110 M.P.H.	MINIMUM NUMBER OF POSTS — POST TYPE 100 M.P.H. 1[2]	2	3	4	POST TYPE 110 M.P.H. 1	2	3	4	3" X 8" X .042" + CHANNEL INSERT BEAM HEADER: POST SPACING ON SLAB[1]	ON FOOT'G	FOOTING SIZE 100 MPH	110 MPH	MINIMUM NUMBER OF POSTS — POST TYPE 100 MPH 1[2]	2	3	4	POST TYPE 110 MPH 1	2	3	4	BEAM HEADER TO POST CONNECTION NO. OF SCREWS[3] 100 M.P.H.	110 M.P.H.
L.L. = 10 P.S.F.	10'-0"	2"x6 1/2"x.024"	6'-3"	10'-4"	25	25	6	3	3	2	7	4	4	2	6'-3"	23'-11"	32	32	6	-	3	2	7	-	4	2	8 / 12	8 / 12
	11'-0"	2"x6 1/2"x.024"	5'-9"	10'-0"	25	25	6	4	3	2	8	4	4	3	5'-9"	23'-1"	33	33	6	-	3	2	8	-	4	3	8 / 12	8 / 12
	12'-0"	2"x6 1/2"x.032"	5'-5"	9'-8"	25	25	7	4	4	2	8	4	4	3	5'-5"	22'-3"	33	33	7	-	4	2	8	-	4	3	8 / 12	8 / 12
	13'-0"	2"x6 1/2"x.032"	5'-1"	9'-4"	25	25	7	4	4	3	9	5	5	3	5'-1"	21'-7"	33	33	7	-	4	3	9	-	5	3	8 / 12	8 / 12
	14'-0"	2"x6 1/2"x.032"	4'-9"	9'-1"	26	26	8	4	4	3	9	5	5	3	4'-9"	20'-11"	34	34	8	-	4	3	9	-	5	3	8 / 12	8 / 12
	15'-0"	2"x6 1/2"x.040"	4'-6"	8'-10"	26	26	8	4	4	3	10	5	5	3	4'-6"	20'-4"	34	34	8	-	4	3	10	-	5	-	8 / -	8 / -
	16'-0"	2"x6 1/2"x.040"	4'-3"	8'-7"	26	26	9	5	5	3	10	6	5	3	4'-3"	19'-9"	34	34	9	-	5	3	10	-	5	-	8 / -	8 / -
	17'-0"	2"x6 1/2"x.040"	4'-0"	8'-4"	26	26	9	5	5	3	11	6	6	4	4'-0"	19'-3"	35	35	9	-	5	9	11	-	6	-	8 / -	8 / -
	18'-0"	3"x8"x.042"	3'-10"	8'-1"	26	26	9	5	5	3	11	6	6	4	3'-10"	18'-9"	35	35	9	-	5	3	11	-	6	-	8 / -	8 / -
	19'-0"	3"x8"x.042"	3'-8"	7'-11"	27	27	10	5	5	3	12	6	6	4	3'-8"	18'-4"	35	35	10	-	5	3	12	-	6	-	8 / -	8 / -
	20'-0"	3"x8"x.042"	3'-6"	7'-9"	27	27	10	6	5	3	12	7	7	4	3'-6"	17'-11"	35	35	10	-	5	3	12	-	7	-	8 / -	8 / -
L.L. = 20 P.S.F.	8'-0"	2 x 6 1/2 x.024	7'-3"	10'-4"	23	23	5	3	3	2	6	3	3	2	7'-3"	22'-7"	30	30	5	-	3	2	6	-	3	2	8 / 12	8 / 12
	9'-0"	2 x 6 1/2 x.024	6'-0"	10'-0"	24	24	6	3	3	2	7	4	4	2	6'-8"	21'-8"	30	30	6	-	3	2	7	-	4	2	8 / 12	8 / 12
	10'-0"	2 x 6 1/2 x.024	6'-3"	6'-8"	24	24	6	3	3	2	7	4	4	2	6'-3"	20'-10"	31	31	6	-	3	2	7	-	4	2	8 / 12	8 / 12
	11'-0"	2 x 6 1/2 x.024	5'-9"	9'-8"	25	25	6	4	3	2	8	4	4	3	5'-9"	20'-1"	31	31	6	-	3	2	8	-	4	3	8 / 12	8 / 12
	12'-0"	2 x 6 1/2 x.032	5'-5"	9'-4"	25	25	7	4	3	2	8	4	4	3	5'-5"	19'-5"	32	32	7	-	4	2	8	-	4	3	8 / 12	8 / 12
	13'-0"	2 x 6 1/2 x.032	5'-1"	9'-0"	25	25	7	4	4	3	9	5	5	3	5'-1"	18'-9"	32	32	7	-	4	3	9	-	5	3	8 / 12	8 / 12
	14'-0"	2 x 6 1/2 x.032	4'-9"	8'-9"	25	25	8	4	4	3	9	5	5	3	4'-9"	18'-3"	32	32	8	-	4	3	9	-	5	3	8 / 12	8 / 12
	15'-0"	2 x 6 1/2 x.040	4'-6"	8'-6"	26	26	8	4	4	3	10	5	5	3	4'-6"	17'-8"	32	32	8	-	4	3	10	-	5	-	8 / 12	8 / 12
	16'-0"	2 x 6 1/2 x.040	4'-3"	8'-3"	26	26	9	5	5	3	10	6	5	3	4'-3"	17'-3"	33	33	9	-	5	3	10	-	5	-	8 / 12	8 / 12
L.L. = 30 P.S.F.	8'-0"	2 x 6 1/2 x.024	7'-3"	9'-0"	22	22	5	3	3	2	6	3	3	2	7'-3"	18'-9"	28	28	5	3	3	2	6	3	3	2	8 / 8	8 / 8
	9'-0"	2 x 6 1/2 x.024	6'-8"	8'-8"	23	23	6	3	3	2	7	4	4	2	6'-8"	18'-0"	29	29	6	3	3	2	7	4	4	2	8 / 8	8 / 8
	10'-0"	2 x 6 1/2 x.032	6'-2"	8'-4"	23	23	6	3	3	2	7	4	4	2	6'-2"	17'-4"	29	29	6	3	3	2	7	4	4	2	8 / 8	8 / 8
	11'-0"	2 x 6 1/2 x.032	5'-9"	8'-0"	23	23	6	4	3	2	8	4	4	3	5'-9"	16'-8"	29	29	6	4	3	2	8	4	4	3	8 / 8	8 / 8
	12'-0"	2 x 6 1/2 x.032	5'-4"	7'-9"	23	23	7	4	3	2	8	4	4	3	5'-4"	16'-1"	30	30	7	4	4	2	8	4	4	3	8 / 8	8 / 8
	13'-0"	2 x 6 1/2 x.040	5'-0"	7'-6"	24	24	7	4	4	3	9	5	5	3	5'-0"	15'-7"	30	30	7	-	4	3	9	-	5	3	8 / 12	8 / 12
	14'-0"	2 x 6 1/2 x.040	4'-9"	7'-3"	24	24	8	4	4	3	9	5	5	3	4'-8"	15'-1"	30	30	8	-	4	3	9	-	5	3	8 / 12	8 / 12

2" x 6 1/2" & 3 x 8 RAFTER THICKNESS & SPACING — TABLE B

L.L.	PROJECTION	18" O.C.	20" O.C.	22" O.C.
L.L. = 20 P.S.F.	8'-0"	.024"	.024"	.024"
	9'-0"	.024"	.024"	.024"
	10'-0"	.024"	.024"	.032"
	11'-0"	.032"	.032"	.032"
	12'-0"	.032"	.032"	.032"
	13'-0"	.032"	.032"	.040"
	14'-0"	.032"	.040"	.040"
	15'-0"	.040"	.040"	.040"
	16'-0"	.040"	.040"	.042"
L.L. = 30 P.S.F.	8'-0"	.024"	.024"	.032"
	9'-0"	.032"	.032"	.032"
	10'-0"	.032"	.032"	.032"
	11'-0"	.032"	.032"	.040"
	12'-0"	.040"	.040"	.040"
	13'-0"	.040"	.040"	.040"
	14'-0"	.040"	.042"	.042"

FASTENER / ANCHOR BOLT CONNECTION — TABLE C

RAFTER TO BEAM CONNECTION

DETAIL	WIND SPEED = 100 M.P.H. TO RAFTER	WIND SPEED = 100 M.P.H. TO BEAM	WIND SPEED = 110 M.P.H. TO RAFTER	WIND SPEED = 110 M.P.H. TO BEAM
(14) SHT. 11	(2)-#10 S.M.S. EA. LEG (4-TOTAL)	(2)-#14 S.M.S. W/1 1/2" X 1/8" WASHER PLT. EA. LEG. (4-TOTAL)	(2)-#10 S.M.S. EACH LEG (4-TOTAL)	(2)-#14 S.M.S. W/1 1/2" X 1/8" WASHER PLT. EA. LEG. (4-TOTAL)
(15) SHT. 11	(2)-#10 S.M.S. EA. SIDE OF RAFTER (4-TOTAL)	(4)-#12 S.M.S. W/ 1/8" X 1" SQ. WASHER, EA.	(2)-#14 S.M.S. EA. SIDE OF RAFTER (4-TOTAL)	(4)-#12 S.M.S. W/ 1/8" X 1" SQ. WASHER, EA.

BEAM TO POST CONNECTION

DETAIL	WIND SPEED = 100 M.P.H. ON SLAB	WIND SPEED = 100 M.P.H. ON FTG.	WIND SPEED = 110 M.P.H. ON SLAB	WIND SPEED = 110 M.P.H. ON FTG.
(20) & (21)	[1]	[2] 3" X 8" X .040" W/ INSERT, SEE FOOTNOTE 4 & 5	[1]	[2] 3" X 8" X .040" W/ INSERT, SEE FOOTNOTE 4 & 5

POST BASE CONNECTION

DETAIL	WIND SPEED 100 M.P.H. ON SLAB	WIND SPEED 100 M.P.H. ON FTG[2]	WIND SPEED 110 M.P.H. ON SLAB	WIND SPEED 110 M.P.H. ON FTG.[2]
(7) & (24) SHT. 11	(2)-#12 S.M.S. OR TEKS. EA. SIDE OF POST (4-TOT.) & (1)-3/8"ø X 2 1/2" EMBED. ANCHOR BOLT W/ 3" X 1/4" WASHER PLATE		(2)-#12 S.M.S. OR TEKS. EA. SIDE OF POST (4-TOT.) & (1)-3/8"ø X 2 1/2" EMBED. ANCHOR BOLT W/ 3" X 1/4" WASHER PLT.	
(8) & (23) SHT. 11		(2)-#14 S.M.S. OR TEKS EA. SIDE OF POST (4-TOTAL) & (2)-5/8 ø X 4 EMBED. ANCHOR BOLT W/ 1/4 STL. GALV. WASHER PLT.		(2)-#14 S.M.S. OR TEKS. EA. SIDE OF POST (4-TOTAL) & (2)-5/8 ø X 4 EMBED. ANCHOR BOLT W/ 1/4 STL. GALV. WASHER PLT.

DETAIL	WIND SPEED 100 M.P.H. ON SLAB	WIND SPEED 100 M.P.H. ON FTG.	WIND SPEED 110 M.P.H. ON SLAB	WIND SPEED 110 M.P.H. ON FTG.
(17) & (18) SHT. 11	(2)-#12 S.M.S. OR TEKS. EA. SIDE OF POST (4-TOTAL) & 3/8"ø A.B. GALV. W/1" SQ X 1/4" STL. GALV. WASHER PLT.		(2)-#12 S.M.S. OR TEKS. EA. SIDE OF POST (4-TOTAL) & 3/8"ø A.B. GALV. W/1" SQ X 1/4" STL. GALV. WASHER PLT.	
(6) SHT. 11		L.L. = 10: (2)-5/8"ø M.B.[5] & (2)-3/4"ø X 8" CONC. EMBED. A.B.[5]; L.L. = 20 & 30: (2)-1/2"ø M.B.[5] & (2)-3/4"ø X 8" CONC. EMBED. A.B.[5]		L.L. = 10: (2)-5/8"ø M.B.[5] & (2)-3/4"ø X 8" CONC. EMBED. A.B.[5]; L.L. = 20 & 30: (2)-1/2"ø M.B.[5] & (2)-3/4"ø X 8" CONC. EMBED. A.B.[5]

NOTE: POST TYPES [1] AND [3] ARE USED FOR SLAB CONDITION. POST TYPES [2] AND [4] ARE USED FOR FOOTING CONDITION.

POST TYPES

- [1] 3" SQ. POST + (2) - 2" X 6 1/2" X .024" W/ (8)-#14 S.M.S.
- [2] 3" SQ. POST + (2) - 2" X 6 1/2" X .032" W/ (8)-#14 S.M.S.
- [3] 3" SQ. POST + (2) 2" X 6 1/2" X .024" W/ (12)-#14 S.M.S.
- [4] 3" SQ. POST + (2) - 2" X 6 1/2" X .032" W/ (12)-#14 S.M.S.

TABLE FOOTNOTES:

1. POST MAY BEAR ON CONCRETE SLAB, SAFETY STAKE OR ABESCO ANCHOR.
2. POST TYPES [1] AND [3] MAY BE USED AT CONCRETE SLAB, SAFETY STAKE OR ABESCO ANCHOR. POST TYPES [2] AND [4] SHALL BE USED AT FOOTINGS. SEE POST TYPE SCHEDULE, THIS SHEET.
3. TOTAL MINIMUM NUMBER OF #10 SHEET METAL SCREWS PER POST TO BEAM CONNECTION FOR DETAILS (20) AND (21)
4. FOR 3" X 8" X .040" BEAM W/ INSERT, USE [4] FOR L.L. 10 PSF, 16' MAX. PROJECTION; USE [4] FOR L.L. = 20 P.S.F.; [2] FOR L.L. = 30 P.S.F., 12' MAX. PROJECTION; [4] FOR L.L. = 30 P.S.F. 14' MAX. PROJECTIONS AND DETAIL (22) W/ (2) - 5/8"ø M.B. EACH TO BEAM HEADER & POST.
5. FOR 3" X 8" X .040" BEAM W/ INSERT USE DETAIL (6) SHEET 11 FOR POST BASE CONN. & DETAIL (12), SHEET 11 FOR POST / BEAM HEADER CONN.

GENERAL NOTES AND SPECIFICATIONS:

1. Aluminum design and stresses are per the latest edition of the Uniform Building Code and the 1982 edition of the Aluminum Construction manual.
2. Alternate aluminum alloys may be substituted for those shown, provided they are registered with the Aluminum Association and have equal or greater yield and ultimate strengths.
3. All concrete shall have a minimum 28 day compressive strength of 2,000 p.s.i. Concrete slab shall have 3½" minimum thickness and shall be in good condition.
4. All footings shall bear on firm, natural un-disturbed soil or certified fill. Design vertical soil bearing pressure = 1,000 P.S.F.
5. All steel members shall be hot-dip galvanized or electroplated and conform to A.S.T.M. A-446, Grade C.
6. Aluminum fasteners shall be 2024-T4. All other fasteners shall be galvanized steel or cadmium plated. All bolts shall conform to A.S.T.M. A-307 and have standard cut plate washers. Holes for bolts shall be bolt diameter plus 1/16" maximum.
7. Expansion bolts shall be Hilti Kwik Bolts KB II carbon steel or equal per I.C.B.O. E.R.No. 4627. All bolts shall have a minimum concrete edge distance of 6 bolt diameters.
8. Each installation shall bear an identifying tag giving the name and address of the manufacturer, design loads and enclosability.
9. All items pertaining to each particular installation shall be circled, i.e., project, post spacing, footing detail, etc.
10. Open lattice patio cover shall not be enclosed with any type of solid material, and the design loads have only been applied to the horizontal projected area of the lattice, rafters, beams, etc. per I.C.B.O. criteria.
11. For all detail references, see Sheet 11 of 12

I.C.B.O. E.S. EVALUATION REPORT NO. 5038

DATE 10-15-92
SCALE NOTE
DRAWN BY K.K.

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ATTACHED, LATTICE-TYPE PATIO COVER W/24" MAX. O.H.
L.L. = 10, 20 & 30 P.S.F.
WIND SPEED = 100 & 110 M.P.H.

ALUMA-LATTICE PATIO COVER
(AS MFG. BY)
VALLEY ALUMINUM COMPANY
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JOB NO. 92-17267
SHEET 2 OF 12