

**CITY OF SACRAMENTO**  
1231 I Street, Sacramento, CA 95814

**Permit No: 0012405**  
**Insp Area: 3**

**Site Address: 4990 STOCKTON BL SAC**  
Parcel No: 022-0280-003

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

**CONTRACTOR**  
PETKUS BROS  
3068 SUNRISE BL  
RANCHO CORDOVA CA

**OWNER**  
LAWRENCE PROPERTIES  
5740 WINDMILL WY #11-A  
CARMICHAEL CA 95608

**ARCHITECT**

**Nature of Work: FREE STANDING PATIO COVER**

**CONSTRUCTION LENDING AGENCY:** I hereby affirm under penalty of perjury that there is a construction lending agency for the performance of the work for which this permit is issued (Sec. 3097, Civ. C).

Lender's Name \_\_\_\_\_ Lender's Address \_\_\_\_\_

**LICENSED CONTRACTORS DECLARATION:** I hereby affirm under penalty of perjury that I am licensed under provisions of Chapter 9 (commencing with section 7000) of Division 3 of the Business and Professions Code and my license is in full force and effect.

License Class B License Number 670242 Date 10-16-00 Contractor Signature [Signature]

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

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

I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec. 7044, Business and Professions Code: The Contractors License Law does not apply to an owner of property who builds or improves 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 \_\_\_\_\_

PAID  
CITY OF SACRAMENTO  
OCT 16 2000

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 hereby authorize representative(s) of this city to enter upon the above-mentioned property for inspection purposes.

Date 10-16-00 Applicant/Agent Signature [Signature]

**WORKER'S COMPENSATION DECLARATION:** I hereby affirm under penalty of perjury one of the following declarations:  
I have and will maintain a certificate of consent to self-insure for workers' compensation as provided for by Section 3700 of the Labor Code, for the performance of work for which the permit is issued.

I have and will maintain workers' compensation insurance, as required by Section 3700 of the Labor Code, for the performance of the work for which this permit is issued. My workers' compensation insurance carrier and policy number are:

Carrier STATE FUND Policy Number 713-00 0000502 Exp Date 10/01/2001

(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 10-16-00 Applicant Signature [Signature]

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

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

Date of Request: \_\_\_\_\_

By: \_\_\_\_\_

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

Project Address: 990 STOCKTON BLVD

Assessor's Parcel Number: 022 040 003

Previous Use: OFFICE

Description of Request/Proposed Use: 3 PATIO COVERS

Is This a Change of Use? NO

Zoning Designation: C4

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

Comments: 1 FEET ROCKS FROM PL INTERIOR PL MUST BE MINIMUM  
OF 5', NO DESIGN REVIEW

Are There Any Planning Issues?: (circle one) YES  NO

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

\* Field Inspection Required? (Circle one) YES  NO

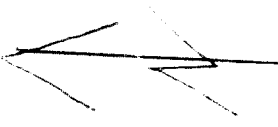
\* Design Review/Preservation Required? (Circle one) YES  NO

Planning Review by/Date: [Signature]

10/13/2000

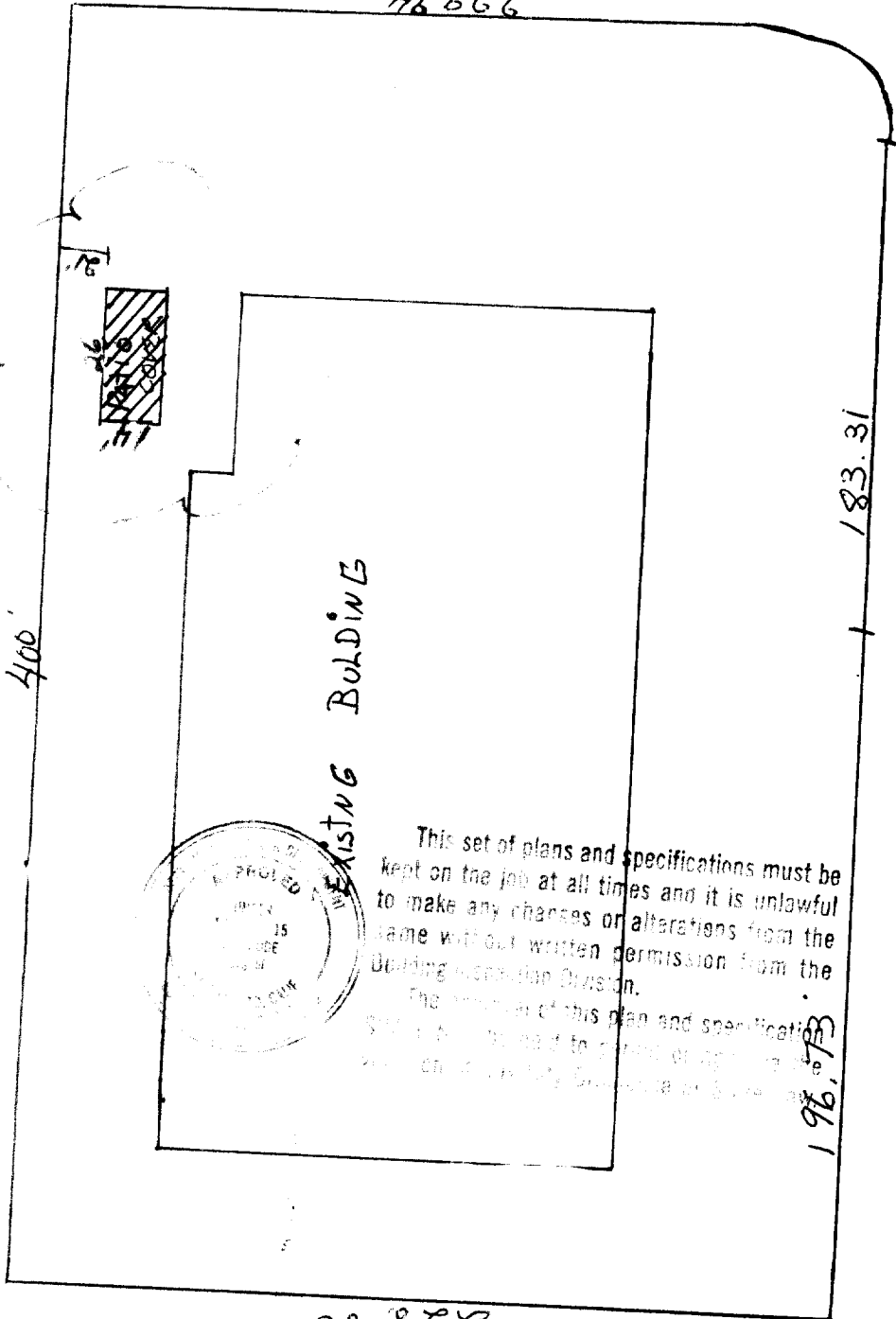
A list of items that must be reviewed by Planning is provided on the reverse side of this form.

MICROFILM AFTER FINAL

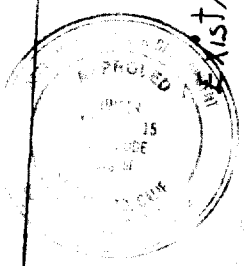


Stockton Blvd

229.94



EXISTING BUILDING



This set of plans and specifications must be kept on the job at all times and it is unlawful to make any changes or alterations from the same without written permission from the Building Inspection Division.

The contractor of this plan and specifications shall be held to strict compliance with all applicable laws, codes, and ordinances of the City of Sacramento.

196.73

183.31

400'

Petkus Beos  
3068 Sunrise Blvd  
Rancho Cordova Ca.  
95742

LAWRENCE DR

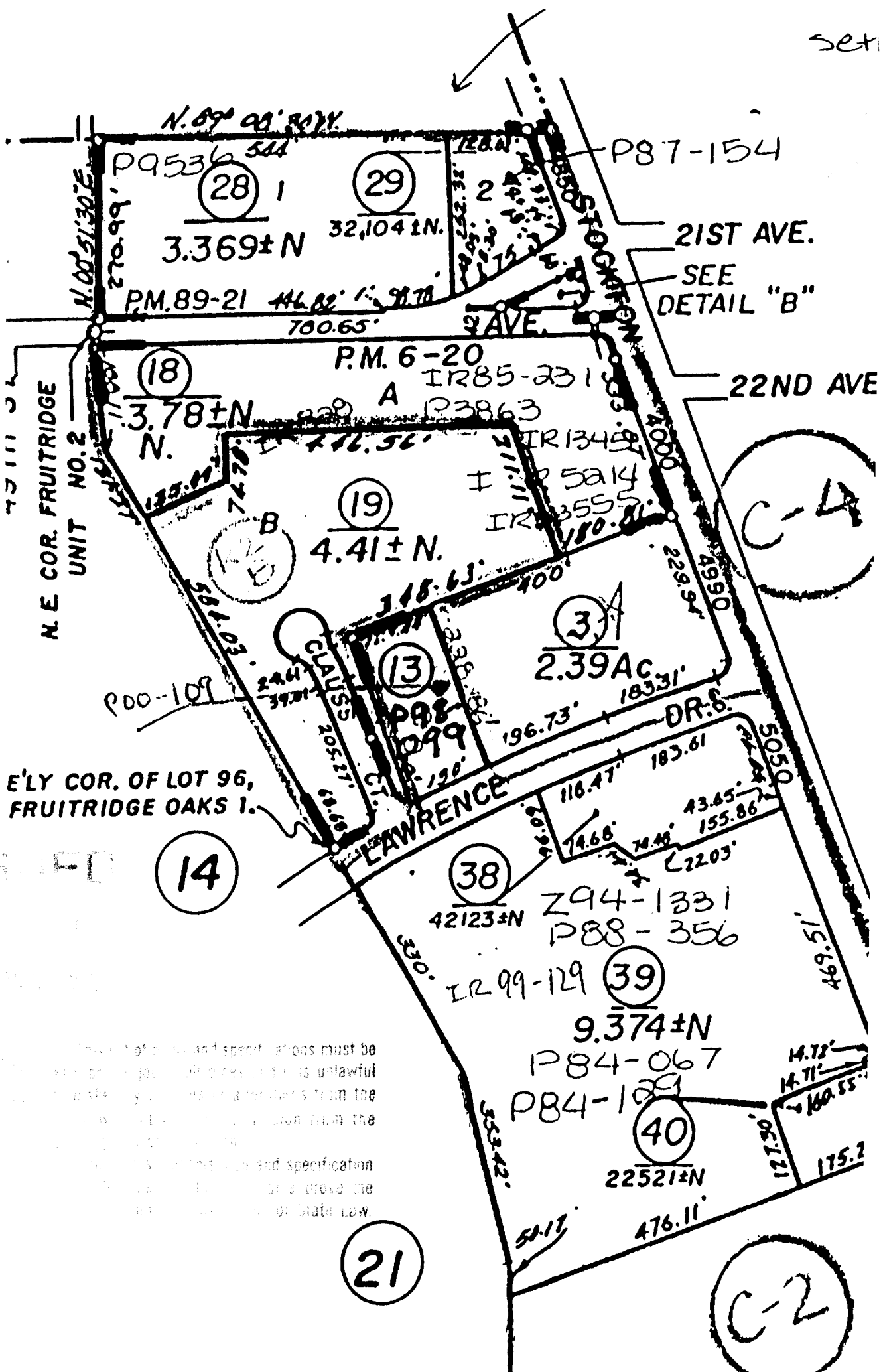
4990 Stockton Blvd.  
Sacramento CA.

98888  
PLANNING DIVISION

I, [Signature] SHALL NOT be held to permit or allow the violation of any State law, City Ordinance, State agreement, and assumes that property lines and information submitted by the applicant are correct.

ISSUED

DEPARTMENT OF ENVIRONMENT SERVICES DIV.



E'LY COR. OF LOT 96,  
FRUITRIDGE OAKS 1.

SC-ED

PLANNING

This set of plans and specifications must be read in conjunction with all other plans and specifications and it is unlawful to alter or modify any of the same in any way without the approval of the City Engineer. The City Engineer is not responsible for any errors or omissions in the plans and specifications.

The City Engineer is not responsible for any errors or omissions in the plans and specifications. The City Engineer is not responsible for any errors or omissions in the plans and specifications.

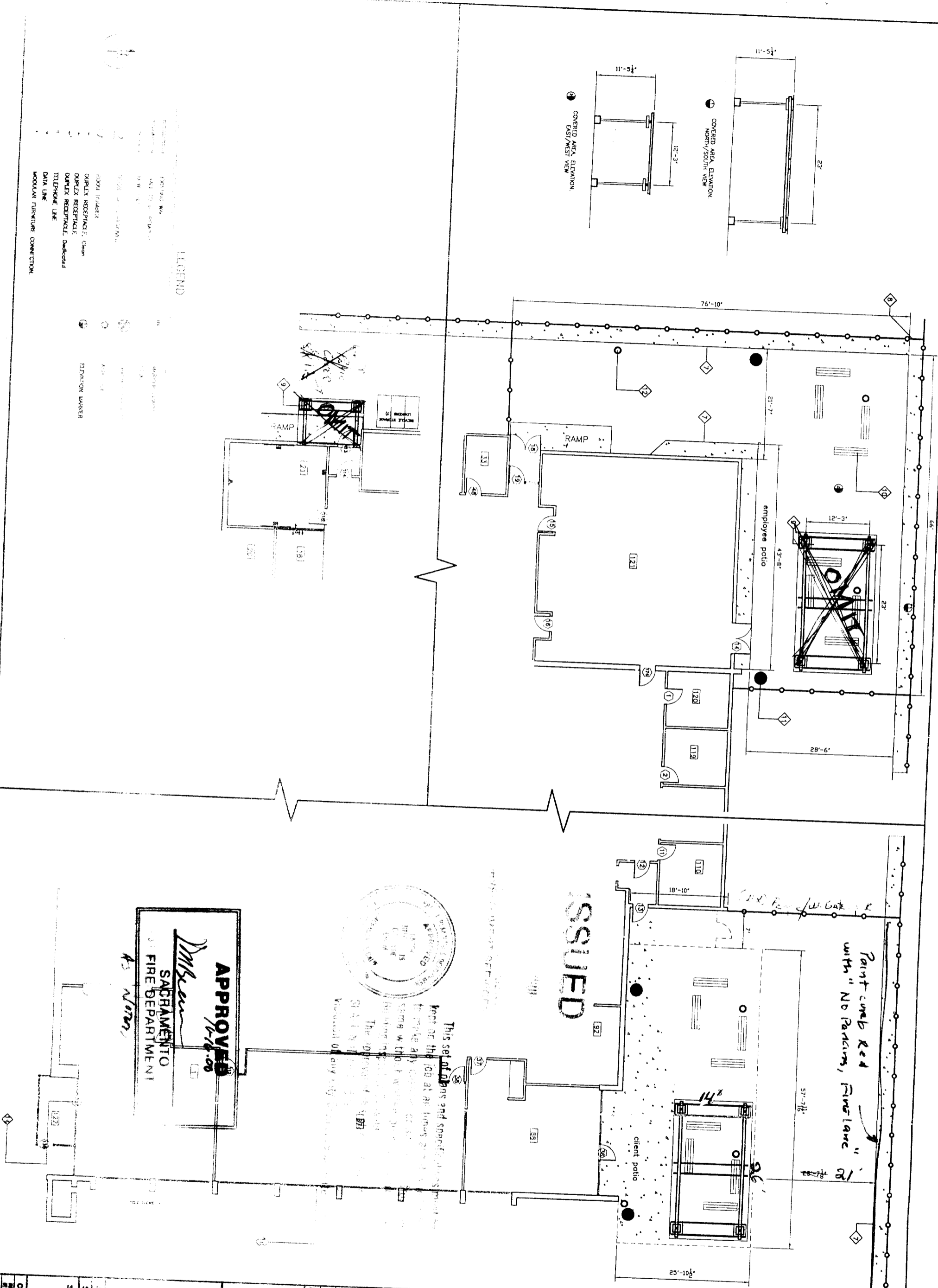
21

C-2

C-4

SEE DETAIL "B"

- LEGEND**
- ROOM NUMBER
  - OVERLAP RECEIPTAGE - Open
  - OVERLAP RECEIPTAGE - Closed
  - TELEPHONE LINE
  - DATA LINE
  - WOODLUM FURNITURE CONNECTION
  - ELEVATION WORKER
  - ARCH. LINE
  - MASONRY WORK
  - CONCRETE WORK
  - METAL WORK
  - GLASS WORK
  - FINISH WORK
  - ELECTRICAL WORK
  - MECHANICAL WORK
  - PLUMBING WORK
  - PAINT WORK
  - CARPET WORK
  - FLOORING WORK
  - CEILING WORK
  - WALL WORK
  - ROOF WORK
  - EXTERIOR WORK
  - LANDSCAPE WORK
  - SITE WORK
  - UTILITY WORK
  - STRUCTURAL WORK
  - FOUNDATION WORK
  - RETENTION WALL WORK
  - EROSION CONTROL WORK
  - WATER MANAGEMENT WORK
  - AIR CONDITIONING WORK
  - HEATING WORK
  - COOLING WORK
  - VENTILATION WORK
  - EXHAUST WORK
  - FAN WORK
  - PUMP WORK
  - TANK WORK
  - PIPE WORK
  - VALVE WORK
  - FITTING WORK
  - JOINT WORK
  - WELDING WORK
  - BRACKET WORK
  - ANCHOR WORK
  - BOLTING WORK
  - NUTTING WORK
  - WASHER WORK
  - PLATE WORK
  - GASKET WORK
  - SEALING WORK
  - INSULATION WORK
  - VAPOR BARRIER WORK
  - SOUND BARRIER WORK
  - SOUND ATTENUATION WORK
  - SOUND ABSORPTION WORK
  - SOUND REFLECTION WORK
  - SOUND TRANSMISSION WORK
  - SOUND ISOLATION WORK
  - SOUND PROTECTION WORK
  - SOUND BARRIER SYSTEM WORK
  - SOUND ATTENUATION SYSTEM WORK
  - SOUND ABSORPTION SYSTEM WORK
  - SOUND REFLECTION SYSTEM WORK
  - SOUND TRANSMISSION SYSTEM WORK
  - SOUND ISOLATION SYSTEM WORK
  - SOUND PROTECTION SYSTEM WORK
  - SOUND BARRIER SYSTEM DESIGN WORK
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  - SOUND REFLECTION SYSTEM MAINTENANCE WORK
  - SOUND TRANSMISSION SYSTEM MAINTENANCE WORK
  - SOUND ISOLATION SYSTEM MAINTENANCE WORK
  - SOUND PROTECTION SYSTEM MAINTENANCE WORK
  - SOUND BARRIER SYSTEM REPAIR WORK
  - SOUND ATTENUATION SYSTEM REPAIR WORK
  - SOUND ABSORPTION SYSTEM REPAIR WORK
  - SOUND REFLECTION SYSTEM REPAIR WORK
  - SOUND TRANSMISSION SYSTEM REPAIR WORK
  - SOUND ISOLATION SYSTEM REPAIR WORK
  - SOUND PROTECTION SYSTEM REPAIR WORK
  - SOUND BARRIER SYSTEM REPLACEMENT WORK
  - SOUND ATTENUATION SYSTEM REPLACEMENT WORK
  - SOUND ABSORPTION SYSTEM REPLACEMENT WORK
  - SOUND REFLECTION SYSTEM REPLACEMENT WORK
  - SOUND TRANSMISSION SYSTEM REPLACEMENT WORK
  - SOUND ISOLATION SYSTEM REPLACEMENT WORK
  - SOUND PROTECTION SYSTEM REPLACEMENT WORK



**APPROVED**  
*M. Moran*  
 SACRAMENTO  
 FIRE DEPARTMENT



This set of plans and specifications prepared for the job at all times and to make any changes or alterations to the same without a written order from the architect. The approval of the architect is not a warranty of the work. The approval of any city or county engineer is not a warranty of the work.

**PUBLIC WORKS AGENCY**  
 COUNTY OF SACRAMENTO  
 CALIFORNIA

**DEPARTMENT OF COUNTY ENGINEERING**  
 BUILDING DESIGN DIVISION  
 609 9TH STREET  
 SACRAMENTO, CA 95814

- 1) LESSOR SHALL RESEARCH ALL APPLICABLE CODES. ADDITIONAL ITEMS REQUIRED TO MEET ANY CODE SHALL NOT BE CONSIDERED AS PART OF THE LEASE AGREEMENT.
- 2) LESSOR SHALL REMOVED THE EXISTING FIRE AND SMOKE ALARM SYSTEMS TO COMPLY WITH THE NEW ARCHITECTURAL LAYOUT FOR A COMPLETE OPERATING SYSTEM.
- 3) LESSOR SHALL REMOVED THE EXISTING FIRE SPRINKLER SYSTEM TO COMPLY TO APPLICABLE BUILDING CODES FOR THE NEW ARCHITECTURAL LAYOUT FOR A COMPLETE OPERATING SYSTEM.

| DESIGN    | PROJECT TEAM    |
|-----------|-----------------|
| DRAWN     | GEORGE TURNER   |
| CHECKED   | PROJECT TEAM    |
| REVIEW    | CHUCK OLIVESTED |
| DATE      | JANUARY 9, 2000 |
| REVISIONS |                 |

| NO. | DESCRIPTION | DATE   |
|-----|-------------|--------|
| 1.  |             | 1/9/00 |

**EXTERIOR PLAN**  
**EXHIBIT B**  
**IMPROVEMENTS**

**PROJECT TITLE**  
 DEPARTMENT OF HUMAN ASSISTANCE  
 STOCKTON H.Q.

**APR. NO.**  
**SCALE** 1/8" = 1'-0"  
**SHEET NO.** 3  
**SHEET 3 OF 4 SHEETS**  
**CONTRACT NO.** N/A  
**PROJECT NO.** 198264.1

**RBO ES EVALUATION REPORT NO ER-2621P**

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**COMPONENT PARTS AND CONNECTION DETAILS FOR PATIO AND COMMERCIAL LATTICE STRUCTURES**

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

**R. F. TUCKER**

Registration No. 22

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

DATE: 2/8/2000

EX-1083

**GENERAL NOTES:**  
(CONTINUED FROM SHEET NO. 1)

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

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

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

7. ALUMINUM BOLTS TO BE 2024-T4.

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

9. FREESTANDING STRUCTURES SHALL NOT BE ENCLOSED IN ANY MANNER

10. STEEL BOLTS SHALL BE ASTM A-307.

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

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

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

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

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

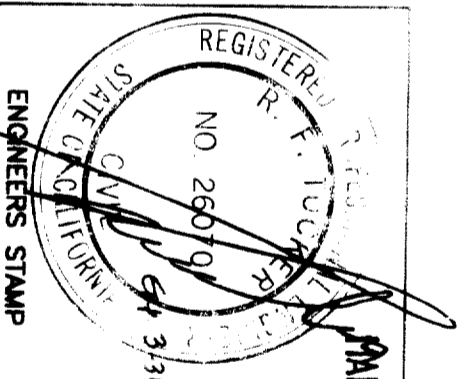
16. HEADER SPLICES SHALL NOT BE LOCATED NEARER TO THE END OF THE STRUCTURE THAN THE FIRST INTERIOR COLUMN

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

**GENERAL NOTES FOR LATTICE STRUCTURES:**

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

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



| DATE        | REVISION | DATE | REVISION |
|-------------|----------|------|----------|
| MAR 03 2001 |          |      |          |

**Amerimax**  
Engineering Services  
1140 All Pro Drive  
Elkhart, IN 46514

|       |                 |               |
|-------|-----------------|---------------|
| SCALE | DRAWING OR PART | GENERAL NOTES |
| NONE  |                 |               |

|          |         |        |
|----------|---------|--------|
| DATE     | PROJECT | SHEET  |
| 2/8/2000 | 97GN02  | 2 OF 2 |





**1.0 ROOF PANEL SPANS AND OVERHANGS FOR PATIO AND COMMERCIAL STRUCTURES**

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

| LIVE LOAD (PSF) | PANEL TYPE | 12' HEIGHT |        |           |
|-----------------|------------|------------|--------|-----------|
|                 |            | 70 MPH     | 90 MPH | OVER HANG |
| 10              | 0.018      | 16-7"      | 16-2"  | 7-10"     |
| 20              | 0.024      | 18-8"      | 18-8"  | 8-7"      |
| 25              | 0.032      | 20-8"      | 20-8"  | 9-6"      |
| 30              | 0.036      | 21-4"      | 21-4"  | 9-10"     |
| 40              | 0.048      | 11-11"     | 11-11" | 5-8"      |
| 60              | 0.024      | 13-8"      | 13-8"  | 6-8"      |
|                 | 0.032      | 15-11"     | 15-11" | 7-6"      |
|                 | 0.036      | 17-0"      | 17-0"  | 7-10"     |
|                 | 0.018      | 10-8"      | 10-9"  | 5-2"      |
|                 | 0.024      | 12-3"      | 12-3"  | 5-11"     |
|                 | 0.032      | 14-4"      | 14-4"  | 7-0"      |
|                 | 0.036      | 15-4"      | 15-4"  | 7-3"      |
| 30              | 0.018      | 9-10"      | 9-10"  | 4-9"      |
|                 | 0.024      | 11-3"      | 11-3"  | 5-5"      |
|                 | 0.032      | 13-1"      | 13-1"  | 6-4"      |
|                 | 0.036      | 14-0"      | 14-0"  | 6-10"     |
| 40              | 0.018      | 8-7"       | 8-7"   | 4-1"      |
|                 | 0.024      | 9-10"      | 9-10"  | 4-9"      |
|                 | 0.032      | 11-5"      | 11-5"  | 5-8"      |
|                 | 0.036      | 12-3"      | 12-3"  | 5-11"     |
| 60              | 0.018      | 7-1"       | 7-1"   | 3-4"      |
|                 | 0.024      | 8-1"       | 8-1"   | 3-10"     |
|                 | 0.032      | 9-5"       | 9-5"   | 4-6"      |
|                 | 0.036      | 10-1"      | 10-1"  | 4-10"     |

TABLE 1.1

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

| LIVE LOAD (PSF) | PANEL TYPE | 12' HEIGHT |        |           |
|-----------------|------------|------------|--------|-----------|
|                 |            | 70 MPH     | 90 MPH | OVER HANG |
| 10              | 0.018      | 12-4"      | 11-11" | 5-8"      |
| 20              | 0.018      | 8-10"      | 8-10"  | 4-3"      |
| 25              | 0.018      | 8-0"       | 8-0"   | 3-10"     |
| 30              | 0.018      | 7-4"       | 7-4"   | 3-6"      |
| 40              | 0.018      | 6-5"       | 6-5"   | 3-0"      |
| 60              | 0.018      | 4-10"      | 4-10"  | 2-5"      |

TABLE 1.2

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

| LIVE LOAD (PSF) | PANEL TYPE | 12' HEIGHT |        |           |
|-----------------|------------|------------|--------|-----------|
|                 |            | 70 MPH     | 90 MPH | OVER HANG |
| 10              | 0.0120     | 14-8"      | 14-8"  | 5-1"      |
| 20              | 0.0148     | 16-2"      | 16-2"  | 5-5"      |
| 25              | 0.0120     | 11-8"      | 11-8"  | 4-4"      |
| 30              | 0.0148     | 10-8"      | 10-8"  | 3-4"      |
| 40              | 0.0120     | 5-7"       | 5-7"   | 2-9"      |
| 60              | 0.0148     | 4-3"       | 4-3"   | 2-1"      |
|                 | 0.0120     | 2-10"      | 2-10"  | 1-5"      |
|                 | 0.0148     | 5-10"      | 5-10"  | 2-11"     |

TABLE 1.3

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

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

TABLE 1.6

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

| LIVE LOAD (PSF) | PANEL TYPE | EXP. B EXPOSURE C |        |        | MAX OVER HANG |
|-----------------|------------|-------------------|--------|--------|---------------|
|                 |            | 70 MPH            | 90 MPH | MAX    |               |
| 20              | 0.0120     | 8-9"              | 8-9"   | 8-9"   | 4-0"          |
|                 | 0.0148     | 12-1"             | 12-1"  | 12-1"  | 4-4"          |
| 25              | 0.0120     | 7-1"              | 7-1"   | 7-1"   | 4-0"          |
|                 | 0.0148     | 10-11"            | 10-11" | 10-11" | 4-0"          |
| 30              | 0.0120     | 6-0"              | 6-0"   | 6-0"   | 3-4"          |
|                 | 0.0148     | 10-0"             | 10-0"  | 10-0"  | 3-9"          |
| 40              | 0.0120     | 4-7"              | 4-7"   | 4-7"   | 2-1"          |
|                 | 0.0148     | 8-4"              | 8-4"   | 8-4"   | 3-5"          |
| 60              | 0.0120     | 3-2"              | 3-2"   | 3-2"   | 1-5"          |
|                 | 0.0148     | 6-2"              | 6-2"   | 6-2"   | 2-11"         |

TABLE 1.7

**2 1/2" x 18" ROOF PNL ALLOW. DSGN SPAN**  
FOR COMM. STRUCTURES - ROOF HGT 18'

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

TABLE 1.8

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

| LIVE LOAD (PSF) | PANEL TYPE | EXP. B EXPOSURE C |        |        | MAX OVER HANG |
|-----------------|------------|-------------------|--------|--------|---------------|
|                 |            | 70 MPH            | 90 MPH | MAX    |               |
| 20              | 0.018      | 9-9"              | 9-9"   | 9-7"   | 4-8"          |
|                 | 0.024      | 10-5"             | 10-5"  | 10-2"  | 4-10"         |
|                 | 0.032      | 11-9"             | 11-9"  | 11-6"  | 5-6"          |
|                 | 0.036      | 14-1"             | 14-1"  | 13-10" | 6-8"          |
| 25              | 0.018      | 8-9"              | 8-9"   | 8-9"   | 4-2"          |
|                 | 0.020      | 9-5"              | 9-5"   | 9-5"   | 4-6"          |
|                 | 0.024      | 10-7"             | 10-7"  | 10-7"  | 5-1"          |
|                 | 0.032      | 12-8"             | 12-8"  | 12-8"  | 6-1"          |
| 30              | 0.018      | 7-8"              | 7-8"   | 7-8"   | 3-7"          |
|                 | 0.020      | 8-8"              | 8-8"   | 8-8"   | 4-1"          |
|                 | 0.024      | 9-9"              | 9-9"   | 9-9"   | 4-8"          |
|                 | 0.032      | 11-8"             | 11-8"  | 11-8"  | 5-7"          |
| 40              | 0.018      | 5-10"             | 5-10"  | 5-10"  | 2-9"          |
|                 | 0.020      | 6-11"             | 6-11"  | 6-11"  | 3-3"          |
|                 | 0.024      | 8-6"              | 8-6"   | 8-6"   | 4-0"          |
|                 | 0.032      | 10-2"             | 10-2"  | 10-2"  | 4-10"         |
| 60              | 0.018      | 4-1"              | 4-1"   | 4-1"   | 1-10"         |
|                 | 0.020      | 4-9"              | 4-9"   | 4-9"   | 2-2"          |
|                 | 0.024      | 6-5"              | 6-5"   | 6-5"   | 3-0"          |
|                 | 0.032      | 8-5"              | 8-5"   | 8-5"   | 4-0"          |
|                 | 0.036      | 9-0"              | 9-0"   | 9-0"   | 4-3"          |

TABLE 1.9

**ALT. 2 1/2" x 12" PANEL ALLOW.**  
SPAN FOR PATIO STRUCTURES

| LIVE LOAD (PSF) | PANEL TYPE | 12' HEIGHT |        |           |
|-----------------|------------|------------|--------|-----------|
|                 |            | 70 MPH     | 90 MPH | OVER HANG |
| 10              | 0.018      | 11-4"      | 11-1"  | 5-4"      |
|                 | 0.024      | 14-8"      | 14-8"  | 6-8"      |
|                 | 0.030      | 15-9"      | 15-9"  | 7-2"      |
|                 | 0.036      | 16-11"     | 16-11" | 7-9"      |
| 20              | 0.018      | 8-2"       | 8-2"   | 3-11"     |
|                 | 0.024      | 11-0"      | 11-0"  | 5-3"      |
|                 | 0.030      | 12-7"      | 12-7"  | 5-8"      |
|                 | 0.036      | 13-6"      | 13-6"  | 6-2"      |
| 25              | 0.018      | 7-5"       | 7-5"   | 3-6"      |
|                 | 0.024      | 9-10"      | 9-10"  | 4-9"      |
|                 | 0.030      | 11-8"      | 11-8"  | 5-3"      |
|                 | 0.036      | 12-7"      | 12-7"  | 5-9"      |
| 30              | 0.018      | 6-9"       | 6-9"   | 3-2"      |
|                 | 0.024      | 9-1"       | 9-1"   | 4-4"      |
|                 | 0.030      | 11-0"      | 11-0"  | 5-0"      |
|                 | 0.036      | 11-10"     | 11-10" | 5-4"      |
| 40              | 0.018      | 5-11"      | 5-11"  | 2-9"      |
|                 | 0.024      | 7-11"      | 7-11"  | 3-9"      |
|                 | 0.030      | 9-7"       | 9-7"   | 4-6"      |
|                 | 0.036      | 10-10"     | 10-10" | 4-10"     |
| 60              | 0.018      | 4-11"      | 4-11"  | 2-3"      |
|                 | 0.024      | 6-6"       | 6-6"   | 3-1"      |
|                 | 0.030      | 7-11"      | 7-11"  | 3-9"      |
|                 | 0.036      | 9-0"       | 9-0"   | 4-3"      |

TABLE 1.10

**2 1/2" x 12" ROOF PNL ALLOWABLE SPAN**  
FOR COMMERCIAL STRUCTURES

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

TABLE 1.11

**ALT. 2 1/2" x 12" ROOF PNL ALLOW.**  
SPAN FOR COMMERCIAL STRUCTURES

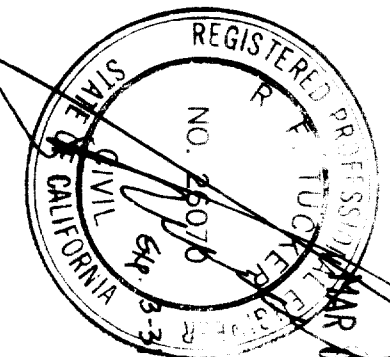
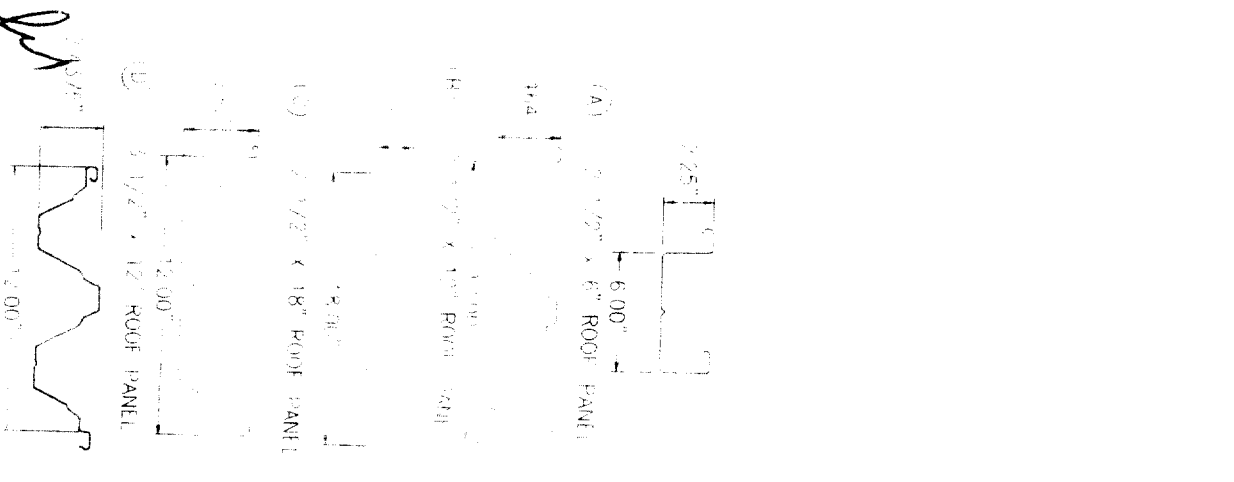
| LIVE LOAD (PSF) | PANEL TYPE | EXP. B EXPOSURE C |        |        | MAX OVER HANG |
|-----------------|------------|-------------------|--------|--------|---------------|
|                 |            | 70 MPH            | 90 MPH | MAX    |               |
| 20              | 0.018      | 8-2"  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

TABLE 1.12

**PANEL TO PANEL FASTENING**

| PANEL TYPE | #10 SMS FASTENER SPACING |            |            |
|------------|--------------------------|------------|------------|
|            | WIND LOAD                | EXPOSURE B | EXPOSURE C |
| 0.018      | 8"                       | 5"         | 4-8"       |
| 0.024      | 11"                      | 5-6"       | 6-8"       |
| 0.032      | 14"                      | 6-8"       | 8-9"       |
| 0.036      | 14"                      | 6-8"       | 8-9"       |
| 0.042      | 14"                      | 6-8"       | 8-9"       |

TABLE 1.13



ALTERNATE 2 1/2" x 12" ROOF PANEL  
**Amerimax**  
 BUILDING PRODUCTS, INC.  
 1140 ALL PRO DRIVE  
 ELKHART, IN 46514  
 ICB0 ES EVALUATION REPORT ER-2621P  
 COMMERCIAL STRUCTURES FOR PATIO AND  
 PANEL SPANS FOR ALT. 2.5" PAN FOR  
 PATIO AND COMMERCIAL STRUCTURES  
 SHEET 1 OF 8  
 DATE: 2/8/2000

**2.0 FREESTANDING AND ATTACHED PATIO STRUCTURES**

| TRIB WIDTH (FT) | MAX COLUMN SPACING FOR ATTACHED PATIO |                        | 3" SQUARE STEEL HEADER |                         | 6" ROLLFORMED C BEAM |                         | 10" ROLLFORMED C BEAM |                         | 6" BEAM           |                         | 7" I BEAM         |                         | 8 1/2" ROLLFORMED HEADER |                         | ALUMINUM EXTRUDED HEADER |                         | 5 1/2" EXTRUDED HEADER |    | TRIB WIDTH (FT) |
|-----------------|---------------------------------------|------------------------|------------------------|-------------------------|----------------------|-------------------------|-----------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|--------------------------|-------------------------|--------------------------|-------------------------|------------------------|----|-----------------|
|                 | USING COLUMN TYPE                     | MAX COL LENGTH ON SLAB | ALL OTHERS ON SLAB     | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE    | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE     | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE        | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE        | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE      |    |                 |
| 10              | 4-8"                                  | 4-10"                  | 4-10"                  | 23                      | A                    | 14-11"                  | 28                    | 24                      | 13-3"             | 27                      | 23                | 28                      | 27                       | 22                      | 23                       | 28                      | 27                     | 23 | 10              |
| 8               | 4-8"                                  | 4-10"                  | 4-10"                  | 23                      | B                    | 12-7"                   | 27                    | 25                      | 11-10"            | 26                      | 24                | 28                      | 27                       | 22                      | 23                       | 28                      | 27                     | 23 | 8               |
| 6               | 4-8"                                  | 4-10"                  | 4-10"                  | 23                      | B                    | 11-8"                   | 26                    | 24                      | 10-9"             | 26                      | 24                | 28                      | 27                       | 22                      | 23                       | 28                      | 27                     | 23 | 6               |
| 4               | 4-8"                                  | 4-10"                  | 4-10"                  | 23                      | B                    | 10-7"                   | 26                    | 24                      | 10-0"             | 26                      | 24                | 28                      | 27                       | 22                      | 23                       | 28                      | 27                     | 23 | 4               |
| 30              | 5-8"                                  | 4-7"                   | 4-7"                   | 22                      | B                    | 8-4"                    | 25                    | 21                      | 8-4"              | 25                      | 21                | 27                      | 27                       | 22                      | 23                       | 28                      | 27                     | 23 | 30              |
| 20              | 5-8"                                  | 4-7"                   | 4-7"                   | 22                      | B                    | 8-4"                    | 25                    | 21                      | 8-4"              | 25                      | 21                | 27                      | 27                       | 22                      | 23                       | 28                      | 27                     | 23 | 20              |
| 10              | 5-8"                                  | 4-7"                   | 4-7"                   | 22                      | B                    | 8-4"                    | 25                    | 21                      | 8-4"              | 25                      | 21                | 27                      | 27                       | 22                      | 23                       | 28                      | 27                     | 23 | 10              |

**TABLE 2.3**

| COL | COLUMN SCHEDULE FOR ATTACHED PATIO STRUCTURES | MAX COL HEIGHT | COLUMN SCHEDULE FOR FREESTANDING STRUCTURES AND INTERMEDIATE COLUMNS FOR MULTISPAN STRUCTURES |
|-----|---|----------------|---|
| A   | 0.022" x 3" SQUARE ALUM. COLUMN               | 11'-4"         | 8"-7" MAX. COLUMN HEIGHT  |
| B   | 0.022" x 1 1/2" SQUARE ALUM. SCROLL COLUMN    | 8'-0"          | 11" MAX. COLUMN LENGTH  |
| C   | 0.027" x 3" SQUARE ALUM. COLUMN               | 11'-4"         | 12" MAX. COLUMN LENGTH  |
| D   | 3" CLOVERLEAF ALUM. 0.040"                    | 12'-0"         |   |
| E   | 3" CLOVERLEAF STEEL 0.044"                    | 12'-0"         |   |
| F   | 3" SQUARE STEEL COLUMN                        | 12'-0"         |   |
| G   | 4" SQUARE STEEL COLUMN                        | 12'-0"         |   |
| H   | 5" SQUARE STEEL COLUMN                        | 12'-0"         |   |
| J   | 6" SQUARE STEEL COLUMN                        | 12'-0"         |   |

ALL COLUMNS MAY BE REPLACED WITH A STRONGER COLUMN.  
 A. MAY BE REPLACED W/ B, J.  
 B. MAY BE REPLACED W/ C, J. ETC.  
 LINEAR INTERPOLATION FOR ALL CALCULATIONS IS ALLOWED.

**TABLE 2.4**

| TRIB WIDTH (FT) | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE |
|-----------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|
| 10              | 12-1"                   | 27                | 23                      | 24                | 13-3"                   | 27                | 23                      | 28                |
| 8               | 10-8"                   | 26                | 24                      | 24                | 11-10"                  | 26                | 24                      | 28                |
| 6               | 9-1"                    | 25                | 25                      | 25                | 10-9"                   | 26                | 24                      | 28                |
| 4               | 8-0"                    | 25                | 25                      | 25                | 10-0"                   | 26                | 24                      | 28                |
| 30              | 8-0"                    | 25                | 25                      | 25                | 8-4"                    | 25                | 21                      | 27                |
| 20              | 8-0"                    | 25                | 25                      | 25                | 8-4"                    | 25                | 21                      | 27                |
| 10              | 8-0"                    | 25                | 25                      | 25                | 8-4"                    | 25                | 21                      | 27                |

**TABLE 2.5**

| TRIB WIDTH (FT) | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE | MAX COLUMN SPACING (FT) | CONC. FOOTER SIZE |
|-----------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|-------------------|
| 10              | 12-1"                   | 27                | 23                      | 24                | 13-3"                   | 27                | 23                      | 28                |
| 8               | 10-8"                   | 26                | 24                      | 24                | 11-10"                  | 26                | 24                      | 28                |
| 6               | 9-1"                    | 25                | 25                      | 25                | 10-9"                   | 26                | 24                      | 28                |
| 4               | 8-0"                    | 25                | 25                      | 25                | 10-0"                   | 26                | 24                      | 28                |
| 30              | 8-0"                    | 25                | 25                      | 25                | 8-4"                    | 25                | 21                      | 27                |
| 20              | 8-0"                    | 25                | 25                      | 25                | 8-4"                    | 25                | 21                      | 27                |
| 10              | 8-0"                    | 25                | 25                      | 25                | 8-4"                    | 25                | 21                      | 27                |

**GENERAL METHOD FOR USING THESE TABLES**

1. CHOOSE FREESTANDING OR ATTACHED, COMMERCIAL OR PATIO STRUCTURE.
2. CHOOSE PROTECTION, WIDTH, OVERHANG, WIND LOAD AND LIVE LOAD.
3. FIND TRIBUTARY WIDTH FROM TABLE 2.6 AND DRAWINGS ON 97C004 OF "STRUCTURAL CONFIGURATIONS".
4. CHOOSE A PANEL FROM SHEET 1 THAT HAS ADEQUATE CLEARSPAN FOR YOUR NEEDS.
5. CHOOSE A HEADER FROM SHEETS 2.5 THAT HAS ADEQUATE COLUMN SPACING.
6. USE THE FOOTER SIZE SHOWN.
7. FOR SINGLE SPAN ATTACHED PATIO, USE THE POST SHOWN.
8. LOOK AT THE TABLES PROVIDED FOR ALL OTHERS.
9. FIND THE O.C. SPACING OF WALL CONNECTIONS ON TABLE 6.5.
10. FIND THE APPROPRIATE DETAILS ON 97C001 TO 97C003.

FOR CONCRETE PATIO SLABS FOLLOW 1.4 ABOVE.

**FOR CONCRETE PATIO SLABS**

1. CHOOSE A COLUMN LENGTH IF USING COLUMN "A" (8'-0" OR 10'-8").
2. FIND THE MAXIMUM COLUMN SPACING ON SLABS FROM TABLE 2.1.
3. CHOOSE A HEADER (TABLE 2.1 OR 2.5) THAT HAS THE SAME OR GREATER COLUMN SPACING FOR THAT TRIB WIDTH AND LIVE AND WIND LOAD.
4. USE COLUMN TYPE "B" OR STRONGER (UNLESS USING COLUMN "A").
5. FOLLOW STEPS 6, 9 AND 10 ABOVE.

**TABLE 2.6**

| PRO. (FT) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----------|---|---|---|---|---|---|---|---|
| 0         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 2         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 3         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 4         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 6         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 7         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 8         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 9         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 10        | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |

**TABLE 2.7**

| PRO. (FT) | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----------|---|---|---|---|---|---|---|---|
| 0         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 2         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 3         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 4         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 5         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 6         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 7         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 8         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 9         | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 10        | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |

**REGISTERED PROFESSIONAL ENGINEER**  
**R. F. JACKSON**  
 NO. 26070  
 Exp 3-31-02  
 CIVIL  
 STATE OF CALIFORNIA

**Ametimax**  
 ENGINEERING, INC.  
 1140 ALL PRO DRIVE  
 ELKHART, IN 46514

HEAD E.E. EVALUATION REPORT ER-2627P  
 FOOTER SIZE AND COLUMN TYPE FOR  
 PATIO STRUCTURES AND ATTACHED  
 SLABS  
 DATE: 2/7/2000

**3.0 FREESTANDING AND ATTACHED COMMERCIAL STRUCTURES**

| LIVE LOAD | TRIB WIDTH | 6" I BEAM          |                   |                  |                    | 10" I BEAM        |                  |                    |                   |                  |
|-----------|------------|--------------------|-------------------|------------------|--------------------|-------------------|------------------|--------------------|-------------------|------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               | (IN)              | (IN)             | (FT)               | (IN)              | (IN)             |

| LIVE LOAD | TRIB WIDTH | 3" COVERLEAF STEEL HEADER |                   |                  |                    | 8" STEEL C BEAM   |                  |                    |                   | 10" STEEL C BEAM |                    |                   |                  |
|-----------|------------|---------------------------|-------------------|------------------|--------------------|-------------------|------------------|--------------------|-------------------|------------------|--------------------|-------------------|------------------|
|           |            | MAX COLUMN SPACING        | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING |
| (PSF)     | (FT)       | (FT)                      | (IN)              | (IN)             | (FT)               | (IN)              | (IN)             | (FT)               | (IN)              | (IN)             | (FT)               | (IN)              | (IN)             |

| LIVE LOAD | PRO. TON | 5 1/2" EXTRUDED HEADER |                   |                  |                    |
|-----------|----------|------------------------|-------------------|------------------|--------------------|
|           |          | MAX COLUMN SPACING     | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (T)      | (FT)                   | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 90 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 70 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 90 MPH EXPOSURE B  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 70 & 90 MPH EXPOSURE B / 70 MPH EXPOSURE C |                   |                  |                    |
|-----------|------------|--|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING                         | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)                                       | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 70 & 90 MPH EXPOSURE B |                   |                  |                    |
|-----------|------------|------------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING     | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)                   | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 90 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 90 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 70 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 90 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 90 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 90 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

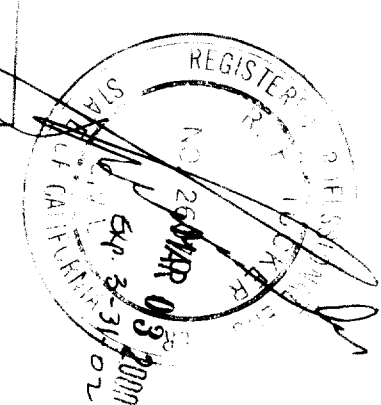
| LIVE LOAD | TRIB WIDTH | 90 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 90 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 90 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

| LIVE LOAD | TRIB WIDTH | 90 MPH EXPOSURE C  |                   |                  |                    |
|-----------|------------|--------------------|-------------------|------------------|--------------------|
|           |            | MAX COLUMN SPACING | CONC. FOOTER SIZE | ATT. FT. SPACING | MAX COLUMN SPACING |
| (PSF)     | (FT)       | (FT)               | (IN)              | (IN)             | (FT)               |

**Amertimax**  
BUILDING PRODUCTS, INC.  
1140 ALL PRO DRIVE  
ELKHART, IN 46514  
ICBD'S EVALUATION REPORT ER-2621P  
HEADER SPANS, COLUMN SPACING,  
FOOTER SIZE AND ATTACHED  
FREESTANDING AND ATTACHED  
COMMERCIAL STRUCTURES  
SHEET 5 OF 8  
DATE: 2/8/2000



**5.0 FREESTANDING AND ATTACHED LATTICE COMMERCIAL STRUCTURES**

| LIVE LOAD                         | TRIB WIDTH | 8" C BEAM HEADER    |                          |              |              |
|-----------------------------------|------------|---------------------|--------------------------|--------------|--------------|
|                                   |            | MAX. COLUMN SPACING | CONSTRAINED FOOTER SIZES | ATTACHED     | MIN COL TYPE |
| (PSF)                             | (FT)       | (IN)                | FOOTER "d" (IN)          | FTR "d" (IN) | COL TYPE     |
| <b>70 MPH EXPOSURE B</b>          |            |                     |                          |              |              |
| 20                                | 4          | 31'-9"              | 27                       | 29           | 32           |
|                                   | 5          | 29'-6"              | 27                       | 29           | 31           |
|                                   | 6          | 27'-9"              | 27                       | 28           | 31           |
|                                   | 7          | 26'-4"              | 27                       | 28           | 31           |
|                                   | 8          | 25'-3"              | 26                       | 28           | 30           |
|                                   | 9          | 24'-3"              | 26                       | 28           | 30           |
|                                   | 10         | 23'-5"              | 26                       | 28           | 30           |
| <b>70 MPH EXPOSURE C</b>          |            |                     |                          |              |              |
| 20                                | 4          | 31'-9"              | 32                       | 34           | 38           |
|                                   | 5          | 29'-6"              | 31                       | 33           | 36           |
|                                   | 6          | 27'-9"              | 30                       | 32           | 35           |
|                                   | 7          | 26'-1"              | 30                       | 32           | 34           |
|                                   | 8          | 24'-0"              | 29                       | 31           | 34           |
|                                   | 9          | 22'-8"              | 29                       | 31           | 34           |
|                                   | 10         | 21'-6"              | 29                       | 31           | 33           |
| <b>90 MPH EXPOSURE B</b>          |            |                     |                          |              |              |
| 20                                | 4          | 31'-9"              | 31                       | 33           | 36           |
|                                   | 5          | 29'-6"              | 31                       | 33           | 35           |
|                                   | 6          | 27'-9"              | 30                       | 32           | 35           |
|                                   | 7          | 26'-1"              | 30                       | 32           | 35           |
|                                   | 8          | 24'-4"              | 30                       | 32           | 34           |
|                                   | 9          | 23'-0"              | 29                       | 31           | 33           |
|                                   | 10         | 21'-9"              | 29                       | 31           | 33           |
| <b>90 MPH EXPOSURE C</b>          |            |                     |                          |              |              |
| 20                                | 4          | 25'-10"             | 34                       | 36           | 39           |
|                                   | 5          | 23'-1"              | 33                       | 35           | 38           |
|                                   | 6          | 21'-1"              | 33                       | 35           | 38           |
|                                   | 7          | 19'-6"              | 32                       | 34           | 37           |
|                                   | 8          | 18'-3"              | 32                       | 34           | 37           |
|                                   | 9          | 17'-2"              | 31                       | 33           | 36           |
|                                   | 10         | 16'-4"              | 31                       | 33           | 36           |
| <b>70 &amp; 90 MPH EXPOSURE B</b> |            |                     |                          |              |              |
| 25                                | 4          | 29'-6"              | 31                       | 33           | 35           |
|                                   | 5          | 27'-4"              | 30                       | 32           | 35           |
|                                   | 6          | 25'-9"              | 30                       | 32           | 34           |
|                                   | 7          | 24'-6"              | 30                       | 32           | 34           |
|                                   | 8          | 23'-5"              | 29                       | 31           | 33           |
|                                   | 9          | 22'-6"              | 29                       | 31           | 33           |
|                                   | 10         | 21'-9"              | 29                       | 31           | 33           |
| <b>70 MPH EXPOSURE C</b>          |            |                     |                          |              |              |
| 25                                | 4          | 29'-6"              | 31                       | 33           | 37           |
|                                   | 5          | 27'-4"              | 30                       | 32           | 37           |
|                                   | 6          | 25'-9"              | 30                       | 32           | 36           |
|                                   | 7          | 24'-6"              | 30                       | 32           | 36           |
|                                   | 8          | 23'-5"              | 29                       | 31           | 35           |
|                                   | 9          | 22'-6"              | 29                       | 31           | 35           |
|                                   | 10         | 21'-9"              | 29                       | 31           | 34           |

| LIVE LOAD                         | TRIB WIDTH | 8" C BEAM HEADER    |                          |              |              |
|-----------------------------------|------------|---------------------|--------------------------|--------------|--------------|
|                                   |            | MAX. COLUMN SPACING | CONSTRAINED FOOTER SIZES | ATTACHED     | MIN COL TYPE |
| (PSF)                             | (FT)       | (IN)                | FOOTER "d" (IN)          | FTR "d" (IN) | COL TYPE     |
| <b>70 &amp; 90 MPH EXPOSURE B</b> |            |                     |                          |              |              |
| 25                                | 4          | 25'-10"             | 34                       | 36           | 39           |
|                                   | 5          | 23'-1"              | 33                       | 35           | 38           |
|                                   | 6          | 21'-1"              | 33                       | 35           | 38           |
|                                   | 7          | 19'-6"              | 32                       | 34           | 37           |
|                                   | 8          | 18'-3"              | 32                       | 34           | 37           |
|                                   | 9          | 17'-2"              | 31                       | 33           | 36           |
|                                   | 10         | 16'-4"              | 31                       | 33           | 36           |
| <b>70 &amp; 90 MPH EXPOSURE C</b> |            |                     |                          |              |              |
| 40                                | 4          | 25'-3"              | 30                       | 32           | 34           |
|                                   | 5          | 23'-5"              | 29                       | 31           | 34           |
|                                   | 6          | 22'-0"              | 29                       | 31           | 33           |
|                                   | 7          | 20'-11"             | 29                       | 31           | 33           |
|                                   | 8          | 20'-0"              | 28                       | 30           | 32           |
|                                   | 9          | 19'-2"              | 28                       | 30           | 32           |
|                                   | 10         | 18'-2"              | 28                       | 30           | 32           |
| <b>90 MPH EXPOSURE B</b>          |            |                     |                          |              |              |
| 40                                | 4          | 25'-3"              | 34                       | 36           | 39           |
|                                   | 5          | 23'-1"              | 33                       | 35           | 38           |
|                                   | 6          | 21'-1"              | 33                       | 35           | 38           |
|                                   | 7          | 19'-6"              | 32                       | 34           | 37           |
|                                   | 8          | 18'-3"              | 32                       | 34           | 37           |
|                                   | 9          | 17'-2"              | 31                       | 33           | 36           |
|                                   | 10         | 16'-4"              | 31                       | 33           | 36           |
| <b>90 MPH EXPOSURE C</b>          |            |                     |                          |              |              |
| 40                                | 4          | 22'-0"              | 33                       | 35           | 37           |
|                                   | 5          | 20'-5"              | 33                       | 35           | 37           |
|                                   | 6          | 19'-3"              | 32                       | 34           | 37           |
|                                   | 7          | 17'-10"             | 31                       | 33           | 36           |
|                                   | 8          | 16'-9"              | 31                       | 33           | 36           |
|                                   | 9          | 15'-9"              | 30                       | 32           | 35           |
|                                   | 10         | 14'-11"             | 30                       | 32           | 35           |

| COL | COLUMN DESCRIPTION FOR ALL COLUMNS SEE DETAIL 5.1C, 1" AND 1" DETAIL 5.1D | MAXIMUM COLUMN HEIGHT | SINGLE SPAN | OR MULTISPAN |
|-----|---|-----------------------|-------------|--------------|
| D   | FLUTED COLUMN ALUM. 0.002   | 12'-0"                | ATTACHED    | ATTACHED     |
| E   | 3" COVERLEAF STEEL 0.046"   | 12'-0"                | ATTACHED    | N/A          |
| F   | 3" SQUARE STEEL COLUMN  | 18'-0"                | ATTACHED    | 8'-7"        |
| G   | 4" SQUARE STEEL COLUMN  | 18'-0"                | ATTACHED    | 11'-0"       |
| H   | 5" SQUARE STEEL COLUMN  | 18'-0"                | ATTACHED    | 15'-0"       |
| J   | 6" SQUARE STEEL COLUMN  | 18'-0"                | ATTACHED    | 18'-0"       |

**TABLE 5.1**

GENERAL METHOD FOR USING THESE TABLES

1. CHOOSE FREESTANDING OR ATTACHED, COMMERCIAL OR PATIO LATTICE STRUCTURE
2. DETERMINE PROJECTION, WIDTH, OVERHANG, WIND LOAD AND LIVE LOAD
3. FIND TRIBUTARY WIDTH FROM TABLE 5.6 AND DRAWING 97AC02
4. CHOOSE A RAFTER FROM TABLES 4.3, 4.5, 5.3 OR 5.4 THAT HAS ADEQUATE CLEARSPAN FOR YOUR NEEDS
5. CHOOSE A HEADER FROM TABLES 4.1, 4.2 OR 5.2 THAT HAS ADEQUATE COLUMN SPACING
6. USE THE FOOTER SIZE SHOWN
7. USE THE COLUMN SHOWN FOR SINGLE SPAN ATTACHED PATIO
8. LOOK AT THE TABLES PROVIDED FOR ALL OTHERS
9. FIND THE APPROPRIATE DETAILS IN THE "CONNECTION DETAILS" SHEETS

FOR CONCRETE PATIO SLABS FOLLOW 1-4 ABOVE

5. FIND THE MAXIMUM COLUMN SPACING ON SLAB FROM THE DESIRED COLUMN HEIGHT

6. CHOOSE A HEADER FROM TABLE 4.1 OR 4.2 THAT CAN SPAN THAT DISTANCE FOR THAT TRIB WIDTH AND LIVE AND WIND LOAD

7. FIND THE APPROPRIATE DETAILS IN THE "CONNECTION DETAIL" SHEETS.

| LIVE LOAD | PANEL "t" | MAX ROOF HEIGHT 18' |        |        |
|-----------|-----------|---------------------|--------|--------|
|           |           | EXPOSURE B AND C    | OVER   | HANG   |
| (PSF)     | (IN)      | 70 & 90 MPH         | 8'-10" | 4'-11" |
| 20        | 0.024     | 9'-10"              | 6'-7"  | 4'-11" |
| 25        | 0.024     | 8'-10"              | 4'-5"  | 6'-7"  |
|           | 0.032     | 11'-9"              | 5'-10" | 5'-10" |
| 30        | 0.024     | 7'-8"               | 3'-10" | 5'-4"  |
|           | 0.032     | 10'-9"              | 5'-4"  | 2'-11" |
| 40        | 0.024     | 5'-10"              | 4'-8"  | 4'-8"  |
|           | 0.032     | 9'-4"               | 4'-8"  | 1'-11" |
| 60        | 0.024     | N/A                 | 3'-10" | 3'-10" |
|           | 0.032     | 7'-8"               | 3'-10" | 3'-10" |

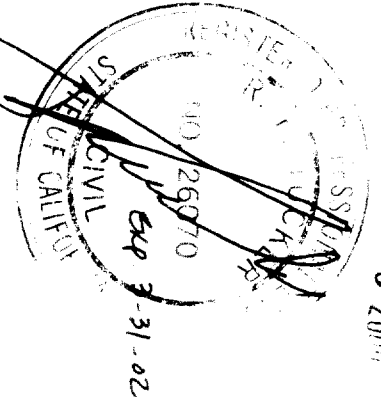
| LIVE LOAD | PANEL "t" | 24" O.C. 3"x8" RAFTER CLEARSPANS |        |        |
|-----------|-----------|----------------------------------|--------|--------|
|           |           | EXPOSURE B AND C                 | OVER   | HANG   |
| (PSF)     | (IN)      | 70 & 90 MPH                      | 14'-6" | 8'-6"  |
| 20        | 0.036     | 14'-6"                           | 8'-6"  | 8'-6"  |
|           | 0.042     | 19'-10"                          | 9'-11" | 9'-11" |
| 25        | 0.036     | 11'-9"                           | 7'-7"  | 7'-7"  |
|           | 0.042     | 17'-9"                           | 8'-10" | 8'-10" |
| 30        | 0.036     | 9'-9"                            | 6'-11" | 6'-11" |
|           | 0.042     | 15'-7"                           | 8'-1"  | 8'-1"  |
| 40        | 0.036     | 7'-4"                            | 6'-0"  | 6'-0"  |
|           | 0.042     | 11'-9"                           | 7'-0"  | 7'-0"  |
| 60        | 0.036     | 4'-11"                           | 4'-11" | 4'-11" |
|           | 0.042     | 7'-10"                           | 5'-9"  | 5'-9"  |

| EQUIVALENT FOOTER "d" (IN) | CON- STRAINED | NONCON- STRAINED | EQUIVALENT FOOTER "d" (IN) |
|----------------------------|---------------|------------------|----------------------------|
|                            |               |                  |                            |
| 18                         | 18            | 18               | 18                         |
| 19                         | 20            | 20               | 20                         |
| 20                         | 22            | 22               | 22                         |
| 21                         | 23            | 23               | 23                         |
| 22                         | 24            | 24               | 24                         |
| 23                         | 26            | 26               | 26                         |
| 24                         | 27            | 27               | 27                         |
| 25                         | 29            | 29               | 29                         |
| 26                         | 31            | 31               | 31                         |
| 27                         | 33            | 33               | 33                         |
| 28                         | 35            | 35               | 35                         |
| 29                         | 36            | 36               | 36                         |
| 30                         | 38            | 38               | 38                         |
| 31                         | 39            | 39               | 39                         |
| 32                         | 40            | 40               | 40                         |
| 33                         | 41            | 41               | 41                         |
| 34                         | 43            | 43               | 43                         |
| 35                         | 44            | 44               | 44                         |
| 36                         | 46            | 46               | 46                         |
| 37                         | 47            | 47               | 47                         |
| 38                         | 48            | 48               | 48                         |

| PROJ. (FT) | RAFTER OVERHANG (FT) |     |    |       |    |       |
|------------|----------------------|-----|----|-------|----|-------|
|            | 0                    | 1/2 | 1  | 1 1/2 | 2  | 2 1/2 |
| 3          | 4                    | 4   | 4  | 4     | 4  | 4     |
| 4          | 4                    | 4   | 4  | 4     | 4  | 4     |
| 5          | 5                    | 5   | 5  | 5     | 5  | 5     |
| 6          | 5                    | 5   | 5  | 5     | 5  | 5     |
| 7          | 5                    | 5   | 5  | 5     | 5  | 5     |
| 8          | 5                    | 5   | 5  | 5     | 5  | 5     |
| 9          | 5                    | 5   | 5  | 5     | 5  | 5     |
| 10         | 5                    | 5   | 5  | 5     | 5  | 5     |
| 11         | 6                    | 6   | 6  | 6     | 6  | 6     |
| 12         | 6                    | 6   | 6  | 6     | 6  | 6     |
| 13         | 6                    | 6   | 6  | 6     | 6  | 6     |
| 14         | 7                    | 7   | 7  | 7     | 7  | 7     |
| 15         | 7                    | 7   | 7  | 7     | 7  | 7     |
| 16         | 7                    | 7   | 7  | 7     | 7  | 7     |
| 17         | 8                    | 8   | 8  | 8     | 8  | 8     |
| 18         | 8                    | 8   | 8  | 8     | 8  | 8     |
| 19         | 8                    | 8   | 8  | 8     | 8  | 8     |
| 20         | 10                   | 10  | 10 | 10    | 10 | 10    |
| 21         | 10                   | 10  | 10 | 10    | 10 | 10    |
| 22         | 10                   | 10  | 10 | 10    | 10 | 10    |
| 23         | 11                   | 11  | 11 | 11    | 11 | 11    |
| 24         | 11                   | 11  | 11 | 11    | 11 | 11    |
| 25         | 13                   | 13  | 13 | 13    | 13 | 13    |
| 26         | 13                   | 13  | 13 | 13    | 13 | 13    |
| 27         | 14                   | 14  | 14 | 14    | 14 | 14    |
| 28         | 14                   | 14  | 14 | 14    | 14 | 14    |
| 29         | 15                   | 15  | 15 | 15    | 15 | 15    |
| 30         | 15                   | 15  | 15 | 15    | 15 | 15    |
| 31         | 16                   | 16  | 16 | 16    | 16 | 16    |
| 32         | 16                   | 16  | 16 | 16    | 16 | 16    |
| 33         | 17                   | 17  | 17 | 17    | 17 | 17    |
| 34         | 17                   | 17  | 17 | 17    | 17 | 17    |
| 35         | 18                   | 18  | 18 | 18    | 18 | 18    |
| 36         | 18                   | 18  | 18 | 18    | 18 | 18    |
| 37         | 18                   | 18  | 18 | 18    | 18 | 18    |
| 38         | 19                   | 19  | 19 | 19    | 19 | 19    |
| 39         | 19                   | 19  | 19 | 19    | 19 | 19    |
| 40         | 20                   | 20  | 20 | 20    | 20 | 20    |
| 41         | 20                   | 20  | 20 | 20    | 20 | 20    |
| 42         | 21                   | 21  | 21 | 21    | 21 | 21    |

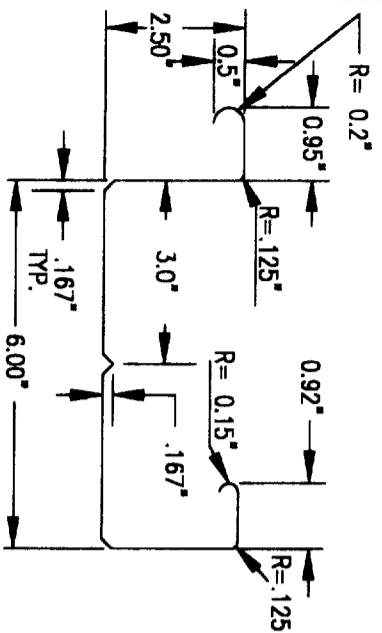


ICBO E5 EVALUATION REPORT ER-2621P  
 HEADER SPANS, COLUMN SPACING,  
 FOOTER SIZE AND COLUMN TYPE FOR  
 FREESTANDING AND ATTACHED  
 COMMERCIAL LATTICE STRUCTURES  
 SHEET 7 OF 8  
 DATE: 2/8/2000

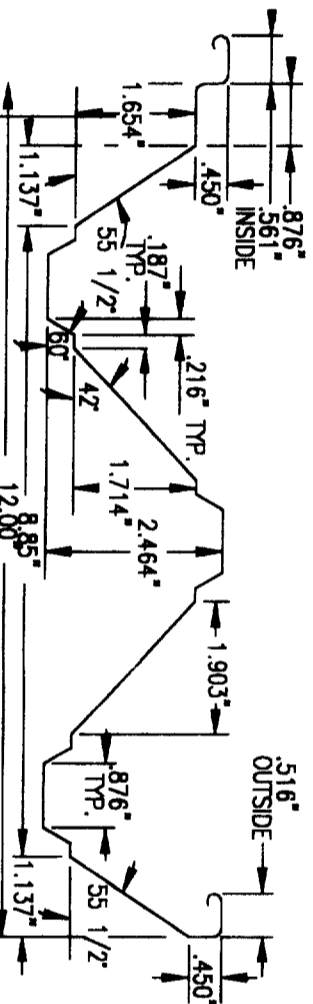


MAR 03 2002



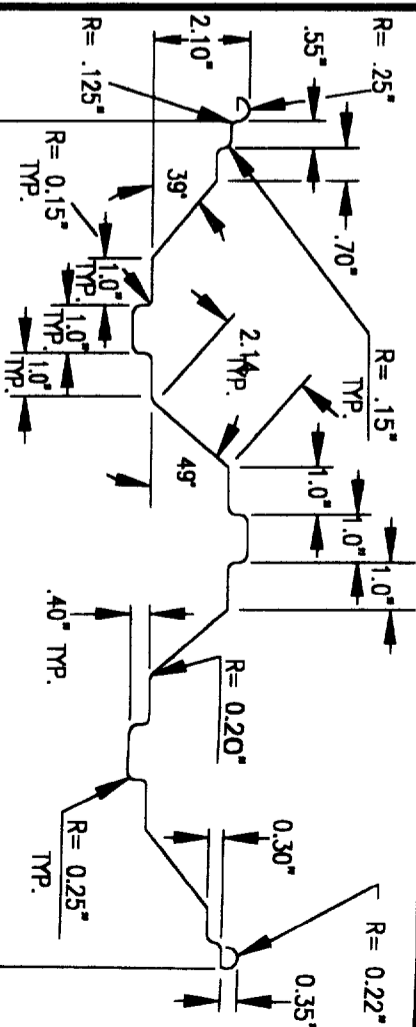


**(A) 6" STRUCTURAL PANEL**  
(3006-H391 ALUM. ALLOY)

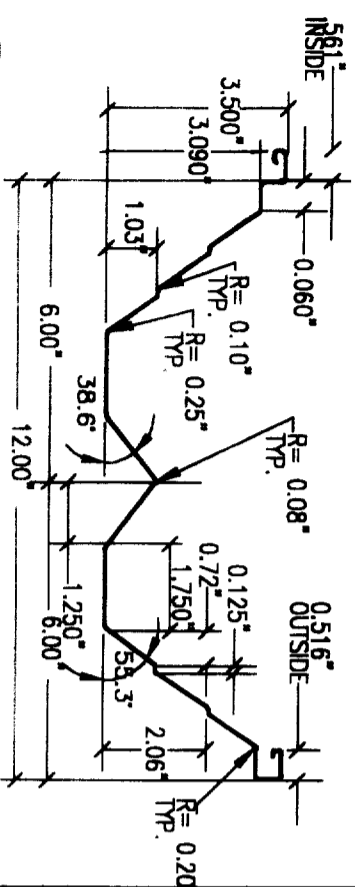


**(B) 12" STRUCTURAL PANEL** (3006-H391 ALUM. ALLOY)

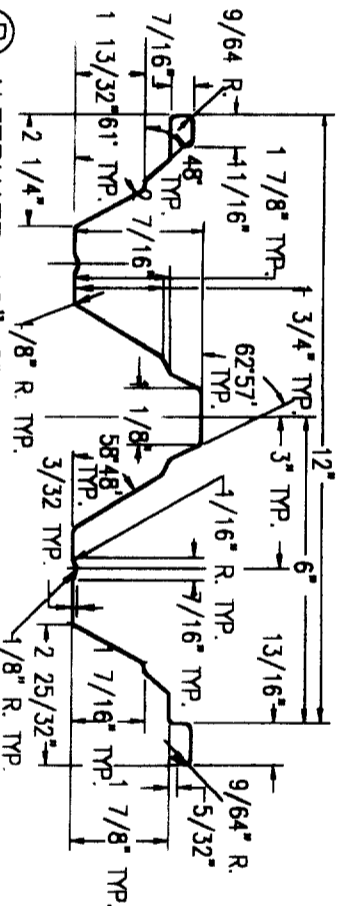
FOR STEEL PANEL: ASTM A 653 GRADE 80 STRUCTURAL QUALITY  
FY= 80 KSI STEEL  
30 GA GALV T=.0157  
28 GA GALV T=.0187



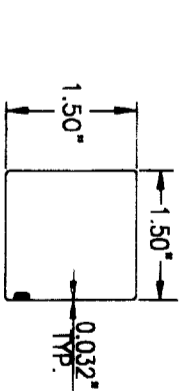
**(C) 18" STRUCTURAL PANEL** (3006-H391 ALUM. ALLOY)



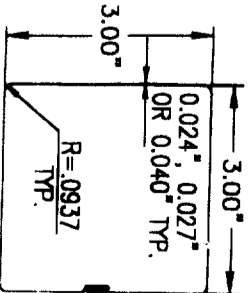
**(D) 3 1/2" X 12" STRUCTURAL PANEL**



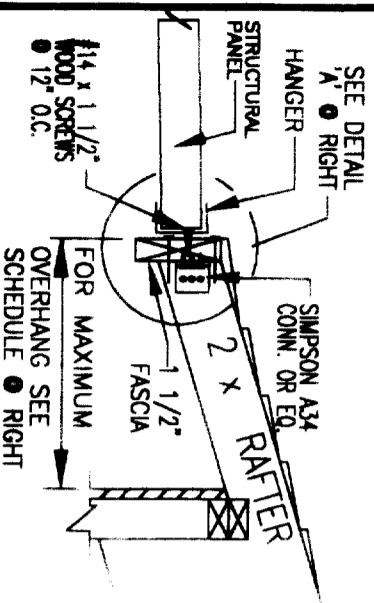
**(B) ALTERNATE - 12" STRUCTURAL PANEL**  
(3006-H391 ALUM. ALLOY)



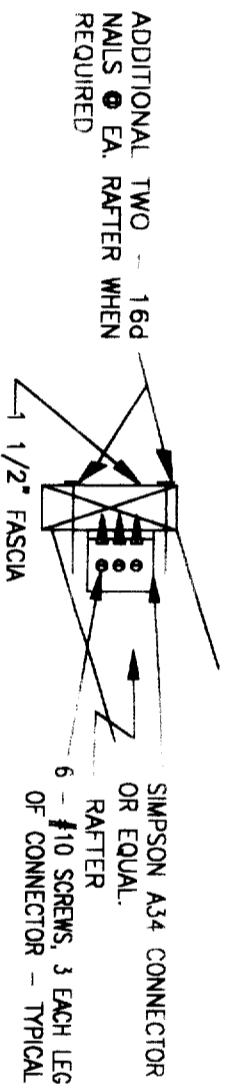
**(E) 1 1/2" SQUARE COLUMN**  
(3003-H16 ALUM. ALLOY)



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



**(C) ALTERNATE EAVE ATTACHMENT**

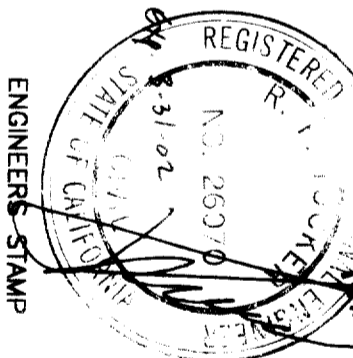


DETAIL "A"

SCHEDULE FOR MAXIMUM RAFTER OVERHANGS FOR AWNING PROJECTIONS

| PROJ. (FT.) | 2 X 4 RAFTERS @ 18" O.C. | 2 X 4 RAFTERS @ 24" O.C. | 2 X 6 RAFTERS @ 24" O.C. | 2 X 6 RAFTERS @ 30" O.C. | 2 X 8 RAFTERS @ 24" O.C. | 2 X 8 RAFTERS @ 30" O.C. | 2 X 8 RAFTERS @ 36" O.C. |
|-------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 8'          | 28"                      | 20"                      | 17"                      | 14"                      | 11"                      | 8"                       | 6"                       |
| 10'         | 26"                      | 17"                      | 14"                      | 12"                      | 9"                       | 8"                       | 6"                       |
| 12'         | 23"                      | 15"                      | 12"                      | 10"                      | 8"                       | 7"                       | 5"                       |
| 13/16'      | 21"                      | 13"                      | 11"                      | 9"                       | 7"                       | 6"                       | 4"                       |
| 16'         | 19"                      | 11"                      | 9"                       | 7"                       | 5"                       | 4"                       | 3"                       |
| 18'         | 18"                      | 10"                      | 8"                       | 6"                       | 4"                       | 3"                       | 2"                       |
| 19'         | 17"                      | 9"                       | 7"                       | 5"                       | 3"                       | 2"                       | 1"                       |

\* REQUIRES ADDITIONAL 2 - 16d NAILS @ EACH RAFTER



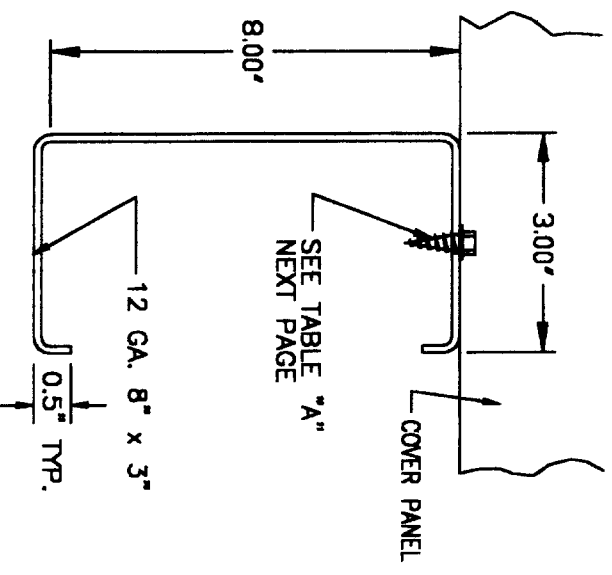
ENGINEER'S STAMP



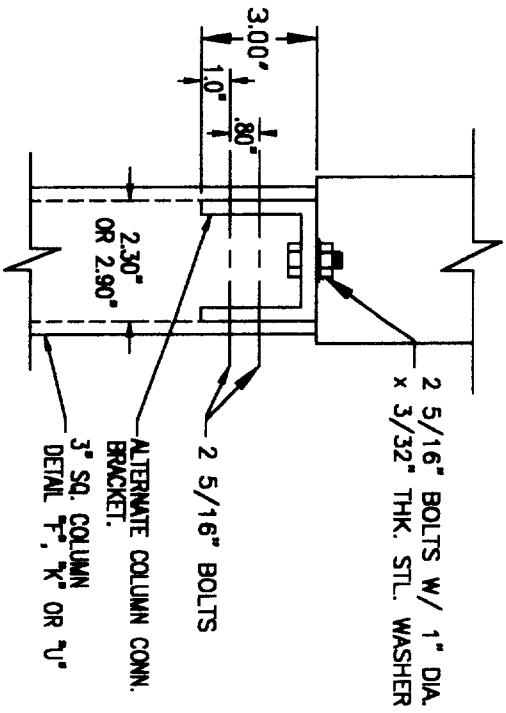
Engineering Services  
1140 All Pro Drive  
Elkhart, IN 46514

|                |  |
|----------------|--|
| DRAWN BY: KG   | ICBO ES EVALUATION REPORT NO. ER-2621P                     |
| SCALE: NONE    | DRAWING OR PART NAME: COMPONENT PARTS & CONNECTION DETAILS |
| DATE: 2/8/2000 | DRAWING NUMBER: 97CD01                                     |
|                | SHEET: 1 OF 9  |

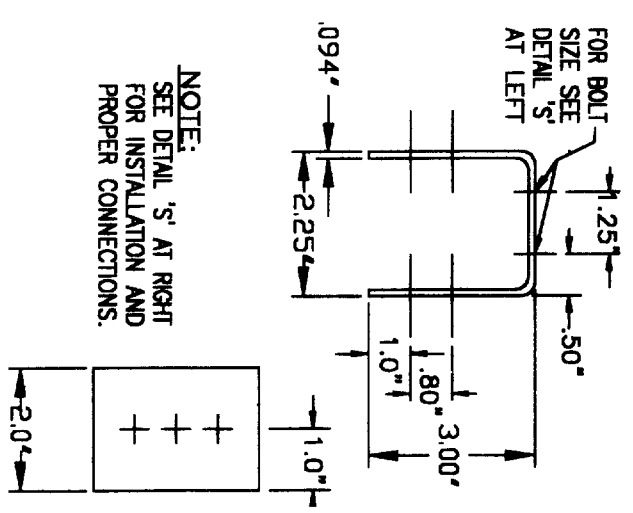
STRUCTURAL PANELS + TYP. CONNECTION DETAILS



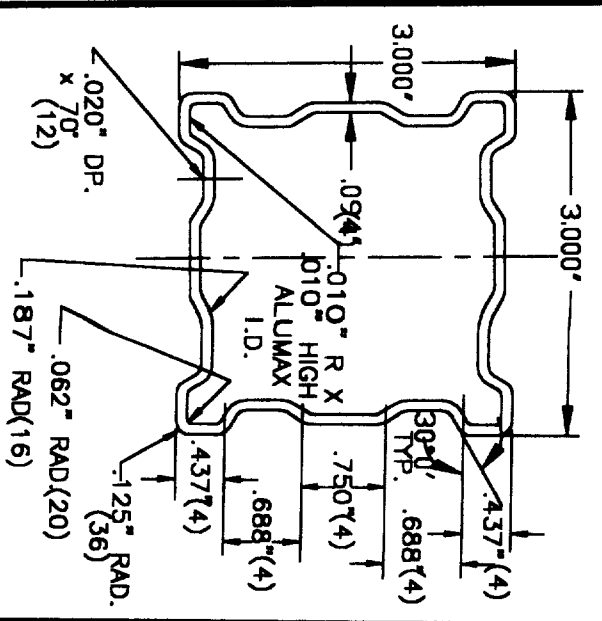
**(R)** STEEL "C" - CHANNEL HEADER  
(STEEL A-653 Fy=50,000 PSI)



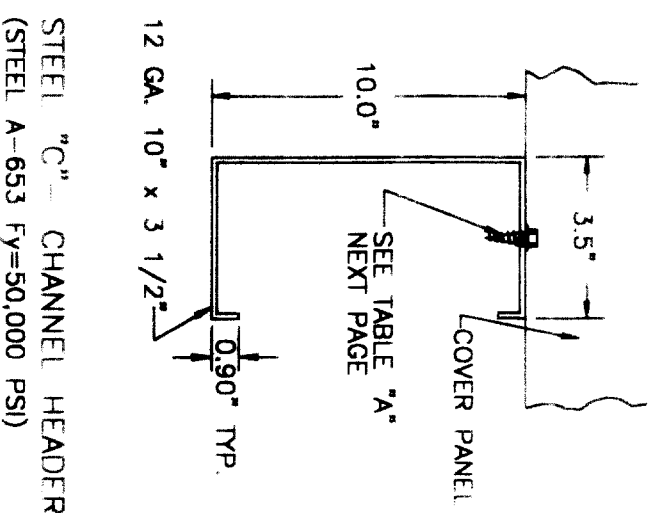
**(S)** 3" COLUMN CONNECTIONS FOR FASCIA HEADERS



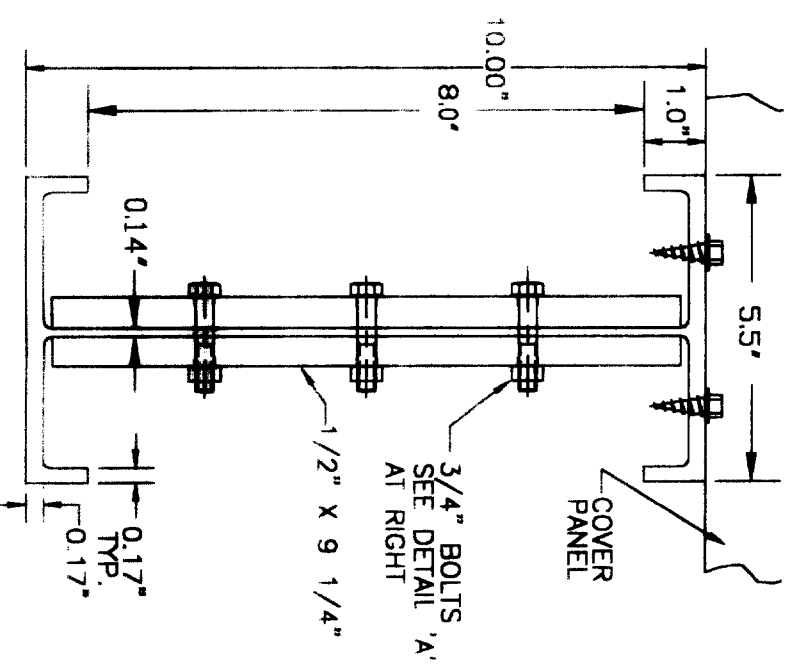
**(T)** 3" ALTERNATE COLUMN CONN. BRACKETS  
(STEEL A-653 Fy=40,000 PSI)



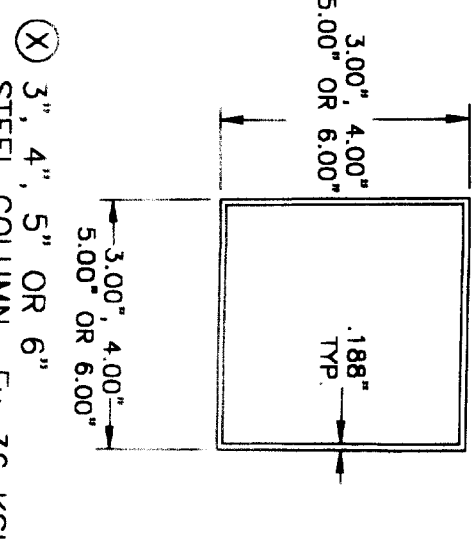
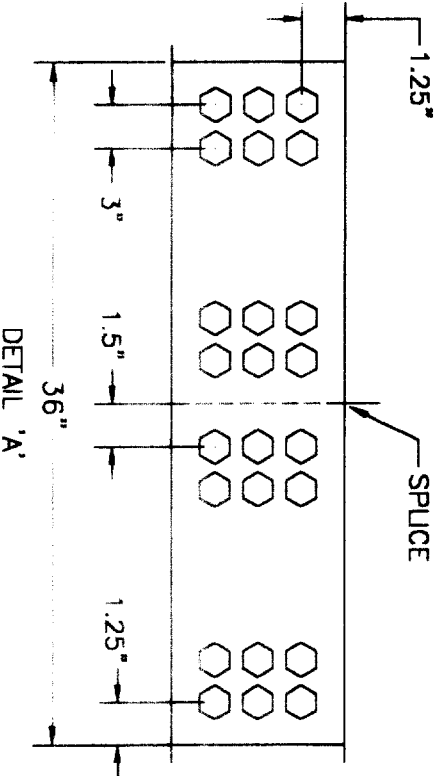
**(U)** FLUTED COLUMN  
(3" ALUM. 6063-T6)  
"t" = 0.062" UNLESS OTHERWISE NOTED



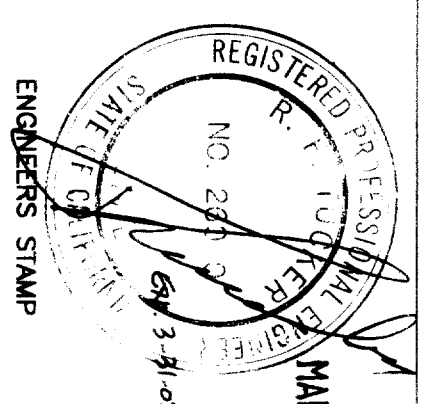
**(V)** STEEL "C" - CHANNEL HEADER  
(STEEL A-653 Fy=50,000 PSI)



**(W)** 10" FULL-STRENGTH SPLICE DETAIL  
ASTM A 653 Fy=36 KSI



**(X)** 3", 4", 5" OR 6" STEEL COLUMN Fy=36 KSI



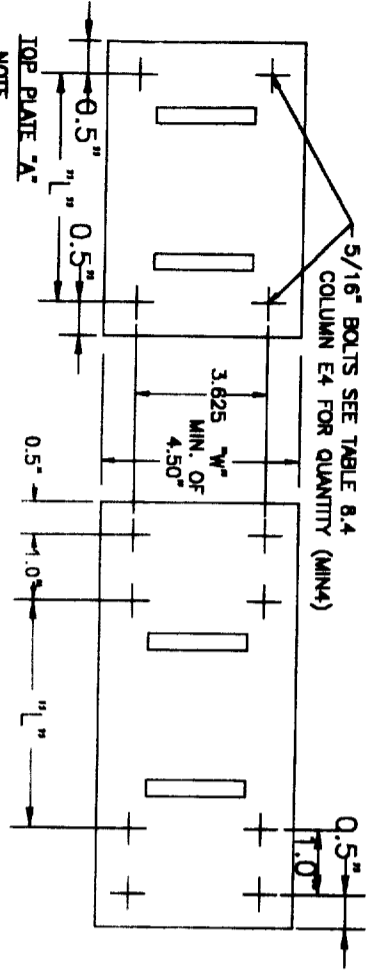
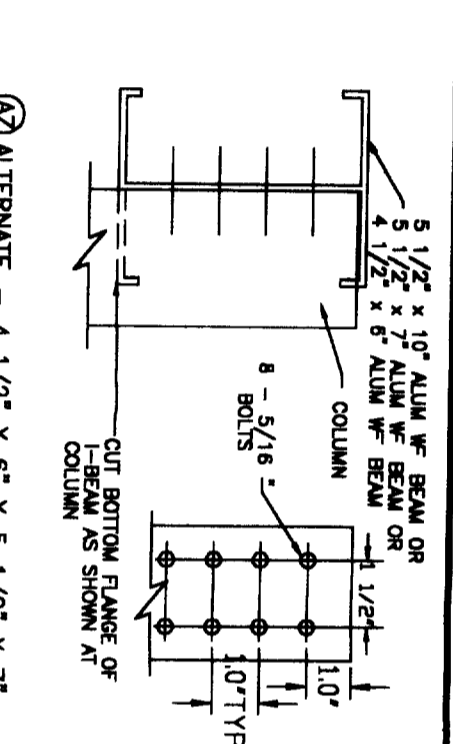
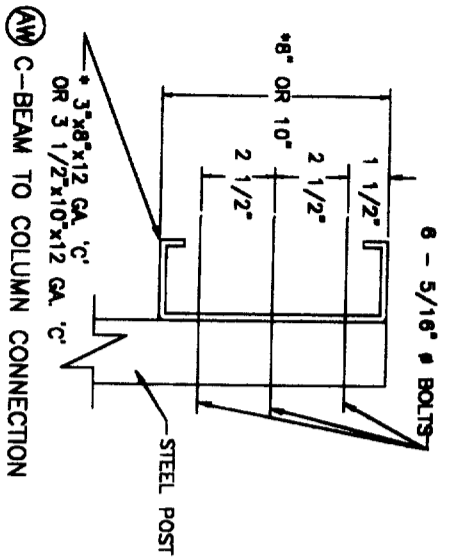
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1140 All Pro Drive  
Elkhart, IN 46514

ICBO ES EVALUATION REPORT NO. ER-2621P

DATE: 2/8/2000

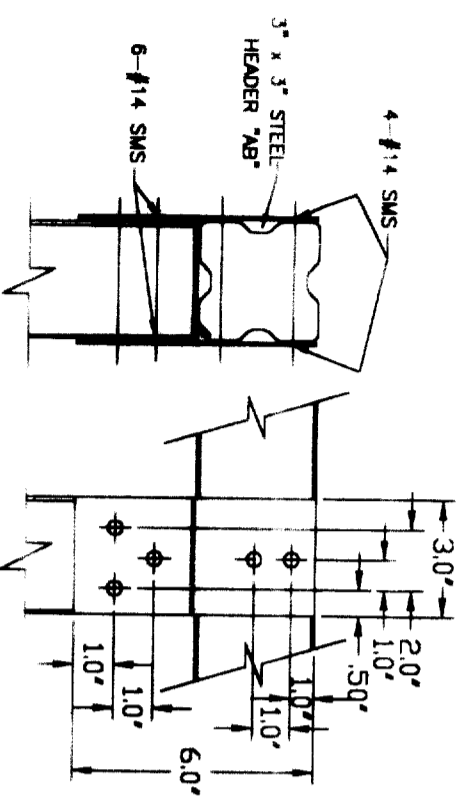
SHEET 3 OF 9



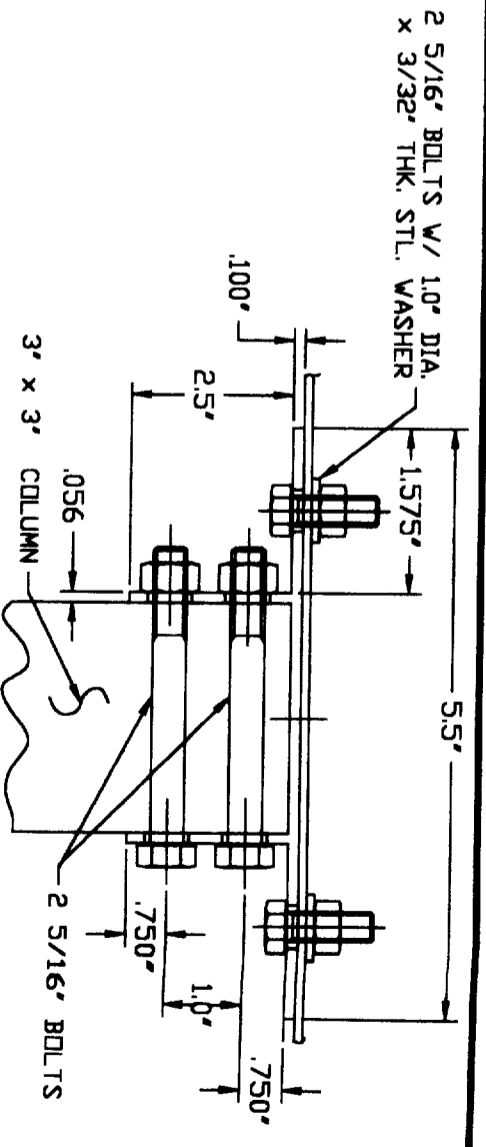


NOTE  
 "C" = COLUMN SIZE + 1"  
 "W" = COLUMN SIZE + 1/2" WITH  
 A MINIMUM OF 4.5"

BD TOP PLATES 'A' & 'B' AND SCHEDULE 'B' FOR TOP PLATE CONNECTIONS WITH 'I' BEAMS (Y, Z, AA) ON STEEL POSTS

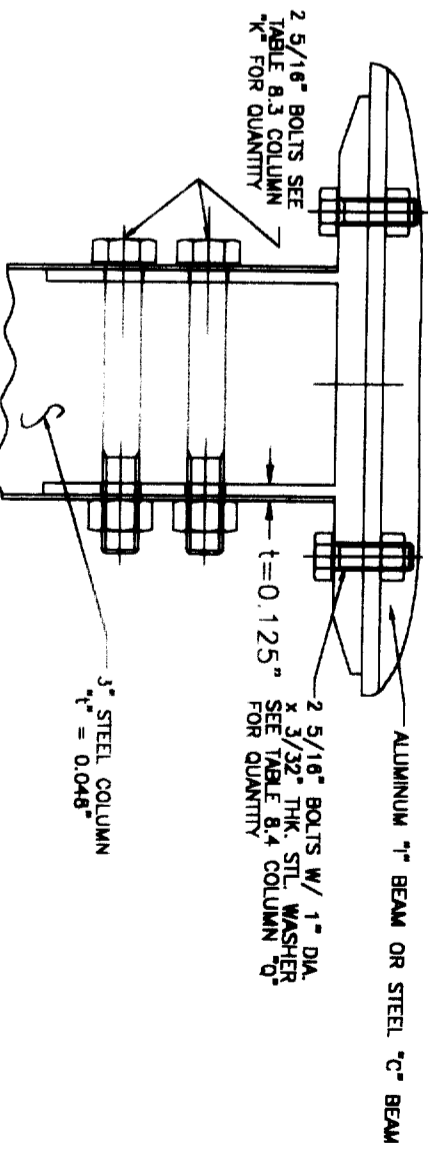


AV COLUMN TO HEADER CONNECTION FOR 3" X 3" STEEL HEADER "AB"



ALL 'I' BEAMS & 'C' BEAMS USE TABLE 8.3 COLUMN 'J' FOR QUANTITY OF HORIZONTAL BOLTS  
 USE TABLE 8.4 COLUMN 'N' FOR VERTICAL BOLTS.

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



BC 3" STEEL COLUMN TO HEADER CONN. BRACKET (6063-T6 ALUM.)

|             |          |      |          |
|-------------|----------|------|----------|
| DATE        | REVISION | DATE | REVISION |
| MAR 03 2000 |          |      |          |

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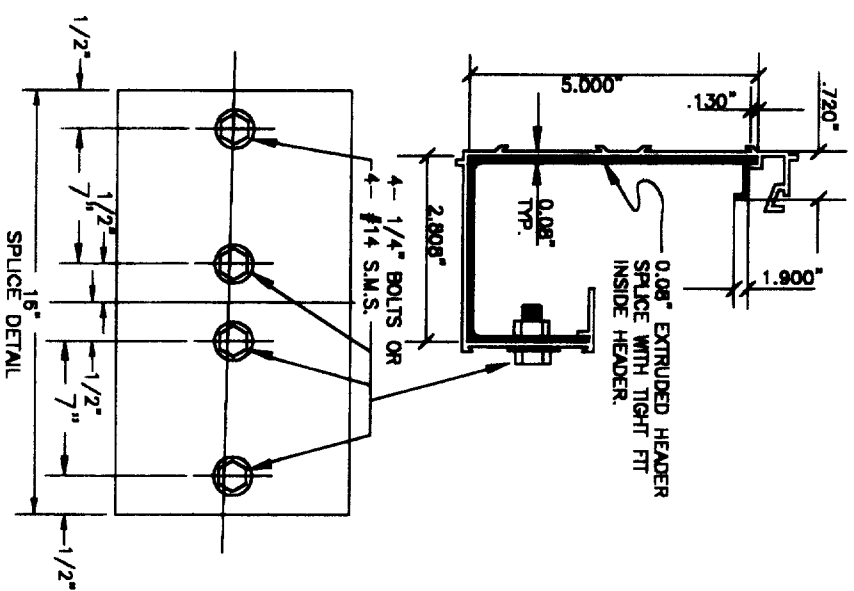
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 SCALE: NONE  
 DATE: 2/8/2000

ICBO ES EVALUATION REPORT NO. ER-2621P  
 DRAWING OR PART NAME: COMPONENT PARTS & CONNECTION DETAILS  
 SHEET NUMBER: 97CD07  
 SHEET: 7 OF 9

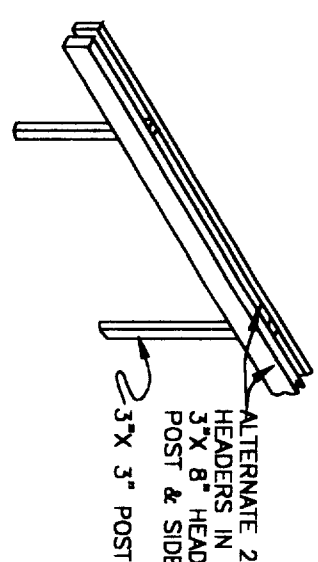
ENGINEERS STAMP

EXP 3-31-02

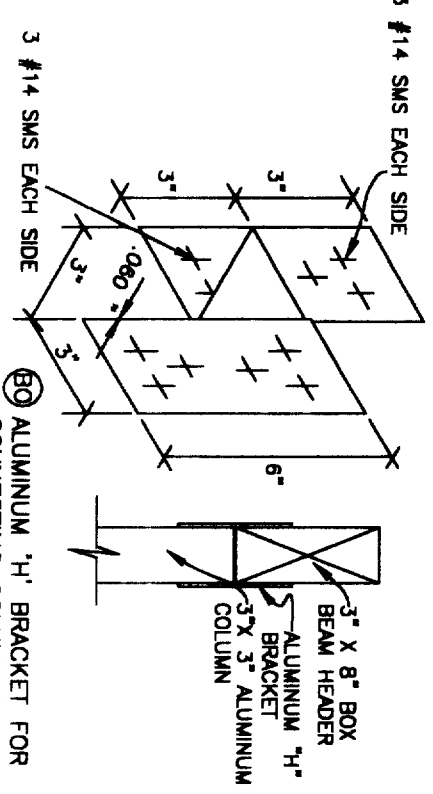




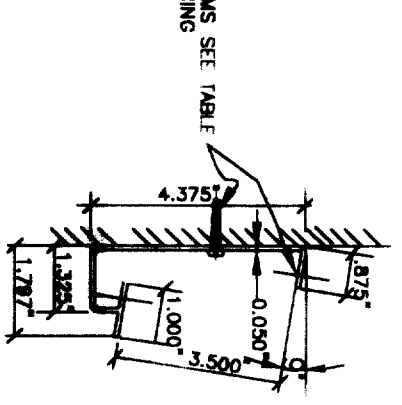
**(BU)** 5 1/2" EXTRUDED HEADER SPLICE  
(6061-T6 ALUM. ALLOY)



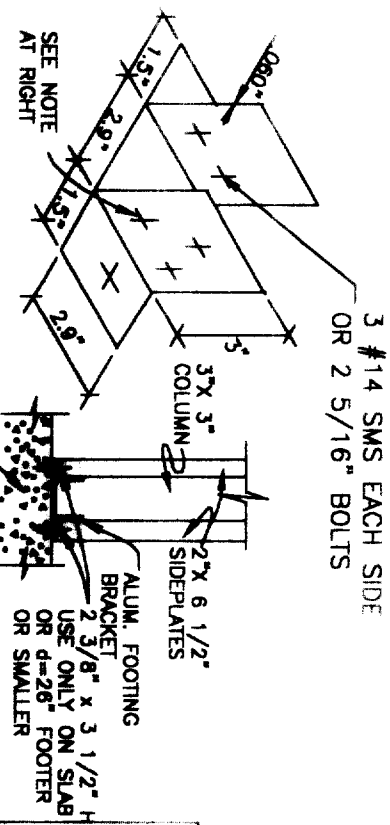
**(BX)** ALTERNATE 2-2" X 6 1/2" HEADERS



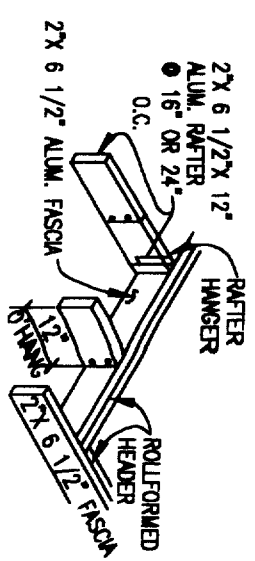
**(BO)** ALUMINUM "H" BRACKET FOR  
CONNECTING COLUMN TO HEADER  
(6063-T6 ALUM. ALLOY)



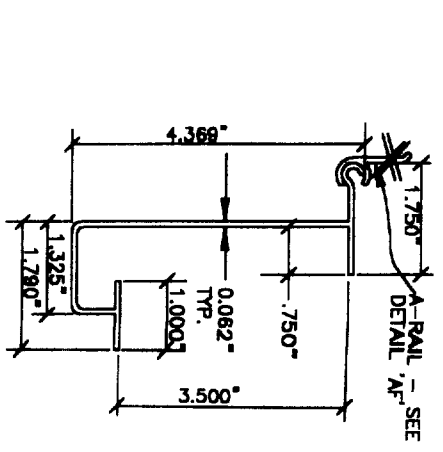
**(BM)** 3 1/2" "C" RAIL  
(6063-T6 ALUM. ALLOY)



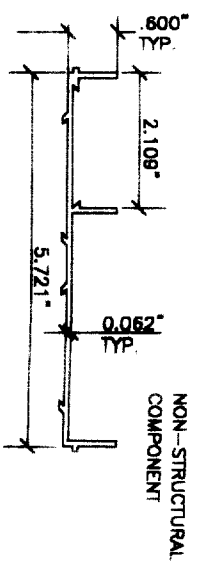
**(BN)** ALUMINUM FOOTING BRACKET FOR CONNECTING  
COLUMN TO CONC. SLAB OR FOOTING  
(6063-T6 ALUM. ALLOY)



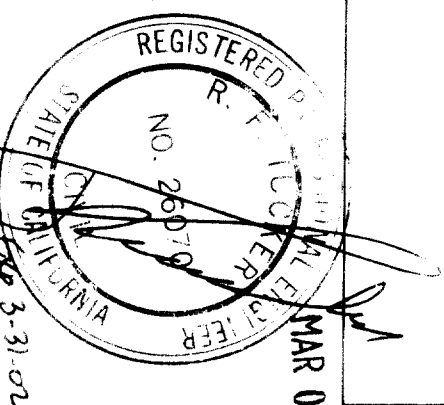
**(BL)** ALTERNATE-DECORATIVE  
FASCIA TRIM



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



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

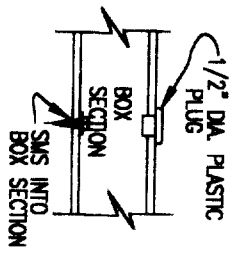


|  |   |
|--|---|
| <p><b>Amerimax</b><br/>Engineering Services<br/>1140 All Pro Drive<br/>Elkhart, IN 46514</p> | <p>ICBO ES EVALUATION REPORT NO. ER-2621P</p>                                 |
| <p>SCALE: NONE</p>   | <p>DRAWING OR PART NAME: DRAWING COMPONENT PARTS &amp; CONNECTION DETAILS</p> |
| <p>DATE: 2/8/2000</p>  | <p>DATE: 3-31-02</p>  |
| <p>REVISION</p>  | <p>REVISION</p>   |
| <p>DATE</p>  | <p>DATE</p>   |
| <p>REVISION</p>  | <p>REVISION</p>   |

DRAWN BY: KG  
 SCALE: NONE  
 DATE: 2/8/2000  
 SHEET: 9 OF 9

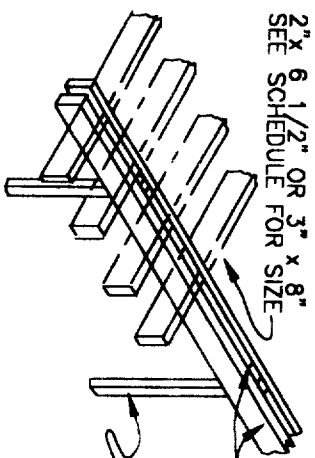
#10 x 1.5" SMS SEE TABLE  
B.S. FOR SPACING

NON-STRUCTURAL  
COMPONENT

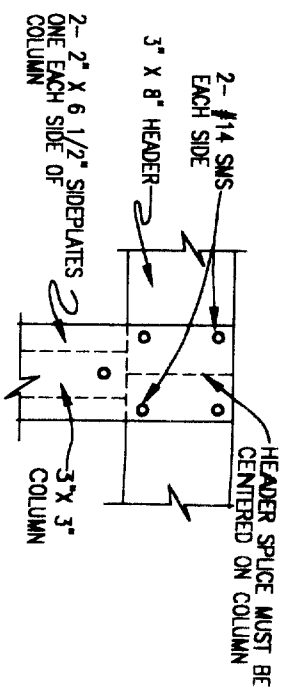


NOTE: USE PLASTIC PLUG TO FILL 1/2" DIA. ACCESS HOLES USED WHEN ATTACHING SMS INTO ANOTHER BOX SECTION IN WHICH THE SMS LENGTH WOULD EXCEED 2 1/2".

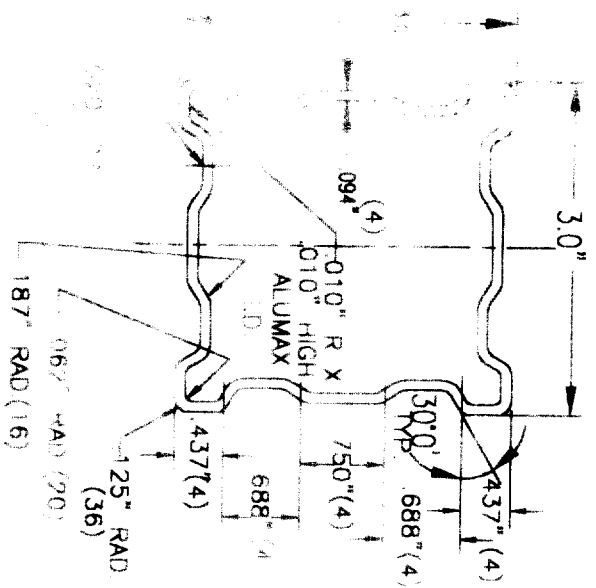
**L10** PLASTIC PLUG DETAIL



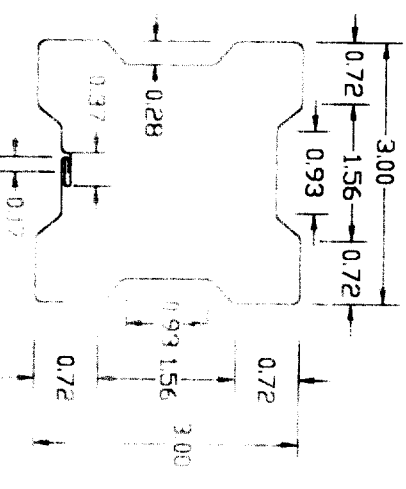
**L11** ALTERNATE 2-2" X 6 1/2" HEADERS



**L16** HEADER SPLICE DETAIL



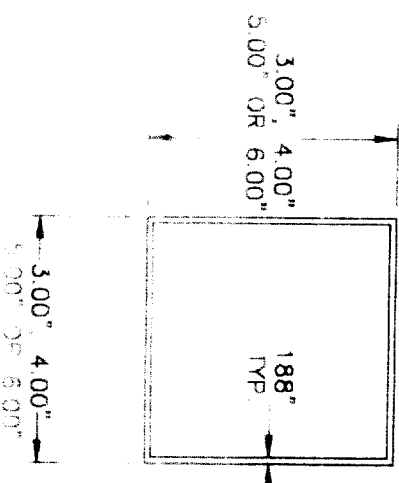
**L31** FLUTED COLUMN  
(3" ALUM. 6063-T6)  
0.062" UNLESS OTHERWISE NOTED



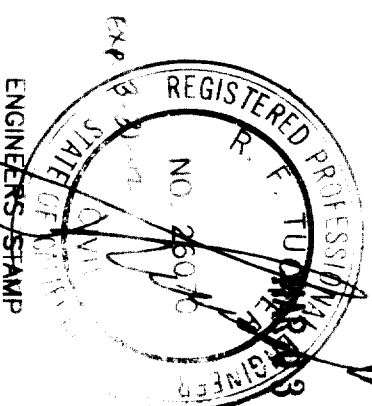
T (IN) = 0.024, 0.030, 0.040 (ALUM)  
= 0.048 (STEEL)

NOTE:  
COLUMNS MAY BE TRIMMED W/FLEX-  
ALUM. FACING

**L30** 3" ALTERNATE COLUMN  
(3003-H16 ALUM. ALLOY OR  
A-446 Fy=40 KSI STEEL)



**L32** 3" X 4" X 5" OR 6"  
STEEL COLUMN  
TY: AISC

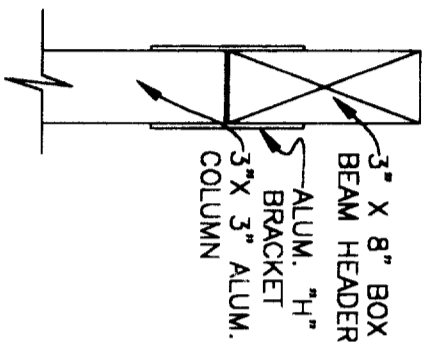
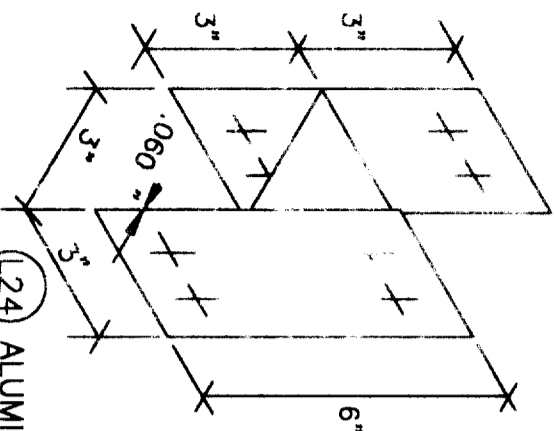


| DATE     | REVISION | DATE | REVISION |
|----------|----------|------|----------|
| 2/8/2000 |          |      |          |

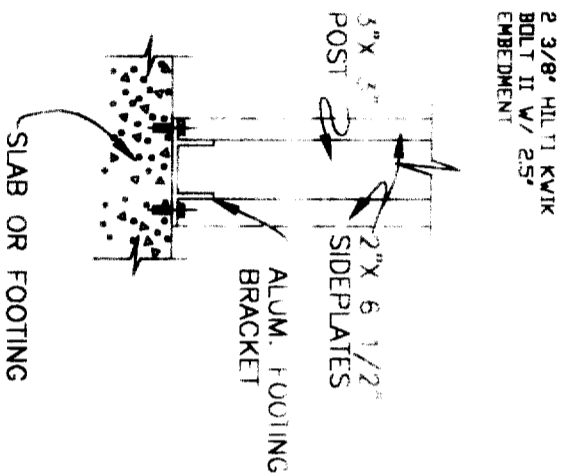
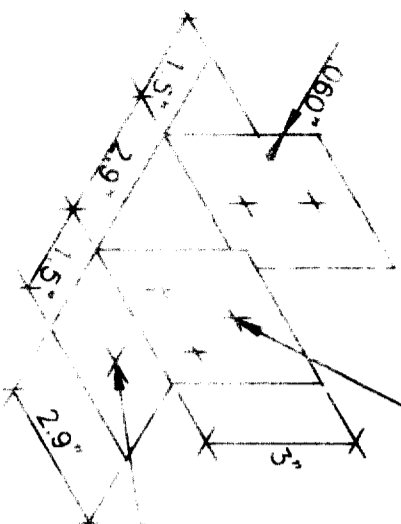
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 SCALE: NONE  
 DATE: 2/8/2000

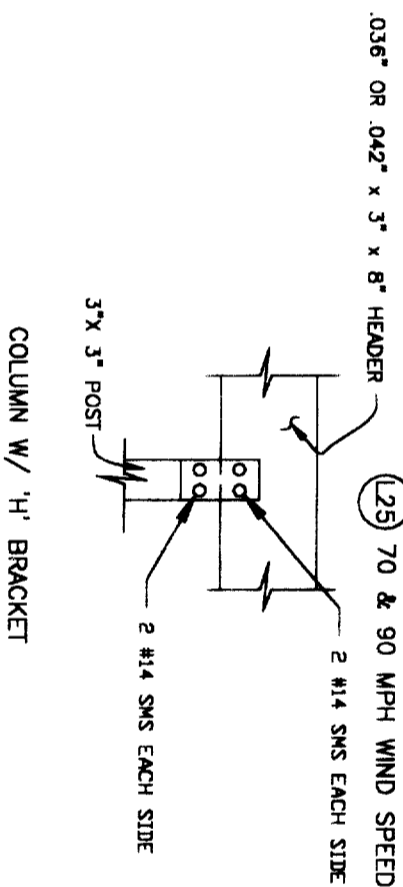
PROJECT: CBO ES EVALUATION REPORT NO. CR-262-10  
 DRAWING: COMPONENT PARTS & CONNECTION DETAILS  
 NAME: FOR PATIO & COMMERCIAL ATTICE STRUCTURES  
 DRAWING NUMBER: 97LT03  
 SHEET: 2 OF 4



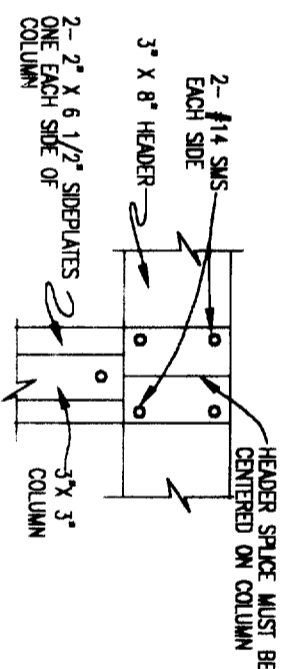
L24 ALUMINUM 'H' BRACKET FOR CONNECTING COLUMN TO HEADER (6063-T6 ALUM. ALLOY)



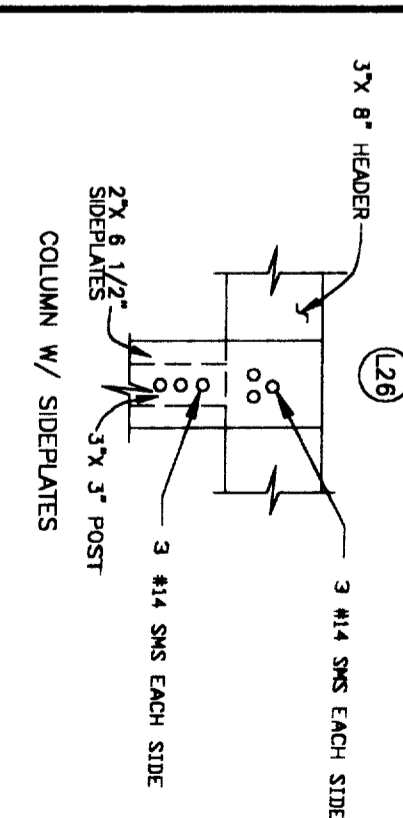
L27 ALUMINUM FOOTING BRACKET FOR CONNECTING POST TO SLAB OR FOOTING (6063-T6 ALUM. ALLOY)



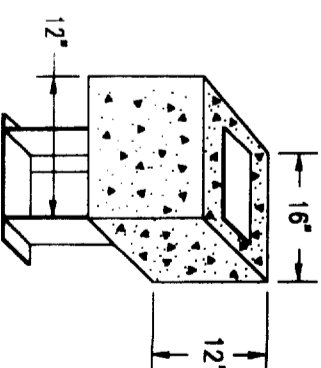
L25 70 & 90 MPH WIND SPEED



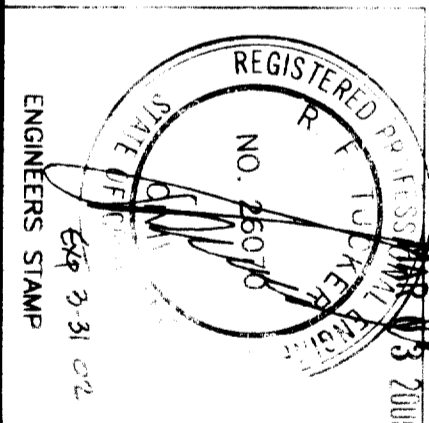
L16 HEADER SPLICE DETAIL



L26



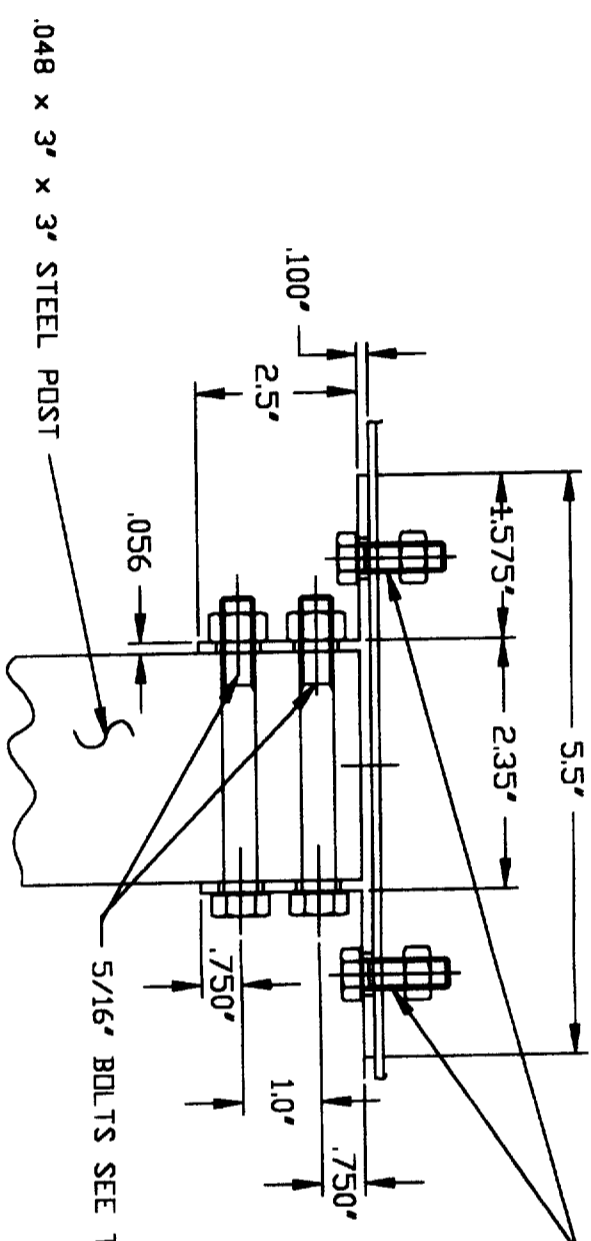
L33 SAFETY STAKE IN CONCRETE FOOTING



| DATE     | REVISION | DATE | REVISION |
|----------|----------|------|----------|
| 2/8/2000 |          |      |          |

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DRAWING OR PART NUMBER: 97LT04  
 SHEET: 4 OF 4

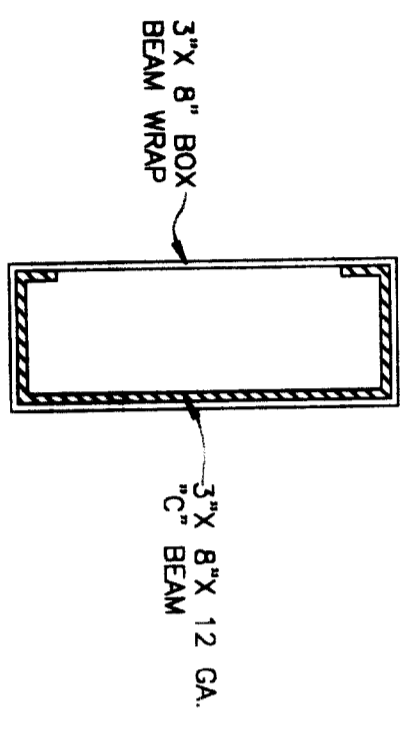


5/16" BOLTS W/ 1" DIA. x 3/32" THK. STL. WASHER TO 8" STEEL 'C' BEAM SEE TABLE 8.4 COLUMN E4 FOR QUANTITY

.048 x 3' x 3' STEEL POST

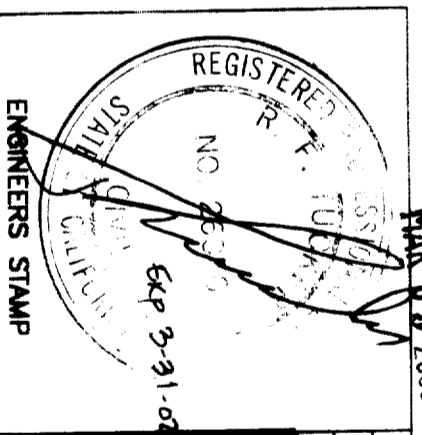
(AN) ALTERNATE 3" SQ. COLUMN CONNECTOR BRACKET (6063-T6 ALUM. ALLOY)

DETAIL 3" X 8" - 1 FOR ATTACHED STRUCTURES COLUMN TO WRAPPED 3" X 8" X 12 GA. 'C' BEAM HEADER CONNECTIONS



(L23) 3" X 12" X 12 GA. STL. 'C' BEAM WRAP W/ 3" X 8" ALUM. BOX BEAM

MAR 03 2000



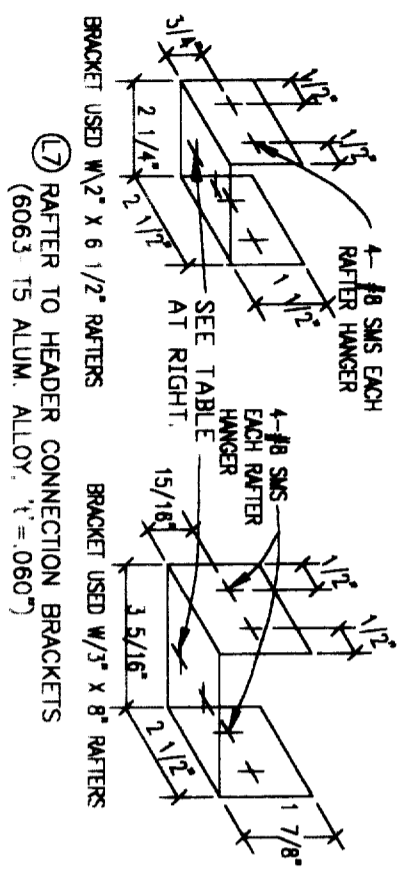
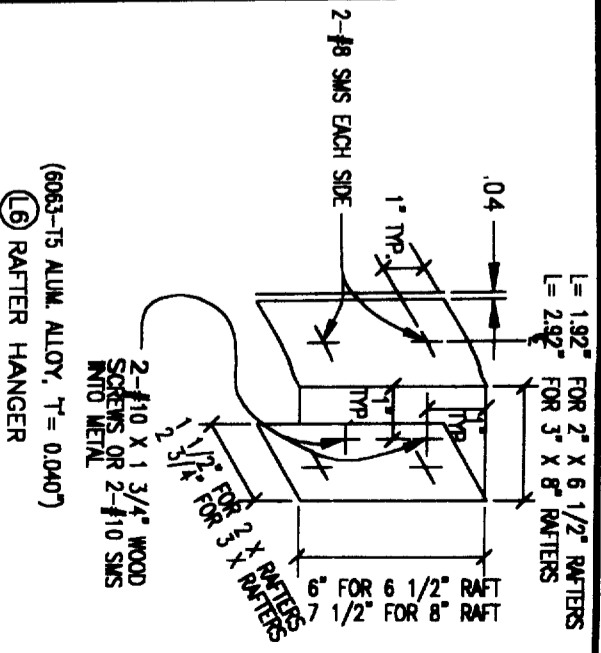
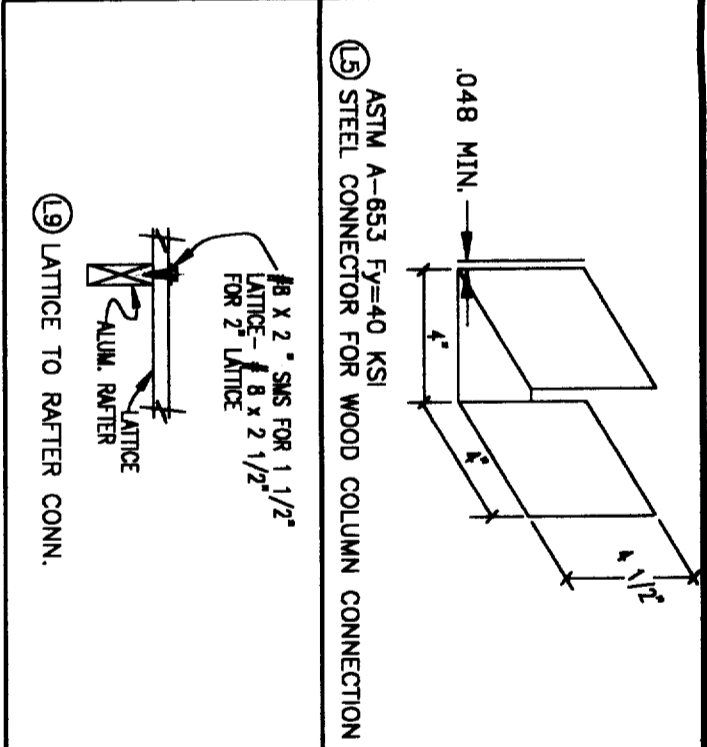
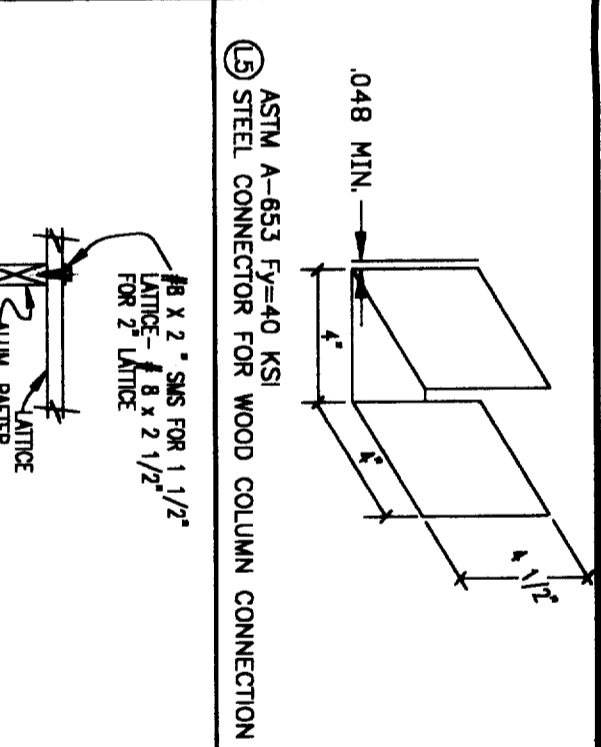
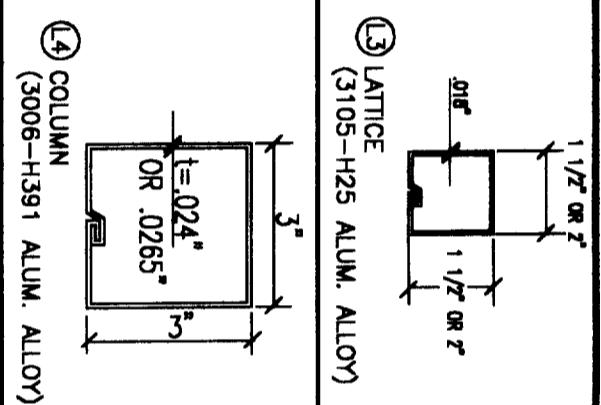
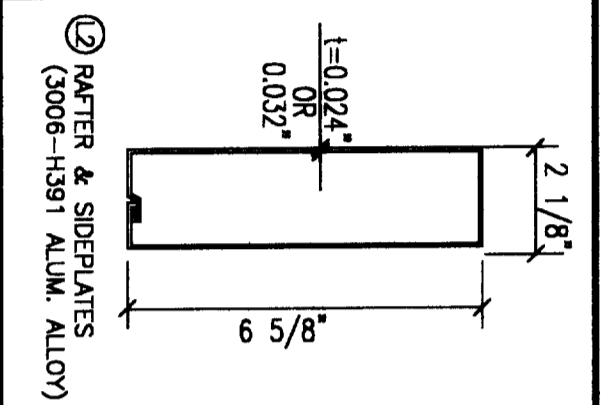
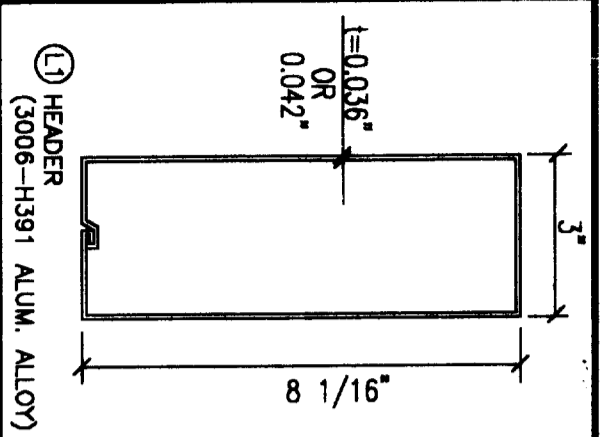
| DATE | REVISION | DATE | REVISION |
|------|----------|------|----------|
|      |          |      |          |
|      |          |      |          |

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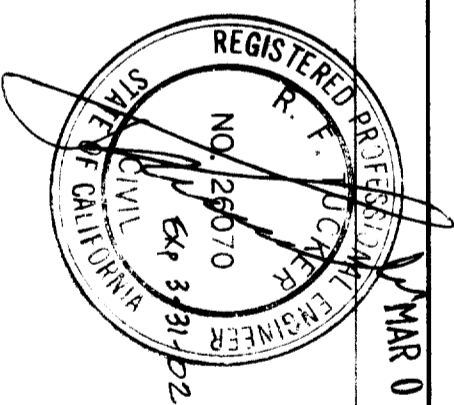
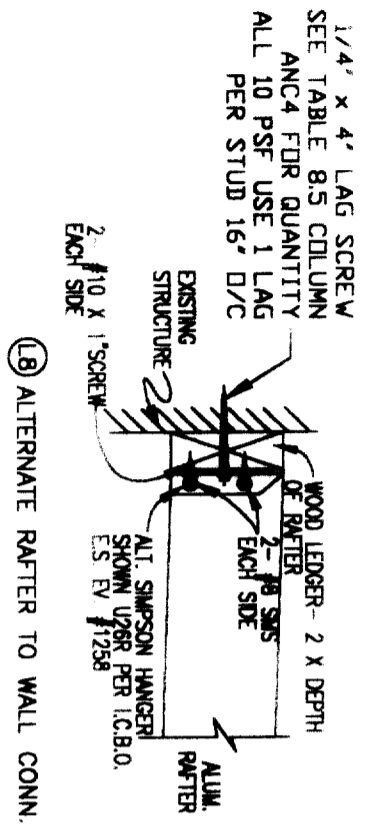
DRYAN BT: KG  
 SCALE: NONE  
 DATE: 2/8/2000

DRAWING COMPONENT PARTS & CONNECTION DETAILS FOR PATIO & COMMERCIAL LATTICE STRUCTURES  
 DATE: 9/7/03  
 SHEET 3 OF 4

ICB0 ES EVALUATION REPORT NO. ER-2621P



| HEADER GAGE | HEADER     | DETAIL | MAXIMUM WIND LOAD    | MAX TRIB   | FASTENING                                    |
|-------------|------------|--------|----------------------|------------|--|
| .042        | 3' x 8"    | L1     | 90 MPH PATID         | 6'         | 2-#8 SMS EACH BRKT.<br>3-#8 SMS EACH BRKT.   |
| .036        | 3' x 8"    | L1     | 90 MPH PATID         | 5'         | 2-#8 SMS EACH BRKT.<br>4-#8 SMS EACH BRKT.   |
| .032        | DBL 2 x 6  | L11    | 90 MPH PATID         | 10'        | 3-#8 SMS EACH BRKT.                          |
| .094        | 8" STEEL C | L23    | 90 MPH C<br>90 EXP C | 22'<br>10' | 2-#14 SMS EACH BRKT.<br>2-#14 SMS EACH BRKT. |



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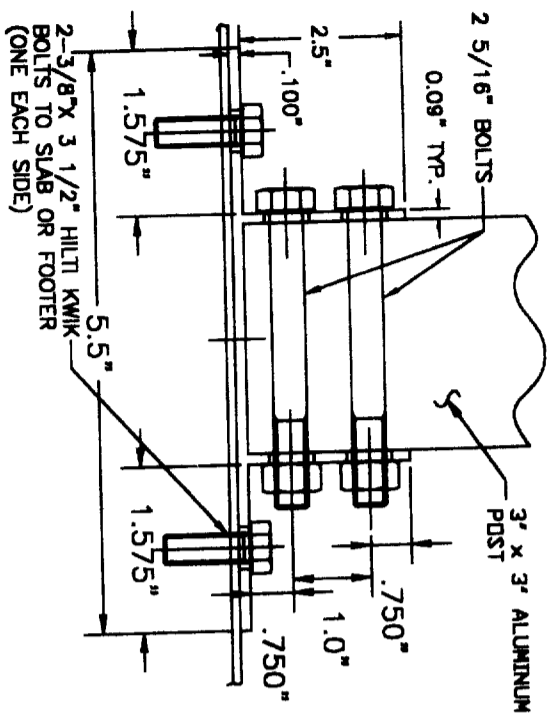
ICBO ES EVALUATION REPORT NO. ER-2621P

DATE: 2/8/2000

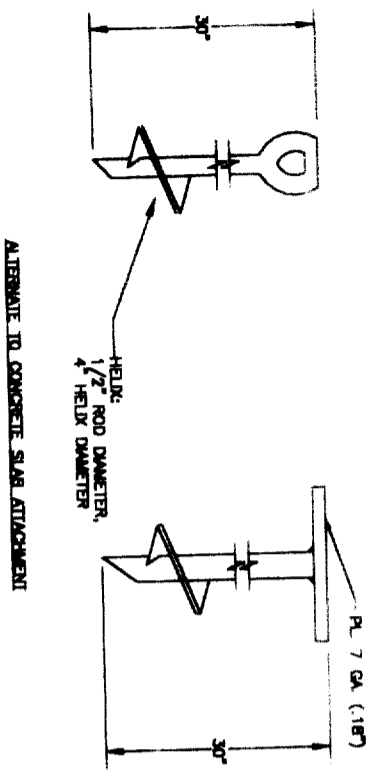
REVISION: 97LT01

SHEET: 1 OF 4





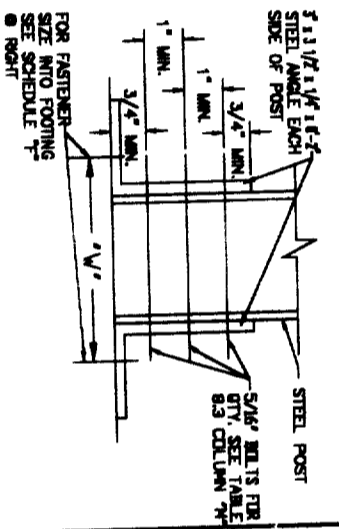
AN ALTERNATE 3" SQ. COLUMN CONNECTOR BRACKET (6063-T6 ALUM. ALLOY)



ALTERNATE TO CONCRETE SLAB ATTACHMENT

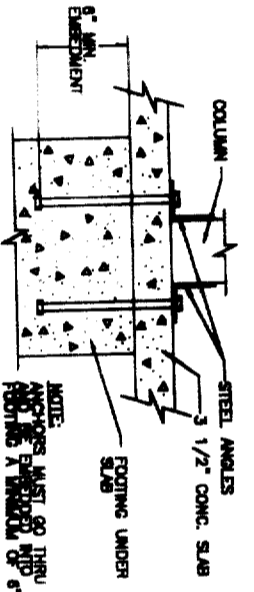
- NOTES:
1. ALL PARTS TO BE HOT-DIP GALVANIZED OR ELECTROPLATED ZINC. MAY BE USED IN LIEU OF ATTACHING TO CONCRETE SLAB.
  2. FABRICATION OF AWNING ANCHORS AND SAFETY STAKES IS BEYOND THE SCOPE OF THIS REPORT. FABRICATION DETAILS AND QUANTITY CONTROL PROGRAM MUST BE SUBMITTED TO BUILDING OFFICIAL FOR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

AS AWNING ANCHOR

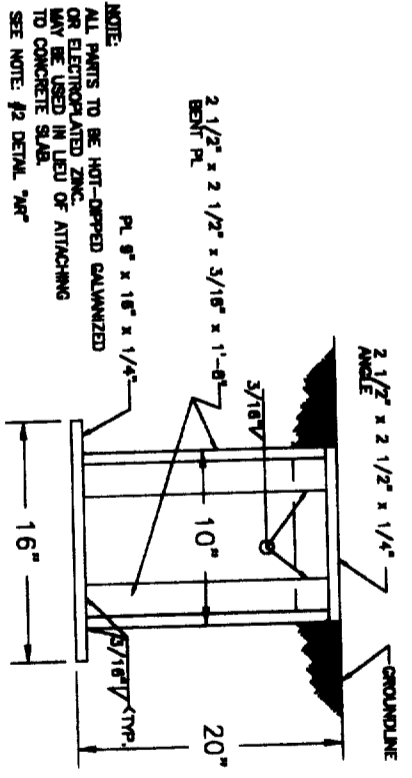


AS ATTACHED STRUCTURE COLUMN TO FOOTING CONNECTION DETAIL. \*d\* = 18" TO 32" HILTI FASTENER ALTERNATE

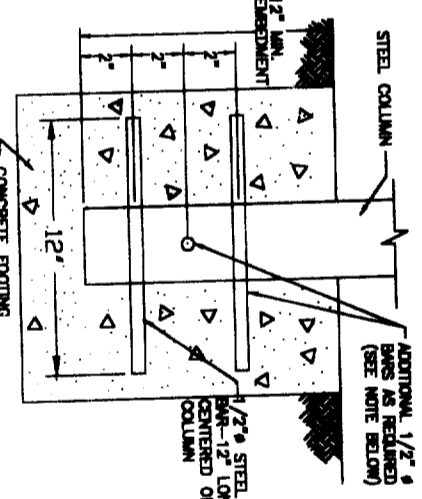
| REQUIRED "w" (WIDTH) | MINIMUM "w" (WIDTH) | FASTENER SIZE |
|----------------------|---------------------|---------------|
| 1/4"                 | 3"                  | 1/4"          |
| 3/8"                 | 4 1/2"              | 3/8"          |
| 1/2"                 | 6"                  | 1/2"          |
| 5/8"                 | 7 1/2"              | 5/8"          |
| 3/4"                 | 9"                  | 3/4"          |



AI COLUMN CONNECTION DETAIL FOR SLAB & FOOTING ATTACHMENT



AP SAFETY STAKE (ALTERNATE TO CONCRETE SLAB ATTACHMENT)

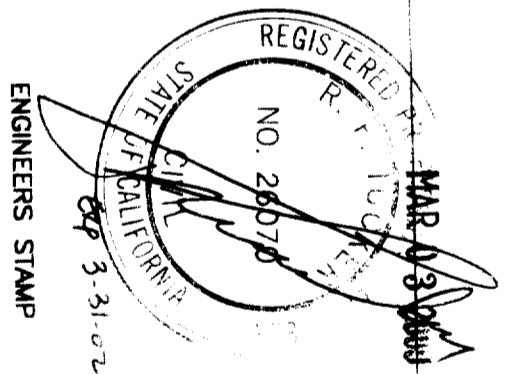


AI ALTERNATE FREESTANDING STRUCTURE COLUMN TO FOOTING CONNECTION DETAIL

| SCHEDULE "d" - COLUMN TO FOOTING CONNECTIONS FOR 18" TO 42" FOOTING SIZES | FOOTING SIZE (OR EQUIV.) | FASTENER CONNECTION TO COLUMN TUBE | REQUIRED TENSION FOR ANCHOR BOLTS |
|---|--------------------------|------------------------------------|-----------------------------------|
| *d* = 18"   | 2-1/4" x 2" d            | 1-5/16" BOLT                       | 430#                              |
| 20"   | 2-3/8" x 2 1/2"          | 1-5/16" BOLT                       | 580#                              |
| 22"   | 2-5/16" BOLTS            | 2-5/16" BOLT                       | 850#                              |
| 24"   | 2-3/8" BOLTS             | 2-3/8" BOLTS                       | 790#                              |
| 26"   | 2-1/2" x 3 1/2"          | 3-5/16" BOLTS                      | 1330#                             |
| 28"   |                          |                                    | 1330#                             |
| 30"   |                          |                                    | 1670#                             |
| 32"   | 2-5/8" x 4" d            |                                    | 2080#                             |
| 34"   |                          |                                    | N/A                               |
| 36"   |                          |                                    | N/A                               |
| 38"   |                          |                                    | N/A                               |
| 40"   |                          |                                    | N/A                               |
| 42"   | 3-3/8" BOLTS             |                                    | N/A                               |

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

AV FOOTING SCHEDULE



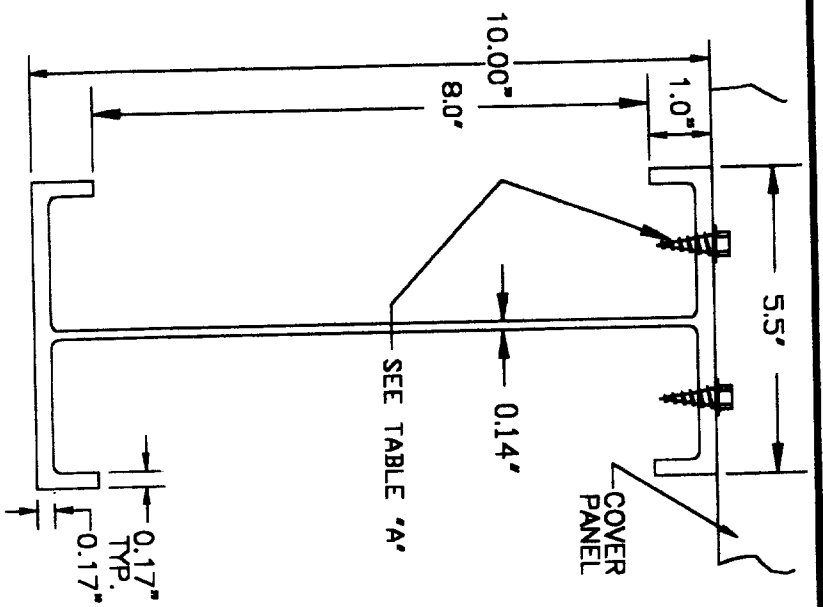
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ICBO ES EVALUATION REPORT NO ER-2621P

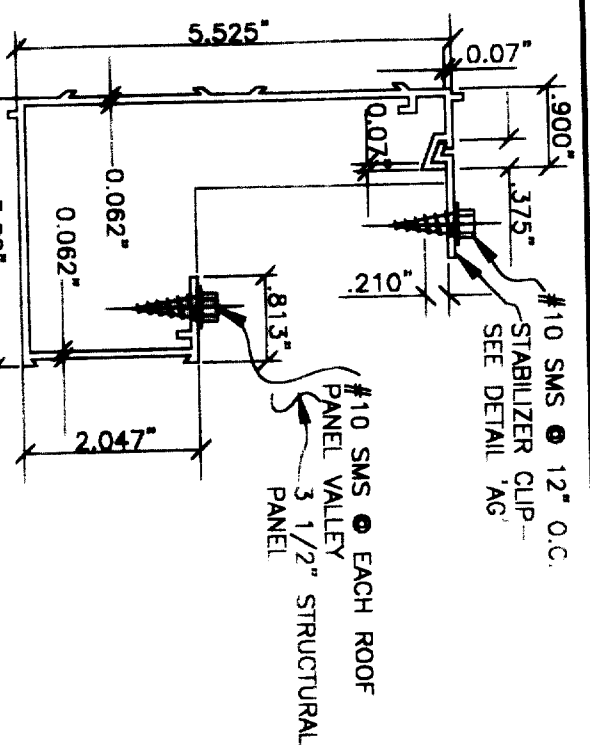
DATE: 2/8/2000

REVISION: 97CD06

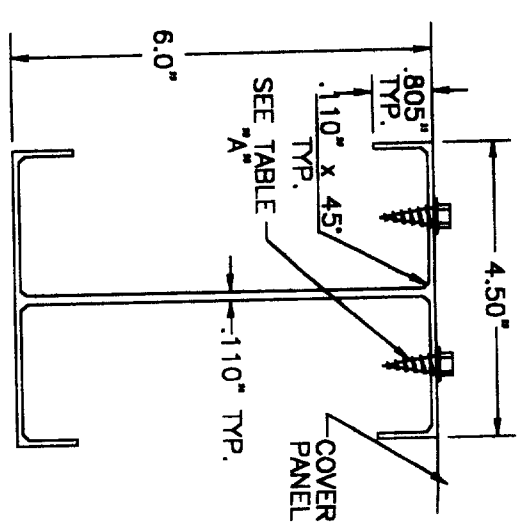
SHEET: 6 OF 9



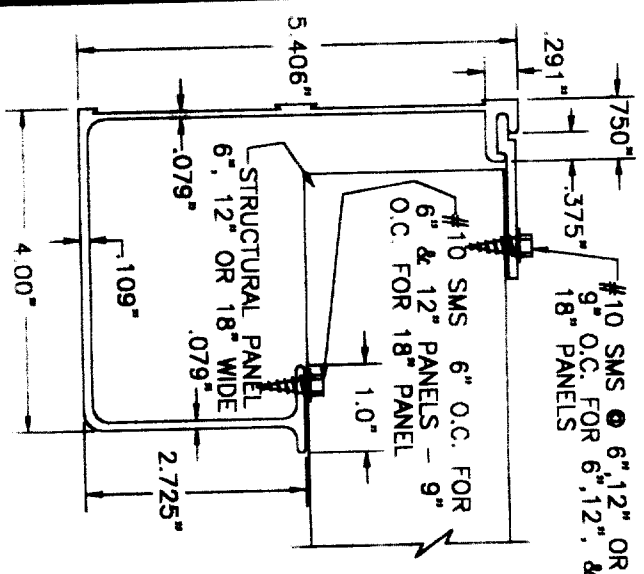
Y 10" X 5 1/2" W BEAM HEADER  
(6061-T6 ALUM. ALLOY)



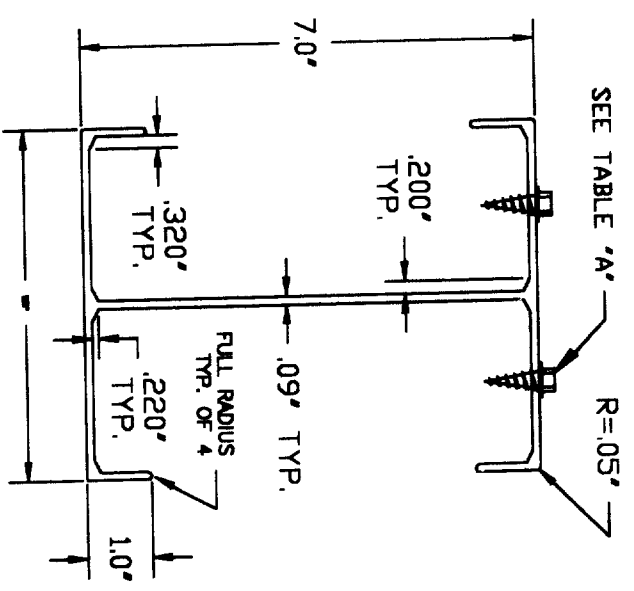
AC 5 1/2" EXTRUDED HEADER  
(6061-T6 ALUM. ALLOY)



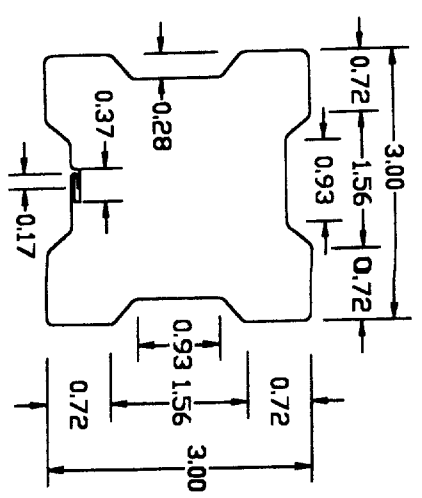
Z 6" W BEAM HEADER  
(6061-T6 ALUM. ALLOY)



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



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



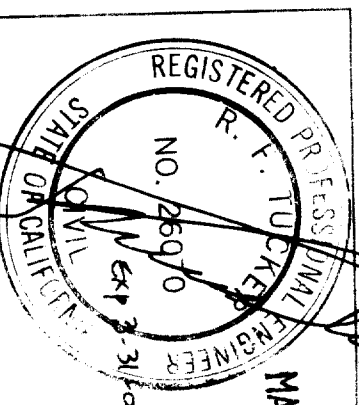
AB 3" X 3" HEADER (STEEL)  
(A-653 Fy=40 KSI STEEL)

FASTENERS REQUIRED FOR PANEL TO HEADER CONNECTIONS

| MAX. WIND LOAD | HEADER DESCRIPTION                        | MAX. TRIB WIDTH | FASTENING SCHEDULE      | NOTE'S |
|----------------|---|-----------------|-------------------------|--------|
| 90 MPH PATID   | ALL FASCIA STEEL CLOVER, C BEAMS, I BEAMS | 10'             | 2-#10 SMS PER 12" PANEL |        |
| 70 MPH EXP C   | ALL FASCIA STEEL CLOVER, C BEAMS, I BEAMS | 12'             | 2-#14 SMS PER 12" PANEL |        |
| AND            | STEEL CLOVER, C BEAMS, I BEAMS            | 21'             | 3-#14 SMS PER 12" PANEL |        |
| 90 MPH EXP B   | STEEL CLOVER, C BEAMS, I BEAMS            | 10'             | 2-#10 SMS PER 12" PANEL | SEE #1 |
| AND            | STEEL CLOVER, C BEAMS, I BEAMS            | 16'             | 3-#14 SMS PER 12" PANEL | SEE #2 |
| 90 MPH EXP C   | ALL FASCIA STEEL CLOVER, C BEAMS, I BEAMS | 10'             | 2-#14 SMS PER 12" PANEL | SEE #1 |
|                | STEEL CLOVER, C BEAMS, I BEAMS            | 16'             | 4-#14 SMS PER 12" PANEL | SEE #2 |
|                | STEEL CLOVER, C BEAMS, I BEAMS            | 16'             | 3-#14 SMS PER 12" PANEL | SEE #2 |

AE 6" PANEL USE 50% LESS SCREWS  
18" PANEL USE 50% MORE SCREWS

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

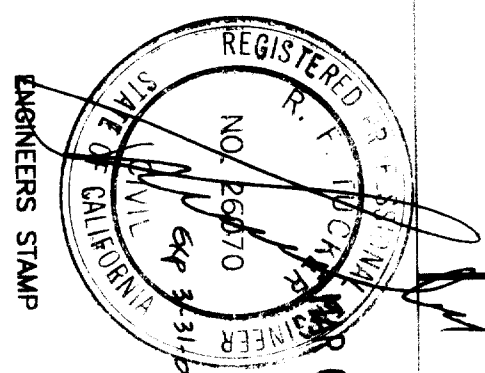
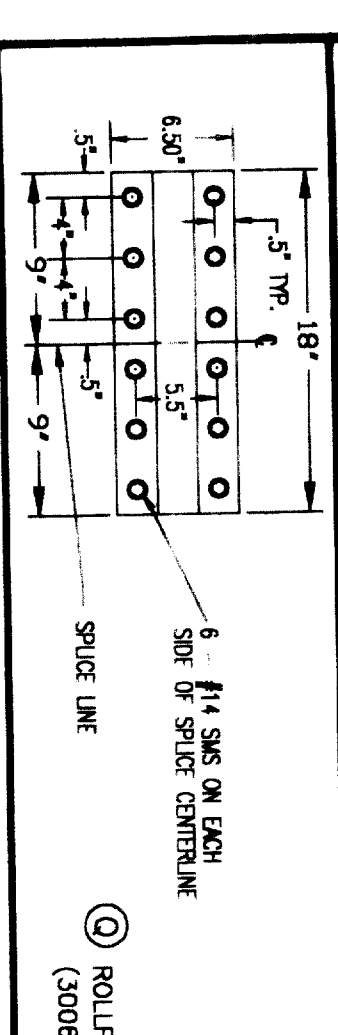
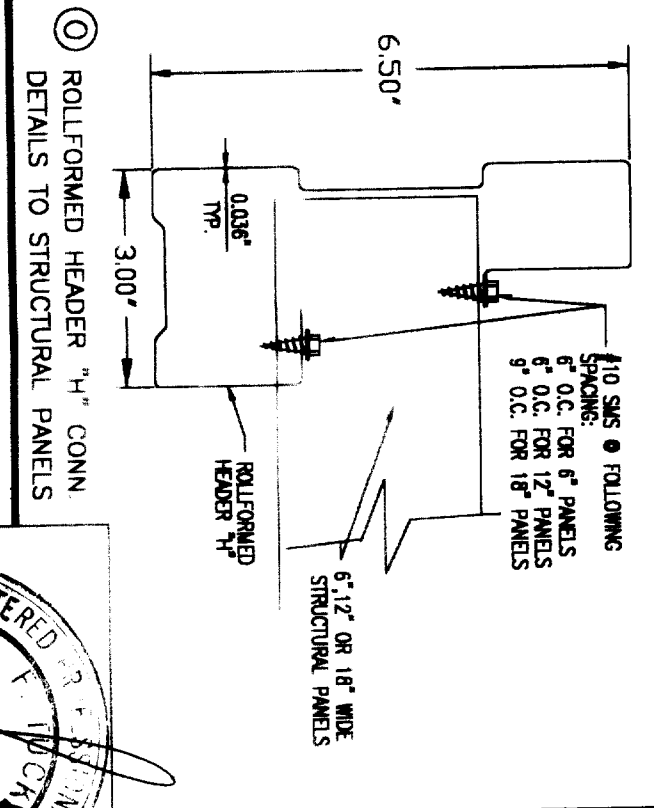
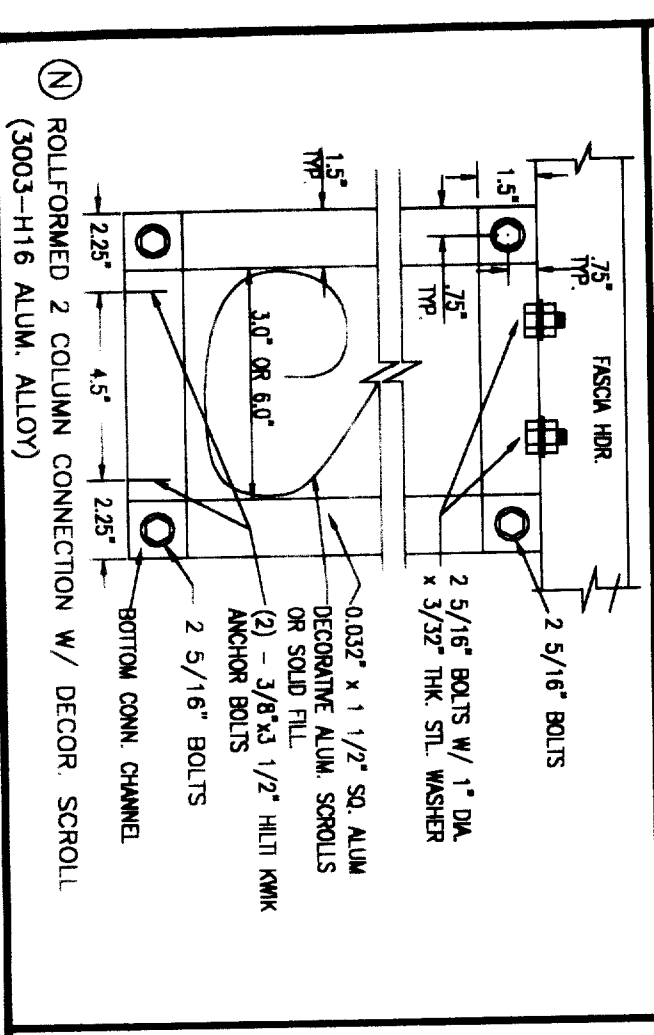
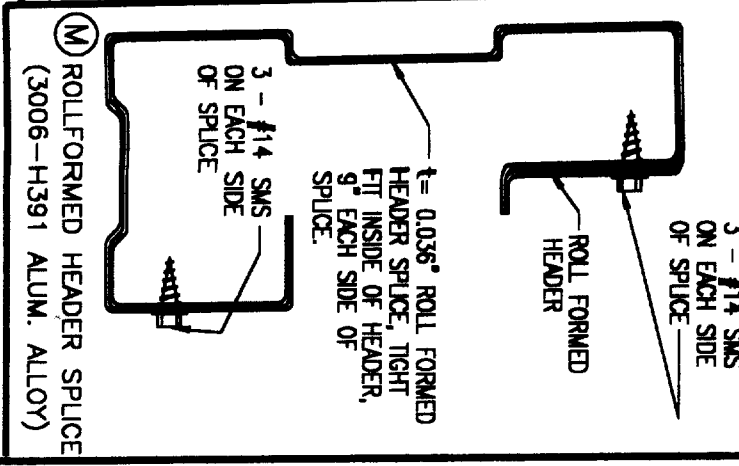
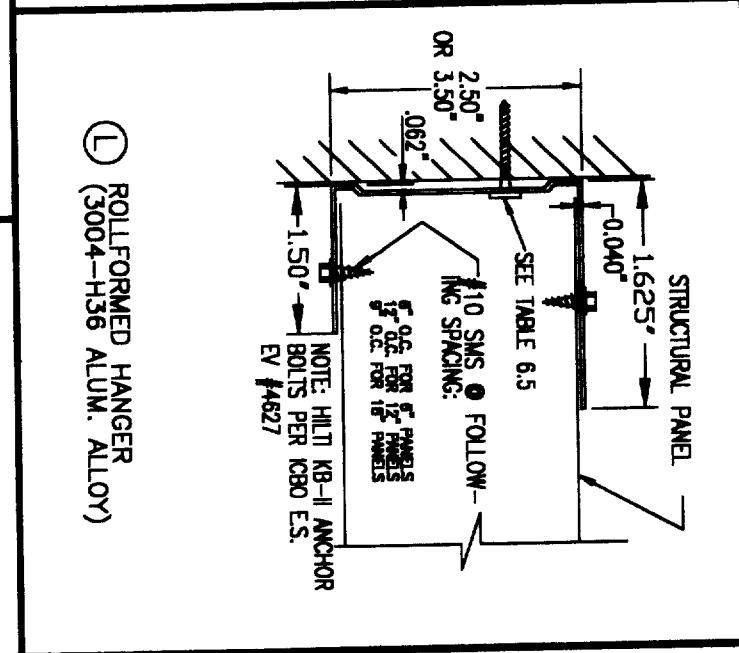
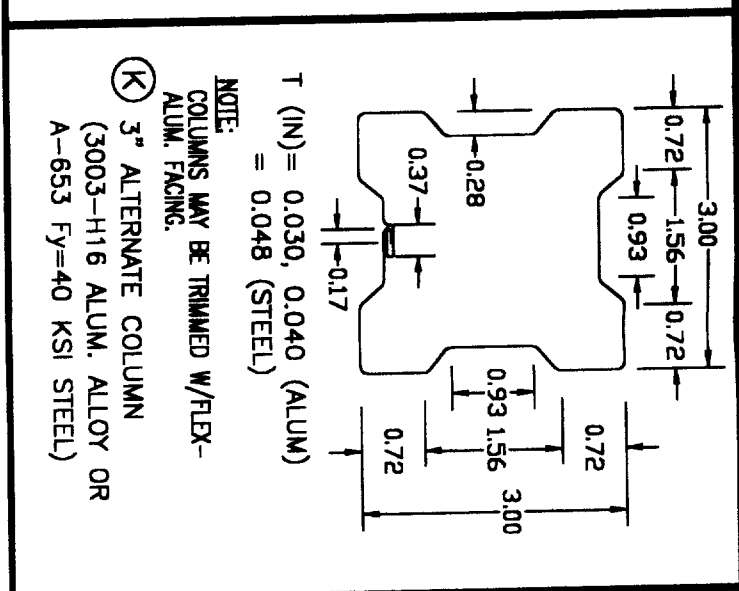
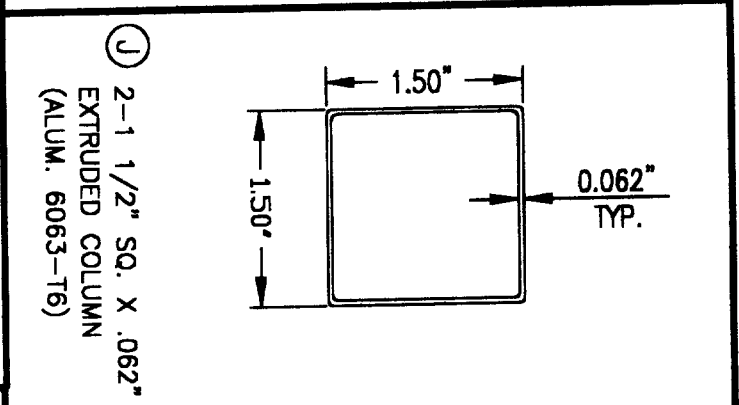
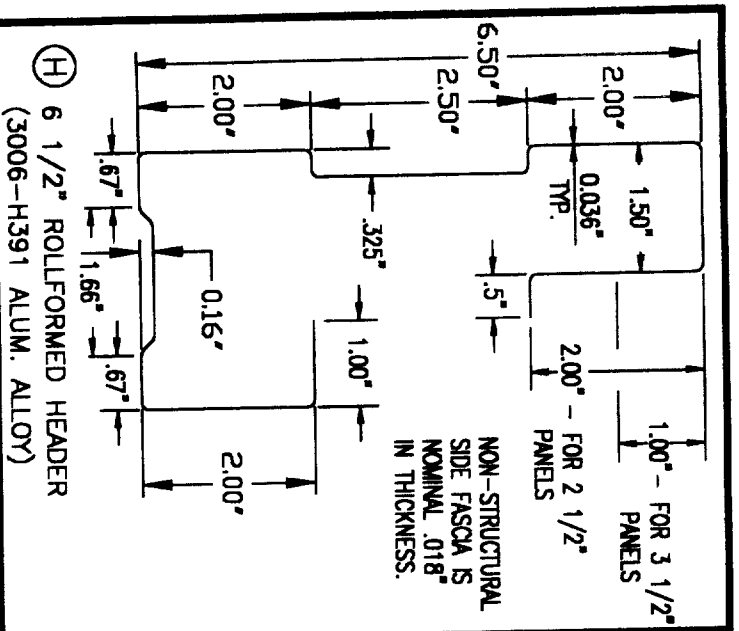


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| MAR 03 2000 |          |      |          |

|                |  |
|----------------|--|
| DRAWN BY: KG   | ICBO ES EVALUATION REPORT NO. ER-2621P               |
| SCALE: NONE    | DRAWING OR PART COMPONENT PARTS & CONNECTION DETAILS |
| DATE: 2/8/2000 | REVISION NUMBER: 97CDD04                             |
|                | SHEET: 4 OF 9  |





| DATE    | REVISION | DATE | REVISION |
|---------|----------|------|----------|
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DRAWN BY: KG  
 SCALE: NONE  
 DATE: 2/8/2000

DRAWING OR PART NAME: ICBO ES EVALUATION REPORT NO. ER-2621P  
 PART NUMBER: 97CD02

SHEET: 2 OF 9

**6.0 COLUMN AND FASTENER REQUIREMENTS FOR COMMERCIAL AND PATIO STRUCTURES**

| Column Spacing multiplied by Trib Width | Lattice Tributary Area (sq ft) | Solid Cover Tributary Area (sq ft) | Minimum Column Required for Attached Structures |    |    |    |    |    |
|---|--------------------------------|------------------------------------|---|----|----|----|----|----|
|   |                                |                                    | 10  | 20 | 25 | 30 | 40 | 60 |
| 23                                      | 15                             | 15                                 | A1  | A1 | A1 | A1 | A2 | C  |
| 31                                      | 20                             | 20                                 | A1  | A1 | A1 | A2 | B  | C  |
| 37                                      | 24                             | 24                                 | A1  | A1 | A2 | B  | C  | C  |
| 44                                      | 29                             | 29                                 | A1  | A2 | B  | C  | C  | D  |
| 55                                      | 36                             | 36                                 | A1  | B  | C  | C  | C  | D  |
| 62                                      | 40                             | 40                                 | A1  | C  | C  | C  | C  | D  |
| 69                                      | 45                             | 45                                 | A1  | C  | C  | C  | C  | D  |
| 77                                      | 50                             | 50                                 | A1  | C  | C  | C  | C  | D  |
| 85                                      | 55                             | 55                                 | A2  | C  | C  | C  | C  | D  |
| 92                                      | 60                             | 60                                 | A2  | C  | C  | C  | C  | D  |
| 100                                     | 65                             | 65                                 | A2  | C  | C  | C  | C  | D  |
| 105                                     | 68                             | 68                                 | B   | C  | C  | C  | C  | D  |
| 108                                     | 70                             | 70                                 | C   | C  | C  | C  | C  | D  |
| 116                                     | 75                             | 75                                 | C   | C  | C  | C  | C  | D  |
| 123                                     | 80                             | 80                                 | C   | C  | C  | C  | C  | D  |
| 138                                     | 90                             | 90                                 | C   | C  | C  | C  | C  | D  |
| 154                                     | 100                            | 100                                | C   | C  | C  | C  | C  | D  |
| 185                                     | 120                            | 120                                | C   | C  | C  | C  | C  | F  |
| 216                                     | 140                            | 140                                | C   | C  | C  | C  | C  | F  |
| 246                                     | 160                            | 160                                | D   | E  | E  | E  | E  | F  |
| 277                                     | 180                            | 180                                | D   | E  | E  | E  | E  | F  |
| 308                                     | 200                            | 200                                | D   | E  | E  | E  | F  | F  |
| 338                                     | 220                            | 220                                | E   | E  | E  | F  | F  | F  |
| 385                                     | 250                            | 250                                | E   | E  | F  | F  | F  | F  |
| 492                                     | 320                            | 320                                | E   | F  | F  | F  | F  | F  |
| 616                                     | 400                            | 400                                | E   | F  | F  | F  | F  | F  |
| 692                                     | 480                            | 480                                | E   | F  | F  | F  | F  | F  |
| 769                                     | 500                            | 500                                | E   | F  | F  | F  | F  | F  |
| 923                                     | 600                            | 600                                | F   | G  | G  | G  | G  | H  |

Table 6.1

| COLUMN TYPE | COLUMN DESCRIPTIONS                       | DETAIL | MAX COL HGT |
|-------------|---|--------|-------------|
| A1          | 0.024" x 3" SQUARE ALUM COLUMN            | F      | 10'-6"      |
| A2          | 0.024" x 3" SQUARE ALUM COLUMN            | F      | 8'-0"       |
| B           | 0.032" x 1 1/2" SQUARE ALUM SCROLL COLUMN | E, N   | 8'-0"       |
| B           | 0.027" x 3" SQUARE ALUM COLUMN            | F      | 11'-4"      |
| C           | 3" CLOVERLEAF ALUM. 0.040"                | K      | 12'-0"      |
| D           | FLUTED COLUMN ALUM. 0.062"                | U      | 12'-0"      |
| E           | 3" CLOVERLEAF STEEL 0.048"                | K      | 8'-7"       |
| F           | 3" SQUARE STEEL COLUMN                    | X      | 18'-0"      |
| G           | 4" SQUARE STEEL COLUMN                    | X      | 18'-0"      |
| H           | 5" SQUARE STEEL COLUMN                    | X      | 18'-0"      |
| J           | 6" SQUARE STEEL COLUMN                    | X      | 18'-0"      |

Table 6.2

Table 6.3: Required Number of Fasteners for Shearing Loads

| Slab | Footer Design | Footer Size d (in) | Aluminum Material Gauge (in) |     |     |     |     |     |     |     |   |   | Steel Gauge (in) |   |   |   |   |
|------|---------------|--------------------|------------------------------|-----|-----|-----|-----|-----|-----|-----|---|---|------------------|---|---|---|---|
|      |               |                    | A                            | B   | C   | D   | E   | F   | G   | H   | I | J | K                | L |   |   |   |
| 26   | 765           | 6                  | 6                            | 2   | 2   | 2   | 4   | 4   | 4   | 2   | 2 | 3 | 3                | 3 | 3 | 1 | 1 |
| 27   | 856           | 6                  | 6                            | 3   | 3   | 2   | 2   | 4   | 4   | 4   | 2 | 2 | 3                | 3 | 3 | 1 | 1 |
| 28   | 955           | 7                  | 7                            | 3   | 3   | 2   | 2   | 5   | 5   | 4   | 2 | 2 | 4                | 4 | 1 | 1 | 1 |
| 29   | 1061          | 8                  | 8                            | 3   | 3   | 3   | 3   | 5   | 5   | 5   | 2 | 2 | 4                | 4 | 1 | 1 | 1 |
| 30   | 1175          | 8                  | 8                            | 4   | 4   | 4   | 4   | 6   | 6   | 5   | 2 | 2 | 5                | 5 | 1 | 1 | 1 |
| 31   | 1296          | 9                  | 9                            | 4   | 4   | 3   | 3   | 6   | 6   | 6   | 3 | 3 | 5                | 5 | 2 | 2 | 2 |
| 32   | 1426          | n/a                | n/a                          | 4   | 4   | 3   | 3   | 7   | 7   | 6   | 3 | 3 | 5                | 5 | 2 | 2 | 2 |
| 33   | 1564          | n/a                | n/a                          | 5   | 5   | 4   | 4   | 8   | 8   | 7   | 3 | 3 | 6                | 6 | 3 | 3 | 3 |
| 34   | 1710          | n/a                | n/a                          | 5   | 5   | 4   | 4   | 9   | 9   | 8   | 3 | 3 | 7                | 7 | 4 | 4 | 4 |
| 35   | 1866          | n/a                | n/a                          | 5   | 5   | 4   | 4   | 9   | 9   | 8   | 3 | 3 | 7                | 7 | 4 | 4 | 4 |
| 36   | 2030          | n/a                | n/a                          | 6   | 6   | 5   | 5   | n/a | 9   | 9   | 4 | 4 | 8                | 8 | 5 | 5 | 5 |
| 37   | 2204          | n/a                | n/a                          | 6   | 6   | 5   | 5   | n/a | 9   | 9   | 4 | 4 | 8                | 8 | 5 | 5 | 5 |
| 38   | 2388          | n/a                | n/a                          | 7   | 7   | 6   | 6   | n/a | n/a | n/a | 4 | 4 | 9                | 9 | 6 | 6 | 6 |
| 39   | 2581          | n/a                | n/a                          | 7   | 7   | 6   | 6   | n/a | n/a | n/a | 4 | 4 | 9                | 9 | 6 | 6 | 6 |
| 40   | 2785          | n/a                | n/a                          | 8   | 8   | 6   | 6   | n/a | n/a | n/a | 5 | 5 | 9                | 9 | 7 | 7 | 7 |
| 41   | 2999          | n/a                | n/a                          | 8   | 8   | 6   | 6   | n/a | n/a | n/a | 5 | 5 | 9                | 9 | 7 | 7 | 7 |
| 42   | 3224          | n/a                | n/a                          | 9   | 9   | 7   | 7   | n/a | n/a | n/a | 6 | 6 | 9                | 9 | 8 | 8 | 8 |
| 43   | 3459          | n/a                | n/a                          | 9   | 9   | 7   | 7   | n/a | n/a | n/a | 6 | 6 | 9                | 9 | 8 | 8 | 8 |
| 44   | 3706          | n/a                | n/a                          | n/a | n/a | 8   | 8   | n/a | n/a | n/a | 6 | 6 | 9                | 9 | 8 | 8 | 8 |
| 45   | 3965          | n/a                | n/a                          | n/a | n/a | 8   | 8   | n/a | n/a | n/a | 6 | 6 | 9                | 9 | 8 | 8 | 8 |
| 46   | 4235          | n/a                | n/a                          | n/a | n/a | 9   | 9   | n/a | n/a | n/a | 7 | 7 | 9                | 9 | 9 | 9 | 9 |
| 47   | 4518          | n/a                | n/a                          | n/a | n/a | 9   | 9   | n/a | n/a | n/a | 7 | 7 | 9                | 9 | 9 | 9 | 9 |
| 48   | 4812          | n/a                | n/a                          | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 8 | 8 | 9                | 9 | 9 | 9 | 9 |
| 49   | 5119          | n/a                | n/a                          | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 8 | 8 | 9                | 9 | 9 | 9 | 9 |
| 50   | 5439          | n/a                | n/a                          | n/a | n/a | n/a | n/a | n/a | n/a | n/a | 9 | 9 | 9                | 9 | 9 | 9 | 9 |

Table 6.4: Required Number of Fasteners for Tension Loads

| Slab | Footer Design | Footer Size d (in) | Aluminum Gauge (in) |     |   |   |   |   |   |   |   |   |   |   |   |   |   |
|------|---------------|--------------------|---------------------|-----|---|---|---|---|---|---|---|---|---|---|---|---|---|
|      |               |                    | K                   | L   | M | N | O | P | Q | R | S | T |   |   |   |   |   |
| 26   | 765           | 6                  | 2                   | 7   | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 27   | 856           | 6                  | 3                   | 8   | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 28   | 955           | 7                  | 3                   | 9   | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 29   | 1061          | 8                  | 3                   | n/a | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 30   | 1175          | 8                  | 3                   | n/a | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 31   | 1296          | 9                  | 4                   | n/a | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 32   | 1426          | n/a                | 4                   | n/a | 2 | 2 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 33   | 1564          | n/a                | 4                   | n/a | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 34   | 1710          | n/a                | 5                   | n/a | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 35   | 1866          | n/a                | 5                   | n/a | 3 | 3 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 36   | 2030          | n/a                | 6                   | n/a | 4 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 37   | 2204          | n/a                | 6                   | n/a | 4 | 4 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 38   | 2388          | n/a                | 7                   | n/a | 5 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 39   | 2581          | n/a                | 7                   | n/a | 5 | 5 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 40   | 2785          | n/a                | 8                   | n/a | 6 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 41   | 2999          | n/a                | 8                   | n/a | 6 | 6 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 42   | 3224          | n/a                | 9                   | n/a | 7 | 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 43   | 3459          | n/a                | 9                   | n/a | 7 | 7 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 44   | 3706          | n/a                | 9                   | n/a | 8 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 45   | 3965          | n/a                | 9                   | n/a | 8 | 8 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 46   | 4235          | n/a                | 9                   | n/a | 9 | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 47   | 4518          | n/a                | 9                   | n/a | 9 | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 48   | 4812          | n/a                | 9                   | n/a | 9 | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 49   | 5119          | n/a                | 9                   | n/a | 9 | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 50   | 5439          | n/a                | 9                   | n/a | 9 | 9 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

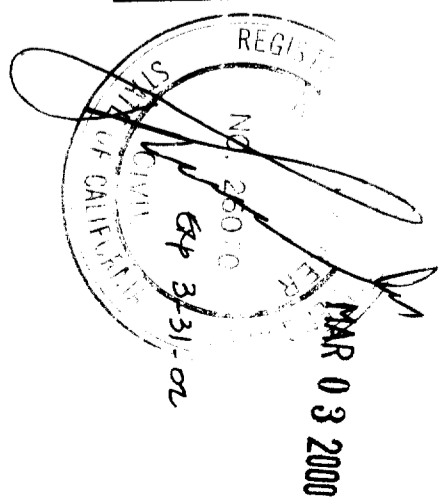
- Spacing between bolts and screws shall be 2.5 times the shank diameter
- The edge distance of bolts and screws shall be 3 times the shank diameter
- Connectors shall be arranged so that the center of resistance of the connection shall coincide with the resultant line of action of the load.

Fastener Terminology:  
 #14 SMS = #14 sheet metal or Tek screw, 3/4" minimum length  
 5/16" B = 5/16" Diameter Bolt  
 See General Notes for specifics on fasteners

- Clearspan on this chart is the distance from the wall to the first row of columns
- Mini Kwik Bolt II 1/4" diameter and 2" embedment. (CBO ER-462) or other anchor w/ 550# shear vs wind and seismic loads
- Masonry anchors must have a shear value of 250# for wind or seismic loads.
- 1/4" Lag screws must have 2 1/4" of penetration into studs. These lag screws must have an 1/8" lead hole.
- 10 psf evaluated at 90 mph wind load (15 psf) All other loads evaluated at 90 mph exposure C.

TABLE 6.5: WALL ATTACHMENTS FOR PATIO AND COM. STRUCTURES

| LIVE LOAD (PSF) | ANC 1       |                  | ANC 2       |                 | ANC 3       |                         | ANC 4           |   |
|-----------------|-------------|------------------|-------------|-----------------|-------------|-------------------------|-----------------|---|
|                 | SPACING O/C | CONCRETE ANCHORS | SPACING O/C | MASONRY ANCHORS | SPACING O/C | FOR #10 X 2" SMS SCREWS | CLEAR-SPAN (FT) | # OF 1/4" LAG SCREWS PER STUD 16" O/C SPACING |
| 10              | 24"         | 24"              | 24"         | 24"             | 16"         | 22"                     | 1               | 1   |
| 20              | 24"         | 24"              | 16"         | 16"             | 8"          | 11"                     | 1               | 1   |
| 25              | 24"         | 24"              | 15"         | 15"             | 8"          | 11"                     | 1               | 1   |
| 30              | 24"         | 24"              | 14"         | 14"             | 8"          | 10"                     | 1               | 1   |
| 40              | 24"         | 24"              | 12"         | 12"             | 8"          | 13"                     | 2               | 2   |
| 60              | 16"         | 16"              | 10"         | 10"             | 4"          | 11"                     | 2               | 2   |

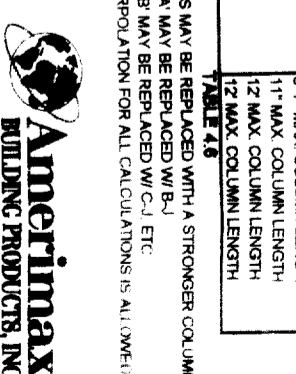
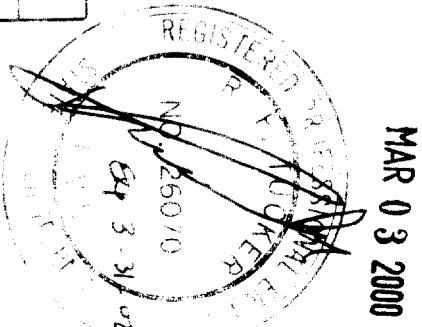


**4.0 FREESTANDING AND ATTACHED LATTICE PATIO STRUCTURES**

| LIVE LOAD | TRIB WIDTH | MAXIMUM COLUMN SPACING       |  | 3" x 8" STEEL C BEAM |         | MAX. COLUMN SPACING | CONS. FOOTING SIZE | ATTACHED | MIN. COLUMN | TYPE |     |     |
|-----------|------------|------------------------------|--|----------------------|---------|---------------------|--------------------|----------|-------------|------|-----|-----|
|           |            | FOR ATTACHED LATTICE ON SLAB | HEADER MUST BE ABLE TO SPAN USING COLUMN X-Y | FREE                 | FTR     |                     |                    |          |             |      | MIN | MAX |
| 10        | 70 MPH     | 10                           | 21'-1"                                       | 22'-0"               | 25'-7"  | 26'-3"              | 27                 | 22       | 22          | C    |     |     |
|           |            | 4                            | 16'-10"                                      | 17'-7"               | 20'-5"  | 21'-0"              | 26'-4"             | 26       | 23          | C    |     |     |
|           |            | 5                            | 14'-1"                                       | 14'-8"               | 17'-0"  | 17'-6"              | 25'-0"             | 26       | 23          | C    |     |     |
|           |            | 6                            | 12'-1"                                       | 12'-7"               | 14'-7"  | 15'-0"              | 22'-2"             | 26       | 24          | C    |     |     |
|           |            | 7                            | 10'-7"                                       | 10'-7"               | 12'-9"  | 13'-1"              | 20'-9"             | 26       | 24          | C    |     |     |
|           |            | 8                            | 9'-4"  | 9'-4"                | 11'-0"  | 11'-8"              | 19'-7"             | 26       | 25          | C    |     |     |
|           |            | 9                            | 8'-5"  | 8'-5"                | 10'-3"  | 10'-6"              | 18'-6"             | 26       | 25          | C    |     |     |
|           |            | 10                           | 7'-8"  | 7'-8"                | 9'-4"   | 9'-4"               | 17'-8"             | 26       | 25          | C    |     |     |
|           |            | 11                           | 7'-0"  | 7'-0"                | 8'-0"   | 8'-9"               | 16'-3"             | 26       | 26          | C    |     |     |
|           |            | 12                           | 6'-6"  | 6'-6"                | 7'-4"   | 8'-1"               | 15'-11"            | 26       | 26          | C    |     |     |
|           |            | 13                           | 6'-0"  | 6'-0"                | 7'-4"   | 8'-1"               | 14'-7"             | 26       | 26          | C    |     |     |
|           |            | 14                           | 5'-7"  | 5'-7"                | 7'-4"   | 8'-1"               | 13'-5"             | 26       | 26          | C    |     |     |
|           |            | 15                           | 5'-3"  | 5'-3"                | 7'-4"   | 8'-1"               | 12'-9"             | 26       | 26          | C    |     |     |
|           |            | 16                           | 5'-0"  | 5'-0"                | 7'-4"   | 8'-1"               | 12'-3"             | 26       | 26          | C    |     |     |
|           |            | 17                           | 4'-8"  | 4'-8"                | 7'-4"   | 8'-1"               | 11'-11"            | 26       | 26          | C    |     |     |
|           |            | 18                           | 4'-5"  | 4'-5"                | 7'-4"   | 8'-1"               | 10'-9"             | 26       | 26          | C    |     |     |
|           |            | 19                           | 4'-3"  | 4'-3"                | 7'-4"   | 8'-1"               | 10'-9"             | 26       | 26          | C    |     |     |
|           |            | 20                           | 4'-1"  | 4'-1"                | 7'-4"   | 8'-1"               | 10'-9"             | 26       | 26          | C    |     |     |
|           |            | 21                           | 4'-0"  | 4'-0"                | 7'-4"   | 8'-1"               | 10'-9"             | 26       | 26          | C    |     |     |
|           |            | 22                           | 4'-0"  | 4'-0"                | 7'-4"   | 8'-1"               | 10'-9"             | 26       | 26          | C    |     |     |
|           |            | 10                           | 80 MPH                                       | 10                   | 21'-1"  | 22'-0"              | 25'-7"             | 26'-3"   | 27          | 22   | 22  | C   |
|           |            |                              |  | 4                    | 16'-10" | 17'-7"              | 20'-5"             | 21'-0"   | 26'-4"      | 26   | 23  | C   |
| 5         | 14'-1"     |                              |  | 14'-8"               | 17'-0"  | 17'-6"              | 25'-0"             | 26       | 23          | C    |     |     |
| 6         | 12'-1"     |                              |  | 12'-7"               | 14'-7"  | 15'-0"              | 22'-2"             | 26       | 24          | C    |     |     |
| 7         | 10'-7"     |                              |  | 10'-7"               | 12'-9"  | 13'-1"              | 20'-9"             | 26       | 24          | C    |     |     |
| 8         | 9'-4"      |                              |  | 9'-4"                | 11'-0"  | 11'-8"              | 19'-7"             | 26       | 25          | C    |     |     |
| 9         | 8'-5"      |                              |  | 8'-5"                | 10'-3"  | 10'-6"              | 18'-6"             | 26       | 25          | C    |     |     |
| 10        | 7'-8"      |                              |  | 7'-8"                | 9'-4"   | 9'-4"               | 17'-8"             | 26       | 25          | C    |     |     |
| 11        | 7'-0"      |                              |  | 7'-0"                | 8'-0"   | 8'-9"               | 16'-3"             | 26       | 26          | C    |     |     |
| 12        | 6'-6"      |                              |  | 6'-6"                | 7'-4"   | 8'-1"               | 15'-11"            | 26       | 26          | C    |     |     |
| 13        | 6'-0"      |                              |  | 6'-0"                | 7'-4"   | 8'-1"               | 14'-7"             | 26       | 26          | C    |     |     |
| 14        | 5'-7"      |                              |  | 5'-7"                | 7'-4"   | 8'-1"               | 13'-5"             | 26       | 26          | C    |     |     |
| 15        | 5'-3"      |                              |  | 5'-3"                | 7'-4"   | 8'-1"               | 12'-9"             | 26       | 26          | C    |     |     |
| 16        | 5'-0"      |                              |  | 5'-0"                | 7'-4"   | 8'-1"               | 12'-3"             | 26       | 26          | C    |     |     |
| 17        | 4'-8"      |                              |  | 4'-8"                | 7'-4"   | 8'-1"               | 11'-11"            | 26       | 26          | C    |     |     |
| 18        | 4'-5"      |                              |  | 4'-5"                | 7'-4"   | 8'-1"               | 10'-9"             | 26       | 26          | C    |     |     |
| 19        | 4'-3"      |                              |  | 4'-3"                | 7'-4"   | 8'-1"               | 10'-9"             | 26       | 26          | C    |     |     |
| 20        | 4'-1"      |                              |  | 4'-1"                | 7'-4"   | 8'-1"               | 10'-9"             | 26       | 26          | C    |     |     |
| 21        | 4'-0"      |                              |  | 4'-0"                | 7'-4"   | 8'-1"               | 10'-9"             | 26       | 26          | C    |     |     |
| 22        | 4'-0"      |                              |  | 4'-0"                | 7'-4"   | 8'-1"               | 10'-9"             | 26       | 26          | C    |     |     |

| LIVE LOAD | TRIB WIDTH | MAXIMUM COLUMN SPACING       |  | 3" x 8" STEEL C BEAM |        | MAX. COLUMN SPACING | CONS. FOOTING SIZE | ATTACHED | MIN. COLUMN | TYPE |
|-----------|------------|------------------------------|--|----------------------|--------|---------------------|--------------------|----------|-------------|------|
|           |            | FOR ATTACHED LATTICE ON SLAB | HEADER MUST BE ABLE TO SPAN USING COLUMN X-Y | FREE                 | FTR    |                     |                    |          |             |      |
| 10        | 90 MPH     | 10                           | 5'-0"  | 5'-2"                | 6'-0"  | 6'-2"               | 29                 | 29       | 29          | C    |
|           |            | 17                           | 4'-8"  | 4'-11"               | 5'-8"  | 5'-10"              | 11'-11"            | 29       | 29          | C    |
|           |            | 18                           | 4'-5"  | 4'-5"                | 5'-5"  | 5'-6"               | 11'-7"             | 29       | 29          | C    |
|           |            | 19                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 20                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 21                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 22                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 23                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 24                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 25                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 26                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 27                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 28                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 29                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 30                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 31                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 32                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 33                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 34                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 35                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 36                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
|           |            | 37                           | 4'-5"  | 4'-5"                | 5'-3"  | 5'-3"               | 11'-7"             | 29       | 29          | C    |
| 38        | 4'-5"      | 4'-5"                        | 5'-3"  | 5'-3"                | 11'-7" | 29                  | 29                 | C        |             |      |
| 39        | 4'-5"      | 4'-5"                        | 5'-3"  | 5'-3"                | 11'-7" | 29                  | 29                 | C        |             |      |
| 40        | 4'-5"      | 4'-5"                        | 5'-3"  | 5'-3"                | 11'-7" | 29                  | 29                 | C        |             |      |

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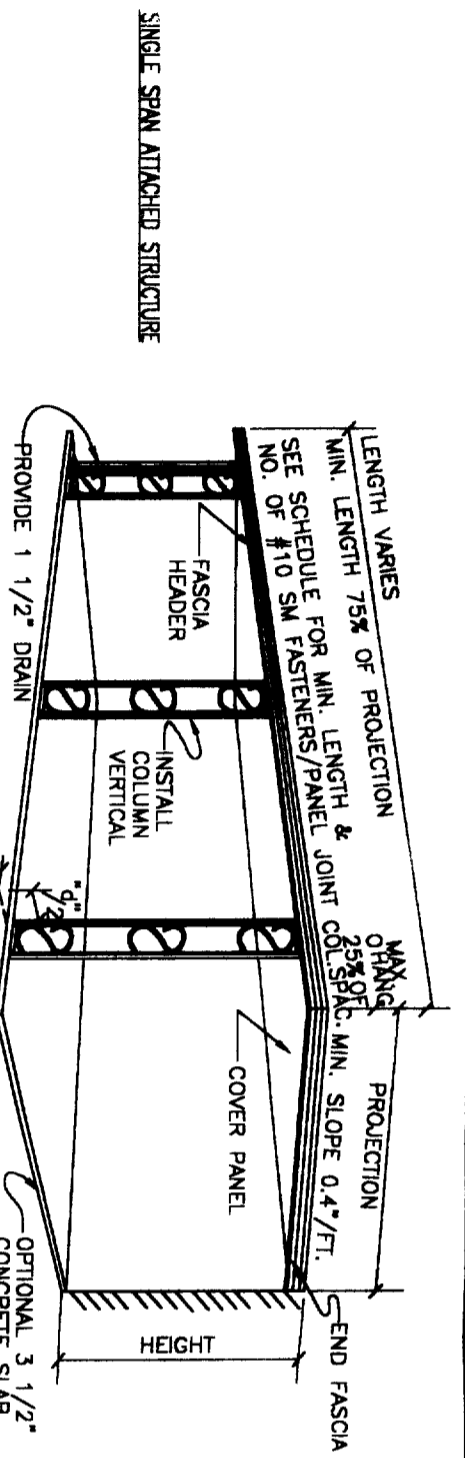


ICBO ES EVALUATION REPORT ER-2621P  
 HEADER SPANS, COLUMN SPACING  
 FOOTER SIZE AND COLUMN TYPE FOR  
 FREESTANDING AND ATTACHED  
 LATTICE PATIO STRUCTURES  
 SHEET 6 OF 8 DATE: 2/8/2000

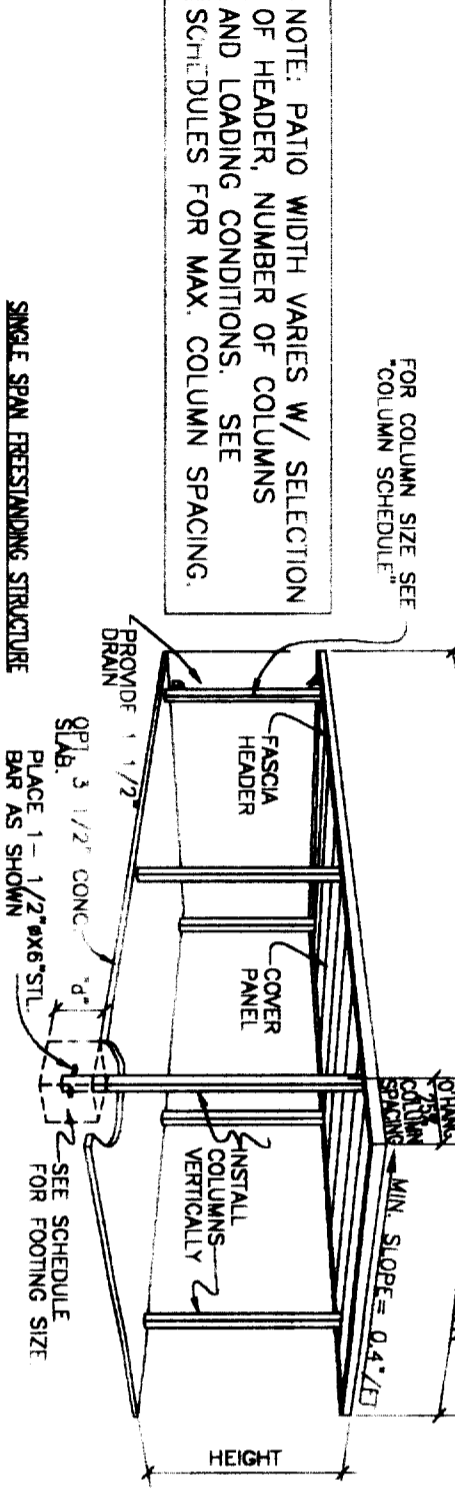
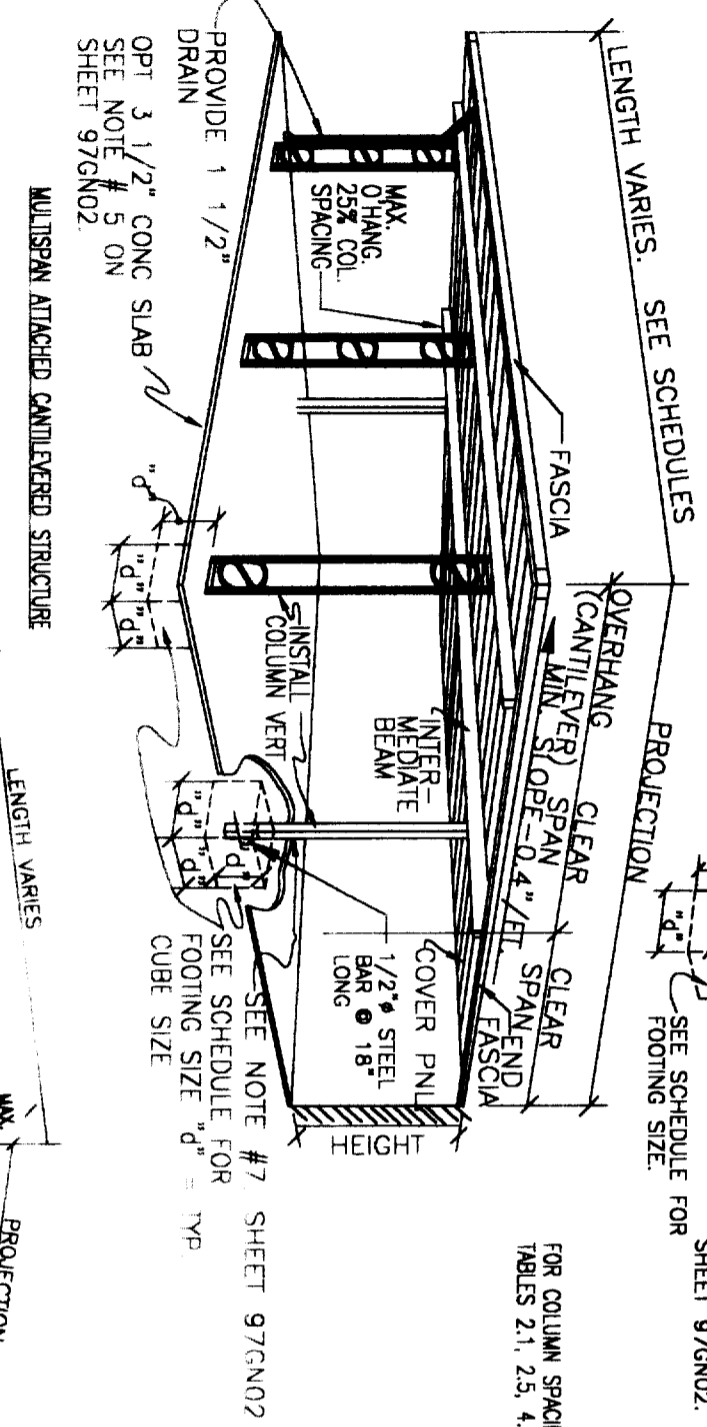
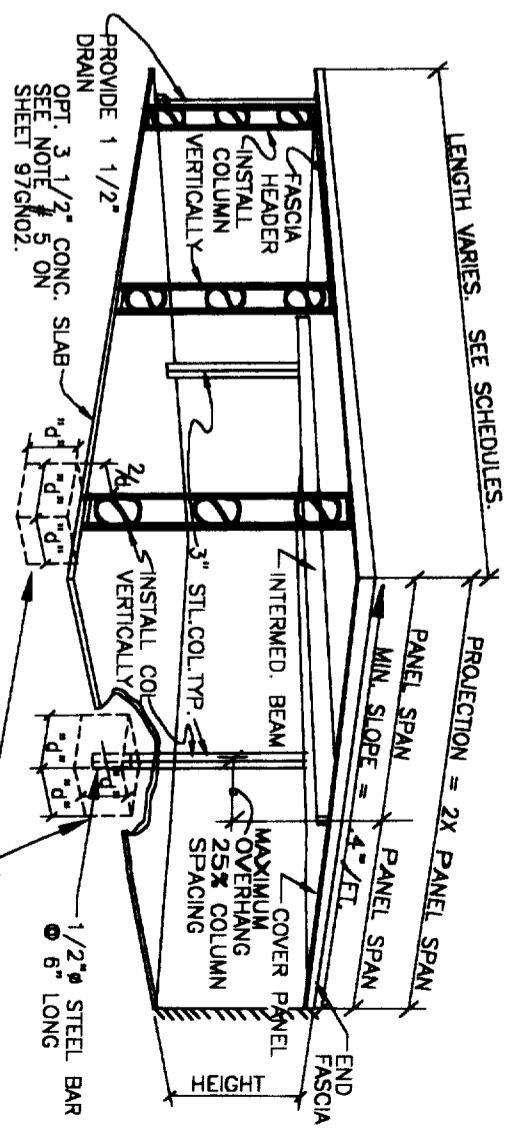






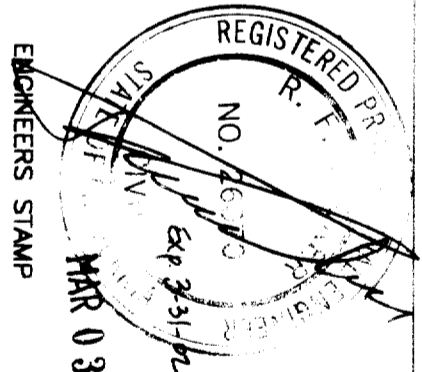


FOR COLUMN SPACING SEE TABLES 2.1, 2.5, 4.1 OR 4.2



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

SINGLE SPAN FREESTANDING STRUCTURE



| DATE | REVISION | DATE | REVISION |
|------|----------|------|----------|
|      |          |      |          |
|      |          |      |          |
|      |          |      |          |

DRAWN BY: KG  
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 DRAWING OR PART NUMBER: 97SC01  
 SHEET: 1 OF 2

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