



THE CITY OF NAPOLEON

BUILDING & ZONING DEPARTMENT

255 W. RIVERVIEW

(419)592-4010

Building Permit

Permit Number: BP2005-175

Page 1 of 1

Printed: 10/17/2005

Property Address: 625 Buckeye Lane

Applicant Patio Enclosures Inc
Address: 3132 Sylvania
Toledo, OH 43613

Approval Date: 10/17/2005

Phone: 419-244-3886

Owners

Name: Mr. Ronald Ritter
Address: 625 Buckeye Lane

Phone: 419-599-8643

Contractors Patio Enclosures Inc
Address: 3132 Sylvania
Toledo, OH 43613

Phone 419-244-3886

Fees and Receipts:

Number	Description	Amount
FEE2005-789	Building Permit Fee (Auto)	\$32.00
Total Fees:		\$32.00

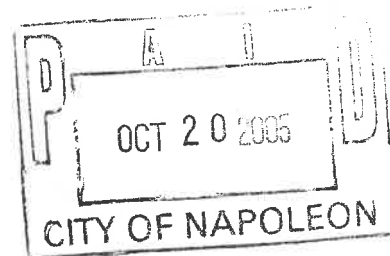
Description

Structure Use: Residential
Construction Value: \$18,000.00

Start Date:
End Date:

Floor Areas

Living Space:	Other:
Basement/Storage:	Total Area:
Garage:	



Description of work to be done: 14x25 Sunroom, sliding glass doors, concrete floor

Applicant signature:  **Date:** 10-20-05

CITY OF NAPOLEON GENERAL PERMIT APPLICATION

THIS APPLICATION IS FOR RESIDENTAL CONSTRUCTION INCLUDING BUILDING, ELECTRICAL, PLUMBING, MECHANICAL, DEMOLITIONS, REMODELING.

DATE: 10-7-05 JOB LOCATION: 625 Buckeye Lane

OWNER: Ronald Ritter PHONE: 419-599-8643

OWNER ADDRESS: SAME CITY: NAPOLEON ZIP: 43545

CONTRACTOR: PAID ENCLOSURES, INC PHONE: 419-244-3884

CONTRACTOR LICENSED WITH THE CITY OF NAPOLEON?: YES: NO:

Is any of this job going to be subcontracted out? Yes: No:

If yes to whom: KENIM OBERHOUSE - DIVERSIFIED CONCRETE ²⁶²⁻²⁸²⁹
425 928 4325

DESCRIPTION OF WORK TO BE PERFORMED: Three Season Sunroom 14 x 25 - Sliding glass + Screen Windows on glass k.w. New Concrete footings pad.

- PLEASE MARK THE TYPE OF WORK YOU WILL BE PERFORMING
- | | |
|---|--|
| <input type="checkbox"/> A/C ADD ON | <input checked="" type="checkbox"/> REMODELING |
| <input type="checkbox"/> BOILER REPLACEMENT | <input type="checkbox"/> ROOFING |
| <input type="checkbox"/> CURBING | <input type="checkbox"/> SEWER REPAIRS** |
| <input type="checkbox"/> DECKS * | <input type="checkbox"/> SIDEWALK* |
| <input type="checkbox"/> DRIVEWAY* | <input type="checkbox"/> SIDING |
| <input type="checkbox"/> ELECTRICAL SERVICE UPGRADE | <input type="checkbox"/> STORAGE SHED* |
| <input type="checkbox"/> ELECTRICAL SERVICE NEW | <input type="checkbox"/> SWIMMING POOL* |
| <input type="checkbox"/> FENCE* | <input type="checkbox"/> FURNACE REPLACEMENT |
| <input type="checkbox"/> ADDITIONS* | <input type="checkbox"/> TEMP ELECTRIC |
| <input type="checkbox"/> FURNACE NEW | <input type="checkbox"/> WATER TAP (size _____") |
| <input type="checkbox"/> LAWN METER | <input type="checkbox"/> WINDOWS |
| <input type="checkbox"/> PLUMBING | <input type="checkbox"/> ZONING |

*PLEASE INCLUDE A PICTURE SHOWING MEASUREMENTS FROM EXISTING STRUCTURES AND PROPERTY LINES. INDICATING THE TYPE OF WORK YOU WISH TO PERFORM.

** IF WORK REQUIRES GOING INTO THE STREET A STREET BOND IS REQUIRED!

FOR PERMIT COSTS PLEASE FILL OUT REVERSE SIDE.

PERMIT COST WORKSHEET

Ritter

JOB	BASE FEE	TOTAL
SIDING (only) TOTAL SQ ____ X 1.00 +	\$5.00 =	\$ _____
ROOFING (only) TOTAL SQ ____ X 1.00 +	\$5.00 =	\$ _____
WINDOWS (only) # OF WINDOWS ____ X 1.00 +	\$5.00 =	\$ _____
ELECTRICAL # OF CIRCUITS ____ X 3.00 +	\$15.00 =	\$ _____
ELECTRICAL SERVICE UPGRADE	\$15.00 =	\$ _____
PLUMBING (INSIDE) repairs only	\$10.00 =	\$ _____
PLUMBING/SEWER (OUTSIDE)	\$25.00 =	\$ _____
WATER HEATER	\$5.00	\$ _____
SHED UNDER 200 SQ FT	\$ 5.00	\$ _____
FURNACE OR A/C (REPLACEMNT)	\$ 5.00	\$ _____
DEMOLITION (only)	\$30.00	\$ _____
SIDEWALK REPLACEMENT/NEW	\$25.00	\$ _____
DRIVEWAY	\$25.00	\$ _____

ALL CONSTRUCTION, ALTERATIONS, REMODELING, SHEDS, DECKS & FENCES NOT LISTED ABOVE IS BASED ON COST OF WORK BEING PERFORMED.

COST OF WORK \$ 18117.⁰⁰ (SEE CHART) \$ 32.⁰⁰

0.00	-	250.00	0.00	11,000.00	-	11,999.00	25.00
250.00	-	1,000.00	10.00	12,000.00	-	12,999.00	26.00
1,000.00	-	1,999.00	12.00	13,000.00	-	13,999.00	27.00
2,000.00	-	2,999.00	14.00	14,000.00	-	14,999.00	28.00
3,000.00	-	3,999.00	16.00	15,000.00	-	15,999.00	29.00
4,000.00	-	4,999.00	18.00	16,000.00	-	16,999.00	30.00
5,000.00	-	5,999.00	19.00	17,000.00	-	17,999.00	31.00
6,000.00	-	6,999.00	20.00	18,000.00	-	18,999.00	32.00
7,000.00	-	7,999.00	21.00	19,000.00	-	19,999.00	33.00
8,000.00	-	8,999.00	22.00	20,000.00	-	20,999.00	34.00
9,000.00	-	9,999.00	23.00	21,000.00	-	21,999.00	35.00
10,000.00	-	10,999.00	24.00	22,000.00	-	22,999.00	36.00
				Over 22,999		Please Call	



CITY OF NAPOLEON

Building & Zoning Division

255 W. Riverview Avenue, PO Box 151, Napoleon, OH 43545

Phone: 419-592-4010 - Fax: 419-599-8393

BUILDING & ZONING DIVISION

Zoning Administrator
Building Commissioner
Tom Zimmerman

Building & Zoning
Admin. Assistant
Angela Straight

FAX COVER SHEET

TO: ___Patio Enclosures Inc
419-668-1769

FROM: Tom Zimmerman, Building Inspector

DATE: __10/10/05_____

RE: 625 Buckeye Ln

Please mark on the drawing where the electric meter is on this house.

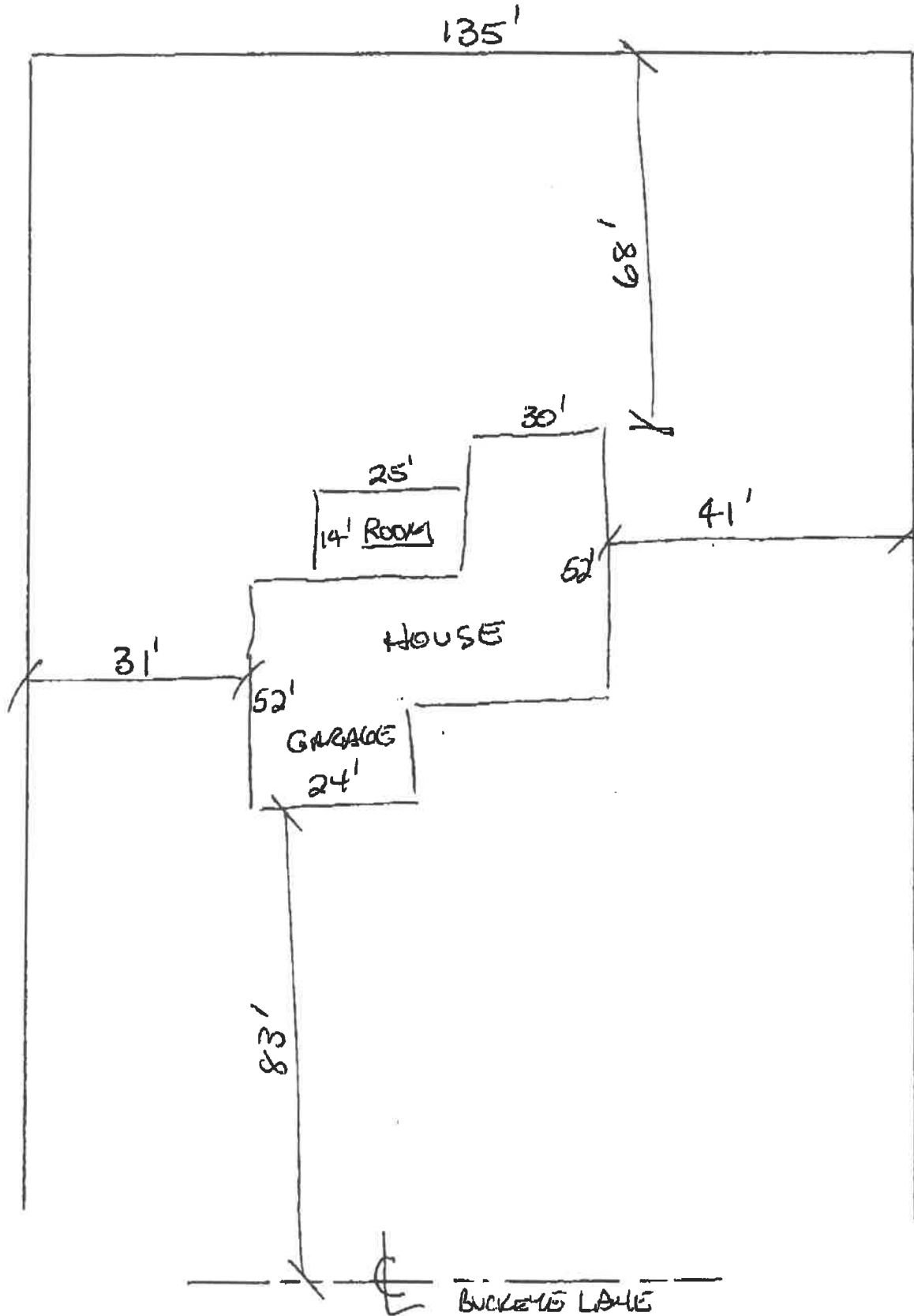
Also if you have the plans on what type of room is being added, and what kind of foundation and how deep the foundation will be.

Is there going to be any electric in this room? If so are you performing the electrical work or is someone else?

Any questions please feel free to give my office a call and speak to myself or my assistant Angela.

Thank you.

PLOT PLAN KITTER
NAPOLÉON



Customer:
 Ronald Ritter
 625 Buckeye Lane
 Napoleon, OH 43545
 419-599-8643

Contractor:
 Patio Enclosures Inc
 3132 Sylvania Ave.
 " " " " Ohio 43613
 419-3886
 meeting

This is OK
 Keep with
 Permit

Project: One Sunroom
 Approx size: 25' x 14'
 6" foam insulated
 Aluminum roof w/
 I beams every three
 feet. Room is insulated
 glass sunroom on
 insulated glass knee-
 wall. Roof is
 single sloped. Sliding
 windows & doors const.

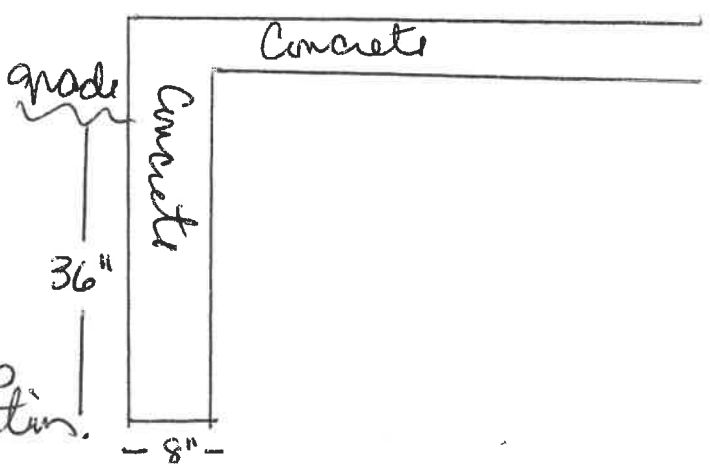
foundation - new
 footer foundation -
 add to existing
 continuous concrete
 footer - 36" deep.
 New pad is 4"
 thick concrete cap.



14' CW Wall



25'



Note: Electrical by Others.
 Box not in room location.

6" Shed

By YKH Date 6/20/12 Sheet 1 of 1

Section 300 Subject: Encl. Panel Engineering Manual
Structural Component
Description

PATIO ENCLOSURES, INC.
MANUFACTURERS OF PATIO & PORCH ENCLOSURES
SOLARIUMS * GREENHOUSES

=====

STRUCTURAL COMPONENT DESCRIPTIONS:

1. Roof Panel

Core: Expanded Polystyrene Foam, 1.5 PCF per ASTM C578-85; supplied by Falcon Mfg. or other approved source

Skin: 3105-H174 Aluminum; supplied by Nichols-Homeshield or other approved source

Optional Subskin: Oriented Strand Board; supplied by Blandex or other approved source.

Adhesive: One part, moisture cured urethane, ICBO Report #3462

I-Beam (3"): PEI Dwg. #1-0217, 6063-T6 Aluminum

I-Beam (6"): Dwg. # 1-0223, 6063-T6 Aluminum

Fasteners (Panels-to-I-Beam): #8 x 1/2" S.M.S. @ 1/3 pts. in from supports, 4' O.C. max.;
Silicone Sealant, Dow Chemical #795 or equivalent

2. Skylights by Others

Glass Unit: 24" x 48", custom mfg. by Naturalite or approved equal

Framing (3"): PEI Dwg. #1-0215

Framing (6"): PEI Dwg. #1-0221

3. PEI Glass Roof Panels

Glass Unit, 1" Insulated Glass, Tempered/Tempered or Tempered/Laminated,
34-1/8" x 34-1/8"

Framing (3"): PEI Dwgs. #1-0114 & #1-0115

Framing (6"): PEI Dwgs. #1-0325 & #1-0326

4. Cross Beam: (A) Spruce-Pine-Fir or Douglas Fir Select Structural
(B) Western Cedar, Appearance Grade
(C) "Micro Lam" as mfg. by the Trus Joist Corp.

5. Cross Beam Post: 4 x 4, 4 x 6, or 6 x 6 Wood; Spruce-Pine-Fir Construction Grade

SECT300.PEN



COMMERCIAL TESTING COMPANY

Standard Test Method for
SURFACE BURNING CHARACTERISTICS OF BUILDING MATERIALS
ASTM E 84-91a

Material Tested: 6-inch Brown/Brown Panels

Report Number 92379
Test Number 2438-7421
February 1, 1993

Prepared for:
Patio Enclosures
Macedonia, Ohio

COMMERCIAL TESTING COMPANY

Jonathan Jackson

Jonathan Jackson
Executive Vice President

TESTING • RESEARCH • ENGINEERING

INTRODUCTION:

This report represents test results on a material submitted for testing by Patio Enclosures of Macedonia, Ohio.

The test was conducted in accordance with the American Society for Testing and Materials Standard Test Method for "Surface Burning Characteristics of Building Materials," E 84-91a, also known as the Steiner Tunnel Test. This method is similar to ANSI 2.5, NFPA No. 255, UBC No. 42-1, and UL No. 723. This method has been approved for use by agencies of the Department of Defense and for listing in the DoD Index of Specifications and Standards.

The E 84 standard should be used to measure and describe the properties of materials, products, or assemblies in response to heat and flame under controlled laboratory conditions. It should not be used for the appraisal, description, or regulation of the fire hazard or fire risk of the materials. No consideration is made for results that may be obtained if the material being evaluated were tested in combination with other materials.

In the light of present knowledge, fire performance of any material cannot be evaluated on the basis of one test. However, results of this test may be used as one element of a fire risk assessment that takes into account all of the factors which are pertinent to an assessment of the fire hazard of a particular end use.

These test results represent only the sample tested and are not necessarily indicative of apparent identical or similar materials. All test data are on file and available for review by authorized persons.

PURPOSE:

The purpose of the test is to determine the relative burning behavior of a material by observing the flame spread along the surface of the specimen. It is intended to provide comparative measurements of surface flame spread and smoke development of materials with that of select grade red oak and inorganic fiber reinforced cement board under specific fire exposure conditions. The test exposes a nominal 24-foot long by 21-inches wide specimen to a controlled air flow and flaming fire adjusted to spread the flame along the entire length of a red oak specimen in 5½ minutes during a 10-minute test duration while flamespread over its surface and density of the resulting smoke are measured and recorded. Test results are calculated relative to the red oak specimen, which has an arbitrary rating of 100, and the cement board, which has a rating of 0. The test results are expressed as Flamespread Index and Smoke Density. However, there is not necessarily a relationship between these two measurements.

TEST PROCEDURE:

The test specimens, selected and identified by the Client, were conditioned to equilibrium in an atmosphere with the temperature maintained between 69°F and 73°F, and the relative humidity between 47 and 53 percent. The zero reference and other parameters critical to furnace operation were verified



COMMERCIAL TESTING COMPANY

by conducting a 10-minute burn using 1/2-inch cement board. Periodic tests using NOFMA certified select grade red oak flooring provided data for the 100 reference. The test specimens were then tested in accordance with test method procedures.

TEST SPECIMENS:

Identification: 6-inch Brown/Brown Panels

Sample Preparation:

Two test panels, each measuring 2 feet in width by 12 feet in length, were received for testing. The panels were 6 inches thick, EPS foam with brown painted aluminum skins on both sides. The panels were physically self-supporting and required no sample preparation. They were stored in an atmosphere maintained between 69 and 73°F and 47 to 53 percent relative humidity for conditioning.

TEST RESULTS:

Test results, calculated on the basis of observed flame propagation and the integrated area under the recorded smoke density curve, are presented below. In recognition of possible variations due to limitations of the test method, the results are rounded to the nearest number divisible by five. Graphic presentation of flame spread and smoke development data is presented in the computer generated graph at the end of the report.

<u>Test Specimen</u>	<u>FLAMESPREAD INDEX</u>	<u>SMOKE DENSITY</u>
GRC Board	0	0
Red Oak	100	100
6-inch Brown/Brown Panels	50	445

OBSERVATIONS:

Ignition of the painted surface was recorded at 0.58 minutes with a maximum flame spread distance of 19.50 feet at 8.26 minutes. The maximum temperature recorded during the test was 1,174°F.



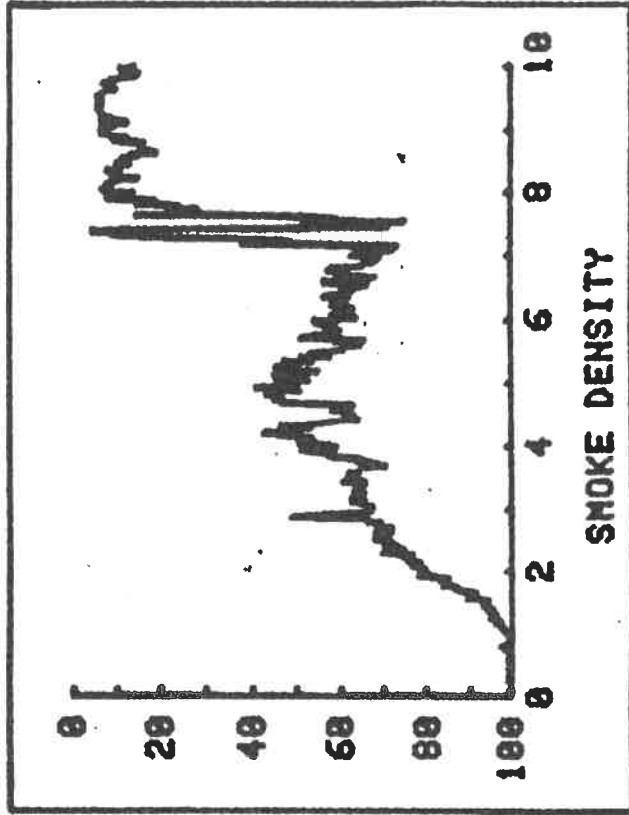
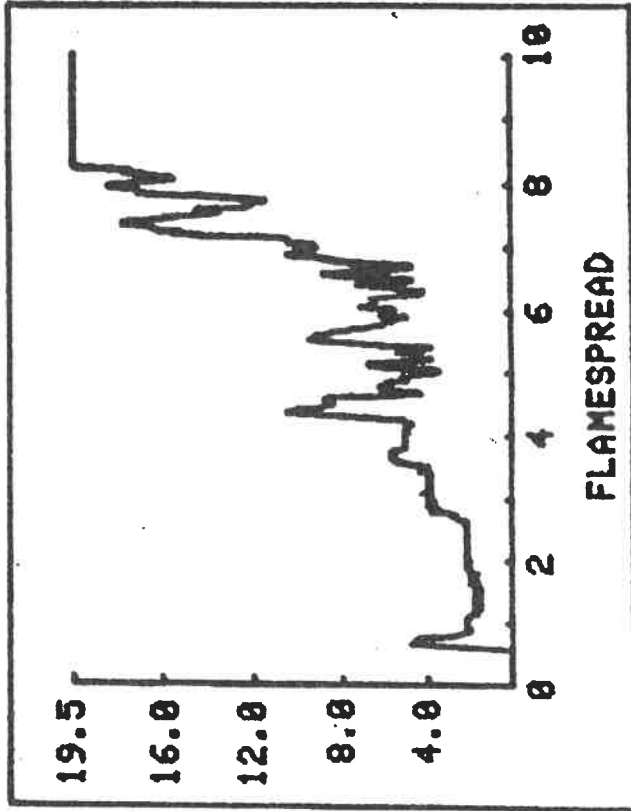
COMMERCIAL TESTING COMPANY

.....ASTM E 84 TEST DATA.....

CLIENT: PATIO ENCLOSURES
TEST NUMBER: 2438-7421
MATERIAL TESTED: 6-INCH BROWN/BROWN PANELS
DATE TESTED: FEBRUARY 1, 1993

TEST RESULTS:

TIME TO IGNITION = 0.58 minutes
MAXIMUM FLAMESPREAD DISTANCE = 19.50 feet
TIME MAXIMUM SPREAD = 8.26 minutes
FLAMESPREAD INDEX = 50
SMOKE DENSITY INDEX = 445



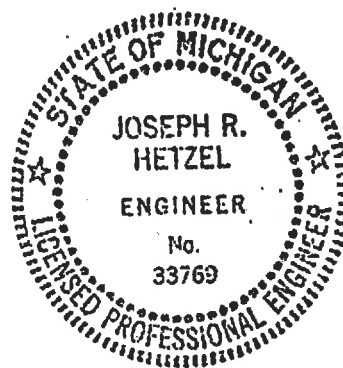
PATIO ENCLOSURES, INC.
MANUFACTURERS OF PATIO & PORCH ENCLOSURES
SOLARIUMS * GREENHOUSES

TITLE: PANEL ENGINEERING MANUAL ON "ALL-VIEW" & "COMFORT-VIEW" ROOF SYSTEMS

CERTIFICATION: I hereby certify the following:

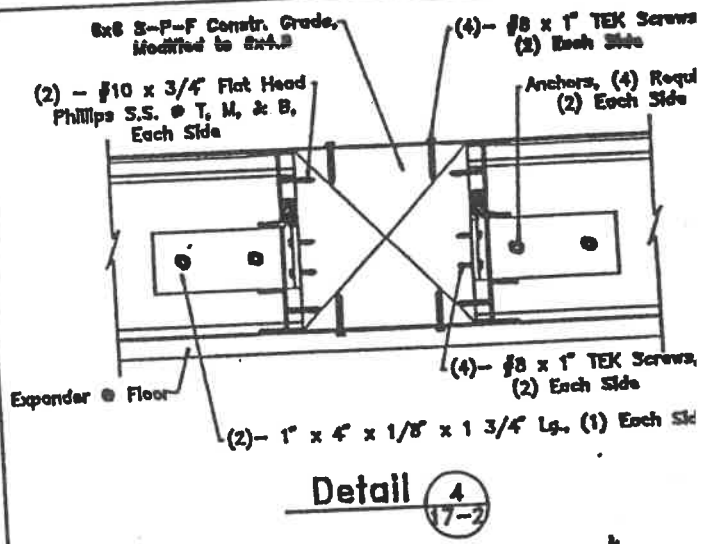
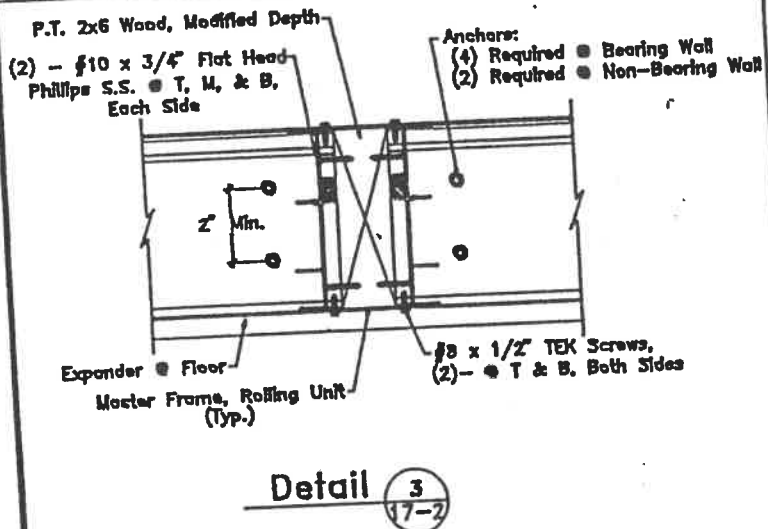
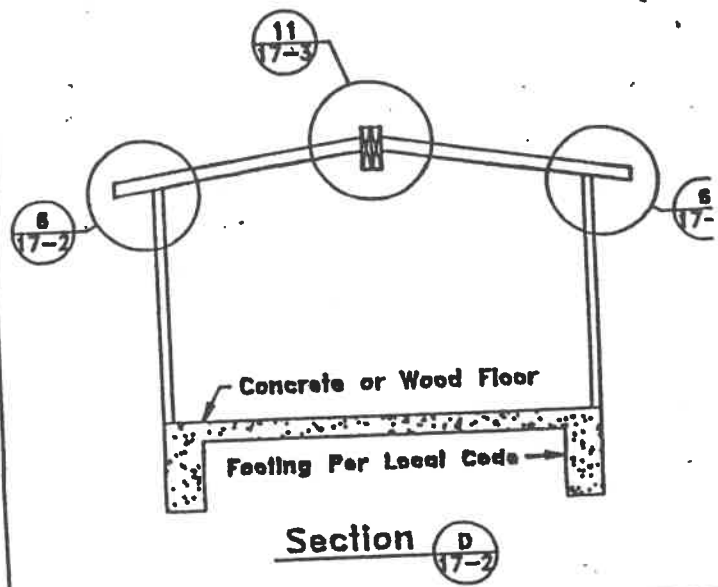
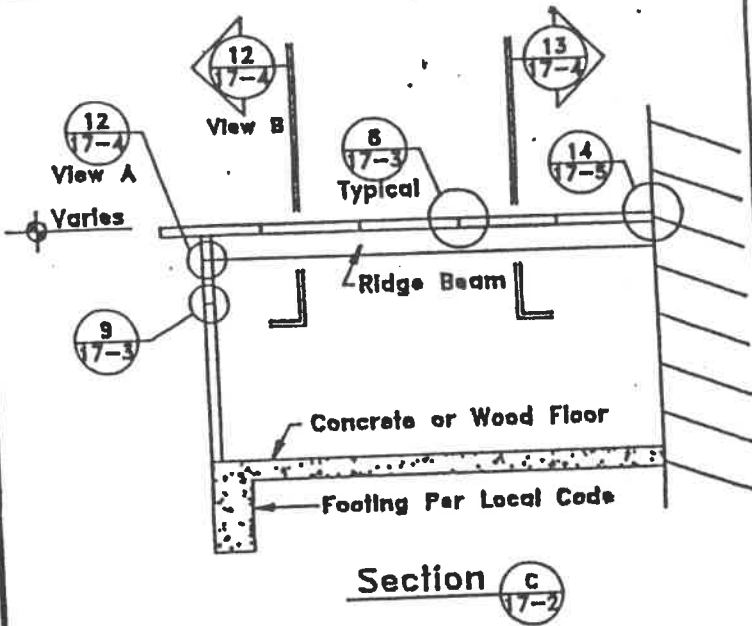
1. I am in responsible charge concerning the calculations prepared herein.
2. The calculations prepared herein are true and correct, to the best of my knowledge and ability.
3. I am qualified to perform the calculations prepared herein, based on my education and experience.
4. I am an actively registered professional engineer in the state(s) having jurisdiction over the application of the calculations prepared herein, to which I affix my seal(s) below.

Signature Joseph R. Hetzel Date February 28, 1995
Registration Oh # 48598, mi # 33769



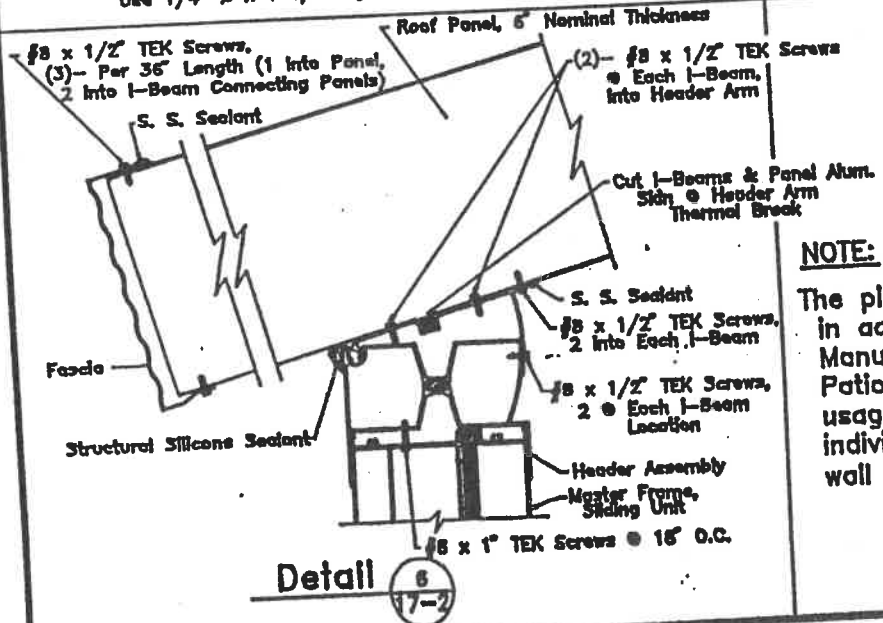
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Reproduction without permission is prohibited.

JERTEM.FEM



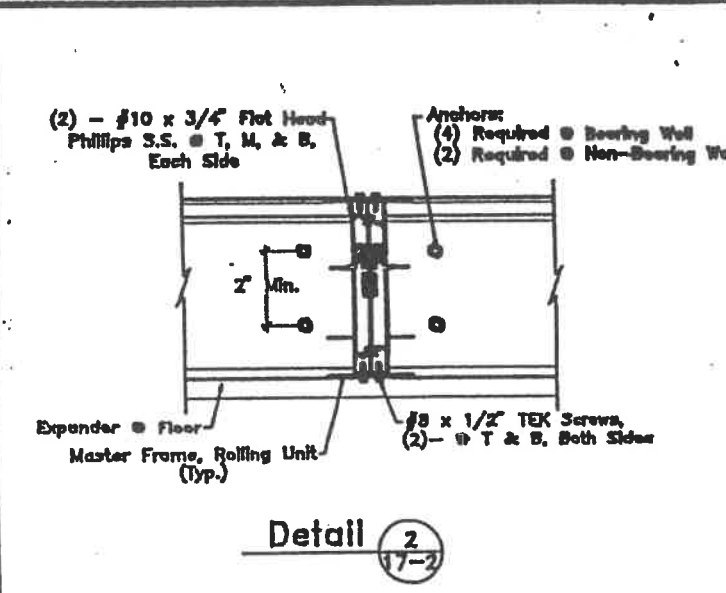
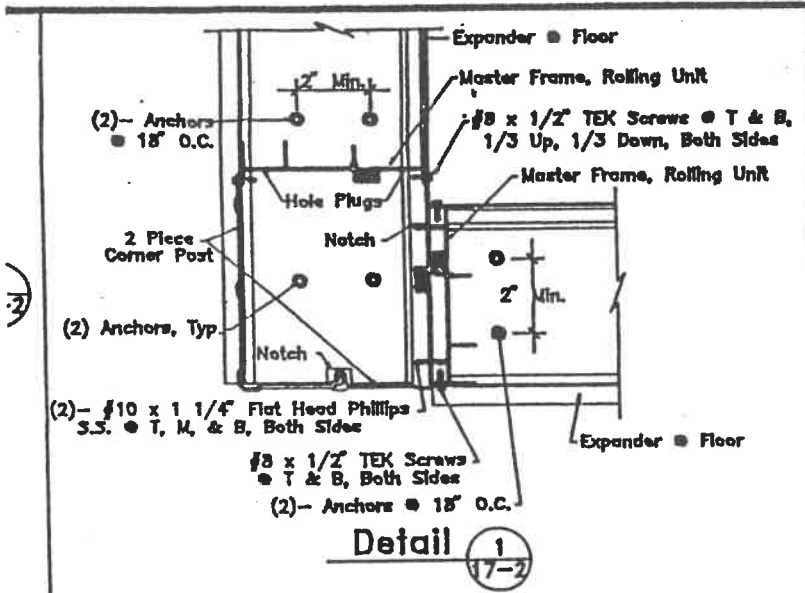
Anchors At Ganging
 Use 1/4" ϕ x 5" Lg. Lag Screws into Wood
 Use 1/4" ϕ x 1 1/4" Lg. Drive-Pin Anchors into Concrete

Anchors At Ganging
 Use 1/4" ϕ x 3" Lg. Lag Screws into Wood
 Use 1/4" ϕ x 1 1/4" Lg. Drive-Pin Anchors into Concrete



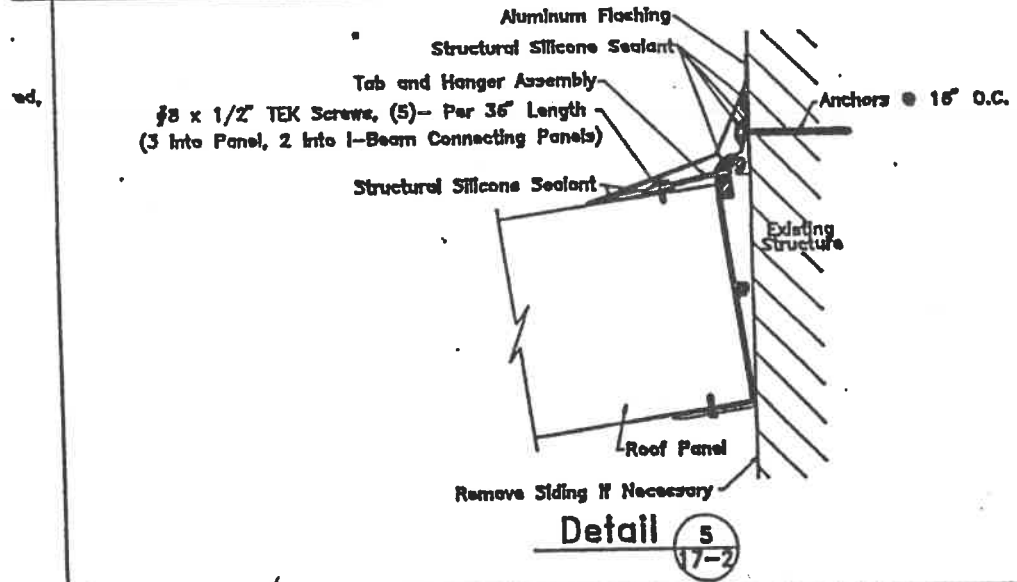
NOTE:
 The plans, elevations, sections and details contained in accordance with information contained in Manual on 'Comfort-View' Four Season Room Patio Enclosures, Inc., Macedonia, Ohio. Limit usage are contained in said "Product Engine individual job submittal for specific projection wall heights.

PROJECT



Anchors:
 Use 1/4" Ø x 3" Lg. Lag Screws w/ Washers into Wood
 Use 1/4" Ø x 1 1/4" Lg. Drive-Pin Anchors into Concrete

Anchors At Ganging
 Use 1/4" Ø x 3" Lg. Lag Screws into Wood
 Use 1/4" Ø x 1 1/4" Lg. Drive-Pin Anchors into Concrete



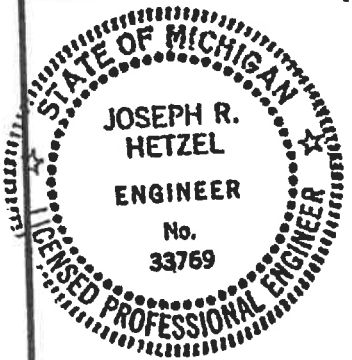
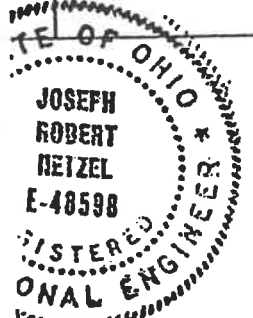
Anchors:
 Use 1/4" Ø x 3" Lg. Logs into Wood
 Use 1/4" Ø x 1 1/2" Lg. Logs w/ Log Shields into Concrete Block or Brick

GENERAL STRUCTURAL DETAILS FOR PEI "COMFORT-VIEW" FOUR SEASON ROOM

NOTE: Details on this sheet are also in section 500 of the "Yr.-Round Rooms Engineering Manual"



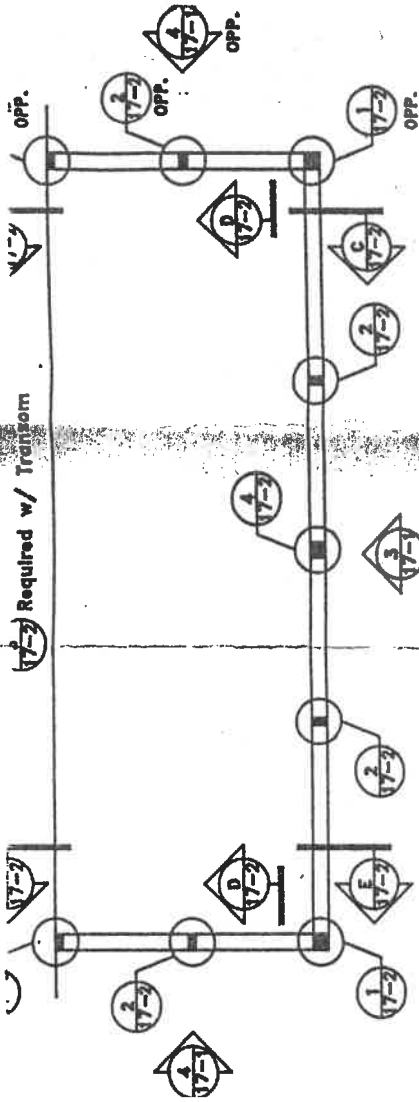
720 EAST HIGHLAND ROAD
 P.O. BOX 186 • MACEDONIA, OHIO 44056
 (216) 465-0700 FAX (216) 467-4297



SCALE: NONE	DRAWN: MAD	DATE: 11/12/
REVISIONS		
APPROVED BY:	OH # 48598	MI # 33769
<i>Joseph R. Hetzel</i>		1/20/
SIGNATURE	P.E. REG. NO.	DATE

ed herein are
 duct Engineering
 as published by
 ns for product
 g Manual. See
 unit widths and

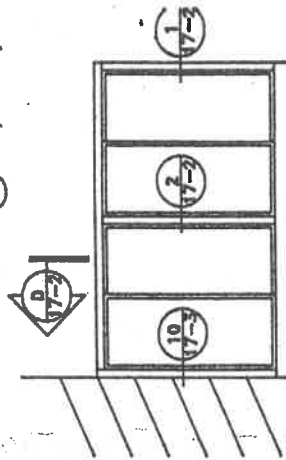
YEAR-ROUND RO



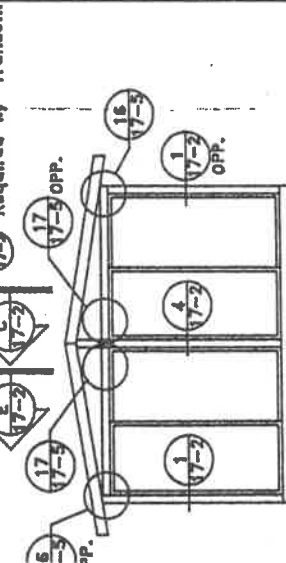
Gable Roof Enclosure Plan View

Note: Where (17-3) shown, (17-3) Required w/ Tr

Note: Where (17-3) shown, (17-3) Required w/ Transom



"A" & "C" Wall Elevation (17-3)



"B" Wall Elevation (17-3)

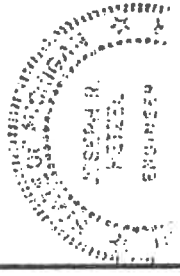
GENERAL STRUCTURAL DETAILS FOR PEI "COMFORT-VIEW" FOUR SEASON RO
 NOTE: Details on this sheet are also in section 500 of the "Yr-Round Rooms Engineering



720 EAST HIGHLAND ROAD
 P.O. BOX 186 • MACEDONIA, OHIO 44058
 (216) 466-0700 FAX (216) 467-4287

SCALE:	NONE	DRAWN:	MAD	DATE:	11/
REVISIONS					

APPROVED BY:
Joseph R. Nitzel
 SIGNATURE
 OH # 48598
 MI # 33769
 1/26
 P.E. REG. NO. DJ



Section 400 Subject: Year-Round Room
Product Engineering Manual
Structural Component
Limitations

PATIO ENCLOSURES, INC.,
MANUFACTURERS OF PATIO & PORCH ENCLOSURES
SOLARIUMS * GREENHOUSES

STRUCTURAL COMPONENT LIMITATIONS
SINGLE-SLOE ROOF ENCLOSURES - FRAMING MEMBERS

MEMBER	LOAD COMB.	MIN. SAFETY FACTOR REQ'D	ENCLOSURE PARAMETERS	SAFETY FACTOR PROVIDED
Corner Column	(C)	1.24	16' Proj. x 16' Width, 2 Units @ B-Wall 16' Proj. x 24' Width, 3 Units @ B-Wall	2.49 2.49
H @ A & C-Wall	(B)	1.24	16' Proj., 2 Units @ A or C-Wall	1.45
Header System @ B-Wall	(A)	1.65	20 PSF: 16' P x 16' W, 2 Units @ B-Wall 16' P x 24' W, 3 Units @ B-Wall	1.97 2.46
			30 PSF: 15' P x 15' W, 2 Units @ B-Wall 16' P x 24' W, 3 Units @ B-Wall	1.68 1.84
			40 PSF: 11' P x 14' W, 2 Units @ B-Wall 16' P x 21' W, 3 Units @ B-Wall	1.66 1.72
Hanger Assembly @ Existing House	(A)	1.65	20 PSF: 16' Proj. 30 PSF: 16' Proj. 40 PSF: 16' Proj.	5.68 4.56 3.33
Ganging Between Units @ A & C-Wall	(B)	1.24	16' Proj., 2 Units @ A & C-Wall	2.54
Ganging Between Units @ B-Wall	(D)	1.24	16' Proj. x 16' Width, 2 Units @ B-Wall	2.23
			16' Proj. x 24' Width, 3 Units @ B-Wall	2.23
Transom @ A, B & C-Walls	(B)	1.24	8' Wide Units; 84" Unit Heights and 18" Transom Glass Heights	2.16

NOTES ON LOAD COMBINATIONS

- (A) Dead Load + Snow Load: 6.9 PSF Roof Dead Load; Basic, Drifting & Sliding Snow per Section 1400, sheet 9
- (B) Wind Load only; 18.0 PSF Horiz. Outward Wind Load
- (C) Dead Load + Wind Load; 1.4 PSF Roof Dead Load; 25.2 PSF Horiz. Outward Wind Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang
- (D) Dead Load + Wind Load: 1.4 PSF Roof Dead Load; 18.0 PSF Horiz. Outward Wind Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang
- (E) Dead Load + Wind Load: 1.4 PSF Roof Dead Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang

SBCT4000.YRR

Section 400 Subject: Year-Round Room
Product Engineering Manual
Structural Component
Limitations

PATIO ENCLOSURES, INC.
MANUFACTURERS OF PATIO & PORCH ENCLOSURES
SOLARIUMS * GREENHOUSES

STRUCTURAL COMPONENT LIMITATIONS
SINGLE-SLOPE ROOF ENCLOSURE - FASTENERS

MEMBER	CONNECTED TO	USING	# REQ'D	LOAD COMB.	MIN. SAFETY FACTOR REQ'D	ENCLOSURE PARAMETERS	SAFETY FACTOR PROVIDED
Hanger Assembly	Ex. Wall (Wood)	(1)	16" O.C.	(D)	1.50	16' Proj.	8.30
				(A)	2.00	20 PSF: 16' Proj.	5.38
						30 PSF: 16' Proj.	4.30
						40 PSF: 16' Proj.	3.13
Hanger Assembly	Ex. Wall (Concrete Block or Brick)	(2)	16" O.C.	(D)	1.50	16' Proj.	6.71
				(A)	2.00	20 PSF: 16' Proj.	4.40
						30 PSF: 16' Proj.	3.52
						40 PSF: 16' Proj.	2.56
Vertical Expander	Ex. Wall (Wood)	(6)	18" O.C.	(B)	1.50	16' Proj., 2 Units @ A & C-Walls	3.22
Vertical Expander	Ex. Wall (Concrete Block or Brick)	(3)	18" O.C.	(B)	1.50	16' Proj., 2 Units @ A & C Walls	8.19
Horiz. Expander	Ex. Floor (Concrete) Between Vertical Structural Members	(4)	18" O.C.	(B)	1.50		12.93
Horiz. Expander	Ex. Floor (Concrete) @ Corner Column	(4)	4	(C)	1.50	16'Px16'W, 2 Units @A,B,&C-Walls	4.21
						16'Px24'W, 2 Units @ A & C-Walls 3 Units @ B-Wall	4.03
Horiz. Expander	Ex. Floor (Concrete) @ A & C-Wall Ganging Between Units	(4)	4	(B)	1.50	16' Proj., 2 Units @ A & C Walls	9.71
Horiz. Expander	Ex. Floor (Concrete) @ B-Wall Ganging Between Units	(4)	4	(D)	1.50	16' P x 16' W, 2 Units @ B-Wall	2.03
						16' P x 24' W, 3 Units @ B-Wall	2.07

NOTES ON LOAD COMBINATIONS

- (A) Dead Load + Snow Load: 6.9 PSF Roof Dead Load; Basic, Drifting & Sliding Snow per Section 1400, sheet 9
- (B) Wind Load only; 18.0 PSF Horiz. Outward Wind Load
- (C) Dead Load + Wind Load: 1.4 PSF Roof Dead Load; 25.2 PSF Horiz. Outward Wind Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang
- (D) Dead Load + Wind Load: 1.4 PSF Roof Dead Load; 18.0 PSF Horiz. Outward Wind Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang
- (E) Dead Load + Wind Load: 1.4 PSF Roof Dead Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang

NOTES ON FASTENERS

- (1) 1/4" dia. x 3" Lg. Lag Screws
- (2) 1/4" dia. x 1-1/2" Lg. Lag Screws, with 5/16" dia. x 1-1/2" Lg. Lag Shields (U.S.E. Sup-R-Lag #3305 or equiv.)
- (3) 1/4" dia. x 1" Lg. Nylon Anchors (U.S.E. "Tap-It" #5630 or equiv.)
- (4) 1/4" dia. x 1-1/4" Lg. Drive-Pin Anchors (Rawl Zamac Nailin or equiv.)
- (5) #8 x 1/2" Lg. Sheet Metal Screws
- (6) #8 x 1" Sheet Metal Screws

SBCT4000.YRR

Section 400 Subject: Year-Round Room
Product Engineering Manual
Structural Component
Limitations

PATIO ENCLOSURES, INC.
MANUFACTURERS OF PATIO & PORCH ENCLOSURES
SOLARIUMS * GREENHOUSES

STRUCTURAL COMPONENT LIMITATIONS
SINGLE-SLOPE ROOF ROOMS - FASTENERS

MEMBER	CONNECTED TO	USING	# REQ'D	LOAD COMB.	MIN. SAFETY FACTOR REQ'D	ENCLOSURE PARAMETERS	SAFETY FACTOR PROVIDED
Corner Column	Horizontal Expander	(5)	2	(E)	1.76	16' P x 16' W, 2 Units @ B-Wall	2.75
						16' P x 24' W, 3 Units @ B-Wall	2.58
Corner Column	Header	(5)	2	(E)	1.76	16' P x 16' W, 2 Units @ B-Wall	2.75
						16' P x 24' W, 3 Units @ B-Wall	2.58
B-Wall Ganging Between Units	Horizontal Expander	(5)	2	(E)	1.76	10' P x 11' W, 2 Units @ B-Wall	1.76
						12' P x 15' W, 3 Units @ B-Wall	1.76
B-Wall Ganging Between Units	Header	(5)	2	(E)	1.76	10' P x 11' W, 2 Units @ B-Wall	1.76
						12' P x 15' W, 3 Units @ B-Wall	1.76
Roof System	Header @ I-Beam Locations	(5)	6	(E)	1.46	14' Proj.	1.51
Roof System	Panel Cap @ Room Corner	(7)	1	(E)	1.46	16' Proj.	1.51
Panel Cap	Corner Post	(5)	2	(E)	1.76	16' Proj.	5.30
H	Ex. House (Wood)	(6)	3	(B)	1.50	16' Proj., 2 Units @ A & C Walls	1.69
H	Ex. House (Concrete Block or Brick)	(3)	2	(B)	1.50	16' Proj., 2 Units @ A & C Walls	2.86
H	Corner Column	(5)	3	(B)	1.76	15' Proj., 2 Units @ A & C Walls	1.78

NOTES ON LOAD COMBINATIONS

- (A) Dead Load + Snow Load: 6.9 PSF Roof Dead Load; Basic, Drifting & Sliding Snow per Section 1400, sheet 9
- (B) Wind Load only; 18.0 PSF Horiz. Outward Wind Load
- (C) Dead Load + Wind Load: 1.4 PSF Roof Dead Load; 25.2 PSF Horiz. Outward Wind Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang
- (D) Dead Load + Wind Load: 1.4 PSF Roof Dead Load; 18.0 PSF Horiz. Outward Wind Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang
- (E) Dead Load + Wind Load: 1.4 PSF Roof Dead Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang

NOTES ON FASTENERS

- (1) 1/4" dia. x 3" Lg. Lag Screws
- (2) 1/4" dia. x 1-1/2" Lg. Lag Screws, with 5/16" dia. x 1-1/2" Lg. Lag Shields (U.S.E. Sup-R-Lag #3305 or equiv.)
- (3) 1/4" dia. x 1" Lg. Nylon Anchors (U.S.E. "Tap-It" #5630 or equiv.)
- (4) 1/4" dia. x 1-1/4" Lg. Drive-Pin Anchors (Rawl Zamac Nailin or equiv.)
- (5) #8 x 1/2" Lg. Sheet Metal Screws
- (6) #8 x 1" Sheet Metal Screws
- (7) 1/4" dia. x 4" Lg. Lag Screw

SBCT4000.YRR

Section 400 Subject: Year-Round Room
Product Engineering Manual
Structural Component
Limitations

PATIO ENCLOSURES, INC.
MANUFACTURERS OF PATIO & PORCH ENCLOSURES
SOLARIUMS * GREENHOUSES

STRUCTURAL COMPONENT LIMITATIONS
GABLE ROOF ROOMS - FASTENERS

MEMBER	CONNECTED TO	USING	# REQ'D	LOAD COMB.	MIN. SAFETY FACTOR REQ'D	ENCLOSURE PARAMETERS	SAFETY FACTOR PROVIDED
Horizontal Expander	Ex. Wall (Wood)	(1)	16" O.C.	(D)	1.50	20' Proj.	7.15
Horizontal Expander	Ex. Wall (Concrete Block or Brick)	(2)	16" O.C.	(D)	1.50	20' Proj.	5.94
Vertical Expander	Ex. Wall (Wood)	(6)	18" O.C.	(B)	1.50	16' Proj., 2 Units @ A & C-Walls	3.22
Vertical Expander	Ex. Wall (Concrete Block or Brick)	(3)	18" O.C.	(B)	1.50	16' Proj., 2 Units @ A & C Walls	8.19
Horiz. Expander	Ex. Floor (Concrete) Between Vertical Structural Members	(4)	18" O.C.	(B)	1.50		12.93
Horiz. Expander	Ex. Floor (Concrete) @ Corner Column	(4)	4	(C)	1.50	16'Px16'W, 2 Units @A,B,&C-Walls	5.43
						16'Px22'W, 2 Units @ A & C-Walls 4 Units @ B-Wall	5.33
Horiz. Expander	Ex. Floor (Concrete) @ A & C-Wall Ganging Between Units	(4)	4	(D)	1.50	16'P x 22'W, 2 Units @ A & C Walls	2.29
Horiz. Expander	Ex. Floor (Concrete) @ B-Wall Ganging Between Units	(4)	4	(B)	1.50	22' Width, 4 Units @ B-Wall	14.12
Horizontal Expander	Ex. Floor (Concrete) @ Ridge Beam Post	(4)	4	(D)	1.50	20' Proj. x 22' Width	1.61
Corner Column	Horizontal Expander	(5)	2	(E)	1.76	16'P x 22'W, 2 Units @ A & C Walls	3.57
Corner Column	Header	(5)	2	(E)	1.76	16'P x 22'W, 2 Units @ A & C Walls	3.57
A & C-Wall Ganging Between Units	Horizontal Expander	(5)	2	(e)	1.76	12'P x 14'W, 2 Units @ A & C Walls	1.79
A & C-Wall Ganging Between Units	Header	(5)	2	(E)	1.76	12'P x 14'W, 2 Units @ A & C Walls	1.79

NOTES ON LOAD COMBINATIONS

- (A) Dead Load + Snow Load: 6.9 PSF Roof Dead Load; Basic, Drifting & Sliding Snow per Section 1400, sheet 9
- (B) Wind Load only; 18.0 PSF Horiz. Outward Wind Load
- (C) Dead Load + Wind Load: 1.4 PSF Roof Dead Load; 25.2 PSF Horiz. Outward Wind Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang
- (D) Dead Load + Wind Load: 1.4 PSF Roof Dead Load; 18.0 PSF Horiz. Outward Wind Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang
- (E) Dead Load + Wind Load: 1.4 PSF Roof Dead Load; 16.6 PSF Uplift @ Roof; 43.2 PSF Uplift @ Roof Overhang

NOTES ON FASTENERS

- (1) 1/4" dia. x 3" Lg. Lag Screws
- (2) 1/4" dia. x 1-1/2" Lg. Lag Screws, with 5/16" dia. x 1-1/2" Lg. Lag Shields (U.S.E. Sup-R-Lag #3305 or equiv.)
- (3) 1/4" dia. x 1" Lg. Nylon Anchors (U.S.E. "Tap-It" #5630 or equiv.)
- (4) 1/4" dia. x 1-1/4" Lg. Drive-Pin Anchors (Rawl Zamac Nallin or equiv.)
- (5) #8 x 1/2" Lg. Sheet Metal Screws
- (6) #8 x 1" Sheet Metal Screws

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**PATIO ENCLOSURES, INC.
U.S. RETAIL LOCATIONS; CODE GROUP & GROUND SNOW LOADS
AS OF JANUARY, 1995**

LOCATION	CODE GROUP	GROUND SNOW LOAD (PSF)
Albany, NY	BOCA	** 40, 50
Atlanta, GA	SBCCI	** 20
Baltimore, MD	BOCA	20, 30
Buffalo, NY	BOCA	** 40
Charlotte, NC	SBCCI	** 20
Chicago, IL	BOCA	** 30, 40
Cincinnati, OH	BOCA	20
Cleveland, OH	BOCA	** 20, 30
Columbus, OH	BOCA	20
Denver, CO	ICBO	** 30
Detroit, MI	BOCA	20, 30, 40
El Paso, TX	SBCCI	20
Erie, PA	BOCA	** 30
Harrisburg, PA	BOCA	** 30, 40
Huntsville, AL	SBCCI	** 20
Indianapolis, IN	BOCA	20
Kansas City, MO	ICBO	30
Knoxville, TN	BOCA	** 30
Louisville, KY	BOCA	20
Milwaukee, WI	BOCA	40
Minneapolis MN	ICBO	40, 50, 60
Newark, NJ	BOCA	** 20, 30, 40
Norwalk/Toledo, OH	BOCA	20
Philadelphia, PA	BOCA	20, 30
Pittsburgh, PA	BOCA	** 20, 30
Raleigh, NC	SBCCI	20
Richmond, VA	BOCA	20
Rochester, NY	BOCA	40
St. Louis, MO	BOCA	20
Seattle, WA	ICBO	30
South Bend, IN	BOCA	** 20, 30
Virginia Beach, VA	BOCA	20
Washington, DC	BOCA	20, 30
Williamsport, PA	BOCA	** 30
Winston-Salem, NC	SBCCI	20

** Location also has areas with extreme local variations. If in question, check with local bldg. dept.

- NOTES: 1) GSL rounded up to nearest 10 PSF
2) Greater of 20 PSF Live Load or map GSL used

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PATIO ENCLOSURES, INC.
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SOLARIUMS * GREENHOUSES

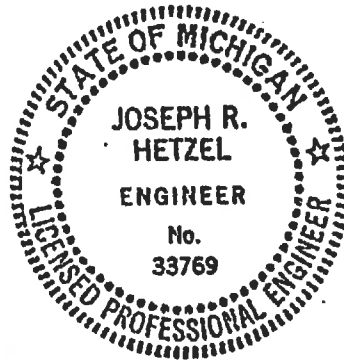
TITLE: PRODUCT ENGINEERING MANUAL ON YEAR-ROUND ROOMS

CERTIFICATION: I hereby certify the following:

1. I am in responsible charge concerning the calculations prepared herein.
2. The calculations prepared herein are true and correct, to the best of my knowledge and ability.
3. I am qualified to perform the calculations prepared herein, based on my education and experience.
4. I am an actively registered professional engineer in the state(s) having jurisdiction over the application of the calculations prepared herein, to which I affix my seal(s) below.

Signature Joseph R. Hetzel Date December 8, 1993

Registration OH #48598, MI #33769



SECT190Y.172R

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PATIO ENCLOSURES, INC.
MANUFACTURERS OF PATIO & PORCH ENCLOSURES
SOLARIUMS * GREENHOUSES

ROOF SYSTEM PERFORMANCE DATA

Ground Snow Load: 20 PSF Code Group: BOCA (F.S. = 2.5)													
Roof System: 6" "Super-Foam"													
Roof Panels: .024" 3105-H174 Al. Skin T & B: 1.5 PCF EPS Foam Core													
Roof I-Beams: Therm Brk., .080" Flanges, .090" Web (PEI Dwg. #1-0223)													
Roof Type: Single Slope													
NO GLASS ROOF PANELS OR SKYLIGHTS													
Clear Span, Ft.	8	9	10	11	12	13	14	15	16	17	18	19	20
Ult. Load, PSF	438.8	346.7	280.8	232.1	195.0	166.2	143.3	124.8	109.7	97.2	86.7	77.8	70.2
Allow. Load, PSF	175.5	138.7	112.3	92.8	78.0	66.5	57.3	49.9	43.9	38.9	34.7	31.1	28.1
1-St. SL, PSF	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
1-St. SL + DL, PSF	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9	21.9
1-St.SL+DL Defl.,in.	0.059	0.083	0.116	0.155	0.208	0.269	0.348	0.440	0.552	0.685	0.841	1.023	1.235
2-St. SL, PSF	30.7	28.3	26.3	24.5	23.0	21.8	20.7	20.0	20.0	20.0	20.0	20.0	20.0
2-St. SL + DL, PSF	32.6	30.2	28.2	26.4	24.9	23.7	22.6	21.9	21.9	21.9	21.9	21.9	21.9
2-St.SL+DL Defl.,in.	0.088	0.115	0.149	0.187	0.237	0.292	0.359	0.440	0.552	0.685	0.841	1.023	1.235
For PEI Use Only	0.0027	0.0038	0.0053	0.0071	0.0095	0.0123	0.0159	0.0201	0.0252	0.0313	0.0384	0.0467	0.0564

PATIO ENCLOSURES, INC.
MANUFACTURERS OF PATIO & PORCH ENCLOSURES
SOLARIUMS * GREENHOUSES

ROOF SYSTEM PERFORMANCE

Ground Snow Load: 20 PSF Code Group: BOCA (F.S. = 2.5)													
Roof System: 6" "Super-Foam"													
Roof Panels: .024" 3105-H174 AL. Skin T & B: 1.5 PCF EPS Foam Core													
Roof I-Beams: Therm Brk., .080" Flanges, .090" Web (PEI Dwg. #1-0223)													
Roof Type: Single Slope with Glass Roof Panels													
EDGE DISTANCE WITHIN 6" OF HEADER/RIDGE													
Clear Span, Ft.	8	9	10	11	12	13	14	15	16	17	18	19	20
Ult. Load, PSF	243.8	199.5	168.8	146.3	129.1	115.5	104.5	95.4	87.8	81.3	75.7	70.8	66.5
Allow. Load, PSF	97.5	79.8	67.5	58.5	51.6	46.2	41.8	38.2	35.1	32.5	30.3	28.3	26.6
1-St. SL, PSF	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
1-St. SL + DL, PSF	24.4	24.1	23.9	23.7	23.5	23.4	23.3	23.2	23.1	23.1	23.0	22.9	22.9
1-St.SL+DL Defl.,in.	0.078	0.116	0.167	0.230	0.306	0.396	0.501	0.622	0.761	0.920	1.097	1.298	1.519
2-St. SL, PSF	30.7	28.3	26.3	24.5	23.0	21.8	20.7	20.0	20.0	20.0	20.0	20.0	20.0
2-St. SL + DL, PSF	35.1	32.4	30.2	28.2	26.5	25.2	24.0	23.2	23.1	23.1	23.0	22.9	22.9
2-St.SL+DL Defl.,in.	0.112	0.155	0.211	0.273	0.345	0.426	0.516	0.622	0.761	0.920	1.097	1.298	1.519
For PEI Use Only	0.0032	0.0048	0.007	0.0097	0.013	0.0169	0.0215	0.0268	0.0329	0.0399	0.0477	0.0566	0.0664
EDGE DISTANCE 24" FROM HEADER/RIDGE													
Clear Span, Ft.	8	9	10	11	12	13	14	15	16	17	18	19	20
Ult. Load, PSF	---	---	153.6	128.0	109.7	96.0	85.3	76.8	69.8	64.0	59.1	54.9	51.2
Allow. Load, PSF	---	---	61.4	51.2	43.9	38.4	34.1	30.7	27.9	25.6	23.6	21.9	20.5
1-St. SL, PSF	---	---	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
1-St. SL + DL, PSF	---	---	23.9	23.7	23.5	23.4	23.3	23.2	23.1	23.1	23.0	22.9	22.9
1-St.SL+DL Defl.,in.	---	---	0.186	0.270	0.370	0.492	0.634	0.801	0.992	1.212	1.460	1.736	2.045
2-St. SL, PSF	---	---	26.3	24.5	23.0	21.8	20.7	20.0	20.0	20.0	20.0	20.0	20.0
2-St. SL + DL, PSF	---	---	30.2	28.2	26.5	25.2	24.0	23.2	23.1	23.1	23.0	22.9	22.9
2-St.SL+DL Defl.,in.	---	---	0.235	0.321	0.417	0.529	0.653	0.801	0.992	1.212	1.460	1.736	2.045
For PEI Use Only			0.0078	0.0114	0.0157	0.021	0.0272	0.0345	0.0429	0.0526	0.0635	0.0757	0.0894

**JOSEPH R. HETZEL
PROFESSIONAL ENGINEERING REGISTRATIONS
AS OF APRIL, 1996**

STATE	REGISTRATON NUMBER	DATE OF ISSUE	BCEGS IMPLEMENTATION
Alabama	17243	06/06/89	N/A
Colorado	25532	02/19/88	1997
Connecticut	19267	11/13/95	
Delaware	7583	03/08/88	1996
D.C.	8985	09/22/88	1996
Florida	36399	10/15/85	1995
Georgia	17952	05/18/89	1996
Indiana	PE-60860515	07/25/86	1998
Kansas	11053	05/09/88	1999
Kentucky	14576	12/15/85	1997
Maryland	16210	03/16/88	1996
Massachusetts	39061	1/18/96	
Michigan	33769	03/24/88	1998
Minnesota	19018	04/26/88	1999
Missouri	EN23145	07/06/88	1997
New Jersey	GE33130	03/03/88	1996
New York	064705-1	05/23/88	1998
N. Carolina	14803	06/09/88	1995
Ohio	48598	05/19/84	1998
Pennsylvania	PE-037196-R	02/05/88	1997
S. Carolina	12809	06/01/89	1995
Tennessee	20544	05/05/89	1997
Virginia	18485	04/28/88	1997
W. Virginia	9883	02/26/88	1999
Wisconsin	25447	03/25/88	1999

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