



ICBO Evaluation Service, Inc.

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EVALUATION REPORT

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Report No. 3773

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Filing Category: DESIGN—Masonry

KORFIL I AND II INSULATED HOLLOW CONCRETE MASONRY UNITS
KORFIL, INCORPORATED
POST OFFICE BOX 1000
WEST BROOKFIELD, MASSACHUSETTS 01585

I. **Subject:** Korfil I and II Insulated Hollow Concrete Masonry Units.

II. **Description:** Korfil I polystyrene insulation inserts are designed for use in standard hollow masonry units that comply as Grade N units under U.B.C. Standard No. 24-4. See Figure No. 2. The Korfil II polystyrene insulation inserts are designed for use in hollow masonry units that comply as Grade N units under U.B.C. Standard No. 24-4, with dimensions as shown in Figure No. 1. The inserts are installed at the time of manufacture of the masonry units.

Design: Structures are designed in accordance with Chapter 24 of the Uniform Building Code with the following provisions:

1. The allowable working stress in unreinforced grouted masonry is 80 percent of that specified in Table No. 24-H of the code.
2. For reinforced masonry, the net cross-sectional area of the masonry units must exclude the insert area. See Tables Nos. I and II.
3. Allowable shear on bolts is as specified for solid masonry in Table No. 24-J of the code.
4. Korfil inserts are not located in bond beams.
5. Buildings are limited to 65 feet in height or four stories, whichever is less.

Identification: Each Korfil I and II shipping container is identified by the product name, date of manufacture, container number, evaluation report number, the Class I flame-spread and smoke-developed rating, and the name of the quality control agency (RADCO, NER-QA204). The hollow concrete masonry units are palletized and bear the manufacturer's name and address.

III. **Evidence Submitted:** Reports on transverse, diagonal tension, compression, flexural load tests and quality control manual.

Findings

IV. **Findings:** That the Korfil I and II Insulated Hollow Concrete Masonry Units described in this report are alternate methods of construction to that specified in the 1985 Uniform Building Code, subject to the following conditions:

1. Plans and calculations for each project are submitted to the building official for approval.
2. The design and construction complies with this report, the Uniform Building Code and the manufacturer's instructions.
3. Minimum 8-inch block is recognized as two-hour fire-resistive wall construction.
4. The Korfil I and II polystyrene inserts are manufactured by Energy Performance Systems, Freighthouse Road, West Brookfield, Massachusetts 01585, with follow-up inspection by RADCO (NER-QA204) and Military Packaging, Inc., 637 West 3560 South, Salt Lake City, Utah 84119.

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

TABLE NO. I—NET CROSS-SECTIONAL AREA OF VARIOUS CONCRETE MASONRY UNITS INSULATED WITH KORFIL I BLOCK INSULATION

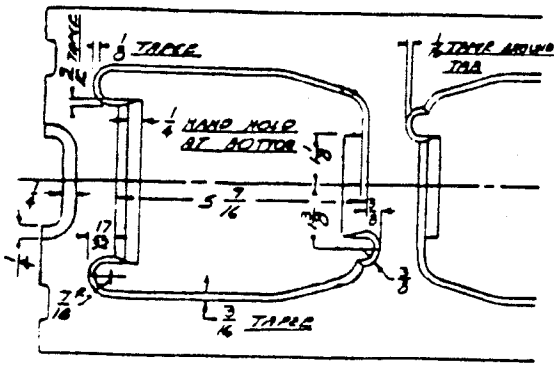
BLOCK UNIT SIZE	NET CROSS-SECTIONAL AREA (in Square Inches)		
	NO GROUT	ONE CELL GROUTED	BOTH CELLS GROUTED
8-inch	65.96	81.02	96.08
10-inch	81.29	103.25	125.21
12-inch	92.76	124.31	155.86

TABLE NO. II—NET CROSS-SECTIONAL AREA OF VARIOUS CONCRETE MASONRY UNITS INSULATED WITH KORFIL II BLOCK INSULATION

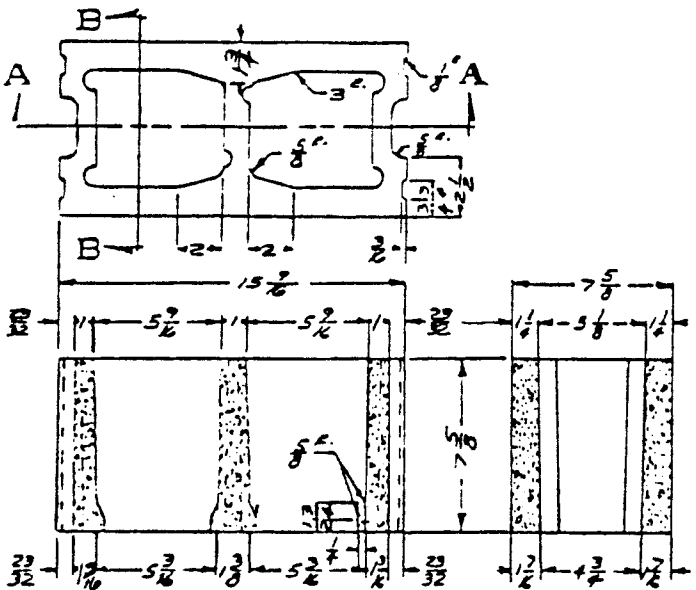
BLOCK UNIT SIZE	NET CROSS-SECTIONAL AREA (in Square Inches)		
	NO GROUT	ONE CELL GROUTED	BOTH CELLS GROUTED
8-inch	65.05	85.92	106.79
10-inch	81.29	103.25	125.21
12-inch	91.38	130.02	168.66

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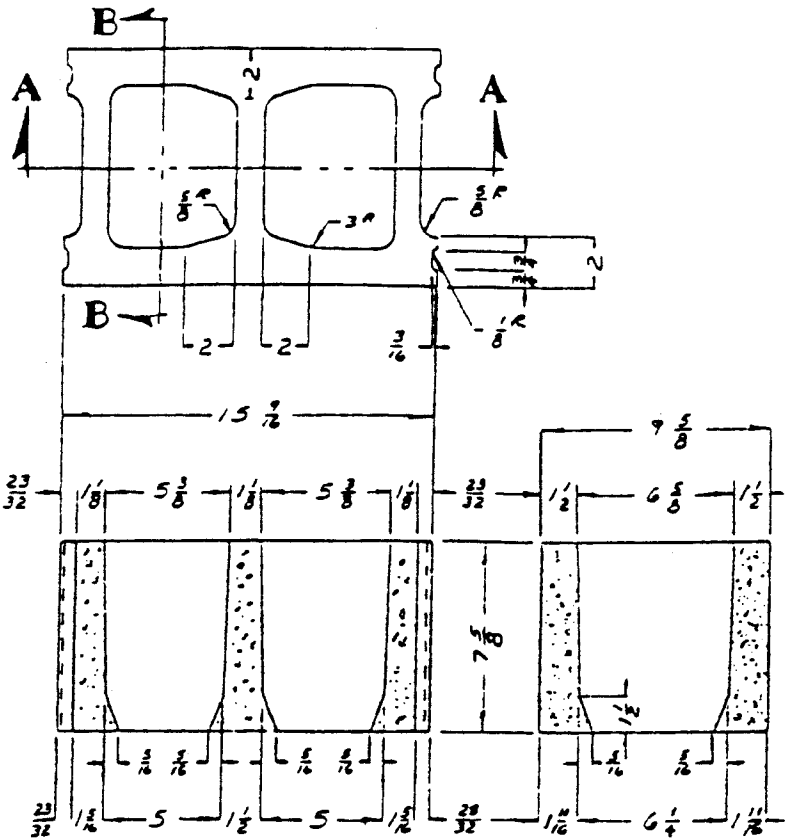
TOP PLAN OF CORE



SECTION A-A

SECTION B-B

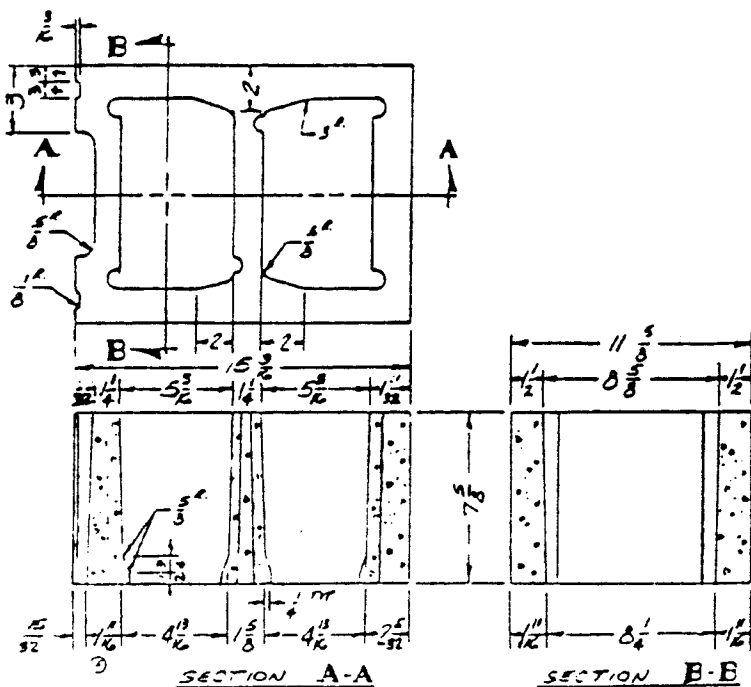
8-INCH UNIT



SECTION A A

SECTION B B

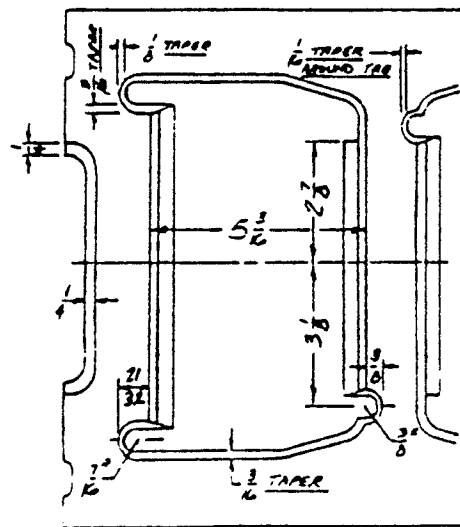
10-INCH UNIT



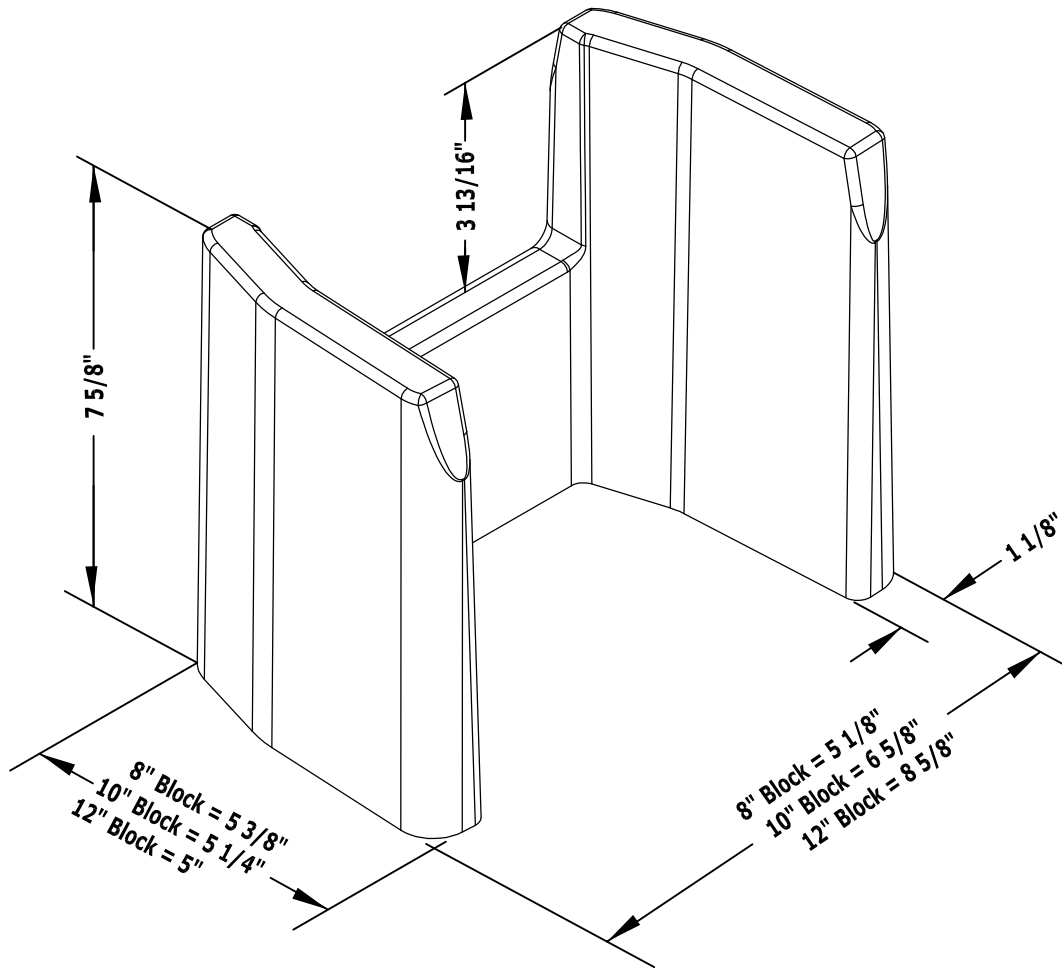
SECTION A-A

SECTION B-B

12-INCH UNIT
KORFIL II INSERT
FIGURE NO. 1



TOP PLAN OF CORE
1/2 SCALE



**KORFIL INSERT
FIGURE NO. 2**