DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT Housing—Federal Housing Commissioner	STRUCTURAL ENGINEERING BULLETIN NO. 1106 Rev. 1 (Supersedes issue dated August 14, 1989)
	ISSUE DATE December 8, 1995
TO: DIRECTORS, SINGLE FAMILY DIVISION Directors of Housing	REVIEW DATE December 8, 1998

SUBJECT: 1. Item Description Shop Fabricated Wood-Fiber Reinforced Concrete Wall and Partition Panels

2. Name and Address of Manufacturer Fibrecrete, Inc.
940 Eller Drive
Ft. Lauderdale, FL 33316

This Structural Engineering Bulletin (SEB) should be filed with other SEBs and related bulletins on materials or products as required by prescribed procedures.

The technical description, requirements and limitations expressed herein do not constitute an endorsement or approval by the Department of Housing and Urban Development (HUD) of the subject matter, and any statement or representation, however made, indicating approval or endorsement by HUD is unauthorized and false, and will be considered a violation of the United States Criminal Code, *18 U.S.C. 709*.

NOTICE: THIS BULLETIN APPLIES TO DWELLING UNITS BUILT UNDER HUD HOUSING PROGRAMS. NON-HUD-INSURED UNITS MAY OR MAY NOT BE IN CONFORMITY WITH THE REQUIREMENTS OF THE HUD MINIMUM PROPERTY STANDARDS.

Any reproduction of this Bulletin must be in its entirety and any use of all or any part of this Bulletin in sales promotion or advertising is prohibited.

1. General:

This Bulletin sets forth specific requirements under the Technical Suitability of Products Program for determining the eligibility of housing to be constructed under HUD mortgage insurance or other HUD housing programs.

2. Scope:

This Bulletin applies only to the structural features of this method of construction. Final determination of eligibility is made by the appropriate HUD Field Office. Other factors considered by the Field Office will be valuation, location, architectural planning and appeal, mechanical equipment, thermal characteristics, and market acceptance. Consideration is also necessary to determine whether a specific property will qualify under the specific HUD program when constructed according to the method outlined in this Bulletin and where the structure is to be located.

In geographical areas subject to hurricanes, earthquakes, or other severe conditions affecting dwelling structures, the HUD Field Office shall require additional safeguards in proposed designs, when necessary.

3. Minimum Property Standards (MPS):

Compliance with HUD MPS will be determined by the HUD Field Office on the same basis as submissions involving conventional construction, except for the special features described in this Bulletin.

4. Inspection:

Field compliance inspections covering conventional items of construction and any special features covered in this Bulletin shall be made in accordance with prescribed procedures.

The appropriate HUD Field Office shall furnish a copy of a HUD field inspection report to Headquarters, Manufactured Housing and Construction Standards Division, Office of Manufactured Housing and Regulatory Functions, when there is:

a. Evidence of noncompliance with any portion of the system of construction described in this Bulletin.

b. Faulty shop fabrication, including significant surface defects.

c. Damage to shop fabricated items or materials due to improper transportation, storage, handling, or assembly.

d. Unsatisfactory field workmanship or performance of the product or system.

e. Any significant degradation or deterioration of the product or evidence of lack of durability or performance.

Periodic plant inspections will be made by HUD Field Office or State Agency personnel in accordance with their prescribed procedures. Factory inspection reports shall be submitted to HUD Headquarters, upon request.

5. Certification:

The manufacturer named in this Bulletin shall furnish the builder with a written certification stating that the product has been manufactured in compliance with the HUD Minimum Property Standards (MPS), except as modified by this Bulletin. The builder shall endorse the certification with a statement that the product has been erected in compliance with HUD MPS except as modified by this Bulletin, and that the manufacturer's certification does not relieve the builder, in any way, of the responsibility under the terms of the Builder's Warranty required by the National Housing Act, or under any provisions applicable to any other housing program. This certification shall be furnished to the HUD Field Office upon completion of the property.

OUTLINE DESCRIPTION, CATEGORY II CONSTRUCTION

GENERAL:

Shop manufactured, field erected wood fiber concrete wall and partition panels for one-story dwellings are furnished in this method of construction.

Panels are field finished on the interior and exterior and may include various types of finish material. Panels may be sawed, nailed or screwed. Materials and methods of installation shall be in accordance with HUD Minimum Property Standards (MPS), Use of Materials Bulletins (UM), and Materials Releases (MR), except as may be specifically noted herein. Plumbing, heating and electrical systems are field installed and connected.

This Bulletin is based upon a structural review of the TC-114, three-bedroom model of Fibrecrete, but may be considered applicable to all structurally similar units of this company. Foundation design, roofing systems and nonstructural items (such as architectural, plumbing, heating and electrical features) are not covered by this Bulletin.

SPECIFICATIONS:

Form HUD-92005, "Description of Materials" (specifying only the structurally related Items Nos. 1 to 12, 14, 26 and 27), as submitted for review for technical suitability determination, describes the materials that shall be used in construction of housing units under this system of construction. Form HUD-92005, furnished with each application for use under HUD housing programs, shall include as a minimum the same structural materials.

DRAWINGS:

The following drawings by Fibrecrete shall be considered an integral part of this Bulletin:

Drawing No.	Date*	Description
Sheet 1	Feb. 1989	Specifications
Sheet 2	Feb. 1989	Foundation plan, floor plan roof framing plan and details
Sheet 3	Feb. 1989	Elevators and header detail
Sheet 4	Jan. 1989	Mechanical Plan
Sheet 5	Feb. 1989	Reinforcing Details and Schedule

The Builder shall submit construction drawings to the HUD Field Office with each application under HUD housing programs, which shall include the same or similar structural features as shown on the drawings listed above. Copies of these listed drawings shall also be furnished to the HUD Field Office by the Builder upon request.

SPECIAL CONSTRUCTION FEATURES:

Wall and Partition Panels:

The panels consist of 90-100 pcf density wood fiber concrete a minimum of three inches thick x 24 inches wide x 96-100 inches long. Each panel contains six 2-3/4 inch round voids for 4" thick panel and eight 1-5/8 inch voids for 3" thick panel, parallel to the long dimension of the panel. One long vertical edge of the panel contains a 1/4 inch projecting tongue. The opposite edge contains a 1/2 inch groove.

Panels are connected in the field by applying a bead of epoxy to the vertical edge on each side of the groove prior to inserting the tongue of the adjacent panel into the groove. A #4 reinforcing rod extends from the foundation through the double 2 inch x 4 inch top cap plate at eight feet and at each side of door and window openings.

Interior partitions are secured to the floor with a 10 gauge galvanized "Fiber-Leg" angle. The vertical leg of the angle is seated into a void in the panel. The horizontal leg is attached to the floor with powder activated studs.

Partitions abutting exterior walls are secured by epoxy along the connecting surface and by lapping the top plate over the exterior wall.

*Sponsor: Please furnish updated drawings identified by Fibrecrete in the title block

DESIGN AND CONSTRUCTION REQUIREMENTS:

Design Loads: The method described in this Bulletin is based on maximum design loads of 20 psf for snow, Seismic Zone 2, and a Basic Wind Speed of 110 mph and Exposure C ASCE 7-88. The Builder shall submit structural calculations to the local HUD Office if housing units are to be located in geographical areas where these conditions are exceeded.

Concrete Strengths: Shall be in accordance with referenced quality control manual.

Roof Construction: Trussed rafters shall be designed and constructed in accordance with Truss Plate Institute, "Design Specification for Metal Plate Connected Wood Trusses", and the appropriate HUD Truss Connector Bulletin.

MANUFACTURING PLANT:

Housing units covered under this Bulletin will be produced in the following plant:

Fibrecrete, Inc.
940 Eller Drive
Ft. Lauderdale, FL 33316
(305) 761-8555

The Coral Gables HUD Office will inspect this plant in accordance with prescribed procedures.

QUALITY CONTROL:

The appropriate HUD Field Office in whose jurisdiction the manufacturing plant is located shall review and approve plant fabrication procedures and quality control program, and shall report to Headquarters in accordance with outstanding instructions. The quality control program shall include field erection supervision or crews trained by Fibercrete, Inc.

RECORD OF PROPERTIES:

The manufacturer shall provide a list of the first ten properties in which the component or system described in this Bulletin is used. The list shall include the complete address, or description of location, and approximate date of installation or erection. Failure of the manufacturer to provide HUD with the above information may result in cancellation of this Bulletin.

NOTICE OF CHANGES:

The manufacturer shall inform HUD in advance of changes in production facilities, transportation, field erection procedures, design, or of materials used in this product. Further, HUD must be informed of any revision to corporate structure, change of address or change in name or affiliation of the prime manufacturer. Failure of the manufacturer to notify HUD of any of the above changes may result in cancellation of this Bulletin.

EVALUATION:

This SEB shall be valid for a period of three years from the date of initial issuance or most recent renewal or revision, whichever is later. The holder of this SEB shall apply for a renewal or revision 90 days prior to the Review Date printed on this SEB. Submittals for renewal or revision shall be sent to HUD Headquarters. Appropriate User Fees shall be sent to:

U. S. Department of Housing and Urban Development
Technical Suitability of Products Fees
P. O. Box 954199
St. Louis, MO 63195-4199

The holder of this SEB may apply for revision at any time prior to the Review Date. Amendments or minor revisions may be in the form of a supplement.

If the Department determines that a proposed renewal or supplement constitutes a revision, the appropriate User Fee for a revision will need to be submitted in accordance with Code of Federal Regulations 24 CFR 200.934, "User Fee System for the Technical Suitability of Products Program", and current User Fee Schedule.

CANCELLATION:

Failure to apply for a renewal or revision shall constitute a basis for cancellation of the SEB. HUD will notify the manufacturer that the SEB may be canceled when:

1. conditions under which the document was issued have changed so as to affect production of, or to compromise the integrity of the accepted material, product, or system,

2. the manufacturer has changed its organizational form without notifying HUD, or

3. the manufacturer has not complied with responsibilities it assumed as a condition of HUD's acceptance.

However, before cancellation, HUD will give the manufacturer a written notice of the specific reasons for cancellation, and the opportunity to present views on why the SEB should not be canceled. No refund of fees will be made on a canceled document.

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This Structural Engineering Bulletin is issued solely for the captioned firm and is not transferable to any person or successor entity.
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