

## **MEMORANDUM**

TO:

President Edward T. Foote, II

FROM:

Dr. John Knoblock

Chairman, Faculty Senate

DATE:

June 20, 1988

SUBJECT:

Faculty Senate Legislation #87030(B) -

Approval of Name of International Fibrous Concrete Institute

The Faculty Senate, at its meeting of April 25, 1988, voted to approve Faculty Senate Legislation #87030(B) - Name of International Fibrous Concrete Institute. The text of the legislation is attached for your action.

JK/b

Attachment

cc: Provost Luis Glaser

## Faculty Senate Action,87030 Class B Legislation

At its meeting of April 25, 1988, the Faculty Senate voted to approve the name of the *International Fibrous Concrete Institute* in the Department of Civil and Architectural Engineering.

[This action is contingent on the approval of the faculty of the College of Engineering and on the bylaws of the Institute incorporating prohibition against commercial endorsements which may involve the name of the University and all political activity.]

CAPSULE:

Faculty Senate Legislation #87030(B)
International Fibrous Concrete Institute
(in the Department of Civil and Architectural

Engineering)

RESPONSE BY THE PRESIDENT:	DATE: 7/12/22
APPROVED: 900 3	,
OFFICE OR INDIVIDUAL TO IMPLEMENT OR PUBL	JSH:
EFFECTIVE DATE OF LEGISLATION:	<del></del>
NOT APPROVED AND REFERRED TO:	
REMARKS (IF NOT APPROVED):	



May 10, 1988

TO:

Dr. George Alexandrakis, Chairman

Faculty Senate

FROM:

Dean, College of Engineering

SUBJECT:

Proposed Name for the International Fibrous Concrete

Institute

At its April 27, 1988 meeting, the Faculty of the College of Engineering approved the name of the International Fibrous Concrete Institute as proposed by the Department of Civil and Architectural Engineering.

Norman G Einspruch

NGE: smp

cc: Dr. Michael K. Phang

Dr. Ronald F. Zollo

6

# Proposed Change of Name for Master of Music in Music Engineering Technology

It was *moved*, and seconded, to approve the change of name for the Master of Music in Music Engineering Technology degree to Master of Science in Music Engineering Technology (MSMET). The *motion carried*.

# Approval of Name of International Fibrous Concrete Institute

It was *moved*, and seconded, to approve the name of the International Fibrous Concrete Institute. It was *moved*, and seconded, to amend the motion approving the name of the Institute pending the approval of the faculty of the College of Engineering. The *motion carried*. It was *moved*, and seconded, to amend the motion to include specific prohibitions against political advocacy and commercial endorsements. The *motion carried*. The *main motion as amended carried*.

# Appreciation for Outgoing Chairman

The Senate expressed its appreciation to Professor Knoblock for his outstanding leadership during his term as Chairman of the Faculty Senate.

### Matters from the Floor

Professor Knoblock announced that Professor Thomas Miller, School of Education, passed away recently and a memorial service is scheduled for Wednesday at 7:00 P.M. in the Miami Lakes Congregational Church.

The meeting adjourned at 6:45 P.M.

Barbara L. Hoadley Secretary to the Faculty Senate

### SPECIAL SENATE COUNCIL MEETING

# April 25, 1988

The meeting was called to order at 2:00 P.M. by Dr. Knoblock. He informed the Council that the matter raised by the Provost regarding a tenured faculty member had been resolved.

### Disestablishment of the Guidance Center

The Provost gave reasons for proposing the disestablishment of the Guidance Center as an academic unit. He stated that the standard academic ranks are inappropriate since the Center functions primarily as a support service to the students and not as an academic unit equivalent to schools and colleges. However, the administration will continue to honor its commitments to the tenured faculty of the Center. Dr. Zwibelman, Guidance Center Senator, presented the Center's proposal for reorganizing the operation. It was moved, and seconded, to recommend to the Senate disestablishment of the Guidance Center as an academic unit with the requirement that amended provisions one through four be met by the time of the dissolution of the unit. The motion carried.

# Change of Degree Name

It was moved by Dr. Awad, seconded by Dr. Baden, to recommend to the Senate that the M.M. in Music Engineering Technology be changed to M.S. in Music Engineering Technology. The motion carried.

### Proposal for Institute for International Fibrous Concrete

Dr. Ronald Zollo, Professor of Civil and Architectural Engineering, presented the background for the proposed institute at the University. He stated that there would be no financial burden on the University and that the main mission of the institute would be educational. It was moved by Dr. Awad, and seconded, to recommend to the Faculty Senate the approval of the name of the Institute for International Fibrous Concrete. It was moved by Dr. Yacoub, and seconded, to approve the motion contingent on a favorable vote of the College of Engineering faculty. The motion to amend carried. It was moved by Dr. Alexandrakis, seconded by Dr. Swan, to approve the motion contingent upon the bylaws containing a specific provision against political activity and commercial endorsement. The amendment carried. The motion carried by a vote of nine in favor, two opposed, with one abstention.

### Research Associate

Dr. Knoblock introduced a draft revision of page 118 of the Faculty Manual regarding research personnel. After discussion it was moved, and seconded, to recommend approval of the revision to the Senate. The motion carried.



### MEMORANDUM

DATE:

April 22, 1988

TO:

John Knoblock, Chairman

University of Miami Faculty Senate

FROM:

Michael K. Phang, Chairman

Department of Civil & Architectural Engineering

SUBJECT: International Fibrous Concrete Institute (IFCI)

In accordance with the requirements of the Faculty Manual and By-Laws Section 6.6, we are seeking approval for the name of the International Fibrous Concrete Institute (IFCI). The formation of the IFCI has been approved by our Department and endorsed by the Dean of the College of Engineering, Dean Norman G. Einspruch.

Attached please find the proposal which contains the means by which the Faculty of the Department will oversee and regulate the activities of the Institute as they relate to the name and mission of the University of Miami.

RFZ:sem

Dean Norman G. Einspruch

Dr. Ronald F. Zollo

### PROPOSAL

TO: Faculty, of the Department of Civil and Architectural Engineering

BY: Ronald F. Zollo, Ph.D., P.E. Professor
Dept. of Civil and Architectural Eng.

RE: International Fibrous Concrete Institute

The subject of this proposal is the establishment of an Institute within the Department of Civil/Architectural Engineering at the University of Miami to be named the International Fibrous Concrete Institute (IFCI).

### Introduction

Approximately 25 years ago research at the Carnegie Institute of Technology led to the granting of U.S. Patents Nos. 3,429,094 (1969), 3,500,728 (1970) and 3,650,785 (1972), on a system of reinforcement for portland cement concretes utilizing randomly distributed fibers within the concrete matrix. After the first fifteen or so years of research and development commercial enterprise ensued and applications of what is termed fiber reinforced concrete (FRC) began to multiply. Today, there are applications and fiber producers on every continent. At the present time, there is interest among fiber producers, among FRC users and researchers, and among educators in the establishment of an industrial institute, to be named the International Fibrous Concrete Institute (IFCI).

Early recognition of the importance of FRC to the construction industry prompted the American Concrete Institute (ACI) established a technical committee on the subject, known as ACI Committee 544 Fiber Reinforced Concrete. Further indication of the current levels of interest and FRC attivity worldwide are the following.

Twice yearly meetings of the ACI Committee 544 are heavily attended as are sponsored seminar programs by ACI and World of Concrete in the United States and by RILEM (International Union of Testing and Research Laboratories for Materials and Structures) in Europe and by other similar organizations throughout the world. Such organized programs regularly

receive an overabundance of support from authors and audiences. The numbers publications by individual authors and by concrete and constituction oriented organizations is conservatively estimated as several hundreds yearly. At virtually every research oriented college and university throughout the world which have civil engineering programs, FRC has been the subject of research for Masters theses and Ph.D. dissertations. And finally commercial activity has mushroomed in the past five years with the phasing out of the initial and subsequent patents. A measure of this activity is the number and prominence of commercial advertising which is being published in the journals of the construction industry.

Interest, growth and development has evolved thus far an industry which, in the authors opinion, is in need of leadership and of representation that will serve to help guide the industry and bridge the gap between industrial development and research. Having broached these thoughts to several representatives of U.S. fiber manufacturers, the author has received encouragement to proceed and offers of assistance in the formation of an institute. Modest financial support and the human resources of one of the nation's largest synthetic fiber manufacturers has been Institute. offered and supplied to help start the Furthermore, apparently due to the fact that the author has maintained a high degree of objectivity and fairness in what has developed as a highly competitive industry, the author has been asked to serve as the Institute's first Executive Director.

### About the Author

The author of this proposal has been directly associated with the development of FRC since the time of the invention and early testing of these materials at the Carnegie Institute of Technology in 1962. Since that time, he has conducted research and has published numerous journal articles on the subject. These activities are listed in the resume which is appended to this proposal. The author is now a senior member of ACI Committee 544, has served as chairman of the subcommittee on Ongoing and Needed Research and currently serves as chairman of the subcommittee on Synthetic Fibers (ACI 544.03). As a result of this long and continuously active association the author has witnessed the invention and development of this innovative material system and has been directly associated with the transition from laboratory research to full scale industrial development and commercial enterprise.

## Progress to Date

A steering committee has informally surveyed the body of those who may be interested in formation of an Institute to be founded and headquartered at the University of Miami. Initial steps have been taken, including incorporation of the IFCI in the State of Georgia, and an organizational meeting was held in Orlando, Florida on March 22, 1988.

The purpose and goals of the Institute are listed in Article IV of the Articles of Incorporation. The IFCI is to be a non-profit corporation which is organized for the following purposes:

- 1. To promote the betterment of concrete as a construction material through the acceptance and proper use of fibers.
- 2. To encourage and disseminate ideas, research, and development information on fibers and on fibrous concrete methodology.
- 3. To recommend standards on the use and performance of fibrous concrete.
- 4. To unitedly and collectively strive to establish a harmonious relationship and understanding between the members of the corporation and government regulatory agencies and other related institutions and industries.
- To secure, preserve, diffuse and interchange accurate and reliable information on fibrous concrete.
- 6. To develop and improve methods and techniques for using fibers in concrete.
- 7. To conduct seminars, conferences, and research for the concrete industry.

# Organizational Format

During initial discussions on the establishment of the IFCI at the University of Miami, the author made known the fact that the interests of the University of Miami, relative to its educational and research missions, must be fostered and protected within the organizational structure of the

Institute for as long as it would be associated with the University. To that end the author proposed to the Institute's organizational \* steering committee a structure which is patterned after that of the Phosphate Research Institute (PRI) which is already headquartered in the Department of Civil and Architectural Engineering at the University. Figure 1 schematically demonstrates this structure.

Department Advisory Board Board of Direction

Executive Director

Figure 1.

There are to be two independent boards to oversee the operation of the Institute.

A Department (of Civil and Architectural Engineering) Advisory Board consisting of the Department Chairman, the Institute's Executive Director while and if he/she is a regular member of the Department Faculty, and a third member elected from the Department Faculty by the Department. In the case that the Executive Director might be someone who is not a regular member of the Department Faculty then there would be two Department Faculty members elected to the Advisory Board.

A Board of Directors consisting of 12 to 15 members chosen from internationally recognized leaders from the fields of education, research, government and industry who have expressed interest and a willingness to serve the Institute will be appointed by the Steering Committee. The Chairman of the Department of Civil and Architectural Engineering of the University is to serve as ex-officio member of the Board of Directors of the Institute. The Steering Committee will, upon carrying out this initial appointment responsibility, be immediately dissolved and relieved of further responsibility for the operation or organization of the Institute in favor of the new Board of Direction. In preparation for this event, the Steering Committee will present a draft set of by-laws, which are currently in preparation, for final revision and adoption by the Board of Directors.

The Executive Director will administer the activities of the Institute in a manner which is consistent with the wishes of the Department Advisory Board, overseers of the interests of the Department and of the University, and with the By Laws and discretion of the Board of Directors who attend to the goals and standards of the Institute.

## Impact to the University

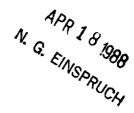
The goals of the IFCI, as stated in the Articles IV listed above, are consistent with the author's own long-standing personal commitment to the development within this industry and with what are the University's mission and standards with regard to education and research and the ethical industrial and commercial development which is a desired by product of the first two activities.

Among the goals of the Institute which, by implementation at headquarters at the University of Miami, will provide direct benefits to the University are the following.

- 1. The Institute will sponsor International Symposia on FRC. There is worldwide interest in the research and applications of these materials and the greater Miami is well situated, geographically as well as with regard to facilities, transportation and other attractions, to serve as host for this type of function as well as for other meetings and as the headquarters of the Institute.
- The Institute will maintain a research library which will gather and catalog literature from its worldwide sources and industry members
- 3. At the present time there are three members of the Department Faculty who are actively engaged in research activities with FRC. They, and other faculty members engaged in research in related areas, will gain recognition and have the resources of the Institute on which to draw in support of their research and funding proposals.
- 4. For many years and through the efforts and successes of Department Faculty the University of Miami has maintained an active presence in concrete research. This will not change with the formation of the Institute. However, with headquarters at the University of Miami, the deserved recognition will be spread worldwide and to the construction industry. This should yield benefits to the graduate and undergraduate enrollments.







DATE:

April 14, 1988

TO:

Dr. Norman G. Einspruch, Dean

FROM:

Dr. Michael K. Phang, Chairman

SUBJECT:

International Fibrous Concrete Institute (IFCI)

Attached please find a copy of proposed International Fibrous Concrete Institute in the Department of Civil and Architectural Engineering for your review and approval.

The formation of the Institute was approved unanimously at the department meeting on March 9, 1988 and subsequently the proposed document was approved by the faculty on April 13, 1988.

The proposal carries my full support.

MKP:sem

Attachment

John -

This activity has my endorsement.

Ph. prous approval

of title.

4/10/88

NORMAN G. EINSPRUCH, DEAN UNIVERSITY OF MIAME COLLEGE OF ENGINEERING P. O. BOX 248294 CORAL GABLES, FL 33124

1.) To: Dr. Knoblock

2./cc: Provost

3)cc: Dr. Phag (P.1)

4- xc: Jr. Zollo (P.1)

5.) W. T 4/25

Department of Civil & Architectural Engineering College of Engineering

P.O. Box 248294 Coral Gables, Florida 33124 (305) 284-3391

### PROPOSAL

TO: Faculty, of the Department of Civil and Architectural Engineering

BY: Ronald F. Zollo, Ph.D., P.E.
Professor
Dept. of Civil and Architectural Eng.

RE: International Fibrous Concrete Institute

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### RESUME

NAME:

Ronald F. Zollo

ADDRESS:

3050 S.W. 21 Street, Miami, FL 33145 September 13, 1941/Brooklyn, N.Y.

DATE/PLACE OF BIRTH: PROFESSIONAL STATUS:

15, 1941/blooklyn, W.1.

Professor and Associate Chairman Professional Engineer Dept. of Civil and Architectural Engineering, University of Miami Coral Gables, Florida (305) 284 - 3490 President
ENGINEERING ANALYTICS
INCORPORATED
Established Jan. 1986
(305) 444 - 9543

## EDUCATION (Institutional):

Secondary: Brooklyn Technical High School, Brooklyn, N. Y. College: Carnegie Inst. of Technology, Pgh. Pa., B.S. 1963 Graduate: Carnegie Inst. of Technology, Pgh. Pa., M.S. 1966 Carnegie-Mellon University, Pgh. Pa., Ph.D. 1971

(Non-Institutional)
Finite Element Methods in Engineering, Feb. 16 - 20, 1976
Practical Steel Design for Buildings, Feb. 3, 10, 17, 1977
National Science Foundation, Summer Institute
Multi Protection Design, Aug. 15 - 26, 1977

### CERTIFICATION - LICENSURE

Professional Engineer State of New York 1971 State of Florida 1973

PROFESSIONAL ACTIVITIES: (Teaching, Research, Publications, Panels, Seminars, Memberships, Honors, Consultation)

### Teaching:

Instructor, Dept. of Civil Engineering, Carnegie Inst. of Tech., Pgh. Pa., Summer 1968, Summer 1969.

Assistant Prof. of Civil Engineering, The City College of the City Univ. of N. Y., Sept. 1969 to Aug. 1972.

Professor of Civil and Architectural Engineering, College of Engineering, Univ. of Miami, June 1983 to Present. Associate Professor, June 1976 to May 1983. Assistant Professor, Sept. 1972 to May 1976.

Professor of Ocean Engineering (Secondary Appointment) Univ. of Miami, Aug. 1981 to 1983.

### RESEARCH

Research Assistant: "Emergency Support of Hovercraft at Sea" Principal Investigator: Dr. T.E. Stelson, Georgia Inst. of Tech.
June 1966 to June 1967 (at Carnegie Inst. of Tech.)

Project Engineer: "Photo Elastic Model for Granular Soils" Principal Investigator: Dr. G.R. Theirs, Gen'l Analytics Inc., Pittsburgh, PA June 1967 to June 1968 (at Carnegie Inst. of Tech.)

Masters Thesis Research: "Properties of Fiber Concrete Composite with Steel Decks" Advisor: Dr. J.P. Romualdi, Carnegie-Mellon University Completed 1966

Doctoral Thesis Research: "Hybrid Computer Techniques for Solving Partial Differential Equations" Advisor: Dr. E.M. Krokosky, Carnegie-Mellon University Completed 1971

Research Consultant: Pittsburgh Corning Corp., Pgh., PA July - August, 1971.

Principal Investigator: "Extrusion of Fiber Reinforced Concrete" National Science Foundation (NSF) Grant 4/1/72-1/31/75

Principal Investigator: "Experimental Facilities Development: Structural Engineering Laboratory" National Science Foundation Inst. Grant 5/1/73-6/30/73

Principal Investigator: "Extrusion of Fiber Reinforced Concrete"
National Science Foundation Grant 2/1/73-8/31/75

Principal Investigator: "Water Extended Polyester for Roofing Products"
Meridian Products, Inc., Grant 8/1/74-3/2/75

Principal Investigator: "Standardization of Fiber Concrete Flexural Testing" University of Miami, 12/76-12/78

Principal Investigator: "Effect of Number of Fibers at Constant Spacing on Flexural Strength of Fiber Concrete" University of Miami, 1/79-6/79

Current Research Projects in Fiber Reinforced Concrete and in Ferrocement, University of Miami

# RONALD F. ZOLLO / 3

Principal Investigator: "Collated Fibrillated Polypropylene Fiber in Concrete."
Initiation Grant, Forta Fiber, Inc., 5/82-8/82

Supplemental Grant, Forta Fiber, Inc., 1/83-5/83

Principal Investigator: "Collated Fibrillated Polypropylene A New Fiber Type". Fiber Tech Industries, Inc., 1/83-12/83

## REFEREED PUBLICATIONS AND JOURNAL ARTICLES

- Zollo, R.F., "Wire Fiber Reinforced Concrete Overlays for Orthotropic Bridge Deck Type Loadings", J. of the American Concrete Institute, October 1975.
- Zollo, R.F., "Fiber Reinforced Concrete Extrusion", J. of the Structural Division, American Society of Civil Engineers, December, 1975.
- Zollo, R.F., "Extrusion of Steel Fiber Reinforced Concrete", J. of the American Concrete Institute, December 1975.
- Zollo, R.F., "Discussion of Ferrocement Steel Plate Composite Beams", J. of the American Concrete Institute, September, 1975.
- Zollo, R.F., and Campbell, R.B., "Extrusion of Glass Fiber Reinforced Concrete", J. of the American Concrete Institute, November, 1977.
- Zollo, R.F., "Fibrous Concrete Flexural Testing", J. of the American Concrete Institute, September\_October 1980.
- Zollo, R.F., "Discussion--Fibrous Concrete Flexural Testing", J. of the American Concrete Institute, July-August 1981.
- Zollo, R.F. and Heyer, E.F., "Rx-Treated Lumber and Metal + Corrosion Elements", Civil Engineering, ASCE, August, 1982.
- Zollo, R.F., "Collated Fibrillated Polypropylene Fibers in FRC", SP-81, American Concrete Institute, pp. 397-409, 1984.
- Zollo, R.F., Ilter, J.A. and Bouchacourt, G.B., "Plastic and Drying Shrinkage in Concrete Containing Collated Fibrillated Polypropylene Fiber" RILEM International Symposium on FRC, Sheffield, England, July, 1986.

### **PUBLICATIONS**

"Possible Contributions of Cement and Concrete Technology to Energy Conservation", U.S. Dept. of Commerce, National Bureau of Standards, NBS Publication 542, May 1979 (contributor).

"Extruding Fiber Reinforced Concrete", presented at ASCE National Struct. Engr. Convention, New Orleans, LA., April, 1975.

"Measurement of Properties of Fiber Reinforced Concrete", ACI committee 544, J. of the American Concrete Institute, July, 1978.

"An introduction to Fiber Reinforced Concrete", presented at ACI S. Florida Chapter, March 1979.

"Professional Liability in the Construction Industry", Seminar Coordinator, University of Miami, March, 1979.

"State of the Art Report on Fiber Reinforced Concrete" (contributing author), Concrete International, American Concrete Inst., August, 1982.

"Collated Fibrillated Polypropylene Fibers in FRC", International Symposiums on Fiber Reinforced Concrete, Detroit, Mich., September, 1982.

"Properties of Ferrocement Subjected to In-Plane Bi-Axial States of Stress", Ferrocement Symposium: Research Design and Applications, Detroit, Mich., September, 1982.

"An Overview of Progress in Applications of Steel Fiber Reinforced Concrete" U.S.A.-Sweden Seminar on Steel Fiber Reinforced Concrete, Saltsjobaden, Sweden, June, 1985.

"Glass, Natural and Synthetic Fiber Uses in Fibrous Concrete" Seminar on Design with Fiber Reinforced Concrete, American Concrete Inst., Chicago, IL, October, 1985.

"Organic and Synthetic Fibers in Concrete", Seminar 20-43 Fiber Reinforced Concrete, World of Concrete, Atlanta, GA, February, 1986.

"Slip and Fall Accidents", Second Engineering Institute for Attorneys, University of Miami, Bal Harbor, Fl March, 1986.

Zollo, R.F., "An Overview of the Development and Performance of Commercially Applied SFRC", Tenth Joint USA-ROC Business Conference, Taipei, Taiwan, December, 1986.

### RONALD F. ZOLLO / 5

Zollo, R.F., "A Brief Discussion of Fundamental Physical and Chemical Properties of Fibers for, and of, Fibrous Concrete" Seminar Proceedings, Composite Materials and Structures Center, Michigan State University, East Lansing, MI, February 1987.

### BOOKS AND MONOGRAPHS

"Structural Materials Laboratory Manual", by Ronald F. Zollo, Dept. of Civil Engineering, University of Miami, 1974.

Produced Experiment Demonstration and Discussion: Structural Materials Laboratory Manual, a series of seven television tapes, 4 hrs., 40 min. total time, University of Miami, 1981.

### PANELS (by invitation)

- National Bureau of Standards (NBS)-U.S. Dept. of Energy (DOE) International Workshop on Energy Conservation in Concrete Technology, October 1977
- Forum: Needed Research & Development for Fiber Reinforced Concrete, ACI Annual Meeting, Toronto, Canada, April 1978
- Seminar: Design of Light and Heavy Industrial Buildings, American Institute of Steel Construction (AISC), Oct. 1980, Mia. FL
- Conference: Civil Engineering Department Chairmen Meeting: Charlottsville, Virginia (for C.E. Dept., Univ. of Miami), December, 1980.
- Conference: Southeastern Consortium for Minorities in Engineering (for Office of the Dean, University of Miami), October, 1980.
- Workshop: Research, Standards and Specifications for Protection of Structures Against Wood Destroying Organisms, National Institute of Building Sciences, September 1982.
- Symposium Session Chairman, International Symposium of Fiber Reinforced Concrete, Detroit, Michigan, September, 1982
- Symposium Session Co-Chairman, Ferrocement: Research, Design and Applications, Detroit, Michigan, September 1982
- Chairman, "Design and Construction of Post Tensioned Buildings" University of Miami/Knight International Center, November, 1983

- RONALD F. ZOLLO / 6
- Chairman, "Masonry Structures", University of Miami, Coral Gables, Florida, December 1983
- Chairman, "ACI 318-83 Building Code and PCI Design Handbook", University of Miami/Knight International Center, February, 1984
- Conference: Steel Fiber Reinforced Concrete-Prospects and Problems, Saltsjobaden, Sweden, June 1985.
- Examiner: ACI Certification for Concrete Field Testing.
- Seminar: Fiber Reinforced Concrete, World of Concrete, Atlanta, GA, February, 1986.

### PROFESSIONAL MEMBERSHIP / EDITORIAL RESPONSIBILITIES

- Fellow, American Society of Civil Engineering / Journal of the ASCE
- Member, American Concrete Institute / Journal of the American Concrete Institute / Concrete International / Committee 544 / Committee 549 / Reviewer, Technical Activities Committee / Sub-Committee Chair, 544 Ongoing and Needed Research / Sub-Committee Chair, 544.03 Synthetic Fibers / Secretary ACI Comm. 549
- Member, American Society for Engineering Education
- Member, American Society for Testing and Materials / Standards of the ASTM / Committee CO9.03.04
- Reviewer, National Science Foundation

### HONORS, AWARDS, ELECTED MEMBERSHIPS

- Member, Chi Epsilon, National Civil Engineering Honor Soc.
- Awarded Best Technical Paper of 1975, School of Engineering and Architecture, University of Miami.
- Member, Board of Directors, South Florida Section of the American Concrete Institute, 1981-Present.
- Member, University of Miami College of Engineering Council, from 1983.
- Member, College of Eng. Tenure and Promotion Review Board, Univ. of Miami, from 1984.

RONALD F. ZOLLO / 7

Chairman, University of Miami Faculty Senate Athletic Committee, 1985.

Member, University of Miami Faculty Senate, from 1986.

Omicron Delta Kappa (ODK) - National Leadership Society

Iron Arrow (IA) - Highest Honor Achievable at Univ. of Miami

Juror, Florida Concrete and Products Association, Outstanding Concrete Structures in Florida, 1987.

### CONSULTATION

Professional consultation activities have been numerous and diverse in their classification. The following is a chronological listing of the most important of these activities dating from 1963 to the present time:

# Client/Employer

Swindell-Dressler Co., Inc.
AllStates Design & Devel Co.
Meridian Products, Inc.
B & B Equipment Co., Inc.
I.C.E. Engineers
Roman Stone Const. Co., Inc.
General Development Co., Inc.
Palm Beach Co. School Board
Dade Co. Courthouse Repair

# Brill/Heyer Assoc.

Clough Assoc., Engineers
Law Firms (numerous)
O.K. Houston, Architect
Southern Pacific Com.
Gerald F. DeMarco, Arch.
Consulting Eng. & Science
Gustav R. Mayer, P.E.
KBC Consultants
Mitchell Fibercon
Fibermesh Inc.
Bekaert Steel Co.
W. R. Grace
Aviation Underwriters, Inc.

# Job Description/Classificationn

Structural Engineer Struct. & Foundation Engineer Materials Research and Testing Computerization Structural Engineering Research & Development Materials Testing Structural Failure Analysis Failure Analysis & Matls. Testing Computer Anal., Eng. Consultant Computer Structural Analysis Expert Witness Structural Engr. Consultant Structural Engr. Consultant Structural Engr. Consultant Structural Engr. Consultant Structural Engr. Consulting Structural Engr. Consulting Materials Consultant Materials Consultant Materials Consultant Materials Consultant Pedestrian Safety Consultant

# COUNTRIES VISITED IN PROFESSIONAL STATUS:

Canada, Sweden, Italy, England, Taiwan, Philippines, Thailand, Singapore

· Copy.

### BY-LAWS

OF

THE INTERNATIONAL FIBROUS CONCRETE INSTITUTE, INC.

### ARTICLE I

# NAME AND LOCATION

SECTION 1. Name.

The name of this organization shall be The International Fibrous Concrete Institute, Inc. The International Fibrous Concrete Institute, Inc. is a non-profit corporation incorporated in and under the laws of the State of Georgia.

SECTION 2. Trade Name.

The Corporation shall do business and operate under the following trademarks or trade names: International Fibrous Concrete Institute or IFCI.

SECTION 3. Trademark.

The emblem and logo of the Corporation shall be a series of dark gray rectangular boxes with white blotches inside the rectangular boxes representing fibers.

SECTION 4. Offices.

The principal place of business of the Corporation shall be at such localities as may be determined by the Board of Directors.

### ARTICLE II.

#### **OBJECTIVES**

SECTION 1. Objectives.

- To promote the betterment of concrete as a construction material through the acceptance and proper use of fibers.
- To encourage and disseminate ideas, research, and development of information on fibers and on fibrous concrete methodology.
- To recommend standards on the use and performance of fibrous concrete.

- 4. To unitedly and collectively strive to establish a harmonious relationship and understanding between the members of the Corporation and governmental regulator agencies and other related institutions and industries.
- 5. To secure, preserve, diffuse and interchange accurate and reliable information in fibrous concrete.
- 6. To develop and improve methods and techniques for using fibers in concretes.
- 7. To conduct seminars, conferences and research for the concrete industry.

#### ARTICLE III

#### MEMBERSHIP

# SECTION 1. Qualifications.

Any person, firm, corporation or organized group that, in the opinion of the Board of Directors, subscribes to the purposes and basic policies of the Corporation may become a member of the Corporation subject to compliance with the by-laws.

SECTION 2. Application for Membership.

1. Application for membership shall be made to the Corporation on a form prescribed by the Board of Directors and shall embody a concise statement of the applicant's work and interest in the promotion and acceptance of fibrous concrete. Each application for membership shall be accompanied by a check or cash in an amount equal to the basic annual dues of the institute. In case the application for membership is denied, the check or cash accompanying such application shall be promptly returned.

- The Executive Director shall submit to the Board of Directors a copy of the application and a written ballot for approval within thirty days after receipt of the application. Approval by a majority of the members of the Board of Directors shall be necessary to approve membership.
- 3. Applicants who have been approved shall be notified of the fact in writing by the executive director and a copy of the by-laws of the Corporation shall accompany the notice of election and certificate of membership.

Institute

SECTION 3. Classes of Membership.

Membership in the Corporation is open to persons, firms, corporations and organized groups. The Corporation shall have the following classes of members:

- 1) CLASS 1. GENERAL MEMBERS Academics, architects, authors, engineers, scientists, schools, testing laboratories, trade or professional associations and regulatory agencies. Individuals who are employed by Class 3 companies may join as Class 1 General Members only if their employer is a company member.
- 2) CLASS 2. CONSTRUCTION INDUSTRY GROUP MEMBERS Persons, firms, corporations, or organized groups engaged in the concrete construction industry as a manufacturer or distributor of concrete industry products.
- 3) CLASS 3. FIBER MANUFACTURING MEMBER Persons, firms, corporations, or organized groups engaged in the manufacture or trade name labeling of fibers used in concrete.
  - 4) CLASS 4. ALL OTHERS.

SECTION 4. Rights and Privileges of Membership.

Members of the Corporation shall have the following rights and trivileges:

- 1) The right to receive all literature and publications of the Corporation. In the
  - 2) The right to publish membership affiliation with the Corporation. In .
- 3) The right to use the registered trademark and trade name of the Corporation.
- .4) The right to attend the meetings and vote on matters before the membership.
- 5) Eligible to serve as an officer of the Corporation, on the Board of Directors and on the various committees.

Tpon termination of membership by resignation or expulsion or therwise, all interest and right of a former member in the treations and affairs of the Corporation shall cease.

SECTION 5. Group Members.

Corporations, firms, partnerships and other organized groups with more than one member shall become Company Members. Each Company Member shall have one vote. The Company Member shall designate

in writing an individual and an alternate, if any, to be eligible for election as an officer, director or committee member, to represent, vote and act for said Company Member in all affairs of the Corporation properly subject to action by members.

SECTION 6. Resignation.

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Any member may withdraw from the Corporation after fulfilling all coligations to it by giving written notice of such intention to the Executive Alrector, which notice shall be presented to the Board of Directors by the Executive Director at the first meeting after its receipt.

SECTION 7. Suspension or Removal.

A member may be suspended for a period or expelled for cause such as violation of any of the by-laws or rules of the Corporation, In vior or for conduct prejudicial to the best interest of the Corporation. Suspension or expulsion shall be by a two-thirds vote of the membership of the Board of Directors. For any cause other than non-payment of dues, removal shall occur only after the member against whom the complaint has been lodged has been aivised of the complaint in writing and has been given a reasonable opportunity for defense; and such member, if removed, may appeal the decision of the Board of Directors at the annual meeting of the Corporation, providing that notice of intent to appeal is provided in writing to the executive director at least thirty (30) days in advance of the meeting.

SECTION 8. Reinstatement.

If a former member desiring a continuous membership record may be reinstated on showing proof of qualification and paying all dues from the time of leaving to the present and all dues in arrears.

If, however, a continuous membership record is not desired, the member may be reinstated on showing proof of qualification and paying current year's dues.

SECTION 9. Change of Name.

In case a member of the Corporation shall make a change in its business title or firm name, then such member shall at once notify the executive Director of that change, and, if assurances satisfactory to the membership committee are given that a material change in membership of the firm, corporation or group has not taken place, then the name shall be changed on the records of the Corporation without affecting the standing of the member.

SECTION 10. Bound by Articles and By-Laws.

Any member of this corporation shall be deemed to have agreed to be bound by the Articles of Incorporation and these by-laws, together with all obligations therein fixed.

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SECTION 11. Certificate Non-Assignable.

The certificate of membership and the rights and privilege of a member shall not be assignable.

ARTICLE IV.

DUES

SECTION 1. Dues.

Dues and admission fees, if any, for all classes of membership shall be established by the Board of Directors.

SECTION 2. Payment of Dues.

Dues statements for the forthcoming year will be posted to all members in October of the current year. All dues statements are due and payable thirty days after billing. All unpaid dues will be charged a one and one-half per cent monthly interest rate starting from the date the bill was due until receipt of payment.

SECTION 3. Delinquency and Termination of Membership.

When any member shall be in default in the payment of dues for a period of forty-five days, said member shall be notified of such delinquency by certified mail. If payment is not made within forty-five days after notification of the delinquency, the member shall be dropped from the roll and thereupon forfeit all rights and privileges of membership.

SECTION 4. Refunds.

 No dues or admission fees shall be refunded to any member whose membership terminates for any reason.

### ARTICLE V.

### MEETINGS OF MEMBERSHIP

SECTION 1. Annual Meeting.

The annual meeting of the membership of the Corporation shall be on a date as may be fixed by the Board of Directors. The annual meeting shall be held at a location designated by the Board of Directors. The purpose of the meeting shall be election of directors, reports of officers and committees, and all business which is properly brought before the meeting.

# SECTION 2. Special Meetings.

Special meetings of the Corporation may be called by the Board of Directors, at any time; or shall be called by the President upon written request by one-half (1/2) of the members within thirty (30) days after such request is filed with the Executive Director. The business to be transacted at any special meeting shall be stated in the notice thereof and no other business may be considered at that time.

# SECTION 3. Notice of Meetings.

Written notice of any meeting of the membership shall be mailed to the last known address of each member not less than thirty (30) nor more than sixty (60) days before the date of the meeting.

SECTION 4. Voting.

At all meetings of the Corporation, each active member regardless of category of membership shall be entitled to one vote on matters submitted to a vote before the membership. Prior to each meeting, each company member shall designate a voting delegate and an alternate voting delegate to act as its voting member. The name of the voting delegate and the alternate voting delegate shall be submitted to the executive director prior to each meeting by the company member. Proxy votes will be accepted at all meetings of the members. Unless otherwise specifically provided by these by-laws, a majority vote of those members present and voting are represented by proxy shall govern.

# SECTION 5. Voting by Mail

Proposals to be offered to the members for a mail vote, excepting election ballots, shall first be approved by the Board of Directors. On any mail vote, no less than one-half of the members shall cause a ballot to constitute a valid action, and majority of those voting shall determine the action.

### SECTION 6. Quorum of Members

At an annual or special meeting of members, a quorum shall consist of one-half (1/2) of the members including proxy representation, the decision of a majority of the quorum shall be valid as an act of the members.

### SECTION 7. Proxies.

At any meeting of the members, a member entitled to vote may vote by proxy executed in writing by the member or by his duly authorized attorney-in-fact. No proxy shall be valid after eleven (11) months from the date of its execution, unless otherwise provided in the proxy. Proxies may be cancelled by proper notification from the member of his duly authorized attorney-in-fact.

## SECTION 8. Rules of Order.

The meetings and proceedings of the Corporation shall be regulated and controlled by Roberts Rules of Order (revised) for parliamentary procedures, except as may be otherwise provided by these By-Laws.

### ARTICLE VI.

### BOARD OF DIRECTORS

# SECTION 1. Authority and Responsibility.

The governing body of the Corporation shall be the Board of Directors. The Board of Directors shall have supervision, control and direction of the affairs of the Corporation, its committees and publications; shall determine its policies or changes therein; shall actively prosecute its objectives and supervise the disbursement of its funds. The Board may adopt such rules and regulations for the conduct of its business as shall be deemed advisable.

# SECTION 2. Composition.

The initial Board of Directors shall consist of \_\_\_\_\_ members. Thereafter the number of Directors shall be established by a vote of the membership at the annual meeting of the Corporation, but in no event shall there be less than five (5) nor more than fifteen (15) Directors.

The make-up of the Board of Directors shall be as follows:

Board	Number Class l	of Members Class 2	from Class 3
Board	<u></u>		
Five man Board	1	1	3
Six man Board	1	2	3
Seven man Board	2	2	3
Eight man Board	2	2	4
Nine man Board	2	3	4 .
Ten man Board	2	3	5
Eleven man Board	3	3	5
Twelve man Board	3	3	. 6
Thirteen man Board	3	4	6
Fourteen man Board	3	4	7
Fifteen man Board	4	4	7

# SECTION 3. Manner of Election and Term.

Directors shall be elected at the annual meeting of the Corporation by a vote of the full membership. Each Director shall be elected for a two (2) year term. Directors shall be elected on staggered terms. Initially, the Class 1 director, Class 2 director and one Class 3 director shall be elected for a three (3) year term and the two remaining Class 3 directors shall be elected for a two (2) year term. Thereafter, upon expiration of their terms, each director shall be elected for a two (2) year term. If additional directorships are added by a vote of the membership, each of said additional directors shall be elected for a two (2) year term. The Board of Directors will advise the nominating committee of the number of Directorships available and the term of each position. The immediate past president shall serve a one (1) year term on the Board of Directors as the member at large.

# SECTION 4. Nomination.

The nominating committee, shall present to the membership at least sixty (60) days before the annual meeting by mail one (1) nomination for each seat on the Board which is vacant or is about to expire. Additional nominations may be made from the floor at the annual meeting.

# SECTION 5. Quorum of the Board.

At the meeting of the Board of Directors, no less than a majority of the members of the Board shall constitute a quorum for the transaction of the business of the Corporation and any such business transacted shall be valid providing it is affirmatively passed upon by a majority of those present.

# SECTION 6. Meetings of the Board.

A regular meeting of the Board of Directors shall be held no less than two (2) times during each year at such times and at such place as the Board may prescribe. One such meeting shall be an annual meeting that will be held before the annual membership meeting. Notice of all such meetings shall be given by the Executive Director to the Directors not less than twenty (20) days before the meeting is held. Special meetings of the Board may be called by the President or at the request of any three (3) Directors, by notice mailed, delivered, telephoned or telegraphed to each member of the Board of Directors not less than seven (7) days before the meeting is to be held.

# SECTION 7. Voting by Mail.

Action taken by a mail ballot of the members of the Board of Directors in which at least a majority of such Directors in

writing indicate themselves in agreement shall constitute a valid action of the Board if reported at the next regular meeting of such Board.

SECTION 8. Vacancies and Removal.

Any vacancy occurring on the Board of Directors between annual meetings shall be filled by the Board of Directors. A Director so elected to fill a vacancy shall serve the unexpired term of his predecessor. The Board of Directors may, in its discretion by affirmative vote of two-thirds (2/3) of its member: any Director for cause. In the event a board member than two (2) consecutive meetings, then the Board of may, in its discretion by affirmative vote of two-thi its members, remove said Director.

SECTION 9. Compensation.

Directors and elected officers shall not receive any for their services.

ARTICLE VII.

**OFFICERS** 

SECTION 1. Elected Officers.

The elected officers of this Corporation shall be President, Vice President, and a Secretary/Treasurer to be elected at the annual meeting of the Corporation by the Board of Directors, and to serve until their successors have been duly elected and assume office. The Vice President shall automatically succeed the President.

SECTION 2. Qualifications for Office.

Members of the Board of Directors in good standing shall be eligible for nomination and election to any elective office of this Corporation.

SECTION 3. Terms of Offices.

Each elected officer shall take office immediately upon installation and shall serve for a term of one (1) year or until his successor is duly elected and qualified.

SECTION 4. Re-election.

No elected officer, except the Secretary/Treasurer, having served one full term shall be eligible for re-election to the same office until at least one year shall have elapsed.

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# SECTION 5. Vacancies and removal.

Vacancies in any elective office shall be filled for the balance of the term thereof by the Board of Directors at a regular or special meeting. The Board of Directors may, in its discretion by a two-thirds vote of all its members, remove any officer from effice for cause.

### ARTICLE VIII.

### DUTIES OF OFFICERS

### SECTION 1. President.

The President shall preside at meetings of the Board of Directors and at membership meetings, and shall serve as a member, ex-officio, with right to vote on all committees. He shall make appointments of the nominating, and special committees with the approval of the Board of Directors. At the annual meeting of the Corporation and at such other times as he shall deem proper, the president shall communicate to the members such matters and make such suggestions as may in his opinion tend to promote the welfare and increase the usefulness of the Corporation. He shall perform such other duties as are necessarily incidental to the cifice of the President or as may be described by the Board of Directors.

# SECTION 2. Vice President.

The Vice President shall have such powers and perform such duties as the Board shall from time to time prescribe. In the absence of the President, the Vice President shall act as presiding officer at any Board or Membership meeting.

# SECTION 3. Secretary/Treasurer.

The Secretary/Treasurer shall be in charge of the Corporation funds and records. As Treasurer, he shall collect all members dues and/or assessments; shall have established proper accounting procedures for the handling of the Corporation's funds and shall be responsible for the keeping of funds in such banks, trust companies and/or investments as are approved by the Board of Directors. He shall report on the financial condition of the Corporation at all meetings of the Board of Directors and at other times when called upon by the President. At the end of each fiscal year as Treasurer, the shall prepare an annual report which shall reflect an audit by a Certified Public Accountant. At the expiration of his term of office, he shall deliver over to his successor all books, money, and other property in his charge or, in the absence of a successor, he shall deliver such property to the President. As Secretary of the Corporation, he shall be responsible for the proper and legal mailing of notices to

members. He shall see to the proper recording of proceedings of meetings of the Corporation, Board of Directors and all committees; and carry into execution all orders, votes and resolutions, not otherwise committed. He shall keep the seal of the Corporation. Such duties of the Secretary/Treasurer as may be specified by the Board of Directors may be delegated to the Executive Director of the Corporation.

# ARTICLE IX. COMMITTEES

# SECTION 1. Executive Committee.

There shall be elected annually by the Board of Directors an Executive Committee. The Committee shall consist of five (5) members of whom three shall be the President, Vice President, and Secretary/Treasurer. The Executive Committee may act on behalf of the Corporation in any matter when the Board of Directors is not in session, reporting to the Board of Directors for its ratification of their action at each regular or special meeting called for the purpose. Three (3) members shall constitute a quorum for the transaction of business. The meetings may be called by the Chairman or by three (3) members.

# SECTION 2. Nominating Committee.

The President shall appoint a Nominating Committee which shall consist of four (4) regular members. With the approval of the Board of Directors, the committee members shall be announced to the membership within six (6) months prior to the annual meeting. The nominating committee shall invite suggestions from the membership for those directorships which are vacant or about to expire, allowing at least sixty (60) days before the annual meeting. The committee's nomination shall be voted upon at the annual meeting by the regular members as these by-laws prescribe.

### SECTION 3. Special Committees.

The President, with the approval of the Board of Directors, shall appoint committees, subcommittees or task forces as are necessary and which are not in conflict with other provisions of these by-laws and the duties of any such committee shall be prescribed by the Board of Directors upon their appointment. The members of such committee shall hold office until the appointment of their successors. A majority of any committee of the Corporation shall constitute a quorum for the transaction of business, unless any committee shall, by a majority of the vote of its entire membership decide otherwise. The President of the Corporation shall have the power to fill committee vacancies.

### ARTICLE X

### EXECUTIVE AND STAFF

# SECTION 1. Executive Director.

The Executive Director shall be the chief paid executive of the Corporation responsible for all management functions. He shall manage and direct all activities of the Corporation as prescribed by the Board of Directors and shall be responsible to the Board of Directors.

### ARTICLE XI

### FINANCE

# SECTION 1. Bonding.

Trust or surety bonds will be furnished by the President, Secretary/Treasurer, Executive Director and such other officers or employees of the Corporation as the Board shall direct. The amount of such bonds shall be determined by the Board and the costs paid by the Corporation.

# SECTION 2. Budget.

The Board shall adopt, in advance of the next fiscal period, an annual operating budget covering all activities of the Corporation. The Secretary/Treasurer shall furnish the membership within sixty-one days following the end of each annual period a financial report for the year just completed.

# SECTION 3. Audit.

The accounts of the Corporation shall be audited not less than annually by a certified public accountant who shall be appointed by the Vice President with the approval of the Board of Directors and who shall provide a report to all voting members.

### SECTION 4. Fiscal Year.

The fiscal year of the Corporation shall begin on the first day of January and end on the last day of December in each year.

### SECTION 5. Corporate Obligation.

This Corporation shall have no capital stock and no member shall te liable personally for the Corporation's obligations.

### ARTICLE XI.

### AMENDMENTS

These by-laws may be amended or appealed by a majority (50%) vote of the voting members present at any annual meeting of the Corporation duly called and regularly held, notice of such proposed changes having been sent in writing to the members at least thirty (30) days before such meeting or by a majority (50%) vote of the voting members voting by a thirty (30) day mail ballot. Amendments may be proposed by the Board of Directors on its own initiative or upon petition of any one-third of the voting members addressed by the Board. All such proposed amendments shall be presented by the Board to the membership with or without recommendation, except that no amendment shall be made which provide for personal liability of the members for the debt of the Corporation.

ARTICLE XII.

### **AFFILIATIONS**

SECTION 1. Affiliations.

The Corporation may affiliate with other related associations as so directed by the Board of Directors.

ARTICLE XIII.

#### INDEMNIFICATION

# SECTION 1. Indemnification.

Any person who at any time shall serve, or shall have served, as director or officer of the Corporation or of any other enterprise at the request of the Corporation, including any individual or corporation (and the officers, directors, shareholders and employees of that corporation) and the heirs, executors, and cersonal representatives of any such person, shall be indemnified by the Corporation against all costs and expenses, including, but not limited to, counsel fees, amounts of judgments paid, amounts gaid in settlement, reasonably incurred in connection with the defense of any claim, action, suit or proceeding, whether civil, criminal, administrative or other in which he or they may be involved by virtue of such person being or having been such a director or officer, if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interest of the Corporation; provided, however, that such indemnity shall not be made with respect to (a) any matter as to which such

person shall have been finally adjudged in such action, suit or proceeding to be liable for misconduct or bad faith in the performance of his duties as such director or officer; or (b) any matter settled or compromised unless, in the opinion of the independent counsel selected by, or as determined by the Board of Directors of the Corporation by a majority vote of a quorum consisting of directors who are not parties to such action, suit or proceeding, there is not reasonable for ground for such person being adjudged liable for misconduct or bad faith in the performance of his duties as such director or officer; or (c) any amount paid or payable to the Corporation by such officer or director. The foregoing indemnification shall not be deemed exclusive of any of the rights to which those who are indemnified may be entitled under any other by-law, agreement, vote of the members or by operation of law.

The Corporation may purchase and maintain insurance, at its expense, to protect itself and any such person who is or was a director, officer or representative against any such expense, liability or loss, either asserted against or incurred by him, whether or not the Corporation would have the power to indemnify him against such expense, liability or loss.

### ARTICLE XIV.

### NOTICES AND WAIVERS

Whenever any notice whatsoever is required by these by-laws or by law to be given to any member, director or officer, such notice may, except as otherwise provided for herein, may be given personally, or be given in writing by depositing the same in a postpaid, sealed envelope, addressed to such member, director or officer, at such address as appears of the records of the Corporation, and any notices so given by mail shall be deemed to have been received when it shall have been thus mailed. Such notice need not be manually signed. A waiver of such notice in writing signed by such member, director or officer, or by his duly authorized attorney, whether before or after the time stated therein, shall be deemed the equivalent thereof and the presence at the meeting of any such member, director or officer, shall be deemed a waiver of such notice of such meeting to such member, director or officer.

1.

BY-LAWS OF

THE INTERNATIONAL FIBROUS CONCRETE INSTITUTE, INC.

### ARTICLE I

#### NAME AND LOCATION

SECTION 1. Name.

The name of this organization shall be The International Fibrous Concrete Institute, Inc. The International Fibrous Concrete Institute, Inc. is a non-profit corporation incorporated in and under the laws of the State of Georgia.

SECTION 2. Trade Name.

The Corporation shall do business and operate under the following trademarks or trade names: International Fibrous Concrete Institute or IFCI.

SECTION 3. Trademark.

The emblem and logo of the Corporation shall be a series of dark gray rectangular boxes with white blotches inside the rectangular boxes representing fibers.

SECTION 4. Offices.

The principal place of business of the Corporation shall be at such localities as may be determined by the Board of Directors.

# ARTICLE II.

### OBJECTIVES

SECTION 1. Objectives.

- To promote the betterment of concrete as a construction material through the acceptance and proper use of fibers.
- 2. To encourage and disseminate ideas, research, and development of information on fibers and on fibrous concrete methodology.
- To recommend standards on the use and performance of fibrous concrete.

- 4. To unitedly and collectively strive to establish a harmonious relationship and understanding between the members of the Corporation and governmental regulator agencies and other related institutions and industries.
- 5. To secure, preserve, diffuse and interchange accurate and reliable information in fibrous concrete.
- 6. To develop and improve methods and techniques for using fibers in concretes.
- 7. To conduct seminars, conferences and research for the concrete industry.

### ARTICLE III

### MEMBERSHIP

# SECTION 1. Qualifications.

Any person, firm, corporation or organized group that, in the opinion of the Board of Directors, subscribes to the purposes and basic policies of the Corporation may become a member of the Corporation subject to compliance with the by-laws.

# SECTION 2. Application for Membership.

- 1. Application for membership shall be made to the Corporation on a form prescribed by the Board of Directors and shall embody a concise statement of the applicant's work and interest in the promotion and acceptance of fibrous concrete. Each application for membership shall be accompanied by a check or cash in an amount equal to the basic annual dues of the institute. In case the application for membership is denied, the check or cash accompanying such application shall be promptly returned.
- 2. The executive director shall submit to the Board of Directors a copy of the application and a written ballot for approval within thirty days after receipt of the application. Approval by a majority of the members of the Board of Directors shall be necessary to approve membership.
- 3. Applicants who have been approved shall be notified of the fact in writing by the executive director and a copy of the by-laws of the Corporation shall accompany the notice of election and certificate of membership.

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Membership in the Corporation is open to persons, firms, corporations and organized groups. The Corporation shall have the following classes of members:

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- 2) CLASS 2. CONSTRUCTION INDUSTRY GROUP MEMBERS Persons, firms, corporations, or organized groups engaged in the concrete construction industry as a manufacturer or distributor of concrete industry products.
- 3) CLASS 3. FIBER MANUFACTURING MEMBER Persons, firms, corporations, or organized groups engaged in the manufacture or trade name labeling of fibers used in concrete.
  - 4) CLASS 4. ALL OTHERS.

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Members of the Corporation shall have the following rights and trivileges:

- 1) The right to receive all literature and publications of the Corporation.
  - 2) The right to publish membership affiliation with the Corporation.
  - 3) The right to use the registered trademark and trade name of the Corporation.
- (4) The right to attend the meetings and vote on matters before the membership.
- Eligible to serve as an officer of the Corporation, on the Board of Directors and on the various committees.

Tpon termination of membership by resignation or expulsion or otherwise, all interest and right of a former member in the operations and affairs of the Corporation shall cease.

SECTION 5. Group Members.

Corporations, firms, partnerships and other organized groups with more than one member shall become Company Members. Each Company Member shall have one vote. The Company Member shall designate

in writing an individual and an alternate, if any, to be eligible for election as an officer, director or committee member, to represent, vote and act for said Company Member in all affairs of the Corporation properly subject to action by members.

SECTION 6. Resignation.

Any member may withdraw from the Corporation after fulfilling all coligations to it by giving written notice of such intention to the executive director, which notice shall be presented to the Board of Directors by the executive director at the first meeting after its receipt.

SECTION 7. Suspension or Removal.

A member may be suspended for a period or expelled for cause such as violation of any of the by-laws or rules of the Corporation, or for conduct prejudicial to the best interest of the Corporation. Suspension or expulsion shall be by a two-thirds vote of the membership of the Board of Directors. For any cause other than non-payment of dues, removal shall occur only after the member against whom the complaint has been lodged has been advised of the complaint in writing and has been given a reasonable opportunity for defense; and such member, if removed, may appeal the decision of the board of directors at the annual meeting of the Corporation, providing that notice of intent to appeal is provided in writing to the executive director at least thirty (30) days in advance of the meeting.

SECTION 8. Reinstatement.

If a former member desiring a continuous membership record may be reinstated on showing proof of qualification and paying all dues from the time of leaving to the present and all dues in arrears. If, however, a continuous membership record is not desired, the member may be reinstated on showing proof of qualification and paying current year's dues.

SECTION 9. Change of Name.

In case a member of the Corporation shall make a change in its business title or firm name, then such member shall at once notify the executive director of that change, and, if assurances satisfactory to the membership committee are given that a material change in membership of the firm, corporation or group has not taken place, then the name shall be changed on the records of the Corporation without affecting the standing of the member.

SECTION 10. Bound by Articles and By-Laws.

Any member of this Corporation shall be deemed to have agreed to be bound by the Articles of Incorporation and these by-laws, together with all obligations therein fixed.

SECTION 11. Certificate Non-Assignable.

The certificate of membership and the rights and privilege of a member shall not be assignable.

ARTICLE IV.

DUES

SECTION 1. Dues.

Dues and admission fees, if any, for all classes of membership shall be established by the Board of Directors.

SECTION 2. Payment of Dues.

Dues statements for the forthcoming year will be posted to all members in October of the current year. All dues statements are due and payable thirty days after billing. All unpaid dues will be charged a one and one-half per cent monthly interest rate starting from the date the bill was due until receipt of payment.

SECTION 3. Delinquency and Termination of Membership.

When any member shall be in default in the payment of dues for a period of forty-five days, said member shall be notified of such delinquency by certified mail. If payment is not made within forty-five days after notification of the delinquency, the member shall be dropped from the roll and thereupon forfeit all rights and privileges of membership.

SECTION 4. Refunds.

No dues or admission fees shall be refunded to any member whose membership terminates for any reason.

ARTICLE V.

MEETINGS OF MEMBERSHIP

SECTION 1. Annual Meeting.

The annual meeting of the membership of the Corporation shall be on a date as may be fixed by the Board of Directors. The annual meeting shall be held at a location designated by the Board of Directors. The purpose of the meeting shall be election of directors, reports of officers and committees, and all business which is properly brought before the meeting.

# SECTION 2. Special Meetings.

Special meetings of the Corporation may be called by the Board of Directors, at any time; or shall be called by the President upon written request by one-half (1/2) of the members within thirty (30) days after such request is filed with the Executive Director. The business to be transacted at any special meeting shall be stated in the notice thereof and no other business may be considered at that time.

## SECTION 3. Notice of Meetings.

Written notice of any meeting of the membership shall be mailed to the last known address of each member not less than thirty (30) nor more than sixty (60) days before the date of the meeting.

### SECTION 4. Voting.

At all meetings of the Corporation, each active member regardless of category of membership shall be entitled to one vote on matters submitted to a vote before the membership. Prior to each meeting, each company member shall designate a voting delegate and an alternate voting delegate to act as its voting member. The name of the voting delegate and the alternate voting delegate shall be submitted to the executive director prior to each meeting by the company member. Proxy votes will be accepted at all meetings of the members. Unless otherwise specifically provided by these by-laws, a majority vote of those members present and voting are represented by proxy shall govern.

# SECTION 5. Voting by Mail

Proposals to be offered to the members for a mail vote, excepting election ballots, shall first be approved by the Board of Directors. On any mail vote, no less than one-half of the members shall cause a ballot to constitute a valid action, and majority of those voting shall determine the action.

# SECTION 6. Quorum of Members

At an annual or special meeting of members, a quorum shall consist of one-half (1/2) of the members including proxy representation, the decision of a majority of the quorum shall be valid as an act of the members.

### SECTION 7. Proxies.

At any meeting of the members, a member entitled to vote may vote by proxy executed in writing by the member or by his duly authorized attorney-in-fact. No proxy shall be valid after eleven (11) months from the date of its execution, unless otherwise provided in the proxy. Proxies may be cancelled by proper notification from the member of his duly authorized attorney-in-fact.

# SECTION 8. Rules of Order.

The meetings and proceedings of the Corporation shall be regulated and controlled by Roberts Rules of Order (revised) for parliamentary procedures, except as may be otherwise provided by these By-Laws.

# ARTICLE VI.

### BOARD OF DIRECTORS

# SECTION 1. Authority and Responsibility.

The governing body of the Corporation shall be the Board of Directors. The Board of Directors shall have supervision, control and direction of the affairs of the Corporation, its committees and publications; shall determine its policies or changes therein; shall actively prosecute its objectives and supervise the disbursement of its funds. The Board may adopt such rules and regulations for the conduct of its business as shall be deemed advisable.

# SECTION 2. Composition.

The initial Board of Directors shall consist of \_\_\_\_\_ members. Thereafter the number of Directors shall be established by a vote of the membership at the annual meeting of the Corporation, but in no event shall there be less than five (5) nor more than fifteen (15) Directors.

The make-up of the Board of Directors shall be as follows:

Board		of Members Class 2	
Five man Board	1	1	3
Six man Board	1	2	3
Seven man Board	2	2	3
Eight man Board	2	2	4
Nine man Board	2	3	4
Ten man Board	2 .	3	5
Eleven man Board	3	3	5
Twelve man Board	3	3	. 6
Thirteen man Board	3	4	6
Fourteen man Board	3	4	7 -
Fifteen man Board	4	4	7

# SECTION 3. Manner of Election and Term.

Directors shall be elected at the annual meeting of the Corporation by a vote of the full membership. Each Director shall be elected for a two (2) year term. Directors shall be elected on staggered terms. Initially, the Class 1 director, Class 2 director and one Class 3 director shall be elected for a three (3) year term and the two remaining Class 3 directors shall be elected for a two (2) year term. Thereafter, upon expiration of their terms, each director shall be elected for a two (2) year term. If additional directorships are added by a vote of the membership, each of said additional directors shall be elected for a two (2) year term. The Board of Directors will advise the nominating committee of the number of Directorships available and the term of each position. The immediate past president shall serve a one (1) year term on the Board of Directors as the member at large.

### SECTION 4. Nomination.

The nominating committee, shall present to the membership at least sixty (60) days before the annual meeting by mail one (1) nomination for each seat on the Board which is vacant or is about to expire. Additional nominations may be made from the floor at the annual meeting.

# SECTION 5. Quorum of the Board.

At the meeting of the Board of Directors, no less than a majority of the members of the Board shall constitute a quorum for the transaction of the business of the Corporation and any such business transacted shall be valid providing it is affirmatively passed upon by a majority of those present.

# SECTION 6. Meetings of the Board.

A regular meeting of the Board of Directors shall be held no less than two (2) times during each year at such times and at such place as the Board may prescribe. One such meeting shall be an annual meeting that will be held before the annual membership meeting. Notice of all such meetings shall be given by the Executive Director to the Directors not less than twenty (20) days before the meeting is held. Special meetings of the Board may be called by the President or at the request of any three (3) Directors, by notice mailed, delivered, telephoned or telegraphed to each member of the Board of Directors not less than seven (7) days before the meeting is to be held.

### SECTION 7. Voting by Mail.

Action taken by a mail ballot of the members of the Board of Directors in which at least a majority of such Directors in

writing indicate themselves in agreement shall constitute a valid action of the Board if reported at the next regular meeting of such Board.

SECTION 8. Vacancies and Removal.

Any vacancy occurring on the Board of Directors between annual meetings shall be filled by the Board of Directors. A Director so elected to fill a vacancy shall serve the unexpired term of his predecessor. The Board of Directors may, in its discretion by affirmative vote of two-thirds (2/3) of its members, remove any Director for cause. In the event a board member misses more than two (2) consecutive meetings, then the Board of Directors may, in its discretion by affirmative vote of two-thirds (2/3) of its members, remove said Director.

SECTION 9. Compensation.

Directors and elected officers shall not receive any compensation for their services.

ARTICLE VII.

OFFICERS

SECTION 1. Elected Officers.

The elected officers of this Corporation shall be President, Vice President, and a Secretary/Treasurer to be elected at the annual meeting of the Corporation by the Board of Directors, and to serve until their successors have been duly elected and assume cffice. The Vice President shall automatically succeed the President.

SECTION 2. Qualifications for Office.

Members of the Board of Directors in good standing shall be eligible for nomination and election to any elective office of this Corporation.

SECTION 3. Terms of Offices.

Each elected officer shall take office immediately upon installation and shall serve for a term of one (1) year or until his successor is duly elected and qualified.

SECTION 4. Re-election.

No elected officer, except the Secretary/Treasurer, having served one full term shall be eligible for re-election to the same office until at least one year shall have elapsed.

# SECTION 5. Vacancies and removal.

Vacancies in any elective office shall be filled for the balance of the term thereof by the Board of Directors at a regular or special meeting. The Board of Directors may, in its discretion by a two-thirds vote of all its members, remove any officer from office for cause.

### ARTICLE VIII.

### DUTIES OF OFFICERS

## SECTION 1. President.

The President shall preside at meetings of the Board of Directors and at membership meetings, and shall serve as a member, ex-officio, with right to vote on all committees. He shall make appointments of the nominating, and special committees with the approval of the Board of Directors. At the annual meeting of the Corporation and at such other times as he shall deem proper, the President shall communicate to the members such matters and make such suggestions as may in his opinion tend to promote the welfare and increase the usefulness of the Corporation. He shall perform such other duties as are necessarily incidental to the cifice of the President or as may be described by the Board of Directors.

# SECTION 2. Vice President.

The Vice President shall have such powers and perform such duties as the Board shall from time to time prescribe. In the absence of the President, the Vice President shall act as presiding officer at any Board or Membership meeting.

# SECTION 3. Secretary/Treasurer.

The Secretary/Treasurer shall be in charge of the Corporation funds and records. As Treasurer, he shall collect all members dues and/or assessments; shall have established proper accounting procedures for the handling of the Corporation's funds and shall be responsible for the keeping of funds in such banks, trust companies and/or investments as are approved by the Board of Directors. He shall report on the financial condition of the Corporation at all meetings of the Board of Directors and at other times when called upon by the President. At the end of each fiscal year as Treasurer, the shall prepare an annual report which shall reflect an audit by a Certified Public Accountant. Lt the expiration of his term of office, he shall deliver over to his successor all books, money, and other property in his charge cr, in the absence of a successor, he shall deliver such property to the President. As Secretary of the Corporation, he shall be responsible for the proper and legal mailing of notices to

members. He shall see to the proper recording of proceedings of meetings of the Corporation, Board of Directors and all committees; and carry into execution all orders, votes and resolutions, not otherwise committed. He shall keep the seal of the Corporation. Such duties of the Secretary/Treasurer as may be specified by the Board of Directors may be delegated to the Executive Director of the Corporation.

# ARTICLE IX. COMMITTEES

## SECTION 1. Executive Committee.

There shall be elected annually by the Board of Directors an Executive Committee. The Committee shall consist of five (5) members of whom three shall be the President, Vice President, and Secretary/Treasurer. The Executive Committee may act on behalf of the Corporation in any matter when the Board of Directors is not in session, reporting to the Board of Directors for its ratification of their action at each regular or special meeting called for the purpose. Three (3) members shall constitute a grorum for the transaction of business. The meetings may be called by the Chairman or by three (3) members.

# SECTION 2. Nominating Committee.

The President shall appoint a Nominating Committee which shall consist of four (4) regular members. With the approval of the Board of Directors, the committee members shall be announced to the membership within six (6) months prior to the annual meeting. The nominating committee shall invite suggestions from the membership for those directorships which are vacant or about to expire, allowing at least sixty (60) days before the annual meeting. The committee's nomination shall be voted upon at the annual meeting by the regular members as these by-laws prescribe.

# SECTION 3. Special Committees.

The President, with the approval of the Board of Directors, shall appoint committees, subcommittees or task forces as are necessary and which are not in conflict with other provisions of these by-laws and the duties of any such committee shall be prescribed by the Board of Directors upon their appointment. The members of such committee shall hold office until the appointment of their successors. A majority of any committee of the Corporation shall constitute a quorum for the transaction of business, unless any committee shall, by a majority of the vote of its entire membership decide otherwise. The President of the Corporation shall have the power to fill committee vacancies.

### ARTICLE X

### EXECUTIVE AND STAFF

SECTION 1. Executive Director.

The Executive Director shall be the chief paid executive of the Corporation responsible for all management functions. He shall manage and direct all activities of the Corporation as prescribed by the Board of Directors and shall be responsible to the Board of Directors.

### ARTICLE XI

### FINANCE

SECTION 1. Bonding.

Trust or surety bonds will be furnished by the President, Secretary/Treasurer, Executive Director and such other officers or employees of the Corporation as the Board shall direct. The amount of such bonds shall be determined by the Board and the costs paid by the Corporation.

SECTION 2. Budget.

The Board shall adopt, in advance of the next fiscal period, an annual operating budget covering all activities of the Corporation. The Secretary/Treasurer shall furnish the membership within sixty-one days following the end of each annual period a financial report for the year just completed.

SECTION 3. Audit.

The accounts of the Corporation shall be audited not less than annually by a certified public accountant who shall be appointed by the Vice President with the approval of the Board of Directors and who shall provide a report to all voting members.

SECTION 4. Fiscal Year.

The fiscal year of the Corporation shall begin on the first day of January and end on the last day of December in each year.

SECTION 5. Corporate Obligation.

This Corporation shall have no capital stock and no member shall be liable personally for the Corporation's obligations.

### ARTICLE XI.

### **AMENDMENTS**

These by-laws may be amended or appealed by a majority (50%) vote of the voting members present at any annual meeting of the Corporation duly called and regularly held, notice of such proposed changes having been sent in writing to the members at least thirty (30) days before such meeting or by a majority (50%) vote of the voting members voting by a thirty (30) day mail ballot. Amendments may be proposed by the Board of Directors on its own initiative or upon petition of any one-third of the voting members addressed by the Board. All such proposed amendments shall be presented by the Board to the membership with or without recommendation, except that no amendment shall be made which provide for personal liability of the members for the debt of the Corporation.

ARTICLE XII.

**AFFILIATIONS** 

SECTION 1. Affiliations.

The Corporation may affiliate with other related associations as so directed by the Board of Directors.

ARTICLE XIII.

INDEMNIFICATION

SECTION 1. Indemnification.

Any person who at any time shall serve, or shall have served, as director or officer of the Corporation or of any other enterprise at the request of the Corporation, including any individual or corporation (and the officers, directors, shareholders and employees of that corporation) and the heirs, executors, and personal representatives of any such person, shall be indemnified by the Corporation against all costs and expenses, including, but not limited to, counsel fees, amounts of judgments paid, amounts paid in settlement, reasonably incurred in connection with the defense of any claim, action, suit or proceeding, whether civil, criminal, administrative or other in which he or they may be involved by virtue of such person being or having been such a director or officer, if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interest of the Corporation; provided, however, that such indemnity shall not be made with respect to (a) any matter as to which such

person shall have been finally adjudged in such action, suit or proceeding to be liable for misconduct or bad faith in the performance of his duties as such director or officer; or (b) any matter settled or compromised unless, in the opinion of the independent counsel selected by, or as determined by the Board of Directors of the Corporation by a majority vote of a quorum consisting of directors who are not parties to such action, suit or proceeding, there is not reasonable for ground for such person being adjudged liable for misconduct or bad faith in the performance of his duties as such director or officer; or (c) any amount paid or payable to the Corporation by such officer or director. The foregoing indemnification shall not be deemed exclusive of any of the rights to which those who are indemnified may be entitled under any other by-law, agreement, vote of the members or by operation of law.

The Corporation may purchase and maintain insurance, at its expense, to protect itself and any such person who is or was a director, officer or representative against any such expense, liability or loss, either asserted against or incurred by him, whether or not the Corporation would have the power to indemnify him against such expense, liability or loss.

### ARTICLE XIV.

### NOTICES AND WAIVERS

Whenever any notice whatsoever is required by these by-laws or by law to be given to any member, director or officer, such notice may, except as otherwise provided for herein, may be given personally, or be given in writing by depositing the same in a postpaid, sealed envelope, addressed to such member, director or officer, at such address as appears of the records of the Corporation, and any notices so given by mail shall be deemed to have been received when it shall have been thus mailed. Such notice need not be manually signed. A waiver of such notice in writing signed by such member, director or officer, or by his dily authorized attorney, whether before or after the time stated therein, shall be deemed the equivalent thereof and the presence at the meeting of any such member, director or officer, shall be deemed a waiver of such notice of such meeting to such member, director or officer.

# Lyilati,

### PROPOSAL

TO: Faculty, of the

Department of Civil and Architectural Engineering

BY: Ronald F. Zollo, Ph.D., P.E.

Professor

Dept. of Civil and Architectural Eng.

RE: International Fibrous Concrete Institute

The subject of this proposal is the establishment of an Institute within the Department of Civil/Architectural Engineering at the University of Miami to be named the International Fibrous Concrete Institute (IFCI).

# Introduction

Approximately 25 years ago research at the Carnegie Institute of Technology led to the granting of U.S. Patents Nos. 3,429,094 (1969), 3,500,728 (1970) and 3,650,785 (1972), on a system of reinforcement for portland cement concretes utilizing randomly distributed fibers within the concrete matrix. After the first fifteen or so years of research and development commercial enterprise ensued and applications of what is termed fiber reinforced concrete (FRC) began to multiply. Today, there are applications and fiber producers on every continent. At the present time, there is interest among fiber producers, among FRC users and researchers, and among educators in the establishment of an industrial institute, to be named the International Fibrous Concrete Institute (IFCI).

Early recognition of the importance of FRC to the construction industry prompted the American Concrete Institute (ACI) established a technical committee on the subject, known as ACI Committee 544 Fiber Reinforced Concrete. Further indication of the current levels of interest and FRC activity worldwide are the following.

Twice yearly meetings of the ACI Committee 544 are heavily attended as are sponsored seminar programs by ACI and World of Concrete in the United States and by RILEM (International Union of Testing and Research Laboratories for Materials and Structures) in Europe and by other similar organizations throughout the world. Such organized programs regularly

receive an overabundance of support from authors and audiences. The numbers publications by individual authors and by concrete and construction oriented organizations is conservatively estimated as several hundreds yearly. At virtually every research oriented college and university throughout the world which have civil engineering programs, FRC has been the subject of research for Masters theses and Ph.D. dissertations. And finally commercial activity has mushroomed in the past five years with the phasing out of the initial and subsequent patents. A measure of this activity is the number and prominence of commercial advertising which is being published in the journals of the construction industry.

Interest, growth and development has evolved thus far an industry which, in the authors opinion, is in need leadership and of representation that will serve to help guide the industry and bridge the gap between industrial development and research. Having broached these thoughts to several representatives of U.S. fiber manufacturers, the author has received encouragement to proceed and offers of assistance in the formation of an institute. financial support and the human resources of one of the nation's largest synthetic fiber manufacturers has been offered and supplied to help start the Institute. Furthermore, apparently due to the fact that the author has maintained a high degree of objectivity and fairness in what has developed as a highly competitive industry, the author has been asked to serve as the Institute's first Executive Director.

### About the Author

The author of this proposal has been directly associated with the development of FRC since the time of the invention and early testing of these materials at the Carnegie Institute of Technology in 1962. Since that time, he has conducted research and has published numerous journal articles on the subject. These activities are listed in the resume which is appended to this proposal. The author is now a senior member of ACI Committee 544, has served as chairman of the subcommittee on Ongoing and Needed Research and currently serves as chairman of the subcommittee on Synthetic Fibers (ACI 544.03). As a result of this long and continuously active association the author has witnessed the invention and development of this innovative material system and has been directly associated with the transition from laboratory research to full scale industrial development and commercial enterprise.

# Progress to Date

A steering committee has informally surveyed the body of those who may be interested in formation of an Institute to be founded and headquartered at the University of Miami. Initial steps have been taken, including incorporation of the IFCI in the State of Georgia, and an organizational meeting was held in Orlando, Florida on March 22, 1988.

The purpose and goals of the Institute are listed in Article IV of the Articles of Incorporation. The IFCI is to be a non-profit corporation which is organized for the following purposes:

- 1. To promote the betterment of concrete as a construction material through the acceptance and proper use of fibers.
- 2. To encourage and disseminate ideas, research, and development information on fibers and on fibrous concrete methodology.
- 3. To recommend standards on the use and performance of fibrous concrete.
- 4. To unitedly and collectively strive to establish a harmonious relationship and understanding between the members of the corporation and government regulatory agencies and other related institutions and industries.
- 5. To secure, preserve, diffuse and interchange accurate and reliable information on fibrous concrete.
- 6. To develop and improve methods and techniques for using fibers in concrete.
- 7. To conduct seminars, conferences, and research for the concrete industry.

# Organizational Format

During initial discussions on the establishment of the IFCI at the University of Miami, the author made known the fact that the interests of the University of Miami, relative to its educational and research missions, must be fostered and protected within the organizational structure of the

Institute for as long as it would be associated with the University. To that end the author proposed to the Institute's organizational steering committee a structure which is patterned after that of the Phosphate Research Institute (PRI) which is already headquartered in the Department of Civil and Architectural Engineering at the University. Figure 1 schematically demonstrates this structure.

Department Advisory Board Board of Direction

Executive Director

Figure 1.

There are to be two independent boards to oversee the operation of the Institute.

A Department (of Civil and Architectural Engineering) Advisory Board consisting of the Department Chairman, the Institute's Executive Director while and if he/she is a regular member of the Department Faculty, and a third member elected from the Department Faculty by the Department. In the case that the Executive Director might be someone who is not a regular member of the Department Faculty then there would be two Department Faculty members elected to the Advisory Board.

A Board of Directors consisting of 12 to 15 members chosen from internationally recognized leaders from the fields of education, research, government and industry who have expressed interest and a willingness to serve the Institute will be appointed by the Steering Committee. The Chairman of the Department of Civil and Architectural Engineering of the University is to serve as ex-officio member of the Board of Directors of the Institute. The Steering Committee will, upon carrying out this initial appointment responsibility, be immediately dissolved and relieved of further responsibility for the operation or organization of the Institute in favor of the new Board of Direction. In preparation for this event, the Steering Committee will present a draft set of by-laws, which are currently in preparation, for final revision and adoption by the Board of Directors.

The Executive Director will administer the activities of the Institute in a manner which is consistent with the wishes of the Department Advisory Board, overseers of the interests of the Department and of the University, and with the By Laws and discretion of the Board of Directors who attend to the goals and standards of the Institute.

# Impact to the University

The goals of the IFCI, as stated in the Articles IV listed above, are consistent with the author's own long-standing personal commitment to the development within this industry and with what are the University's mission and standards with regard to education and research and the ethical industrial and commercial development which is a desired by product of the first two activities.

Among the goals of the Institute which, by implementation at headquarters at the University of Miami, will provide direct benefits to the University are the following.

- 1. The Institute will sponsor International Symposia on FRC. There is worldwide interest in the research and applications of these materials and the greater Miami is well situated, geographically as well as with regard to facilities, transportation and other attractions, to serve as host for this type of function as well as for other meetings and as the headquarters of the Institute.
- 2. The Institute will maintain a research library which will gather and catalog literature from its worldwide sources and industry members
- 3. At the present time there are three members of the Department Faculty who are actively engaged in research activities with FRC. They, and other faculty members engaged in research in related areas, will gain recognition and have the resources of the Institute on which to draw in support of their research and funding proposals.
- 4. For many years and through the efforts and successes of Department Faculty the University of Miami has maintained an active presence in concrete research. This will not change with the formation of the Institute. However, with headquarters at the University of Miami, the deserved recognition will be spread worldwide and to the construction industry. This should yield benefits to the graduate and undergraduate enrollments.