

TECHNICAL PUBLICATION NO. 62

**DISSEMINATION & CONTINUATION OF STUDY
INVESTIGATING SHORTAGE OF
CONSTRUCTION CRAFTSMEN IN FLORIDA**

**SPONSORED BY A GRANT FROM THE BUILDING
CONSTRUCTION INDUSTRY ADVISORY COMMITTEE**



BRISBANE H. BROWN, Jr.

ALI M. MARKUS

JAMES F. TURNER, III

**School of Building Construction
University of Florida
1989**



DISSEMINATION AND CONTINUATION OF STUDY INVESTIGATING
SHORTAGE OF CONSTRUCTION CRAFTSMEN IN FLORIDA

R87-31

Principal Investigator:
Dr. Brisbane H. Brown, Jr.

UNIVERSITY OF FLORIDA

March 5, 1989

This research project was sponsored
by the Building Construction Industry
Advisory Committee under a grant from the
State of Florida Department of Education.

EXECUTIVE SUMMARY

The School of Building Construction at the University of Florida in conjunction with the Building Construction Industry Advisory Committee, has initiated this research to determine the proper methods to disseminate research grant #R86-4 "Recruitment, Training and Employment of Construction Craftsmen in Florida; Impediments and Recommendations". Once the studies had been made and the final reports were written, the principal investigators realized that there were no documented procedures for making their research known to the public. If the reports could not get to the people in the industry who needed them, the reports would be of no use. This research final report addresses that problem.

The Building Construction Industry Advisory Committee was also concerned that other research and continuing education final reports needed to be made public. Dissemination procedures needed to be standardized so everyone engaging in research or continuing education could make their projects publicly known. Other colleges and universities, construction trade associations and the industry's contractors could benefit from the research or the continuing education projects if the final reports were disseminated to those who needed them. This research final report standardizes the procedures for dissemination of all final reports.

This final report contains all of the procedures and methods established for proper dissemination of research and continuing education final reports. These procedures were also adopted by the Building Construction Industry Advisory Committee and incorporated in their newly rewritten REMS manual. Also included in this final report are the specific procedures used for dissemination of research grant R86-4 which included four seminars. The conclusions and results of that dissemination are discussed.

The research grant R86-4 "Recruitment, Training and Employment of Construction Craftsmen in Florida; Impediments and Recommendations" was used as a pilot for dissemination. Since then, other final reports such as R87-2 "Control Factors in Scheduling" have also been disseminated according to the procedures in this report. Dissemination of these reports is currently fostering requests for copies of the reports.

Copies of this report can be obtained by contacting:

Executive Secretary
Building Construction Industry Advisory Committee
School of Building Construction
University of Florida
Gainesville, Florida 32611
phone (904) 392-5965

INTRODUCTION

At the request of the Building Construction Industry Advisory Committee (BCIAC), this research grant R87-31 "Dissemination and Continuation of Study Investigating Shortage of Construction Craftsmen in Florida" was funded to disseminate the grant R86-4 "Recruitment, Training and Employment of Construction Craftsmen in Florida; Impediments and Recommendations". The project was proposed because BCIAC wanted research and continuing education projects to be disseminated and procedures for proper dissemination had not yet been developed. This research final report contains the objectives that were originally sought and accomplished, the developed dissemination procedures, presentations, future research, and recommendations.

OBJECTIVES

This grant accomplished the following goals in conjunction with the proposal that was originally submitted to the Building Construction Industry Advisory Committee (BCIAC).

- 1) Develop the procedures and obtain funding to adequately disseminate the results of the grant R86-4 "Recruitment, Training and Employment of Construction Craftsmen in Florida; Impediments and Recommendations" Technical Publication No. 58 which summarizes the results of the following studies:

An analysis of Carpentry Apprenticeship Programs in Florida.
Technical Publication No. 47

Effect of the shortage of skilled carpenters in the home building industry in Florida: Impediments and Recommendations. Technical Publication No. 48

Effects of the shortage of skilled carpenter on the Associated General Contractors of Florida: Impediments and Recommendations. Technical Publication No. 50

An Analysis of the Shortage of Skilled Carpenters in Florida as reported by Union Contractors: Impediments and Recommendation. Technical Publication No. 51

Effects of the Shortage of Skilled Carpenters on the Associated Builders and Contractors of Florida: Impediments and Recommendations. Technical Publication No. 52

Recruitment, Training and Placement of Residential and Commercial Carpentry Programs offered through state supported vocational training centers and Community Colleges. Technical Publication No. 54

The Penal System and what role it serves in the training of carpenters in Florida.

- 2) Make presentations of R86-4 "Recruitment, Training and Employment of Construction Craftsmen in Florida; Impediments and Recommendations" to at least four professional associations or government agencies.
- 3) Generate future research in this area by soliciting and writing more proposals for research grants.

DISSEMINATION PROCEDURES

The proper dissemination of information is a very essential part of the research cycle. The research or continuing education final report must be made known to those who need the information. Therefore, an objective of this final report is to establish and list the procedures to disseminate the research final report R86-4 "Recruitment, Training and Employment of Construction Craftsmen in Florida; Impediments and Recommendations".

Individuals who are doing research and continuing education projects also have responsibilities to disseminate the final reports from those projects. The Principal Investigator (PI) or Project Director (PD) is the one performing the research or continuing education. His or her responsibilities are listed below.

- 1 Disseminate 1 copy of the final report to:
 - a. The BCIAC approved Mailing List for Final Reports.
 - b. A special list of organizations and individuals who have an interest in the topic of the study. This special list is generated by the PI/PD while conducting the research or continuing education.
- 2 Send 25 copies of the final report to the Executive Secretary.
- 3 Write a news release which will be sent out to the BCIAC approved List of Newspapers. The PI/PD should work with his institution to accomplish this.
- 4 Write or cause to be written a journal article highlighting the areas of research or continuing education. This can be done through the use of a technical writer.
- 5 In addition to the dissemination, the PI/PD should make various talks and conduct appropriate seminars pertaining to his research findings or continuing education project. The BCIAC Project Coordinator for that project will be invited to any seminars given by the PI/PD.

The Executive Secretary of BCIAC (Exec. Sec.) supervises those completing dissemination procedures. His or her responsibilities for dissemination of research and continuing education final reports are:

- 1 Ensures that the PI/PD has made the proper provisions for dissemination. The Exec. Sec. sees that the PI/PD signs the proposal certifying that there are adequate funds in the proposal included for dissemination.

- 2 Certain reports which have a national interest will be selected by the Exec. Sec. for national distribution. The Exec. Sec. will disseminate copies of the final report to the appropriate national professional associations and academic institutions.
- 3 Cause an announcement to be sent to technical newsletters and construction journals.
- 4 Develop and maintain a file of completed research and continuing education reports.
- 5 After the initial distribution, the Exec. Sec. will send out copies of reports in response to inquiries. The BCIAC policy is to send one copy at no charge. When the requestor desires multiple copies, he or she will be charged the cost of producing and mailing the copies.

The BCIAC Project Coordinator is a member of BCIAC who has been assigned to a particular project to help out and see that the project runs smoothly. His or her responsibility for dissemination is:

- 1 To follow up to ensure that the PI/PD disseminates the final report as required.

The procedures that follow have been developed to ensure proper dissemination. They are listed in four appendices at the end of this report and are as follows: the BCIAC Approved Mailing List for Final Reports, Announcements to News Letters and Construction Journals, News Releases, and Publishing Journal Articles.

Appendix A contains:

The approved BCIAC Mailing List for final reports. The Project Director / Principal Investigator must disseminate the final report to this mailing list and also to a special list generated by the PI/PD while doing his research or continuing education project.

Appendix B contains:

Announcements of the final report to news letters of construction associations and professional journals and how to obtain a copy of the final report.

Appendix C contains:

News release samples and procedures to the approved BCIAC list of newspapers and other news agencies.

Appendix D contains:

Procedures for articles in professional journals to be generated by the PI/PD.

PRESENTATIONS

In addition to developing the dissemination procedures for this research final report, the principal investigator also has prepared four presentations to continue disseminating research grant R86-4 "Recruitment, Training and Employment of Construction Craftsmen in Florida; Impediments and Recommendations". For each presentation, a notebook of information has been prepared that contains overhead slides and a master copy for fliers during the presentation. Each presentation pertains directly to the group that is being targeted in that presentation. Five notebooks were made for presentations to the following groups with one notebook being a generic copy for use with any group.

Study of Shortage of Carpenters With Emphasis on Union Contractors

Study of Shortage of Carpenters With Emphasis on The Associated General Contractors of America (AGC)

Study of Shortage of Carpenters With Emphasis on The Florida Home Builders Association (FHBA)

Study of Shortage of Carpenters With Emphasis on The Associated Builders and Contractors, Inc. (ABC)

This will partially fulfill the PI/PD's responsibilities to "make various talks and conduct appropriate seminars pertaining to his research findings or continuing education project." Two of the seminars have already been given. The first was a vocational and adult educator's workshop to the Florida Home Builders Association in Orlando, Florida. Approximately forty people were in attendance including Bill Harris, Chief of the Bureau of Apprenticeship for the State of Florida. The second presentation was to Alachua County Plumbing, Heating, Cooling, and Electrical Contractors. The two remaining presentations are currently being scheduled for this quarter with one already confirmed for the Association of General Contractors in Jacksonville, Florida on May 10 at 11:50am. Appendices E and F contain the materials and attendees from the presentations already given. Materials from the other presentations will be furnished.

FUTURE RESEARCH

This completed research was an all management response to a questionnaire survey and the respective management opinion about the shortage of construction workers "Carpenters". There is interest from outside agencies to pursue this research further to survey individual carpenters in the field. Obtaining their input in addition to the management's will be very important in arriving at a workable solution. This grant would provide the seed money to prepare proposals in conjunction with outside agencies that want to pursue this research further.

RECOMMENDATIONS

It was recommended to BCIAC and accepted by them to include the dissemination procedures in BCIAC's new Research and Continuing Education Management Systems (REMS) Procedures Manual. Beyond the scope of this grant, these procedures were incorporated into chapter six of the REMS Procedures Manual and a seminar was given to further illustrate them. They now are an integral part of BCIAC's process. Since these procedures have been implemented, the executive secretary has received many requests for the final reports that were disseminated. The result is that dissemination of final reports successful. The dissemination procedures can be obtained from the REMS Procedures Manual or the BCIAC Executive Secretary.

LIST OF APPENDICES

Dissemination Procedures

- Appendix A BCIAC Approved Dissemination Lists for Final Reports
- Appendix B Procedure-News Announcement
- Appendix C Procedure-News Release
- Appendix D Publishing Journal Articles

Presentations

- Appendix E 21st Annual Vocational and Adult Educators Workshop
- Appendix F List of attendees of the Alachua County Plumbing, Heating, Cooling, and Electrical Contractors seminar

BCIAC Approved
Dissemination Lists
for
Final Reports

APPENDIX A

FLORIDA LIST-ALL REPORTS

Julius Blum
AMERICAN PLUMBING
P. O. Box 1389
Orlando, Florida 32802

Susan J. Leigh
FLA. HOUSING FINANCING AGENCY
2740 Centerview Drive
Tallahassee, Florida 32399-
8244

The Honorable Wm. Cecil Golden
Deputy Commissioner
DEPARTMENT OF EDUCATION
Knott Building
Tallahassee, Florida 32399

William R. Conway
BCIAC Chairman
110 Orchard Lane
Ormond Beach, Florida 32074

Charles R. Perry
CHARLES PERRY CONSTRUCTION INC.
2500 N. E. 18th Terrace
Gainesville, Florida 32609

Fred Seely
CILB
111 Coast Line Drive, East
Suite 504
Jacksonville, Florida 32202

Jim Falkner
FALKNER, INC.
P. O. Box 673
Orlando, Florida 32802

John C. Pistorino, President
PISTORINO & ALAM CONSULTING
ENGINEERS, INC.
7701 S. W. 62nd Ave.-2nd Floor
South Miami, Florida 33143

J. R. "Jock" Crockett
FCILB
111 Coast Line Drive East
P. O. Box 2
Jacksonville, Florida 32201

Kinney Harley
P. O. Box 10428
Tallahassee, Florida 32302

Paul Scheele
PAUL SCHEELE & ASSOCIATES
P. O. Box 24445
Jacksonville, Florida 32241

David Weber
FCILB
111 Coast Line Drive East
P. O. Box 2
Jacksonville, Florida 32201

Joseph Holland
NATIONAL FOREST PRODUCTS
533 Seabreeze Blvd., #202
Daytona Beach, Florida 32018

R. Bruce Simpson
CROM CORPORATION
250 S. W. 36th Terrace
Gainesville, Florida 32607

Michael Blankenship
P. O. Box 6052
Tallahassee, Florida 32301

Harold W. "Johnny" Johnson
P. O. Box 771
Winter Garden, Florida 32787

Richard Traynor
EXECUTIVE DIRECTOR, FLA. AGC.
P. O. Box 10569
Tallahassee, Florida 32302

Clark Jennings
Department of Legal Affairs
Tallahassee, Florida 32399-
1050

T. Michael Kaney, Vice Pres.
FLA. MINING/MATERIALS CORP.
P. O. Box 23965
Tampa, Florida 33630

Daniel Whiteman
GULF CONSTRUCTION CORPORATION
P. O. Drawer 4256
Sarasota, Florida 33578

Building Construction Program
Broward Community College
225 E. Las Olas Boulevard
Ft. Lauderdale, FL 33301

Building Construction Program
Central FL Community College
P. O. Box 1388
Ocala, FL 32670

Building Construction Program
Daytona Beach Community College
P. O. Box 1111
Daytona Beach, FL 32015

Building Construction Program
Edison Community College
Fort Myers, FL 33907

Building Construction Program
FL. Jr. College/Jacksonville
210 N. Main Street
Jacksonville, FL 32202

Building Construction Program
Gulf Coast Community College
5230 W. Highway 98
Panama City, FL 32401

Building Construction Program
Hillsborough Comm. College
P. O. Box 22127
Tampa, FL 33622

Building Construction Program
Indian river Comm. College
3209 Virginia Avenue
Fort Pierce, FL 33450

Building Construction Program
Manatee Junior College
5840 26th Street West
Bradenton, FL 33507

Building Construction Program
Miami Dade Comm. College
1601 S.W. 104 st.
Miami, FL 33176

Building Construction Program
Palm Beach Junior College
4200 Congress Avenue
Lake Worth, FL 33461

Building Construction Program
Pasco-Hernando Comm. College
2401 State Highway 41, North
Dade City, FL 33525

Building Construction Program
Pensacola Junior College
1000 College Boulevard
Pensacole, FL 32504

Building Construction Program
St. Perersburg Jr. College
P. O. Box 13489
St. Petersburg, FL 33733

Building Construction Program
Santa Fe Community College
P. O. Box 1530
Gainesville, FL 32602

Building Construction Program
Seminole Community College
Sanford, FL 32771

Building Construction Program
Valencia Community College
Distr. Office - 1 W. Church
P. O. Box 3026
Orlando, FL 32802

Building Construction Dept.
FL Agr. & Mech. University
South Boulevard Street
Tallahassee, FL 32307

Program Advisor Const. Dept.
FL. Jnt'l University
Tamiami Campus - Tamiami Trail
Miami, FL 33199

Program Director Const. Tech.
University of N. Florida
Div. of Tech & Voc. Ed.
4567 St. Johns Bluff Road
Jacksonville, FL 32216

Building Construction Dept.
University of W. Florida
Pensacola, FL 32504

ABC Central Florida Chapter
1260 Palmetto Avenue
Winter Park, Fl 32789

ABC Florida Gulf Coast Chapter
P. O. Box 152107
Tampa, Fl 33684

ABC Florida Panhandle
7100 Plantation Rd. Suite 21
Pensacola, Fl 32504

ABC Florida Gold Coast Chapter
4700 N.W. 2nd Ave., Suite 202
Boca Raton, Fl 33431

ABC North Florida Chapter
1230 North Adams Street
Tallahassee, Fl 32303

ABC Florida Space Coast
1900 S. Harbor City Blvd. #318
P. O. Box 2296
Melbourne, Fl 32902-2296

AGC Northwest Florida Chapter
201 South "F" Street
Pensacola, Fl 32501

AGC Northeastern Florida Chapter
P. O. Box 2519
2144 Rosselle Street
Jacksonville, Fl 32204

AGC Mid-Florida Chapter
P. O. Box 22646
1509 N. Westshore Blvd.
Tampa, Fl 32622

AGC Florida East Coast Chapter
2617 Australian Avenue
West Palm Beach, Fl 33407

AGC South Florida Chapter
18201 N.W. 68th Avenue
Miami, Fl 33015

Florida AGC Council
1363-A E. Lafayette Street
P. O. Box 10569
Tallahassee, Fl 32302

Florida Home Builders Ass.
P.O. Box 1259
Tallahassee, Fl 32302

BREVARD CO. FHBA
1861 Avocado Ave.
Melbourne, Fl 32935

CHARLOTTE CO. FHBA
4007 A. Tamiami Trail
Port Charlotte, Fl 33952

CHIPOLA FHBA
P. O. Drawer 728
Marianna, Fl 32446

CITRUS CO. FHBA
P. O. Box 70
Inverness, Fl 32650

COLLIER CO. FHBA
3237 Horseshoe Drive
Naples, Fl 33942

DAYTONA FHBA
P. O. Box 446
Daytona Beach, Fl 32015

FIVE COUNTY FHBA
Rt. 25, Box 8290
Colonial Extension, S. E.
Ft. Myers, Fl 33908

FLAGLER CO. FHBA
PALM COAST
P. O. Box 1429
Palm Coast, Fl 32037

FLA. ATLANTIC FHBA
201 N. Fed. Hwy. #208
Deerfield Bch., Fl 33441

GAINESVILLE FHBA
2217 NW 66th Court
Gainesville, Fl 32601

HERNANDO CO. FHBA
P. O. Box 1238
Brooksville, Fl 33512

HIGHLANDS CO. FHBA
P. O. Box 3506
Sebring, Fl 33870

LAKE CO. FHBA
1102 N. Joanna Ave
Tavares, Fl 32778

MANATEE FHBA
3825 26th St. W.
Branenton, Fl 33505

MARION CO. FHBA
409 NE 36th Ave.
Ocala, Fl 32670

MID - FLORIDA FHBA
544 Mayo Avenue
Maitland, Fl 32751

NORTHEAST FLA. FHBA
P. O. Box 17339
Jacksonville, Fl 32245

OKALOOSA CO. FHBA
1980 Lewis Turner Blvd.
Ft. Walton Bch. , Fl 32548

OKEECHOBEE FHBA
P. O. Box 1207
Okeechobee, Fl 33473

PALM BEACH FHBA
2921 Australian Ave.
W. Palm Beach, Fl 33407

NATIONAL LIST-SELECTIVE REPORTS

Mr. E. J. Jones
Associated General Contractors
of America
1957 "E" Street N.W.
Washington, D.C. 20006

AGC Foundation
1957 "E" Street N.W.
Washington, D.C. 20006

Associated Builders & Contractors
729 15th Street N. W.
Washington, D.C. 20005

National Assolcated of
Homebuilder Research Ctr.
David Macfadden
15th and M. Streets, N.W.
Washington, D.C. 20005

American Association of Cost
Engineers
Kenneth Humphries
308 Monongahela Building
Morgantown, W V 26505-5468

C I I
Charles McGuiness
3208 Redrives Suite 300
Austin, TX 78705

Project Management Institute
Director of Educational
Services
P. O. Box 43
Drexel Hill, PA 19026

The Business Roundtable
200 Park Avenue
New York, New York 10166

American Institute of Constructc
Ed Freeman
20 S. Front Street
Columbus, Ohio 43215

Structures of Building
System Program
NATIONAL SCIENCE FOUNDATION
Washington, D.C. 20550

Prof Fred Hoarenzadeh
Center for Construction Research
and Education
M.I.T.
77 Massachusetts Avenue
Cambridge, MA 02139

Mr. W.R. Jones
NATIONAL CONSTRUCTORS ASS.
1101 15th St. N.W. Suite 1000
Washington, D.C. 20005

Mr. Ted Wilson
Proffessional Construction
Estimators Association of
America
P. O. Box 1107
Cornelius, N. C. 28031

Department of the Army
Construction Engineering
Research Laboratory
Corps of Engineers
P. O. Box 4005
Champaign, Illinois 61820
ATT: Dr. L. R. Shaffer

PROCEDURE-NEWS ANNOUNCEMENT

APPENDIX B

Announcements for Newsletters and Journals

Upon completion and after approval of the report by the BCIAC, a brief announcement shall be prepared by the Executive Secretary and set to Technical Newsletters and Construction Journals. This announcement should be kept brief (see example) and is to include the following:

1. Report Title
2. Author(s) name
3. Number of pages
4. What topic it concerns
5. How to get a copy

The announcement should be accompanied by a cover letter (see sample) and a copy of the Executive Summary (see sample). The announcement is to be mailed to the enclosed lists of newsletters and journals.

MAILING LIST

NEWSLETTERS & JOURNALS-FLORIDA

Fred Seely
FCILB
111 Coast Line Drive East
P. O. Box 2
Jacksonville, Florida 32201

Florida Builder Magazine, Inc
P. O. Drawer 6126
Clearwater, Florida 34618-6126

Florida Constructor
AGC Publications, Inc.
P.O. Box 22167
Tampa, Florida 33622
ATTN: Jeff Rogo

Florida Home Builder
FHBA
110 N. Magnolia Drive, St. 231
Tallahassee, Florida 32301

Fla. Construction Industry
Magazine FCI
Marion Frisbie, Editor
P. O. Box 89
Bartow, Florida 33830

Florida Engineering Society
Journal
P.O. Box 750
Tallahassee, Florida 32302

Florida Forum
P. O. Drawer 988
Lakeland, Florida 33802

Florida Contractor
C/O 1207 No. Himes Ave, Suite 102
Tampa, Florida 33607

The Florida Specifier
P. O. Box 13328A
Orlando, Florida 32859

Florida Architect
Florida Association of the
American Institute of Architects
104 East Jefferson St.
P. O. Box 10388
Tallahassee, Florida 32302

Florida Trend
P. O. Box 611
St. Petersburg, Florida 33731-
0611

The Business Journal
P. O. Box 2879
Gainesville, Florida 32602

Florida Construction Industry
Austan Barle, Editor
Drawer 520
Maitland, Florida 32751

BOAF Newsletter
Robert K. Becker
924 Riviera Street
Venice, Florida 34285

Gainesville HBA
2017 NW 66th Court
Gainesville, Florida 32601

Marion Co. HBA
409 NE 36th Avenue
Ocala, Florida 32670

MAILING LIST

NEWSLETTERS & JOURNALS - NATIONAL

American Society of Civil
Engineering (ADCE)
Construction Journal
345 E. 47th Street
New York, NY 10017

International Association for
Housing Science (IAHS)
P. O. Box 340254
Coral Gables/Miami, FL 33114

Builder - Published monthly by
the National Association of
Home Builders
655 15th Street, NW, Suite 475
Washington, D.C. 20005

American Institute of
Construction (AIC) Journal
Published Semi - Annually
20 South Front Street
Columbus, OH 43215

Constructor - Published monthly
by the Associated General
Contractors of America
1957 E. Street, NW
Washington, D.C. 20006

Professional Builder - Published
monthly except March, April,
June, Sept., Oct., when two
issues are published
275 Washington Street
Newton, MA 02158-1630

International Council for
Building Research, Studies &
Documentation (CIB)
The Chartered Institute of
Building (CIOB)
Englemere, Kings Ride
Ascot, Berkshire SL5 8BJ
England

Builder and Contractor -
Published monthly by the
Associated Builders & Contractors
Inc.
729 15th Street, NW
Washington, D.C. 20005

Southern Building - Published
Bi - monthly by Southern Bldg
Code Congress International, Inc.
Birmingham, AL 35213

Journal of Housing - Published
Bi - monthly by National
Association of Housing & Redev.
Officials
1320 18th Street NW
Washington, D.C. 20036

ENR Construction Week - Published
weekly by McGraw-Hill
1221 Avenue of the Americas
New York, NY 10020

Building Design and Construction
Cahners Plaza
1350 E. Touhy Avenue
Des Plaines, IL 60018

Building
1 - 3 Pemberton Row
Fleet Street, London EC4P 4HL
England

Nation's Bldg News - Published
weekly by National Association
of Home Builders
15th And M. Streets, NW
Washington, D.C. 20005

SAMPLE
USING TECHNICAL PUBLICATION #58
CONSTRUCTION CRAFTSMEN

SAMPLE-COVER LETTER



BETTY CASTOR
Commissioner

STATE OF FLORIDA
DEPARTMENT OF EDUCATION

TALLAHASSEE 32301

WM. CECIL GOLDEN
Associate Deputy Commissioner

BUILDING CONSTRUCTION INDUSTRY ADVISORY COMMITTEE

*University of Florida School of Building Construction - Room FAC 101
Gainesville, Florida 32611*

Date

Editor
Address

Dear Sir:

Please announce in your Journal/Newsletter the completion and availability of this construction related research.

Sincerely,

Brisbane H. Brown, Jr.
Executive Secretary

AM/pw

Enclosures

Aulus Blum
Orlando

William Conway
Ormond Beach

Jim Falkner
Orlando

Cecil Golden,
Ex-Officio
Tallahassee

Kinney Harley
Tallahassee

Joseph Holland
Daytona Beach

Harold Johnson
Winter Garden

Michael Kancy
Tampa

Susan Leigh
Tallahassee

Robert Palchanis
West Palm Beach

John Pistorino
Miami

Charles Perry
Gainesville

Paul Scheele
Jacksonville

R. Bruce Simpson
Gainesville

Richard Traynor
Tallahassee

Daniel Whiteman
Sarasota

SAMPLE-ANNOUNCEMENT

SAMPLE - Announcement

The School of Building Construction at the University of Florida has just completed a study "Recruitment, Training and Employment of Construction Craftsmen in Florida: Impediments & Recommendations" By Brisbane Brown and Ali Markus. This detailed study investigates the carpetnter shortage in the Florida Construction Industry. Copies of a 48 page summary of the findings of the study and recommendations to alleviate the problem may be obtained by contacting:

Executive Secretary
Building Construction Industry Advisory Committee
School of Building Construction - FAC 101
University of Florida
Gainesville, Florida 32611
904/392-5965

SAMPLE-EXECUTIVE SUMMARY

EXECUTIVE SUMMARY:

RECRUITMENT, TRAINING, AND EMPLOYMENT OF CONSTRUCTION CRAFTSMEN
IN FLORIDA: IMPEDIMENTS AND RECOMMENDATIONS

By

Brisbane H. Brown, Jr., and Ali M. Markus

The School of Building Construction at the University of Florida, in conjunction with the Building Construction Industry Advisory Committee, has undertaken a study of the manpower shortage in the State of Florida's construction industry. Graduate students, under the close supervision of faculty, developed a number of surveys and conducted numerous interviews for the purpose of isolating the causes and effect of a shortage of skilled carpenters and identifying steps that could be taken to prevent, or at least minimize, such a shortage.

Because of the broad scope of this topic, seven separate studies were conducted of the different segments of the construction industry and its training programs. Each study assembled detailed data and examined the unique aspects of one segment of the industry. All seven studies were coordinated and the results combined into this report, as follows:

- 1) Technical Publication 47: Carpentry Apprenticeship Program
- 2) Technical Publication 48: Florida Homebuilders Association;
- 3) Technical Publication 50: Associated General Contractors of Florida
- 4) Technical Publication 51: Union Brotherhood of Carpenters
- 5) Technical Publication 52: Associated Builders and Contractors
- 6) Technical Publication 54: Community College and Vocational Training

7) Report on the Penal System

The data demonstrated that construction contractors and carpentry educators believe that a definite shortage of skilled carpenters exists in Florida. Despite this situation, training programs are inefficiently utilized. This investigation has revealed that several factors contribute to the discrepancy between the low utilization of carpentry training programs and the high industry demand for skilled carpenters. The most significant factors include the following:

- Lack of articulation between curriculum content and the requirements of an increasingly specialized industry
- Lack of on-the job training as part of the curriculum of community colleges and voc-tech programs
- Low level of communication between personnel from training programs and construction contractors
- A tendency of graduates to choose an alternative to carpentry upon graduation, resulting in a low employment rate due mainly to low wages paid to carpenters in Florida.

Copies of this overview of the carpenter shortage in Florida and recommendations to alleviate the problem may be obtained by contacting:

Executive Secretary

Building Construction Industry Advisory Committee

School of Building Construction

University of Florida

Gainesville, Florida 32611

Phone: (904) 392-5965

AN EXAMPLE OF AN ANNOUNCEMENT

See CLAMBER PG. 17

The Business Journal

No. 2 Vol. 45

North-Central Florida

November 17, 1988

Construction Employment Study Available From UF

The UF School of Building Construction has just completed a study "Recruitment, Training and Employment of Construction Craftsmen in Florida: Impediments & Recommendations" by Brisbane Brown and Ali Markus. This detailed study investigates the carpenter shortage in the Florida Construction Industry. Copies of a 48 page summary of the findings of the study and recommendations to alleviate the problem may be obtained by contacting:

Executive Secretary

Building Construction Industry Advisory Committee

School of Building Construction - FAC
101

University of Florida

Gainesville, Florida 32611

904/392-5965

OFFICERS

1988-1989

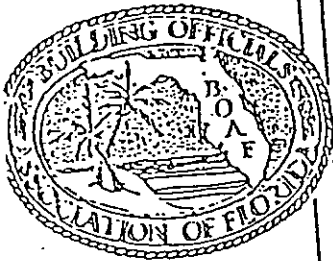
PRESIDENT
Francis Lubier, Jr.

V. PRESIDENT
Hans Belvers

SECRETARY
David H. Jones

TREASURER
Sam Gerace

P. PRESIDENT
Robert Palcheris



EXECUTIVE
SECY.

*Robert K. Becker
924 Riviera Street
Venice, FL 34285*

UNIVERSITY OF FLORIDA
School of Building Construction

ANNOUNCEMENT

The School of Building Construction at the University of Florida has just completed a study "Recruitment, Training and Employment of Construction Craftsmen in Florida: Impediments & Recommendations" by Brisbane Brown and Ali Markus. This detailed study investigates the carpenter shortage in the Florida Construction Industry. Copies of a 48 page summary of the findings of the study and recommendations to alleviate the problem may be obtained by contacting:

Executive Secretary
Building Construction Industry
Advisory Committee
School of Building Construction
FAC 101
University of Florida
Gainesville, Florida 32611
904/392-5965

PROCEDURE-NEWS RELEASE

APPENDIX C

News Release Procedure

Step 1 -

If the report is produced by the University of Florida, a copy of the Executive Summary (see sample) is to be sent to:

Mr. Larry Humes
Assistant Director
Information and Publications Services
355 Tigert Hall
University of Florida
Gainesville, Florida 32611
Tel: (904) 392-0186

A cover letter (see sample cover letter A) is to accompany the executive summary indicating a request for considering the completed research as a University of Florida news release.

Step 2 -

The office of Information and Publication Services will respond informing the Executive Secretary of BCIAC either;

a) The research is of public news interest. A University of Florida news reporter will be sent to interview the Principal Investigator and a news release will be prepared and released by the office of Information and Publications Services on the Associated Press (AP) and United Press (UPI) wires.

b) The office of Information and Publications Services will not prepare a news release. Either the article is not news worthy in their opinion or they have so much other work they can not fulfil the request.

Step 3 - This is the first step for Non- University of Florida reports

A writer is to be hired to write a news release on the report
(see enclosed list of newswriters/editors)

Step 4 - If a University of Florida report

Upon completion of the news release (see sample), one copy is to be forward to the office of Information and Publications Services with a list of the newspapers it will be mailed to. This release is to be accompanied by a cover letter (see sample cover letter B) informing the office of Information and Publications Services of the release and requesting that the news clippings be forward to the School of Building Construction.

NOTE: Holly Stacy, Information Specialist, at the Information and Publications Services of the University of Florida, Telephone (904) 392-5965, will forward all news clippings related to the School of Building Construction.

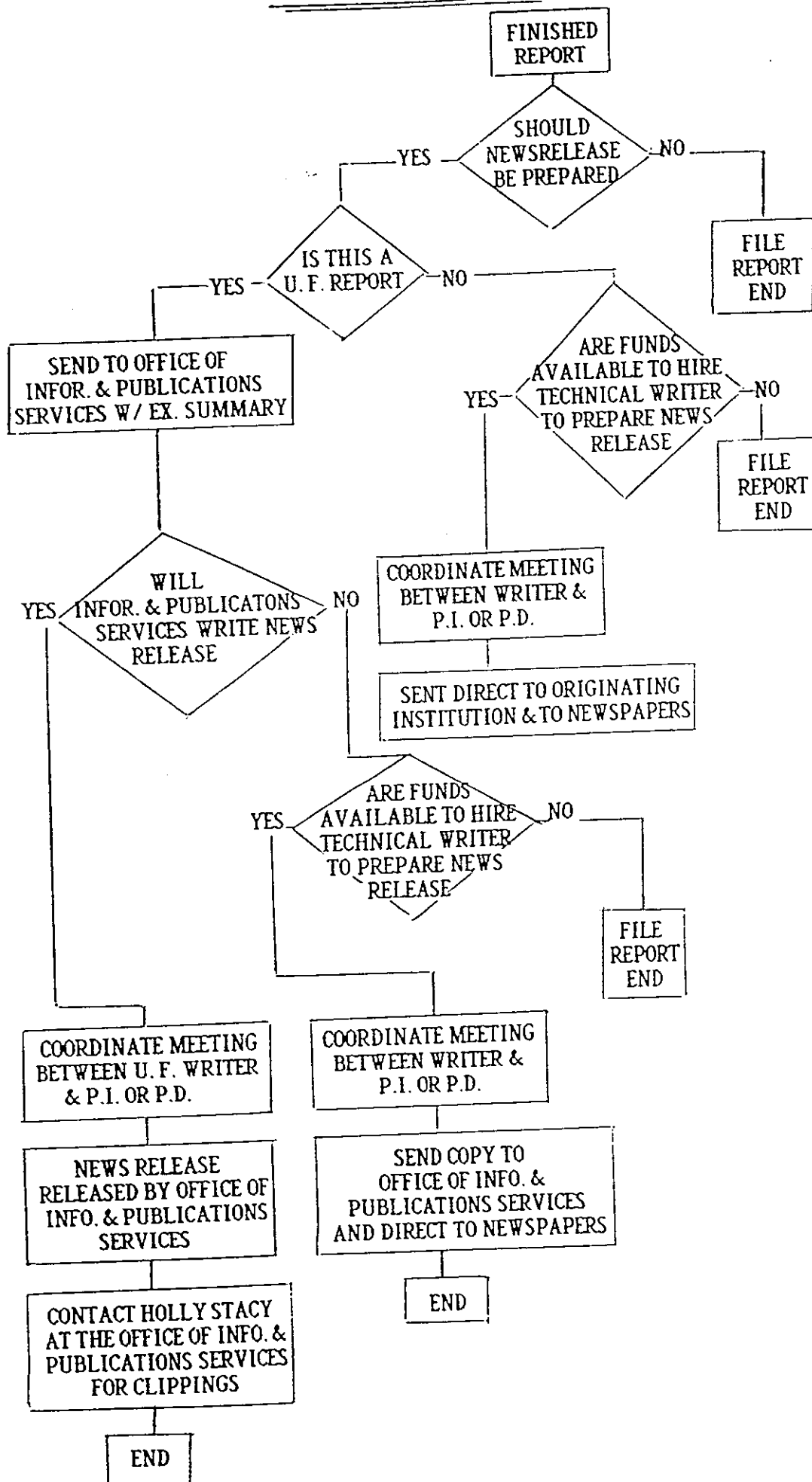
Step 5 - This is the second step for Non- University of Florida reports

The completed news release accompanied by a cover letter (see sample cover letter) is to be mailed to the enclosed list of newspapers.

Step 6 -

Contact office of Information and Publications Services to obtain copies of clippings of articles which were published relating to the news release.

PROCEDURE FLOW CHART



LIST OF NEWSPAPERS

News-Journal Newspapers
Attn. Feature Editor
P.O. Box 431
Daytona Beach, FL 32015

The Orlando Sentinel
Attn. Feature Editor
633 N. Orange Avenue
Orlando, FL 32801

Daytona Beach News
Attn. Feature Editor
P.O. Box 431, 901 6th St.
Daytona Beach, FL 32015

Ocala Star-Banner
Attn. Feature Editor
P.O. Box 490
Ocala, FL 32678

Daily Herald-News
Attn. Feature Editor
P.O. Box 1808
Punta Gorda, FL 33951

Deland Sun-News
Attn. Feature Editor
P.O. Box 1119, 111 S. Alabama
Deland, FL 32720

St. Petersburg Times
Attn. Feature Editor
P.O. Box 1121
St. Petersburg, FL 33731

Panama City News-Herald
Attn. Feature Editor
P.O. Box 1940
Panama City, FL 32402

Ft. Lauderdale Sun-Sentinel
Attn. Feature Editor
P.O. Box 14430
Ft. Lauderdale, FL 33302

Gainesville Sun
Attn. Feature Editor
P.O. Drawer A
Gainesville, FL 32601

Playground Daily News
Attn. Feature Editor
PO Box 2949, 200 Racetrack Rd.
Ft. Walton Beach, FL 32548

Ft. Lauderdale News
Attn. Feature Editor
P.O. Box 14430
Ft. Lauderdale, FL 33302

The Tampa Tribune
Attn. Feature Editor
P.O. Box 191
Tampa, FL 33702

Clearwater Sun
Attn. Feature Editor
301 South Myrtle Avenue
Clearwater, FL 33417

Fort Pierce News Tribune
Attn. Feature Editor
P.O. Box 69
Fort Pierce, FL 33454

Sarasota Herald-Tribune
Attn. Feature Editor
P.O. Box 1719
Sarasota, FL 33578

Boca Raton News
Attn. Feature Editor
P.O. Box 580, 34 SE 2nd St.
Boca Raton, FL 33432

Hollywood Sun-Tattler
Attn. Feature Editor
P.O. Box 1968, 2600 N. 29 Ave.
Hollywood, FL 33022

The Miami Herald
Attn. Feature Editor
1 Herald Plaza
Miami, FL 33101

Bradenton Herald
Attn. Feature Editor
P.O. Box 921, 102 Manatee Av.W
Bradenton, FL 33506

Homestead News-Leader
Attn. Feature Editor
P.O. Box 339, 15th NE 1st St.
Homestead, FL 33030

The Ledger
Attn. Feature Editor
P.O. Box 408
Lakeland, FL 33803

Brooksville Sun Journal
Attn. Feature Editor
P.O. Box 218, 703 Lamar Ave.
Brooksville, FL 33512

Jacksonville Journal
Attn. Feature Editor
P.O. Box 1949-F
Jacksonville, FL 32231

The News Chief
Attn. Feature Editor
650 Sixth St. SW, P.O. Box 1440
Winter Haven, FL 33880

Cape Coral Breeze
Attn. Feature Editor
P.O. Box 846, 2510 Del Prado
Cape Coral, FL 33904

Key West Citizen
Attn. Feature Editor
P.O. Box 1120
Key West, FL 33040

The Miami News
Attn. Feature Editor
P.O. Box 615
Miami, FL 33152

Florida Today
Attn. Feature Editor
P.O. Box 363000
Melbourne, FL 32936

Lake City Reporter
Attn. Feature Editor
P.O. Box 1709
Lake City, FL 32056

Fort Myers News-Press
Attn. Feature Editor
P.O. Box 10
Fort Myers, FL 33902

Daytona Beach Journal
Attn. Feature Editor
P.O. Box 431, 901 6th St.
Daytona Beach, FL 32015

Lake Wales Highlander
Attn. Feature Editor
P.O. Box 872
Lake Wales, FL 33859

Leesburg Comm.
Attn. Feature Editor
P.O. Box 7, 212 E. Main St.
Leesburg, FL 32748

Stuart News
Attn. Feature Editor
P.O. Box 2870
Stuart, FL 33495

Marianna Jackson Co. Floridan
Attn. Feature Editor
P.O. Box 520
Marianna, FL 32446

Tallahassee Democrat
Attn. Feature Editor
P.O. Box 990, 277 N. Magnolia
Tallahassee, FL 32302

Miami Diario Las Americas
Attn. Feature Editor
2900 W 39th St.
Miami, FL 33142

Vero Beach Press-Journal
Attn. Feature Editor
P.O. Box 1268
Vero Beach, FL 32960

Naples News
Attn. Feature Editor
1075 Central Avenue
Naples, FL 33940

W. Palm Bch. Palm Beach Post
Attn. Feature Editor
P.O. Box T, 2751 S. Dixie
West Palm Beach, FL 33402

Orange Park Clay Today
Attn. Feature Editor
P.O. Box 1209
Orange Park, FL 32073

West Palm Beach Times
Attn. Feature Editor
P.O. Box T, 2751 S. Dixie
West Palm Beach, FL 33402

Palatka News
Attn. Feature Editor
P.O. Box 777
Palatka, FL 32077

The Net
525 N.E. 15th St.
Miami, FL 33132

Palm Beach News
Attn. Feature Editor
P.O. Box 1176
Palm Beach, FL 33480

Palm Beach Post
2325 S. Federal Highway
Delray Beach, FL 33444

Pensacola News Journal
Attn. Feature Editor
1 News-Journal Plaza
Pensacola, FL 32501

Jackson County Floridan
Attn. Feature Editor
P.O. Box 520
Marianna, FL 32446

St. Augustine Record
Attn. Feature Editor
P.O. Box 1630
St. Augustine, FL 32084

St. Petersburg Independent
Attn. Feature Editor
P.O. Box 1121
St. Petersburg, FL 33731

Sanford Herald
Attn. Feature Editor
P.O. Box 1657
Sanford, FL 32771

TO: Ali Marukus

FROM: Holly Stacy

RE: List of magazines to which I sent the carpentry story by direct mail

ARCHITECTURE

Fine Homebuilding
Builder
Log Home & Alternative Housing Builder
World Construction
Progressive Architecture
Architectural Record
American Institute of Architecture Magazine
Florida Institute of Architecture Magazine
Architecture Digest
Better Homes & Gardens
Florida Architect
Florida Real Estate Magazine
Architectural Metals

EDUCATION

DORM Magazine
Today's Education
American Education
American Educator
American School & University Magazine
Chronicle of Higher Education
Education Digest
Learning
American School Board Journal
NEA Today
Parade Magazine
Campus Life
Florida Scholastic News

GENERAL PUBLICATIONS WHO HAVE REQUESTED ALL OUR ARCHITECTURE AND EDUCATION STORIES

College Press Service
Bradenton Herald
USA Today
Guttenberg Press Publications
WKIS Radio, Orlando
Florida Radio Network
Good Housekeeping
Daytona Beach News-Journal
St. Petersburg Times
TIME Magazine
South Florida Business Journal
Women In Business
McCalls

SAMPLE EXECUTIVE SUMMARY

EXECUTIVE SUMMARY:
RECRUITMENT, TRAINING, AND EMPLOYMENT OF CONSTRUCTION CRAFTSMEN
IN FLORIDA: IMPEDIMENTS AND RECOMMENDATIONS

By

Brisbane H. Brown, Jr., and Ali M. Markus

The School of Building Construction at the University of Florida, in conjunction with the Building Construction Industry Advisory Committee, has undertaken a study of the manpower shortage in the State of Florida's construction industry. Graduate students, under the close supervision of faculty, developed a number of surveys and conducted numerous interviews for the purpose of isolating the causes and effect of a shortage of skilled carpenters and identifying steps that could be taken to prevent, or at least minimize, such a shortage.

Because of the broad scope of this topic, seven separate studies were conducted of the different segments of the construction industry and its training programs. Each study assembled detailed data and examined the unique aspects of one segment of the industry. All seven studies were coordinated and the results combined into this report, as follows:

- 1) Technical Publication 47: Carpentry Apprenticeship Program
- 2) Technical Publication 48: Florida Homebuilders Association;
- 3) Technical Publication 50: Associated General Contractors of
Florida
- 4) Technical Publication 51: Union Brotherhood of Carpenters
- 5) Technical Publication 52: Associated Builders and Contractors
- 6) Technical Publication 54: Community College and Vocational
Training

7) Report on the Penal System

The data demonstrated that construction contractors and carpentry educators believe that a definite shortage of skilled carpenters exists in Florida. Despite this situation, training programs are inefficiently utilized. This investigation has revealed that several factors contribute to the discrepancy between the low utilization of carpentry training programs and the high industry demand for skilled carpenters. The most significant factors include the following:

- Lack of articulation between curriculum content and the requirements of an increasingly specialized industry
- Lack of on-the job training as part of the curriculum of community colleges and voc-tech programs
- Low level of communication between personnel from training programs and construction contractors
- A tendency of graduates to choose an alternative to carpentry upon graduation, resulting in a low employment rate due mainly to low wages paid to carpenters in Florida.

Copies of this overview of the carpenter shortage in Florida and recommendations to alleviate the problem may be obtained by contacting:

Executive Secretary

Building Construction Industry Advisory Committee

School of Building Construction

University of Florida

Gainesville, Florida 32611

Phone: (904) 392-5965

COVER LETTER - A

TO INFORMATION & PUBLICATIONS SERVICES



SCHOOL OF BUILDING CONSTRUCTION
UNIVERSITY OF FLORIDA
GAINESVILLE, 32611

PHONE 904 392-5965
904 392-0202
SUNCOM 622-0202

Faculty

- Bill G. Eppes, AIA
Acting School Director
- Kweku K. Bentil
- George Birrell, D.Arch.
- Brisbane H. Brown, Jr., Ph.D.
- Weilin Chang, Ph.D.
- Gary D. Cook
- Rodney E. Cox, Ph.D.
- Robert E. Crosland
- Richard A. Furman
- Charles Grim, Jr.
- William R. Gunby, Jr.
- Don A. Halperin, Ph.D., FAIC
- Harold Holland
- Jack W. Martin
- Anthony Section
- Luther J. Strange
- G. Arlan Toy
- J. Morris Trimmer, DBA
- Howard L. Underberger

DATE

Mr. Larry Humes
Assistant Director
Information and Publications Services
355 Tigert Hall
University of Florida
Gainesville, Florida 32611

- Loys A. Johnson, FAIC
Emeritus
- Thomas E. Martin
Emeritus
- C. Dawson Zeigler, Jr.
Emeritus

Dear Sir:

Enclosed is an Executive Summary on a research study that has recently been completed by the School of Building Construction.

Please respond by returning this letter indication whether the office of Information and Publications Services will be interested in preparing a news release on this research or not.

Sincerely,

Brisbane H. Brown, Jr.
Executive Secretary

Please check one

_____ Yes, We will prepare a news release

_____ No, We will not prepare a news release

_____ X
Signature

Date

COVER LETTER-B

TO INFORMATION & PUBLICATIONS SERVICES

SCHOOL OF BUILDING CONSTRUCTION
UNIVERSITY OF FLORIDA
GAINESVILLE, 32611



PHONE 904 392-5965
904 392-0202
SUNCOM 622-0202

Faculty

Bill G. Eppes, AIA
Acting School Director
Kweku K. Bentil
George Birrell, D.Arch.
Brisbane H. Brown, Jr., Ph.D.
Weilin Chang, Ph.D.
Gary D. Cook
Rodney E. Cox, Ph.D.
Robert E. Crosland
Richard A. Furman
Charles Grim, Jr.
William R. Gunby, Jr.
Don A. Halperin, Ph.D., FAIC
Harold Holland
Jack W. Martin
Anthony Section
Luther J. Strange
G. Arlan Toy
J. Morris Trimmer, DBA
Howard L. Underberger
Loys A. Johnson, FAIC
Emeritus
Thomas E. Martin
Emeritus
C. Dawson Zeigler, Jr.
Emeritus

DATE

Mr. Larry Humes
Assistant Director
Information and Publications Services
355 Tigert Hall
University of Florida
Gainesville, Florida 32611

Dear Sir:

Enclosed is a copy of a news release the School of Building Construction will be releasing to the enclosed list of newspapers.

Please forward to us the news clippings as they come in. If you need anymore information please contact me.

Sincerely,

Brisbane H. Brown, Jr.
Executive Secretary

CC: William Conway

COVER LETTER- TO NEWSPAPERS

FOR NEWS RELEASES PREPARED BY

BCIAC TECHNICAL WRITER



STATE OF FLORIDA
DEPARTMENT OF EDUCATION

TALLAHASSEE 32301

WM. CECIL GOLDEN
Associate Deputy Commissioner

BETTY CASTOR
Commissioner

BUILDING CONSTRUCTION INDUSTRY ADVISORY COMMITTEE
*University of Florida School of Building Construction - Room FAC 101
Gainesville, Florida 32611*

DATE

EDITOR'S NAME
ADDRESS OF NEWSPAPER

Dear Sir:

Enclosed is a news release concerning research recently completed by (name of Institution).

If you need anymore information concerning this new release please contact me at (904) 392-5965.

Sincerely,

Brisbane H. Brown, Jr.
Executive Secretary

CC: William Conway

Julius Blum
Orlando

William Conway
Ormond Beach

Jim Falkner
Orlando

Cecil Golden,
Ex-Officio
Tallahassee

Kinney Harley
Tallahassee

Joseph Holland
Daytona Beach

Harold Johnson
Winter Garden

Michael Kaney
Tampa

Susan Leigh
Tallahassee

Robert Palchanis
West Palm Beach

John Pistorino
Miami

Charles Perry
Gainesville

Paul Scheele
Jacksonville

R. Bruce Simpson
Gainesville

Richard Traynor
Tallahassee

Daniel Whiteman
Sarasota

-NEWS RELEASE SAMPLE

From Information Services
University of Florida
355 Tigert Hall
Gainesville, Fla. 32611
Telephone 904/392-0186

This copy by Holly Stacy
May 9, 1988

GAINESVILLE---Florida has a shortage of skilled carpenters that could mean higher prices and lower quality for construction consumers, says a University of Florida researcher.

But ironically, while building contractors say they don't have enough carpenters, many graduates of carpentry training programs say they can't find jobs, and enrollment in such programs is declining, said Ali Markus, a UF graduate student who has spent the last two years surveying Florida builders and carpentry schools for his doctoral dissertation in building construction and education.

"The next step is to use the research model I developed through this study for closer interaction between building contractors and vocational-technical and community college training programs. Cooperation between these two parties will result in producing quality craftsmen oriented to the needs of today's construction industry," said Markus, who is studying at UF on a scholarship from his native country of Libya.

Eighty-eight percent of the 281 Florida building contractors who responded to Markus' survey said there is a need for more skilled carpenters, and 67 percent said there are not enough to handle Florida's present workload. Eighty percent said a lack of carpenters has sometimes created scheduling problems on the job, and 52 percent have had to pay overtime because there aren't enough skilled carpenters to complete the job on time working only 40 hours a week.

When contractors must pay a lot of overtime, their costs go up, and the consumer ultimately bears the burden, Markus said. And if a shortage of skilled carpenters continues, Florida could see new buildings of lower quality than in the past, he added.

carpentry/add one

The survey of 31 vo-tech and community college carpentry programs showed a decrease in enrollment from 1086 to 594 in the past two years -- a 45 percent drop, Markus said.

The schools reported that 23 percent of their graduates choose fields other than carpentry, mainly because of low wage rates. Contractors report that the average hourly wage they pay skilled carpenters in Florida is \$10.98 an hour, Markus said. But vocational educators say the average starting wage for their graduates is \$5.56 an hour.

But the lowest-ranked reason graduates give for not choosing carpentry is lack of jobs, he said.

"That indicates that there are jobs out there for the carpentry graduates who choose to go into the field, so the problem must be in placement procedures and communication," Markus said.

One problem with carpentry schools is that many don't offer on-the-job training, which contractors ranked as highly important to them when interviewing potential employees, Markus said.

"You can graduate from a community college training program without one day of on-the-job training in carpentry. That should change. The schools should modify their curriculum based on what contractors need," he said.

Contractors reported that carpentry is becoming increasingly specialized, but schools said they stress all-around competency. "That's another area the two groups need to get closer together in," Markus said.

He recommends formal meetings between contractors and carpentry educators to open the lines of communication. A joint council of education and contractor representatives should be formed, and carpentry students should be surveyed to reveal what their expectations are, he said.

PUBLISHING JOURNAL ARTICLES

APPENDIX D

PUBLISHING JOURNAL ARTICLES

The Building Construction Industry Advisory Committee encourages all Principal Investigators (P.I.'s) to attempt to publish the findings of their research in construction related journals.

The articles vary in type, length, and format depending on the publication. A list of the major construction publications both referred and non-referred journals is enclosed.

An example of an article written and submitted to the AGC National Journal "Constructor" is enclosed.

LIST OF MAJOR JOURNALS

Refereed Construction Journals

1. American Society of Civil Engineering (ASCE)
Construction Journal
345 E. 47th Street
New York, NY 10017
2. American Institute of Constructors (AIC) Journal
Published Semi Annually
20 South Front Street
Columbus, OH 43215
3. International Council for Building Research
Studies and Documentation (CIB)
The Chartered Institute of Building (CIOB)
Englemere, Kings Ride
Ascot, Berkshire SL5 8BJ
England
4. International Association for Housing
Science (IAHS)
P. O. Box 340254
Coral Gables/ Miami, Fl 33114

Non- Refereed Construction Journals

1. Constructor -
Published monthly by the Associated
General Contractors of America.
1957 E. Street, N. W.
Washington, D. C. 20006
2. Builder & Contractor -
Published monthly by the Associated
Builders & Contractors, Inc.
729 15th Street, N. W.
Washington, D. C. 20005
3. Builder -
Published monthly by the National
Association of Home Builders
655 15th Street N. W. , Suite 475
Washington, D. C. 20005
4. Professional Builder -
Published monthly, except March, April, June,
September, and October when two issues are Published
275 Washington Street
Newton, MA 02158-1630

**AN EXAMPLE OF AN ARTICLE
READY FOR PUBLICATION**

SKILLED CARPENTERS: A VANISHING BREED?

Brisbane H. Brown, Jr., Ph.D., and Ali M. Markus, Ph.D.

School of Building Construction
University of Florida, Gainesville

[SDIEBAR]

A number of graduate students at the University of Florida's School of Building Construction collaborated in this research project: Ben Baffer, Anthony Cardinale, Rohit Chib, Ivey Dittmer, Darren Jones and Sheli Romer. Faculty members who contributed included Professors Rodney Cox, Richard Furman, and J. Morris Trimmer. Barbara Cox wrote the article for publication.

Corresponding Author: Dr. Brisbane Brown, School of Building Construction, University of Florida, Gainesville, FL 32611; telephone (904) 392-5965.

Where have all the carpenters gone?

A recent survey of contractors' associations in Florida, among them Florida's AGC, indicates that member contractors in the state find themselves in a manpower crisis. To identify the causes of the problem, Florida's Building Construction Industry Advisory Committee has underwritten a major research project conducted by the University of Florida's School of Building Construction. The task of researchers is to examine many segments of the construction industry, identify weak links, and make recommendations. The initial thrust of the research has involved the carpentry trade, because it represents the largest pool of skilled labor in the construction industry. Nationally, about 40 percent of the need for skilled tradesmen is expected to occur in carpentry.

In light of Florida's projected growth in the next decade, the shortage could frustrate the building industry's attempts to keep up with demand through the 1990's. Statisticians in Florida estimate that Florida's population will rise from its 1986 level of 11.7 million to 14.8 million by the year 2000--a population boom four times greater than that of the nation as a whole. Florida, once a largely rural state, is expected to have a population rivaling that of Texas and California, the nation's largest states.

The problem promises to worsen. Construction of the \$1.2

billion Trident Submarine Base in southern Georgia, consuming the labor of thousands of skilled construction tradesmen over the next nine years, is likely to pull manpower from Florida. The expansion of Walt Disney World will create added demands for skilled workers in central Florida, where Disney officials plan \$500 million in large new projects. All this in the face of falling numbers of new skilled tradesmen entering the job market. And skilled carpenters, dwindling in numbers, show little evidence of being motivated by the current low wages in Florida--an average of less than \$11.00 an hour.

Building contractors expect vocational training centers and community colleges to generate a supply of skilled carpenters for the construction industry. Indeed, the mission of vocational education programs in Florida, as elsewhere, is to train craftsmen, give them marketable skills, and place them in jobs. However, the state's community colleges and voc-tech centers have been unable to meet the demand for skilled carpenters because they can't entice enough young people into training programs. Low enrollment has forced several programs to close down or operate well below their capacity. Apprenticeship training programs have fared no better. Enrollment has dropped, and the effectiveness of many programs has been questioned by contractors who depend on the labor supply they generate.

Florida Study

Researchers at the University of Florida looked at the

shortage of skilled carpenters from the vantage points of two groups: construction industry contractors and educators in training programs.

Key representatives of major construction trade associations were interviewed, among them AGC members, after which a comprehensive follow-up survey was sent to members of four contractor associations throughout the state. A sample of 1079 contractors belonging to four associations were mailed surveys, 267 of whom were AGC members; the response rate for both AGC contractors and the overall group was approximately 27 percent.

At the same time, a number of directors of training programs in the state were interviewed, after which a comprehensive follow-up survey was sent to all 59 of Florida's programs. These included 31 voc-tech centers and community colleges, 25 apprenticeship programs, and three training programs in the penal system. The survey instrument examined educators' recruitment procedures, the employment rates of their graduates, and their perceptions of the industry's needs. All 59 surveys were completed and returned.

The questions in the two surveys targeted six areas of information:

- o Data on currently employed skilled carpenters
- o Effects of carpenter shortage on business
- o Responding firms' annual business volume, construction types, open vs. closed shop
- o Training programs' contributions to carpenter supply

- o Issues bearing on carpenter shortage

Responses of AGC Contractors vs. Overall Group

In general, the responses of AGC members were similar to those of other contractors, although a few differences emerged. For example, each AGC contractor employed an average of 21 journeyman carpenters, compared to only 14 per contractor for the overall group. AGC contractors employed an average of six carpenter apprentices, compared to four for the overall group.

AGC members agreed with other contractors about the fraction of these carpenters they considered skilled--only a little over half. Journeyman carpenters for all contractors earned an average of \$10.97 per hour (\$10.87 for AGC journeyman carpenters); apprentices earned \$8.01 (\$7.89 for AGC apprentices). Several AGC contractors commented that wages would have to go up before the carpenter shortage went down.

AGC contractors were singled out to answer the question: Where do you look for skilled carpenters? Most frequently cited sources were construction industry contacts and newspaper ads. Training programs were relatively low on their list.

What tasks must skilled carpenters be proficient at?

Contractors were asked to rank the importance of various carpentry skills. While the ratings by various association members did not vary dramatically, the top eight skills for the overall group were somewhat different from those for the AGC group.

Necessary Skills in Order of Ranking

AGC	All Contractors
1 Construct forms (piers, columns, beams, slabs, decks, stairs, bridges)	1 Frame partitions
2 Construct forms (walls, footings, edges, curbs)	2 Frame door and sills
3 Frame floors, sills, partitions	3 Install decking, sheathing
4 Install decking, sheathing	4 Frame roofs
5 Frame roofs	5 Install doors, window frames, units
6 Install doors, window frames, units	6 Install exterior wall covering, trim
7 Install exterior wall covering, trim	7 Read blueprints
8 Read blueprints	8 Construct forms (walls, footings, edges, curbs)

What problems has the carpenter shortage caused contractors?

Over one third of all contractors felt that the carpenter shortage had kept the lid on their business volume. Also, 68 percent of contractors as a group and 80 percent of AGC contractors complained of scheduling problems due to the shortage. About 56 percent of all contractors and 67 percent of AGC contractors paid overtime to skilled carpenters because of the shortage, a situation about which few respondents were happy. In

fact, four out of five AGC contractors and three out of five of the overall group said they would hire additional carpenters to avoid paying overtime.

Why is there a shortage of skilled carpenters? The three most important reasons for the carpenter shortage cited by all contractors were: 1) general decline in craftsmanship, 2) the construction boom, and 3) lack of training programs. Some comments of AGC contractors were:

- o "Need more training programs and advertisement of these programs."
- o "Start training programs in high school, create a better image for carpentry, and bring it back to a respected profession."

Where do contractors get skilled carpenters? All contractors agreed that on-the-job training is their current prime source of skilled carpenters. Open-shop apprenticeship programs and vocational training centers scored somewhat below on-the-job training, but were still significant. Contractors as a group and AGC members specifically felt that the best carpenters were products of on-the job training. Open-shop apprenticeship programs and vocational training were less important, but also significant.

Educators vs. Contractors

Educators in Florida's vocational training programs agreed with contractors that a shortage of skilled carpenters exists;

over 90 percent of those in vocational centers and community colleges cited a shortage, as well as 83% of those in apprenticeship training programs. However, over half of all educators felt that training programs are capable of fulfilling the demands for carpenters in the state--a sentiment at odds with that of building contractors.

Another area of disagreement was the importance of various carpentry skills on the job. When educators and contractors rated twenty skills necessary for a skilled carpenters, statistical analysis indicated that educators ranked every skill higher than did construction contractors. The implication? Training programs continue to stress competence in a broad area of training, despite the industry's pleas for specialization. Contractors expressed a need for three areas of specialty: frame carpentry, form carpentry, and finish carpentry.

Educators and contractors also perceived the quality of their communications differently. Educators thought that communications between educators and the building industry could be described as "close." Building contractors considered communication relatively remote. When asked how communications could be improved however, the two groups agreed. Both favored various types of personal contact over written communications--for example, formal meetings, sitting on advisory committees, and mutual attendance at educational functions

Complaints are filed on both sides. For example, personnel in apprenticeship programs express concern about lack of contrac-

tor cooperation. Many contractors won't pay for apprentice training, contributing to the problem of low supply from training programs. On the other hand, many contractors believe they're not getting what they need from training programs; they feel that training programs aren't keeping up to date on specialized skills needed on today's construction sites.

Declining Enrollment

Educators worry about their inability to find enough students to fill their programs. Statistics indicate that the number of carpentry students in voc-tech and community colleges dropped from 1086 in 1986 to 594 in 1988. University of Florida investigators were startled by this precipitous drop--particularly at a time when contractors say their on-the-job trainees are in need of classroom instruction in addition to what they learn on construction sites.

The greatest barrier to recruitment appears to be the low status associated with the carpentry trade. Today's young people simply don't perceive carpenters as enjoying the same status as electricians, plumbers, and others in building trades. Consequently, not only do training schools have empty places for would-be carpenters, but so do apprenticeship programs. Educators cite the specific reasons for low enrollment as low wage rates, low annual employment rates, and no official recognition of skilled carpentry in the form of licensure or certification.

Surveys of both educators and contractors point to four

explanations for the discrepancy between the low utilization of carpentry training programs and the high industry demand for skilled carpenters:

- o Lack of agreement between what is taught in the curriculum and the requirements of an industry that is becoming increasingly specialized
- o Lack of on-the-job training as a curricular component in community college and voc-tech programs
- o Low level of communication between personnel from training programs and construction contractors
- o Tendency of graduates to choose an alternative to carpentry upon graduation (especially those from community colleges and voc-tech programs) due to low wages paid to carpenters in Florida

Recommendations

Analysis of the data from AGC contractors, other contractors' associations, and educators led University of Florida researchers to formulate several recommendations for improving communications between educators and contractors:

- o A joint council should be formed, consisting of representatives of Florida's four major construction associations, the state's Division of Vocational, Adult and Community Education, and the Florida Bureau of Apprenticeships. Goals would be to modify curricula (creating separate training for frame carpentry, form carpentry, and finish carpentry),

incorporate on-the-job training, and improve communication between employers and trainers.

- o Regional AGC and other contractor associations should establish liaisons with training programs in their area.
- o Educators should upgrade their curricula to reflect increased specialization in carpentry and incorporate on-the-job training into their programs.
- o Contractors should include classroom and shop training in their on-the-job training, coordinating this with community colleges and voc-tech centers.
- o Competency-based training and testing (both classroom and field) should be instituted to create a recognized system of transferability of training; certificates of completion of such programs should be issued to help contractors determine the skill levels of carpenters applying for jobs.
- o More aggressive, creative recruitment of students should be pushed by construction trade associations and educational programs to promote carpentry as a positive career choice.
- o Manpower and training committees of construction associations should examine ways to improve wages for carpenters, because the low wage scale is one of the chief impediments to entry of young people into the carpentry trade.

The recommendations of University of Florida investigators indicate that improved communication between educators and contractors in Florida may be a key ingredient in relieving the shortage of skilled carpenters in the state's building construc-

tion industry. Local contractors should be encouraged to get active in training programs. They should be invited to visit training facilities, their advice should be solicited, and they should be urged to help provide on-the-job training. On the other hand, educators should attend industry functions to get in touch with contractors' needs and promote their training programs. Educators should arrange field trips to their students to local job sites.

Crossing territorial boundaries and networking may be the first step needed to reverse the current trend toward worsening of the carpentry manpower shortage.

#

21st ANNUAL VOCATIONAL and ADULT
EDUCATORS WORKSHOP

ORLANDO JULY 31-AUGUST 4, 1988

An Investigation of the Postsecondary
Carpentry Training Programs in Florida

By

ALI MARKUS

Funded By

The

BUILDING CONSTRUCTION INDUSTRY
ADVISORY COMMITTEE

APPENDIX E

A RESEARCH DISCREPANCY MODEL
FOR BUILDING TRADES TRAINING PROGRAMS

By

ALI MILUD MARKUS

August, 1988

The purpose of this study was to develop a research model to determine the variables influencing the discrepancy between the low placement of postsecondary building trades training programs graduates and the high demand for skilled craftsmen in the construction industry. The study was based on an investigation of the carpentry craft in Florida and the Provus Discrepancy Evaluation model.

Two instruments were developed through a series of meetings and personal interviews. One instrument was mailed to 1079 contractors representing four major construction groups that hire carpenters. The second instrument was sent to all 31 postsecondary carpentry training program coordinators in Florida. Responses were received from 281 construction contractors (26%) and all 31

coordinators (100%). Six groups of research questions were answered to determine the significance of each variable on the supply/demand discrepancy.

The Wilcoxon-rank-sum test indicated no significant difference ($p < .05$) in placement procedures between high and low placement rate carpentry programs. Multivariate analysis of variance utilizing the Wilks' lambda criterion with post-hoc univariate comparisons using the Student-Newmans-Keuls test indicated significant differences in the perception of skills necessary for a skilled carpenter between the contractor group and the postsecondary training program coordinator group. Repeated measures one-way analysis of variance with post-hoc comparisons utilizing Fisher's LSD and Duncan's multiple range test indicated that contractors ranked community colleges as the least effective source supplying carpenters and as having a remote level of communication with industry. Formal meetings of the two groups was rated as the best method to improve communication. Program coordinators indicated that 23% of the graduates chose an alternative occupation; this was mainly attributed to low wages.

Utilizing the Malcolm Provus Discrepancy Evaluation model, the variables determined most significant were incorporated into a research discrepancy model. The model in which the resources of the vocational education system were coordinated with the needs of the construction industry was recommended as the base for future studies of related building trades training programs.

Educators' Response to Instruments

Vocational Educators	No. Sent	No. Responded	%
Voc-Centers	28	28	100
Community Colleges	3	3	100
Total	31	31	100

Practitioners' Response by Association

Industry Association	No. sent	No. Responded	%
ABC	280	64	23
AGC	267	70	26
FHBA	363	95	26
Union	169	52	31
Total	1079	281	26%

IN YOUR OPINION WHICH OF THE FOLLOWING FACTORS HAD THE INFLUENCE ON THE PLACEMENT OF YOUR GRADUATES IN JOBS RELATED TO THEIR TRAINING?

PLEASE USE A SCALE OF 1 TO 10:

10 = EXTREMELY INFLUENTIAL
1 = NO INFLUENCE

PLACEMENT FACTORS	AVERAGE OF RESPONSES
The quality and adequacy of training provided to the students.	8.61
An individual effort and personal contacts of the instructor.	8.03
Relationship between program personnel and local contractors.	7.90
Cooperation between instructor and placement officer.	7.17
Providing information on local employment opportunities.	7.13
Help from students' friends and relatives to get job contacts.	7.10
Students had previous on - site experience.	6.87
Counseling students on job opportunities and requirements.	6.63
Showing up at construction sites and asking for work.	6.48
Actively contacting contractors and inviting them to visit the program and interview the students.	6.43
Existence of an advisory or craft committee for the program.	6.32
The central placement office for the vocational center or community college.	5.90

GLM MANOVA and SNK Test for Each Skill Ranked According to

F-Ratio

Skill	Group/ <u>n</u> ^a	Mean	F
Install insulation and sound control material	E=30	2.97	10.92
	I=253	2.34	
Frame partitions	E=30	3.87	10.62
	I=253	3.24	
Frame roofs	E=30	3.70	7.50
	I=253	3.15	
Conduct site preparation and layouts	E=30	3.0	4.92
	I=253	2.61	
Install decking and sheathing	E=30	3.60	4.05
	I=253	3.22	
Install exterior wall covering and trim	E=30	3.43	3.82
	I=253	3.06	
Read blueprints	E=30	3.43	3.74
	I=253	3.06	
Frame floor and sills	E=30	3.57	3.28
	I=253	3.22	
Install paneling, furring, soffit, ceiling	E=30	3.30	2.88
	I=253	2.97	
Install door, window frame and units	E=30	3.37	1.50
	I=253	3.13	
Install drywall material	E=30	2.74	1.42
	I=253	2.39	
Apply weather stripping and caulking	E=30	3.06	1.41
	I=253	2.84	
Build trusses	E=30	2.77	1.31
	I=253	2.43	

Continued

Skill	^a		Mean	F
	Group/n			
Construction forms (piers, columns, beams, slabs, stairs, bridge, deck)	E=30		3.15	1.25
	I=253		2.93	
Install cabinets, fixtures and shelving	E=30		2.97	0.87
	I=253		2.79	
Install structural timber	E=30		3.03	0.47
	I=253		2.90	
Construction forms (footing, walls, edge, curb)	E=30		3.19	0.41
	I=253		3.06	
Pre-plan forthcoming activities	E=30		2.67	0.23
	I=253		2.58	
Issue instructions to crew members	E=30		2.74	0.15
	I=253		2.66	
Construct interior stairs	E=30		2.98	0.06
	I=253		2.93	

a

E= Coordinators group (educators).

I= Construction contractors group (industry).

Rating of Training Programs by Construction Contractors

^a Training program	<u>n</u>	Mean
On-the-job training	219	3.25
Open shop apprenticeship programs	204	2.46
Vocational training centers	198	2.29
Union apprenticeship program	208	2.26
Community college training	192	1.98

^a
Vocational training centers and community college training are the two Florida Department of Education training programs.

(LSD procedure) Rating of Training Programs' Level of Communication With Industry.

Program	<u>n</u>	Mean
On-the-job training	244	3.25
Open shop apprenticeship program	241	1.91
Community college training	239	1.66
Vocational training centers	242	1.55
Union apprenticeship programs	250	1.47

BETTER COMMUNICATION

Linkage Methods Ranked According to Means Utilizing LSD and Duncan's Multiple Test

Method	<u>n</u>	Mean
Formal meeting of the two groups	180	3.17
Written contact	169	2.82
Attending educational functions	172	2.55
Sitting on a advisory committee	174	2.51

Graduates Seeking an Alternative Occupation

<u>n</u>	<u>Mean</u>	<u>Median</u>	<u>Low</u>	<u>High</u>
31	23.1%	15.0%	1.0%	85.0%

WHY

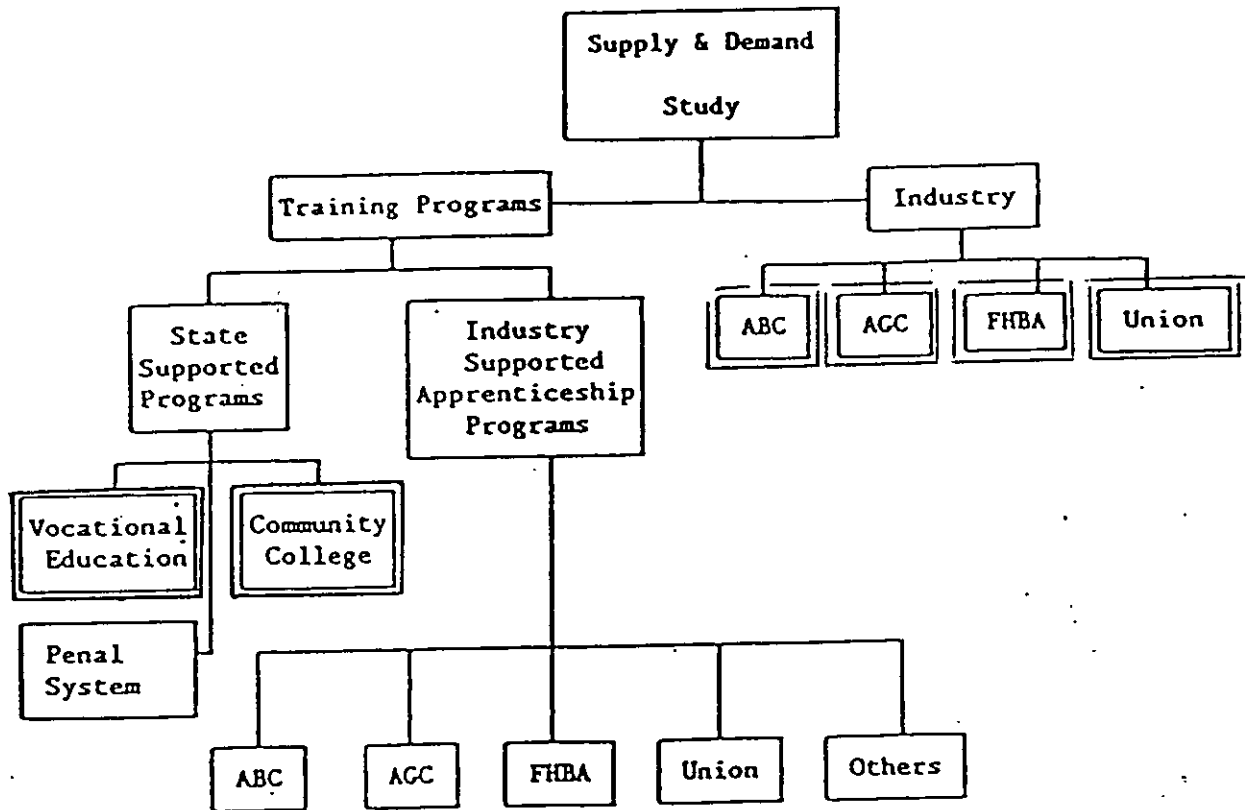
Educators' Ratings of Reasons for Graduates Seeking Alternate Occupations, Ranked According to Mean

<u>Factor</u>	<u>n</u>	<u>Mean</u>
Low wage rates	28	6.68
Students' preference	28	5.32
Characteristics and conditions of the job	28	4.71
Students feel they have not acquired the training necessary to perform the job	28	2.25
No jobs available for carpenters in the area	28	2.18

Wage Rates by Region Ranked According to Mean

Region	<u>n</u>	Mean
Southeast	81	\$12.58
Central	42	\$10.70
Northeast	35	\$10.65
Southwest	61	\$ 9.92
Northwest	20	\$ 8.87

SCOPE OF TOTAL RESEARCH PROJECT



LEGEND:

==== - scope of research for this particular project

ABC - Associated Builders and Contractors

AGC - Associated General Contractors

FHBA - Florida Home Builders Association

Union - United Brotherhood of Carpenters and Joiners of America

Others - Any individual or group program which is non-union and does not belong to any one particular building organization.

Funded by BCIAAC

Chairman: William R. Conway
 110 Orchard Lane
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 904/677-2498

Secretary: Brisbane H. Brown
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January 3, 1989

Alachua County Plumbing, Heating, Cooling,
and Electrical Contractors

a presentation to disseminate grant

R86-4 "Recruitment, Training and Employment of Construction
Craftsmen in Florida; Impediments and Recommendations"

List of Attendees

Representing

Sam Crutchfield	Samuel Crutchfield Elect.	
Brisbane Brown	University of Florida	392-5965
Jornal Nejame	A & H Suppliers	463-1124
James W. Brown	Weather Control, Inc.	377-2665
Doyle Sikes	Ray French A/C Heating, Inc.	372-3705
Don Coyce	Don Coyce Elect.	373-7613
Sam Williams	S.E. Williams Elect.	372-3324
Robert Richardson	Bob Richardson's Heating & A/C	378-1943