

GEORGIA INSTITUTE OF TECHNOLOGY  
OFFICE OF CONTRACT ADMINISTRATION  
SPONSORED PROJECT INITIATION

Date: October 4, 1977

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adg  
OHL

Project Title: Continuation of Management and Technical Assistance by Georgia  
Institute of Technology, Industrial Extension Expansion Service Program

Project No: A-2018

12/31/83

5/31/83  
3/31/83

Project Director: Hardy Taylor

Sponsor: U.S. Dept. of Commerce/EDA

11/5/82  
12/31/82  
4/30/82

cd  
12/31/82  
4/30/82

July 31, 1981

performance

Agreement Period: From 7/1/77

Until 9/30/78

2/28/82

\*12 mo. work period -

3/2/81 reports

3 mos. for reporting, etc.

4/28/82 performance

3/31/84

Type Agreement: Grant No. 04-06-01567

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25,000 GIT Cost-Sharing

\$100,000

Reports Required: Work Schedule Plan; Progress & Financial Reports; Final Technical  
and Financial Reports

Sponsor Contact Person (s):

Technical Matters

Contractual Matters

(thru OCA)

Director

S. E. Regional Office

U. S. Dept. of Commerce/EDA

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Defense Priority Rating:

Assigned to: Technology & Development Laboratory

(School/Laboratory)

COPIES TO:

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Office of Computing Services  
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EES Information Office  
Project File (OCA)  
Project Code (GTRI)  
Other EES R&P

SPONSORED PROJECT TERMINATION/CLOSEOUT SHEETDate 11/6/84Project No. A-2018~~Faculty~~ School/Lab EDL

Includes Subproject No.(s) \_\_\_\_\_

Project Director(s) Hardy TaylorGTRI / ~~OT~~Sponsor U. S. Department of Commerce (EDA)Title A Program of Management and Technical Assistance in Designated EDA Counties in Ga.Effective Completion Date: 3/31/84 (Performance) 6/30/84 (Reports)

## Grant/Contract Closeout Actions Remaining:

☐ None☒ Final Invoice or Final Fiscal Report☐ Closing Documents☐ Final Report of Inventions☐ Govt. Property Inventory & Related Certificate☐ Classified Material Certificate☐ Other \_\_\_\_\_

Continues Project No. \_\_\_\_\_

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Project No. A-2018  
Grant Nos. 04-06-01567-6  
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A PROGRAM  
OF MANAGEMENT AND TECHNICAL ASSISTANCE  
IN DESIGNATED EDA COUNTIES IN GEORGIA

Semi-Annual Report

January 1 - June 30, 1982

by

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*This technical assistance program was accomplished by professional consultants under a grant from the Economic Development Administration. The statements, findings, conclusions, recommendations, and other data in this report are solely those of the grantee and do not necessarily reflect the views of the Economic Development Administration.*

Economic Development Laboratory  
Engineering Experiment Station  
GEORGIA INSTITUTE OF TECHNOLOGY  
July 1982

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## SUMMARY OF CENTER ACTIVITIES

### Overall Program Objectives

The program activities described in this report represent an extension of the Economic Development Laboratory's established service to Georgia business and industry through market research, management guidance, and technical assistance. The specific objectives of the EDA-sponsored program are as follows:

- o To stimulate the expansion and diversification of existing industry;
- o To support the formation of new, economically sound enterprises; and
- o As an ultimate objective following from the two stated above, to create additional jobs.

### Service Region

The region covered under the EDA program of management and technical assistance encompasses all designated EDA counties in the State of Georgia. As of the end of the reporting period, there were 154 of these EDA counties in Georgia, so designated because they are the most economically depressed areas of the state. The objectives of the program address the fundamental cause of these conditions: inadequate employment opportunities. As a result of this deficiency, the counties have experienced high levels of unemployment, poverty, and out-migration.

### Project Activity

The extended period for the project year 1980-1981 ended on December 31, 1981. An amendment extending the grant until June 30, 1982 became effective on May 10, 1982. Because of the uncertainty of program continuation, funding limitations, and a general downturn in the economy, the current level of program effort and the number of viable technical assistance projects currently under way is substantially below the levels of previous years.

Because of the situation described above, it was necessary to utilize Center management consulting personnel in other activities within the Economic Development Laboratory until the EDA program again became fully operational. The revised instructions for preparing progress reports were not received by this Center until May 10, 1982. Thus, a considerable amount of data needed for the revised report is not currently available to the Center.

This semi-annual report is based on the revised format provided on May 10, 1982. It will be used as the basis for preparing the annual report which will be submitted at the completion of the project. The new data requirements have been integrated into the Center's operating procedures.

During the first half of the project year, 23 management and technical projects were active under the EDA program. Twenty of these projects involved manufacturing firms, while three were service-oriented in the business sector. Over 60 percent of the assistance furnished to companies related to engineering, technology development, and general production problems. Some 96 jobs were reported as having been saved or created. However, because time has not been available to review the reported gains, they are not considered for economic impact analysis at this time. Twenty projects were completed during the period, leaving two projects still in progress. Because the current EDA Center program has been stabilized, at least for the time being, it is anticipated that additional projects will be undertaken.

## I. DESCRIPTION OF TECHNICAL ASSISTANCE GAP IN SERVICE REGION

### A. Service Area

The service area covered by the EDA Technical Assistance Grant effective during fiscal year 1980-1981 is comprised of 154 designated counties from the total 159 Georgia counties. These designated counties, shown in Map 1, are economically depressed areas for various reasons.

### B. Economic Characteristics of Service Area

The EDL program addresses the need for economic revitalization in these counties by creating job opportunities in new or existing businesses and industries in the designated counties.

Consideration of the specific economic needs of the area is given in each management and technical assistance case. For instance, some of these counties have experienced a high negative net migration in the period 1970-1977. One county had a net migration of -43% as a result of stagnant and/or declining economic conditions. Although the state as a whole experienced a 3.0% net migration, as compared to 1.6% for the United States, 49 designated EDA counties in Georgia experienced negative net migrations. These negative rates are good indicators of where EDA assistance is needed and what type of management and technical assistance is appropriate.

Other economic indicators which are considered include median years of education completed and percent of land in farms. In the United States the median number of years of education completed in 1970 was 12.1 for males and females, as compared with 10.8 for males and females in Georgia. However, 141 of the Georgia EDA counties had a lower median than the State as a whole. In 1978, 54 of these EDA counties had a higher percentage of land in farms than the nation as a whole, which had 45.4%. The comparable Georgia figure was 37.0%.

Income and unemployment are also economic indicators used in this program. In 1977 the per capita income in the United States was \$5,751, compared with \$5,071 in Georgia. During this same year, 140 of the Georgia EDA counties had lower per capita income than the state as a whole. In 1969 (the last year for which statistics have been developed), the estimated proportion of the U.S. population with income below the poverty level was 13.7%, compared with 20.7% in Georgia; of the Georgia EDA counties, 114 had a figure higher than that of the State as a whole. Many of these county figures were extremely high, reaching in one case 60.7%. In May 1981, the estimated unemployment rate was 9.1% for the U.S. and 7.4% for Georgia. EDA counties in Georgia for this same period had unemployment rates as high as 19.1%, and 54 of them were higher than the U.S. average.



## II. LINKING CENTER RESOURCES TO TECHNICAL ASSISTANCE NEEDS

### A. Organization and Establishment of Center

First proposed as a comprehensive plan in October 1955, the industrial development program at Georgia Tech was established in July 1956 as a three-man operation. The Industrial Development Branch grew to division status within the Engineering Experiment Station in 1962, and was called the Industrial Development Division. Currently the group holds laboratory status and is known as the Economic Development Laboratory.

The overall objective of this laboratory has been and is to stimulate and advance industrial and economic development. This objective is to be achieved through active cooperation with other agencies and organizations engaged in the field of industrial and economic development and through the continuing development and implementation of programs which are designed to accomplish the following specific aims:

1. To provide the facts and scientific research needed to assess the economic status and development potential of the state and its subdivisions;
2. To describe, measure, and evaluate the physical and human resources of the state and its subdivisions;
3. To determine, through objective research and analysis, the types of business and industrial operations that are best suited for development or expansion in Georgia and in specific locations;
4. To serve as a center for the collection, interpretation, and dissemination of information relating to industrial and economic development.
5. To provide professional assistance, information, and service to governmental units and to other industrial and economic development groups;
6. To provide professional assistance, information, and service to established and prospective business and industrial firms;
7. To motivate and assist public and private organizations in the utilization of research findings in the achievement of industrial and economic potentials; and
8. To provide professional instruction and guidance in the application of the principles and techniques of industrial and economic development.

During fiscal 1980-1981, 34 management and technical assistance projects were active under the EDA program. This brought to 978 the total number of projects undertaken by EDL since the inception of the program through December 31, 1981.

The overall philosophy of the Economic Development Laboratory is to work in conjunction with all economic development agencies. Exhibits 1 and 2 illustrate the relationship of the Economic Development Laboratory and its divisions to the structure of the Georgia Institute of Technology.

#### B. Program Objectives

The program activities described in this report represent an extension of the Economic Development Laboratory's established service to Georgia business and industry through market research, management guidance, and technical assistance. The specific objectives of the EDA-sponsored program are:

1. To stimulate the expansion and diversification of existing business and industry in designated EDA counties;
2. To support the formation of new, economically sound enterprises in designated EDA counties; and
3. To encourage the development and expansion of economically sound enterprises owned and/or managed by individuals from the minority and female community in the service area.

The program objectives are applied to all the EDA areas in Georgia and do not vary from subregion to subregion.

#### C. Technical Assistance Services

Under the current EDA Technical Assistance Grant, the Economic Development Laboratory, through its Business Development Division, offers several types of assistance in designated Economic Development Districts and counties:

1. Technical and management assistance is provided to marginal existing business and industrial firms in order to solve problems that endanger their continuation. The purpose of aid in these cases is to save jobs.
2. Technical and management assistance is furnished to existing business and industry with operating problems which inhibited growth. Expansion and diversification assistance is provided in order to create jobs.
3. Technical and management assistance is enlisted in the formation of new industrial ventures, also for the purpose of creating jobs.
4. Technical and management assistance is furnished to individuals from the minority and female community for the purpose of creating opportunities for the development of business enterprises and the creation of jobs.

This assistance covers all of the problems businesses encounter in the broad fields of management, operations, personnel, finance, product evaluation, and market identification. It should be noted that when a company or group of individuals expresses an interest in an EDA business loan, the Economic Development Laboratory refers that company or individual to the EDA Economic Development Representative and takes no action until requested to do so by the Economic Development Representative.

D. Internal Management Policies and Procedures

1. General Program Approach. As each project is developed, an EDL representative is assigned as project director, and the required work is performed by the project director or assigned to a staff specialist. The project director maintains close contact with the company until completion of the project. Work performed on each project and the results achieved are recorded on individual project report forms.
2. Operating Policies. When it is decided to proceed with a project, the assignment of personnel and the priority given to these assignments is decided on the basis of the potential return which can be expected from an investment of management and technical assistance services. The principal criteria which determine project priorities are listed below.
  - a. First, the inherent potential of the proposal is evaluated. If a new product or process is involved or if the request is for assistance in the organization of a new enterprise, an analysis is made of the profit potential of the product, process, or company.
  - b. The management and/or technical competence of the individuals requesting assistance must be considered in the assessment of the proposal's overall potential. Assuming a high degree of management competence, a proposal with sound market potentials justifies a high priority. Without such competence, the chances of success for a potentially good idea are obviously reduced.
  - c. The economic impact of EDL's assistance service is projected as a third criterion. A higher priority is normally given to those projects in which a relatively high return can be achieved through the creation of better paying jobs, the increased use of natural resources, and the fulfillment of a profitable business opportunity.
  - d. Finally, the financial resources supporting the proposal itself are investigated. If the proposal had validity in all other respects, financial backing usually can be secured from outside interests. If the proposed product, process, or company is weak in either of the first two external factors stated above, its potential success is weakened, even if the individuals involved can provide their own financial backing.

Thus, priority is determined on the basis of the financial resources behind the proposal if it meets the first two criteria.

3. Individual Project Approach. As a result of EDL's work with companies of varying size during the initial six years of the program, a standard approach (especially in problem-solving projects) has evolved that has proved successful in most cases. The projects are approached in the following three steps:

- a. Initial efforts are directed toward assisting the firm in solving the problem by itself. This is essentially a matter of helping company representatives to identify the true nature of a problem, and then providing guidance as they move toward and through a series of steps to resolve the problem.
- b. If it is not possible for a firm to resolve a problem situation with its own personnel, direct assistance is provided in attacking those aspects of the problem which EDL can effectively address.
- c. If a problem situation involves an unusual amount of time relative to the results to be attained or if qualified personnel are not available to attack the problem, the firm is advised of its need for consulting specialists.

E. Strategy for Subregions

Map 1 shows the locations of the Economic Development Districts and Area Planning and Development Commissions throughout the state. Map 2 shows the locations of the area offices of the Georgia Institute of Technology. This latter map reflects the blanket coverage of the entire state with area offices, and taken with Map 1, shows the relationship between the area offices and the development districts. This area office network enables EDL to effectively serve EDA objectives statewide in an efficient and economical manner through its trained professionals in the area offices and the more EDA-oriented staff in Atlanta.

These management and technical assistance program objectives are applied to all the EDA areas in Georgia and do not vary from subregion to subregion.

F. Relationship to Other Development Efforts

In furthering EDA objectives in Georgia, the Economic Development Laboratory works closely with representatives of the following organizations:

- o Georgia State Office of Planning and Budget,
- o Georgia Department of Industry and Trade,
- o Georgia Department of Community Development,
- o Economic Development Districts,

- o Area Planning and Development Commissions,
- o Chambers of Commerce,
- o Local Industrial Development Groups,
- o Coastal Plains Regional Commission,
- o Small Business Administration,
- o EDA Economic Development Representatives, and
- o Farmers Home Administration.

Particular attention is directed to working with the EDD's and APDC's on individual projects. When an assistance project is opened, these organizations are notified that EDL will be working in their area and a monthly progress report of activity on projects within their area is supplied.

Cooperation with the above-mentioned organizations is enhanced because EDL is involved in activities other than EDA within the state, and its personnel are in almost constant contact with these groups.

#### G. Project Personnel

The staff of the Business Development Division (EDL) has a wide range of practical experience in consulting, administrative, and operational work with a variety of business and industrial firms. Supporting the Division staff are other professional personnel of the Economic Development Laboratory: market analysts, plant location specialists, industrial economists, statisticians, research librarians, and industrial and chemical engineers. The facilities and personnel of other divisions of the Engineering Experiment Station and of Georgia Tech's academic departments and library are also available for consultative work on special projects.

Exhibit 3 contains biographical sketches of the in-house professionals of the Economic Development Laboratory, in which EDA activities are centered. Sketches of Georgia Tech field office personnel who work on EDA projects are also included.

### IV. EVALUATION OF PROGRAM EFFORT

#### A. Project Summaries

The individual projects which were active during the period under the program of management and technical assistance to businesses, industrial firms, and communities in designated Georgia counties are listed by Economic Development Districts, and descriptions include identification of each project by number, type, and location; a brief description of the work performed; and a statement of the results achieved. The projects which were still active as of June 30, 1982 are listed under "Ongoing Projects" in each EDD.

## ALTAMAHA GEORGIA SOUTHERN ECONOMIC DEVELOPMENT DISTRICT

### General

The Altamaha Georgia Southern Economic Development District consists of eight counties, all of which are eligible Redevelopment Area counties: Appling, Bulloch, Candler, Evans, Jeff Davis, Tattnall, Toombs, and Wayne. The Economic Development Centers are Hazlehurst (Jeff Davis County), Statesboro (Bulloch County), and Vidalia (Toombs County).

### Discontinued Projects

None

### Ongoing Projects

There are no projects under way in this area.



## CENTRAL SAVANNAH RIVER ECONOMIC DEVELOPMENT DISTRICT

### General

The Central Savannah River Economic Development District consists of 13 counties, all of which are eligible Redevelopment Area counties: Burke, Columbia, Emanuel, Glascock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Screven, Taliaferro, Warren, and Wilkes. The Economic Development Centers are Augusta (Richmond County) and Swainsboro (Emanuel County).

### Discontinued Projects

None

### Ongoing Projects

One project is now under way in this area.

### Project 974: Assistance to a metal manufacturing company in Jefferson County.

Nature of Problem: A tool and die shop is seeking to broaden its manufacturing base as well as its marketing area. The company produces several metal products, including gas fish cookers, pickup truck tool boxes, and wire cricket cages. The company has general machining, welding, and fabrication capabilities. It is interested in using these capabilities to produce metal fabrications and components for other companies. The firm has requested help with its marketing effort, including supply guidelines for promotion of the most profitable work.

Work Performed: Initial contacts have been made with company personnel and a work program has been developed and is under way.

Results: The project is continuing.

## CHATTAHOOCHEE-FLINT ECONOMIC DEVELOPMENT DISTRICT

### General

The Chattahoochee-Flint Economic Development District consists of five counties, all of which are eligible Redevelopment Area counties: Carroll, Coweta, Heard, Meriwether, and Troup. The Economic Development Centers are Carrollton (Carroll County) and LaGrange (Troup County).

### Discontinued Projects

During the period, two projects were discontinued in this area.

#### Project 989: Assistance to a manufacturer of spraying equipment in Carroll County.

Nature of Problem: The manufacturer of spray equipment in Carroll County produces trailer and truck mounted spray equipment which is marketed on a national basis. The company's expansion efforts have been hindered by inefficient material handling procedures and poor production layouts. The company has no engineering expertise on its staff. EES was requested to furnish assistance.

Work Performed: After conferring with company management, EES personnel studied the existing plant layout and materials flow and handling procedures. As a result of the analysis, several recommended changes were submitted to management. It is estimated that the changes, if implemented, will increase productivity by 25 per cent.

Results: The project is closed.

#### Project 992: Assistance to a manufacturer of machined aluminum parts in Heard County.

Nature of Problem: A manufacturer of aluminum products in Heard County requested technical assistance relating to its use of chemicals used in treatment tanks. The company was concerned for health hazards to its personnel, as well as the corrosion effects which were being experienced in the steel roof structure over the area.

Work Performed: EES personnel designed a ventilation system to remove the fumes and protect the building and personnel. The system was designed so that both the building structure and the anodizing equipment operating personnel would be isolated from the fumes.

Results: Implementation of the system will result in the savings of maintenance costs. Two jobs will be saved because workers will be able to work in the area under safe conditions. Further assistance was not required. The project is closed.

### Ongoing Projects

There are no projects under way in this area.

## COASTAL AREA ECONOMIC DEVELOPMENT DISTRICT

### General

The Coastal Area Economic Development District consists of eight counties, all of which are eligible Redevelopment Area counties: Bryan, Camden, Chatham, Effingham, Glynn, Liberty, Long, and McIntosh. The Economic Development Centers are Brunswick (Glynn County) and Hinesville (Liberty County).

### Discontinued Projects

During the period, two projects were discontinued in this area.

#### Project 993: Assistance to a manufacturing company in Chatham County.

Nature of Problem: A pump manufacturer in the Savannah area needed assistance in developing markets and obtaining additional financial support for expansion.

Work Performed: EDL assistance was provided in developing business in the public sector. The firm has been successful in obtaining sales contracts with federal agencies. Assistance was also provided in developing and presenting financial packages to lending institutions.

Results: During the period covered by the assistance furnished by EDL, the company increased by 12 employees. Further assistance was not required. The project is closed.

#### Project 994: Assistance to a firm interested in establishing a manufacturing plant for lysene in the U.S.

Nature of Problem: A principal of a firm was interested in establishing a plant for manufacturing lysene in the U.S. Assistance was requested to characterize the domestic market.

Work Performed: A market study was conducted which developed import sales and price data for the product. The firm was referred to Georgia Tech's Advanced Technology Development Center. A joint venture between the principal and a French firm currently producing lysene was established.

Results: No further assistance was required. The project is closed.

### Ongoing Projects

There are no projects under way in this area.

## COOSA VALLEY ECONOMIC DEVELOPMENT DISTRICT

### General

The Coosa Valley Economic Development District consists of ten counties, nine of which are eligible Redevelopment Area counties: Bartow, Chattooga, Dade, Floyd, Gordon, Haralson, Paulding, Polk, and Walker. The Economic Development Centers are Bremen-Tallapoosa-Buchanan (Haralson County), Rome (Floyd County), Cartersville (Bartow County), Ft. Oglethorpe (Catoosa County), and Rossville-LaFayette (Walker County).

### Discontinued Projects

During the period, one project was discontinued in this area.

#### Project 985: Assistance to a manufacturer of sheet rubber products in Haralson County.

Nature of Problem: A company in Haralson County manufactures raw rubber, and molds and die cuts the rubber for the retread market. Bottlenecks in shipping and warehousing were restricting the company's ability to grow. Also, congestion in the shipping and receiving department was causing a decrease in the level of customer service, thereby jeopardizing the current level of sales and employment. The company did not consider it feasible to expand plant capacity to ease the shipping and receiving problem. The company requested assistance in developing a more efficient way of handling shipping and receiving problems.

Work Performed: Working with company personnel, EES made an analysis of the problem to determine from a time study (work sampling) the number of avoidable man-hours lost in searching and shifting materials to find a particular order. Also, a cost analysis of two alternate systems was explored to determine cost/benefit trade-offs. EES redesigned the shipping/warehouse area to increase capacity and reduce congestion. Blueprints were provided for two alternative layouts and a system of locating specific pallets in a racking system.

Results: The improved system should result in the employment of three additional persons. No further assistance is required. The project is closed.

### Ongoing Projects

There are no projects under way in this area.

## GEORGIA MOUNTAINS ECONOMIC DEVELOPMENT DISTRICT

### General

The Georgia Mountains Economic Development District consists of 13 counties, all of which are eligible Redevelopment Area counties: Banks, Dawson, Forsyth, Franklin, Habersham, Hall, Hart, Lumpkin, Rabun, Stephens, Towns, Union, and White. The Economic Development Centers are Gainesville (Hall County) and Toccoa (Stephens County).

### Discontinued Projects

None.

### Ongoing Projects

There are no projects under way in this area.

## HEART OF GEORGIA ECONOMIC DEVELOPMENT DISTRICT

### General

The Heart of Georgia Economic Development District consists of nine counties, eight of which are eligible Redevelopment Area counties: Dodge, Laurens, Montgomery, Pulaski, Telfair, Treutlen, Wheeler, and Wilcox. The Economic Development Center is Dublin-East Dublin (Laurens County).

### Discontinued Projects

None.

### Ongoing Projects

There are no projects under way in this area.



## LOWER CHATTAHOOCHEE ECONOMIC DEVELOPMENT DISTRICT

### General

The Lower Chattahoochee Economic Development District consists of eight counties, seven of which are eligible Redevelopment Area counties: Chattahoochee, Clay, Muscogee, Quitman, Randolph, Stewart, and Talbot. The Economic Development Center is Columbus (Muscogee County).

### Discontinued Projects

During the period, one project was discontinued in this area.

#### Project 990: Assistance to a manufacturer of high fidelity speakers in Randolph County.

Nature of Problem: A manufacturer of high fidelity speakers in Randolph County has a national market. However, the company has experienced some problems in the area of plant layout, speaker design, product costing and financial management. Assistance was requested from EDL.

Work Performed: EDL personnel established a working relationship with company management. Recommendations were made and accepted by company personnel relative to product line improvement. Analysis of existing product costing procedures were made and an improved system was installed by the company. Assistance is currently being furnished in speaker design as well as in general financial improvement matters.

Results: The project is continuing.

### Ongoing Projects

There are no projects under way in this area.

## McINTOSH TRAIL ECONOMIC DEVELOPMENT DISTRICT

### General

The McIntosh Trail Economic Development District consists of eight counties, all of which are eligible Redevelopment Area counties: Butts, Fayette, Henry, Lamar, Newton, Pike, Spalding, and Upson. The Economic Development Centers are Covington (Newton County), Griffin (Spalding County), and Thomas-ton (Upson County).

### Discontinued Projects

None.

### Ongoing Projects

There are no projects under way in this area.

## MIDDLE FLINT ECONOMIC DEVELOPMENT DISTRICT

### General

The Middle Flint Economic Development District consists of eight counties, all of which are eligible Redevelopment Area counties: Crisp, Dooly, Macon, Marion, Schley, Sumter, Taylor, and Webster. The Economic Development Center is Americus (Sumter County).

### Discontinued

None.

### Ongoing Projects

There are no projects under way in this area.

## MIDDLE GEORGIA ECONOMIC DEVELOPMENT DISTRICT

### General

The Middle Georgia Economic Development District consists of seven counties, six of which are Redevelopment Area counties: Bibb, Crawford, Houston, Jones, Monroe, and Twiggs. The Economic Development Center is Macon (Bibb County).

### Discontinued Projects

None.

### Ongoing Projects

There are no projects under way in this area.

## NORTH GEORGIA ECONOMIC DEVELOPMENT DISTRICT

### General

The North Georgia Economic Development District consists of six counties, all of which are eligible Redevelopment Area counties: Cherokee, Fannin, Gilmer, Murray, Pickens, and Whitfield. The Economic Development Center is Dalton (Whitfield County).

### Discontinued Projects

During the period, one project was discontinued in this area.

#### Project 986: Assistance to a manufacturer of specialty packaging equipment in North Georgia (Pickens County).

Nature of Problem: A manufacturing company in Pickens County designs specialty packaging equipment. The company has been adversely affected by the current recession and has had to lay-off employees. Assistance was requested in the design of new equipment for new products.

Work Performed: EES personnel furnished the company design assistance by which the company was able to develop a new piece of equipment that can be used throughout the T-shirt industry.

Results: It is expected that at least four employees will be returned to work and six to ten additional employees may be added to the payroll. Further assistance is not required at this time. The project is closed.

### Ongoing Projects

There are no projects under way in this area.

## NORTHEAST GEORGIA ECONOMIC DEVELOPMENT DISTRICT

### General

The Northeast Georgia Economic Development District consists of ten counties, all of which are eligible Redevelopment Area counties: Barrow, Clarke, Elbert, Greene, Jackson, Madison, Morgan, Oconee, Oglethorpe, and Walton. The Economic Development Center is Athens (Clarke County).

### Discontinued Projects

During the period, two projects were discontinued in this area.

#### Project 983: Assistance to a processor and packer of boiled eggs in Jackson County.

Nature of Problem: An egg processing plant in Jackson was located in an old plant with limited land for expansion. The company was cited by the county health department for violation of waste disposal regulations. Assistance was requested by the company.

Work Performed: EES personnel assisted the company in finding a temporary solution to its waste problem until a new plant could be built. Subsequently, EES personnel assisted the company in the design of a layout for a new plant, and in designing an improved system for cooking and processing hard boiled eggs.

Results: The firm now occupies a new plant. Fifteen jobs have been saved and 10 to 15 new jobs are expected to be created. Further assistance at this time is not needed. The project is closed.

#### Project 995: Assistance to a service company in Elbert County.

Nature of Problem: A service company engaged in cutting blocks of granite into small pieces utilized a relatively new type of saw. However, severe vibration problems were hampering sawing operations. Assistance was requested from EDL.

Work Performed: EDL personnel identified the spectral aspects of the problem vibration and quantified both the probable causes of the vibration and the existing movements. Recommendations were made for changes to reduce the cause of vibration including motor changes, mass changes, and stiffness changes to enable the machine to operate in ranges away from the system's natural frequencies.

Results: Vibrations have been reduced significantly and productivity has improved. Two employees have been kept on the payroll as a result of project work. The project is closed.

### Ongoing Projects

There are no projects under way in this area.



## OCONEE ECONOMIC DEVELOPMENT DISTRICT

### General

The Oconee Economic Development District consists of seven counties, all of which are eligible Redevelopment Area counties: Baldwin, Hancock, Jasper, Johnson, Putnam, Washington, and Wilkinson. The Economic Development Center is Milledgeville (Baldwin County).

### Discontinued Projects

None.

### Ongoing Projects

There are no projects under way in this area.

## SOUTH GEORGIA ECONOMIC DEVELOPMENT DISTRICT

### General

The South Georgia Economic Development District consists of ten counties, all of which are eligible Redevelopment Area counties: Ben Hill, Berrien, Brooks, Cook, Echols, Irwin, Lanier, Lowndes, Tift, and Turner. The Economic Development Centers are Valdosta (Lowndes County) and Tifton (Tift County).

### Discontinued Projects

During the period, two projects were discontinued in the area.

#### Project 948: Assistance to a manufacturer of irrigation equipment in Ben Hill County.

Nature of Problem: A firm in Ben Hill County is manufacturing a new product which involves a new type of electronic control circuit. No one in the area manufactures such a circuit. The company is interested in establishing a manufacturing capability in the area so that the item will be available for use in the company's new product. Assistance has been requested in establishing such a capability in the area.

Work Performed: EES personnel have assisted the company in initiating a project setup, drawing a schematic, and locating sources of supplies. Investigation of sources of controls was undertaken, including cost estimates. Initial design work has been completed on the control circuit. Subsequently the company was sold. No further assistance has been requested.

Results: The project is closed.

#### Project 984: Technical assistance to a company in Berrien County that manufactures agricultural equipment.

Nature of Problem: A company in Berrien County that manufactures portable silage feeders and electrical fencing desired to increase its product line by developing and marketing a hand-held meter that would help trouble-shoot electric fence systems. However, the company had no expertise in electronics and requested assistance from Georgia Tech.

Work Performed: EDL personnel met with company management and determined the technical needs of the company for the meter. EES personnel completed design of an instrument system, including component selections, and working drawings. Subsequently, EES personnel assisted the company in the selection of tools, equipment, and test instrumentation needed to produce the product. Plant layout, assembly line procedures, and test parameters were also developed and furnished to the company.

Results: A new product line and a wholly owned subsidiary of the company was established. Two new jobs were created. It is anticipated that a second line will be added for an additional two jobs. Additional assistance is not required at this time. The project is closed.

### Ongoing Projects

One project is currently under way in this area.

#### Project 973: Assistance to an agricultural manufacturing business in Berrien County.

Nature of Problem: A small manufacturer of agricultural equipment in Berrien County wishes to diversity its product line by manufacturing disk blades for agricultural equipment. The company requested assistance in identifying the basic production processes required, specific manufacturing operations needed, new equipment that will be required to produce the disks, and in the development of a pricing structure.

Work Performed: EES staff engineers met with management and developed a detailed program which is now under way. Assistance will also be furnished in the transfer of new technology.

Results: The project is continuing.

## SOUTHEAST GEORGIA ECONOMIC DEVELOPMENT DISTRICT

### General

The Southeast Georgia Economic Development District consists of eight counties, all of which are eligible Redevelopment Area counties: Atkinson, Bacon, Brantley, Charlton, Clinch, Coffee, Pierce, and Ware. The Economic Development Center is Waycross (Ware County).

### Discontinued Projects

During the period, one project was discontinued in the area.

#### Project 987: Assistance to a meat process plant in Bacon County.

Nature of Problem: A meat processing company in Bacon County was planning an expansion of plant facilities and requested EES assistance in preparing a comprehensive feasibility plan for presentation to a development authority.

Work Performed: EES personnel assisted company management in putting together a comprehensive package to obtain financing for plant expansion.

Results: As a result of the assistance, the development authority approved financing for plant expansion and plant expansion is currently underway. It is expected that the plant expansion will result in an increase of 40 employees. Additional assistance was not required. The project is closed.

### Ongoing Projects

There are no projects under way in this area.

## SOUTHWEST GEORGIA ECONOMIC DEVELOPMENT DISTRICT

### General

The Southwest Georgia Economic Development District consists of 13 counties, all of which are eligible Redevelopment Area counties: Baker, Calhoun, Colquitt, Decatur, Dougherty, Grady, Lee, Miller, Mitchell, Seminole, Terrell, Thomas, and Worth. The Economic Development Centers are Albany (Dougherty County) and Bainbridge (Decatur County).

### Discontinued Projects

During the period, three projects were discontinued in the area.

#### Project 890: Technical assistance to a manufacturing company in Colquitt County.

Nature of Problem: A recently established small industrial firm produces a waste-fired furnace designed for agricultural uses such as tobacco curing, lumber curing, heating chicken houses, and pecan drying. The company requested technical assistance to improve heat exchanger efficiency, heat recovery from stack gases, unit efficiency, and manufacturing processes. The company employed six workers. It was anticipated that if annual sales were increased, the work force would be increased to about 40 workers.

Work Performed: EES personnel met with the company principals and made preliminary work plans. Initial work was started. However, the poor economic situation in the area has required that the company shut down production. It is anticipated that the company will try again for expansion when the situation indicates that it will be economically feasible to do so.

Results: Because of adverse economic conditions, the company has terminated its expansion plans and EES services are no longer required. The project is closed.

#### Project 988: Assistance to a manufacturer of automotive equipment in Mitchell County.

Nature of Problem: A manufacturing concern in Mitchell County recently re-located in a new, modern plant which replaced one lost in a fire several years ago. To accomodate additional staff personnel, a new addition was built at the plant. The addition is located near the manufacturing area, and is subjected to high levels of production noise level in the office area.

Work Performed: EES personnel conducted noise measurements, analysis of ceiling materials and obtained other information needed to plan for noise reduction in critical areas. A recommended plan was furnished to the company.

Results: The plan was implemented and worker productivity improved substantially. Further assistance was not required. The project is closed.

Project 991: Assistance to a manufacturer of electronic equipment in Thomas County.

Nature of Problem: A manufacturer of television dish antennae was negotiating for increased business through the development of new and improved types of antennae. Assistance was requested of EDL.

Work Performed: EES personnel, working with company management, made an analysis of structures involved with stress on the members under a specified loading. Information on a polar mount antennae system was also provided to the company. Finally, EDL personnel worked with the company on methods of advertising and promoting the establishment of an associated spray coating business.

Results: Further assistance was not required. It was estimated that if the recommendations were implemented the new ventures would create eight new jobs. The project is closed.

Ongoing Projects

No projects are currently under way in this area.

## PROJECTS OUTSIDE ECONOMIC DEVELOPMENT DISTRICTS

### General

During the period, six projects were active in counties outside the Economic Development Districts.

### Discontinued Projects

During the period, six projects were discontinued in the area.

#### Project 975: Assistance to an executive search firm in Fulton County (Atlanta).

Nature of Problem: An executive search firm in Atlanta desired to apply for a SBA working capital loan and required assistance in completing the SBA application. This firm specializes in executive searches for the banking industry.

Work Performed: An EES staff member met with the principal of the firm on several occasions. The client completed the SBA package, it was reviewed by an EES management consultant and submitted to SBA. No further assistance was required of the Center.

Results: The project is closed.

#### Project 976: Assistance to a building firm in Cobb County.

Nature of Problem: A building firm in Cobb County was involved in the sale of custom housing plans and components. The company requested assistance in preparing a SBA loan application.

Work Performed: An EES staff assistant met with the company principal. The matter of the SBA loan application and procedures for preparing background data on commercial loans was discussed. No further assistance was requested.

Results: The project is closed.

#### Project 977: Technical assistance to a moving firm in Fulton County (Atlanta).

Nature of Problem: A moving company in Fulton County has requested technical assistance in business development for the firm.

Work Performed: An EES staff assistant contacted the company principal. A discussion of the company's problems with the principal indicated that a specialized marketing effort was needed to improve the company's position. It was recommended that the company seek the assistance of a firm specializing in marketing. No further assistance could be furnished to the company.

Results: The project is closed.

Project 978: Assistance to a firm in Fulton County that provides services to the phonograph industry.

Nature of Problem: A firm in Fulton County that provides services to the phonograph industry requested assistance in conducting a market evaluation for its services and advice on a market approach.

Work Performed: An EES staff assistant conducted a literature search on the record business for the company principal and furnished the company with a marketing plan. No further assistance was requested.

Results: The project is closed.

Project 981: Assistance to an individual wishing to establish a new business in the Atlanta Area.

Nature of Problem: An individual wishing to enter the food business contacted the Center. EDA staff personnel met with the individual and outlined various approaches to entering this type of business. Apparently the individual has decided not to enter business at this time.

Results: The project is closed.

Project 982: Assistance to a custom printing and duplicating company in Fulton County (Metropolitan Atlanta).

Nature of Problem: A printing company in the Atlanta area requested assistance in improving the handling of its cash flow activities and in preparing pro forma statements. This assistance was needed to improve the financial management processes of the company.

Work Performed: EDL personnel met with company principals and established a work program. The scope of work involves designing a computerized cash flow forecasting system compatible with the SBA forecasting model, preparing cash flows using the model, and preparing pro forma operating statements and balance sheets for the first year of operation. The design assisted the company in developing its own operating plans and in obtaining bank financing to begin the new business. Further assistance is not required at this time.

Results: The project is closed.

Ongoing Projects

There are no projects underway in this area.

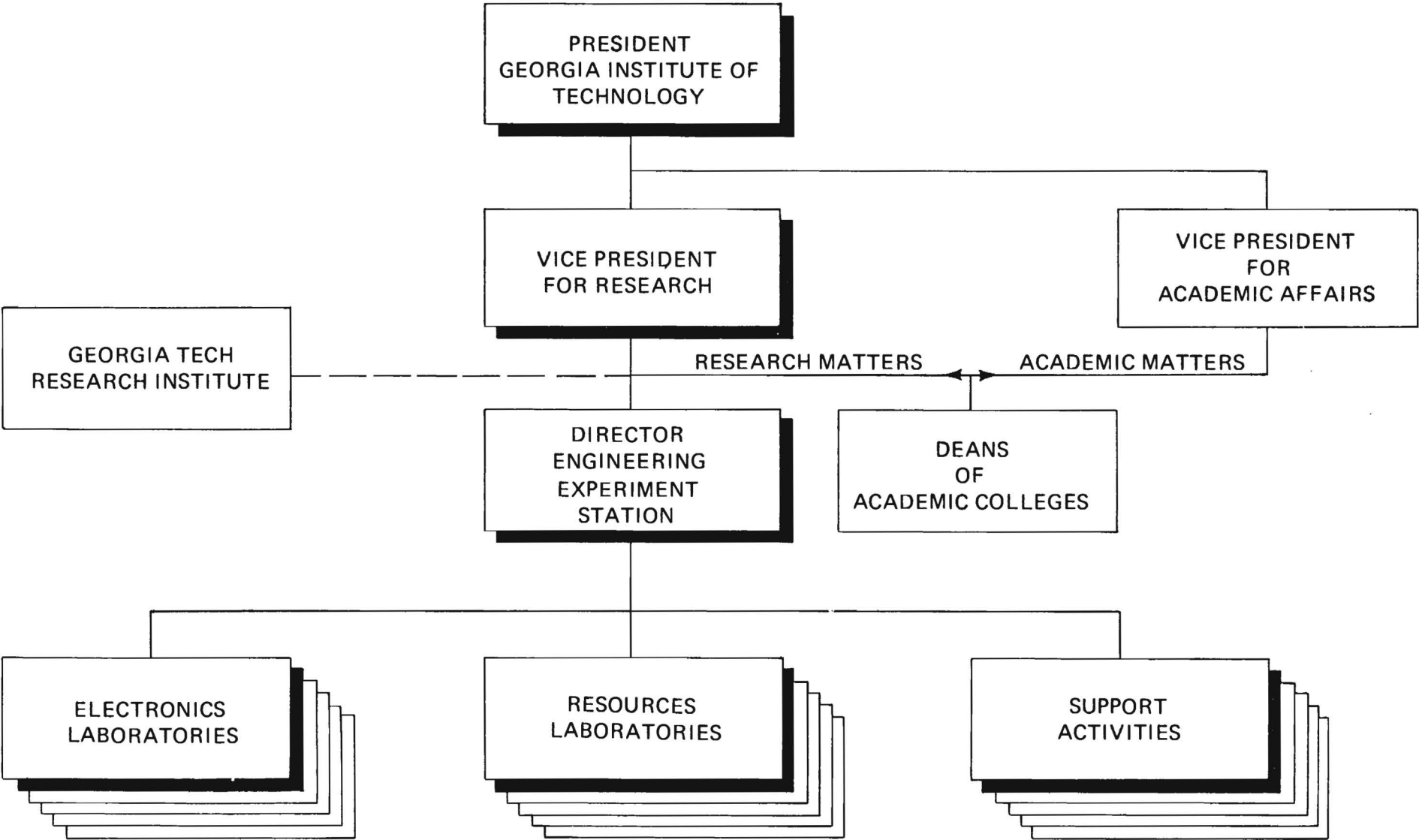


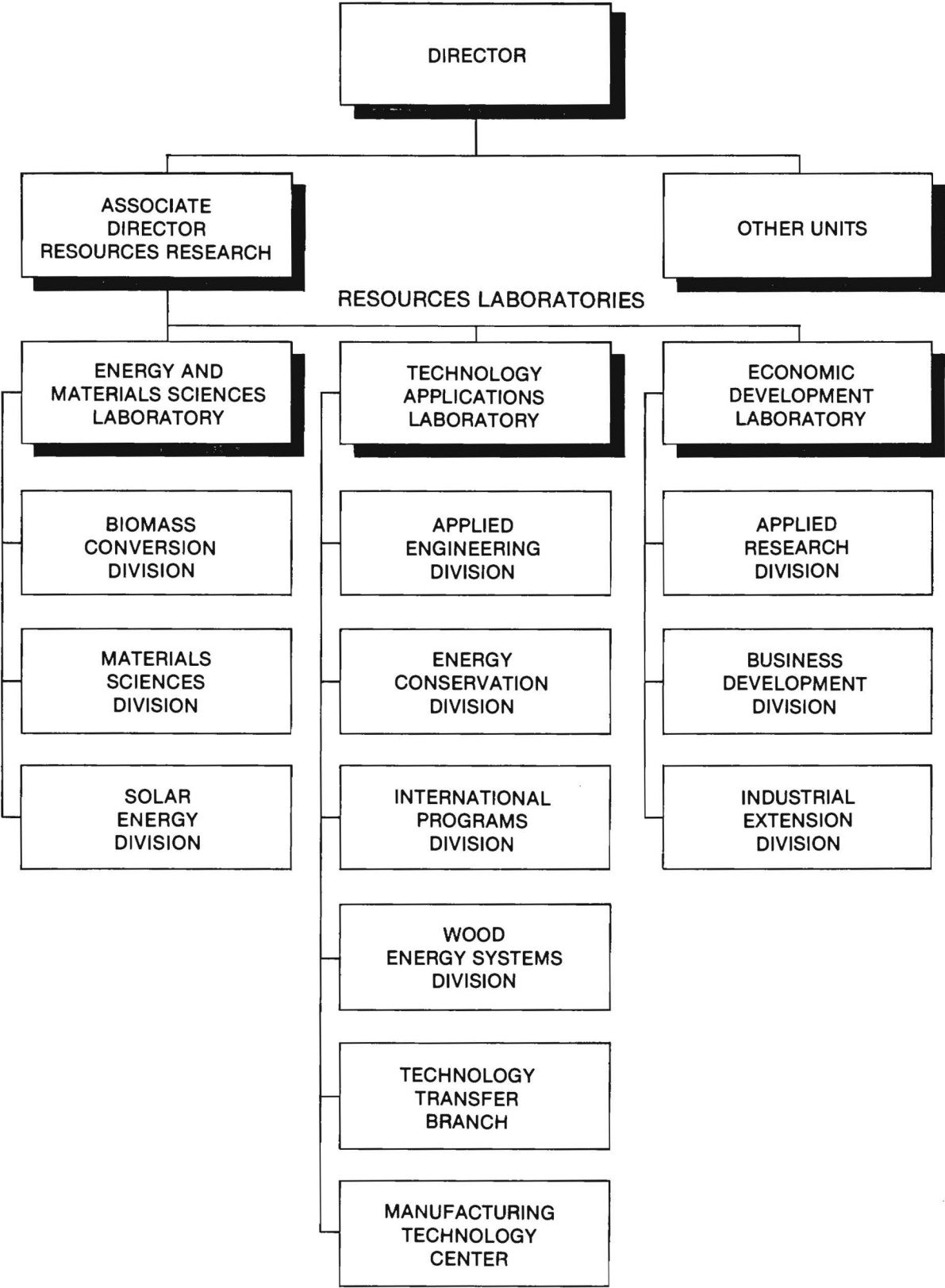
- B. Profile Narrative of Business Clients. The several projects undertaken during the reporting period are described above. The Final Report will furnish detailed discussion of client relationships and economic impacts set forth in paragraph E, below.
- C. Profile Narrative of Community and Economic Development Clients (CEDGs)  
NONE
- D. Profile Narrative of Assistance to Other Clients  
NONE
- E. Economic Impact Data. Economic data will be presented and discussed in the Final Report.

## EXHIBITS



EXHIBIT 1  
GEORGIA INSTITUTE OF TECHNOLOGY





## Exhibit 2

### ECONOMIC DEVELOPMENT LABORATORY

D.S. Clifton, Jr., Director, SRS  
H.S. Taylor, Associate Lab Director  
M.E. Anders, PRS  
J.G. Meeks, Administrative Assistant  
F.P. Coyle, RS I  
A. DeCurtis, RA I  
N. Strombom, Student Assistant

#### Business Development Division

H.S. Taylor, SRS, Div. Chief  
W.W. Coleman, Sr. Sec.

#### Economic Analysis Group

J.R. Jackson, SRS, Acting  
Group Leader  
T.I. Chiang, PRS  
F. Tarpley, PRE  
M.J. Moskaluk, SRE  
R.R. Ratajczak, SRS  
R.B. Lann, RS II  
B.W. Riall, RS II  
D.K. Robertson, Sr. Sec.  
S. Gunter, Student Assistant

#### Management & Technical Assistance Group

R.W. Springfield, RE II, Leader  
R.E. Collier, SRS  
H. Diamond, SRE  
E.T. Lindsey, SRA  
J.C. Muller, SRE  
G.F. Rice, SRA  
S.B. Wilenchek, SRA  
E.A. Bethea, RS II  
R.G. Escoffery, RA II  
C.M. Estes, RE II  
D.D. Lanier, RA II  
R.O. Lumpkin, RS II  
J.M. Thomas, RA II  
V.M. Hankins, Staff Assistant  
D.A. Stewart, Staff Assistant  
J.H. Martin, Sr. Sec.  
T. Brydon, GRA

#### Industrial Extension Division

J.L. Mercer, SRA, Div. Chief  
R. Johnston, SRS  
E.O. Berg, RS II  
R.S. Hawkins, RA I  
N.J. Wilson, Admin. Sec.

#### Resource Productivity Group

R.L. Collins, RS II, Leader  
J. Komaki, PRS  
J.S. Williams, RA I

#### Albany

E.L. Lewis, RE II, Director  
E.H. Hardison, RE II  
D.A. Abrams, Sr. Sec.

#### Augusta

D.H. Poss, RE II, Director  
J.R. Howland, Sr. Sec.

#### Carrollton

H.T. Johnson, RT II, Director  
S.C. Brown, Sr. Sec.

#### Douglas

S.L. Dudley, RS II, Director  
C.C. Davis, Sr. Sec.

#### Gainesville

P.D. Loveless, RS II, Director  
D. Fischer, Sr. Sec.

#### Macon

G.H. Lee, RS II, Director  
P. Zabriskie, Sr. Sec.

#### Rome

W.C. Darley, RE II, Director  
S.D. Marshall, Sr. Sec.

#### Savannah

L.R. Edens, RE II, Director  
D.E. Primrose, RE II  
H.O. Blum, Sr. Sec.

#### Safety & Health Services Branch

J.L. Burson, SRS, Branch Head  
W.H. Spain, RT II  
R.G. McCain, Staff Assistant  
D.L. Beal, Sr. Sec.

#### Safety Group

S.A. Kramer, RE II, Leader  
K.E. Johnson, RA I

#### Industrial Hygiene Group

K.A. Smith, SRS, Leader  
M.T. Luster, RE II  
P.L. Williams, RS II  
P.J. Middendorf, RS I

Exhibit 3  
BIOGRAPHICAL SKETCHES

**Georgia Institute of Technology  
Engineering Experiment Station**

**BIOGRAPHICAL SKETCH**

**BETHEA, EDWIN A. -- Research Scientist, Economic Development Division,  
Technology and Development Laboratory, Engineering  
Experiment Station**

**Education**

B. S., Knoxville College	1953
M. S. W., Howard University	1962
Certificate of Completion, Howard University's Small Business Guidance Center	1969
Certificate of Completion, CPM and PERT for Project Managers, Continuing Education Department, Georgia Institute of Technology	1974
Georgia Institute of Technology Basic Industrial Development Continuing Education Course, Certificate of Completion	1976
Emory University How to Start and Manage a Successful Business -- Continuing Education Course, Certificate of Completion	1977

**Employment History**

District of Columbia, Department of Public Welfare, Caseworker, Child Welfare Division	1962 - 1965
Far East Community Services, Inc., Community Organizer - Youth Community Organizer	1965 - 1966
United Planning Organization, Community Organization Specialist (training officer), Economic Development Specialist	1966 - 1968
Youth Enterprises, Inc., Executive Director	1968 - 1970

### **Consultant Employers**

Office of Economic Opportunity; Manpower Assistance Project, Inc.; University Research Corp.; Xerox Corporation; Commerce Department, Economic Develop- ment Administration	1969 - 1970
Volunteers for International Technical Assistance, Director - Washington D.C.; Director - East Central Regional Office	1970 - 1972
Georgia Institute of Technology Research Scientist	1972 - Present

### **Experience Summary**

Directed a regional office for technical assistance that provided services to minority and economically disadvantaged groups in mid Atlantic region; this entailed establishing, structuring, and supervising new program offices in several states within the region. Program developer for minority economic ventures and community development project; the responsibilities included establishing a working relationship with community groups, federal, state and local government agencies, and/or private agencies whose interests were similar. Organized and managed a minority firm for the purpose of establishing "spin-off" business ventures and the training of minority entrepreneurs. Managed and developed programs aimed toward helping groups initiate and implement economic and social changes in their community planning. Developed and directed programs relating to youth activities in the areas of training, proposal development, community improvement and change and economic developments.

### **Current Fields of Interest**

Minority business development, industrial and community development, manpower management and motivation, transportation and new economic systems.

### **Major Reports and Publications**

1. "South Georgia Crafts - Study of Markets in Georgia, Product Quality and Management Structure," Georgia Tech Report, 1972
2. "Survey of Georgia Minority Business," Georgia Tech Report, 1973, coauthor
3. "Market Study for Sea Island Handicraft Cooperative," Georgia Tech Report, 1973



4. "Feasibility Study for Skating Rink in Columbus, Georgia," Georgia Tech Report, coauthor, 1975
5. "A National Cultural Center at Tuskegee, Alabama. (A feasibility study)," Georgia Tech Report, 1975
6. "Market Study for Westgate Hardware Store," Georgia Tech Report, 1976
7. "Final Report on Technical Assistance to Selected Community Action Agencies in Georgia," Georgia Tech Report, 1976
8. A Directory and Survey of Minority-Owned Business in the State of Georgia with Pond Employees, Georgia Tech Report, 1977, coauthor
9. "Research and Demonstration Project" - Regional Office of Minority Business Enterprise = Quarterly Reports. June 1977 and October 1977. Georgia Tech Report, 1977

Georgia Institute of Technology  
Engineering Experiment Station

BIOGRAPHICAL SKETCH

CLIFTON, DAVID. S., JR. --Director  
Economic Development Laboratory

Education

Ph.D. in Economics, Georgia State University	1980
M.B.A. in Economics, Georgia State University	1970
B.I.E., Georgia Institute of Technology	1966

Employment History

Georgia Institute of Technology	
Director, Economic Development Laboratory, EES	1979 - Present
Chief, Economic Development Division, TDL, EES	1977 - 1979
Manager, Economic Research, IDD, EDL, EES	1977 - 1978
Head, Industrial Economics Section, IDD, EDL, EES	1974 - 1977
Senior Research Scientist	1977 - Present
Research Scientist II	1973 - 1977
Research Economist I	1970 - 1973
Lockheed - Georgia Company	
Associate Customer Facilities Engineer	1966 - 1969
Customer Facilities Engineer	1969 - 1970

Experience Summary

Georgia Tech assignment involves industry feasibility studies; regression analysis; product/market studies; transportation studies; economic impact studies; domestic/international training; and proposal development/project management; energy alternatives; and energy fuel plantation concepts. At Lockheed, gathered data, made preparatory investigations, analyzed and arrived at solutions for customer facilities problems. Provided technical assistance in planning and design of new construction or major alternations of customer facilities. Completed economic feasibility studies for prospective aircraft customers.

### Current Fields of Interest

Market analysis; economic feasibility studies; international trade; energy research; technology assessment; research in economic and industrial development; research management.

### Major Reports and Publications

1. "State Science, Engineering, and Technology Program," Georgia Tech Report, February 1980, coauthor
2. "Economic Development Analysis of Appalachian Georgia," Georgia Tech Report, January 1980, coauthor
3. "A Feasibility Study for Wood Energy Utilization in Georgia," Georgia Tech Report, August 1979, coauthor
4. "Market Potentials of Wood Fuel in the Southeast," Georgia Tech Report, June 1979, coauthor
5. "Regional Forums on Appropriate Technology," National Science Foundation, February 1979, coauthor
6. "Project Feasibility Analysis," presented at the Instituto de Administracion cientifica de las Empresas, Mexico City, 10 - 12 August 1978
7. "A Design for a Ventur Opportunities Information System," Atlanta Regional Office of Minority Business Enterprise, August 1978, coauthor
8. "The Potential for Industrial Development in the Industrial City Region," Vol. 3, Georgia Tech Report, December 1977, coauthor
9. "The Industrial City: Concept and Design," Vol. 2, Georgia Tech Report, December 1977, coauthor
10. "The Industrial City: Executive Summary," Vol. 1, Georgia Tech Report, December 1977, coauthor
11. "Economic Analysis of Pretreatment Standards for the Textile Industry," Environmental Protection Agency, June 1977, coauthor
12. PROJECT FEASIBILITY ANALYSIS: A Guide to Profitable New Ventures, John Wiley & Sons, Inc., April 1977, coauthor
13. "Market Information System for Vada Builders, Inc." Georgia Tech Report, November 1976, coauthor
14. "Baseline Energy Data System: Energy Indicators," Vol. 4, Georgia State Energy Office, June 1976

15. "Baseline Energy Data System: Energy Supply Network," Vol. 3, Georgia State Energy Office, June 1976, coauthor
16. "Baseline Energy Data System: Data Base 1973," Vol. 2, Georgia State Energy Office, June 1976, coauthor
17. "Baseline Energy Data System: Methodology," Vol. 1, Georgia State Energy Office, June 1976, coauthor
18. "Impact of the Engineering Experiment Station on the Economy of Georgia, Fiscal Years 1973 and 1974," Georgia Tech Report, February 1976, coauthor
19. "Energy in Georgia, Uses, Program Needs, Policy and Recommendations," prepared by State Energy Office and Georgia Tech, December 1975, coauthor
20. "A Program to Assist Business and Industry in Coping with the Energy Crisis," Georgia Tech Report, September 1975, coauthor
21. "Analysis and Evaluation of Industrial Projects," presented at the Institute for Small-Scale Industries, University of the Philippines, Manila, 1975, 23-27 June 1975
22. "A Training Program on the Analysis and Evaluation of Industrial Projects," Georgia Tech Report, June 1975
23. "Economic Data Relative to the Central Georgia Steam Plant," Georgia Tech Report, February 1975, coauthor
24. "A Productivity Program for the Engineering Experiment Station," Georgia Tech Report, November 1974, coauthor
25. "An Analysis of Merchandising Methods for Eggs," Georgia Tech Report, June 1974
26. "Southeastern Trends of Selected Industries," Georgia Tech Report, April 1974, coauthor
27. "The Economic Impact of Georgia's Deepwater Ports," Georgia Tech Report, December 1973, editor
29. "The Little-Mirrlees Cost-Benefit Method for Industrial Project Analysis in Developing Countries," unpublished report in Ph.D. program, Georgia State University, August 1973.
30. "Georgia Employment and Population Projections with Special Reference to Water-Using Industries," Georgia Tech Report, July 1973, coauthor
31. "Training for Business and Industry in Florida, Kentucky, North Carolina, and South Carolina," Georgia Tech Report, May 1973, coauthor

32. "A Survey of Empirical Evidence of the Heckscher-Ohlin Theory of International Trade," unpublished report in Ph.D. program, Georgia State University, April 1973
33. "Training for Business and Industry in Alabama, Georgia, Mississippi, and Tennessee," Georgia Tech Report, March 1973, coauthor
34. "A Graduate-Employer Evaluation of Georgia's Vocational-Technical School Program," Georgia Tech Report, January 1973, coauthor
35. "An Unemployment Registration and Employment Generation Program for the Lower Chattahoochee Community Action Agency," Georgia Tech Report, September 1972, coauthor
36. Transportation Analysis in "Peanut Processing Opportunities," Southwest Georgia Area Planning and Development Commission, June 1972
37. "A Survey of Export Proceeds Instability Research with a Report on the Export Proceeds Instability of Colombia," unpublished report in Ph.D. program, Georgia State University, June 1972
38. "Georgia as a Center for Charcoal and Charcoal Briquette Production," Atlanta Economic Review, March 1972, coauthor
39. "A Registration of the Unemployed in the Heart of Georgia Community Action Council Area," Georgia Tech Report, January 1972, coauthor
40. "A Survey of Selected Users of Spun Sheet Metal in Alabama and Georgia," Economic Development Administration, July 1971
41. "Carbonized Bark for Briquetting Purposes," Georgia Tech Report, July 1971, coauthor
42. "Economic Factors Affecting the Feasibility of Locating a Vegetable Processing Plant in the Vicinity of Americus, Georgia," Georgia Tech Report, May 1971, coauthor
43. "The Market for Leaf Springs," Economic Development Administration, February 1 971
44. "Industrial Air Pollution: Particulate Control Equipment Market," Economic Development Administration, December 1970
45. "The Potential Impact of Jumbo-Jet Air Cargo Transportation on Georgia," Georgia Tech Report, October 1970, coauthor
46. "Market Survey of Garden Center Buyers," Economic Development Administration, October 1970
47. "Georgia Retail Florist Store Sales," Economic Development Administration, September 1970

48. "The Southeastern Market for Plastic Bathroom Fixtures in Residential Construction, Economic Development Administration, July 1970
49. "The Calico Scallop Market," Economic Development Administration, June 1970
50. "The Southeastern Modular Housing Market," Economic Development Administration, May 1970
51. "The Market for Boxboard Containers for the Coastal Plain Region of Georgia," Economic Development Administration, May 1970
52. "Long Cycles in Residential Construction," unpublished report in M.B.A. program, Georgia State University, December 1969

**Georgia Institute of Technology**

**BIOGRAPHICAL SKETCH**

**COLLIER, ROBERT E. -- Senior Research Scientist, Economic Development  
Division, Technology and Development Laboratory  
Engineering Experiment Station**

**Education**

<b>B. S., Texas Agricultural and Mechanical University</b>	<b>1939</b>
<b>M. S., The George Washington University</b>	<b>1966</b>

**Employment History**

<b>Sears Robuck &amp; Company, El Paso, Management Training</b>	<b>1939</b>
<b>U. S. Marine Corps, General Duty Officer</b>	<b>1940 - 1966</b>
<b>Spindletop Research Center, Inc., Director, Training Services</b>	<b>1971 - 1972</b>
<b>Georgia Institute of Technology</b>	
<b>Research Scientist</b>	<b>1966 - 1970</b>
<b>Head, Economic Development Training Section, IDD - EES</b>	<b>1968 - 1970</b>
<b>Senior Research Scientist</b>	<b>1972 - Present</b>

**Experience Summary**

While on active duty with the Marine Corps, performed a variety of line and staff assignments involving administration, education, training, and logistics. As Research Scientist in the Management and Technical Assistance Section, IDD - EES, furnished management guidance and technical assistance to prospective and established business and industrial firms; also provided assistance in establishing sound new business ventures which utilize local resources and manpower. As head of the Economic Development Training Section, IDD - EES, developed handbooks, manuals, lesson plans, visual presentations and other materials for industrial and economic development training; also conducted training courses in the principles and techniques of industrial, economic, and community development under sponsorship of the Economic Development Administration and the Small Business Administration. As Director, Training Services, National Area Development Institute, Spindletop Research, Inc.,

planned and conducted seminars and workshops for professionals and local leaders involved in area development activities. Courses were directed to the needs of individuals from economic development districts, community action agencies, governmental agencies, business organizations, farm organizations, utilities, cooperatives, public agencies and universities who were involved in area development programs. As Senior Research Scientist, Community Development Branch, IDD - EES, participated in training programs and conducted community development research projects. As head of Education and Training Branch, is responsible for the development and conduct of laboratory training activities.

#### Current Fields of Interest

Management theory and practice, public administration, management information systems, economic development training, public technology, and inter-governmental operations.

#### Major Reports and Publications

1. "Site Relocation Guide for Georgia Retail Business, Industrial Series No. 2," Georgia Tech Report, April 1967
2. "Internship Program in Regional Economic Development," A Training Program Prepared for the Economic Development Administration under Contract C-239-62L Neg., 1967
3. "Final Report: Training Program in Economic Development, April 1, 1968 - March 31, 1969," Economic Development Administration Contract No. OER-208-G-68-3, May 1969
4. "Final Report: Development of a Community Development Training Program for the Small Business Administration, June 19, 1968 - July 1969." Small Business Administration Contract No. 1474-FA-68, July 1969
5. "Final Report: Training Programs in Economic Development, April 1, 1969 - March 31, 1970," Economic Development Administration Contract No. OER-208-G-69-2, May 1970
6. "Advanced Executive Training Program," A Seminar Prepared for the Economic Development Administration under EDA Grant No. 99-6-09165, 1970
7. "Executive Training Program," A Seminar Prepared for the Economic Development Administration under EDA Grant No. 99-6-09165, 1970



8. "Industrial Development Training Program," A Seminar Prepared for the Economic Development Administration under EDA Grant No. 99-6-09165, 1970
9. "Basic Economic Development Training Program," A Seminar Prepared for the Economic Development Administration under EDA Grant No. 99-6-09165, 1970
10. "Training Program for Planning and Development Technicians," A Seminar Prepared for the Economic Development Administration under EDA Grant No. 99-6-09165, 1970
11. "Training Program for Staff Information Technicians," A Seminar Prepared for the Economic Development Administration under EDA Grant No. 99-6-09165, 1970, coauthor
12. "Exploring the Dimensions of Area Development," The National Area Development Institute Special Seminar Sponsored under a Ford Foundation Program, 1971
13. "Final Report: Leadership Training Programs in Selected Georgia Communities, May 31, 1972 - September 30, 1973," Coastal Plains Regional Commission Contract No. 10240033, September 1973, coauthor
14. "Economic Development Approaches for the Southeast," A Study Prepared for the Economic Development Administration under Grant No. 04-6-09029-6, 1973, coauthor
15. "Final Report: Leadership Training Programs in Selected Georgia Communities," Coastal Planning Regional Commission Contract No. 10040037, 1975, coauthor
16. "Guidelines for Industrial Extension Personnel," Prepared under AID Grant No. AID/CM/TA/G-73-18, 1974, editor
17. "Analysis and Evaluation of Industrial Projects," A Seminar with Text Prepared under AID Grant No. AID/CM/TA/G-73-18, 1975, coauthor
18. "Guidelines for an Energy Audit and an Energy Impact Statement," prepared under HUD Grant CPA-GA-04-06-1056, June 1976, coauthor
19. "Final Report: Substate Energy Management," prepared under contract with the Georgia State Energy Office, February 15, 1976, coauthor
20. "Final Report: Planning for the Interorganizational Networking of a State Economic Development Council," Prepared under contract with the Office of Economic Research, Economic Development Administration under Grant No. OER-577-G-77-22, 1977

Georgia Institute of Technology  
Engineering Experiment Station

BIOGRAPHICAL SKETCH

DARLEY, WILLIAM C., Jr.--Director, Northwest Georgia Area Office  
Economic Development Laboratory

Education

M.B.A., Management, Georgia State University	1969
B.I.E., Georgia Institute of Technology	1967
A.S., Middle Georgia College	1965

Employment History

Georgia Institute of Technology	
Director, Northwest Georgia Area Office, IED	1973-Present
Research Engineer II	1973-Present
Erb Plastics, Inc.	
Plant Engineer/Assistant Production Superintendent	1972-1973
Union Carbide Corporation	
Industrial Engineer	1971-1972
Project Engineer	1967-1969
U.S. Army	
Transportation Officer	1969-1971
NASA, Marshall Space Flight Center	
Aerospace Technologist/Technical Management	1966

Experience Summary: As Director of the Northwest Georgia Area Office, responsible for providing management and technical assistance to existing industries and providing economic assistance to local governments and development groups in the 15-county area. Duties with Erb Plastics included being responsible for complete installation of all production and subordinate equipment in new plant and being in charge of production control and job process improvement. At Union Carbide, was responsible for projects involving equipment layout, job evaluation, wage administration, materials handling, production control, equipment installation feasibility, quality control, contractor coordination, process analysis, and estimating. Was in charge of video training of production operators. Chairman of Noise Abatement Committee and of two other committees involved in production problem solving. In the Army, duties as Transportation Officer included supervising cargo port clearance operations which involved control and dispatch of contractor-operated and government-owned commercial trucks and military truck assets. Responsibility also included staging, deprocessing, accountability, and shipment of vehicles in Newport. Was responsible for establishment of a Discrepancy in Shipment Report program for reducing in-transit damage to cargo. Training experience includes U.S. Army Transportation Officer's Basic Course and Cargo Officer's Course, Basic Industrial Development Course, and U.S. Department of Labor's Guide to Voluntary Compliance Course (OSHA).

Current Fields of Interest

Management and technical assistance to industry; economic development.

Major Reports and Publications

1. "Energy Conservation Survey Report for Jennings Funeral Home, Rome, Georgia," Project C-120-155, August 1981
2. "A Retail Site Location Study," for O'Neill Mfg. Co., Rome, Georgia, Project A-2959-000, July 1981, coauthor
3. "Energy Conservation Survey Report for Fannin Regional Hospital, Blue Ridge, Georgia," Project C-120-115, May 1981
4. "Energy Conservation Survey Report for Pickens General Hospital, Jasper, Georgia," Project C-120-115, April 1981
5. "Energy Conservation Survey Report for Watkins Memorial Hospital and Gilmer Nursing Home, Ellijay, Georgia," Project C-120-115, April 1981
6. "Energy Conservation Survey Report for Bona Allen, Inc., Buford, Georgia," Project C-120-115, February 1981
7. "Energy Conservation Survey Report for Chattooga County Hospital, Summerville, Georgia," Project C-120-115, December 1980
8. "Energy Conservation Survey Report for Walker County Courthouse, LaFayette, Georgia," Project C-120-115, November 1980
9. "Energy Conservation Survey Report for the Peanut Factory, Inc., Rome, Georgia," Project C-120-115, July 1980
10. "Energy Conservation Survey Report for Mayhill Homes, Gainesville, Georgia," Project C-140-115, June 1980
11. "Fabric Packaging Study," for the U.S. Department of Commerce, Economic Development Administration, Project A-2365-000, October 1979
12. "Quality Control Acceptance Program for Model F Container for Fountain Syrup," for The Coca-Cola Company, Project A-2271-000, December 1978
13. "Study of Lowndes Wood Products, Inc., Letohatchee, Alabama," for The Onyx Corporation and Tuskegee Institute Business Development Center, Project B-476-003, July 1977
14. "Water-Saving Techniques in Dyeing Carpet in Dalton (Whitfield County), Georgia," for Dalton Utilities, Project A-1916-000, May 1977, coauthor
15. "Industrial Data Digest - Paulding County, Georgia," for Paulding County Industrial Building Authority, Project A-1569-002, November 1976
16. "Industrial Data Digest - Chattooga County, Georgia," for Chattooga County Government, Project A-1765-000, July 1976
17. "Quality Control for Small-Scale Manufacturing," for A.I.D. Small Industry Assistance Grant, Project A-1600-000, July 1975
18. "Economic Profile - Dallas, Georgia," for Paulding County Industrial Building Authority, Project A-1569-000, July 1974
19. "Employee Turnover Analysis - Newnan, Georgia," for the Newnan Chamber of Commerce and the Chattahoochee-Flint Area Planning and Development Commission, Project A-1500-000, February 1974, coauthor
20. "Standard Operating Procedures for the Vehicle Staging and Processing Yard - U.S. Army Terminal, Newport, R.V.N.," for the U.S. Department of Army, 1971
21. "Standard Operating Procedures for the Transportation Cargo Clearance Branch - U.S. Army Terminal, Newport, R.V.N.," for the U.S. Department of Army, 1971
22. "Discrepancy in Shipment Report Program SOP - U.S. Army Terminal, Newport R.V.N.," for the U.S. Department of Army, 1971

**Georgia Institute of Technology  
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**BIOGRAPHICAL SKETCH**

**DIAMOND, HARVEY — Senior Research Engineer, Economic Development Division,  
Technology and Development Laboratory, Engineering  
Experiment Station**

**Education**

St. Johns University	1941 - 1942
B. S. in Textile Engineering, North Carolina State College	1942 - 1946

**Employment History**

Cohn-Hall-Marx, Converter and Assistant Designer	1946 - 1947
American Woolen Company, Designer and Assistant Buyer	1947 - 1950
Dux Mixture Hardware Company, Partner	1950 - 1960
Georgia Institute of Technology	
Assistant Research Engineer	1960 - 1965
Research Engineer	1965 - 1967
Senior Research Engineer	1967 - Present

**Experience Summary**

Economic feasibility studies; plant location analyses; market research to identify manufacturing and nonmanufacturing business opportunities; raw materials and intermediate products availability studies; marketing strategies; purchasing and marketing development and procedures; evaluation of export markets; small-scale industry entrepreneurship; liaison with prospects on industrial location possibilities; evaluation and development of area resources; transportation studies; management and technical assistance to prospective and established business; product diversification studies; manpower resources; industrial economic analyses; purchasing and marketing of hardware, wholesale and retail; textile designing; textile converting. Coeditor of monthly metalworking bulletin.

### Current Fields of Interest

Market analyses; plant location criteria; economic feasibility analyses; import-export potentials; small-scale industries.

### Major Reports and Publications

1. "Studies of Selected Industries in the Southeast River Basins: Textiles," Georgia Tech Report, March 1961, coauthor
2. "Plumbing Fixture Fittings: A Manufacturing Opportunity in Atlanta," Georgia Tech Report, June 1962
3. "Strengths and Weaknesses of Atlanta's Metalworking Industry," Georgia Tech Report, August 1962
4. "Pipe Fittings and Valves: A Manufacturing Opportunity in Atlanta," Georgia Tech Report, September 1962
5. "Flat Glass: A Manufacturing Opportunity in Georgia," Georgia Tech Report, June 1963
6. "Glass Wool Insulation: A Manufacturing Opportunity in Georgia," Georgia Tech Report, September 1964

Georgia Institute of Technology  
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BIOGRAPHICAL SKETCH

DUDLEY, SHERMAN L.--Research Scientist II  
Economic Development Laboratory

Education

B.S. in Industrial Management, Georgia Southern College 1969  
A.E., Southern Technical Institute 1967  
Various Professional Short Courses

Employment History

Georgia Institute of Technology	
Research Scientist II, EES	1974-Present
Head, Southeast Georgia Area Office	1973-Present
Research Scientist I	1970-1974
Lockheed Georgia Co., Industrial Engineering Div.	1969-1970
City of Atlanta	1966-1968
Oxford Manufacturing Company, Inc.	1966-1967
Kraft Foods, Inc.	1966
Circuit Control Corporation	1965

Experience Summary: At Georgia Tech, duties involve providing management and technical assistance to existing industries throughout the southeast Georgia area. Such assistance covers all areas of industrial management and industrial engineering, including manufacturing and process controls, plant layout and materials handling; basic accounting and cost accounting, and engineering economy. Work entails providing assistance to local development groups and areawide groups in identifying industrial sites, servicing industrial prospects, and performing analyses pertinent to economic development of the area. Lockheed Georgia work included development of administrative systems, computer-oriented systems, and manufacturing procedures, as well as labor budgets and cost control policies and functions. In the finance department of the City of Atlanta, supervised all financial transactions for summer agencies, maintaining payrolls, personnel records, and purchasing records. At Oxford Manufacturing, was plant accountant. At Kraft, work encompassed layouts, electrical schematics, and piping diagrams. Circuit Control Corporation duties involved drafting, quality reports, and product quotes-bills of materials.

Current Fields of Interest

Industrial development; metalworking methods/application and the adaptation of these methods to industrial use.

Major Reports and Publications

1. "Productivity in Action," Newsletter for Georgia Productivity Center, 4,000 distributed bi-monthly, Editor, 1980-1981
2. "Intermediate Technology Demonstration Project," Final Report for A-1925, Coastal Plains Regional Commission, 1977, coauthor

Major Reports and Publications (continued)

3. "Feasibility Study for an Industrial Resources and Service Facility in Tifton/Tift County," Final Report on Project A-1722, Coastal Plain Area Planning and Development Commission, November 1975
4. "Fitzgerald Urban Fringe Area Analysis," Final Report on Project A-1597, Coastal Plain Area Planning and Development Commission, April 1974
5. "Impact Study of the Offshore Power Systems," Final Report on Project A-1553, Coastal Plain Area Planning and Development Commission, September 1973, with H. Diamond
6. "Areawide Industrial Site Survey and Analysis," Final Report on Project A-1495, Coastal Plain Area Planning and Development Commission, May 1973

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BIOGRAPHICAL SKETCH

EDENS, LARRY R.--Research Engineer II  
Economic Development Laboratory

Education

M.B.A., Management, Armstrong State College	1976
B.Ch.E., Georgia Institute of Technology	1963

Employment History

Georgia Institute of Technology	
Head, Savannah Area Office, EES	1973-Present
Research Engineer II	1973-Present
Gilman Paper Company, Process Control Group Leader	1970-1973
Union Camp Corporation, Process Development Engineer	1967-1970
E.I. du Pont de Nemours & Co., Inc., Process Engineer	1963-1967
U.S. Army, Chemical Officer	1963-1965
Research Cottrell, Inc., Engineering Assistant	1962

Experience Summary: Work at Georgia Tech involves providing managerial and technical assistance to small industries, including technical, marketing, and financial analysis of new ventures and plant expansions, advising local communities on activities related to industrial and economic growth, and soliciting and conducting sponsored industrial and economic development studies. Employment prior to Georgia Tech assignment encompassed statistical analyses of processing and operating variables, cost and capital budget justification studies, process engineering studies for integrated pulp/paper mill, and supervision of routine process control testing. Also has been engaged in pilot plant design and operation and preliminary plant design for pulp mill by-product chemicals. Experience covers continuous, coupled-process nylon production, development projects, cost studies, quality control, plant start-up, and general assistance to manufacturing sections.

Current Fields of Interest

Industrial development and chemical processing.

Major Reports and Publications

1. "An Energy Conservation Study for Tattnall Memorial Hospital," Final Report on Project A-2345 for Tattnall Memorial Hospital, July 1979
2. "Report of Title IX Implementation Assistance to Motel Owners on U.S. Highway 301, Georgia," for U.S. Economic Development Administration, Project A-1927, EDA Grant #04-19-0131, Phase I, with W. C. Howard and R. B. Junk, December 1977; Project A-2181, EDA Grant #04-19-0131-45, Phase II, Final Report, February 1979
3. "Industrial Site Selection Study for Liberty County, Georgia," Project A-2188 for Liberty County Industrial Authority, December 1978
4. "Chatham County Wage Survey," Project A-1287, for Savannah Port Authority, September 1974 and September 1977



Major Reports and Publications (continued)

5. "Economic Impact of Georgia's Deepwater Ports," Georgia Ports Authority, Project A-1950, August 1977, with N. S. Gibson
6. "An Address Numbering Plan for the City of Hinesville," Final Report on Project A-1774 for the City of Hinesville, Georgia, January 1976
7. "Study of Economic Growth Indicators on Brantley, Camden, Glynn, Long, and Wayne Counties, Georgia, 1965-1974," Georgia Tech Report, March 1975
8. "Savannah-Chatham County Occupational Needs Survey and Manpower Training and Services Program," Final Report on Project A-1676 for City of Savannah, Department of Manpower Development, March 1975, with W. C. Howard and J. C. Lewis
9. "Economic Impact of Georgia's Deepwater Ports," Final Report on Project A-1565, Georgia Ports Authority, December 1973, with D. S. Clifton

Georgia Institute of Technology  
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BIOGRAPHICAL SKETCH

ESCOFFERY, RONALD G. -- Research Associate  
Economic Development Laboratory

Education

M. B. A., Rutgers Graduate School of Business Administration	1973
B. A., Howard University	1972
Chase Manhattan Bank Credit Training	1974

Employment History

Georgia Institute of Technology	
Research Associate II	1979 - Present
F. A. Johnson & Associates, Inc.	
Director of Finance and Marketing	1979
Escoffery, Bolten & Associates, President	1977 - Present
Geore & Branday Ltd., Manager, Investment Department	1975 - 1977
Chase Manhattan Bank, Manager	
Credit & Marketing Financial Analyst	1974 - 1975
Rutgers MESBIC, Student Consultant	1972 - 1973
Johnson & Johnson, Graduating Financial Intern	1973

Experience Summary

As a financial analyst and consultant, is experienced in all phases of business, financial management and economic development, with emphasis on project and solution implementation, banking, budgeting, management and technical assistance to businessmen, loan packaging, financial counseling, feasibility studies, research for business development and expansion, and trouble shooting. Recently became involved in community revitalization projects, contributing to the development of financing vehicles for the catalyst projects which enabled the project implementation.

### Current Field of Interest

All phases of economic development with special interest in business and commercial development, identification and solution of business problems, and commercial revitalization.

### Major Reports and Publications

1. "An Approach for an Economic Diversification Strategy for Bogalusa", 1979.

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BIOGRAPHICAL SKETCH

ESTES, CHARLES M., JR. -- Research Engineer II  
Economic Development Laboratory

Education

M.B.A., University of South Carolina	1974
B.S., Industrial Engineering, Auburn University	1971

Employment History

Georgia Institute of Technology	
Research Engineer II	1980 - Present
Monsanto Textiles Company	
Industrial Engineering Supervisor	1978 - 1979
Senior Industrial Engineer	1975 - 1977
Industrial Engineer	1971 - 1975
Auburn University Computer Center	
Applications Programmer	1970 - 1971

Experience Summary

Industrial engineering responsibilities included designing and implementing automated materials-handling systems, developing improved management information systems, developing improved methods of operation, and determining manpower requirements. Specific accomplishments including development of computer program to optimize finished goods packaging, development of computerized operator scheduling system, chairmanship of committee to develop product inventory system, design of materials-handling system for new manufacturing process, development of manpower estimates for several long-range manufacturing processes, and implementation of several new procedures to increase labor productivity. As supervisor, managed group of five professionals. Also participated in start-up team of new manufacturing facility, coordinated \$1.5 million plant-wide cost reduction program, coordinated facilities planning and site development activities, and assisted in development of cost standards, budgets, and economic evaluations. At Auburn

University Computer Center, provided programming assistance to students and assisted faculty/staff with computer applications for special projects.

#### Current Fields of Interest

Application of sound business and engineering principles to improve manufacturing businesses, including materials handling, economic evaluation, cost reduction, facilities planning, management information systems, and business planning.

#### Major Reports and Publications

1. "Site Development Manual," Monsanto Textiles Company, October 1978, coauthor
2. "Principles and Economics of Industrial Packaging," University of South Carolina Graduate Paper, May 1974
3. Published numerous analyses and recommendations for Monsanto Textiles Company

Georgia Institute of Technology  
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BIOGRAPHICAL SKETCH

HARDISON, EDWARD H., III--Research Engineer II  
Economic Development Laboratory

Education

M.S.E., Florida Technological University (Now University of Central Florida)	1974
B.S.E., Florida Technological University	1973

Employment History

Georgia Institute of Technology Research Engineer II, EES	1979-Present
Naval Training Equipment Center, Mechanical Engineer	1974-1979
Florida Technological University, Graduate Assistant	1973-1974

Experience Summary: Provide technical assistance in all areas of mechanical engineering including heating, ventilation, and air conditioning, heat transfer, power generation, refrigeration, hydraulics, thermodynamics and machine design. Work has recently involved design of a room cooling system for a baking operation and performing energy audits for energy conservation. With the Navy, acted as Project Engineer for a training device - directing project team efforts, reviewing and approving project team procurement package inputs. Prepared performance specification, evaluated technical and cost proposals, and participated in technical clarification discussions, negotiations, and selection of contractor. Furnished technical advice to other engineers regarding mechanical systems performance problems and suggested possible approaches to resolve specific design problems. Also with the Navy was responsible for preliminary mechanical design data and establishing building construction or modification requirements for training devices. Provided design parameters and reviewed preliminary building specifications and drawings to insure compatibility with trainer facility requirements. Participated in design review meetings and acted as liaison between the training device contractor and Government activity responsible for building construction. As a graduate assistant, assisted in analyzing a binary power generation and salt water flash distillation cycle which utilizes absorption process.

Current Fields of Interest

Energy conservation; aerodynamics; heating, ventilation, and air conditioning; heat transfer; machine design.

Registrations

Registered Professional Engineer, Florida and Georgia

Georgia Institute of Technology  
Engineering Experiment Station

BIOGRAPHICAL SKETCH

HAWKINS, ROBERT S.--Research Associate I  
Economic Development Laboratory

Education

Industrial Engineering, North Carolina State University	1979
B.S., Furniture Manufacturing/Management, North Carolina State University	1976
Occupational Safety & Health Summer Institute University of North Carolina, Asheville, N.C.	1978

Employment History

Georgia Institute of Technology Research Associate I	1979-Present
United States Fidelity & Guaranty Co. Safety/Loss Control Representative	1976-1978

Experience Summary: At Georgia Tech, current responsibilities include providing assistance to field engineers, in the areas of technical information and/or requirements for specialized expertise from EES staff or Tech faculty; handling inquiries from Georgia industries and maintaining company case records, and assisting the IED Chief with special administrative functions. At U.S. Fidelity and Guaranty, duties encompassed technical studies, safety engineering surveys of insured and prospective risks, detailed property reporting, industrial plants, machinery, equipment, construction projects; providing periodic technical assistance/safety engineering services for accident control programs, evaluating casualty/property loss control effectiveness, and making specific recommendations to protect property and work environments. Considerable involvement with OSHA, ANSI, and NFPA codes interpretation/implementation.

Current Fields of Interest

Industrial ergonomics; safety/risk management; information systems; furniture manufacturing.

Major Reports and Publications

1. "Foundations for a Comprehensive Loss Control Information System for North Carolina State University Safety Division," June 1979

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BIOGRAPHICAL SKETCH

JOHNSON, HARRIS T., III--Research Technologist II  
Economic Development Laboratory

Education

M.B.A., Brenau College	1979
B.E.T., Electronics, Southern Technical Institute	1972
A.E., Computer Science, Southern Technical Institute	1971
Graduate Work, Computer Science, Johns Hopkins University	1977
Various Professional Short Courses	1979-1981

Employment History

Georgia Institute of Technology	
Director, West Georgia Area Office, IED	1981-Present
Research Technologist II, EES	1979-Present
Research Engineer I, Communications Div.	1971-1974
Potter & Brumfield Division, AMF	1978-1979
Sprague Electric Co.	
Product Specialist, Electric Filter Div.	1974-1978
U.S. Army, Captain, Transportation Corps.	1966-1970
Western Electric Co., Systems Engineering	1965
U.S. Internal Revenue Service	1964

Experience Summary: At Georgia Tech, present duties include managing the West Georgia Area office of the Industrial Extension Division and providing management/technical assistance -- including manufacturing process control, plant layout, materials handling, electronics development, microcomputer design, implementation, simulation, and feasibility analysis -- to existing and developing industry throughout southwest Georgia. While working on Tech's "SAFEGUARD" program, worked in developing measurement methodology, electromagnetic compatibility measurements, and programming in BASIC, FORTRAN, and Assembly Language. Potter & Brumfield work included product engineering, product maintenance, production problem solving, new product design, product computer simulation, etc. At Sprague Electric, work covered the total manu-facturing effort: design, computer simulation, mass production, customer service and new product design, market surveys, and sales campaigns. U.S. Army duties were platoon/company command and instructional programs. Western Electric work included systems detailing and busy signal minimization. At IRS, work involved compliance examinations for taxpayers and computer record preparation.

Current Fields of Interest

Industrial development; manufacturing feasibility analysis; development of digital control, implementation, computer simulation and microprocessor-based industrial fixtures including integrated robotics.



Major Reports and Publications

1. "Franklin Industrial Park Plan," Interim Report, Project No. A-1500-007, The Chattahoochee Flint Area Planning and Development Commission, 1981, coauthor
2. "Affirmative Manufacturing -- Business Plan," Final Report on Project A-2808, 1981
3. "Waycross-Ware County Wage and Salary Survey," Interim Report on Project A-2237-002 for the Waycross/Ware County Industrial Development Authority, 1980
4. "The Need for a Vocational-Technical School in the Heart of Georgia Area," Final Report on Project A-2625 for the Heart of Georgia Area Planning and Development Commission, 1980
5. "Total Firm Productivity Measurement," Interim Report on Project A-2652, 1980, coauthor
6. "Wood Chips for Process Industry Energy Generation," Unpublished Master's Thesis, Brenau College, 1980
7. "Feasibility Study for Agricultural Manufacturing," Final Report on Project A-2472 for Poultry Health Services, 1979, with others
8. "Minimum Cost Specifications for Electric Wave Filter," Electronic Engineering Times, May 1979
9. "Susceptibility Investigations on Selected Test Specimen," Project A-1191 for U.S. Army SAFEGUARD System Command, October 1973, coauthor
10. "Mobile Radio Susceptibility Investigations," Project A-1491 for U.S. Army SAFEGUARD System Command, June 1973, coauthor
11. "Field Measurements of Television Receiver Susceptibility to Air Force Radars," Project A-1491 for U.S. Army SAFEGUARD System Command, June 1973, coauthor

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BIOGRAPHICAL SKETCH

LANIER, DIANNE D. -- Research Associate II  
Economic Development Laboratory

Education

M.B.A., Georgia State University	1979
B.A., University of Georgia	1974

Employment History

Georgia Institute of Technology	
Research Associate II	1979 - Present
Marketing Information Service	
Project Manager	1979
Research Analyst	1978
Rich's, Research Analyst	1976 - 1978

Experience Summary

As a research associate at Georgia Tech, activities include outreach to acquaint prospective clients with the market research capabilities available within EES's Economic Development Laboratory. Duties also include consultation with clients seeking assistance from the Economic Development Administration or Trade Adjustment Assistance Program, with particular emphasis on marketing strategy and implementation of market research survey results. As a project manager at Marketing Information Service, directed all phases of the research process, with particular emphasis on client liaison and initial problem definition via a consulting orientation. Specific duties entailed interface with internal and external staff members and involvement in all areas of design and analysis, including methodology design and interpretive report writing and presentation. While a marketing research analyst, provided assistance in preparing research proposals, methodologies, data analysis, reports and statistical processing of data. Also was responsible for questionnaire design and creation of instructions for field personnel. As a research analyst with

Rich's, was responsible for liaison with independent field services, questionnaire design, sample determination, supervision of coding process, SPSS programming, analysis and report writing in conjunction with survey research effort. Evaluated research reports and surveys prepared by other firms for Rich's management. Received training in trade area research from Hammer, Siler, George/Gould Retail Consultants and authored a major study of six potential southeastern markets for Rich's.

#### Current Fields of Interest

Industrial marketing and marketing research; marketing planning.

#### Major Reports and Publications

1. "The Modern Masculine Lifestyle," Advances in Consumer Research, Vol. IV, coauthor

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BIOGRAPHICAL SKETCH

LEE, GEORGE H.--Research Engineer II  
Economic Development Laboratory

Education

M.S., Aerospace Engineering, Georgia Institute of Technology	1971
B.A.E., Co-op Plan, Georgia Institute of Technology	1970
Graduate Studies toward EdS, University of Georgia	1973-1978
Short Courses: M.E. Refresher, Basic Industrial Development, Industrial Noise Control I & II, Analysis of Machinery Vibration, Introductory Project Management	

Employment History

Georgia Institute of Technology	
Head, Central Georgia Area Office, EES	1978-Present
Research Engineer II	1978-Present
NASA/Tech Graduate Research Assistantship	1970-1971
Albany Area Vocational-Technical School, Instructor	1973-1978
Rockwell International	
Design Engineer	1971-1973
Engineering Trainee, Co-op Student	1965-1969

Experience Summary: At Georgia Tech, work includes management of the Central Georgia Area Office, EDL, and administering a program of management and technical assistance to industries in the area. In 1970-71 on graduate research assistantship, was involved in demonstrating the practicality of equipment for later research use. At Albany Area Vocational-Technical School, instructional classes included both basic and advanced technical drawing, manufacturing materials and processes, slide rule/problem solving, and applied physics--mechanics, electricity, heat, light, and sound. At Rockwell International as a design engineer, work included structural sizing, flight test engineering, instrumentation calibration and test initiation, collection and reduction of data, performance prediction, and coordination with FAA. Early work at Rockwell included plant layout, liaison drafting, drawing system revision and duties as design technician, assistant flight analyst, and service test participant.

Current Fields of Interest

Manufacturing processes and problems; industrial and community noise control; economic and industrial development; energy conservation; predictive maintenance; vibration analysis.

Registrations

Registered Professional Engineer (Mechanical), Georgia  
Licensed Private Pilot, Single Engine Land

Major Reports and Publications

1. "Community Noise Study for HUD Housing Project GA.183-8, Barrow County, Georgia," Final Report, Housing Authority of the City of Winder, Georgia, Project A-3236, April 1982, author
2. "Community Noise Study for HUD Housing Project S.C. 26-6, Yemassee, South Carolina," Final Report, Beaufort Housing Authority, Beaufort, South Carolina, Project A-3200, April 1982, author
3. "Noise Assessment for Engineered Noise Control at the St. Regis, Allied Operation, Lumpkin, Georgia, Mill," Final Report, Project A-3152, April 1982, author
4. "Employee Noise Exposure Profile for Continental Forest Industries, Building Products Division, Mill No. 152, Hazlehurst, Georgia," Project A-2578, September 1981, author
5. "Design of Acoustical Treatment for Noise Control in the Continental Forest Industries' Sawmill at Hazlehurst, Georgia," Project A-2578, September 1981, author
6. "Community Noise Evaluation for Lilly, Georgia," Final Report, Dooly County Commission, Vienna, Georgia, Project A-2964, May 1981, author
7. "Employee Noise Exposure Profile for St. Regis Paper Co., Allied Lumber Division, Lumber City, Georgia," Final Report on Project A-2135, August 1979, author

Georgia Institute of Technology  
Engineering Experiment Station

BIOGRAPHICAL SKETCH

LEWIS, EDWIN L.--Research Engineer II  
Economic Development Laboratory

Education

B.S.I.E., Auburn University 1972

Employment History

Georgia Institute of Technology	
Head, Southwest Georgia Area Office, IED/EES	1977-Present
Research Engineer II	1977-Present
Talon, Division of Textron	
Industrial Engineering Department	1972-1974
NASA, Kennedy Space Center	
Operations Management Office	1967-1971

Experience Summary: Georgia Tech duties involve providing management and technical assistance to existing and developing industry in the southwest Georgia area administered by the Albany office, IED. Work covers all areas of industrial management/engineering, plant layout, materials handling, basic and cost accounting, manufacturing and process controls. Also provides assistance to local development groups and areawide groups in all areas of economic development: site identification, servicing of industrial prospects, and analysis of municipal service needs. Work also has included design and installation of solar energy agricultural crop dryers.

Current Fields of Interest

Manufacturing engineering and management assistance to industry; energy conservation; principles and practices of industrial development.

Major Reports and Publications

1. "Feasibility Study of an Industrial Resources and Services Facility in Tifton/Tift County," Final Report on Project A-1722 for the Coastal Plain Area Planning and Development Commission, November 1975, with others

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BIOGRAPHICAL SKETCH

LOVELESS, PHILIP D.--Research Scientist II  
Economic Development Laboratory

Education

M.B.A., Florida State University	1972
M.S.A., East Texas State University	1971

Employment History

Georgia Institute of Technology	
Director, Northeast Georgia Area Office, EES	1979-Present
Research Scientist II	1977-Present
Seminole Boat Company, Owner	1976-1977
Florida Department of Commerce, Division of Economic Development, Economic Development Administrator, Economic Development Representative I and II	1972-1976
East Texas State University	
Earth Science Laboratory Assistant	1969-1971
Texas Instruments, Inc., Production Scheduler	1968-1969
U.S. Air Force, Weather Observer-Rawin	1965-1968

Experience Summary: Work at Georgia Tech is in the fields of management and technical assistance to small industries and community industrial development groups in the areas of plant design layout, financial analysis, labor cost analysis, advertising, and management of the Northeast Georgia Area Office, IED. Completed Maynard Management Institute's Maynard Operations Sequence Technique (MOST) in December 1981. As owner of Seminole Boat Company, manufactured and marketed fiberglass fishing boats and canoes. At Florida Department of Commerce, worked in the field of community industrial development and provided management/technical assistance to small business firms. These activities included industrial park design, industrial solicitation and team training, and management/technical assistance projects with Florida manufacturing firms. At Texas Instruments scheduled and expedited work in printed circuit board shop and designed program to compare rejected parts with overall production runs to assist in analyzing production problem areas.

Current Fields of Interest

Productivity audits and improvement designs.

Major Reports and Publications

1. "Affirmative Manufacturing-Business Plan," Final Report on Project A-2808-000, 1981
2. "Standards Program Acceptance Analysis," Project A-2859-000, Macon Prestressed Concrete Co., Inc., March 1981
3. "Financial Feasibility Study and Presentation for Banks," Project EDA-884, for Bantam Furniture Company, Valdosta, Georgia, February 1978

Major Reports and Publications (continued)

4. "Shopping Center Design for Tommy Greene," Madison, Florida, 1973,  
with Leo Florez
5. "Feedback" Newsletter, Florida Department of Commerce, Bureau of  
Research and Statistics, 1972



Georgia Institute of Technology  
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BIOGRAPHICAL SKETCH

MULLER, JAMES C. — Research Engineer II  
Economic Development Laboratory

Education

M.B.A. in Management, Georgia State University	1972
B.M.E., Georgia Institute of Technology	1967

Employment History

Georgia Institute of Technology	
Research Engineer II	1977 - Present
Corning Glass Works	
Equipment Development Engineer	1975 - 1977
Senior Equipment Engineer	1974 - 1975
Southwire Company	
Assistant Manager, Design Engineer	1972 - 1974
U.S. Army, Ordnance Officer	1968 - 1970
International Harvester, Design Engineer	1968

Experience Summary

At Georgia Tech, functions as project director and/or principal investigator on sponsored research projects concerning energy conservation and economic feasibility; also provides management and technical consultation to manufacturing firms in the southeastern United States. As senior equipment engineer in charge of equipment development at Corning in the Electronic Products Division, developed six new and different pieces of production equipment, taking them through all stages of development; conceptualizing, funding, designing, prototyping, debugging, fabricating, training operators, training maintenance personnel, commissioning, and documenting. As assistant manager of design engineering, provided engineering drawings to support all Southwire Continuous Road projects; functioned as a design engineer, designing a complete continuous copper casting machine and bar preparation machine; did

feasibility studies on an insulated scrap reclamation plant, designed the eventual system, and participated in the design of a system for recycling the plastic insulation material. As test officer, U.S. Army Armor and Engineering Board, conducted field test of experimental wheel and track vehicles. As platoon leader, commanded 98 men performing direct support maintenance on vehicles and armament of two battalion-size combat units. Assigned to General Staff, Support Command DaNang, monitored the readiness of engineer construction and material-handling equipment for all U.S. Army forces from Chu Lai to the DMZ. As design engineer, designed the valve train for a family of six-cylinder engines in medium-duty trucks.

#### Current Fields of Interest

Manufacturing engineering and manufacturing management, in particular: feasibility studies on new ventures, analysis of current problems, equipment selection and development, cost reduction programs, automation, computer-aided manufacturing.

#### Patents

1. "Automatic Metering System," U.S. Patent Pending, coinventor
2. "Pour Pot Manipulator," U.S. Patent No. 3,877,509

#### Registrations

Licensed Professional Engineer, Georgia, Reg. No. 11429

Licensed Professional Engineer, North Carolina, Reg. No. 7943

Certified Manufacturing Engineering, Cert. No. 970285, Exp. Date, Dec. 31, 1982

#### Major Reports and Publications

1. "Industrial Supply Company, Brunswick, Georgia: An Economic Analysis," Georgia Tech Report, May 1980
2. "The Feasibility of Manufacturing Machine Shop Products in Southwest Georgia," January 1980, with Harvey Diamond
3. "Feasibility of Manufacturing Metal Stampings in Southwest Georgia," Georgia Tech Report, January 1980, with Harvey Diamond
4. "The Feasibility of Obtaining Metalworking Support Facilities for Southwest Georgia Manufacturers," Georgia Tech Report, August 1979, with Harvey Diamond

5. "Diagnosis of Butler Furniture Industries," Georgia Tech Report, August 1979
6. "Feasibility of Reopening the Southern Electric Steel Mill, Birmingham, Alabama," Georgia Tech Report, May 1979
7. "Precision metals Inc., An Economic Analysis," Georgia Tech Report, January 1979
8. "Trade Adjustment Assistance Provided to the Atlanta Umbrella Company," Georgia Tech Report, December 1978
9. "A Craftsman's Guide to Energy Conservation," textbook to be used in vocational/technical schools in Georgia, November 1978, with Esther Burks, Tom McGowan, and William Studstill
10. "Production and Profitability Analysis of Miami Laces Corporation," Georgia Tech Report, November 1978
11. "Energy Conservation and Management in Vocation/Technical Schools," Georgia Tech Report, September 1978, with James Clark
12. "Technical Assistance to Mulvey Supply Company, Hollywood, Florida," Georgia Tech Final Report, April 1978

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BIOGRAPHICAL SKETCH

POSS, DAVID H., II--Research Engineer II  
Economic Development Laboratory

Education

M.R.A., Management, Augusta College	1974
B.S.E.M., Georgia Institute of Technology	1967

Employment History

Georgia Institute of Technology	
Director, Augusta Area Office, IED	1981-Present
Research Engineer II	1980-Present
United Fabricators, Inc.	
V.P. Operations and Chief Engineer	1979-1980
Chief Engineer	1976-1979
Office Engineer, Quality Control Manager	1973-1976
Patchen, Mingledorff and Associates, Inc.	
Design Engineer	1967-1968/1971-1973
U.S. Army, Ordnance Corps	
Special Weapons Officer	1968-1971

Experience Summary: Georgia Tech responsibilities include technical assistance to business and industry and economic and industrial development. At United Fabricators as office engineer, was responsible for drafting, purchasing, office personnel, and estimating for the custom metal fabricating company. Products included piping, structural steel, tanks, and pressure vessels. Vice President and Chief Engineer added responsibility for 75 employee plant operation. In U.S. Army, platoon leader and progressed to company commander of a weapons maintenance company which furnished technical assistance and maintenance services to 35 battalions within support area. At Patchen, Mingledorff and Associates, performed steel and concrete structural design for buildings and bridges, as well as civil work for railroad, highway, and industrial park layout. Supervised drafting, specification preparation, and reviewed design work of others.

Current Fields of Interest

Technical and management assistance; energy conservation; productivity in metalworking and related industry.

Registrations

Registered Professional Engineer, Georgia

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BIOGRAPHICAL SKETCH

PRIMROSE, DENNIS E.--Research Engineer II  
Economic Development Laboratory

Education

M.B.A., Management, Augusta College	1979
B.I.E., Georgia Institute of Technology	1966

Employment History

Georgia Institute of Technology	
Research Engineer II, Savannah Area Office, IED, EES	1979-Present
Uniroyal, Inc., Quality Control Manager, Plant	
Engineering Manager, Project Engineer	1968-1979
Southern Railway Company, Management Trainee	1966-1968

Experience Summary: At Georgia Tech, duties encompass providing management and technical assistance to existing and to developing industries in the field office area of the Savannah IED office in all aspects of industrial management and engineering; plant layout, materials handling, manufacturing and process controls, etc. Also assists local and area development groups in attracting and servicing industrial prospects for the expansion of the economic development of the area. Also assists the International Division with special overseas assignments on contracts related to the above experience. At Uniroyal, worked as project engineer designing and installing mechanical and process systems and maintaining plant and equipment, and worked as plant engineering manager with responsibilities for facility capital projects estimation, installation, maintenance, environmental and mechanical safety programs, and for internal quality control and assurance. At Southern Railway, worked on mechanical/electrical repairs of the mechanical equipment for the company.

Current Fields of Interest

Management theory and application; industrial and economic development; technology transfer and application.

Major Reports and Publications

1. "Chatham County Wage Survey," Project A-1287 for Savannah Port Authority, August 1979
2. "Plant Reorganization," unpublished report in MBA program, December 1978
3. "Augusta Port Authority," unpublished report in MBA program, Augusta College, June 1978

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BIOGRAPHICAL SKETCH

SPRINGFIELD, ROBERT W. -- Research Engineer II  
Economic Development Laboratory

Education

B.I.E., Georgia Institute of Technology 1969

Employment History

Georgia Institute of Technology	
Research Engineer II	1979 - Present
Summerour and Associates, Inc., Management Consultants	
Associate	1977 - 1979
Senior Consultant	1975 - 1977
Staff Consultant	1973 - 1975
Colonial Stores, Inc., Retail Food Chain	
Industrial Engineer, Corporate Warehousing and Transportation Department	1969 - 1973

Experience Summary

As a research engineer at Georgia Tech, duties include program management responsibility for a business consulting unit which provides management, financial, production, and marketing services primarily to small and medium manufacturing firms. As a management consultant with Summerour and Associates, worked with both large and small companies in solving the problems of facility design, employee productivity, personnel recruiting, training, cost and method analysis, inventory control and production planning. As a senior consultant, specialized in on-site implementation of problem solutions and engineering programs with complete documentation. As an associate consultant, responsibilities included marketing consulting services, preparing proposals and surveys and supervising staff engineers performing on-site implementation work. As an industrial engineer with Colonial Stores, did extensive project work in product delivery to stores, warehouse material

handling methods, inventory control, store material handling methods, equipment justification, and facility layout and design.

### Current Fields of Interest

Utilization of sound marketing, financial and management techniques that apply to manufacturing businesses; operations management with respect to diagnosing and solving problems.

### Major Reports and Publications

1. "A Diagnostic Review and Business Recovery Plan," prepared by Mapletree, Inc., July 1980, coauthor
2. "A Diagnostic Review of Company Operations," prepared for Forsyth Industries, February 1980, coauthor
3. "A Business Recovery Plan," prepared for the Curlee Clothing Company, March 1979
4. "Economic Feasibility Study for the Proposed Relocation of Sewing, Finishing, and Distribution Activities," prepared for the Tobias Kotzin Company, January 1979
5. "Layout Concept for Central Cutting and Piece Goods Facility," prepared for Noel Industries, Inc., February 1977
6. "Facilities Utilization Study," prepared for Skyline Manufacturing Company, Inc., November 1977
7. "Industrial Engineering and Standard Data Manual," prepared for Atlantic Products Corporation, August 1977
8. "Survey Analysis of the Chicago Distributon Operations," prepared for Humphrey's Leather Goods, January 1977
9. "Results of an Assessment of Order Fulfillment Costs," prepared for McGregor-Donniger, Inc., October 1975, coauthor
10. "Survey of the Distribution Facility," prepared for Jonbil, Inc., November 1975
11. "Industrial Engineering and Incentive Wage Manual for the Camden Finished Goods Warehouse," prepared for Skyline Manufacturing Company, Inc., September 1974
12. "Cutting Engineering Manual-Summersville," prepared by Angelica, Inc., August 1973, coauthor
13. "Proposed Design for the Hazlehurst Service Center," prepared for the Edward Hyman Company, April 1973

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BIOGRAPHICAL SKETCH

TAYLOR, HARDY S. -- Associate Director, Economic Development Laboratory and  
Chief, Business Development Division

Education

B.S. in Business Administration and Pre-Law University of Alabama	1943
U.S. Naval Supply Corp. School Boston, Mass.	1944
Graduate School of Business Organization, University of Nebraska	1951
Defense Department Comptroller School, Washington, D.C.	1955

Employment History

Georgia Institute of Technology	
Associate Director, Economic Development Laboratory	1981-Present
Chief, Business Development Division	1979-Present
Director, Southeastern Trade Adjustment Assistance Center	1978-Present
Head, Industrial Services Group	1977-1979
Associate Chief, Industrial Development Division	1976-1977
Assistant Head, Industrial Services Branch	1970-1976
Head, EDA Services Section	1970
Head, Management and Technical Assistance Section	1968
Senior Research Scientist, Senior Management Consultant	1968
Research Scientist II, Management Consultant	1966
Gladwin Industries, Inc., Atlanta, Georgia	
Treasurer/Controller	1964-1966
U.S. Navy, Supply and Fiscal Officer/Comptroller	1943-1964
Turco Products, Inc., Atlanta, Georgia, Representative and Field Engineer	1948
National Southern Products, Inc., Tuscaloosa, Alabama, Research Assistant	1943

Experience Summary: As the Chief of the Business Development Division consisting of a group of 15 professional consultants is responsible for directing the overall EDL program of management and technical assistance services to Georgia industry, as well as Director of the Southeastern Trade Adjustment Center which provides management assistance to trade impacted companies in the eight southeastern states. Served as an officer and senior executive of a locally based national corporation, primarily a manufacturer for the telephone industry, and was responsible for overall management of the company. Has served as officer and part owner of a successful small business for fifteen years. Currently serves as a member of the board of directors of several corporations both national, multinational and international. In 1964 completed 20 years in U.S. Navy as top departmental executive with experience in all phases of business and financial management.



Professional Activities: Past Chairman, National Association of Management and Technical Centers - Currently, member Executive Committee NAMTAC - Chairman, Legislative Committee, NAMTAC - Member, National Advisory Council, Economic Development Administration, Washington, D.C. - Member, National Steering Committee, Trade Adjustment Assistance Centers - Testified before several Sub-Committees of the U.S. Senate and U.S. House of Representatives on providing assistance services to small business - Regularly serves on special committees pertaining to industrial development and services to small business.

Current Fields of Interest

All Phases of area development activity, including industrial and community development, financial and inventory management, and management development.

Major Reports and Publications

1. "Technical Assistance to Motels and Restaurant Owners Located on U. S. Highway 301," Georgia Tech Report, January 1978, coauthor
2. "A Program of Management and Technical Assistance in Designated EDA Counties in Georgia," Georgia Tech Report, December 1977, coauthor
3. "A Program of Management and Technical Assistance in Designated EDA Counties in Georgia," Georgia Tech Report, January 1977, coauthor
4. "Feasibility of Restructuring the Long-Term Financing of Delta Diversified, Inc.," Georgia Tech Report, July 1976, coauthor
5. "A Program of Management and Technical Assistance in Designated EDA Counties in Georgia," Georgia Tech Report, December 1975
6. "A Program of Technical Assistance to the Farmers Home Administration Business and Industry Loan Program," Georgia Tech Report, March 1975
7. "A Program of Management and Technical Assistance in Designated EDA Counties in Georgia," Georgia Tech Report, December 1974, coauthor
8. "Management and Technical Assistance to Georgia Business and Industry," Georgia Tech Report, August 1973, coauthor
9. "A Program of Management and Technical Assistance in Designated EDA Counties in Georgia," Georgia Tech Report, June 1973, coauthor
10. "A Program of Management and Technical Assistance in Designated EDA Counties in Georgia," Georgia Tech Report, September 1972, coauthor
11. "A Program of Management and Technical Assistance in Designated EDA Counties in Georgia," Georgia Tech Final Report, September 1971, coauthor
12. "Ways of Organizing a Business in Georgia," Georgia Tech Management and Technical Assistance Counseling Note, August 1971, coauthor
13. "An Evaluation Report on McGuire Tire and Recapping Company, Atlanta, Georgia," Special Report for the Small Business Administration, July 1971, coauthor

14. "A Feasibility Report on the Proposed Expansion of Bertie Industries, Inc., Windsor, North Carolina," Special Report for the Small Business Administration, June 1971, coauthor
15. "A Program of Management and Technical Assistance in Designated EDA Counties," Georgia Tech Final Report, August 1970, coauthor
16. "Management and Technical Assistance to Georgia Business and Industry," Georgia Tech Annual Report, August 1968, coauthor
17. "Economic Impact of a Proposed Industrial District to be Located in Richmond County, Georgia," EDA Special Report, May 1968, coauthor
18. "Economic Impact of Proposed Water and Sewerage Systems Improvements on Gibson, Georgia," EDA Special Report, April 1968, coauthor
19. "Economic Impact of Proposed Water and Sewerage System Improvements on Madison, Georgia," EDA Special Report, April 1968
20. "Economic Impact of Proposed Sewerage System Improvements on Camilla, Georgia," EDA Special Report, March 1968, coauthor
21. "Economic Impact of Proposed Water and Sewerage Systems Improvements on the City of Sylvester and Worth County, Georgia," EDA Special Report
22. "Economic Impact of a Proposed Industrial Park to be located in Milledgeville, Georgia," EDA Special Report, February 1968
23. "Economic Impact of the Proposed Establishment of Keller Industries, Inc. in Swainsboro, Georgia," EDA Special Report, February 1968, coauthor
24. "Economic Impact of a Proposed Industrial Park to be located in Swainsboro, Georgia," EDA Special Report, January 1968, coauthor
25. "Economic Impact of the Proposed I-20 Regional Industrial Park at Comak, Georgia," EDA Special Report, January 1968
26. "Economic Impact of Proposed Water and Sewerage System Improvements on Warrenton, Georgia," EDA Special Report, September or December 1967
27. "A Simplified Inventory and Cost Control System for a Small Manufacture," EDA Special Report, June 1967
28. "Economic Impact of Proposed Water and Sewerage System on Cleveland, Georgia," EDA Special Report, May 1967, coauthor
29. "Economic Impact of a Proposed Water Storage Tank on Tennille, Georgia," EDA Special Report, April 1967
30. "Impact of Proposed Water and Sewerage System on Blakely, Georgia," EDA Special Report, February 1967, coauthor
31. Author of numerous published company studies; procedural systems manuals; and operational plans
32. Published catalog in connection with a Simplified Issue Procedure for General Stores Material

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BIOGRAPHICAL SKETCH

THOMAS, JAMES M. -- Research Associate II  
Economic Development Laboratory

Education

M.S., Management, Purdue University	1977
B.S.I.M., Georgia Institute of Technology	1972

Employment History

Georgia Institute of Technology	
Research Associate II	1980 - Present
Touche Ross and Company, Management Consultant	1977 - 1980
Purdue University, Instructor of Financial Accounting	1975 - 1977
Federal Reserve Bank - Miami	
Systems Department Manager	1974 - 1975
Branch Systems Analysts	1973 - 1974
Check Collection Analyst and Check Processing Supervisor	1972 - 1973

Experience Summary

With Touche Ross and Company, performed a broad range of general management consulting engagements, including a review of operations and fiscal controls for a county maintenance department, development of a water quality management program for a state-designated water pollution control district, design and implementation of inventory evaluation procedures for a general hardware manufacturer, management of a Chapter XI bankruptcy for the court and creditors of a food processing company, implementation of a fully integrated accounting system for a state welfare agency, analyses of engineering operations and manpower utilization for an affiliated company of the Bell System, development of employee performance appraisal and incentive system for two county governments, development of a staff performance appraisal system for the Atlanta Management Services Department of Touche Ross and Company, analyses of road and drainage system maintenance operations and manpower

utilization for a county government, development of an organization and operations plan for a new lease company venture, and market profile analyses of potential management consulting markets in the southeastern United States. Work experience with Purdue University included course instruction in financial accounting. As Systems Department Manager, with the Federal Reserve Bank, developed and implemented the department's organizational structure, procedures and policies; planned and managed the efforts of the programming and operations analyst staff; and managed the systems and user department's conversion from second to third generation computers. As Check Processing Supervisor, supervised three operational units with over fifty employees. Branch System Analyst work experience included supervision of the Data Processing Department programming staff, and planning and coordination of the department conversion from second to third generation computers. As a Check Collection Analyst, performed analyses of short-and long-term computer hardware requirements, performed analyses of alternative damaged check processing equipment, and coordinated implementation of computer hardware recommendations. Work experience with the Georgia Power Company included drafting and layout design of electrical sub-stations.

#### Current Fields of Interest

Utilization of quantitative management tools in finance, operations and marketing in the development of strategic business and operating plans.

## CHARTS

# CHART 1

## Types of Businesses Receiving Assistance

<u>Type of Firm</u>	<u>Exporting</u>	<u>No. of Firms</u>	<u>% of Center Assistance</u>
Manufacturing		19	83
Retail		4	17
Service			
Wholesale			
Construction			
Professional			
Transportation			
Assembling or Packaging			
Other			
TOTAL		<hr/> 23	<hr/> 100

CHART 2

Duration of Business Operations

<u>Year of Initial Operations</u>	<u>No. of Clients</u>
Before 1900	0
1900 - 1959	2
1960 - 1969	6
1970 - 1974	0
1975 - 1979	2
1980 - Present	1
Unknown	<u>12</u>
TOTAL	23

### CHART 3

#### Gross Annual Sales of Client Businesses

<u>Gross Sales Amount</u>	<u>No. of Firms</u>	<u>% of Firms</u>
\$0 to \$1,000		
\$1,001 to \$10,000		
\$10,001 to \$50,000		
\$50,001 to \$100,000		
\$100,001 to \$500,000		
\$500,001 to \$2 Million		
\$2.01 million to \$10 million		.
\$10.01 million to \$100 million		
\$101 million to 1 billion	_____	_____
TOTALS		\$100%

Information not availble at this time.



# CHART 4

## Employment Levels of Business Clients

<u>Number of Employees</u>	<u>No. of Firms</u>	<u>% of Firms</u>
10 or less	2	8.7
11 to 25	1	4.3
26 to 50	2	8.7
51 to 100	2	8.7
101 to 500	4	17.4
501 to 1,000		
over 1,000	<u>12</u>	<u>52.2</u>
TOTALS	23	100%

# CHART 5

## Minority and Women Ownership Status

<u>All Firms</u>	<u>No. of Firms</u>	<u>% of Firms</u>
<u>Minority Owned</u>		
Asian or Pacific Islander		
American Indian or Alaskan Native		
Hispanic		
Black non-Hispanic	<u>2</u>	<u>8.6</u>
TOTAL MINORITY OWNED	<u>2</u>	<u>8.6</u>
<u>Women Owned</u>		
Black non-Hispanic		
White non-Hispanic		
Hispanic		
TOTAL WOMEN OWNED	<u>(2)</u>	<u></u>
TOTAL MINORITY & WOMEN OWNED	<u>2</u>	<u>8.6</u>

# CHART 6

## Types of Center Assistance Furnished Business Clients

<u>Types of Assistance</u>	<u>No. of Firms</u>	<u>% of Firms</u>
Business Planning		
Market Research	4	17.4
Financial Analysis	2	8.7
Accounting		
Business Start-up	2	8.7
Sales & Advertising		
SBA Loan Application	2	8.7
FmHA Loan Application		
Commercial Loan Application		
Engineering	7	30.4
Technology Development	4	17.4
Training Seminar		
Purchasing		
Export Development		
Other (Production)	2	8.7
TOTALS	<hr/> 23	<hr/> 100

# CHART 7-A

## Economic Impact Data on Center Business Projects

<u>Project No.</u>	<u>Type of Assistance</u>	<u>Projected Impact</u>			<u>Remarks</u>
		<u>Jobs Saved</u>	<u>Jobs Created</u>	<u>Capital Investment</u>	
0001	Marketing				
0002	Advertising				
0003	Accounting				
0004	Fin. Analysis				
0005	Training Sem.				
0075	Bus. Start-up				
0076	FmHA Loan				
0091	SBA Loan				
0110	Engineering				
0120	Tech. Dev.				
	TOTALS				

DATA IS NOT AVAILABLE TO COMPLETE THIS CHART AT THIS TIME.

# CHART 7-B

## Economic Impact Data on Center Business Projects

<u>Project No.</u>	<u>Type of Assistance</u>	<u>Projected Impact-Year_____</u>			<u>Actual Impact-Year_____</u>			<u>Remarks</u>
		<u>Jobs Saved</u>	<u>Jobs Created</u>	<u>Capital Investment</u>	<u>Jobs Saved</u>	<u>Jobs Created</u>	<u>Capital Investment</u>	
0001	Marketing							
0002	Advertising							
0003	Accounting							
0004	Fin. Analysis							
0005	Training Sem.	DATA IS NOT AVAILABLE AT THIS TIME TO COMPLETE THIS CHART.						
0075	Bus. Start-up							
0076	FmHA Loan							
0091	SBA Loan							
0110	Engineering							
0120	Tech. Dev.							
TOTALS		_____	_____	_____	_____	_____	_____	

# CHART 8

## CEDG Organizations

<u>Types of Organizations</u>	<u>No. of Clients</u>	<u>% of Clients</u>
Regional Economic Planning*		
Statewide Economic Planning		
Economic Development Districts		
Local Development Groups		
Trade Associations		
Other (Specify)		
TOTALS		100%

NO CEDG PRODUCTS DURING THIS PERIOD

# CHART 9

## Population of Communities Served by CEDGs

<u>Population of Community Served</u>	<u>No. of Clients</u>	<u>% of Clients</u>
1,000 to 24,999		
25,000 to 49,999		
50,000 to 99,999		
100,000 to 499,999		
500,000 to 999,999		
Over 1 million		
TOTALS		100%

NO CEDG PRODUCTS DURING THIS PERIOD

# CHART 10

## Types of Center Assistance Furnished CEDG Clients

<u>Type of Assistance</u>	<u>No. of Clients</u>	<u>% of Clients</u>
Plan Preparation		
Attracting Industry		
Market Research		
Financial Feasibility of Public-Private Projects		
Strengthening Infrastructure		
Assisting Existing Firms through CEDGs		
Assisting Trade or Industry Groups	NO CEDG PRODUCTS DURING THIS PERIOD.	
Federal Funding		
Non-Federal Funding		
Labor Surveys		
Training Seminars		
Data Services		
Other		
TOTALS		



CHART 11

Economic Impact of Center CEDG Projects

<u>Project No.</u>	<u>Plan Completed</u>	<u>Industry Attracted</u>	<u>Market Study Completed</u>	<u>Financial Feasibility Study Completed</u>	<u>Infra- Structure Improved</u>	<u>Direct TA to Firms</u>	<u>Trade Group Aided</u>	<u>Receipt of Federal Funds</u>	<u>Non- Federal Funds Received</u>	<u>Labor Survey Completed</u>	<u>Agency Operation Improved</u>	<u>Improvement In Delivery of Services</u>
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NO CEDG PROJECTS DURING THIS PERIOD.

CHART 12

Key Poverty Indicators of Areas Served

Area	Population 1980 (000)	Net Migration * 1970-77	Minority Population 1980 (000)	Median Years * Education Completed 1980		% Pop. Below * Poverty Income 1980	% Unemployed 1980	% Land in Farms 1978
				Male	Female			
United States	226,504.8	1.6	38,164.4	12.1	12.1	13.7	9.1	45.4
Georgia	5,463.1	3.0	1,465.2	10.8	10.8	20.7	7.4	37.0
Appling	15.5	9.4	3.1	8.8	10.0	37.1	6.1	44.7
Atkinson	6.1	-5.2	1.7	8.1	8.7	44.6	9.5	52.7
Bacon	9.4	7.0	1.4	8.2	9.0	31.2	5.6	47.9
Baker	3.8	-2.7	1.9	7.9	8.8	45.9	7.9	67.8
Baldwin	34.7	-10.8	13.0	8.5	9.0	22.3	5.4	28.8
Banks	8.7	3.6	0.4	8.2	8.9	24.0	5.3	35.5
Barrow	21.4	10.3	3.1	9.1	9.5	18.1	8.0	39.7
Bartow	40.8	7.4	4.7	9.1	9.4	15.1	10.4	31.6
Ben Hill	16.0	7.1	4.8	8.7	9.6	31.9	11.7	40.0
Berrien	13.5	6.7	1.7	8.9	9.2	28.2	8.0	59.9
Bibb	150.2	-4.7	58.1	11.2	10.9	21.9	7.1	17.0
Bleckley*	10.8	-2.5	2.4	9.1	9.5	28.4	5.0	54.3
Brantley	8.7	24.2	0.6	8.7	9.0	24.8	11.1	16.3
Brooks	15.3	-4.4	6.8	8.8	9.6	42.3	5.0	67.5
Bryan	10.2	18.2	2.2	8.8	9.6	30.3	4.8	10.1
Bulloch	35.8	5.1	9.6	9.9	10.7	32.1	5.7	55.9
Burke	19.3	-3.0	10.4	7.8	8.5	52.7	7.9	50.2
Butts	13.7	11.0	5.4	9.0	9.9	23.8	11.7	27.7
Calhoun	5.7	-4.4	3.3	7.2	9.1	52.0	9.6	80.0

CHART 12 (continued)

Key Poverty Indicators of Areas Served

Area	Population 1980 (000)	Net Migration * 1970-77	Minority Population 1980 (000)	Median Years * Education Completed 1980		% Pop. Below * Poverty Income 1980	% Unemployed 1980	% Land in Farms 1978
				Male	Female			
Camden	13.4	1.2	4.3	10.1	10.7	19.7	6.4	8.5
Candler	7.5	4.0	2.4	9.0	9.8	40.4	7.3	55.0
Carroll	56.3	10.3	9.7	10.0	10.0	18.3	7.5	28.2
Catossa	37.0	11.4	0.3	10.9	10.8	13.0	8.4	35.0
Charlton	7.3	8.5	5.2	9.1	9.6	29.0	7.6	7.8
Chatham	202.2	-3.8	77.3	12.0	11.6	20.9	7.5	5.8
Chattahoochee	21.7	-43.7	7.0	12.7	12.4	17.1	6.9	3.5
Chattooga *	21.9	4.3	1.8	8.8	9.0	17.7	19.1	33.4
Cherokee	51.7	25.4	1.1	9.0	9.4	16.9	7.6	17.4
Clarke	74.4	0.1	17.6	12.8	12.3	20.4	6.2	22.9
Clay	3.6	-5.8	2.2	8.4	9.4	60.7	6.4	39.7
Clayton	150.4	25.0	10.5	12.0	11.9	5.9	5.5	13.2
Clinch	6.7	-6.1	2.0	8.0	9.0	36.3	8.7	5.9
Cobb	297.7	18.1	13.1	12.1	11.8	7.1	5.1	7.5
Coffee	26.9	2.6	6.8	8.7	9.9	32.9	9.2	61.0
Colquitt	35.4	-0.4	8.3	9.2	10.1	29.3	8.4	65.3
Columbia	40.1	31.8	5.9	11.1	10.9	19.2	5.1	26.0
Cook	13.4	-5.5	4.1	8.8	9.5	30.3	9.1	63.8
Coweta	39.3	7.6	10.7	9.5	10.2	20.6	10.6	23.5
Crawford	7.7	11.1	3.0	8.3	8.9	42.8	10.7	25.3
Crisp	19.4	-0.9	7.6	9.0	9.7	32.4	10.8	70.7

CHART 12 (continued)  
Key Poverty Indicators of Areas Served

Area	Population 1980 (000)	Net Migration* 1970-77	Minority Population 1980 (000)	Median Years* Education Completed 1980		% Pop. Below* Poverty Income 1980	% Unemployed 1980	% Land in Farms 1978
				Male	Female			
Dade	12.3	8.9	0.1	8.6	9.1	22.4	9.4	29.0
Dawson	4.8	25.6	0	8.1	8.8	27.2	11.9	15.5
Decatur*	25.4	3.9	9.9	8.6	9.5	39.6	6.6	51.8
DeKalb	483.0	2.4	131.0	12.7	12.4	7.1	5.4	3.8
Dodge	17.0	3.2	4.5	8.9	9.3	35.7	6.8	46.5
Dooley	10.8	0.7	5.3	8.4	9.4	46.0	8.9	76.5
Dougherty	100.7	-4.8	43.1	11.8	11.7	23.1	8.4	63.5
Douglas	54.6	52.3	2.8	10.3	10.5	12.3	5.3	8.2
Early	13.2	-0.5	5.7	8.2	9.3	49.4	10.5	58.5
Echols	2.3	9.5	0.4	9.3	9.9	31.5	8.2	8.1
Effingham	18.3	15.8	3.4	9.6	10.1	21.8	6.5	26.9
Elbert	18.8	2.3	5.8	9.5	9.8	29.1	9.5	34.1
Emanuel	20.8	3.9	6.6	8.8	9.5	34.7	9.9	43.0
Evans	8.4	9.6	2.9	8.7	9.3	41.6	7.2	49.5
Fannin	14.7	7.8	0	8.6	8.7	24.6	9.9	8.5
Fayette	29.0	75.9	1.3	10.4	10.7	14.3	4.3	29.8
Floyd	79.8	2.4	10.3	10.2	10.2	15.4	11.2	38.5
Forsyth	28.0	25.3	0	8.8	9.2	17.7	5.6	40.4
Franklin	15.2	6.6	1.5	9.6	10.0	20.3	11.2	50.4

## CHART 12 (continued)

Key Poverty Indicators of Areas Served

Area	Population 1980 (000)	Net Migration 1970-77	Minority * Population 1980 (000)	Median Years * Education Completed 1980		% Pop. Below * Poverty Income 1980	% Unemployed 1980	% Land in Farms 1978
				Male	Female			
Fulton	589.9	-12.0	303.5	12.1	11.8	17.6	7.5	14.6
Gilmer	11.1	19.5	0	7.9	8.4	27.9	8.2	12.6
Glascocock	2.4	9.8	0.4	7.2	8.5	42.1	8.8	39.7
Glynn	55.0	-8.7	14.5	11.9	11.7	17.3	6.8	4.3
Gordon	30.1	11.3	1.3	8.9	9.1	15.1	11.5	45.4
Grady	19.8	4.0	6.3	8.8	9.5	35.2	5.6	63.0
Greene	11.4	1.2	6.0	8.6	9.5	33.1	7.8	26.1
Gwinnett	166.9	63.0	4.1	10.5	10.7	10.3	4.6	12.5
Habersham	25.0	10.3	1.3	9.4	9.9	17.1	7.1	20.9
Hall	75.6	8.8	6.8	9.8	10.1	17.7	8.9	25.1
Hancock	9.4	-4.2	7.4	7.5	8.9	47.8	6.0	18.8
Haralson	18.4	6.6	1.3	9.4	9.7	17.5	10.6	20.3
Harris*	15.7	6.1	5.3	9.1	9.6	29.7	8.2	24.3
Hart	18.6	1.0	4.1	9.5	9.7	26.6	11.0	48.6
Heard	6.5	13.4	1.1	8.9	9.4	23.5	10.4	20.1
Henry	36.3	15.9	6.4	10.0	10.4	20.0	5.6	29.8
Houston	77.6	6.5	15.9	12.4	12.1	13.7	4.5	46.0
Irwin	9.0	2.0	2.8	8.6	9.5	43.8	8.9	65.7
Jackson	25.3	6.9	2.8	8.8	9.0	19.4	8.0	42.4

CHART 12 (continued)

Key Poverty Indicators of Areas Served

Area	Population 1980 (000)	Net Migration * 1970-77	Minority Population 1980 (000)	Median Years * Education Completed 1980		% Pop. Below * Poverty Income 1980	% Unemployed 1980	% Land in Farms 1978
				Male	Female			
Jasper	7.6	16.0	3.0	8.8	9.9	34.9	5.9	32.2
Jeff Davis	11.5	8.1	1.8	8.9	9.6	26.3	5.4	50.9
Jefferson	18.4	-8.7	10.1	8.2	8.9	39.9	9.3	53.3
Jenkins	8.8	-4.3	3.6	8.4	8.8	44.4	8.8	49.6
Johnson	8.7	-1.5	2.8	8.5	9.2	39.4	9.8	44.6
Jones	16.6	19.6	5.0	9.7	10.1	21.7	7.9	16.5
Lamar	12.2	4.2	4.2	9.0	9.5	19.3	7.6	38.0
Lanier	5.6	0.1	1.4	8.4	9.8	31.5	6.2	45.0
Laurens	37.0	1.6	12.2	9.1	10.0	32.6	11.8	47.6
Lee	11.7	28.7	2.8	9.6	9.6	37.0	6.6	77.0
Liberty	37.6	43.7	13.7	11.7	10.6	32.5	3.8	4.5
Lincoln	6.7	-0.8	2.9	8.3	9.7	34.8	10.6	34.7
Long	4.5	-4.3	1.2	8.1	9.2	37.2	6.3	8.6
Lowndes	68.0	5.8	20.6	11.4	11.4	25.0	6.9	47.1
Lumpkin	10.8	7.4	0.2	8.3	8.8	28.7	7.8	15.0
McDuffie	18.5	7.4	6.8	9.0	10.1	26.4	16.2	32.2
McIntosh	8.0	13.7	3.6	8.0	9.4	35.2	9.1	2.0
Macon	14.0	-11.6	7.9	8.3	9.2	42.6	10.6	66.7

CHART 12 (continued)

Key Poverty Indicators of Areas Served

Area	Population 1980 (000)	Net Migration* 1970-77	Minority Population 1980 (000)	Median Years* Education Completed 1980		% Pop. Below Poverty Income 1980	% Unemployed 1980	% Land in Farms 1978
				Male	Female			
Madison	17.7	12.8	1.9	8.8	9.7	19.3	8.5	39.5
Marion	5.3	11.6	2.4	7.9	9.3	40.2	6.0	32.2
Meriwether	21.2	2.7	9.6	9.0	9.4	32.2	9.5	31.9
Miller	7.0	-5.9	2.0	8.1	9.1	47.0	6.5	77.8
Mitchell	21.1	-7.1	10.1	8.6	9.4	36.9	7.6	75.2
Monroe	14.6	7.6	5.5	8.8	9.7	22.1	5.9	20.5
Montgomery	7.0	0.5	2.2	9.0	9.7	33.4	6.8	61.7
Morgan	11.6	-1.7	4.8	8.9	9.4	37.1	8.9	54.0
Murray	19.7	20.1	0	8.3	8.7	14.1	10.9	19.8
Muscogee(Columbus)	170.1	-9.6	57.9	12.2	11.5	19.9	7.3	8.1
Newton	34.5	15.9	8.8	9.2	9.8	19.8	8.6	31.5
Oconee	12.4	21.1	1.3	9.8	10.7	24.0	7.7	47.9
Oglethorpe	8.9	4.4	2.8	8.1	9.1	28.0	6.0	26.3
Paulding	26.1	24.9	1.2	8.9	9.2	18.3	6.7	15.1
Peach*	19.2	11.6	9.7	10.4	10.6	27.9	4.8	64.5
Pickens	11.7	8.5	0.3	8.3	8.7	20.8	9.0	15.7
Pierce	11.9	14.4	1.7	8.8	9.7	26.8	10.3	51.7

CHART 12 (continued)

Key Poverty Indicators of Areas Served

Area	Population 1980 (000)	Net Migration* 1970-77	Minority Population 1980 (000)	Median Years* Education Completed 1980		% Pop. Below* Poverty Income 1980	% Unemployed 1980	% Land in Farms 1978
				Male	Female			
Pike	8.9	14.2	2.3	8.5	9.2	28.2	7.8	41.4
Polk	32.4	1.4	4.8	9.2	9.2	20.3	13.9	27.5
Pulaski	9.0	-0.2	3.0	8.9	9.9	36.9	12.4	61.9
Putnam	10.3	4.3	4.3	9.3	10.4	27.0	6.4	21.0
Quitman	2.6	-13.0	1.3	6.8	8.3	54.1	8.5	25.9
Rabun	10.5	7.0	0.1	9.4	9.9	25.1	8.1	6.2
Randolph	9.6	0.9	5.3	8.0	9.2	50.6	8.7	47.1
Richmond	181.6	-8.1	68.0	12.0	11.4	20.1	6.7	14.4
Rockdale	36.7	58.2	3.2	10.2	10.4	15.7	5.2	23.1
Schley	3.4	-1.7	1.3	8.3	9.8	29.6	8.1	49.4
Screven	14.0	2.3	6.4	8.1	9.0	38.6	6.0	51.9
Seminole	9.1	9.1	3.0	8.9	10.0	29.0	6.9	67.1
Spalding	47.9	7.3	13.0	9.9	9.7	19.4	9.3	33.5
Stephens	21.8	5.5	2.6	9.8	10.0	17.8	9.5	16.3
Stewart	5.9	-15.7	3.8	7.8	9.1	48.0	12.9	23.0
Sumter	29.4	-4.1	13.0	9.4	10.0	31.7	9.8	60.0
Talbot	6.6	-3.0	4.2	7.7	9.0	41.7	9.8	19.9
Taliaferro	2.0	-11.3	1.3	7.6	8.2	51.4	13.2	22.5



CHART 12 (continued)

Key Poverty Indicators of Areas Served

Area	Population 1980 (000)	Net Migration * 1970-77	Minority Population 1980 (000)	Median Years * Education Completed 1980		% Pop. Below * Poverty Income 1980	% Unemployed 1980	% Land in Farms 1978
				Male	Female			
Tattnall	18.1	0.2	5.3	8.9	9.5	35.3	6.4	50.7
Taylor	7.9	-6.0	3.2	8.2	8.9	36.5	5.9	34.2
Telfair	11.4	-3.4	3.6	8.3	9.3	35.5	6.0	38.1
Terrell	12.0	-8.0	7.3	8.7	9.9	42.4	7.4	75.4
Thomas	38.1	3.4	14.6	9.1	9.9	32.1	7.3	71.5
Tift	32.8	7.0	8.5	9.5	10.0	27.5	9.5	77.5
Toombs	22.6	6.6	5.7	9.3	9.7	31.0	6.6	44.0
Towns	5.6	9.2	0	8.7	8.9	30.4	6.2	10.6
Treutlen	6.1	2.4	2.0	7.6	8.9	38.1	7.1	49.4
Troup	50.0	-2.3	15.6	9.3	9.5	25.2	8.0	21.3
Turner	9.5	-5.4	3.5	8.6	9.7	33.6	11.3	57.0
Twiggs	9.4	-6.0	4.8	7.5	8.6	39.3	6.8	18.7
Union	9.4	17.0	0	8.2	8.4	36.0	7.9	14.9
Upson	26.0	0.9	7.1	9.1	9.5	18.8	16.1	25.0
Walker	56.5	-0.1	2.3	9.8	9.9	15.3	9.9	35.2
Walton	31.2	19.5	6.6	8.9	9.2	20.0	6.2	42.9
Ware	37.2	1.2	8.4	10.1	10.2	25.7	9.5	11.9

CHART 1234 (continued)

Key Poverty Indicators of Areas Served

Area	Population 1980 (000)	Net Migration 1970-77	Minority * Population 1980 (000)	Median Years * Education Completed 1980		% Pop. Below * Poverty Income 1980	% Unemployed 1980	% Land in Farms 1978
				Male	Female			
Warren	6.6	-10.3	3.9	7.4	9.0	43.5	16.4	32.6
Washington	18.8	-6.8	9.6	7.9	9.3	38.8	7.2	39.0
Wayne	20.8	1.7	4.0	10.0	10.2	25.6	10.5	18.2
Webster	2.3	-1.7	1.2	7.5	9.2	46.1	6.5	53.6
Wheeler	5.2	2.4	1.5	7.7	8.5	36.4	6.9	46.0
White	10.1	11.3	0.4	8.9	9.4	23.9	10.0	15.0
Whitfield	65.8	1.2	2.5	9.2	9.3	13.7	10.2	25.3
Wilcox	7.7	-2.2	2.4	8.6	9.5	39.9	10.3	47.9
Wilkes	11.0	-0.9	5.0	9.2	10.2	35.4	6.8	42.6
Wilkinson	10.4	0.1	4.7	8.2	9.4	29.3	3.9	18.1
Worth	18.1	7.7	6.2	8.9	9.5	39.8	9.7	61.3

1/ All Georgia counties are included; however, those marked \* are not designated EDA Counties.

z = less than 0.05%

Source for Population 1980: U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population.

Source for % Net Migration 1970-1977: U.S. Department of Commerce, Bureau of the Census, Current Population Reports: Population Estimates, 1977, and Current Population Reports: Population Estimates and Projections.

Source for % Estimate Minority Population 1980: Georgia Office of Planning and Budget, and U.S. Department of Commerce, Bureau of the Census, Current Population Reports: Population Estimates and Projections.

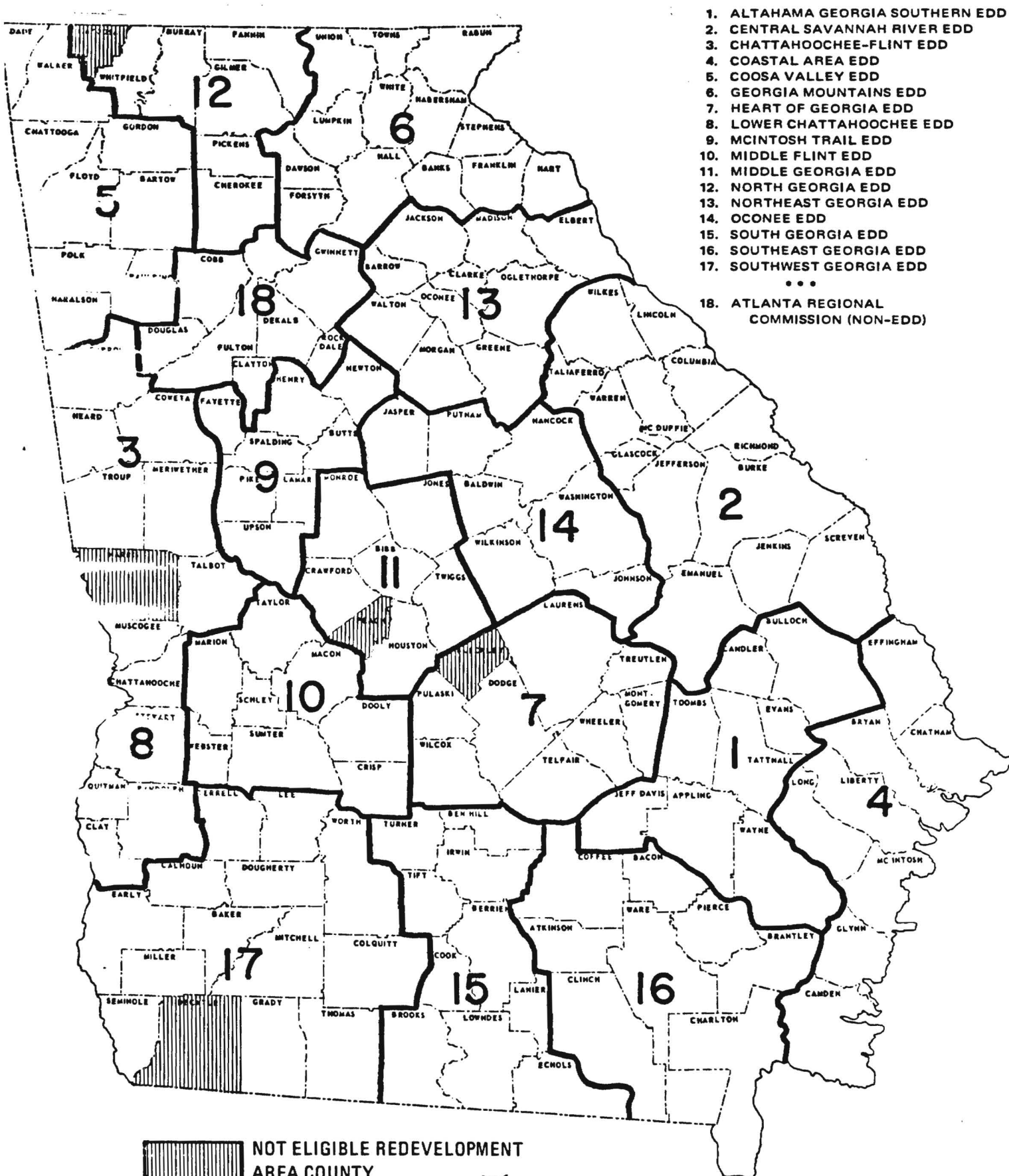
Source for Median Years of Education Completed 1970: U.S. Department of Commerce, Bureau of the Census, 1980 Census of Population.

Source for % Estimate Unemployment May 1981: Georgia Department of Labor, Civilian Labor Force Estimates, Preliminary, May 1981, and U.S. Bureau of Labor Statistics.

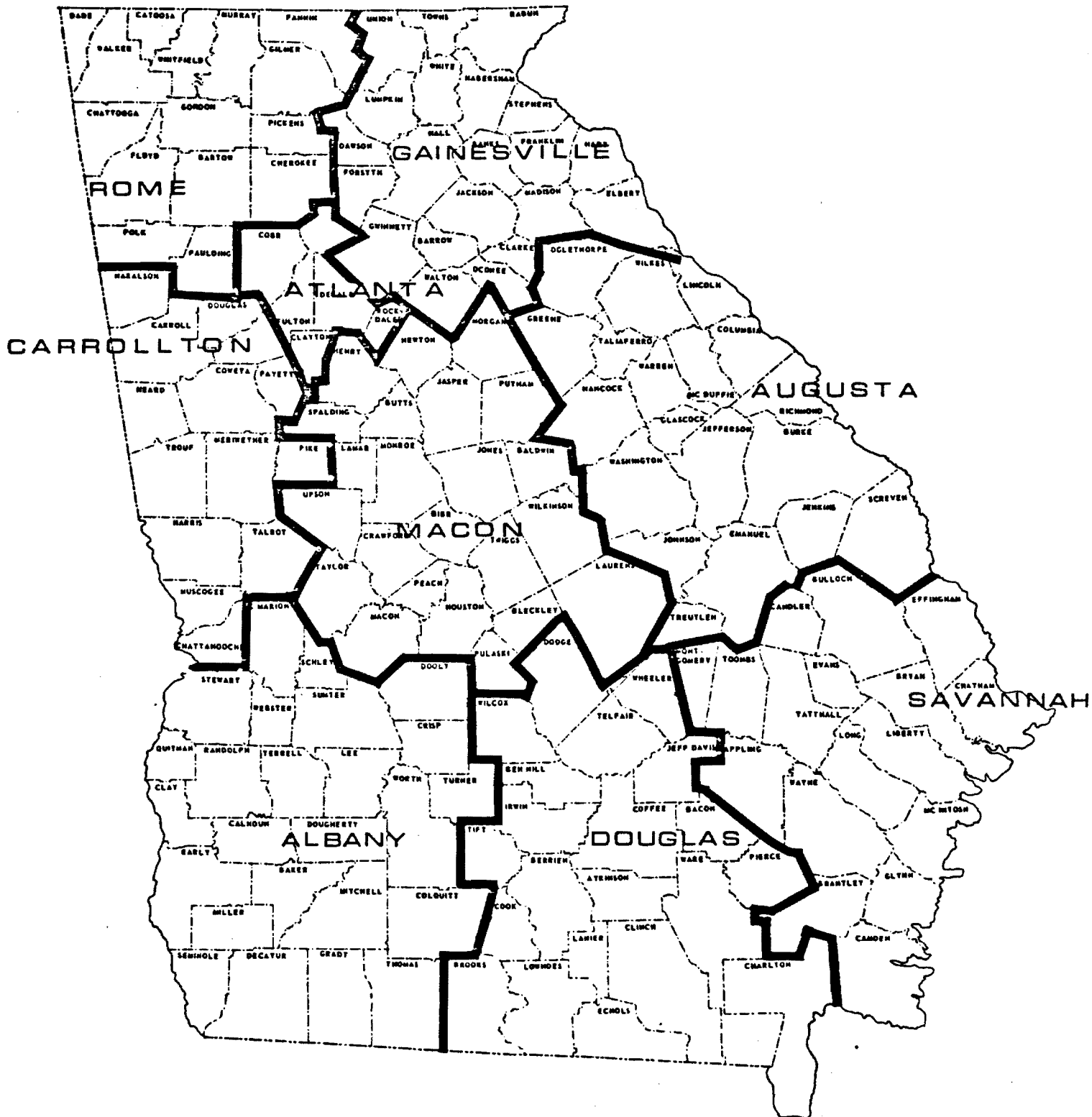
Source for % Land in Farms 1978: U.S. Department of Commerce, Bureau of the Census, 1978 Census of Agriculture.

MAPS

**MAP 1**  
**ECONOMIC DEVELOPMENT DISTRICTS**  
**AREA PLANNING AND DEVELOPMENT COMMISSION BOUNDARIES**

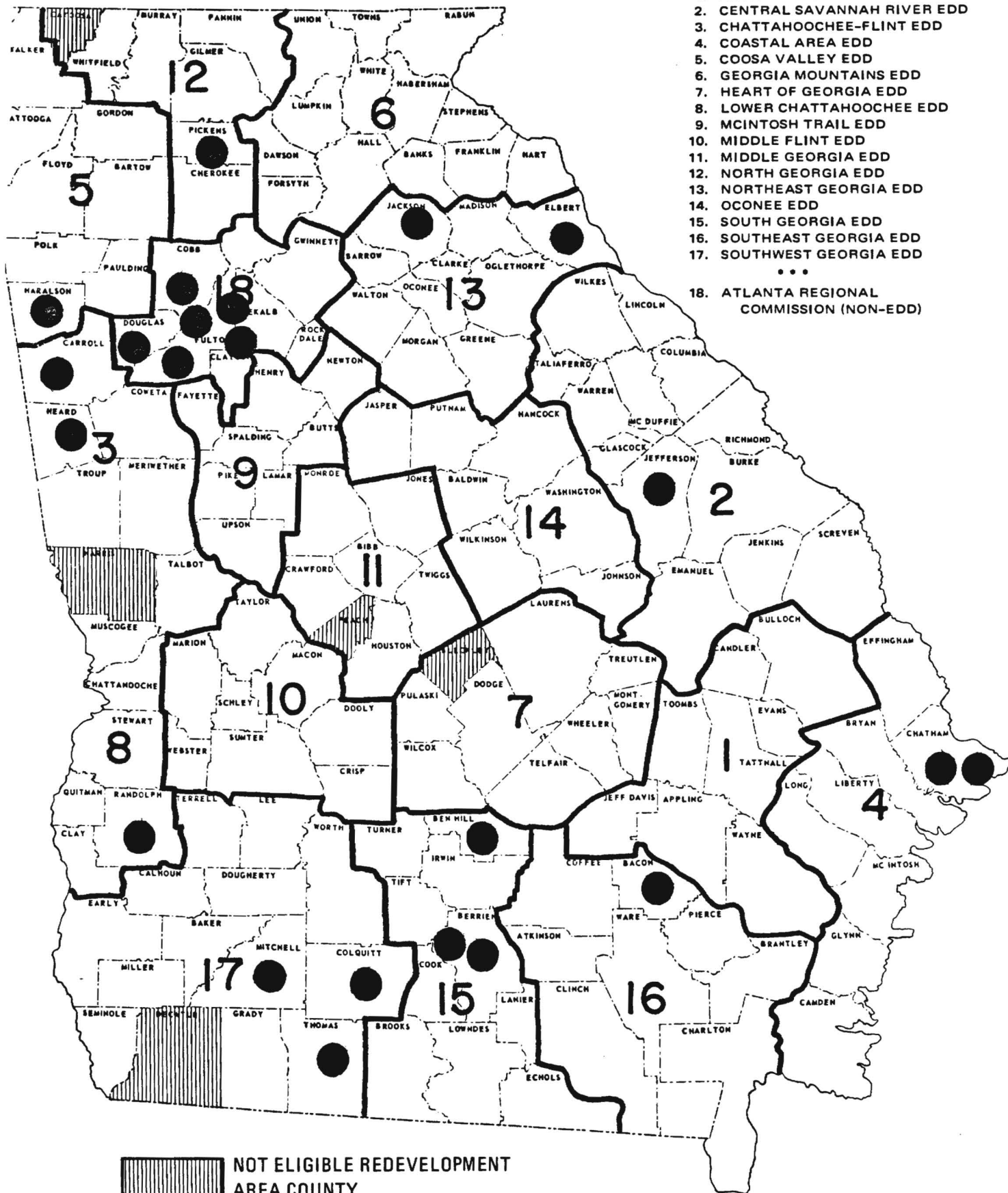


**MAP 2**  
**AREA OFFICES OF**  
**GEORGIA INSTITUTE OF TECHNOLOGY**



Map 3

PROJECT LOCATION BY COUNTIES



Project No. A-2018  
Grant Nos. 04-06-01567-23/24

**A PROGRAM  
OF MANAGEMENT AND TECHNICAL ASSISTANCE  
IN DESIGNATED EDA COUNTIES IN GEORGIA**

**Semi-Annual Progress Report**

**January 1 - June 30, 1983**

by

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This technical assistance program was accomplished by professional consultants under a grant from the Economic Development Administration. The statements, findings, conclusions, recommendations, and other data in this report are solely those of the grantee and do not necessarily reflect the views of the Economic Development Administration.

Economic Development Laboratory  
Engineering Experiment Station  
GEORGIA INSTITUTE OF TECHNOLOGY  
July 1983



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## SUMMARY OF CENTER ACTIVITIES

### Overall Program Objectives

The program activities described in this report represent an extension of the Economic Development Laboratory's established service to Georgia business and industry through market research, management guidance, and technical assistance. The specific objectives of the EDA-sponsored program are as follows:

- o To stimulate the expansion and diversification of existing industry;
- o To support the formation of new, economically sound enterprises; and
- o As an ultimate objective following from the two stated above, to create additional jobs.

### Service Area

The service area covered under the EDA program of management and technical assistance encompasses all designated EDA counties in the State of Georgia. As of the end of the reporting period, there were 154 of these EDA counties in Georgia, so designated because they are the most economically depressed areas of the state. The objectives of the program address the fundamental cause of these conditions: inadequate employment opportunities. As a result of this deficiency, the counties have experienced high levels of unemployment poverty, and out-migration.

### Project Activity

During this project year to date, 18 management and technical assistance projects were active under the EDA program. Sixteen of these projects were carried over from the previous year; two new projects were established. Eight projects were completed during the period, leaving 10 active projects.

All of the projects involved manufacturing firms. The eight EES Field Offices continue to report increasing interest by small manufacturing concerns in revitalizing their operations. In turn, EES personnel are seeking opportunities to assist Georgia concerns that wish to enter the export field or improve their productivity.

## ANNUAL WORK PLAN, AIMS AND OBJECTIVES

### Economic Characteristics of Service Area

The service area covered by the EDA Technical Assistance Grant effective during 1983 comprises 154 designated counties from the total 159 Georgia counties. These designated counties, shown in Figure 1, are economically depressed areas for various reasons.

The EDA grant program addresses the need for economic revitalization in these counties by creating job opportunities in new or existing businesses and industries in them.

Consideration of the specific economic needs of the area is given in each management and technical assistance case. For instance, some of these counties have experienced a high negative net migration in the period 1970-1977. One county had a net migration of -43% as a result of stagnant and/or declining economic conditions. Although the state as a whole experienced a 3.0% net migration, as compared to 11.6% for the United States, 49 designated EDA counties in Georgia experienced negative net migrations. These negative rates are good indicators of where EDA assistance is needed and what type of management and technical assistance is appropriate.

Other economic indicators considered include median years of education completed and percent of land in farms. In the United States the median number of years of education completed in 1970 was 12.1 for males and females, as compared with 10.8 for males and females in Georgia. However, 141 of the Georgia EDA counties had a lower median than the state as a whole. In 1978, 54 of these EDA counties had a higher percentage of land in farms than the nation as a whole, which had 45.4%. The comparable Georgia Figure was 37.0%.

Income and unemployment are also economic indicators used in this program. In 1977 the per capita income in the United States was \$5,571, compared with \$5,071 in Georgia. During this same year, 140 of the Georgia EDA counties had lower per capita incomes than the state as a whole. In 1969 (the last year for which statistics have been developed), the estimated proportion of the U.S. population with income below the poverty level was 13.7%, compared with 20.7% in Georgia; of the Georgia EDA counties, 114 had a figure higher than that of the state as a whole. Many of these county figures were extremely high, reaching 60.7% in one case. In May 1981, the estimated unemployment rate was 9.1% for the U.S. and 7.4% for Georgia. EDA counties in Georgia for this same period had unemployment rates as high as 19.1%, and 54 of them were higher than the U.S. average.

Preliminary unemployment statistics are available for Georgia counties as of July 1982, and although the estimated state unemployment rate increased from 7.4% to 8.1%, it was still substantially less than the U.S. average. EDA counties in Georgia for mid-1982 had unemployment rates as high as 17.3%.

Census data for 1980 place the median family income in the state at \$17,488, with 89 counties (56.7%) below \$15,000. During that year the Georgia labor force had approximately 535,600 persons in manufacturing jobs and 341,200 working in retail trade.

### Overall Program Goals

Organization and Establishment of Center. First proposed as a comprehensive plan in October 1955, the Industrial Development Program at Georgia Tech was established in July 1956 as a three-man operation. The Industrial Development Branch grew to division status within the Engineering Experiment Station in 1962 and was called the Industrial Development Division. Currently the group holds laboratory status and is known as the Economic Development Laboratory. This laboratory administers the EDA University Center Program.

The overall objective of this laboratory has been and is to stimulate and advance industrial and economic development. This objective is to be achieved through active cooperation with other agencies and organizations engaged in the field of industrial and economic development and through the continuing development and implementation of programs designed to accomplish the following specific aims:

- o To provide the facts and scientific research needed to assess the economic status and development potential of the state and its subdivisions;
- o To describe, measure, and evaluate the physical and human resources of the state and its subdivisions;
- o To determine, through objective research and analysis, the types of business and industrial operations suited for development or expansion in Georgia and in specific locations;
- o To serve as a center for the collection, interpretation, and dissemination of information relating to industrial and economic development;
- o To provide professional assistance, information and service to established and prospective businesses and industrial firms;
- o To motivate and assist public and private organizations in the utilization of research findings in the effort to achieve industrial and economic potentials; and
- o To provide professional instruction and guidance in the application of the principles and techniques of industrial and economic development.

### **Program Objectives and Strategies for Subregions**

The program activities described in this report represent an extension of the Economic Development Laboratory's established service to Georgia business and industry through market research, management guidance, and technical assistance. The specific objectives of the EDA-sponsored program are:

- o To stimulate the expansion and diversification of existing business and industry in designated EDA counties;
- o To support the formation of new, economically sound enterprises in designated EDA counties; and
- o To encourage the development and expansion of economically sound enterprises owned and/or managed by individuals from the minority and female community in the service area.

The program objectives are applied to all the EDA areas in Georgia and do not vary from subregion to subregion. Figure 1 shows the location of the Economic Development Districts and Area Planning and Development Commissions throughout the state. Figure 2 shows the locations of the area offices of the Georgia Institute of Technology. This latter map reflects the blanket coverage of the entire state with area offices, and taken with Figure 1, shows the relationship between the area offices and the development districts. This area office network enables EDL to effectively serve EDA objectives statewide in an efficient and economical manner through its trained professionals in the area offices and EDA-oriented staff in Atlanta.

### **Types of Assistance**

Under the current EDA Technical Assistance Grant, the Economic Development Laboratory, through its Business Development Division, offers several types of assistance in designated Economic Development Districts and counties:

- o Technical and management assistance is provided to marginal existing business and industrial firms to solve problems that endanger their continuation. The purpose of aid in these cases is to save jobs.
- o Technical and management assistance is furnished to existing business and industry with operating problems which inhibit growth. Expansion and diversification assistance is provided to create jobs.
- o Technical and management assistance is enlisted in the formation of new industrial ventures, and also for the purpose of creating jobs.

**FIGURE 1**  
**ECONOMIC DEVELOPMENT DISTRICTS**  
**AREA PLANNING AND DEVELOPMENT COMMISSION BOUNDARIES**

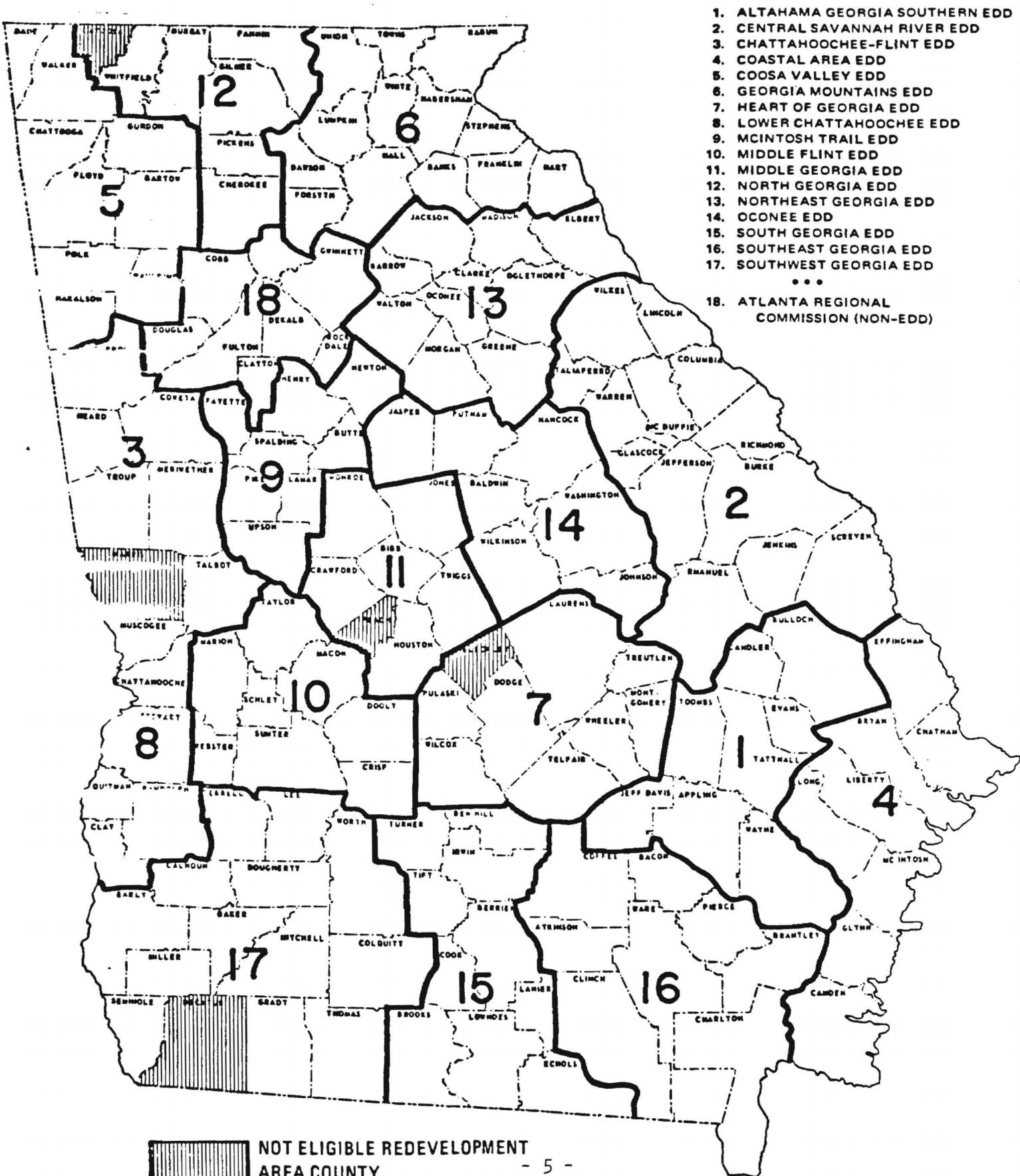
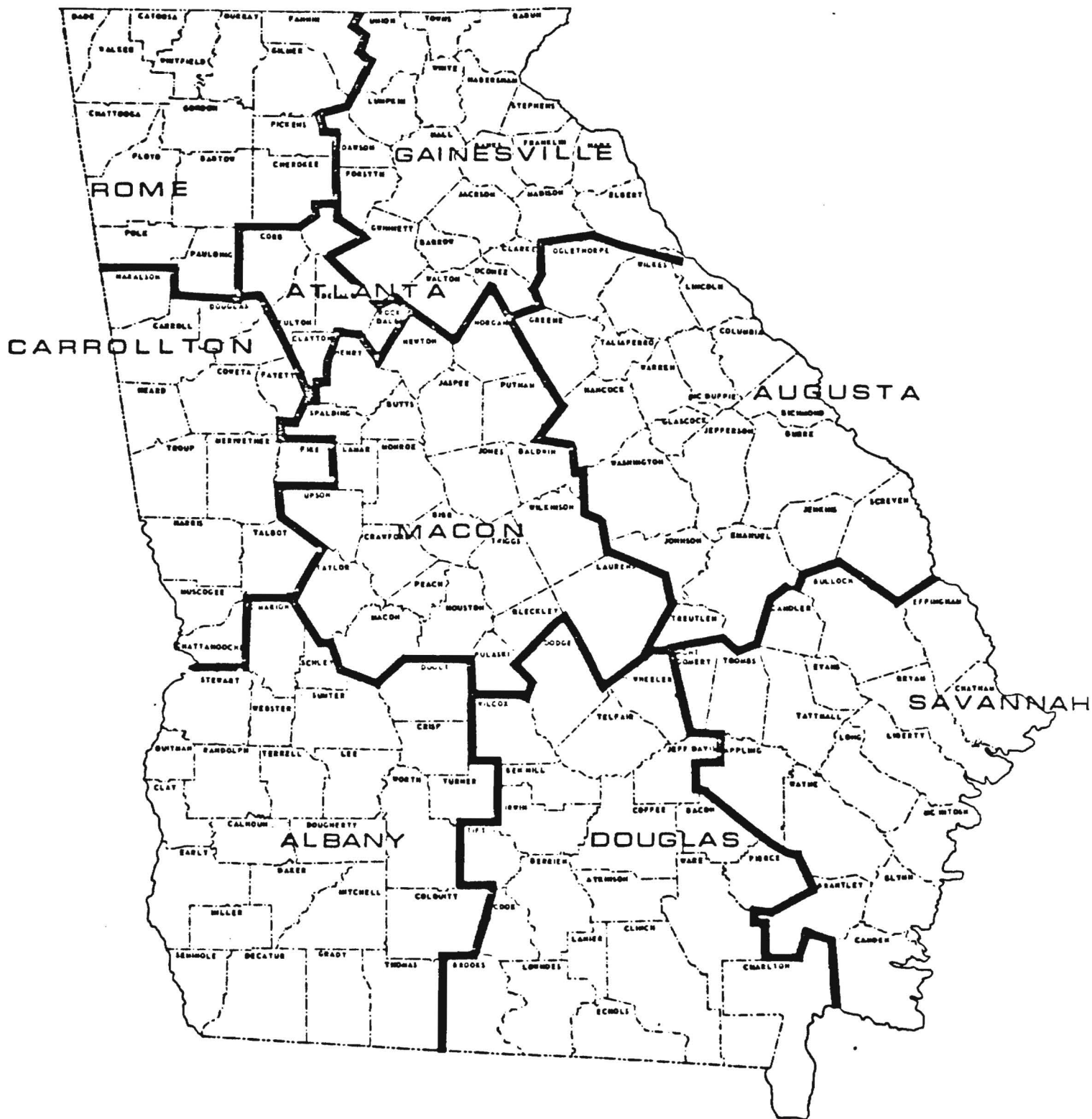


FIGURE 2  
 AREA OFFICES OF  
 GEORGIA INSTITUTE OF TECHNOLOGY



- o Technical and management assistance is furnished to individuals from the minority and female community for the purpose of creating opportunities for the development of business enterprises and the creation of jobs.

### **Aims and Objectives - 1983**

EDA's university centers for technical assistance program is a proven, cost-effective program that furnishes in-place technical assistance on a national basis. Over the years, EDA's policy guidance, program objectives and established techniques for the conduct of the national program of management and technical assistance have proven to be sound. Responsible personnel of this Center believe that the Center's established goals, objectives, and methods are also sound. Based on a background study conducted by the Center during the 1982 report year, the scope of the current EDA program has been retargeted to emphasize or focus on:

- o High-priority development items needed to assist and support, within reasonable cost constraints, economic revitalization programs fostered by the Department of Commerce. These items include productivity improvement, technology transfer and assistance to firms involved in the "world market";
- o Continued assistance to individual firms in matters relating to business counseling, with emphasis on firm-wide, comprehensive productivity improvement. Such assistance is to be furnished on request and within funding constraints;
- o Encouraging and assisting firms in their efforts to initiate export operations; and
- o Assisting firms in becoming more competitive in the world marketplace through the application of appropriate new technologies and productivity improvement.

This Center continues its operations based upon goals, objectives and procedures set forth in this report during the 1983 plan year. Where possible and affordable, activities will be retargeted to follow the recommendations contained in the study cited above. Such actions will comply with existing EDA rules and regulations as known to this Center. It is expected that, unless EDA is able to develop a new economic redevelopment plan for use in the present economic recession that will utilize the capabilities of the university centers, the funding level for this Center will remain unchanged.



## **PROGRAM ACTIVITIES AND ACCOMPLISHMENTS**

### **Project Activity**

During this project year, to date, 18 management and technical assistance projects were active under the EDA program. Sixteen of these projects were carried over from the previous year; two new projects were established. Eight projects were completed during the period, leaving 10 active projects.

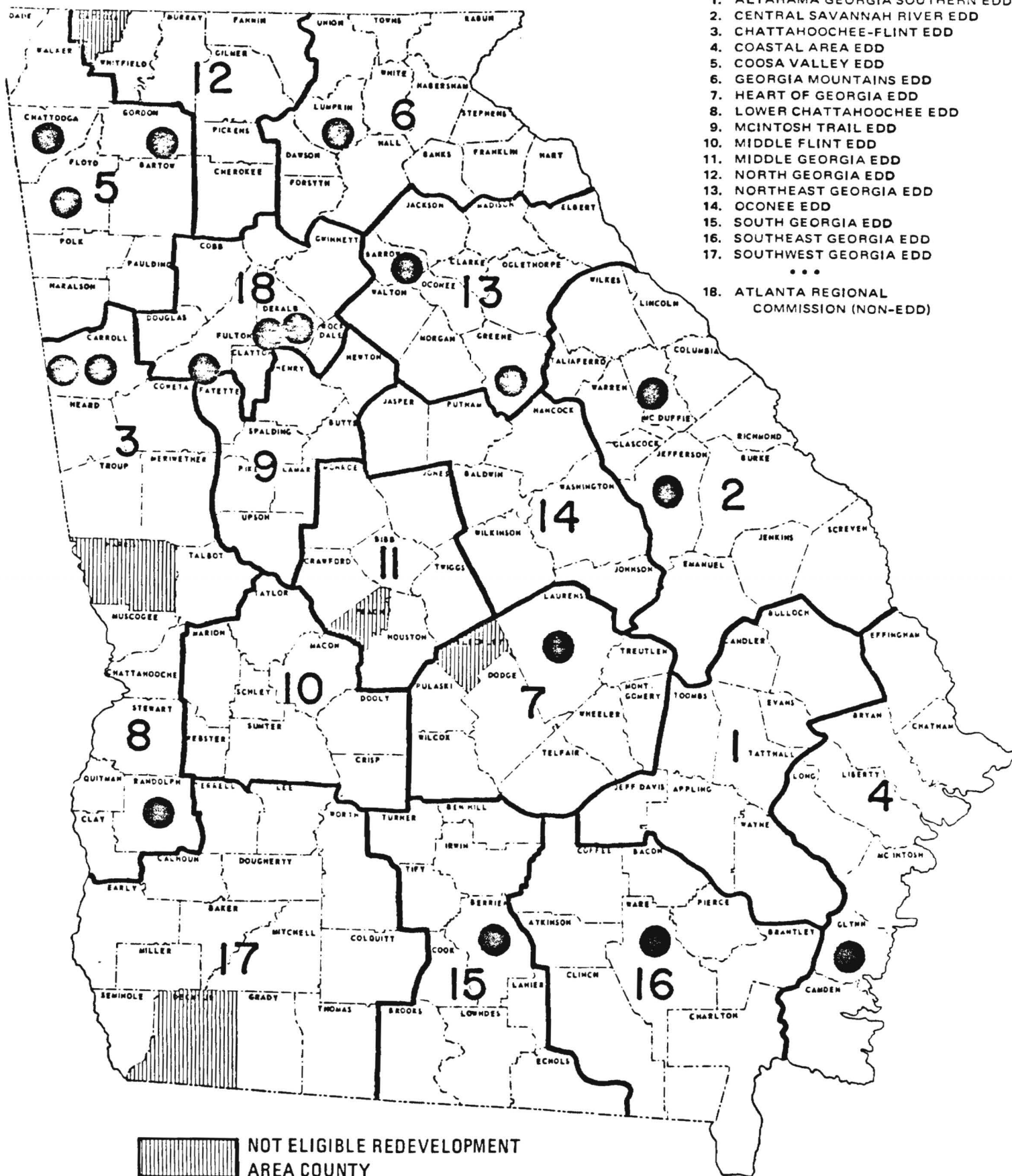
All of the projects involved manufacturing firms. The eight EES Field Offices continue to report increasing interest by small manufacturing concerns in revitalizing their operations. In turn, EES personnel are seeking opportunities to assist Georgia concerns that wish to enter the export field or improve their productivity.

### **Project Summaries**

The individual projects which were active during the period under the program of management and technical assistance to businesses, industrial firms, and communities in designated Georgia counties are listed by Economic Development District, and descriptions include identification of each project by number, type, and location; a brief description of the work performed; and a statement of the results achieved. The projects which were still active as of June 30, 1982 are listed under "Ongoing Projects" in each EDD. The location of projects by county are shown in Figure 3. Project summaries are as follow.

FIGURE 3

PROJECT LOCATION BY COUNTIES



## CENTRAL SAVANNAH RIVER ECONOMIC DEVELOPMENT DISTRICT

### General

The Central Savannah River Economic Development District consists of 13 counties, all of which are eligible Redevelopment Area counties: Burke, Columbia, Emanuel, Glascock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Screven, Taliaferro, Warren, and Wilkes. The Economic Development Centers are Augusta (Richmond County) and Swainsboro (Emanuel County).

### Discontinued Projects

During this period, one project was discontinued in this area.

#### Project 974: Assistance to a metal manufacturing company in Jefferson County

Nature of Problem: A tool and die shop was seeking to broaden its manufacturing base as well as its marketing area. The company produces several metal products, including gas fish cookers, pickup truck tool boxes, and wire cricket cages. The company has general machining, welding, and fabrication capabilities. It was interested in using these capabilities to produce metal fabrications and components for other companies. The firm requested help with its marketing effort, including supply guidelines for promotion of the most profitable work.

Work Performed: Initial contacts was made with company personnel and a work program developed. However, a decision was made to discontinue work on the project until a later date.

Results: The project is closed.

### Ongoing Projects

There is one project underway in this area.

#### Project 1002: Assistance to a firm in McDuffie County

Nature of Problem: The company has requested assistance in a product design for a wooden highway noise barrier. It is anticipated that this product item will increase the company's market for treated timber and create a construction company subsidiary.

Work Performed: EES personnel have met with company representatives and discussed proposed work which would deal specifically with the evaluation and design changes that may be required of a prototype now in use. Several innovative design changes have been developed which have resulted in the company being invited to bid on additional contracts. Additional sales resulting from successful bids have the potential of creating more jobs, rather than continuing layoffs.

Results: The project is continuing.

## CHATTAHOOCHEE-FLINT ECONOMIC DEVELOPMENT DISTRICT

### General

The Chattahoochee-Flint Economic Development District consists of five counties, all of which are eligible Redevelopment Area counties: Carroll, Coweta, Heard, Meriwether, and Troup. The Economic Development Centers are Carrollton (Carroll County) and LaGrange (Troup County).

### Discontinued Projects

During the period, one project was discontinued in this area.

#### Project 999: Assistance to a manufacturing firm in Carroll County

Nature of Problem: This company planned to put its manufacturing planning data on its computer. The firm was adding part numbers to all its parts and requested assistance in designing a companywide numbering plan which will later fit a computerized need.

Work Performed: A visit to the firm was made and a project plan developed. However, a significant decrease in order rate caused a reevaluation of efforts at this company. Assistance shifted to designing a company-wide MIS system in preparation for growth to an analysis of cost cutting opportunities. A total firm productivity analysis was conducted to analyze the four factors of productivity (materials, labor, energy, and capital) as well as to analyze product flow and materials handling methods. As a result of the above work, \$57,000 in annual savings were identified from a modified plant flow, and plans were made for implementing this modification (including a small plant expansion) in the first quarter of 1983. Further, assistance is not required at this time.

Results: The project is closed.

### Ongoing Projects

There is one project underway in this area.

#### Project 1006: Assistance to an individual in Carroll County concerning a new venture

Nature of Problem: An individual in Carroll county is exploring the feasibility of developing a product and has requested technical assistance from EES.

Work Performed: A staff assistant has been assigned to meet with and assist the individual as requested.

Results: The project is continuing.

## COASTAL AREA ECONOMIC DEVELOPMENT DISTRICT

### General

The Coastal Area Economic Development District consists of eight counties, all of which are eligible Redevelopment Area counties: Bryan, Camden, Chatham, Effingham, Glynn, Liberty, Long, and McIntosh. The Economic Development Centers are Brunswick (Glynn County) and Hinesville (Liberty County).

### Discontinued Projects

None.

### Ongoing Projects

There is one project underway in this area.

### Project 1010: Assistance to the Coastal Area District Development Authority, Brunswick, Georgia

Nature of Problem: The Coastal Area District Development Authority (CADDa) is evaluating a loan application for a new venture in the Brunswick area. The new firm's proposed operation will provide for the importation of mica and its processing in a unique manner for sale to domestic customers. CADDa has requested assistance in assessing the technical and financial feasibility of the proposed operation. CADDa manages an EDA-sponsored revolving loan program.

Work Performed: EES personnel have met with CADDa staff members and an initial plan of work has been developed.

Results: The project is continuing.

## COOSA VALLEY ECONOMIC DEVELOPMENT DISTRICT

### General

The Coosa Valley Economic Development District consists of ten counties, nine of which are eligible Redevelopment Area counties: Bartow, Chattooga, Dade, Floyd, Gordon, Haralson, Paulding, Polk, and Walker. The Economic Development Centers are Bremen-Tallapoosa-Buchanan (Haralson County), Rome (Floyd County), and Rossville-LaFayette (Walker County).

### Discontinued Projects

During this period, three projects were discontinued in this area.

#### Project 1000: Assistance to a machinery firm in Gordon County

Nature of Problem: The president of the company wanted to diversify and expand his job/machine shop in order to minimize the effects of recessionary times. He was interested in complementing his present operation with a metal fabrication shop to manufacture portable wrecker/towing equipment, including trailers that would be attachable/detachable to standard pick-up trucks. He requested assistance in defining the market and determining the feasibility of setting up such an operation. He wanted to know if there were other equipment manufacturers in the market area which would compete with his products.

Work Performed: A visit was made to the plant and discussions were conducted with management regarding their desire to diversify. A marketing survey was then conducted in which 58 wrecker and towing equipment manufacturers were addressed. Information was received from 14 of the companies queried. Eleven letters were returned "undeliverable," indicating that the companies may have gone out of business. Other information indicated that the current competitive situation in the region and the state of the recessionary economy are such that it does not appear that expansion in this manufacturing field is feasible. A return to better economic conditions might justify further investigation into this manufacturing opportunity in the future.

The company was advised of the findings of the marketing survey. No further assistance is needed at this time.

Results: The project is closed.

#### Project 1001: Technical assistance to a lumber company in Floyd County

Nature of Problem: The owner of a lumber company in Floyd County requested engineering assistance to evaluate his present production system, especially that part of the system that planes lumber. There appears to be a

need to reduce noise levels, and thus decrease operator fatigue and improve the working environment for all workers. The owner also requested that an acoustical enclosure be designed, if required.

Work Performed: EES personnel visited the plant and analyzed plant operations. This included measuring noise levels and sound pressures around equipment and operators. A comprehensive engineering analysis was completed for the construction of an acoustical enclosure and provided to the company. Also, the company was furnished research information from a number of technical publications that are applicable to company operations.

Results: The company plans to construct the planned enclosure in the near future, using EES recommendations. Further assistance is not required at this time. The project is closed.

#### Project 1011: Assistance to a manufacturing firm in Chattooga County

Nature of Problem: A manufacturer of wire harnesses in Chattooga County is planning to increase production during 1983. He wants to expand existing facilities and redesign its production processes to make material flow and equipment layout more efficient and productive.

Work Performed: EES personnel met with plant management and discussed business objectives and plans for expansion. A detailed analysis of the existing facilities was made and measurements were taken to prepare a plant layout, production techniques and material flow to identify improvements that could be economically and effectively accomplished. EES personnel proposed two layouts and presented the proposals to management.

Results: Either of the proposed layouts will enable the firm to expand its production during 1983, if undertaken. Further assistance is not required. The project is closed.

#### Ongoing Projects

There are no projects underway in this area.

## GEORGIA MOUNTAINS ECONOMIC DEVELOPMENT DISTRICT

### General

The Georgia Mountains Economic Development District consists of 13 counties, all of which are eligible Redevelopment Area counties: Banks, Dawson, Forsyth, Franklin, Habersham, Hall, Hart, Lumpin, Rabun, Stephens, Towns, Union, and White. The Economic Development Centers are Gainesville (Hall County) and Toccoa (Stephens County).

### Discontinued Projects

None.

### Ongoing Projects

There is one project under way in this area.

#### Project 1013: Assistance to a manufacturing firm in County

Nature of Problem: A company in County has a noise problem resulting from the use of rooftop air conditioning units. Assistance has been requested in determining ways and means for reducing noise impacts on residents surrounding the plant site.

Work Performed: Communications has been established with plant management and work will be undertaken in the foreseeable future.

Results: The project is continuing.



## LOWER CHATTAHOOCHEE ECONOMIC DEVELOPMENT DISTRICT

### General

The Lower Chattahoochee Economic Development District consists of eight counties, seven of which are eligible Redevelopment Area counties: Chattahoochee, Clay, Muscogee, Quitman, Randolph, Stewart, and Talbot. The Economic Development Center is Columbus (Muscogee County).

### Discontinued Projects

During this period, one project was discontinued in this area.

#### Project 990: Assistance to a manufacturer of high fidelity speakers in Randolph County

Nature of Problem: A manufacturer of high fidelity speakers in Randolph County has a national market. However, the company has experienced some problems in the area of plant layout, speaker design, product costing and financial management. Assistance was requested from EDL.

Work Performed: EDL personnel established a working relationship with company management. Recommendations were made and accepted by company personnel relative to product line improvement. Analysis of existing product costing procedures were made and an improved system was installed by the company. Assistance is currently being furnished in speaker design as well as in general financial improvement matters. Further assistance is not required at this time.

Results: The project is closed.

### Ongoing Projects

There are no projects under way in this area.

## HEART OF GEORGIA ECONOMIC DEVELOPMENT DISTRICT

### General

The Heart of Georgia Economic Development District consists of nine counties, eight of which are eligible Redevelopment Area counties: Dodge, Laurens, Montgomery, Pulaski, Telfair, Treutlen, Wheeler, and Wilcox. The Economic Development Center is Dublin (Laurens County).

### Discontinued Projects

None.

### Ongoing Projects

There was one project under way in this area.

#### Project 1012: Assistance to an individual in start-up venture in Laurens County

Nature of Problem: An individual in Laurens County developed a specialty consumer item for the recreation and sporting goods area. Primary assistance requested involves product component pricing and other technical assistance relating to accuracy and improved viability of the product in the market. A patent has been obtained on the product and productions start-up is anticipated.

Work Performed: Communication has been established with the client and work will be undertaken in the foreseeable future.

Results: The project is continuing.

## NORTHEAST GEORGIA ECONOMIC DEVELOPMENT DISTRICT

### General

The Northeast Georgia Economic Development District consists of ten counties, all of which are eligible Redevelopment Area counties: Barrow, Clarke, Elbert, Greene, Jackson, Madison, Morgan, Oconnee, Oglethorpe, and Walton. The Economic Development Center is Athens (Clarke County).

### Discontinued Projects

None.

### Ongoing Projects

There is one project under way in this area.

#### Project 998: Assistance to a firm in Barrow County in solving engineering problems

Nature of Problem: This company is developing a new product for which orders have already been taken. They have had trouble locating the specialized components needed for an electric circuit and have asked for engineering help to solve some other technical problems.

Work Performed: Communications were established with the company and work was undertaken. Specialty vendors and quotes were obtained and the prototype circuit evaluated. Changes in the speciality circuits affected the performance of the end item, thus requiring assistance by the EES staff.

Results: The project is continuing.

#### Project 1007: Assistance to a manufacturing firm in Greene County

Nature of Problem: A manufacturing firm in Greene County determined that it had a need to establish a computer-based management information system (MIS) within its operations. EES was requested to furnish assistance in developing an MIS specifically designed for an apparel manufacturing business.

Work Performed: EES staff personnel were in communication with the company and tentative plans for the project were developed. However, a decision has been made to discontinue the project.

Results: The project is closed.

### Ongoing Projects

There are no projects underway in this area.

## **SOUTH GEORGIA ECONOMIC DEVELOPMENT DISTRICT**

### General

The South Georgia Economic Development District consists of ten counties, all of which are eligible Redevelopment Area counties: Ben Hill, Berrien, Brooks, Cook, Echols, Irwin, Lanier, Lowndes, Tift, and Turner. The Economic Development Centers are Valdosta (Lowndes County) and Tifton (Tift County).

### Discontinued Projects

None.

### Ongoing Projects

One project is currently underway in this area.

#### Project 973: Assistance to an agricultural manufacturing business in Berrien County

Nature of Problem: A small manufacturer of agricultural equipment in Berrien County wishes to diversify its product line by manufacturing disk blades for agricultural equipment. The company requested assistance in identifying the basic production processes required, specific manufacturing operations needed, new equipment that will be required to produce the disks, and the development of a pricing structure.

Work Performed: EES staff engineers met with management and developed a detailed program which is now underway. Assistance will also be furnished in the transfer of new technology.

Results: The project is continuing.

## SOUTHEAST GEORGIA ECONOMIC DEVELOPMENT DISTRICT

### General

The Southeast Georgia Economic Development District consists of eight counties, all of which are eligible Redevelopment Area counties: Atkinson, Bacon, Brantley, Charlton, Clinch, Coffee, Pierce, and Ware. The Economic Development Center is Waycross (Ware County).

### Discontinued Projects

None.

### Ongoing Projects

There is one project under way in this area.

#### Project 1004: Assistance to a manufacturing firm in Ware County

Nature of Problem: A manufacturing firm in Ware County began serious consideration of expansion in 1980. However, economic conditions have resulted in delay of further expansion planning until now. As a part of the expansion plans, EES has been requested to assist management in developing a layout for its facilities and to provide guidance in the planning process necessary to start up a totally new plant site. It is estimated that the new facility will permit the employment of an additional 40 workers.

Work Performed: EES has assisted this firm on several occasions and Field Office representatives maintain continuing liaison with management. Thus, the current project is actually a continuation of service furnished the company. Work is underway on the current project.

Results: The project is continuing.

## PROJECTS OUTSIDE ECONOMIC DEVELOPMENT DISTRICTS

### General

During the period, six projects were active in counties outside the Economic Development Districts.

### Discontinued Projects

During the period, two projects were discontinued in the area.

#### Project 996: Assistance to a small manufacturing firm in the DeKalb County/Atlanta Metropolitan Area

Nature of Problem: The principal of a firm developed a specialty consumer item for the home. The item required that some technical problems be solved prior to production.

Work Performed: Discussions were conducted with the head of the firm and a plan developed. Work was to be undertaken when the principal completed research on technical matters. It has been determined that further assistance is not required at this time.

Results: The project is closed.

#### Project 1005: Assistance to a textile firm in the Atlanta Fulton County Area

Nature of Problem: A concern in the Atlanta Metropolitan Area engaged in the manufacture of men's and boys' socks from cotton and synthetic yarns is experiencing problems because of excessive noise levels. The company is attempting to upgrade its existing machine line to achieve higher production efficiency. EES has been requested to furnish management assistance and advice concerning the program.

Work Performed: EES personnel have been in communication with company management and a work program has been developed and is underway. EES personnel have examined existing machine lines and furnished the company a recommended course of action. If the recommendations are accepted and implemented,, it is anticipated that the company's ability to stay in business will be substantially improved. Further assistance is not required at this time.

Results: The project is closed.

### Ongoing Projects

There is one project underway in this area.

Project I003: Assistance to an engineering firm in the DeKalb County/Atlanta Metropolitan Area

Nature of Problem: An engineering firm in the Atlanta Metropolitan Area produces a line of small pressure vessels used to apply insecticides or cleaning chemicals. At present, the company has a market limited to states that do not have boiler and pressure vessel codes. The company has requested assistance needed to guide the company in preparing and implementing procedures to allow fabrication of "ASME" coded vessels.

Work Performed: EES staff personnel have been in communication with company management personnel. A work program will be prepared for the company in the near future.

Results: The project is continuing.

**Accomplishments**

Conclusions regarding the overall impact of this program must be based upon the collective evaluation of the individual projects and their collective results over the project year. This evaluation should include not only a recognition of the fact that a deliberate attempt has been made to state the significance of the Georgia Tech efforts in realistic terms, but also a consideration of other actions transpiring in the area in which the management and technical assistance efforts were undertaken.

During the first half of this program year, economic conditions in the target areas have been turbulent. Firm management has faced an array of problems as the economy is beginning to move into a more favorable climate. Georgia Tech field personnel report that it appears that the services offered under the EDA program and similar programs continue to be utilized when available. Thus, it is anticipated that the program will be accelerated during the last half of the project year.

As reported above, 18 management and technical projects were active during this report period. Project assessment has been included in each case where results could be confirmed. The employment of 40 additional workers has been forecast. It is planned to furnish a more comprehensive assessment of each project and the program, including the number of jobs created and saved in the final statistical progress report.

## INSTITUTIONAL AND ORGANIZATIONAL MATTERS

### The Georgia Tech EDA University Center Program

A program of management and technical assistance to counties designated by the Economic Development Agency (EDA) has been conducted by the Economic Development Laboratory since 1965. This program conducted under EDA sponsorship, has undertaken 1010 projects since its inception.

The program has three major objectives. First, the program is designed to stimulate the expansion and diversification of existing business and industry in 154 Georgia Counties. Additionally, it seeks to support the formulation of new, economically sound enterprises in these counties. Finally, it serves to encourage the development and expansion of economically sound enterprises owned and/or managed by individuals from the minority and the female communities in the service area.

At this time the Economic Development Laboratory is offering the following types of management assistance under the EDA program. Assistance is provided marginal existing business and industrial firms in order to solve problems that endanger their continuation. The purpose of this aid is to save jobs. EDL assistance is furnished to existing business and industry with operational problems which inhibit growth. This expansion and diversification assistance is furnished to create jobs. Also, technical and management assistance is enlisted in the formulation of new industrial venture; this, again, is designed to create jobs. Finally assistance is furnished individuals from the minority and the female communities for the purpose of creating opportunities for the development of business enterprises and the creation of jobs.

In the work plan for 1983 the program aims at high-priority development items needed to assist and support the revitalization program fostered by the Department of Commerce, within reasonable cost constraints. These items include productivity improvement, technology transfer, and assistance to firms involved in the "world market." Special attention is given to continuing assistance to firms in matters relating to business counseling involving firmwide comprehensive productivity improvement.

EDA's University Center for Technical Assistance continues to function as an integral part of Georgia Tech's broad program of managerial and technological assistance to business and industry. This broad program is outlined in the following section.

### Relationships with Other Federal Programs and the Private Sector

As a leading technological institution of higher learning, Georgia Tech has sought and developed a close relationship with the business community through a number of innovative programs, and is involved with federal programs as well.



The Economic Development Laboratory (formerly the Georgia Tech Industrial Development Division) within EES has served as an EDA University for Technical Assistance Center Unit since the inception of the program in the mid-1960's.

From its base at Georgia Tech, the Southeastern Trade Adjustment Assistance Center (TAAC) provides technical and financial assistance to manufacturing firms and contractors in Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee that have been hurt by import competition. One of eleven such centers across the nation, TAAC is funded through a grant from the International Trade Administration of the U.S. Department of Commerce. TAAC assists firms in marketing, engineering, management, finance, and obtaining financial assistance from the federal government through direct government loans or federally guaranteed loans.

The Technology Utilization and Commercialization Center within EES brings business, government, and academic resources together to advance minority business development. One of ten technology commercialization centers funded by the Minority Business Development Agency, TUCC encourages the growth of minority-owned firms and minority entrepreneurship in Alabama, Florida, Kentucky, Mississippi, and Tennessee. TUCC identifies markets and new or underutilized products and technologies which, as required, can be matched with sources of technical expertise, adaptive engineering, capital investment, and financing. Products with commercial potential are matched with minority-owned firms capable of manufacturing or marketing them effectively.

Another program based on the Georgia Tech campus with extensive private sector linkages is the Advanced Technology Development Center (ATDC). Sponsored by Georgia Tech and the State of Georgia, ATDC's mission is to stimulate the growth of high technology business development in Georgia. To achieve this end, ATDC provides information and assistance to high technology firms considering expansion or relocation to Georgia, aids high technology entrepreneurs, and helps existing Georgia companies enhance their technological capabilities. Additionally, ATDC helps firms identify product markets, locates venture capital, provides management support, and evaluates new ventures and products.

The Corporate Liaison Program consists of a network of major corporations that work with Georgia Tech on projects of mutual benefit and interest. The program provides supplemental research resources for member companies by linking them with Georgia Tech's extensive technical expertise; by having Tech researchers design solutions to specific technical problems; by establishing ongoing working relationships between researchers and company staff; by keeping firms abreast of innovative university programs and research; and by working with firms to open new avenues of commercial development. The Corporate Associates Program is a similar program of mutual cooperation between Georgia Tech and the corporate world. Among its members are the Coca-Cola Company, the Eastman Kodak Company, the IBM Corporation, the Exxon Corporation, and Merrill, Lynch, Pierce, Fenner & Smith, Inc.

Georgia Tech is also the home of the Georgia Productivity Center (GPC), the nation's first state center dedicated to improvements in business and industrial productivity. Building on Tech's two decades of service to Georgia industry, GPC provides problem solving in the areas of innovation, research and development, safety and environmental counseling, and human resources.

Through these and other business-related programs, Georgia Tech maintains ongoing productive relationships with chambers of commerce, trade associations, industry groups, business councils, and representatives of both major corporations and small businesses, as well as with federal agencies.

### Recommendations

EDA's university centers for technical assistance program is a proven, cost effective one that furnishes in-place technical assistance on a national basis. However, personnel of this Center believe that the current program should be retargeted to emphasize or focus on:

- o High-priority development items needed to assist and support economic revitalization programs fostered by the Department of Commerce within reasonable cost constraints. These items include productivity improvement, technology transfer, assistance to firms involved in the "world market," and the reduction of adversary relationships between governmental units and the private sector.
- o Furnishing technical assistance and applied research to the Department of Commerce, its regional offices, and to others involved in Department of Commerce economic development activities.
- o Continued assistance to individual firms in matters relating to business counseling with emphasis on firmwide, comprehensive productivity improvement. Such assistance is to be furnished on request, and within funding constraints.

**SEMI-ANNUAL REPORT  
PROJECT NO. A-2018**



**A PROGRAM OF MANAGEMENT AND  
TECHNICAL ASSISTANCE IN DESIGNATED  
EDA COUNTIES IN GEORGIA**

**By**

**Hardy S. Taylor  
Senior Research Scientist**

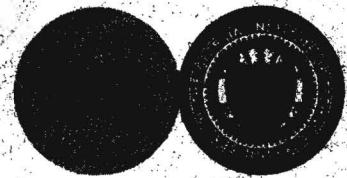
**Arthur L. Brown  
Research Associate II**

**Grant Nos. 04-06-01567-26**

**Period 1/1/84 through 6/30/84**

**GEORGIA INSTITUTE OF TECHNOLOGY**

**A Unit of the University System of Georgia  
Engineering Experiment Station  
Atlanta, Georgia 30332**



Project No. A-2018  
Grant Nos. 04-06-01567-26

**A PROGRAM  
OF MANAGEMENT AND TECHNICAL ASSISTANCE  
IN DESIGNATED EDA COUNTIES IN GEORGIA**

**Semi-Annual Progress Report**

**January 1 - June 30, 1984**

**by**

**Hardy S. Taylor  
Senior Research Scientist**

**Arthur L. Brown  
Research Associate II**

This technical assistance program was accomplished by professional consultants under a grant from the Economic Development Administration. The statements, findings, conclusions, recommendations, and other data in this report are solely those of the grantee and do not necessarily reflect the views of the Economic Development Administration.

**Economic Development Laboratory  
Engineering Experiment Station  
GEORGIA INSTITUTE OF TECHNOLOGY  
July 1984**

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## **SUMMARY OF CENTER ACTIVITIES**

### **Overall Program Objectives**

The program activities described in this report represent an extension of the Economic Development Laboratory's established service to Georgia business and industry through market research, management guidance, and technical assistance. The specific objectives of the EDA-sponsored program are as follows:

- To stimulate the expansion and diversification of existing industry;
- To support the formation of new, economically sound enterprises; and
- As an ultimate objective following from the two stated above, to create more jobs.

### **Service Area**

The service area covered under the EDA program of management and technical assistance encompasses all designated EDA counties in the State of Georgia. At the end of the reporting period, there were 154 of these EDA counties in Georgia, so designated because they are the most economically depressed areas of the state. The objectives of the program address the fundamental cause of these conditions: inadequate employment opportunities. As a result of this deficiency, the counties have experienced high levels of unemployment poverty, and out-migration.

### **Project Activity**

During this project year, 20 management and technical assistance projects were active under the EDA program. Of these projects, seven were carried over from the previous year, and 13 new projects were established. Fifteen projects were completed during the period, leaving five active projects.

Several client types are represented in our portfolio. However, eighteen of our clients were manufacturing concerns. The service and retail sectors are also represented with one client each. Although a construction company received assistance, the firm is considered a manufacturing and retail operation.

Fifteen cases required technical/engineering assistance. The remaining five cases required assistance of a non-technical nature with one case receiving combined technical/engineering and non-technical assistance.

Of the 20 client cases, one minority- and one female-owned operation received assistance.

## **ANNUAL WORK PLAN, AIMS AND OBJECTIVES**

### **Economic Characteristics of Service Area**

The service area covered by the EDA Technical Assistance Grant effective during 1984 comprises 154 designated counties from the total 159 Georgia counties. These designated counties, shown in Exhibit 1, are economically depressed areas for various reasons. The EDA grant program addresses the need for economic revitalization in these counties by creating job opportunities in new or existing businesses and industries within these regions.

The Southeastern economy experienced a deepening recession that held through most of 1982. Parts of the Southeastern economy began to experience a strong upturn during the first half of 1983 with a reawakening of consumer spending. Increasingly optimistic consumers began to buy cars, clothes and houses as interest rates fell.

A revival in residential construction, first noted as 1982 drew to a close, stimulated construction related industries across the nation. Predictably, the region's substantial furniture and carpet manufacturing industries soon began to expand output rapidly to meet the renewed demand.

The recovery spread quickly, injecting new life into the Southeast's concentrations of automobile parts and apparel manufacturing plants. Closed factories began to reopen and laid-off employees returned to work. Total employment, which had languished through 1982, began to grow again during the late spring, pumping more money into the economy.

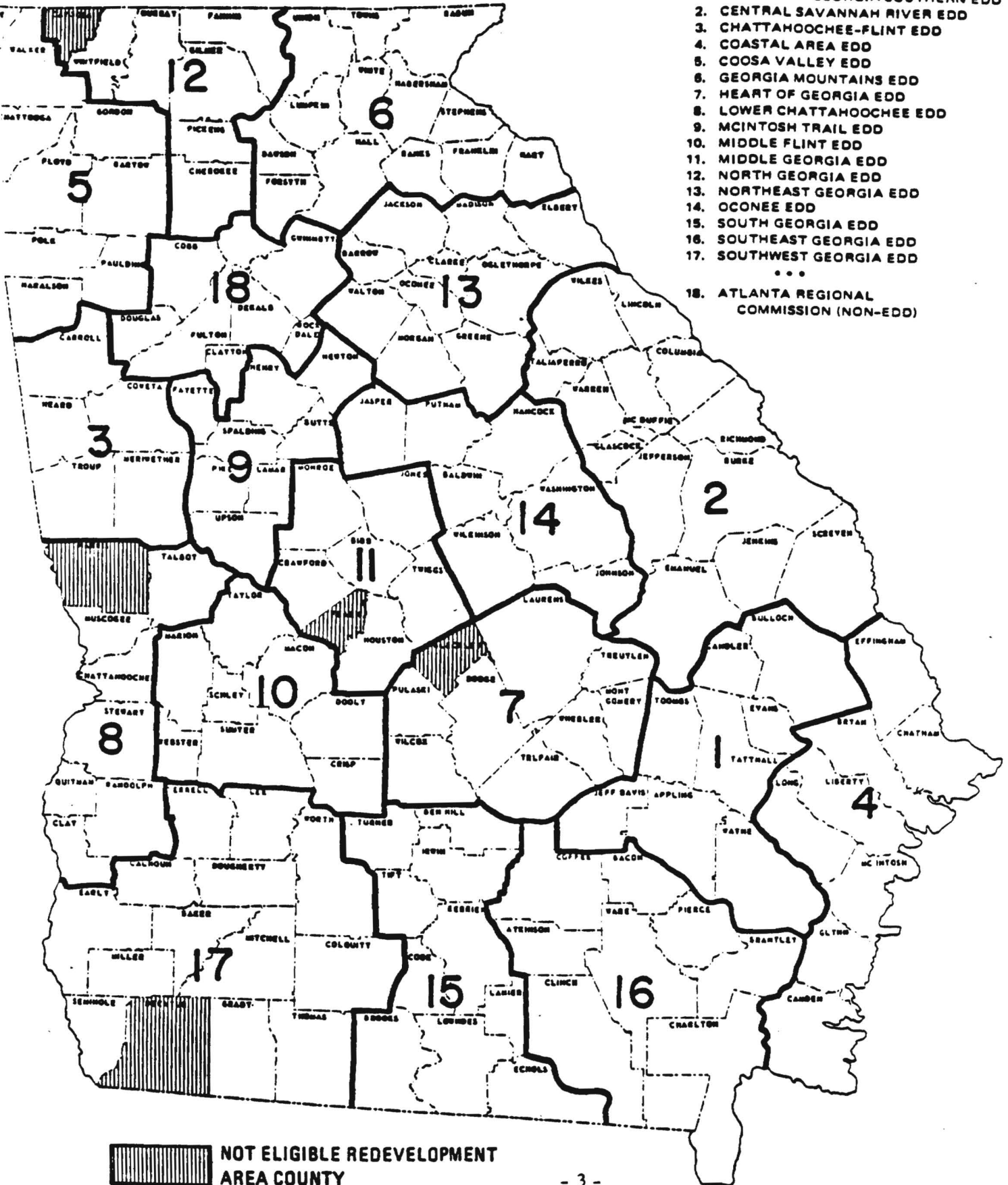
As 1983 ended, both employment and joblessness reflected the recovery's burgeoning strength. Employment was showing strong growth, while the unemployment rate continued to drop.

In November, Florida, Georgia and North Carolina, where economic activity weathered the recession relatively well, unemployment fell to 7.8, 7.1 and 8.2 percent, respectively. The mix of service-related industries in these states insulated them from the unemployment problems that plagued the manufacturing-dominated economies of neighboring states.

# EXHIBIT I

## ECONOMIC DEVELOPMENT ADMINISTRATION SERVICE AREA WITH AREA PLANNING AND DEVELOPMENT COMMISSION BOUNDARIES.

1. ALTAHAMA GEORGIA SOUTHERN EDD
2. CENTRAL SAVANNAH RIVER EDD
3. CHATTAHOOCHEE-FLINT EDD
4. COASTAL AREA EDD
5. COOSA VALLEY EDD
6. GEORGIA MOUNTAINS EDD
7. HEART OF GEORGIA EDD
8. LOWER CHATTAHOOCHEE EDD
9. MCINTOSH TRAIL EDD
10. MIDDLE FLINT EDD
11. MIDDLE GEORGIA EDD
12. NORTH GEORGIA EDD
13. NORTHEAST GEORGIA EDD
14. OCONEE EDD
15. SOUTH GEORGIA EDD
16. SOUTHEAST GEORGIA EDD
17. SOUTHWEST GEORGIA EDD
- ...
18. ATLANTA REGIONAL COMMISSION (NON-EDD)





Another year of economic expansion promises a continuing reduction in unemployment throughout the Southeast and in the nation, where the rate seems likely to decline to 8 percent or even lower by year end.

Though the nation as a whole has experienced problems resulting from the recession, Georgia has fared rather well. Part of the explanation for Georgia's increased stability lies in its employment base. Since the 1973-1975 recession, the percentage employed in service jobs has increased, while the proportion in manufacturing and construction has decreased (Exhibit II). The increasing share of service jobs, generally less susceptible to economic downturns, has served to insulate the Georgia economy. Furthermore, a cyclically sensitive sector, durable goods, currently accounts for 8 percent of nonagricultural employment in the state compared with 12 percent nationwide.

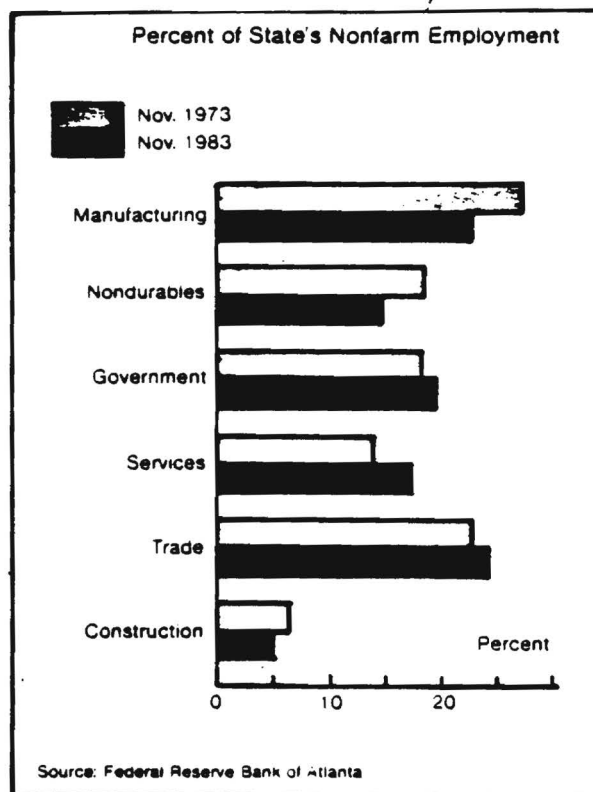
Recovery from Georgia's mild recession has been broad-based, with improvement in employment, construction activity, and tourism. Following recovery behavior, declining interest rates during early 1983 stirred demand and stimulated consumer purchases, which reduced inventories and increased employment.

The job market brightened for almost all Georgians in 1983, with employment rising in all major industries. Pent-up demand for automobiles stimulated employment in Georgia's transportation equipment industry. Similarly, lumber and wood employment responded favorably to increased demands for housing.

Residential and commercial construction increased during the year. Single family building permits in the state were up 64 percent through November compared with 1982 levels. Commercial space absorption in Atlanta, although posting near-record highs, barely kept pace with new construction.

With Georgia's employment gains, came expected reductions in the unemployment rate. Reviewing Georgia's economic recovery in 1983, almost two-thirds of the state's counties experienced lower annual average unemployment rates than in 1982. Revised 1982 data and recently released 1983 estimates show that the state's modest drop of .3 percentage points in the annual, unemployment rate (from 7.8 percent of the civilian labor force in 1982 to 7.5 percent in 1983) a considerable improvement in the patterns of unemployment rates among counties.

## EXHIBIT II



Previous county unemployment patterns have indicated annual average unemployment rates shifting with the state's overall economic changes. As Exhibit III shows, urban counties and those with extensive governmental employment, maintained moderate levels of unemployment in 1983; and outlying counties improved to that level. Although no county in Georgia had a low unemployment rate (3 to 4.9 percent annually) in either year, the group with moderate rates (5 to 6.9 percent) increased from 35 in 1982 to 39 in 1983. The number of counties with high rates (7 to 9.9 percent) grew from 77 in 1982 to 89 in 1983. The growth in moderate and high unemployment rate counties actually improved: counties experiencing very high rates (10 percent or more) dropped from 47 in 1982 to 31 in 1983.

The greatest number of counties experienced annual average unemployment rates in the range of 7 to 7.9 percent and 8 to 8.9 percent during 1983. Data for 1982 indicate that unemployment rates ranged from 5.1% (Camden County) to 19.4 percent (McDuffie County) in the earlier year. In 1983, the range narrowed -- 5.1 (Fayette County) to 14.5 percent (McDuffie County).

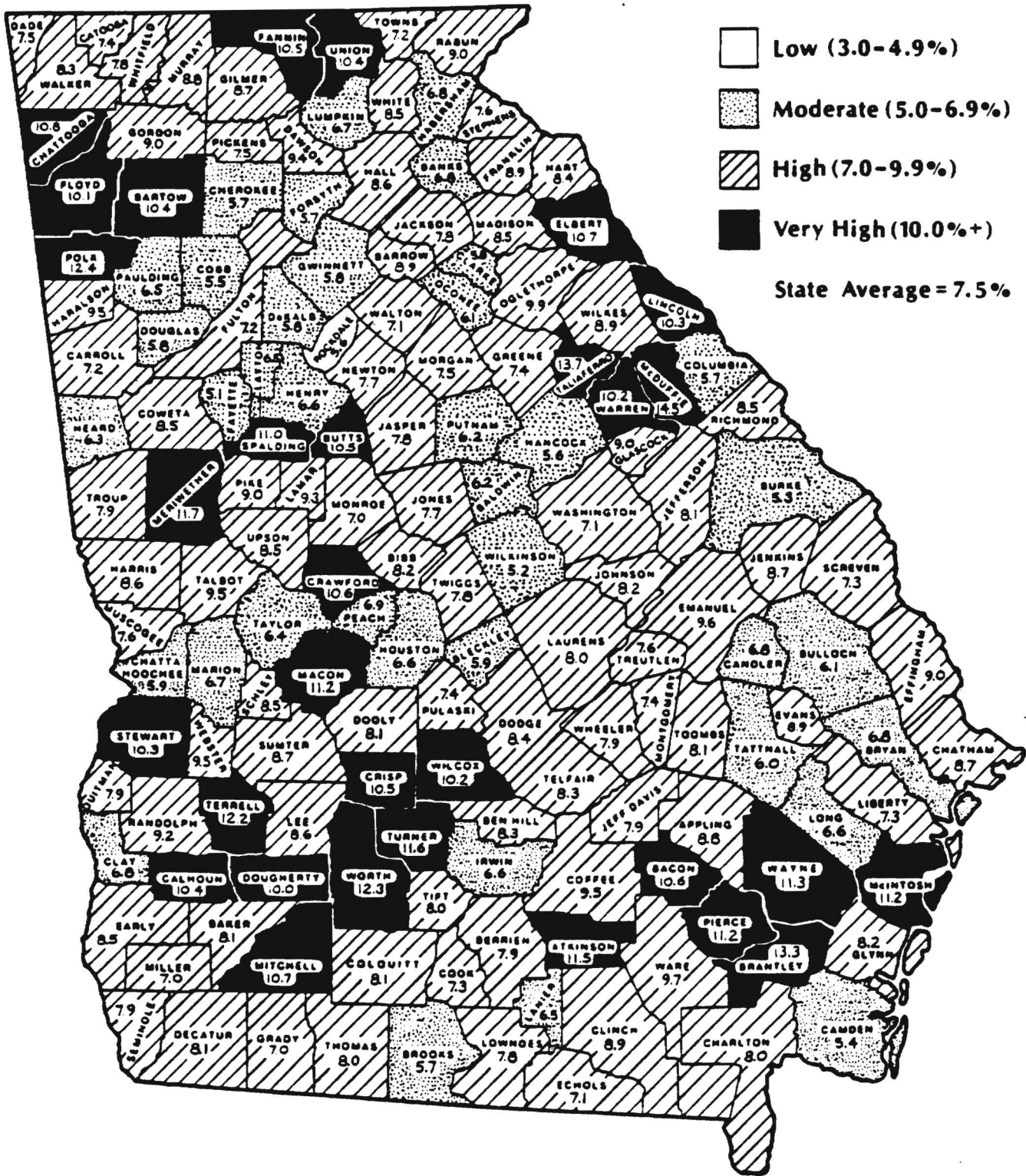
The drop in Georgia's statewide average annual unemployment rate, and the accompanying shifts in county rates, took place when the state's total labor force was expanding. Between 1982 and 1983 Georgia's annual average civilian labor force rose from 2,664,000 to 2,697,000, an increase of 1.24 percent. The average number of employed persons increased from 2,456,000 to 2,495,000 (1.159 percent increase). Simultaneously, the average number of unemployed persons dropped by 2.8 percent, from 208,000 to 202,000. The picture given by labor force, employment and unemployment rate data is thus one of an improving economy both statewide and in many local areas.

Per capita income in Georgia is mostly concentrated around the Atlanta SMSA. Exhibit IV shows the top ten counties ranked by per capita income. Of the top ten counties, five are located in the Atlanta metropolitan area and the remaining five are scattered.

Also shown in Exhibit IV are the ten counties with the lowest per capital income. Four of these counties are designated as having very high unemployment rates. The majority of these counties are in Southern Georgia.

# EXHIBIT III

## 1983 GEORGIA COUNTY UNEMPLOYMENT RATES\*



\* Annual average unemployment as a percentage of the civilian labor force, by place of residence.

## EXHIBIT IV

### GEORGIA'S 10 HIGHEST INCOME COUNTIES, 1980

<u>County</u>	<u>Per Capita Income (\$ Dollars)</u>	<u>Personal Income (\$ Millions)</u>
Dekalb	\$11,850	\$5,724
Fulton	11,317	6,676
Clayton	9,378	1,410
Cobb	9,294	2,767
Glynn	8,821	485
Bibb	8,659	1,301
Fayette	8,608	250
Camden	8,376	112
Chatham	8,372	1,693
<u>Hall</u>	8,196	620

### GEORGIA'S 10 LOWEST INCOME COUNTIES, 1980

<u>County</u>	<u>Per Capita Income (\$ Dollars)</u>	<u>Personal Income (\$ Millions)</u>
Quitman	3,818	9
Lee	4,108	48
Crawford	4,164	32
Clay	4,222	15
Union	4,260	40
Twiggs	4,383	41
Baker	4,464	17
Stewart	4,579	27
Randolph	4,584	44
<u>Brantley</u>	4,597	40

**SOURCE:** 1983 Georgia County Guide

The Atlanta area is under represented in terms of manufacturing employment. Yet the state actually has a higher percentage of manufacturing employment than the nation--23.8 percent versus 22.1 percent. Most of the manufacturing activity is packed into a horseshoe surrounding Atlanta, running clockwise from Macon through Columbus to Rome, around the northern rim of the state to Athens, and ending in Augusta. This area contains 34 percent of the state's population, but 44 percent of its manufacturing employment. This area employs about 250,000 manufacturing workers. Within this area, about 32 percent of the nonfarm employment is in manufacturing, 4 percentage points higher than Michigan, Ohio, or Pennsylvania.

In Fulton and DeKalb Counties (Atlanta), there are approximately three workers in retailing and professional occupations for every worker in manufacturing. In Floyd County (Rome) the ratio is approximately one-to-one. In Whitfield County (Dalton), there are twice as many manufacturing workers as workers in retailing or professions - fully six times the concentration in Fulton-DeKalb.

Even though the manufacturing concentration exceeds the average for the industrial Midwest, the type of manufacturing is very different. Relatively few smokestack industries operate in Georgia; generally, manufacturing focuses on nondurable items, particularly, textile and apparel goods. About 35 percent of Georgia's manufacturing employment is in these two sections. Apparel plants (two-fifths of manufacturing employment) are scattered throughout the state, but textile factories are concentrated in the horseshoe.

However, the manufacturing-intensive horseshoe section is very vulnerable to foreign competition, particularly in textiles and apparel. Imports are supplying more than 14 percent of the U.S. textile market. Almost 6 percent of apparel sales is foreign-produced. These numbers are growing simply because foreign production can produce stock textile items with much lower labor cost. Some help may come from new federal regulations that will restrict import growth.

Southern textile firms, however, are strengthening their position by substituting new technology to reduce costs and enhance responsiveness to the market. For example, southern textile mills have reduced labor cost by 25-30 percent. Still, new developments put pressure on the traditional labor relationships of Georgia textile and apparel firms and require extensive investment in both training and technology.

Traditionally, the manufacturing-intensive section of the state has not been tied too closely to Atlanta. However, this situation is expected to change. Success in the new manufacturing environment places a premium on knowledge, access and responsiveness to changing markets, and application of new technology.

Northeast Georgia, one of the poorest and most sparsely populated parts of the state, faces its own set of peculiar problems. Because of the area's lakes and mountains, it is becoming increasingly popular for second homes, retirement homes, and recreational activities. Much of this activity emanates from Atlanta, and the more affluent northern suburbs. Unfortunately, these activities typically do not provide a local tax base, commensurate with the additional demands on it, so it could prove a mixed blessing for north Georgia. The prospects again are for increased ties with the Atlanta area.

The corridor between Athens and Atlanta has high economic potential. Athens is dominated by the University of Georgia, with few Atlanta commuters. But the high-

tech area now spreading northeast from DeKalb and Gwinett counties promises a natural connection to Athens, perhaps enhanced by some of the "super-computer" developments in the educational center. This is Georgia's most obvious opportunity for a high-tech corridor, anchored by Atlanta and Georgia Tech on the other end.

Retail sales showed gains in 1983 over 1982. Department store sales, grew 15% over 1982 levels. Retailers reported robust double-digit sales increases for the 1983 Christmas season over the previous year.

Georgia retail trade employment increased by 15,600 jobs during the year, with the majority of the new jobs generated in the Atlanta area. The outlook for retail trade in 1984 is excellent, although sales and employment can be expected to grow at a somewhat slower rate than in 1983.

A good economic outlook is predicted for Georgia. Two sectors are especially contributing to Georgia's strong performance -- retail trade and construction. Both sectors could face some slowdown, however. Construction is approaching a saturated market in some areas of the South and consumer buying plans are down. Thus, the recent increase in interest rates will surely impede some home buyers from purchasing. This of course has a reverse multiplier effect since home purchases generally lead to increased furniture and appliance demand.

Nevertheless, Georgia is expected to prosper in 1984. Unemployment in April measured 5.8%, compared with 7.6% in the U.S. Atlanta's jobless rate is even lower, 4.8%. The outlook through 1985 reveals some slowing in the state's economy. Employment growth is projected to continue but at a slower rate. Thus, personal income could expand by 10% for 1984.

## **Overall Program Goals**

Organization and Establishment of Center. First proposed as a comprehensive plan in October 1955, the Industrial Development Program at Georgia Tech was established in July 1956 as a three-man operation. The Industrial Development Branch grew to division status within the Engineering Experiment Station in 1962 and was called the Industrial Development Division. Currently the group holds laboratory status and is known as the Economic Development Laboratory. This laboratory administers the EDA University Center Program.

The overall objective of this laboratory has been and is to stimulate and advance industrial and economic development. This objective is to be achieved through active cooperation with other agencies and organizations engaged in the field of industrial and economic development and through the continuing development and implementation of programs designed to accomplish the following specific aims:

- To provide the facts and scientific research needed to assess the economic status and development potential of the state and its subdivisions;
- To describe, measure, and evaluate the physical and human resources of the state and its subdivisions;
- To determine, through objective research and analysis, the types of business and industrial operations suited for development or expansion in Georgia and in specific locations;
- To serve as a center for the collection, interpretation, and dissemination of information relating to industrial and economic development;



- To provide professional assistance, information and service to established and prospective businesses and industrial firms;
- To motivate and assist public and private organizations in the utilization of research findings in the effort to achieve industrial and economic potentials; and
- To provide professional instruction and guidance in the application of the principles and techniques of industrial and economic development.

#### **Program Objectives and Strategies for Subregions**

The program activities described in this report represent an extension of the Economic Development Laboratory's established service to Georgia business and industry through market research, management guidance, and technical assistance. The specific objectives of the EDA-sponsored program are:

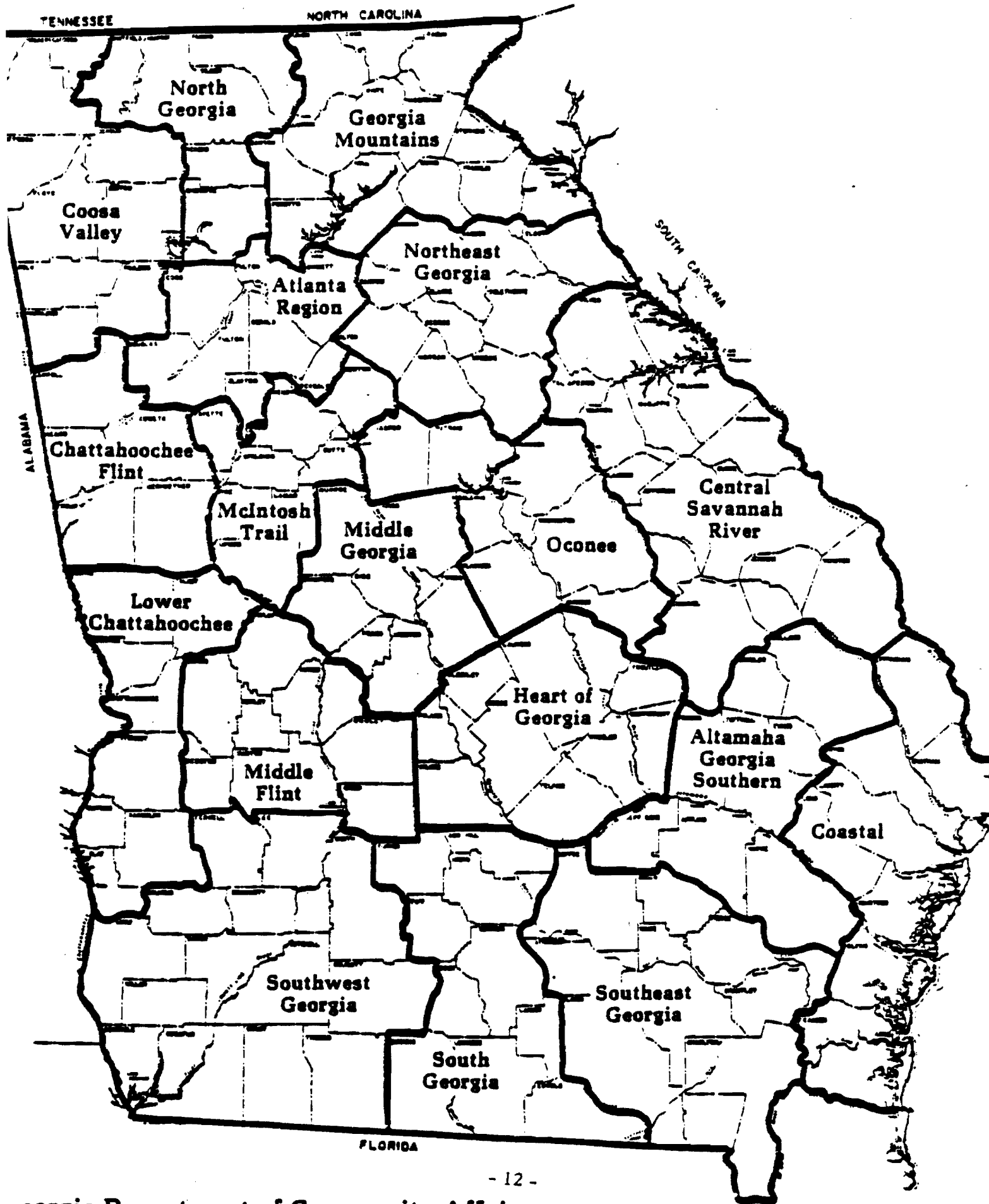
- To stimulate the expansion and diversification of existing business and industry in designated EDA counties;
- To support the formation of new, economically sound enterprises in designated EDA counties; and
- To encourage the development and expansion of economically sound enterprises owned and/or managed by individuals from the minority and female community in the service area.

The program objectives are applied to all the EDA areas in Georgia and do not vary from subregion to subregion. Exhibit V shows the location of Economic Development Districts by Area Planning and Development Commissions throughout the state. Exhibit VI shows the location of Georgia Tech's regional offices. This latter map reflects the blanket coverage of the entire state with regional offices, and taken with Exhibit V shows the relationship between the area offices and the development districts. This 12 - office network enables EDL to effectively serve EDA objectives statewide efficiently and economically through trained professionals in the area offices and EDL staff in Atlanta.

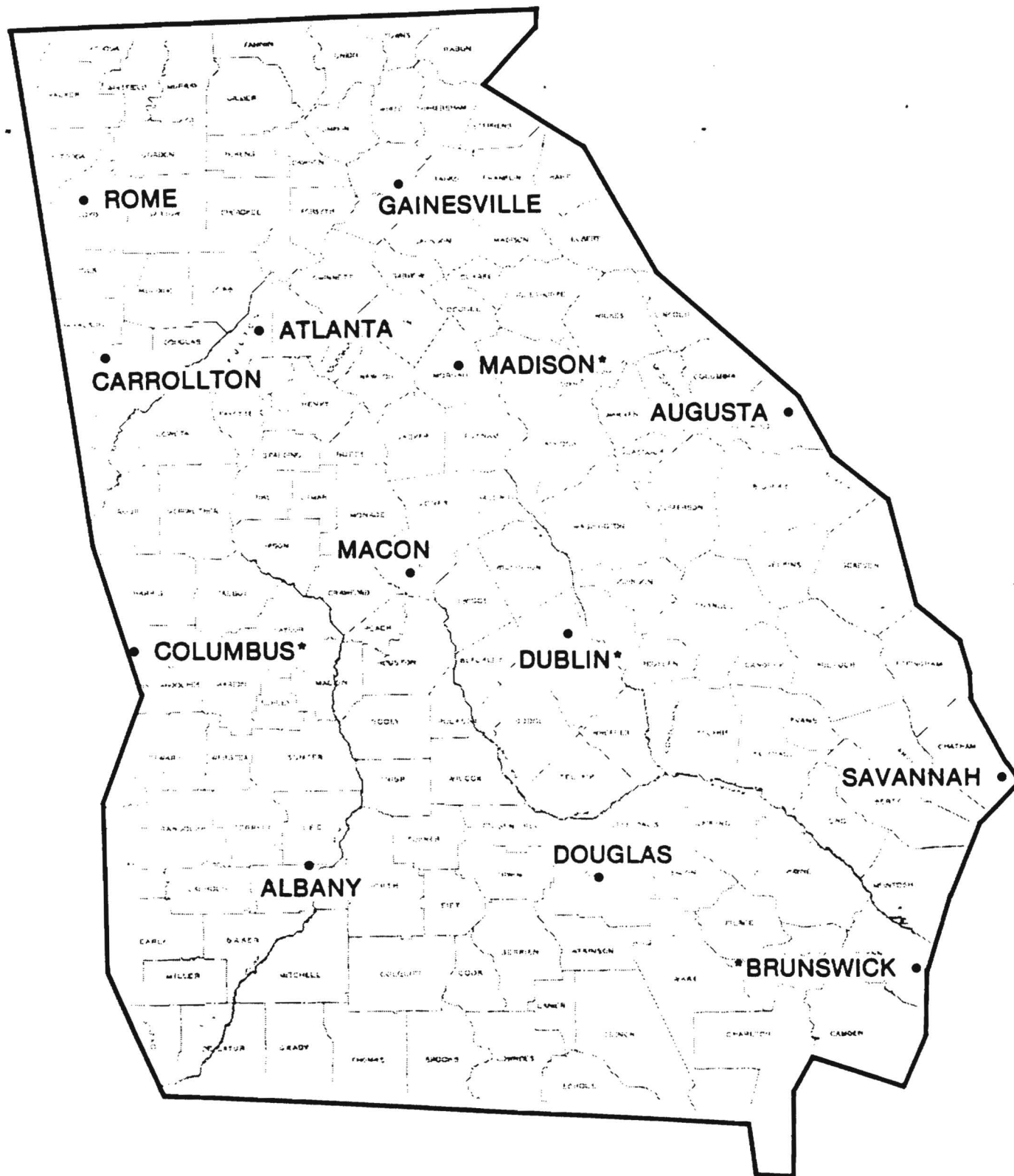


**EXHIBIT V**

**ECONOMIC DEVELOPMENT DISTRICT BY AREA PLANNING & DEVELOPMENT COMMISSIONS**



**EXHIBIT VI**  
**GEORGIA TECH'S REGIONAL OFFICES**



**INDUSTRIAL EXTENSION OFFICE LOCATIONS**

\*Madison, Columbus, Dublin and Brunswick are proposed offices.  
 There are only eight field offices presently serving Georgia's 5.4 million population.

### **Types of Assistance**

Under the current EDA Technical Assistance Grant, the Economic Development Laboratory, through its Business Development Division, offers several types of assistance in designated Economic Development Districts and counties:

- Technical and management assistance is provided to marginal existing business and industrial firms to solve problems that endanger their continuation. The purpose of aid in these cases is to save jobs.
- Technical and management assistance is furnished to existing business and industry with operating problems which inhibit growth. Expansion and diversification assistance is provided to create jobs.
- Technical and management assistance is enlisted in the formation of new industrial ventures, and also for the purpose of creating jobs.
- Technical and management assistance is furnished to individuals from the minority and female community for the purpose of creating opportunities for the development of business enterprises and the creation of jobs.

### **Aims and Objectives - 1984**

EDA's University Centers for technical assistance program is a proven, cost effective program that furnishes in-place technical assistance on a national basis. Over the years, EDA's policy guidance, program objectives and established techniques for conducting a national program of management and technical assistance have proven to be sound. Responsible personnel of this Center believe that established goals, objectives, and methods are also sound. However, a background study conducted by the Center in 1982 concluded that the current program could be targeted to emphasize or focus on:

- High-priority development items needed to assist and support, within reasonable cost constraints, economic revitalization programs fostered by the Department of Commerce. These items include productivity improvement, technology transfer, assistance to firms involved in the "world market"; and the reduction of adversarial relationships between governmental units and the private sector.
- Furnishing technical assistance and applied research to the Department of Commerce, its regional offices, and to others involved in Department of Commerce economic development activities. These efforts are furnished in support of other Department of Commerce activities.
- Continued assistance to individual firms in matters relating to business counseling, with emphasis on firm-wide, comprehensive productivity improvement. Such assistance is to be furnished on request and within funding constraints;

This Center continues its operations based on goals, objectives and procedures set forth in the 1983 Annual Report. Where possible and affordable, activities will be retargeted to follow the recommendations contained in the study cited above. Such actions will comply with existing EDA rules and regulations as known to this Center.

## **PROGRAM ACTIVITIES**

### **Project Activity**

Assistance has been rendered to twenty management and technical assistance projects during the first half of 1984 under the EDA program. Seven projects were carried over from 1983 and thirteen new projects were initiated. Fifteen of the twenty projects were completed during the first half, leaving five projects active for the second half of 1984. Exhibit VII lists each case by County and Economic Development District and its status as of June 30, 1984. Project locations by Economic Development Districts are in Exhibit VIII.

### **Project Summaries**

The individual projects which were active during the period under the program of management and technical assistance to businesses, industrial firms, and communities in designated Georgia counties are listed by Economic Development District. Project descriptions include identification of each project by number, type, and location; a brief description of the work performed; and a statement of the results achieved. Projects which were discontinued at the end of this period are listed under "Discontinued Projects." The projects which were still active as of June 30, 1984 are listed under "Ongoing Projects" in each EDD. Project summaries follow after Exhibits VII and VIII.

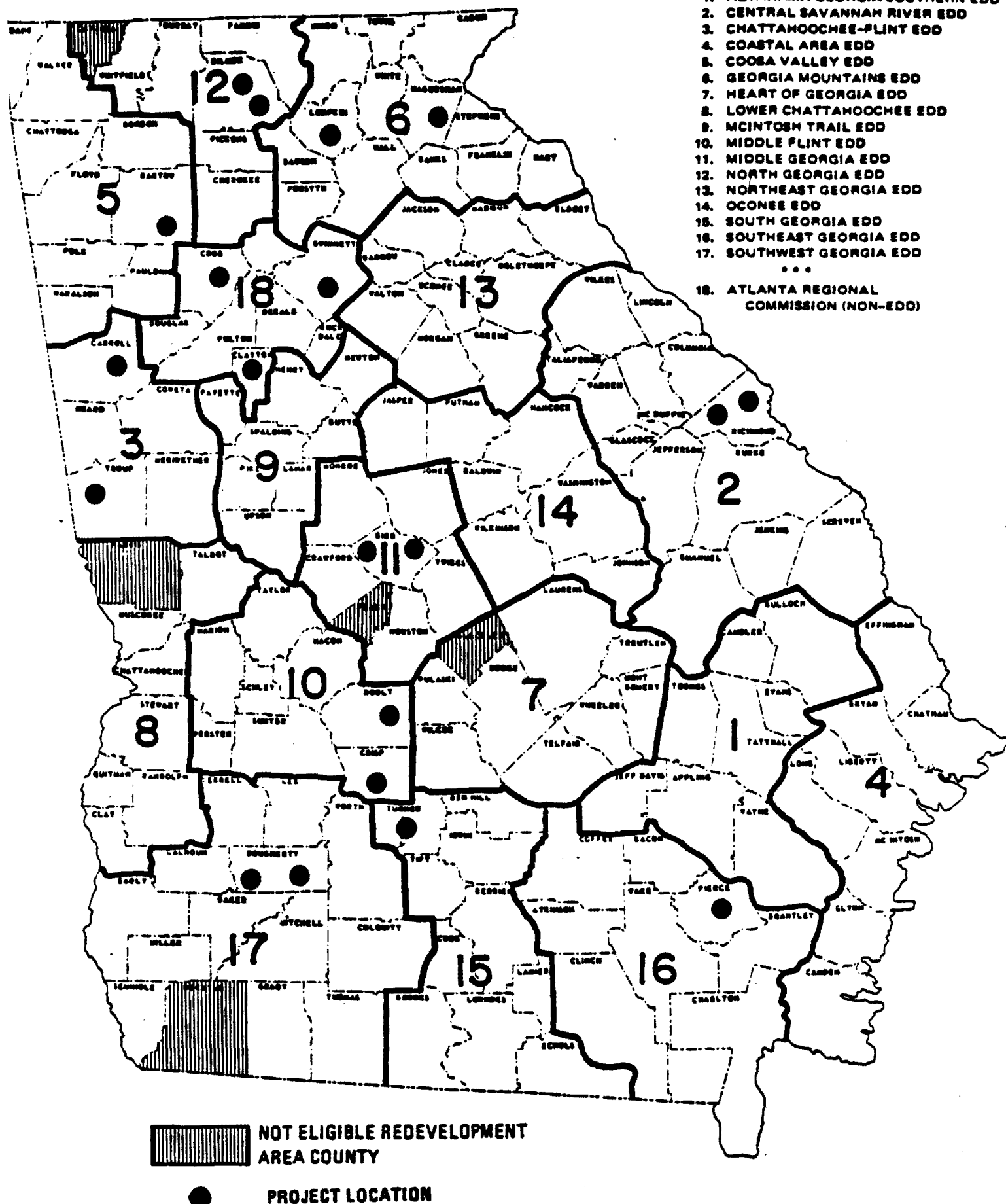
## EXHIBIT VII

### EDA UNIVERSITY CENTER PROJECT LISTING AND STATUS

<u>CASE NO.</u>	<u>COMPANY NAME</u>	<u>COUNTY</u>	<u>STATUS AS OF 6-30-84</u>
1013	Torrington Bearings	Lumpkin	<u>Continue</u>
1014	Low Temp Manufacturing	Clayton	Complete Close
1015	Sun Products	Carroll	Complete Close
1016	Frost Industries	Dooly	Complete Close
1017	Blue Ridge Mountains Woodcraft	Gilmer	Complete Close
1018	Georgia Diversified Industries	Bartow	Complete Close
1019	J. Menefee	Bibb	Complete Close
1020	CTC Sales Corporation	Gilmer	Complete Close
1021	Embroidery Enterprises	Cobb	Complete Close
1022	AATCO, Inc.	Dougherty	<u>Continue</u>
1023	Augusta Opportunities Industrialization Center	Richmond	<u>Continue</u>
1024	Albany Nut and Bolt	Dougherty	Complete Close
1025	Richmond Industrial Machine	Richmond	<u>Continue</u>
1026	Batson-Cook Construction	Troup	Complete Close
1027	T.J. Ashwood	Pierce	Complete Close
1028	Wheelers MFG. Company	Bibb	Complete Close
1029	Buddy McLeod	Turner	Complete Close
1030	Habersham Metal Products	Habersham	Complete Close
1031	Barrington MFG. Company	Gwinnett	Complete Close
1032	Cook Industrial Electric	Crisp	Continue

# EXHIBIT VIII

## PROJECT LOCATION BY COUNTIES



**ALTAHAMA GEORGIA SOUTHERN ECONOMIC  
DEVELOPMENT DISTRICT**

**General**

The Altahama Georgia Southern Economic Development District consists of eight counties, all of which are eligible redevelopment area counties. These counties include Appling, Bullock, Candler, Evans, Jeff Davis, Tatnall, Toombs, and Wayne.

**Discontinued Projects**

None.

**Ongoing Projects**

None.

## **CENTRAL SAVANNAH RIVER ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Central Savannah River Economic Development District consists of 13 counties, all of which are eligible redevelopment area counties: burke, columbia, Emanuel, Glascock, Jefferson, Jenkins, Lincoln, McDuffie, Richmond, Screven, Taliaferro, Warren, and Wilkes. The Economic Development Centers are Augusta (Richmond County) and Swainsboro (Emanuel County).

### **Discontinued Projects**

During this period, two projects were discontinued in this area.

#### **Project #1017: Assistance to Blue Ridge Mountain Woodcrafts, Inc. of Gilmer County**

**Nature of Problem:** Blue Ridge Mountain, Woodcrafts, Inc. produces trophy and award components from walnut wood or fiberboard for wholesale and retail distribution. The market for Trophy and award components is highly competitive. The owner felt a need to consolidate their four producing locations into one area and preparation of a plant layout which would utilize the most efficient flow of material throughout the facility.

**Work Performed:** A visit to the firm was made to obtain plant measurements, determine existing layouts and material flows, and identify current equipment used. Two proposed layouts were presented, one reducing current material flow distances by 66% and the other with a material flow reduction of 16%. The plant layout which reduced material flow by 66% was recommended for installation.

**Results:** It is estimated that implementation of this plan would result in an annual savings of \$80,000. This project is closed.

#### **Project # 1020 Assistance to CTC Sales Corporation of Gilmer County**

**Nature of Problem:** CTC Sales Corporation makes cedar and white pine siding from rough cut lumber. They are proposing to add urethane logs or beams as a new product line to be sold in the custom log cabin market. The firm requested help in alleviating high noise levels present in the production area.

**Work Performed:** A visit was made to their operation to take sound pressure measurements around equipment and operator locations. Noise levels were analyzed and recommendations were provided. The recommendations included constructing a workable acoustical enclosure for company operators.

**Results:** It is estimated that the implementation of this recommendation would not only reduce noise levels but decrease operator fatigue and, hence, increase productivity, improve the work environment, and provide safer working conditions. This project is closed.

### **Ongoing Projects**

There are two projects underway in this area.

#### **Project #1023: Assistance to Augusta Opportunities Industrialization Center of Richmond County**

**Nature of Problem:** The Augusta Opportunities Industrialization Center (OIC) is a non-profit training organization that is currently developing a wood products' manufacturing facility. Small wooden furniture such as magazine racks, trays, towel



racks, would be produced and marketed as gift items. A request was made by the Augusta OIC to provide assistance with a marketing and distribution plan.

Work Performed: Contact has been made with the operation and a work program is in process.

Results: This project is continuing.

**Project #1025: Assistance to Richmond Industrial Machine, Inc. of Richmond County**

Nature of Problem: Richmond Industrial Machine, Inc. is a machine shop which specializes in the design and maintenance of bakery equipment. The firm recently acquired several jobs rebuilding large commercial bakery mixers. A request was made to determine the feasibility of focusing the business on rebuilding bakery equipment and, specifically, certain brands of mixers.

Work Performed: A meeting was held with the company to develop a work plan.

Results: This project is continuing.

## **CHATTAHOOCHEE-FLINT ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Chattahoochee-Flint Economic Development District consists of five counties, all of which are eligible redevelopment area counties: Carroll, Coweta, Heard, Meriwether, and Troup. The Economic Development Centers are Carrollton (Carroll County) and LaGrange (Troup County).

### **Discontinued Projects**

During the period, one project was discontinued in this area.

#### **Project #1015: Assistance to Sun Products, Inc. of Carroll County**

**Nature of Problem:** Sun Products is a roto-moulding manufacturer of large plastic products for the leisure and entertainment industry. They control quality by slightly varying the mix of constituent parts to the raw materials mix. Due to the fact that usage rates vary as the mix changes (virtually with every different product), recording usage rate for quality analysis and for inventory control purposes has been a problem. No simple method of measuring ingredients is available to them in the terms they use (i.e. lbs. of material) as both density changes with various components and Sun Products has several non-standard shape tanks.

**Work Performed:** A basic program was written to calculate and print out in quarter-inch increments the quantity (in gallons and pounds) the amount of material remaining in their tanks. Several of the more common tank sizes were run for Sun Products.

**Results:** This project is closed. A quality control and WIP inventory reduction program based on these measurements was initiated. The estimated results include an 8% reduction in inventory. However, the in-house production engineer who orchestrated these changes has now left the firm to start a competitive operation.

#### **Project #1026: Assistance to Batson-Cook Construction Company of Troup County**

**Nature of Problem:** Batson-Cook is a large construction and project management firm, which has remained competitive by keeping low overhead and tight fiscal management. This strategy has been effective to some degree because the firm is a family-run business in which all members of management have direct construction experience and can relate directly to jobs at hand. The firm still operates with a fully manual record-keeping system, causing delays with job progress, billing for work performed and payment of invoices. Previous attempts to install an automated system failed due to a mismatch of software, operating system and hardware.

**Work Performed:** The goal of this project was to instruct the board of directors in computer basics, rebuild their confidence in potential computer applications, and to assist the accounting manager in formulating an acceptance selection procedure to avoid a repetition of past computer purchasing decisions.

**Results:** This project is closed. The company is currently evaluating software packages and is committed to automation. Implementation is scheduled late in the 1984 calendar year.

### **Ongoing Projects:**

None.

## **COASTAL AREA ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Coastal Area Economic Development District consists of eight counties, all of which are eligible redevelopment area counties: Bryan, Camden, Chatham, Effingham, Glynn, Liberty, Long, and McIntosh. The Economic Development Centers are Brunswick (Glynn County) and Hinesville (Liberty County).

### **Discontinued Projects**

None.

### **Ongoing Projects**

None.

## **COOSA VALLEY ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Coosa Valley Economic Development District consists of ten counties, nine of which are eligible redevelopment area counties: Bartow, Chattooga, Dade, Floyd, Gordon, Haralson, Paulding, Polk, and Walker. The Economic Development Centers are Bremen-Tallapoosa-Buchanan (Haralson County), Rome (Floyd County), and Rossville-LaFayette (Walker County).

### **Discontinued Projects**

During this period, one project was discontinued in this area.

#### **Project #1018: Assistance to Georgia Diversified Industries, Inc. of Bartow County**

**Nature of Problem:** Georgia Diversified Industries, Inc., of Cartersville, Georgia is a small non-profit company which trains and employs mentally and physically handicapped persons. Examples of the services provided include parts subassembly and assembly; wood fabrication; packing and labeling; heat sealing; salvaging; and sorting. President Charles Ivey contacted Georgia Tech's Rome office to seek engineering assistance with one of the company's assembly processes. The request for assistance involved the design of production techniques to improve productivity and to minimize the rejection rate of poor quality brushes caused by improper preparation.

**Work Performed:** It was determined that slitting the brush heads used in the production process would improve the production techniques. Three sources of brushes were located. It was suggested that the hot knife be mounted at an adjustable, horizontal height. Wooden jigs could be economically manufactured to hold and position the brush heads for slitting. It was also determined that the blade be made of a high chromium alloy which would assist in channeling heat to the tip of the blade.

**Results:** It is estimated that implementation of these suggestions will reduce rejection rates and manpower requirements by 50 and 67%, respectively. This project is closed.

### **Ongoing Projects**

None.

## **GEORGIA MOUNTAINS ECONOMICS DEVELOPMENT DISTRICT**

### **General**

The Georgia Mountains Economic Development District consists of 13 counties, all of which are eligible redevelopment area counties: Banks, Dawson, Forsyth, Franklin, Habersham, Hall, Lumpkin, Rabun, Stephens, Towns, Union, and White. The Economic Development Centers are Gainesville (Hall County) and Toccoa (Stephens County).

### **Discontinued Projects**

One project was discontinued in this area.

#### **Project #1030 Assistance to Habersham Metal Products of Habersham County**

**Nature of Problem:** Habersham Metal Products of Cornelia, Georgia is a manufacturer of hollow metal doors such as those used in hotels, high rise office buildings and prisons. The company provides complete design to finished product on site service and is using computers quite heavily in the control of machine tools.

The company has two facilities, one of which has grown slowly, and the other, a modern building, has outgrown. The company has material handling problems and machine control problems which reduce productivity. A request was made for assistance in determining the most efficient way to move material in the older plant and identify a method to control the length of a cut on a shear which is used to cut roll stock.

**Work Performed:** Personnel from the Augusta and Gainesville, Georgia regional offices visited the plant to analyze the current capabilities of the facility. Suggestions were made concerning the flow of product throughout the plant. In addition, information on various automated cut-off systems were located and provided to the company for consideration. Information was provided to the company concerning the use of spark arrestors in a metal standing operation as a result of a bag house fire which occurred during the plant visit.

**Results:** The information provided to the company will allow them to maintain a knowledge of current technology in a rapidly changing field. The firm was already using techniques that few metal working firms use. The firm will also become even more competitive as they purchase and begin to use the new technology for cutting material at the shear. This project is closed.

### **Ongoing Projects**

There is one project continuing in this area.

#### **Project #1013: Assistance to Torrington Bearings of Lumpkin County**

**Nature of Problem:** Torrington Bearings is a manufacturer of bearings. A low humidity in-plant environment must be maintained at all times for quality production. This requires running as many as twelve of the large rooftop air-conditioning units during summer months. The noise level generated from these units has brought a number of complaints from nearby residents. The company has requested that a study be prepared and recommendations made for an equitable solution.

**Worked Performed:** Personnel in the Macon regional office continues to provide assistance. Because the equipment being studied is not used during winter months, only the summer months are appropriate for providing the help needed.

**Results:** This project is to be continued.

## **MCINTOSH TRAIL ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The McIntosh Economic Development District consists of seven counties, all of which are eligible redevelopment counties: Butts, Fayette Henry, Lamar, Pike, Spalding, and Upson.

### **Discontinued Projects**

None.

### **Ongoing Projects**

None.

## **HEART OF GEORGIA ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Heart of Georgia Economic Development District consists of nine counties, eight of which are eligible redevelopment area counties: Dodge, Laurens, Montgomery, Pulaski, Telfair, Treutlen, Wheeler, and Wilcox. The Economic Development Center is Dublin (Laurens County).

### **Discontinued Projects**

None.

### **Ongoing Projects**

None.

## **LOWER CHATTAHOOCHEE ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Lower Chattahoochee Economic Development District consists of eight counties, seven of which are eligible redevelopment area counties: Chattahoochee, Clay, Muscogee, Quitman, Randolph, Stewart, and Talbot. The Economic Development Center is Columbus (Muscogee County).

### **Discontinued Projects**

None.

### **Ongoing Projects**

None.



## **MIDDLE FLINT ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Middle Flint Economic Development District consists of eight counties, all of which are eligible redevelopment area counties: Crisp, Dooly, Macon, Marion, Schley, Sumter, Taylor, and Webster.

### **Discontinued Projects**

During this period, one project was discontinued in this area.

#### **Project #1016: Assistance to Frost Industries of Dooly County**

**Nature of Problem:** Frost Industries is a newly formed company whose principals are interested in building a spinning mill to produce spun yarn for the carpet industry. Present capacity in the industry is adequate; however, the recent improvement in the market, which is expected to continue, will soon justify new capacity. Company principals are experienced in the industry and are working with the Middle Flint APDC to obtain loans through Farmers Home Administration and UDAG. All of the requirements for obtaining the loans have been met except a market feasibility study. Frost Industries was referred to Georgia Tech by the APDC as a source for obtaining the study.

**Work Performed:** Personnel from the Atlanta EDL staff conducted a brief survey of the market potential for a new spinning mill. The report addressed the current market conditions, recent trends and discussed pros and cons of independent spinners versus vertically integrated carpet companies.

**Results:** Current efforts are underway to sell bond issue. The company feels assured of being successful in this endeavor. This project is closed.

### **Ongoing Projects:**

One project is continuing in this area.

#### **Project #1032: Assistance to Cook Industrial Electric of Crisp County**

**Nature of Problem:** Cook Industrial Electric Company is a 20 year old family-owned business which has three divisions. The company provides electrical equipment supply and repair, electrical contracting, and sheet metal work. Several years ago, the company began supplying parts for peanut dryers and then began repairing them. During the past two years, several dryers were built and the company was highly praised for their work. As a result, the company is considering producing dryers on a large scale. The company is seeking assistance in market evaluation, pricing and business plan formulation for this new venture.

**Work performed:** Minimal assistance has been provided to date. The assistance to be rendered is expected to determine whether or not the potential for producing dryers on a large scale is viable.

**Results:** This project is continuing.

## **MIDDLE GEORGIA ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Middle Georgia Economic Development District consists of seven counties, six of which are eligible redevelopment area counties: Bibb, Crawford, Houston, Jones, Monroe, and Twiggs.

### **Discontinued Projects**

There are two projects to be discontinued in this area.

#### **Project #1019: Assistance to Jay Menefee of Bibb County**

**Nature of Problem:** Mr. Jay Menefee is an individual seeking development of a novel idea. He has developed a plastic insert which, when inserted into a self-loaded shotgun, improves shot pattern control. He has conducted extensive market research on this idea including production and distribution requirements. A compression molding device is currently being built by him for the manufacture of the plastic insert. He is concerned with allowable stresses necessary for the machine's component parts as well as the size necessary for a continuous ball power screw and has thus requested assistance from Georgia Tech.

**Work Performed:** A visit was made to see Mr. Menefee's mold by regional office staff. Several telephone conversations have taken place and letters and reports have been provided in answer to technical questions.

**Results:** Plans are currently underway to produce the product through an injection molding process. An industrial plastic fabricator has been contacted to perform these services. This project is closed.

#### **Project #1028: Assistance to Wheelers Manufacturing Co., Inc. of Bibb County**

**Nature of Problem:** Wheelers Manufacturing Company began after WWII by rebuilding gasoline engines. During the 1960's Wheelers began rebuilding automotive parts such as starters, alternators, a/c compressors, p/s units, etc., for 1,400 east coast Chrysler dealers. The firm continued growth with out-dated material handling, but random cross flows and back-tracking of materials is affecting the plant's ability to meet increasing volumes. The company requested assistance in facilities planning and product flow planning to increase plant efficiency and allow for orderly future growth.

**Work Performed:** Personnel from the Douglas, Georgia regional office with assistance from the Macon field office visited the plant and collected data on present operations and facilities. Operation process charts and flow diagrams were prepared for key plant products. Space requirements for future expansion were defined. Alternative courses of action were investigated and three expansion options were outlined. These options were drawn for and presented to company management.

**Results:** The information presented reinforced the need for top company management to plan and clarify the options available. A decision is pending on a 12,800 square foot addition representing a 30% increase in plant size. This will allow continued growth of the company and expanded employment opportunities. This project is closed.

## **NORTH GEORGIA ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The North Georgia Economic Development District consists of seven counties, six of which are eligible redevelopment area counties: Cherokee, Fannin, Gilmer, Murray, Pickens, and Whitfield.

### **Discontinued Projects**

None.

### **Ongoing Projects**

None.

## **NORTHEAST GEORGIA ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Northeast Georgia Economic Development District consists of ten counties, all of which are eligible redevelopment area counties: Barrow, Clarke, Elbert, Greene, Jackson, Madison, Morgan, Oconee, Oglethorpe, and Walton. The Economic Development Center is Athens (Clarke County).

### **Discontinued Projects**

None.

### **Ongoing Projects**

None.

## **OCONEE ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Oconee Economic Development District consists of seven counties, all of which are eligible redevelopment area counties: Baldwin, Hancock, Jasper, Johnson, Putnam, Washington and Wilkinson.

### **Discontinued Projects**

None.

### **Ongoing Projects**

None.

## **SOUTH GEORGIA ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The South Georgia Economic Development District consists of ten counties, all of which are eligible redevelopment area counties: Ben Hill, Berrien, Brooks, Cook, Echols, Irwin, Lanier, Lowndes, Tift, and Turner. The Economic Development Centers are Valdosta (Lowndes County) and Tifton (Tift County).

### **Discontinued Projects**

There is one project to be discontinued in this area.

#### **Project #1029: Assistance to Buddy McLeod of Turner County**

**Nature of Problem:** Buddy McLeod and Van Richter hold the patent for a small pecan harvester which they manufacture and market. Most pecan harvesters presently on the market cost from \$20,000 to \$60,000 and require additional support equipment. Mr. McLeod and Mr. Richter along with The Turner County Development Authority requested assistance in determining the market potential of this product and reviewing and helping refine the business and manufacturing plans. After funding is obtained, further assistance will be requested in selecting equipment and tooling, plant layout and production planning and control.

**Work Performed:** Personnel from the Douglas, Georgia regional office performed a feasibility study of manufacturing and marketing a small pecan harvester. The study includes an analysis of market size and limiting factors, competition and recommendations on how to proceed with manufacturing and marketing. A presentation was made to principals of the enterprise, development authority, local APDC members, Chamber of Commerce, and other local officials.

**Results:** Final approval of funding is still pending; however, a favorable decision is expected shortly. Upon funding the new company will complete its start-up phase with approximately eight employees. This project is closed.

### **Ongoing Projects**

None.

## **SOUTHEAST GEORGIA ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Southeast Georgia Economic Development District consists of eight counties, all of which are eligible redevelopment area counties: Atkinson, Bacon, Brantley, Charlton, Clinch, Coffee, Pierce, and Ware. The Economic Development Center is Waycross (Ware County).

### **Discontinued Projects**

There is one project being discontinued in this area.

#### **Project #1027: Assistance to T.J. Ashwood of Pierce County**

**Nature of Problem:** T.J. Ashwood is a production woodworking operation which manufactures unfinished bath and kitchen plywood cabinets. Their primary customers are do-it-yourself building materials dealers including Home Depot and Buildarama. The firm operates in a 22,500 square foot metal building and needs assistance in developing a complete facility plan for their operation. A request was made to improve their current plant layout, identify a conveyor system, methods improvement, and productivity measurements.

**Work Performed:** A detailed plant layout was developed for the company including designation of production areas, equipment position, conveyor location, and product flow. The layout of the 22,500 square foot building provides for 100% growth in production and finished goods storage. Methods improvement areas which were researched included automatic screw driving machines and overhead trolleys. Specifications were prepared and vendors contacted for quotes and demonstrations.

**Results:** The company's employment is expected to grow from the current level of 14 to 25 within 9 months. This project is closed.

### **Ongoing Projects**

None.

## **SOUTHWEST GEORGIA ECONOMIC DEVELOPMENT DISTRICT**

### **General**

The Southwest Georgia Economic Development District consists of fourteen counties, thirteen of which are eligible redevelopment area counties: Baker, Calhoun, Colquitt, Dougherty, Early, Grady, Lee, Miller, Mitchell, Seminole Terrell, Thomas, and Worth.

### **Discontinued**

There is one project being discontinued in this area.

#### **Project #1024: Assistance to Albany Nut and Bolt of Dougherty County**

**Nature of Problem:** Albany Nut and Bolt is a locally owned business which supplies fasteners and related articles both commercially and to the general public. The owner is considering expanding into a new line of stamped plastic parts using a new, soon to be patented process. The owner is unfamiliar with plastic manufacturing and requested Georgia Tech's assistance in evaluating the market possibilities for the process.

**Work Performed:** The owner met with personnel from Georgia Tech's Industrial Design Department and Energy and Materials Sciences Laboratory to discuss plastic part manufacturing. Also discussed were types of products which would be most appropriate for manufacture utilizing this process.

**Results:** The owner has invested in a business in South Carolina to make plastic parts utilizing this process. Manufacturing has begun and the company has current orders which will utilize equipment for two months. This project is closed.

### **Ongoing Projects**

There is one ongoing project in this area.

#### **Project #1022: Assistance to AATCO, Inc. of Dougherty County**

**Nature of Problem:** AATCO is a small company which began in 1962 repairing automotive transmissions. In 1966 they began remanufacturing transmission parts. There is a high demand for these parts and AATCO is recognized in the industry for producing a high quality product. Their production area is presently very cramped and cluttered, and production cannot increase to supply their increasing demand without infringing on their high quality standards. The company has requested help to improve production while maintaining quality.

**Work Performed:** Assistance is ongoing and will initially involve equipment improvement/replacement and work methods.

**Results:** Excellent potential for significant improvement in company operations and profitability exists. This project is continuing.



## **PROJECTS OUTSIDE ECONOMIC DEVELOPMENT DISTRICT**

### **General**

During the period, six projects were active in counties outside the Economic Development District.

### **Discontinued Projects**

During the period three projects were discontinued in the area.

#### **Project #1014: Assistance to Low Temp Manufacturing of Clayton County**

**Nature of Problem:** Low Temp Manufacturing is a rapidly expanding manufacturing firm of custom commercial kitchen and food line equipment. This firm provides full service from initial conceptual design of the work area, through working drawings of the actual equipment to assembly, testing and installation of equipment. All of the engineers at Low Temp are mechanical engineers. They have no background in sophisticated electronics. The company expects to differentiate itself from its competitors with a number of energy efficient innovations. One of these innovations is a set of dirty dish handling equipment designed especially for smaller restaurants and cafeterias. The equipment uses a pulse doppler radar at 10.525 GHz to sense motion and thereby not run the equipment when no one is in-line. In order to sell the equipment U.L. must certify that the radar exhibits a field strength of less than 10 mW/CM<sup>2</sup> to any human exposure. Their request from Georgia Tech was to help setup, conduct, and provide instrumentation for this very specialized test and then later assist in interpreting the results for U.L. if required.

**Work Performed:** Personnel from the Carrollton, GA Field Office visited the site to analyze field requirements for measurement accuracy and to determine the feasibility of measuring the device on-site as opposed to using a shielded anechoic chamber. A dry run of the actual measurement session was conducted using instrumentation from the Georgia Tech Systems and Techniques Laboratory before U.L. was to witness the actual tests. Members of the U.L. inspection team later witnessed actual tests under a simulated operating environment.

**Results:** The proposed design of the motion sensing equipment has received U.L. approval and is ready to be announced as a portion of a major new product line. The competitive environment will determine the degree of market acceptance and subsequent employment growth. This project is closed.

#### **Project #1021: Assistance to Embroidery Enterprises of Cobb County**

**Nature of Problem:** Embroidery Enterprises is a production embroidery operation serving primarily apparel manufacturers. Apparel components (pockets, sleeves, etc.) are received in bundles, embroidered on one of two large multi-head machines, and returned to the apparel manufacturer. The company president requested assistance in three areas to improve productivity and competitiveness: work simplification, design of a template system, and implementation of a performance measurement system for all employees.

**Work Performed:** Personnel from Georgia Tech visited the plant four times. Operations were analyzed from a work simplification standpoint and recommendations were made to improve both employee performance and machine utilization. A plastic template system for sizing components was designed and implemented. In addition, a performance measurement system was implemented and complements the company's bonus plan.

Results: The company president has noted a 20% increase in production, primarily through use of the new template system. One new employee has been hired and a computer embroidery design system has been purchased to prepare the tapes that run the multi-head equipment. This project is closed.

**Project #1031: Assistance to Barrington Manufacturing Co. of Gwinett County**

Nature of Problem: Barrington Manufacturing Company is a manufacturer of storm windows and doors. The firm has been in business for about 18 months as a designer, builder, and installer of windows as well as selling to third party installers and building supply firms. The company requested assistance in preparing a layout for a new window manufacturing line which would allow them to add a new product due to current space limitations and outdated assembly line flow.

Work Performed: Personnel from the Gainesville, Georgia regional office visited the plant to analyze current layout and to determine where a new manufacturing line could fit given current conditions. A plant layout for the new window line was prepared and implemented immediately upon completion. Information was also provided to the company concerning the use of computers for manufacturing control.

Results: The company will be more competitive in an already very competitive market place. Approximately ten new jobs will be created as a result of the new product line. This project is closed.

## **PROGRAM ACCOMPLISHMENTS**

Conclusions regarding the overall impact of this program are based upon collective evaluation of individual projects and their collective results that could be measured during this period. This evaluation should include not only a recognition of the fact that a deliberate attempt has been made to state the significance of the Georgia Tech efforts in realistic terms, but also a consideration of other actions transpiring in the area in which management and technical assistance efforts were undertaken.

The United States and Georgia showed improving economic indicators, unemployment rate continuing to decrease, retail sales rising, and inflation remaining relatively low. These factors lead to a good economic outlook and will cause businesses to make increasing capital investment decisions. The degree to which business operators seek the resources of EDA and other similar programs will depend on our economy's continuing to improve and the continuation of management and technical assistance programs.

As reported previously, 20 management and technical projects were active during this report period. Project assessment has been included in each case where results could be confirmed. The employment of 45 additional workers has been forecast. A more comprehensive assessment of each project and the program, including the number of jobs created and saved will be provided in the final statistical progress report.

## **INSTITUTIONAL AND ORGANIZATIONAL MATTERS**

### **The Georgia Tech EDA University Center Program**

The Economic Development Laboratory at Georgia Tech is one of eight laboratories included in the Engineering Experiment Station. As of October 1, 1984 the name of the Engineering Experiment Station will be changed to the Georgia Tech Research Institute.

A program of management and technical assistance to counties designated by the Economic Development Agency (EDA) has been conducted by the Economic Development Laboratory since 1965. This program conducted under EDA sponsorship, has undertaken 1,032 projects since its inception.

The program has three major objectives. First, the program is designed to stimulate the expansion and diversification of existing business and industry in 154 Georgia Counties. Additionally, it seeks to support the formulation of new, economically sound enterprises in these counties. Finally, it serves to encourage the development and expansion of economically sound enterprises owned and/or managed by individuals from minority and female communities in the service area.

At this time the Economic Development Laboratory is offering the following types of management assistance under the EDA program. Assistance is provided marginal existing business and industrial firms in order to solve problems that endanger their continuation. The purpose of this aid is to save jobs. EDL assistance is furnished to existing business and industry with operational problems which inhibit growth. This expansion and diversification assistance is furnished to create jobs. Also, technical and management assistance is enlisted in the formulation of new industrial ventures; this, again, is designed to create jobs. Finally assistance is provided to individuals from minority and female communities for the purpose of creating opportunities for the development of business enterprises and the creation of jobs.

In the work plan for 1984 the program aims at high-priority development items needed to assist and support the revitalization program fostered by the Department of Commerce, within reasonable cost constraints. These items include productivity improvement, technology transfer, and assistance to firms involved in the "world market." Special attention is given to continuing assistance to firms in matters relating to business counseling involving firmwide comprehensive productivity improvement.

EDA's University Center for Technical Assistance continues to function as an integral part of Georgia Tech's broad program of managerial and technological assistance to business and industry. This broad program is outlined in the following section.

The EDA University Center Program at Georgia Tech relies heavily on the delivery of management and technical assistance through the Industrial Extension Division (IED) Regional Office network. Presently consisting of eight offices around the state; four new field offices have been successful in receiving funding from the Georgia State Legislature.

IED is a vital resource in the development of the state's existing businesses and industries, and has been particularly helpful to small and medium sized firms which

lack technical staff or resources. The Division increases productivity by bringing emerging and "off-the-shelf" technologies to Georgia's industries. Most assistance projects are short in duration and normally involve aid in manufacturing processes, facility planning, materials handling, methods improvement and cost control. The new offices, which will be staffed with an engineer and a secretary, will enhance IED's capabilities and help the program meet its goal of contributing to Georgia's industrial growth.

The new field offices will be located in Brunswick, Columbus, Dublin, and Madison, Georgia. Each of the new offices will open on August 1, with the exception of Dublin, which will open when a Field Office Director is hired.

#### Relationships with Other Federal Programs and the Private Sector

As a leading technological institution of higher learning, Georgia Tech has sought and developed a close relationship with the business community through a number of innovative programs, and is involved with federal programs as well.

The Economic Development Laboratory within EES has served as an EDA University for Technical Assistance Center Unit since the inception of the program in the mid-1960's.

From its base at Georgia Tech, the Southeastern Trade Adjustment Assistance Center (TAAC) provides technical and financial assistance to manufacturing firms and contractors in Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee that have been hurt by import competition. One of eleven such centers across the nation, TAAC is funded through a grant from the International Trade Administration of the U.S. Department of Commerce. TAAC assists firms in marketing, engineering, management, finance, and obtaining financial assistance from the federal government through direct government loans or federally guaranteed loans.

The Technology Utilization and Commercialization Center within EES brings business, government, and academic resources together to advance minority business development. The only technology commercialization center to be funded by the Minority Business Development Agency, TUCC encourages the growth of minority-owned firms and minority entrepreneurship in Alabama, Florida, Kentucky, Mississippi, and Tennessee. TUCC identifies markets and new or underutilized products and technologies which, as required, can be matched with sources of technical expertise, adaptive engineering, capital investment, and financing. Products with commercial potential are matched with minority-owned firms capable of manufacturing or marketing them effectively.

Another program based on the Georgia Tech campus with extensive private sector linkages is the Advanced Technology Development Center (ATDC). Sponsored by Georgia Tech and the State of Georgia, ATDC's mission is to stimulate the growth of high technology business development in Georgia. To achieve this end, ATDC provides information and assistance to high technology firms considering expansion or relocation to Georgia, aids high technology entrepreneurs, and helps existing Georgia companies enhance their technological capabilities. Additionally, ATDC helps firms identify product markets, locates venture capital, provides management support, and evaluates new ventures and products.

The Corporate Liaison Program consists of a network of major corporations that work with Georgia Tech on projects of mutual benefit and interest. The program provides supplemental research resources for member companies by: linking them with Georgia Tech's extensive technical expertise; having Tech researchers design solutions to specific technical problems; establishing ongoing working relationships between researchers and company staff; keeping firms abreast of innovative university programs and research; and working with firms to open new avenues of commercial development. The Corporate Associates Program is a similar program of mutual cooperation between Georgia Tech and the corporate world. Among its members are the Coca-Cola Company, the Eastman Kodak Company, the IBM Corporation, the Exxon Corporation, and Merrill, Lynch, Pierce, Fenner & Smith, Inc.

Georgia Tech is also the home of the Georgia Productivity Center (GPC), the nation's first state center dedicated to improving business and industrial productivity. Building on Tech's two decades of service to Georgia industry, GPC provides problem solving in the areas of innovation, research and development, safety and environmental counseling, and human resources.

Through these and other business-related programs, Georgia Tech maintains ongoing productive relationships with chambers of commerce, trade associations, industry groups, business councils, and representatives of both major corporations and small businesses, as well as with federal agencies.

#### Recommendations

EDA's University Centers for technical assistance program is a proven, cost effective one that furnishes in-place technical assistance on a national basis. However, personnel of this Center believe that the current program should be retargeted to emphasize or focus on:

- High-priority development items needed to assist and support economic revitalization programs fostered by the Department of Commerce within reasonable cost constraints. These items include productivity improvement, technology transfer, assistance to firms involved in the "world market," and the reduction of adversary relationships between governmental units and the private sector.
- Furnishing technical assistance and applied research to the Department of Commerce, its regional offices, and to others involved in Department of Commerce economic development activities.
- Continued assistance to individual firms in matters relating to business counseling with emphasis on firmwide, comprehensive productivity improvement. Such assistance is to be furnished on request, and within funding constraints.