

GEORGIA INSTITUTE OF TECHNOLOGY  
Engineering Experiment Station

PROJECT INITIATION

Date: 11/13/70

Project Title: The Market for Perforated Metals in Nine Southern States

Project No.: A-1294

Project Director: George D. Woodard

Sponsor: Hendrick Manufacturing Company

Effective November 12, 1970 Estimated to run until: February 28, 1971

Type Agreement: Standard Industrial Research Project Amount: \$ 3,500.00

Reports: Monthly Progress Letters  
Final Report

Contact Person: Mr. B. J. Dann, Jr., President  
Hendrick Manufacturing Company  
Carbondale, Pennsylvania 18407

Assigned to Industrial Development Division

COPIES TO:

- |  |  |
|--|--|
| <input type="checkbox"/> Project Director            | <input type="checkbox"/> Photographic Laboratory         |
| <input type="checkbox"/> Director                    | <input type="checkbox"/> Research Security Officer       |
| <input type="checkbox"/> Associate Director          | <input type="checkbox"/> Accounting                      |
| <input type="checkbox"/> Assistant Director(s)       | <input type="checkbox"/> Purchasing                      |
| <input type="checkbox"/> Division Chiefs             | <input type="checkbox"/> Report Section                  |
| <input type="checkbox"/> Branch Head                 | <input checked="" type="checkbox"/> Library              |
| <input type="checkbox"/> General Office Services     | <input type="checkbox"/> Rich Electronic Computer Center |
| <input type="checkbox"/> Engineering Design Services | <input type="checkbox"/> _____                           |

A-344  
28

GEORGIA INSTITUTE OF TECHNOLOGY  
Engineering Experiment Station

PROJECT TERMINATION

Date 5/12/71

PROJECT TITLE: The Market for Perforated Metals in Nine Southern States

PROJECT NO: A-1294

PROJECT DIRECTOR: Mr. George D. Woodard

SPONSOR: Hendrick Manufacturing Company

TERMINATION EFFECTIVE: 2/22/71

CHARGES SHOULD CLEAR ACCOUNTING BY: All charges cleared.

Project Director to transfer overrun to  
Division accounts.

Industrial Development Division

COPIES TO:

Project Director  
Director  
Associate Director  
Assistant Directors  
Division Chief  
Branch Head  
Accounting  
Engineering Design Services

General Office Services  
Photographic Laboratory  
Purchasing  
Report Section  
Library ✓  
Security  
Rich Electronic Computer Center

---



ENGINEERING EXPERIMENT STATION  
GEORGIA INSTITUTE of TECHNOLOGY

If you have any questions concerning our work or any comments on the Industrial Development Division, I would appreciate hearing from you. I would also appreciate your interest in our progress as the survey develops further.

1132 W. Peachtree Street  
Atlanta, Georgia 30309  
873-2931 Area Code 404

Sincerely,

January 6, 1971

George W. Woolders, Jr.  
Head, Market Analysis Division

to:

Mr. B. G. Dann, Jr.  
President  
Hendrick Manufacturing Company  
Carbondale, Pennsylvania 18407



Dear Mr. Dann:

Work is well underway on our study of the market for perforated metals in selected Southern states. As you might expect we have had a temporary lull during the holiday period, which covered approximately two weeks, during which time only limited work was attempted, but we are now back at full strength and proceeding on schedule as far as this project is concerned.

A questionnaire pertaining to the use of perforated metal forms was prepared along with a letter directed to potential large manufacturing consumers. Information requested includes dollar volume purchased, the percentage that is stock items and the percentage that is non-stock special order items, the normal delivery requirements, and the need for additional fabrication.

A mailing list for these survey questionnaires was prepared from state manufacturing directories and industry publications and includes companies representing the mining, ordnance, food, furniture, paper, chemical, and metal industries. These firms are all located in the nine-state area being considered in this study and were chosen from selected four-digit SIC numbers that cover companies that would possibly consume a substantial volume of perforated metals. These companies generally are the larger ones in their respective categories having at least 100 employees.

A total of about 1800 questionnaires is being mailed with the last portion going out this week. We have already received a substantial return, and it appears at this time that we will obtain a good overall response.

COPY

Mr. B. G. Dann, Jr.

-2-

January 6, 1971

If you have any questions concerning our work or any comments on the manner in which we are proceeding, I would appreciate hearing from you. We will keep you informed of our progress as the survey develops further.

Sincerely,

George D. Woodard, Jr.  
Head, Market Analysis Section

GDW:vh



## GEORGIA INSTITUTE of TECHNOLOGY

## Industrial Development Division

1132 W. Peachtree Street  
Atlanta, Georgia 30309  
873-2931 Area Code 404

February 2, 1971

Mr. B. G. Dann, Jr.  
President  
Hendrick Manufacturing Company  
Carbondale, Pennsylvania 18407



Dear Mr. Dann:

The latter stages of our work on "The Market for Perforated Metals in Nine Southern States" is now taking shape. We should complete the final report and have it in your hands by the end of the third week in this month.

There was a good response to the approximately 1,800 questionnaires we sent out with a return of 27 percent. Of those returns showing consumption of perforated metals, 92 percent of the total dollar volume consumed was in metalworking industries.

After analyzing the information contained in the survey replies, we decided to project the total market potential based on the metalworking industries. Metalworking companies cut across the various SIC numbers we used to such an extent that this approach seems to be the most feasible of those that were considered.

Although metalworking companies account for the major portion of the volume of perforated metals consumed, there does not seem to be any correlation between usage and size of the firm or even the number of firms responding within a given SIC group. This leaves very little in the way of alternatives for total market projections within the nine-state area except the metalworking company approach.

In making our projection of total consumption, we are assuming that the respondent companies are representative of all possible users of perforated metals in the area being studied. The combined employment of all metalworking companies in the area surveyed is considered as the upper limit of our projection equation and the other known factors are the total employment of all metalworking companies that responded to the questionnaire and the total consumption of perforated metals by those responding metalworking companies in dollar volume. This will allow us to determine our basic projection figure for the nine-state area.

The various other parts of the study are being handled as we have previously proposed, and we see no problem involved in following through on them. We feel that our overall methodology is working well in this regard.

As stated previously, if you have any questions or comments on our work, please feel free to contact me. You should be receiving your copies of our final report as stated above, and we hope it will prove most helpful in evaluating the market potential for the states we have surveyed.

Sincerely,

George D. Woodard, Jr.  
Head, Market Analysis Section

GDW:erl

Project A-1294

THE MARKET FOR PERFORATED METALS  
IN NINE SOUTHERN STATES



by  
Harvey Diamond

Industrial Development Division  
Engineering Experiment Station  
GEORGIA INSTITUTE OF TECHNOLOGY  
February 1971

THE MARKET FOR PERFORATED METALS  
IN NINE SOUTHERN STATES

Introduction

As the South increases in importance as an industrial region, the need for adequate raw materials expands. Many metal forms consumed in the southern states must be purchased from companies located in other regions of the country. Such is the case for perforated metals.

Purpose and Procedure

If a southern source for perforated metals was available to service the area, manufacturing consumers would benefit through shorter delivery time and lower transportation costs. A facility of this type would be feasible, however, only with the existence of a substantial market.

The purpose of this study is to quantify the dollar market for perforated metal forms in a selected southern area and to determine which industry groups in the area purchase the largest volumes of perforated metals.

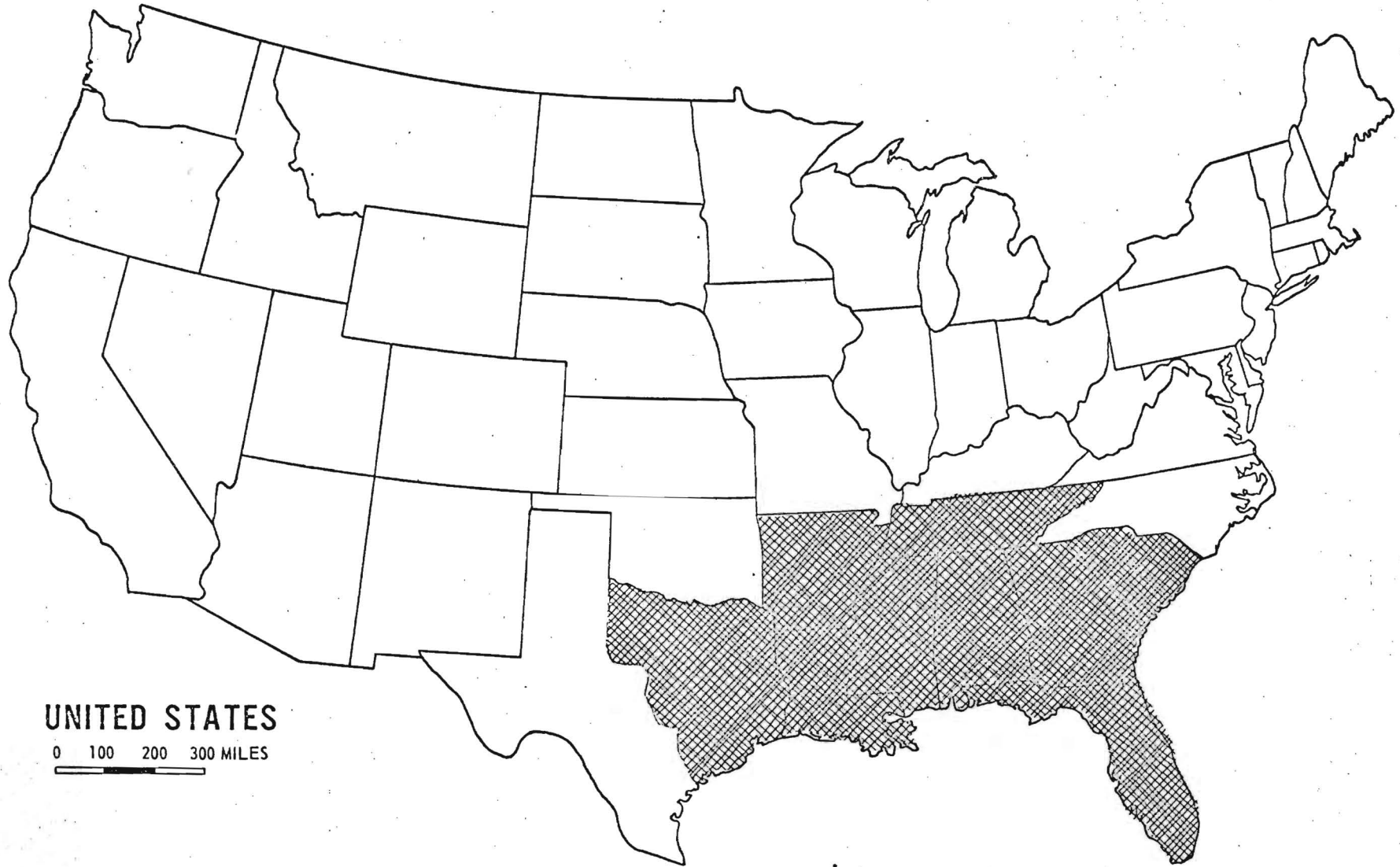
The study area is composed of an eight-state southern region plus the eastern portion of Texas using telephone area codes 214, 713, and 817. (See Map 1.)

A survey questionnaire pertaining to perforated metal purchase requirements was mailed to potential large manufacturing consumers in the study area. Requested information included dollar volume purchased; percentage of light gauge, standard stock items and percentage of non-stock custom special order items; normal delivery time requirements; and the percentage of material requiring additional forming or fabricating (e.g., rolling, bending, and welding).

The mailing list for this survey was prepared from state manufacturing directories and trade publications and included companies representing the mining, ordnance, food, furniture, paper, chemical, and metal industries (SIC 10-14, 19, 20, 25, 26, 28, and 33-39). The firms, all located in the nine-state study area, were selected from four-digit SIC industries that possibly would consume substantial volumes of perforated metals. The companies chosen were generally the larger ones in their respective categories, all having more than 100 employees. This list was supplemented by Hendrick Manufacturing Company customers

Map 1

STUDY MARKET AREA FOR PERFORATED METALS



UNITED STATES

0 100 200 300 MILES



not already included. Questionnaires were sent to 1,799 potential perforated metal consuming companies. A breakdown of survey recipients by state and by SIC is shown in Appendix 1.

### Findings

There were 491 questionnaire responses, more than 27% of the entire mail-out. Individual state returns ranged in number from 29 from Louisiana to 89 from Georgia and in percentage response from 17% for Louisiana to 37% for Georgia.

Volumes of perforated metals consumed annually by replying companies varied from nil to a million dollars. In order to cull small volumes used primarily for maintenance, only companies which reported purchasing \$500 worth or more of perforated metals annually were considered for collation and analysis. This group consisted of 157 manufacturing plants. (See Map 2 for state location.)

The total dollar volume of perforated metals purchased yearly by the 157 companies was \$4,365,000. Of this figure, \$2.5 million or 58% was considered to be for light gauge stock items, while \$1.8 million was for special order or custom perforated forms.

Although delivery time requirements for standard light gauge perforated stock items vary between one and five weeks, a two to three-week delivery period appears to satisfy the majority of customers and is the requirement for the bulk of the volume consumed. Time required for custom orders ranges between three and eight weeks, with the greatest volumes being serviced by a four-week delivery schedule.

Much of the perforated metals consumed in the South requires additional processing after delivery. Questionnaire returns indicate that \$3.1 million or 71% of the perforated metals purchased are further fabricated before use.

The 157 companies acknowledging purchases of perforated metals constitute 8.7% of the total survey listing and represent, in part, segments of various manufacturing industries. Tables 1 and 2 give breakdowns by industrial classification of the number of perforated metal users, the percentage they represent of questionnaire recipients, and the dollar volume purchased.

Map 2

NUMBER OF PLANTS CONSUMING PERFORATED METALS IN THE SOUTHEASTERN STUDY AREA

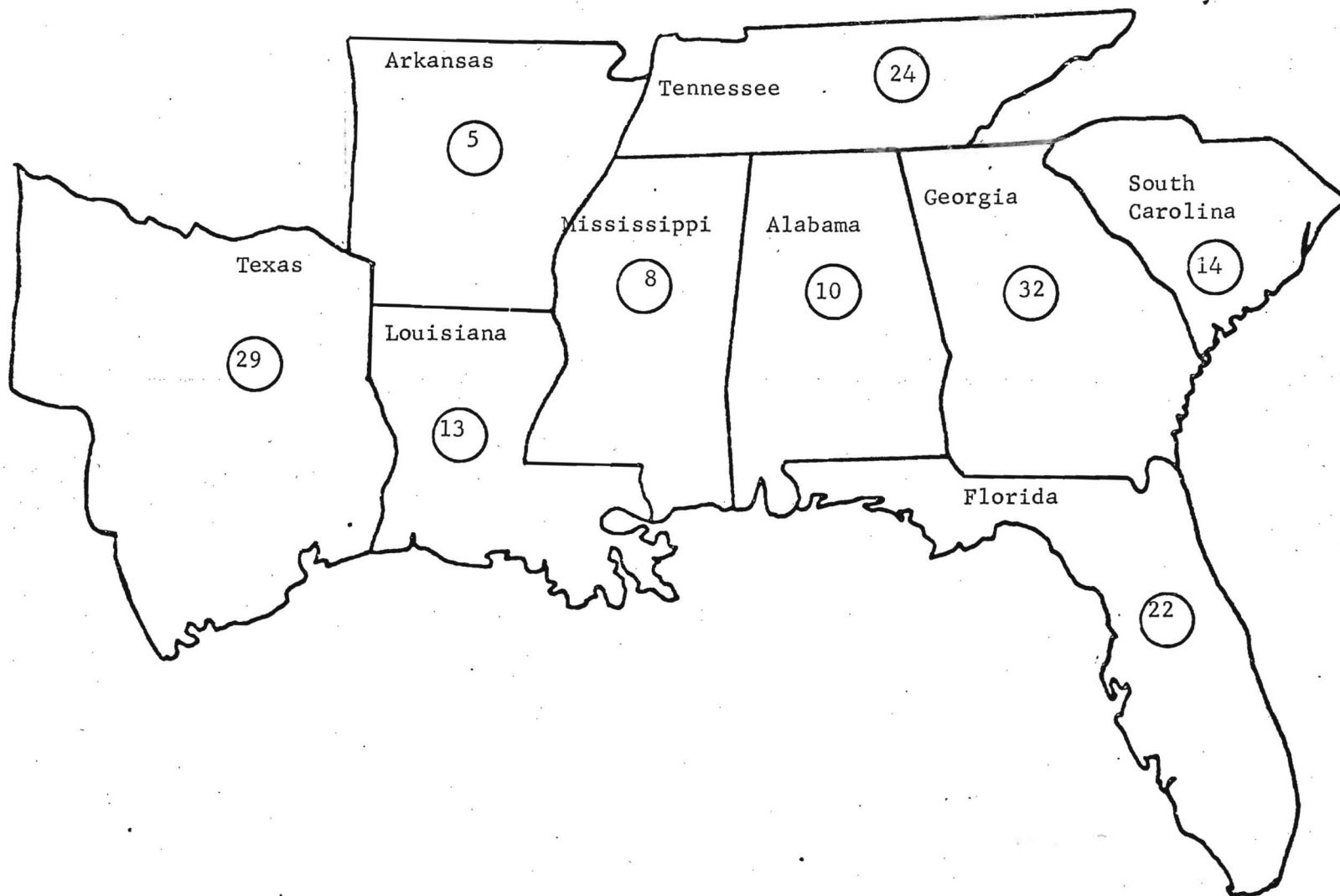


Table 1  
SURVEY RESPONDENTS USING PERFORATED METALS, BY INDUSTRY

<u>SIC*</u>	<u>Number of Survey Recipients</u>	<u>Perforated Metal Users</u>	
		<u>No.</u>	<u>%</u>
10-14	229	7	2.4
19	11	-	-
20	272	13	4.8
25	42	5	11.9
26	126	22	17.5
28	236	13	5.5
33	31	2	6.5
34	252	31	12.3
35	257	37	14.4
36	145	11	7.6
37	155	10	6.5
38	17	2	11.8
39	<u>26</u>	<u>4</u>	15.4
Total	1,799	157	8.7

\* See Appendix 2 for industry descriptions.

Table 2  
VOLUME PURCHASED, BY INDUSTRY

<u>SIC</u>	<u>Purchased Volume (in thousands)</u>
10-14	\$ 13.0
19	-
20	24.5
25	688.5
26	104.0
28	149.0
33	10.0
34	538.5
35	1,661.5
36	1,069.0
37	87.5
38	15.5
39	<u>4.0</u>
Total	\$4,365.0

Of the companies returning affirmative questionnaires, 46 firms purchase \$10,000 worth or more of perforated metal forms annually. The locations of these plants, depicted by a buying volume symbol, are shown on Map 3.

Responses to the survey indicate strongly that the industries engaged in metalworking (SIC 19, 25, and 33-39) are the major large-volume consumers of perforated metals in the study area. Of the 46 plants shown on Map 3, 38 are classified as metalworking, including all seven operations known to purchase \$100,000 or more of perforated metal products annually. The combined consumption of the 102 metalworking plant respondents is \$4.07 million per year, or more than 93% of the reported area total.

Analysis of the information contained in the survey replies shows no correlation between usage and size of firm or the number of companies responding within a specific SIC group.

Since the metalworking plants account for such a large portion (93%) of the dollar volume of the perforated metals used in the nine-state area and because metalworking companies cut across the various SIC numbers used to prepare the questionnaire mailing list, metalworking returns were used as a basis for estimating a total market volume. In making a projection of total consumption, it was assumed that the respondent companies were representative of all possible users of perforated metals in the area. The combined employment of all the metalworking companies in the study area was considered the upper limit of the projection equation, with the other known factors being the total employment reported in all the returned metalworking questionnaires and the total dollar consumption of perforated metals by the responding metalworking companies.

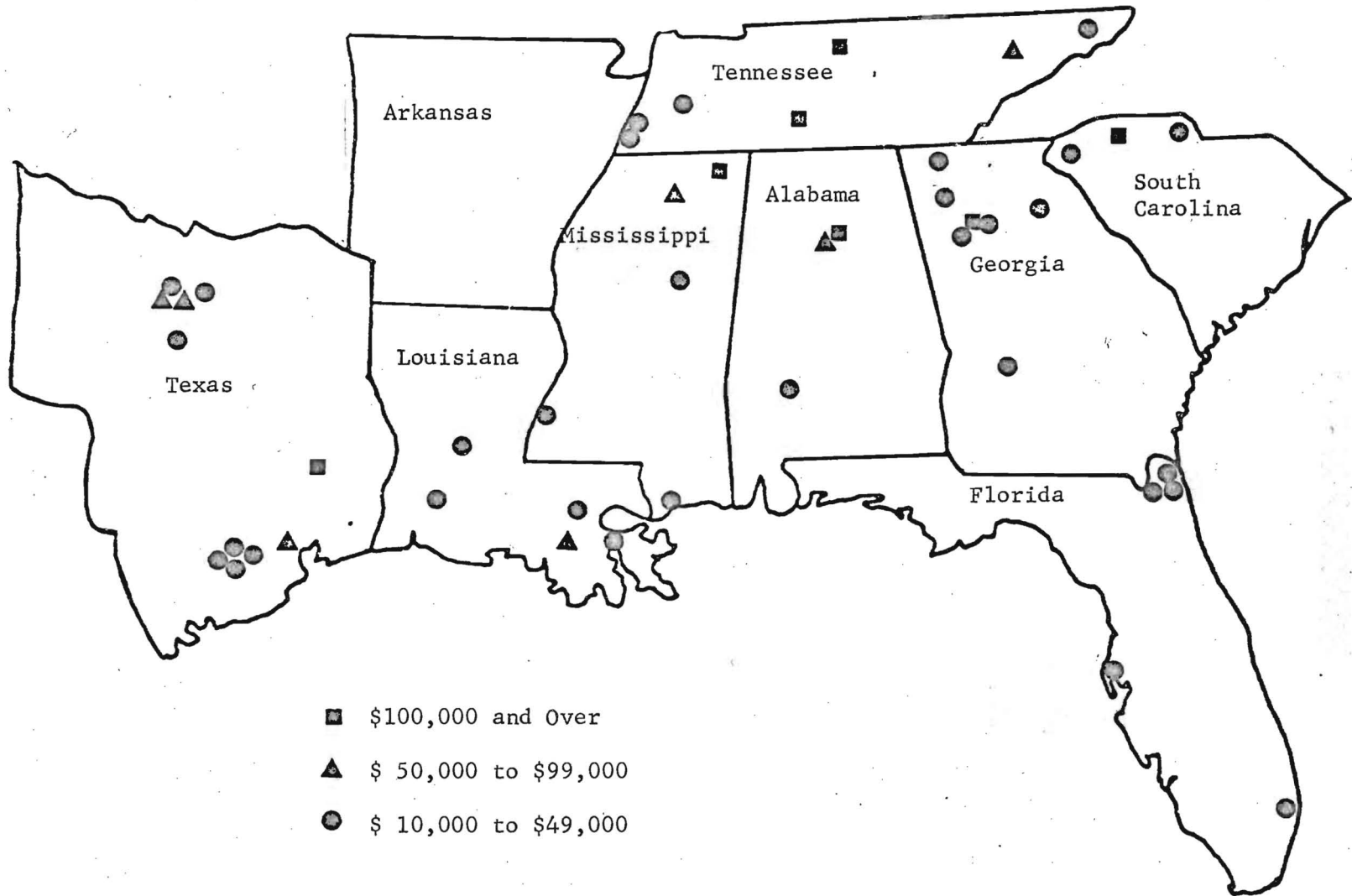
Using the above data and adding 7% for nonmetalworking consumption, the annual market for perforated metals in the nine-state study area was estimated to be approximately \$25 million.

### Conclusion

A substantial market for perforated metals exists in the nine-state southern area. Since local suppliers for these products are known to be limited, it would appear that new perforated metal facilities in the South, capable of providing adequate service on a competitive basis, could well penetrate the present area market.

Map 3

LOCATIONS OF PLANTS PURCHASING LARGE VOLUMES OF PERFORATED METALS IN THE SOUTHEAST



Appendix 1

BREAKDOWN OF SURVEY RECIPIENTS

<u>SIC</u>	<u>Ala.</u>	<u>Ark.</u>	<u>Fla.</u>	<u>Ga.</u>	<u>La.</u>	<u>Miss.</u>	<u>S. C.</u>	<u>Tenn.</u>	<u>Tex.</u>	<u>Total</u>
10-14	26	25	25	29	22	10	20	29	43	229
19	3	-	1	-	3	-	-	2	2	11
20	26	8	46	45	40	16	17	34	40	272
25	6	6	2	4	1	7	2	9	5	42
26	16	11	17	19	17	10	7	13	16	126
28	24	10	38	44	31	15	14	29	31	236
33	8	3	-	4	5	-	1	5	5	31
34	41	17	23	24	12	25	11	38	61	252
35	25	14	20	30	16	18	21	39	74	257
36	12	11	25	19	2	13	10	30	23	145
37	17	7	24	21	19	7	6	19	35	155
38	-	1	3	1	-	2	-	2	8	17
39	<u>1</u>	<u>3</u>	<u>3</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>2</u>	<u>5</u>	<u>3</u>	<u>26</u>
Total	205	116	227	242	171	127	111	254	346	1,799

Appendix 2

STANDARD INDUSTRIAL CLASSIFICATION

10-14	Metal, Coal, and Nonmetallic Mineral Mining
19	Ordnance and Accessories
20	Food and Kindred Products
25	Furniture and Fixtures
26	Paper and Allied Products
28	Chemicals and Allied Products
33	Primary Metal Industries
34	Fabricated Metal Products
35	Nonelectrical Machinery
36	Electrical Machinery, Equipment, and Supplies
37	Transportation Equipment
38	Professional, Scientific, and Controlling Instruments
39	Miscellaneous Manufacturing Industries