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UNITED STATES DEPARTMENT OF COMMERCE

JESSE H. JONES, Secretary

BUREAU OF THE CENSUS

J. C. CAPT, Director (Appointed May 22, 1941)

WILLIAM LANE AUSTIN, Director (Retired January 31, 1941)

PHILIP M. HAUSER, Assistant Director



SIXTEENTH CENSUS OF THE UNITED STATES: 1940
CENSUS OF BUSINESS: 1939

VOLUME IV
CONSTRUCTION: 1939

*Bureau of the Census
Library*

Prepared under the supervision of

FRED A. GOSNELL

Chief Statistician for Business

(Resigned, April 16, 1942)

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LETTER OF TRANSMITTAL

DEPARTMENT OF COMMERCE,
BUREAU OF THE CENSUS,
Washington, D. C., March 3, 1943.

SIR: I transmit herewith volume IV of the Sixteenth Census reports on the Census of Business. This volume presents information on the construction activities of contractors, builders, and the erection or installation departments or subsidiaries of manufacturers or merchandisers that performed work at the sites of construction projects.

The Census of Business, taken in 1940 in conformity with the Act providing for the Sixteenth Decennial Census, approved June 18, 1929, covers operations during the calendar year 1939. The facts were collected in 1940 by a complete field canvass of all business establishments in the continental United States.

The statistics were compiled under the supervision of Fred A. Gosnell, Chief Statistician for Business (resigned April 16, 1942), John Albright, Chief Statistician, and William A. Ruff, Assistant Chief Statistician. This volume was prepared by Isaac Q. Lord, in charge of the Construction Census, with the technical assistance of Arthur B. Fridinger, Lee M. Cissna, and Leonard H. Mattingly, Jr.

Respectfully,

J. C. CAPT,
Director of the Census.

HON. JESSE H. JONES,
Secretary of Commerce.

REPORTS ON BUSINESS

CENSUS OF BUSINESS: 1939

- Volume I. Retail Trade (in three parts).
- Volume II. Wholesale Trade.
- Volume III. Service Businesses.
- Volume IV. Construction.
- Volume V. Distribution of Manufacturers' Sales.
Special Reports.

CONTENTS

	Page		Page
INTRODUCTION.....	1	EXPLANATION OF CLASSIFICATIONS—Continued.	
Scope of the census.....	1	Special trade contractor.....	6
Previous construction censuses.....	2	Work performed.....	6
Schedule forms used.....	2	Types of construction.....	6
The canvass.....	2	On buildings.....	6
Measurement of coverage.....	3	One- and two-family houses.....	7
EXPLANATION OF TERMS.....	4	Other residential buildings.....	7
Construction work.....	4	Buildings other than residential.....	7
Contract construction.....	4	Other than on buildings.....	7
Force account work.....	4	Heavy construction.....	7
Establishment.....	4	Highway construction.....	7
Dual-enterprise establishment.....	4	Kinds of work performed.....	7
Larger establishments.....	4	New construction and additions.....	7
Smaller establishments.....	4	Repairs and alterations.....	7
Builder.....	5	Ownership.....	7
Contractor.....	5	Private construction.....	7
Contractor (kind of).....	5	Public construction.....	7
Contracts or orders received.....	5	DESCRIPTION OF TABLES.....	7
Work sublet.....	5	GENERAL SUMMARY OF CONTRACT CONSTRUCTION.....	9
Subcontractor.....	5	Distribution of contract construction by kinds of contractors.....	9
Work performed.....	5	Geographic distribution of contract construction.....	12
Materials used and equipment installed.....	5	Localization of activities.....	13
Employees (average number of).....	5	Analysis of work performed, for all establishments.....	16
Pay roll.....	5	Types of construction.....	16
Proprietors and firm members (active).....	5	Kinds of work.....	16
EXPLANATION OF CLASSIFICATIONS.....	6	Size-of-business analysis.....	16
Kinds of builders and contractors (basis of classification).....	6	Monthly employment.....	17
Builders.....	6	Legal forms of organization.....	20
Contractors.....	6	Analysis of work performed, for larger establishments.....	21
General contractors.....	6	Types of construction.....	21
Building contractor.....	6	Kinds of work.....	21
Highway contractor.....	6	Ownership.....	23
Heavy contractor.....	6	1930-1929 COMPARISONS.....	23

CHARTS

CHART 1.—Diagram of the construction industry.....	VIII
CHART 2.—Distribution of establishments and work performed, by kinds of contractors: 1939.....	10
CHART 3.—Distribution of establishments and work performed, by kinds of special trade contractors: 1939.....	11
CHART 4.—Value of work performed, by States: 1939.....	14
CHART 5.—Value of work performed on projects located within each State: 1939.....	15
CHART 6.—Work performed, by types of construction and kinds of work, by kinds of contractors: 1939.....	18
CHART 7.—Establishments and value of work performed for all contractors by size of business, based on volume of work performed: 1939.....	19
CHART 8.—Number of employees on the 15th of each month, expressed as percentages of average for the year, for the United States. All contractors combined and principal kinds of contractors: 1939.....	22

TEXT TABLES

TABLE I.—Basic data for the United States by principal kinds of contractors.....	12
TABLE II.—Basic data for the United States and geographic divisions for all kinds of contractors combined.....	12
TABLE III.—Work performed, expressed in percentages of United States and geographic division totals, by principal kinds of contractors.....	13
TABLE IV.—Establishments and work performed, by city-size groups (cities of 100,000 population or more).....	13
TABLE V.—Value of work performed on sites within State by local contractors and by outside contractors, and on sites in States other than the home State.....	16
TABLE VI.—Work performed by types of construction, by principal kinds of contractors.....	16
TABLE VII.—Relative importance of principal kinds of contractors within 11 size-of-business groups.....	17
TABLE VIII.—Establishments reporting work performed in 1939 of less than \$500.....	17
TABLE IX.—1939 average employment and percent of average for each month, for the United States and geographic divisions, by principal kinds of contractors.....	20
TABLE X.—Basic data by legal forms of organization, expressed as percentages of United States totals.....	21
TABLE XI.—Work performed by larger establishments, by types of construction, for principal kinds of contractors.....	21
TABLE XII.—Type of work for larger establishments, by principal kinds of contractors.....	23
TABLE XIII.—Type of work for larger establishments, by types of construction.....	23
TABLE XIV.—Work performed by larger establishments, by ownership, for principal kinds of contractors.....	23
TABLE XV.—Work performed by larger establishments, by ownership, for types of construction.....	23
TABLE XVI.—Comparison of establishments, work performed, pay roll, and materials and equipment for establishments reporting a volume of \$25,000 or more, by geographic divisions and kinds of contractors: 1939 and 1929.....	24
TABLE XVII.—Comparison of establishments, work performed, pay roll, and materials and equipment for establishments reporting a volume of \$25,000 or more, by geographic divisions and States: 1939 and 1929.....	25
TABLE XVIII.—Comparison of establishments, work performed, pay roll, and materials and equipment for establishments reporting a volume of \$25,000 or more, for cities of 500,000 population and over: 1939 and 1929.....	26

VI

CONTENTS

SUMMARY TABLES

	Page
TABLE 1A.—Establishments, work performed, personnel, pay roll, and materials and equipment in total and for two size groups, by kinds of contractors (United States and geographic divisions).....	28
TABLE 1B.—Establishments, work performed, personnel, pay roll, and materials and equipment in total and for two size groups, by divisions and States.....	37
TABLE 2A.—Value of work performed, by location and by kinds of contractors (United States and geographic divisions).....	38
TABLE 2B.—Value of work performed, by location and by geographic divisions and States.....	43
TABLE 3B.—Value of work performed on projects in State, by principal kinds of contractors (resident and nonresident).....	44
TABLE 4A.—Work performed, by types of construction, by kinds of contractors (United States and geographic divisions).....	45
TABLE 4B.—Work performed, by types of construction, by divisions and States.....	52
TABLE 5A.—Establishments, work performed, pay roll, and cost of materials by kinds of contractors, by size of business.....	53
TABLE 5B.—Establishments, work performed, pay roll, and cost of materials by kinds of contractors, by size of business (special trade contractors only).....	54
TABLE 6A.—Monthly employment, by kinds of contractors (United States and geographic divisions).....	57
TABLE 6B.—Monthly employment, by geographic divisions and States.....	65
TABLE 7A.—Establishments, work performed, personnel, and pay roll by kinds of contractors and legal forms of organization.....	66
TABLE 8A.—Value of work performed by types of work, ownership, and construction, by kinds of contractors for establishments reporting a business of \$25,000 or more (United States and geographic divisions).....	67
TABLE 8B.—Value of work performed by types of work, ownership, and construction, by geographic divisions and States for establishments reporting a business of \$25,000 or more.....	90
TABLE 9A.—Work performed, dollar value of contracts and orders received, and work let to others on subcontract, by kinds of contractors for establishments reporting a business of \$25,000 or more (United States and geographic divisions).....	91
TABLE 9B.—Work performed, dollar value of contracts and orders received, and work let to others on subcontract, by geographic divisions and States for establishments reporting a business of \$25,000 or more.....	95

STATE TABLES

TABLE 1.—Establishments, work performed, personnel, pay roll, and materials and equipment in total and for two size groups, by kinds of contractors.....	98
TABLE 2.—Value of work performed, by location and by kinds of contractors.....	132
TABLE 3.—Value of work performed on projects in State, by kinds of contractors (resident and nonresident).....	150
TABLE 4.—Work performed, by types of construction, by kinds of contractors.....	165
TABLE 5.—Establishments, work performed, pay roll, and cost of materials by kinds of contractors, by size of business.....	188
TABLE 6.—Monthly employment, by kinds of contractors.....	198
TABLE 7.—Establishments, work performed, personnel, and pay roll by kinds of contractors and legal forms of organization.....	221
TABLE 8.—Value of work performed by types of work, ownership, and construction, by kinds of contractors for establishments reporting a business of \$25,000 or more.....	226

CITY TABLES

TABLE 1.—Establishments, work performed, personnel, pay roll, and materials and equipment in total and for two size groups, by kinds of contractors (cities of more than 100,000 population).....	258
TABLE 2.—Value of work performed, by location and by kinds of contractors (cities of more than 100,000 population).....	308
TABLE 4.—Work performed, by types of construction, by kinds of contractors (cities of more than 100,000 population).....	334
TABLE 5.—Establishments, work performed, pay roll, and cost of materials by kinds of contractors, by size of business (cities of more than 500,000 population).....	369
TABLE 6.—Monthly employment, by kinds of contractors (cities of more than 500,000 population).....	372
TABLE 8.—Value of work performed by types of work, ownership, and construction, by kinds of contractors for establishments reporting a business of \$25,000 or more (cities of more than 500,000 population).....	380

APPENDIXES

A.—Instructions to enumerators.....	390
B.—Schedule Form 61.....	393
C.—Schedule Form 60.....	394
D.—Explanation of inquiries appearing on the construction schedules for which no data are published.....	395
E.—Explanation of classifications of special trade contractors.....	396

CONTENTS

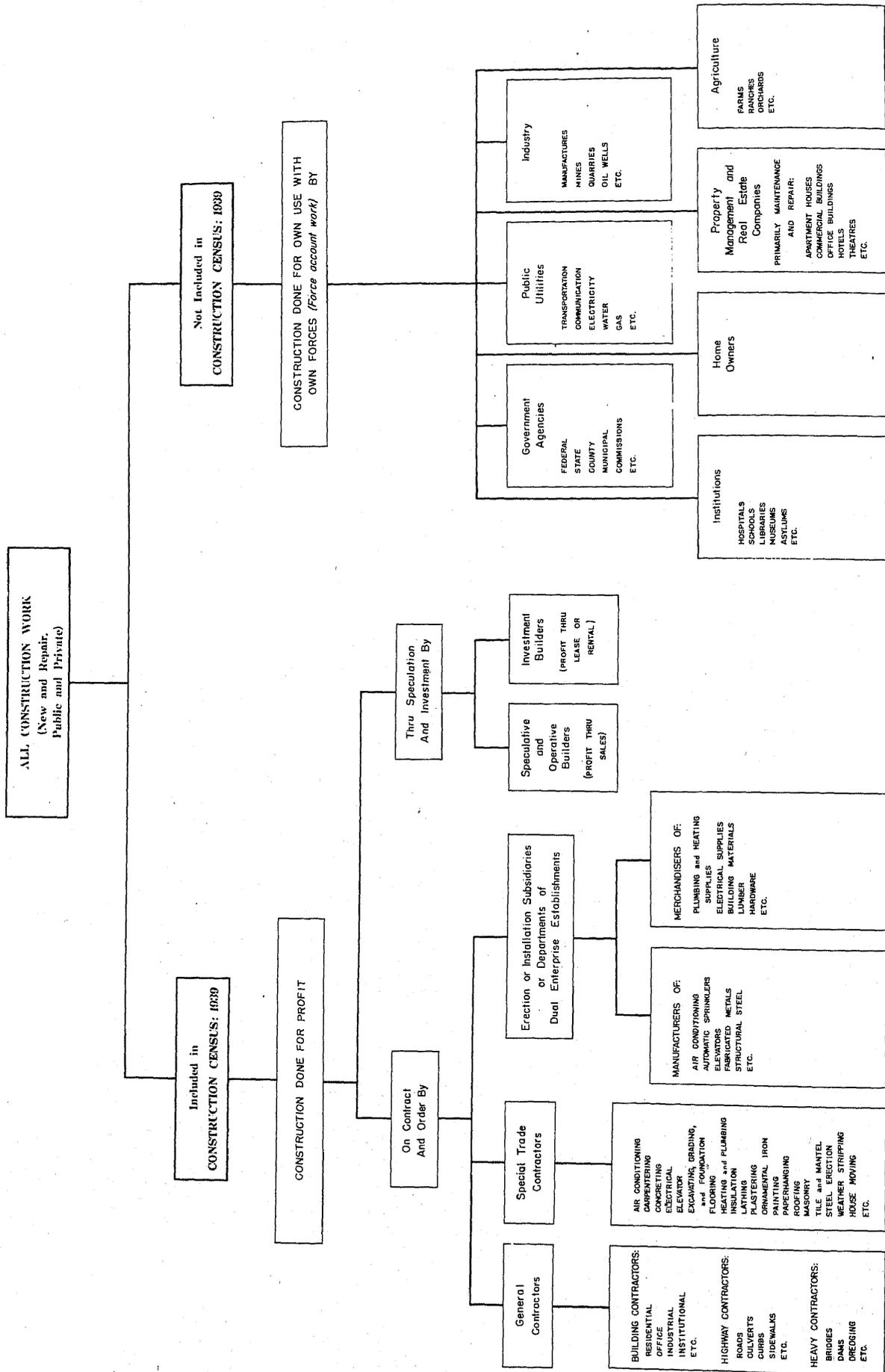
VII

INDEX TO TABLES, BY AREAS

- TABLE 1.—Establishments, work performed, personnel, pay roll, and materials and equipment in total and for two size groups, by kinds of contractors—
 TABLE 2.—Value of work performed, by location and by kinds of contractors—
 TABLE 3.—Value of work performed on projects in State, by kinds of contractors (resident and nonresident)—
 TABLE 4.—Work performed, by types of construction, by kinds of contractors—
 TABLE 5.—Establishments, work performed, pay roll, and cost of materials by kinds of contractors, by size of business—
 TABLE 6.—Monthly employment, by kinds of contractors—
 TABLE 7.—Establishments, work performed, personnel, and pay roll by kinds of contractors and legal forms of organization—
 TABLE 8.—Value of work performed by types of work, ownership, and construction, by kinds of contractors for establishments reporting a business of \$25,000 or more—

AREA	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8	AREA	Table 1	Table 2	Table 3	Table 4	Table 5	Table 6	Table 7	Table 8
United States Total	Page 28	Page 38	Page 45	Page 53	Page 57	Page 66	Page 67		CITIES OF 100,000 POPULATION OR MORE—Continued.	Page							
GEOGRAPHIC DIVISIONS									Chicago, Ill.	265	311						
New England	28	38		45		58		70	Cincinnati, Ohio	266	312						
Middle Atlantic	29	38		46		58		72	Cleveland, Ohio	266	312						
East North Central	30	39		46		59		75	Columbus, Ohio	267	312			369	374		382
West North Central	31	39		47		60		80	Dallas, Tex.	268	313						
South Atlantic	32	40		48		61		82	Dayton, Ohio	268	313						
East South Central	33	40		48		61		84	Denver, Colo.	269	313						
West South Central	34	41		49		62		86	Des Moines, Iowa	269	314						
Mountain	34	41		50		62		87	Detroit, Mich.	270	314			369	374		383
Pacific	35	41		50		63			Duluth, Minn.	271	314						
STATES									Elizabeth, N. J.	271	315						
Alabama	98	132	160	165	188	198	221	226	Erie, Pa.	272	315						
Arizona	98	132	160	165	188	198	221	226	Fall River, Mass.	272	315						
Arkansas	99	132	160	165	188	198	221	227	Flint, Mich.	273	315						
California	99	132	160	166	188	199	221	227	Fort Wayne, Ind.	273	315						
Colorado	100	133	161	166	188	199	221	228	Fort Worth, Tex.	273	316						
Connecticut	101	133	161	167	188	200	221	229	Gary, Ind.	274	316						
Delaware	102	134	161	167	189	200	221	229	Grand Rapids, Mich.	274	316						
District of Columbia	102	134	162	168	189	201	221	230	Hartford, Conn.	275	316						
Florida	103	134	162	168	189	201	221	231	Houston, Tex.	275	317						
Georgia	104	135	162	169	189	202	221	231	Indianapolis, Ind.	276	317						
Idaho	105	135	163	170	190	202	222	232	Jacksonville, Fla.	277	317						
Illinois	105	135	163	170	190	202	222	232	Jersey City, N. J.	277	318						
Indiana	106	136	163	170	190	203	222	233	Kansas City, Kans.	277	318						
Iowa	107	136	164	171	190	204	222	234	Kansas City, Mo.	278	318						
Kansas	107	137	164	171	190	204	222	234	Knoxville, Tenn.	278	318						
Kentucky	108	137	164	172	190	205	222	235	Long Beach, Calif.	279	318						
Louisiana	109	137	164	172	191	205	222	236	Los Angeles, Calif.	279	319			370	375		383
Maine	110	138	165	173	191	206	222	236	Louisville, Ky.	280	319						
Maryland	110	138	165	173	191	206	222	237	Lowell, Mass.	281	319						
Massachusetts	111	139	165	174	191	206	222	237	Memphis, Tenn.	281	319						
Michigan	112	139	166	174	191	207	223	238	Miami, Fla.	282	320						
Minnesota	113	139	166	175	192	208	223	239	Milwaukee, Wis.	282	320			370	375		384
Mississippi	113	140	166	175	192	208	223	240	Minneapolis, Minn.	283	320						
Missouri	114	140	167	176	192	209	223	240	Nashville, Tenn.	284	321						
Montana	115	141	167	176	192	209	223	241	Newark, N. J.	284	321						
Nebraska	115	141	167	177	192	210	223	241	New Bedford, Mass.	285	321						
Nevada	116	141	168	177	193	210	223	242	New Haven, Conn.	285	322						
New Hampshire	117	142	168	178	193	210	223	242	New Orleans, La.	286	322						
New Jersey	117	142	168	178	193	211	223	243	New York, N. Y.	287	322			370	376		384
New Mexico	118	142	168	178	193	211	223	244	Norfolk, Va.	287	323						
New York	118	142	169	179	193	211	224	244	Oakland, Calif.	288	323						
North Carolina	119	143	169	179	194	212	224	245	Oklahoma City, Okla.	289	323						
North Dakota	120	143	169	180	194	213	224	245	Omaha, Nebr.	289	323						
Ohio	120	144	169	180	194	213	224	246	Paterson, N. J.	290	324						
Oklahoma	121	144	169	181	194	213	224	247	Peoria, Ill.	290	324						
Oregon	122	144	169	181	194	214	224	247	Philadelphia, Pa.	290	324			370	377		385
Pennsylvania	123	145	169	182	194	214	224	248	Pittsburgh, Pa.	291	325			370	377		386
Rhode Island	123	145	169	182	195	215	224	248	Portland, Oreg.	292	325						
South Carolina	124	145	169	183	195	215	224	249	Providence, R. I.	292	325						
South Dakota	125	146	169	183	195	216	224	250	Reading, Pa.	293	325						
Tennessee	125	146	169	183	195	216	225	250	Richmond, Va.	293	325						
Texas	126	146	169	184	195	216	225	251	Rochester, N. Y.	294	326						
Utah	127	147	169	184	196	217	225	252	Sacramento, Calif.	295	326						
Vermont	127	147	169	185	196	217	225	252	St. Louis, Mo.	295	327			371	378		386
Virginia	128	147	169	185	196	218	225	253	St. Paul, Minn.	296	327						
Washington	129	148	169	186	196	218	225	253	Salt Lake City, Utah	297	327						
West Virginia	129	148	169	186	196	219	225	254	San Antonio, Tex.	297	328						
Wisconsin	130	148	169	187	197	219	225	255	San Diego, Calif.	298	328						
Wyoming	131	149	169	187	197	220	225	255	San Francisco, Calif.	298	328			371	378		387
CITIES OF 100,000 POPULATION OR MORE									Seranton, Pa.	299	329						
Akron, Ohio	258	308		334					Seattle, Wash.	299	329						
Albany, N. Y.	258	308		334					Somerville, Mass.	300	329						
Atlanta, Ga.	259	308		334					South Bend, Ind.	300	329						
Baltimore, Md.	259	308		335	369	372		380	Spokane, Wash.	301	329						
Birmingham, Ala.	260	309		335	369	372		380	Springfield, Mass.	301	330						
Boston, Mass.	260	309		336	369	372		381	Syracuse, N. Y.	302	330						
Bridgeport, Conn.	261	309		336	369	372		381	Tacoma, Wash.	302	330						
Buffalo, N. Y.	262	310		336	369	373		381	Tampa, Fla.	303	331						
Cambridge, Mass.	262	310		337					Toledo, Ohio	303	331						
Camden, N. J.	263	310		337					Trenton, N. J.	304	331						
Canton, Ohio	263	310		338					Tulsa, Okla.	304	331						
Charlotte, N. C.	264	311		338					Utica, N. Y.	305	331						
Chattanooga, Tenn.	264	311		338					Washington, D. C.	102	134			189	201		230
									Wichita, Kans.	305	332						
									Wilmington, Del.	306	332						
									Worcester, Mass.	306	332						
									Yonkers, N. Y.	307	332						
									Youngstown, Ohio	307	333						

CHART I.—DIAGRAM OF THE CONSTRUCTION INDUSTRY



CONSTRUCTION: 1939

INTRODUCTION

This volume presents the findings of the Census of Construction, which was one phase of the Census of Business for 1939. Additional fields covered by the Census of Business were retail trade, wholesale trade, the distribution of manufacturers' sales, service establishments, hotels, laundries, cleaning and dyeing plants, tourist courts and tourist camps, motion-picture theaters and other places of amusement, and sales finance companies.

A widely accepted conception of the industry includes all construction of, and repair work done on, immobile structures and facilities. The home owner repairing his porch floor, painting his kitchen, or screening his windows; the farmer building a fence, painting his barn, or graveling his driveway; the apartment house janitor doing odd jobs, replacing spigot washers, repairing a door lock; the telephone company erecting new lines, replacing old poles, installing new switchboards; the railroad adding new ballast, replacing worn rails, installing a siding; the factory adding a new wing, replacing an old boiler; CCC enrollees building trails and picnic areas in parks; WPA widening a road, digging drainage ditches, repairing public buildings; the United States Engineer Corps dredging channels, repairing levees; the State maintaining a highway and all of its appurtenances such as guard rails, culverts, road signs, painted lines; the county scraping a road, clearing out side drainage ditches; the city water department replacing a broken main or the street department resurfacing a street—all these and, of course, the work done by regular building, highway, heavy, and special trade contractors and operative or speculative builders are generally considered to make up the construction industry.

Examination of these examples of construction work reveals that they fall within one of two major categories—first, construction work done for profit by contractors and builders; and second, construction work done by owners on their own property either by themselves or by their own employees. This conception of the industry is diagrammed in chart 1, p. VIII, and indicates that part of the industry which is included in the census as against that part which is not included.

Scope of the census.—This census is limited to establishments engaged in doing construction work for others for the purpose of *direct profit* from those activities as such, and, in addition, includes builders who derive

their profit through sale or lease of the finished structure. Force account work, that is, construction work done by public agencies, establishments, or persons with their own forces on structures *for their own use or occupancy*, is not included in the Construction Census. This limitation of scope was imposed rather than elected. The records of government agencies, public utility companies, industrial concerns, and institutions are not kept in such a manner as would readily permit, at a nominal cost, the assembly of such information, nor was it practicable to canvass home owners, property management and real estate companies, and persons engaged in agriculture. Such an undertaking would have involved a personal call by the enumerator on the owner, manager, or agent of every house, store, hotel, apartment house, office building, and farm in the country.

By definition, the 1939 Census of Construction includes all persons (other than employees) or establishments whose principal business in 1939 was the utilization of construction materials and labor in construction work for others, or for themselves for speculative or investment purposes. It also includes construction or installation departments of manufacturers of building specialties, such as steel products, elevators, resilient flooring, etc., and the construction done for profit by retailers and wholesalers when it was an important, but not necessarily the major portion of their business enterprise.

The selling and servicing of domestic appliances such as electric refrigerators, oil burners, gas stoves, and electric ranges are included in the retail, wholesale, or service phases of the Business Census, while ship and boat building are included in the Census of Manufactures, rather than the Construction Census.

Foreign business of reporting establishments, that is, construction work done by them at sites located outside of the continental United States, is not included. Reports which showed volume of work performed of less than \$500 for the year were omitted from this census, it being considered that a volume of this amount constituted evidence that contract construction was neither the *principal* business nor an important part of the operations of the respondent. Demolition or wrecking was enumerated but not included in the tabulations since the value of work performed was generally reported in terms of the total sales in 1939 of salvaged materials rather than direct compensation for work done for others under contract or order.

CENSUS OF BUSINESS

Previous construction censuses.—The first Census of Construction was taken in 1930 and covered the operations of the calendar year 1929. The scope of that census was substantially the same as that for 1939 with one *major exception*, namely, that in 1929 only those persons or establishments which handled business of at least \$25,000 for the year (including work sublet to others) were required to report, whereas in 1939 all persons and establishments falling within the scope were required to file a return regardless of the size of their business.

The second Census of Construction was taken in 1936 covering the operations of 1935. As in this present Census, it covered establishments without regard to size of business. There were, however, two major factors which made the coverage for 1935 incomparable with that for 1939—first, in 1935 only those establishments which had a recognizable place of business were canvassed, no attempt being made to locate individuals who operated from their homes; and second, reporting in 1935 was on a voluntary basis while in 1939 reporting was required by law.

The 1929 census was quite complete in coverage of establishments over \$25,000, but this size limitation automatically eliminated comprehensive information for special trade contractors since a preponderant number of them have an annual volume of less than \$25,000. It was because of this fact that, in 1935, no size limitation was imposed. However, the purpose of broadening the coverage in this respect was only partially accomplished due to the limitation of funds, lack of time in which to develop field plans that would make it possible to include persons operating from their homes, and the absence of authority to require a person or establishment to report.

In 1939 then, for the first time, an effort was made to enumerate all persons or establishments falling within the scope, whether they had a recognizable place of business or conducted their business from their homes, and regardless of the volume or size of their business.

Schedule forms used.—In the preparation of questionnaires it was recognized that, if complete coverage and uniform reporting were to be achieved to a substantial degree, the character of information requested would necessarily be limited to a few basic facts about the industry. The experience of the 1929 and 1935 censuses had conclusively demonstrated this to be the case.

Review of a few characteristics of the industry also point to that fact. In the first place, organization of the industry is in its early stages, consequently there are only a few agencies which could render educational or promotional assistance over any broad area toward the planning and accomplishment of the census. Secondly, the varied practices of contracting and sub-

contracting; the many methods of purchasing materials, equipment, and supplies, and of paying for materials and services; and the different combinations of these practices, in the absence of any detailed records of such procedures, also recommended this restriction. Accounting methods, even among the larger contractors, are more often than not quite limited, particularly with regard to individual projects and work in progress, while the records of smaller contractors are apt to stop with those relating to employment and pay rolls as required by the Social Security Board, plus an incomplete miscellaneous assortment of job tickets, bills for materials, and canceled checks. In addition to these limitations within the industry were those of the enumerator, who, as a temporary employee, could not be thoroughly schooled in trade practices and methods and therefore would not be in a position to render material assistance to the respondent in his attempt to assemble and fit his records to anything other than a very simple questionnaire.

Such items of interest as number of employees and pay roll "at site of project"; value of equipment owned, purchased, and rented during the year; cost of individual kinds of material used; and types of wage earners employed were sacrificed and subordinated in the interests of a more complete coverage and greater uniformity of reporting.

To further these purposes two schedule forms were used—a very short questionnaire (Form 61) simplified for use by the smaller establishments (those who in 1939 performed work with their own forces of less than \$25,000) and a longer one (Form 60) for those who in that year performed work with their own forces or received contracts totaling \$25,000 or more. The only essential differences between the two forms which are reflected in the tables of this volume are that the longer form provided for the reporting of the value and source of contracts or orders received, the value of work sublet to others, a more detailed analysis of the type of structure upon which work was performed, and whether the project upon which the work was done was owned by a public or private agency. Both forms are reproduced in the appendixes to this volume, pp. 393 and 394.

The canvass.—Reports were secured by a field canvass in which every portion of the continental United States was assigned to an enumerator who was required to obtain, in person, a schedule from each contractor or builder in his enumeration district. Enumerators reported to the district supervisors who in turn were responsible to their respective area managers.

With special emphasis on the attempt at *complete* coverage, extensive preparations were made in Washington to assist the enumerators and supervisors in their difficult task of locating each contractor or builder. As an aid to the enumerator he was given a field card in advance of the canvass which bore the name and address of each known contracting establishment or

builder located in his district. These cards were prepared mainly from the following sources:

1. Establishments which reported in the Construction Census of 1935.
2. Employers reporting to the Social Security Board.
3. Lists which were prepared by local chambers of commerce in reply to over 1,400 letters requesting this specific assistance from them.
4. Licensee registers from each State which had a contractors' licensing law.
5. Licensee registers from cities which licensed plumbers, electricians, and other contractors.
6. Prequalified bidders from the various States requiring such prequalifications.
7. The Bureau of Labor Statistics of the United States Department of Labor, which furnished names of persons or firms other than owners operating in the cities and counties covered by the permit data prepared monthly by this agency, if such persons or firms in 1939 took out permits totaling \$500 or more for new construction of, or repairs to, buildings.
8. Mailing, contract award, and membership lists of numerous trade periodicals, services, and associations.

Approximately 640,000 cards were prepared, 284,000 of which were found to be duplicates, leaving 356,000 which were sent to the enumerators.

The enumerator was required to account for the disposition of every card either by securing a report or by explaining why a schedule was not obtained. He was instructed, with emphasis, that he was also responsible for securing reports from any additional establishments which might be located in his district for which he had no card.

Supervisors were furnished a list of licensing and permit agencies, building supply dealers, labor organizations and trade associations which had, through correspondence, indicated their ability and willingness to assist in identifying additional contractors and builders in their respective districts. They were instructed to exhaust the possibilities of these contacts.

These methods resulted in the enumeration of 215,050 establishments which are included in the tabulations, 18,770 which were not included because they reported work performed in 1939 of less than \$500, and approximately 12,500 additional establishments which were excluded for the reason that they did not fall within the scope of the census.

Despite these aids, the canvass of the construction business is reputed by experienced field men to be the most difficult enumeration job which they have been called upon to perform. This was due primarily to the problem, peculiar to this field, of ferreting out the smaller establishments which had no readily recognizable place of business and the individuals who operated from their homes.

Comparatively little trouble in this respect was encountered in rural areas and smaller communities, for the enumerator was generally a local man who knew the affairs of his neighbors or could at least find out about them with little effort. The local lumberyards or building supply houses and hardware stores could

give him direct and valuable assistance. Having located a builder or contractor, he met no resistance in securing a report, for the "little fellow" in the country was not reluctant to take enough "time-out" for its preparation. The experience in the more densely populated sections was quite a different story.

In fact, this problem was acute in the metropolitan districts where the enumerator had little personal knowledge of the source of livelihood of the residents of his district. In locating operators for whom he had no card, the enumerator was dependent largely upon developing leads through known contacts and following them through. These leads were not so readily available for the metropolitan dealer or agency is not prone to disclose his customer list to a stranger, whatever the purpose. Furthermore, customer lists, permits issued, and licensee records were on a city-wide basis and there was great duplication among them. This meant that the job had to be centralized in the supervisor's office in order that duplications might be eliminated, cards prepared, and each card transmitted to the enumerator in whose district the contractor resided. Quite often funds available for clerical help and time factors did not permit the thorough accomplishment of this task.

Having learned the identity and place of residence of a small contractor, the problem of "catching up with him" was at hand. In the evenings he was out submitting bids, looking up labor for the next morning, or collecting; in the day he was out on a job or somewhere between jobs, or arranging for materials for work in progress. His was a one-man business and the time required for the adaptation of his inadequate records to the items on the report form often involved the sacrifice of his personal time which he needed in his business. Procrastination was not infrequent and it was a common occurrence for the enumerator to make five or six calls in securing a report from one of these small operators.

Measurement of coverage.—Since this was the first attempt at complete coverage in this field, there is no direct comparison by which the completeness of canvass may be measured. A measurement by comparison between States, counties, or cities, on the basis of the number of reports received per thousand of population, was not conclusive due to the unmeasured influences of local factors such as W. P. A. programs, public construction projects, economic stringencies due to the depression, and differences of licensing laws between political entities. Measurement by comparisons of the volume of work performed was not feasible for the same reasons and, in addition, because of the distorting influence of the comparatively few establishments which performed a large volume of work.

The analyses which have been made indicate that there was an undercoverage of the very small establishments in some metropolitan districts. This shortage, however, has important bearing only on the number of

establishments and number of proprietors. Due to the small volume of business which they did, the effect is not significant upon the United States and State totals for value of work performed, number of employees, pay roll, and cost of materials and equipment installed. This undercoverage occurs mostly among the special trade contractors, such as painters, paperhangers, electricians, etc., and to a much lesser degree, among builders.

Records of the canvass indicate very few known large establishments for which usable reports were not obtained. Those omitted were usually dual-enterprise establishments whose reporting was confused between the various phases of their activities for which separate schedules should have been obtained. A steel manufacturer is a case in point. All activities of this concern were reported to the Census of Manufactures, whereas the business of the erection department should have been reported to the Construction Census. Data for steel erection are understated as a result. The significant influence of this omission, however, as in the case of similar ones, does not extend beyond the State and seldom does it reach beyond the city in which it is located.

With these exceptions, it is considered that the canvass was complete and comprehensive and that the data published herein present the basic facts concerning that portion of the construction industry which falls within the scope of this census. (See Scope of the census, p. 1.)

EXPLANATION OF TERMS

The meanings of the following terms as used in connection with this volume are explained in the interest of clarity.

Construction work.—For purposes of the census, *construction work* represents the use of labor, materials, and equipment in the fabrication, alteration, repair, or maintenance of immobile physical improvements. Thus, it embraces such work both new and repair, which was done on houses and other buildings, highways, bridges, tunnels, railroad trackage, streets, dams, reservoirs, harbors or channels, docks, airports, industrial plants, etc.

Contract construction is construction work performed for others by contractors, and the installation and erection departments or subdivisions of dual-enterprise establishments such as manufacturers, wholesalers, or retailers. The value of work performed by builders is also included in this term. It embraces work done on order or by agreement, written or oral, and therefore is not limited to that done under formal or written contracts. It excludes force account work and work done by journeymen or laborers employed directly by the owner on a wage basis.

Force account work.—Construction work done by concerns with their own forces, that is, by employees

on their own pay roll, on structures for their own use or occupancy (except that done by "builders") is *force account work*. Instances where it occurs in volume are: railroad right-of-way maintenance and alteration, telephone installation and maintenance, electrification maintenance, repair and extension, property management maintenance, street repair, home and farm improvements and repair on a wage basis, State and county road maintenance and repair, factory maintenance, alterations or additions, etc.

Establishment.—As used herein the term *establishment* includes corporations, partnerships, joint ventures, and receiverships as well as individuals operating as proprietorships or partnerships primarily engaged in contract construction as described above. It includes the individual so engaged whose office is "under his hat," as well as the large corporation or the building material dealer or manufacturer, who does an important volume of such work in connection with other phases of his business enterprise.

Dual-enterprise establishment.—An establishment which is engaged in two or more lines of business enterprise, one of which is the performance of contract construction, is termed a *dual-enterprise* establishment. Examples are: the steel manufacturer who erects steel at the site of construction; the sheet metal shop which installs fabricated ducts, flashings, gutters, etc.; the lumberyard or building supply dealer who contracts for erection of buildings, and the electrical supply house which contracts for electrical wiring at the site. A dual-enterprise establishment furnished a separate report for each activity and, therefore, only their construction activities are included in the Construction Census. Small shops, showrooms, or stores (such as plumbing shops, electrical shops, tin shops) operated in connection with a special trade which sold merchandise or repair services and did some small repairs or installations in connection therewith were reported only on one form as a construction, retail, or service establishment depending upon the activity from which the largest part of their receipts was derived.

Larger establishments, as the term is used here, are those which in 1939 received contracts and orders or performed work with their own forces in the total value of \$25,000 or more. The term also includes builders who in 1939 actually started construction or performed work on projects which upon completion would aggregate a value of \$25,000 or more exclusive of land value, mark-up, and sales commissions.

Smaller establishments are contractors who in 1939 neither performed work with their own forces nor received contracts and orders aggregating \$25,000 or more, and builders who had neither started projects in that year which upon completion would aggregate a value of \$25,000 nor performed work with their own forces in that or greater volume.

Builder.—Establishments or persons engaged in the construction of buildings for their own account for purposes of profit through sale, lease, or rental are termed *builders*. They should be distinguished from the building contractor who contracts to construct buildings for others. The promoter who merely invests in promotional developments involving the construction of buildings but who has no construction force and does none of the actual erection process is not considered a builder, nor is he included in any other classification of the Construction Census.

Contractor.—Business organizations or individuals (other than employees) who are engaged in construction work for others are termed *contractors*.

Contractor (kind of).—The term "*kind of contractor*" as used in the tables and text includes builders as well as general and special trade contractors.

Contracts or orders received is the sum of all awards for construction work received in 1939 by the contractor, whether written or oral, formal or informal, from any source whatsoever and embraces construction done on a fee or cost-plus basis. It also includes the estimated cost when finished of construction projects started but not completed in 1939 by builders. It does not include any part of contracts received in 1938 or earlier, or the cost of projects started by builders prior to January 1, 1939.

Work sublet.—An order or contract for construction given by one contractor or builder to another contractor or builder is termed *work sublet* provided that it covers a part of a project, the successful completion of which is the responsibility of the first contractor or builder. Work sublet is said to be on subcontract or subcontracted and is synonymous with "work let to others on subcontract."

Contracts for materials or equipment *only* which involved the delivery of goods, but no labor at the site of construction by the suppliers, were included as materials—not as work sublet.

Subcontractor.—This term has proved to be confusing and, therefore, is not used in this volume. In the past it has been widely and loosely used to denote special trade contractors because much of their volume has been work sublet to them by other contractors or builders. (See Special trade contractor, p. 6.)

Work performed represents the total value of construction actually performed by the contractors' or builders' *own forces*. It includes (1) work done in 1939 on jobs which were started prior to that year; (2) work started and completed in 1939; and (3) that portion of the work which was done in 1939 on projects which were incomplete at the end of the year.

Contractors in computing work performed reported in terms of *contract price* (not cost of labor and materials used) and, therefore, included profit. For example, if the contract price on a building was \$50,000 and the building was half completed on December 31, 1939,

the amount reported would be \$25,000, not the cost to date. *Builders* in making such computation, reported in terms of *actual cost* of improvements (exclusive of work sublet) and, therefore, excluded profit, land values, and sales commissions.

Work sublet to others by the builder or general contractor was not included as work performed in the report of the builder or general contractor but was reported as a part of the business of the special trade contractor who received the subcontract. Therefore, there is no duplication of reporting in any items shown in the tables of this volume.

Materials used and equipment installed is the cost, delivered at the site of construction, of the materials furnished and used by the establishment in construction (brick, cement, lumber, steel, etc.), and of equipment furnished and installed (plumbing, heating, elevators, escalators, metal partitions, stoves, etc.). Equipment is limited to nonrevenue types which become an integral part of the structure and, therefore, does not include such items as factory machinery, power generating equipment in powerhouses, etc.

Material and equipment furnished *directly* by the owner was not reported or included since it was not practical to contact owners for this information. General contractors or builders who sublet work to others did not include the materials or equipment furnished by the establishment which received the subcontract. Material and equipment furnished by dual-enterprise establishments, from their own stocks or factories, in their performance of construction work at the site was included by them just as though they had purchased such equipment or supplies from exterior sources.

Employees (average number of).—Average number of employees is the sum of all employees who appeared on the establishments' pay rolls in the pay period ended nearest the 15th of each month, divided by 12. It includes both full-time and part-time employees, whether employed at the sites of construction or elsewhere and whether paid on a wage or salary basis. Proprietors and firm members of unincorporated establishments are not included as employees.

Pay roll is the compensation by wages, salaries, bonuses, and commissions of all persons employed on either a full-time or part-time basis by the establishment during 1939. It does not include any form of compensation of proprietors and firm members of unincorporated establishments.

In the case of dual-enterprise establishments, only that part of the pay roll which was paid to employees engaged in the construction phase of the business was included.

Proprietors and firm members (active).—Active proprietors and firm members designates persons having a financial interest in the establishment who devote the major portion of their time to the construction business of the establishment. Such persons are

included whether or not they receive a regular salary or drawing account. (Corporate officers and executives are not included as proprietors or firm members, but are included as employees.)

EXPLANATION OF CLASSIFICATIONS

Kinds of builders and contractors (basis of classification).—Each reporting establishment was classified according to the predominant type of work which it performed in 1939 as determined from inquiries 2 and 4 of the long form, and inquiries 2 and 3 of the short form (Forms 61 and 60, see Appendixes B and C, pp. 393 and 394).

Builders.—Establishments or persons engaged in the construction of buildings for their own account for purposes of profit through sale, lease, or rental were classified as *builders*. Due to the relatively small number of builders it was not feasible to further subdivide this group without disclosure of individual operations, though the schedule provided for three subclassifications, namely, "operative or speculative," "investment," and "occasional" builders.

Contractors.—Business organizations or individuals (other than employees) engaged in the performance of construction work for others were classified as *contractors*. Each contractor was classified as either a general contractor or a special trade contractor.

General contractors.—Establishments or persons who normally contract for the entire work in a given project directly with the owner (or his agent), who are responsible for the execution of the whole, and who usually do part of the actual work with their own forces, are *general contractors*. This classification also includes contractors engaged in specialized operations (as distinguished from "special trades"), which require mechanized equipment, where their portion of the job constitutes a considerable part of the entire project and even though they are doing the work for another contractor, rather than directly for the owner. Examples of these types of work are: highway grade preparation, highway paving, heavy foundations and excavations, dredging, and pile driving. The general contractor group is broken down into three subclassifications, based upon the nature of the structure or project on which the majority of his construction work of 1939 was performed. These subclassifications are:

Building contractor.—A general contractor who is primarily engaged in the construction of new buildings or general repair and alterations of existing buildings of any type is a *building contractor*. Building contractors should not be confused with builders as described under "Builder" (p. 5).

Highway contractor.—General contractors primarily engaged in construction work on roads, streets, alleys, highway structures (such as guard rails, culverts, light bridges), and light sewer and water improvements are termed highway contractors. A general contractor, most of whose work is in one line of highway work such as preparation of grades or paving, is classified as

a highway contractor rather than a special trade contractor. (For further details, see footnote 2 of Appendix C, p. 394.)

Heavy contractor.—General contractors primarily engaged in the construction of heavy bridges, large sewer and water mains, viaducts, tunnels, pipe lines, transmission lines, docks, etc.; or work on railroad, electrification, drainage, sanitation, water supply, hydroelectric, flood control, irrigation, reclamation, and dredging projects are termed *heavy contractors*. (For further details, see footnote 1 of Appendix C, p. 394.)

Special trade contractor.—A special trade contractor is one who contracts for and is primarily engaged in a specialized trade such as plumbing, painting, concreting, steel erection, carpentering, etc. He is classified on the basis of the processes of his trade regardless of the type of project or structure upon which he performs work and regardless of the source of his contracts. (See Subcontractor, p. 5.) There are 32 kinds of special trade contractors for which it has been possible to present data in the United States summary tables. In addition, there is a thirty-third classification designated "other"—a catch-all for recognizable types which did not appear in sufficient number for individual presentation.

Work performed is classified on three bases: First, on the basis of "type of construction" as determined by the physical nature of the finished structure or facility; second, as to "kind of work," that is, whether new construction and additions, or repairs and alterations; and finally, according to "ownership" of the structure or facility upon which the work was performed.

Types of construction.—Work performed, when classified on this basis, falls into two major categories: first, work performed "on buildings" and second, work performed "other than on buildings." Each of these categories is further reduced to sub-classifications.

ON BUILDINGS.—The term *on buildings* refers to any type of construction, new and additions, as well as repairs and alterations on any type of housing structure, whether for residential, commercial, industrial, or miscellaneous use, and regardless of public or private ownership. It includes work which is incidental to the construction of buildings, such as the erection of a private garage, a barn, or other out-building, the laying of a sidewalk from the street to the house, bringing in a service sewer or water line from the street to the building, and the fencing of the yard. It also includes the construction of a building even though it may be only a part of a larger project. For example, a hangar erected in connection with the construction of an airport would be classified as "on buildings" while the grading of the field and the construction of the runways would be classified as "other than on buildings." Construction work done in connection with buildings by heavy or highway contractors is classified as "on buildings." Examples are: grading, excavating, and heavy foundations for buildings.

This general classification is divided into three sub-

classifications, depending on the type of building erected, as follows:

One- and two-family houses includes detached, semidetached, and attached or row houses with separate entrances, designed for the occupancy of one or two families. It does not include the so-called duplex apartment with a common entrance for four apartments. The latter are included in "other residential buildings."

Other residential buildings denotes structures which provide for housing three or more families, such as apartment houses, hotels, flats, and dormitories. Dual-purpose structures such as an apartment house having stores or service shops on the ground floor are classified according to their predominant use.

Buildings other than residential represents all types of buildings not designed as living quarters. It includes commercial buildings (e. g. banks, public garages, service stations, stores, office buildings, theaters, and warehouses, etc.), educational buildings (e. g. gymnasiums, schools and libraries, etc.), institutional buildings (e. g. museums, hospitals, asylums, and churches, etc.), and industrial buildings (e. g. factories, foundries, distillation plants, etc.).

OTHER THAN ON BUILDINGS.—Work performed on any structure or facility which is not a building or a close appurtenance of a building such as fences, garages, private walks, etc. is classified as "*other than on buildings.*" It includes such projects as are generally handled by heavy or highway contractors and is therefore broken down into two subclassifications, namely, heavy construction and highway construction.

Heavy construction.—This includes such projects as have been described under "heavy contractor" (p. 6), and in footnote 1 of schedule Form 60 (Appendix C, p. 394).

Highway construction.—This includes work regularly done by highway contractors as explained under that side heading (p. 6), and in footnote 2 of schedule Form 60 (Appendix C, p. 394). Work performed on buildings in connection with heavy or highway projects is included in the classification "on buildings."

Kinds of work performed.—This falls into two classifications—"new construction and additions" and "repairs and alterations."

NEW CONSTRUCTION AND ADDITIONS.—The original construction of new structures such as buildings, bridges, dams, etc., or of new facilities such as streets, sewers, roads, railroads, channels, irrigation ditches, etc., is termed *new construction*. Substantial *additions* to existing improvements such as adding a wing to an existent building, erecting an overpass on a highway, or extending an irrigation system are included as new work.

REPAIRS AND ALTERATIONS.—Repair, maintenance, and alteration, or remodeling of existing physical improvements is termed *repairs and alterations*. It includes such activities as painting, papering, or re-roofing a house, remodeling a kitchen or bathroom, adding a porch, or raising the height of a jetty, re-dredging a partially filled channel, replacing the rails of a railroad, straightening a highway, resurfacing a street, etc.

Ownership.—Work performed when classified on this basis is either "private" or "public" construction.

Ownership of the finished structure or facility is the determining factor rather than the source of financing, therefore projects owned by individuals or corporations are classified as private construction even though financed by funds made available through the offices of a public agency such as Federal Housing Authority, Home Owners Loan Corporation, or the Rural Electrification Administration.

PRIVATE CONSTRUCTION.—Construction work done by establishments on projects owned by individuals, corporations, and all other private agencies, including cooperatives, churches, colleges, and other institutions is termed *private construction*.

PUBLIC CONSTRUCTION.—Construction work done by establishments on projects owned by Federal, State, county, municipal, and other governmental agencies is termed *public construction*.

DESCRIPTION OF TABLES

The findings of this census are presented in nine basic tables. The first seven tables contain data which were common to both the long and short form schedules (see Schedule forms used, p. 2), and therefore pertain to all of the 215,050 reporting establishments. Tables 8 and 9 present the additional information which was asked for on the longer schedule (Form 60), and therefore relate only to the 30,912 larger establishments which had a business in 1939 of \$25,000 or more (see Larger establishments, p. 4).

With the single exception of table 3, the inclusion of the report for any establishment in a given locality was determined by the location of the *office* of the respondent, therefore the data presented for any region, State, or city relate to the business of those establishments whose offices were situated therein, and not to the actual amount of construction work which was done in that area. On the other hand, table 3 shows the value of construction work actually performed within the boundaries of each State, since in this table geographic allocation is based on the location of the construction site without regard to the office address of the reporting concern.

Statistics are shown in the various tables for each kind of contractor. In order to prevent disclosure of individual operations data could not be shown for each kind of contractor in each table. In States where relatively few establishments reported for a given kind of contractor, the figures for related or similar kinds of contractors have been combined and so designated, or detailed figures have been omitted and an "x" substituted. The values represented by each "x" are included in the totals. Where neither of these treatments has been feasible, the figures for the kind of contractor so involved have been included in the classification "other."

In all tables other than tables 4 and 8 (which present the value of the individual types of construction per-

formed) the data relating to any "kind of contractor" include all of the work done by such contractors, most of which would be in their regular line but part of which may be a type that would more often be done by some other kind of contractor. By way of illustration, table 1A, p. 28, shows that building contractors of the United States performed work with their own forces valued at \$1,174,693,000. This does not mean that all of this work was performed "on buildings." A major portion of it necessarily fell in this category, for by definition a building contractor is a general contractor who is *primarily* engaged in the construction or general repair and alteration of buildings. However, he need not be and very often is not *exclusively* engaged in work on buildings. The volume of work performed by building contractors which was not "on buildings" is revealed in table 4A, p. 45, to be \$23,902,000.

The tables are presented in three sections as follows:

United States and geographic division data, p. 27.

State data, p. 97.

City data, p. 257.

Table 1 shows, for each kind of contractor, number of establishments, value of work performed, number of active proprietors and firm members, number of employees, total pay roll, and the value of materials used and equipment installed. It relates to all of the 215,050 establishments which furnished usable reports of their construction activities. These data are presented for 2 "size by volume" classes allocated in accordance with the explanation of the terms "larger establishments" and "smaller establishments" as shown on p. 4. The information is shown for the United States and 9 geographic divisions, for each State, and for each city which had 100,000 or more inhabitants in 1940.

Table 2 presents the dollar value and percentage of work performed by builders and contractors in their "home State," outside their home State, and in their home city, for all of the 215,050 reporting concerns. It should be noted that the values for "in home State" include those shown under the heading "in home city." This table was compiled from the answers to inquiry 5 of Form 60 and inquiry 3 of Form 61 (see Appendixes B and C) and is designed to show the volume of business done by each kind of contractor in his own community as against that for which he has gone afield. The information is shown for the United States and 9 geographic divisions, for each State, and for cities which had 100,000 or more inhabitants in 1940.

Table 3 includes all of the 215,050 reporting establishments and shows, by kinds of contractors, the value of construction work which was performed on projects located within the boundaries of each State and the number of establishments which participated in that construction. Both the value of work performed and

the number of participating establishments are shown for builders and contractors which are resident of the State as against those which are nonresident. A contractor was classified "resident" of the State in which his office was situated. It should be noted that the number of establishments in this table is the number which actually did some construction work within the boundaries of the State, whereas, number of establishments in the other tables is the number which reported home offices located in the respective States. (See p. 7.) Since some establishments reported work performed in more than one State and, conversely, some performed no work within the State from which they reported, the figures in this table do not correspond to those on the other tables. The information is shown for each State by kinds of contractors. In addition, the totals for the separate States are summarized for 4 classes of contractors, namely, building, highway, heavy, and special trade contractors.

Table 4 contains data relating to the type of construction work performed by all reporting establishments. It presents the value and percentage of work performed by them "on buildings" and on all types "other than on buildings." The value of work performed "on buildings" is shown separately for that portion which was on "new buildings and additions" as against "repairs and alterations" to existing buildings. The data are shown by kinds of contractors for the United States and 9 geographic divisions, for each State, and for cities which in 1940 had 100,000 or more inhabitants.

Table 5 presents the number of establishments, value of work performed, amount of pay roll, and cost of materials used and equipment installed for building, highway, heavy, and special trade contractors, each by size-of-business groups based on the value of work performed. These data, which relate to all establishments, are given for the United States, for each State, and for cities which had 500,000 or more inhabitants in 1940. In addition, table 5B gives similar information for the United States by individual kinds of special trade contractors.

Lack of uniformity in class intervals is the result of consolidations made in order to avoid disclosure of individual operations.

"Size" in table 5 was determined by value of *work performed only*, while "size" in table 1 was determined by *either value of work performed or contracts and orders received*, for contractors, and value of work performed or estimated cost upon completion of projects started within the year, for builders. For this reason, data in tables 1 and 5 relating to establishments of \$25,000 or more do not always correspond.

Table 6 shows the number of establishments, number of active proprietors and firm members, and the number of persons employed by contractors and build-

ers for the pay period ended nearest the 15th of each month. Average number of employees includes persons working on either a part-time or full-time basis. Data pertain to all of the 215,050 reporting concerns. This information is given by kinds of contractors for the United States and 9 geographic divisions, for each State, and for cities which had 500,000 or more inhabitants in 1940.

The average number of employees was obtained for any given kind of contractor by adding the number reported for all months by establishments within that kind-of-contractor classification and dividing the total by 12.

Table 7 shows the number of establishments, value of work performed, number of active proprietors and firm members, average number of employees, and the total pay roll, for (1) corporate and (2) noncorporate construction establishments. Classification was determined by the answer to inquiry 1-f on Form 60 and inquiry 1-e on Form 61. This information is presented for the United States by 37 kinds of contractors, and for each State by general contractors and special trade contractors. These data pertain to all of the 215,050 establishments which reported.

Table 8 contains data relating to the value of work performed by the 30,912 establishments reporting a business of \$25,000 or more in 1939, as described in the explanation of "larger establishments" (p. 4). It presents, by kinds of contractors, the value of work performed by these establishments on the following types of construction: (1) One- and two-family houses, (2) other residential buildings, (3) buildings other than residential, (4) highway construction, and (5) heavy construction.

Each type of construction is further broken down (1) by types of work, that is, new construction and additions as against repairs and alterations, and (2) by ownership, i. e., whether private or public. (See Work performed, p. 6.) New work and repair work are both further broken down to show how much was done on privately and publicly owned projects.

This information is given for the United States and 9 geographic divisions, for each State, and for cities which had 500,000 or more inhabitants in 1940.

Table 9 presents the value and source of contracts and orders received and work let out to others on subcontracts by the 30,912 establishments reporting a business of \$25,000 or more as described in "Larger establishments" on p. 4. It shows, by kinds of contractors, the value of contracts and orders received in 1939, according to two sources: (1) Those received directly from owners or sources other than from contractors and (2) those received from other contractors. In addition, the value of work performed by the contractors' own forces and that which was let out to others on subcontract is given.

It might be expected that "contracts and orders received from other contractors" should equal "work let to others on subcontract." This is not the case since this table relates only to the larger contractors and much of the work let to others on subcontract by them was let to the smaller establishments not included in table 9 and also because an additional part was let to concerns which did not fall within the scope of the Construction Census.

The information is shown for the United States and nine geographic divisions.

GENERAL SUMMARY OF CONTRACT CONSTRUCTION

Construction work performed in the United States by the forces of 215,050 contractors and builders who reported in this census amounted to slightly more than four and one-half billion dollars in the calendar year 1939. This activity furnished employment for an average of 1,073,655 workers and 226,784 active proprietors, or a total of 1,300,439 persons. Compensation of the paid employees (not including that of active proprietors or firm members) amounted to \$1,403,771,000, an average of \$1,307 per year for each person. The value of materials used and equipment installed by these establishments was in excess of two billion dollars.

Distribution of contract construction by kinds of contractors.—The general contractors accounted for 53.2 percent, or \$2,403,630,000 of the total work performed by all contractors and builders in 1939, though they numbered only 35,158 establishments, or 16.4 percent of the total number which reported. A preponderant number (29,641) of the general contractors were building contractors. These reported work performed valued at \$1,174,693,000 which is 26.0 percent of the total for the Nation. Heavy contractors, of which there were only 1,890, performed work valued at \$638,366,000, or 14.1 percent of the United States total. The 3,627 highway contractors, though nearly twice as numerous as heavy contractors, performed about \$48,000,000 less work than the latter, with \$590,571,000, or 13.1 percent of the United States total.

Special trade contractors as a group, including plumbing, electrical, carpentering, painting, and masonry contractors, etc., numbered 176,187, or 81.9 percent of all reporting establishments and performed work valued at \$2,007,906,000, or 44.4 percent of the national total. Their average volume was \$11,396 as against \$68,367 for general contractors and \$29,219 for operative and speculative builders.

Builders performed work with their own forces valued at \$108,258,000, or 2.4 percent of the total. They numbered 3,705 establishments, about the same as highway contractors (3,627) though they performed

CHART 2.-- DISTRIBUTION OF ESTABLISHMENTS AND WORK PERFORMED
BY KINDS OF CONTRACTORS: 1989

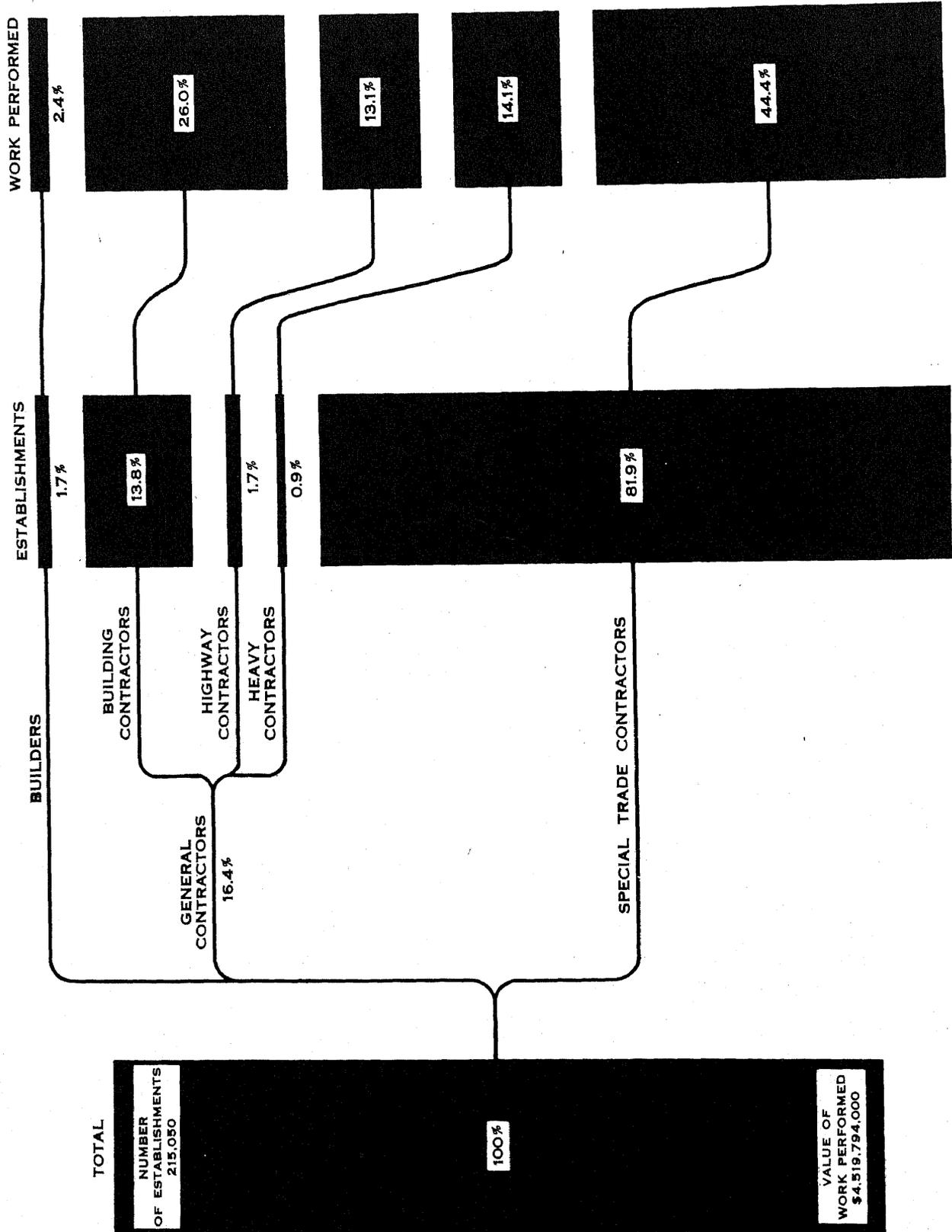
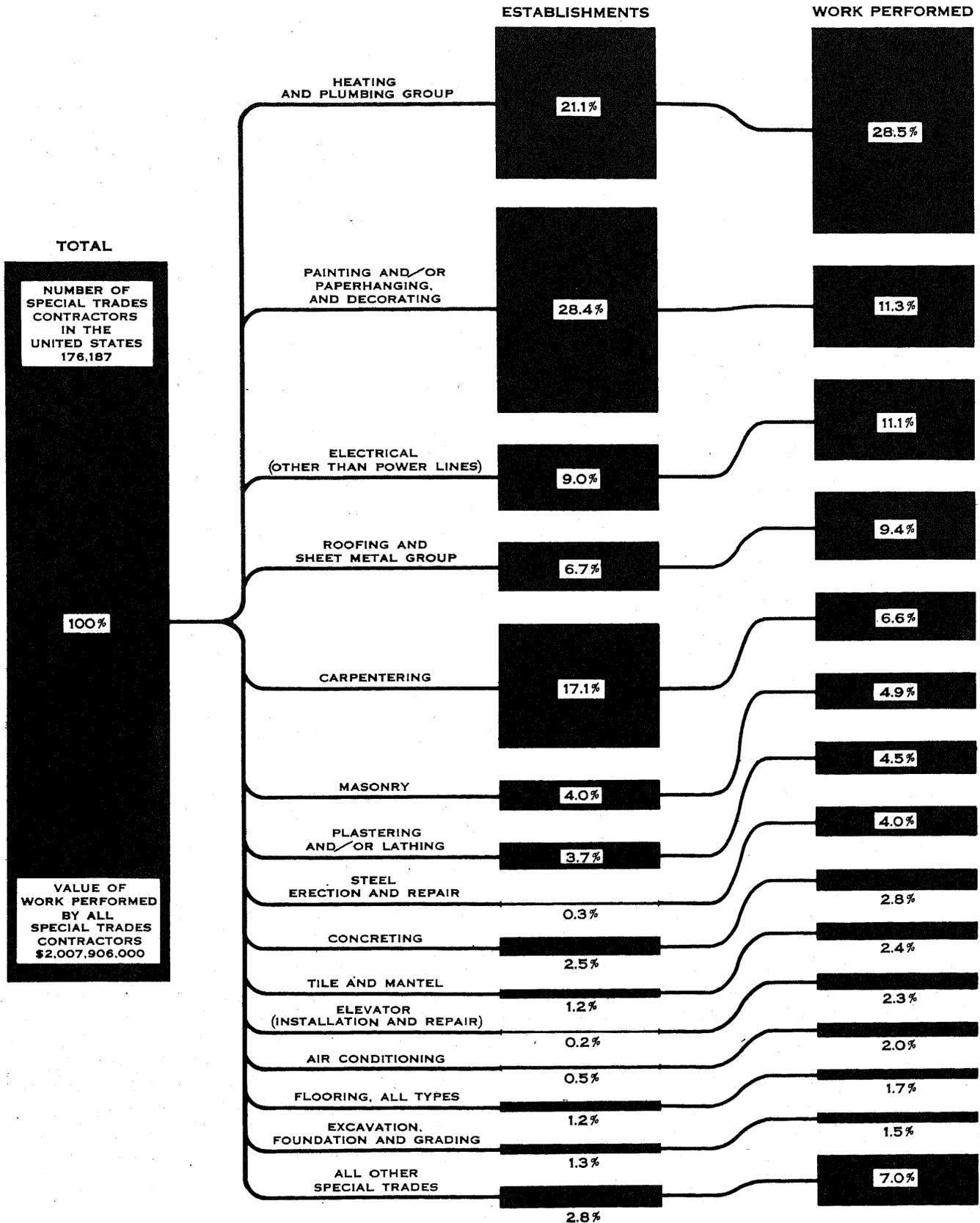


CHART 3.— DISTRIBUTION OF ESTABLISHMENTS AND WORK PERFORMED
BY KINDS OF SPECIAL TRADE CONTRACTORS: 1939



CENSUS OF BUSINESS

less than one-fifth the volume of work done by the latter. This relatively small volume for builders is in part due to their widely practiced method of subletting to other contractors much of the work on their building projects, leaving a comparatively small portion to be done by the builder's own forces. It is also influenced

by the fact that builders reported on a cost basis, while contractors reported on the basis of contract price and, therefore, included profit.

The following table summarizes these facts while chart 2, p. 10, and chart 3, p. 11, present these comparisons graphically.

TABLE I.—BASIC DATA FOR THE UNITED STATES BY PRINCIPAL KINDS OF CONTRACTORS

KIND OF CONTRACTOR	ESTABLISHMENTS		WORK PERFORMED		ACTIVE PROPRIETORS		AVERAGE NUMBER OF EMPLOYEES		PAY ROLL		MATERIALS USED AND EQUIPMENT INSTALLED	
	Number	Percent	Amount (add 000)	Percent	Number	Percent	Number	Percent	Amount (add 000)	Percent	Amount (add 000)	Percent
United States total.....	215,050	100.0	\$4,519,794	100.0	226,784	100.0	1,073,655	100.0	\$1,403,771	100.0	\$2,046,613	100.0
Builders.....	3,705	1.7	108,258	2.4	3,300	1.5	20,268	1.9	25,798	1.8	72,976	3.6
General contractors.....	35,153	10.4	2,403,630	53.2	36,111	15.9	600,974	55.9	770,766	54.9	1,085,735	53.0
Building contractors.....	29,641	13.8	1,174,693	26.0	31,336	13.8	304,274	28.3	389,151	27.8	588,832	28.8
Highway contractors.....	3,627	1.7	560,571	13.1	3,361	1.5	161,317	15.0	171,946	12.2	248,395	12.1
Heavy contractors.....	1,890	.9	638,366	14.1	1,414	.6	135,383	12.6	209,669	14.9	248,508	12.1
Special trade contractors.....	176,187	81.9	2,007,006	44.4	187,373	82.6	452,413	42.2	607,207	43.3	887,902	43.4

Geographic distribution of contract construction.—

Based on the office address of the reporting establishments, the Middle Atlantic Division, composed of the States of New York, Pennsylvania, and New Jersey, reported 23.7 percent of all establishments and 26.4 percent of all work performed in the Nation; and was closely followed by the East North Central Division (Wisconsin, Michigan, Illinois, Indiana, and Ohio) with 22.0 percent of establishments and 21.0 percent of work performed. Third in importance, as measured by volume of work performed, was the Pacific Division (Washington, Oregon, and California) with 13.5 percent

of establishments and 11.9 percent of work performed. Of interest is the fact that the States east of the Mississippi River accounted for nearly seven-tenths (69.0 percent) of all work performed in the United States, though this is not surprising since these same States contain 69.3 percent of the country's total population.

One-line totals for all kinds of contractors combined (including builders) are shown for each geographic division in the following summary table. The number of establishments, work performed, and population in each division are shown in percentage of United States totals.

TABLE II.—BASIC DATA FOR THE UNITED STATES AND GEOGRAPHIC DIVISIONS FOR ALL KINDS OF CONTRACTORS COMBINED

GEOGRAPHIC DIVISION	ESTABLISHMENTS		WORK PERFORMED		Active proprietors	Average number of employees	Pay roll (add 000)	Materials used and equipment installed (add 000)	Percent of total population
	Number	Percent	Amount (add 000)	Percent					
United States total.....	215,050	100.0	\$4,519,794	100.0	226,784	1,073,655	\$1,403,771	\$2,046,613	100.0
New England.....	18,910	8.8	323,471	7.2	19,118	76,089	106,757	138,669	6.4
Middle Atlantic.....	50,979	23.7	1,190,993	26.4	51,749	249,846	393,141	534,158	20.9
East North Central.....	47,263	22.0	946,952	21.0	49,705	204,097	302,899	431,194	20.2
West North Central.....	23,892	11.1	418,053	9.2	25,874	103,298	118,781	190,522	10.3
South Atlantic.....	17,634	8.2	497,683	11.0	18,023	151,486	149,088	241,943	13.5
East South Central.....	7,494	3.5	161,700	3.6	8,026	52,630	45,083	75,714	3.2
West South Central.....	13,034	6.1	303,988	6.7	13,893	87,280	82,330	144,780	9.9
Mountain.....	6,751	3.1	137,424	3.0	7,512	32,477	39,635	57,883	3.2
Pacific.....	29,093	13.5	539,530	11.9	32,884	116,452	166,057	231,750	7.4

The following percentage table provides a ready comparison of the relative importance (as measured by volume of work performed) of each of five kinds of contractors (including builders) within any one geographic division, as well as the importance of each classification between divisions, as related to the United States totals. For example, in the Middle

Atlantic Division special trade contractors accounted for 51.7 percent of all work performed by all kinds of contractors in that division. This was 30.6 percent of the work performed by all special trade contractors in the United States; while the special trade contractors of the Mountain Division reported only 2.2 percent of the United States total for this classification.

TABLE III.—WORK PERFORMED, EXPRESSED IN PERCENTAGES OF UNITED STATES AND GEOGRAPHIC DIVISION TOTALS, BY PRINCIPAL KINDS OF CONTRACTORS

GEOGRAPHIC DIVISION	WORK PERFORMED												Percent of total population 1940
	Total		Builders		General Contractors						Special trade contractors		
					Building contractors		Highway contractors		Heavy contractors				
	Percent of U. S. total	Percent of division total	Percent of U. S. total	Percent of division total	Percent of U. S. total	Percent of division total	Percent of U. S. total	Percent of division total	Percent of U. S. total	Percent of division total	Percent of U. S. total	Percent of division total	
United States total.....	100.0	100.0	100.0	2.4	100.0	28.0	100.0	13.1	100.0	14.1	100.0	44.4	100.0
New England.....	7.2	100.0	5.3	1.8	7.5	27.3	7.0	12.8	6.1	12.0	7.4	46.1	6.4
Middle Atlantic.....	26.4	100.0	26.9	2.4	20.2	19.9	18.8	9.3	31.2	16.7	30.6	51.7	20.9
East North Central.....	21.0	100.0	13.3	1.5	21.5	26.7	18.3	11.4	16.3	11.0	23.3	49.4	20.2
West North Central.....	9.2	100.0	6.5	1.7	9.2	25.9	13.2	18.6	10.0	15.3	8.0	38.5	10.3
South Atlantic.....	11.0	100.0	21.9	4.8	13.1	31.0	13.8	16.3	7.8	9.9	9.4	38.0	13.5
East South Central.....	3.6	100.0	2.5	1.7	4.4	31.9	5.5	20.1	3.3	13.0	2.7	33.3	8.2
West South Central.....	6.7	100.0	7.9	2.8	8.0	31.0	10.2	19.8	7.4	15.6	4.7	30.8	9.9
Mountain.....	3.0	100.0	2.4	1.9	3.3	27.9	5.3	22.7	3.4	16.0	2.2	31.5	3.2
Pacific.....	11.9	100.0	13.3	2.7	12.8	27.8	7.9	8.7	14.5	17.2	11.7	43.6	7.4

NOTE.—The dollar values which are represented by the percentages in the above table are available in table 1A.

More than two-thirds (67.7 percent) of all contract construction in the Nation was reported from the 12 States of New York, California, Pennsylvania, Illinois, Ohio, Texas, Michigan, Massachusetts, New Jersey, Missouri, Minnesota, and Wisconsin. These 12 States were the only ones which reported work performed of \$100,000,000 or more. New York, which reported the largest volume (\$675,167,000), exceeded the total reported by the 26 States and the District of Columbia which had the lowest volumes.

Chart 4, p. 14, gives a graphic presentation of the percentage of the United States total work performed which was reported by the establishments from each of the 48 States and the District of Columbia.

Nearly one-third (32.3 percent) of all work performed was reported from the 14 cities which in 1940 had 500,000 or more inhabitants. The 92 cities, including the above-mentioned, which had a population of 100,000 or more accounted for 37.1 percent of all establishments and more than one-half (54.7 percent) of all work performed in the Nation in 1939.

A summary of the number of establishments and work performed for three city-size groups and the percentage of the United States total within each group is given below.

TABLE IV.—ESTABLISHMENTS AND WORK PERFORMED, BY CITY-SIZE GROUPS (CITIES OF 100,000 POPULATION OR MORE)

CITY-SIZE GROUP	Number of cities	Percent of United States population	ESTABLISHMENTS		WORK PERFORMED	
			Number	Percent of United States total	Value (add 000)	Percent of United States total
Total—all cities (100,000 population or more).....	92	28.8	79,755	37.1	\$2,475,405	54.7
500,000 and over.....	14	17.0	44,425	20.7	1,460,366	32.3
250,000 to 499,999.....	23	5.9	17,175	8.0	547,735	12.1
100,000 to 249,999.....	55	5.9	18,155	8.4	467,304	10.3

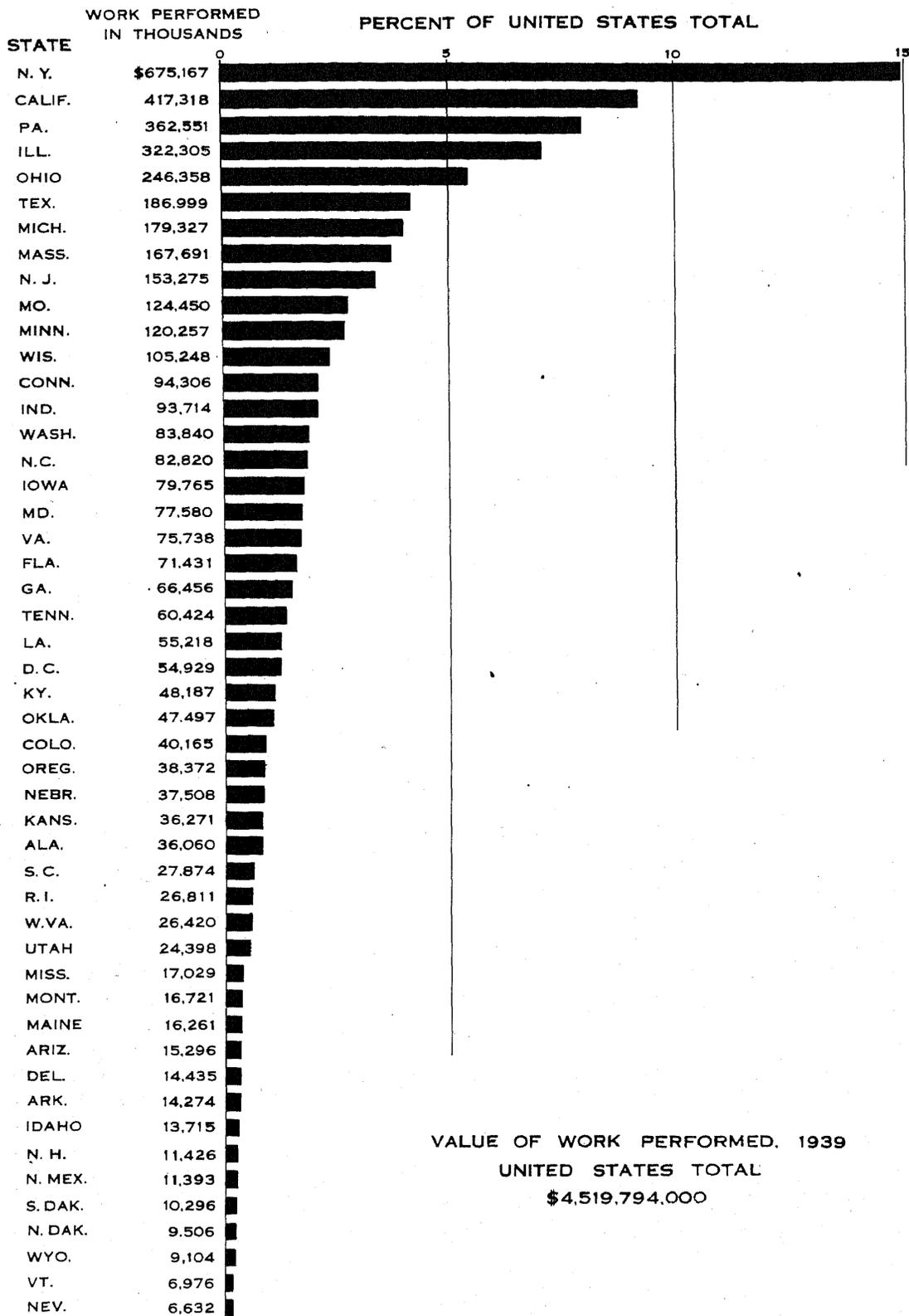
Localization of activities.—A comparatively small part of contract construction was done across State lines in 1939. The volume of work performed by all contractors outside of their respective "home States" was \$688,659,000, or only 15.2 percent of the national total. Nearly three-fourths (72.1 percent) of this out-of-State business was performed by general contractors and was distributed among them as follows: Heavy contractors, \$233,194,000; building contractors, \$146,115,000; and highway contractors, \$117,325,000. Special trade contractors performed over one-fourth of the out-of-State work (27.3 percent) done by all establishments. Steel erection, which is dominated by manufacturers of structural steel who operate nationally, accounted for \$47,583,000, or 25.3 percent of the special trade contractor total and were followed in descending order of volume by the heating and plumbing group, \$25,924,000; elevator contractors, \$19,824,000, who again are largely manufacturers' installation departments; electrical contractors, \$11,896,000; and masonry contractors, \$11,730,000. It appears that "out-of-State" business is only important in lines which require specialized heavy operational equipment, as in heavy and highway projects; or an extensive operating organization substantially capitalized, as in large building projects and in those which are dominated by installation departments or subsidiaries of manufacturers.

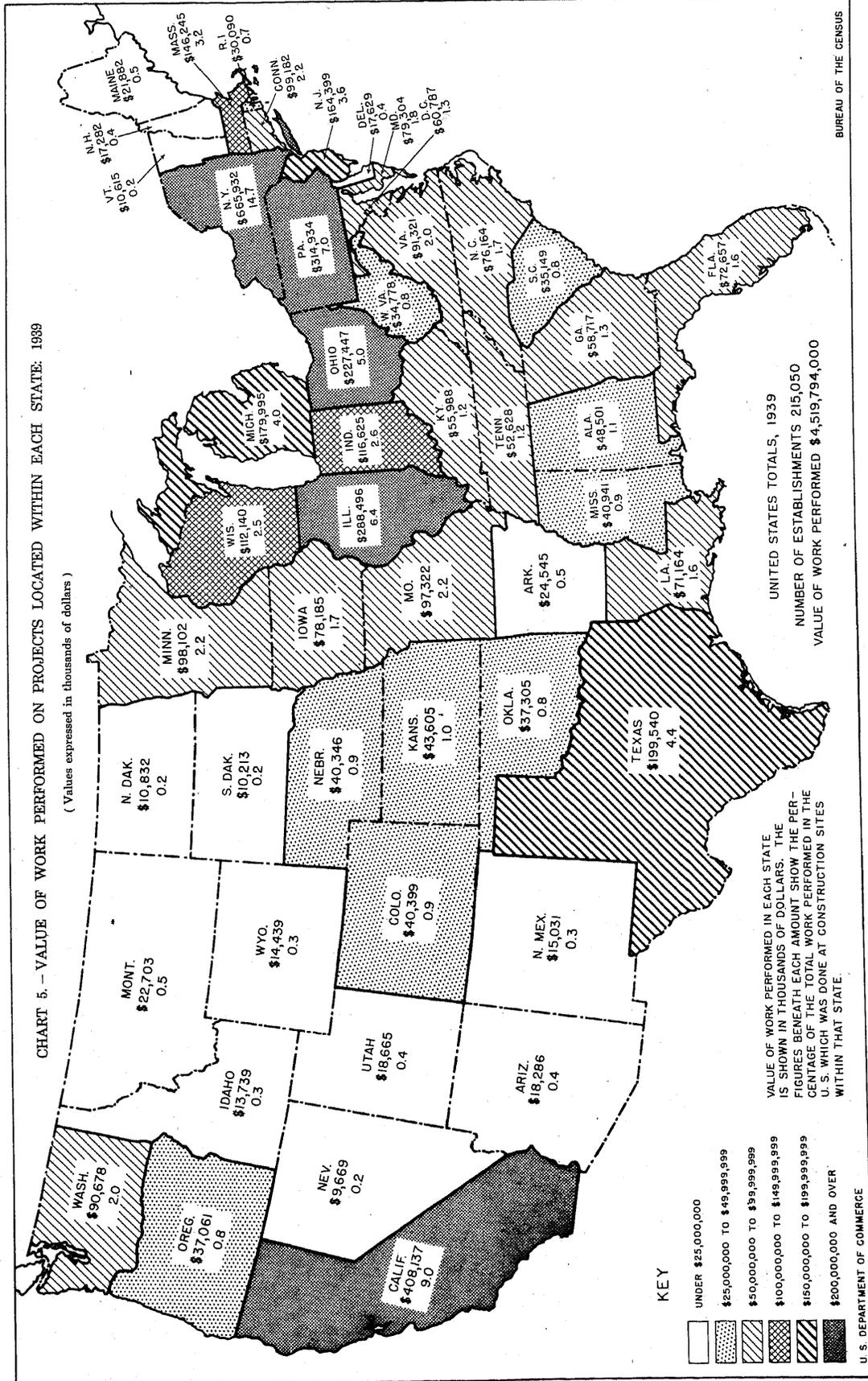
This characteristic of localized activities is further emphasized when it is considered that more than one-half (50.6 percent) of all work performed by all kinds of contractors was done in the home city of the contractor, and in the case of special trade contractors, two-thirds (66.4 percent) of their work was strictly local.

Table V, p. 16, shows the influence of interstate construction activities upon the volume of work done at construction sites located within each State. Similar

CHART 4. — VALUE OF WORK PERFORMED, BY STATES: 1939

(Based on the office address of the reporting establishment—
not on the location of the construction project)





information for any kind of contractor can be constructed from tables 2 and 3.

Chart 5, p. 15, shows the value of construction work performed at sites within the boundaries of each State.

TABLE V.—VALUE OF WORK PERFORMED ON SITES WITHIN STATE BY LOCAL CONTRACTORS AND BY OUTSIDE CONTRACTORS, AND ON SITES IN STATES OTHER THAN THE HOME STATE

STATE	VALUE OF WORK PERFORMED (Thousands of dollars)				
	On sites within State			In other States by local contractors	Interstate difference ¹
	Total	By local contractors	By outside contractors		
Alabama.....	\$48,501	\$20,973	\$18,528	\$6,087	-\$12,441
Arizona.....	18,286	14,395	3,891	901	-2,990
Arkansas.....	24,645	12,985	11,560	1,289	-10,271
California.....	408,137	397,949	10,188	19,369	+9,181
Colorado.....	40,899	34,788	5,611	5,377	-234
Connecticut.....	99,182	83,610	15,572	10,696	-4,876
Delaware.....	17,629	13,104	4,525	1,331	-3,194
District of Columbia.....	60,787	40,412	20,375	14,517	-5,858
Florida.....	72,657	63,512	9,145	7,919	-1,226
Georgia.....	58,717	46,979	11,738	19,477	+7,739
Idaho.....	13,739	8,536	5,203	5,179	-24
Illinois.....	288,496	258,942	29,554	63,363	+33,809
Indiana.....	116,625	85,075	31,550	8,639	-22,911
Iowa.....	78,185	65,192	12,993	14,573	+1,580
Kansas.....	43,605	29,866	13,739	6,405	-7,334
Kentucky.....	55,988	42,420	13,568	5,767	-7,801
Louisiana.....	71,164	48,924	22,240	6,294	-15,946
Maine.....	21,882	15,851	6,031	410	-5,621
Maryland.....	79,304	59,970	19,334	17,610	-1,724
Massachusetts.....	146,245	132,054	14,191	35,637	+21,446
Michigan.....	179,995	163,065	16,930	16,262	-668
Minnesota.....	98,102	92,536	5,566	27,721	+22,155
Mississippi.....	40,941	15,478	25,463	1,551	-23,912
Missouri.....	97,322	84,176	13,146	40,274	+27,128
Montana.....	22,703	15,903	6,809	818	-5,982
Nebraska.....	40,346	31,092	9,254	6,416	-2,838
Nevada.....	9,669	6,339	3,330	293	-3,037
New Hampshire.....	17,282	10,441	6,841	985	-5,856
New Jersey.....	164,399	128,337	36,062	24,938	-11,124
New Mexico.....	15,031	10,810	4,221	583	-3,638
New York.....	665,932	608,657	57,275	66,510	+9,235
North Carolina.....	76,164	63,357	12,807	19,463	+6,656
North Dakota.....	10,833	7,650	3,182	1,856	-1,326
Ohio.....	227,447	209,807	17,640	36,551	+18,911
Oklahoma.....	37,305	30,632	6,673	16,865	+10,192
Oregon.....	37,061	32,553	4,508	5,819	+1,311
Pennsylvania.....	314,934	271,738	43,176	90,793	+47,617
Rhode Island.....	30,090	22,844	7,246	3,967	-3,279
South Carolina.....	35,149	21,939	13,210	5,935	-7,275
South Dakota.....	10,213	8,252	1,961	2,044	+83
Tennessee.....	52,628	42,927	9,701	17,497	+7,796
Texas.....	199,540	170,138	29,402	16,861	-12,541
Utah.....	18,665	16,308	2,357	8,090	+5,733
Vermont.....	10,615	6,624	3,991	352	-3,639
Virginia.....	91,321	64,173	27,148	11,565	-15,583
Washington.....	90,678	78,336	12,342	5,504	-6,838
West Virginia.....	34,778	24,138	10,640	2,282	-8,388
Wisconsin.....	112,140	100,207	11,933	5,041	-6,893
Wyoming.....	14,439	8,121	6,318	983	-5,335

¹ Minus (-) indicates that the volume done in other States by local contractors was less than that done by outside contractors within the State of the local contractor; plus (+) indicates that the volume done in other States by local contractors was greater than that done by outside contractors within the State of the local contractor.

Analysis of work performed, for all establishments—Types of construction.—Nearly seven-tenths (69.9 percent) of all work performed by the 215,050 reporting establishments was performed on buildings, 29.0 percent was done on projects other than buildings, and 1.1 percent was not reported as to type. In evaluating this relationship, it should be recognized that much of the work of types other than on buildings, such as street, highway, railway and railroad maintenance and repair, is done on force account rather than let out on contract.

Nearly six-tenths (59.2 percent) of work on buildings was done by special trade contractors. General building contractors accounted for 36.4 percent and builders only 3.4 percent, while highway and heavy contractors together, as would be expected, reported only 1 percent of the "on buildings" total.

As to work performed on types of construction other than buildings, heavy contractors led with 46.9 percent; highway contractors followed with 44.3 percent; and special trade contractors were third with only 7.0 percent. Builders and building contractors did 1.8 percent of work other than on buildings. This was largely due to rural electrification projects done by building contractors who turned to this business in the depression years when construction of buildings was at a low ebb. The following table summarizes these relationships.

TABLE VI.—WORK PERFORMED BY TYPES OF CONSTRUCTION, BY PRINCIPAL KINDS OF CONTRACTORS

KIND OF CONTRACTORS	WORK PERFORMED ON BUILDINGS		WORK PERFORMED OTHER THAN ON BUILDINGS	
	Amount (add 000)	Percent	Amount (add 000)	Percent
Total reported by types.....	\$3,156,701	100.0	\$1,312,671	100.0
Builders.....	108,090	3.4	168	(¹)
Building contractors.....	1,149,712	36.4	23,902	1.8
Special trade contractors.....	1,867,186	59.2	91,377	7.0
Highway contractors.....	8,502	.3	582,069	44.3
Heavy contractors.....	23,211	.7	615,155	46.9

¹ Less than one-tenth of 1 percent.

Kinds of work.—Work performed on buildings was 70.5 percent new work and additions and 29 percent repairs and alterations. Special trade contractors performed 49.6 percent or nearly one-half of the new work and 81.8 percent of the repairs and alterations on buildings. This reflects the practice of builders and building contractors to sublet much of their construction. Chart 6, page 18, shows by kinds of contractors, "types of construction" and in addition, "kinds of work" (new or repair) for work performed on buildings.

These data pertain to all reporting establishments as shown in table 4. More detailed information on types of construction and kinds of work done by the 30,912 larger establishments which reported on the longer schedule (Form 60) is shown in table 8 and discussed on p. 21.

Size-of-business analysis.—Contract construction when analyzed by size of business, based on the volume of work performed by each establishment, discloses two salient facts: First, that more than one-half (53.1 percent) of the reporting concerns did less than \$5,000 worth of work in 1939, and accounted for only 5.6 percent of the volume of all contract construction done in that year; and second, at the other extreme, one-half of 1

percent of all establishments had an annual volume of \$500,000 or more and accounted for more than one-fourth (27.4 percent) of the work performed by all contractors in 1939 (see chart 7, p. 19). In fact, this one-half of 1 percent of the reporting establishments performed more work than did all establishments which had a volume of less than \$25,000, though the latter embrace 87.2 percent of all reporting concerns. If the brackets for these larger establishments are expanded to include all firms which performed work of \$100,000 or more, it is found that only 3.3 percent of all establishments accounted for 54.3 percent of all work performed.

As would be expected, the establishments with a

volume of less than \$5,000 were very largely special trade contractors. In fact, of the 114,095 establishments in this size group, 107,620 were so classified. The small group which had a volume of \$500,000 or over is dominated by general contractors, though it includes 163 special trade contractors composed largely of installation and erection departments or subsidiaries of manufacturers.

The following table shows the percentage of establishments and work performed for principal kinds of contractors within each size-of-business group. The total number of contractors and the total work performed by all establishments within each size-group equal 100 percent.

TABLE VII.—RELATIVE IMPORTANCE OF PRINCIPAL KINDS OF CONTRACTORS WITHIN 11 SIZE-OF-BUSINESS GROUPS

SIZE OF BUSINESS	U. S. TOTAL, ALL KINDS OF CONTRACTORS		PERCENT OF TOTAL FOR EACH SIZE GROUP FOR—									
			Builders		Building contractors		Highway contractors		Heavy contractors		Special trade contractors	
			Percent of establishments	Percent of work performed	Percent of establishments	Percent of work performed	Percent of establishments	Percent of work performed	Percent of establishments	Percent of work performed	Percent of establishments	Percent of work performed
Less than \$5,000.....	53.1	5.6	0.7	0.9	4.7	6.6	0.2	0.1	0.1	0.1	94.3	92.3
\$5,000-\$9,999.....	17.0	5.7	2.3	2.3	17.2	17.6	.6	.6	.2	.2	79.7	79.3
\$10,000-\$14,999.....	8.2	4.7	2.9	2.9	23.4	23.5	1.1	1.1	.4	.4	72.2	72.1
\$15,000-\$19,999.....	5.1	4.1	3.2	3.2	27.7	27.7	1.6	1.6	.5	.5	67.0	67.0
\$20,000-\$24,999.....	3.8	4.0	3.3	3.2	30.7	30.7	2.0	2.0	.8	.8	63.2	63.3
\$25,000-\$29,999.....	1.8	2.3	4.2	4.2	30.4	30.4	3.1	3.1	1.8	1.8	60.5	60.5
\$30,000-\$39,999.....	4.2	7.7	3.6	3.6	30.0	30.0	4.9	5.0	2.2	2.3	59.3	59.1
\$50,000-\$99,999.....	3.5	11.6	3.8	3.8	30.6	30.6	8.0	8.3	4.3	4.5	53.3	52.8
\$100,000-\$299,999.....	2.4	18.9	3.0	2.8	29.9	29.8	18.3	19.5	9.4	9.8	39.4	38.1
\$300,000-\$499,999.....	.4	8.0	2.5	2.4	25.5	25.7	27.3	27.7	18.1	18.3	26.6	25.9
\$500,000 and over.....	.5	27.4	1.3	1.0	28.8	25.1	24.8	20.2	29.2	36.5	15.9	17.2

Nearly 19,000 reports were received from persons represented as contractors who performed work of less than \$500 in 1939. These persons were not considered as being primarily engaged in contracting, therefore their reports have not been included in the tabulated figures. Since some interests would prefer that reports of this character be included, the following summary presents data pertaining to them. Figures contained herein are not included in any other part of this volume.

TABLE VIII.—ESTABLISHMENTS REPORTING WORK PERFORMED IN 1939 OF LESS THAN \$500

	Number of establishments	Work performed (add 000)	Materials used and equipment installed (add 000)	Pay roll (add 000)
United States total.....	18,770	\$5,140	\$783	\$162
Carpentering.....	5,034	1,380	142	35
Electrical.....	1,079	280	84	5
Painting.....	8,143	2,221	309	47
Plumbing.....	1,322	374	85	8
Other.....	3,192	,885	163	67

Monthly employment.—The lowest point of national employment by all kinds of contractors and builders

combined in 1939 occurred in January, with only 74.2 percent of the average monthly employment for that year. The number of employees increased each succeeding month until it reached the peak in August, with 116.9 percent of the average monthly employment, although July and September closely approached the August level.

Periods of minimum and maximum employment and the degree of fluctuation vary for different kinds of contractors and between geographic regions, largely due to the effect of climatic conditions on the various types of construction. Chart 8, p. 22, shows employment trends for "building contractors and builders," highway, heavy, and special trade contractors separately, and for all kinds of contractors combined; and table IX, p. 20, shows employment for each month as a percentage of "average number of employees" for these classifications, for the United States and each of the nine geographic divisions. "Average number of employees" in this table is obtained by the method explained in the description of table 6, p. 8.

CHART 6. — WORK PERFORMED, BY TYPES OF CONSTRUCTION AND KINDS OF WORK
BY KINDS OF CONTRACTORS: 1939

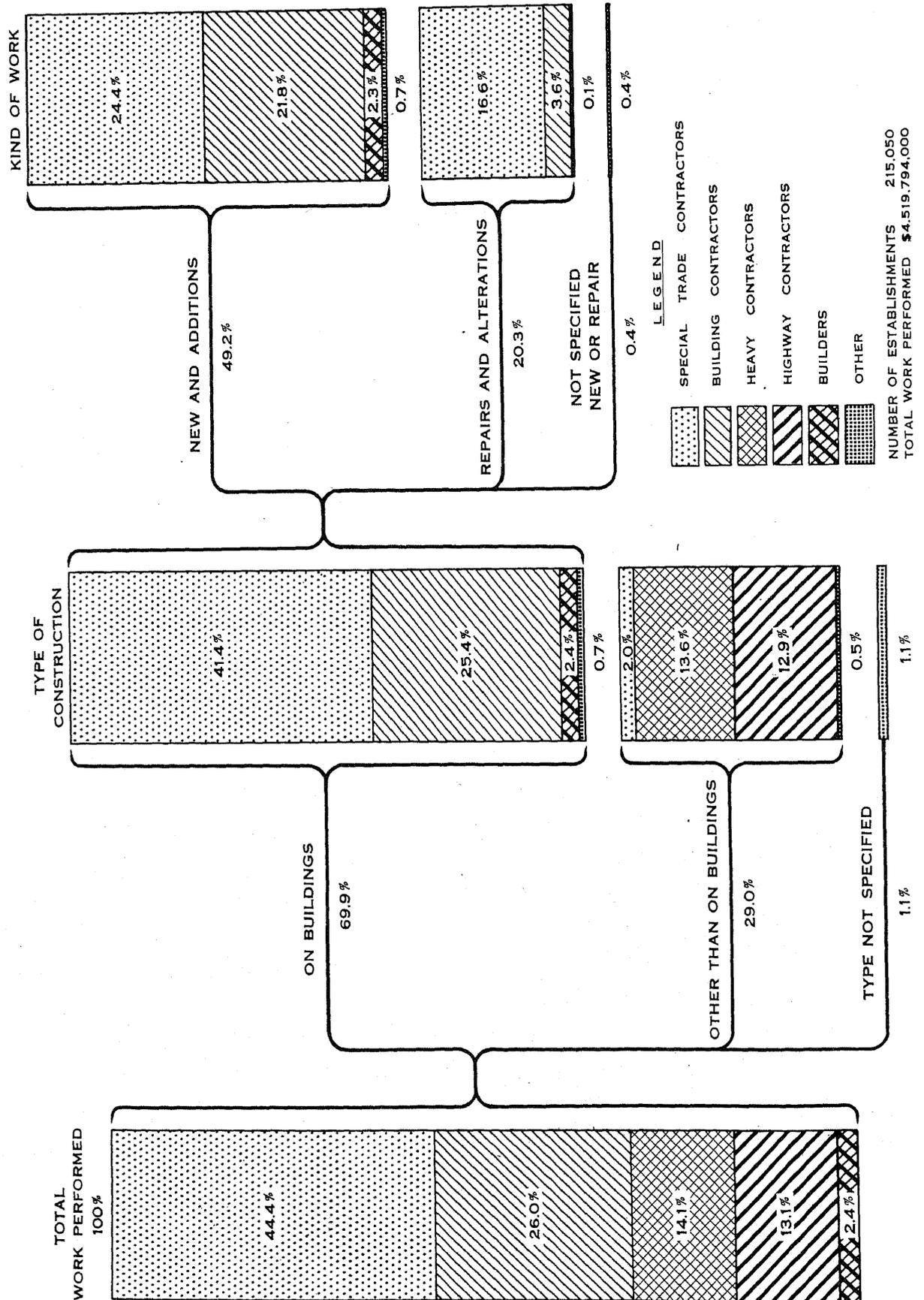
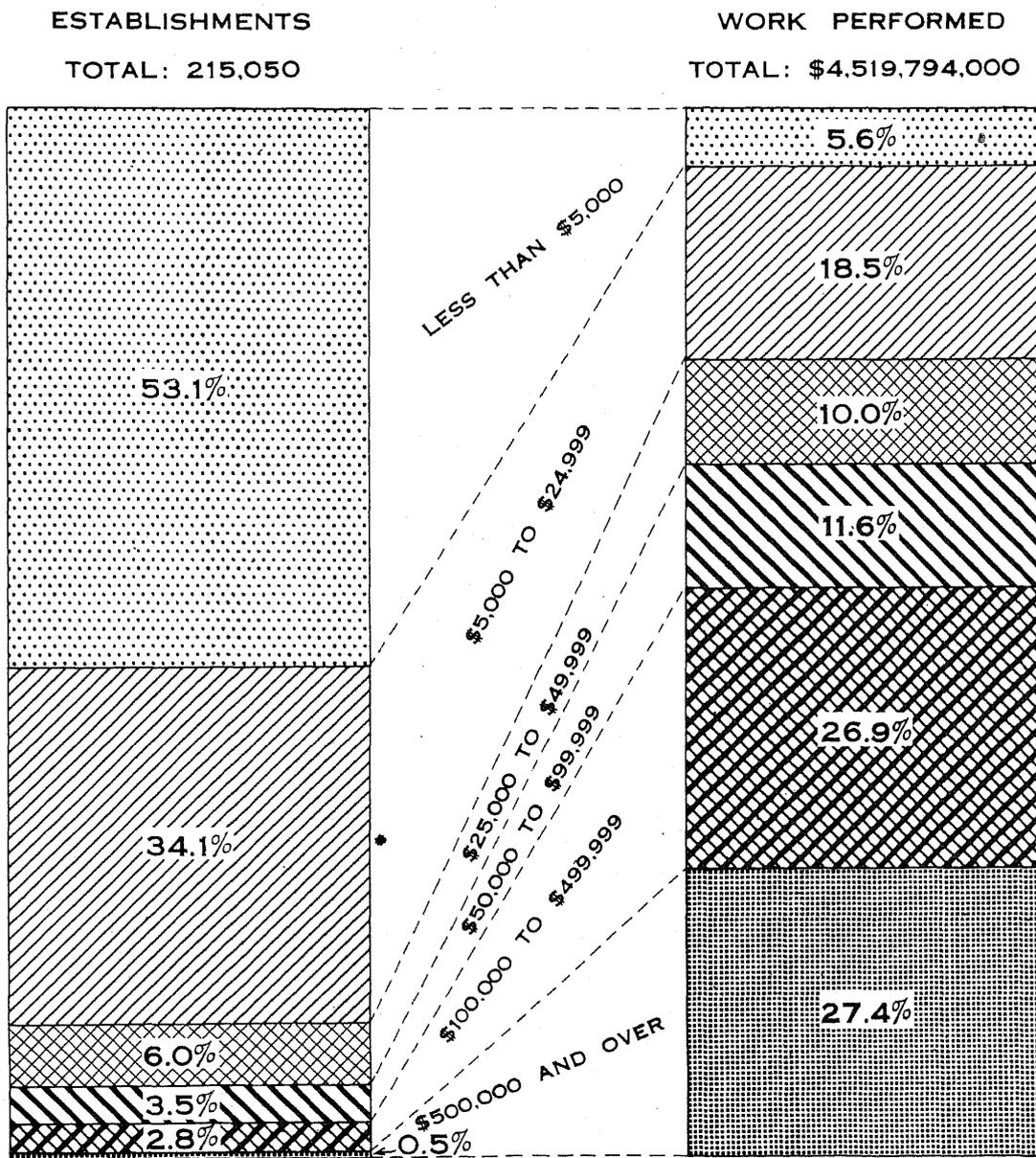


CHART 7.— ESTABLISHMENTS AND VALUE OF WORK PERFORMED
FOR ALL CONTRACTORS BY SIZE OF BUSINESS BASED
ON VOLUME OF WORK PERFORMED: 1939



CENSUS OF BUSINESS

TABLE IX.—1939 AVERAGE EMPLOYMENT AND PERCENT OF AVERAGE FOR EACH MONTH, FOR THE UNITED STATES AND GEOGRAPHIC DIVISIONS, BY PRINCIPAL KINDS OF CONTRACTORS

GEOGRAPHIC DIVISIONS AND KIND OF CONTRACTOR	Average number of em- ployees	PERCENT OF AVERAGE MONTHLY EMPLOYMENT											
		January	February	March	April	May	June	July	August	September	October	November	December
United States total.....	1,073,655	74.2	74.5	83.8	96.3	107.2	112.2	115.0	116.9	116.0	110.8	102.8	90.3
Building ¹	324,542	77.6	78.6	88.9	99.7	108.2	111.5	114.2	114.6	111.7	105.8	100.2	89.0
Highway.....	161,317	57.8	55.7	66.3	88.9	112.9	126.8	133.9	135.0	133.6	119.8	97.9	72.2
Heavy.....	135,383	75.4	74.6	81.8	91.5	102.2	107.2	110.9	116.2	116.6	114.7	110.7	98.2
Special trades.....	452,413	77.3	78.3	87.0	98.0	106.0	109.4	109.9	112.2	112.6	109.9	103.9	95.4
NEW ENGLAND.....	76,089	75.7	71.3	75.2	93.6	110.2	116.5	117.6	117.8	116.4	111.5	104.5	89.8
Building ¹	24,189	78.7	72.3	74.2	96.2	114.2	118.9	118.1	116.9	112.5	107.0	102.2	88.9
Highway.....	9,367	60.7	51.4	52.3	79.6	111.9	127.5	133.9	133.6	133.4	125.7	108.2	76.8
Heavy.....	7,897	74.0	69.7	77.1	89.5	104.2	108.2	116.4	118.9	120.4	114.1	111.1	96.3
Special trades.....	34,636	78.1	76.3	81.6	96.5	108.3	113.8	113.1	112.4	113.6	110.1	103.6	92.5
MIDDLE ATLANTIC.....	249,846	73.8	74.1	83.7	96.6	106.1	109.7	111.2	115.2	115.3	112.5	106.5	95.4
Building ¹	62,105	73.4	75.0	85.9	98.0	106.0	109.1	113.5	115.4	112.9	108.9	106.3	95.7
Highway.....	24,836	49.9	46.0	58.0	82.4	109.3	123.2	131.3	136.2	142.9	133.2	108.8	78.9
Heavy.....	34,145	79.8	76.9	81.5	90.8	99.2	106.2	106.8	115.4	115.4	112.4	111.1	104.3
Special trades.....	128,760	76.9	78.3	88.2	100.3	107.5	108.2	107.4	110.9	111.1	110.2	105.0	96.1
EAST NORTH CENTRAL.....	204,097	67.0	66.9	77.0	90.7	107.8	116.7	122.0	123.5	121.5	114.4	103.3	89.2
Building ¹	59,422	72.7	71.9	83.2	96.0	109.8	114.6	122.2	118.8	115.1	108.3	100.3	87.0
Highway.....	22,876	38.0	34.8	42.0	62.7	109.3	137.9	152.8	160.4	157.9	138.1	102.8	63.4
Heavy.....	21,139	62.9	62.9	71.3	81.3	105.0	114.7	122.5	125.6	121.0	116.7	113.6	102.4
Special trades.....	100,660	71.2	72.1	82.6	95.9	106.9	113.6	114.8	117.4	117.0	112.1	103.0	93.5
WEST NORTH CENTRAL.....	103,298	64.1	61.2	72.9	95.0	114.5	121.8	125.7	126.3	124.3	115.1	99.3	79.7
Building ¹	129,410	67.4	69.5	78.7	100.0	115.7	122.6	124.2	124.7	120.0	109.4	96.0	77.8
Highway.....	22,081	47.3	49.0	55.6	88.1	125.7	139.6	151.0	147.6	140.5	121.6	86.5	53.6
Heavy.....	14,320	66.9	62.8	67.9	89.1	109.0	113.2	116.6	125.0	124.8	122.0	113.5	88.9
Special trades.....	37,478	70.5	69.6	80.5	97.5	109.1	114.0	115.4	115.4	118.0	113.0	103.9	93.2
SOUTH ATLANTIC.....	151,486	77.5	79.7	89.5	97.2	104.8	107.3	111.4	112.7	113.2	109.9	104.0	92.9
Building ¹	56,207	79.7	83.5	94.8	97.4	103.3	104.7	108.4	110.8	111.2	106.9	103.6	95.8
Highway.....	29,845	66.5	65.6	78.3	98.6	111.2	117.6	127.1	125.3	125.0	113.5	97.1	74.1
Heavy.....	14,952	83.5	86.4	94.3	99.4	106.5	106.9	104.0	103.8	106.5	110.4	104.9	93.4
Special trades.....	50,482	79.8	81.7	88.7	95.7	102.1	104.1	107.7	109.9	110.4	111.0	108.2	100.7
EAST SOUTH CENTRAL.....	52,630	75.8	77.4	86.3	97.2	102.5	109.4	115.4	119.1	119.0	109.8	100.8	87.4
Building ¹	17,807	87.0	87.7	98.1	103.1	104.2	107.3	110.4	113.1	107.7	101.0	96.4	83.9
Highway.....	13,621	56.4	59.3	69.7	91.0	99.9	116.9	126.7	132.1	140.6	122.4	102.7	82.2
Heavy.....	6,132	71.9	72.7	75.5	88.7	96.7	103.2	117.9	123.9	118.3	117.8	113.0	100.5
Special trades.....	15,070	81.6	83.3	91.7	99.3	105.2	107.5	110.0	112.5	113.0	105.5	99.2	91.1
WEST SOUTH CENTRAL.....	87,280	84.5	91.1	99.2	102.6	105.2	109.4	107.9	108.2	106.3	101.6	96.6	87.6
Building ¹	28,862	88.2	95.2	102.4	105.3	108.3	109.9	105.8	107.7	104.0	97.4	92.2	83.5
Highway.....	19,788	79.0	86.8	101.7	111.6	118.2	120.0	115.8	109.3	102.2	93.8	86.3	75.3
Heavy.....	14,069	85.6	94.4	94.8	92.2	86.4	97.5	103.7	108.1	112.5	115.3	110.8	98.6
Special trades.....	24,561	83.8	87.8	95.7	98.2	102.0	106.8	106.5	108.1	108.7	104.8	101.8	95.9
MOUNTAIN.....	32,477	66.8	63.5	75.0	101.6	115.5	120.3	124.6	125.3	121.2	107.3	96.0	83.0
Building ¹	9,938	67.8	65.1	83.2	111.0	117.6	121.7	126.6	119.3	112.9	101.2	94.2	79.3
Highway.....	7,731	49.3	40.6	49.6	94.2	127.5	137.3	143.7	149.0	136.8	109.3	88.2	74.5
Heavy.....	4,747	78.1	74.1	79.3	97.8	108.2	104.8	110.9	122.3	127.1	114.1	100.3	82.9
Special trades.....	10,061	74.1	74.5	84.3	99.7	107.5	113.1	114.4	114.4	114.6	108.6	101.6	93.2
PACIFIC.....	116,452	85.1	85.6	93.9	100.5	104.7	106.2	106.5	108.4	108.4	106.0	101.5	93.2
Building ¹	36,593	86.8	90.6	98.7	104.9	106.4	107.5	105.8	107.0	105.3	101.7	96.3	88.9
Highway.....	11,172	80.8	74.0	79.8	94.9	105.5	113.4	119.7	117.6	117.6	110.6	101.6	84.3
Heavy.....	17,982	75.2	70.7	90.3	99.6	107.1	105.0	107.1	110.4	114.0	113.5	110.7	96.4
Special trades.....	50,705	83.4	89.8	94.7	99.0	102.4	104.2	103.8	106.6	106.7	105.4	102.0	97.2

¹ Includes builders.

Legal forms of organization.—In an activity composed so largely of small operators, it is natural that only a small percentage of the establishments would be incorporated. Of the 215,050 contractors, 16,380, or 7.6 percent, were corporations, and 198,670, or 92.4 percent, were proprietorships, partnerships, receiverships, or other forms of noncorporate organizations. Despite their small number, corporate establishments performed 46.4 percent of all contract construction, as

against 53.6 percent for the preponderant number of noncorporate enterprises.

The highest ratio of corporate to noncorporate establishments occurs among heavy contractors, where nearly 1 out of every 2 concerns is incorporated. The opposite extreme is found in special trade contractors, for about 16 out of every 17 establishments in this group are noncorporate.

The relationship between corporate and noncorporate contractors is shown in table X.

TABLE X.—BASIC DATA BY LEGAL FORMS OF ORGANIZATION, EXPRESSED AS PERCENTAGES OF UNITED STATES TOTALS

KIND OF CONTRACTOR	ESTABLISHMENTS			WORK PERFORMED			EMPLOYEES			PAY ROLL		
	Total	Corpo- rate	Noncor- porate	Total	Corpo- rate	Noncor- porate	Total	Corpo- rate	Noncor- porate	Total	Corpo- rate	Noncor- porate
United States total.....	100.0	7.6	92.4	100.0	46.4	53.6	100.0	44.1	55.9	100.0	52.6	47.4
Builders.....	1.7	.3	1.4	2.4	1.1	1.3	1.9	.9	1.0	1.8	.9	.9
Building contractors.....	13.8	1.6	12.2	26.0	10.7	15.3	28.4	11.6	16.8	27.7	13.6	14.1
Highway contractors.....	1.7	.6	1.1	13.1	7.4	5.7	15.0	8.0	7.0	12.2	7.2	5.0
Heavy contractors.....	.9	.4	.5	14.2	10.8	3.4	12.6	9.2	3.4	15.0	12.0	3.0
Special trade contractors.....	81.9	4.7	77.2	44.3	16.4	27.9	42.1	14.4	27.7	43.3	18.9	24.4

¹ United States totals: Establishments, 215,050; work performed, \$4,519,794,000; employees, 1,073,655; pay roll, \$1,403,771,000.

In comparing the number of employees and pay roll for corporate establishments with those for noncorporate ones, it should be noted that the pay roll for the former includes compensation of executives and salaried corporation officers, whereas the pay roll for noncorporate concerns does not include salaries, withdrawals, or profits of proprietors and partners who perform directional or supervisory activities similar to those of the corporation executive or official.

Analysis of work performed, for larger establishments.—The larger establishments, which reported on the longer schedule (Form 60), reported total work performed of \$3,479,671,000, or 77 percent of the total reported by both the larger and smaller establishments. These 30,912 concerns accounted for 68.1 percent of the work performed on buildings and 94.6 percent of the work performed other than on buildings by all of the 215,050 contractors who reported. These per-

centages would be slightly higher were it not for the fact that 2.5 percent of their volume was not reported by types of construction, and therefore it is not possible to distribute this additional \$88,643,000.

Types of construction.—Table XI presents, in summary form, the value of work performed by principal kinds of contractors on each type of construction. It also shows for the principal kinds of contractors the percentage of work performed on each type of construction. Perhaps the most striking facts which it reveals are the high percentage of work done by special trades contractors on buildings and the small percentage of work which was done by each kind of contractor outside his own line of work. Builders and building contractors crossed "kind-of-contractor" lines for only 2.1 percent of their volume; highway contractors, for only 5.7 percent; and heavy contractors found all but 7 percent of their business in their own line of work.

TABLE XI.—WORK PERFORMED BY LARGER ESTABLISHMENTS, BY TYPES OF CONSTRUCTION, FOR PRINCIPAL KINDS OF CONTRACTORS

TYPE OF CONSTRUCTION	TOTAL WORK PERFORMED		BUILDERS AND BUILDING CONTRACTORS		SPECIAL TRADE CONTRACTORS		HIGHWAY CONTRACTORS		HEAVY CONTRACTORS	
	Value (add 000)	Percent	Value (add 000)	Percent	Value (add 000)	Percent	Value (add 000)	Percent	Value (add 000)	Percent
Total—all types.....	\$3,479,671	100.0	\$1,083,548	100.0	\$1,181,672	100.0	\$579,704	100.0	\$634,747	100.0
On buildings.....	2,149,129	61.8	1,056,087	97.4	1,061,500	89.8	8,168	1.4	23,374	3.7
One- and two-family houses.....	633,497	18.2	338,305	31.2	293,083	24.8	825	.1	1,284	.2
Other residential buildings.....	241,384	6.9	78,639	7.2	160,496	13.6	563	.1	1,686	.3
Buildings other than residential.....	1,274,248	36.7	639,143	59.0	607,921	51.4	6,780	1.2	20,404	3.2
Other than on buildings.....	1,241,899	35.7	22,443	2.1	37,201	3.2	571,010	98.5	611,245	96.3
Highway.....	583,475	16.8	7,064	.7	9,174	.8	546,013	94.2	21,224	3.3
Heavy.....	658,424	18.9	15,379	1.4	28,027	2.4	24,997	4.3	590,021	93.0
Type not specified.....	88,643	2.5	5,018	.5	82,971	7.0	526	.1	128	(1)

¹ Less than one-tenth of 1 percent.

Kinds of work.—Approximately seven-eighths of the work performed by the larger establishments was on new construction and additions and one-eighth on repairs and alterations. In each of the "principal kind of contractor" classifications "new and additions" exceeded "repairs and alterations" by better than three to one. The repair and alteration business was largely one for special trade contractors and building contractors. Jointly they accounted for 87.9 percent, or better

than seven-eighths of this type of work, divided between them as follows: Special trade contractors 62.7 percent and building contractors 25.2 percent. Table XII shows for the larger establishments the type-of-work distribution for each principal kind of contractor.

The relatively low volume of repairs and alterations for highway and heavy contractors is explainable by the fact that a very large part of such work is done by force account rather than by contractors.

CENSUS OF BUSINESS

CHART 8.— NUMBER OF EMPLOYEES ON THE 15TH OF EACH MONTH, EXPRESSED AS PERCENTAGES OF AVERAGE FOR THE YEAR, FOR THE UNITED STATES. ALL CONTRACTORS COMBINED AND PRINCIPAL KINDS OF CONTRACTORS: 1939

(Includes full-time and part-time employees)

PERCENT OF AVERAGE
NUMBER OF EMPLOYEES

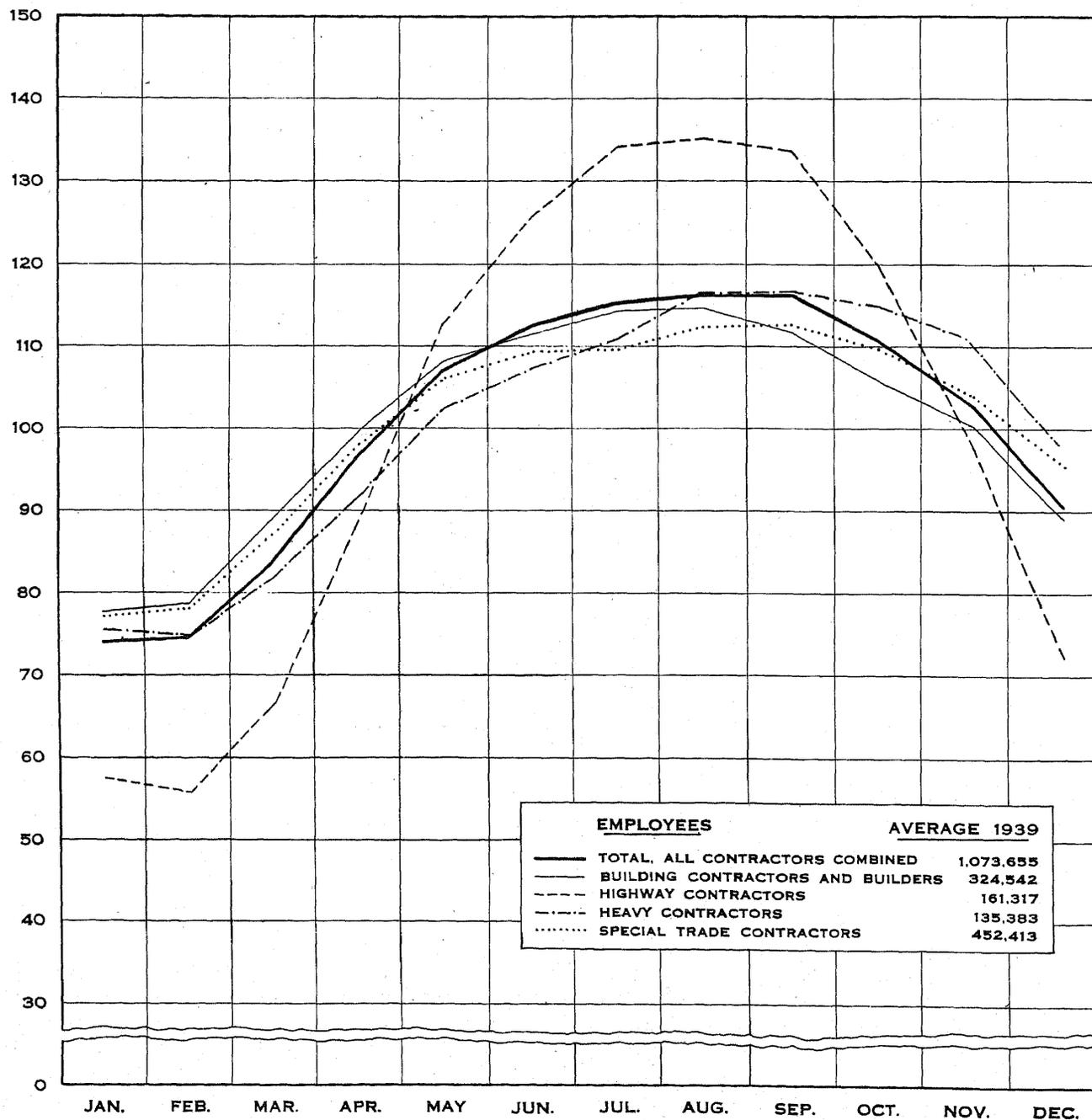


TABLE XII.—TYPE OF WORK FOR LARGER ESTABLISHMENTS, BY PRINCIPAL KINDS OF CONTRACTORS

KIND OF CONTRACTOR	TOTAL WORK PERFORMED		NEW AND ADDITIONS		REPAIRS AND ALTERATIONS		NOT CLASSIFIED	
	Value (add 000)	Per-cent	Value (add 000)	Per-cent	Value (add 000)	Per-cent	Value (add 000)	Per-cent
Total.....	\$3,479,671	100.0	\$2,965,553	85.8	\$439,168	12.6	\$54,950	1.6
Builders.....	89,919	100.0	88,445	98.4	1,292	1.4	182	.2
Building contractors.....	993,629	100.0	874,717	88.1	110,693	11.1	8,219	.8
Highway contractors.....	579,704	100.0	547,749	94.5	29,972	5.2	1,992	.3
Heavy contractors.....	634,747	100.0	611,385	96.3	21,962	3.5	1,400	.2
Special trade contractors.....	1,181,672	100.0	863,266	73.0	275,249	23.3	43,157	3.7

Table XIII presents the amount of "new and additions" and "repairs and alterations" which was performed on each type of construction. As would be expected from observations relating to table XII, repairs and alterations were very largely done on buildings; in fact, \$379,045,000 out of \$439,168,000 was so reported. Of these 379 million dollars, 47.8 percent was on "buildings other than residential," 37.4 percent on "one- and two-family houses," and only 14.7 percent on "other residential buildings." The comparatively low volume of repairs and alterations on "other residential buildings" is largely due to the fact that the owners or agents of many buildings in this category carry maintenance forces, and therefore much of their repair is not reflected here since it is force account work.

TABLE XIII.—TYPE OF WORK FOR LARGER ESTABLISHMENTS, BY TYPES OF CONSTRUCTION

TYPE OF CONSTRUCTION	TOTAL WORK PERFORMED		NEW AND ADDITIONS		REPAIRS AND ALTERATIONS		NOT CLASSIFIED	
	Value (add 000)	Per-cent	Value (add 000)	Per-cent	Value (add 000)	Per-cent	Value (add 000)	Per-cent
Total—all types....	\$3,479,671	100.0	\$2,965,553	85.8	\$439,168	12.6	\$54,950	1.6
On buildings.....	2,149,129	100.0	1,759,625	81.9	379,045	17.6	10,459	.5
One- and two-family houses.....	633,497	100.0	490,406	77.4	141,798	22.4	1,293	.2
Other residential buildings.....	241,384	100.0	184,546	76.5	55,876	23.1	962	.4
Buildings other than residential.....	1,274,248	100.0	1,084,673	85.2	181,371	14.2	8,204	.6
Other than on buildings.....	1,241,899	100.0	1,184,845	95.4	54,352	4.4	2,702	.2
Highway.....	583,475	100.0	551,120	94.4	30,832	5.3	1,523	.3
Heavy.....	658,424	100.0	633,725	96.2	23,520	3.6	1,179	.2
Type not specified.....	88,643	100.0	41,083	46.3	5,771	6.5	41,789	47.2

Ownership.—The value of work performed on structures and facilities which were privately owned exceeded that done on those publicly owned by a margin of only \$40,349,000, or 2.4 percent. In fact, the \$54,950,000 of work which was not reported in sufficient detail to permit classification by ownership might have thrown the balance in either direction. Table XIV shows the volume and percentage of work which each principal kind of contractor received from these two sources. It reveals that publicly owned projects furnished 92.1 percent of the highway contractors' activities, nearly three-fourths (74.5 percent) of those for

heavy contractors, 38.3 percent of the building contractors' volume, and a little more than one-fourth of that for special trade contractors.

TABLE XIV.—WORK PERFORMED BY LARGER ESTABLISHMENTS, BY OWNERSHIP FOR PRINCIPAL KINDS OF CONTRACTORS

KIND OF CONTRACTOR	TOTAL WORK PERFORMED		PRIVATE		PUBLIC		NOT CLASSIFIED	
	Value (add 000)	Per-cent	Value (add 000)	Per-cent	Value (add 000)	Per-cent	Value (add 000)	Per-cent
Total.....	\$3,479,671	100.0	\$1,732,535	49.8	\$1,692,186	48.6	\$54,950	1.6
Builders.....	89,919	100.0	89,240	99.2	497	.6	182	.2
Building contractors.....	993,629	100.0	605,199	60.9	380,211	38.3	8,219	.8
Highway contractors.....	579,704	100.0	44,143	7.6	533,569	92.1	1,992	.3
Heavy contractors.....	634,747	100.0	160,325	25.3	473,022	74.5	1,400	.2
Special trade contractors.....	1,181,672	100.0	833,628	70.5	304,887	25.8	43,157	3.7

Nearly seven-tenths of the work performed "on buildings" was on privately owned structures and slightly less than three-tenths on those publicly owned. Of the \$1,732,535,000 private construction performed by contractors, 86.6 percent was on buildings, distributed as follows: Buildings other than residential, 40.2 percent; one- and two-family houses, 35.0 percent; other residential buildings, 11.3 percent. Work performed on buildings which were publicly owned amounted to \$639,023,000, nearly nine-tenths (89 percent) of which was on buildings other than residential.

The total value of work performed on public structures and facilities was \$1,692,186,000. The largest volume was performed on buildings other than residential, which amounted to \$568,851,000, followed by highway construction valued at \$545,389,000 and heavy construction totaling \$489,358,000.

TABLE XV.—WORK PERFORMED BY LARGER ESTABLISHMENTS, BY OWNERSHIP, FOR TYPES OF CONSTRUCTION

TYPE OF CONSTRUCTION	TOTAL WORK PERFORMED		PRIVATE		PUBLIC		NOT CLASSIFIED	
	Value (add 000)	Per-cent	Value (add 000)	Per-cent	Value (add 000)	Per-cent	Value (add 000)	Per-cent
Total—all types....	\$3,479,671	100.0	\$1,732,535	49.8	\$1,692,186	48.6	\$54,950	1.6
On buildings.....	2,149,129	100.0	1,499,647	69.8	639,023	29.7	10,459	.5
One- and two-family houses.....	633,497	100.0	606,247	95.7	25,957	4.1	1,293	.2
Other residential buildings.....	241,384	100.0	196,207	81.3	44,215	18.3	962	.4
Buildings other than residential.....	1,274,248	100.0	697,193	54.8	568,851	44.6	8,204	.6
Other than on buildings.....	1,241,899	100.0	204,450	16.5	1,034,747	83.3	2,702	.2
Highway.....	583,475	100.0	36,563	6.3	545,389	93.4	1,523	.3
Heavy.....	658,424	100.0	167,887	25.5	489,358	74.3	1,179	.2
Type not specified.....	88,643	100.0	28,438	32.1	18,416	20.8	41,789	47.1

1939-1929 COMPARISONS

The Construction Census of 1929, the first year that this field was covered, was conducted by mail and was limited to those establishments which did a business of \$25,000 or more in that year. Therefore, comparisons

CENSUS OF BUSINESS

must be limited to those establishments which fell in that size group in the respective years.

There were 30,912 of these larger contractors and builders in the Nation who performed work in 1939 of \$3,479,671,000, as against the 30,597 in 1929 who performed work in the value of \$4,794,771,000, an increase in establishments of 1.0 percent and a decrease in the value of work performed of 27.4 percent.

Builders and building contractors showed an increase of 1,289 establishments and a decrease in work performed of \$464,178,000, or 30.0 percent. Special trade contractors decreased in number of establishments reporting by 583 and in value of work performed by \$636,229,000, or 35.0 percent. Highway and heavy contractors were 391 (8.4 percent) fewer in number in

1939, but showed a decrease in work performed of \$214,693,000, or 15.0 percent.

Since these larger establishments in 1939 accounted for 77 percent of the total value of work performed in the United States by all contractors and builders, regardless of size, they afford significant data from which the 1929-1939 trend of contract construction may be derived; though, of course, it does not necessarily follow that the business of the smaller contractors, who accounted for the remaining 23 percent of work performed, followed this same trend in like proportion.

Comparisons for geographic divisions for builders and building contractors, highway and heavy contractors, and special trade contractors are shown in table XVI, below, while table XVII, p. 25, gives comparative data

TABLE XVI.—COMPARISON OF ESTABLISHMENTS, WORK PERFORMED, PAY ROLL, AND MATERIALS AND EQUIPMENT FOR ESTABLISHMENTS REPORTING A VOLUME OF \$25,000 OR MORE, BY GEOGRAPHIC DIVISIONS AND KINDS OF CONTRACTORS: 1939 AND 1929

DIVISION AND KIND OF CONTRACTOR	NUMBER OF ESTABLISHMENTS		WORK PERFORMED			PAY ROLL ¹				MATERIALS USED AND EQUIPMENT INSTALLED			
	1939	1929	Amount (add 000)		Percent change 1939 vs. 1929	Amount (add 000)		Percent of work performed		Amount (add 000)		Percent of work performed	
			1939	1929		1939	1929	1939	1929	1939	1929	1939	1929
United States total ²	30,912	30,597	\$3,479,671	\$4,794,771	-27.4	\$1,144,862	\$1,769,613	32.9	38.9	\$1,625,344	\$2,056,598	46.7	42.9
Builders and building contractors ²	12,170	10,881	1,083,548	1,547,726	-30.0	367,314	626,406	33.9	40.5	557,796	674,766	51.5	43.6
Highway and heavy contractors.....	4,244	4,635	1,214,451	1,429,144	-15.0	377,177	491,900	31.1	34.4	492,908	536,524	40.6	37.5
Special trade contractors.....	14,498	15,081	1,181,672	1,817,901	-35.0	400,371	651,307	33.9	35.8	574,640	844,308	48.6	46.4
NEW ENGLAND.....	2,218	2,780	222,693	370,102	-39.8	79,849	152,738	35.9	41.3	99,613	144,376	44.7	39.0
Builders and building contractors.....	867	1,066	74,720	143,370	-47.9	28,549	65,175	38.2	45.5	34,928	57,550	46.7	40.1
Highway and heavy contractors.....	297	271	79,019	99,027	-20.2	26,877	40,669	34.0	41.1	33,062	29,207	41.8	29.5
Special trade contractors.....	1,654	1,443	68,954	127,705	-46.0	24,423	46,894	35.4	36.7	31,623	57,619	45.9	45.1
MIDDLE ATLANTIC.....	6,949	8,546	941,998	1,608,972	-41.5	332,068	635,410	35.3	39.5	436,164	658,851	46.3	40.9
Builders and building contractors.....	2,280	2,910	233,878	501,996	-53.4	86,415	219,325	36.9	43.7	114,517	197,926	49.0	39.4
Highway and heavy contractors.....	805	967	307,291	436,364	-29.6	102,288	159,035	33.8	36.4	127,657	159,724	41.5	36.6
Special trade contractors.....	3,864	4,669	400,829	670,612	-40.2	143,365	257,050	35.8	38.3	193,990	301,201	48.4	44.9
EAST NORTH CENTRAL.....	6,927	7,934	716,327	1,224,664	-41.5	241,506	451,229	33.7	36.8	340,980	542,728	47.6	44.3
Builders and building contractors.....	2,530	2,604	232,468	395,566	-41.2	80,798	161,588	34.8	40.8	119,697	176,501	51.5	44.6
Highway and heavy contractors.....	944	1,212	208,940	304,693	-31.4	65,066	100,908	31.1	33.1	91,408	125,732	43.7	41.3
Special trade contractors.....	3,453	4,118	274,919	524,405	-47.6	95,642	188,733	34.8	36.0	129,875	240,495	47.2	45.9
WEST NORTH CENTRAL.....	2,790	2,490	316,734	367,544	-13.8	94,945	125,037	30.0	34.0	150,217	160,143	47.4	43.6
Builders and building contractors.....	1,008	868	97,155	111,997	-13.3	32,139	39,554	33.1	35.3	51,715	55,006	53.2	49.1
Highway and heavy contractors.....	603	608	138,708	159,679	-13.1	37,138	53,079	26.8	33.2	57,897	60,856	41.7	38.1
Special trade contractors.....	1,179	1,014	80,871	95,868	-15.6	25,668	32,404	31.7	33.8	40,605	44,281	50.2	46.2
SOUTH ATLANTIC.....	3,626	2,184	410,081	338,238	21.2	126,615	116,591	30.9	34.5	203,664	152,130	49.7	45.0
Builders and building contractors.....	1,604	861	152,998	122,354	25.0	49,424	43,898	32.3	35.9	82,420	57,787	53.9	47.2
Highway and heavy contractors.....	432	364	128,785	102,537	26.6	37,275	35,257	28.7	34.4	55,810	36,813	43.0	35.9
Special trade contractors.....	1,590	959	127,295	113,347	12.3	39,916	37,436	31.4	32.0	65,434	57,530	51.4	50.8
EAST SOUTH CENTRAL.....	1,052	936	128,626	137,100	-6.2	37,269	44,563	29.0	32.5	61,668	62,135	47.9	45.3
Builders and building contractors.....	440	334	45,770	39,047	17.2	14,425	13,769	31.5	35.3	24,413	19,209	53.3	49.2
Highway and heavy contractors.....	178	195	53,206	56,705	-6.2	14,073	18,368	26.5	32.4	21,735	22,446	40.9	39.6
Special trade contractors.....	434	407	29,650	41,348	-28.3	8,771	12,426	29.6	30.1	15,510	20,480	52.3	49.5
WEST SOUTH CENTRAL.....	1,950	1,609	246,343	256,850	-4.1	69,278	82,599	28.1	32.2	119,791	118,364	48.6	46.1
Builders and building contractors.....	921	644	85,421	85,019	2.9	23,624	28,774	27.7	34.7	46,600	41,473	54.6	50.0
Highway and heavy contractors.....	336	314	106,916	108,126	-1.1	30,423	34,149	28.5	31.6	44,868	42,502	42.0	39.3
Special trade contractors.....	693	651	54,006	63,705	-17.8	15,231	19,676	28.2	29.9	28,323	34,389	52.4	52.3
MOUNTAIN ²	934	709	104,384	74,202	40.7	32,127	24,575	30.8	33.1	43,754	29,218	41.9	39.4
Builders and building contractors ²	407	270	32,005	23,059	38.8	9,874	7,782	30.9	33.7	17,133	11,285	53.5	48.9
Highway and heavy contractors.....	185	152	52,865	29,741	77.8	16,510	10,280	31.2	34.6	16,550	7,501	31.3	25.5
Special trade contractors.....	342	287	19,514	21,402	-8.8	5,743	6,513	29.4	30.4	10,071	10,342	51.6	48.3
PACIFIC.....	4,466	3,400	392,485	417,009	-5.9	131,205	136,871	33.4	32.8	169,503	187,653	43.2	45.0
Builders and building contractors.....	2,113	1,324	129,133	127,318	1.4	42,066	46,541	32.6	36.6	66,373	58,029	51.4	45.6
Highway and heavy contractors.....	464	552	137,718	132,272	4.1	47,527	40,155	34.5	30.4	43,921	51,653	31.9	39.1
Special trade contractors.....	1,889	1,533	125,634	157,419	-20.2	41,612	50,175	33.1	31.9	59,209	77,971	47.1	49.5

¹ Pay roll includes compensation for paid executives of corporations but not for proprietors of unincorporated businesses.

² Figures for 1929 include three establishments erroneously reported as contractors.

for all kinds of contractors combined for each of the States within the respective geographic divisions.

Geographic distribution for each of these two tables is based on the office address of the reporting establishment and not upon the location of the sites of the construction projects; therefore intercity and interstate changes in the location of the contractor's office or discontinuation of branch offices during the depression

years would affect these city and State comparisons. For this reason, comparative figures are not given for individual kinds of contractors. The limited comparative data that have been shown are considered sound for general statistical usage although obviously city data, as shown in table XVIII, p. 26, are affected to a greater degree than are those for geographic divisions and States.

TABLE XVII.—COMPARISON OF ESTABLISHMENTS, WORK PERFORMED, PAY ROLL, AND MATERIALS AND EQUIPMENT FOR ESTABLISHMENTS REPORTING A VOLUME OF \$25,000 OR MORE, BY GEOGRAPHIC DIVISIONS AND STATES: 1939 AND 1929

DIVISION AND STATE	NUMBER OF ESTABLISHMENTS		WORK PERFORMED				PAY ROLL ¹				MATERIALS USED AND EQUIPMENT INSTALLED			
			Amount (add 000)		Percent change 1939 vs. 1929	Amount (add 000)		Per cent of work performed		Amount (add 000)		Percent of work performed		
			1939	1929		1939	1929	1939	1929	1939	1929	1939	1929	
			1939	1929	1939	1929	1939	1929	1939	1929	1939	1929	1939	1929
United States total ²	30,912	30,597	\$3,479,871	\$4,794,771	-27.4	\$1,144,862	\$1,789,613	32.9	36.9	\$1,625,344	\$2,055,598	46.7	42.9	
GEOGRAPHIC DIVISIONS:														
New England.....	2,218	2,780	222,693	370,192	-39.8	79,849	152,738	35.9	41.3	99,613	144,376	44.7	39.0	
Middle Atlantic.....	6,949	8,546	941,998	1,608,972	-41.5	332,068	635,410	35.3	39.5	436,164	658,851	46.3	40.9	
East North Central.....	6,927	7,934	716,327	1,224,664	-41.5	241,506	451,229	33.7	36.8	340,980	542,728	47.6	44.3	
West North Central.....	2,790	2,490	316,734	367,544	-13.8	94,945	125,037	30.0	34.0	150,217	160,143	47.4	43.6	
South Atlantic.....	3,626	2,184	410,081	338,238	21.2	126,615	116,591	30.9	34.5	203,664	152,130	49.7	45.0	
East South Central.....	1,052	936	128,626	137,100	-6.2	37,269	44,563	29.0	32.5	61,658	62,135	47.9	45.3	
West South Central.....	1,950	1,609	246,343	256,850	-4.1	59,278	82,599	28.1	32.2	119,791	118,364	48.6	46.1	
Mountain ³	934	709	104,384	74,202	40.7	32,127	24,575	30.8	33.1	43,754	29,218	41.9	39.4	
Pacific.....	4,466	3,409	392,485	417,009	-5.9	131,205	136,871	33.4	32.8	169,603	187,653	43.2	45.0	
NEW ENGLAND:														
Maine.....	118	142	8,448	11,593	-27.1	3,056	5,175	36.2	44.6	3,508	4,185	41.5	36.1	
New Hampshire.....	87	113	6,232	9,135	-31.8	2,182	3,512	35.0	38.4	2,815	4,091	45.2	44.8	
Vermont.....	53	61	3,488	5,612	-37.8	1,127	2,106	32.3	37.5	1,641	2,611	47.0	46.5	
Massachusetts.....	1,131	1,434	122,113	229,778	-46.9	44,534	94,720	36.5	41.2	55,167	88,448	45.2	38.5	
Rhode Island.....	199	226	17,934	25,200	-29.1	6,257	10,318	34.9	40.8	7,983	9,958	44.5	39.4	
Connecticut.....	630	804	64,478	88,784	-27.4	22,693	36,907	35.2	41.6	28,499	35,083	44.2	39.5	
MIDDLE ATLANTIC:														
New York.....	3,943	4,372	556,380	938,099	-40.7	209,296	387,289	37.6	41.3	242,853	363,751	43.6	38.8	
New Jersey.....	950	1,483	106,335	235,061	-54.8	35,984	80,440	33.8	34.2	48,993	110,025	45.7	46.8	
Pennsylvania.....	2,056	2,691	279,283	435,812	-35.9	86,788	167,681	31.1	38.5	144,718	185,075	51.8	42.5	
EAST NORTH CENTRAL:														
Ohio.....	1,817	2,043	188,836	310,519	-39.2	60,301	109,901	31.9	35.4	95,771	144,722	50.7	46.6	
Indiana.....	649	746	68,044	86,760	-21.6	22,072	30,878	32.4	35.6	32,971	40,614	48.5	46.8	
Illinois.....	2,221	2,497	256,281	454,524	-43.6	94,161	181,376	36.7	39.9	110,227	186,280	43.0	41.0	
Michigan.....	1,380	1,501	134,765	252,993	-46.7	42,277	88,122	31.4	34.8	69,932	115,431	51.9	45.6	
Wisconsin.....	860	1,147	68,401	119,898	-42.9	22,695	40,952	33.2	34.2	32,079	55,681	46.9	46.5	
WEST NORTH CENTRAL:														
Minnesota.....	840	561	92,446	88,111	4.9	27,507	31,032	29.8	35.2	44,174	35,259	47.8	40.0	
Iowa.....	494	486	58,555	68,660	-14.7	16,522	21,685	28.2	31.6	29,792	30,042	50.9	43.8	
Missouri.....	863	759	95,657	120,296	-20.5	31,439	44,903	32.9	37.3	43,562	52,422	45.5	43.6	
North Dakota.....	68	81	7,331	7,428	-1.3	2,068	2,114	28.2	28.5	3,165	3,557	43.2	47.9	
South Dakota.....	70	70	7,804	7,591	2.8	2,082	2,238	26.7	29.5	3,125	2,958	40.0	39.0	
Nebraska.....	216	243	29,506	40,314	-26.8	7,951	12,323	26.9	30.6	14,067	18,631	47.7	46.2	
Kansas.....	289	290	25,435	35,144	-27.6	7,376	10,742	29.0	30.6	12,332	17,274	48.5	49.2	
SOUTH ATLANTIC:														
Delaware.....	134	91	10,468	14,789	-29.2	3,847	4,944	36.8	33.4	4,832	6,702	46.2	45.3	
Maryland.....	577	407	60,802	82,030	-25.9	20,773	28,124	34.2	34.3	29,441	33,390	48.4	40.7	
District of Columbia.....	437	253	49,430	39,846	24.1	17,847	16,327	36.1	41.0	23,289	15,601	47.1	38.9	
Virginia.....	631	337	59,322	41,682	42.3	17,582	14,900	29.6	35.7	30,960	19,604	52.2	47.0	
West Virginia.....	178	169	20,501	20,053	2.2	6,395	7,244	31.2	36.1	7,974	7,946	38.9	39.6	
North Carolina.....	492	293	70,207	47,800	46.9	20,359	14,974	29.0	31.3	35,435	24,767	50.5	51.8	
South Carolina.....	166	116	23,588	14,833	59.0	6,810	4,682	28.9	31.6	12,116	8,161	51.4	55.0	
Georgia.....	395	230	58,317	46,490	25.4	16,128	14,086	27.7	30.3	30,457	23,624	52.2	50.8	
Florida.....	616	288	57,446	30,715	87.0	16,874	11,310	29.4	36.8	29,160	12,435	50.8	40.5	
EAST SOUTH CENTRAL:														
Kentucky.....	341	330	36,229	34,321	5.6	10,526	11,821	29.1	34.4	17,945	13,872	49.5	40.4	
Tennessee.....	363	314	49,669	53,065	-6.4	14,773	16,033	29.7	30.2	20,719	23,706	41.7	44.7	
Alabama.....	240	197	29,970	38,841	-22.8	8,556	13,224	28.5	34.0	16,467	19,380	54.9	49.9	
Mississippi.....	108	95	12,758	10,873	17.3	3,414	3,485	26.8	32.1	6,527	5,177	51.2	47.6	
WEST SOUTH CENTRAL:														
Arkansas.....	86	118	10,095	14,557	-30.7	2,784	4,433	27.6	30.5	4,538	7,156	45.0	49.2	
Louisiana.....	348	178	46,843	28,599	63.8	13,337	9,334	28.5	32.6	21,999	11,733	47.0	41.0	
Oklahoma.....	272	312	38,974	49,212	-20.8	11,488	15,630	29.5	31.8	19,755	22,225	50.7	45.2	
Texas.....	1,244	1,001	150,431	164,482	-8.5	41,669	53,202	27.7	32.3	73,499	77,250	48.9	47.0	
MOUNTAIN:														
Montana.....	138	119	12,926	10,208	26.6	4,121	3,268	31.9	32.0	5,675	4,551	43.9	44.6	
Idaho.....	71	44	9,976	6,268	59.2	3,369	2,406	33.8	38.4	3,298	1,168	33.1	18.6	
Wyoming.....	67	40	6,424	2,765	(*)	1,909	949	29.7	34.3	2,548	984	39.7	35.6	
Colorado.....	227	211	30,370	23,040	31.8	9,368	7,513	30.8	32.6	13,062	10,009	43.0	43.4	
New Mexico.....	83	41	8,765	5,744	52.6	2,616	1,649	29.8	28.7	3,934	2,030	44.9	35.3	
Arizona ²	131	102	11,278	9,312	21.1	3,590	2,983	31.8	32.0	4,839	4,404	42.9	47.3	
Utah.....	155	129	19,235	12,899	49.1	5,643	4,753	29.3	36.8	8,333	4,717	43.3	36.6	
Nevada.....	62	20	5,410	2,956	(*)	1,511	879	27.9	29.7	2,065	790	38.2	26.7	
PACIFIC:														
Washington.....	429	404	66,994	55,263	21.2	23,178	19,353	34.6	35.0	22,999	25,616	34.3	46.4	
Oregon.....	287	249	28,479	26,315	8.2	9,531	9,377	33.5	35.6	12,531	10,615	44.0	41.5	
California.....	3,750	2,756	297,012	335,431	-11.5	98,496	108,141	33.2	32.2	133,973	151,122	45.1	45.1	

¹ Pay roll includes compensation for paid executives of corporations but not for proprietors of unincorporated businesses.

² Detailed figures for 1929 have been adjusted to exclude 3 establishments erroneously reported as contractors. Figures for these establishments are included in the totals.

³ Not comparable due to undercoverage in 1929.

CENSUS OF BUSINESS

TABLE XVIII.—COMPARISON OF ESTABLISHMENTS, WORK PERFORMED, PAY ROLL, AND MATERIALS AND EQUIPMENT FOR ESTABLISHMENTS REPORTING A VOLUME OF \$25,000 OR MORE, FOR CITIES OF 500,000 POPULATION AND OVER: 1939 and 1929

CITY	NUMBER OF ESTABLISHMENTS		WORK PERFORMED			PAY ROLL ¹				MATERIALS USED AND EQUIPMENT INSTALLED			
			Amount (add 000)		Percent change 1939 vs. 1929	Amount (add 000)		Percent of work performed		Amount (add 000)		Percent of work performed	
	1939	1929	1939	1929		1939	1929	1939	1929	1939	1929	1939	1929
Baltimore, Md.....	328	298	\$43,040	\$65,208	-34.0	\$15,848	\$22,683	36.8	34.8	\$20,107	\$26,033	46.7	39.9
Boston, Mass.....	330	429	56,950	114,548	-50.3	20,040	48,600	35.2	42.5	26,212	40,293	46.0	35.2
Buffalo, N. Y.....	167	254	21,991	47,326	-53.5	8,563	18,585	38.9	39.3	8,609	19,389	39.1	41.0
Chicago, Ill.....	1,309	1,485	184,932	352,730	-47.6	70,314	143,787	38.0	40.8	77,330	143,441	41.8	40.7
Cleveland, Ohio.....	339	355	46,853	102,926	-54.5	17,162	38,562	36.6	37.5	21,398	48,553	45.7	47.2
Detroit, Mich.....	745	681	79,838	152,262	-47.6	24,245	56,536	30.4	37.1	43,071	67,583	53.9	44.4
Los Angeles, Calif. ²	895	778	77,337	122,435	-36.8	26,362	39,234	34.1	32.0	37,419	56,862	48.4	46.4
Milwaukee, Wis.....	291	471	24,520	59,773	-59.0	9,191	20,733	37.5	34.7	10,636	27,301	43.4	46.7
New York, N. Y.....	2,415	2,325	396,433	672,851	-41.1	154,162	284,472	38.9	42.3	169,480	253,226	42.8	37.6
Philadelphia, Pa.....	608	922	90,896	196,072	-53.6	30,651	77,974	33.7	39.8	44,421	83,417	48.9	42.5
Pittsburgh, Pa.....	274	343	62,775	84,339	-25.6	18,164	33,477	28.9	39.7	34,810	34,578	55.5	41.0
St. Louis, Mo.....	391	375	39,181	67,182	-41.7	14,763	24,551	37.7	36.5	17,252	29,947	44.0	44.6
San Francisco, Calif.....	497	399	64,964	78,804	-17.6	23,974	27,026	36.9	34.3	25,939	33,888	39.9	43.0
Washington, D. C.....	437	253	49,430	39,846	24.1	17,847	16,327	36.1	41.0	23,289	15,501	47.1	38.9

¹ Pay roll includes compensation for paid executives of corporations but not for proprietors of unincorporated businesses.

² 1929 figures have been adjusted to exclude 28 establishments erroneously tabulated as within Los Angeles in that year.