

Plumbing, Heating, and Air-Conditioning Contractors

1997

Issued July 1999

EC97C-2351A

1997 Economic Census

Construction

Industry Series



U S C E N S U S B U R E A U

Helping You Make Informed Decisions

U.S. Department of Commerce
Economics and Statistics Administration
U.S. CENSUS BUREAU



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-- Not applicable for this report.

Introduction to the Economic Census

PURPOSES AND USES OF THE ECONOMIC CENSUS

The economic census is the major source of facts about the structure and functioning of the Nation's economy. It provides essential information for government, business, industry, and the general public. Title 13 of the United States Code (Sections 131, 191, and 224) directs the Census Bureau to take the economic census every 5 years, covering years ending in 2 and 7.

The economic census furnishes an important part of the framework for such composite measures as the gross domestic product estimates, input/output measures, production and price indexes, and other statistical series that measure short-term changes in economic conditions. Specific uses of economic census data include the following:

- Policymaking agencies of the Federal Government use the data to monitor economic activity and assess the effectiveness of policies.
- State and local governments use the data to assess business activities and tax bases within their jurisdictions and to develop programs to attract business.
- Trade associations study trends in their own and competing industries, which allows them to keep their members informed of market changes.
- Individual businesses use the data to locate potential markets and to analyze their own production and sales performance relative to industry or area averages.

ALL-NEW INDUSTRY CLASSIFICATIONS

Data from the 1997 Economic Census are published primarily on the basis of the North American Industry Classification System (NAICS), unlike earlier censuses, which were published according to the Standard Industrial Classification (SIC) system. NAICS is in the process of being adopted in the United States, Canada, and Mexico. Most economic census reports cover one of the following NAICS sectors:

21	Mining
22	Utilities
23	Construction
31-33	Manufacturing
42	Wholesale Trade
44-45	Retail Trade
48-49	Transportation and Warehousing
51	Information

52	Finance and Insurance
53	Real Estate and Rental and Leasing
54	Professional, Scientific, and Technical Services
55	Management of Companies and Enterprises
56	Administrative and Support and Waste Management and Remediation Services
61	Educational Services
62	Health Care and Social Assistance
71	Arts, Entertainment, and Recreation
72	Accommodation and Foodservices
81	Other Services (except Public Administration)

(Not listed above are the Agriculture, Forestry, Fishing, and Hunting sector (NAICS 11), partially covered by the census of agriculture conducted by the U.S. Department of Agriculture, and the Public Administration sector (NAICS 92), covered by the census of governments conducted by the Census Bureau.)

The 20 NAICS sectors are subdivided into 96 subsectors (three-digit codes), 313 industry groups (four-digit codes), and, as implemented in the United States, 1170 industries (five- and six-digit codes).

RELATIONSHIP TO SIC

While many of the individual NAICS industries correspond directly to industries as defined under the SIC system, most of the higher level groupings do not. Particular care should be taken in comparing data for retail trade, wholesale trade, and manufacturing, which are sector titles used in both NAICS and SIC, but cover somewhat different groups of industries. The industry definitions discuss the relationships between NAICS and SIC industries. Where changes are significant, it will not be possible to construct time series that include data for points both before and after 1997.

For 1997, data for auxiliary establishments (those functioning primarily to manage, service, or support the activities of their company's operating establishments, such as a central administrative office or warehouse) will not be included in the sector-specific reports. These data will be published separately.

GEOGRAPHIC AREA CODING

Accurate and complete information on the physical location of each establishment is required to tabulate the census data for the states, metropolitan areas (MAs), counties, parishes, and corporate municipalities including cities, towns, villages, and boroughs. Respondents were

required to report their physical location (street address, municipality, county, and state) if it differed from their mailing address. For establishments not surveyed by mail (and those single-establishment companies that did not provide acceptable information on physical location), location information from Internal Revenue Service tax forms is used as a basis for coding.

BASIS OF REPORTING

The economic census is conducted on an establishment basis. A company operating at more than one location is required to file a separate report for each store, factory, shop, or other location. Each establishment is assigned a separate industry classification based on its primary activity and not that of its parent company.

DOLLAR VALUES

All dollar values presented are expressed in current dollars; i.e., 1997 data are expressed in 1997 dollars, and 1992 data, in 1992 dollars. Consequently, when making comparisons with prior years, users of the data should consider the changes in prices that have occurred.

All dollar values are shown in thousands of dollars.

AVAILABILITY OF ADDITIONAL DATA

Reports in Print and Electronic Media

All results of the 1997 Economic Census are available on the Census Bureau Internet site (www.census.gov) and on compact discs (CD-ROM) for sale by the Census Bureau. Unlike previous censuses, only selected highlights are published in printed reports. For more information, including a description of electronic and printed reports being issued, see the Internet site, or write to U.S. Census Bureau, Washington, DC 20233-8300, or call Customer Services at 301-457-4100.

Special Tabulations

Special tabulations of data collected in the 1997 Economic Census may be obtained, depending on availability of time and personnel, in electronic or tabular form. The data will be summaries subject to the same rules prohibiting disclosure of confidential information (including name, address, kind of business, or other data for individual business establishments or companies) that govern the regular publications.

Special tabulations are prepared on a cost basis. A request for a cost estimate, as well as exact specifications on the type and format of the data to be provided, should be directed to the Chief of the division named below, U.S. Census Bureau, Washington, DC 20233-8300. To discuss a special tabulation before submitting specifications, call the appropriate division:

Manufacturing and Construction Division 301-457-4673
Service Sector Statistics Division 301-457-2668

HISTORICAL INFORMATION

The economic census has been taken as an integrated program at 5-year intervals since 1967 and before that for 1954, 1958, and 1963. Prior to that time, individual components of the economic census were taken separately at varying intervals.

The economic census traces its beginnings to the 1810 Decennial Census, when questions on manufacturing were included with those for population. Coverage of economic activities was expanded for the 1840 Decennial Census and subsequent censuses to include mining and some commercial activities. The 1905 Manufactures Census was the first time a census was taken apart from the regular decennial population census. Censuses covering retail and wholesale trade and construction industries were added in 1930, as were some covering service trades in 1933. Censuses of construction, manufacturing, and the other business service censuses were suspended during World War II.

The 1954 Economic Census was the first census to be fully integrated: providing comparable census data across economic sectors, using consistent time periods, concepts, definitions, classifications, and reporting units. It was the first census to be taken by mail, using lists of firms provided by the administrative records of other Federal agencies. Since 1963, administrative records also have been used to provide basic statistics for very small firms, reducing or eliminating the need to send them census questionnaires.

The range of industries covered in the economic censuses expanded between 1967 and 1992. The census of construction industries began on a regular basis in 1967, and the scope of service industries, introduced in 1933, was broadened in 1967, 1977, and 1987. While a few transportation industries were covered as early as 1963, it was not until 1992 that the census broadened to include all of transportation, communications, and utilities. Also new for 1992 was coverage of financial, insurance, and real estate industries. With these additions, the economic census and the separate census of governments and census of agriculture collectively covered roughly 98 percent of all economic activity.

Printed statistical reports from the 1992 and earlier censuses provide historical figures for the study of long-term time series and are available in some large libraries. All of the census reports printed since 1967 are still available for sale on microfiche from the Census Bureau. CD-ROMs issued from the 1987 and 1992 Economic Censuses contain databases including nearly all data published in print, plus additional statistics, such as ZIP Code statistics, published only on CD-ROM.

SOURCES FOR MORE INFORMATION

More information about the scope, coverage, classification system, data items, and publications for each of the economic censuses and related surveys is published in the *Guide to the 1997 Economic Census and Related Statistics* at www.census.gov/econguide. More information on the methodology, procedures, and history of the censuses will be published in the *History of the 1997 Economic Census* at www.census.gov/econ/www/history.html.

ABBREVIATIONS AND SYMBOLS

The following abbreviations and symbols are used with the 1997 Economic Census data:

A	Standard error of 100 percent or more.
D	Withheld to avoid disclosing data of individual companies; data are included in higher level totals.
F	Exceeds 100 percent because data include establishments with payroll exceeding revenue.
N	Not available or not comparable.
Q	Revenue not collected at this level of detail for multiestablishment firms.
S	Withheld because estimates did not meet publication standards.

V	Represents less than 50 vehicles or .05 percent.
X	Not applicable.
Y	Disclosure withheld because of insufficient coverage of merchandise lines.
Z	Less than half the unit shown.
a	0 to 19 employees.
b	20 to 99 employees.
c	100 to 249 employees.
e	250 to 499 employees.
f	500 to 999 employees.
g	1,000 to 2,499 employees.
h	2,500 to 4,999 employees.
i	5,000 to 9,999 employees.
j	10,000 to 24,999 employees.
k	25,000 to 49,999 employees.
l	50,000 to 99,999 employees.
m	100,000 employees or more.
p	10 to 19 percent estimated.
q	20 to 29 percent estimated.
r	Revised.
s	Sampling error exceeds 40 percent.
nec	Not elsewhere classified.
nsk	Not specified by kind.
–	Represents zero (page image/print only).
(CC)	Consolidated city.
(IC)	Independent city.

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Construction

SCOPE

Construction, sector 23, includes establishments primarily engaged in construction work that have one or more paid employees. Construction work includes new construction work, additions, alterations, and repairs. Establishments identified as construction management firms are also included. The construction sector is divided into three types of activity or subsectors.

The Building, Developing, and General Contracting subsector includes establishments responsible for the construction of building projects. Builders, developers, and general contractors, as well as land subdividers and land developers are included in the subsector. The construction work may be done for others and performed by custom builders, general contractors, design builders, or turnkey contractors. This construction activity may be for sale as performed by speculative or operative builders.

The Heavy Construction subsector includes establishments engaged in the construction of heavy engineering and industrial projects (except buildings) such as highways, power plants, and pipelines. Establishments in this subsector usually assume responsibility for entire non-building projects, but may subcontract some or all of the actual construction work. Special trade contractors are included in this group if they are engaged in activities primarily related to heavy construction such as grading for highways. Kinds of establishments include heavy construction general contractors, and design builders.

The Special Trade Contractors subsector includes establishments engaged in specialized construction activities such as plumbing, painting, and electrical work. The activities in this subsector may be subcontracted from builders or general contractors, or the work may be performed directly for project owners. Special trade contractors usually perform most of their work at the job site, although they may have shops where they perform prefabrication and other work.

GENERAL

A list of publications that provide statistics on construction, sector 23, follows.

Industry reports. There are 28 separate industry reports. They present data for a six-digit North American Industry Classification System (NAICS) industry. A description of the particular NAICS industry may be found in

Appendix B. These reports include statistics such as number of establishments, employment, payroll, value added, cost of materials, value of business done, and capital expenditures. Explanations of these and other terms may be found in Appendix A. The industry reports also include selected statistics for states.

Geographic area reports. There is a separate report for each state, the District of Columbia, and the United States. They present statistics similar to the industry reports for each state. They also present selected six-digit NAICS level data.

Subject reports. The Industry series, U.S. Summary, and Geographic Area series, U.S. Summary, reports present selected statistics from the individual industry and geographic area reports, as well as higher level aggregations.

GEOGRAPHIC AREAS COVERED

The area reports for the construction industries contain state and regional level data. No substate data are available.

While most of the state data in the industry series reports are by physical location of the establishment, some data are available by reported location of the construction work.

The regions are made up of groups of states as follows:

NORTHEAST

Connecticut
Maine
Massachusetts
New Hampshire
New Jersey
New York
Pennsylvania
Rhode Island
Vermont

MIDWEST

Illinois
Indiana
Iowa
Kansas
Michigan
Minnesota
Missouri
Nebraska

North Dakota
Ohio
South Dakota
Wisconsin

SOUTH

Alabama
Arkansas
Delaware
District of Columbia
Florida
Georgia
Kentucky
Louisiana
Maryland
Mississippi
North Carolina
Oklahoma
South Carolina
Tennessee
Texas
Virginia
West Virginia

WEST

Alaska
Arizona
California
Colorado
Hawaii
Idaho
Montana
Nevada
New Mexico
Oregon
Utah
Washington
Wyoming

COMPARABILITY OF THE 1992 AND 1997 CENSUSES

The adoption of the North American Industry Classification System (NAICS) had a major impact on the comparability of data between the 1992 and 1997 censuses. Less than half of the industries in the construction sector of NAICS have comparable industries in the Standard Industrial Classification (SIC) system that was used for past censuses. Because of the lack of comparable data, historic data are not shown for this sector.

Lead paint removal and asbestos abatement left the construction sector with the introduction of NAICS. Many changes took place within the sector, or from business

activity coming into the sector. Much of the change came from adding management services to each of the construction industries in the building, developing, and general contracting subsector and the heavy construction subsector. Also, land subdividers and developers, and rental of construction equipment with an operator were added to the sector.

Another change is that data for establishments with no employees are no longer included in the construction reports, but are available in other report series.

DISCLOSURE

In accordance with Federal law governing census reports (Title 13 of the United States Code), no data are published that would disclose the operations of an individual establishment or company. However, the number of establishments classified in a specific industry or geography is not considered a disclosure, and may be released even when other information is withheld. Suppressed data are included in higher-level totals.

AVAILABILITY OF MORE FREQUENT ECONOMIC DATA

The County Business Patterns program of the U.S. Census Bureau offers annual statistics on the number of establishments, employment, and payroll classified by industry within each county and state.

The U.S. Census Bureau's monthly Construction Reports, Series C30, Value of New Construction Put in Place contain data related to construction sector census data. The main difference is that the C30 series covers all new construction put in place without regard to who is performing the construction activity. The construction sector census data covers both new construction and maintenance and repair work done by establishments classified in the construction industries. Significant amounts of construction are done by establishments classified outside of construction (real estate, manufacturing, utilities, and communications, for example), as both "force account" construction and construction done for others. In addition, the C30 series includes construction-related expenses such as architectural and engineering costs and the costs of materials supplied by owners which are normally not reflected in construction sector census data.

Data contained in the 1997 construction sector may also differ from industry data in Employment and Earnings Statistics, published by the Bureau of Labor Statistics and Statistics of Income, published by the Internal Revenue Service. These differences arise from varying definitions of scope, coverage, timing, classification, and methodology.

Table 1. 1997 Data Showing the Derivation of the NAICS Classification Based on the SIC Classification

[NAICS codes appear in bold type. Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A. For a more detailed title for each SIC code shown, see Appendix F]

NAICS and SIC code	Industry	Number of establishments	Total number of employees	Payroll, all employees	Value of construction work	Net value of construction work	Value added	Cost of materials, components, supplies, and fuels	Capital expenditures, other than land
		A	B	C	D	E	F	G	H
235110	Plumbing, heating, & air-conditioning contractors	84 876	788 930	25 720 160	87 330 176	78 496 384	46 576 808	33 016 838	1 361 596
171100	Plumbing, heating, & air-conditioning special trade contractors	84 876	788 930	25 720 160	87 330 176	78 496 384	46 576 808	33 016 838	1 361 596

Table 2. Employment Statistics for Establishments With Payroll by State: 1997

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. * Indicates geographic change, but not applicable to this sector. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

Location of establishment	Number of establishments	Number of employees		Number of construction workers				Payroll (thousand dollars)		Relative standard error of estimate (percent) for column—
		All	Construction workers	January to March	April to June	July to September	October to December	All employees	Construction workers	
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS										
United States	84 876	788 930	599 940	575 724	594 608	622 656	606 774	25 720 160	18 279 714	1
Alabama	1 413	14 066	11 172	10 570	11 500	11 333	11 286	375 525	261 627	4
Alaska	187	1 333	961	909	859	982	1 096	55 496	39 063	13
Arizona	1 344	15 358	11 784	11 762	11 455	11 944	11 976	444 412	314 727	5
Arkansas	980	7 214	5 611	5 167	5 621	5 991	5 664	169 157	123 406	6
California	6 776	64 396	48 875	46 455	48 185	50 282	50 579	2 500 392	1 829 630	1
Colorado	1 654	16 541	12 884	12 381	13 057	13 299	12 801	498 985	360 281	4
Connecticut	1 254	8 868	6 479	6 246	6 588	6 558	6 525	304 430	211 448	4
Delaware	288	3 942	3 029	2 913	2 985	3 158	3 059	139 406	97 407	5
District of Columbia	31	461	342	323	347	368	330	16 581	11 331	6
Florida	4 803	44 510	33 003	31 921	32 555	33 773	33 765	1 210 184	808 674	3
Georgia	2 589	26 088	19 813	19 344	19 307	20 508	20 092	745 613	509 764	4
Hawaii*	243	1 976	1 337	1 444	1 303	1 312	1 289	78 869	53 728	7
Idaho	546	4 961	3 863	3 595	3 963	4 099	3 794	134 837	99 646	6
Illinois	3 756	36 423	27 791	26 153	27 892	29 487	27 632	1 495 104	1 111 017	6
Indiana	1 973	21 461	16 402	15 795	16 290	16 955	16 566	754 554	551 694	2
Iowa	938	9 125	6 819	6 093	6 647	7 297	7 240	275 501	201 583	5
Kansas	1 065	9 054	6 886	6 509	6 754	7 227	7 055	276 099	199 495	7
Kentucky	1 178	12 006	9 422	9 052	9 052	10 011	9 574	317 112	233 198	5
Louisiana	1 200	10 148	7 674	7 434	7 764	7 868	7 632	277 969	189 221	5
Maine	552	2 930	2 181	2 035	2 273	2 177	2 238	78 732	54 823	7
Maryland	2 037	23 109	17 207	16 883	17 308	17 726	16 910	762 103	518 575	3
Massachusetts	2 172	15 548	11 677	11 397	11 593	12 179	11 289	580 187	404 929	4
Michigan	3 187	27 022	20 554	18 916	20 610	21 897	20 794	978 742	704 768	3
Minnesota	1 416	13 656	10 211	9 508	10 004	10 701	10 632	522 806	376 324	3
Mississippi	746	6 793	5 279	4 804	5 196	5 567	5 550	145 477	104 011	6
Missouri	1 824	16 587	12 594	11 975	12 291	13 179	12 933	569 548	411 300	2
Montana	412	2 350	1 799	1 624	1 740	1 924	1 907	68 332	51 205	11
Nebraska	662	5 598	4 369	4 140	4 338	4 619	4 377	174 976	126 247	4
Nevada	515	7 491	6 175	6 091	6 268	6 147	6 193	255 684	194 926	3
New Hampshire	462	3 097	2 304	2 344	2 192	2 370	2 312	95 903	68 677	6
New Jersey	3 320	21 391	15 758	15 183	15 621	16 689	15 539	820 980	578 431	3
New Mexico	600	4 824	3 893	3 804	3 758	4 051	3 960	124 143	93 895	12
New York	5 234	42 540	30 533	29 423	30 536	31 734	30 438	1 525 713	1 012 489	2
North Carolina	3 057	31 326	24 450	24 042	23 765	25 282	24 711	874 860	608 150	3
North Dakota	248	2 359	1 947	1 773	1 855	2 201	1 961	67 537	52 237	10
Ohio	3 329	34 872	26 575	24 975	26 536	27 775	27 013	1 158 021	841 751	3
Oklahoma	1 156	7 288	5 644	5 334	5 736	5 778	5 727	186 741	134 307	6
Oregon	1 079	10 884	8 332	8 119	8 490	8 842	7 878	439 915	332 455	3
Pennsylvania	3 546	33 498	25 353	24 510	24 542	26 303	26 055	1 167 403	830 817	2
Rhode Island	356	1 893	1 417	1 315	1 448	1 511	1 395	62 657	43 832	4
South Carolina	1 351	14 067	11 260	10 856	11 195	11 562	11 428	358 773	262 120	4
South Dakota	311	1 760	1 327	1 228	1 262	1 439	1 379	49 934	34 206	7
Tennessee	1 612	18 810	14 504	14 327	14 568	14 885	14 236	568 979	380 309	3
Texas	5 516	56 618	43 479	41 831	42 907	45 053	44 123	1 644 450	1 147 065	3
Utah	835	7 899	6 254	6 099	6 111	6 645	6 351	234 561	173 567	7
Vermont	245	1 657	1 286	1 281	1 262	1 308	1 293	45 191	33 780	10
Virginia	2 391	24 055	18 959	18 422	19 159	19 432	18 822	672 524	475 238	3
Washington	1 746	16 774	12 145	11 693	11 991	12 408	12 488	594 665	417 457	3
West Virginia	496	3 488	2 809	2 860	2 654	2 912	2 810	83 891	66 039	5
Wisconsin	1 981	19 290	14 478	14 081	14 259	14 823	14 750	697 399	512 820	3
Wyoming	264	1 527	1 039	975	1 015	1 087	1 078	39 102	26 025	11

Table 3. General Statistics for Establishments With Payroll by State: 1997

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. * Indicates geographic change, but not applicable to this sector. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

Location of establishment	Value of construction work	Net value of construction work	Value added	Cost of materials, components, supplies, and fuels	Cost of construction work subcontracted out to others	Rental cost of machinery, equipment, and buildings	Capital expenditures, other than land	End-of-year gross book value of depreciable assets	Relative standard error of estimate (percent) for column—	
	A	B	C	D	E	F	G	H	B	G
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS										
United States	87 330 176	78 496 384	46 576 808	33 016 838	8 833 796	1 315 324	1 361 596	9 891 859	1	1
Alabama	1 227 115	1 155 231	699 249	469 589	71 884	19 099	22 412	160 701	4	10
Alaska	191 222	164 223	108 139	62 114	26 999	^s 4 521	2 307	27 574	11	16
Arizona	1 558 535	1 453 145	793 404	670 620	105 390	25 873	25 484	159 542	6	11
Arkansas	587 503	548 644	330 419	233 542	38 859	8 545	11 552	90 137	4	15
California	8 179 446	7 426 678	4 449 958	3 074 373	752 769	143 011	118 094	870 603	1	3
Colorado	1 693 660	1 530 481	872 671	681 129	163 179	28 935	30 998	177 132	3	15
Connecticut	1 004 514	912 162	553 885	363 915	92 352	12 838	15 674	109 206	4	11
Delaware	409 763	376 723	239 580	137 526	33 041	7 095	7 216	50 783	5	18
District of Columbia	53 426	46 512	26 808	19 772	6 914	464	641	7 073	4	13
Florida	4 270 074	3 882 746	2 181 664	1 743 206	387 329	58 376	77 091	476 948	2	6
Georgia	2 707 372	2 481 172	1 450 960	1 068 051	226 200	38 972	44 191	300 404	5	7
Hawaii *	262 209	231 089	154 884	84 395	31 120	5 355	2 438	43 249	6	8
Idaho	534 485	462 487	268 830	203 012	71 998	7 366	12 160	57 037	8	18
Illinois	4 666 573	4 245 413	2 681 746	1 612 309	421 160	61 132	70 575	582 331	6	10
Indiana	2 415 608	2 167 212	1 329 427	880 509	248 395	39 358	39 800	294 249	2	9
Iowa	941 814	851 722	542 395	333 338	90 092	11 386	20 011	137 873	5	15
Kansas	991 048	902 062	495 306	413 221	88 986	12 002	12 944	103 151	6	13
Kentucky	1 069 652	997 945	582 799	420 424	71 707	13 460	16 902	158 837	5	11
Louisiana	1 032 992	909 265	526 595	390 003	123 727	19 564	11 475	101 275	6	12
Maine	271 742	249 405	145 708	109 332	22 336	2 897	3 967	49 777	6	16
Maryland	2 706 074	2 274 393	1 311 396	996 255	431 681	36 415	32 271	265 053	3	7
Massachusetts	2 197 054	1 842 845	1 072 589	788 930	354 210	29 122	26 804	182 403	4	8
Michigan	3 345 829	2 958 858	1 820 863	1 168 701	386 972	52 285	54 238	373 997	2	6
Minnesota	1 744 406	1 558 957	932 738	645 039	283 878	185 449	23 983	207 051	3	8
Mississippi	561 720	524 098	302 722	246 454	37 622	7 638	10 380	65 491	6	16
Missouri	1 850 266	1 627 030	1 006 408	630 723	223 236	23 542	32 417	213 900	2	10
Montana	248 138	227 860	122 656	110 880	20 278	3 305	3 815	40 072	13	28
Nebraska	585 515	530 901	306 550	228 098	54 614	7 644	10 061	78 103	4	11
Nevada	881 622	811 489	462 661	355 908	70 133	18 301	10 434	76 483	3	8
New Hampshire	362 465	319 501	179 213	140 289	42 963	6 990	9 562	43 158	7	17
New Jersey	2 809 386	2 460 887	1 481 605	995 667	348 499	43 513	37 123	307 243	4	9
New Mexico	393 575	358 030	208 096	155 469	^s 35 545	5 400	6 599	50 619	12	23
New York	5 292 794	4 627 403	2 818 927	1 887 074	665 391	74 624	62 044	509 027	2	5
North Carolina	2 989 371	2 751 252	1 598 384	1 184 341	238 119	46 171	55 391	359 756	3	6
North Dakota	225 388	205 178	122 164	84 540	20 210	4 450	6 107	33 752	8	38
Ohio	3 847 492	3 363 445	2 052 205	1 349 187	484 047	57 371	58 035	451 005	2	8
Oklahoma	737 958	678 253	397 876	291 994	59 705	10 728	10 826	96 370	9	14
Oregon	1 349 767	1 200 922	719 422	498 268	148 845	20 876	13 541	106 289	2	10
Pennsylvania	4 001 213	3 570 171	2 151 883	1 485 212	431 042	56 244	54 904	474 555	2	8
Rhode Island	240 887	204 306	113 363	91 233	36 581	2 940	3 828	29 508	5	29
South Carolina	1 189 389	1 079 759	605 759	484 566	109 630	18 681	20 124	149 866	5	12
South Dakota	171 663	156 157	89 233	71 723	15 506	1 385	3 075	33 215	9	19
Tennessee	1 940 866	1 753 611	984 376	815 782	187 255	24 356	36 081	228 343	3	12
Texas	5 988 883	5 417 527	2 995 410	2 482 127	571 356	95 453	83 624	622 243	4	6
Utah	899 015	784 428	481 882	313 840	^s 114 587	10 966	22 756	101 371	10	22
Vermont	149 893	138 002	84 157	55 013	11 891	2 677	3 065	21 913	7	14
Virginia	2 109 902	1 966 871	1 138 711	863 964	143 031	28 860	38 591	243 246	3	7
Washington	1 894 359	1 760 303	1 114 906	693 627	134 056	37 110	31 094	223 032	3	8
West Virginia	307 942	292 185	155 652	138 747	15 757	3 565	^s 8 241	41 023	7	43
Wisconsin	2 108 422	1 939 963	1 241 173	740 090	168 459	38 101	38 659	280 630	2	8
Wyoming	130 175	117 487	69 403	52 717	12 688	2 378	3 214	25 261	11	28

Table 4. Detailed Statistics for Establishments With Payroll: 1997

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

Item	Value	Relative standard error of estimate (percent)	Item	Value	Relative standard error of estimate (percent)
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS			235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS—Con.		
Number of establishments in business during year	84 876	Z	Selected costs	41 850 632	1
Number of proprietors and working partners	28 011	2	Cost of materials, components, and supplies	31 879 484	1
Total number of employees	788 930	1	Cost of construction work subcontracted out to others	8 833 796	2
Number of construction workers in March	575 724	1	Cost of selected power, fuels, and lubricants	1 137 354	1
Number of construction workers in May	594 608	1	Cost of electricity	193 364	2
Number of construction workers in August	622 656	1	Cost of natural gas and manufactured gas	54 978	2
Number of construction workers in November	606 774	1	Cost of gasoline and diesel fuel	850 725	1
Average number of construction workers	599 940	1	Cost of on-highway use of gasoline and diesel fuel	762 418	1
Number of other employees in March	190 023	1	Cost of off-highway use of gasoline and diesel fuel	88 307	3
Number of other employees in May	187 368	1	Cost of all other fuels and lubricants	38 287	4
Number of other employees in August	189 183	1	Rental cost for machinery, equipment, and buildings	1 315 324	1
Number of other employees in November	189 386	1	Rental cost for machinery and equipment	647 653	1
Average number of other employees	188 990	1	Rental cost for buildings	667 671	2
Payroll, all employees	25 720 160	1	Selected purchased services	1 401 114	1
Payroll, construction workers	18 279 714	1	Purchased communication services	678 117	1
Payroll, other employees	7 440 445	1	Cost of repairs to buildings and other structures	120 064	3
First-quarter payroll, all employees	5 792 535	1	Cost of repairs to machinery and equipment	602 933	2
Fringe benefits, all employees	6 359 989	1	Value of construction work	87 330 176	1
Legally required expenditures	3 507 174	1	Value of construction work on government owned projects ..	15 770 702	2
Voluntary expenditures	2 852 815	1	Value of construction work on federally owned projects ..	3 966 296	3
Value of business done	88 427 440	1	Value of construction work on state and locally owned projects	11 804 406	2
Value of construction work	87 330 176	1	Value of construction work on privately owned projects	71 559 472	1
Value of construction work subcontracted in from others ..	46 546 320	1	Beginning-of-year gross book value of depreciable assets	8 911 646	1
Other business receipts	1 097 264	5	Capital expenditures, other than land	1 361 596	1
Net value of construction	78 496 384	1	Retirements and disposition of depreciable assets	381 382	3
Value added	46 576 808	1	End-of-year gross book value of depreciable assets	9 891 859	1
			Depreciation charges during year	1 167 645	1
			Number of establishments with inventories	40 497	1
			Value of construction work for establishments with inventories ..	60 654 116	1
			End of 1997, inventories of materials and supplies	1 475 810	2
			End of 1996, inventories of materials and supplies	1 433 171	2
			Number of establishments with no inventories	21 281	2
			Value of construction work for establishments with no inventories	15 303 367	2
			Number of establishments not reporting inventories	23 098	2
			Value of construction work for establishments not reporting inventories	11 372 695	2

Table 5. Selected Statistics for Establishments With Payroll by Employment Size Class: 1997

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

Employment size class	Number of establishments	Total number of employees	Total payroll	Dollar value of business done	Value of construction work	Net value of construction work	Value added	Cost of materials, components, supplies, and fuels	Cost of construction work subcontracted out to others	Relative standard error of estimate (percent) for column—	
	A	B	C	D	E	F	G	H	I	B	F
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS											
Total	84 876	788 930	25 720 160	88 427 440	87 330 176	78 496 384	46 576 808	33 016 838	8 833 796	1	1
Establishments with 1 to 4 employees	48 446	95 210	1 907 896	9 114 267	8 999 314	8 641 380	4 812 287	3 944 047	357 934	1	2
Establishments with 5 to 9 employees	17 814	115 416	2 956 310	10 566 375	10 409 636	9 856 687	5 808 711	4 204 716	552 949	2	3
Establishments with 10 to 19 employees	10 123	135 377	4 072 951	13 699 807	13 563 026	12 626 148	7 482 611	5 280 318	936 879	3	3
Establishments with 20 to 49 employees	6 214	182 117	6 202 941	20 916 294	20 653 482	18 367 322	10 920 422	7 709 713	2 286 160	2	2
Establishments with 50 to 99 employees	1 481	99 297	3 805 513	12 626 972	12 424 539	10 795 713	6 546 985	4 451 161	1 628 827	1	1
Establishments with 100 to 249 employees	633	91 361	3 694 907	12 021 869	11 887 726	10 085 222	6 234 630	3 984 735	1 802 504	3	2
Establishments with 250 to 499 employees	128	43 466	1 796 351	5 820 973	5 742 832	4 893 965	2 917 833	2 054 273	848 867	Z	Z
Establishments with 500 to 999 employees	33	21 331	926 139	2 770 504	2 759 241	2 420 922	1 462 806	969 379	338 319	Z	Z
Establishments with 1,000 employees or more	4	5 356	357 153	890 381	890 381	809 023	390 526	418 497	81 358	Z	Z

Table 6. Selected Statistics for Establishments With Payroll by Dollar Value of Business Done Size Class: 1997

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

Dollar value size class	Number of establishments	Total number of employees	Total payroll	Dollar value of business done	Value of construction work	Net value of construction work	Value added	Cost of materials, components, supplies, and fuels	Cost of construction work subcontracted out to others	Relative standard error of estimate (percent) for column—	
	A	B	C	D	E	F	G	H	I	B	F
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS											
Total	84 876	788 930	25 720 160	88 427 440	87 330 176	78 496 384	46 576 808	33 016 838	8 833 796	1	1
Establishments with value of business done less than \$25,000	S	S	S	S	S	S	S	S	S	S	S
Establishments with value of business done \$25,000 to \$49,999	S	S	S	S	S	S	S	S	S	S	S
Establishments with value of business done \$50,000 to \$99,999	S	S	S	S	S	S	S	S	15 588	S	S
Establishments with value of business done \$100,000 to \$249,999	22 907	50 561	877 979	3 834 415	3 796 025	3 677 926	2 082 751	1 633 565	118 099	3	2
Establishments with value of business done \$250,000 to \$499,999	18 297	76 760	1 695 278	6 463 142	6 376 684	6 171 203	3 529 435	2 728 226	205 481	3	3
Establishments with value of business done \$500,000 to \$999,999	12 559	98 481	2 542 303	8 801 000	8 703 083	8 406 006	5 042 852	3 461 071	297 077	3	3
Establishments with value of business done \$1,000,000 to \$2,499,999	9 998	152 520	4 646 371	15 227 328	15 024 674	14 087 413	8 311 336	5 978 732	937 261	3	3
Establishments with value of business done \$2,500,000 to \$4,999,999	3 712	112 192	3 905 131	12 740 950	12 575 622	11 486 437	6 875 585	4 776 182	1 089 184	3	3
Establishments with value of business done \$5,000,000 to \$9,999,999	1 847	95 430	3 652 842	12 695 014	12 517 114	10 840 192	6 424 966	4 593 126	1 676 922	2	2
Establishments with value of business done \$10,000,000 or more	1 231	187 209	8 205 552	27 881 188	27 558 104	23 066 850	13 862 761	9 527 173	4 491 255	1	1

Table 7. Value of Construction Work for Establishments With Payroll by Type of Construction: 1997

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

Type of construction	Value of construction work				Relative standard error of estimate (percent) for column—			
	Total	New construction	Additions, alterations, or reconstruction	Maintenance and repair	A	B	C	D
	A	B	C	D	A	B	C	D
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS								
Total	87 330 176	44 209 609	22 527 386	20 282 213	1	1	1	1
Building construction, total	82 150 114	42 071 087	21 241 073	18 837 953	1	1	1	1
Single-family houses, detached and attached	23 203 689	11 823 423	4 469 433	6 910 833	2	3	3	2
Single-family houses, detached	19 889 441	10 064 325	3 933 310	5 891 806	2	3	3	2
Single-family houses, attached	3 314 248	1 759 098	536 123	1 019 027	4	6	6	5
Apartment buildings, apartment type condominiums and cooperatives	4 514 461	2 504 192	708 788	1 301 481	3	5	5	5
Manufacturing and light industrial buildings	12 568 213	5 666 283	4 140 145	2 761 785	1	2	2	3
Manufacturing and light industrial warehouses	2 392 515	1 301 973	635 030	455 512	3	4	5	4
Hotels and motels	2 190 177	1 482 972	384 638	322 567	3	4	5	7
Office buildings	9 473 317	4 457 351	2 878 779	2 137 187	1	2	2	3
All other commercial buildings, nec	7 488 174	3 605 581	1 759 896	2 122 697	2	3	3	4
Commercial warehouses	1 722 421	1 021 554	417 287	283 581	6	6	14	6
Religious buildings	1 248 741	557 106	344 208	347 427	4	7	6	4
Educational buildings	7 135 443	3 834 131	2 472 947	828 365	3	3	4	5
Health care and institutional buildings	5 528 991	2 682 837	2 114 601	731 552	2	2	3	4
Public safety buildings	1 420 400	906 118	370 057	144 225	3	4	6	5
All other nonresidential buildings	3 263 572	2 227 567	545 265	490 740	4	5	6	8
Nonbuilding construction, total	4 869 095	2 138 522	1 286 313	1 444 260	3	3	3	9
Sewers, water mains, and related facilities	1 215 373	588 722	241 183	385 468	6	6	9	9
Sewers, sewer lines, septic systems, and related facilities	705 618	342 178	147 219	216 221	7	7	11	11
Water mains and related facilities	509 754	246 544	93 964	169 247	6	6	8	13
Blast furnaces, petroleum refineries, chemical complexes, etc	997 125	284 193	361 978	350 954	1	2	1	3
Sewage and water treatment plants	866 571	527 804	261 520	77 247	4	3	9	13
Other nonbuilding construction, nec	1 790 026	737 804	421 632	630 590	7	5	4	19
Construction work, nsk	310 871	X	X	X	8	X	X	X

Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1997

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in Table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A.]

Item	Number of establishments	Total number of employees	Payroll, all employees	Value of construction work		Net value of construction work	Value added	Cost of construction work subcontracted out to others	Relative standard error of estimate (percent) for column—			
				For all types	For specialized type				B	D	H	
												A
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS												
Total	84 876	788 930	25 720 160	87 330 176	X	78 496 384	46 576 808	8 833 796	1	1	2	
Establishments not specializing ..	22 295	302 187	10 517 994	35 360 924	X	31 094 914	18 649 939	4 266 010	1	1	2	
Establishments specializing 51 percent or more	62 581	486 743	15 202 167	51 969 258	42 620 034	47 401 471	27 926 871	4 567 787	1	1	2	
Single-family houses, detached and attached												
All establishments specializing	43 089	235 446	5 910 872	21 067 834	17 636 676	20 438 276	11 479 047	629 557	2	2	7	
Specialization 100 percent	14 956	62 901	1 490 236	5 822 332	5 822 332	5 622 176	3 080 052	200 156	4	5	11	
Specialization 90 to 99 percent ...	8 864	47 348	1 200 816	4 341 835	4 060 097	4 208 249	2 279 543	133 586	5	5	18	
Specialization 80 to 89 percent ...	6 534	38 308	944 847	3 377 574	2 779 304	3 282 889	1 857 205	94 684	5	6	25	
Specialization 70 to 79 percent ...	6 729	41 686	1 031 980	3 478 565	2 538 139	3 390 073	1 997 856	88 493	5	5	13	
Specialization 60 to 69 percent ...	4 703	33 575	920 478	3 028 071	1 872 540	2 937 310	1 637 439	90 760	9	10	13	
Specialization 51 to 59 percent ...	1 304	11 629	322 515	1 019 457	564 265	997 579	626 952	21 878	12	11	13	
Apartment buildings, apartment type condominiums and cooperatives												
All establishments specializing	1 985	19 438	565 774	2 106 281	1 647 712	1 989 883	1 085 542	116 398	8	7	11	
Specialization 100 percent	499	3 511	107 858	404 142	404 142	369 051	199 808	35 092	15	14	19	
Specialization 90 to 99 percent ...	175	2 549	79 570	326 883	305 686	312 013	174 755	14 870	17	18	36	
Specialization 80 to 89 percent ...	502	3 807	93 175	337 011	274 188	326 416	178 690	10 594	22	22	32	
Specialization 70 to 79 percent ...	359	3 429	88 470	351 065	252 016	332 012	174 778	*19 053	19	19	41	
Specialization 60 to 69 percent ...	345	4 139	131 117	454 726	284 368	434 389	241 800	20 337	18	17	9	
Specialization 51 to 59 percent ...	105	2 003	65 584	232 454	127 310	216 002	115 710	16 452	20	20	15	
Manufacturing and light industrial buildings												
All establishments specializing	2 761	67 091	2 839 636	8 659 603	7 147 740	7 573 499	4 801 249	1 086 104	3	2	2	
Specialization 100 percent	S	24 166	983 179	2 943 807	2 943 807	2 601 852	1 594 532	341 955	5	5	7	
Specialization 90 to 99 percent ...	S	9 221	418 320	1 168 321	1 110 248	1 036 270	702 385	132 051	6	5	3	
Specialization 80 to 89 percent ...	209	5 940	293 608	907 421	738 768	786 129	509 140	121 292	7	6	3	
Specialization 70 to 79 percent ...	368	10 176	426 235	1 340 845	987 104	1 140 161	732 384	200 683	5	3	2	
Specialization 60 to 69 percent ...	387	11 063	441 850	1 429 048	888 845	1 252 156	795 551	176 892	7	5	3	
Specialization 51 to 59 percent ...	217	6 525	276 444	870 160	478 968	756 930	467 257	113 231	6	5	7	
Manufacturing and light industrial warehouses												
All establishments specializing	220	3 713	152 434	490 374	428 631	428 141	251 662	62 233	12	10	11	
Specialization 100 percent	153	2 159	86 818	272 077	272 077	234 850	132 833	37 226	19	17	19	
Specialization 90 to 99 percent ...	5	231	8 467	22 354	21 170	20 802	14 249	1 552	Z	Z	Z	
Specialization 80 to 89 percent ...	*43	S	S	33 268	26 614	31 532	S	S	S	S	33	
Specialization 70 to 79 percent ...	10	414	18 978	63 152	46 826	51 891	29 771	11 261	1	5	7	
Specialization 60 to 69 percent ...	*28	635	29 676	99 523	61 943	89 065	58 910	10 458	6	9	3	
Hotels and motels												
All establishments specializing	266	5 302	207 702	677 628	549 369	613 843	342 859	63 785	11	9	12	
Specialization 100 percent	*49	*718	*17 291	*54 910	*54 910	*52 479	*32 989	2 431	50	48	14	
Specialization 90 to 99 percent ...	*43	625	24 268	70 957	67 215	67 301	37 045	3 656	35	29	16	
Specialization 80 to 89 percent ...	*43	1 718	68 341	241 537	208 976	215 109	117 720	26 428	13	8	8	
Specialization 70 to 79 percent ...	*89	1 698	70 186	226 947	164 034	204 812	S	22 135	15	10	Z	
Specialization 60 to 69 percent ...	*16	*464	*25 634	*76 446	*50 477	*67 311	*45 347	S	44	56	S	
Specialization 51 to 59 percent ...	S	S	S	S	S	S	S	S	S	S	-	
Office buildings												
All establishments specializing	1 935	29 969	1 240 083	4 179 915	3 159 233	3 559 015	2 255 082	620 899	4	3	3	
Specialization 100 percent	583	4 768	187 264	651 995	651 995	564 779	349 099	87 216	12	7	5	
Specialization 90 to 99 percent ...	164	2 532	122 850	486 699	453 777	365 240	205 945	121 460	9	8	4	
Specialization 80 to 89 percent ...	174	3 500	152 430	533 582	442 988	456 825	290 682	76 756	7	7	13	
Specialization 70 to 79 percent ...	606	8 234	332 100	1 007 736	735 167	876 519	585 905	131 217	8	7	7	
Specialization 60 to 69 percent ...	265	5 721	232 746	814 380	501 214	700 039	437 203	114 341	9	8	9	
Specialization 51 to 59 percent ...	142	5 214	212 695	685 523	374 092	595 613	386 248	89 909	8	6	9	

Table 8. Selected Statistics for Establishments With Payroll by Specialization in Types of Construction: 1997—Con.

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. This table presents selected statistics for establishments according to degree of specialization in major types of construction work. If number of establishments or value of construction work for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the value of construction work by type of construction was not provided in Table 7. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A.]

Item	Number of establishments	Total number of employees	Payroll, all employees	Value of construction work		Net value of construction work	Value added	Cost of construction work subcontracted out to others	Relative standard error of estimate (percent) for column—		
				For all types	For specialized type				B	D	H
	A	B	C	D	E	F	G	H	B	D	H
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS—Con.											
All other commercial buildings, nec											
All establishments specializing	4 771	37 566	1 179 139	3 938 005	3 324 304	3 605 003	2 133 577	333 002	5	5	9
Specialization 100 percent	2 019	15 451	502 686	1 726 732	1 726 732	1 555 604	911 813	171 127	8	8	15
Specialization 90 to 99 percent ...	611	4 027	119 951	390 011	361 347	366 011	225 138	24 000	15	16	25
Specialization 80 to 89 percent ...	492	3 839	119 660	377 650	310 408	359 358	209 744	18 292	14	13	7
Specialization 70 to 79 percent ...	578	4 377	139 147	475 535	350 548	426 032	257 178	49 503	14	12	25
Specialization 60 to 69 percent ...	787	7 068	213 834	702 676	431 981	653 583	381 158	49 093	13	12	18
Specialization 51 to 59 percent ...	283	2 804	83 861	265 402	143 288	244 415	148 546	20 987	20	19	20
Commercial warehouses											
All establishments specializing	223	2 909	124 407	479 877	397 167	445 015	222 563	34 862	16	21	14
Specialization 100 percent	^{§2}	966	^{§41} 381	^{§203} 734	^{§203} 734	^{§192} 393	^{§84} 076	^{§11} 341	36	46	40
Specialization 90 to 99 percent ...	^{§47}	347	^{§17} 394	^{§62} 281	^{§58} 947	^{§60} 135	^{§32} 005	^{§2} 146	39	55	66
Specialization 80 to 89 percent ...	S	183	8 316	23 712	19 025	22 993	15 240	719	35	29	12
Specialization 70 to 79 percent ...	S	^{§283}	10 034	^{§27} 931	^{§19} 813	^{§23} 940	^{§16} 496	3 991	61	46	10
Specialization 60 to 69 percent ...	^{§47}	766	33 509	123 143	75 359	108 219	53 511	14 924	14	7	1
Specialization 51 to 59 percent ...	^{§12}	^{§364}	^{§13} 774	^{§39} 077	^{§20} 290	^{§37} 335	^{§21} 236	1 742	56	46	4
Educational buildings											
All establishments specializing	1 335	24 591	866 065	3 516 761	2 526 712	2 767 545	1 541 941	749 216	6	5	8
Specialization 100 percent	202	1 865	57 390	253 729	253 729	201 528	105 531	52 201	24	26	31
Specialization 90 to 99 percent ...	173	1 996	73 049	362 192	334 362	262 648	129 619	^{§99} 544	17	29	45
Specialization 80 to 89 percent ...	176	3 102	111 965	464 497	383 070	370 798	204 395	93 699	10	12	12
Specialization 70 to 79 percent ...	269	5 581	186 962	743 950	549 037	590 673	328 070	153 276	15	12	14
Specialization 60 to 69 percent ...	371	8 358	298 833	1 145 562	708 123	904 822	521 407	240 740	10	9	14
Specialization 51 to 59 percent ...	144	3 689	137 866	546 831	298 391	437 076	252 919	109 755	12	8	6
Health care and institutional buildings											
All establishments specializing	452	10 496	415 649	1 520 541	1 077 209	1 177 014	726 859	343 528	7	6	9
Specialization 100 percent	77	1 168	40 586	164 887	164 887	114 569	65 756	50 318	27	17	9
Specialization 90 to 99 percent ...	^{§56}	798	33 140	103 376	94 214	84 445	56 489	18 931	28	25	15
Specialization 80 to 89 percent ...	^{§63}	1 063	40 607	128 447	105 644	110 390	68 863	18 057	27	25	29
Specialization 70 to 79 percent ...	78	2 070	86 221	290 621	210 389	237 510	145 823	53 111	6	6	3
Specialization 60 to 69 percent ...	140	4 021	155 881	564 027	354 301	444 963	282 790	119 064	14	11	7
Specialization 51 to 59 percent ...	^{§37}	1 377	59 215	269 183	147 773	185 136	107 138	84 047	12	16	33
Sewers, water mains, and related facilities											
All establishments specializing	1 043	4 830	108 907	362 688	313 222	336 185	200 982	§26 503	16	16	48
Specialization 100 percent	717	2 085	44 444	166 650	166 650	159 096	86 212	7 554	18	15	16
Specialization 90 to 99 percent ...	^{§77}	887	18 943	43 712	40 147	42 493	27 351	1 218	33	36	12
Specialization 80 to 89 percent ...	S	^{§593}	^{§15} 486	^{§45} 788	^{§38} 519	^{§44} 590	^{§28} 500	1 197	46	48	37
Specialization 70 to 79 percent ...	^{§60}	S	S	S	S	S	S	S	S	S	S
Specialization 60 to 69 percent ...	^{§45}	241	6 702	23 375	14 694	15 297	15 297	D	18	21	D
Specialization 51 to 59 percent ...	S	S	10 131	34 563	19 061	D	26 482	D	S	31	D
Blast furnaces, petroleum refineries, chemical complexes, etc											
All establishments specializing	164	7 339	324 733	762 232	607 395	671 687	542 412	90 545	2	2	Z
Specialization 100 percent	^{§68}	1 560	51 889	128 290	128 290	114 841	91 006	13 449	4	3	Z
Specialization 90 to 99 percent ...	^{§37}	2 101	94 808	213 781	202 013	190 659	158 347	23 122	5	3	1
Specialization 80 to 89 percent ...	S	865	42 908	98 963	81 688	84 860	67 827	14 103	11	7	1
Specialization 70 to 79 percent ...	4	844	43 666	113 048	79 824	101 200	82 803	11 848	Z	Z	Z
Specialization 60 to 69 percent ...	S	249	11 116	29 031	17 860	26 509	18 765	2 522	35	30	Z
Specialization 51 to 59 percent ...	6	1 720	80 345	179 120	97 720	153 618	123 665	25 502	Z	Z	Z

Table 9. **Dollar Value of Business Done for Establishments With Payroll by Kind-of-Business Activity: 1997**

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. Based on their primary business activity or combination of activities, establishments were classified into this specific industry. These establishments, however, may also be engaged in other kinds of business activities. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A.]

Primary and other kinds of business activities	Dollar value of business done	Relative standard error of estimate (percent)
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS		
Total	88 427 440	1
Special trade contractors, total	86 186 373	1
Building sprinkler system installation contractor	4 084 354	3
Electric power installation and service contractor, including lighting	962 464	4
Energy management contractor	647 181	9
Environmental control systems installation and service contractor	1 526 112	5
Heating, ventilation and air-conditioning contractor (HVAC)	32 353 064	1
Lawn sprinkler installation contractor	1 100 932	9
Mechanical contractor	16 201 863	2
Plumbing contractor	21 804 226	2
Refrigeration contractor	2 179 294	6
Septic system installation contractor	713 187	11
Sheet metal contractor, except HVAC and plumbing	1 157 849	3
Steamfitting and piping contractor	3 455 847	2
Other construction activities, nec	1 117 894	4
Other business activities secondary to construction activities, total	1 086 462	5
Other business activities, secondary to construction activities, nec	605 088	5
Retail trade, secondary to construction activities	481 375	9
Kind of business activity, nsk	36 715	23

Table 10. Selected Statistics for Establishments With Payroll by Specialization in Kind-of-Business Activity: 1997

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. This table presents selected statistics for establishments according to degree of specialization by major activity of construction work. If number of establishments or dollar value of business done for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the dollar value of business done by kind of business activity was not provided in Table 9. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A.]

Item	Number of establishments	Total number of employees	Payroll, all employees	Value of construction work		Net value of construction work	Value added	Cost of construction work subcontracted out to others	Relative standard error of estimate (percent) for column—		
				For all kinds of business	For specialized kinds of business				B	D	H
	A	B	C	D	E	F	G	H	B	D	H
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS											
Total	84 876	788 930	25 720 160	87 330 176	X	78 496 384	46 576 808	8 833 796	1	1	2
Establishments not specializing	7 568	116 424	4 244 498	14 269 278	X	12 082 190	7 433 561	2 187 088	2	2	3
Establishments specializing 51 percent or more	77 308	672 506	21 475 663	73 060 904	66 102 848	66 414 196	39 143 250	6 646 708	1	1	2
Building sprinkler system installation contractor											
All establishments specializing	1 897	35 921	1 295 558	3 725 654	3 656 247	3 537 754	2 274 539	187 899	4	4	10
Specialization 100 percent	1 698	30 514	1 079 911	3 156 757	3 156 757	3 001 023	1 890 507	155 734	5	4	11
Specialization 90 to 99 percent	137	3 672	146 983	392 470	374 984	371 032	262 981	21 439	11	10	26
Specialization 80 to 89 percent	S	533	21 641	52 657	43 969	47 529	38 655	⁵ 128	22	12	45
Specialization 70 to 79 percent	S	467	16 392	43 171	32 873	41 586	25 037	1 585	30	20	5
Specialization 60 to 69 percent	8	S	S	S	S	S	S	1 118	S	S	Z
Specialization 51 to 59 percent	5	311	14 137	35 485	18 712	32 589	25 525	2 896	Z	Z	Z
Energy management contractor											
All establishments specializing	372	3 263	117 411	390 616	350 050	328 695	200 764	61 921	17	15	8
Specialization 100 percent	283	S	73 702	268 498	268 498	227 607	137 571	40 891	S	21	12
Specialization 90 to 99 percent	5	D	D	D	D	11 784	D	D	D	D	D
Specialization 80 to 89 percent	1	D	D	D	D	D	D	D	D	D	D
Specialization 70 to 79 percent	³⁴	²⁷⁹	⁹ 496	²⁴ 344	¹⁷ 358	²⁰ 243	¹⁰ 724	4 102	49	44	19
Specialization 60 to 69 percent	²⁰	⁴⁰³	11 812	40 061	26 216	33 116	21 720	6 945	52	22	8
Specialization 51 to 59 percent	²⁹	310	14 828	38 297	20 546	D	23 144	D	6	1	D
Environmental control systems installation and service contractor											
All establishments specializing	1 134	9 931	365 417	1 146 159	992 594	1 038 193	676 772	107 966	8	7	10
Specialization 100 percent	692	4 425	148 875	519 278	519 278	456 834	278 703	62 444	11	9	15
Specialization 90 to 99 percent	137	1 011	38 566	110 868	105 039	104 483	66 246	6 385	15	13	5
Specialization 80 to 89 percent	77	2 001	82 211	254 748	214 892	237 272	157 652	17 477	19	17	16
Specialization 70 to 79 percent	⁴⁶	320	16 723	35 399	25 615	32 813	24 734	2 586	29	21	39
Specialization 60 to 69 percent	100	1 041	38 764	97 064	60 347	91 535	64 498	⁵ 529	39	32	46
Specialization 51 to 59 percent	⁸¹	1 132	40 279	128 801	67 424	115 257	84 940	13 545	27	24	27
Heating, ventilation and air-conditioning contractor (HVAC)											
All establishments specializing	30 218	275 346	8 635 062	30 006 901	27 126 417	27 656 729	15 972 690	2 350 172	2	2	3
Specialization 100 percent	20 510	169 554	5 209 577	18 677 950	18 677 950	17 245 826	9 731 097	1 432 124	2	2	4
Specialization 90 to 99 percent	2 594	25 989	827 776	2 788 619	2 625 316	2 616 170	1 482 381	172 448	6	5	5
Specialization 80 to 89 percent	2 301	21 219	675 651	2 272 585	1 870 116	2 092 323	1 217 131	180 263	6	7	22
Specialization 70 to 79 percent	1 855	18 424	594 969	1 970 099	1 436 733	1 809 450	1 099 174	160 649	7	6	7
Specialization 60 to 69 percent	1 929	22 973	759 380	2 468 793	1 535 211	2 255 277	1 449 275	213 516	6	5	4
Specialization 51 to 59 percent	1 030	17 187	567 709	1 828 855	981 090	1 637 683	993 631	191 172	8	7	10
Lawn sprinkler installation contractor											
All establishments specializing	2 595	14 924	314 220	1 039 436	975 490	996 858	635 781	42 578	9	9	17
Specialization 100 percent	2 046	11 173	240 515	806 749	806 749	779 135	485 321	27 614	11	11	19
Specialization 90 to 99 percent	200	1 179	17 775	60 775	57 743	60 009	³¹ 361	S	35	32	S
Specialization 80 to 89 percent	⁵⁵	⁴²⁷	¹⁰ 350	37 232	31 040	³¹ 672	²² 294	5 560	48	35	7
Specialization 70 to 79 percent	⁹³	³²⁷	⁶ 596	²³ 771	¹⁶ 780	²³ 032	²¹ 305	⁷³⁹	62	56	46
Specialization 60 to 69 percent	97	⁷¹⁶	¹⁵ 667	⁴⁹ 528	²⁹ 829	⁴³ 748	³² 261	S	41	52	S
Specialization 51 to 59 percent	¹⁰⁴	1 102	23 316	61 380	³³ 350	⁵⁹ 262	43 240	2 118	38	39	32
Mechanical contractor											
All establishments specializing	4 145	98 236	3 850 004	13 517 703	12 301 056	11 166 916	6 560 632	2 350 787	2	2	2
Specialization 100 percent	3 124	61 884	2 427 352	8 664 519	8 664 519	7 243 400	4 108 815	1 421 119	3	3	4
Specialization 90 to 99 percent	188	7 495	304 684	1 002 030	945 847	781 918	470 352	220 112	5	3	1
Specialization 80 to 89 percent	1 819	11 478	307 621	1 020 663	845 637	861 998	548 589	158 665	7	6	4
Specialization 70 to 79 percent	226	8 064	320 978	1 112 735	817 646	890 414	562 415	222 322	5	5	5
Specialization 60 to 69 percent	255	8 698	322 235	1 126 844	704 815	916 787	569 559	210 057	6	5	6
Specialization 51 to 59 percent	138	4 004	167 133	590 912	322 593	472 399	300 902	118 513	4	3	2
Plumbing contractor											
All establishments specializing	32 957	199 123	5 530 337	19 055 078	17 154 806	17 895 768	10 446 533	1 159 310	2	2	7
Specialization 100 percent	22 792	123 157	3 354 620	11 581 334	11 581 334	11 046 843	6 360 206	534 491	3	3	6
Specialization 90 to 99 percent	2 676	20 233	563 507	1 858 286	1 760 169	1 785 497	1 097 118	72 789	8	8	9
Specialization 80 to 89 percent	1 819	11 478	329 539	1 092 955	904 894	1 031 962	623 386	60 993	10	10	19
Specialization 70 to 79 percent	2 168	16 350	486 301	1 656 162	1 207 378	1 472 995	866 313	183 167	8	9	24
Specialization 60 to 69 percent	2 149	17 341	501 672	1 824 289	1 137 114	1 634 562	969 079	189 727	8	9	25
Specialization 51 to 59 percent	1 353	10 563	294 699	1 042 051	563 917	923 908	530 431	118 143	9	10	22

Table 10. **Selected Statistics for Establishments With Payroll by Specialization in Kind-of-Business Activity: 1997—Con.**

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. This table presents selected statistics for establishments according to degree of specialization by major activity of construction work. If number of establishments or dollar value of business done for a given type of specialization are relatively insignificant, data may not be shown. In addition, data are not shown in this table where distribution of the dollar value of business done by kind of business activity was not provided in Table 9. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

Item	Number of establishments	Total number of employees	Payroll, all employees	Value of construction work		Net value of construction work	Value added	Cost of construction work subcontracted out to others	Relative standard error of estimate (percent) for column—		
				For all kinds of business	For specialized kinds of business				B	D	H
	A	B	C	D	E	F	G	H	B	D	H
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS—Con.											
Refrigeration contractor											
All establishments specializing	1 491	11 733	428 047	1 512 831	1 345 049	1 421 544	767 116	91 287	9	9	8
Specialization 100 percent	667	5 382	199 913	755 862	755 862	707 241	370 231	48 621	13	16	14
Specialization 90 to 99 percent	213	1 961	76 253	270 100	249 732	254 315	130 417	15 785	23	21	5
Specialization 80 to 89 percent	128	789	35 497	112 752	93 138	108 353	62 863	4 399	25	31	29
Specialization 70 to 79 percent	194	1 331	43 329	152 884	114 217	144 458	76 844	8 426	21	19	9
Specialization 60 to 69 percent	178	1 165	36 605	124 152	78 385	116 764	54 880	7 389	21	18	4
Specialization 51 to 59 percent	111	1 105	36 451	97 079	53 714	90 412	71 881	6 667	30	26	8
Septic system installation contractor											
All establishments specializing	1 548	6 136	133 629	581 354	535 009	562 315	344 520	19 038	15	13	20
Specialization 100 percent	1 123	4 275	95 793	433 443	433 443	419 498	247 303	13 945	18	16	25
Specialization 90 to 99 percent	136	^s 386	7 035	38 197	35 464	37 836	22 145	^s 361	42	38	74
Specialization 80 to 89 percent	1	D	D	D	D	D	D	D	D	D	D
Specialization 70 to 79 percent	^s 65	D	D	D	D	D	D	D	D	D	D
Specialization 60 to 69 percent	109	466	7 960	31 648	19 962	29 678	18 968	^s 1 970	33	32	67
Specialization 51 to 59 percent	112	^s 795	^s 16 544	^s 58 795	^s 31 969	^s 57 171	^s 43 788	1 624	51	42	37
Steamfitting and piping contractor											
All establishments specializing	599	17 395	795 176	2 044 284	1 625 241	1 772 255	1 238 095	272 029	4	3	4
Specialization 100 percent	321	5 794	232 015	613 988	613 988	550 395	384 366	63 593	7	7	4
Specialization 90 to 99 percent	40	1 761	72 062	191 131	180 289	162 346	121 154	28 785	18	13	7
Specialization 80 to 89 percent	146	1 829	99 280	271 786	229 334	230 883	142 801	40 903	8	4	2
Specialization 70 to 79 percent	16	1 188	56 402	148 405	107 472	117 647	77 318	30 758	Z	Z	Z
Specialization 60 to 69 percent	59	5 326	246 671	601 171	371 835	505 176	370 163	95 995	6	5	9
Specialization 51 to 59 percent	^s 17	1 497	88 747	217 803	122 323	205 809	142 294	11 994	10	10	21

Table 11. Value of Construction Work for Establishments With Payroll by Location of Construction Work: 1997

[Thousand dollars unless otherwise noted. Detail may not add to total because of rounding. * Indicates geographic change, but not applicable to this sector. For meaning of abbreviations and symbols, see introductory text. For explanation of terms, see Appendix A]

Location of construction work	Construction work done by establishments located in this state		Construction work done by establishments not located in this state		Construction work done by establishments not reporting		Relative standard error of estimate (percent) for column—			
	Value of construction work done in this state	Number	Value of construction work	Number	Value of construction work	Number	Value of construction work	A	C	E
	A	B	C	D	E	F	G			
235110, PLUMBING, HEATING, & AIR-CONDITIONING CONTRACTORS										
United States	87 330 176	53 447	62 953 269	10 249	6 230 189	31 307	18 146 724	1	1	2
Alabama	1 212 824	869	836 371	178	113 147	543	263 306	4	6	4
Alaska	263 105	126	163 229	63	72 338	⁶¹ 12	²⁷ 538	11	13	26
Arizona	1 691 579	855	1 166 558	120	150 061	490	374 960	5	6	3
Arkansas	583 320	532	377 423	126	54 891	428	151 006	5	10	24
California	7 608 021	4 263	5 694 694	73	51 799	2 512	1 861 528	2	2	1
Colorado	1 704 733	1 180	1 334 950	64	109 085	475	260 698	3	5	5
Connecticut	1 165 659	750	704 586	239	205 174	505	255 899	4	6	8
Delaware	381 045	193	296 042	164	59 836	95	25 167	6	7	25
District of Columbia	243 222	19	33 168	366	207 933	12	2 121	4	5	5
Florida	4 308 487	2 840	3 165 808	194	127 204	1 955	1 015 476	2	4	7
Georgia	2 633 033	1 643	1 845 151	201	207 653	926	580 228	3	5	3
Hawaii *	318 582	162	249 350	³⁰ 131	56 373	81	12 858	7	6	23
Idaho	558 983	407	428 009	131	65 029	138	65 945	11	16	6
Illinois	4 818 807	2 320	3 471 120	305	229 951	1 436	1 117 735	5	7	3
Indiana	2 266 658	1 248	1 779 631	302	96 246	726	390 781	2	4	6
Iowa	957 581	701	776 392	179	84 553	237	96 635	5	6	3
Kansas	926 158	626	597 101	287	135 331	439	193 726	6	10	11
Kentucky	1 186 637	676	773 268	308	161 796	502	251 573	4	7	4
Louisiana	970 793	720	633 430	130	46 512	480	290 851	6	9	12
Maine	301 183	407	204 735	61	38 186	145	58 262	6	10	21
Maryland	2 288 104	1 283	1 469 496	356	159 161	751	659 447	3	4	6
Massachusetts	2 160 185	1 345	1 619 695	300	129 240	827	411 251	5	7	9
Michigan	3 456 822	2 052	2 551 720	177	153 708	1 135	751 394	2	3	3
Minnesota	1 725 955	898	1 336 107	173	87 539	502	302 309	3	4	13
Mississippi	587 000	435	376 758	182	116 166	310	94 077	5	9	6
Missouri	1 819 071	1 114	1 273 857	243	164 898	690	380 316	2	4	8
Montana	259 858	276	199 069	24	21 588	137	39 200	10	15	7
Nebraska	574 561	464	460 077	86	37 930	196	76 554	4	8	2
Nevada	1 025 747	312	734 781	116	145 721	203	145 245	3	5	2
New Hampshire	311 450	400	240 140	133	28 255	⁶⁰ 43	43 055	10	13	5
New Jersey	2 720 387	2 106	1 878 570	375	158 850	1 214	682 967	5	6	9
New Mexico	418 234	343	261 729	⁶³ 34	480	257	122 025	13	19	6
New York	5 170 488	2 925	3 560 412	430	166 904	2 306	1 443 173	2	3	15
North Carolina	2 904 632	1 914	2 054 022	301	218 687	1 142	631 923	3	4	5
North Dakota	202 035	184	183 215	⁷¹ 10	0 011	⁶⁴ 8	8 810	9	10	14
Ohio	3 791 102	2 354	3 120 861	361	126 449	975	543 792	2	3	6
Oklahoma	767 332	649	519 260	115	67 872	507	180 200	8	11	8
Oregon	1 415 693	762	1 041 980	180	223 093	317	150 620	3	5	7
Pennsylvania	4 001 097	2 117	2 783 929	534	259 777	1 428	957 391	2	3	21
Rhode Island	233 483	330	209 086	134	16 423	S	7 973	7	7	27
South Carolina	1 344 962	825	833 779	389	239 178	526	272 005	4	7	11
South Dakota	184 150	178	104 590	95	24 215	133	⁵⁵ 345	7	14	4
Tennessee	1 847 442	910	1 252 077	192	135 446	701	459 919	4	7	6
Texas	6 039 938	3 187	4 459 631	209	260 830	2 329	1 319 477	4	5	6
Utah	910 020	666	752 904	⁶⁷ 34	992	169	122 125	13	17	10
Vermont	148 392	140	106 896	⁵⁹ 12	175	105	²⁹ 321	7	11	13
Virginia	2 439 006	1 605	1 642 339	561	478 883	785	317 784	3	4	3
Washington	1 978 389	1 097	1 315 610	298	300 469	649	362 310	7	5	39
West Virginia	378 218	378	242 699	271	92 397	118	⁴³ 123	6	12	4
Wisconsin	1 979 738	1 469	1 731 553	131	28 614	512	219 572	3	4	10
Wyoming	146 278	193	105 408	101	23 141	51	17 729	11	15	26

Appendix A.

Explanation of Terms

ALL EMPLOYEES

Comprise all full-time and part-time employees on the payroll of construction establishments, who worked or received pay for any part of the pay period including the 12th of March, May, August, and November. Included are all persons on paid sick leave, paid holidays, and paid vacations during these pay periods. Officers of corporations are included, but proprietors and partners of unincorporated firms are not. Number of employees is the sum of all employees during the pay periods including the 12th of March, May, August, and November, divided by 4.

BEGINNING-OF-YEAR GROSS BOOK VALUE OF DEPRECIABLE ASSETS (\$1,000)

Gross value of depreciable assets, usually original costs of the assets, at the beginning of the year. Depreciable assets are the fixed tangible property of the establishment for which depreciation accounts are ordinarily maintained.

BEGINNING-OF-YEAR INVENTORIES OF MATERIALS AND SUPPLIES (\$1,000)

The inventories of materials and supplies owned at the beginning of the reporting year by establishments with payroll. Includes all of the materials and supplies that are owned regardless of where they are held. Excludes materials that are owned by others but held by the reporting establishment. Builders who built on their own account for sale were requested to exclude work in progress and finished units not sold from inventories. Inventories of multi-establishment companies were instructed to be reported by the establishment that is responsible for the inventories, even if these inventories were held at a separate location.

CAPITAL EXPENDITURES, OTHER THAN LAND (\$1,000)

Capital expenditures are those that were or will be charged to the fixed assets accounts and for which depreciation accounts are ordinarily maintained. Includes the cost of capital improvements that were made during the year that increased the value of property or adapted it for another use. Capital expenditures for leasehold improvements made to property leased from others are also included. Land expenditures are not included as capital expenditures. If any building or equipment had been acquired under a capital leasing arrangement that meet

the criteria set down by the Financial Accounting Standards Board (FASB), respondents were instructed to report the original cost or market value as a fixed asset and as a capital expenditure, if acquired in the reporting year. If the lease qualified as an operating lease, respondents were instructed not to include the value of the building and equipment as a fixed asset or capital expenditure. If capital expenditures were not recorded directly at the establishment level but handled centrally at a company or division level, respondents were requested to report appropriate estimates for the individual establishments.

CONSTRUCTION WORK DONE BY ESTABLISHMENTS LOCATED IN THIS STATE: NUMBER

Includes the number of establishments physically located and doing construction work in the same state.

CONSTRUCTION WORK DONE BY ESTABLISHMENTS LOCATED IN THIS STATE: VALUE OF CONSTRUCTION WORK (\$1,000)

Includes the value of construction work done by establishments physically located and doing construction work in the same state.

CONSTRUCTION WORK DONE BY ESTABLISHMENTS NOT LOCATED IN THIS STATE: NUMBER

Includes the number of establishments not located in the state where the construction work is done. Establishment location is defined as a relatively permanent office or other place of business where the usual business activities related to construction are conducted with some exceptions. A relatively permanent office is one that has been established for the management of more than one project or job and is expected to be maintained on a continuing basis.

CONSTRUCTION WORK DONE BY ESTABLISHMENT NOT LOCATED IN THIS STATE: VALUE OF CONSTRUCTION WORK (\$1,000)

Includes the value of construction work done by establishments not located in the state where the construction work is done. Establishment location is defined as a relatively permanent office or other place of business where the usual business activities related to construction are conducted with some exceptions. A relatively permanent

office is one that has been established for the management of more than one project or job and is expected to be maintained on a continuing basis.

CONSTRUCTION WORK DONE BY ESTABLISHMENTS NOT REPORTING: NUMBER (\$1,000)

Includes the number of establishments that did not report the state location of construction work on their census forms and establishments that did not complete a construction census form. Data were estimated for establishments that did not complete a census form.

CONSTRUCTION WORK DONE BY ESTABLISHMENTS NOT REPORTING: VALUE OF CONSTRUCTION WORK (\$1,000)

Includes the value of construction work done by establishments that did not report the state location of construction work on their census forms and establishments that did not complete a construction census form. Data were estimated for establishments that did not complete a census form.

CONSTRUCTION WORKERS

Includes all payroll workers up through the working supervisor level directly engaged in construction operations, such as painters, carpenters, plumbers, and electricians. Included are journeymen, mechanics, apprentices, laborers, truck drivers and helpers, equipment operators, and on-site record keepers and security guards. Supervisory employees above the working foreman level are excluded from this category and are included in the other employees category.

COST OF ALL OTHER FUELS AND LUBRICANTS (\$1,000)

Costs for fuels and lubricants purchased during the year from other companies or received from other establishments of the company and not included as costs in any of these categories: natural gas; manufactured gas; gasoline; and diesel fuel.

COST OF CONSTRUCTION WORK SUBCONTRACTED OUT TO OTHERS (\$1,000)

All costs for construction work subcontracted out to other construction contractors during the reporting year. Excluded from this item are costs to the reporting establishment for its purchases of materials, components, and supplies provided to a subcontractor for use, such costs are reported under costs for materials, components, and supplies. Also excluded are costs for the rental of machinery or equipment.

COST OF ELECTRICITY (\$1,000)

Costs for electric energy purchased during the year from other companies or received from other establishments of the company.

COST OF GASOLINE AND DIESEL FUEL (\$1,000)

Costs for gasoline and diesel fuel purchased during the year from other companies or received from other establishments of the company.

COST OF OFF-HIGHWAY USE OF GASOLINE AND DIESEL FUEL (\$1,000)

Includes the costs for gasoline and diesel fuel purchased during the reporting year for off-highway use. Off-highway fuel use is the use of fuel for trade, business, or income producing activity. In most cases, off-highway fuel use does not include use in a highway vehicle registered or required to be registered for use on public highways.

COST OF ON-HIGHWAY USE OF GASOLINE AND DIESEL FUEL (\$1,000)

Costs for gasoline and diesel fuel purchased during the year to fuel highway vehicles. A highway vehicle is any self-propelled vehicle designed to carry a load over public highways, whether or not also designed to perform other functions. Examples of vehicles designed to carry a load over public highways are passenger automobiles, trucks, and truck tractors. If a vehicle can be used for a combination of on-highway and off-highway uses and has one fuel tank, the fuel use is not considered off-highway. An example of this is a concrete-mixer truck where the truck engine operates both the engine and the mixing unit by a power take-off and is fueled by a single tank. None of the fuel used in this vehicle is off-highway because of the on-highway use. If the vehicle has separate fuel tanks and engines, the fuel in a tank used for non-highway use may be considered off-highway use.

COSTS OF MATERIALS, COMPONENTS, AND SUPPLIES (\$1,000)

Includes the costs for materials, components, and supplies used by establishments in the construction or reconstruction of buildings, structures, or other facilities and costs for materials bought and resold to others. Also includes costs made for direct purchases of materials, components, and supplies even though the purchases were subsequently provided to subcontractors for their use. Supplies include expendable tools which are charged to current accounts. Freight and other direct charges representing only that amount paid after discounts, and the value of materials, components, and supplies obtained from other establishments of the respondent's company. Excluded from this item are the cost of fuels, lubricants, electric energy, industrial and other specialized machinery

and equipment such as printing presses; computer systems, that are not an integral part of a structure; and materials furnished to contractors by the owners of projects.

COST OF MATERIALS, COMPONENTS, SUPPLIES, AND FUELS (\$1,000)

Includes the costs for materials, components, supplies used by establishments in the construction or reconstruction of buildings, structures, or other facilities and costs for materials bought and resold to others. Also includes the costs for fuels that include gasoline, diesel fuel, and lubricants, and electric energy purchased during the year from other companies or received from other establishments of the company and costs for natural and manufactured gas, fuel oil, coal and coke products. Excluded from this item are industrial and other specialized machinery and equipment, such as printing presses; computer systems, that are not an integral part of a structure; materials furnished to contractors by the owners of projects.

COST OF NATURAL GAS AND MANUFACTURED GAS (\$1,000)

Costs for natural gas and manufactured gas purchased during the year from other companies or received from other establishments of the company.

COST OF REPAIRS TO BUILDING AND OTHER STRUCTURES (\$1,000)

Includes the cost of all repairs made to structures by outside companies or from other establishments of the same company. It includes only the cost of repairs necessary to maintain property. It excludes the cost of improvements that increase the value of property or the cost of adapting it for another use. Such costs are included in capital expenditures.

COST OF REPAIRS TO MACHINERY AND EQUIPMENT (\$1,000)

Includes the cost of all repairs made to machinery and equipment by outside companies or from other establishments of the same company. It includes only the cost of repairs necessary to maintain the machinery.

COST OF SELECTED POWER, FUELS, AND LUBRICANTS (\$1,000)

Included are costs for fuels including gasoline, diesel fuel, and lubricants, and electric energy purchased during the year from other companies or received from other establishments of the company. Also included are costs for natural gas, manufactured gas, fuel oil, coal and coke products.

DEPRECIATION CHARGES DURING YEAR (\$1,000)

The depreciation expenses of the establishment in the reporting year. These expenses are charged against depreciable assets which are the fixed tangible property of the establishment for which depreciation accounts are ordinarily maintained.

DOLLAR VALUE SIZE CLASS

Displays data for establishments with payroll that fall within each range of value of business done.

END-OF-YEAR GROSS BOOK VALUE OF DEPRECIABLE ASSETS (\$1,000)

The gross value of depreciable assets, plus any capital expenditures for new and use depreciable assets in the reporting year, minus the gross value of depreciable assets sold, retired, scrapped, destroyed, etc. in the reporting year.

END-OF-YEAR INVENTORIES OF MATERIALS AND SUPPLIES (\$1,000)

The inventories of materials and supplies owned at the end of the reporting year by establishments with payroll. Includes all of the materials and supplies that are owned regardless of where they are held. Excludes materials which are owned by others but held by the reporting establishment. Builders who build on their own account for sale were requested to exclude work in progress and finished units not sold from inventories. Inventories of multiestablishment companies were instructed to be reported by the establishment that is responsible for the inventories even if these inventories were held at a separate location.

FIRST-QUARTER PAYROLL (\$1,000)

Includes the gross earnings paid in the first quarter of the reporting year to all employees on the payroll of construction establishments. The first-quarter payroll period is January through March. Includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, prior to such deductions as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Includes salaries of officers of these establishments, if a corporation, but excludes payments to the proprietor or partners, if unincorporated.

FRINGE BENEFITS (\$1,000)

Includes expenditures made by the employer for legally required and voluntary fringe benefit programs for employees.

LEGALLY REQUIRED EXPENDITURES (\$1,000)

Includes expenditures made by the employer for Social Security contributions, unemployment compensation, workman's compensation, and state temporary disability payments.

NET VALUE OF CONSTRUCTION WORK (\$1,000)

The value of construction work less the cost of construction work subcontracted out to others.

NUMBER OF CONSTRUCTION WORKERS: QUARTERLY PAY PERIOD

Refers to the number of construction workers employed during a quarterly pay period. January to March includes the reported number of construction workers employed during the pay period including March 12. April to June includes the reported number of construction workers employed during the pay period including May 12. July to September includes the reported number of construction workers employed during the pay period including August 12. October to December includes the reported number of construction workers employed during the pay period including November 12.

NUMBER OF ESTABLISHMENTS

Includes all establishments that were in business at any time during the year. It covers all full-year and part-year operations. Construction establishments that were inactive or idle for the entire year were not included.

NUMBER OF ESTABLISHMENTS NOT REPORTING INVENTORIES

Includes all establishments with payroll that did not report a dollar amount for inventories of materials and supplies during the reporting year. It covers all full-year and part-year operations. Construction establishments that were inactive or idle for the entire year were not included.

NUMBER OF ESTABLISHMENTS WITH INVENTORIES

Includes all establishments with payroll that reported a dollar amount of inventory. Includes the number of establishments that were in business at any time during the year. It covers all full-year and part-year operations. Construction establishments that were inactive or idle for the entire year were not included.

NUMBER OF ESTABLISHMENTS WITH NO INVENTORIES

Includes all establishments with payroll that reported having no inventories of materials and supplies during the reporting year. Includes establishments that were in business at any time during the year. It covers all full-year and part-year operations. Construction establishments that were inactive or idle for the entire year were not included.

NUMBER OF OTHER EMPLOYEES: QUARTERLY PAY PERIOD

Refers to the number of other employees employed during a quarterly pay period. January to March includes the reported number of other workers employed during the pay period including March 12. April to June includes the reported number of other workers employed during the pay period including May 12. July to September includes the reported number of other workers employed during the pay period including August 12. October to December includes the reported number of other workers employed during the pay period including November 12.

NUMBER OF PROPRIETORS AND WORKING PARTNERS

These data were not collected on the census report forms. The data shown are based on crediting each sole proprietorship establishment with one active proprietor and each partnership establishment with two working partners.

OTHER BUSINESS RECEIPTS (\$1,000)

Includes business receipts not reported as value of construction work. This includes business receipts from retail and wholesale trade, rental of equipment without operator, manufacturing, transportation, legal services, insurance, finance, rental of property and other real estate operations, and other nonconstruction activities. Receipts for separately definable architectural and engineering work for others are also included here. Excluded are receipts from other business operations in foreign countries, and nonoperating income such as interest and dividends.

OTHER EMPLOYEES

Includes payroll employees in executive, purchasing, accounting, personnel, professional, technical activities, and routine office functions. Also included are supervisory employees above the working foreman level.

PAYROLL (\$1,000)

Includes the gross earnings paid in the reporting year to all employees on the payroll of construction establishments. It includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, prior to deductions such as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. The total includes salaries of officers of these establishments, if a corporation, but excludes payments to the proprietor or partners, if unincorporated.

PAYROLL: CONSTRUCTION WORKERS (\$1,000)

Includes the gross earnings paid in the reporting year to all construction workers on the payroll of construction establishments. It includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, vacation and sick leave pay, prior to deductions such as employees' Social security contributions, withholding taxes, group insurance, union dues, and savings bonds.

PAYROLL: OTHER EMPLOYEES (\$1,000)

Includes the gross earnings paid in the reporting year to all other employees on the payroll of construction establishments. It includes all forms of compensation such as salaries, wages, commissions, dismissal pay, bonuses, vacations and sick leave pay, prior to deductions such as employees' Social Security contributions, withholding taxes, group insurance, union dues, and savings bonds. Payroll of other employees excludes salaries of the proprietor or partners, if unincorporated.

PRIMARY AND OTHER KINDS OF BUSINESS ACTIVITIES

Displays dollar value of business done by primary construction business activity. Primary construction activity is construction activity that generates fifty-one percent or more of an establishment's dollar value of business done. Also displayed are other kinds of business activities. Other kinds of business activities include business receipts not reported as value of construction work. This item includes business receipts from retail and wholesale trade, rental of equipment without an operator, manufacturing, transportation, legal services, insurance, finance, rental of property and other real estate operations, and other nonconstruction activities. Receipts for separately definable architectural and engineering work for others are also included in other kinds of business activities.

PURCHASED COMMUNICATION SERVICES (\$1,000)

Includes all costs for communication services purchased from other companies or from other establishments of the company.

RENTAL COSTS FOR BUILDINGS (\$1,000)

Includes all costs for renting or leasing space and buildings. It excludes costs under agreements that are in effect conditional sales contracts such as capital leases. Such costs are included in capital expenditures.

RENTAL COSTS FOR MACHINERY AND EQUIPMENT (\$1,000)

Includes all costs for renting or leasing construction machinery and equipment, transportation equipment, production equipment, office equipment, furniture and fixtures, and scaffolding. It excludes costs for the rental of

land. It also excludes costs under agreements that in effect are conditional sales contracts such as capital leases. Such costs are included in capital expenditures.

RENTAL COSTS FOR MACHINERY, EQUIPMENT, AND BUILDINGS (\$1,000)

Includes all costs for renting or leasing construction machinery and equipment, transportation equipment, production equipment, office equipment, furniture and fixtures, scaffolding, office space, and buildings. It excludes costs for the rental of land. It also excludes costs under agreements that in effect are conditional sales contracts such as capital leases. Such costs are included in capital expenditures.

RETIREMENTS AND DISPOSITION OF DEPRECIABLE ASSETS (\$1,000)

Includes the gross value of depreciable assets sold, retired, scrapped, destroyed, abandoned, etc., during the year. The values shown are the acquisition costs of the retired assets. This item also includes the value of assets (at acquisition cost rather than current market value) transferred to other establishments of the same company.

SELECTED COSTS (\$1,000)

Includes the costs for materials, components, and supplies; costs for construction work subcontracted out to others; and costs for selected power, fuels, and lubricants. Capital expenditures and rental costs for machinery, equipment, and structures are shown elsewhere.

SELECTED PURCHASED SERVICES (\$1,000)

Includes all costs for communication and repair to buildings and other structure services purchased from other companies or from other establishments of the company. It also includes the cost of all repairs made to structures and equipment by outside companies or from other establishments of the same company. It includes only the cost of repairs necessary to maintain property and equipment. It excludes the cost of improvements that increase the value of property or the cost of adapting it for another use. Such costs are included in capital expenditures.

SPECIALIZATION PERCENT

Displays data for establishments with payroll that fall within each percent range of specialization.

TYPE OF CONSTRUCTION

Provides data by the types of buildings, structures, or other facilities being constructed or worked on by construction establishments in the reporting year. Respondents were instructed that each building, structure, or other facility should be classified in terms of its function.

For example, a restaurant building was to be classified in the restaurant category whether it was designed as a commercial restaurant building or an auxiliary unit of an educational institution. If respondents worked on more than one type of building or structure in a multibuilding complex, they were instructed to report separately for each building or type of structure. If they worked on a building that had more than one purpose; i.e., office and residential, or commercial, they were to classify the building by major purpose. In addition, all respondents were requested to report the percentage of the value of construction work done for new construction, additions, alterations, or reconstruction, and maintenance and repair work for each of these types.

Building Construction

- **Single-family houses, detached.** Includes all fully detached residential buildings constructed for one family use.
- **Single-family houses, attached, including townhouses and townhouse-type condominiums.** Includes all residential buildings with two or more living quarters side by side, completely independent of one another, and separated by an unbroken party or lot line wall from ground to roof.
- **Apartment buildings, apartment type condominiums, and cooperatives.** Includes apartment rentals, high-rise, low-rise, or any structures containing two or more housing units other than attached single-family houses.
- **All other residential buildings.** Includes dormitories, fraternity and sorority houses, and other nonhousekeeping residential structures.
- **Manufacturing and light industrial buildings.** Includes all manufacturing and light industrial buildings and plants that are used to house production and assembly activities. Note that industrial parks should be classified under its primary usage such as warehouses, office space, commercial or industrial type buildings. Heavy industrial facilities such as blast furnaces, petroleum refineries, and chemical complexes are not included in this category but are reported under nonbuilding construction.
- **Manufacturing and light industrial warehouses.** Includes all warehouses which are intended for industrial activities.
- **Hotels and motels.** Includes hotels, motels, bed-and-breakfast inns, and tourist cabins intended for transient accommodations. Also included are hotel and motel conference centers.
- **Office buildings.** Includes all buildings that are used primarily for office space or for government administrative offices. Also included are banks or financial buildings that are three stories or more. Medical office buildings are reported under hospitals and institutional buildings.
- **All other commercial buildings, nec (not elsewhere classified) such as stores, restaurants, and automobile service stations.** Includes all buildings that are intended for use primarily in the retail and service trades. For example, shopping centers, department stores, drug stores, restaurants, public garages, auto service stations, and one or two story bank or financial institutions.
- **Commercial warehouses.** Includes distribution buildings and mini-storage units intended for commercial use. Also included are storage warehouses.
- **Religious buildings.** Includes all buildings that are intended for religious services or functions such as churches, synagogues, convents, monasteries, and seminaries.
- **Educational buildings.** Includes all buildings that are used directly in administrative and instructional activities such as colleges, universities, elementary and secondary schools, correspondence, commercial, and trade schools. Libraries, museums, and art galleries, as well as laboratories that are not a part of a manufacturing or commercial establishment, are also included.
- **Health care and institutional buildings.** Includes hospitals, medical office buildings and all other buildings that are intended to provide health and institutional care such as clinics, infirmaries, sanitariums, nursing homes, homes for the aged, and orphanages.
- **Public safety buildings.** Included detention centers, prisons, fire stations, and rescue squad buildings.
- **Farm buildings, nonresidential.** Includes nonresidential farm buildings such as barns, poultry houses, implement sheds, and farm silos.
- **Amusement, social, and recreational buildings.** Includes buildings that are used primarily for entertainment, social, and recreational activities such as sports arenas, convention centers, theaters, music halls, golf and country club buildings, skating rinks, fitness centers, bowling alleys, and indoor swimming pools.
- **All other nonresidential buildings.** Includes nonresidential buildings that are not classified elsewhere such as fire stations, post offices, bus and air passenger terminals and hangars, and prisons.

Nonbuilding Construction

- **Highways, streets, and related work such as installation of guardrails, highway signs, and lighting.** Includes streets, roads, alleys, sidewalks,

curbs and gutters, culverts, right-of-way drainage, erosion control, and lighting. Also includes earthwork protective structures when used in connection with road improvements.

- **Airport runways and related work.** Includes runways, taxiways, aprons, and related work.
- **Private driveways and parking areas.** Includes all nonstructural parking areas and private driveways of all surface types.
- **Bridges and elevated highways.** Includes viaducts and overpasses, roads, highways, railroads, and causeways built on structural supports.
- **Tunnels.** Includes highway, pedestrian, railroad, and water distribution tunnels.
- **Sewers, sewer lines, septic tanks, and related facilities.** Includes sanitary and storm sewers, pumping stations, septic systems, and related facilities.
- **Water mains and related facilities.** Includes water supply systems, pumping stations, and related facilities.
- **Pipeline construction other than sewer or water-lines.** Includes pipelines for the transmission of gas, petroleum products, and liquefied gases.
- **Power and communication transmission lines, towers, and related facilities.** Includes electric power lines, telephone and telegraph lines, fiber optic cables, cable television lines, television and radio towers, and electric light and power facilities.
- **Power plants and cogeneration plants, except hydroelectric.** Includes electric and steam generating plants, cogenerating plants, and nuclear plants.
- **Power plant, hydroelectric.** Includes all types of hydroelectric power generating plants.
- **Blast furnaces, petroleum refineries, chemical complexes, etc.** Includes coke ovens and mining appurtenances such as tipples and washeries.
- **Sewage treatment plants.** Includes sewage treatment and waste disposal plants.
- **Water treatment plants.** Includes water filtration and water softening plants.
- **Urban mass transit.** Includes subways, street cars, and light rail systems.
- **Railroad construction.** Includes the construction of railroad beds, tracks, freight yards, and signal towers for systems other than urban mass transit.
- **Conservation and development construction.** Includes land reclamation, irrigation projects, drainage canals, levees, jetties, breakwaters, and flood control projects.
- **Dam and reservoir construction.** Includes hydroelectric, water supply, and flood control dams and reservoirs.
- **Dry/Solid waste disposal.** Includes all dry/solid waste disposal sites where non hazardous waste is buried.
- **Harbor and port facilities.** Includes docks, piers, and wharves.
- **Marine construction.** Includes dredging, underwater rock removal, breakwaters, navigational channels, and locks.
- **Outdoor swimming pools.** Includes wading pools and reflecting pools.
- **Water storage facilities.** Includes aqueducts, water towers, and water tanks.
- **Tank storage facilities other than water.** Includes gasoline and oil storage tanks.
- **Fencing.** Includes all types of fencing.
- **Recreational facilities.** Includes athletic fields, golf courses, outdoor tennis courts, trails, and camps.
- **Billboards.** Includes all type of billboards.
- **Heavy military construction.** Includes all military non-building such as missile sites and testing facilities, launch sites and underground command centers.
- **Ships.** Includes special trade contractors working on ships and boats such as painters, carpenters, joiners, electricians, etc.
- **Oilfields.** The majority of construction work occurring in oil fields is classified in Sector 21, Mining. For example, pipeline construction on oil and gas leases are classified in mining only up to the point where the distribution company takes over. At that point, pipeline construction activity is classified in Sector 23, Construction. Some secondary mining construction activities are classified in the construction sector. Examples of this include: road construction; land clearing contracting; land drainage contracting; and land leveling contracting.
- **Other nonbuilding construction, nec.** Includes all types of nonbuilding construction not elsewhere classified.

VALUE ADDED (\$1,000)

Value added is equal to value of business done, less costs for construction work subcontracted out to others and costs for materials, components, supplies, and fuels.

VALUE OF BUSINESS DONE (\$1,000)

Value of business done is the sum of value of construction work and other business receipts.

VALUE OF CONSTRUCTION WORK (\$1,000)

Includes the value of construction work done by general contractors, heavy construction contractors, and special trades contractors. Included are new construction, additions, alterations or reconstruction, and maintenance and repair construction work. Also includes the value of any construction work done by the reporting establishments for themselves. Speculative builders were instructed to include the value of buildings and other structures built or being built for sale in the reporting year, but not sold. They were to include the costs of such construction plus normal profit. Also included is the cost of construction work done on buildings for rent or lease. Establishments engaged in the sale and installation of construction components such as plumbing, heating, and central air-conditioning supplies and equipment; lumber and building materials; paint, glass, and wallpaper; and electrical and wiring supplies, elevators or escalators were instructed to include both the value for the installation and the receipts covering the price of the items installed. Excluded are the cost of industrial and other special machinery and equipment that are not an integral part of a structure, and value of work done from business operations in foreign countries.

VALUE OF CONSTRUCTION WORK: ADDITIONS, ALTERATIONS, OR RECONSTRUCTION (\$1,000)

Includes construction work which adds to the value or useful life of an existing building or structure or that adapts a building or structure to a new or different use. Included are major replacements of building systems, such as the installation of a new roof or heating system and the resurfacing of streets or highways. This contrasts to the repair of a hole in a roof or the routine patching of highways and streets that would be classified as maintenance and repair.

VALUE OF CONSTRUCTION WORK DONE IN THIS STATE (\$1,000)

Includes the value of construction work done in a state by general contractors, heavy construction contractors, and special trades contractors.

VALUE OF CONSTRUCTION WORK FOR ESTABLISHMENTS WITH INVENTORIES (\$1,000)

The value of construction work for establishments with payroll that reported a dollar amount of inventory in the reporting year.

VALUE OF CONSTRUCTION WORK FOR ESTABLISHMENTS WITH NO INVENTORIES (\$1,000)

The value of construction work for establishments with payroll that reported having no dollar amount of inventory in the reporting year.

VALUE OF CONSTRUCTION WORK: FOR SPECIALIZED TYPE (\$1,000)

Includes value of construction work for one of two specialized categories: types of construction; and kind-of-business activity. A construction establishment specializes in a type of construction when fifty-one percent or more of the construction work done is in one construction industry. The construction establishment reports each type of construction it performs as a percent of value of construction work. Types of construction refers to the types of buildings, structures, or facilities constructed or worked on by construction establishments in the reporting year. Specialization in types of construction displays data for establishments with payroll that falls within each percent range of specialization. A construction establishment specializes in a kind-of-business activity when fifty-one percent or more of the construction work done by the establishment is performed in one type of business activity. The construction establishment reports each kind-of-business activity engaged in as a percent of value of construction work. Kind-of-business activity refers to the kinds of business activities construction establishments perform throughout the reporting year. The following are examples of kind-of-business activity: highway and street construction; electrical contracting; carpentry contracting; and concrete contracting. Specialization in kind-of-business activity displays data for establishments with payroll that fall within each percent range of specialization.

VALUE OF CONSTRUCTION WORK: MAINTENANCE AND REPAIR (\$1,000)

Includes incidental construction work that keeps a property in ordinary working condition. Excluded are trash and snow removal, lawn maintenance and landscaping, cleaning and janitorial services.

VALUE OF CONSTRUCTION WORK: NEW CONSTRUCTION (\$1,000)

Includes the complete, original building of structures and essential service facilities and the initial installation of integral equipment such as elevators and plumbing, heating, and air-conditioning supplies and equipment.

VALUE OF CONSTRUCTION WORK ON FEDERALLY OWNED PROJECTS (\$1,000)

The value of construction work for projects owned by the Federal government.

VALUE OF CONSTRUCTION WORK ON GOVERNMENT OWNED PROJECTS (\$1,000)

The value of construction work for the sum total of all projects owned by Federal, state, and local governments.

VALUE OF CONSTRUCTION WORK ON PRIVATELY OWNED PROJECTS (\$1,000)

The value of construction work for construction projects other than government owned projects.

VALUE OF CONSTRUCTION WORK ON STATE AND LOCALLY OWNED PROJECTS (\$1,000)

The value of construction work for the sum total of all projects owned by state and local governments.

VALUE OF CONSTRUCTION WORK SUBCONTRACTED IN FROM OTHERS (\$1,000)

Includes the value of construction work done by reporting establishments as subcontractors to other contractors or builders. Establishments were asked to report the

approximate percent of total value of construction work accounted for by such work, and the percentages reported were applied to the reported value of construction work to develop a value for this item.

VALUE OF CONSTRUCTION WORK FOR ESTABLISHMENTS NOT REPORTING INVENTORIES (\$1,000)

The value of construction work for establishments that did not report a dollar amount for inventories of materials and supplies, and the value of construction work for establishments that did not complete a census form.

VOLUNTARY EXPENDITURES (\$1,000)

Includes expenditures made by the employer for life insurance premiums, pension plans, insurance premiums on hospital and medical plans, welfare plans, and union negotiated benefits.

Appendix B.

NAICS Codes, Titles, and Descriptions

23 CONSTRUCTION

The Construction sector comprises establishments primarily engaged in the construction of buildings and other structures, heavy construction (except buildings), additions, alterations, reconstruction, installation, and maintenance and repairs. Establishments engaged in demolition or wrecking of buildings and other structures, clearing of building sites, and sale of materials from demolished structures are also included. This sector also includes those establishments engaged in blasting, test drilling, landfill, leveling, earthmoving, excavating, land drainage, and other land preparation. The industries within this sector have been defined on the basis of their unique production processes. As with all industries, the production processes are distinguished by their use of specialized human resources and specialized physical capital. Construction activities are generally administered or managed at a relatively fixed place of business, but the actual construction work is performed at one or more different project sites.

This sector is divided into three subsectors of construction activities: (1) building construction and land subdivision and land development; (2) heavy construction (except buildings), such as highways, power plants, and pipelines; and (3) construction activity by special trade contractors.

Establishments classified in Subsector 233, Building, Developing, and General Contracting and Subsector 234, Heavy Construction, usually assume responsibility for an entire construction project, and may subcontract some or all of the actual construction work. Operative builders who build on their own account for sale, and land subdividers and land developers, who engage in subdividing real property into lots for sale, are included in Subsector 233, Building, Developing, and General Contracting. (Special trade contractors are included in Subsector 234, Heavy Construction, if they are engaged in activities primarily relating to heavy construction, such as grading for highways.) Establishments included in these subsectors operate as general contractors, design-builders, engineer-constructors, joint-venture contractors, and turnkey construction contractors. Establishments identified as construction management firms are also included.

Establishments classified in Subsector 235, Special Trade Contractors, are primarily engaged in specialized construction activities, such as plumbing, painting, and electrical work, and work for builders and general contractors under subcontract or directly for project owners. Establishments engaged in demolition or wrecking of

buildings and other structures, dismantling of machinery, excavating, shoring and underpinning, anchored earth retention activities, foundation drilling, and grading for buildings are also included in this subsector.

“Force account” construction is construction work performed by an establishment primarily engaged in some business other than construction, for its own account and use, and by employees of the establishment. This activity is not included in this industry sector unless the construction work performed is the primary activity of a separate establishment of the enterprise.

The installation of prefabricated building equipment and materials, such as elevators and revolving doors, is classified in the Construction sector. Installation work incidental to sales by employees of a manufacturing or retail establishment is classified as an activity of those establishments.

233 Building, Developing, and General Contracting

Industries in the Building, Developing, and General Contracting subsector comprises establishments primarily responsible for the entire construction (i.e., new work, additions, alterations, and repair) of building projects. Builders, developers, and general contractors, as well as land subdividers and land developers are included in this subsector. Establishments identified as construction management firms for building projects are also included. The construction work may be for others and performed by custom builders, general contractors, design builders, engineer-constructors, joint-venture contractors, and turnkey contractors, or may be on their own account for sale and performed by speculative or operative builders.

2331 Land Subdivision and Land Development

This NAICS Industry Group includes establishments classified in NAICS Industry 23311, Land Subdivision and Land Development.

23311 Land Subdivision and Land Development

This industry comprises establishments primarily engaged in subdividing real property into lots and/or developing building lots for sale.

233110 Land Subdivision and Land Development

This U.S. industry comprises establishments primarily engaged in subdividing real property into lots and/or developing building lots for sale.

The data published with NAICS code 233110 include the following SIC industries:

6552 Land subdividers and developers, except cemeteries

2332 Residential Building Construction

This NAICS Industry Group includes establishments classified in the following NAICS Industries: 23321, Single-Family Housing Construction; and 23322, Multifamily Housing Construction.

23321 Single-Family Housing Construction

This industry comprises establishments primarily responsible for the entire construction (i.e., new work, additions, alterations, and repairs) of single family residential housing units (e.g., single family detached houses, town houses, or row houses where each housing unit is separated by a ground-to-roof wall and where no housing units are constructed above or below). This industry includes establishments responsible for additions and alterations to mobile homes and on-site assembly of modular and prefabricated houses. Establishments identified as single family construction management firms are also included in this industry. Establishments in this industry may perform work for others or on their own account for sale as speculative or operative builders. Kinds of establishments include single family housing custom builders, general contractors, design builders, engineer-constructors, joint-venture contractors, and turnkey contractors.

233210 Single-Family Housing Construction

This U.S. industry comprises establishments primarily responsible for the entire construction (i.e., new work, additions, alterations, and repairs) of single family residential housing units (e.g., single family detached houses, town houses, or row houses where each housing unit is separated by a ground-to-roof wall and where no housing units are constructed above or below). This industry includes establishments responsible for additions and alterations to mobile homes and on-site assembly of modular and prefabricated houses. Establishments identified as single family construction management firms are also included in this industry. Establishments in this industry may perform work for others or on their own account for sale as speculative or operative builders. Kinds of establishments include single family housing custom builders, general contractors, design builders, engineer-constructors, joint-venture contractors, and turnkey contractors.

The data published with NAICS code 233210 include the following SIC industries:

1521 General contractors—single-family houses
1531 Operative builders (pt)
8741 Management services (pt)

23322 Multifamily Housing Construction

This industry comprises establishments primarily responsible for the entire construction (i.e., new work, additions, alterations, and repairs) of multifamily residential housing units (e.g., highrise, garden, and town house apartments where each unit is not separated by a ground-to-roof wall). The units may be constructed for sale as condominiums or cooperatives, or for rental as apartments. Establishments identified as multifamily construction management firms are also included in this industry. Establishments in this industry may perform work for others or on their own account for sale as speculative or operative builders. Kinds of establishments include multifamily housing general contractors, design builders, engineer-constructors, joint-venture contractors, and turnkey contractors.

233220 Multifamily Housing Construction

This U.S. industry comprises establishments primarily responsible for the entire construction (i.e., new work, additions, alterations, and repairs) of multifamily residential housing units (e.g., highrise, garden, and town house apartments where each unit is not separated by a ground-to-roof wall). The units may be constructed for sale as condominiums or cooperatives, or for rental as apartments. Establishments identified as multifamily construction management firms are also included in this industry. Establishments in this industry may perform work for others or on their own account for sale as speculative or operative builders. Kinds of establishments include multifamily housing general contractors, design builders, engineer-constructors, joint-venture contractors, and turnkey contractors.

The data published with NAICS code 233220 include the following SIC industries:

1522 General contractors—residential buildings, other than single-family (pt)
1531 Operative builders (pt)
8741 Management services (pt)

2333 Nonresidential Building Construction

This NAICS Industry Group includes establishments classified in the following NAICS Industries: 23331, Manufacturing and Industrial Building Construction; and 23332, Commercial and Institutional Building Construction.

23331 Manufacturing and Industrial Building Construction

This industry comprises establishments primarily responsible for the entire construction (i.e., new work, additions, alterations, and repairs) of manufacturing and industrial buildings (e.g., plants, mills, factories). Establishments identified as manufacturing and industrial building construction management firms are also included in

this industry. Kinds of establishments include manufacturing and industrial building general contractors, design builders, engineer-constructors, joint-venture contractors, and turnkey contractors.

233310 Manufacturing and Industrial Building Construction

This U.S. industry comprises establishments primarily responsible for the entire construction (i.e., new work, additions, alterations, and repairs) of manufacturing and industrial buildings (e.g., plants, mills, factories). Establishments identified as manufacturing and industrial building construction management firms are also included in this industry. Kinds of establishments include manufacturing and industrial building general contractors, design builders, engineer-constructors, joint-venture contractors, and turnkey contractors.

The data published with NAICS code 233310 include the following SIC industries:

- 1531 Operative builders (pt)
- 1541 General contractors—industrial buildings and warehouses (pt)
- 8741 Management services (pt)

23332 Commercial and Institutional Building Construction

This industry comprises establishments primarily responsible for the entire construction (i.e., new work, additions, alterations, and repairs) of commercial and institutional buildings (e.g., stores, schools, hospitals office buildings, public warehouses). Establishments identified as commercial and institutional building construction management firms are also included in this industry. Kinds of establishments include commercial and institutional building general contractors, design builders, engineer-constructors, joint-venture contractors, and turnkey contractors.

233320 Commercial and Institutional Building Construction

This U.S. industry comprises establishments primarily responsible for the entire construction (i.e., new work, additions, alterations, and repairs) of commercial and institutional buildings (e.g., stores, schools, hospitals office buildings, public warehouses). Establishments identified as commercial and institutional building construction management firms are also included in this industry. Kinds of establishments include commercial and institutional building general contractors, design builders, engineer-constructors, joint-venture contractors, and turnkey contractors.

The data published with NAICS code 233320 include the following SIC industries:

- 1522 General contractors—residential buildings, other than single-family (pt)
- 1531 Operative builders (pt)
- 1541 General contractors—industrial buildings and warehouses (pt)
- 1542 General contractors—nonresidential buildings, except industrial buildings and warehouses
- 8741 Management services (pt)

234 Heavy Construction

Industries in the Heavy Construction subsector group establishments that engage in the construction of heavy engineering and industrial projects (except buildings), for example, highways, power plants, and pipelines. The construction work performed may include new work, reconstruction, or repairs. Establishments identified as heavy construction management firms are also included. Establishments in this subsector usually assume responsibility for entire nonbuilding projects but may subcontract some or all of the actual construction work. Special trade contractors are included in this group if they are engaged in activities primarily related to heavy construction, for example, grading for highways. Kinds of establishments include heavy construction general contractors, design builders, engineer-constructors, and joint-venture contractors.

2341 Highway, Street, Bridge, and Tunnel Construction

This NAICS Industry Group includes establishments classified in the following NAICS industries: 23411, Highway and Street Construction; and 23412, Bridge and Tunnel Construction.

23411 Highway and Street Construction

This industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, or repairs) of highways (except elevated), streets, roads, or airport runways; (2) establishments identified as highway and street construction management firms; and (3) establishments identified as special trade contractors engaged in performing subcontract work primarily related to highway and street construction (e.g., grading for highways, installing guardrails, public sidewalk construction). Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include highway and street general contractors, design builders, engineer-constructors, and joint-venture contractors.

234110 Highway and Street Construction

This U.S. industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, or repairs) of highways (except elevated),

streets, roads, or airport runways; (2) establishments identified as highway and street construction management firms; and (3) establishments identified as special trade contractors engaged in performing subcontract work primarily related to highway and street construction (e.g., grading for highways, installing guardrails, public sidewalk construction). Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include highway and street general contractors, design builders, engineer-constructors, and joint-venture contractors.

The data published with NAICS code 234110 include the following SIC industries:

- 1611 Highway and street construction contractors, except elevated highways
- 8741 Management services (pt)

23412 Bridge and Tunnel Construction

This industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, or repairs) of bridges, viaducts, elevated highways, and tunnels; (2) establishments identified as bridge and tunnel construction management firms; and (3) establishments identified as special trade contractors primarily engaged in performing subcontract work related to bridge and tunnel construction. Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include bridge and tunnel general contractors, design builders, engineer-constructors, and joint-venture contractors.

234120 Bridge and Tunnel Construction

This U.S. industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, or repairs) of bridges, viaducts, elevated highways, and tunnels; (2) establishments identified as bridge and tunnel construction management firms; and (3) establishments identified as special trade contractors primarily engaged in performing subcontract work related to bridge and tunnel construction. Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include bridge and tunnel general contractors, design builders, engineer-constructors, and joint-venture contractors.

The data published with NAICS code 234120 include the following SIC industries:

- 1622 Bridge, tunnel, and elevated highway construction contractors
- 8741 Management services (pt)

2349 Other Heavy Construction

This industry group comprises establishments primarily engaged in heavy nonbuilding construction (except highway, street, bridge, and tunnel construction).

23491 Water, Sewer, and Pipeline Construction

This industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, rehabilitation, or repairs) of water mains, sewers, drains, gas mains, natural gas pumping stations, and gas and oil pipelines; (2) establishments identified as water, sewer, and pipeline construction management firms; and (3) establishments identified as special trade contractors engaged in activities primarily related to water, sewer, and pipeline construction. Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include water, sewer, and pipeline general contractors, design builders, engineer-constructors, and joint-venture contractors.

234910 Water, Sewer, and Pipeline Construction

This U.S. industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, rehabilitation, or repairs) of water mains, sewers, drains, gas mains, natural gas pumping stations, and gas and oil pipelines; (2) establishments identified as water, sewer, and pipeline construction management firms; and (3) establishments identified as special trade contractors engaged in activities primarily related to water, sewer, and pipeline construction. Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include water, sewer, and pipeline general contractors, design builders, engineer-constructors, and joint-venture contractors.

The data published with NAICS code 234910 include the following SIC industries:

- 1623 Water, sewer, pipeline, and communications and power line construction (pt)
- 8741 Management services (pt)

23492 Power and Communication Transmission Line Construction

This industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, or repairs) of electric power and communication transmission lines and towers, radio and television transmitting/receiving towers, cable laying, and cable television lines; (2) establishments identified as power and communication transmission line construction management firms; and (3) establishments identified as special trade contractors engaged in activities primarily related to power and communication transmission line construction. Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include power and communication transmission line general contractors, design builders, engineer-constructors, and joint-venture contractors.

234920 Power and Communication Transmission Line Construction

This U.S. industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, or repairs) of electric power and communication transmission lines and towers, radio and television transmitting/receiving towers, cable laying, and cable television lines; (2) establishments identified as power and communication transmission line construction management firms; and (3) establishments identified as special trade contractors engaged in activities primarily related to power and communication transmission line construction. Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include power and communication transmission line general contractors, design builders, engineer-constructors, and joint-venture contractors.

The data published with NAICS code 234920 include the following SIC industries:

- 1623 Water, sewer, pipeline, and communications and power line construction (pt)
- 8741 Management services (pt)

23493 Industrial Nonbuilding Structure Construction

This industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, or repairs) of heavy industrial nonbuilding structures, such as chemical complexes or facilities, cement plants, petroleum refineries, industrial incinerators, ovens, kilns, power plants (except hydroelectric plants), and nuclear reactor containment structures; (2) establishments identified as industrial nonbuilding construction management firms; and (3) establishments identified as special trade contractors engaged in activities primarily related to industrial nonbuilding construction. Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include industrial nonbuilding general contractors, design builders, engineer-constructors, and joint-venture contractors.

234930 Industrial Nonbuilding Structure Construction

This U.S. industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, or repairs) of heavy industrial nonbuilding structures, such as chemical complexes or facilities, cement plants, petroleum refineries, industrial incinerators, ovens, kilns, power plants (except hydroelectric plants), and nuclear reactor containment structures; (2) establishments identified as industrial nonbuilding construction management firms; and (3) establishments identified as special trade contractors engaged in activities primarily related to industrial nonbuilding construction.

Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include industrial nonbuilding general contractors, design builders, engineer-constructors, and joint-venture contractors.

The data published with NAICS code 234930 include the following SIC industries:

- 1629 Heavy construction, n.e.c. (pt)
- 8741 Management services (pt)

23499 All Other Heavy Construction

This industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, or repairs) of heavy nonbuilding construction projects (except highway, street, bridge, tunnel, water lines, sewer lines, pipelines, power and communication transmission lines, and industrial nonbuilding structures); (2) establishments identified as all other heavy construction management firms; (3) establishments primarily engaged in construction equipment rental with an operator; and (4) establishments identified as special trade contractors engaged in activities related primarily to all other heavy construction. Typical projects constructed by establishments in this industry include athletic fields, dams, dikes, docks, drainage projects, golf courses, harbors, parks, reservoirs, canals, sewage treatment plants, water treatment plants, hydroelectric plants, subways, and other mass transit projects. Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include heavy construction general contractors, design builders, engineer-constructors, and joint-venture contractors.

234990 All Other Heavy Construction

This U.S. industry comprises: (1) establishments primarily responsible for the entire construction (i.e., new work, reconstruction, or repairs) of heavy nonbuilding construction projects (except highway, street, bridge, tunnel, water lines, sewer lines, pipelines, power and communication transmission lines, and industrial nonbuilding structures); (2) establishments identified as all other heavy construction management firms; (3) establishments primarily engaged in construction equipment rental with an operator; and (4) establishments identified as special trade contractors engaged in activities related primarily to all other heavy construction. Typical projects constructed by establishments in this industry include athletic fields, dams, dikes, docks, drainage projects, golf courses, harbors, parks, reservoirs, canals, sewage treatment plants, water treatment plants, hydroelectric plants, subways, and other mass transit projects. Establishments in this industry may subcontract some or all of the actual construction work. Kinds of establishments include heavy construction general contractors, design builders, engineer-constructors, and joint-venture contractors.

The data published with NAICS code 234990 include the following SIC industries:

- 1629 Heavy construction, n.e.c. (pt)
- 7353 Heavy construction equipment, rental and leasing (pt)
- 8741 Management services (pt)

235 Special Trade Contractors

Industries in the Special Trade Contractors subsector engage in specialized construction activities, such as plumbing, painting, and electrical work. Those establishments that engage in activities primarily related to heavy construction, such as grading for highways, are classified in Subsector 234, Heavy Construction. The activities of this subsector may be subcontracted from builders or general contractors or it may be performed directly for project owners. The construction work performed may include new work, additions, alterations, or maintenance and repairs. Special trade contractors usually perform most of their work at the job site, although they may have shops where they perform prefabrication and other work.

2351 Plumbing, Heating, and Air-Conditioning Contractors

This NAICS Industry Group includes establishments classified in NAICS Industry 23511, Plumbing, Heating, and Air-Conditioning Contractors.

23511 Plumbing, Heating, and Air-Conditioning Contractors

This industry comprises establishments primarily engaged in one or more of the following: (1) installing plumbing, heating, and air-conditioning equipment; (2) servicing plumbing, heating, and air-conditioning equipment; and (3) the combined activity of selling and installing plumbing, heating, and air-conditioning equipment. The plumbing, heating, and air-conditioning work performed includes new work, additions, alterations, and maintenance and repairs. The activities performed by these establishments range from duct fabrication and installation at the site to installation of refrigeration equipment, installation of sprinkler systems, and installation of environmental controls.

235110 Plumbing, Heating, and Air-Conditioning Contractors

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) installing plumbing, heating, and air-conditioning equipment; (2) servicing plumbing, heating, and air-conditioning equipment; and (3) the combined activity of selling and installing plumbing, heating, and air-conditioning equipment. The plumbing, heating, and air-conditioning work performed includes new work, additions, alterations, and

maintenance and repairs. The activities performed by these establishments range from duct fabrication and installation at the site to installation of refrigeration equipment, installation of sprinkler systems, and installation of environmental controls.

The data published with NAICS code 235110 include the following SIC industry:

- 1711 Plumbing, heating, and air-conditioning special trade contractors

This definition comes from the 1997 NAICS manual. However, for this industry, the 1997 Economic Census--Construction did not fully implement the conversion to NAICS. Data for NAICS industry 235110 do not include establishments whose primary activity is boiler cleaning. The NAICS definitions will be fully implemented with the 2002 Economic Census.

2352 Painting and Wall Covering Contractors

This NAICS Industry Group includes establishments classified in NAICS Industry 23521, Painting and Wall Covering Contractors.

23521 Painting and Wall Covering Contractors

This industry comprises establishments primarily engaged in interior or exterior painting and interior wall covering. The painting and wall covering work performed includes new work, additions, alterations, and maintenance and repairs. Activities performed by these establishments range from bridge, ship, and traffic lane painting to paint and wall covering removal.

235210 Painting and Wall Covering Contractors

This U.S. industry comprises establishments primarily engaged in interior or exterior painting and interior wall covering. The painting and wall covering work performed includes new work, additions, alterations, and maintenance and repairs. Activities performed by these establishments range from bridge, ship, and traffic lane painting to paint and wall covering removal.

The data published with NAICS code 235210 include the following SIC industries:

- 1721 Painting and paper hanging special trade contractors
- 1799 Special trade contractors, n.e.c. (pt)

2353 Electrical Contractors

This NAICS Industry Group includes establishments classified in NAICS Industry 23531, Electrical Contractors.

23531 Electrical Contractors

This industry comprises establishments primarily engaged in one or more of the following: (1) performing electrical work at the site (e.g., installing wiring); (2) servicing electrical equipment at the site; and (3) the combined activity of selling and installing electrical equipment. The electrical work performed includes new work, additions, alterations, and maintenance and repairs.

235310 Electrical Contractors

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) performing electrical work at the site (e.g., installing wiring); (2) servicing electrical equipment at the site; and (3) the combined activity of selling and installing electrical equipment. The electrical work performed includes new work, additions, alterations, and maintenance and repairs.

The data published with NAICS code 235310 include the following SIC industry:

1731 Electrical work special trade contractors

2354 Masonry, Drywall, Insulation, and Tile Contractors

This NAICS Industry Group includes establishments classified in the following NAICS Industries: 23541, Masonry and Stone Contractors; 23542, Drywall, Plastering, Acoustical, and Insulation Contractors; and 23543, Tile, Marble, Terrazzo, and Mosaic Contractors.

23541 Masonry and Stone Contractors

This industry comprises establishments primarily engaged in masonry work, stone setting, and other stone work. The masonry work, stone setting, and other stone work performed includes new work, additions, alterations, and maintenance and repairs. Activities performed by establishments in this industry range from the construction of foundations made of block, stone, or brick to glass block laying; exterior marble, granite and slate work; and tuck pointing.

235410 Masonry and Stone Contractors

This U.S. industry comprises establishments primarily engaged in masonry work, stone setting, and other stone work. The masonry work, stone setting, and other stone work performed includes new work, additions, alterations, and maintenance and repairs. Activities performed by establishments in this industry range from the construction of foundations made of block, stone, or brick to glass block laying; exterior marble, granite and slate work; and tuck pointing.

The data published with NAICS code 235410 include the following SIC industry:

1741 Masonry, stone setting, and other stone work special trade contractors

23542 Drywall, Plastering, Acoustical, and Insulation Contractors

This industry comprises establishments primarily engaged in drywall, plaster work, acoustical, and building insulation work. The drywall, plaster work, acoustical, and insulation work performed includes new work, additions,

alterations, and maintenance and repairs. Plaster work includes applying plain or ornamental plaster, including installation of lathing to receive plaster.

235420 Drywall, Plastering, Acoustical, and Insulation Contractors

This U.S. industry comprises establishments primarily engaged in drywall, plaster work, acoustical, and building insulation work. The drywall, plaster work, acoustical, and insulation work performed includes new work, additions, alterations, and maintenance and repairs. Plaster work includes applying plain or ornamental plaster, including installation of lathing to receive plaster.

The data published with NAICS code 235420 include the following SIC industries:

1742 Plastering, drywall, acoustical, and insulation work special trade contractors

1743 Terrazzo, tile, marble, and mosaic work special trade contractors (pt)

1771 Concrete work special trade contractors (pt)

23543 Tile, Marble, Terrazzo, and Mosaic Contractors

This industry comprises establishments primarily engaged in (1) setting and installing ceramic tile, marble (interior only), terrazzo, and mosaic and/or (2) mixing marble particles and cement to make terrazzo at the job site. The tile, marble, terrazzo, and mosaic work performed includes new work, additions, alterations, and maintenance and repairs.

235430 Tile, Marble, Terrazzo, and Mosaic Contractors

This U.S. industry comprises establishments primarily engaged in (1) setting and installing ceramic tile, marble (interior only), terrazzo, and mosaic and/or (2) mixing marble particles and cement to make terrazzo at the job site. The tile, marble, terrazzo, and mosaic work performed includes new work, additions, alterations, and maintenance and repairs.

The data published with NAICS code 235430 include the following SIC industry:

1743 Terrazzo, tile, marble, and mosaic work special trade contractors (pt)

2355 Carpentry and Floor Contractors

This NAICS Industry Group includes establishments classified in the following NAICS Industries: 23551, Carpentry Contractors; and 23552, Floor Laying and Other Floor Contractors.

23551 Carpentry Contractors

This industry comprises establishments primarily engaged in framing, carpentry, and finishing work. The carpentry work performed includes new work, additions,

alterations, and maintenance and repairs. Activities performed by establishments in this industry range from the installation of doors and windows to paneling, steel framing work, and ship joinery.

235510 Carpentry Contractors

This U.S. industry comprises establishments primarily engaged in framing, carpentry, and finishing work. The carpentry work performed includes new work, additions, alterations, and maintenance and repairs. Activities performed by establishments in this industry range from the installation of doors and windows to paneling, steel framing work, and ship joinery.

The data published with NAICS code 235510 include the following SIC industry:

1751 Carpentry work special trade contractors

23552 Floor Laying and Other Floor Contractors

This industry comprises establishments primarily engaged in the installation of resilient floor tile, carpeting, linoleum, and wood or resilient flooring. The floor laying and other floor work performed includes new work, additions, alterations, and maintenance and repairs.

235520 Floor Laying and Other Floor Contractors

This U.S. industry comprises establishments primarily engaged in the installation of resilient floor tile, carpeting, linoleum, and wood or resilient flooring. The floor laying and other floor work performed includes new work, additions, alterations, and maintenance and repairs.

The data published with NAICS code 235520 include the following SIC industry:

1752 Floor laying and other floor work special trade contractors, n.e.c.

2356 Roofing, Siding, and Sheet Metal Contractors

This NAICS Industry Group includes establishments classified in NAICS Industry 23561, Roofing, Siding, and Sheet Metal Contractors.

23561 Roofing, Siding, and Sheet Metal Contractors

This industry comprises establishments primarily engaged in the installation of roofing, siding, sheet metal work, and roof drainage-related work, such as downspouts and gutters. Activities performed by these establishments also include treating roofs (i.e., by spraying, painting, or coating), copper smithing, tin smithing, installing skylights, installing metal ceilings, flashing, duct work, and capping. The roofing, siding, and sheet metal work performed includes new work, additions, alterations, and maintenance and repairs.

235610 Roofing, Siding, and Sheet Metal Contractors

This U.S. industry comprises establishments primarily engaged in the installation of roofing, siding, sheet metal work, and roof drainage-related work, such as downspouts and gutters. Activities performed by these establishments also include treating roofs (i.e., by spraying, painting, or coating), copper smithing, tin smithing, installing skylights, installing metal ceilings, flashing, duct work, and capping. The roofing, siding, and sheet metal work performed includes new work, additions, alterations, and maintenance and repairs.

The data published with NAICS code 235610 include the following SIC industry:

1761 Roofing, siding, and sheet metal work special trade contractors

2357 Concrete Contractors

This NAICS Industry Group includes establishments classified in NAICS Industry 23571, Concrete Contractors.

23571 Concrete Contractors

This industry comprises establishments primarily engaged in the use of concrete and asphalt to produce parking areas, building foundations, structures, and retaining walls, and in the use of all materials to produce patios, private driveways, and private walks. Activities performed by these establishments include grout and shotcrete work. The concrete work performed includes new work, additions, alterations, and maintenance and repairs.

235710 Concrete Contractors

This U.S. industry comprises establishments primarily engaged in the use of concrete and asphalt to produce parking areas, building foundations, structures, and retaining walls, and in the use of all materials to produce patios, private driveways, and private walks. Activities performed by these establishments include grout and shotcrete work. The concrete work performed includes new work, additions, alterations, and maintenance and repairs.

The data published with NAICS code 235710 include the following SIC industry:

1771 Concrete work special trade contractors (pt)

2358 Water Well Drilling Contractors

This NAICS Industry Group includes establishments classified in NAICS Industry 23581, Water Well Drilling Contractors.

23581 Water Well Drilling Contractors

This industry comprises establishments primarily engaged in drilling, tapping, and capping of water wells, and geothermal drilling. The water well drilling work performed includes new work, servicing, and maintenance and repairs.

235810 Water Well Drilling Contractors

This U.S. industry comprises establishments primarily engaged in drilling, tapping, and capping of water wells, and geothermal drilling. The water well drilling work performed includes new work, servicing, and maintenance and repairs.

The data published with NAICS code 235810 include the following SIC industry:

1781 Water well drilling special trade contractors

2359 Other Special Trade Contractors

This industry group comprises establishments primarily engaged in specialized construction activities (except plumbing, painting, electrical, masonry, drywall, insulation, tile, carpentry, flooring work, roofing, siding, sheet metal, concrete, and water well drilling).

23591 Structural Steel Erection Contractors

This industry comprises establishments primarily engaged in one or more of the following: (1) erecting metal, structural steel, and similar products of prestressed or precast concrete to produce structural elements, building exteriors, and elevator fronts; (2) setting rods, bars, rebar, mesh, and cages, to reinforce poured-in-place concrete; and (3) erecting cooling towers and metal storage tanks. The structural steel erection work performed includes new work, additions, alterations, reconstruction, and maintenance and repairs.

235910 Structural Steel Erection Contractors

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) erecting metal, structural steel, and similar products of prestressed or precast concrete to produce structural elements, building exteriors, and elevator fronts; (2) setting rods, bars, rebar, mesh, and cages, to reinforce poured-in-place concrete; and (3) erecting cooling towers and metal storage tanks. The structural steel erection work performed includes new work, additions, alterations, reconstruction, and maintenance and repairs.

The data published with NAICS code 235910 include the following SIC industry:

1791 Structural steel erection special trade contractors

23592 Glass and Glazing Contractors

This industry comprises establishments primarily engaged in installing glass (i.e., glazing work) and/or tinting glass. The glass work performed includes new work, additions, alterations, and maintenance and repairs. 235920 Glass and Glazing Contractors This U.S. industry comprises establishments primarily engaged in installing

glass (i.e., glazing work) and/or tinting glass. The glass work performed includes new work, additions, alterations, and maintenance and repairs.

The data published with NAICS code 235920 include the following SIC industries:

1793 Glass and glazing work special trade contractors

1799 Special trade contractors, n.e.c. (pt)

23593 Excavation Contractors

This industry comprises establishments primarily engaged in preparing land for building construction. Activities performed by these establishments are drilling shafts, foundation digging, foundation drilling, and grading. The excavation work performed includes new work, additions, alterations, and repairs.

235930 Excavation Contractors

This U.S. industry comprises establishments primarily engaged in preparing land for building construction. Activities performed by these establishments are drilling shafts, foundation digging, foundation drilling, and grading. The excavation work performed includes new work, additions, alterations, and repairs.

The data published with NAICS code 235930 include the following SIC industry:

1794 Excavation work special trade contractors

23594 Wrecking and Demolition Contractors

This industry comprises establishments primarily engaged in the wrecking and demolition of buildings and other structures, including underground tank removal and the dismantling of steel oil tanks, except those for hazardous materials. The establishments engaged in wrecking and demolition work may or may not sell materials derived from demolishing operations.

235940 Wrecking and Demolition Contractors

This U.S. industry comprises establishments primarily engaged in the wrecking and demolition of buildings and other structures, including underground tank removal and the dismantling of steel oil tanks, except those for hazardous materials. The establishments engaged in wrecking and demolition work may or may not sell materials derived from demolishing operations.

The data published with NAICS code 235940 include the following SIC industry:

1795 Wrecking and demolition work special trade contractors

23595 Building Equipment and Other Machinery Installation Contractors

This industry comprises establishments primarily engaged in one or more of the following: (1) the installation or dismantling of building equipment, machinery or

other industrial equipment (except plumbing, heating, air conditioning or electrical equipment); (2) machine rigging; and (3) millwriting. Types of equipment installed include automated and revolving doors, conveyor systems, dumbwaiters, dust collecting equipment, elevators, small incinerators, pneumatic tubes systems, and built-in vacuum cleaning systems. The building equipment and other machinery installation work performed includes new work, additions, alterations, and maintenance and repairs.

235950 Building Equipment and Other Machinery Installation Contractors

This U.S. industry comprises establishments primarily engaged in one or more of the following: (1) the installation or dismantling of building equipment, machinery or other industrial equipment (except plumbing, heating, air conditioning or electrical equipment); (2) machine rigging; and (3) millwriting. Types of equipment installed include automated and revolving doors, conveyor systems, dumbwaiters, dust collecting equipment, elevators, small incinerators, pneumatic tubes systems, and built-in vacuum cleaning systems. The building equipment and other machinery installation work performed includes new work, additions, alterations, and maintenance and repairs.

The data published with NAICS code 235950 include the following SIC industry:

1796 Installation or erection of building equipment, special trade contractors, n.e.c.

23599 All Other Special Trade Contractors

This industry comprises establishments primarily engaged in specialized construction work, (except plumbing, painting, electrical, masonry, drywall, insulation, tile, carpentry, flooring, roofing, siding, sheet metal work, concrete work, glass and glazing, structural steel erection, excavation, wrecking and demolition, and building equipment installation work). Activities undertaken by these

establishments include constructing swimming pools and fences, house moving, waterproofing, dewatering, damp-proofing, fireproofing, and sandblasting; installing antennas, artificial turf, awnings, countertops, fire escapes, forms for poured concrete, gasoline pumps, lightning conductors, ornamental metal, shoring systems, and signs (on buildings); and specialized activities, such as bathtub refinishing, coating and glazing of concrete surfaces, gas leakage detection, insulation of pipes and boilers, mobile home site setup and tie-down, posthole digging, radon remediation, scaffolding work, and on-site welding. The other special trade work performed includes new work, additions, alterations, and maintenance and repairs.

235990 All Other Special Trade Contractors

This U.S. industry comprises establishments primarily engaged in specialized construction work, (except plumbing, painting, electrical, masonry, drywall, insulation, tile, carpentry, flooring, roofing, siding, sheet metal work, concrete work, glass and glazing, structural steel erection, excavation, wrecking and demolition, and building equipment installation work). Activities undertaken by these establishments include constructing swimming pools and fences, house moving, waterproofing, dewatering, damp-proofing, fireproofing, and sandblasting; installing antennas, artificial turf, awnings, countertops, fire escapes, forms for poured concrete, gasoline pumps, lightning conductors, ornamental metal, shoring systems, and signs (on buildings); and specialized activities, such as bathtub refinishing, coating and glazing of concrete surfaces, gas leakage detection, insulation of pipes and boilers, mobile home site setup and tie-down, posthole digging, radon remediation, scaffolding work, and on-site welding. The other special trade work performed includes new work, additions, alterations, and maintenance and repairs.

The data published with NAICS code 235990 include the following SIC industry:

1799 Special trade contractors, n.e.c. (pt)

Appendix C.

Coverage and Methodology

THE SAMPLE FRAME

The universe for the construction sector includes approximately 650,000 establishments. This includes only those construction establishments with at least one paid employee in 1997. Census reports were mailed to a sample of approximately 130,000 establishments.

The sample frame consisted of the entire construction universe; there were no subpopulations that were explicitly removed from the sample frame. The sample frame was compiled from a list of all construction companies in the active records of the Internal Revenue Service (IRS) and the Social Security Administration (SSA) which are subject to the payment of Federal Insurance Contributions Act taxes. Under special arrangements to safeguard their confidentiality, the U.S. Census Bureau obtains information on the location and classification of the companies, as well as their payroll and receipts data from these sources. Unfortunately, these sources do not provide establishment level information for companies with multiple locations. For multilocation companies, the establishment level information is directly obtained from the U.S. Census Bureau's Company Organization Survey.

While the IRS-SSA list usually provided sufficient classification information to assign a company to the proper economic sector, there were cases for which the information was incomplete or missing. A classification form was mailed to companies with insufficient information to be assigned to an industry. This form requested information on the nature of the company's activities. Companies determined to be in scope of the construction sector subsequent to the census mailout were treated as a supplement to the universe rather than part of the sample frame.

SAMPLE SELECTION

The major objective of the sample design was to provide a sample that would provide reliable estimates for each state and construction industry. A stratified random sample was designed. Within each state by industry cell, six strata were defined.

- Stratum 1 was comprised of approximately 12,000 establishments of companies that had operations of any type at more than one location. These establishments of multiunit companies were included in the construction sample with certainty.
- Strata 2-6 were comprised of single-location companies. For each industry, payroll cut-offs were determined at the U.S. level and used to define the payroll ranges for each of the strata 2-6 across all states.

All establishments in stratum 2 were included in the construction sample with certainty. These consisted of the largest single-location construction companies.

For strata 3-6, a random sample of establishments was selected. The general strategy was to sample the strata containing larger establishments at a higher rate than those containing small establishments. The minimum sample rate was 1 in 20.

For five industries, the U.S. population in the sample frame was quite small. For these industries, all establishments in the sample frame were included in the sample with certainty. These industries were as follows:

- SIC 1622: Bridge, Tunnel, and Elevated Highway Construction Contractors
- SIC 1795: Wrecking and Demolition Work
- SIC 1796: Installation or Erection of Building Equipment, Not Elsewhere Classified
- SIC 7353: Equipment Rental with Operators
- SIC 8741: Construction Management

ESTIMATION AND VARIANCES

Based on the response data, establishments were assigned to the appropriate NAICS industry. At each level of tabulation, unbiased estimates were derived by summing the weighted establishment data where the establishment sample weight was equal to the inverse of its probability of selection for the construction sample.

Variations of the estimated items were derived at the state level, industry, and by stratum using standard stratified random sample formulas. Variations were then aggregated to the publication levels for the computation of the relative standard errors.

RELIABILITY OF THE ESTIMATES

The estimates developed from the sample can differ somewhat from the results of a survey covering all companies in the sample lists but are otherwise conducted under essentially the same conditions as the actual sample survey. The estimates of the magnitude of the sampling errors (the difference between the estimates obtained and the results theoretically obtained from a comparable, complete-coverage survey) are provided by the standard errors of estimates.

The particular sample selected for the construction sector is one of many similar probability samples that, by chance, might have been selected under the same specifications. Each of the possible samples would yield somewhat different sets of results, and the standard errors are measures of the variation of all the possible sample estimates around the theoretically, comparable, complete-coverage values.

Estimates of the standard errors have been computed from the sample data. They are presented in the form of relative standard errors which are the standard errors divided by the estimated values to which they refer.

In conjunction with its associated estimate, the relative standard error may be used to define confidence intervals, or ranges, that would include the comparable, complete-coverage value for specified percentages of all the possible samples.

The complete-coverage value would be included in the range:

- From one standard error below to one standard error above the derived estimate for about two-thirds of all possible samples.
- From two standard errors below to two standard errors above the derived estimate for about 19 out of 20 of all possible samples.
- From three standard errors below to three standard errors above the derived estimate for nearly all samples.

An inference is that the comparable complete-survey result would fall within the indicated ranges and the relative frequencies shown. Those proportions, therefore, may be interpreted as defining the confidence that the estimates from a particular sample would differ from complete-coverage results by as much as one, two, or three standard errors, respectively.

For example, suppose an estimated total is shown at 50,000 with an associated relative standard error of 2 percent, that is, a standard error of 1,000 (2 percent of 50,000). There is approximately 67 percent confidence that the interval 49,000 to 51,000 includes the complete-coverage total, about 95 percent confidence that the interval 48,000 to 52,000 includes the complete-coverage total, and almost certain confidence that the interval 47,000 to 53,000 includes the complete-coverage total.

In addition to the sample errors, the estimates are subject to various response and operational errors: errors of collection; reporting; coding; transcription; imputation for nonresponse, etc. These operational errors also would occur if a complete canvass were to be conducted under the same conditions as the survey. Explicit measures of their effects generally are not available. However, it is believed that most of the important operational errors were detected and corrected during the U.S. Census Bureau's review of the data for reasonableness and consistency. The small operational errors usually remain. To

some extent, they are compensating in the aggregated totals shown. When important operational errors were detected too late to correct the estimates, the data were suppressed or were specifically qualified in the tables.

As derived, the estimated standard errors included part of the effect of the operational errors. The total errors, which depend upon the joint effect of the sampling and operational errors, are usually of the order of size indicated by the standard error, or moderately higher. However, for particular estimates, the total error may considerably exceed the standard errors shown. Any figures shown in the tables of this publication having an associated standard error exceeding 75 percent may be combined with higher level totals, creating a broader aggregate, which then may be of acceptable reliability.

INDUSTRY CLASSIFICATION OF ESTABLISHMENTS

Each establishment covered in the construction sector was classified in one of twenty eight industries in accordance with the industry definitions in the 1997 NAICS (North American Industry Classification System) manual. The U.S. Census Bureau first used NAICS to classify industries for 1997 economic census data. Prior to this the U.S. Census Bureau used SIC (Standard Industrial Classification) for industry classification. The differences between NAICS and SIC are outlined in Appendix A of the 1997 NAICS manual.

In the NAICS system, an industry is generally defined as a group of establishments that use similar processes or have similar business activities. To the extent practical, the system uses supply-based or production-oriented concepts in defining industries. The resulting group of establishments must be significant in terms of number, value added, value of business, and number of employees.

The coding system works in such a way that the definitions progressively become narrower with successive additions of numerical digits. In the construction sector for 1997, there are 3 subsectors (three-digit NAICS), 14 industry groups (four-digit NAICS), and 28 NAICS industries (five- and six-digit NAICS). The five-digit NAICS is supposed to be the level at which there is comparability with the Canadian and Mexican classification systems. However, agreement had not been reached with these countries at the time of the 1997 Economic Census regarding the classification of construction industries. The 28 five- and six-digit NAICS construction industries are the result of an expansion and a restructuring of the 26 four-digit SIC industries of 1987.

ESTABLISHMENT BASIS OF REPORTING

The construction sector is conducted on an establishment basis. A construction establishment is defined as a relatively permanent office or other place of business where the usual business activities related to construction

are conducted. With some exceptions, a relatively permanent office is one which has been established for the management of more than one project or job and which is expected to be maintained on a continuing basis. Such establishment activities include, but are not limited to, estimating, bidding, purchasing, supervising, and operation of the actual construction work being conducted at one or more construction sites. Separate construction reports were not required for each project or construction site.

Companies with more than one construction establishment were required to submit a separate report for each establishment operated during any part of the census year. The construction sector figures represent a tabulation of records for individual establishments rather than for companies.

If an establishment was engaged in construction and one or more distinctly different lines of economic activity at the same place of business, it was requested to file a separate report for each activity, provided that the activity was of substantial size and separate records were maintained. If a separate establishment report could not be prepared for each activity, then a construction report was

requested covering all activities of that establishment providing that the value of construction work exceeded the gross receipts from each of its other activities.

DUPLICATION IN VALUE OF CONSTRUCTION WORK

The aggregate of value of construction work reported by all construction establishments in each of the industry, geographic area, or other groupings contains varying amounts of duplication. This is because the construction work of one firm may be subcontracted to other construction firms and may also be included in the subcontractors' value of construction work. Also, part of the value of construction results from the use of products of nonconstruction industries as input materials. These products are counted in the nonconstruction industry as well as part of the value of construction. Value added avoids this duplication and is, for most purposes, the best measure for comparing the relative economic importance of industries or geographic areas. Value added for construction industries is defined as the dollar value of business done less costs for construction work subcontracted to others and payments for materials, components, supplies, and fuels.

Appendix D. Geographic Notes

Not applicable for this report.

Appendix E. Metropolitan Areas

Not applicable for this report.

Appendix F.

Detailed SIC Code Titles: 1997

[The SIC code title shown in Table 1 is a standard SIC title from the Standard Industrial Classification Manual. A more detailed title description for the SIC code shown in Table 1 is included in this appendix]

SIC code	Detailed industry title description	SIC code	Detailed industry title description
15	GENERAL BUILDING CONTRACTORS	17	SPECIAL TRADE CONTRACTORS (EXCLUDING LEAD PAINT REMOVAL AND ASBESTOS ABATEMENT)—Con.
152100	General contractors—single-family houses	175100	Carpentry work
152210	General contractors—hotel and motel construction	175200	Floor laying and other floor work, n.e.c
152220	General contractors—residential buildings, other than single-family, except hotel and motel construction	176100	Roofing, siding, and sheet metal work
153110	Operative builders, single-family housing construction	177110	Stucco construction
153120	Operative builders, multifamily housing construction	177120	Concrete work, except stucco construction
153130	Operative builders, manufacturing and light industrial building construction	178100	Water well drilling
153140	Operative builders, commercial and institutional building construction	179100	Structural steel erection
154110	General contractors—commercial warehouse construction	179300	Glass and glazing work
154120	General contractors—industrial buildings and warehouse construction	179400	Excavation work
154200	General contractors—nonresidential buildings, other than industrial buildings and warehouses	179500	Wrecking and demolition work
		179600	Installation or erection of building equipment, n.e.c
		179910	Paint and wallpaper stripping and wallpaper removal contractors
		179920	Tinting glass contractors
		179940	All other special trade contractors
16	HEAVY CONSTRUCTION OTHER THAN BUILDING CONSTRUCTION	65	REAL ESTATE—CONSTRUCTION LAND SUBDIVIDERS AND DEVELOPERS
161100	Highway and street construction, except elevated highways	655200	Land subdividers and developers, except cemeteries
162200	Bridge, tunnel, and elevated highway construction	73	BUSINESS SERVICES—CONSTRUCTION EQUIPMENT RENTAL AND LEASING, WITH OPERATOR
162310	Water, sewer, and pipeline construction	735320	Heavy construction equipment rental and leasing, with operator
162320	Power and communication transmission line construction	87	ENGINEERING AND MANAGEMENT SERVICES—CONSTRUCTION MANAGEMENT FOR BUILDINGS AND HEAVY CONSTRUCTION
162910	Industrial nonbuilding construction	874121	Construction management—single-family housing construction
162920	Other heavy construction	874122	Construction management—multifamily housing construction
17	SPECIAL TRADE CONTRACTORS (EXCLUDING LEAD PAINT REMOVAL AND ASBESTOS ABATEMENT)	874123	Construction management—manufacturing and industrial building construction
171100	Plumbing, heating, and air-conditioning	874124	Construction management—commercial and institutional building construction
172100	Painting and paper hanging	874131	Construction management—highway and street construction
173100	Electrical work	874132	Construction management—bridge and tunnel construction
174100	Masonry, stone setting, and other stone work	874133	Construction management—water, sewer, and pipeline construction
174200	Plastering, drywall, acoustical, and insulation work	874134	Construction management—power and communication transmission line construction
174310	Fresco work	874135	Construction management—industrial nonbuilding construction
174320	Terrazzo, tile, marble, and mosaic work, except fresco work	874136	Construction management—all other heavy construction

