

Roofing, Siding, and Sheet Metal Contractors

1997

Issued October 1999

EC97C-2356A

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
235610	Roofing, siding, & sheet metal contractors . . .	30 557	253 315	6 494 890	23 967 096	21 976 038	13 220 789	8 941 505	417 129
176100	Roofing, siding, & sheet metal work special trade contractors	30 557	253 315	6 494 890	23 967 096	21 976 038	13 220 789	8 941 505	417 129

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		
											A
235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS											
United States	30 557	253 315	197 294	180 620	198 105	210 731	199 719	6 494 890	4 369 788	1	
Alabama	426	3 737	3 004	2 723	2 927	3 217	3 150	77 808	56 364	14	
Alaska	67	387	316	² 258	297	380	331	15 776	¹ 12 571	27	
Arizona	406	4 836	3 963	4 097	3 973	4 030	3 754	112 914	81 589	7	
Arkansas	204	1 661	1 403	1 379	1 462	1 385	1 385	31 319	23 145	22	
California	3 033	27 560	22 279	21 044	20 523	23 298	24 252	714 487	503 708	3	
Colorado	596	5 591	4 085	3 763	4 149	4 335	4 092	144 692	90 982	6	
Connecticut	421	2 688	1 851	1 493	1 986	2 020	1 906	97 918	56 921	9	
Delaware	81	716	521	510	505	525	545	21 864	12 689	9	
District of Columbia	¹ 16	44	36	36	46	30	30	1 013	⁶ 686	22	
Florida	1 944	16 766	12 464	12 316	12 688	12 579	12 270	392 397	244 279	4	
Georgia	734	5 938	4 779	4 751	4 734	4 775	4 854	161 671	105 611	5	
Hawaii *	128	1 119	806	781	772	830	840	32 613	20 317	15	
Idaho	171	1 048	859	715	833	938	950	24 079	17 616	13	
Illinois	1 388	12 816	9 273	7 800	9 861	10 222	9 209	399 763	264 014	3	
Indiana	786	7 367	5 676	5 284	5 696	6 163	5 562	180 919	122 469	5	
Iowa	408	3 132	2 440	2 156	2 594	2 759	2 251	84 753	58 323	7	
Kansas	382	2 931	2 331	1 936	2 458	2 717	2 212	68 638	48 401	7	
Kentucky	440	4 155	3 400	3 257	3 509	3 523	3 310	89 682	64 242	9	
Louisiana	450	3 460	2 594	2 437	2 448	2 753	2 740	75 827	49 973	8	
Maine	67	1 072	821	704	819	876	886	26 841	18 210	3	
Maryland	501	5 631	4 520	4 333	4 613	4 540	4 597	163 984	112 125	7	
Massachusetts	566	3 817	2 825	2 260	2 786	3 114	3 142	116 954	72 498	9	
Michigan	1 019	8 078	6 432	5 446	6 384	7 308	6 592	246 147	170 689	4	
Minnesota	566	5 193	3 870	3 005	3 902	4 583	3 992	139 948	88 087	6	
Mississippi	245	2 446	1 940	1 853	1 931	1 884	2 093	41 114	26 685	9	
Missouri	887	5 886	4 686	4 307	4 884	5 114	4 439	158 665	106 336	6	
Montana	126	672	498	332	450	677	533	13 201	8 655	13	
Nebraska	189	1 585	1 144	925	1 227	1 325	1 098	41 474	23 776	11	
Nevada	110	2 373	2 010	1 931	1 851	2 027	2 234	53 866	41 748	14	
New Hampshire	107	807	540	389	565	649	557	23 738	12 924	17	
New Jersey	970	6 323	4 535	3 982	4 773	4 848	4 536	212 020	137 581	5	
New Mexico	150	961	791	793	763	872	735	18 656	13 249	14	
New York	1 509	10 888	8 304	6 908	8 526	9 292	8 489	280 827	193 062	4	
North Carolina	1 130	8 389	6 666	6 911	6 763	6 649	6 342	186 627	124 304	6	
North Dakota	101	1 063	805	663	920	948	687	21 661	14 553	5	
Ohio	1 614	12 827	10 314	8 726	10 602	11 664	10 265	317 687	221 496	4	
Oklahoma	284	2 397	1 833	2 150	1 994	1 579	1 608	45 104	31 781	8	
Oregon	640	4 728	3 763	3 048	3 768	4 488	3 749	116 377	80 430	8	
Pennsylvania	1 497	12 245	9 561	8 278	9 809	10 423	9 736	355 121	248 567	3	
Rhode Island	129	769	616	539	622	695	607	20 563	14 790	10	
South Carolina	472	3 686	2 878	2 695	2 859	3 033	2 927	72 124	48 315	14	
South Dakota	71	747	611	477	571	684	715	13 498	9 546	15	
Tennessee	564	4 996	4 044	3 920	4 036	4 200	4 022	112 219	75 922	6	
Texas	1 593	13 697	10 066	9 824	10 210	10 305	9 923	321 999	186 528	5	
Utah	337	2 770	2 353	2 408	2 433	2 451	2 122	62 731	48 074	11	
Vermont	110	594	459	352	444	560	480	13 730	10 390	11	
Virginia	922	9 225	7 562	7 420	7 419	7 659	7 751	217 162	151 483	6	
Washington	957	6 381	4 970	4 383	4 784	5 349	5 366	167 967	109 656	5	
West Virginia	193	1 314	1 108	991	1 093	1 144	1 204	30 298	23 134	8	
Wisconsin	776	5 330	4 285	3 569	4 449	4 883	4 237	144 483	103 769	6	
Wyoming	76	475	401	363	398	430	412	9 966	7 524	14	

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
235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS										
United States	23 967 096	21 976 038	13 220 789	8 941 505	1 991 057	335 273	417 129	3 127 915	1	2
Alabama	310 223	274 198	163 537	111 507	36 025	4 601	8 959	49 826	14	31
Alaska	61 820	60 375	36 524	24 031	1 445	423	^S 2 386	S	30	65
Arizona	366 167	357 262	199 859	163 818	8 905	5 264	6 831	40 880	6	12
Arkansas	109 595	103 625	65 772	42 274	5 970	1 257	2 265	20 384	19	21
California	2 734 800	2 587 805	1 503 435	1 109 097	146 995	43 827	39 871	282 134	3	6
Colorado	568 358	522 114	303 399	221 819	46 245	7 927	7 272	74 458	9	11
Connecticut	351 924	297 181	194 286	105 971	54 743	5 744	4 909	44 032	7	10
Delaware	79 050	73 459	46 749	26 710	5 591	2 039	970	9 596	3	12
District of Columbia	D	D	1 354	D	60	^S 22	^S 64	475	D	67
Florida	1 471 864	1 379 599	856 300	526 711	92 265	23 556	22 242	177 206	4	8
Georgia	546 995	490 135	299 312	193 027	56 860	5 865	10 876	83 947	6	20
Hawaii *	140 447	130 349	94 395	35 955	^S 10 098	1 834	1 503	23 190	17	31
Idaho	97 315	89 951	39 655	D	^S 7 364	1 254	2 512	12 836	15	21
Illinois	1 427 896	1 252 809	800 107	460 889	175 087	19 312	21 137	160 643	3	5
Indiana	648 999	609 044	372 492	240 547	39 955	7 353	12 080	82 211	5	15
Iowa	283 672	266 069	160 103	107 836	17 602	5 043	4 556	41 671	6	10
Kansas	242 580	231 355	142 965	91 364	11 225	3 439	6 127	45 521	7	22
Kentucky	333 597	308 749	183 286	125 463	24 848	3 665	5 754	45 889	8	15
Louisiana	285 047	256 805	134 773	123 815	28 242	4 281	4 518	43 343	9	17
Maine	92 888	89 521	54 047	36 866	3 367	1 528	2 624	28 063	3	11
Maryland	542 025	483 130	277 225	215 763	58 895	8 211	10 499	89 307	10	11
Massachusetts	466 301	427 834	258 765	172 463	38 467	9 042	4 679	39 782	9	9
Michigan	923 253	825 716	513 531	317 996	97 536	8 901	15 545	119 955	4	7
Minnesota	574 484	517 062	286 408	243 832	57 422	6 470	14 432	77 751	6	12
Mississippi	153 663	144 944	77 353	67 955	^S 8 718	1 616	5 919	33 484	8	38
Missouri	519 384	480 729	310 414	172 675	38 655	5 301	8 743	77 913	5	11
Montana	51 131	49 026	33 911	15 114	2 105	^S 1 325	1 375	7 694	15	23
Nebraska	174 762	153 373	91 472	62 267	^S 21 389	1 636	^S 6 671	24 780	15	51
Nevada	181 879	178 055	112 089	65 966	3 825	1 506	2 777	15 459	7	15
New Hampshire	80 992	77 467	48 079	30 148	3 525	1 342	1 444	13 216	16	14
New Jersey	797 322	677 902	399 054	284 353	119 419	7 709	9 438	75 010	7	14
New Mexico	64 093	63 011	38 197	24 995	1 082	542	864	11 311	10	10
New York	1 059 195	965 537	588 945	385 569	93 658	15 973	16 152	131 135	4	8
North Carolina	722 112	649 450	357 663	292 865	72 663	9 747	9 835	81 883	7	9
North Dakota	73 775	69 294	43 724	29 868	4 481	761	3 512	12 774	5	10
Ohio	1 162 241	1 067 866	642 878	437 634	94 375	15 733	18 206	150 770	4	9
Oklahoma	195 863	180 003	102 583	77 420	15 860	3 919	2 937	37 162	7	15
Oregon	398 589	371 469	226 108	148 668	27 120	6 566	6 988	49 309	5	18
Pennsylvania	1 269 740	1 190 593	746 100	453 617	79 147	19 380	28 297	167 995	3	6
Rhode Island	70 188	67 356	44 426	22 930	2 832	979	1 252	9 896	9	27
South Carolina	284 392	251 898	152 218	99 679	32 494	4 880	3 795	32 624	12	22
South Dakota	52 234	49 553	28 718	20 835	2 681	986	2 603	12 370	12	28
Tennessee	409 984	376 930	231 193	148 108	33 054	6 011	^S 9 015	58 259	6	43
Texas	1 338 362	1 160 472	676 962	488 980	177 890	16 102	24 467	195 642	5	13
Utah	229 546	220 234	115 708	104 633	9 311	1 959	3 243	24 905	10	21
Vermont	44 724	43 669	23 707	20 913	1 055	759	^S 1 683	10 221	15	40
Virginia	731 203	667 027	410 085	260 904	64 176	10 385	9 805	95 241	6	9
Washington	597 900	566 610	336 752	241 161	31 290	9 406	12 468	71 202	6	12
West Virginia	126 122	120 247	83 927	37 464	5 875	934	2 134	16 601	6	25
Wisconsin	474 057	456 235	287 993	178 516	17 822	8 119	9 760	89 681	5	8
Wyoming	D	D	22 253	D	1 343	840	1 135	5 854	D	14

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)
235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS			235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS—Con.		
Number of establishments in business during year	30 557	1	Selected costs	10 932 562	1
Number of proprietors and working partners	11 971	3	Cost of materials, components, and supplies	8 589 147	1
Total number of employees	253 315	1	Cost of construction work subcontracted out to others	1 991 057	3
Number of construction workers in March	180 620	1	Cost of selected power, fuels, and lubricants	352 358	1
Number of construction workers in May	198 105	1	Cost of electricity	54 045	3
Number of construction workers in August	210 731	1	Cost of natural gas and manufactured gas	30 511	4
Number of construction workers in November	199 719	1	Cost of gasoline and diesel fuel	253 753	2
Average number of construction workers	197 294	1	Cost of on-highway use of gasoline and diesel fuel	230 636	2
Number of other employees in March	55 455	2	Cost of off-highway use of gasoline and diesel fuel	23 117	4
Number of other employees in May	55 819	1	Cost of all other fuels and lubricants	14 049	9
Number of other employees in August	56 886	2	Rental cost for machinery, equipment, and buildings	335 273	2
Number of other employees in November	55 924	2	Rental cost for machinery and equipment	163 491	3
Average number of other employees	56 021	1	Rental cost for buildings	171 782	2
Payroll, all employees	6 494 890	1	Selected purchased services	449 717	2
Payroll, construction workers	4 369 788	1	Purchased communication services	193 506	2
Payroll, other employees	2 125 102	1	Cost of repairs to buildings and other structures	34 312	6
First-quarter payroll, all employees	1 374 101	1	Cost of repairs to machinery and equipment	221 900	2
Fringe benefits, all employees	1 650 512	1	Value of construction work	23 967 096	1
Legally required expenditures	1 140 754	1	Value of construction work on government owned projects ..	4 027 092	2
Voluntary expenditures	509 758	1	Value of construction work on federally owned projects ..	1 035 583	4
Value of business done	24 153 350	1	Value of construction work on state and locally owned projects	2 991 509	3
Value of construction work	23 967 096	1	Value of construction work on privately owned projects	19 940 004	1
Value of construction work subcontracted in from others ..	9 937 492	2	Beginning-of-year gross book value of depreciable assets	2 812 216	2
Other business receipts	186 256	6	Capital expenditures, other than land	417 129	2
Net value of construction	21 976 038	1	Retirements and disposition of depreciable assets	101 430	6
Value added	13 220 789	1	End-of-year gross book value of depreciable assets	3 127 915	2
			Depreciation charges during year	373 501	2
			Number of establishments with inventories	9 551	3
			Value of construction work for establishments with inventories ..	14 124 007	1
			End of 1997, inventories of materials and supplies	357 004	4
			End of 1996, inventories of materials and supplies	363 144	4
			Number of establishments with no inventories	10 884	3
			Value of construction work for establishments with no inventories	5 676 492	3
			Number of establishments not reporting inventories	10 123	3
			Value of construction work for establishments not reporting inventories	4 166 597	4

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
235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS											
Total	30 557	253 315	6 494 890	24 153 350	23 967 096	21 976 038	13 220 789	8 941 505	1 991 057	1	1
Establishments with 1 to 4 employees	18 037	33 347	606 715	3 356 849	3 341 655	2 938 815	1 706 143	1 247 867	402 839	2	3
Establishments with 5 to 9 employees	6 159	39 747	799 529	3 334 773	3 318 207	3 002 420	1 815 448	1 203 537	315 788	4	4
Establishments with 10 to 19 employees	3 449	46 709	1 129 055	4 091 205	4 063 538	3 748 489	2 268 315	1 507 841	315 049	4	4
Establishments with 20 to 49 employees	2 159	64 178	1 800 301	6 298 844	6 240 866	5 799 266	3 487 669	2 369 576	441 599	3	2
Establishments with 50 to 99 employees	581	39 031	1 177 721	3 835 775	3 795 269	3 553 393	2 065 930	1 527 969	241 876	3	1
Establishments with 100 to 249 employees	151	21 365	674 164	2 240 827	2 215 731	2 040 251	1 256 270	809 077	175 480	Z	Z
Establishments with 250 to 499 employees	19	D	D	D	D	D	D	D	D	D	D
Establishments with 500 to 999 employees	—	—	—	—	—	—	—	—	—	—	—
Establishments with 1,000 employees or more	2	D	D	D	D	D	D	D	D	D	D

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
235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS											
Total	30 557	253 315	6 494 890	24 153 350	23 967 096	21 976 038	13 220 789	8 941 505	1 991 057	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	4 001	7 025	72 835	299 201	297 522	282 245	175 607	108 317	15 277	8	6
Establishments with value of business done \$100,000 to \$249,999	7 882	21 793	315 915	1 288 044	1 282 898	1 212 877	740 942	477 081	70 020	5	4
Establishments with value of business done \$250,000 to \$499,999	5 624	27 718	499 709	1 934 738	1 929 582	1 813 417	1 068 363	750 209	116 166	5	4
Establishments with value of business done \$500,000 to \$999,999	4 002	34 140	710 823	2 790 113	2 772 077	2 524 513	1 563 155	979 395	247 563	5	4
Establishments with value of business done \$1,000,000 to \$2,499,999	3 264	52 330	1 376 028	5 111 078	5 078 105	4 646 947	2 768 273	1 911 647	431 158	4	4
Establishments with value of business done \$2,500,000 to \$4,999,999	1 343	42 453	1 272 638	4 667 262	4 624 138	4 225 459	2 564 197	1 704 385	398 679	3	4
Establishments with value of business done \$5,000,000 to \$9,999,999	567	32 815	1 071 225	3 839 808	3 801 360	3 485 722	1 980 111	1 544 059	315 638	2	2
Establishments with value of business done \$10,000,000 or more	226	32 350	1 149 793	4 124 148	4 082 869	3 693 910	2 302 665	1 432 524	388 959	Z	Z

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
235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS								
Total	23 967 096	8 652 871	9 244 494	5 704 792	1	2	2	2
Building construction, total	23 383 309	8 589 810	9 149 900	5 643 599	1	2	2	2
Single-family houses, detached and attached	8 371 781	3 090 564	3 243 047	2 038 170	2	4	3	4
Single-family houses, detached	6 956 063	2 555 856	2 714 261	1 685 947	2	4	4	5
Single-family houses, attached	1 415 718	534 709	528 786	352 223	6	12	8	7
Apartment buildings, apartment type condominiums and cooperatives	1 348 161	359 230	603 522	385 409	6	6	12	7
Manufacturing and light industrial buildings	2 991 690	945 050	1 247 342	799 298	3	5	3	5
Manufacturing and light industrial warehouses	1 029 754	388 123	380 785	260 846	3	5	3	7
Hotels and motels	411 764	203 279	118 629	89 856	7	13	7	6
Office buildings	1 898 463	797 120	673 792	427 551	2	3	3	4
All other commercial buildings, nec	2 264 477	978 552	717 463	568 463	4	5	4	6
Commercial warehouses	1 024 616	363 742	439 844	221 030	5	5	6	7
Religious buildings	485 256	126 805	207 850	150 601	3	5	4	6
Educational buildings	2 077 995	723 200	942 745	412 050	3	4	4	6
Health care and institutional buildings	710 831	279 968	299 503	131 361	3	4	5	8
Public safety buildings	335 832	146 021	125 456	64 355	4	4	5	9
All other nonresidential buildings	432 688	188 156	149 923	94 610	4	6	6	5
Nonbuilding construction, total	218 848	63 061	94 594	61 193	11	9	23	14
Other nonbuilding construction, nec	218 848	63 061	94 594	61 193	11	9	23	14
Construction work, nsk	364 939	X	X	X	13	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
				D	E						
A	B	C	D	E	F	G	H	B	D	H	
235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS											
Total	30 557	253 315	6 494 890	23 967 096	X	21 976 038	13 220 789	1 991 057	1	1	3
Establishments not specializing ..	7 257	103 816	2 935 434	10 108 110	X	9 443 679	5 719 509	664 431	2	2	4
Establishments specializing 51 percent or more	23 301	149 499	3 559 456	13 858 986	11 710 936	12 532 361	7 501 281	1 326 625	2	2	5
Single-family houses, detached and attached											
All establishments specializing	17 861	87 352	1 827 300	7 669 715	6 726 424	6 862 402	4 059 628	807 313	2	3	6
Specialization 100 percent	8 545	32 159	666 829	2 960 933	2 960 933	2 603 808	1 565 830	357 125	4	4	8
Specialization 90 to 99 percent ...	3 147	18 358	389 490	1 574 690	1 479 506	1 408 021	832 698	166 668	6	6	13
Specialization 80 to 89 percent ...	2 188	13 047	290 295	1 193 939	985 470	1 093 627	652 869	100 312	6	8	17
Specialization 70 to 79 percent ...	2 210	12 735	248 815	1 011 971	745 766	936 252	554 508	75 719	8	9	21
Specialization 60 to 69 percent ...	1 379	7 829	159 817	686 650	423 310	594 992	325 389	91 658	10	12	23
Specialization 51 to 59 percent ...	392	3 223	72 053	241 532	131 440	225 702	128 334	15 830	15	14	24
Apartment buildings, apartment type condominiums and cooperatives											
All establishments specializing	830	4 722	105 220	511 337	438 544	404 405	237 632	106 932	12	16	31
Specialization 100 percent	245	1 712	45 111	207 620	207 620	158 926	87 731	\$48 694	21	32	62
Specialization 90 to 99 percent ...	164	704	12 456	85 181	80 472	66 491	48 610	18 691	24	28	31
Specialization 80 to 89 percent ...	81	523	10 073	\$57 947	\$47 196	42 805	23 541	\$15 142	29	41	55
Specialization 70 to 79 percent ...	S	772	14 971	58 044	43 476	53 444	34 064	\$4 600	29	27	43
Specialization 60 to 69 percent ...	79	694	15 742	56 577	35 718	49 948	26 836	\$6 629	35	34	73
Specialization 51 to 59 percent ...	79	315	6 867	\$45 966	\$24 063	32 790	16 850	\$13 176	23	44	67
Manufacturing and light industrial buildings											
All establishments specializing	1 301	20 301	618 988	2 031 973	1 626 787	1 899 048	1 209 811	132 925	5	4	5
Specialization 100 percent	451	5 087	151 418	518 144	518 144	476 048	295 156	42 096	11	11	15
Specialization 90 to 99 percent ...	158	2 390	69 465	235 761	223 215	214 377	138 671	21 384	14	13	7
Specialization 80 to 89 percent ...	248	3 768	107 293	314 497	258 864	301 201	210 720	13 296	12	10	13
Specialization 70 to 79 percent ...	148	3 509	118 747	370 082	268 123	347 147	221 365	22 935	8	9	3
Specialization 60 to 69 percent ...	186	3 697	113 892	419 151	262 588	391 052	233 209	28 100	8	8	5
Specialization 51 to 59 percent ...	109	1 851	58 171	174 337	95 853	169 223	110 690	5 114	16	15	25
Manufacturing and light industrial warehouses											
All establishments specializing	214	2 206	64 389	224 802	171 898	220 668	128 074	4 134	15	15	16
Specialization 100 percent	97	599	17 049	71 424	71 424	71 082	45 120	342	31	35	9
Specialization 90 to 99 percent ...	S	S	S	S	S	D	D	D	S	S	D
Specialization 80 to 89 percent ...	3	104	3 590	8 077	6 462	D	D	D	Z	Z	D
Specialization 70 to 79 percent ...	\$37	357	11 870	36 853	27 055	36 123	22 166	731	29	34	9
Specialization 60 to 69 percent ...	\$42	817	22 435	80 830	49 614	79 522	39 956	1 309	25	21	28
Specialization 51 to 59 percent ...	S	\$225	\$7 149	20 733	11 105	19 386	\$11 308	1 347	53	30	39
Office buildings											
All establishments specializing	264	5 286	175 479	550 536	393 484	498 409	343 396	52 127	7	6	15
Specialization 100 percent	S	329	13 840	48 902	48 902	39 855	28 502	9 047	14	12	17
Specialization 90 to 99 percent ...	\$26	666	22 558	65 976	60 615	60 740	42 937	5 236	12	12	36
Specialization 80 to 89 percent ...	S	635	15 138	44 244	35 446	42 772	28 231	1 472	31	20	24
Specialization 70 to 79 percent ...	32	1 110	40 967	120 111	86 775	106 222	77 398	13 888	11	8	3
Specialization 60 to 69 percent ...	41	1 974	63 966	220 657	134 152	200 171	132 905	20 486	12	14	35
Specialization 51 to 59 percent ...	\$20	572	19 012	S	S	S	33 424	S	12	S	S
All other commercial buildings, nec											
All establishments specializing	975	11 223	291 246	1 093 524	909 118	1 018 938	589 387	74 586	8	8	11
Specialization 100 percent	318	3 615	95 357	366 535	366 535	329 827	187 596	36 708	12	11	10
Specialization 90 to 99 percent ...	158	1 711	42 585	193 894	182 151	183 971	108 027	\$9 923	26	28	48
Specialization 80 to 89 percent ...	172	986	24 255	91 988	74 550	81 875	46 106	\$10 113	29	28	45
Specialization 70 to 79 percent ...	198	2 151	52 733	181 140	130 844	176 127	113 207	5 013	20	20	26
Specialization 60 to 69 percent ...	101	2 006	53 338	183 335	112 895	174 465	91 194	8 870	18	14	11
Specialization 51 to 59 percent ...	29	754	22 979	76 634	42 144	72 673	43 258	\$3 960	22	21	60

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	E						
235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS—Con.											
Commercial warehouses											
All establishments specializing	255	3 154	82 945	305 908	255 355	280 349	151 676	25 559	16	17	27
Specialization 100 percent	120	1 131	29 189	117 639	117 639	106 281	58 143	11 358	23	29	38
Specialization 90 to 99 percent ...	^{§16} S	S	S	S	S	S	S	S	S	S	S
Specialization 80 to 89 percent ...	2	D	D	D	D	D	D	D	D	D	D
Specialization 70 to 79 percent ...	79	1 272	29 344	112 769	80 654	99 959	50 712	^{§12} 810	22	23	41
Specialization 60 to 69 percent ...	S	S	S	S	S	S	S	S	S	S	S
Specialization 51 to 59 percent ...	2	D	D	D	D	D	D	D	D	D	D
Educational buildings											
All establishments specializing	422	8 255	224 861	789 331	585 562	725 972	426 540	63 359	10	8	19
Specialization 100 percent	110	1 016	24 429	94 067	94 067	89 433	52 976	4 634	19	18	19
Specialization 90 to 99 percent ...	S	^{§1} 422	27 422	79 734	73 894	76 659	49 830	^{§3} 075	44	23	45
Specialization 80 to 89 percent ...	49	1 111	34 794	123 337	102 934	107 435	67 635	^{§15} 902	20	24	56
Specialization 70 to 79 percent ...	40	1 376	39 142	152 284	112 265	142 135	78 301	^{§10} 148	21	17	41
Specialization 60 to 69 percent ...	98	2 082	63 644	214 423	135 237	192 663	107 051	21 761	17	18	29
Specialization 51 to 59 percent ...	45	1 248	35 429	125 485	67 165	117 647	70 748	7 838	15	10	10

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)
235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS		
Total	24 153 350	1
Special trade contractors, total	23 192 494	1
Architectural sheet metal contractor, including gutters and downspouts	2 094 958	4
Carpentry contractor	509 671	6
Heating, ventilation and air-conditioning contractor (HVAC)	343 345	5
Roofing contractor	14 407 154	1
Sheet metal contractor, except HVAC and plumbing	2 808 388	3
Siding contractor	2 418 638	5
Specialty sheet metal contractor, including decking and metal ceilings	610 339	6
Other construction activities, nec	694 339	6
Other business activities secondary to construction activities, total	177 874	6
Other business activities, secondary to construction activities, nec	177 874	6
Kind of business activity, nsk	88 645	18

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
235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS											
Total	30 557	253 315	6 494 890	23 967 096	X	21 976 038	13 220 789	1 991 057	1	1	3
Establishments not specializing	2 736	23 291	600 451	2 071 786	X	1 841 590	1 151 513	230 196	5	5	10
Establishments specializing 51 percent or more	27 821	230 024	5 894 439	21 895 310	19 403 747	20 134 449	12 069 277	1 760 861	1	1	3
Architectural sheet metal contractor, including gutters and downspouts											
All establishments specializing	3 112	15 562	398 947	1 423 257	1 277 595	1 328 824	806 784	94 432	6	7	20
Specialization 100 percent	2 216	9 474	234 553	826 833	826 833	784 587	475 040	42 246	8	8	25
Specialization 90 to 99 percent	338	1 719	42 155	123 433	115 987	118 973	76 901	4 460	18	17	30
Specialization 80 to 89 percent	279	1 756	48 840	179 643	147 950	166 128	95 491	13 515	16	16	23
Specialization 70 to 79 percent	183	834	21 044	69 709	51 149	67 391	49 408	2 318	22	20	38
Specialization 60 to 69 percent	70	1 395	42 467	S	S	152 409	90 969	S	25	S	S
Specialization 51 to 59 percent	25	385	9 887	47 154	25 534	39 337	18 974	S	14	38	S
Roofing contractor											
All establishments specializing	16 773	164 136	4 061 628	15 256 621	13 654 860	14 148 414	8 466 688	1 108 208	1	1	4
Specialization 100 percent	10 820	79 880	1 818 040	7 157 787	7 157 787	6 678 406	3 963 296	479 381	2	2	5
Specialization 90 to 99 percent	2 071	29 949	796 148	2 850 566	2 675 818	2 639 576	1 596 357	210 990	5	4	17
Specialization 80 to 89 percent	1 319	21 948	578 138	2 084 223	1 726 326	1 946 273	1 203 324	137 950	4	4	10
Specialization 70 to 79 percent	1 195	16 229	439 752	1 547 918	1 134 658	1 443 314	817 974	104 604	5	5	14
Specialization 60 to 69 percent	946	10 345	276 522	1 032 895	644 714	945 489	539 631	87 406	7	8	12
Specialization 51 to 59 percent	422	5 785	153 029	583 232	315 557	495 355	346 106	87 877	10	8	11
Sheet metal contractor, except HVAC and plumbing											
All establishments specializing	1 817	24 416	792 726	2 429 154	2 075 392	2 226 687	1 436 399	202 467	5	4	4
Specialization 100 percent	1 224	12 873	400 145	1 172 595	1 172 595	1 102 522	732 861	70 073	7	6	4
Specialization 90 to 99 percent	158	2 428	84 802	278 145	262 410	239 075	153 483	39 071	12	12	10
Specialization 80 to 89 percent	113	2 070	62 904	188 128	153 706	174 832	121 938	13 296	14	8	4
Specialization 70 to 79 percent	125	2 061	65 929	198 114	145 612	182 391	113 561	15 723	14	11	10
Specialization 60 to 69 percent	139	2 326	79 276	271 222	168 871	238 110	149 874	33 112	9	8	14
Specialization 51 to 59 percent	57	2 657	99 669	320 949	172 198	289 756	164 681	31 193	17	15	7
Siding contractor											
All establishments specializing	5 330	20 599	477 133	2 192 959	1 876 850	1 864 694	1 014 469	328 264	5	5	10
Specialization 100 percent	2 926	9 957	218 117	1 050 865	1 050 865	878 652	463 569	172 213	7	9	14
Specialization 90 to 99 percent	734	2 214	44 725	200 216	186 351	173 251	86 741	26 965	14	13	20
Specialization 80 to 89 percent	483	2 156	53 177	214 407	176 736	193 730	113 101	20 677	12	14	31
Specialization 70 to 79 percent	510	2 473	57 580	241 422	179 019	212 075	117 506	\$29 346	19	19	42
Specialization 60 to 69 percent	449	1 682	42 747	213 797	134 001	178 066	95 075	35 731	15	17	32
Specialization 51 to 59 percent	228	2 117	60 788	272 252	149 878	228 919	138 477	43 333	14	15	19
Specialty sheet metal contractor, including decking and metal ceilings											
All establishments specializing	486	4 520	145 551	512 295	438 025	492 255	297 698	20 040	8	9	19
Specialization 100 percent	295	2 629	82 506	280 062	280 062	267 657	155 194	12 406	12	12	30
Specialization 90 to 99 percent	*83	S	10 769	S	S	S	S	144	S	S	Z
Specialization 80 to 89 percent	7	159	4 220	11 171	9 082	D	7 410	D	3	3	D
Specialization 70 to 79 percent	*59	429	12 587	36 973	27 306	D	23 883	D	8	7	D
Specialization 60 to 69 percent	18	443	18 373	73 091	45 538	68 363	30 324	4 728	11	15	11
Specialization 51 to 59 percent	*23	466	17 096	69 204	37 087	67 517	47 492	1 688	31	35	23

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	Value of construction work done in this state	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—			
		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			
235610, ROOFING, SIDING, & SHEET METAL CONTRACTORS											
United States	23 967 096	19 515	17 247 375	5 080	1 999 570	10 975	4 720 151	1	1	3	
Alabama	306 904	246	167 874	91	33 289	180	105 741	15	17	9	
Alaska	71 222	^{§46}	^{§45} 884	^{§38}	9 402	^{§21}	15 936	26	41	15	
Arizona	381 914	262	304 271	30	23 719	144	53 925	6	4	5	
Arkansas	133 401	150	74 041	49	28 984	^{§43}	^{§30} 377	16	19	17	
California	2 720 514	1 967	2 141 434	48	53 525	1 057	525 555	3	4	4	
Colorado	576 107	390	401 576	44	^{§26} 145	206	148 386	9	13	40	
Connecticut	348 216	260	241 071	57	20 896	161	86 249	8	12	9	
Delaware	122 315	46	53 823	52	51 083	^{§35}	17 409	3	11	2	
District of Columbia	92 330	^{§16}	D	79	D	—	—	2	D	D	
Florida	1 459 598	1 217	1 004 743	100	79 709	728	375 147	4	6	2	
Georgia	604 219	448	381 033	201	82 635	286	140 552	6	8	7	
Hawaii *	144 875	108	124 591	4	4 428	^{§19}	^{§15} 856	18	22	Z	
Idaho	102 896	87	75 424	56	11 174	84	16 298	13	17	16	
Illinois	1 316 468	935	989 193	234	80 100	454	247 175	3	4	11	
Indiana	573 880	535	441 593	197	50 711	250	81 575	7	9	14	
Iowa	252 098	255	183 255	72	20 034	140	48 810	7	7	12	
Kansas	237 705	250	150 394	150	37 869	133	49 442	6	9	7	
Kentucky	355 498	288	207 054	202	59 898	152	88 546	7	12	13	
Louisiana	288 354	342	201 329	69	21 719	106	65 306	10	16	14	
Maine	89 854	52	75 738	7	582	15	13 534	3	4	13	
Maryland	507 698	282	270 415	127	76 965	218	160 318	11	8	11	
Massachusetts	485 244	365	332 216	109	43 392	197	109 637	8	12	19	
Michigan	901 298	638	711 412	198	49 050	381	140 837	4	5	6	
Minnesota	586 275	393	483 727	133	23 990	173	78 558	6	8	8	
Mississippi	175 814	172	124 693	122	37 235	73	^{§13} 885	8	10	9	
Missouri	549 544	504	352 182	142	75 038	384	122 323	5	8	14	
Montana	48 977	81	43 910	^{§8}	D	^{§45}	D	15	19	D	
Nebraska	173 509	156	150 759	65	15 219	33	7 531	17	19	32	
Nevada	213 614	84	159 062	108	34 782	26	19 771	7	10	16	
New Hampshire	73 056	^{§54}	49 438	80	9 402	^{§52}	^{§14} 216	12	20	19	
New Jersey	814 087	559	557 418	217	72 331	410	184 338	9	13	7	
New Mexico	79 768	^{§59}	35 072	^{§39}	15 675	91	29 021	8	13	4	
New York	1 064 668	790	737 664	147	39 404	718	287 599	4	5	8	
North Carolina	739 265	769	581 495	145	83 227	362	74 543	7	9	4	
North Dakota	69 832	67	47 085	^{§31}	^{§2} 857	^{§34}	19 890	5	7	40	
Ohio	1 192 008	1 117	912 245	222	96 934	496	182 829	4	5	16	
Oklahoma	188 825	179	129 646	69	13 357	106	45 822	8	11	7	
Oregon	410 290	424	288 214	101	38 484	216	83 593	6	7	35	
Pennsylvania	1 067 359	1 040	756 846	195	68 159	434	242 354	3	5	19	
Rhode Island	68 120	80	47 110	31	6 428	^{§49}	^{§14} 582	10	18	23	
South Carolina	326 738	293	227 890	160	56 283	179	^{§42} 566	12	15	8	
South Dakota	48 683	43	39 053	31	5 756	^{§28}	S	13	14	20	
Tennessee	397 109	330	254 543	136	62 469	233	80 097	5	8	13	
Texas	1 326 799	925	1 001 925	65	47 660	667	277 214	6	8	8	
Utah	197 435	252	153 102	10	3 697	85	^{§40} 636	12	7	1	
Vermont	47 708	72	33 703	^{§29}	5 833	^{§38}	8 172	12	19	25	
Virginia	774 484	584	541 600	229	113 033	338	119 850	6	9	13	
Washington	623 674	603	489 731	76	52 513	353	81 431	5	7	8	
West Virginia	109 027	97	40 754	69	18 708	96	49 565	14	13	9	
Wisconsin	468 856	532	386 377	118	27 660	244	54 819	5	6	12	
Wyoming	58 961	73	D	89	D	1	D	15	D	D	

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) millwrighting. 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) millwrighting. 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

