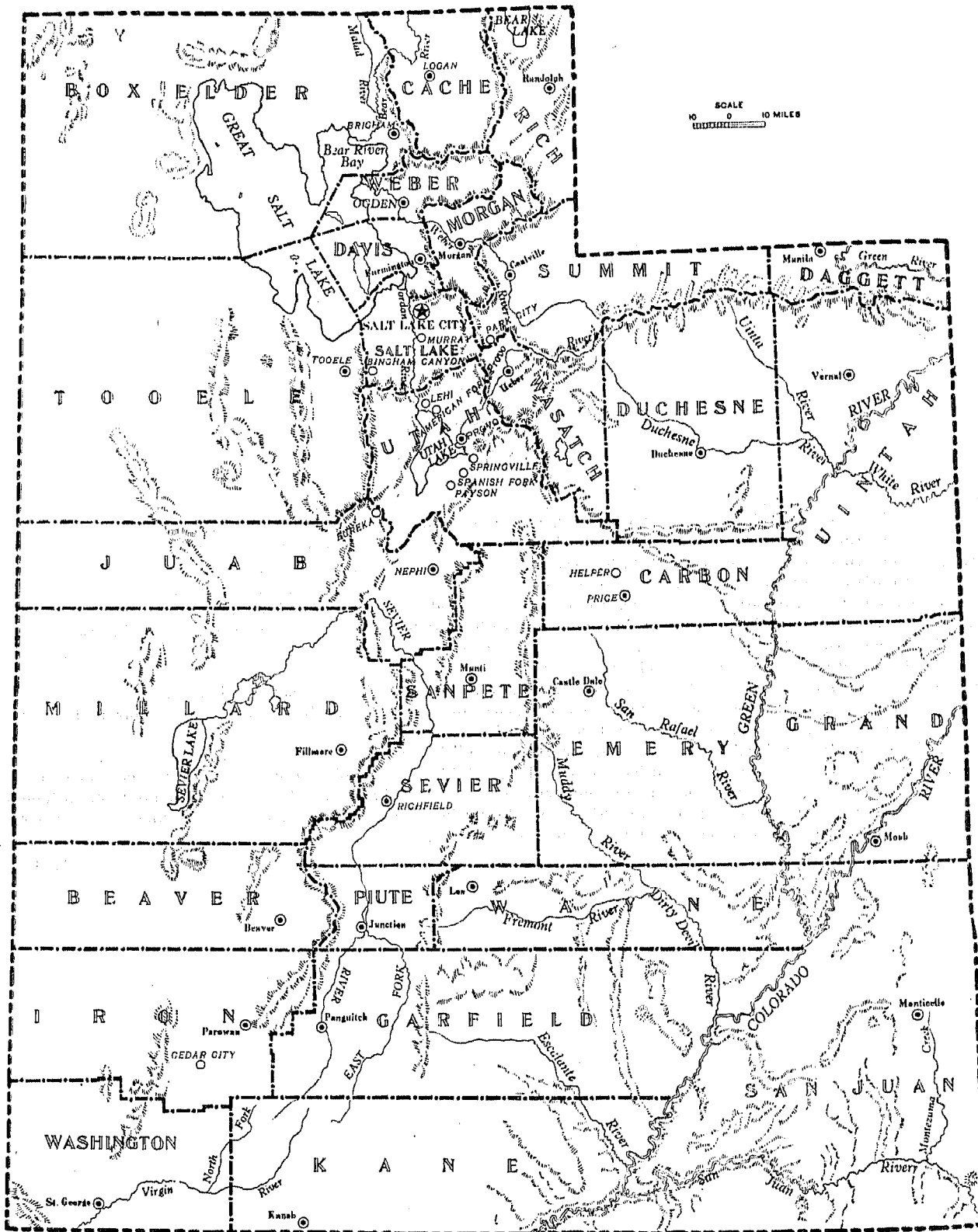


# UTAH

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# UTAH



# CONSTRUCTION—UTAH

1203

TABLE 1.—VALUE OF CONSTRUCTION BUSINESS DURING 1929, AND PRINCIPAL ITEMS OF EXPENDITURE

[Values expressed in thousands]

AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	Number of establishments	VALUE OF CONSTRUCTION BUSINESS			PRINCIPAL EXPENDITURES			AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	Number of establishments	VALUE OF CONSTRUCTION BUSINESS			PRINCIPAL EXPENDITURES		
		Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials			Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials
<b>UTAH</b> .....	129	\$17,350	\$13,670	\$3,780	\$4,461	\$4,041	\$4,717	<b>UTAH—Continued</b>							
<i>Counties and principal city</i>								<i>Size of business groups—Continued</i>							
Counties:								Subcontractors.....	68	\$4,676	\$944	\$3,731	\$160	\$1,327	\$1,678
Caché.....	4	484	382	102	33	174	100	\$25,000 to \$49,999.....	32	1,093	292	806	7	316	495
Salt Lake.....	94	11,335	7,934	3,401	2,288	2,792	3,854	\$50,000 to \$99,999.....	23	1,615	432	1,183	21	448	742
Utah.....	12	1,003	850	123	220	235	279	\$100,000 to \$199,999.....	6	799	211	588	26	185	355
Weber.....	15	4,300	4,182	124	1,840	850	843	\$200,000 to \$499,999.....	1	211	211	—	53	85	—
Other counties <sup>1</sup> .....	4	222	192	30	61	52	51	\$500,000 to \$999,999.....	1	952	9	943	97	332	—
Principal city: <sup>2</sup>								\$1,000,000 and over.....	1	—	—	—	—	—	—
Salt Lake City.....	93	11,297	7,807	3,400	2,282	2,723	3,835	<b>SALT LAKE CITY</b> .....	93	11,297	7,897	3,400	2,282	2,723	3,835
<i>Classification of establishments</i>								Operative builders.....	5	439	439	—	207	71	139
Operative builders.....	6	494	494	—	215	84	152	General contractors.....	38	6,723	6,707	16	1,930	1,452	2,204
General contractors.....	60	12,180	12,132	49	4,086	2,630	2,886	Building.....	31	5,712	5,710	2	1,930	1,114	1,987
Building.....	42	6,771	6,700	2	2,273	1,294	2,852	Building not specialized.....	27	5,461	5,459	2	1,850	1,032	1,870
Building not specialized.....	37	6,484	6,482	2	2,187	1,257	2,216	Residential building only.....	4	251	251	—	80	32	117
Residential building only.....	5	287	287	—	86	87	136	Street paving and highway.....	4	797	797	—	250	306	—
Highway.....	9	1,374	1,342	32	156	505	201	Other classes <sup>7</sup> .....	3	213	199	15	89	—	
Grading.....	3	215	200	15	11	85	30	Subcontractors.....	50	4,185	751	3,384	145	1,200	1,402
Street paving.....	3	715	715	—	211	211	303	Electrical.....	11	430	125	305	—	122	190
Other classes <sup>8</sup> .....	3	3,105	3,105	—	1,646	476	30	Heating and plumbing.....	10	784	291	493	23	169	436
Subcontractors.....	68	4,075	944	3,731	150	1,327	1,678	Heating and piping <sup>4</sup> .....	3	205	—	205	6	48	107
Electrical.....	13	493	126	367	—	138	215	Plumbing.....	7	579	291	288	18	121	320
Heating and plumbing.....	18	1,100	437	722	28	237	654	Masonry and concreting.....	4	411	10	401	25	140	149
Heating and piping <sup>4</sup> .....	6	394	15	369	9	83	199	Painting, decorating, and glazing.....	7	376	51	325	—	152	123
Plumbing.....	12	775	422	353	19	155	455	Plastering and lathing.....	3	111	—	111	—	41	38
Masonry and concreting.....	5	444	27	417	25	152	156	Roofing and sheet-metal work.....	7	508	182	326	—	111	240
Painting, decorating, and glazing.....	7	376	50	326	—	152	123	Roofing.....	3	324	155	169	—	65	178
Plastering and lathing.....	4	141	30	111	—	53	47	Sheet-metal work.....	4	184	27	157	—	46	71
Roofing and sheet-metal work.....	7	508	182	326	—	111	249	Marble and tiling.....	5	371	38	333	—	91	168
Roofing.....	3	324	155	169	—	65	178	Other classes <sup>9</sup> .....	3	1,144	54	1,090	67	375	43
Sheet-metal work.....	4	184	27	157	—	40	71	<i>Size of business groups</i>							
Marble and tiling.....	5	371	38	333	—	91	168	General contractors <sup>5</sup> .....	43	7,162	7,146	16	2,137	1,523	2,433
Other classes <sup>9</sup> .....	4	1,183	54	1,129	97	393	64	\$25,000 to \$49,999.....	6	225	225	60	55	67	
<i>Size of business groups</i>								\$50,000 to \$99,999.....	10	1,180	1,165	15	489	194	278
General contractors <sup>5</sup> .....	66	12,675	12,626	49	4,301	2,714	3,039	\$100,000 to \$199,999.....	5	718	718	—	210	163	213
\$25,000 to \$49,999.....	10	379	373	6	87	100	117	\$200,000 to \$499,999.....	14	3,958	3,956	2	1,049	918	1,394
\$50,000 to \$99,999.....	25	1,823	1,794	29	644	337	454	\$500,000 to \$999,999.....	2	1,082	1,082	—	329	193	480
\$100,000 to \$199,999.....	12	1,770	1,770	—	525	379	486	\$1,000,000 and over.....	—	—	—	—	—	—	
\$200,000 to \$499,999.....	16	4,613	4,599	14	1,070	1,269	1,500	Building contractors <sup>6</sup> .....	36	6,151	6,149	2	2,137	1,185	2,120
\$500,000 to \$999,999.....	2	1,082	1,082	—	329	194	480	\$25,000 to \$49,999.....	4	166	166	—	60	23	50
\$1,000,000 and over.....	1	3,008	3,008	—	1,046	436	—	\$50,000 to \$99,999.....	14	1,020	1,026	—	489	134	276
Building contractors <sup>6</sup> .....	48	7,265	7,263	2	2,488	1,378	2,504	\$100,000 to \$199,999.....	4	603	603	—	210	117	213
\$25,000 to \$49,999.....	6	242	242	—	76	35	90	\$200,000 to \$499,999.....	12	3,274	3,272	2	1,049	718	1,101
\$50,000 to \$99,999.....	20	1,461	1,461	—	639	299	397	\$500,000 to \$999,999.....	2	1,082	1,082	—	329	193	480
\$100,000 to \$199,999.....	8	1,207	1,207	—	395	222	434	\$1,000,000 and over.....	—	—	—	—	—	—	
\$200,000 to \$499,999.....	12	3,273	3,271	2	1,049	718	1,102	Subcontractors.....	50	4,135	751	3,384	145	1,200	1,402
\$500,000 to \$999,999.....	2	1,082	1,082	—	329	194	481	\$25,000 to \$49,999.....	23	805	171	634	6	229	361
\$1,000,000 and over.....	—	—	—	—	—	—	—	\$50,000 to \$99,999.....	19	1,369	361	1,008	17	402	600
								\$100,000 to \$199,999.....	6	798	210	588	25	185	354
								\$200,000 to \$499,999.....	1	211	211	—	53	85	
								\$500,000 to \$999,999.....	1	952	9	943	97	332	
								\$1,000,000 and over.....	—	—	—	—	—	—	

<sup>1</sup> Includes Box Elder, Carbon, and Sevier, for which data cannot be shown separately without revealing individual operations. From areas other than those listed no reports were received from establishments which handled as much as \$25,000 business during 1929.

<sup>2</sup> Figures are included in respective county totals.

<sup>3</sup> Includes bridge and culvert; sewer, gas, water, and conduit; and railroad.

<sup>4</sup> Includes automatic temperature control; and plumbing and heating combined.

<sup>5</sup> Includes excavating; ornamental iron; bridge and culvert; and rental of equipment, trucking, etc.

<sup>6</sup> Includes operative builders.

<sup>7</sup> Includes grading; and sewer, gas, water, and conduit.

<sup>8</sup> Includes plumbing and heating combined; and automatic temperature control.

<sup>9</sup> Includes excavating; ornamental iron; and rental of equipment, trucking, etc.

CONSTRUCTION—UTAH

TABLE 2.—CONSTRUCTION BUSINESS OF REPORTING ESTABLISHMENTS DURING 1929, BY CLASS OF OWNERSHIP AND BY TYPE OF WORK

CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—						CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—					
	All classes of establishments		General contractors <sup>1</sup>		Subcontractors			All classes of establishments		General contractors <sup>1</sup>		Subcontractors	
	Number reporting	Value	Number reporting	Value	Number reporting	Value		Number reporting	Value	Number reporting	Value	Number reporting	Value
<b>UTAH</b>						<b>SALT LAKE CITY</b>							
All construction business.....	120	\$17,349,982	66	\$12,674,685	63	\$4,675,297	All construction business.....	93	\$11,207,208	43	\$7,161,010	50	\$4,135,388
Distribution not reported.....	4	327,809	1	114,808	3	213,001	Distribution not reported.....	3	302,809	1	114,808	2	188,001
Distributed by class of ownership.....	126	17,022,173	65	12,550,877	60	4,462,296	Distributed by class of ownership.....	90	10,994,489	42	7,047,102	48	3,947,387
Private.....	105	11,076,050	53	8,175,337	52	2,900,713	Private.....	81	7,610,290	38	4,979,040	43	2,030,350
Quasi-public or community.....	29	1,107,081	11	570,458	18	531,223	Quasi-public or community.....	21	940,332	7	605,080	14	440,046
Public.....	50	4,838,442	33	3,808,082	26	1,030,300	Public.....	32	2,437,807	10	1,661,470	10	876,311
Distribution not reported.....	5	201,470	3	247,323	2	44,147	Distribution not reported.....	4	289,323	3	247,323	1	42,000
Distributed by class of public ownership.....	54	4,540,972	30	3,560,769	24	980,213	Distributed by class of public ownership.....	28	2,148,544	13	1,314,153	15	884,391
Federal.....	13	1,400,105	9	920,880	4	500,315	Federal.....	8	590,048	5	63,122	3	527,526
State.....	24	1,420,668	18	1,334,111	6	95,557	State.....	9	328,528	5	274,875	4	53,053
County or township.....	19	610,790	10	542,919	9	67,871	County or township.....	10	400,145	4	346,474	0	53,071
Municipal.....	27	1,010,310	12	753,849	15	262,470	Municipal.....	17	820,223	8	620,682	0	199,541
All business under general contract or directly for owners.....	00	13,570,158	00	12,625,982	24	944,176	All business under general contract or directly for owners.....	00	7,806,050	43	7,145,024	17	761,332
Distribution not reported.....	1	114,808	1	114,808	---	---	Distribution not reported.....	1	114,808	1	114,808	---	---
Distributed by class.....	80	13,455,350	66	12,511,174	24	944,176	Distributed by class.....	50	7,782,148	42	7,030,810	17	751,332
Building.....	73	7,858,141	51	6,939,656	22	918,485	Building.....	54	6,041,509	38	5,899,801	10	741,648
Distribution not reported.....	3	236,030	---	---	3	236,030	Distribution not reported.....	4	236,030	---	---	4	236,030
Distributed by class of building.....	70	7,022,111	51	6,939,656	19	682,456	Distributed by class of building.....	50	6,405,479	38	5,899,801	12	505,618
Commercial.....	31	1,931,556	22	1,709,185	9	162,371	Commercial.....	22	1,488,170	15	1,432,218	7	155,952
Educational.....	23	1,186,035	13	1,026,238	10	169,797	Educational.....	13	858,090	7	770,063	0	87,727
Hotel.....	0	507,538	4	770,351	2	150,026	Hotel.....	0	498,638	3	760,454	2	187,040
Hospital and institutional.....	10	413,730	3	(?)	1	(?)	Hospital and institutional.....	0	308,056	2	(?)	1	(?)
Manufacturing.....	10	440,909	0	(?)	1	(?)	Manufacturing.....	7	406,012	0	(?)	1	(?)
Military and naval.....	2	77,200	2	75,694	3	1,572	Military and naval.....	0	8,420	1	(?)	2	(?)
Public: Courts, jails, etc.....	5	---	2	---	---	---	Public: Courts, jails, etc.....	2	439,065	5	(?)	2	(?)
Religious and memorial.....	12	513,132	8	483,147	4	29,985	Religious and memorial.....	7	1,093,283	23	1,601,058	0	31,025
Residential.....	41	1,988,933	31	1,893,618	10	95,015	Residential.....	29	1,093,283	3	43,269	---	---
Social and recreational.....	4	15,804	2	(?)	2	(?)	Social and recreational.....	3	43,269	3	43,269	---	---
Air transport.....	3	43,263	3	43,263	---	---	Air transport.....	---	---	---	---	---	
Rail and water transportation.....	5	221,939	5	221,939	---	---	Rail and water transportation.....	5	221,939	5	221,939	---	---
Miscellaneous, n. e. s.....	12	270,237	9	196,003	3	70,574	Miscellaneous, n. e. s.....	0	248,237	1	108,463	1	70,774
Highway and street.....	19	1,721,151	18	(?)	1	(?)	Highway and street.....	0	687,330	0	687,330	---	---
Railroad and car line.....	0	1,930,050	0	1,930,050	---	---	Railroad and car line.....	4	202,280	4	202,280	---	---
Public works and utilities.....	17	1,150,281	15	(?)	2	(?)	Public works and utilities.....	9	178,231	3	(?)	1	(?)
Bridge, tunnel, etc.....	8	176,565	8	176,565	---	---	Bridge, tunnel, etc.....	2	---	2	(?)	---	---
Central station, light, and power plant.....	1	---	1	(?)	---	---	Central station, light, and power plant.....	1	70,310	1	(?)	---	---
Flood control, irrigation, and land drainage.....	3	500,261	2	(?)	1	(?)	Flood control, irrigation, and land drainage.....	2	---	2	(?)	1	(?)
Park grounds, etc.....	2	---	2	---	---	---	Park grounds, etc.....	2	57,771	2	57,771	---	---
Sewage disposal and drainage.....	3	110,064	3	110,064	---	---	Sewage disposal and drainage.....	2	---	2	---	---	---
Water supply.....	7	304,401	0	(?)	1	(?)	Water supply.....	3	44,144	3	44,144	---	---
Air transport.....	3	0,843	2	(?)	1	(?)	Air transport.....	3	72,708	2	(?)	1	(?)
Miscellaneous, n. e. s.....	3	788,284	3	788,284	---	---	Miscellaneous, n. e. s.....	3	---	3	---	---	---
All business under subcontract.....	60	3,770,824	0	48,703	54	3,731,121	All business under subcontract.....	40	3,400,342	3	10,286	43	3,384,056
Concrete.....	3	100,700	1	(?)	2	(?)	Concrete.....	0	304,043	---	---	0	304,643
Electrical.....	12	309,032	---	---	12	309,032	Electrical.....	8	500,788	---	---	8	500,788
Heating and plumbing.....	14	720,521	---	---	14	720,521	Heating and plumbing.....	8	244,880	---	---	8	244,880
Heating and piping.....	3	354,301	---	---	3	354,301	Heating and piping.....	0	261,908	---	---	0	261,908
Pipe covering.....	3	0,500	---	---	3	0,500	Pipe covering.....	3	262,520	---	---	3	262,520
Plumbing.....	12	350,720	---	---	12	350,720	Plumbing.....	5	325,368	---	---	5	325,368
Masonry.....	3	262,520	---	---	3	262,520	Masonry.....	2	---	---	---	2	---
Painting and decorating.....	5	325,368	---	---	5	325,368	Painting and decorating.....	5	---	---	---	5	---
Glass and glazing.....	3	111,203	---	---	3	111,203	Glass and glazing.....	5	311,044	---	---	5	311,044
Plastering and lathing.....	6	323,044	---	---	6	323,044	Plastering and lathing.....	3	111,203	---	---	3	111,203
Roofing and sheet-metal work.....	4	333,002	---	---	4	333,002	Roofing and sheet-metal work.....	5	311,044	---	---	5	311,044
Marble and tiling.....	3	979,709	---	---	3	979,709	Marble and tiling.....	4	333,002	---	---	4	333,002
Excavating.....	3	41,088	---	---	3	41,088	Excavating.....	0	1,244,874	3	10,286	0	1,228,588
Highway.....	3	---	---	---	---	---	Highway.....	---	---	---	---	---	---
Other classes.....	0	152,734	2	(?)	4	(?)	Other classes.....	---	---	---	---	---	---

<sup>1</sup> Includes operative builders.  
<sup>2</sup> Value omitted in order to avoid disclosing individual operations. The amounts omitted are, however, included in the respective totals.  
<sup>3</sup> Includes one establishment reporting water power development work.  
<sup>4</sup> Includes 1 establishment reporting plumbing and heating combined, and 1 automatic temperature control.  
<sup>5</sup> Includes establishments reporting the following types of work: General contractors: Carpentering and wood flooring, 1; bridge and culvert, 1; Subcontractors: Carpentering and wood flooring, 1; ornamental iron work, 1; bridge and culvert, 1; and rental of equipment, trucking, etc., 1.  
<sup>6</sup> Includes establishments reporting the following types of work: General contractors: Water power development, 1; air transport work, 1; Subcontractors: Air transport work, 1.  
<sup>7</sup> Includes establishments reporting the following types of work: Pipe covering, 1; plumbing and heating combined, 1; automatic temperature control, 1.  
<sup>8</sup> Includes establishments reporting the following types of work: General contractors: Carpentering and wood flooring, 1; highway, 1; bridge and culvert, 1; subcontractors: Carpentering and wood flooring, 1; concrete, 1; excavating, 2; ornamental iron, 1; rental of equipment, trucking, etc., 1.



# CONSTRUCTION--UTAH

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TABLE 3.—CONSTRUCTION BUSINESS DURING 1929, BY LOCATION

CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	UTAH			SALT LAKE CITY				
		Total	In home city	In home State	Total	In home city	In home State	Outside home State	
<b>UTAH</b> .....	127	\$16,942,673	\$8,122,472	\$13,026,372	\$3,816,301				
Operative builders.....	6	494,307	438,302	494,307	439,307	383,302	439,307		
General contractors.....	58	11,773,069	5,047,076	8,693,602	3,079,407				
Building.....	40	6,303,638	4,477,291	5,723,681	640,255				
Building not specialized.....	35	6,077,093	4,100,448	5,436,832	640,255				
Residential building only.....	5	280,843	280,843	280,843					
Highway.....	0	1,374,117	66,817	987,753	388,364				
Grading.....	3	215,049		192,635	22,514				
Street paving.....	3	714,547	480,368	714,547					
Other classes <sup>1</sup> .....	3	3,105,420	14,500	1,075,146	2,030,274				
Subcontractors.....	63	4,075,207	2,636,194	3,838,403	836,894				
Electrical.....	13	492,899	460,900	492,899					
Heating and plumbing.....	18	1,150,728	944,060	1,086,683	73,045				
Heating and piping <sup>2</sup> .....	0	384,450	290,374	341,447	43,003				
Plumbing.....	12	775,278	644,686	746,236	30,042				
Masonry and concreting.....	5	443,820	150,120	357,184	86,642				
Painting, decorating, and glazing.....	7	370,302	318,054	309,873	6,519				
Plastering and lathing.....	4	141,203	77,754	137,183	4,020				
Roofing and sheet-metal work.....	7	507,088	207,104	461,639	46,349				
Roofing.....	3	324,283	112,694	288,934	35,349				
Sheet-metal work.....	4	183,705	154,470	172,705	11,000				
Marble and tiling.....	5	370,542	277,078	330,060	39,882				
Other classes <sup>3</sup> .....	4	1,182,719	128,065	602,282	580,437				

<sup>1</sup> Includes bridge and culvert; sewer, gas, water, and conduit; and railroad.  
<sup>2</sup> Includes automatic temperature control; and plumbing and heating combined.  
<sup>3</sup> Includes excavating; ornamental iron; bridge and culvert; and rental of equipment, trucking, etc.  
<sup>4</sup> Includes grading; and sewer, gas, water, and conduit.  
<sup>5</sup> Includes excavating; ornamental iron; and rental of equipment, trucking, etc.

TABLE 4.—CONSTRUCTION BUSINESS OUTSIDE HOME STATE, BY LOCATION

STATE	LOCATION REPORTED BY—			STATE	LOCATION REPORTED BY—		
	All classes of establishments	General contractors	Subcontractors		All classes of establishments	General contractors	Subcontractors
<b>UTAH</b>				<b>SALT LAKE CITY</b>			
Total distributed by States <sup>1</sup> .....	\$3,910,301	\$3,079,407	\$836,894	Total distributed by States <sup>2</sup> .....	\$1,409,642	\$616,682	\$792,960
Arizona.....	83,334	43,334	54,437	Arizona.....	36,903	36,903	54,437
California.....	1,608,165	938,728	4,097	California.....	569,605	5,168	664,437
Colorado.....	28,597	24,500	4,097	Colorado.....	28,597	24,500	4,097
Idaho.....	652,423	508,876	143,547	Idaho.....	376,338	276,725	99,613
Montana.....	363,961	338,167	25,804	Montana.....	25,804		25,804
Nebraska.....	28,858	20,058	8,800	Nebraska.....	28,858	20,058	8,800
Nevada.....	416,868	387,014	29,854	Nevada.....	77,919	48,065	29,854
Oregon.....	386,778	386,778		Oregon.....	20,500	20,500	
Washington.....	95,910	52,614	42,696	Washington.....	42,696		42,696
Wyoming.....	188,399	179,740	8,659	Wyoming.....	33,814	25,155	8,659
Other States, n. s.....	168,608	159,608	9,000	Other States, n. s.....	168,608	159,608	9,000

Number of establishments reporting:  
<sup>1</sup> All classes, 35; general contractors, 18; subcontractors, 17.  
<sup>2</sup> All classes, 27; general contractors, 12; subcontractors, 15.

TABLE 5.—NUMBER AND SALARIES OF PROPRIETORS, FIRM MEMBERS, AND SALARIED EMPLOYEES: 1929

CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	PROPRIETORS AND FIRM MEMBERS			SALARIED EMPLOYEES						Number reported, by sex			Sex not reported
		Receiving no salary	Receiving salaries		All salaried employees		Officers and clerical staff		Superintendents, foremen, etc.		Total	Male	Female	
			Number	Total annual salaries	Total number	Total annual salaries	Number	Total annual salaries	Number	Total annual salaries				
<b>UTAH</b> .....	125	80	48	\$148,789	310	\$711,821	180	\$403,624	130	\$508,197	286	265	31	24
Operative builders.....	6	2			8	19,482	5	13,075	3	6,407	8	7	1	
General contractors.....	59	52	10	59,265	184	452,107	97	242,164	87	209,943	176	162	14	8
Building.....	42	32	14	55,835	74	193,698	41	103,321	33	85,377	72	64	8	2
Building not specialized.....	37	28	14	55,835	73	188,898	40	103,621	38	85,377	71	63	8	2
Residential building only.....	5	4			1	4,800					1			
Highway and grading.....	11	11	2	3,420	62	95,439	28	41,785	34	53,654	56	54	2	6
Street paving.....	3	3			8	26,700	3	17,400	5	9,300	8	8		
Other classes <sup>1</sup> .....	3	6			40	136,270	25	74,658	15	61,612	40	36	4	
Subcontractors.....	60	26	32	90,534	118	240,232	78	148,385	40	91,847	102	86	16	16
Electrical.....	11	3	1	3,000	24	47,254	18	35,803	6	11,451	11	9	2	13
Heating and plumbing.....	17	8	12	35,850	19	32,486	16	24,941	3	7,545	18	12	6	1
Heating and piping <sup>2</sup> .....	0	3	5	14,360	8	13,513	6	8,713	2	4,800	7	4	3	1
Plumbing.....	11	5	7	21,490	11	18,978	10	16,228	1	2,745	11	10	3	
Masonry and concreting.....	6	6	6	17,542	10	27,071	4	14,000	6	13,071	10	10		
Painting, decorating, and glazing.....	7	2	3	6,000	15	25,373	13	17,973	2	7,400	14	11	3	1
Plastering and lathing.....	4	5			1	3,718			1	3,718	1	1		
Roofing and sheet-metal work.....	7	1	6	14,044	17	24,656	15	20,484	2	4,162	17	12	5	
Roofing.....	3	1	1	3,000	14	21,296	13	19,964	1	1,302	14	9	5	
Sheet-metal work.....	4	1	5	11,044	3	3,800	2	11,500	1	2,860	3	3		
Marble and tiling.....	5	5	2	5,400	8	17,756	5	11,338	3	6,420	7	7		1
Other classes <sup>3</sup> .....	4	2	2	8,098	24	61,918	7	23,838	17	38,080	24	24		

See footnotes at end of table.

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TABLE 5.—NUMBER AND SALARIES OF PROPRIETORS, FIRM MEMBERS, AND SALARIED EMPLOYEES: 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS	Estab-lish-ments reporting	PROPRIETORS AND FIRM MEMBERS			SALARIED EMPLOYEES						Sex not reported			
		Receiving no salary	Receiving salaries		All salaried employees		Officers and clerical staff		Superintendents, foremen, etc.			Number reported, by sex		
			Number	Total annual salaries	Total number	Total annual salaries	Number	Total annual salaries	Number	Total annual salaries		Total	Male	Female
<b>SALT LAKE CITY</b> .....	90	51	33	\$111,099	186	\$428,279	116	\$268,872	70	\$167,407	173	151	22	12
Operative builders.....	5	2			5	0,014	3	4,050	2	4,364	5	4	1	
General contractors.....	37	31	10	46,715	70	100,805	42	111,104	34	70,731	74	67	7	2
Building.....	31	22	10	46,715	57	147,079	34	84,502	23	62,577	55	48	7	2
Building not specialized.....	27	19	10	40,715	50	142,270	33	70,702	23	62,577	54	47	7	2
Residential building only.....	4	3			1	4,800	1	4,800			1	1		
Street paving.....	3	6			8	20,700	3	17,400	5	0,300	8	8		
Other classes <sup>1</sup> .....	3	3			11	17,110	5	0,202	6	7,854	11	11		
Subcontractors.....	48	18	23	65,284	104	220,370	70	143,058	34	83,312	94	80	14	10
Electrical.....	10	3	1	3,600	19	43,710	15	33,723	4	9,087	11	9	2	8
Heating and plumbing.....	0	3	3	10,600	14	26,989	12	21,844	2	5,145	14	10	4	
Heating and piping <sup>2</sup> .....	3	1			5	8,010	4	0,210	1	2,400	5	3	2	
Plumbing.....	0	2	3	10,600	9	18,379	8	15,634	1	2,745	9	7	2	
Masonry and concreting.....	4		6	17,542	7	24,050	3	13,850	4	10,800	14	7		
Painting, decorating, and glazing.....	7	2	3	6,000	15	25,373	13	17,973	2	7,400	17	11	3	1
Plastering and lathing.....	3	4			1	3,718			4	3,718	1	1		
Roofing and sheet-metal work.....	7	1	0	14,044	17	24,056	15	20,404	2	4,162	17	12	5	
Roofing.....	3		1	3,000	14	21,200	13	19,994	1	1,302	14	9	5	
Sheet-metal work.....	4	1	5	11,044	3	3,300	2	500	1	2,800	3	3		
Marble and tiling.....	5	5	2	5,400	8	17,750	5	11,330	3	6,420	7	7		1
Other classes <sup>3</sup> .....	3		2	8,093	23	50,518	7	23,838	10	35,680	23	23		

<sup>1</sup> Includes bridge and culvert; sewer, gas, water, conduit; and railroad.  
<sup>2</sup> Includes plumbing and heating combined; and automatic temperature control.  
<sup>3</sup> Includes excavating; ornamental iron; bridge and culvert; and rental of equipment, trucking, etc.  
<sup>4</sup> Includes highway; grading; and sewer, gas, water, conduit.  
<sup>5</sup> Includes excavating; ornamental iron; and rental of equipment, trucking, etc.

TABLE 6.—VALUE OF CONSTRUCTION EQUIPMENT, IN COMPARISON WITH CONSTRUCTION BUSINESS AND WAGES PAID DURING 1929

CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT OWNED	Estab-lish-ments reporting	EQUIPMENT		Value of construction business reported	Wages paid	CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT OWNED	Estab-lish-ments reporting	EQUIPMENT		Value of construction business reported	Wages paid
		Pur-chased during the year	Inven-tory value at end of year					Pur-chased during the year	Inven-tory value at end of year		
<b>UTAH</b> .....	117	\$421,782	\$1,793,056	\$16,883,631	\$3,893,281	<b>SALT LAKE CITY</b> .....	86	\$189,170	\$617,439	\$10,945,984	\$2,626,636
<i>Classification of establishments</i>						<i>Classification of establishments</i>					
Operative builders.....	5	45	3,333	440,307	80,155	Operative builders.....	4	45	333	304,307	67,155
General contractors.....	57	325,643	1,336,347	11,878,514	2,572,428	General contractors.....	37	67,154	400,110	6,657,470	1,438,377
Building.....	40	37,835	242,400	6,518,728	1,252,032	Building.....	30	33,781	191,045	5,047,011	1,100,255
Building not specialized.....	36	37,363	230,218	6,207,011	1,230,777	Building not specialized.....	27	33,240	100,213	5,400,050	1,032,200
Residential building only.....	4	532	3,182	221,711	23,155	Residential building only.....	3	532	1,432	186,050	17,005
Highway.....	8	100,245	380,546	1,324,770	547,066	Street paving and highway.....	4	21,072	74,357	707,220	240,551
Grading.....	3	43,703	137,108	215,041	84,604	Other classes <sup>1</sup> .....	3	42,301	140,108	213,239	88,571
Street paving.....	3	10,272	38,357	714,547	211,301	Subcontractors.....	41	91,971	410,990	3,894,201	1,120,104
Other classes <sup>1</sup> .....	3	124,488	537,036	3,105,420	475,836	Electrical.....	10	8,520	30,809	300,809	109,370
Subcontractors.....	55	96,104	453,375	4,855,810	1,230,698	Heating and plumbing.....	9	12,578	14,881	725,455	158,038
Electrical.....	11	8,520	33,385	434,346	121,874	Heating and piping <sup>2</sup> .....	3	10,808	7,837	205,150	48,040
Heating and plumbing.....	16	15,520	32,088	1,047,045	208,803	Plumbing.....	3	10,808	7,837	520,355	104,998
Heating and piping.....	6	11,158	11,011	331,150	70,176	Masonry and concreting.....	4	1,770	00,224	411,037	130,577
Plumbing.....	11	4,371	20,777	710,795	138,718	Painting, decorating, and glazing.....	5	1,088	12,885	320,505	124,713
Masonry and concreting.....	5	3,170	68,358	443,820	151,677	Roofing and sheet-metal work.....	7	5,917	16,108	507,088	111,420
Painting, decorating, and glazing.....	5	1,088	12,885	320,505	124,713	Roofing.....	3	4,507	0,314	324,283	64,088
Plastering and lathing.....	3	3,040	3,340	90,203	41,702	Sheet-metal work.....	4	1,350	0,854	183,705	46,441
Roofing and sheet-metal work.....	7	6,017	16,168	507,088	111,420	Marble and tiling.....	4	12,327	13,205	310,135	77,012
Roofing.....	3	4,507	9,314	324,283	64,088	Other classes <sup>3</sup> .....	5	48,243	206,200	1,213,018	404,955
Sheet-metal work.....	4	1,350	6,854	183,705	46,441	<i>Percentage of equipment owned</i>					
Marble and tiling.....	4	12,327	13,205	310,135	77,012	General contractors <sup>4</sup> .....	41	97,190	406,443	7,051,783	1,505,532
Other classes <sup>3</sup> .....	4	45,703	273,250	1,182,719	303,408	None.....	5			447,115	76,122
<i>Percentage of equipment owned</i>						1% to 25%.....	1		150	34,044	10,850
General contractors <sup>4</sup> .....	62	325,588	1,330,080	12,327,821	2,652,583	26% to 50%.....	3	5,000	01,500	434,782	123,375
None.....	2			447,115	76,122	51% to 75%.....	5	11,350	135,737	830,520	242,437
1% to 25%.....	8		3,150	109,044	29,850	76% to 90%.....	24	80,717	207,010	4,805,870	1,000,272
26% to 50%.....	5	5,400	64,850	641,882	138,875	100%.....	3	132	2,040	370,952	52,476
51% to 75%.....	7	55,040	222,990	1,309,045	402,530	Not reported.....					
76% to 90%.....	40	205,010	1,047,144	9,450,283	1,800,230	Subcontractors.....	44	91,971	410,990	3,894,201	1,120,104
100%.....	3	132	2,040	370,952	52,476	None.....	1			85,577	22,972
Not reported.....						1% to 25%.....					
Subcontractors.....	55	96,104	453,375	4,855,810	1,230,698	26% to 50%.....					
None.....	1			85,577	22,972	51% to 75%.....					
1% to 25%.....						76% to 90%.....	5	32,419	261,180	1,330,643	443,473
26% to 50%.....						100%.....	30	39,480	81,542	2,283,051	576,131
51% to 75%.....						Not reported.....	2	20,072	65,274	185,930	77,528
76% to 90%.....	5	32,419	261,180	1,330,643	443,473						
100%.....	40	43,703	111,783	2,707,204	674,221						
Not reported.....	3	20,072	80,412	223,380	90,032						

<sup>1</sup> Includes bridge and culvert; sewer, gas, water, conduit; and railroad.  
<sup>2</sup> Includes plumbing and heating combined; and automatic temperature control.  
<sup>3</sup> Includes excavating; ornamental iron; bridge and culvert; and rental of equipment, trucking, etc.  
<sup>4</sup> Includes operative builders.  
<sup>5</sup> Includes grading; and sewer, gas, water, and conduit.  
<sup>6</sup> Includes plastering and lathing; excavating; ornamental iron; and rental of equipment, trucking, etc.

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TABLE 7.—WAGE EARNERS, BY MONTHS, AND WAGES PAID DURING 1929

CLASSIFICATION OF ESTABLISHMENTS AND LENGTH OF WORKING WEEK	Estab-lish-ments report-ing	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY												Wages paid during year
		January	Febru-ary	March	April	May	June	July	August	Septem-ber	October	Novem-ber	Decem-ber	
<b>UTAH</b> .....	121	827	984	1,451	2,076	2,555	2,961	3,076	2,950	2,988	2,918	2,514	1,892	\$3,869,558
<i>Classification of establishments</i>														
Operative builders.....	3	10	10	10	10	13	14	14	15	10	22	20	21	20,029
General contractors.....	58	476	539	876	1,305	1,793	2,108	2,193	2,122	2,185	2,109	1,785	1,240	2,680,480
Building.....	41	300	334	550	805	974	1,146	1,134	1,122	1,143	1,197	1,025	746	1,283,984
Building not specialized.....	30	286	326	531	785	946	1,112	1,102	1,089	1,110	1,173	994	726	1,226,907
Residential building only.....	5	14	8	10	20	28	34	32	33	33	24	31	20	37,077
Highway.....	9	62	75	118	242	305	465	519	570	582	477	382	289	564,665
Street paving.....	3	4	4	5	33	117	184	177	151	208	202	105	13	211,391
Other classes <sup>1</sup> .....	5	110	126	203	315	307	313	363	270	282	233	273	201	540,440
Subcontractors.....	60	341	435	565	671	749	839	869	813	784	787	709	562	1,269,049
Electrical.....	12	47	55	80	87	50	69	74	82	72	60	63	55	128,774
Heating and plumbing.....	17	75	70	80	90	124	140	146	135	129	126	119	111	210,620
Heating and piping <sup>2</sup> .....	0	20	34	35	35	40	54	56	57	59	51	48	53	82,509
Plumbing.....	11	46	42	45	54	78	86	90	78	70	75	71	58	128,111
Masonry and concreting.....	5	14	10	45	77	113	109	198	120	125	103	71	41	151,677
Painting, decorating, and glazing.....	7	53	57	68	83	92	90	85	89	85	98	97	71	151,529
Plastering and lathing.....	4	9	16	18	11	18	12	41	49	35	33	22	14	52,522
Roofing and sheet-metal work.....	6	44	45	51	56	62	68	74	78	77	75	63	50	92,967
Marble and tiling.....	5	43	37	46	57	61	67	67	65	71	55	57	53	90,562
Other classes <sup>3</sup> .....	4	56	130	177	201	222	194	184	107	190	237	217	167	393,498
<i>Length of working week</i>														
General contractors <sup>4</sup> .....	61	480	540	886	1,405	1,806	2,122	2,207	2,137	2,204	2,131	1,805	1,270	2,600,509
40-hour, 5-day week.....														
45-hour, 5-day week.....														
50-hour, 5-day week.....														
All other 5-day week.....	27	171	203	288	384	458	605	580	585	575	570	488	308	627,673
44-hour, 5½-day week.....														
49½-hour, 5½-day week.....														
55-hour, 5½-day week.....	1	21	16	11	29	35	41	87	98	50	48	45	61	44,725
All other 5½-day week.....	26	160	147	231	456	783	988	1,050	1,060	1,172	1,066	847	566	1,210,809
48-hour, 6-day week.....	2	4	4	14	23	42	54	70	82	71	67	75	67	77,807
64-hour, 6-day week.....														
60-hour, 6-day week.....	1	8	28	120	144	141	76	33	44	85	138	130	110	108,148
All other 6-day week.....	3	114	146	207	366	335	342	348	243	225	218	197	138	500,163
All other not designated.....	1	8	5	6	6	12	16	18	19	20	24	23	14	22,904
Not reported.....														
Subcontractors <sup>5</sup> .....	60	341	435	565	671	749	839	869	813	784	787	709	562	1,269,049
44-hour, 5½-day week.....	36	173	192	236	281	339	403	410	394	382	373	328	249	615,453
All other 5½-day week.....	2	16	16	14	18	24	25	25	26	24	20	21	36	40,927
48-hour, 6-day week.....	18	110	195	202	297	303	332	314	305	325	303	303	239	519,043
All other 6-day week.....	1	11	10	12	13	18	16	18	15	13	13	12	9	25,352
All other not designated.....	3	22	22	41	62	65	63	84	64	60	56	45	20	68,274
Not reported.....														
<b>SALT LAKE CITY</b> .....	88	559	706	1,038	1,364	1,706	1,966	1,968	1,859	1,915	2,044	1,834	1,308	2,671,549
<i>Classification of establishments</i>														
Operative builders.....	2					3	4	4	5	7	7	8	11	7,029
General contractors.....	37	257	315	529	762	1,033	1,255	1,231	1,143	1,231	1,336	1,179	784	1,422,299
Building.....	30	230	300	502	705	954	1,000	967	894	906	1,010	888	664	1,084,177
Building not specialized.....	26	225	292	487	680	830	970	930	865	877	990	861	648	1,062,260
Residential building only.....	4	14	8	15	16	24	30	28	29	29	20	27	16	31,917
Street paving and highway.....	4	6	6	7	37	150	220	201	178	245	227	153	39	249,551
Other classes <sup>1</sup> .....	3	12	9	20	20	26	20	63	71	80	90	138	81	88,571
Subcontractors.....	47	302	391	509	602	673	707	733	711	677	701	647	508	1,142,221
Electrical.....	10	30	46	71	78	46	57	61	71	62	50	52	45	109,370
Heating and plumbing.....	9	49	46	48	59	84	94	98	84	77	75	75	75	142,431
Heating and piping.....	3	16	17	17	12	22	26	28	28	29	23	25	35	48,040
Plumbing.....	6	33	29	31	47	62	68	70	56	48	52	50	40	94,391
Masonry and concreting.....	4	14	10	45	77	110	145	138	95	95	93	71	41	139,577
Painting, decorating, and glazing.....	7	53	57	68	83	92	90	85	89	85	98	97	71	151,529
Plastering and lathing.....	3	4	11	13	6	11	7	36	44	30	28	17	9	40,522
Roofing and sheet-metal work.....	6	44	45	51	56	62	68	74	76	77	75	63	50	92,967
Marble and tiling.....	5	43	37	46	57	61	67	67	65	71	55	57	53	90,562
Other classes <sup>2</sup> .....	3	56	130	167	186	207	179	174	187	180	227	215	164	375,263
<i>Length of working week<sup>3</sup></i>														
General contractors <sup>4</sup> .....	30	257	315	529	762	1,033	1,259	1,235	1,148	1,238	1,343	1,187	795	1,429,328
44-hour, 5½-day week.....	21	150	181	250	348	412	545	521	487	468	474	428	274	536,393
All other 5½-day week.....	1	21	16	11	26	35	41	87	98	50	48	45	61	44,725
48-hour, 6-day week.....	12	50	52	86	152	351	502	483	408	497	530	484	245	807,164
54-hour, 6-day week.....	1	4	4	4	4	4	10	33	44	48	45	65	67	45,667
All other 6-day week.....	1	8	28	129	144	141	76	33	44	85	138	130	116	108,148
All other not designated.....	2	16	29	37	82	78	69	60	48	64	84	62	18	64,327
Not reported.....	1	8	5	6	6	12	16	18	19	26	24	23	14	22,904
Subcontractors.....	47	302	391	509	602	673	707	733	711	677	701	647	508	1,142,221
44-hour, 5½-day week.....	32	155	171	215	255	312	374	380	363	350	342	302	227	509,867
All other 5½-day week.....	2	16	16	14	18	24	25	25	26	24	20	21	36	40,927
48-hour, 6-day week.....	10	98	172	237	269	269	244	236	253	240	280	269	210	456,056
All other 6-day week.....	1	11	10	12	13	18	16	18	15	13	13	12	9	25,352
All other not designated.....	2	22	22	31	47	50	48	74	54	50	46	43	26	50,059

<sup>1</sup> Includes grading; sewer, gas, water, conduit; and railroad.  
<sup>2</sup> Includes automatic temperature control; and plumbing and heating combined.  
<sup>3</sup> Includes excavating; ornamental iron; bridges and culvert; and rental of equipment, trucking, etc.  
<sup>4</sup> Includes operative builders.  
<sup>5</sup> See complete list of items in this breakdown under "General contractors" for the State.  
<sup>6</sup> Includes grading; and sewer, gas, water, and conduit.  
<sup>7</sup> Includes excavating; ornamental iron; and rental of equipment, trucking, etc.

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TABLE 8.—EXPENDITURES OF REPORTING ESTABLISHMENTS: 1929

CLASSIFICATION OF ESTABLISHMENTS	Es-tab-lish-ments re-port-ing	Value of con-struction business reported	PRINCIPAL ITEMS OF EXPENDITURE			OTHER ITEMS OF EXPENDITURE							
			Sub-con-tract work let	Wages paid	Cost of materials	Salaries		Rent for		Inter-est	Con-tract bond premi-ums	Com-pen-sation and liability insur-ance premi-ums	All other over-head ex-penses
						Propri-eters and firm mem-bers	Em-ploy-ees	Equip-ment	Offices, etc.				
<b>UTAH</b> .....	<b>105</b>	<b>\$15,403,142</b>	<b>\$4,209,000</b>	<b>\$3,467,650</b>	<b>\$4,060,492</b>	<b>\$126,899</b>	<b>\$801,000</b>	<b>\$159,584</b>	<b>\$45,558</b>	<b>\$108,893</b>	<b>\$75,273</b>	<b>\$87,588</b>	<b>\$1,308,799</b>
Operative builders.....	5	290,359	183,000	20,029	44,650	-----	11,482	-----	-----	8,407	75	204	0,350
General contractors.....	51	11,215,205	3,913,000	2,315,795	2,095,519	55,255	402,503	12,055	19,751	74,202	74,700	57,331	687,100
Building.....	30	6,391,516	2,161,000	1,179,534	2,217,145	51,835	188,198	2,631	9,378	34,324	35,730	32,863	104,411
Building not specialized.....	34	6,104,673	2,075,000	1,142,467	2,081,041	51,835	183,398	2,631	9,378	30,777	34,865	32,097	100,330
Residential building only.....	5	286,843	80,000	37,077	136,104	-----	4,800	-----	-----	3,547	874	766	4,072
Highway.....	5	973,741	95,000	430,007	175,080	3,420	51,395	5,300	1,027	10,554	8,988	9,090	207,150
Street paving.....	3	714,547	-----	211,391	303,285	-----	26,700	5,024	1,395	7,464	6,075	5,848	13,480
Other classes <sup>1</sup> .....	4	3,135,491	1,057,000	494,773	-----	-----	130,270	-----	7,051	21,870	23,907	9,524	362,131
Subcontractors.....	40	3,897,488	113,000	1,131,820	1,320,323	71,644	187,024	146,029	25,807	20,284	3,494	29,991	612,253
Electrical.....	9	331,309	-----	93,190	137,295	3,600	30,035	1,310	3,810	2,193	1,111	902	31,370
Heating and plumbing.....	14	876,545	16,000	186,428	474,618	28,960	20,086	1,200	8,967	3,112	2,117	2,012	64,700
Heating and piping <sup>2</sup> .....	6	384,450	9,000	82,500	109,350	14,360	13,513	1,200	4,002	1,050	1,767	700	12,548
Plumbing.....	8	492,095	7,000	103,919	275,250	14,600	13,173	-----	3,975	1,102	350	1,312	52,152
Painting, decorating, and glazing.....	5	311,595	-----	120,672	103,939	-----	25,373	1,500	3,202	10	25	3,004	29,472
Plastering and lathing.....	3	99,203	-----	41,702	34,328	-----	-----	-----	-----	12	42	787	2,412
Roofing and sheet-metal work.....	7	507,988	-----	111,429	248,982	14,044	24,656	6	4,359	12,809	-----	3,684	43,053
Roofing.....	3	324,283	-----	94,988	177,030	3,000	21,206	6	2,859	12,854	-----	2,900	26,527
Sheet-metal work.....	4	183,705	-----	46,441	71,046	11,044	3,360	-----	1,500	15	-----	724	17,420
Marble and tiling.....	6	370,542	-----	90,592	108,300	5,400	17,756	560	3,173	2,116	-----	1,778	49,889
Other classes <sup>3</sup> .....	6	1,460,246	97,000	487,834	153,161	19,640	91,918	142,047	2,296	5,972	190	10,804	390,451
<b>SALT LAKE CITY</b> .....	<b>77</b>	<b>9,592,527</b>	<b>2,101,000</b>	<b>2,290,729</b>	<b>3,321,456</b>	<b>95,999</b>	<b>\$44,876</b>	<b>153,874</b>	<b>\$2,422</b>	<b>\$0,653</b>	<b>\$0,704</b>	<b>\$0,998</b>	<b>715,393</b>
Operative builders.....	4	235,359	175,000	7,020	31,272	-----	1,014	-----	-----	1,601	75	264	1,746
General contractors.....	33	6,145,374	1,818,000	1,254,022	2,155,298	42,715	198,279	7,245	9,748	36,047	30,065	32,416	126,083
Building.....	28	5,332,409	1,818,000	999,727	1,852,013	42,715	141,570	2,221	7,203	28,444	30,290	29,075	83,457
Building not specialized.....	24	5,081,227	1,738,000	967,810	1,735,177	42,715	136,779	2,221	7,203	24,920	29,416	25,434	79,385
Residential building only.....	4	251,182	80,000	31,917	116,830	-----	4,800	-----	-----	3,524	874	641	4,072
Other classes <sup>4</sup> .....	5	812,965	-----	254,205	393,285	-----	20,700	5,024	2,545	7,693	6,375	6,341	42,620
Subcontractors.....	40	3,511,794	103,000	1,029,678	1,134,880	53,284	175,583	140,029	22,674	22,945	2,994	28,228	587,534
Electrical.....	8	293,913	-----	80,695	127,160	3,900	27,091	1,316	3,810	1,570	1,111	962	25,297
Heating and plumbing.....	8	597,211	11,000	127,019	323,010	10,000	21,189	1,200	5,834	1,002	1,587	1,487	47,060
Heating and piping <sup>2</sup> .....	3	205,150	5,000	48,040	100,869	-----	8,610	1,200	2,244	47	1,237	436	3,785
Plumbing.....	5	392,061	6,000	78,979	217,047	10,000	12,579	-----	3,590	1,015	350	1,051	43,275
Painting, decorating, and glazing.....	5	311,595	-----	120,672	103,939	-----	25,373	1,500	3,202	10	25	3,064	29,472
Roofing and sheet-metal work.....	7	507,988	-----	111,429	248,982	14,044	24,656	6	4,359	12,809	-----	3,684	43,053
Roofing.....	3	324,283	-----	94,988	177,036	3,000	21,206	6	2,859	12,854	-----	2,900	26,527
Sheet-metal work.....	4	183,705	-----	46,441	71,046	11,044	3,360	-----	1,500	15	-----	724	17,420
Marble and tiling.....	5	370,542	-----	90,592	108,300	5,400	17,756	500	3,173	2,116	-----	1,778	49,889
Other classes <sup>3</sup> .....	7	1,430,545	97,000	499,301	162,889	19,640	59,518	142,047	2,296	5,309	241	16,353	391,863

<sup>1</sup> Includes grading; sewer, gas, water and conduit; and railroad.  
<sup>2</sup> Includes automatic temperature control; and plumbing and heating combined.  
<sup>3</sup> Includes masonry; ornamental iron; excavating; bridge and culvert; and rental of equipment, trucking, etc.  
<sup>4</sup> Includes grading; street paving; and sewer, gas, water and conduit.  
<sup>5</sup> Includes plastering and lathing; masonry; excavating; ornamental iron; and rental of equipment, trucking, etc.

CONSTRUCTION—UTAH

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TABLE 9.—COST OF MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, BY KIND

KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—					KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—				
	All classes of establishments			General contractors <sup>1</sup>	Subcontractors		All classes of establishments			General contractors <sup>2</sup>	Subcontractors
	Amount	Percent distribution	Per \$1,000 construction work done <sup>3</sup>				Amount	Percent distribution	Per \$1,000 construction work done <sup>3</sup>		
<b>UTAH</b>					<b>SALT LAKE CITY</b>						
All kinds of material.....	\$4,710,577		\$365.65	\$3,038,705	\$1,677,782	All kinds of material.....	\$3,835,104	\$425.41	\$2,432,681	\$1,402,423	
Distribution not reported.....	840,810	18.0		662,094	187,125	Distribution not reported.....	607,252	15.8	430,127	177,125	
Distributed by kind.....	3,869,768	100.0		2,376,611	1,490,657	Distributed by kind.....	3,227,852	100.0	2,002,554	1,225,298	
Sand, gravel, stone, slag, cinders, etc.....	209,292	7.7	28.30	267,735	31,557	Sand, gravel, stone, slag, cinders, etc.....	201,222	6.2	26,52	170,965	24,257
Brick (face, common, fire, paving, etc.).....	243,008	6.3	22.98	140,008	97,060	Brick (face, common, fire, paving, etc.).....	232,168	7.2	30.60	135,108	97,060
Tile, (fireproofing).....	35,505	.9	3.36	7,952	27,553	Tile, (fireproofing).....	35,505	1.1	4.68	7,952	27,553
Tile, facing, terra cotta, floor, and wall.....	146,142	3.8	13.82	15,907	130,235	Tile, facing, terra cotta, floor, and wall.....	144,642	4.5	19.00	14,407	130,235
Concrete and cinder block.....	25,092	.6	2.37	24,225	667	Concrete and cinder block.....	20,742	.6	2.74	20,075	667
Cut stone, granite and marble.....	19,295	.5	1.82	2,205	17,000	Cut stone, granite and marble.....	19,295	.6	2.54	2,295	17,000
Riprap, rubble, etc.....	10,400	.3	.98	10,400		Riprap, rubble, etc.....	10,200	.3	1.34	10,200	
Cement.....	300,200	10.3	37.75	381,709	17,491	Cement.....	345,237	10.7	45.50	330,730	8,451
Lime.....	20,527	.5	1.94	8,370	12,151	Lime.....	19,025	.6	2.51	7,174	11,851
Plaster, etc.....	69,787	1.8	6.60	44,187	25,600	Plaster, etc.....	61,951	1.9	8.16	42,951	19,000
Structural steel.....	127,881	3.3	12.09	127,881		Structural steel.....	111,881	3.5	14.74	111,881	
Reinforcing steel.....	92,874	2.4	8.78	90,082	2,792	Reinforcing steel.....	81,833	2.6	10.78	80,641	1,192
Cast iron, miscellaneous (excluding pipe).....	6,900	.2	.66	4,960	2,000	Cast iron, miscellaneous (excluding pipe).....	6,560	.2	.80	4,500	2,000
Metal doors, windows, and trim.....	67,928	1.8	6.42	62,928	5,000	Metal doors, windows, and trim.....	57,022	1.8	7.52	52,022	5,000
Metal and wire lath and furring.....	22,093	.6	2.09	10,747	11,346	Metal and wire lath and furring.....	19,993	.6	2.63	10,147	9,846
Ornamental metal work.....	42,233	1.1	3.99	14,233	28,000	Ornamental metal work.....	40,891	1.3	5.39	12,891	28,000
Lumber, rough and finished.....	539,066	13.9	50.68	531,511	7,555	Lumber, rough and finished.....	442,426	13.7	53.31	439,371	3,055
Lath, shingles, and shakes (wood).....	42,537	1.1	4.02	38,836	3,701	Lath, shingles, and shakes (wood).....	41,537	1.3	5.43	37,836	3,701
Millwork.....	125,999	3.3	11.92	125,999		Millwork.....	112,699	3.5	14.85	112,699	
Composition board.....	12,449	.3	1.18	12,449		Composition board.....	10,899	.3	1.44	10,899	
Waterproofing materials.....	3,281	.1	.31	3,281		Waterproofing materials.....	2,581	.1	.34	2,581	
Hardware, rough and finished.....	80,405	2.1	7.00	75,405	5,000	Hardware, rough and finished.....	70,205	2.2	10.04	71,205	5,000
Paints, varnishes, glass.....	151,505	3.9	14.33	36,236	115,279	Paints, varnishes, glass.....	150,405	4.7	19.33	35,189	115,279
Roofing and sheet metal.....	222,282	5.7	21.02	31,162	191,120	Roofing and sheet metal.....	214,282	6.6	28.24	27,162	187,120
Finished flooring (other than cement, wood, or tile).....	6,230	.2	.59	6,230		Finished flooring (other than cement, wood, or tile).....	4,630	.1	.61	4,630	
Screens, shades, awnings, etc.....	6,240	.2	.50	6,240		Screens, shades, awnings, etc.....	5,800	.2	.77	5,800	
Heating and ventilating equipment.....	221,321	5.7	20.93	19,410	201,911	Heating and ventilating equipment.....	110,197	3.4	14.52	11,810	98,387
Plumbing and gas-fitting equipment.....	364,579	9.4	34.48	54,578	310,001	Plumbing and gas-fitting equipment.....	269,939	8.4	35.58	40,578	220,361
Electrical appliances and supplies.....	233,000	6.0	22.03	34,800	198,200	Electrical appliances and supplies.....	200,695	6.2	26.45	32,400	168,295
Elevators, dumb-waiters, and equipment.....	4,253	.1	.40	4,253		Elevators, dumb-waiters, and equipment.....	4,253	.1	.50	4,253	
Pipe: Drain tile, vitrified, concrete, segment tile, corrugated.....	21,990	.6	2.08	20,473	1,520	Pipe: Drain tile, vitrified, concrete, segment tile, corrugated.....	8,656	.3	1.14	8,080	576
Pipe: Cast-iron, sheet and tube steel, etc.....	39,789	1.0	3.76	9,433	30,356	Pipe: Cast-iron, sheet and tube steel, etc.....	33,289	1.0	4.39	4,433	23,856
Wire cable, guards, and fencing.....	5,120	.1	.49	5,120		Wire cable, guards, and fencing.....	2,120	.1	.28	2,120	
Bituminous paving material, tar, asphalt, and oil.....	79,656	2.1	7.53	79,656		Bituminous paving material, tar, asphalt and oil.....	73,433	2.3	9.68	73,433	
Machinery.....	17,556	.5	1.00		17,556	Machinery.....	17,556	.5	2.31		17,556
Freight, hauling or trucking to job.....	1,703	(*)	.10	1,703		Freight, hauling or trucking to job.....	1,703	.1	.23	1,703	
Miscellaneous.....	59,442	1.6	5.62	59,442		Miscellaneous.....	36,311	1.1	4.70	36,311	

<sup>1</sup> The value of construction work done is obtained from figures presented in Table 1, by subtracting the value of subcontract work let from the total value of construction business.

<sup>2</sup> Includes operative builders.

<sup>3</sup> Less than one-tenth of 1 per cent.

<sup>4</sup> The percentage of total cost shown for this item is high because the business of establishments reporting this material constituted a large part of the total business reported for this area.

CONSTRUCTION—UTAH

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>			
	Cost of all materials distributed by kind	Per cent of—						Value of construction business	Cost of all materials distributed by kind	Per cent of—				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	
		Amount	Total cost	Cost of all distributed materials						Amount	Total cost					Cost of all distributed materials
<b>UTAH</b>						<b>UTAH—Continued</b>										
<i>Sand, gravel, stone, slag, cinders, etc.</i>						<i>Reinforcing steel</i>										
All classes.....	\$3,866,758	\$200,292	100.0	7.7	\$10,530,312	74.3	All classes.....	\$3,866,758	\$92,874	100.0	2.4	\$10,530,312	74.3			
General contractors <sup>2</sup> .....	2,376,101	267,736	89.5	11.8	7,202,817	66.1	General contractors <sup>2</sup> .....	2,376,101	90,082	97.0	3.8	7,202,817	66.1			
Building.....	1,944,038	120,712	40.3	6.2	5,636,232	65.8	Building.....	1,944,038	84,387	90.9	4.3	5,636,232	65.8			
Building not specialized <sup>2</sup> .....	1,825,909	117,802	39.4	6.5	5,386,289	65.6	Building not specialized <sup>2</sup> .....	1,825,909	83,681	90.1	4.6	5,386,289	65.6			
Residential building only.....	118,129	2,920	.9	2.4	249,943	70.0	Residential building only.....	118,129	706	.8	.6	249,943	70.0			
Highway.....	128,778	75,520	25.2	58.6	852,038	88.6	Highway.....	128,778	2,241	2.4	1.7	852,038	88.6			
Street paving.....	303,285	71,503	23.9	23.6	714,547	100.0	Street paving.....	303,285	3,454	3.7	1.1	714,547	100.0			
Subcontractors.....	1,490,657	31,557	10.5	2.1	3,333,495	96.8	Subcontractors.....	1,490,657	2,792	3.0	.2	3,333,495	96.8			
Concreting.....	34,375	5,163	1.7	15.0	170,700	85.4	Concreting.....	34,375	2,792	3.0	8.1	170,700	85.4			
Masonry.....	122,082	4,059	1.4	3.3	273,120	100.0										
Plastering and lathing.....	47,328	2,681	.9	5.7	141,203	100.0										
Marble and tiling.....	108,300	1,500	.5	9.9	370,542	100.0										
Bridge and culvert.....	15,500	6,000	1.7	32.3	38,904	100.0										
Rental of equipment, trucking, etc.....	13,154	13,154	4.4	100.0	88,065	100.0										
<i>Brick (face, common, fire, paving, etc.)</i>						<i>Metal doors, windows, and trim</i>										
All classes.....	3,866,758	243,068	100.0	6.3	10,530,312	74.3	All classes.....	3,866,758	67,928	100.0	1.8	10,530,312	74.3			
General contractors <sup>2</sup> .....	2,376,101	146,008	60.1	6.1	7,202,817	66.1	General contractors <sup>2</sup> .....	2,376,101	62,928	92.6	2.5	7,202,817	66.1			
Building.....	1,944,038	140,008	60.1	7.5	5,636,232	65.8	Building.....	1,944,038	62,928	92.6	3.2	5,636,232	65.8			
Building not specialized <sup>2</sup> .....	1,825,909	131,103	53.9	7.2	5,386,289	65.6	Building not specialized <sup>2</sup> .....	1,825,909	62,708	92.4	3.4	5,386,289	65.6			
Residential building only.....	118,129	14,900	6.1	12.0	249,943	70.0	Residential building only.....	118,129	130	.2	.1	249,943	70.0			
Highway.....	128,778	97,060	39.9	6.5	3,333,495	96.8	Highway.....	128,778	5,000	7.4	.3	3,333,495	96.8			
Street paving.....	303,285	97,060	39.9	79.5	273,120	100.0	Street paving.....	303,285	5,000	7.4	14.3	103,000	100.0			
Subcontractors.....	1,490,657	97,060	39.9	6.5	3,333,495	96.8	Subcontractors.....	1,490,657	5,000	7.4	.3	3,333,495	96.8			
Masonry.....	122,082	97,060	39.9	79.5	273,120	100.0	Ornamental iron.....	35,000	5,000	7.4	14.3	103,000	100.0			
<i>Tile, facing, terra cotta, floor, and wall</i>						<i>Lumber, rough and finished</i>										
All classes.....	3,866,758	140,142	100.0	3.8	10,530,312	74.3	All classes.....	3,866,758	530,060	100.0	13.9	10,530,312	74.3			
General contractors.....	2,237,008	15,007	10.9	.7	6,881,963	66.5	General contractors.....	2,237,008	531,511	98.6	22.4	7,202,817	66.1			
Building.....	1,804,945	15,007	10.9	.9	5,315,378	66.4	Building.....	1,944,038	516,072	95.7	20.5	5,636,232	65.8			
Building not specialized.....	1,686,816	12,807	8.8	.8	5,065,435	66.3	Building not specialized.....	1,825,909	462,468	85.8	25.3	5,386,289	65.6			
Residential building only.....	118,129	3,100	2.1	2.6	249,943	70.0	Residential building only.....	118,129	53,014	9.9	15.4	249,943	70.0			
Highway.....	128,778	17,201	4.3	13.4	852,038	88.6	Highway.....	128,778	10,200	1.9	7.0	852,038	88.6			
Street paving.....	303,285	130,129	32.6	42.9	714,547	100.0	Street paving.....	303,285	5,239	1.0	1.7	714,547	100.0			
Subcontractors.....	1,490,657	130,235	89.1	8.7	3,333,495	96.8	Subcontractors.....	1,490,657	7,555	1.4	.5	3,333,495	96.8			
Concreting.....	34,375	4,636	3.2	3.8	273,120	100.0	Concreting.....	34,375	2,555	4.7	7.4	170,700	85.4			
Masonry.....	122,082	4,636	3.2	3.8	273,120	100.0	Masonry.....	122,082	500	.1	.4	273,120	100.0			
Marble and tiling.....	108,300	125,599	85.9	74.6	370,542	100.0	Bridge and culvert.....	15,500	4,500	.8	20.0	38,904	100.0			
<i>Cement*</i>						<i>Millwork</i>										
All classes.....	3,866,758	300,200	100.0	10.3	10,530,312	74.3	All classes.....	3,866,758	125,900	100.0	3.3	10,530,312	74.3			
General contractors.....	2,237,008	381,709	95.0	17.1	6,881,963	66.5	General contractors.....	2,237,008	125,900	100.0	5.3	7,202,817	66.1			
Building.....	1,804,945	234,379	68.7	13.0	5,315,378	66.4	Building.....	1,944,038	125,900	100.0	6.5	5,636,232	65.8			
Building not specialized.....	1,686,816	227,608	57.0	13.5	5,065,435	66.3	Building not specialized.....	1,825,909	112,501	89.3	6.2	5,386,289	65.6			
Residential building only.....	118,129	6,711	1.7	5.7	249,943	70.0	Residential building only.....	118,129	13,408	10.7	11.4	249,943	70.0			
Highway.....	128,778	17,201	4.3	13.4	852,038	88.6	Highway.....	128,778	3,426	4.3	2.0	852,038	88.6			
Street paving.....	303,285	130,129	32.6	42.9	714,547	100.0	Street paving.....	303,285	5,239	1.0	1.7	714,547	100.0			
Subcontractors.....	1,490,657	17,491	4.4	1.2	3,333,495	96.8	Subcontractors.....	1,490,657	7,555	1.4	.5	3,333,495	96.8			
Concreting.....	34,375	7,834	2.0	22.8	170,700	85.4	Concreting.....	34,375	2,555	4.7	7.4	170,700	85.4			
Masonry.....	122,082	882	.2	.7	273,120	100.0	Masonry.....	122,082	500	.1	.4	273,120	100.0			
Plastering and lathing.....	47,328	200	.1	.4	141,203	100.0	Marble and tiling.....	108,300	1,500	.5	9.9	370,542	100.0			
Marble and tiling.....	108,300	2,575	.6	1.5	370,542	100.0	Bridge and culvert.....	15,500	6,000	1.5	38.7	38,904	100.0			
Bridge and culvert.....	15,500	6,000	1.5	38.7	38,904	100.0										
<i>Plaster, etc.</i>						<i>Hardware, rough and finished</i>										
All classes.....	3,866,758	69,787	100.0	1.8	10,530,312	74.3	All classes.....	3,866,758	80,405	100.0	2.1	10,530,312	74.3			
General contractors <sup>2</sup> .....	2,376,101	44,187	63.3	1.9	7,202,817	66.1	General contractors <sup>2</sup> .....	2,376,101	75,405	93.8	3.2	7,202,817	66.1			
Building.....	1,944,038	44,187	63.3	2.3	5,636,232	65.8	Building.....	1,944,038	73,505	91.4	3.8	5,636,232	65.8			
Building not specialized <sup>2</sup> .....	1,825,909	39,991	57.3	2.2	5,386,289	65.6	Building not specialized <sup>2</sup> .....	1,825,909	70,089	87.2	3.8	5,386,289	65.6			
Residential building only.....	118,129	4,196	6.0	3.0	249,943	70.0	Residential building only.....	118,129	3,426	4.3	2.0	249,943	70.0			
Highway.....	128,778	25,600	36.7	1.7	3,333,495	96.8	Highway.....	128,778	1,900	2.4	1.5	852,038	88.6			
Plastering and lathing.....	47,328	25,600	36.7	54.1	141,203	100.0	Street paving.....	303,285	5,239	1.0	1.7	714,547	100.0			
Subcontractors.....	1,490,657	25,600	36.7	1.7	3,333,495	96.8	Subcontractors.....	1,490,657	5,000	6.2	.3	3,333,495	96.8			
Plastering and lathing.....	47,328	25,600	36.7	54.1	141,203	100.0	Roofing and sheet-metal work.....	102,982	5,000	6.2	2.6	384,000	100.0			
<i>Structural steel</i>						<i>Sheet-metal work</i>										
All classes.....	3,866,758	127,881	100.0	3.8	10,530,312	74.3	All classes.....	3,866,758	45,046	6.2	11.1	123,717	100.0			
General contractors.....	2,237,008	127,881	100.0	5.7	6,881,963	66.5	General contractors.....	2,237,008	45,046	6.2	11.1	123,717	100.0			
Building.....	1,804,945	127,881	100.0	7.1	5,315,378	66.4	Building.....	1,944,038	45,046	6.2	11.1	123,717	100.0			
Building not specialized.....	1,686,816	127,201	99.5	7.5	5,065,435	66.3	Building not specialized.....	1,825,909	34,766	22.9	1.9	5,386,289	65.6			
Residential building only.....	118,129	620	.5	.6	249,943	70.0	Residential building only.....	118,129	1,520	1.0	1.3	249,943	70.0			
Highway.....	128,778	17,201	4.3	13.4	852,038	88.6	Highway.....	128,778	3,426	4.3	2.0	852,038	88.6			
Street paving.....	303,285	130,129	32.6	42.9	714,547	100.0	Street paving.....	303,285	5,239	1.0	1.7	714,547	100.0			
Subcontractors.....	1,490,657	17,491	4.4	1.2	3,333,495	96.8	Subcontractors.....	1,490,657	7,555	1.4	.5	3,333,495	96.8			
Concreting.....	34,375	7,834	2.0	22.8	170,700	85.4	Concreting.....	34,375	2,555	4.7	7.4	170,700	85.4			
Masonry.....	122,082	882	.2	.7	273,120	100.0	Masonry.....	122,082	500	.1	.4	273,120	100.0			
Plastering and lathing.....	47,328	200	.1	.4	141,203	100.0	Marble and tiling.....	108,300	1,500	.5	9.9	370,542	100.0			
Marble and tiling.....	108,300	2,575	.6	1.5	370,542	100.0	Bridge and culvert.....	15,500	6,000	1.5	38.7	38,904	100.0			
Bridge and culvert.....	15,500	6,000	1.5	38.7	38,904	100.0										
<i>Paints, varnishes, glass</i>						<i>Painting and decorating</i>										
All classes.....	3,866,758	151,565	100.0	3.9	10,530,312	74.3	All classes.....	3,866,758	68,222	45.0	100.0	135,320	100.0			
General contractors.....	2,376,101	36,289	23.0	1.5	7,202,817	66.1	General contractors.....									

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force		
	Cost of all materials distributed by kind	Per cent of—		Total cost				Cost of all distributed materials	Cost of all materials distributed by kind	Per cent of—				Total cost	Cost of all distributed materials
		Amount	Total cost							Amount	Total cost				
<b>UTAH—Continued</b>						<b>SALT LAKE CITY</b>									
<i>Roofing and sheet metal</i>						<i>Sand, gravel, stone, slag, cinders, etc.</i>									
All classes.....	\$3,260,758	\$222,282	100.0	5.7	\$10,530,312	74.3	All classes.....	\$3,227,852	\$201,222	100.0	6.2	\$8,556,657	79.8		
General contractors.....	\$2,237,008	31,102	14.0	1.4	\$6,881,963	66.5	General contractors <sup>2</sup> .....	\$2,002,554	176,965	87.9	8.8	\$5,736,321	70.2		
Building.....	1,804,945	31,162	14.0	1.7	5,315,378	60.4	Building.....	1,006,179	105,462	52.4	6.2	4,939,082	65.3		
Building not specialized.....	1,686,816	29,532	13.3	1.8	5,065,435	60.3	Building not specialized <sup>2</sup> .....	1,597,318	103,362	51.4	6.5	4,724,800	65.1		
Residential building only.....	118,129	1,030	.7	1.4	249,943	70.0	Residential building only.....	98,861	2,100	1.0	2.1	214,282	68.1		
Subcontractors.....	\$1,490,657	101,120	86.0	12.8	\$3,333,495	96.8	Street paving.....	303,285	71,503	35.5	23.6	714,547	100.0		
Heating and plumbing.....	\$531,171	4,000	1.8	.8	\$20,561	97.6	Subcontractors.....	\$1,225,298	24,257	12.1	2.0	\$2,820,336	96.5		
Heating and piping.....	95,742	4,000	1.8	4.2	101,269	100.0	Concreting.....	27,285	3,563	1.8	13.1	137,917	81.9		
Roofing and sheet-metal work.....	102,982	187,120	84.2	97.0	384,000	100.0	Masonry.....	122,082	4,050	2.0	3.3	273,120	100.0		
Roofing.....	147,930	147,930	66.0	100.0	260,283	100.0	Plastering and lathing.....	38,228	1,981	1.0	5.2	111,203	100.0		
Sheet-metal work.....	46,040	39,184	17.0	87.0	123,717	100.0	Marble and tiling.....	108,300	1,500	.7	.9	370,542	100.0		
<i>Heating and ventilating equipment</i>						<i>Brick (face, common, fire, paving, etc.)</i>									
All classes.....	\$3,860,758	221,321	100.0	5.7	\$10,530,312	74.3	All classes.....	\$3,227,852	232,108	100.0	7.2	\$8,556,657	79.8		
General contractors <sup>2</sup> .....	\$2,376,101	19,410	8.8	.8	\$7,202,817	68.1	General contractors <sup>2</sup> .....	\$2,002,554	135,108	58.2	6.7	\$5,736,321	70.2		
Building.....	1,944,038	19,410	8.8	1.0	5,036,232	65.8	Building.....	1,006,179	135,108	58.2	8.0	4,939,082	65.3		
Building not specialized.....	1,825,900	17,810	8.0	1.0	5,389,289	65.6	Building not specialized <sup>2</sup> .....	1,597,318	122,008	52.8	7.7	4,724,800	65.1		
Residential building only.....	118,129	1,000	.7	1.4	249,943	70.0	Residential building only.....	98,861	12,500	5.4	12.6	214,282	68.1		
Subcontractors.....	\$1,490,657	201,911	91.2	13.5	\$3,333,495	96.8	Subcontractors.....	\$1,225,298	97,060	41.8	7.9	\$2,820,336	96.5		
Electrical.....	215,486	500	.2	.2	492,899	100.0	Masonry.....	122,082	97,060	41.8	79.5	273,120	100.0		
Heating and plumbing.....	531,171	200,549	90.6	37.8	920,591	97.6	<i>Tile, facing, terra cotta, floor, and wall</i>								
Heating and piping.....	95,742	50,271	25.4	58.8	101,269	100.0	All classes.....	\$3,227,852	144,042	100.0	4.5	\$8,556,657	79.8		
Plumbing.....	376,812	96,861	43.8	25.7	624,111	97.5	General contractors.....	\$1,863,461	14,407	10.0	.8	\$5,415,467	71.3		
Plumbing and heating combined.....	20,119	8,919	4.0	44.3	53,300	93.6	Building.....	1,557,086	14,407	10.0	.9	4,618,228	66.2		
Automatic temperature control.....	38,498	38,498	17.4	100.0	81,881	100.0	Building not specialized.....	1,458,225	11,307	7.8	.8	4,403,946	66.1		
Roofing and sheet-metal work.....	192,982	862	.4	.4	\$384,000	100.0	Residential building only.....	98,861	3,100	2.1	3.1	214,282	68.1		
Sheet-metal work.....	45,040	862	.4	1.0	123,717	100.0	Subcontractors.....	\$1,225,298	130,235	90.0	10.6	\$2,820,336	96.5		
<i>Plumbing and gas-fitting equipment</i>						<i>Cement</i>									
All classes.....	\$3,860,758	364,579	100.0	9.4	\$10,530,312	74.3	All classes.....	\$3,227,852	345,237	100.0	10.7	\$8,556,657	79.8		
General contractors.....	\$2,237,008	54,578	15.0	2.4	\$6,881,963	66.5	General contractors.....	1,863,461	336,786	97.6	18.1	5,415,467	71.3		
Building.....	1,804,945	54,578	15.0	3.0	5,315,378	66.4	Building.....	1,557,086	206,417	59.8	13.3	4,618,228	66.2		
Building not specialized.....	1,686,816	51,578	14.1	3.1	5,065,435	66.3	Building not specialized.....	1,458,225	200,306	58.0	13.7	4,403,946	66.1		
Residential building only.....	118,129	3,000	.8	2.5	249,943	70.0	Residential building only.....	98,861	6,111	1.8	6.2	214,282	68.1		
Subcontractors.....	\$1,490,657	310,001	85.0	20.8	\$3,333,495	96.8	Highway.....	3,000	240	.1	7.8	82,692	100.0		
Heating and plumbing.....	\$215,486	310,001	85.0	58.4	920,591	97.6	Street paving.....	303,285	130,129	37.7	42.9	714,547	100.0		
Heating and piping.....	95,742	28,871	7.9	30.2	101,269	100.0	Subcontractors.....	\$1,225,298	8,451	2.4	.7	\$2,820,336	96.5		
Plumbing.....	376,812	200,930	74.0	71.6	624,111	97.5	Concreting.....	27,285	4,794	1.4	17.6	187,917	81.9		
Plumbing and heating combined.....	20,119	11,200	3.1	55.7	53,300	93.6	Masonry.....	122,082	882	.3	.7	273,120	100.0		
<i>Electrical appliances and supplies</i>						<i>Plaster, etc.</i>									
All classes.....	\$3,860,758	233,000	100.0	6.0	\$10,530,312	74.3	All classes.....	\$3,227,852	61,951	100.0	1.9	\$8,556,657	79.8		
General contractors.....	\$2,237,008	34,800	14.0	1.0	\$6,881,963	66.5	General contractors <sup>2</sup> .....	\$2,002,554	42,951	60.3	2.1	\$5,736,321	70.2		
Building.....	1,804,945	34,800	14.0	1.9	5,315,378	66.4	Building.....	1,006,179	42,951	60.3	2.5	4,939,082	65.3		
Building not specialized.....	1,686,816	33,000	14.4	2.0	5,065,435	66.3	Building not specialized <sup>2</sup> .....	1,597,318	39,091	63.1	2.4	4,724,800	65.1		
Residential building only.....	118,129	1,200	.5	1.0	249,943	70.0	Residential building only.....	98,861	3,860	6.2	3.9	214,282	68.1		
Subcontractors.....	\$1,490,657	198,200	85.1	13.3	\$3,333,495	96.8	Subcontractors.....	\$1,225,298	19,000	30.7	1.6	\$2,820,336	96.5		
Electrical.....	215,486	198,200	85.0	89.8	492,899	100.0	Plastering and lathing.....	38,228	38,228	30.7	40.7	111,203	100.0		
Heating and plumbing.....	\$531,171	4,770	2.0	.9	\$20,561	97.6	<i>Structural steel</i>								
Heating and piping.....	95,742	4,770	2.0	1.3	624,111	97.5	All classes.....	\$3,227,852	111,881	100.0	3.5	\$8,556,657	79.8		
Plumbing.....	376,812	4,770	2.0	1.3	624,111	97.5	General contractors.....	\$1,863,461	111,881	100.0	6.0	\$5,415,467	71.3		
<i>Bituminous paving materials, tar, asphalt, and oil</i>						<i>General contractors.....</i>									
All classes.....	\$3,860,758	79,656	100.0	2.1	\$10,530,312	74.3	Building.....	1,557,086	111,881	100.0	7.2	4,618,228	66.2		
General contractors.....	\$2,237,008	79,656	100.0	3.6	\$6,881,963	66.5	Building not specialized.....	1,458,225	111,261	99.4	7.6	4,403,946	66.1		
Building.....	1,804,945	425	.5	.9	5,315,378	66.4	Residential building only.....	98,861	620	.6	.6	214,282	68.1		
Building not specialized.....	1,686,816	425	.5	.5	5,065,435	66.3	<i>See footnotes at end of table.</i>								
Highway.....	128,778	0,223	.7	4.8	852,038	88.6									
Street paving.....	303,285	73,008	91.7	24.1	714,547	100.0									

See footnotes at end of table.



TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force		
	Cost of all materials distributed by kind	Amount	Per cent of—					Cost of all distributed materials	Cost of all materials distributed by kind	Amount	Per cent of—			Cost of all distributed materials	
			Total cost	Cost of all distributed materials							Total cost				Cost of all distributed materials
<b>SALT LAKE CITY—Con.</b>						<b>SALT LAKE CITY—Con.</b>									
<i>Reinforcing steel</i>						<i>Paints, varnishes, glass</i>									
All classes.....	\$3,227,852	\$81,833	100.0	2.5	\$8,550,057	79.8	All classes.....	\$3,227,852	\$150,465	100.0	4.7	\$8,550,057	79.8		
General contractors <sup>2</sup> .....	2,002,554	80,641	98.6	4.0	5,730,321	70.2	General contractors <sup>2</sup> .....	2,002,554	35,180	23.4	1.8	5,730,321	70.2		
Building.....	1,690,179	77,187	91.3	4.6	4,939,082	65.3	Building.....	1,690,179	35,180	23.4	2.1	4,939,082	65.3		
Building not specialized <sup>2</sup> .....	1,597,318	76,481	93.5	4.8	4,724,800	65.1	Building not specialized <sup>2</sup> .....	1,597,318	33,000	22.4	2.1	4,724,800	65.1		
Residential building only.....	98,801	706	.9	.7	214,282	68.1	Residential building only.....	98,801	1,520	1.0	1.6	214,282	68.1		
Street paving.....	303,285	3,454	4.2	1.1	714,547	100.0	Street paving.....	303,285	1,520	1.0	1.6	714,547	100.0		
Subcontractors.....	1,225,298	1,192	1.5	.1	2,820,330	96.5	Subcontractors.....	1,225,298	115,279	76.0	9.4	2,820,330	96.5		
Concreting.....	27,285	1,192	1.5	4.4	137,917	81.9	Painting and decorating.....	47,057	47,057	31.3	100.0	214,269	100.0		
<i>Metal doors, windows, and trim</i>						<i>Roofing and sheet metal</i>									
All classes.....	3,227,852	57,022	100.0	1.8	8,550,057	79.8	All classes.....	3,227,852	214,282	100.0	6.0	8,550,057	79.8		
General contractors <sup>2</sup> .....	2,002,554	52,022	91.2	2.6	5,730,321	70.2	General contractors.....	1,863,461	27,162	12.7	1.6	5,415,467	71.3		
Building.....	1,690,179	52,022	91.2	3.1	4,939,082	65.3	Building.....	1,557,086	27,162	12.7	1.7	4,618,228	66.2		
Building not specialized <sup>2</sup> .....	1,597,318	51,802	91.0	3.2	4,724,800	65.1	Building not specialized.....	1,458,225	25,632	11.0	1.8	4,403,946	66.1		
Residential building only.....	98,801	130	.2	.1	214,282	68.1	Residential building only.....	98,801	1,630	.8	1.6	214,282	68.1		
Subcontractors.....	1,225,298	5,000	8.8	.4	2,820,330	96.5	Subcontractors.....	1,225,298	187,120	87.3	15.3	2,820,330	96.5		
Ornamental iron.....	35,000	5,000	8.8	14.3	103,000	100.0	Roofing and sheet-metal work.....	192,982	187,120	87.3	97.0	384,000	100.0		
<i>Ornamental metal work</i>						<i>Heating and ventilating equipment</i>									
All classes.....	3,227,852	40,801	100.0	1.3	8,550,057	79.8	All classes.....	3,227,852	110,197	100.0	3.4	8,550,057	79.8		
General contractors <sup>2</sup> .....	2,002,554	12,801	31.5	.0	5,730,321	70.2	General contractors <sup>2</sup> .....	2,002,554	11,810	10.7	.0	5,730,321	70.2		
Building.....	1,690,179	12,891	31.5	.8	4,939,082	65.3	Building.....	1,690,179	11,810	10.7	.7	4,939,082	65.3		
Building not specialized <sup>2</sup> .....	1,597,318	12,291	30.1	.8	4,724,800	65.1	Building not specialized <sup>2</sup> .....	1,597,318	11,810	10.7	.7	4,724,800	65.1		
Residential building only.....	98,801	600	1.5	.6	214,282	68.1	Subcontractors.....	1,225,298	98,387	80.3	8.0	2,820,330	96.5		
Subcontractors.....	1,225,298	28,000	68.5	2.3	2,820,330	96.5	Electrical.....	100,351	500	.5	.3	430,443	100.0		
Ornamental iron.....	35,000	28,000	68.5	80.0	103,000	100.0	Heating and plumbing.....	322,637	97,025	88.0	30.1	571,551	97.1		
<i>Lumber, rough and finished</i>						<i>Plumbing and gas-fitting equipment</i>									
All classes.....	3,227,852	442,426	100.0	13.7	8,550,057	79.8	All classes.....	3,227,852	200,030	100.0	8.4	8,550,057	79.8		
General contractors <sup>2</sup> .....	2,002,554	430,371	99.3	21.9	5,730,321	70.2	General contractors.....	1,863,461	49,578	18.4	2.7	5,415,467	71.3		
Building.....	1,690,179	433,132	97.9	25.6	4,939,082	65.3	Building.....	1,557,086	49,578	18.4	3.2	4,618,228	66.2		
Building not specialized <sup>2</sup> .....	1,597,318	387,518	87.6	24.3	4,724,800	65.1	Building not specialized.....	1,458,225	49,578	18.4	3.4	4,403,946	66.1		
Residential building only.....	98,801	45,614	10.3	46.1	214,282	68.1	Subcontractors.....	1,225,298	220,361	81.6	18.0	2,820,330	96.5		
Highway.....	3,000	1,000	.2	32.4	82,092	100.0	Heating and plumbing.....	322,637	220,361	81.6	68.3	571,551	97.1		
Street paving.....	303,285	5,239	1.2	1.7	714,547	100.0	Heating and piping.....	23,371	10,100	3.7	43.2	35,209	100.0		
Subcontractors.....	1,225,298	3,055	.7	.2	2,820,330	96.5	Plumbing.....	200,708	210,261	77.0	80.6	454,401	96.9		
Concreting.....	27,285	2,556	.6	0.4	137,917	81.9	<i>Electrical appliances and supplies</i>								
Masonry.....	122,082	500	.1	.4	273,120	100.0	All classes.....	3,227,852	200,095	100.0	6.2	8,550,057	79.8		
<i>Lath, shingles, and shakes (wood)</i>						<i>Bituminous paving materials, tar, asphalt, and oil</i>									
All classes.....	3,227,852	41,537	100.0	1.3	8,550,057	79.8	All classes.....	3,227,852	73,433	100.0	2.3	8,550,057	79.8		
General contractors <sup>2</sup> .....	2,002,554	37,836	91.1	1.9	5,730,321	70.2	General contractors.....	1,863,461	32,400	10.1	1.7	5,415,467	71.3		
Building.....	1,690,179	37,836	91.1	2.2	4,939,082	65.3	Building.....	1,557,086	32,400	10.1	2.1	4,618,228	66.2		
Building not specialized <sup>2</sup> .....	1,597,318	35,781	80.1	2.2	4,724,800	65.1	Building not specialized.....	1,458,225	32,400	10.1	2.2	4,403,946	66.1		
Residential building only.....	98,801	2,055	4.9	2.1	214,282	68.1	Subcontractors.....	1,225,298	168,295	83.0	13.7	2,820,330	96.5		
Subcontractors.....	1,225,298	3,701	8.9	.3	2,820,330	96.5	Electrical.....	190,351	168,295	83.0	88.4	430,443	100.0		
Plastering and lathing.....	38,228	3,701	8.9	9.7	111,203	100.0	<i>Roofing and sheet-metal work</i>								
<i>Millwork</i>						<i>Sheet-metal work</i>									
All classes.....	3,227,852	112,699	100.0	3.5	8,550,057	79.8	All classes.....	3,227,852	5,000	6.6	2.0	8,550,057	79.8		
General contractors <sup>2</sup> .....	2,002,554	112,699	100.0	5.6	5,730,321	70.2	General contractors.....	1,863,461	5,000	6.6	2.0	5,415,467	71.3		
Building.....	1,690,179	112,699	100.0	6.6	4,939,082	65.3	Building.....	1,557,086	4,425	6.0	(9)	4,618,228	66.2		
Building not specialized <sup>2</sup> .....	1,597,318	99,501	88.3	6.2	4,724,800	65.1	Building not specialized.....	1,458,225	4,425	6.0	(9)	4,403,946	66.1		
Residential building only.....	98,801	13,198	11.7	13.4	214,282	68.1	Street paving.....	303,285	73,008	90.4	24.1	714,547	100.0		
Subcontractors.....	1,225,298	5,000	6.6	.4	2,820,330	96.5	<i>Hardware, rough and finished</i>								
Roofing and sheet-metal work.....	192,982	5,000	6.6	2.0	384,000	100.0	All classes.....	3,227,852	70,205	100.0	2.4	8,550,057	79.8		
Sheet-metal work.....	45,046	5,000	6.6	11.1	123,717	100.0	General contractors <sup>2</sup> .....	2,002,554	71,205	93.4	3.0	5,730,321	70.2		

1 Based upon the difference between the total value of all construction work reported and the value of subcontract work let.  
 2 Includes operative builders.  
 3 Includes cost of materials reported by establishments which did not include designated material in their distributed lists.  
 4 Includes construction work reported by establishments which did not include the designated material in their distributed lists.  
 5 Includes cost of materials reported by operative builders who did not include the designated material in their distributed lists.  
 6 Includes construction work reported by operative builders who did not include the designated material in their distributed lists.  
 7 Includes cost of materials reported by subcontracting establishments which did not include the designated material in their distributed lists.  
 8 Includes construction work reported by subcontracting establishments which did not include the designated material in their distributed lists.  
 9 Less than one-tenth of 1 per cent.  
 \* See footnote 4, of Table 9 on p. 1200.



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TABLE 11.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929

[This table is made up in two sections; the second section begins on p. 1214]

CLASSIFICATION OF ESTABLISHMENTS	Total cost of all materials	COST OF ALL MATERIALS, DISTRIBUTED BY KIND		Sand, gravel, crushed stone, slag, cinders, etc.	Brick (face, common, fire, paving, etc.)	Tile (fire-proofing)	Tile, facing, terra cotta, floor, and wall	Concrete and cinder block	Cut stone, granite and marble	Cement*	Lime	Plaster, etc.	Structural steel	Reinforcing steel	Cast iron, miscellaneous (excluding pipe)	Metal doors, windows, and trim	Metal and wire lath and furring
		Amount	Percent of total														
<b>UTAH</b> .....	<b>\$4,716,577</b>	<b>\$3,866,758</b>	<b>82.0</b>	<b>\$299,292</b>	<b>\$243,068</b>	<b>\$35,505</b>	<b>\$146,142</b>	<b>\$25,092</b>	<b>\$19,295</b>	<b>\$399,200</b>	<b>\$20,527</b>	<b>\$69,787</b>	<b>\$127,881</b>	<b>\$92,874</b>	<b>\$6,980</b>	<b>\$67,928</b>	<b>\$22,093</b>
Operative builders.....	152,471	130,093	91.2	7,007	31,589							9,489		1,000		300	450
General contractors.....	2,880,321	2,237,008	77.5	259,828	114,419	7,952	15,907	24,425	2,295	381,709	8,376	34,698	127,881	89,082	4,960	62,628	10,297
Building.....	2,352,345	1,804,945	76.7	112,805	114,419	7,952	15,907	24,425	2,295	234,379	8,376	34,698	127,881	88,387	2,100	62,628	10,297
Building not specialized.....	2,216,241	1,680,816	76.1	109,985	90,519	7,787	12,807	24,425	1,845	227,668	7,231	30,602	127,261	82,681	2,100	62,498	9,982
Residential building only.....	136,104	118,129	86.8	2,820	14,900	165	3,100		450	6,711	1,145	4,190	620	706		130	315
Highway.....	200,094	128,778	64.2	75,520						17,201				2,241			
Street paving.....	303,285	303,285	100.0	71,593						130,129				3,454	2,860		
Subcontractors.....	1,677,782	1,400,657	83.8	31,557	97,060	27,553	130,235	667	17,000	17,491	12,151	25,000		2,792	2,000	5,000	11,346
Concreting.....	31,375	31,375	100.0	5,163						7,834				2,792			
Electrical.....	215,486	215,486	100.0														
Heating and plumbing.....	654,266	531,171	81.2														
Heating and piping.....	95,742	95,742	100.0														
Plumbing.....	454,937	370,812	82.8														
Plumbing and heating combined.....	65,119	20,110	30.9														
Automatic temperature control.....	38,498	38,498	100.0														
Masonry.....	122,082	122,082	100.0	4,059	97,060	6,427	4,636	667		882	7,851						
Painting and decorating.....	55,057	47,057	85.5														
Glass and glazing.....	68,222	68,222	100.0														
Plastering and lathing.....	47,328	47,328	100.0	2,981						200	4,300	25,000					10,846
Roofing and sheet-metal work.....	248,982	192,982	77.5														
Roofing.....	177,936	147,936	83.1														
Sheet-metal work.....	71,046	46,046	64.8														
Marble and tiling.....	168,300	168,300	100.0	1,500		21,126	125,599		17,000	2,575					2,000	5,000	500
Ornamental iron.....	35,000	35,000	100.0							6,000							
Bridge and culvert.....	15,500	15,500	100.0	5,000													
Rental of equipment, trucking, etc.....	13,154	13,154	100.0	13,154													
<b>SALT LAKE CITY</b> .....	<b>3,856,104</b>	<b>3,227,852</b>	<b>84.2</b>	<b>201,222</b>	<b>232,168</b>	<b>35,505</b>	<b>144,642</b>	<b>20,742</b>	<b>19,295</b>	<b>345,237</b>	<b>19,025</b>	<b>61,951</b>	<b>111,881</b>	<b>81,833</b>	<b>8,580</b>	<b>57,622</b>	<b>19,933</b>
Operative builders.....	130,093	130,093	100.0	7,007	31,589							9,489		1,000		300	450
General contractors.....	2,293,598	1,893,401	82.6	169,068	103,519	7,952	14,407	20,075	2,295	336,789	7,174	33,402	111,881	79,641	4,560	51,722	9,697
Building.....	1,987,213	1,557,086	78.4	97,555	103,519	7,952	14,407	20,075	2,295	206,417	7,174	33,462	111,881	76,187	1,700	51,722	9,697
Building not specialized.....	1,870,377	1,468,225	78.0	95,455	91,019	7,787	11,807	20,075	1,845	200,308	6,481	20,602	111,261	75,481	1,700	51,592	9,382
Residential building only.....	119,836	98,801	82.6	2,100	12,500	165	3,100		450	6,111	693	3,860	620	706		130	315
Highway.....	3,090	3,090	100.0							240							
Street paving.....	303,285	303,285	100.0	71,593						130,129				3,454	2,860		
Subcontractors.....	1,402,423	1,225,298	87.4	24,257	97,060	27,553	130,235	667	17,000	8,451	11,851	19,000		1,192	2,000	5,000	9,846
Concreting.....	27,285	27,285	100.0	3,593						4,794				1,192			
Electrical.....	190,361	190,361	100.0														
Heating and plumbing.....	435,762	322,637	74.0														
Heating and piping.....	23,371	23,371	100.0														
Plumbing.....	328,803	269,768	82.0														
Automatic temperature control.....	38,498	38,498	100.0														
Masonry.....	122,082	122,082	100.0	4,059	97,060	6,427	4,636	667		882	7,851						
Painting and decorating.....	55,057	47,057	85.5														
Glass and glazing.....	68,222	68,222	100.0														
Plastering and lathing.....	38,228	38,228	100.0	1,981						200	4,000	19,000					9,346
Roofing and sheet-metal work.....	248,982	192,982	77.5														
Roofing.....	177,936	147,936	83.1														
Sheet-metal work.....	71,046	46,046	64.8														
Marble and tiling.....	168,300	168,300	100.0	1,500		21,126	125,599		17,000	2,575					2,000	5,000	500
Ornamental iron.....	35,000	35,000	100.0														
Rental of equipment, trucking, etc.....	13,154	13,154	100.0	13,154													

Certain establishments did not give a distribution of the cost of their materials by separate items. Amounts reported by such establishments engaged in the following lines of work have been included as indicated in figures shown for "Total cost of all materials":

- 1 Bridge and culvert, \$30,000.
- 2 Plumbing and heating combined \$45,000.

\* See footnote 4, of Table 9 on p. 1209.

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TABLE 11.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929—Continued

(See note at head of this table)

CLASSIFICATION OF ESTABLISHMENTS	Orna-mental metal work	Lum-ber, rough and finished	Laths, shingles, and shakes	Mill-work	Com-position board	Hard-ware, rough and finished	Paints, var-nishes, and glass	Roofing and sheet metal	Fin-ished floor-ing, n. c. s.	Heat-ing and vent-ilating equip-ment	Plumb-ing and gas-fitting equip-ment	Elec-trical appli-ances and supplies	Pipe: Drain tile, vitrified, concrete, etc.	Pipe: Cast iron, sheet and tuba steel, etc.	Bitu-minous paving ma-te-rials	Ma-chinery	Mis-cel-laneous <sup>1</sup>
<b>UTAH</b> .....	\$42,233	\$639,066	\$42,537	\$125,909	\$12,449	\$80,405	\$161,565	\$222,282	\$6,230	\$221,321	\$364,570	\$235,000	\$21,009	\$39,780	\$79,656	\$17,556	\$90,448
Operative builders.....	750	60,000	9,000	4,000	700	2,300	800			1,770							9,032
General contractors.....	13,483	471,511	29,830	121,999	11,749	73,105	35,486	31,162	0,230	17,634	54,578	34,800	20,473	9,433	70,650		81,416
Building.....	13,483	460,072	29,830	121,999	11,049	71,205	35,486	31,162	0,230	17,634	54,578	34,800	346	75	425		78,416
Building not specialized.....	12,883	402,458	27,781	108,501	11,170	67,780	33,900	29,632	0,230	10,034	51,578	33,000	346	75	425		78,100
Residential building only.....	600	58,614	2,055	13,498	473	3,425	1,520	1,630		1,600	3,000	1,200					250
Highway.....		10,200			100	1,900							12,303		0,223		3,000
Street paving.....		5,239											7,734	9,358	73,008		
Subcontractors.....	28,000	7,555	3,701			5,000	115,279	191,120		201,911	810,001	108,200	1,520	30,350		17,550	
Concreting.....		2,555											850	15,181			
Electrical.....									600			103,430		4,000		17,550	
Heating and plumbing.....								4,000		200,549	810,601		676	11,175			
Heating and piping.....								4,000		56,271	28,871		100	6,500			
Plumbing.....										98,861	209,930		4,770	4,675			
Plumbing and heating com-bined.....																	
Automatic temperature con-trol.....										8,919	11,200						
Masonry.....		500								38,498							
Painting and decorating.....							47,057										
Glass and glazing.....							68,222										
Plastering and lathing.....			3,701														
Roofing and sheet-metal work.....						5,000		187,120		862							
Roofing.....								147,930									
Sheet-metal work.....						5,000		39,184		862							
Ornamental iron.....	28,000																
Bridge and culvert.....		4,600															
<b>SALT LAKE CITY</b> .....	40,891	442,428	41,537	112,699	10,899	78,208	150,465	214,282	4,830	110,197	269,930	200,095	8,656	33,289	73,433	17,556	92,977
Operative builders.....	760	60,000	9,000	4,000	700	2,300	800			1,770							9,032
General contractors.....	12,141	370,371	28,830	108,699	10,199	68,605	34,886	27,162	4,630	10,034	40,578	32,400	8,080	9,433	73,433		53,945
Building.....	12,141	373,132	28,830	108,699	10,099	67,168	34,886	27,162	4,630	10,034	40,578	32,400	846	75	425		53,945
Building not specialized.....	11,541	327,518	26,781	95,501	9,620	64,150	32,806	25,632	4,630	10,034	40,578	32,400	846	75	425		53,029
Residential building only.....	600	45,614	2,055	13,198	473	3,005	1,620	1,630									10
Highway.....		1,000			100	1,700											
Street paving.....		5,239											7,734	9,358	73,008		
Subcontractors.....	28,000	3,055	3,701			5,000	115,279	187,120		98,887	220,361	108,295	576	23,850		17,550	
Concreting.....		2,555												15,181			
Electrical.....									600			108,295		4,000		17,550	
Heating and plumbing.....									97,025	220,361			576	4,675			
Heating and piping.....									13,271	10,100							
Plumbing.....									45,250	210,201			576	4,675			
Automatic temperature con-trol.....										38,498							
Masonry.....		500															
Painting and decorating.....							47,057										
Glass and glazing.....							68,222										
Plastering and lathing.....			3,701														
Roofing and sheet-metal work.....						5,000		187,120		862							
Roofing.....								147,930									
Sheet-metal work.....						5,000		39,184		862							
Ornamental iron.....	28,000																

<sup>1</sup> Includes the reported cost of riprap, rubble, etc., waterproofing materials; screens, shades, awnings, etc.; elevators, dumb-walters, etc.; wire cable, guards, and fencing; and freight, trucking or hauling to job.  
For total cost of these items see Table 9.

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**TABLE 12.—NUMBER OF, AND VOLUME OF BUSINESS REPORTED BY ESTABLISHMENTS DOING A CONSTRUCTION BUSINESS OF LESS THAN \$25,000 IN 1929, PERCENTAGE OF TOTAL NUMBER OF KNOWN ESTABLISHMENTS, AND AVERAGE VOLUME PER ESTABLISHMENT**

TYPES OF WORK	UTAH 1930 population, 507,847							SALT LAKE CITY 1930 population, 140,207			REMAINDER OF STATE 1930 population, 307,580			
	Known contracting establishments				Volume of business reported				Volume of business			Total number active in 1929	Volume of business	
	Total number	Inactive in 1929	Active in 1929		Number of reporting establishments	Per cent of active	Amount	Average per establishment	Total number active in 1929	Number of reporting establishments	Amount		Number of reporting establishments	Amount
			Number	Per cent										
Total establishments canvassed (under \$25,000).....	710	88	622					302			260			
Total establishments, type of work unknown.....	74	33	41		5	12.2	\$31,500	\$0,300	13	1	\$10,000	28	4	\$21,500
Total general and subcontractors classified.....	636	55	581	100.0	178				340			232		
Total general contractors classified.....	180	23	157	27.0	37	23.6	333,766	9,020	104	26	252,901	53	12	80,865
Building.....	167	22	145	25.0	34	23.4	281,149	8,269	100	23	207,784	45	11	73,365
Highway.....	12	1	11	1.9	3	27.3	52,017	17,539	4	2	45,117	7	1	7,500
Sewer, gas, water, conduit.....	1		1	.2								1		
Total subcontractors classified.....	456	32	424	73.0	141	33.3	908,455	0,443	245	84	541,028	179	57	366,827
Carpentering.....	43	5	38	6.5	10	26.3	54,896	5,490	10	1	1,500	28	9	53,396
Concreting.....	23	1	22	3.8	6	27.3	33,117	5,519	5	3	12,117	17	3	21,000
Electrical.....	54	6	48	8.3	12	25.0	74,046	6,170	23	5	22,844	25	7	51,202
Elevator.....	2		2	.3					2					
Heating and ventilating.....	2		2	.3					1			1	2	8,000
Masonry.....	15	1	14	2.4	3	21.4	15,500	5,166	2	1	7,500	12	2	31,900
Painting and decorating.....	40	2	44	7.6	14	31.8	70,250	5,017	20	7	38,350	18	7	14,104
Glass and glazing.....	5	1	4	.7	2	50.0	14,104	7,052				4	2	13,500
Plastering.....	19	2	17	2.9	7	41.2	25,500	3,643	5	2	12,000	12	5	94,752
Plumbing and heating.....	86	3	83	14.3	32	38.6	253,924	7,935	41	10	150,172	42	13	78,973
Sheet metal and roofing.....	45	2	43	7.4	21	48.8	192,028	9,144	26	12	113,055	17	9	
Steel erection.....	2		2	.3								2		
Marble and tiling.....	7	1	6	1.0	1	16.7	16,400	16,400	5	1	16,400	1		
Wracking.....	2	1	1	.2					1					
Unclassified subcontractors.....	105	7	98	16.9	33	33.7	158,690	4,809	98	33	158,690			

**TABLE 13.—ESTABLISHMENTS (WHOSE BUSINESS WAS LESS THAN \$25,000 IN 1929) WHICH REPORTED THEIR VOLUME OF CONSTRUCTION WORK, CLASSIFIED BY RANGE OF VOLUME OF BUSINESS**

CLASSIFICATION	Total	Less than \$2,500	\$2,500 to \$4,999	\$5,000 to \$7,499	\$7,500 to \$9,999	\$10,000 to \$12,499	\$12,500 to \$14,999	\$15,000 to \$17,499	\$17,500 to \$19,999	\$20,000 to \$22,499	\$22,500 to \$24,999
Total general and subcontractors.....	183	53	37	19	23	19	6	8	7	8	3
General contractors.....	37	7	6	3	4	7	4		3		
Subcontractors.....	141	45	30	16	18	10	2	8	4	1	2
Type of contracting unknown.....	5	1	1		1	2					

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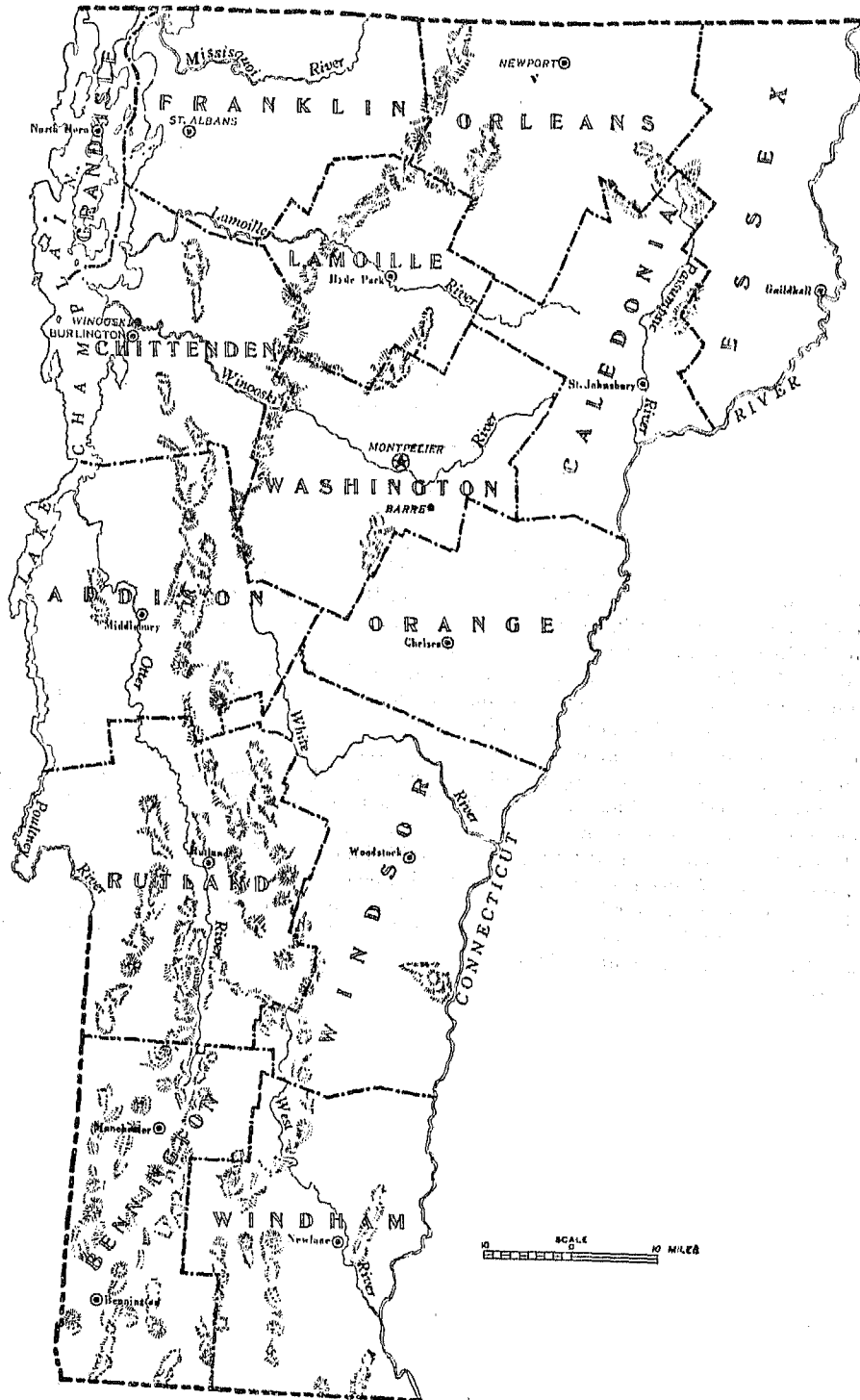


TABLE 1.—VALUE OF CONSTRUCTION BUSINESS DURING 1929 AND PRINCIPAL ITEMS OF EXPENDITURE  
[Values expressed in thousands]

AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	Number of establishments	VALUE OF CONSTRUCTION BUSINESS					PRINCIPAL EXPENDITURES								
		Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials	Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials		
<b>VERMONT</b>	<b>61</b>	<b>\$5,878</b>	<b>\$4,955</b>	<b>\$923</b>	<b>\$266</b>	<b>\$1,898</b>	<b>\$2,611</b>								
<i>Counties:</i>								<i>Size of business groups</i>							
Bennington	4	364	302	62	20	151	146	General contractors	33	\$3,812	\$3,777	\$34	\$265	\$1,392	\$1,551
Chittenden	12	1,410	1,013	397	17	477	920	\$25,000 to \$49,999	11	425	425	—	14	170	153
Franklin	3	214	181	33	—	83	88	\$50,000 to \$99,999	6	420	426	—	28	132	143
Orleans	4	362	291	71	45	86	153	\$100,000 to \$199,999	12	1,651	1,617	34	92	616	671
Rutland	14	1,302	1,234	68	36	367	656	\$200,000 to \$499,999	4	1,310	1,310	—	131	424	554
Washington	0	950	943	7	134	257	434	\$500,000 to \$999,999	—	—	—	—	—	—	—
Windham	6	502	401	101	3	182	167	\$1,000,000 and over	—	—	—	—	—	—	—
Windsor	6	534	399	135	2	208	227	Building contractors	27	3,019	3,019	—	253	1,045	1,288
Other counties <sup>1</sup>	3	240	192	48	—	87	115	\$25,000 to \$49,999	10	390	390	—	14	153	168
<i>Classification of establishments</i>								\$50,000 to \$99,999	6	420	426	—	28	132	143
General contractors	33	3,812	3,777	34	265	1,392	1,551	\$100,000 to \$199,999	8	1,183	1,183	—	88	406	505
Building	27	3,010	3,010	—	258	1,045	1,288	\$200,000 to \$499,999	3	1,020	1,020	—	128	304	472
Building not specialized	17	2,332	2,332	—	234	745	1,011	\$500,000 to \$999,999	—	—	—	—	—	—	—
Commercial buildings only	3	281	281	—	10	123	108	\$1,000,000 and over	—	—	—	—	—	—	—
Residential building only	7	406	406	—	14	177	169	Subcontractors	28	2,066	1,178	888	1	506	1,060
Bridge and culvert	3	255	221	34	—	130	99	\$25,000 to \$49,999	10	361	130	231	—	77	196
Other classes <sup>2</sup>	3	538	538	—	7	216	164	\$50,000 to \$99,999	14	992	697	295	—	216	489
Subcontractors	28	2,066	1,178	888	1	506	1,060	\$100,000 to \$199,999	2	207	102	105	1	48	192
Electrical	4	192	31	161	—	48	83	\$200,000 to \$499,999	2	505	249	257	—	165	274
Heating and plumbing	21	1,455	868	587	1	324	743	\$500,000 to \$999,999	—	—	—	—	—	—	—
Heating and piping	8	478	351	127	—	103	264	\$1,000,000 and over	—	—	—	—	—	—	—
Plumbing	6	307	230	137	—	69	190	Other classes <sup>3</sup>	3	410	279	140	—	134	234
Plumbing and heating combined	7	610	287	323	1	152	200								
Other classes <sup>3</sup>	3	410	279	140	—	134	234								

<sup>1</sup> Includes Addison and Caledonia, for which data can not be shown separately without revealing individual operations. From areas other than those listed, no reports were received from establishments which handled as much as \$25,000 business during 1929.  
<sup>2</sup> Includes highway; and central station, light and power plant.  
<sup>3</sup> Includes marble and tiling; and roofing and sheet metal combined.

CONSTRUCTION—VERMONT

TABLE 2.—CONSTRUCTION BUSINESS OF REPORTING ESTABLISHMENTS DURING 1929, BY CLASS OF OWNERSHIP AND BY TYPE OF WORK

CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—						CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—					
	All classes of establishments		General contractors		Subcontractors			All classes of establishments		General contractors		Subcontractors	
	Number reporting	Value	Number reporting	Value	Number reporting	Value		Number reporting	Value	Number reporting	Value	Number reporting	Value
<b>VERMONT</b>							<b>VERMONT—Continued</b>						
All construction business.....	61	\$5,878,110	33	\$3,811,645	28	\$2,066,465	All business under general contract or directly for owners—Contd. Distributed by class of building—Continued.						
Distribution not reported.....	11	666,562	2	76,051	9	590,511	Religious and memorial.....	9	\$271,057	2	(1)	7	(1)
Distributed by class of ownership.	50	5,211,548	31	3,735,504	19	1,475,954	Residential.....	29	1,396,646	19	\$967,843	10	\$436,303
Private.....	40	3,564,000	30	2,483,320	19	1,080,770	Air transport.....	1	361,094	1	114,987	4	246,107
Quasi public or community.....	11	762,582	5	471,701	6	290,881	Miscellaneous.....	11	5	5	444,150	1	(1)
Public.....	21	884,876	11	780,573	10	104,303	Highway and street.....	5	444,150	2	(1)	1	(1)
Distribution not reported.....	6	100,904	2	20,074	4	80,290	Water power development.....	3	18,300	2	(1)	1	(1)
Distributed by class of public ownership	15	783,012	9	759,890	6	24,013	Public works and utilities.....	8	383,856	8	383,856	7	234,497
Federal.....	5	75,458	3	632,874	2	2,452	Bridge, tunnel, etc.....	7	234,497	3	4,675	3	144,684
State.....	7	559,508	5	127,325	4	21,561	Water supply.....	3	4,675	3	144,684	4	51,504
County or township.....	6	86,715	2	4	2	(1)	Other classes <sup>1</sup> .....	3	144,684	3	51,504	2	(1)
Municipal.....	0	62,171	4	4	4	30,205	Other classes <sup>2</sup> .....	3	30,205	2	(1)	1	(1)
All business under general contract or directly for owners.....	50	4,935,433	33	3,777,345	17	1,178,088	All business under subcontract.....	22	922,677	1	(1)	21	(1)
Distribution not reported.....	4	360,951	3	330,951	1	30,000	Distribution not reported.....	2	294,031	2	294,031	2	294,031
Distributed by class.....	40	4,594,492	30	3,446,304	10	1,148,088	Distributed by class.....	20	628,646	1	(1)	19	(1)
Building.....	44	3,657,377	28	2,520,840	10	1,136,523	Heating and plumbing.....	2	288,171	0	0	2	288,171
Distribution not reported.....	3	81,296	1	15,000	2	66,296	Heating and piping.....	0	147,063	0	0	2	147,063
Distributed by class of building..	41	3,576,081	27	2,505,840	14	1,070,232	Plumbing and heating combined.....	2	147,063	2	147,063	3	1,700
Commercial.....	21	782,214	16	753,401	5	28,813	Pipe covering.....	3	1,700	3	1,700	11	139,408
Educational.....	11	415,602	4	361,372	7	54,230	Plumbing.....	11	139,408	11	139,408	3	143,874
Hotel.....	5	40,884	2	(1)	3	(1)	Roofing and sheet-metal work.....	3	143,874	3	143,874	3	1,750
Hospital and institutional.....	8	123,039	3	104,757	5	18,282	Roofing.....	3	1,750	3	1,750	3	142,124
Manufacturing.....	9	107,044	4	91,432	5	16,212	Sheet-metal work.....	3	142,124	3	142,124	2	142,124
Military and naval.....	2	(1)	2	(1)	5	(1)	Roofing and sheet metal combined.....	2	142,124	2	142,124	2	142,124
Public: Courts, jails, etc.....	5	68,901	5	(1)	5	(1)	Other classes <sup>4</sup> .....	6	100,601	1	(1)	5	(1)

<sup>1</sup> Value omitted in order to avoid disclosing individual operations. The amounts omitted are, however, included in the respective totals.

<sup>2</sup> Includes establishments reporting the following types of work: Central station, light and power plant, 1; dock, pier, retaining wall, etc., 1; flood control, irrigation and land drainage and sewage disposal and drainage, 1.

<sup>3</sup> Includes establishments reporting the following types of work: General contractors—Railroad and car line, 1; air transport, 1; Subcontractors—Railroad and car line, 1.

<sup>4</sup> Includes establishments reporting the following types of work: General contractors—Concreting, 1—Subcontractors—Electrical, 4; excavating, 1.

TABLE 3.—CONSTRUCTION BUSINESS DURING 1929, BY LOCATION

CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	Total	VERMONT			CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	Total	VERMONT—Continued		
			In home city	In home State	Outside home State				In home city	In home State	Outside home State
<b>VERMONT</b> .....	61	\$5,878,110	\$3,750,952	\$5,382,441	\$495,669						
General contractors.....	33	3,811,645	2,148,272	3,591,582	220,063	Subcontractors.....	28	\$2,066,465	\$1,602,080	\$1,700,850	\$275,608
Building.....	27	3,018,840	2,013,378	2,828,783	190,063	Electrical.....	4	192,101	192,101	192,101	—
Building not specialized.....	17	2,332,394	1,330,451	2,142,331	190,063	Heating and plumbing.....	21	1,454,071	1,297,422	1,452,071	2,000
Commercial building only.....	3	280,770	275,776	280,776	—	Heating and piping.....	8	477,888	382,714	477,888	—
Residential building only.....	7	405,676	401,151	405,676	—	Plumbing.....	6	367,115	317,880	365,115	2,000
Bridges and culvert.....	3	254,654	101,732	224,654	30,000	Plumbing and heating combined.....	7	600,968	596,828	600,968	—
Other classes <sup>1</sup> .....	3	538,145	33,162	538,145	—	Other classes <sup>2</sup> .....	3	410,393	113,187	145,787	273,606

<sup>1</sup> Includes highway; and central station, light and power plant.

<sup>2</sup> Includes marble and tiling; and roofing and sheet metal combined.

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TABLE 4.—CONSTRUCTION BUSINESS OUTSIDE HOME STATE, BY LOCATION

STATE	LOCATION REPORTED BY—			STATE	LOCATION REPORTED BY—		
	All classes of establishments	General contractors	Subcontractors		All classes of establishments	General contractors	Subcontractors
<b>VERMONT</b>				<b>VERMONT—Continued</b>			
Total distributed by States <sup>1</sup> .....	\$495,669	\$220,063	\$275,606	Total distributed by States <sup>1</sup> —Continued.			
Maine.....	1,573	1,573	.....	New York.....	\$344,005	\$93,771	\$251,134
New Hampshire.....	120,441	104,969	24,472	Other States, n. s.....	19,750	.....	.....

<sup>1</sup> Reported by 6 general contracting and 3 subcontracting establishments.

TABLE 5.—NUMBER AND SALARIES OF PROPRIETORS, FIRM MEMBERS, AND SALARIED EMPLOYEES: 1929

CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	PROPRIETORS AND FIRM MEMBERS			SALARIED EMPLOYEES									
		Receiving no salary	Receiving salaries		All salaried employees		Officers and clerical staff		Superintendents, foremen, etc.		Number reported, by sex			Sex not reported
			Number	Total annual salaries	Number	Total annual salaries	Number	Total annual salaries	Number	Total annual salaries	Number	Total annual salaries	Total	
<b>VERMONT</b> .....	60	33	35	\$82,497	115	\$207,537	64	\$104,204	51	\$103,333	97	70	27	18
General contractors.....	33	24	9	38,145	67	124,322	25	40,219	42	84,103	57	49	8	10
Building.....	27	18	0	38,145	39	74,433	20	32,792	19	41,641	35	29	6	4
Building not specialized.....	17	10	0	31,045	34	66,133	18	30,792	16	35,341	31	25	6	3
Commercial building only.....	3	2	1	3,500	2	4,300	.....	.....	2	4,300	2	2	.....	1
Residential building only.....	7	6	2	3,000	3	4,000	2	2,000	1	2,000	2	2	.....	.....
Bridge and culvert.....	3	2	.....	.....	13	23,060	3	4,660	10	18,400	7	6	1	6
Other classes <sup>1</sup> .....	3	4	.....	.....	15	20,829	2	2,767	13	24,062	15	14	1	.....
Subcontractors.....	27	9	20	44,352	48	83,215	39	63,985	9	10,230	40	21	19	8
Electrical.....	3	1	3	5,780	3	3,280	3	3,280	.....	.....	3	1	.....	.....
Heating and plumbing.....	21	8	16	35,072	42	73,285	35	59,205	7	14,080	34	17	17	8
Heating and piping.....	8	3	7	14,528	14	16,932	13	16,612	1	320	10	5	5	4
Plumbing.....	6	3	7	16,008	6	5,329	6	5,329	.....	.....	6	1	5	.....
Plumbing and heating combined.....	7	2	2	4,470	22	51,024	16	37,264	6	13,700	18	11	7	4
Other classes <sup>2</sup> .....	3	.....	7	3,600	3	6,650	1	1,500	2	5,150	3	3	.....	.....

<sup>1</sup> Includes highway; and central station, light and power plant.

<sup>2</sup> Includes marble and tiling; and roofing and sheet-metal work.

TABLE 6.—VALUE OF CONSTRUCTION EQUIPMENT, IN COMPARISON WITH CONSTRUCTION BUSINESS AND WAGES PAID DURING 1929

CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT OWNED	Establishments reporting	EQUIPMENT		Value of construction business reported	Wages paid	CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT OWNED	Establishments reporting	EQUIPMENT		Value of construction business reported	Wages paid
		Purchased during the year	Inventory value at end of year					Purchased during the year	Inventory value at end of year		
<b>VERMONT</b> .....	53	\$89,056	\$642,946	\$5,598,039	\$1,804,070	<b>VERMONT—Continued</b>					
<i>Classification of establishments</i>						<i>Percentage of equipment owned</i>					
General contractors.....	32	87,339	545,483	3,766,145	1,368,579	General contractors.....	32	\$87,339	\$545,480	\$3,766,145	\$1,368,579
Building.....	26	27,503	279,350	2,073,346	1,022,263	None.....	1	2,950	6,300	34,600	17,139
Building not specialized.....	10	20,000	269,874	2,286,894	722,296	1% to 25%, inclusive.....	.....	.....	.....	.....	.....
Commercial building only.....	3	5,013	5,600	280,776	123,284	26% to 50%, inclusive.....	1	11,551	58,099	141,143	37,376
Residential building only.....	7	2,490	3,885	406,670	176,683	51% to 75%, inclusive.....	4	8,099	23,397	707,049	248,361
Bridge and culvert.....	3	25,450	52,600	254,654	130,048	76% to 99%, inclusive.....	25	64,489	455,940	2,778,353	1,023,703
Other classes <sup>1</sup> .....	3	34,380	213,527	533,145	210,268	100%.....	1	250	750	110,000	42,000
Subcontractors.....	21	11,717	97,460	1,741,894	435,491	Not reported.....	.....	.....	.....	.....	.....
Heating and plumbing.....	10	8,103	70,023	1,194,833	260,452	Subcontractors.....	21	11,717	97,460	1,741,894	435,491
Heating and piping.....	7	3,775	20,510	425,688	91,393	None.....	.....	.....	.....	.....	.....
Plumbing.....	4	3,196	27,680	252,704	46,265	1% to 25%, inclusive.....	1	.....	250	240,134	90,000
Plumbing and heating combined.....	5	1,132	21,933	516,441	128,794	26% to 50%, inclusive.....	.....	.....	.....	.....	.....
Other classes <sup>2</sup> .....	5	3,614	18,437	547,061	169,039	51% to 75%, inclusive.....	.....	.....	.....	.....	.....
						76% to 99%, inclusive.....	20	11,717	97,210	1,492,760	345,491
						100%.....	.....	.....	.....	.....	.....
						Not reported.....	.....	.....	.....	.....	.....

<sup>1</sup> Includes highway; and central station, light and power plant.

<sup>2</sup> Includes electrical; marble and tiling; and roofing and sheet metal combined.



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TABLE 7.—WAGE EARNERS, BY MONTHS, AND WAGES PAID DURING 1929

CLASSIFICATION OF ESTABLISHMENTS AND LENGTH OF WORKING WEEK	Establishments reporting	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY—												Wages paid during year
		January	February	March	April	May	June	July	August	September	October	November	December	
<b>VERMONT</b> .....	54	677	648	711	760	1,268	1,422	1,430	1,517	1,319	1,455	1,387	1,050	\$1,646,436
<i>Classification of establishments</i>														
General contractors.....	28	397	369	441	478	964	1,107	1,131	1,203	1,010	1,138	1,074	754	1,152,167
Building.....	22	313	270	342	356	752	787	772	700	671	815	780	601	806,841
Building not specialized.....	17	261	213	281	298	678	678	683	605	585	754	710	543	697,181
Residential building only.....	5	52	57	61	58	74	80	89	104	80	61	61	58	108,000
Bridge and culvert.....	3	59	56	66	64	112	149	142	156	154	168	161	100	130,048
Other classes <sup>1</sup> .....	3	25	43	33	28	100	101	217	248	185	155	133	53	216,268
Subcontractors.....	26	280	270	270	291	294	315	299	314	309	317	313	302	494,270
Electrical.....	3	14	17	13	17	17	18	20	21	21	18	20	21	43,108
Heating and plumbing.....	20	269	196	187	187	198	215	222	234	240	262	259	241	317,240
Heating and piping.....	8	62	62	58	67	61	65	67	70	71	77	81	80	103,273
Plumbing.....	5	43	44	43	47	50	51	49	45	47	50	48	45	62,119
Plumbing and heating combined.....	7	65	90	80	83	87	99	106	119	122	135	130	116	151,848
Other classes <sup>2</sup> .....	3	60	60	70	87	79	82	67	59	48	37	34	40	133,871
<i>Length of working week</i>														
General contractors.....	28	397	369	441	478	964	1,107	1,131	1,203	1,010	1,138	1,074	754	1,152,167
40-hour, 5-day week.....														
45-hour, 5-day week.....														
50-hour, 5-day week.....														
All other 5-day week.....														
44-hour, 5½-day week.....	3	35	13	32	52	48	107	103	95	83	73	48	25	88,821
49½-hour, 5½-day week.....														
55-hour, 5½-day week.....														
All other 5½-day week.....	4	64	60	71	83	60	134	130	139	142	157	167	78	120,227
48-hour, 6-day week.....	7	157	133	161	131	171	181	208	287	217	248	286	248	281,802
54-hour, 6-day week.....	13	133	165	107	203	594	608	590	670	497	587	534	388	536,077
60-hour, 6-day week.....	1	8	8	10	9	55	77	91	106	71	73	49	15	110,230
All other 6-day week.....														
All other not designated.....														
Not reported.....														
Subcontractors.....	26	280	270	270	291	294	315	299	314	309	317	313	302	494,270
40-hour, 5-day week.....														
45-hour, 5-day week.....														
50-hour, 5-day week.....														
All other 5-day week.....														
44-hour, 5½-day week.....	8	108	105	102	108	103	132	95	99	81	83	81	78	180,827
49½-hour, 5½-day week.....														
55-hour, 5½-day week.....	1	6	6	6	6	8	8	6	6	6	6	6	6	6,733
All other 5½-day week.....	12	97	98	95	98	100	100	107	117	118	129	128	117	160,619
48-hour, 6-day week.....	7	44	41	42	49	53	57	55	54	60	67	64	67	82,013
54-hour, 6-day week.....	4	7	10	6	6	10	11	13	14	14	11	13	13	30,922
60-hour, 6-day week.....	1	12	12	12	14	14	14	14	14	14	11	11	11	19,414
All other 6-day week.....														
All other not designated.....														
Not reported.....	1	6	7	7	7	6	7	9	10	10	10	10	10	11,861

<sup>1</sup> Includes highway; and central station, light and power plant.  
<sup>2</sup> Includes marble and tiling; and roofing and sheet metal combined.

TABLE 8.—EXPENDITURES OF REPORTING ESTABLISHMENTS: 1929

CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	Value of construction business reported	PRINCIPAL ITEMS OF EXPENDITURE			OTHER ITEMS OF EXPENDITURE							
			Sub-contract work let	Wages paid	Cost of materials	Salaries		Rent for		Interest	Contract bond premiums	Compensation and liability insurance premiums	All other overhead expenses
						Proprietors and firm members	Employees	Equipment	Offices, etc.				
<b>VERMONT</b> .....	52	\$5,052,926	\$229,000	\$1,614,667	\$2,194,829	\$78,677	\$198,945	\$21,600	\$84,768	\$18,018	\$6,209	\$28,398	\$278,279
General contractors.....	26	3,270,594	228,000	1,204,690	1,312,555	34,145	144,430	21,000	5,932	12,674	6,209	24,810	116,168
Building.....	21	2,512,305	221,000	875,513	9,095,190	34,145	60,101	1,280	4,375	10,469	990	17,152	67,146
Building not specialized.....	13	1,900,443	100,000	643,569	837,588	27,045	57,801	450	4,200	9,424	990	12,403	61,228
Commercial building only.....	2	280,776	10,000	123,284	108,099	3,500	4,300	800	-----	405	300	3,528	3,853
Residential building only.....	5	271,176	12,000	108,680	119,508	3,000	4,000	-----	175	640	-----	1,121	2,055
Other classes <sup>1</sup> .....	5	768,199	7,000	329,177	247,365	48,320	20,350	1,567	2,205	5,213	7,007	7,007	48,022
Subcontractors.....	26	1,782,331	1,000	409,367	882,274	42,532	70,515	-----	28,826	5,344	-----	3,509	158,111
Heating and plumbing.....	20	1,419,971	1,000	317,240	718,782	33,252	73,285	-----	10,197	3,448	-----	2,031	120,631
Heating and piping.....	8	477,888	-----	102,273	263,002	14,528	16,632	-----	4,715	2,138	-----	840	26,561
Plumbing.....	5	332,115	-----	92,119	165,527	14,248	5,320	-----	4,100	627	-----	433	34,118
Plumbing and heating combined.....	7	609,968	1,000	351,848	289,653	4,476	51,024	-----	7,292	683	-----	1,340	65,952
Other classes <sup>2</sup> .....	6	362,360	-----	92,127	163,492	8,280	6,230	-----	12,620	1,806	-----	938	31,480

<sup>1</sup> Includes highway; bridge and culvert; and central station, light and power plant.  
<sup>2</sup> Includes electrical; and roofing and sheet metal combined.

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**TABLE 9.—COST OF MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, BY KIND**

KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—					KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—				
	All classes of establishments			General contractors	Subcontractors		All classes of establishments			General contractors	Subcontractors
	Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>				Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>		
<b>VERMONT</b>					<b>VERMONT—Continued</b>						
All kinds of material.....	\$2,011,205		\$405.28	\$1,560,720	\$1,060,470	Distributed by kind—Continued.					
Distribution not reported.....	1,013,980	38.8		658,855	355,125	Composition board.....	\$14,842	.9	\$4.32	\$12,642	\$2,200
Distributed by kind.....	1,507,225	100.0		801,871	705,354	Waterproofing materials.....	1,282	.1	.37	962	320
Sand, gravel, stone, slag, cinders, etc.	90,691	0.2	29.04	99,491	200	Hardware, rough and finished.....	23,759	1.5	6.92	23,609	150
Brick (face, common, fire, paving, etc.).....	72,300	4.5	21.08	74,909	400	Paints, varnishes, glass.....	22,142	1.4	6.45	22,042	100
Tile (fireproofing).....	938	.1	.27	938		Roofing and sheet metal.....	47,896	3.0	13.95	17,632	80,264
Tile, facing, terra cotta, floor, and wall.....	15,373	1.0	4.48	15,373		Finished flooring other than cement, wood or tile.....	19,846	1.2	5.78	19,846	
Concrete and cinder block.....	6,400	.4	1.87	6,400		Screens, shades, awnings, etc.....	1,721	.1	.50	1,721	
Cut stone, granite, and marble.....	160,500	9.8	45.69	6,500	160,000	Heating and ventilating equipment.....	270,551	16.9	78.81	25,471	215,080
Cement.....	115,159	7.2	33.55	115,159		Plumbing and gas fitting equipment.....	178,676	11.2	52.06	26,752	151,924
Lime.....	7,473	.5	2.18	7,473		Electrical appliances and supplies.....	90,512	5.7	26.37	7,251	83,261
Plaster, etc.....	18,110	1.1	5.28	18,110	3,600	Elevators, dumb-waiters and equipment.....	5,990	.4	1.74	5,990	
Structural steel.....	30,865	1.9	8.99	30,865		Pipe: Drain tile, vitrified concrete, segment tile, corrugated.....	31,271	2.0	9.11	9,521	21,750
Reinforcing steel.....	24,985	1.6	7.28	24,985		Pipe: Cast iron, sheet and tube steel, etc.....	19,600	1.2	5.71	7,600	12,000
Metal doors, windows, and trim.....	5,175	.3	1.51	5,175		Wire cable, guards and fencing.....	671	(?)	.20	671	
Metal and wire lath and furring.....	3,888	.2	1.13	3,888		Bituminous paving materials, tar, asphalt, and oil.....	4,800	.3	1.40	300	4,500
Ornamental metal work.....	712	(?)	.21	712		Miscellaneous.....	6,176	.4	1.80	6,176	
Lumber, rough and finished.....	188,777	11.8	54.99	188,597	180						
Lath, shingles, and shakes (wood).....	4,092	.2	1.19	4,092	25						
Millwork.....	106,983	6.7	31.16	106,983							

<sup>1</sup> The value of construction work done is obtained from figures presented in Table 1, by subtracting the value of subcontract work let from the total value of construction business.  
<sup>2</sup> Less than one-tenth of 1 per cent.  
<sup>3</sup> The percentage of total cost shown for this item is high because the business of establishments reporting this material constituted a large part of the total business reported for this area.

**TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS**

(Based exclusively upon reports of establishments which gave the distributed cost of materials)

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
	Cost of all materials distributed by kind	Per cent of—		Value of construction business				Cost of all materials distributed by kind	Per cent of—		Value of construction business		
		Amount	Total cost						Amount	Total cost			
<b>VERMONT</b>						<b>VERMONT</b>							
Sand, gravel, stone, slag, cinders, etc.						Out stone, granite, and marble							
All classes.....	\$1,507,225	\$90,691	100.0	0.2	\$3,536,088	95.5	All classes.....	\$1,507,225	\$166,500	100.0	0.8	\$3,536,088	95.5
General contractors.....	801,871	99,491	99.8	11.2	2,188,938	93.0	General contractors.....	801,871	6,500	4.2	.7	2,188,938	93.0
Building.....	666,814	28,019	28.7	4.3	1,505,393	91.5	Building.....	666,814	6,500	4.2	1.0	1,505,393	91.5
Building not specialized.....	453,630	19,819	19.9	4.4	1,019,441	90.0	Building not specialized.....	453,630	6,500	4.2	1.4	1,019,441	90.0
Commercial building only.....	93,676	560	.6	.6	214,776	96.4	Commercial building only.....	93,676	900	.8	1.0	214,776	96.4
Residential building only.....	119,508	8,250	8.8	0.0	271,176	96.0	Residential building only.....	119,508	4,270	3.7	3.6	271,176	96.0
Highway.....	135,088	44,898	45.0	35.2	431,000	98.4	Highway.....	135,088	65,814	57.2	48.7	431,000	98.4
Bridge and culvert.....	90,809	20,174	20.2	33.1	145,400	100.0	Bridge and culvert.....	90,809	8,949	7.8	14.7	145,400	100.0
Central station, light and power plant.....	29,100	5,800	5.8	19.0	107,136	100.0	Central station, light and power plant.....	29,100	5,600	4.9	19.2	107,136	100.0
Subcontractors.....	705,354	200	.2	(?)	1,347,150	100.0	Subcontractors.....	705,354	150,000	95.8	21.3	1,347,150	100.0
Marble and tiling.....	153,705	200	.2	.1	249,134	100.0	Marble and tiling.....	153,705	150,000	95.8	97.6	249,134	100.0
Brick (face, common, fire, paving, etc.).....							<b>Cement</b>						
All classes.....	1,507,225	72,300	100.0	4.5	3,536,088	95.5	All classes.....	1,507,225	115,159	100.0	7.2	3,536,088	95.5
General contractors.....	801,871	71,069	99.4	8.1	2,188,938	93.0	General contractors.....	801,871	115,159	100.0	12.9	2,188,938	93.0
Building.....	666,814	99,999	99.7	10.5	1,505,393	91.5	Building.....	666,814	94,796	30.2	6.2	1,505,393	91.5
Building not specialized.....	453,630	54,317	75.1	12.0	1,019,441	90.0	Building not specialized.....	453,630	20,626	25.7	6.5	1,019,441	90.0
Commercial building only.....	93,676	7,390	10.1	7.8	214,776	96.4	Commercial building only.....	93,676	900	.8	1.0	214,776	96.4
Residential building only.....	119,508	8,352	11.5	7.0	271,176	96.6	Residential building only.....	119,508	4,270	3.7	3.6	271,176	96.0
Central station, light and power plant.....	29,100	2,000	2.8	6.9	107,136	100.0	Highway.....	135,088	65,814	57.2	48.7	431,000	98.4
Subcontractors.....	705,354	400	.6	.1	1,347,150	100.0	Bridge and culvert.....	90,809	8,949	7.8	14.7	145,400	100.0
Heating and plumbing.....	445,629	75	.1	(?)	428,393	100.0	Central station, light and power plant.....	29,100	5,600	4.9	19.2	107,136	100.0
Heating and piping.....	237,002	75	.1	(?)	428,393	100.0	<b>Structural steel</b>						
Marble and tiling.....	153,705	325	.4	.2	249,134	100.0	All classes.....	1,507,225	30,865	100.0	1.9	3,536,088	95.5

See footnotes at end of table.

CONSTRUCTION—VERMONT

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
	Cost of all materials distributed by kind	Amount	Per cent of—					Cost of all materials distributed by kind	Amount	Per cent of—			
			Total cost	Cost of all distributed materials						Total cost	Cost of all distributed materials		
<b>Lumber, rough and finished</b>							<b>Heating and ventilating equipment—Continued</b>						
All classes.....	\$1,507,225	\$188,777	100.0	11.8	\$3,536,088	95.5	Subcontractors—Continued.	\$145,027	\$50,955	18.8	35.1	\$270,303	100.0
General contractors.....	891,871	188,597	99.9	21.1	2,188,038	93.0	Plumbing and heating combined.....	63,000	34,000	12.0	54.0	141,000	99.8
Building.....	600,814	173,605	91.9	26.0	1,505,303	91.5	Roofing and sheet metal work.....	22,750	200	.1	.9	65,250	100.0
Building not specialized.....	453,630	101,875	54.0	22.5	1,019,441	90.0	Roofing and sheet metal combined.....	22,750	200	.1	.9	65,250	100.0
Commercial building only.....	93,076	28,080	15.4	30.9	214,770	96.4	Plumbing and gas-fitting equipment *.....						
Residential building only.....	110,508	42,650	22.6	35.7	271,176	96.6	All classes.....	1,507,225	178,676	100.0	11.2	3,536,088	95.5
Highway.....	135,088	1,050	.6	.8	431,009	98.4	General contractors.....	2,891,871	26,762	15.0	3.0	2,188,038	93.0
Bridge and culvert.....	60,869	8,842	4.7	14.5	145,400	100.0	Building.....	2,000,814	25,292	14.2	3.8	1,505,303	91.5
Central station, light and power plant.....	20,100	5,200	2.8	17.9	107,136	100.0	Building not specialized.....	453,630	18,292	10.2	4.0	1,019,441	90.0
Subcontractors.....	2,705,354	180	.1	( <sup>2</sup> )	1,347,150	100.0	Commercial building only.....	93,076	7,000	3.9	7.5	214,770	96.4
Marble and tiling.....	153,705	180	.1	.1	249,134	100.0	Residential building only.....	110,508	30,000	28.0	32.0	271,176	96.4
<b>Millwork</b>							Highway.....	135,088	300	.3	.2	431,009	98.4
All classes.....	1,507,225	100,983	100.0	6.7	3,536,088	95.5	Central station, light and power plant.....	20,100	1,500	1.4	5.2	107,136	100.0
General contractors.....	2,891,871	100,983	100.0	12.9	2,188,038	93.0	<b>Roofing and sheet metal</b>						
Building.....	2,000,814	105,183	98.3	15.8	1,505,303	91.5	All classes.....	1,507,225	47,896	100.0	3.0	3,536,088	95.5
Building not specialized.....	453,630	41,083	30.0	9.2	1,019,441	90.0	General contractors.....	891,871	17,632	36.8	2.0	2,188,038	93.0
Commercial building only.....	93,076	30,000	28.0	32.0	214,770	96.4	Building.....	2,000,814	10,810	35.1	2.5	1,505,303	91.5
Residential building only.....	110,508	33,500	31.3	28.0	271,176	96.6	Building not specialized.....	453,630	10,510	34.5	3.0	1,019,441	90.0
Highway.....	135,088	300	.3	.2	431,009	98.4	Commercial building only.....	93,076	300	.6	.3	214,770	96.4
Central station, light and power plant.....	20,100	1,500	1.4	5.2	107,136	100.0	Residential building only.....	110,508	250	.5	.2	271,176	96.4
Subcontractors.....	2,705,354	30,264	63.2	4.3	1,347,150	100.0	Highway.....	135,088	250	.5	.2	431,009	98.4
Heating and plumbing.....	245,620	13,090	27.1	2.0	840,656	99.9	Bridge and culvert.....	60,869	272	.6	.4	145,400	100.0
Heating and piping.....	237,602	6,800	14.2	2.0	428,303	100.0	Central station, light and power plant.....	20,100	300	.6	1.0	107,136	100.0
Plumbing.....	145,027	6,200	12.9	4.3	270,303	100.0	Subcontractors.....	2,705,354	30,264	63.2	4.3	1,347,150	100.0
Roofing and sheet metal work.....	22,750	17,264	36.0	75.0	65,250	100.0	Heating and plumbing.....	245,620	13,090	27.1	2.0	840,656	99.9
Roofing and sheet metal combined.....	22,750	17,264	36.0	75.0	65,250	100.0	Heating and piping.....	237,602	6,800	14.2	2.0	428,303	100.0
<b>Heating and ventilating equipment *</b>							Plumbing.....	145,027	6,200	12.9	4.3	270,303	100.0
All classes.....	1,507,225	270,551	100.0	16.9	3,536,088	95.5	Roofing and sheet metal work.....	22,750	17,264	36.0	75.0	65,250	100.0
General contractors.....	2,891,871	25,471	9.4	2.9	2,188,038	93.0	Roofing and sheet metal combined.....	22,750	17,264	36.0	75.0	65,250	100.0
Building.....	2,000,814	24,146	8.0	3.0	1,505,303	91.5	<b>Electrical appliances and supplies</b>						
Building not specialized.....	453,630	24,146	8.0	5.3	1,019,441	90.0	All classes.....	1,507,225	90,512	100.0	5.7	3,536,088	95.5
Bridge and culvert.....	60,869	325	.1	.5	145,400	100.0	General contractors.....	2,891,871	7,251	8.0	.8	2,188,038	93.0
Central station, light and power plant.....	20,100	1,000	.4	3.4	107,136	100.0	Building.....	2,000,814	6,456	7.1	1.0	1,505,303	91.5
Subcontractors.....	2,705,354	245,080	90.6	34.7	1,347,150	100.0	Building not specialized.....	453,630	5,456	6.0	1.2	1,019,441	90.0
Heating and plumbing.....	445,620	244,880	90.5	55.0	840,656	99.9	Commercial building only.....	93,076	1,000	1.1	1.1	214,770	96.4
Heating and piping.....	237,602	159,925	59.1	67.3	428,303	100.0	Residential building only.....	110,508	95	.1	.2	145,400	100.0
							Highway.....	135,088	275	.9	.5	431,009	98.4
							Bridge and culvert.....	60,869	275	.9	.5	145,400	100.0
							Central station, light and power plant.....	20,100	300	1.0	1.0	107,136	100.0
							Subcontractors.....	2,705,354	21,750	69.6	3.1	1,347,150	100.0
							Heating and plumbing.....	245,620	21,750	69.6	4.0	840,656	99.9
							Heating and piping.....	237,602	20,000	64.0	8.4	428,303	100.0
							Plumbing.....	145,027	1,750	5.6	1.2	270,303	100.0

<sup>1</sup> Based upon the difference between the total value of all construction work reported and the value of subcontract work let.  
<sup>2</sup> Includes cost of materials reported by establishments which did not include designated material in their distributed lists.  
<sup>3</sup> Less than one-tenth of 1 per cent.  
<sup>4</sup> Includes construction work reported by establishments which did not include the designated material in their distributed lists.  
<sup>5</sup> Includes cost of materials reported by subcontracting establishments which did not include the designated material in their distributed lists.  
<sup>6</sup> Includes construction work reported by subcontracting establishments which did not include the designated material in their distributed lists.

\* See footnote 3 of Table 9, on p. 1223.

CONSTRUCTION—VERMONT

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TABLE 11.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929

CLASSIFICATION OF ESTABLISHMENTS	Total cost of all materials	COST OF ALL MATERIALS DISTRIBUTED BY KIND		Sand, gravel, crushed stone, slag, cinders, etc.	Brick (face, common, fire, paving, etc.)	Tile, facing, terra cotta, floor, and wall	Concrete and cinder block	Cut stone, granite and marble	Cement	Lime	Plaster, etc.	Structural steel	Reinforcing steel	Metal doors, windows, and trim	Metal and wire lath and furring	Lumber, rough and finished
		Amount	Per cent of total													
<b>VERMONT</b>	\$2,611,205	\$1,597,225	61.2	\$99,661	\$72,369	\$15,373	\$6,400	\$156,500	\$115,159	\$7,473	\$18,110	\$30,865	\$24,985	\$5,175	\$3,888	\$188,777
General contractors	1,550,726	891,871	57.5	99,491	71,969	15,373	6,400	6,500	115,159	7,473	15,110	30,865	24,985	5,175	3,888	188,597
Building	1,287,017	606,814	51.8	28,619	69,969	15,373	1,250	6,500	34,796	7,273	14,938	28,165	4,100	4,575	3,700	173,505
Building not specialized	1,011,310	453,030	44.9	19,819	54,817	14,373		6,500	29,626	6,568	13,418	27,665	4,100	4,200	3,075	101,875
Commercial building only	108,000	93,070	86.7		7,309	1,000			800	200	300	500			200	28,980
Residential building only	168,608	119,508	70.9		8,250				4,270	505	1,220				375	42,650
Highway	135,088	135,088	100.0	44,898					65,814			500	12,465	600		1,050
Bridge and culvert	98,621	60,809	61.7	20,174			4,250		8,049		172	1,200	7,380		188	8,842
Central station, light and power plant	20,100	20,100	100.0	5,800	2,000				5,600	200		1,000	1,100			5,200
Subcontractors	1,060,479	705,354	66.5	200	400			150,000			3,000					180
Electrical	83,261	83,261	100.0													
Heating and plumbing	743,282	446,620	60.0		75											
Heating and piping	263,602	237,602	90.1		75											
Plumbing	190,027	145,027	76.3													
Plumbing and heating combined	280,653	63,000	21.8													
Roofing and sheet metal combined	80,231	22,759	28.4													
Marble and tiling	153,705	153,705	100.0	200	325			150,000			3,000					180

CLASSIFICATION OF ESTABLISHMENTS	Laths, shingles, and shakes	Mill-work	Composition board	Hardware, rough and finished	Paints, varnishes, and glass	Roofing and sheet metal	Finished flooring, n. e. s.	Heating and ventilating equipment	Plumbing and gas fitting equipment	Electrical appliances and supplies	Elevators, dumb-waiters, etc.	Pipe: Drain, tile, vitrified, concrete, etc.	Pipe: Cast iron, sheet and tube steel, etc.	Bituminous paving materials	Miscellaneous
<b>VERMONT</b>	\$4,092	\$106,983	\$14,842	\$23,759	\$22,142	\$47,896	\$19,846	\$270,551	\$175,876	\$80,512	\$5,990	\$31,271	\$19,600	\$4,800	\$11,500
General contractors	4,007	106,983	12,642	23,600	22,042	17,632	19,846	25,471	26,752	7,251	5,990	9,521	7,800	300	11,180
Building	3,665	105,183	12,542	22,007	19,823	16,810	18,990	24,146	25,292	6,456	5,990	875	7,600		4,672
Building not specialized	2,325	41,683	5,166	13,157	14,827	16,510	8,490	24,146	18,292	5,456	5,990	800	7,600		3,622
Commercial building only		30,000	2,400	5,300	1,240	300	6,000		7,000	1,000		75			1,050
Residential building only	1,340	33,500	4,946	3,550	3,750		4,500								
Highway		300				250						8,071		300	6,508
Bridge and culvert	402			1,102	219	272	256	325	260	95		275			
Central station, light and power plant		1,500	100	500	2,000	300	600	1,000	1,200	700		300			
Subcontractors	25		2,200	150	100	30,264		245,080	151,624	83,261		21,750	12,000	4,500	320
Electrical										83,261					
Heating and plumbing			2,000			13,000		244,880	151,024			21,750	12,000		
Heating and piping			2,000			6,800		159,925	47,802			20,000	1,000		
Plumbing						6,200		50,955	75,122			1,750	11,000		
Plumbing and heating combined								34,000	29,000						
Roofing and sheet metal combined	25		200	150	100	17,264		200						4,500	320
Marble and tiling															

\* See footnote 3 of Table 9, on p. 1223.

## CONSTRUCTION—VERMONT

TABLE 12.—NUMBER OF, AND VOLUME OF BUSINESS REPORTED BY, ESTABLISHMENTS DOING A CONSTRUCTION BUSINESS OF LESS THAN \$25,000 IN 1929, PERCENTAGE OF TOTAL NUMBER OF KNOWN ESTABLISHMENTS, AND AVERAGE VOLUME PER ESTABLISHMENT

TYPES OF WORK	VERMONT 1930 population, 350,611							
	Known contracting establishments				Volume of business reported			
	Total number	Inactive in 1929	Active in 1929		Number of reporting establishments	Per cent of active	Amount	Average per establishment
			Number	Per cent				
Total establishments canvassed (under \$25,000).....	275	5	270					
Total establishments, type of work unknown.....	4		4					
Total general and subcontractors classified.....	271	5	266	100.0				
Total general contractors classified.....	78		78	29.3	32	41.0	\$350,253	\$11,227
Building.....	72		72	27.1	30	41.7	\$30,738	11,025
Highways.....	2		2	.8	1	50.0	0,515	0,515
Foundation.....	2		2	.8				
Dams.....	1		1	.4				
Bridges and culverts.....	1		1	.4	1	100.0	22,000	22,000
Total subcontractors classified.....	193		188	70.7	66	35.1	555,737	8,420
Plumbing and heating.....	84	3	81	30.5	31	38.3	\$21,273	10,364
Carpentering.....	18	1	17	6.4	0	35.3	22,121	3,087
Painting and decorating.....	30		30	11.3	9	30.0	60,485	0,669
Electrical.....	39		39	14.7	10	25.6	60,588	5,059
Heating and ventilating.....	8		8	3.0	3	37.5	47,270	15,757
Sheet metal and roofing.....	0		0	2.3	4	60.7	10,000	2,500
Marble and tiling.....	1		1	.4				
Masonry.....	3		3	1.1	1	33.3	15,700	10,700
Plastering.....	1		1	.4				
Concrete and cement.....	1		1	.4	1	100.0	4,300	4,300
Glass and glazing.....	1		1	.4	1	100.0	15,000	15,000
Wrecking.....	1	1						

TABLE 13.—ESTABLISHMENTS (WHOSE BUSINESS WAS LESS THAN \$25,000 IN 1929) WHICH REPORTED THEIR VOLUME OF CONSTRUCTION WORK, CLASSIFIED BY RANGE OF VOLUME OF BUSINESS

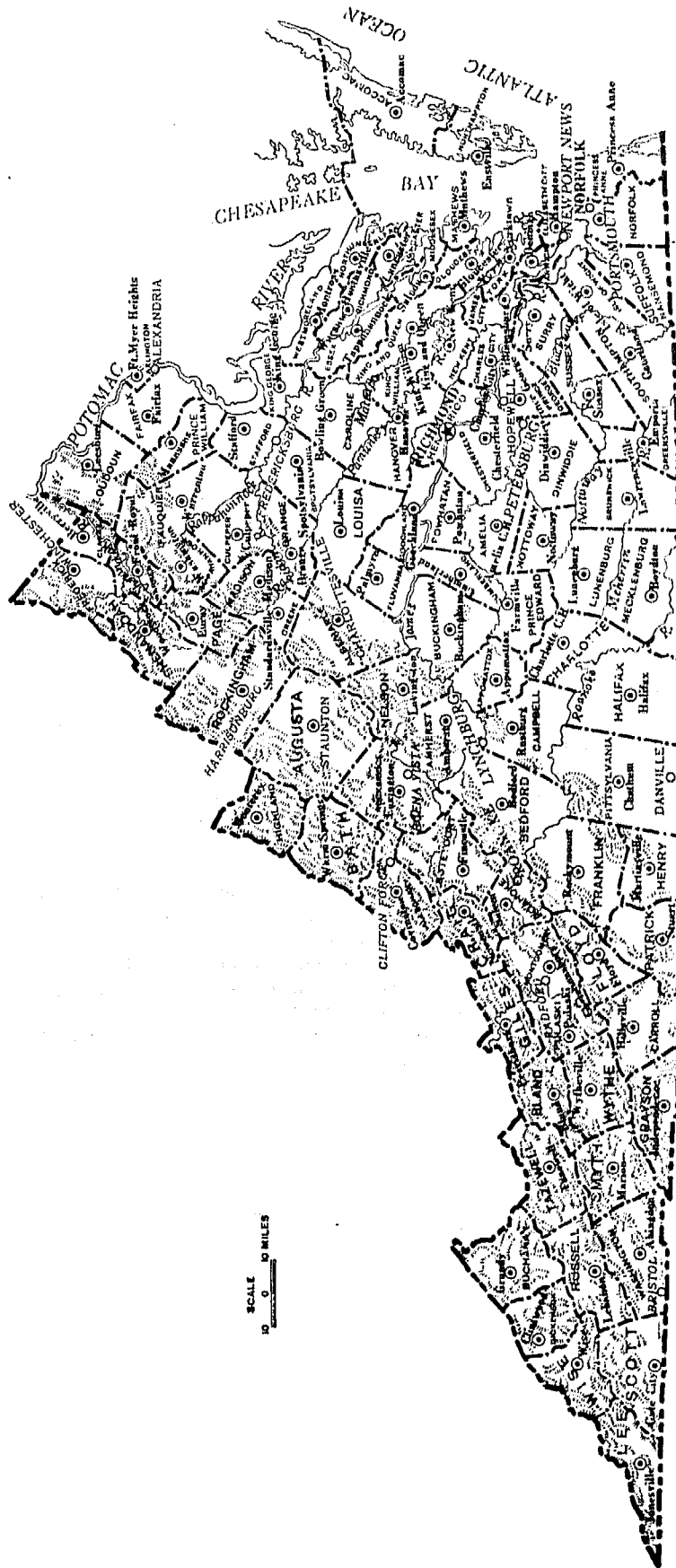
CLASSIFICATION	Total	Less than \$2,500	\$2,500 to \$4,000	\$4,000 to \$7,400	\$7,500 to \$9,000	\$10,000 to \$12,400	\$12,500 to \$14,000	\$15,000 to \$17,400	\$17,500 to \$19,000	\$20,000 to \$22,400	\$22,500 to \$24,000
VERMONT											
Total general and subcontractor.....	98	12	25	10	10	12	4	8	0	7	4
General contractors.....	22	2	6	4	3	5		4	3	5	
Subcontractors.....	66	10	19	6	7	7	4	4	3	2	4

# VIRGINIA

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# VIRGINIA



# CONSTRUCTION—VIRGINIA

1229

**TABLE 1.—VALUE OF CONSTRUCTION BUSINESS DURING 1929, AND PRINCIPAL ITEMS OF EXPENDITURE**  
[Values expressed in thousands]

AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	Number of establishments	VALUE OF CONSTRUCTION BUSINESS					PRINCIPAL EXPENDITURES						
		Total	Under general contract or directly for owner	Under subcontract	Subcontract work let	Wages paid	Cost of materials	Total	Under general contract or directly for owner	Under subcontract	Subcontract work let	Wages paid	Cost of materials
<b>VIRGINIA.....</b>	<b>337</b>	<b>\$54,313</b>	<b>\$42,710</b>	<b>\$11,603</b>	<b>\$12,631</b>	<b>\$12,443</b>	<b>\$19,804</b>						
<i>Counties and independent cities</i>													
<i>Counties:</i>													
Alleghany.....	3	250	157	93	21	85	105						
Halifax.....	6	848	848		125	240	165						
Montgomery.....	3	207	207		6	55	93						
Orange.....	3	514	450	55		104	220						
Prince Edward.....	3	235	202	33		55	92						
Roanoke.....	3	480	480		103	149	19						
Wise.....	3	258	258		10	114	55						
Other counties <sup>1</sup> .....	30	3,159	2,692	567	463	841	1,160						
<i>Independent cities:</i>													
Alexandria.....	3	209	109	102	36	78	87						
Charlottesville.....	11	2,083	1,084	99	221	703	341						
Clifton Forge.....	3	234	234		50	78	79						
Danville.....	10	803	602	201	67	237	335						
Fredericksburg.....	3	301	301		42	75	129						
Harrisonburg.....	4	305	236	68	96	68	96						
Lynchburg.....	23	6,050	5,449	601	1,026	1,929	2,883						
Newport News.....	0	2,131	2,010	115	546	506	700						
Norfolk.....	03	5,993	3,755	2,208	1,449	1,229	1,883						
Petersburg.....	0	305	287	107	42	106	163						
Richmond.....	08	17,873	12,160	5,713	6,029	3,284	5,024						
Roanoke.....	30	10,837	6,478	1,369	1,648	2,158	5,481						
Staunton.....	4	413	301	62	23	103	183						
Suffolk.....	4	242	242		47	63	86						
Other independent cities <sup>2</sup> .....	7	407	238	229	26	70	223						
<i>Classification of establishments</i>													
Operative builders.....	3	209	209		153	14	28						
General contractors.....	177	36,929	36,804	126	11,857	8,820	9,906						
Building contractors.....	110	28,022	26,622	10,704	5,002	7,522	7,522						
Buildings, not specialized.....	84	23,391	23,391		0,690	4,065	6,992						
Commercial buildings only.....	4	286	286		115	41	83						
Residential buildings only.....	31	1,946	1,946		699	236	447						
Highway.....	22	3,225	3,219	9	421	900	745						
Bridge and culvert.....	8	2,728	2,728		440	540	50						
Grading.....	0	602	559	43	8	193	157						
Street paving.....	0	396	396		7	109	81						
Sewers, gas, water, conduit.....	3	271	255	16		75	81						
Dam reservoir, waterworks.....	3	1,320	1,320		43	414	213						
Dredging river, harbor, etc.....	5	637	679	58		178	108						
Railroad.....	5	2,027	2,027		234	744	477						
Subcontractors.....	167	17,175	5,097	11,478	621	3,909	9,670						
Concrete.....	0	391	138	253	19	105	159						
Electrical.....	20	1,713	228	1,485	1	513	808						
Heating and plumbing.....	62	4,210	1,036	3,174	128	900	2,288						
Heating and pipe covering.....	27	2,079	610	1,469	123	399	1,134						
Plumbing.....	20	1,754	302	1,452	5	410	961						
Plumbing and heating combined.....	0	377	124	253		91	194						
Masonry and stone work.....	9	1,267	71	1,226	2	494	602						
Painting and decorating.....	8	323	123	200		103	80						
Plastering and lathing.....	5	483	8	475		217	183						
Roofing and sheet-metal work.....	21	1,735	120	1,614		452	900						
Roofing.....	13	993	120	873		256	503						
Sheet-metal work.....	3	363		303		88	209						
Roofing and sheet metal combined.....	5	378		378		108	187						
Marble and tiling.....	11	928	63	860	4	279	451						
Excavating.....	4	412	70	342		138	42						
Steel erection, ornamental iron and miscellaneous metal work n. e. s.....	0	5,105	3,785	1,369	464	536	3,867						
Other classes <sup>3</sup> .....	5	584	105	479	3	113	292						
<i>Size of business groups</i>													
General contractors <sup>4</sup> .....	180	37,138	37,013	125	12,010	8,584	9,934						
\$25,000 to \$49,999.....	40	1,442	1,442		407	353	436						
\$50,000 to \$99,999.....	52	3,680	3,645	35	1,267	708	983						
\$100,000 to \$199,999.....	43	6,139	6,048	91	1,462	1,462	1,725						
\$200,000 to \$499,999.....	28	8,697	8,697		2,703	1,672	2,460						
\$500,000 to \$999,999.....	13	8,495	8,495		2,830	2,215	1,578						
\$1,000,000 and over.....	4	8,684	8,684		3,361	2,064	2,762						
Subcontractors.....	157	17,175	5,097	11,478	621	3,909	9,670						
\$25,000 to \$49,999.....	08	2,434	841	1,892	5	748	1,170						
\$50,000 to \$99,999.....	54	3,784	449	3,335	0	1,082	1,764						
<b>VIRGINIA—Continued.</b>													
<i>Size of business groups—Con.</i>													
Subcontractors—Continued.													
\$100,000 to \$199,999.....	22	\$3,000	\$702	\$2,298	\$146	\$734	\$1,495						
\$200,000 to \$499,999.....	11	3,110	271	2,839	1	855	1,520						
\$500,000 to \$999,999.....	1	580		580		59	474						
\$1,000,000 and over.....	1	4,267	3,735	532	463	434	3,244						
<b>NORFOLK</b>	<b>63</b>	<b>5,983</b>	<b>3,765</b>	<b>2,208</b>	<b>1,449</b>	<b>1,281</b>	<b>1,893</b>						
<i>Classification of establishments</i>													
General contractors <sup>4</sup> .....	28	3,575	3,517	58	1,425	547	759						
Building contractors.....	20	2,515	2,515		1,407	278	499						
Buildings, not specialized.....	14	2,044	2,044		1,148	218	391						
Residential buildings only.....	6	471	471		269	58	108						
Dredging, river, harbor, etc.....	5	637	579	58		180	106						
Other classes <sup>5</sup> .....	3	423	423		18	91	154						
Subcontractors.....	35	2,388	237	2,151	24	684	1,124						
Concrete.....	3	255	112	143	19	71	90						
Electrical.....	3	360	50	310		143	133						
Heating and plumbing.....	10	475	9	466		106	278						
Heating and plumbing and heating combined.....	4	193		193		41	117						
Plumbing.....	6	282	9	273		65	161						
Roofing and sheet-metal work.....	7	392	66	327		114	209						
Marble and tiling.....	3	220		220	4	51	112						
Ornamental iron.....	3	214		214	1	38	113						
Other classes <sup>6</sup> .....	6	470		470		159	189						
<i>Size of business groups</i>													
General contractors <sup>4</sup> .....	28	3,575	3,517	58	1,425	547	759						
\$25,000 to \$49,999.....	6	225	225		90	35	57						
\$50,000 to \$99,999.....	9	717	709	8	307	110	188						
\$100,000 to \$199,999.....	8	1,136	1,086	50	315	201	289						
\$200,000 to \$499,999.....	5	1,496	1,496		713	195	225						
Subcontractors.....	35	2,388	237	2,151	24	684	1,124						
\$25,000 to \$49,999.....	10	569	58	511	1	161	291						
\$50,000 to \$99,999.....	14	1,001	48	953	4	247	507						
\$100,000 to \$199,999.....	4	277	131	146	19	194	231						
\$200,000 to \$499,999.....	1	640	240			80	95						
<b>RICHMOND</b>	<b>98</b>	<b>17,873</b>	<b>12,160</b>	<b>5,713</b>	<b>6,839</b>	<b>3,284</b>	<b>5,024</b>						
<i>Classification of establishments</i>													
General contractors <sup>4</sup> .....	42	11,401	11,351	50	6,503	1,528	1,784						
Building contractors.....	33	10,221	10,221		6,469	1,218	1,403						
Buildings, not specialized.....	24	9,640	9,640		6,035	1,175	1,312						
Residential buildings only.....	9	582	582		424	43	91						
Highways and street paving.....	5	568	558	8	15	166	189						
Other classes <sup>5</sup> .....	4	614	572	42	29	144	161						
Subcontractors.....	56	6,472	809	5,663	126	1,756	3,240						
Electrical.....	9	759	58	671		227	365						
Heating and plumbing.....	18	1,774	332	1,442	121	350	923						
Heating and pipe covering.....	7	870	226	644	116	143	431						
Plumbing.....	11	904	106	798	5	207	492						
Masonry and stone work.....	6	1,158	71	1,087	2	452	531						
Painting and decorating.....	3	153	123	30		79	35						
Plastering and lathing.....	4	243	8	235		137	88						
Roofing and sheet-metal work.....	5	620		620		152	321						
Marble and tiling.....	4	497	13	484		153	254						
Other classes <sup>6</sup> .....	7	1,269	175	1,094	3	206	723						
<i>Size of business groups</i>													
General contractors <sup>4</sup> .....	42	11,401	11,351	50	6,503	1,528	1,784						
\$25,000 to \$49,999.....	7	294	294		157	48	44						
\$50,000 to \$99,999.....	14	991	965	26	566	128	158						
\$100,000 to \$199,999.....	8	1,104	1,080	24	378	232	257						
\$200,000 to \$499,999.....	6	2,169	2,169		1,156	282	411						
\$500,000 to \$999,999.....	5	3,491	3,491		1,711	632</							



TABLE 2.—CONSTRUCTION BUSINESS OF REPORTING ESTABLISHMENTS DURING 1929, BY CLASS OF OWNERSHIP AND BY TYPE OF WORK

CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—						CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—											
	All classes of establishments		General contractors 1		Subcontractors			All classes of establishments		General contractors 1		Subcontractors							
	Number reporting	Value	Number reporting	Value	Number reporting	Value		Number reporting	Value	Number reporting	Value	Number reporting	Value						
<b>VIRGINIA</b>																			
All construction business.....	337	\$54,313,004	180	\$37,138,126	167	\$17,174,808	<b>NORFOLK—Continued</b> All construction business—Contd. Distributed by class of public ownership..... Federal..... State..... County or township..... Municipal..... All business under general contract or directly for owners..... Buildings..... Commercial..... Educational..... Hospital and institutional..... Manufacturing..... Religious and memorial..... Residential..... Miscellaneous..... Highways and streets..... Public works and utilities..... Bridges, tunnels, etc..... River and harbor improvement..... Miscellaneous..... All business under subcontract..... Concrete..... Electrical..... Heating and plumbing..... Heating and piping..... Plumbing..... Plumbing and heating combined..... Roofing and sheet-metal work..... Roofing..... Sheet-metal work..... Steel erection..... Marble and tiling..... Excavating..... Ornamental iron..... Miscellaneous..... All construction business..... Distribution not reported..... Distributed by class of ownership..... Private construction..... Quasi-public construction..... Public construction..... Distribution not reported..... Distributed by class of public ownership..... Federal..... State..... County or township..... Municipal..... All business under general contract or directly for owners..... Buildings..... Distribution not reported..... Distributed by class of buildings..... Commercial..... Educational..... Hotel..... Hospital and institutional..... Manufacturing..... Religious and memorial..... Residential..... Social and recreational..... Rail and water transportation..... Miscellaneous..... Highways and streets..... Railroads and car lines..... Public works and utilities..... Bridges, tunnels, etc..... Central station, light and power plants (including gas)..... River and harbor improvements..... Sewage disposal and drainage..... Water supply..... Air transport work..... Miscellaneous..... All business under subcontract..... Distribution not reported..... Distributed by class of subcontract work..... Concrete..... Electrical and elevator construction..... Heating and plumbing..... Heating and piping..... Pipe covering..... Plumbing..... Plumbing and heating combined..... Masonry and stone work..... Painting and decorating..... Glass and glazing..... Plastering..... Roofing and sheet-metal work..... Roofing..... Sheet-metal work..... Roofing and sheet metal combined..... Steel erection..... Marble and tiling..... Excavating..... Ornamental iron..... Miscellaneous..... All construction business..... Private construction..... Quasi-public construction..... Public construction..... Distribution not reported.....	11	651,937	11	651,937	11	651,937	10	\$550,010	8	\$475,466	11	\$283,544
Distribution not reported.....	11	651,937	11	651,937	11	651,937		14	320,551	10	211,154	4	109,307						
Distributed by class of ownership.....	326	53,061,157	180	37,138,126	140	16,523,031		0	373,031	3	350,703	3	22,028						
Private construction.....	202	36,401,050	151	25,909,223	141	13,402,427		5	93,000	4	(?)	1	(?)						
Quasi-public construction.....	77	3,431,537	36	2,010,489	41	821,051		11	171,828	3	22,550	8	140,269						
Public construction.....	140	10,827,070	76	8,018,417	64	2,209,553		35	3,754,583	28	3,517,432	7	237,151						
Distribution not reported.....	13	669,236	7	621,814	6	147,922		28	2,693,380	22	2,630,865	6	150,517						
Distributed by class of public ownership.....	127	10,158,734	69	8,007,103	58	2,001,631		13	941,011	0	001,193	4	30,813						
Federal.....	35	2,064,769	10	2,511,065	10	153,104		0	167,108	3	154,000	3	2,508						
State.....	58	4,606,750	33	3,811,770	25	784,983		3	91,947	3	91,947	0	(?)						
County or township.....	33	930,715	15	302,020	18	508,005		0	287,140	2	(?)	3	(?)						
Municipal.....	54	1,966,491	29	1,411,042	25	555,440		4	147,438	3	(?)	1	(?)						
All business under general contract or directly for owners.....	231	42,709,895	180	37,013,383	51	5,006,512		18	837,822	13	801,423	5	36,390						
Buildings.....	170	28,761,790	130	25,028,104	46	3,133,002		10	230,005	7	198,340	3	32,550						
Distribution not reported.....	3	106,081	3	100,081	4	8,133,002		3	371,436	2	(?)	1	(?)						
Distributed by class of buildings.....	173	28,655,715	127	25,622,023	40	3,133,002		0	680,767	8	(?)	1	(?)						
Commercial.....	83	6,727,672	04	0,211,325	10	516,347		3	17,611	2	(?)	3	(?)						
Educational.....	40	2,603,745	25	2,377,032	16	126,813		8	336,830	5	328,730	3	8,100						
Hotel.....	8	2,094,725	4	2,080,087	4	6,038		3	275,317	3	275,317	0	(?)						
Hospital and institutional.....	27	1,700,423	20	1,657,023	7	42,500		4	2,208,100	2	(?)	35	(?)						
Manufacturing.....	25	6,078,118	18	3,957,003	7	1,120,155		4	138,723	1	(?)	3	(?)						
Military and naval.....	5	440,387	4	(?)	1	(?)		4	322,854	4	322,854	4	322,854						
Public: Courts, jails, etc.....	14	139,841	10	131,101	4	8,650		7	406,007	7	406,007	7	406,007						
Religious and memorial.....	31	1,780,418	25	1,723,534	6	45,884		7	104,016	7	104,016	7	104,016						
Residential.....	128	6,721,020	93	5,820,457	35	901,472		7	109,038	7	109,038	7	109,038						
Social and recreational.....	10	404,074	9	(?)	1	(?)		3	102,053	3	102,053	3	102,053						
Rail and water transportation.....	4	101,083	2	(?)	2	(?)		6	325,730	6	325,730	6	325,730						
Miscellaneous.....	37	973,400	25	941,054	12	331,746		5	153,778	5	153,778	6	133,773						
Highways and streets.....	38	4,187,443	36	4,035,241	3	152,202		3	101,006	3	101,006	3	101,006						
Railroads and car lines.....	9	2,206,751	9	2,206,751	3	152,202		3	82,250	3	82,250	3	82,250						
Public works and utilities.....	36	7,132,548	29	4,823,382	7	2,309,166		3	207,720	3	207,720	3	207,720						
Bridges, tunnels, etc.....	17	4,748,010	15	(?)	2	(?)		3	71,000	3	71,000	3	71,000						
Central station, light and power plants (including gas).....	10	1,804,070	0	952,327	4	352,652		3	132,035	3	132,035	7	409,347						
River and harbor improvements.....	10	428,202	8	(?)	2	(?)		10	401,850	3	52,603	7	409,347						
Sewage disposal and drainage.....	8	208,755	0	(?)	2	(?)		8	17,872,958	42	11,401,281	56	0,471,877						
Water supply.....	5	382,413	5	382,413	1	(?)		10	589,937	10	589,937	10	589,937						
Air transport work.....	3	109,196	2	(?)	1	(?)		88	17,286,021	42	11,401,281	46	5,884,740						
Miscellaneous.....	6	222,161	4	(?)	2	(?)		85	13,812,309	40	0,156,035	45	4,635,374						
All business under subcontract.....	162	11,603,199	7	124,748	146	11,478,450		14	745,689	7	612,807	7	132,782						
Distribution not reported.....	1	28,975	1	28,975	1	28,975		34	2,728,123	19	1,631,639	16	1,000,584						
Distributed by class of subcontract work.....	151	11,574,224	7	124,748	144	11,440,481		2	147,633	2	147,633	2	147,633						
Concrete.....	9	250,303	1	(?)	8	(?)		32	2,580,490	17	1,483,000	16	1,000,584						
Electrical and elevator construction.....	21	1,571,165	21	1,571,165	21	1,571,165		9	522,456	3	497,851	6	24,605						
Heating and plumbing.....	3	8,188,477	3	8,188,477	3	8,188,477		10	512,010	3	106,184	7	316,826						
Heating and piping.....	43	1,305,415	43	1,305,415	43	1,305,415		13	580,444	7	137,918	6	442,526						
Pipe covering.....	6	43,010	6	43,010	6	43,010		16	965,580	9	652,653	7	312,627						
Plumbing.....	41	1,430,389	41	1,430,389	41	1,430,389		61	12,100,265	42	11,351,400	19	808,775						
Plumbing and heating combined.....	9	349,063	9	349,063	9	349,063		51	10,892,114	34	10,127,754	17	674,300						
Masonry and stone work.....	11	1,245,265	11	1,245,265	11	1,245,265		1	30,000	1	30,000	1	30,000						
Painting and decorating.....	7	199,793	7	199,793	7	199,793		50	10,763,114	33	10,088,754	17	674,300						
Glass and glazing.....	3	234,100	3	234,100	3	234,100		25	2,713,466	19	2,631,526	6	81,931						
Plastering.....	5	474,843	5	474,843	5	474,843		10	478,718	7	421,334	3	57,384						
Roofing and sheet-metal work.....	1	1,537,434	1	1,537,434	1	1,537,434		3	2,003,600	1	(?)	2	(?)						
Roofing.....	16	1,389,270	16	1,389,270	16	1,389,270		0	345,436	1	(?)	2	(?)						
Sheet-metal work.....	16	539,870	16	539,870	16	539,870		6	709,614	4	(?)	2	(?)						
Roofing and sheet metal combined.....	5	358,282	5	358,282	5	358,282	6	47,202	4	(?)	1	(?)							
Steel erection.....	5	1,050,074	5	1,050,074	5	1,050,074	8	696,405	8	696,405	8	696,405							
Marble and tiling.....	11	866,454	11	866,454	11	866,454	40	3,125,354	28	2,777,008	12	348,340							
Excavating.....	9	372,768	2	(?)	7	(?)	3	180,211	3	180,211	5	134,063							
Ornamental iron.....	4	276,144	4	276,144	4	276,144	10	489,155	5	335,095	5	134,063							
Miscellaneous.....	11	307,404	5	85,772	6	221,632	9	673,770	7	(?)	2	(?)							
<b>NORFOLK</b>																			
All construction business.....	03	5,002,360	28	3,574,516	35	2,387,844	0	516,975	5	516,975	5	516,975							
Private construction.....	59	4,313,432	25	2,553,430	34	1,760,002	0	83,463	3	(?)	1	(?)							
Quasi-public construction.....	20	684,418	9	345,620	11	238,798	5	432,612	5	432,612	5	432,612							
Public construction.....	23	1,004,510	8	675,466	15	889,044	5	163,400	5	163,400	5	163,400							
Distribution not reported.....	4	105,500	4	105,500	4	105,500	0	0	0	0	0	0							

1 Includes operative builders.  
 2 Value omitted in order to avoid revealing individual operations. The amounts omitted are, however, included in the respective totals.  
 3 Includes work on water power developments by 1 general contracting and 1 subcontracting establishment.  
 4 Includes establishments engaged in the following types of work: General contract: Grading, 1; dredging, river and harbor, 2; rental of equipment, trucking, etc., 2; Subcontract: Wrecking, 2; highway, 1; grading, 1; metal work, other than sheet metal, steel erection and ornamental iron, 1; and pipe line construction, 1.  
 5 Includes establishments engaged in the following types of work: General contract: Hotel construction, 1; military and naval buildings, 1; public buildings, courts, jails, etc., 1; social and recreational buildings, 1; rail and water transportation buildings, 1; Subcontract: Military and naval buildings, 1; and rail and water transportation buildings, 1.  
 6 Includes 1 establishment engaged in railroad and car line construction; and 2 in sewage disposal and drainage work.  
 7 Includes 1 establishment engaged in roofing and sheet metal work combined.  
 8 Includes establishments engaged in the following types of work: General contract: Dredging, river and harbor, 2; rental of equipment, trucking, etc., 1; Subcontract: Masonry, 2; painting and decorating, 2; plastering and lathing, 1; and wrecking, 2.  
 9 Includes 1 establishment reporting general contract work on military and naval buildings.  
 10 Includes establishments engaged in the following types of work: Bridge and tunnel construction, 1; docks, piers, and retaining walls, 1; sewage disposal and drainage, 1; and water supply, 2.  
 11 Includes 3 general contract establishments engaged in railroad and car line construction and 1 in air transport work.

TABLE 2.—CONSTRUCTION BUSINESS OF REPORTING ESTABLISHMENTS DURING 1929, BY CLASS OF OWNERSHIP AND BY TYPE OF WORK—Continued

CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—						CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—					
	All classes of establishments		General contractors <sup>1</sup>		Subcontractors			All classes of establishments		General contractors <sup>1</sup>		Subcontractors	
	Number reporting	Value	Number reporting	Value	Number reporting	Value		Number reporting	Value	Number reporting	Value	Number reporting	Value
<b>RICHMOND—Continued</b>							<b>RICHMOND—Continued</b>						
All business under subcontract	57	\$5,712,693	3	\$49,791	54	\$5,662,902	All business under subcontract—Continued						
Concrete, masonry and stone work	8	1,099,423	—	—	8	1,099,423	Roofing and sheet-metal work	—	\$663,932	—	—	\$663,932	
Electrical	10	671,181	—	—	10	671,181	Roofing	3	202,540	—	—	202,540	
Heating and plumbing	—	1,365,715	—	—	—	1,365,715	Sheet-metal work	4	183,110	—	—	183,110	
Heating and piping	13	646,031	—	—	13	646,031	Roofing and sheet metal combined	3	188,282	—	—	188,282	
Pipe covering	3	41,750	—	—	3	41,750	Steel erection <sup>11</sup>	3	623,321	—	—	623,321	
Plumbing	15	677,034	—	—	15	677,034	Marble and tiling	5	515,738	—	—	515,738	
Painting and decorating <sup>12</sup>	6	204,843	—	—	6	204,843	Excavating	4	218,946	2	(?)	2	(?)
							Miscellaneous <sup>14</sup>	4	289,594	1	(?)	3	(?)

<sup>1</sup> Includes operative builders.  
<sup>2</sup> Value omitted in order to avoid revealing individual operations. The amounts omitted are, however, included in the respective totals.  
<sup>3</sup> Includes plastering and lathing.  
<sup>4</sup> Includes subcontract establishments engaged in the following types of work: Ornamental iron, 1; and metal work other than sheet metal, steel erection or ornamental iron, 1.  
<sup>5</sup> Includes establishments engaged in the following types of work: General contract: Rental of equipment, trucking, etc., 1; Subcontract: Highway, 1; grading, 1; glass and glazing, 1.

TABLE 3.—CONSTRUCTION BUSINESS DURING 1929, BY LOCATION

CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	Total	In home city	In home State	Outside home State	CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	Total	In home city	In home State	Outside home State
Operative builders	3	209,193	209,193	209,193	—	General contractors <sup>2</sup>	27	3,217,545	1,824,475	3,066,116	151,429
General contractors	170	36,105,449	14,108,265	24,884,407	11,220,082	Building contractors	19	2,157,223	1,499,408	1,601,992	24,434
Building contractors	114	24,936,741	13,016,701	19,277,420	5,069,315	Buildings, not specialized <sup>4</sup>	13	1,080,420	1,028,071	470,797	470,797
Buildings, not specialized	80	22,776,030	11,277,258	17,153,501	5,021,568	Residential buildings only	6	470,797	470,797	—	—
Commercial buildings only	4	285,759	241,113	285,759	—	Dredging, river, harbor, etc.	5	637,181	316,451	510,186	126,995
Residential buildings only	30	1,875,809	1,492,330	1,838,169	37,727	Other classes <sup>5</sup>	3	423,141	8,550	423,141	—
Highway	22	3,325,351	64,125	2,022,036	1,302,415	Subcontractors	34	2,352,045	1,020,682	2,037,955	314,090
Bridges and culvert	8	2,728,232	123,891	1,049,909	1,678,323	Concrete and masonry	5	304,381	228,644	304,381	—
Grading	6	601,850	62,072	381,859	220,000	Electrical	3	300,854	255,354	325,004	32,200
Street paving	6	395,703	373,803	395,703	—	Heating and plumbing	9	430,208	409,365	437,208	2,000
Public works and utilities <sup>7</sup>	10	2,169,320	413,073	1,237,732	931,588	Heating and piping <sup>8</sup>	4	192,543	174,170	192,543	—
Railroad	4	1,048,213	—	518,872	1,429,341	Plumbing	5	246,665	226,465	244,665	2,000
Subcontractors	153	16,505,170	8,345,505	11,370,478	5,185,701	Roofing and sheet-metal work	7	392,256	300,733	342,256	50,000
Concrete	6	301,227	228,849	301,227	—	Marble and tiling	3	220,229	142,729	143,720	70,500
Electrical	20	1,718,425	1,064,624	1,587,190	126,233	Ornamental iron	3	214,294	163,204	197,994	16,300
Heating and plumbing	50	3,939,482	3,010,281	3,856,013	79,500	Other classes <sup>9</sup>	4	361,323	131,323	224,323	137,000
Heating and pipe covering	20	1,934,609	1,304,370	1,882,851	51,818	<b>RICHMOND</b>	94	17,219,919	12,191,263	15,864,528	1,355,391
Plumbing	24	1,024,907	1,372,001	1,002,160	22,751	General contractors <sup>2</sup>	41	11,322,232	7,869,424	10,400,590	915,642
Plumbing and heating combined	9	376,900	333,811	371,006	5,000	Building contractors	33	10,221,204	7,411,746	9,481,793	739,411
Masonry and stone work	8	969,908	878,449	930,908	39,000	Buildings, not specialized <sup>4</sup>	24	9,689,549	6,998,413	8,000,136	739,411
Painting and decorating	8	322,842	256,005	301,842	21,000	Residential buildings only	9	581,655	418,333	581,655	—
Plastering and lathing	6	482,994	252,254	350,994	132,000	Highway and street paving	5	565,737	340,402	565,737	—
Roofing and sheet-metal work	21	1,734,670	1,026,895	1,337,000	407,661	Other classes <sup>5</sup>	3	535,291	109,216	359,000	176,281
Roofing	13	935,342	692,554	920,681	72,661	Subcontractors	53	5,897,687	4,324,839	5,457,938	439,749
Sheet-metal work	3	303,946	68,371	78,046	285,000	Electrical	9	758,576	519,451	675,800	83,267
Roofing and sheetmetal combined	5	378,282	265,970	328,282	50,000	Heating and plumbing	10	1,536,819	1,143,711	1,502,341	33,478
Marble and tiling	11	922,772	598,850	743,086	179,686	Heating and pipe covering	6	725,420	355,376	691,942	33,478
Excavating	4	411,535	241,097	320,907	84,638	Plumbing	10	810,399	787,335	810,399	—
Steel erection, ornamental iron and metal work	6	5,104,800	641,033	1,238,210	3,866,590	Masonry and stonework	6	821,884	763,954	791,884	30,000
n. e. s. <sup>10</sup>	5	683,520	146,352	325,102	258,424	Painting and decorating	3	153,049	130,049	152,049	1,000
Other classes <sup>2</sup>	5	—	—	—	—	Plastering and lathing	4	242,994	227,264	242,994	—
						Roofing and sheet-metal work	5	620,242	427,970	577,363	42,879
						Marble and tiling	4	496,610	355,530	425,730	70,886
						Other classes <sup>9</sup>	7	1,268,507	756,920	1,090,288	178,239

<sup>1</sup> Includes sewers, gas, water and conduit; dam and reservoir; waterworks; and dredging, river and harbor, etc.  
<sup>2</sup> Includes elevator construction; glass and glazing; subcontract work on highways; and grading.  
<sup>3</sup> Includes operative builders.  
<sup>4</sup> Includes operative builders and establishments reporting commercial buildings only.  
<sup>5</sup> Includes highways; and sewers, gas, water and conduit.  
<sup>6</sup> Includes plumbing and heating combined.  
<sup>7</sup> Includes painting and decorating; plastering and lathing; and excavating.  
<sup>8</sup> Includes grading; sewers, gas, water and conduit; waterworks; and railroad.  
<sup>9</sup> Includes glass and glazing; steel erection; excavating; highway; grading; and metal work.  
<sup>10</sup> See footnote 4 of Table 1 on p. 1239.

## CONSTRUCTION—VIRGINIA

TABLE 4.—CONSTRUCTION BUSINESS OUTSIDE HOME STATE, BY LOCATION

STATE OR COUNTRY	LOCATION REPORTED BY—			STATE OR COUNTRY	LOCATION REPORTED BY—		
	All classes of establishments	General contractors	Subcontractors		All classes of establishments	General contractors	Subcontractors
<b>VIRGINIA</b>				<b>NORFOLK</b>			
Total distributed by State or country <sup>1</sup> ..	\$16,406,683	\$11,220,982	\$5,185,701	Total distributed by State or country <sup>1</sup> ..	\$405,510	\$151,420	\$314,090
Alabama.....	351,311	249,629	101,682	Alabama.....	2,484		2,484
Connecticut.....	21,000	21,000		District of Columbia.....	14,054		14,054
Delaware.....	50,000	50,000		Maryland.....	9,050		9,050
District of Columbia.....	1,063,045	\$55,000	208,045	Mississippi.....	6,441		6,441
Florida.....	124,418	100,000	24,418	New Jersey.....	53,000		53,000
Georgia.....	826,189	592,312	233,877	New York.....	700		700
Indiana.....	77,608	77,608		North Carolina.....	322,420	138,420	184,000
Kentucky.....	2,216,393	2,062,637	153,756	Pennsylvania.....	44,361		44,361
Louisiana.....	740,166		740,166	South Carolina.....	13,000	13,000	
Maryland.....	663,720	469,422	194,298				
Mississippi.....	45,357		45,357	<b>RICHMOND</b>			
New Jersey.....	92,292		92,292	Total distributed by State or country <sup>1</sup> ..	1,355,391	915,042	430,740
New York.....	61,759	20,721	35,038	Alabama.....	249,629	249,629	
North Carolina.....	1,262,636	883,138	379,498	District of Columbia.....	65,424	15,000	50,424
Ohio.....	609,705	605,260	4,415	Georgia.....	29,950	29,950	
Pennsylvania.....	2,545,232	2,477,227	68,005	Indiana.....	77,608	77,608	
South Carolina.....	1,525,017	75,000	1,450,017	Kentucky.....	8,306	8,306	
Tennessee.....	1,478,284	590,213	888,071	Maryland.....	306,671	301,423	5,248
West Virginia.....	2,177,668	1,858,785	318,883	New Jersey.....	39,292		39,292
Other States, not specified.....	247,883		247,883	New York.....	20,721	20,721	
Canal Zone.....	227,000	227,000		North Carolina.....	52,476		52,476
				Ohio.....	90,257	90,257	
				Pennsylvania.....	23,044		23,044
				South Carolina.....	2,160		2,160
				West Virginia.....	51,688	20,688	25,000
				Other States, not specified.....	241,506		341,506

<sup>1</sup> Reported by 44 general contracting and 34 subcontracting establishments.<sup>2</sup> Reported by 4 general contracting and 18 subcontracting establishments.<sup>3</sup> Reported by 7 general contracting and 11 subcontracting establishments.

# CONSTRUCTION—VIRGINIA

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TABLE 5.—NUMBER AND SALARIES OF PROPRIETORS, FIRM MEMBERS, AND SALARIED EMPLOYEES: 1929

CLASSIFICATION OF ESTABLISHMENTS	Estab-lish-ments report-ing	PROPRIETORS AND FIRM MEMBERS				SALARIED EMPLOYEES								Sex not re-ported
		Re-ceiving no salary	Receiving salaries		All salaried employees		Officers and clerical staff		Superintendents, foremen, etc.		Number reported, by sex			
			Num-ber	Total annual salaries	Total num-ber	Total annual salaries	Num-ber	Total annual salaries	Num-ber	Total annual salaries	Total	Male	Fe-male	
<b>VIRGINIA</b> .....	331	197	137	\$388,488	1,018	\$2,457,316	541	\$1,365,184	477	\$1,062,132	856	730	126	163
Operative builders.....	3	2			6	14,478	5	13,578	1	900	6	5	1	
General contractors.....	174	125	70	204,952	638	1,592,840	280	838,100	358	754,749	545	489	56	93
Building contractors.....	117	85	39	129,878	807	829,871	175	508,890	132	317,981	247	210	37	60
Buildings, not specialized.....	83	59	30	105,485	286	790,408	158	478,857	128	311,641	284	202	32	52
Commercial buildings only.....	4	1	1	3,556	6	21,670	5	19,320	1	2,850	2	2		4
Residential buildings only.....	30	25	8	20,837	15	14,703	12	10,713	3	3,990	11	6	5	4
Highway.....	22	10	10	29,760	97	230,044	41	138,305	56	100,739	80	76	4	17
Bridge and culvert.....	8	12	6	14,789	80	142,055	14	26,833	66	115,422	64	64		16
Grading.....	0	7			12	25,466	4	8,390	8	17,076	12	11	1	
Street paving.....	0	4	2	4,945	10	19,361	8	14,261	2	5,100	10	8	2	
Sewers, gas, water, conduit.....	3	4			12	30,780	4	13,240	8	17,540	12	12		
Dam, reservoir and waterworks.....	3	1			32	94,870	8	47,550	24	47,320	32	30	2	
Dredging, river, harbor, etc.....	4				21	54,767	12	36,527	9	18,240	21	18	3	
Railroad.....	5	2	7	25,000	67	159,635	14	44,304	53	115,331	67	60	7	
Subcontractors.....	154	70	67	184,516	374	849,989	256	543,506	118	306,488	305	236	69	69
Concrete.....	6	3	2	5,200	16	38,700	8	13,500	8	25,200	16	14	2	
Electrical.....	20	0	3	8,956	71	162,563	53	124,380	18	28,203	66	54	12	5
Heating and plumbing.....	61	22	34	95,742	116	233,653	95	181,516	21	52,137	97	66	31	19
Heating and pipe covering.....	27	12	17	48,406	54	113,229	42	83,257	12	29,972	44	30	14	10
Plumbing.....	25	6	12	35,293	62	104,898	45	88,078	7	16,165	46	32	14	6
Plumbing and heating combined.....	9	4	5	12,043	10	15,586	8	9,586	2	6,000	7	4	3	3
Masonry and stone work.....	8	7	2	4,031	28	79,048	10	26,826	18	52,222	19	17	2	9
Painting and decorating.....	8	0	2	3,640	10	14,820	10	14,820			4	4		6
Plastering and lathing.....	5	2	5	12,340	8	17,157	5	8,884	3	8,273	8	7	1	
Roofing and sheet-metal work.....	21	10	12	25,926	56	126,044	39	81,595	17	44,449	39	31	8	17
Roofing.....	13	6	9	17,570	80	58,124	19	28,300	11	29,824	26	20	6	4
Sheet-metal work.....	3	4			10	30,995	8	23,975	2	7,020	1	1		0
Roofing and sheet-metal work com-bined.....	5		3	8,350	16	36,925	12	29,320	4	7,605	12	10	2	4
Marble and tiling.....	11	5	2	13,900	18	38,339	15	32,004	3	6,335	12	8	4	6
Excavating.....	4	2	4	12,281	13	29,891	5	11,161	8	18,730	10	9	1	3
Steel erection, ornamental iron and metal work n. e. s.....	6	2	1	2,500	29	95,707	11	37,078	18	58,634	25	23	2	4
Other classes <sup>1</sup> .....	4	2			9	24,067	5	11,767	4	12,300	9	7	2	
<b>NORFOLK</b> .....	60	26	13	41,931	152	373,053	111	276,206	41	96,847	131	101	30	21
General contractors <sup>2</sup> .....	20	13	3	10,532	61	185,969	40	141,554	21	44,415	50	43	7	11
Building contractors.....	10	11	3	10,532	32	89,044	25	76,044	7	13,000	21	18	3	11
Buildings, not specialized <sup>3</sup> .....	14	7	2	7,932	29	85,920	23	74,120	6	11,800	18	17	1	11
Residential buildings only.....	5	4	1	2,600	3	3,124	2	1,924	1	1,200	3	1		
Dredging, river, harbor, etc.....	4				21	54,767	12	36,527	9	18,240	21	18	3	
Other classes <sup>4</sup> .....	3	2			8	42,158	3	28,983	5	13,175	8	7	1	
Subcontractors.....	34	12	10	31,399	91	187,084	71	134,652	20	52,432	81	58	23	10
Concrete and masonry.....	4	3			12	30,300	6	10,700	6	19,600	12	10	2	
Electrical.....	3		4	9,790	21	44,480	18	38,664	3	5,925	21	16	6	
Heating and plumbing.....	10	3	2	3,600	15	24,907	14	22,307	1	2,600	14	8	6	1
Roofing and sheet-metal work.....	7	4	4	18,000	18	34,197	14	26,026	4	7,571	17	14	3	1
Other classes <sup>5</sup> .....	10				25	63,191	19	36,455	6	16,736	17	10	7	8
<b>RICHMOND</b> .....	96	58	32	119,698	301	877,447	192	588,744	109	288,703	267	213	44	44
General contractors <sup>2</sup> .....	42	28	10	55,406	159	526,071	94	356,928	65	169,148	139	120	19	20
Building contractors.....	33	22	10	55,406	110	403,846	75	288,138	44	115,708	107	91	16	12
Buildings, not specialized <sup>3</sup> .....	24	13	9	52,806	113	397,701	70	283,683	43	114,018	102	88	14	11
Residential buildings only.....	9	9	1	2,600	6	6,145	5	4,455	1	1,690	5	3	2	1
Highways and street paving.....	5	3			18	40,461	8	23,061	8	17,400	10	8	2	8
Other classes <sup>4</sup> .....	4	3			22	81,764	9	45,724	13	36,040	22	21	1	
Subcontractors.....	54	30	22	64,292	142	351,376	98	231,821	44	119,555	118	93	25	24
Electrical.....	9	4	1	5,950	29	67,832	25	57,887	4	9,945	25	20	5	4
Heating and plumbing.....	17	8	3	22,245	48	121,438	38	98,829	10	27,609	42	30	12	6
Heating and pipe covering.....	7	5	3	9,600	21	63,513	15	44,946	6	18,508	17	12	5	4
Plumbing.....	10	3	5	12,645	27	57,925	23	48,884	4	9,041	25	18	7	2
Masonry and stone work.....	6	4	2	4,031	28	79,048	10	26,826	18	52,222	19	17	2	9
Painting and decorating.....	3	3			5	10,200	5	10,200			3	3		4
Plastering and lathing.....	4	1	5	12,340	3	6,707	1	2,184	2	4,523	3	3		
Roofing and sheet-metal work.....	5	2	4	11,106	11	25,187	8	17,651	3	7,516	11	8	3	
Marble and tiling.....	4	3	1	3,900	5	7,851	5	7,851	4	7,851	4	3	1	1
Other classes <sup>5</sup> .....	6	5	1	4,711	13	33,133	6	15,393	7	17,740	13	12	1	

<sup>1</sup> Includes elevator construction; glass and glazing; and subcontract work on highways and grading.  
<sup>2</sup> Includes operative builders.  
<sup>3</sup> Includes operative builders and establishments reporting commercial buildings only.  
<sup>4</sup> Includes highways; and sewers, gas, water, and conduit.  
<sup>5</sup> Includes painting; plastering; marble and tiling; excavating; and ornamental iron.  
<sup>6</sup> Includes grading; sewers, gas, water, and conduit; waterworks; and railroad.  
<sup>7</sup> Includes steel erection; excavating; highway; grading; and miscellaneous metal work.



# CONSTRUCTION—VIRGINIA

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TABLE 7.—WAGE EARNERS BY MONTHS, AND WAGES PAID DURING 1929

CLASSIFICATION OF ESTABLISHMENTS AND LENGTH OF WORKING WEEK	Estab-lish-ments reporting	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY—												Wages paid during year
		Jan-uary	Feb-ruary	March	April	May	June	July	Aug-ust	Sep-tember	Octo-ber	Novem-ber	Decem-ber	
<b>VIRGINIA</b>	802	6,290	6,771	7,521	8,080	9,587	9,964	10,808	10,886	10,123	9,397	8,139	7,307	\$11,772,579
<i>Classification of establishments</i>														
General contractor <sup>1</sup>	159	4,312	4,676	5,281	6,244	6,920	7,232	7,946	8,155	7,486	6,891	5,887	5,151	8,122,754
Building contractors	108	2,696	2,777	2,959	3,345	3,502	3,663	3,996	4,060	3,514	3,112	2,789	2,493	4,004,944
Buildings, not specialized <sup>2</sup>	82	2,433	2,618	2,777	3,073	3,249	3,389	3,669	3,761	3,250	2,876	2,540	2,380	4,630,051
Commercial buildings only	3	30	14	4	29	22	32	71	60	73	57	17	17	89,971
Residential buildings only	23	133	145	178	243	231	242	226	223	204	163	136	96	225,922
Highway	17	339	311	327	570	781	897	1,005	1,220	1,309	1,136	671	392	724,925
Bridge and culvert	7	648	751	820	850	847	820	887	859	797	753	732	716	825,331
Grading	5	72	77	85	108	103	139	160	157	151	158	135	79	145,679
Street paving	6	68	48	67	97	125	155	127	148	129	100	77	50	108,878
Sewers, gas, water, conduit	3	40	63	64	79	114	122	100	104	95	64	56	56	74,976
Dam, reservoir, and waterworks	3	159	143	227	386	525	489	604	620	586	650	629	571	414,181
Dredging, river, harbor, etc.	5	155	146	143	159	174	159	138	123	119	117	113	163	179,427
Railroad	5	229	360	589	650	749	788	809	864	786	801	735	631	744,413
Subcontractors	143	1,978	2,095	2,240	2,446	2,667	2,732	2,862	2,831	2,637	2,506	2,252	2,156	3,649,825
Concrete	5	49	109	106	110	103	143	156	149	150	155	135	105	92,535
Electrical	10	203	215	228	249	289	279	299	305	314	300	249	239	360,042
Heating and plumbing	57	627	503	602	545	599	651	634	638	663	618	590	540	849,336
Heating and pipe covering	26	246	232	210	234	263	283	209	284	302	299	302	266	332,447
Plumbing	29	249	244	259	280	303	332	301	318	327	286	251	246	410,210
Plumbing and heating combined	5	33	27	27	31	33	36	34	36	34	33	37	28	56,079
Masonry	8	271	326	340	350	490	372	409	340	306	331	276	280	474,244
Painting and decorating	7	62	63	79	107	104	94	98	100	134	108	80	64	153,542
Plastering and lathing	5	61	65	59	88	140	90	208	180	126	70	66	50	216,756
Roofing and sheet-metal work	20	257	271	323	375	391	371	368	379	316	357	347	332	442,306
Roofing	12	139	135	168	209	223	211	210	236	204	222	215	208	246,300
Sheet-metal work	3	62	76	82	82	68	49	40	41	29	31	38	35	88,150
Roofing and sheet metal combined	5	56	60	83	84	100	108	103	102	83	104	94	89	107,706
Marble and tiling	11	130	133	161	121	113	217	241	201	214	157	133	141	279,102
Excavating	4	90	94	63	85	142	137	141	147	170	122	123	123	137,994
Steel erection, ornamental iron	5	289	277	345	361	164	185	219	252	176	209	197	223	530,630
Other classes <sup>4</sup>	5	34	30	34	55	83	98	89	80	68	79	56	59	113,338
<i>Length of working week</i>														
General contractor <sup>1</sup>	159	4,312	4,676	5,281	6,244	6,920	7,232	7,946	8,155	7,486	6,891	5,887	5,151	8,122,754
40-hour, 5 day week	1	0	0	0	12	12	12	7	0	5	7	5	4	10,296
45-hour, 5 day week	10	10	10	10	10	10	10	10	10	10	10	10	10	10,296
50-hour, 5 day week	28	452	406	503	514	513	463	556	460	332	241	222	199	437,637
All other 5 day week	10	131	154	185	252	287	287	226	224	202	168	119	98	238,680
44-hour, 5 1/2 day week	45	598	612	907	1,120	1,472	1,649	1,446	1,681	1,539	1,456	1,100	1,032	1,402,738
49 1/2-hour, 6 1/2 day week	23	670	763	850	843	770	780	814	914	733	607	486	490	921,144
All other 6 1/2 day week	4	82	100	134	182	217	185	315	277	250	306	324	271	370,527
48-hour, 6 day week	0	125	115	147	185	199	221	218	200	202	250	211	202	293,475
54-hour, 6 day week	33	1,828	2,441	3,002	3,257	3,450	3,813	3,557	3,851	3,571	3,090	3,090	2,645	4,135,610
60-hour, 6 day week	5	62	53	63	77	138	129	218	272	154	168	187	165	140,407
All other 6 day week	1	30	30	30	30	30	30	28	6	6	4	3	5	33,856
All other not designated	2	22	30	15	22	25	46	105	96	72	83	74	40	53,286
Not reported	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Subcontractors	143	1,978	2,095	2,240	2,446	2,667	2,732	2,862	2,831	2,637	2,506	2,252	2,156	3,649,825
40-hour, 5 day week	1	0	0	0	12	12	12	7	0	5	7	5	4	10,296
45-hour, 5 day week	10	10	10	10	10	10	10	10	10	10	10	10	10	10,296
50-hour, 5 day week	28	452	406	503	514	513	463	556	460	332	241	222	199	437,637
All other 5 day week	10	131	154	185	252	287	287	226	224	202	168	119	98	238,680
44-hour, 5 1/2 day week</														

TABLE 7.—WAGE EARNERS BY MONTHS, AND WAGES PAID DURING 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS AND LENGTH OF WORKING WEEK	Establishments reporting	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY—												Wages paid during year	
		January	February	March	April	May	June	July	August	September	October	November	December		
<b>NORFOLK—Continued.</b>															
<i>Length of working week</i>															
General contractors 1.....	27	430	419	425	431	527	433	505	551	467	404	350	334		\$646,720
40-hour, 5 day week.....															
45-hour, 5 day week.....															
50-hour, 5 day week.....															
All other 5 day week.....															
44-hour, 5½ day week.....	17	219	221	248	220	275	206	274	215	188	147	141	137		241,138
49½-hour, 5½ day week.....															
55-hour, 5½ day week.....	2	43	60	68	66	51	48	32	35	38	18	20	56		40,550
All other 5½ day week.....	2					25	30	27	30	40	24	15	10		17,637
48-hour, 6 day week.....															
54-hour, 6 day week.....	1	18	13	16	6	25	14	12	8	15	13	18	22		29,313
60-hour, 6 day week.....	3	120	95	73	109	111	75	127	178	118	133	106	80		148,087
All other 6 day week.....															
All other not designated.....	1	30	30	30	30	30	30	28	70	6	4	3	5		33,850
Not reported.....	1				10	10	10	65	6	52	65	53	15		30,245
Subcontractors.....	31	268	349	368	420	492	477	438	440	436	444	407	380		553,360
40-hour, 5 day week.....															
45-hour, 5 day week.....															
50-hour, 5 day week.....															
All other 5 day week.....															
44-hour, 5½ day week.....	22	174	181	206	243	313	290	232	230	263	271	262	230		339,740
49½-hour, 5½ day week.....	1	15	28	21	28	31	30	25	20	20	28	25	23		20,268
55-hour, 5½ day week.....	3	15	20	10	23	24	21	30	57	44	31	22	38		28,767
All other 5½ day week.....	1	8	10	9	9	10	12	12	12	12	10	10	12		21,438
48-hour, 6 day week.....	1	15	20	10	20	20	20	25	25	25	15	15	15		18,237
54-hour, 6 day week.....	2	23	72	76	47	34	64	70	61	52	65	47	32		44,819
60-hour, 6 day week.....	1	18	18	30	50	60	40	35	35	20	15	30	30		80,100
All other 6 day week.....															
All other not designated.....															
Not reported.....	1														
<b>RICHMOND</b> .....	<b>89</b>	<b>1,725</b>	<b>1,893</b>	<b>2,027</b>	<b>2,256</b>	<b>2,308</b>	<b>2,932</b>	<b>3,108</b>	<b>3,116</b>	<b>2,682</b>	<b>2,369</b>	<b>1,996</b>	<b>1,965</b>		<b>3,222,304</b>
<i>Classification of establishments</i>															
General contractors 1.....	36	811	916	1,038	1,229	1,444	1,533	1,625	1,720	1,398	1,267	1,050	1,005		1,510,450
Building contractors.....	27	683	773	873	1,028	1,108	1,107	1,170	1,253	965	894	705	770		1,208,754
Buildings, not specialized 2.....	22	606	750	840	990	1,082	1,079	1,154	1,239	953	886	780	767		1,173,889
Residential buildings only.....	5	17	17	24	32	26	28	25	24	12	8	9	12		34,865
Highway and street paving.....	5	20	20	47	78	156	284	262	275	248	192	126	95		106,039
Other classes 3.....	4	108	123	118	123	180	142	184	185	185	181	129	131		144,600
Subcontractors.....	53	914	977	989	1,027	1,304	1,399	1,483	1,390	1,284	1,102	940	960		1,702,845
Electrical.....	8	124	129	157	151	155	154	154	155	153	140	121	126		190,241
Heating and plumbing.....	18	7	197	193	207	270	291	280	282	278	237	216	104		350,415
Heating and pipe covering.....	7	89	81	74	96	108	115	122	111	110	80	73	73		142,046
Plumbing.....	11	121	115	110	141	192	176	158	171	168	141	150	121		207,409
Masonry.....	5	240	267	317	307	447	330	376	303	290	274	244	244		432,039
Painting and decorating.....	3	34	35	43	54	40	45	50	54	74	51	42	33		78,963
Plastering and lathing.....	4	43	47	29	38	89	140	173	145	106	55	30	20		130,656
Roofing and sheet metal work.....	4	5	80	101	117	131	134	134	140	119	112	124	115		151,785
Marble and tiling.....	4	51	64	95	84	56	137	159	160	131	80	55	63		152,689
Other classes 4.....	6	120	114	74	80	107	168	157	145	167	140	108	105		201,067
<i>Length of working week</i>															
General contractors 1.....	36	811	916	1,038	1,229	1,444	1,533	1,625	1,720	1,398	1,267	1,050	1,005		1,510,450
40-hour, 5 day week.....															
45-hour, 5 day week.....															
50-hour, 5 day week.....															
All other 5 day week.....															
44-hour, 5½ day week.....	1	3	3	3	3	3	4	4	3	3	3	3	3		5,518
49½-hour, 5½ day week.....	6	102	107	126	157	171	155	141	147	133	127	93	73		103,937
55-hour, 5½ day week.....	11	341	370	350	404	607	777	740	757	663	623	496	461		658,740
All other 5½ day week.....	12	294	346	439	441	378	378	443	524	406	326	262	260		470,590
48-hour, 6 day week.....	1	4	7	16	32	20	17	39	21	13	10	9	9		20,118
54-hour, 6 day week.....	2	40	48	42	77	75	91	86	79	83	78	70	80		92,480
60-hour, 6 day week.....															
All other 6 day week.....	2	5	6	17	43	106	95	121	109	77	70	87	85		73,729
All other not designated.....															
Not reported.....	1	22	30	15	12	15	10	40	20	20	18	21	25		23,041
Subcontractors.....	53	914	977	989	1,027	1,304	1,399	1,483	1,390	1,284	1,102	940	960		1,702,845
40-hour, 5 day week.....															
45-hour, 5 day week.....															
50-hour, 5 day week.....															
All other 5 day week.....															
44-hour, 5½ day week.....	15	204	213	228	190	242	381	449	418	343	250	178	180		446,551
49½-hour, 5½ day week.....	2	8	13	20	24	30	30	29	17	14	8	18	8		19,417
55-hour, 5½ day week.....	2	50	58	23	30	100	98	96	78	85	70	60	107		85,218
All other 5½ day week.....	14	330	382	368	391	504	388	440	410	409	332	356	360		531,841
48-hour, 6 day week.....	15	227	219	223	257	313	323	302	313	296	268	240	210		400,650
54-hour, 6 day week.....															
60-hour, 6 day week.....															
All other 6 day week.....	4	77	75	77	90	124	138	132	123	104	104	85	64		174,713
All other not designated.....	1	18	17	30	45	42	32	29	31	32	30	19	19		44,455
Not reported.....															

1 Includes operative builders.  
 2 Includes operative builders and establishments reporting commercial buildings only.  
 3 Includes grading; sewers, gas, water and conduit; waterworks; and railroad.  
 4 Includes glass and glazing, steel erection, excavating, highways, and grading.



# CONSTRUCTION—VIRGINIA

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TABLE 8.—EXPENDITURES OF REPORTING ESTABLISHMENTS: 1929

CLASSIFICATION OF ESTABLISHMENTS	Es-tab-lish-ments re- port- ing	Value of construction business reported	PRINCIPAL ITEMS OF EXPENDITURE			OTHER ITEMS OF EXPENDITURE							
			Sub-con-tract work let	Wages paid	Cost of materials	Salaries		Rent for		Interest	Contract bond pre-miums	Com-pen-sation and liability in-surance pre-miums	All other overhead expenses
						Propri- etors and firm members	Em-ploy- ees	Equip- ment	Offices, etc.				
<b>VIRGINIA</b> .....	<b>321</b>	<b>\$53, 116, 413</b>	<b>\$12, 196, 000</b>	<b>\$12, 208, 974</b>	<b>\$19, 227, 937</b>	<b>\$369, 399</b>	<b>\$2, 436, 439</b>	<b>\$113, 349</b>	<b>\$153, 287</b>	<b>\$264, 803</b>	<b>\$131, 692</b>	<b>\$376, 693</b>	<b>\$2, 858, 622</b>
General contractors <sup>1</sup> .....	108	30, 160, 217	11, 675, 000	8, 362, 054	9, 672, 985	190, 352	1, 585, 622	93, 404	62, 125	189, 939	124, 874	270, 713	1, 920, 428
Building contractors.....	112	25, 172, 599	10, 422, 000	4, 047, 837	7, 424, 832	127, 278	837, 644	7, 110	38, 130	114, 231	65, 521	114, 024	384, 561
Buildings, not specialized <sup>2</sup> .....	82	23, 207, 443	9, 527, 000	4, 035, 925	6, 948, 054	105, 485	802, 876	7, 040	34, 895	105, 051	64, 355	107, 559	354, 395
Commercial buildings only.....	3	227, 881	70, 000	37, 889	77, 031	3, 550	21, 670	-----	1, 303	474	609	1, 558	3, 897
Residential buildings only.....	27	1, 077, 575	825, 000	274, 026	399, 597	18, 237	13, 088	70	1, 932	8, 758	557	4, 527	20, 269
Highway.....	21	3, 085, 848	421, 000	885, 045	642, 370	17, 760	221, 044	34, 925	6, 634	24, 123	33, 440	26, 819	411, 267
Bridge and culvert.....	8	2, 728, 232	440, 000	840, 331	549, 417	14, 769	142, 055	14, 800	2, 114	16, 621	2, 129	60, 418	498, 558
Grading.....	0	601, 889	8, 000	195, 079	55, 867	-----	25, 466	7, 876	1, 675	3, 901	8, 440	7, 035	76, 808
Street paving.....	0	895, 703	7, 000	108, 878	156, 863	4, 945	19, 361	5, 329	2, 050	7, 159	3, 072	6, 169	50, 092
Sewers, gas, water, conduit.....	3	271, 833	-----	74, 970	80, 794	-----	30, 780	5, 058	470	1, 333	2, 415	4, 005	40, 886
Dam, reservoir, and waterworks.....	3	1, 319, 020	43, 000	414, 181	213, 050	-----	94, 870	3, 965	848	1, 214	2, 738	9, 782	99, 084
Dredging, river, harbor, etc.....	4	504, 181	-----	150, 114	73, 128	-----	64, 707	550	7, 498	9, 132	1, 160	4, 444	227, 448
Railroad.....	5	2, 027, 262	234, 000	744, 413	470, 808	25, 600	159, 635	13, 752	2, 730	12, 178	5, 929	37, 417	131, 114
Subcontractors.....	153	10, 650, 199	621, 000	8, 846, 920	9, 554, 952	179, 016	849, 811	19, 945	91, 162	74, 864	6, 718	105, 970	983, 194
Concreting.....	6	301, 227	10, 000	104, 553	158, 790	5, 200	38, 700	150	2, 273	1, 764	250	1, 608	20, 094
Electrical.....	19	1, 630, 150	1, 000	484, 580	768, 155	8, 950	145, 705	1, 000	22, 339	11, 040	80	5, 332	126, 272
Heating and plumbing.....	62	4, 210, 181	128, 000	990, 328	2, 287, 904	95, 742	248, 659	-----	32, 055	23, 026	2, 008	11, 938	249, 723
Heating and pipe covering.....	27	2, 070, 154	123, 000	899, 447	1, 135, 539	48, 400	113, 229	-----	15, 023	8, 537	1, 178	5, 227	121, 141
Plumbing.....	20	1, 754, 121	5, 000	410, 210	900, 808	35, 293	119, 838	-----	14, 037	12, 292	753	6, 027	111, 583
Plumbing and heating combined.....	9	376, 999	-----	90, 671	193, 617	12, 043	15, 386	-----	2, 040	2, 407	77	1, 684	16, 099
Masonry and stone work.....	9	1, 209, 998	2, 000	494, 058	601, 641	4, 031	79, 048	1, 897	2, 910	11, 809	-----	11, 060	31, 072
Painting and decorating.....	8	322, 842	-----	162, 993	79, 636	5, 640	14, 820	-----	6, 034	1, 630	-----	2, 367	14, 440
Plastering and lathing.....	5	482, 994	-----	216, 750	182, 935	12, 340	17, 167	-----	6, 040	1, 655	-----	4, 069	6, 383
Roofing and sheet-metal work.....	10	1, 030, 495	-----	462, 558	863, 993	20, 426	117, 724	420	8, 227	9, 217	2, 020	0, 808	116, 840
Roofing.....	11	895, 107	-----	226, 612	457, 380	12, 070	49, 804	420	2, 831	6, 065	2, 000	6, 212	67, 122
Sheet-metal work.....	3	363, 040	-----	88, 150	209, 330	-----	30, 905	-----	1, 120	1, 402	2, 000	1, 210	19, 030
Roofing and sheet metal combined.....	5	378, 252	-----	107, 796	186, 983	8, 356	36, 925	-----	4, 276	1, 150	-----	2, 386	20, 428
Marble and tiling.....	11	922, 772	4, 000	179, 102	461, 403	13, 900	38, 339	-----	6, 978	4, 984	110	2, 197	61, 581
Excavating.....	4	411, 535	-----	137, 994	41, 635	12, 281	29, 891	10, 888	962	4, 124	1, 806	4, 928	157, 835
Steel erection, ornamental iron and metal work n. e. s.....	5	5, 001, 470	404, 000	530, 630	3, 837, 106	2, 500	95, 707	5, 360	2, 480	971	-----	48, 571	84, 404
Other classes <sup>3</sup> .....	5	583, 520	3, 000	113, 338	291, 994	-----	24, 067	230	2, 385	3, 962	445	4, 012	60, 531
<b>NORFOLK</b> .....	<b>60</b>	<b>5, 700, 099</b>	<b>1, 413, 000</b>	<b>1, 184, 974</b>	<b>1, 823, 241</b>	<b>29, 331</b>	<b>373, 053</b>	<b>4, 770</b>	<b>37, 336</b>	<b>39, 800</b>	<b>14, 096</b>	<b>29, 104</b>	<b>475, 844</b>
General contractors <sup>1</sup> .....	25	3, 412, 255	1, 889, 000	560, 692	690, 572	7, 932	185, 069	4, 200	14, 401	20, 002	13, 491	15, 075	299, 312
Building contractors.....	18	2, 424, 933	1, 371, 000	259, 692	472, 543	7, 932	89, 044	650	4, 989	10, 289	9, 238	9, 333	30, 435
Buildings, not specialized <sup>2</sup> .....	13	2, 002, 030	1, 137, 000	210, 146	370, 714	7, 932	85, 920	650	4, 803	7, 868	9, 233	7, 803	33, 693
Residential buildings only.....	5	422, 297	234, 000	49, 516	101, 820	-----	9, 124	-----	180	2, 421	5	1, 580	5, 802
Highways and street paving.....	4	504, 181	-----	150, 114	73, 128	-----	54, 767	550	7, 408	9, 132	1, 190	4, 444	227, 448
Other classes <sup>3</sup> .....	3	423, 141	18, 000	90, 916	153, 901	-----	42, 158	3, 000	1, 944	581	3, 063	1, 848	32, 429
Subcontractors.....	35	2, 387, 844	24, 000	684, 282	1, 123, 669	21, 300	187, 084	570	22, 935	19, 708	605	13, 429	176, 532
Concreting and masonry.....	5	304, 381	10, 000	101, 821	150, 464	-----	30, 300	150	2, 015	5, 709	250	1, 776	28, 313
Electrical.....	3	360, 354	-----	143, 291	132, 528	-----	44, 489	-----	7, 620	6, 534	50	623	23, 267
Heating and plumbing.....	10	475, 007	-----	100, 240	277, 275	9, 799	24, 007	-----	4, 199	2, 211	5	1, 125	23, 408
Heating and plumbing and heating combined.....	4	192, 543	-----	116, 469	8, 239	3, 106	-----	-----	900	136	5	310	10, 106
Plumbing.....	0	282, 404	-----	65, 214	160, 306	1, 560	21, 801	-----	3, 299	2, 076	-----	815	13, 342
Roofing and sheet-metal work.....	7	302, 250	-----	114, 294	209, 110	3, 600	84, 197	420	1, 841	2, 190	15	2, 981	35, 020
Marble and tiling.....	3	220, 220	4, 000	51, 301	112, 125	-----	11, 552	-----	3, 180	1, 183	35	520	23, 958
Ornamental iron.....	3	214, 204	1, 000	33, 104	118, 482	2, 500	24, 989	-----	1, 880	971	-----	2, 004	24, 060
Other classes <sup>4</sup> .....	4	361, 323	-----	129, 261	128, 056	5, 600	16, 350	-----	2, 200	1, 000	250	4, 391	18, 466
<b>RICHMOND</b> .....	<b>90</b>	<b>17, 252, 186</b>	<b>6, 253, 000</b>	<b>3, 214, 530</b>	<b>4, 890, 412</b>	<b>119, 693</b>	<b>683, 984</b>	<b>29, 110</b>	<b>58, 690</b>	<b>105, 698</b>	<b>29, 155</b>	<b>83, 118</b>	<b>707, 330</b>
General contractors.....	30	10, 907, 105	6, 127, 000	1, 491, 841	1, 719, 380	55, 406	524, 466	16, 515	20, 068	72, 807	26, 005	60, 106	305, 861
Building contractors.....	27	9, 727, 028	6, 083, 000	1, 181, 136	1, 335, 130	55, 406	402, 241	75	16, 085	63, 278	19, 075	33, 188	157, 920
Buildings, not specialized <sup>2</sup> .....	21	9, 305, 194	5, 899, 000	1, 151, 080	1, 288, 457	52, 806	397, 701	75	16, 205	60, 156	19, 025	32, 013	151, 922
Residential buildings only.....	6	301, 834	274, 000	29, 450	49, 673	2, 600	4, 540	-----	480	3, 122	50	575	6, 998
Highways and street paving.....	4	565, 737	15, 000	166, 036	189, 709	-----	40, 461	8, 004	680	8, 204	4, 186	7, 388	80, 770
Other classes <sup>3</sup> .....	4	614, 340	29, 000	144, 669	191, 451	-----	81, 764	8, 436	2, 703	1, 325	3, 344	9, 532	67, 171
Subcontractors.....	54	6, 345, 080	120, 000	1, 722, 680	3, 171, 032	64, 292	359, 518	12, 595	38, 622	32, 789	2, 550	33, 010	401, 469
Electrical.....	8	675, 309	-----	199, 241	325, 526	5, 950	60, 974	1, 000	8, 604	4, 003	30	1, 925	41, 665
Heating and plumbing.....	18	1, 773, 719	121, 000	350, 415	922, 840	22, 248	130, 438	-----	13, 124	10, 803	580	5, 240	106, 127
Heating and pipe covering.....	7	869, 905	116, 000	142, 946	431, 869	9, 600	63, 513	-----	6, 741	3, 525	570	2, 657	45, 110
Plumbing.....	11	903, 814	5, 000	207, 469	491, 471	12, 648	72, 925	-----	6, 383	7, 278	10	2, 583	61, 017
Masonry and stone work.....	0	1, 157, 974	2, 000	451, 833	530, 687	4, 031	79, 048	1, 897	2, 760	6, 093	-----	9, 964	27, 073
Painting and decorating.....	2	153, 049	-----	78, 833	35, 374	-----	10, 200	-----	5, 200	1, 228	-----	1, 456	9, 783
Plastering and lathing.....	2	242, 994	-----	130, 650	87, 030	12, 340	6, 707	-----	120	1, 155	-----	2, 108	2, 383
Roofing and sheet-metal work.....	4	620, 242	-----	151, 785	320, 973	11, 106	25, 167	-----	4, 276	3, 800	5	3, 842	39, 190
Marble and tiling.....	0	496, 617	-----	152, 689	254, 284	3, 900	7, 851	-----	2, 273	440			



CONSTRUCTION—VIRGINIA

TABLE 9.—COST OF MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, BY KIND

KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—					KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—				
	All classes of establishments			General contractors <sup>1</sup>	Subcontractors		All classes of establishments			General contractors <sup>2</sup>	Subcontractors
	Amount	Per cent distribution	Per \$1,000 construction work done <sup>3</sup>				Amount	Per cent distribution	Per \$1,000 construction work done <sup>3</sup>		
<b>VIRGINIA</b>						<b>NORFOLK—Continued</b>					
All kinds of material.....	\$19,604,111		\$470.32	\$9,633,903	\$9,670,148	Distributed by kind—Continued.					
Distribution not reported.....	3,308,031	16.9		2,170,312	1,137,719	Ornamental metal work.....	\$60,290	4.2	\$17.36		\$60,290
Distributed by kind.....	10,296,080	100.0		7,763,651	8,532,429	Lumber, rough and finished.....	102,444	11.2	48.78	\$161,044	1,400
Sand, gravel, crushed stone.....	1,303,735	8.0	37.63	1,156,016	147,720	Lath, shingles, and shakes (wood).....	10,172	1.3	5.52	1,172	18,000
Brick (face, common, fire, paving).....	877,677	5.4	25.33	610,530	207,141	Composition board.....	66,355	4.0	19.11	66,355	
Tile, fireproofing.....	36,591	.2	1.05	22,431	14,160	Waterproofing materials.....	5,385	.4	1.55	1,235	4,160
Tile, facing.....	294,603	1.8	8.50	30,812	263,881	Hardware, rough and finished.....	593	(*)	.17	343	250
Concrete and cinder block.....	50,903	.4	1.73	45,309	14,594	Paints, varnishes, and glass.....	21,904	1.5	0.31	21,700	105
Cut stone, granite, and marble.....	316,548	1.9	0.13	104,442	121,906	Roofing and sheet metal.....	14,440	1.0	4.16	3,084	10,462
Riprap, rubble, etc.....	42,585	.3	1.23	36,585	6,000	Finished flooring, other than cement, wood, or tile.....	140,295	9.7	40.40	2,270	138,019
Cement.....	1,130,450	7.0	32.88	1,016,507	122,883	Screens, shades, awnings, etc.....	260	(*)	.07	250	
Lime.....	94,077	.6	2.71	42,394	51,683	Heating and ventilating equipment.....	67,463	4.7	19.43	7,500	59,963
Plaster.....	130,737	.9	4.03	34,626	105,111	Plumbing and gas-fitting equipment.....	95,627	0.0	27.64	11,010	83,717
Structural steel.....	4,501,898	27.0	129.93	729,901	3,771,997	Electrical appliances and supplies.....	142,628	9.8	41.06	5,000	137,628
Reinforcing steel.....	410,091	2.5	11.85	401,658	9,033	Pipe: Drain tile, vitrified concrete, etc.....	1,200	.1	.36	1,180	15
Cast iron, miscellaneous.....	7,062	(*)	.23	6,833	1,120	Pipe: Cast iron, sheet and tubesteel.....	7,824	.5	2.25		7,824
Metal doors, windows, and trim.....	70,953	.5	2.22	76,440	507	Wire cable, guards, and fencing.....	2,804	.2	.81	2,604	200
Metal and wire lath and furring.....	24,125	.1	1.70	12,713	11,412	Miscellaneous.....	10,948	.8	3.15	708	10,150
Ornamental metal work.....	83,501	.5	2.41	22,595	60,906						
Lumber, rough and finished.....	1,375,134	8.4	39.69	1,369,427	5,707						
Lath, shingles, and shakes (wood).....	53,800	.3	1.55	22,291	31,515						
Millwork.....	600,710	4.2	19.94	600,710							
Composition board.....	40,870	.3	1.18	24,166	16,704						
Waterproofing materials.....	20,880	.1	1.60	17,897	2,989						
Hardware, rough and finished.....	182,043	1.1	5.25	177,208	4,745						
Paints, varnishes, and glass.....	390,344	2.4	11.20	149,580	240,764						
Roofing and sheet metal.....	800,223	5.5	25.00	283,179	607,044						
Finished flooring, n. o. s.....	25,025	.2	.74	25,025							
Screens, shades, awnings, etc.....	9,824	.1	.28	9,824							
Heating and ventilating equipment.....	910,020	5.0	26.28	42,500	868,120						
Plumbing and gas-fitting equipment.....	825,338	5.1	23.82	40,410	784,328						
Electrical appliances and supplies.....	830,108	5.1	23.96	15,002	814,506						
Elevators, dumb-waiters, etc.....	6,493	(*)	.19	6,493							
Pipe: Drain tile, vitrified concrete.....	34,388	.2	.99	30,057	4,331						
Pipe: Cast iron, sheet and tubesteel.....	152,557	.9	4.40	117,905	34,592						
Wire cable, guards, and fencing.....	33,055	.2	.97	33,055	200						
Bituminous paving materials.....	280,461	1.7	8.09	146,950	133,511						
Wood piling and timber.....	13,496	.1	.39	13,496							
Ready-mixed concrete.....	41,816	.3	1.21	41,816							
Machinery.....	5,582	(*)	.16	5,582							
Freight, trucking, and hauling.....	10,841	.1	.31	10,841							
Metal products, n. o. s.....	5,993	(*)	.17	5,993							
Mineral products (nonmetallic).....	400	(*)	.01	400							
Miscellaneous.....	54,655	.3	1.58	42,065	12,650						
<b>NORFOLK</b>						<b>RICHMOND</b>					
All kinds of material.....	1,853,200		417.30	759,621	1,123,689	All kinds of material.....	5,024,102		446.83	1,783,820	3,240,282
Distribution not reported.....	433,986	23.0		131,024	302,361	Distribution not reported.....	610,760	12.3		310,667	297,093
Distributed by kind.....	1,449,306	100.0		627,007	821,308	Distributed by kind.....	4,407,340	100.0		1,464,153	2,943,193
Sand, gravel, crushed stone.....	137,857	9.5	39.70	80,754	57,103	Sand, gravel, crushed stone.....	261,064	5.0	26.47	210,326	60,738
Brick (face, common, fire, paving).....	52,093	3.6	14.98	52,093		Brick (face, common, fire, paving).....	385,269	8.7	39.00	127,769	267,600
Tile, fireproofing.....	92	(*)	.02	92		Tile, fireproofing.....	13,840	.3	1.40	4,680	9,160
Tile, facing.....	56,831	3.9	16.37	60	56,771	Tile, facing.....	144,679	3.3	14.67	3,647	141,032
Concrete and cinder block.....	744	.1	.21	744		Concrete and cinder block.....	18,775	.4	1.90	7,211	11,664
Cut stone, granite and marble.....	11,486	.8	3.31	3,971	7,515	Cut stone, granite and marble.....	128,598	2.9	13.04	20,408	90,100
Riprap, rubble, etc.....	33,750	2.3	9.72	27,750	6,000	Cement.....	194,357	4.4	19.71	128,983	65,374
Cement.....	118,619	8.2	34.16	83,098	35,551	Lime.....	40,802	1.1	5.05	7,029	42,773
Lime.....	14,590	1.0	4.20	6,480	8,110	Plaster, etc.....	43,484	1.0	4.41	3,378	43,106
Plaster.....	97,180	4.6	19.35	5,180	62,000	Structural steel.....	492,169	11.2	40.90	12,887	479,272
Structural steel.....	50,039	3.5	14.41	1,666	48,373	Reinforcing steel.....	78,867	1.7	7.49	73,207	600
Reinforcing steel.....	80,180	5.5	23.09	74,453	5,727	Metal doors, windows, and trim.....	44,261	1.0	4.49	43,604	357
Cast iron, miscellaneous.....	1,129	.1	.33	1,129		Metal and wire lath and furring.....	10,412	.2	1.05		10,412
Metal doors, windows, and trim.....	3,771	.3	1.08	3,771		Ornamental metal work.....	13,242	.3	1.34	12,742	500
Metal and wire lath and furring.....	1,000	.1	.20		1,000	Lumber, rough and finished.....	310,050	7.0	31.43	300,080	970
						Lath, shingles, and shakes (wood).....	4,673	.1	1.47	1,168	3,515
						Millwork.....	260,175	5.9	26.38	200,175	
						Composition board.....	10,401	.2	1.05	2,800	7,604
						Waterproofing materials.....	2,447	.1	.25	2,233	214
						Hardware, rough and finished.....	33,097	.8	3.35	31,800	1,297
						Paints, varnishes, and glass.....	103,274	2.3	10.47	2,600	100,774
						Roofing and sheet metal.....	323,638	7.3	32.81	1,065	321,973
						Finished flooring, other than cement, wood, or tile.....	0,050	.2	.02	9,050	
						Screens, shades, awnings, etc.....	3,990	.1	1.41	3,990	
						Heating and ventilating equipment.....	430,146	9.8	43.01	25,000	405,146
						Plumbing and gas-fitting equipment.....	407,814	9.3	41.34	15,000	392,814
						Electrical appliances and supplies.....	304,077	6.9	36.07	1,000	303,077
						Elevators, dumb-waiters, etc.....	1,053	(*)	.11	1,053	
						Pipe: Drain tile, vitrified concrete, segment tile, etc.....	2,200	(*)	.22	2,200	
						Pipe: Cast iron, sheet and tubesteel, etc.....	55,805	1.3	5.66	55,805	
						Wire cable, guards, and fencing.....	2,200	(*)	.22	2,200	
						Bituminous paving materials.....	140,711	3.3	14.87	14,400	132,311
						Ready-mixed concrete.....	41,810	.9	4.24	41,810	
						Freight, trucking and hauling.....	183	(*)	.02	183	
						Miscellaneous.....	20,165	.5	2.05	18,665	1,500

<sup>1</sup> The value of construction work done is obtained from figures presented in Table 1 by subtracting the value of subcontract work let from the total value of construction business.

<sup>2</sup> Including operative builders.

<sup>3</sup> Less than one-tenth of 1 per cent.

<sup>4</sup> These percentages of total materials are those purchased and used by Virginia contractors, but not necessarily in the State of Virginia, e. g. the 27.6 per cent representing structural steel is that erected by steel companies or contractors located in Virginia, of which the major portion was used on contracts outside the State.

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL						KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL					
	Cost of all materials	Amount	Per cent of—		Value of construction business	Indicated per cent of all business done by own force 1		Cost of all materials	Amount	Per cent of—		Value of construction business	Indicated per cent of all business done by own force 1
			Total cost	Cost of all distributed materials						Total cost	Cost of all distributed materials		
<b>VIRGINIA</b>							<b>VIRGINIA—Continued</b>						
<b>Sand, gravel, crushed stone, slag, and cinders</b>							<b>Cement—Continued</b>						
All classes.....	\$16,200,080	\$1,303,735	100.0	8.0	\$42,206,258	76.7	General contractors—Contd.	\$55,807	\$7,000	0.9	12.5	\$403,201	98.7
General contractors 2.....	7,763,651	1,156,015	88.7	14.9	27,391,529	67.7	Grading.....	166,863	21,232	1.9	18.5	305,703	98.2
Building contractors.....	5,814,651	513,105	30.4	8.8	18,550,656	58.0	Street paving.....	80,794	7,305	.6	9.0	271,883	100.0
Buildings, not specialized 1.....	6,411,380	491,853	37.7	9.1	17,108,612	58.7	Sewers, gas, water, conduit.....	213,050	11,490	1.0	5.4	487,330	94.5
Commercial buildings only.....	83,076	14,010	1.1	16.9	285,756	59.8	Waterworks.....	56,254	4,350	.4	8.9	153,085	100.0
Residential buildings only.....	320,189	7,230	.6	2.3	1,096,288	48.7	Dredging, river harbor, etc.....	269,080	883	.1	.3	1,040,290	88.5
Highway.....	587,075	302,906	23.2	51.5	2,721,040	87.3	Railroad.....	8,532,429	122,833	10.8	1.4	14,814,729	96.4
Bridge and culvert.....	529,417	91,247	7.0	17.2	2,678,232	83.9	Subcontractors.....	143,025	48,697	4.3	34.0	356,364	95.1
Grading.....	55,807	30,317	2.3	54.3	493,201	98.7	Concrete.....	807,881	325	(*)	(*)	1,713,423	99.9
Street paving.....	156,863	56,333	4.3	35.9	895,708	98.2	Electrical.....	1,707,375	338	(*)	(*)	3,013,705	97.0
Sewers, gas, water, conduit.....	80,794	6,070	.6	7.5	271,383	100.0	Heating and plumbing.....	934,019	88	(*)	(*)	1,075,724	94.0
Waterworks.....	213,050	35,060	2.7	16.4	487,330	94.5	Plumbing.....	753,356	250	(*)	(*)	1,297,981	99.7
Dredging, river harbor, etc.....	56,254	2,910	.2	5.2	153,085	100.0	Masonry.....	377,702	37,405	3.3	9.9	870,135	99.8
Railroad.....	200,080	118,007	9.1	43.9	1,040,290	88.5	Plastering.....	182,935	4,043	.4	2.5	482,994	100.0
Subcontractors.....	8,532,429	147,720	11.3	1.7	14,814,729	96.4	Roofing.....	465,473	(*)	(*)	(*)	901,992	100.0
Concrete.....	143,025	66,832	5.1	46.7	350,364	95.1	Marble and tiling.....	421,174	26,326	2.3	6.2	807,043	99.6
Heating.....	934,019	136	(*)	(*)	1,075,724	94.0	Excavating.....	41,635	4,200	.4	10.1	346,560	100.0
Masonry.....	377,702	24,992	1.9	6.0	870,135	99.8	Grading.....	1,583	885	.1	55.9	31,437	100.0
Plastering.....	182,935	9,913	.8	5.4	482,994	100.0	<b>Plaster</b>						
Roofing.....	465,473	2,101	.2	.5	901,992	100.0	All classes.....	16,296,080	139,737	100.0	.8	42,206,258	76.7
Marble and tiling.....	421,174	9,083	.7	2.2	807,043	99.6	General contractors 2.....	7,763,651	84,626	24.8	.4	27,391,529	67.7
Excavating.....	41,635	33,875	2.6	81.4	340,560	100.0	Building contractors.....	5,814,651	34,620	24.8	.6	18,550,656	58.0
Grading.....	1,583	608	.1	44.1	31,437	100.0	Buildings, not specialized 1.....	5,411,380	28,798	20.0	.5	17,108,612	58.7
<b>Brick (face, common, fire, paving, etc.)</b>							<b>Residential buildings only.....</b>						
All classes.....	16,200,080	877,077	100.0	5.4	42,206,258	70.7	Subcontractors.....	8,532,429	105,111	75.3	1.2	14,814,729	96.4
General contractors 2.....	7,763,651	610,530	60.6	7.9	27,391,529	67.7	Masonry.....	377,702	1,113	.8	.3	870,135	99.8
Building contractors.....	5,814,651	527,730	60.1	9.1	18,550,656	58.0	Painting and decorating.....	79,636	300	.2	4.4	322,842	100.0
Buildings, not specialized 1.....	6,411,380	506,104	57.7	9.4	17,108,612	58.7	Plastering.....	182,935	103,348	74.0	56.5	482,994	100.0
Commercial buildings only.....	83,076	238	(*)	(*)	285,756	59.8	Marble and tiling.....	421,174	350	.3	.1	807,043	99.6
Residential buildings only.....	320,189	21,328	2.4	6.7	1,096,288	48.7	<b>Structural steel 12</b>						
Highway.....	587,075	70,280	8.0	44.8	305,703	88.2	All classes.....	16,296,080	4,501,898	100.0	27.0	42,206,258	76.7
Bridge and culvert.....	529,417	2,340	.2	2.9	271,383	100.0	General contractors.....	7,735,854	720,001	10.2	9.4	27,202,380	67.9
Grading.....	55,807	1,000	.2	1.3	350,364	95.1	Building contractors.....	5,780,854	450,545	10.8	8.4	18,421,403	58.2
Street paving.....	156,863	70,280	8.0	44.8	305,703	88.2	Buildings, not specialized.....	5,383,589	484,391	10.8	9.0	17,039,419	59.0
Sewers, gas, water, conduit.....	80,794	2,340	.2	2.9	271,383	100.0	Residential buildings only.....	320,189	2,154	(*)	(*)	1,096,288	48.7
Waterworks.....	213,050	10,000	1.1	4.7	487,330	94.5	Bridge and culvert.....	529,417	222,680	4.0	42.1	2,078,232	88.9
Railroad.....	200,080	180	(*)	(*)	1,040,290	88.5	Grading.....	55,807	10,900	.2	19.5	493,201	98.7
Subcontractors.....	8,532,429	267,141	30.4	3.1	14,814,729	96.4	Waterworks.....	213,050	5,000	.1	2.3	487,330	94.5
Concrete.....	143,025	1,000	.2	1.3	350,364	95.1	Dredging, river harbor, etc.....	56,254	1,629	(*)	(*)	153,085	100.0
Heating.....	934,019	41	(*)	(*)	1,075,724	94.0	Railroad.....	269,080	3,150	.1	2.9	1,040,290	88.5
Masonry.....	377,702	205,000	30.2	70.2	870,135	99.8	Subcontractors.....	8,532,429	3,771,997	83.8	44.2	14,814,729	96.4
Marble and tiling.....	421,174	200	(*)	(*)	807,043	99.6	Plumbing.....	753,356	193	(*)	(*)	1,297,981	99.7
<b>Tile, facing, terra cotta (architectural) floor and wall</b>							<b>Steel erection.....</b>						
All classes.....	16,200,080	204,693	100.0	1.8	42,206,258	76.7	Steel erection.....	3,723,624	3,723,624	82.7	100.0	4,847,176	90.4
General contractors 2.....	7,763,651	30,812	10.6	.4	27,391,529	67.7	Ornamental iron.....	113,482	48,180	1.1	42.4	214,294	99.5
Building contractors.....	5,814,651	30,812	10.6	.5	18,550,656	58.0	<b>Reinforcing steel</b>						
Buildings, not specialized 1.....	6,411,380	30,812	10.6	.6	17,108,612	58.7	All classes.....	16,296,080	410,691	100.0	2.5	42,206,258	76.7
Subcontractors.....	8,532,429	263,881	80.6	3.1	14,814,729	96.4	General contractors.....	7,763,651	401,655	67.8	5.2	27,391,529	67.7
Marble and tiling.....	421,174	263,881	89.5	62.7	807,043	99.6	Building contractors.....	5,814,651	290,925	72.3	5.1	18,550,656	58.0
<b>Cut stone, granite, and marble</b>							<b>Buildings, not specialized.....</b>						
All classes.....	16,200,080	310,548	100.0	1.9	42,206,258	76.7	Commercial buildings only.....	83,076	23,000	6.6	27.7	285,756	59.8
General contractors 2.....	7,735,854	104,042	61.5	2.5	27,262,330	67.9	Residential buildings only.....	320,189	1,015	.2	.9	1,096,288	48.7
Building contractors.....	5,780,854	104,042	61.5	3.4	18,421,403	58.2	Highway.....	587,075	28,732	7.0	4.9	2,721,649	87.3
Buildings, not specialized 1.....	6,383,589	190,671	60.2	3.5	17,039,419	59.0	Bridge and culvert.....	529,417	9,141	2.2	1.7	2,678,232	83.9
Commercial buildings only.....	83,076	8,770	1.2	4.5	285,756	59.8	Grading.....	55,807	1,200	.3	2.1	493,201	98.7
Residential buildings only.....	320,189	201	.1	.1	1,096,288	48.7	Street paving.....	156,863	1,550	.4	1.0	305,703	98.2
Subcontractors.....	8,532,429	121,000	38.5	1.4	14,814,729	96.4	Sewers, gas, water, conduit.....	80,794	3,700	.9	4.6	271,383	100.0
Concrete.....	143,025	100	(*)	(*)	350,364	95.1	Waterworks.....	213,050	5,380	2.2	4.2	487,330	94.5
Heating.....	934,019	6.3	100.0	0.3	40,984	100.0	Dredging, river harbor, etc.....	56,254	4,200	1.0	7.5	153,085	100.0
Masonry.....	377,702	20,000	32.2	24.2	807,043	99.6	Railroad.....	269,080	47,390	11.5	17.6	1,040,290	88.5
Stonework.....	20,000	101,800	32.2	24.2	807,043	99.6	Subcontractors.....	8,532,429	9,033	2.2	2.5	14,814,729	96.4
Marble and tiling.....	421,174	101,800	32.2	24.2	807,043	99.6	Concrete.....	143,025	8,096	.9	5.6	350,364	95.1
<b>Cement</b>							<b>Excavating.....</b>						
All classes.....	16,296,080	1,139,450	100.0	7.0	42,206,258	76.7	Excavating.....	41,635	600	1.1	1.4	346,560	100.0
General contractors 2.....	7,763,651	1,018,507	80.2	13.1	27,391,529	67.7	Ornamental iron.....	113,482	4,827	1.2	4.3	214,294	99.5
Building contractors.....	5,814,651	859,043	75.4	14.8	18,550,656	58.0	<b>Lumber, rough and finished</b>						
Buildings, not specialized 1.....	6,411,380	828,888	72.7	15.8	17,108,612	58.7	All classes.....	16,296,080	1,375,134	100.0	8.4	42,206,258	76.7
Commercial buildings only.....	83,076	20,210	1.8	24.3	285,756	59.8	General contractors 2.....	7,763,651	1,369,427	99.6	17.6	27,391,529	67.7
Residential buildings only.....	320,189	9,939	.9	3.1	1,096,288	48.7	Building contractors.....	5,814,651	1,179,555	85.8	20.3	18,550,656	58.0
Highway.....	587,075	52,245	4.6	8.9	2,721,649	87.3	Buildings, not specialized 1.....	6,411,380	1,022,087	74.3	18.9	17,108,612	58.7
Bridge and culvert.....	529,417	52,519	4.6	9.9	2,678,232	83.9	Commercial buildings only.....	83,076	15,497	1.3	22.8	285,756	59.8
							Residential buildings only.....	320,189	138,971	10.1	43.4	1,096,288	48.7
							Highway.....	587,075	13,206	1.0	2.3	2,721,649	87.3
							Bridge and culvert.....	529,417	108,348	7.9	20.6	2,678,232	83.9

See footnotes at end of table, p. 1243.

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	
		Amount	Per cent of—		Value of construction business					Amount	Per cent of—		Value of construction business			Indicated per cent of all business done by own force <sup>1</sup>
			Total cost	Cost of all distributed materials							Total cost	Cost of all distributed materials				
<b>VIRGINIA—Continued</b>																
<i>Lumber, rough and finished—Contd.</i>																
<b>General contractors—Con.</b>																
Grading.....	\$55,807	\$1,200	.1	2.1	\$493,201	98.7	Subcontractors.....	\$8,532,429	\$607,044	68.2	7.1	\$14,814,720	96.4			
Street paving.....	150,803	650	(*)	.4	395,703	98.2	Heating and plumbing.....	1,707,375	27,866	3.1	1.0	3,013,705	97.0			
Sewers, gas, water conduit.....	80,794	8,000	.0	9.0	271,333	100.0	Heating.....	934,019	10,100	2.1	2.0	1,075,724	94.0			
Waterworks.....	213,050	7,300	.0	3.7	487,330	94.5	Plumbing.....	758,356	8,760	1.0	1.2	1,207,981	99.7			
Dredging, river harbor, etc.....	50,254	31,024	2.3	55.1	153,086	100.0	Roofing and sheet-metal work.....	621,906	878,988	95.0	93.0	1,228,020	100.0			
Railroad.....	269,080	10,054	1.4	7.1	1,040,290	88.5	Roofing.....	465,473	438,391	48.9	93.6	901,692	100.0			
							Sheet-metal work.....	30,330	34,434	3.9	87.6	78,046	100.0			
							Roofing and sheet metal combined.....	117,163	108,863	12.2	92.0	248,282	100.0			
							Marble and tiling.....	421,174	500	.1	.1	807,043	99.0			
<b>Subcontractors.....</b>																
Concrete.....	4,150	4,150	.8	2.9	14,814,720	96.4	<b>Heating and ventilating equipment and supplies, etc.</b>									
Electrical.....	807,881	260	(*)	.1	350,304	95.1	All classes.....	\$10,200,080	\$10,020	100.0	5.0	\$42,206,258	76.7			
Heating.....	934,019	180	(*)	.1	1,713,423	94.0	General contractors.....	\$7,735,854	42,600	4.7	.5	\$27,202,330	67.9			
Masonry.....	377,702	520	(*)	.1	1,075,724	94.0	Building contractors.....	\$5,780,854	17,500	1.0	.3	\$18,421,463	58.2			
Plastering.....	182,935	200	(*)	.1	870,135	99.8	Buildings, not specialized.....	5,383,589	10,000	1.1	.2	17,030,419	50.0			
Excavating.....	41,635	407	(*)	1.0	482,094	100.0	Residential buildings only.....	320,189	7,600	.8	2.3	1,096,288	48.7			
							Waterworks.....	213,050	25,000	2.7	11.7	487,330	94.5			
<b>Millwork</b>																
<b>All classes.....</b>																
General contractors.....	\$7,703,051	690,710	100.0	4.2	\$42,206,258	76.7	Subcontractors.....	\$8,532,429	868,120	95.3	10.2	\$14,814,720	96.4			
Building contractors.....	5,814,051	680,030	99.8	11.8	18,550,056	58.0	Heating and plumbing.....	1,707,375	850,302	94.0	60.2	3,013,705	97.0			
Buildings, not specialized.....	5,411,380	610,485	88.4	11.3	17,108,012	58.7	Heating.....	934,019	678,648	63.6	61.9	1,075,724	94.0			
Commercial buildings only.....	88,070	2,140	.3	2.0	286,760	50.8	Pipe covering.....	15,000	15,000	1.0	100.0	40,000	100.0			
Residential buildings only.....	320,189	70,455	11.1	23.0	1,006,288	48.7	Plumbing.....	758,356	202,814	26.9	34.6	1,207,981	90.7			
Waterworks.....	213,050	800	.1	.4	487,330	94.5	Roofing and sheet-metal work.....	621,906	11,758	1.8	1.0	1,228,020	100.0			
Railroad.....	269,080	830	.1	.8	1,040,290	88.5	Roofing.....	465,473	2,862	.3	.6	901,692	100.0			
							Sheet-metal work.....	30,330	4,800	.5	12.4	78,046	100.0			
							Roofing and sheet metal combined.....	117,163	4,000	.4	3.4	248,282	100.0			
<b>Hardware, rough and finished</b>																
<b>All classes.....</b>																
General contractors.....	\$7,703,051	177,208	67.4	2.3	\$27,301,520	67.7	<b>Plumbing and gas-fitting equipment and supplies, etc.</b>									
Building contractors.....	5,814,051	143,104	78.0	2.5	18,550,056	58.0	All classes.....	10,200,080	825,338	100.0	5.1	42,206,258	76.7			
Buildings, not specialized.....	5,411,380	120,208	60.3	2.3	17,108,012	58.7	General contractors.....	\$7,703,051	40,410	4.0	.5	\$27,301,520	67.7			
Commercial buildings only.....	88,070	965	.5	1.2	286,760	48.8	Building contractors.....	5,814,051	25,410	3.1	.4	18,550,056	58.0			
Residential buildings only.....	320,189	15,950	8.8	5.0	1,006,288	48.7	Buildings, not specialized.....	5,411,380	17,010	2.2	.3	17,108,012	58.7			
Highway.....	587,075	9,067	5.0	1.5	2,721,640	87.3	Waterworks.....	213,050	7,500	.0	2.3	1,006,288	48.7			
Bridge and culvert.....	529,417	0,935	.5	1.9	2,078,232	83.0	Waterworks.....	213,050	15,000	1.8	7.0	487,330	94.5			
Street paving.....	150,803	692	.4	.4	487,330	94.5	Subcontractors.....	\$8,532,429	784,928	95.1	0.2	\$14,814,720	96.4			
Waterworks.....	213,050	500	.2	.2	487,330	94.5	Heating and plumbing.....	1,707,375	770,928	94.5	45.6	3,013,705	97.0			
Dredging, river, harbor, etc.....	50,254	4,000	2.2	7.1	153,086	100.0	Heating.....	934,019	303,887	30.8	32.5	1,075,724	94.0			
Railroad.....	269,080	10,000	5.5	3.7	1,040,290	88.5	Plumbing.....	758,356	470,041	57.7	62.8	1,207,981	90.7			
							Roofing and sheet-metal work.....	621,906	11,758	1.8	1.0	1,228,020	100.0			
							Roofing.....	465,473	2,862	.3	.6	901,692	100.0			
							Sheet-metal work.....	30,330	4,800	.5	12.4	78,046	100.0			
							Roofing and sheet metal combined.....	117,163	4,000	.4	3.4	248,282	100.0			
<b>Subcontractors.....</b>																
Concrete.....	4,150	4,150	.7	.9	14,814,720	96.4	<b>Electrical appliances and supplies, etc.</b>									
Electrical.....	807,881	1,000	.5	.1	350,304	95.1	All classes.....	\$10,200,080	830,108	100.0	6.1	42,206,258	76.7			
Heating and plumbing.....	1,707,375	263	.1	(*)	1,713,423	99.0	General contractors.....	\$7,735,854	15,602	1.9	.2	\$27,202,330	67.9			
Heating.....	934,019	240	.1	(*)	1,075,724	94.0	Building contractors.....	5,780,854	5,000	.7	.1	18,421,463	58.2			
Plumbing.....	758,356	23	(*)	(*)	870,135	99.8	Buildings, not specialized.....	5,383,589	5,000	.7	.1	17,030,419	50.0			
Plastering.....	182,935	207	.1	.1	482,094	100.0	Bridge and culvert.....	529,417	3,042	.4	.7	2,678,232	83.0			
Excavating.....	41,635	2,018	1.1	4.8	482,094	100.0	Waterworks.....	213,050	1,000	.1	.5	487,330	94.5			
							Dredging, river, harbor, etc.....	50,254	5,000	.6	8.0	153,086	100.0			
<b>Paints, varnishes, and glass, etc.</b>																
<b>All classes.....</b>																
General contractors.....	\$7,703,051	140,580	38.8	1.9	\$27,301,520	67.7	Subcontractors.....	\$8,532,429	814,506	98.1	9.5	\$14,814,720	96.4			
Building contractors.....	5,814,051	147,644	37.8	2.5	18,550,056	58.0	Electrical.....	807,881	806,306	97.1	99.8	1,713,423	99.0			
Buildings, not specialized.....	5,411,380	142,205	36.4	2.6	17,108,012	58.7	Plumbing.....	758,356	3,000	.4	.4	1,207,981	99.7			
Commercial buildings only.....	320,189	5,379	1.4	1.7	1,006,288	48.7	Marble and tiling.....	421,174	5,000	.0	1.2	807,043	99.6			
Residential buildings only.....	320,189	5,379	1.4	1.7	1,006,288	48.7	Excavating.....	41,635	2,000	(*)	.5	346,500	100.0			
Highway.....	587,075	1,180	.3	.2	2,678,232	83.0	<b>Pipe, cast-iron, sheet, and tube steel</b>									
Bridge and culvert.....	529,417	250	.1	.4	493,201	98.7	All classes.....	\$10,200,080	152,557	100.0	.0	\$42,206,258	76.7			
Street paving.....	150,803	500	.1	.2	487,330	94.5	General contractors.....	\$7,735,854	117,965	77.3	1.5	\$27,202,330	67.9			
Waterworks.....	213,050	500	.1	.2	487,330	94.5	Building contractors.....	5,780,854	5,500	3.0	.1	18,421,463	58.2			
							Buildings, not specialized.....	5,383,589	5,500	3.0	.1	17,030,419	50.0			
							Highway.....	587,075	10,000	6.0	1.7	2,701,640	87.3			
							Bridge and culvert.....	529,417	3,052	2.0	.0	2,678,232	83.0			
							Sewers, gas, water, conduit.....	80,794	13,090	8.0	10.2	2,713,883	100.0			
							Waterworks.....	213,050	77,520	50.8	38.4	487,330	94.5			
							Railroad.....	269,080	8,743	6.7	3.2	1,040,290	88.5			
							Subcontractors.....	\$8,532,429	34,592	22.7	.4	\$14,814,720	96.4			
							Concrete.....	413,025	200	.1	.1	350,304	95.1			
							Heating and plumbing.....	1,707,375	34,392	22.5	2.0	3,013,705	97.0			
							Heating.....	934,019	28,571	18.7	2.5	1,075,724	94.0			
							Plumbing.....	758,356	5,821	3.8	.8	1,207,981	99.7			

See footnotes at end of table, p. 1243.

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
		Amount	Per cent of—		Amount					Per cent of—	Amount	Per cent of—			
			Total cost	Cost of all distributed materials								Total cost	Cost of all distributed materials		
<b>VIRGINIA—Continued</b>							<b>NORFOLK—Continued</b>								
<i>Bituminous paving materials, tar, asphalt, and oil</i>							<i>Plaster, etc.</i>								
All classes.....	\$16,206,080	\$280,461	100.0	1.7	\$42,206,258	76.7	All classes.....	\$1,440,305	\$67,180	100.0	4.0	\$4,442,472	75.7		
General contractors.....	7,735,854	140,050	62.4	1.9	27,202,336	67.9	General contractors.....	609,550	5,180	7.7	.8	2,513,589	60.8		
Building contractors.....	5,780,854	1,400	.5	(*)	18,421,403	58.2	Building contractors.....	454,096	5,180	7.7	1.1	2,097,363	44.3		
Buildings, not specialized.....	5,383,689	1,400	.5	(*)	17,039,419	59.0	Buildings, not specialized.....	277,248	180	.3	.1	1,587,128	40.1		
Highway.....	687,076	133,325	47.5	22.7	2,721,049	87.3	Residential buildings only.....	101,829	5,000	7.4	4.9	327,297	45.0		
Street paving.....	156,863	5,543	2.0	3.5	395,703	98.2	Subcontractors.....	821,308	62,000	92.3	7.5	1,825,690	99.0		
Railroad.....	269,08	0,042	2.4	2.5	1,040,200	88.5	Plastering.....	95,000	62,000	92.3	65.8	240,000	100.0		
Subcontractors.....	8,532,429	133,511	47.0	1.6	14,814,729	96.4	<i>Structural steel</i>								
Concreting.....	143,225	1,200	.4	.8	365,804	95.1	All classes.....	\$1,440,305	50,039	100.0	3.4	\$4,442,472	75.7		
Highway.....	132,311	132,311	47.2	100.0	246,752	100.0	General contractors.....	609,550	1,000	3.3	.3	2,513,589	60.8		
<b>NORFOLK</b>							<i>Reinforcing steel</i>								
<i>Sand, gravel, crushed stone, slag, and cinders</i>							<i>All classes.....</i>								
All classes.....	\$1,440,305	137,857	100.0	9.5	\$4,442,472	75.7	General contractors.....	464,096	40	.1	(*)	2,097,363	44.3		
General contractors.....	609,550	80,754	68.0	13.2	2,513,589	60.8	Buildings, not specialized.....	277,248	40	.1	(*)	1,587,128	40.1		
Building contractors.....	454,096	32,274	23.4	7.1	2,097,363	44.3	Commercial buildings only.....	75,019	13,320	10.0	17.8	182,938	82.5		
Buildings, not specialized.....	277,248	18,243	13.2	0.6	1,587,128	40.1	Residential buildings only.....	101,829	711	.5	.7	327,297	45.0		
Commercial buildings only.....	75,019	13,320	10.0	17.8	182,938	82.5	Highway.....	70,500	45,500	33.0	64.5	195,458	94.9		
Residential buildings only.....	101,829	711	.5	.7	327,297	45.0	Sewers, gas, water, conduit.....	28,700	70	.2	.2	67,683	100.0		
Highway.....	70,500	45,500	33.0	64.5	195,458	94.9	Dredging, river, harbor, etc.....	56,254	2,010	2.1	5.2	153,085	100.0		
Sewers, gas, water, conduit.....	28,700	70	.2	.2	67,683	100.0	Subcontractors.....	821,308	57,103	41.4	7.0	1,825,690	99.0		
Dredging, river, harbor, etc.....	56,254	2,010	2.1	5.2	153,085	100.0	Concreting.....	73,895	30,253	40.9	40.9	220,404	92.6		
Subcontractors.....	821,308	57,103	41.4	7.0	1,825,690	99.0	Plastering.....	95,000	2,000	1.5	2.1	240,000	100.0		
Concreting.....	73,895	30,253	40.9	40.9	220,404	92.6	Roofing.....	117,416	527	.4	.4	222,065	100.0		
Plastering.....	95,000	2,000	1.5	2.1	240,000	100.0	Marble and tiling.....	81,890	900	.7	1.1	104,500	98.2		
Roofing.....	117,416	527	.4	.4	222,065	100.0	Excavating.....	23,423	23,423	17.0	100.0	65,000	100.0		
Marble and tiling.....	81,890	900	.7	1.1	104,500	98.2	<i>Brick</i>								
Excavating.....	23,423	23,423	17.0	100.0	65,000	100.0	All classes.....	\$1,440,305	52,003	100.0	3.6	\$4,442,472	75.7		
<i>Reinforcing steel</i>							<i>Reinforcing steel</i>								
All classes.....	\$1,440,305	80,754	68.0	13.2	2,513,589	60.8	General contractors.....	609,550	52,003	100.0	8.5	\$4,442,472	75.7		
General contractors.....	609,550	32,274	23.4	7.1	2,097,363	44.3	Building contractors.....	454,096	51,013	99.8	11.4	2,097,363	44.3		
Building contractors.....	454,096	18,243	13.2	0.6	1,587,128	40.1	Buildings, not specialized.....	277,248	42,748	82.2	16.4	1,587,128	40.1		
Buildings, not specialized.....	277,248	13,320	10.0	17.8	182,938	82.5	Commercial buildings only.....	75,019	238	.4	.3	182,938	82.5		
Commercial buildings only.....	75,019	711	.5	.7	327,297	45.0	Residential buildings only.....	101,829	8,932	17.2	8.8	327,297	45.0		
Residential buildings only.....	101,829	711	.5	.7	327,297	45.0	Sewers, gas, water, conduit.....	28,700	90	.2	.3	67,683	100.0		
Highway.....	70,500	45,500	33.0	64.5	195,458	94.9	<i>Lumber, rough and finished</i>								
Sewers, gas, water, conduit.....	28,700	70	.2	.2	67,683	100.0	All classes.....	1,440,305	162,444	100.0	11.2	4,442,472	75.7		
Dredging, river, harbor, etc.....	56,254	2,010	2.1	5.2	153,085	100.0	General contractors.....	627,997	161,044	99.1	25.0	2,616,782	60.1		
Subcontractors.....	821,308	57,103	41.4	7.0	1,825,690	99.0	Building contractors.....	472,543	130,020	80.0	27.5	2,200,556	44.0		
Concreting.....	73,895	30,253	40.9	40.9	220,404	92.6	Buildings, not specialized.....	295,695	74,425	45.8	26.2	1,690,321	40.0		
Plastering.....	95,000	2,000	1.5	2.1	240,000	100.0	Commercial buildings only.....	75,019	12,452	7.7	16.6	182,938	82.5		
Roofing.....	117,416	527	.4	.4	222,065	100.0	Residential buildings only.....	101,829	43,143	28.0	42.4	327,297	45.0		
Marble and tiling.....	81,890	900	.7	1.1	104,500	98.2	Dredging, river, harbor, etc.....	56,254	31,024	19.1	55.1	153,085	100.0		
Excavating.....	23,423	23,423	17.0	100.0	65,000	100.0	Subcontractors.....	821,308	1,400	.9	.2	1,825,690	99.0		
<i>Brick</i>							<i>Ornamental metal work</i>								
All classes.....	\$1,440,305	52,003	100.0	3.6	\$4,442,472	75.7	All classes.....	\$1,440,305	60,290	100.0	4.2	\$4,442,472	75.7		
General contractors.....	609,550	52,003	100.0	8.5	2,513,589	60.8	Subcontractors.....	821,308	60,290	100.0	7.3	1,825,690	99.0		
Building contractors.....	454,096	51,013	99.8	11.4	2,097,363	44.3	Marble and tiling.....	81,890	1,150	1.9	1.4	164,500	98.2		
Buildings, not specialized.....	277,248	42,748	82.2	16.4	1,587,128	40.1	Ornamental iron work.....	113,482	59,146	98.1	52.1	214,294	99.5		
Commercial buildings only.....	75,019	238	.4	.3	182,938	82.5	<i>Laths, shingles, and shakes</i>								
Residential buildings only.....	101,829	8,932	17.2	8.8	327,297	45.0	All classes.....	1,440,305	10,172	100.0	1.3	\$4,442,472	75.7		
Sewers, gas, water, conduit.....	28,700	90	.2	.3	67,683	100.0	General contractors.....	609,550	1,172	6.1	.2	2,513,589	60.8		
Dredging, river, harbor, etc.....	56,254	2,010	2.1	5.2	153,085	100.0	Building contractors.....	454,096	1,172	6.1	.2	2,097,363	44.3		
Subcontractors.....	821,308	57,103	41.4	7.0	1,825,690	99.0	Buildings, not specialized.....	277,248	372	1.0	.8	1,587,128	40.1		
Concreting.....	73,895	30,253	40.9	40.9	220,404	92.6	Residential buildings only.....	101,829	800	4.2	.8	327,297	45.0		
Plastering.....	95,000	2,000	1.5	2.1	240,000	100.0	Subcontractors.....	821,308	18,000	93.9	2.2	1,825,690	99.0		
Roofing.....	117,416	527	.4	.4	222,065	100.0	Plastering.....	95,000	18,000	93.9	18.6	240,000	100.0		
Marble and tiling.....	81,890	900	.7	1.1	104,500	98.2	<i>Millwork</i>								
Excavating.....	23,423	23,423	17.0	100.0	65,000	100.0	All classes.....	\$1,440,305	66,355	100.0	4.6	\$4,442,472	75.7		
<i>Tile, facing, terra cotta, floor, and wall</i>							<i>Hardware, rough and finished</i>								
All classes.....	\$1,440,305	56,831	100.0	3.9	\$4,442,472	75.7	All classes.....	1,440,305	21,904	100.0	1.5	4,442,472	75.7		
General contractors.....	609,550	60	.1	(*)	2,513,589	60.8	General contractors.....	627,997	21,799	99.5	3.8	2,616,782	60.1		
Building contractors.....	454,096	60	.1	(*)	2,097,363	44.3	Building contractors.....	472,543	17,799	81.2	3.8	2,200,556	44.0		
Buildings, not specialized.....	277,248	60	.1	(*)	1,587,128	40.1	Buildings, not specialized.....	295,695	12,014	54.8	4.1	1,690,321	40.0		
Commercial buildings only.....	75,019	238	.4	.3	182,938	82.5	Commercial buildings only.....	75,019	965	4.4	1.3	182,938	82.5		
Residential buildings only.....	101,829	8,932	17.2	8.8	327,297	45.0	Residential buildings only.....	101,829	4,820	22.0	4.7	327,297	45.0		
Highway.....	70,500	25,000	21.1	35.5	195,458	94.9	Dredging, river, harbor, etc.....	56,254	4,000	18.3	7.1	153,085	100.0		
Sewers, gas, water, conduit.....	28,700	105	.1	.4	67,683	100.0	<i>Millwork</i>								
Dredging, river, harbor, etc.....	56,254	4,850	4.1	8.0	153,085	100.0	All classes.....	\$1,440,305	66,355	100.0	4.6	\$4,442,472	75.7		
Subcontractors.....	821,308	57,103	41.4	7.0	1,825,690	99.0	General contractors.....	627,997	66,355	100.0	10.6	2,616,782	60.1		
Concreting.....	73,895	30,253	40.9	40.9	220,404	92.6	Building contractors.....	472,543	66,355	100.0	14.0	2,200,556	44.0		
Plastering.....	95,000	2,000	1.5	2.1	240,000	100.0	Buildings, not specialized.....	295,695	51,965	78.3	17.6	1,690,321	40.0		
Roofing.....	117,416	527	.4	.4	222,065	100.0	Commercial buildings only.....	75,019	2,140	3.2	2.8	182,938	82.5		
Marble and tiling.....	81,890	900	.7	1.1	104,500	98.2	Residential buildings only.....	101,829	12,250	18.5	12.0	327,297	45.0		

See footnotes at end of table, p. 1243.

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
		Amount	Per cent of—		Total cost					Amount	Per cent of—		Total cost		
			Cost of all distributed materials	Value of construction business							Cost of all distributed materials	Value of construction business			
<b>NORFOLK—Continued</b>							<b>RICHMOND—Continued</b>								
<i>Hardware, rough and finished—Continued</i>							<i>Brick</i>								
Subcontractors.....	\$821,308	\$106	0.5	(9)	\$1,825,000	99.0	All classes.....	\$4,407,340	\$385,253	100.0	8.7	\$14,035,131	62.9		
Concrete.....	73,895	82	.4	.1	220,494	92.6	General contractors.....	1,464,153	127,753	33.2	8.7	8,262,689	43.3		
Building contractors.....	161,532	23	.1	(9)	242,469	100.0	Building contractors.....	1,082,903	45,503	11.8	4.2	7,082,612	37.1		
Heating and plumbing.....	83,883	23	.1	(9)	133,014	100.0	Buildings, not specialized.....	984,159	44,838	11.6	4.6	6,502,601	37.9		
Plumbing.....							Residential buildings only.....	90,887	685	2.2	.9	387,103	27.1		
<i>Roofing and sheet metal</i>							Street paving.....								
All classes.....	1,440,305	140,296	100.0	9.7	4,442,472	75.7	Sewers, gas, water, conduit.....	120,478	70,000	18.2	58.1	288,320	97.6		
General contractors.....	609,550	2,270	1.0	.4	2,513,589	60.8	Waterworks.....	23,594	2,250	6.0	9.5	144,830	100.0		
Building contractors.....	464,096	2,276	1.0	.5	2,097,303	44.3	Subcontractors.....	2,043,193	257,500	66.8	8.7	5,772,442	98.1		
Buildings, not specialized.....	277,248	276	.2	.1	1,687,128	40.1	Masonry.....	367,552	267,500	60.8	70.1	840,135	99.8		
Residential buildings only.....	101,820	2,000	1.4	2.0	327,297	45.0	<i>Tile, facing, terra cotta</i>								
Subcontractors.....	821,308	138,019	98.4	16.8	1,825,000	99.0	All classes.....	4,407,340	144,070	100.0	3.3	14,035,131	62.9		
Heating and plumbing.....	83,883	197	.1	.2	133,014	100.0	General contractors.....	1,464,153	3,047	2.5	.2	8,262,689	43.3		
Roofing.....	117,410	115,948	82.6	98.7	222,605	100.0	Building contractors.....	1,082,903	3,047	2.6	.3	7,082,612	37.1		
Sheet metal.....	21,874	21,874	15.0	100.0	39,591	100.0	Buildings, not specialized.....	984,159	3,047	2.6	.4	6,502,601	37.9		
<i>Heating and ventilating equipment</i>							Subcontractors.....								
All classes.....	1,440,305	67,463	100.0	4.6	4,442,472	75.7	Marble and tiling.....	2,043,193	141,032	97.5	4.8	5,772,442	98.1		
General contractors.....	609,550	7,500	11.1	1.2	2,513,589	60.8	General contractors.....	1,464,153	254,284	141,032	97.5	55.5	499,616	100.0	
Building contractors.....	464,096	7,500	11.1	1.0	2,097,303	44.3	<i>Cut stone, granite, and marble</i>								
Residential buildings only.....	101,820	7,500	11.1	7.4	327,297	45.0	All classes.....	4,407,340	128,508	100.0	3.0	14,035,131	62.9		
Subcontractors.....	821,308	59,963	88.0	7.3	1,825,000	99.0	General contractors.....	1,464,153	20,408	22.0	2.0	8,262,689	43.3		
Heating and plumbing.....	161,532	59,101	87.6	39.0	242,469	100.0	Building contractors.....	1,082,903	20,408	22.0	2.7	7,082,612	37.1		
Heating.....	67,649	94,799	51.0	51.4	108,555	100.0	Buildings, not specialized.....	984,159	20,408	22.0	3.0	6,502,601	37.9		
Plumbing.....	83,883	24,302	36.0	20.0	133,014	100.0	Subcontractors.....	2,043,193	99,100	77.1	3.4	5,772,442	98.1		
Roofing and sheet-metal work.....	139,200	892	1.3	.0	222,605	100.0	Masonry.....	367,552	100	.1	(9)	840,135	99.8		
Roofing.....	117,410	892	1.3	.7	222,605	100.0	Stone work.....	20,000	20,000	15.0	100.0	40,984	100.0		
<i>Plumbing and gas-fitting equipment</i>							Marble and tiling.....								
All classes.....	1,440,305	95,027	100.0	0.0	4,442,472	75.7	General contractors.....	1,464,153	194,367	100.0	4.4	14,035,131	62.9		
General contractors.....	627,097	11,910	12.4	1.9	2,610,782	60.1	Building contractors.....	1,082,903	128,983	62.7	11.3	8,262,689	43.3		
Building contractors.....	472,643	11,910	12.4	2.5	2,200,556	44.0	Buildings, not specialized.....	984,159	121,933	62.1	12.2	7,082,612	37.1		
Residential buildings only.....	101,820	7,500	7.8	7.4	327,297	45.0	Commercial buildings only.....	8,057	1,310	.7	16.3	1,092,818	19.4		
Subcontractors.....	821,308	83,717	87.5	10.2	1,825,000	99.0	Highway.....	90,321	2,800	1.4	4.0	277,411	97.1		
Heating and plumbing.....	161,532	83,717	87.5	55.2	242,469	100.0	Sewers, gas, water, conduit.....	23,594	2,250	1.2	0.5	144,830	100.0		
Heating.....	67,649	20,520	27.7	39.2	108,555	100.0	Waterworks.....	150,000	2,000	1.0	1.3	320,330	97.5		
Plumbing.....	83,883	67,191	59.8	98.2	133,014	100.0	Subcontractors.....	2,043,193	65,374	33.0	2.2	5,772,442	98.1		
<i>Electrical appliances and supplies</i>							<i>Cement</i>								
All classes.....	1,440,305	142,528	100.0	0.8	4,442,472	75.7	All classes.....	4,407,340	194,367	100.0	4.4	14,035,131	62.9		
General contractors.....	609,550	5,000	3.5	.8	2,513,589	60.8	General contractors.....	1,464,153	305,282	32.5	.2	8,262,689	43.3		
Dredging, river, harbor, etc.....	56,254	5,000	3.5	8.9	153,085	100.0	Building contractors.....	1,082,903	30,155	18.0	0.8	7,082,612	37.1		
Subcontractors.....	821,308	137,528	96.5	16.7	1,825,000	99.0	Plastering and lathing.....	87,930	3,643	1.0	4.1	242,994	100.0		
Electrical.....	132,528	132,528	93.0	100.0	300,354	100.0	Marble and tiling.....	254,284	20,160	10.4	7.0	406,610	100.0		
Marble and tiling.....	81,896	5,000	3.5	0.1	164,500	98.2	Excavating.....	15,252	4,200	2.2	27.5	202,022	100.0		
<b>RICHMOND</b>							<i>Lime</i>								
<i>Sand, gravel, crushed stone, slag, and cinders</i>							All classes.....								
All classes.....	4,407,340	261,064	100.0	5.9	14,035,131	62.9	All classes.....	4,407,340	40,802	100.0	1.1	14,035,131	62.9		
General contractors.....	1,464,153	210,326	80.6	14.4	8,262,689	43.3	General contractors.....	1,464,153	7,029	14.1	.5	8,262,689	43.3		
Building contractors.....	1,082,903	87,497	33.5	8.1	7,082,612	37.1	Building contractors.....	1,082,903	7,029	14.1	.6	7,082,612	37.1		
Buildings, not specialized.....	984,159	80,200	33.0	8.8	6,502,601	37.9	Buildings, not specialized.....	984,159	7,029	14.1	.7	6,502,601	37.9		
Commercial buildings only.....	8,057	696	.3	8.6	102,818	19.4	Subcontractors.....	2,043,193	42,773	85.0	1.5	5,772,442	98.1		
Residential buildings only.....	90,887	532	.2	1.6	387,103	27.1	Masonry.....	367,552	29,948	64.1	7.3	840,135	99.8		
Highway.....	69,321	41,255	15.8	59.5	277,411	97.1	Plastering and lathing.....	87,930	12,772	25.6	14.5	242,994	100.0		
Grading.....	3,071	3,071	1.2	100.0	64,125	100.0	Marble and tiling.....	254,284	3,053	6.1	1.2	406,610	100.0		
Street paving.....	120,478	45,503	17.4	37.8	288,320	97.6	<i>Structural steel</i>								
Sewers, gas, water, conduit.....	23,594	3,000	1.1	12.7	144,830	100.0	All classes.....	4,407,340	492,159	100.0	11.2	14,035,131	62.9		
Waterworks.....	150,000	25,000	9.6	16.7	326,330	97.5	General contractors.....	1,464,153	12,887	2.6	.0	8,262,689	43.3		
Railroad.....	14,786	5,000	1.9	33.8	70,049	73.4	Building contractors.....	1,082,903	4,737	1.0	.4	7,082,612	37.1		
Subcontractors.....	2,043,193	50,738	19.4	1.7	5,772,442	98.1	Buildings, not specialized.....	984,159	3,545	.7	1.3	6,502,601	37.9		
Masonry.....	367,552	23,992	9.2	6.5	840,135	99.8	Residential buildings only.....	90,887	1,192	1.2	3.3	387,103	27.1		
Plastering.....	87,930	7,913	3.0	9.0	242,994	100.0	Waterworks.....	150,000	5,000	1.0	3.3	326,330	97.5		
Marble and tiling.....	254,284	7,688	2.9	3.0	496,610	100.0	Railroad.....	14,786	3,150	.6	21.3	70,049	73.4		
Excavating.....	15,252	10,452	4.0	68.5	202,022	100.0	Subcontractors.....	2,043,193	479,272	97.4	16.8	5,772,442	98.1		
Grading.....	1,583	998	.3	44.1	31,437	100.0	Steel erection.....	479,272	479,272	97.4	100.0	579,991	100.0		

See footnotes at end of table, p. 1243.

# CONSTRUCTION—VIRGINIA

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**TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued**

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL					Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL					Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>		
	Cost of all materials	Amount	Per cent of—		Total cost				Cost of all distributed materials	Cost of all materials	Amount	Per cent of—				Total cost	Cost of all distributed materials
			Total cost	Cost of all distributed materials								Total cost	Cost of all distributed materials				
<b>RICHMOND—Continued</b>							<b>RICHMOND—Continued</b>										
<i>Reinforcing steel</i>							<i>Roofing and sheet metal</i>										
All classes.....	\$4,407,340	\$73,867	100.0	1.7	\$14,035,131	62.0	All classes.....	\$4,407,340	\$323,638	100.0	7.3	\$14,035,131	62.0				
General contractors.....	\$1,464,153	73,267	69.2	5.0	\$8,262,689	43.3	General contractors.....	\$1,464,153	1,065	.5	.1	\$8,262,689	43.3				
Building contractors.....	\$1,082,903	65,047	88.1	6.0	\$7,082,612	37.1	Building contractors.....	\$1,082,903	1,065	.5	.2	\$7,082,612	37.1				
Buildings, not specialized.....	984,159	65,047	83.1	6.0	6,592,691	37.0	Buildings, not specialized.....	984,159	1,065	.5	.2	6,592,691	37.0				
Residential buildings only.....	120,478	200	1.7	.2	288,326	97.5	Subcontractors.....	\$2,943,193	321,973	99.5	10.9	\$5,772,442	98.1				
Street paving.....	150,000	5,000	6.8	3.3	326,330	97.5	Plumbing.....	430,943	1,450	.4	.3	734,224	99.4				
Waterworks.....	14,786	3,000	4.1	20.3	70,049	73.4	Roofing and sheet metal work.....	320,973	320,023	99.0	99.7	620,240	100.0				
Subcontractors.....	\$2,943,193	600	.8	(9)	\$5,772,442	98.1	Roofing.....	228,110	227,160	70.2	99.6	431,960	100.0				
Excavating.....	15,252	600	.8	3.0	202,022	100.0	Roofing and sheet metal combined.....	92,863	92,863	28.7	100.0	188,282	100.0				
<i>Metal doors, windows, and trim</i>							<i>Heating and ventilating equipment and supplies, etc.</i>										
All classes.....	4,407,340	44,261	100.0	1.0	14,035,131	62.0	All classes.....	4,407,340	430,140	100.0	9.8	14,035,131	62.0				
General contractors.....	\$1,464,153	43,904	99.2	3.0	\$8,262,689	43.3	General contractors.....	\$1,464,153	25,000	5.8	1.8	\$8,262,689	43.3				
Building contractors.....	\$1,082,903	42,793	90.5	3.9	\$7,082,612	37.1	Waterworks.....	150,000	25,000	5.8	16.7	326,330	97.5				
Buildings, not specialized.....	984,159	41,104	92.0	4.2	6,592,691	37.0	Subcontractors.....	\$2,943,193	405,146	94.2	13.8	\$5,772,442	98.1				
Residential buildings only.....	90,687	1,600	3.6	1.8	387,103	27.1	Heating and plumbing.....	798,410	405,146	94.2	50.7	\$1,459,644	93.2				
Waterworks.....	150,000	1,200	2.7	.8	326,330	97.5	Heating.....	352,467	252,871	58.8	71.7	685,420	86.0				
Subcontractors.....	\$2,943,193	357	.8	(9)	\$5,772,442	98.1	Pipe covering.....	15,000	15,000	3.5	100.0	40,000	100.0				
Plastering.....	87,030	107	.2	.1	242,994	100.0	Plumbing.....	430,943	137,276	31.9	81.9	734,224	99.4				
Roofing.....	228,110	250	.6	.1	431,960	100.0	<i>Plumbing and gas-fitting equipment</i>										
<i>Lumber, rough and finished</i>							<i>Electrical appliances and supplies, etc.</i>										
All classes.....	4,407,340	310,050	100.0	7.3	14,035,131	62.0	All classes.....	4,407,340	364,677	100.0	8.3	14,035,131	62.0				
General contractors.....	\$1,464,153	309,080	99.7	21.1	\$8,262,689	43.3	General contractors.....	\$1,464,153	15,000	3.7	1.0	\$8,262,689	43.3				
Building contractors.....	\$1,082,903	290,430	95.6	27.4	\$7,082,612	37.1	Waterworks.....	150,000	15,000	3.7	10.0	326,330	97.5				
Buildings, not specialized.....	984,159	282,249	81.4	25.6	6,592,691	37.0	Subcontractors.....	\$2,943,193	362,814	96.3	13.3	\$5,772,442	98.1				
Commercial buildings only.....	84,657	6,045	1.9	75.0	102,818	19.4	Heating and plumbing.....	798,410	391,814	98.1	40.1	\$1,459,644	93.2				
Residential buildings only.....	90,687	38,136	12.3	4.2	387,103	27.1	Heating and piping.....	352,467	93,590	24.4	28.3	685,420	86.0				
Highway.....	69,321	250	.1	.4	277,411	97.1	Plumbing.....	430,943	292,128	71.6	67.8	734,224	99.4				
Street paving.....	120,478	400	.1	.3	288,326	97.0	Marble and tiling.....	254,284	1,000	.2	.4	496,616	100.0				
Sewers, gas, water, and conduit.....	23,594	4,000	1.3	17.0	144,836	100.0	<i>Electrical appliances and supplies, etc.</i>										
Waterworks.....	150,000	0,000	1.9	4.0	326,330	97.5	All classes.....	4,407,340	364,677	100.0	8.3	14,035,131	62.0				
Railroad.....	14,786	2,000	.6	13.6	70,049	73.4	General contractors.....	\$1,464,153	1,000	.3	.1	\$8,262,689	43.3				
Subcontractors.....	\$2,943,193	970	.3	(9)	\$5,772,442	98.1	Waterworks.....	150,000	1,000	.3	.7	326,330	97.5				
Electrical.....	365,252	250	.1	.1	758,570	100.0	Subcontractors.....	\$2,943,193	363,677	99.7	12.4	\$5,772,442	98.1				
Masonry.....	367,652	520	.2	.1	840,135	99.8	Electrical.....	365,252	363,677	99.7	99.6	758,576	100.0				
Plastering and lathing.....	87,030	200	.1	.2	242,994	100.0	<i>Pipe, cast iron, sheet and tube, steel, etc.</i>										
<i>Millwork</i>							<i>Bituminous paving materials</i>										
All classes.....	4,407,340	260,175	100.0	5.9	14,035,131	62.0	All classes.....	4,407,340	55,805	100.0	1.3	14,035,131	62.0				
General contractors.....	\$1,464,153	260,175	100.0	17.8	\$8,262,689	43.3	General contractors.....	\$1,464,153	55,805	100.0	3.8	\$8,262,689	43.3				
Building contractors.....	\$1,082,903	259,539	99.4	23.9	\$7,082,612	37.1	Building contractors.....	\$1,082,903	1,315	2.4	.1	\$7,082,612	37.1				
Buildings, not specialized.....	984,159	218,481	84.0	22.2	6,592,691	37.0	Buildings, not specialized.....	984,159	1,315	2.4	.1	6,592,691	37.0				
Residential buildings only.....	90,687	40,058	15.4	44.2	387,103	27.1	Highway.....	69,321	10,000	17.9	14.4	277,411	97.1				
Waterworks.....	150,000	800	.3	.5	326,330	97.5	Sewers, gas, water, conduit.....	23,594	4,490	8.0	19.0	144,836	100.0				
Railroads.....	14,786	836	.3	5.7	70,049	73.4	Waterworks.....	150,000	40,000	71.7	26.7	326,330	97.5				
Subcontractors.....	\$2,943,193	100,774	97.6	3.4	\$5,772,442	98.1	<i>Bituminous paving materials</i>										
Masonry.....	367,652	500	.5	.1	840,135	99.8	All classes.....	4,407,340	146,711	100.0	3.4	14,035,131	62.0				
Painting and decorating.....	35,474	35,074	84.0	90.2	163,049	100.0	General contractors.....	\$1,464,153	14,400	9.8	1.0	\$8,262,689	43.3				
Glass and glazing.....	65,000	65,000	62.0	100.0	100,000	97.0	Building contractors.....	\$1,082,903	1,400	1.0	.1	\$7,082,612	37.1				
Plastering.....	87,030	200	.2	.2	242,994	100.0	Buildings, not specialized.....	984,159	1,400	1.0	.1	6,592,691	37.0				
<i>Paints, varnishes, glass, etc.</i>							<i>Highway.....</i>										
All classes.....	4,407,340	103,274	100.0	2.3	14,035,131	62.0	Street paving.....	120,478	4,000	2.7	3.3	288,326	97.6				
General contractors.....	\$1,464,153	2,500	2.4	.2	\$8,262,689	43.3	Subcontractors.....	\$2,943,193	132,311	90.2	4.5	\$5,772,442	98.1				
Building contractors.....	\$1,082,903	2,000	1.9	.2	\$7,082,612	37.1	Highway.....	132,311	132,311	90.2	100.0	240,752	100.0				
Buildings, not specialized.....	984,159	1,000	1.0	.1	6,592,691	37.0											
Residential buildings only.....	90,687	1,000	1.0	1.1	387,103	27.1											
Waterworks.....	150,000	500	.6	.3	326,330	97.5											

<sup>1</sup> Based upon the difference between the total value of all construction work reported and the value of subcontract work let.  
<sup>2</sup> Includes operative builders.  
<sup>3</sup> Includes cost of materials reported by establishments which did not include designated material in their distributed lists.  
<sup>4</sup> Includes construction work reported by establishments which did not include the designated material in their distributed lists.  
<sup>5</sup> Less than one-tenth of 1 per cent.  
<sup>6</sup> Includes cost of materials reported by operative builders who did not include the designated materials in their distributed lists.  
<sup>7</sup> Includes construction work reported by operative builders who did not include the designated materials in their distributed lists.  
<sup>8</sup> Includes construction work reported by subcontracting establishments which did not include the designated material in their distributed lists.  
<sup>9</sup> Includes cost of materials reported by subcontracting establishments which did not include the designated material in their distributed lists.  
<sup>10</sup> Includes construction work reported by subcontracting establishments which did not include the designated material in their distributed lists.  
<sup>11</sup> Includes cost of materials reported by general contracting establishments which did not include the designated material in their distributed lists.  
<sup>12</sup> Includes construction work reported by general contracting establishments which did not include the designated material in their distributed lists.  
<sup>13</sup> See footnote 4 of table 9 on page 1238.



TABLE 11.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1920

CLASSIFICATION OF ESTABLISHMENTS	Total cost of all materials	COST OF ALL MATERIALS		Sand, gravel, crushed stone, slag, cinders, etc.	Brick (face, common, fire, paving, etc.)	Tile (fire-proofing)	Tile, facing, terra cotta, floor, and wall	Concrete and Cinder block	Cut stone, granite, and marble	Riprap, rubble, etc.	Cement	Lime	Plaster, etc.	Structural steel
		Amount	Per cent of total											
<b>VIRGINIA</b> .....	\$19,604,111	\$16,206,080	83.1	\$1,303,735	\$377,677	\$38,591	\$294,693	\$59,903	\$316,548	\$42,555	\$1,139,460	\$94,077	\$139,737	\$4,601,898
Operative builders.....	27,797	27,797	100.0	300	600		400				125	76	350	
General contractors.....	9,006,166	7,735,854	78.1	1,156,715	609,936	22,431	30,412	45,390	194,612	36,585	1,016,442	42,310	34,270	720,901
Building contractors.....	7,522,500	5,786,854	76.9	512,805	527,130	22,431	30,412	45,390	194,612	1,235	828,018	41,810	34,270	486,545
Buildings, not specialized..	6,992,363	5,383,589	77.0	491,563	505,564	22,300	30,412	41,418	160,671	1,235	828,763	38,740	28,448	484,301
Commercial buildings only..	83,076	83,076	100.0	14,016	238				3,770		20,216			
Residential buildings only..	447,061	320,189	71.6	7,230	21,328	125		3,981	201		9,000	3,070	5,828	2,154
Highway.....	745,270	587,675	78.8	302,900						7,690	52,245			
Bridge and culvert.....	549,417	529,417	96.4	91,247							7,000			222,680
Grading.....	55,867	55,867	100.0	30,317										10,000
Street paving.....	156,863	156,863	100.0	56,333	70,280						21,232			
Sewers, gas, water, conduit..	80,794	80,794	100.0	6,070	2,340					27,750	7,305	500		
Waterworks.....	213,050	213,050	100.0	35,000	10,000						11,490			5,000
Dredging, river, harbor, etc..	105,597	56,254	53.3	2,910							4,850			1,020
Railroad.....	470,808	200,080	50.4	118,067	180						883			3,150
Subcontractors.....	1,070,148	8,532,429	88.2	147,730	267,141	14,100	263,881	14,564	121,000	6,000	122,883	51,083	105,111	3,771,007
Concrete.....	153,700	143,025	93.1	60,832	1,000			3,000			48,607	210		
Electrical.....	807,881	807,881	100.0								325			
Heating and plumbing.....	2,287,564	1,707,375	74.6	130	41						338			193
Heating.....	1,118,530	994,010	88.5	130	41						88			
Pipe covering.....	15,000	15,000	100.0											
Plumbing.....	900,808	758,350	84.2								250			
Masonry.....	581,641	377,702	64.9	24,092	205,000	0,100		11,564	100		37,405	27,348	1,113	193
Painting and decorating.....	70,436	70,436	100.0										300	
Glass and glazing.....	158,100	158,100	100.0											
Plastering.....	182,035	182,035	100.0	9,013							4,643	20,772	103,348	
Roofing and sheet-metal work	809,639	621,066	76.7	2,191		5,000					64			
Roofing.....	503,326	465,473	92.5	2,191		5,000					64			
Sheet metal work.....	200,330	30,330	15.1											
Roofing and sheet metal combined.....	186,983	117,163	62.6											
Steel erection.....	3,723,624	3,723,624	100.0						20,000		26,329	3,353	350	3,723,624
Stone work.....	20,000	20,000	100.0						101,806	0,000	4,200			
Marble and tiling.....	451,403	421,174	93.3	0,083	200		263,881							
Excavating.....	41,635	41,635	100.0	33,875										
Ornamental iron.....	113,482	113,482	100.0											48,180
Highway.....	132,311	132,311	100.0											
Grading.....	1,583	1,583	100.0	698							885			
<b>NORFOLK</b> .....	1,888,290	1,440,306	77.0	137,857	52,003	92	56,891	744	11,486	33,750	118,010	14,500	67,180	50,039
Operative builders.....	18,447	18,447	100.0											
General contractors.....	741,174	609,550	82.2	80,754	52,003	92	60	744	3,071	27,750	83,008	0,480	5,180	1,060
Building contractors.....	481,670	454,093	94.3	32,274	51,913	92	60	744	3,071		53,113	6,180	5,180	40
Buildings, not specialized..	208,378	277,248	92.9	18,243	42,743	92	60	744			31,610	5,224	180	40
Commercial buildings only..	75,010	75,010	100.0	13,320	238				3,770		18,000			
Residential buildings only..	108,270	101,820	94.0	711	8,932				201		2,693	1,256	5,000	
Highways.....	125,201	70,500	56.3	45,500							25,000			
Sewers, gas, water, conduit..	28,700	28,700	100.0	70	90					27,750	115			
Dredging, river, harbor, etc..	105,597	56,254	53.3	2,910							4,850			1,020
Subcontractors.....	1,123,609	821,308	73.1	57,103			56,771		7,515	6,000	35,551	8,110	62,000	48,373
Concrete.....	80,600	73,805	91.6	30,253							30,777	10		
Electrical.....	132,528	132,528	100.0											
Heating and plumbing.....	277,275	151,532	54.6								250			193
Heating.....	67,049	67,049	100.0											
Plumbing.....	160,806	83,883	52.2								250			193
Painting and decorating.....	10,262	10,262	100.0											
Plastering.....	95,000	95,000	100.0	2,000							1,000	8,000	62,000	
Roofing and sheet-metal work	209,110	130,290	62.6	527							64			
Roofing.....	117,416	117,416	100.0	527							64			
Sheet metal work.....	21,874	21,874	100.0											
Marble and tiling.....	112,125	81,806	73.0	900			56,771		7,515	0,000	3,400	100		
Excavating.....	23,423	23,423	100.0	23,423										
Ornamental iron work.....	113,482	113,482	100.0											48,180
<b>RICHMOND</b> .....	5,024,102	4,407,346	87.7	201,004	385,253	13,840	144,679	16,776	128,598		194,567	40,802	43,484	492,169
General contractors.....	1,783,820	1,404,153	82.1	210,320	127,753	4,680	3,017	7,211	29,498		128,083	7,029	378	12,887
Building contractors.....	1,402,570	1,082,903	77.2	87,497	45,503	4,680	3,017	7,211	29,498		121,033	7,029	378	4,737
Buildings, not specialized..	1,303,826	984,150	75.5	80,250	44,818	4,080	3,047	3,630	29,498		120,617	7,029	378	3,545
Commercial buildings only..	8,057	8,057	100.0	606										
Residential buildings only..	90,687	90,687	100.0	532	685			3,581			1,310			1,192
Highway.....	69,321	69,321	100.0	41,255										
Grading.....	3,071	3,071	100.0	3,071							2,800			
Street paving.....	120,478	120,478	100.0	45,503	70,000									
Sewers, gas, water, conduit..	23,594	23,594	100.0	3,000	2,250									
Waterworks.....	150,000	150,000	100.0	25,000	10,000						2,550			5,000
Railroads.....	14,786	14,786	100.0	5,000							2,000			3,150
Subcontractors.....	3,240,282	2,943,193	90.8	50,738	257,500	9,160	141,632	11,564	99,100		65,374	42,723	43,100	479,272
Electrical.....	365,252	365,252	100.0											
Heating and plumbing.....	922,840	798,410	86.5											
Heating.....	416,369	352,467	84.6											
Pipe covering.....	15,000	15,000	100.0											
Plumbing.....	491,471	430,943	87.7											
Masonry.....	510,687	307,552	60.2	23,092	257,500	9,160		11,564	100		36,155	26,948	1,113	300
Painting and decorating.....	35,374	35,374	100.0											
Glass and glazing.....	65,000	65,000	100.0											
Plastering.....	87,930	87,930	100.0	7,013							3,643	12,772	41,343	
Roofing and sheet-metal work	320,973	320,973	100.0											
Roofing.....	228,110	228,110	100.0											
Roofing and sheet metal combined.....	92,863	92,863	100.0											
Steel erection.....	479,272	479,272	100.0											479,272
Stone work.....	20,000	20,000	100.0											
Marble and tiling.....	254,284	254,284	100.0	7,683			141,032		20,000	79,000	20,166	3,053	350	
Excavating.....														







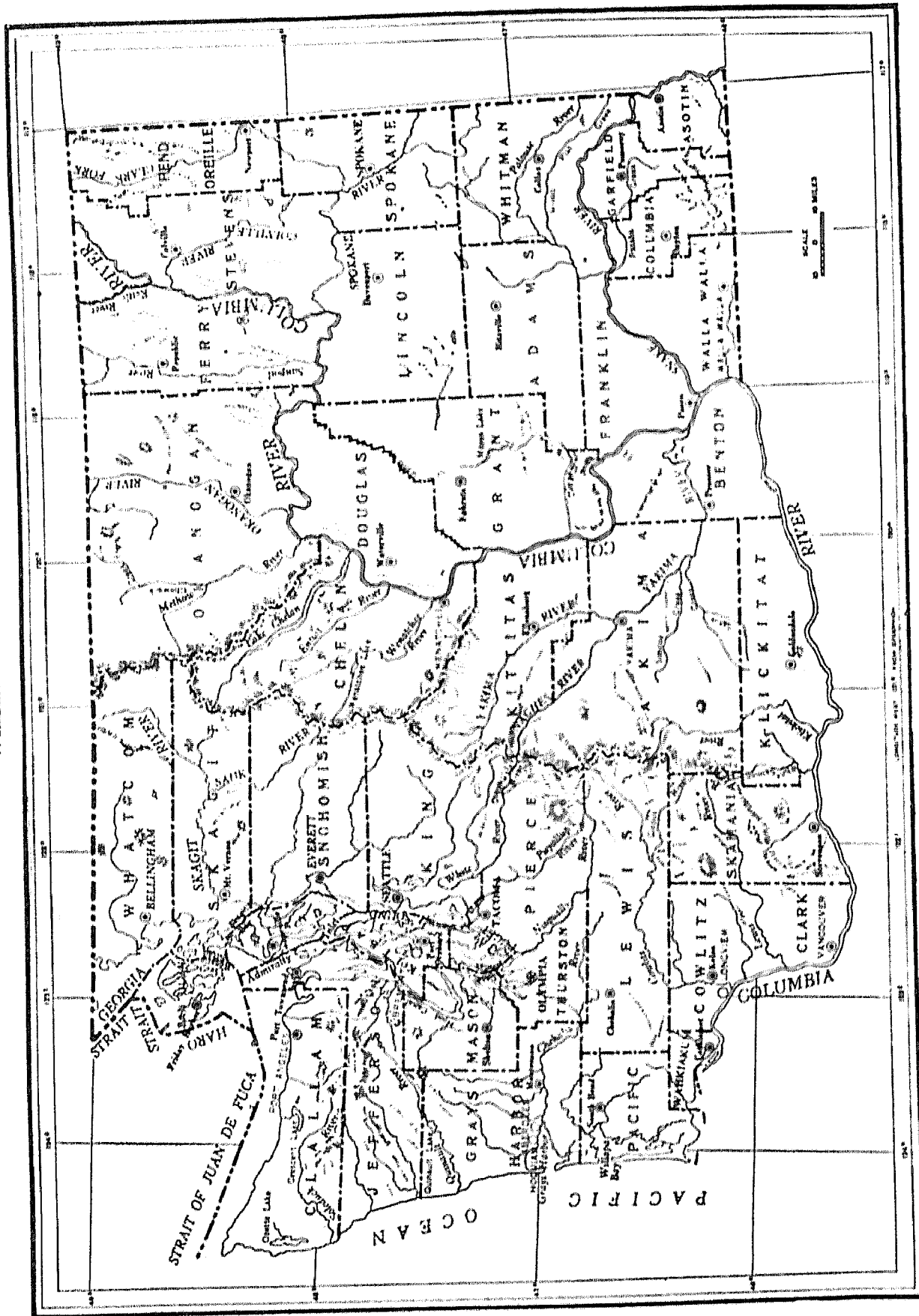


# WASHINGTON

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WASHINGTON



# CONSTRUCTION—WASHINGTON

1251

TABLE 1.—VALUE OF CONSTRUCTION BUSINESS DURING 1929 AND PRINCIPAL ITEMS OF EXPENDITURE  
(Values expressed in thousands)

AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	VALUE OF CONSTRUCTION BUSINESS					PRINCIPAL EXPENDITURES					AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	VALUE OF CONSTRUCTION BUSINESS					PRINCIPAL EXPENDITURES					
	Number of establishments	Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials	Number of establishments	Total	Under general contract or directly for owner		Under sub-contract	Sub-contract work let	Wages paid	Cost of materials	Number of establishments	Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials
<b>WASHINGTON</b>	404	\$68,728	\$56,950	\$9,778	\$11,405	\$16,622	\$25,616															
<i>Counties and principal cities</i>																						
<b>Counties:</b>																						
Chelan	9	694	646	48	47	212	278															
Clallam	5	1,030	1,000	30	74	169	620															
Clark	3	133	101	32	8	28	75															
Cowlitz	8	489	468	21	78	107	142															
Grays Harbor	14	1,332	1,200	120	178	401	393															
Jefferson	3	261	260	1	29	66	73															
King	170	40,542	33,400	7,082	8,845	9,429	14,978															
Kittitas	3	177	177	—	11	53	61															
Lewis	3	232	232	—	46	66	43															
Pierce	57	6,708	5,881	827	537	1,768	2,008															
Skagit	7	2,454	2,454	—	129	757	1,010															
Snohomish	13	1,258	938	320	250	332	488															
Spokane	51	6,000	6,168	738	763	2,015	2,698															
Thurston	4	420	391	35	47	130	178															
Walla Walla	8	552	406	146	88	147	258															
Whatcom	12	716	534	182	67	100	280															
Yakima	15	1,474	1,480	185	156	404	641															
Other counties <sup>1</sup>	13	1,143	1,180	4	117	281	400															
<b>Principal cities:<sup>2</sup></b>																						
Seattle	172	40,228	33,172	7,056	8,796	9,264	14,942															
Spokane	51	6,000	6,168	738	763	2,015	2,698															
Tacoma	56	6,602	5,076	827	520	1,781	2,888															
<i>Classification of establishments</i>																						
<b>Operative builders</b>	3	984	984	—	399	100	338															
<b>General contractors</b>	230	47,879	47,400	479	10,036	11,957	16,417															
Building	132	27,673	27,633	41	8,461	6,484	9,490															
Building not specialized	106	23,327	23,286	41	7,000	5,591	7,067															
Commercial building only	13	2,293	2,293	—	580	622	739															
Manufacturing building only	4	1,405	1,405	—	37	282	895															
Residential building only	9	649	649	—	274	90	219															
Highway	30	6,309	6,251	58	1,050	1,052	2,018															
Bridges and culvert	12	1,111	1,095	16	118	812	419															
Grading	18	2,002	1,931	71	166	638	91															
Street paving	17	3,700	3,537	163	112	792	1,973															
Sewer, gas, water, conduit	9	1,034	1,031	3	412	362	374															
Waterworks, dam, and reservoir	3	2,506	2,500	—	173	709	1,080															
Dredging, river, harbor, etc.	8	2,316	2,180	130	114	850	748															
Other classes <sup>3</sup>	4	539	539	—	163	224	—															
<b>Subcontractors</b>	165	17,865	8,560	9,299	433	4,559	8,861															
Carpentering and wood flooring	4	165	—	165	—	63	62															
Concreting and masonry	4	371	234	137	22	86	137															
Electrical	26	2,273	1,176	1,097	8	654	1,031															
Heating and plumbing	67	6,562	2,543	4,018	240	1,545	3,518															
Heating and piping <sup>4</sup>	14	1,392	707	685	20	374	740															
Pipe covering	3	253	34	219	—	71	96															
Plumbing	31	2,060	700	1,357	121	600	1,483															
Plumbing and heating combined	16	1,710	583	1,123	98	390	890															
Automatic sprinkler systems	3	534	510	24	1	111	309															
Painting, decorating, and glazing	16	1,023	358	665	1	501	330															
Plastering and lathing	4	562	—	562	—	313	127															
Roofing and sheet-metal work	18	1,166	250	913	—	361	520															
Roofing	3	100	67	39	—	20	59															
Sheet-metal work	12	942	188	754	—	302	408															
Roofing and sheet metal combined	3	121	—	121	—	40	53															
Steel erection <sup>5</sup>	6	3,300	3,044	257	110	408	2,429															
Marble and tiling	11	1,273	14	1,259	9	340	586															
Excavating and grading	9	875	659	216	43	185	1															
Dredging, river, harbor, etc.	3	293	282	11	—	103	89															
<b>WASHINGTON—Continued</b>																						
<i>Size of business groups</i>																						
<b>General contractors<sup>6</sup></b>	239	\$48,864	\$48,384	\$479	\$11,032	\$12,063	\$16,755															
\$25,000 to \$49,999	45	1,652	1,641	—	41	308	392															
\$50,000 to \$99,999	74	5,448	5,389	59	1,066	1,335	1,890															
\$100,000 to \$199,999	61	8,962	8,835	127	1,553	2,434	2,818															
\$200,000 to \$499,999	38	11,252	11,225	27	2,044	2,695	4,477															
\$500,000 to \$999,999	14	8,989	8,704	225	1,684	1,955	3,691															
\$1,000,000 and over	7	12,530	12,530	—	4,377	3,252	3,305															
<b>Building contractors<sup>6</sup></b>	135	28,658	28,617	41	8,857	6,591	9,828															
\$25,000 to \$49,999	26	985	972	13	278	193	401															
\$50,000 to \$99,999	47	3,424	3,423	1	794	831	1,314															
\$100,000 to \$199,999	26	3,763	3,763	—	859	883	1,527															
\$200,000 to \$499,999	24	6,926	6,890	27	1,621	1,679	2,719															
\$500,000 to \$999,999	8	5,169	5,169	—	1,443	1,003	1,995															
\$1,000,000 and over	4	8,391	8,391	—	3,892	2,002	1,872															
<b>Subcontractors</b>	165	17,865	8,560	9,299	433	4,559	8,861															
\$25,000 to \$49,999	56	1,973	709	1,264	13	592	863															
\$50,000 to \$99,999	69	4,764	1,989	2,775	48	1,493	2,065															
\$100,000 to \$199,999	26	3,678	917	2,761	46	1,070	1,721															
\$200,000 to \$499,999	11	3,262	2,055	1,207	53	806	1,325															
\$500,000 to \$999,999	2	1,393	101	1,292	200	319	669															
\$1,000,000 and over	1	2,794	2,794	—	73	272	2,169															
<b>SEATTLE</b>	172	40,228	33,172	7,056	8,796	9,264	14,942															
<i>Classification of establishments</i>																						
<b>Operative builders</b>	3	984	984	—	399	100	338															
<b>General contractors</b>	86	26,652	26,413	240	8,015	6,128	8,178															
Building	51	17,235	17,208	27	6,718	3,856	4,776															
Building not specialized	42	15,222	15,195	27	6,034	3,474	4,173															
Commercial building only	9	1,676	1,676	—	515	341	611															
Residential building only	3	337	337	—	169	40	92															
Highway	10	1,848	1,834	14	383	522	366															
Bridges and culvert	4	468	468	—	93	123	213															
Grading	5	551	501	50	48	122	24															
Street paving	8	3,043	2,918	125	88	652	1,644															
Sewer, gas, water, conduit	3	1,481	1,478	3	469	324	326															
Other classes <sup>7</sup>	5	2,027	2,007	20	276	530	809															
<b>Subcontractors</b>	83	12,591	5,775	6,816	385	3,029	6,426															
Electrical	14	1,536	755	781	8	435	732															
Heating and plumbing	28	3,955	1,003	2,952	204	957	2,070															
Heating and piping <sup>8</sup>	10	1,619	104	1,515	90	413	777															
Plumbing	15	1,802	389	1,413	113	432	983															
Automatic sprinkler systems	3	534	510	24	1	111	309															
Painting and decorating	7	512	122	390	1	204	121															
Plastering and lathing	4	562	—	562	—	313	127															
Roofing and sheet-metal work	10	779	138	641	—	237	362															
Marble and tiling	8	991	2	989	9	280	400															
Excavating	3	641	522	119	33	89	1															
Steel erection <sup>9</sup>	5	3,265	3,005	260	110	359	2,403															
Other classes <sup>7</sup>	4	407	201	207	20	65	202															
<b>Size of business groups</b>																						
<b>General contractors<sup>6</sup></b>	89	27,637	27,397	240	8,411	6,234	8,516															
\$25,000 to \$49,999	13	480	480	—	140	104	117															
\$50,000 to \$99,999	19	1,437	1,434	3	340	280	529															
\$100,000 to \$199,999	24	3,654	3,570	84	934	887	1,073															
\$200,000 to \$499,999	13	5,403	5,376	27	1,112	1,129	2,071															
\$500,000 to \$999,999	9	5,898	5,773	125	1,508	1,066	2,204															
\$1,000,000 and over	6	10,765	10,765	—	4,377	2,669	2,523															
<b>Building contractors<sup>6</sup></b>	54	18,219	18,192	27	7,114	3,962	5,115															
\$25,000 to \$49,999	10	376	376	—	136	72	163															
\$50,000 to \$99,999	11	853	853	—	265	160	336															
\$100,000 to \$199,999	11	1,646	1,646	—	517	361	522															
\$200,000 to \$499,999	13	3,871	3,844	27	969	874	1,426															
\$500,000 to \$999,999	5	3,082	3,052	—	1,335	492	856															
\$1,000,000 and over	4	8,391	8,391	—	3,892	2,002	1,872															

See footnotes at end of table.

CONSTRUCTION—WASHINGTON

TABLE 1.—VALUE OF CONSTRUCTION BUSINESS DURING 1929, AND PRINCIPAL ITEMS OF EXPENDITURE—Continued

[Values expressed in thousands]

AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	Number of establishments	VALUE OF CONSTRUCTION BUSINESS					PRINCIPAL EXPENDITURES					
		Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials	Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid
<b>SEATTLE—Continued</b>												
<i>Size of business groups—Con.</i>												
Subcontractors.....	83	\$12,591	\$5,775	\$6,816	\$385	\$3,029	\$6,426					
\$25,000 to \$49,999.....	22	757	201	550	11	241	346					
\$50,000 to \$99,999.....	30	2,114	619	1,495	39	727	893					
\$100,000 to \$199,999.....	18	2,657	393	2,264	29	784	1,252					
\$200,000 to \$499,999.....	10	2,878	1,070	1,208	33	684	1,008					
\$500,000 to \$999,999.....	2	1,393	101	1,292	200	319	669					
\$1,000,000 and over.....	1	2,794	2,794		73	272	2,169					
<b>SPOKANE</b>												
<i>Classification of establishments</i>												
General contractors.....	20	5,244	5,227	18	743	1,400	1,021					
Building.....	12	2,328	2,328		351	683	1,030					
Highway.....	11	2,150	2,150		344	495	807					
Other classes <sup>10</sup> .....	6	767	749	18	48	231	84					
Subcontractors.....	22	1,662	941	721	20	555	777					
Electrical.....	5	364	150	214		139	139					
Heating and plumbing.....	8	824	659	166	20	210	506					
Heating and piping <sup>11</sup> .....	5	619	481	138	20	160	369					
Plumbing.....	3	206	178	28		44	136					
Painting and decorating <sup>12</sup> .....	3	141	82	59		84	31					
Sheet metal work.....	3	171	46	125		53	59					
Other classes <sup>13</sup> .....	3	162	5	157		69	42					
<i>Size of business groups</i>												
General contractors.....	29	5,244	5,227	18	743	1,400	1,021					
\$25,000 to \$49,999.....	6	278	278		21	64	79					
\$50,000 to \$99,999.....	6	449	449		41	141	165					
\$100,000 to \$199,999.....	6	899	881	18	131	275	200					
\$200,000 to \$499,999.....	10	3,012	3,012		408	823	1,199					
\$500,000 to \$999,999.....	1	607	607		82	156	269					
Building contractors.....	12	2,328	2,328		351	683	1,030					
\$25,000 to \$49,999.....	1	43	43		12	27	27					
\$50,000 to \$99,999.....	4	280	280		15	103	98					
\$100,000 to \$199,999.....	2	274	274		28	51	115					
\$200,000 to \$499,999.....	4	1,124	1,124		211	343	521					
\$500,000 to \$999,999.....	1	607	607		82	156	269					
Subcontractors.....	22	1,662	941	721	20	555	777					
\$25,000 to \$49,999.....	9	318	182	136		94	133					
\$50,000 to \$99,999.....	9	650	374	276		220	283					
\$100,000 to \$199,999.....	3	309		309		120	133					
\$200,000 to \$499,999.....	1	386	386		20	122	227					
<b>TACOMA</b>												
<i>Classification of establishments</i>												
General contractors.....	35	5,210	5,115	103	529	1,411	2,245					
Building.....	21	2,038	2,038		434	732	1,308					
Building not specialized.....	18	2,547	2,547		390	619	1,182					
Commercial building only.....	3	391	391		44	114	126					
Street paving <sup>14</sup> .....	8	1,101	1,098		92	297	500					
Other classes <sup>15</sup> .....	6	1,179	1,079	100	3	382	423					
Subcontractors.....	21	1,283	560	723		320	613					
Electrical.....	3	141	55	86		30	75					
Heating and plumbing.....	10	612	353	259		132	320					
Heating and pipe covering.....	4	231	182	79		61	136					
Plumbing.....	3	151	65	86		27	82					
Plumbing and heating combined.....	3	200	100	94		43	162					
Roofing and sheet metal work.....	3	109	31	77		29	48					
Other classes <sup>16</sup> .....	5	421	122	299		129	199					
<i>Size of business groups</i>												
General contractors.....	35	5,210	5,115	103	529	1,411	2,245					
\$25,000 to \$49,999.....	5	184	184		30	44	77					
\$50,000 to \$99,999.....	15	1,094	1,091	3	234	257	414					
\$100,000 to \$199,999.....	8	1,222	1,222		60	304	587					
\$200,000 to \$499,999.....	4	1,001	1,001		120	208	439					
\$500,000 to \$999,999.....	3	1,717	1,617	100	79	599	728					
Building contractors.....	21	2,038	2,038		434	732	1,308					
\$25,000 to \$49,999.....	2	89	89		22	19	44					
\$50,000 to \$99,999.....	11	899	899		229	198	273					
\$100,000 to \$199,999.....	4	619	619		52	129	352					
\$200,000 to \$499,999.....	3	708	708		120	198	260					
\$500,000 to \$999,999.....	1	713	713		11	219	370					
Subcontractors.....	21	1,283	560	723		320	613					
\$25,000 to \$49,999.....	10	352	187	165		96	155					
\$50,000 to \$99,999.....	9	599	229	370		101	269					
\$100,000 to \$199,999.....	2	331	154	177		63	224					

<sup>1</sup> Includes Asotin, Columbia, Kitsap, Lincoln, Mason, Okanogan, Pacific, Pend Oreille, Stevens, and Whitman, for which data can not be shown without revealing individual operations. From areas other than those listed, no reports were received from establishments, which handled as much as \$25,000 business during 1929.

<sup>2</sup> Figures are included in respective county totals.

<sup>3</sup> Includes railroad; foundation; vehicular subway and tunnel; central station, light and power plant.

<sup>4</sup> Includes automatic temperature control.

<sup>5</sup> Includes elevator construction; and ornamental iron.

<sup>6</sup> Includes operative builders.

<sup>7</sup> Includes waterworks; dredging, river, harbor, etc.; vehicular subway and tunnel; and central station, light and power plant.

<sup>8</sup> Includes pipe covering; automatic temperature control; and heating and plumbing combined.

<sup>9</sup> Includes concreting; carpentering and wood flooring; and glass and glazing.

<sup>10</sup> Includes street paving and grading.

<sup>11</sup> Includes plumbing and heating combined.

<sup>12</sup> Includes carpentering and woodflooring.

<sup>13</sup> Includes marble and tiling and grading.

<sup>14</sup> Includes highway and grading.

<sup>15</sup> Includes bridge and culvert; sewer, gas, water, conduit; waterworks; and dredging, river, harbor, etc.

<sup>16</sup> Includes concreting; painting and decorating; steel erection; marble and tiling; and excavating.

TABLE 2.—CONSTRUCTION BUSINESS OF REPORTING ESTABLISHMENTS DURING 1929, BY CLASS OF OWNERSHIP AND BY TYPE OF WORK

CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—						CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—					
	All classes of establishments		General contractors <sup>1</sup>		Subcontractors			All classes of establishments		General contractors <sup>1</sup>		Subcontractors	
	Number reporting	Value	Number reporting	Value	Number reporting	Value		Number reporting	Value	Number reporting	Value	Number reporting	Value
<b>WASHINGTON</b>													
All construction business.....	404	\$86,728,302	239	\$49,863,506	165	\$17,864,797	All business under subcontract—Continued.....						
Distribution not reported.....	32	2,705,281	10	1,252,797	22	1,452,484	Distributed by class—Contd.						
Distributed by class of ownership.....							Marble and tiling.....	11	\$1,240,394		11	\$1,240,394	
Private.....	372	64,023,021	229	47,610,708	143	10,412,313	Excavating.....	15	306,679	11	\$154,131	4	152,548
Quasi public or community.....	205	37,546,998	157	23,942,027	138	13,604,941	Street paving.....	1		1		1	
Public.....	75	2,062,564	35	2,067,820	40	894,744	Rental of equipment, trucking, etc.....	1	71,628	1		1	86,650
Distribution not reported.....	210	23,513,489	139	21,600,861	71	1,912,628	Pipe line.....	1		1		1	
Distributed by class of public ownership.....							Sewer, gas, water, conduit.....	3	90,522	1		1	
Federal.....	42	23,194,957	130	21,413,466	66	1,781,491	Dredging, river, harbor, etc.....	5	144,307	4		1	
State.....	23	2,081,613	26	1,693,702	16	387,911	Flooring, n. e. s.....	3	40,907	3		3	49,907
County or township.....	86	7,320,314	72	7,009,376	14	310,935							
Municipal.....	94	4,205,208	61	3,521,863	33	638,345							
	112	9,587,822	72	6,188,522	40	399,300							
All business under general contract or directly for owners.....	328	56,950,106	236	48,384,431	92	8,565,675	<b>SEATTLE</b>						
Distribution not reported.....	2	129,498			2	129,498	All construction business.....	172	40,227,668	89	27,636,794	83	12,590,874
Distributed by class.....							Distribution not reported.....	14	1,043,427	3	283,339	11	760,088
Building.....	326	56,820,608	236	48,384,431	90	8,436,177	Distributed by class of ownership.....						
Distribution not reported.....	230	32,733,173	150	28,327,131	80	4,406,042	Private.....	129	39,184,241	68	27,353,455	72	11,830,786
Distributed by class.....							Quasi public or community.....	26	1,443,170	10	1,003,378	16	459,792
Commercial.....	113	31,066,278	141	27,003,827	72	4,062,451	Public.....	80	12,801,895	51	11,335,595	38	1,520,300
Educational.....	63	3,017,918	39	2,764,223	24	253,695	Distribution not reported.....	2	113,047			2	113,047
Hotel.....	31	1,392,564	12	1,229,197	19	163,367	Distributed by class of public ownership.....						
Hospital and institutional.....	24	931,308	13	823,847	11	107,461	Federal.....	37	12,748,848	51	11,335,595	36	1,413,253
Manufacturing.....	42	4,565,651	20	3,988,069	16	577,582	State.....	18	1,405,258	10	1,045,070	8	300,188
Military and naval.....	5	548,741	2		3		County or township.....	31	2,416,991	14	1,889,200	17	527,791
Public: Courts, jails, etc.....	18	823,693	11	1,352,429	7	20,005	Municipal.....	68	6,370,640	35	6,099,624	23	271,016
Religious and memorial.....	34	731,578	19	679,660	15	51,918	All business under general contract or directly for owners.....	120	33,173,182	86	27,397,081	43	5,775,121
Residential.....	118	4,403,253	72	3,570,853	46	922,400	Building.....	95	20,502,333	53	18,375,058	37	2,127,325
Social and recreational.....	24	1,100,740	12	929,663	12	171,077	Distribution not reported.....	8	711,286	4	542,979	4	168,307
Air transport.....	8	827,206	5	826,655	3	641	Distributed by class.....						
Rail and water transportation.....	7	242,857	4	223,966	3	28,891	Commercial.....	57	10,701,097	54	17,832,079	33	1,660,018
Miscellaneous.....	37	801,982	20	304,897	17	497,085	Educational.....	50	7,969,075	35	7,232,182	21	730,893
Highway and street.....	80	11,769,848	84	11,353,467	5	416,381	Hospital and institutional.....	22	1,313,738	13	1,250,178	9	57,560
Water-power development.....	5	1,816,714	5	1,816,714			Hotel.....	18	896,510	5	861,354	8	25,156
Public works and utilities.....	72	8,717,885	57	5,574,057	15	3,143,228	Manufacturing.....	10	941,280	0	626,045	4	14,035
Bridge, tunnel, etc.....	26	4,377,378	22	1,663,453	4	2,713,925	Military and naval.....	15	2,534,392	8	2,147,280	7	387,112
Central station, light and power plant.....	6	410,933	4	(?)	2	(?)	Public: Courts, jails, etc.....	3	545,748	2	1,309,320	1	8,175
Dock, pier, retaining wall, etc.....	16	800,447	11	821,910	5	38,537	Religious and memorial.....	7	771,759	5	448,081	2	18,903
Flood control, irrigation, and land drainage.....	5	141,343	4		1		Residential.....	16	466,984	9	1,969,182	22	380,458
River and harbor improvement.....	7	626,655	5	704,177	2	93,821	Social and recreational.....	45	2,339,620	23	1,969,182	22	380,458
Sewage disposal and drainage.....	13	1,244,066	12	(?)	1	(?)	Air transport.....	18	1,037,075	6	869,089	7	168,586
Water supply.....	20	859,763	15	827,372	5	32,391	Rail and water transportation.....	4	742,753	3		1	
Park, grounds, etc.....	5	197,300	3	13,246	2	184,054	Miscellaneous.....	3	183,780	2	1,122,759	1	161,560
Miscellaneous.....	2		1		1		Highway and street.....	13	357,899	7		6	
Railroad and car line.....	13	541,550	11	745,635	2	17,479	Public works and utilities.....	30	5,338,549	27	4,908,549	3	370,000
Air-transport work.....	4	221,504	3		1		Bridge, tunnel, etc.....	22	6,327,596	17	3,333,787	5	2,993,809
Miscellaneous, n. e. s.....	20	1,019,874	12	566,827	8	453,047	Central station, light and power plant.....	13	3,937,971	10	1,120,162	3	2,808,809
							Dock, pier, retaining wall, etc.....	2	823,203	1	(?)	1	(?)
All business under subcontract.....	152	9,778,196	18	479,074	134	9,299,122	Flood control, irrigation, and land drainage.....	4		3	(?)	1	
Distribution not reported.....	2	68,010	1	37,419	1	31,590	Park, grounds, etc.....	1	556,685	1	(?)	1	(?)
Distributed by class.....							River and harbor improvement.....	1		1	(?)		
Carpentering and wood flooring.....	5	174,099	4	187,336	1	174,099	Sewage disposal and drainage.....	1	1,092,545	4	1,092,545		
Concreting.....	7	187,336	4	68,657	3	128,679	Water supply.....	3	417,192	3	417,192		
Masonry.....	2	1,107,153	1		1	1,107,153	Air transport work.....	3	221,103	3	221,103		
Electrical.....	20	1,107,153	20		20		Water-power development.....	2	54,745	2			
Elevator construction.....	1	222,809	1		1	222,809	Railroad and car line.....	3	54,745	2	498,564	1	283,987
Steel erection.....	2	3,918,545	2		2	3,918,545	Miscellaneous, n. e. s.....	8	727,800	4			
Ornamental iron.....	2	1,230,829	2		2	1,230,829							
Heating and plumbing.....	35	220,078	35		35	220,078	All business under subcontract.....	79	7,055,486	6	239,733	73	6,815,753
Heating and piping.....	1	1,377,033	1		1	1,377,033	Carpentering and wood flooring.....	2	88,762	2		2	88,762
Automatic temperature control.....	1	1,081,605	1		1	1,081,605	Flooring, n. e. s.....	2	752,138	11		11	752,138
Pipe covering.....	9	473,778	9		9	473,778	Elevator construction.....	1	170,228	1		1	170,228
Plumbing.....	33	196,509	33		33	196,509	Steel erection.....	1	170,228	1		1	170,228
Plumbing and heating combined.....	5	561,949	5		5	561,949	Ornamental iron.....	2	2,954,273	2		2	2,954,273
Automatic sprinkler systems.....	12	945,002	12		12	945,002	Heating and plumbing.....	18		18		18	
Painting and decorating.....	4	162,280	4		4	162,280	Heating and piping.....	1	1,763,409	1		1	1,763,409
Glass and glazing.....	4	608,264	4		4	608,264	Automatic temperature control.....	1		1		1	
Plastering and lathing.....	4	174,058	4		4	174,058	Plumbing and heating combined.....	1		1		1	
Roofing and sheet-metal work.....	10	184,975	10		10	184,975	Pipe covering.....	3	183,971	3		3	183,971
Roofing.....	18	608,264	18		18	608,264	Plumbing.....	10	1,006,893	10		10	1,006,893
Sheet-metal work.....	4	174,058	4		4	174,058	Automatic sprinkler systems.....	1	668,782	1		1	668,782
Roofing and sheet metal combined.....	4	174,058	4		4	174,058	Painting and decorating.....	7	561,949	7		7	561,949
							Glass and glazing.....	2	608,264	2		2	608,264
							Roofing and sheet-metal work.....	4	184,975	4		4	184,975
							Roofing.....	11	473,007	11		11	473,007

See footnotes at end of table.

CONSTRUCTION—WASHINGTON

TABLE 2.—CONSTRUCTION BUSINESS OF REPORTING ESTABLISHMENTS DURING 1929, BY CLASS OF OWNERSHIP AND BY TYPE OF WORK—Continued

CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—						CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—					
	All classes of establishments		General contractors <sup>1</sup>		Subcontractors			All classes of establishments		General contractors <sup>1</sup>		Subcontractors	
	Number reporting	Value	Number reporting	Value	Number reporting	Value		Number reporting	Value	Number reporting	Value	Number reporting	Value
<b>SEATTLE—Continued</b>						<b>TACOMA</b>							
All business under subcontract—Continued						All construction business.....	56	\$6,602,181	35	\$6,218,859	21	\$1,283,322	
Marble and tiling.....	8	\$689,120				Distribution not reported.....	2	181,309	1	117,650	1	63,659	
Excavating.....	9	222,188				Distributed by class of ownership.....							
Concreting.....	2		1	\$239,733	1	Private.....	54	6,320,872	34	5,101,200	20	1,210,663	
Dredging, river, harbor, etc.....	1	139,474				Quasi public or community.....	42	3,557,975	24	2,651,068	18	906,007	
Sewer, gas, water, conduit.....	1					Public.....	8	414,400	3	173,934	5	240,468	
						Distribution not reported.....	30	2,348,497	20	2,275,307	10	73,100	
							2	24,072	1	20,000	1	4,072	
<b>SPOKANE</b>													
All construction business.....	51	6,906,332	29	5,244,296	22	1,662,036							
Distribution not reported.....	5	338,916			5	338,916	Distributed by class.....	28	2,324,425	19	2,255,307	9	69,118
Distributed by class of ownership.....						Federal.....	4	143,108					
Private.....	46	6,507,416	29	5,244,206	17	1,323,120	State.....	12	865,726	10	1,001,024	2	6,910
Quasi public or community.....	32	2,934,367	16	1,768,409	16	1,165,958	County or township.....	13	525,887	9	510,293	4	15,594
Public.....	12	620,559	0	565,604	0	54,955	Municipal.....	21	789,704	13	743,000	8	46,614
Distribution not reported.....	30	3,012,490	22	2,910,283	8	102,207							
	3	179,413	2	167,395	1	12,018	All business under general contract or directly for owners.....	48	5,675,408	35	5,115,369	13	560,039
Distributed by class of public ownership.....						Building.....	34	3,135,328	23	2,675,383	11	459,045	
Federal.....	27	2,833,077	20	2,742,888	7	90,189	Distribution not reported.....	2	148,070	1	117,650	1	31,026
State.....	9	401,806	6	400,599	3	1,207	Distributed by class.....						
County or township.....	16	1,002,169	12	1,857,108	4	45,061	Commercial.....	32	2,080,652	22	2,557,733	10	428,610
Municipal.....	10	367,719	14	485,181	2	43,921	Educational.....	18	1,032,442	13	913,752	5	118,690
	5	161,383	4		1		Hotel.....	8	277,938	5	223,638	3	54,400
All business under general contract or directly for owners.....	41	6,168,233	28	5,226,793	13	941,440	Hospital and institutional.....	4	63,240			4	63,246
Distribution not reported.....	1	52,898			1	52,898	Manufacturing.....	4	75,000	1	(?)	3	(?)
Distributed by class.....							Public: Courts, jails, etc.....	9	384,816	7	(?)	2	(?)
Building.....	40	6,115,335	28	5,226,793	12	888,542	Religious and memorial.....	3	7,733	3	7,733		
Distribution not reported.....	26	3,020,165	14	2,131,623	12	888,542	Social and recreational.....	2	30,749	1	33,461	2	3,288
	3	89,758	1	4,000	2	85,758	Residential.....	14	505,408	8	416,110	6	80,298
Distributed by class.....							Military and naval.....	1					
Commercial.....	23	2,030,407	13	2,127,623	10	802,784	Air transport.....	3	80,793	2	91,773	1	10,878
Educational.....	13	673,160	9	440,342	4	223,817	Miscellaneous.....	4	15,858	3		1	
Hotel.....	9	951,620	0	870,179	3	81,441	Public works and utilities.....	14	1,026,600	10	1,000,940	4	25,651
Hospital and institutional.....	2	241,778	1	174,822	1	66,956	Bridge, tunnel, etc.....	1		1		1	(?)
Manufacturing.....	3	62,345	2	(?)	1	(?)	Central station, light and power plant.....	2	201,800	1	(?)	1	(?)
Military and naval.....	1						Dock, pier, retaining wall, etc.....	4		3		1	(?)
Public: Courts, jails, etc.....	2	36,993	1	(?)	1	(?)	Flood control, irrigation, and land drainage.....	4		1	(?)		
Residential.....	12	575,941	7	407,560	5	168,381	River and harbor improvement.....	1	480,104	1	(?)		
Religious and memorial.....	4	158,217	3		1		Park, grounds, etc.....	1		1		1	(?)
Social and recreational.....	3	26,685	2		1		Sewage disposal and drainage.....	2	68,141	2		1	(?)
Rail and water transportation.....	1			174,612	1	213,059	Water supply.....	4	281,546	3	(?)	1	(?)
Miscellaneous.....	5	203,669			4		Highway and street.....	12	1,430,156	11		1	
Highway and street.....	19	2,582,990	10	2,582,990			Railroad and car line.....	1		1	1,430,037	2	74,443
Public works and utilities <sup>2</sup> .....	4	153,408	4	153,408			Miscellaneous, n. e. s.....	3	83,324	1			
Water power development.....	1		1										
Railroad and car line.....	3	358,772	3	358,772			All business under subcontract.....	17	826,773	2	(?)	15	(?)
Miscellaneous, n. e. s.....	1		1				Concreting.....	1				1	
							Painting and decorating.....	1	214,521			1	214,521
All business under subcontract.....	16	738,099	1	17,503	15	720,596	Marble and tiling.....	1				1	
Distribution not reported.....	1	17,503					Electrical.....	2				2	
Distributed by class.....							Steel erection.....	1	138,871			1	138,871
Electrical.....	15	720,596			15	720,596	Heating and plumbing.....	1				1	
Heating and plumbing.....	3	213,613			3	213,613	Heating and piping.....	5	259,611			5	259,611
Heating and piping.....	1	175,361			1	175,361	Pipe covering.....	1	106,005			1	106,005
Pipe covering.....	4	104,890			4	104,890	Plumbing.....	3				3	
Plumbing.....	1	70,471			1	70,471	Plumbing and heating combined.....	1	153,606			1	153,606
Painting and decorating.....	1				1		Roofing and sheet-metal work.....	3	77,762			3	77,762
Marble and tiling.....	2	112,085			2	112,085	Excavating.....	2				2	(?)
Roofing and sheet-metal work.....	5	115,947			5	115,947	Dredging, river, harbor, etc.....	1	136,008			1	
Other classes <sup>4</sup> .....	3	103,590			3	103,590							

<sup>1</sup> Includes operative builders.  
<sup>2</sup> Value omitted in order to avoid disclosing individual operations. The amounts omitted are, however, included in the respective totals.  
<sup>3</sup> Includes establishments reporting the following types of general contract work: Bridge, tunnel, etc., and miscellaneous, n. e. s., 1; park, grounds, and sewage disposal and drainage, 1; and water supply, 2.  
<sup>4</sup> Includes establishments reporting the following types of subcontract work: Carpentering and woodflooring, 1; grading, 1; flooring, n. e. s., 1.



# CONSTRUCTION—WASHINGTON

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TABLE 3.—CONSTRUCTION BUSINESS DURING 1929, BY LOCATION

CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	Total	In home city	In home State	Outside home State	CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	Total	In home city	In home State	Outside home State
<b>WASHINGTON</b> -----						<b>SEATTLE—Continued</b>					
General contractors <sup>1</sup> -----	232	\$84, 138, 656	\$38, 462, 231	\$80, 741, 446	\$9, 392, 212	General contractors—Con.					
Building-----	180	27, 282, 044	17, 761, 003	26, 977, 018	1, 305, 026	Street paving-----	8	\$3, 043, 447	\$2, 041, 707	\$3, 043, 447	-----
Building not specialized <sup>1</sup> -----	104	22, 035, 355	15, 138, 056	21, 705, 329	1, 230, 026	Sewer, gas, water, conduit-----	3	1, 481, 478	1, 481, 473	1, 481, 473	-----
Commercial building only-----	13	2, 292, 899	1, 842, 527	2, 202, 869	-----	Other classes <sup>2</sup> -----	5	2, 026, 790	1, 391, 462	1, 776, 799	\$50, 000
Manufacturing building only-----	4	1, 405, 000	150, 000	1, 345, 000	60, 000	Subcontractors-----	81	11, 575, 138	7, 008, 294	11, 383, 500	191, 638
Residential building only-----	9	648, 820	619, 820	633, 820	15, 000	Electrical-----	14	1, 536, 040	1, 345, 930	1, 404, 340	41, 700
Highway-----	35	6, 206, 836	601, 372	5, 278, 700	928, 136	Heating and plumbing-----	27	3, 127, 627	2, 378, 838	3, 006, 000	121, 627
Bridge and culvert-----	12	1, 111, 135	420, 896	1, 111, 135	-----	Heating and piping <sup>3</sup> -----	9	791, 208	632, 497	781, 208	10, 000
Grading-----	17	1, 898, 587	181, 777	1, 384, 887	513, 700	Plumbing-----	15	1, 802, 422	1, 680, 913	1, 757, 122	45, 300
Street paving-----	17	3, 700, 447	3, 151, 778	3, 695, 028	4, 819	Automatic sprinkler systems-----	3	533, 907	65, 428	467, 670	66, 327
Sewer, gas, water, conduit-----	0	1, 633, 885	1, 520, 473	1, 601, 523	32, 392	Painting and decorating-----	7	511, 021	501, 660	511, 021	-----
Waterworks, dam, and reservoir-----	3	2, 595, 935	2, 432, 079	2, 595, 935	-----	Plastering and lathing-----	3	373, 829	343, 820	373, 820	-----
Dredging, river, harbor, etc-----	8	2, 316, 334	947, 596	2, 116, 207	200, 127	Roofing and sheet-metal work-----	10	778, 505	663, 172	778, 224	284
Other classes <sup>4</sup> -----	4	539, 394	277, 873	420, 621	118, 773	Marble and tiling-----	8	991, 341	812, 564	965, 341	26, 000
Subcontractors-----	103	16, 849, 061	11, 170, 484	16, 559, 792	289, 269	Excavating-----	3	640, 782	256, 050	640, 782	-----
Carpentering and woodflooring-----	4	163, 299	96, 513	140, 299	23, 000	Steel erection <sup>5</sup> -----	5	3, 208, 068	497, 818	3, 208, 068	-----
Concreting and masonry-----	4	370, 980	130, 396	370, 296	684	Other classes <sup>6</sup> -----	4	407, 022	208, 424	404, 995	2, 027
Electrical-----	26	2, 272, 888	1, 973, 506	2, 231, 188	41, 700	<b>SPOKANE</b> -----					
Heating and plumbing-----	60	5, 734, 288	4, 764, 179	5, 589, 948	144, 340	General contractors-----	29	5, 244, 296	1, 629, 823	3, 767, 825	1, 470, 471
Heating and piping <sup>7</sup> -----	14	1, 392, 403	1, 204, 235	1, 359, 600	32, 713	Building-----	12	2, 327, 829	1, 469, 019	2, 180, 800	147, 020
Pipe covering-----	3	253, 371	193, 371	253, 371	-----	Highway-----	11	2, 149, 669	-----	1, 237, 100	912, 500
Plumbing-----	31	2, 065, 654	2, 406, 187	2, 620, 354	45, 300	Other classes <sup>8</sup> -----	6	706, 798	160, 804	349, 010	416, 882
Plumbing and heating combined-----	15	888, 863	804, 058	888, 863	-----	Subcontractors-----	22	1, 002, 036	1, 437, 888	1, 011, 414	50, 622
Automatic sprinkler systems-----	3	533, 907	65, 428	467, 670	66, 327	Electrical-----	5	363, 513	363, 513	363, 513	-----
Painting, decorating, and glazing-----	16	1, 022, 560	970, 601	1, 013, 833	8, 727	Heating and plumbing-----	8	824, 268	777, 435	801, 555	22, 713
Plastering and lathing-----	3	373, 829	343, 829	373, 829	-----	Heating and piping <sup>9</sup> -----	5	618, 538	580, 092	595, 825	22, 713
Roofing and sheet-metal work-----	18	1, 168, 912	988, 088	1, 150, 781	18, 131	Plumbing-----	3	205, 730	196, 473	205, 730	-----
Roofing-----	3	105, 936	105, 936	105, 936	-----	Painting and decorating <sup>10</sup> -----	3	140, 768	100, 882	133, 068	7, 700
Sheet-metal work-----	12	942, 270	760, 275	924, 145	18, 131	Sheet-metal work-----	3	171, 451	110, 786	153, 064	17, 847
Roofing and sheet metal combined-----	3	120, 700	115, 877	120, 700	-----	Other classes <sup>11</sup> -----	3	162, 036	85, 272	150, 674	2, 392
Steel erection <sup>1</sup> -----	6	3, 300, 270	503, 818	3, 292, 200	7, 980	<b>TACOMA</b> -----					
Marble and tiling-----	11	1, 273, 048	906, 820	1, 228, 341	44, 707	General contractors-----	34	5, 017, 947	2, 287, 366	4, 785, 132	232, 815
Excavating and grading-----	6	875, 488	339, 021	875, 488	-----	Building-----	20	2, 737, 465	1, 464, 438	2, 504, 650	232, 815
Dredging, river, harbor, etc-----	3	293, 409	147, 023	293, 409	-----	Building not specialized-----	17	2, 346, 465	1, 073, 438	2, 113, 650	232, 815
<b>SEATTLE</b> -----						Commercial building only-----	3	301, 000	301, 000	301, 000	-----
General contractors <sup>1</sup> -----	88	26, 936, 794	18, 808, 247	26, 050, 200	886, 504	Street paving <sup>12</sup> -----	8	1, 101, 381	355, 082	1, 101, 381	-----
Building-----	53	17, 519, 027	12, 325, 737	16, 682, 523	836, 504	Other classes <sup>13</sup> -----	0	1, 179, 101	467, 246	1, 179, 101	-----
Building not specialized <sup>1</sup> -----	44	15, 505, 890	10, 608, 062	14, 669, 392	836, 504	Subcontractors-----	21	1, 283, 322	920, 960	1, 258, 997	24, 325
Commercial building only-----	6	1, 675, 944	1, 319, 888	1, 675, 944	-----	Electrical-----	3	141, 074	113, 637	141, 074	-----
Residential building only-----	3	337, 187	337, 187	337, 187	-----	Heating and plumbing-----	10	612, 220	543, 352	612, 220	-----
Highway-----	10	1, 847, 884	478, 460	1, 847, 884	-----	Heating and pipe covering--	4	260, 941	201, 317	260, 941	-----
Bridge and culvert-----	4	467, 023	371, 840	467, 023	-----	Plumbing-----	3	150, 952	141, 708	150, 952	-----
Grading-----	5	560, 541	117, 568	550, 541	-----	Plumbing and heating combined-----	3	200, 327	200, 327	200, 327	-----

<sup>1</sup> Includes operative builders.  
<sup>2</sup> Includes railroad; foundation; vehicular subway and tunnel; and central station, light and power plant.  
<sup>3</sup> Includes automatic temperature control.  
<sup>4</sup> Includes elevator construction; and ornamental iron.  
<sup>5</sup> Includes waterworks; dredging, river, harbor, etc.; vehicular subway and tunnel; and central station, light and power plant.  
<sup>6</sup> Includes plumbing and heating combined; automatic temperature control; and pipe covering.  
<sup>7</sup> Includes carpentering and woodflooring; concreting; and glass and glazing.  
<sup>8</sup> Includes street paving; and grading.  
<sup>9</sup> Includes plumbing and heating combined.  
<sup>10</sup> Includes carpentering and woodflooring.  
<sup>11</sup> Includes marble and tiling; and grading.  
<sup>12</sup> Includes highway; and grading.  
<sup>13</sup> Includes bridge and culvert; sewer, gas, water, conduit; waterworks; and dredging, river, harbor, etc.  
<sup>14</sup> Includes concreting; painting and decorating; steel erection; marble and tiling; and excavating.

CONSTRUCTION—WASHINGTON

TABLE 4.—CONSTRUCTION BUSINESS OUTSIDE HOME STATE, BY LOCATION

STATE OR COUNTRY	LOCATION REPORTED BY—			STATE OR COUNTRY	LOCATION REPORTED BY—		
	All classes of establishments	General contractors	Subcontractors		All classes of establishments	General contractors	Subcontractors
<b>WASHINGTON</b>				<b>SEATTLE—Continued</b>			
Total distributed by State or country <sup>1</sup>	\$3,392,212	\$3,102,943	\$289,269	Total distributed by State or country—Continued			
California.....	203,806	166,784	37,172	Other States, not specified.....	\$130,609	\$119,751	\$11,218
Idaho.....	567,635	546,790	20,845	Alaska.....	155,645	152,161	3,484
Michigan.....	60,000	60,000		<b>SPOKANE</b>			
Montana.....	1,008,082	945,572	62,510	Total distributed by State or country <sup>2</sup>	1,527,093	1,476,471	50,622
Nevada.....	28,347	28,347		California.....	49,172	48,000	1,172
Oregon.....	926,850	772,089	153,761	Idaho.....	472,418	451,573	20,845
Wyoming.....	160,806	160,806		Montana.....	636,273	638,946	27,327
Other States, not specified.....	194,606	153,388	11,218	Oregon.....	801,951	300,952	900
Alaska.....	272,701	269,217	3,484	Alaska.....	37,000	37,000	
Canada.....	279		279	Canada.....	279		279
<b>SEATTLE</b>				<b>TACOMA</b>			
Total distributed by State or country <sup>2</sup>	1,078,142	886,504	191,638	Total distributed by State <sup>4</sup>	257,140	232,815	24,325
California.....	36,000		36,000	Michigan.....	60,000	60,000	
Montana.....	341,809	300,626	35,183	Oregon.....	197,140	172,815	24,325
Nevada.....	28,347	28,347					
Oregon.....	224,566	118,813	105,753				
Wyoming.....	160,806	160,806					

Number of establishments reporting:

- <sup>1</sup> All classes, 54; general contractors, 34; subcontractors, 20.
- <sup>2</sup> All classes, 16; general contractors, 8; subcontractors, 8.
- <sup>3</sup> All classes, 21; general contractors, 14; subcontractors, 7.
- <sup>4</sup> All classes, 4.

TABLE 5.—NUMBER AND SALARIES OF PROPRIETORS, FIRM MEMBERS, AND SALARIED EMPLOYEES: 1929

CLASSIFICATION OF ESTABLISHMENTS	Es-tab-lish-ments re- port- ing	PROPRIETORS AND FIRM MEMBERS		SALARIED EMPLOYEES										
		Re- ceiv- ing no salary	Receiving sala- ries		All salaried em- ployees		Officers and cleri- cal staff		Superintendents, foremen, etc.		Number reported, by sex			Sex not re- port- ed
			Num- ber	Total annual salaries	Total num- ber	Total annual salaries	Num- ber	Total annual salaries	Num- ber	Total annual salaries	Total	Male	Fe- male	
<b>WASHINGTON</b> .....	387	287	108	\$974,389	1,028	\$2,731,401	564	\$1,582,680	402	\$1,148,741	883	778	115	138
Operative builders.....	3	2			9	35,398	5	23,236	4	12,162	0	0	3	
General contractors.....	228	195	62	234,023	652	1,731,864	200	878,013	353	853,261	564	517	47	88
Building.....	126	112	42	159,991	206	802,144	149	430,902	147	371,242	235	204	31	61
Building not specialized.....	100	88	34	138,161	263	654,326	129	347,114	124	307,212	205	177	28	48
Commercial building only.....	13	9	2	6,000	28	114,170	17	77,000	11	30,570	15	13	2	13
Manufacturing building only.....	4	9	4	9,000	10	28,200	2	5,400	8	22,800	10	10		
Residential building only.....	9	6	2	6,830	5	5,448	1	788	4	4,000	5	4		
Highway.....	34	36	8	40,626	113	237,930	46	111,102	67	120,828	102	98	4	11
Bridges and culvert.....	12	15			26	43,472	9	15,300	17	28,112	24	24		2
Grading.....	18	9	5	16,806	63	153,159	31	78,101	32	75,058	63	59	4	
Street paving.....	17	12	3	10,800	48	128,146	13	49,440	35	78,700	46	45	1	2
Sewer, gas, water, conduit.....	0	5	4	5,800	13	31,605	5	9,230	8	22,275	13	12	1	
Waterworks, dam, and reservoir.....	3	1			27	161,189	11	74,867	16	80,322	27	26	1	
Dredging, river, harbor, etc.....	8	2			59	156,494	31	98,711	28	57,783	50	45	5	0
Other classes <sup>1</sup> .....	4	3			7	17,825	4	10,900	3	0,925	4	4		3
Subcontractors.....	156	70	46	140,366	365	904,189	260	680,811	105	283,328	320	255	65	45
Carpentering and woodflooring.....	4	7			6	14,515	5	12,115	1	2,400	5	4	1	1
Concreting and masonry.....	4	5			3	7,404			3	7,404	3	3		
Electrical.....	24	8	9	25,761	68	174,514	51	129,666	17	46,148	67	48	19	1
Heating and plumbing.....	62	28	28	75,199	132	328,375	102	246,440	30	81,935	119	91	28	13
Heating and piping <sup>2</sup> .....	3	3	2	15,000	34	94,115	27	72,023	7	22,002	34	20	8	
Pipe covering.....	13	3			13	29,800	12	27,000	1	2,800	0	5	1	7
Plumbing.....	31	16	14	40,946	61	146,172	46	111,623	15	34,549	50	43	13	5
Plumbing and heating combined.....	15	8	7	19,253	24	58,288	17	35,794	7	22,494	23	17	0	1
Painting, decorating, and glazing.....	16	8	6	12,420	35	81,393	26	57,843	9	23,550	28	24	4	7
Plastering and lathing.....	4	4			8	28,600	3	10,200	5	18,400	4	4		4
Roofing and sheet-metal work.....	17	6	7	23,886	37	73,167	31	63,427	6	9,740	28	24	4	9
Roofing.....	3	2			2	3,490					2	1		
Sheet-metal work.....	11	4	2	7,720	29	58,767	26	52,667	3	6,100	20	18	2	9
Roofing and sheet metal combined.....	3				6	10,940	3	7,300	3	3,640	6	5	1	
Steel erection <sup>3</sup> .....	6				22	102,654	14	67,960	8	34,604	22	21	1	
Marble and tiling.....	11	1			26	94,369	15	65,275	11	29,094	24	17	7	2
Excavating and grading.....	5	3	1	3,600	14	26,385	9	15,585	5	10,800	6	5	1	8
Dredging, river, harbor, etc.....	3				14	32,553	4	12,300	10	20,253	14	14		

See footnotes at end of table.

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TABLE 5.—NUMBER AND SALARIES OF PROPRIETORS, FIRM MEMBERS, AND SALARIED EMPLOYEES: 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS	Es-tab-lish-ments re- port- ing	PROPRIETORS AND FIRM MEMBERS				SALARIED EMPLOYEES								
		Re- ceiv- ing no salary	Receiving salaries		All salaried em- ployees		Officers and cler- ical staff		Superintendents, foremen, etc.		Number reported, by sex			Sex not re- port- ed
			Num- ber	Total annual salaries	Total number	Total annual salaries	Number	Total annual salaries	Number	Total annual salaries	Total	Male	Fe- male	
<b>SEATTLE</b> .....	106	104	26	\$118,413	548	\$1,810,001	315	\$1,014,513	233	\$595,488	483	414	69	66
Operative builders.....	3	2			9	35,398	5	23,230	4	12,162	9	6	3	
General contractors.....	84	70	16	80,773	318	800,235	151	493,420	167	396,815	276	245	31	42
Building.....	49	40	9	62,973	172	505,616	93	311,807	74	191,809	136	114	22	36
Building not specialized.....	40	35	9	62,973	160	414,968	84	248,219	66	166,749	127	107	20	23
Commercial building only.....	6	3			18	85,000	13	62,800	5	22,200	5	4	1	13
Residential building only.....	6	2			4	3,648	1	788	3	2,800	4	3	1	
Highway.....	3	12			29	91,881	14	60,045	15	31,836	29	27	2	
Bridge and culvert.....	4	3			10	19,410	5	9,660	5	9,750	8	8		2
Grading.....	4	3	2	4,500	17	48,143	8	23,743	9	24,400	17	15	2	
Street paving.....	5	3	3	10,500	40	113,895	10	43,800	30	70,095	38	37	1	2
Sewer, gas, water, conduit.....	5	3	2	2,200	9	24,275	3	8,000	6	16,275	9	8	1	
Other classes <sup>1</sup> .....	5	6			41	80,015	13	36,365	28	52,650	30	36	3	2
Subcontractors.....	79	32	10	37,640	221	684,368	150	497,857	62	186,511	108	163	35	23
Electrical.....	13	3	2	7,200	47	139,641	36	110,276	11	29,365	47	36	11	
Heating and plumbing.....	26	12	5	24,740	69	216,962	53	170,073	16	46,889	62	51	11	7
Heating and piping <sup>2</sup> .....	10	3	1	12,000	32	103,301	25	78,550	7	24,751	25	21	4	7
Plumbing.....	16	9	4	12,740	37	113,661	28	91,623	9	22,138	37	30	7	
Painting and decorating.....	7	5	1	1,820	14	39,548	9	23,223	5	10,325	12	11	1	2
Plastering and lathing.....	4	4			8	23,600	3	10,260	5	18,400	4	4		4
Roofing and sheet-metal work.....	9	3	2	3,850	24	50,424	22	46,324	2	3,600	22	17	5	2
Marble and tiling.....	8	1			18	76,424	10	53,996	8	22,428	16	12	4	2
Excavating.....	3	2			10	19,485	7	12,885	3	6,600	4	3	1	6
Steel erection <sup>3</sup> .....	5				21	60,980	13	60,980	8	34,604	21	20	1	
Other classes <sup>4</sup> .....	4	2			10	17,700	6	9,400	4	8,300	10	9	1	
<b>SPOKANE</b> .....	49	36	21	78,007	140	268,423	74	131,550	66	138,373	130	110	20	10
General contractors.....	29	24	11	52,955	98	200,550	41	83,491	57	117,059	98	92	6	
Building.....	12	0	4	17,729	27	65,247	12	32,630	15	32,617	27	22	5	
Highway.....	11	12	6	33,426	45	74,703	17	18,311	28	56,392	45	45		
Other classes <sup>7</sup> .....	6	3	1	1,800	26	60,600	12	32,550	14	28,050	26	25	1	
Subcontractors.....	20	12	10	25,052	42	67,873	33	48,059	9	19,314	32	18	14	10
Electrical.....	4		4	8,660	10	13,290	9	11,630	1	1,660	10	6	4	
Heating and plumbing.....	7	4	2	5,526	15	26,080	11	16,492	4	9,588	13	8	5	2
Heating and piping <sup>8</sup> .....	4	2	1	3,000	9	16,213	6	9,121	3	7,092	9	6	3	
Plumbing.....	3	2	1	2,526	6	9,867	5	7,371	1	2,496	4	2	2	2
Sheetmetal work.....	3	3	2	5,666	5	8,023	4	5,523	1	2,500				5
Painting and decorating <sup>9</sup> .....	3	4	2	5,200	3	2,335	3	2,335			2			1
Other classes <sup>10</sup> .....	3	1			9	17,645	6	11,679	3	6,066	7	4	3	2
<b>TACOMA</b> .....	54	30	21	66,751	121	361,927	69	228,812	62	133,115	105	92	13	16
General contractors.....	34	23	13	40,730	83	271,735	39	157,760	44	113,975	68	63	5	15
Building.....	20	14	13	40,730	54	149,387	22	68,200	32	81,187	30	37	2	15
Building not specialized.....	17	13	11	34,730	48	128,147	20	55,700	28	72,447	33	32	1	15
Commercial building only.....	3	1	2	6,000	6	21,240	2	12,500	4	8,740	6	5	1	
Street paving <sup>11</sup> .....	8	7			10	27,820	5	15,120	5	12,700	10	8	2	
Other classes <sup>12</sup> .....	6	2			19	94,528	12	74,440	7	20,088	19	18	1	
Subcontractors.....	20	7	8	26,021	38	90,192	30	71,052	8	19,140	37	20	8	1
Electrical.....	3	2	3	9,901	3	4,040	2	2,340	1	2,000	2	1	1	1
Heating and plumbing.....	10	4	4	12,280	23	54,112	20	43,612	3	10,500	23	17	6	
Heating and pipe covering.....	4	1			13	27,112	11	19,112	2	8,000	13	10	3	
Plumbing.....	3	1	4	12,280	2	2,516	2	2,516			2	1	1	
Plumbing and heating combined.....	3	2			8	24,484	7	21,984	1	2,500	8	6	2	
Roofing and sheet-metal work.....	3		1	3,840	6	10,940	3	7,300	3	3,640	6	5	1	
Other classes <sup>13</sup> .....	4	1			6	20,200	5	17,800	1	2,400	6	6		

1 Includes railroad; foundation; central station, light and power plant; and vehicular subway and tunnel.  
 2 Includes automatic temperature control.  
 3 Includes elevator construction; and ornamental iron.  
 4 Includes waterworks; dredging, river, harbor, etc.; central station, light and power plant; and vehicular subway and tunnel.  
 5 Includes pipe covering; automatic temperature control; and plumbing and heating combined.  
 6 Includes carpentering and woodflooring; concreting; and glass and glazing.  
 7 Includes grading; and street paving.  
 8 Includes plumbing and heating combined.  
 9 Includes carpentering and woodflooring.  
 10 Includes marble and tiling; and grading.  
 11 Includes highway; and grading.  
 12 Includes bridge and culvert; sewer, gas, water, conduit; waterworks; and dredging, river, harbor, etc.  
 13 Includes concreting; painting and decorating; steel erection; and marble and tiling.

CONSTRUCTION—WASHINGTON

TABLE 6.—VALUE OF CONSTRUCTION EQUIPMENT, IN COMPARISON WITH CONSTRUCTION BUSINESS AND WAGES PAID DURING 1929

CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT OWNED	Establishments reporting	EQUIPMENT		Value of construction business reported	Wages paid	CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT PAID	Establishments reporting	EQUIPMENT		Value of construction business reported	Wages paid
		Purchased during the year	Inventory value at end of year					Purchased during the year	Inventory value at end of year		
<b>WASHINGTON</b>	363	\$1,609,790	\$5,956,792	\$62,778,443	\$15,547,870	<b>SEATTLE—Continued</b>					
<i>Classification of establishments</i>						<i>Classification of establishments—Continued</i>					
Operative builders	3	1,360	4,900	984,300	106,082	Subcontractors—Continued.					
General contractors	219	1,285,545	4,794,441	45,669,991	11,413,764	7	\$3,094	\$50,432	\$658,785	\$270,755	
Building	118	123,394	661,481	25,407,902	6,113,075	3	35,190	222,616	3,110,504	348,804	
Building not specialized	93	106,042	595,729	23,088,993	5,220,660	5	49,100	263,324	807,399	120,184	
Commercial building only	13	8,964	46,041	2,292,869	522,245	<i>Percentage of equipment owned<sup>8</sup></i>					
Manufacturing building only	4	6,500	9,000	1,405,000	281,720	General contractors <sup>4</sup>					
Residential building only	3	1,888	10,111	621,040	82,450	31	472,200	1,637,061	26,214,916	5,934,189	
Highway	86	430,709	1,630,070	6,306,337	1,652,262	1	None	None	56,683	18,000	
Bridge and culvert	12	44,878	148,098	1,111,135	312,481	2	242	9,749	906,226	191,113	
Grading	10	324,204	673,196	1,928,842	602,893	5	12,340	26,589	737,630	137,002	
Street paving	10	95,282	338,324	2,830,227	650,043	11	8,017	58,240	5,222,031	1,010,787	
Sewer, gas, water, conduit	6	122,405	159,089	1,693,886	361,570	27	322,917	838,372	12,632,803	3,125,687	
Waterworks, dam, and reservoir	3	32,160	290,384	2,595,935	708,635	32	103,117	618,176	6,372,341	1,421,145	
Dredging, river, harbor, etc.	8	90,517	846,964	2,316,334	849,042	3	25,057	36,535	226,602	30,455	
Other classes <sup>1</sup>	4	21,990	46,235	539,394	162,554	Subcontractors					
Subcontractors	141	222,825	1,157,391	16,124,062	4,027,824	08	135,935	726,380	11,283,457	2,000,392	
Carpentering and woodflooring	3	1,300	8,831	135,786	51,701	2	None	None	121,407	31,864	
Concreting and masonry	3	10,600	36,680	319,684	72,786	1	35	710	40,241	13,523	
Electrical	25	15,041	72,249	2,218,104	640,190	7	35,802	248,021	1,344,430	310,076	
Heating and plumbing	59	50,770	193,915	5,913,329	1,390,438	53	97,937	463,505	9,287,563	2,097,611	
Heating and piping <sup>2</sup>	11	8,350	37,370	1,266,906	356,924	5	2,101	14,144	519,726	152,718	
Plumbing	20	14,798	77,338	2,395,947	531,879	SPOKANE					
Plumbing and heating combined	16	12,851	52,030	1,716,479	390,392	45	328,374	1,065,594	6,605,759	1,922,449	
Automatic sprinkler systems	3	14,771	20,577	538,997	111,243	<i>Classification of establishments</i>					
Painting, decorating, and glazing	13	3,679	33,421	764,543	404,655	General contractors					
Plastering and lathing	3	3,200	11,408	373,829	219,558	28	320,308	1,022,532	5,166,536	1,420,294	
Roofing and sheet-metal work	13	6,956	79,809	821,120	241,910	11	26,815	80,880	2,250,069	652,530	
Sheet metal work	8	5,887	47,541	625,737	184,970	11	209,128	732,255	2,149,669	495,493	
Roofing and sheet metal combined	5	1,069	32,268	195,383	50,949	6	84,365	200,397	766,798	281,262	
Steel erection <sup>3</sup>	4	38,806	227,953	3,202,706	397,887	Subcontractors					
Marble and tiling	9	3,528	51,040	1,206,074	320,980	17	8,066	43,062	1,439,223	493,155	
Excavating and grading	6	72,443	338,295	875,488	185,222	5	1,385	7,006	363,513	130,453	
Dredging, river, harbor, etc.	3	16,605	108,890	293,499	103,282	6	2,911	12,264	755,873	198,424	
<i>Percentage of equipment owned</i>						3	1,287	8,673	550,143	154,592	
General contractors <sup>4</sup>	222	1,280,905	4,709,341	46,654,381	11,519,846	8	1,624	3,591	205,730	43,832	
None	6	None	None	651,234	137,286	3	484	6,770	140,768	83,827	
1% to 25%	3	1,242	11,249	1,061,226	211,980	3	3,286	16,422	179,069	71,451	
26% to 50%	8	18,247	60,603	2,025,854	349,504	<i>Percentage of equipment owned<sup>8</sup></i>					
51% to 75%	15	58,192	150,743	5,541,837	1,091,090	General contractors					
76% to 99%	58	563,350	1,518,708	17,044,541	4,351,804	28	320,308	1,022,532	5,166,536	1,420,294	
100%	124	587,069	2,728,041	17,812,011	4,608,822	1	None	None	42,700	15,000	
Not reported	8	58,705	329,912	2,517,578	760,342	1	33,070	42,794	149,844	33,154	
Subcontractors	141	222,825	1,157,391	16,124,062	4,027,824	6	99,165	258,083	1,683,783	639,525	
None	2	None	None	121,497	31,864	20	188,073	721,655	2,690,209	756,015	
1% to 25%	1	2,788	622	30,545	3,280	Subcontractors					
26% to 50%	1	None	None	None	None	17	8,066	43,062	1,439,223	493,155	
51% to 75%	1	36	710	40,241	13,523	1	51	228	65,282	18,405	
76% to 99%	11	68,823	358,220	1,656,682	406,321	16	8,015	42,834	1,378,941	474,760	
100%	110	148,897	775,304	13,615,086	3,391,657	TACOMA					
Not reported	7	2,282	22,535	656,411	181,179	62	164,271	634,965	6,247,098	1,678,469	
<b>SEATTLE</b>	149	608,225	2,364,041	37,498,373	8,540,581	<i>Classification of establishments</i>					
<i>Classification of establishments</i>						General contractors					
Operative builders	3	1,360	4,900	984,300	106,082	34	144,010	488,210	5,101,209	1,388,249	
General contractors	78	470,920	1,632,761	25,230,526	5,828,107	20	34,646	95,629	2,820,727	709,563	
Building	45	36,609	336,336	16,727,979	3,718,223	17	34,046	92,329	2,429,727	599,013	
Building not specialized	30	28,474	291,304	14,714,848	3,336,938	3	600	3,300	391,000	113,550	
Commercial building only	6	0,497	36,996	1,676,944	340,794	8	42,537	202,211	1,101,381	296,580	
Manufacturing building only	3	1,638	8,036	337,187	40,491	6	67,727	190,370	1,179,101	382,106	
Residential building only	3	1,638	8,036	337,187	40,491	Subcontractors					
Highway	10	92,465	360,684	1,847,884	521,945	18	19,361	146,755	1,145,889	290,220	
Bridge and culvert	4	12,065	28,002	407,623	123,137	10	9,733	53,828	612,220	131,861	
Grading	4	95,051	217,873	506,541	100,865	4	4,963	11,808	200,041	61,193	
Street paving	7	83,480	187,612	2,173,227	510,577	3	1,568	14,989	150,952	27,237	
Sewer, gas, water, conduit	3	107,000	120,500	1,481,473	323,701	3	3,202	27,031	200,327	43,421	
Other classes <sup>1</sup>	5	44,260	381,754	2,026,799	529,659	3	3,920	31,369	169,659	75,276	
Subcontractors	68	135,935	726,380	11,283,457	2,606,392	5	5,702	61,558	364,010	83,093	
Electrical	14	9,875	40,182	1,536,040	434,523	<i>Percentage of equipment owned<sup>8</sup></i>					
Heating and plumbing	23	20,018	75,395	3,448,135	829,867	General contractors					
Heating and piping <sup>2</sup>	6	5,420	18,941	1,308,351	337,266	34	144,010	488,210	5,101,209	1,388,249	
Plumbing	14	8,821	29,877	1,605,787	351,328	4	None	None	551,851	119,286	
Automatic sprinkler systems	3	14,771	26,577	538,997	111,243	1	12,500	21,000	75,000	15,000	
Painting and decorating	5	1,330	13,951	376,796	212,278	5	36,550	105,821	538,216	125,178	
Plastering and lathing	3	3,200	11,408	373,829	219,558	23	95,560	359,589	3,845,243	1,113,685	
Roofing and sheet-metal work	8	5,128	40,072	583,969	161,423	1	300	1,800	90,900	15,100	
						Subcontractors					
						18	10,361	146,755	1,145,889	290,220	
						1	2,788	622	30,545	3,280	
						1	4,200	50,187	63,650	18,135	
						15	12,262	92,057	1,092,169	260,627	
						1	121	3,889	40,526	8,178	

<sup>1</sup> Includes railroad; foundation; vehicular subway and tunnel; and central station, light and power plant.  
<sup>2</sup> Includes pipe covering; and automatic temperature control.  
<sup>3</sup> Includes ornamental iron.  
<sup>4</sup> Includes operative builders.  
<sup>5</sup> Includes dredging, river, harbor, etc.; waterworks; vehicular subway and tunnel; and central station, light and power plant.  
<sup>6</sup> Includes automatic temperature control; and plumbing and heating combined.  
<sup>7</sup> Includes glazing; concreting; and excavating.  
<sup>8</sup> For complete classification see tabulation for State above.  
<sup>9</sup> Includes street paving and grading.  
<sup>10</sup> Includes plumbing and heating combined.  
<sup>11</sup> Includes carpentering and woodflooring.  
<sup>12</sup> Includes sheet-metal work; marble and tiling; and grading.  
<sup>13</sup> Includes highway and grading.  
<sup>14</sup> Includes bridge and culvert; sewer, gas, water, conduit; waterworks; and dredging, river, harbor, etc.  
<sup>15</sup> Includes roofing and sheet metal combined.  
<sup>16</sup> Includes electrical; painting and decorating; marble and tiling; and excavating.

# CONSTRUCTION—WASHINGTON

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TABLE 7.—WAGE EARNERS, BY MONTHS, AND WAGES PAID DURING 1929

CLASSIFICATION OF ESTABLISHMENTS AND LENGTH OF WORKING WEEK	Estab-lish-ments reporting	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY												Wages paid dur-ing year
		January	February	March	April	May	June	July	August	September	October	November	December	
<b>WASHINGTON</b>	<b>366</b>	<b>5,612</b>	<b>4,962</b>	<b>6,591</b>	<b>7,782</b>	<b>8,697</b>	<b>10,191</b>	<b>10,765</b>	<b>11,349</b>	<b>10,925</b>	<b>9,486</b>	<b>8,686</b>	<b>6,905</b>	<b>\$15,013,526</b>
<i>Classification of establishments</i>														
Operative builders	3	30	29	53	63	72	84	73	70	66	35	35	37	106,082
General contractors	214	4,002	3,427	4,614	5,673	6,485	7,750	8,233	8,708	8,312	7,044	6,364	4,999	10,643,260
Building	117	1,988	1,855	2,411	2,963	3,537	4,061	4,194	4,194	3,700	3,248	3,134	2,600	5,868,562
Building not specialized	94	1,633	1,375	1,833	2,314	2,838	3,462	3,653	3,790	3,361	2,890	2,637	2,086	4,664,419
Commercial building only	11	86	115	227	315	387	352	325	272	207	157	213	124	332,543
Manufacturing building only	4	354	354	329	270	229	179	104	70	120	154	229	304	281,720
Residential building only	8	15	11	32	55	33	68	77	53	33	47	55	86	80,850
Highway	33	418	335	533	755	1,041	1,356	1,584	1,837	1,880	1,500	992	599	1,561,826
Bridge and culvert	10	116	72	86	82	60	74	122	143	231	288	353	405	271,514
Grading	17	216	217	254	393	537	532	513	494	424	386	310	235	593,165
Street paving	16	257	141	361	474	508	668	818	858	695	405	295	214	795,783
Sewer, gas, water, conduit	6	159	145	176	189	191	199	256	266	290	226	223	181	361,579
Waterworks, dam, and reservoir	3	309	187	361	395	244	418	367	405	365	276	337	130	708,655
Dredging, river, harbor, etc.	8	444	389	375	373	349	353	326	350	432	541	555	543	849,642
Other classes <sup>1</sup>	4	95	86	57	40	18	84	88	161	176	168	156	92	162,554
Subcontractors	149	1,580	1,496	1,024	2,046	2,140	2,357	2,459	2,571	2,547	2,407	2,287	1,869	4,294,184
Carpentering and woodflooring	3	14	14	18	20	21	28	27	26	25	25	25	23	50,463
Concreting and masonry	4	34	15	30	40	54	59	69	60	70	92	72	61	86,168
Electrical	26	311	283	314	273	263	287	320	320	305	285	269	220	653,837
Heating and plumbing	59	531	485	650	726	725	810	858	881	804	745	655	655	1,468,584
Heating and piping <sup>2</sup>	15	155	150	183	183	175	198	241	274	286	226	199	106	423,620
Plumbing	28	216	205	275	301	299	284	277	289	303	317	294	274	606,266
Plumbing and heating combined	13	153	119	160	193	198	190	233	219	225	202	201	140	807,465
Automatic sprinkler systems	3	7	11	33	49	50	53	65	76	67	59	61	69	111,243
Painting, decorating, and glazing	15	174	159	229	238	282	282	237	260	284	233	220	162	453,346
Plastering and lathing	3	68	97	144	162	99	128	69	119	89	72	100	105	219,568
Roofing and sheet-metal work	16	128	114	134	133	152	161	200	172	172	199	202	148	315,575
Roofing	3	9	7	5	12	8	12	13	19	13	26	14	10	20,027
Sheet-metal work	13	119	107	129	121	144	149	187	153	159	173	188	138	295,548
Steel erection <sup>3</sup>	5	54	55	65	94	128	162	202	222	213	237	225	204	407,818
Marble and tiling	9	129	121	120	143	188	199	183	175	178	163	142	133	290,341
Excavating and grading	6	95	105	121	155	173	201	277	291	356	240	232	97	185,222
Dredging, river, harbor, etc.	3	42	48	63	62	68	65	69	62	68	57	65	61	103,282
<i>Length of working week</i>														
General contractors <sup>4</sup>	217	4,032	3,456	4,667	5,736	6,557	7,834	8,300	8,778	8,378	7,079	6,390	5,036	10,749,342
40-hour, 5-day week	37	743	684	847	862	1,102	1,254	1,183	1,148	1,070	888	798	619	1,556,118
45-hour, 5-day week														
50-hour, 5-day week														
All other 5-day week														
44-hour, 5½-day week	68	1,304	1,154	1,394	1,790	2,051	2,631	2,931	3,123	2,982	2,705	2,604	2,150	4,180,164
40½-hour, 5½-day week														
55-hour, 5½-day week														
All other 5½-day week														
48-hour, 6-day week	01	1,481	1,246	1,872	2,304	2,713	3,059	3,214	3,457	3,215	2,520	2,186	1,822	3,590,857
54-hour, 6-day week	1	2	3	3	3	7	27	45	49	36	4	4	4	33,154
60-hour, 6-day week	3	15	17	52	121	145	202	227	234	230	218	145	101	169,577
All other 6-day week	0	121	118	92	155	189	164	238	242	259	249	235	160	312,660
All other not designated	7	350	232	302	488	344	495	483	529	547	455	472	171	894,835
Not reported	1	16	3	15	7	6	2	7	14	8	5	5	5	11,977
Subcontractors	149	1,580	1,496	1,024	2,046	2,140	2,357	2,459	2,571	2,547	2,407	2,287	1,869	4,294,184
40-hour, 5-day week	80	927	879	1,169	1,168	1,154	1,227	1,242	1,302	1,330	1,205	1,172	981	2,448,823
45-hour, 5-day week														
50-hour, 5-day week														
All other 5-day week														
44-hour, 5½-day week	38	365	341	398	441	473	485	504	477	460	462	425	354	842,865
40½-hour, 5½-day week														
55-hour, 5½-day week														
All other 5½-day week														
48-hour, 6-day week	26	248	237	318	376	447	580	642	714	677	658	618	474	836,227
54-hour, 6-day week														
60-hour, 6-day week														
All other 6-day week	1	5	6	4	5	6	4	7	0	12	9	11	8	12,037
All other not designated	2	18	15	16	35	38	37	35	41	38	41	30	26	75,725
Not reported	2	17	18	19	21	22	24	26	28	30	32	31	26	48,507
<b>SEATTLE</b>	<b>161</b>	<b>3,358</b>	<b>2,887</b>	<b>3,596</b>	<b>4,033</b>	<b>4,802</b>	<b>5,099</b>	<b>5,468</b>	<b>5,728</b>	<b>5,604</b>	<b>4,908</b>	<b>4,586</b>	<b>3,848</b>	<b>8,298,165</b>
<i>Classification of establishments</i>														
Operative builders	3	30	29	53	63	72	84	73	70	66	35	35	37	106,082
General contractors	80	2,283	1,905	2,280	2,614	2,840	3,445	3,731	3,893	3,820	3,234	3,018	2,535	5,314,891
Building	47	1,201	1,113	1,243	1,603	1,682	2,002	2,092	2,188	2,051	1,728	1,594	1,315	3,090,470
Building not specialized	39	1,132	1,025	1,090	1,268	1,377	1,716	1,822	1,950	1,878	1,592	1,406	1,146	2,805,293
Commercial building only	5	65	87	142	220	282	267	233	203	162	100	153	102	244,692
Residential building only	3	1	1	11	15	23	19	37	35	11	27	35	67	40,491
Highway	9	251	203	270	249	254	357	400	491	511	477	297	204	513,826
Bridge and culvert	4	90	41	38	33	32	44	43	38	106	132	160	177	123,137
Grading	4	39	33	39	57	80	70	75	74	59	69	67	56	82,140
Street paving	8	236	124	330	400	437	590	689	656	548	290	224	173	651,952
Sewer, gas, water, conduit	3	118	111	162	169	174	170	221	225	251	205	207	176	323,701
Other classes <sup>1</sup>	5	347	280	208	203	181	212	211	221	294	333	469	434	629,659
Subcontractors	78	1,039	953	1,283	1,356	1,390	1,570	1,664	1,765	1,718	1,639	1,533	1,276	2,877,192
Electrical	14	193	185	220	179	175	186	220	217	199	179	148	128	434,523
Heating and plumbing	27	332	284	406	475	463	445	512	561	558	519	475	435	947,687
Heating and piping <sup>2</sup>	10	171	133	172	205	196	186	244	252	283	232	213	169	419,311
Plumbing	14	154	140	196	221	217	206	203	203	208	228	211	167	423,133
Automatic sprinkler systems	3	7	11	38	49	50	53	65	76	67	59	51	69	111,243
Painting and decorating	7	101	98	145	146	182	176	135	160	167	117	99	91	

TABLE 7.—WAGE EARNERS, BY MONTHS, AND WAGES PAID DURING 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS AND LENGTH OF WORKING WEEK	Establishments reporting	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY												Wages paid during year
		January	February	March	April	May	June	July	August	September	October	November	December	
<b>SEATTLE—Continued.</b>														
<i>Length of working week<sup>1</sup></i>														
General contractors <sup>1</sup> .....	83	2,313	1,934	2,333	2,077	2,012	3,529	3,804	3,063	3,886	3,269	3,053	2,572	\$5,420,973
40-hour, 5-day week.....	12	539	438	482	490	601	745	697	722	660	465	302	300	1,001,038
44-hour, 5½-day week.....	44	969	880	944	1,222	1,252	1,531	1,740	1,818	1,905	1,815	1,817	1,488	2,740,569
48-hour, 6-day week.....	24	727	560	882	925	1,005	1,204	1,306	1,355	1,251	935	702	703	1,544,519
All other 6-day week.....	2	40	40	—	12	12	8	10	12	10	9	40	40	22,040
All other not designated.....	1	18	16	25	28	42	41	51	58	60	45	42	41	111,007
Subcontractors.....	78	1,030	953	1,263	1,356	1,300	1,570	1,664	1,765	1,718	1,639	1,533	1,276	2,877,192
40-hour, 5-day week.....	49	696	658	880	899	863	905	899	974	963	868	839	747	1,849,744
44-hour, 5½-day week.....	17	216	191	241	263	281	272	312	265	239	261	228	199	473,149
48-hour, 6-day week.....	8	87	65	97	137	184	338	392	458	445	437	404	279	442,660
All other 6-day week.....	1	5	6	4	5	4	7	9	9	12	9	11	8	12,037
All other not designated.....	1	18	15	13	31	34	27	23	31	29	32	20	17	51,075
Not reported.....	2	17	18	19	21	22	24	20	28	30	32	31	26	48,607
<b>SPOKANE.....</b>	<b>45</b>	<b>455</b>	<b>402</b>	<b>658</b>	<b>1,167</b>	<b>1,392</b>	<b>1,729</b>	<b>1,825</b>	<b>1,938</b>	<b>1,708</b>	<b>1,466</b>	<b>1,161</b>	<b>686</b>	<b>1,924,891</b>
<i>Classification of establishments</i>														
General contractors.....	26	268	226	454	927	1,159	1,404	1,528	1,625	1,380	1,156	850	503	1,419,012
Building.....	10	70	50	198	368	465	710	748	802	550	390	250	157	654,267
Highway.....	10	84	57	108	298	419	497	554	612	656	595	455	253	483,468
Other classes <sup>2</sup> .....	6	114	119	148	261	275	251	226	211	174	171	145	93	281,262
Subcontractors.....	19	187	176	204	230	233	265	297	313	328	310	311	183	505,579
Electrical.....	5	58	40	47	54	54	60	63	70	68	69	79	59	139,453
Heating and plumbing.....	7	93	83	85	87	90	118	134	110	127	109	105	74	204,770
Heating and piping <sup>3</sup> .....	4	71	61	63	63	63	91	107	83	100	82	81	50	160,988
Plumbing.....	3	22	22	22	24	27	27	27	27	27	27	24	24	43,832
Other classes <sup>4</sup> .....	7	36	44	72	89	89	87	100	133	133	132	127	60	161,656
<i>Length of working week<sup>1</sup></i>														
General contractors.....	26	268	226	454	927	1,159	1,404	1,528	1,625	1,380	1,156	850	503	1,419,012
40-hour, 5½-day week.....	8	36	37	159	279	356	586	606	681	490	362	217	124	68,744
48-hour, 6-day week.....	11	188	159	221	378	460	511	503	464	374	314	270	140	438,662
54-hour, 6-day week.....	1	2	2	3	3	7	27	23	45	49	36	4	4	33,154
60-hour, 6-day week.....	1	3	5	32	96	95	142	137	144	146	128	85	86	84,297
All other 6-day week.....	2	37	23	31	81	120	93	148	159	166	154	114	62	128,699
All other not designated.....	3	2	—	8	90	112	105	111	132	155	162	160	97	153,846
Subcontractors.....	19	187	176	204	230	233	265	297	313	328	310	311	183	505,579
40-hour, 5-day week.....	8	90	81	91	101	102	128	146	132	147	145	163	74	247,688
44-hour, 5½-day week.....	7	37	41	44	46	43	42	42	72	75	63	65	43	107,775
48-hour, 6-day week.....	4	60	54	69	83	86	95	100	109	106	102	88	60	150,516
<b>TACOMA.....</b>	<b>51</b>	<b>543</b>	<b>538</b>	<b>677</b>	<b>706</b>	<b>937</b>	<b>1,112</b>	<b>1,173</b>	<b>1,207</b>	<b>1,146</b>	<b>963</b>	<b>966</b>	<b>849</b>	<b>1,659,780</b>
<i>Classification of establishments</i>														
General contractors.....	32	404	394	497	539	747	918	985	1,039	981	824	815	746	1,273,227
Building.....	19	223	202	253	230	350	421	508	484	497	520	588	553	620,776
Street paving <sup>11</sup> .....	7	32	47	82	137	247	301	313	304	279	137	101	54	270,345
Other classes <sup>12</sup> .....	6	149	145	162	172	160	196	104	191	205	167	126	139	382,106
Subcontractors.....	19	139	144	180	167	190	194	188	168	165	139	141	103	280,553
Electrical.....	3	33	28	20	11	10	14	12	11	10	11	8	8	29,745
Heating and plumbing.....	9	35	46	74	75	73	73	79	82	64	62	55	55	116,126
Heating and piping.....	3	14	25	32	29	24	20	26	25	24	20	18	21	45,528
Plumbing.....	3	8	11	20	17	15	16	14	18	21	15	14	11	27,237
Plumbing and heating combined.....	3	13	10	22	29	34	37	38	36	37	29	30	23	43,421
Roofing and sheet-metal work.....	3	21	21	20	20	25	31	33	30	32	31	30	24	29,006
Other classes <sup>13</sup> .....	4	50	49	66	61	82	76	65	48	41	33	41	16	111,616
<i>Length of working week<sup>1</sup></i>														
General contractors.....	32	404	394	497	539	747	918	985	1,039	981	824	815	746	1,273,227
40-hour, 5-day week.....	13	100	141	188	161	207	267	244	205	101	190	165	132	244,462
44-hour, 5½-day week.....	7	174	141	182	196	306	372	450	476	474	435	480	472	688,032
48-hour, 6-day week.....	11	120	97	107	167	224	289	281	348	301	184	155	127	302,594
All other 6-day week.....	1	10	15	20	15	10	—	10	10	15	15	15	15	38,139
Subcontractors.....	19	139	144	180	167	190	194	188	168	165	139	141	103	280,553
40-hour, 5-day week.....	8	34	45	68	64	66	70	71	67	75	50	57	51	111,665
44-hour, 5½-day week.....	7	61	56	49	37	82	91	71	60	50	52	54	38	98,257
48-hour, 6-day week.....	4	44	43	63	46	42	33	46	41	31	28	30	14	76,331

1 Includes railroad; foundation; vehicular subway and tunnel; and central station, light and power plant.  
 2 Includes pipe covering, and automatic temperature control.  
 3 Includes elevator construction and ornamental iron.  
 4 Includes operative builders.  
 5 Includes waterworks; dredging, river, harbor, etc; vehicular subway and tunnel; and central station, light and power plant.  
 6 Includes carpentering and wood flooring; concreting; and glass and glazing.  
 7 For complete classification see tabulation for the State above.  
 8 Includes street paving; and grading.  
 9 Includes plumbing and heating combined.  
 10 Includes painting and decorating; sheet-metal work; marble and tiling; and grading.  
 11 Includes highway; and grading.  
 12 Includes bridge and culvert; sewer, gas, water, conduit; waterworks; and dredging, river, harbor, etc.  
 13 Includes concreting; steel erection; marble and tiling; and excavating.

CONSTRUCTION—WASHINGTON

TABLE 8.—EXPENDITURES OF REPORTING ESTABLISHMENTS: 1929

CLASSIFICATION OF ESTABLISHMENTS	Estab-lish-ments reporting	Value of construction business re-ported	PRINCIPAL ITEMS OF EXPENDITURE			OTHER ITEMS OF EXPENDITURE							
			Subcon-tract work let	Wages paid	Cost of materials	Salaries		Rent for		Interest	Contract bond pre-miums	Compen-sation and liability in-surance pre-miums	All other overhead expenses
						Propri-eters and firm mem-bers	Em-ploy-ees	Equip-ment	Offices, etc.				
<b>WASHINGTON</b>	349	\$60,680,558	\$10,705,000	\$14,975,704	\$23,471,903	\$321,214	\$2,603,626	\$261,498	\$183,517	\$290,282	\$438,178	\$374,406	\$3,353,882
General contractors <sup>1</sup>	208	44,248,560	10,428,000	10,767,598	15,190,661	206,794	1,667,928	182,086	75,108	219,263	401,970	305,412	2,203,191
Building	121	25,424,291	8,546,000	6,005,549	8,826,492	146,562	793,908	38,451	46,874	77,461	202,383	159,805	383,454
Building not specialized <sup>1</sup>	99	22,625,512	7,799,000	5,247,171	7,169,105	124,732	670,088	32,261	30,089	64,263	190,515	142,310	327,172
Commercial building only	11	1,929,543	560,000	409,766	611,650	6,000	93,820	2,470	4,715	8,128	10,593	6,406	28,872
Manufacturing building only	4	1,405,000	37,000	281,720	864,700	9,000	28,200	3,000	2,020	1,000	1,275	9,884	23,000
Residential building only	7	461,230	160,000	66,892	181,031	7,800	1,800	120	1,050	4,060	1	1,196	4,410
Highway	28	5,450,414	907,000	1,423,800	1,816,835	33,426	227,430	20,289	6,610	51,089	78,420	38,335	533,414
Bridge and culvert	12	1,111,135	118,000	312,481	419,120	---	43,472	4,638	1,930	4,780	29,544	12,163	102,344
Grading	13	1,491,589	97,000	492,815	67,128	10,206	147,759	34,533	3,112	14,564	27,831	17,090	526,356
Street paving	10	3,379,317	64,000	746,597	1,776,057	10,800	124,546	29,341	2,894	22,772	35,442	12,056	189,613
Sewer, gas, water, conduit	5	1,558,885	409,000	346,579	345,118	5,800	25,025	10,870	2,740	10,043	62,767	11,071	49,074
Waterworks, dam, and reservoir	3	2,595,935	173,000	708,035	1,079,779	---	161,189	27,725	2,488	14,775	13,503	27,247	229,697
Dredging, river, harbor, etc.	0	1,097,000	114,000	568,588	645,903	---	126,774	5,688	7,500	13,088	6,332	19,331	91,787
Other classes <sup>2</sup>	4	539,394	---	162,554	223,629	---	17,825	4,645	900	10,595	5,743	7,438	94,502
Subcontractors	141	16,431,998	867,000	4,208,106	8,281,242	114,420	935,698	79,412	108,409	71,029	26,208	68,988	1,150,691
Carpentering and wood flooring	3	118,299	---	47,514	42,100	---	3,615	---	600	31	650	205	5,982
Concreting and masonry	3	319,584	22,000	72,780	103,361	---	7,404	37,795	115	532	2,350	1,459	24,033
Electrical	24	2,120,859	8,000	659,037	987,367	21,081	171,634	250	21,273	10,026	4,127	6,426	110,543
Heating and plumbing	50	5,999,014	236,000	1,414,817	3,189,174	73,199	322,242	680	49,342	33,375	5,920	16,290	275,382
Heating and piping <sup>3</sup>	15	1,503,153	20,000	423,020	795,132	15,000	111,015	324	15,700	4,149	1,613	4,201	117,695
Plumbing	23	2,265,955	117,000	607,412	1,239,933	38,940	110,002	---	18,778	5,049	1,374	5,380	80,646
Plumbing and heating combined	12	1,630,479	98,000	372,542	844,722	19,253	55,785	361	10,817	10,327	2,033	3,429	57,741
Automatic sprinkler systems	3	633,997	1,000	111,243	300,587	---	38,537	---	4,050	250	---	2,226	10,300
Painting and decorating, and glazing	15	900,795	1,000	463,270	300,330	12,420	81,303	817	10,077	1,632	897	8,876	48,517
Plastering and lathing	4	601,940	---	313,362	126,041	---	28,600	---	1,070	1,462	---	4,204	13,419
Roofing and sheet-metal work	14	678,244	---	290,220	456,494	7,720	70,059	---	10,326	5,702	157	3,134	93,443
Roofing	3	105,635	---	20,027	59,035	---	3,460	---	1,285	372	---	62	7,812
Sheet-metal work	11	372,303	---	270,198	397,459	---	66,599	---	9,048	5,390	95	2,916	85,631
Steel erection <sup>4</sup>	5	3,229,900	78,000	407,818	807,818	---	102,244	13,600	5,480	113	8,250	18,136	193,063
Marble and tiling	11	1,273,048	9,000	339,512	560,200	---	94,369	---	7,846	9,421	573	3,923	72,249
Excavating and grading	3	597,118	13,000	110,488	1,030	---	21,535	---	26,472	8,730	2,725	3,436	272,191
Dredging, river, harbor, etc.	3	293,499	---	103,282	80,271	---	32,553	---	674	780	---	4,376	41,809
<b>SEATTLE</b>	158	\$8,445,230	\$8,448,000	\$8,900,594	\$14,318,162	\$113,613	\$1,617,142	\$158,314	\$116,185	\$185,540	\$115,317	\$219,991	\$1,701,858
General contractors <sup>1</sup>	82	26,340,897	8,115,000	5,969,392	8,070,249	75,973	907,335	82,980	48,698	129,068	294,541	170,349	867,817
Building	51	17,759,735	6,965,000	3,870,678	4,905,162	62,973	534,369	27,400	33,933	55,770	144,840	106,692	270,219
Building not specialized <sup>1</sup>	45	16,083,841	6,450,000	3,529,894	4,393,873	449,369	449,369	26,060	29,768	48,521	135,545	101,177	248,207
Commercial building only	6	1,675,944	515,000	340,704	611,289	---	85,000	2,340	4,165	7,255	9,295	5,415	22,012
Highway	8	1,532,329	314,000	433,540	354,820	---	81,831	3,742	2,023	21,579	20,390	12,263	136,278
Bridge and culvert	4	467,623	93,000	123,137	213,358	---	10,410	3,038	1,442	8,589	14,532	5,769	13,417
Grading	4	350,541	18,000	82,140	14,100	---	43,143	10,824	775	2,080	8,224	5,178	135,738
Street paving	7	2,722,317	40,000	606,531	1,447,985	10,800	110,295	22,292	1,005	14,474	30,113	9,341	100,398
Sewer, gas, water, conduit	3	1,481,473	409,000	323,701	325,888	2,200	24,275	6,900	2,100	0,881	0,107	10,975	24,000
Other classes <sup>2</sup>	5	2,026,799	276,000	629,659	809,170	---	89,015	9,184	5,520	22,239	14,369	20,234	127,787
Subcontractors	76	12,104,393	333,000	2,931,202	6,248,013	37,640	700,807	76,334	67,687	55,872	20,776	49,462	839,541
Electrical	13	1,444,040	8,000	629,523	859,073	7,200	137,241	250	11,293	10,143	3,409	3,797	64,309
Heating and plumbing	25	3,830,807	204,000	924,020	1,994,500	24,740	237,229	---	28,080	10,082	2,000	10,536	123,137
Heating and piping <sup>3</sup>	10	1,618,824	90,000	413,311	777,395	12,000	103,301	---	12,484	10,409	1,936	4,068	60,246
Plumbing	12	1,677,086	113,000	400,772	907,724	12,740	95,391	---	11,646	6,023	904	4,262	52,591
Automatic sprinkler systems	3	633,997	1,000	111,243	309,887	---	38,537	---	4,050	250	---	2,226	10,300
Painting and decorating	0	450,156	1,000	256,307	100,275	1,820	39,548	787	3,649	690	784	4,626	10,173
Plastering and lathing	4	601,940	---	313,362	126,041	---	28,600	---	1,070	1,462	---	4,204	13,419
Roofing and sheet-metal work	10	778,503	---	236,081	362,087	3,880	58,316	---	9,640	3,141	157	2,320	68,946
Marble and tiling	8	991,341	0,000	280,379	498,780	---	76,424	0,000	6,334	8,767	526	3,152	57,807
Steel erection <sup>4</sup>	4	3,137,758	78,000	358,935	2,364,733	---	95,264	11,000	4,980	118	8,250	17,180	187,510
Other classes <sup>5</sup>	6	909,804	33,000	134,089	202,812	---	37,185	63,267	2,035	8,870	4,760	3,182	299,240
<b>SPOKANE</b>	40	\$5,694,677	\$698,000	\$1,662,740	\$2,177,593	\$62,712	\$229,087	\$30,455	\$20,656	\$25,724	\$40,678	\$30,154	\$55,993
General contractors	22	4,170,223	618,000	1,176,453	1,612,862	43,329	170,614	30,107	7,308	21,439	30,151	32,592	425,994
Building	10	1,639,882	299,000	494,123	701,377	0,000	43,611	1,058	2,823	8,847	7,251	12,214	26,465
Highway	8	1,905,743	301,000	444,418	731,711	33,420	98,203	9,132	2,058	11,044	24,042	12,261	200,337
Other classes <sup>6</sup>	4	674,598	48,000	247,912	79,774	---	58,800	20,007	2,425	6,548	7,858	8,127	193,142
Subcontractors	18	1,424,454	20,000	480,293	664,701	10,386	58,473	258	13,350	4,285	1,427	6,592	129,999
Painting and decorating <sup>7</sup>	3	140,768	---	83,827	31,124	5,200	2,385	---	2,448	432	---	1,439	19,530
Electrical	5	353,513	---	189,453	139,313	8,660	13,260	---	5,140	487	---	1,796	28,765
Heating and plumbing	0	708,080	20,000	182,000	490,477	5,520	4,200	---	4,200	2,684	734	1,030	67,220
Heating and piping	3	524,277	20,000	140,864	315,357	3,000	14,653	---	3,042	2,438	530	1,001	45,014
Plumbing and heating combined	3	184,400	---	35,196	115,120	2,520	5,727	---	1,208	146	195	329	11,306
Other classes <sup>8</sup>	4	211,487	---	80,953	63,787	---	21,068	268	1,612	782	277	1,397	24,475
<b>TACOMA</b>	47	\$5,308,501	\$508,000	\$1,296,598	\$2,833,756	\$62,071	\$303,147	\$13,172	\$17,289	\$26,138	\$58,714	\$9,303	\$177,529
General contractors	32	4,343,859	600,000	1,058,990	2,023,645	40,730	235,535	10,347	8,670	24,470	57,942	25,984	121,579
Building	20	2,638,377	414,000	638,770	1,218,185	40,730	138,867	3,141	5,409	7,484			



TABLE 9.—COST OF MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, BY KIND

KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—					KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—				
	All classes of establishments			General contractors <sup>2</sup>	Subcontractors		All classes of establishments			General contractors <sup>2</sup>	Subcontractors
	Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>				Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>		
<b>WASHINGTON</b>						<b>SEATTLE—Continued</b>					
All kinds of material	\$25,615,576		\$463.52	\$16,754,877	\$8,860,699	Distributed by kind—Continued.					
Distribution not reported	5,943,384	23.2		4,030,947	1,012,437	Ornamental metal work	\$100,059	.8	\$3.78	\$24,087	\$70,572
Distributed by kind	19,672,192	100.0		11,823,930	7,848,262	Lumber, rough and finished	690,551	5.2	24.82	617,697	42,854
Sand, gravel, stone, slag, cinders, etc.	1,917,302	9.7	45.18	1,859,516	57,847	Lath, shingles, and shakes (wood)	7,950	.1	.30	7,323	633
Brick (face, common, fire, paving, etc.)	430,082	2.2	10.13	408,944	21,138	Millwork	402,017	3.7	17.39	461,821	1,096
Tile (fireproofing)	63,123	0.3	1.49	58,823	4,300	Composition board	50,592	.4	1.90	41,100	9,492
Tile, facing, terra cotta, floor, and wall	482,297	2.5	11.37	246,160	236,128	Waterproofing materials	18,856	.1	.71	13,817	5,078
Concrete and cinder block	270,682	1.4	6.59	251,047	28,035	Hardware, rough and finished	231,794	1.8	8.71	220,989	10,805
Cut stone, granite and marble	440,970	2.3	10.60	262,378	187,601	Paints, varnishes, glass	290,504	2.3	10.91	58,449	232,055
Riprap, rubble, etc.	39,747	.2	.94	31,306	8,441	Roofing and sheet metal	408,419	3.2	15.35	54,037	353,782
Cement	2,271,204	11.5	53.51	2,189,652	81,552	Finished flooring (other than cement, wood, or tile)	78,667	.6	2.90	9,717	68,980
Lime	35,271	.2	.83	22,161	13,110	Screens, shades, awnings, etc.	17,531	.1	.60	17,531	
Plaster, etc.	95,432	.5	2.25	81,470	13,963	Heating and ventilating equipment	715,597	5.7	26.89	80,140	636,457
Structural steel	2,440,370	12.4	57.50	306,528	2,133,848	Plumbing and gas fitting equipment	1,205,130	9.5	45.28	127,332	1,077,798
Reinforcing steel	745,323	3.8	17.56	789,342	5,981	Electrical appliances and supplies	972,043	7.7	36.50	242,770	730,167
Cast iron, miscellaneous, excluding pipe	39,796	.2	.94	38,702	1,094	Elevators, dumb-waiters, and equipment	98,170	.8	3.69	30,000	62,170
Metal doors, windows, and trim	69,722	.4	1.64	54,842	14,880	Pipe: Drain tile, vitrified, concrete, segment tile, corrugated	74,314	.6	2.70	63,284	11,030
Metal and wire lath and furring	41,204	.2	.97	18,904	22,300	Pipe: Cast-iron, sheet and tube steel, etc.	309,719	2.4	11.64	204,532	15,187
Ornamental metal work	125,470	.6	2.96	48,898	76,572	Wire cable, guards, and fencing	9,510	.1	.30	6,000	2,560
Lumber, rough and finished	1,276,496	6.5	30.08	1,199,184	77,312	Bituminous paving materials, tar, asphalt, and oil	31,602	.2	1.10	31,602	
Lath, shingles, and shakes (wood)	30,695	.2	.72	30,062	633	Wood piling and timber	32,404	.3	1.22	12,464	20,000
Millwork	830,256	4.2	19.56	829,160	1,096	Ready-mixed concrete	227,101	1.8	8.54	227,101	
Composition board	70,232	.4	1.65	60,716	10,517	Freight, hauling or trucking to job	4,300	(*)	.10	4,300	
Waterproofing materials	23,194	.1	.55	18,116	5,078	Metal products, n. e. s. (including metal furniture)	3,207	(*)	.12	1,700	1,507
Hardware, rough and finished	372,883	1.9	8.78	367,203	15,620	Mineral products (nonmetallic) n. e. s.	15,721	.1	.50	15,393	328
Paints, varnishes, glass	405,488	2.1	9.55	114,587	290,901	Miscellaneous	108,852	.9	4.09	96,649	12,203
Roofing and sheet metal	545,531	2.8	12.85	120,375	425,156	<b>SPOKANE</b>					
Finished flooring (other than cement, wood, or tile)	103,782	.5	2.45	32,837	70,945	All kinds of material	2,698,160		430.23	1,921,103	776,907
Screens, shades, awnings, etc.	19,731	.1	.46	19,731		Distribution not reported	660,288	24.1		593,728	53,560
Heating and ventilating equipment	1,295,726	6.0	30.53	129,230	1,166,496	Distributed by kind	2,047,872	100.0		1,324,465	723,407
Plumbing and gas fitting equipment	1,879,192	9.6	44.28	251,065	1,627,227	Sand, gravel, stone, slag, cinders, etc.	297,208	14.6	63.78	296,505	673
Electrical appliances and supplies	1,357,141	6.9	31.08	296,060	1,060,481	Brick (face, common, fire, paving, etc.)	69,700	3.4	14.96	69,620	80
Elevators, dumb-waiters, and equipment	116,966	.6	2.76	54,790	62,176	Tile (fireproofing)	4,162	.2	.80	4,162	
Pipe: Drain tile, vitrified, concrete, segment tile, corrugated	178,814	.9	4.21	166,044	12,770	Tile, facing, terra cotta, floor, and wall	54,841	2.7	11.70	20,020	34,221
Pipe: Cast-iron, sheet and tube steel, etc.	516,060	2.6	12.16	478,269	37,791	Concrete and cinder block	32	(*)	.01	32	
Wire cable, guards, and fencing	25,331	.1	.60	22,658	2,723	Cut stone, granite and marble	65,050	3.2	13.95	64,600	550
Bituminous paving materials, tar, asphalt, and oil	359,430	1.8	8.47	359,360	70	Cement	115,677	5.6	24.81	112,928	2,749
Wood piling and timber	145,060	.7	3.42	125,066	20,000	Lime	5,970	.3	1.28	5,690	380
Ready-mixed concrete	228,101	1.2	5.38	228,191		Plaster, etc.	38,731	1.9	8.31	38,650	81
Machinery	60,100	.3	1.42	60,100		Structural steel	33,181	1.6	7.12	33,181	
Freight, hauling or trucking to job	10,303	.1	.24	10,303		Reinforcing steel	43,087	2.1	9.37	43,087	
Metal products, n. e. s. (including metal furniture)	3,807	(*)	.09	2,300	1,507	Metal doors, windows, and trim	12,381	.6	2.66	12,381	
Mineral products (nonmetallic) n. e. s.	17,534	.1	.41	17,256	328	Metal and wire lath and furring	6,188	.3	1.33	5,800	388
Sealing materials	4,000	(*)	.09	4,000		Ornamental metal work	3,595	.2	.77	3,595	
Miscellaneous	270,073	1.4	6.36	217,418	52,655	Lumber, rough and finished	91,041	4.5	19.00	84,873	6,768
<b>SEATTLE</b>						Laths, shingles, and shakes (wood)	2,500	.1	.54	2,500	
All kinds of material	14,942,180		475.38	8,515,999	6,426,181	Millwork	137,417	6.7	29.47	137,417	
Distribution not reported	2,291,826	15.3		1,793,395	498,431	Composition board	3,617	.2	.78	3,542	75
Distributed by kind	12,650,354	100.0		6,722,604	5,927,750	Waterproofing materials	660	(*)	.14	660	
Sand, gravel, stone, slag, cinders, etc.	1,055,177	8.3	39.65	1,013,650	41,518	Hardware, rough and finished	40,789	2.0	8.75	40,789	
Brick (face, common, fire, paving, etc.)	240,780	1.9	0.05	235,922	4,858	Paints, varnishes, glass	31,525	1.5	6.76	6,651	24,874
Tile (fireproofing)	46,961	.4	1.76	46,961		Roofing and sheet metal	7,704	.4	1.65	7,580	124
Tile, facing, terra cotta, floor, and wall	361,464	2.9	13.58	150,557	201,007	Finished flooring (other than cement, wood, or tile)	7,160	.3	1.54	5,195	1,965
Concrete and cinder block	147,682	1.2	5.55	119,547	28,035	Heating and ventilating equipment	274,268	13.4	58.83	1,585	272,683
Cut stone, granite and marble	236,022	1.9	8.87	184,664	51,358	Plumbing and gas fitting equipment	222,206	10.9	47.66	3,400	218,806
Riprap, rubble, etc.	29,801	.2	1.12	21,450	8,441	Electrical appliances and supplies	140,388	6.9	30.11	825	139,563
Cement	1,401,819	11.1	52.68	1,355,081	46,738	Pipe: Drain tile, vitrified, concrete, segment tile, corrugated	8,080	.4	1.80	8,380	300
Lime	18,554	.1	.70	8,224	10,330	Pipe: Cast-iron, sheet and tube steel, etc.	32,701	1.6	7.03	14,007	8,754
Plaster, etc.	36,807	.3	1.38	22,935	13,872	Wire cable, guards, and fencing	1,024	.1	.22	851	173
Structural steel	2,281,087	18.0	85.72	170,980	2,110,107	Bituminous paving materials, tar, asphalt, and oil	293,876	14.4	63.03	293,805	70
Reinforcing steel	668,802	4.5	21.37	564,177	4,625	Mineral products (nonmetallic) n. e. s.	1,064	.1	.23	1,064	
Cast iron, miscellaneous, excluding pipe	14,224	.1	.53	14,130	94	Miscellaneous	130	(*)	.03		130
Metal doors, windows, and trim	46,902	.4	1.76	32,697	14,205						
Metal and wire lath and furring	27,041	.2	1.02	5,129	21,912						

See footnotes at end of table.



TABLE 9.—COST OF MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, BY KIND—Continued

KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—					KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—					
	All classes of establishments			General contractors <sup>2</sup>	Subcontractors		All classes of establishments			General contractors <sup>2</sup>	Subcontractors	
	Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>				Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>			
<b>TACOMA</b>						<b>TACOMA—Continued</b>						
All kinds of material.....	\$2,888,069		\$483.52	\$2,244,635	\$643,434	Distributed by kind—Continued.						
Distribution not reported.....	288,856	9.9		184,282	101,574	Composition board.....	\$9,295	.4	\$1.73	\$9,295		
Distributed by kind.....	2,602,213	100.0		2,060,353	541,860	Waterproofing materials.....	500	(*)	.09	500		
Sand, gravel, stone, slag, cinders, etc.....	303,089	11.6	56.32	292,616	10,473	Hardware, rough and finished.....	38,998	1.5	7.25	38,998		
Brick (face, common, fire, paving, etc.).....	59,868	2.2	10.56	59,868		Paints, varnishes, glass.....	25,691	1.0	4.77	19,509	\$6,182	
Tile (fireproofing).....	1,600	.1	.29	1,600		Roofing and sheet metal.....	66,965	2.6	12.44	15,580	51,385	
Tile, facing, terra cotta, floor, and wall.....	7,686	.3	1.43	7,686		Screens, shades, awnings, etc.....	210	(*)	.04	210		
Concrete and cinder block.....	131,508	5.1	24.44	131,508		Heating and ventilating equipment.....	127,588	4.9	23.71	22,450	105,138	
Cut stone, granite and marble.....	142,413	5.5	26.46	6,720	135,693	Plumbing and gas fitting equipment.....	158,991	6.1	29.54	49,136	109,855	
Riprap, rubble, etc.....	9,850	.4	1.83	9,850		Electrical appliances and supplies.....	105,607	4.1	19.62	20,541	76,066	
Cement.....	459,479	17.7	85.38	436,064	23,412	Pipe: Drain tile, vitrified, concrete, segment tile, corrugated.....	47,435	1.8	8.81	47,120	315	
Lime.....	568	(*)	.11	568		Pipe: Cast-iron, sheet and tube steel, etc.....	150,152	6.0	20.02	150,152		
Plaster, etc.....	8,301	.3	1.54	8,301		Wire cable, guards, and fencing.....	9,100	.3	1.09	9,100		
Structural steel.....	50,181	1.9	9.32	26,840	23,341	Bituminous paving materials, tar, asphalt, and oil.....	13,007	.5	2.42	13,007		
Reinforcing steel.....	84,995	3.3	15.79	84,995		Wood piling and timber.....	102,140	3.9	18.58	102,140		
Cast iron, miscellaneous, excluding pipe.....	21,906	.8	4.07	21,906		Ready mixed concrete.....	1,000	(*)	.18	1,000		
Metal doors, windows, and trim.....	3,700	.1	.09	3,700		Machinery.....	60,100	2.3	11.17	60,100		
Metal and wire lath and furring.....	2,500	.1	.46	2,500		Freight, hauling or trucking to job.....	6,003	.2	1.12	6,003		
Ornamental metal work.....	2,400	.1	.44	2,400		Metal products, n. e. s. (including metal furniture).....	600	(*)	.11	600		
Lumber, rough and finished.....	203,837	7.8	37.87	203,837		Sealing materials.....	4,000	.2	.74	4,000		
Lath, shingles, and shakes (wood).....	2,593	.1	.48	2,593		Miscellaneous.....	82,682	3.2	15.36	82,682		
Millwork.....	92,672	3.6	17.22	92,672								

<sup>1</sup> The value of construction work done is obtained from figures presented in Table 1, by subtracting the value of subcontract work let from the total value of construction business.

<sup>2</sup> Includes operative builders.

<sup>3</sup> The percentage of total cost shown for this item is high because establishments located within this area reported that the large part of their construction work (on which this material was used) was done on contracts outside this area.

<sup>4</sup> Less than one-tenth of 1 per cent.

<sup>5</sup> The percentage of total cost shown for this item is high because the business of establishments reporting this material constituted a large part of the total business reported for this area.

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
		Amount	Per cent of—						Amount	Per cent of—			
			Total cost	Cost of all distributed materials						Total cost	Cost of all distributed materials		
<b>WASHINGTON</b>						<b>WASHINGTON—Contd.</b>							
<i>Sand, gravel, stone, slag, cinders, etc.<sup>1</sup></i>						<i>Concrete and cinder block</i>							
All classes.....	\$19,672,192	\$1,917,362	100.0	9.7	\$40,435,621	82.8	All classes.....	\$19,672,192	\$279,682	100.0	1.4	\$40,435,621	82.8
General contractors.....	\$11,485,586	1,859,515	97.0	16.2	\$33,778,640	77.8	General contractors.....	\$11,485,586	261,647	90.0	2.2	\$33,778,640	77.8
Building.....	6,284,810	633,740	33.1	10.1	18,679,298	69.3	Building.....	6,284,810	135,560	48.5	2.2	18,679,298	69.3
Building not specialized.....	5,346,991	595,124	31.0	11.1	15,974,308	67.4	Building not specialized.....	5,346,991	81,000	29.2	1.5	15,974,308	67.4
Commercial building only.....	625,383	20,716	1.1	3.3	1,958,170	74.7	Commercial building only.....	625,383	53,000	19.3	8.6	1,958,170	74.7
Manufacturing building only.....	164,000	14,000	.7	9.1	238,000	97.4	Manufacturing building only.....	1,433,613	87,342	31.2	0.1	4,425,148	83.3
Residential building only.....	158,436	3,900	.2	2.5	508,820	57.8	Highway.....	532,070	745	.3	.1	1,710,804	95.1
Highway.....	1,433,613	409,614	24.5	32.8	4,425,148	83.3	Dredging, river, harbor, etc.....	28,050	28,000	10.0	99.8	56,683	100.0
Bridge and culvert.....	302,786	25,472	1.3	8.4	827,866	89.4	Subcontractors.....	\$7,848,262	28,035	10.0	.4	\$14,672,591	97.6
Grading.....	71,025	16,897	.9	23.8	1,508,368	91.7	Marble and tiling.....	500,131	28,035	10.0	5.6	1,089,646	99.3
Street paving.....	1,964,271	468,178	23.9	23.3	3,667,222	97.0	<i>Cut stone, granite, and marble</i>						
Sewer, gas, water, conduit.....	374,118	52,000	2.7	13.9	1,581,523	74.8	All classes.....	19,672,192	440,070	100.0	2.3	40,435,621	82.8
Waterworks.....	298,364	20,672	1.1	6.9	830,017	79.2	General contractors.....	\$11,823,930	262,378	58.3	2.2	\$34,763,030	77.4
Dredging, river, harbor, etc.....	532,970	180,125	9.4	33.8	1,719,804	95.1	Building.....	6,623,154	200,150	57.8	3.9	19,663,688	69.0
Railroad.....	23,341	2,143	.1	9.2	226,173	100.0	Building not specialized.....	5,685,335	254,094	56.7	4.5	10,958,698	67.1
Foundation.....	5,651	674	(?)	11.9	31,909	100.0	Commercial building only.....	625,383	5,150	1.1	.8	1,958,170	74.7
Subcontractors.....	\$7,848,262	57,847	3.0	.7	14,672,591	97.6	Manufacturing building only.....	154,000	21,000	2.0	13.6	238,000	97.4
Concreting.....	111,348	32,271	1.7	29.0	298,396	92.6	Residential building only.....	158,436	4,800	.2	3.0	508,820	57.8
Masonry.....	25,821	1,320	.1	5.1	72,584	100.0	Highway.....	1,433,613	229,722	10.1	10.0	4,425,148	83.3
Painting and decorating.....	167,400	1,480	.1	.9	695,286	99.9	Bridge and culvert.....	302,786	46,288	2.0	15.3	827,866	89.4
Plastering and lathing.....	57,104	5,539	.3	9.7	298,885	100.0	Grading.....	71,025	2,882	.1	4.1	1,508,368	91.7
Roofing and sheet metal work.....	438,959	1,640	.1	.4	947,869	100.0	Street paving.....	1,964,271	1,107,416	48.8	56.4	3,667,222	97.0
Roofing.....	59,035	226	(?)	.4	105,936	100.0	Sewer, gas, water, conduit.....	374,118	72,300	3.2	19.3	1,581,523	74.8
Sheet-metal work.....	347,403	1,420	.1	.4	764,476	100.0	Waterworks.....	298,364	28,678	1.3	9.6	830,017	79.2
Marble and tiling.....	500,131	13,728	.7	2.7	1,089,646	99.3	Dredging, river, harbor, etc.....	532,970	40,875	1.8	7.7	1,719,804	95.1
Dredging, river, harbor, etc.....	54,175	1,863	.1	3.4	163,064	100.0	Foundation.....	5,651	554	(?)	9.8	31,909	100.0
<i>Brick (face, common, fire, paving, etc.)</i>							<i>Cement<sup>1</sup></i>						
All classes.....	19,672,192	430,082	100.0	2.2	40,435,621	82.8	All classes.....	19,672,192	2,271,204	100.0	11.5	49,435,621	82.8
General contractors.....	\$11,823,930	408,944	95.1	3.5	\$34,763,030	77.4	General contractors.....	\$11,823,930	2,189,652	96.4	18.5	\$34,763,030	77.4
Building.....	6,623,154	342,012	79.5	5.2	19,663,688	69.0	Building.....	6,623,154	660,937	29.1	10.0	19,663,688	69.0
Building not specialized.....	5,685,335	310,114	72.1	5.5	10,958,698	67.1	Building not specialized.....	5,685,335	588,588	25.9	10.4	10,958,698	67.1
Commercial building only.....	625,383	23,640	5.5	3.8	1,958,170	74.7	Commercial building only.....	625,383	40,549	2.0	7.4	1,958,170	74.7
Manufacturing building only.....	154,000	3,000	.7	1.9	238,000	97.4	Manufacturing building only.....	154,000	21,000	2.0	13.6	238,000	97.4
Residential building only.....	158,436	5,258	1.2	3.3	508,820	57.8	Residential building only.....	158,436	4,800	.2	3.0	508,820	57.8
Highway.....	1,433,613	5,013	1.2	.3	4,425,148	83.3	Highway.....	1,433,613	229,722	10.1	10.0	4,425,148	83.3
Bridge and culvert.....	302,786	766	.2	.3	827,866	89.4	Bridge and culvert.....	302,786	46,288	2.0	15.3	827,866	89.4
Grading.....	71,025	16,897	.9	23.8	1,508,368	91.7	Grading.....	71,025	2,882	.1	4.1	1,508,368	91.7
Street paving.....	1,964,271	37,083	8.6	1.9	3,667,222	97.0	Street paving.....	1,964,271	1,107,416	48.8	56.4	3,667,222	97.0
Sewer, gas, water, conduit.....	374,118	17,096	4.0	4.6	1,581,523	74.8	Sewer, gas, water, conduit.....	374,118	72,300	3.2	19.3	1,581,523	74.8
Waterworks.....	298,364	4,550	1.1	1.5	830,017	79.2	Waterworks.....	298,364	28,678	1.3	9.6	830,017	79.2
Dredging, river, harbor, etc.....	532,970	2,420	.6	.5	1,719,804	95.1	Dredging, river, harbor, etc.....	532,970	40,875	1.8	7.7	1,719,804	95.1
Subcontractors.....	\$7,848,262	21,138	4.9	.3	14,672,591	97.6	Foundation.....	5,651	554	(?)	9.8	31,909	100.0
Masonry.....	25,821	16,200	3.8	62.7	72,584	100.0	Subcontractors.....	\$7,848,262	81,552	3.0	1.0	\$14,672,591	97.6
Roofing and sheet-metal work.....	438,959	80	(?)	(?)	947,869	100.0	Concreting.....	111,348	55,402	2.4	49.8	288,396	92.6
Roofing.....	59,035	80	(?)	(?)	105,936	100.0	Masonry.....	25,821	870	(?)	3.4	72,584	100.0
Sheet-metal work.....	347,403	80	(?)	(?)	764,476	100.0	Plastering and lathing.....	57,104	6,838	.3	12.0	298,885	100.0
Marble and tiling.....	500,131	4,858	1.1	1.0	1,089,646	99.3	Roofing and sheet-metal work.....	438,959	40	(?)	(?)	947,869	100.0
Dredging, river, harbor, etc.....	54,175	1,863	.1	3.4	163,064	100.0	Sheet-metal work.....	347,403	40	(?)	(?)	764,476	100.0
<i>Tile, facing, terra cotta, floor, and wall</i>							Marble and tiling.....	500,131	16,619	.7	3.3	1,089,646	99.3
All classes.....	19,672,192	482,297	100.0	2.5	49,435,621	82.8	Dredging, river, harbor, etc.....	54,175	1,783	.1	3.3	163,064	100.0
General contractors.....	\$11,823,930	240,169	51.0	2.1	\$34,763,030	77.4	<i>Structural steel<sup>1</sup></i>						
Building.....	6,623,154	219,813	45.6	3.3	19,663,688	69.0	All classes.....	\$19,672,192	2,440,876	100.0	12.4	\$49,435,621	82.8
Building not specialized.....	5,685,335	204,213	42.3	3.6	10,958,698	67.1	General contractors.....	\$11,485,586	306,623	12.6	2.7	\$33,778,640	77.8
Commercial building only.....	625,383	6,600	1.4	1.1	1,958,170	74.7	Building.....	6,284,810	189,679	7.8	3.0	18,679,298	69.3
Manufacturing building only.....	154,000	3,000	.6	1.9	238,000	97.4	Building not specialized.....	5,346,991	160,429	6.6	3.0	15,974,308	67.4
Residential building only.....	158,436	6,000	1.2	3.8	508,820	57.8	Commercial building only.....	625,383	15,250	.6	2.4	1,958,170	74.7
Highway.....	1,433,613	701	.1	(?)	4,425,148	83.3	Manufacturing building only.....	154,000	14,000	.6	9.1	238,000	97.4
Bridge and culvert.....	302,786	155	(?)	.1	827,866	89.4	Highway.....	1,433,613	7,200	.3	.5	4,425,148	83.3
Dredging, river, harbor, etc.....	532,970	25,500	5.3	4.8	1,719,804	95.1	Bridge and culvert.....	302,786	82,218	3.4	27.2	827,866	89.4
Subcontractors.....	\$7,848,262	230,128	49.0	3.0	\$14,672,591	97.6	Street paving.....	1,964,271	1,731	.1	.1	3,667,222	97.0
Marble and tiling.....	500,131	236,128	49.0	47.2	1,089,646	99.3	Dredging, river, harbor, etc.....	532,970	22,260	.9	4.2	1,719,804	95.1
							Railroad.....	23,341	3,440	.1	14.7	226,173	100.0

See footnotes at end of table.

CONSTRUCTION—WASHINGTON

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TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
		Amount	Per cent of—						Amount	Per cent of—			
			Total cost	Cost of all distributed materials						Total cost	Cost of all distributed materials		
WASHINGTON—Contd.						WASHINGTON—Contd.							
<i>Structural steel—Contd.</i>						<i>Millwork—Continued</i>							
Subcontractors.....	\$7,848,262	\$2,133,848	87.4	27.2	\$14,672,591	97.6	General contractors—Contd. Building—Continued						
Masonry.....	25,821	400	(?)	1.5	72,584	100.0	Commercial building only.....	\$25,383	\$50,045	6.0	8.0	\$1,958,170	74.7
Roofing and sheet-metal work.....	438,959	4,107	.2	.9	947,869	100.0	Residential building only.....	158,436	30,781	3.7	19.4	508,820	57.8
Sheet-metal work.....	347,403	4,107	.2	1.2	764,476	100.0	Highway.....	1,433,613	6,584	.8	.5	4,425,148	83.3
Steel erection.....	2,194,523	2,123,341	87.0	96.8	2,886,202	97.5	Bridge and culvert.....	302,786	3,399	.4	1.1	827,866	89.4
Ornamental iron.....	188,533	6,000	.2	3.2	316,504	98.4	Street paving.....	1,964,271	214	(?)	(?)	3,667,222	97.0
<i>Reinforcing steel</i>						<i>Hardware, rough and finished</i>							
All classes.....	19,672,192	745,828	100.0	3.8	49,435,621	82.8	All classes.....	19,672,192	372,883	100.0	1.0	49,435,621	82.8
General contractors <sup>2</sup> .....	\$11,823,930	739,342	99.2	6.3	\$4,763,030	77.4	General contractors <sup>2</sup> .....	\$11,823,930	357,293	95.8	3.0	\$4,763,030	77.4
Building.....	6,623,154	591,985	79.4	8.9	19,663,688	69.0	Building.....	6,623,154	279,785	78.0	4.2	19,663,688	69.0
Building not specialized <sup>3</sup> .....	5,685,335	530,048	71.1	9.3	16,958,698	67.1	Building not specialized <sup>3</sup> .....	5,685,335	253,427	68.0	4.5	16,958,698	67.1
Commercial building only.....	625,383	47,491	6.4	7.6	1,958,170	74.7	Commercial building only.....	625,383	18,863	5.1	3.0	1,958,170	74.7
Manufacturing building only.....	154,000	13,000	1.7	8.4	238,000	97.4	Residential building only.....	158,436	7,495	2.0	4.7	508,820	57.8
Residential building only.....	158,436	1,446	.2	.9	508,820	57.8	Highway.....	1,433,613	31,704	8.5	2.2	4,425,148	83.3
Highway.....	1,433,613	25,717	3.5	1.8	4,425,148	33.3	Bridge and culvert.....	302,786	11,768	3.2	3.0	827,866	89.4
Bridge and culvert.....	302,786	25,713	3.4	8.5	827,866	39.4	Grading.....	71,025	10,925	2.0	15.4	1,508,368	91.7
Grading.....	71,025	3,601	.5	5.1	1,508,368	91.7	Street paving.....	1,964,271	19,423	5.2	1.0	3,667,222	97.0
Street paving.....	1,964,271	28,504	3.8	1.5	3,667,222	74.8	Sewer, gas, water, conduit.....	374,118	806	.1	.1	1,581,523	74.8
Sewer, gas, water, conduit.....	374,118	35,359	4.7	9.4	1,581,523	74.8	Waterworks.....	298,364	1,550	.4	.5	830,017	79.2
Waterworks.....	298,364	320	(?)	.1	830,017	79.2	Dredging, river, harbor, etc.....	532,970	1,275	.3	.2	1,710,804	95.1
Dredging, river, harbor, etc.....	532,970	28,000	3.8	5.3	1,710,804	95.1	Railroad.....	23,341	533	.1	2.3	226,173	100.0
Foundation.....	5,651	102	(?)	1.8	31,909	100.0	Subcontractors.....	\$7,848,262	15,620	4.2	2.2	\$14,672,591	97.6
Vehicle subway and tunnel.....	28,050	50	(?)	.2	56,688	100.0	Carpentering and wood-flooring.....	29,725	900	.2	3.0	90,786	100.0
Subcontractors.....	\$7,848,262	5,981	.8	1.1	\$14,672,591	97.6	Concreting.....	111,848	200	.1	.2	298,366	92.6
Concreting.....	111,848	5,100	.7	4.6	298,366	92.6	Roofing and sheet-metal work.....	438,959	350	.1	.1	947,869	100.0
Marble and tiling.....	500,131	25	(?)	(?)	1,089,646	90.3	Sheet-metal work.....	347,403	350	.1	.1	764,476	100.0
Dredging, river, harbor, etc.....	54,175	856	.1	1.6	163,064	100.0	Steel erection.....	2,194,523	3,000	.8	1.1	2,886,202	97.5
<i>Lumber, rough and finished</i>						<i>Paints, varnishes, glass</i>							
All classes.....	19,672,192	1,270,490	100.0	6.5	49,435,621	82.8	All classes.....	19,672,192	405,488	100.0	2.1	49,435,621	82.8
General contractors <sup>2</sup> .....	\$11,823,930	1,199,184	93.9	10.1	\$4,763,030	77.4	General contractors <sup>2</sup> .....	\$11,823,930	114,587	28.3	1.0	\$4,763,030	77.4
Building.....	6,623,154	950,913	75.2	14.5	19,663,688	69.0	Building.....	6,623,154	103,063	25.6	1.0	19,663,688	69.0
Building not specialized <sup>3</sup> .....	5,685,335	784,253	61.4	13.8	16,958,698	67.1	Building not specialized <sup>3</sup> .....	5,685,335	88,875	21.0	1.0	16,958,698	67.1
Commercial building only.....	625,383	108,374	8.5	17.3	1,958,170	74.7	Commercial building only.....	625,383	11,452	2.8	1.8	1,958,170	74.7
Manufacturing building only.....	154,000	13,500	1.1	8.8	238,000	97.4	Residential building only.....	158,436	3,336	.8	2.1	508,820	57.8
Residential building only.....	158,436	53,786	4.2	33.9	508,820	57.8	Highway.....	1,433,613	1,956	.5	.1	4,425,148	83.3
Highway.....	1,433,613	71,605	5.6	5.0	4,425,148	33.3	Bridge and culvert.....	302,786	1,568	.4	.5	827,866	89.4
Bridge and culvert.....	302,786	99,094	5.4	22.8	827,866	39.4	Grading.....	71,025	4,777	.1	.7	1,508,368	91.7
Grading.....	71,025	11,456	.9	16.1	1,508,368	91.7	Street paving.....	1,964,271	2,500	.6	.1	3,667,222	97.0
Street paving.....	1,964,271	43,621	3.4	2.2	3,667,222	97.0	Dredging, river, harbor, etc.....	532,970	4,250	1.0	.8	1,710,804	95.1
Sewer, gas, water, conduit.....	374,118	900	.1	.2	1,581,523	74.8	Railroad.....	23,341	173	(?)	.7	226,173	100.0
Waterworks.....	298,364	12,600	1.0	4.2	830,017	79.2	Subcontractors.....	\$7,848,262	290,901	71.7	3.7	\$14,672,591	97.6
Dredging, river, harbor, etc.....	532,970	23,245	1.8	4.4	1,710,804	95.1	Concreting.....	111,848	100	(?)	.1	298,366	92.6
Railroad.....	23,341	4,362	.3	18.7	226,173	100.0	Masonry.....	25,821	250	1.0	1.0	72,584	100.0
Foundation.....	5,651	2,388	.2	42.3	31,909	100.0	Painting and decorating.....	157,400	154,970	38.2	98.5	695,286	99.9
Subcontractors.....	\$7,848,262	77,312	6.1	1.0	\$14,672,591	97.6	Glass and glazing.....	123,936	123,936	30.6	100.0	178,509	100.0
Carpentering and wood-flooring.....	29,725	28,250	2.2	95.0	90,786	100.0	Roofing and sheet-metal work.....	438,959	1,306	.3	.3	947,869	100.0
Concreting.....	111,848	1,075	.1	1.0	298,366	92.6	Roofing.....	59,035	42	(?)	.1	105,936	100.0
Roofing and sheet-metal work.....	438,959	788	.1	.2	947,869	100.0	Sheet-metal work.....	347,403	1,264	.3	.4	764,476	100.0
Roofing.....	59,035	162	(?)	.3	105,936	100.0	Steel erection.....	2,194,523	5,182	2.0	.4	2,886,202	97.5
Sheet-metal work.....	347,403	626	(?)	.2	764,476	100.0	Marble and tiling.....	500,131	300	.1	.1	1,089,646	90.3
Steel erection.....	2,194,523	40,000	3.1	1.8	2,886,202	97.5	Ornamental iron.....	188,533	1,658	.4	.9	316,504	98.4
Marble and tiling.....	500,131	1,534	.1	.3	1,089,646	90.3	Dredging, river, harbor, etc.....	54,175	5,615	.4	10.4	163,064	100.0
Ornamental iron.....	188,533	50	(?)	(?)	316,504	98.4	<i>Millwork</i>						
Dredging, river, harbor, etc.....	54,175	5,615	.4	10.4	163,064	100.0	All classes.....	19,672,192	880,256	100.0	4.2	49,435,621	82.8
<i>Millwork</i>						<i>General contractors<sup>2</sup>.....</i>							
All classes.....	19,672,192	880,256	100.0	4.2	49,435,621	82.8	\$11,823,930	829,160	99.9	7.0	\$4,763,030	77.4	
General contractors <sup>2</sup> .....	\$11,823,930	829,160	99.9	7.0	\$4,763,030	77.4	Building.....	6,623,154	814,163	98.1	12.3	\$19,663,688	69.0
Building.....	6,623,154	814,163	98.1	12.3	\$19,663,688	69.0	Building not specialized <sup>3</sup> .....	5,685,335	733,387	88.3	12.9	16,958,698	67.1
Building not specialized <sup>3</sup> .....	5,685,335	733,387	88.3	12.9	16,958,698	67.1	See footnotes at end of table.						

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>		
	Cost of all materials distributed by kind	Amount	Percent of—					Cost of all distributed materials	Cost of all materials distributed by kind	Amount	Percent of—			Cost of all distributed materials	
			Total cost	of all distributed materials							Total cost				of all distributed materials
<b>WASHINGTON—Contd.</b>						<b>WASHINGTON—Contd.</b>									
<b>Roofing and sheet metal</b>						<b>Plumbing and gas fitting equipment—Contd.</b>									
All classes.....	\$19,672,192	\$545,631	100.0	2.8	\$49,435,621	82.8	Subcontractors.....	\$7,848,262	\$1,627,227	86.6	20.7	\$14,672,501	97.0		
General contractors <sup>2</sup> .....	\$11,823,930	120,375	22.1	1.0	\$4,763,030	77.4	Heating and plumbing.....	\$2,858,534	1,627,227	86.6	56.0	\$6,194,340	96.3		
Building.....	6,623,154	108,330	10.3	1.6	10,663,688	69.0	Heating and piping.....	718,295	204,838	10.0	28.5	1,320,459	98.5		
Building not specialized <sup>3</sup> .....	5,685,335	66,314	12.2	1.2	16,958,698	67.1	Plumbing.....	1,070,327	771,150	41.0	71.6	1,802,249	95.5		
Commercial building only.....	625,383	36,485	6.7	5.8	1,958,170	74.7	Plumbing and heating combined.....	636,075	348,852	18.6	54.8	1,212,329	94.3		
Manufacturing building only.....	154,000	2,400	.4	1.6	238,000	97.4	Automatic sprinkler systems.....	309,387	302,387	16.1	97.7	533,907	99.8		
Residential building only.....	158,436	131	(?)	.1	508,820	57.8	<b>Electrical appliances and supplies</b>								
Highway.....	1,433,613	1,010	.2	.1	4,425,148	83.3	All classes.....	19,672,192	1,357,141	100.0	6.9	40,435,621	82.8		
Bridge and culvert.....	302,786	2,800	.5	.9	827,866	89.4	General contractors <sup>2</sup> .....	\$11,823,930	206,060	21.0	2.5	\$4,763,030	77.4		
Street paving.....	1,964,271	51	(?)	(?)	3,667,222	97.0	Building.....	6,623,154	110,037	8.1	1.7	10,663,688	69.0		
Dredging, river, harbor, etc.....	532,970	9,750	1.8	1.8	1,719,804	95.1	Building not specialized <sup>3</sup> .....	5,685,335	91,085	6.8	1.0	16,958,698	67.1		
Railroad.....	23,341	1,434	.3	6.1	226,173	100.0	Commercial building only.....	625,383	14,027	1.0	2.2	1,958,170	74.7		
Subcontractors.....	\$7,848,262	425,156	77.9	5.4	\$14,672,501	97.6	Manufacturing building only.....	154,000	1,000	.1	.6	238,000	97.4		
Concreting.....	111,348	100	(?)	.1	298,396	92.6	Residential building only.....	158,436	3,325	.2	2.1	508,820	57.8		
Heating and plumbing.....	\$2,858,534	28,315	6.2	1.0	\$6,194,349	96.3	Highway.....	1,433,613	2,293	.2	.2	4,425,148	83.3		
Heating and piping.....	718,295	21,815	4.0	3.0	1,320,459	98.5	Bridge and culvert.....	302,786	5,470	.4	1.8	827,866	89.4		
Pipe covering.....	95,817	3,000	.5	3.1	253,371	100.0	Street paving.....	1,964,271	3,923	.3	.2	3,667,222	97.0		
Plumbing.....	1,076,327	3,500	.6	.3	1,802,249	95.5	Sewer, gas, water, conduit, etc.....	532,970	1,000	.1	.3	1,681,623	74.8		
Roofing and sheet-metal work.....	438,959	306,617	72.7	90.4	947,869	100.0	Dredging, river, harbor, etc.....	532,970	7,350	.5	1.4	1,719,804	95.1		
Roofing.....	59,035	50,473	10.4	95.7	105,936	100.0	Central station, light and power plant.....	166,587	166,587	12.3	100.0	224,620	100.0		
Sheet-metal work.....	347,403	307,623	56.4	88.5	764,476	100.0	Subcontractors.....	\$7,848,262	1,060,481	78.1	13.5	\$14,672,501	97.0		
Roofing and sheet-metal combined.....	82,521	82,521	6.0	100.0	77,467	100.0	Electrical.....	11,061,467	1,058,717	78.0	99.7	\$2,272,888	99.0		
Marble and tiling.....	500,131	124	(?)	(?)	1,089,646	99.3	Heating and plumbing.....	\$2,858,534	170	(?)	(?)	\$6,194,349	96.3		
<b>Heating and ventilating equipment</b>						<b>Pipe: Cast-iron, sheet and tube steel, etc.</b>									
All classes.....	19,672,192	1,295,726	100.0	6.6	49,435,621	82.8	All classes.....	\$19,672,192	516,000	100.0	2.6	\$49,435,621	82.8		
General contractors <sup>2</sup> .....	\$11,823,930	129,230	10.0	1.1	\$4,763,030	77.4	General contractors.....	\$11,485,586	478,209	92.7	4.2	\$33,778,640	77.8		
Building.....	6,623,154	123,425	9.5	1.9	19,663,688	69.0	Building.....	\$6,284,810	10,956	2.1	.2	\$18,679,298	69.3		
Building not specialized <sup>3</sup> .....	5,685,335	69,440	5.4	1.2	16,958,698	67.1	Building not specialized.....	5,346,991	10,956	2.1	.2	15,974,308	67.4		
Commercial building only.....	625,383	40,000	3.1	6.4	1,958,170	74.7	Highway.....	1,433,613	91,625	13.9	5.0	4,425,148	83.3		
Manufacturing building only.....	154,000	3,500	.3	2.3	238,000	97.4	Bridge and culvert.....	302,786	7,000	1.9	3.2	827,866	89.4		
Residential building only.....	158,436	10,485	.8	6.6	508,820	57.8	Grading.....	71,025	7,907	1.5	11.2	1,508,368	91.7		
Highway.....	1,433,613	2,558	.2	.2	4,425,148	83.3	Street paving.....	1,964,271	91,300	17.7	4.7	3,667,222	97.0		
Bridge and culvert.....	302,786	3,129	.2	1.0	827,866	89.4	Sewer, gas, water, conduit, etc.....	532,970	67,893	13.2	18.1	1,681,623	74.8		
Grading.....	71,025	118	(?)	.2	1,508,368	91.7	Waterworks.....	298,364	185,373	35.9	62.1	830,017	79.2		
Subcontractors.....	\$7,848,262	1,166,496	90.0	14.9	\$14,672,501	97.6	Dredging, river, harbor, etc.....	532,970	31,100	6.0	5.8	1,719,804	96.1		
Heating and plumbing.....	\$2,858,534	1,140,986	88.0	39.9	\$6,194,349	96.3	Railroad.....	23,341	2,425	.5	10.4	226,173	100.0		
Heating and piping.....	718,295	467,203	36.1	65.0	1,320,459	98.5	Subcontractors.....	\$7,848,262	37,791	7.3	.5	\$14,672,501	97.6		
Pipe covering.....	95,817	83,589	6.5	87.2	253,371	100.0	Concreting.....	111,348	1,000	.2	.9	298,396	92.6		
Plumbing.....	1,076,327	290,475	22.4	27.0	1,802,249	95.5	Electrical.....	1,061,467	500	.1	(?)	2,272,888	99.0		
Plumbing and heating combined.....	636,075	277,405	21.4	43.6	1,212,329	94.3	Heating and plumbing.....	\$2,858,534	31,604	6.1	1.1	\$6,194,349	96.3		
Automatic temperature control.....	22,033	22,033	1.7	100.0	71,944	100.0	Heating and piping.....	718,295	18,954	2.7	1.9	1,320,459	98.5		
Roofing and sheet-metal work.....	\$438,959	25,800	2.0	5.9	\$947,869	100.0	Plumbing.....	1,070,327	10,650	2.1	1.0	1,802,249	95.5		
Sheet-metal work.....	347,403	25,800	2.0	7.4	764,476	100.0	Automatic sprinkler systems.....	309,387	7,000	1.4	2.3	533,907	99.8		
<b>Plumbing and gas fitting equipment<sup>1</sup></b>						<b>Bituminous paving materials, tar, asphalt, and oil</b>									
All classes.....	10,672,192	1,879,192	100.0	9.6	49,435,621	82.8	All classes.....	\$10,672,192	350,430	100.0	1.8	\$49,435,621	82.8		
General contractors <sup>2</sup> .....	\$11,823,930	251,965	13.4	2.1	\$4,763,030	77.4	General contractors.....	\$11,485,586	359,360	100.0	3.1	\$33,778,640	77.8		
Building.....	6,623,154	218,238	11.6	3.3	19,663,688	69.0	Building.....	\$6,284,810	5,787	1.6	.1	\$18,679,298	69.3		
Building not specialized <sup>3</sup> .....	5,685,335	163,693	8.7	2.9	16,958,698	67.1	Building not specialized.....	5,346,991	5,787	1.6	.1	15,974,308	67.4		
Commercial building only.....	625,383	41,045	2.2	6.6	1,958,170	74.7	Highway.....	1,433,613	311,003	86.5	21.7	4,425,148	83.3		
Manufacturing building only.....	154,000	500	(?)	.3	238,000	97.4	Street paving.....	1,964,271	39,320	10.9	2.0	3,667,222	97.0		
Residential building only.....	158,436	13,000	.7	8.2	508,820	57.8	Dredging, river, harbor, etc.....	532,970	3,250	.9	.6	1,719,804	95.1		
Highway.....	1,433,613	2,622	.1	.2	4,425,148	83.3	Subcontractors.....	\$7,848,262	70	(?)	(?)	\$14,672,501	97.0		
Bridge and culvert.....	302,786	1,675	.1	.5	827,866	89.4	Marble and tiling.....	500,131	70	(?)	(?)	1,089,646	99.3		
Street paving.....	1,964,271	11,000	.6	.6	3,667,222	97.0									
Sewer, gas, water, conduit.....	374,118	18,580	1.0	5.0	1,531,623	74.8									

See footnotes at end of table.

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
		Amount	Per cent of Total cost	Cost of all distributed materials					Amount	Per cent of Total cost	Cost of all distributed materials		
<b>SEATTLE</b>						<b>SEATTLE—Continued</b>							
<i>Sand, gravel, stone, slag, cinders, etc.<sup>2</sup></i>						<i>Cement<sup>3</sup></i>							
All classes.....	\$12,650,354	\$1,055,177	100.0	8.3	\$32,302,082	78.1	All classes.....	\$12,650,354	\$1,401,819	100.0	11.1	\$32,302,082	78.1
General contractors.....	\$ 6,384,200	1,013,659	96.1	15.9	\$ 20,518,301	69.9	General contractors <sup>4</sup> .....	\$ 6,722,604	1,355,081	96.7	20.2	\$ 21,502,691	69.6
Building.....	3,377,012	367,191	34.8	10.9	12,235,988	61.0	Building.....	3,715,356	260,092	18.6	7.0	13,220,378	61.0
Building not specialized.....	2,907,557	363,217	33.5	12.1	10,504,567	59.4	Building not specialized <sup>5</sup> .....	3,245,901	222,777	15.9	6.9	11,578,947	59.4
Commercial building only.....	437,840	13,474	1.3	3.1	1,444,244	69.3	Commercial building only.....	437,840	36,515	2.6	8.3	1,444,244	69.3
Residential building only.....	31,615	500	(?)	1.6	197,187	49.9	Residential building only.....	31,615	800	.1	2.5	197,187	49.9
Highway.....	135,826	30,739	2.9	22.6	1,132,637	79.3	Highway.....	135,826	12,951	9.0	9.6	1,132,637	79.3
Bridge and culvert.....	169,368	15,492	1.5	9.1	344,663	80.1	Bridge and culvert.....	169,368	27,598	2.0	16.3	344,663	80.1
Grading.....	23,500	1,429	.1	6.1	466,726	91.3	Grading.....	23,500	2,484	2.0	10.6	466,726	91.3
Street paving.....	1,635,599	378,011	35.8	23.1	3,010,222	97.1	Street paving.....	1,635,599	937,573	69.9	57.3	3,010,222	97.1
Sewer, gas, water, conduit, Waterworks.....	325,588	40,000	3.8	12.3	1,481,473	72.4	Sewer, gas, water, conduit, Waterworks.....	325,588	72,300	5.2	22.2	1,481,473	72.4
Dredging, river, harbor, etc.....	110,614	672	.1	.0	538,280	67.8	Dredging, river, harbor, etc.....	110,614	1,178	.1	1.0	538,280	67.8
Subcontractors.....	\$ 5,927,750	41,518	3.9	.7	\$ 10,799,391	96.9	Subcontractors.....	\$ 5,927,750	46,738	3.3	.8	\$ 10,799,391	96.9
Concreting.....	65,465	19,875	1.9	30.4	201,000	90.0	Concreting.....	65,465	25,990	1.9	39.7	201,000	90.0
Painting and decorating.....	100,275	1,480	.1	1.5	450,156	69.8	Painting and decorating.....	67,104	6,838	.5	12.0	293,885	100.0
Plastering and lathing.....	57,104	5,539	.5	9.7	293,885	100.0	Plastering and lathing.....	13,910	13,910	1.0	4.3	807,939	99.1
Roofing and sheet-metal work.....	355,087	1,569	.1	.4	747,159	100.0	Roofing and sheet-metal work.....	\$ 355,087	4,107	.2	1.2	747,159	100.0
Roofing.....	43,094	149	(?)	.3	74,683	100.0	Roofing.....	311,993	4,107	.2	1.3	672,476	100.0
Sheet-metal work.....	311,993	1,420	.1	.5	672,476	100.0	Sheet-metal work.....	2,169,000	2,100,000	92.1	96.8	2,794,000	97.4
Marble and tiling.....	322,711	13,055	1.2	4.0	807,939	99.1	Marble and tiling.....	188,538	6,000	.3	3.2	310,504	98.4
<i>Brick (face, common, fire, paving, etc.)</i>						<i>Structural steel<sup>1</sup></i>							
All classes.....	12,650,354	240,780	100.0	1.9	32,302,082	78.1	All classes.....	\$ 12,650,354	2,281,087	100.0	18.0	\$ 32,302,082	78.1
General contractors <sup>4</sup> .....	\$ 6,722,604	235,922	98.0	3.5	\$ 21,502,691	69.6	General contractors.....	\$ 6,384,200	170,930	7.5	2.7	\$ 20,518,301	69.9
Building.....	3,715,356	177,760	73.8	4.8	13,220,378	61.0	Building.....	\$ 3,377,012	99,129	4.3	2.9	\$ 12,235,988	61.0
Building not specialized.....	3,245,901	150,694	62.6	4.6	11,578,947	59.4	Building not specialized.....	2,907,557	84,214	3.7	2.9	10,504,567	59.4
Commercial building only.....	437,840	23,308	9.7	5.3	1,444,244	69.3	Commercial building only.....	437,840	14,915	.7	3.4	1,444,244	69.3
Residential building only.....	31,615	3,758	1.6	11.9	197,187	49.9	Residential building only.....	31,615	7,200	3.3	5.3	1,132,637	79.3
Highway.....	135,826	3,500	1.5	2.6	1,132,637	79.3	Highway.....	135,826	40,660	1.8	24.0	344,663	80.1
Bridge and culvert.....	169,368	74	(?)	(?)	344,663	80.1	Bridge and culvert.....	169,368	1,731	.1	.1	3,010,222	97.1
Grading.....	23,500	74	(?)	(?)	466,726	91.3	Grading.....	1,635,599	1,731	.1	.1	3,010,222	97.1
Street paving.....	1,635,599	35,593	14.8	2.2	3,010,222	97.1	Street paving.....	1,635,599	1,731	.1	.1	3,010,222	97.1
Sewer, gas, water, conduit, Waterworks.....	325,588	16,575	6.9	5.1	1,481,473	72.4	Sewer, gas, water, conduit, Waterworks.....	325,588	22,260	1.0	5.5	1,481,473	72.4
Dredging, river, harbor, etc.....	110,614	2,420	1.0	.0	538,280	67.8	Dredging, river, harbor, etc.....	110,614	22,260	1.0	5.5	538,280	67.8
Subcontractors.....	\$ 5,927,750	4,858	2.0	.1	\$ 10,799,391	96.9	Subcontractors.....	\$ 5,927,750	2,110,107	92.5	35.6	\$ 10,799,391	96.9
Marble and tiling.....	322,711	4,858	2.0	1.5	807,939	99.1	Roofing and sheet-metal work.....	\$ 355,087	4,107	.2	1.2	747,159	100.0
<i>Tile, facing, terra cotta, floor, and wall</i>						<i>Reinforcing steel</i>							
All classes.....	12,650,354	361,464	100.0	2.9	32,302,082	78.1	All classes.....	12,650,354	568,802	100.0	4.5	32,302,082	78.1
General contractors <sup>4</sup> .....	\$ 6,722,604	169,557	44.1	2.4	\$ 21,502,691	69.6	General contractors.....	\$ 6,722,604	564,177	99.2	8.4	\$ 21,502,691	69.6
Building.....	\$ 3,715,356	134,057	37.1	3.0	\$ 13,220,378	61.0	Building.....	\$ 3,715,356	444,774	78.2	12.0	\$ 13,220,378	61.0
Building not specialized.....	3,245,901	127,467	35.3	3.9	11,578,947	59.4	Building not specialized.....	3,245,901	402,379	70.7	12.4	11,578,947	59.4
Commercial building only.....	437,840	6,600	1.8	1.5	1,444,244	69.3	Commercial building only.....	437,840	41,049	7.2	9.4	1,444,244	69.3
Residential building only.....	31,615	1,340	.2	4.3	197,187	49.9	Residential building only.....	31,615	1,340	.2	4.3	197,187	49.9
Highway.....	135,826	3,500	1.5	2.6	1,132,637	79.3	Highway.....	135,826	7,530	1.3	5.5	1,132,637	79.3
Bridge and culvert.....	169,368	74	(?)	(?)	344,663	80.1	Bridge and culvert.....	169,368	23,863	4.2	14.1	344,663	80.1
Grading.....	23,500	1,100	.2	4.7	466,726	91.3	Grading.....	23,500	1,100	.2	4.7	466,726	91.3
Street paving.....	1,635,599	23,490	4.1	1.4	3,010,222	97.1	Street paving.....	1,635,599	23,490	4.1	1.4	3,010,222	97.1
Sewer, gas, water, conduit, Waterworks.....	325,588	35,050	6.2	10.8	1,481,473	72.4	Sewer, gas, water, conduit, Waterworks.....	325,588	35,050	6.2	10.8	1,481,473	72.4
Dredging, river, harbor, etc.....	110,614	320	.1	.3	538,280	67.8	Dredging, river, harbor, etc.....	110,614	320	.1	.3	538,280	67.8
Subcontractors.....	\$ 5,927,750	201,907	55.9	3.4	\$ 10,799,391	96.9	Subcontractors.....	\$ 5,927,750	28,000	4.9	6.9	\$ 10,799,391	96.9
Marble and tiling.....	322,711	201,907	55.9	62.0	807,939	99.1	Vehicular subway and tunnel.....	28,000	50	(?)	.2	50,683	100.0
<i>Cut stone, granite and marble</i>						<i>Lumber, rough and finished</i>							
All classes.....	12,650,354	230,022	100.0	1.9	32,302,082	78.1	All classes.....	12,650,354	680,551	100.0	5.2	32,302,082	78.1
General contractors <sup>4</sup> .....	\$ 6,722,604	184,664	78.2	2.7	\$ 21,502,691	69.6	General contractors.....	\$ 6,722,604	617,697	93.5	9.2	\$ 21,502,691	69.6
Building.....	\$ 3,715,356	182,436	77.3	4.9	\$ 13,220,378	61.0	Building.....	\$ 3,715,356	470,141	71.2	12.7	\$ 13,220,378	61.0
Building not specialized.....	3,245,901	177,280	75.1	5.5	11,578,947	59.4	Building not specialized.....	3,245,901	378,382	57.3	11.7	11,578,947	59.4
Commercial building only.....	437,840	5,156	2.2	1.2	1,444,244	69.3	Commercial building only.....	437,840	78,574	11.9	17.9	1,444,244	69.3
Residential building only.....	31,615	2,228	.9	.6	1,027,000	91.5	Residential building only.....	31,615	13,185	2.0	41.7	197,187	49.9
Dredging, river, harbor, etc.....	403,116	2,228	.9	.6	1,027,000	91.5	Dredging, river, harbor, etc.....	403,116	2,228	.9	.6	1,027,000	91.5
Subcontractors.....	\$ 5,927,750	51,358	21.8	.9	\$ 10,799,391	96.9	Subcontractors.....	\$ 5,927,750	4,625	.8	.1	\$ 10,799,391	96.9
Concreting.....	65,465	14,000	6.9	21.4	201,000	90.0	Concreting.....	65,465	4,600	.8	7.0	201,000	90.0
Marble and tiling.....	322,711	37,358	15.8	11.6	807,939	99.1	Marble and tiling.....	322,711	25	(?)	(?)	807,939	99.1

See footnotes at end of table.

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>		
	Cost of all materials distributed by kind	Amount	Percent of—					Cost of all distributed materials	Cost of all materials distributed by kind	Amount	Percent of—			Cost of all distributed materials	
			Total cost	Cost of distributed materials							Total cost				Cost of distributed materials
<b>SEATTLE—Continued</b>						<b>SEATTLE—Continued</b>									
<i>Lumber, rough and finished—Continued</i>						<i>Paints, varnishes, glass—Continued</i>									
<b>General contractors—Con.</b>						<b>General contractors—Con.</b>									
Highway.....	\$135,826	\$36,821	5.6	27.1	\$1,132,637	79.3	Street paving.....	\$1,635,599	\$2,451	0.8	0.1	\$3,010,222	97.1		
Bridge and culvert.....	169,368	45,761	6.9	27.0	344,663	80.1	Dredging, river, harbor, etc.....	403,116	4,250	1.5	1.1	1,027,000	91.5		
Grading.....	23,500	5,707	.9	24.3	466,726	91.3	<b>Subcontractors.....</b>	\$5,927,750	232,055	79.9	3.9	\$10,799,391	98.9		
Street paving.....	1,635,599	29,667	4.5	1.8	3,010,222	97.1	Painting and decorating.....	100,275	98,795	34.0	98.5	450,156	99.8		
Waterworks.....	119,614	9,600	1.5	8.0	538,280	67.8	Glass and glazing.....	123,936	42,780	100.0	100.0	178,569	100.0		
Dredging, river, harbor, etc.....	403,116	20,000	3.0	5.0	1,027,000	91.5	Roofing and sheet-metal work.....	355,087	1,306	.4	.4	747,159	100.0		
<b>Subcontractors.....</b>	\$5,927,750	42,554	6.5	.7	\$10,799,391	96.9	Roofing.....	43,004	42	(?)	.1	74,683	100.0		
Concreting.....	65,465	1,000	.2	1.5	201,000	90.0	Sheet-metal work.....	311,993	1,264	.4	.4	672,476	100.0		
Roofing and sheet-metal work.....	355,087	588	.1	.2	747,159	100.0	Steel erection.....	2,169,000	6,000	2.1	.3	2,794,000	97.4		
Roofing.....	43,004	162	(?)	.4	74,683	100.0	Marble and tiling.....	322,711	300	.1	.1	807,939	99.1		
Sheet-metal work.....	311,993	426	.1	.1	672,476	100.0	Ornamental iron.....	188,533	1,058	.6	.9	316,504	98.4		
Steel erection.....	2,169,000	40,000	6.1	1.8	2,794,000	97.4	<b>Roofing and sheet metal</b>								
Marble and tiling.....	322,711	1,216	.2	.4	807,939	99.1	All classes.....	12,650,354	408,419	100.0	3.2	32,302,082	78.1		
Ornamental iron.....	188,533	50	(?)	(?)	316,504	98.4	<b>General contractors<sup>2</sup></b>	\$6,722,604	54,637	13.4	.8	\$21,502,691	69.6		
<b>Millwork</b>							Building.....	\$3,715,356	43,087	10.7	1.2	\$13,220,378	61.0		
All classes.....	12,650,354	462,917	100.0	3.7	32,302,082	78.1	Building not specialized <sup>3</sup>	3,245,901	13,887	3.4	.4	11,578,947	59.4		
<b>General contractors<sup>2</sup></b>	\$6,722,604	481,821	99.8	6.9	\$21,502,691	69.6	Commercial building only.....	437,840	29,800	7.3	6.8	1,444,244	69.3		
Building.....	3,715,356	450,941	97.4	12.1	13,220,378	61.0	Bridge and culvert.....	169,368	1,200	.7	.7	344,663	80.1		
Building not specialized <sup>3</sup>	3,245,901	425,641	91.9	13.1	11,578,947	59.4	Dredging, river, harbor, etc.....	403,116	9,750	2.4	2.4	1,027,000	91.5		
Commercial building only.....	437,840	19,419	4.2	4.4	1,444,244	69.3	<b>Subcontractors.....</b>	\$5,927,750	353,782	86.6	6.0	\$10,799,391	96.9		
Residential building only.....	31,615	5,881	1.3	18.6	197,187	49.9	Heating and plumbing.....	\$1,767,460	29,550	5.0	1.2	\$3,301,576	94.8		
Highway.....	135,826	5,000	1.1	3.7	1,132,637	79.3	Heating and piping.....	213,616	17,050	4.2	8.0	460,891	100.0		
Bridge and culvert.....	169,368	1,080	.2	.6	344,663	80.1	Plumbing.....	718,717	3,500	.9	.5	1,202,957	93.7		
Grading.....	23,500	759	.3	3.2	466,726	91.3	Roofing and sheet-metal work.....	355,087	333,232	81.6	93.8	747,159	100.0		
Street paving.....	1,635,599	18,041	7.8	1.1	3,010,222	97.1	Roofing.....	43,004	40,609	9.9	94.2	74,683	100.0		
Sewer, gas, water, conduit.....	325,588	300	.1	.1	1,481,473	72.4	Sheet-metal work.....	311,993	292,623	71.0	93.8	672,476	100.0		
Waterworks.....	119,614	1,550	.7	1.3	538,280	67.8	<b>Heating and ventilating equipment</b>								
Dredging, river, harbor, etc.....	403,116	1,275	.6	.3	1,027,000	91.5	All classes.....	12,650,354	715,597	100.0	5.7	32,302,082	78.1		
<b>Subcontractors.....</b>	\$5,927,750	1,096	.2	(?)	\$10,799,391	96.9	<b>General contractors<sup>2</sup></b>	\$6,722,604	80,140	11.2	1.2	\$21,502,691	69.6		
Roofing and sheet-metal work.....	355,087	1,096	.2	.3	747,159	100.0	Building.....	\$3,715,356	80,140	11.2	2.2	\$13,220,378	61.0		
Sheet-metal work.....	311,993	1,066	.2	.4	672,476	100.0	Building not specialized <sup>3</sup>	3,245,901	55,140	7.7	1.7	11,578,947	59.4		
<b>Hardware, rough and finished</b>							Commercial building only.....	437,840	25,000	3.5	5.7	1,444,244	69.3		
All classes.....	12,650,354	231,794	100.0	1.8	32,302,082	78.1	<b>Subcontractors.....</b>	\$5,927,750	635,457	88.8	10.7	\$10,799,391	96.9		
<b>General contractors<sup>2</sup></b>	\$6,722,604	220,989	95.3	3.3	\$21,502,691	69.6	Heating and plumbing.....	\$1,767,460	629,457	88.0	35.6	\$3,301,576	94.8		
Building.....	3,715,356	188,362	81.3	5.1	13,220,378	61.0	Heating and piping.....	213,616	145,985	20.4	68.3	460,891	100.0		
Building not specialized <sup>3</sup>	3,245,901	172,318	74.3	5.3	11,578,947	59.4	Pipe covering.....	78,817	69,580	9.7	88.3	204,171	100.0		
Commercial building only.....	437,840	14,394	6.2	3.3	1,444,244	69.3	Plumbing and heating combined.....	718,717	203,552	28.4	28.3	1,202,957	93.7		
Residential building only.....	31,615	1,640	.7	5.2	197,187	49.9	Automatic temperature control.....	424,890	188,307	26.3	44.3	827,616	89.8		
Highway.....	135,826	4,699	2.0	3.5	1,132,637	79.3	Roofing and sheet-metal work.....	22,033	22,033	3.1	100.0	71,944	100.0		
Bridge and culvert.....	169,368	6,013	2.0	3.6	344,663	80.1	Sheet-metal work.....	311,993	6,000	.8	1.7	747,159	100.0		
Grading.....	23,500	759	.3	3.2	466,726	91.3	Sheet-metal work.....	311,993	6,000	.8	1.9	672,476	100.0		
Street paving.....	1,635,599	18,041	7.8	1.1	3,010,222	97.1	<b>Plumbing and gas fitting equipment<sup>2</sup></b>								
Sewer, gas, water, conduit.....	325,588	300	.1	.1	1,481,473	72.4	All classes.....	12,650,354	1,205,130	100.0	9.5	32,302,082	78.1		
Waterworks.....	119,614	1,550	.7	1.3	538,280	67.8	<b>General contractors<sup>2</sup></b>	\$6,722,604	127,332	10.6	1.9	\$21,502,691	69.6		
Dredging, river, harbor, etc.....	403,116	1,275	.6	.3	1,027,000	91.5	Building.....	\$3,715,356	116,332	9.7	3.1	\$13,220,378	61.0		
<b>Subcontractors.....</b>	\$5,927,750	10,805	4.7	.2	\$10,799,391	96.9	Building not specialized <sup>3</sup>	3,245,901	96,332	8.0	3.0	11,578,947	59.4		
Roofing and sheet-metal work.....	355,087	350	.2	.1	747,159	100.0	Commercial building only.....	437,840	20,000	1.7	4.6	1,444,244	69.3		
Sheet-metal work.....	311,993	350	.2	.1	672,476	100.0	Street paving.....	1,635,599	11,000	.9	.7	3,010,222	97.1		
Steel erection.....	2,169,000	3,000	1.3	.1	2,794,000	97.4	<b>Subcontractors.....</b>	\$5,927,750	1,077,798	89.4	18.2	\$10,799,391	96.9		
Marble and tiling.....	322,711	6,205	2.7	1.9	807,939	99.1	Heating and plumbing.....	\$1,767,460	1,077,798	89.4	61.6	\$3,301,576	94.8		
Ornamental iron.....	188,533	1,250	.6	.7	316,504	98.4	Heating and piping.....	213,616	40,581	3.4	19.0	460,891	100.0		
<b>Paints, varnishes, glass</b>							Plumbing.....	718,717	508,665	42.2	70.8	1,202,957	93.7		
All classes.....	12,650,354	290,604	100.0	2.3	32,302,082	78.1	Plumbing and heating combined.....	424,890	226,165	18.8	53.2	827,616	89.8		
<b>General contractors<sup>2</sup></b>	\$6,722,604	58,449	20.1	.9	\$21,502,691	69.6	Automatic sprinkler systems.....	309,387	302,387	25.1	97.7	533,997	99.8		
Building.....	3,715,356	50,000	17.5	1.4	13,220,378	61.0									
Building not specialized <sup>3</sup>	3,245,901	41,440	14.3	1.3	11,578,947	59.4									
Commercial building only.....	437,840	8,000	3.1	2.0	1,444,244	69.3									
Residential building only.....	31,615	551	.2	1.7	197,187	49.9									
Bridge and culvert.....	169,368	848	.3	.5	344,663	80.1									

See footnotes at end of table.

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
		Amount	Per cent of—						Amount	Per cent of—			
			Total cost	Cost of all distributed materials						Total cost	Cost of all distributed materials		
<b>SEATTLE—Continued</b>						<b>SPOKANE—Continued</b>							
<i>Electrical appliances and supplies<sup>2</sup></i>						<i>Tile, facing, terra cotta, floor, and wall</i>							
All classes.....	\$12,650,354	\$972,043	100.0	7.7	\$32,302,082	78.1	All classes.....	\$2,047,872	\$54,841	100.0	2.7	\$5,072,734	80.0
General contractors <sup>3</sup> .....	\$ 6,722,604	242,776	25.0	5.1	\$21,502,691	69.0	General contractors.....	\$ 1,324,465	20,620	37.0	1.6	\$ 3,621,485	85.8
Building.....	\$ 3,715,350	67,239	6.9	1.8	\$13,220,378	61.0	Building.....	\$ 688,191	20,620	37.0	3.0	\$ 1,546,254	84.9
Building not specialized.....	\$ 3,245,901	57,239	5.9	1.8	\$11,578,947	59.4	Building not specialized.....	\$ 600,821	20,620	37.0	3.1	\$ 1,503,554	85.2
Commercial building only.....	437,840	10,000	1.0	2.3	1,444,244	69.3	Residential building only.....	27,370	2,200	1.9	8.0	42,700	72.1
Highway.....	135,826	672	.1	.5	1,132,637	79.3	Highway.....	551,943	1,770	1.5	.3	1,308,433	84.0
Bridge and culvert.....	169,368	1,700	.2	1.0	344,663	80.1	Grading.....	20,500	262	2.2	1.9	603,108	92.0
Street paving.....	1,635,599	3,728	.4	.2	3,010,222	97.1	Street paving.....	63,831	28,880	25.0	45.2	163,600	100.0
Dredging, river, harbor, etc.....	403,116	2,850	.3	.7	1,027,000	91.5	Subcontractors.....	\$ 723,407	550	.8	.1	\$ 1,451,249	98.8
Central station, light and power plant.....	166,587	166,587	17.1	100.0	224,629	100.0	Roofing and sheet-metal work.....	5,610	40	(?)	.7	25,000	100.0
Subcontractors.....	\$ 5,927,750	730,167	75.0	12.3	\$10,799,391	96.9	Sheet-metal work.....	5,610	40	(?)	.7	25,000	100.0
Electrical.....	731,573	728,823	74.9	99.6	1,536,040	99.5	Marble and tiling.....	41,727	2,709	2.3	6.5	97,700	100.0
Roofing and sheet-metal work.....	\$ 355,087	1,194	.1	.3	\$ 747,159	100.0	<i>Cement</i>						
Sheet-metal work.....	311,993	1,194	.1	.4	672,476	100.0	All classes.....	2,047,872	115,677	100.0	5.6	5,072,734	80.0
Marble and tiling.....	322,711	150	(?)	(?)	807,939	99.1	General contractors.....	\$ 1,324,465	112,928	97.0	8.5	\$ 3,621,485	85.8
<i>Pipe: Cast-iron, sheet and tube steel, etc.</i>							Building.....	\$ 688,191	82,018	70.0	11.9	\$ 1,546,254	84.9
All classes.....	\$12,650,354	309,719	100.0	2.4	\$32,302,082	78.1	Building not specialized.....	\$ 600,821	79,816	69.0	12.1	\$ 1,503,554	85.2
General contractors.....	\$ 6,384,260	294,532	95.1	4.6	\$20,518,301	69.9	Residential building only.....	27,370	2,200	1.9	8.0	42,700	72.1
Building.....	\$ 3,377,012	9,359	3.0	.3	\$12,285,988	61.0	Highway.....	551,943	1,770	1.5	.3	1,308,433	84.0
Building not specialized.....	\$ 2,907,557	9,359	3.0	.3	\$10,594,557	59.4	Grading.....	20,500	262	2.2	1.9	603,108	92.0
Highway.....	135,826	6,140	2.0	4.5	1,132,637	79.3	Street paving.....	63,831	28,880	25.0	45.2	163,600	100.0
Bridge and culvert.....	169,368	600	.2	4.4	344,663	80.1	Subcontractors.....	\$ 723,407	2,749	2.4	.4	\$ 1,451,249	98.8
Grading.....	23,500	3,600	1.2	15.3	466,726	91.3	Roofing and sheet-metal work.....	5,610	40	(?)	.7	25,000	100.0
Street paving.....	1,635,599	89,100	28.8	5.4	3,010,222	97.4	Sheet-metal work.....	5,610	40	(?)	.7	25,000	100.0
Sewer, gas, water, conduit, waterworks.....	\$ 325,588	67,863	21.9	20.8	\$ 1,481,473	72.4	Marble and tiling.....	41,727	2,709	2.3	6.5	97,700	100.0
Dredging, river, harbor, etc.....	119,614	93,373	30.1	78.1	588,280	67.8	<i>Plaster, etc.</i>						
Subcontractors.....	\$ 5,927,750	15,187	4.9	.3	\$10,799,391	96.0	All classes.....	2,047,872	38,731	100.0	1.9	5,072,734	80.0
Electrical.....	731,573	500	.2	.1	1,536,040	99.5	General contractors.....	\$ 1,324,465	38,650	99.8	2.9	\$ 3,621,485	85.8
Heating and plumbing.....	\$ 1,767,460	10,000	3.2	.6	\$ 3,301,576	94.8	Building.....	\$ 688,191	38,650	99.8	5.6	\$ 1,546,254	84.9
Plumbing.....	718,717	3,000	1.0	.4	1,202,957	93.7	Building not specialized.....	\$ 600,821	38,100	98.4	5.8	\$ 1,503,554	85.2
Automatic sprinkler systems.....	309,387	7,000	2.3	2.3	533,997	99.8	Residential building only.....	27,370	550	1.4	2.0	42,700	72.1
Ornamental iron.....	188,538	4,687	1.5	2.5	316,504	98.4	Subcontractors.....	\$ 723,407	81	.2	(?)	\$ 1,451,249	98.8
<i>Ready mixed concrete</i>							Marble and tiling.....	41,727	81	.2	.2	97,700	100.0
All classes.....	\$12,650,354	227,191	100.0	1.8	\$32,302,082	78.1	<i>Structural steel</i>						
General contractors.....	\$ 6,384,260	227,191	100.0	3.6	\$20,518,301	69.0	All classes.....	\$ 2,047,872	33,181	100.0	1.6	\$ 5,072,734	80.0
Building.....	\$ 3,377,012	141,691	62.4	4.2	\$12,235,988	61.0	General contractors.....	\$ 1,324,465	33,181	100.0	2.5	\$ 3,621,485	85.8
Building not specialized.....	\$ 2,907,557	107,081	47.1	3.7	\$10,594,557	59.4	Building.....	\$ 688,191	33,181	100.0	4.8	\$ 1,546,254	84.9
Commercial building only.....	437,840	34,640	15.2	7.9	1,444,244	69.3	Building not specialized.....	\$ 600,821	33,181	100.0	5.0	\$ 1,503,554	85.2
Sewer, gas, water, conduit.....	325,588	85,500	37.6	26.3	1,481,473	72.4	<i>Reinforcing steel</i>						
<i>SPOKANE</i>							All classes.....	\$ 2,047,872	43,687	100.0	2.1	\$ 5,072,734	80.0
<i>Sand, gravel, stone, slag, cinders, etc.<sup>2</sup></i>							General contractors.....	\$ 1,324,465	43,687	100.0	3.3	\$ 3,621,485	85.8
All classes.....	2,047,872	297,268	100.0	14.5	5,072,734	80.0	Building.....	\$ 688,191	36,546	83.7	5.3	\$ 1,546,254	84.9
General contractors.....	1,324,465	296,595	99.8	22.4	3,621,485	85.8	Building not specialized.....	\$ 600,821	36,546	83.7	5.5	\$ 1,503,554	85.2
Building.....	688,191	41,819	14.1	6.1	1,546,254	84.9	Residential building only.....	27,370	1,200	4.4	4.4	42,700	72.1
Building not specialized.....	600,821	40,619	13.7	6.1	1,503,554	85.2	Highway.....	551,943	240,734	81.0	43.6	1,308,433	84.0
Commercial building only.....	27,370	1,200	4.4	4.4	42,700	72.1	Grading.....	20,500	837	3	4.1	603,108	92.0
Highway.....	551,943	240,734	81.0	43.6	1,308,433	84.0	Street paving.....	63,831	13,205	4.4	20.7	163,600	100.0
Grading.....	20,500	837	3	4.1	603,108	92.0	Subcontractors.....	\$ 723,407	673	.2	.1	\$ 1,451,249	98.8
Street paving.....	63,831	13,205	4.4	20.7	163,600	100.0	Marble and tiling.....	41,727	673	.2	1.6	97,700	100.0
Subcontractors.....	\$ 723,407	673	.2	.1	\$ 1,451,249	98.8	<i>Brick (face, common, fire, paving, etc.)</i>						
Marble and tiling.....	41,727	673	.2	1.6	97,700	100.0	All classes.....	2,047,872	69,700	100.0	3.4	5,072,734	80.0
<i>Reinforcing steel</i>							General contractors.....	\$ 1,324,465	69,620	99.0	5.3	\$ 3,621,485	85.8
All classes.....	2,047,872	69,700	100.0	3.4	5,072,734	80.0	Building.....	\$ 688,191	68,326	98.0	9.9	\$ 1,546,254	84.9
General contractors.....	\$ 1,324,465	69,620	99.0	5.3	\$ 3,621,485	85.8	Building not specialized.....	\$ 600,821	67,426	96.7	10.2	\$ 1,503,554	85.2
Building.....	\$ 688,191	68,326	98.0	9.9	\$ 1,546,254	84.9	Residential building only.....	27,370	900	1.3	3.3	42,700	72.1
Building not specialized.....	\$ 600,821	67,426	96.7	10.2	\$ 1,503,554	85.2	Highway.....	551,943	1,294	1.9	2.0	1,308,433	84.0
Residential building only.....	27,370	900	1.3	3.3	42,700	72.1	Grading.....	20,500	837	3	4.1	603,108	92.0
Highway.....	551,943	1,294	1.9	2.0	1,308,433	84.0	Street paving.....	63,831	13,205	4.4	20.7	163,600	100.0
Grading.....	20,500	837	3	4.1	603,108	92.0	Subcontractors.....	\$ 723,407	80	.1	(?)	\$ 1,451,249	98.8
Street paving.....	63,831	13,205	4.4	20.7	163,600	100.0	Roofing and sheet-metal work.....	5,610	80	.1	1.4	25,000	100.0
Subcontractors.....	\$ 723,407	80	.1	(?)	\$ 1,451,249	98.8	Sheet-metal work.....	5,610	80	.1	1.4	25,000	100.0
Roofing and sheet-metal work.....	5,610	80	.1	1.4	25,000	100.0	Marble and tiling.....	41,727	318	.3	.8	97,700	100.0
Sheet-metal work.....	5,610	80	.1	1.4	25,000	100.0							

See footnotes at end of table.



TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
		Amount	Per cent of—						Amount	Per cent of—			
			Total cost	Cost of all distributed materials						Total cost	Cost of all distributed materials		
<b>SPOKANE—Continued</b>						<b>SPOKANE—Continued</b>							
<i>Millwork</i>						<i>Pipe: Cast-iron, sheet and tube steel, etc.</i>							
All classes.....	\$ 2,047,872	\$137,417	100.0	6.7	\$5,072,734	89.0	All classes.....	\$2,047,872	\$32,761	100.0	1.6	\$5,072,734	89.0
General contractors.....	\$ 1,324,465	137,417	100.0	10.4	\$ 3,621,485	85.8	General contractors.....	\$ 1,324,465	14,007	42.8	1.1	\$ 3,621,485	85.8
Building.....	688,191	137,203	99.8	19.9	1,546,254	84.9	Highway.....	551,943	7,873	24.0	1.4	1,308,433	84.0
Building not specialized.....	660,821	131,603	95.8	19.9	1,503,554	85.2	Grading.....	20,500	4,367	13.3	21.3	603,108	92.0
Residential building only.....	27,370	5,600	4.1	20.5	42,700	72.1	Street paving.....	63,831	1,787	5.4	2.8	163,600	100.0
Street paving.....	63,831	214	.2	.3	163,600	100.0	Subcontractors.....	\$ 723,407	18,754	57.2	2.6	\$ 1,451,249	98.8
<i>Hardware, rough and finished</i>							Heating and plumbing.....	\$ 505,633	18,754	57.2	3.7	\$ 824,268	97.6
All classes.....	\$ 2,047,872	40,789	100.0	2.0	\$ 5,072,734	89.0	Heating and piping.....	339,370	13,954	42.0	4.1	557,668	96.4
General contractors.....	1,324,465	40,789	100.0	3.1	3,621,485	85.8	Plumbing.....	136,263	4,800	14.7	3.5	205,730	100.0
Building.....	688,191	23,323	57.2	3.4	1,546,254	84.9	All classes.....	2,047,872	293,875	100.0	14.4	5,072,734	80.0
Building not specialized.....	660,821	22,503	55.2	3.4	1,503,554	85.2	General contractors.....	\$ 1,324,465	293,805	100.0	22.2	\$ 3,621,485	85.8
Residential building only.....	27,370	825	2.0	3.0	42,700	72.1	Highway.....	551,943	290,057	98.7	52.6	1,308,433	84.0
Highway.....	551,943	7,417	18.2	1.3	1,808,433	84.0	Street paving.....	63,831	3,748	1.3	5.9	163,600	100.0
Grading.....	20,500	9,344	22.9	45.6	603,108	92.0	Subcontractors.....	\$ 723,407	70	(?)	(?)	\$ 1,451,249	98.8
Street paving.....	63,831	700	1.7	1.1	163,600	100.0	Marble and tiling.....	41,727	70	(?)	.2	97,700	100.0
<i>Paints, varnishes, glass</i>							<b>TACOMA</b>						
All classes.....	2,047,872	31,525	100.0	1.5	5,072,734	89.0	<i>Sand, gravel, stone, slag, cinders, etc.<sup>2</sup></i>						
General contractors.....	\$ 1,324,465	6,651	21.1	.5	\$ 3,621,485	85.8	All classes.....	2,602,213	303,089	100.0	11.6	5,731,336	91.9
Building.....	688,191	6,325	20.1	.9	1,546,254	84.9	General contractors.....	\$ 2,060,353	292,616	96.5	14.2	\$ 4,712,000	89.0
Building not specialized.....	660,821	4,740	15.0	.7	1,503,554	85.2	Building.....	\$ 1,196,247	161,310	49.9	12.6	\$ 2,591,827	85.2
Residential building only.....	27,370	1,585	5.0	5.8	42,700	72.1	Building not specialized.....	929,422	135,810	44.8	14.6	1,934,601	84.5
Grading.....	20,500	320	1.0	1.6	603,108	92.0	Commercial building only.....	103,575	1,500	.5	1.4	353,000	88.7
Subcontractors.....	\$ 723,407	24,874	78.9	3.4	\$ 1,451,249	98.8	Manufacturing building only.....	154,000	14,000	4.6	9.1	238,000	97.1
Painting and decorating.....	24,874	24,874	78.9	100.0	110,982	100.0	Highway.....	289,639	90,000	19.8	20.7	695,045	89.5
<i>Heating and ventilating equipment<sup>11</sup></i>							Street paving.....	218,676	49,306	16.3	22.5	365,336	99.5
All classes.....	2,047,872	274,268	100.0	13.4	5,072,734	89.0	Sewer, gas, water, conduit.....	48,530	12,000	4.0	24.7	100,650	97.0
General contractors.....	\$ 1,324,465	1,585	.6	.1	\$ 3,621,485	85.8	Waterworks.....	178,750	20,000	6.0	11.2	291,737	100.0
Building.....	688,191	1,585	.6	.2	1,546,254	84.9	Subcontractors.....	\$ 541,860	10,473	3.5	1.9	\$ 1,019,336	100.0
Residential building only.....	27,370	1,585	.6	5.8	42,700	72.1	Concrete.....	33,808	10,396	3.4	30.8	51,396	100.0
Subcontractors.....	\$ 723,407	272,633	99.4	37.7	\$ 1,451,249	98.8	Roofing and sheet-metal work.....	\$ 48,462	77	(?)	.2	\$ 108,710	100.0
Heating and plumbing.....	505,633	267,683	97.6	62.9	824,268	97.6	Roofing.....	15,941	77	(?)	.5	31,253	100.0
Heating and piping.....	339,370	220,125	80.3	64.9	557,668	96.4	<i>Brick (face, common, fire, paving, etc.)</i>						
Plumbing.....	136,263	32,568	11.9	23.9	205,730	100.0	All classes.....	\$ 2,602,213	56,868	100.0	2.2	\$ 5,731,336	91.9
Plumbing and heating combined.....	30,000	15,000	5.0	50.0	60,870	100.0	General contractors.....	\$ 2,060,353	56,868	100.0	2.8	\$ 4,712,000	89.0
Roofing and sheet-metal work.....	5,610	5,000	1.8	89.1	25,000	100.0	Building.....	\$ 1,196,247	50,597	89.0	4.2	\$ 2,591,827	85.2
Sheet-metal work.....	5,610	5,000	1.8	89.1	25,000	100.0	Building not specialized.....	929,422	47,397	33.3	5.1	1,934,601	84.5
<i>Plumbing and gas fitting equipment<sup>11</sup></i>							Manufacturing building only.....	154,000	3,000	5.3	1.9	238,000	97.1
All classes.....	2,047,872	222,206	100.0	10.9	5,072,734	89.0	Residential building only.....	9,250	200	.4	2.2	69,226	49.3
General contractors.....	\$ 1,324,465	3,400	1.5	.3	\$ 3,621,485	85.8	Highway.....	289,639	1,000	1.8	.3	695,045	88.2
Building.....	688,191	3,400	1.5	.5	1,546,254	84.9	Street paving.....	218,676	201	.4	.1	365,336	99.5
Residential building only.....	27,370	3,400	1.5	12.4	42,700	72.1	Sewer, gas, water, conduit.....	48,530	520	.9	1.1	100,650	97.0
Subcontractors.....	\$ 723,407	218,806	98.5	30.2	\$ 1,451,249	98.8	Waterworks.....	178,750	4,560	8.0	2.5	291,737	100.0
Heating and plumbing.....	505,633	218,806	98.5	43.3	824,268	97.6	<i>Concrete and cinder block</i>						
Heating and piping.....	339,370	105,291	47.4	31.0	557,668	96.4	All classes.....	\$ 2,602,213	131,508	100.0	5.1	\$ 5,731,336	91.9
Plumbing.....	136,263	98,515	44.3	72.3	205,730	100.0	General contractors.....	\$ 2,060,353	131,508	100.0	6.4	\$ 4,712,000	89.0
Plumbing and heating combined.....	30,000	15,000	6.8	50.0	60,870	100.0	Building.....	\$ 1,196,247	44,166	33.6	3.7	\$ 2,591,827	85.2
<i>Electrical appliances and supplies</i>							Building not specialized.....	929,422	4,166	3.2	.4	1,934,601	84.5
All classes.....	2,047,872	140,388	100.0	6.9	5,072,734	89.0	Commercial building only.....	103,575	40,000	30.4	38.6	350,000	88.7
General contractors.....	\$ 1,324,465	825	.6	.1	\$ 3,621,485	85.8	Highway.....	289,639	87,342	66.4	30.2	695,045	88.2
Building.....	688,191	825	.6	.1	1,546,254	84.9	<i>Cut stone, granite and marble</i>						
Residential building only.....	27,370	825	.6	3.0	42,700	72.1	All classes.....	2,602,213	142,413	100.0	5.5	\$ 5,731,336	91.9
Subcontractors.....	\$ 723,407	139,563	99.4	19.3	\$ 1,451,249	98.8	General contractors.....	\$ 2,060,353	6,720	4.7	.3	\$ 4,712,000	89.0
Electrical.....	139,313	139,313	99.2	100.0	363,513	100.0	Building.....	\$ 1,196,247	6,720	4.7	.6	\$ 2,591,827	85.2
Roofing and sheet-metal work.....	5,610	250	.2	4.5	25,000	100.0	Building not specialized.....	929,422	6,720	4.7	.7	1,934,601	84.5
Sheet-metal work.....	5,610	250	.2	4.5	25,000	100.0	Commercial building only.....	103,575	40,000	30.4	38.6	350,000	88.7
							Highway.....	289,639	87,342	66.4	30.2	695,045	88.2
							<i>Subcontractors.....</i>						
							Marble and tiling.....	\$ 541,860	135,693	95.3	25.0	\$ 1,019,336	100.0
							Marble and tiling.....	135,693	135,693	95.3	100.0	184,007	100.0

See footnotes at end of table.



TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>		
	Cost of all materials distributed by kind	Amount	Per cent of—					Cost of all materials distributed	Cost of all materials distributed by kind	Amount	Per cent of—			Cost of all materials distributed	
			Total cost	Cost of all distributed materials							Total cost				Cost of all distributed materials
<b>TACOMA—Continued</b>						<b>TACOMA—Continued</b>									
<i>Cement</i> <sup>2</sup>						<i>Hardware, rough and finished</i>									
All classes.....	\$2,602,213	\$459,476	100.0	17.7	\$5,781,330	91.9	All classes.....	\$2,602,213	\$38,998	100.0	1.5 <sup>10</sup>	\$5,781,336	91.9		
General contractors.....	\$2,000,353	436,064	94.9	21.2	\$4,712,000	89.9	General contractors.....	\$2,000,353	38,998	100.0	1.9	\$4,712,000	89.9		
Building.....	\$1,196,247	257,951	56.1	21.6	\$2,591,827	85.2	Building.....	\$1,196,247	23,316	59.8	1.9	\$2,591,827	85.2		
Building not specialized.....	929,422	233,471	60.8	25.1	1,934,601	84.5	Building not specialized.....	929,422	21,849	60.0	2.4	1,934,601	84.5		
Commercial building only.....	103,575	3,480	.8	3.4	350,000	88.7	Commercial building only.....	103,575	667	1.7	.6	350,000	88.7		
Manufacturing building only.....	154,000	21,000	4.6	13.6	238,000	97.1	Residential building only.....	9,250	800	2.1	8.6	69,226	49.3		
Highway.....	289,639	25,000	5.4	8.6	695,045	88.2	Highway.....	289,639	15,000	38.5	5.2	695,045	88.2		
Street paving.....	218,676	125,613	27.3	57.4	365,336	99.5	Street paving.....	218,676	682	1.7	.3	365,336	99.5		
Waterworks.....	178,750	27,600	6.0	15.4	291,737	100.0									
Subcontractors.....	\$541,860	23,412	5.1	4.3	\$1,019,336	100.0									
Concreting.....	33,808	23,412	5.1	69.2	51,396	100.0									
<i>Structural steel</i>						<i>Roofing and sheet metal</i>									
All classes.....	2,602,213	50,181	100.0	1.9	5,731,336	91.9	All classes.....	2,602,213	66,965	100.0	2.6	5,731,336	91.9		
General contractors.....	\$2,060,353	26,840	53.5	1.3	\$4,712,000	89.0	General contractors.....	\$2,060,353	15,580	23.3	.8	\$4,712,000	89.9		
Building.....	\$1,196,247	26,840	53.5	2.2	\$2,591,827	85.2	Building.....	\$1,196,247	15,529	23.2	1.3	\$2,591,827	85.2		
Building not specialized.....	929,422	12,840	25.6	1.4	1,934,601	84.5	Building not specialized.....	929,422	13,129	19.6	1.4	1,934,601	84.5		
Manufacturing building only.....	154,000	14,000	27.9	9.1	238,000	97.1	Manufacturing building only.....	154,000	2,400	3.6	1.6	238,000	97.1		
Street paving.....	\$541,860	23,341	46.5	4.3	\$1,019,336	100.0	Street paving.....	218,676	51	.1	(7)	365,336	99.5		
Steel erection.....	25,523	23,341	46.5	91.5	92,202	100.0	Subcontractors.....	\$541,860	51,385	76.7	9.5	\$1,019,336	100.0		
<i>Reinforcing steel</i>						<i>Heating and plumbing</i>									
All classes.....	\$2,602,213	84,995	100.0	3.3	5,731,336	91.9	Heating and plumbing.....	\$218,308	3,000	4.5	1.4	\$411,893	100.0		
General contractors.....	\$2,060,353	84,995	100.0	4.1	\$4,712,000	89.9	Pipe covering.....	17,000	3,000	4.5	17.6	40,200	100.0		
Building.....	\$1,196,247	79,142	93.1	6.6	\$2,591,827	85.2	Roofing and sheet-metal work.....	48,402	48,385	72.3	90.8	108,710	100.0		
Building not specialized.....	929,422	65,142	76.6	7.0	1,934,601	84.5	Roofing.....	15,941	15,864	23.7	90.5	31,263	100.0		
Commercial building only.....	103,575	1,000	1.2	1.0	350,000	88.7	Roofing and sheet metal combined.....	32,521	32,521	48.6	100.0	77,457	100.0		
Manufacturing building only.....	154,000	13,000	15.3	8.4	238,000	97.1	<i>Heating and ventilating equipment</i>								
Highway.....	289,639	5,345	6.3	1.8	695,045	88.2	All classes.....	2,602,213	127,688	100.0	4.9	5,731,336	91.9		
Street paving.....	218,676	208	.2	.1	365,336	99.5	General contractors.....	\$2,060,353	22,450	17.6	1.1	\$4,712,000	89.9		
Sewer, gas, water, conduit.....	48,530	300	.4	.6	100,050	97.0	Building.....	\$1,196,247	22,450	17.6	1.9	\$2,591,827	85.2		
<i>Lumber, rough and finished</i>						<i>Plumbing and gas fitting equipment</i>									
All classes.....	\$2,602,213	203,837	100.0	7.8	5,731,336	91.9	Building not specialized.....	929,422	3,950	3.1	.4	1,934,601	84.5		
General contractors.....	\$2,060,353	203,837	100.0	9.9	\$4,712,000	89.9	Commercial building only.....	103,575	15,000	11.8	14.5	350,000	88.7		
Building.....	\$1,196,247	170,876	83.8	14.3	\$2,591,827	85.2	Manufacturing building only.....	154,000	3,500	2.7	2.3	238,000	97.1		
Building not specialized.....	929,422	162,942	75.0	16.5	1,934,601	84.5	Subcontractors.....	\$541,860	105,138	82.4	10.4	\$1,019,336	100.0		
Commercial building only.....	103,575	3,434	1.7	1.7	350,000	88.7	Heating and plumbing.....	218,308	105,138	82.4	48.2	411,893	100.0		
Manufacturing building only.....	154,000	13,500	6.6	8.8	238,000	97.1	Heating and piping.....	119,059	72,773	67.0	61.1	211,741	100.0		
Residential building only.....	9,250	1,000	.5	10.8	69,226	49.3	Pipe covering.....	17,000	14,000	11.0	82.4	40,200	100.0		
Highway.....	289,639	15,409	7.0	5.3	695,045	88.2	Plumbing.....	82,249	18,365	14.4	22.9	150,952	100.0		
Street paving.....	218,676	10,416	5.1	4.8	365,336	99.5	<i>Plumbing and gas fitting equipment</i>								
Sewer, gas, water, conduit.....	48,530	900	.4	1.9	100,050	97.0	All classes.....	2,602,213	168,991	100.0	6.1	5,731,336	91.9		
Waterworks.....	178,750	3,000	1.5	1.7	291,737	100.0	General contractors.....	\$2,060,353	49,136	30.9	2.4	\$4,712,000	89.9		
Dredging, river, harbor, etc.....	128,311	3,245	1.6	2.5	627,005	100.0	Building.....	\$1,196,247	30,606	19.3	2.6	\$2,591,827	85.2		
<i>Millwork</i>						<i>Plumbing</i>									
All classes.....	\$2,602,213	92,672	100.0	3.6	5,731,336	91.9	Building not specialized.....	929,422	15,106	9.5	1.6	1,934,601	84.5		
General contractors.....	\$2,060,353	92,672	100.0	4.5	\$4,712,000	89.9	Commercial building only.....	103,575	15,000	9.4	14.5	350,000	88.7		
Building.....	\$1,196,247	92,672	100.0	7.7	\$2,591,827	85.2	Manufacturing building only.....	154,000	500	.3	.3	238,000	97.1		
Building not specialized.....	929,422	63,178	68.2	6.8	1,934,601	84.5	Sewer, gas, water, conduit.....	48,530	18,530	11.7	38.2	100,050	97.0		
Commercial building only.....	103,575	23,494	25.4	22.7	350,000	88.7	Subcontractors.....	\$541,860	109,855	69.1	20.3	\$1,019,336	100.0		
Residential building only.....	9,250	6,000	6.5	64.9	69,226	49.3	Heating and plumbing.....	218,308	109,855	69.1	50.3	411,893	100.0		
							Heating and piping.....	119,059	45,971	28.9	38.6	211,741	100.0		
							Plumbing.....	82,249	63,884	40.2	77.7	160,952	100.0		

See footnotes at end of table.

CONSTRUCTION—WASHINGTON

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
		Amount	Per cent of—						Amount	Per cent of—			
			Total cost	Cost of all distributed materials						Total cost	Cost of all distributed materials		
<b>TACOMA—Continued</b>						<b>TACOMA—Continued</b>							
<i>Electrical appliances and supplies</i>						<i>Pipe: Cast-iron, sheet and tube steel, etc.</i>							
All classes.....	\$2,602,213	\$105,607	100.0	4.1	\$5,731,336	91.0	All classes.....	\$2,602,213	\$156,152	100.0	6.0	\$5,731,336	91.9
General contractors.....	\$2,080,353	29,541	28.0	1.4	\$4,712,000	89.9	General contractors.....	\$2,080,353	156,152	100.0	7.6	\$4,712,000	89.9
Building.....	\$1,196,247	23,848	22.6	2.0	\$2,591,827	85.2	Highway.....	289,639	57,552	38.9	19.9	695,045	88.2
Building not specialized.....	929,422	22,846	21.6	2.5	1,934,001	84.5	Waterworks.....	178,750	92,000	58.9	51.5	291,737	100.0
Manufacturing building only.....	154,000	1,000	.9	.6	238,000	97.1	Dredging, river, harbor, etc.....	128,311	6,800	4.2	5.1	627,005	100.0
Street paving.....	218,676	195	.2	.1	365,336	99.5	<i>Wood piling and timber</i>						
Sewer, gas, water, conduit.....	48,530	1,000	.9	2.1	100,050	97.0	All classes.....	\$2,602,213	102,140	100.0	3.9	\$5,731,336	91.9
Dredging, river, harbor, etc.....	128,311	4,500	4.3	3.5	627,005	100.0	General contractors.....	\$2,080,353	102,140	100.0	5.0	\$4,712,000	89.9
Subcontractors.....	\$541,800	76,066	72.0	14.0	\$1,019,336	100.0	Street paving.....	218,676	150	.1	.1	365,336	99.5
Electrical.....	76,066	76,066	72.0	100.0	141,074	100.0	Dredging, river, harbor, etc.....	128,311	101,990	99.9	79.5	627,005	100.0
<i>Pipe: Drain tile, vitrified, concrete, segment tile, corrugated</i>						<i>Machinery</i>							
All classes.....	2,002,213	47,435	100.0	1.8	5,731,336	91.9	All classes.....	\$2,602,213	60,100	100.0	2.3	\$5,731,336	91.9
General contractors.....	\$2,080,353	47,120	69.3	2.3	\$4,712,000	89.9	General contractors.....	\$2,080,353	60,100	100.0	2.9	\$4,712,000	89.9
Building.....	\$1,196,247	5,744	12.1	.5	\$2,591,827	85.2	Building.....	\$1,196,247	60,100	100.0	5.0	\$2,591,827	85.2
Building not specialized.....	929,422	5,744	12.1	.6	1,934,001	84.5	Manufacturing building only.....	154,000	60,100	100.0	39.0	238,000	97.1
Highway.....	289,639	9,000	19.0	3.1	695,045	88.2							
Street paving.....	218,676	7,076	14.9	3.2	365,336	99.5							
Sewer, gas, water, conduit.....	48,530	15,000	31.6	30.9	100,050	97.0							
Waterworks.....	178,750	10,300	21.7	5.8	291,737	100.0							
Subcontractors.....	\$541,800	315	.7	.1	\$1,019,336	100.0							
Heating and plumbing.....	\$218,308	315	.7	.1	\$411,893	100.0							
Heating and piping.....	119,050	315	.7	.3	211,741	100.0							

1 Based upon the difference between the total value of all construction business reported and the value of subcontract work let.  
 2 See footnote 3 of Table 9 on p. 1263.  
 3 Includes cost of materials reported by operative builders who did not include the designated materials in their distributed lists.  
 4 Includes construction work reported by operative builders who did not include the designated materials in their distributed lists.  
 5 Includes cost of materials reported by establishments which did not include designated material in their distributed lists.  
 6 Includes construction work reported by establishments which did not include the designated material in their distributed lists.  
 7 Less than one-tenth of 1 per cent.  
 8 Includes operative builders.  
 9 Includes cost of materials reported by subcontracting establishments which did not include the designated material in their distributed lists.  
 10 Includes construction work reported by subcontracting establishments which did not include the designated material in their distributed lists.  
 11 See footnote 5 of Table 9 on p. 1263.

CONSTRUCTION—WASHINGTON

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TABLE 11.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929

[This table is made up in three sections; the second section begins on p. 1275, the third section on p. 1276]

CLASSIFICATION OF ESTABLISHMENTS	Total cost of all materials	COST OF ALL MATERIALS DISTRIBUTED BY KIND		Sand, gravel, crushed stone, slag, cinders, etc.	Brick (face, common, fire, paving, etc.)	Tile (fire-proofing)	Tile, facing, terra cotta, floor, and wall	Concrete and cinder block	Cut stone, granite and marble	Rip-rap, rubble, etc.	Cement	Lime	Plaster, etc.	Structural steel
		Amount	Per cent of total											
<b>WASHINGTON</b>	\$25,015,676	\$19,672,192	76.8	\$1,917,362	\$430,082	\$63,123	\$492,297	\$279,632	\$449,979	\$39,747	\$2,271,204	\$35,271	\$95,432	\$2,440,376
Operative builders	338,344	338,344	100.0		20,236		2,599		9,816		28,822		70	
General contractors	16,410,533	11,485,586	70.0	1,859,515	388,708	58,823	243,570	251,647	252,562	31,306	2,160,830	22,161	81,400	306,528
Building	9,489,857	6,284,810	66.2	633,740	321,776	58,658	217,214	135,590	250,334		632,115	22,008	79,327	189,679
Building not specialized	7,600,890	5,340,991	69.7	595,134	289,878	55,773	201,614	81,660	245,173		559,786	19,006	68,178	160,429
Commercial building only	739,181	625,363	84.6	20,716	23,640	2,880	6,600	53,000	5,156		46,549	1,862	10,599	15,250
Manufacturing building only	864,700	154,000	17.8	14,000	3,000						21,000			14,000
Residential building only	219,086	158,436	72.3	3,900	5,258		8,000				4,800	240	550	
Highway	2,018,455	1,433,613	71.0	409,614	5,013		701	87,342			229,722	95	2,000	7,200
Bridge and culvert	410,120	302,786	73.8	25,472	766	165	155				46,288	58	82	82,218
Grading	91,025	71,025	78.0	16,897							2,852			
Street paving	1,072,657	1,064,271	99.6	458,178	37,088						1,107,416			1,731
Sewer, gas, water, conduit	374,118	374,118	100.0	52,000	17,095					280	72,300			
Waterworks	208,364	208,364	100.0	20,672	4,550						28,678			
Dredging, river, harbor, etc.	747,893	532,070	71.3	130,125	2,420		25,500	745	2,228	31,026	40,875			22,260
Railroad	29,341	29,341	100.0	2,143										3,440
Foundation	5,651	5,651	100.0	674							554			
Central station, light and power plant	166,587	166,587	100.0											
Vehicular subway and tunnel	28,050	28,050	100.0					28,000						
Subcontractors	8,860,609	7,848,262	88.6	57,847	21,138	4,300	236,128	28,035	187,001	8,441	81,562	13,110	13,953	2,133,848
Carpentering and wood flooring	62,106	20,725	47.9											
Concreting	111,348	111,348	100.0	32,271					14,000		55,402			
Electrical	1,061,467	1,061,467	100.0											
Elevator construction	45,576	45,576	100.0											
Heating and plumbing	3,518,188	2,858,534	81.3											
Heating and piping	718,295	718,295	100.0											
Pipe covering	95,817	95,817	100.0											
Plumbing	1,482,932	1,076,327	72.6											
Plumbing and heating combined	889,722	636,675	71.6											
Automatic temperature control	22,033	22,033	100.0											
Automatic sprinkler systems	309,387	309,387	100.0											
Masonry	25,821	25,821	100.0	1,320	16,200	4,300					870	2,400		400
Painting and decorating	208,536	157,400	76.2	1,480										
Glass and glazing	123,936	123,936	100.0											
Plastering and lathing	126,641	57,104	45.1	5,539							6,838	8,960	13,290	
Roofing and sheet-metal work	519,519	438,059	84.5	1,646	80						40			4,107
Roofing	59,035	59,035	100.0											
Sheet-metal work	407,963	347,403	85.2	1,420	80						40			4,107
Roofing and sheet metal combined	52,521	32,521	61.9											
Steel erection	2,194,523	2,194,523	100.0											2,123,341
Marble and tiling	586,206	500,131	85.3	13,728	4,858		236,128	28,035	173,001	8,441	16,619	1,750	657	
Excavating	1,030	1,030	100.0											
Ornamental iron	188,533	188,533	100.0											6,000
Dredging, river, harbor, etc.	89,271	54,175	60.7	1,863							1,733			
<b>SEATTLE</b>	14,942,180	12,680,354	84.7	\$1,055,177	240,780	46,961	361,464	147,582	236,022	29,891	1,401,819	18,554	36,807	2,281,087
Operative builders	338,344	338,344	100.0		20,236		2,599		9,816		28,822		70	
General contractors	8,177,655	6,384,260	78.1	1,013,650	215,686	46,961	150,958	119,547	174,848	21,450	1,326,259	8,224	22,865	170,980
Building	4,776,228	3,377,012	70.7	367,191	157,524	46,796	131,458	90,802	172,620		231,270	8,224	22,465	99,129
Building not specialized	3,951,974	2,907,557	73.6	353,217	130,458	43,916	124,858	76,902	167,464		193,955	6,478	14,465	84,214
Commercial building only	511,289	437,840	85.6	13,474	23,308	2,880	6,600	13,900	5,156		36,515	1,596	8,000	14,015
Residential building only	92,265	31,615	34.3	500	3,758						800	150		
Highway	385,828	135,828	35.2	30,739	3,500						12,981		400	7,200
Bridge and culvert	213,358	169,368	79.4	15,492	74	165					27,598			40,690
Grading	23,500	23,500	100.0	1,429							2,484			
Street paving	1,643,985	1,635,599	99.5	378,011	35,593						937,573			1,731
Sewer, gas, water, conduit	325,588	325,588	100.0	40,000	16,675						72,300			
Waterworks	119,614	119,614	100.0	672							1,178			
Dredging, river, harbor, etc.	494,919	403,116	81.5	130,125	2,420		25,500	745	2,228	21,450	40,875			22,260
Central station, light and power plant	166,587	166,587	100.0											
Vehicular subway and tunnel	28,050	28,050	100.0					28,000						
Subcontractors	6,426,181	5,927,750	92.2	41,518	4,858		201,907	28,035	51,358	8,441	46,738	10,380	13,872	2,110,107
Concreting	65,465	65,465	100.0	19,875					14,000		25,900			
Electrical	731,573	731,573	100.0											
Elevator construction	45,576	45,576	100.0											
Heating and plumbing	2,069,762	1,767,460	85.4											
Heating and piping	213,616	213,616	100.0											
Pipe covering	78,817	78,817	100.0											
Plumbing	982,980	715,717	72.1											
Plumbing and heating combined	462,920	424,890	91.8											
Automatic temperature control	22,033	22,033	100.0											
Automatic sprinkler systems	309,387	309,387	100.0											

See footnotes on p. 1274.

TABLE II.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS	Total cost of all materials <sup>1</sup>	COST OF ALL MATERIALS DISTRIBUTED BY KIND		Sand, gravel, crushed stone, slag, cinders, etc.	Brick (face, common, fire, paving, etc.)	Tile (fire-proofing)	Tile, facing, terra-cotta, floor, and wall	Concrete and Cinder block	Cut stone, granite and marble	Rip-rap, rubble, etc.	Cement	Lime	Plaster, etc.	Structural steel
		Amount	Per cent of total											
<b>SEATTLE—Continued.</b>														
Subcontractors—Continued.														
Painting and decorating	\$121,411	\$100,275	82.6	\$1,480										
Glass and glazing	123,636	123,636	100.0											
Plastering and lathing	126,641	57,104	45.1	5,539							\$6,838	\$4,000	\$13,200	
Roofing and sheet-metal work	362,087	355,087	98.1	1,500										\$4,107
Roofing	43,604	43,604	100.0	149										
Sheet-metal work	318,483	311,483	97.8	1,420										4,107
Steel erection	2,160,000	2,160,000	100.0											2,100,000
Marble and tiling	408,786	323,711	78.0	13,055	\$4,858		\$301,007	\$28,035	\$17,058	\$9,441	13,010	1,370	670	
Excavating	1,030	1,030	100.0											
Ornamental iron	188,533	188,533	100.0											0,000
<b>SPOKANE</b>	<b>2,698,100</b>	<b>2,047,872</b>	<b>75.9</b>	<b>\$997,968</b>	<b>69,700</b>	<b>\$4,162</b>	<b>64,841</b>	<b>\$2</b>	<b>65,050</b>		<b>115,877</b>	<b>5,070</b>	<b>38,791</b>	<b>33,181</b>
General contractors	1,921,163	1,324,465	68.9	296,505	69,620	4,162	20,620	32	64,500		112,828	5,590	38,650	33,181
Building	1,030,677	688,191	66.8	41,818	68,326	4,162	20,620	32	64,500		92,016	5,590	38,650	33,181
Building not specialized	1,062,707	690,821	65.0	40,619	67,426	4,162	20,620	32	64,500		79,816	5,590	38,100	33,181
Residential building only	47,370	27,370	100.0	1,290							2,300		580	
Highway	800,785	551,933	68.4	240,534							1,770			
Grading	20,500	20,500	100.0	837							295			
Street paving	63,831	63,831	100.0	13,205	1,294						29,890			
Subcontractors	776,967	723,407	93.1	673	80		34,221		500		2,740	360	81	
Carpentering and wood flooring	6,250	6,250	100.0											
Electrical	130,313	130,313	100.0											
Heating and plumbing	505,633	505,633	100.0											
Heating and piping	330,370	330,370	100.0											
Plumbing	130,263	130,263	100.0											
Plumbing and heating combined	30,000	30,000	100.0											
Painting and decorating	24,874	24,874	100.0											
Sheet-metal work	50,170	5,610	9.5		80									
Marble and tiling	41,727	41,727	100.0	673			34,221		650		2,700	360	81	
<b>TACOMA</b>	<b>2,888,080</b>	<b>2,602,213</b>	<b>90.1</b>	<b>\$308,080</b>	<b>56,868</b>	<b>1,000</b>	<b>7,080</b>	<b>131,508</b>	<b>142,413</b>	<b>9,858</b>	<b>\$450,476</b>	<b>568</b>	<b>8,301</b>	<b>50,181</b>
General contractors	2,234,635	2,000,353	89.8	292,616	56,868	1,000	7,080	131,508	6,720	9,858	436,064	568	8,301	20,840
Building	1,308,185	1,106,247	84.6	151,310	80,567	1,000	2,660	44,100	6,720		257,673	568	8,301	20,840
Building not specialized	1,010,232	920,422	91.2	135,810	47,397	1,000	4,180	4,100	6,720		233,471	568	8,301	12,840
Commercial building only	125,713	103,575	82.4	1,500				40,000			3,400			
Manufacturing building only	154,000	154,000	100.0	14,000	3,000		3,000				21,000			14,000
Residential building only	9,250	9,250	100.0		200		500							
Highway	280,630	280,630	100.0	60,000	1,000			87,312			25,000			
Grading	200	200	100.0											
Street paving	218,678	218,678	100.0	49,306	201						128,618			
Sewer, gas, water, conduit	48,530	48,530	100.0	12,000	520						290			
Waterworks	178,750	178,750	100.0	20,000	4,550						27,500			
Dredging, river, harbor, etc.	128,311	128,311	100.0							9,876				
Subcontractors	643,434	541,860	84.2	10,473					135,693		23,412			23,341
Concrete	33,808	33,808	100.0	10,396							23,412			
Electrical	76,066	76,066	100.0											
Heating and plumbing	319,862	218,308	68.2											
Heating and piping	119,050	119,050	100.0											
Pipe covering	17,000	17,000	100.0											
Plumbing	82,240	82,240	100.0											
Painting and decorating	4,000	4,000	100.0											
Roofing and sheet-metal work	48,462	48,472	100.0	77										
Roofing	15,041	15,041	100.0	77										
Roofing and sheet metal combined	32,521	32,521	100.0											
Steel erection	25,523	25,523	100.0											23,341
Marble and tiling	135,663	135,663	100.0						135,663					

<sup>1</sup> Certain establishments did not give a distribution of the cost of their materials by separate items. The total cost of materials reported by such establishments is, however, included in totals in this column which carry a footnote to that effect.

<sup>2</sup> See footnote 3 of Table 0 on p. 1263.  
<sup>3</sup> Includes dam and reservoir, \$781,415.  
<sup>4</sup> Includes manufacturing building only, \$220,700.  
<sup>5</sup> Includes carpentering and woodfloors, \$12,381.  
<sup>6</sup> See footnote 5 of Table 0, on p. 1263.  
<sup>7</sup> Includes bridge and culvert, \$72,344.  
<sup>8</sup> Includes plumbing and heating combined, \$101,574.

CONSTRUCTION—WASHINGTON

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TABLE 11.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS	Reinforcing steel	Cast iron, miscellaneous, excluding pipe	Metal doors, windows, and trim	Metal and wire lath and furring	Ornamental metal work	Lumber, rough and finished	Laths, shingles, and shakes	Mill-work	Composition board	Water-proofing materials	Hardware, rough and finished	Paints, varnishes, and glass	Roofing and sheet metal	Finished flooring, n. e. s.	Screens, shades, awnings, etc.
<b>WASHINGTON</b>	\$745,323	\$39,796	\$69,722	\$41,204	\$125,470	\$1,276,486	\$30,695	\$830,256	\$70,232	\$23,194	\$372,883	\$405,488	\$546,531	\$103,782	\$19,731
Operative builders	6,220	546			1,450	51,402		100,584	1,308	71	16,272	2,801	2,082		9,318
General contractors	733,122	38,156	64,842	18,904	47,448	1,147,782	30,062	728,576	58,407	18,045	340,991	111,786	118,293	32,837	10,413
Building	585,765	2,990	48,158	18,818	45,881	908,511	30,062	713,579	33,203	10,806	263,513	100,802	103,248	31,137	10,338
Building not specialized	523,828	2,010	42,593	14,783	28,427	732,851	21,054	632,803	25,263	6,568	237,155	86,074	64,232	28,637	8,913
Commercial building only	47,401	80	4,965	4,035	17,165	108,374	408	50,045	1,176	4,298	18,803	11,452	36,485		525
Manufacturing building only	13,000					13,500			5,000				2,400		
Residential building only	1,446		600		289	53,786	7,700	30,731	1,794		7,495	3,336	131	2,500	900
Highway	25,717		2,500			71,605		6,584	300	503	31,704	1,956	1,010	1,700	75
Bridge and culvert	25,713	2,076	2,384	86	927	69,094		3,399	659	325	11,708	1,668	2,800		
Grading	3,601					11,456					10,925	477			
Street paving	28,504	11,850				43,621		214	24,245	2,000	10,423	2,500	51		
Sewer, gas, water, conduit	35,350					900					300				
Waterworks	320	19,400				12,600					1,560				
Dredging, river, harbor, etc.	28,000	1,240	1,800		640	23,245		4,800		4,351	1,275	4,250	9,750		
Railroad						4,362					533		1,434		
Foundation	102					2,388									
Vehicular subway and tunnel	50														
Subcontractors	5,981	1,094	14,880	22,300	76,572	77,312	633	1,096	10,517	5,078	15,020	290,901	425,156	70,945	
Carpentering and wood-flooring			575			28,250					900				
Concreting	5,100	1,000	100			1,075					200	100			
Heating and plumbing								9,237					28,315		
Heating and piping													21,815		
Pipe covering								9,237					3,000		
Plumbing													3,500		
Masonry									950			250			
Painting and decorating												154,070			
Glass and glazing												123,986			
Plastering and lathing				21,173			600		105	265					
Roofing and sheet-metal work		94	465		2,371	788		1,096	150	1,585	350	1,306	306,617	980	
Roofing						162				1,152		42	50,473	980	
Sheet-metal work		94	465		2,371	626		1,096	150	433	350	1,264	307,623		
Roofing and sheet metal combined													32,521		
Steel erection						40,000					3,000	8,182			
Marble and tiling	25		200	1,127	261	1,634	33		75	330	6,205	360	124	1,965	
Ornamental iron		13,450			73,940	50				2,898	1,250	1,658	68,000		
Dredging, river, harbor, etc.	850					5,015					3,715	130			
<b>SEATTLE</b>	568,892	14,224	48,892	27,041	100,659	680,551	7,956	442,917	50,592	18,895	231,794	290,504	408,419	78,697	17,531
Operative builders	6,220	546			1,450	51,402		100,584	1,308	71	16,272	2,801	2,082		9,318
General contractors	557,957	13,584	32,697	5,129	22,637	566,295	7,323	361,237	39,792	13,746	204,717	55,648	52,555	9,717	8,213
Building	433,554	2,700	26,013	5,059	21,197	418,739	7,323	350,357	15,112	8,113	172,080	48,009	41,605	9,717	8,213
Building not specialized	399,159	2,700	21,788	1,059	4,037	326,980	4,223	325,057	14,508	4,113	150,046	38,048	11,805	9,717	7,688
Commercial building only	41,040		4,225	4,000	17,000	78,574		10,410		4,000	14,394	8,900	29,800		525
Residential building only	1,346				160	13,185	3,100	5,881	644		1,040	551			
Highway	7,530		2,500			36,321		5,000		500	4,699				
Bridge and culvert	23,863	300	2,384	70	800	45,761		1,080	435	325	0,013	848	1,200		
Grading	1,100					5,707					759				
Street paving	23,490	9,344				29,667			24,245	2,000	18,041	2,451			
Sewer, gas, water, conduit	35,050										300				
Waterworks	320					9,600					1,550				
Dredging, river, harbor, etc.	28,000	1,240	1,800		640	20,000		4,800		2,808	1,275	4,250	9,760		
Vehicular subway and tunnel	50														
Subcontractors	4,672	94	14,205	21,912	76,572	42,854	633	1,096	9,492	5,078	10,805	232,055	353,782	68,980	
Concreting	4,600				1,000										
Heating and plumbing								9,237					20,550		
Heating and piping													17,050		
Pipe covering								9,237					3,600		
Plumbing															
Painting and decorating												98,795			
Glass and glazing												123,986			
Plastering and lathing				21,173			600		105	265					
Roofing and sheet-metal work		94	465		2,371	588		1,096	150	1,585	350	1,306	333,232	980	
Roofing						162				1,152		42	40,609	980	
Sheet-metal work		94	465		2,371	426		1,096	150	433	350	1,264	292,623		
Steel erection						40,000					3,000	6,000			
Marble and tiling	25		200	739	261	1,216	33			330	6,205	360		1,965	
Ornamental iron		13,450			73,940	50				2,898	1,250	1,658	68,000		
<b>SPOKANE</b>	43,687		12,381	6,188	3,595	91,641	2,500	137,417	3,817	680	40,789	31,525	7,704	7,160	
General contractors	43,687		12,381	5,800	3,595	84,873	2,500	137,417	3,542	680	40,789	6,651	7,580	5,195	
Building	36,546		12,381	5,800	3,595	77,766	2,500	137,203	3,542	680	23,323	6,325	7,580	5,195	
Building not specialized	36,546		12,381	5,800	3,595	70,296	1,300	131,693	3,542	600	22,503	4,740	7,580	5,195	
Residential building only						7,500	1,200	5,600			825	1,585			
Highway	2,104					1,988					7,417				
Grading	292					2,551					9,344				
Street paving	4,745					2,568		214			700				
Subcontractors				388		6,768			75				24,874	124	1,965
Carpentering and wood-flooring						6,250							24,874		
Painting and decorating															
Sheet-metal work						200									
Marble and tiling				388		318			75				124	1,965	

See footnotes on p. 1274.

TABLE 11.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS	COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929—Continued															
	Reinforcing steel	Cast iron, miscellaneous, excluding pipe	Metal doors, windows, and trim	Metal and wire lath and furring	Orna-mental metal work	Lumber, rough and finished	Laths, shingles, and shakes	Mill-work	Com-position board	Water-proofing materials	Hard-ware, rough and finished	Paints, var-nishes, and glass	Roofing and sheet metal	Finished flooring, n. e. s.	Screens, shades, awn-ings, etc.	
<b>TACOMA</b> .....	\$84,995	\$21,906	\$3,700	\$2,500	\$2,400	\$203,837	\$2,593	\$92,672	\$3,295	\$500	\$38,998	\$25,691	\$66,965		\$210	
General contractors.....	84,995	21,906	3,700	2,500	2,400	203,837	2,593	92,672	9,295	500	38,998	19,509	15,580		210	
Building.....	79,142		3,700	2,500	2,400	170,876	2,593	92,672	9,295	500	23,316	17,960	15,529		210	
Building not specialized.....	65,142		3,100		2,400	152,942	2,593	63,178	4,145	500	21,849	17,960	13,129		210	
Commercial building only.....	1,000					3,434		23,494			667					
Manufacturing building only.....	13,000					13,500			5,000				2,400			
Residential building only.....			600			1,000		6,000	150		800					
Highway.....	5,345					15,400					15,000	1,500				
Street paving.....	208	2,506				10,416					682	40	51			
Sewer, gas, water, conduit.....	300					900										
Waterworks.....		19,400				3,000										
Dredging, river, harbor, etc.....						3,245										
Subcontractors.....												6,182	51,385			
Heating and plumbing.....													3,000			
Pipe covering.....													3,000			
Painting and decorating.....												4,000				
Roofing and sheet-metal work.....													48,385			
Roofing.....													15,864			
Roofing and sheet metal combined.....													32,521			
Steel erection.....													2,182			
<b>WASHINGTON</b> .....	\$1,295,726	\$1,879,192	\$1,357,141	\$116,960	\$178,814	\$516,060	\$25,381	\$359,430	\$145,066	\$228,191	\$60,100	\$10,303	\$3,807	\$17,564	\$4,000	\$270,079
Operative builders.....	4,487	3,300	45,303	26,000	30		63						1,700			3,804
General contractors.....	124,743	248,665	251,357	28,790	166,014	478,269	22,595	359,360	125,066	228,191	60,100	10,303	600	17,256	4,000	213,554
Building.....	118,938	214,938	64,734	28,790	10,094	10,956	3,711	5,787	12,464	142,691	60,100	4,300	600	16,457		142,908
Building not specialized.....	64,953	160,893	40,382	28,790	0,804	10,956	3,711	5,787	12,464	108,081	4,300	4,300	600	16,457		139,721
Commercial building only.....	40,000	41,045	14,027							84,610						3,187
Manufacturing building only.....	3,500	600	1,000								60,100					
Residential building only.....	10,485	13,000	3,325		200											
Highway.....	2,558	2,622	2,293		52,003	71,625	4,850	311,008							4,000	37,318
Bridge and culvert.....	3,120	1,575	5,470		2,499	0,800	3,900									10
Grading.....	118				15,703	7,967	200									
Street paving.....		11,000	3,923		31,663	91,360	2,937	39,320	9,026							32,318
Sewer, gas, water, conduit.....		18,530	1,000		23,000	67,883				85,600		6,003				
Waterworks.....					20,821	185,373	3,400									1,000
Dredging, river, harbor, etc.....			7,550		1,500	31,100	3,250	3,250	101,990							
Railroad.....					8,831	2,425										
Foundation.....							347		1,588							
Central station, light and power plant.....			166,587													
Subcontractors.....	1,166,496	1,627,227	1,060,481	62,176	12,770	37,791	2,723	70	20,000			1,507	328			52,655
Concreting.....					1,000	1,000										
Electrical.....			1,058,717			600	2,250									
Elevator construction.....				45,576												
Heating and plumbing.....	1,140,696	1,627,227	170		10,740	31,604										10,545
Heating and piping.....	467,203	204,838	170		10,815	13,954										
Pipe covering.....	83,580															
Plumbing.....	290,475	771,150			425	10,650										127
Plumbing and heating combined.....	277,405	348,852														10,418
Automatic temperature control.....	22,033															
Automatic sprinkler systems.....		302,387				7,000										
Masonry.....																81
Plastering and lathing.....													328			
Roofing and sheet-metal work.....	25,800		1,444													40
Sheet-metal work.....	25,800		1,444													40
Steel erection.....									20,000							
Marble and tiling.....			150				473	70				1,507				1,785
Excavating.....					1,030											
Ornamental iron.....				16,600		4,857										
Dredging, river, harbor, etc.....																40,204

See footnotes on p. 1274.

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TABLE 11.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS	Heating and ventilating equipment	Plumbing and gas fitting equipment	Electrical appliances and supplies	Elevators, dumb-waiters, etc.	Pipe: Drain tile, vitrified, concrete, etc.	Pipe: Cast-iron, sheet and tube, steel, etc.	Wire cable, guards, and fencing	Bituminous paving materials	Wood piling and timber	Ready mixed concrete	Machinery	Freight, hauling or trucking to job	Metal products, n. e. s.	Mineral products (non-metallic) n. e. s.	Sealing materials	Miscellaneous
<b>SEATTLE</b> .....	\$715,597	\$1,205,130	\$972,943	\$98,176	\$74,314	\$309,719	\$9,510	\$31,002	\$32,464	\$227,161		\$4,300	\$3,207	\$15,721		\$108,852
Operative builders.....	4,437	3,300	45,303	26,000	30		63						1,700			3,864
General contractors.....	75,653	124,032	107,473	10,000	63,254	294,532	6,897	31,602	12,464	227,101		4,300		15,393		92,785
Building.....	75,653	113,032	21,936	10,000	1,390	9,356	2,561	500	12,464	141,601		4,300		15,393		68,376
Building not specialized.....	50,653	93,032	11,936	10,000	1,390	9,356	2,561	500	12,464	107,081		4,300		15,393		68,376
Commercial building only.....	25,000	20,000	10,000							34,610						
Highway.....			672		17,144	0,140										
Bridge and culvert.....			1,700			0,000										
Grading.....					8,421	3,000										
Street paving.....		11,000			16,278	89,100	2,086	27,852								23,409
Sewer, gas, water, conduit.....			3,728		8,000	67,893				85,500						
Waterworks.....					10,521	93,373	1,400									1,000
Dredging, river, harbor, etc.....			2,850		1,500	24,500	850	3,250								
Central station, light and power plant.....			166,587													
Subcontractors.....	635,457	1,077,798	730,107	62,176	11,030	15,187	2,550		20,000				1,507	328		12,203
Electrical.....			728,823			500	2,250									
Elevator construction.....				45,576												
Heating and plumbing.....	629,457	1,077,798			10,000	10,000										10,418
Heating and piping.....	145,935	40,581			10,000											
Pipe covering.....	69,580															
Plumbing.....	203,552	508,665				3,000										
Plumbing and heating combined.....	188,307	226,165														10,418
Automatic temperature control.....	22,033															
Automatic sprinkler systems.....		302,387				7,000										
Plastering and lathing.....																
Roofing and sheet-metal work.....	6,000		1,194													
Sheet-metal work.....	6,000		1,194													
Steel erection.....								20,000								
Marble and tiling.....			150				300									1,785
Excavating.....					1,030							1,607				
Ornamental iron.....				16,600		4,687										
<b>SPOKANE</b> .....	\$274,288	\$222,200	140,388		8,680	32,761	1,024	293,875						1,064		130
General contractors.....	1,535	3,400	825		8,380	14,007	851	293,805						1,004		
Building.....	1,535	3,400	825											1,064		
Building not specialized.....														1,064		
Residential building only.....	1,535	3,400	825													
Highway.....						7,873		290,057								
Grading.....					2,521	4,367										
Street paving.....					5,859	1,707	851	3,748								
Subcontractors.....	272,693	218,800	130,563		300	18,754	173	70								130
Electrical.....			130,313													
Heating and plumbing.....	267,693	218,800			300	18,754										90
Heating and piping.....	220,125	105,291														
Plumbing.....	32,568	98,616			300	4,800										90
Plumbing and heating combined.....	15,000	15,000														
Sheet-metal work.....	5,000		250													40
Marble and tiling.....							173	70								
<b>TACOMA</b> .....	127,588	153,991	105,607		47,436	156,152	9,100	18,007	102,140	1,000	\$80,100	6,003	800		\$4,000	82,682
General contractors.....	22,450	49,136	29,541		47,120	156,152	9,100	18,007	102,140	1,000	60,100	6,003	600		4,000	82,682
Building.....	22,450	30,006	23,846		5,744			5,287		1,000	60,100		600			70,182
Building not specialized.....	3,950	15,106	22,846		5,744			5,287		1,000			600			70,182
Commercial building only.....	15,000	15,000														
Manufacturing building only.....	3,500	500	1,000								60,100					
Highway.....					9,000	57,552	4,500									
Grading.....							200									
Street paving.....			195		7,076			7,720	150							
Sewer, gas, water, conduit.....		18,530	1,000		15,000							6,003				8,500
Waterworks.....					10,300	92,000	2,000									
Dredging, river, harbor, etc.....			4,500			6,600	2,400		101,990							
Subcontractors.....	105,138	109,855	76,066		315											
Electrical.....			76,066													
Heating and plumbing.....	105,138	109,855			315											
Heating and piping.....	72,773	45,971			315											
Pipe covering.....	14,000															
Plumbing.....	18,365	63,884														

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TABLE 13.—ESTABLISHMENTS (WHOSE BUSINESS WAS LESS THAN \$25,000 IN 1929) WHICH REPORTED THEIR VOLUME OF CONSTRUCTION WORK, CLASSIFIED BY RANGE OF VOLUME OF BUSINESS

CLASSIFICATION	Total	Less than \$2,500	\$2,500 to \$4,999	\$5,000 to \$7,499	\$7,500 to \$9,999	\$10,000 to \$12,499	\$12,500 to \$14,999	\$15,000 to \$17,499	\$17,500 to \$19,999	\$20,000 to \$22,499	\$22,500 to \$24,999
<b>WASHINGTON</b>											
Total general and subcontractors.....	364	52	66	55	47	29	18	34	30	15	18
General contractors.....	92	10	13	12	11	9	7	12	10	4	4
Subcontractors.....	269	42	52	43	35	19	11	22	20	11	14
Type of contracting unknown.....	3		1		1	1					

# WEST VIRGINIA

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# CONSTRUCTION—WEST VIRGINIA

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**TABLE 1.—VALUE OF CONSTRUCTION BUSINESS DURING 1929, AND PRINCIPAL ITEMS OF EXPENDITURE**  
(Values expressed in thousands)

AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	Number of establishments	VALUE OF CONSTRUCTION BUSINESS					PRINCIPAL EXPENDITURES											
		Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials	Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials					
<b>WEST VIRGINIA</b> .....	169	\$23,375	\$20,438	\$2,936	\$3,322	\$6,086	\$7,946	<i>Classification of establishments—Continued</i>										
Counties:								<i>Subcontractors—Continued</i>										
Berkeley.....	6	303	293	10	20	96	143	Plumbing and heating combined.....										
Brooke.....	3	131	131	—	—	26	40	Masonry and concreting.....										
Cabell.....	22	4,849	4,430	410	1,046	1,065	1,409	Roofing and sheet-metal work.....										
Payette.....	3	403	375	28	40	118	157	Marble and tiling.....										
Hancock.....	5	344	282	62	69	92	114	Excavating.....										
Harrison.....	12	2,160	2,058	102	200	600	500	Other classes <sup>1</sup> .....										
Kanawha.....	31	3,971	3,305	666	364	1,058	1,414	<i>Size of business groups</i>										
McDowell.....	5	560	507	50	128	130	201	General contractors.....										
Marion.....	8	1,320	1,320	—	—	229	280	\$25,000 to \$49,999.....										
Morcar.....	11	1,799	1,274	525	311	520	344	\$50,000 to \$99,999.....										
Monongalia.....	6	360	265	95	36	122	128	\$100,000 to \$199,999.....										
Ohio.....	19	3,235	2,012	323	437	838	1,475	\$200,000 to \$499,999.....										
Raleigh.....	3	318	277	41	70	56	137	\$500,000 to \$999,999.....										
Wood.....	12	1,443	1,045	398	154	301	643	\$1,000,000 and over.....										
Other counties <sup>1</sup> .....	23	2,175	1,956	219	183	611	576	<i>Building contractors</i>										
<i>Classification of establishments</i>													\$25,000 to \$49,999.....					
General contractors.....	118	18,502	18,310	193	3,230	4,715	5,707	\$50,000 to \$99,999.....										
Building.....	67	8,541	8,513	28	1,005	1,924	3,393	\$100,000 to \$199,999.....										
Building not specialized.....	57	6,476	6,447	28	1,463	1,563	2,447	\$200,000 to \$499,999.....										
Residential building only.....	10	2,066	2,066	—	442	372	946	\$500,000 to \$999,999.....										
Highway.....	23	4,385	4,362	23	469	1,192	1,213	\$1,000,000 and over.....										
Bridge and culvert.....	5	920	920	—	5	249	402	Subcontractors.....										
Grading.....	8	914	772	142	80	312	88	\$25,000 to \$49,999.....										
Street paving.....	5	554	554	—	—	136	204	\$50,000 to \$99,999.....										
Railroad.....	7	2,000	2,000	—	773	810	322	\$100,000 to \$199,999.....										
Other classes <sup>2</sup> .....	3	283	283	—	8	82	84	\$200,000 to \$499,999.....										
Subcontractors.....	51	4,873	2,120	2,744	92	1,372	2,230	\$500,000 to \$999,999.....										
Electrical.....	6	592	247	345	2	144	301	\$1,000,000 and over.....										
Heating and plumbing.....	19	1,550	725	825	38	331	813	Building contractors.....										
Heating and piping.....	7	905	373	532	20	122	304	\$25,000 to \$49,999.....										
Plumbing.....	6	497	40	457	—	113	250	\$50,000 to \$99,999.....										
								\$100,000 to \$199,999.....										
								\$200,000 to \$499,999.....										
								\$500,000 to \$999,999.....										
								\$1,000,000 and over.....										

<sup>1</sup> Includes Boone, Clay, Jackson, Jefferson, Lewis, Logan, Marshall, Mason, Mineral, Monroe, Nicholas, Pendleton, Pleasants, Pocahontas, Preston, Randolph, Roane, Summers, Upshur, Wetzel, and Wyoming, for which data can not be shown with out revealing individual operations. From areas other than those listed, no reports were received from establishments, which handled as much as \$25,000 business during 1929.  
<sup>2</sup> Includes sewer, gas, water, conduit, waterworks, and foundation.  
<sup>3</sup> Includes painting and decorating; plastering and lathing; steel erection; and highway.

**TABLE 2.—CONSTRUCTION BUSINESS OF REPORTING ESTABLISHMENTS DURING 1929, BY CLASS OF OWNERSHIP AND BY TYPE OF WORK**

CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—						CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—					
	All classes of establishments		General contractors		Subcontractors			All classes of establishments		General contractors		Subcontractors	
	Number reporting	Value	Number reporting	Value	Number reporting	Value		Number reporting	Value	Number reporting	Value	Number reporting	Value
<b>WEST VIRGINIA</b>	169	\$23,374,047	118	\$18,502,092	51	\$4,872,555	<b>WEST VIRGINIA—Continued</b>						
All construction work.....	169	\$23,374,047	118	\$18,502,092	51	\$4,872,555	<i>All business under general contract or directly for owners—Continued</i>						
Distribution not reported.....	19	1,525,127	10	928,858	9	590,269	Public works and utilities.....						
Distributed by class of ownership.....	150	21,849,520	108	17,573,234	42	4,276,286	Bridge, tunnel, etc.....						
Private.....	111	11,792,757	73	8,529,044	38	3,263,713	Central station, light and power plant.....						
Quasi public or community.....	31	950,506	16	641,061	15	318,535	Sewage disposal and drainage.....						
Public.....	37	9,097,107	65	8,403,120	22	694,038	Dock, pier, retaining wall, etc.....						
Distribution not reported.....	10	1,398,332	8	1,284,877	2	83,455	Water supply.....						
Distributed by class of public ownership.....	77	7,728,835	57	7,118,252	20	610,583	Railroad and car line.....						
Federal.....	4	74,429	2	—	2	—	Miscellaneous, n. o. s.....						
State.....	46	4,970,368	39	4,224,127	10	420,608	All business under subcontract.....						
County or township.....	42	1,941,461	29	1,817,499	13	123,062	Distribution not reported.....						
Municipal.....	27	1,142,579	19	1,076,626	8	65,953	Distributed by class.....						
All business under general contract or directly for owners.....	144	20,438,201	118	18,309,501	20	2,128,700	Carpentering and woodflooring.....						
Distribution not reported.....	4	307,626	4	307,626	—	—	Painting and decorating.....						
Distributed by class.....	140	20,130,575	114	18,001,875	26	2,128,700	Plastering and lathing.....						
Building.....	94	10,129,127	73	8,496,450	21	1,632,677	Concreting.....						
Distribution not reported.....	4	198,796	1	33,000	3	165,796	Masonry.....						
Distributed by class.....	90	9,930,331	72	8,463,450	18	1,466,881	Electrical.....						
Commercial.....	55	2,028,016	43	1,759,140	12	269,770	Heating and plumbing.....						
Educational.....	39	2,326,230	29	2,093,828	10	232,402	Heating and piping.....						
Hotel.....	4	67,960	2	(1)	2	(1)	Pipe covering.....						
Hospital and institutional.....	13	420,921	8	293,265	5	127,656	Plumbing.....						
Manufacturing.....	24	1,023,846	17	530,534	7	443,312	Plumbing and heating combined.....						
Military and naval.....	1	65,811	1	(1)	—	—	Roofing and sheet-metal work.....						
Public: Courts, jails, etc.....	5	—	3	(1)	2	(1)	Roofing.....						
Religious and memorial.....	14	304,532	10	291,817	4	12,715	Sheet-metal work.....						
Residential.....	64	3,288,014	41	3,012,137	13	276,829	Roofing and sheet metal combined.....						
Social and recreational.....	11	181,239	7	166,841	4	14,398	Marble and tiling.....						
Air transport.....	1	—	1	—	—	—	Excavating.....						
Rail and water transportation.....	1	222,860	1	155,160	—	—	Highway.....						
Miscellaneous.....	15	—	12	—	3	67,700	Grading.....						
Highway and street.....	44	5,812,100	39	5,064,459	5	147,740							

<sup>1</sup> Value omitted in order to avoid disclosing individual operations. The amounts omitted are, however, included in the respective totals.

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TABLE 3.—CONSTRUCTION BUSINESS DURING 1929, BY LOCATION

CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	Total	In home city	In home State	Outside home State	CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	Total	In home city	In home State	Outside home State
General contractors.....	115	18,103,428	5,793,805	14,400,326	3,708,102	Subcontractors—Continued					
Building.....	67	8,641,182	4,139,555	6,523,299	2,017,918	Heating and plumbing—Con.					
Building not specialized.....	57	6,475,091	3,710,047	5,881,834	693,267	Plumbing.....	6	\$496,740	\$432,553	\$496,740	-----
Residential building only.....	10	2,066,091	429,503	641,435	1,424,656	Plumbing and heating combined.....	3	454,309	391,584	454,309	-----
Highway.....	22	4,250,196	228,007	3,804,836	445,360	Masonry and concreting.....	6	195,495	130,740	195,495	-----
Bridge and culvert.....	5	919,744	60,990	380,562	539,182	Roofing and sheet-metal work.....	6	301,167	249,873	338,349	\$22,818
Grading.....	7	317,652	-----	780,522	28,130	Marble and tiling.....	7	461,530	268,884	352,248	99,232
Railroad.....	7	2,906,127	867,029	2,228,610	677,517	Excavating.....	5	780,080	8,000	647,616	130,094
Other classes <sup>1</sup> .....	7	673,527	498,224	673,527	-----	Other classes <sup>2</sup> .....	5	968,943	129,556	391,874	604,069
Subcontractors.....	51	4,872,555	2,220,952	3,742,884	1,129,675						
Electrical.....	6	562,457	209,937	293,032	209,425						
Heating and plumbing.....	19	1,556,283	1,172,907	1,521,270	35,013						
Heating and piping.....	7	605,234	438,770	570,221	35,013						

<sup>1</sup> Includes street paving; sewer, gas, water, conduit; and waterworks. <sup>2</sup> Includes painting and decorating; plastering and lathing; steel erection; and highway.

TABLE 4.—CONSTRUCTION BUSINESS OUTSIDE HOME STATE, BY LOCATION

STATE	LOCATION REPORTED BY—			STATE	LOCATION REPORTED BY—		
	All classes of establishments	General contractors	Subcontractors		All classes of establishments	General contractors	Subcontractors
<b>WEST VIRGINIA</b>				<b>WEST VIRGINIA—Continued</b>			
Total distributed by States <sup>1</sup> .....	\$4,837,773	\$3,708,102	\$1,129,671	Total distributed by States—Contd.			
Alabama.....	511,956	509,456	2,500	New York.....		\$82,322	
Indiana.....	344	344		Ohio.....	1,091,853	907,997	\$723,850
Kentucky.....	562,829	363,029	199,200	Pennsylvania.....	620,362	506,587	54,275
Maryland.....	542,294	542,294		Tennessee.....	485,000	485,000	
Michigan.....	81,500	-----	81,500	Virginia.....	50,955	34,715	16,240
New Hampshire.....	155,758	155,758		Other States, not specified.....	52,100	-----	52,100

<sup>1</sup> Number of establishments reporting: All classes, 49; general contractors, 27; subcontractors, 22.

TABLE 5.—NUMBER AND SALARIES OF PROPRIETORS, FIRM MEMBERS, AND SALARIED EMPLOYEES: 1929

CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	PROPRIETORS AND FIRM MEMBERS			SALARIED EMPLOYEES									
		Receiving no salary	Receiving salaries		All salaried employees		Officers and clerical staff		Superintendents, foremen, etc.		Number reported by sex			Sex not reported
			Number	Total annual salaries	Total number	Total annual salaries	Number	Total annual salaries	Number	Total annual salaries	Total	Male	Female	
<b>WEST VIRGINIA</b> .....	166	109	75	\$247,472	465	\$1,158,044	238	\$651,282	227	\$508,782	418	371	47	47
General contractors.....	116	91	40	135,214	354	885,812	159	447,181	195	438,631	333	301	32	21
Building.....	65	56	23	78,614	142	386,465	75	209,714	67	176,751	128	110	18	14
Building not specialized.....	56	45	23	78,614	123	318,985	65	168,914	58	150,051	121	98	14	11
Residential building only.....	9	11	-----	-----	19	67,500	10	40,800	9	26,700	10	12	4	3
Highway.....	23	9	8	25,000	94	268,756	45	151,630	49	117,126	88	82	0	0
Bridge and culvert.....	5	3	3	10,000	32	57,200	11	22,112	31	35,088	32	28	4	-----
Grading.....	8	8	4	11,600	34	51,004	8	12,480	26	38,524	34	33	1	-----
Street paving.....	5	6	1	3,000	9	15,150	4	5,560	5	9,600	8	7	1	1
Railroad.....	7	0	1	6,000	36	96,035	15	43,895	21	52,140	36	34	2	-----
Other classes <sup>1</sup> .....	3	3	-----	-----	7	11,202	1	1,800	6	8,402	7	7	-----	-----
Subcontractors.....	50	18	35	112,258	111	272,232	70	204,101	32	68,131	85	70	15	26
Electrical.....	6	-----	3	12,600	17	39,073	11	28,313	6	10,760	15	10	6	2
Heating and plumbing.....	19	6	15	56,000	39	87,802	32	69,782	7	18,020	28	21	7	11
Heating and piping.....	7	1	9	38,494	14	36,952	13	33,052	1	3,900	11	10	1	3
Plumbing.....	6	2	3	11,846	14	36,120	9	24,700	5	11,420	14	10	4	-----
Plumbing and heating combined.....	6	3	3	5,720	11	14,730	10	12,030	1	2,700	3	1	-----	-----
Masonry and concreting.....	3	2	3	5,030	6	7,301	2	1,500	4	5,711	0	0	-----	-----
Roofing and sheet-metal work.....	5	3	4	8,828	8	18,085	7	14,705	1	3,380	3	3	1	4
Marble, tiling, and plastering.....	8	5	1	5,200	13	27,136	12	24,136	1	3,000	4	8	1	4
Excavating.....	5	-----	9	24,600	10	70,535	9	67,475	7	13,060	16	16	-----	-----
Other classes <sup>2</sup> .....	4	2	-----	-----	12	22,300	6	8,100	6	14,200	7	0	1	5

<sup>1</sup> Includes sewer, gas, water, conduit; waterworks; and foundation.

<sup>2</sup> Includes painting and decorating; steel erection; and highway.

# CONSTRUCTION—WEST VIRGINIA

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**TABLE 6.—VALUE OF CONSTRUCTION EQUIPMENT, IN COMPARISON WITH CONSTRUCTION BUSINESS AND WAGES PAID DURING 1929**

CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT OWNED	Es-tab-lish-ments re- port- ing	EQUIPMENT		Value of construction business reported	Wages paid	CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT OWNED	Es-tab-lish-ments re- port- ing	EQUIPMENT		Value of construction business reported	Wages paid
		Pur- chased during the year	Inven- tory value at end of year					Pur- chased during the year	Inven- tory value at end of year		
<b>WEST VIRGINIA</b> .....	151	\$959, 213	\$3, 155, 195	\$22, 069, 430	\$5, 718, 077	<b>WEST VIRGINIA—Contd.</b>					
<i>Classification of establishments</i>						<i>Percentage of equipment owned</i>					
General contractors.....	107	730, 643	2, 749, 852	17, 499, 712	4, 456, 775	General contractors.....	107	\$739, 643	\$2, 749, 852	\$17, 499, 712	\$4, 456, 775
Building.....	61	45, 445	355, 991	8, 178, 782	1, 813, 598	None.....	4			171, 849	38, 209
Building not specialized.....	54	41, 462	334, 923	6, 354, 391	1, 514, 276	1% to 25%.....	3	600	1, 750	108, 890	23, 084
Residential building only.....	7	3, 983	21, 068	1, 824, 391	299, 323	26% to 50%.....	3	4, 880	11, 250	182, 690	29, 932
Highway.....	21	367, 767	1, 010, 362	4, 149, 802	1, 124, 511	51% to 75%.....	5	23, 350	96, 712	535, 509	126, 502
Bridge and culvert.....	3	2, 523	82, 217	574, 994	204, 994	76% to 99%.....	13	172, 945	459, 086	2, 839, 354	575, 191
Grading.....	8	124, 322	547, 633	913, 693	811, 875	100%.....	78	537, 808	2, 173, 955	13, 506, 166	3, 051, 557
Street paving.....	4	18, 806	67, 243	493, 221	100, 752	Not reported.....	1		7, 169	95, 194	12, 300
Railroad.....	7	165, 480	611, 063	2, 908, 127	818, 594	Subcontractors.....	44	219, 570	405, 343	4, 569, 718	1, 261, 302
Other classes <sup>1</sup> .....	3	15, 310	75, 343	283, 093	82, 451	None.....	3			100, 328	33, 255
Subcontractors.....	44	219, 570	405, 343	4, 569, 718	1, 261, 302	1% to 25%.....					
Electrical.....	6	993	12, 883	562, 457	144, 314	26% to 50%.....					
Heating and plumbing.....	14	9, 469	33, 478	1, 331, 984	266, 198	51% to 75%.....					
Heating and piping.....	6	2, 000	10, 165	570, 794	110, 790	76% to 99%.....	3	26, 908	27, 243	192, 694	80, 092
Plumbing and heating combined.....	8	6, 560	17, 313	755, 190	155, 318	100%.....	37	192, 662	370, 000	4, 241, 690	1, 129, 083
Masonry and concreting.....	3	6, 800	7, 500	195, 495	97, 561	Not reported.....	1		1, 500	35, 000	9, 962
Roofing and sheet-metal work.....	6	5, 822	21, 588	361, 167	116, 065						
Marble and tiling.....	7	4, 043	22, 002	451, 590	137, 762						
Excavating.....	5	146, 467	229, 726	780, 650	304, 355						
Other classes <sup>2</sup> .....	3	45, 076	78, 166	880, 405	195, 157						

<sup>1</sup> Includes sewer, gas, water, conduit; waterworks; and foundation.

<sup>2</sup> Includes painting and decorating; steel erection; and highway.

**TABLE 7.—WAGE EARNERS, BY MONTHS, AND WAGES PAID DURING 1929**

CLASSIFICATION OF ESTABLISHMENTS AND LENGTH OF WORKING WEEK	Estab-lish-ments report- ing	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY												Wages paid during year
		Janu- ary	Febru- ary	March	April	May	June	July	August	Septem- ber	Octo- ber	Novem- ber	Decem- ber	
<b>WEST VIRGINIA</b> .....	142	2, 102	1, 990	2, 382	3, 243	3, 946	4, 847	5, 435	5, 837	5, 405	5, 810	4, 147	3, 097	\$5, 550, 669
<i>Classification of establishments</i>														
General contractors.....	102	1, 621	1, 566	1, 907	2, 757	3, 328	4, 051	4, 534	4, 915	4, 571	4, 372	3, 425	2, 463	4, 430, 932
Building.....	57	795	859	934	1, 173	1, 225	1, 357	1, 516	1, 383	1, 273	1, 256	1, 116	901	1, 774, 230
Building not specialized.....	49	701	758	806	879	907	1, 014	1, 161	1, 091	1, 095	1, 090	944	869	1, 419, 171
Residential building only.....	8	94	101	128	294	318	343	365	292	178	166	172	122	355, 059
Highway.....	21	286	227	269	511	669	897	1, 076	1, 501	1, 577	1, 566	1, 250	738	1, 126, 272
Bridge and culvert.....	4	122	56	51	100	242	283	266	247	277	224	127	71	228, 994
Grading.....	6	116	156	109	140	242	358	384	399	273	239	230	181	278, 635
Street paving.....	5	23	20	40	94	158	162	162	243	263	270	203	55	135, 762
Railroad.....	6	271	234	479	644	739	842	958	904	784	724	451	385	804, 598
Other classes <sup>1</sup> .....	3	8	8	25	35	53	152	172	178	124	93	39	42	82, 451
Subcontractors.....	40	481	424	475	491	618	796	901	972	834	938	722	634	1, 119, 737
Electrical.....	5	63	57	60	66	69	74	91	91	113	113	87	70	134, 632
Heating and plumbing.....	15	165	149	143	162	152	154	176	170	164	197	160	160	280, 148
Heating and piping.....	7	74	61	54	58	59	59	73	75	73	81	68	58	122, 281
Plumbing.....	3	50	52	52	69	59	58	67	62	49	71	49	50	81, 791
Plumbing and heating combined.....	5	41	36	37	35	34	37	30	43	42	45	43	43	78, 076
Masonry and concreting.....	3	69	79	112	18	32	41	44	79	43	37	15	22	97, 561
Roofing and sheet-metal work.....	5	49	47	40	56	58	67	71	72	72	73	68	62	97, 065
Marble and tiling.....	4	38	47	27	20	34	45	60	62	51	42	37	22	72, 702
Excavating.....	4	13	9	45	90	121	179	217	271	211	216	180	150	218, 519
Other classes <sup>2</sup> .....	4	84	36	39	80	152	236	252	237	180	260	169	148	219, 120
<i>Length of working week</i>														
General contractors.....	102	1, 621	1, 566	1, 907	2, 757	3, 328	4, 051	4, 534	4, 915	4, 571	4, 372	3, 425	2, 463	4, 430, 932
40-hour, 5-day week.....	1			4		5	7	12	12	5	5	4	4	14, 000
45-hour, 5-day week.....														
50-hour, 5-day week.....														
All other 5-day week.....	23	295	325	342	415	394	484	536	523	517	486	438	392	789, 897
44-hour, 5½-day week.....	1							12	12	10	10	8	4	4, 330
49½-hour, 5½-day week.....	3	21	17	28	32	52	63	67	85	64	65	57	34	62, 853
55-hour, 5½-day week.....	6	84	110	133	125	108	97	110	116	106	102	88	57	162, 348
All other 5½-day week.....	9	176	155	171	169	207	216	220	203	223	237	211	235	243, 932
48-hour, 6-day week.....	18	277	227	261	537	610	694	688	715	680	666	519	337	661, 707
54-hour, 6-day week.....	36	673	658	837	1, 263	1, 689	2, 130	2, 452	2, 829	2, 602	2, 490	1, 850	1, 152	2, 152, 257
60-hour, 6-day week.....	4	63	38	91	182	251	330	356	388	325	272	212	205	279, 132
All other 6-day week.....	1	32	36	40	40	34	30	31	32	37	39	38	43	66, 486
Not reported.....														
Subcontractors.....	40	481	424	475	491	618	796	901	972	834	938	722	634	1, 119, 737
40-hour, 5-day week.....	1	4	3	3	2	3	2	2	4	4	9	3	2	11, 491
45-hour, 5-day week.....														
50-hour, 5-day week.....														
All other 5-day week.....	17	303	235	216	267	272	309	344	337	294	342	311	281	555, 433
44-hour, 5½-day week.....	1	4	6	10	7	9	9	6	4	11	30	18	15	16, 470
49½-hour, 5½-day week.....	1	9	7	14	9	11	11	12	10	11	10	10	10	10, 179
All other 5½-day week.....	7	53	57	54	59	66	65	81	87	92	92	71	56	127, 265
48-hour, 6-day week.....	5	28	28	28	28	38	45	42	75	67	50	28	32	77, 671
54-hour, 6-day week.....	7	20	16	52	110	222	341	398	433	362	400	276	226	267, 673
60-hour, 6-day week.....														
All other 6-day week.....	1	60	72	98	9	7	14	16	22	3	5	5	12	47, 555
Not reported.....														

<sup>1</sup> Includes sewer, gas, water, conduit; waterworks; and foundation.

<sup>2</sup> Includes painting and decorating; steel erection; and highway.



CONSTRUCTION—WEST VIRGINIA

TABLE 8.—EXPENDITURES OF REPORTING ESTABLISHMENTS: 1929

CLASSIFICATION OF ESTABLISHMENTS	Estab-lishments reporting	Value of construction business reported	PRINCIPAL ITEMS OF EXPENDITURE			OTHER ITEMS OF EXPENDITURE							
			Sub-contract work let	Wages paid	Cost of materials	Salaries		Rent for		Interest	Contract bond premiums	Com-pensation and liability insurance premiums	All other overhead expenses
						Pro- prietors and firm members	Em- ployees	Equip- ment	Offices, etc.				
<b>WEST VIRGINIA</b> .....	119	\$17,719,386	\$2,844,000	\$4,385,118	\$6,569,119	\$183,922	\$918,196	\$115,659	\$68,639	\$117,962	\$104,127	\$114,267	\$1,383,206
General contractors.....	79	13,690,359	2,788,000	3,362,592	4,533,479	100,714	686,059	100,855	34,730	100,455	95,048	86,793	1,001,649
Building.....	50	7,247,199	1,692,000	1,569,015	2,916,935	64,914	344,533	4,704	21,263	48,764	31,892	34,120	204,762
Building not specialized.....	43	5,474,808	1,315,000	1,287,983	2,078,159	64,914	280,533	4,704	17,465	43,418	30,362	28,518	174,649
Residential building only.....	7	1,772,391	377,000	281,032	838,776	-----	64,000	-----	3,798	5,330	1,000	5,302	30,122
Highway.....	13	2,727,439	332,000	754,613	746,195	5,200	137,211	84,154	7,171	17,764	43,484	14,833	352,210
Bridge and culvert.....	5	919,744	5,000	249,443	402,283	10,000	57,200	2,250	2,197	8,470	7,824	6,310	118,070
Railroad.....	5	2,103,087	727,000	542,103	282,652	6,000	72,245	15,322	2,360	22,044	6,002	21,977	347,894
Other classes <sup>1</sup> .....	6	698,890	32,000	247,418	185,414	14,600	24,870	3,425	1,739	3,423	6,046	6,544	73,707
Subcontractors.....	40	4,023,027	56,000	1,022,526	2,035,640	93,208	232,137	5,804	33,909	17,507	8,470	27,464	201,647
Electrical.....	6	562,457	2,000	144,314	301,404	12,000	39,073	-----	5,678	1,453	347	1,458	21,788
Heating and plumbing.....	16	1,457,282	33,000	307,048	752,613	51,580	86,918	576	18,876	7,732	4,022	2,466	105,599
Heating and piping.....	6	576,794	15,000	110,790	293,764	34,014	36,068	-----	5,377	2,170	1,103	932	45,050
Plumbing.....	5	456,740	-----	103,124	229,534	11,846	36,120	-----	6,395	1,220	-----	350	34,813
Plumbing and heating com- bined.....	5	423,748	18,000	93,134	229,315	5,720	14,730	-----	7,104	4,842	3,810	884	25,733
Roofing and sheet-metal work.....	6	361,167	-----	116,055	129,704	8,828	18,085	-----	4,310	3,464	200	1,746	35,732
Marble and tiling.....	6	390,630	-----	100,122	204,369	5,200	27,136	-----	4,445	377	680	1,048	21,082
Excavating.....	3	430,153	21,000	180,964	45,365	15,000	46,775	4,878	420	4,273	2,330	4,000	90,789
Other classes <sup>2</sup> .....	3	821,438	-----	168,023	601,686	-----	14,160	-----	180	208	-----	17,042	16,000

<sup>1</sup> Includes grading; street paving; waterworks; and foundation.

<sup>2</sup> Includes painting and decorating; plastering and lathing; and steel erection.

TABLE 9.—COST OF MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, BY KIND

KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—					KIND OF MATERIAL	COST OF MATERIALS REPORTED BY—				
	All classes of establish- ments			General contractors	Sub-contractors		All classes of establish- ments			General contractors	Sub-contractors
	Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>				Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>		
<b>WEST VIRGINIA</b>						<b>WEST VIRGINIA—Continued.</b>					
All kinds of material.....	\$7,945,623	-----	\$366.23	\$5,706,546	\$2,239,077	Distributed by kind—Continued.					
Distribution not reported.....	2,798,220	35.2	-----	2,200,353	537,867	Composition board.....	\$12,000	0.3	\$1.00	\$12,194	\$776
Distributed by kind.....	5,147,403	100.0	-----	3,446,193	1,701,210	Waterproofing materials.....	6,100	.1	.47	3,901	2,139
Sand, gravel, stone, slag, cinders, etc.....	921,592	17.9	70.94	863,786	57,806	Hardware, rough and finished.....	53,022	1.0	4.13	52,068	1,004
Brick (face, common, fire, paving, etc.).....	222,550	4.3	17.13	204,870	17,680	Paints, varnishes, glass.....	54,800	1.1	4.22	32,207	22,680
Tile (fireproofing).....	44,298	.9	3.41	38,768	5,500	Roofing and sheet metal.....	128,086	2.5	9.91	27,423	101,263
Tile, facing, terra cotta, floor, and wall.....	114,000	2.2	8.84	22,930	91,970	Finished flooring (other than cement, wood, or tile).....	48,510	.9	3.73	33,890	14,650
Concrete and cinder block.....	32,697	.6	2.52	32,697	-----	Screens, shades, awnings, etc.....	1,771	( <sup>3</sup> )	.13	1,771	-----
Cut stone, granite and marble.....	108,259	2.1	8.33	86,149	22,110	Heating and ventilating equipment.....	205,823	4.0	15.85	3,003	202,820
Riprap, rubble, etc.....	953	( <sup>3</sup> )	.08	-----	953	Plumbing and gas fitting equip- ment.....	192,415	3.7	14.81	6,041	186,374
Cement.....	664,860	12.9	51.18	628,706	36,154	Electrical appliances and supplies.....	315,467	6.1	24.28	5,063	310,404
Lime.....	27,247	.5	2.10	19,982	7,265	Elevators, dumb-waiters, and equipment.....	285	( <sup>3</sup> )	.02	285	-----
Plaster, etc.....	47,849	.9	3.68	40,824	7,025	Pipe: Drain tile, vitrified, con- crete, segment tile, corrugated.....	101,382	2.0	7.81	94,800	6,582
Structural steel.....	324,522	16.0	63.47	269,487	55,035	Pipe: Cast-iron, sheet and tube steel, etc.....	53,009	1.0	4.15	43,009	10,000
Reinforcing steel.....	189,997	3.7	14.62	182,564	7,433	Wire cable, guards, and fencing.....	2,340	( <sup>3</sup> )	.18	2,340	-----
Cast iron, miscellaneous, excluding pipe.....	7,340	.1	.57	7,340	-----	Bituminous paving materials, tar, asphalt, and oil.....	71,540	1.4	5.51	71,540	-----
Metal doors, windows, and trim.....	56,886	1.1	4.38	35,386	21,500	Ready-mixed concrete.....	1,250	( <sup>3</sup> )	.10	1,250	-----
Metal and wire lath and furring.....	31,762	.6	2.44	29,012	2,750	Freight, hauling or trucking to job.....	15,977	.3	1.23	15,977	-----
Ornamental metal work.....	13,016	.3	1.00	12,016	1,000	Mineral products (nonmetallic) n. e. s.....	2,138	( <sup>3</sup> )	.17	2,138	-----
Lumber, rough and finished.....	349,553	6.8	23.91	345,208	4,345	Miscellaneous.....	50,995	1.1	4.39	50,995	-----
Lath, shingles, and shakes (wood).....	14,855	.3	1.15	12,785	2,100						
Millwork.....	148,080	2.9	11.40	146,196	1,884						

<sup>1</sup> The value of construction work done is obtained from figures presented in Table 1, by subtracting the value of subcontract work let from the total value of construction business.

<sup>2</sup> The high percentage of total cost shown for this item is due to the fact that establishments located within this area reported that the major part of their construction work (on which this material was used) was done on contracts outside this area.

<sup>3</sup> Less than one-tenth of 1 per cent.

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**TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS**

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force
		Amount	Percent of—						Amount	Percent of—			
			Total cost	Cost of all distributed materials						Total cost	Cost of all distributed materials		
<b>WEST VIRGINIA</b>						<b>WEST VIRGINIA—Contd.</b>							
<i>Sand, gravel, stone, slag, cinders, etc.<sup>1</sup></i>						<i>Structural steel<sup>1</sup></i>							
All classes.....	\$5,147,403	\$921,592	100.0	17.0	\$15,838,188	85.8	All classes.....	\$5,147,403	\$824,522	100.0	16.0	\$15,838,188	85.8
General contractors.....	3,440,193	863,780	93.7	25.1	12,263,000	82.5	General contractors.....	3,440,193	209,487	32.7	7.8	12,263,000	82.5
Building.....	1,470,309	95,097	10.4	6.5	3,636,558	77.7	Building.....	1,470,309	148,075	18.0	10.0	3,636,558	77.7
Building not specialized.....	1,249,288	85,127	0.2	0.8	3,125,973	77.0	Building not specialized.....	1,249,288	117,075	14.3	9.4	3,125,973	77.0
Commercial building only.....	135,145	7,305	0.8	5.5	310,159	86.5	Commercial building only.....	135,145	25,008	3.0	18.5	310,159	86.5
Residential building only.....	94,930	3,175	0.3	3.3	200,426	78.6	Residential building only.....	94,930	5,397	0.7	6.7	200,426	78.6
Highway.....	1,003,752	471,511	51.2	47.0	3,019,380	89.5	Highway.....	1,003,752	5,077	0.1	0.1	3,019,380	89.5
Bridges and culvert.....	402,283	109,045	11.8	27.1	910,744	90.5	Bridges and culvert.....	402,283	120,100	14.6	20.9	910,744	90.5
Grading.....	58,753	8,747	0.9	14.0	507,527	91.2	Grading.....	58,753	17,000	4.0	2.2	507,527	91.2
Street paving.....	203,596	117,105	12.7	57.6	553,517	100.0	Street paving.....	203,596	40	0.0	0.0	553,517	100.0
Sewer, gas, water, conduit.....	17,900	350	(*)	2.0	55,500	98.2	Sewer, gas, water, conduit.....	17,900	100	0.1	0.2	55,500	98.2
Waterworks.....	26,175	3,845	4	14.7	64,420	80.1	Waterworks.....	26,175	254,365	31.1	2.5	64,420	80.1
Railroad.....	254,365	57,300	0.2	22.0	2,817,170	73.4	Railroad.....	254,365	100	(*)	(*)	2,817,170	73.4
Subcontractors.....	1,701,210	57,806	0.3	3.4	3,574,282	98.1	Subcontractors.....	1,701,210	555,036	67.3	32.0	3,574,282	98.1
Concreting.....	20,425	10,437	1.1	35.5	64,755	100.0	Concreting.....	20,425	570,500	69.3	90.3	64,755	100.0
Heating and plumbing.....	406,133	22	(*)	(*)	752,067	97.0	Heating and plumbing.....	406,133	35	(*)	(*)	752,067	97.0
Heating and piping.....	277,704	22	(*)	(*)	543,014	96.7	Heating and piping.....	277,704				543,014	96.7
Masonry.....	32,500	2,500	0.3	7.7	91,073	100.0	Masonry.....	32,500				91,073	100.0
Plastering and lathing.....	21,185	4,200	0.5	19.8	41,603	100.0	Plastering and lathing.....	21,185				41,603	100.0
Marble and tiling.....	170,291	27,521	3.0	16.2	343,050	100.0	Marble and tiling.....	170,291				343,050	100.0
Excavating.....	17,063	7,700	0.8	43.0	518,046	93.4	Excavating.....	17,063				518,046	93.4
Highway.....	11,442	5,420	0	47.4	81,794	100.0	Highway.....	11,442				81,794	100.0
<i>Brick (face, common, fire, paving, etc.)</i>						<i>Reinforcing steel</i>							
All classes.....	5,147,403	222,550	100.0	4.3	15,838,188	85.8	All classes.....	5,147,403	189,097	100.0	3.7	15,838,188	85.8
General contractors.....	3,440,193	204,870	92.1	5.9	12,263,000	82.5	General contractors.....	3,440,193	182,504	96.1	5.3	12,263,000	82.5
Building.....	1,470,309	100,303	89.0	13.5	3,636,558	77.7	Building.....	1,470,309	25,079	13.2	1.7	3,636,558	77.7
Building not specialized.....	1,249,288	180,501	81.1	14.4	3,125,973	77.0	Building not specialized.....	1,249,288	22,213	11.7	1.8	3,125,973	77.0
Commercial building only.....	135,145	13,748	6.2	10.2	310,159	86.5	Commercial building only.....	135,145	1,300	0.7	1.0	310,159	86.5
Residential building only.....	94,930	5,144	2.3	5.4	200,426	78.6	Residential building only.....	94,930	1,500	0.8	1.0	200,426	78.6
Highway.....	1,003,752	375	0.2	(*)	3,019,380	89.5	Highway.....	1,003,752	30,311	20.7	3.9	3,019,380	89.5
Bridges and culvert.....	402,283	1,580	0.7	0.8	910,744	90.5	Bridges and culvert.....	402,283	42,584	22.4	10.0	910,744	90.5
Grading.....	58,753	2,108	1.1	3.0	507,527	91.2	Grading.....	58,753	2,108	1.1	3.0	507,527	91.2
Street paving.....	203,596	2,050	1.4	1.4	553,517	100.0	Street paving.....	203,596	2,050	1.4	1.4	553,517	100.0
Sewer, gas, water, conduit.....	17,900	1,350	0	7.5	55,500	98.2	Sewer, gas, water, conduit.....	17,900	4,550	2.4	17.4	55,500	98.2
Waterworks.....	26,175	2,172	1.0	8.8	64,420	80.1	Waterworks.....	26,175	60,277	34.0	20.1	64,420	80.1
Subcontractors.....	1,701,210	17,080	7.9	1.0	3,574,282	98.1	Subcontractors.....	1,701,210	7,433	3.9	4.4	3,574,282	98.1
Masonry.....	32,500	17,600	7.9	54.2	91,073	100.0	Concreting.....	20,425	7,070	3.7	24.1	64,755	100.0
Marble and tiling.....	170,291	80	(*)	(*)	343,050	100.0	Excavating.....	17,063	354	2	2.0	518,046	93.4
<i>Tile, facing, terra cotta, floor, and wall</i>						<i>Lumber, rough and finished</i>							
All classes.....	5,147,403	114,900	100.0	2.2	15,838,188	85.8	All classes.....	5,147,403	340,553	100.0	0.8	15,838,188	85.8
General contractors.....	3,440,193	22,920	20.0	0.7	12,263,000	82.5	General contractors.....	3,440,193	345,208	98.8	10.0	12,263,000	82.5
Building.....	1,470,309	22,200	19.3	1.5	3,636,558	77.7	Building.....	1,470,309	250,742	71.7	16.9	3,636,558	77.7
Building not specialized.....	1,249,288	20,367	17.7	1.0	3,125,973	77.0	Building not specialized.....	1,249,288	103,028	55.2	15.5	3,125,973	77.0
Commercial building only.....	135,145	1,833	1.6	1.0	200,426	78.6	Commercial building only.....	135,145	30,789	8.8	22.8	310,159	86.5
Residential building only.....	94,930	730	0.6	2.8	64,420	80.1	Residential building only.....	94,930	26,025	7.7	28.4	200,426	78.6
Highway.....	1,003,752	3	0	(*)	3,019,380	89.5	Highway.....	1,003,752	0,752	2.8	1.0	3,019,380	89.5
Bridges and culvert.....	402,283	3	0	(*)	910,744	90.5	Bridges and culvert.....	402,283	34,003	9.0	9.6	910,744	90.5
Grading.....	58,753	2	0	(*)	507,527	91.2	Grading.....	58,753	806	2.1	1.4	507,527	91.2
Street paving.....	203,596	3,114	0	1.5	553,517	100.0	Street paving.....	203,596	3,114	0	1.5	553,517	100.0
Sewer, gas, water, conduit.....	17,900	1,400	4	7.8	55,500	98.2	Sewer, gas, water, conduit.....	17,900	1,400	4	7.8	55,500	98.2
Waterworks.....	26,175	2,745	8	10.5	64,420	80.1	Waterworks.....	26,175	2,745	8	10.5	64,420	80.1
Railroad.....	254,365	41,950	12.0	16.5	2,817,170	73.4	Railroad.....	254,365	41,950	12.0	16.5	2,817,170	73.4
Subcontractors.....	1,701,210	91,070	80.0	5.4	3,574,282	98.1	Subcontractors.....	1,701,210	4,345	1.2	3	3,574,282	98.1
Marble and tiling.....	170,291	91,970	80.0	54.0	343,050	100.0	Concreting.....	20,425	2,270	0	7.7	64,755	100.0
<i>Cut stone, granite and marble</i>						<i>Millwork</i>							
All classes.....	5,147,403	108,250	100.0	2.1	15,838,188	85.8	All classes.....	5,147,403	148,080	100.0	2.0	15,838,188	85.8
General contractors.....	3,440,193	80,140	70.0	2.5	12,263,000	82.5	General contractors.....	3,440,193	140,196	98.7	4.2	12,263,000	82.5
Building.....	1,470,309	80,080	79.5	5.8	3,636,558	77.7	Building.....	1,470,309	143,486	93.9	9.7	3,636,558	77.7
Building not specialized.....	1,249,288	85,500	79.1	0.9	3,125,973	77.0	Building not specialized.....	1,249,288	116,066	77.7	9.2	3,125,973	77.0
Commercial building only.....	135,145	490	0.5	0.5	200,426	78.6	Commercial building only.....	135,145	16,025	10.1	11.1	310,159	86.5
Residential building only.....	94,930	63	0.1	0.2	64,420	80.1	Residential building only.....	94,930	13,895	9.0	14.1	200,426	78.6
Highway.....	1,003,752	3	0	(*)	3,019,380	89.5	Highway.....	1,003,752	39	0	(*)	3,019,380	89.5
Bridges and culvert.....	402,283	3	0	(*)	910,744	90.5	Bridges and culvert.....	402,283	200	0.1	(*)	910,744	90.5
Grading.....	58,753	5,167	8	8.8	507,527	91.2	Grading.....	58,753	1,000	0.7	0.6	507,527	91.2
Street paving.....	203,596	40,590	6.1	19.9	553,517	100.0	Street paving.....	203,596	1,471	1.0	5.0	553,517	100.0
Sewer, gas, water, conduit.....	17,900	875	1	3.8	55,500	98.2	Sewer, gas, water, conduit.....	17,900	1,471	1.0	5.0	55,500	98.2
Waterworks.....	26,175	3,728	0	14.2	64,420	80.1	Waterworks.....	26,175	1,471	1.0	5.0	64,420	80.1
Railroad.....	254,365	86,092	5.3	13.8	2,817,170	73.4	Railroad.....	254,365	41,950	12.0	16.5	2,817,170	73.4
Subcontractors.....	1,701,210	30,154	5.4	2.1	3,574,282	98.1	Subcontractors.....	1,701,210	1,884	1.3	10.5	3,574,282	98.1
Concreting.....	20,425	8,035	1.3	20.3	64,755	100.0	Highway.....	11,442	1,884	1.3	16.5	81,794	100.0
Heating and plumbing.....	406,133	32	(*)	(*)	752,067	97.0	<i>Roofing and sheet metal work</i>						
Heating and piping.....	277,704	32	(*)	(*)	543,014	96.7	All classes.....	5,147,403	128,080	100.0	2.5	15,838,188	85.8
Masonry.....	32,500	4,200	0	12.9	91,073	100.0	General contractors.....	3,440,193	27,423	21.3	0.8	12,263,000	82.5
Plastering and lathing.....	21,185	1,080	0	5.1	41,603	100.0	Building.....	1,470,309	27,324	21.2	1.8	3,636,558	77.7
Marble and tiling.....	170,291	11,905	1.8	7.0	343,050	100.0	Building not specialized.....						

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
		Amount	Per cent of—						Amount	Per cent of—			
			Total cost	Cost of all distributed materials						Total cost	Cost of all distributed materials		
<b>WEST VIRGINIA—Contd.</b>						<b>WEST VIRGINIA—Contd.</b>							
<i>Heating and ventilating equipment</i>						<i>Electrical appliances and supplies</i>							
All classes.....	\$5,147,403	\$205,823	100.0	4.0	\$15,838,188	85.8	All classes.....	\$5,147,403	\$315,467	100.0	6.1	\$15,838,188	85.8
General contractors.....	\$3,446,193	3,003	1.5	.1	\$12,263,906	82.5	General contractors.....	\$3,446,193	5,063	1.0	.1	\$12,263,906	82.5
Building.....	\$1,479,369	3,003	1.5	.2	\$3,636,558	77.7	Building.....	\$1,479,369	4,400	1.4	.3	\$3,636,558	77.7
Building not specialized.....	1,249,288	1,233	.0	.1	3,125,973	77.0	Building not specialized.....	1,249,288	2,900	.9	.2	3,125,973	77.0
Residential building only.....	94,936	1,770	.9	1.0	200,426	78.0	Residential building only.....	94,936	1,560	.5	1.0	200,426	78.6
Subcontractors.....	\$1,701,210	202,820	98.5	11.0	\$3,574,282	98.1	Subcontractors.....	\$1,701,210	310,404	98.4	18.2	\$3,574,282	98.1
Heating and plumbing.....	\$405,133	193,820	94.2	47.8	\$752,067	97.6	Electrical.....	\$301,404	301,404	95.5	100.0	\$10,572	99.0
Heating and piping.....	277,764	176,840	85.7	63.5	543,014	96.7	Heating and plumbing.....	\$405,133	9,000	2.9	2.2	\$752,067	97.6
Plumbing and heating combined.....	32,595	17,480	8.5	53.6	50,500	96.0	Plumbing.....	94,774	9,000	2.9	9.5	168,553	100.0
Roofing and sheet-metal work.....	\$113,038	9,000	4.4	8.0	\$326,167	100.0	<i>Pipe: Drain tile, vitrified, concrete, segment tile, corrugated.</i>						
Roofing.....	37,390	9,000	4.4	24.1	130,355	100.0	All classes.....	5,147,403	101,382	100.0	2.0	15,838,188	85.8
<i>Plumbing and gas fitting equipment</i>						<i>General contractors.....</i>							
All classes.....	5,147,403	192,415	100.0	3.7	15,838,188	85.8	Building.....	\$1,479,369	2,211	2.2	.1	\$3,636,558	77.7
General contractors.....	\$3,446,193	6,041	3.1	.2	\$12,263,906	82.5	Building not specialized.....	1,249,288	1,708	1.8	.1	3,125,973	77.0
Building.....	\$1,479,369	6,041	3.1	.4	\$3,636,558	77.7	Residential building only.....	94,936	413	.4	.4	200,426	78.6
Building not specialized.....	1,249,288	1,021	1.0	.2	3,125,973	77.0	Highway.....	1,003,752	61,850	51.1	5.2	3,610,380	89.5
Residential building only.....	94,936	4,120	2.1	4.3	200,426	78.6	Bridge and culvert.....	402,283	1,410	1.4	.4	910,744	99.5
Subcontractors.....	\$1,701,210	186,374	98.9	11.0	\$3,574,282	98.1	Grading.....	58,753	20,078	10.8	34.2	597,527	91.2
Heating and plumbing.....	\$405,133	186,374	98.9	46.0	\$752,067	97.6	Street paving.....	203,596	3,730	3.7	1.8	553,517	100.0
Heating and piping.....	277,764	95,955	49.9	34.6	543,014	96.7	Sewer, gas, water, conduit.....	17,900	10,280	10.1	57.4	55,500	98.2
Plumbing.....	94,774	75,274	39.1	79.4	158,553	100.0	Railroad.....	254,365	5,241	6.2	2.1	2,817,170	73.4
Plumbing and heating combined.....	32,595	15,115	7.9	46.4	50,500	96.0	Subcontractors.....	\$1,701,210	6,582	6.5	.4	\$3,574,282	98.1
							Heating and plumbing.....	\$405,133	5,825	5.7	1.4	\$752,067	97.6
							Heating and piping.....	277,764	325	.3	.1	543,014	96.7
							Plumbing.....	94,774	5,500	5.4	5.8	168,553	100.0
							Excavating.....	17,603	767	.7	4.3	518,046	93.4

<sup>1</sup> Based upon the difference between the total value of all construction business reported and the value of subcontract work let.  
<sup>2</sup> See footnote 2 of Table 9 on p. 1286.  
<sup>3</sup> Less than one-tenth of 1 per cent.

<sup>4</sup> Includes cost of materials reported by establishments which did not include the designated material in their distributed lists.  
<sup>5</sup> Includes construction work reported by establishments which did not include the designated material in their distributed lists.

TABLE 11.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929

CLASSIFICATION OF ESTABLISHMENTS	Total cost of all materials <sup>1</sup>	COST OF ALL MATERIALS DISTRIBUTED BY KIND		Sand, gravel, crushed stone, slag, cinders, etc.	Brick (face, common, fire, paving, etc.)	Tile (fire-proofing)	Tile, facing, terra cotta, floor, and wall	Concrete and cinder block	Cut stone, granite, and marble	Cement	Lime	Plaster, etc.	Structural steel	Reinforcing steel	Cast iron, miscellaneous, excluding pipe	Metal doors, windows, and trim
		Amount	Per cent of total													
<b>WEST VIRGINIA.....</b>	<b>\$7,945,693</b>	<b>\$5,147,403</b>	<b>64.8</b>	<b>\$921,592</b>	<b>\$222,550</b>	<b>\$44,269</b>	<b>\$114,900</b>	<b>\$32,697</b>	<b>\$108,258</b>	<b>\$684,860</b>	<b>\$27,247</b>	<b>\$47,849</b>	<b>\$824,622</b>	<b>189,997</b>	<b>\$7,340</b>	<b>\$66,886</b>
General contractors.....	\$3,706,546	3,446,193	60.4	863,786	204,870	38,708	22,930	32,697	86,149	628,706	10,982	40,824	209,487	182,564	7,340	35,386
Building.....	3,393,369	1,479,369	43.6	95,697	199,393	38,480	22,200	16,003	86,086	115,451	19,725	40,554	148,075	25,079	4,535	34,861
Building not specialized.....	2,312,311	1,249,288	54.0	85,127	180,501	34,480	20,367	14,784	85,590	104,019	10,931	39,128	117,075	22,213	4,535	25,420
Commercial building only.....	135,145	135,145	100.0	7,395	13,748											
Residential building only.....	945,933	94,936	10.0	3,175	5,144	4,000	1,833	1,219	496	6,812	395	187	25,003	1,360		0,441
Highway.....	1,212,650	1,003,752	82.8	471,511	875			12,540		3,720	2,309	1,230	5,397	1,500		
Bridge and culvert.....	402,283	402,283	100.0	109,045				355,811		72,207			607	30,311		
Grading.....	88,424	58,753	66.4	8,747				72,207		5,157			120,100	42,584		
Street paving.....	203,596	203,596	100.0	117,195	1,580			5,157		40,530		200		2,108		
Sewer, gas, water, conduit.....	17,900	17,900	100.0	3,845	1,350			40,530		675			40	2,040		975
Waterworks.....	26,175	26,175	100.0	3,845	2,172			3,723	63	35,092			665	4,569	150	525
Railroad.....	322,129	254,365	79.0	87,896				3,708		35,092			100	66,277	1,080	
Subcontractors.....	2,239,077	1,701,210	76.0	57,806	17,680	5,500	91,970		22,110	36,154	7,265	7,025	555,035	7,433		21,500
Concrete.....	29,425	29,425	100.0	10,437						8,635				7,079		
Electrical.....	301,404	301,404	100.0													
Heating and plumbing.....	812,695	405,133	49.9													
Heating and piping.....	304,246	277,764	91.3							32						
Plumbing.....	249,534	94,774	38.0							32						
Plumbing and heating combined.....	258,815	32,595	12.6													
Masonry.....	42,500	32,500	76.5	2,500	17,600	5,500				4,200	1,500					
Painting and decorating.....	22,629	22,629	100.0													
Plastering and lathing.....	21,185	21,185	100.0	4,200						1,080	4,750	7,005				
Roofing and sheet-metal work.....	129,704	113,038	87.2													
Roofing.....	54,056	37,390	69.2													
Sheet-metal work.....	25,775	25,775	100.0													
Roofing and sheet metal combined.....	49,873	49,873	100.0													
Steel erection.....	576,500	576,500	100.0													
Marble and tiling.....	235,291	170,291	72.4	27,521	80		91,970		22,110	11,965	1,015	20	555,000			21,500
Excavating.....	56,402	17,663	31.3	7,700						6,110						
Highway.....	11,442	11,442	100.0	5,426						4,132						

<sup>1</sup> Certain establishments did not give a distribution of the cost of their materials by separate items. The total cost of materials reported by such establishments is, however, included in totals in this column which carry a footnote to that effect.  
<sup>2</sup> See footnote 2 of Table 9 on p. 1286.  
<sup>3</sup> Includes foundation, \$40,000.

CONSTRUCTION—WEST VIRGINIA

TABLE 11.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS	Metal and wire lath and furring	Orna-mental metal work	Lum-ber, rough and finished	Laths, shingles, and shakes	Mill-work	Com-position board	Water-proofing materials	Hard-ware, rough and finished	Paints var-nishes, and glass	Roofing and sheet metal	Fin-ished floor-ing, n. e. s.	Heating and ven-tilating equip-ment	Plumb-ing and gas fit-ting equip-ment	Electri-cal appli-ances and supplies	Pipe: Drain tile, vit-rified, con-crete, etc.	Pipe: Cast iron, sheet and tube steel, etc.	Bitu-minous pav-ing ma-terials	Mis-cellaneous
WEST VIRGINIA.....	\$31,782	\$13,016	\$349,553	\$14,885	\$148,080	\$12,069	\$8,100	\$53,062	\$54,896	\$128,686	\$48,510	\$205,823	\$192,415	\$315,487	\$101,382	\$53,969	\$71,546	\$81,715
General contractors.....	20,012	12,016	345,208	12,785	140,196	12,194	3,061	52,658	32,207	27,423	33,860	3,003	6,041	5,093	94,800	43,969	71,540	80,762
Building.....	23,662	12,016	250,742	12,785	143,483	12,194	2,367	45,830	29,212	27,324	33,860	3,003	6,041	4,490	2,211	3,080	101	15,950
Building not specialized.....	27,698	11,800	193,028	7,289	115,060	9,385	2,209	32,956	23,024	24,960	29,800	1,233	1,921	2,900	1,798	3,080	101	0,155
Commercial building only.....	500		30,789	5,000	15,025	800		4,310	4,000		4,000							6,374
Residential building only.....	364	160	26,925	496	13,395	2,009	68	8,571	2,188	2,364		1,770	4,120	1,560	413			421
Highway.....			9,752		39			600	337	99					51,850	10,823	26,442	23,497
Bridge and culvert.....			34,693		200		1,244	5,422	1,000						1,410		819	13,143
Grading.....			800												20,078	19,608		2,162
Street paving.....			3,114		1,000		200	300	300						3,730	400	27,880	4,521
Sewer, gas, water, conduit.....			1,400												10,280	1,226	1,604	
Waterworks.....	450		2,745		1,471			600	200					603	6,241	8,746	14,700	4,020
Railroad.....			41,956				150		1,158									17,469
Subcontractors.....	2,750	1,000	4,345	2,100	1,584	775	2,130	1,004	22,689	101,263	14,650	202,820	186,374	310,404	6,582	10,000		953
Concreting.....			2,270					1,004										
Electrical.....														301,404				
Heating and plumbing.....									60			193,820	186,374	9,000	5,825	10,000		
Heating and piping.....									60			176,340	95,985	9,000	325	5,000		
Plumbing.....														9,000	6,600	5,000		
Plumbing and heating combined.....												17,480	15,115					
Masonry.....			1,200															
Painting and decorating.....									22,629									
Plastering and lathing.....	2,050			2,100														
Roofing and sheet-metal work.....		1,000				775	1,000			101,263				9,000				
Roofing.....		1,000					1,000			26,390				9,000				
Sheet-metal work.....						775				25,000								
Roofing and sheet-metal combined.....										49,873								
Marble and tiling.....	700		125				100				14,650							
Excavating.....			750				1,039								757			953
Highway.....					1,884													

\* Includes reported cost of riprap, rubble, etc.; screens, shades, awnings, etc.; elevators, dumb-waiters, etc.; wire cable, guards, and fencing; ready-mixed concrete; mineral products (nonmetallic), n. e. s.; freight hauling or trucking to job; and miscellaneous, n. e. s. For total cost of these items see Table 9.

TABLE 12.—NUMBER OF, AND VOLUME OF BUSINESS REPORTED BY, ESTABLISHMENTS DOING A CONSTRUCTION BUSINESS OF LESS THAN \$25,000 IN 1929, PERCENTAGE OF TOTAL NUMBER OF KNOWN ESTABLISHMENTS, AND AVERAGE VOLUME PER ESTABLISHMENT

TYPES OF WORK	West VIRGINIA 1930 population, 1,729,205							
	Known contracting establishments				Volume of business reported			
	Total number	Inactive in 1929	Active in 1929		Number of reporting establishments	Per cent of active	Amount	Average per establishment
Total establishments canvassed (less than \$25,000).....	798	18	780					
Total establishments, type of work unknown.....								
Total general and subcontractors classified.....	798	18	780		100.0			
Total general contractors classified.....	271	13	258		33.1	66	25.6	\$734,727
Building.....	236	11	225		28.8	61	27.1	689,977
Highway.....	28	2	26		3.3	3	11.5	30,700
Bridge and culvert.....	5		5		.6	1	20.0	21,200
Sewer, gas, water, conduit.....	2		2		.3	1	50.0	1,850
Total subcontractors classified.....	527	5	522		66.9	140	28.0	1,024,560
Carpentering.....	41	2	39		5.0	16	41.0	72,210
Concreting.....	38		38		4.9	9	23.7	55,858
Electrical.....	62		62		7.9	11	17.7	82,558
Heating and ventilating.....	15		15		1.9	4	26.7	60,879
Masonry.....	20	1	19		2.4	3	15.8	10,600
Painting and decorating.....	104	1	103		13.2	24	23.3	104,706
Glass and glazing.....	1		1		.1			
Plastering.....	32	1	31		4.0	11	35.5	57,508
Plumbing and heating.....	139		139		17.8	44	31.7	341,570
Sheet metal and roofing.....	25		25		3.2	9	36.0	92,684
Marble and tiling.....	9		9		1.2	4	44.4	52,325
Excavating and grading.....	5		5		.6	2	40.0	22,943
Steel erection.....	1		1		.1	1	100.0	20,431
Pipe covering.....	1		1		.1	1	100.0	4,000
Foundation.....	1		1		.1	1	100.0	2,855
Ornamental iron.....	1		1		.1			
Wrecking.....	1		1		.1			
Cut stone.....	5		5		.6			
Miscellaneous subcontractors.....	20		26		3.3	6	23.1	43,433

TABLE 13.—ESTABLISHMENTS (WHOSE BUSINESS WAS LESS THAN \$25,000 IN 1929) WHICH REPORTED THEIR VOLUME OF CONSTRUCTION WORK, CLASSIFIED BY RANGE OF VOLUME OF BUSINESS

CLASSIFICATION	Total	Less than \$2,500	\$2,500 to \$4,999	\$5,000 to \$7,499	\$7,500 to \$9,999	\$10,000 to \$12,499	\$12,500 to \$14,999	\$15,000 to \$17,499	\$17,500 to \$19,999	\$20,000 to \$22,499	\$22,500 to \$24,999
WEST VIRGINIA											
Total general and subcontractors.....	212	48	30	20	27	25	19	13	6	6	9
General contractors.....	66	6	7	4	13	7	12	6	5	2	4
Subcontractors.....	146	42	23	16	14	18	7	7	1	4	5

# WISCONSIN

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# CONSTRUCTION—WISCONSIN

1293

TABLE 1.—VALUE OF CONSTRUCTION BUSINESS DURING 1929 AND PRINCIPAL ITEMS OF EXPENDITURE

(Values expressed in thousands)

AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	Number of establishments	VALUE OF CONSTRUCTION BUSINESS			PRINCIPAL EXPENDITURES			AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	Number of establishments	VALUE OF CONSTRUCTION BUSINESS			PRINCIPAL EXPENDITURES		
		Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials			Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials
<b>WISCONSIN</b> .....	1,147	\$145,279	\$114,357	\$30,321	\$25,411	\$33,598	\$55,081	<b>WISCONSIN—Continued.</b>							
<i>Counties and principal city</i>								<i>Classification of establishments—Continued</i>							
<b>Counties:</b>								<b>Subcontractors—Continued.</b>							
Ashland .....	5	390	390		84	123	159	Stone work .....	4	\$206		\$200	\$20	\$72	\$80
Brown .....	51	4,565	2,865	1,700	416	1,007	2,047	Marble and tiling .....	24	3,440	\$1,788	1,652	31	1,080	1,596
Chippewa .....	5	770	720	56	175	190	181	Excavating and wrecking .....	12	1,172	321	851	14	410	10
Dane .....	68	10,173	7,872	2,301	2,356	2,443	3,277	Ornamental iron .....	7	2,830	138	2,493	20	360	1,714
Dodge .....	6	249	209	40	4	72	108	Grading .....	5	435	20	415	10	142	15
Douglas .....	15	1,974	1,621	353	147	451	832	Rental of equipment, trucking, etc. .....	3	145	19	120	7	34	
Eau Claire .....	20	2,426	2,285	141	271	616	923	Other classes .....	4	721	169	552		204	376
Fond du Lac .....	17	6,402	6,039	363	1,089	1,415	1,826	<b>Size of business groups</b>							
Grant .....	4	150	97	53	31	54	21	General contractors .....	573	62,552	61,737	814	24,433	10,860	30,483
Green .....	4	124	92	32	6	35	20	\$25,000 to \$49,999 .....	170	5,948	5,867	91	1,388	2,150	
Green Lake .....	3	917	878	39	181	115	323	\$50,000 to \$99,999 .....	176	11,978	11,835	143	2,588	4,115	
Jefferson .....	13	763	713	50	68	215	244	\$100,000 to \$199,999 .....	110	15,653	15,517	136	3,045	5,389	
Kenosha .....	31	3,137	2,326	811	531	667	1,340	\$200,000 to \$499,999 .....	87	27,140	26,707	343	7,084	9,225	
La Crosse .....	22	1,083	775	308	161	274	370	\$500,000 to \$999,999 .....	19	13,534	13,430	104	2,556	4,944	
Manitowoc .....	28	1,901	1,585	316	153	431	800	\$1,000,000 and over .....	11	18,298	18,298		7,318	3,859	
Marathon .....	12	808	712	96	64	202	391	Building contractors .....	408	63,402	62,974	428	21,462	13,755	10,210
Marinette .....	3	231	231		63	47	81	\$25,000 to \$49,999 .....	132	4,710	4,654	56	1,210	1,776	
Milwaukee .....	539	80,851	60,753	20,098	14,623	18,521	31,033	\$50,000 to \$99,999 .....	130	8,721	8,652	69	2,410	3,106	
Oncida .....	3	123	74	49	4	44	65	\$100,000 to \$199,999 .....	79	11,464	11,361	103	3,556	3,898	
Outagamie .....	25	2,927	2,450	477	616	561	1,120	\$200,000 to \$499,999 .....	48	14,882	14,682	200	5,284	4,461	
Ozaukee .....	9	353	299	54	35	95	178	\$500,000 to \$999,999 .....	9	6,519	6,519		1,845	1,785	
Portage .....	4	222	222		48	113	138	\$1,000,000 and over .....	10	17,100	17,100		7,157	8,626	
Racine .....	70	7,872	6,639	1,233	1,714	1,057	2,958	Subcontractors .....	574	52,727	22,620	30,107	978	13,722	25,198
Rock .....	32	3,046	3,172	374	538	894	1,408	\$25,000 to \$49,999 .....	282	10,022	3,978	6,044	106	2,898	4,557
Sauk .....	7	470	470		6	123	204	\$50,000 to \$99,999 .....	161	10,400	4,485	5,924	135	3,142	4,443
Sheboygan .....	29	1,803	1,248	555	100	551	785	\$100,000 to \$199,999 .....	99	13,650	6,407	7,243	237	3,003	6,130
Vernon .....	3	101	101		4	24	55	\$200,000 to \$499,999 .....	85	10,696	5,353	5,343	226	2,682	5,157
Walworth .....	12	682	681	1	21	187	258	\$500,000 to \$999,999 .....	4	2,534	1,117	1,417	154	434	1,342
Washington .....	9	618	503	115	54	159	283	\$1,000,000 and over .....	3	5,417	1,285	4,132	120	914	3,563
Waukesha .....	24	1,736	1,394	342	176	456	700	<b>MILWAUKEE</b> .....	471	73,163	55,022	18,142	13,390	16,869	27,901
Waupaca .....	3	143	96	48	1	37	89	<i>Classification of establishments</i>							
Winnebago .....	20	4,967	4,331	636	455	1,243	2,491	Operative builders .....	11	1,642	1,642		943	208	389
Wood .....	11	1,070	985	85	190	224	345	General contractors .....	187	38,630	38,078	558	11,743	8,059	11,691
Other counties .....	22	1,690	1,582	108	179	400	646	Building .....	141	27,631	27,270	355	10,679	5,981	7,288
Principal city: 1								Building not specialized .....	85	22,374	22,019	355	7,817	5,134	6,075
Milwaukee .....	471	73,163	55,022	18,142	13,390	16,859	27,901	Residential building only .....	56	5,257	5,257		2,762	547	1,213
<i>Classification of establishments</i>								Highway .....	6	1,474	1,200	184	136	231	665
Operative builders .....	21	2,060	2,669		1,286	367	760	Grading .....	4	523	523		147	148	
General contractors .....	552	89,893	80,068	814	23,147	19,499	29,724	Street paving .....	16	4,412	4,391	21	393	825	2,181
Building .....	387	60,733	60,305	428	20,170	13,387	18,451	Sewer, gas, water, conduit .....	15	1,931	1,931		53	626	627
Building not specialized .....	255	49,919	49,491	428	15,245	11,814	15,483	Other classes .....	5	2,664	2,664		435	548	380
Commercial building only .....	4	201	201		73	42	35	Subcontractors .....	273	32,885	15,301	17,584	704	8,592	16,921
Residential building only .....	128	10,613	10,613		4,858	1,532	2,933	Carpentering and wood flooring .....	10	552	290	253	7	178	180
Highway .....	51	11,145	10,841	304	1,651	1,828	4,086	Concreting .....	6	1,205	842	363	214	249	393
Bridge and culvert .....	14	1,225	1,206	19	270	209	401	Electrical .....	30	2,652	1,584	1,068		723	1,253
Grading .....	18	1,364	1,361	3	233	367	23	Elevator construction .....	3	904	285	619		115	546
Street paving .....	38	7,919	7,859	60	483	1,500	4,124	Heating and plumbing .....	90	9,757	4,552	5,206	144	2,309	5,234
Sewer, gas, water, conduit .....	29	4,165	4,165		60	1,264	1,497	Heating and piping .....	34	4,242	2,318	1,924	115	908	2,235
Dredging, river, harbor, etc. .....	6	2,483	2,483		256	588	896	Plumbing .....	46	4,738	1,699	3,039	3	1,205	2,679
Railroad .....	3	370	370		9	139	106	Plumbing and heating combined .....	10	778	535	243	20	195	420
Other classes .....	6	478	475	3		158	138	Masonry .....	14	1,089	520	519	83	309	441
Subcontractors .....	574	52,727	22,620	30,107	978	13,722	25,198	Painting and decorating .....	28	1,676	938	688	15	350	396
Carpentering and wood flooring .....	19	1,237	354	883	12	327	603	Glass and glazing .....	5	674	103	511	5	80	449
Concreting .....	16	1,928	644	1,284	214	514	657	Plastering and lathing .....	15	1,851	664	1,187	27	918	588
Electrical .....	65	4,742	2,874	1,868	10	1,196	2,220	Roofing and sheet-metal work .....	28	2,381	1,417	904	14	561	1,020
Elevator construction .....	3	904	285	619		115	546	Roofing .....	12	1,226	975	251		247	521
Heating and plumbing .....	232	18,655	8,658	9,997	243	4,320	10,064	Sheet-metal work .....	16	1,166	442	713	14	315	500
Heating and piping .....	61	6,060	3,398	2,662	171	1,293	3,273	Steel erection .....	8	2,997	2,204	793	150	506	1,855
Plumbing .....	125	9,068	3,650	6,316	17	2,423	5,359	Stonework .....	3	192		192		52	61
Plumbing and heating combined .....	46	2,629	1,610	1,019	55	604	1,432	Marble and tiling .....	17	3,092	1,762	1,330	31	961	1,466
Masonry .....	29	1,894	654	1,240	160	624	736	Excavating and wrecking .....	0	537	194	843	14	197	2
Painting and decorating .....	41	2,430	1,197	1,242	15	1,198	582	Ornamental iron .....	5	2,458	138	2,320		339	1,662
Glass and glazing .....	5	674	103	511	6	80	449	Other classes .....	6	915	180	727		244	376
Plastering and lathing .....	28	2,398	761	1,637	35	1,195	769								
Roofing and sheet-metal work .....	65	5,301	2,200	3,040	15	1,225	2,455								
Roofing .....	28	2,572	1,541	1,031		478	1,280								
Sheet-metal work .....	31	2,048	447	1,601	15	598	912								
Roofing and sheet metal combined .....	6	680	272	408		160	313								
Steel erection .....	12	3,742	2,320	1,422	167	611	2,318								

See footnotes at end of table.



CONSTRUCTION—WISCONSIN

TABLE 1.—VALUE OF CONSTRUCTION BUSINESS DURING 1929 AND PRINCIPAL ITEMS OF EXPENDITURE—Continued

[Values expressed in thousands]

AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	Number of establishments	VALUE OF CONSTRUCTION BUSINESS			PRINCIPAL EXPENDITURES			AREA, CLASSIFICATION OF ESTABLISHMENTS, AND SIZE OF BUSINESS GROUPS	Number of establishments	VALUE OF CONSTRUCTION BUSINESS			PRINCIPAL EXPENDITURES							
		Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials			Total	Under general contract or directly for owner	Under sub-contract	Sub-contract work let	Wages paid	Cost of materials					
<b>MILWAUKEE—Continued.</b>						<b>MILWAUKEE—Continued</b>														
<i>Size of business groups</i>						<i>Size of business groups—Continued</i>														
General contractors <sup>1</sup> .....	198	\$40,278	\$30,720	\$558	\$12,686	\$8,267	\$11,980	General contractors—Con.												
\$25,000 to \$49,999.....	41	1,417	1,390	27	376	261	473	Building contractors—Con.												
\$50,000 to \$99,999.....	57	3,957	3,847	110	1,259	755	1,305	\$500,000 to \$999,999.....	6	\$4,428	\$4,428		\$1,005	\$1,325	\$1,290					
\$100,000 to \$199,999.....	43	6,865	6,762	103	2,057	1,331	2,081	\$1,000,000 and over.....	5	8,039	8,039		3,892	1,042	1,616					
\$200,000 to \$499,999.....	33	9,658	9,433	225	3,306	1,855	2,830	Subcontractors.....	273	32,885	15,301	\$17,584	704	8,502	15,921					
\$500,000 to \$999,999.....	13	9,143	9,053	95	1,041	2,192	3,270	\$25,000 to \$49,999.....	115	4,130	1,600	2,440	52	1,345	1,777					
\$1,000,000 and over.....	6	9,232	9,232	4,048	1,873	1,900		\$50,000 to \$99,999.....	58	4,129	1,004	2,135	54	1,333	1,728					
Building contractors <sup>2</sup> .....	152	29,274	28,918	355	11,522	5,880	7,677	\$100,000 to \$199,999.....	67	8,954	4,385	4,560	126	2,403	3,834					
\$25,000 to \$49,999.....	35	1,213	1,180	27	307	204	420	\$200,000 to \$499,999.....	27	8,377	4,830	3,547	108	2,273	3,081					
\$50,000 to \$99,999.....	46	3,190	3,148	42	1,211	575	967	\$500,000 to \$999,999.....	3	1,877	1,117	760	154	323	1,039					
\$100,000 to \$199,999.....	37	5,492	5,299	103	1,688	837	1,600	\$1,000,000 and over.....	3	5,417	1,285	4,132	120	914	3,663					
\$200,000 to \$499,999.....	23	7,001	6,818	183	3,059	1,206	1,848													

<sup>1</sup> Includes Barron, Bayfield, Buffalo, Clark, Columbia, Door, Dunn, Forest, Juneau, Lincoln, Monroe, Pepin, Price, Richland, St. Croix, Shawano, Taylor, and Vilas, for which data can not be shown separately without revealing individual operations. From areas other than those listed, no reports were received for establishments which handled as much as \$25,000 business during 1929.

- <sup>2</sup> Figures included in respective county total.
- <sup>3</sup> Includes foundation; dam and reservoir; and waterworks.
- <sup>4</sup> Includes pipe covering; and automatic temperature control.
- <sup>5</sup> Includes metal work, n. e. s.
- <sup>6</sup> Includes bridge and culvert; soundproofing; and flooring, n. e. s.
- <sup>7</sup> Includes operative builders.
- <sup>8</sup> Includes bridge and culvert; dredging, river, harbor, etc.; and railroad.
- <sup>9</sup> Includes bridge and culvert; grading; soundproofing; and flooring, n. e. s.

TABLE 2.—CONSTRUCTION BUSINESS OF REPORTING ESTABLISHMENTS DURING 1929, BY CLASS OF OWNERSHIP AND BY TYPE OF WORK

CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—						CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—												
	All classes of establishments		General contractors <sup>1</sup>		Subcontractors			All classes of establishments		General contractors <sup>1</sup>		Subcontractors								
	Number reporting	Value	Number reporting	Value	Number reporting	Value		Number reporting	Value	Number reporting	Value	Number reporting	Value							
<b>WISCONSIN</b>						<b>WISCONSIN—Continued</b>														
All construction business.....	1,147	\$145,278,823	573	\$92,551,858	574	\$52,727,187	All business under general contract or directly for owners—Continued.													
Distribution not reported.....	82	9,472,670	24	3,478,054	58	5,994,616	Building—Continued.													
Distributed by class of ownership.....	1,065	135,806,153	546	89,073,602	516	46,732,551	Distributed by class—Con.													
Private.....	951	90,175,937	446	61,856,376	505	38,319,081	Air transport.....	10	\$133,810	4	\$115,050	6	\$18,167							
Quasi public or community.....	233	9,715,845	81	6,494,179	152	3,221,666	Rail and water transportation.....	22	689,739	14	656,752	8	32,984							
Public.....	388	35,914,371	214	30,722,547	174	5,191,824	Miscellaneous.....	119	3,709,937	65	1,426,651	54	2,283,286							
Distribution not reported.....	44	1,892,733	18	1,365,641	26	527,092	Highway and street.....	120	18,675,909	113	18,573,957	7	102,009							
Distributed by class of public ownership.....	344	34,021,638	106	29,356,906	148	4,664,732	Railroad and car line.....	7	394,072	4	370,607	3	18,365							
Federal.....	30	1,908,735	17	1,615,638	13	293,097	Public works and utilities.....	114	9,642,756	95	9,250,999	19	686,757							
State.....	116	9,867,055	75	9,020,111	41	837,944	Distribution not reported.....	7	368,790	6	357,358	1	11,372							
County or township.....	154	6,372,127	83	5,208,798	71	1,165,329	Distributed by class.....	107	9,574,026	89	8,899,641	18	674,385							
Municipal.....	210	15,873,721	111	13,505,359	99	2,368,362	Bridge, tunnel, etc.....	44	2,798,096	39	2,464,823	5	343,873							
All business under general contract or directly for owners.....	897	114,357,461	579	91,737,256	318	22,620,205	Central station, light, dock, pier, retaining wall, etc.....	20	770,430	14	574,605	6	195,826							
Distribution not reported.....	5	534,727	3	446,871	2	87,856	Flood control, irrigation, and land drainage.....	14	1,240,245	12	1,399,120	2	51,340							
Distributed by class.....	892	113,822,734	576	91,290,385	316	22,532,349	Refuse disposal plant.....	4	210,224	3	1,309,120	1								
Building.....	730	83,956,156	422	62,342,785	303	21,612,371	Sewage disposal and drainage.....	3	14,610	2	2,784,396	1								
Distribution not reported.....	63	4,852,480	36	3,683,303	27	1,109,177	Park, grounds, etc.....	30	2,791,884	26	30,853	4	12,123							
Distributed by class.....	667	79,102,676	386	58,656,482	281	20,443,194	River and harbor improvement.....	8	42,976	3	731,216	3								
Commercial.....	297	13,353,219	188	10,534,039	109	2,819,180	Water supply.....	20	816,788	17	924,610	3								
Educational.....	160	7,128,106	66	5,436,642	94	1,691,554	Telephone line and system.....	1		1		1								
Hotel.....	69	1,576,602	15	1,043,453	54	532,149	Miscellaneous.....	2	150,987	1		1								
Hospital and institutional.....	96	3,337,768	32	2,368,863	64	938,905	Water-power development.....	3	370,574	2		1								
Manufacturing.....	157	10,503,346	64	7,877,369	93	2,625,977	Air-transport work.....	1		1		1								
Military and naval.....	4	63,870	1		3		Miscellaneous, n. e. s.....	31	483,810	22	740,037	9								
Public: Courts, jails, etc.....	66	2,941,450	30	2,385,908	36	619,412														
Religious and memorial.....	129	2,076,486	52	1,665,324	77	411,162														
Residential.....	576	31,402,706	337	23,085,189	239	8,317,007														
Social and recreational.....	66	2,186,454	34	2,033,633	32	152,821														

See footnotes at end of table.

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TABLE 2.—CONSTRUCTION BUSINESS OF REPORTING ESTABLISHMENTS DURING 1929, BY CLASS OF OWNERSHIP AND BY TYPE OF WORK—Continued

CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—						CLASS OF OWNERSHIP AND TYPE OF CONSTRUCTION WORK	CONSTRUCTION BUSINESS REPORTED BY—					
	All classes of establishments		General contractors <sup>1</sup>		Subcontractors			All classes of establishments		General contractors <sup>1</sup>		Subcontractors	
	Number reporting	Value	Number reporting	Value	Number reporting	Value		Number reporting	Value	Number reporting	Value	Number reporting	Value
<b>WISCONSIN—Continued</b>							<b>MILWAUKEE—Continued</b>						
All business under subcontract—	482	\$30,921,802	43	\$814,400	439	\$30,106,082	All business under general contract or directly for owners—						
Distribution not reported.....	12	413,007	1	9,580	11	403,487	Continued.						
Distributed by class.....	470	30,508,205	42	804,820	428	29,703,475	Distributed by class—Con.						
Carpentering and wood flooring.....	33		14		19		Building—Continued.						
Soundproofing.....	1	1,417,132	1	220,902	1	1,196,230	Distributed by class—Con.						
Flooring, n. e. s.....	1						Manufacturing.....	85	\$6,804,484	29	\$4,792,894	56	\$2,011,590
Concreting.....	43	1,502,090	19	203,768	24	1,388,341	Military and naval.....	3	60,020	1	1,010,500	2	551,422
Electrical.....	47	1,889,224			47	1,889,224	Public: Courts, jails, etc.....	30	2,401,092	7		23	320,958
Elevator construction.....	4	702,166			4	702,166	Religious and memorial.....	05	835,296	18	514,338	47	302,988
Heating and plumbing.....	104	9,907,457		7,875	103	9,900,082	Residential.....	268	16,569,341	135	11,024,234	133	5,536,107
Automatic temperature control.....	1	3,298,887		(?)		(?)	Social and recreational.....	31	671,327	11	545,400	20	125,927
Pipe covering.....	13	643,073		(?)	13	643,073	Air transport.....	6	38,369	2		4	45,253
Plumbing.....	112	5,008,254	2	(?)	110	(?)	Rail and water transportation.....	13	520,021	7	513,137	6	1,163,415
Plumbing and heating combined.....	23	807,243			23	807,243	Miscellaneous.....	42	1,689,234	20	535,819	22	50,406
Masonry.....	33	981,900	9	46,552	24	935,408	Highway and street.....	20	5,019,563	27	5,833,297	2	440,275
Painting and decorating.....	28	1,113,449			28	1,113,449	Railroad and car line.....	4	264,230	4	4,540,810	8	11,372
Glass and glazing.....	11	570,148			11	570,148	Public works and utilities.....	41	4,090,094	33	27,000	1	437,003
Plastering and lathing.....	34	1,045,536	4	4,090	30	1,641,446	Distribution not reported.....	2	38,372	1		7	338,181
Roofing and sheet-metal work.....	30	2,908,509		(?)		(?)	Distributed by class.....	39	4,951,722	32	4,513,819	7	437,003
Roofing.....	52	1,055,515	1	(?)	26	(?)	Bridge, tunnel, etc.....	16	1,634,840	13	1,296,659	3	
Sheet-metal work.....	3	241,486			3	241,486	Central station, light and power plant.....	6	295,104	4	(?)	2	(?)
Steel erection.....	14	1,327,025	1	(?)	13	(?)	Dock, pier, retaining wall, etc.....	7		0	(?)	1	(?)
Stonework.....	11	301,016	2	(?)	9	(?)	River and harbor improvement.....	2	1,495,139	2	(?)		
Marble and tiling.....	25	1,661,573			25	1,661,573	Sewage disposal and drainage.....	13	1,224,064	18	1,224,064		
Wrecking.....	4	56,850	1	224,039	3	823,520	Water supply.....	5	230,067	5	230,067	3	
Excavating.....	32	990,709	13	(?)	19	(?)	Park, grounds, etc.....	5	36,831	2		1	37,005
Ornamental iron.....	9	2,510,291		(?)	8	(?)	Refuse disposal plant.....	2	29,177	1		1	
Metal work, n. e. s.....	2	66,926	3	72,726	2	445,245	Miscellaneous.....	2		1		3	31,151
Highway.....	3	451,045	1		7		Water-power development.....	1	377,758	4	346,607		
Grading.....	8	136,312			5	136,312	Miscellaneous.....	7		1		208	17,583,018
Rental of equipment, trucking, etc.....	2	197,489	1		1	256,653	All business under subcontract—	226	18,141,529	21	587,911	208	17,583,018
Bridge and culvert.....	3	197,489	1		2		Distribution not reported.....	4	126,142	1	9,580	3	110,592
Sewer, gas, water, conduit.....	1	81,370	1	22,215	4		Distributed by class.....	222	18,015,387	20	548,331	202	17,467,056
Miscellaneous, n. e. s.....	5		1		4		Carpentering and wood flooring.....	18		10		8	548,808
							Soundproofing.....	1	753,084	1	205,080	12	970,700
							Concreting.....	19	1,071,750	7	100,900	19	1,067,702
							Electrical.....	19	1,007,702			4	702,166
							Elevator construction.....	4	702,166			41	(?)
							Heating and plumbing.....	4	5,122,434			41	2,048,180
							Heating and piping.....	41				1	550,200
							Automatic temperature control.....	1	2,048,180			43	2,342,330
							Pipe covering.....	4	550,200			4	181,724
							Plumbing.....	43	2,342,330	1	(?)	0	31,223
							Plumbing and heating combined.....	4	181,724			16	611,728
							Masonry.....	15	394,322			8	516,539
							Painting and decorating.....	16	611,728			17	1,167,427
							Glass and glazing.....	8	516,539			10	1,019,171
							Plastering and lathing.....	17	1,167,427	2	(?)	10	200,538
							Roofing and sheet-metal work.....		1,019,171			21	758,633
							Roofing.....	10	200,538			1	725,751
							Sheet-metal work.....	21		1	(?)	8	217,804
							Roofing and sheet metal combined.....	1	758,633	1	(?)	18	1,340,157
							Steel erection.....	8	725,751			2	441,573
							Stonework.....	8	217,804			6	2,328,026
							Marble and tiling.....	18	1,340,157			3	66,926
							Wrecking.....	2	441,573			1	414,504
							Excavating.....	13				1	52,823
							Ornamental iron.....	6	2,328,026				
							Metal work, n. e. s.....	2					
							Highway.....	3	66,926				
							Bridge and culvert.....	1					
							Grading.....	2	414,504				
							Sewer, gas, water, conduit.....	1					
							Miscellaneous, n. e. s.....	3	52,823				

<sup>1</sup> Includes operative builders.

<sup>2</sup> Value omitted in order to avoid disclosing individual operations. The amounts omitted are, however, included in the respective totals.

TABLE 3.—CONSTRUCTION BUSINESS DURING 1929, BY LOCATION

CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	TOTAL	IN HOME CITY	IN HOME STATE	OUTSIDE HOME STATE	CLASSIFICATION OF ESTABLISHMENTS	Establishments reporting	TOTAL	IN HOME CITY	IN HOME STATE	OUTSIDE HOME STATE
WISCONSIN	1,181	\$140,900,323	\$98,162,307	\$128,020,098	\$12,880,225	MILWAUKEE	495	\$70,308,270	\$54,759,288	\$63,674,941	\$6,723,329
Operative builders	20	2,314,832	2,215,036	2,314,832		Operative builders	10	1,288,000	1,220,531	1,288,090	
General contractors	544	88,360,373	55,139,550	80,025,004	8,335,809	General contractors	185	38,160,780	20,701,107	35,301,331	2,859,449
Building	381	59,447,504	43,855,833	54,048,270	5,399,234	Building	139	27,156,216	21,901,552	25,162,450	1,993,766
Building not specialized	249	48,632,965	35,130,771	44,073,731	4,589,234	Building not specialized	83	21,898,772	17,631,626	19,905,006	1,993,706
Commercial building only	4	201,235	197,635	201,235		Residential building only	56	5,257,444	4,269,926	5,257,444	
Residential building only	128	10,613,304	8,527,427	9,773,304	840,000	Highway	6	1,473,703	339,026	608,020	865,683
Highway	61	11,144,928	685,171	10,029,207	1,115,721	Grading	4	523,255	152,200	523,255	
Bridge and culvert	14	1,224,868	727,443	1,190,000	34,868	Street paving	16	4,412,238	3,160,295	4,412,233	
Grading	18	1,363,795	272,792	1,363,795		Sewer, gas, water, conduit	15	1,931,384	1,747,579	1,931,384	
Street paving	37	7,743,319	5,084,402	7,687,916	155,403	Other classes <sup>1</sup>	5	2,063,984	2,490,484	2,663,984	
Sewer, gas, water, conduit	29	4,165,358	2,190,080	2,840,429	1,324,929	Subcontractors	270	30,949,400	23,747,650	27,085,620	3,863,880
Dredging, river, harbor, etc.	6	2,483,177	1,062,111	2,308,792	174,385	Carpentering and wood flooring	10	562,305	523,889	550,173	2,132
Railroad	3	370,003	139,890	269,859	100,204	Concreting	6	1,205,235	1,107,401	1,205,235	
Other classes <sup>1</sup>	5	417,361	221,828	386,736	30,625	Electrical	29	2,621,680	2,398,432	2,591,517	80,163
Subcontractors	67	50,225,118	38,807,121	45,680,262	4,544,856	Elevator construction	3	903,827	646,813	817,768	80,059
Carpentering and wood flooring	19	1,237,000	1,189,721	1,234,868	2,132	Heating and plumbing	89	8,069,572	6,080,071	7,993,072	110,500
Concreting	16	1,928,147	1,678,358	1,928,147		Heating and piping <sup>2</sup>	34	4,241,952	3,304,123	4,126,452	110,500
Electrical	64	4,711,321	4,220,057	4,604,198	107,123	Plumbing	45	3,049,088	2,010,473	3,049,088	
Elevator construction	3	903,827	646,813	817,768	80,059	Plumbing and heating combined	10	777,932	690,475	777,932	
Heating and plumbing	230	16,819,185	14,417,753	16,028,780	190,405	Masonry	14	1,038,848	925,304	1,038,848	
Heating and piping <sup>2</sup>	61	6,059,951	5,057,094	5,025,546	134,405	Painting and decorating	28	1,070,482	1,520,090	1,029,785	46,697
Plumbing	123	8,130,525	7,061,844	8,130,525		Glass and glazing	5	674,343	590,105	674,343	
Plumbing and heating combined	46	2,628,709	2,298,815	2,572,709	56,000	Plastering and lathing	15	1,850,611	1,727,549	1,809,009	41,062
Masonry	29	1,894,218	1,700,246	1,888,375	5,843	Roofing and sheet-metal work	28	2,381,373	2,125,986	2,351,377	29,996
Painting and decorating	41	2,439,171	2,257,770	2,377,474	61,697	Roofing	12	1,225,620	1,157,335	1,225,620	
Glass and glazing	5	674,343	590,105	674,343		Sheet-metal work	10	1,155,763	968,650	1,125,767	29,996
Plastering and lathing	28	2,397,857	2,188,999	2,301,790	96,067	Steel erection	8	2,900,815	1,677,018	2,086,836	909,980
Roofing and sheet-metal work	65	5,360,616	3,996,780	5,089,780	261,836	Stonework	3	192,308	181,712	192,308	
Roofing	28	2,572,361	1,838,811	2,572,361	5,843	Marble and tiling	16	2,874,068	1,931,203	2,115,655	769,013
Sheet-metal work	31	2,048,480	1,657,723	1,848,909	199,481	Excavating and wrecking	6	637,447	500,576	537,447	
Roofing and sheet metal combined	11	679,775	500,246	617,420	62,355	Ornamental iron <sup>3</sup>	5	2,458,429	663,002	714,601	1,743,738
Steel erection	6	3,525,222	1,985,445	2,590,242	934,980	Other classes <sup>4</sup>	5	915,457	488,440	817,467	98,000
Stonework	4	266,247	202,398	245,600	20,647						
Marble and tiling	23	3,222,284	1,797,592	2,455,456	766,798						
Excavating and wrecking	12	1,171,538	608,172	1,035,954	135,584						
Ornamental iron <sup>3</sup>	6	2,491,094	678,002	747,356	1,743,738						
Grading	4	377,315	282,800	377,315							
Rental of equipment, trucking, etc.	3	145,159	38,169	111,212	33,947						
Other classes <sup>1</sup>	4	720,574	317,940	622,574	92,000						

<sup>1</sup> Includes dam and reservoir; waterworks; and foundation.  
<sup>2</sup> Includes pipe covering; and automatic temperature control.  
<sup>3</sup> Includes metal work, n. e. s.

<sup>4</sup> Includes bridge and culvert; soundproofing; and flooring, n. e. s.  
<sup>5</sup> Includes bridge and culvert; dredging, river, harbor, etc.; and railroad.  
<sup>6</sup> Includes bridge and culvert; grading; soundproofing; and flooring, u. e. s.

TABLE 4.—CONSTRUCTION BUSINESS OUTSIDE HOME STATE, BY LOCATION

STATE OR COUNTRY	LOCATION REPORTED BY—			STATE OR COUNTRY	LOCATION REPORTED BY—		
	All classes of establishments	General contractors	Subcontractors		All classes of establishments	General contractors	Subcontractors
WISCONSIN				MILWAUKEE			
Total distributed by State or country <sup>1</sup>	\$12,880,225	\$8,335,369	\$4,544,856	Total distributed by State or country <sup>2</sup>	\$6,723,320	\$2,860,440	\$3,803,880
Alabama	651		651	Alabama	651		651
California	9,580		9,580	California	9,580		9,580
Connecticut	46,922		46,922	Connecticut	46,922		46,922
District of Columbia	336,749		336,749	District of Columbia	336,749		336,749
Georgia	1,160		1,160	Georgia	1,160		1,160
Illinois	4,883,962	3,128,845	1,755,117	Illinois	4,883,962	1,025,719	1,430,083
Indiana	545,076	339,550	205,826	Indiana	545,076	296,996	185,494
Iowa	1,178,993	1,127,711	51,282	Iowa	1,178,993		50,540
Kansas	52,728		52,728	Kansas	52,728		24,480
Kentucky	54,754	13,379	41,375	Kentucky	54,754		21,200
Louisiana	13,185		13,185	Louisiana	13,185		13,185
Massachusetts	23,000		23,000	Massachusetts	23,000		23,000
Michigan	1,214,204	694,037	520,167	Michigan	1,214,204	100,000	399,005
Minnesota	173,023	72,608	100,415	Minnesota	173,023	72,608	13,493
Missouri	61,224		61,224	Missouri	61,224		57,514
Montana	118,166	75,595	42,571	Montana	118,166		172,620
Nebraska	179,443	6,823	172,620	Nebraska	179,443		320,473
New Jersey	320,473		320,473	New Jersey	320,473		454,835
New York	499,559	426,367	64,202	New York	499,559	426,367	252,168
North Dakota	30,565	24,309	6,256	North Dakota	30,565		3,390
Ohio	400,752	148,584	252,168	Ohio	400,752		577,086
Oklahoma	3,390		3,390	Oklahoma	3,390		173,274
Pennsylvania	1,008,807	1,404,533	204,274	Pennsylvania	1,008,807		109,852
Tennessee	109,852		109,852	Tennessee	109,852		6,700
Texas	367,393	361,683	5,700	Texas	367,393	361,683	125,749
Other States, n. s.	638,104	512,355	125,749	Other States, n. s.	638,104		18,520
Canada	18,520		18,520	Canada	18,520		

Number of establishments reporting:

<sup>1</sup> All classes, 79; general contractors, 34; subcontractors, 45.  
<sup>2</sup> All classes, 35; general contractors, 9; subcontractors, 26.

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TABLE 5.—NUMBER AND SALARIES OF PROPRIETORS, FIRM MEMBERS, AND SALARIED EMPLOYEES: 1929

CLASSIFICATION OF ESTABLISHMENTS	Estab-lish-ments reporting	PROPRIETORS AND FIRM MEMBERS			SALARIED EMPLOYEES								Sex not reported	
		Receiving salaries		Total annual salaries	All salaried employees		Officers and clerical staff		Superintendents, foremen, etc.		Number reported, by sex			
		Receiving no salary	Number		Total number	Total annual salaries	Number	Total annual salaries	Number	Total annual salaries	Total	Male		Female
<b>WISCONSIN</b> .....	1,112	622	361	\$1,082,219	2,789	\$7,368,534	1,713	\$4,076,286	1,076	\$2,688,248	2,426	1,972	454	363
Operative builders.....	20	15	4	22,000	35	91,027	21	60,641	14	30,386	28	24	4	7
General contractors.....	537	363	136	458,292	1,414	3,941,824	710	2,174,020	704	1,707,804	1,250	1,075	175	164
Building.....	377	249	97	319,536	950	2,640,928	484	1,429,403	466	1,211,525	823	691	132	127
Building not specialized.....	243	153	74	235,621	813	2,323,991	391	1,230,976	422	1,093,015	711	608	108	102
Commercial building only.....	4	4			7	18,660	5	12,700	2	5,900	6	4	2	1
Residential building only.....	125	92	23	83,915	130	298,277	88	185,667	42	112,610	106	84	22	24
Highway.....	50	37	13	60,211	157	434,759	79	248,479	78	186,280	147	131	16	10
Bridge and culvert.....	13	14	1	2,400	21	50,965	8	10,721	13	31,244	19	18	1	2
Grading.....	18	22	8	9,703	27	40,115	5	11,530	22	28,585	20	24	2	1
Street paving.....	36	23	9	39,339	110	288,166	48	166,129	62	122,340	105	90	6	5
Sewer, gas, water, conduit.....	28	12	7	19,098	81	270,931	47	164,786	34	106,145	69	58	11	12
Dredging, river, harbor, etc.....	6	1			35	142,335	20	91,469	15	50,866	35	31	4	
Railroad.....	3		1	2,000	14	38,168	5	15,281	9	22,887	14	13	1	
Other classes <sup>1</sup> .....	6	4			19	35,167	14	27,225	5	7,932	12	10	2	7
Subcontractors.....	555	244	221	601,927	1,340	3,330,683	982	2,440,625	358	890,058	1,148	873	275	192
Carpentering and wood flooring.....	17	8	10	39,730	24	62,027	16	44,237	8	17,790	24	17	7	
Concreting.....	16	14	1	3,866	38	90,760	15	43,928	23	46,822	31	26	5	7
Electrical.....	61	10	24	80,156	109	497,072	142	343,192	57	153,880	169	124	45	30
Elevator construction.....	3				20	67,008	17	56,950	3	10,058	20	17	3	
Heating and plumbing.....	227	104	110	285,973	454	1,033,270	300	821,595	94	211,675	267	249	118	87
Heating and piping <sup>2</sup> .....	59	23	19	60,798	147	374,640	116	291,144	31	83,496	133	98	35	14
Plumbing.....	124	47	75	198,766	245	528,384	189	415,822	56	112,562	183	121	62	62
Plumbing and heating combined.....	44	34	16	36,419	62	130,246	55	114,629	7	15,617	51	30	21	11
Masonry.....	23	25	6	20,280	30	87,140	17	49,497	15	37,643	22	21	1	8
Painting and decorating.....	41	10	21	60,498	82	174,447	61	128,391	21	46,056	71	52	19	11
Glass and glazing.....	4	3			12	35,960	8	25,660	4	8,300	3	2	1	9
Plastering and lathing.....	23	22	3	10,553	45	114,567	29	65,557	16	49,010	46	39	6	
Roofing and sheet-metal work.....	68	13	25	96,294	173	397,659	138	318,532	35	82,127	144	111	33	20
Roofing.....	25	5	6	17,644	74	167,174	62	144,868	12	22,306	66	46	20	3
Sheet-metal work.....	29	8	13	30,993	69	163,528	57	134,505	12	29,023	51	41	10	18
Roofing and sheet metal combined.....	6		0		30	66,957	19	36,159	11	30,798	27	24	3	3
Steel erection.....	12	2	4	14,338	87	256,800	37	117,063	50	189,747	87	81	6	
Stonework.....	4	1	2	10,214	12	28,929	9	21,424	3	7,505	8	7	1	4
Marble and tiling.....	24	6	5	10,795	80	222,562	70	193,001	10	39,361	73	56	17	7
Excavating and wrecking.....	12	6	2	3,600	30	102,018	18	77,730	12	24,888	30	30		
Ornamental iron <sup>3</sup> .....	6	2			18	70,487	16	66,387	2	5,100	18	14	4	
Grading.....	3	2	7	12,600	8	10,100	1	15,000	2	3,500	8	7	1	
Rental of equipment, trucking, etc.....	5	5			1	1,560	1	1,560			1			
Other classes <sup>4</sup> .....	4	1	1	3,000	27	70,927	22	54,331	5	16,590	27	19	8	
<b>MILWAUKEE</b> .....	457	189	144	460,781	1,394	3,873,985	905	2,679,741	489	1,294,244	1,260	994	256	144
Operative builders.....	11	4	3	17,000	22	66,848	17	57,221	5	9,627	17	14	3	5
General contractors.....	183	86	48	163,448	592	1,803,831	337	1,071,655	255	732,178	534	450	84	58
Building.....	138	65	30	112,514	436	1,320,695	250	799,698	177	521,087	392	322	70	44
Building not specialized.....	85	30	21	33,783	346	1,121,056	197	663,991	149	452,065	314	258	56	32
Residential building only.....	55	35	9	28,791	90	199,699	62	180,617	28	68,992	78	64	14	12
Highway.....	6	1	4	22,210	33	118,709	17	67,041	16	51,685	33	31	2	1
Grading.....	4	3	5	4,992	8	19,910	2	5,785	6	11,125	7	7		
Street paving.....	15	9	5	18,847	60	115,973	19	65,093	31	53,070	45	42	3	5
Sewer, gas, water, conduit.....	15	7	4	4,885	31	105,300	22	65,215	9	37,085	28	18	5	8
Other classes <sup>5</sup> .....	5	1			34	120,544	18	69,008	16	37,541	34	30	4	
Subcontractors.....	263	99	93	280,313	780	2,068,306	551	1,450,865	229	552,441	699	530	169	81
Carpentering and wood flooring.....	10	4	7	31,652	17	43,827	10	28,137	7	15,680	17	11	6	
Concreting.....	6	3			20	52,448	9	29,078	11	22,470	16	12	4	4
Electrical.....	28	1	13	38,476	105	275,472	73	170,820	32	95,652	93	67	26	12
Elevator construction.....	3				20	67,008	17	56,950	3	10,058	20	17	3	
Heating and plumbing.....	87	41	30	84,400	223	480,921	159	369,276	64	123,645	184	124	60	39
Heating and piping <sup>2</sup> .....	33	15	8	26,328	94	262,275	75	211,068	19	51,207	94	69	25	
Plumbing.....	45	16	21	55,195	115	202,160	73	138,884	42	63,276	76	49	27	30
Plumbing and heating combined.....	9	10	1	2,877	14	25,486	11	16,324	3	9,162	14	6	8	
Masonry.....	13	11	3	11,400	14	45,281	8	31,500	6	13,781	10	10		
Painting and decorating.....	28	12	14	40,098	52	113,732	38	87,490	14	26,242	49	37	12	3
Glass and glazing.....	4	3			12	38,960	8	25,660	4	8,300	3	2	1	0
Plastering and lathing.....	15	10			41	105,413	27	61,477	14	43,936	41	35	6	
Roofing and sheet-metal work.....	26	5	15	39,905	75	180,208	65	172,577	10	16,631	75	56	19	
Roofing.....	11	2	3	10,000	34	94,041	32	90,636	2	3,405	34	21	13	
Sheet-metal work.....	15	3	12	29,905	41	95,167	33	81,941	8	13,226	41	35	6	
Steel erection.....	8	1	2	7,138	69	198,780	29	82,915	40	113,865	69	64	5	
Stonework.....	3		2	10,214	10	24,107	7	16,602	3	7,505	6	5	1	4
Marble and tiling.....	17	3	3	4,520	60	192,797	61	171,795	8	21,002	63	48	15	6
Excavating and wrecking.....	6	3			14	62,498	9	52,530	5	9,968	14	14		
Ornamental iron <sup>3</sup> .....	4	1			11	37,927	9	32,827	2	5,100	11	8	3	
Other classes <sup>4</sup> .....	5	1	4	12,000	28	72,927	22	54,331	6	18,596	28	20	8	

<sup>1</sup> Includes dam and reservoir; water works; and foundation.  
<sup>2</sup> Includes pipe covering; and automatic temperature control.  
<sup>3</sup> Includes metal work, n. e. s.  
<sup>4</sup> Includes bridge and culvert; soundproofing; and flooring, n. e. s.  
<sup>5</sup> Includes water works; dredging, river, and harbor; and railroad.  
<sup>6</sup> Includes bridge and culvert; grading; soundproofing; and flooring, n. e. s.

TABLE 6.—VALUE OF CONSTRUCTION EQUIPMENT, IN COMPARISON WITH CONSTRUCTION BUSINESS AND WAGES PAID DURING 1929

CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT OWNED	Establishments reporting	EQUIPMENT		Value of construction business reported	Wages paid	CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT OWNED	Establishments reporting	EQUIPMENT		Value of construction business reported	Wages paid
		Purchased during the year	Inventory value at end of year					Purchased during the year	Inventory value at end of year		
<b>WISCONSIN</b> .....	1,012	\$2,391,963	\$10,692,883	\$131,332,519	\$30,824,144	<b>MILWAUKEE</b> .....	429	\$877,009	\$4,521,189	\$68,052,298	\$15,010,288
<i>Classification of establishments</i>						<i>Classification of establishments</i>					
Operative builders.....	14	4,351	26,201	1,933,900	346,148	Operative builders.....	6	1,041	13,493	988,795	197,731
General contractors.....	499	1,867,620	7,935,858	84,886,809	18,559,968	General contractors.....	175	586,741	2,904,432	37,379,904	7,908,387
Building.....	344	300,221	1,844,476	50,770,798	12,660,400	Building.....	131	144,631	825,986	20,525,149	5,473,723
Building not specialized.....	230	320,159	1,639,840	47,028,138	11,239,599	Building not specialized.....	81	126,708	758,858	21,810,180	6,056,013
Commercial building only.....	4	3,550	22,859	201,235	41,735	Residential building only.....	50	17,923	87,128	4,714,963	518,110
Residential building only.....	110	36,512	181,771	9,550,425	1,379,156	Highway.....	6	84,399	270,917	1,473,703	231,167
Highway.....	49	608,533	2,840,753	11,064,510	1,812,499	Grading.....	4	44,500	163,800	823,255	147,672
Bridge and culvert.....	14	20,346	199,831	1,224,808	269,040	Street paving.....	16	96,331	546,313	4,412,238	824,795
Grading.....	17	159,046	458,697	1,802,099	303,639	Sewer, gas, water, conduit.....	13	70,889	193,871	1,781,675	682,768
Street paving.....	34	259,952	1,029,720	7,661,386	1,417,918	Other classes <sup>e</sup> .....	5	145,901	908,455	2,069,984	548,272
Sewer, gas, water, conduit.....	20	164,880	664,125	3,623,047	1,162,500	Subcontractors.....	248	288,627	1,003,204	27,683,699	7,510,170
Dredging, river, harbor, etc.....	6	169,857	1,307,324	2,483,177	587,697	Carpentering and wood flooring.....	9	4,020	107,599	506,970	101,236
Railroad.....	3	24,688	38,393	370,063	138,544	Concrete.....	6	38,282	67,708	1,205,235	248,906
Other classes <sup>f</sup> .....	6	39,992	140,528	477,361	157,621	Electrical.....	23	6,062	29,050	1,978,715	520,246
Subcontractors.....	499	519,992	2,730,824	44,511,810	11,918,028	Elevator construction.....	3	5,087	61,218	903,827	114,513
Carpentering and wood flooring.....	14	5,430	135,559	987,753	260,799	Heating and plumbing.....	81	30,788	343,557	7,677,184	1,780,684
Concrete.....	10	65,788	159,979	1,928,147	513,922	Heating and piping.....	33	20,698	215,705	4,202,922	809,205
Electrical.....	55	12,230	123,550	3,942,590	978,709	Plumbing.....	39	16,107	104,987	2,760,945	706,958
Elevator construction.....	3	5,087	61,218	903,827	114,513	Plumbing and heating combined.....	9	2,923	22,865	723,317	180,421
Heating and plumbing.....	197	81,618	631,351	15,103,512	3,471,147	Masonry.....	13	12,902	43,550	1,011,960	208,725
Heating and piping.....	52	25,000	238,376	5,421,456	1,165,430	Painting and decorating.....	25	5,965	45,244	1,500,440	784,587
Plumbing.....	106	36,393	248,072	7,394,375	1,790,324	Glass and glazing.....	4	3,841	10,840	555,544	65,345
Plumbing and heating combined.....	39	19,065	94,903	2,287,681	515,393	Plastering and lathing.....	15	11,951	60,550	1,850,611	918,426
Masonry.....	28	19,288	85,799	1,867,330	614,009	Roofing and sheet-metal work.....	27	22,869	130,800	2,161,204	548,778
Painting and decorating.....	37	10,220	65,256	2,273,129	1,103,303	Roofing.....	11	15,167	70,840	1,355,451	234,038
Glass and glazing.....	4	3,841	10,840	555,544	65,345	Sheet-metal work.....	10	7,702	65,960	1,156,763	314,740
Plastering and lathing.....	25	13,699	84,430	2,286,399	1,150,840	Steel erection.....	8	23,184	208,685	2,906,815	605,742
Roofing and sheet-metal work.....	55	41,775	282,024	4,353,571	1,004,752	Stonework.....	3	1,070	79,911	192,308	52,405
Roofing.....	25	27,168	149,821	2,402,260	438,772	Marble and tiling.....	16	12,909	79,213	3,011,008	941,698
Sheet-metal work.....	26	12,372	125,740	1,570,672	461,174	Excavating and wrecking.....	0	46,282	151,055	537,447	197,118
Roofing and sheet metal combined.....	4	2,235	6,463	380,649	104,806	Ornamental iron <sup>g</sup> .....	4	9,303	37,782	423,808	115,765
Steel erection.....	12	23,184	218,072	3,741,532	610,704	Other classes <sup>h</sup> .....	5	43,313	130,001	915,457	244,096
Stonework.....	4	1,070	89,058	269,247	72,377	<i>Percentage of equipment owned<sup>i</sup></i>					
Marble and tiling.....	21	16,328	94,630	3,261,299	1,055,197	General contractors <sup>j</sup> .....	181	688,382	2,917,925	38,368,099	8,106,118
Excavating and wrecking.....	12	121,112	865,695	1,171,538	410,115	None.....	13	19,088	10,940	1,540,418	192,308
Ornamental iron <sup>g</sup> .....	4	9,403	46,470	601,473	142,492	26% to 50%.....	2	10,088	10,940	150,991	27,497
Grading.....	4	47,875	138,466	391,720	121,290	51% to 75%.....	4	14,801	25,915	413,880	133,762
Other classes <sup>f</sup> .....	6	42,062	137,657	836,173	228,514	76% to 99%.....	39	169,154	787,307	11,345,583	2,400,100
<i>Percentage of equipment owned</i>						100%.....	127	385,807	2,090,757	24,560,457	4,850,181
General contractors <sup>k</sup> .....	513	1,871,971	7,962,059	80,820,709	18,900,116	Not reported.....	2	22	8,000	358,870	2,281
None.....	18	1,849,344	1,000	1,849,344	225,300	Subcontractors.....	248	288,627	1,003,204	27,683,699	7,510,170
1% to 25%.....	1	24,723	20,968	171,183	28,604	None.....	1	20,800	73,650	32,068	10,475
26% to 50%.....	6	27,321	53,428	641,988	91,088	26% to 50%.....	3	69,024	313,671	497,708	80,389
51% to 75%.....	8	425,811	1,588,829	22,808,562	5,361,004	76% to 99%.....	21	69,024	313,671	4,651,577	1,082,412
76% to 99%.....	74	1,376,357	6,235,060	59,298,258	12,738,910	100%.....	218	188,805	1,117,170	21,830,323	6,218,605
100%.....	394	17,709	53,774	1,306,547	242,336	Not reported.....	5	14,098	98,773	602,023	109,380
Not reported.....	12	17,709	53,774	1,306,547	242,336						
Subcontractors.....	499	519,992	2,730,824	44,511,810	11,918,028						
None.....	7	20,800	85,724	529,157	98,424						
1% to 25%.....	4	9,575	66,172	216,000	61,148						
26% to 50%.....	4	174,745	670,894	6,135,104	1,508,263						
51% to 75%.....	30	298,786	1,873,522	36,117,073	9,902,593						
76% to 99%.....	433	16,080	134,512	1,227,498	272,112						
100%.....	15	16,080	134,512	1,227,498	272,112						
Not reported.....	15	16,080	134,512	1,227,498	272,112						

<sup>1</sup> Includes dam and reservoir; water works; and foundation.  
<sup>2</sup> Includes pipe covering; and automatic temperature control.  
<sup>3</sup> Includes metal work, n. e. s.  
<sup>4</sup> Includes bridge and culvert; soundproofing; flooring, n. e. s.; and rental of equipment, trucking, etc.  
<sup>5</sup> Includes operative builders.  
<sup>6</sup> Includes bridge and culvert; dredging, river and harbor, etc.; and railroad.  
<sup>7</sup> Includes bridge and culvert; grading; soundproofing; and flooring, n. e. s.  
<sup>8</sup> For complete classification see tabulation for the State above.

CONSTRUCTION—WISCONSIN

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TABLE 7.—WAGE EARNERS, BY MONTHS, AND ANNUAL WAGES PAID DURING 1929

CLASSIFICATION OF ESTABLISHMENTS AND LENGTH OF WORKING WEEK	Estab-lish-ments reporting	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY												Wages paid during year
		Janu-ary	Febru-ary	March	April	May	June	July	August	Sep-tember	Octo-ber	No-vember	De-cember	
<b>WISCONSIN</b> .....	<b>1,080</b>	<b>12,270</b>	<b>12,238</b>	<b>13,610</b>	<b>16,987</b>	<b>21,027</b>	<b>23,097</b>	<b>24,785</b>	<b>25,315</b>	<b>24,288</b>	<b>23,098</b>	<b>19,271</b>	<b>14,781</b>	<b>\$31,968,170</b>
<i>Classification of establishments</i>														
Operative builders.....	15	174	184	180	200	229	282	266	231	204	191	150	118	355,862
General contractors.....	511	7,193	6,689	7,506	10,078	13,493	15,138	16,487	16,951	16,180	15,020	11,848	8,536	19,009,688
Building.....	300	6,158	5,621	6,364	7,335	8,463	9,104	9,663	10,149	9,769	9,835	8,751	7,111	13,156,081
Building not specialized.....	241	5,570	5,020	5,659	6,330	7,347	7,783	8,435	8,921	8,510	8,750	7,923	6,429	11,641,479
Commercial building only.....	3	27	21	33	37	37	39	31	43	44	73	80	80	41,735
Residential building only.....	116	561	580	672	968	1,070	1,282	1,197	1,185	1,215	1,012	748	602	1,473,407
Highway.....	45	180	187	182	609	1,376	1,978	2,262	2,497	2,523	1,941	925	286	1,705,292
Bridge and culvert.....	12	56	60	74	161	261	292	273	273	100	148	102	42	246,877
Grading.....	15	74	87	89	247	370	407	445	490	412	277	220	121	349,751
Street paving.....	38	249	255	320	590	1,434	1,484	1,803	1,880	1,639	1,403	630	220	1,500,053
Sewer, gas, water, conduit.....	26	234	251	214	506	780	902	1,128	728	736	710	607	320	1,176,872
Dredging, river, harbor, etc.....	6	165	144	206	339	568	681	611	603	551	408	277	264	687,697
Railroad.....	3	29	39	10	98	108	117	118	138	133	126	135	100	138,544
Other classes <sup>1</sup> .....	6	48	45	47	133	133	173	184	187	177	172	135	84	187,621
Subcontractors.....	534	5,503	5,365	5,924	6,709	7,305	7,677	8,032	8,133	7,904	7,887	7,273	6,127	12,592,620
Carpentering and wood flooring.....	19	139	122	130	160	188	212	222	237	234	197	179	168	327,333
Concreting.....	15	125	138	176	314	412	435	433	418	419	387	344	108	504,212
Electrical.....	63	598	565	567	659	636	661	683	695	688	693	665	614	1,775,316
Elevator construction.....	3	75	70	72	72	76	76	82	79	89	91	90	84	114,618
Heating and plumbing.....	213	1,855	1,724	1,776	1,877	1,977	2,030	2,141	2,263	2,414	2,444	2,207	2,000	3,721,974
Heating and piping <sup>2</sup> .....	59	646	612	645	642	661	668	758	810	899	960	975	778	1,270,195
Plumbing.....	113	803	831	848	934	1,001	1,057	1,093	1,111	1,124	1,109	1,040	900	1,891,871
Plumbing and heating combined.....	41	316	281	283	301	315	306	320	342	351	371	320	320	564,405
Masonry.....	28	219	230	325	341	383	437	493	410	397	453	448	308	591,886
Painting and decorating.....	38	339	384	507	655	749	792	841	921	770	745	697	429	1,102,950
Glass and glazing.....	5	39	37	36	58	61	60	55	55	49	55	49	48	80,345
Plastering and lathing.....	20	486	511	571	695	616	656	628	552	518	501	398	1	1,094,538
Roofing and sheet-metal work.....	55	439	436	537	645	698	649	677	660	672	672	632	534	971,932
Roofing.....	20	150	163	247	306	359	316	309	307	305	304	282	224	458,386
Sheet-metal work.....	23	213	204	210	226	232	231	249	255	200	263	240	227	368,373
Roofing and sheet metal combined.....	6	70	69	80	113	107	102	119	104	107	105	101	83	149,873
Steel erection.....	12	335	298	311	311	372	340	390	394	301	300	300	332	610,704
Stonework.....	4	36	34	35	43	44	41	43	44	42	35	42	45	73,377
Marble and tiling.....	24	454	440	484	534	491	532	566	614	602	639	566	517	1,089,009
Excavating and wrecking.....	12	108	101	118	229	241	300	348	338	280	252	203	108	416,115
Ornamental iron <sup>3</sup> .....	7	116	118	131	136	101	149	120	128	133	135	132	151	309,051
Grading.....	4	31	26	38	63	128	140	141	128	116	97	63	66	126,611
Other classes <sup>4</sup> .....	6	109	113	110	107	147	167	174	191	178	191	186	108	234,714
<i>Length of working week</i>														
General contractors <sup>5</sup> .....	523	7,367	6,873	7,686	10,278	13,722	15,420	16,753	17,182	16,334	15,211	11,998	8,654	19,365,550
40-hour, 5-day week.....	10	43	47	52	102	130	146	141	135	122	87	75	53	173,458
45-hour, 5-day week.....	1				52	31	31	25	28	30				20,055
50-hour, 5-day week.....	1	1	1	1	2	2	2	2	2	2				3,073
All other 5-day week.....	182	2,521	2,370	2,692	3,205	3,737	4,186	4,276	4,699	4,631	4,754	4,298	3,590	5,881,087
44-hour, 5½-day week.....	22	189	195	234	338	320	292	261	253	261	251	242	117	401,796
49½-hour, 5½-day week.....	24	199	241	304	339	418	471	550	595	530	492	300	232	560,630
55-hour, 5½-day week.....	57	830	664	877	972	1,071	1,053	1,190	1,134	1,084	1,081	873	795	1,499,181
All other 5½-day week.....	45	558	547	521	806	1,749	1,864	2,240	1,992	1,899	1,641	1,199	806	2,410,897
48-hour, 6-day week.....	43	1,009	785	856	1,042	1,743	1,854	1,928	1,837	1,607	1,636	1,460	996	2,318,341
54-hour, 6-day week.....	120	1,184	1,192	1,340	2,133	3,144	3,846	4,373	4,689	4,404	3,890	2,487	1,407	4,080,707
60-hour, 6-day week.....	44	786	791	707	619	1,285	1,514	1,601	1,507	1,404	1,285	832	543	1,798,515
All other 6-day week.....	4	26	27	27	32	61	110	114	118	172	154	74	58	150,236
All other not designated.....	3	17	12	15	30	36	51	52	47	69	51	62	57	65,574
Not reported.....														
Subcontractors.....	534	5,503	5,365	5,924	6,709	7,305	7,677	8,032	8,133	7,904	7,887	7,273	6,127	12,592,620
40-hour, 5-day week.....	48	751	723	745	776	780	824	837	854	870	794	747	638	1,470,495
45-hour, 5-day week.....	3	57	41	66	84	99	118	122	83	76	84	66	64	160,144
50-hour, 5-day week.....	1	5	3	3	6	6	7	10	10	5	6	6	6	15,188
All other 5-day week.....	294	2,930	2,916	3,268	3,536	3,707	3,928	4,126	4,251	4,166	4,265	3,969	3,380	6,929,121
44-hour, 5½-day week.....	15	118	99	107	128	131	131	131	159	161	163	137	108	221,634
49½-hour, 5½-day week.....	14	184	193	158	251	295	201	280	284	272	248	210	168	386,063
55-hour, 5½-day week.....	32	272	260	289	337	425	413	441	424	415	408	364	320	616,478
All other 5½-day week.....	36	350	355	359	410	479	540	616	595	568	560	539	402	846,114
48-hour, 6-day week.....	28	412	367	378	448	501	538	588	558	483	477	492	445	812,338
54-hour, 6-day week.....	36	301	291	342	502	581	620	616	652	689	655	510	368	770,914
60-hour, 6-day week.....	22	129	141	167	177	209	206	235	234	232	208	194	159	304,429
All other 6-day week.....	2	9	8	8	8	10	11	10	9	5	7	6	6	17,351
All other not designated.....	5	35	35	34	46	22	50	22	21	22	17	15	33	51,771
Not reported.....														

See footnotes at end of table.

TABLE 7.—WAGE EARNERS, BY MONTHS, AND ANNUAL WAGES PAID DURING 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS AND LENGTH OF WORKING WEEK	Estab-lish-ments reporting	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY												Wages paid during year
		January	February	March	April	May	June	July	August	Sep-tember	October	No- vember	De- cember	
<b>MILWAUKEE</b> .....	442	6,883	6,498	7,417	8,909	10,603	10,895	11,378	11,679	10,919	10,525	9,230	7,377	\$18,060,315
<i>Classification of establishments</i>														
Operative builders.....	6	109	118	102	107	122	151	145	119	103	107	95	68	106,290
General contractors.....	174	3,391	3,053	3,546	4,646	6,005	6,072	6,404	6,611	5,907	5,637	4,738	3,592	7,998,517
Building.....	130	2,911	2,549	2,954	3,364	3,301	3,799	3,898	4,101	3,619	3,746	3,301	2,881	5,076,002
Building not specialized.....	81	2,651	2,307	2,686	2,989	3,388	3,361	3,472	3,691	3,260	3,389	3,118	2,669	5,128,611
Residential building only.....	49	260	242	268	375	413	438	426	410	359	357	273	212	547,391
Highway.....	6	28	33	48	139	181	216	262	278	288	303	248	105	231,167
Grading.....	4	63	76	72	131	148	165	188	224	181	116	96	34	147,072
Street paving.....	16	170	177	244	380	944	815	1,061	1,137	1,005	691	302	80	824,795
Sewer, gas, water, conduit.....	13	141	123	101	232	350	394	419	325	405	396	386	216	570,609
Other classes <sup>1</sup> .....	5	78	95	127	400	581	683	576	546	499	385	312	207	548,272
Subcontractors.....	262	3,383	3,327	3,709	4,156	4,476	4,672	4,829	4,949	4,819	4,781	4,397	3,717	7,805,499
Carpentering and wood flooring.....	10	68	50	62	84	131	331	130	135	148	115	106	91	178,492
Concreting.....	6	67	61	80	134	179	209	215	189	195	189	194	40	248,006
Electrical.....	30	355	341	338	356	392	413	419	430	414	413	383	358	722,718
Elevator construction.....	3	75	70	72	72	76	76	82	79	89	91	90	84	114,513
Heating and plumbing.....	80	907	853	915	940	963	990	1,056	1,126	1,221	1,235	1,112	972	1,634,440
Heating and piping <sup>2</sup> .....	34	460	433	464	450	462	455	529	572	637	689	590	526	808,493
Plumbing.....	42	351	338	366	396	405	434	420	427	424	399	384	331	701,090
Plumbing and heating combined.....	10	96	82	85	94	96	101	107	127	160	147	138	115	164,853
Masonry.....	13	108	112	131	187	200	230	214	178	167	196	177	101	276,612
Painting and decorating.....	25	200	248	338	437	505	532	586	682	548	550	446	316	755,495
Glass and glazing.....	5	39	37	36	38	51	60	55	55	49	55	49	48	80,345
Plastering and lathing.....	14	394	421	471	509	513	545	484	424	411	372	309	208	860,423
Roofing and sheet-metal work.....	26	194	185	201	306	337	268	310	312	323	329	297	237	493,718
Roofing.....	12	62	65	126	156	180	149	150	160	148	150	136	93	246,557
Sheet-metal work.....	14	132	120	135	150	157	140	160	162	175	179	161	144	247,161
Steel erection.....	8	279	245	264	260	315	272	322	324	279	223	270	304	605,742
Stonework.....	3	26	24	27	31	30	28	30	32	32	25	32	35	52,405
Marble and tiling.....	17	402	395	433	477	443	486	502	533	521	561	526	452	601,143
Excavating and wrecking.....	6	74	81	93	105	99	106	120	125	102	98	79	77	107,118
Ornamental iron <sup>3</sup> .....	5	84	86	99	103	91	114	113	120	127	128	125	122	330,324
Other classes <sup>4</sup> .....	5	105	109	109	117	169	182	191	205	193	201	193	173	244,000
<i>Length of working week<sup>5</sup></i>														
General contractors <sup>6</sup> .....	180	3,500	3,171	3,648	4,753	6,127	6,223	6,549	6,730	6,100	5,744	4,833	3,600	8,194,816
40-hour, 5-day week.....	3	10	10	8	13	27	28	26	26	25	26	18	13	38,320
45-hour, 5-day week.....	1				62	31	31	25	28	30				20,055
44-hour, 5½-day week.....	50	1,011	878	1,001	1,161	1,447	1,609	1,614	1,806	1,564	1,595	1,511	1,304	2,290,082
49½-hour, 5½-day week.....	12	123	141	182	237	214	174	143	135	127	136	144	52	249,785
55-hour, 5½-day week.....	11	116	130	168	168	183	196	200	206	160	112	120	36	235,396
All other 5½-day week.....	33	590	426	624	705	763	713	779	708	656	617	499	402	990,374
48-hour, 6-day week.....	21	185	163	149	393	1,122	1,123	1,250	1,201	1,197	920	560	287	1,118,626
54-hour, 6-day week.....	14	297	194	213	445	573	512	516	603	415	559	546	303	773,738
60-hour, 6-day week.....	25	659	710	829	1,110	1,289	1,346	1,494	1,577	1,504	1,342	1,022	702	1,600,492
All other 6-day week.....	9	497	507	469	449	453	460	477	415	382	387	354	282	738,292
All other not designated.....	1	12	12	15	20	25	25	25	25	60	50	50	50	73,750
Subcontractors.....	262	3,383	3,327	3,709	4,156	4,476	4,672	4,829	4,949	4,819	4,781	4,397	3,717	7,805,499
40-hour, 5-day week.....	13	485	472	477	502	482	504	498	509	507	439	391	326	814,879
45-hour, 5-day week.....	2	47	31	57	75	90	109	113	74	67	75	58	57	136,004
44-hour, 5½-day week.....	165	1,948	1,973	2,263	2,438	2,597	2,648	2,766	2,907	2,828	2,886	2,651	2,285	4,781,783
49½-hour, 5½-day week.....	12	101	86	94	112	113	112	112	137	141	142	108	85	195,638
55-hour, 5½-day week.....	11	117	98	118	151	173	166	172	171	174	154	142	120	205,240
All other 5½-day week.....	15	135	127	134	169	217	213	223	222	225	203	151	167	322,893
48-hour, 6-day week.....	12	134	140	141	171	235	299	310	309	299	289	278	137	432,712
54-hour, 6-day week.....	4	194	177	178	172	236	195	199	188	162	163	208	228	326,870
60-hour, 6-day week.....	15	153	141	200	264	296	302	294	302	291	323	284	230	363,655
All other 6-day week.....	10	50	60	94	89	112	108	127	116	115	95	85	71	167,394
All other not designated.....	2	9	8	8	8	10	11	10	9	5	7	6	6	17,351
Not reported.....	1	5	5	5	5	5	5	5	5	5	5	5	5	10,763

<sup>1</sup> Includes dam and reservoir; waterworks; and foundation.  
<sup>2</sup> Includes pipe covering; and automatic temperature control.  
<sup>3</sup> Includes metal work, n. e. s.  
<sup>4</sup> Includes bridge and culvert; soundproofing; rental of equipment, trucking, etc.; and flooring, n. e. s.  
<sup>5</sup> Includes operative builders.  
<sup>6</sup> Includes bridge and culvert; dredging, river, harbor, etc.; and railroad.  
<sup>7</sup> Includes bridge and culvert; grading; soundproofing; and flooring, n. e. s.  
<sup>8</sup> See complete classification in the tabulation for the State above.



# CONSTRUCTION—WISCONSIN

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TABLE 8.—EXPENDITURES OF REPORTING ESTABLISHMENTS: 1929

CLASSIFICATION OF ESTABLISHMENTS	Estab- lish- ments report- ing	Value of construc- tion busi- ness re- ported	PRINCIPAL ITEMS OF EXPENDITURE			OTHER ITEMS OF EXPENDITURE							
			Subcon- tract work let	Wages paid	Cost of materials	Salaries		Rent for		Interest	Con- tract bond premi- ums	Com- pen- sation and liability insur- ance premi- ums	All other overhead expenses
						Propri- etors and firm mem- bers	Em- ployees	Equip- ment	Offices, etc.				
<b>WISCONSIN</b> .....	<b>1,017</b>	<b>\$134,056,457</b>	<b>\$23,644,000</b>	<b>\$31,115,758</b>	<b>\$51,850,615</b>	<b>\$908,642</b>	<b>\$6,901,071</b>	<b>\$351,268</b>	<b>\$477,612</b>	<b>\$719,820</b>	<b>\$486,160</b>	<b>\$927,747</b>	<b>\$8,748,949</b>
Operative builders.....	18	2,448,908	1,150,000	860,002	710,550	7,000	82,822	678	3,330	20,459	39	8,136	102,278
General contractors.....	480	82,830,014	21,609,000	18,045,431	27,512,150	408,879	3,751,975	214,397	103,235	409,966	417,654	600,888	5,236,631
Building.....	343	57,318,274	18,929,000	12,704,665	17,479,301	313,007	2,577,838	43,865	108,613	307,978	158,553	375,992	1,750,650
Building not specialized.....	227	47,225,436	14,205,000	11,295,291	14,769,282	233,620	2,268,641	41,761	75,917	185,266	146,473	338,950	1,427,719
Commercial building only.....	4	201,235	73,000	41,735	35,052	18,000	860	2,700	3,263	1,235	5,301	5,301	5,301
Residential building only.....	112	9,891,603	4,061,000	1,367,639	2,074,967	79,447	295,537	754	29,996	119,459	13,080	35,807	317,570
Highway.....	41	10,054,030	1,594,000	1,630,861	3,748,999	32,711	405,419	87,063	0,909	61,786	115,201	73,343	1,548,007
Bridge and culvert.....	11	1,035,897	279,000	211,669	323,017	2,400	36,265	1,569	2,520	8,431	5,334	6,722	39,413
Grading.....	12	934,679	147,000	258,692	7,811	6,204	27,945	26,198	1,614	5,771	6,608	11,182	533,767
Street paving.....	34	6,427,700	373,000	1,247,994	3,381,682	33,359	258,835	0,721	16,322	29,347	68,986	43,492	834,852
Sewer, gas, water, conduit.....	20	3,910,313	22,000	1,177,132	1,457,180	19,098	251,631	34,010	8,487	34,114	47,888	59,972	547,035
Waterworks, dam and reservoir.....	3	321,221	-----	97,563	85,850	-----	25,902	10,196	600	4,303	2,660	2,550	75,425
Dredging, river, harbor, etc.....	2	2,483,177	266,000	587,977	890,841	-----	142,335	4,696	13,185	25,023	11,917	24,013	421,342
Other classes <sup>1</sup> .....	4	338,723	9,000	120,228	131,975	2,000	25,755	680	1,925	3,213	7	3,122	36,150
Subcontractors.....	519	48,782,475	879,000	12,710,325	23,621,909	550,763	3,126,274	136,198	311,047	229,395	68,473	319,223	3,380,040
Carpentering and wood flooring.....	18	1,198,247	12,000	323,024	588,084	33,780	62,027	25	430	5,407	805	7,738	83,234
Concreting.....	15	1,368,147	164,000	410,922	480,814	3,896	80,758	92	1,935	13,921	4,408	11,893	80,645
Electrical.....	58	4,457,363	10,000	1,124,191	2,113,614	45,355	467,103	444	64,991	30,906	3,601	20,070	390,845
Elevator construction.....	8	903,827	-----	114,513	645,006	-----	67,008	-----	2,410	1,124	2,381	4,445	53,024
Heating and plumbing.....	212	17,090,595	281,000	4,099,514	9,507,082	277,034	985,817	3,752	118,874	83,439	31,997	88,465	1,102,504
Heating and piping <sup>2</sup> .....	58	5,944,300	164,000	1,200,010	3,192,610	3,192,610	305,840	1,909	43,005	31,500	7,812	24,780	392,401
Plumbing.....	111	9,263,232	10,000	2,265,697	4,948,126	189,817	500,051	1,053	55,787	40,663	20,296	50,993	553,746
Plumbing and heating combined.....	43	2,489,033	61,000	566,907	1,866,340	30,419	119,226	700	20,082	11,270	3,839	12,692	156,367
Masonry.....	20	1,745,887	160,000	674,787	662,231	14,280	87,140	731	2,654	6,972	1,836	16,881	44,707
Painting and decorating.....	37	2,210,926	5,000	1,070,081	537,700	52,274	156,603	15	27,035	7,674	1,742	18,959	125,797
Glass and glazing.....	4	524,343	-----	399,154	399,154	-----	33,960	-----	8,667	859	600	5,208	34,306
Plastering and lathing.....	25	2,205,813	32,000	1,103,023	712,626	10,583	108,832	75	4,925	8,271	6,401	11,457	104,136
Roofing and sheet-metal work.....	57	4,710,228	15,000	1,080,727	2,200,055	62,064	367,935	110	38,260	30,601	1,804	41,163	462,936
Roofing.....	24	2,224,088	-----	390,265	1,081,550	17,619	147,530	50	10,899	9,789	692	20,684	254,868
Sheet-metal work.....	27	1,311,765	15,000	537,588	805,117	17,398	153,442	60	13,774	9,356	1,112	13,080	127,967
Roofing and sheet metal combined.....	0	-----	-----	149,873	313,382	17,622	66,657	-----	4,796	11,456	-----	7,390	80,706
Steel erection.....	11	3,525,222	150,000	580,288	2,165,920	14,338	235,755	8,448	7,961	3,325	2,529	43,598	110,551
Stonework.....	4	260,247	20,000	72,377	89,459	10,214	28,929	-----	9,978	2,389	-----	1,705	44,061
Marble and tiling.....	23	3,344,678	31,000	1,045,850	1,574,778	10,795	204,317	1,307	18,412	7,858	7,120	7,333	244,855
Excavating.....	11	330,311	14,000	319,625	3,046	3,000	78,018	43,823	3,981	9,338	835	12,520	258,079
Ornamental iron <sup>3</sup> .....	7	2,036,004	20,000	366,051	1,713,828	-----	70,487	-----	5,660	6,087	371	13,004	59,898
Grading.....	3	334,383	10,000	109,200	-----	6,000	19,100	68,160	1,680	2,848	-----	5,878	53,836
Other classes <sup>4</sup> .....	5	808,164	-----	225,514	375,615	3,000	72,487	9,156	2,135	8,376	1,599	6,306	106,513
<b>MILWAUKEE</b> .....	<b>442</b>	<b>69,469,728</b>	<b>12,858,000</b>	<b>16,213,473</b>	<b>26,641,657</b>	<b>426,737</b>	<b>3,801,849</b>	<b>181,782</b>	<b>292,664</b>	<b>346,136</b>	<b>241,282</b>	<b>484,785</b>	<b>4,218,364</b>
Operative builders.....	9	1,491,021	843,000	207,500	365,729	7,000	58,943	403	2,980	6,488	30	5,645	78,920
General contractors.....	176	36,644,502	11,174,000	7,769,754	10,997,168	157,448	1,740,078	79,835	100,319	213,736	194,604	266,346	2,124,045
Building.....	134	26,836,553	10,158,000	6,650,277	7,149,436	112,514	1,232,410	30,877	69,018	151,633	94,757	169,165	922,895
Building not specialized.....	81	21,744,596	7,466,000	5,051,236	6,988,093	83,733	1,034,801	30,156	53,713	96,856	94,757	154,533	728,406
Residential building only.....	53	5,091,957	2,692,000	1,601,041	1,161,343	28,781	107,609	721	15,305	54,077	-----	14,627	164,489
Highway.....	9	1,473,703	136,000	231,167	604,634	22,210	118,709	8,887	1,791	10,733	19,921	12,893	181,480
Grading.....	4	623,255	147,000	147,672	-----	4,992	16,010	4,085	805	4,222	5,122	7,820	153,865
Street paving.....	15	3,512,238	283,000	745,625	1,773,612	12,847	121,273	650	11,399	16,504	43,916	27,278	258,377
Sewer, gas, water, conduit.....	13	1,762,330	15,000	672,115	887,312	4,885	102,000	30,060	1,851	24,910	24,439	28,269	218,320
Other classes <sup>4</sup> .....	4	2,630,504	435,000	492,008	822,174	-----	106,876	5,276	15,425	5,884	6,539	20,212	389,108
Subcontractors.....	257	31,324,115	641,000	8,236,120	15,278,600	262,280	1,003,828	81,519	189,355	125,862	46,549	212,794	2,015,390
Carpentering and wood flooring.....	9	513,552	7,000	174,783	104,884	25,052	43,827	25	480	2,519	180	4,770	41,364
Concreting.....	5	640,235	154,000	145,006	222,951	-----	42,448	42	1,850	11,826	1,053	2,908	30,902
Electrical.....	28	2,678,753	-----	699,360	1,210,317	35,476	268,968	72	31,576	8,191	2,166	13,237	211,851
Elevator construction.....	3	903,827	-----	114,513	545,906	-----	67,008	-----	2,410	1,124	2,381	4,445	53,024
Heating and plumbing.....	85	9,593,793	144,000	2,264,045	5,119,837	84,400	494,405	2,342	57,549	43,567	18,360	54,588	550,093
Heating and piping <sup>2</sup> .....	33	4,202,022	115,000	890,205	2,209,668	20,328	262,275	1,999	20,089	19,771	6,468	18,317	278,036
Plumbing.....	42	4,582,909	3,000	1,169,977	2,483,887	55,195	206,644	348	24,800	10,973	0,417	30,968	233,113
Plumbing and heating combined.....	10	777,932	26,000	194,363	420,332	2,877	25,486	-----	3,660	3,823	2,498	5,303	38,825
Masonry.....	12	921,715	83,000	277,445	379,254	5,400	45,281	460	1,440	3,682	1,366	7,605	25,807
Painting and decorating.....	20	1,684,237	15,000	811,345	373,230	37,684	113,732	15	21,084	4,502	1,192	14,423	80,436
Glass and glazing.....	4	524,343	5,000	399,154	-----	-----	33,960	-----	8,667	859	600	5,208	34,306
Plastering and lathing.....	14	1,737,964	24,000	860,013	565,759	-----	99,678	-----	3,826	7,150	6,381	8,228	80,770
Roofing and sheet-metal work.....	27	2,163,177	14,000	517,820	933,246	39,905	197,485	110	26,363	12,988	812	21,068	224,978
Roofing.....	11	1,007,424	-----	203,080	433,741	10,000	84,161	50	11,893	8,663	-----	10,996	122,260
Sheet-metal work.....	8	1,155,753	14,000	314,740	499,505	29,905	113,324	60	13,470	9,323	812	10,072	102,718
Steel erection.....	8	2,996,815	150,000	505,742	1,854,595	7,138	196,780	8,448	6,161	1,458	2,529	3	

TABLE 9.—COST OF MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, BY KIND

KIND OF MATERIAL	COST OF MATERIALS REPORTED BY				KIND OF MATERIAL	COST OF MATERIALS REPORTED BY					
	All classes of establishments			General contractors <sup>2</sup>		Subcontractors	All classes of establishments			General contractors <sup>2</sup>	Subcontractors
	Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>				Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>		
<b>WISCONSIN</b>					<b>MILWAUKEE</b>						
All kinds of material.....	\$55,681,033		\$464.52	\$30,483,083	\$25,197,950			\$27,900,600	\$466.78	\$11,979,799	\$15,920,801
Distribution not reported.....	12,051,128	21.0		8,029,688	4,021,440			4,023,150	14.4	2,118,829	1,904,321
Distributed by kind.....	43,629,905	100.0		22,453,395	21,176,510			23,877,450	100.0	9,860,970	14,016,480
Sand, gravel, stone, slag, cinders, etc.....	4,217,601	9.7	44.91	3,771,221	440,380			2,152,590	9.0	42.08	1,805,384
Brick (face, common, fire, paving, etc.).....	1,212,448	2.8	12.01	1,044,350	108,098			583,753	2.2	10.43	442,094
Tile (fireproofing).....	199,884	.5	2.13	180,303	19,581			100,269	.4	2.08	92,880
Tile, facing, terra cotta, floor, and wall.....	821,811	1.9	8.75	258,984	562,827			643,773	2.7	12.58	156,945
Concrete and cinder block.....	404,789	1.1	4.95	333,293	131,496			280,100	1.2	5.45	190,089
Cut stone, granite and marble.....	1,398,720	3.2	14.84	440,788	952,932			1,011,100	4.2	19.77	119,134
Riprap, rubble, etc.....	583,922	1.3	6.22	578,469	6,463			372,880	1.6	7.29	372,880
Cement.....	4,375,315	10.0	46.58	3,951,211	424,104			1,907,842	8.0	37.29	1,683,749
Lime.....	287,329	.6	2.74	137,772	149,557			157,003	.7	3.07	82,942
Plaster, etc.....	564,727	1.3	6.01	206,313	358,414			375,809	1.6	7.35	102,332
Structural steel.....	2,851,983	6.5	30.37	809,685	2,042,298			1,924,320	8.1	37.02	205,099
Reinforcing steel.....	1,045,164	2.4	11.13	937,214	107,950			438,717	1.8	8.57	409,772
Cast iron, miscellaneous, excluding pipe.....	94,522	.2	1.01	30,055	64,467			45,370	.2	.89	0,228
Metal doors, windows, and trim.....	158,175	.4	1.69	86,132	72,043			96,789	.4	1.89	41,304
Metal and wire lath and furring.....	213,246	.5	2.27	40,852	172,394			122,688	.5	2.39	0,177
Ornamental metal work.....	1,708,199	4.1	18.83	43,208	1,724,991			1,066,680	7.0	32.58	11,109
Lumber, rough and finished.....	3,847,359	8.8	40.99	3,512,815	334,545			1,591,749	6.7	31.12	1,472,041
Lath, shingles, and shakes (wood).....	190,336	.5	2.09	145,896	50,440			66,219	.3	1.29	43,779
Millwork.....	2,200,090	5.2	24.07	2,086,504	174,586			956,287	4.0	18.09	909,937
Composition board.....	567,729	1.3	6.04	114,577	453,152			462,644	1.9	9.04	42,763
Waterproofing materials.....	59,505	.1	.92	39,727	46,778			64,723	.3	1.07	20,437
Hardware, rough and finished.....	546,323	1.3	5.82	470,574	69,749			280,891	1.2	5.07	233,335
Paints, varnishes, glass.....	1,234,073	2.8	13.14	185,907	1,048,166			933,031	3.9	18.24	92,028
Roofing and sheet metal.....	1,996,913	4.6	21.15	282,918	1,708,995			861,195	3.6	16.84	95,373
Finished flooring (other than cement, wood, or tile).....	128,457	.3	1.37	63,062	64,495			95,759	.4	1.87	31,264
Screens, shades, awnings, etc.....	31,440	.1	.39	30,934	512			15,312	.1	.30	15,312
Heating and ventilating equipment.....	3,455,265	7.9	36.79	200,659	3,254,606			1,884,730	7.9	30.84	17,682
Plumbing and gas-fitting equipment.....	3,990,069	9.1	42.48	304,500	3,685,569			1,755,792	7.4	34.32	64,200
Electrical appliances and supplies.....	2,245,264	5.1	23.90	131,615	2,113,649			1,265,442	5.3	24.74	26,790
Elevators, dumb-waiters, and equipment.....	578,541	1.3	6.16	32,635	545,906			572,311	2.4	11.10	20,405
Pipe: Drain tile, vitrified, concrete, segment tile, corrugated.....	679,957	1.6	7.24	638,779	41,178			211,239	.9	4.13	183,847
Pipe: Cast-iron, sheet and tube steel, etc.....	344,505	.8	3.67	276,880	68,125			190,837	.8	3.73	108,703
Wire cable, guards, and fencing.....	14,045	(*)	.15	12,629	1,416			4,865	(*)	.09	4,112
Bituminous paving materials, tar, asphalt, and oil.....	322,638	.7	3.43	292,420	30,200			250,517	1.0	4.90	229,573
Wood piling and timber.....	170,124	.4	1.88	176,124				160,104	.7	3.13	160,104
Ready-mixed concrete.....	43,900	.1	.47	43,900				39,482	.2	.77	39,482
Freight, hauling or trucking to job.....	73,594	.2	.79	73,594				56	(*)	(*)	56
Cast forms, beads, etc.....	141	(*)		141				6,272	(*)	.12	6,217
Chemicals and chemical products.....	17,419	(*)	.19	17,364	55			115,474	.5	2.26	84,802
Metal products, n. e. s. (including metal furniture).....	118,354	.3	1.26	84,871	33,483			14,980	.1	.29	14,980
Mineral products (nonmetallic), n. e. s.....	15,687	(*)	.17	15,687				3,953	(*)	.08	3,349
Sealing materials.....	14,484	(*)	.16	13,877	607			2,300	(*)	.05	2,300
Textiles and calking materials.....	5,635	(*)	.06	5,635				237,165	1.0	4.64	160,434
Miscellaneous.....	425,618	1.0	4.53	342,853	82,765						76,731

<sup>1</sup> The value of construction work done is obtained from figures presented in Table 1, by subtracting the value of subcontract work let from the total value of construction business.

<sup>2</sup> Includes operative builders.

<sup>3</sup> The percentage of total cost shown for this item is high, because establishments located within this area reported that a large part of their construction work (on which this material was used) was done on contracts outside this area.

<sup>4</sup> Less than one-tenth of 1 per cent.

<sup>5</sup> Less than 1 cent.

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>		
	Cost of all materials distributed by kind	Percent of—		Amount				Cost of all materials distributed	Cost of all materials distributed by kind	Percent of—				Amount	Cost of all materials distributed
		Total cost	Cost of all distributed materials							Total cost	Cost of all distributed materials				
<b>WISCONSIN</b>						<b>WISCONSIN—Continued</b>									
<i>Sand, gravel, stone, slag, cinders, etc.<sup>2</sup></i>						<i>Tile, facing, terra cotta, floor, and wall—Con.</i>									
All classes	\$43,629,905	\$4,217,001	100.0	9.7	\$105,393,915	82.5	Subcontractors—Continued. Roofing and sheet-metal work	\$1,773,054	\$1,344	0.2	0.1	\$3,882,900	90.7		
General contractors <sup>3</sup>	22,453,395	3,771,221	89.4	16.8	62,712,137	73.6	Sheet-metal work	572,402	1,344	2.2	2.2	1,884,785	98.3		
Building	13,407,433	1,086,023	25.7	8.1	40,079,126	66.1	Marble and tiling	1,553,120	545,226	66.3	35.1	3,289,548	99.1		
Building not specialized <sup>4</sup>	10,822,625	1,022,856	24.3	9.5	31,739,677	69.6	Metal work, n. e. s.	18,220	200	( <sup>5</sup> )	1.1	75,188	100.0		
Commercial building only	35,052	5,720	.1	16.3	171,235	63.7	<i>Cut stone, granite and marble</i>								
Manufacturing building only	11,296	2,467	.1	21.8	47,081	46.8	All classes	43,629,905	1,393,720	100.0	3.2	105,393,915	82.5		
Residential building only	2,538,460	54,980	1.3	2.2	8,121,133	54.2	General contractors <sup>3</sup>	22,453,395	440,788	31.6	2.0	62,712,137	73.6		
Highway	3,051,183	940,263	22.3	30.8	8,042,285	85.2	Building	13,407,433	419,133	30.1	3.1	40,079,126	66.1		
Bridge and culvert	356,680	59,169	1.4	16.0	1,143,068	77.2	Building not specialized <sup>4</sup>	10,822,625	305,687	26.2	3.4	31,739,677	69.6		
Grading	23,471	7,523	2.2	32.1	273,949	82.0	Residential building only	2,538,460	53,446	3.8	2.1	8,121,133	54.2		
Street paving	3,260,562	1,415,756	33.6	43.4	6,664,140	93.9	Highway	3,051,183	10,000	.7	3.3	8,042,285	85.2		
Sewer, gas, water, conduit	1,303,475	192,270	4.6	14.8	3,550,972	98.6	Street paving	3,260,562	1,071	.1	( <sup>5</sup> )	6,664,140	93.9		
Dam and reservoir	18,850	8,000	.2	42.4	60,500	100.0	Dredging, river, harbor, etc.	883,687	10,000	.7	1.1	2,423,477	89.7		
Waterworks	42,000	15,000	4.3	35.7	122,000	100.0	Foundation	33,518	584	( <sup>5</sup> )	1.7	96,140	100.0		
Dredging, river, harbor, etc.	883,687	25,974	.6	2.9	2,423,477	89.7	Subcontractors	21,176,510	952,932	68.4	4.5	42,681,778	98.1		
Railroad	72,536	14,636	.3	20.2	256,480	97.0	Concrete	639,230	3,826	.3	8.8	1,894,374	88.9		
Foundation	33,518	6,607	.2	19.7	96,140	100.0	Masonry	518,027	39,355	2.8	7.0	1,277,863	91.6		
Subcontractors	21,176,510	446,380	10.6	2.1	42,681,778	98.1	Plastering and lathing	714,030	4,500	.3	.6	2,224,224	98.5		
Concrete	639,230	249,931	5.9	39.1	1,894,374	88.9	Stonework	89,459	89,459	6.4	100.0	266,247	92.5		
Heating and plumbing	4,732,206	995	( <sup>5</sup> )	( <sup>5</sup> )	13,497,038	98.7	Marble and tiling	1,553,120	810,792	58.2	52.2	3,289,548	99.1		
Heating and piping	2,624,803	100	( <sup>5</sup> )	( <sup>5</sup> )	4,796,878	96.8	Soundproofing	215,703	5,000	.4	2.3	443,701	100.0		
Plumbing	3,505,827	870	( <sup>5</sup> )	( <sup>5</sup> )	6,405,961	99.8	<i>Riprap, rubble, etc.</i>								
Plumbing and heating combined	879,571	25	( <sup>5</sup> )	( <sup>5</sup> )	1,023,114	97.9	All classes	743,629,905	583,922	100.0	1.3	105,393,915	82.5		
Masonry	518,027	57,763	1.4	11.1	1,277,863	91.6	General contractors <sup>3</sup>	21,860,738	578,459	99.1	2.6	61,201,100	74.2		
Plastering and lathing	714,030	42,084	1.0	5.0	2,224,224	98.5	Building	12,814,776	71,208	12.2	.6	38,568,155	67.8		
Roofing and sheet-metal work	1,773,054	889	( <sup>5</sup> )	.1	3,832,990	99.7	Building not specialized <sup>4</sup>	10,229,908	69,421	11.9	.7	30,228,700	70.5		
Roofing	1,000,302	889	( <sup>5</sup> )	.1	2,156,550	100.0	Residential building only	2,538,460	1,785	.3	.1	8,121,133	54.2		
Steel erection	2,255,347	4,000	.1	.2	3,414,590	95.5	Highway	3,051,183	58,884	10.1	1.9	8,042,285	85.2		
Marble and tiling	1,553,120	60,612	1.4	3.9	3,289,548	99.1	Bridge and culvert	356,680	27	( <sup>5</sup> )	( <sup>5</sup> )	1,143,068	77.2		
Excavating	9,640	2,686	.1	26.8	139,823	98.8	Grading	23,471	50	( <sup>5</sup> )	.2	273,949	82.9		
Bridge and culvert	100,037	26,630	.6	26.5	171,873	100.0	Street paving	3,260,562	36,933	14.9	2.7	6,664,140	93.9		
Soundproofing	215,703	1,000	( <sup>5</sup> )	.5	443,101	100.0	Sewer, gas, water, conduit	1,303,475	11,250	1.9	.0	3,550,972	98.6		
<i>Brick (face, common, fire, paving, etc.)</i>						<i>Cement<sup>2</sup></i>									
All classes	43,629,905	1,212,448	100.0	2.8	105,393,915	82.5	All classes	43,629,905	4,375,315	100.0	10.0	105,393,915	82.5		
General contractors <sup>3</sup>	22,453,395	1,044,350	86.1	4.7	62,712,137	73.6	General contractors <sup>3</sup>	22,453,395	3,951,211	90.3	17.6	62,712,137	73.6		
Building	13,407,433	972,633	80.2	7.3	40,079,126	66.1	Building	13,407,433	1,137,168	26.0	8.5	40,079,126	66.1		
Building not specialized <sup>4</sup>	10,822,625	878,498	72.5	8.1	31,739,677	69.6	Building not specialized <sup>4</sup>	10,822,625	1,076,420	24.6	9.9	31,739,677	69.6		
Commercial building only	35,052	3,380	.3	9.6	171,235	63.7	Commercial building only	35,052	5,736	.1	16.4	171,235	63.7		
Manufacturing building only	11,296	991	.1	8.8	47,081	46.8	Manufacturing building only	11,296	2,542	.1	22.5	47,081	46.8		
Residential building only	2,538,460	89,764	7.4	8.5	8,121,133	54.2	Residential building only	2,538,460	52,470	1.2	2.1	8,121,133	54.2		
Highway	3,051,183	18,300	1.5	6.0	8,042,285	85.2	Highway	3,051,183	1,350,425	30.9	44.8	8,042,285	85.2		
Bridge and culvert	356,680	1,400	.1	6.0	1,143,068	77.2	Bridge and culvert	356,680	80,863	1.8	22.7	1,143,068	77.2		
Grading	23,471	1,471	1.0	6.0	273,949	82.9	Grading	23,471	3,010	1.1	12.8	273,949	82.9		
Street paving	3,260,562	31,471	2.6	1.0	6,664,140	93.9	Street paving	3,260,562	1,203,738	27.5	36.9	6,664,140	93.9		
Sewer, gas, water, conduit	1,303,475	16,726	1.4	1.3	3,550,972	98.6	Sewer, gas, water, conduit	1,303,475	110,717	2.5	8.5	3,550,972	98.6		
Waterworks	42,000	2,500	.2	6.0	122,000	100.0	Dam and reservoir	18,850	4,000	1.1	21.2	60,500	100.0		
Foundation	33,518	1,321	.1	3.9	96,140	100.0	Waterworks	42,000	12,000	.3	28.6	122,000	100.0		
Subcontractors	21,176,510	168,098	13.9	8.8	42,681,778	98.1	Dredging, river, harbor, etc.	883,687	41,361	.9	4.7	2,423,477	89.7		
Concrete	639,230	20,512	1.7	3.2	1,894,374	88.0	Foundation	33,518	7,939	.2	23.7	96,140	100.0		
Heating and plumbing	4,732,206	3,080	.3	1.2	13,497,038	98.7	Subcontractors	21,176,510	424,104	9.7	2.0	42,681,778	98.1		
Heating and piping	2,624,803	3,080	.3	2.1	4,796,878	96.8	Concrete	639,230	246,521	5.6	38.6	1,894,374	88.9		
Plumbing	3,505,827	870	( <sup>5</sup> )	( <sup>5</sup> )	6,405,961	99.8	Heating and plumbing	4,732,206	489	( <sup>5</sup> )	( <sup>5</sup> )	13,497,038	98.7		
Plumbing and heating combined	879,571	25	( <sup>5</sup> )	( <sup>5</sup> )	1,023,114	97.9	Heating and piping	2,624,803	271	( <sup>5</sup> )	( <sup>5</sup> )	4,796,878	96.8		
Masonry	518,027	143,476	11.8	27.7	1,277,863	91.6	Plumbing	3,505,827	218	( <sup>5</sup> )	( <sup>5</sup> )	6,405,961	99.8		
Plastering and lathing	714,030	130	( <sup>5</sup> )	( <sup>5</sup> )	3,289,548	99.1	Masonry	518,027	54,904	1.3	10.6	1,277,863	91.6		
Roofing and sheet-metal work	1,773,054	889	( <sup>5</sup> )	.1	3,832,990	99.7	Plastering and lathing	714,030	44,571	1.0	6.2	2,224,224	98.5		
Roofing	1,000,302	889	( <sup>5</sup> )	.1	2,156,550	100.0	Steel erection	2,255,347	3,000	.1	.1	3,414,590	95.5		
Steel erection	2,255,347	4,000	.1	.2	3,414,590	95.5	Marble and tiling	1,553,120	38,707	.9	2.5	3,289,548	98.8		
Marble and tiling	1,553,120	60,612	1.4	3.9	3,289,548	99.1	Excavating	9,640	463	( <sup>5</sup> )	4.8	139,823	98.8		
Excavating	9,640	2,686	.1	26.8	139,823	98.8	Bridge and culvert	100,037	34,449	.8	34.4	171,873	100.0		
Bridge and culvert	100,037	26,630	.6	26.5	171,873	100.0	Soundproofing	215,703	1,000	( <sup>5</sup> )	.8	443,701	100.0		
Soundproofing	215,703	1,000	( <sup>5</sup> )	.5	443,101	100.0	<i>Tile, facing, terra cotta, floor, and wall</i>								
<i>Brick (face, common, fire, paving, etc.)</i>						<i>Tile, facing, terra cotta, floor, and wall</i>									
All classes	43,629,905	821,811	100.0	1.9	105,393,915	82.5	All classes	43,629,905	821,811	100.0	1.9	105,393,915	82.5		
General contractors <sup>3</sup>	22,453,395	258,984	31.5	1.2	62,712,137	73.6	General contractors <sup>3</sup>	22,453,395	258,984	31.5	1.2	62,712,137	73.6		
Building	13,407,433	248,064	30.2	1.9	40,079,126	66.1	Building	13,407,433	248,064	30.2	1.9	40,079,126	66.1		
Building not specialized <sup>4</sup>	10,822,625	229,733	28.0	2.1	31,739,677	69.6	Building not specialized <sup>4</sup>	10,822,625	229,733	28.0	2.1	31,739,677	69.6		
Commercial building only	35,052	383	( <sup>5</sup> )	1.0	171,235	63.7	Commercial building only	35,052	383	( <sup>5</sup> )	1.0	171,235	63.7		
Manufacturing building only	11,296	991	.1	8.8	47,081	46.8	Manufacturing building only	11,296	991	.1	8.8	47,081	46.8		
Residential building only	2,538,460	17,998	2.2	.7	8,121,133	54.2	Residential building only	2,538,460	17,998	2.2	.7	8,121,133	54.2		
Highway	3,051,183	10,000	1.2	.3	8,042,285	85.2	Highway	3,051,183	10,000	1.2	.3	8,042,285	85.2		
Bridge and culvert	356,680	540	.1	( <sup>5</sup> )	1,143,068	77.2	Bridge and culvert	356,680	540						

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	
		Amount	Per cent of—		Value of construction business					Amount	Per cent of—		Value of construction business			Indicated per cent of all business done by own force <sup>1</sup>
			Total cost	Cost of all distributed materials							Total cost	Cost of all distributed materials				
<b>WISCONSIN—Continued</b>							<b>WISCONSIN—Continued</b>									
<i>Plaster, etc.</i>							<i>Ornamental metal work</i>									
All classes.....	\$43,629,905	\$504,727	100.0	1.3	\$105,393,915	82.5	All classes.....	\$43,629,905	\$1,768,199	100.0	4.1	\$105,393,915	82.5			
General contractors <sup>2</sup> .....	22,453,395	209,313	36.5	.9	62,712,137	73.6	General contractors <sup>2</sup> .....	22,453,395	43,208	2.4	.2	62,712,137	73.6			
Building.....	13,407,433	200,011	35.5	1.5	40,079,126	66.1	Building.....	13,407,433	38,951	2.2	.3	40,079,126	66.1			
Building not specialized <sup>3</sup> .....	10,822,625	168,279	29.8	1.6	31,739,677	69.6	Building not specialized <sup>3</sup> .....	10,822,625	32,870	1.9	.3	31,739,677	69.6			
Commercial building only.....	35,052	350	1.0	1.0	171,235	63.7	Manufacturing building only.....	11,296	65	( <sup>0</sup> )	.6	47,081	46.8			
Residential building only.....	2,538,460	31,982	5.7	1.3	8,121,133	54.2	Residential building only.....	2,538,460	6,010	.3	.2	8,121,133	54.2			
Highway.....	3,051,183	4,832	.9	.2	8,012,285	85.2	Highway.....	3,051,183	4,267	.2	.1	8,012,285	85.2			
Foundation.....	33,518	870	.2	2.6	96,140	100.0	Subcontractors.....	21,176,510	1,724,901	97.0	8.1	42,681,778	98.1			
Subcontractors.....	21,176,510	358,414	63.5	1.7	42,681,778	98.1	Carpentering and wood flooring.....	527,843	350	( <sup>0</sup> )	.1	1,021,699	99.0			
Carpentering and wood flooring.....	527,843	700	.1	.1	1,021,699	99.0	Concreting.....	630,230	142	( <sup>0</sup> )	( <sup>0</sup> )	1,804,374	88.0			
Concreting.....	630,230	1,730	.3	.3	1,894,374	88.9	Masonry.....	518,027	378	( <sup>0</sup> )	.1	1,277,803	91.0			
Masonry.....	518,027	10,287	1.8	2.0	2,277,803	91.6	Roofing and sheet-metal work.....	1,773,054	3,821	.2	.2	3,832,000	99.7			
Painting and decorating.....	581,615	24	( <sup>0</sup> )	( <sup>0</sup> )	2,439,171	90.4	Sheet-metal work.....	572,402	3,821	.2	.7	1,355,785	99.3			
Plastering and lathing.....	714,030	333,625	59.1	46.7	2,224,224	98.5	Steel erection.....	2,255,347	124,014	7.1	5.6	3,414,590	95.5			
Marble and tiling.....	1,553,120	9,550	1.7	.6	3,289,548	99.1	Ornamental iron.....	1,657,537	1,596,386	90.2	96.3	2,440,680	99.2			
Soundproofing.....	215,703	2,500	.4	1.2	443,701	100.0	All classes.....	43,629,905	3,847,350	100.0	8.8	105,393,915	82.5			
<i>Structural steel</i>							<i>Lumber, rough and finished</i>									
All classes.....	43,629,905	2,851,933	100.0	6.5	105,393,915	82.5	All classes.....	43,629,905	3,847,350	100.0	8.8	105,393,915	82.5			
General contractors <sup>2</sup> .....	22,453,395	809,685	28.4	3.6	62,712,137	73.6	General contractors <sup>2</sup> .....	22,453,395	3,612,815	91.3	15.6	62,712,137	73.6			
Building.....	13,407,433	558,816	19.8	4.2	40,079,126	66.1	Building.....	13,407,433	3,231,406	81.0	24.1	40,079,126	66.1			
Building not specialized <sup>3</sup> .....	10,822,625	521,491	18.3	4.8	31,739,677	69.6	Building not specialized <sup>3</sup> .....	10,822,625	2,219,697	57.7	20.5	31,739,677	69.6			
Commercial building only.....	35,052	2,328	.1	0.6	171,235	63.7	Commercial building only.....	35,052	3,000	.1	11.1	171,235	63.7			
Manufacturing building only.....	11,296	1,370	( <sup>0</sup> )	12.1	47,081	46.8	Manufacturing building only.....	11,296	1,147	( <sup>0</sup> )	10.2	47,081	46.8			
Residential building only.....	2,538,460	33,627	1.2	1.3	8,121,133	54.2	Residential building only.....	2,538,460	1,006,752	26.2	30.7	8,121,133	54.2			
Highway.....	3,051,183	59,104	2.1	1.9	8,042,285	85.2	Highway.....	3,051,183	28,008	.7	.0	8,012,285	85.2			
Bridge and culvert.....	356,680	59,037	2.1	16.6	1,143,068	77.2	Bridge and culvert.....	356,680	53,874	1.4	15.1	1,143,068	77.2			
Grading.....	23,471	480	( <sup>0</sup> )	2.0	273,949	82.9	Grading.....	23,471	700	( <sup>0</sup> )	3.0	273,949	82.9			
Street paving.....	3,260,562	5,784	.2	.2	6,664,140	93.9	Street paving.....	3,260,562	44,670	1.2	1.4	6,664,140	93.9			
Sewer, gas, water, conduit.....	1,303,475	8,412	.3	.6	3,550,972	98.6	Sewer, gas, water, conduit.....	1,303,475	47,342	1.2	3.5	3,550,972	98.6			
Dredging, river, harbor, etc.....	883,687	31,365	2.9	9.2	2,423,477	89.7	Dredging, river, harbor, etc.....	883,687	85,012	2.2	10.0	2,423,477	89.7			
Railroad.....	72,590	35,500	1.2	48.9	256,480	97.6	Railroad.....	72,590	18,000	.6	24.8	256,480	97.6			
Foundation.....	33,518	1,187	( <sup>0</sup> )	3.5	96,140	100.0	Foundation.....	33,518	3,115	.1	9.3	96,140	100.0			
Subcontractors.....	21,176,510	2,042,298	71.6	9.6	42,681,778	98.1	Subcontractors.....	21,176,510	334,535	8.7	1.0	42,681,778	98.1			
Concreting.....	630,230	4,865	.8	0.6	1,894,374	88.9	Carpentering and wood flooring.....	527,843	265,326	6.0	50.3	1,021,699	99.0			
Heating and plumbing.....	7,320,206	4,530	.2	.1	13,497,038	98.7	Concreting.....	630,230	22,850	( <sup>0</sup> )	3.0	1,804,374	88.0			
Heating and piping.....	2,624,803	4,480	.2	.2	4,796,878	98.8	Heating and plumbing.....	7,320,206	117	( <sup>0</sup> )	( <sup>0</sup> )	13,497,038	98.7			
Plumbing and heating combined.....	879,571	50	( <sup>0</sup> )	( <sup>0</sup> )	1,623,114	97.9	Heating and piping.....	2,624,803	72	( <sup>0</sup> )	( <sup>0</sup> )	4,796,878	98.8			
Masonry.....	518,027	22,636	.8	4.4	1,277,803	91.6	Plumbing.....	3,565,827	45	( <sup>0</sup> )	( <sup>0</sup> )	6,405,911	90.8			
Roofing and sheet-metal work.....	1,773,054	14,506	.5	.8	3,832,990	99.7	Plastering and lathing.....	518,027	5,778	.2	1.1	1,277,803	91.6			
Roofing.....	1,060,302	5,000	.2	.5	2,156,556	100.0	Roofing and sheet-metal work.....	1,773,054	1,784	( <sup>0</sup> )	.1	3,832,000	99.7			
Sheet-metal work.....	572,402	9,509	.3	1.7	1,355,785	99.3	Sheet-metal work.....	572,402	1,784	( <sup>0</sup> )	.3	1,355,785	99.3			
Steel erection.....	2,255,347	1,956,731	68.6	8.8	3,414,590	95.5	Steel erection.....	2,255,347	1,392	( <sup>0</sup> )	.1	3,414,590	95.5			
Marble and tiling.....	1,553,120	500	( <sup>0</sup> )	( <sup>0</sup> )	3,289,548	99.1	Marble and tiling.....	1,553,120	2,356	( <sup>0</sup> )	.1	2,850,548	99.1			
Ornamental iron.....	1,657,537	32,692	1.1	2.0	2,449,686	99.2	Ornamental iron.....	1,657,537	1,100	( <sup>0</sup> )	.1	2,440,680	99.2			
Bridge and culvert.....	100,037	5,878	.2	5.9	171,873	100.0	Bridge and culvert.....	100,037	11,482	.3	11.6	171,873	100.0			
<i>Reinforcing steel</i>							<i>Millwork</i>									
All classes.....	43,629,905	1,045,164	100.0	2.4	105,393,915	82.5	All classes.....	43,629,905	2,260,600	100.0	5.2	105,393,915	82.5			
General contractors <sup>2</sup> .....	22,453,395	937,214	89.7	4.2	62,712,137	73.6	General contractors <sup>2</sup> .....	22,453,395	2,086,504	92.3	9.3	62,712,137	73.6			
Building.....	13,407,433	492,497	47.1	3.7	40,079,126	66.1	Building.....	13,407,433	2,070,104	91.6	15.4	40,079,126	66.1			
Building not specialized <sup>3</sup> .....	10,822,625	486,591	40.6	4.5	31,739,677	69.6	Building not specialized <sup>3</sup> .....	10,822,625	1,396,894	61.8	12.9	31,739,677	69.6			
Manufacturing building only.....	11,296	125	( <sup>0</sup> )	1.1	47,081	46.8	Manufacturing building only.....	11,296	500	( <sup>0</sup> )	1.4	171,235	63.7			
Residential building only.....	2,538,460	5,781	.6	.2	8,121,133	54.2	Residential building only.....	2,538,460	501	( <sup>0</sup> )	5.0	47,081	46.8			
Highway.....	3,051,183	192,847	18.4	0.3	8,042,285	85.2	Highway.....	3,051,183	13,400	.6	.4	8,042,285	85.2			
Bridge and culvert.....	356,680	79,071	7.0	22.2	1,143,068	77.2	Bridge and culvert.....	356,680	3,000	.1	.1	6,664,140	93.9			
Grading.....	23,471	1,200	.1	5.1	273,949	82.9	Grading.....	23,471	1,200	.1	.1	273,949	82.9			
Street paving.....	3,260,562	154,681	14.8	4.7	6,664,140	93.9	Street paving.....	3,260,562	154,681	14.8	4.7	6,664,140	93.9			
Sewer, gas, water, conduit.....	1,303,475	4,757	.5	.4	3,550,972	98.6	Sewer, gas, water, conduit.....	1,303,475	4,200	.4	22.3	3,550,972	98.6			
Dredging, river, harbor, etc.....	883,687	8,183	.9	2.9	2,423,477	89.7	Dredging, river, harbor, etc.....	883,687	8,183	.9	2.9	2,423,477	89.7			
Foundation.....	33,518	578	.1	1.7	96,140	100.0	Foundation.....	33,518	578	.1	1.7	96,140	100.0			
Subcontractors.....	21,176,510	107,950	10.3	.5	42,681,778	98.1	Subcontractors.....	21,176,510	174,186	7.7	.8	42,681,778	98.1			
Concreting.....	630,230	16,870	1.6	2.6	1,894,374	88.9	Carpentering and wood flooring.....	527,843	172,786	7.0	32.7	1,021,699	99.0			
Heating and plumbing.....	7,320,206	60	( <sup>0</sup> )	( <sup>0</sup> )	13,497,038	98.7	Plastering and lathing.....	714,030	300	( <sup>0</sup> )	( <sup>0</sup> )	2,224,224	98.5			
Heating and piping.....	2,624,803	50	( <sup>0</sup> )	( <sup>0</sup> )	4,796,878	98.8	Steel erection.....	2,255,347	1,100	( <sup>0</sup> )	( <sup>0</sup> )	3,414,590	95.5			
Plumbing and heating combined.....	879,571	10,290	1.0	2.0	1,277,803	91.6	Roofing and sheet-metal work.....	1,773,054	1,784	( <sup>0</sup> )	.1	3,832,000	99.7			
Masonry.....	518,027	1,848	.2	.3	2,224,224	98.5	Sheet-metal work.....	572,402	1,784	( <sup>0</sup> )	.3	1,355,785	99.3			
Roofing and sheet-metal work.....	1,773,054	1,848	.2	.3	3,414,590	95.5	Steel erection.....	2,255,347	2,356	( <sup>0</sup> )	.1	2,850,548	99.1			
Roofing.....	1,060,302	69,207	6.6	3.1	2,449,686	99.2	Ornamental iron.....	1,657,537	1,100	( <sup>0</sup> )	.1	2,440,680	99.2			
Sheet-metal work.....	572,402	1,000	.1	.1	1,355,785	99.3	Bridge and culvert.....	100,037	7,685	.7	7.7	171,873	100.0			
Steel erection.....	2,255,347	7,685	.7	7.7	2,449,686	99.2	Foundation.....	33,518	1,000	.1	.1	443,701	100.0			
Marble and tiling.....	1,553,120	1,000														

# CONSTRUCTION—WISCONSIN

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**TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued**

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
	Cost of all materials distributed by kind	Amount	Per cent of—					Cost of all materials distributed by kind	Amount	Per cent of—			
			Total cost	Cost of all distributed materials						Total cost	Cost of all distributed materials		
<b>WISCONSIN—Continued</b>						<b>WISCONSIN—Continued</b>							
<i>Composition board</i>						<i>Roofing and sheet metal—Continued</i>							
All classes.....	\$43,629,905	\$567,729	100.0	1.3	\$105,393,915	82.5	Subcontractors—Continued, Roofing and sheet-metal work combined.....	\$140,350	\$136,056	6.8	96.9	\$340,640	100.0
General contractors.....	22,463,395	114,577	20.2	.5	62,712,137	73.6	Steel erection.....	2,255,347	7,325	.4	.3	3,414,590	95.5
Building.....	13,407,433	114,137	20.1	.9	40,079,126	66.1	Metal work, n. e. s.....	18,220	5,000	.3	27.4	75,188	100.0
Building not specialized <sup>2</sup> .....	10,822,625	83,590	14.7	.8	31,739,877	69.6	<i>Heating and ventilating equipment<sup>3</sup></i>						
Manufacturing building only.....	11,296	308	.1	2.7	47,081	46.8	All classes.....	43,629,905	3,455,265	100.0	7.9	105,393,915	82.5
Residential building only.....	2,538,460	30,179	5.3	1.2	8,121,133	54.2	General contractors.....	22,463,395	200,659	5.8	.9	62,712,137	73.6
Highway.....	3,051,183	151	( <sup>o</sup> )	( <sup>o</sup> )	3,042,285	85.2	Building.....	13,407,433	199,652	5.8	1.5	40,079,126	66.1
Street paving.....	3,260,562	154	( <sup>o</sup> )	( <sup>o</sup> )	6,664,140	93.9	Building not specialized <sup>2</sup> .....	10,822,625	178,241	6.0	1.6	31,739,877	69.6
Dredging, river, harbor, etc.....	883,687	135	( <sup>o</sup> )	( <sup>o</sup> )	2,423,477	89.7	Manufacturing building only.....	11,296	95	( <sup>o</sup> )	.8	47,081	46.8
Subcontractors.....	21,176,610	453,152	79.8	2.1	42,681,778	98.1	Residential building only.....	2,538,460	26,810	8	1.0	8,121,133	54.2
Carpentering and wood flooring.....	527,843	13,690	2.4	2.6	1,021,699	99.0	Highway.....	3,051,183	457	( <sup>o</sup> )	( <sup>o</sup> )	3,042,285	85.2
Heating and plumbing.....	7,320,206	235,586	41.5	3.2	13,497,038	98.7	Bridge and culvert.....	356,680	2,111	2	.6	1,143,068	77.2
Pipe covering.....	235,586	235,586	41.5	100.0	466,000	100.0	Grading.....	23,471	00	( <sup>o</sup> )	.3	273,949	82.9
Plastering and lathing.....	714,030	13,896	2.4	1.9	2,224,224	98.5	Street paving.....	3,260,562	139	( <sup>o</sup> )	( <sup>o</sup> )	6,004,140	93.9
Roofing and sheet-metal work.....	1,773,054	27,259	4.8	1.5	3,832,990	99.7	Dam and reservoir.....	18,850	200	( <sup>o</sup> )	1.1	60,600	100.0
Roofing.....	1,060,302	26,709	4.7	2.5	2,156,556	100.0	Dredging, river, harbor, etc.....	883,687	1,000	.1	.1	2,423,477	89.7
Sheet-metal work.....	572,402	550	1	( <sup>o</sup> )	1,335,786	99.3	Subcontractors.....	21,176,610	1,048,166	84.9	4.9	42,681,778	98.1
Marble and tiling.....	1,553,120	48	( <sup>o</sup> )	( <sup>o</sup> )	3,289,548	99.1	Carpentering and wood flooring.....	527,843	14,386	1.2	2.7	1,021,699	99.0
Soundproofing.....	215,703	102,703	28.7	75.4	443,701	100.0	Electrical.....	7,320,206	990	.1	( <sup>o</sup> )	13,497,038	98.7
<i>Paints, varnishes, glass</i>						<i>Plumbing and gas-fitting equipment<sup>3</sup></i>							
All classes.....	43,629,905	1,234,073	100.0	2.8	105,393,915	82.5	All classes.....	43,629,905	3,090,068	100.0	9.1	105,393,915	82.5
General contractors.....	22,463,395	185,907	15.1	.8	62,712,137	73.6	General contractors.....	22,463,395	804,500	7.6	1.4	62,712,137	73.6
Building.....	13,407,433	176,550	14.9	1.3	40,079,126	66.1	Building.....	13,407,433	245,238	6.1	1.8	40,079,126	66.1
Building not specialized <sup>2</sup> .....	10,822,625	142,725	11.6	1.3	31,739,877	69.6	Building not specialized <sup>2</sup> .....	10,822,625	193,890	4.9	1.8	31,739,877	69.6
Commercial building only.....	35,052	1,347	.1	3.8	171,235	63.7	Residential building only.....	2,538,460	51,848	1.3	2.0	8,121,133	54.2
Manufacturing building only.....	11,296	256	( <sup>o</sup> )	2.3	47,081	46.6	Highway.....	3,051,183	480	( <sup>o</sup> )	( <sup>o</sup> )	3,042,285	85.2
Residential building only.....	2,538,460	32,222	2.6	1.3	8,121,133	54.2	Street paving.....	3,260,562	760	( <sup>o</sup> )	( <sup>o</sup> )	6,064,140	93.9
Highway.....	3,051,183	5,847	.5	2	8,042,285	85.2	Sewer, gas, water, conduit.....	1,303,475	56,092	1.4	4.3	3,550,972	98.6
Bridge and culvert.....	356,680	2,111	.2	.6	1,143,068	77.2	Dredging, river, harbor, etc.....	883,687	2,000	.1	.2	2,423,477	89.7
Grading.....	23,471	00	( <sup>o</sup> )	.3	273,949	82.9	Subcontractors.....	21,176,610	3,685,508	92.4	17.4	42,681,778	98.1
Street paving.....	3,260,562	139	( <sup>o</sup> )	( <sup>o</sup> )	6,004,140	93.9	Concrete.....	639,230	1,500	( <sup>o</sup> )	.2	1,894,374	88.9
Dam and reservoir.....	18,850	200	( <sup>o</sup> )	1.1	60,600	100.0	Electrical.....	2,148,257	30,274	.9	1.7	4,517,661	99.8
Dredging, river, harbor, etc.....	883,687	1,000	.1	.1	2,423,477	89.7	Heating and plumbing.....	7,320,206	3,647,734	91.4	49.8	13,497,038	98.7
Subcontractors.....	21,176,610	1,048,166	84.9	4.9	42,681,778	98.1	Heating and piping.....	2,624,803	175,295	4.4	6.7	4,796,878	96.8
Carpentering and wood flooring.....	527,843	14,386	1.2	2.7	1,021,699	99.0	Plumbing.....	3,505,827	2,961,798	74.2	34.5	6,405,961	99.8
Electrical.....	7,320,206	990	.1	( <sup>o</sup> )	13,497,038	98.7	Plumbing and heating combined.....	879,571	510,741	12.8	58.1	1,623,114	97.9
Heating and plumbing.....	2,624,803	652	.1	( <sup>o</sup> )	4,796,878	96.8	<i>Electrical appliances and supplies</i>						
Plumbing.....	3,505,827	238	( <sup>o</sup> )	( <sup>o</sup> )	6,405,961	99.8	All classes.....	43,629,905	2,245,264	100.0	5.1	105,393,915	82.5
Plumbing and heating combined.....	879,571	100	( <sup>o</sup> )	( <sup>o</sup> )	1,623,114	97.9	General contractors.....	22,463,395	131,615	5.9	.6	62,712,137	73.6
Painting and decorating.....	581,615	681,629	47.1	100.0	2,439,171	99.4	Building.....	13,407,433	116,304	5.2	.9	40,079,126	66.1
Glass and glazing.....	449,150	403,657	32.7	89.9	674,343	99.3	Building not specialized <sup>2</sup> .....	10,822,625	84,826	3.8	.8	31,739,877	69.6
Plastering and lathing.....	714,030	800	( <sup>o</sup> )	( <sup>o</sup> )	2,224,224	98.5	Manufacturing building only.....	11,296	120	( <sup>o</sup> )	1.1	47,081	46.8
Roofing and sheet-metal work.....	1,773,054	29,896	2.4	1.7	3,832,990	99.7	Residential building only.....	2,538,460	31,358	1.4	1.2	8,121,133	54.2
Roofing.....	1,060,302	17,724	1.4	1.7	2,156,556	100.0	Highway.....	3,051,183	706	( <sup>o</sup> )	( <sup>o</sup> )	3,042,285	85.2
Sheet-metal work.....	572,402	12,172	1.0	2.1	1,335,786	99.3	Street paving.....	3,260,562	611	( <sup>o</sup> )	( <sup>o</sup> )	6,064,140	93.9
Steel erection.....	2,255,347	5,008	.5	.3	3,414,590	95.5	Dredging, river, harbor, etc.....	883,687	14,000	.6	1.0	2,423,477	89.7
Soundproofing.....	215,703	10,000	.8	4.6	443,701	100.0	Subcontractors.....	21,176,610	2,113,649	94.1	10.0	42,681,778	98.1
Metal work, n. e. s.....	18,220	1,500	.1	8.2	75,188	100.0	Carpentering and wood flooring.....	527,843	200	( <sup>o</sup> )	( <sup>o</sup> )	1,021,699	99.0
<i>Roofing and sheet metal</i>						<i>Roofing and sheet metal</i>							
All classes.....	43,629,905	1,080,013	100.0	4.6	105,393,915	82.5	All classes.....	43,629,905	2,245,264	100.0	5.1	105,393,915	82.5
General contractors.....	22,463,395	282,918	14.2	1.3	62,712,137	73.6	General contractors.....	22,463,395	131,615	5.9	.6	62,712,137	73.6
Building.....	13,407,433	281,359	14.2	2.1	40,079,126	66.1	Building.....	13,407,433	116,304	5.2	.9	40,079,126	66.1
Building not specialized <sup>2</sup> .....	10,822,625	244,183	12.3	2.3	31,739,877	69.6	Building not specialized <sup>2</sup> .....	10,822,625	84,826	3.8	.8	31,739,877	69.6
Residential building only.....	2,538,460	37,173	1.9	1.5	8,121,133	54.2	Manufacturing building only.....	11,296	120	( <sup>o</sup> )	1.1	47,081	46.8
Highway.....	3,051,183	1,800	.1	( <sup>o</sup> )	3,042,285	85.2	Residential building only.....	2,538,460	31,358	1.4	1.2	8,121,133	54.2
Street paving.....	3,260,562	282	( <sup>o</sup> )	( <sup>o</sup> )	6,664,140	93.9	Highway.....	3,051,183	706	( <sup>o</sup> )	( <sup>o</sup> )	3,042,285	85.2
Subcontractors.....	21,176,610	1,793,965	85.8	8.0	42,681,778	98.1	Street paving.....	3,260,562	611	( <sup>o</sup> )	( <sup>o</sup> )	6,064,140	93.9
Carpentering and wood flooring.....	527,843	3,650	.2	.7	1,021,699	99.0	Dredging, river, harbor, etc.....	883,687	14,000	.6	1.0	2,423,477	89.7
Electrical.....	2,148,257	3,679	.2	.2	4,517,661	99.8	Subcontractors.....	21,176,610	2,113,649	94.1	10.0	42,681,778	98.1
Heating and plumbing.....	7,320,206	159,887	8.0	2.2	13,497,038	98.7	Carpentering and wood flooring.....	527,843	200	( <sup>o</sup> )	( <sup>o</sup> )	1,021,699	99.0
Heating and piping.....	2,624,803	95,854	4.8	3.7	4,796,878	96.8	Electrical.....	2,148,257	2,080,262	92.7	66.8	4,517,661	99.8
Plumbing.....	3,505,827	52,982	2.7	1.5	6,405,961	99.8	Heating and plumbing.....	7,320,206	31,056	1.4	.4	13,497,038	98.7
Plumbing and heating combined.....	879,571	11,101	.6	1.3	1,623,114	97.9	Heating and piping.....	2,624,803	8,130	.4	.3	4,796,878	96.8
Painting and decorating.....	581,615	133	( <sup>o</sup> )	( <sup>o</sup> )	1,277,863	91.6	Plumbing.....	3,505,827	18,926	.8	.6	6,405,961	99.8
Glass and glazing.....	449,150	29	( <sup>o</sup> )	( <sup>o</sup> )	2,439,171	99.4	Plumbing and heating combined.....	879,571	4,000	.2	.5	1,623,114	97.9
Plastering and lathing.....	714,030	800	( <sup>o</sup> )	( <sup>o</sup> )	2,224,224	98.5	Marble and tiling.....	1,553,120	131	( <sup>o</sup> )	( <sup>o</sup> )	3,289,548	99.1
Roofing and sheet-metal work.....	1,773,054	1,824,202	76.7	86.0	3,832,990	99.7	Soundproofing.....	215,703	2,000	.9	.9	443,701	100.0
Roofing.....	1,060,302	981,331	46.9	87.8	2,156,556	100.0	See footnotes at end of table, p. 1308.						
Sheet-metal work.....	572,402	450,905	23.0	79.8	1,335,786	99.3							

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	Cost of all materials distributed by kind	COST OF DESIGNATED MATERIAL			Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
		Amount	Per cent of—						Amount	Per cent of—			
			Total cost	Cost of all distributed materials						Total cost	Cost of all distributed materials		
<b>WISCONSIN—Continued</b>						<b>MILWAUKEE—Continued</b>							
<i>Elevators, dumb-waiters, and equipment</i>						<i>Tile, facing, terra cotta, floor, and wall</i>							
All classes.....	\$43,629,905	\$578,541	100.0	1.3	\$105,393,915	82.5	All classes.....	\$23,877,450	\$643,773	100.0	2.7	\$57,723,518	81.7
General contractors.....	\$21,860,738	32,635	5.6	1.1	\$1,201,166	74.2	General contractors.....	\$9,860,970	156,945	24.4	1.0	\$20,587,827	68.5
Building.....	\$2,814,776	32,635	5.6	3.3	\$8,568,155	66.3	Building.....	\$5,886,184	156,945	24.4	2.7	\$10,780,254	60.6
Building not specialized.....	\$10,229,968	32,300	5.6	3.3	\$3,228,706	70.5	Building not specialized.....	\$4,850,023	142,507	22.1	1.9	\$16,193,650	65.2
Residential building only.....	\$2,538,460	335	1.1	(*)	\$,121,133	54.2	Residential building only.....	\$1,010,431	14,431	2.2	2.4	\$3,473,224	47.5
Subcontractors.....	\$21,176,510	545,906	94.4	2.6	\$42,881,778	98.1	Subcontractors.....	\$14,016,480	486,828	75.6	3.5	\$28,135,691	97.0
Elevator construction.....	\$545,906	545,906	94.4	100.0	\$903,827	100.0	Masonry.....	\$299,450	13,000	2.0	4.3	\$655,188	92.0
<i>Pipe, drain tile, vitrified, concrete, segment tile, corrugated</i>						<i>Concrete and cinder block</i>							
All classes.....	\$43,629,905	\$679,957	100.0	1.6	\$105,393,915	82.5	All classes.....	\$23,877,450	\$280,100	100.0	1.2	\$57,723,518	81.7
General contractors.....	\$22,453,395	638,779	98.0	2.8	\$62,712,137	73.6	General contractors.....	\$9,860,970	190,089	67.0	1.0	\$20,587,827	68.5
Building.....	\$13,407,433	5,535	1.0	(*)	\$40,079,126	66.1	Building.....	\$5,886,184	189,779	67.3	3.2	\$10,780,254	60.6
Building not specialized.....	\$10,822,625	5,268	.8	(*)	\$1,739,677	69.6	Building not specialized.....	\$4,850,023	160,976	53.7	3.1	\$16,193,650	65.2
Residential building only.....	\$2,538,460	1,267	.2	(*)	\$,121,133	54.2	Residential building only.....	\$1,010,431	39,408	14.1	3.0	\$3,473,224	47.5
Highway.....	\$3,051,183	17,644	2.6	.6	\$8,042,285	85.2	Street paving.....	\$1,068,484	310	.1	(*)	\$4,117,826	91.1
Bridge and culvert.....	\$356,680	493	.1	1.1	\$1,433,068	77.2	Subcontractors.....	\$14,016,480	90,011	32.1	.6	\$28,135,691	97.0
Grading.....	\$23,471	7,432	1.1	31.7	\$278,940	82.9	Concreting.....	\$375,367	26,181	9.3	7.0	\$1,171,402	82.2
Street paving.....	\$3,280,562	30,695	4.5	.9	\$6,664,140	93.9	Masonry.....	\$299,450	63,830	22.8	21.3	\$655,188	92.0
Sewer, gas, water, conduit.....	\$1,303,475	572,980	84.3	44.0	\$3,550,972	98.6	Cut stone, granite and marble.....	\$23,877,450	\$1,011,160	100.0	4.2	\$57,723,518	81.7
Waterworks.....	\$42,000	3,000	.4	7.1	\$122,000	100.0	All classes.....	\$23,877,450	\$1,011,160	100.0	4.2	\$57,723,518	81.7
Subcontractors.....	\$21,176,510	41,178	6.1	.2	\$42,681,778	98.1	General contractors.....	\$9,860,970	119,134	11.8	1.2	\$20,587,827	68.5
Concreting.....	\$639,230	190	(*)	(*)	\$1,894,374	88.9	Building.....	\$5,886,184	118,063	11.7	2.0	\$10,780,254	60.6
Heating and plumbing.....	\$7,320,206	33,739	5.0	.5	\$13,497,038	98.7	Building not specialized.....	\$4,850,023	116,717	10.9	2.3	\$16,193,650	65.2
Heating and piping.....	\$2,624,803	373	.1	(*)	\$4,796,878	96.8	Residential building only.....	\$1,010,431	7,846	.7	.7	\$3,473,224	47.5
Plumbing.....	\$3,505,827	31,516	4.6	.9	\$6,405,961	99.8	Street paving.....	\$1,068,484	1,071	.1	.1	\$4,117,826	91.1
Plumbing and heating combined.....	\$79,571	1,900	.3	.2	\$1,623,114	97.9	Subcontractors.....	\$14,016,480	892,026	88.2	6.4	\$28,135,691	97.0
Masonry.....	\$518,027	908	.1	.2	\$1,277,863	91.6	Concreting.....	\$375,367	2,826	.3	8.8	\$1,171,402	82.2
Excavating.....	\$9,640	6,291	.9	65.3	\$139,823	98.3	Masonry.....	\$299,450	25,472	2.5	8.5	\$655,188	92.0
<b>MILWAUKEE</b>						<b>Riprap, rubble, etc.</b>							
<i>Sand, gravel, stone, slag, cinders, etc.<sup>1</sup></i>						<i>All classes.....</i>							
All classes.....	\$23,877,450	\$2,152,596	100.0	9.0	\$57,723,518	81.7	All classes.....	\$23,877,450	\$372,886	100.0	1.6	\$57,723,518	81.7
General contractors.....	\$9,860,970	1,885,394	86.7	18.9	\$29,587,827	68.5	General contractors.....	\$9,860,970	372,886	100.0	3.9	\$20,587,827	68.5
Building.....	\$5,886,184	559,211	26.0	9.5	\$19,780,254	60.6	Building.....	\$5,886,184	37,784	10.1	.7	\$10,780,254	61.7
Building not specialized.....	\$4,850,023	539,727	25.1	11.1	\$16,193,650	65.2	Building not specialized.....	\$4,850,023	37,784	10.1	.8	\$16,193,650	67.1
Manufacturing building only.....	\$11,296	2,467	.1	21.8	\$47,081	46.8	Street paving.....	\$1,068,484	36,104	9.4	1.8	\$4,117,826	91.1
Residential building only.....	\$1,010,431	17,017	.8	1.7	\$3,473,224	47.5	Sewer, gas, water, conduit.....	\$551,558	11,250	3.0	2.0	\$1,062,000	97.3
Highway.....	\$624,634	232,542	10.8	37.2	\$1,373,703	90.8	Dredging, river, harbor, etc.....	\$635,545	288,748	77.4	45.4	\$1,705,930	91.2
Bridge and culvert.....	\$22,029	22,021	1.0	18.0	\$641,568	55.7	Subcontractors.....	\$14,016,480	892,026	88.2	6.4	\$28,135,691	97.0
Street paving.....	\$1,968,484	935,034	43.4	47.6	\$4,117,826	91.1	Concreting.....	\$375,367	2,826	.3	8.8	\$1,171,402	82.2
Sewer, gas, water, conduit.....	\$551,558	87,062	4.0	15.8	\$1,652,060	97.3	Masonry.....	\$299,450	25,472	2.5	8.5	\$655,188	92.0
Dredging, river, harbor, etc.....	\$635,545	14,878	.7	2.3	\$1,765,936	91.2	Plastering and lathing.....	\$543,066	4,500	.4	8.8	\$1,731,111	98.5
Railroad.....	\$72,536	14,636	.7	20.2	\$256,480	99.6	Stone work.....	\$60,612	60,612	6.0	100.0	\$192,938	100.0
Subcontractors.....	\$14,016,480	287,212	13.3	2.0	\$28,135,691	97.9	Marble and tiling.....	\$1,423,285	793,616	78.6	55.8	\$2,941,932	99.0
Concreting.....	\$375,367	140,988	6.5	37.6	\$1,171,462	82.2	Soundproofing.....	\$215,703	5,000	.5	2.3	\$443,701	100.0
Heating and plumbing.....	\$3,879,365	970	(*)	(*)	\$7,357,664	98.5	<b>Cement</b>						
Heating and piping.....	\$1,690,933	100	(*)	(*)	\$3,165,911	96.8	All classes.....	\$23,877,450	\$1,907,342	100.0	8.0	\$57,723,518	81.7
Plumbing.....	\$1,403,693	870	(*)	.1	\$2,808,071	99.9	General contractors.....	\$9,860,970	1,633,749	85.7	16.0	\$20,587,827	68.5
Masonry.....	\$299,450	29,150	1.4	9.7	\$655,188	92.0	Building.....	\$5,886,184	605,049	31.8	10.3	\$10,780,254	60.6
Plastering and lathing.....	\$543,066	32,704	1.5	6.0	\$1,731,111	98.5	Building not specialized.....	\$4,850,023	585,105	30.7	12.1	\$16,193,650	65.2
Roofing and sheet-metal work.....	\$836,710	889	(*)	.1	\$1,973,513	99.4	Manufacturing building only.....	\$11,296	2,542	1.0	22.5	\$7,357,664	40.8
Roofing.....	\$383,741	889	(*)	.2	\$895,642	100.0	Residential building only.....	\$1,010,431	18,302	1.0	1.8	\$3,473,224	47.5
Steel erection.....	\$1,792,253	4,000	.2	.2	\$2,669,823	95.0	Highway.....	\$624,634	229,754	12.0	36.8	\$1,373,703	90.8
Marble and tiling.....	\$1,423,285	49,797	2.3	3.5	\$2,941,932	99.0	Bridge and culvert.....	\$22,029	30,480	2.1	32.4	\$641,568	55.7
Excavating.....	\$1,947	1,184	.1	60.8	\$6,797	97.1	Street paving.....	\$1,068,484	687,262	36.0	34.9	\$4,117,826	91.1
Bridge and culvert.....	\$100,037	26,530	1.2	26.5	\$171,873	100.0	Sewer, gas, water, conduit.....	\$551,558	42,900	2.2	7.8	\$1,062,000	97.3
Soundproofing.....	\$215,703	1,000	(*)	.5	\$443,701	100.0	Dredging, river, harbor, etc.....	\$635,545	28,404	1.5	4.5	\$1,705,930	91.2
<b>Brick (face, common, fire paving, etc.)</b>						<b>Plaster, etc.</b>							
All classes.....	\$23,877,450	\$33,763	100.0	2.2	\$57,723,518	81.7	All classes.....	\$23,877,450	\$375,809	100.0	1.0	\$57,723,518	81.7
General contractors.....	\$9,860,970	442,094	82.8	4.5	\$29,587,827	68.5	General contractors.....	\$9,860,970	102,332	27.2	1.0	\$20,587,827	68.5
Building.....	\$5,886,184	419,108	78.5	7.1	\$19,780,254	60.6	Building.....	\$5,886,184	102,332	27.2	1.7	\$10,780,254	60.6
Building not specialized.....	\$4,850,023	378,602	70.9	7.8	\$16,193,650	65.2	Building not specialized.....	\$4,850,023	92,694	24.7	1.9	\$16,193,650	65.2
Manufacturing building only.....	\$11,296	991	.2	8.8	\$47,081	46.8	Residential building only.....	\$1,010,431	9,638	2.6	1.0	\$3,473,224	47.5
Residential building only.....	\$1,010,431	39,555	7.4	3.9	\$3,473,224	47.5	Subcontractors.....	\$14,016,480	273,593	14.3	2.0	\$28,135,691	97.0
Street paving.....	\$1,968,484	16,515	3.1	.8	\$4,117,826	91.1	Concreting.....	\$375,367	151,395	7.9	40.3	\$1,171,402	82.2
Sewer, gas, water, conduit.....	\$551,558	6,471	1.2	1.2	\$1,652,060	97.3	Heating and plumbing.....	\$3,879,365	263	(*)	(*)	\$7,357,664	98.5
Subcontractors.....	\$14,016,480	91,859	17.2	.7	\$28,135,691	97.9	Heating and piping.....	\$1,690,933	234	(*)	(*)	\$3,155,191	96.8
Concreting.....	\$375,367	11,942	2.2	3.2	\$1,171,462	82.2	Plumbing.....	\$1,403,693	29	(*)	(*)	\$2,808,071	99.9
Heating and plumbing.....	\$3,879,365	8,700	.7	.1	\$7,357,664	98.5	Masonry.....	\$299,450	29,807	1.6	10.0	\$655,188	92.0
Heating and piping.....	\$1,690,933	8,700	.7	.1	\$3,155,191	96.8	Plastering and lathing.....	\$543,066	35,371	1.9	6.5	\$1,731,111	98.5
Masonry.....	\$299,450	76,887	14.2	25.3	\$655,188	92.0	Steel erection.....	\$1,792,253	3,000	.2	2.0	\$2,000,823	95.0
Marble and tiling.....	\$1,423,285	130	(*)	(*)	\$2,941,932	99.0	Marble and tiling.....	\$1,423,285	17,845	.9	1.3	\$2,941,932	99.0

See footnotes at end of table, p. 1308.



TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL					Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL					Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>				
	Cost of all materials distributed by kind	Per cent of—			Amount				Total cost	Cost of all distributed materials	Cost of all materials distributed by kind	Per cent of—				Amount	Total cost	Cost of all distributed materials	
		Amount	Total cost	Cost of all distributed materials								Amount	Total cost						Cost of all distributed materials
<b>MILWAUKEE—Continued</b>							<b>MILWAUKEE—Continued</b>												
<i>Plaster, etc.—Continued</i>							<i>Lumber, rough and finished—Con.</i>												
Subcontractors.....	\$14,016,480	\$273,477	72.8	2.0	\$28,135,691	97.9	General contractors—Con. Building—Continued.												
Carpentering and wood flooring.....	161,366	700	(°)	.2	431,400	98.7	Commercial building only.....	\$14,434	\$700	(°)	4.8	\$66,269	90.9						
Masonry.....	299,450	150	(°)	.1	655,188	92.0	Manufacturing building only.....	11,206	1,147	0.1	10.2	47,081	46.8						
Painting and decorating.....	395,777	24	(°)	(°)	1,878,482	99.1	Residential building only.....	1,010,431	408,356	25.7	40.4	3,473,224	47.5						
Plastering and lathing.....	643,066	200,653	69.4	48.0	1,731,111	98.5	Highway.....	624,634	3,749	.2	.6	1,373,703	90.8						
Marble and tiling.....	1,423,285	9,450	2.5	.7	2,941,932	99.0	Bridge and culvert.....	122,029	11,007	.7	9.0	641,568	56.7						
Soundproofing.....	215,703	2,500	.7	1.2	443,701	100.0	Street paving.....	1,968,484	20,402	1.3	1.0	4,117,826	91.1						
<i>Structural steel</i> <sup>2</sup>							Sewer, gas, water, conduit.....	551,558	24,918	1.0	4.5	1,652,060	97.3						
All classes.....	23,877,450	1,924,320	100.0	8.1	57,723,518	81.7	Dredging, river, harbor, etc.....	635,545	52,233	3.3	8.2	1,765,936	91.2						
General contractors <sup>3</sup> .....	9,860,970	205,699	10.7	2.1	29,587,827	68.5	Railroad.....	72,536	18,000	1.1	24.8	250,480	99.6						
Building.....	5,886,184	156,159	8.1	2.7	19,780,254	60.6	Subcontractors.....	14,016,480	119,708	7.5	.9	28,135,691	97.9						
Building not specialized <sup>4</sup> .....	4,850,023	142,512	7.4	2.9	16,193,650	65.2	Carpentering and wood flooring.....	161,366	69,447	4.4	43.0	431,400	98.7						
Commercial building only.....	14,434	2,328	.1	16.1	66,269	90.9	Concrete.....	375,367	8,780	.6	2.3	1,171,462	82.2						
Manufacturing building only.....	11,206	1,370	.1	12.1	47,081	46.8	Heating and plumbing.....	3,879,365	117	(°)	(°)	7,357,064	98.5						
Residential building only.....	1,010,431	9,949	.5	1.0	3,473,224	47.5	Heating and piping.....	1,600,663	72	(°)	(°)	3,155,191	96.8						
Street paving.....	1,968,484	5,784	.3	.3	4,117,826	91.1	Plumbing.....	1,493,903	45	(°)	(°)	2,808,071	99.9						
Sewer, gas, water, conduit.....	551,558	8,256	.4	1.5	1,652,060	97.3	Masonry.....	299,450	2,100	.1	.7	655,188	92.0						
Railroad.....	72,536	35,500	1.8	48.9	256,480	99.6	Plastering and lathing.....	543,066	1,850	.1	.3	1,731,111	98.6						
Subcontractors.....	14,016,480	1,718,621	89.3	12.3	28,135,691	97.0	Roofing and sheet-metal work.....	836,710	1,784	.1	.2	1,973,513	99.4						
Heating and plumbing.....	3,879,365	430	(°)	(°)	7,867,064	98.5	Sheet-metal work.....	338,512	1,784	.1	.5	807,404	98.4						
Heating and piping.....	1,690,663	380	(°)	(°)	3,155,191	96.8	Steel erection.....	1,792,253	1,292	.1	.1	2,669,823	95.0						
Plumbing and heating combined.....	384,794	50	(°)	(°)	723,317	98.7	Marble and tiling.....	1,423,285	2,356	.1	.2	2,941,932	99.0						
Masonry.....	299,450	16,451	.9	5.5	655,188	92.0	Bridge and culvert.....	100,037	11,482	.7	11.5	171,873	100.0						
Roofing and sheet-metal work.....	836,710	14,506	.8	1.7	1,973,513	99.4	Soundproofing.....	215,703	20,000	1.3	9.3	443,701	100.0						
Roofing.....	383,741	5,000	.3	1.3	895,642	100.0	Metal work, n. e. s.....	18,220	500	(°)	2.7	75,188	100.0						
Sheet-metal work.....	338,512	6,506	.5	2.8	807,404	98.4	<i>Millwork</i>												
Steel erection.....	1,792,253	1,665,704	86.6	92.9	2,669,823	95.0	All classes.....	23,877,450	656,287	100.0	4.0	57,723,518	81.7						
Marble and tiling.....	1,423,285	560	(°)	(°)	2,941,932	99.0	General contractors <sup>3</sup> .....	9,860,970	909,937	95.2	9.2	29,587,827	68.5						
Ornamental iron.....	1,605,616	15,692	.8	.9	2,272,021	100.0	Building.....	5,886,184	909,857	95.1	15.5	19,780,254	60.6						
Bridge and culvert.....	100,037	6,878	.3	5.9	171,873	100.0	Building not specialized <sup>4</sup> .....	4,850,023	624,104	65.3	12.9	16,193,650	65.2						
<i>Reinforcing steel</i>							Commercial building only.....	14,434	500	.1	3.5	66,269	90.9						
All classes.....	23,877,450	498,717	100.0	1.8	57,723,518	81.7	Manufacturing building only.....	11,206	561	.1	5.0	47,081	46.8						
General contractors.....	9,819,134	409,772	93.4	4.3	28,979,803	69.6	Residential building only.....	1,010,431	284,692	29.8	28.2	3,473,224	47.5						
Building.....	5,844,348	259,135	59.1	4.6	19,172,230	61.7	Street paving.....	1,968,484	30	(°)	(°)	4,117,826	61.1						
Building not specialized.....	4,608,187	258,790	59.0	5.6	15,885,626	67.1	Subcontractors.....	14,016,480	46,350	4.8	.3	28,135,691	97.9						
Manufacturing building only.....	11,206	125	(°)	1.1	47,081	46.8	Carpentering and wood flooring.....	161,366	44,950	4.7	27.9	431,100	98.7						
Residential building only.....	1,010,431	220	.1	(°)	3,473,224	47.5	Plastering and lathing.....	543,066	300	(°)	.1	1,731,111	98.5						
Highway.....	624,634	38,070	8.7	6.1	1,373,703	90.8	Steel erection.....	1,792,253	1,100	.1	.1	2,669,823	95.0						
Bridge and culvert.....	122,029	46,428	10.6	38.0	641,568	56.7	<i>Composition board</i>												
Street paving.....	1,968,484	63,189	14.4	3.2	4,117,826	91.1	All classes.....	23,877,450	462,544	100.0	1.9	57,723,518	81.7						
Sewer, gas, water, conduit.....	551,558	2,200	.5	.4	1,652,060	97.3	General contractors <sup>3</sup> .....	9,860,970	42,763	9.2	.4	29,587,827	68.5						
Dredging, river, harbor, etc.....	635,545	770	.2	.1	1,765,936	91.2	Building.....	5,886,184	42,600	9.2	.7	19,780,254	60.6						
Subcontractors.....	14,016,480	28,945	6.6	.2	28,135,691	97.9	Building not specialized <sup>4</sup> .....	4,850,023	29,232	6.3	.6	16,193,650	65.2						
Concrete.....	375,367	10,686	2.4	2.8	1,171,462	82.2	Manufacturing building only.....	11,206	308	.1	2.7	47,081	46.8						
Masonry.....	299,450	2,726	.0	.9	655,188	92.0	Residential building only.....	1,010,431	18,069	2.8	1.3	3,473,224	47.5						
Plastering and lathing.....	543,066	1,848	.4	.3	1,731,111	98.5	Street paving.....	1,968,484	154	(°)	(°)	4,117,826	61.1						
Steel erection.....	1,792,253	4,000	.9	.2	2,669,823	95.0	Subcontractors.....	14,016,480	419,781	90.8	3.0	28,135,691	97.9						
Ornamental iron.....	1,605,616	1,000	.2	.1	2,272,021	100.0	Heating and plumbing.....	3,879,365	285,586	50.9	6.1	7,357,064	98.5						
Bridge and culvert.....	100,037	7,685	1.8	7.7	171,873	100.0	Pipe covering.....	235,580	285,586	50.9	100.0	466,000	100.0						
Soundproofing.....	215,703	1,000	.2	.5	443,701	100.0	Plastering and lathing.....	543,066	3,600	.8	.7	1,731,111	98.5						
<i>Ornamental metal work</i> <sup>2</sup>							Roofing and sheet-metal work.....	836,710	17,844	3.9	2.1	1,973,513	99.4						
All classes.....	23,877,450	1,666,680	100.0	7.0	57,723,518	81.7	Sheet-metal work.....	338,512	17,844	3.9	4.7	805,642	100.0						
General contractors.....	9,819,134	11,109	.7	.1	28,979,803	69.6	Steel erection.....	1,792,253	48	(°)	(°)	2,941,932	99.0						
Building.....	5,844,348	11,109	.7	.2	19,172,230	61.7	Soundproofing.....	215,703	162,703	35.2	75.4	443,701	100.0						
Building not specialized.....	4,608,187	9,231	.6	.2	15,885,626	67.1	<i>Hardware, rough and finished</i>												
Manufacturing building only.....	11,206	65	(°)	.6	47,081	46.8	All classes.....	23,877,450	289,891	100.0	1.2	57,723,518	81.7						
Residential building only.....	1,010,431	1,813	.1	.2	3,473,224	47.5	General contractors <sup>3</sup> .....	9,860,970	233,335	80.5	2.4	29,587,827	68.5						
Subcontractors.....	14,016,480	1,655,571	99.3	11.8	28,135,691	97.9	Building.....	5,886,184	168,323	58.1	2.9	19,780,254	60.6						
Carpentering and wood flooring.....	161,366	350	(°)	.2	431,400	98.7	Building not specialized <sup>4</sup> .....	4,850,023	118,313	40.8	2.4	16,193,650	65.2						
Roofing and sheet-metal work.....	836,710	3,421	.2	.4	1,973,513	99.4	Commercial building only.....	14,434	500	.2	3.5	66,269	90.9						
Sheet-metal work.....	338,512	3,421	.2	1.0	807,404	98.4	Manufacturing building only.....	11,206	571	.2	5.1	47,081	46.8						
Steel erection.....	1,792,253	83,414	5.0	4.7	2,669,823	95.0	Residential building only.....	1,010,431	48,939	16.9	4.8	3,473,224	47.5						
Ornamental iron.....	1,605,616	1,698,386	94.1	97.7	2,272,021	100.0	Highway.....	624,634	39,087	13.5	6.3	1,373,703	90.8						
<i>Lumber, rough and finished</i>							Bridge and culvert.....	122,029	2,142	.7	1.8	641,568	56.7						
All classes.....	23,877,450	1,591,749</																	



TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS—Continued

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL					Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL					Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>
	Cost of all materials distributed by kind	Amount	Percent of—		Value of construction business				Cost of all materials distributed by kind	Amount	Percent of—		Value of construction business		
			Total cost	Cost of all distributed materials							Total cost	Cost of all distributed materials			
<b>MILWAUKEE—Continued</b>							<b>MILWAUKEE—Continued</b>								
<i>Hardware, rough and finished—Continued</i>							<i>Heating and ventilating equipment<sup>2</sup></i>								
Subcontractors.....	\$14,016,480	\$60,550	10.5	0.4	\$28,135,691	97.9	All classes.....	\$23,877,450	\$1,884,730	100.0	7.9	\$57,723,518	81.7		
Carpentering and wood-flooring.....	161,366	22,090	7.6	13.7	431,460	98.7	General contractors <sup>3</sup> .....	9,860,970	17,682	0.2	0.2	20,587,827	88.5		
Concreting.....	375,367	1,145	0.3	0.3	1,171,462	82.2	Building.....	5,886,184	17,525	0.3	0.3	19,780,254	60.6		
Heating and plumbing.....	3,879,365	610	0.2	( <sup>4</sup> )	7,357,664	98.5	Building not specialized <sup>4</sup> .....	4,850,023	11,030	0.2	0.2	16,193,650	65.2		
Heating and piping.....	1,690,663	610	0.2	( <sup>4</sup> )	3,155,191	96.8	Manufacturing building only.....	11,296	95	( <sup>4</sup> )	0.8	47,081	46.8		
Masonry.....	299,450	255	0.1	0.1	655,188	92.0	Residential building only.....	1,010,431	6,400	0.3	0.6	3,473,224	47.5		
Plastering and lathing.....	543,066	1,850	0.5	0.2	1,731,111	98.5	Highway.....	624,634	157	( <sup>4</sup> )	( <sup>4</sup> )	2,808,071	99.0		
Roofing and sheet metal work.....	836,710	7,556	2.6	0.9	1,973,513	99.4	Subcontractors.....	14,016,480	1,867,048	99.1	13.3	28,135,691	97.9		
Sheet-metal work.....	338,512	5,649	1.9	1.6	807,404	98.4	Electrical.....	1,252,771	20,670	1.1	1.0	2,651,998	100.0		
Roofing and sheet metal combined.....	114,457	2,007	0.7	1.8	270,467	100.0	Heating and plumbing.....	3,879,365	1,810,472	96.1	46.7	7,357,664	98.5		
Steel erection.....	1,792,253	655	0.2	( <sup>4</sup> )	2,669,823	95.0	Heating and piping.....	1,690,663	1,511,326	89.4	89.4	3,155,191	98.8		
Marble and tiling.....	1,423,285	11,889	4.1	0.8	2,941,932	99.0	Plumbing.....	1,493,903	94,021	5.0	6.3	2,808,071	99.0		
Soundproofing.....	215,703	10,000	3.4	4.6	443,701	100.0	Plumbing and heating combined.....	384,794	130,706	6.9	34.0	723,317	96.7		
Metal work, n. e. s.....	18,220	1,000	0.3	5.5	75,188	100.0	Automatic temperature control.....	74,419	74,419	3.9	100.0	205,085	100.0		
<i>Paints, varnishes, glass</i>							<i>Plumbing and gas fitting equipment<sup>2</sup></i>								
All classes.....	23,877,450	933,031	100.0	3.9	57,723,518	81.7	All classes.....	23,877,450	1,755,792	100.0	7.4	57,723,518	81.7		
General contractors <sup>3</sup> .....	9,860,970	92,028	9.9	0.9	20,587,827	68.5	General contractors <sup>3</sup> .....	9,860,970	64,209	3.7	0.7	20,587,827	88.5		
Building.....	5,886,184	91,889	9.8	1.6	19,780,254	60.6	Building.....	5,886,184	50,170	2.9	0.9	19,780,254	60.6		
Building not specialized <sup>4</sup> .....	4,850,023	82,623	8.9	1.7	16,193,650	65.2	Building not specialized <sup>4</sup> .....	4,850,023	21,536	1.2	0.4	16,193,650	65.2		
Commercial building only.....	14,434	1,347	1.1	9.3	66,299	90.9	Residential building only.....	1,010,431	28,634	1.0	2.8	3,473,224	47.5		
Manufacturing building only.....	11,296	256	( <sup>4</sup> )	2.3	47,081	46.8	Sewer, gas, water conduit.....	1,010,431	28,634	1.0	2.8	3,473,224	47.5		
Residential building only.....	1,010,431	7,183	0.8	0.7	3,473,224	47.5	Subcontractors.....	14,016,480	1,691,583	96.3	12.1	28,135,691	97.9		
Highway.....	624,634	500	0.1	0.1	1,373,703	90.8	Electrical.....	1,252,771	3,300	0.2	0.3	2,651,998	100.0		
Street paving.....	1,968,484	139	( <sup>4</sup> )	( <sup>4</sup> )	4,117,820	91.1	Heating and plumbing.....	3,879,365	1,688,283	96.2	43.5	7,357,664	98.5		
Subcontractors.....	14,016,480	841,003	90.1	6.0	28,135,691	97.9	Heating and piping.....	1,690,663	70,255	4.0	4.2	3,155,191	98.8		
Carpentering and wood-flooring.....	161,366	14,356	1.5	8.9	431,460	98.7	Plumbing.....	1,493,903	1,305,300	77.8	91.4	2,808,071	99.0		
Heating and plumbing.....	3,879,365	464	( <sup>4</sup> )	( <sup>4</sup> )	7,357,664	98.5	Plumbing and heating combined.....	384,794	252,638	14.4	65.7	723,317	96.7		
Heating and piping.....	1,690,663	226	( <sup>4</sup> )	( <sup>4</sup> )	3,155,191	99.8	<i>Electrical appliances and supplies</i>								
Plumbing.....	1,493,903	238	( <sup>4</sup> )	( <sup>4</sup> )	2,808,071	99.9	All classes.....	23,877,450	1,265,442	100.0	5.3	57,723,518	81.7		
Painting and decorating.....	395,777	395,691	42.4	100.0	1,076,482	99.1	General contractors <sup>3</sup> .....	9,860,970	20,766	2.1	0.3	20,587,827	88.5		
Glass and glazing.....	449,154	403,657	43.3	89.9	674,343	99.3	Building.....	5,886,184	20,766	2.1	0.5	19,780,254	60.6		
Plastering and lathing.....	543,066	300	( <sup>4</sup> )	0.1	1,731,111	98.5	Building not specialized <sup>4</sup> .....	4,850,023	20,541	1.6	0.4	16,193,650	65.2		
Roofing and sheet-metal work.....	836,710	9,097	1.0	1.1	1,973,513	99.4	Manufacturing building only.....	11,296	120	( <sup>4</sup> )	1.1	47,081	46.8		
Sheet-metal work.....	338,512	9,097	1.0	2.7	807,404	98.4	Residential building only.....	1,010,431	6,135	0.5	0.6	3,473,224	47.5		
Steel erection.....	1,792,253	5,908	0.3	3	2,669,823	95.0	Subcontractors.....	14,016,480	1,238,046	97.9	8.8	28,135,691	97.9		
Soundproofing.....	215,703	10,000	1.1	4.6	443,701	100.0	Carpentering and wood-flooring.....	161,366	200	( <sup>4</sup> )	0.1	431,460	98.7		
Metal work, n. e. s.....	18,220	1,500	0.2	8.2	75,188	100.0	Electrical.....	1,252,771	1,228,566	97.1	98.1	2,651,998	100.0		
<i>Roofing and sheet metal</i>							<i>Elevators, dumb-walters, and equipment</i>								
All classes.....	23,877,450	861,195	100.0	3.6	57,723,518	81.7	All classes.....	23,877,450	572,311	100.0	2.4	57,723,518	81.7		
General contractors <sup>3</sup> .....	9,860,970	95,373	11.1	1.0	20,587,827	68.5	General contractors.....	9,619,134	26,405	4.6	0.3	28,079,808	69.6		
Building.....	5,886,184	95,111	11.0	1.0	19,780,254	60.6	Building.....	5,644,348	26,405	4.6	0.5	19,172,230	61.7		
Building not specialized <sup>4</sup> .....	4,850,023	73,559	8.5	1.5	16,193,650	65.2	Building not specialized.....	4,608,187	26,405	4.0	0.6	15,585,026	67.1		
Residential building only.....	1,010,431	21,552	2.5	2.1	3,473,224	47.5	Subcontractors.....	14,016,480	545,906	95.4	3.9	28,135,691	97.9		
Highway.....	624,634	262	( <sup>4</sup> )	( <sup>4</sup> )	4,117,820	91.1	Elevator construction.....	545,906	545,906	95.4	100.0	903,827	100.0		
Street paving.....	1,968,484	262	( <sup>4</sup> )	( <sup>4</sup> )	4,117,820	91.1	<i>General contractors.....</i>								
Subcontractors.....	14,016,480	765,822	88.0	5.5	28,135,691	97.9	Building.....	9,619,134	26,405	4.6	0.3	28,079,808	69.6		
Carpentering and wood-flooring.....	161,366	950	1.1	0.6	431,460	98.7	Building not specialized.....	4,608,187	26,405	4.0	0.6	15,585,026	67.1		
Heating and plumbing.....	3,879,365	76,351	8.7	1.9	7,357,664	98.5	Manufacturing building only.....	11,296	120	( <sup>4</sup> )	1.1	47,081	46.8		
Heating and piping.....	1,690,663	75,287	8.7	4.5	3,155,191	96.8	Residential building only.....	1,010,431	6,135	0.5	0.6	3,473,224	47.5		
Plumbing.....	1,493,903	64	( <sup>4</sup> )	( <sup>4</sup> )	2,808,071	99.9	Subcontractors.....	14,016,480	1,238,046	97.9	8.8	28,135,691	97.9		
Masonry.....	299,450	133	( <sup>4</sup> )	( <sup>4</sup> )	655,188	92.0	Carpentering and wood-flooring.....	161,366	200	( <sup>4</sup> )	0.1	431,460	98.7		
Painting and decorating.....	395,777	29	( <sup>4</sup> )	( <sup>4</sup> )	1,076,482	99.1	Electrical.....	1,252,771	1,228,566	97.1	98.1	2,651,998	100.0		
Roofing and sheet-metal work.....	836,710	677,084	78.6	80.9	1,973,513	99.4	Heating and plumbing.....	3,879,365	7,880	0.6	0.2	7,357,664	98.5		
Roofing.....	383,741	304,510	35.4	79.4	895,642	100.0	Heating and piping.....	1,690,663	7,880	0.6	0.5	3,155,191	98.8		
Sheet-metal work.....	338,512	260,808	30.3	77.0	807,404	98.4	Soundproofing.....	215,703	2,000	0.2	0.9	443,701	100.0		
Roofing and sheet-metal combined.....	114,457	111,716	13.0	97.0	270,467	100.0	<i>Elevators, dumb-walters, and equipment</i>								
Steel erection.....	1,792,253	7,325	0.9	0.4	2,669,823	95.0	All classes.....	23,877,450	572,311	100.0	2.4	57,723,518	81.7		
Metal work, n. e. s.....	18,220	5,000	0.6	27.4	75,188	100.0	General contractors.....	9,619,134	26,405	4.6	0.3	28,079,808	69.6		

<sup>1</sup> Based upon the difference between the total value of all construction business reported and the value of subcontract work let.

<sup>2</sup> See footnote 3 of Table 9 on p. 1302.

<sup>3</sup> Includes operative builders.

<sup>4</sup> Includes cost of materials reported by establishments which did not include the designated material in their distributed lists.

<sup>5</sup> Includes construction work reported by establishments which did not include the designated material in their distributed lists.

<sup>6</sup> Less than one-tenth of 1 per cent.

<sup>7</sup> Includes cost of materials reported by operative builders who did not include the the designated materials in their distributed lists.

<sup>8</sup> Includes construction work reported by operative builders who did not include the designated materials in their distributed lists.

<sup>9</sup> Includes cost of materials reported by subcontracting establishments which did not include the designated material in their distributed lists.

<sup>10</sup> Includes construction work reported by subcontracting establishments which did not include the designated material in their distributed lists.



TABLE 11.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS	Reinforcing steel	Cast iron, miscellaneous, excluding pipe	Metal doors, windows, and trim	Metal and wire lath and furring	Orna-mental metal work	Lumber, rough and finished	Laths, shingles, and shakes	Mill-work	Compo-sition board	Water-proofing materials	Hard-ware, rough and finished	Paints, var-nishes and glass	Roofing and sheet metal	Fin-ished floor-ing, n. e. s.	Screens, shades, awn-ings, etc.
<b>WISCONSIN</b>	\$1,045,164	\$94,522	\$158,175	\$213,246	\$1,768,199	\$3,847,350	\$196,336	\$2,260,690	\$567,729	\$86,505	\$546,323	\$1,234,073	\$1,986,913	\$128,457	\$31,446
Operative builders	779	---	400	1,468	1,218	165,823	7,857	102,963	6,219	7,860	13,287	44,674	7,974	4,705	5,102
General contractors	936,435	30,055	85,732	39,384	41,990	3,847,492	138,539	1,983,541	108,358	31,867	463,287	141,233	274,944	59,257	25,832
Building	491,718	3,579	83,357	30,860	37,733	3,066,178	136,701	1,967,141	107,618	27,242	367,322	131,876	273,352	55,757	25,492
Building not specialized	485,812	2,821	80,454	33,973	31,653	2,054,374	113,607	1,293,931	77,431	25,142	252,660	98,051	236,209	48,286	10,843
Commercial building only	---	---	---	---	---	3,900	417	500	---	---	500	1,347	---	---	---
Manufacturing building only	125	---	144	---	65	1,147	---	561	308	---	571	256	---	---	---
Residential building only	5,731	758	2,759	2,887	6,010	1,006,752	22,677	30,179	30,179	2,100	113,691	32,222	37,173	7,471	8,649
Highway	192,347	---	1,900	900	4,257	28,000	1,400	13,400	151	732	44,477	5,847	1,300	3,500	340
Bridge and culvert	79,071	314	---	---	---	53,874	---	---	---	3,075	11,729	2,111	---	---	---
Grading	1,200	150	---	---	---	700	---	---	---	60	370	60	---	---	---
Street paving	154,361	820	475	427	---	44,670	---	3,000	154	---	3,243	139	262	---	---
Sewer, gas, water, conduit	4,767	25,105	---	---	---	45,842	---	---	---	500	13,009	---	---	---	---
Dam and reservoir	4,200	---	---	---	---	2,000	---	---	---	150	800	200	---	---	---
Dredging, river, harbor, etc.	8,183	87	---	---	---	85,612	---	---	135	---	22,662	1,000	---	---	---
Railroad	---	---	---	---	---	18,000	---	---	---	---	---	---	---	---	---
Foundation	578	---	---	1,197	---	3,115	438	---	---	108	175	---	---	---	---
Subcontractors	107,950	64,467	72,043	172,394	1,724,901	334,635	50,440	174,186	453,152	46,778	69,749	1,048,160	1,703,995	64,496	512
Carpentering and wood flooring	---	---	520	---	350	265,326	11,850	172,786	13,660	11,360	26,256	14,380	3,680	3,980	512
Concreting	16,870	7,000	---	234	142	22,850	1,302	---	---	1,702	4,010	---	---	---	---
Electrical	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Heating and plumbing	50	22,769	---	---	---	117	---	---	235,686	---	1,302	990	3,879	150,887	640
Heating and piping	50	22,769	---	---	---	72	---	---	---	---	610	652	95,854	640	---
Pipe covering	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Plumbing	---	---	---	---	---	45	---	---	---	---	191	238	52,932	---	---
Plumbing and heating combined	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Masonry	10,200	---	444	1,707	378	5,778	70	---	---	490	501	100	11,101	---	---
Painting and decorating	---	---	---	---	---	---	---	---	---	---	255	---	133	---	---
Glass and glazing	---	---	18,157	---	---	---	---	---	---	---	---	881,529	29	---	---
Plastering and lathing	1,848	---	2,100	160,680	---	1,850	37,058	300	13,896	1,600	1,575	403,657	300	---	---
Roofing and sheet-metal work	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Roofing	---	---	18,092	---	3,821	1,784	100	---	27,259	31,326	7,981	29,896	1,524,292	---	---
Sheet-metal work	---	---	---	---	---	---	100	---	26,709	31,326	---	17,724	931,331	---	---
Roofing and sheet metal combined	---	---	18,092	---	3,821	1,784	---	---	550	---	5,924	12,172	456,905	---	---
Steel erection	69,207	14,310	18,670	2,250	124,914	1,392	---	1,100	---	---	2,007	---	136,056	---	---
Marble and tiling	---	---	---	7,114	---	2,356	---	---	---	---	2,155	5,908	7,325	---	---
Excavating	---	---	---	---	---	---	---	48	---	---	12,194	---	---	---	---
Ornamental iron	1,000	20,388	4,000	---	1,595,386	1,100	---	---	---	300	3,071	---	---	---	---
Bridge and culvert	7,685	---	---	---	---	11,482	---	---	---	---	---	---	---	---	---
Soundproofing	1,000	---	---	500	---	20,000	---	---	162,703	---	10,000	10,000	---	---	---
Metal work, n. e. s.	---	---	10,000	---	---	500	---	---	---	---	1,000	1,500	5,000	---	---
Flooring, n. e. s.	---	---	---	---	---	---	---	---	---	---	---	---	---	59,875	---
<b>MILWAUKEE</b>	438,717	45,376	96,789	122,688	1,666,680	1,591,749	66,219	956,287	462,644	64,723	289,891	933,031	861,195	95,759	16,312
Operative builders	---	---	---	---	---	48,695	2,625	46,239	1,724	4,510	6,044	34,699	4,830	---	200
General contractors	409,772	9,028	41,264	6,177	11,109	1,423,340	41,154	863,698	41,039	15,927	227,201	57,329	90,537	31,264	16,103
Building	250,135	2,369	40,839	5,750	11,109	1,293,037	41,154	863,618	40,835	14,769	162,279	56,600	90,275	31,264	16,103
Building not specialized	258,790	1,875	40,096	5,630	9,231	882,834	35,290	577,865	27,508	14,628	112,269	47,924	68,723	27,264	9,103
Commercial building only	---	---	---	---	---	700	---	500	---	---	500	1,347	---	---	---
Manufacturing building only	125	---	144	---	65	1,147	---	561	308	---	571	256	---	---	---
Residential building only	220	494	640	120	1,813	408,366	5,864	284,692	13,069	141	48,939	7,163	21,552	4,000	6,000
Highway	38,070	---	---	---	---	3,749	---	---	---	207	39,087	---	---	---	---
Bridge and culvert	46,428	---	---	---	---	11,007	---	---	---	961	2,142	---	---	---	---
Street paving	63,169	66	475	427	---	20,402	---	80	154	---	1,184	139	262	---	---
Sewer, gas, water, conduit	2,200	6,506	---	---	---	24,918	---	---	---	---	2,937	---	---	---	---
Dredging, river, harbor, etc.	770	87	---	---	---	52,233	---	---	---	---	19,662	---	---	---	---
Railroad	---	---	---	---	---	18,000	---	---	---	---	---	---	---	---	---
Subcontractors	28,945	36,348	55,425	116,411	1,655,571	119,708	22,440	46,350	419,781	34,286	56,556	841,003	765,822	64,496	---
Carpentering and wood flooring	---	---	---	---	350	69,447	2,000	44,950	---	---	22,096	14,386	950	3,980	---
Concreting	10,686	7,000	---	---	---	8,780	---	---	---	943	1,145	---	---	---	---
Heating and plumbing	---	12,000	---	---	---	117	---	---	---	---	610	464	75,351	640	---
Heating and piping	---	12,000	---	---	---	72	---	---	---	---	610	226	75,287	640	---
Pipe covering	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Plumbing	---	---	---	---	---	45	---	---	---	---	---	238	64	---	---
Masonry	2,720	---	---	---	---	2,100	70	---	---	277	255	---	133	---	---
Painting and decorating	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Glass and glazing	---	---	18,157	---	---	---	---	---	---	---	---	395,691	29	---	---
Plastering and lathing	1,848	---	2,100	112,294	---	1,850	20,270	300	3,600	1,440	1,350	403,657	300	---	---
Roofing and sheet-metal work	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
Roofing	---	---	13,688	---	3,421	1,784	100	---	17,844	31,326	7,556	9,097	677,034	---	---
Sheet-metal work	---	---	---	---	---	---	100	---	17,844	31,326	---	---	304,510	---	---
Roofing and sheet metal combined	---	---	13,688	---	3,421	1,784	---	---	---	---	5,549	9,097	280,808	---	---
Steel erection	4,000	210	7,420	---	83,414	1,292	---	1,100	---	---	2,007	---	111,716	---	---
Marble and tiling	---	---	---	3,617	---	2,356	---	---	---	---	655	5,908	7,325	---	---
Excavating	---	---	---	---	---	---	---	48	---	---	11,889	---	---	---	---
Ornamental iron	1,000	17,138	4,000	---	1,568,386	1,100	---	---	---	300	---	---	---	---	---
Bridge and culvert	7,685	---	---	---	---	11,482	---	---	---	---	---	---	---	---	---
Soundproofing	1,000	---	---	500	---	20,000	---	---	162,703	---	10,000	10,000	---	---	---
Metal work, n. e. s.	---	---	10,000	---	---	500	---	---	---	---	1,000	1,500	5,000	---	---
Flooring, n. e. s.	---	---	---	---	---	---	---	---	---	---	---	---	---	59,875	---

See footnotes on p. 1309.

CONSTRUCTION—WISCONSIN

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TABLE II.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929—Continued

CLASSIFICATION OF ESTABLISHMENTS	Heating and ventilating equipment	Plumbing and gas-fitting equipment	Electrical appliances and supplies	Elevators, dumb-waiters, etc.	Pipe: Drain tile, vitrified, concrete, etc.	Pipe: Cast iron, sheet and tube steel, etc.	Wire cable, guards, and fencing	Bituminous paving materials	Wood piling and timber	Ready mixed concrete	Freight, hauling, or trucking to job	Chemicals, and chemical products	Metal products, n. e. s.	Mineral products (non-metallic), n. e. s.	Sealing materials	Miscellaneous <sup>1</sup>
<b>WISCONSIN</b> .....	\$3,456,266	\$3,990,088	\$2,245,264	\$578,541	\$878,957	\$344,505	\$14,045	\$322,638	\$176,124	\$43,909	\$73,594	\$17,419	\$118,364	\$15,687	\$14,484	\$431,394
Operative builders.....	18,693	34,787	13,820	41	41											25,791
General contractors.....	181,906	269,773	117,795	32,635	638,738	276,380	12,029	262,429	176,124	43,909	73,594	17,364	84,871	15,687	13,877	322,888
Building.....	180,969	210,461	102,484	32,635	6,494	457	2,196	7,606	1,703	30,482	3,777	2,378	9,114	15,687	1,930	186,261
Building not specialized.....	154,548	159,103	71,006	32,300	5,227	132	1,303	7,386	1,703	30,482	3,777	2,378	55	15,687	1,930	140,102
Commercial building only.....						325							9,050			
Manufacturing building only.....	95		120					306								
Residential building only.....	26,310	51,348	31,358	835	1,267			587								46,159
Highway.....	457	480	700		17,044	54,907	5,584	80,219	2,260	4,427	52,755	14,986				60,389
Bridge and culvert.....					493	980		280	000		4,000					77
Grading.....	200				7,432	100	625	75	30							55,130
Street paving.....	350	750	011		30,695	1,591		203,888			10,192		4,070			16,581
Sewer, gas, water, conduit.....		50,092			572,980	213,785	3,944	541							6,947	5,000
Waterworks.....					3,000	4,500										
Dredging, river, harbor, etc.....		2,000	14,000					200	171,135				71,687			4,400
Railroad.....											2,270					
Foundation.....																
Subcontractors.....	3,254,606	3,685,508	2,113,049	545,906	41,178	63,125	1,416	30,209				55	33,483		607	82,765
Carpentering and wood-flooring.....			200			400										1,907
Concreting.....		1,500			190		315					55				3,024
Electrical.....	27,807	36,274	2,080,262	545,906												235
Elevator construction.....																
Heating and plumbing.....	3,111,649	3,047,734	31,056		33,739	59,298							2,062		275	3,010
Heating and piping.....	2,279,011	175,205	8,130		373	30,269							2,062		275	
Plumbing.....	407,566	2,961,788	18,926		31,516	28,527										3,010
Plumbing and heating combined.....	350,653	510,741	4,000		1,900	500										
Automatic temperature control.....	74,419	2,000			908											
Masonry.....																33
Painting and decorating.....													27,340			
Glass and glazing.....															332	1,802
Plastering and lathing.....						204		450								
Roofing and sheet-metal work.....	76,900						753	29,759								4,312
Roofing.....	13,885							29,759								3,578
Sheet-metal work.....	61,551															
Roofing and sheet-metal combined.....	1,553															734
Steel erection.....	36,100					8,225							4,081			54,349
Marble and tiling.....			131				98									14,013
Excavating.....					6,291											
Bridge and culvert.....								250								
Grading.....			2,000													20
Soundproofing.....																
Metal work, n. e. s.....																
<b>MILWAUKEE</b> .....	1,884,730	1,755,792	1,265,442	572,311	211,239	190,837	4,865	250,517	180,104	39,482	56	6,272	115,474	14,980	3,953	289,465
Operative builders.....	3,128	5,405	2,102													25,791
General contractors.....	14,554	58,804	24,604	26,405	183,847	168,703	4,112	229,573	160,104	39,482	56	6,217	84,862	14,980	3,346	136,943
Building.....	14,397	44,795	24,604	26,405	2,948	132	812	7,287	1,028	39,482		1,217	9,105	14,980	1,930	91,738
Building not specialized.....	7,902	16,131	18,436	26,405	2,851	132	419	7,287	1,028	39,482		1,217	46	14,980	1,930	90,637
Commercial building only.....													9,050			
Manufacturing building only.....	95		120					306								
Residential building only.....	6,400	28,634	6,135		97			87								1,101
Highway.....	157				5,000	6,590	1,000	63,008				5,000				
Street paving.....					788	71		158,737			56		4,070			37,213
Sewer, gas, water, conduit.....		14,039			175,111	101,940	2,300	541							1,416	3,592
Dredging, river, harbor, etc.....									159,076				71,687			4,400
Railroad.....																
Subcontractors.....	1,867,048	1,691,583	1,238,646	545,906	27,392	22,134	753	20,944				55	30,612		607	76,731
Carpentering and wood-flooring.....			200			400										1,907
Concreting.....		3,300										55				235
Electrical.....	20,670		1,228,566	545,906												
Elevator construction.....																
Heating and plumbing.....	1,810,472	1,688,283	7,880		26,957	13,305							2,062		275	
Heating and piping.....	1,511,326	70,255	7,880		330	5,286							2,062		275	
Plumbing.....	94,021	1,365,300			25,227	8,019										
Plumbing and heating combined.....	130,706	252,638			1,400											
Automatic temperature control.....	74,419	2,000			435											
Masonry.....																33
Painting and decorating.....													27,340			
Glass and glazing.....															332	1,802
Plastering and lathing.....						204		450								
Roofing and sheet-metal work.....	33,906						753	20,494								4,312
Roofing.....								20,494								3,578
Sheet-metal work.....	33,906															
Roofing and sheet-metal combined.....																734
Steel erection.....						8,225							1,210			54,349
Marble and tiling.....																14,013
Bridge and culvert.....								250								
Grading.....			2,000													20
Soundproofing.....																
Metal work, n. e. s.....																

See footnotes on p. 1309.

CONSTRUCTION—WISCONSIN

TABLE 12.—NUMBER OF, AND VOLUME OF BUSINESS REPORTED BY, ESTABLISHMENTS DOING A CONSTRUCTION BUSINESS OF LESS THAN \$25,000 IN 1929, PERCENTAGE OF TOTAL NUMBER OF KNOWN ESTABLISHMENTS, AND AVERAGE VOLUME PER ESTABLISHMENT

TYPES OF WORK	WISCONSIN 1930 population, 2,939,006								MILWAUKEE 1930 population 578,249			REMAINDER OF STATE 1930 population 2,360,767		
	Known contracting establishments				Volume of business reported				Total number active in 1929	Volume of business		Total number active in 1929	Volume of business	
	Total number	Inactive in 1929	Active in 1929		Number of reporting establishments	Per cent of active	Amount	Average per establishment		Number of reporting establishments	Amount		Number of reporting establishments	Amount
			Number	Per cent										
Total establishments canvassed (less than \$25,000).....	4,231	133	4,198					1,510			2,088			
Total establishments, type of work unknown.....	158		158	31	19.6	\$230,874	\$7,448	22	2	\$10,600	136	20	\$211,184	
Total general and subcontractors classified.....	4,073	83	4,040	100.0				1,488			2,552			
Total general contractors classified.....	1,357	12	1,345	33.3	328	24.4	3,026,302	11,053	389	23	281,162	956	306	3,344,140
Building.....	1,165	8	1,157	28.6	258	22.3	2,910,598	11,281	378	23	281,162	770	235	2,020,436
Highway.....	134	4	130	3.2	30	30.0	472,792	12,123	9		121	39	472,702	
Bridge and culvert.....	19		19	.5	14	73.7	110,977	7,927			10	14	110,977	
Sewer, gas, water, conduit.....	30		30	.7	12	40.0	91,128	7,594	2		28	12	91,128	
Railroad.....	1		1	( <sup>1</sup> )										
Foundation.....	2		2	.1	1	50.0	2,500	2,500			1	1	2,500	
Docks and piers.....	1		1	( <sup>1</sup> )	1	100.0	4,000	4,000			1	1	4,000	
Street paving.....	4		4	.1	3	75.0	33,307	11,102			4	3	33,307	
Dredging.....	1		1	( <sup>1</sup> )							1			
Total subcontractors classified.....	2,716	21	2,695	66.7	761	28.2	6,460,196	8,501	1,099	163	1,585,101	1,596	598	4,884,095
Carpentering.....	533	13	520	12.9	160	30.8	1,257,280	7,858	177	26	240,452	343	134	1,007,828
Concreting.....	112		112	2.8	50	44.6	350,955	7,199	1		111	50	350,955	
Electrical.....	370	3	367	9.1	81	22.1	703,196	8,681	120	19	161,542	241	62	611,064
Elevator.....	2		2	.1					1		1			
Heating and ventilating.....	104		104	2.6	14	13.5	194,468	13,898	65	8	107,181	30	4	87,817
Masonry.....	115	2	113	2.8	46	40.7	309,109	6,720	3	2	19,470	110	44	289,680
Painting and decorating.....	568		568	14.1	161	28.3	1,051,783	6,633	329	40	282,544	299	121	700,239
Glass and glazing.....	6		6	.2					2		4			
Plastering.....	98		98	2.4	18	18.4	109,088	6,060	63	3	44,041	35	15	65,047
Plumbing and heating.....	527	2	525	13.0	153	29.1	1,714,438	11,205	200	41	498,049	325	112	1,220,780
Sheet metal and roofing.....	208	1	207	6.1	59	28.5	590,712	10,165	103	21	215,313	104	38	384,594
Steel erection.....	1		1	( <sup>1</sup> )							1			
Stone.....	15		15	.4	3	20.0	43,570	14,825	9		6	8	43,570	
Marble and tile.....	20		20	.5	4	20.0	37,662	9,415	4	1	600	6	8	37,062
Wrecking.....	9		9	.2	1	11.1	4,500	4,500	7	1	4,500	2	2	4,500
Excavating and grading.....	15		15	.4	7	46.7	48,240	6,801	1	1	6,795	14	6	41,445
Ornamental iron.....	13		13	.3	4	30.8	36,159	9,040	8		5	4	36,159	

<sup>1</sup> Of the total inactive contractors, 5 are in Milwaukee and 28 in the remainder of the State.  
<sup>2</sup> Less than one-tenth of 1 per cent.

TABLE 13.—ESTABLISHMENTS (WHOSE BUSINESS WAS LESS THAN \$25,000 IN 1929) WHICH REPORTED THEIR VOLUME OF CONSTRUCTION WORK, CLASSIFIED BY RANGE OF VOLUME OF BUSINESS

CLASSIFICATION	Total	Less than \$2,500	\$2,500 to \$4,999	\$5,000 to \$7,499	\$7,500 to \$9,999	\$10,000 to \$12,499	\$12,500 to \$14,999	\$15,000 to \$17,499	\$17,500 to \$19,999	\$20,000 to \$22,499	\$22,500 to \$24,999
<b>WISCONSIN</b>											
Total general and subcontractors.....	1,120	187	176	189	111	119	74	90	73	54	47
General contractors.....	328	28	49	48	24	40	33	31	30	26	10
Subcontractors.....	761	162	121	136	84	75	38	56	43	28	10
Type of contracting unknown.....	31	7	6	5	3	4	3	3			28

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TABLE 3.—CONSTRUCTION BUSINESS DURING 1929, BY LOCATION

CLASSIFICATION OF ESTABLISHMENTS	Es-tab-lish-ments re- port- ing	Total	In home city	In home State	Outside home State	CLASSIFICATION OF ESTABLISHMENTS	Es-tab-lish-ments re- port- ing	Total	In home city	In home State	Outside home State
General contractors.....	28	2,413,045	1,357,267	2,380,745	32,300	Subcontractors.....	11	\$474,146	\$380,068	\$473,940	\$200
Building.....	17	1,359,568	1,197,767	1,359,568		Heating and plumbing.....	8	340,140	318,466	339,940	200
Highway and street paving.....	7	747,987	90,000	715,687	32,300	Plumbing.....	4	202,716	193,185	202,516	200
Other classes <sup>1</sup> .....	4	305,490	63,500	305,490		Plumbing and heating combined.....	4	137,424	125,281	137,424	
						Other classes <sup>2</sup> .....	3	134,006	62,202	134,006	

<sup>1</sup> Includes bridge and culvert; grading; sewer, water, gas, conduit; and central station, light and power plant.  
<sup>2</sup> Includes masonry; plastering and lathing; and excavating.  
<sup>3</sup> The amount of business located outside the home State consisted of \$32,300 in Washington, and \$200 in Colorado.

TABLE 4.—CONSTRUCTION BUSINESS OUTSIDE HOME STATE, BY LOCATION

(See footnote 3 of Table 3 on this page for location of business outside home State)

TABLE 5.—NUMBER AND SALARIES OF PROPRIETORS, FIRM MEMBERS, AND SALARIED EMPLOYEES: 1929

CLASSIFICATION OF ESTABLISHMENTS	Es-tab-lish-ments re- port- ing	PROPRIETORS AND FIRM MEMBERS				SALARIED EMPLOYEES								Sex not re- port- ed	
		Re- ceiv- ing no salary	Receiving salaries			All salaried employees		Officers and clerical staff		Superintendents, foremen, etc.		Number reported, by sex			
			Number	Total annual salaries	Total number	Total annual salaries	Number	Total annual salaries	Number	Total annual salaries	Total	Male	Fe- male		
															<b>WYOMING</b> .....
General contractors.....	29	31	10	31,125	34	86,828	15	50,041	19	36,787	32	30	2	2	
Building.....	18	20	5	17,524	19	42,578	10	24,691	9	17,887	17	15	2	2	
Highway and street paving.....	7	7	2	5,801	8	31,050	5	25,350	3	5,700	8	8			
Other classes <sup>1</sup> .....	4	4	3	7,800	7	13,200			7	13,200	7	7			
Subcontractors.....	11	6	4	9,600	7	14,374	5	8,502	2	5,812	5	3	2	2	
Heating and plumbing.....	8	3	4	9,600	7	14,374	5	8,502	2	5,812	5	3	2	2	
Plumbing.....	4	1	1	1,960	5	10,474	3	4,662	2	5,812	5	3	2	2	
Plumbing and heating combined.....	4	2	3	7,640	2	3,900	2	3,900						2	
Other classes <sup>2</sup> .....	3	3													

<sup>1</sup> Includes bridge and culvert; grading; sewer, gas, water, conduit; and central station, light and power plant.  
<sup>2</sup> Includes masonry; plastering and lathing; and excavating.

TABLE 6.—VALUE OF CONSTRUCTION EQUIPMENT, IN COMPARISON WITH CONSTRUCTION BUSINESS AND WAGES PAID DURING 1929

CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT OWNED	Es-tab-lish-ments re- port- ing	EQUIPMENT		Value of construction business reported	Wages paid	CLASSIFICATION OF ESTABLISHMENTS AND PERCENTAGE OF EQUIPMENT OWNED	Es-tab-lish-ments re- port- ing	EQUIPMENT		Value of construction business reported	Wages paid
		Pur- chased during the year	Inven- tory val- ue at end of year					Pur- chased during the year	Inven- tory val- ue at end of year		
<b>WYOMING</b> .....	35	\$113,988	\$400,386	\$3,810,442	\$760,750	<i>Percentage of equipment owned</i>					
<i>Classification of establishments</i>						General contractors.....	25	\$80,919	\$353,880	\$2,371,990	\$656,373
General contractors.....	25	80,919	353,880	2,371,996	656,373	None.....					
Building.....	15	22,322	58,568	1,361,019	355,731	1% to 25%.....					
Highway and street paving.....	7	52,197	269,312	747,987	193,836	26% to 50%.....					
Other classes <sup>1</sup> .....	3	6,400	26,000	262,990	106,806	51% to 75%.....					
Subcontractors.....	10	33,069	46,506	438,446	104,377	76% to 99%.....	1	826	2,000	45,049	10,754
Heating and plumbing.....	7	18,694	20,606	304,440	60,072	100%.....	23	79,843	348,880	2,267,485	630,619
Plumbing.....	4	1,947	8,071	202,716	50,618	Not reported.....	1	250	3,000	60,492	15,000
Plumbing and heating combined.....	3	16,747	12,535	101,724	19,054	Subcontractors.....	10	33,069	46,506	438,446	104,377
Other classes <sup>2</sup> .....	3	14,375	25,900	134,006	34,705	None.....					
						1% to 25%.....					
						26% to 50%.....					
						51% to 75%.....					
						76% to 99%.....					
						100%.....	10	33,069	46,506	438,446	104,377
						Not reported.....					

<sup>1</sup> Includes bridge and culvert; grading; and sewer, gas, water, conduit.  
<sup>2</sup> Includes masonry; plastering and lathing; and excavating.

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TABLE 7.—WAGE EARNERS, BY MONTHS, AND WAGES PAID DURING 1929

CLASSIFICATION OF ESTABLISHMENTS AND LENGTH OF WORKING WEEK	Estab-lish-ments reporting	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY												Wages paid during year
		January	February	March	April	May	June	July	August	September	October	November	December	
<b>WYOMING</b> .....	33	138	139	191	259	385	529	607	701	635	577	397	244	\$703, 622
<i>Classification of establishments</i>														
General contractors.....	24	104	102	156	216	338	454	528	612	556	498	323	195	598, 347
Building.....	15	84	84	128	142	190	240	282	287	244	225	160	138	307, 589
Highway and street paving.....	6	18	13	4	34	96	160	210	265	253	204	115	44	193, 036
Other classes <sup>1</sup> .....	3	2	5	24	40	52	45	36	60	50	69	48	13	97, 722
Subcontractors.....	9	34	37	35	43	47	75	70	89	79	79	74	49	105, 275
Heating and plumbing.....	6	30	33	28	34	36	40	39	47	43	50	40	36	70, 570
Other classes <sup>2</sup> .....	3	4	4	7	9	11	35	40	42	36	29	34	13	34, 705
<i>Length of working week</i>														
General contractors.....	24	104	102	156	216	338	454	528	612	556	498	323	195	598, 347
40-hour, 5-day week.....														
45-hour, 5-day week.....														
50-hour, 5-day week.....														
All other 5-day week.....														
44-hour, 5½-day week.....	4	32	27	67	77	97	103	100	110	91	78	54	51	111, 817
49½-hour, 5½-day week.....														
55-hour, 5½-day week.....														
All other 5½-day week.....														
48-hour, 6-day week.....	15	64	62	85	105	145	191	219	277	252	250	154	100	326, 494
54-hour, 6-day week.....	5	18	13	4	34	96	160	200	225	213	164	115	44	160, 036
60-hour, 6-day week.....														
All other 6-day week.....														
All other not designated.....														
Not reported.....														
Subcontractors.....	9	34	37	35	43	47	75	70	89	79	79	74	49	105, 275
40-hour, 5-day week.....														
45-hour, 5-day week.....														
50-hour, 5-day week.....														
All other 5-day week.....														
44-hour, 5½-day week.....	1	2	2	2	4	4	4	3	3	3	5	2	2	6, 754
49½-hour, 5½-day week.....														
55-hour, 5½-day week.....														
All other 5½-day week.....														
48-hour, 6-day week.....	8	32	35	33	39	43	71	76	80	76	74	72	47	98, 521
54-hour, 6-day week.....														
60-hour, 6-day week.....														
All other 6-day week.....														
All other not designated.....														
Not reported.....														

<sup>1</sup> Includes bridge and culvert; sewer, gas, water, conduit; and central station, light and power plant.  
<sup>2</sup> Includes masonry; plastering and lathing; and excavating.

TABLE 8.—EXPENDITURES OF REPORTING ESTABLISHMENTS: 1929

CLASSIFICATION OF ESTABLISHMENTS	Estab-lish-ments reporting	Value of construction business reported	PRINCIPAL ITEMS OF EXPENDITURE			OTHER ITEMS OF EXPENDITURE							
			Subcontract work let	Wages paid	Cost of materials	Salaries		Rent for		Interest	Contract bond premiums	Compen-sation and liability insurance premiums	All other over-head expenses
						Proprietors and firm members	Employees	Equip-ment	Offices, etc.				
<b>WYOMING</b> .....	35	\$2, 681, 423	\$224, 000	\$747, 859	\$805, 530	\$30, 124	\$100, 002	\$936	\$5, 824	\$16, 781	\$15, 247	\$11, 134	\$283, 937
General contractors.....	24	2, 207, 277	222, 000	622, 956	747, 633	20, 524	85, 628	906	1, 709	13, 287	13, 613	8, 764	251, 984
Building.....	17	1, 465, 464	167, 000	405, 871	630, 912	17, 524	42, 578	806	1, 129	7, 295	4, 530	6, 366	58, 787
Highway and street paving.....	4	478, 823	47, 000	110, 279	48, 185		31, 050	100	300	5, 072	6, 121	1, 562	106, 147
Other classes <sup>1</sup> .....	3	262, 990	18, 000	106, 806	62, 836	3, 000	12, 000		280	920	2, 956	846	27, 000
Subcontractors.....	11	474, 146	2, 000	124, 903	157, 897	9, 600	14, 374	30	4, 115	3, 494	1, 634	2, 370	42, 003
Heating and plumbing.....	8	340, 140		90, 198	135, 897	9, 600	14, 374		4, 105	2, 537	584	1, 833	30, 228
Plumbing.....	4	202, 716		50, 618	90, 431	1, 960	10, 474		1, 707	2, 119	479	1, 177	11, 043
Plumbing and heating combined.....	4	137, 424		39, 580	45, 466	7, 640	3, 900		2, 898	418	105	656	19, 185
Other classes <sup>2</sup> .....	3	134, 006	2, 000	84, 705	21, 700			30		957	1, 050	637	11, 775

<sup>1</sup> Includes bridge and culvert; grading; and sewer, gas, water, conduit.  
<sup>2</sup> Includes masonry; plastering and lathing; and excavating.

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TABLE 9.—COST OF MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, BY KIND

KIND OF MATERIAL	COST OF MATERIALS REPORTED BY					KIND OF MATERIAL	COST OF MATERIALS REPORTED BY				
	All classes of establishments			General contractors	Sub-contractors		All classes of establishments			General contractors	Sub-contractors
	Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>				Amount	Per cent distribution	Per \$1,000 construction work done <sup>1</sup>		
<b>WYOMING</b>						<b>WYOMING—Continued</b>					
All kinds of material.....	\$984, 117		\$355. 92	\$826, 520	\$157, 597	Distributed by kind—Continued.					
Distribution not reported.....	554, 661	56. 4		466, 030	98, 631	Millwork.....	\$17, 651	4. 1	\$14. 63	\$17, 651	
Distributed by kind.....	429, 456	100. 0		370, 490	58, 966	Composition board.....	4, 231	1. 0	3. 51	4, 231	
Sand, gravel, stone, slag, cinders, etc.	13, 941	3. 2	11. 55	12, 391	1, 550	Waterproofing materials.....	500	. 1	. 41	500	
Brick (face, common, fire, paving, etc.).....	17, 877	4. 2	14. 82	11, 877	6, 000	Hardware, rough and finished.....	9, 396	2. 2	7. 79	9, 396	
Tile (fireproofing).....	2, 140	. 5	1. 77	140	2, 000	Paints, varnishes, glass.....	4, 901	1. 2	4. 11	4, 901	
Tile, facing, terra cotta, floor, and wall.....	3, 000	. 7	2. 49	400	2, 600	Roofing and sheet metal.....	7, 696	1. 8	6. 38	7, 696	
Concrete and cinder block.....	18, 000	4. 2	14. 92	18, 000		Finished flooring (other than cement, wood, or tile).....	5, 990	1. 4	4. 97	5, 990	
Cut stone, granite and marble.....	900	. 2	. 75		900	Screens, shades, awnings, etc.....	876	. 2	. 73	876	
Cement.....	28, 219	6. 6	23. 39	27, 349	870	Heating and ventilating equipment.....	19, 205	4. 5	15. 92	7, 105	\$12, 100
Lime.....	5, 726	1. 3	4. 74	3, 146	2, 580	Plumbing and gas fitting equipment.....	31, 410	7. 3	26. 03	7, 009	24, 401
Plaster, etc.....	5, 805	1. 4	4. 81	4, 005	1, 800	Electrical appliances and supplies.....	28, 600	6. 7	23. 70	28, 600	
Structural steel.....	30, 878	7. 2	25. 59	30, 878		Pipe: Drain tile, vitrified, concrete, segment tile, corrugated.....	5, 587	1. 3	4. 63	4, 822	765
Reinforcing steel.....	30, 422	7. 1	25. 21	30, 422		Pipe: Cast-iron, sheet and tube steel, etc.....	8, 669	2. 0	7. 19	8, 669	
Cast iron, miscellaneous, excluding pipe.....	60	( <sup>3</sup> )	. 05	60		Wire cable, guards, and fencing.....	1, 180	. 3	. 98	180	1, 000
Metal doors, windows, and trim.....	1, 119	. 3	. 93	1, 119		Bituminous paving materials, tar, asphalt, and oil.....	700	. 2	. 58	700	
Metal and wire lath and furring.....	2, 048	. 5	1. 70	1, 448	600	Miscellaneous.....	2, 656	. 6	2. 20	2, 656	
Lumber, rough and finished.....	115, 548	26. 9	95. 76	115, 548							
Lath, shingles, and shakes (wood).....	4, 465	1. 0	3. 70	2, 665	1, 800						

<sup>1</sup> The value of construction work done is obtained from figures presented in Table 1, by subtracting the value of subcontract work let from the total value of construction business.

<sup>2</sup> The percentage of total cost shown for this item is high because establishments located within this area reported that the large part of their construction work (on which this material was used) was done on contracts outside this area.

<sup>3</sup> Less than one-tenth of 1 per cent.

<sup>4</sup> The percentage of total cost shown for this item is high because the business of establishments reporting this material constituted a large part of the total business reported for this area.

<sup>5</sup> Includes the electrical equipment of a power plant.

TABLE 10.—COMPARISON OF COST OF DESIGNATED MATERIALS FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929, WITH COST OF MATERIALS AND VALUE OF CONSTRUCTION BUSINESS

[Based exclusively upon reports of establishments which gave the distributed cost of materials]

KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>	KIND OF MATERIAL AND CLASSIFICATION OF ESTABLISHMENTS	COST OF DESIGNATED MATERIAL				Value of construction business	Indicated per cent of all business done by own force <sup>1</sup>		
	Cost of all materials distributed by kind	Amount	Per cent of—					Cost of all distributed materials	Cost of all materials distributed by kind	Amount	Per cent of—			Cost of all distributed materials	
			Total cost	Cost of all distributed materials							Total cost				Cost of all distributed materials
<b>WYOMING</b>						<b>WYOMING—Continued</b>									
<i>Sand, gravel, stone, slag, cinders, etc.</i>						<i>Reinforcing steel—Con.</i>									
All classes.....	\$429,456	\$13,941	100.0	3.2	\$1,603,836	90.3	General contractors—Con.								
General contractors.....	<sup>2</sup> 370,490	12,391	88.9	3.3	<sup>3</sup> 1,382,889	88.6	Highway.....	\$33,396	\$9,348	20.9	19.0	\$551,987	85.7		
Building.....	269,258	8,591	61.0	3.2	610,012	88.3	Bridge and culvert.....	42,836	4,400	14.5	10.3	178,300	95.5		
Building not specialized.....	269,258	8,591	61.0	3.2	610,012	88.3	<i>Lumber, rough and finished</i>								
Highway.....	33,396	2,800	20.1	8.4	551,987	85.7	All classes.....	<sup>4</sup> 429,456	115,548	100.0	26.9	<sup>5</sup> 1,603,836	90.3		
Bridge and culvert.....	42,836	1,000	7.2	2.3	178,390	95.5	General contractors.....	<sup>2</sup> 370,490	115,548	100.0	31.2	<sup>3</sup> 1,382,889	88.6		
Subcontractors.....	<sup>2</sup> 58,966	1,550	11.1	2.6	<sup>2</sup> 220,947	99.6	Building.....	269,258	105,448	91.3	30.2	610,012	88.3		
Masonry.....	14,100	800	4.3	4.3	37,000	100.0	Building not specialized.....	269,258	105,448	91.3	30.2	610,012	88.3		
Plastering and lathing.....	6,150	700	5.0	11.4	27,006	92.6	Highway.....	33,396	4,100	3.5	12.3	551,987	85.7		
Excavating.....	1,450	250	1.8	17.2	70,000	100.0	Bridge and culvert.....	42,836	6,000	5.2	14.0	178,300	95.5		
<i>Brick (face, common, fire, paving, etc.)</i>						<i>Millwork</i>									
All classes.....	429,456	17,877	100.0	4.2	1,603,836	90.3	All classes.....	<sup>4</sup> 429,456	17,651	100.0	4.1	<sup>5</sup> 1,603,836	90.3		
General contractors.....	<sup>2</sup> 370,490	11,877	66.4	3.2	<sup>3</sup> 1,382,889	88.6	General contractors.....	<sup>2</sup> 370,490	17,651	100.0	4.8	<sup>3</sup> 1,382,889	88.6		
Building.....	269,258	7,377	41.3	2.7	610,012	88.3	Building.....	269,258	15,151	85.8	5.6	610,012	88.3		
Building not specialized.....	269,258	7,377	41.3	2.7	610,012	88.3	Building not specialized.....	269,258	15,151	85.8	5.6	610,012	88.3		
Bridge and culvert.....	42,836	4,500	25.2	10.5	178,390	95.5	Bridge and culvert.....	42,836	2,500	14.2	5.8	178,300	95.5		
Subcontractors.....	<sup>2</sup> 58,966	6,000	33.6	10.2	<sup>2</sup> 220,947	99.6	<i>Heating and ventilating equipment</i>								
Masonry.....	14,100	6,000	33.6	42.6	37,000	100.0	All classes.....	429,456	10,205	100.0	4.5	1,603,836	90.3		
<i>Concrete and cinder block</i>						<i>General contractors.....</i>									
All classes.....	<sup>4</sup> 429,456	18,000	100.0	4.2	<sup>5</sup> 1,603,836	90.3	General contractors.....	<sup>2</sup> 370,490	7,105	37.0	1.9	<sup>3</sup> 1,382,889	88.6		
General contractors.....	<sup>2</sup> 370,490	18,000	100.0	4.9	<sup>3</sup> 1,382,889	88.6	Building.....	269,258	7,105	37.0	2.6	610,012	88.3		
Building.....	269,258	18,000	100.0	6.7	610,012	88.3	Building not specialized.....	269,258	7,105	37.0	2.6	610,012	88.3		
Building not specialized.....	269,258	18,000	100.0	6.7	610,012	88.3	<i>Subcontractors.....</i>								
<i>Cement<sup>6</sup></i>						<i>Heating and plumbing.....</i>									
All classes.....	429,456	28,219	100.0	6.6	1,603,836	90.3	Heating and plumbing.....	<sup>2</sup> 58,966	12,100	63.0	20.5	<sup>2</sup> 220,947	99.6		
General contractors.....	<sup>2</sup> 370,490	27,349	96.9	7.4	<sup>3</sup> 1,382,889	88.6	Plumbing.....	37,266	12,100	63.0	32.5	89,941	100.0		
Building.....	269,258	14,896	52.8	5.5	610,012	88.3	Plumbing and heating combined.....	28,300	7,790	40.1	33.0	45,000	100.0		
Building not specialized.....	269,258	14,896	52.8	5.5	610,012	88.3	<i>Plumbing and gas fitting equipment<sup>7</sup></i>								
Highway.....	33,396	4,053	17.8	14.8	551,987	85.7	All classes.....	429,456	31,410	100.0	7.3	1,603,836	90.3		
Bridge and culvert.....	42,836	7,500	26.6	17.5	178,390	95.5	General contractors.....	<sup>2</sup> 370,490	7,009	22.3	1.9	<sup>3</sup> 1,382,889	88.6		
Subcontractors.....	<sup>2</sup> 58,966	870	3.1	1.5	<sup>2</sup> 220,947	99.6	Building.....	269,258	7,009	22.3	2.6	610,012	88.3		
Masonry.....	14,100	500	1.8	3.5	37,000	100.0	Building not specialized.....	269,258	7,009	22.3	2.6	610,012	88.3		
Plastering and lathing.....	6,150	170	.6	2.8	27,006	92.6	<i>Subcontractors.....</i>								
Excavating.....	1,450	200	.7	13.8	70,000	100.0	Heating and plumbing.....	<sup>2</sup> 58,966	24,401	77.7	41.4	<sup>2</sup> 220,947	99.6		
<i>Structural steel<sup>8</sup></i>						<i>Plumbing.....</i>									
All classes.....	<sup>4</sup> 429,456	30,878	100.0	7.2	<sup>5</sup> 1,603,836	90.3	Plumbing and heating combined.....	37,206	24,401	77.7	65.5	89,941	100.0		
General contractors.....	<sup>2</sup> 370,490	30,878	100.0	8.3	<sup>3</sup> 1,382,889	88.6	Plumbing and heating combined.....	23,300	15,000	49.7	67.0	45,000	100.0		
Building.....	269,258	22,818	73.9	8.5	610,012	88.3	<i>Electrical appliances and supplies<sup>8</sup></i>								
Building not specialized.....	269,258	22,818	73.9	8.5	610,012	88.3	All classes.....	<sup>4</sup> 429,456	28,600	100.0	6.7	<sup>5</sup> 1,603,836	90.3		
Highway.....	33,396	60	.2	.2	551,987	85.7	General contractors.....	<sup>2</sup> 370,490	28,600	100.0	7.7	<sup>3</sup> 1,382,889	88.6		
Bridge and culvert.....	42,836	8,000	26.9	18.7	178,390	95.5	Building.....	269,258	3,000	12.6	1.3	610,012	88.3		
<i>Reinforcing steel<sup>8</sup></i>						<i>Building not specialized.....</i>									
All classes.....	<sup>4</sup> 429,456	30,422	100.0	7.1	<sup>5</sup> 1,603,836	90.3	Central station, light and power plant.....	269,258	3,600	12.6	1.3	610,012	88.3		
General contractors.....	<sup>2</sup> 370,490	30,422	100.0	8.2	<sup>3</sup> 1,382,889	88.6		25,000	25,000	87.4	100.0	42,500	90.5		
Building.....	269,258	19,074	64.7	7.3	610,012	88.3									
Building not specialized.....	269,258	19,074	64.7	7.3	610,012	88.3									

<sup>1</sup> Based upon the difference between the total value of all construction business reported and the value of subcontract work let.  
<sup>2</sup> Includes cost of materials reported by establishments which did not include the designated material in their distributed lists.  
<sup>3</sup> Includes construction work reported by establishments which did not include the designated material in their distributed lists.  
<sup>4</sup> Includes cost of materials reported by subcontracting establishments which did not include the designated material in their distributed lists.  
<sup>5</sup> Includes construction work reported by subcontracting establishments which did not include the designated material in their distributed lists.  
<sup>6</sup> See footnote 2 of Table 9 on p. 1318.  
<sup>7</sup> See footnote 4 of Table 9 on p. 1318.  
<sup>8</sup> See footnote 5 of Table 9 on p. 1318.

CONSTRUCTION—WYOMING

TABLE II.—COST OF MATERIAL FURNISHED AND USED BY REPORTING ESTABLISHMENTS DURING 1929

CLASSIFICATION OF ESTABLISHMENTS	Total cost of all materials <sup>1</sup>	COST OF ALL MATERIALS DISTRIBUTED BY KIND		Sand, gravel, crushed stone, slag, cinders, etc.	Brick (face, common, fire, paving, etc.)	Tile (fire-proofing)	Tile, facing, terra cotta, floor, and wall	Concrete and cinder block	Cement	Lime	Plaster, etc.	Structural steel	Reinforcing steel
		Amount	Per cent of total										
<b>WYOMING</b> .....	\$984, 117	\$429, 466	43. 6	\$13, 941	\$17, 877	\$2, 140	\$3, 000	\$18, 000	<sup>2</sup> \$28, 219	\$5, 726	\$5, 805	<sup>3</sup> \$30, 878	<sup>4</sup> \$30, 422
General contractors.....	\$ 826, 529	370, 490	44. 8	12, 391	11, 877	140	400	18, 000	27, 349	3, 146	4, 005	30, 878	30, 422
Building not specialized.....	667, 318	269, 258	40. 3	8, 591	7, 377	140	400	18, 000	14, 806	2, 546	3, 255	22, 818	19, 674
Highway.....	41, 366	33, 396	80. 7	2, 800	—	—	—	—	4, 953	—	—	60	6, 348
Bridge and culvert.....	42, 836	42, 836	100. 0	1, 000	4, 500	—	—	—	7, 500	800	750	8, 000	4, 400
Central station, light and power plant.....	25, 000	25, 000	100. 0	—	—	—	—	—	—	—	—	—	—
Subcontractors.....	157, 597	58, 966	37. 4	1, 550	6, 000	2, 000	2, 600	—	870	2, 580	1, 800	—	—
Heating and plumbing.....	135, 897	37, 266	27. 4	—	—	—	—	—	—	—	—	—	—
Plumbing.....	90, 431	23, 300	25. 8	—	—	—	—	—	—	—	—	—	—
Plumbing and heating combined.....	40, 966	13, 966	34. 1	—	—	—	—	—	—	—	—	—	—
Masonry.....	14, 100	14, 100	100. 0	600	6, 000	2, 000	2, 600	—	500	1, 500	—	—	—
Plastering and lathing.....	6, 160	6, 160	100. 0	700	—	—	—	—	170	1, 030	1, 800	—	—
Excavating.....	1, 450	1, 450	100. 0	250	—	—	—	—	200	—	—	—	—

CLASSIFICATION OF ESTABLISHMENTS	Metal and wire lath and furring	Lumber, rough and finished	Laths, slings, and shakes	Mill-work	Composition board	Hardware, rough and finished	Paints, varnishes, and glass	Roofing and sheet metal	Finished flooring, n. e. s.	Heating and ventilating equipment	Plumbing and gas fitting equipment	Electrical appliances and supplies	Pipe: Drain tile, vitrified, concrete, etc.	Pipe: Cast-iron, sheet and tube steel, etc.	Miscellaneous <sup>7</sup>
<b>WYOMING</b> .....	\$2, 048	\$116, 548	\$4, 465	\$17, 651	\$4, 231	\$9, 396	\$4, 961	\$7, 696	\$5, 990	\$19, 205	\$31, 410	\$28, 600	\$5, 687	\$8, 669	\$7, 991
General contractors.....	1, 448	115, 548	2, 665	17, 651	4, 231	9, 396	4, 961	7, 696	5, 990	7, 105	7, 009	28, 600	4, 822	8, 069	6, 091
Building not specialized.....	748	105, 448	2, 165	15, 151	3, 731	6, 110	4, 064	6, 996	4, 900	7, 105	7, 009	8, 600	4, 301	288	3, 855
Highway.....	—	4, 100	—	—	—	2, 136	97	—	—	—	—	—	4, 521	8, 381	—
Bridge and culvert.....	700	6, 000	500	2, 500	500	1, 150	800	700	1, 000	—	—	—	—	—	2, 236
Central station, light and power plant.....	—	—	—	—	—	—	—	—	—	—	—	25, 000	—	—	—
Subcontractors.....	600	—	1, 800	—	—	—	—	—	—	12, 100	24, 401	—	765	—	1, 900
Heating and plumbing.....	—	—	—	—	—	—	—	—	—	12, 100	24, 401	—	765	—	—
Plumbing.....	—	—	—	—	—	—	—	—	—	7, 700	15, 600	—	—	—	—
Plumbing and heating combined.....	—	—	—	—	—	—	—	—	—	4, 400	8, 801	—	765	—	—
Masonry.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	900
Plastering and lathing.....	600	—	1, 800	—	—	—	—	—	—	—	—	—	—	—	—
Excavating.....	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1, 000

<sup>1</sup> Certain establishments did not give a distribution of the cost of their materials by separate items. The total cost of materials reported by such establishments is, however, included in totals in this column which carry a footnote to that effect.

<sup>2</sup> See footnote 2, Table I, on p. 1318.

<sup>3</sup> Includes street paving, \$30,000; and sewer, gas, water, conduit, \$20,000.

<sup>4</sup> Includes heating and piping, \$4,500.

<sup>5</sup> See footnote 4 of Table I on p. 1318.

<sup>6</sup> See footnote 5 of Table I on p. 1318.

<sup>7</sup> Includes the reported cost of cut stone, granite and marble; cast iron, miscellaneous, excluding pipe; metal doors, windows, and trim; waterproofing materials; screens, shades, awnings, etc.; wire cable, guards, and fencing; bituminous paving materials; and miscellaneous, n. e. s. For total cost of these items see Table I.





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# CONSTRUCTION IN THE UNITED STATES

## A STUDY OF ITS LOCATION AND AGENCIES

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# CONSTRUCTION IN THE UNITED STATES

## A STUDY OF ITS LOCATION AND AGENCIES

By I. MANSFIELD SPASOFF

### INTRODUCTION

What was the value, during a typical year, of actual construction work throughout the United States? Where was this work located? By whom was it executed? These and many other questions may be answered from a study of statistics of the construction industry collected and compiled in connection with the Fifteenth Decennial Census and published in the form of individual reports for each State and for the United States.

Basic statistics of the construction industry throughout the United States were collected and compiled for the first time by the Bureau of the Census in connection with the Fifteenth Decennial Census. These figures relate to the various aspects of that part of the construction business of reporting contracting establishments which was actually done during 1929. The report of each establishment was allocated to a certain city, county, and State, according to the post-office address of its business office. Thus, the statistics in the tabulations of original data presented in the individual State and United States Summary reports, relate to the business of reporting establishments whose headquarters were situated in the designated locality. Some part of the work of contractors of almost every State has been done on construction projects located in other States, or even outside the United States. On the other hand, additional work by establishments of other States has been done within each State.

Therefore, to determine the actual value of construction work done on projects within a given State, it is necessary to assemble the several parcels of construction which were done in each State, respectively, by contractors of the home State and by outside contractors of every other State. These basic figures are presented in the reports for each individual State in Tables 3 and 4 which show the location (in the home State and in other States or counties, respectively) of construction business handled by establishments of that State.

In the present study of the location and agencies of construction throughout the United States, this reallocation of all construction work has been made. The methods and results of this analysis are explained in the text and the statistics are presented in a series

of tabulations which show the distribution among the several States of the total value of construction work in the United States during 1929, together with the correlative distribution of the actual construction work done by establishments whose headquarters were located in the respective States.

Although these statistics relate to the operations of contracting establishments during the year 1929, they may be considered to give an approximate cross-section of the industry at any period of normal activity. The index \* of the average monthly value of construction contracts awarded, compiled by the Federal Reserve Board from statistics of the F. W. Dodge Corporation, shows the following trend in construction activity during the period from 1923 to 1931: 1923, 84; 1924, 94; 1925, 122; 1926, 129; 1927, 129; 1928, 135; 1929, 117; 1930, 92; 1931, 63. From this series it may be seen that 1929 was an average or normal postwar year in the industry, standing as it did at about the same level as the year 1925.

The cumulative effect of the extreme variation in the amount of construction work in certain areas, during years of maximum or minimum construction activity, tends to be leveled out in an approximately normal year. The year 1929 may, therefore, be safely taken as a measure of average annual construction requirements.

In the present study a projection and analysis have been made upon the basis of statistics relating to the geographic distribution among the several States of construction work executed during 1929, together with a correlative analysis of statistics which show the extent of operations of contracting establishments of individual States. These figures are presented in detail in Table 10.

**Compilation of basic statistics.**—In broad outline, the tabulations presented in the published reports on construction issued by the Bureau of the Census will be found to fall into five general groups: Those relating to (1) costs of construction; (2) construction equipment and labor; (3) types of construction work; (4) construction materials; and (5) the location of construction business. It is with the last of these that the

\* Monthly average 1923-25=100.

present study has to deal. Tables 1 and 2 will enable the reader to correlate the projected figures which constitute the basis of this study with the original tabulations in the State and the United States Summary reports.

A summary of data relating to the business of all establishments which submitted complete reports for the Census of the Construction Industry, i. e., those whose business amounted to at least \$25,000 during 1929, together with estimates for the smaller establishments, is given in Table 1. Business valued at \$6,250,266,665 was handled by the group of larger establishments, while the estimated business of the smaller-business group amounted to \$1,035,453,579, making a total of \$7,285,720,244. As a measure of the actual value of construction work executed, however, this valuation includes a certain amount of duplication, because the aggregate business of all establishments includes a double statement of that work which was sublet to other contractors. The total value of subcontract work let by all reporting establishments was \$1,507,266,679, or 20.7 per cent of all construction business handled. The value of construction work executed by the forces of contracting establishments working under general contract or directly for owners was accordingly \$5,778,453,565, as shown in the last item of the first column.

TABLE 1.—VALUE OF CONSTRUCTION BUSINESS THROUGHOUT THE UNITED STATES, PRINCIPAL ITEMS OF EXPENDITURE AND WORK EXECUTED DURING 1929, INCLUDING ESTIMATES FOR ESTABLISHMENTS REPORTING A BUSINESS OF LESS THAN \$25,000

[Values expressed in thousands]

ITEM	ALL REPORTING ESTABLISHMENTS		ESTABLISHMENTS WHICH HAD A BUSINESS OF—			
	Amount	Per cent of total business	Over \$25,000 during 1929		Less than \$25,000 during 1929	
			Amount	Per cent of total business	Amount <sup>1</sup>	Per cent of total business
Number of establishments reporting.....	144,896		30,597		113,799	
Value of construction business handled.....	\$7,285,720	100.0	\$6,250,267	100.0	\$1,035,454	100.0
Value of business under general contract or directly for owner.....	5,778,454	79.3	4,911,766	78.6	866,688	83.7
Value of business under subcontract.....	1,507,267	20.7	1,338,501	21.4	168,766	16.3
Principal items of expenditure.....	5,753,469	78.0	4,978,631	79.7	774,837	74.8
Subcontract work let.....	1,507,267	20.7	1,455,494	23.3	51,773	5.0
Wages paid.....	1,768,608	24.3	1,467,542	23.5	301,066	29.1
Cost of materials.....	2,477,594	34.0	2,055,595	32.9	421,998	40.8
Value of work executed by own forces <sup>2</sup> .....	5,778,454	79.3	4,794,778	76.7	983,681	95.0

<sup>1</sup> Values estimated from sampling of reports of an average of about 20 per cent of active reporting establishments.

<sup>2</sup> Obtained by subtracting the value of subcontract work let from the value of all construction business handled.

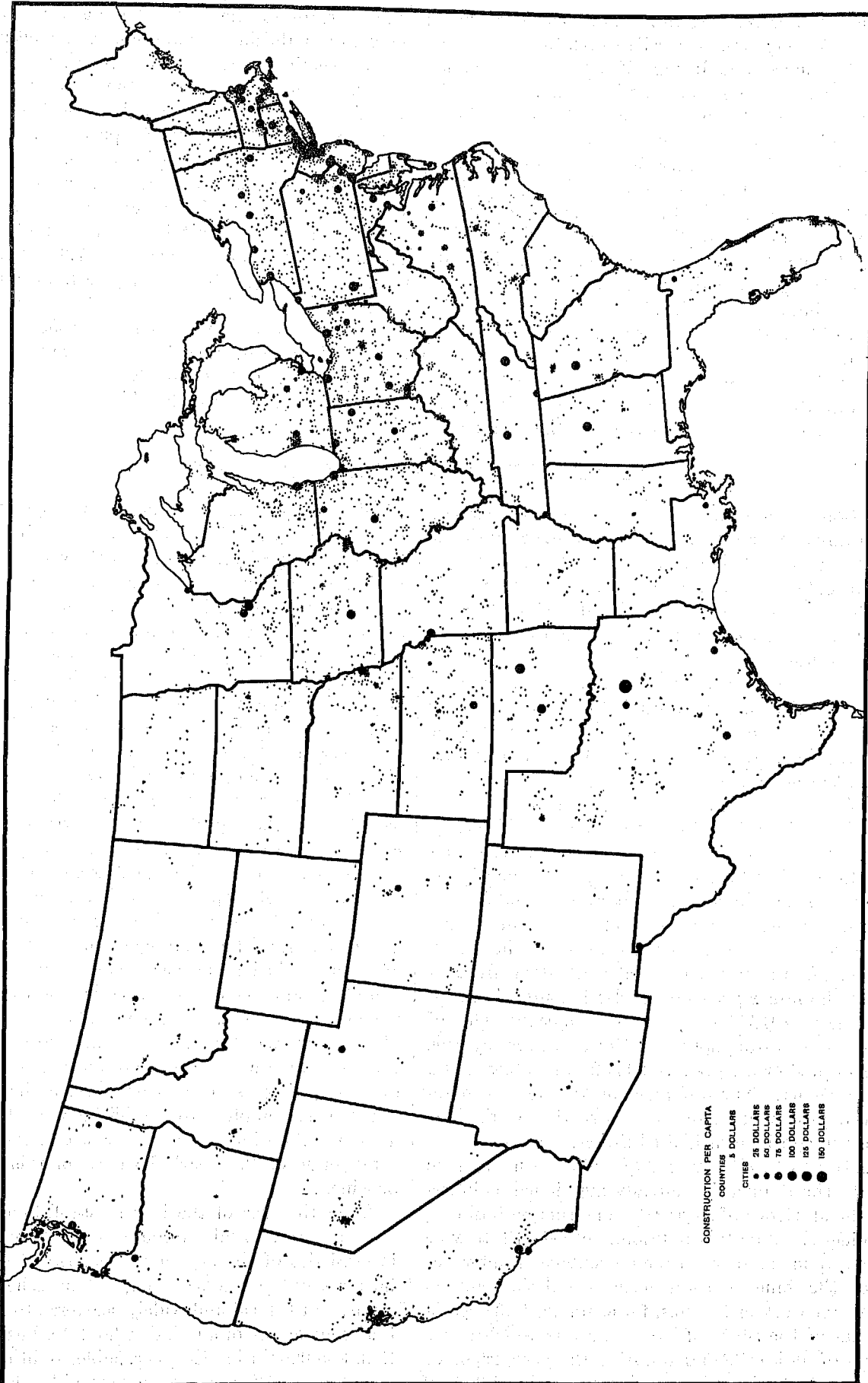
For each State and for each city of more than 100,000 population, corresponding figures showing work done by location of reporting establishment may be derived from statistics contained in the individual State reports. The principal data are also available by counties wherever it was possible to show these without revealing individual operations. A graphic presentation of the per capita value of construction work executed by establishments whose headquarters were located in the individual counties and 93 principal cities is shown in the dot map on page 1327. This map is based upon the detailed tabulation of statistics of the construction industry which relate only to establishments reporting a year's business of at least \$25,000. It was impossible to make projections by counties for the business of the smaller contractors. For the purpose of this graphic presentation, however, the general effect is probably the same as it would be if complete figures were available, the only difference being that the per capita value of each dot would have been slightly greater in the latter case. In considering this map it should be borne in mind that it represents the total work executed by establishments whose business offices were situated in the various localities and not the actual amount of construction within each locality. For purposes of general comparison these two items may be assumed to be approximately the same. Nevertheless, it is advisable to have the distinction in mind, more especially since the shaded State maps (Maps II and III) are based upon actual construction work per square mile and per capita which was executed within the respective States.

TABLE 2.—LOCATION IN THE HOME STATE AND ELSEWHERE OF CONSTRUCTION BUSINESS DURING 1929 REPORTED BY CONTRACTING ESTABLISHMENTS OF EACH GEOGRAPHIC DIVISION

(Values expressed in thousands.)

LOCATION OF OFFICES OF REPORTING ESTABLISHMENTS	Estab-lish-ments reporting	Total value of business reported	BUSINESS REPORTED AS LOCATED			
			In home State		Outside home State	
			Value	Per cent of total business	Value	Per cent of total business
United States.....	29,799	\$6,013,034	\$4,955,681	82.4	\$1,057,353	17.6
GEOGRAPHIC DIVISIONS:						
New England.....	2,715	453,307	329,166	71.8	124,141	28.2
Middle Atlantic.....	3,295	2,135,487	1,778,670	83.3	357,817	16.7
East North Central.....	7,780	1,617,565	1,292,405	85.2	225,160	14.8
West North Central.....	2,427	419,368	293,519	70.0	125,850	30.0
South Atlantic.....	2,124	423,129	309,576	73.2	113,553	26.8
East South Central.....	898	156,820	118,825	76.0	37,995	24.0
West South Central.....	1,556	263,095	264,554	90.3	28,541	9.7
Mountain.....	688	86,169	72,423	84.1	13,741	15.9
Pacific.....	3,316	522,593	496,539	95.0	26,054	5.0

MAP I.—CONSTRUCTION WORK PER CAPITA BY ESTABLISHMENTS OF THE RESPECTIVE COUNTIES AND PRINCIPAL CITIES



**Standard tables relating to location of construction business.**—Among many other items relating to actual construction operations during 1929, the report blank for the Census of the Construction Industry called for a statement of the value of reported construction business which was located in the home city, in the home State, and in the other States or foreign countries. Table 3 of the standard tabulations in the individual State and United States Summary reports, is a summary of the replies to this inquiry, while standard Table 4 gives the location by individual States and foreign countries of the total business done outside the home State. Table 2 of this report will serve as an illustration of the form in which the figures are presented in standard Table 3.

**Complications inherent in the basic figures.**—Throughout the reports of the construction industry it has been necessary to stress the fact that the basic

figures relate to the aggregate business handled by reporting establishments and not to the actual volume of construction work executed by them. Moreover, the basic figures do not show the actual value of construction which was done in a given locality, since they relate to the total business of reporting establishments whose offices were situated in that locality, a part of which business may have been executed outside the local area, while additional work may have been done within that area by establishments of other States. The figures in Table 2 show that 17.6 per cent of the total business of all reporting establishments was done outside the home State. *In order to allocate this outside business to the States in which the work was performed and determine the actual amount of construction work executed within the respective States, the present study has been undertaken.*

#### METHOD OF DERIVING PROJECTED FIGURES

**Allocation of undistributed amounts.**—A comparison of the number reporting and the total value of business reported by establishments of the larger-business group, in Tables 1 and 2 above, shows that of a total of 30,597 establishments 798 failed to report the geographic location of their business valued at \$237,232,633, or less than 4 per cent of the total. Upon the basis of the reported distribution by States and foreign countries of construction business valued at \$6,013,034,032, the comparatively small amount of unallocated business has been distributed among the States in the same proportions.

**Omission of construction business outside the continental United States.**—Since the object of this study is to show the actual construction work executed within the continental United States, the value of construction business in outlying possessions and in foreign countries was disregarded at this point in the computation. This omission accounts for the difference between the value of total work done by own forces of the larger group of establishments, shown in Table 1 as \$4,794,772,665, and the projected value of all work done throughout the United States by this same group, shown as \$4,776,093,890 in Tables 4 and 5 of this report. The difference of \$18,678,775 represents the projected value of construction work done outside the continental United States.

**Adjustment to eliminate duplication.**—In order to eliminate the duplication already mentioned as inherent in the statistics of aggregate construction business, the projected totals for contractors of each State were adjusted upon the basis of the percentage of difference between the value of total business and the value of subcontract work let. Thus, for example, 1,434 establishments of the State of Massachusetts which had a business of at least \$25,000 during the year, reported an aggregate business amounting to \$306,094,000, of

which 24.9 per cent was sublet to others, leaving a balance of 75.1 per cent which was done with their own forces. The projected figures in the geographic distribution of the business of contractors of this State were accordingly reduced in that same proportion. After deducting the value of business done in foreign countries, the remaining value of construction work executed by establishments of Massachusetts was \$228,665,000, as shown in Table 5. A similar adjustment was made in the projected figures for each State before they were combined with the estimates for establishments of the smaller-business group.

**Estimates for smaller establishments.**—As explained elsewhere in the reports of the construction industry, contracting establishments which had a business of less than \$25,000 during 1929 were not required to submit complete reports for this census. Many such contractors, however, overlooking or disregarding that exemption, furnished a statement of the actual amount of business during the year, while some even gave a complete statement. A tabulation of these reports, which represented an average of about 20 per cent of all contractors of the smaller-business group, furnished the approximate average size of business for each class of contracting establishments. Assuming that this average also applied to establishments of which the amount of business was not reported, the estimated total value of the year's business of this group was obtained.

As in the case of the larger establishments, it was also necessary to take account of a similar duplication in statistics of the aggregate business of the smaller-business group. A sampling of the schedules for a number of typical and widely scattered States showed that contractors of all kinds who did a business of less than \$25,000 during the year, sublet to others an average of about 5 per cent of their total business. There-

fore, it was assumed that all reporting contractors of this group actually executed 95 per cent of their total business with their own constructing forces.

In connection with the projected figures for the smaller-business group, it was necessary to make another assumption relating to the actual location of construction work executed. There was no statistical basis for determining what proportion of the work of such establishments was done outside their immediate

localities. In view of the expense involved in obtaining and executing work in other than strictly local areas, however, it seemed likely that very little, if any, of the work of such contractors extended beyond the borders of the home State. Therefore, in combining the individual State figures for this group with those for the larger establishments in Tables 4 and 5, it has been assumed that all the work of smaller establishments was done within the home State.

### COMPARABILITY OF PROJECTED TOTALS WITH EXISTING STATISTICS

**Construction contracts awarded.**—In view of the difference in the basic nature of the census statistics of the construction industry and those of construction contracts awarded, issued by the statistical service of the F. W. Dodge Corporation, the fairly close comparability of the two sets of figures for identical areas east of the Rocky Mountains is remarkable. The statistics of contracts awarded cover actual awards which were made in the designated localities during 1929, including large privately planned projects built with the aid of subcontractors without a general contract. These figures only partially cover contracts for less than \$5,000, and they relate principally to new construction work actually done under contract, although some remodeling and repair work within their cost range is also included. Work covered by contracts awarded to either general contractors or subcontractors, might have been completed during the year in which the contract was let, or it might not even have been started during that year. Or, part might have been done in the current year and part in the succeeding year or over a period of years. On the whole, these statistics of contracts awarded are a measure of actual construction work started, rather than of that actually done during a given year.

Statistics of the construction census, on the other hand, include repair work and small remodeling projects as well as large remodeling projects and new construction actually executed during the year. They cover all construction operations of reporting establishments, whether or not any or all of such work was done under contracts awarded either during that year or during a preceding year. Thus, there is only the slightest chance that these two sets of figures would ever be the same for a given locality. Nevertheless, the census figures in Table 3, representing actual work

done in the designated areas, show a total for the 37 States and the District of Columbia less than 12 per cent smaller than the total value of contracts awarded, and the percentage distribution among the respective States is similar in both sets of figures, the percentages for a few States being identical.

In this connection, it is also interesting to note that the F. W. Dodge Corporation's figures for these States have been assumed to represent approximately 91 per cent of the United States total. The accuracy of this estimate is supported by the projected census figures which indicate that 88.5 per cent of all construction work during 1929 was done in these States.

**Building permits issued.**—Statistics of building permits issued during 1929, compiled from publications of the Bureau of Labor Statistics, are also presented for 156 cities of these 37 States and the District of Columbia in Table 3. Since the building permit figures relate only to cities, the totals are less than half as great as those for construction work and contracts awarded throughout the entire area. The percentage distribution, however, shows a marked similarity to those for the other two sets of figures, despite the fact that permits in New York State are shown to represent 42.1 per cent of the total for this group of cities. Almost 90 per cent of the value shown as the equivalent of building permit figures for New York was made up of the valuation of plans filed in New York City. Building permit figures are considered a more dependable index of prospective construction than the valuation of plans filed, since a much greater proportion of the latter may never be carried to the point of actual construction. Impending changes in the New York City housing regulations were also instrumental in causing an inflation in the filing of building plans during this period.

### LOCATION OF CONSTRUCTION WORK WITHIN DIVISIONS AND STATES

According to the projections based upon the census statistics, actual construction work throughout the United States during 1929 was valued at \$5,759,774,790, as shown in Table 4. These figures do not include the projected value of work done by American contractors in outlying possessions of the United States and in foreign countries, which amounted to \$18,678,775. Of the total volume of national construction work 82.9

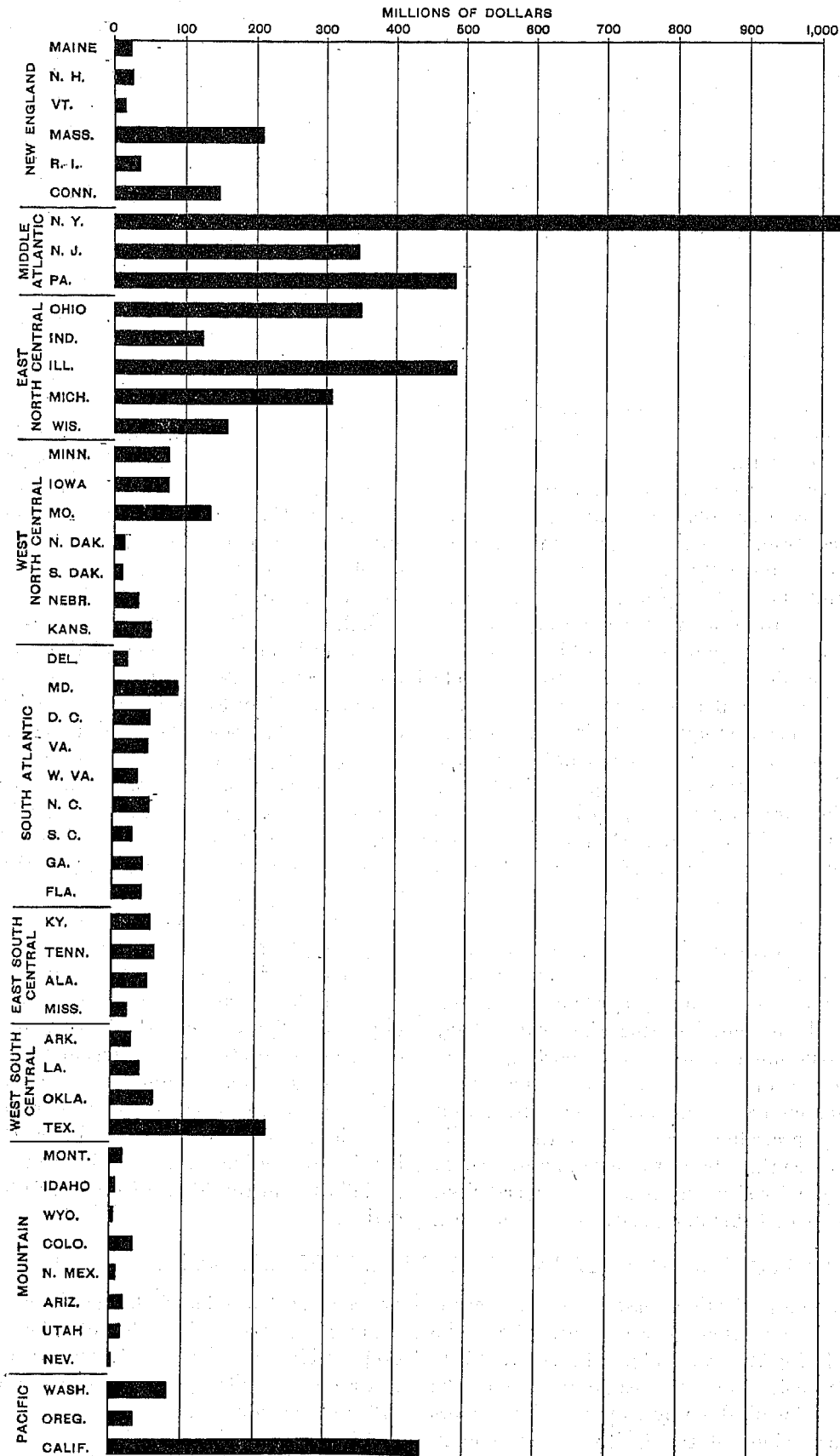
per cent, or \$4,776,093,890, must be credited to 30,597 contracting establishments of the larger-business group which constituted 21.2 per cent of all known contractors, while actual construction executed by 113,799 smaller contractors was valued at \$983,680,900, or 17.1 per cent of the total.

The concentration in the Middle Atlantic and East North Central divisions of more than half the aggre-



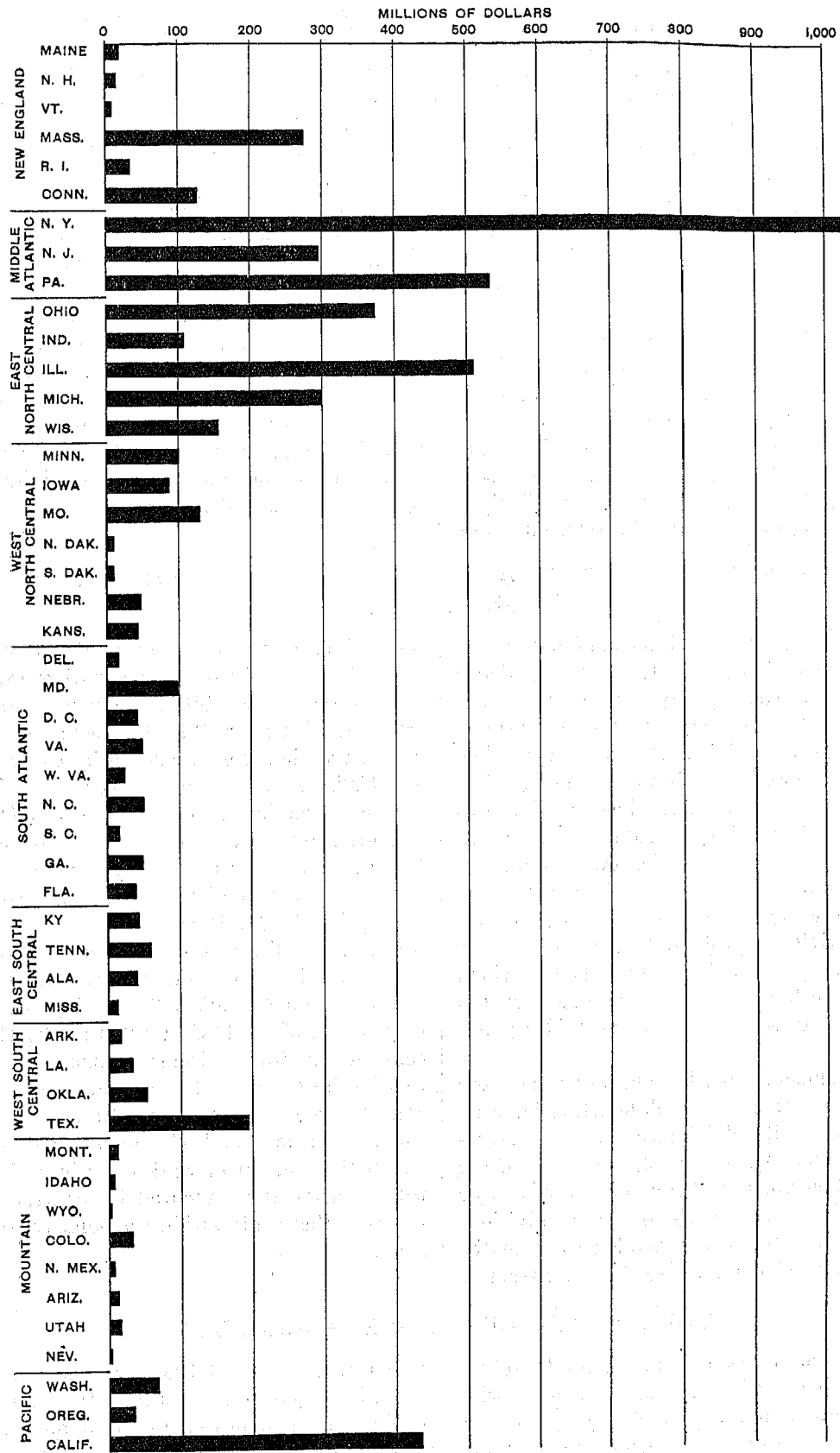
CONSTRUCTION INDUSTRY

CHART I—TOTAL VALUE OF CONSTRUCTION WORK EXECUTED WITHIN THE RESPECTIVE STATES



# CONSTRUCTION IN THE UNITED STATES

CHART II—TOTAL VALUE OF CONSTRUCTION WORK EXECUTED BY ESTABLISHMENTS OF THE RESPECTIVE STATES



gate volume of construction is significant. Actual construction work valued at \$3,291,568,308, or 57.2 per cent of the year's total for the entire United States, was executed in this area comprising only 11.7 per cent of the total area of the continental United States and containing 42.0 per cent of the total population.\* Construction work in the Pacific division represented the investment of \$553,922,162, or 9.6 per cent of the United States total, and that in the New England division \$456,997,491, or 7.9 per cent. Only a little more than one-fourth of all construction was distributed among the States of the other five divisions which contained 75.5 per cent of the total continental area and 44.6 per cent of the population.

Among the individual States, construction work in New York amounted to more than a billion dollars, while in both Pennsylvania and Illinois the total was more than \$485,000,000. California was the only other State in which more than \$400,000,000 worth of construction was accomplished during the year. The value of construction in New Jersey, Ohio, and Michigan ranged between \$300,000,000 and \$400,000,000, while

in both Massachusetts and Texas the total was a little more than \$200,000,000. The only other States in which construction valued at more than \$100,000,000 was done were Connecticut, Indiana, Wisconsin, and Missouri. In the thirteen States just enumerated, construction valued at \$4,436,929,313, or 77 per cent of all construction work, was located; and in the other 36 States approximately \$1,322,845,477, or 23 per cent of the total.

A graphic comparison of the actual value of construction in each State and the District of Columbia is shown in Chart I, on page 1330. The length of the bar for each State represents the value of actual construction work in millions of dollars. The States are arranged in groups, in geographic division order. The bars for the 13 States enumerated in the preceding paragraph are conspicuously outstanding, and those for the States of Minnesota, Iowa, Maryland, and Washington are also of considerable proportions, while other States range downward to a minimum of \$4,000,000 for the State of Nevada.

#### TOTAL CONSTRUCTION WORK EXECUTED BY ESTABLISHMENTS OF GEOGRAPHIC DIVISIONS AND STATES

Of equal interest with the distribution of actual construction among the individual States are the statistics of construction work executed by contracting establishments classified by the location of their business offices in the respective divisions and States. The division and State figures in the first column of Table 5 will be found to be identical with the United States total figures across the top line of Table 10 at the end of this report. The figures in the first column of Table 4 are the same as those in the first column of Table 10. Tables 4 and 5, accordingly, present summaries of the correlated projected totals which are analyzed in full detail in Table 10, reference to which will immediately establish the correct relationship between the figures in the two summary tables under discussion.

Contracting establishments whose headquarters were located in the New England, Middle Atlantic, East North Central, and Pacific divisions executed construction valued at \$4,363,033,458, or 75.8 per cent of the total for all establishments throughout the United States, while establishments of the other five divisions did less than 25 per cent of the total work. In the capacity of actual constructors, New York contractors

maintained their preeminence with more than a billion dollars' worth of work, representing 18.6 per cent of the United States total. Pennsylvania and Illinois followed with more than half a billion dollars' worth of construction work executed by contractors of each, and California contractors ranked next in importance with construction work valued at \$435,000,000.

Contractors of each of the 13 States enumerated in the preceding section did more than \$100,000,000 worth of construction work, their combined total amounting to \$4,512,600,213 or 78.5 per cent of the total. In addition to contractors of those States, the work done by Minnesota contractors was also valued at more than \$100,000,000, making the aggregate for contractors of the 14 States \$4,614,400,410, or 80.3 per cent of the total. Chart II shows at a glance the relative importance of construction work executed by contractors of the respective States, while a comparison of Charts I and II indicates the difference between the amount of work done in a given State and total construction executed by contracting establishments of that State within the home State and in other States.

#### THE PROBLEM OF OUTSIDE COMPETITION

A State by State comparison of the total of these two sets of figures is presented in Table 6, together with value and percentage figures which bring out the differences between the two by showing the excess of work done in a given State over the total value of work done in all localities by contractors of that State, or

vice versa. These figures may shed some light upon the moot question regarding the effect upon local business of competition in the home market by contracting establishments of other States. Of the total value of construction work throughout the Nation amounting to \$5,760,000,000, an aggregate of only

\* See Table 9 for area and population figures.

\$109,000,000 is shown as the balance of work which contractors of certain States did in other States in excess of the total value of work in the respective home States, or vice versa. This comparatively small amount of outside work, representing only 1.9 per cent of total construction, indicates that this problem is not serious for the country as a whole, although in certain localities it may appear to be so. This table shows that in the four northern and eastern divisions a greater amount of work was executed by establishments of each area than that which was actually done in each, while in the remaining southern and western divisions the reverse was the case.

These figures indicate further that the excess of total work executed by contracting establishments of Massachusetts, Minnesota, and Nebraska was more than 30 per cent greater than the total value of work done in the respective States by all contractors throughout the United States. The work of Georgia, Iowa, Pennsylvania, and Maryland contractors also exceeded considerably that which was done in each of these States. The value of construction work done in New Hampshire and Vermont, on the other hand, was much greater than the total value of work executed by local contractors, while the value of work done in South Carolina, Mississippi, Arkansas, Wyoming and Arizona was more than half as great again as that executed by contractors of each of those States. Other States in which the value of work done was considerably greater than the value of work executed by local contractors were Maine, North Dakota, West Virginia, and Montana. In certain States, notably New York, Illinois, Michigan, Wisconsin, Missouri, Virginia, North Carolina, Tennessee, Idaho, Colorado, and California, the amount of work done was approximately the same as the amount of work executed by local contractors.

These figures indicate simply the degree of balance between the amount of work done within a given area by contractors both located in and outside that area and the work done by contractors of that area in that and other areas. They do not show the extent of the field of activity of establishments of any State, as may be seen by reference to the figures in Table 8 which show that of the States last mentioned above, California contractors actually did only 2.6 per cent of their work outside the home State, while 29.2 per cent of the work of contractors of North Carolina was done outside that State, with the other nine States of the enumerated group ranging in between these two extremes. The figures in Table 6 indicate that a degree of balance within 10 per cent of either total is maintained in 20 of the 48 States and the District of Columbia, with an extreme variation of more than 50 per cent in the case of only 7 States.

**Encroachment upon home territory.**—Statistics which show the value of construction work done in the respective States and geographic divisions by estab-

lishments of the home State as distinguished from that done by establishments of other States, presented in Table 7 and Chart III, serve further to indicate that in a majority of the States the local contractor had control of his own market. For the United States as a whole, more than 85 per cent of all construction work was executed by contracting establishments of the home State, about 6 per cent by establishments of other States of the same geographic division, and 8 per cent by establishments of States outside that division. In 7 States more than 90 per cent of the total construction work was done by establishments of the home State; in 12 States between 80 and 90 per cent; in 18 States and the District of Columbia between 70 and 80 per cent; in 6 States between 60 and 70 per cent; and in only 5 States less than 60 per cent.

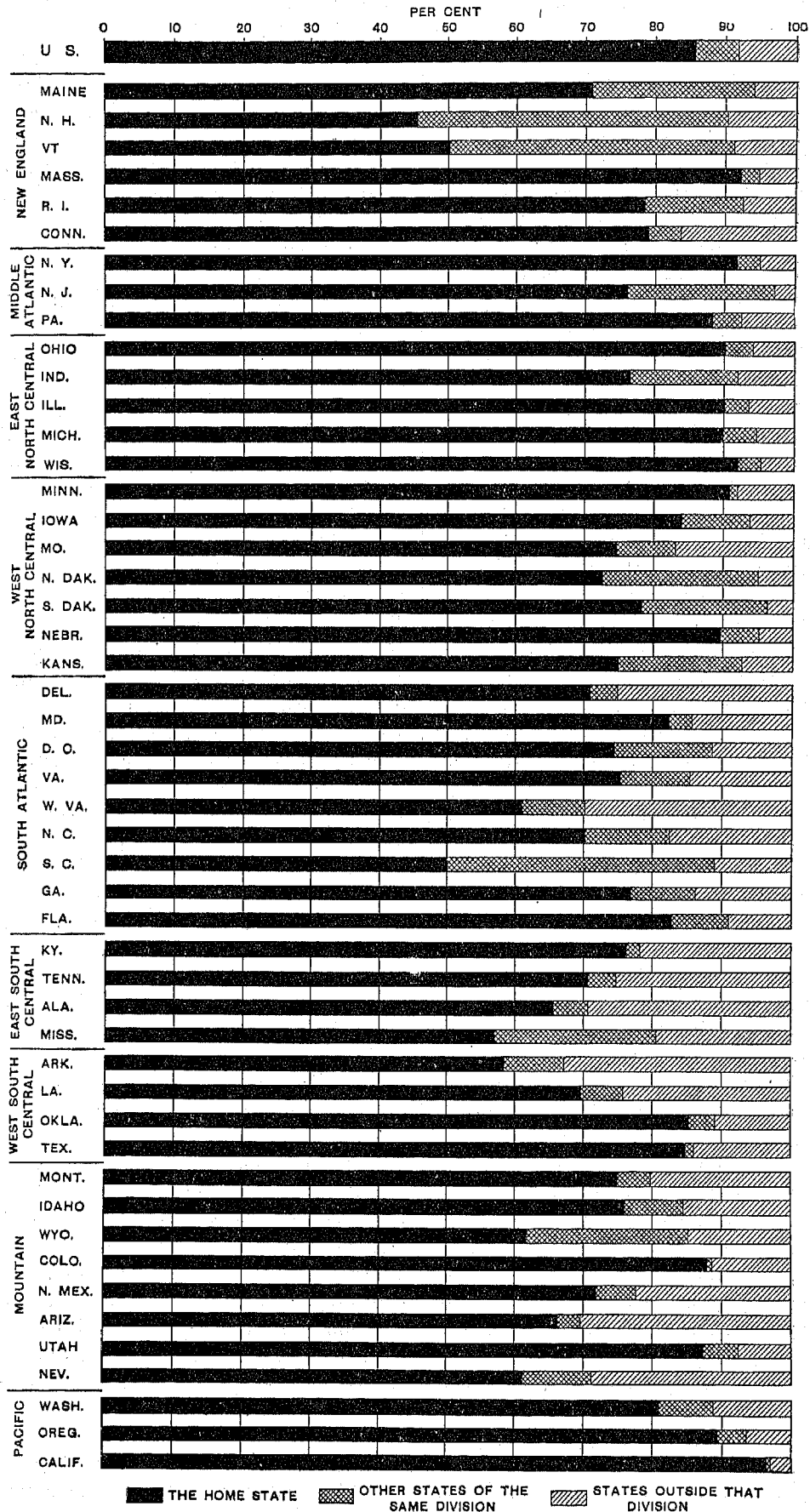
New Hampshire and California provide outstanding examples of the two extremes among individual States. Only 45 per cent of the construction work in the State of New Hampshire was executed by contractors of that State. About the same per cent of the total was done by establishments of other States of the same division, principally those of Massachusetts, and the remaining 10 per cent by establishments of States outside that division, chiefly those of Pennsylvania. The amount of construction work done in New Hampshire by establishments of each State may be found by reference to the horizontal line of figures for New Hampshire in Table 10. In California, on the other hand, more than 96 per cent of the total value of construction work was executed by contractors of the home State, less than 1 per cent by establishments of the States of Washington and Oregon, and only 3 per cent by establishments of States outside the Pacific division.

Between these two extremes range the figures for the other States in a great variety of combinations, no two of which are exactly alike. The graphic presentation of these relationships in Chart III should be understood to show the relative value of the distribution of the work done in each individual State by agencies of various States, rather than similarities or differences in this distribution for different States or groups of States. For example, although a close similarity is found in the percentage figures for the States of Pennsylvania and Utah, the actual value of construction work done in Pennsylvania was thirty times that in Utah, as may be readily seen in Chart I. Thus, in making any detailed comparison between figures for different States the actual values as well as the per centages should be taken into account. In analyzing conditions prevailing in individual States, however, the percentage figures shown in Table 7 and Chart III are of marked value as an index of competitive conditions prevailing in the local construction market.

**Extent of field of activity.**—The correlative figures presented in Table 8, and reproduced graphically in Chart IV, show the location in the home State, in other States of the same geographic division and in States

# CONSTRUCTION INDUSTRY

CHART III.—CONSTRUCTION WORK WITHIN THE RESPECTIVE STATES EXECUTED BY ESTABLISHMENTS OF VARIOUS LOCALITIES

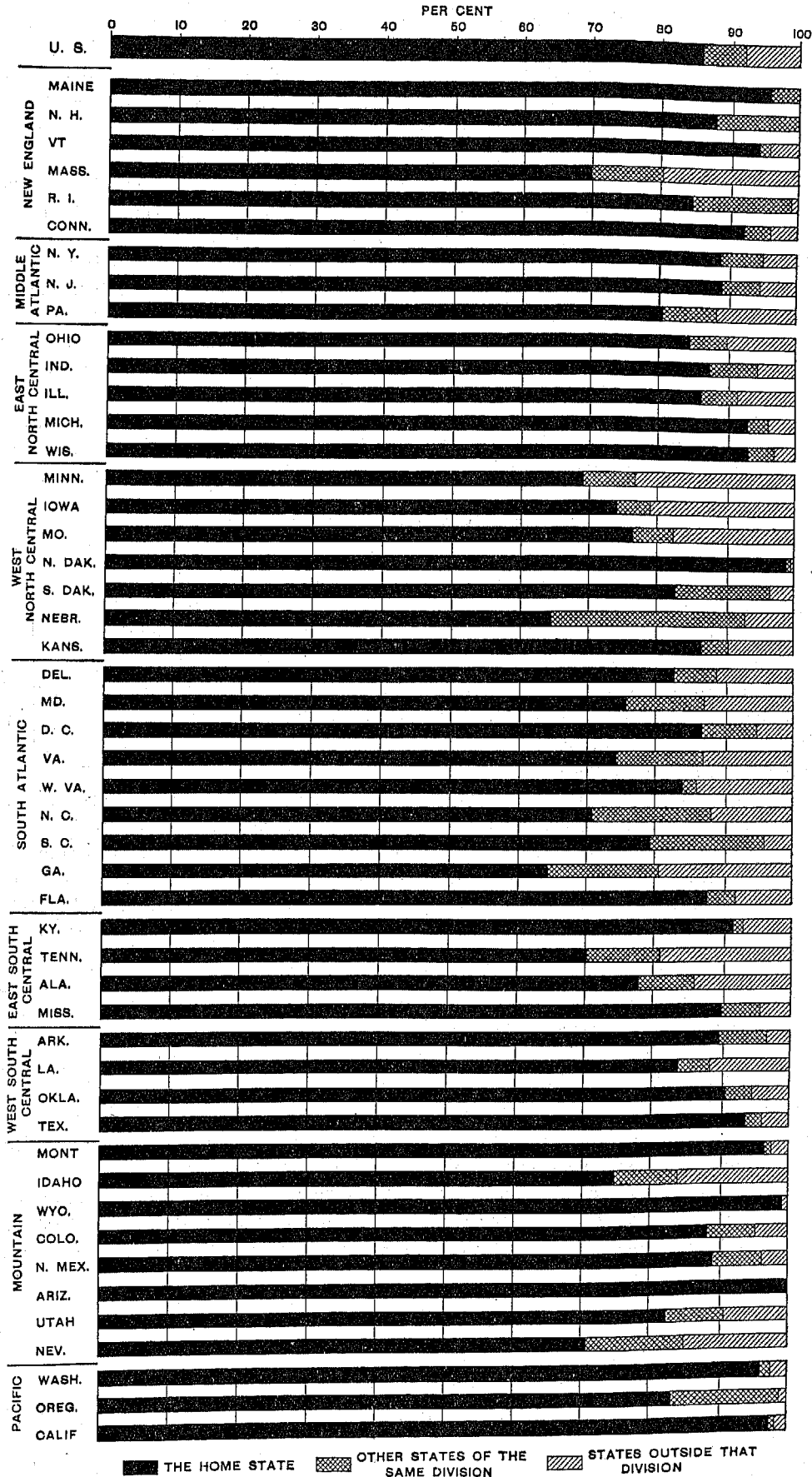


THE HOME STATE
  OTHER STATES OF THE SAME DIVISION
  STATES OUTSIDE THAT DIVISION

# CONSTRUCTION IN THE UNITED STATES

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CHART IV.—LOCATION IN THE HOME STATE, IN OTHER STATES OF THE SAME DIVISION, AND IN STATES OUTSIDE THAT DIVISION, OF CONSTRUCTION WORK EXECUTED BY ESTABLISHMENTS OF THE RESPECTIVE STATES



outside that division, of construction work executed by establishments of the respective divisions and States. Contracting establishments of 25 States and the District of Columbia did more than 85 per cent of their construction work in the home State and those of only 10 States did more than 25 per cent of their work outside the home State.

Arizona is the only State for which the projected figures indicate that local contractors did no work at all outside the home State. This projection was based upon returns covering only about 80 per cent of the estimated total construction work of all contractors of the State. It is obvious, accordingly, that one or more of the contractors who failed to report the actual location of their work might have done some part of it in other States.

Among the States of which the contractors did less than \$100,000,000 worth of construction, establishments of Maine, Vermont, North Dakota, Kentucky, Oklahoma, Montana, Wyoming, and Washington executed more than 90 per cent of their work in the

Home State. Of the States of which contractors did a greater amount of work, those of California, Connecticut, Michigan, Wisconsin, and Texas did more than 90 per cent of their construction work in the home State.

States of which the contracting establishments executed a considerable part of their construction work in other States were Massachusetts and Minnesota of the larger State group, and Nebraska, Georgia, and Tennessee of the smaller. As indicated in the discussion of Table 7 and Chart III, in the preceding section, however, in considering the figures presented in Table 8 and Chart IV it is equally important to have in mind the actual volume of construction work done by contractors of the respective States, shown in Chart II, when making detailed comparisons of the activity of contracting establishments of the various States. Thus, although Massachusetts contractors did a much larger percentage of their total work outside the home State, the actual volume of work done outside the home State by establishments of both New York and Pennsylvania was much greater.

#### DISTRIBUTION OF CONSTRUCTION WORK

Construction work valued at \$5,759,774,790, executed throughout the United States, was distributed over 2,973,776 square miles of territory and served the housing and other construction requirements of 122,775,046 people. As a measure of the density of, and the average expenditure per person for construction in the various States, statistics of the value of construction work per square mile and per capita are of interest. Such figures are given in Table 9 and are presented graphically in Maps II and III. The greatest concentration of construction work, both per square mile and per capita, was in the District of Columbia. Statistics of this Federal area are, of course, not comparable with those of the States because the latter include data relating to both urban and suburban areas whereas the District of Columbia consists of a metropolitan area of 62 square miles with a concentrated population of 486,869. The apparently great volume of construction work in this locality is also partly due to the large volume of Federal construction which was under way during 1929.

**Construction per square mile.**—In 14 Northern States east of the Mississippi River, the greatest concentration of construction work per square mile took place. The following tabulation is a condensed summary of the figures classified according to the density groups used in the legend of the shaded map, Map II:

VALUE PER SQUARE MILE	Number of States	AREA		CONSTRUCTION WORK DONE	
		Square miles	Per cent of United States	Value	Per cent of United States
\$30,000 and over.....	3	13,401	5	\$528,974,130	9.2
\$10,000 to \$30,000.....	4	102,490	3.4	1,748,130,565	30.3
\$3,000 to \$10,000.....	5	200,240	6.7	1,360,954,897	23.6
\$1,000 to \$3,000.....	12	615,104	20.7	1,183,071,180	20.5
\$400 to \$1,000.....	13	940,808	31.6	714,724,873	12.4
Less than \$400.....	11	1,101,667	37.0	174,833,472	3.0

Reference to the figures for individual States in Table 9 will reveal the composition of these groups. In the first group of States, consisting of Rhode Island, Connecticut, and New Jersey, the value of construction work per square mile was \$33,745, \$30,589, and \$45,985, respectively. Construction work valued at between \$10,000 and \$30,000 per square mile was executed in Massachusetts, New York, Pennsylvania, and Delaware. In these two groups of States which cover an area of less than 4 per cent of the entire United States, almost 40 per cent of all construction work was done. The group of States in which the value of construction per square mile was between \$3,000 and \$10,000, consisted of Ohio, Indiana, Illinois, Michigan, and Maryland.

Construction per square mile amounted to between \$1,000 and \$3,000 in 12 widely scattered States from New Hampshire to California. In Maine and 12 other



eastern and central States actual construction was valued at between \$400 and \$1,000 per square mile, while in 11 States including Colorado, Oregon, and the more sparsely settled mountain and desert regions, construction work was valued at less than \$400 per square mile.

**Construction per capita.**—Since actual construction requirements are to a great extent determined by the needs of the people located in a given area, the per capita figures furnish a convenient standard of comparison. Per capita construction in the respective States is shown graphically in Map III. The condensed summary of the figures according to per capita value groups used in the legend of Map III, shown below, indicates that construction work amounting to between \$80 and \$100 per capita was done in 4 States, viz, Connecticut, New York, New Jersey, and Delaware.

In the second group in which construction was valued at from \$55 to \$80 per capita were the 5 States of New Hampshire, Maryland, Illinois, Michigan, and California. Actual construction work in these 9 States, in which 31.5 per cent of the total population lived, amounted in the aggregate to \$2,900,150,562, or 50.3

per cent of the United States total. The third group consisted of seven States: Massachusetts, Rhode Island, Pennsylvania, Ohio, Wisconsin, Washington, and Nevada. In the 16 States of the three groups containing 52.5 per cent of the population, construction valued at \$4,222,844,287, or 73.3 per cent of the United States total, was completed during the year.

VALUE PER CAPITA	Number of States	POPULATION		CONSTRUCTION WORK DONE	
		Number	Percent of United States	Value	Percent of United States
\$80 to \$100.....	4	18,474,683	15.0	\$1,545,729,139	28.8
\$55 to \$80.....	5	20,247,040	16.5	1,354,421,423	23.5
\$45 to \$55.....	7	25,808,618	21.0	1,322,693,725	23.0
\$30 to \$45.....	12	22,355,114	18.2	785,820,821	13.6
\$20 to \$30.....	11	17,835,141	14.5	416,153,216	7.2
\$10 to \$20.....	9	17,567,572	14.3	283,361,793	4.9

Twelve States constituted the group in each of which construction valued at between \$30 and \$45 per capita was done, and in 11 States the value of construction per capita was between \$20 and \$30. The nine remaining States each had between \$10 and \$20 worth of construction per capita during 1929.

SUMMARY OF CONSTRUCTION WORK IN DETAIL

A summary in detail of the value of construction work executed by all establishments of the respective States and geographic divisions in each State and division is presented in Table 10. These data constitute the basic statistics from which the preceding tables in this study have been derived. As already pointed out in the discussion of Table 5, the value of construction work executed in the designated areas by establishments located throughout the United States, shown in the first column of Table 10, corresponds exactly to the figures in the first column of Table 4; while the first line of figures across the top of the six pages of Table 10, representing the value of total construction work done throughout the United States by establishments whose offices were located in the respective divisions and States, is the same as the first column of Table 5.

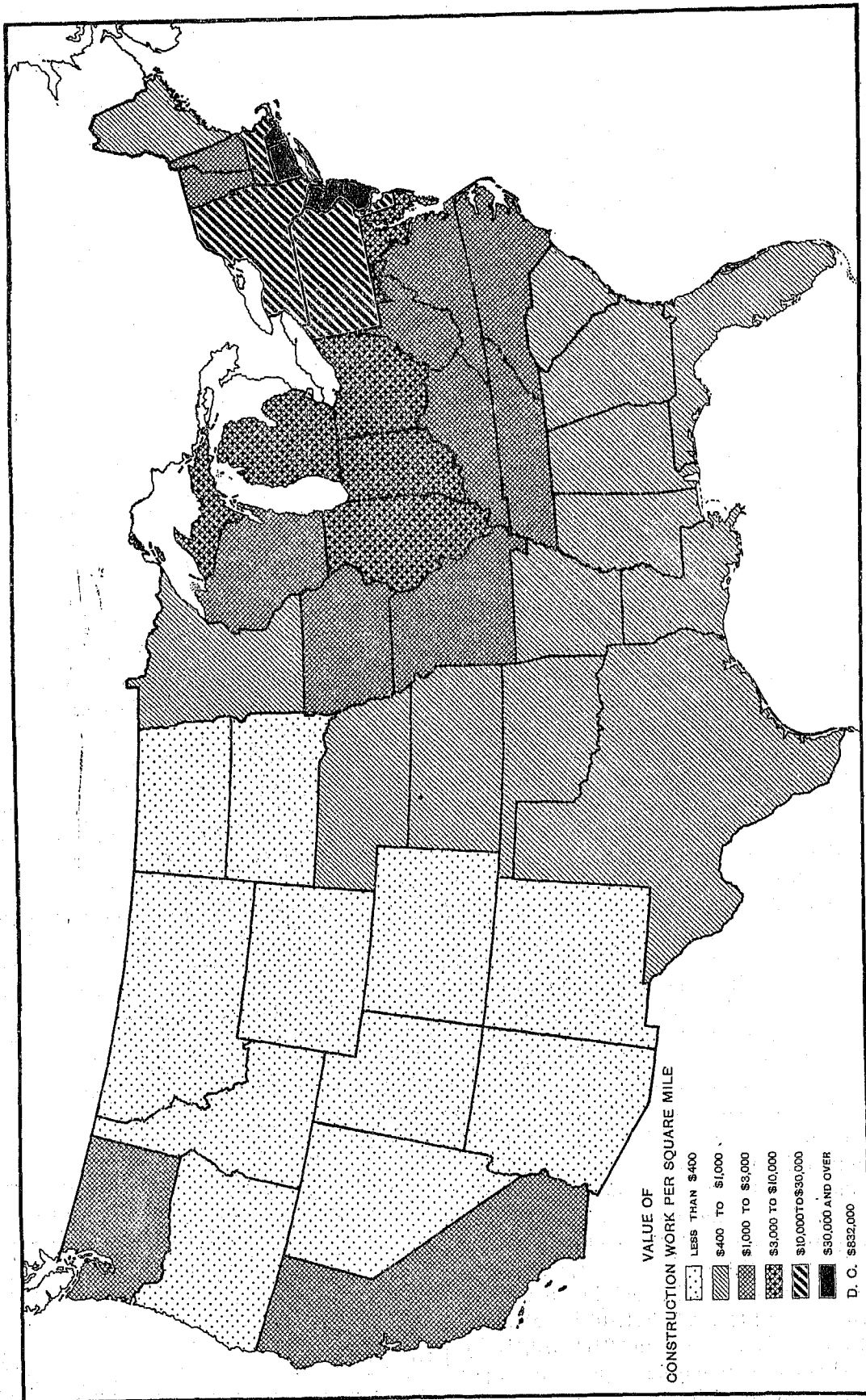
In each line of Table 10, the value of construction work done in the designated division or State is distributed according to location of the offices of establishments by which the work was executed. Thus, of total construction in the Middle Atlantic division valued at \$1,863,840,002, the value of that executed by establishments of the same division was \$1,766,825,467, or approximately 95 per cent of the total. Of the latter amount construction valued at \$1,017,998,209 was done by establishments located in New York State, as shown on page 1349, \$279,951,100 by establishments of the State of New Jersey, and \$468,876,158 by those of Pennsylvania, representing 55 per cent, 15 per cent, and 25 per cent, respectively, of the total construction work in that division.

A similar indication of the execution of the major part of construction work in each division by establishments located therein is shown by corresponding figures for other divisions at the beginning of Table 10. Of the total value of construction work amounting to \$1,427,728,306 in the East North Central division, \$1,342,847,350 or 94.1 per cent was the value of that executed by contractors of the same division. In the New England division, 90.7 per cent of the total construction was so executed; in the West North Central division, 90.1 per cent; in the South Atlantic division, 84.6 per cent; in the East South Central division, 75.5 per cent; in the West South Central division, 83.8 per cent; in the Mountain division, 82.5 per cent; and in the Pacific division, 95.6 per cent.

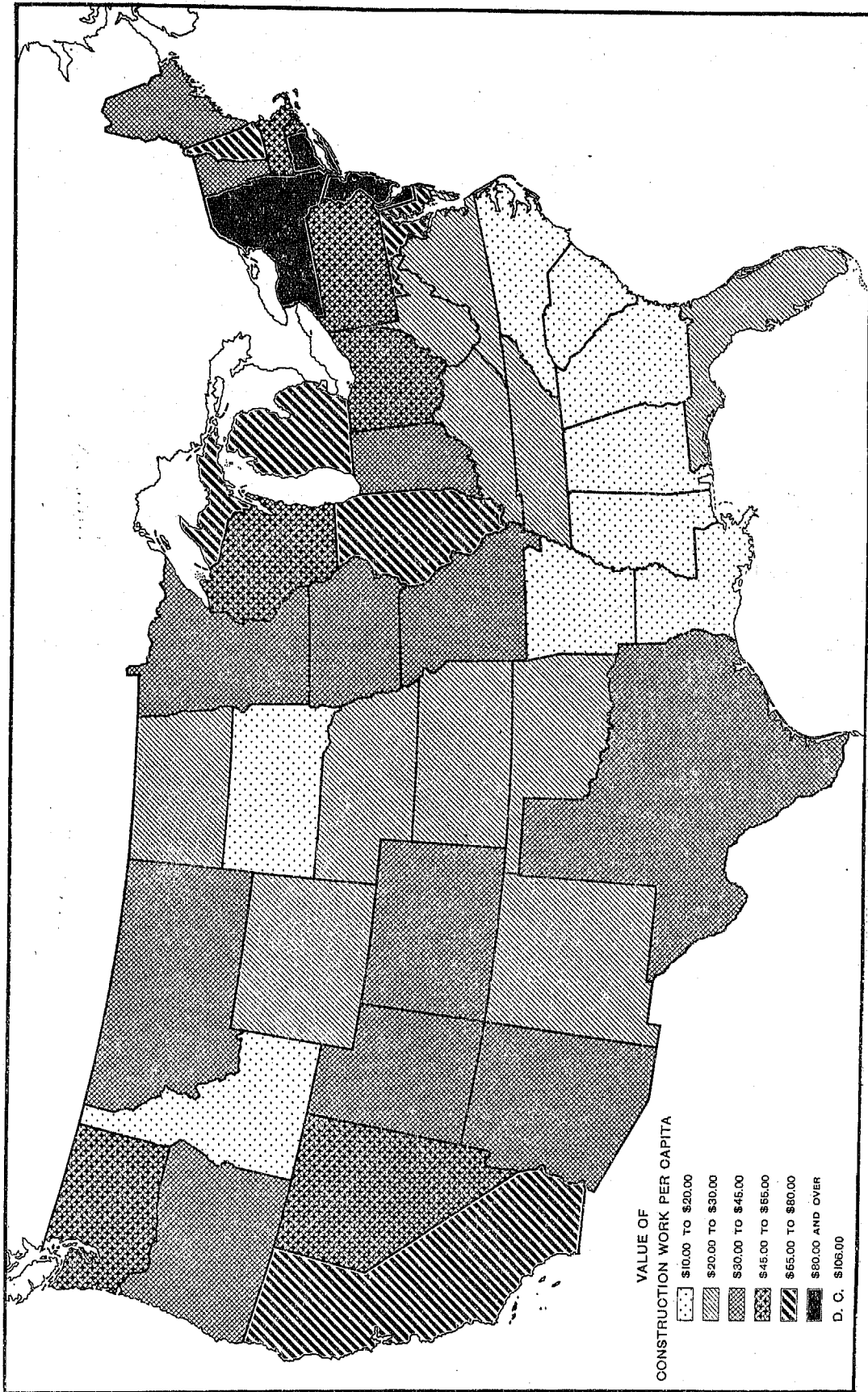
A similar analysis may be made of the construction work done in any State. In the State of Illinois, for example, total construction valued at \$487,200,490 was distributed among contractors of various States as follows:

Contractors of—	Value of work	Per cent of total
Illinois.....	\$438,840,385	90.1
Ohio.....	7,974,540	1.6
Iowa.....	6,376,929	1.3
New York.....	5,776,315	1.2
Missouri.....	5,037,175	1.0
Wisconsin.....	4,371,819	.9
Pennsylvania.....	4,333,240	.9
Minnesota.....	2,929,126	.6
Indiana.....	2,537,287	.5
New Jersey.....	2,484,685	.5
Michigan.....	2,163,165	.4
Nebraska.....	1,097,345	.2
All other States.....	3,278,479	.7

MAP II.—CONSTRUCTION PER SQUARE MILE



MAP III.—CONSTRUCTION PER CAPITA



A correlative analysis of the construction work executed by contracting establishments of each geographic division is presented in the respective columns of Table 10. The actual location of the construction work executed by establishments of the Middle Atlantic division is shown in the figures in the third column of this table. The total value of work done by these contractors was \$1,900,525,642, of which \$1,766,825,467, or 93.0 per cent was located in the same division; while of the total work executed by establishments of the West North Central division, valued at \$436,110,958, 83.1 per cent valued at \$362,317,234, was located in the home division.

That part of the construction work of contractors of each individual State which was located in each geographic division and State is also shown in Table 10. For example, establishments of both New York and New Jersey did about 88 per cent of their work in the home State, while contractors of Massachusetts did only about 70 per cent of their work in that State. Both higher and lower ratios will be found to obtain in the distribution of the work of contractors of the various States.

In addition to the two types of detailed analysis of construction work done in a given locality or the work of contractors of a certain division or State, already described, it is also possible to combine the two so as

to be able to find at a glance the value of work of contractors of any State in any other State. If, for instance, we wish to know how much construction work was done in the State of Iowa by contractors of Wisconsin, about halfway down in the column for the State of Wisconsin we find \$1,055,362 as the amount. Or, if we wish to know how much was done by Iowa contractors in the State of Wisconsin, we find in the Iowa column in the line for the State of Wisconsin the desired item amounting to \$501,218. Thus, it appears that Iowa contractors did about half as much work in Wisconsin as Wisconsin contractors did in Iowa, or vice versa.

The data presented in the 10 tables of this report are in such form as to be readily applicable to a great variety of problems which must be solved by those whose business interests depend to some extent upon a knowledge of the actual location of construction work throughout the United States, as well as of the location of the offices of contracting establishments by which this work was executed. From the brief analysis of these tables in the foregoing discussion it may be possible to understand the many aspects and practical applications of these statistics which have been derived from basic data relating to the construction industry collected and compiled in connection with the Fifteenth Decennial Census of the United States.

# CONSTRUCTION IN THE UNITED STATES

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**TABLE 3.—CONSTRUCTION WORK EXECUTED, CONTRACTS AWARDED, AND BUILDING PERMITS ISSUED DURING 1929 WITHIN EACH GEOGRAPHIC DIVISION AND STATE**

[The statistics presented in this table are from the following sources: Construction work executed, United States Bureau of the Census; contracts awarded, F. W. Dodge Corporation; building permits issued, United States Bureau of Labor Statistics]

AREA	STATISTICS OF DESIGNATED AREAS					STATISTICS OF 166 CITIES OF DESIGNATED AREAS			
	Population, 1930	Construction work executed		Construction contracts awarded		No. of cities	Population, 1930	Building permits issued	
		Value (\$1,000)	Per cent of total	Value (\$1,000)	Per cent of total			Value (\$1,000)	Per cent of total
<b>Total, 37 States and the District of Columbia</b>	110, 878, 824	\$5, 091, 786	100. 0	\$5, 764, 290	100. 0	156	57, 556, 495	\$2, 498, 494	100. 0
<b>GEOGRAPHIC DIVISIONS:</b>									
New England.....	8, 166, 341	450, 997	9. 0	398, 382	6. 9	20	3, 489, 373	164, 430	6. 6
Middle Atlantic.....	26, 260, 750	1, 863, 840	36. 6	2, 059, 498	35. 8	40	14, 185, 955	1, 318, 494	52. 8
East North Central.....	25, 297, 185	1, 427, 728	28. 0	1, 612, 437	28. 0	35	10, 415, 716	592, 659	23. 7
West North Central.....	13, 296, 915	402, 256	7. 9	465, 832	7. 9	16	3, 093, 312	108, 734	4. 3
South Atlantic.....	15, 793, 589	412, 937	8. 1	517, 142	9. 0	16	2, 725, 056	136, 092	5. 4
East South Central.....	9, 887, 214	186, 230	3. 7	223, 791	4. 0	9	1, 399, 565	48, 871	2. 0
West South Central.....	12, 176, 830	341, 767	6. 7	484, 208	8. 4	11	2, 046, 918	129, 095	5. 2
<b>NEW ENGLAND:</b>									
Maine.....	797, 423	24, 238	. 5	23, 050	. 4	1	70, 810	2, 133	. 1
New Hampshire.....	465, 293	26, 435	. 5	9, 700	. 2	1	76, 884	1, 241	(1)
Vermont.....	359, 611	14, 994	. 3	9, 470	. 1	1	1, 100, 000	1, 000	. 1
Massachusetts.....	4, 249, 614	207, 888	4. 1	207, 096	3. 6	20	2, 370, 126	107, 014	4. 3
Rhode Island.....	687, 497	36, 006	. 7	33, 730	. 6	2	330, 130	16, 038	. 7
Connecticut.....	1, 606, 903	147, 438	2. 9	114, 436	2. 0	5	641, 478	37, 163	1. 5
<b>MIDDLE ATLANTIC:</b>									
New York.....	12, 588, 066	1, 032, 827	20. 3	1, 217, 307	21. 2	13	8, 840, 854	1, 052, 185	42. 1
New Jersey.....	4, 041, 334	345, 531	6. 8	313, 635	5. 4	12	1, 658, 286	83, 238	3. 4
Pennsylvania.....	9, 631, 350	485, 482	9. 5	528, 556	9. 2	15	3, 686, 815	183, 011	7. 3
<b>EAST NORTH CENTRAL:</b>									
Ohio.....	6, 646, 697	349, 966	6. 0	381, 554	6. 6	11	2, 855, 229	136, 264	5. 4
Indiana.....	3, 238, 503	122, 958	2. 4	149, 030	2. 6	6	848, 785	37, 264	1. 5
Illinois.....	7, 630, 654	487, 200	9. 6	551, 441	9. 6	7	3, 816, 705	231, 642	9. 3
Michigan.....	4, 842, 325	309, 399	6. 0	367, 064	6. 4	7	2, 162, 531	139, 099	5. 6
Wisconsin.....	2, 939, 006	168, 205	3. 1	162, 748	2. 8	4	732, 166	48, 490	1. 9
<b>WEST NORTH CENTRAL:</b>									
Minnesota.....	2, 563, 953	77, 332	1. 5	63, 052	1. 1	3	837, 425	34, 011	1. 4
Iowa.....	2, 470, 939	77, 500	1. 5	76, 310	1. 3	5	366, 220	11, 062	. 4
Missouri.....	3, 629, 867	134, 340	2. 6	208, 781	3. 6	3	1, 302, 641	43, 323	1. 7
North Dakota.....	680, 845	14, 957	. 4	10, 733	. 2	1	1, 100, 000	1, 000	. 1
South Dakota.....	692, 849	11, 738	. 2	9, 467	. 2	1	1, 100, 000	1, 000	. 1
Nebraska.....	1, 377, 993	34, 652	. 7	31, 086	. 5	2	280, 939	8, 141	. 3
Kansas.....	1, 880, 999	51, 737	1. 0	56, 453	1. 0	3	297, 087	12, 247	. 6
<b>SOUTH ATLANTIC:</b>									
Delaware.....	238, 380	19, 933	. 4	16, 949	. 3	1	106, 597	6, 143	. 2
Maryland.....	1, 631, 526	91, 481	1. 8	124, 067	2. 1	1	804, 874	33, 175	1. 3
District of Columbia.....	486, 869	51, 686	1. 0	88, 960	1. 5	1	486, 869	56, 128	2. 3
Virginia.....	2, 421, 851	49, 005	1. 0	56, 857	1. 0	4	427, 549	14, 503	. 6
West Virginia.....	1, 729, 295	36, 004	. 7	49, 836	. 9	2	137, 231	3, 223	. 1
North Carolina.....	3, 170, 276	52, 210	1. 0	51, 028	. 9	1	1, 100, 000	1, 000	. 1
South Carolina.....	1, 738, 765	27, 918	. 6	21, 600	. 4	1	62, 265	671	(1)
Georgia.....	2, 908, 598	42, 692	. 8	57, 255	1. 0	4	469, 561	15, 811	. 6
Florida.....	1, 468, 211	42, 188	. 8	50, 592	. 9	2	230, 710	6, 438	. 3
<b>EAST SOUTH CENTRAL:</b>									
Kentucky.....	2, 614, 589	53, 544	1. 1	46, 587	. 8	2	872, 997	14, 684	. 6
Tennessee.....	2, 616, 559	60, 485	1. 2	76, 218	1. 4	4	632, 609	21, 517	. 9
Alabama.....	2, 646, 248	50, 806	1. 0	69, 418	1. 2	8	893, 959	12, 670	. 5
Mississippi.....	2, 009, 821	21, 894	. 4	34, 568	. 6	1	1, 100, 000	1, 000	. 1
<b>WEST SOUTH CENTRAL:</b>									
Arkansas.....	1, 854, 482	27, 582	. 6	64, 855	1. 1	1	81, 679	3, 268	. 1
Louisiana.....	2, 101, 593	40, 792	. 8	111, 928	1. 9	2	535, 417	15, 506	. 6
Oklahoma.....	2, 396, 040	57, 685	1. 1	89, 625	1. 6	2	326, 647	34, 258	1. 4
Texas.....	5, 824, 715	215, 739	4. 2	217, 800	3. 8	6	1, 103, 175	76, 063	3. 1

1 Less than one-tenth of 1 per cent.

## CONSTRUCTION INDUSTRY

TABLE 4.—CONSTRUCTION WORK DURING 1929 LOCATED WITHIN EACH GEOGRAPHIC DIVISION AND STATE, BY PRINCIPAL SIZE-GROUPS OF CONTRACTING ESTABLISHMENTS EXECUTING THE WORK

AREA WITHIN WHICH WORK WAS EXECUTED	CONSTRUCTION WORK EXECUTED BY—							
	All reporting establishments		Establishments which had a business of at least \$25,000			Establishments which had a business of less than \$25,000		
	Value	Per cent of United States	Value	Per cent of—		Value	Per cent of—	
				United States	All establishments		United States	All establishments
United States.....	\$5,759,774,780	100.0	\$4,776,093,890	100.0	82.9	\$983,680,900	100.0	17.1
<b>GEOGRAPHIC DIVISIONS:</b>								
New England.....	456,997,491	7.9	351,028,858	7.4	76.9	105,968,633	10.7	23.1
Middle Atlantic.....	1,863,840,002	32.4	1,562,001,331	32.7	83.8	301,838,671	30.6	16.2
East North Central.....	1,427,723,306	24.8	1,198,252,283	25.1	83.9	229,470,023	23.3	16.1
West North Central.....	402,266,018	7.0	333,532,221	7.0	82.9	68,733,797	7.0	17.1
South Atlantic.....	412,900,617	7.2	353,250,999	7.4	85.5	59,715,618	6.1	14.5
East South Central.....	186,230,026	3.2	161,364,950	3.4	86.6	24,865,076	2.5	13.4
West South Central.....	341,767,440	5.9	296,947,070	6.2	86.9	44,819,770	4.6	13.1
Mountain.....	114,066,723	2.0	88,348,949	1.8	77.5	25,717,770	2.6	22.5
Pacific.....	553,922,162	9.6	430,166,629	9.0	77.7	123,755,533	12.6	22.3
<b>NEW ENGLAND:</b>								
Maine.....	24,237,746	.4	17,882,893	.4	73.8	6,354,853	.6	26.2
New Hampshire.....	26,434,665	.4	21,350,443	.4	82.7	4,884,122	.5	17.3
Vermont.....	14,993,680	.3	12,598,040	.3	84.0	2,394,640	.2	16.0
Massachusetts.....	207,888,069	3.6	161,884,485	3.4	77.9	46,003,584	4.7	22.1
Rhode Island.....	36,005,520	.6	27,813,051	.6	77.2	8,191,869	.8	22.8
Connecticut.....	147,438,011	2.6	109,598,746	2.3	74.3	37,839,265	3.9	25.7
<b>MIDDLE ATLANTIC:</b>								
New York.....	1,032,827,436	18.0	893,455,832	18.7	86.5	139,371,604	14.1	13.5
New Jersey.....	345,530,599	6.0	280,700,370	5.9	81.3	64,770,229	6.6	18.7
Pennsylvania.....	485,481,967	8.4	388,385,129	8.1	80.0	97,096,838	9.9	20.0
<b>EAST NORTH CENTRAL:</b>								
Ohio.....	349,960,332	6.1	285,351,421	6.0	81.5	64,614,911	6.6	18.5
Indiana.....	122,957,844	2.1	101,760,693	2.1	82.8	21,191,151	2.2	17.2
Illinois.....	487,200,490	8.5	430,670,003	9.0	88.4	56,530,487	5.7	11.6
Michigan.....	309,399,040	5.4	259,025,860	5.4	83.7	50,373,180	5.1	16.3
Wisconsin.....	158,204,600	2.7	121,438,306	2.6	76.8	36,766,294	3.7	23.2
<b>WEST NORTH CENTRAL:</b>								
Minnesota.....	77,832,361	1.3	63,485,920	1.3	82.1	13,346,441	1.4	17.9
Iowa.....	77,469,692	1.4	58,183,118	1.2	75.1	19,310,474	2.0	24.9
Missouri.....	134,340,073	2.3	123,461,023	2.6	91.9	10,878,450	1.1	8.1
North Dakota.....	14,957,433	.3	11,414,074	.2	76.3	3,543,359	.4	23.7
South Dakota.....	11,737,686	.2	8,197,907	.2	69.8	3,539,679	.3	30.2
Nebraska.....	34,651,800	.6	26,867,924	.6	77.5	7,783,876	.8	22.5
Kansas.....	51,737,173	.9	41,621,655	.9	81.0	9,815,518	1.0	19.0
<b>SOUTH ATLANTIC:</b>								
Delaware.....	19,933,093	.3	17,034,434	.4	85.5	2,898,659	.2	11.5
Maryland.....	91,431,191	1.6	73,992,383	1.5	80.9	17,438,808	1.8	19.1
District of Columbia.....	51,585,673	.9	47,057,074	1.0	91.2	4,527,999	.5	8.8
Virginia.....	49,004,985	.8	40,804,281	.9	83.3	8,200,704	.8	16.7
West Virginia.....	30,003,678	.6	29,854,119	.6	82.9	6,149,559	.6	17.1
North Carolina.....	52,210,109	.9	47,718,173	1.0	91.4	4,491,936	.5	8.6
South Carolina.....	27,918,371	.5	25,104,195	.5	89.9	2,814,176	.3	10.1
Georgia.....	42,691,336	.7	38,285,961	.8	89.7	4,405,875	.4	10.3
Florida.....	42,187,681	.7	32,799,779	.7	77.7	9,387,902	1.0	22.3
<b>EAST SOUTH CENTRAL:</b>								
Kentucky.....	53,544,404	.9	43,133,696	.9	80.6	10,410,708	1.1	19.4
Tennessee.....	60,485,157	1.0	52,653,893	1.1	87.1	7,831,264	.8	12.9
Alabama.....	50,306,369	.9	46,782,418	1.0	93.0	3,523,951	.3	7.0
Mississippi.....	21,894,096	.4	18,794,943	.4	85.8	3,099,153	.3	14.2
<b>WEST SOUTH CENTRAL:</b>								
Arkansas.....	27,582,085	.5	24,098,792	.5	87.4	3,483,293	.4	12.6
Louisiana.....	40,761,715	.7	35,489,075	.7	87.1	5,272,640	.5	12.9
Oklahoma.....	57,684,925	1.0	52,520,799	1.1	91.0	5,164,126	.5	9.0
Texas.....	215,738,715	3.7	184,830,004	3.9	85.7	30,899,711	3.2	14.3
<b>MOUNTAIN:</b>								
Montana.....	17,330,689	.3	14,063,256	.3	81.1	3,277,433	.4	18.9
Idaho.....	8,259,628	.1	6,133,511	.1	74.3	2,126,115	.2	25.7
Wyoming.....	6,402,379	.1	5,177,806	.1	80.9	1,224,573	.1	19.1
Colorado.....	32,773,722	.6	23,137,045	.5	70.6	9,636,677	1.0	29.4
New Mexico.....	9,493,601	.2	7,562,251	.2	79.7	1,931,350	.2	20.3
Arizona.....	18,996,913	.3	16,738,046	.3	88.1	2,258,867	.2	11.9
Utah.....	16,056,801	.3	11,944,197	.2	74.4	4,112,604	.4	25.6
Nevada.....	4,752,937	.1	3,602,837	.1	75.8	1,150,100	.1	24.2
<b>PACIFIC:</b>								
Washington.....	80,394,300	1.4	67,645,851	1.4	84.1	12,748,449	1.3	15.9
Oregon.....	33,571,725	.6	23,838,992	.5	71.0	9,732,733	1.0	29.0
California.....	439,956,137	7.6	338,681,786	7.1	77.0	101,274,351	10.3	23.0

# CONSTRUCTION IN THE UNITED STATES

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**TABLE 5.—CONSTRUCTION WORK DURING 1929 OF CONTRACTING ESTABLISHMENTS OF EACH GEOGRAPHIC DIVISION AND STATE, BY PRINCIPAL SIZE GROUPS**

LOCATION OF OFFICES OF REPORTING ESTABLISHMENTS	CONSTRUCTION WORK EXECUTED BY—							
	All reporting establishments		Establishments which had a business of at least \$25,000			Establishments which had a business of less than \$25,000		
	Value	Per cent of United States	Value	Per cent of—		Value	Per cent of—	
				United States	All establishments		United States	All establishments
United States.....	\$5,759,774,790	100.0	\$4,776,093,890	100.0	82.9	\$983,680,900	100.0	17.1
<b>GEOGRAPHIC DIVISIONS:</b>								
New England.....	474,387,804	8.2	369,019,171	7.7	77.8	105,368,633	10.7	22.2
Middle Atlantic.....	1,900,525,642	33.0	1,599,286,971	33.5	84.1	301,238,671	30.6	15.9
East North Central.....	1,448,798,748	25.2	1,219,322,725	25.5	84.2	229,476,023	23.3	15.8
West North Central.....	436,110,958	7.6	367,387,161	7.7	84.2	68,723,797	7.0	15.8
South Atlantic.....	397,090,916	6.9	337,375,298	7.1	85.0	59,715,618	6.1	15.0
East South Central.....	161,965,260	2.8	137,100,184	2.9	84.6	24,865,076	2.5	15.4
West South Central.....	301,660,096	5.2	256,840,320	5.4	85.1	44,819,770	4.6	14.9
Mountain.....	90,914,102	1.7	74,196,323	1.5	74.3	25,717,779	2.6	25.7
Pacific.....	539,321,264	9.4	415,505,731	8.7	77.1	123,755,533	12.6	22.9
<b>NEW ENGLAND:</b>								
Maine.....	17,948,176	.3	11,593,323	.2	64.6	6,354,853	.0	35.4
New Hampshire.....	13,719,122	.2	9,135,000	.2	66.6	4,584,122	.5	33.4
Vermont.....	8,007,049	.1	5,612,109	.1	70.1	2,394,940	.2	29.0
Massachusetts.....	274,668,199	4.8	228,664,615	4.8	83.3	46,003,584	4.7	10.7
Rhode Island.....	33,481,376	.6	25,289,507	.5	75.5	8,191,869	.8	24.5
Connecticut.....	126,563,882	2.2	88,724,617	1.0	70.1	37,839,265	3.9	29.9
<b>MIDDLE ATLANTIC:</b>								
New York.....	1,071,943,527	18.6	932,571,923	19.5	87.0	139,371,604	14.1	13.0
New Jersey.....	295,938,720	5.1	231,168,491	4.9	78.1	64,770,229	6.6	21.9
Pennsylvania.....	532,643,395	9.3	435,546,557	9.1	81.8	97,096,838	9.9	18.2
<b>EAST NORTH CENTRAL:</b>								
Ohio.....	374,153,551	6.5	300,538,640	6.5	82.7	64,614,911	6.6	17.3
Indiana.....	107,936,488	1.9	86,745,337	1.8	80.4	21,191,151	2.2	19.6
Illinois.....	510,494,238	8.9	453,963,751	9.5	88.9	56,530,487	5.7	11.1
Michigan.....	299,596,109	5.2	249,222,929	5.2	83.2	50,373,180	5.1	16.8
Wisconsin.....	156,618,362	2.7	119,852,068	2.5	76.5	36,766,294	3.7	23.5
<b>WEST NORTH CENTRAL:</b>								
Minnesota.....	101,800,197	1.8	87,953,756	1.8	86.4	13,846,441	1.4	13.6
Iowa.....	87,976,269	1.5	68,659,795	1.4	78.0	19,316,474	2.0	22.0
Missouri.....	131,173,975	2.3	120,205,525	2.5	91.7	10,978,450	1.1	8.3
North Dakota.....	10,971,780	.2	7,428,421	.2	67.7	3,543,359	.4	32.3
South Dakota.....	11,130,995	.2	7,501,316	.2	68.2	3,539,679	.3	31.8
Nebraska.....	43,093,010	.8	40,314,134	.9	83.8	2,778,876	.8	16.2
Kansas.....	44,959,732	.8	35,144,214	.7	78.2	9,815,518	1.0	21.8
<b>SOUTH ATLANTIC:</b>								
Delaware.....	17,088,113	.3	14,789,454	.3	86.5	2,298,659	.2	13.5
Maryland.....	99,469,239	1.7	82,030,431	1.7	82.5	17,438,808	1.8	17.5
District of Columbia.....	44,373,831	.8	39,845,832	.8	89.8	4,527,999	.5	10.2
Virginia.....	49,703,867	.9	41,503,163	.9	83.5	8,200,704	.8	16.5
West Virginia.....	26,202,206	.4	20,052,647	.4	76.5	6,149,559	.6	23.5
North Carolina.....	51,746,199	.9	47,254,263	1.0	91.3	4,491,936	.5	8.7
South Carolina.....	17,602,619	.3	14,783,443	.3	84.0	2,814,176	.3	16.6
Georgia.....	50,896,084	.9	46,490,209	1.0	91.3	4,405,875	.4	8.7
Florida.....	40,003,758	.7	30,620,859	.7	76.5	9,387,902	1.0	23.5
<b>EAST SOUTH CENTRAL:</b>								
Kentucky.....	44,732,149	.8	34,321,441	.7	76.7	10,410,708	1.1	23.3
Tennessee.....	60,896,665	1.1	53,065,401	1.1	87.1	7,831,264	.8	12.9
Alabama.....	42,364,627	.7	38,840,676	.8	91.7	3,523,951	.3	8.3
Mississippi.....	13,971,819	.2	10,872,666	.3	77.8	3,099,153	.3	22.2
<b>WEST SOUTH CENTRAL:</b>								
Arkansas.....	18,039,916	.3	14,556,623	.3	80.7	3,483,293	.4	19.3
Louisiana.....	33,871,590	.6	28,598,950	.6	84.4	5,272,640	.5	15.6
Oklahoma.....	54,375,966	.9	49,211,840	1.0	90.5	5,164,126	.5	9.5
Texas.....	195,372,624	3.4	164,473,913	3.5	84.2	30,899,711	3.2	15.8
<b>MOUNTAIN:</b>								
Montana.....	13,485,491	.2	10,208,058	.2	75.7	3,277,433	.4	24.3
Idaho.....	8,394,583	.1	6,283,468	.1	74.7	2,111,115	.2	25.3
Wyoming.....	3,939,764	.1	2,705,191	.1	69.3	1,234,573	.1	30.7
Colorado.....	32,676,870	.6	23,040,199	.5	70.5	9,636,677	1.0	29.5
New Mexico.....	7,675,061	.1	5,743,711	.1	74.8	1,931,350	.2	25.2
Arizona.....	12,574,457	.2	10,315,590	.2	82.0	2,258,867	.2	18.0
Utah.....	17,011,646	.3	12,898,982	.2	75.8	4,112,664	.4	24.2
Nevada.....	4,106,224	.1	2,956,124	.1	72.0	1,150,100	.1	28.0
<b>PACIFIC:</b>								
Washington.....	67,776,527	1.2	55,028,078	1.2	81.2	12,748,449	1.3	18.8
Oregon.....	36,047,594	.6	26,314,861	.5	73.0	9,732,733	1.0	27.0
California.....	435,497,143	7.6	334,222,792	7.0	76.7	101,274,351	10.3	23.3



## CONSTRUCTION INDUSTRY

TABLE 6.—CONSTRUCTION WORK DURING 1929 OF CONTRACTING ESTABLISHMENTS OF EACH GEOGRAPHIC DIVISION AND STATE COMPARED WITH CONSTRUCTION WORK ACTUALLY LOCATED THEREIN

AREA	TOTAL VALUE OF WORK EXECUTED—		EXCESS OF WORK EXECUTED—						
	By establishments located in designated area	Within designated area by all establishments	By local establishments outside the designated area			Within the designated area by outside establishments			
			Value	Per cent of work		Value	Per cent of work		
				By local establishments	Within designated area		By local establishments	Within designated area	
United States.....	\$5,759,774,790	\$5,759,774,790							
<b>GEOGRAPHIC DIVISIONS:</b>									
New England.....	474,387,804	456,997,491	\$17,390,313	3.7	3.8				
Middle Atlantic.....	1,900,525,642	1,863,840,002	36,685,640	1.9	2.0				
East North Central.....	1,448,798,748	1,427,728,306	21,070,442	1.5	1.5				
West North Central.....	436,110,958	402,256,018	33,854,940	7.8	8.4				
South Atlantic.....	397,090,916	412,966,617				\$15,875,701	4.0	3.8	
East South Central.....	161,965,260	186,230,026				24,264,766	15.0	13.0	
West South Central.....	301,660,066	341,767,440				40,107,344	13.3	11.7	
Mountain.....	99,014,102	114,066,723				14,152,626	14.2	12.4	
Pacific.....	530,321,264	553,922,162				14,600,898	2.7	2.6	
<b>NEW ENGLAND:</b>									
Maine.....	17,948,176	24,237,740				6,289,570	35.0	25.9	
New Hampshire.....	13,719,122	26,434,565				12,715,443	92.7	48.1	
Vermont.....	8,007,049	14,993,580				6,986,531	87.3	46.6	
Massachusetts.....	274,688,199	207,888,069	66,780,130	24.3	32.1				
Rhode Island.....	33,481,376	36,005,520				2,524,144	7.5	7.0	
Connecticut.....	126,563,882	147,438,011				20,874,129	16.5	14.2	
<b>MIDDLE ATLANTIC:</b>									
New York.....	1,071,943,527	1,032,827,436	39,116,091	3.6	3.8				
New Jersey.....	295,968,720	345,530,599				49,561,879	16.8	14.4	
Pennsylvania.....	532,643,395	455,481,997	47,161,428	8.9	9.7				
<b>EAST NORTH CENTRAL:</b>									
Ohio.....	374,153,551	349,966,332	24,187,219	6.5	6.9				
Indiana.....	107,936,488	122,987,844				15,021,356	13.9	12.2	
Illinois.....	510,494,238	487,200,490	23,293,748	4.6	4.8				
Michigan.....	299,596,109	309,399,040				9,802,931	3.3	3.2	
Wisconsin.....	156,618,362	158,204,600				1,586,238	1.0	1.0	
<b>WEST NORTH CENTRAL:</b>									
Minnesota.....	101,800,197	77,332,361	24,467,836	24.0	31.6				
Iowa.....	87,976,269	77,499,592	10,476,677	11.9	13.5				
Missouri.....	131,178,975	134,340,073				3,160,098	2.4	2.4	
North Dakota.....	10,971,780	14,957,433				3,985,653	36.3	26.6	
South Dakota.....	11,130,995	11,737,586				606,591	5.4	5.2	
Nebraska.....	48,098,010	34,651,800	13,446,210	28.0	38.8				
Kansas.....	44,959,732	51,737,173				6,777,441	15.1	13.1	
<b>SOUTH ATLANTIC:</b>									
Delaware.....	17,088,113	19,933,093				2,844,980	16.6	14.3	
Maryland.....	99,469,239	91,431,191	8,038,048	8.1	8.8				
District of Columbia.....	44,373,831	51,585,673				7,211,842	16.3	14.0	
Virginia.....	49,703,867	49,004,985	698,882	1.4	1.4				
West Virginia.....	28,202,206	36,003,678				9,801,472	37.4	27.2	
North Carolina.....	51,746,109	52,210,109				463,910	.9	.9	
South Carolina.....	17,692,619	27,918,371				10,315,752	58.6	30.0	
Georgia.....	50,806,084	42,601,836	8,204,248	16.1	10.2				
Florida.....	40,008,758	42,187,681				2,178,923	5.4	5.2	
<b>EAST SOUTH CENTRAL:</b>									
Kentucky.....	44,732,149	53,544,404				8,812,255	19.7	16.6	
Tennessee.....	60,806,665	60,485,167	411,508	.7	.7				
Alabama.....	42,364,627	50,306,369				7,941,742	18.7	15.8	
Mississippi.....	13,971,819	21,804,096				7,832,277	56.7	36.2	
<b>WEST SOUTH CENTRAL:</b>									
Arkansas.....	18,039,916	27,532,085				9,542,169	52.0	34.6	
Louisiana.....	33,871,590	40,761,715				6,890,125	20.3	16.9	
Oklahoma.....	54,375,966	57,684,025				3,308,059	6.1	5.7	
Texas.....	195,372,624	215,738,715				20,366,091	10.4	9.4	
<b>MOUNTAIN:</b>									
Montana.....	13,485,491	17,380,689				3,845,198	28.5	22.2	
Idaho.....	8,394,583	8,269,626	134,957	1.6	1.6				
Wyoming.....	3,989,764	6,402,379				2,412,615	60.5	37.7	
Colorado.....	32,076,876	32,773,722				69,846	.3	.3	
New Mexico.....	7,675,061	9,493,601				1,818,540	23.7	19.2	
Arizona.....	12,574,457	18,996,913				6,422,456	51.1	33.8	
Utah.....	17,011,646	16,056,861	954,785	5.6	5.9				
Nevada.....	4,106,224	4,752,937				646,713	15.7	13.6	
<b>PACIFIC:</b>									
Washington.....	67,776,527	80,394,300				12,617,773	18.6	15.7	
Oregon.....	36,047,594	33,571,725	2,475,869	6.9	7.4				
California.....	435,497,143	439,956,137				4,458,994	1.0	1.0	

# CONSTRUCTION IN THE UNITED STATES

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TABLE 7.—CONSTRUCTION WORK DURING 1929 LOCATED WITHIN EACH GEOGRAPHIC DIVISION AND STATE, BY LOCATION (IN THE HOME STATE AND IN OTHER STATES) OF CONTRACTING ESTABLISHMENTS EXECUTING THE WORK

AREA WITHIN WHICH WORK WAS PERFORMED	Total value of construction work executed within designated areas	CONSTRUCTION WORK EXECUTED BY ALL CLASSES OF ESTABLISHMENTS OF—					
		The home State		Other States of the same division		States outside that division	
		Value	Per cent of total	Value	Per cent of total	Value	Per cent of total
United States.....	\$5,759,774,790	\$4,930,824,615	85.6	\$355,494,012	6.2	\$473,456,163	8.2
<b>GEOGRAPHIC DIVISIONS:</b>							
New England.....	456,997,491	373,852,299	81.7	41,113,178	9.0	42,532,014	9.3
Middle Atlantic.....	1,863,840,002	1,040,408,095	55.8	126,417,402	6.8	97,014,535	5.2
East North Central.....	1,427,728,306	1,272,705,576	89.1	70,141,774	4.9	84,880,956	5.9
West North Central.....	402,256,018	325,754,421	81.0	36,502,813	9.1	39,938,784	9.9
South Atlantic.....	412,960,617	306,195,247	73.9	44,139,169	10.7	63,632,201	15.4
East South Central.....	186,230,026	129,144,271	69.3	11,438,210	6.1	45,647,545	24.5
West South Central.....	341,767,440	276,519,218	80.9	9,896,481	2.9	55,351,741	16.2
Mountain.....	114,066,723	88,361,238	77.5	5,777,485	5.1	19,928,005	17.5
Pacific.....	553,922,162	519,384,230	93.8	10,007,500	1.8	24,530,382	4.4
<b>NEW ENGLAND:</b>							
Maine.....	24,237,740	17,181,739	70.9	5,631,147	23.2	1,424,860	5.9
New Hampshire.....	26,434,565	12,017,289	45.5	11,847,738	44.8	2,569,538	9.7
Vermont.....	14,993,580	7,533,811	50.2	6,150,768	41.0	1,309,001	8.7
Massachusetts.....	207,888,069	191,891,448	92.3	5,457,011	2.6	10,539,610	5.1
Rhode Island.....	36,005,520	28,278,230	78.5	5,080,072	14.1	2,647,218	7.4
Connecticut.....	147,438,011	116,440,782	79.0	6,946,442	4.7	24,041,787	16.3
<b>MIDDLE ATLANTIC:</b>							
New York.....	1,032,827,436	948,644,295	91.8	33,431,080	3.2	50,752,061	4.9
New Jersey.....	345,530,599	262,882,854	76.1	72,983,040	21.1	9,664,696	2.8
Pennsylvania.....	485,481,967	428,880,916	88.3	20,002,673	4.1	36,598,378	7.5
<b>EAST NORTH CENTRAL:</b>							
Ohio.....	349,966,332	315,825,851	90.2	13,874,055	4.0	20,266,426	5.8
Indiana.....	122,957,844	94,108,328	76.5	19,138,018	15.6	9,711,498	7.9
Illinois.....	487,200,490	438,840,385	90.1	17,046,811	3.5	31,313,294	6.4
Michigan.....	309,390,400	278,254,460	89.9	14,765,404	4.8	16,379,176	5.3
Wisconsin.....	158,204,600	145,676,652	92.1	5,317,486	3.4	7,210,562	4.6
<b>WEST NORTH CENTRAL:</b>							
Minnesota.....	77,332,361	70,327,381	90.9	914,368	1.2	6,090,612	7.9
Iowa.....	77,499,592	65,162,195	84.1	7,594,264	9.8	4,743,133	6.1
Missouri.....	134,340,073	100,318,703	74.7	11,431,856	8.5	22,589,514	16.8
North Dakota.....	14,957,433	10,854,541	72.6	3,367,744	22.5	735,143	4.9
South Dakota.....	11,737,586	9,195,818	78.3	2,119,162	18.1	422,606	3.6
Nebraska.....	34,651,800	31,070,681	89.7	1,941,919	5.6	1,039,300	4.7
Kansas.....	51,737,173	38,825,202	75.0	9,193,500	17.8	3,718,471	7.2
<b>SOUTH ATLANTIC:</b>							
Delaware.....	19,933,093	14,102,817	70.8	834,204	4.2	4,990,072	25.1
Maryland.....	91,431,191	75,320,985	82.4	3,013,227	3.3	13,096,979	14.3
District of Columbia.....	51,585,673	38,410,162	74.5	7,269,441	14.1	5,000,080	11.4
Virginia.....	49,004,985	36,950,362	75.4	4,971,922	10.1	7,082,701	14.5
West Virginia.....	36,003,678	21,980,883	61.1	3,278,914	9.1	10,743,881	29.8
North Carolina.....	52,210,109	36,627,164	70.2	6,424,645	12.3	9,158,300	17.5
South Carolina.....	27,918,371	13,985,880	50.1	10,861,653	38.9	3,070,838	11.0
Georgia.....	42,691,836	32,841,725	76.9	3,981,472	9.3	5,868,069	13.7
Florida.....	42,137,681	34,069,279	80.9	3,503,691	8.3	3,714,711	8.8
<b>EAST SOUTH CENTRAL:</b>							
Kentucky.....	53,544,404	40,845,204	76.3	1,348,916	2.5	11,350,284	21.2
Tennessee.....	60,485,187	42,788,225	70.7	2,430,300	4.0	15,271,632	25.2
Alabama.....	50,306,369	33,004,091	65.6	2,548,258	5.1	14,764,020	29.3
Mississippi.....	21,894,096	12,511,751	57.1	5,110,736	23.3	4,271,609	19.5
<b>WEST SOUTH CENTRAL:</b>							
Arkansas.....	27,582,085	16,129,666	58.5	2,894,761	8.7	9,057,658	32.8
Louisiana.....	40,761,715	28,556,351	69.6	2,522,608	6.2	9,882,756	24.2
Oklahoma.....	57,684,925	49,189,667	85.3	2,206,528	3.8	6,288,730	10.9
Texas.....	215,738,715	182,843,534	84.8	2,772,684	1.3	30,122,597	14.0
<b>MOUNTAIN:</b>							
Montana.....	17,330,689	12,993,056	75.0	838,174	4.8	3,499,459	20.2
Idaho.....	8,259,626	6,276,899	76.0	714,201	8.6	1,268,526	15.4
Wyoming.....	6,402,379	3,958,636	61.8	1,493,826	23.3	949,917	14.8
Colorado.....	32,773,722	28,797,365	87.9	233,478	3,742,879	11.4	
New Mexico.....	9,493,801	6,820,888	71.8	568,086	5.9	2,114,627	22.3
Arizona.....	18,996,913	12,574,457	66.2	652,090	3.4	5,770,366	30.4
Utah.....	16,056,861	14,030,044	87.4	813,685	5.1	1,213,132	7.6
Nevada.....	4,762,937	2,909,893	61.2	473,945	10.0	1,369,099	28.8
<b>PACIFIC:</b>							
Washington.....	80,394,300	65,088,718	81.0	6,198,711	7.7	9,106,871	11.3
Oregon.....	33,571,725	29,979,893	89.3	1,414,696	4.2	2,177,131	6.5
California.....	439,958,187	424,315,664	96.4	2,394,093	13,246,380	3.0	

## CONSTRUCTION INDUSTRY

TABLE 8.—CONSTRUCTION WORK DURING 1929 OF CONTRACTING ESTABLISHMENTS OF EACH GEOGRAPHIC DIVISION AND STATE BY LOCATION (IN THE HOME STATE AND IN OTHER STATES) OF WORK EXECUTED

LOCATION OF OFFICES OF REPORTING ESTABLISHMENTS	Total value of construction work executed by reporting establishments	LOCATION OF CONSTRUCTION WORK EXECUTED—					
		Within the home State		Within other States of the same division		Within States outside that division	
		Value	Per cent of total	Value	Per cent of total	Value	Per cent of total
United States.....	\$5,769,774,790	\$4,930,824,615	85.6	\$355,494,012	6.2	\$473,456,163	8.2
<b>GEOGRAPHIC DIVISIONS:</b>							
New England.....	474,387,804	373,352,299	78.7	41,113,178	8.7	59,922,327	12.6
Middle Atlantic.....	1,900,525,642	1,640,408,065	86.3	126,417,402	6.7	133,700,175	7.0
East North Central.....	1,448,798,748	1,272,705,576	87.9	70,141,774	4.8	105,951,398	7.3
West North Central.....	436,110,958	325,754,421	74.7	36,562,813	8.4	73,793,724	16.9
South Atlantic.....	397,090,916	305,105,247	76.9	44,139,169	11.1	47,786,500	12.0
East South Central.....	161,965,260	120,144,271	79.7	11,438,210	7.1	21,382,779	13.2
West South Central.....	301,660,096	276,519,218	91.8	9,806,481	3.3	15,244,397	5.1
Mountain.....	99,914,102	88,361,238	88.4	5,777,485	5.8	5,775,379	5.8
Pacific.....	539,321,264	519,384,230	96.3	10,007,500	1.9	9,929,494	1.8
<b>NEW ENGLAND:</b>							
Maine.....	17,948,176	17,181,739	95.7	766,437	4.3	—	—
New Hampshire.....	13,710,122	12,017,289	87.6	1,692,160	12.3	9,673	.1
Vermont.....	8,007,049	7,533,811	94.1	130,276	1.6	342,902	4.3
Massachusetts.....	274,668,199	191,891,448	69.9	28,651,497	10.4	54,125,254	19.7
Rhode Island.....	33,481,376	28,278,230	84.5	4,856,280	14.5	346,800	1.0
Connecticut.....	126,563,882	116,449,782	92.0	5,016,628	4.0	5,097,572	4.0
<b>MIDDLE ATLANTIC:</b>							
New York.....	1,071,943,527	948,644,295	88.5	69,353,914	6.5	53,945,318	5.0
New Jersey.....	295,938,720	262,882,854	88.8	17,068,246	5.8	15,987,620	5.4
Pennsylvania.....	532,643,395	428,880,916	80.5	39,995,242	7.5	63,767,237	12.0
<b>EAST NORTH CENTRAL:</b>							
Ohio.....	374,163,551	315,825,851	84.4	19,673,605	5.3	38,654,095	10.3
Indiana.....	107,936,488	94,108,328	87.2	7,635,247	7.1	6,192,913	5.7
Illinois.....	510,494,238	438,840,385	86.0	27,110,569	5.3	44,543,284	8.7
Michigan.....	299,596,109	278,254,460	92.9	9,417,008	3.1	11,924,641	4.0
Wisconsin.....	156,618,362	145,676,582	93.0	6,305,845	4.0	4,636,465	3.0
<b>WEST NORTH CENTRAL:</b>							
Minnesota.....	101,800,197	70,327,381	69.1	7,893,605	7.7	23,579,211	23.2
Iowa.....	87,976,269	65,162,195	74.1	4,862,204	4.9	18,451,870	21.0
Missouri.....	131,173,975	100,318,703	76.5	7,445,768	5.7	23,409,504	17.8
North Dakota.....	10,971,780	10,854,541	98.9	70,860	.7	46,379	.4
South Dakota.....	11,130,995	9,195,818	82.6	1,544,844	13.9	390,333	3.5
Nebraska.....	48,098,010	31,070,581	64.6	13,506,451	28.1	3,520,978	7.3
Kansas.....	44,959,732	38,825,202	86.3	1,739,081	3.9	4,395,449	9.8
<b>SOUTH ATLANTIC:</b>							
Delaware.....	17,088,113	14,102,817	82.5	1,028,829	6.0	1,956,467	11.5
Maryland.....	99,469,239	75,320,985	75.7	11,161,705	11.2	12,986,549	13.1
District of Columbia.....	44,373,831	38,410,152	86.6	3,594,039	8.1	2,363,640	5.3
Virginia.....	49,703,867	36,950,362	74.3	6,158,048	12.4	6,595,457	13.3
West Virginia.....	26,202,206	21,980,883	83.9	623,290	2.0	3,608,033	14.1
North Carolina.....	51,740,199	36,627,164	70.8	8,877,258	17.1	6,241,777	12.1
South Carolina.....	17,602,619	13,985,880	79.5	2,895,328	16.4	721,411	4.1
Georgia.....	60,896,084	52,841,725	86.8	8,222,417	13.4	9,831,922	16.3
Florida.....	40,008,758	34,969,279	87.4	1,678,255	4.2	3,361,224	8.4
<b>EAST SOUTH CENTRAL:</b>							
Kentucky.....	44,732,149	40,845,204	91.3	871,014	1.9	3,215,931	7.2
Tennessee.....	60,896,665	42,783,225	70.2	6,572,864	10.8	11,540,576	19.0
Alabama.....	42,364,627	33,004,091	77.9	3,364,038	7.9	5,996,498	14.2
Mississippi.....	13,971,819	12,511,751	89.6	830,294	5.9	629,774	4.5
<b>WEST SOUTH CENTRAL:</b>							
Arkansas.....	18,039,916	16,120,666	89.4	1,294,926	7.2	615,324	3.4
Louisiana.....	33,871,590	28,356,351	83.7	1,632,118	4.8	3,938,121	11.8
Oklahoma.....	54,375,966	49,189,607	90.5	2,201,702	4.0	2,984,597	5.5
Texas.....	195,372,624	182,843,534	93.6	4,867,785	2.5	7,661,335	3.9
<b>MOUNTAIN:</b>							
Montana.....	13,485,491	12,993,056	96.4	154,867	1.1	337,568	2.5
Idaho.....	8,394,583	6,276,890	74.8	767,909	9.1	1,349,775	16.1
Wyoming.....	3,989,764	3,968,636	99.2	192	(1)	30,936	.8
Colorado.....	32,676,876	28,797,365	88.1	2,327,785	7.1	1,551,726	4.8
New Mexico.....	7,675,061	6,820,888	88.9	565,091	7.3	289,082	3.8
Arizona.....	12,574,467	12,574,467	100.0	—	0	—	—
Utah.....	17,011,046	14,080,044	82.5	1,379,209	8.1	1,602,393	9.4
Nevada.....	4,106,224	2,909,893	70.8	582,432	14.2	613,899	15.0
<b>PACIFIC:</b>							
Washington.....	67,776,527	65,088,718	96.0	1,027,734	1.5	1,660,075	2.5
Oregon.....	36,047,594	29,979,898	83.2	5,619,005	15.6	448,091	1.2
California.....	435,497,143	424,315,664	97.4	3,360,161	.8	7,821,318	1.8

1 Less than one-tenth of 1 per cent.

# CONSTRUCTION IN THE UNITED STATES

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**TABLE 9.—CONSTRUCTION WORK DURING 1929 PER SQUARE MILE AND PER CAPITA LOCATED WITHIN EACH GEOGRAPHIC DIVISION AND STATE**

AREA WITHIN WHICH WORK WAS EXECUTED	AREA		POPULATION IN 1920			VALUE OF CONSTRUCTION WORK EXECUTED BY ALL REPORTING ESTABLISHMENTS				
	Square miles	Per cent of United States	Number	Per cent of United States	Per square mile	Total	Per cent of United States	Per square mile	Per capita	
United States.....	2, 973, 770	100. 0	122, 775, 048	100. 0	41. 3	\$5, 759, 774, 790	100. 0	\$1, 937	\$48. 91	
<b>GEOGRAPHIC DIVISIONS:</b>										
New England.....	61, 076	2. 1	8, 166, 341	6. 7	131. 8	456, 997, 491	7. 9	7, 374	55. 96	
Middle Atlantic.....	100, 000	3. 4	26, 260, 750	21. 4	262. 6	1, 863, 840, 002	32. 4	18, 638	70. 97	
East North Central.....	245, 564	8. 3	25, 297, 185	20. 6	103. 0	1, 427, 728, 306	24. 8	5, 814	56. 44	
West North Central.....	510, 304	17. 2	13, 296, 915	10. 8	26. 0	402, 256, 018	7. 0	788	30. 25	
South Atlantic.....	269, 073	9. 0	15, 793, 639	12. 9	58. 7	412, 966, 617	7. 2	1, 535	26. 15	
East South Central.....	170, 500	6. 0	9, 887, 214	8. 0	55. 1	186, 230, 026	3. 2	1, 037	18. 84	
West South Central.....	426, 746	14. 4	12, 176, 830	9. 9	28. 3	341, 767, 440	5. 9	795	23. 07	
Mountain.....	859, 009	28. 9	3, 701, 789	3. 0	4. 3	114, 066, 728	2. 0	133	30. 81	
Pacific.....	318, 065	10. 7	8, 184, 433	6. 7	25. 8	553, 922, 162	9. 6	1, 741	67. 60	
<b>NEW ENGLAND:</b>										
Maine.....	29, 895	1. 0	797, 423	. 6	26. 7	24, 237, 746	. 4	811	30. 40	
New Hampshire.....	9, 031	. 3	465, 293	. 4	51. 5	26, 434, 565	. 4	2, 927	56. 81	
Vermont.....	9, 124	. 3	359, 611	. 3	39. 4	14, 093, 580	. 3	1, 643	41. 09	
Massachusetts.....	8, 039	. 3	4, 249, 614	3. 5	523. 6	207, 888, 069	3. 6	25, 860	48. 02	
Rhode Island.....	1, 067	(1)	687, 497	. 6	644. 3	36, 005, 520	. 6	33, 745	52. 37	
Connecticut.....	4, 820	. 2	1, 066, 903	1. 3	333. 4	147, 438, 011	2. 6	30, 689	91. 75	
<b>MIDDLE ATLANTIC:</b>										
New York.....	47, 654	1. 6	12, 683, 066	10. 3	264. 2	1, 032, 827, 436	18. 0	21, 673	82. 05	
New Jersey.....	7, 514	. 3	4, 041, 334	3. 3	537. 8	345, 530, 599	6. 0	45, 985	85. 50	
Pennsylvania.....	44, 832	1. 5	9, 631, 360	7. 8	214. 8	485, 481, 967	8. 4	10, 829	50. 41	
<b>EAST NORTH CENTRAL:</b>										
Ohio.....	40, 740	1. 4	6, 646, 697	5. 4	163. 1	340, 966, 332	6. 1	8, 590	52. 65	
Indiana.....	36, 045	1. 2	3, 238, 503	2. 6	89. 8	122, 957, 844	2. 1	3, 411	37. 97	
Illinois.....	56, 043	1. 9	7, 630, 654	6. 2	136. 2	487, 200, 490	8. 5	8, 693	63. 85	
Michigan.....	57, 480	1. 9	4, 842, 325	4. 0	84. 2	309, 399, 040	5. 4	5, 383	63. 89	
Wisconsin.....	55, 256	1. 9	2, 939, 006	2. 4	63. 2	168, 204, 600	2. 7	2, 863	53. 83	
<b>WEST NORTH CENTRAL:</b>										
Minnesota.....	80, 858	2. 7	2, 563, 953	2. 1	31. 7	77, 332, 361	1. 3	956	30. 16	
Iowa.....	55, 586	1. 9	2, 470, 939	2. 0	44. 5	77, 409, 592	1. 4	1, 394	31. 36	
Missouri.....	68, 727	2. 3	3, 629, 367	3. 0	52. 8	184, 340, 073	2. 3	1, 955	37. 01	
North Dakota.....	70, 183	2. 4	680, 845	. 5	9. 7	14, 937, 433	. 3	213	21. 97	
South Dakota.....	76, 868	2. 6	692, 849	. 6	9. 0	11, 737, 586	. 2	153	16. 94	
Nebraska.....	76, 808	2. 6	1, 377, 963	1. 1	17. 9	34, 651, 800	. 6	451	25. 15	
Kansas.....	81, 774	2. 7	1, 880, 999	1. 5	23. 0	51, 737, 173	. 9	633	27. 51	
<b>SOUTH ATLANTIC:</b>										
Delaware.....	1, 965	. 1	233, 380	. 2	121. 3	19, 933, 093	. 3	10, 144	83. 62	
Maryland.....	9, 941	. 3	1, 631, 526	1. 3	164. 1	91, 431, 191	1. 6	9, 197	56. 04	
District of Columbia.....	62	(1)	486, 369	. 4	7, 852. 7	51, 535, 073	. 9	832, 027	105. 95	
Virginia.....	40, 262	1. 4	2, 421, 851	2. 0	60. 2	49, 004, 985	. 8	1, 217	20. 23	
West Virginia.....	24, 022	. 8	1, 729, 205	1. 4	72. 0	36, 003, 678	. 6	1, 499	20. 82	
North Carolina.....	48, 740	1. 6	3, 170, 276	2. 6	65. 0	52, 210, 109	. 9	1, 071	16. 47	
South Carolina.....	30, 495	1. 0	1, 733, 765	1. 4	57. 0	27, 918, 371	. 5	916	16. 06	
Georgia.....	58, 725	2. 0	2, 908, 506	2. 4	49. 5	42, 691, 836	. 7	727	14. 68	
Florida.....	54, 301	1. 8	1, 468, 211	1. 2	26. 8	42, 137, 681	. 7	769	23. 73	
<b>EAST SOUTH CENTRAL:</b>										
Kentucky.....	40, 181	1. 3	2, 614, 589	2. 1	65. 1	53, 544, 404	. 9	1, 333	20. 48	
Tennessee.....	41, 687	1. 4	2, 616, 556	2. 1	62. 8	60, 435, 157	1. 0	1, 451	23. 12	
Alabama.....	51, 279	1. 7	2, 646, 248	2. 2	51. 6	50, 306, 369	. 9	981	19. 01	
Mississippi.....	46, 362	1. 6	2, 009, 821	1. 6	43. 4	21, 894, 096	. 4	472	10. 80	
<b>WEST SOUTH CENTRAL:</b>										
Arkansas.....	52, 525	1. 8	1, 854, 482	1. 5	35. 3	27, 582, 085	. 5	525	14. 87	
Louisiana.....	45, 409	1. 5	2, 101, 593	1. 7	46. 3	40, 761, 715	. 7	898	19. 40	
Oklahoma.....	69, 414	2. 3	2, 396, 040	2. 0	34. 5	57, 084, 925	1. 0	831	24. 08	
Texas.....	262, 398	8. 8	5, 824, 715	4. 7	22. 2	215, 738, 715	3. 7	822	37. 04	
<b>MOUNTAIN:</b>										
Montana.....	146, 131	4. 9	537, 606	. 4	3. 7	17, 330, 639	. 3	119	32. 24	
Idaho.....	83, 354	2. 8	445, 032	. 4	5. 3	8, 259, 626	. 1	99	18. 56	
Wyoming.....	97, 548	3. 3	225, 565	. 2	2. 3	6, 402, 379	. 1	66	28. 38	
Colorado.....	103, 658	3. 5	1, 035, 791	. 8	10. 0	32, 773, 722	. 6	316	31. 64	
New Mexico.....	122, 503	4. 1	423, 317	. 3	3. 5	9, 493, 601	. 2	78	22. 43	
Arizona.....	113, 810	3. 8	435, 573	. 4	3. 8	18, 996, 913	. 3	167	43. 61	
Utah.....	82, 184	2. 8	507, 847	. 4	6. 2	16, 056, 861	. 3	195	31. 62	
Nevada.....	109, 821	3. 7	91, 058	. 1	0. 8	4, 752, 987	. 1	43	62. 20	
<b>PACIFIC:</b>										
Washington.....	66, 836	2. 3	1, 563, 306	1. 3	23. 4	80, 394, 300	1. 4	1, 203	51. 42	
Oregon.....	95, 607	3. 2	953, 786	. 8	10. 0	33, 571, 725	. 6	351	35. 20	
California.....	155, 652	5. 2	5, 677, 251	4. 6	36. 5	439, 956, 137	7. 6	2, 826	77. 49	

1 Less than one-tenth of 1 per cent.

CONSTRUCTION INDUSTRY

TABLE 10.—CONSTRUCTION WORK DURING 1929 LOCATED WITHIN EACH GEOGRAPHIC DIVISION AND STATE, BY LOCATION OF CONTRACTING ESTABLISHMENTS EXECUTING THE WORK

AREA WITHIN WHICH WORK WAS EXECUTED	PROJECTED VALUE OF CONSTRUCTION WORK EXECUTED BY ESTABLISHMENTS LOCATED IN—									
	United States	New England division	Middle Atlantic division	East North Central division	West North Central division	South Atlantic division	East South Central division	West South Central division	Mountain division	Pacific division
United States.....	\$5,759,774,790	\$474,387,804	\$1,900,525,642	\$1,448,786,748	\$436,110,956	\$397,090,916	\$161,065,260	\$301,660,096	\$99,914,102	\$639,321,264
<b>GEOGRAPHIC DIVISIONS:</b>										
New England.....	450,997,401	414,405,477	38,536,077	3,543,423	171,687	280,827				
Middle Atlantic.....	1,863,840,002	34,048,800	1,760,825,467	36,514,333	8,439,654	17,132,683	650,065	1,282		221,028
East North Central.....	1,427,728,306	2,710,945	38,524,517	1,342,847,350	34,551,347	4,052,929	3,137,503	1,681,062	138,407	75,246
West North Central.....	402,256,018	2,646,045	4,706,719	24,540,116	362,317,234	1,250,021	2,915,620	3,091,256	657,888	121,619
South Atlantic.....	412,966,617	7,464,094	27,434,048	15,822,110	2,183,317	340,334,416	9,057,480	1,061,422		9,730
East South Central.....	189,230,026	764,309	6,145,437	9,014,468	1,958,274	22,107,613	140,582,481	5,067,454		
West South Central.....	341,767,440	4,620,213	11,757,587	10,555,802	18,713,170	2,770,839	5,015,611	286,415,090	1,387,881	530,638
Mountain.....	114,066,728	3,647	1,161,095	1,819,657	4,724,952	60,033		3,187,398	94,138,723	8,971,223
Pacific.....	553,922,162	7,054,584	5,434,695	4,132,499	3,051,323	101,655		604,523	3,591,203	529,391,780
<b>NEW ENGLAND:</b>										
Maine.....	24,237,746	22,812,880	1,264,510	157,686		2,064				
New Hampshire.....	26,434,665	23,855,027	2,353,453	78,095		137,390				
Vermont.....	14,993,680	13,664,579	1,192,709	87,824		18,737				
Massachusetts.....	207,888,069	197,348,459	3,031,214	2,300,434		147,614				
Rhode Island.....	30,005,620	33,358,302	2,447,377	190,348		4,203				
Connecticut.....	147,438,011	123,396,224	23,246,814	728,436		1,133				
<b>MIDDLE ATLANTIC:</b>										
New York.....	1,032,827,436	25,496,717	982,075,375	16,376,166	6,685,700	2,138,687	24,299			30,492
New Jersey.....	345,530,599	2,162,279	335,866,503	4,822,821	1,028,031	1,650,965				
Pennsylvania.....	485,481,067	6,389,894	448,883,589	15,815,346	725,923	13,343,031	632,366	1,282		190,536
<b>EAST NORTH CENTRAL:</b>										
Ohio.....	340,966,332	564,286	9,517,645	329,690,906	5,444,530	3,262,354	1,327,357	11,797	138,407	
Indiana.....	122,957,844	522,326	5,126,912	113,246,346	3,169,002	238,151	616,459	38,048		
Illinois.....	487,200,490	128,376	12,594,240	455,887,196	15,919,370	288,290	1,011,846	1,350,507		20,065
Michigan.....	309,399,040	1,373,620	10,240,983	293,019,864	3,983,307	264,134	181,841	280,710		54,581
Wisconsin.....	158,204,600	131,337	1,044,737	150,994,038	6,034,488					
<b>WEST NORTH CENTRAL:</b>										
Minnesota.....	77,332,361		1,442,353	4,648,214	71,241,749			45		
Iowa.....	77,499,562		106,772	3,994,545	72,756,459	94,272	479,810	67,734		
Missouri.....	134,340,073	2,286,336	2,857,981	12,466,091	111,750,559	636,556	2,241,867	2,100,693		
North Dakota.....	14,957,433		51,917	309,391	14,222,285				373,840	
South Dakota.....	11,737,586	2,776	14,083	192,518	11,314,980				213,229	
Nebraska.....	34,651,800	115,099	56,811	1,095,714	33,012,500	225,840	59,033	36,232	50,571	
Kansas.....	51,737,173	242,434	176,802	1,842,643	48,018,702	293,353	134,320	886,552	20,248	121,610
<b>SOUTH ATLANTIC:</b>										
Delaware.....	19,933,093	156,864	4,678,002	161,206		14,937,021				
Maryland.....	91,431,191	253,247	6,391,097	6,313,317	134,318	78,334,212				
District of Columbia.....	51,535,673	1,390,425	3,534,015	736,269	230,341	45,085,593				
Virginia.....	49,004,935	3,206,358	2,833,587	471,906	172,448	41,922,284		348,402		
West Virginia.....	36,003,678		5,003,992	3,374,849	1,333,112	25,259,797		1,031,928		
North Carolina.....	52,210,100	1,270,873	2,009,706	2,545,838	141,855	43,051,809		2,265,261		
South Carolina.....	27,913,371	687,173	648,953	523,010	12,279	24,847,533		15,037		9,730
Georgia.....	42,691,836	92,981	678,471	1,404,965	73,982	36,823,107		3,585,067		
Florida.....	42,137,881	397,173	706,225	285,720	85,032	38,472,970		1,269,603	971,058	
<b>EAST SOUTH CENTRAL:</b>										
Kentucky.....	53,544,404		2,038,094	4,092,224	623,622	3,472,838	42,194,120	223,506		
Tennessee.....	60,485,157	176,394	872,125	2,473,810	193,477	9,349,592	45,213,525	2,206,234		
Alabama.....	50,306,369	587,640	2,411,607	909,006	835,458	8,817,814	35,552,349	1,139,495		
Mississippi.....	21,894,096	275	823,611	639,418	302,717	467,369	17,622,487	2,038,219		
<b>WEST SOUTH CENTRAL:</b>										
Arkansas.....	27,582,085		234,042	1,499,204	3,846,642	123,538	3,353,332	18,524,427		
Louisiana.....	40,761,715	1,188,180	2,413,132	906,760	479,501	2,313,959	1,356,551	30,878,959	1,201,851	22,813
Oklahoma.....	57,684,926		376,925	2,018,839	3,712,768	26,886	21,298	51,306,195	71,532	60,432
Texas.....	215,738,715	3,432,033	8,732,588	6,130,940	10,674,259	306,466	284,430	135,616,118	114,498	447,303
<b>MOUNTAIN:</b>										
Montana.....	17,330,689			250,705	2,134,216			60,365	13,831,230	1,054,173
Idaho.....	8,259,626			40,761	15,123				6,991,100	1,206,642
Wyoming.....	6,402,379	3,647	5,715	97,139	690,313				5,452,462	153,103
Colorado.....	32,773,722		1,023,572	1,180,375	1,170,645			271,198	20,030,843	92,089
New Mexico.....	9,493,601		19,995	53,822	171,172	60,033		1,658,204	7,378,974	151,401
Arizona.....	18,996,913		81,102	5,250	609			1,177,931	13,226,547	4,506,474
Utah.....	16,056,861		25,711	179,725	542,874			19,700	14,843,729	448,122
Nevada.....	4,752,937			8,880					3,383,838	1,360,219
<b>PACIFIC:</b>										
Washington.....	80,394,300	4,878,126	14,185	2,585,278	691,817			67,652	869,813	71,287,429
Oregon.....	33,571,725		119,727	133,222	1,001,140			17,264	905,778	31,394,594
California.....	499,956,137	2,776,468	5,300,783	1,413,999	1,368,366	101,555		479,607	1,815,612	426,709,767

CONSTRUCTION IN THE UNITED STATES

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TABLE 10.—CONSTRUCTION WORK DURING 1929 LOCATED WITHIN EACH GEOGRAPHIC DIVISION AND STATE, BY LOCATION OF CONTRACTING ESTABLISHMENTS EXECUTING THE WORK—Continued

AREA WITHIN WHICH WORK WAS EXECUTED	PROJECTED VALUE OF CONSTRUCTION WORK EXECUTED BY ESTABLISHMENTS LOCATED IN—								
	New England division						Middle Atlantic division		
	Maine	New Hampshire	Vermont	Massachusetts	Rhode Island	Connecticut	New York	New Jersey	Pennsylvania
United States.....	\$17,948,176	\$13,719,122	\$8,907,049	\$274,668,199	\$33,481,376	\$126,563,882	\$1,071,943,527	\$295,938,720	\$532,643,395
<b>GEOGRAPHIC DIVISIONS:</b>									
New England.....	17,948,176	13,700,440	7,664,087	220,542,045	33,184,510	121,460,310	24,010,482	1,622,379	12,903,216
Middle Atlantic.....		9,673	342,962	28,261,113	346,866	5,088,276	1,017,908,209	279,951,100	468,876,158
East North Central.....				2,719,945			13,067,005	2,650,342	22,817,170
West North Central.....				2,646,645			1,476,071	7,635	3,223,013
South Atlantic.....				7,454,798		0,296	8,084,261	2,397,069	16,952,118
East South Central.....				764,309			1,095,973	3,393	5,046,071
West South Central.....				4,620,213			3,089,679	6,098,463	2,569,545
Mountain.....				3,047			14,781	1,026,069	119,645
Pacific.....				7,654,584			3,117,166	2,181,070	136,459
<b>NEW ENGLAND:</b>									
Maine.....	17,181,730	269,673	1,564	4,748,182	4,032	607,666	1,010,200	8,134	246,176
New Hampshire.....	632,862	12,017,289	128,712	10,403,962	132,350	549,852	35,627	32,750	2,282,076
Vermont.....	132,668	1,276,897	7,533,811	3,867,371	502,505	371,327	566,606		566,103
Massachusetts.....	907	145,590		191,891,448	2,521,294	2,789,220	6,697,439	328,382	1,005,393
Rhode Island.....				4,381,639	28,278,230	698,433	1,804,032	21,124	622,221
Connecticut.....				5,250,343	1,096,009	116,440,782	13,863,578	1,231,989	8,151,247
<b>MIDDLE ATLANTIC:</b>									
New York.....			342,962	20,053,356	226,897	4,873,502	948,644,295	14,065,167	19,365,913
New Jersey.....				1,908,690	119,969	133,620	52,354,320	262,882,854	20,629,329
Pennsylvania.....		9,673		6,269,067		81,154	16,999,594	3,003,079	428,880,916
<b>EAST NORTH CENTRAL:</b>									
Ohio.....				564,286			1,699,434	58,625	7,769,586
Indiana.....				522,326			1,850,094		3,266,918
Illinois.....				128,376			5,776,315	2,484,685	4,333,240
Michigan.....				1,373,620			3,552,094	107,032	6,581,867
Wisconsin.....				131,337			169,168		875,569
<b>WEST NORTH CENTRAL:</b>									
Minnesota.....							124,802		1,317,551
Iowa.....							74,885		31,887
Missouri.....				2,286,336			997,346	7,635	1,853,000
North Dakota.....							45,321		6,596
South Dakota.....				2,776			2,687		11,306
Nebraska.....				115,099			59,811		
Kansas.....				242,434			174,219		2,583
<b>SOUTH ATLANTIC:</b>									
Delaware.....				166,864			383,124	99,241	4,195,637
Maryland.....				253,247			1,867,390	474,497	4,049,210
District of Columbia.....				1,399,425			1,939,773	3,274	1,500,068
Virginia.....				3,200,292		66	1,261,807	81,149	1,541,131
West Virginia.....							397,908	61,251	4,044,833
North Carolina.....				1,270,873			917,493	1,643,167	349,046
South Carolina.....				684,561		2,612	115,894	34,497	498,592
Georgia.....				92,981			123,713		554,768
Florida.....				300,555		6,618	577,659	593	127,973
<b>EAST SOUTH CENTRAL:</b>									
Kentucky.....							25,780		2,012,314
Tennessee.....				176,394			286,557		535,598
Alabama.....				587,640			436,352	3,393	1,971,862
Mississippi.....				275			347,284		479,327
<b>WEST SOUTH CENTRAL:</b>									
Arkansas.....							211,293		23,739
Louisiana.....				1,188,180			1,702,557	650,650	59,925
Oklahoma.....							45,429	119,611	211,885
Texas.....				3,432,033			1,130,890	5,328,202	2,273,996
<b>MOUNTAIN:</b>									
Montana.....									
Idaho.....									
Wyoming.....				3,647					5,715
Colorado.....								1,026,669	1,903
New Mexico.....							9,881		10,114
Arizona.....									81,102
Utah.....							4,900		20,811
Nevada.....									
<b>PACIFIC:</b>									
Washington.....				4,878,126			5,842		8,343
Oregon.....							5,820		113,007
California.....				2,776,458			3,105,504	2,181,070	14,209

TABLE 10.—CONSTRUCTION WORK DURING 1929 LOCATED WITHIN EACH GEOGRAPHIC DIVISION AND STATE, BY LOCATION OF CONTRACTING ESTABLISHMENTS EXECUTING THE WORK—Continued

AREA WITHIN WHICH WORK WAS EXECUTED	PROJECTED VALUE OF CONSTRUCTION WORK EXECUTED BY ESTABLISHMENTS LOCATED IN—											
	East North Central division					West North Central division						
	Ohio	Indiana	Illinois	Michigan	Wisconsin	Minnesota	Iowa	Missouri	North Dakota	South Dakota	Nebraska	Kansas
United States .....	\$374, 153, 551	\$107, 936, 488	\$510, 494, 238	\$299, 596, 109	\$156, 618, 382	\$101, 800, 197	\$87, 976, 269	\$131, 173, 975	\$10, 971, 780	\$11, 130, 995	\$48, 098, 010	\$44, 959, 732
<b>GEOGRAPHIC DIVISIONS:</b>												
New England.....	921, 518		1, 082, 620	1, 476, 695	62, 590	1, 133	23, 451	147, 103				
Middle Atlantic.....	18, 356, 614	89, 731	10, 267, 323	5, 635, 465	2, 165, 195	1, 847, 612	5, 105, 839	1, 319, 430			166, 723	
East North Central.....	335, 499, 456	101, 743, 575	465, 950, 954	237, 671, 468	151, 981, 897	13, 650, 622	11, 906, 261	7, 330, 975		64, 481	1, 110, 246	438, 762
West North Central.....	2, 484, 657	140, 253	18, 421, 016	1, 996, 959	1, 500, 231	78, 220, 986	69, 524, 399	107, 704, 471	10, 925, 401	10, 740, 662	44, 577, 032	40, 564, 283
South Atlantic.....	12, 645, 427	234, 345	1, 624, 209	1, 115, 654	302, 475	1, 333, 063	59, 452	790, 167				635
East South Central.....	2, 579, 469	611, 732	5, 026, 649	648, 680	147, 923	61, 369	154, 480	1, 050, 704			378, 253	313, 468
West South Central.....	313, 238	3, 846, 015	5, 434, 865	117, 988	343, 696	1, 038, 684	1, 103, 797	12, 020, 215		206, 768	819, 436	3, 524, 270
Mountain.....	289, 625		946, 470	477, 787	105, 775	2, 643, 103	97, 509	704, 243	46, 379	119, 084	1, 046, 320	68, 314
Pacific.....	563, 547	1, 264, 837	1, 840, 127	455, 413	8, 575	3, 003, 625	1, 031	46, 667				
<b>NEW ENGLAND:</b>												
Maine.....	45, 294		71, 368	41, 024								
New Hampshire.....	3, 537		20, 074	55, 034								
Vermont.....	87, 619		137	68			18, 737					
Massachusetts.....	641, 331		765, 247	873, 268	20, 588		4, 714	142, 900				
Rhode Island.....	2, 009		123, 641	64, 698				4, 203				
Connecticut.....	141, 678		102, 153	442, 003	42, 002	1, 133						
<b>MIDDLE ATLANTIC:</b>												
New York.....	8, 375, 456	26, 156	4, 498, 960	3, 037, 371	438, 223	943, 746	4, 802, 559	849, 395				
New Jersey.....	1, 331, 961	15, 692	2, 400, 734	728, 567	286, 867	557, 559	46, 866	423, 006				
Pennsylvania.....	8, 599, 197	47, 883	3, 358, 634	1, 869, 527	1, 440, 105	346, 307	160, 464	46, 429			166, 723	
<b>EAST NORTH CENTRAL:</b>												
Ohio.....	315, 325, 851	1, 849, 508	7, 453, 069	4, 212, 760	558, 728	1, 948, 025	2, 498, 632	997, 923				
Indiana.....	4, 733, 123	94, 108, 323	11, 873, 939	2, 038, 038	487, 918	181, 291	2, 011, 725	889, 237			12, 901	74, 448
Illinois.....	7, 974, 640	2, 537, 237	438, 840, 385	2, 163, 185	4, 371, 819	2, 929, 126	6, 376, 929	5, 037, 175		64, 481	1, 097, 345	414, 314
Michigan.....	5, 973, 888	3, 210, 545	4, 494, 291	278, 254, 460	1, 086, 880	3, 339, 485	517, 757	126, 065				
Wisconsin.....	992, 264	37, 007	3, 234, 270	1, 003, 055	145, 676, 552	5, 252, 695	501, 218	280, 575				
<b>WEST NORTH CENTRAL:</b>												
Minnesota.....	63, 550		3, 996, 395	433, 379	154, 880	70, 327, 381	468, 557	364, 118	40, 013		41, 680	
Iowa.....	36, 255	2, 408	2, 587, 079	313, 441	1, 055, 362	2, 371, 105	65, 162, 195	203, 608		42, 164	4, 917, 327	
Missouri.....	1, 171, 226		10, 519, 274	720, 787	54, 804	1, 792, 142	2, 476, 200	100, 318, 703		1, 116, 029	4, 519, 864	1, 527, 621
North Dakota.....	2, 651	27, 085	181, 072	71, 313	27, 360	2, 837, 344	113, 866	13, 211	10, 854, 541	386, 651	16, 672	
South Dakota.....		15, 302	143, 287	33, 929		389, 002	838, 589	57, 145	30, 847	9, 195, 818	803, 579	
Nebraska.....	405, 682	25, 972	462, 430	41, 004	160, 626	895	153, 435	1, 571, 129			31, 070, 581	211, 460
Kansas.....	805, 373	75, 486	531, 479	383, 100	47, 199	503, 117	306, 557	5, 176, 497			3, 207, 329	38, 825, 202
<b>SOUTH ATLANTIC:</b>												
Delaware.....	119, 097		4, 358	37, 751								
Maryland.....	6, 081, 370		144, 478	144, 478			1, 550	132, 708				
District of Columbia.....	108, 772	6, 139	62, 857	257, 694	301, 437	1, 370	23, 979	204, 933				
Virginia.....	134, 375		225, 917	111, 114			1, 188	171, 260				
West Virginia.....	2, 313, 598	14, 931	474, 496	60, 524		1, 331, 684		1, 428				
North Carolina.....	2, 345, 176		65, 067	135, 595			2, 604	139, 251				
South Carolina.....	467, 071		55, 939	55, 939				12, 279				
Georgia.....	494, 967	80, 068	549, 404	273, 588	1, 038			73, 932				
Florida.....	74, 692	132, 307	50, 150	28, 571			80, 131	54, 206				635
<b>EAST SOUTH CENTRAL:</b>												
Kentucky.....	1, 606, 714	387, 837	2, 714, 647	234, 013	40, 013		111, 031	512, 591				
Tennessee.....	288, 070	223, 895	1, 590, 274	273, 239	98, 332	29, 699	41, 387	122, 391				
Alabama.....	645, 247		121, 743	141, 423	583			408, 303			312, 605	117, 550
Mississippi.....	39, 433		590, 980			31, 670	2, 002	7, 419			65, 648	195, 918
<b>WEST SOUTH CENTRAL:</b>												
Arkansas.....		30, 236	1, 468, 166	302		567, 688	432, 676	1, 859, 630		206, 768	38, 693	691, 187
Louisiana.....	270, 824		623, 793	350	11, 802	100, 360	31, 339	101, 558				156, 244
Oklahoma.....	236, 332	340, 360	1, 322, 326	116, 836	3, 035	25, 473	34, 362	1, 754, 762			294, 512	1, 603, 669
Texas.....	306, 082	3, 475, 419	2, 020, 580		323, 859	345, 163	555, 420	8, 214, 275			480, 231	1, 073, 170
<b>MOUNTAIN:</b>												
Montana.....	2, 206		80, 250	62, 474	105, 775	1, 987, 773	85, 053	609	22, 226		38, 555	
Idaho.....			14, 136	32, 625		1, 233		13, 885				
Wyoming.....			45, 045	52, 094		111, 552	12, 456	4, 306	24, 153	119, 084	418, 762	
Colorado.....	233, 541		783, 081	158, 753		630		515, 245			589, 003	65, 767
New Mexico.....	48, 800			5, 022				163, 625				2, 547
Arizona.....	1, 067		4, 183					609				
Utah.....	4, 011		5, 895	106, 819		541, 910		994				
Nevada.....			8, 880									
<b>PACIFIC:</b>												
Washington.....	537, 467		1, 738, 731	309, 080		680, 854	1, 031	0, 032				
Oregon.....	3, 553		60, 283	69, 381		991, 957		0, 183				
California.....	22, 522	1, 264, 837	41, 113	76, 952	8, 575	1, 330, 814		27, 552				



# CONSTRUCTION IN THE UNITED STATES

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TABLE 10.—CONSTRUCTION WORK DURING 1929 LOCATED WITHIN EACH GEOGRAPHIC DIVISION AND STATE, BY LOCATION OF CONTRACTING ESTABLISHMENTS EXECUTING THE WORK—Continued

AREA WITHIN WHICH WORK WAS EXECUTED	PROJECTED VALUE OF CONSTRUCTION WORK EXECUTED BY ESTABLISHMENTS LOCATED IN—								
	South Atlantic division								
	Delaware	Maryland	District of Columbia	Virginia	West Virginia	North Carolina	South Carolina	Georgia	Florida
United States.....	\$17,088, 113	\$99,469, 239	\$44,373, 891	\$49,703, 867	\$26,202, 206	\$51,746, 199	\$17,602, 619	\$50,896, 084	\$40,008, 768
<b>GEOGRAPHIC DIVISIONS:</b>									
New England.....	70,268	31,908	13,451	10,811	137,390	10,999			
Middle Atlantic.....	1,880,494	9,814,421	1,240,422	2,160,794	620,261	1,086,105		237,496	92,690
East North Central.....	5,705	443,481	961,292	550,199	1,564,533	136,444		206,120	185,146
West North Central.....		29,511	96,179			871,995		6,268	246,458
South Atlantic.....	15,131,646	86,482,690	42,010,191	43,108,410	22,504,173	46,504,422	16,881,208	41,064,142	30,047,534
East South Central.....		2,667,223	52,296	3,275,146	1,375,849	3,257,098	712,057	7,905,850	2,862,089
West South Central.....				592,507		717,938	3,086	1,236,009	221,299
Mountain.....						60,033			
Pacific.....						101,555			
<b>NEW ENGLAND:</b>									
Maine.....			2,664						
New Hampshire.....					137,390				
Vermont.....			9,731						
Massachusetts.....	60,848								
Rhode Island.....						5,290			
Connecticut.....	9,920	31,908	1,056	10,811		5,709			
<b>MIDDLE ATLANTIC:</b>									
New York.....	117,661	1,573,291	81,106	49,430	72,614	151,880			92,690
New Jersey.....	581,511	240,938	8,827	73,890		745,809			
Pennsylvania.....	1,181,322	8,000,192	1,150,489	2,037,475	547,047	188,410		237,496	
<b>EAST NORTH CENTRAL:</b>									
Ohio.....	2,315	335,983	907,775	488,073	1,492,339	8,978		26,886	
Indiana.....		55,001		62,126	304	120,720			
Illinois.....		42,881	53,517			6,746			185,146
Michigan.....	3,390	9,611			71,890			170,243	
Wisconsin.....									
<b>WEST NORTH CENTRAL:</b>									
Minnesota.....									
Iowa.....			94,272						
Missouri.....		29,511	1,907			605,133			
North Dakota.....									
South Dakota.....									
Nebraska.....							6,268	219,572	
Kansas.....						266,467		26,886	
<b>SOUTH ATLANTIC:</b>									
Delaware.....	14,102,817	723,777		40,025		70,402			
Maryland.....	271,306	75,320,985	1,342,872	531,312	478,344	345,363		44,030	
District of Columbia.....	62,002	5,244,903	38,416,152	850,974		225,996	129,802	755,704	
Virginia.....	302,735	742,534	1,313,063	36,950,362	44,946	1,435,380	261,063	837,766	34,425
West Virginia.....	337,385	798,623	84,006	1,743,237	21,980,883	294,704	8,238	12,031	
North Carolina.....	1,240	1,178,871	766,474	1,010,748		36,627,164	1,355,057	2,008,375	103,880
South Carolina.....		2,307,840	84,487	1,220,785		2,858,306	13,985,880	3,273,453	1,116,777
Georgia.....			2,475	661,369		1,753,307	1,141,148	32,841,725	423,173
Florida.....	54,161	105,187	662	99,598		1,893,710		1,290,403	34,969,279
<b>EAST SOUTH CENTRAL:</b>									
Kentucky.....		792,377	5,200	1,774,236	406,458	17,125	73,522	313,830	
Tennessee.....		1,874,851	144	1,183,376	427,807	2,754,930	309,285	1,733,991	1,065,208
Alabama.....			46,862	281,226	451,584	471,786	329,250	5,537,230	1,679,876
Mississippi.....				36,308		13,257		300,799	117,005
<b>WEST SOUTH CENTRAL:</b>									
Arkansas.....						250		84,168	30,120
Louisiana.....				592,507		429,156	3,086	1,107,031	182,179
Oklahoma.....								26,886	
Texas.....						238,532		17,924	
<b>MOUNTAIN:</b>									
Montana.....									
Idaho.....									
Wyoming.....									
Colorado.....									
New Mexico.....						60,033			
Arizona.....									
Utah.....									
Nevada.....									
<b>PACIFIC:</b>									
Washington.....									
Oregon.....									
California.....						101,555			

## CONSTRUCTION INDUSTRY

TABLE 10.—CONSTRUCTION WORK DURING 1929 LOCATED WITHIN EACH GEOGRAPHIC DIVISION AND STATE, BY LOCATION OF CONTRACTING ESTABLISHMENTS EXECUTING THE WORK—Continued

AREA WITHIN WHICH WORK WAS EXECUTED	PROJECTED VALUE OF CONSTRUCTION WORK EXECUTED BY ESTABLISHMENTS LOCATED IN—									
	East South Central division				West South Central division				Mountain division <sup>1</sup>	
	Kentucky	Tennessee	Alabama	Mississippi	Arkansas	Louisiana	Oklahoma	Texas	Montana	Idaho
United States.....	\$44,732,149	\$60,896,065	\$42,364,627	\$13,971,819	\$18,039,916	\$33,871,560	\$54,376,966	\$195,372,624	\$13,486,491	\$8,394,593
<b>GEOGRAPHIC DIVISIONS:</b>										
New England.....										
Middle Atlantic.....	13,761	182,697	460,207		1,282					
East North Central.....	2,024,270		1,113,233		14,544		542,852	1,123,666		
West North Central.....	59,033	2,340,581	615,006		252,480		1,562,640	1,276,136	138,623	235,217
South Atlantic.....	1,001,622	5,810,886	2,839,982	4,990		666,670		394,752		
East South Central.....	41,516,218	49,856,089	36,393,129	13,342,045	347,018	3,316,451	593,148	1,400,837		
West South Central.....	117,245	3,206,412	1,067,170	624,784	17,424,592	29,888,469	51,391,369	187,711,269		
Mountain.....							285,957	2,901,441	13,147,923	7,044,808
Pacific.....							564,623	198,945		1,114,558
<b>NEW ENGLAND:</b>										
Maine.....										
New Hampshire.....										
Vermont.....										
Massachusetts.....										
Rhode Island.....										
Connecticut.....										
<b>MIDDLE ATLANTIC:</b>										
New York.....			24,299							
New Jersey.....										
Pennsylvania.....	13,761	182,697	435,908		1,282					
<b>EAST NORTH CENTRAL:</b>										
Ohio.....	920,330		407,018		11,080			717		
Indiana.....	299,408		317,051				38,048			
Illinois.....	799,008		211,848				504,804	845,703		
Michigan.....	4,525		177,316		3,464			277,246		
Wisconsin.....										
<b>WEST NORTH CENTRAL:</b>										
Minnesota.....								45		
Iowa.....			479,810		11,020		56,714			
Missouri.....		2,218,290	23,567		87,520		968,188	1,054,985		
North Dakota.....									138,623	235,217
South Dakota.....										
Nebraska.....	59,033						9,656	26,576		
Kansas.....		122,291	12,529		153,940		538,082	194,530		
<b>SOUTH ATLANTIC:</b>										
Delaware.....										
Maryland.....										
District of Columbia.....										
Virginia.....	23,860	257,147	67,395							
West Virginia.....	627,185	404,743								
North Carolina.....		1,940,694	324,567					15,037		
South Carolina.....		2,673	1,154,646					42,104		
Georgia.....	317,587	2,129,551	1,187,929					33,223		
Florida.....	32,990	1,076,078	155,445	4,990		666,670		304,388		
<b>EAST SOUTH CENTRAL:</b>										
Kentucky.....	40,845,204	1,140,270	208,646				223,506			
Tennessee.....	631,058	42,783,225	1,478,173	321,069	824,376	544,651	107,510	1,139,697		
Alabama.....	39,956	1,969,077	33,004,091	509,225	18,601	1,031,983	71,161	67,750		
Mississippi.....		3,433,517	1,677,219	12,511,751	4,041	1,739,817	100,971	193,390		
<b>WEST SOUTH CENTRAL:</b>										
Arkansas.....	27,034	2,413,066	777,858	135,374	16,129,666	824,351	523,196	1,047,214		
Louisiana.....	77,694	681,367	108,080	459,410	623,943	28,356,351	84,624	1,809,041		
Oklahoma.....	3,759	17,539			195,048		49,189,667	2,011,480		
Texas.....	8,758	94,440	181,232		470,935	707,767	1,593,882	182,843,534		
<b>MOUNTAIN:</b>										
Montana.....								60,365	12,993,056	209,463
Idaho.....									119,214	6,276,899
Wyoming.....									35,653	336,204
Colorado.....							199,767	71,441		
New Mexico.....							86,200	1,572,004		
Arizona.....								1,177,931		
Utah.....								19,700		79,860
Nevada.....										142,202
<b>PACIFIC:</b>										
Washington.....								67,652	198,945	438,614
Oregon.....								17,264		598,064
California.....								479,607		77,880

<sup>1</sup> See p. 1353 for other States of the Mountain division.

# CONSTRUCTION IN THE UNITED STATES

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TABLE 10.—CONSTRUCTION WORK DURING 1929 LOCATED WITHIN EACH GEOGRAPHIC DIVISION AND STATE, BY LOCATION OF CONTRACTING ESTABLISHMENTS EXECUTING THE WORK—Continued

AREA WITHIN WHICH WORK WAS EXECUTED	PROJECTED VALUE OF CONSTRUCTION WORK EXECUTED BY ESTABLISHMENTS LOCATED IN—								
	Mountain division—Continued						Pacific division		
	Wyoming	Colorado	New Mexico	Arizona	Utah	Nevada	Washington	Oregon	California
United States.....	\$3,989,764	\$32,676,876	\$7,675,061	\$12,574,457	\$17,011,646	\$4,106,224	\$37,776,527	\$38,047,504	\$435,497,143
GEOGRAPHIC DIVISIONS:									
New England.....									
Middle Atlantic.....									221,028
East North Central.....		138,407					54,581		20,665
West North Central.....		81,007	180,082		22,959				121,619
South Atlantic.....									9,730
East South Central.....									
West South Central.....		1,332,312	55,569					60,432	470,206
Mountain.....	3,958,828	31,125,150	7,385,979	12,574,457	15,409,253	3,492,325	1,605,494	387,659	6,978,070
Pacific.....	30,936		53,431		1,679,434	613,899	66,118,452	35,599,503	427,675,825
NEW ENGLAND:									
Maine.....									
New Hampshire.....									
Vermont.....									
Massachusetts.....									
Rhode Island.....									
Connecticut.....									
MIDDLE ATLANTIC:									
New York.....									30,492
New Jersey.....									
Pennsylvania.....									100,536
EAST NORTH CENTRAL:									
Ohio.....		138,407							
Indiana.....									
Illinois.....									20,665
Michigan.....							54,581		
Wisconsin.....									
WEST NORTH CENTRAL:									
Minnesota.....									
Iowa.....									
Missouri.....									
North Dakota.....									
South Dakota.....		33,147	180,082						
Nebraska.....		27,612			22,959				
Kansas.....		20,248							121,619
SOUTH ATLANTIC:									
Delaware.....									
Maryland.....									
District of Columbia.....									
Virginia.....									
West Virginia.....									
North Carolina.....									9,730
South Carolina.....									
Georgia.....									
Florida.....									
EAST SOUTH CENTRAL:									
Kentucky.....									
Tennessee.....									
Alabama.....									
Mississippi.....									
WEST SOUTH CENTRAL:									
Arkansas.....									
Louisiana.....		1,201,851							22,813
Oklahoma.....		15,963	55,569					60,432	
Texas.....		114,498							447,393
MOUNTAIN:									
Montana.....		339,150			289,561		917,047	51,197	85,929
Idaho.....		75,929			519,058		518,375	196,165	494,102
Wyoming.....	3,958,036	825,738	146,254		149,887		146,285		6,818
Colorado.....	192	23,797,365	210,535		22,751				92,089
New Mexico.....		558,086	6,820,888						151,401
Arizona.....		377,489	208,302	12,574,457		66,299			4,505,474
Utah.....		151,393			14,030,044		582,432	140,297	307,825
Nevada.....					331,653	2,909,893	25,787		1,334,432
PACIFIC:									
Washington.....	30,936				75,827	125,491	65,088,718	3,411,004	2,737,707
Oregon.....					307,714		842,242	29,979,898	572,454
California.....			53,431		1,195,893	488,408	185,492	2,208,601	424,315,664