

# Value of Construction Put in Place

May  
1999

Issued August 1999

C30/99-5

## Current Construction Reports



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

*Helping You Make Informed Decisions*

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



## ACKNOWLEDGMENTS

This report was developed in the U.S. Census Bureau's Manufacturing and Construction Division. It was prepared under the general direction of **George Roff**, Chief, Construction Expenditures Branch. **Mike Davis, Joe Huesman, Kathy McDonald-Johnson, Delsey Newman, Linda Mersch, John P. Hill, Edna Free, Brenda Swann-Newman, Amy Wilder, Maryellen Buffington, and Brenda Jordan** performed specific activities related to the development, presentation and review of the data.

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# Introduction

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## **ANNUAL DATA BACK TO 1994 AND MONTHLY DATA BACK TO 1996 ARE SHOWN IN THIS REPORT**

Construction put in place during May 1999 was estimated at a seasonally adjusted annual rate of \$694.3 billion, 1(±5) percent below the revised April estimate of \$700.8 billion. The May figure represents a 7 percent increase over May 1998.

In constant (1992) dollars, the May annual rate was \$552.9 billion, 1(±5) percent below the revised estimate of \$559.0 billion for April.

### **DESCRIPTION OF CURRENT REVISIONS**

In each May report, unadjusted value-in-place estimates are revised to incorporate additional data not previously available. Seasonally adjusted statistics are also revised using newly computed seasonal factors. The revised factors for January 1996-December 1998 were computed using data through April 1999. The revised factors for January-May 1999 were computed using data through May 1999. See Appendix D, Adjustments for Seasonal Variations and Cost Changes.

Annual statistics reflecting all revisions are shown in Tables 1 and 2. Monthly estimates for January 1996 through May 1999 are presented in Tables 3-10. Monthly and annual data back to 1964 are available upon request or on the Internet at [www.census.gov/const/www/c30index.html](http://www.census.gov/const/www/c30index.html).

### **RELATIONSHIP OF VALUE OF CONSTRUCTION PUT IN PLACE TO STRUCTURES IN GDP**

The estimates shown in this report differ from the estimates of structures components of the gross domestic product (GDP) as developed by the Bureau of Economic Analysis (BEA), because of differences in coverage, estimation procedures, classification, and the timing of revisions.

#### **Coverage Differences**

GDP estimates of the structures components of gross private domestic fixed investment exclude the imputed interest amount of the allowances for funds used during construction of public utility plants; these amounts are included in the value-in-place estimates. In addition, GDP estimates include the following items not included in the value-in-place series:

1. Expenditures on new manufactured homes.
2. Expenditures for petroleum and natural gas well drilling and exploration.
3. Expenditures for construction of mine shafts and mining exploration.
4. Brokers' commissions on the sale of new and existing structures.
5. Net value of purchases of used structures from the public sector by the private sector.
6. Expenditures for Federal Government structures located outside the United States.

### **Estimation Procedures Differences**

Effective with the January 1996 comprehensive revision of the national income and product accounts (NIPAs), the estimates of the structures components of GDP for 1992 are estimated as follows:<sup>1</sup>

#### **Private Structures**

Estimates of residential structures are the value-in-place estimates.

Estimates of all components of nonresidential buildings, except industrial buildings, are prepared by BEA as the sum of "new" structures from the value-in-place estimates plus "improvements to existing structures" estimates based on the Department of Energy's Commercial Buildings Energy Consumption Survey. The estimate of industrial buildings is prepared by BEA based on the Census Bureau's Annual Capital Expenditures Survey.

Estimates of public utility structures are the value-in-place estimates, adjusted by BEA to exclude remaining allowances for funds used during construction (imputed interest).

The estimate of farm structures is the value-in-place estimate.

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<sup>1</sup>For additional information, see the January/February 1996 *Survey of Current Business*, page 5 and Tables 5.6 and 5.14.

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The estimate of all other private nonresidential structures is prepared by BEA as an extrapolation of a 1982 benchmark estimate using the corresponding value-in-place series.

### **Government Structures**

Estimates of state and local structures are the value-in-place estimates.

Estimates of all components of Federal structures are the value-in-place estimates except housing and military facilities; these two estimates are prepared by BEA from Department of Defense data.

### **Residential Improvements**

In the quarterly estimate of GDP, Consumer Expenditure Survey (CES) estimates of residential improvements are not usually available. Consequently, BEA projects estimates for the current quarter and normally replaces the projections with the CES estimates in the annual NIPA revision.

### **Classification Differences**

BEA classifies dormitories, fraternity and sorority houses, etc. as private residential structures. They are classified in the educational component of private nonresidential buildings in the value-in-place series.

BEA classifies Federal Government expenditures for military family housing in the defense purchases component of GDP. These expenditures are classified in the housing component of the value-in-place series. BEA separates atomic energy related construction and hospital construction into the defense and nondefense components; they are not separated in the value-in-place series.

BEA classifies Federal Government expenditures on structures by the Coast Guard in the nondefense purchases component of GDP. These expenditures are classified in the military facilities component of the value-in-place series.

### **Timing of Revisions**

Because of differences in the timing of revisions, not all revisions to the value-in-place estimates have been incorporated in the NIPAs.

### **ADDITIONAL DATA**

Additional data related to the value of construction put in place can be found in the following publications:

- Current Construction Reports, *Value of Construction Put in Place: July 1998*, C30/98-7, U.S. Department of Commerce, U.S. Census Bureau, Washington, DC, 1998; contains annual value of construction put in place for private nonresidential buildings by geographic area and detailed types of construction for 1993 to 1997.
- Current Construction Reports, *Value of New Construction Put in Place: October 1992*, C30/92-10, U.S. Department of Commerce, U.S. Census Bureau, Washington, DC, 1992; contains total time and monthly progress from start to completion for private nonresidential buildings and for state and local construction.
- Current Construction Reports, *Value of New Construction Put in Place in the United States, 1964 to 1980*, C30-80 supplement, U.S. Department of Commerce, U.S. Census Bureau, Washington, DC, 1981; contains annual data for 1915 to 1963.
- Current Construction Reports Special Study, *Expenditures for Nonresidential Improvements and Repairs: 1992*, U.S. Department of Commerce, U.S. Census Bureau, Washington, DC, 1994.

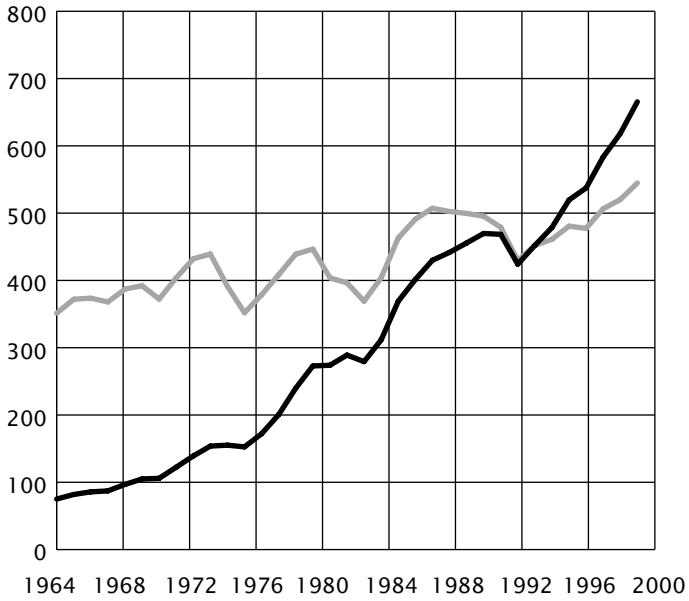


# Annual Value of Construction Put in Place: 1964-1998

— Current dollars  
— 1992 dollars

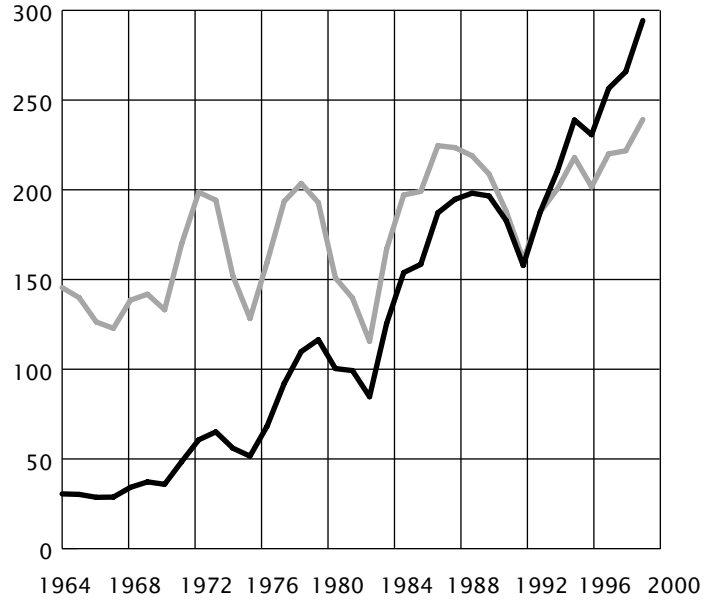
## Total Construction

Billions of dollars



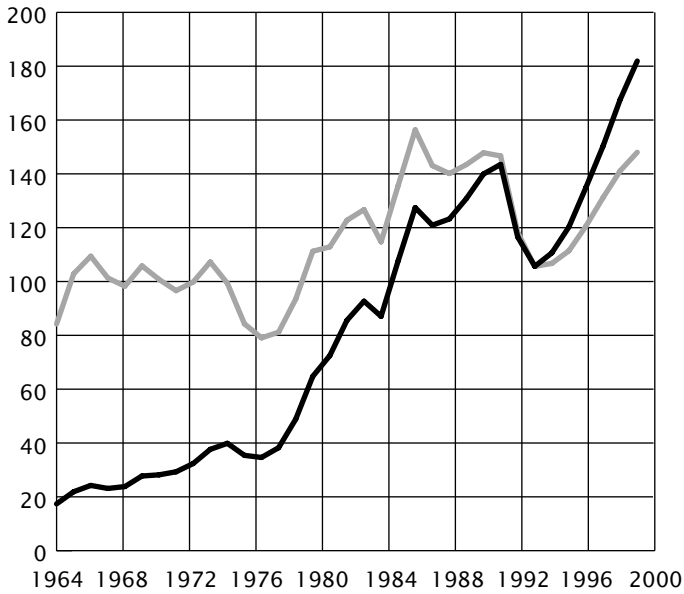
## Private Residential Construction

Billions of dollars



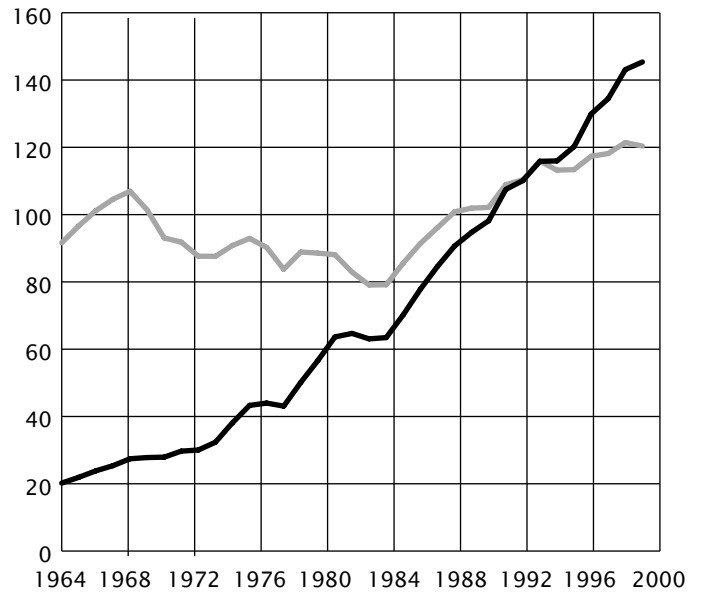
## Private Nonresidential Construction

Billions of dollars



## Public Construction

Billions of dollars



Source: U.S. Census Bureau, Value of Construction Put in Place.

**Table 1. Annual Value of Construction Put in Place: 1994-1998**

[Millions of dollars]

Type of construction	Current dollars					Constant (1992) dollars				
	1994	1995 <sup>r</sup>	1996 <sup>r</sup>	1997 <sup>r</sup>	1998 <sup>r</sup>	1994	1995 <sup>r</sup>	1996 <sup>r</sup>	1997 <sup>r</sup>	1998 <sup>r</sup>
<b>Total construction</b> .....	<b>519,539</b>	<b>537,409</b>	<b>583,445</b>	<b>618,225</b>	<b>665,446</b>	<b>480,620</b>	<b>477,386</b>	<b>506,485</b>	<b>520,123</b>	<b>544,729</b>
<b>Private construction</b> .....	<b>399,346</b>	<b>407,477</b>	<b>448,969</b>	<b>475,123</b>	<b>520,073</b>	<b>367,247</b>	<b>360,040</b>	<b>388,324</b>	<b>398,699</b>	<b>424,345</b>
Residential buildings .....	238,874	230,688	256,460	265,863	294,326	218,005	201,677	220,017	221,756	239,201
New housing units .....	167,919	162,898	179,448	187,328	213,909	153,250	142,413	153,966	156,248	173,828
1 unit .....	153,838	145,009	159,124	164,444	189,453	140,416	126,773	136,516	137,156	153,937
2 units or more .....	14,081	17,889	20,324	22,883	24,457	12,833	15,640	17,450	19,092	19,891
Improvements .....	70,955	67,790	77,012	78,535	80,417	64,755	59,264	66,052	65,509	65,372
Nonresidential buildings .....	120,285	135,022	150,350	167,610	181,915	111,416	120,627	131,188	141,129	148,017
Industrial .....	28,947	32,505	32,657	31,359	32,270	26,803	29,043	28,503	26,405	26,269
Office .....	22,178	25,613	27,886	34,305	41,541	20,553	22,891	24,329	28,876	33,803
Hotels, motels .....	4,648	7,112	10,912	12,898	14,904	4,308	6,351	9,521	10,864	12,121
Other commercial .....	37,551	42,654	48,188	51,809	53,783	34,756	38,098	42,042	43,628	43,749
Religious .....	3,869	4,326	4,534	5,777	6,729	3,584	3,864	3,955	4,861	5,472
Educational .....	4,822	5,493	6,742	8,693	9,629	4,471	4,908	5,880	7,316	7,840
Hospital and institutional .....	12,268	11,248	11,780	13,546	13,663	11,377	10,051	10,280	11,413	11,121
Miscellaneous <sup>1</sup> .....	6,002	6,071	7,650	9,223	9,395	5,565	5,421	6,677	7,767	7,643
Farm nonresidential .....	3,226	3,014	3,658	3,815	3,891	2,990	2,692	3,192	3,210	3,165
Public utilities .....	34,071	35,859	36,070	35,544	37,267	32,074	32,401	31,771	30,644	31,705
Telecommunications .....	10,121	11,093	11,772	11,698	12,441	9,785	10,073	10,245	9,985	10,612
Other public utilities .....	23,950	24,766	24,298	23,846	24,826	22,289	22,328	21,525	20,659	21,093
Railroads .....	3,340	3,509	4,398	4,922	5,320	3,186	3,201	3,894	4,204	4,489
Electric light and power .....	14,918	14,049	11,211	11,260	11,574	13,877	12,656	9,914	9,783	9,827
Gas .....	4,694	6,279	7,674	6,695	6,667	4,308	5,637	6,814	5,828	5,697
Petroleum pipelines .....	998	929	1,015	969	1,265	918	834	903	843	1,080
All other private <sup>2</sup> .....	2,890	2,893	2,431	2,292	2,674	2,763	2,643	2,156	1,960	2,256
<b>Public construction</b> .....	<b>120,193</b>	<b>129,933</b>	<b>134,476</b>	<b>143,102</b>	<b>145,373</b>	<b>113,373</b>	<b>117,346</b>	<b>118,161</b>	<b>121,424</b>	<b>120,384</b>
Buildings .....	49,446	57,754	60,047	63,489	66,137	45,728	51,506	52,348	53,424	53,810
Housing and redevelopment ..	3,835	4,698	4,113	3,795	4,047	3,495	4,108	3,532	3,165	3,291
Industrial .....	1,465	1,508	1,389	999	1,012	1,358	1,348	1,214	843	824
Educational .....	20,361	25,783	27,148	28,915	29,916	18,838	23,027	23,693	24,340	24,336
Hospital .....	3,951	4,236	4,472	4,934	3,978	3,663	3,785	3,905	4,157	3,239
Other <sup>3</sup> .....	19,834	21,528	22,924	24,846	27,183	18,373	19,238	20,004	20,919	22,119
Highways and streets .....	37,419	37,616	39,860	44,292	44,792	36,219	34,501	35,258	37,833	37,525
Military facilities .....	2,318	3,011	2,591	2,556	2,578	2,196	2,728	2,280	2,169	2,131
Conservation and development ..	6,363	6,308	5,910	5,612	5,511	5,996	5,724	5,245	4,801	4,681
Sewer systems .....	8,700	8,420	9,142	9,166	8,707	8,199	7,640	8,110	7,842	7,398
Water supply facilities .....	4,647	4,709	5,234	5,662	5,871	4,237	4,186	4,550	4,817	4,903
Miscellaneous public <sup>4</sup> .....	11,301	12,116	11,691	12,325	11,777	10,799	11,060	10,370	10,537	9,936

<sup>r</sup>Revised.

<sup>1</sup>Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc.

<sup>2</sup>Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc.

<sup>3</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc.

<sup>4</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

**Table 2. Annual Value of Public Construction Put in Place: 1994-1998**

[Millions of dollars]

Type of construction	Current dollars					Constant (1992) dollars				
	1994	1995 <sup>r</sup>	1996 <sup>r</sup>	1997 <sup>r</sup>	1998 <sup>r</sup>	1994	1995 <sup>r</sup>	1996 <sup>r</sup>	1997 <sup>r</sup>	1998 <sup>r</sup>
<b>Total public construction . . . .</b>	<b>120,193</b>	<b>129,933</b>	<b>134,476</b>	<b>143,102</b>	<b>145,373</b>	<b>113,373</b>	<b>117,346</b>	<b>118,161</b>	<b>121,424</b>	<b>120,384</b>
<b>State and local construction . . . . .</b>	<b>105,753</b>	<b>114,181</b>	<b>119,151</b>	<b>129,009</b>	<b>130,950</b>	<b>99,804</b>	<b>103,132</b>	<b>104,680</b>	<b>109,475</b>	<b>108,422</b>
Total buildings . . . . .	44,303	51,711	53,817	57,382	60,109	40,972	46,117	46,917	48,287	48,904
Housing and redevelopment . . . . .	3,389	4,122	3,432	3,118	3,504	3,089	3,605	2,947	2,600	2,849
Educational . . . . .	20,335	25,757	27,135	28,895	29,901	18,814	23,003	23,683	24,324	24,324
Hospital . . . . .	3,099	3,195	3,313	3,683	2,968	2,875	2,854	2,892	3,103	2,417
Other <sup>1</sup> . . . . .	17,480	18,638	19,936	21,685	23,736	16,195	16,654	17,395	18,260	19,313
Highways and streets . . . . .	36,991	37,308	39,492	44,031	44,440	35,805	34,218	34,933	37,610	37,230
Conservation and development . . . . .	1,988	2,140	2,066	2,244	1,939	1,872	1,943	1,833	1,919	1,648
Sewer systems . . . . .	8,700	8,420	9,142	9,166	8,707	8,199	7,640	8,110	7,842	7,398
Water supply facilities . . . . .	4,647	4,709	5,234	5,662	5,871	4,237	4,186	4,550	4,817	4,903
Miscellaneous nonbuilding <sup>2</sup> . . . . .	9,125	9,893	9,401	10,525	9,884	8,719	9,029	8,336	8,999	8,339
<b>Federal construction . . . . .</b>	<b>14,440</b>	<b>15,751</b>	<b>15,325</b>	<b>14,093</b>	<b>14,423</b>	<b>13,569</b>	<b>14,214</b>	<b>13,482</b>	<b>11,949</b>	<b>11,962</b>
Total buildings . . . . .	5,142	6,043	6,230	6,107	6,028	4,755	5,390	5,430	5,137	4,906
Housing . . . . .	446	576	681	677	543	406	503	585	565	442
Industrial . . . . .	1,465	1,508	1,389	999	1,012	1,358	1,348	1,214	843	824
Educational . . . . .	26	27	12	19	15	24	24	11	16	12
Hospital . . . . .	851	1,041	1,159	1,251	1,010	789	931	1,013	1,053	823
Other <sup>3</sup> . . . . .	2,354	2,891	2,989	3,161	3,448	2,178	2,584	2,608	2,659	2,806
Highways and streets . . . . .	428	308	368	261	352	414	283	326	223	295
Military facilities . . . . .	2,318	3,011	2,591	2,556	2,578	2,196	2,728	2,280	2,169	2,131
Conservation and development . . . . .	4,376	4,167	3,845	3,368	3,572	4,124	3,781	3,412	2,882	3,034
Miscellaneous public <sup>4</sup> . . . . .	2,176	2,223	2,291	1,800	1,893	2,080	2,032	2,034	1,538	1,596

<sup>r</sup>Revised..

<sup>1</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers, etc.

<sup>2</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

<sup>3</sup>Includes Federal office buildings, prisons, courthouses, space facilities, postal facilities, etc.

<sup>4</sup>Includes Federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

Table 3a. **Monthly Value of Construction Put in Place: May 1997-May 1999— Not Seasonally Adjusted in Current Dollars**

[Millions of dollars]

Period	Total construction	Private construction															All other private <sup>5</sup>	
		Total <sup>1</sup>	Residential buildings					Nonresidential buildings								Public utilities <sup>4</sup>		
			Total <sup>2</sup>	New housing units			Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous <sup>3</sup>	Total		Telecommunications
				Total	1 unit	2 units or more												
<b>YEAR TO DATE</b>																		
May 1998	239,024	189,456	104,921	76,282	66,521	9,761	69,611	12,976	16,164	5,327	19,720	2,428	3,913	5,519	3,564	(NA)	4,830	952
May 1999	259,860	205,657	118,644	89,543	78,528	11,016	72,605	10,774	18,775	6,719	20,815	2,821	3,359	5,145	4,197	(NA)	(NA)	1,127
Percent change	9	9	13	17	18	13	4	-17	16	26	6	16	-14	-7	18	(NA)	(NA)	18
<b>MONTHLY DATA</b>																		
1997: May <sup>f</sup>	52,449	40,536	23,285	15,919	13,819	2,100	13,709	2,484	2,643	1,151	4,319	484	715	1,103	811	(NA)	952	175
June <sup>f</sup>	55,830	42,541	24,528	16,602	14,594	2,009	14,156	2,592	2,783	1,163	4,497	443	817	1,089	773	(NA)	999	186
July <sup>f</sup>	58,189	44,113	25,066	17,226	15,337	1,888	14,858	2,746	3,018	1,163	4,738	469	874	1,060	791	(NA)	1,078	208
August <sup>f</sup>	60,106	45,251	25,538	17,668	15,646	2,022	15,273	2,787	3,079	1,121	4,917	493	898	1,176	803	(NA)	1,000	231
September <sup>f</sup>	59,580	44,720	24,938	17,760	15,762	1,998	15,410	2,870	3,124	1,086	4,870	562	848	1,221	830	(NA)	1,095	221
October <sup>f</sup>	58,238	44,217	24,925	17,678	15,506	2,173	15,217	2,843	3,254	1,115	4,675	583	789	1,164	794	(NA)	1,128	256
November <sup>f</sup>	53,292	41,187	23,506	16,857	14,889	1,968	14,456	2,664	3,171	1,050	4,321	574	748	1,153	775	(NA)	967	222
December <sup>f</sup>	47,493	36,966	20,070	14,533	12,606	1,926	13,983	2,782	3,098	1,062	3,965	537	694	1,073	772	(NA)	1,060	170
1998: January <sup>f</sup>	42,730	33,872	18,300	13,531	11,694	1,838	12,944	2,404	3,109	1,002	3,572	485	679	1,040	653	(NA)	804	183
February <sup>f</sup>	41,735	32,988	17,496	13,037	11,188	1,848	12,988	2,425	3,053	989	3,587	491	726	1,059	658	(NA)	889	173
March <sup>f</sup>	47,319	37,790	20,886	15,521	13,553	1,968	14,042	2,806	3,147	1,073	3,959	489	783	1,108	678	(NA)	1,105	192
April <sup>f</sup>	52,069	41,205	23,129	16,629	14,573	2,056	14,780	2,691	3,374	1,158	4,211	497	848	1,177	824	(NA)	1,001	195
May <sup>f</sup>	55,171	43,601	25,110	17,564	15,513	2,051	14,857	2,651	3,481	1,105	4,392	466	876	1,135	751	(NA)	1,031	210
June <sup>f</sup>	61,912	48,111	27,123	18,965	16,864	2,101	16,074	2,792	3,704	1,336	4,841	525	908	1,147	821	(NA)	1,100	276
July <sup>f</sup>	63,150	48,683	28,197	20,126	17,965	2,162	15,692	2,630	3,498	1,299	4,915	546	857	1,116	830	(NA)	1,050	227
August <sup>f</sup>	64,367	49,363	28,703	20,449	18,376	2,073	16,232	2,881	3,455	1,371	4,976	615	903	1,188	844	(NA)	1,059	246
September <sup>f</sup>	63,973	48,479	28,062	20,575	18,443	2,132	16,291	2,907	3,555	1,416	4,950	633	822	1,186	822	(NA)	1,085	246
October <sup>f</sup>	62,127	48,132	27,865	20,408	18,213	2,196	16,441	2,766	3,761	1,466	5,034	659	745	1,159	852	(NA)	1,186	246
November <sup>f</sup>	58,458	46,219	26,609	19,855	17,784	2,071	16,070	2,666	3,746	1,362	4,886	678	741	1,163	829	(NA)	1,046	252
December <sup>f</sup>	52,435	41,630	22,846	17,249	15,287	1,962	15,504	2,654	3,658	1,328	4,463	645	740	1,184	833	(NA)	1,085	229
1999: January <sup>f</sup>	46,432	37,053	20,871	16,050	14,125	1,925	13,643	2,242	3,489	1,238	3,802	560	592	952	768	(NA)	877	178
February <sup>f</sup>	46,034	36,329	19,899	15,447	13,391	2,056	14,069	2,199	3,638	1,307	3,916	537	632	1,045	796	(NA)	873	182
March <sup>f</sup>	52,392	41,734	23,941	18,480	16,161	2,319	14,950	2,281	3,772	1,426	4,297	553	684	1,055	882	(NA)	1,187	231
April <sup>f</sup>	55,714	44,060	25,904	19,265	16,915	2,351	14,906	2,055	3,891	1,402	4,312	569	758	1,047	871	(NA)	1,118	276
May <sup>p</sup>	59,287	46,481	28,029	20,301	17,937	2,364	15,037	1,997	3,985	1,347	4,487	601	694	1,047	881	(NA)	(NA)	260
<b>PERCENT CHANGE</b>																		
April 1999- May 1999	6	5	8	5	6	1	1	-3	2	-4	4	6	-8	(Z)	1	(NA)	(NA)	-6

See footnotes at end of table.

Table 3a. **Monthly Value of Construction Put in Place: May 1997-May 1999—Not Seasonally Adjusted in Current Dollars—Con.**

[Millions of dollars]

Period	Public construction												
	Total	Buildings						Highways and streets	Military facilities	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous public <sup>7</sup>
		Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings <sup>6</sup>						
<b>YEAR TO DATE</b>													
May 1998	49,567	24,578	1,562	414	10,618	1,640	10,343	12,827	1,053	1,983	2,999	2,105	4,023
May 1999	54,203	25,938	1,513	379	11,867	1,623	10,557	14,580	879	2,226	3,481	2,405	4,695
Percent change	9	6	-3	-8	12	-1	2	14	-17	12	16	14	17
<b>MONTHLY DATA</b>													
1997: May <sup>f</sup>	11,913	5,088	320	74	2,309	374	2,012	3,796	215	448	833	474	1,059
June <sup>f</sup>	13,289	5,651	311	95	2,727	429	2,089	4,550	224	439	858	473	1,093
July <sup>f</sup>	14,075	5,842	325	92	2,901	423	2,102	4,996	236	470	831	504	1,195
August <sup>f</sup>	14,855	6,016	316	80	3,066	403	2,152	5,386	245	523	831	488	1,366
September <sup>f</sup>	14,859	6,093	360	98	2,736	510	2,389	5,060	273	765	879	518	1,271
October <sup>f</sup>	14,021	5,880	417	56	2,642	458	2,308	4,876	196	400	843	546	1,279
November <sup>f</sup>	12,105	5,288	344	66	2,264	408	2,206	3,910	230	414	741	505	1,017
December <sup>f</sup>	10,528	5,011	304	71	2,213	354	2,069	2,809	191	477	636	429	974
1998: January <sup>f</sup>	8,858	4,646	292	76	2,009	326	1,943	1,943	188	345	567	376	793
February <sup>f</sup>	8,747	4,617	293	79	1,970	306	1,969	1,904	196	419	541	384	685
March <sup>f</sup>	9,529	4,813	314	95	2,000	372	2,033	2,317	237	411	603	392	756
April <sup>f</sup>	10,864	5,175	338	84	2,255	299	2,199	3,113	216	387	640	464	867
May <sup>f</sup>	11,570	5,327	324	81	2,384	337	2,201	3,549	215	421	647	488	922
June <sup>f</sup>	13,801	6,067	368	78	2,910	338	2,374	4,633	225	498	759	476	1,143
July <sup>f</sup>	14,467	6,390	406	93	3,130	322	2,439	4,872	279	478	790	529	1,130
August <sup>f</sup>	15,004	6,386	341	88	3,161	312	2,484	5,342	241	501	819	523	1,192
September <sup>f</sup>	15,494	6,323	350	108	2,886	400	2,579	5,411	225	771	859	562	1,342
October <sup>f</sup>	13,995	5,721	338	58	2,548	345	2,433	5,228	162	379	889	600	1,017
November <sup>f</sup>	12,239	5,426	346	92	2,325	310	2,353	3,734	194	467	847	565	1,006
December <sup>f</sup>	10,805	5,246	336	80	2,339	312	2,179	2,746	199	433	746	512	923
1999: January <sup>f</sup>	9,379	4,751	278	64	2,162	310	1,936	2,161	147	400	652	431	839
February <sup>f</sup>	9,705	4,889	273	70	2,166	363	2,018	2,282	182	436	607	447	862
March <sup>f</sup>	10,658	5,185	286	85	2,299	327	2,187	2,735	187	472	723	475	882
April <sup>f</sup>	11,654	5,449	328	76	2,550	294	2,201	3,269	181	480	716	507	1,053
May <sup>p</sup>	12,807	5,665	347	83	2,690	329	2,215	4,134	182	438	784	545	1,060
<b>PERCENT CHANGE</b>													
April 1999-													
May 1999	10	4	6	9	5	12	1	26	1	-9	9	7	1

NA Not available, but estimates are included in totals. <sup>p</sup>Preliminary. <sup>r</sup>Revised. Z Less than 0.5 percent.

<sup>1</sup>Includes farm nonresidential and other private categories, not shown separately. <sup>2</sup>Includes residential improvements, not shown separately. <sup>3</sup>Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. <sup>4</sup>Includes gas, electric, railroad, and petroleum pipelines, not shown separately. <sup>5</sup>Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. <sup>6</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc. <sup>7</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

∞ Table 3b. **Annual and Monthly Value of Construction Put in Place: 1996-1998—Not Seasonally Adjusted in Current Dollars**

[Millions of dollars]

Type of construction	1996												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> . . . . .	583,445	37,735	36,228	40,501	45,591	49,837	53,023	54,201	56,428	56,529	55,774	52,164	45,433
<b>Private construction</b> . . . . .	448,969	29,253	28,357	31,876	35,504	38,090	40,865	41,146	42,951	42,265	42,539	40,392	35,732
Residential buildings . . . . .	256,460	15,906	15,202	18,080	20,312	22,444	24,186	24,713	25,292	24,445	24,092	22,695	19,093
New housing units . . . . .	179,448	11,719	11,205	13,223	14,264	15,324	16,399	16,896	17,289	17,074	16,694	15,955	13,406
1 unit . . . . .	159,124	10,283	9,749	11,629	12,457	13,427	14,475	15,184	15,536	15,381	14,961	14,217	11,826
2 units or more . . . . .	20,324	1,437	1,456	1,594	1,807	1,897	1,924	1,712	1,752	1,693	1,733	1,738	1,581
Improvements . . . . .	77,012	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings . . . . .	150,350	10,445	10,595	10,893	11,751	12,142	12,942	12,704	13,521	13,908	14,408	13,927	13,114
Industrial . . . . .	32,657	2,521	2,458	2,523	2,636	2,570	2,768	2,601	2,632	2,914	3,219	2,993	2,823
Office . . . . .	27,886	1,814	1,904	1,920	2,126	2,365	2,514	2,441	2,498	2,594	2,589	2,614	2,507
Hotels, motels . . . . .	10,912	739	808	814	922	823	894	866	1,001	994	1,000	1,002	1,050
Other commercial . . . . .	48,188	3,211	3,266	3,396	3,727	3,958	4,107	4,147	4,590	4,644	4,748	4,433	3,962
Religious . . . . .	4,534	317	314	309	340	351	387	360	411	425	439	452	430
Educational . . . . .	6,742	395	420	465	451	511	641	677	721	650	634	617	560
Hospital and institutional . . . . .	11,780	895	840	847	912	976	995	962	1,039	1,045	1,068	1,100	1,104
Miscellaneous <sup>1</sup> . . . . .	7,650	554	584	621	637	589	636	651	631	643	711	716	678
Farm nonresidential . . . . .	3,658	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities . . . . .	36,070	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications . . . . .	11,772	830	835	856	957	987	888	932	1,065	949	1,110	1,113	1,251
Railroads . . . . .	4,398	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power . . . . .	11,211	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas . . . . .	7,674	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines . . . . .	1,015	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> . . . . .	2,431	203	187	192	199	199	216	201	247	199	223	187	176
<b>Public construction</b> . . . . .	134,476	8,482	7,871	8,625	10,086	11,748	12,158	13,054	13,477	14,265	13,236	11,772	9,702
Buildings . . . . .	60,047	4,452	4,030	4,410	4,656	5,184	5,193	5,453	5,622	5,757	5,254	5,266	4,771
Housing and redevelopment . . . . .	4,113	381	319	312	311	387	319	355	324	400	359	355	292
Industrial . . . . .	1,389	103	103	124	120	127	129	129	132	184	60	91	88
Educational . . . . .	27,148	1,916	1,767	1,962	2,052	2,290	2,416	2,672	2,862	2,548	2,365	2,298	2,000
Hospital . . . . .	4,472	339	356	380	389	395	362	364	320	446	374	341	407
Other <sup>3</sup> . . . . .	22,924	1,713	1,485	1,632	1,785	1,985	1,966	1,934	1,984	2,180	2,097	2,181	1,983
Highways and streets . . . . .	39,860	1,698	1,702	1,849	2,579	3,470	3,894	4,521	4,581	4,758	4,797	3,479	2,533
Military facilities . . . . .	2,591	256	207	212	220	227	216	197	199	279	176	204	200
Conservation and development . . . . .	5,910	375	368	430	481	489	504	511	570	875	424	487	396
Other public construction . . . . .	26,068	1,702	1,565	1,724	2,150	2,378	2,353	2,373	2,505	2,596	2,585	2,336	1,802
Sewer systems . . . . .	9,142	549	522	592	732	779	773	769	937	890	1,016	876	706
Water supply facilities . . . . .	5,234	283	298	312	418	448	458	462	468	504	629	517	439
Miscellaneous public <sup>4</sup> . . . . .	11,691	870	745	821	1,001	1,151	1,121	1,143	1,100	1,202	940	943	656

See footnotes at end of table.

Table 3b. **Annual and Monthly Value of Construction Put in Place: 1996-1998—Not Seasonally Adjusted in Current Dollars—Con.**

[Millions of dollars]

Type of construction	1997												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> . . . . .	618,225	40,564	39,802	44,245	48,437	52,449	55,830	58,189	60,106	59,580	58,238	53,292	47,493
<b>Private construction</b> . . . . .	475,123	32,084	31,185	34,611	37,710	40,536	42,541	44,113	45,251	44,720	44,217	41,187	36,966
Residential buildings . . . . .	265,863	17,035	16,420	19,316	21,235	23,285	24,528	25,066	25,538	24,938	24,925	23,506	20,070
New housing units . . . . .	187,328	12,269	11,999	14,001	14,815	15,919	16,602	17,226	17,668	17,760	17,678	16,857	14,533
1 unit . . . . .	164,444	10,781	10,286	12,239	12,979	13,819	14,594	15,337	15,646	15,762	15,506	14,889	12,606
2 units or more . . . . .	22,883	1,488	1,713	1,762	1,836	2,100	2,009	1,888	2,022	1,998	2,173	1,968	1,926
Improvements . . . . .	78,535	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings . . . . .	167,610	12,210	12,460	12,667	13,211	13,709	14,156	14,858	15,273	15,410	15,217	14,456	13,983
Industrial . . . . .	31,359	2,405	2,435	2,306	2,444	2,484	2,592	2,746	2,787	2,870	2,843	2,664	2,782
Office . . . . .	34,305	2,464	2,623	2,520	2,531	2,643	2,783	3,018	3,079	3,124	3,254	3,171	3,098
Hotels, motels . . . . .	12,898	939	972	1,026	1,051	1,151	1,163	1,163	1,121	1,086	1,115	1,050	1,062
Other commercial . . . . .	51,809	3,780	3,763	3,897	4,067	4,319	4,497	4,738	4,917	4,870	4,675	4,321	3,965
Religious . . . . .	5,777	367	376	434	456	484	443	469	493	562	583	574	537
Educational . . . . .	8,693	536	545	551	678	715	817	874	898	848	789	748	694
Hospital and institutional . . . . .	13,546	1,068	1,084	1,168	1,188	1,103	1,089	1,060	1,176	1,221	1,164	1,153	1,073
Miscellaneous <sup>1</sup> . . . . .	9,223	650	662	766	797	811	773	791	803	830	794	775	772
Farm nonresidential . . . . .	3,815	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities . . . . .	35,544	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications . . . . .	11,698	801	775	861	982	952	999	1,078	1,000	1,095	1,128	967	1,060
Railroads . . . . .	4,922	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power . . . . .	11,260	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas . . . . .	6,695	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines . . . . .	969	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> . . . . .	2,292	150	140	165	169	175	186	208	231	221	256	222	170
<b>Public construction</b> . . . . .	143,102	8,480	8,617	9,634	10,727	11,913	13,289	14,075	14,855	14,859	14,021	12,105	10,528
Buildings . . . . .	63,489	4,429	4,438	4,755	4,997	5,088	5,651	5,842	6,016	6,093	5,880	5,288	5,011
Housing and redevelopment . . . . .	3,795	269	268	269	292	320	311	325	316	360	417	344	304
Industrial . . . . .	999	89	79	88	112	74	95	92	80	98	56	66	71
Educational . . . . .	28,915	1,886	1,904	2,079	2,189	2,309	2,727	2,901	3,066	2,736	2,642	2,264	2,213
Hospital . . . . .	4,934	388	383	384	421	374	429	423	403	510	458	408	354
Other <sup>3</sup> . . . . .	24,846	1,798	1,804	1,934	1,983	2,012	2,089	2,102	2,152	2,389	2,308	2,206	2,069
Highways and streets . . . . .	44,292	1,800	1,859	2,201	3,050	3,796	4,550	4,996	5,386	5,060	4,876	3,910	2,809
Military facilities . . . . .	2,556	199	169	191	185	215	224	236	245	273	196	230	191
Conservation and development . . . . .	5,612	414	386	453	423	448	439	470	523	765	400	414	477
Other public construction . . . . .	27,153	1,638	1,765	2,033	2,072	2,366	2,424	2,531	2,685	2,668	2,668	2,264	2,040
Sewer systems . . . . .	9,166	625	627	711	749	833	858	831	831	879	843	741	636
Water supply facilities . . . . .	5,662	391	410	475	449	474	473	504	488	518	546	505	429
Miscellaneous public <sup>4</sup> . . . . .	12,325	622	728	847	874	1,059	1,093	1,195	1,366	1,271	1,279	1,017	974

See footnotes at end of table.

Table 3b. **Annual and Monthly Value of Construction Put in Place: 1996-1998—Not Seasonally Adjusted in Current Dollars—Con.**

[Millions of dollars]

Type of construction	1998												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> . . . . .	<b>665,446</b>	<b>42,730</b>	<b>41,735</b>	<b>47,319</b>	<b>52,069</b>	<b>55,171</b>	<b>61,912</b>	<b>63,150</b>	<b>64,367</b>	<b>63,973</b>	<b>62,127</b>	<b>58,458</b>	<b>52,435</b>
<b>Private construction</b> . . . . .	520,073	33,872	32,988	37,790	41,205	43,601	48,111	48,683	49,363	48,479	48,132	46,219	41,630
Residential buildings . . . . .	294,326	18,300	17,496	20,886	23,129	25,110	27,123	28,197	28,703	28,062	27,865	26,609	22,846
New housing units . . . . .	213,909	13,531	13,037	15,521	16,629	17,564	18,965	20,126	20,449	20,575	20,408	19,855	17,249
1 unit . . . . .	189,453	11,694	11,188	13,553	14,573	15,513	16,864	17,965	18,376	18,443	18,213	17,784	15,287
2 units or more . . . . .	24,457	1,838	1,848	1,968	2,056	2,051	2,101	2,162	2,073	2,132	2,196	2,071	1,962
Improvements . . . . .	80,417	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings . . . . .	181,915	12,944	12,988	14,042	14,780	14,857	16,074	15,692	16,232	16,291	16,441	16,070	15,504
Industrial . . . . .	32,270	2,404	2,425	2,806	2,691	2,651	2,792	2,630	2,881	2,907	2,766	2,666	2,654
Office . . . . .	41,541	3,109	3,053	3,147	3,374	3,481	3,704	3,498	3,455	3,555	3,761	3,746	3,658
Hotels, motels . . . . .	14,904	1,002	989	1,073	1,158	1,105	1,336	1,299	1,371	1,416	1,466	1,362	1,328
Other commercial . . . . .	53,783	3,572	3,587	3,959	4,211	4,392	4,841	4,915	4,976	4,950	5,034	4,886	4,463
Religious . . . . .	6,729	485	491	489	497	466	525	546	615	633	659	678	645
Educational . . . . .	9,629	679	726	783	848	876	908	857	903	822	745	741	740
Hospital and institutional . . . . .	13,663	1,040	1,059	1,108	1,177	1,135	1,147	1,116	1,188	1,186	1,159	1,163	1,184
Miscellaneous <sup>1</sup> . . . . .	9,395	653	658	678	824	751	821	830	844	822	852	829	833
Farm nonresidential . . . . .	3,891	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities . . . . .	37,267	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications . . . . .	12,441	804	889	1,105	1,001	1,031	1,100	1,050	1,059	1,085	1,186	1,046	1,085
Railroads . . . . .	5,320	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power . . . . .	11,574	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas . . . . .	6,667	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines . . . . .	1,265	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> . . . . .	2,674	183	173	192	195	210	276	227	246	246	246	252	229
<b>Public construction</b> . . . . .	145,373	8,858	8,747	9,529	10,864	11,570	13,801	14,467	15,004	15,494	13,995	12,239	10,805
Buildings . . . . .	66,137	4,646	4,617	4,813	5,175	5,327	6,067	6,390	6,386	6,323	5,721	5,426	5,246
Housing and redevelopment . . . . .	4,047	292	293	314	338	324	368	406	341	350	338	346	336
Industrial . . . . .	1,012	76	79	95	84	81	78	93	88	108	58	92	80
Educational . . . . .	29,916	2,009	1,970	2,000	2,255	2,384	2,910	3,130	3,161	2,886	2,548	2,325	2,339
Hospital . . . . .	3,978	326	306	372	299	337	338	322	312	400	345	310	312
Other <sup>3</sup> . . . . .	27,183	1,943	1,969	2,033	2,199	2,201	2,374	2,439	2,484	2,579	2,433	2,353	2,179
Highways and streets . . . . .	44,792	1,943	1,904	2,317	3,113	3,549	4,633	4,872	5,342	5,411	5,228	3,734	2,746
Military facilities . . . . .	2,578	188	196	237	216	215	225	279	241	225	162	194	199
Conservation and development . . . . .	5,511	345	419	411	387	421	498	478	501	771	379	467	433
Other public construction . . . . .	26,356	1,736	1,610	1,751	1,971	2,058	2,378	2,449	2,534	2,764	2,505	2,418	2,181
Sewer systems . . . . .	8,707	567	541	603	640	647	759	790	819	859	889	847	746
Water supply facilities . . . . .	5,871	376	384	392	464	488	476	529	523	562	600	565	512
Miscellaneous public <sup>4</sup> . . . . .	11,777	793	685	756	867	922	1,143	1,130	1,192	1,342	1,017	1,006	923

NA Not available, but estimates are included in total.

<sup>1</sup>Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. <sup>2</sup>Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. <sup>3</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc.

<sup>4</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.



Table 4a. **Monthly Value of Construction Put in Place: May 1997-May 1999—Seasonally Adjusted Annual Rate in Current Dollars**

[Millions of dollars]

Period	Total construction	Private construction																All other private <sup>5</sup>	
		Total <sup>1</sup>	Residential buildings					Nonresidential buildings									Public utilities <sup>4</sup>		
			Total <sup>2</sup>	New housing units			Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous <sup>3</sup>	Total	Telecommunications		
				Total	1 unit	2 units or more													
1997: May <sup>f</sup> . . . . .	612,476	471,008	266,597	187,886	164,028	23,858	163,184	29,835	30,698	13,486	51,934	5,959	8,418	13,129	9,725	(NA)	11,327	2,168	
June <sup>f</sup> . . . . .	611,388	468,756	264,107	185,697	163,209	22,488	163,637	30,461	32,868	13,428	50,955	5,596	8,375	12,981	8,974	(NA)	11,712	2,211	
July <sup>f</sup> . . . . .	621,624	478,046	263,659	185,324	163,598	21,727	171,943	32,886	35,294	13,827	53,339	5,562	8,693	13,063	9,280	(NA)	12,276	2,272	
August <sup>f</sup> . . . . .	624,453	479,891	264,013	186,540	164,120	22,420	172,079	32,101	35,873	13,793	52,771	5,664	8,943	13,616	9,318	(NA)	11,454	2,446	
September <sup>f</sup> . . . . .	624,773	481,280	266,156	188,695	165,774	22,922	170,618	32,068	36,006	12,426	51,131	5,929	9,450	14,164	9,444	(NA)	12,426	2,395	
October <sup>f</sup> . . . . .	628,610	483,233	270,199	192,135	167,330	24,805	170,729	31,827	37,440	13,398	50,088	6,231	9,537	13,323	8,885	(NA)	11,986	2,629	
November <sup>f</sup> . . . . .	623,266	479,115	270,817	191,897	168,394	23,503	168,967	30,888	37,676	12,807	49,667	6,265	9,422	13,303	8,938	(NA)	11,683	2,541	
December <sup>f</sup> . . . . .	626,907	482,318	272,869	194,330	169,971	24,359	171,616	31,708	38,084	12,676	50,622	6,257	9,709	13,001	9,558	(NA)	11,828	2,080	
1998: January <sup>f</sup> . . . . .	639,962	494,992	277,551	197,735	172,389	25,346	175,724	32,302	40,909	13,032	51,027	6,430	9,879	13,246	8,899	(NA)	11,680	2,561	
February <sup>f</sup> . . . . .	644,643	499,944	280,843	200,621	175,503	25,118	175,430	32,260	39,387	12,712	51,489	6,826	10,365	13,477	8,913	(NA)	12,819	2,584	
March <sup>f</sup> . . . . .	650,509	506,741	284,013	203,838	179,113	24,725	178,700	35,976	38,688	12,429	53,016	6,371	10,368	13,511	8,342	(NA)	13,670	2,559	
April <sup>f</sup> . . . . .	656,271	511,838	287,556	207,391	182,540	24,851	181,214	33,182	40,370	13,294	53,639	6,229	10,748	14,196	9,555	(NA)	12,185	2,510	
May <sup>f</sup> . . . . .	648,673	510,851	287,972	207,482	184,134	23,348	178,315	31,967	40,955	13,669	52,860	5,971	10,317	13,540	9,036	(NA)	12,780	2,614	
June <sup>f</sup> . . . . .	672,757	525,287	291,887	211,247	187,730	23,518	185,215	32,814	43,366	14,980	55,014	6,492	9,326	13,673	9,550	(NA)	12,201	3,298	
July <sup>f</sup> . . . . .	673,703	525,240	297,318	216,810	191,965	24,845	182,172	31,495	40,835	15,764	55,275	6,774	8,567	13,746	9,717	(NA)	12,000	2,506	
August <sup>f</sup> . . . . .	670,007	523,652	297,314	216,194	193,095	23,099	182,487	33,177	40,450	16,219	53,315	6,809	8,979	13,764	9,774	(NA)	12,334	2,568	
September <sup>f</sup> . . . . .	672,053	524,270	299,752	218,957	194,476	24,481	181,554	32,423	41,138	16,827	52,148	6,749	9,131	13,755	9,382	(NA)	12,252	2,677	
October <sup>f</sup> . . . . .	674,253	528,694	302,056	221,585	196,539	25,046	184,778	30,928	43,775	17,396	53,930	6,977	9,005	13,247	9,520	(NA)	12,928	2,509	
November <sup>f</sup> . . . . .	680,117	534,743	306,299	226,053	201,327	24,726	186,605	30,845	43,730	16,185	56,101	7,364	9,333	13,440	9,607	(NA)	12,327	2,877	
December <sup>f</sup> . . . . .	690,462	541,591	310,261	230,494	205,655	24,839	190,044	30,327	44,697	15,758	56,908	7,357	10,345	14,353	10,299	(NA)	12,090	2,786	
1999: January <sup>f</sup> . . . . .	697,858	543,471	315,828	235,142	208,739	26,403	185,816	29,895	45,658	16,923	54,506	7,702	8,538	12,131	10,462	(NA)	13,326	2,509	
February <sup>f</sup> . . . . .	710,657	548,682	318,483	238,146	210,328	27,818	189,040	28,967	46,788	16,822	56,014	7,466	8,962	13,307	10,714	(NA)	12,539	2,727	
March <sup>f</sup> . . . . .	715,396	555,362	323,133	241,524	212,412	29,113	189,297	29,052	46,430	16,422	57,553	7,210	8,985	12,835	10,810	(NA)	14,158	3,073	
April <sup>f</sup> . . . . .	700,795	545,891	321,493	239,614	211,434	28,180	182,084	25,374	46,234	16,163	54,757	7,347	9,506	12,627	10,076	(NA)	13,294	3,538	
May <sup>p</sup> . . . . .	694,317	541,845	319,984	237,625	210,607	27,018	179,638	24,251	46,833	15,841	54,007	7,392	8,216	12,496	10,601	(NA)	(NA)	3,218	
<b>PERCENT CHANGE</b>																			
April 1999- May 1999 . . . . .	-1	-1	(Z)	-1	(Z)	-4	-1	-4	1	-2	-1	1	-14	-1	5	(NA)	(NA)	-9	

See footnotes at end of table.

Table 4a. **Monthly Value of Construction Put in Place: May 1997-May 1999—Seasonally Adjusted Annual Rate in Current Dollars—Con.**

[Millions of dollars]

Period	Public construction												
	Total	Buildings						Highways and streets	Military facilities	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous public <sup>7</sup>
		Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings <sup>6</sup>						
1997: May <sup>f</sup> . . . . .	141,468	60,906	3,760	891	28,277	4,576	23,403	44,435	2,528	5,385	10,112	5,558	12,543
June <sup>f</sup> . . . . .	142,632	62,777	3,585	1,119	29,118	4,972	23,983	44,976	2,608	5,123	9,590	5,425	12,133
July <sup>f</sup> . . . . .	143,578	63,298	3,838	1,105	28,723	5,023	24,610	44,643	2,740	5,240	9,425	5,518	12,714
August <sup>f</sup> . . . . .	144,563	63,393	3,927	1,015	28,862	5,064	24,526	45,135	2,804	5,652	8,695	5,342	13,541
September <sup>f</sup> . . . . .	143,493	64,563	3,876	862	28,841	5,161	25,823	43,461	2,552	6,005	8,979	5,670	12,262
October <sup>f</sup> . . . . .	145,377	67,031	4,694	740	30,483	5,295	25,819	42,126	2,915	5,197	8,664	5,435	14,008
November <sup>f</sup> . . . . .	144,151	64,394	4,080	814	28,957	4,983	25,559	46,044	2,737	5,015	8,337	5,587	12,036
December <sup>f</sup> . . . . .	144,589	64,650	3,705	808	30,236	4,149	25,752	45,066	2,209	5,955	8,253	5,439	13,017
1998: January <sup>f</sup> . . . . .	144,971	64,799	3,763	1,001	29,403	4,262	26,371	46,084	2,423	5,234	8,391	5,579	12,460
February <sup>f</sup> . . . . .	144,699	64,777	3,906	1,033	29,152	4,020	26,665	46,162	2,845	6,121	8,264	5,770	10,759
March <sup>f</sup> . . . . .	143,768	63,841	4,027	1,170	27,740	4,540	26,363	46,497	2,820	5,640	8,241	5,583	11,145
April <sup>f</sup> . . . . .	144,433	65,250	4,094	1,042	29,480	3,628	27,006	46,527	2,725	4,898	8,277	5,834	10,922
May <sup>f</sup> . . . . .	137,822	64,081	3,864	1,007	29,310	4,177	25,723	41,588	2,530	5,129	7,820	5,711	10,962
June <sup>f</sup> . . . . .	147,470	67,247	4,197	899	31,038	3,891	27,221	45,346	2,610	5,710	8,505	5,448	12,603
July <sup>f</sup> . . . . .	148,463	69,109	4,778	1,104	30,913	3,812	28,501	44,026	3,231	5,358	8,932	5,809	12,000
August <sup>f</sup> . . . . .	146,355	67,191	4,203	1,106	29,760	3,886	28,236	44,700	2,760	5,470	8,623	5,732	11,880
September <sup>f</sup> . . . . .	147,783	67,080	3,784	947	30,342	4,051	27,957	45,057	2,103	5,920	8,822	6,158	12,643
October <sup>f</sup> . . . . .	145,559	65,405	3,802	799	29,366	4,029	27,409	46,301	2,407	5,321	9,121	5,989	11,015
November <sup>f</sup> . . . . .	145,374	65,831	4,034	1,114	29,650	3,763	27,271	43,929	2,296	5,639	9,537	6,236	11,905
December <sup>f</sup> . . . . .	148,871	67,875	4,093	920	32,002	3,674	27,185	44,583	2,306	5,406	9,770	6,532	12,398
1999: January <sup>f</sup> . . . . .	154,387	66,634	3,666	886	31,445	4,099	26,539	50,538	1,881	6,018	9,658	6,465	13,192
February <sup>f</sup> . . . . .	161,975	68,570	3,650	919	32,001	4,772	27,227	54,880	2,636	6,271	9,394	6,739	13,486
March <sup>f</sup> . . . . .	160,033	68,786	3,623	1,012	32,080	3,982	28,089	53,099	2,223	6,194	10,017	6,767	12,947
April <sup>f</sup> . . . . .	154,904	68,456	3,952	921	33,079	3,663	26,841	48,971	2,287	6,113	9,343	6,389	13,345
May <sup>p</sup> . . . . .	152,472	68,115	4,135	1,043	33,040	4,014	25,883	48,347	2,152	5,414	9,469	6,376	12,599
<b>PERCENT CHANGE</b>													
April 1999- May 1999 . . . . .	-2	(Z)	5	13	(Z)	10	-4	-1	-6	-11	1	(Z)	-6

NA Not available, but estimates are included in totals. <sup>p</sup>Preliminary. <sup>r</sup>Revised. Z Less than 0.5 percent.

<sup>1</sup>Includes farm nonresidential and other private categories, not shown separately. <sup>2</sup>Includes residential improvements, not shown separately. <sup>3</sup>Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. <sup>4</sup>Includes gas, electric, railroad, and petroleum pipelines, not shown separately. <sup>5</sup>Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. <sup>6</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc. <sup>7</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

Table 4b. **Monthly Value of Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in Current Dollars**

[Millions of dollars]

Type of construction	1996											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> .....	560,234	557,043	559,320	575,198	580,368	583,883	580,146	585,887	594,288	600,584	606,297	599,789
<b>Private construction</b> .....	424,611	427,623	429,892	440,466	442,287	452,286	447,093	454,189	456,699	463,785	466,585	465,605
Residential buildings .....	240,369	243,818	247,640	254,156	257,732	260,665	260,271	260,895	261,065	259,780	260,690	259,838
New housing units .....	170,294	172,443	174,785	179,489	181,378	183,566	181,970	182,047	181,450	180,373	180,769	179,456
1 unit .....	150,477	152,519	154,714	157,519	159,844	162,035	162,252	162,685	162,046	160,583	160,040	159,446
2 units or more .....	19,817	19,924	20,071	21,971	21,534	21,532	19,718	19,362	19,404	19,790	20,729	20,010
Improvements .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings .....	142,258	141,891	139,992	143,766	143,598	150,691	147,419	151,298	154,202	161,097	162,484	160,989
Industrial .....	33,844	32,706	32,281	32,538	30,836	32,535	31,151	30,305	32,644	36,031	34,797	32,054
Office .....	23,437	23,826	24,045	24,963	26,394	30,384	28,635	28,991	30,043	30,139	30,846	31,079
Hotels, motels .....	9,633	9,717	9,892	10,383	9,782	10,593	10,352	11,680	11,689	11,724	12,187	12,600
Other commercial .....	46,365	46,882	45,528	47,479	47,539	46,497	46,723	49,218	48,587	50,867	50,905	50,580
Religious .....	4,199	4,119	4,146	4,255	4,382	4,877	4,344	4,554	4,573	4,510	5,042	5,052
Educational .....	5,783	6,003	6,167	5,716	6,007	6,566	6,724	7,198	7,241	7,633	7,776	7,839
Hospital and institutional .....	11,383	10,699	10,276	11,047	11,602	11,852	11,848	12,055	12,122	12,222	12,689	13,377
Miscellaneous <sup>1</sup> .....	7,614	7,939	7,658	7,384	7,056	7,387	7,641	7,296	7,302	7,971	8,242	8,409
Farm nonresidential .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications .....	11,642	11,552	10,920	11,571	11,420	10,650	10,699	11,725	11,397	11,768	12,747	14,451
Railroads .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> .....	2,806	2,773	2,581	2,559	2,458	2,551	2,160	2,670	2,155	2,316	2,136	2,174
<b>Public construction</b> .....	135,623	129,420	129,427	134,732	138,082	131,597	133,054	131,697	137,590	136,799	139,712	134,184
Buildings .....	61,824	56,575	58,594	58,895	61,735	58,014	59,342	59,088	61,176	59,789	63,853	61,439
Housing and redevelopment .....	4,823	4,234	4,041	3,764	4,497	3,738	4,201	3,996	4,347	3,993	4,148	3,592
Industrial .....	1,313	1,346	1,542	1,481	1,506	1,566	1,567	1,684	1,669	775	1,093	1,010
Educational .....	28,101	25,885	27,034	26,971	27,954	25,821	26,545	26,881	26,886	27,393	29,457	27,275
Hospital .....	4,403	4,692	4,692	4,721	4,768	4,232	4,350	4,022	4,596	4,240	4,128	4,785
Other <sup>3</sup> .....	23,183	20,417	21,284	21,959	23,010	22,658	22,680	22,505	23,678	23,388	25,027	24,777
Highways and streets .....	39,028	40,354	38,052	39,822	39,549	38,552	39,627	38,309	41,042	41,293	40,974	41,990
Military facilities .....	3,307	2,983	2,509	2,771	2,652	2,516	2,297	2,269	2,604	2,609	2,427	2,307
Conservation and development .....	5,499	5,417	5,816	5,938	5,783	6,024	5,740	6,143	6,887	5,783	5,855	5,040
Other public construction .....	25,965	24,091	24,456	27,305	28,363	26,491	26,047	25,888	25,880	27,324	26,603	23,409
Sewer systems .....	8,086	8,135	8,128	9,596	9,529	8,608	8,758	9,782	9,040	10,473	9,856	8,999
Water supply facilities .....	4,171	4,486	4,404	5,295	5,263	5,249	5,049	5,120	5,528	6,282	5,710	5,525
Miscellaneous public <sup>4</sup> .....	13,708	11,470	11,924	12,413	13,571	12,633	12,240	10,987	11,312	10,569	11,037	8,886

See footnotes at end of table.

Table 4b. **Monthly Value of Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in Current Dollars—Con.**

[Millions of dollars]

Type of construction	1997											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> .....	603,669	614,426	611,996	610,937	612,476	611,388	621,624	624,453	624,773	628,610	623,267	626,907
<b>Private construction</b> .....	466,758	472,641	466,405	468,651	471,008	468,756	478,046	479,890	481,280	483,233	479,115	482,318
Residential buildings .....	259,445	264,013	264,258	264,768	266,597	264,107	263,659	264,013	266,156	270,199	270,817	272,869
New housing units .....	179,679	184,712	184,632	185,509	187,886	185,697	185,324	186,540	188,695	192,135	191,897	194,330
1 unit .....	159,126	161,351	162,469	163,254	164,028	163,209	163,598	164,120	165,774	167,330	168,394	169,971
2 units or more .....	20,553	23,362	22,164	22,255	23,858	22,488	21,727	22,420	22,922	24,805	23,503	24,359
Improvements .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings .....	166,097	168,737	162,081	162,289	163,184	163,637	171,943	172,079	170,618	170,729	168,967	171,616
Industrial .....	32,323	32,425	29,565	30,170	29,835	30,461	32,886	32,101	32,068	31,827	30,888	31,708
Office .....	31,825	33,985	31,692	30,006	30,698	32,868	35,294	35,873	36,006	37,440	37,676	38,084
Hotels, motels .....	12,418	12,493	11,994	12,307	13,486	13,428	13,827	13,793	12,426	13,398	12,807	12,676
Other commercial .....	54,260	54,016	52,250	51,804	51,934	50,955	53,339	52,771	51,131	50,088	49,667	50,622
Religious .....	4,940	5,247	5,653	5,790	5,959	5,596	5,562	5,664	5,929	6,231	6,265	6,257
Educational .....	7,817	7,772	7,294	8,608	8,418	8,375	8,693	8,943	9,450	9,537	9,422	9,709
Hospital and institutional .....	13,604	13,799	14,219	14,371	13,129	12,981	13,063	13,616	14,164	13,323	13,303	13,001
Miscellaneous <sup>1</sup> .....	8,910	8,999	9,413	9,233	9,725	8,974	9,280	9,318	9,444	8,885	8,938	9,558
Farm nonresidential .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications .....	11,270	11,194	11,151	11,824	11,327	11,712	12,276	11,454	12,426	11,986	11,683	11,828
Railroads .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> .....	2,079	2,080	2,215	2,172	2,168	2,211	2,272	2,446	2,395	2,629	2,541	2,080
<b>Public construction</b> .....	136,912	141,785	145,591	142,286	141,468	142,632	143,578	144,563	143,493	145,377	144,151	144,589
Buildings .....	61,565	62,343	63,274	63,189	60,906	62,777	63,298	63,393	64,563	67,031	64,394	64,650
Housing and redevelopment .....	3,421	3,561	3,489	3,548	3,760	3,585	3,838	3,927	3,876	4,694	4,080	3,705
Industrial .....	1,138	1,039	1,109	1,404	891	1,119	1,105	1,015	862	740	814	808
Educational .....	27,632	28,035	28,672	28,702	28,277	29,118	28,723	28,862	28,841	30,483	28,957	30,236
Hospital .....	5,026	5,042	4,737	5,114	4,576	4,972	5,023	5,064	5,161	5,295	4,983	4,149
Other <sup>3</sup> .....	24,348	24,667	25,267	24,420	23,403	23,983	24,610	24,526	25,823	25,819	25,559	25,752
Highways and streets .....	41,779	43,993	44,758	45,125	44,435	44,976	44,643	45,135	43,461	42,126	46,044	45,066
Military facilities .....	2,561	2,452	2,266	2,335	2,528	2,608	2,740	2,804	2,552	2,915	2,737	2,209
Conservation and development .....	6,081	5,669	6,296	5,297	5,385	5,123	5,240	5,652	6,005	5,197	5,015	5,955
Other public construction .....	24,926	27,328	28,997	26,341	28,213	27,148	27,657	27,579	26,911	28,107	25,961	26,709
Sewer systems .....	9,252	9,713	9,754	9,735	10,112	9,590	9,425	8,695	8,979	8,664	8,337	8,253
Water supply facilities .....	5,801	6,173	6,743	5,668	5,558	5,425	5,518	5,342	5,670	5,435	5,587	5,439
Miscellaneous public <sup>4</sup> .....	9,873	11,441	12,501	10,937	12,543	12,133	12,714	13,541	12,262	14,008	12,036	13,017

See footnotes at end of table.

Table 4b. **Monthly Value of Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in Current Dollars—Con.**

[Millions of dollars]

Type of construction	1998											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> .....	<b>639,962</b>	<b>644,643</b>	<b>650,509</b>	<b>656,271</b>	<b>648,673</b>	<b>672,756</b>	<b>673,703</b>	<b>670,007</b>	<b>672,053</b>	<b>674,253</b>	<b>680,117</b>	<b>690,462</b>
<b>Private construction</b> .....	494,992	499,944	506,741	511,838	510,851	525,287	525,240	523,652	524,270	528,694	534,743	541,591
Residential buildings .....	277,551	280,843	284,013	287,555	287,972	291,887	297,318	297,314	299,752	302,056	306,299	310,261
New housing units .....	197,735	200,621	203,838	207,391	207,482	211,247	216,810	216,194	218,957	221,585	226,053	230,494
1 unit .....	172,389	175,503	179,113	182,540	184,134	187,730	191,965	193,095	194,476	196,539	201,327	205,655
2 units or more .....	25,346	25,118	24,725	24,851	23,348	23,518	24,845	23,099	24,481	25,046	24,726	24,839
Improvements .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings .....	175,724	175,430	178,700	181,214	178,315	185,215	182,172	182,487	181,554	184,778	186,605	190,044
Industrial .....	32,302	32,260	35,976	33,182	31,967	32,814	31,495	33,177	32,423	30,928	30,845	30,327
Office .....	40,909	39,387	38,688	40,370	40,955	43,366	40,835	40,450	41,138	43,775	43,730	44,697
Hotels, motels .....	13,032	12,712	12,429	13,294	13,669	14,980	15,764	16,219	16,827	17,396	16,185	15,758
Other commercial .....	51,027	51,489	53,016	53,639	52,860	55,014	55,275	53,315	52,148	53,930	56,101	56,908
Religious .....	6,430	6,826	6,371	6,229	5,971	6,492	6,774	6,809	6,749	6,977	7,364	7,357
Educational .....	9,879	10,365	10,368	10,748	10,317	9,326	8,567	8,979	9,131	9,005	9,333	10,345
Hospital and institutional .....	13,246	13,477	13,511	14,196	13,540	13,673	13,746	13,764	13,755	13,247	13,440	14,353
Miscellaneous <sup>1</sup> .....	8,899	8,913	8,342	9,555	9,036	9,550	9,717	9,774	9,382	9,520	9,607	10,299
Farm nonresidential .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications .....	11,680	12,819	13,670	12,185	12,780	12,201	12,000	12,334	12,252	12,928	12,327	12,090
Railroads .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> .....	2,561	2,584	2,559	2,510	2,614	3,298	2,506	2,568	2,677	2,509	2,877	2,786
<b>Public construction</b> .....	144,971	144,699	143,768	144,433	137,822	147,470	148,463	146,355	147,783	145,559	145,374	148,871
Buildings .....	64,799	64,777	63,841	65,250	64,081	67,247	69,109	67,191	67,080	65,405	65,831	67,875
Housing and redevelopment .....	3,763	3,906	4,027	4,094	3,864	4,197	4,778	4,203	3,784	3,802	4,034	4,093
Industrial .....	1,001	1,033	1,170	1,042	1,007	899	1,104	1,106	947	799	1,114	920
Educational .....	29,403	29,152	27,740	29,480	29,310	31,038	30,913	29,760	30,342	29,366	29,650	32,002
Hospital .....	4,262	4,020	4,540	3,628	4,177	3,891	3,812	3,886	4,051	4,029	3,763	3,674
Other <sup>3</sup> .....	26,371	26,665	26,363	27,006	25,723	27,221	28,501	28,236	27,957	27,409	27,271	27,185
Highways and streets .....	46,084	46,162	46,497	46,527	41,587	45,346	44,026	44,700	45,057	46,301	43,929	44,583
Military facilities .....	2,423	2,845	2,820	2,725	2,530	2,610	3,231	2,760	2,103	2,407	2,296	2,306
Conservation and development .....	5,234	6,121	5,640	4,898	5,129	5,710	5,358	5,470	5,920	5,321	5,639	5,406
Other public construction .....	26,430	24,793	24,970	25,034	24,493	26,557	26,740	26,235	27,623	26,125	27,678	28,701
Sewer systems .....	8,391	8,264	8,241	8,277	7,820	8,505	8,932	8,623	8,822	9,121	9,537	9,770
Water supply facilities .....	5,579	5,770	5,583	5,834	5,711	5,448	5,809	5,732	6,158	5,989	6,236	6,532
Miscellaneous public <sup>4</sup> .....	12,460	10,759	11,145	10,922	10,962	12,603	12,000	11,880	12,643	11,015	11,905	12,398

NA Not available, but estimates are included in total.

<sup>1</sup>Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. <sup>2</sup>Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. <sup>3</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc.<sup>4</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

Table 5a. **Monthly Value of Construction Put in Place: May 1997-May 1999—Seasonally Adjusted Annual Rate in 1992 Dollars**

[Millions of dollars]

Period	Total construction	Private construction																All other private <sup>5</sup>	
		Total <sup>1</sup>	Residential buildings					Nonresidential buildings									Public utilities <sup>4</sup>		
			Total <sup>2</sup>	New housing units			Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous <sup>3</sup>	Total	Telecommunications		
				Total	1 unit	2 units or more													
1997: May <sup>f</sup> . . . . .	517,760	397,483	224,031	157,888	137,839	20,049	138,058	25,241	25,971	11,409	43,938	5,042	7,122	11,107	8,227	(NA)	9,640	1,851	
June <sup>f</sup> . . . . .	515,792	394,552	221,010	155,395	136,577	18,818	138,324	25,749	27,783	11,350	43,073	4,730	7,080	10,973	7,586	(NA)	9,976	1,890	
July <sup>f</sup> . . . . .	522,495	400,689	219,716	154,437	136,332	18,105	144,490	27,635	29,658	11,619	44,823	4,674	7,305	10,978	7,798	(NA)	10,474	1,944	
August <sup>f</sup> . . . . .	523,381	400,953	219,280	154,933	136,312	18,621	143,999	26,862	30,019	11,542	44,160	4,740	7,483	11,394	7,797	(NA)	9,781	2,092	
September <sup>f</sup> . . . . .	522,226	400,852	220,145	156,075	137,116	18,959	142,419	26,768	30,055	10,372	42,680	4,949	7,888	11,823	7,883	(NA)	10,620	2,048	
October <sup>f</sup> . . . . .	524,084	401,585	222,937	158,527	138,061	20,466	142,393	26,545	31,226	11,174	41,775	5,197	7,954	11,111	7,410	(NA)	10,218	2,239	
November <sup>f</sup> . . . . .	517,441	396,820	223,262	158,200	138,824	19,376	140,105	25,612	31,241	10,620	41,183	5,195	7,813	11,030	7,411	(NA)	9,893	2,149	
December <sup>f</sup> . . . . .	520,524	399,593	225,140	160,339	140,240	20,098	142,302	26,292	31,579	10,511	41,975	5,189	8,051	10,780	7,925	(NA)	10,007	1,760	
1998: January <sup>f</sup> . . . . .	530,358	409,157	228,625	162,879	142,001	20,878	145,226	26,696	33,809	10,770	42,171	5,314	8,165	10,947	7,354	(NA)	9,824	2,169	
February <sup>f</sup> . . . . .	534,648	413,458	231,528	165,393	144,685	20,708	144,984	26,661	32,551	10,506	42,553	5,641	8,566	11,138	7,366	(NA)	10,763	2,195	
March <sup>f</sup> . . . . .	539,315	418,962	234,334	168,183	147,783	20,400	147,442	29,683	31,921	10,255	43,742	5,257	8,555	11,148	6,883	(NA)	11,459	2,174	
April <sup>f</sup> . . . . .	542,912	422,142	236,671	170,692	150,239	20,453	148,902	27,265	33,172	10,924	44,075	5,119	8,832	11,665	7,851	(NA)	10,335	2,134	
May <sup>f</sup> . . . . .	535,326	420,387	236,431	170,346	151,177	19,169	146,040	26,181	33,542	11,195	43,293	4,890	8,450	11,089	7,400	(NA)	10,923	2,219	
June <sup>f</sup> . . . . .	552,098	429,648	237,886	172,166	152,999	19,167	150,826	26,721	35,315	12,199	44,799	5,287	7,594	11,134	7,777	(NA)	10,473	2,787	
July <sup>f</sup> . . . . .	551,246	428,270	241,330	175,982	155,816	20,166	147,987	25,585	33,172	12,806	44,903	5,502	6,959	11,166	7,894	(NA)	10,345	2,116	
August <sup>f</sup> . . . . .	546,564	425,881	240,935	175,197	156,479	18,718	147,763	26,864	32,753	13,133	43,170	5,513	7,270	11,145	7,914	(NA)	10,615	2,158	
September <sup>f</sup> . . . . .	546,822	425,302	242,322	177,007	157,216	19,791	146,651	26,190	33,229	13,592	42,123	5,451	7,376	11,111	7,578	(NA)	10,526	2,242	
October <sup>f</sup> . . . . .	546,608	427,133	243,006	178,266	158,117	20,150	148,775	24,902	35,246	14,006	43,422	5,617	7,251	10,666	7,665	(NA)	11,078	2,103	
November <sup>f</sup> . . . . .	549,530	430,245	245,039	180,843	161,062	19,781	149,884	24,775	35,124	13,000	45,061	5,915	7,496	10,796	7,716	(NA)	10,563	2,418	
December <sup>f</sup> . . . . .	555,484	433,652	246,827	183,368	163,608	19,761	152,035	24,261	35,758	12,606	45,526	5,886	8,276	11,482	8,240	(NA)	10,334	2,341	
1999: January <sup>f</sup> . . . . .	560,780	434,508	251,056	186,917	165,930	20,988	148,178	23,839	36,410	13,495	43,466	6,142	6,809	9,674	8,343	(NA)	11,400	2,108	
February <sup>f</sup> . . . . .	571,380	438,922	253,569	189,607	167,459	22,148	150,629	23,082	37,282	13,404	44,633	5,949	7,141	10,603	8,537	(NA)	10,735	2,292	
March <sup>f</sup> . . . . .	571,609	441,683	255,643	191,079	168,047	23,032	149,998	23,021	36,790	13,013	45,605	5,713	7,120	10,170	8,566	(NA)	12,070	2,555	
April <sup>f</sup> . . . . .	558,974	433,315	253,743	189,119	166,877	22,242	144,054	20,074	36,578	12,787	43,320	5,813	7,521	9,990	7,971	(NA)	11,343	2,941	
May <sup>p</sup> . . . . .	552,891	429,703	252,553	187,550	166,225	21,325	141,894	19,156	36,993	12,513	42,660	5,839	6,490	9,870	8,374	(NA)	(NA)	2,661	
<b>PERCENT CHANGE</b>																			
April 1999- May 1999 . . . . .	-1	-1	(Z)	-1	(Z)	-4	-1	-5	1	-2	-2	(Z)	-14	-1	5	(NA)	(NA)	-10	

See footnotes at end of table.

Table 5a. **Monthly Value of Construction Put in Place: May 1997-May 1999—Seasonally Adjusted Annual Rate in 1992 Dollars—Con.**

[Millions of dollars]

Period	Public construction												
	Total	Buildings						Highways and streets	Military facilities	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous public <sup>7</sup>
		Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings <sup>6</sup>						
1997: May <sup>f</sup> . . . . .	120,276	51,507	3,160	754	23,923	3,871	19,799	37,979	2,150	4,595	8,628	4,706	10,712
June <sup>f</sup> . . . . .	121,239	53,036	3,000	946	24,614	4,203	20,273	38,441	2,216	4,379	8,197	4,602	10,370
July <sup>f</sup> . . . . .	121,806	53,165	3,198	929	24,137	4,221	20,681	38,222	2,324	4,475	8,049	4,696	10,876
August <sup>f</sup> . . . . .	122,427	53,024	3,262	849	24,152	4,237	20,524	38,643	2,374	4,827	7,425	4,551	11,583
September <sup>f</sup> . . . . .	121,374	53,863	3,206	720	24,074	4,308	21,555	37,242	2,157	5,124	7,661	4,838	10,489
October <sup>f</sup> . . . . .	122,499	55,864	3,873	618	25,423	4,416	21,534	35,761	2,452	4,446	7,411	4,634	11,932
November <sup>f</sup> . . . . .	120,621	53,375	3,363	675	24,011	4,132	21,194	38,660	2,285	4,276	7,107	4,735	10,183
December <sup>f</sup> . . . . .	120,932	53,592	3,057	670	25,071	3,440	21,353	37,744	1,841	5,086	7,048	4,609	11,012
1998: January <sup>f</sup> . . . . .	121,201	53,543	3,099	827	24,300	3,522	21,794	38,758	2,019	4,466	7,160	4,704	10,551
February <sup>f</sup> . . . . .	121,189	53,527	3,220	854	24,093	3,323	22,037	38,989	2,377	5,232	7,063	4,861	9,141
March <sup>f</sup> . . . . .	120,354	52,674	3,323	966	22,887	3,746	21,752	39,304	2,356	4,817	7,038	4,695	9,469
April <sup>f</sup> . . . . .	120,769	53,621	3,370	856	24,224	2,981	22,191	39,429	2,275	4,179	7,062	4,915	9,288
May <sup>f</sup> . . . . .	114,939	52,490	3,172	825	24,005	3,421	21,067	35,214	2,107	4,362	6,650	4,811	9,306
June <sup>f</sup> . . . . .	122,450	54,764	3,420	732	25,276	3,169	22,167	38,267	2,164	4,831	7,196	4,574	10,654
July <sup>f</sup> . . . . .	122,977	56,137	3,879	897	25,112	3,097	23,153	37,028	2,670	4,548	7,582	4,877	10,135
August <sup>f</sup> . . . . .	120,682	54,408	3,406	896	24,097	3,146	22,863	37,312	2,268	4,627	7,295	4,788	9,983
September <sup>f</sup> . . . . .	121,520	54,187	3,059	765	24,509	3,272	22,582	37,454	1,722	4,996	7,445	5,127	10,589
October <sup>f</sup> . . . . .	119,475	52,659	3,059	643	23,644	3,244	22,068	38,424	1,967	4,509	7,729	4,954	9,233
November <sup>f</sup> . . . . .	119,285	52,863	3,227	895	23,815	3,022	21,904	36,486	1,874	4,799	8,117	5,141	10,004
December <sup>f</sup> . . . . .	121,832	54,282	3,256	736	25,602	2,939	21,748	36,968	1,878	4,605	8,322	5,359	10,418
1999: January <sup>f</sup> . . . . .	126,272	53,128	2,914	707	25,076	3,268	21,163	41,871	1,528	5,131	8,233	5,295	11,086
February <sup>f</sup> . . . . .	132,457	54,635	2,906	732	25,499	3,803	21,695	45,468	2,141	5,351	8,015	5,514	11,332
March <sup>f</sup> . . . . .	129,926	54,501	2,866	802	25,420	3,155	22,258	43,775	1,796	5,187	8,390	5,515	10,762
April <sup>f</sup> . . . . .	125,659	54,151	3,119	729	26,170	2,898	21,235	40,405	1,848	5,124	7,831	5,207	11,093
May <sup>p</sup> . . . . .	123,188	53,800	3,263	824	26,098	3,170	20,445	39,662	1,731	4,512	7,891	5,171	10,421
<b>PERCENT CHANGE</b>													
April 1999- May 1999 . . . . .	-2	-1	5	13	(Z)	9	-4	-2	-6	-12	1	-1	-6

NA Not available, but estimates are included in totals. <sup>p</sup>Preliminary. <sup>r</sup>Revised. Z Less than 0.5 percent.

<sup>1</sup>Includes farm nonresidential and other private categories, not shown separately. <sup>2</sup>Includes residential improvements, not shown separately. <sup>3</sup>Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. <sup>4</sup>Includes gas, electric, railroad, and petroleum pipelines, not shown separately. <sup>5</sup>Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. <sup>6</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc. <sup>7</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

Table 5b. **Monthly Value of Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in 1992 Dollars**

[Millions of dollars]

Type of construction	1996											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> .....	<b>492,530</b>	<b>488,918</b>	<b>490,454</b>	<b>504,816</b>	<b>508,105</b>	<b>508,582</b>	<b>502,241</b>	<b>506,134</b>	<b>511,901</b>	<b>516,697</b>	<b>521,272</b>	<b>514,397</b>
<b>Private construction</b> .....	371,878	374,038	375,894	385,385	385,941	392,501	385,381	390,790	391,994	397,531	399,498	397,747
Residential buildings .....	208,654	211,464	214,965	220,813	223,338	224,325	222,264	222,416	222,372	220,901	221,299	220,202
New housing units .....	147,824	149,560	151,723	155,942	157,173	157,975	155,397	155,198	154,557	153,379	153,454	152,082
1 unit .....	130,622	132,280	134,300	136,854	138,513	139,445	138,559	138,691	138,029	136,550	135,858	135,124
2 units or more .....	17,202	17,280	17,423	19,088	18,660	18,530	16,839	16,507	16,528	16,828	17,597	16,958
Improvements .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings .....	125,781	125,235	123,341	126,778	126,296	131,954	128,414	131,563	133,508	139,237	140,315	138,545
Industrial .....	29,924	28,867	28,441	28,693	27,121	28,490	27,135	26,352	28,263	31,142	30,049	27,585
Office .....	20,722	21,029	21,185	22,013	23,214	26,606	24,943	25,210	26,011	26,049	26,637	26,746
Hotels, motels .....	8,517	8,576	8,715	9,157	8,603	9,276	9,017	10,157	10,121	10,133	10,524	10,843
Other commercial .....	40,995	41,378	40,112	41,869	41,811	40,715	40,700	42,798	42,067	43,965	43,960	43,528
Religious .....	3,713	3,636	3,652	3,752	3,854	4,271	3,784	3,960	3,959	3,898	4,354	4,348
Educational .....	5,114	5,298	5,434	5,283	5,750	5,875	6,259	6,269	6,597	6,857	6,746	6,746
Hospital and institutional .....	10,064	9,443	9,054	9,742	10,204	10,378	10,321	10,482	10,495	10,563	10,958	11,512
Miscellaneous <sup>1</sup> .....	6,732	7,007	6,747	6,512	6,206	6,469	6,656	6,344	6,322	6,889	7,118	7,236
Farm nonresidential .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications .....	10,266	10,169	9,579	10,150	10,000	9,318	9,320	10,169	9,825	10,136	10,998	12,447
Railroads .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> .....	2,518	2,483	2,303	2,285	2,193	2,272	1,915	2,356	1,892	2,035	1,880	1,911
<b>Public construction</b> .....	120,652	114,881	114,561	119,431	122,164	116,081	116,859	115,344	119,907	119,166	121,774	116,649
Buildings .....	54,585	49,869	51,572	51,887	54,238	50,744	51,620	51,313	52,905	51,620	55,080	52,826
Housing and redevelopment .....	4,187	3,672	3,508	3,270	3,897	3,217	3,587	3,407	3,703	3,395	3,521	3,044
Industrial .....	1,161	1,188	1,358	1,306	1,325	1,371	1,365	1,464	1,445	670	944	869
Educational .....	24,846	22,847	23,819	23,784	24,585	22,610	23,123	23,374	23,278	23,676	25,438	23,472
Hospital .....	3,893	4,141	4,134	4,163	4,194	3,706	3,789	3,498	3,979	3,665	3,565	4,118
Other <sup>3</sup> .....	20,498	18,020	18,753	19,364	20,238	19,840	19,756	19,570	20,500	20,215	21,612	21,323
Highways and streets .....	34,908	35,966	33,764	35,429	35,154	34,208	35,099	33,842	36,065	36,318	36,133	36,963
Military facilities .....	2,943	2,644	2,218	2,454	2,345	2,218	2,019	1,988	2,273	2,275	2,118	2,008
Conservation and development .....	4,954	4,871	5,216	5,326	5,177	5,378	5,093	5,422	6,036	5,073	5,149	4,421
Other public construction .....	23,262	21,530	21,790	24,335	25,250	23,532	23,028	22,779	22,628	23,881	23,294	20,432
Sewer systems .....	7,285	7,316	7,290	8,606	8,531	7,686	7,771	8,633	7,923	9,187	8,669	7,894
Water supply facilities .....	3,671	3,946	3,863	4,645	4,613	4,597	4,406	4,448	4,774	5,406	4,909	4,730
Miscellaneous public <sup>4</sup> .....	12,305	10,268	10,637	11,083	12,106	11,249	10,851	9,697	9,932	9,288	9,716	7,808

See footnotes at end of table.



Table 5b. **Monthly Value of Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in 1992 Dollars—Con.**

[Millions of dollars]

Type of construction	1997											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> .....	<b>515,384</b>	<b>524,790</b>	<b>520,324</b>	<b>518,111</b>	<b>517,760</b>	<b>515,792</b>	<b>522,495</b>	<b>523,381</b>	<b>522,226</b>	<b>524,084</b>	<b>517,441</b>	<b>520,524</b>
<b>Private construction</b> .....	397,149	402,474	395,743	396,757	397,483	394,552	400,689	400,953	400,852	401,585	396,820	399,593
Residential buildings .....	218,941	222,984	223,002	223,056	224,031	221,010	219,716	219,280	220,145	222,937	223,262	225,140
New housing units .....	151,628	156,007	155,808	156,284	157,888	155,395	154,437	154,933	156,075	158,527	158,200	160,339
1 unit .....	134,284	136,276	137,104	137,535	137,839	136,577	136,332	136,312	137,116	138,061	138,824	140,240
2 units or more .....	17,345	19,731	18,703	18,749	20,049	18,818	18,105	18,621	18,959	20,466	19,376	20,098
Improvements .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings .....	142,328	144,714	138,059	137,884	138,058	138,324	144,490	143,999	142,419	142,393	140,105	142,302
Industrial .....	27,698	27,809	25,183	25,633	25,241	25,749	27,635	26,862	26,768	26,545	25,612	26,292
Office .....	27,271	29,147	26,995	25,494	25,971	27,783	29,658	30,019	30,055	31,226	31,241	31,579
Hotels, motels .....	10,641	10,715	10,216	10,456	11,409	11,350	11,619	11,542	10,372	11,174	10,620	10,511
Other commercial .....	46,495	46,326	44,506	44,013	43,938	43,073	44,823	44,160	42,680	41,775	41,183	41,975
Religious .....	4,233	4,500	4,816	4,920	5,042	4,730	4,674	4,740	4,949	5,197	5,195	5,189
Educational .....	6,698	6,666	6,213	7,314	7,122	7,080	7,305	7,483	7,888	7,954	7,813	8,051
Hospital and institutional .....	11,657	11,835	12,111	12,210	11,107	10,973	10,978	11,394	11,823	11,111	11,030	10,780
Miscellaneous <sup>1</sup> .....	7,635	7,718	8,018	7,844	8,227	7,586	7,798	7,797	7,883	7,410	7,411	7,925
Farm nonresidential .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications .....	9,707	9,667	9,572	10,098	9,640	9,976	10,474	9,781	10,620	10,218	9,893	10,007
Railroads .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> .....	1,809	1,802	1,901	1,858	1,851	1,890	1,944	2,092	2,048	2,239	2,149	1,760
<b>Public construction</b> .....	118,235	122,316	124,581	121,354	120,276	121,239	121,806	122,427	121,374	122,499	120,621	120,932
Buildings .....	52,710	53,421	53,869	53,661	51,507	53,036	53,165	53,024	53,863	55,864	53,375	53,592
Housing and redevelopment .....	2,887	3,008	2,944	2,989	3,160	3,000	3,198	3,262	3,206	3,873	3,363	3,057
Industrial .....	975	891	945	1,192	754	946	929	849	720	618	675	670
Educational .....	23,678	24,043	24,423	24,386	23,923	24,614	24,137	24,152	24,074	25,423	24,011	25,071
Hospital .....	4,307	4,325	4,035	4,345	3,871	4,203	4,221	4,237	4,308	4,416	4,132	3,440
Other <sup>3</sup> .....	20,864	21,155	21,522	20,748	19,799	20,273	20,681	20,524	21,555	21,534	21,194	21,353
Highways and streets .....	36,457	38,288	38,584	38,701	37,979	38,441	38,222	38,643	37,242	35,761	38,660	37,744
Military facilities .....	2,215	2,119	1,942	1,992	2,150	2,216	2,324	2,374	2,157	2,452	2,285	1,841
Conservation and development .....	5,274	4,896	5,381	4,524	4,595	4,379	4,475	4,827	5,124	4,446	4,276	5,086
Other public construction .....	21,579	23,592	24,805	22,477	24,046	23,168	23,621	23,559	22,988	23,977	22,026	22,670
Sewer systems .....	8,025	8,388	8,336	8,314	8,628	8,197	8,049	7,425	7,661	7,411	7,107	7,048
Water supply facilities .....	4,962	5,290	5,739	4,808	4,706	4,602	4,696	4,551	4,838	4,634	4,735	4,609
Miscellaneous public <sup>4</sup> .....	8,592	9,914	10,730	9,356	10,712	10,370	10,876	11,583	10,489	11,932	10,183	11,012

See footnotes at end of table.

Table 5b. **Monthly Value of Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in 1992 Dollars—Con.**

[Millions of dollars]

Type of construction	1998											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> .....	<b>530,358</b>	<b>534,648</b>	<b>539,315</b>	<b>542,912</b>	<b>535,326</b>	<b>552,098</b>	<b>551,246</b>	<b>546,564</b>	<b>546,822</b>	<b>546,608</b>	<b>549,530</b>	<b>555,484</b>
<b>Private construction</b> .....	409,157	413,458	418,962	422,142	420,387	429,648	428,270	425,881	425,302	427,133	430,245	433,652
Residential buildings .....	228,625	231,528	234,334	236,671	236,431	237,886	241,330	240,935	242,322	243,006	245,039	246,827
New housing units .....	162,879	165,393	168,183	170,692	170,346	172,166	175,982	175,197	177,007	178,266	180,843	183,368
1 unit .....	142,001	144,685	147,783	150,239	151,177	152,999	155,816	156,479	157,216	158,117	161,062	163,608
2 units or more .....	20,878	20,708	20,400	20,453	19,169	19,167	20,166	18,718	19,791	20,150	19,781	19,761
Improvements .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings .....	145,226	144,984	147,442	148,902	146,040	150,826	147,987	147,763	146,651	148,775	149,884	152,035
Industrial .....	26,696	26,661	29,683	27,265	26,181	26,721	25,585	26,864	26,190	24,902	24,775	24,261
Office .....	33,809	32,551	31,921	33,172	33,542	35,315	33,172	32,753	33,229	35,246	35,124	35,758
Hotels, motels .....	10,770	10,506	10,255	10,924	11,195	12,199	12,806	13,133	13,592	14,006	13,000	12,606
Other commercial .....	42,171	42,553	43,742	44,075	43,293	44,799	44,903	43,170	42,123	43,422	45,061	45,526
Religious .....	5,314	5,641	5,257	5,119	4,890	5,287	5,502	5,513	5,451	5,617	5,915	5,886
Educational .....	8,165	8,566	8,555	8,832	8,450	7,594	6,959	7,270	7,376	7,251	7,496	8,276
Hospital and institutional .....	10,947	11,138	11,148	11,665	11,089	11,134	11,166	11,145	11,111	10,666	10,796	11,482
Miscellaneous <sup>1</sup> .....	7,354	7,366	6,883	7,851	7,400	7,777	7,894	7,914	7,578	7,665	7,716	8,240
Farm nonresidential .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications .....	9,824	10,763	11,459	10,335	10,923	10,473	10,345	10,615	10,526	11,078	10,563	10,334
Railroads .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines .....	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> .....	2,169	2,195	2,174	2,134	2,219	2,787	2,116	2,158	2,242	2,103	2,418	2,341
<b>Public construction</b> .....	121,201	121,189	120,354	120,769	114,939	122,450	122,977	120,682	121,520	119,475	119,285	121,832
Buildings .....	53,543	53,527	52,674	53,621	52,490	54,764	56,137	54,408	54,187	52,659	52,863	54,282
Housing and redevelopment .....	3,099	3,220	3,323	3,370	3,172	3,420	3,879	3,406	3,059	3,059	3,227	3,256
Industrial .....	827	854	966	856	825	732	897	896	765	643	895	736
Educational .....	24,300	24,093	22,887	24,224	24,005	25,276	25,112	24,097	24,509	23,644	23,815	25,602
Hospital .....	3,522	3,323	3,746	2,981	3,421	3,169	3,097	3,146	3,272	3,244	3,022	2,939
Other <sup>3</sup> .....	21,794	22,037	21,752	22,191	21,067	22,167	23,153	22,863	22,582	22,068	21,904	21,748
Highways and streets .....	38,758	38,989	39,304	39,429	35,214	38,267	37,028	37,312	37,454	38,424	36,486	36,968
Military facilities .....	2,019	2,377	2,356	2,275	2,107	2,164	2,670	2,268	1,722	1,967	1,874	1,878
Conservation and development .....	4,466	5,232	4,817	4,179	4,362	4,831	4,548	4,627	4,996	4,509	4,799	4,605
Other public construction .....	22,414	21,066	21,203	21,265	20,767	22,424	22,594	22,067	23,161	21,916	23,262	24,099
Sewer systems .....	7,160	7,063	7,038	7,062	6,650	7,196	7,582	7,295	7,445	7,729	8,117	8,322
Water supply facilities .....	4,704	4,861	4,695	4,915	4,811	4,574	4,877	4,788	5,127	4,954	5,141	5,359
Miscellaneous public <sup>4</sup> .....	10,551	9,141	9,469	9,288	9,306	10,654	10,135	9,983	10,589	9,233	10,004	10,418

NA Not available, but estimates are included in total.

<sup>1</sup>Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. <sup>2</sup>Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. <sup>3</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc.<sup>4</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

Table 6a. **Monthly Value of Construction Put in Place: May 1997-May 1999—Not Seasonally Adjusted in 1992 Dollars**

[Millions of dollars]

Period	Total construction	Private construction															All other private <sup>5</sup>	
		Total <sup>1</sup>	Residential buildings					Nonresidential buildings								Public utilities <sup>4</sup>		
			Total <sup>2</sup>	New housing units			Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous <sup>3</sup>	Total		Telecommunications
				Total	1 unit	2 units or more												
<b>YEAR TO DATE</b>																		
May 1998	197,757	156,354	86,381	62,806	54,769	8,039	57,331	10,688	13,313	4,387	16,240	2,001	3,222	4,545	2,935	(NA)	4,078	808
May 1999	207,638	163,648	93,942	70,906	62,183	8,723	57,607	8,550	14,896	5,331	16,513	2,238	2,665	4,082	3,331	(NA)	(NA)	938
Percent change	5	5	9	13	14	9	(Z)	-20	12	22	2	12	-17	-10	13	(NA)	(NA)	16
<b>MONTHLY DATA</b>																		
1997: May <sup>f</sup>	44,335	34,207	19,567	13,377	11,613	1,764	11,598	2,101	2,236	974	3,654	409	605	933	686	(NA)	811	149
June <sup>f</sup>	47,105	35,807	20,526	13,893	12,212	1,681	11,966	2,191	2,352	983	3,801	374	691	921	653	(NA)	851	159
July <sup>f</sup>	48,926	36,978	20,888	14,355	12,781	1,574	12,486	2,308	2,536	977	3,982	394	734	891	665	(NA)	920	178
August <sup>f</sup>	50,406	37,815	21,211	14,674	12,995	1,679	12,781	2,333	2,577	938	4,114	412	751	984	672	(NA)	854	198
September <sup>f</sup>	49,836	37,254	20,627	14,690	13,037	1,653	12,863	2,396	2,607	907	4,065	469	708	1,019	692	(NA)	935	189
October <sup>f</sup>	48,572	36,749	20,566	14,586	12,794	1,792	12,692	2,371	2,714	930	3,899	486	658	970	662	(NA)	961	218
November <sup>f</sup>	44,237	34,105	19,379	13,897	12,274	1,623	11,987	2,209	2,629	871	3,583	476	620	956	642	(NA)	819	188
December <sup>f</sup>	39,430	30,626	16,559	11,991	10,401	1,589	11,594	2,307	2,568	880	3,288	445	576	889	640	(NA)	896	144
1998: January <sup>f</sup>	35,390	27,994	15,074	11,146	9,632	1,514	10,698	1,987	2,570	828	2,952	401	561	859	540	(NA)	676	155
February <sup>f</sup>	34,587	27,273	14,423	10,747	9,224	1,524	10,734	2,004	2,523	818	2,965	406	600	875	544	(NA)	746	147
March <sup>f</sup>	39,198	31,232	17,232	12,806	11,182	1,624	11,586	2,315	2,596	885	3,266	403	646	914	559	(NA)	926	163
April <sup>f</sup>	43,056	33,979	19,036	13,687	11,994	1,693	12,145	2,211	2,773	951	3,460	409	697	967	677	(NA)	849	165
May <sup>f</sup>	45,526	35,876	20,616	14,420	12,737	1,684	12,168	2,171	2,851	905	3,597	382	718	930	615	(NA)	881	178
June <sup>f</sup>	50,840	39,373	22,105	15,457	13,744	1,712	13,090	2,274	3,016	1,088	3,942	427	739	934	669	(NA)	944	233
July <sup>f</sup>	51,711	39,718	22,887	16,336	14,582	1,754	12,747	2,136	2,842	1,055	3,993	444	697	906	674	(NA)	905	192
August <sup>f</sup>	52,541	40,157	23,260	16,572	14,892	1,680	13,144	2,333	2,798	1,110	4,029	498	731	962	683	(NA)	911	207
September <sup>f</sup>	52,091	39,333	22,685	16,633	14,909	1,723	13,159	2,348	2,872	1,144	3,998	511	664	958	664	(NA)	932	206
October <sup>f</sup>	50,384	38,885	22,418	16,419	14,652	1,766	13,238	2,227	3,028	1,180	4,053	531	600	933	686	(NA)	1,016	206
November <sup>f</sup>	47,229	37,182	21,287	15,884	14,227	1,657	12,908	2,141	3,009	1,094	3,924	545	595	934	666	(NA)	896	212
December <sup>f</sup>	42,177	33,343	18,175	13,723	12,161	1,561	12,403	2,123	2,926	1,062	3,570	516	592	947	667	(NA)	927	192
1999: January <sup>f</sup>	37,261	29,610	16,591	12,758	11,228	1,530	10,880	1,788	2,782	987	3,032	446	472	759	613	(NA)	750	149
February <sup>f</sup>	36,959	29,046	15,843	12,299	10,662	1,637	11,210	1,752	2,899	1,041	3,121	428	503	832	634	(NA)	747	153
March <sup>f</sup>	41,809	33,174	18,941	14,620	12,786	1,835	11,846	1,807	2,989	1,130	3,405	439	542	836	699	(NA)	1,012	192
April <sup>f</sup>	44,410	34,967	20,445	15,206	13,350	1,855	11,793	1,626	3,079	1,109	3,411	450	600	828	689	(NA)	954	229
May <sup>p</sup>	47,199	36,851	22,122	16,023	14,157	1,866	11,878	1,577	3,147	1,064	3,544	475	548	827	696	(NA)	(NA)	215
<b>PERCENT CHANGE</b>																		
April 1999- May 1999	6	5	8	5	6	1	1	-3	2	-4	4	6	-9	(Z)	1	(NA)	(NA)	-6

See footnotes at end of table.

Table 6a. **Monthly Value of Construction Put in Place: May 1997-May 1999—Not Seasonally Adjusted in 1992 Dollars—Con.**

[Millions of dollars]

Period	Public construction												
	Total	Buildings						Highways and streets	Military facilities	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous public <sup>7</sup>
		Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings <sup>6</sup>						
<b>YEAR TO DATE</b>													
May 1998 .....	41,403	20,242	1,287	340	8,743	1,352	8,517	10,844	879	1,691	2,558	1,773	3,415
May 1999 .....	43,991	20,576	1,198	301	9,413	1,288	8,376	12,023	710	1,876	2,932	1,961	3,914
Percent change .....	6	2	-7	-11	8	-5	-2	11	-19	11	15	11	15
<b>MONTHLY DATA</b>													
1997: May <sup>f</sup> .....	10,128	4,303	269	62	1,954	316	1,702	3,244	183	382	711	401	904
June <sup>f</sup> .....	11,298	4,774	260	80	2,305	363	1,766	3,889	190	375	734	401	934
July <sup>f</sup> .....	11,948	4,907	270	77	2,438	355	1,767	4,278	200	402	710	429	1,022
August <sup>f</sup> .....	12,591	5,032	262	67	2,566	337	1,800	4,611	208	447	710	415	1,169
September <sup>f</sup> .....	12,582	5,083	298	82	2,283	426	1,994	4,336	231	653	750	442	1,087
October <sup>f</sup> .....	11,823	4,901	344	47	2,203	382	1,925	4,139	165	342	721	465	1,089
November <sup>f</sup> .....	10,131	4,383	284	54	1,877	338	1,830	3,283	192	353	632	428	861
December <sup>f</sup> .....	8,804	4,154	251	59	1,835	294	1,716	2,353	159	407	543	364	824
1998: January <sup>f</sup> .....	7,396	3,839	241	62	1,660	270	1,605	1,634	157	294	484	317	671
February <sup>f</sup> .....	7,314	3,815	242	65	1,628	253	1,627	1,608	164	358	463	324	582
March <sup>f</sup> .....	7,966	3,971	259	78	1,650	307	1,677	1,959	198	351	515	330	642
April <sup>f</sup> .....	9,077	4,253	279	69	1,853	246	1,806	2,638	181	330	546	391	737
May <sup>f</sup> .....	9,650	4,364	266	66	1,952	276	1,802	3,005	179	358	550	411	783
June <sup>f</sup> .....	11,467	4,941	300	64	2,369	275	1,933	3,910	187	422	642	399	966
July <sup>f</sup> .....	11,993	5,190	329	76	2,542	261	1,981	4,098	230	406	670	444	955
August <sup>f</sup> .....	12,383	5,171	276	71	2,560	252	2,011	4,459	198	424	693	437	1,002
September <sup>f</sup> .....	12,758	5,108	283	87	2,331	323	2,083	4,498	184	651	725	468	1,124
October <sup>f</sup> .....	11,500	4,606	272	47	2,051	278	1,959	4,339	132	321	753	496	852
November <sup>f</sup> .....	10,047	4,357	277	74	1,868	249	1,890	3,101	158	398	721	466	846
December <sup>f</sup> .....	8,834	4,196	268	64	1,871	250	1,743	2,277	162	369	635	420	776
1999: January <sup>f</sup> .....	7,651	3,788	221	51	1,724	247	1,544	1,790	119	341	556	353	705
February <sup>f</sup> .....	7,914	3,896	218	56	1,725	289	1,608	1,891	148	372	518	366	724
March <sup>f</sup> .....	8,634	4,108	227	68	1,822	259	1,733	2,254	151	395	605	387	733
April <sup>f</sup> .....	9,444	4,310	258	60	2,017	233	1,741	2,697	146	403	600	413	875
May <sup>p</sup> .....	10,348	4,474	274	66	2,125	260	1,750	3,391	146	365	653	442	877
<b>PERCENT CHANGE</b>													
April 1999- May 1999 .....	10	4	6	10	5	12	1	26	(Z)	-9	9	7	(Z)

NA Not available, but estimates are included in totals. <sup>p</sup>Preliminary. <sup>r</sup>Revised. Z Less than 0.5 percent.

<sup>1</sup>Includes farm nonresidential and other private categories, not shown separately. <sup>2</sup>Includes residential improvements, not shown separately. <sup>3</sup>Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. <sup>4</sup>Includes gas, electric, railroad, and petroleum pipelines, not shown separately. <sup>5</sup>Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. <sup>6</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc. <sup>7</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

Table 6b. Annual and Monthly Value of Construction Put in Place: 1996-1998—Not Seasonally Adjusted in 1992 Dollars

[Millions of dollars]

Type of construction	1996												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> .....	<b>506,485</b>	<b>33,168</b>	<b>31,795</b>	<b>35,502</b>	<b>40,006</b>	<b>43,628</b>	<b>46,183</b>	<b>46,929</b>	<b>48,759</b>	<b>48,715</b>	<b>47,997</b>	<b>44,844</b>	<b>38,959</b>
<b>Private construction</b> .....	<b>388,324</b>	<b>25,630</b>	<b>24,814</b>	<b>27,871</b>	<b>31,067</b>	<b>33,234</b>	<b>35,456</b>	<b>35,456</b>	<b>36,948</b>	<b>36,275</b>	<b>36,459</b>	<b>34,582</b>	<b>30,534</b>
Residential buildings .....	220,017	13,808	13,184	15,695	17,647	19,449	20,814	21,104	21,562	20,822	20,487	19,265	16,181
New housing units .....	153,966	10,173	9,718	11,479	12,393	13,279	14,112	14,429	14,739	14,543	14,196	13,544	11,361
1 unit .....	136,516	8,926	8,455	10,095	10,823	11,635	12,457	12,967	13,245	13,101	12,722	12,069	10,022
2 units or more .....	17,450	1,247	1,263	1,384	1,570	1,644	1,655	1,462	1,494	1,442	1,474	1,475	1,340
Improvements .....	66,052	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings .....	131,188	9,236	9,351	9,597	10,362	10,679	11,333	11,066	11,757	12,041	12,453	12,027	11,286
Industrial .....	28,503	2,229	2,170	2,223	2,324	2,260	2,424	2,266	2,288	2,523	2,782	2,584	2,430
Office .....	24,329	1,604	1,681	1,691	1,875	2,080	2,202	2,126	2,172	2,246	2,238	2,258	2,157
Hotels, motels .....	9,521	653	713	717	813	724	783	754	870	860	864	866	904
Other commercial .....	42,042	2,839	2,883	2,992	3,287	3,481	3,596	3,612	3,991	4,021	4,103	3,828	3,410
Religious .....	3,955	280	277	272	300	309	338	313	357	368	379	390	370
Educational .....	5,880	349	371	409	397	450	562	590	627	563	548	533	482
Hospital and institutional .....	10,280	791	741	746	804	858	871	838	903	904	923	950	950
Miscellaneous <sup>1</sup> .....	6,677	490	516	547	562	518	557	567	548	557	615	619	583
Farm nonresidential .....	3,192	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities .....	31,771	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications .....	10,245	731	735	751	839	864	777	812	924	818	956	960	1,078
Railroads .....	3,894	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power .....	9,914	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas .....	6,814	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines .....	903	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> .....	2,156	183	167	172	178	178	193	178	218	175	196	165	155
<b>Public construction</b> .....	<b>118,161</b>	<b>7,539</b>	<b>6,981</b>	<b>7,631</b>	<b>8,939</b>	<b>10,394</b>	<b>10,727</b>	<b>11,472</b>	<b>11,812</b>	<b>12,441</b>	<b>11,539</b>	<b>10,262</b>	<b>8,425</b>
Buildings .....	52,348	3,930	3,552	3,881	4,102	4,554	4,542	4,743	4,884	4,979	4,536	4,542	4,102
Housing and redevelopment .....	3,532	331	277	271	270	336	275	303	276	340	305	302	248
Industrial .....	1,214	91	91	109	106	112	113	112	115	160	52	78	75
Educational .....	23,693	1,694	1,559	1,729	1,810	2,014	2,116	2,328	2,489	2,206	2,044	1,984	1,721
Hospital .....	3,905	300	314	334	343	347	317	317	278	386	323	295	351
Other <sup>3</sup> .....	20,004	1,515	1,310	1,438	1,574	1,746	1,721	1,684	1,725	1,887	1,813	1,884	1,707
Highways and streets .....	35,258	1,519	1,517	1,640	2,294	3,085	3,455	4,004	4,047	4,181	4,219	3,068	2,230
Military facilities .....	2,280	227	184	187	195	200	190	173	174	244	153	178	174
Conservation and development .....	5,245	338	331	386	432	438	450	454	503	767	372	428	347
Other public construction .....	23,030	1,525	1,398	1,536	1,916	2,117	2,090	2,098	2,204	2,271	2,258	2,045	1,572
Sewer systems .....	8,110	495	469	531	656	697	690	682	827	780	891	771	620
Water supply facilities .....	4,550	249	262	273	367	392	401	403	406	435	541	445	376
Miscellaneous public <sup>4</sup> .....	10,370	781	667	732	894	1,027	998	1,013	971	1,055	826	830	577

See footnotes at end of table.

Table 6b. **Annual and Monthly Value of Construction Put in Place: 1996-1998—Not Seasonally Adjusted in 1992 Dollars—Con.**

[Millions of dollars]

Type of construction	1997												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> . . . . .	<b>520,123</b>	<b>34,621</b>	<b>33,985</b>	<b>37,598</b>	<b>41,071</b>	<b>44,335</b>	<b>47,105</b>	<b>48,926</b>	<b>50,406</b>	<b>49,836</b>	<b>48,572</b>	<b>44,237</b>	<b>39,430</b>
<b>Private construction</b> . . . . .	398,699	27,310	26,561	29,362	31,924	34,207	35,807	36,978	37,815	37,254	36,749	34,105	30,626
Residential buildings . . . . .	221,756	14,376	13,868	16,301	17,889	19,567	20,526	20,888	21,211	20,627	20,566	19,379	16,559
New housing units . . . . .	156,248	10,354	10,135	11,815	12,481	13,377	13,893	14,355	14,674	14,690	14,586	13,897	11,991
1 unit . . . . .	137,156	9,098	8,688	10,329	10,934	11,613	12,212	12,781	12,995	13,037	12,794	12,274	10,401
2 units or more . . . . .	19,092	1,256	1,447	1,487	1,547	1,764	1,681	1,574	1,679	1,653	1,792	1,623	1,589
Improvements . . . . .	65,509	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings . . . . .	141,129	10,462	10,686	10,790	11,224	11,598	11,966	12,486	12,781	12,863	12,692	11,987	11,594
Industrial . . . . .	26,405	2,061	2,088	1,964	2,076	2,101	2,191	2,308	2,333	2,396	2,371	2,209	2,307
Office . . . . .	28,876	2,111	2,249	2,146	2,150	2,236	2,352	2,536	2,577	2,607	2,714	2,629	2,568
Hotels, motels . . . . .	10,864	804	834	874	893	974	983	977	938	907	930	871	880
Other commercial . . . . .	43,628	3,239	3,227	3,319	3,455	3,654	3,801	3,982	4,114	4,065	3,899	3,583	3,288
Religious . . . . .	4,861	315	322	370	387	409	374	394	412	469	486	476	445
Educational . . . . .	7,316	459	467	470	576	605	691	734	751	708	658	620	576
Hospital and institutional . . . . .	11,413	915	930	995	1,009	933	921	891	984	1,019	970	956	889
Miscellaneous <sup>1</sup> . . . . .	7,767	557	568	652	677	686	653	665	672	692	662	642	640
Farm nonresidential . . . . .	3,210	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities . . . . .	30,644	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications . . . . .	9,985	690	669	739	839	811	851	920	854	935	961	819	896
Railroads . . . . .	4,204	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power . . . . .	9,783	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas . . . . .	5,828	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines . . . . .	843	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> . . . . .	1,960	130	121	142	144	149	159	178	198	189	218	188	144
<b>Public construction</b> . . . . .	121,424	7,311	7,424	8,236	9,146	10,128	11,298	11,948	12,591	12,582	11,823	10,131	8,804
Buildings . . . . .	53,424	3,792	3,803	4,048	4,243	4,303	4,774	4,907	5,032	5,083	4,901	4,383	4,154
Housing and redevelopment . . . . .	3,165	227	226	227	246	269	260	270	262	298	344	284	251
Industrial . . . . .	843	76	68	75	95	62	80	77	67	82	47	54	59
Educational . . . . .	24,340	1,616	1,633	1,771	1,859	1,954	2,305	2,438	2,566	2,283	2,203	1,877	1,835
Hospital . . . . .	4,157	332	329	328	358	316	363	355	337	426	382	338	294
Other <sup>3</sup> . . . . .	20,919	1,540	1,548	1,647	1,684	1,702	1,766	1,767	1,800	1,994	1,925	1,830	1,716
Highways and streets . . . . .	37,833	1,571	1,618	1,897	2,616	3,244	3,889	4,278	4,611	4,336	4,139	3,283	2,353
Military facilities . . . . .	2,169	172	146	164	158	183	190	200	208	231	165	192	159
Conservation and development . . . . .	4,801	359	333	388	361	382	375	402	447	653	342	353	407
Other public construction . . . . .	23,196	1,418	1,524	1,739	1,768	2,016	2,069	2,161	2,294	2,279	2,276	1,921	1,731
Sewer systems . . . . .	7,842	542	542	608	639	711	734	710	710	750	721	632	543
Water supply facilities . . . . .	4,817	334	351	405	381	401	401	429	415	442	465	428	364
Miscellaneous public <sup>4</sup> . . . . .	10,537	541	631	727	748	904	934	1,022	1,169	1,087	1,089	861	824

See footnotes at end of table.

Table 6b. **Annual and Monthly Value of Construction Put in Place: 1996-1998—Not Seasonally Adjusted in 1992 Dollars—Con.**

[Millions of dollars]

Type of construction	1998												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>Total construction</b> . . . . .	<b>544,729</b>	<b>35,390</b>	<b>34,587</b>	<b>39,198</b>	<b>43,056</b>	<b>45,526</b>	<b>50,840</b>	<b>51,711</b>	<b>52,541</b>	<b>52,091</b>	<b>50,384</b>	<b>47,229</b>	<b>42,177</b>
<b>Private construction</b> . . . . .	424,345	27,994	27,273	31,232	33,979	35,876	39,373	39,718	40,157	39,333	38,885	37,182	33,343
Residential buildings . . . . .	239,201	15,074	14,423	17,232	19,036	20,616	22,105	22,887	23,260	22,685	22,418	21,287	18,175
New housing units . . . . .	173,828	11,146	10,747	12,806	13,687	14,420	15,457	16,336	16,572	16,633	16,419	15,884	13,723
1 unit . . . . .	153,937	9,632	9,224	11,182	11,994	12,737	13,744	14,582	14,892	14,909	14,652	14,227	12,161
2 units or more . . . . .	19,891	1,514	1,524	1,624	1,693	1,684	1,712	1,754	1,680	1,723	1,766	1,657	1,561
Improvements . . . . .	65,372	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Nonresidential buildings . . . . .	148,017	10,698	10,734	11,586	12,145	12,168	13,090	12,747	13,144	13,159	13,238	12,908	12,403
Industrial . . . . .	26,269	1,987	2,004	2,315	2,211	2,171	2,274	2,136	2,333	2,348	2,227	2,141	2,123
Office . . . . .	33,803	2,570	2,523	2,596	2,773	2,851	3,016	2,842	2,798	2,872	3,028	3,009	2,926
Hotels, motels . . . . .	12,121	828	818	885	951	905	1,088	1,055	1,110	1,144	1,180	1,094	1,062
Other commercial . . . . .	43,749	2,952	2,965	3,266	3,460	3,597	3,942	3,993	4,029	3,998	4,053	3,924	3,570
Religious . . . . .	5,472	401	406	403	409	382	427	444	498	511	531	545	516
Educational . . . . .	7,840	561	600	646	697	718	739	697	664	664	600	595	592
Hospital and institutional . . . . .	11,121	859	875	914	967	930	934	906	962	958	933	934	947
Miscellaneous <sup>1</sup> . . . . .	7,643	540	544	559	677	615	669	674	683	664	686	666	667
Farm nonresidential . . . . .	3,165	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Public utilities . . . . .	31,705	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Telecommunications . . . . .	10,612	676	746	926	849	881	944	905	911	932	1,016	896	927
Railroads . . . . .	4,489	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Electric light and power . . . . .	9,827	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Gas . . . . .	5,697	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Petroleum pipelines . . . . .	1,080	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
All other private <sup>2</sup> . . . . .	2,256	155	147	163	165	178	233	192	207	206	206	212	192
<b>Public construction</b> . . . . .	120,384	7,396	7,314	7,966	9,077	9,650	11,467	11,993	12,383	12,758	11,500	10,047	8,834
Buildings . . . . .	53,810	3,839	3,815	3,971	4,253	4,364	4,941	5,190	5,171	5,108	4,606	4,357	4,196
Housing and redevelopment . . . . .	3,291	241	242	259	279	266	300	329	276	283	272	277	268
Industrial . . . . .	824	62	65	78	69	66	64	76	71	87	47	74	64
Educational . . . . .	24,336	1,660	1,628	1,650	1,853	1,952	2,369	2,542	2,560	2,331	2,051	1,868	1,871
Hospital . . . . .	3,239	270	253	307	246	276	275	261	252	323	278	249	250
Other <sup>3</sup> . . . . .	22,119	1,605	1,627	1,677	1,806	1,802	1,933	1,981	2,011	2,083	1,959	1,890	1,743
Highways and streets . . . . .	37,525	1,634	1,608	1,959	2,638	3,005	3,910	4,098	4,459	4,498	4,339	3,101	2,277
Military facilities . . . . .	2,131	157	164	198	181	179	187	230	198	184	132	158	162
Conservation and development . . . . .	4,681	294	358	351	330	358	422	406	424	651	321	398	369
Other public construction . . . . .	22,237	1,472	1,368	1,487	1,675	1,745	2,008	2,069	2,132	2,318	2,102	2,032	1,831
Sewer systems . . . . .	7,398	484	463	515	546	550	642	670	693	725	753	721	635
Water supply facilities . . . . .	4,903	317	324	330	391	411	399	444	437	468	496	466	420
Miscellaneous public <sup>4</sup> . . . . .	9,936	671	582	642	737	783	966	955	1,002	1,124	852	846	776

NA Not available, but estimates are included in total.

<sup>1</sup>Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc. <sup>2</sup>Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc. <sup>3</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc.

<sup>4</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc.

**Table 7a. Monthly Value of Public Construction Put in Place: May 1997-May 1999—Not Seasonally Adjusted in Current Dollars**

[Millions of dollars]

Period		State and locally owned public construction										
		Total state and local	Buildings					Highways and streets	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous construction <sup>2</sup>
			Total	Housing and redevelopment	Educational	Hospital	Other buildings <sup>1</sup>					
1997:	May <sup>f</sup> . . . . .	10,776	4,635	271	2,309	290	1,765	3,774	158	833	474	903
	June <sup>f</sup> . . . . .	12,140	5,139	252	2,725	320	1,841	4,524	181	858	473	965
	July <sup>f</sup> . . . . .	12,912	5,366	270	2,899	352	1,845	4,968	198	831	504	1,044
	August <sup>f</sup> . . . . .	13,673	5,538	258	3,064	323	1,893	5,355	226	831	488	1,235
	September <sup>f</sup> . . . . .	13,117	5,384	305	2,733	336	2,010	5,029	218	879	518	1,088
	October <sup>f</sup> . . . . .	13,041	5,418	346	2,642	342	2,088	4,846	245	843	546	1,143
	November <sup>f</sup> . . . . .	10,860	4,721	285	2,263	278	1,894	3,888	200	741	505	805
	December <sup>f</sup> . . . . .	9,241	4,457	265	2,210	254	1,729	2,791	165	636	429	763
1998:	January <sup>f</sup> . . . . .	7,849	4,216	253	2,009	255	1,700	1,930	154	567	376	605
	February <sup>f</sup> . . . . .	7,699	4,169	244	1,970	240	1,716	1,891	139	541	384	574
	March <sup>f</sup> . . . . .	8,391	4,309	282	1,999	267	1,761	2,301	152	603	392	634
	April <sup>f</sup> . . . . .	9,777	4,687	300	2,254	236	1,897	3,091	141	640	464	752
	May <sup>f</sup> . . . . .	10,463	4,844	282	2,383	248	1,932	3,520	165	647	488	799
	June <sup>f</sup> . . . . .	12,598	5,579	324	2,908	256	2,091	4,597	202	759	476	985
	July <sup>f</sup> . . . . .	13,107	5,810	345	3,128	226	2,111	4,833	163	790	529	983
	August <sup>f</sup> . . . . .	13,755	5,880	284	3,159	225	2,213	5,298	182	819	523	1,053
	September <sup>f</sup> . . . . .	13,655	5,633	294	2,883	253	2,204	5,367	177	859	562	1,057
	October <sup>f</sup> . . . . .	13,068	5,288	304	2,547	257	2,180	5,186	183	889	600	923
	November <sup>f</sup> . . . . .	11,012	4,948	298	2,325	247	2,078	3,703	148	847	565	801
	December <sup>f</sup> . . . . .	9,577	4,745	296	2,338	258	1,854	2,723	134	746	512	718
1999:	January <sup>f</sup> . . . . .	8,394	4,345	252	2,159	223	1,712	2,145	150	652	431	672
	February <sup>f</sup> . . . . .	8,577	4,419	247	2,165	236	1,770	2,266	136	607	447	703
	March <sup>f</sup> . . . . .	9,519	4,716	249	2,298	242	1,927	2,716	134	723	475	755
	April <sup>f</sup> . . . . .	10,518	5,017	285	2,549	231	1,952	3,243	183	716	507	852
	May <sup>p</sup> . . . . .	11,762	5,236	309	2,689	259	1,979	4,101	162	784	545	935
		Federally owned public construction										
		Total Federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction <sup>4</sup>	
			Total	Housing	Industrial	Educational	Hospital					Other buildings <sup>3</sup>
1997:	May <sup>f</sup> . . . . .	1,136	454	49	74	1	84	247	(NA)	215	290	155
	June <sup>f</sup> . . . . .	1,148	512	59	95	2	109	248	(NA)	224	258	128
	July <sup>f</sup> . . . . .	1,163	476	55	92	1	70	257	(NA)	236	272	151
	August <sup>f</sup> . . . . .	1,181	478	58	80	2	80	258	(NA)	245	297	131
	September <sup>f</sup> . . . . .	1,743	709	55	98	3	174	379	(NA)	273	547	182
	October <sup>f</sup> . . . . .	980	462	71	56	-	116	220	(NA)	196	155	136
	November <sup>f</sup> . . . . .	1,246	567	60	66	1	129	312	(NA)	230	214	213
	December <sup>f</sup> . . . . .	1,286	554	39	71	3	101	340	(NA)	191	312	212
1998:	January <sup>f</sup> . . . . .	1,009	429	40	76	-	71	243	(NA)	188	191	188
	February <sup>f</sup> . . . . .	1,047	447	50	79	1	66	253	(NA)	196	280	111
	March <sup>f</sup> . . . . .	1,138	504	32	95	-	105	272	(NA)	237	259	122
	April <sup>f</sup> . . . . .	1,087	488	39	84	1	63	301	(NA)	216	246	115
	May <sup>f</sup> . . . . .	1,107	483	42	81	1	90	269	(NA)	215	256	123
	June <sup>f</sup> . . . . .	1,204	488	44	78	2	82	283	(NA)	225	297	158
	July <sup>f</sup> . . . . .	1,360	580	61	93	2	95	329	(NA)	279	315	148
	August <sup>f</sup> . . . . .	1,249	506	57	88	3	87	271	(NA)	241	319	139
	September <sup>f</sup> . . . . .	1,839	690	57	108	3	148	375	(NA)	225	595	285
	October <sup>f</sup> . . . . .	927	433	34	58	-	88	253	(NA)	162	196	94
	November <sup>f</sup> . . . . .	1,228	478	48	92	1	63	275	(NA)	194	320	206
	December <sup>f</sup> . . . . .	1,228	501	41	80	1	55	325	(NA)	199	299	205
1999:	January <sup>f</sup> . . . . .	985	406	27	64	3	87	225	(NA)	147	249	167
	February <sup>f</sup> . . . . .	1,127	471	26	70	1	127	247	(NA)	182	300	159
	March <sup>f</sup> . . . . .	1,140	468	37	85	1	85	260	(NA)	187	338	127
	April <sup>f</sup> . . . . .	1,136	431	42	76	1	64	248	(NA)	181	297	201
	May <sup>p</sup> . . . . .	1,045	429	39	83	1	70	237	(NA)	182	277	125

- Less than \$0.5 million. NA Not available, but estimates are included in totals. <sup>p</sup>Preliminary. <sup>f</sup>Revised.

<sup>1</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers, etc. <sup>2</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. <sup>3</sup>Includes Federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. <sup>4</sup>Includes Federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.



Table 7b. **Annual and Monthly Value of Public Construction Put in Place: 1996-1998—Not Seasonally Adjusted in Current Dollars**

[Millions of dollars]

Type of construction	1996												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . .</b>	119,151	7,289	6,739	7,383	8,782	10,332	10,844	11,771	12,216	12,260	12,312	10,584	8,640
Total buildings . . . . .	53,817	3,964	3,558	3,897	4,149	4,598	4,657	4,914	5,141	5,044	4,883	4,753	4,258
Housing and redevelopment . . . . .	3,432	328	275	267	257	307	261	290	267	332	313	294	241
Educational . . . . .	27,135	1,915	1,767	1,962	2,051	2,289	2,415	2,671	2,862	2,547	2,363	2,295	2,000
Hospital . . . . .	3,313	276	251	257	266	254	287	266	247	324	316	267	301
Other <sup>1</sup> . . . . .	19,936	1,446	1,266	1,411	1,576	1,748	1,694	1,687	1,765	1,842	1,891	1,896	1,716
Highways and streets . . . . .	39,492	1,684	1,687	1,832	2,555	3,437	3,856	4,477	4,535	4,714	4,753	3,449	2,514
Conservation and development . . . . .	2,066	120	134	142	155	156	175	190	204	200	225	211	152
Other state and local construction . . . . .	23,777	1,521	1,361	1,512	1,923	2,140	2,156	2,190	2,337	2,301	2,451	2,170	1,716
Sewer systems . . . . .	9,142	549	522	592	732	779	773	769	937	890	1,016	876	706
Water supply facilities . . . . .	5,234	283	298	312	418	448	458	462	468	504	629	517	439
Miscellaneous nonbuilding <sup>2</sup> . . . . .	9,401	689	541	608	773	914	924	960	932	907	807	777	570
<b>Federal construction . . . . .</b>	15,325	1,193	1,132	1,242	1,304	1,416	1,314	1,283	1,261	2,005	924	1,188	1,062
Total buildings . . . . .	6,230	488	472	513	507	586	535	538	482	713	371	513	513
Housing . . . . .	681	53	44	45	53	80	58	64	57	68	46	61	51
Industrial . . . . .	1,389	103	103	124	120	127	129	129	132	184	60	91	88
Educational . . . . .	12	1	-	1	1	1	1	1	1	1	2	2	-
Hospital . . . . .	1,159	63	105	122	123	141	76	98	73	121	57	74	107
Other Federal buildings <sup>3</sup> . . . . .	2,989	268	219	221	209	237	272	247	219	338	207	285	267
Highways and streets . . . . .	368	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	2,591	256	207	212	220	227	216	197	199	279	176	204	200
Conservation and development . . . . .	3,845	255	234	288	326	333	328	321	366	675	199	276	244
Miscellaneous nonbuilding <sup>4</sup> . . . . .	2,291	181	204	212	228	237	197	183	168	295	133	166	86

See footnotes at end of table.

Table 7b. **Annual and Monthly Value of Public Construction Put in Place: 1996-1998—Not Seasonally Adjusted in Current Dollars—Con.**

[Millions of dollars]

Type of construction	1997												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . .</b>	129,009	7,434	7,613	8,537	9,665	10,776	12,140	12,912	13,673	13,117	13,041	10,860	9,241
Total buildings . . . . .	57,382	3,945	3,957	4,298	4,524	4,635	5,139	5,366	5,538	5,384	5,418	4,721	4,457
Housing and redevelopment . . . . .	3,118	198	209	217	242	271	252	270	258	305	346	285	265
Educational . . . . .	28,895	1,886	1,903	2,075	2,188	2,309	2,725	2,899	3,064	2,733	2,642	2,263	2,210
Hospital . . . . .	3,683	275	263	301	348	290	320	352	323	336	342	278	254
Other <sup>1</sup> . . . . .	21,685	1,587	1,582	1,704	1,746	1,765	1,841	1,845	1,893	2,010	2,088	1,894	1,729
Highways and streets . . . . .	44,031	1,788	1,848	2,188	3,033	3,774	4,524	4,968	5,355	5,029	4,846	3,888	2,791
Conservation and development . . . . .	2,244	142	137	177	197	158	181	198	226	218	245	200	165
Other state and local construction . . . . .	25,353	1,559	1,672	1,874	1,910	2,211	2,296	2,380	2,554	2,486	2,532	2,051	1,828
Sewer systems . . . . .	9,166	625	627	711	749	833	858	831	831	879	843	741	636
Water supply facilities . . . . .	5,662	391	410	475	449	474	473	504	488	518	546	505	429
Miscellaneous nonbuilding <sup>2</sup> . . . . .	10,525	543	635	688	712	903	965	1,044	1,235	1,088	1,143	805	763
<b>Federal construction . . . . .</b>	14,093	1,046	1,004	1,097	1,062	1,136	1,148	1,163	1,181	1,743	980	1,246	1,286
Total buildings . . . . .	6,107	484	482	457	473	454	512	476	478	709	462	567	554
Housing . . . . .	677	71	58	52	50	49	59	55	58	55	71	60	39
Industrial . . . . .	999	89	79	88	112	74	95	92	80	98	56	66	71
Educational . . . . .	19	-	2	4	1	1	2	1	2	3	-	1	3
Hospital . . . . .	1,251	113	120	83	73	84	109	70	80	174	116	129	101
Other Federal buildings <sup>3</sup> . . . . .	3,161	211	223	230	236	247	248	257	258	379	220	312	340
Highways and streets . . . . .	261	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	2,556	199	169	191	185	215	224	236	245	273	196	230	191
Conservation and development . . . . .	3,368	272	249	276	226	290	258	272	297	547	155	214	312
Miscellaneous nonbuilding <sup>4</sup> . . . . .	1,800	79	93	159	162	155	128	151	131	182	136	213	212

See footnotes at end of table.

Table 7b. **Annual and Monthly Value of Public Construction Put in Place: 1996-1998—Not Seasonally Adjusted in Current Dollars—Con.**

[Millions of dollars]

Type of construction	1998												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . .</b>	130,950	7,849	7,699	8,391	9,777	10,463	12,598	13,107	13,755	13,655	13,068	11,012	9,577
Total buildings . . . . .	60,109	4,216	4,169	4,309	4,687	4,844	5,579	5,810	5,880	5,633	5,288	4,948	4,745
Housing and redevelopment . . . . .	3,504	253	244	282	300	282	324	345	284	294	304	298	296
Educational . . . . .	29,901	2,009	1,970	1,999	2,254	2,383	2,908	3,128	3,159	2,883	2,547	2,325	2,338
Hospital . . . . .	2,968	255	240	267	236	248	256	226	225	253	257	247	258
Other <sup>1</sup> . . . . .	23,736	1,700	1,716	1,761	1,897	1,932	2,091	2,111	2,213	2,204	2,180	2,078	1,854
Highways and streets . . . . .	44,440	1,930	1,891	2,301	3,091	3,520	4,597	4,833	5,298	5,367	5,186	3,703	2,723
Conservation and development . . . . .	1,939	154	139	152	141	165	202	163	182	177	183	148	134
Other state and local construction . . . . .	24,463	1,548	1,499	1,629	1,857	1,935	2,220	2,301	2,395	2,479	2,412	2,213	1,976
Sewer systems . . . . .	8,707	567	541	603	640	647	759	790	819	859	889	847	746
Water supply facilities . . . . .	5,871	376	384	392	464	488	476	529	523	562	600	565	512
Miscellaneous nonbuilding <sup>2</sup> . . . . .	9,884	605	574	634	752	799	985	983	1,053	1,057	923	801	718
<b>Federal construction . . . . .</b>	14,423	1,009	1,047	1,138	1,087	1,107	1,204	1,360	1,249	1,839	927	1,228	1,228
Total buildings . . . . .	6,028	429	447	504	488	483	488	580	506	690	433	478	501
Housing . . . . .	543	40	50	32	39	42	44	61	57	57	34	48	41
Industrial . . . . .	1,012	76	79	95	84	81	78	93	88	108	58	92	80
Educational . . . . .	15	-	1	-	1	1	2	2	3	3	-	1	1
Hospital . . . . .	1,010	71	66	105	63	90	82	95	87	148	88	63	55
Other Federal buildings <sup>3</sup> . . . . .	3,448	243	253	272	301	269	283	329	271	375	253	275	325
Highways and streets . . . . .	352	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	2,578	188	196	237	216	215	225	279	241	225	162	194	199
Conservation and development . . . . .	3,572	191	280	259	246	256	297	315	319	595	196	320	299
Miscellaneous nonbuilding <sup>4</sup> . . . . .	1,893	188	111	122	115	123	158	148	139	285	94	206	205

- Less than \$0.5 million. NA Not available, but estimates are included in total.

<sup>1</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers etc. <sup>2</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. <sup>3</sup>Includes Federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. <sup>4</sup>Includes Federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

**Table 8a. Monthly Value of Public Construction Put in Place: May 1997-May 1999—Seasonally Adjusted Annual Rate in Current Dollars**

[Millions of dollars]

Period		State and locally owned public construction										
		Total state and local	Buildings					Highways and streets	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous construction <sup>2</sup>
			Total	Housing and redevelopment	Educational	Hospital	Other buildings <sup>1</sup>					
1997:	May <sup>f</sup>	127,793	55,427	3,171	28,267	3,564	20,424	44,178	1,860	10,112	5,558	10,660
	June <sup>f</sup>	129,040	56,745	2,891	29,096	3,693	21,065	44,719	1,982	9,590	5,425	10,578
	July <sup>f</sup>	129,958	57,578	3,179	28,707	4,177	21,515	44,393	2,080	9,425	5,518	10,964
	August <sup>f</sup>	130,440	57,304	3,187	28,839	4,045	21,233	44,875	2,203	8,695	5,342	12,020
	September <sup>f</sup>	129,383	58,340	3,393	28,814	3,635	22,499	43,195	2,205	8,979	5,670	10,994
	October <sup>f</sup>	131,009	60,909	3,757	30,480	3,765	22,906	41,867	2,495	8,664	5,435	11,639
	November <sup>f</sup>	128,771	57,366	3,342	28,951	3,381	21,692	45,785	2,331	8,337	5,587	9,365
	December <sup>f</sup>	129,580	58,322	3,259	30,204	2,997	21,862	44,777	2,270	8,253	5,439	10,519
1998:	January <sup>f</sup>	131,093	59,104	3,236	29,400	3,315	23,153	45,775	2,489	8,391	5,579	9,755
	February <sup>f</sup>	130,245	58,904	3,255	29,142	3,161	23,347	45,847	2,239	8,264	5,770	9,219
	March <sup>f</sup>	129,501	57,635	3,630	27,736	3,253	23,017	46,176	2,297	8,241	5,583	9,568
	April <sup>f</sup>	130,760	59,213	3,617	29,463	2,853	23,281	46,198	1,775	8,277	5,834	9,463
	May <sup>f</sup>	124,220	58,066	3,337	29,293	3,060	22,376	41,248	1,942	7,820	5,711	9,432
	June <sup>f</sup>	133,510	61,629	3,693	31,018	2,952	23,967	44,994	2,197	8,505	5,448	10,736
	July <sup>f</sup>	132,659	62,246	4,056	30,894	2,683	24,612	43,673	1,709	8,932	5,809	10,290
	August <sup>f</sup>	131,590	60,855	3,488	29,729	2,800	24,839	44,331	1,775	8,623	5,732	10,274
	September <sup>f</sup>	133,139	61,029	3,288	30,317	2,758	24,667	44,691	1,781	8,822	6,158	10,659
	October <sup>f</sup>	131,696	59,449	3,337	29,364	2,820	23,929	45,929	1,852	9,121	5,989	9,357
	November <sup>f</sup>	130,493	60,031	3,453	29,643	3,000	23,936	43,565	1,734	9,537	6,236	9,390
	December <sup>f</sup>	134,430	62,101	3,623	31,988	3,046	23,444	44,210	1,853	9,770	6,532	9,963
1999:	January <sup>f</sup>	140,524	61,050	3,301	31,405	2,896	23,448	50,164	2,410	9,658	6,465	10,778
	February <sup>f</sup>	146,523	62,381	3,304	31,992	3,107	23,977	54,495	2,187	9,394	6,739	11,327
	March <sup>f</sup>	146,132	63,221	3,180	32,071	2,972	24,999	52,730	2,020	10,017	6,767	11,376
	April <sup>f</sup>	140,635	63,232	3,440	33,066	2,894	23,833	48,581	2,318	9,343	6,389	10,772
	May <sup>p</sup>	139,466	62,741	3,647	33,031	3,142	22,920	47,961	1,907	9,469	6,376	11,012
		Federally owned public construction										
		Total Federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction <sup>4</sup>	
			Total	Housing	Industrial	Educational	Hospital					Other buildings <sup>3</sup>
1997:	May <sup>f</sup>	13,675	5,480	589	891	10	1,012	2,978	(NA)	2,528	3,526	1,884
	June <sup>f</sup>	13,593	6,032	694	1,119	22	1,279	2,918	(NA)	2,608	3,140	1,555
	July <sup>f</sup>	13,620	5,720	659	1,105	16	845	3,095	(NA)	2,740	3,160	1,750
	August <sup>f</sup>	14,122	6,089	740	1,015	23	1,019	3,293	(NA)	2,804	3,449	1,521
	September <sup>f</sup>	14,110	6,223	482	862	27	1,526	3,325	(NA)	2,552	3,800	1,268
	October <sup>f</sup>	14,368	6,122	936	740	3	1,530	2,913	(NA)	2,915	2,703	2,369
	November <sup>f</sup>	15,380	7,028	738	814	6	1,602	3,868	(NA)	2,737	2,684	2,671
	December <sup>f</sup>	15,009	6,328	446	808	32	1,152	3,890	(NA)	2,209	3,685	2,498
1998:	January <sup>f</sup>	13,878	5,695	526	1,001	3	947	3,218	(NA)	2,423	2,746	2,705
	February <sup>f</sup>	14,454	5,873	651	1,033	11	860	3,318	(NA)	2,845	3,882	1,540
	March <sup>f</sup>	14,267	6,206	398	1,170	4	1,287	3,346	(NA)	2,820	3,343	1,577
	April <sup>f</sup>	13,673	6,037	478	1,042	17	776	3,725	(NA)	2,725	3,123	1,459
	May <sup>f</sup>	13,602	6,015	527	1,007	17	1,117	3,347	(NA)	2,530	3,187	1,530
	June <sup>f</sup>	13,960	5,618	503	899	21	940	3,255	(NA)	2,610	3,512	1,867
	July <sup>f</sup>	15,804	6,863	722	1,104	19	1,129	3,889	(NA)	3,231	3,649	1,710
	August <sup>f</sup>	14,765	6,336	715	1,106	31	1,086	3,397	(NA)	2,760	3,695	1,606
	September <sup>f</sup>	14,644	6,051	496	947	25	1,293	3,290	(NA)	2,103	4,139	1,984
	October <sup>f</sup>	13,863	5,956	465	799	3	1,210	3,480	(NA)	2,407	3,469	1,658
	November <sup>f</sup>	14,880	5,800	581	1,114	7	763	3,335	(NA)	2,296	3,905	2,515
	December <sup>f</sup>	14,441	5,774	470	920	14	629	3,742	(NA)	2,306	3,553	2,434
1999:	January <sup>f</sup>	13,863	5,584	365	886	40	1,203	3,091	(NA)	1,881	3,609	2,414
	February <sup>f</sup>	15,452	6,189	346	919	9	1,665	3,250	(NA)	2,636	4,084	2,159
	March <sup>f</sup>	13,901	5,565	443	1,012	10	1,010	3,090	(NA)	2,223	4,173	1,571
	April <sup>f</sup>	14,269	5,224	512	921	13	769	3,008	(NA)	2,287	3,796	2,573
	May <sup>p</sup>	13,006	5,374	487	1,043	9	872	2,962	(NA)	2,152	3,507	1,587

NA Not available, but estimates are included in totals. <sup>P</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers, etc. <sup>2</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. <sup>3</sup>Includes Federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. <sup>4</sup>Includes Federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

Table 8b. **Monthly Value of Public Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in Current Dollars**

[Millions of dollars]

Type of construction	1996											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . . .</b>	119,731	113,756	113,819	118,524	121,367	115,654	117,941	116,851	121,182	123,168	125,269	121,661
Total buildings . . . . .	55,623	50,416	52,200	52,634	54,805	51,514	52,777	52,957	54,728	54,961	57,667	55,524
Housing and redevelopment . . . . .	4,151	3,657	3,480	3,105	3,551	3,032	3,415	3,274	3,732	3,395	3,411	3,002
Educational . . . . .	28,087	25,883	27,027	26,956	27,939	25,810	26,536	26,870	26,876	27,369	29,428	27,271
Hospital . . . . .	3,604	3,317	3,168	3,202	3,106	3,312	3,158	3,096	3,499	3,495	3,238	3,554
Other <sup>1</sup> . . . . .	19,782	17,559	18,525	19,371	20,208	19,359	19,668	19,717	20,622	20,701	21,590	21,696
Highways and streets . . . . .	38,706	39,998	37,702	39,452	39,173	38,176	39,241	37,924	40,663	40,914	40,621	41,675
Conservation and development . . . . .	1,953	2,123	2,157	1,932	1,838	1,931	2,004	1,988	2,031	2,300	2,438	2,094
Other state and local construction . . . . .	23,448	21,219	21,759	24,505	25,551	24,033	23,918	23,982	23,760	24,993	24,543	22,367
Sewer systems . . . . .	8,086	8,135	8,128	9,596	9,529	8,608	8,758	9,782	9,040	10,473	9,856	8,999
Water supply facilities . . . . .	4,171	4,486	4,404	5,295	5,263	5,249	5,049	5,120	5,528	6,282	5,710	5,525
Miscellaneous nonbuilding <sup>2</sup> . . . . .	11,191	8,597	9,227	9,614	10,759	10,176	10,111	9,080	9,193	8,238	8,977	7,844
<b>Federal construction . . . . .</b>	15,893	15,664	15,609	16,208	16,715	15,942	15,113	14,847	16,407	13,631	14,443	12,523
Total buildings . . . . .	6,201	6,159	6,394	6,261	6,930	6,500	6,565	6,131	6,448	4,829	6,186	5,915
Housing . . . . .	672	577	561	659	946	706	785	723	615	598	737	589
Industrial . . . . .	1,313	1,346	1,542	1,481	1,506	1,566	1,567	1,684	1,669	775	1,093	1,010
Educational . . . . .	14	3	7	15	14	11	9	10	10	23	29	3
Hospital . . . . .	800	1,375	1,524	1,519	1,662	919	1,191	926	1,098	745	890	1,231
Other Federal buildings <sup>3</sup> . . . . .	3,402	2,858	2,759	2,588	2,802	3,299	3,012	2,788	3,056	2,687	3,437	3,081
Highways and streets . . . . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	3,307	2,983	2,509	2,771	2,652	2,516	2,297	2,269	2,604	2,609	2,427	2,307
Conservation and development . . . . .	3,546	3,293	3,658	4,006	3,945	4,093	3,736	4,156	4,856	3,483	3,417	2,946
Miscellaneous nonbuilding <sup>4</sup> . . . . .	2,517	2,873	2,697	2,800	2,812	2,457	2,129	1,907	2,119	2,332	2,060	1,042

See footnotes at end of table.

Table 8b. **Monthly Value of Public Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in Current Dollars—Con.**

[Millions of dollars]

Type of construction	1997											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . . . .</b>	122,956	127,951	131,611	128,947	127,793	129,040	129,958	130,440	129,383	131,009	128,771	129,580
Total buildings . . . . .	55,344	56,016	57,516	57,289	55,427	56,745	57,578	57,304	58,340	60,909	57,366	58,322
Housing and redevelopment . . . . .	2,506	2,794	2,830	2,922	3,171	2,891	3,179	3,187	3,393	3,757	3,342	3,259
Educational . . . . .	27,628	28,012	28,622	28,692	28,267	29,096	28,707	28,839	28,814	30,480	28,951	30,204
Hospital . . . . .	3,573	3,468	3,691	4,202	3,564	3,693	4,177	4,045	3,635	3,765	3,381	2,997
Other <sup>1</sup> . . . . .	21,637	21,742	22,373	21,472	20,424	21,065	21,515	21,233	22,499	22,906	21,692	21,862
Highways and streets . . . . .	41,501	43,733	44,494	44,873	44,178	44,719	44,393	44,875	43,195	41,867	45,785	44,777
Conservation and development . . . . .	2,285	2,180	2,686	2,468	1,860	1,982	2,080	2,203	2,205	2,495	2,331	2,270
Other state and local construction . . . . .	23,826	26,023	26,915	24,318	26,329	25,593	25,907	26,058	25,643	25,739	23,289	24,211
Sewer systems . . . . .	9,252	9,713	9,754	9,735	10,112	9,590	9,425	8,695	8,979	8,664	8,337	8,253
Water supply facilities . . . . .	5,801	6,173	6,743	5,668	5,558	5,425	5,518	5,342	5,670	5,435	5,587	5,439
Miscellaneous nonbuilding <sup>2</sup> . . . . .	8,773	10,136	10,418	8,914	10,660	10,578	10,964	12,020	10,994	11,639	9,365	10,519
<b>Federal construction . . . . .</b>	13,956	13,834	13,980	13,339	13,675	13,593	13,620	14,122	14,110	14,368	15,380	15,009
Total buildings . . . . .	6,221	6,327	5,758	5,900	5,480	6,032	5,720	6,089	6,223	6,122	7,028	6,328
Housing . . . . .	915	767	659	627	589	694	659	740	482	936	738	446
Industrial . . . . .	1,138	1,039	1,109	1,404	891	1,119	1,105	1,015	862	740	814	808
Educational . . . . .	4	22	50	10	10	22	16	23	27	3	6	32
Hospital . . . . .	1,453	1,574	1,046	912	1,012	1,279	845	1,019	1,526	1,530	1,602	1,152
Other Federal buildings <sup>3</sup> . . . . .	2,711	2,925	2,894	2,948	2,978	2,918	3,095	3,293	3,325	2,913	3,868	3,890
Highways and streets . . . . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	2,561	2,452	2,266	2,335	2,528	2,608	2,740	2,804	2,552	2,915	2,737	2,209
Conservation and development . . . . .	3,795	3,489	3,609	2,830	3,526	3,140	3,160	3,449	3,800	2,703	2,684	3,685
Miscellaneous nonbuilding <sup>4</sup> . . . . .	1,100	1,305	2,082	2,023	1,884	1,555	1,750	1,521	1,268	2,369	2,671	2,498

See footnotes at end of table.

Table 8b. **Monthly Value of Public Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in Current Dollars—Con.**

[Millions of dollars]

Type of construction	1998											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . . .</b>	131,093	130,245	129,501	130,760	124,220	133,510	132,659	131,590	133,139	131,696	130,493	134,430
Total buildings . . . . .	59,104	58,904	57,635	59,213	58,066	61,629	62,246	60,855	61,029	59,449	60,031	62,101
Housing and redevelopment . . . . .	3,236	3,255	3,630	3,617	3,337	3,693	4,056	3,488	3,288	3,337	3,453	3,623
Educational . . . . .	29,400	29,142	27,736	29,463	29,293	31,018	30,894	29,729	30,317	29,364	29,643	31,988
Hospital . . . . .	3,315	3,161	3,253	2,853	3,060	2,952	2,683	2,800	2,758	2,820	3,000	3,046
Other <sup>1</sup> . . . . .	23,153	23,347	23,017	23,281	22,376	23,967	24,612	24,839	24,667	23,929	23,936	23,444
Highways and streets . . . . .	45,775	45,847	46,176	46,198	41,248	44,994	43,673	44,331	44,691	45,929	43,565	44,210
Conservation and development . . . . .	2,489	2,239	2,297	1,775	1,942	2,197	1,709	1,775	1,781	1,852	1,734	1,853
Other state and local construction . . . . .	23,725	23,254	23,393	23,574	22,963	24,689	25,030	24,629	25,638	24,466	25,163	26,266
Sewer systems . . . . .	8,391	8,264	8,241	8,277	7,820	8,505	8,932	8,623	8,822	9,121	9,537	9,770
Water supply facilities . . . . .	5,579	5,770	5,583	5,834	5,711	5,448	5,809	5,732	6,158	5,989	6,236	6,532
Miscellaneous nonbuilding <sup>2</sup> . . . . .	9,755	9,219	9,568	9,463	9,432	10,736	10,290	10,274	10,659	9,357	9,390	9,963
<b>Federal construction . . . . .</b>	13,878	14,454	14,267	13,673	13,602	13,960	15,804	14,765	14,644	13,863	14,880	14,441
Total buildings . . . . .	5,695	5,873	6,206	6,037	6,015	5,618	6,863	6,336	6,051	5,956	5,800	5,774
Housing . . . . .	526	651	398	478	527	503	722	715	496	465	581	470
Industrial . . . . .	1,001	1,033	1,170	1,042	1,007	899	1,104	1,106	947	799	1,114	920
Educational . . . . .	3	11	4	17	17	21	19	31	25	3	7	14
Hospital . . . . .	947	860	1,287	776	1,117	940	1,129	1,086	1,293	1,210	763	629
Other Federal buildings <sup>3</sup> . . . . .	3,218	3,318	3,346	3,725	3,347	3,255	3,889	3,397	3,290	3,480	3,335	3,742
Highways and streets . . . . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	2,423	2,845	2,820	2,725	2,530	2,610	3,231	2,760	2,103	2,407	2,296	2,306
Conservation and development . . . . .	2,746	3,882	3,343	3,123	3,187	3,512	3,649	3,695	4,139	3,469	3,905	3,553
Miscellaneous nonbuilding <sup>4</sup> . . . . .	2,705	1,540	1,577	1,459	1,530	1,867	1,710	1,606	1,984	1,658	2,515	2,434

NA Not available, but estimates are included in total.

<sup>1</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers etc. <sup>2</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. <sup>3</sup>Includes Federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. <sup>4</sup>Includes Federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

**Table 9a. Monthly Value of Public Construction Put in Place: May 1997-May 1999—Seasonally Adjusted Annual Rate in 1992 Dollars**

[Millions of dollars]

Period		State and locally owned public construction										
		Total state and local	Buildings					Highways and streets	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous construction <sup>2</sup>
			Total	Housing and redevelopment	Educational	Hospital	Other buildings <sup>1</sup>					
1997:	May <sup>f</sup> . . . . .	108,657	46,874	2,665	23,915	3,016	17,279	37,759	1,587	8,628	4,706	9,103
	June <sup>f</sup> . . . . .	109,697	47,943	2,420	24,595	3,122	17,806	38,222	1,694	8,197	4,602	9,041
	July <sup>f</sup> . . . . .	110,270	48,363	2,649	24,123	3,510	18,080	38,008	1,776	8,049	4,696	9,379
	August <sup>f</sup> . . . . .	110,494	47,933	2,647	24,133	3,385	17,768	38,420	1,882	7,425	4,551	10,283
	September <sup>f</sup> . . . . .	109,471	48,672	2,807	24,052	3,034	18,780	37,014	1,881	7,661	4,838	9,405
	October <sup>f</sup> . . . . .	110,400	50,766	3,100	25,421	3,140	19,105	35,541	2,134	7,411	4,634	9,914
	November <sup>f</sup> . . . . .	107,746	47,551	2,755	24,006	2,804	17,986	38,442	1,987	7,107	4,735	7,923
	December <sup>f</sup> . . . . .	108,343	48,346	2,689	25,044	2,485	18,127	37,502	1,939	7,048	4,609	8,899
1998:	January <sup>f</sup> . . . . .	109,583	48,837	2,666	24,298	2,740	19,135	38,499	2,123	7,160	4,704	8,260
	February <sup>f</sup> . . . . .	109,068	48,675	2,684	24,084	2,612	19,295	38,722	1,914	7,063	4,861	7,833
	March <sup>f</sup> . . . . .	108,412	47,554	2,995	22,884	2,684	18,991	39,033	1,962	7,038	4,695	8,129
	April <sup>f</sup> . . . . .	109,349	48,660	2,977	24,209	2,344	19,130	39,151	1,514	7,062	4,915	8,047
	May <sup>f</sup> . . . . .	103,609	47,563	2,740	23,991	2,506	18,326	34,926	1,652	6,650	4,811	8,007
	June <sup>f</sup> . . . . .	110,863	50,189	3,010	25,259	2,404	19,517	37,970	1,859	7,196	4,574	9,075
	July <sup>f</sup> . . . . .	109,895	50,563	3,293	25,097	2,180	19,994	36,731	1,451	7,582	4,877	8,691
	August <sup>f</sup> . . . . .	108,501	49,278	2,827	24,072	2,267	20,112	37,004	1,501	7,295	4,788	8,634
	September <sup>f</sup> . . . . .	109,450	49,299	2,658	24,488	2,228	19,925	37,149	1,503	7,445	5,127	8,927
	October <sup>f</sup> . . . . .	108,074	47,864	2,685	23,642	2,270	19,266	38,115	1,569	7,729	4,954	7,843
	November <sup>f</sup> . . . . .	107,014	48,207	2,762	23,810	2,410	19,225	36,183	1,476	8,117	5,141	7,891
	December <sup>f</sup> . . . . .	109,955	49,664	2,882	25,591	2,436	18,755	36,658	1,579	8,322	5,359	8,373
1999:	January <sup>f</sup> . . . . .	114,876	48,676	2,624	25,044	2,309	18,699	41,561	2,054	8,233	5,295	9,057
	February <sup>f</sup> . . . . .	119,767	49,704	2,631	25,492	2,476	19,105	45,149	1,866	8,015	5,514	9,518
	March <sup>f</sup> . . . . .	118,616	50,092	2,516	25,413	2,355	19,809	43,471	1,692	8,390	5,515	9,456
	April <sup>f</sup> . . . . .	114,038	50,019	2,715	26,159	2,290	18,855	40,084	1,943	7,831	5,207	8,954
	May <sup>p</sup> . . . . .	112,660	49,556	2,879	26,091	2,482	18,105	39,345	1,589	7,891	5,171	9,108
		Federally owned public construction										
		Total Federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction <sup>4</sup>	
			Total	Housing	Industrial	Educational	Hospital					Other buildings <sup>3</sup>
1997:	May <sup>f</sup> . . . . .	11,620	4,633	495	754	8	856	2,520	(NA)	2,150	3,008	1,609
	June <sup>f</sup> . . . . .	11,542	5,093	580	946	19	1,081	2,467	(NA)	2,216	2,684	1,329
	July <sup>f</sup> . . . . .	11,536	4,802	549	929	13	710	2,601	(NA)	2,324	2,699	1,497
	August <sup>f</sup> . . . . .	11,934	5,091	614	849	19	853	2,755	(NA)	2,374	2,945	1,301
	September <sup>f</sup> . . . . .	11,904	5,191	399	720	23	1,274	2,775	(NA)	2,157	3,243	1,085
	October <sup>f</sup> . . . . .	12,099	5,097	773	618	2	1,276	2,429	(NA)	2,452	2,312	2,018
	November <sup>f</sup> . . . . .	12,874	5,824	608	675	5	1,328	3,207	(NA)	2,285	2,288	2,260
	December <sup>f</sup> . . . . .	12,589	5,245	368	670	27	955	3,226	(NA)	1,841	3,147	2,113
1998:	January <sup>f</sup> . . . . .	11,617	4,705	434	827	2	782	2,660	(NA)	2,019	2,343	2,291
	February <sup>f</sup> . . . . .	12,121	4,852	537	854	9	711	2,742	(NA)	2,377	3,318	1,308
	March <sup>f</sup> . . . . .	11,942	5,120	328	966	3	1,062	2,761	(NA)	2,356	2,855	1,340
	April <sup>f</sup> . . . . .	11,420	4,961	393	856	14	637	3,061	(NA)	2,275	2,665	1,241
	May <sup>f</sup> . . . . .	11,331	4,927	432	825	14	914	2,741	(NA)	2,107	2,710	1,298
	June <sup>f</sup> . . . . .	11,587	4,575	410	732	17	765	2,650	(NA)	2,164	2,972	1,579
	July <sup>f</sup> . . . . .	13,082	5,574	586	897	15	917	3,159	(NA)	2,670	3,097	1,444
	August <sup>f</sup> . . . . .	12,181	5,131	580	896	25	879	2,751	(NA)	2,268	3,126	1,350
	September <sup>f</sup> . . . . .	12,070	4,888	401	765	21	1,044	2,657	(NA)	1,722	3,493	1,662
	October <sup>f</sup> . . . . .	11,401	4,795	374	643	2	974	2,802	(NA)	1,967	2,940	1,390
	November <sup>f</sup> . . . . .	12,271	4,656	464	895	6	613	2,679	(NA)	1,874	3,324	2,113
	December <sup>f</sup> . . . . .	11,877	4,617	374	736	11	503	2,993	(NA)	1,878	3,026	2,046
1999:	January <sup>f</sup> . . . . .	11,396	4,452	290	707	32	959	2,465	(NA)	1,528	3,076	2,029
	February <sup>f</sup> . . . . .	12,690	4,931	275	732	7	1,327	2,590	(NA)	2,141	3,484	1,814
	March <sup>f</sup> . . . . .	11,310	4,409	351	802	8	800	2,449	(NA)	1,796	3,495	1,306
	April <sup>f</sup> . . . . .	11,621	4,132	404	729	11	608	2,380	(NA)	1,848	3,181	2,138
	May <sup>p</sup> . . . . .	10,528	4,244	385	824	7	689	2,340	(NA)	1,731	2,923	1,313

NA Not available, but estimates are included in totals. <sup>p</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers, etc. <sup>2</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. <sup>3</sup>Includes Federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. <sup>4</sup>Includes Federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.



Table 9b. **Monthly Value of Public Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in 1992 Dollars**

[Millions of dollars]

Type of construction	1996											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . . .</b>	106,496	100,959	100,719	105,042	107,362	102,005	103,591	102,346	105,610	107,289	109,194	105,783
Total buildings . . . . .	49,114	44,442	45,946	46,374	48,155	45,063	45,915	45,994	47,331	47,455	49,749	47,744
Housing and redevelopment . . . . .	3,603	3,172	3,021	2,698	3,078	2,610	2,917	2,791	3,179	2,887	2,896	2,544
Educational . . . . .	24,834	22,844	23,812	23,771	24,573	22,601	23,115	23,366	23,269	23,656	25,413	23,469
Hospital . . . . .	3,186	2,928	2,791	2,824	2,732	2,901	2,751	2,692	3,029	3,021	2,796	3,058
Other <sup>1</sup> . . . . .	17,490	15,498	16,322	17,082	17,773	16,952	17,132	17,145	17,854	17,892	18,644	18,671
Highways and streets . . . . .	34,621	35,649	33,454	35,099	34,820	33,874	34,758	33,502	35,732	35,985	35,821	36,686
Conservation and development . . . . .	1,760	1,910	1,935	1,733	1,646	1,724	1,778	1,754	1,780	2,017	2,144	1,837
Other state and local construction . . . . .	21,002	18,958	19,384	21,835	22,741	21,344	21,141	21,096	20,767	21,832	21,480	19,516
Sewer systems . . . . .	7,285	7,316	7,290	8,606	8,531	7,686	7,771	8,633	7,923	9,187	8,669	7,894
Water supply facilities . . . . .	3,671	3,946	3,863	4,645	4,613	4,597	4,406	4,448	4,774	5,406	4,909	4,730
Miscellaneous nonbuilding <sup>2</sup> . . . . .	10,046	7,697	8,231	8,584	9,597	9,061	8,964	8,014	8,071	7,239	7,902	6,893
<b>Federal construction . . . . .</b>	14,156	13,922	13,842	14,389	14,802	14,076	13,268	12,998	14,297	11,877	12,579	10,866
Total buildings . . . . .	5,472	5,427	5,626	5,512	6,083	5,681	5,705	5,319	5,574	4,165	5,331	5,082
Housing . . . . .	584	501	487	572	820	607	671	616	524	509	626	499
Industrial . . . . .	1,161	1,188	1,358	1,306	1,325	1,371	1,365	1,464	1,445	670	944	869
Educational . . . . .	12	2	7	13	12	10	7	9	9	20	25	3
Hospital . . . . .	707	1,214	1,343	1,339	1,462	805	1,038	806	950	644	769	1,059
Other Federal buildings <sup>3</sup> . . . . .	3,008	2,523	2,431	2,282	2,464	2,889	2,624	2,424	2,646	2,323	2,968	2,652
Highways and streets . . . . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	2,943	2,644	2,218	2,454	2,345	2,218	2,019	1,988	2,273	2,275	2,118	2,008
Conservation and development . . . . .	3,194	2,962	3,281	3,593	3,532	3,654	3,315	3,668	4,256	3,055	3,005	2,584
Miscellaneous nonbuilding <sup>4</sup> . . . . .	2,259	2,572	2,406	2,500	2,509	2,188	1,887	1,683	1,861	2,049	1,814	915

See footnotes at end of table.

Table 9b. **Monthly Value of Public Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in 1992**  
**Dollars—Con.**

[Millions of dollars]

Type of construction	1997											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . . .</b>	106,209	110,410	112,640	109,991	108,657	109,697	110,270	110,494	109,471	110,400	107,746	108,343
Total buildings . . . . .	47,391	48,005	48,969	48,652	46,874	47,943	48,363	47,933	48,672	50,766	47,551	48,346
Housing and redevelopment . . . . .	2,115	2,360	2,388	2,461	2,665	2,420	2,649	2,647	2,807	3,100	2,755	2,689
Educational . . . . .	23,674	24,024	24,380	24,378	23,915	24,595	24,123	24,133	24,052	25,421	24,006	25,044
Hospital . . . . .	3,061	2,975	3,144	3,570	3,016	3,122	3,510	3,385	3,034	3,140	2,804	2,485
Other <sup>1</sup> . . . . .	18,541	18,646	19,057	18,243	17,279	17,806	18,080	17,768	18,780	19,105	17,986	18,127
Highways and streets . . . . .	36,214	38,061	38,357	38,485	37,759	38,222	38,008	38,420	37,014	35,541	38,442	37,502
Conservation and development . . . . .	1,982	1,882	2,296	2,107	1,587	1,694	1,776	1,882	1,881	2,134	1,987	1,939
Other state and local construction . . . . .	20,622	22,461	23,018	20,747	22,437	21,839	22,124	22,259	21,903	21,960	19,765	20,556
Sewer systems . . . . .	8,025	8,388	8,336	8,314	8,628	8,197	8,049	7,425	7,661	7,411	7,107	7,048
Water supply facilities . . . . .	4,962	5,290	5,739	4,808	4,706	4,602	4,696	4,551	4,838	4,634	4,735	4,609
Miscellaneous nonbuilding <sup>2</sup> . . . . .	7,635	8,784	8,943	7,626	9,103	9,041	9,379	10,283	9,405	9,914	7,923	8,899
<b>Federal construction . . . . .</b>	12,026	11,906	11,941	11,363	11,620	11,542	11,536	11,934	11,904	12,099	12,874	12,589
Total buildings . . . . .	5,319	5,416	4,900	5,008	4,633	5,093	4,802	5,091	5,191	5,097	5,824	5,245
Housing . . . . .	772	648	556	528	495	580	549	614	399	773	608	368
Industrial . . . . .	975	891	945	1,192	754	946	929	849	720	618	675	670
Educational . . . . .	3	19	43	8	8	19	13	19	23	2	5	27
Hospital . . . . .	1,245	1,350	891	774	856	1,081	710	853	1,274	1,276	1,328	955
Other Federal buildings <sup>3</sup> . . . . .	2,323	2,509	2,465	2,505	2,520	2,467	2,601	2,755	2,775	2,429	3,207	3,226
Highways and streets . . . . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	2,215	2,119	1,942	1,992	2,150	2,216	2,324	2,374	2,157	2,452	2,285	1,841
Conservation and development . . . . .	3,292	3,013	3,085	2,416	3,008	2,684	2,699	2,945	3,243	2,312	2,288	3,147
Miscellaneous nonbuilding <sup>4</sup> . . . . .	957	1,131	1,787	1,731	1,609	1,329	1,497	1,301	1,085	2,018	2,260	2,113

See footnotes at end of table.

Table 9b. **Monthly Value of Public Construction Put in Place: 1996-1998—Seasonally Adjusted Annual Rate in 1992 Dollars—Con.**

[Millions of dollars]

Type of construction	1998											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . . .</b>	109,583	109,068	108,412	109,349	103,609	110,863	109,895	108,501	109,450	108,074	107,014	109,955
Total buildings . . . . .	48,837	48,675	47,554	48,660	47,563	50,189	50,563	49,278	49,299	47,864	48,207	49,664
Housing and redevelopment . . . . .	2,666	2,684	2,995	2,977	2,740	3,010	3,293	2,827	2,658	2,685	2,762	2,882
Educational . . . . .	24,298	24,084	22,884	24,209	23,991	25,259	25,097	24,072	24,488	23,642	23,810	25,591
Hospital . . . . .	2,740	2,612	2,684	2,344	2,506	2,404	2,180	2,267	2,228	2,270	2,410	2,436
Other <sup>1</sup> . . . . .	19,135	19,295	18,991	19,130	18,326	19,517	19,994	20,112	19,925	19,266	19,225	18,755
Highways and streets . . . . .	38,499	38,722	39,033	39,151	34,926	37,970	36,731	37,004	37,149	38,115	36,183	36,658
Conservation and development . . . . .	2,123	1,914	1,962	1,514	1,652	1,859	1,451	1,501	1,503	1,569	1,476	1,579
Other state and local construction . . . . .	20,123	19,757	19,863	20,024	19,468	20,845	21,150	20,717	21,499	20,526	21,149	22,054
Sewer systems . . . . .	7,160	7,063	7,038	7,062	6,650	7,196	7,582	7,295	7,445	7,729	8,117	8,322
Water supply facilities . . . . .	4,704	4,861	4,695	4,915	4,811	4,574	4,877	4,788	5,127	4,954	5,141	5,359
Miscellaneous nonbuilding <sup>2</sup> . . . . .	8,260	7,833	8,129	8,047	8,007	9,075	8,691	8,634	8,927	7,843	7,891	8,373
<b>Federal construction . . . . .</b>	11,617	12,121	11,942	11,420	11,331	11,587	13,082	12,181	12,070	11,401	12,271	11,877
Total buildings . . . . .	4,705	4,852	5,120	4,961	4,927	4,575	5,574	5,131	4,888	4,795	4,656	4,617
Housing . . . . .	434	537	328	393	432	410	586	580	401	374	464	374
Industrial . . . . .	827	854	966	856	825	732	897	896	765	643	895	736
Educational . . . . .	2	9	3	14	14	17	15	25	21	2	6	11
Hospital . . . . .	782	711	1,062	637	914	765	917	879	1,044	974	613	503
Other Federal buildings <sup>3</sup> . . . . .	2,660	2,742	2,761	3,061	2,741	2,650	3,159	2,751	2,657	2,802	2,679	2,993
Highways and streets . . . . .	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	2,019	2,377	2,356	2,275	2,107	2,164	2,670	2,268	1,722	1,967	1,874	1,878
Conservation and development . . . . .	2,343	3,318	2,855	2,665	2,710	2,972	3,097	3,126	3,493	2,940	3,324	3,026
Miscellaneous nonbuilding <sup>4</sup> . . . . .	2,291	1,308	1,340	1,241	1,298	1,579	1,444	1,350	1,662	1,390	2,113	2,046

NA Not available, but estimates are included in total.

<sup>1</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers etc. <sup>2</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. <sup>3</sup>Includes Federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. <sup>4</sup>Includes Federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

**Table 10a. Monthly Value of Public Construction Put in Place: May 1997-May 1999—Not Seasonally Adjusted in 1992 Dollars**

[Millions of dollars]

Period		State and locally owned public construction										
		Total state and local	Buildings					Highways and streets	Conservation and development	Sewer systems	Water supply facilities	Miscellaneous construction <sup>2</sup>
			Total	Housing and redevelopment	Educational	Hospital	Other buildings <sup>1</sup>					
1997:	May <sup>f</sup> . . . . .	9,163	3,919	228	1,953	245	1,493	3,225	134	711	401	771
	June <sup>f</sup> . . . . .	10,323	4,342	211	2,304	271	1,557	3,867	155	734	401	825
	July <sup>f</sup> . . . . .	10,963	4,508	225	2,436	296	1,550	4,254	169	710	429	893
	August <sup>f</sup> . . . . .	11,593	4,633	214	2,564	270	1,584	4,585	193	710	415	1,057
	September <sup>f</sup> . . . . .	11,110	4,492	252	2,281	281	1,678	4,309	186	750	442	931
	October <sup>f</sup> . . . . .	10,999	4,516	286	2,203	285	1,742	4,114	209	721	465	973
	November <sup>f</sup> . . . . .	9,089	3,913	235	1,876	231	1,571	3,264	171	632	428	681
	December <sup>f</sup> . . . . .	7,725	3,695	219	1,832	210	1,434	2,338	141	543	364	645
1998:	January <sup>f</sup> . . . . .	6,552	3,484	208	1,660	210	1,405	1,623	132	484	317	512
	February <sup>f</sup> . . . . .	6,436	3,445	201	1,628	199	1,418	1,597	119	463	324	488
	March <sup>f</sup> . . . . .	7,014	3,555	232	1,650	220	1,453	1,945	130	515	330	539
	April <sup>f</sup> . . . . .	8,169	3,852	247	1,852	194	1,559	2,620	120	546	391	640
	May <sup>f</sup> . . . . .	8,728	3,968	232	1,951	203	1,582	2,980	140	550	411	679
	June <sup>f</sup> . . . . .	10,468	4,544	264	2,368	209	1,703	3,879	171	642	399	833
	July <sup>f</sup> . . . . .	10,867	4,719	280	2,541	184	1,714	4,065	139	670	444	830
	August <sup>f</sup> . . . . .	11,352	4,762	230	2,558	182	1,792	4,422	154	693	437	885
	September <sup>f</sup> . . . . .	11,239	4,550	237	2,328	204	1,780	4,461	149	725	468	885
	October <sup>f</sup> . . . . .	10,739	4,257	244	2,051	207	1,755	4,304	155	753	496	774
	November <sup>f</sup> . . . . .	9,034	3,974	239	1,867	198	1,669	3,076	126	721	466	673
	December <sup>f</sup> . . . . .	7,825	3,795	235	1,870	206	1,483	2,258	114	635	420	604
1999:	January <sup>f</sup> . . . . .	6,842	3,464	200	1,722	177	1,365	1,777	128	556	353	565
	February <sup>f</sup> . . . . .	6,988	3,521	197	1,725	188	1,411	1,877	116	518	366	591
	March <sup>f</sup> . . . . .	7,708	3,737	197	1,821	192	1,527	2,239	112	605	387	627
	April <sup>f</sup> . . . . .	8,519	3,969	225	2,016	183	1,545	2,676	154	600	413	708
	May <sup>p</sup> . . . . .	9,503	4,136	243	2,124	205	1,563	3,364	135	653	442	773
		Federally owned public construction										
		Total Federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction <sup>4</sup>	
			Total	Housing	Industrial	Educational	Hospital					Other buildings <sup>3</sup>
1997:	May <sup>f</sup> . . . . .	966	384	41	62	1	71	209	(NA)	183	248	132
	June <sup>f</sup> . . . . .	975	432	49	80	2	92	209	(NA)	190	221	109
	July <sup>f</sup> . . . . .	985	399	46	77	1	59	216	(NA)	200	233	129
	August <sup>f</sup> . . . . .	999	399	48	67	2	67	216	(NA)	208	254	112
	September <sup>f</sup> . . . . .	1,472	592	45	82	3	145	316	(NA)	231	466	156
	October <sup>f</sup> . . . . .	824	385	58	47	-	96	183	(NA)	165	133	116
	November <sup>f</sup> . . . . .	1,043	470	49	54	-	107	259	(NA)	192	182	180
	December <sup>f</sup> . . . . .	1,079	459	32	59	2	84	282	(NA)	159	266	179
1998:	January <sup>f</sup> . . . . .	844	355	33	62	-	59	201	(NA)	157	163	159
	February <sup>f</sup> . . . . .	878	370	41	65	-	54	209	(NA)	164	239	94
	March <sup>f</sup> . . . . .	952	416	27	78	-	86	224	(NA)	198	221	104
	April <sup>f</sup> . . . . .	908	401	32	69	1	52	247	(NA)	181	210	98
	May <sup>f</sup> . . . . .	922	396	35	66	1	73	220	(NA)	179	218	104
	June <sup>f</sup> . . . . .	999	397	36	64	1	66	230	(NA)	187	251	133
	July <sup>f</sup> . . . . .	1,126	471	50	76	1	77	267	(NA)	230	267	125
	August <sup>f</sup> . . . . .	1,031	410	46	71	2	70	220	(NA)	198	270	117
	September <sup>f</sup> . . . . .	1,519	558	46	87	2	119	303	(NA)	184	502	239
	October <sup>f</sup> . . . . .	761	349	27	47	-	71	204	(NA)	132	166	79
	November <sup>f</sup> . . . . .	1,012	383	38	74	-	50	221	(NA)	158	272	173
	December <sup>f</sup> . . . . .	1,009	401	32	64	1	44	260	(NA)	162	255	172
1999:	January <sup>f</sup> . . . . .	809	324	21	51	2	70	179	(NA)	119	213	140
	February <sup>f</sup> . . . . .	926	375	21	56	1	101	197	(NA)	148	256	133
	March <sup>f</sup> . . . . .	927	371	30	68	1	67	206	(NA)	151	283	106
	April <sup>f</sup> . . . . .	925	341	33	60	1	50	197	(NA)	146	249	167
	May <sup>p</sup> . . . . .	846	339	31	66	1	55	187	(NA)	146	230	103

- Less than \$0.5 million. NA Not available, but estimates are included in totals. <sup>P</sup>Preliminary. <sup>r</sup>Revised.

<sup>1</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers, etc. <sup>2</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. <sup>3</sup>Includes Federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. <sup>4</sup>Includes Federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

**Table 10b. Annual and Monthly Value of Public Construction Put in Place: 1996-1998—Not Seasonally Adjusted in 1992 Dollars**

[Millions of dollars]

Type of construction	1996												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . .</b>	104,680	6,477	5,975	6,530	7,781	9,140	9,567	10,345	10,708	10,692	10,735	9,227	7,504
Total buildings . . . . .	46,917	3,500	3,136	3,430	3,656	4,040	4,074	4,276	4,466	4,363	4,216	4,100	3,661
Housing and redevelopment . . . . .	2,947	285	238	232	223	266	225	248	227	282	266	250	204
Educational . . . . .	23,683	1,693	1,559	1,728	1,809	2,013	2,115	2,327	2,488	2,205	2,042	1,982	1,721
Hospital . . . . .	2,892	244	222	227	234	223	251	232	215	281	273	231	259
Other <sup>1</sup> . . . . .	17,395	1,278	1,117	1,243	1,389	1,537	1,483	1,469	1,535	1,595	1,634	1,638	1,477
Highways and streets . . . . .	34,933	1,506	1,503	1,625	2,273	3,055	3,421	3,965	4,006	4,142	4,180	3,042	2,213
Conservation and development . . . . .	1,833	108	120	128	139	140	157	169	180	176	198	185	134
Other state and local construction . . . . .	20,997	1,362	1,215	1,347	1,713	1,905	1,915	1,935	2,056	2,012	2,141	1,899	1,497
Sewer systems . . . . .	8,110	495	469	531	656	697	690	682	827	780	891	771	620
Water supply facilities . . . . .	4,550	249	262	273	367	392	401	403	406	435	541	445	376
Miscellaneous nonbuilding <sup>2</sup> . . . . .	8,336	619	484	543	690	815	823	851	822	796	709	684	501
<b>Federal construction . . . . .</b>	13,482	1,062	1,006	1,101	1,158	1,254	1,160	1,127	1,104	1,748	804	1,035	921
Total buildings . . . . .	5,430	430	416	451	446	515	468	468	418	616	320	442	441
Housing . . . . .	585	46	38	39	46	69	50	55	48	58	39	52	43
Industrial . . . . .	1,214	91	91	109	106	112	113	112	115	160	52	78	75
Educational . . . . .	11	1	-	1	1	1	1	1	1	1	2	2	-
Hospital . . . . .	1,013	56	93	108	108	124	66	85	63	105	50	64	92
Other Federal buildings <sup>3</sup> . . . . .	2,608	237	193	195	185	208	238	215	191	292	179	246	230
Highways and streets . . . . .	326	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	2,280	227	184	187	195	200	190	173	174	244	153	178	174
Conservation and development . . . . .	3,412	229	211	258	292	298	293	285	323	592	175	242	214
Miscellaneous nonbuilding <sup>4</sup> . . . . .	2,034	162	183	189	203	212	175	162	148	259	117	146	76

See footnotes at end of table.

Table 10b. **Annual and Monthly Value of Public Construction Put in Place: 1996-1998—Not Seasonally Adjusted in 1992 Dollars—Con.**

[Millions of dollars]

Type of construction	1997												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . .</b>	109,475	6,410	6,560	7,299	8,241	9,163	10,323	10,963	11,593	11,110	10,999	9,089	7,725
Total buildings . . . . .	48,287	3,378	3,391	3,659	3,842	3,919	4,342	4,508	4,633	4,492	4,516	3,913	3,695
Housing and redevelopment . . . . .	2,600	167	177	183	204	228	211	225	214	252	286	235	219
Educational . . . . .	24,324	1,616	1,632	1,768	1,859	1,953	2,304	2,436	2,564	2,281	2,203	1,876	1,832
Hospital . . . . .	3,103	235	226	257	296	245	271	296	270	281	285	231	210
Other <sup>1</sup> . . . . .	18,260	1,360	1,357	1,452	1,484	1,493	1,557	1,550	1,584	1,678	1,742	1,571	1,434
Highways and streets . . . . .	37,610	1,560	1,608	1,886	2,601	3,225	3,867	4,254	4,585	4,309	4,114	3,264	2,338
Conservation and development . . . . .	1,919	123	118	152	168	134	155	169	193	186	209	171	141
Other state and local construction . . . . .	21,658	1,349	1,443	1,603	1,630	1,884	1,960	2,032	2,182	2,123	2,160	1,741	1,552
Sewer systems . . . . .	7,842	542	542	608	639	711	734	710	710	750	721	632	543
Water supply facilities . . . . .	4,817	334	351	405	381	401	401	429	415	442	465	428	364
Miscellaneous nonbuilding <sup>2</sup> . . . . .	8,999	473	550	590	609	771	825	893	1,057	931	973	681	645
<b>Federal construction . . . . .</b>	11,949	901	864	937	905	966	975	985	999	1,472	824	1,043	1,079
Total buildings . . . . .	5,137	414	413	389	401	384	432	399	399	592	385	470	459
Housing . . . . .	565	60	49	44	42	41	49	46	48	45	58	49	32
Industrial . . . . .	843	76	68	75	95	62	80	77	67	82	47	54	59
Educational . . . . .	16	-	1	3	1	1	2	1	2	3	-	-	2
Hospital . . . . .	1,053	97	103	71	62	71	92	59	67	145	96	107	84
Other Federal buildings <sup>3</sup> . . . . .	2,659	181	191	196	201	209	209	216	216	316	183	259	282
Highways and streets . . . . .	223	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	2,169	172	146	164	158	183	190	200	208	231	165	192	159
Conservation and development . . . . .	2,882	236	215	236	193	248	221	233	254	466	133	182	266
Miscellaneous nonbuilding <sup>4</sup> . . . . .	1,538	69	81	137	138	132	109	129	112	156	116	180	179

See footnotes at end of table.

Table 10b. **Annual and Monthly Value of Public Construction Put in Place: 1996-1998—Not Seasonally Adjusted in 1992 Dollars—Con.**

[Millions of dollars]

Type of construction	1998												
	Total	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<b>State and local construction . . .</b>	108,422	6,552	6,436	7,014	8,169	8,728	10,468	10,867	11,352	11,239	10,739	9,034	7,825
Total buildings . . . . .	48,904	3,484	3,445	3,555	3,852	3,968	4,544	4,719	4,762	4,550	4,257	3,974	3,795
Housing and redevelopment . . . . .	2,849	208	201	232	247	232	264	280	230	237	244	239	235
Educational . . . . .	24,324	1,660	1,628	1,650	1,852	1,951	2,368	2,541	2,558	2,328	2,051	1,867	1,870
Hospital . . . . .	2,417	210	199	220	194	203	209	184	182	204	207	198	206
Other <sup>1</sup> . . . . .	19,313	1,405	1,418	1,453	1,559	1,582	1,703	1,714	1,792	1,780	1,755	1,669	1,483
Highways and streets . . . . .	37,230	1,623	1,597	1,945	2,620	2,980	3,879	4,065	4,422	4,461	4,304	3,076	2,258
Conservation and development . . . . .	1,648	132	119	130	120	140	171	139	154	149	155	126	114
Other state and local construction . . . . .	20,641	1,313	1,274	1,383	1,577	1,640	1,874	1,944	2,015	2,079	2,023	1,859	1,659
Sewer systems . . . . .	7,398	484	463	515	546	550	642	670	693	725	753	721	635
Water supply facilities . . . . .	4,903	317	324	330	391	411	399	444	437	468	496	466	420
Miscellaneous nonbuilding <sup>2</sup> . . . . .	8,339	512	488	539	640	679	833	830	885	885	774	673	604
<b>Federal construction . . . . .</b>	11,962	844	878	952	908	922	999	1,126	1,031	1,519	761	1,012	1,009
Total buildings . . . . .	4,906	355	370	416	401	396	397	471	410	558	349	383	401
Housing . . . . .	442	33	41	27	32	35	36	50	46	46	27	38	32
Industrial . . . . .	824	62	65	78	69	66	64	76	71	87	47	74	64
Educational . . . . .	12	-	1	-	1	1	1	1	2	2	-	-	1
Hospital . . . . .	823	59	54	86	52	73	66	77	70	119	71	50	44
Other Federal buildings <sup>3</sup> . . . . .	2,806	201	209	224	247	220	230	267	220	303	204	221	260
Highways and streets . . . . .	295	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)	(NA)
Military facilities . . . . .	2,131	157	164	198	181	179	187	230	198	184	132	158	162
Conservation and development . . . . .	3,034	163	239	221	210	218	251	267	270	502	166	272	255
Miscellaneous nonbuilding <sup>4</sup> . . . . .	1,596	159	94	104	98	104	133	125	117	239	79	173	172

- Less than \$0.5 million. NA Not available, but estimates are included in total.

<sup>1</sup>Includes general administrative buildings, prisons, police and fire stations, courthouses, passenger terminals, civic centers etc. <sup>2</sup>Includes open amusement and recreational facilities, power generating facilities, transit systems, airfields, open parking facilities, etc. <sup>3</sup>Includes Federal office buildings, prisons, courthouses, space facilities, postal facilities, etc. <sup>4</sup>Includes Federal airport facilities, fish and wildlife preservation facilities, VA cemeteries, etc.

# Appendix A.

## Definitions

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### CONSTRUCTION

In this publication, construction includes the following:

1. New buildings and structures.
2. Additions, alterations, conversions, expansions, reconstruction, renovations, rehabilitations, and major replacements (such as the complete replacement of a roof or heating system).
3. Mechanical and electrical installations such as plumbing, heating, electrical work, elevators, escalators, central air-conditioning, and other similar building services.
4. Site preparation and outside construction of fixed structures or facilities such as sidewalks, highways and streets, parking lots, utility connections, outdoor lighting, railroad tracks, airfields, piers, wharves and docks, telephone and telegraph lines, radio and television towers, water supply lines, sewers, water and signal towers, electric light and power distribution and transmission lines, petroleum and gas pipelines, and similar facilities which are built into or fixed to the land.
5. Installation of the following types of equipment: boilers, overhead hoists and cranes, and blast furnaces.
6. Fixed, largely site-fabricated equipment not housed in a building, primarily for petroleum refineries and chemical plants, but also including storage tanks, refrigeration systems, etc.
7. Cost and installation of construction materials placed inside a building and used to support production machinery; for example, concrete platforms, overhead steel girders, and pipes to carry paint, etc. from storage tanks.

The following are excluded from construction:

1. Maintenance and repairs to existing structures or service facilities.
2. Cost and installation of production machinery and equipment items not specifically covered above, such as heavy industrial machinery, printing presses, stamping machines, bottling machines,

and packaging machines; special purpose equipment designed to prepare the structure for a specific use, such as steam tables in restaurants, pews in churches, lockers in school buildings, beds or X-ray machines in hospitals, and display cases and shelving in stores.

3. Drilling of gas and oil wells, including construction of offshore drilling platforms; digging and shoring of mines (construction of buildings at mine sites is included); work which is an integral part of farming operations such as plowing and planting of crops.
4. Land acquisition.

### VALUE OF CONSTRUCTION PUT IN PLACE

The “value of construction put in place” is a measure of the value of construction installed or erected at the site during a given period. For an individual project, this includes—

1. Cost of materials installed or erected.
2. Cost of labor (both by contractors and force account) and a proportionate share of the cost of construction equipment rental.
3. Contractor’s profit.
4. Cost of architectural and engineering work.
5. Miscellaneous overhead and office costs chargeable to the project on the owner’s books.
6. Interest and taxes paid during construction (except for state and locally owned projects).

The total value-in-place for a given period is the sum of the value of work done on all projects underway during this period, regardless of when work on each individual project was started or when payment was made to the contractors. For some categories, published estimates represent payments made during a period rather than the value of work actually done during that period. For other categories, estimates are derived by distributing the total construction cost of the project by means of historic construction progress patterns.

### CLASSIFICATION OF CONSTRUCTION

The following descriptions are used in classifying construction projects. Projects are classified as privately owned or government owned (state, local, or Federal Government). The distinction is made on the basis of ownership during the construction period.



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## Categories of Private Construction

### Residential Buildings

*New housing units* includes new houses, apartments, condominiums, and townhouses. The classification excludes residential units in buildings which are primarily nonresidential. It also excludes manufactured homes and houseboats.

*Improvements* includes remodeling, additions, and major replacements to properties subsequent to completion of original building. It includes construction of additional housing units in existing residential structures, finishing of basements and attics, modernization of kitchens, bathrooms, etc. Also included are improvements outside of residential structures, such as the addition of swimming pools and garages, and replacement of major equipment items such as water heaters, furnaces and central air-conditioners. Maintenance and repair work is not included.

### Nonresidential Buildings

*Industrial* includes all buildings and structures at manufacturing sites. Office buildings and warehouses owned by industrial companies but not constructed at an industrial site are classified as "office" and "other commercial" respectively.

*Office* includes office and professional buildings used primarily for office space. Office buildings built by public utilities for their own use are included in "public utilities." Office buildings at industrial sites are classified as "industrial"; however, an office building owned by an industrial company and not located at an industrial site is classified as "office."

*Hotels, motels* includes hotels, motels, resort lodging, tourist courts and cabins, and similar facilities.

*Other commercial* includes buildings and structures which are intended for use by wholesale, retail, or service trade establishments. For example, shopping centers or malls, department stores, low-rise banks and financial institutions, drug stores, parking garages, auto service stations and repair garages, beauty schools, grocery stores, restaurants, and dry cleaning stores are included in this category. Also included are warehouses and storage buildings, cold storage plants, grain elevators and silos, except such facilities at industrial sites.

*Religious* includes houses of worship and other religious buildings. Certain buildings, although owned by religious organizations, are not included in this category. These include educational or charitable institutions, hospitals, and publishing houses.

*Educational* includes schools, universities and other academic buildings, and associated buildings (libraries, cafeteria, dormitories, student unions, etc.). Also included are noncommercial museums, art galleries, and similar establishments. Beauty schools and dance schools are classified as "other commercial."

*Hospital and institutional* includes health care and institutional facilities. Also included are sanatoria, convalescent and rest homes, nursing homes, orphanages, and similar establishments for prolonged care. Surgical or outpatient clinics affiliated with a hospital are also part of this category. Buildings which are used primarily for doctors' offices are classified as "office."

*Miscellaneous nonresidential* includes nonresidential buildings which are not classified in any of the above categories. Motion picture studios, theatres, casinos, health clubs, and buildings which provide amusement and recreational services are included. Also included are radio and television studios and bus and airline terminal buildings. Farm buildings and buildings owned by public utility companies for their own use are included in the "farm nonresidential" and "public utilities" categories, respectively.

### Farm Nonresidential

Farm nonresidential construction includes buildings and structures such as barns, storage houses, smokehouses, and fences which are constructed on establishments having annual agricultural sales of \$1,000 or more. Also included are land improvements such as land leveling, terracing, tile drainage, and the construction of dikes, ponds, flood control systems, and roads and lanes.

### Public Utilities

For each of the public utility categories, construction expenditures are classified in terms of the industry rather than the function of the building or structure. Construction expenditures made by the following privately owned public utility companies or cooperatives are included in this category:

Railroad	Petroleum pipelines
Telephone	Electric light and power
Telegraph	Gas (manufacturing, transmission, and distribution)
Television cable	

The estimates include not only the type of construction peculiar to the operation of the utility, but also other types of nonresidential building and nonbuilding construction built by these companies for their own use, such as office buildings.

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## All Other Private

All other private construction includes all privately owned nonbuilding projects (other than built for public utility companies) which are not classified elsewhere, such as streets and bridges, parking areas not associated with a building project, dams and reservoirs, sewer and water facilities, golf courses, parks and playgrounds, and airfields.

## Categories of Public Construction

Public construction is composed of two parts: state and local construction and Federal construction.

### State and local Construction

*Housing and redevelopment* includes houses, apartment buildings, and all other residential structures.

*Educational* includes primary, secondary, college and university level educational buildings and associated buildings (libraries, dining halls, dormitories, student unions, etc.). Also included are buildings which serve an educational purpose, i.e., public libraries, museums, art galleries, planetariums, observatories, arboreta, botanical and zoological gardens, archives, conservatories, etc. This category does not include institutions for the handicapped or teaching hospitals which are classified as “hospitals.”

*Hospital* includes health care and institutional facilities such as hospitals, clinics, and infirmaries. Also included are rest homes, nursing homes, sanatoria, psychiatric institutions, schools for the handicapped, orphanages, half-way homes, outpatient clinics, etc.

*Other buildings* includes general administrative buildings; police, fire, and rescue buildings; courthouses, jails and prisons; bus, streetcar, subway and railroad garages and barns, stations and related buildings; enclosed parking facilities; airport buildings; maritime transport, storage and terminal buildings; electric power generating buildings; amusement-recreational buildings; and other commercial, industrial, and miscellaneous buildings not elsewhere classified.

*Highways and streets* includes highways, streets, bridges, overpasses, tunnels, toll facilities, street lighting, and miscellaneous road construction.

*Conservation and development* includes all construction intended for water resources protection and control such as erosion control systems, fish hatcheries, spillways, levees, seawalls, waterfront bulkheads, jetties, river and harbor development, dredging and drainage, canals, irrigation facilities, docks, piers, wharves, berths, and reservoirs built other than for potable water supply.

*Sewer systems* includes storm drainage and sewerage system lines, interceptors, dry waste disposal plants, nonpotable water treatment plants and pumping stations, tunnels, outfalls, and all other sewer construction.

*Water supply facilities* includes potable water distribution systems and storage facilities such as water lines, aqueducts, water pumping stations, treatment plants, dams, reservoirs, artificial lakes, brooks, ponds, and water wells.

*Miscellaneous nonbuilding* construction includes open amusement and recreational facilities; power generating facilities; and other open construction (subway and streetcar construction, airport runways, open parking facilities, etc.).

### Federal Construction

The value-in-place estimates for Federal construction are classified into nine separate categories defined below. In general, classification is based on the agency responsible for the work; for example, Veterans Administration expenditures are classified as “hospital” and Bureau of Reclamation expenditures are classified as “conservation and development.” However, the expenditures reported by a few agencies are subdivided into two or more types of construction.

*Housing* includes new family housing units and the rehabilitation of existing units constructed for the armed services. Military barracks, bachelor officers’ quarters and family housing for Coast Guard personnel are classified under “military facilities.” Housing for forest rangers and national park employees is classified under “conservation and development.”

*Industrial* includes construction done at Department of Energy research and development facilities. It also includes manufacturing, assembling and processing buildings and their related facilities such as arsenals, ordnance works, and shipyards.

*Educational* includes academic and associated buildings, laboratories and science buildings, libraries, art galleries, and museums. Educational facilities built by the Department of Defense for its personnel are included under “military facilities.” Federally owned schools on Indian reservations are included in this category.

*Hospital* includes health care and institutional facilities such as veterans’ hospitals and clinics.

*Other buildings* includes general office buildings, customs houses, courthouses, jails and prisons, except such buildings owned by the Department of Defense.

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*Military facilities*, with the specific exceptions noted below, covers construction owned by the Department of Defense and the Coast Guard. This category includes troop housing, administration and training buildings, warehouses, mess halls, recreation centers, educational facilities, airfields and airport buildings, missile sites, etc. The following specific types of construction owned by the Department of Defense are classified in the categories indicated in parentheses:

Family housing for the armed services (Residential)  
Civil Works—Construction by Army Corps of Engineers (Conservation and development)  
Department of Defense owned industrial facilities (Industrial)  
Military hospitals (Hospitals)  
Soldiers' Home (Miscellaneous construction)

*Highways and streets* includes streets, bridges, vehicular tunnels, viaducts, and forest and park roads owned by Federal agencies other than the Department of Defense. Also included are the following built in connection with a Federal road: culverts, drainage, erosion control, lighting, guard rails, and earthwork protective structures.

*Conservation and development* includes construction work done by agencies which are primarily engaged in the maintenance and supervision of natural resources such as the Army Corps of Engineers, Tennessee Valley Authority, and Bureau of Reclamation.

*Miscellaneous construction* includes Federal airport facilities, fish and wildlife preservation facilities, Veterans Administration cemeteries, etc.

# Appendix B.

## Data Sources, Assumptions, and Methods

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### INTRODUCTION

This appendix describes the sample design and estimation procedures used to develop current estimates of value of construction put in place.

Value-in-place estimates are not published separately for individual series until data for the series are available. Therefore, publication of separate estimates is limited to quarterly data if the series is quarterly, and to annual data if the series is annual; however, projected or interpolated monthly estimates from these series are included in the monthly totals but are not shown separately.

### PRIVATE RESIDENTIAL BUILDINGS

#### New One-Unit Housing

Construction cost of new one-unit houses started each month is estimated using data from the U.S. Census Bureau's Housing Starts Survey and Housing Sales Survey. The estimated cost of all single units started is then distributed into monthly value put in place by applying fixed patterns of monthly construction progress. The patterns are shown in Table B-1.

Construction cost is estimated separately for units built to be sold or rented and units built by the owner or for the owner on contract. In both cases, the total cost is obtained by multiplying the number of units started by an average construction cost per unit. For units built to be sold or rented, the average construction cost is the average sales price at the time of start multiplied by the factor .7813. This factor eliminates an estimate of the cost of "nonconstruction" items such as raw land, marketing costs, closing costs, and movable appliances. The average construction cost for units built for the owner on contract is the average contract value at time of start increased by the factor 1.0190 to eliminate "nonconstruction" items and add the value of land development not already accounted for.

#### New Two-or-More-Unit Buildings

A subsample of new residential building projects with two units or more is selected from the Census Bureau's Housing Starts Survey (HSS). A description of this survey is provided in Current Construction Reports, C20/99-1 *Housing Starts*, issued March 1999.

Once a project is selected, monthly construction progress reports are requested from the owner until the project is completed. About 2,350 projects are in the

survey each month. This number includes newly selected projects as well as projects carried over from the previous months. Estimates of value put in place are obtained by multiplying the final weight of each project by the reported value and summing all projects. The final weight can be expressed as follows:

**Final weight** = (basic weight) x (unit adjustment factor) x (adjustment factor for architectural, engineering, and miscellaneous costs).

- a. **Basic weight.** The basic weight is the reciprocal of the probability of selection. Since the projects in the Two Plus Survey are a subsample of the HSS sample, the basic weight includes the reciprocal of the sampling rate used in HSS.
- b. **Unit adjustment factor.** The unit adjustment factor is the ratio of the unbiased estimate obtained from the Census Bureau's Building Permits Survey of the number of 2+ units authorized in a month to the unbiased estimate from the Two Plus Survey of the number of 2+ units authorized in a month.
- c. **Adjustment for architectural, engineering, and miscellaneous costs.** The value put in place for the construction of a project includes the total construction cost and fees for architectural and engineering services and miscellaneous costs. However, monthly reports from sample projects do not include architectural, engineering, and miscellaneous costs. Each month's reported value is inflated to account for these costs so that the sum of the values put in place each month is the total cost of the project. This adjustment factor is defined as the ratio of the total estimated value of the project reported by the owner (construction cost and architectural, engineering, and miscellaneous costs) to the estimated construction cost of the project reported by the owner.

#### Improvements

Data for this series are obtained by the Census Bureau from household interviews in a representative sample of owner-occupied units and a mail survey of owners of a sample of rental or vacant properties. Prior to 1985, these data were collected as part of the Census Bureau's Quarterly Household Survey of Residential Alterations and Repairs. Beginning with January 1984 statistics, estimates of expenditures on owner-occupied

properties are based on data from the Consumer Expenditure Survey (CES) conducted by the Census Bureau for the Department of Labor's Bureau of Labor Statistics. A detailed description of this survey and the mail survey and a comparison of the old and new series for 1984 appear in Construction Reports, C50-85-Q1, *Residential Alterations and Repairs*, issued in October 1985. The CES was designed to provide the Bureau of Labor Statistics with a database for purposes relating to the Consumer Price Index. This survey was not designed to provide monthly estimates of residential improvements. As a result, these estimates have high variances and are not shown separately in the tables of monthly estimates.

Data from owner-occupied units are collected through a rotating panel survey design. There are three panels: one panel is interviewed during the first month of a quarter, another panel during the second month and a third panel during the last month. Each panel reports on improvements done since the previous interview 3 months ago; thus, an expenditure may be reported in the month of interview, the month before, 2 months before or 3 months before, but after the previous interview. Data collection for expenditures in a month will not be completed until 3 months after the month and an estimate based on all of the data will not be available until approximately 5 months after the month.

Data from the mail survey of owners of a sample of rental or vacant properties are collected after the end of each quarter. The expenditures are not reported for each month of the quarter but only for the entire quarter. For this report, monthly estimates need to be made by apportioning the quarterly expenditures to the months in the quarter. The quarterly estimate is available 4 months after the end of the quarter and accounts for about 24 percent of the estimate.

The estimates of total residential improvements are usually forecasted data at least 1 or 2 months in advance. The revised estimates are still based on incomplete data and in many cases are still forecasts. Estimates based on complete data are first used in the May publication for revisions to the previous year. The total improvements estimates are subject to substantial revisions from the preliminary estimates based on forecasts to the final estimates based on complete data. The final estimates have relative standard errors approximating 15 percent. For estimates beginning in 1982, time series techniques have been used to remove the sampling variation.

### PRIVATE NONRESIDENTIAL BUILDINGS

The Census Bureau conducts a monthly Construction Progress Reporting Survey for estimating the value of private nonresidential building construction in the United States. This survey uses three sources of information for identifying nonresidential building projects:

1. Data from the F.W. Dodge Division of the McGraw-Hill Information Systems Company on projects valued at \$50,000 or more in the United States except Hawaii.
2. Building permit notifications for a sample of projects in the permit-issuing places of Honolulu, Maui, Kauai and Hawaii county in Hawaii.
3. Projects in a sample of areas not covered by building permit systems or reported by Dodge.

Projects from sources 1 and 2 are stratified by type of construction and construction value. Sixty-six strata are created and each stratum is assigned a specific sampling rate. Of the 66 strata, 22 are certainty strata and have a sampling rate of 1-in-1. Within each of the remaining 44 non-certainty strata, a systematic sample of projects is selected each month continuing from the sample selected from the previous month. Projects from source 3 (nonpermit areas) are selected with virtual certainty. Once a project is selected, monthly construction progress reports are requested from the owner until the project is completed. About 6,300 projects are in the survey at any one time.

Estimates of value put in place are obtained by multiplying the final weight of each project by the monthly reported value and summing all projects. The final weight can be expressed as the product of the following:

**Final weight**=(basic weight) x (outlier adjustment factor) x (adjustment factor for architectural, engineering, and miscellaneous costs)

- a. **Basic weight.** The basic weight varies with each source and project.
  1. For projects from sources 1 and 2, the basic weight is the reciprocal of the probability of selecting a project.
  2. For projects from source 3, the basic weight is the reciprocal of the probability of selecting a nonpermit segment.
- b. **Outlier adjustment factor.** This factor reduces the influence on the VIP of an extreme noncertainty observation that reports an extremely large total construction value.
- c. **Adjustment factor for architectural, engineering, and miscellaneous costs.** This factor is computed in the same manner as in the Two Plus Survey (see above).

Imputations are made for projects which have not reported at the time of the monthly tabulation, based on estimated total construction value and month of start of the project. Weighted data are summed over all

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sample projects by type of construction. The results are increased by 28 percent to account for undercoverage of construction projects not reported by F.W. Dodge. The adjustment for undercoverage results from comparison studies of Dodge reports with building permits for a sample of projects for which permits were issued.

The industrial buildings category is further adjusted by benchmarking the tabulated estimates to the latest detailed structures data from the Census Bureau's Annual Capital Expenditures Survey (ACES). The 1992 and 1994 levels for industrial buildings are based upon actual ACES data. Estimates for other years are extrapolations from the 1992 and 1994 levels.

### **FARM NONRESIDENTIAL CONSTRUCTION**

Value-in-place estimates for new farm nonresidential construction are extrapolated from the annual U.S. Department of Agriculture (USDA) report, *Income and Balance Sheet Statistics*. Monthly or quarterly estimates are not available.

To estimate monthly values, including projections for the current and following year, the USDA data are developed using the trend of the "all other private" construction put-in-place estimates.

### **PUBLIC UTILITIES**

Value-in-place estimates for the telephone component of telecommunications construction are based on reports of actual monthly construction progress. For the electric light and power, gas, railroad, petroleum pipeline categories, and the TV cable component of telecommunications, construction put in place estimates are based on annual capital expenditure reports compiled by Federal regulatory agencies and private organizations.

Pending availability of annual data, monthly estimates for railroads are obtained by distributing Surface Transportation Board quarterly construction expenditures estimates into monthly values. Preliminary monthly estimates for TV cable, electric, and gas construction are based on annual forecasts from Paul Kagan Associates, Inc., the Edison Electric Institute, and the American Gas Association; and petroleum pipeline estimates are projections from the latest final year of Federal Energy Regulatory Commission data. Monthly estimates are published only for telecommunications; however, estimates for other public utilities are included in the appropriate totals.

### **ALL OTHER PRIVATE CONSTRUCTION**

Beginning with data for May 1995, estimates for this series are based upon a monthly sample survey of projects. The information for creating the sampling frame is obtained from the same F.W. Dodge data used for private nonresidential buildings (see above). Once a

project is selected it remains in the survey until completion of the project, and monthly progress reports are requested from the owner. Tabulation of data is the same as for private nonresidential buildings. The results are also increased by 28 percent to account for projects not reported by F.W. Dodge.

Prior to May 1995, monthly estimates for this series are indirectly measured using Dodge contract awards statistics and construction progress patterns.

### **PUBLIC CONSTRUCTION**

Public construction is composed of two parts: State and local construction and Federal construction.

#### **State and Local**

The information for creating the sampling frame for the state and local survey is obtained from the same F.W. Dodge data used for private nonresidential buildings (see above).

The projects are stratified by type of construction and value according to the information from Dodge. Seventy-two strata are created and a sampling rate is assigned to each stratum. Of the 72 strata, 16 are certainty strata. Within each of the remaining 56 non-certainty strata, a systematic sample of projects is selected each month continuing from the sample selected from the previous month. Once a project is selected it remains in the survey until completion of the project, and monthly construction progress reports are requested from the appropriate agency in charge of the project or its designated agent, such as the builder or architect responsible for the project. The average number of projects in the survey at any one time is about 8,400. These include newly selected projects as well as projects carried over from previous months.

Tabulation of data is the same as for private nonresidential buildings. The results are increased by 5 percent to account for construction projects not reported by F.W. Dodge. This adjustment results from a comparison study of Dodge reports with state and local agency reports for a sample of projects for which contracts were awarded or force account work started.

All data are further adjusted by benchmarking the tabulated estimates to annual construction expenditures data collected in the Census Bureau's Annual Survey of Government Finances.

#### **Federal**

Monthly value-in-place estimates for Federally owned construction are based on monthly data which, with few exceptions, are supplied to the Census Bureau by each Federal agency involved in construction activities. Information is obtained from Federal budget documents for a small number of agencies where information cannot be directly supplied. These budget totals are prorated over the fiscal year to derive monthly estimates.

**Table B-1. Monthly Progress Patterns for Private One-Unit Residential Buildings by Month of Start**

[Percent of the value of units started monthly]

Month of activity <sup>1</sup>	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1st .....	15.8	15.8	15.8	15.8	15.9	16.9	16.9	16.9	16.9	16.9	16.9	15.8
2nd .....	21.7	23.2	22.5	22.5	22.9	23.8	23.8	23.8	23.8	23.8	21.7	21.7
3rd .....	21.0	20.1	20.8	20.8	20.8	20.8	20.8	20.8	20.8	18.3	18.3	18.3
4th .....	16.3	16.0	16.0	16.0	16.0	16.0	16.0	16.0	13.7	13.7	13.7	16.8
5th .....	10.6	10.3	10.3	10.3	10.3	9.5	9.5	8.8	8.8	8.8	11.7	11.7
6th .....	6.1	6.1	6.1	6.1	6.1	5.8	5.8	5.1	5.1	7.4	7.6	6.7
7th .....	3.5	3.5	3.5	3.5	3.5	2.7	2.7	2.7	4.3	4.8	4.3	4.0
8th .....	2.0	2.0	2.0	2.0	1.5	1.5	1.5	2.5	2.8	3.3	2.8	2.0
9th .....	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.6	2.0	1.2	1.2	1.2
10th .....	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
11th .....	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
12th .....	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4

<sup>1</sup>Month of start is first month of activity.

# Appendix C.

## Reliability of the Estimates

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The statistics on the value of construction put in place result from direct measurement and indirect estimation. A series results from direct measurement when it is based on reports of the actual value of construction progress or construction expenditures obtained from a complete census or sample survey. All other series are developed by indirect estimation using related construction statistics.

On an annual basis, the estimates for series directly measured monthly, quarterly, or annually accounted for about 71 percent of total construction in 1998 (private multi-family residential, private residential improvements, private nonresidential buildings, farm nonresidential construction, public utility construction, all other private construction, and virtually all of public construction). On a monthly basis, directly measured data are available for about 55 percent of the value-in-place estimates.

Some of the directly measured monthly construction value-in-place estimates are based on samples. Estimates from these samples may differ from statistics which would have been obtained from a complete census using the same schedules and procedures. An estimate based on a sample survey is subject to both sampling error and nonsampling error. The accuracy of a survey result is determined by the joint effects of these errors.

### MEASURE OF SAMPLING ERRORS

Sampling error reflects the fact that only a particular sample was surveyed rather than the entire population. Each sample selected for the monthly value-in-place survey is one of a large number of similar probability samples that, by chance, might have been selected under the same specifications. Estimates derived from the different samples would differ from one another. The standard error, or sampling error, of a survey estimate is a measure of the variation among the estimates from all possible samples and, thus, is a measure of the precision with which an estimate from a particular sample approximates the average from all possible samples.

Estimates of the standard errors for the monthly, year-to-date and annual estimates were computed from the sample data for selected statistics in this report.

They are presented in the form of relative standard errors in Table C-1. The relative standard error equals the standard error divided by the estimated value to which it refers.

The sample estimate and an estimate of its standard error allow us to construct interval estimates with prescribed confidence that the interval includes the average result of all possible samples with the same size and design. A 90-percent confidence interval is defined to be from 1.6 standard errors below the estimate to 1.6 standard errors above the estimate. If all possible samples were selected and surveyed under essentially the same conditions and all the respective 90-percent confidence intervals were generated, then approximately nine-tenths of the intervals would include the average value of all sample estimates and approximately one-tenth would not include this estimate. For example, suppose Table 3 of this report showed that the monthly VIP estimate for "total private nonresidential buildings" was \$10.0 billion in a particular month. According to Table C-1, the relative standard error of this estimate is 2 percent. Multiplying \$10.0 billion by .02, we obtain \$200 million as the standard error. To obtain a 90-percent confidence interval, multiply \$200 million by 1.6 and add and subtract the result from \$10.0 billion, yielding limits of \$9.68 billion and \$10.32 billion. The average value of the monthly VIP estimate for "total private nonresidential buildings" may or may not be contained in this computed interval, but one can say that the average is included in the constructed interval with a specified confidence of 90 percent.

Table C-1 also presents coefficients necessary to compute standard errors for the month-to-month and year-to-date changes. To derive a specific standard error of a change, look up an appropriate coefficient (k1 or k2) for the change and apply the following formula:

$$\text{Standard error of a change} = k (100 + \text{\% change shown in Tables 3 through 6})$$

Once the standard error is available, one can construct a 90-percent confidence interval of the change by multiplying the standard error by 1.6.

No standard errors are shown for farm nonresidential or public utilities because the estimates are based on a complete enumeration.

### NONSAMPLING ERRORS

As calculated for this report, the coefficient of variation estimates sampling variation but does not measure all nonsampling error in the data. Nonsampling error



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consists of both a variance component and a bias component. Bias is the difference, averaged over all possible samples of the same size and design, between the estimate and the true value being estimated. Nonsampling errors are usually attributed to many possible sources: (1) coverage error—failure to accurately represent all population units in the sample, (2) inability to obtain information about all sample cases, (3) response errors, possibly due to definitional difficulties or misreporting, (4) mistakes in recording or coding the data obtained, and (5) other errors of coverage, collection and nonresponse, response, processing, or imputing for missing or inconsistent data. These nonsampling errors also occur in complete censuses. Although no direct measures of these errors have been obtained, precautionary steps were taken in all phases of the collection, processing, and tabulation of the data to minimize their influence.

A major source of nonsampling error in the published estimates is due to the need to impute data for nonrespondents and for late and inconsistent reports. For preliminary value-in-place estimates, the average imputation rates for major components are as follows: private nonresidential construction, 41 percent; state and locally owned public construction, 31 percent; private residential construction of 2 units or more, 42 percent; and private residential improvements, 13 percent. Each of these imputation rates is not an explicit indication of the potential error in statistics, but the degree of uncertainty regarding the accuracy of the statistics increases as the percentage of imputation increases.

Other potential sources of bias are the upward adjustment of 28 percent made to the private nonresidential construction and the adjustment of the state and local owned public construction to the construction outlays from the Annual Survey of Government Finances in order to account for construction projects not included in their respective sampling frames. The adjustment for the nonresidential construction results from a coverage evaluation sample; hence, the estimated percentage adjustment is subject to sampling error and nonsampling errors associated with the evaluation study. In addition, the percentage was estimated from data collected during a limited time period; therefore, these adjustments do not reflect any recent changes in the proportion of projects not included in the frame.

For state and locally owned construction, construction outlays from the Survey of Government Finances are available only through Fiscal Year 1996. (Outlays

are included if a government agency's fiscal year ending date falls within July 1995 to June 1996 inclusive, and for three state agencies with fiscal years ending in August or September 1996.) As a result, the adjustment to the construction outlay levels of this survey must be projected ahead for 4 years from 1996 through April 2000. The relationship between the state and locally owned value-in-place and the capital outlays estimate changes from year to year so that revisions of 4 to 5 percent are expected in state and local construction and substantially larger revisions can be expected in the individual types of construction. In addition, because of the definition of fiscal year for the Survey of Government Finances, the reported capital outlays do not correspond to any 12 month period but result from capital outlays made over a 26 month period. There are also definitional and timing differences between the concepts of capital outlays and value put in place.

Consequently, even though the private nonresidential and state and local owned construction adjustments are designed to reduce the bias due to the failure to include projects in the sampling frames, for the above stated reasons, these adjustment procedures, themselves, may introduce a bias in the current estimates of value-in-place.

Furthermore, additional nonsampling errors may be introduced into the estimates because the procedures such as phasing, extrapolating, and forecasting used to develop the indirectly measured series are subject to the validity of the underlying assumptions made and mathematical models used. No explicit measures of the effect of these procedures are available.

## **MONTHLY REVISIONS TO ESTIMATES**

Statistics for the current month are preliminary estimates. These estimates are released to provide government and private data users with early measures of construction activity. A necessary part of the process of issuing these early data involves the issuance of subsequent revisions. The revisions to monthly construction put in place estimates are primarily the result of the replacement of imputed data with data which are reported in subsequent months.

For total construction, the range of the difference between the last 12 preliminary and second revision estimates for the same months was from -1.3 percent to 1.6 percent with a median of 0.5 percent (see Table C-2). The range of the difference between first revision and second revision was from -0.8 to 1.0 percent, with a median of 0.3 percent.

**Table C-1. Relative Standard Errors and Coefficients for Standard Errors of Changes**

Type of construction	Relative standard error (percent)			Coefficient for changes	
	Monthly estimate	Year-to-date estimate	Annual estimate	Month-to-month change (k1)	Year-to-date change (k2)
<b>Total construction</b> .....	<b>2</b>	<b>2</b>	<b>1</b>	<b>.03</b>	<b>.02</b>
Private construction .....	3	2	1	.04	.03
Residential buildings .....	5	3	2	.06	.05
New housing units .....	2	2	1	.01	.02
1 unit structures .....	2	2	2	.01	.02
2 units or more .....	4	4	3	.03	.04
Nonresidential buildings .....	2	1	1	.02	.01
Industrial .....	3	2	2	.04	.03
Office .....	4	3	2	.05	.04
Hotels, motels .....	7	6	5	.09	.08
Other commercial .....	5	3	2	.06	.04
Religious .....	9	8	5	.12	.11
Educational .....	7	5	5	.10	.07
Hospital and institutional .....	6	5	5	.07	.07
Miscellaneous buildings .....	7	5	4	.09	.07
Public construction .....	2	1	1	.03	.01
Housing and redevelopment .....	8	5	4	.11	.07
Industrial .....	(NA)	(NA)	(NA)	(NA)	(NA)
Educational .....	3	2	2	.04	.03
Hospital .....	6	5	4	.08	.07
Other public buildings .....	3	2	2	.04	.03
Highways and streets .....	4	3	2	.05	.04
Military facilities .....	(NA)	(NA)	(NA)	(NA)	(NA)
Conservation and development .....	4	3	2	.06	.04
Sewer systems .....	6	4	3	.08	.06
Water supply facilities .....	8	5	3	.11	.07
Miscellaneous public .....	8	5	4	.11	.07
State and local construction .....	2	1	1	.03	.01
Housing and redevelopment .....	8	5	5	.11	.07
Educational .....	3	2	2	.04	.03
Hospital .....	8	7	5	.11	.10
Other public buildings .....	4	3	2	.05	.04
Highways and streets .....	4	3	2	.05	.04
Conservation and development .....	16	10	9	.23	.14
Sewer systems .....	6	4	3	.08	.06
Water supply facilities .....	8	5	3	.11	.07
Miscellaneous public .....	9	6	4	.12	.09
Federal construction .....	(NA)	(NA)	(NA)	(NA)	(NA)

NA Not available.

Note: All statistics are based upon 1998 data. The coefficient (k1) for the month-to-month change is applicable to change from the previous month and change from the same month a year ago.

**Table C-2. Analysis of Revisions to Monthly Seasonally Adjusted Annual Rate Estimates in Current Dollars**

Type of construction	Percent changes between estimates - last 12 months					
	Preliminary versus second revision			First revision versus second revision		
	Range		Median	Range		Median
	From	To		From	To	
<b>Total construction</b> .....	<b>-1.3</b>	<b>1.6</b>	<b>0.5</b>	<b>-0.8</b>	<b>1.0</b>	<b>0.3</b>
Private construction .....	-1.1	2.3	0.6	-0.9	1.3	0.3
Residential buildings .....	-1.7	1.4	0.7	-1.4	0.9	0.2
New housing units .....	-0.1	1.0	0.5	-0.2	0.4	0.1
1 unit .....	-0.5	0.9	0.4	-0.3	0.6	0.0
2 units or more .....	-1.6	5.5	0.6	-2.8	3.1	-0.1
Nonresidential buildings .....	-0.2	4.7	0.9	-0.5	3.3	0.7
Industrial .....	-7.0	13.3	3.3	-5.3	4.4	0.6
Office .....	-1.2	6.1	0.8	-3.4	3.0	0.1
Hotel, motel .....	-3.5	12.0	3.9	-5.6	5.9	1.5
Other commercial .....	-2.4	8.4	-0.2	-1.0	7.7	1.4
Religious .....	1.6	6.9	3.9	-1.3	3.8	1.0
Educational .....	-7.0	3.1	-2.4	-3.4	4.4	-1.3
Hospital and institutional .....	-7.0	3.1	-2.4	-2.7	4.4	1.0
Miscellaneous buildings .....	-2.8	9.5	3.6	-1.4	6.5	0.8
Telecommunications .....	-3.9	9.8	-1.2	-1.4	2.0	0.0
All other private .....	-2.4	18.5	2.9	-2.7	11.5	2.1
Public construction .....	-2.3	2.7	-1.4	-0.9	1.0	0.1
Housing and redevelopment .....	-11.3	6.1	-4.6	-6.4	1.8	-1.1
Industrial .....	-16.8	16.6	1.4	-1.5	1.3	0.7
Educational .....	-4.3	9.3	1.8	-0.9	3.4	1.1
Hospital .....	-10.8	9.4	-0.3	-3.0	10.4	-0.7
Other public buildings .....	-1.3	5.5	1.9	-0.9	1.8	0.3
Highways and streets .....	-7.9	1.7	-2.3	-3.2	1.7	-0.2
Military facilities .....	-13.6	9.3	0.1	-4.5	7.8	0.0
Conservation and development .....	-2.7	6.4	-1.4	-1.1	4.9	0.2
Sewer systems .....	-4.1	2.1	-0.9	-4.1	2.6	-0.2
Water supply facilities .....	-6.6	4.6	-2.1	-2.6	3.3	-1.5
Miscellaneous public .....	-8.8	5.7	-1.1	-5.8	0.5	-1.4

# Appendix D.

## Adjustments for Seasonal Variations and Cost Changes

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### ADJUSTMENT FOR SEASONAL VARIATIONS

Seasonally adjusted estimates result by removing normal seasonal movement from the unadjusted data to bring out underlying trends and business cycles. Seasonal adjustment accounts for month-to-month variations resulting from normal or average changes in any phenomena affecting the data such as weather conditions, the differing lengths of months, and the varying number of weekdays and weekends within each month. It neither adjusts for abnormal conditions within each month nor for year-to-year variations in weather. For example, suppose the normal month-to-month change in an unadjusted series between February and March is 20 percent. Then an increase in the unadjusted series of less than 20 percent will be seen as a decrease in the seasonally adjusted series; an increase of exactly 20 percent will result in no change in the adjusted series; and an increase of more than 20 percent will be shown as an increase in the adjusted series.

An assumption underlying the seasonal adjustment process is that the original series can be separated into a seasonal component, a trend-cycle component, a trading day component, and an irregular component. The seasonally adjusted series consists of the trend-cycle and the irregular components taken together. The trend-cycle component includes the long-term and business cycle. The irregular component is made up of residual variations such as the sudden impact of political events, the effects of strikes, unusual weather conditions, reporting errors, and sampling errors. The trading-day component represents the effect due to the varying number of weekdays and weekends in each month. The seasonally adjusted monthly rate is found by dividing the unadjusted monthly estimate by its seasonal component and trading day components.

The seasonally adjusted annual rate is the seasonally adjusted monthly rate multiplied by 12. It is neither a forecast nor a projection. Rather it is a description of the annual rate at which construction is put in place in that particular month. Changes in the seasonally adjusted estimates may indicate changes in the trend or rate of construction put in place, but changes in the unadjusted estimates may be strictly due to seasonal variation. Seasonally adjusted annual rates facilitate comparisons with previous annual data as well as with the seasonally adjusted annual rates for prior months.

To obtain seasonally adjusted estimates or seasonal factors the unadjusted data are run through X-12-ARIMA, an enhanced version of the X-11 variant of the Census Method II seasonal adjustment program. A description of the X-12-ARIMA program appears in the "New Capabilities and Methods of the X-12-ARIMA Seasonal Adjustment Program" by David F. Findley et al. of the U.S. Census Bureau. Table D-1 provides a description of the components found in seasonally adjusted series. Further information on X-12-ARIMA may be obtained from the Associate Director for Methodology and Standards, U.S. Census Bureau, Washington, DC 20233.

Each monthly series is run through the X-12-ARIMA program every month as new data become available. This procedure, known as concurrent seasonal adjustment, utilizes the current month estimate to calculate that month's seasonal adjustment factor. Several studies indicate that use of the most current data to estimate seasonal factors is generally effective; the seasonal factors are subject to less revision. Table D-2 shows the past 11 months and the year ago seasonal factors.

As the unadjusted data are revised, so are the seasonal factors. Thus, changes in seasonally adjusted estimates will not only reflect changes in the unadjusted data, but also changes to the seasonal factors. In addition, the seasonally adjusted data are revised back for 3 years each year with the release of May data.

### ADJUSTMENT FOR COST CHANGES

The monthly value-in-place estimates in current dollars are converted to a constant 1992 dollar series using cost indexes derived for each category of construction. The deflators for the various categories are related indexes or combinations of related indexes from private companies and Federal agencies. The selection of the indexes and procedures used for developing the deflators for each category resulted primarily from recommendations made jointly by the Bureau of Economic Analysis and the Census Bureau.<sup>1</sup>

The index or combinations of indexes which apply to the individual categories of construction are shown in Table D-3. These indexes are indicated in the column headed "Applicable deflating index."

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<sup>1</sup>A description of the deflators and their development appears in Part 1 of the August 1974 issue of the *Survey of Current Business*, U.S. Department of Commerce.

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Since most of the indexes were originally compiled for different base years, all indexes were converted to the 1992 dollar base (1992=100).

Indexes which are available quarterly or semiannually are linked with a "monthly trend index" shown in Table D-3. The results are monthly indexes which have the movement of the monthly trend index and the level of the quarterly or semiannual index.

Table D-4 shows the indexes used to deflate value put in place. The source and description of each index follow:

**U.S. Census Bureau Composite Fixed-Weighted Price Index** (Source: U.S. Census Bureau, U.S. Department of Commerce, Washington, DC)

The composite index is a weighted average of the individual price index series used to deflate the value-in-place series. In calculating the index each month, the weights (the composition of current dollar value-in-place in 1992 by category of construction) are held constant. Consequently, the index reflects only changes in prices. The composite index is calculated using the U.S. Census Bureau Single-Family Houses Under Construction Fixed-Weighted Price Index.

The annual index is an average of the monthly indexes. Monthly and annual indexes are shown in Table D-5.

**U.S. Census Bureau Implicit Price Deflator** (Source: U.S. Census Bureau, U.S. Department of Commerce, Washington, DC)

The implicit price deflator is a derived ratio of total current to constant dollar value put in place (multiplied by 100). It is the average of the individual price indexes used in the deflation of value put in place, but the indexes are weighted by the changing composition of value put in place each month. Consequently, the implicit price deflator reflects not only changes in prices, but also changes in the composition of value put in place, and its use as a measure of price change is discouraged. Monthly and annual deflators are shown in Table D-6.

**Engineering News-Record Indexes** (Source: *Engineering News-Record*, McGraw-Hill Publishing Company, New York, NY)

*Engineering News-Record* (ENR) compiles monthly national cost indexes with 1913 as the base period for total construction and for buildings.

Both the construction index and the building index have four components—three materials items plus labor. The materials items for both indexes are as follows: 1) the base price of structural steel, which is a 20-city average of wholesale prices; 2) consumers' net price of cement, which is a 20-city average of f.o.b. bulk prices; 3) lumber, which is 2" x 4" S4S pine and fir

in carload lots (ENR 20-city average). The labor component of the construction cost index, which is designed to show the movement of construction cost in general, is the common labor rate (ENR 20-city average), while the labor component of the building cost index is the skilled labor rate (ENR 20-city average).

The component series are weighted according to their relative importance as determined by the compilers. As a step in arriving at the weights, the average production of steel and cement in the years 1913, 1916, and 1919; average production of lumber for 1913 and 1916; and the number of common industrial laborers according to the 1919 Census were placed on a dollar-value basis using 1913 average prices as compiled by ENR wherever possible.

A complete description of the quantities and unit prices or labor rates used in developing the weights for the materials and labor components of both indexes is published in *Business Statistics*, 1963 Edition, a supplement to the *Survey of Current Business*, published by the Office of Business Economics (now the Bureau of Economic Analysis), U.S. Department of Commerce.

Annual indexes are averages of the monthly indexes.

More information about the indexes can be found on the ENR Internet site at [www.enr.com](http://www.enr.com).

**Federal Highway Administration Composite Index** (Source: Federal Highway Administration, U.S. Department of Transportation, Washington, DC)

The composite index is compiled quarterly with 1987 as the base period. The index is derived from average unit bid prices for fixed amounts of the following items put in place: common excavation, surfacing (portland cement concrete and bituminous concrete), and structures (reinforcing steel, structural steel, and structural concrete).

To eliminate erratic quarter-to-quarter movement in the Federal Highway Administration composite index, the quarterly index is adjusted with the application of 12-quarter phasing patterns based upon highway construction activity.

The annual index is a weighted average of the indicator items for the composite index.

**U.S. Census Bureau Single-Family Houses Under Construction Fixed-Weighted Price Index** (Source: U.S. Census Bureau, U.S. Department of Commerce, Washington, DC)

This price index is designed to measure changes over time in the price of new single-family houses under construction each month and year. It is calculated using the "hedonic" or regression methodology whereby physical characteristics of new houses are regressed against house values to obtain "prices" of those characteristics. These prices can then be used in an index calculation such that "quality" of new houses is kept constant and inflation measured.

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The index is based on the Laspeyres index methodology which compares the current period construction value of the kinds of houses built in the base year (1992) to the actual houses built in 1992. In effect, a fixed market basket of goods is repriced each time period, and the index reflects only changes in prices.

The price index is computed from information on the physical characteristics and transaction prices obtained from the Census Bureau's Housing Starts and Sales Surveys. The annual index is computed independently of the monthly indexes, and may not equal the average of the monthly indexes.

Detailed information on the methodology used to calculate this index is available upon request.

**U.S. Census Bureau Single-Family Houses Under Construction Price Deflator** (Source: U.S. Census Bureau, U.S. Department of Commerce, Washington, DC)

The index is calculated based on the same data and regression analysis described above under the U.S. Census Bureau Single-Family Houses Under Construction Fixed-Weighted Price Index. In the calculation of the deflator index series, however, the Fisher ideal chain-type annual-weighted index methodology is employed in place of the Laspeyres.

Fisher ideal chain-type annual-weighted indexes are computed by multiplying annual components together, called index relatives. The index relative is the geometric mean of a Laspeyres index and a Paasche index. The Laspeyres index compares the current year construction value of the houses built in the previous year to the actual value of the previous year's construction value of these same houses.

For years following the base year, the index is computed by multiplying the relatives. For years prior to the base year, the index is found by dividing the relatives.

Monthly Fisher ideal indexes are derived by distributing the annual indexes into monthly indexes based on a month-to-month change in the Single-Family Houses Under Construction Paasche Index.

Because the chain-type Fisher ideal index addresses the substitution effects which can bias the more traditional index measures, this index is the preferred index for use as a price deflator.

**Bureau of Reclamation Composite Index** (Source: Bureau of Reclamation, U.S. Department of Interior, Denver, CO)

The index is compiled quarterly with 1977 as the base period. The Bureau of Reclamation composite index for dams and reclamation projects reflects the Bureau of Reclamation's cost of constructing these projects in 17 Western States. The index is a weighted

average of costs of labor, materials, and equipment furnished by contractors and the government. When possible, labor and materials costs are based on unit bid prices from contracts let by the Bureau of Reclamation. These data are supplemented by components of the Federal Highway Administration index, Bureau of Labor Statistics wholesale indexes, quotations of wage rates published in *Engineering News-Record* and judgment of Bureau of Reclamation analysts.

For 11 categories of reclamation work listed below, basic cost components have been defined and relative weights for each of these components derived from contracts awarded during the period 1930-46. This is a fixed weight index with weights determined within each category for labor, materials, and equipment furnished by contractors and the government.

The major categories of work which make up the composite index are—dams, pumping plants, steel penstocks and discharge pipes, canals and conduits, laterals and drains, hydroelectric power plants, concrete pipelines, switchyards and substations, transmission lines, general property (buildings), and roads and bridges.

The Census Bureau computes an annual index by averaging the quarterly indexes.

This index is available on the Internet at [www.usbr.gov/tsc/cost\\_trend.html](http://www.usbr.gov/tsc/cost_trend.html).

**Turner Construction Company Index** (Source: Turner Construction Company, New York, NY)

This index is compiled quarterly with 1967 as the base period. The index is a price index for national building construction costs and is derived from the firm's current cost experience with respect to the following factors considered on a nationwide basis: labor rates and productivity, material prices, and the competitive condition of the market place.

The annual index is an average of the quarterly indexes.

This index is available on the Internet at [www.turnerconstruction.com](http://www.turnerconstruction.com).

**Handy-Whitman Indexes** (Source: Computed by the U.S. Census Bureau from data compiled by Whitman, Requardt and Associates, Baltimore, MD)

Whitman, Requardt and Associates compile semiannual (January and July) cost indexes for various elements for four types of construction—utility buildings, electric light and power plants, gas plants, and water—within six geographical regions. The base period for the utility indexes is 1973. The Census Bureau computes semiannual national average indexes for the types of construction as follows:

*Utility Buildings.* The national average is a simple average of indexes for reinforced concrete buildings and brick buildings in each of the six regions.

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*Electric Light and Power Plants.* The national average is a simple average of indexes for total construction and equipment for steam operated electric plants in each of the six regions.

*Gas.* The national average is a simple average of indexes for total gas plant in each of the six regions.

*Water.* The national average is a simple average of indexes for structures and improvements at water facilities in each of the six regions.

Each of the original source indexes is based on prices for materials, labor costs, and prices of mechanical and electrical equipment. Prices of basic materials such as cement, sand, stone, cast iron pipe, wire, and the like are obtained from standard publications such as *Engineering News-Record* and checked against prices actually being paid for such materials. Labor cost trends are computed from labor rates obtained from sources such as the Construction Labor Research Council. Mechanical and electrical equipment prices and trends are obtained from nationally known manufacturers and operating utilities.

**C.A. Turner Telephone Plant Index** (Source: Computed by U.S. Census Bureau from data compiled by AUS Consultants Inc., Harrisburg, PA)

AUS Consultants developed an independent telephone plant index in 1977. This index had been published since then through affiliation with Whitman, Requardt and Associates as the Handy-Whitman Index of Public Utility Construction Cost for the telephone industry. As of January 1, 1990, Handy-Whitman no longer publishes the index which is now available only through C.A. Turner, the publications division of AUS Consultants.

The telephone plant index numbers cover each major FCC plant account and are published with 1973 as the base period at January 1 and July 1 price levels each year. Data from many operating companies and suppliers related to construction methods, plant investment, and component costs are analyzed and summarized as a basis for preparing the index.

The Census Bureau computes a semiannual national index by averaging the weighted component indexes published for the six geographic regions.

Table D-1. **Average Percentage Changes and Related Measures of Variability for the Value of Construction Put in Place**

Type of construction	Average percentage change				$\bar{I}/\bar{C}$	MCD
	$\bar{O}$	$\bar{C}$	$\bar{I}$	$\bar{C}$		
<b>Total construction</b> .....	<b>6.05</b>	<b>1.17</b>	<b>0.99</b>	<b>0.58</b>	<b>1.71</b>	<b>3</b>
Private construction.....	4.99	1.29	1.00	0.67	1.50	2
Residential buildings.....	6.61	1.27	0.70	0.96	0.73	1
Nonresidential buildings.....	4.19	2.18	1.92	0.87	2.19	3
Public construction.....	9.31	2.21	2.11	0.60	3.52	4
Buildings.....	5.40	2.66	2.51	0.83	3.02	3
Military facilities.....	17.61	11.06	10.59	2.37	4.46	5
Highways.....	19.20	4.10	3.92	1.14	3.43	4
Conservation and development.....	15.96	7.85	7.75	1.40	5.53	8
All other public.....	8.19	4.59	4.28	1.10	3.90	5

### DEFINITIONS OF SUMMARY MEASURES

Summary measures of the seasonal, cyclical, and irregular components of the construction put in place series provide a rough guide for use in interpreting current percentage changes in the seasonally adjusted data. Detailed explanations of the basic method and definitions of the measures used appear in *Electronic Computers and Business Indicators*, Occasional Paper 57, National Bureau of Economic Research, New York, 1957.

The following are brief descriptions of the measures shown in Table D-1:

- $\bar{O}$  is the average month-to-month percentage change (without regard to sign) in the original series before seasonal adjustment.
- $\bar{C}$  is the average month-to-month percentage change (without regard to sign) in the seasonally adjusted figures.
- $\bar{I}$  is the average month-to-month percentage change (without regard to sign) for the irregular component. The irregular component is obtained by dividing the cyclical component into the seasonally adjusted series.
- $\bar{C}$  is the average month-to-month percentage change (without regard to sign) for the cyclical component, which is a smooth, flexible moving average.
- $\bar{I}/\bar{C}$  is the average month-to-month percentage change (without regard to sign) of the irregular component divided by the average month-to-month percentage change (without regard to sign) of the cyclical component. It serves as an indication of the series' relative smoothness (small values) or irregularity (large values).
- MCD (months for cyclical dominance) gives an estimate of the appropriate time span over which to observe cyclical movements in a monthly series. In deriving MCD, the average percentage changes (without regard to sign) in the irregular and in the cyclical component are computed for 1-month spans (Jan.-Feb., Feb.-Mar., etc.), 2-month spans (Jan.-Mar., Feb.-Apr., etc.), up to 12-month spans. MCD is the shortest span for which the average percentage change (without regard to sign) in the cyclical component is larger than the average percentage change (without regard to sign) in the irregular component; thus, it indicates the point at which fluctuations begin to be more attributable to cyclical than to irregular movements.



**Table D-2. Factors Used to Seasonally Adjust Estimates of the Value of Construction Put in Place**

[Percent]

Type of construction	May 1999 <sup>P</sup>	Apr. 1999 <sup>r</sup>	Mar. 1999 <sup>r</sup>	Feb. 1999 <sup>r</sup>	Jan. 1999 <sup>r</sup>	Dec. 1998 <sup>r</sup>	Nov. 1998 <sup>r</sup>	Oct. 1998 <sup>r</sup>	Sep. 1998 <sup>r</sup>	Aug. 1998 <sup>r</sup>	July 1998 <sup>r</sup>	May 1998 <sup>r</sup>
<b>PRIVATE CONSTRUCTION</b>												
Residential buildings:												
New housing units:												
1 unit .....	102.2	96.0	91.3	76.4	81.2	89.2	106.0	111.2	113.8	114.2	112.3	101.1
2 units or more.....	105.0	100.1	95.6	88.7	87.5	94.8	100.5	105.2	104.5	107.7	104.4	105.4
Nonresidential buildings:												
Industrial .....	98.8	97.2	94.2	91.1	90.0	105.0	103.7	107.3	107.6	104.2	100.2	99.5
Office .....	102.1	101.0	97.5	93.3	91.7	98.2	102.8	103.1	103.7	102.5	102.8	102.0
Hotels, motels .....	102.0	104.1	104.2	93.2	87.8	101.1	101.0	101.1	101.0	101.4	98.9	97.0
Other commercial .....	99.7	94.5	89.6	83.9	83.7	94.1	104.5	112.0	113.9	112.0	106.7	99.7
Religious .....	97.6	93.0	92.1	86.3	87.2	105.2	110.5	113.4	112.5	108.3	96.8	93.7
Educational.....	101.3	95.7	91.3	84.6	83.2	85.8	95.3	99.3	108.0	120.7	120.1	101.9
Hospital and institutional .....	100.5	99.5	98.6	94.2	94.2	99.0	103.8	105.0	103.5	103.6	97.4	100.6
Miscellaneous nonresidential .....	99.7	103.7	97.9	89.1	88.1	97.1	103.5	107.4	105.1	103.6	102.5	99.7
Telecommunications .....	95.3	100.9	100.6	83.5	79.0	107.7	101.8	110.1	106.3	103.0	105.0	96.8
All other private .....	97.0	93.6	90.2	80.0	85.1	98.6	105.1	117.5	110.2	115.0	108.8	96.5
<b>PUBLIC CONSTRUCTION</b>												
<b>State and local</b>												
Buildings:												
Housing and redevelopment .....	101.5	99.5	94.0	89.7	91.5	97.9	103.7	109.2	107.2	97.7	102.0	101.4
Educational.....	97.7	92.5	86.0	81.2	82.5	87.7	94.1	104.1	114.1	127.5	121.5	97.6
Hospital .....	99.0	95.7	97.6	91.3	92.2	101.5	98.8	109.5	110.0	96.4	101.2	97.1
Other buildings.....	103.6	98.3	92.5	88.6	87.6	94.9	104.2	109.3	107.2	106.9	102.9	103.6
Highways and streets.....	102.6	80.1	61.8	49.9	51.3	73.9	102.0	135.5	144.1	143.4	132.8	102.4
Conservation and development .....	101.9	94.9	79.6	74.5	74.8	86.5	102.3	118.4	119.0	123.0	114.6	101.7
Sewer systems.....	99.3	91.9	86.6	77.5	81.0	91.6	106.6	116.9	116.9	114.0	106.1	99.3
Water supply facilities.....	102.5	95.2	84.3	79.6	80.0	94.0	108.7	120.2	109.6	109.5	109.2	102.6
Miscellaneous construction .....	101.9	94.9	79.6	74.5	74.8	86.5	102.3	118.4	119.0	123.0	114.6	101.7
<b>Federal</b>												
Buildings:												
Housing and redevelopment .....	95.8	99.1	101.0	91.3	87.2	104.2	98.8	87.3	136.9	95.8	101.4	96.4
Industrial .....	95.8	99.1	101.0	91.3	87.2	104.2	98.8	87.3	136.9	95.8	101.4	96.4
Educational.....	95.8	99.1	101.0	91.3	87.2	104.2	98.8	87.3	136.9	95.8	101.4	96.4
Hospital .....	95.8	99.1	101.0	91.3	87.2	104.2	98.8	87.3	136.9	95.8	101.4	96.4
Other buildings.....	95.8	99.1	101.0	91.3	87.2	104.2	98.8	87.3	136.9	95.8	101.4	96.4
Military .....	101.2	94.8	101.1	83.0	93.7	103.6	101.3	80.7	128.5	104.7	103.6	102.1
Conservation and development .....	94.6	93.9	97.1	88.1	82.9	101.1	98.2	67.8	172.4	103.7	103.6	96.5
Miscellaneous construction .....	94.6	93.9	97.1	88.1	82.9	101.1	98.2	67.8	172.4	103.7	103.6	96.5

<sup>P</sup>Preliminary. <sup>r</sup>Revised.

**Table D-3. Sources of Cost Indexes Used to Derive Estimates of the Value of Construction Put in Place in 1992 Dollars**

Type of construction	Applicable deflating index		Monthly trend index
	Name of index	Availability	
Residential buildings . . . . .	U.S. Census Bureau Single-Family Houses Under Construction . . . . .	Monthly	
Industrial buildings . . . . .	Unweighted average of—		
Office buildings . . . . .	Turner Construction Company . . . . .	Quarterly	Engineering News-Record—buildings
Hotels and motels . . . . .	U.S. Census Bureau Single-Family Houses Under Construction . . . . .	Monthly	
Other commercial buildings . . . . .			
Educational buildings . . . . .			
Hospital and institutional buildings . . . . .			
Religious buildings . . . . .			
Miscellaneous nonresidential buildings . . . . .			
Farm nonresidential . . . . .			
Railroads . . . . .	Unweighted average of—		
	Federal Highway Admin.-composite . . . . .	Quarterly	Engineering News-Record—construction
	Bureau of Reclamation . . . . .	Quarterly	Engineering News-Record—construction
Telecommunications . . . . .	C.A. Turner Telephone Plant . . . . .	Semiannually	Engineering News-Record—construction
Electric light and power . . . . .	Weighted average of—		
	Handy-Whitman—electric (weight 9) . . . . .	Semiannually	Engineering News-Record—construction
	Handy-Whitman—utility building (weight 1) . . . . .	Semiannually	Engineering News-Record—buildings
Gas and petroleum pipelines . . . . .	Handy-Whitman—gas . . . . .	Semiannually	Engineering News-Record—construction
Military facilities . . . . .	Weighted average of—		
	Federal Highway Admin.-composite (weight 2) . . . . .	Quarterly	Engineering News-Record—construction
	U.S. Census Bureau Single-Family Houses Under Construction (weight 1) . . . . .	Monthly	
	Turner Construction Company (weight 1) . . . . .	Quarterly	Engineering News-Record—buildings
Highways and streets . . . . .	Federal Highway Admin.-composite . . . . .	Quarterly	Engineering News-Record—construction
Sewer systems and conservation and development . . . . .	Bureau of Reclamation . . . . .	Quarterly	Engineering News-Record—construction
Water supply facilities . . . . .	Handy-Whitman—water . . . . .	Semiannually	Engineering News-Record—construction
All other private and public . . . . .	Unweighted average of—		
	Federal Highway Admin.-composite . . . . .	Quarterly	Engineering News-Record—construction
	Bureau of Reclamation . . . . .	Quarterly	Engineering News-Record—construction

Note: Federal Highway Administration composite index, adjusted with the application of 12-quarter phasing patterns, is used before the monthly indexes are developed.

Table D-4. **Indexes Used in Deriving Estimates of the Value of Construction Put in Place in Constant Dollars**

[1992 = 100]

Period	U.S. Census Bureau		Engineering News-Record		U.S. Census Bureau Houses Under Construction		Federal Highway Administration composite	Bureau of Reclamation	Turner Construction Company	Handy-Whitman public utility				C.A. Turner telephone plant
	Composite fixed-weighted	Implicit price deflator	Buildings	Construction	Fixed-weighted	Price deflator				Buildings	Electric	Gas	Water	
	Annual indexes													
1994.....	108.0	108.1	109.8	108.5	109.7	109.5	106	105	112	107	109	109	103	
1995.....	112.5	112.6	109.8	109.8	114.4	114.3	115.9	110	109	115	111	112	110	
1996 <sup>r</sup> .....	115.0	115.2	113.0	112.8	116.4	116.5	116.1	112	112	118	112	112	115	
1997 <sup>r</sup> .....	118.7	118.9	118.7	116.9	119.9	119.9	124.7	116	117	122	115	115	117	
1998 <sup>r</sup> .....	122.0	122.2	119.7	118.8	123.3	123.0	122.2	118	122	123	117	117	120	
	Monthly indexes						Quarterly indexes			Semiannual indexes				
1997 <sup>r</sup> : January.....	117.1	117.2	117.6	115.6	118.6	118.5								
February.....	117.0	117.1	117.6	115.7	118.5	118.4	127.1	114	114					
March.....	117.6	117.7	117.3	115.5	118.6	118.5				121	114	114	117	
April.....	117.8	117.9	118.7	116.3	118.7	118.7								
May.....	118.1	118.3	119.2	117.1	118.8	119.0	124.1	116	116					
June.....	118.3	118.5	119.9	117.6	119.2	119.5								
July.....	118.6	118.9	119.7	117.6	119.6	120.0								
August.....	118.9	119.2	119.5	117.4	120.0	120.4	116.4	118	118					
September.....	119.5	119.6	119.2	117.4	120.9	120.9				122	114	115	118	
October.....	119.9	119.9	119.0	117.3	121.5	121.2								
November.....	120.6	120.5	118.2	117.1	121.9	121.3	131.5	118	119					
December.....	120.7	120.4	118.9	117.5	122.0	121.2								
1998 <sup>r</sup> : January.....	120.9	120.7	118.7	117.4	122.0	121.4								
February.....	120.5	120.7	119.0	117.8	121.5	121.3	113.8	118	120					
March.....	120.5	120.7	118.9	117.9	121.3	121.2				122	116	116	118	
April.....	120.9	120.9	119.1	118.0	121.9	121.5								
May.....	121.1	121.2	119.1	118.0	122.0	121.8	119.5	118	121					
June.....	121.8	121.8	119.2	118.3	123.0	122.7								
July.....	122.2	122.1	119.4	118.8	123.7	123.2								
August.....	122.6	122.5	119.7	118.9	123.9	123.4	130.2	118	123					
September.....	122.8	122.8	120.5	119.6	124.0	123.7				124	117	117	119	
October.....	123.1	123.3	120.8	120.1	124.3	124.3								
November.....	123.4	123.8	120.8	120.3	125.0	125.0	125.0	119	124					
December.....	124.1	124.3	120.7	120.2	126.0	125.7								
1999: January.....	<sup>r</sup> 124.5	<sup>r</sup> 124.6	120.9	120.4	<sup>r</sup> 126.4	<sup>r</sup> 125.8								
February.....	<sup>r</sup> 124.8	<sup>r</sup> 124.6	120.6	120.2	<sup>r</sup> 126.8	<sup>r</sup> 125.6	124.4	118	125					
March.....	<sup>r</sup> 125.6	<sup>r</sup> 125.3	120.4	120.1	<sup>r</sup> 127.8	<sup>r</sup> 126.4				<sup>r</sup> 125	<sup>r</sup> 118	<sup>r</sup> 118	<sup>r</sup> 122	
April.....	<sup>r</sup> 125.5	<sup>r</sup> 125.5	120.7	120.5	<sup>r</sup> 127.6	<sup>r</sup> 126.7								
May.....	<sup>p</sup> 125.6	<sup>p</sup> 125.6	120.8	120.5	<sup>p</sup> 127.4	<sup>p</sup> 126.7	(NA)	119	126					
June.....			121.1	121.2										

NA Not available. <sup>p</sup>Preliminary. <sup>r</sup>Revised.

**Table D-5. Monthly U.S. Census Bureau Composite Fixed-Weighted Price Index: 1964 to 1999**  
 [1992=100]

Year	Month												Annual composite index
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	
1964	21.2	21.2	21.1	21.3	21.4	21.5	21.5	21.4	21.4	21.7	21.9	21.9	21.5
1965	22.0	21.9	21.9	21.9	22.0	22.2	22.1	22.0	22.1	22.4	22.7	22.8	22.2
1966	22.6	22.4	22.4	23.0	23.4	23.3	23.2	23.1	23.1	23.4	23.5	23.7	23.1
1967	23.5	23.5	23.5	23.5	23.6	23.7	23.8	23.9	24.0	24.1	24.3	24.5	23.8
1968	24.6	24.7	24.8	24.9	25.0	25.0	24.9	25.0	25.1	25.5	25.9	26.4	25.2
1969	26.2	26.2	26.5	26.6	26.9	26.8	27.0	26.8	26.9	27.3	27.5	27.6	26.9
1970	27.5	27.6	27.8	28.4	28.7	29.2	28.6	28.3	28.3	28.6	28.7	29.1	28.4
1971	29.0	29.7	29.9	30.0	30.1	30.3	30.4	30.9	30.9	31.1	31.3	31.6	30.4
1972	31.7	31.7	31.9	31.9	31.9	32.0	32.3	32.6	32.8	33.2	33.4	33.8	32.4
1973	33.8	33.9	34.2	34.6	34.8	34.9	35.3	35.8	36.0	36.4	36.6	36.7	35.3
1974	37.1	37.6	38.5	38.2	38.8	39.9	40.4	40.4	40.8	41.1	41.5	41.8	39.7
1975	42.3	42.2	42.3	42.6	43.0	43.4	43.4	43.1	43.6	43.7	44.0	44.3	43.2
1976	44.2	44.1	44.3	44.7	45.4	45.7	45.9	45.8	45.9	46.2	46.5	46.7	45.5
1977	47.4	47.5	47.8	48.0	48.6	49.2	49.4	49.8	50.2	50.4	50.9	51.4	49.2
1978	51.8	52.2	52.5	53.1	53.4	54.1	54.5	55.1	55.6	56.4	57.0	57.4	54.4
1979	58.0	58.6	58.9	59.2	60.4	61.3	61.8	62.6	62.8	63.5	64.2	64.6	61.3
1980	65.5	66.2	66.4	66.8	67.6	68.6	69.3	69.6	69.8	70.5	71.0	71.3	68.6
1981	71.9	72.2	73.0	73.3	73.6	74.0	74.3	74.5	74.6	75.2	75.5	75.5	74.0
1982	75.7	75.5	75.7	75.6	76.0	76.3	76.0	76.1	76.2	76.1	76.5	76.6	76.0
1983	77.1	77.0	76.8	76.6	77.3	77.7	77.9	77.9	77.9	78.5	78.7	78.9	77.7
1984	79.2	79.4	79.7	79.8	80.0	80.3	80.5	81.1	81.3	81.8	81.9	82.0	80.6
1985	82.3	82.2	82.3	82.3	82.4	82.6	82.8	83.0	83.2	83.6	83.8	84.2	82.9
1986	84.7	84.8	85.0	85.3	85.7	86.1	86.4	86.6	86.9	87.3	87.6	88.0	86.2
1987	88.3	88.5	88.6	88.8	89.0	89.3	89.6	89.7	89.7	89.9	90.6	90.9	89.4
1988	91.5	91.8	91.8	91.8	92.2	92.3	92.6	92.8	93.1	93.4	93.8	93.9	92.6
1989	94.2	94.6	94.9	95.2	95.6	95.8	96.1	96.4	96.6	96.8	96.9	97.0	95.8
1990	97.3	97.5	97.7	97.8	98.0	98.4	98.8	99.0	99.0	99.1	99.4	99.4	98.5
1991	99.4	99.3	98.9	98.9	99.1	99.6	99.7	99.6	99.6	99.4	99.2	99.1	99.3
1992	99.1	99.3	99.4	99.5	99.4	99.6	99.8	99.9	100.2	100.7	101.0	101.5	100.0
1993	101.8	102.2	103.0	103.4	103.1	102.9	103.4	104.0	104.4	104.7	105.3	105.8	103.7
1994	106.2	106.3	106.5	106.7	107.1	107.5	107.9	108.4	108.9	109.5	110.3	111.1	108.0
1995	111.7	111.7	111.7	111.8	112.1	112.6	112.6	112.6	113.0	113.3	113.3	113.3	112.5
1996 <sup>P</sup>	113.6	113.8	113.8	113.7	114.1	114.5	115.2	115.5	116.0	116.3	116.4	116.7	115.0
1997 <sup>P</sup>	117.1	117.0	117.6	117.8	118.1	118.3	118.6	118.9	119.5	119.9	120.6	120.7	118.7
1998 <sup>P</sup>	120.9	120.5	120.5	120.9	121.1	121.8	122.2	122.6	122.8	123.1	123.4	124.1	122.0
1999	<sup>P</sup> 124.5	<sup>P</sup> 124.8	<sup>P</sup> 125.6	<sup>P</sup> 125.5	<sup>P</sup> 125.6								

<sup>P</sup>Preliminary. <sup>R</sup>Revised.

**Table D-6. Monthly U.S. Census Bureau Implicit Price Deflator: 1964 to 1999**

[1992=100]

Year	Month												Annual deflator
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept	Oct.	Nov.	Dec.	
1964	21.1	20.9	21.0	21.1	21.4	21.4	21.4	21.4	21.4	21.6	21.8	21.8	21.4
1965	21.8	21.7	21.6	21.7	21.9	22.0	22.0	21.9	21.9	22.2	22.5	22.6	22.0
1966	22.3	22.1	22.2	22.8	23.2	23.3	23.1	23.0	22.9	23.2	23.4	23.5	23.0
1967	23.4	23.3	23.4	23.4	23.5	23.6	23.7	23.7	23.8	23.9	24.1	24.3	23.7
1968	24.3	24.5	24.6	24.7	24.9	24.9	24.8	24.9	25.0	25.3	25.8	26.2	25.0
1969	26.0	26.1	26.3	26.4	26.7	26.6	26.9	26.7	26.8	27.3	27.5	27.6	26.8
1970	27.4	27.4	27.8	28.3	28.7	29.2	28.7	28.4	28.4	28.7	28.7	29.0	28.4
1971	28.8	29.6	29.8	29.8	29.9	30.2	30.2	30.8	30.7	30.9	31.1	31.3	30.3
1972	31.4	31.5	31.7	31.7	31.7	31.8	31.9	32.4	32.4	32.9	33.1	33.6	32.2
1973	33.5	33.6	33.8	34.3	34.5	34.6	35.0	35.6	35.8	36.1	36.4	36.5	35.0
1974	36.9	37.5	38.5	38.2	38.8	39.9	40.2	40.3	40.6	41.1	41.6	41.9	39.7
1975	42.3	42.3	42.4	42.7	43.2	43.6	43.6	43.4	43.8	43.9	44.1	44.3	43.4
1976	44.0	44.0	44.1	44.6	45.4	45.7	45.9	45.8	45.9	46.2	46.3	46.4	45.5
1977	46.8	47.2	47.3	47.5	48.2	49.0	49.2	49.8	50.1	50.4	50.7	51.0	49.1
1978	51.5	52.0	52.5	53.2	53.5	54.5	54.8	55.4	55.6	56.3	56.7	57.0	54.6
1979	57.3	57.7	58.0	58.6	60.1	61.1	61.6	62.5	62.6	63.4	63.8	63.9	61.1
1980	64.5	65.2	65.5	66.0	66.9	67.9	68.6	68.7	69.1	69.9	70.1	70.3	67.8
1981	70.7	71.0	71.9	72.1	72.3	73.0	73.4	73.7	73.7	74.3	74.2	74.1	72.9
1982	74.4	74.5	74.8	74.7	75.4	76.0	75.9	76.3	76.5	76.2	76.3	76.2	75.7
1983	76.6	76.6	76.6	76.3	76.8	77.1	77.2	77.2	77.2	77.7	77.8	77.9	77.1
1984	78.4	78.8	79.0	78.9	79.0	79.3	79.6	80.2	80.4	80.6	80.6	80.7	79.7
1985	81.0	81.2	81.4	81.2	81.3	81.5	81.6	81.8	82.0	82.4	82.5	82.7	81.8
1986	83.2	83.3	83.5	83.8	84.2	84.5	84.9	85.1	85.4	85.8	86.0	86.4	84.8
1987	86.7	86.7	86.9	87.1	87.4	87.8	88.1	88.2	88.3	88.6	89.0	89.3	87.9
1988	89.9	90.3	90.4	90.4	90.8	90.9	91.1	91.3	91.7	92.0	92.3	92.5	91.2
1989	92.9	93.4	93.6	94.2	94.7	94.9	95.2	95.3	95.4	95.6	95.8	96.1	94.8
1990	96.7	96.8	97.0	97.1	97.4	97.7	98.2	98.5	98.3	98.5	98.6	98.5	97.8
1991	98.5	98.4	98.0	98.2	98.4	98.8	99.2	99.2	99.2	99.1	98.8	98.8	98.7
1992	98.9	99.2	99.3	99.5	99.3	99.7	99.9	100.0	100.2	100.8	101.2	101.7	100.0
1993	102.1	102.4	103.1	103.5	103.2	103.0	103.5	104.1	104.5	104.7	105.3	105.6	103.8
1994	106.2	106.5	106.6	106.7	107.0	107.4	107.8	108.3	108.8	109.5	110.2	111.0	108.1
1995	111.6	111.7	111.7	111.9	112.0	112.5	112.6	112.7	113.1	113.4	113.4	113.5	112.6
1996 <sup>f</sup>	113.8	113.9	114.1	114.0	114.2	114.8	115.5	115.7	116.0	116.2	116.3	116.6	115.2
1997 <sup>f</sup>	117.2	117.1	117.7	117.9	118.3	118.5	118.9	119.2	119.6	119.9	120.5	120.4	118.9
1998 <sup>f</sup>	120.7	120.7	120.7	120.9	121.2	121.8	122.1	122.5	122.8	123.3	123.8	124.3	122.2
1999	<sup>r</sup> 124.6	<sup>r</sup> 124.6	<sup>r</sup> 125.3	<sup>r</sup> 125.5	<sup>p</sup> 125.6								

<sup>p</sup>Preliminary. <sup>r</sup>Revised.