

Value of Construction Put in Place

APRIL 1998



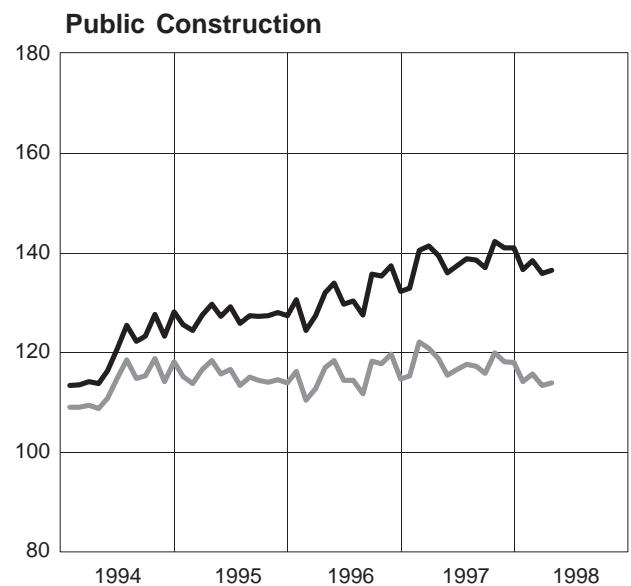
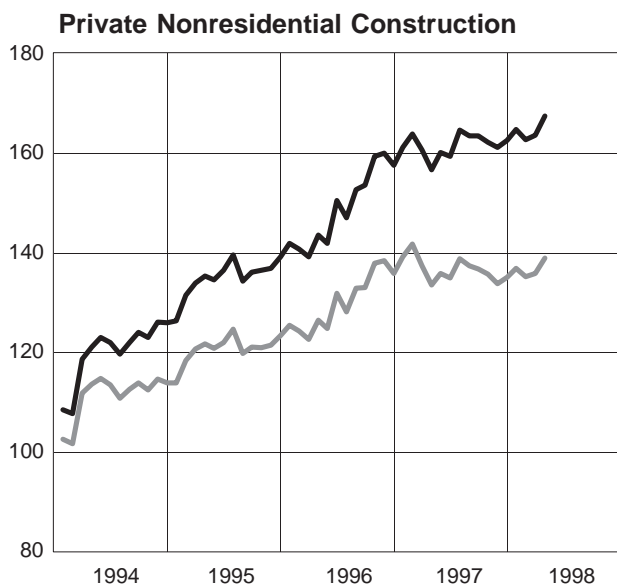
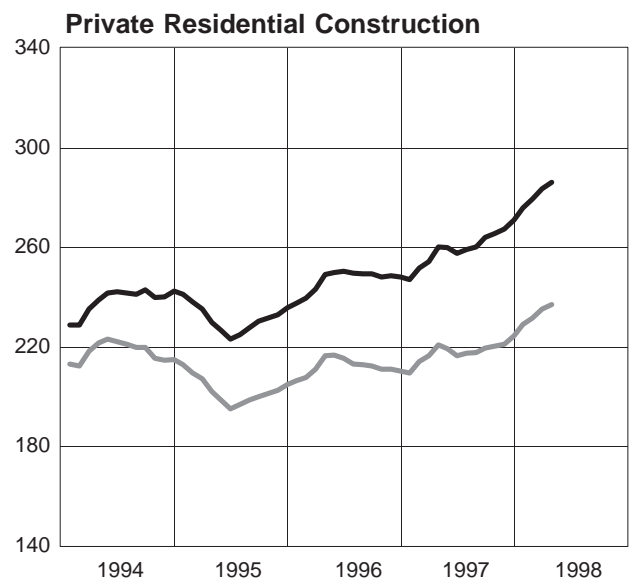
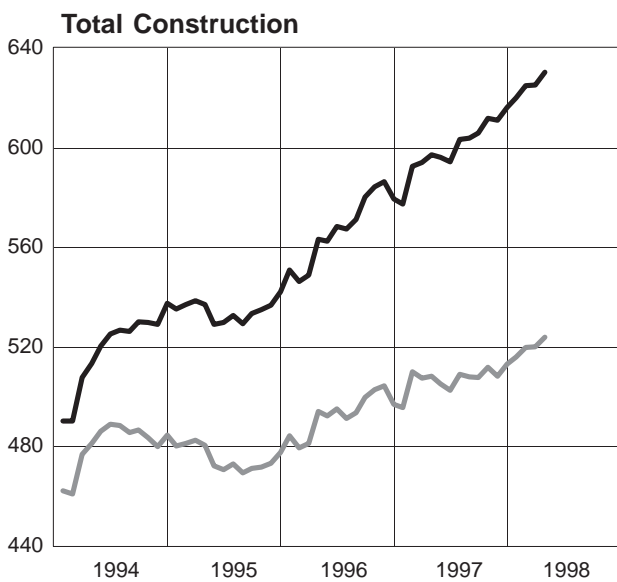
U.S. Department of Commerce
Economics and Statistics Administration
BUREAU OF THE CENSUS

C30/98-4
Issued June 1998

Monthly Value of Construction Put in Place

(Seasonally adjusted annual rate in billions of dollars)

— Current dollars
— 1992 dollars



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

VALUE OF CONSTRUCTION PUT IN PLACE

Construction put in place during April 1998 was estimated at a seasonally adjusted annual rate of \$630.1 billion, 1(\pm 5) percent above the revised March estimate of \$625.0 billion. The April figure represents a 6(\pm 5) percent increase over April 1997.

During the first 4 months of this year \$178.6 billion of construction was put in place, 6 percent above the \$169.0 billion for the same period in 1997.

In constant (1992) dollars, the April annual rate was \$523.8 billion, 1(\pm 5) percent above the revised estimate of \$519.7 billion for March.

Spending on new residential housing units was at a seasonally adjusted annual rate of \$206.6 billion in April, 1(\pm 2) percent above the revised March estimate of \$204.0 billion. Nonresidential building construction was at a rate of \$167.3 billion, 2(\pm 3) percent above the revised March estimate of \$163.5 billion.

In April, the estimated seasonally adjusted annual rate of public construction put in place was \$136.3 billion, nearly the same (\pm 5 percent) as the revised March estimate of \$135.7 billion.

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. Project owner's overhead and office costs.
5. Cost of architectural and engineering work.
6. Miscellaneous costs chargeable to the project on the owner's books.
7. Interest and taxes paid during construction.

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, estimates are derived by distributing the total construction cost of the project by means of historic construction progress patterns.

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: May 1997*, C30/97-5, U.S. Department of Commerce, Bureau of the Census, Washington, DC, 1997; contains annual data for 1992 to 1996 and monthly data for 1994 to 1996.
- Current Construction Reports, *Value of Construction Put in Place: July 1997*, C30/97-7, U.S. Department of Commerce, Bureau of the Census, Washington, DC, 1997; contains annual value of construction put in place for private nonresidential buildings by geographic area and detailed types of construction for 1973 to 1996.
- Current Construction Reports, *Value of New Construction Put in Place: October 1992*, C30/92-10,

U.S. Department of Commerce, Bureau of the Census, 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, Bureau of the Census, 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, Bureau of the Census, Washington, DC, 1994.

Table 1. Annual Value of Construction Put in Place: 1993-1997

[Millions of dollars]

Type of construction	Current dollars					Constant (1992) dollars				
	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997
Total construction	478,648	519,896	534,068	568,585	600,995	461,078	480,965	474,426	493,587	507,307
Private construction	362,688	399,366	406,776	437,079	462,152	347,851	367,265	359,411	378,150	389,503
Residential buildings	210,455	238,874	230,688	247,177	259,938	200,502	218,005	201,682	212,069	217,975
New housing units	144,071	167,919	162,898	179,448	185,469	137,243	153,250	142,413	153,965	155,541
1 unit	133,282	153,838	145,009	159,124	162,729	126,960	140,416	126,773	136,516	136,466
2 or more units	10,788	14,081	17,889	20,324	22,740	10,283	12,833	15,640	17,449	19,075
Improvements	66,384	70,955	67,790	67,729	(NA)	63,259	64,755	59,268	58,104	(NA)
Nonresidential buildings	110,635	120,285	135,022	149,376	161,596	106,729	111,416	120,627	130,394	136,533
Industrial	26,482	28,947	32,505	32,069	30,688	25,554	26,803	29,043	28,003	25,935
Office	20,920	22,178	25,613	27,609	32,060	20,197	20,553	22,891	24,099	27,084
Hotels, motels	4,565	4,648	7,112	11,758	12,955	4,405	4,308	6,351	10,263	10,952
Other commercial	32,453	37,551	42,654	47,319	48,851	31,292	34,756	38,098	41,301	41,272
Religious	3,887	3,869	4,326	4,539	5,832	3,748	3,584	3,864	3,961	4,922
Educational	4,649	4,822	5,493	6,638	8,261	4,484	4,471	4,908	5,790	6,974
Hospital and institutional	12,492	12,268	11,248	11,982	13,883	12,050	11,377	10,051	10,460	11,734
Miscellaneous ¹	5,188	6,002	6,071	7,462	9,066	5,000	5,565	5,421	6,516	7,660
Farm nonresidential	3,392	3,246	3,014	3,135	(NA)	3,271	3,008	2,693	2,736	(NA)
Public utilities	34,925	34,071	35,158	35,010	(NA)	34,120	32,074	31,767	30,842	(NA)
Telecommunications	9,619	10,121	11,093	11,960	11,853	9,468	9,785	10,071	10,420	10,143
Other public utilities	25,306	23,950	24,065	23,050	(NA)	24,652	22,289	21,696	20,422	(NA)
Railroads	3,108	3,340	3,509	4,560	(NA)	3,056	3,186	3,202	4,030	(NA)
Electric light and power	15,567	14,918	14,049	12,654	(NA)	15,096	13,877	12,656	11,191	(NA)
Gas	5,645	4,694	5,578	4,814	(NA)	5,536	4,308	5,004	4,291	(NA)
Petroleum pipelines	986	998	929	1,022	(NA)	965	918	834	910	(NA)
All other private ²	3,281	2,890	2,893	2,381	2,148	3,229	2,763	2,644	2,109	1,834
Public construction	115,960	120,530	127,292	131,506	138,843	113,227	113,700	115,014	115,437	117,804
Buildings	48,559	48,841	53,622	56,685	60,095	46,813	45,177	47,832	49,415	50,742
Housing and redevelopment ..	4,011	3,647	4,293	4,522	4,793	3,833	3,326	3,754	3,881	4,020
Industrial	1,718	1,465	1,508	1,392	1,001	1,658	1,358	1,348	1,216	847
Educational	19,129	19,002	21,534	23,064	24,748	18,465	17,593	19,237	20,131	20,906
Hospital	3,710	4,085	4,312	4,558	5,039	3,579	3,787	3,854	3,981	4,260
Other ³	19,991	20,642	21,974	23,148	24,513	19,279	19,114	19,638	20,207	20,711
Highways and streets	34,299	37,346	36,508	37,774	41,138	34,164	36,151	33,500	33,297	34,938
Military facilities	2,453	2,318	3,011	2,534	2,550	2,405	2,196	2,729	2,225	2,162
Conservation and development ..	5,937	6,464	6,362	5,909	5,517	5,771	6,091	5,773	5,244	4,729
Sewer systems	8,863	9,120	9,895	10,207	9,907	8,622	8,592	8,975	9,060	8,490
Water supply facilities	5,085	4,875	5,539	5,887	6,104	4,868	4,443	4,923	5,121	5,192
Miscellaneous public ⁴	10,765	11,566	12,355	12,510	13,532	10,583	11,050	11,282	11,075	11,551

NA Not available, but estimates are included in totals.

¹Includes amusement and recreational buildings, bus and airline terminals, animal hospitals and shelters, etc.²Includes privately owned streets and bridges, parking areas, sewer and water facilities, parks and playgrounds, golf courses, airfields, etc.³Includes general administrative buildings, prisons, police and fire stations, courthouses, civic centers, passenger terminals, space facilities, postal facilities, etc.⁴Includes 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: 1993-1997

[Millions of dollars]

Type of construction	Current dollars					Constant (1992) dollars				
	1993	1994	1995	1996	1997	1993	1994	1995	1996	1997
Total public construction	115,960	120,530	127,292	131,506	138,843	113,227	113,700	115,014	115,437	117,804
State and local construction	101,535	106,090	111,417	115,917	123,501	99,200	100,130	100,686	101,730	104,772
Total buildings	42,865	43,699	47,580	50,412	53,898	41,323	40,422	42,442	43,946	45,511
Housing and redevelopment	3,775	3,201	3,717	3,842	4,116	3,608	2,920	3,251	3,296	3,451
Educational	19,108	18,975	21,507	23,052	24,729	18,445	17,568	19,213	20,120	20,889
Hospital	2,804	3,234	3,271	3,359	3,635	2,703	2,998	2,923	2,933	3,073
Other ¹	17,177	18,289	19,084	20,160	21,418	16,567	16,936	17,054	17,597	18,098
Highways and streets	33,961	36,918	36,076	37,339	40,665	33,827	35,736	33,104	32,913	34,536
Conservation and development . .	1,719	2,088	2,194	2,066	2,152	1,670	1,966	1,992	1,833	1,844
Sewer systems	8,863	9,120	9,895	10,207	9,907	8,622	8,592	8,975	9,060	8,490
Water supply facilities	5,085	4,875	5,539	5,887	6,104	4,868	4,443	4,923	5,121	5,192
Miscellaneous nonbuilding ²	9,043	9,390	10,132	10,006	10,776	8,890	8,970	9,250	8,857	9,200
Federal construction	14,424	14,440	15,875	15,589	15,342	14,027	13,569	14,328	13,707	13,032
Total buildings	5,695	5,142	6,043	6,273	6,197	5,490	4,755	5,390	5,469	5,231
Housing	236	446	576	681	677	225	406	503	585	569
Industrial	1,718	1,465	1,508	1,392	1,001	1,658	1,358	1,348	1,216	847
Educational	21	26	27	12	19	20	24	24	11	16
Hospital	906	851	1,041	1,199	1,405	875	789	931	1,048	1,187
Other ³	2,814	2,354	2,891	2,989	3,095	2,713	2,178	2,584	2,609	2,612
Highways and streets	338	428	432	435	(NA)	336	414	396	383	(NA)
Military facilities	2,453	2,318	3,011	2,534	2,550	2,405	2,196	2,729	2,225	2,162
Conservation and development . .	4,217	4,376	4,167	3,843	3,365	4,102	4,124	3,781	3,411	2,885
Miscellaneous public ⁴	1,722	2,176	2,223	2,504	2,756	1,693	2,080	2,032	2,218	2,351

NA Not available, but estimates are included in totals.

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

Table 3. Monthly Value of Construction Put in Place—Not Seasonally Adjusted in Current Dollars

[Millions of dollars]

Period	Total construction	Private construction																All other private ⁵
		Total ¹	Residential buildings					Nonresidential buildings								Public utilities ⁴		
			Total ²	New housing units			Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous ³	Total	Telecommunications	
				Total	1 unit	2 units or more												
YEAR TO DATE																		
April 1997	168,952	132,218	71,106	52,501	45,815	6,686	49,198	9,579	9,689	4,148	14,649	1,641	2,243	4,521	2,728	(NA)	3,534	610
April 1998	178,634	142,609	79,069	58,288	50,576	7,712	50,461	9,546	10,713	4,182	14,195	1,909	2,889	4,365	2,663	(NA)	(NA)	648
Percent change	6	8	11	11	10	15	3	(Z)	11	1	-3	16	29	-3	-2	(NA)	(NA)	6
MONTHLY DATA																		
1996: April	44,566	34,672	19,695	14,255	12,457	1,798	11,699	2,610	2,123	981	3,664	340	437	912	633	(NA)	972	199
May	48,485	36,967	21,648	15,316	13,427	1,889	12,055	2,531	2,348	899	3,859	350	510	976	584	(NA)	1,001	194
June	51,339	39,433	23,243	16,389	14,475	1,914	12,866	2,713	2,480	971	4,054	384	640	994	631	(NA)	908	208
July	52,521	39,846	23,686	16,897	15,184	1,713	12,667	2,570	2,437	948	4,062	362	681	972	635	(NA)	948	186
August	54,492	41,360	24,170	17,290	15,536	1,754	13,492	2,573	2,498	1,093	4,522	414	731	1,057	603	(NA)	1,086	243
September	54,767	40,796	23,390	17,083	15,381	1,702	13,776	2,866	2,589	1,064	4,499	432	655	1,061	611	(NA)	966	192
October	54,095	41,080	23,080	16,698	14,961	1,737	14,249	3,129	2,539	1,072	4,662	438	642	1,082	686	(NA)	1,128	217
November	50,564	38,950	21,695	15,970	14,217	1,753	13,781	2,895	2,551	1,072	4,397	446	624	1,115	681	(NA)	1,131	190
December	44,066	34,596	18,334	13,410	11,826	1,584	12,886	2,724	2,414	1,135	3,852	435	550	1,130	646	(NA)	1,266	172
1997: January	39,285	30,899	16,281	12,189	10,750	1,439	11,916	2,380	2,364	983	3,647	363	508	1,070	601	(NA)	825	140
February	38,947	30,458	15,714	11,861	10,183	1,678	12,082	2,412	2,518	1,021	3,500	375	527	1,090	641	(NA)	809	134
March	43,351	33,976	18,446	13,818	12,087	1,731	12,437	2,353	2,402	1,076	3,739	437	549	1,158	723	(NA)	888	157
April	47,369	36,886	20,665	14,633	12,795	1,838	12,763	2,435	2,405	1,069	3,763	467	658	1,204	763	(NA)	1,012	180
May	51,213	39,618	22,608	15,665	13,589	2,076	13,490	2,534	2,565	1,160	4,068	500	683	1,139	842	(NA)	979	164
June	54,050	41,241	23,903	16,379	14,377	2,002	13,772	2,613	2,703	1,149	4,182	449	768	1,139	769	(NA)	973	173
July	55,845	42,357	24,556	17,005	15,116	1,890	14,256	2,716	2,784	1,138	4,433	469	807	1,108	800	(NA)	1,045	183
August	57,559	43,337	25,135	17,445	15,427	2,019	14,557	2,699	2,858	1,109	4,572	487	833	1,199	799	(NA)	995	220
September	57,367	43,123	24,712	17,592	15,583	2,009	14,723	2,735	2,864	1,117	4,543	581	798	1,259	826	(NA)	1,056	202
October	56,722	42,993	24,637	17,572	15,398	2,174	14,547	2,679	2,974	1,088	4,476	590	749	1,213	778	(NA)	1,166	235
November	52,330	40,536	23,252	16,800	14,836	1,964	13,778	2,537	2,847	1,031	4,132	571	712	1,189	760	(NA)	1,008	206
December	46,956	36,729	20,027	14,508	12,589	1,919	13,276	2,596	2,778	1,014	3,796	544	669	1,115	764	(NA)	1,098	155
1998: January	41,868	33,409	18,183	13,485	11,652	1,833	12,106	2,229	2,745	943	3,386	478	651	1,068	606	(NA)	822	175
February ^f	40,896	32,564	17,421	12,991	11,126	1,866	11,993	2,327	2,494	1,003	3,313	479	677	1,064	636	(NA)	874	153
March ^f	45,740	36,770	20,616	15,361	13,425	1,936	12,742	2,510	2,647	1,059	3,548	470	743	1,094	671	(NA)	1,074	172
April ^p	50,129	39,866	22,849	16,451	14,373	2,078	13,621	2,481	2,828	1,176	3,948	482	817	1,138	750	(NA)	(NA)	148
PERCENT CHANGE																		
March 1998-April 1998	10	8	11	7	7	7	7	-1	7	11	11	3	10	4	12	(NA)	(NA)	-14

See footnotes at end of table.

Table 3. Monthly Value of Construction Put in Place—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 ⁷
		Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings ⁶						
YEAR TO DATE													
April 1997	36,734	18,010	1,392	371	7,060	1,620	7,567	8,096	748	1,654	2,806	1,819	3,600
April 1998	36,025	17,672	1,457	335	6,936	1,238	7,706	8,416	824	1,563	2,676	1,751	3,123
Percent change	-2	-2	5	-10	-2	-24	2	4	10	-6	-5	-4	-13
MONTHLY DATA													
1996: April	9,894	4,325	323	120	1,690	392	1,799	2,465	214	483	862	502	1,042
May	11,517	4,866	413	128	1,922	396	2,007	3,305	220	490	902	527	1,207
June	11,906	4,906	355	129	2,062	369	1,991	3,707	210	506	870	523	1,185
July	12,675	5,165	402	129	2,299	365	1,971	4,238	191	513	850	515	1,204
August	13,132	5,347	373	133	2,495	323	2,025	4,323	193	574	1,021	506	1,167
September	13,971	5,554	462	185	2,237	457	2,214	4,502	271	877	951	540	1,278
October	13,016	5,068	419	60	2,073	392	2,123	4,521	175	420	1,080	658	1,093
November	11,615	5,088	424	91	2,005	363	2,205	3,275	203	478	918	546	1,106
December	9,470	4,589	361	88	1,751	423	1,966	2,382	200	392	721	457	731
1997: January	8,387	4,307	335	90	1,653	400	1,829	1,641	199	411	655	419	757
February	8,489	4,327	337	79	1,683	395	1,832	1,673	170	385	643	426	866
March	9,375	4,547	345	88	1,800	394	1,920	2,022	192	443	719	501	951
April	10,483	4,830	375	114	1,924	431	1,987	2,760	188	416	790	474	1,026
May	11,595	4,851	417	74	2,016	388	1,956	3,544	214	444	873	499	1,171
June	12,809	5,338	389	94	2,340	438	2,077	4,222	221	434	890	502	1,202
July	13,488	5,480	403	91	2,494	437	2,054	4,595	230	440	880	557	1,306
August	14,222	5,586	396	80	2,612	391	2,108	5,051	236	513	933	537	1,366
September	14,244	5,611	464	98	2,231	518	2,300	4,722	269	754	970	568	1,352
October	13,730	5,543	542	56	2,215	469	2,262	4,607	199	396	986	600	1,399
November	11,794	4,953	433	66	1,899	408	2,146	3,715	236	414	848	553	1,075
December	10,227	4,723	357	71	1,882	371	2,043	2,587	198	468	721	471	1,060
1998: January	8,459	4,291	338	78	1,686	326	1,863	1,763	197	355	643	397	813
February ^f	8,332	4,257	355	78	1,674	292	1,858	1,766	194	417	614	421	663
March ^f	8,971	4,415	383	94	1,695	342	1,901	2,052	241	398	672	435	758
April ^p	10,264	4,708	381	84	1,881	278	2,084	2,836	193	392	746	499	889
PERCENT CHANGE													
March 1998-													
April 1998	14	7	-1	-11	11	-19	10	38	-20	-2	11	15	17

NA Not available, but estimates are included in totals. ^pPreliminary. ^rRevised. Z Less than 0.5 percent.

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

Table 4. Monthly Value of Construction Put in Place—Seasonally Adjusted Annual Rate in Current Dollars

[Millions of dollars]

Period		Total construction	Private construction															All other private ⁵		
			Total ¹	Residential buildings						Nonresidential buildings							Public utilities ⁴			
				Total ²	New housing units			Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous ³	Total		Telecommunications	
					Total	1 unit	2 units or more													
1996:	April	562,889	431,083	248,755	181,387	159,027	22,360	143,384	31,888	25,198	11,260	46,679	4,274	5,603	11,112	7,370	(NA)	11,754	2,521	
	May	562,287	428,467	249,677	181,834	160,162	21,672	141,795	30,161	26,525	10,146	46,026	4,315	5,928	11,544	7,149	(NA)	11,625	2,248	
	June	568,189	438,624	250,201	182,395	161,133	21,262	150,364	31,978	29,822	11,212	46,864	4,820	6,584	11,738	7,346	(NA)	10,786	2,361	
	July	566,999	436,845	249,401	181,169	161,964	19,206	146,896	30,537	28,891	11,487	45,428	4,343	6,713	11,918	7,579	(NA)	10,906	2,137	
	August	570,996	443,553	249,211	181,092	161,978	19,114	152,620	30,968	28,988	12,888	48,581	4,571	7,084	12,388	7,154	(NA)	11,861	2,785	
	September	579,959	444,388	248,957	180,650	161,197	19,453	153,539	32,845	29,646	12,701	47,067	4,666	7,228	12,347	7,040	(NA)	11,489	2,099	
	October	584,140	448,952	247,901	179,886	160,153	19,733	159,310	34,738	29,961	12,684	49,903	4,609	7,556	12,291	7,568	(NA)	11,893	2,347	
	November	586,226	448,907	248,259	180,036	159,293	20,743	159,895	33,244	29,987	13,054	50,157	4,948	7,972	12,832	7,702	(NA)	12,995	2,101	
	December	579,109	447,045	247,899	179,112	159,267	19,845	157,371	30,752	29,532	13,816	48,863	5,122	7,635	13,650	8,002	(NA)	14,640	2,157	
1997:	January	577,116	444,391	246,661	178,271	158,284	19,987	161,045	31,871	30,607	12,937	51,372	4,878	7,464	13,657	8,258	(NA)	11,675	1,869	
	February	592,365	452,037	251,402	183,408	160,152	23,256	163,721	32,161	32,388	12,891	50,719	5,245	7,848	13,792	8,676	(NA)	11,737	1,911	
	March	593,908	452,728	253,974	184,118	161,516	22,602	160,545	30,520	30,144	12,997	50,871	5,699	7,424	14,148	8,741	(NA)	11,393	2,090	
	April	596,907	457,604	259,917	185,217	162,477	22,739	156,536	29,331	28,710	12,430	47,835	6,032	8,678	14,626	8,893	(NA)	12,279	2,264	
	May	595,763	459,882	259,662	185,273	161,612	23,660	160,043	30,501	29,708	13,134	48,962	6,196	7,946	13,545	10,051	(NA)	11,548	1,961	
	June	594,195	456,927	257,277	182,844	160,641	22,202	159,164	31,046	31,671	13,333	47,338	5,587	7,762	13,509	8,917	(NA)	11,356	1,995	
	July	603,002	464,326	258,803	182,913	161,520	21,393	164,489	31,796	32,534	13,674	49,812	5,694	7,925	13,609	9,444	(NA)	11,765	2,110	
	August	603,684	465,236	259,958	183,819	161,676	22,143	163,422	31,480	32,564	13,116	48,988	5,500	8,329	13,995	9,450	(NA)	11,449	2,528	
	September	605,748	468,822	263,799	186,687	163,745	22,942	163,283	30,675	32,606	13,328	47,945	6,142	8,778	14,650	9,159	(NA)	11,816	2,189	
	October	611,742	469,560	265,422	190,129	165,420	24,709	162,119	30,048	34,248	12,873	47,241	6,228	8,911	13,835	8,733	(NA)	12,479	2,424	
	November	610,933	470,041	267,207	190,321	167,009	23,312	161,100	29,352	33,788	12,556	47,723	6,287	9,023	13,696	8,675	(NA)	12,041	2,258	
	December	616,027	475,262	270,822	193,723	169,735	23,988	162,533	29,697	34,151	12,387	47,953	6,263	9,304	13,410	9,368	(NA)	12,099	1,927	
1998:	January	619,733	483,253	275,667	197,148	171,988	25,160	164,593	29,885	36,437	12,394	48,091	6,379	9,527	13,605	8,276	(NA)	11,961	2,369	
	February ^f	624,635	486,346	279,229	201,052	175,435	25,617	162,605	30,850	32,489	12,726	48,020	6,470	10,008	13,473	8,569	(NA)	12,599	2,226	
	March ^f	624,995	489,255	283,292	203,972	178,807	25,165	163,538	31,409	33,289	12,893	47,887	6,228	10,056	13,427	8,349	(NA)	13,180	2,367	
	April ^P	630,142	493,799	285,789	206,556	180,981	25,575	167,287	30,783	33,971	13,466	49,919	6,214	10,336	13,770	8,828	(NA)	(NA)	1,920	
PERCENT CHANGE																				
March 1998-	April 1998	1	1	1	1	1	2	2	-2	2	4	4	(Z)	3	3	6	(NA)	(NA)	-19	

See footnotes at end of table.

Table 4. Monthly Value of Construction Put in Place—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 ⁷
			Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings ⁶						
1996:	April	131,807	54,202	4,021	1,469	22,336	4,617	21,758	38,119	2,721	6,017	11,138	6,367	13,243
	May	133,820	57,140	4,815	1,414	23,415	4,677	22,820	37,166	2,640	5,733	10,864	6,115	14,162
	June	129,565	54,616	4,034	1,468	22,217	4,181	22,716	37,227	2,463	5,960	9,779	5,863	13,656
	July	130,154	56,390	4,781	1,519	22,778	4,272	23,041	37,614	2,301	5,706	9,795	5,625	12,724
	August	127,443	55,986	4,385	1,583	23,066	4,068	22,884	35,196	2,278	6,154	10,549	5,479	11,801
	September	135,572	59,637	5,108	1,713	23,547	4,796	24,472	38,338	2,482	7,177	9,750	5,997	12,192
	October	135,188	58,348	4,671	878	24,068	4,659	24,072	38,367	2,531	5,573	11,155	6,693	12,521
	November	137,319	61,588	4,947	1,122	24,964	4,425	26,129	38,610	2,365	5,710	10,269	6,080	12,697
	December	132,064	59,626	4,446	1,090	24,343	5,064	24,684	39,585	2,241	5,223	9,704	5,854	9,831
1997:	January	132,725	59,515	4,320	1,128	24,219	5,197	24,651	37,869	2,542	5,807	9,508	6,106	11,377
	February	140,328	60,984	4,638	1,108	24,999	5,262	24,976	41,060	2,564	5,727	10,082	6,591	13,320
	March	141,180	60,311	4,507	1,021	25,080	4,785	24,918	41,473	2,232	6,114	9,992	7,044	14,014
	April	139,304	60,375	4,641	1,394	25,173	5,031	24,135	42,356	2,408	5,134	10,114	5,945	12,973
	May	135,882	57,173	4,783	797	24,581	4,673	22,339	40,694	2,548	5,242	10,381	5,780	14,064
	June	137,268	59,261	4,579	1,052	25,029	4,949	23,652	41,531	2,580	4,952	10,073	5,652	13,219
	July	138,676	59,277	4,682	1,104	24,740	5,069	23,682	41,087	2,738	5,002	10,116	6,080	14,377
	August	138,448	59,183	4,616	1,011	24,322	4,956	24,278	41,715	2,767	5,469	9,692	5,856	13,765
	September	136,926	59,088	4,679	886	23,482	5,194	24,847	40,126	2,451	6,177	10,030	6,248	12,806
	October	142,182	63,973	6,176	799	25,528	5,603	25,866	39,484	2,827	4,859	9,842	6,031	15,166
	November	140,893	59,791	4,939	820	23,611	5,027	25,394	44,271	2,740	5,209	9,488	6,144	13,248
	December	140,765	61,327	4,424	830	26,098	4,391	25,584	42,114	2,234	5,910	9,547	6,062	13,571
1998:	January	136,480	59,095	4,383	972	24,581	4,198	24,961	41,718	2,483	5,270	9,504	5,821	12,589
	February ^f	138,289	59,927	4,869	1,067	24,830	3,906	25,256	42,986	2,918	6,193	9,583	6,357	10,326
	March ^f	135,740	58,594	4,940	1,173	23,792	4,211	24,478	42,012	2,865	5,449	9,441	6,125	11,253
	April ^p	136,343	58,915	4,666	1,019	24,511	3,394	25,325	42,805	2,484	4,920	9,488	6,264	11,468
PERCENT CHANGE														
	March 1998- April 1998	(Z)	1	-6	-13	3	-19	3	2	-13	-10	(Z)	2	2

NA Not available, but estimates are included in totals. ^pPreliminary. ^rRevised. Z Less than 0.5 percent.

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

Table 5. Monthly Value of Construction Put in Place—Seasonally Adjusted Annual Rate in 1992 Dollars

[Millions of dollars]

Period		Total construction	Private construction															All other private ⁵		
			Total ¹	Residential buildings					Nonresidential buildings								Public utilities ⁴			
				Total ²	Total	1 unit	2 units or more	Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous ³	Total		Telecommunications	
1996:	April	493,871	377,113	216,121	157,590	138,164	19,426	126,441	28,120	22,220	9,930	41,163	3,769	4,941	9,799	6,499	(NA)	10,311	2,249	
	May	492,125	373,823	216,358	157,569	138,788	18,780	124,710	26,527	23,329	8,924	40,480	3,795	5,214	10,153	6,287	(NA)	10,179	2,002	
	June	494,882	380,650	215,319	156,966	138,669	18,298	131,667	28,002	26,114	9,818	41,036	4,221	5,765	10,278	6,432	(NA)	9,436	2,099	
	July	490,878	376,661	212,981	154,713	138,312	16,401	127,958	26,600	25,167	10,006	39,571	3,783	5,848	10,381	6,601	(NA)	9,500	1,893	
	August	493,282	381,760	212,456	154,384	138,089	16,295	132,713	26,928	25,207	11,207	42,245	3,974	6,160	10,772	6,221	(NA)	10,287	2,456	
	September	499,575	381,523	212,058	153,875	137,306	16,569	132,934	28,437	25,668	10,996	40,750	4,040	6,258	10,690	6,095	(NA)	9,904	1,840	
	October	502,583	385,003	210,800	152,965	136,185	16,780	137,811	30,050	25,918	10,972	43,169	3,987	6,536	10,632	6,546	(NA)	10,271	2,057	
	November	504,085	384,631	210,746	152,832	135,223	17,609	138,318	28,758	25,940	11,292	43,388	4,280	6,896	11,100	6,663	(NA)	11,251	1,843	
	December	496,676	382,146	210,084	151,790	134,972	16,818	135,665	26,510	25,458	11,910	42,123	4,416	6,582	11,767	6,899	(NA)	12,676	1,887	
1997:	January	495,257	380,158	209,212	151,205	134,252	16,953	138,951	27,499	26,408	11,162	44,324	4,209	6,440	11,783	7,125	(NA)	10,117	1,633	
	February	509,850	387,879	213,959	156,092	136,300	19,792	141,627	27,821	28,018	11,151	43,874	4,537	6,789	11,931	7,505	(NA)	10,206	1,673	
	March	507,140	386,485	216,148	156,696	137,461	19,235	137,218	26,086	25,764	11,109	43,479	4,871	6,346	12,093	7,471	(NA)	9,847	1,787	
	April	508,034	389,402	220,455	157,097	137,810	19,287	133,449	25,005	24,476	10,597	40,780	5,143	7,398	12,469	7,581	(NA)	10,540	1,928	
	May	504,770	389,424	219,124	156,348	136,382	19,967	135,745	25,870	25,198	11,140	41,528	5,255	6,740	11,488	8,525	(NA)	9,870	1,669	
	June	502,250	385,799	216,199	153,650	134,993	18,657	134,770	26,288	26,817	11,290	40,083	4,731	6,572	11,439	7,550	(NA)	9,697	1,698	
	July	508,833	391,339	217,298	153,579	135,617	17,962	138,692	26,809	27,432	11,530	42,000	4,801	6,682	11,475	7,963	(NA)	10,064	1,797	
	August	507,769	390,646	217,356	153,695	135,181	18,514	137,214	26,431	27,342	11,013	41,132	4,618	6,993	11,751	7,934	(NA)	9,802	2,154	
	September	507,545	391,895	219,284	155,184	136,114	19,070	136,638	25,670	27,285	11,153	40,121	5,139	7,346	12,260	7,664	(NA)	10,117	1,865	
	October	511,550	391,748	220,084	157,652	137,164	20,488	135,551	25,124	28,636	10,764	39,499	5,207	7,450	11,568	7,302	(NA)	10,638	2,061	
	November	508,106	390,144	220,832	157,290	138,024	19,266	133,693	24,358	28,039	10,420	39,604	5,218	7,488	11,366	7,199	(NA)	10,178	1,910	
	December	512,782	394,902	224,190	160,367	140,509	19,857	134,995	24,665	28,364	10,289	39,828	5,201	7,727	11,138	7,781	(NA)	10,202	1,630	
1998:	January	515,753	401,738	228,579	163,473	142,610	20,863	136,705	24,821	30,263	10,294	39,943	5,298	7,913	11,300	6,874	(NA)	10,017	1,996	
	February ^f	519,574	404,067	231,341	166,572	145,348	21,224	135,054	25,623	26,984	10,569	39,884	5,374	8,312	11,191	7,117	(NA)	10,525	1,875	
	March ^f	519,676	406,438	234,902	169,131	148,264	20,866	135,716	26,066	27,626	10,700	39,740	5,169	8,345	11,143	6,929	(NA)	10,993	1,991	
	April ^p	523,778	409,998	236,776	171,132	149,943	21,189	138,828	25,546	28,192	11,175	41,427	5,157	8,578	11,427	7,326	(NA)	(NA)	1,616	
PERCENT CHANGE																				
	March 1998- April 1998	1	1	1	1	1	2	2	-2	2	4	4	(Z)	3	3	6	(NA)	(NA)	-19	

See footnotes at end of table.

Table 5. Monthly Value of Construction Put in Place—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 ⁷
		Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings ⁶						
1996: April	116,758	47,745	3,494	1,296	19,697	4,072	19,187	33,823	2,406	5,396	9,990	5,585	11,813
May	118,302	50,193	4,172	1,243	20,594	4,113	20,070	32,949	2,332	5,132	9,726	5,359	12,611
June	114,232	47,764	3,471	1,286	19,454	3,661	19,892	32,974	2,169	5,321	8,731	5,134	12,138
July	114,217	49,039	4,083	1,323	19,841	3,721	20,070	33,228	2,019	5,063	8,691	4,908	11,270
August	111,522	48,609	3,738	1,377	20,057	3,538	19,899	31,010	1,995	5,431	9,311	4,760	10,406
September	118,052	51,562	4,351	1,483	20,387	4,152	21,188	33,630	2,162	6,290	8,545	5,178	10,686
October	117,581	50,405	3,972	759	20,820	4,030	20,823	33,567	2,201	4,889	9,785	5,760	10,974
November	119,454	53,197	4,200	971	21,596	3,828	22,603	33,779	2,058	5,022	9,031	5,228	11,138
December	114,529	51,337	3,768	939	20,985	4,365	21,279	34,542	1,943	4,582	8,512	5,012	8,601
1997: January	115,099	51,287	3,664	973	20,897	4,484	21,269	33,016	2,205	5,089	8,333	5,224	9,945
February	121,971	52,689	3,947	958	21,626	4,552	21,606	35,860	2,230	5,028	8,851	5,648	11,664
March	120,655	51,532	3,836	872	21,436	4,090	21,297	35,477	1,908	5,225	8,540	5,995	11,978
April	118,632	51,450	3,937	1,188	21,461	4,289	20,576	36,017	2,051	4,384	8,637	5,042	11,050
May	115,347	48,472	4,037	676	20,849	3,964	18,947	34,516	2,161	4,473	8,858	4,898	11,969
June	116,451	50,149	3,848	890	21,193	4,191	20,027	35,225	2,187	4,232	8,610	4,798	11,250
July	117,494	49,964	3,931	931	20,860	4,274	19,968	34,879	2,316	4,272	8,639	5,179	12,246
August	117,124	49,676	3,860	849	20,421	4,161	20,385	35,442	2,337	4,670	8,277	4,997	11,725
September	115,651	49,420	3,889	741	19,650	4,347	20,792	34,092	2,067	5,271	8,558	5,335	10,908
October	119,803	53,446	5,121	668	21,344	4,685	21,627	33,376	2,376	4,157	8,419	5,133	12,896
November	117,962	49,602	4,082	680	19,594	4,172	21,074	37,140	2,287	4,441	8,089	5,194	11,208
December	117,880	50,924	3,662	689	21,676	3,647	21,249	35,301	1,863	5,047	8,153	5,111	11,482
1998: January	114,014	49,076	3,634	807	20,416	3,486	20,732	34,823	2,068	4,481	8,082	4,879	10,605
February ^f	115,507	49,763	4,034	886	20,623	3,244	20,976	35,881	2,430	5,266	8,149	5,319	8,699
March ^f	113,238	48,622	4,097	973	19,744	3,495	20,314	35,010	2,384	4,626	8,015	5,117	9,464
April ^p	113,780	48,886	3,866	846	20,341	2,817	21,017	35,700	2,066	4,180	8,061	5,233	9,653
PERCENT CHANGE													
March 1998- April 1998	(Z)	1	-6	-13	3	-19	3	2	-13	-10	1	2	2

NA Not available, but estimates are included in totals. ^pPreliminary. ^rRevised. Z Less than 0.5 percent.

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

Table 6. Monthly Value of Construction Put in Place—Not Seasonally Adjusted in 1992 Dollars

[Millions of dollars]

Period	Total construction	Private construction																All other private ⁵	
		Total ¹	Residential buildings					Nonresidential buildings									Public utilities ⁴		
			Total ²	New housing units				Total	Industrial	Office	Hotels, motels	Other commercial	Religious	Educational	Hospital and institutional	Miscellaneous ³	Total		Telecommunications
				Total	1 unit	2 units or more													
YEAR TO DATE																			
April 1997	144,585	113,007	60,409	44,606	38,924	5,681	42,243	8,226	8,321	3,561	12,578	1,409	1,925	3,883	2,341	(NA)	3,054	527	
April 1998	148,569	118,498	65,536	48,311	41,919	6,392	41,893	7,925	8,894	3,471	11,785	1,585	2,398	3,624	2,211	(NA)	(NA)	545	
Percent change	3	5	8	8	8	13	-1	-4	7	-3	-6	12	25	-7	-6	(NA)	(NA)	3	
MONTHLY DATA																			
1996: April	39,100	30,337	17,111	12,385	10,823	1,562	10,316	2,301	1,872	865	3,231	300	385	804	558	(NA)	852	177	
May	42,434	32,252	18,759	13,272	11,635	1,637	10,603	2,226	2,065	791	3,394	308	448	858	514	(NA)	876	173	
June	44,707	34,210	20,002	14,104	12,457	1,647	11,266	2,375	2,172	850	3,550	336	561	870	552	(NA)	794	185	
July	45,466	34,338	20,227	14,429	12,967	1,462	11,034	2,239	2,122	826	3,538	315	594	847	553	(NA)	826	164	
August	47,078	35,580	20,605	14,740	13,245	1,495	11,732	2,237	2,172	951	3,932	360	635	919	525	(NA)	942	214	
September	47,191	35,016	19,923	14,551	13,101	1,450	11,928	2,481	2,242	921	3,895	374	567	918	529	(NA)	833	168	
October	46,547	35,221	19,625	14,199	12,722	1,477	12,326	2,707	2,197	927	4,033	379	555	936	593	(NA)	974	190	
November	43,474	33,369	18,417	13,557	12,069	1,488	11,921	2,504	2,207	927	3,804	386	540	965	589	(NA)	979	167	
December	37,795	29,587	15,537	11,364	10,022	1,343	11,109	2,348	2,081	979	3,321	375	474	974	557	(NA)	1,096	151	
1997: January	33,714	26,447	13,809	10,339	9,118	1,221	10,281	2,053	2,040	848	3,147	313	438	923	518	(NA)	715	123	
February	33,527	26,155	13,374	10,095	8,666	1,428	10,452	2,087	2,178	883	3,027	324	456	943	554	(NA)	703	117	
March	37,023	29,012	15,698	11,760	10,287	1,473	10,629	2,011	2,053	919	3,196	374	470	990	618	(NA)	767	134	
April	40,321	31,393	17,528	12,412	10,853	1,559	10,881	2,075	2,050	911	3,208	398	561	1,027	651	(NA)	869	153	
May	43,391	33,548	19,079	13,219	11,467	1,752	11,442	2,149	2,175	984	3,450	424	579	966	714	(NA)	836	139	
June	45,682	34,815	20,087	13,764	12,082	1,682	11,661	2,213	2,288	973	3,541	380	650	965	651	(NA)	831	147	
July	47,120	35,692	20,618	14,278	12,692	1,587	12,020	2,290	2,348	960	3,738	395	680	934	675	(NA)	894	156	
August	48,416	36,380	21,016	14,586	12,898	1,688	12,222	2,266	2,399	931	3,839	409	699	1,007	671	(NA)	852	188	
September	48,077	36,039	20,542	14,624	12,954	1,670	12,320	2,289	2,397	935	3,802	486	668	1,053	691	(NA)	904	172	
October	47,436	35,861	20,429	14,571	12,768	1,803	12,163	2,240	2,487	910	3,743	493	626	1,014	651	(NA)	994	200	
November	43,515	33,640	19,217	13,884	12,261	1,623	11,434	2,105	2,362	855	3,429	474	591	987	631	(NA)	852	174	
December	39,086	30,521	16,578	12,010	10,421	1,589	11,027	2,156	2,307	842	3,153	452	556	926	635	(NA)	926	131	
1998: January	34,844	27,779	15,077	11,181	9,662	1,519	10,055	1,851	2,280	783	2,813	397	541	887	503	(NA)	689	147	
February ^f	34,021	27,063	14,434	10,763	9,217	1,546	9,961	1,932	2,071	833	2,752	398	562	884	528	(NA)	730	129	
March ^f	38,035	30,552	17,095	12,737	11,132	1,605	10,574	2,083	2,196	879	2,944	390	617	908	557	(NA)	896	145	
April ^p	41,669	33,104	18,930	13,630	11,908	1,722	11,303	2,059	2,347	976	3,276	400	678	945	623	(NA)	(NA)	124	
PERCENT CHANGE																			
March 1998-April 1998	10	8	11	7	7	7	7	-1	7	11	11	3	10	4	12	(NA)	(NA)	-14	

See footnotes at end of table.

Table 6. Monthly Value of Construction Put in Place—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 ⁷
		Total	Housing and redevelopment	Industrial	Educational	Hospital	Other public buildings ⁶						
YEAR TO DATE													
April 1997	31,578	15,450	1,183	318	6,061	1,391	6,497	6,969	644	1,432	2,427	1,551	3,106
April 1998	30,071	14,670	1,207	278	5,758	1,028	6,398	7,020	685	1,328	2,273	1,464	2,630
Percent change	-5	-5	2	-13	-5	-26	-2	1	6	-7	-6	-6	-15
MONTHLY DATA													
1996: April	8,763	3,810	281	106	1,490	346	1,587	2,187	189	433	773	440	930
May	10,182	4,274	358	112	1,691	348	1,765	2,930	194	439	807	462	1,075
June	10,498	4,291	305	113	1,806	323	1,743	3,284	185	451	776	458	1,053
July	11,128	4,492	343	112	2,002	318	1,717	3,744	168	455	754	449	1,066
August	11,498	4,643	318	115	2,169	281	1,761	3,809	169	507	901	440	1,029
September	12,174	4,802	393	160	1,937	395	1,917	3,949	236	769	833	466	1,120
October	11,326	4,378	357	52	1,794	339	1,837	3,955	152	369	948	566	958
November	10,104	4,395	360	79	1,735	314	1,907	2,866	177	420	808	469	970
December	8,208	3,950	306	76	1,509	364	1,695	2,078	173	343	632	391	639
1997: January	7,267	3,711	284	77	1,426	345	1,578	1,431	172	360	574	358	661
February	7,372	3,738	287	69	1,456	342	1,584	1,461	148	338	564	365	758
March	8,011	3,885	294	75	1,539	336	1,641	1,730	164	379	615	426	813
April	8,928	4,116	318	97	1,640	368	1,694	2,347	160	355	674	402	874
May	9,843	4,113	352	63	1,710	329	1,659	3,006	182	379	745	422	997
June	10,866	4,517	327	80	1,981	371	1,759	3,581	187	371	761	426	1,023
July	11,428	4,619	339	77	2,103	368	1,732	3,901	195	376	752	474	1,113
August	12,036	4,689	331	67	2,193	328	1,770	4,291	199	438	797	458	1,164
September	12,038	4,692	386	82	1,867	433	1,925	4,011	226	643	828	485	1,152
October	11,575	4,631	449	47	1,852	392	1,891	3,894	167	339	843	510	1,190
November	9,875	4,109	358	55	1,576	339	1,781	3,117	197	353	723	467	910
December	8,564	3,922	296	59	1,563	308	1,697	2,168	165	400	616	397	897
1998: January	7,065	3,564	280	65	1,400	271	1,548	1,471	164	302	547	333	685
February ^f	6,958	3,535	294	65	1,390	243	1,543	1,474	161	355	522	352	558
March ^f	7,483	3,664	317	78	1,407	284	1,578	1,710	200	338	570	363	638
April ^p	8,565	3,907	316	70	1,561	230	1,729	2,365	160	333	634	416	749
PERCENT CHANGE													
March 1998-													
April 1998	14	7	(Z)	-10	11	-19	10	38	-20	-1	11	15	17

NA Not available, but estimates are included in totals. ^pPreliminary. ^rRevised. Z Less than 0.5 percent.

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

Table 7. Monthly Value of Public Construction Put in Place—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 ²
			Total	Housing and redevelopment	Educational	Hospital	Other buildings ¹					
1996:	April	8,591	3,818	270	1,689	269	1,590	2,437	157	862	502	815
	May	10,102	4,279	333	1,921	256	1,770	3,267	157	902	527	970
	June	10,593	4,371	297	2,062	293	1,719	3,664	178	870	523	988
	July	11,392	4,626	337	2,298	267	1,724	4,189	192	850	515	1,021
	August	11,871	4,865	316	2,494	250	1,806	4,273	207	1,021	506	999
	September	11,966	4,841	394	2,236	335	1,876	4,451	202	951	540	983
	October	11,990	4,679	373	2,072	318	1,917	4,469	221	1,080	658	882
	November	10,314	4,562	363	2,003	275	1,920	3,237	203	918	546	848
	December	8,346	4,066	310	1,750	306	1,699	2,354	149	721	457	600
1997:	January	7,265	3,808	264	1,653	274	1,618	1,620	140	655	419	624
	February	7,399	3,830	279	1,682	260	1,609	1,649	136	643	426	716
	March	8,162	4,075	293	1,796	296	1,690	2,001	168	719	501	699
	April	9,287	4,340	325	1,923	343	1,749	2,727	190	790	474	766
	May	10,357	4,401	369	2,015	290	1,727	3,503	156	873	499	927
	June	11,581	4,824	330	2,338	322	1,834	4,177	177	890	502	1,011
	July	12,225	5,010	349	2,493	355	1,814	4,541	171	880	557	1,066
	August	12,982	5,131	348	2,610	296	1,877	5,003	217	933	537	1,160
	September	12,388	4,901	413	2,228	339	1,921	4,665	210	970	568	1,074
	October	12,576	5,066	471	2,214	339	2,042	4,550	231	986	600	1,144
	November	10,440	4,377	374	1,898	270	1,834	3,674	190	848	553	799
	December	8,839	4,136	303	1,879	252	1,703	2,556	166	721	471	790
1998:	January	7,346	3,835	298	1,686	244	1,607	1,742	146	643	397	583
	February ^f	7,249	3,796	291	1,673	227	1,605	1,742	138	614	421	539
	March ^f	7,787	3,899	338	1,695	238	1,629	2,031	139	672	435	611
	April ^p	9,140	4,210	332	1,880	215	1,783	2,803	147	746	499	736
		Federally owned public construction										
		Total federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction ⁴	
			Total	Housing	Industrial	Educational	Hospital					Other buildings ³
1996:	April	1,303	507	53	120	1	123	209	(NA)	214	326	228
	May	1,415	586	80	128	1	141	237	(NA)	220	333	237
	June	1,313	535	58	129	1	76	272	(NA)	210	328	197
	July	1,283	538	64	129	1	98	247	(NA)	191	321	183
	August	1,260	482	57	133	1	73	219	(NA)	193	367	168
	September	2,005	713	68	185	1	121	338	(NA)	271	676	295
	October	1,025	389	46	60	2	74	207	(NA)	175	199	210
	November	1,300	527	61	91	2	87	285	(NA)	203	275	258
	December	1,124	523	51	88	-	116	267	(NA)	200	242	131
1997:	January	1,122	499	71	90	-	127	211	(NA)	199	271	132
	February	1,090	497	58	79	2	135	223	(NA)	170	249	150
	March	1,213	472	52	88	4	98	230	(NA)	192	275	252
	April	1,197	491	50	114	1	89	237	(NA)	188	225	260
	May	1,238	450	49	74	1	98	229	(NA)	214	288	245
	June	1,227	514	59	94	2	116	243	(NA)	221	257	191
	July	1,263	470	55	91	1	82	241	(NA)	230	269	240
	August	1,241	455	48	80	2	95	231	(NA)	236	296	206
	September	1,856	709	51	98	3	179	379	(NA)	269	544	278
	October	1,154	477	71	56	-	130	220	(NA)	199	165	255
	November	1,353	576	60	66	1	138	312	(NA)	236	224	277
	December	1,389	587	54	71	3	119	340	(NA)	198	302	271
1998:	January	1,113	456	40	78	-	82	256	(NA)	197	209	230
	February ^f	1,083	461	64	78	1	66	253	(NA)	194	280	124
	March ^f	1,184	516	45	94	-	105	272	(NA)	241	258	148
	April ^p	1,123	498	49	84	1	63	301	(NA)	193	246	154

- Less than \$0.5 million. NA Not available, but estimates are included in totals. ^pPreliminary. ^fRevised.

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

Table 8. Monthly Value of Public Construction Put in Place—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 ²
			Total	Housing and redevelopment	Educational	Hospital	Other buildings ¹					
1996:	April	115,653	48,001	3,369	22,322	3,114	19,196	37,686	2,015	11,138	6,367	10,446
	May	117,597	50,643	3,928	23,402	3,119	20,194	36,739	1,846	10,864	6,115	11,391
	June	114,291	48,527	3,373	22,206	3,320	19,627	36,795	2,031	9,779	5,863	11,296
	July	115,232	50,031	4,021	22,769	3,118	20,123	37,179	1,996	9,795	5,625	10,607
	August	113,030	50,230	3,707	23,056	3,199	20,268	34,789	2,057	10,549	5,479	9,926
	September	118,668	53,022	4,477	23,537	3,670	21,338	37,903	2,043	9,750	5,997	9,953
	October	119,707	52,651	3,997	24,042	3,569	21,043	37,926	2,263	11,155	6,693	9,019
	November	121,343	55,087	4,193	24,935	3,348	22,610	38,162	2,273	10,269	6,080	9,473
	December	117,938	53,149	3,813	24,339	3,624	21,374	39,120	2,015	9,704	5,854	8,096
1997:	January	117,964	53,228	3,422	24,215	3,599	21,991	37,385	2,143	9,508	6,106	9,594
	February	124,444	54,039	3,822	24,976	3,378	21,864	40,471	2,114	10,082	6,591	11,147
	March	126,298	54,852	3,903	25,034	3,654	22,261	41,042	2,587	9,992	7,044	10,781
	April	124,607	54,355	4,025	25,163	3,941	21,226	41,850	2,457	10,114	5,945	9,886
	May	121,795	52,322	4,257	24,572	3,620	19,873	40,224	1,881	10,381	5,780	11,208
	June	123,218	53,528	3,922	25,007	3,653	20,945	41,088	1,918	10,073	5,652	10,959
	July	123,808	53,581	4,017	24,724	4,074	20,765	40,604	1,856	10,116	6,080	11,570
	August	123,876	53,416	4,008	24,299	3,759	21,351	41,319	2,142	9,692	5,856	11,450
	September	121,385	52,644	4,218	23,454	3,568	21,404	39,642	2,100	10,030	6,248	10,721
	October	125,447	57,210	5,175	25,525	3,764	22,747	38,996	2,245	9,842	6,031	11,123
	November	124,000	52,636	4,199	23,605	3,314	21,518	43,783	2,300	9,488	6,144	9,650
	December	124,014	54,451	3,793	26,066	2,994	21,599	41,609	2,144	9,547	6,062	10,201
1998:	January	121,681	53,403	3,888	24,579	3,174	21,763	41,221	2,355	9,504	5,821	9,376
	February ^f	122,726	53,648	3,997	24,819	3,015	21,817	42,402	2,186	9,583	6,357	8,551
	March ^f	120,808	52,165	4,380	23,788	2,908	21,090	41,582	2,136	9,441	6,125	9,358
	April ^p	122,433	52,878	4,074	24,494	2,634	21,675	42,306	1,910	9,488	6,264	9,587
		Federally owned public construction										
		Total federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction ⁴	
			Total	Housing	Industrial	Educational	Hospital					Other buildings ³
1996:	April	16,153	6,201	652	1,469	15	1,503	2,561	(NA)	2,721	4,002	2,797
	May	16,223	6,498	886	1,414	13	1,558	2,626	(NA)	2,640	3,887	2,771
	June	15,274	6,090	661	1,468	10	861	3,089	(NA)	2,463	3,929	2,359
	July	14,922	6,359	761	1,519	8	1,154	2,917	(NA)	2,301	3,710	2,117
	August	14,413	5,756	678	1,583	10	869	2,616	(NA)	2,278	4,096	1,875
	September	16,904	6,614	631	1,713	10	1,126	3,134	(NA)	2,482	5,134	2,239
	October	15,482	5,697	674	878	26	1,090	3,029	(NA)	2,531	3,310	3,502
	November	15,976	6,501	754	1,122	30	1,077	3,519	(NA)	2,365	3,437	3,225
	December	14,126	6,477	633	1,090	4	1,440	3,310	(NA)	2,241	3,208	1,735
1997:	January	14,761	6,287	897	1,128	4	1,598	2,660	(NA)	2,542	3,663	1,783
	February	15,884	6,944	816	1,108	24	1,885	3,112	(NA)	2,564	3,613	2,173
	March	14,882	5,459	605	1,021	46	1,131	2,657	(NA)	2,232	3,527	3,232
	April	14,697	6,020	616	1,394	10	1,091	2,909	(NA)	2,408	2,677	3,087
	May	14,086	4,851	526	797	9	1,053	2,466	(NA)	2,548	3,361	2,856
	June	14,050	5,733	657	1,052	21	1,296	2,707	(NA)	2,580	3,034	2,259
	July	14,868	5,696	664	1,104	16	995	2,916	(NA)	2,738	3,146	2,806
	August	14,572	5,767	608	1,011	23	1,197	2,927	(NA)	2,767	3,327	2,315
	September	15,541	6,443	461	886	28	1,626	3,443	(NA)	2,451	4,077	2,085
	October	16,735	6,762	1,002	799	3	1,839	3,120	(NA)	2,827	2,614	4,043
	November	16,893	7,155	740	820	6	1,713	3,876	(NA)	2,740	2,910	3,599
	December	16,751	6,876	631	830	33	1,397	3,985	(NA)	2,234	3,766	3,371
1998:	January	14,799	5,692	495	972	2	1,024	3,198	(NA)	2,483	2,915	3,212
	February ^f	15,563	6,279	872	1,067	11	891	3,438	(NA)	2,918	4,007	1,775
	March ^f	14,932	6,429	561	1,173	4	1,303	3,388	(NA)	2,865	3,313	1,895
	April ^p	13,910	6,038	592	1,019	17	760	3,650	(NA)	2,484	3,010	1,881

NA Not available, but estimates are included in totals. ^pPreliminary. ^fRevised.

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

Table 9. Monthly Value of Public Construction Put in Place—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 ²
			Total	Housing and redevelopment	Educational	Hospital	Other buildings ¹					
1996:	April	102,425	42,285	2,927	19,684	2,746	16,928	33,439	1,808	9,990	5,585	9,319
	May	103,940	44,490	3,404	20,582	2,743	17,760	32,570	1,652	9,726	5,359	10,143
	June	100,752	42,442	2,903	19,445	2,908	17,187	32,591	1,813	8,731	5,134	10,041
	July	101,121	43,512	3,434	19,834	2,716	17,529	32,843	1,771	8,691	4,908	9,395
	August	98,906	43,615	3,160	20,049	2,782	17,624	30,651	1,816	9,311	4,760	8,753
	September	103,330	45,844	3,813	20,378	3,178	18,475	33,249	1,790	8,545	5,178	8,723
	October	104,102	45,487	3,399	20,797	3,087	18,204	33,181	1,985	9,785	5,760	7,905
	November	105,540	47,585	3,559	21,570	2,896	19,559	33,387	1,999	9,031	5,228	8,309
	December	102,274	45,763	3,231	20,982	3,124	18,426	34,136	1,768	8,512	5,012	7,083
1997:	January	102,291	45,875	2,903	20,893	3,105	18,974	32,593	1,879	8,333	5,224	8,386
	February	108,155	46,693	3,253	21,605	2,922	18,913	35,346	1,856	8,851	5,648	9,761
	March	107,937	46,868	3,321	21,397	3,123	19,027	35,109	2,211	8,540	5,995	9,215
	April	106,106	46,321	3,414	21,452	3,359	18,096	35,586	2,098	8,637	5,042	8,421
	May	103,376	44,360	3,593	20,841	3,070	16,856	34,117	1,605	8,858	4,898	9,538
	June	104,523	45,299	3,296	21,175	3,093	17,735	34,850	1,639	8,610	4,798	9,327
	July	104,891	45,164	3,373	20,847	3,435	17,509	34,469	1,585	8,639	5,179	9,855
	August	104,798	44,836	3,351	20,402	3,156	17,927	35,105	1,830	8,277	4,997	9,753
	September	102,528	44,030	3,507	19,627	2,986	17,911	33,680	1,792	8,558	5,335	9,132
	October	105,693	47,799	4,291	21,342	3,147	19,019	32,963	1,921	8,419	5,133	9,458
	November	103,804	43,667	3,470	19,589	2,751	17,857	36,730	1,961	8,089	5,194	8,164
	December	103,818	45,215	3,140	21,649	2,487	17,939	34,878	1,831	8,153	5,111	8,630
1998:	January	101,620	44,349	3,224	20,414	2,636	18,075	34,408	2,003	8,082	4,879	7,899
	February ^f	102,474	44,550	3,312	20,614	2,504	18,121	35,394	1,859	8,149	5,319	7,204
	March ^f	100,755	43,288	3,632	19,741	2,413	17,502	34,652	1,814	8,015	5,117	7,870
	April ^p	102,148	43,876	3,376	20,327	2,186	17,988	35,285	1,623	8,061	5,233	8,070
		Federally owned public construction										
		Total federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction ⁴	
			Total	Housing	Industrial	Educational	Hospital					Other buildings ³
1996:	April	14,333	5,459	566	1,296	13	1,326	2,259	(NA)	2,406	3,589	2,495
	May	14,362	5,703	768	1,243	12	1,370	2,310	(NA)	2,332	3,480	2,468
	June	13,479	5,323	569	1,286	9	754	2,705	(NA)	2,169	3,508	2,097
	July	13,096	5,526	650	1,323	7	1,005	2,541	(NA)	2,019	3,292	1,875
	August	12,616	4,994	578	1,377	8	756	2,275	(NA)	1,995	3,615	1,653
	September	14,723	5,718	538	1,483	9	975	2,714	(NA)	2,162	4,500	1,962
	October	13,478	4,918	573	759	23	943	2,620	(NA)	2,201	2,904	3,069
	November	13,914	5,612	640	971	26	931	3,044	(NA)	2,058	3,023	2,829
	December	12,256	5,574	536	939	3	1,242	2,854	(NA)	1,943	2,814	1,518
1997:	January	12,808	5,412	761	973	3	1,379	2,295	(NA)	2,205	3,211	1,559
	February	13,815	5,996	694	958	21	1,630	2,692	(NA)	2,230	3,172	1,903
	March	12,717	4,664	515	872	40	966	2,271	(NA)	1,908	3,015	2,763
	April	12,526	5,129	522	1,188	8	930	2,480	(NA)	2,051	2,286	2,629
	May	11,970	4,112	444	676	7	893	2,091	(NA)	2,161	2,868	2,431
	June	11,929	4,850	553	890	18	1,097	2,292	(NA)	2,187	2,593	1,923
	July	12,603	4,800	558	931	13	839	2,459	(NA)	2,316	2,686	2,390
	August	12,326	4,840	509	849	19	1,005	2,458	(NA)	2,337	2,841	1,971
	September	13,122	5,389	383	741	24	1,361	2,881	(NA)	2,067	3,479	1,776
	October	14,110	5,647	831	668	2	1,538	2,608	(NA)	2,376	2,236	3,438
	November	14,158	5,935	612	680	5	1,422	3,216	(NA)	2,287	2,481	3,045
	December	14,063	5,709	522	689	27	1,160	3,310	(NA)	1,863	3,216	2,852
1998:	January	12,394	4,727	411	807	2	851	2,656	(NA)	2,068	2,479	2,706
	February ^f	13,033	5,213	723	886	9	740	2,856	(NA)	2,430	3,407	1,495
	March ^f	12,483	5,335	465	973	3	1,082	2,812	(NA)	2,384	2,812	1,594
	April ^p	11,632	5,010	490	846	14	631	3,029	(NA)	2,066	2,557	1,583

NA Not available, but estimates are included in totals. ^pPreliminary. ^fRevised.

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

Table 10. Monthly Value of Public Construction Put in Place—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 ²
			Total	Housing and redevelopment	Educational	Hospital	Other buildings ¹					
1996:	April	7,607	3,364	235	1,489	237	1,402	2,162	141	773	440	727
	May	8,929	3,759	288	1,689	225	1,557	2,896	141	807	462	864
	June	9,339	3,823	255	1,805	257	1,505	3,246	158	776	458	878
	July	10,002	4,024	288	2,002	233	1,502	3,700	170	754	449	904
	August	10,394	4,225	269	2,169	217	1,570	3,765	183	901	440	881
	September	10,427	4,186	335	1,936	290	1,624	3,904	177	833	466	861
	October	10,434	4,042	318	1,792	275	1,658	3,910	194	948	566	773
	November	8,972	3,940	308	1,733	238	1,661	2,832	179	808	469	744
	December	7,233	3,500	263	1,509	264	1,465	2,054	131	632	391	525
1997:	January	6,294	3,282	223	1,426	236	1,396	1,412	122	574	358	546
	February	6,425	3,309	237	1,455	225	1,392	1,440	119	564	365	627
	March	6,975	3,481	249	1,535	253	1,444	1,712	143	615	426	597
	April	7,908	3,698	275	1,639	292	1,491	2,319	163	674	402	653
	May	8,791	3,731	311	1,709	246	1,465	2,971	133	745	422	789
	June	9,824	4,083	277	1,980	272	1,553	3,543	151	761	426	860
	July	10,358	4,223	293	2,102	299	1,529	3,855	146	752	474	908
	August	10,987	4,307	291	2,192	249	1,576	4,251	185	797	458	988
	September	10,469	4,099	344	1,865	283	1,608	3,963	180	828	485	915
	October	10,602	4,233	390	1,851	284	1,707	3,846	198	843	510	973
	November	8,741	3,631	309	1,575	224	1,522	3,082	162	723	467	676
	December	7,399	3,435	251	1,561	209	1,414	2,142	142	616	397	668
1998:	January	6,134	3,185	247	1,400	203	1,335	1,454	124	547	333	491
	February ^f	6,051	3,152	241	1,390	188	1,333	1,454	117	522	352	454
	March ^f	6,494	3,236	280	1,407	197	1,352	1,692	118	570	363	514
	April ^p	7,625	3,493	275	1,560	178	1,480	2,338	125	634	416	619
		Federally owned public construction										
		Total federal	Buildings					Highways and streets	Military facilities	Conservation and development	Miscellaneous construction ⁴	
			Total	Housing	Industrial	Educational	Hospital					Other buildings ³
1996:	April	1,156	446	46	106	1	108	185	(NA)	189	292	203
	May	1,252	515	69	112	1	124	208	(NA)	194	298	211
	June	1,159	468	50	113	1	66	238	(NA)	185	293	175
	July	1,126	468	55	112	1	85	215	(NA)	168	285	162
	August	1,104	418	48	115	1	63	191	(NA)	169	324	148
	September	1,747	616	58	160	1	105	292	(NA)	236	592	258
	October	892	336	39	52	2	64	179	(NA)	152	174	184
	November	1,132	455	52	79	2	75	247	(NA)	177	242	226
	December	975	450	43	76	-	100	230	(NA)	173	212	115
1997:	January	973	429	60	77	-	109	182	(NA)	172	238	115
	February	947	429	50	69	1	117	193	(NA)	148	218	131
	March	1,036	403	45	75	3	84	196	(NA)	164	235	216
	April	1,020	418	43	97	1	76	202	(NA)	160	192	221
	May	1,052	381	41	63	1	83	194	(NA)	182	246	208
	June	1,042	435	49	80	2	98	205	(NA)	187	220	163
	July	1,070	396	46	77	1	69	203	(NA)	195	229	204
	August	1,050	382	40	67	2	79	194	(NA)	199	253	175
	September	1,569	593	42	82	3	150	317	(NA)	226	464	237
	October	973	399	59	47	-	109	184	(NA)	167	141	217
	November	1,134	478	49	55	-	114	259	(NA)	197	191	234
	December	1,165	488	45	59	2	99	283	(NA)	165	258	229
1998:	January	932	379	33	65	-	68	213	(NA)	164	178	194
	February ^f	907	383	53	65	1	54	210	(NA)	161	238	104
	March ^f	990	428	37	78	-	87	226	(NA)	200	219	124
	April ^p	939	413	40	70	1	52	250	(NA)	160	209	129

- Less than \$0.5 million. NA Not available, but estimates are included in totals. ^pPreliminary. ^fRevised.

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

Table 11. Indexes Used in Deriving Estimates of the Value of Construction Put in Place in Constant Dollars

[1992 = 100]

Period	Bureau of the Census		Engineering news-record		Bureau of the Census 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														
1993.....	103.7	103.8	105.7	104.5	104.9	104.8	103.0	103	102	105	103	103	104	102
1994.....	108.0	108.1	109.8	108.5	109.7	109.5	109.5	106	105	112	107	109	109	103
1995.....	112.5	112.6	109.8	109.8	114.4	114.3	116.2	110	109	115	111	111	112	110
1996.....	115.0	115.2	113.0	112.8	116.4	116.5	116.0	112	112	118	112	112	115	115
1997.....	118.3	118.5	118.7	116.9	119.2	119.1	125.2	116	117	122	114	114	118	117
Monthly indexes							Quarterly indexes			Semiannual indexes				
1996: January	113.6	113.8	110.3	110.8	115.0	115.2								
February	113.8	113.9	110.5	111.0	115.2	115.3	122.3	111	111					
March.....	113.8	114.1	110.7	111.1	114.9	115.2				117	112	110	114	113
April.....	113.7	114.0	111.1	111.3	114.8	115.1								
May.....	114.1	114.3	111.5	111.8	115.3	115.4	112.7	112	112					
June.....	114.5	114.8	112.2	112.3	115.9	116.2								
July.....	115.2	115.5	112.6	112.7	116.8	117.1								
August.....	115.5	115.7	113.7	113.4	117.1	117.3	118.7	112	112					
September	116.0	116.1	114.6	114.0	117.4	117.4				118	112	113	115	115
October.....	116.3	116.2	115.9	114.7	117.9	117.6								
November.....	116.4	116.3	116.6	115.1	118.1	117.8	117.6	114	113					
December.....	116.7	116.6	116.9	115.2	118.4	118.0								
1997: January	116.9	116.5	117.6	115.6	118.3	117.8								
February	116.8	116.2	117.6	115.7	118.0	117.5	127.1	114	114					
March.....	117.2	117.1	117.3	115.5	117.8	117.5				121	114	114	117	115
April.....	117.4	117.5	118.7	116.3	117.9	117.9								
May.....	118.0	118.0	119.2	117.1	118.6	118.5	125.7	116	116					
June.....	117.9	118.3	119.9	117.6	118.5	119.0								
July.....	117.9	118.5	119.7	117.6	118.4	119.1								
August.....	118.4	118.9	119.5	117.4	119.0	119.6	116.4	118	118					
September.....	119.0	119.3	119.2	117.4	120.0	120.3				122	114	114	118	117
October.....	119.6	119.6	119.0	117.3	120.9	120.6								
November.....	120.3	120.3	118.2	117.1	121.5	121.0	131.5	118	119					
December.....	120.5	120.1	118.9	117.5	121.7	120.8								
1998: January	120.4	120.2	118.7	117.4	121.3	120.6								
February.....	^r 120.3	^r 120.2	119.0	117.8	^r 121.1	^r 120.7	(NA)	118	120					
March.....	^r 120.2	^r 120.3	118.9	117.9	^r 120.8	^r 120.6				124	115	115	119	119
April.....	^p 120.3	^p 120.3	119.1	118.0	^p 120.9	^p 120.7								
May.....			119.1	118.0			(NA)	(NA)	(NA)					

NA Not available. ^pPreliminary. ^rRevised.

Table 12. Factors Used to Seasonally Adjust Estimates of the Value of Construction Put in Place

[Percent]

Type of construction	Apr. 1998 ^P	Mar. 1998 ^r	Feb. 1998 ^r	Jan. 1998	Dec. 1997	Nov. 1997	Oct. 1997	Sep. 1997	Aug. 1997	July 1997	June 1997	Apr. 1997
PRIVATE CONSTRUCTION												
Residential buildings:												
New housing units:												
1 unit	95.3	90.1	76.1	81.3	89.0	106.6	111.7	114.2	114.5	112.3	107.4	94.5
2 units or more	97.5	92.3	87.4	87.4	96.0	101.1	105.6	105.1	109.4	106.0	108.2	97.0
Nonresidential buildings:												
Industrial	96.7	95.9	90.5	89.5	104.9	103.7	107.0	107.0	102.9	102.5	101.0	99.6
Office	99.9	95.4	92.1	90.4	97.6	101.1	104.2	105.4	105.3	102.7	102.4	100.5
Hotels, motels	104.8	98.6	94.6	91.3	98.2	98.5	101.4	100.6	101.5	99.9	103.4	103.2
Other commercial	94.9	88.9	82.8	84.5	95.0	103.9	113.7	113.7	112.0	106.8	106.0	94.4
Religious	93.1	90.5	88.8	89.9	104.2	109.0	113.7	113.5	106.3	98.8	96.5	92.8
Educational	94.9	88.7	81.2	82.0	86.3	94.7	100.8	109.1	120.0	122.2	118.7	91.0
Hospital and institutional	99.2	97.8	94.8	94.2	99.8	104.2	105.2	103.1	102.8	97.7	101.2	98.8
Miscellaneous nonresidential	102.0	96.4	89.0	87.9	97.9	105.1	106.9	108.2	101.5	101.7	103.5	103.0
Telecommunications	98.4	97.8	83.2	82.5	108.9	100.5	112.1	107.2	104.3	106.6	102.8	98.9
All other private	92.3	87.2	82.7	88.6	96.4	109.5	116.4	110.9	104.6	103.9	103.8	95.2
PUBLIC CONSTRUCTION												
State and local												
Buildings:												
Housing and redevelopment	97.9	92.5	87.3	92.1	95.9	106.8	109.2	117.6	104.1	104.1	101.0	96.8
Educational	92.1	85.5	80.9	82.3	86.5	96.5	104.1	114.0	128.9	121.0	112.2	91.7
Hospital	97.9	98.1	90.2	92.3	100.8	97.9	108.2	113.9	94.6	104.5	105.6	104.3
Other buildings	98.7	92.7	88.3	88.6	94.6	102.3	107.7	107.7	105.5	104.8	105.1	98.9
Highways and streets	79.5	58.6	49.3	50.7	73.7	100.7	140.0	141.2	145.3	134.2	122.0	78.2
Conservation and development	92.1	78.3	75.6	74.6	92.9	99.3	123.4	120.2	121.6	110.6	110.7	93.0
Sewer systems	94.4	85.4	76.9	81.2	90.6	107.2	120.2	116.1	115.5	104.4	106.0	93.7
Water supply facilities	95.5	85.2	79.4	81.8	93.2	108.0	119.3	109.0	110.1	109.9	106.6	95.6
Miscellaneous construction	92.1	78.3	75.6	74.6	92.9	99.3	123.4	120.2	121.6	110.6	110.7	93.0
Federal												
Buildings:												
Housing and redevelopment	99.0	96.3	88.2	96.2	102.5	96.6	84.7	132.1	94.7	99.0	107.5	97.8
Industrial	99.0	96.3	88.2	96.2	102.5	96.6	84.7	132.1	94.7	99.0	107.5	97.8
Educational	99.0	96.3	88.2	96.2	102.5	96.6	84.7	132.1	94.7	99.0	107.5	97.8
Hospital	99.0	96.3	88.2	96.2	102.5	96.6	84.7	132.1	94.7	99.0	107.5	97.8
Other buildings	99.0	96.3	88.2	96.2	102.5	96.6	84.7	132.1	94.7	99.0	107.5	97.8
Military	93.2	100.8	79.7	95.1	106.1	103.3	84.6	131.5	102.3	100.9	102.6	93.7
Conservation and development	98.0	93.6	83.7	86.0	96.3	92.3	75.8	160.0	106.7	102.5	101.6	101.0
Miscellaneous construction	98.0	93.6	83.7	86.0	96.3	92.3	75.8	160.0	106.7	102.5	101.6	101.0

^PPreliminary. ^rRevised.

Appendix.

Reliability of the Estimates

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 72 percent of total construction in 1996 (private multifamily 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 the following table. 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 the following table, 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.

The following table 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 (k_1 or k_2) for the change and apply the following formula:

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

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 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. Non-sampling 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, 44 percent; state and locally owned public construction, 33 percent; private residential construction of 2 units or more, 48 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 1994. (Outlays are included if a government agency's fiscal year ending date falls within July 1993 to June 1994 inclusive, and

for three state agencies with fiscal years ending in August or September 1994.) As a result, the adjustment to the construction outlay levels of this survey must be projected ahead for 4 years from 1994 through April 1998. 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 -0.8 percent to 0.7 percent with a median of 0.0 percent. The range of the difference between first revision and second revision was from -0.6 to 0.3 percent, with a median of 0.1 percent.

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)
Total construction	2	2	1	.03	.03
Private construction	3	2	1	.04	.03
Residential buildings	5	4	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	2	1	.02	.03
Industrial	3	3	2	.04	.04
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	6	5	.10	.09
Hospital and institutional	6	6	5	.07	.08
Miscellaneous buildings	7	6	4	.09	.09
Public construction	2	1	1	.03	.01
Housing and redevelopment	8	5	4	.11	.07
Industrial	(NA)	(NA)	(NA)	(NA)	(NA)
Educational	3	3	2	.04	.04
Hospital	6	6	4	.08	.09
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	3	2	.04	.04
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	11	9	.23	.16
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 1997 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.