

Value of Construction Put in Place

August

1999

Issued October 1999

C30/99-8

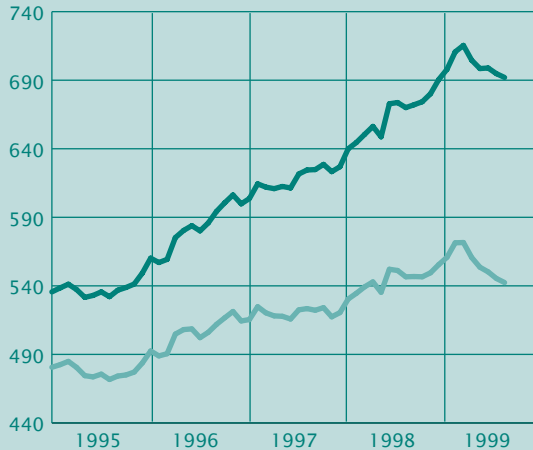
Current Construction Reports

Monthly Value of Construction Put in Place

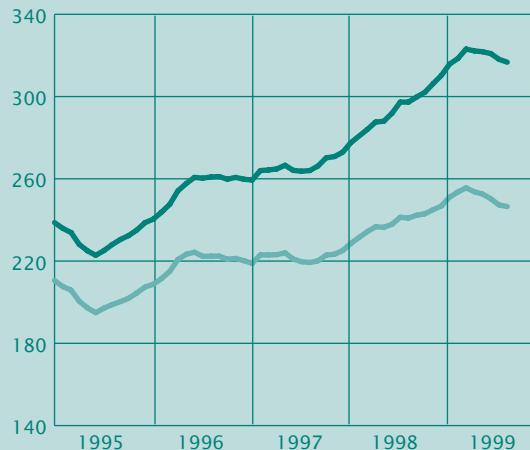
Seasonally adjusted annual rate in billions of dollars

— Current dollars
— 1992 dollars

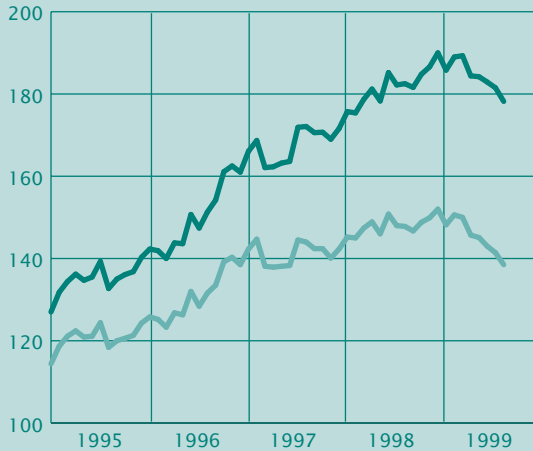
Total Construction



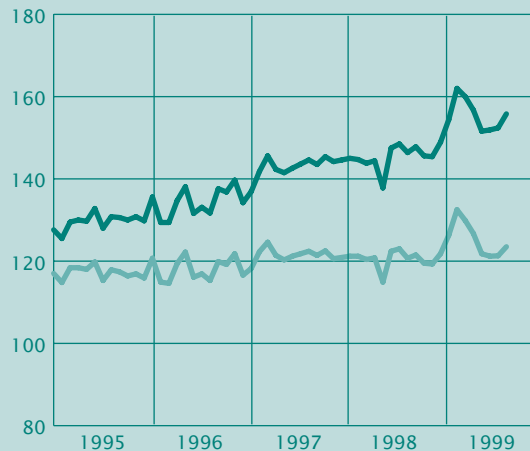
Private Residential Construction



Private Nonresidential Construction



Public Construction



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

Questions regarding these data may be directed to **George A. Roff**, Construction Expenditures Branch, Manufacturing and Construction Division, telephone: 301-457-1605.

For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

USCENSUSBUREAU

Helping You Make Informed Decisions

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



VALUE OF CONSTRUCTION PUT IN PLACE

Construction put in place during August 1999 was estimated at a seasonally adjusted annual rate of \$692.0 billion, nearly the same (± 5 percent) as the revised July estimate of \$694.8 billion. The August figure represents a 3 (± 5) percent increase over August 1998.

During the first 8 months of this year \$456.8 billion of construction was put in place, 7 percent above the \$428.5 billion for the same period in 1998.

In constant (1992) dollars, the August annual rate was \$542.4 billion, 1 (± 5) percent below the revised estimate of \$545.4 billion for July.

Spending on new residential housing units was at a seasonally adjusted annual rate of \$235.9 billion in August, nearly the same (± 2 percent) as the revised July estimate of \$236.7 billion. Nonresidential building construction was at a rate of \$178.2 billion, 2 (± 3) percent below the revised July estimate of \$181.5 billion.

In August, the estimated seasonally adjusted annual rate of public construction put in place was \$155.8 billion, 2 (± 5) percent above the revised July estimate of \$152.4 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 1999*, C30/99-5, U.S. Department of Commerce, U.S. Census Bureau, Washington, DC, 1999; contains annual data for 1994 to 1998 and monthly data for 1996 to 1998.
- Current Construction Reports, *Value of Construction Put in Place: June 1999*, C30/99-6, U.S. Department of Commerce, U.S. Census Bureau, Washington, DC, 1999; contains annual value of construction put in place for private nonresidential buildings by geographic area and detailed types of construction for 1994 to 1998.
- 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.

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

[Millions of dollars]

Type of construction	Current dollars					Constant (1992) dollars				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
Total construction	519,539	537,409	583,445	618,225	665,446	480,620	477,386	506,485	520,123	544,729
Private construction	399,346	407,477	448,969	475,123	520,073	367,247	360,040	388,324	398,699	424,345
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 ¹	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 ²	2,890	2,893	2,431	2,292	2,674	2,763	2,643	2,156	1,960	2,256
Public construction	120,193	129,933	134,476	143,102	145,373	113,373	117,346	118,161	121,424	120,384
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 ³	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 ⁴	11,301	12,116	11,691	12,325	11,777	10,799	11,060	10,370	10,537	9,936

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: 1994-1998

[Millions of dollars]

Type of construction	Current dollars					Constant (1992) dollars				
	1994	1995	1996	1997	1998	1994	1995	1996	1997	1998
Total public construction	120,193	129,933	134,476	143,102	145,373	113,373	117,346	118,161	121,424	120,384
State and local construction	105,753	114,181	119,151	129,009	130,950	99,804	103,132	104,680	109,475	108,422
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 ¹	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 ²	9,125	9,893	9,401	10,525	9,884	8,719	9,029	8,336	8,999	8,339
Federal construction	14,440	15,751	15,325	14,093	14,423	13,569	14,214	13,482	11,949	11,962
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 ³	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 ⁴	2,176	2,223	2,291	1,800	1,893	2,080	2,032	2,034	1,538	1,596

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																			
August 1998	428,453	335,613	188,944	135,822	119,726	16,096	117,609	21,279	26,821	9,333	34,452	4,114	6,581	8,970	6,059	(NA)	8,039	1,701	
August 1999	456,762	357,257	209,389	155,667	137,487	18,180	120,641	17,177	31,066	10,580	36,257	4,630	6,084	8,176	6,672	(NA)	(NA)	1,966	
Percent change	7	6	11	15	15	13	3	-19	16	13	5	13	-8	-9	10	(NA)	(NA)	16	
MONTHLY DATA																			
1997: August	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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 ^f	55,951	44,125	25,875	19,306	16,945	2,361	15,080	2,130	3,840	1,409	4,442	575	772	1,023	890	(NA)	1,104	263	
May ^f	59,622	46,873	28,114	20,430	18,034	2,396	15,461	2,069	3,964	1,383	4,797	573	770	1,037	868	(NA)	973	271	
June ^f	64,500	50,119	29,867	21,514	19,097	2,417	15,847	2,179	4,017	1,239	5,058	610	910	1,018	815	(NA)	1,108	277	
July ^f	64,991	50,288	30,215	22,063	19,777	2,286	15,632	2,051	4,017	1,308	4,966	591	871	1,000	830	(NA)	1,154	278	
August ^p	66,839	50,735	30,607	22,377	19,956	2,421	15,959	2,026	4,329	1,270	4,978	630	854	1,047	824	(NA)	(NA)	285	
PERCENT CHANGE																			
July 1999- August 1999	3	1	1	1	1	6	2	-1	8	-3	(Z)	7	-2	5	-1	(NA)	(NA)	3	

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													
August 1998	92,840	43,421	2,677	674	19,819	2,611	17,640	27,673	1,798	3,461	5,367	3,632	7,488
August 1999	99,505	45,037	2,464	610	21,859	2,606	17,498	30,302	1,411	3,847	6,212	4,236	8,461
Percent change	7	4	-8	-9	10	(Z)	-1	10	-22	11	16	17	13
MONTHLY DATA													
1997: August	14,855	6,016	316	80	3,066	403	2,152	5,386	245	523	831	488	1,366
September	14,859	6,093	360	98	2,736	510	2,389	5,060	273	765	879	518	1,271
October	14,021	5,880	417	56	2,642	458	2,308	4,876	196	400	843	546	1,279
November	12,105	5,288	344	66	2,264	408	2,206	3,910	230	414	741	505	1,017
December	10,528	5,011	304	71	2,213	354	2,069	2,809	191	477	636	429	974
1998: January	8,858	4,646	292	76	2,009	326	1,943	1,943	188	345	567	376	793
February	8,747	4,617	293	79	1,970	306	1,969	1,904	196	419	541	384	685
March	9,529	4,813	314	95	2,000	372	2,033	2,317	237	411	603	392	756
April	10,864	5,175	338	84	2,255	299	2,199	3,113	216	387	640	464	867
May	11,570	5,327	324	81	2,384	337	2,201	3,549	215	421	647	488	922
June	13,801	6,067	368	78	2,910	338	2,374	4,633	225	498	759	476	1,143
July	14,467	6,390	406	93	3,130	322	2,439	4,872	279	478	790	529	1,130
August	15,004	6,386	341	88	3,161	312	2,484	5,342	241	501	819	523	1,192
September	15,494	6,323	350	108	2,886	400	2,579	5,411	225	771	859	562	1,342
October	13,995	5,721	338	58	2,548	345	2,433	5,228	162	379	889	600	1,017
November	12,239	5,426	346	92	2,325	310	2,353	3,734	194	467	847	565	1,006
December	10,805	5,246	336	80	2,339	312	2,179	2,746	199	433	746	512	923
1999: January	9,379	4,751	278	64	2,162	310	1,936	2,161	147	400	652	431	839
February	9,705	4,889	273	70	2,166	363	2,018	2,282	182	436	607	447	862
March	10,658	5,185	286	85	2,299	327	2,187	2,735	187	472	723	475	882
April ^f	11,826	5,432	327	76	2,548	290	2,192	3,453	181	475	732	510	1,044
May ^f	12,749	5,511	328	83	2,616	316	2,168	4,167	181	419	812	542	1,117
June ^f	14,381	6,248	320	72	3,266	336	2,254	4,791	188	511	890	579	1,175
July ^r	14,703	6,234	311	89	3,239	337	2,256	5,039	199	511	916	608	1,195
August ^p	16,103	6,788	340	70	3,563	328	2,487	5,676	146	624	880	643	1,347
PERCENT CHANGE													
July 1999- August 1999	10	9	9	-21	10	-3	10	13	-27	22	-4	6	13

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													
1997: August	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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 ^f	704,582	547,885	322,213	241,193	212,924	28,269	184,411	26,217	45,890	16,277	56,290	7,374	9,766	12,356	10,241	(NA)	13,105	3,376	
May ^f	698,461	546,880	321,803	239,910	212,582	27,329	184,245	24,975	46,912	16,259	57,222	7,092	9,031	12,369	10,384	(NA)	12,371	3,307	
June ^f	698,852	546,931	320,913	238,490	211,410	27,080	182,945	25,465	47,304	14,430	57,153	7,575	9,309	12,182	9,526	(NA)	12,393	3,280	
July ^f	694,783	542,334	318,055	236,735	210,210	26,524	181,527	24,537	47,913	15,495	55,536	7,245	8,774	12,314	9,714	(NA)	13,449	3,095	
August ^p	692,013	536,190	316,724	235,908	208,783	27,125	178,221	23,358	49,383	14,866	53,388	6,983	8,537	12,127	9,580	(NA)	(NA)	2,984	
PERCENT CHANGE																			
July 1999- August 1999	(Z)	-1	(Z)	(Z)	-1	2	-2	-5	3	-4	-4	-4	-3	-2	-1	(NA)	(NA)	-4	

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						
1997:	August	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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 ^f	156,697	68,268	3,935	920	33,016	3,625	26,773	50,897	2,268	6,016	9,553	6,453	13,242
	May ^f	151,581	66,449	3,910	1,042	32,266	3,895	25,335	48,542	2,128	5,101	9,775	6,379	13,207
	June ^f	151,921	68,932	3,709	821	34,588	3,868	25,946	45,518	2,137	5,845	9,921	6,649	12,919
	July ^f	152,449	67,389	3,731	1,052	32,131	4,018	26,456	47,279	2,305	5,816	10,227	6,682	12,750
	August ^p	155,823	70,455	4,085	832	33,650	3,964	27,924	47,330	1,697	6,674	9,341	6,991	13,334
PERCENT CHANGE														
	July 1999- August 1999	2	5	9	-21	5	-1	6	(Z)	-26	15	-9	5	5

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	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													
1997: August	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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 ^f	560,726	434,006	253,711	189,916	167,657	22,259	145,664	20,708	36,248	12,857	44,463	5,825	7,714	9,760	8,089	(NA)	11,191	2,794	
May ^f	553,552	431,734	252,593	188,312	166,861	21,451	145,075	19,666	36,939	12,803	45,057	5,585	7,111	9,739	8,176	(NA)	10,511	2,715	
June ^f	550,207	429,039	250,323	186,030	164,907	21,123	143,037	19,910	36,985	11,282	44,685	5,922	7,279	9,525	7,448	(NA)	10,476	2,673	
July ^f	545,357	424,088	247,321	184,086	163,461	20,625	141,376	19,110	37,315	12,067	43,252	5,643	6,833	9,590	7,565	(NA)	11,340	2,516	
August ^p	542,446	418,949	246,477	183,586	162,477	21,109	138,478	18,149	38,370	11,551	41,482	5,426	6,633	9,423	7,444	(NA)	(NA)	2,416	
PERCENT CHANGE																			
July 1999- August 1999	-1	-1	(Z)	(Z)	-1	2	-2	-5	3	-4	-4	-4	-3	-2	-2	(NA)	(NA)	-4	

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						
1997:	August	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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 ^f	126,720	53,915	3,099	726	26,079	2,863	21,148	41,719	1,825	5,035	7,994	5,272	10,962
	May ^f	121,818	52,312	3,069	821	25,406	3,067	19,949	39,401	1,701	4,241	8,125	5,195	10,843
	June ^f	121,168	53,888	2,893	642	27,043	3,024	20,286	36,649	1,694	4,827	8,192	5,388	10,529
	July ^f	121,269	52,479	2,902	819	25,024	3,130	20,604	37,975	1,822	4,791	8,425	5,411	10,366
	August ^p	123,497	54,748	3,179	647	26,146	3,080	21,697	37,834	1,338	5,475	7,663	5,643	10,797
PERCENT CHANGE														
	July 1999- August 1999	2	4	10	-21	4	-2	5	(Z)	-27	14	-9	4	4

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																		
August 1998	352,849	275,602	154,633	111,171	97,987	13,185	96,312	17,431	21,969	7,640	28,204	3,370	5,389	7,347	4,961	(NA)	6,838	1,440
August 1999	362,059	282,114	164,428	122,266	107,980	14,288	94,986	13,534	24,457	8,334	28,534	3,645	4,785	6,439	5,255	(NA)	(NA)	1,618
Percent change	3	2	6	10	10	8	-1	-22	11	9	1	8	-11	-12	6	(NA)	(NA)	12
MONTHLY DATA																		
1997: August	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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	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 ^f	44,503	34,947	20,374	15,201	13,343	1,859	11,912	1,683	3,033	1,113	3,509	454	609	808	703	(NA)	943	218
May ^f	47,239	36,992	22,068	16,036	14,155	1,881	12,174	1,629	3,121	1,089	3,777	451	606	816	683	(NA)	827	223
June ^f	50,815	39,341	23,297	16,782	14,897	1,885	12,390	1,704	3,141	968	3,955	477	711	796	637	(NA)	937	226
July ^f	51,048	39,349	23,495	17,156	15,379	1,777	12,174	1,597	3,128	1,019	3,867	460	678	778	646	(NA)	973	226
August ^p	52,425	39,655	23,819	17,414	15,530	1,884	12,400	1,574	3,364	987	3,868	490	664	814	640	(NA)	(NA)	231
PERCENT CHANGE																		
July 1999- August 1999	3	1	1	2	1	6	2	-1	8	-3	(Z)	7	-2	5	-1	(NA)	(NA)	2

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													
August 1998	77,246	35,544	2,192	551	16,214	2,140	14,442	23,311	1,494	2,943	4,563	3,053	6,338
August 1999	79,945	35,435	1,937	481	17,188	2,053	13,775	24,589	1,129	3,208	5,179	3,444	6,963
Percent change	3	(Z)	-12	-13	6	-4	-5	5	-24	9	13	13	10
MONTHLY DATA													
1997: August	12,591	5,032	262	67	2,566	337	1,800	4,611	208	447	710	415	1,169
September	12,582	5,083	298	82	2,283	426	1,994	4,336	231	653	750	442	1,087
October	11,823	4,901	344	47	2,203	382	1,925	4,139	165	342	721	465	1,089
November	10,131	4,383	284	54	1,877	338	1,830	3,283	192	353	632	428	861
December	8,804	4,154	251	59	1,835	294	1,716	2,353	159	407	543	364	824
1998: January	7,396	3,839	241	62	1,660	270	1,605	1,634	157	294	484	317	671
February	7,314	3,815	242	65	1,628	253	1,627	1,608	164	358	463	324	582
March	7,966	3,971	259	78	1,650	307	1,677	1,959	198	351	515	330	642
April	9,077	4,253	279	69	1,853	246	1,806	2,638	181	330	546	391	737
May	9,650	4,364	266	66	1,952	276	1,802	3,005	179	358	550	411	783
June	11,467	4,941	300	64	2,369	275	1,933	3,910	187	422	642	399	966
July	11,993	5,190	329	76	2,542	261	1,981	4,098	230	406	670	444	955
August	12,383	5,171	276	71	2,560	252	2,011	4,459	198	424	693	437	1,002
September	12,758	5,108	283	87	2,331	323	2,083	4,498	184	651	725	468	1,124
October	11,500	4,606	272	47	2,051	278	1,959	4,339	132	321	753	496	852
November	10,047	4,357	277	74	1,868	249	1,890	3,101	158	398	721	466	846
December	8,834	4,196	268	64	1,871	250	1,743	2,277	162	369	635	420	776
1999: January	7,651	3,788	221	51	1,724	247	1,544	1,790	119	341	556	353	705
February	7,914	3,896	218	56	1,725	289	1,608	1,891	148	372	518	366	724
March	8,634	4,108	227	68	1,822	259	1,733	2,254	151	395	605	387	733
April ^f	9,556	4,290	257	60	2,012	229	1,731	2,830	145	397	613	417	864
May ^f	10,247	4,339	257	66	2,060	249	1,707	3,382	145	348	675	441	917
June ^f	11,474	4,884	250	56	2,553	263	1,762	3,857	149	422	735	469	957
July ^r	11,699	4,855	242	70	2,523	263	1,757	4,048	157	421	755	492	972
August ^p	12,770	5,275	265	54	2,769	254	1,933	4,537	115	512	722	519	1,091
PERCENT CHANGE													
July 1999- August 1999	9	9	10	-23	10	-3	10	12	-27	22	-4	5	12

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					
1997:	August	13,673	5,538	258	3,064	323	1,893	5,355	226	831	488	1,235
	September	13,117	5,384	305	2,733	336	2,010	5,029	218	879	518	1,088
	October	13,041	5,418	346	2,642	342	2,088	4,846	245	843	546	1,143
	November	10,860	4,721	285	2,263	278	1,894	3,888	200	741	505	805
	December	9,241	4,457	265	2,210	254	1,729	2,791	165	636	429	763
1998:	January	7,849	4,216	253	2,009	255	1,700	1,930	154	567	376	605
	February	7,699	4,169	244	1,970	240	1,716	1,891	139	541	384	574
	March	8,391	4,309	282	1,999	267	1,761	2,301	152	603	392	634
	April	9,777	4,687	300	2,254	236	1,897	3,091	141	640	464	752
	May	10,463	4,844	282	2,383	248	1,932	3,520	165	647	488	799
	June	12,598	5,579	324	2,908	256	2,091	4,597	202	759	476	985
	July	13,107	5,810	345	3,128	226	2,111	4,833	163	790	529	983
	August	13,755	5,880	284	3,159	225	2,213	5,298	182	819	523	1,053
	September	13,655	5,633	294	2,883	253	2,204	5,367	177	859	562	1,057
	October	13,068	5,288	304	2,547	257	2,180	5,186	183	889	600	923
	November	11,012	4,948	298	2,325	247	2,078	3,703	148	847	565	801
	December	9,577	4,745	296	2,338	258	1,854	2,723	134	746	512	718
1999:	January	8,394	4,345	252	2,159	223	1,712	2,145	150	652	431	672
	February	8,577	4,419	247	2,165	236	1,770	2,266	136	607	447	703
	March	9,519	4,716	249	2,298	242	1,927	2,716	134	723	475	755
	April ^f	10,696	5,004	284	2,547	230	1,943	3,427	178	732	510	846
	May ^f	11,715	5,091	295	2,616	248	1,932	4,134	143	812	542	994
	June ^f	13,203	5,795	281	3,265	266	1,984	4,751	168	890	579	1,020
	July ^f	13,487	5,749	273	3,237	246	1,994	4,996	173	916	608	1,044
	August ^p	14,932	6,367	308	3,559	275	2,224	5,630	220	880	643	1,193
		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
1997:	August	1,181	478	58	80	2	80	258	(NA)	245	297	131
	September	1,743	709	55	98	3	174	379	(NA)	273	547	182
	October	980	462	71	56	-	116	220	(NA)	196	155	136
	November	1,246	567	60	66	1	129	312	(NA)	230	214	213
	December	1,286	554	39	71	3	101	340	(NA)	191	312	212
1998:	January	1,009	429	40	76	-	71	243	(NA)	188	191	188
	February	1,047	447	50	79	1	66	253	(NA)	196	280	111
	March	1,138	504	32	95	-	105	272	(NA)	237	259	122
	April	1,087	488	39	84	1	63	301	(NA)	216	246	115
	May	1,107	483	42	81	1	90	269	(NA)	215	256	123
	June	1,204	488	44	78	2	82	283	(NA)	225	297	158
	July	1,360	580	61	93	2	95	329	(NA)	279	315	148
	August	1,249	506	57	88	3	87	271	(NA)	241	319	139
	September	1,839	690	57	108	3	148	375	(NA)	225	595	285
	October	927	433	34	58	-	88	253	(NA)	162	196	94
	November	1,228	478	48	92	1	63	275	(NA)	194	320	206
	December	1,228	501	41	80	1	55	325	(NA)	199	299	205
1999:	January	985	406	27	64	3	87	225	(NA)	147	249	167
	February	1,127	471	26	70	1	127	247	(NA)	182	300	159
	March	1,140	468	37	85	1	85	260	(NA)	187	338	127
	April ^f	1,130	428	42	76	1	60	249	(NA)	181	297	198
	May ^f	1,034	420	32	83	1	67	237	(NA)	181	277	123
	June ^f	1,178	453	39	72	1	71	270	(NA)	188	343	155
	July ^f	1,216	484	39	89	3	91	263	(NA)	199	338	151
	August ^p	1,172	421	32	70	4	52	263	(NA)	146	404	155

- 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					
1997:	August	130,440	57,304	3,187	28,839	4,045	21,233	44,875	2,203	8,695	5,342	12,020
	September	129,383	58,340	3,393	28,814	3,635	22,499	43,195	2,205	8,979	5,670	10,994
	October	131,009	60,909	3,757	30,480	3,765	22,906	41,867	2,495	8,664	5,435	11,639
	November	128,771	57,366	3,342	28,951	3,381	21,692	45,785	2,331	8,337	5,587	9,365
	December	129,580	58,322	3,259	30,204	2,997	21,862	44,777	2,270	8,253	5,439	10,519
1998:	January	131,093	59,104	3,236	29,400	3,315	23,153	45,775	2,489	8,391	5,579	9,755
	February	130,245	58,904	3,255	29,142	3,161	23,347	45,847	2,239	8,264	5,770	9,219
	March	129,501	57,635	3,630	27,736	3,253	23,017	46,176	2,297	8,241	5,583	9,568
	April	130,760	59,213	3,617	29,463	2,853	23,281	46,198	1,775	8,277	5,834	9,463
	May	124,220	58,066	3,337	29,293	3,060	22,376	41,248	1,942	7,820	5,711	9,432
	June	133,510	61,629	3,693	31,018	2,952	23,967	44,994	2,197	8,505	5,448	10,736
	July	132,659	62,246	4,056	30,894	2,683	24,612	43,673	1,709	8,932	5,809	10,290
	August	131,590	60,855	3,488	29,729	2,800	24,839	44,331	1,775	8,623	5,732	10,274
	September	133,139	61,029	3,288	30,317	2,758	24,667	44,691	1,781	8,822	6,158	10,659
	October	131,696	59,449	3,337	29,364	2,820	23,929	45,929	1,852	9,121	5,989	9,357
	November	130,493	60,031	3,453	29,643	3,000	23,936	43,565	1,734	9,537	6,236	9,390
	December	134,430	62,101	3,623	31,988	3,046	23,444	44,210	1,853	9,770	6,532	9,963
1999:	January	140,524	61,050	3,301	31,405	2,896	23,448	50,164	2,410	9,658	6,465	10,778
	February	146,523	62,381	3,304	31,992	3,107	23,977	54,495	2,187	9,394	6,739	11,327
	March	146,132	63,221	3,180	32,071	2,972	24,999	52,730	2,020	10,017	6,767	11,376
	April ^f	142,595	63,093	3,424	33,003	2,896	23,770	50,514	2,252	9,553	6,453	10,732
	May ^f	138,863	61,191	3,505	32,257	3,053	22,376	48,157	1,676	9,775	6,379	11,685
	June ^f	138,416	63,772	3,261	34,575	3,065	22,870	45,138	1,826	9,921	6,649	11,110
	July ^f	138,245	61,683	3,278	32,100	2,943	23,361	46,876	1,815	10,227	6,682	10,961
	August ^p	142,438	65,425	3,700	33,605	3,338	24,782	46,947	2,135	9,341	6,991	11,599
		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
1997:	August	14,122	6,089	740	1,015	23	1,019	3,293	(NA)	2,804	3,449	1,521
	September	14,110	6,223	482	862	27	1,526	3,325	(NA)	2,552	3,800	1,268
	October	14,368	6,122	936	740	3	1,530	2,913	(NA)	2,915	2,703	2,369
	November	15,380	7,028	738	814	6	1,602	3,868	(NA)	2,737	2,684	2,671
	December	15,009	6,328	446	808	32	1,152	3,890	(NA)	2,209	3,685	2,498
1998:	January	13,878	5,695	526	1,001	3	947	3,218	(NA)	2,423	2,746	2,705
	February	14,454	5,873	651	1,033	11	860	3,318	(NA)	2,845	3,882	1,540
	March	14,267	6,206	398	1,170	4	1,287	3,346	(NA)	2,820	3,343	1,577
	April	13,673	6,037	478	1,042	17	776	3,725	(NA)	2,725	3,123	1,459
	May	13,602	6,015	527	1,007	17	1,117	3,347	(NA)	2,530	3,187	1,530
	June	13,960	5,618	503	899	21	940	3,255	(NA)	2,610	3,512	1,867
	July	15,804	6,863	722	1,104	19	1,129	3,889	(NA)	3,231	3,649	1,710
	August	14,765	6,336	715	1,106	31	1,086	3,397	(NA)	2,760	3,695	1,606
	September	14,644	6,051	496	947	25	1,293	3,290	(NA)	2,103	4,139	1,984
	October	13,863	5,956	465	799	3	1,210	3,480	(NA)	2,407	3,469	1,658
	November	14,880	5,800	581	1,114	7	763	3,335	(NA)	2,296	3,905	2,515
	December	14,441	5,774	470	920	14	629	3,742	(NA)	2,306	3,553	2,434
1999:	January	13,863	5,584	365	886	40	1,203	3,091	(NA)	1,881	3,609	2,414
	February	15,452	6,189	346	919	9	1,665	3,250	(NA)	2,636	4,084	2,159
	March	13,901	5,565	443	1,012	10	1,010	3,090	(NA)	2,223	4,173	1,571
	April ^f	14,102	5,176	511	920	13	729	3,003	(NA)	2,268	3,765	2,510
	May ^f	12,718	5,258	405	1,042	9	842	2,959	(NA)	2,128	3,425	1,522
	June ^f	13,505	5,160	448	821	13	803	3,076	(NA)	2,137	4,019	1,809
	July ^f	14,205	5,706	453	1,052	31	1,075	3,095	(NA)	2,305	4,001	1,789
	August ^p	13,384	5,030	386	832	45	626	3,141	(NA)	1,697	4,538	1,734

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					
1997:	August	110,494	47,933	2,647	24,133	3,385	17,768	38,420	1,882	7,425	4,551	10,283
	September	109,471	48,672	2,807	24,052	3,034	18,780	37,014	1,881	7,661	4,838	9,405
	October	110,400	50,766	3,100	25,421	3,140	19,105	35,541	2,134	7,411	4,634	9,914
	November	107,746	47,551	2,755	24,006	2,804	17,986	38,442	1,987	7,107	4,735	7,923
	December	108,343	48,346	2,689	25,044	2,485	18,127	37,502	1,939	7,048	4,609	8,899
1998:	January	109,583	48,837	2,666	24,298	2,740	19,135	38,499	2,123	7,160	4,704	8,260
	February	109,068	48,675	2,684	24,084	2,612	19,295	38,722	1,914	7,063	4,861	7,833
	March	108,412	47,554	2,995	22,884	2,684	18,991	39,033	1,962	7,038	4,695	8,129
	April	109,349	48,660	2,977	24,209	2,344	19,130	39,151	1,514	7,062	4,915	8,047
	May	103,609	47,563	2,740	23,991	2,506	18,326	34,926	1,652	6,650	4,811	8,007
	June	110,863	50,189	3,010	25,259	2,404	19,517	37,970	1,859	7,196	4,574	9,075
	July	109,895	50,563	3,293	25,097	2,180	19,994	36,731	1,451	7,582	4,877	8,691
	August	108,501	49,278	2,827	24,072	2,267	20,112	37,004	1,501	7,295	4,788	8,634
	September	109,450	49,299	2,658	24,488	2,228	19,925	37,149	1,503	7,445	5,127	8,927
	October	108,074	47,864	2,685	23,642	2,270	19,266	38,115	1,569	7,729	4,954	7,843
	November	107,014	48,207	2,762	23,810	2,410	19,225	36,183	1,476	8,117	5,141	7,891
	December	109,955	49,664	2,882	25,591	2,436	18,755	36,658	1,579	8,322	5,359	8,373
1999:	January	114,876	48,676	2,624	25,044	2,309	18,699	41,561	2,054	8,233	5,295	9,057
	February	119,767	49,704	2,631	25,492	2,476	19,105	45,149	1,866	8,015	5,514	9,518
	March	118,616	50,092	2,516	25,413	2,355	19,809	43,471	1,692	8,390	5,515	9,456
	April ^f	115,266	49,828	2,696	26,068	2,287	18,776	41,405	1,884	7,994	5,272	8,884
	May ^f	111,569	48,173	2,751	25,399	2,404	17,619	39,089	1,393	8,125	5,195	9,594
	June ^f	110,341	49,854	2,544	27,033	2,396	17,881	36,343	1,508	8,192	5,388	9,055
	July ^f	109,929	48,036	2,549	25,000	2,292	18,194	37,651	1,495	8,425	5,411	8,911
	August ^p	112,816	50,839	2,879	26,111	2,594	19,256	37,527	1,752	7,663	5,643	9,392
		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
1997:	August	11,934	5,091	614	849	19	853	2,755	(NA)	2,374	2,945	1,301
	September	11,904	5,191	399	720	23	1,274	2,775	(NA)	2,157	3,243	1,085
	October	12,099	5,097	773	618	2	1,276	2,429	(NA)	2,452	2,312	2,018
	November	12,874	5,824	608	675	5	1,328	3,207	(NA)	2,285	2,288	2,260
	December	12,589	5,245	368	670	27	955	3,226	(NA)	1,841	3,147	2,113
1998:	January	11,617	4,705	434	827	2	782	2,660	(NA)	2,019	2,343	2,291
	February	12,121	4,852	537	854	9	711	2,742	(NA)	2,377	3,318	1,308
	March	11,942	5,120	328	966	3	1,062	2,761	(NA)	2,356	2,855	1,340
	April	11,420	4,961	393	856	14	637	3,061	(NA)	2,275	2,665	1,241
	May	11,331	4,927	432	825	14	914	2,741	(NA)	2,107	2,710	1,298
	June	11,587	4,575	410	732	17	765	2,650	(NA)	2,164	2,972	1,579
	July	13,082	5,574	586	897	15	917	3,159	(NA)	2,670	3,097	1,444
	August	12,181	5,131	580	896	25	879	2,751	(NA)	2,268	3,126	1,350
	September	12,070	4,888	401	765	21	1,044	2,657	(NA)	1,722	3,493	1,662
	October	11,401	4,795	374	643	2	974	2,802	(NA)	1,967	2,940	1,390
	November	12,271	4,656	464	895	6	613	2,679	(NA)	1,874	3,324	2,113
	December	11,877	4,617	374	736	11	503	2,993	(NA)	1,878	3,026	2,046
1999:	January	11,396	4,452	290	707	32	959	2,465	(NA)	1,528	3,076	2,029
	February	12,690	4,931	275	732	7	1,327	2,590	(NA)	2,141	3,484	1,814
	March	11,310	4,409	351	802	8	800	2,449	(NA)	1,796	3,495	1,306
	April ^f	11,454	4,087	403	726	11	576	2,372	(NA)	1,825	3,150	2,078
	May ^f	10,249	4,139	318	821	7	663	2,330	(NA)	1,701	2,847	1,250
	June ^f	10,827	4,034	349	642	10	628	2,405	(NA)	1,694	3,319	1,474
	July ^f	11,340	4,443	353	819	24	837	2,410	(NA)	1,822	3,296	1,455
	August ^p	10,681	3,909	300	647	35	486	2,441	(NA)	1,338	3,723	1,404

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

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					
1997:	August	11,593	4,633	214	2,564	270	1,584	4,585	193	710	415	1,057
	September	11,110	4,492	252	2,281	281	1,678	4,309	186	750	442	931
	October	10,999	4,516	286	2,203	285	1,742	4,114	209	721	465	973
	November	9,089	3,913	235	1,876	231	1,571	3,264	171	632	428	681
	December	7,725	3,695	219	1,832	210	1,434	2,338	141	543	364	645
1998:	January	6,552	3,484	208	1,660	210	1,405	1,623	132	484	317	512
	February	6,436	3,445	201	1,628	199	1,418	1,597	119	463	324	488
	March	7,014	3,555	232	1,650	220	1,453	1,945	130	515	330	539
	April	8,169	3,852	247	1,852	194	1,559	2,620	120	546	391	640
	May	8,728	3,968	232	1,951	203	1,582	2,980	140	550	411	679
	June	10,468	4,544	264	2,368	209	1,703	3,879	171	642	399	833
	July	10,867	4,719	280	2,541	184	1,714	4,065	139	670	444	830
	August	11,352	4,762	230	2,558	182	1,792	4,422	154	693	437	885
	September	11,239	4,550	237	2,328	204	1,780	4,461	149	725	468	885
	October	10,739	4,257	244	2,051	207	1,755	4,304	155	753	496	774
	November	9,034	3,974	239	1,867	198	1,669	3,076	126	721	466	673
	December	7,825	3,795	235	1,870	206	1,483	2,258	114	635	420	604
1999:	January	6,842	3,464	200	1,722	177	1,365	1,777	128	556	353	565
	February	6,988	3,521	197	1,725	188	1,411	1,877	116	518	366	591
	March	7,708	3,737	197	1,821	192	1,527	2,239	112	605	387	627
	April ^f	8,639	3,952	224	2,012	181	1,535	2,809	149	613	417	700
	May ^f	9,414	4,008	232	2,059	196	1,521	3,355	119	675	441	816
	June ^f	10,530	4,530	219	2,552	208	1,551	3,825	138	735	469	832
	July ^f	10,729	4,477	212	2,521	192	1,553	4,013	142	755	492	849
	August ^p	11,834	4,947	240	2,766	214	1,728	4,500	180	722	519	966
		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
1997:	August	999	399	48	67	2	67	216	(NA)	208	254	112
	September	1,472	592	45	82	3	145	316	(NA)	231	466	156
	October	824	385	58	47	-	96	183	(NA)	165	133	116
	November	1,043	470	49	54	-	107	259	(NA)	192	182	180
	December	1,079	459	32	59	2	84	282	(NA)	159	266	179
1998:	January	844	355	33	62	-	59	201	(NA)	157	163	159
	February	878	370	41	65	1	54	209	(NA)	164	239	94
	March	952	416	27	78	-	86	224	(NA)	198	221	104
	April	908	401	32	69	1	52	247	(NA)	181	210	98
	May	922	396	35	66	1	73	220	(NA)	179	218	104
	June	999	397	36	64	1	66	230	(NA)	187	251	133
	July	1,126	471	50	76	1	77	267	(NA)	230	267	125
	August	1,031	410	46	71	2	70	220	(NA)	198	270	117
	September	1,519	558	46	87	2	119	303	(NA)	184	502	239
	October	761	349	27	47	-	71	204	(NA)	132	166	79
	November	1,012	383	38	74	-	50	221	(NA)	158	272	173
	December	1,009	401	32	64	1	44	260	(NA)	162	255	172
1999:	January	809	324	21	51	2	70	179	(NA)	119	213	140
	February	926	375	21	56	1	101	197	(NA)	148	256	133
	March	927	371	30	68	1	67	206	(NA)	151	283	106
	April ^f	917	338	33	60	1	48	196	(NA)	145	249	164
	May ^f	833	331	25	66	1	53	186	(NA)	145	230	101
	June ^f	944	354	31	56	1	55	211	(NA)	149	283	126
	July ^f	971	377	30	70	2	71	205	(NA)	157	279	123
	August ^p	936	327	25	54	3	41	204	(NA)	115	332	125

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

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	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.....	115.0	115.2	113.0	112.8	116.4	116.5	116.1	112	112	118	112	115	115	
1997.....	118.7	118.9	118.7	116.9	119.9	119.9	124.7	116	117	122	115	118	117	
1998.....	122.0	122.2	119.7	118.8	123.3	123.0	122.2	118	122	123	117	120	117	
	Monthly indexes						Quarterly indexes			Semiannual indexes				
1998: 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.....	124.5	124.6	120.9	120.4	126.4	125.8								
February.....	124.8	124.6	120.6	120.2	126.8	125.6	124.4	118	125					
March.....	125.7	125.3	120.4	120.1	127.8	126.4				125	118	118	122	
April.....	^r 125.6	^r 125.7	120.7	120.5	^r 127.6	^r 127.0								
May.....	^r 125.9	^r 126.2	120.8	120.5	^r 127.6	^r 127.4	136.4	119	126					
June.....	^r 126.9	^r 126.9	121.1	121.2	^r 128.6	^r 128.2								
July.....	^r 127.4	^r 127.3	122.1	121.9	^r 129.3	^r 128.6								
August.....	^p 127.6	^p 127.5	122.6	122.2	^p 129.2	^p 128.5	(NA)	121	127					
September.....			123.3	122.7						126	119	120	123	

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	Aug. 1999 ^P	July 1999 ^f	June 1999 ^f	May 1999 ^f	Apr. 1999 ^f	Mar. 1999	Feb. 1999	Jan. 1999	Dec. 1998	Nov. 1998	Oct. 1998	Aug. 1998
PRIVATE CONSTRUCTION												
Residential buildings:												
New housing units:												
1 unit	114.7	112.9	108.4	101.8	95.5	91.3	76.4	81.2	89.2	106.0	111.2	114.2
2 units or more	107.1	103.4	107.1	105.2	100.2	95.6	88.7	87.5	94.8	100.5	105.2	107.7
Nonresidential buildings:												
Industrial	104.1	100.3	102.7	99.4	97.5	94.2	91.1	90.0	105.0	103.7	107.3	104.2
Office	105.2	100.6	101.9	101.4	100.4	97.5	93.3	91.7	98.2	102.8	103.1	102.5
Hotels, motels	102.5	101.3	103.0	102.1	103.9	104.2	93.2	87.8	101.1	101.0	101.1	101.4
Other commercial	111.9	107.3	106.2	100.6	94.7	89.6	83.9	83.7	94.1	104.5	112.0	112.0
Religious	108.3	97.8	96.7	97.0	93.6	92.1	86.3	87.2	105.2	110.5	113.4	108.3
Educational	120.1	119.1	117.3	102.3	94.8	91.3	84.6	83.2	85.8	95.3	99.3	120.7
Hospital and institutional	103.6	97.4	100.3	100.6	99.3	98.6	94.2	94.2	99.0	103.8	105.0	103.6
Miscellaneous nonresidential	103.2	102.5	102.7	100.3	104.3	97.9	89.1	88.1	97.1	103.5	107.4	103.6
Telecommunications	108.0	103.0	107.3	94.4	101.1	100.6	83.5	79.0	107.7	101.8	110.1	103.0
All other private	114.7	107.8	101.5	98.4	93.6	90.2	80.0	85.1	98.6	105.1	117.5	115.0
PUBLIC CONSTRUCTION												
State and Local												
Buildings:												
Housing and redevelopment	99.9	99.9	103.4	101.1	99.6	94.0	89.7	91.5	97.9	103.7	109.2	97.7
Educational	127.1	121.0	113.3	97.3	92.6	86.0	81.2	82.5	87.7	94.1	104.1	127.5
Hospital	98.9	100.3	104.0	97.6	95.1	97.6	91.3	92.2	101.5	98.8	109.5	96.4
Other buildings	107.7	102.4	104.1	103.6	98.1	92.5	88.6	87.6	94.9	104.2	109.3	106.9
Highways and streets	143.9	127.9	126.3	103.0	81.4	61.8	49.9	51.3	73.9	102.0	135.5	143.4
Conservation and development	123.4	114.3	110.2	102.1	94.6	79.6	74.5	74.8	86.5	102.3	118.4	123.0
Sewer systems	113.0	107.5	107.7	99.7	92.0	86.6	77.5	81.0	91.6	106.6	116.9	114.0
Water supply facilities	110.4	109.2	104.5	101.9	94.9	84.3	79.6	80.0	94.0	108.7	120.2	109.5
Miscellaneous construction	123.4	114.3	110.2	102.1	94.6	79.6	74.5	74.8	86.5	102.3	118.4	123.0
Federal												
Buildings:												
Housing and redevelopment	100.5	101.9	105.3	95.9	99.3	101.0	91.3	87.2	104.2	98.8	87.3	95.8
Industrial	100.5	101.9	105.3	95.9	99.3	101.0	91.3	87.2	104.2	98.8	87.3	95.8
Educational	100.5	101.9	105.3	95.9	99.3	101.0	91.3	87.2	104.2	98.8	87.3	95.8
Hospital	100.5	101.9	105.3	95.9	99.3	101.0	91.3	87.2	104.2	98.8	87.3	95.8
Other buildings	100.5	101.9	105.3	95.9	99.3	101.0	91.3	87.2	104.2	98.8	87.3	95.8
Military	103.0	103.7	105.3	102.3	95.6	101.1	83.0	93.7	103.6	101.3	80.7	104.7
Conservation and development	106.9	101.4	102.5	96.9	94.7	97.1	88.1	82.9	101.1	98.2	67.8	103.7
Miscellaneous construction	106.9	101.4	102.5	96.9	94.7	97.1	88.1	82.9	101.1	98.2	67.8	103.7

^PPreliminary. ^fRevised.

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 71 percent of total construction in 1998 (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 0.02, 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 (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 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. 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.

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	1	1	.03	.02
Private construction	3	2	1	.04	.02
Residential buildings	5	3	2	.06	.03
New housing units	2	2	1	.01	.02
1 unit structures	2	2	2	.01	.01
2 units or more	4	3	3	.03	.03
Nonresidential buildings	2	1	1	.02	.01
Industrial	3	2	2	.04	.03
Office	4	2	2	.05	.03
Hotels, motels	7	6	5	.09	.08
Other commercial	5	3	2	.06	.04
Religious	9	7	5	.12	.10
Educational	7	5	5	.10	.07
Hospital and institutional	6	5	5	.07	.07
Miscellaneous buildings	7	4	4	.09	.06
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	4	4	.08	.06
Other public buildings	3	2	2	.04	.03
Highways and streets	4	2	2	.05	.03
Military facilities	(NA)	(NA)	(NA)	(NA)	(NA)
Conservation and development	4	2	2	.06	.03
Sewer systems	6	3	3	.08	.04
Water supply facilities	8	4	3	.11	.06
Miscellaneous public	8	4	4	.11	.06
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	6	5	.11	.09
Other public buildings	4	3	2	.05	.04
Highways and streets	4	2	2	.05	.03
Conservation and development	16	9	9	.23	.13
Sewer systems	6	3	3	.08	.04
Water supply facilities	8	4	3	.11	.06
Miscellaneous public	9	5	4	.12	.07
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.