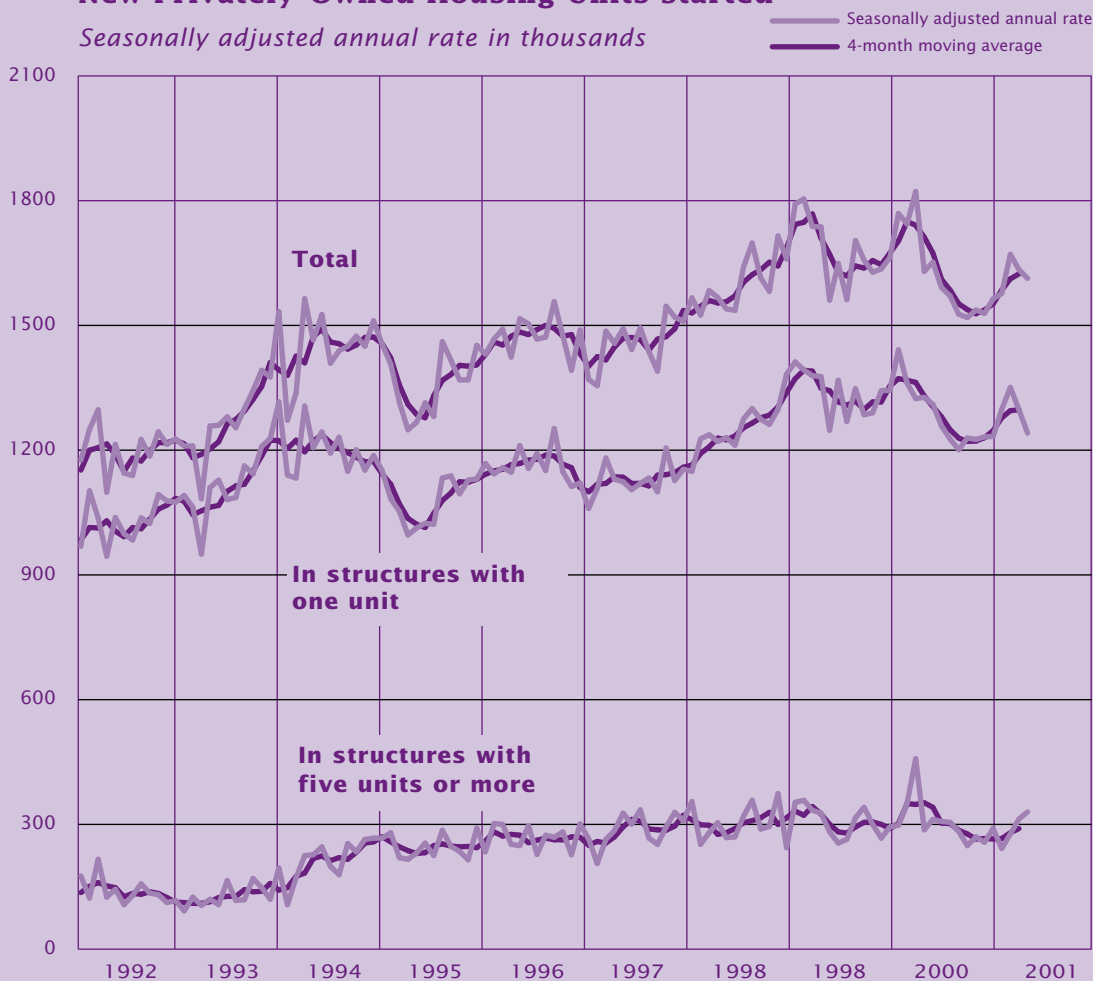


# Housing Starts

**This is the last "Housing Starts" publication.** Information previously found in the publication will be available in the "New Residential Construction" press release. This can be found on our Web site at [www.census.gov/mcd](http://www.census.gov/mcd). For all series except Building Permits, we will introduce new estimation methods and revise unadjusted data and seasonally adjusted annual rates back to January 1999. The Building Permits series will have the usual annual revisions for 2000 and revised seasonal factors back to January 1999.

## New Privately-Owned Housing Units Started

Seasonally adjusted annual rate in thousands



Note: Total includes units started in structures with two to four units.  
Source: U.S. Census Bureau, Housing Starts.

Questions regarding these data may be directed to Residential Construction Branch, Manufacturing and Construction Division, telephone: 301-457-1321.  
For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.



## HOUSING STARTS AND BUILDING PERMITS

Privately-owned housing starts in March 2001 were at a seasonally adjusted annual rate of 1,613,000. This is 1 (±6) percent below the revised February rate of 1,634,000 and 1 (±7) percent below the March 2000 rate of 1,630,000.

The rate for single-family housing starts in March 2001 was 1,241,000. This is 4 (±6) percent below the February rate of 1,297,000. The March rate for units in buildings with five units or more was 330,000, and the March rate for units in buildings with two to four units was 42,000.

During the first 3 months of this year, 349,500 housing units were started. This is 4 (±4) percent below the 364,600 units started during the same period in 2000.

New privately-owned housing construction was authorized in March in the 19,000 permit-issuing places at a seasonally adjusted annual rate of 1,615,000 units. This is 4 (±1) percent below the revised February rate of 1,675,000, but is 1 (±1) percent above the March 2000 rate of 1,597,000.

Single-family authorizations in March 2001 were at a rate of 1,203,000. This is 3 (±1) percent below the February rate of 1,239,000. Authorizations of units in buildings with five units or more were at a rate of 340,000 in March. The March rate of permit-authorized units in buildings with two to four units was 72,000.

During the first 3 months of this year, 370,600 housing units were authorized compared with 368,600 units for the same period in 2000. This is an increase of 1 (±1) percent.

In interpreting changes in housing starts and building permits, note that month-to-month changes in seasonally adjusted statistics often show movements

which may be irregular. It may take 5 months to establish an underlying trend for total starts and 3 months for building permit authorizations.

The statistics in this report are estimated from sample surveys and are subject to sampling variability as well as nonsampling error including bias and variance from response, nonreporting, and undercoverage. Estimated average relative standard errors of preliminary data are shown in the tables. Whenever a statement such as "2 (±3) percent above" appears in the text, this indicates the range (-1 to +5 percent) in which the actual percent change is likely to have occurred. All ranges given are 90-percent confidence intervals and account for only sampling variability. If a range contains zero, it is uncertain whether there was an increase or decrease; that is, the change is not statistically significant. For any comparison cited without a confidence interval, the change is statistically significant. The appendix to this report includes explanations of confidence intervals and sampling variability. On average, the preliminary seasonally adjusted estimates of total housing starts and building permits are revised about ±1 percent.

## HISTORICAL DATA

Historical data on housing starts and residential permit authorizations are available from Residential Construction Branch, Manufacturing and Construction Division, U.S. Census Bureau, Washington, DC 20233-6900. Telephone 301-457-1321.

A list of tables and special supplements is shown below:

Title	C20 issues				
New privately-owned housing units started, by purpose of construction (quarterly and annual data).....	01-1	00-10	00-7	00-4	00-1
Total time from start of construction to completion of private residential buildings (annual data) .....	01-3	00-3	99-3	98-3	97-3
Total time from authorization of construction to start for private residential buildings (annual data) .....	01-3	00-3	99-3	98-3	97-3
New privately-owned housing units, by intended use and design at time of start (annual data) .....	01-2	00-2	99-2	98-2	97-2

**Table 1. New Privately-Owned Housing Units Started**

[Thousands of units. Detail may not add to total because of rounding]

Period	Total	In structures with—				Inside MSAs <sup>1</sup>	Outside MSAs <sup>1</sup>	North-east	Midwest	South	West
		1 unit	2 units	3 and 4 units	5 units or more						
<b>ANNUAL DATA</b>											
1991 .....	1,013.9	840.4	15.5	20.1	137.9	789.2	224.7	112.9	233.0	414.1	254.0
1992 .....	1,199.7	1,029.9	12.4	18.3	139.0	931.5	268.2	126.7	287.8	496.9	288.3
1993 .....	1,287.6	1,125.7	11.1	18.3	132.6	1,031.9	255.8	126.5	297.7	561.8	301.7
1994 .....	1,457.0	1,198.4	14.8	20.2	223.5	1,183.1	273.9	138.2	328.9	639.1	350.8
1995 .....	1,354.1	1,076.2	14.3	19.4	244.1	1,106.4	247.6	117.7	290.1	615.0	331.3
1996 .....	1,476.8	1,160.9	16.4	28.8	270.8	1,211.4	265.5	132.1	321.5	661.9	361.4
1997 .....	1,474.0	1,133.7	18.1	26.4	295.8	1,221.3	252.7	136.8	303.6	670.3	363.3
1998 .....	1,616.9	1,271.4	15.7	26.9	302.9	1,349.9	267.0	148.5	330.5	743.0	394.9
1999 .....	1,666.5	1,334.9	13.4	18.5	299.7	1,404.5	261.9	153.7	356.4	760.3	396.1
2000 .....	1,593.1	1,261.8	13.8	22.3	295.3	1,340.4	252.7	152.1	328.6	723.4	389.1
<b>MONTHLY DATA</b>											
<b>Not Seasonally Adjusted</b>											
2000: January .....	105.2	80.5	1.0	0.7	23.0	91.2	14.1	8.1	15.9	55.4	25.8
February .....	122.1	90.2	0.9	1.7	29.4	106.8	15.3	9.9	22.9	58.1	31.2
March .....	137.2	115.3	0.7	0.5	20.7	115.9	21.3	11.9	25.4	68.4	31.5
April .....	151.8	121.5	1.3	1.4	27.5	124.0	27.8	12.2	35.8	65.6	38.1
May .....	155.3	125.7	1.4	0.7	27.5	128.5	26.8	14.2	35.6	70.2	35.3
June .....	148.5	118.7	1.0	3.2	25.6	124.1	24.4	14.2	31.4	68.2	34.6
July .....	138.0	108.5	1.0	3.3	25.2	114.7	23.3	14.6	30.8	57.6	34.9
August .....	142.0	114.8	1.0	2.9	23.2	118.8	23.2	13.9	29.8	62.6	35.7
September .....	132.4	104.6	1.2	2.4	24.3	110.2	22.2	14.2	28.6	56.0	33.7
October .....	141.3	111.0	2.1	2.1	26.1	117.6	23.7	15.2	32.6	64.6	28.9
November .....	117.8	90.7	1.2	2.0	23.9	98.9	18.9	12.1	25.5	49.3	30.9
December .....	101.6	80.2	1.0	1.4	18.9	89.7	11.8	11.4	14.4	47.3	28.5
2001: January <sup>f</sup> .....	106.3	85.5	1.0	1.4	18.4	92.3	14.0	6.6	17.2	54.0	28.5
February <sup>f</sup> .....	108.0	85.8	0.6	0.8	20.7	94.9	13.1	8.2	17.8	56.1	26.0
March <sup>p</sup> .....	135.2	107.5	1.3	2.1	24.3	115.9	19.3	12.2	26.9	61.7	34.4
Year to date: 2000 .....	364.6	286.0	2.6	3.0	73.1	313.9	50.7	30.0	64.1	181.9	88.5
2001 .....	349.5	278.8	2.9	4.4	63.4	303.1	46.4	27.0	61.9	171.7	88.8
<b>Seasonally Adjusted Annual Rate</b>											
2000: January .....	1,744	1,361	32		351	(NA)	(NA)	153	381	821	389
February .....	1,822	1,324	40		458	(NA)	(NA)	189	471	748	414
March .....	1,630	1,327	16		287	(NA)	(NA)	155	330	772	373
April .....	1,652	1,310	30		312	(NA)	(NA)	140	370	710	432
May .....	1,591	1,258	26		307	(NA)	(NA)	148	345	737	361
June .....	1,571	1,227	39		305	(NA)	(NA)	144	301	762	364
July .....	1,527	1,201	43		283	(NA)	(NA)	144	318	674	391
August .....	1,519	1,229	41		249	(NA)	(NA)	145	299	703	372
September .....	1,537	1,226	41		270	(NA)	(NA)	157	308	674	398
October .....	1,529	1,232	40		257	(NA)	(NA)	158	317	720	334
November .....	1,564	1,233	41		290	(NA)	(NA)	146	326	670	422
December .....	1,577	1,298	37		242	(NA)	(NA)	167	255	714	441
2001: January <sup>f</sup> .....	1,671	1,351	43		277	(NA)	(NA)	127	396	747	401
February <sup>f</sup> .....	1,634	1,297	24		313	(NA)	(NA)	151	363	743	377
March <sup>p</sup> .....	1,613	1,241	42		330	(NA)	(NA)	157	353	700	403
<b>AVERAGE RELATIVE STANDARD ERRORS<sup>2</sup></b>											
Annual .....	1	1	7	11	3	1	3	3	2	1	1
Monthly .....	3	3	11	13	9	3	9	7	6	4	4
Year to date .....	2	1	8	18	8	2	5	13	4	2	2

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

<sup>1</sup>Metropolitan statistical areas.

<sup>2</sup>Average Relative Standard Errors (Avg. RSE): Annual—Avg. RSE for the last 2 years; Year to date—Avg. RSE for the current period and the same period last year; Monthly—Avg. RSE for the latest 6-month period (January through June or July through December).



**Table 2. New Privately-Owned Housing Units Authorized in Permit-Issuing Places—Con.**

[Thousands of units. Detail may not add to total because of rounding]

Period	United States							Northeast			Midwest			South			West		
	Total	In structures with—				Inside MSAs <sup>1</sup>	Outside MSAs <sup>1</sup>	Total	In structures with—		Total	In structures with—		Total	In structures with—		Total	In structures with—	
		1 unit	2 units	3 and 4 units	5 units or more				1 unit	2 units or more		1 unit	2 units or more		1 unit	2 units or more		1 unit	2 units or more
<b>MONTHLY DATA—Con.</b>																			
<b>Seasonally Adjusted Annual Rate</b>																			
1998:	January	1,555	1,158	71	326	(NA)	(NA)	173	132	41	336	261	75	655	485	170	391	280	111
	February	1,647	1,191	77	379	(NA)	(NA)	170	142	28	373	268	105	703	498	205	401	283	118
	March	1,605	1,162	71	372	(NA)	(NA)	149	126	23	316	234	82	747	511	236	393	291	102
	April	1,547	1,157	57	333	(NA)	(NA)	140	118	22	304	239	65	690	502	188	413	298	115
	May	1,554	1,165	66	323	(NA)	(NA)	142	113	29	321	244	77	723	522	201	368	286	82
	June	1,551	1,148	73	330	(NA)	(NA)	155	122	33	314	234	80	687	505	182	395	287	108
	July	1,610	1,181	76	353	(NA)	(NA)	158	118	40	313	237	76	735	527	208	404	299	105
	August	1,654	1,196	72	386	(NA)	(NA)	157	124	33	309	237	72	790	544	246	398	291	107
	September	1,577	1,187	68	322	(NA)	(NA)	162	123	39	319	241	78	708	529	179	388	294	94
	October	1,719	1,217	70	432	(NA)	(NA)	174	123	51	338	255	83	789	536	253	418	303	115
	November	1,672	1,248	59	365	(NA)	(NA)	174	130	44	330	267	63	717	541	176	451	310	141
	December	1,742	1,317	75	350	(NA)	(NA)	179	137	42	408	302	106	750	573	177	405	305	100
1999:	January	1,745	1,269	79	397	(NA)	(NA)	167	132	35	323	259	64	806	561	245	449	317	132
	February	1,748	1,308	69	371	(NA)	(NA)	184	152	32	354	277	77	809	572	237	401	307	94
	March	1,681	1,255	65	361	(NA)	(NA)	170	129	41	354	266	88	748	554	194	409	306	103
	April	1,595	1,223	65	307	(NA)	(NA)	165	128	37	344	258	86	695	536	159	391	301	90
	May	1,639	1,253	60	326	(NA)	(NA)	161	131	30	344	253	91	716	555	161	418	314	104
	June	1,696	1,266	63	367	(NA)	(NA)	174	125	49	340	256	84	755	553	202	427	332	95
	July	1,673	1,263	64	346	(NA)	(NA)	161	127	34	335	256	79	769	561	208	408	319	89
	August	1,658	1,233	66	359	(NA)	(NA)	162	127	35	344	262	82	760	552	208	392	292	100
	September	1,553	1,200	65	288	(NA)	(NA)	153	118	35	343	263	80	681	530	151	376	289	87
	October	1,636	1,204	62	370	(NA)	(NA)	145	115	30	342	264	78	765	538	227	384	287	97
	November	1,678	1,238	68	372	(NA)	(NA)	171	123	48	372	269	103	742	551	191	393	295	98
	December	1,683	1,266	68	349	(NA)	(NA)	174	128	46	347	274	73	751	540	211	411	324	87
2000:	January	1,762	1,317	65	380	(NA)	(NA)	195	133	62	378	308	70	751	563	188	438	313	125
	February	1,661	1,223	67	371	(NA)	(NA)	162	124	38	360	264	96	732	549	183	407	286	121
	March	1,597	1,238	68	291	(NA)	(NA)	164	127	37	364	272	92	679	549	130	390	290	100
	April	1,559	1,164	58	337	(NA)	(NA)	162	114	48	342	252	90	664	505	159	391	293	98
	May	1,511	1,150	62	299	(NA)	(NA)	153	116	37	310	231	79	683	516	167	365	287	78
	June	1,528	1,127	61	340	(NA)	(NA)	150	106	44	311	224	87	675	514	161	392	283	109
	July	1,511	1,117	55	339	(NA)	(NA)	156	112	44	316	227	89	666	504	162	373	274	99
	August	1,486	1,140	66	280	(NA)	(NA)	140	109	31	300	229	71	644	508	136	402	294	108
	September	1,518	1,157	65	296	(NA)	(NA)	159	113	46	311	230	81	669	512	157	379	302	77
	October	1,546	1,191	66	289	(NA)	(NA)	152	119	33	327	238	89	680	534	146	387	300	87
	November	1,598	1,183	67	348	(NA)	(NA)	168	116	52	294	235	59	723	523	200	413	309	104
	December	1,507	1,158	53	296	(NA)	(NA)	145	112	33	263	202	61	667	521	146	432	323	109
2001:	January	1,724	1,287	57	380	(NA)	(NA)	148	119	29	343	283	60	759	554	205	474	331	143
	February <sup>P</sup>	1,675	1,239	68	368	(NA)	(NA)	192	120	72	329	248	81	737	547	190	417	324	93
	March <sup>P</sup>	1,615	1,203	72	340	(NA)	(NA)	146	105	41	316	248	68	728	534	194	425	316	109
<b>AVERAGE RELATIVE STANDARD ERRORS<sup>3</sup></b>																			
Annual	(percent)	(Z)	(Z)	3	3	(Z)	(Z)	3	1	1	2	1	1	3	1	1	1	1	(Z)
Monthly	(percent)	1	(Z)	5	4	2	(Z)	4	2	2	5	2	1	5	1	3	1	1	1
Year to date	(percent)	(Z)	(Z)	2	4	(Z)	(Z)	2	2	2	1	1	3	1	1	1	1	1	2

NA Not available. <sup>P</sup>Preliminary. <sup>R</sup>Revised. Z Less than 0.5 percent.

<sup>1</sup>Metropolitan statistical areas.

<sup>2</sup>Reflects revisions not distributed to months.

<sup>3</sup>Average Relative Standard Errors (Avg. RSE): Annual—RSE for the latest year; Year to date—Avg. RSE for the current period and the same period last year; Monthly—Avg. RSE for the latest 6-month period (January through June or July through December).

Table 3. **New Privately-Owned Housing Units Authorized, but Not Started, in Permit-Issuing Places at End of Period**

[Thousands of units. Detail may not add to total because of rounding]

Authorized, but not started at end of period	United States				Northeast				Midwest				South				West			
	Total	In structures with—			Total	In structures with—			Total	In structures with—			Total	In structures with—			Total	In structures with—		
		1 unit	2 to 4 units	5 units or more		1 unit	2 to 4 units	5 units or more		1 unit	2 to 4 units	5 units or more		1 unit	2 to 4 units	5 units or more		1 unit	2 to 4 units	5 units or more
<b>END OF YEAR</b>																				
<b>16,000-Place Series</b>																				
1981	145.5	60.1	10.7	74.7	23.3	11.5	0.9	10.8	10.0	5.0	1.7	3.2	77.5	29.8	4.9	42.8	34.7	13.8	3.1	17.9
1982	167.8	66.9	11.6	89.3	19.4	9.4	1.0	9.0	10.4	4.5	1.7	4.2	100.3	38.5	5.9	55.9	37.7	14.5	2.9	20.2
1983	178.0	68.9	13.0	96.1	21.9	12.6	1.1	8.2	12.2	5.2	1.8	5.1	104.2	33.6	6.8	63.8	39.8	17.4	3.3	19.0
1984	192.5	66.2	10.2	116.1	23.2	10.8	1.2	11.2	14.0	5.1	1.5	7.5	109.4	34.5	4.8	70.1	45.8	15.7	2.7	27.4
<b>17,000-Place Series</b>																				
1985	223.3	80.6	13.7	129.0	36.9	19.2	2.1	15.7	20.4	5.8	2.2	12.4	120.6	43.3	5.7	71.6	45.4	12.3	3.8	29.3
1986	205.2	92.8	12.3	100.2	34.4	21.2	2.4	10.8	21.1	6.4	2.3	12.4	91.3	43.5	3.8	43.9	58.4	21.7	3.7	33.0
1987	155.0	79.3	11.1	64.6	36.8	23.3	2.1	11.4	11.9	6.5	2.2	3.2	68.6	33.8	3.5	31.4	37.7	15.7	3.3	18.6
1988	156.4	76.4	9.9	70.1	32.9	20.0	1.9	11.0	15.5	5.9	2.3	7.3	64.0	30.4	2.9	30.7	44.0	20.1	2.7	21.1
1989	173.9	93.1	8.4	72.5	34.1	25.1	1.6	7.4	18.0	7.5	1.8	8.7	73.5	34.3	2.1	37.1	48.3	26.2	2.8	19.2
1990	131.6	75.0	8.5	48.1	25.8	20.0	1.3	4.5	14.2	5.7	2.2	6.3	55.1	27.3	2.1	25.7	36.5	22.0	2.9	11.6
1991	126.3	71.1	4.7	50.6	24.4	17.3	0.7	6.4	16.9	6.4	1.4	9.1	51.3	26.0	1.3	24.0	33.8	21.4	1.4	11.1
1992	108.7	71.9	5.1	31.7	18.6	13.5	0.7	4.5	13.4	8.8	1.7	2.9	49.8	33.3	1.3	15.2	26.9	16.3	1.5	9.1
1993	118.9	72.5	3.7	42.8	22.3	15.4	0.5	6.4	14.3	8.6	1.2	4.5	58.5	35.2	1.0	22.3	23.8	13.2	1.0	9.6
1994	115.6	66.0	3.6	46.1	17.1	12.2	0.4	4.5	13.1	8.3	1.2	3.7	58.1	31.2	1.1	25.8	27.3	14.2	1.0	12.1
<b>19,000-Place Series</b>																				
1995	142.2	80.1	4.5	57.6	18.3	13.5	0.5	4.3	18.7	12.8	1.4	4.5	71.6	36.7	1.3	33.6	33.5	17.1	1.2	15.2
1996	126.4	67.5	4.8	54.2	16.0	9.0	0.6	6.4	16.6	10.6	1.7	4.2	68.1	32.3	1.3	34.4	25.8	15.5	1.2	9.2
1997	111.1	63.6	3.7	43.8	11.3	7.1	0.4	3.8	14.1	9.2	1.3	3.6	58.7	32.0	1.2	25.5	26.9	15.2	0.8	10.8
1998	137.1	79.5	3.1	54.5	16.0	10.2	0.5	5.3	18.2	11.8	1.1	5.3	75.9	41.4	0.8	33.7	27.1	16.2	0.7	10.2
1999	138.9	79.3	3.9	55.7	15.7	9.0	0.6	6.1	16.5	11.4	1.2	3.9	79.3	40.5	1.2	37.5	27.4	18.4	1.0	8.1
2000 <sup>f</sup>	132.2	79.0	4.2	49.1	16.0	7.9	0.9	7.3	19.0	12.9	1.1	5.0	67.3	40.3	1.1	25.9	29.9	17.8	1.1	11.0
<b>END OF MONTH</b>																				
2000: January	137.3	79.3	3.0	55.0	17.3	9.4	0.5	7.5	16.3	11.1	0.9	4.3	75.8	41.2	0.9	33.7	27.9	17.7	0.8	9.5
February	132.4	80.2	3.1	49.0	15.9	9.8	0.5	5.6	14.1	11.2	0.9	1.9	76.3	42.8	1.0	32.4	26.1	16.3	0.7	9.0
March	150.9	93.6	3.3	54.0	17.3	11.3	0.5	5.5	22.3	16.3	1.0	5.0	80.1	48.4	1.1	30.7	31.2	17.7	0.7	12.8
April	143.6	87.5	4.0	52.1	19.1	11.9	0.7	6.4	22.1	15.6	1.3	5.2	76.2	44.9	1.2	30.1	26.2	15.0	0.9	10.3
May	136.4	88.5	5.9	42.0	18.6	11.4	1.0	6.1	20.2	15.5	1.8	2.8	72.0	44.0	1.8	26.2	25.6	17.5	1.2	6.9
June	144.4	90.2	6.4	47.8	20.4	11.8	1.1	7.4	23.0	16.4	2.1	4.5	69.1	41.7	1.9	25.5	31.9	20.2	1.3	10.4
July	137.8	86.0	4.6	47.3	18.7	11.7	0.8	6.2	20.9	14.9	1.5	4.4	70.5	42.1	1.2	27.1	27.7	17.3	0.9	9.5
August	137.1	87.0	4.5	45.7	17.8	11.4	0.8	5.6	20.0	14.4	1.4	4.2	68.9	42.1	1.2	25.6	30.5	19.1	1.1	10.2
September	134.6	82.1	4.6	47.8	16.9	9.5	0.9	6.5	19.9	13.6	1.3	5.0	70.5	40.4	1.4	28.7	27.3	18.7	1.0	7.6
October	129.3	81.0	4.3	44.0	15.7	9.9	0.7	5.1	19.0	12.6	1.2	5.2	65.0	38.2	1.4	25.4	29.6	20.3	1.0	8.3
November	131.1	82.3	3.7	45.1	17.4	9.4	0.6	7.4	18.8	13.8	1.1	3.8	67.0	39.7	1.2	26.1	27.9	19.4	0.8	7.7
December	132.2	79.0	4.2	49.1	16.0	7.9	0.9	7.3	19.0	12.9	1.1	5.0	67.3	40.3	1.1	25.9	29.9	17.8	1.1	11.0
2001: January <sup>f</sup>	142.6	83.3	3.6	55.7	17.1	8.2	0.7	8.1	19.2	12.5	0.9	5.8	71.8	41.8	1.1	29.0	34.6	20.8	0.9	12.9
February <sup>f</sup>	145.7	85.4	5.0	55.3	18.5	8.7	0.9	8.9	20.1	14.5	1.2	4.4	71.0	40.7	1.7	28.6	36.1	21.5	1.2	13.4
March <sup>p</sup>	155.8	95.4	5.3	55.0	17.9	10.2	0.9	6.8	21.4	16.5	1.3	3.5	77.6	46.1	1.7	29.8	38.9	22.5	1.4	15.0
<b>AVERAGE RELATIVE STANDARD ERRORS<sup>1</sup></b>																				
End of period . . . (percent) . . .	3	4	8	5	13	20	19	4	8	8	12	25	4	4	15	7	6	8	15	9

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

<sup>1</sup>Average Relative Standard Errors: Average for the latest 6-month period (January through June or July through December).

Note: These backlog data represent the number of housing units authorized in all months up to and including the last day of the reporting period and not started as of that date without regard to the months of original permit issuance. Cancelled, abandoned, expired, and revoked permits are excluded from the backlog.

**Table 4. New Privately-Owned Housing Units Started by Location and Type of Structure**

[Thousands of units. Detail may not add to total because of rounding]

Period	United States			Inside MSAs <sup>1</sup>			Outside MSAs <sup>1</sup>			Northeast			Midwest			South			West			
	Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—		Total <sup>2</sup>	In structures with—		
		1 unit	5 units or more		1 unit	5 units or more		1 unit	5 units or more		1 unit	5 units or more		1 unit	5 units or more		1 unit	5 units or more		1 unit	5 units or more	1 unit
<b>ANNUAL DATA</b>																						
1981	1,084	705	288	760	458	236	324	247	52	117	84	25	165	110	40	562	363	153	240	148	69	
1982	1,062	663	320	785	452	274	277	211	46	117	79	31	149	99	38	591	357	189	205	127	61	
1983	1,703	1,068	522	1,351	795	464	352	272	58	168	123	35	218	153	48	935	557	317	382	234	121	
1984	1,750	1,084	544	1,415	830	491	335	254	53	204	158	35	243	167	60	866	528	274	436	230	175	
1985	1,742	1,072	576	1,494	882	535	248	190	41	252	182	55	240	148	77	782	504	240	468	239	204	
1986	1,805	1,179	542	1,546	970	508	259	209	34	294	228	50	296	188	91	733	504	201	483	261	200	
1987	1,620	1,146	409	1,372	934	385	248	212	24	269	204	50	298	203	81	634	485	129	420	255	148	
1988	1,488	1,081	348	1,243	874	323	245	207	25	235	181	42	274	194	66	575	443	115	404	264	125	
1989	1,376	1,003	318	1,128	798	289	248	205	29	178	132	37	266	190	62	536	409	109	396	272	108	
1990	1,193	895	260	947	685	233	246	210	27	131	104	21	253	193	50	479	371	99	329	226	91	
1991	1,014	840	138	789	648	117	225	193	21	113	99	8	233	191	31	414	353	51	254	197	47	
1992	1,200	1,030	139	932	793	117	268	237	22	127	112	11	288	236	42	497	438	50	288	244	36	
1993	1,288	1,126	133	1,032	897	114	256	229	19	126	116	8	298	251	37	562	498	55	302	261	33	
1994	1,457	1,198	224	1,183	958	200	274	241	23	138	123	12	329	268	50	639	522	107	351	286	54	
1995	1,354	1,076	244	1,106	861	221	248	215	23	118	102	12	290	234	46	615	485	119	331	256	67	
1996	1,477	1,161	271	1,211	936	242	265	225	29	132	112	15	321	254	51	662	524	125	361	271	79	
1997	1,474	1,134	296	1,221	923	267	253	211	29	137	111	21	304	238	48	670	507	151	363	278	76	
1998	1,617	1,271	303	1,350	1,036	280	267	235	23	148	122	21	330	273	45	743	574	155	395	303	83	
1999	1,666	1,335	300	1,405	1,100	280	262	235	20	154	129	20	356	297	49	760	595	154	396	314	76	
2000	1,593	1,262	295	1,340	1,037	273	253	225	22	152	120	26	329	269	49	723	570	143	389	303	78	
<b>QUARTERLY DATA</b>																						
1997:	1st quarter	297	238	51	255	202	47	42	36	4	26	20	5	49	40	6	143	115	26	80	63	15
	2nd quarter	419	325	83	342	260	74	77	65	9	36	31	5	92	74	14	190	143	43	101	77	21
	3rd quarter	400	315	75	328	252	68	72	62	7	40	33	6	88	72	12	177	134	39	96	75	18
	4th quarter	357	257	86	296	209	78	62	48	8	35	28	6	75	52	16	161	115	43	87	62	22
1998:	1st quarter	325	258	57	279	219	52	46	39	5	28	22	5	55	45	7	157	125	29	84	66	16
	2nd quarter	448	360	74	366	287	68	82	73	6	40	34	4	97	83	9	200	158	38	111	85	23
	3rd quarter	445	348	86	369	281	80	76	67	7	41	35	5	92	76	13	201	153	44	111	84	24
	4th quarter	399	305	86	336	250	79	63	55	6	39	31	7	86	68	15	185	138	44	89	68	20
1999:	1st quarter	370	294	68	318	248	64	52	46	4	30	24	5	59	52	5	193	149	41	88	69	17
	2nd quarter	455	377	69	378	307	64	76	70	5	43	38	4	106	90	14	196	159	34	110	91	17
	3rd quarter	453	356	88	381	291	82	73	64	6	46	36	8	99	81	14	197	152	42	111	86	23
	4th quarter	389	308	74	328	254	69	61	55	5	35	31	4	91	74	15	175	136	36	88	67	19
2000:	1st quarter	365	286	73	314	242	68	51	44	5	30	22	7	64	52	11	182	142	38	89	70	17
	2nd quarter	456	366	81	377	294	75	79	72	5	41	34	5	103	88	12	204	161	40	108	83	23
	3rd quarter	412	328	73	344	267	67	69	61	6	43	33	7	89	73	13	176	142	31	104	80	22
	4th quarter	361	282	69	306	235	64	54	47	5	39	31	6	72	57	13	161	125	33	88	70	16
2001:	1st quarter <sup>P</sup>	349	279	63	303	237	60	46	41	4	27	19	7	62	50	10	172	139	30	89	71	16
<b>AVERAGE RELATIVE STANDARD ERRORS<sup>3</sup></b>																						
Annual . . . . .(percent) . .	1	1	5	1	1	5	4	5	13	6	3	36	3	3	10	2	2	6	1	1	3	
Quarterly . . . . .(percent) . .	1	1	5	1	1	5	6	6	22	3	4	8	4	4	18	2	2	6	2	1	6	

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

<sup>1</sup>Metropolitan statistical areas.

<sup>2</sup>Includes units started in structures with two to four units.

<sup>3</sup>Average Relative Standard Errors (Avg. RSE): Annual—Avg. RSE for the last 2 years; Quarterly—Avg. RSE for the latest 2-quarter period (quarter 1 through quarter 2 or quarter 3 through quarter 4).

**Table 5. Seasonal Indexes Used to Adjust Housing Units Started**

Period	United States implicit index <sup>1</sup>	In structures with—						All units			
		1 unit				2 to 4 units	5 units or more	North-east	Midwest	South	West
		North-east	Midwest	South	West						
<b>2000</b>											
December .....	77.3	83.0	66.1	75.6	73.6	79.0	93.7	82.9	68.4	80.4	78.2
<b>2001</b>											
January <sup>r</sup> .....	76.3	59.8	55.9	84.8	83.3	67.6	79.8	61.4	51.6	85.6	84.1
February <sup>r</sup> .....	79.3	61.7	61.5	89.1	81.6	71.3	79.4	62.8	56.8	87.9	80.3
March <sup>p</sup> .....	100.6	92.4	93.2	109.1	108.1	100.7	88.4	93.8	91.7	105.8	102.6

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

<sup>1</sup>The implicit seasonal index is the ratio of the unadjusted number of housing units started in the United States to the seasonally adjusted national total of housing units started. It provides an indication of the overall seasonality for the particular month.

Note: These seasonal indexes include trading-day adjustment factors.

**Table 6. Seasonal Indexes Used to Adjust Housing Units Authorized in Permit-Issuing Places**

Period	United States implicit index <sup>1</sup>	In structures with—						All units			
		1 unit				2 to 4 units	5 units or more	North-east	Midwest	South	West
		North-east	Midwest	South	West						
<b>2000</b>											
December .....	80.1	77.8	63.1	77.3	77.0	82.4	100.5	80.4	69.1	82.7	82.5
<b>2001</b>											
January .....	79.9	65.5	53.6	91.3	82.9	75.7	85.5	69.4	59.2	88.6	83.2
February <sup>r</sup> .....	80.0	62.0	64.5	92.2	81.1	79.0	77.5	65.7	67.2	88.7	82.5
March <sup>p</sup> .....	106.3	98.3	106.3	113.7	108.8	101.2	96.3	99.8	104.1	110.0	107.1

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

<sup>1</sup>The implicit seasonal index is the ratio of the unadjusted number of housing units authorized by building permits in the United States to the seasonally adjusted national total of housing units authorized. It provides an indication of the overall seasonality for the particular month.

Note: These seasonal indexes include trading-day adjustment factors.



# Supplement 1.

## Total Time From Authorization of Construction to Start of Private Residential Buildings

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This supplement contains annual statistics on the length of time from authorization of construction to start of new private residential buildings in permit-issuing places. Data are obtained from the U.S. Census Bureau's Survey of Construction.

For the purpose of this survey, a housing unit is considered authorized when a building permit is issued for construction of the unit. A housing unit is considered started when excavation begins for the footings or foundation. In a multifamily building, all housing units are defined as being started when excavation for the building has begun.

Table S1-1 shows the estimated average number of months it takes to start construction on a residential building once the permit has been issued. Table S1-2 shows a percentage distribution for 2000 of buildings started by the number of months from authorization. Data for Tables S1-1 and S1-2 are shown for the United States and the four census regions by the number of housing units in the building.

Since the Survey of Construction is designed to collect data on a monthly basis, it can only be determined in what month a building was authorized or started rather than the precise day. For example, buildings started on August 1 or August 31 would be counted as starting in August. Because of this, it is assumed for this supplement that a building authorized and started in the same month

was started immediately after the permit was issued. Buildings started in the first month after authorization took the full month to begin; those started in the second month after authorization took 2 months; those started in the third month after authorization took 3 months, and so on.

These estimates are based on a sample survey and may differ from the results that 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. Estimates of the standard errors have been computed from the sample data. They are presented in the tables in the form of relative standard errors. The relative standard error equals the standard error divided by the estimated value to which it refers. The average relative standard errors shown in Table S1-1 are averages of the estimated relative standard errors for the most recent 2 years. The relative standard errors of estimated percentages in Table S1-2 are shown in Table S1-3. Where estimates involve small numbers of units, the relative standard errors may be very large, indicating that extra care should be taken when interpreting the results. For a more detailed description of sampling variability, see the appendix to Current Construction Reports, C20/01-1.

**Table S1-1. Average Number of Months From Authorization to Start of New Buildings Started by Location and Type of Structure**

Year	United States			Northeast			Midwest			South			West		
	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more
1990	0.8	1.5	2.2	1.4	2.7	3.7	0.4	0.5	1.1	0.9	2.0	2.7	0.9	1.6	2.0
1991	0.8	1.5	1.8	1.3	2.1	3.2	0.4	0.9	1.0	0.9	0.8	2.2	0.9	1.9	2.0
1992	0.8	0.9	2.0	1.3	1.5	2.4	0.4	0.5	1.6	0.8	1.0	2.1	0.9	0.8	2.2
1993	0.8	1.2	1.6	1.3	2.6	1.9	0.5	0.7	0.8	0.9	0.9	1.9	0.7	1.1	1.5
1994	0.7	1.1	1.8	1.2	1.7	2.4	0.4	0.7	1.1	0.9	0.8	2.2	0.6	1.0	1.5
1995	0.7	1.1	1.6	1.0	2.2	2.2	0.5	0.7	0.4	0.8	0.7	2.0	0.5	1.0	1.8
1996	0.7	1.3	1.8	1.0	1.8	1.2	0.6	0.5	1.3	0.9	1.0	2.3	0.6	1.2	1.4
1997	0.7	0.8	1.9	0.9	1.2	2.2	0.5	0.6	0.7	0.8	0.8	2.7	0.5	0.9	0.9
1998	0.6	1.0	1.5	0.7	1.0	1.0	0.5	0.6	0.8	0.8	1.3	2.0	0.5	0.8	1.2
1999	0.7	1.1	1.8	0.8	1.6	1.1	0.5	0.5	1.4	0.8	0.9	2.3	0.5	1.1	1.3
2000	0.7	1.4	1.7	1.1	1.8	1.4	0.5	0.7	0.8	0.8	1.7	2.4	0.6	1.3	1.1
Average relative standard errors.....(percent) .	3	18	5	17	7	20	9	(A)	21	4	11	7	7	15	6

A Relative standard error of 100 percent or more. The estimate should be used with caution because a high standard error indicates lack of precision in the estimate.

**Table S1-2. Percentage Distribution of New Buildings Started in 2000 by Number of Months From Authorization and by Location and Type of Structure**

[Percents may not add to 100 because of rounding]

Period	United States			Northeast			Midwest			South			West		
	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more
Prior to authorization or same month as authorization	53	44	35	49	25	34	60	64	56	48	37	22	59	49	45
1 month	34	30	26	33	39	44	32	25	19	37	31	24	30	23	30
2 months	7	12	14	10	15	7	5	6	10	9	15	19	6	13	10
3 months	2	3	9	2	5	2	2	2	9	2	3	12	2	4	5
4 months	1	3	5	2	3	4	(Z)	1	1	1	5	7	1	2	4
5 or 6 months	1	4	6	1	6	5	(Z)	1	2	1	4	9	1	5	4
7 months or more	1	4	4	3	6	3	1	2	2	1	4	6	1	4	3

Z Less than 0.5 percent.

**Table S1-3. Relative Standard Errors of Percentage Distribution of New Buildings Started in 2000 by Number of Months From Authorization and by Location and Type of Structure**

Period	United States			Northeast			Midwest			South			West		
	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more	1 unit	2 to 4 units	5 units or more
Prior to authorization or same month as authorization	1	6	6	4	5	26	3	8	10	2	16	12	3	11	5
1 month	2	11	6	6	8	25	7	13	20	3	30	7	5	17	4
2 months	4	12	9	10	18	39	11	44	26	6	17	13	8	20	8
3 months	5	20	12	20	34	29	19	49	31	6	32	15	10	53	10
4 months	9	15	10	28	26	32	24	23	61	11	24	12	19	47	14
5 or 6 months	9	37	17	32	56	41	32	(X)	61	12	58	22	18	72	16
7 months or more	12	26	11	54	62	48	21	(A)	29	11	23	15	12	35	16

A Relative standard error of 100 percent or more. The estimate should be used with caution because a high standard error indicates lack of precision in the estimate.

X Not applicable.

# Supplement 2.

## Total Time From Start of Construction to Completion of Private Residential Buildings

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This supplement contains annual statistics on the length of time from start of construction to completion of new private residential buildings. Data are obtained from the U.S. Census Bureau's Survey of Construction.

For the purpose of this survey, a housing unit is considered started when excavation begins for the footings or foundation. In a multifamily building, all housing units are defined as being started when excavation for the building has begun. One-family houses are classified as completed either when all finish flooring has been installed (or carpeting, if used in place of finish flooring) or when occupied. All of the units in a multifamily building are considered as completed when 50 percent or more of the units are occupied or available for occupancy.

Table S2-1 shows the estimated average number of months it takes to build a one-family house in the United States, by the four census regions, and by purpose of construction. By "purpose of construction," we mean that one-family houses are classified as either *built for sale* (houses built where the house and lot are both to be included in the sales transaction), *contractor-built* (houses built on the owner's land under the supervision of a single general contractor), or *owner-built* (houses built on the owner's land under the supervision of the owner). The United States and regional data include a small number of houses built for rent.

Table S2-2 shows the estimated average number of months it takes to build multifamily buildings by the number of units in the building; data are shown for buildings with five units or more for the United States and the four census regions in Table S2-3. Table S2-4 shows a percentage distribution for 2000 of buildings completed by the number of months from start and the number of units in the building.

Since the Survey of Construction is designed to collect data on a monthly basis, it can only be determined in what month a building was started or completed rather than the precise day. For example, buildings started on June 1 or June 30 would both be counted as starting in June. Because of this, it is assumed for this supplement that a building started and completed in the same month took the full month to build. Buildings completed in the first month after start took 1.5 months; those completed in the second month after start took 2.5 months; those completed in the third month after start took 3.0 months; those completed in the fourth month after start took 4.0 months, and so on.

These estimates are based on a sample survey and may differ from the results that 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. Estimates of the standard errors have been computed from the sample data. They are presented in the tables in the form of relative standard errors. The relative standard error equals the standard error divided by the estimated value to which it refers. The average relative standard errors shown in Tables S2-1, S2-2, and S2-3 are averages of the estimated relative standard errors for the most recent 2 years. The relative standard errors of estimated percentages in Table S2-4 are shown in Table S2-5. Where estimates involve small numbers of units, the relative standard errors may be very large, indicating that extra care should be taken when interpreting the results. For a more detailed description of sampling variability, see the appendix to Current Construction Reports, C20/01-1.

**Table S2-1. Average Number of Months From Start to Completion of New One-Family Houses Completed by Region and Purpose of Construction**

Year	United States	Region				Construction purpose		
		Northeast	Midwest	South	West	Built for sale	Contractor built	Owner built
1990.....	6.4	9.3	5.6	5.7	6.9	5.9	5.3	10.3
1991.....	6.3	8.9	5.6	5.5	6.9	5.6	5.1	10.2
1992.....	5.8	7.6	5.6	5.1	6.1	5.0	5.0	9.5
1993.....	5.6	7.2	5.5	5.2	6.0	4.9	5.4	9.0
1994.....	5.6	7.1	5.7	5.3	5.6	4.9	5.3	9.1
1995.....	5.9	7.4	6.0	5.4	6.0	5.2	5.8	9.5
1996.....	6.0	8.2	6.1	5.6	5.6	5.2	5.8	9.9
1997.....	6.0	7.3	6.2	5.6	5.8	5.2	5.9	9.8
1998.....	6.0	7.1	6.2	5.5	6.1	5.4	6.0	9.5
1999.....	6.2	7.1	7.0	5.7	6.3	5.6	6.4	9.6
2000.....	6.3	7.6	6.5	5.9	6.1	5.6	6.6	9.9
Average relative standard errors.....(percent) ..	1	3	3	2	2	1	3	4

**Table S2-2. Average Number of Months From Start to Completion of New Multifamily Buildings Completed by Number of Units in the Building**

Year	Buildings with 2 to 4 units	Buildings with 5 units or more					
		Total	5 to 9 units	10 to 19 units	20 to 29 units	30 to 49 units	50 units or more
1990.....	7.6	9.4	9.2	9.3	9.1	11.4	15.6
1991.....	8.5	9.7	9.2	10.4	8.8	10.5	14.2
1992.....	7.1	9.1	8.6	8.8	11.0	9.7	15.2
1993.....	7.4	8.6	7.6	9.5	9.3	11.0	14.7
1994.....	7.3	9.3	8.2	11.0	8.8	9.8	13.3
1995.....	6.8	9.1	8.6	9.5	9.4	9.8	12.9
1996.....	7.5	8.9	8.6	8.9	10.4	9.8	10.8
1997.....	7.5	9.2	8.5	9.3	10.1	11.2	12.7
1998.....	7.7	9.6	8.6	9.6	10.9	10.0	12.7
1999.....	9.0	10.1	9.3	10.1	10.9	11.1	13.5
2000.....	8.5	10.4	9.7	10.6	11.0	10.6	15.1
Average relative standard errors.....(percent) ..	5	2	2	3	3	6	3

**Table S2-3. Average Number of Months From Start to Completion of New Buildings Completed With 5 Units or More by Region**

Year	United States	Region			
		Northeast	Midwest	South	West
1990.....	9.4	11.4	8.2	7.9	10.7
1991.....	9.7	12.8	8.0	8.4	11.3
1992.....	9.1	20.2	6.8	7.7	10.4
1993.....	8.6	8.0	8.0	7.8	10.1
1994.....	9.3	26.6	7.9	7.6	8.6
1995.....	9.1	19.9	8.2	8.4	8.9
1996.....	8.9	8.9	8.1	9.1	9.1
1997.....	9.2	8.7	8.8	9.1	9.6
1998.....	9.6	9.7	9.2	9.2	10.6
1999.....	10.1	11.4	9.1	10.0	11.0
2000.....	10.4	9.4	9.9	10.6	11.0
Average relative standard errors.....(percent) ..	2	10	7	3	2

**Table S2-4. Percentage Distribution of New Buildings Completed in 2000 by Number of Months From Start and by Number of Units in the Building**

[Percents may not add to 100 because of rounding]

Period	Buildings with 1 unit	Buildings with 2 to 4 units	Buildings with 5 units or more					
			Total	5 to 9 units	10 to 19 units	20 to 29 units	30 to 49 units	50 units or more
2 months or less .....	6	2	(Z)	1	1	(Z)	(Z)	(Z)
3 months.....	14	4	1	1	1	(Z)	5	(Z)
4 months.....	18	9	2	3	3	1	(Z)	(Z)
5 months.....	17	12	4	5	3	5	4	(Z)
6 months.....	13	14	7	7	10	5	2	(Z)
7 months.....	9	9	10	12	8	9	11	1
8 months.....	6	10	11	12	11	10	8	3
9 months.....	4	8	11	12	10	10	11	2
10 months.....	3	8	10	10	10	12	11	5
11 months.....	2	6	8	8	7	9	9	12
12 months.....	2	5	9	10	8	9	7	8
13 to 18 months .....	4	10	22	16	23	27	26	46
19 to 24 months .....	1	1	3	2	3	4	4	17
25 months or more .....	1	1	1	(Z)	1	(Z)	(Z)	4

Z Less than 0.5 percent.

**Table S2-5. Relative Standard Errors of Percentage Distribution of New Buildings Completed in 2000 by Number of Months From Start and by Number of Units in the Building**

Period	Buildings with 1 unit	Buildings with 2 to 4 units	Buildings with 5 units or more					
			Total	5 to 9 units	10 to 19 units	20 to 29 units	30 to 49 units	50 units or more
2 months or less .....	6	36	39	42	56	11	(X)	(X)
3 months.....	4	26	27	34	47	31	70	(X)
4 months.....	2	19	13	17	24	15	62	(X)
5 months.....	2	27	12	19	18	19	42	34
6 months.....	3	20	13	13	20	16	29	54
7 months.....	4	21	8	12	13	13	22	34
8 months.....	4	19	8	16	12	13	25	35
9 months.....	4	17	7	11	10	18	14	47
10 months.....	6	15	9	19	10	10	18	16
11 months.....	7	24	7	12	11	9	19	24
12 months.....	7	20	8	16	11	11	19	21
13 to 18 months .....	6	37	6	13	9	10	13	12
19 to 24 months .....	9	38	19	22	20	39	32	13
25 months or more .....	11	48	17	(A)	42	(A)	(X)	94

A Relative standard error of 100 percent or more. The estimate should be used with caution because a high standard error indicates lack of precision in the estimate.

X Not applicable.