

Appendix F

Detailed Statistical Tables

Table F1-1. Number of research-performing institutions, total net assignable square feet (NASF) of space in all academic fields, NASF in science and engineering (S&E) fields, and research NASF in S&E fields by institution type and control: 1996
 [NASF in millions]

Institution type and control	Number of research-performing institutions	Total NASF in all fields ¹	Total NASF in S&E fields	Research NASF in S&E fields
Total	560	511	285	136
Doctorate-granting	318	434	256	131
Top 100 in research expenditures	100	255	173	98
Other	218	179	82	32
Nondoctorate-granting	242	77	29	6
Public	324	375	208	99
Doctorate-granting	188	324	187	96
Nondoctorate-granting	136	51	20	4
Private	236	137	77	38
Doctorate-granting	130	110	69	35
Nondoctorate-granting	106	26	9	2

¹ Projected from responses of 88 percent of institutions.

NOTE: Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F1-2. Number of research-performing institutions, total net assignable square feet (NASF) of space in science and engineering (S&E) fields, and research NASF in S&E fields by institution type and control: 1988, 1990, 1992, 1994 and 1996
[NASF in millions]

Institution type and control	Number of institutions					Total NASF in S&E fields					Research NASF in S&E fields				
	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996
Total	525	525	525	565	560	270.6	276.0	285.4	282.2	284.9	112.1	116.3	122.0	127.2	136.5
Doctorate-granting	293	293	294	319	318	240.7	243.9	256.3	252.7	255.9	107.4	111.2	117.4	121.8	130.7
Top 100 in research expenditures	100	100	100	100	100	165.7	163.9	171.9	170.6	173.4	80.6	81.7	87.5	90.9	98.3
Other	193	193	194	219	218	75.1	80.0	84.3	82.1	82.5	26.8	29.5	29.9	30.9	32.4
Nondoctorate-granting	232	232	231	246	242	29.9	32.1	29.1	29.4	29.0	4.6	5.2	4.6	5.4	5.8
Public	320	319	319	326	324	204.3	211.7	218.7	203.1	207.5	82.4	86.9	90.8	91.7	99.0
Doctorate-granting	191	190	192	188	188	183.5	188.9	198.6	182.7	187.3	79.3	83.6	88.0	88.2	95.5
Nondoctorate-granting	129	129	127	138	136	20.8	22.8	20.1	20.5	20.2	3.1	3.3	2.8	3.5	3.5
Private	205	206	206	239	236	66.3	64.4	66.7	79.0	77.4	29.7	29.4	31.2	35.6	37.5
Doctorate-granting	102	103	102	131	130	57.2	55.1	57.6	70.9	68.6	28.2	27.6	29.4	33.7	35.2
Nondoctorate-granting	103	103	104	108	106	9.1	9.3	9.1	8.9	8.8	1.5	1.8	1.8	1.9	2.3

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions, all previous years' data (1988, 1990, 1992) represent 525 institutions. Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F1-3. Number of research-performing institutions with space assigned to science and engineering fields, by field and institution type: 1988, 1990, 1992, 1994 and 1996
[NASF in millions]

Field	Total					Institution type														
						Doctorate-granting										Nondoctorate-granting				
						Top 100 in research expenditures					Other									
						1988	1990	1992	1994	1996	1988	1990	1992	1994	1996					
Total	525	525	525	565	560	100	100	100	100	100	193	193	194	219	218	232	232	231	246	242
Biological sciences-- outside medical school	475	479	485	509	517	96	95	94	93	94	151	156	161	184	186	229	228	231	232	237
Physical sciences	473	471	468	512	510	93	93	89	91	90	150	147	147	181	181	230	231	231	241	239
Psychology	472	470	435	469	479	91	91	86	88	88	155	155	155	176	176	227	225	194	205	215
Social sciences	461	447	421	450	457	94	95	91	93	91	153	155	152	165	164	214	198	177	191	201
Mathematics	455	457	458	486	493	93	93	88	90	88	148	145	153	171	178	215	219	217	225	227
Computer sciences	426	404	426	455	441	86	86	83	82	82	133	131	144	167	158	207	187	199	208	200
Earth, atmospheric and ocean sciences	323	326	329	336	339	84	85	83	86	88	120	112	122	129	131	118	129	124	121	120
Engineering	295	299	304	314	322	86	86	86	88	87	128	129	130	129	133	81	84	88	98	102
Agricultural sciences	104	103	98	120	118	42	41	40	41	42	30	27	25	29	24	32	35	33	50	52
Medical sciences-- outside medical school	235	250	257	272	285	68	68	72	67	78	79	91	114	119	116	88	91	70	86	91
Medical sciences-- medical school	138	144	150	125	118	64	64	67	66	64	74	80	83	59	54	0	0	0	0	0
Biological sciences-- medical school	94	105	128	131	121	50	55	60	60	58	44	50	68	71	63	0	0	0	0	0
Other, not elsewhere classified	111	75	82	86	95	47	40	38	41	38	40	23	30	25	34	24	12	14	19	23

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Because of rounding, components may not add to totals.

In the biological and medical sciences, the total number of institutions is less than the sum of the subcategories because medical schools that are part of larger universities are not counted twice.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F1-4. Number of institutions with research space in science and engineering fields
by field and institution type: 1988, 1990, 1992, 1994 and 1996

Field	Total					Institution type														
						Doctorate-granting										Nondoctorate-granting				
	Top 100 in research expenditures					Other														
	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996
Total	513	517	501	551	560	100	100	100	100	100	188	187	188	219	218	225	229	213	232	242
Biological sciences-- outside medical school	456	451	434	489	504	95	94	94	93	94	144	149	152	184	186	217	208	188	213	223
Physical sciences	446	450	432	485	490	92	92	89	91	90	142	141	141	181	181	212	217	202	214	219
Psychology	403	402	377	412	430	87	86	84	85	86	131	132	142	165	171	185	184	150	162	173
Social sciences	360	347	318	370	378	89	91	87	89	89	127	117	114	141	137	144	140	116	140	152
Mathematics	318	296	285	321	343	85	88	85	82	83	105	85	91	125	140	129	124	109	114	120
Computer sciences	332	281	284	333	340	78	79	80	74	77	95	89	90	130	132	159	113	114	128	131
Earth, atmospheric and ocean sciences	299	294	298	291	306	80	82	81	81	85	120	112	121	118	125	98	89	96	92	96
Engineering	283	296	280	290	288	85	86	86	87	86	128	129	126	122	123	70	81	68	82	79
Agricultural sciences	96	94	95	114	112	42	41	40	41	42	30	27	25	29	24	24	26	30	44	45
Medical sciences-- outside medical school	205	189	208	235	239	67	67	67	67	77	70	64	96	101	100	69	57	44	67	62
Medical sciences-- medical school	134	141	146	122	118	63	64	66	66	64	71	77	80	56	54	0	0	0	0	0
Biological sciences-- medical school	94	105	125	131	116	50	55	60	60	58	44	50	66	71	58	0	0	0	0	0
Other, not elsewhere classified	92	69	71	66	81	45	40	37	40	37	35	18	26	15	30	12	11	7	12	15

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Because of rounding, components may not add to totals.

In the biological and medical sciences, the total number of institutions is less than the sum of the subcategories because medical schools that are part of larger universities are not counted twice.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F1-5. Number of public and private research-performing institutions with space assigned to science and engineering (S&E) fields, and number with assigned research space in S&E fields: 1988, 1990, 1992, 1994 and 1996

Field	Institutions with S&E Space										Institutions with S&E research space									
	Public					Private					Public					Private				
	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996
Total	320	319	319	326	324	205	206	206	239	236	316	319	311	323	324	197	198	190	228	236
Biological sciences-- outside medical school	291	291	296	313	312	184	187	189	196	205	287	277	266	298	303	168	174	168	191	201
Physical sciences	286	285	283	310	308	188	186	185	202	202	280	280	269	301	294	165	170	164	184	195
Psychology	286	285	269	290	295	186	185	166	179	184	263	261	245	259	263	140	141	132	153	166
Social sciences	272	278	262	283	277	189	169	159	167	179	246	244	214	232	229	114	103	103	138	149
Mathematics	277	275	275	295	302	178	182	184	191	191	218	197	184	197	206	101	98	101	124	137
Computer sciences	253	247	264	278	261	173	158	162	177	180	213	164	192	199	205	120	116	92	134	135
Earth, atmospheric and ocean sciences	224	221	210	229	233	99	105	119	106	106	213	195	193	201	211	87	88	105	91	95
Engineering	219	225	220	221	232	76	73	84	92	90	207	222	204	198	202	76	73	77	92	86
Agricultural sciences	99	96	88	116	112	6	7	10	4	6	90	87	84	110	106	6	7	10	4	6
Medical sciences-- outside medical school	196	202	195	211	225	38	48	62	62	59	170	152	156	179	193	36	37	51	56	47
Medical sciences-- medical school	86	89	96	65	63	51	55	54	60	54	82	86	92	63	63	51	55	54	60	54
Biological sciences-- medical school	68	70	79	66	61	26	35	49	64	60	68	70	77	66	56	26	35	49	64	60
Other, not elsewhere classified	92	63	61	51	67	19	13	21	35	29	73	57	53	45	60	19	13	18	21	22

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Because of rounding, components may not add to totals.

In the biological and medical sciences, the total number of institutions is less than the sum of the subcategories because medical schools that are part of larger universities are not counted twice.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F1-6. Total net assignable square feet (NASF) of space in science and engineering fields
by field and institution type: 1988, 1990, 1992, 1994 and 1996
[NASF in thousands]

Field	Total					Institution type														
						Doctorate-granting										Nondoctorate-granting				
						Top 100 in research expenditures					Other									
						1988	1990	1992	1994	1996	1988	1990	1992	1994	1996					
Total	270,621	276,041	285,383	282,176	284,905	165,655	163,911	171,895	170,627	173,370	75,070	80,024	84,340	82,110	82,500	29,895	32,107	29,148	29,440	29,035
Biological sciences-- outside medical school	32,445	34,385	33,108	34,717	35,889	18,769	19,046	18,703	18,866	19,385	7,850	9,318	8,842	10,349	11,202	5,827	6,022	5,562	5,501	5,302
Physical sciences	35,634	37,542	36,722	37,648	37,822	18,807	19,264	19,075	18,530	19,139	9,677	9,854	10,613	12,059	11,938	7,150	8,425	7,085	7,057	6,746
Psychology	9,011	9,122	8,329	8,728	8,923	4,182	4,025	3,894	3,866	4,054	2,528	2,759	2,726	3,009	3,016	2,302	2,339	1,708	1,852	1,853
Social sciences	16,433	15,158	14,926	17,089	17,270	9,766	8,798	8,659	9,647	9,974	3,264	3,424	3,655	4,790	4,721	3,403	2,936	2,612	2,651	2,576
Mathematics	4,786	5,190	5,198	5,956	5,746	2,179	2,279	2,207	2,398	2,410	1,490	1,662	1,753	1,921	1,864	1,116	1,249	1,238	1,637	1,473
Computer sciences	4,938	4,625	5,707	6,206	6,290	2,245	2,430	2,818	2,795	2,839	1,594	1,318	1,673	1,826	1,880	1,099	877	1,216	1,584	1,571
Earth, atmospheric and ocean sciences	12,268	12,019	12,411	12,174	12,463	7,816	7,598	6,799	7,751	7,859	3,239	3,222	4,371	3,181	3,333	1,214	1,199	1,241	1,242	1,272
Engineering	40,063	42,291	43,150	44,752	46,140	24,422	24,810	26,089	26,361	27,543	11,353	12,177	12,505	14,481	14,731	4,288	5,303	4,556	3,909	3,866
Agricultural sciences	29,994	34,003	33,161	33,971	35,056	22,276	24,706	25,699	26,402	27,282	5,948	7,194	5,500	5,796	5,759	1,771	2,103	1,962	1,773	2,015
Medical sciences-- outside medical school	21,387	21,955	24,572	22,445	23,449	14,699	15,090	15,576	13,731	14,735	5,441	5,651	7,380	6,890	6,740	1,247	1,214	1,615	1,823	1,974
Medical sciences-- medical school	44,843	41,213	45,532	37,578	35,899	28,502	23,934	27,668	25,881	24,413	16,341	17,279	17,864	11,697	11,486	0	0	0	0	0
Biological sciences-- medical school	12,739	14,936	18,670	16,954	16,016	7,999	9,231	11,575	11,151	11,105	4,741	5,705	7,095	5,803	4,911	0	0	0	0	0
Other, not elsewhere classified	6,078	3,602	3,846	3,958	3,941	3,993	2,701	3,132	3,247	2,633	1,604	461	362	303	919	480	440	352	407	389

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F1-7. Total net assignable square feet (NASF) of space in science and engineering (S&E) fields,
[NASF in thousands]

Field	Total					Institution type														
						Doctorate-granting										Nondoctorate-granting				
	Top 100 in research expenditures					Other														
	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996
Total	112,062	116,327	122,015	127,369	136,481	80,627	81,659	87,508	90,974	98,273	26,815	29,508	29,865	30,956	32,411	4,620	5,161	4,642	5,438	5,797
Biological sciences-- outside medical school	16,072	17,569	17,072	16,982	18,662	11,403	11,715	11,316	11,487	12,409	3,668	4,727	4,589	4,106	4,803	1,001	1,128	1,167	1,389	1,450
Physical sciences	16,024	16,121	16,353	17,001	17,872	10,443	10,429	10,487	10,380	11,154	4,236	4,232	4,767	5,347	5,358	1,344	1,459	1,099	1,275	1,361
Psychology	3,085	2,978	2,984	3,178	3,404	1,771	1,581	1,665	1,717	1,829	896	984	981	1,047	1,133	418	413	337	413	442
Social sciences	3,337	3,338	3,253	3,403	3,977	2,380	2,359	2,339	2,204	2,766	635	671	654	872	877	322	309	260	326	334
Mathematics	722	790	829	937	1,005	397	415	437	491	555	260	300	300	312	306	65	75	92	132	145
Computer sciences	1,437	1,445	1,606	1,779	2,075	835	1,017	1,114	1,179	1,396	431	315	332	361	430	170	113	160	238	249
Earth, atmospheric and ocean sciences	6,313	6,056	6,728	7,053	7,246	4,645	4,534	4,145	5,324	5,411	1,458	1,314	2,251	1,436	1,530	210	208	332	292	305
Engineering	15,900	17,057	18,095	20,730	21,832	11,444	12,130	13,577	14,538	15,649	3,928	4,214	3,996	5,557	5,599	529	713	523	636	584
Agricultural sciences	17,622	20,821	19,910	20,120	22,118	14,433	16,032	16,714	16,952	18,496	2,821	4,247	2,737	2,692	3,031	368	542	459	475	590
Medical sciences-- outside medical school	5,320	4,959	6,234	6,070	7,402	4,208	4,133	4,806	4,397	5,435	1,004	713	1,328	1,497	1,712	109	113	100	175	255
Medical sciences-- medical school	14,042	14,762	16,139	16,799	17,727	10,365	9,957	11,569	12,564	13,485	3,677	4,805	4,571	4,234	4,242	0	0	0	0	0
Biological sciences-- medical school	7,838	8,584	10,649	10,876	10,797	5,401	5,831	7,489	7,587	8,093	2,437	2,754	3,160	3,288	2,704	0	0	0	0	0
Other, not elsewhere classified	4,350	1,846	2,162	2,442	2,363	2,903	1,526	1,851	2,152	1,596	1,364	232	198	203	685	83	87	113	86	82

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F1-8. Total net assignable square feet (NASF) of space in science and engineering (S&E) fields, and research NASF in S&E fields, by field and institution control: 1988, 1990, 1992, 1994 and 1996 [NASF in thousands]

Field	Total NASF in S&E fields										Research NASF in S&E fields									
	Public					Private					Public					Private				
	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996
Total	204,302	211,651	218,687	203,107	207,483	66,318	64,390	66,696	79,069	77,422	82,384	86,881	90,815	91,723	98,958	26,678	29,447	31,200	35,645	37,522
Biological sciences-- outside medical school	24,164	26,449	25,754	26,186	27,145	8,281	7,937	7,354	8,530	8,744	11,473	13,240	13,327	12,646	13,852	4,599	4,329	3,745	4,337	4,811
Physical sciences	24,505	26,595	25,912	25,048	25,533	11,129	10,947	10,860	12,599	12,289	10,719	10,944	11,299	11,342	12,175	5,305	5,177	5,054	5,659	5,697
Psychology	6,254	6,415	5,960	6,224	6,486	2,758	2,706	2,369	2,503	2,437	2,216	2,102	2,148	2,266	2,434	869	876	836	911	970
Social sciences	12,284	11,071	11,305	12,006	12,708	4,149	4,087	3,621	5,082	4,562	2,794	2,684	2,601	2,806	3,284	543	655	652	597	693
Mathematics	3,520	3,874	3,811	4,309	4,097	1,266	1,316	1,387	1,646	1,649	505	527	554	635	629	217	264	276	301	376
Computer sciences	3,530	3,041	3,947	3,977	4,181	1,408	1,584	1,759	2,229	2,110	875	735	973	975	1,135	562	710	633	804	940
Earth, atmospheric and ocean sciences	9,624	9,393	9,981	9,307	9,555	2,644	2,626	2,430	2,866	2,908	5,045	4,833	5,718	5,692	5,774	1,267	1,223	1,009	1,361	1,472
Engineering	29,780	32,224	33,252	33,492	35,375	10,284	10,066	9,898	11,260	10,765	11,593	12,562	13,383	15,418	16,373	4,306	4,495	4,712	5,311	5,459
Agricultural sciences	29,238	32,510	31,409	30,707	31,852	756	1,493	1,753	3,264	3,204	17,233	19,434	18,304	18,788	20,937	389	1,387	1,607	1,331	1,181
Medical sciences-- outside medical school	16,920	18,755	19,675	17,563	18,683	4,468	3,200	4,897	4,882	4,766	3,948	4,137	4,674	4,608	5,802	1,373	822	1,560	1,461	1,600
Medical sciences-- medical school	31,891	28,935	34,335	23,306	21,239	12,953	12,278	11,197	14,272	14,660	8,368	9,022	10,434	9,738	9,766	5,675	5,739	5,705	7,061	7,960
Biological sciences-- medical school	8,433	9,388	10,306	8,352	7,756	4,307	5,547	8,364	8,601	8,259	4,854	5,067	5,768	5,189	5,069	2,984	3,517	4,881	5,687	5,729
Other, not elsewhere classified	4,162	3,000	3,038	2,627	2,873	1,917	602	808	1,332	1,068	2,761	1,593	1,632	1,620	1,727	1,589	253	530	824	636

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F1-9. Total net assignable square feet (NASF) of space in science and engineering (S&E) fields,
by institution type and control: 1988, 1990, 1992, 1994 and 1996

Institution type and control	NASF in thousands					Percentage of total research NASF				
	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996
Total	3,771	3,551	4,755	4,366	5,461	3.4%	3.1%	3.9%	3.0%	4.0%
Doctorate-granting	3,760	3,536	4,717	4,317	5,444	3.5	3.2	4.0	3.5	4.2
Top 100 in research expenditures	2,847	2,601	3,532	3,696	4,544	3.5	3.2	4.0	4.0	4.6
Other	913	935	1,185	621	900	3.4	3.2	4.0	2.0	2.8
Nondoctorate-granting	11	15	38	48	17	0.2	0.3	0.8	0.9	0.3
Public	2,315	2,145	2,869	3,169	1,625	2.8	2.5	3.2	3.0	4.3
Private	1,456	1,406	1,886	1,196	3,836	4.9	4.8	6.0	3.0	3.9

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions. Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F2-1. Adequacy of the amount of science and engineering research space by field: 1988, 1990, 1992, 1994 and 1996

Field	Number of institutions ¹					Adequate					Generally adequate					Inadequate ²				
	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996 ³	1988	1990	1992	1994	1996 ³	1988	1990	1992	1994	1996 ³
[Percentage of institutions' assessments]																				
Biological sciences-- outside medical school	444	451	434	490	504	8.3%	8.7%	10.8%	6.2%	45.9%	45.8%	48.2%	51.8%	53.7%	45.9%	43.1%	37.4%	40.1%	53.3%	
Physical sciences	445	450	433	489	490	4.7	8.7	10.6	6.4	44.9	52.4	50.8	52.3	53.1	42.9	40.5	37.0	40.5	54.5	
Psychology	403	398	388	425	430	16.8	13.2	17.2	14.8	55.4	51.4	54.3	50.0	53.9	31.8	32.4	32.9	31.2	43.8	
Social sciences	360	345	328	378	378	12.9	12.7	8.2	7.2	51.2	50.2	51.0	64.4	63.4	36.9	36.2	27.4	29.3	47.6	
Mathematics	318	296	300	348	343	21.0	17.6	16.1	16.0	68.4	53.6	47.2	58.6	55.5	25.4	35.2	25.3	28.3	30.3	
Computer sciences	331	280	297	347	340	15.1	13.5	12.9	15.5	54.6	38.2	41.5	56.7	48.3	46.9	45.0	30.3	36.0	43.7	
Earth, atmospheric and ocean sciences	297	284	314	310	306	11.0	11.1	10.5	7.2	53.7	49.4	48.4	59.4	59.6	39.5	40.5	30.1	33.2	46.0	
Engineering	283	296	290	297	288	8.7	10.6	5.8	6.7	42.8	40.1	40.8	49.1	53.3	51.1	48.6	45.1	40.5	57.2	
Agricultural sciences	96	94	96	123	112	11.0	17.0	17.5	10.5	48.1	51.2	39.9	48.2	59.7	37.7	43.1	34.3	29.6	51.9	
Medical sciences-- outside medical school	191	189	210	243	239	14.3	13.0	14.2	11.7	42.6	46.0	40.3	50.1	50.3	39.7	46.7	35.7	38.2	57.4	
Medical sciences-- medical school	134	141	146	126	118	0.8	7.0	4.2	10.8	34.1	52.6	33.8	54.1	44.8	46.6	59.2	41.8	44.0	65.9	
Biological sciences-- medical school	91	105	125	132	116	3.7	10.4	3.6	10.6	55.9	47.3	35.5	60.5	53.5	49.0	54.1	35.9	35.5	45.5	
Other, not elsewhere classified	90	69	71	63	81	10.4	16.9	14.0	15.0	51.8	51.3	39.2	44.9	50.0	38.4	44.0	41.1	36.5	40.7	

¹ Excludes institutions that have no research space in the field and report "not applicable or not needed."

² Includes the category "nonexistent but needed."

³ 1996 survey question included only two categories: adequate and inadequate. In previous years' surveys, there were three categories: adequate, generally adequate, and inadequate.

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F2-2. Adequacy of the amount of science and engineering research space by field: 1988, 1990, 1992, 1994 and 1996
by field and institution type: 1988, 1990, 1992, 1994 and 1996

Field	Institution type														
	Doctorate-granting										Nondoctorate-granting				
	Top 100 in research expenditures					Other									
	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996
Biological sciences-- outside medical school	52%	50%	44%	51%	61%	46%	43%	35%	32%	49%	43%	40%	37%	38%	52%
Physical sciences	63	57	48	51	56	43	45	38	46	55	35	31	31	32	51
Psychology	32	38	34	31	43	26	32	35	25	42	36	29	32	37	42
Social sciences	36	39	37	38	55	29	34	27	26	42	44	36	26	27	44
Mathematics	45	35	28	32	30	29	35	24	19	26	10	37	28	35	32
Computer sciences	54	55	35	43	39	46	39	26	30	36	43	42	28	39	47
Earth, atmospheric and ocean sciences	47	50	38	41	46	44	33	23	34	39	33	42	40	27	47
Engineering	61	59	52	55	57	46	41	37	35	57	49	49	53	35	48
Agricultural sciences	42	45	42	37	30	39	51	29	29	50	28	32	31	24	35
Medical sciences-- outside medical school	48	56	32	43	44	43	35	41	41	65	26	49	32	30	47
Medical sciences-- medical school	62	52	53	33	40	57	33	35	35	69	-	-	-	-	-
Biological sciences-- medical school	51	64	46	49	31	35	43	26	24	38	-	-	-	-	-

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

In 1994, data from 1988, 1990, and 1992 were adjusted to match the analytic procedure used to calculate 1994 figures.

In 1996, survey question categories were worded slightly differently (see Table F2-1 notes).

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F2-3. Adequacy of the amount of science and engineering research space by field: 1988, 1990, 1992, 1994 and 1996
by field and institution control: 1988, 1990, 1992, 1994 and 1996

Field	Public					Private				
	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996
Biological sciences-- outside medical school	48%	54%	43%	46%	63%	42%	25%	28%	30%	39%
Physical sciences	44	47	43	43	60	40	29	26	36	51
Psychology	32	31	36	33	47	31	34	28	29	40
Social sciences	37	37	32	32	48	38	34	23	25	47
Mathematics	27	43	31	32	40	21	21	17	22	16
Computer sciences	45	49	31	38	49	50	40	24	33	35
Earth, atmospheric and ocean sciences	50	46	39	34	46	23	29	17	31	46
Engineering	51	51	52	47	62	50	10	28	25	46
Agricultural sciences	39	45	38	29	53	20	14	12	46	33
Medical sciences-- outside medical school	41	50	39	38	59	36	31	27	39	51
Medical sciences-- medical school	55	61	42	48	67	33	56	42	40	65
Biological sciences-- medical school	56	61	37	39	50	31	40	34	32	41

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

In 1994, data from 1988, 1990, and 1992 were adjusted to match the analytic procedure used to calculate 1994 figures.

In 1996, survey question categories were worded slightly differently (see Table F2-1 notes).

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F2-4. Adequacy of the amount of science and engineering research space by field: 1988, 1990, 1992, 1994 and 1996
 [Percentage of institutions' S&E research space]

Institution type and control	Suitable for use in most scientifically sophisticated research					Effective for most uses, but not most scientifically sophisticated research					Requires limited/repair/renovation to be used effectively					Requires major repair/renovation to be used effectively ¹					Requires replacement ²		
	1988	1990	1992	1994	1996 ³	1988	1990	1992	1994	1996 ³	1988	1990	1992	1994	1996 ³	1988	1990	1992	1994	1996 ³	1992	1994	1996 ³
Total	23.9%	25.9%	26.8%	26.4%	37.2%	36.8%	35.3%	34.7%	32.8%		23.5%	23.3%	22.6%	23.1%	43.9%	15.8%	15.5%	12.8%	12.9%		3.1%	4.1%	18.5%
Doctorate-granting	24.3	26.2	27.2	26.9	37.8	36.2	34.8	34.3	32.4		23.5	23.3	22.4	22.9	43.4	16.2	15.7	12.9	12.9		3.2	4.2	18.5
Top 100 in research expenditures	23.9	27.2	26.7	26.7	37.9	35.0	33.4	31.8	31.7		24.0	22.9	23.4	22.9	42.7	17.1	16.5	14.2	13.1		3.9	4.8	18.9
Other	25.6	23.5	28.8	27.1	37.5	39.8	38.6	41.8	34.8		21.8	24.2	19.3	23.1	45.4	12.8	13.6	9.2	12.2		1.0	2.5	17.1
Nondoctorate-granting	15.6	18.9	16.8	15.8	23.8	49.5	47.2	43.0	41.3		23.8	22.8	29.2	26.7	56.8	11.1	11.1	9.8	13.9		1.2	2.2	18.4
Public	23.1	24.5	25.5	25.2	35.2	36.2	35.7	34.8	33.2		24.4	23.9	23.1	24.1	45.8	16.4	15.9	13.1	13.0		3.5	4.7	18.5
Doctorate-granting	23.4	24.6	25.7	26.0	35.7	35.7	35.4	34.6	32.9		24.4	24.0	22.9	23.8	45.3	16.6	16.0	13.2	12.5		3.6	4.7	18.5
Nondoctorate-granting	17.5	21.1	19.1	16.0	21.7	48.0	44.3	41.8	38.3		24.0	22.7	26.8	27.2	58.9	10.4	11.8	11.2	16.0		1.1	2.3	19.4
Private	26.2	30.1	30.8	27.7	42.5	38.4	34.1	34.3	31.9		21.0	21.2	21.4	21.6	39.0	14.4	14.5	11.7	12.7		1.8	2.7	18.4
Doctorate-granting	27.0	31.1	31.8	29.4	43.5	37.6	32.9	33.6	32.0		20.9	21.1	20.7	20.5	38.0	14.5	14.8	12.0	11.7		1.9	2.6	18.5
Nondoctorate-granting	11.5	15.1	13.3	15.3	26.9	52.8	52.4	44.9	46.6		23.3	22.9	32.8	25.7	53.7	12.4	9.7	7.5	10.1		1.4	1.9	17.1

¹ The data for 1988 and 1990 in this category include space requiring replacement.

² This category was first used in the 1992 survey.

³ 1996 survey response categories changed to: suitable for the most scientifically competitive research; effective for most levels of research, but may need limited repair/renovation; and requires major renovation or replacement to be used effectively.

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

In 1994, data from 1988, 1990, and 1992 were adjusted to match the analytic procedure used to calculate 1994 figures.

Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F2-5. Adequacy of the amount of science and engineering research space by field: 1988, 1990, 1992, 1994 and 1996

Field	Suitable for use in most scientifically sophisticated research					Effective for most uses, but not most scientifically sophisticated research					Requires limited/repair/renovation to be used effectively					Requires major repair/renovation to be used effectively ¹					Requires replacement ²		
	1988	1990	1992	1994	1996 ³	1988	1990	1992	1994	1996 ³	1988	1990	1992	1994	1996 ³	1988	1990	1992	1994	1996 ³	1992	1994	1996 ³
Biological sciences-- outside medical school	23.2%	27.5%	25.5%	22.6%	37.9%	36.2%	34.3%	32.6%	31.0%		25.0%	24.2%	26.7%	27.1%	43.8%	15.5%	14.0%	12.5%	14.2%		2.8%	5.0%	17.8%
Physical sciences	25.7	26.3	29.9	24.8	32.2	34.5	33.5	32.5	33.8		22.3	23.7	23.0	23.8	48.3	17.5	16.5	12.5	15.3		2.1	2.3	18.8
Psychology	23.2	20.5	22.2	22.8	38.2	43.7	46.6	46.9	37.9		20.8	21.4	20.9	26.1	48.7	12.3	11.6	9.0	11.1		1.0	2.0	12.3
Social sciences	14.8	17.2	17.1	14.4	31.8	47.7	45.0	42.8	46.2		26.7	28.1	26.7	28.2	54.2	10.8	9.8	12.2	9.0		1.2	1.9	13.1
Mathematics	29.5	25.9	30.6	22.6	42.9	45.3	44.6	47.1	47.0		19.4	21.9	17.5	24.9	46.8	5.8	7.6	3.0	4.1		1.8	1.3	9.9
Computer sciences	32.6	38.3	43.9	35.2	55.0	35.0	35.5	35.4	40.9		16.2	18.0	13.7	17.9	37.1	16.2	8.1	6.0	4.7		1.0	1.2	7.5
Earth, atmospheric and ocean sciences	18.7	18.7	22.5	22.1	32.4	40.6	40.4	41.9	35.9		26.0	26.1	23.7	22.9	48.1	14.7	14.8	9.5	13.0		2.4	6.0	19.1
Engineering	26.1	27.9	28.4	31.4	38.2	37.6	35.6	36.1	32.3		22.4	22.0	22.2	21.3	43.3	13.9	14.5	10.8	12.1		2.4	2.8	17.9
Agricultural sciences	21.2	20.3	16.8	18.2	30.2	32.5	33.6	34.3	32.0		26.2	24.1	22.7	27.4	46.2	20.0	22.0	18.5	13.6		7.7	8.8	23.5
Medical sciences-- outside medical school	18.1	24.0	24.4	25.7	35.2	40.1	35.1	34.4	34.4		27.2	23.8	24.0	23.3	43.6	14.6	17.0	13.8	11.8		3.4	4.7	20.6
Medical sciences-- medical school	25.2	28.4	29.7	33.7	44.3	35.1	34.4	33.3	29.1		23.1	23.7	22.3	20.5	36.0	16.6	13.4	12.6	13.5		2.0	3.3	19.7
Biological sciences-- medical school	36.2	34.3	38.6	36.9	45.1	34.0	33.5	30.2	32.2		16.5	18.9	17.4	15.8	40.1	13.4	13.2	12.5	13.3		1.4	1.8	14.7

¹ The data for 1988 and 1990 in this category include space requiring replacement.

² This category was first used in the 1992 survey.

³ 1996 survey response categories changed to: suitable for the most scientifically competitive research; effective for most levels of research, but may need limited repair/renovation; and requires major renovation or replacement to be used effectively.

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

In 1994, data from 1988, 1990, and 1992 were adjusted to match the analytic procedure used to calculate 1994 figures.

Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F3-1. Number of research-performing institutions starting any projects to construct science and engineering research space by institution type and control: 1986-1995

Institution type and control	1986-1987	1988-1989	1990-1991	1992-1993	1994-1995	1996-1997 [Scheduled]
Total	192	227	191	184	164	160
Doctorate-granting	135	154	165	144	132	128
Top 100 in research expenditures	72	71	81	81	75	64
Other	64	83	84	63	57	64
Nondoctorate-granting	57	73	27	39	32	32
Public	140	158	136	133	115	115
Doctorate-granting	103	106	116	103	97	97
Nondoctorate-granting	37	52	20	30	19	19
Private	52	68	55	51	49	45
Doctorate-granting	32	48	49	42	35	32
Nondoctorate-granting	19	21	7	10	14	14

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of \$100,000 or more for research space. Estimates are prorated to reflect research components only.

Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F3-2. For projects to construct science and engineering research space, estimated net assignable square feet (NASF) of research space to be created and estimated total cost of the construction of this research space, by institution type and control: 1986-1995
[NASF in thousands; current dollars in millions]

Institution type and control	1986-1987		1988-1989		1990-1991		1992-1993		1994-1995		1996-1997 [Scheduled]	
	NASF	Cost	NASF	Cost								
Total	9,922	\$2,051	10,647	\$2,464	11,433	\$2,976	10,992	\$2,811	9,521	\$2,768	10,843	\$3,072
Doctorate-granting	8,908	1,888	9,840	2,315	11,022	2,847	10,474	2,720	8,818	2,437	10,112	2,807
Top 100 in research expenditures	7,261	1,599	6,073	1,558	6,972	2,022	6,787	2,029	6,426	2,007	6,442	2,104
Other	1,647	288	3,767	757	4,050	826	3,687	691	2,391	430	3,670	704
Nondoctorate-granting	1,014	163	807	150	411	128	518	92	703	331	731	264
Public	7,344	1,355	8,115	1,727	8,268	2,020	8,189	2,016	6,838	1,872	8,278	2,234
Doctorate-granting	6,516	1,220	7,460	1,626	7,942	1,906	7,695	1,929	6,252	1,578	7,834	2,039
Nondoctorate-granting	828	134	656	101	325	114	494	86	586	294	444	195
Private	2,578	696	2,532	738	3,165	956	2,802	796	2,683	895	2,566	837
Doctorate-granting	2,392	667	2,381	689	3,079	941	2,778	789	2,566	859	2,279	768
Nondoctorate-granting	186	29	152	48	86	15	24	6	117	36	287	69

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of \$100,000 or more for research space. Estimates are prorated to reflect research components only.

Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 3 of this report.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F3-3. Number of research-performing institutions starting any projects to construct science and engineering research space by field: 1986-1995

Field	1986-1987	1988-1989	1990-1991	1992-1993	1994-1995	1996-1997 [Scheduled]
Total	192	227	191	184	164	160
Biological sciences-- outside medical school	43	87	57	49	42	51
Physical sciences	41	67	50	44	49	37
Psychology	21	11	29 ¹	8	8	5
Social sciences	19	13		10	15	11
Mathematics	3	5	13	5	4	5
Computer sciences	28	21	20	13	7	8
Earth, atmospheric and ocean sciences	28	17	42	26	15	18
Engineering	79	252	48	49	44	47
Agricultural sciences	36	32	28	32	25	27
Medical sciences-- outside medical school	18	14	33	25	14	20
Medical sciences-- medical school	42	35	62	41	31	30
Biological sciences-- medical school	20	26	41	26	12	13
Other, not elsewhere classified	14	13	22	13	17	17

¹ Psychology and social sciences were not differentiated in the questionnaire item for the 1990-1991 period.

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of \$100,000 or more for research space. Estimates are prorated to reflect research components only. Because of rounding, components may not add to totals.

In the biological and medical sciences, the total number of institutions is less than the sum of the subcategories because medical schools that are part of larger universities are not counted twice.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F3-4. For projects to construct science and engineering research space, estimated net assignable square feet (NASF) of research space to be created and estimated total cost of the construction of this research space by field: 1986-1996 [NASF in thousands; current dollars in millions]

Field	1986-1987		1988-1989		1990-1991		1992-1993		1994-1995		1996-1997 [Scheduled]	
	NASF	Cost	NASF	Cost	NASF	Cost	NASF	Cost	NASF	Cost	NASF	Cost
Total	9,922	\$2,051	10,647	\$2,464	11,433	\$2,976	10,992	\$2,812	9,521	\$2,768	10,843	\$3,072
Biological sciences-- outside medical school	1,275	324	1,549	396	1,374	451	1,169	292	1,028	388	1,804	507
Physical sciences	799	182	2,000	401	1,609	430	1,257	337	1,551	426	1,153	390
Psychology	132	23	115	25	164 ¹	36 ¹	78	16	145	42	82	38
Social sciences	202	38	329	48			221	44	380	112	176	54
Mathematics	9	2	25	8	46	12	44	10	8	2	72	25
Computer sciences	237	61	286	65	293	40	172	47	143	46	121	31
Earth, atmospheric and ocean sciences	380	57	324	82	529	170	502	123	282	33	746	240
Engineering	2,390	430	1,490	388	1,697	395	1,065	286	2,174	575	2,122	429
Agricultural sciences	1,513	150	1,146	152	955	175	1,218	210	808	150	1,051	212
Medical sciences-- outside medical school	613	203	306	61	673	151	669	160	388	122	926	243
Medical sciences-- medical school	1,335	302	1,948	587	2,288	655	3,154	839	1,694	525	2,049	672
Biological sciences-- medical school	433	139	712	181	1,426	381	1,020	341	579	226	465	214
Other, not elsewhere classified	603	139	418	70	380	79	420	106	340	122	77	16

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of \$100,000 or more for research space. Estimates are prorated to reflect research components only.

Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 3 of this report.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F4-1. Number of institutions performing major repair/renovation of science and engineering research facilities by institution type and control: 1986-1995

Institution type and control	1986 - 1987	1988 - 1989	1990 or 1991	1992 - 1993	1994-1995	1996-1997 [Scheduled]
Total	288	248	244	252	252	243
Doctorate-granting	224	204	212	196	194	176
Top 100 in research expenditures	96	85	91	90	88	78
Other	128	119	121	106	106	98
Nondoctorate-granting	64	44	32	56	59	68
Public	210	164	155	137	149	132
Doctorate-granting	163	133	137	112	116	97
Nondoctorate-granting	47	31	17	25	33	35
Private	78	84	89	115	103	111
Doctorate-granting	61	71	75	84	77	78
Nondoctorate-granting	17	14	15	31	25	33

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of \$100,000 or more for research space. Estimates are prorated to reflect research components only.

Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F4-2. For major projects to repair/renovate science and engineering research space, estimated net assignable square feet (NASF) of research space affected and estimated total cost of this repair/renovation, by institution type and control, and year of project start: 1986-1995 [NASF in thousands; current dollars in millions]

Institution type and control	1986-1987		1988-1989		1990-1991		1992-1993		1994-1995		1996-1997 [Scheduled]	
	NASF	Cost	NASF	Cost	NASF	Cost	NASF	Cost	NASF	Cost	NASF	Cost
Total	13,431	\$838	11,449	\$1,010	8,655	\$826	9,133	\$837	13,122	\$1,058	13,698	\$1,258
Doctorate-granting	12,841	793	10,993	979	8,352	794	8,811	803	12,364	981	13,051	1,161
Top 100 in research expenditures	9,124	596	7,781	483	5,622	633	6,028	623	8,758	755	9,014	889
Other	3,717	197	3,212	496	2,730	161	2,783	180	3,607	226	4,038	272
Nondoctorate-granting	590	45	456	30	303	32	323	34	758	77	646	97
Public	8,745	436	8,223	699	5,460	449	6,011	522	6,839	496	7,987	688
Doctorate-granting	8,307	399	7,890	674	5,295	431	5,877	508	6,242	450	7,567	636
Nondoctorate-granting	438	37	333	25	165	18	134	14	597	46	421	53
Private	4,685	402	3,226	311	3,195	376	3,123	315	6,283	562	5,710	570
Doctorate-granting	4,534	393	3,102	305	3,057	363	2,934	295	6,122	531	5,485	526
Nondoctorate-granting	152	9	123	6	137	14	189	20	161	31	226	44

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of \$100,000 or more for research space. Estimates are prorated to reflect research components only.

Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 4 of this report.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F4-3. Number of research-performing institutions performing major repair/renovation of science and engineering research facilities, by field: 1986-1995

Field	1986-1987	1988-1989	1990 or 1991	1992-1993	1994-1995	1996-1997 [Scheduled]
Total	288	248	244	252	252	243
Biological sciences-- outside medical school	112	121	96	104	113	97
Physical sciences	98	104	98	104	118	107
Psychology	35	20	44 ¹	18	22	30
Social sciences	29	17		20	33	29
Mathematics	25	26	12	6	14	4
Computer sciences	49	16	29	20	25	17
Earth, atmospheric and ocean sciences	40	26	37	38	33	41
Engineering	118	106	71	85	86	67
Agricultural sciences	32	24	25	21	31	22
Medical sciences-- outside medical school	28	32	41	36	39	41
Medical sciences-- medical schools	75	70	92	74	66	48
Biological sciences-- medical schools	44	44	59	53	57	51
Other, not elsewhere classified	17	17	23	8	8	8

¹ Psychology and social sciences were not differentiated in the questionnaire for the 1990-91 period.

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of \$100,000 or more for research space. Estimates are prorated to reflect research components only.

Because of rounding, components may not add to totals.

In the biological and medical sciences, the total number of institutions is less than the sum of the subcategories because medical schools that are part of larger universities are not counted twice.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F4-4. For projects to repair/renovate science and engineering research space, estimated net assignable square feet (NASF) of research space affected, and estimated total cost of this repair/renovation, by field: 1986-1995
[NASF in thousands; current dollars in millions]

Field	1986-1987		1988-1989		1990-1991		1992-1993		1994-1995		1996-1997 [Scheduled]	
	NASF	Cost	NASF	Cost	NASF	Cost	NASF	Cost	NASF	Cost	NASF	Cost
Total	13,431	\$838	11,449	\$1,010	8,606	\$826	9,134	\$837	13,122	\$1,058	13,698	\$1,258
Biological sciences-- outside medical school	2,555	146	2,203	126	1,055	135	1,304	108	1,610	127	1,777	187
Physical sciences	1,746	105	1,928	165	1,680	151	1,725	134	2,474	192	1,991	241
Psychology	256	14	88	11	254 ¹	31 ¹	141	10	182	28	272	29
Social sciences	181	36	119	8			236	10	296	40	346	60
Mathematics	37	4	136	11	39	6	11	2	67	6	95	1
Computer sciences	193	17	144	9	164	21	54	4	124	8	142	13
Earth, atmospheric and ocean sciences	362	21	930	18	450	16	418	31	521	35	570	41
Engineering	2,716	141	1,630	361	1,159	82	1,932	139	1,803	150	2,410	222
Agricultural sciences	628	20	530	23	391	35	335	14	1,245	72	661	48
Medical sciences-- outside medical school	737	52	705	24	627	53	284	28	757	59	773	65
Medical sciences-- medical schools	2,499	174	1,598	161	1,443	166	1,678	234	3,129	226	3,058	132
Biological sciences-- medical schools	1,056	78	1,259	76	1,301	123	864	116	752	101	1,380	175
Other, not elsewhere classified	465	30	180	17	42	6	152	7	162	12	162	42

¹ Psychology and social sciences were not differentiated in the questionnaire item for the 1990-1991 period.

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of \$100,000 or more for research space. Estimates are prorated to reflect research components only.

Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 4 of this report.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F4-5. Number of research-performing institutions and total project completion cost of all repair/renovation projects between \$5,000 and \$100,000 for science and engineering research facilities by institution type and control: 1994 and 1995
[Current dollars in millions]

Institution type and control	Number of institutions	Total completion costs
Total	281	\$135.2
Doctorate-granting	213	129.2
Top 100 in research expenditures	75	102.1
Other	138	27.2
Nondoctorate-granting	69	6.0
Public	154	81.2
Doctorate-granting	122	77.8
Nondoctorate-granting	32	3.4
Private	127	54.1
Doctorate-granting	90	51.5
Nondoctorate-granting	37	2.6

NOTES: Project costs reflect research components only.
Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F5-1. Research-performing institutions' amounts of funds for science and engineering research facility construction projects, by institution type and source of funds: 1986-1995
[Current dollars in millions]

Year of project start and type of institution	All sources	Government		Private donations	Institutional funds	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
1986 or 1987:								
Total	\$2,050.6	\$145.4	\$779.1	\$487.5	\$289.8	\$313.1	\$3.1	\$31.9
Doctorate-granting	1,887.7	129.9	690.4	462.5	289.2	280.1	3.1	31.9
Nondoctorate-granting	162.9	15.5	88.7	25.1	0.6	33.1	0.0	0.0
1988 or 1989:								
Total	2,464.5	352.0	890.7	459.2	343.8	320.2	95.9	0.8
Doctorate-granting	2,315.0	339.0	807.3	411.7	338.3	320.2	95.9	0.8
Nondoctorate-granting	149.5	13.0	83.4	47.5	5.6	0.0	0.0	0.0
1990 or 1991:								
Total	2,975.6	476.3	956.6	352.6	394.1	727.5	35.4	33.1
Doctorate-granting	2,847.3	465.5	947.9	348.0	390.3	627.0	35.4	33.1
Nondoctorate-granting	128.4	10.8	8.7	4.6	3.8	100.5	0.0	0.0
1992 or 1993:								
Total	2,810.8	459.3	968.0	301.0	374.3	620.3	39.0	50.0
Doctorate-granting	2,720.0	452.0	893.0	297.0	374.0	616.0	39.0	48.0
Nondoctorate-granting	91.8	7.3	75.0	4.0	0.3	4.3	0.0	2.0
1994 or 1995:								
Total	2,767.6	206.5	1,180.8	360.0	442.0	426.1	145.7	6.5
Doctorate-granting	2,436.9	201.2	890.4	344.0	437.5	411.6	145.7	6.5
Nondoctorate-granting	330.6	5.2	290.5	16.0	4.4	14.5	0.0	0.0

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of more than \$100,000 for research-related space. Estimates are prorated to research components only.

Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 5 of this report.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F5-2. Public research-performing institutions' amounts of funds for science and engineering research facility construction projects, by institution type and source of funds: 1986-1995
[Current dollars in millions]

Year of project start and type of institution	All sources	Government		Private donations	Institutional funds	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
1986 or 1987:								
Total	\$1,354.8	\$40.3	\$754.5	\$259.1	\$109.2	\$189.5	\$2.4	\$0.2
Doctorate-granting	1,220.4	31.4	665.9	238.6	109.2	173.1	2.4	0.2
Nondoctorate-granting	134.4	8.9	88.5	20.6	0.0	16.4	0.0	0.0
1988 or 1989:								
Total	1,727.0	274.3	838.4	192.9	256.3	154.5	8.1	0.6
Doctorate-granting	1,625.6	268.3	755.0	184.8	252.4	154.6	8.1	0.6
Nondoctorate-granting	101.4	6.0	83.4	8.1	3.9	0.0	0.0	0.0
1990 or 1991:								
Total	2,020.0	388.1	809.4	139.1	270.2	398.6	7.8	6.9
Doctorate-granting	1,906.4	382.3	800.7	139.1	270.2	299.4	7.8	6.9
Nondoctorate-granting	113.7	5.8	8.7	0.0	0.0	99.2	0.0	0.0
1992 or 1993:								
Total	2,016.4	325.8	929.8	152.5	198.3	390.5	16.2	3.3
Doctorate-granting	1,929.9	320.1	854.4	152.5	198.1	386.9	16.2	1.7
Nondoctorate-granting	86.4	5.7	75.4	0.0	0.2	3.6	0.0	1.6
1994 or 1995:								
Total	1,872.3	115.4	1,164.6	123.9	142.4	306.1	13.5	6.5
Doctorate-granting	1,578.1	112.5	874.0	123.9	141.6	306.1	13.5	6.5
Nondoctorate-granting	294.2	3.0	290.5	0.0	0.8	0.0	0.0	0.0

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of more than \$100,000 for research-related space. Estimates are prorated to research components only.

Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 5 of this report.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F5-3. Private research-performing institutions' amounts of funds for science and engineering research facility construction projects, by institution type and source of funds: 1986-1995
[Current dollars in millions]

Year of project start and type of institution	All sources	Government		Private donations	Institutional funds	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
1986 or 1987:								
Total	\$695.8	\$105.1	\$24.6	\$228.4	\$180.6	\$123.6	\$0.7	\$31.7
Doctorate-granting	667.3	98.5	24.5	223.9	180.0	107.0	0.7	31.7
Nondoctorate-granting	28.5	6.6	0.2	4.5	0.6	16.7	0.0	0.0
1988 or 1989:								
Total	737.5	77.7	52.3	266.3	87.5	165.7	87.8	0.2
Doctorate-granting	689.4	70.7	52.3	226.9	85.9	165.6	87.8	0.2
Nondoctorate-granting	48.1	7.0	0.0	39.4	1.7	0.0	0.0	0.0
1990 or 1991:								
Total	955.6	88.2	147.2	213.5	123.9	328.9	27.6	26.2
Doctorate-granting	940.9	83.2	147.2	208.9	120.1	327.6	27.6	26.2
Nondoctorate-granting	14.7	5.0	0.0	4.6	3.8	1.3	0.0	0.0
1992 or 1993:								
Total	795.5	133.5	38.8	148.5	176.1	229.6	22.7	46.4
Doctorate-granting	789.7	132.2	38.8	144.6	175.8	229.3	22.7	46.4
Nondoctorate-granting	5.8	1.3	0.0	3.9	0.3	0.3	0.0	0.0
1994 or 1995:								
Total	895.2	91.0	16.3	236.1	299.5	120.0	132.2	0.0
Doctorate-granting	858.8	88.8	16.3	220.1	295.9	105.5	132.2	0.0
Nondoctorate-granting	36.3	2.2	0.0	16.0	3.6	14.5	0.0	0.0

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of more than \$100,000 for research-related space. Estimates are prorated to research components only.

Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 5 of this report.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F5-4. Research-performing institutions' amounts of funds for science and engineering research facility repair/renovation projects, by institution type and source of funds: 1986-95
[Current dollars in millions]

Year of project start and type of institution	All sources	Government		Private donations	Institutional funds	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
1986 or 1987:								
Total	\$837.9	\$27.3	\$233.1	\$101.0	\$328.0	\$137.6	\$3.8	\$7.4
Doctorate-granting	792.7	23.5	201.7	99.3	325.2	132.2	3.8	7.4
Nondoctorate-granting	45.2	3.7	31.4	1.6	3.0	5.4	0.0	0.0
1988 or 1989:								
Total	1,009.5	61.1	233.8	52.1	570.8	69.9	15.9	5.2
Doctorate-granting	979.2	55.9	226.6	42.1	563.6	69.8	15.9	5.2
Nondoctorate-granting	30.3	5.1	7.1	10.0	7.2	0.0	0.0	0.0
1990 or 1991:								
Total	825.7	49.0	243.0	100.6	355.4	66.4	8.0	3.2
Doctorate-granting	794.1	48.3	227.3	97.5	346.7	63.2	8.0	3.2
Nondoctorate-granting	31.6	0.7	15.8	3.2	8.7	3.3	0.0	0.0
1992 or 1993:								
Total	835.4	56.2	252.4	73.0	332.0	81.0	27.0	16.2
Doctorate-granting	803.0	47.0	244.0	66.0	325.0	79.0	27.0	16.2
Nondoctorate-granting	32.4	9.2	8.4	7.0	7.0	2.0	0.0	0.0
1994 or 1995:								
Total	1,058.1	110.7	265.5	110.7	432.7	50.4	78.6	9.3
Doctorate-granting	981.3	101.9	233.0	93.7	423.2	43.8	76.3	9.3
Nondoctorate-granting	76.8	8.8	32.6	17.0	9.5	6.6	2.4	0.0

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of more than \$100,000 for research-related space. Estimates are prorated to research components only.

Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 5 of this report.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F5-5. Public research-performing institutions' amounts of funds for science and engineering research facility repair/renovation projects, by institution type and source of funds: 1986-1995
[Current dollars in millions]

Year of project start and type of institution	All sources	Government		Private donations	Institutional funds	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
1986 or 1987:								
Total	\$435.9	\$13.2	\$226.6	\$15.0	\$155.1	\$25.5	\$0.3	\$0.2
Doctorate-granting	399.3	10.9	195.1	14.3	153.4	25.0	0.3	0.2
Nondoctorate-granting	36.6	2.2	31.4	0.6	1.8	0.5	0.0	0.0
1988 or 1989:								
Total	698.5	31.4	229.3	22.0	403.5	6.6	4.9	0.0
Doctorate-granting	673.9	26.5	222.1	13.9	399.8	6.5	4.9	0.0
Nondoctorate-granting	24.6	4.9	7.1	8.1	3.6	0.0	0.0	0.0
1990 or 1991:								
Total	449.3	24.6	233.5	43.8	134.6	12.1	0.0	0.6
Doctorate-granting	431.3	23.9	217.8	43.8	133.1	12.1	0.0	0.6
Nondoctorate-granting	18.0	0.7	15.8	0.0	1.5	0.0	0.0	0.0
1992 or 1993:								
Total	520.4	34.3	237.1	24.9	154.4	55.9	1.6	11.9
Doctorate-granting	507.9	31.1	228.5	24.9	153.8	55.9	1.6	11.9
Nondoctorate-granting	12.4	3.2	8.6	0.0	0.6	0.0	0.0	0.0
1994 or 1995:								
Total	495.8	38.9	254.4	16.0	160.8	18.3	0.9	6.5
Doctorate-granting	449.9	31.8	222.3	15.7	154.4	18.3	0.9	6.5
Nondoctorate-granting	45.9	7.1	32.1	0.2	6.5	0.0	0.0	0.0

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of more than \$100,000 for research-related space. Estimates are prorated to research components only.

Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 5 of this report.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F5-6. Private research-performing institutions' amounts of funds for science and engineering research facility repair/renovation projects, by institution type and source of funds: 1986-1995
[Current dollars in millions]

Year of project start and type of institution	All sources	Government		Private donations	Institutional funds	Tax-exempt bonds	Other debt	Other sources
		Federal	State/local					
1986 or 1987:								
Total	\$402.0	\$14.1	\$6.5	\$86.0	\$172.9	\$112.1	\$3.5	\$7.2
Doctorate-granting	393.4	12.6	6.6	85.0	171.8	107.2	3.5	7.2
Nondoctorate-granting	8.6	1.5	0.0	1.0	1.2	4.9	0.0	0.0
1988 or 1989:								
Total	311.0	29.7	4.5	30.1	167.3	63.3	11.0	5.2
Doctorate-granting	305.3	29.4	4.5	28.2	163.8	63.3	11.0	5.2
Nondoctorate-granting	5.7	0.2	0.0	1.9	3.6	0.0	0.0	0.0
1990 or 1991:								
Total	376.4	24.4	9.5	56.8	220.8	54.3	8.0	2.6
Doctorate-granting	362.8	24.4	9.5	53.7	213.6	51.1	8.0	2.6
Nondoctorate-granting	13.6	0.0	0.0	3.2	7.2	3.3	0.0	0.0
1992 or 1993:								
Total	314.6	21.8	15.0	47.5	176.3	24.5	25.2	4.3
Doctorate-granting	294.7	16.0	15.0	40.7	170.5	22.9	25.2	4.2
Nondoctorate-granting	19.9	5.8	0.0	6.8	5.8	1.6	0.0	0.1
1994 or 1995:								
Total	562.3	71.8	11.2	94.8	271.9	32.2	77.7	2.8
Doctorate-granting	531.4	70.1	10.7	78.0	268.8	25.6	75.4	2.8
Nondoctorate-granting	30.8	1.6	0.5	16.8	3.0	6.6	2.4	0.0

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Findings are limited to projects with estimated total costs at completion of more than \$100,000 for research-related space. Estimates are prorated to research components only.

Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 5 of this report.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F5-7. Number of private research-performing institutions, by status relative to the \$150 million limit on institution tax-exempt bonds: 1988, 1990, 1992, 1994 and 1996

Status relative to the \$150 million limit on tax-exempt bond	Total					Doctorate-granting					Nondoctorate-granting				
	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996	1988	1990	1992	1994	1996
Total	205	206	206	220	218	103	103	102	124	126	103	103	104	96	92
Have reached the limit	20	23	28	28	32	20	23	28	28	28	0	0	0	0	3
Have not, but expect to reach the limit in the next 2 fiscal years	9	12	2	12	5	8	12	2	7	5	1	0	0	5	0
Have not, and do not expect to reach the limit in the next 2 fiscal years	176	171	176	180	182	75	68	72	88	93	102	103	104	92	89

NOTES: All 1996 data are national estimates derived from samples representing the 560 largest research-performing U.S. colleges and universities; 1994 data represent 565 institutions; all previous years' data (1988, 1990, 1992) represent 525 institutions.

Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F6-1. Percentage of institutions with need for capital projects to construct and/or to repair/renovate science and engineering (S&E) research facilities, as identified in an institutional plan or not in a plan, by institution type, project type and control: 1996

Institution type	Needs in a plan			Needs not in a plan		
	Need to construct or repair/renovate	Construct	Repair/renovate	Need to construct or repair/renovate	Construct	Repair/renovate
Total	44%	23%	36%	24%	11%	22%
Doctorate-granting	52	30	42	26	11	24
Top 100 in research expenditures	71	53	62	35	23	33
Other	43	19	33	22	6	19
Nondoctorate-granting	34	15	28	23	10	20
Public	45	31	35	23	11	19
Doctorate-granting	55	44	43	25	12	24
Nondoctorate-granting	32	15	23	19	10	14
Private	43	13	38	27	10	25
Doctorate-granting	48	10	42	26	9	24
Nondoctorate-granting	37	16	33	27	10	27

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F6-2. Expenditures for needed capital projects to construct or repair/renovate science and engineering (S&E) research facilities, as identified in an institutional plan or not in a plan, by institution type, project type and control: 1996
[Current dollars in millions]

Institution type	In a plan		Not in a plan		Total
	To construct S&E research facilities	To repair/renovate S&E research facilities	To construct S&E research facilities	To repair/renovate S&E research facilities	
Total	\$4,629.0	\$2,790.0	\$1,046.4	\$875.9	\$9,341.3
Doctorate-granting	4,306.8	2,495.0	1,004.5	762.7	8,569.0
Top 100 in research expenditures	3,480.3	1,653.4	903.6	601.1	6,638.4
Other	826.6	841.6	100.8	161.6	1,930.6
Nondoctorate-granting	322.2	295.0	41.9	113.2	772.3
Public	4,165.7	2,001.1	821.3	676.1	7,664.2
Doctorate-granting	3,929.4	1,809.9	783.5	597.7	7,120.5
Nondoctorate-granting	236.3	191.2	37.9	78.4	543.8
Private	463.3	788.9	225.0	199.8	1,677.0
Doctorate-granting	377.5	685.1	221.0	165.0	1,448.6
Nondoctorate-granting	85.9	103.8	4.0	34.8	228.5

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F6-3. Number of institutions with need for capital projects to construct or repair/renovate science and engineering (S&E) research facilities, as identified in an institutional plan or not in a plan, by field and and project type: 1996

Field	In a plan		Not in a plan	
	To construct S&E research facilities	To repair/renovate S&E research facilities	To construct S&E research facilities	To repair/renovate S&E research facilities
Biological sciences outside medical school	50	88	27	71
Physical sciences	65	110	16	58
Psychology	10	32	13	29
Social sciences	11	26	16	36
Mathematics	7	33	10	19
Computer sciences	6	27	19	22
Earth, atmospheric, and ocean sciences	15	56	13	16
Engineering	61	76	11	25
Agricultural sciences	25	21	12	16
Medical sciences outside medical school	23	31	15	29
Medical sciences medical schools	16	35	4	14
Biological sciences medical schools	12	37	3	12
Other, not elsewhere classified	9	32	3	6

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F6-4. Expenditures for needed capital projects to construct or repair/renovate science and engineering (S&E) research facilities, as identified in an institutional plan or not in a plan, by field: 1996

Field	In a plan		Not in a plan		Total
	To construct S&E research facilities	To repair/renovate S&E research facilities	To construct S&E research facilities	To repair/renovate S&E research facilities	
Total	\$4,629,012.4	\$2,790,044.2	\$1,046,350.2	\$875,885.1	\$9,341,291.9
Biological sciences-- outside medical school	638,820.8	508,097.0	150,909.7	147,571.9	1,445,399.4
Physical sciences	1,065,307.7	587,344.9	109,687.4	94,906.2	1,857,246.2
Psychology	55,320.6	41,043.4	28,811.4	10,030.1	135,205.5
Social sciences	141,908.7	64,485.0	42,900.5	56,542.7	305,836.9
Mathematics	55,944.2	52,630.8	3,408.3	11,145.3	123,128.6
Computer sciences	86,088.7	22,033.0	33,499.2	11,297.3	152,918.2
Earth, atmospheric, and ocean sciences	377,487.4	165,671.5	95,938.6	27,688.4	666,785.9
Engineering	727,087.6	525,313.6	179,511.4	90,978.0	1,522,890.6
Agricultural sciences	356,487.6	144,548.5	159,739.9	147,542.8	808,318.8
Medical sciences-- outside medical school	238,171.5	113,803.8	90,235.1	76,259.3	518,469.7
Medical sciences-- medical schools	660,194.8	403,880.2	107,030.7	90,308.0	1,261,413.7
Biological sciences-- medical schools	166,230.3	101,984.2	33,911.9	71,836.3	373,962.7
Other, not elsewhere classified	59,962.4	57,208.2	10,766.2	39,778.8	167,715.6

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F7-1. Total number of Historically Black Colleges and Universities (HBCUs)
by type and control: 1996

Institution type and control	Original group 1996 ¹	Expanded group 1996
Number of research-performing HBCUs	29	68
Public		
Doctorate-granting	5	5
Nondoctorate-granting	17	34
Private		
Doctorate-granting	4	5
Nondoctorate-granting	3	24

¹ The original group consists of the 29 HBCUs also surveyed in 1988, 1990, and 1994; the expanded group is the 1996 population of all 68 research-performing HBCUs.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F7-2. Total net assignable square feet (NASF) of academic space, total NASF in science and engineering (S&E) fields, and research NASF in S&E fields, in Historically Black Colleges and Universities (HBCUs); original and expanded groups of institutions: 1996
[NASF in millions]

	Original group 1996 ¹	Expanded group 1996
Number of research-performing HBCUs	29	68
Total academic space ²	15	20
Space in S&E fields	7	9
Space used for research in S&E fields	2	2

¹ The original group consists of the 29 HBCUs also surveyed in 1988, 1990, and 1994; the expanded group is the 1996 population of all 68 research-performing HBCUs.

² Projected from responses of 76 percent of original group and 86 percent of expanded group.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F7-3. Total net assignable square feet (NASF) of space in science and engineering (S&E) fields and NASF used for research in Historically Black Colleges and Universities (HBCUs): 1988, 1990, 1992, 1994 and 1996 [NASF in thousands]

Field	Total NASF in S&E fields					Research NASF in S&E fields				
	1988	1990	1992 [Original] ¹	1994 [Original] ¹	1996 [Original] ¹	1988	1990	1992 [Original] ¹	1994 [Original] ¹	1996 [Original] ¹
Number of research-performing HBCUs	29	29	29	28	29	29	29	29	28	29
Total	6,077	6,175	6,576	6,084	6,755	1,112	1,440	1,782	1,759	1,797
Biological sciences-- outside medical school	509	546	621	581	634	141	170	254	250	208
Physical sciences	804	810	1,005	876	939	179	190	235	212	229
Psychology	119	105	86	106	134	14	19	16	18	16
Social sciences	304	322	278	233	268	28	47	57	43	56
Mathematics	173	164	191	158	194	12	26	29	19	24
Computer sciences	150	114	160	128	140	43	30	42	31	36
Earth, atmospheric and ocean sciences	44	56	85	73	115	10	26	35	27	42
Engineering	777	979	1,207	1,136	1,354	152	167	285	315	349
Agricultural sciences	604	834	783	704	718	259	433	414	470	451
Medical sciences-- outside medical school	593	956	963	913	719	37	50	133	134	63
Medical sciences-- medical school	1,253	810	810	649	872	141	158	160	69	84
Biological sciences-- medical school	621	388	388	456	470	91	121	121	159	150
Other, not elsewhere classified	126	91	0	70	198	4	4	0	12	88

¹ The original group consists of the 29 HBCUs surveyed in 1988, 1990, 1992, 1994 and 1996. One HBCU did not have R&D expenditures in 1994.

NOTE: Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F7-4. Total net assignable square feet (NASF) of space in science and engineering (S&E) fields and NASF used for research in Historically Black Colleges and Universities (HBCUs): 1988, 1990, 1992, 1994 and 1996 [NASF in thousands]

Field	Total NASF in S&E fields					Research NASF in S&E fields				
	1988	1990	1992 [Expanded] ¹	1994 [Expanded] ¹	1996 [Expanded] ¹	1988	1990	1992 [Expanded] ¹	1994 [Expanded] ¹	1996 [Expanded] ¹
Number of research-performing HBCUs	29	29	70	70	68	29	29	70	70	68
Total	6,077	6,175	9,095	7,923	8,984	1,112	1,440	2,920	2,197	2,374
Biological sciences-- outside medical school	509	546	1,757	1,063	1,182	141	170	1,137	480	393
Physical sciences	804	810	1,380	1,344	1,482	179	190	275	280	352
Psychology	119	105	173	222	219	14	19	25	33	31
Social sciences	304	322	438	367	413	28	47	78	61	77
Mathematics	173	164	325	365	345	12	26	34	38	44
Computer sciences	150	114	283	278	356	43	30	53	52	64
Earth, atmospheric and ocean sciences	44	56	131	97	219	10	26	64	36	54
Engineering	777	979	1,353	1,278	1,445	152	167	302	355	364
Agricultural sciences	604	834	930	705	979	259	433	497	483	595
Medical sciences-- outside medical school	593	956	1,070	989	799	37	50	147	141	77
Medical sciences-- medical schools	1,253	810	862	649	872	141	158	187	69	84
Biological sciences-- medical schools	621	388	388	456	470	91	121	121	159	150
Other, not elsewhere classified	126	91	5	109	202	4	4	0	14	88

¹ The original group consists of the 29 HBCUs surveyed in 1988, 1990, 1992; the expanded group is the 1994 and 1996 population of all 70 research-performing HBCUs. Two HBCUs did not have R&D expenditures in 1996.

NOTE: Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F7-5. Condition of research facilities at Historically Black Colleges and Universities (HBCUs): 1988, 1990, 1992, 1994 and 1996
[percentage of research space]

Condition of research facilities	1988	1990	1992 ¹	1992 Expanded	1994 ¹	1994 Expanded	1996 ^{1,3}	1996 Expanded ³
Total	100	100	100	100	100	100	100	100
Suitable for most highly developed and scientifically sophisticated research	36	31	34	22	31	24	32	31
Effective for most purposes	39	45	41	56	39	35	56	55
Requires limited repair or renovation	18	18	17	14	21	25		
Requires major repair or renovation ²	7	7	8	8	9	16	13	14

¹ Data are based on reduced sample to correspond to 1988 and 1990 surveys.

² Includes research space that requires replacement.

³ 1996 survey response categories changed to: suitable for the most scientifically competitive research; effective for most levels of research, but may need limited repair/renovation; and requires major renovation or replacement to be used effectively.

NOTE: Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F7-6. Science and engineering research facility construction and repair/renovation projects at Historically Black Colleges and Universities (HBCUs), by project characteristics: 1986-1995

Capital Project Activity	Original ¹						Expanded ¹			
	1986-1987	1988-1989	1990-1991	1992-1993	1994-1995	1996-1997 (scheduled)	1990-1991	1992-1993	1994-1995	1996-1997 (scheduled)
Construction Projects: ²										
Number of HBCUs with projects	11	10	6	4	4	11	10	9	13	17
Total project completion cost (current dollars in millions)	\$72	\$55	\$23	\$9	\$3	\$38	\$38	\$29	\$21	\$54
NASF (in thousands)	481	319	328	88	68	181	449	226	166	253
Repair/Renovation projects costing \$100,000: ²										
Number of HBCUs with projects	13	10	5	11	7	9	8	12	9	23
Total project completion cost (in millions)	\$14	\$17	\$12	\$9	\$22	\$8	\$21	\$9	\$22	\$23
NASF (in thousands)	137	308	129	106	343	166	177	110	347	207
Repair/Renovation projects costing \$5,000-\$100,000:										
Number of HBCUs with projects	-	-	10	13	11	-	21	38	24	-
Total project completion cost (in millions)	-	-	\$0.6	\$3.3	\$0.8	-	\$1.1	\$26.0	\$1.6	-

¹ The original group consists of the 29 HBCUs also surveyed in 1988, 1990, 1992, 1994 and 1996; the expanded group is the 1996 population of all 70 research-performing HBCUs. In 1996, two HBCUs did not have R&D expenditures.

² Findings are limited to projects with estimated total cost at completion of over \$100,000 for research space. Estimates are prorated to reflect research components only.

NOTES: Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 7 of this report.

KEY: NASF = net assignable square feet

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F7-7. Source of funds for science and engineering research facility construction projects at Historically Black Colleges and Universities (HBCUs): 1986-1995
[Current dollars in millions]

Source of funds	1986-1987 ¹	1988-1989 ¹	1990-1991 ¹ [Original] ²	1990-1991 ¹ [Expanded] ²	1992-1993 [Original] ²	1992-1993 [Expanded] ²	1994-1995 [Original] ²	1994-1995 [Expanded] ²
Number of institutions	29	29	29	70	28	68 ³	29	68 ³
Total	\$71.8	\$55.1	\$22.5	\$37.6	\$8.6	\$28.8	\$3.3	\$21.3
Federal government	32.7	35.0	12.1	13.0	6.5	4.6	1.3	3.3
State/local government	25.8	11.5	6.3	18.0	2.0	22.4	2.0	16.8
Private donations	11.1	7.7	0.0	0.0	0.0	0.0	0.0	0.3
Institutional funds	2.3	0.9	4.2	4.6	0.0	0.2	0.0	0.9
Debt financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Tax-exempt bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other debt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other sources	0.0	0.0	0.0	1.9	0.0	1.6	0.0	0.0

¹ Data for the first two time periods were heavily inflated by construction activity at a single institution, which accounted for a substantial fraction of the total dollar amount shown.

² The original group consists of the 29 HBCUs also surveyed in 1988, 1990, 1992 and 1994; the expanded group is the 1996 population of all 70 research-performing HBCUs.

³ Two of the HBCUs were determined to be out of scope since they had no S&E research space; data are weighted to 28 in the original panel and 68 in the expanded group.

NOTES: Findings are limited to projects with estimated total cost at completion of \$100,000 or more for research space. Estimates are prorated to reflect research components only. Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 7 of this report.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F7-8. Sources of funds for science and engineering research facilities repair/renovation projects at Historically Black Colleges and Universities (HBCUs): 1986-1995
[Current dollars in millions]

Source of funds	1986-1987	1988-1989	1990-1991 [Original]	1990-1991 [Expanded] ¹	1992-1993 [Original]	1992-1993 [Expanded] ¹	1994-1995 [Original]	1994-1995 [Expanded] ¹
Number of institutions	29	29	29	70	28	68 ²	29	68
Total	14.1	16.6	11.6	21.4	8.7	9.1	21.5	22.0
Federal government	8.7	12.9	3.5	3.6	5.0	4.8	10.2	10.4
State/local government	4.9	8.0	8.0	17.7	2.1	2.1	6.4	6.6
Private donations	0.5	0.1	0.1	0.2	1.7	1.7	0.0	0.0
Institutional funds	0.0	0.1	0.1	0.1	0.1	0.4	2.6	2.6
Debt financing	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4
Tax-exempt bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other debt	0.0	0.0	0.0	0.0	0.0	0.0	2.4	2.4
Other sources	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

¹ The original group consists of the 29 HBCUs also surveyed in 1988, 1990, 1992 and 1994; the expanded group is the 1996 population of all 70 research-performing HBCUs.

² Two of the HBCUs were determined to be out of scope since they had no S&E research space; data are weighted to 28 in the original panel and 68 in the expanded group.

NOTES: Findings are limited to projects with estimated total cost at completion of \$100,000 or more for research space. Estimates are prorated to reflect research components only. Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 7 of this report.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F7-9. Original¹ Historically Black Colleges and Universities (HBCUs) with need for capital projects to construct or repair/renovate science and engineering (S&E) research facilities, as identified in an institutional plan and not in a plan, by field and project type: 1996
[Current dollars in millions]

Field	In a plan				Not in a plan			
	Number of institutions with need to construct	Cost	Number of institutions with need to repair/renovate	Cost	Number of institutions with need to construct	Cost	Number of institutions with need to repair/renovate	Cost
Total	10	\$159,297.2	8	\$11,822.7	4	\$19,060.0	3	\$703.0
Biological sciences-- outside medical school	2	6,365.0	1	1,296.9	1	8,000.0	1	155.0
Physical sciences	5	26,000.0	3	1,544.8	1	10,000.0	1	150.0
Psychology	1	150.0	1	723.1	0	0.0	1	32.0
Social sciences	2	22,755.8	1	80.0	1	200.0	1	217.0
Mathematics	1	15,944.4	1	40.0	1	240.0	0	0.0
Computer sciences	1	6,000.0	3	456.0	1	120.0	1	50.0
Earth, atmospheric and ocean sciences	1	3,680.0	0	0.0	0	0.0	0	0.0
Engineering	3	43,150.0	2	362.0	0	0.0	0	0.0
Agricultural sciences	2	2,652.0	0	0.0	1	150.0	1	54.0
Medical sciences-- outside medical school	3	24,500.0	1	120.0	1	350.0	0	0.0
Medical sciences-- medical school	0	0.0	0	0.0	0	0.0	0	0.0
Biological sciences-- medical school	1	1,500.0	2	6,200.0	0	0.0	1	30.0
Other, not elsewhere classified	1	6,600.0	1	1,000.0	0	0.0	1	15.0

¹ The original group consists of the 29 HBCUs also surveyed in 1988, 1990, 1992 and 1994.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F7-10. Expanded ¹ Historically Black Colleges and Universities (HBCUs) with need for capital projects to construct or repair/renovate science and engineering (S&E) research facilities, as identified in an institutional plan and not in a plan, by field and project type: 1996
[Current dollars in millions]

Field	In a plan				Not in a plan			
	Number of institutions with need to construct	Cost	Number of institutions with need to repair/renovate	Cost	Number of institutions with need to construct	Cost	Number of institutions with need to repair/renovate	Cost
Total	11	\$159,640.1	19	\$74,771.5	13	\$35,920.6	20	\$30,891.2
Biological sciences-- outside medical school	3	6,708.7	7	7,889.3	8	9,335.8	17	7,899.7
Physical sciences	5	26,000.0	13	17,355.1	4	10,833.2	17	14,737.3
Psychology	1	150.0	3	813.1	5	474.9	1	32.0
Social sciences	2	22,755.8	1	80.0	5	361.9	5	273.2
Mathematics	1	15,944.4	8	18,153.8	1	240.0	6	1,884.1
Computer sciences	1	6,000.0	5	2,463.7	5	794.7	5	265.9
Earth, atmospheric and ocean sciences	1	3,680.0	5	5,368.7	0	0.0	0	0.0
Engineering	3	43,150.0	9	14,687.8	0	0.0	0	0.0
Agricultural sciences	2	2,652.0	0	0.0	2	13,530.0	2	5,554.0
Medical sciences-- outside medical school	3	24,500.0	2	760.0	1	350.0	1	200.0
Medical sciences-- medical school	0	0.0	0	0.0	0	0.0	0	0.0
Biological sciences-- medical school	1	1,500.0	2	6,200.0	0	0.0	1	30.0
Other, not elsewhere classified	1	6,600.0	1	1,000.0	0	0.0	1	15.0

¹ The expanded group is the 1996 population of all 68 research-performing HBCUs.

NOTES: Because of rounding, components may not add to totals.

Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 7 of this report.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F7-11. Laboratory animal facilities at Historically Black Colleges and Universities (HBCUs): 1996

Indicator	Original group ¹	Expanded group ¹
Total animal research NASF (in thousands)	223,209	239,688
Animal laboratory NASF (in thousands)	81,231	88,928
Animal housing NASF (in thousands)	141,978	150,759
Regulation status (in percentage of NASF):		
Fully meets government regulations	65.1%	65.5%
Needs limited repair to meet regulations	1.3	2.0
Needs major work or replacement to meet regulations	33.6	32.5
Cost of scheduled construction and repair/renovation of laboratory animal facilities, FY 1996 or FY 1997 (dollars in thousands)	\$203,000	\$203,000
NASF of scheduled construction and repair/renovation of laboratory animal facilities, FY 1996 or FY 1997 (NASF in thousands)	3,200	3,200

¹ The original group consists of the 29 HBCUs also surveyed in 1988, 1990, and 1992; the expanded group is the 1994 population of all 68 research-performing HBCUs.

NOTE: Because of rounding, components may not add to 100.

KEY: NASF = net assignable square feet

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F8-1. Number of institutions with science and engineering (S&E) research space at nondoctorate-granting institutions¹ by field: 1996

Field	Comprehensive universities	Liberal arts colleges
Total	177	65
Biological sciences	164	59
Physical sciences	159	59
Psychology	126	47
Social sciences	111	42
Mathematics	85	35
Computer sciences	99	32
Earth, atmospheric and ocean sciences	67	29
Engineering	73	6
Agricultural sciences	42	3
Medical sciences	62	0
Other, not elsewhere classified	11	4

¹ The Carnegie Classification of Institutions of Higher Education is used to distinguish between two different groups of nondoctorate-granting institutions: comprehensive universities, those that offer a liberal arts program along with other programs such as engineering, business administration, or nursing; and liberal arts colleges, those that primarily award bachelor's degrees and that grant more than half of their degrees in the liberal arts.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F8-2. Condition of science and engineering research space in nondoctorate-granting institutions by type: 1996
 [Percentage of space]

	Total research NASF (in millions)	Suitable for most scientifically competitive research	Effective for most uses, but may need limited repair/renovation	Requires major renovation or replacement
Total: All nondoctorates	5.80	24%	57%	18%
Comprehensive universities	4.44	20	60	19
Liberal arts colleges	1.36	36	48	17

¹ The Carnegie Classification of Institutions of Higher Education is used to distinguish between two different groups of nondoctorate-granting institutions: comprehensive universities, those that offer a liberal arts program along with other programs such as engineering, business administration, or nursing; and liberal arts colleges, those that primarily award bachelor's degrees and that grant more than half of their degrees in the liberal arts.

NOTE: Because of rounding, components may not add to 100.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F8-3. For projects to construct science and engineering research facilities at nondoctorate-granting institutions,¹ the number of institutions and estimated total cost of projects by field and institution type
[Current dollars in millions]

	Comprehensive universities		Liberal arts colleges	
	Number of institutions	Cost	Number of institutions	Cost
Total	20	\$294.5	13	\$36.1
Biological sciences	7	128.6	10	32.0
Physical sciences	9	93.3	4	3.5
Psychology	0	0.0	0	0.0
Social sciences	1	0.6	0	0.0
Mathematics	1	0.4	0	0.0
Computer sciences	0	0.0	0	0.0
Earth, atmospheric and ocean sciences	2	14.5	1	0.7
Engineering	0	0.0	0	0.0
Agricultural sciences	4	4.0	0	0.0
Medical sciences	3	30.3	0	0.0
Other, not elsewhere classified	6	22.7	0	0.0

¹ The Carnegie Classification of Institutions of Higher Education is used to distinguish between two different groups of nondoctorate-granting institutions: comprehensive universities, those that offer a liberal arts program along with other programs such as engineering, business administration, or nursing; and liberal arts colleges, those that primarily award bachelor's degrees and that grant more than half of their degrees in the liberal arts.

NOTE: Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 8 of this report.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F8-4. For projects to repair/renovate science and engineering research facilities at nondoctorate-granting institutions¹, the number of institutions and estimated total cost of projects by field and institution type
[Current dollars in millions]

Field	Comprehensive universities		Liberal arts colleges	
	Number of institutions	Cost	Number of institutions	Cost
Total	38	\$51.1	21	\$25.7
Biological sciences	12	8.2	10	8.2
Physical sciences	10	9.5	9	9.5
Psychology	0	0.0	4	3.4
Social sciences	6	11.8	9	2.4
Mathematics	0	0.0	3	0.7
Computer sciences	2	0.6	6	1.2
Earth, atmospheric and ocean sciences	5	4.7	0	0.0
Engineering	7	14.8	2	0.3
Agricultural sciences	5	1.0	0	0.0
Medical sciences	0	0.0	0	0.0
Other, not elsewhere classified	1	0.4	0	0.0

¹ The Carnegie Classification of Institutions of Higher Education is used to distinguish between two different groups of nondoctorate-granting institutions: comprehensive universities, those that offer a liberal arts program along with other programs such as engineering, business administration, or nursing; and liberal arts colleges, those that primarily award bachelor's degrees and that grant more than half of their degrees in the liberal arts.

NOTE: Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 8 of this report.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F8-5. Expenditures for needed capital projects to construct or repair/renovate S&E research facilities at nondoctorate-granting institutions,¹ by institution type, project type, and whether included in an institutional plan: 1996
[Current dollars in millions]

Institution Type	Included in Institutional Plans		Not Included in Institutional Plans		Total
	To construct new S&E research facilities	To repair/renovate existing S&E research facilities	To construct new S&E research facilities	To repair/renovate existing S&E research facilities	
Total: All nondoctorates	322.2	295.0	41.9	113.2	772.3
Comprehensive universities	249.3	194.8	38.5	93.2	575.8
Liberal arts colleges	72.9	100.2	3.4	20.0	196.5

¹ The Carnegie Classification of Institutions of Higher Education is used to distinguish between two different groups of nondoctorate-granting institutions: comprehensive universities, those that offer a liberal arts program along with other programs such as engineering, business administration, or nursing; and liberal arts colleges, those that primarily award bachelor's degrees and that grant more than half of their degrees in the liberal arts.

NOTE: Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 8 of this report.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F8-6. Expenditures for needed capital projects to construct S&E research facilities, as identified in an institutional plan and not in a plan, at nondoctorate-granting institutions, ¹ by institution type and field: 1996
 [Current dollars in millions]

Field	Comprehensive universities		Liberal arts colleges		Total
	In a plan	Not in a plan	In a plan	Not in a plan	
Total	\$249.3	\$38.5	\$72.9	\$3.4	\$364.1
Biological sciences	35.5	10.4	11.3	0.5	
Physical sciences	72.4	11.6	25.1	0.0	109.1
Psychology	0.2	0.4	24.4	0.2	25.2
Social sciences	22.8	0.9	2.9	0.2	26.8
Mathematics	15.9	0.3	3.0	0.0	19.2
Computer sciences	0.0	1.0	0.0	0.8	1.8
Earth, atmospheric and ocean sciences	0.0	0.1	2.8	0.0	2.9
Engineering	53.6	0.0	0.0	1.8	55.4
Agricultural sciences	2.7	13.5	0.0	0.0	16.2
Medical sciences	39.8	0.3	0.0		
Other, not elsewhere classified	6.6	0.0	3.3	0.0	9.9

¹ The Carnegie Classification of Institutions of Higher Education is used to distinguish between two different groups of nondoctorate-granting institutions: comprehensive universities, those that offer a liberal arts program along with other programs such as engineering, business administration, or nursing; and liberal arts colleges, those that primarily award bachelor's degrees and that grant more than half of their degrees in the liberal arts.

NOTE: Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 8 of this report.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F8-7. Expenditures for needed capital projects to repair/renovate science and engineering (S&E) research facilities, as identified in an institutional plan and not in a plan, at nondoctorate-granting institutions,¹ by institution type and field: 1996
[Current dollars in millions]

Field	Comprehensive universities		Liberal arts colleges		Total
	In a plan	Not in a plan	In a plan	Not in a plan	
Total	\$194.8	\$93.2	\$100.2	\$20.0	\$408.2
Biological sciences	42.8	28.9	13.2	2.8	
Physical sciences	41.3	19.3	36.6	14.8	112.0
Psychology	4.4	3.0	1.6	0.8	9.8
Social sciences	2.6	0.8	3.4	0.1	6.9
Mathematics	16.5	2.0	17.2	0.3	36.0
Computer sciences	2.7	0.5	0.0	0.6	3.8
Earth, atmospheric and ocean sciences	62.9	0.0	14.7	0.0	77.6
Engineering	2.9	0.0	13.4	0.0	16.3
Agricultural sciences	0.0	6.4	0.0	0.0	6.4
Medical sciences	0.9	32.2	0.0		
Other, not elsewhere classified	17.8	0.0	0.0	0.5	18.3

¹ The Carnegie Classification of Institutions of Higher Education is used to distinguish between two different groups of nondoctorate-granting institutions: comprehensive universities, those that offer a liberal arts program along with other programs such as engineering, business administration, or nursing; and liberal arts colleges, those that primarily award bachelor's degrees and that grant more than half of their degrees in the liberal arts.

NOTE: Dollar amounts are reported in current dollars, unadjusted for inflation. See Table A-5 in the Technical Notes for the inflation adjustment used in Chapter 8 of this report.

SOURCE: National Science Foundation/SRS, 1996 Survey of Scientific and Engineering Research Facilities at Colleges and Universities.

Table F9-1. Total research net assignable square feet (NASF) of laboratory animal facilities by institution type and control: 1996
 [NASF in thousands]

Institution type and control	Number of institutions	Total animal research	Animal housing	Animal lab
Total	490	12,213	8,046	4,167
Doctorate-granting	297	11,384	7,660	3,724
Top 100 in research expenditures	97	8,370	5,773	2,598
Other	200	3,014	1,888	1,127
Nondoctorate-granting	192	829	386	443
Public	287	9,476	6,188	3,288
Doctorate-granting	173	8,796	5,886	2,910
Nondoctorate-granting	113	680	302	378
Private	203	2,738	1,858	879
Doctorate-granting	124	2,589	1,774	814
Nondoctorate-granting	79	149	84	65

NOTES: Refers to institutions reporting any space in laboratory animal facilities that are subject to government regulations concerning the humane care and use of laboratory animals.
 Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F9-2. Government regulation status of laboratory animal facilities by institution type and control: 1996
 [Percentage of current laboratory facility research space]

Institution type and control	Total	Fully meets government regulations	Needs limited repair/renovation to meet regulations	Needs limited repair/renovation to meet regulations
Total	100%	81%	10%	9%
Doctorate-granting	100	81	10	9
Top 100 in research expenditures	100	80	12	8
Other	100	84	4	12
Nondoctorate-granting	100	92	6	2
Public	100	79	10	11
Doctorate-granting	100	78	11	12
Nondoctorate-granting	100	94	6	1
Private	100	91	7	2
Doctorate-granting	100	91	7	2
Nondoctorate-granting	100	82	9	9

NOTES: Refers to institutions reporting any space in laboratory animal facilities that are subject to government regulations concerning the humane care and use of laboratory animals.
 Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.

Table F9-3. Total cost of repair/renovation and construction projects in laboratory animal facilities scheduled for 1996 and 1997 by institution type and control: 1996

Institution type and control	Construction			Repair/Renovation		
	Number of Institutions	NASF (in thousands)	Cost (in millions)	Number of Institutions	NASF (in thousands)	Cost (in millions)
Total	71	532	\$83.3	31	645	\$164.1
Doctorate-granting	63	519	78.9	26	638	162.1
Top 100 in research expenditures	35	313	48.1	20	385	112.8
Other	28	206	30.8	6	253	49.3
Nondoctorate-granting	8	13	4.4	4	7	2.0
Public	25	296	41.7	24	591	146.7
Doctorate-granting	25	296	41.7	21	588	146.1
Nondoctorate-granting	0	0	0.0	3	3	0.6
Private	46	236	41.6	7	54	17.4
Doctorate-granting	38	223	37.2	6	50	16.0
Nondoctorate-granting	8	13	4.4	1	4	1.4

NOTES: Refers to institutions reporting any space in laboratory animal facilities that are subject to government regulations concerning the humane care and use of laboratory animals. Because of rounding, components may not add to totals.

SOURCE: National Science Foundation/SRS, 1996 Scientific and Engineering Research Facilities at Colleges and Universities.