

Stalled Momentum

Total construction spending by education institutions in 2005 pulled back from the robust amounts posted over the first half of the decade.

By Joe Agron

The old adage, “what goes up must come down,” can be used to describe education construction spending in 2005. After impressive gains in expenditures during the first half of the decade, total construction spending by schools and universities pulled back from historic highs.

A combination of factors, includ-

ing skyrocketing fuel and building-materials costs, resulted in education institutions trimming down or even putting the brakes on projects. According to *American School & University's* 32nd annual Official Education Construction Report, total spending on new, addition and retrofit construction by the nation's school districts and higher-educat-

tion institutions amounted to \$37.5 billion in 2005, down from \$41.3 billion in 2004.

Reduced spending by school districts accounted for the drop in total spending; colleges and universities actually increased their construction expenditures in 2005. About \$23 billion worth of construction was completed by school districts last year,

TABLE 1

Education construction completed in 2005

(\$000s)

The National Picture	
SCHOOL DISTRICTS	
\$12,288,663	New
\$6,150,856	Additions
\$4,522,403	Modernizations
\$22,961,922	TOTAL
COLLEGES	
\$8,931,688	New
\$2,732,685	Additions
\$2,896,670	Modernizations
\$14,561,043	TOTAL
ALL EDUCATION	
\$21,220,351	New
\$8,883,541	Additions
\$7,419,073	Modernizations
\$37,522,965	TOTAL

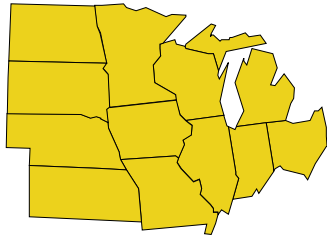
TABLE 2

Education construction projected to be completed in 2006-2008

(\$000s)

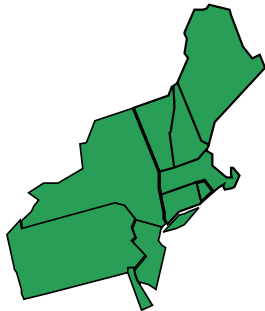
The National Picture	
SCHOOL DISTRICTS	
\$46,238,828	New
\$16,340,922	Additions
\$17,601,429	Modernizations
\$80,181,179	TOTAL
COLLEGES	
\$30,047,478	New
\$7,508,261	Additions
\$7,143,334	Modernizations
\$44,699,073	TOTAL
ALL EDUCATION	
\$76,286,306	New
\$23,849,183	Additions
\$24,744,763	Modernizations
\$124,880,252	TOTAL

Key to Regions



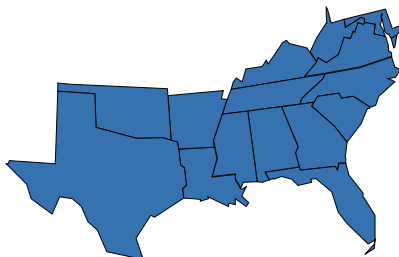
Midwest

IL, IN, IA, KS, MI, MN, MO, ND, NE, OH, SD, WI



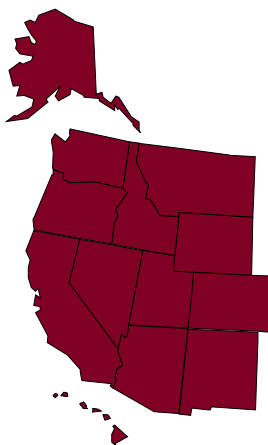
Northeast

CT, MA, ME, NH, NJ, NY, PA, RI, VT



South

AL, AR, DC, DE, FL, GA, KY, LA, MD, MS, NC, OK, SC, TN, TX, VA, WV



West

AK, AZ, CA, CO, HI, ID, MT, NM, NV, OR, UT, WA, WY

Total spending on new, addition and retrofit construction by the nation's school districts and higher-education institutions topped \$37.5 billion in 2005, down from \$41.3 billion in 2004.

down from \$29 billion in 2004. Higher-education-institution spending rose to \$14.5 billion in 2005 (\$12.1 billion the year before).

Dissecting the data

This year's annual official education construction report details spending by education institutions in 2005, projected spending through 2008 and various other data, including:

•**Table 1.** Breaks out the amount and type of construction spending by school districts, colleges and all education institutions in 2005. Although the amount spent on K-12 construction projects decreased from the year before, the biggest drop was in modernization spending—a result of districts postponing many of the projects planned because of rapidly rising costs. The amount spent by schools on new construction and additions remained

TABLE 3

Education construction: Breakouts over the decade

(\$ Billions)	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
School Districts	\$10.964	\$12.394	\$17.095	\$16.039	\$21.567	\$26.777	\$24.343	\$28.638	\$29.088	\$22.962
Colleges	\$7.235	\$7.530	\$7.330	\$13.964	\$14.703	\$14.732	\$16.205	\$19.469	\$12.186	\$14.561
All Education	\$18.199	\$19.924	\$24.425	\$30.003	\$36.270	\$41.509	\$40.548	\$48.107	\$41.274	\$37.523
New Construction	\$9.642	\$10.471	\$12.097	\$14.431	\$19.139	\$20.112	\$22.505	\$31.596	\$20.656	\$21.220
Additions	\$4.002	\$4.249	\$6.160	\$7.043	\$4.936	\$5.814	\$8.014	\$6.176	\$7.124	\$8.884
Modernizations	\$4.555	\$5.204	\$6.168	\$8.529	\$12.195	\$15.583	\$10.029	\$10.335	\$13.494	\$7.419

about the same in 2005 compared with 2004. Colleges bumped up their spending in 2005, increasing expenditures in all areas except modernization. New construction garnered the majority of the dollars at both school districts and colleges.

•**Table 2.** Details the amount and type of construction projected to be completed through 2008 by type of institution and type of spending. Schools and universities expect to spend about \$125 billion on projects over the next three years. New construction will make up the bulk of the spending (61 percent), with school districts allocating 58 percent of their construction dollars and colleges 67 percent.

•**Table 3.** Outlines the past 10 years of education construction by amount, category and type of institution.

•**Table 4.** Charts regional spending on construction by type of institution. This year's breakout of regions conforms to regional categories as broken out by U.S. Department of Education

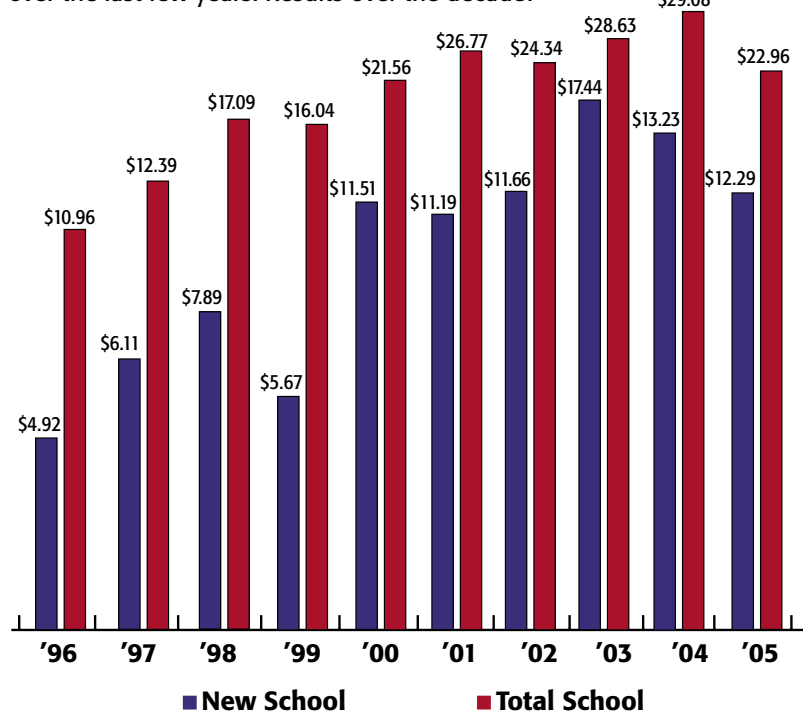
Spending by school districts accounted for the drop in total spending, with colleges and universities actually increasing their construction expenditures in 2005.

data for easier comparison. The most active region for total education construction spending in 2005 was the South, putting in place more than \$14 billion in projects.

•**Table 5.** Highlights the type of school construction completed in 2005 by region and type of spending (new buildings, additions and mod-

Slow down

School construction spending pulled back in 2005 from its record pace over the last few years. Results over the decade:



Strong Showing

Construction spending by colleges and universities increased in 2005 from the year before. Results over the decade:

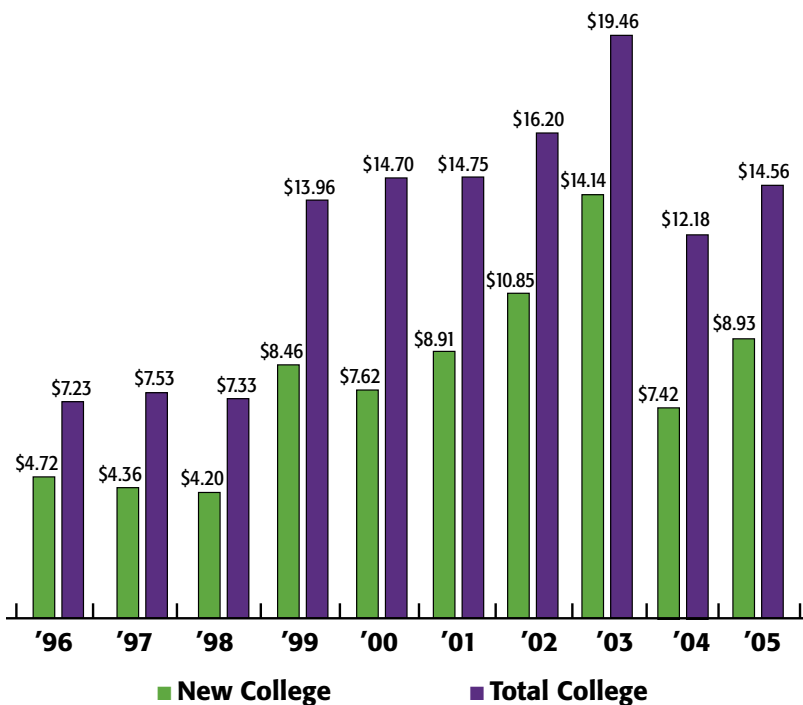


TABLE 4

Education construction, 2005: By type of institution

(\$000)

Region	Schools	Colleges	All Education
Midwest	\$3,911,383	\$5,328,364	\$9,239,747
Northeast	\$4,093,284	\$1,915,768	\$6,009,052
South	\$9,671,246	\$4,457,464	\$14,128,710
West	\$5,286,009	\$2,859,447	\$8,145,456
Nat'l	\$22,961,922	\$14,561,043	\$37,522,965

TABLE 5

School construction, 2005: By type of construction

(\$000)

Region	Total dollars spent		% of dollars spent	
	New Bldgs	Adds/ Mods	New Bldgs	Adds/ Mods
Midwest	\$1,461,866	\$2,449,517	37.4%	62.6%
Northeast	\$1,681,500	\$2,411,784	41.1%	58.9%
South	\$4,674,622	\$4,996,624	48.3%	51.7%
West	\$4,470,675	\$814,334	84.6%	15.4%
Nat'l	\$12,288,663	\$10,673,259	53.5%	46.5%

TABLE 6

College construction, 2005: By type of construction

(\$000)

Region	Total dollars spent		% of dollars spent	
	New Bldgs	Adds/ Mods	New Bldgs	Adds/ Mods
Midwest	\$2,880,143	\$2,448,221	54.1%	45.9%
Northeast	\$1,338,522	\$577,246	69.9%	30.1%
South	\$2,619,517	\$1,837,947	58.8%	41.2%
West	\$2,093,506	\$765,941	73.2%	26.8%
Nat'l	\$8,931,688	\$5,629,355	61.3%	38.7%

Although the amount spent on K-12 construction projects decreased from the year before, the biggest drop was in modernization spending—a result of districts postponing many of the projects planned due to rapidly rising costs.

ernizations). Totally new construction accounted for about 54 percent of all K-12 construction spending—a reversal of where the money was spent in 2004.

•Table 6. Lists the type of college construction completed in 2005 by region and type of spending. As is traditionally the case, new college facilities accounted for the bulk of the spending (61.3 percent), with all regions spending more than half of their dollars on new buildings.

•Table 7. Details projected spending on construction by region through 2008 by school districts, colleges and universities, and all education. About \$125 billion is expected to be completed by the nation's education institutions over the next three years. School districts will account for 64 percent of the spending.

•Table 8. Looks at how the school construction dollars through 2008 will be divided. More than half of the dollars (57.7 percent) will go toward totally new facilities. The two most active regions (South and West) reflect where the school-age population will be growing over the next decade.

•Table 9. Focuses on how college

and university construction dollars will be split over the next three years. More than 67 percent of the dollars will be spent on totally new facilities, with every region allocating more than half of its funds to new construction.

•Table 10. Reflects a variety of cost and size data for the national median new elementary, middle and high school, as well as all schools. Of particular note is the reduction in the amount of square feet per student. In a move to trim costs, school districts cut

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Schools and universities expect to spend about \$125 billion on projects over the next three years.

The ultimate resource

As the bellwether report documenting education construction activity for the past 32 years, the *American School & University* survey is regularly referenced by local, state and federal agencies, as well as the nation's leading news organizations. AS&U actually started compiling data on school and university construction in 1950 for the 1949 year. After a decade or so of yearly surveys, AS&U compiled data sporadically until industry demand prompted AS&U to start collecting data annually again. The annual reports resurfaced in 1975 with information on education construction completed in 1974, and data has been collected and published every year since. **American School & University is the only authorized source of this education construction information.**

TABLE 7

Education construction projected to be completed, 2006-2008 (\$000)

The Regional Picture			
Region	Schools	Colleges	Total
Midwest	\$16,473,489	\$12,637,815	\$29,111,304
Northeast	\$9,018,682	\$7,545,379	\$16,564,061
South	\$29,521,758	\$16,951,869	\$46,473,627
West	\$25,167,250	\$7,564,010	\$32,731,260
Nat'l	\$80,181,179	\$44,699,073	\$124,880,252

TABLE 8

How the school construction dollars are projected to be split, 2006-2008

Total School Construction (\$000)				
Region	New	Adds/ Mods	% New	% Adds/ Mods
Midwest	\$8,185,567	\$8,287,922	49.7%	50.3%
Northeast	\$3,531,150	\$5,487,532	39.2%	60.8%
South	\$19,477,279	\$10,044,479	66.0%	34.0%
West	\$15,044,832	\$10,122,418	59.8%	40.2%
Nat'l	\$46,238,828	\$33,942,351	57.7%	42.3%

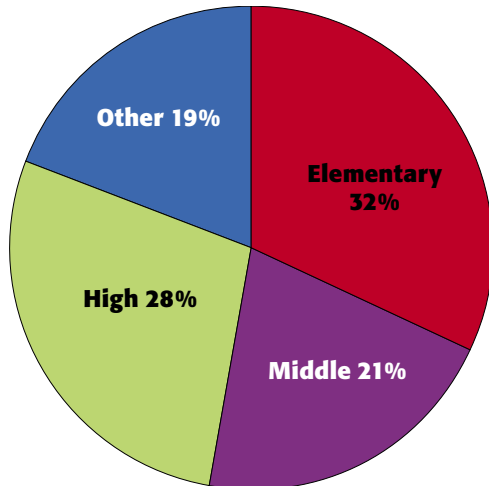
TABLE 9

How the college construction dollars are projected to be split, 2006-2008

Total College Construction (\$000)				
Region	New	Adds/ Mods	% New	% Adds/ Mods
Midwest	\$6,975,408	\$5,662,407	55.2%	44.8%
Northeast	\$5,814,305	\$1,731,074	77.1%	22.9%
South	\$13,117,385	\$3,834,484	77.4%	22.6%
West	\$4,140,380	\$3,423,630	54.7%	45.3%
Nat'l	\$30,047,478	\$14,651,595	67.2%	32.8%

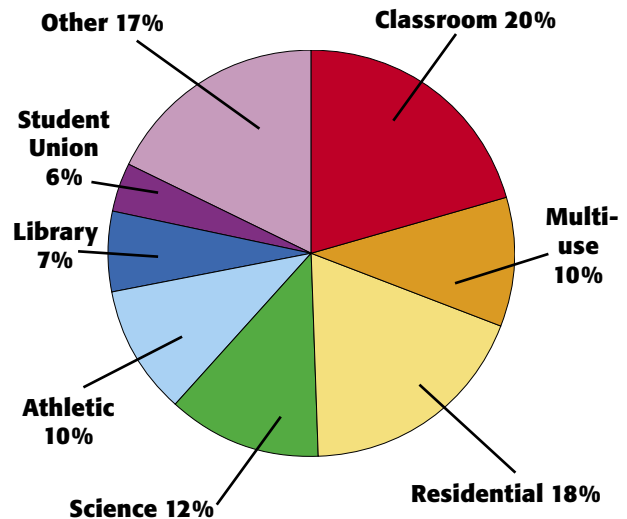
What schools are building

While elementary schools were the type of facility most often built by K-12 institutions in 2005, high school construction continues to increase percentage share. Breakout by building type:



What colleges are building

Classroom facilities were the type of new construction most often completed by colleges and universities in 2005 (of those building types identified), followed by residential facilities. Breakout by building type:



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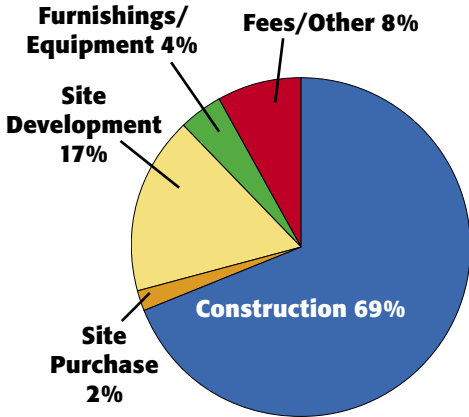
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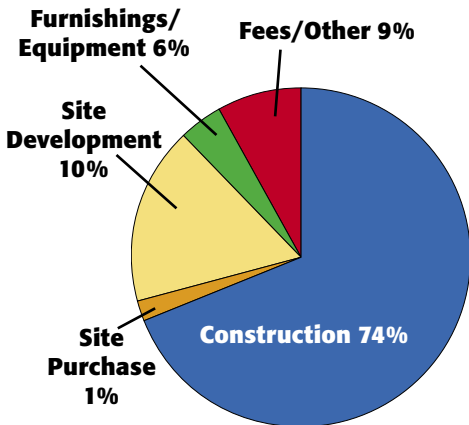


How the dollars are divided

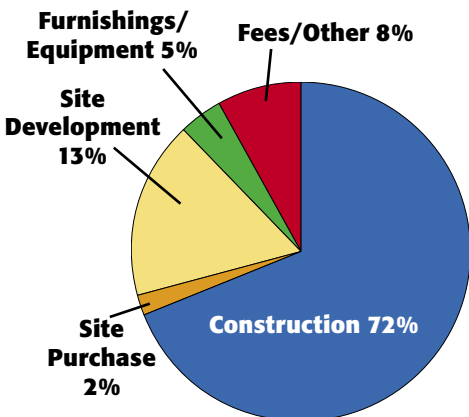
The following identifies (by percentage) how elementary and middle/high schools, as well as all K-12 schools, divide the cost of a new school:



ELEMENTARY



MIDDLE/HIGH



ALL K-12

TABLE 10

How much does a new school cost?

(MEDIAN)

	Elementary	Middle	High	All
Cost/Square Foot	\$141	\$195	\$180	\$173
Cost/Student	\$14,286	\$24,071	\$23,958	\$21,265
Sq. Ft./Student	97	123	125	113
Number of Pupils	725	750	1,055	750
Size (sq. ft.)	73,000	104,880	148,569	73,000
Total Cost (\$000)	\$14,821	\$17,452	\$25,000	\$17,452

TABLE 11

What retrofits are being performed

When schools and universities renovated facilities in 2005, these were the types of retrofits most often performed (by percentage of projects):

	Schools	Colleges
ADA Compliance	51%	59%
Carpeting	81%	77%
Electric	93%	79%
Flooring	93%	67%
HVAC	65%	73%
Indoor Air Quality	49%	27%
Lighting	79%	87%
Painting/Interior Trim	84%	85%
Plumbing	74%	60%
Roofing	74%	33%
Security/Life Safety	49%	45%
Technology Infrastructure	67%	57%
Windows/Doors	77%	52%

Methodology

To arrive at results for the 32nd annual Official Education Construction Report, a detailed questionnaire was sent to chief business officials at the nation's school districts and colleges. Basically, two questions were asked:

- Did you complete any construction during the past year?
- Will you complete any construction in the next three years?

Administrators answering "yes" to either question were then asked to provide a variety of details on the amount being spent, the type of construction being done (new, addition or modernization), and the expected completion date. All respondents involved with new and retrofit construction were asked to provide additional information on each project. Further follow-up correspondence was made to clarify some data. Responses were separated by institution type, region of the country and institution size, and projected across the education universe.

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back the amount of space provided in new facilities, a stark reversal from a trend of steadily increasing numbers.

rofits most often performed in 2005 by type of institution.

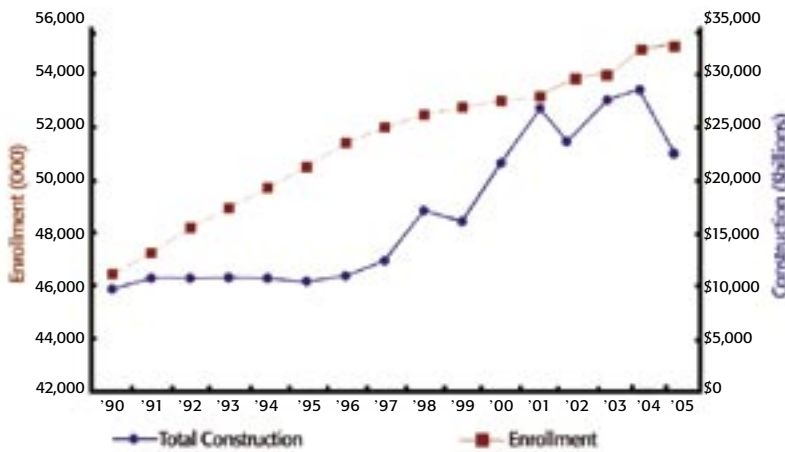
graphs that can help in benchmarking your next construction project. ■

•Table 11. Outlines the types of ret- Also included throughout the report are a variety of other charts and

Agron, editor in chief of AS&U, can be reached at jagron@ASUmag.com.

Enrollment and construction—SCHOOLS

K-12 construction spending related to student population. Results since 1990:



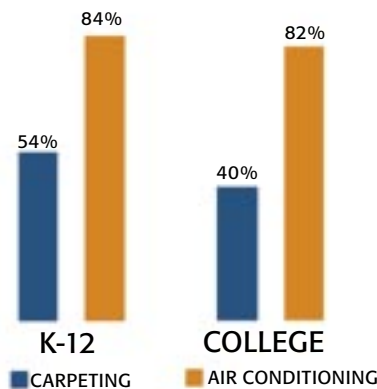
NOTABLE

68 Percentage of school districts expected to complete a construction project during 2006-08.

73 Percentage of colleges and universities expected to complete a construction project during 2006-08.

Incidence of air conditioning and carpeting

Air conditioning continues to be a regularly specified component of new space at schools and universities. Carpeting, while less prominent than AC, increased substantially from the year before in K-12 projects and remained constant at colleges. The percentage of space air conditioned and carpeted in new education facilities projects completed in 2005:



A decade of construction activity

The total amount of education construction completed in 2005 dropped from the prior year, with college activity increasing and school districts pulling back. Total spending over the decade (in \$billions):

