



SCHOOL
Planning & Management

10TH ANNUAL 2005 SCHOOL CONSTRUCTION REPORT



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by Paul Abramson

School construction in the United States dipped below \$20 billion in 2003, the first time that had happened in the 21st Century, setting off alarm bells that the school construction boom might be fading. That concern appears to be unfounded. In 2004, school districts in the United States once again completed more than \$20 billion worth of construction, and the probability is that at least that much will be completed during the current calendar year.

These are among the findings of *School Planning & Management's* Tenth Annual School Construction Report, compiled in partnership with **Market Data Retrieval**, a company of D&B.

Market Data Retrieval gathers information for this report from mailed and e-mailed survey forms and telephone calls to every school district in the United States. Information is gathered on individual projects during a three- and four-year period as each project progresses from planned construction to completion. Each follow-up contact is designed to elicit more detailed and refined information on costs, size and facilities.

School Planning & Management takes the raw information and compiles it into national and regional estimates. Estimates are based on the point in each project when data was gathered, the number and percentage of districts responding, size of districts and location of the districts.

All tables in this report were developed by the author based upon material provided by Market Data Retrieval.

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The National Scene

School districts in the United States spent almost \$20.2 billion on construction projects completed during the 2004 calendar year, including a little more than \$12 billion on new schools (accounting for 60.5 percent of the construction dollars), \$4.3 billion (21.3 percent) on additions to existing buildings and more than \$3.67 billion (18.2 percent) on retrofit and modernization of existing structures.

The percentage of dollars devoted to new buildings was the greatest in more

than 20 years, signaling an end to better than two decades during which school districts spent far more dollars on expanding and fixing up older buildings, rather than building new.

The emphasis on improving existing buildings grew out of a convergence of circumstances in the late 1970s, when districts suddenly found that the post-war Baby Boom had ended, so new space was no longer essential, and the first Arab oil boycott focused the nation on rising costs of fuel, dependency on overseas supplies and the need for conservation.

At that point, many districts, especially those in the oil-dependent northeast and the frigid states of the Midwest, began to focus their construction efforts on "buttoning up" their existing buildings to cut down on the use of fuel. Starting in 1981, and continuing almost to the end of the 20th Century, school districts spent as much or more money on existing buildings than on new ones.

That trend was truly broken in 2002, when better than 57 cents of every school construction dollar went into new structures. In 2003, new buildings consumed better than 56 percent of construction funds. In 2004, it was almost 60 percent.

That trend is expected to continue this year. When asked about construction projects expected to be completed in 2005, districts estimated a total of almost \$19.6 billion, of which 63.6 percent would go to new buildings. Construction totaling \$18.3 billion was identified as starting in 2005, with

work started or completed outside the targeted years is not shown.

(As an example, a school district that passed a \$300-million bond issue in 2002 is scheduled to complete the first phase of that work in 2005 and the balance through the next five years. Only the work estimated to be completed in 2005, and some expected to start this year, was included in this report.)

Construction in 2004

Last year may have been a bounce-back year in school construction. The year before construction had fallen below \$20 billion and indications were that it would fall even further when figures were

compiled for 2004. That did not happen.

Whether it was the result of state activity in California, New Jersey and Ohio, the effects of inflation or just a realization by the public and school officials that new and better school facilities are needed, there is no question that construction in 2004 did overcome a perceived downward trend.

As Table 2 shows, more than \$20 billion worth of construction was put in place in 2004. Of that, \$12.2 billion was spent on entirely new school buildings. Another \$4.3 billion went to



60 percent of the funding for new buildings. Both construction completions and construction expected to start in 2005 are based on incomplete information. History has shown that final figures normally exceed the projections.

It should be noted that all of these figures are "annual in nature." They do not accumulate ongoing construction, but rather compile information on what was completed or expected to be completed or started in a given calendar year. School districts are involved in a great deal more construction but

TABLE 1
School Construction in the U.S.
(\$000s)

	2004 Completions	2005 Projected Completions	2005 Starts
New Schools	\$12,226,012	\$12,431,143	\$11,034,859
Additions	\$4,291,361	\$3,577,521	\$3,478,786
Renovations	\$3,672,344	\$3,546,279	\$3,834,720
Total	\$20,189,717	\$19,554,943	\$18,348,365

TABLE 2
School Construction Completed in 2004

Region	New	Addition	Renovation	Total	% of Spending For			% Reg I Of Nation
					New	Addition	Renovation	
1	\$923,977,996	\$410,402,352	\$332,450,672	\$1,666,831,020	55.4%	24.6%	19.9%	8.3%
2	\$780,676,552	\$687,850,837	\$657,718,598	\$2,126,245,987	36.7%	32.4%	30.9%	10.5%
3	\$606,166,803	\$172,339,541	\$228,299,108	\$1,006,805,450	60.2%	17.1%	22.7%	5.1%
4	\$1,057,801,405	\$317,026,651	\$490,144,084	\$1,864,972,140	56.7%	17.0%	26.3%	9.2%
5	\$1,640,844,023	\$372,830,772	\$143,302,153	\$2,156,976,948	76.1%	17.3%	6.6%	10.7%
6	\$1,058,703,234	\$281,912,723	\$261,128,348	\$1,601,744,305	66.1%	17.6%	16.3%	7.9%
7	\$596,911,593	\$393,271,625	\$305,468,002	\$1,295,651,220	46.1%	30.4%	23.6%	6.4%
8	\$539,983,881	\$184,724,882	\$259,344,191	\$984,052,954	54.9%	18.8%	26.4%	4.9%
9	\$1,851,215,892	\$429,549,583	\$302,219,454	\$2,582,984,929	71.7%	16.6%	11.7%	12.8%
10	\$401,782,349	\$232,834,207	\$137,458,678	\$772,075,234	52.0%	30.2%	17.8%	3.8%
11	\$2,222,066,808	\$550,214,393	\$258,826,065	\$3,031,107,266	73.3%	18.2%	8.5%	15.0%
12	\$545,881,681	\$258,403,306	\$295,984,304	\$1,100,269,291	49.6%	23.5%	26.9%	5.4%
Nat'l	\$12,226,012,217	\$4,291,360,872	\$3,672,343,657	\$20,189,716,746	60.5%	21.3%	18.2%	100.0%

To read this table: Public schools in Region 1 (New England) completed new buildings worth more than \$923 million in 2004. They also put in place \$410 million in additions to existing buildings and spent \$332 million on renovations. School districts in Region 1 completed more than \$1.6 billion of school construction in 2004 with 55.4 percent of those dollars spent on new buildings, the balance on adding to and upgrading existing buildings. Region 1 accounted for 8.3 percent of all school construction dollars spent in the United States in 2004.

providing additional space in existing schools. The remaining \$3.7 billion (18.2 percent) was spent on upgrading existing structures including infrastructure improvements, ADA compliance,

new heating and ventilating systems, roofs, windows and the like.

Better than four of every five construction dollars was spent on

providing new space (new buildings and additions combined). Increasing numbers of students continues to be a major force behind the construction. But while the need for new space is

TABLE 3
School Construction Expected to Be Completed in 2005

Region	New	Addition	Renovation	Total	% of Spending For			% Reg I Of Nation
					New	Addition	Renovation	
1	\$911,316,918	\$299,058,424	\$355,516,705	\$1,565,892,047	58.2%	19.1%	22.7%	8.0%
2	\$922,739,112	\$606,207,352	\$554,352,212	\$2,083,298,676	44.3%	29.1%	26.6%	10.7%
3	\$716,745,408	\$115,565,923	\$157,565,968	\$989,877,299	72.4%	11.7%	15.9%	5.1%
4	\$1,295,425,592	\$274,006,080	\$337,371,719	\$1,906,803,391	67.9%	14.4%	17.7%	9.7%
5	\$1,398,431,355	\$344,567,072	\$254,156,191	\$1,997,154,618	70.0%	17.3%	12.7%	10.2%
6	\$894,370,871	\$369,980,297	\$365,917,956	\$1,630,269,124	54.9%	22.7%	22.4%	8.3%
7	\$742,478,336	\$249,076,946	\$175,110,224	\$1,166,665,506	63.6%	21.3%	15.0%	6.0%
8	\$402,152,488	\$202,561,459	\$248,590,770	\$853,304,717	47.1%	23.7%	29.1%	4.4%
9	\$1,520,726,845	\$443,152,813	\$276,313,202	\$2,240,192,860	67.9%	19.8%	12.3%	11.4%
10	\$536,243,031	\$184,845,184	\$137,081,698	\$858,169,913	62.5%	21.5%	16.0%	4.4%
11	\$2,542,229,258	\$315,528,650	\$478,704,197	\$3,336,462,105	76.2%	9.5%	14.3%	17.1%
12	\$548,284,033	\$172,971,155	\$205,598,372	\$926,853,560	59.2%	18.7%	22.2%	4.7%
Nat'l	\$12,431,143,247	\$3,577,521,355	\$3,546,279,214	\$19,554,943,816	63.6%	18.3%	18.1%	100.0%

To read this table: In 2005, public schools in Region 1 (New England) are expecting to complete new buildings worth \$911 million. They also expect to complete additions worth \$299 million and renovations valued at \$355 million. Total spending in Region 1 is projected at \$1.565 billion, with 58.2 percent of the dollars for new buildings, the balance for additions and renovations. New England is projected to account for eight percent of all school construction dollars spent in the nation.

obvious and relatively easy to show, schools are not losing sight of their need to upgrade existing space, much of which was built in the Baby Boom era and is now approaching 50 years of hard use.

Table 2 shows the national construction picture. It also shows how much school districts in each of 12 regions of the nation (see definition of regions on page CR-11) spent on construction and how they spent it.

All but two of the 12 regions put more than \$1 billion in construction in place in 2004, and an 11th was very close, but the manner in which they spent their dollars varied considerably.

Region 11, including Arizona, California, Hawaii and Nevada, was the highest spending region with more than \$3 billion worth of construction put in place. This region was responsible for 15 percent of the nation's school construction spending. More than 73 percent of the dollars in Region 11 were used to build new buildings while 18 percent went into adding space to exist-

ing buildings. Less than 10 percent of the region's construction dollars went into renovation of existing buildings.

Region 9, including Arkansas, Louisiana, Oklahoma and Texas, put almost \$2.6 billion in place, making it the second highest spending region. As in Region 11, more than 70 percent of the money was spent on new construction. The region was responsible for 12.8 percent of the nation's school spending. Region 5 (Alabama, Florida, Georgia and Mississippi) spent \$2.156 billion on total school construction. It, too, spent far more on new buildings (\$1.6 billion) than on additions or renovations. It was responsible for 10.7 percent of all school construction spending.

The three states making up Region 2 (New Jersey, New York and Pennsylvania) spent \$2.126 billion on school construction in 2004 making it the fourth highest region with 10.5 percent of the nation's spending. However, unlike the regions of the south and west, districts in this region put only 37 percent of their dollars into new building and spread the rest of the

money between additions (\$687 million) and renovations (\$657 million). It was the only region where more than 30 percent of the dollars went into upgrading existing schools.

Districts in Region 4 (Kentucky, North Carolina, South Carolina and Tennessee) spent almost \$1.9 billion, 9.2 percent of the nation's construction dollars.

School districts in Region 1, encompassing the six New England states, spent close to \$1.7 billion on school construction last year with somewhat more than half the money going into new buildings and almost 25 percent for additions. The region was responsible for 8.3 percent of the nation's spending.

School districts in Region 6 (Indiana, Michigan and Ohio) put just more than \$1.6 billion of construction in place. School districts in Region 7 (Illinois, Wisconsin and Minnesota) were responsible for almost \$1.3 billion worth of construction. In both cases, the total was slightly less than they spent the year before. Together, these

TABLE 4
School Construction Projected to Start in 2005

Region	New	Addition	Renovation	Total	% of Spending For			% Reg 1 Of Nation
					New	Addition	Renovation	
1	\$797,451,833	\$250,605,795	\$307,944,730	\$1,356,002,358	58.8%	18.5%	22.7%	7.4%
2	\$1,359,169,232	\$819,834,723	\$690,545,530	\$2,869,549,485	47.4%	28.6%	24.1%	15.5%
3	\$467,812,581	\$176,487,514	\$214,653,127	\$858,953,222	54.5%	20.5%	25.0%	4.7%
4	\$1,293,002,565	\$209,980,041	\$223,722,515	\$1,726,705,121	74.9%	12.2%	13.0%	9.4%
5	\$1,405,086,822	\$501,232,449	\$202,046,107	\$2,108,365,378	66.6%	23.8%	9.6%	11.5%
6	\$889,456,119	\$150,982,934	\$473,376,949	\$1,513,816,002	58.8%	10.0%	31.3%	8.3%
7	\$654,323,035	\$240,912,933	\$174,543,208	\$1,069,779,176	61.2%	22.5%	16.3%	5.8%
8	\$327,026,611	\$162,197,768	\$277,081,822	\$766,306,201	42.7%	21.2%	36.2%	4.2%
9	\$1,565,391,319	\$320,186,256	\$348,013,408	\$2,233,590,983	70.1%	14.3%	15.6%	12.2%
10	\$392,773,252	\$176,766,504	\$159,634,675	\$729,174,431	53.9%	24.2%	21.9%	4.0%
11	\$1,537,247,462	\$307,519,282	\$483,293,167	\$2,328,059,911	66.0%	13.2%	20.8%	12.7%
12	\$346,118,499	\$162,079,645	\$279,864,670	\$788,062,814	43.9%	20.6%	35.5%	4.3%
Nat'l	\$11,034,859,330	\$3,478,785,844	\$3,834,719,908	\$18,348,365,082	60.1%	19.0%	20.9%	100.0%

To read this table: In the year 2005, school districts in Region 1 (New England) expect to start construction on new buildings worth more than \$797 million. They will also start work on \$250 million in additions to existing buildings and renovations valued at \$307 million. Altogether, school districts in Region 1 predict they will start \$1.3 billion worth of school construction in 2005, with 58.8 percent of the dollars devoted to new schools, the balance to additions and renovations. Region 1's spending is about 7.4 percent of all school construction spending projected to start in 2005.

six Great Lakes states still put almost \$3 billion worth of school construction in place in 2004. Interestingly, Region 6 schools (possibly driven by legislation in Ohio) put two-thirds of their dollars into new buildings.

Region 12 (Alaska, Idaho, Oregon and Washington) reported \$1.1 billion of construction completed in 2004, the first time these states have reached that level. Just under half of the dollars went into new buildings.

Region 3 (Delaware, District of Columbia, Maryland, Virginia and West Virginia) was responsible for \$1 billion worth of construction about five percent of the national spending. Region 8 (Iowa, Kansas, Missouri and Nebraska) spent just under \$1 billion.

Region 10, including the states of Colorado, Montana, New Mexico, North Dakota, South Dakota, Utah and Wyoming, spent \$772 million on education construction, the lowest spending region in the nation in 2004. This is a region where spending spurred in 2003, possibly indicating that many of the states provide funding on a two-year cycle.

What's Underway Now

Table 3 looks at construction projected to be completed during the current calendar year. The total shown is almost \$19.6 billion, somewhat less than was completed in 2004. It should be noted, however, that one year ago it was projected that less than \$20 billion worth of construction would be completed in 2004. School district reporting on future construction completions is often incomplete because of a reluctance to go on the record too far in advance.

Region 11 expects to be the big spender in terms of

construction completed in 2005. California in particular has previously allocated a great deal of money to new construction and that is in the pipeline. Future spending may be subject to political decisions as that state fights its budget battles.

Other than Region 11, it appears that major school construction spending will continue in Region 9 (more than \$2.2 billion); in Region 2 (\$2.1 billion); and in Region 5 (almost \$2 billion). Once again, Region 2 will divide its money relatively evenly among new construction, additions and renovations, while the others will be emphasizing new construction.

Table 4 looks at construction projected to start this year. The total \$18.348



TABLE 5
Profile of New Schools Currently Underway

National Medians	\$/Sq. Ft.	\$/Student	Sq. Ft./ Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000s)
Elementary	\$131.82	\$16,667	120.0	600	76,000	\$11,000
Middle	\$129.75	\$20,000	143.8	750	112,000	\$15,000
High	\$137.24	\$24,641	167.0	1,200	205,000	\$31,000
Low Quartile	\$/Sq. Ft.	\$/Student	Sq. Ft./ Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000s)
Elementary	\$113.54	\$13,203	100.3	450	60,000	\$8,000
Middle	\$112.50	\$15,000	116.7	600	89,000	\$10,000
High	\$113.76	\$17,817	131.2	641	120,000	\$19,600
High Quartile	\$/Sq. Ft.	\$/Student	Sq. Ft./ Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000s)
Elementary	\$180.04	\$25,232	155.7	800	90,051	\$14,000
Middle	\$165.05	\$25,641	178.1	1,000	148,000	\$21,900
High	\$190.00	\$32,126	211.3	1,800	278,246	\$42,000
Top 10 Percent	\$/Sq. Ft.	\$/Student	Sq. Ft./ Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000s)
Elementary	\$287.18	\$40,453	206.5	900	108,000	\$20,204
Middle	\$242.54	\$36,714	219.8	1,260	183,757	\$27,550
High	\$235.29	\$49,020	259.2	2,400	365,000	\$60,000

To read this table: The national median cost per square foot for construction of an elementary school currently underway is \$131.82. Cost per student is \$16,667, and the median school provides 120 sq. ft. per student. One quarter of all school districts (the low 25 percent) is spending \$113.54 per sq. ft. or less for its elementary school construction, while one quarter of all districts spends \$180.04 per sq. ft. or more. One in 10 school districts estimated their cost per sq. ft. for a new elementary school at more than \$287.

Base: 331 Elementary Schools; 109 Middle Schools; 132 High Schools

billion is slightly less than was projected a year ago for 2004. This marks the fifth consecutive year that projections of construction to start the next year have fallen off but that construction completed has not. There is reason to believe — certainly to hope — that it is the reporting, not the construction, that is falling off.

Many major school construction bond issues have passed in the last year and the total amount being projected to start in 2005 is still quite high. Districts in four regions expect to start more than \$2 billion worth of construction in 2005. One question that may need to be examined is how much inflation is reflected in these numbers. With the cost of steel, concrete and other materials rising, it may be that school districts will spend more and build less.

What Goes Into a School?

Table 5 provides a profile on a national basis of new schools currently being built and expected to be completed during the current calendar year. The figures shown in Table 5 are medians. That means, for example, that of the elementary schools being built in the nation today, half of them will cost \$131.82 per sq. ft. or more and half \$131.82 or less. By using medians rather than averages, we are able to minimize the influence of special case schools that may be extremely expensive or extremely inexpensive, or cases where reporting is faulty.

Table 5 shows that the median elementary school in the United States cost \$131.82

per sq. ft. to build. Median spending was \$16,667 per pupil and the median school provided 120 sq. ft. for each student. The median school was designed for 600 students and provided 76,000 sq. ft. at a total cost of \$11 million. Note that in finding medians, each variable is looked at separately so that the school that cost \$131.82 per sq. ft. is not necessarily the same one that spends \$16,667 per student.

Median costs per square foot and per student are significantly higher this year than last, probably a result of inflation. Also, possibly as a result of cost escalation, space per student is somewhat lower.

Looking at middle schools, the cost was almost \$130 per sq. ft. and \$20,000 per student. The median middle school provides 143.8 sq. ft. for each of the 750 students it houses. The cost of the median middle school is \$15 million.

The cost of the median high school is \$137.24 per sq. ft. and \$24,641 is being spent per pupil. The median high school provides 167 sq. ft. for each of its students. The median size of a new high school is 205,000 sq. ft., and its cost is \$31 million.

Finding Your Fit

Your district may not be a median district in terms of aspirations, local costs or in terms of what it puts into a building. The low quartile shown in

TABLE 6
School Construction: Where the Money Goes, by Building Type

2004 Completions	Elementary	Middle	High	District	Total
New	\$4,988,639,748	\$2,515,449,594	\$4,618,316,251	\$103,606,624	\$12,226,012,217
Additions	\$1,650,017,243	\$682,315,521	\$1,870,017,011	\$89,011,098	\$4,291,360,873
Renovation	\$1,289,104,711	\$893,588,562	\$1,336,028,380	\$153,622,003	\$3,672,343,656
Total	\$7,927,761,702	\$4,091,353,677	\$7,824,361,642	\$346,239,725	\$20,189,716,746
% of Year's Dollars	39.3%	20.3%	38.7%	1.7%	100.0%
2005 Expected Completions	Elementary	Middle	High	District	Total
New	\$4,720,514,721	\$2,472,624,146	\$5,056,695,918	\$181,308,463	\$12,431,143,248
Additions	\$1,029,535,081	\$698,717,077	\$1,741,285,937	\$107,983,258	\$3,577,521,353
Renovation	\$1,045,840,960	\$716,960,452	\$1,685,789,826	\$97,687,977	\$3,546,279,215
Total	\$6,795,890,762	\$3,888,301,675	\$8,483,771,681	\$386,979,698	\$19,554,943,816
% of Year's Dollars	34.8%	19.8%	43.4%	2.0%	100.0%
2005 Projected Starts	Elementary	Middle	High	District	Total
New	\$3,801,368,288	\$2,464,499,972	\$4,759,258,193	\$9,732,877	\$11,034,859,330
Additions	\$1,044,424,051	\$809,366,639	\$1,500,501,077	\$124,494,076	\$3,478,785,843
Renovation	\$1,022,265,440	\$699,463,419	\$1,563,339,988	\$549,651,061	\$3,834,719,908
Total	\$5,868,057,779	\$3,973,330,030	\$7,823,099,258	\$683,878,014	\$18,348,365,081
% of Year's Dollars	32.0%	21.7%	42.6%	3.7%	100.0%
Total	Elementary	Middle	High	District	Total
New	\$13,510,522,756	\$7,452,573,712	\$14,434,270,362	\$294,647,963	\$35,692,014,793
Additions	\$3,723,976,375	\$2,190,399,237	\$5,111,804,026	\$321,488,432	\$11,347,668,070
Renovation	\$3,357,211,111	\$2,310,012,433	\$4,585,158,194	\$800,961,041	\$11,053,342,779
Total	\$20,591,710,242	\$11,952,985,382	\$24,131,232,582	\$1,417,097,436	\$58,093,025,642
% of Identified Dollars	35.4%	20.6%	41.5%	2.5%	100.0%

To read this table: Of the \$12.226 billion spent on new buildings in 2004, \$4.989 billion went into elementary schools, \$2.515 billion was spent on middle schools and \$4.618 billion on high schools. Another \$103 million was spent on district buildings encompassing multiple grades, special programs or administrative functions.

Table 5 is the point at which 75 percent of the reporting schools are higher and 25 percent are lower. Thus, 25 percent of elementary schools being completed this year will cost \$113.54 per sq. ft. or less. One quarter of the elementary schools will provide less than 100.3 sq. ft. per student.

If your district is in a high cost area or feels that it is a high-quality district in terms of how it spends its money and how it builds its buildings, you may want to look at the high quartile numbers. They show that 25 percent of the new elementary schools being constructed cost \$180.04 per sq. ft.; 75 percent cost less. One quarter of the elementary schools are providing more than 155 sq. ft. per student. At the high school level, 25 percent of the new buildings will provide 211.3 sq. ft. per student or more.

Equally interesting, one of four high schools is being designed to house just 641 students or fewer, indicating that some districts may be taking seriously the research showing that students do better in small learning environments. On the other hand, 25 percent of the new high schools under construction are planned to house more than 1,800 students, and one of 10 is planned for upwards of 2,400 students.

Table 5 gives you an opportunity to compare your district with others around the nation that you think have your aspirations and/or your ability to pay. It is meant as an indicator, not an arbiter.

Where the Pressure Is Greatest
School districts — especially those that are growing rapidly — face multiple pressures for spending construction dollars. Which is more important, to build a

new elementary school to relieve overcrowding, to remodel an existing junior high school so that a middle school program can be installed or to add to the high school to meet the crush of larger incoming classes? Can we afford to do everything at once? These are the questions school boards must answer as they plan their building programs.

Table 6 takes a look, in dollar terms, at how some of those questions were answered. It shows the school level at which construction took place and the type of construction that was undertaken.

Among school construction projects completed in 2004, 39.3 percent of the total dollars went into elementary schools, 38.7 percent into high schools and 20.3 percent into middle schools. Less than two percent was for projects at the district level, including administrative quarters, bus garages, maintenance centers, etc.

Table 6 not only shows the level at which construction dollars are spent, but the purpose. For example, of the \$7.9 billion spent last year on elementary schools, almost \$5 billion was for new buildings. The balance was used to add to existing buildings (\$1.65 billion) and retrofit them (\$1.29 billion).

Elementary schools continue to take slightly more than a third of all construction dollars. High schools now consistently take about 40 percent. About one of five construction dollars is destined for middle schools.

Does Size Matter?
There is increasing evidence, from an educational point of view, that students do better in smaller schools.

TABLE 7
Does School Size Matter?

	Median Number of Students	Median Size of Building	Median Project Cost	Median Cost per sq. ft.	Median Cost per Student	Median Space per Student (SF)
Elementary schools smallest quarter (less than 450)	363	60,000	\$9,000,000	\$136.06	\$25,253	170.1
National Median	600	76,000	\$11,000,000	\$131.82	\$16,667	120.0
largest quarter (800 to 1,500 students)	850	90,051	\$11,800,000	\$120.37	\$13,000	105.9
Middle Schools smallest quarter (less than 600)	500	87,857	\$11,200,000	\$130.30	\$22,000	165.0
National Median	750	112,000	\$15,000,000	\$129.75	\$20,000	143.8
largest quarter (1,000 to 1,750 students)	1,200	150,000	\$21,500,000	\$130.00	\$19,091	126.7
High Schools smallest quarter (less than 641)	414	84,414	\$10,000,000	\$122.68	\$27,548	210.6
National Median	1,200	205,000	\$31,000,000	\$137.24	\$24,641	167.0
largest quarter (1,800 to 3,029 students)	2,138	297,500	\$42,000,000	\$137.14	\$19,799	135.7

The booklet, “Dollars and Sense: The Cost Effectiveness of Small Schools,” (available from Knowledgeworks Foundation <<http://www.kwfdn.org>>) recommends that elementary schools have 25 students per grade (K-6 schools would enroll 175), that middle schools enroll 50 students per grade (a grades 6-8 building would be built for 150

students) and that high schools be limited to 75 per grade making the typical four-year high school a 300-student building.

There are many people who would question having schools that small for a variety of reasons (breadth of program, cost of operation, etc.), but one of the issues that comes up is whether it is economical to build small schools.

Table 7 makes an effort to look at that question. In this case, all of the new school buildings on which information was available were lined up by size. Then, they were divided into four even groups so that median costs and other information could be found among the smaller and larger buildings.

Looking at elementary schools, one quarter were designed to house 450 or fewer students. Among that group, the median school will house 363. It will contain 60,000 sq. ft. and cost almost \$9 million. The median cost per square foot among the smaller elementary schools was \$136.06. The median cost per student was \$25,253, and the median amount of space provided for each student was a very generous 170.1 sq. ft.

By contrast, the largest quarter of the new elementary schools will house anywhere from 800 to 1,500 students, certainly large schools by any measure. The median was 850 students, and the median cost was \$11.8 million. In terms of cost per student, the median among larger schools was \$120.37 per sq. ft., significantly less than the smaller schools, but these schools provided considerably less space per student, just 105.9 sq. ft. On the basis of cost per student, it appears that small elementary schools cost almost twice as much as the largest ones.

When middle schools are considered, the variations between smaller and larger schools are considerably smaller, with cost per student quite close, but the smaller schools provide significantly more space.

At the high school level, some interesting changes occur. The smaller schools (the median size is 414) appear to be less expensive per square foot and more spacious. On a per-student basis, the smaller schools cost more. The explanation, in this case, may have something to do with the facilities provided — do smaller high schools avoid expensive shops or auditoriums? Are the larger schools providing so little space per student that they inhibit the program? There

TABLE 8
What New Schools Starting in 2005 Will Provide
(% of new schools that contain facility, by grade level)

		Elementary	Middle/JHS	High School
Core Facilities	Classrooms	100.0%	100.0%	100.0%
	Library	90.2%	91.9%	90.3%
	Media Center	66.0%	95.9%	98.6%
	Computer Lab	70.9%	100.0%	97.2%
	Science Lab	5.3%	94.6%	98.6%
	Music	89.8%	100.0%	94.4%
	Arts/Crafts	95.9%	94.6%	80.6%
	Gymnasium	84.0%	98.7%	97.2%
	Multipurpose Room	25.0%	37.5%	23.6%
	Stage	13.5%	62.5%	73.6%
	Auditorium/Theater	4.1%	62.5%	73.6%
	Special Ed/Resource	67.6%	60.8%	69.4%
	Home Arts	0.4%	25.0%	41.7%
	Industrial Tech.	0.0%	25.0%	27.8%
	Vocational Shops	0.0%	2.7%	27.8%
Photo Lab	0.0%	0.0%	4.2%	
TV/Radio Studio	0.0%	0.0%	4.2%	
Support Facilities	Offices	100.0%	100.0%	100.0%
	Infirmery/Clinic	100.0%	100.0%	100.0%
	Cafeteria	97.1%	100.0%	100.0%
	Kitchen	95.5%	100.0%	98.6%
Hall Lockers	7.4%	89.2%	100.0%	
Technology Support	LANs	97.1%	100.0%	100.0%
	Fiber Optics/Cable	98.4%	100.0%	98.6%
	Phone Lines in Class	44.3%	62.5%	47.2%
	Technology Lab	0.0%	2.7%	38.9%
	Language Lab	0.0%	0.0%	8.3%
	WANs	86.5%	100.0%	90.3%
Athletic Support	Locker Rooms	5.7%	87.5%	100.0%
	Bleachers	13.1%	82.4%	93.1%
	Track	0.0%	0.0%	13.9%
	Field House	0.0%	0.0%	8.3%
	Fitness Center	0.0%	4.1%	18.1%
	Tennis	0.0%	0.0%	5.6%
	Pool	0.0%	0.0%	2.8%
	Stadium	0.0%	0.0%	9.7%
Athletic Fields/Playground	10.2%	70.3%	79.2%	
Other facilities	Day Care/Nursery	9.0%	0.0%	1.4%
	Elevators	3.7%	6.8%	16.7%
	Portables	0.4%	1.4%	0.0%
	Security Equipment	100.0%	100.0%	100.0%

TABLE 9

The Top Ten Additions by School Type

(% of school additions that contain facility, by grade level)

Elementary

1	Classrooms	70.1%
2	Gymnasium	17.5%
3	Cafeteria	16.8%
4	Music	15.5%
5	Arts/Crafts	12.7%
6	Multipurpose Room	10.7%
7	Library/Media Center	7.9%
8	Special Ed/Resource	6.5%
9	Offices	6.5%
10	Kitchen	6.5%

Middle/JHS

1	Classrooms	65.9%
2	Cafeteria	23.9%
3	Lockers	15.9%
4	Gymnasium	14.8%
5	Music	14.8%
6	Offices	14.8%
7	Library/Media Center	13.7%
8	Bleachers	12.5%
9	Arts/Crafts	12.5%
10	Computer Lab	12.5%

High School

1	Classrooms	42.9%
2	Gymnasium	25.7%
3	Auditorium/Theater/Stage	18.1%
4	Locker Rooms	15.2%
5	Cafeteria	14.3%
6	Music	14.3%
7	Offices	13.3%
8	Science Lab	13.3%
9	Library/Media Center	9.5%
10	Bleachers	9.5%

is no way to answer these questions based on information available in this survey, but they are intriguing questions that should be examined as the concept of building for smaller student populations grows.

Providing Facilities

New school buildings have great similarities. All have classrooms and offices. Virtually all have facilities for physical education. Some kind of infirmary or nurse's station is a regular feature of all school buildings. Libraries are in all buildings, though

When schools renovate, the work they tackle is pretty much the same at all levels. Better than half the renovation projects involve HVAC (heating, ventilating and air conditioning). Almost as many projects undertake an overhaul of the electric system. Flooring and carpeting (in 44.6 percent of all renovation projects), lighting (43.5 percent) and plumbing (36.9 percent) are also popular. ADA compliance and bathroom retrofit, alarm systems, roofing, correcting code violations, replacing tile and upgrading windows also are regularly undertaken.

in some they may be listed as media centers. All elementary schools have gymnasiums and cafeterias but some count them as multi-purpose rooms. Table 8 records the percentage of new schools planned to start in 2005 that will include specific facilities.

Table 9 details information collected on additions to existing schools. It shows the facilities most often included by school type. Classrooms are involved in a majority of elementary and middle school additions and in 43 percent of the high schools. Physical education facilities get attention at all levels.

In elementary schools, there is a significant move to create music rooms, cafeterias (separated from the multipurpose gym), library/media centers and art rooms. A number of middle schools are adding music facilities and office space. High schools seem to be interested in performance space including auditoriums and gymnasiums, when they add to existing structures.

A Closer Look at Regions

National figures are always instructive, but from the point of view of the local school administrator or school board, it may be more important to know what your neighbors are doing. *School Planning & Management's* regional figures are designed to help you do that.

On the following pages, figures are given for each of the 12 regions of the United States. They show the total amount of construction activity by year and how that money was spent, on new schools, additions or renovations. They also show by year what percentage of money in your region goes into elementary schools, middle schools, high schools and district projects.

Finally, for new schools only, you can see the median cost per sq. ft., cost per student and sq. ft. per student for elementary schools, middle schools and high schools in your region. Also shown is the median project size including overall cost, number of students accommodated and size of the building.

The purpose of this report is to provide you with data that can help you understand not only what your own district needs, but also what others are doing and how much their projects cost. The regional tables allow you to measure yourself against your neighbors. The national tables, particularly Table 5, allow you to compare with districts with similar aspirations. Thus, if districts in your region on average tend to provide minimal space per student, but your district aspires to a variety of programs that need space, you may want to look at the amount of space per pupil provided in the high quarter or 10 percent of the nation's schools.

With this information, you will have the data necessary to make your own plans and, in many cases, to help the public understand what you are building, why you are doing it and what it is likely to cost. Remember, there is no right or wrong. These are guidelines that need to be applied to your own local needs.

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REGION 1 CT, ME, MA, NH, RI, VT

Construction Activity

HOW MUCH IS BEING SPENT(\$000s)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$923,978	\$410,402	\$332,451	\$1,666,831
Completions in 2005	\$911,317	\$299,058	\$355,517	\$1,565,892
Starting in 2005	\$797,452	\$250,606	\$307,944	\$1,356,002
Total Activity	\$2,632,747	\$960,066	\$995,912	\$4,588,725
% of Total	57.4%	20.9%	21.7%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$1,666,831	27.6%	28.2%	44.2%	0.1%
Completions in 2005	\$1,565,892	29.4%	21.5%	48.7%	0.4%
Starting in 2005	\$1,356,002	28.6%	20.7%	50.7%	0.0%
Total Activity	\$4,588,725	28.5%	23.7%	47.6%	0.2%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/student (\$000s)	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$198.10	\$27,741	146.3	\$16,000	600	80,000
Middle/JHS	\$165.05	\$29,679	185.7	\$20,000	750	130,000
High School	\$237.67	\$50,467	212.3	\$61,500	1,283	278,463

Region 1, consisting of the six New England states, completed almost \$1.7 billion worth of construction in 2004, slightly more than was completed the year before.

Construction in New England costs more than in most other parts of the nation. Schools not only spend more per sq. ft., they provide more space per student than most others. It's no surprise, then, that the median school in New England costs more per pupil than its counterpart elsewhere.

Based on total dollars spent on new schools and average cost, indications are that about 35 new schools were completed in 2004, evenly split among elementary and secondary (middle and high) schools.

REGION 2 NJ, NY, PA

Construction Activity

HOW MUCH IS BEING SPENT (\$000s)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$780,676	\$687,851	\$657,718	\$2,126,245
Completions in 2005	\$922,739	\$606,207	\$554,352	\$2,083,298
Starting in 2005	\$1,359,169	\$819,834	\$690,546	\$2,869,549
Total Activity	\$3,062,584	\$2,113,892	\$1,902,616	\$7,079,092
% of Total	43.3%	29.8%	26.9%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$2,126,245	46.5%	13.9%	38.9%	0.8%
Completions in 2005	\$2,083,298	27.5%	22.0%	49.4%	1.1%
Starting in 2005	\$2,869,549	32.8%	20.4%	43.3%	3.5%
Total Activity	\$7,079,092	35.4%	18.9%	43.8%	2.0%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/student (\$000s)	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$207.87	\$37,181	168.5	\$18,254	535	85,029
Middle/JHS	\$174.94	\$34,898	210.9	\$29,550	775	113,760
High School	\$190.48	\$33,333	170.0	\$50,000	1,500	270,000

Region 2 consists of New Jersey, New York and Pennsylvania, three large states with large cities and powerful suburbs. Costs in these three industrialized states are higher than in other parts of the nation.

In 2004, school districts in Region 2 put \$2.1 billion worth of construction in place. This marks the fourth year in a row that the region's spending has declined, even if only by a small amount. It still remains among the highest spending regions in the nation. Projections for completions this year indicate that construction will decline again. Predicted starts, however, indicate a possible rebound.

Region 2 puts more money into existing buildings than new ones, but when it does build a new school, it tends to exceed the national medians in terms of size, as well as space and cost.

Based on total dollars spent on new schools and average cost, indications are that about 30 new schools were completed in 2004. Two-thirds were elementary buildings.

Approximately 43 percent of Region 2's districts either completed a construction project in 2004 or expect to complete or start a project in 2005; the balance (57 percent) have no immediate construction plans.

Region 3 includes Delaware, the District of Columbia, Maryland, Virginia and West Virginia. In 2002, for the first time ever, school districts in this region put more than \$1 billion worth of construction in place. That was repeated in 2003 and again in 2004. Construction projected for 2005 is in the same range.

While the bulk of the region's funds go into new buildings, the distribution among building types is fairly equal with high schools getting about 39 percent of the dollars, middle schools 25 percent and elementary 35 percent.

Based on total dollars spent on new schools and average cost, indications are that about 30 new schools were completed in 2004. About half will be secondary schools and the other half will be elementary.

Almost 63 percent of Region 3's districts either completed a construction project in 2004 or expect to complete or start a project in 2005. Only 37 percent have no immediate construction plans.

Region 4 consists of Kentucky, North Carolina, South Carolina and Tennessee — four states that have been very active in terms of school construction during at least a decade.

A year ago, Region 4 districts put more than \$2 billion in place for the first time. They missed that mark in 2004 but are still one of the biggest spenders in dollars. Because costs are lower than in many other parts of the nation, these states are an even larger player in terms of the amount of construction taking place.

Based on total dollars spent on new schools and average cost, indications are that about 74 new schools were completed in 2004, a decrease from the previous year.

More than half of Region 4's districts either completed a construction project in 2004 or expect to complete or start a project in 2005; the balance (48 percent) have no immediate construction plans.

REGION 3 DC, DE, MD, VA, WV

Construction Activity

HOW MUCH IS BEING SPENT (\$000s)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$606,167	\$172,339	\$228,299	\$1,006,805
Completions in 2005	\$716,745	\$115,566	\$157,566	\$989,877
Starting in 2005	\$467,813	\$176,487	\$214,653	\$858,953
Total Activity	\$1,790,725	\$464,392	\$600,518	\$2,855,635
% of Total	62.7%	16.3%	21.0%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$1,006,805	39.0%	19.7%	41.1%	0.2%
Completions in 2005	\$989,877	39.6%	15.7%	42.4%	2.3%
Starting in 2005	\$858,953	26.1%	40.8%	31.5%	1.6%
Total Activity	\$2,855,635	35.3%	24.7%	38.7%	1.3%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/student (\$000s)	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$150.15	\$16,682	102.6	\$12,568	726	77,543
Middle/JHS	\$153.33	\$23,000	201.9	\$23,000	600	130,000
High School	\$143.76	\$24,375	154.5	\$40,000	1,600	245,000

REGION 4 KY, NC, SC, TN

Construction Activity

HOW MUCH IS BEING SPENT (\$000s)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$1,057,801	\$317,027	\$490,144	\$1,864,972
Completions in 2005	\$1,295,426	\$274,006	\$337,372	\$1,906,804
Starting in 2005	\$1,293,003	\$209,980	\$223,722	\$1,726,705
Total Activity	\$3,646,230	\$801,013	\$1,051,238	\$5,498,481
% of Total	66.3%	14.6%	19.1%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$1,864,972	38.0%	18.9%	39.0%	4.1%
Completions in 2005	\$1,906,804	44.7%	33.3%	21.7%	0.4%
Starting in 2005	\$1,726,705	20.6%	27.8%	51.6%	0.0%
Total Activity	\$5,498,481	34.9%	26.7%	37.0%	1.5%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/student (\$000s)	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$116.50	\$16,667	120.0	\$10,000	600	75,000
Middle/JHS	\$116.40	\$15,974	148.3	\$12,000	650	104,926
High School	\$115.29	\$22,941	179.0	\$27,000	1,319	233,000

REGION 5 AL, FL, GA, MS

Construction Activity

HOW MUCH IS BEING SPENT (\$000s)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$1,640,844	\$372,831	\$143,302	\$2,156,977
Completions in 2005	\$1,398,431	\$344,567	\$254,156	\$1,997,154
Starting in 2005	\$1,405,087	\$501,232	\$202,046	\$2,108,365
Total Activity	\$4,444,362	\$1,218,630	\$599,504	\$6,262,496
% of Total	71.0%	19.5%	9.5%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$2,156,977	32.2%	21.4%	44.2%	2.2%
Completions in 2005	\$1,997,154	31.0%	21.2%	43.2%	4.6%
Starting in 2005	\$2,108,365	28.2%	21.4%	50.2%	0.1%
Total Activity	\$6,262,496	30.5%	21.3%	45.9%	2.3%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/student (\$000s)	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$107.96	\$14,286	131.4	\$11,000	700	90,000
Middle/JHS	\$117.91	\$15,197	136.3	\$14,994	989	123,000
High School	\$118.15	\$17,812	142.6	\$22,500	1,200	177,500

There are four states in **Region 5**, Alabama, Florida, Georgia and Mississippi. Region 5 has been a major builder for three decades. The \$2.2 billion spent on school construction in 2004 makes it the third biggest spending region.

Region 5 construction costs are relatively low — its median cost per sq. ft. falls into the lowest quartile when looked at on a national basis — so the dollars spent buy a lot of school space. With a total of \$2.2 billion put in place, three-quarters for new schools, this region is obviously responsible for a great many construction projects. Hopefully, all of the existing schools are in good shape, because school districts in Region 5 spend very few of their capital funds on renovating them.

Based on total dollars spent on new schools and average cost, indications are that about 104 new schools were completed in 2004, with secondary schools emphasized.

Approximately 63 percent of Region 5's districts either completed a construction project in 2004 or expect to complete or start a project in 2005; the balance (37 percent) have no immediate construction plans.

REGION 6 IN, OH, MI

Construction Activity

HOW MUCH IS BEING SPENT (\$000s)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$1,058,703	\$281,913	\$261,128	\$1,601,744
Completions in 2005	\$894,371	\$369,980	\$365,918	\$1,630,269
Starting in 2005	\$889,456	\$150,983	\$473,377	\$1,513,816
Total Activity	\$2,842,530	\$802,876	\$1,100,423	\$4,745,829
% of Total	59.9%	16.9%	23.2%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$1,601,744	43.7%	16.5%	38.8%	1.1%
Completions in 2005	\$1,630,269	36.8%	17.8%	42.7%	2.7%
Starting in 2005	\$1,513,816	35.4%	8.5%	42.7%	13.4%
Total Activity	\$4,745,829	38.7%	14.4%	41.4%	5.6%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$133.60	\$19,742	146.1	\$9,500	450	71,856
Middle/JHS	\$138.46	\$21,429	142.9	\$11,500	600	87,857
High School	\$159.00	\$31,800	200.0	\$28,310	807	164,000

The three states that make up **Region 6**, Indiana, Michigan and Ohio, have a tradition of investing in their schools, and 2004 was no exception.

Three years ago Region 6 districts put more than \$2 billion worth of construction in place. That was a high water mark. In 2004, \$1.6 billion worth of construction was put in place.

Most of the spending in Region 6 is for new buildings. Median construction costs in these states are above the national median. The schools reported tend to provide a great deal of space per student.

Based on total dollars spent on new schools and average cost, indications are that about 78 new schools were completed in 2004, most of them elementary schools.

Approximately 46 percent of Region 6's districts either completed a construction project in 2004 or expect to complete or start a project in 2005; more than half (54 percent) have no immediate construction plans.

Illinois, Minnesota and Wisconsin form **Region 7**. School construction in this region had been relatively high for a number of years (almost \$2 billion in 2002) but has fallen annually since then.

In 2004, less than \$1.3 billion was put in place. Slightly less is expected to be put in place this year, and starts projected for 2005 are somewhat lower — less than \$1.1 billion. Region 7 appears to be cutting back on its support for school construction. What is being spent goes largely to high schools.

Based on total dollars spent on new schools and average cost, indications are that about 35 new schools were completed in 2004. That's fewer than a year ago, a reflection of lower overall spending.

A little less than 30 percent of Region 7's districts either completed a construction project in 2004 or expect to complete or start a project in 2005; the balance (70 percent) have no immediate construction plans.

Iowa, Kansas, Missouri and Nebraska are the four states that make up **Region 8**. In 2004, school districts in these four states combined to put a little less than \$1 billion worth of construction in place, slightly more than the year before. They expect to spend somewhat less on construction in 2005.

Based on total dollars spent on new schools and average cost, indications are that about 55 new schools were completed in 2004.

Twenty-six percent of Region 8's districts either completed a construction project in 2004 or expect to complete or start a project in 2005; the balance (74 percent) have no immediate construction plans.

REGION 7 IL, MN, WI

Construction Activity

HOW MUCH IS BEING SPENT (000s)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$596,912	\$393,272	\$305,468	\$1,295,652
Completions in 2005	\$742,478	\$249,077	\$175,110	\$1,166,665
Starting in 2005	\$654,323	\$240,913	\$174,543	\$1,069,779
Total Activity	\$1,993,713	\$883,262	\$655,121	\$3,532,096
% of Total	56.4%	25.0%	18.6%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$1,295,652	39.6%	14.7%	44.3%	1.4%
Completions in 2005	\$1,166,665	29.5%	25.6%	44.8%	0.1%
Starting in 2005	\$1,069,779	26.1%	25.4%	48.1%	0.3%
Total Activity	\$3,532,096	32.2%	21.5%	45.6%	0.6%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$133.33	\$16,111	128.6	\$9,500	500	80,750
Middle/JHS	\$153.85	\$22,642	143.5	\$18,000	700	117,000
High School	\$136.87	\$26,111	205.6	\$24,000	900	180,160

REGION 8 IA, KS, MO, NE

Construction Activity (\$000s)

HOW MUCH IS BEING SPENT (\$000s)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$539,984	\$184,725	\$259,344	\$984,053
Completions in 2005	\$405,152	\$202,561	\$248,591	\$856,304
Starting in 2005	\$327,027	\$162,198	\$277,082	\$766,307
Total Activity	\$1,272,163	\$549,484	\$785,017	\$2,606,664
% of Total	48.8%	21.1%	30.1%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$984,053	37.7%	24.6%	36.2%	1.6%
Completions in 2005	\$856,304	30.8%	20.1%	43.7%	5.4%
Starting in 2005	\$766,307	29.1%	12.6%	46.2%	12.0%
Total Activity	\$2,606,664	32.9%	19.6%	41.6%	5.9%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$124.16	\$15,413	116.8	\$8,000	500	58,000
Middle/JHS	\$129.63	\$19,078	146.7	\$8,600	629	66,000
High School	\$140.61	\$20,455	179.6	\$14,300	900	102,000

REGION 9 AR, LA, OK, TX

Construction Activity

HOW MUCH IS BEING SPENT (\$000)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$1,851,216	\$429,549	\$302,219	\$2,582,984
Completions in 2005	\$1,520,727	\$443,153	\$276,313	\$2,240,193
Starting in 2005	\$1,565,391	\$320,186	\$348,013	\$2,233,590
Total Activity	\$4,937,334	\$1,192,888	\$926,545	\$7,056,767
% of Total	70.0%	16.9%	13.1%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$2,582,984	39.9%	26.5%	30.9%	2.7%
Completions in 2005	\$2,240,193	32.6%	18.6%	45.2%	3.6%
Starting in 2005	\$2,233,590	42.3%	19.0%	37.2%	1.5%
Total Activity	\$7,056,767	38.3%	21.6%	37.4%	2.6%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$120.37	\$13,750	112.3	\$11,000	800	86,000
Middle/JHS	\$115.38	\$19,545	161.6	\$16,000	979	130,000
High School	\$123.22	\$21,083	183.5	\$28,000	1,100	211,600

Region 9 consists of Arkansas, Louisiana, Oklahoma and Texas. All of these states are active in school construction, but Texas is the dominant one both in terms of activity and median costs and sizes.

Region 9 school districts report putting almost \$2.6 billion worth of school construction in place in 2004. That made them the second highest spending region in the nation, but there has been a significant drop during the last two years. If completions in 2005 are as projected, Region 9 would fall behind several others in terms of overall spending.

Region 9 school districts spent 70 percent of their dollars on new schools, keeping up with expanding populations. They spend very little on renovating and retrofitting existing buildings, a failure that may prove troublesome in the future.

Based on total dollars spent on new schools and average cost, indications are that about 125 new schools were completed in Region 9 in 2004, with half of them elementary buildings.

Approximately 37 percent of Region 9's districts either completed a construction project in 2004 or expect to complete or start a project in 2005; the balance (63 percent) have no immediate construction plans.

REGION 10 CO, MT, ND, NM, SD, UT, WY

Construction Activity

HOW MUCH IS BEING SPENT (\$000s)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$401,782	\$232,834	\$137,459	\$772,075
Completions in 2005	\$536,243	\$184,845	\$137,082	\$858,170
Starting in 2005	\$392,773	\$176,766	\$159,635	\$729,174
Total Activity	\$1,330,798	\$594,445	\$434,176	\$2,359,419
% of Total	56.4%	25.2%	18.4%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$772,075	44.7%	23.1%	27.9%	4.3%
Completions in 2005	\$858,170	41.3%	26.2%	30.8%	1.7%
Starting in 2005	\$729,174	43.8%	18.8%	35.7%	1.7%
Total Activity	\$2,359,419	43.2%	22.9%	31.4%	2.6%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$115.38	\$12,000	100.0	\$8,000	688	65,000
Middle/JHS	\$164.29	\$15,000	106.0	\$12,000	800	85,000
High School	\$133.75	\$30,571	222.2	\$10,700	350	80,000

Region 10 consists of the Mountain states — Colorado, Montana, New Mexico, North Dakota, South Dakota, Utah and Wyoming. Spending in this region was just below \$800 million in 2004. It is expected to rise slightly when completions for 2005 are tallied.

Spending in the region is largely for new buildings, but one of four dollars is for additions. Renovation gets less than 18 cents of every construction dollar.

Based on total dollars spent on new schools and average cost, indications are that about 45 new schools were completed in 2004. This is an increase during the previous year.

Approximately 29 percent of Region 10's districts either completed a construction project in 2004 or expect to complete or start a project in 2005; the balance (71 percent) have no immediate construction plans.

Arizona, California, Hawaii and Nevada are the states that make up **Region 11**. Region 11 schools spent more than \$3 billion on school construction in 2004 and expect to spend even more this year.

Construction costs in the region are higher than national averages, but because in many areas schools are built without corridors (students walk outside between classes), the amount of space provided per student tends to be low.

Based on total dollars spent on new schools and average cost, indications are that about 130 new schools were completed in 2004. There could be more this year.

Approximately half of Region 11's districts either completed a construction project in 2004 or expect to complete or start a project in 2005; a little less than half have no immediate construction plans.

Region 12 is made up of Alaska, Idaho, Oregon and Washington. In 2004, districts there put just more than \$1 billion worth of construction in place — more than was projected.

Schools in this region appear to be concentrating their dollars on their high schools, with almost half the dollars going there. Construction costs are well above national medians, and spending per pupil on new buildings also tends to be high. Some of that is due to the fact that Alaska is included in the region and its costs are well above those of the other states.

Based on total dollars spent on new schools and average cost, indications are that about 29 new schools were completed in 2004.

Approximately 38 percent of Region 12's districts either completed a construction project in 2004 or expect to complete or start a project in 2005; the balance (62 percent) have no immediate construction plans.

REGION 11 AZ, CA, HI, NV

Construction Activity

HOW MUCH IS BEING SPENT (\$000s)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$2,222,067	\$550,214	\$258,826	\$3,031,107
Completions in 2005	\$2,542,229	\$315,529	\$478,704	\$3,336,462
Starting in 2005	\$1,537,247	\$307,519	\$483,293	\$2,328,059
Total Activity	\$6,301,543	\$1,173,262	\$1,220,823	\$8,695,628
% of Total	72.5%	13.5%	14.0%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$3,031,107	40.1%	18.6%	40.8%	0.6%
Completions in 2005	\$3,336,462	42.8%	9.3%	47.7%	0.2%
Starting in 2005	\$2,328,059	41.3%	24.3%	30.7%	3.7%
Total Activity	\$8,695,628	41.5%	16.6%	40.7%	1.3%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$156.30	\$19,423	83.9	\$10,207	650	55,500
Middle/JHS	\$178.57	\$20,000	100.0	\$20,000	997	112,000
High School	\$191.12	\$25,400	118.1	\$40,513	1,582	189,000

REGION 12 AK, ID, OR, WA

Construction Activity

HOW MUCH IS BEING SPENT (\$000)?

	New Schools	Additions	Renovations	Total
Completions in 2004	\$545,882	\$258,403	\$295,984	\$1,100,269
Completions in 2005	\$548,284	\$172,971	\$205,598	\$926,853
Starting in 2005	\$346,118	\$162,080	\$279,865	\$788,063
Total Activity	\$1,440,284	\$593,454	\$781,447	\$2,815,185
% of Total	51.2%	21.1%	27.7%	

WHERE IS THE MONEY GOING?

	Total (\$000s)	Elementary	Middle	High	District
Completions in 2004	\$1,100,269	46.2%	17.8%	33.3%	2.7%
Completions in 2005	\$926,853	19.4%	18.1%	57.8%	4.6%
Starting in 2005	\$788,063	12.6%	25.2%	44.9%	17.3%
Total Activity	\$2,815,185	28.0%	20.0%	44.6%	7.4%

NEW SCHOOLS ONLY

	Cost/ sq. ft.	Cost/ student	Sq. ft./ student	Median Cost (\$000s)	Median # Students	Median Size (Sq. ft.)
Elementary	\$238.95	\$36,399	151.7	\$15,810	432	66,500
Middle/JHS	\$224.21	\$27,500	115.1	\$15,000	500	55,000
High School	\$192.94	\$27,667	150.4	\$40,500	1,350	183,800