



The 2008 Annual School

Construction Report

A Supplement to
SCHOOL
Planning & Management



More Dollars Spent, Less Construction Completed

■ Paul Abramson

When is more less? In the case of school construction, more is less when more dollars are spent but less construction is completed. That's what appears to have occurred in 2007, when the total dollars spent on school construction increased by 3.2 percent, but the cost per sq. ft. of new buildings increased by more than six percent. As a result, while school districts increased spending on new school buildings by more than \$800M from 2006 to 2007, they actually completed fewer buildings.

School construction completed in 2007 — including new buildings, additions to existing buildings, and major retrofit of existing buildings — totaled almost \$20.8B, a significant increase over the \$20.1B spent on construction completed in 2006. This marks the seventh year in the last eight that annual construction exceeded \$20B. During the eight years of the present century, school districts have completed construction projects totaling more than \$166B.

The overall increase in spending in 2007 was expected, but the increase was not as great as projected; and a look ahead at construction expected to be completed or to start in 2008, indicates that school construction may slow slightly.

These are among findings of *School Planning & Management's* 13th 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.

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

	2007 Completed	2008 Projected to be Completed	2008 Projected to Start
New Schools	\$13,126,495	\$12,304,203	\$11,189,755
Additions	\$3,683,000	\$4,015,042	\$3,364,819
Renovations	\$3,942,204	\$2,984,189	\$3,753,103
Total	\$20,751,699	\$19,303,434	\$18,307,677

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, and size and location of districts.

All of the figures published 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 work started or completed outside the targeted years is not included.

The National Scene

School districts in the United States spent almost \$20.8B on construction projects completed during the 2007 calendar year, including \$13.1B on new schools (accounting for 63.3 percent of the construction dollars), \$3.7B (17.7 percent) on additions to existing build-

ings, and almost \$4B (19 percent) on retrofit and modernization of existing structures (see Table 1).

The percentage of construction dollars spent on new buildings was the highest since 1979. Prior to 1979, and especially during the Baby Boom years, school districts spent 70 percent or more of their construction dollars on providing new buildings.

But, starting in 1979, when school districts began to realize that the Baby Boom had ended and smaller cohorts of children were entering the schools, the emphasis shifted. Total spending on construction dropped and the dollars that were spent were shifted to upgrading and enlarging existing buildings.

From 1979 through 2001, a period of 23 years, school districts spent almost \$226B on construction projects, less than half of it (\$104B) on new buildings. The balance enlarged and improved existing structures.

That trend reversed itself, starting in 2002. In the last six years, of the \$124B spent on school construction, \$74.1B (almost 60 percent) went to entirely new school buildings. In 2007, more than 63 percent of the school construction dollars went into new buildings — the highest percentage since 1978.

It is interesting to note that this was



Table 2 School Construction Completed in 2007

Region	New Schools	Additions	Renovation	Total	% of Spending For			% Reg Is Of Nation
					New	Addition	Renovation	
1	\$529,815,419	\$189,414,994	\$357,184,622	\$1,076,415,035	49.2%	17.6%	33.2%	5.2%
2	\$1,130,567,947	\$697,597,127	\$857,397,393	\$2,685,562,468	42.1%	26.0%	31.9%	12.9%
3	\$790,816,077	\$325,767,761	\$430,393,421	\$1,546,977,259	51.1%	21.1%	27.8%	7.5%
4	\$1,292,213,752	\$201,037,799	\$151,505,745	\$1,644,757,295	78.6%	12.2%	9.2%	7.9%
5	\$1,763,026,540	\$332,603,691	\$252,493,054	\$2,348,123,285	75.1%	14.2%	10.8%	11.3%
6	\$1,015,157,341	\$320,465,246	\$453,707,747	\$1,789,330,334	56.7%	17.9%	25.4%	8.6%
7	\$724,058,104	\$201,343,402	\$261,008,251	\$1,186,409,756	61.0%	17.0%	22.0%	5.7%
8	\$421,574,747	\$356,153,420	\$258,102,864	\$1,035,831,031	40.7%	34.4%	24.9%	5.0%
9	\$2,143,301,393	\$358,801,854	\$298,395,298	\$2,800,498,546	76.5%	12.8%	10.7%	13.5%
10	\$547,863,867	\$159,574,096	\$156,802,589	\$864,240,552	63.4%	18.5%	18.1%	4.2%
11	\$2,513,429,840	\$317,769,855	\$266,115,763	\$3,097,315,458	81.1%	10.3%	8.6%	14.9%
12	\$254,669,711	\$222,470,951	\$199,096,946	\$676,237,608	37.7%	32.9%	29.4%	3.3%
Nat'l	\$13,126,494,736	\$3,683,000,196	\$3,942,203,693	\$20,751,698,625	63.3%	17.7%	19.0%	100.0%

To read this table: Public schools in Region 1 (New England) completed new buildings worth more than \$529M in 2007. They also put in place \$189M in additions to existing buildings and spent \$357M on renovations. School districts in Region 1 completed almost \$1.1B of school construction in 2007 with 49.2 percent of those dollars spent on new buildings, the balance on adding to and upgrading existing buildings. Region 1 accounted for 5.2 percent of all school construction dollars spent on projects completed in the United States in 2007.

costs in Region 2 are higher than in most other parts of the nation (Region 1, New England, is the only exception), districts in this part of the nation often spend more but get less.

Region 5, encompassing Florida, Georgia,

also the first year since at least 1983 in which the amount of money spent on retrofitting existing buildings exceeded the dollars put into additions. In a sense, it appears that when new space was needed over the last few years, school districts opted to build new buildings rather than add to the ones already in place.

Table 2 shows the national construction picture in 2007. It also shows how much school districts in each of 12 regions of the nation spent on construction and how they spent it. (See map below. A more detailed account of regional activity begins on page CR8.) Ten of the 12 regions spent more than \$1B on construction completed in 2007 and districts in four regions completed construction worth more than \$2B.

Region 11, including Arizona, California, Hawaii, and Nevada, was the highest spending region with just over \$3B worth of construction put in

place. The region was responsible for 14.9 percent of all school construction spending in the United States last year. More than 80 percent of the construction dollars went to providing new school buildings. Although Region 11 construction totaled more than any other region in 2007, it was less than the same region spent in 2006.

Region 9, including Texas, Louisiana, Oklahoma, and Arkansas, was responsible for 13.5 percent of the nation's construction spending, with \$2.8B put in place. Interestingly, Region 9 also spent somewhat less in 2007 than it did a year earlier.

Region 2, including New York, New Jersey, and Pennsylvania, was the third highest region with almost \$2.7B worth of construction. School districts in these states, which are not gaining in population, spent their money quite differently than those in Regions 11 and 9, with less than half the construction dollars

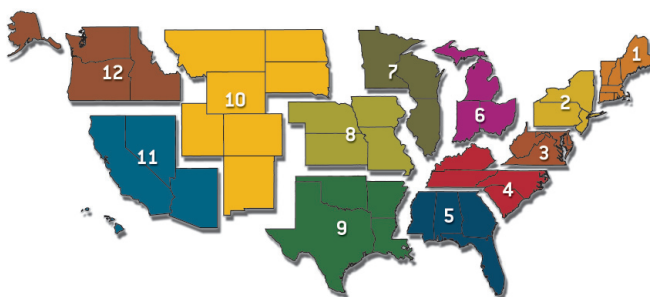
Alabama, and Mississippi, is the fourth region where spending exceeded \$2B. The need for space to accommodate additional students was obviously the driving force in Region 5, which spent almost 90 percent of its funds on new buildings and additions to existing ones.

Those four regions were responsible for more than 50 percent of all school construction spending in the United States in 2007. The other eight regions together were responsible for \$9.8B, but that represented a significant increase from the \$8.5B those eight regions spent a year earlier. They were led by Region 3 (Maryland, Virginia, Delaware, District of Columbia, and West Virginia), Region 4 (North Carolina, South Carolina, Kentucky, and Tennessee) and Region 6 (Ohio, Indiana, and Michigan). More detail on regional spending is shown in Tables 10-1 through 10-12, on pages CR8 through CR14.

What's Underway Now?

Table 3 examines construction that school districts say they will complete in calendar year 2008. If these projections are accurate, total construction will fall below \$20B during the current calendar year for only the second time in this century. New school buildings are

going into new buildings and almost one-third being spent on renovations to existing structures. Because construction



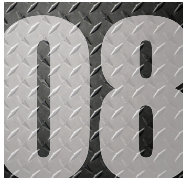


Table 3 School Construction Expected to be Completed in 2008

Region	New Schools	Additions	Renovation	Total	% Of Spending For			% Reg Is
					New	Addition	Renovation	Of Nation
1	\$563,487,281	\$344,980,656	\$194,400,953	\$1,102,868,890	51.1%	31.3%	17.6%	5.7%
2	\$836,550,694	\$741,455,421	\$824,056,411	\$2,402,062,526	34.8%	30.9%	34.3%	12.4%
3	\$634,683,586	\$328,227,135	\$316,164,802	\$1,279,075,523	49.6%	25.7%	24.7%	6.6%
4	\$1,336,856,690	\$154,576,523	\$153,495,719	\$1,644,928,932	81.3%	9.4%	9.3%	8.5%
5	\$1,737,156,761	\$245,561,631	\$317,869,452	\$2,300,587,844	75.5%	10.7%	13.8%	12.0%
6	\$822,068,065	\$524,708,619	\$258,169,996	\$1,604,946,680	51.2%	32.7%	16.1%	8.3%
7	\$659,602,778	\$96,688,862	\$188,800,379	\$945,092,019	69.8%	10.2%	20.0%	5.0%
8	\$263,448,052	\$183,641,455	\$229,388,323	\$676,477,830	38.9%	27.1%	33.9%	3.5%
9	\$1,750,284,835	\$839,093,929	\$141,071,746	\$2,730,450,510	64.1%	30.7%	5.2%	14.1%
10	\$498,234,935	\$195,669,363	\$85,026,792	\$778,931,091	64.0%	25.1%	10.9%	4.0%
11	\$2,866,330,555	\$235,039,371	\$128,495,360	\$3,229,865,286	88.7%	7.3%	4.0%	16.7%
12	\$335,498,456	\$125,398,621	\$147,249,433	\$608,146,510	55.2%	20.6%	24.2%	3.2%
Nat'l	\$12,304,202,688	\$4,015,041,585	\$2,984,189,366	\$19,303,433,640	63.7%	20.8%	15.5%	100.0%

To read this table: In 2008, public schools in Region 1 (New England) are expecting to complete new buildings worth \$563M. They also expect to complete additions worth \$345M and renovations valued at \$194M. Total spending in Region 1 is projected at \$1.1B, with 51.1 percent of the dollars for new buildings, the balance for additions and renovations. New England is projected to account for 5.7 percent of all school construction dollars spent in the nation on schools completed in 2008.

Table 4 School Construction Projected to Start in 2008

Region	New Schools	Additions	Renovation	Total	% Of Spending For			% Reg Is
					New	Addition	Renovation	Of Nation
1	\$545,144,293	\$211,713,143	\$335,680,116	\$1,092,537,552	49.9%	19.4%	30.7%	6.0%
2	\$954,421,105	\$566,512,342	\$611,294,447	\$2,132,227,894	44.8%	26.6%	28.7%	11.6%
3	\$710,647,447	\$358,742,525	\$424,787,372	\$1,494,177,344	47.6%	24.0%	28.4%	8.2%
4	\$1,397,311,918	\$136,299,538	\$154,405,229	\$1,688,016,686	82.8%	8.1%	9.1%	9.2%
5	\$1,560,738,671	\$273,384,507	\$215,693,151	\$2,049,816,328	76.1%	13.3%	10.5%	11.2%
6	\$644,434,168	\$301,872,353	\$484,966,995	\$1,431,273,516	45.0%	21.1%	33.9%	7.8%
7	\$403,861,273	\$73,865,558	\$129,804,758	\$607,531,588	66.5%	12.2%	21.4%	3.3%
8	\$259,358,465	\$216,937,896	\$286,474,772	\$762,771,133	34.0%	28.4%	37.6%	4.2%
9	\$1,275,574,962	\$704,417,685	\$625,511,268	\$2,605,503,916	49.0%	27.0%	24.0%	14.2%
10	\$379,651,519	\$81,654,719	\$69,744,141	\$531,050,380	71.5%	15.4%	13.1%	2.9%
11	\$2,795,824,983	\$367,932,416	\$162,101,564	\$3,325,858,963	84.1%	11.1%	4.9%	18.2%
12	\$262,785,698	\$71,486,609	\$252,639,607	\$586,911,915	44.8%	12.2%	43.0%	3.2%
Nat'l	\$11,189,754,502	\$3,364,819,293	\$3,753,103,420	\$18,307,677,215	61.1%	18.4%	20.5%	100.0%

To read this table: In the year 2008, school districts in Region 1 (New England) expect to start construction on new buildings worth more than \$545M. They will also start work on \$211M in additions to existing buildings and on renovations valued at \$335M. Altogether, school districts in Region 1 predict they will start just over \$1B worth of school construction in 2008, with 49.9 percent of the dollars devoted to new schools, the balance to additions and renovations. Region 1's spending is about 6.0 percent of all school construction spending projected to start in 2008.

expected to account for \$12.3B of that total, while additions will add another \$4B. Retrofit projects are expected to total just under \$3B.

Looking Ahead

Table 4 looks at construction that is projected to start this year. The total shown (\$18.3B) appears to reflect a further slowing of construction activity. That may or may not be true. School districts that are planning construction but have not yet received the funding, hesitate to announce their plans, so there is always a lag between the reporting of construction starts and the

actual starts.

Nevertheless, with just \$18.3B projected to start, one needs to at least be cautious in projecting the future.

New Schools Currently Underway

Table 5 provides a profile, on a national basis, of new schools currently under construction. The figures shown in Table 5 are medians. That means, for example, that among new elementary schools being built in the nation today, half of them will cost \$157.05 per sq. ft. or more, and half \$157.05 per sq. ft. 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 inexpensive, or cases where reporting is faulty.

Table 5 shows that the median elementary school in the United States costs \$157.05 per sq. ft. to build. The median spending is \$19,685 per pupil, and the median school provides 124 sq. ft. for each student. The median elementary school was designed for 700 students and provides 82,000 sq. ft. at a total cost of \$12,885,000. *Note that in finding medians, each variable is looked at separately so that the school that cost \$157.05 per sq. ft. is not*

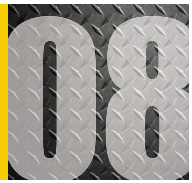


Table 5 Profile of New Schools Currently Underway

National Medians	\$/Sq. Ft.	\$/Student	Sq. Ft./ Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000's)
Elementary Schools	\$157.05	\$19,685	124.0	700	82,000	\$12,885
Middle Schools	\$162.50	\$23,529	146.6	850	120,000	\$20,000
High Schools	\$171.43	\$29,289	166.0	1,400	223,500	\$40,643
Low Quartile	\$/Sq. Ft.	\$/Student	Sq. Ft./ Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000's)
Elementary Schools	\$127.85	\$15,385	105.5	525	65,998	\$10,000
Middle Schools	\$135.36	\$19,953	125.3	616	90,000	\$14,000
High Schools	\$142.59	\$22,975	141.1	880	147,020	\$25,000
High Quartile	\$/Sq. Ft.	\$/Student	Sq. Ft./ Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000's)
Elementary Schools	\$200.00	\$26,895	141.7	800	95,184	\$17,141
Middle Schools	\$209.44	\$31,656	160.7	1,100	160,362	\$28,000
High Schools	\$229.69	\$38,770	194.1	1,830	300,000	\$57,600
Top 10 Percent	\$/Sq. Ft.	\$/Student	Sq. Ft./ Student	No. Of Students	Building Size (Sq. Ft.)	Building Cost (\$000's)
Elementary Schools	\$356.81	\$45,000	178.6	1,038	123,000	\$29,821
Middle Schools	\$345.29	\$58,889	218.8	1,500	212,000	\$47,650
High Schools	\$404.76	\$67,104	460.0	2,600	425,000	\$96,000

To read this table: The national median cost per square foot for construction of an elementary school currently underway is \$157.05. Cost per student is \$19,685 and the median school provides 124 sq. ft. per student. One quarter of all school districts (the low 25 percent) is spending \$127.85 per sq. ft. or less for its elementary school construction while one quarter of all districts spends \$200 per sq. ft. or more. One in ten school districts estimated cost for a new elementary school at almost \$357 per sq. ft.

Base: 598 Elementary Schools; 203 Middle Schools; 206 High Schools

necessarily the same one that spends \$19,685 per pupil, or that was built for 700 students.

Looking at middle schools, the median cost is \$162.50 per sq. ft. Median spending per pupil reached \$23,529, and the median middle school is providing 146.6 sq. ft. per student. The median number of students in middle schools currently being constructed is 850, and the building size is 120,000 sq. ft.. The cost is \$20M.

High schools are bigger than elementary and middle schools, and in terms of total price cost more. The median high school costs \$40.6M and provides 223,500 sq. ft. It was designed to accommodate 1,400 students. The median high school is providing 166 sq. ft. per student and spending \$29,289 for each student. The cost per sq. ft. is \$171.43.

Construction costs for schools completed in 2007 were higher than in 2006. Costs per sq. ft. increased by about 13 percent.

Finding Your Fit

The median figures found in the first section of Table 5 may be significant to your district. But depending on your location, your district's aspirations, the labor market in your area, and many other factors, the median may not apply to you.

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, at least in terms of costs and space per student. They show that 25 percent of new elementary schools being built cost \$200 per sq. ft. or more. One-quarter of the elementary schools are providing more than 141 sq. ft. per student. At the high school level, 25 percent of the districts will spend \$229.69 per sq. ft. or more, and one-quarter of all the new high schools under construction will cost more than \$57M.

The low quartile, also shown in Ta-

ble 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 or currently under construction will cost \$127.85 per sq. ft. or less. Twenty-five percent of all new elementary schools currently under construction provide just 105.5 sq. ft. or less per student. One-quarter of all reporting school districts expect to build their elementary school for \$10M or less. Once again, it must be emphasized that these are not necessarily the same school building but the point at which, in looking at total cost or sq. ft. per student or cost per student, one-quarter of the reporting districts are spending that amount or less.

Being in the low quartile does not necessarily suggest that the school is behind others. It may simply indicate that yours is a lower-cost area. Or, for example, in looking at the number of students in the school, the fact that one-quarter of all elementary schools are built for 525 or fewer students, and one-quarter of all high schools for 880 or fewer students, may be a mark of distinction.

Table 5 also looks at the 10 percent of new schools that are the most expensive, the roomiest, or the largest. If your new school project falls into any of these categories, you may want to take a second look at what you are doing to ensure that your planning process took into account all of the needs of students, and that the extra dollars and the extra space are being used for purposes that have been well thought out.

Table 5 gives you an opportunity to compare your district with others around the nation or in your area that you think have your aspirations, your climate (if you are in a warm climate, you may not have to use interior space for corridors so your space per pupil will be lower), and/or your ability to pay. Keep in mind that the figures



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

2007 Completions	Elementary	Middle	High	District	Total
New	\$5,256,729,522	\$3,056,232,488	\$4,661,954,647	\$151,578,079	\$13,126,494,736
Additions	\$1,254,482,811	\$636,150,645	\$1,698,656,497	\$93,710,243	\$3,683,000,196
Renovation	\$1,342,267,732	\$685,523,107	\$1,741,280,804	\$173,132,050	\$3,942,203,693
Total	\$7,853,480,066	\$4,377,906,240	\$8,101,891,948	\$418,420,372	\$20,751,698,625
% of Year's Dollars	37.8%	21.1%	39.1%	2.0%	

2008 Expected Completions	Elementary	Middle	High	District	Total
New	\$4,698,011,692	\$2,559,605,234	\$4,941,151,179	\$105,434,584	\$12,304,202,688
Additions	\$1,564,706,805	\$837,900,796	\$1,563,942,557	\$48,491,428	\$4,015,041,585
Renovation	\$1,034,323,977	\$651,819,688	\$1,231,915,178	\$66,130,522	\$2,984,189,366
Total	\$7,297,042,474	\$4,049,325,718	\$7,737,008,914	\$220,056,534	\$19,303,433,640
% of Year's Dollars	37.8%	21.0%	40.1%	1.1%	

2008 Projected Starts	Elementary	Middle	High	District	Total
New	\$4,051,617,852	\$2,244,067,685	\$4,778,869,323	\$115,199,642	\$11,189,754,502
Additions	\$1,178,896,550	\$414,467,470	\$1,673,387,185	\$98,068,087	\$3,364,819,293
Renovation	\$1,326,651,434	\$636,795,386	\$1,422,864,274	\$366,792,326	\$3,753,103,420
Total	\$6,557,165,837	\$3,295,330,542	\$7,875,120,781	\$580,060,055	\$18,307,677,215
% of Year's Dollars	35.8%	18.0%	43.0%	3.2%	

Total	Elementary	Middle	High	District	Total
New	\$14,006,359,067	\$7,859,905,406	\$14,381,975,149	\$372,212,305	\$36,620,451,927
Additions	\$3,998,086,167	\$1,888,518,911	\$4,935,986,239	\$240,269,758	\$11,062,861,074
Renovation	\$3,703,243,144	\$1,974,138,182	\$4,396,060,256	\$606,054,898	\$10,679,496,479
Total	\$21,707,688,377	\$11,722,562,499	\$23,714,021,644	\$1,218,536,960	\$58,362,809,480
% of Identified Dollars	37.2%	20.1%	40.6%	2.1%	

To read this table: Of the \$13.126B spent on new buildings in 2007, \$5.26B went into elementary schools, \$3.1B was spent on middle schools and \$4.7B on high schools. Almost \$152M was spent on district buildings encompassing special programs or administrative functions.

shown in Table 5 are meant as comparison points, not as arbiters.

Where to Put the Money

Most school districts have multiple construction needs. Whether caused by an expanding student population, need for technology, questions of safety and accessibility, or the need to upgrade schools built in another time, school boards are often faced with multiple demands for construction dollars.

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 (fewer than 525 students)	450	60,000	\$10,000,000	\$162.50	\$23,477	137.7
National Median	700	82,000	\$12,885,000	\$157.05	\$19,685	124.0
largest quarter (800 to 1,800 students)	850	96,890	\$15,000,000	\$146.83	\$16,489	111.8
Middle Schools						
smallest quarter (fewer than 616 students)	510	80,000	\$13,000,000	\$154.83	\$25,958	159.2
National Median	850	120,000	\$20,000,000	\$162.50	\$23,529	146.6
largest quarter (1,100 to 2,000 students)	1,200	176,950	\$30,000,000	\$162.52	\$22,824	141.7
High Schools						
smallest quarter (fewer than 880 students)	600	100,000	\$15,100,000	\$156.25	\$27,772	187.5
National Median	1,400	223,500	\$40,643,000	\$171.43	\$29,289	166.0
largest quarter (1,830 to 4,000 students)	2,295	330,000	\$55,000,000	\$176.27	\$27,141	150.0

To read this table: One quarter of all new elementary schools were constructed for 525 or fewer students. Among this group, the median number of students accommodated was 450. The median small elementary school was 60,000 sq. ft. and cost \$10M. Median cost per square foot for these smaller elementary schools was \$162.50 and cost per student was \$23,477. The median small elementary school provided 137.7 sq. ft. per student. By contrast the median large elementary school (with 850 students) provided just 111.8 sq. ft. per student.

Table 6 takes a look, in terms of dollars, at how some of those issues are being addressed. It shows the school level at which construction is taking place (money is being spent) and the type of construction that was undertaken. For example, among school construction projects completed in 2007, 37.8 percent was spent on elementary schools, while 21.1 percent went to middle schools. High schools received 39.1 percent. District buildings generally were identified as administrative space, transportation or maintenance space, or when it was spent for renovations, situations where the district was putting money in many different buildings at different levels and could not break it out.

Table 6 also shows the purpose for which construction dollars were spent at each level. For example, of the \$7.853B spent last year on elementary schools, almost \$5.3B (67 percent) was for new buildings. Another \$1.34B was



Table 8 What New Schools Starting in 2008 Will Provide

(% of new schools that reported facility, by grade level)

		Elementary	Middle/JHS	High School
Core Facilities	Classrooms	100.0%	100.0%	100.0%
	Library	96.6%	97.0%	93.9%
	Media Center	74.2%	100.0%	97.0%
	Computer Lab	85.2%	100.0%	97.0%
	Science Lab	8.7%	100.0%	100.0%
	Music	93.9%	100.0%	95.5%
	Arts/Crafts	99.2%	95.5%	89.4%
	Gymnasium	95.8%	100.0%	95.5%
	Multipurpose Room	9.1%	7.6%	7.6%
	Stage	12.9%	31.8%	69.7%
	Auditorium/Theater	3.8%	25.8%	68.2%
	Special ed/resource	78.4%	83.3%	75.8%
	Home Arts	0.0%	57.6%	57.6%
	Industrial Tech.	0.0%	51.6%	25.8%
	Vocational Shops	0.0%	1.5%	21.2%
	Photo Lab	0.0%	0.0%	4.5%
TV/Radio Studio	0.0%	1.5%	6.1%	
Support Facilities	Offices	100.0%	100.0%	100.0%
	Infirmary/Clinic	100.0%	100.0%	100.0%
	Cafeteria	99.2%	100.0%	98.5%
	Kitchen	97.3%	100.0%	95.5%
	Hall Lockers	7.2%	100.0%	95.5%
Technology Support	LANs	100.0%	100.0%	100.0%
	Fiber Optics/Cable	100.0%	100.0%	100.0%
	Phone Lines in Class	40.9%	45.5%	56.1%
	Technology Lab	0.0%	3.0%	39.4%
	Language Lab	1.1%	3.0%	10.6%
	WANs	94.7%	100.0%	98.5%
Athletic Support	Locker Rooms	5.3%	95.5%	100.0%
	Bleachers	18.2%	98.5%	93.9%
	Track	0.4%	1.5%	16.7%
	Field House	0.0%	0.0%	6.1%
	Fitness Center	0.0%	15.2%	36.4%
	Tennis	0.4%	0.0%	15.2%
	Pool	0.0%	0.0%	3.0%
	Stadium	0.0%	1.2%	10.6%
	Athletic fields	17.0%	89.4%	84.8%
	Playground	96.6%	13.6%	9.1%
Other facilities	Day Care/nursery	9.1%	0.0%	1.5%
	Elevators	4.5%	19.7%	28.8%
	Portables	0.4%	0.0%	0.0%
	Security equipment	100.0%	100.0%	100.0%

for renovation of existing buildings and \$1.25B for additions. When it comes to middle schools, \$3B (70 percent) went into new buildings. More than \$5B was spent on new high schools, but that was just 57 percent of the high school construction dollars.

Table 6 also shows how districts are expecting to spend their dollars in projects being completed or starting in 2008.

Does Size Matter?

Students do better in smaller learning environments. There is ample evidence for this statement and most educators accept it. But somewhere there appears to be a gap between educational understanding and educational construction planning. The majority of the schools that we build today continue to be large. The reason, of course, revolves around questions

Table 9 The Top Ten Additions By School Type

(% of school additions that are reported to contain facility)

Elementary

1	Classrooms	79.0%
2	Lavatories	29.3%
3	Gymnasium	12.7%
4	Cafeteria	8.8%
5	Library/Media Center	7.3%
6	Offices	5.4%
7	Kitchen	4.9%
8	Music	2.9%
9	Arts/Crafts	2.9%
10	Special ed/resource	2.9%

Middle/JHS

1	Classrooms	44.3%
2	Lavatories	31.1%
3	Science Labs	11.5%
4	Fitness Center	11.5%
5	Music	6.6%
6	Library	6.6%
7	Cafeteria	4.9%
8	Stage	4.9%
9	Gymnasium	3.3%
10	Offices	3.3%

High School

1	Classrooms	37.1%
2	Lavatories	34.5%
3	Gymnasium	21.6%
4	Stage	16.4%
5	Auditorium/Theater/Stage	14.7%
6	Music	13.8%
7	Science Labs	12.9%
8	Offices	9.5%
9	Locker Rooms	8.6%
10	Cafeteria	8.6%

of efficiency and cost. While advocates insist that the cost of building them and running them, and the cost per student educated successfully, are actually lower for small schools, in terms of construction alone; that does not seem to be true. At least that is the evidence presented in **Table 7**.

Table 7 examines the question of the comparative cost of building schools by their size. To do this, all of the new school buildings for which information was available were lined up by size, and then divided into four equal groups so median costs and

other information could be found among the smaller and larger buildings.

Looking at elementary schools, one-quarter of them were designed to house 525 or fewer students. Among that group of elementary schools, the median school will house 450 students and contain almost 60,000 sq. ft. The cost will be \$10M. The median cost per sq. ft. among the smaller elementary schools was \$162.50 and cost per student was \$23,477.

By contrast, one of every four new elementary schools was designed for 800 or more students. The largest one was designed for 1,800 students. Among these larger elementary schools, the median student population was 850, the median size 96,890 sq. ft., and the median cost \$15M. In terms of cost per sq. ft., these larger buildings cost \$146.83, significantly less per sq. ft. than the smaller elementary schools. The cost per student, \$16,489, was also significantly less than the \$23,477 being spent per pupil for the smaller schools.

On the other hand, the smaller schools provided more space per pupil (137.7 sq. ft. per student) than the larger schools (111.8). Of course, there are many other factors that are not considered, including where the larger and smaller schools were constructed, the aspirations of the districts, and even the future plans of the district.

One-quarter of the middle schools were constructed for 616 or fewer students. The median among them housed 510 students in 80,000 sq. ft. at a cost of \$13M. The median cost per sq. ft. for these smaller schools was just under \$155, and the cost per pupil \$25,958. The smaller middle schools provided 159 sq. ft. per student.

Among larger middle schools (with between 1,100 and 2,000 students) the median was 1,200 students, 176,950 sq. ft., and \$30M. It is a little surprising to see that, in terms of cost

per sq. ft., these larger middle schools actually cost more (\$162.52) while they provided less space per student. They did, however, cost somewhat less per student.

The high school picture does favor smaller schools, while the median cost per student is about the same in larger schools (with 1,830 to 4,000 students) and smaller ones (fewer than 880 students), cost per sq. ft. is higher among the bigger schools. The smaller high schools provide significantly more space per student for the program. The median high school with 600 students costs \$15.1M while the median high school with 2,295 students costs \$55M. The difference in cost per student between large and small high schools is quite small but the cost per sq. ft. and the amount of space provided per student certainly favors the smaller buildings. Considering the educational implications, school districts may wish to look once again at the efficacy of putting 2,000 or more students into a single high school building.

Providing Facilities

New school buildings have great similarities. All have classrooms and offices. Virtually all have facilities for physical education. Some kind of a nurse's station is a regular feature. Libraries are in all buildings, though in some, they may be listed as media centers. In elementary schools, gymnasiums, and cafeterias are provided but some are listed as multi-purpose rooms. **Table 8** records the percentage of new schools planned to start in 2008 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 included in a majority of all school additions as are lavatories. No other single facility is in as many as 30 percent of any of the school types.

A Closer Look at Regions

National figures are instructive, but it may be more important to know what your neighbors are doing. The following regional figures are designed to help you do that.

On the following pages, figures are given for each of the 12 regions of the U.S. 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, middle, high schools, and district projects.

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

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.

Construction Report



Region 1, consisting of the six New England states, completed \$1B worth of construction in 2007, and expects to complete about the same amount in 2008. More than half the construction

dollars go to high school projects.

The cost of school construction in Region 1 is among the highest in the nation, with the median elementary and high school coming in at bet-

ter than \$250 per sq. ft., and middle school costs not much lower. Region 1 schools also tend to provide more space per student.

Based on total dollars spent on new schools, and average cost, indications are that the \$530M spent on new construction in 2007 in New England resulted in 15 to 20 entirely new school buildings. They were relatively equally spread among elementary, middle, and high schools.

About 30 percent of Region 1's districts either completed a construction project in 2007 or expects to complete or start a project this year.

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

HOW MUCH IS BEING SPENT (000's)?

	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$529,815	\$189,415	\$357,185	\$1,076,415
Completions in 2008	\$563,487	\$344,981	\$194,401	\$1,102,869
Starting in 2008	\$545,144	\$211,713	\$335,680	\$1,092,538
Total Activity	\$1,638,447	\$746,109	\$887,266	\$3,271,821
% of Total	50.1%	22.8%	27.1%	

WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$1,076,415	30.5%	13.9%	51.3%	4.3%
Completions in 2008	\$1,102,869	31.0%	23.4%	45.7%	0.0%
Starting in 2008	\$1,092,538	28.1%	5.2%	66.6%	0.0%
Total Activity	\$3,271,821	29.9%	14.2%	54.5%	1.4%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$250.63	\$30,071	157.7	\$23,500	513	82,500
Middle/JHS	\$226.34	\$35,714	166.7	\$22,000	600	97,200
High School	\$253.38	\$67,104	197.4	\$44,300	608	148,000

Region 2 consists of New Jersey, New York, and Pennsylvania. Costs in most parts of these states tend to be higher than in other parts of the nation.

In 2007, school districts in Region 2 put almost \$2.7B worth of construction in place. It is expected construction

may slow slightly in terms of projects to be completed in 2008, and starts are projected to be even lower.

Since Region 2 is an area with relatively stable population, construction is not driven by the need to house additional students, but by the need

to put schools in areas to which the population is moving, and the need to upgrade and expand existing buildings. Thus, throughout Region 2, just 40 percent of construction dollars are spent on new schools.

Despite the emphasis on existing buildings, based on total dollars spent on new schools, and average cost, indications are that about 40 new schools were completed in 2007, with the great majority of them being elementary schools.

Slightly less than 28 percent of Region 2's districts either completed a construction project in 2007 or expect to complete or start a project this year.

Region 2 NJ, NY, PA

HOW MUCH IS BEING SPENT (000's)?

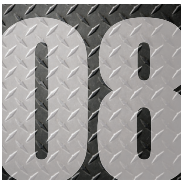
	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$1,130,568	\$697,597	\$857,397	\$2,685,562
Completions in 2008	\$836,551	\$741,455	\$824,056	\$2,402,063
Starting in 2008	\$954,421	\$566,512	\$611,294	\$2,132,228
Total Activity	\$2,921,540	\$2,005,565	\$2,292,748	\$7,219,853
% of Total	40.4%	27.8%	31.8%	

WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$2,685,562	37.1%	17.9%	45.0%	0.0%
Completions in 2008	\$2,402,063	36.0%	20.0%	44.0%	0.0%
Starting in 2008	\$2,132,228	38.9%	11.3%	45.0%	4.7%
Total Activity	\$7,219,853	37.3%	16.6%	44.7%	1.4%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$233.19	\$35,688	155.9	\$20,920	619	94,500
Middle/JHS	\$236.40	\$37,974	178.6	\$24,559	604	111,123
High School	\$287.10	\$55,000	220.8	\$60,000	1400	340,000



Construction Report

Region 3 includes Delaware, the District of Columbia, Maryland, Virginia, and West Virginia. During the last six years, school districts in this region have

tended to spend about \$1B annually. In 2007, spending was up, reaching over \$1.5B, with slightly more than half the dollars going to new schools. Spend-

ing may fall off slightly in 2008, but the region will remain a major school construction area.

While districts in Region 3 are spending more on school construction, they may not be getting significantly more in results. Costs in this area have been spiraling upwards with construction of new schools now near or at \$200 per sq. ft.

Based on total dollars spent on new schools, and average costs, indications are that about 30 new schools were completed in 2007. More than half of Region 3's school districts are involved in construction of some sort.

Region 3 DC, DE, MD, VA, WV

HOW MUCH IS BEING SPENT (000's)?

	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$790,816	\$325,768	\$430,393	\$1,546,977
Completions in 2008	\$634,684	\$328,227	\$316,165	\$1,279,076
Starting in 2008	\$710,647	\$358,743	\$424,787	\$1,494,177
Total Activity	\$2,136,147	\$1,012,737	\$1,171,346	\$4,320,230
% of Total	49.5%	23.4%	27.1%	

WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$1,546,977	32.8%	21.8%	42.6%	2.8%
Completions in 2008	\$1,279,076	43.2%	27.5%	29.3%	0.0%
Starting in 2008	\$1,494,177	39.5%	23.3%	36.3%	0.8%
Total Activity	\$4,320,230	38.2%	24.0%	36.5%	1.3%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$183.24	\$20,333	114.1	\$16,000	750	87,602
Middle/JHS	\$218.41	\$31,014	144.3	\$26,766	740	120,028
High School	\$187.76	\$33,479	177.9	\$47,050	1550	232,000

Region 4 consists of Kentucky, North Carolina, South Carolina, and Tennessee. These are areas of growth in terms of students and schools, with \$1.6B worth of construction put in place during 2007. Indications are that spending will remain pretty close to that level in terms of construction

expected to be completed in 2008, and projects scheduled to get underway.

Region 4, in a sense, represents the national median in terms of school construction. The median elementary school in Region 4 is almost exactly at the national median in terms of sq. ft. costs, cost per student, space per stu-

dent, overall cost, size, and population. Its middle schools tend to be just above the national median in all categories, and while the high schools deviate somewhat from the national middle, the differences are not significant.

One major deviation is in terms of where money is spent. Region 4 put

almost 80 percent of its dollars into new schools, which is why, based on total dollars spent on new schools and average costs, indications are that about 70 new schools were completed in 2007.

About four in 10 of Region 4's districts either completed a construction project in 2007 or expect to complete or start a project this year.

Region 4 KY, NC, SC, TN

HOW MUCH IS BEING SPENT (000's)?

	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$1,292,214	\$201,038	\$151,506	\$1,644,757
Completions in 2008	\$1,336,857	\$154,577	\$153,496	\$1,644,929
Starting in 2008	\$1,397,312	\$136,300	\$154,405	\$1,688,017
Total Activity	\$4,026,382	\$491,914	\$459,407	\$4,977,703
% of Total	80.9%	9.9%	9.2%	

WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$1,644,757	46.0%	21.7%	26.4%	5.9%
Completions in 2008	\$1,644,929	39.4%	18.6%	40.7%	1.3%
Starting in 2008	\$1,688,017	39.7%	28.6%	30.0%	1.7%
Total Activity	\$4,977,703	41.7%	23.0%	32.3%	3.0%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$154.64	\$19,766	124.2	\$13,000	700	83,350
Middle/JHS	\$164.79	\$24,265	149.7	\$21,107	864	130,950
High School	\$160.69	\$27,750	170.3	\$35,950	1478	224,602

Construction Report



Alabama, Florida, Georgia, and Mississippi are the four states that make up **Region 5**. Led by Florida and Georgia, this region has produced an unbroken record of high construction activity. The year 2007 was no exception, with almost \$2.4B worth of con-

struction put in place. School districts in Region 5 spend 75 percent their money on building new schools. In terms of dollars spent, it is evenly divided among elementary, middle, and high schools.

Region 5 school districts get more school for what they pay. They spend

less than most of the nation's schools in terms of cost per sq. ft. and cost per student and, as a result, are able to put more construction in place than districts in other regions.

Based on total dollars spent on new schools, and average cost, indications

Region 5 AL, FL, GA, MS

HOW MUCH IS BEING SPENT (000's)?

	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$1,763,027	\$332,604	\$252,493	\$2,348,123
Completions in 2008	\$1,737,157	\$245,562	\$317,869	\$2,300,588
Starting in 2008	\$1,560,739	\$273,385	\$215,693	\$2,049,816
Total Activity	\$5,060,922	\$851,550	\$786,056	\$6,698,527
% of Total	75.6%	12.7%	11.7%	

WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$2,348,123	47.4%	21.3%	27.0%	4.3%
Completions in 2008	\$2,300,588	40.8%	27.8%	30.5%	1.0%
Starting in 2008	\$2,049,816	24.2%	26.4%	48.8%	0.7%
Total Activity	\$6,698,527	38.0%	25.1%	34.9%	2.0%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$126.51	\$16,776	132.0	\$13,800	810	108,000
Middle/JHS	\$133.33	\$21,067	146.9	\$20,413	1037	156,000
High School	\$141.70	\$25,667	164.3	\$35,000	1500	247,000

are that as many as 95 new schools were put in place in Region 5 in 2007. Two out of three new schools were for the elementary grades.

This is the nation's most active construction region, with almost 60 percent of Region 5's districts either completing construction in 2007 or expecting to complete or start a project in 2008.

Region 6, including the states of Indiana, Michigan, and Ohio, put almost \$1.8B into its school buildings in 2007. There is some indication that construction ending and starting in

2008 may be somewhat lower, perhaps a reflection of difficult economic times in this region.

Despite the fact that this is not an area of population growth, districts

report that they are putting more than half their construction dollars into new schools. The region's new schools — especially the high schools — tend to be relatively small, something of a

change for a region where large high schools have been the norm.

Based on total dollars spent on new schools, and average cost, indications are that about 75 new schools were completed in 2007.

About one in four of Region 6's districts either completed a construction project in 2007 or expects to complete or start a project in 2008.

Region 6 IN, OH, MI

HOW MUCH IS BEING SPENT (000's)?

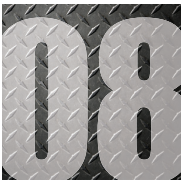
	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$1,015,157	\$320,465	\$453,708	\$1,789,330
Completions in 2008	\$822,068	\$524,709	\$258,170	\$1,604,947
Starting in 2008	\$644,434	\$301,872	\$484,967	\$1,431,274
Total Activity	\$2,481,660	\$1,147,046	\$1,196,845	\$4,825,551
% of Total	51.4%	23.8%	24.8%	

WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$1,789,330	47.0%	19.7%	32.0%	1.3%
Completions in 2008	\$1,604,947	33.7%	24.6%	40.5%	1.3%
Starting in 2008	\$1,431,274	33.0%	12.1%	38.0%	17.0%
Total Activity	\$4,825,551	38.4%	19.1%	36.6%	5.9%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$158.73	\$21,053	129.5	\$11,000	525	66,102
Middle/JHS	\$135.54	\$20,000	141.4	\$13,000	650	90,000
High School	\$160.00	\$32,105	185.6	\$32,000	1105	22,000



Construction Report

The three states that form **Region 7**, Illinois, Minnesota, and Wisconsin, appear to have been less and less active in terms of school construction during the last few years. However, in 2007, school districts in the three states spent almost \$1.2B on school construction, a

sharp rebound from the year before, a rebound that had been predicted.

Indications are, however, that construction completed in 2008 will fall off (less than \$1B is projected), and that starts will drop off even further to just more than \$600M. It is not

clear whether this is a trend (the states involved have long been considered leaders in education and in providing facilities) or a glitch in reporting.

Schools in Region 7 tend to pay a little more, to spend more per student, and to provide more space than the national median.

Based on total dollars spent on new schools and average cost, indications are that about 25 new schools were completed by districts in Region 7 during 2007, about half of them for the elementary grades.

Fewer than one in five of Region 7's school districts report that they completed any construction in 2007 or will complete or start any in 2008.

Region 7 IL, MN, WI

HOW MUCH IS BEING SPENT (000's)?

	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$724,058	\$201,343	\$261,008	\$1,186,410
Completions in 2008	\$659,603	\$96,689	\$188,800	\$945,092
Starting in 2008	\$403,861	\$73,866	\$129,805	\$607,532
Total Activity	\$1,787,522	\$371,898	\$579,613	\$2,739,033
% of Total	65.3%	13.6%	21.1%	

WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$1,186,410	27.9%	18.6%	51.3%	2.2%
Completions in 2008	\$945,092	33.7%	23.4%	42.8%	0.2%
Starting in 2008	\$607,532	23.5%	11.6%	58.6%	6.2%
Total Activity	\$2,739,033	28.9%	18.7%	50.0%	2.4%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$177.00	\$23,959	133.3	\$15,330	600	85,000
Middle/JHS	\$173.56	\$26,272	151.7	\$22,750	825	122,500
High School	\$168.78	\$29,417	173.3	\$48,000	1400	276,573

Region 8 includes the states of Iowa, Kansas, Missouri, and Nebraska. School districts in these four states combined to put more than \$1B worth of construction in place in 2007, the first time the region has reached that peak. However,

that spurt may not be sustained. Projections for completions and starts in 2008 suggest that construction will fall well below the 2007 level.

Construction in Region 8 seems to fall relatively evenly among new

schools, additions, and retrofit, and among elementary, middle, and high schools. Construction costs in this region are below national medians.

Based on total dollars spent on new schools and average cost, indications are that about 35-40 new schools were completed in 2007. Two out of three were for the elementary grades.

Only 15 percent of Region 8's school districts completed a construction project in 2007 or expect to complete or start a project in 2008. This Region, however, has many relatively small school districts, so the fact that fewer than one in five is in a construction mode is not surprising.

Region 8 IA, KS, MO, NE

HOW MUCH IS BEING SPENT (000's)?

	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$421,575	\$356,153	\$258,103	\$1,035,831
Completions in 2008	\$263,448	\$183,641	\$229,388	\$676,478
Starting in 2008	\$259,358	\$216,938	\$286,475	\$762,771
Total Activity	\$944,381	\$756,733	\$773,966	\$2,475,080
% of Total	38.2%	30.5%	31.3%	

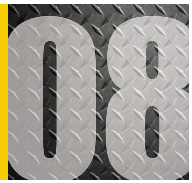
WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$1,035,831	39.1%	25.5%	35.3%	0.1%
Completions in 2008	\$676,478	31.7%	31.1%	32.6%	4.6%
Starting in 2008	\$762,771	21.5%	19.1%	59.2%	0.2%
Total Activity	\$2,475,080	31.6%	25.1%	41.9%	1.4%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$134.82	\$17,750	129.0	\$9,000	510	65,000
Middle/JHS	\$138.75	\$22,200	146.3	\$12,000	600	95,000
High School	\$151.04	\$21,333	148.8	\$15,100	600	96,000

Construction Report



Region 9 includes Arkansas, Louisiana, Oklahoma, and Texas. While all of the states are normally involved in school construction of one kind or another, it is the activity in Texas that dominates the region, and makes it, year after year, one of the highest spending regions.

This year is no exception. Region 9 school districts put \$2.8B worth of school construction in place in 2007, and expectations are that it will probably do the same this year and in the years following. There has been some expectation ever since Hurricane

Katrina that there would be a school building boom in Louisiana, but so far it is not showing up in the reports.

Region 9 schools tend to cost a little less than national medians, but they house more students.

Based on total dollars spent on new

schools, and average cost, indications are that about 110 new schools were completed in Region 9 in 2007. This is a drop from the 140 completed a year earlier.

While there is a lot of school construction activity in Region 9, less than one-quarter of all school districts in Region 9 (390 out of 1,180) reported that they completed construction in 2007 or will complete or start any in 2008.

Region 9 AR, LA, OK, TX

HOW MUCH IS BEING SPENT (000's)?

	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$2,143,301,393	\$358,801,854	\$298,395,298	\$2,800,498,546
Completions in 2008	\$1,750,284,835	\$839,093,929	\$141,071,746	\$2,730,450,510
Starting in 2008	\$1,275,574,962	\$704,417,685	\$625,511,268	\$2,605,503,916
Total Activity	\$5,169,161,190	\$1,902,313,468	\$1,064,978,313	\$8,136,452,972
% of Total	63.5%	23.4%	13.1%	

WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$2,800,498,546	34.0%	26.0%	38.4%	1.6%
Completions in 2008	\$2,730,450,510	48.6%	11.0%	38.5%	1.9%
Starting in 2008	\$2,605,503,916	48.6%	12.6%	34.2%	4.6%
Total Activity	\$8,136,452,972	43.6%	16.7%	37.0%	2.7%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$141.37	\$16,923	119.0	\$11,000	750	81,756
Middle/JHS	\$158.51	\$21,250	142.9	\$21,000	1000	138,000
High School	\$170.78	\$29,857	168.2	\$54,500	1800	303,099

There are seven states in **Region 10** including Colorado, Montana, New Mexico, North Dakota, South Dakota, Utah, and Wyoming. It is the largest region, in terms of area and in number

of states included. Its school construction spending tends to be relatively low. Most of it is found in three states – Colorado, New Mexico, and Utah.

It was one of only two regions that

put less than \$1B worth of construction in place in 2007. The total of \$864M, however, was somewhat more than the previous year. More than half the region's dollars go into high schools.

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

HOW MUCH IS BEING SPENT (000's)?

	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$547,864	\$159,574	\$156,803	\$864,241
Completions in 2008	\$498,235	\$195,669	\$85,027	\$778,931
Starting in 2008	\$379,652	\$81,655	\$69,744	\$531,050
Total Activity	\$1,425,750	\$436,898	\$311,574	\$2,174,222
% of Total	65.6%	20.1%	14.3%	

WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$864,241	25.6%	25.6%	45.3%	3.5%
Completions in 2008	\$778,931	24.2%	24.0%	49.7%	2.1%
Starting in 2008	\$531,050	36.9%	3.3%	59.9%	0.0%
Total Activity	\$2,174,222	27.9%	19.5%	50.4%	2.2%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$131.88	\$15,000	114.6	\$8,150	625	69,000
Middle/JHS	\$179.10	\$24,167	136.0	\$13,500	600	70,000
High School	\$211.36	\$31,290	139.4	\$33,500	1200	148,500

Based on total dollars spent on new schools, and average cost, indications are that about 30 new schools were completed in the region in 2007, evenly split among elementary, middle, and high schools.

Just 17 percent of the region's school districts reported that they completed construction in 2007 or expect to complete or start any in 2008.



Construction Report

The four states in **Region 11** — Arizona, California, Hawaii, and Nevada — are all growing. It is not surprising that, in terms of school construction, Region 11 spent more than any other region in the nation. A little more than \$3B was spent on school construction

completed in 2007. This actually was a drop from the region's activity in 2006 and was expected based on information available a year ago.

Looking ahead to construction to be completed or started in 2008, it appears that districts in the region are

once again increasing their construction activity.

One advantage many school districts in this area have is an easy climate that makes it possible to build schools without corridors and to save on interior space. Thus, these districts provide much less space per pupil than do districts in other regions.

Based on total dollars spent on new schools, and average cost, indications are that more than 100 new schools were put in place in 2007.

Almost three out of 10 of the region's school districts either completed a construction project in 2007, expects to complete one in 2008, or reported that one will be started in 2008.

Region 11 AZ, CA, HI, NV

HOW MUCH IS BEING SPENT (000's)?

	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$2,513,430	\$317,770	\$266,116	\$3,097,315
Completions in 2008	\$2,866,331	\$235,039	\$128,495	\$3,229,865
Starting in 2008	\$2,795,825	\$367,932	\$162,102	\$3,325,859
Total Activity	\$8,175,585	\$920,742	\$556,713	\$9,653,040
% of Total	84.7%	9.5%	5.8%	

WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$3,097,315	41.1%	18.1%	40.7%	0.1%
Completions in 2008	\$3,229,865	38.2%	17.3%	44.1%	0.4%
Starting in 2008	\$3,325,859	36.7%	19.0%	43.9%	0.3%
Total Activity	\$9,653,040	38.6%	18.1%	43.0%	0.3%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$163.27	\$22,252	86.8	\$15,131	750	67,240
Middle/JHS	\$164.05	\$21,339	104.8	\$27,000	1000	97,972
High School	\$177.78	\$26,000	120.2	\$50,000	1728	213,624

Region 12 includes Alaska, Idaho, Oregon, and Washington. As predicted, school districts in these four states put just \$676M worth of construction in place in 2007, a drop from the previous year. It would appear that they will com-

plete even less in 2008, and plans for projects starting in 2008 are also down.

This is a region where, over the years, no single pattern of school construction activity seems to have emerged. One year the projects that are completed

tend to be new schools; the next year additions and renovation projects dominate. This is probably a reflection of the fact that, though there are two major population centers in the four states, most of the construction appears to be

coming from smaller districts scattered throughout the area.

Based on total dollars spent on new schools, and average cost, indications are that only 10 new schools were completed in 2007.

Fewer than three of 10 of the region's school districts either completed a construction project in 2007 or expect to complete or start a project in 2008. Many of the projects that are undertaken tend to be rather small.

Region 12 AK, ID, OR, WA

HOW MUCH IS BEING SPENT (000's)?

	<u>New Schools</u>	<u>Additions</u>	<u>Renovations</u>	<u>Total</u>
Completions in 2007	\$254,670	\$222,471	\$199,097	\$676,238
Completions in 2008	\$335,498	\$125,399	\$147,249	\$608,147
Starting in 2008	\$262,786	\$71,487	\$252,640	\$586,912
Total Activity	\$852,954	\$419,356	\$598,986	\$1,871,296
% of Total	45.6%	22.4%	32.0%	

WHERE IS THE MONEY GOING?

	<u>Total (000's)</u>	<u>Elementary</u>	<u>Middle</u>	<u>High</u>	<u>District</u>
Completions in 2007	\$676,238	19.5%	30.4%	49.7%	0.3%
Completions in 2008	\$608,147	21.1%	23.7%	48.3%	7.0%
Starting in 2008	\$586,912	33.9%	43.9%	20.3%	1.9%
Total Activity	\$1,871,296	24.5%	32.5%	40.0%	3.0%

NEW SCHOOLS ONLY

	<u>Cost/sq. ft.</u>	<u>Cost/student</u>	<u>Sq. ft./student</u>	<u>Median Cost (\$000's)</u>	<u>Median # Students</u>	<u>Median Size (Sq. ft.)</u>
Elementary	\$190.37	\$20,000	109.0	\$11,000	500	55,750
Middle/JHS	\$178.23	\$26,296	143.4	\$19,000	800	113,250
High School	\$276.73	\$54,473	200.4	\$57,200	1050	187,943



Trends since 1995

This is the 13th year that *School Planning & Management* has collected and published data on median spending on new schools in the United States. It is not surprising that during that period, cost per sq. ft. has risen. School districts have little control over construction costs, which are set by the overall construction market in an area. However, the cost increases in 2007 over 2006 have been extremely severe, the highest in over a decade.

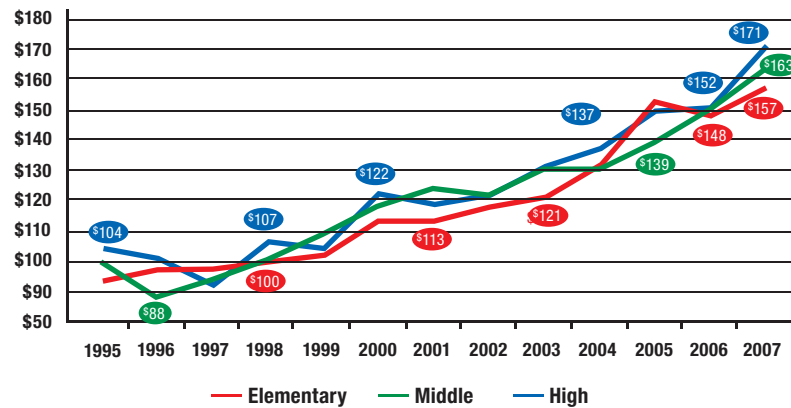
Graph A shows how the median cost per sq. ft. has changed since 1995.

In 1995, cost per square for a high school was reported at \$104.17 per sq. ft. Over the next four years, it declined, then rose only to \$105. Today, the cost per sq. ft. is \$171.43, an increase of almost 65 percent. The one-year increase from schools completed in 2006 (\$151.52) to those completed in 2007 (\$171.43) was a whopping 13 percent! Some of that may be because schools are more and more concerned about building “green,” and the initial cost of green schools is often higher, but the bulk of the increase is inflation. It’s an important demonstration of the negative effects when the design, bidding, and construction process are delayed. (A note before I receive angry letters: While the initial cost of “green” schools is often higher, the operating costs and the costs over the life of a building are much, much lower. Building green is a good investment, for now and the future.)

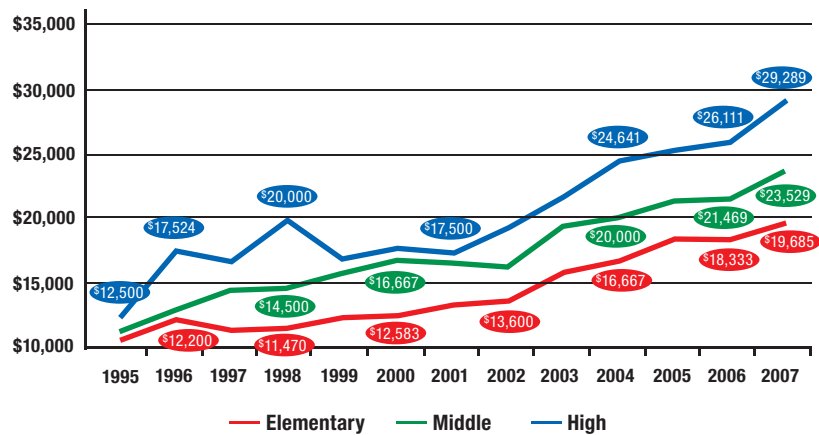
Middle schools, which were being built for below \$100 in 1995, now cost \$162.50 per sq. ft. Elementary schools being built today cost \$157.05, compared to \$93.33 per sq. ft. in 1995. As with high school costs, the increase from 2006 to 2007 was substantial.

Graph B looks at the history of construction cost per student during the period 1995 through 2007. While inflation normally drives construction costs up, and schools have to pay, schools do have some control over cost per student.

■ Graph A
Median Cost per Sq. Ft., 1995 - 2008



■ Graph B
Median Cost per Student, 1995 - 2008



In 1995, a new high school under construction cost \$12,500 per student. Thus, a median-cost high school planned for 1,000 students in 1995, cost \$12.5M. Today, a high school planned for 1,000 students, at the median (\$29,289 per student), would cost more than \$29M.

In 1995, a new high school under construction cost \$12,500 per student. Thus, a median-cost high school planned for 1,000 students in 1995 cost \$12.5M. Today, a high school

planned for 1,000 students, at the median (\$29,289 per student), would cost more than \$29M.

Graph B shows similar information for middle schools and elementary

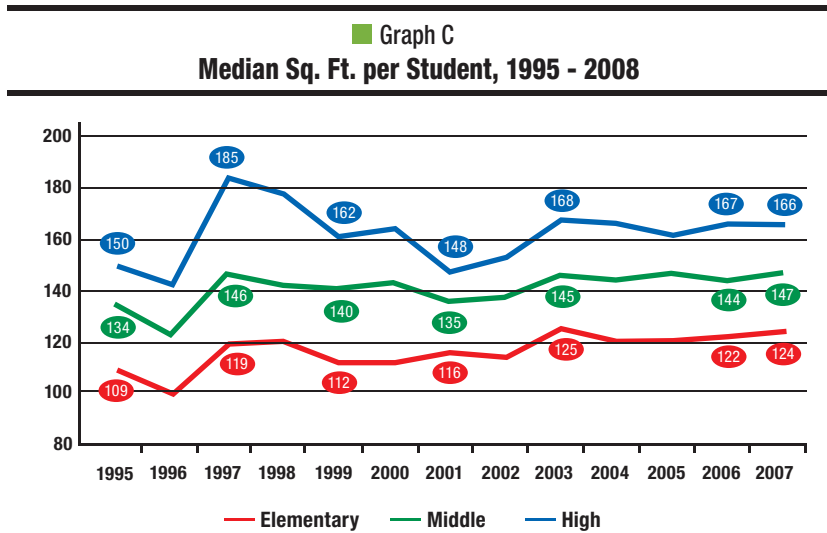
The 2008 Annual School Construction Report

schools. Elementary schools were built for \$10,726 per student in 1995; today schools are paying \$19,685. One probable explanation: elementary schools are being built with more specialized spaces, as well as more sophisticated systems and technology.

Middle school costs per student in 1995 were at \$11,056. Today, they stand at \$23,529, more than twice as much. In 1995, many schools that were called "middle schools" were actually junior high schools.

Graph C looks over the same period at the amount of space allocated per student when the median new school is constructed. Median high schools in 1995 were providing 150 sq. ft. per student. For point of reference, in 1970, the median high school was providing 100 sq. ft. per student. Today, the median stands at 166 sq. ft. per student.

Median elementary schools in 1995 were providing 109 sq. ft. per student. Today, that has risen to 124 sq. ft. per student. In 1970, the average elemen-



tary school was providing 70 sq. ft. per student.

As Graph C shows, there have been some ups and downs in terms of space allocated per student in the median new school, but the trend has been to provide just a little more space each year. www.webSPM.com

Paul Abramson is Education Industry Analyst for SP&M and President of Stanton Leggett & Associates, an educational facility consulting firm based in Mamaroneck, NY. He can be reached at intelled@aol.com

At a Glance History of School Construction

School Construction Completed (\$000's), 1995 through 2007 Projected

	1995	% Of	1996	% Of	1997	% Of	1998	% Of	1999	% Of
	Cost	Total	Cost	Total	Cost	Total	Cost	Total	Cost	Total
New Bldgs	\$5,040,279	48.9%	\$6,117,095	50.9%	\$6,380,580	50.3%	\$7,893,601	51.1%	\$8,166,607	45.5%
Additions	\$2,923,554	28.3%	\$3,557,333	29.6%	\$3,235,823	25.5%	\$3,897,089	25.2%	\$5,849,605	32.5%
Retrofits	\$2,346,892	22.8%	\$2,344,217	19.5%	\$3,072,549	24.2%	\$3,667,274	23.7%	\$3,947,435	22.0%
TOTAL	\$10,310,725		\$12,018,645		\$12,688,952		\$15,457,964		\$17,963,647	
	2000	% Of	2001	% Of	2002	% Of	2003	% Of	2004	% Of
	Cost	Total	Cost	Total	Cost	Total	Cost	Total	Cost	Total
New Bldgs	\$9,389,207	44.4%	\$10,403,831	51.2%	\$12,411,565	57.4%	\$11,248,896	56.3%	\$11,887,900	58.9%
Additions	\$6,131,759	29.0%	\$5,358,499	26.3%	\$5,253,876	24.3%	\$5,061,373	25.4%	\$4,479,472	22.2%
Retrofits	\$5,636,518	26.6%	\$4,578,832	22.5%	\$3,962,177	18.3%	\$3,651,363	18.3%	\$3,822,344	18.9%
TOTAL	\$21,157,484		\$20,341,162		\$21,627,618		\$19,961,632		\$20,189,716	
	2005	% Of	2006	% Of	2007	% Of	2008	% Of		
	Cost	Total	Cost	Total	Cost	Total	Projected	Total		
New Bldgs	\$12,796,915	59.2%	\$12,310,931	61.3%	\$13,126,495	63.2%	\$12,304,203	63.7%		
Additions	\$4,952,538	22.9%	\$4,093,009	20.4%	\$3,683,000	17.7%	\$4,015,041	20.8%		
Retrofits	\$3,878,061	17.9%	\$3,686,640	18.3%	\$3,942,204	19.1%	\$2,984,189	15.5%		
TOTAL	\$21,627,514		\$20,090,580		\$20,751,699		\$19,303,433			



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