Center for Higher Education
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## TIMELY DATA CIRCULATED WHILE CURRENT

Reports on state tax legislation; state appropriations for universities, colleges and community colleges; legislation affecting education beyond the high school.

## IN THIS ISSUE



Two groups of community colleges are shown in Tables 1 and 2. The 24 "state-aided" community colleges in Table 1 include a state-local funding pattern. A smaller "state" community college group of 19 states is characterized by state funding only. The summary statistics below show the two-year percentage gains for these two groups as well as the weighted average percentages of gain for higher education, nationally, for the most recent six years. After the initial three years, when the state colleges outpaced the state-aided colleges, the more recent trend has been one where the state-aided groups outpaced the state colleges in 1989 and 1991, and the nation in 1990 and 1991 with the largest gain found in the current year.

PRECENTAGES OF TWO-YEAR GAIN IN APPROPRIATIONS FOR COMMUNITY COLLEGES AND FOR ALL HIGHER EDUCATION OPERATING EXPENSES

| | 1986 | 1987 | 1988 | 1989 | 1990 | 1991 |
|---|---|---|---|---|---|---|
| State-aided | 15 | 11 | 7 | 13 | 15 | 17 |
| State | 18 | 14 | 12 | 12 | 16 | 15 |
| 50-State Total | 19 | 13 | 12 | 14 | 14 | 12 |



By Brenda Albright*

It is well known that the physical conditions and infrastructures of higher education institutions are deteriorating. During a time of budgetary constraints, campuses may not be giving either the attention or the funding which physical plants need. This article explores the dimensions of higher education budgeting for the renewal, repair, and replacement of capital facilities. It demonstrates one state's experience in this critical area.

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Table 1. APPROPRIATIONS OF STATE TAX FUNDS TO STATE-AIDED, PUBLIC COMMUMUNITY COLLEGES FOR ANNUAL OPERATING EXPENSES, FISCAL YEARS 1988-89, 1989-90 AND 1990-91, WITH PERCENTAGES OF TWO-YEAR GAINS. (In thousands of dollars)

| States | Year 1988-89 | Year 1989-90 | Year 1990-91 | 2-yr gain Percent |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| California | 1,450,025 | 1,591,391 | 1,751,062 | 21 |
| Florida | 460,908 | 494,028 | 518,650 | 13 |
| Texas | 413,584 | 512,064 | 510,375 | 23 |
| New York* | 309,255 | 333,721 | 360,693 | 17 |
| Illinois** | 207,417 | 237,205 | 248,856 | 20 |
| Michigan | 205,361 | 212,491 | 225,465 | 10 |
| Maryland | 105,921 | 118,931 | 123,459 | 17 |
| Ohio | 94,912 | 102,075 | 107,467 | 13 |
| Pennsylvania | 95,641 | 97,344 | 106,037 | 11 |
| Iowa | 82,122 | 88,458 | 87,500 | 7 |
| New Jersey | 98,843 | 92,011 | 80,879 | - 18 |
| Arizona | 66,920 | 78,549 | 75,538 | 13 |
| Mississippi | 68,661 | 72,960 | 74,441 | 8 |
| Oregon | 62,954 | 69,693 | 72,537 | 15 |
| Missouri | 62,463 | 67,176 | 70,787 | 13 |
| Kansas | 35,619 | 42,612 | 44,037 | 24 |
| Wyoming | 37,064 | 37,064 | 40,363 | 9 |
| Nebraska | 23,127 | 27,000 | 32,148 | 39 |
| Arkansas | 23,393 | 23,690 | 24,003 | 3 |
| Indiana*** | 17,640 | 20,031 | 21,218 | 20 |
| Colorado* | 12,621 | 13,921 | 14,779 | 17 |
| Idaho | 6,407 | 6,988 | 8,393 | 31 |
| Montana | 3,042 | 3,208 | 3,182 | 5 |
| New Mexico* | 933 | 1,887 | 3,048 | 227 |
| Totals | 3,944,833 | 4,344,498 | 4,604,917 | |
| Weighted average percentage of gain | | | | 17 |

*One of the states having both "local" and "state" community colleges.

**Includes State Community College in East St. Louis which does not receive local tax support.

***For Vincennes University supported primarily by the state, but partly by the county where it is located.

Table 2. APPROPRIATIONS OF STATE TAX FUNDS FOR ANNUAL OPERATING EXPENSES OF STATE COMMUNITY COLLEGES FOR FISCAL YEARS 1988-89, 1989-90 AND 1990-91, WITH PERCENTAGES OF GAIN OVER THE MOST RECENT TWO YEARS. (In thousands of dollars)

| States | Year 1988-89 | Year 1989-90 | Year 1990-91 | 2-yr Gain Percent |
|---|---|---|---|---|
| (1) | (2) | (3) | (4) | (5) |
| North Carolina* | 325,587 | 364,829 | 387,610 | 19 |
| Washington | 232,440 | 259,758 | 274,528 | 18 |
| Virginia | 177,664 | 183,358 | 182,547 | 3 |
| Alabama** | 155,442 | 156,062 | 179,848 | 16 |
| Massachusetts | 152,469 | 144,765 | 125,390 | - 18 |
| Tennessee | 97,984 | 102,740 | 114,761 | 17 |
| New York*** | 95,937 | 105,204 | 109,286 | 14 |
| South Carolina | 92,837 | 95,243 | 107,278 | 16 |
| Minnesota | 75,788 | 88,147 | 98,671 | 30 |
| Georgia | 66,453 | 78,967 | 87,622 | 32 |
| Oklahoma | 65,583 | 73,488 | 81,108 | 24 |
| Connecticut | 60,106 | 61,704 | 67,659 | 13 |
| Colorado*** | 52,052 | 58,253 | 64,512 | 24 |
| Utah | 41,697 | 48,742 | 53,682 | 29 |
| Delaware | 24,149 | 26,756 | 29,629 | 23 |
| Nevada | 23,522 | 28,286 | 29,868 | 27 |
| Rhode Island | 27,017 | 27,944 | 27,935 | 3 |
| North Dakota | 14,249 | 16,065 | 16,065 | 13 |
| Louisiana+ | 10,156 | 10,835 | 12,183 | 20 |
| West Virginia | 6,469 | 7,536 | 7,853 | 21 |
| New Mexico*** | 6,377 | 7,208 | 8,174 | 28 |
| Totals | 1,803,978 | 1,945,890 | 2,066,209 | |
| Weighted average percentage of gain | | | | 15 |

*Although some support comes from local taxes, the North Carolina community colleges receive most of their funds from the state; therefore, they are included here with the the "state" community colleges.

**Alabama now reports comprehensive and technical community colleges as a lump sum.

***One of the states having both "local" and "state" community colleges.

+For Delgado Community College which is part of the Board of Trustees System.

the state's investments. The program is strongly supported by institutions. Within the past year, the State Administration has announced a plan to adapt the higher education facilities audit and capital renewal system for other departments of state government.

Accountability. Capital renewal raises equity and management issues. If capital renewal is funded at institutions whose leaders have chosen to improperly maintain facilities, then poor management is rewarded. In Tennessee, special budgetary requirements have been adopted for maintenance and operation of physical plant expenditures. Campuses are funded using a formula approach with factors of square footage, age of facility, and intensity of use. Institutions are required to expend what the statewide funding formula generates for this purpose. Also, normal routine maintenance projects are differentiated from other capital projects. A minimum dollar boundary that varies according to institutional size is used. While it may be difficult for a small two-year college to replace a $50,000 roof, larger institutions can fund projects of this magnitude from normal budgetary allocations. By tying funding to individual projects, accountability is enhanced. Campus visits and involvement of senior campus staff are also critical elements of the overall accountability sphere.

Leadership is the most critical requirement. To be successful in achieving the goal of high quality physical facilities through capital renewal, campus and state leaders must be willing to re-examine budget priorities; they must be accountable and provide detailed documentation. They must develop reasonable funding strategies, build political support, and work together with other concerned constituencies.

References

1. Association of Physical Plant Administrators of Universities and Colleges, The Decaying American Campus: A Ticking Time Bomb, 1989

2. National Science Foundation, Scientific and Engineering Research Facilities at Universities and Colleges: 1988, September 1988.

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The audit system provides building, campus, and state condition profiles. The ratings are compiled from separate building component ratings. For example, the roof is evaluated and receives a numeric score which is included in the total building rating. Another outcome is a separate evaluation of each building component. The data collection design permits an analysis of the condition of individual components, such as roofs, on both a statewide and campus basis.

Information Collected. In Tennessee, approximately twelve hundred buildings are rated, producing a comprehensive report for each building including background and descriptive information. Building components include the primary structure, the foundation, the columns and exterior walls, the floor and roof system, secondary structure including the ceiling system, interior walls and partitions, the window system, the door system, the service system - cooling, heating, plumbing, electrical, and conveying. Life safety standards, handicapped accessibility, suitability and adaptability are also evaluated.

Process. Each campus uses a statewide facility audit form to rate each building. The campus evaluation frequently involves physical plant and engineering staff, representatives of departments, senior level administrators, and others. An essential aspect of Tennessee's approach is the use of a statewide team. Following the campus evaluation, a team - three architects or engineers from higher education and the state administration and a staff member of the Higher Education Commission, visit each campus. The team walks through and inspects each facility with campus personnel. Since the same team visits all campuses, campus ratings can be verified or modified to create a comparable and consistent statewide evaluation and data base. Also, the team meets with each President to review the results of the evaluation and the overall maintenance of the campus. The process is designed to build statewide support for the program.

Findings. The audits produce very different results among campuses. In the first study completed in 1976, "less than satisfactory space" ranged from 6 to 30 percent. To some extent the difference could be explained by age, but for some campuses was attributable to construction and maintenance factors.

Establishing a Capital Renewal Program: Developing a Funding System.

The audit data system serves as a foundation for developing a funding system. Many funding strategies are feasible depending on the environment of the state and the institution. The Tennessee program is a separate, identifiable component of the capital budgeting system. Within the capital renewal fund, projects are requested and funded on an individual basis. Campuses submit prioritized listings of projects identified in the audit. The highest funding priority is given to projects which need immediate action to provide safety and protection against costly damage. The second highest priority is for projects which eliminate conditions which might lead to costly physical damage or deterioration of property. A consolidated higher education capital renewal priority listing is submitted to the Governor and the Legislature. Simultaneously, a separate priority listing is submitted for other capital projects. Within the overall capital funding system, capital renewal is given a higher priority than new construction and other capital projects. Since 1978, annual appropriations have totaled more than $100 million with a current funding level of approximately $10 million annually. In addition, more than $75 million have been appropriated for major renovations in the routine capital budget.

The system has widespread support from campus and political leaders. While new building projects are more glamorous than installing new roofs or insulating buildings, the capital maintenance funding program is viewed as essential to protecting

# BUDGETING FOR CAPITAL RENEWAL

by Brenda N. Albright

Twenty billion dollars. These funds are required to address the most urgent repair of facilities for the nation's colleges and universities. The Association of Physical Plant Administrators and the National Association of College and University Business Officers, in cooperation with Coopers and Lybrand, have focused national attention on an essential, but often neglected, responsibility--repair and maintenance of campus buildings and infrastructures. The Decaying American Campus: A Ticking Time Bomb quantified the most urgent repair and renovation of facilities for the nation's colleges and universities at $20.5 billion. When renewal necessary to enhance institutional mission is included, the estimate rises to $60-70 billion. Most alarming are statistics on the chasm between actual and needed funding--colleges and universities reported deferring $4 of needed maintenance for every $1 spent. A 1988 National Science Foundation study parallels these grim facts in reporting that for each dollar universities planned to spend for repair and renovation of research facilities, another $3.60 was deferred.

Front Burner Issue. These national studies combined with the realities of teaching and conducting research in inadequate facilities have brought capital renewal to the forefront. Recent surveys of state and campus leaders show that college presidents and state executive officers rank facilities renewal among the top three funding issues. With campus and state level leaders jointly focusing on this area, effective systems to identify, quantify, and fund capital renewal can be developed.

State Role. For many campuses, particularly public institutions, the most effective solution may be a comprehensive, state approach. Tennessee has a long-standing capital renewal system for public two-year colleges and universities which may serve as a model for other states and institutions.

## Establishing a Capital Renewal Program: Identification of Needs

How are capital renewal needs best determined? The two approaches most frequently cited are life cycle analysis and the facilities audit. Life cycle analysis calculates an annual building renewal allowance by factoring age and replacement costs of building components. Various studies produce ranges of 1-1/2 to 3% of current plant replacement value as an appropriate annual level. Tennessee's experience focuses on a cooperative statewide and institutional-based facilities audit system. Since 1976, statewide facilities audits have been conducted on a five-year cycle and used as a basis for requesting and allocating state funds among various campuses.

Purpose. The facilities audit is designed to identify facilities requiring capital outlay expenditures for renovation and repair within a five year cycle.

Audit Outcome. Instruction and research facilities, student housing, hospitals and farms are numerically rated on a scale of 0 to 100 points and classified into one of the following categories:

Satisfactory - No capital expenditures are anticipated in the next five years

Remodel Category A - facility requires restoration but the cost is less than 25% of total replacement value

Remodel Category C - The facility requires major remodeling costing more than 50% of the total replacement value

Demolition - The facility should be demolished