HIGHER EDUCATION CAPITAL PLANNING FOR NEW JERSEY'S FUTURE

EXECUTIVE SUMMARY

The Issue

New Jersey faces immediate pressure to preserve existing college and university campuses and enhance the capacity of its higher education system to address growing demands. In order to serve the current population of students, colleges and universities must maintain, renovate, and expand their physical plants where necessary and keep equipment and technology current to meet changing workplace needs. Research universities also must provide requisite needs for highly sophisticated laboratory space and state-of-the art equipment. Moreover, if New Jersey colleges and universities are going to serve a growing proportion of high school graduates, address the growing demand from nontraditional students, and extend greater access to underrepresented students, additional physical plant expansion and expenditures for technology infrastructure and equipment are crucial.

New Jersey's colleges and universities rely on state support to varying degrees. The state provides the primary support for 12 senior public institutions, and in partnership with county governments it provides support for 19 community colleges. The state also provides fiscal support to 14 independent colleges and universities with a public mission.

In 1998 approximately 35 percent of all recent New Jersey high school graduates did not attend college within 12 months of graduation, 36 percent attended a two- or four-year college or university in the state, and 29 percent attended college at an out-of-state institution. A total of 60 percent of the state's recent high school graduates who attended four-year institutions within 12 months of graduation did so out of state. Relatively few students enrolled in New Jersey colleges from other states.

Most of the colleges and universities in the state currently operate at or close to full capacity and are not prepared for the significant increase in students that is expected over the next eight years. If current college attendance patterns persist, the cumulative effects of the increased freshman classes between 2001 and 2005 will result in an enrollment increase of 9,430 students by 2005; the four-year period from 2005 to 2008 would generate an overall increase of 22,022 more students in 2008 than are currently enrolled in 2001. If the percentage of high school graduates who attend college in New Jersey within 12 months of graduation continues to grow, the cumulative effect over a four-year period would be significantly higher, reaching 36,800 additional students enrolled in 2008.

As the number of high school graduates rises across the nation, the large percentage of New Jersey's recent high school graduates who typically attend college out of state are likely to find limited spaces. In fact, the seven states that in 1998 enrolled almost three quarters of the students who left New Jersey are all grappling with similar capacity constraints. As a result, New Jersey has an exigent policy decision as to whether and how the capacity of its higher education system should be increased to serve the greater

number of high school graduates annually who will seek a college education as well as the growing nontraditional student population.

Capital Planning for Higher Education

Statewide capital planning for higher education is a shared responsibility and is necessary to utilize resources effectively in addressing New Jersey's educational, workforce, and societal needs. The Commission on Higher Education, in collaboration with institutions of higher education across the state, has established a systemwide capital planning and reporting process to inform the coordinated development and implementation of state policies and funding mechanisms to assist in meeting capital needs. This report provides pertinent data regarding the existing physical plants and long-range plans of the colleges and universities. It also proposes key recommendations to guide the state's decision making and suggests potential funding mechanisms for consideration.

A recent capital planning survey completed by 42 of New Jersey's public and independent colleges and universities in the state reflects widely varying institutional physical plants, consistent with the different institutional missions. Overall, the campuses include over 15,000 acres, 2,000 buildings, and 54 million total gross square feet of building space. The institutions reported expenditures of over $310 million in 2001 for maintenance of these buildings and grounds, along with fire protection, property insurance, and utilities. In addition to maintenance expenditures, the institutions have an obligation to pay debt service on many of these buildings. In FY 2001 the amount of outstanding debt on which the colleges and universities were required to make payments was almost $1.6 billion. This excludes debt issued and paid for by the state or county governments on their behalf, but includes all individual institutional debt and any mandated contribution toward the payment of debt service on state issued bonds. These annual expenditures for maintenance and debt service put a significant impact on institutional operating budgets.

The survey also provides data regarding the institutions' seven-year capital plans to maintain and improve their campuses and meet growing demands. Section IV of the report discusses three categories of capital projects and potential funding mechanisms, recognizing that state support should vary among the different sectors and that capital needs must be addressed by a combination of state, county, institutional, and external funds.

- Preservation/Maintenance and Deferred Maintenance
  Based on national standards and the overall replacement value of over $9 billion at the 42 institutions, preservation and maintenance costs should range between $140 and $280 million annually. When annual maintenance is not attended to, a backlog of projects develops. The institutions report current deferred maintenance totaling approximately $541 million.

  As state institutions, the senior public colleges and universities rely primarily on direct state appropriations for annual maintenance. The report recommends implementation of the Commission's policy calling for an annual expenditure for maintenance at the senior public institutions of at least 2.25 percent of current

replacement cost of academic facilities. The state should support a minimum of 2.0 percent, with the institution supporting the remainder.

- Construction and Major Renovation
  The 42 institutions identified capital projects for construction and renovation estimated in excess of $4.7 billion over the next seven years. This estimate does not include costs associated with security measures that may be mandated in response to recent terrorist activities. It is clear that the magnitude of this need will not be met through a single source or funding mechanism. State funds, county funds, institutional revenues, and external funds will be necessary. It will also be necessary to establish state policies and priorities related to construction and major renovation, which will strategically guide efforts to increase capacity and improve college and university physical plants.

  The Commission urges state policy makers to support stable funding sources that will assist all sectors, at varying levels, to meet the ongoing construction and renovation needs of the institutions. The state is encouraged to consider several funding mechanisms as potential means of providing state assistance, including the extension or expansion of existing debt-financed programs, the creation of new debt-financed programs, the creation of a higher education capital trust fund supported by an ongoing revenue stream, the establishment of an endowment fund, and the initiation of third party development arrangements.

- Equipment and Technology
  The institutions estimated a need of approximately $481 million for equipment and technology in the next seven years. Recognizing the constantly increasing demand for high-tech equipment for academic programs, institutional administration, and sophisticated cutting edge research, the state should consider raising the cap on the Higher Education Equipment Leasing Fund to $200 million and providing $100 million to the institutions every three to four years. Similarly, the state should consider renewing the 1997 Technology Infrastructure Fund when the $50 million bond issue is retired.

The Commission on Higher Education urges state policy makers to address fundamental challenges related to the physical condition and capacity of New Jersey's higher education system. Fluctuating demographics and the demands of the knowledge-based economy require the state to decide now how it will maintain its physical plant assets for the future and meet immediate and growing demands for higher education services. These issues directly impact economic recovery and ongoing competitiveness.

I. CONDITION AND CAPACITY OF THE PHYSICAL PLANT

Introduction

New Jersey faces fundamental policy decisions related to the physical condition and capacity* of its higher education system. Fluctuating demographics and the demands of the knowledge-based economy require the state to decide now how it will maintain its physical plant assets for the future and meet immediate and growing demands for higher education services. The state's response will be crucial to societal development and economic competitiveness.

Over the past several years, intense competition has emerged among states to build higher education capacity and excellence to meet human resource development and research needs necessary for a strategic advantage in today's global, information economy. New Jersey should follow the lead of other states that have already established higher education as a statewide priority and committed to major investments. For example, North Carolina approved a $3.1 billion bond issue to support higher education capital needs. Michigan recently committed $1 billion for a multi-university "life science corridor" to promote biotechnology research. Maryland committed to $1.23 billion over the next five years to meet capital needs. And Pennsylvania is creating an Infrastructure for Sustainable Innovation built around university clusters. This report provides pertinent information to inform New Jersey policy makers as they consider short- and long-term state policies and funding mechanisms to address higher education capital needs.

There are justifiable concerns about the condition of the physical plant and the capacity of New Jersey's colleges and universities. State and county governments, as well as institutions, have placed a substantial investment in higher education's capital assets; they have a concomitant interest in and responsibility for ongoing maintenance and development. Current and future students, faculty, and staff need safe, usable, well-maintained, and well-equipped classrooms, laboratories, offices, and residence halls. In addition, higher education's supporters, including alumni, parents, friends, foundations, and corporations, are concerned about the condition and capacity of the campuses they help to sustain.

Institutional governing boards as well as state and county entities charged as stewards of public resources strive to maintain an excellent learning and research environment to meet state and student needs. Statewide planning is therefore a shared responsibility and is necessary to utilize resources effectively in addressing New Jersey's educational, workforce, and societal needs. To guide planning efforts, the state must clearly articulate New Jersey's higher education policy and priorities, but the principle responsibility to assess and plan for capital needs rests with institutional governing boards and presidents.

The Commission on Higher Education, in collaboration with institutions of higher education across the state, has established a systemwide capital planning and reporting process. The following capital planning report includes an overview of current demographic and economic trends, comprehensive data on institutional physical plants and other capital assets, and long-term projections of capital needs and possible mechanisms to address them.

* Capacity refers to the ability of institutions to provide higher education services; it relates to physical space, human resources, and technological capabilities.

Background

New Jersey's public higher education institutions include three research universities, nine state colleges and universities, and nineteen community colleges, which served a total of 266,921 full- and part-time students in 2000 (63,210, 79,126, and 124,585 respectively), the vast majority of whom were New Jersey residents. The 14 public-mission independent colleges and universities served an additional 57,586 students, with over 75 percent of their undergraduates from New Jersey. The state provides the primary support for the senior public institutions, and in partnership with county governments it provides support for the community colleges. The state also provides fiscal support to independent colleges and universities that have a public mission and assist in meeting students' higher education needs.

A relatively large percentage of New Jersey's high school graduates attend college out of state. In 1998 (the most recent year for which migration data are available), approximately 35 percent of all recent New Jersey high school graduates did not attend college within 12 months of graduation, 36 percent attended a two- or four-year college or university in the state, and 29 percent attended college at an out-of-state institution. A total of 60 percent of the state's recent high school graduates who attended four-year institutions within 12 months of graduation did so out of state. However, relatively few students enrolled in New Jersey colleges from other states.

During the past 20 years, the state has authorized the issuance of over $1.5 billion in debt-financed capital bond programs for the renewal and expansion of New Jersey's public and private higher education institutions (see Table 1). The state bond programs, which were enacted periodically over the years, applied to multiple sectors within the higher education community and often required an institutional match or contribution toward the payment of the debt service on the bonds. The institutions must repay more than 21 percent of the $1.5 billion over the life of the bonds. Institutions must typically rely on reallocations from other much needed operating accounts and increases in student tuition and fees to support the annual debt service. Institutions also rely on tuition and fees and operating accounts, as well as corporate and philanthropic contributions, to meet the institutional match required by some bond programs.

In partnership with county governments, the state also supported additional capital bond funds for the community colleges. The "Chapter 12" program created in 1971 applies only to the community college sector. It has served as an ongoing but limited source of capital bond funds for the two-year colleges. Like Chapter 12, several of the state's more recent debt-financed bond programs allow the state Treasurer to authorize additional bonds for the programs, provided the total outstanding principal does not exceed a statutorily established amount.

Table 1

Higher Education Capital Funding Programs

Bonds	2000 Dormitory Safety Trust Fund	1999 Higher Education Capital Improve-ment Program	1993/2001 Equipment Leasing Fund	1993 Higher Education Facilities Trust Fund	1997 Higher Education Technology Infrastructure Fund	1988 Jobs, Education & Competi-tiveness	1984 Jobs, Science & Tech-nology	1971- to present Chap. 12
Bond Amount	$90 million	$550 million	$100 million/ $100 million	$220 million	$50 million	$350 million	$90 million	*$330 million
Sector	Sr. Public Independent	Sr. Public Independent	Sr. Public Independent Co. College	Sr. Public Independent Co. College	Sr. Public Independent Co. College	Sr. Public Independent Co. College	Sr. Public Independent Co. College	Co. College
Payment Provisions	Institutions repay all principal	Sr. Publics pay 33% of debt service Independents pay 50% of debt service	Institutions pay 25% of debt service	State pays 100% of debt service	State pays 100% of debt service Institutions match 100%	State pays 100% of debt service Publics match 50% Independents match 100%	State pays 100% of debt service	State and county each pay 50% of debt service See note below

Note: *This is an ongoing fund that has been renewed periodically, and the cap has been increased several times. $330 million represents the current statutory limit on principal; the limit has increased from $80 million in 1971. The counties issue the bonds.

In addition to support for capital bonds, the state also has provided occasional direct capital appropriations in the state budget. The direct appropriations are primarily for maintenance and renewal at the senior public colleges and universities, which, as state institutions, fall within the framework of the state's Commission on Capital Budgeting and Planning. Unfortunately, the direct state appropriations have been sporadic and limited over the years, placing additional strain on operating funds at the state institutions and resulting in significant levels of deferred maintenance projects.

These two forms of public funding for capital expenditures (primarily bonds but also direct appropriations) have provided colleges and universities with substantial support for facilities, technology, and equipment. The institutions have also made significant investments in capital needs over the years. In addition to paying their share of the state debt-financed programs, the institutions have incurred considerable debt on their own to address capital needs that are not covered by public funding. Institutions generally finance dormitories and other revenue producing facilities without public assistance, and they rely on the revenues from such facilities to pay the debt service. Institutional bonds are also frequently necessary for construction or renovation of non-revenue producing facilities to complement state or county bonds or to fully fund a project. The institutions must rely primarily on operating aid and tuition and fees to meet their significant annual debt service obligations.

The state's rapidly changing demography and the technologically-driven, knowledge-based economy are imposing increasingly greater demands on higher education –

demands that require long-term planning, clear state policy, and adequate funding. While intermittent enactment of bond programs over the past 20 years provided a means to address specific areas of need as they reached crisis proportions, the state would benefit significantly from a stable capital program to monitor and support higher education's physical plant and the capacity of the system to meet state needs. The lack of statewide predictability of funding support for higher education capital needs has hampered and affected institutional planning.

Demographic and Enrollment Trends

Nationally, student demand for higher education is projected to increase substantially during the first decade of the new millennium. The United States Department of Education projects full-time student enrollment to increase by 19 percent and part-time student enrollment by 11 percent nationwide between 2000 and 2010. Both two- and four-year institutions are expected to accommodate increased enrollments, with slightly higher increases at four-year institutions. Between those same years, undergraduate enrollment is expected to rise 16 percent, graduate enrollment by about 11 percent, and first-professional enrollment by 13 percent. These growth projections, along with the need for lifelong learning and continual enhancement of workforce skills and knowledge, have stressful implications for higher education and its capacity to fulfill needs.

New Jersey faces immediate pressure to preserve existing campuses and enhance the capacity of its higher education institutions to address growing demands. The primary causes of the increased demands include: a greater number of new high school graduates seeking a college education; growth among nontraditional students (those who are not recent high school graduates) seeking to attend college to enhance skills, change careers, or generally expand their education; and the need to enhance higher education opportunities for Hispanic, African American, and Native American students, allowing them to participate fully in the new economy.

Growth in the number of high school graduates in New Jersey between 1996 and 2008 is projected to be among the highest in the nation, with an additional 23,861 high school graduates. Figure 1 (page 8) indicates recent growth patterns and the projected number of new high school graduates who will enroll annually in New Jersey colleges and universities between 2001 and 2008. The New Jersey growth projection assumes that the annual percentage of high school graduates who attend college within 12 months of graduation (66 percent) will remain constant and that the same percentage of graduates will attend college in New Jersey (36 percent). Based on those assumptions, the number of high school graduates enrolling as freshmen in New Jersey colleges and universities in 2008 is projected to be 6,770 greater than the number in 2001. That enrollment growth is projected to decline somewhat after 2008 and stabilize in 2012 with an additional 5,310 more freshmen enrolling annually than are currently being served. It is likely that a significant portion of the new freshmen at four-year institutions will seek to enroll as full-time residential students.

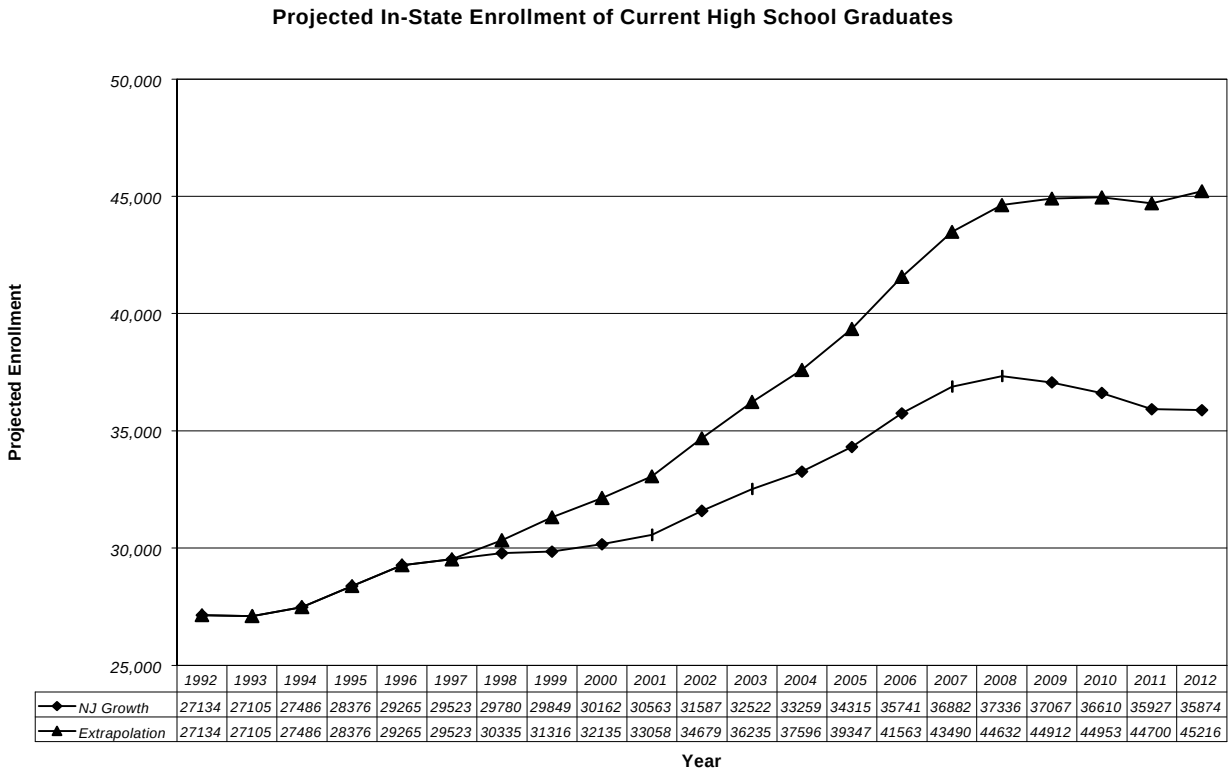
Under these circumstances, the cumulative effects of the increased freshman classes between 2001 and 2005 would result in an overall enrollment increase of 9,430 students by 2005. The growth in the number of high school graduates enrolling in the four-year

period from 2005 to 2008 would generate an overall enrollment increase of 22,022 more students in 2008 than are currently enrolled in 2001.

The higher projection in Figure 1 assumes that the percentage of high school graduates who attend college in New Jersey within 12 months of graduation will continue to grow. The projection extrapolates enrollment growth based on the average actual increases in the number of students who attended college in New Jersey within 12 months of graduation between 1992 and 1999. The extrapolation reveals a potential increase of 11,580 new high school graduates attending New Jersey colleges in 2008, growing to 12,160 in 2012. The cumulative effect over a four-year period would be significantly higher, reaching 36,800 additional students enrolled in 2008.

It is important to note, however, that both the extrapolation and the New Jersey growth projection will be affected by such factors as the cost of college, the economy, nationwide distance learning opportunities, and other occurrences that impact the college going rate.

Figure 1



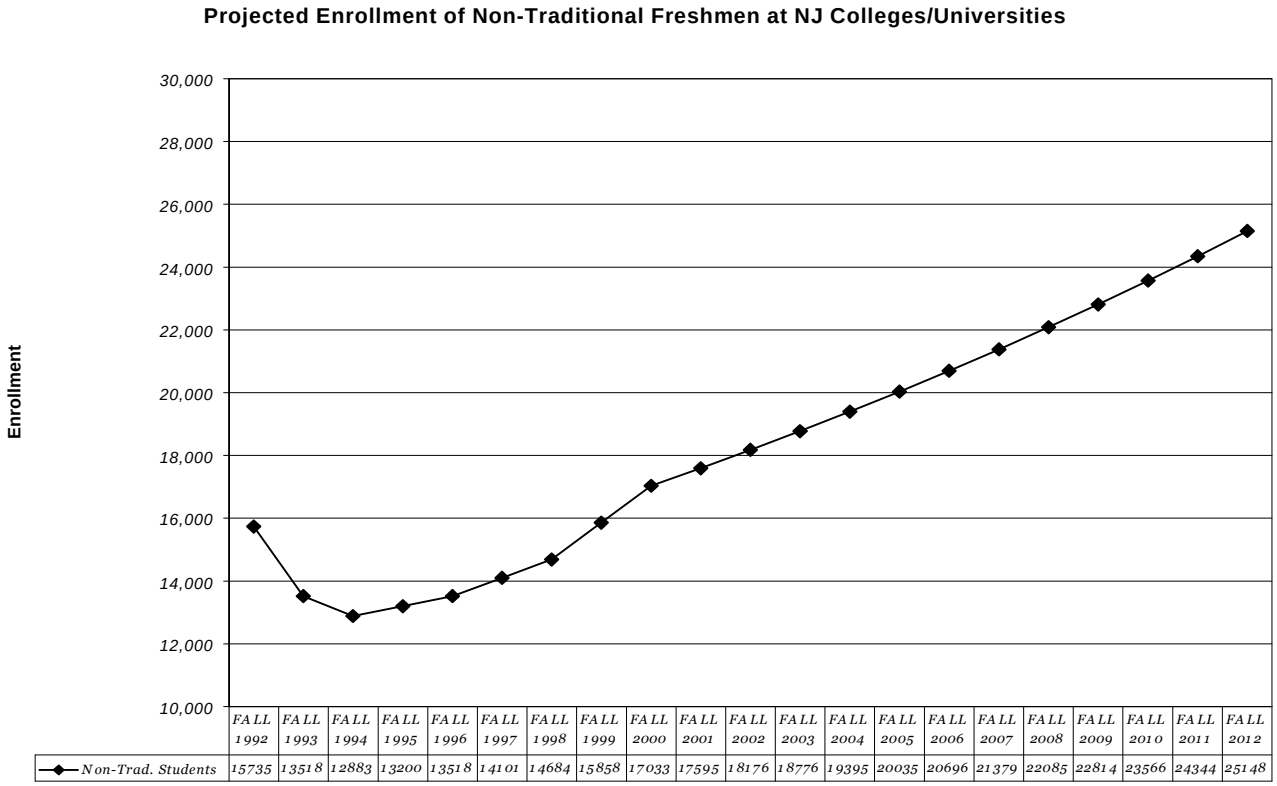
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
NJ Growth	27134	27105	27486	28376	29265	29523	29780	29849	30162	30563	31587	32522	33259	34315	35741	36882	37336	37067	36610	35927	35874
Extrapolation	27134	27105	27486	28376	29265	29523	30335	31316	32135	33058	34679	36235	37596	39347	41563	43490	44632	44912	44953	44700	45216

As the number of high school graduates rises across the nation, the large percentage of New Jersey's recent high school graduates who typically attend college out of state (approximately 29 percent of the total number of high school graduates in a given year) are likely to find limited spaces available. For example, Connecticut, Delaware, Maryland, Massachusetts, New York, Pennsylvania, and Virginia (the seven states that in 1998 enrolled almost three quarters of the students who left New Jersey to attend college) also face large increases in high school graduates. Those states are all grappling with

similar capacity constraints. As a result, New Jersey has an exigent policy decision as to whether and how the capacity of its higher education system should be increased to serve the greater number of high school graduates annually who will seek a college education.

Growth in nontraditional student enrollments will further strain the capacity of New Jersey's colleges and universities to meet student and state demands. Figure 2 projects growth in nontraditional students; the projection reflects a 3.3 percent annual increase, which is the median growth between 1992 and 2000. This increase in nontraditional students is essential to meet the demands of New Jersey's technologically driven, knowledge-based economy. To remain competitive, private and public sector employers depend on a highly skilled workforce. As a result, growing numbers of adults are enrolling in college to upgrade skills, change careers, obtain higher paying jobs, or pursue lifelong learning and professional development.

Figure 2



Response to Growing Demands

New Jersey colleges and universities have increased their capacity to serve more students over the past several years by various means. Collectively, they offer over 1,300 distance education courses, and more than 40 complete certificate and degree programs are available via distance learning. In addition, institutions greatly enhanced the availability of evening and weekend classes and services, focusing on the need to provide flexible

scheduling and off campus programs to meet student and employer needs. The colleges and universities are also aggressively working to enhance articulation and transfer between two- and four-year colleges and establish collaborative programs that serve higher education needs in underserved areas of the state. There has been limited expansion of the physical plant at some institutions as well. Lastly, an FY 2002 budget initiative provided targeted funds to increase the capacity of teacher preparation programs to assist in meeting the vast need for additional preschool to grade 12 teachers.

However, in order to serve the current population of students, colleges and universities must maintain, renovate, and expand their physical plants where necessary and also keep equipment and technology current to meet changing workplace needs. In addition, research universities must provide requisite needs for laboratory space and equipment critical to the attraction and retention of research-oriented faculty, the education or research professionals, and the connection of this work to economic development. Furthermore, if New Jersey colleges and universities are going to serve a portion of the growing population of high school graduates, address the growing demand from nontraditional students, and extend greater access to underrepresented groups, additional physical plant expansion and expenditures for technology infrastructure and equipment are crucial. State policies and funding mechanisms must be developed to efficiently and effectively meet both the immediate and future demands for higher education services.

II. UNDERLYING POLICY RECOMMENDATIONS

The Commission on Higher Education proposes four underlying policies to guide the state's determination of how to best meet short- and long-term higher education capital needs.

1. The primary responsibility for assessing and planning for institutional capital needs should rest with the colleges and universities. However, institutional use of state capital funds that support their missions should be consistent with clearly defined state higher education policy and priorities.

2. The state should promptly consider the growing demands on New Jersey's colleges and universities as described herein and establish a short- and long-range plan to assist in supporting the capital and related capacity needs, which have serious implications for residents as well as the state's economy and prosperity. As the state strives to provide broad access to high-quality education across the state, consideration should be given to expansion of campus facilities along with increased interinstitutional collaboration, improved articulation and transfer, decreased time to degree completion, enhanced access through distance learning, and flexible scheduling and program offerings.

3. The public research universities, state colleges and universities, community colleges, and independent institutions should be eligible for varying types and levels of state funding as New Jersey develops plans to address capital needs and increase the capacity of colleges and universities to meet burgeoning demands for higher education.

4. Institutional governing boards, the state, and the counties should share the obligations to meet higher education capital needs. State support should vary, based on the sector, institutional missions, and the type of capital need (preservation and maintenance, construction and major renovation, and equipment and technology).

- The state should direct essential capital support to its three public research universities and nine state colleges and universities.
- The state should continue to assist with capital needs at community colleges, which are supported by county governments as well.
- The state should continue to assist with capital needs at the independent institutions. These are private entities that assist in meeting the state's higher education needs.

The Commission on Higher Education will work with the institutions of higher education annually to update pertinent capital data and projected needs to further guide policy and funding decisions.

III. SYSTEMWIDE CAPITAL SURVEY DATA RESULTS

The public research universities, state colleges and universities (except Thomas Edison State College), community colleges, and independent institutions that receive funds under the Aid to Independent Colleges and Universities Act were asked to complete the Capital Planning Survey (Attachment A). Forty-two institutions* responded, and the data they provided are summarized in Attachment B. The survey data confirm the generally held understanding that there are varying needs among the sectors related to their roles within higher education. There are also variances within each sector based on the age, history, and mission of each individual institution.

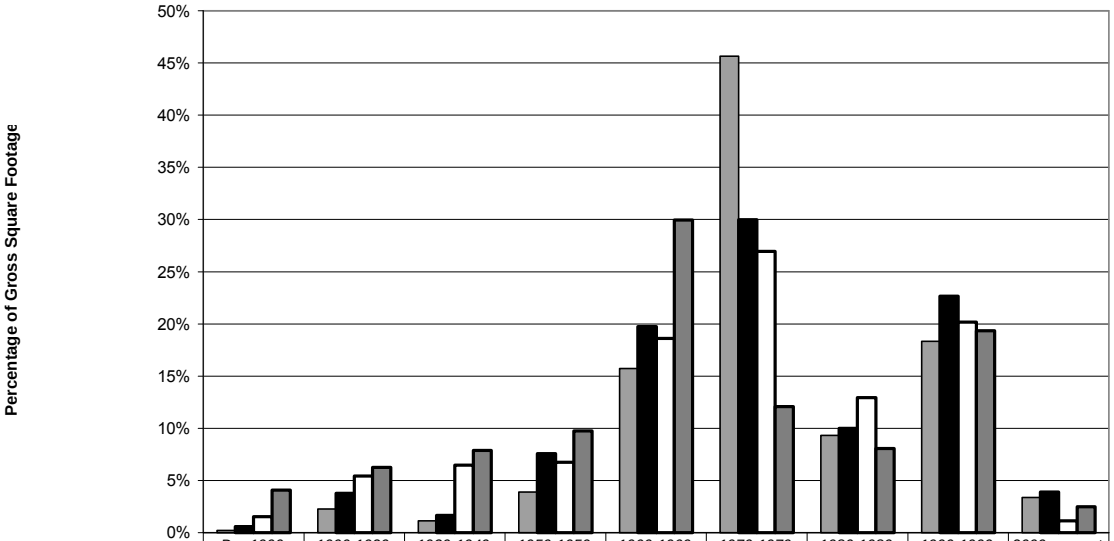
Current Facilities

The 42 colleges and universities that responded to the survey maintain a total of 64 campuses. The 19 community colleges maintain 28 campuses, the 8 state colleges and universities maintain 8 campuses, the three public research universities maintain 10 campuses, and the 12 independent institutions maintain 18 campuses. The diversity of the institutions is reflected in the diversity of their campuses. Occupying over 15,000 acres of land in total, campuses range from one-tenth of an acre at Raritan Valley Community College's Franklin Center campus to Rutgers' Agricultural Experiment station, which is 4,137 acres. The campuses are located in both rural and urban areas. Some colleges border residential or business neighborhoods, while others are surrounded by privately owned or publicly protected land. The institutions' fall 2000 enrollments ranged from approximately 1,000 students to almost 50,000 students. Clearly there is no "typical" campus.

* Princeton University and Stevens Institute of Technology chose not to participate in the survey. Thomas Edison State College was not included because the college's facility needs are met through acquisition or lease by the state and are maintained through the Department of Treasury.

The age of the college and university buildings tends to reflect the history of higher education in New Jersey (Figure 3). Many of the oldest buildings, some built over a century ago, are located on the campuses of the independent institutions, especially those founded by religious organizations or as small liberal arts institutions. About 4 percent of the facilities at independent colleges and universities were built before 1900. However, approximately 30 percent of the buildings at these institutions was constructed during the 1960s and about 22 percent after 1990. Rutgers University, with its history as a private, colonial college chartered in 1766, still maintains many of its older buildings.

Figure 3:
Age of Facilities



	Pre-1900	1900-1929	1930-1949	1950-1959	1960-1969	1970-1979	1980-1989	1990-1999	2000-present
Community Colleges	0%	2%	1%	4%	16%	46%	9%	18%	3%
State Colleges/Univ.	1%	4%	2%	8%	20%	30%	10%	23%	4%
Public Research Univ.	2%	5%	6%	7%	19%	27%	13%	20%	1%
Independent Inst.	4%	6%	8%	10%	30%	12%	8%	19%	3%

Note: Thomas Edison, Stevens and Princeton have been excluded.

The public institutions have grown dramatically since the mid-1900's. During the 1960s, the state colleges doubled the size of their facilities as they expanded their missions from teacher training institutions to more comprehensive colleges and universities. The largest single decade for construction was the 1970s, when 30 percent of present facilities was constructed, including two new colleges. Although construction declined during the 1980s, the eight state colleges and universities surveyed built 10 percent of their campuses during that decade. With institutional and state-backed funding, an additional 2.7 million square feet (23 percent of the current total) were constructed in the 1990s. The three public research universities also reflect the growth in higher education during the 1960s and 1970s. Although approximately 21 percent of the facilities were built before the building boom of the 1960s and 1970s, construction during the latter period tripled the capacity from just under 5 million square feet to 15.8 million square feet. An additional 34 percent of the current 24 million square feet was constructed from 1980 through 2000.

The building surge in the 1970s and the decline of the 1980s were less pronounced for the 19 community colleges. The age of their facilities reflects the creation of the colleges in the late 1960s and their expansion in the 1990s. More than 23 percent of the space at community colleges is at least 30 years old.

The different missions of the institutions are reflected in the types and uses of facilities they maintain. The community colleges and the University of Medicine and Dentistry are not residential, so they do not maintain housing. Overall, approximately one-third of the useable space at the remaining institutions is dedicated to student housing. Housing, as a percent of total facilities at residential institutions, ranges from 7 percent to 48 percent at the responding institutions.

Fifty-six percent of the usable space at community colleges is available to be assigned for classroom, laboratory, or office use, while the state colleges devote 44 percent of their non-residential space to these functions. The amount of space used for these function ranges from 72 percent of all usable space at non-residential institutions to 17 percent at a highly residential campus.

Nationally, the most often used guidelines for classroom use is 30 hours per week. On average, the New Jersey's college and university classrooms are scheduled 37 hours per week and instructional laboratories are scheduled 28 hours per week. In addition to these scheduled hours, laboratories are often in use by students and faculty when they are not scheduled for class use. Classrooms are often used for student activities as well as instruction.

Each institution has a different amount of academic building gross square footage[*] (GSF) available per full-time equivalent (FTE) student. Much of this difference is attributable to the proportion of laboratory space on a campus, especially research laboratory space, and the mix of undergraduate and graduate students. Laboratory space is designed to accommodate fewer students per GSF and traditionally graduate level courses have many fewer students per class section.

Fifty percent of the reported laboratory space is located at the three public research universities (see figure 4) and 44% of graduate students attend these three institutions. As a result, the research institutions have an average of 299 academic GSF per FTE. Thirty-six percent of the state's reported classroom space is at the community colleges (see figure 5), which enroll no graduate students. Their average of 91 GSF of academic building per FTE reflects those characteristics. Table 2 shows the average academic GSF per FTE by sector.

[*] Academic gross square footage (GSF) is defined as the total floor area of structures used for academic and academic support functions, including classrooms, laboratories, faculty offices, libraries, studios, and offices for student services and institutional administration.

Figure 4:
Usable Space: Laboratory

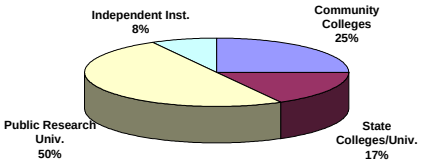
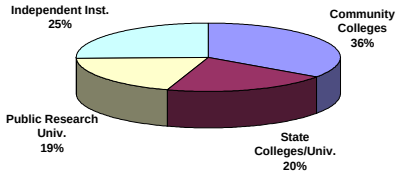


Figure 5:
Usable Space: Classroom



Note: Thomas Edison, Stevens and Princeton have been excluded

Table 2:
Academic Gross Square Footage per FTE Enrollment

Sector	Academic GSF	FTE	Ave. GSF/FTE
COMMUNITY COLLEGE	7,184,495	79,365	91
STATE COL/UNIV.	6,584,002	55,817	118
PUB RESEARCH UNIV.	15,653,089	52,357	299
INDEPENDENT	6,641,169	35,373	188

Note: Thomas Edison, Stevens, Princeton and UMDNJ's University Hospital have been excluded.

In total, the 42 institutions maintain 2,005 buildings with approximately 54 million total gross square feet of building space. In FY 2001, the colleges and universities spent over $310 million in maintenance.[*] This includes maintenance of buildings and grounds, utilities, fire protection, and property insurance. In addition to maintenance expenditures, the institutions have an obligation to pay debt service on many of these buildings, particularly auxiliary enterprises (revenue producing facilities, such as dormitories and bookstores). In FY 2001 the amount of outstanding debt on which the colleges and universities were required to make payments was almost $1.6 billion. This excludes debt issued and paid for by the state or county governments on their behalf, but includes all individual institutional debt and any mandated contribution toward the payment of debt service on state issued bonds, such as the Equipment Leasing Fund.

Institutional Capital Plans

Institutions reported their capital plan requirements for FY 2002 through FY 2008 in six major categories: deferred maintenance, compliance (including Americans with Disabilities Act, life safety, and environmental), acquisition, construction (including new construction and major renovation), infrastructure, and capital equipment and technology infrastructure. A seventh category, annual preservation and maintenance, was calculated based on the estimated replacement value of the physical plants. Each individual

[*] The data for maintenance expenditure and institutional debt was not available for UMDNJ.

institution developed its capital plan based on the current condition of their facilities, forecast for future enrollments, demographic trends (such as residential or non-residential student population), and institutional missions.

Preservation /Maintenance and Deferred Maintenance

The overall current replacement value of the 42 institutions is over $9 billion. This is the estimate of the cost to replace the buildings' gross floor area at current construction costs in accordance with current building and public safety codes and standard construction methods. National standards use the replacement value to determine annual preservation and maintenance needs, calling for expenditures of between 1.5 to 3.0 percent of replacement value annually. Using those standards, preservation and maintenance costs should range between $140 million to $280 million annually. This significant investment is required every year to maintain the facilities at the 42 institutions in a manner that allows for their continued use as intended. When annual maintenance is not attended to, a backlog of projects develops, which are usually referred to as "deferred maintenance" projects. These are preservation and maintenance projects that were not undertaken in the year in which they were scheduled or first identified due to fiscal or other constraints. Failure to do these projects results in the physical deterioration or loss of value of the plant (capital) asset. The institutions report current deferred maintenance totaling approximately $541 million.

Compliance

The reporting institutions estimate that about $220 million will be needed over the next seven years to comply with federal or state laws and regulations. Such projects involve the Americans with Disabilities Act, life/safety standards, and environmental projects such as the abatement of hazardous materials, remediation of contaminated sites, and the mitigation of such conditions. These estimates were made prior to September 11, 2001, and do not include any costs associated with security measures that may be mandated by either state or federal agencies to address increased homeland security.

New Construction and Major Renovation

As the institutions developed their capital plans for the next seven years, they considered how they will address the projected increase in student enrollments, the rapidly changing technological environment, and in some cases changes or refinement of their missions. To meet these challenges, the 42 institutions that responded to the survey estimate that they would need approximately $2.7 billion to construct new facilities and $1.3 billion to renovate facilities. Of these amounts, approximately 26 percent is attributed to increasing enrollments. Included in the new construction total is $490 million, which is projected for housing-related construction to meet current and projected needs.

Acquisition, Infrastructure, Equipment and Technology Infrastructure

Institutional plans include purchasing, either outright or through lease/purchase, approximately $154 million of facilities and land. Infrastructure improvement projects that include the delivery of water supplies, energy efficiency improvements, and the construction of roads, parking lots, and sidewalks are projected to cost approximately $376 million during this seven-year period. Finally, the institutions plan for technology infrastructure and capital equipment projects with a total cost of almost $481 million.

IV. PLANNING TO ADDRESS CAPITAL NEEDS

In responding to the capital planning survey, the 42 institutions reported on seven specific categories of capital projects for FY 2002 through FY 2008. The resulting data are helpful in understanding the various types of capital requirements facing institutions. However, for the purpose of statewide planning, policy development, and consideration of potential funding mechanisms to support higher education capital needs, the Commission on Higher Education recommends consolidating those categories as follows: preservation and maintenance (including deferred maintenance), construction and major renovation (including compliance, infrastructure, and acquisition) and equipment and technology. These three broad categories encompass the various capital needs and provide institutional flexibility to meet diverse and often overlapping projects.

Consistent with the underlying policy recommendations in section II, the following discussion of institutional capital plans and potential funding mechanisms reflects the current distinction in the type and level of state capital support among sectors. The state is the primary source of capital support for its three public research universities and nine state colleges and universities. The state, in partnership with county governments, provides capital support for community colleges. And the state provides capital assistance to independent institutions with a public mission.

Preservation and Maintenance

The nationally recognized standard for maintenance expenditures at colleges and universities recommend that institutions annually dedicate between 1.5 and 3.0 percent of their current replacement value for maintenance and renewal. The Commission encourages all institutions to operate within that standard.

As state institutions, the senior public colleges and universities rely primarily on direct state appropriations for annual maintenance of facilities. Unfortunately, direct appropriations for preservation and maintenance at the senior public institutions have been sporadic over the years, and when funds were appropriated, they were very limited. The lack of funding dedicated to ongoing maintenance puts considerable stress on operating funds to address capital maintenance needs and often impacts on tuition and fees. Ultimately, many necessary maintenance projects are put off year after year, creating significant deferred maintenance backlogs. For each year that state funds are not appropriated the backlog increases substantially.

Consistent with national standards, the Commission on Higher Education recently proposed state policy calling for an annual expenditure for maintenance of at least 2.25 percent of the current replacement cost of academic facilities at the state's senior public institutions. The state should support a minimum of 2.0 percent through direct annual appropriations for the 11 institutions that are eligible for capital renewal funds, with the institutions providing at least an additional 0.25 percent. For FY 2003, the state commitment would be approximately $73 million, with institutional revenues supporting an additional $9 million. A stable funding source to

support this proposal is essential to preserve existing physical plants at the state institutions and avoid the deferral of additional projects.

Historically, the state has not provided direct appropriations for preservation and maintenance projects to the community colleges or independent colleges and universities. However, these institutions have participated in various state debt-financed bond programs, and institutional allocations were often used for projects that addressed preservation or deferred maintenance needs. As the state moves to fund one-third of the operating expenses at the community colleges and to fully fund the New Jersey's Independent College and University Assistance Act (ICUAA), additional institutional revenues should become available to assist in funding ongoing maintenance expenditures at those institutions and avoid future deferred maintenance.

Construction and Major Renovation

The 42 institutions identified capital projects for construction and renovation (which also includes compliance, acquisition and infrastructure projects) estimated in excess of $4.7 billion over the next seven years. It is clear that the magnitude of this need will not be met through a single source or funding mechanism. State funds, county funds, institutional revenues, and external funds will be necessary. It will also be necessary to establish state policies and priorities related to construction and major renovation, which will strategically guide efforts to increase capacity and improve college and university physical plants.

Most of the colleges and universities in the state currently operate at or close to full capacity. As a result, the institutions are actively engaged in efforts to satisfy increasing student demands by: enhancing flexibility to serve students through nontraditional means; incorporating technology and providing distance education; and advancing articulation and transfer and other means of collaboration among institutions. In addition, each institution maintains a long-range plan for capital projects necessary to address capacity needs.

The seven-year construction and major renovation plans vary significantly among institutions, consistent with their different sizes, locations, and missions. Overall, the plans include projects totaling approximately $1.1 billion (of the $4.7 billion) to address current space shortages and projected enrollment growth. Close to half of that amount is for housing-related construction to meet current and projected needs. The remaining $3.6 billion is planned to renovate or construct new facilities to address academic needs; provide student services; comply with state, federal, and other requirements; provide campus recreational facilities; acquire new property; improve campus infrastructure; and make other campus improvements.
The Commission encourages state policy makers to support stable funding sources that will assist in meeting the ongoing construction and renovation needs of the institutions. There are a number of funding mechanisms that could serve this purpose – some of which are already in place.

- The 30-year-old Chapter 12 debt-financed capital program has provided ongoing state and county funding assistance to address facility needs at the community colleges. The program has not been sufficient to meet all of the capital needs of the 19 colleges. Future increases in the cap would provide a means of addressing projected construction and major renovation needs at the community colleges.

- Consideration should be given to the development of a similar ongoing fund to address construction and renovation needs at the state's senior public colleges and universities. The state plays the primary role in supporting capital construction projects at these institutions, and an ongoing bond fund would appropriately acknowledge the state's unique relationship with senior public institutions.

- The Higher Education Facilities Trust Fund was established in 1993 to assist public and independent colleges and universities with new construction and improvement of instructional, laboratory, communications, and research facilities. The state appropriated $220 million in bonds to initiate the trust fund; debt service on the bonds is to be supported by proceeds from the state lottery. The fund was established as an ongoing trust fund that consists of proceeds from the lottery to pay the debt service, other monies appropriated by the state to the trust fund, and all interest and investment earnings on the trust fund. A statutorily established board was to review physical plant needs every three years and recommend additional monies or uses of the fund as determined appropriate. To date, the board has not met, and while there is a provision for the Treasurer to authorize additional bonds provided the principal does not exceed $220 million, no additional bonds have been issued. In September 2002, there is potential to issue about $85 million and stay within the original cap.

  The state should consider issuing additional bonds or fully developing the trust fund as it was originally conceived as an ongoing stable source of funds to assist institutions with capital construction and renovation projects.

- Consideration should be given to new systemwide debt-financed bond programs as a method to provide funds for capital needs. While one-time bond programs do not provide a stable, predictable funding source that promotes long-range capital planning, they have been helpful in meeting targeted statewide and institutional needs over the years. Stability can be added by building in a renewable clause that allows continual issuance of bonds up to a statutory cap, similar to that provided in the Higher Education Facilities Trust Fund. Any new systemwide capital bond programs should be designed to allow the institutions to address their highest priority needs consistent with broad statewide goals. All sectors should be eligible to participate in such programs, although a primary focus should be on the senior public colleges and universities, recognizing their status as state institutions.

NOTE: As additional debt-financed capital programs are considered, attention should be given to the impact that additional debt service requirements will have on the state and on college and university operating budgets.

- The state should also consider systemwide funding mechanisms that do not rely solely on bonding, such as a "Higher Education Capital Trust Fund" that is backed by an ongoing revenue stream. New Jersey has successful experiences from which to draw, such as the Transportation Trust Fund, the Garden State Preservation Trust, and others. A stable higher education trust fund would assist in long-term capital planning by institutions, which would be able to estimate future available resources and plan accordingly. It would also provide a more economical means of addressing capital needs by avoiding the significant ongoing interest charges. (The Higher Education Facilities Trust Fund described above could be more fully developed, as originally conceived, with a dedicated revenue stream to build and maintain the fund.)

- Existing examples of dedicated revenue sources used by other states to support the development of a "Higher Education Capital Trust Fund" include:

  Florida: Percentage of Gross Receipts – Generates $600 million/year for capital needs in school districts, state universities and community colleges.

  Illinois: Statutorily, a percentage of Riverboat Gaming funds will be available for athletic facilities. No revenues have been realized to date.

  Pennsylvania: State Owned University System receives a percentage of the Realty Transfer Tax.

- An additional stable revenue source that does not rely on bonds for systemwide capital needs is a state "Endowment" Fund. For example in Texas, the state established a Higher Education Assistance Fund and appropriates $225 million to it per year. Each year, $50 million of it remains in the fund to be saved until the fund is large enough to generate a stable source of capital funding at $175 million per year in interest.

- The current Higher Education Incentive Grant Fund, which encourages external capital funding donations by providing a state match, is another mechanism to consider, along with other state capital assistance.

- The state should also work with institutions to assure that state tax codes and other policies do not discourage innovative methods of meeting capital needs. For example, there is a recent trend toward third party development of facilities. This is particularly promising for the construction of auxiliary facilities, such as housing and recreation.

Equipment and Technology

The institutions estimated a need of approximately $481 million for equipment and technology in the next seven years. The $100 million Equipment Leasing Fund was established in 1993 to assist institutions in each sector to keep pace with capital equipment needs. The fund is renewable, providing the principal does not exceed $100 million. The bonds were fully retired last year, and a second $100 million was issued in 2001. At that time, the Commission pointed out the need for additional and more frequent state support. Recognizing the constantly increasing demand for high-tech equipment needed for academic programs, institutional administration, and sophisticated cutting edge research, the state should consider raising the cap to $200 million and providing $100 million to the institutions every three to four years.

Similarly, the state should consider whether or not to renew the 1997 Technology Infrastructure Fund when the $50 million bond issue is retired. This fund assisted institutions in each sector to enhance their campus technology infrastructure and improve interinstitutional communications.

Dedicated revenue streams are also a consideration in this area. The State of Texas established the “Telecommunications Infrastructure Fund,” which derives revenue through a tax on telephone and wireless services. It was part of a deregulation agreement with the telephone and wireless industry. Revenues are about $150 million per year for 10 years. Only a portion ($28 million in 2000) goes to higher education for telecommunications infrastructure projects.

These and other potential mechanisms should be carefully evaluated in determining the best means to provide stable, ongoing assistance to address higher education capital needs.

CLOSING

The Commission on Higher Education urges state policy makers to address fundamental challenges related to the physical condition and capacity of New Jersey’s higher education system. Statewide strategic planning is essential to address escalating higher education capital and capacity needs. These issues directly impact economic recovery and ongoing competitiveness.

This report provides pertinent data regarding the existing physical plants and long-range plans of the colleges and universities to inform policy discussions. It proposes key recommendations to guide the state’s decision making. It also suggests potential funding mechanisms for consideration. The Commission, in collaboration with the higher education community, will assist the Administration and Legislature to establish short- and long-term plans to maintain and improve the higher education system’s capital assets in order to achieve statewide education, workforce, and economic goals.

ATTACHMENT A

COMMISSION ON HIGHER EDUCATION
2001 CAPITAL NEEDS SURVEY AND INSTRUCTIONS

INTRODUCTION

Adequate and predictable state funding for college and university facilities and other capital expenses is fundamental to meeting New Jersey's higher education needs. Institutional governing boards and multiple state-level agencies plan, administer, and finance capital projects for higher education, but there is no coordinated long-term planning or needs assessment. The Commission on Higher Education and the Presidents' Council have initiated a statewide planning process to forecast capital needs based on solid data collection and informed cost projections for New Jersey's colleges and universities. This survey is a critical component of that process. The data generated by the survey will underlie long-range capital planning and policy recommendations for state policymakers and will inform the Commission's and the Council's fall 2001 budget policy statements regarding capital funding.

The timeline for completion of the survey, analysis of the data, and development of long-range funding recommendations is short. However, both the Commission and the Presidents' Council's Executive Board strongly encourage adherence to the timeline in order to fully prepare for the next budget and inform policy and planning in the next administration. To expedite completion of the survey, the Commission will facilitate a statewide workshop in late June for institutional representatives from the facilities office, the finance office, and the research office.

The survey form is modified from the form used in the 1997/98 facilities survey, which should assist in completion of some items. Technology infrastructure and capital equipment are added to the new version, some items are revised, and additional supporting data is required in order to provide solid, credible information on which to build a case for ongoing support mechanisms.

GENERAL INSTRUCTIONS

Please complete the survey and submit to the Commission on Higher Education by August 17, 2001. Microsoft Excel spreadsheets are provided for completion of the survey and Attachment A. Please return the completed forms electronically using a disk or email.

If you have any difficulty downloading the spreadsheets, please contact Kris Krishnan at kkrishnan@che.state.nj.us or 609-984-2684.

Unless stated otherwise, all information provided should be for the fiscal year 2000-01.
Pertinent definitions are included in these survey instructions, and reference is made to the Postsecondary Education Facilities Inventory and Classification Manual published in November 1992 by the National Center for Education Statistics (NCES 92-165), which can be found online at www.nces.ed.gov.
Please enter information only in the cells that are outlined and not shaded. The shaded cells contain formulas or references that will be automatically updated when the information is entered in the appropriate cell(s). If you are providing information for more than one campus, please make copies of the spreadsheet so that there is one form submitted for each campus.

HEADING

Provide the information requested on a separate spreadsheet for each New Jersey campus operated by the institution. The term "campus" includes branch campuses and main campuses of multi-campus institutions where the campus is used for regular undergraduate or graduate education and extension centers that are owned or leased by the institution for their exclusive use. The date completed should be entered as month/year (e.g., 07/01).

For the question regarding a facilities master plan, please answer "yes" or "no" on the form for each campus even if the question refers to an institution-wide facilities master plan. The date the plan was last updated and the date of the next scheduled update should be entered as month/year (e.g., 05/99).

Although many people may be involved in completing the form, the name of the person responsible for completing it should be the contact person if additional information or clarification is required. Please provide the telephone and fax numbers for the contact person as well as an email address.

I. GENERAL CAMPUS INFORMATION

A. Acreage Inventory

Report the acreage for each category listed. Definitions are provided below. All entries should be in acres or parts of an acre expressed in decimals. The sum of improved, unimproved-buildable, and unimproved-not-buildable acreage should equal the **total** acreage reported. Likewise, the sum of owned and leased acreage should equal the **total**.

Improved acreage is that regularly maintained, including land occupied by structures, parking lots, open athletic facilities, and roads, as well as regularly maintained open space**.**

Unimproved-buildable acreage means vacant land (not regularly maintained) upon which facilities could be constructed.

Unimproved-not-buildable acreage is vacant land (not regularly maintained) upon which facilities cannot be constructed. The limitation may be because of terrain or legal restrictions.

Owned land includes land being acquired under a lease-purchase agreement, land for which title is held by the Educational Facilities Authority, and land owned by a related entity, such as a religious order.

Leased land is generally defined as land occupied as the result of a term lease.

B. Buildings Inventory

Report the amounts for each category. For the definition of "building" see the Introduction to these instructions or the NCES Manual. The sum of gross square footage: academic and gross square

footage: auxiliary should equal the total gross square footage. Buildings that are under construction should not be reported this year. However, those buildings being renovated should be included.

Gross square footage:academic is the total floor area of structures used for academic and academic support functions, including classrooms, laboratories, faculty offices, libraries, studios, and offices for student services and institutional administration. Operation and maintenance of the buildings is primarily supported by tuition, general fees, and, in the case of public institutions, government appropriations.

Gross square footage:auxiliary is the total floor area of structures whose operation is supported by funds accounted for as auxiliary enterprises (student unions, bookstores, dormitories, etc.)

Gross square footage:total is the floor area of a structure within the outside faces of the exterior walls. The value is either physically measured or scaled from as-built drawings. (NCES, p. 9)

Note: Certain facilities (e.g., recreational facilities) may be either academic or auxiliary depending upon their financing. For mixed buildings (e.g., dormitories with classrooms in them), institutions should separate the uses.

C. Functional Space Available

Provide the Net Assignable Square Footage (NASF) for each use category. NASF refers to areas on all floors of a building that are assigned to, or are available for assignment to an occupant. NASF *excludes* areas used for building service (e.g., janitorial closets and public rest rooms), circulation, mechanical equipment, utility services, shafts, and structural building features. NASF is computed using the inside dimensions of rooms, etc. For further definition and discussion of the use codes, see National Center for Education Statistics, *Postsecondary Education Facilities Inventory and Classification Manual (1992 edition)* [NCES 92-165] (Washington, D.C.: U.S. Government Printing Office, November 1992), Chapter 5. The room use codes differ from those in the earlier 1973 edition. This publication is available online at www.nces.ed.gov . If you have cannot download the document, please contact the Commission on Higher Education.

D. Age of Facilities

Provide the total square footage constructed or reconstructed during the periods indicated.

The purpose of requesting this information is to provide an overview of the age of the campus and the possible need for maintenance, replacement, or code compliance. This may mean that the original construction date of a building is less important than the date when a major reconstruction occurred. The construction date provided should be the year constructed or in which a major reconstruction of a building occurred. If there is a question whether rehabilitation of a building constitutes major reconstruction, the answer should be determined by asking whether the building as redone meets current building, access, and other codes and is considered sufficient to meet current program needs. If the building meets current codes and program needs, it should be considered to have been reconstructed. If a significant portion of a building has undergone major

renovation, the square footage should be pro-rated and reported at the appropriate age for each portion.

All facilities should be included, i.e., both academic and auxiliary. The total square footage should equal the total reported in I. B.

E. Replacement Value

Replacement value will be calculated automatically. The total NASF for each use category will be converted to gross square footage (gsf) and multiplied times the average cost per gsf for the particular use category. *(The average costs per gsf in the several space categories will be established based on recent projects at New Jersey colleges.)*

II. CLASSROOM/LABORATORY INVENTORY

A. Number of Classrooms

Provide the number of classrooms for each size category. Size ranges are provided.

B. Number of Instructional Laboratories

Provide the number of laboratories for each category. Laboratories devoted solely to research should be excluded; laboratories devoted to both instruction and research should be included. The categories are general because of the large number of specialties that may occur in each category.

Science laboratories may be general or devoted to specific disciplines, such as physics, chemistry, biochemistry, or biology.

Engineering laboratories are those used for engineering instruction.

Computer laboratories include both those used strictly for computer science instruction and those available to students for general computer use.

Studio laboratories are those used for art or architecture instruction. Culinary arts teaching facilities should also be reported as studio laboratories.

C. Number of Research Laboratories

Research laboratories are those laboratories devoted solely to research.

III. CLASSROOM/LABORATORY SCHEDULING

A. Scheduled Classroom Hours per Week

For the time periods indicated, calculate the average number of hours per week that classrooms are scheduled based on classroom use during the third week of the fall 2000 semester, regardless of whether the schedule called for the classroom to be fully occupied. For example, a class of 12 that meets in a classroom that holds 50 constitutes a scheduled class even though the classroom itself may be underutilized. The average number of hours scheduled must be during the time periods provided, although there is some room for variation. For example, include morning classes that start at 7:30 a.m. in the weekday hours (8:00 am – 5:00 pm). Evening classes that start at 4:40 p.m. would be included in the evening hours (5:00 pm – 10:00 pm). The average use is calculated by dividing the total number of classroom hours scheduled during the target week by the number of classrooms.

B. Scheduled Instructional Laboratory Hours per Week

For the time periods indicated, calculate the average number of hours per week that instructional laboratories are scheduled based on laboratory use during the third week of the fall 2000 semester, regardless of whether the schedule called for the laboratory to be fully occupied. For example, a lab of 12 that meets in an instructional laboratory that holds 24 constitutes a scheduled class even though the laboratory itself may be underutilized. The average number of hours scheduled must be during the time periods provided, although there is some room for variation. For example, include morning labs that start at 7:30 a.m. in the weekday hours (8:00 am – 5:00 pm). Evening labs that start at 4:40 p.m. would be included in the evening hours (5:00 pm – 10:00 pm). The average use is calculated by dividing the total number of laboratory hours scheduled during the target week by the number of laboratories.

Instructional laboratories may occasionally be used as classrooms. All calculations should be based on the primary or intended purpose of the room, not on the particular use at a given time. Thus, calculations for a room equipped as a computer laboratory would always assume that the room is a laboratory even though a particular class meeting in the room might not require the use of computers.

Special notes: Institutions may schedule classrooms or laboratories for activities other than credit-bearing instruction. Examples include noncredit instruction and use by student associations. For the survey, regularly using a classroom for such purposes constitutes a scheduled use and the number of hours of use should be calculated accordingly. The emphasis is on the regular schedule of the classroom or laboratory; occasional uses would not be considered when calculating the number of hours used.

In addition, if an institution's facilities are used by another institution (e.g., through a joint program), the institution owning the facilities should report the classroom or laboratory as scheduled even though it is not offering the course.

IV. Maintenance Expenditure and Debt

A. Expenditure for Operation and Maintenance of Physical Plant (FY2001)

Report all expenditures for operations established to provide service and maintenance related to grounds and facilities used for educational and general purposes. Also include expenditures for utilities, fire protection, property insurance, and similar items. Do not include capital expenses covered by the institutional plant fund account.

B. Institutional Debt (FY 2001)

Report data on indebtedness liability against the physical plant. Include auxiliary enterprises facilities as well as educational and general facilities. Exclude debt issued by **and** paid for by state or county government. (E.g., an institution should include only its 25% share of the debt service for equipment leasing bond funds allocated to the institution.)

(The Commission will gather existing state and county government debt on behalf of each institution.)

V. CAPITAL PLAN REQUIREMENTS

NOTE: The community colleges should complete this section of the survey based on what is currently in their long-range capital plans, which is limited in most cases to projects for which funding is already identified. The Capital Planning Committee will work with the community colleges to develop a mechanism to project capital needs beyond those projects currently in their long-range capital plans where necessary.

For each category, except preservation/maintenance, estimate the current dollar value of capital construction needed during the next seven years (FY 2002 through FY 2008). Preservation/maintenance will be a calculated amount based upon the replacement value calculated in Item I.E. Using the spread sheet (page 3 of the survey), provide a list of projects in each area mentioned in Item V. (except preservation/maintenance), including the related information to support the estimate. (See Attachment A for format and instructions.)

Preservation/maintenance projects are those for regularly scheduled repair, replacement, rehabilitation, upgrade, or maintenance of plant assets to preserve and maintain facilities for their intended use. Preservation/maintenance projects address the repair, replacement, rehabilitation and upgrade of electrical systems, heating, ventilation & air conditioning (HVAC) systems, roofs, security systems, as well as critical repairs to the structure itself.

Deferred Maintenance is defined as preservation and maintenance projects that were not performed in the time period in which they were scheduled or first identified due to fiscal or other conditions, the result of which is physical deterioration or loss in value of a plant (capital) asset.

Compliance projects are those whose purpose is to comply with federal or state laws and regulations. Such projects usually have specific compliance standards and penalties for non-compliance. Note that separate estimates are requested for compliance with Americans with Disabilities Act; with life/safety (primarily fire) standards; and with environmental projects such as the abatement of hazardous materials, remediation of contaminated sites, and mitigation of such conditions. The category also includes projects necessary to comply with permits and environmental regulations.

Acquisition projects should be limited to the purchase, either outright or through lease/purchase, of facilities and land. Do not include the purchase of capital equipment or computer equipment.

New Construction is the total cost of a construction project for new facilities or the addition of building area or volume.

Major Renovation is the significant restructuring of a facility, which will allow the occupancy of previously unoccupied space or a change in the use of the facility.

Infrastructure improvement projects include the delivery of water supplies, energy efficiency improvements, and construction of roads, parking lots, and sidewalks.

Technology Infrastructure and Capital Equipment
Technology infrastructure means video, voice, and data telecommunications equipment and linkages, including transport services and network interconnections. Capital equipment means any property consisting of, or relating to, scientific, engineering, technical, computer, communications, or instructional equipment.

SURVEYS MUST BE COMPLETED AND RETURNED TO THE COMMISSION ON HIGHER EDUCATION NO LATER THAN AUGUST 17, 2001. PLEASE SUBMIT ELECTRONICALLY USING A DISK OR EMAIL TO kkrishna@che.state.nj.us ; SEND DISK TO COMMISSION ON HIGHER EDUCATION, P.O. BOX 542, TRENTON, NJ 08625-0542.

Thank you for completing the survey. If you have any questions, please contact Kris Krishnan at kkrishna@che.state.nj.us or 609-984-2684. If Kris is not available, contact Jeanne Oswald at joswald@che.state.nj.us or 609-292-8916.

Attachment A

Project List, Format, and Instructions

General Instructions

A. The capital construction needs project list is provided as an Excel spreadsheet. It may be replicated as needed to provide for the total number of projects at your institution. This format has been slightly modified from that used by the Capital Planning Commission. An example of a completed form follows these instructions.

B. Individual projects should be listed for Compliance, Acquisition, Construction and Infrastructure. However, grouping similar projects into a single project is encouraged. For example, removing asbestos in various buildings should be combined into one project.

C. Projects should be grouped in the remaining categories, as follows:

- Deferred maintenance: Provide "lump sum" needs in the areas of Academic/Administrative facilities, Auxiliary facilities, and Infrastructure.
- Technology infrastructure and capital equipment: Provide information in broad categories. For example, it is not necessary to list each computer lab and estimate the number of PC's needed to be bought or replaced during this seven year time period. Rather, provide a total computing equipment estimate for your institution or campus. Likewise, estimate the need for scientific equipment across the institution or campus.

Specific Instructions

A. Begin each page with the institution name and column headings.

B. *Category*: Use those listed in Section V. If there is a sub-category, include both. For example, installing a sprinkler system in a dormitory would be listed "Compliance, Life/Safety".

C. *Location*: Give as specific information as possible.

D. *Cost:* Provide estimated cost needs and the anticipated source of funds.

- *General:* Include institutional funds not included in other categories and state general fund appropriations. If the source of funds is not known, include the cost in this line.
- *Bond:* Include those funds known to be available to your institution. An example of this would be a project that will be financed with Higher Education Capital Improvement Fund Program resources or Chapter 12.
- *Federal Funds:* Funds provided by the federal government.

- *Other:* Include projects funded through endowments, donations, trusts, or authority issued bonds, such as EFA.

E. *Project Description:* Provide a brief (1 to 3 sentences) description of the project.

F. *Rationale:* Use a "Rationale Code" listed below. In some cases, there may be more than one reason why a project is needed. In those cases, use multiple codes and assign a percentage to each code that represents that portion of the rationale. For example, a dormitory may be built to address both current overcrowding and anticipated enrollment growth, so the codes would be C –25% and A – 75%. In some cases, especially compliance, the rationale may appear obvious, but please provide the code to accommodate data compilation.

Rationale Code

A. Expanding to accommodate growing number of applicants
B. Expanding in preparation for more high school graduates
C. Expanding to accommodate growing population of non-traditional students
D. Expanding to accommodate more graduate students
E. Expanding to broaden offerings
F. Expanding to eliminate overcrowding
G. Replacing or renovating obsolete facility
H. Increasing research capacity to address NJ corporate needs
I. Changing teaching methodology
J. Changing space to accommodate technology
K. Compliance: Americans with Disabilities Act
L. Compliance: Life/Safety
M. Compliance: Environmental
N. Technology infrastructure/capital equipment: periodic replacement
O. Technology infrastructure/capital equipment: expansion to accommodate growing student body
P. Technology infrastructure/capital equipment: expansion to increase research capacity
Q. Technology infrastructure/capital equipment: new industry standards
R. Other

G. *Estimate FTE Increase:* Provide this information if using Rationale Code A-E.

EXAMPLE: Capital Expenditure Needs FY2002 – FY2008
Attachment A: Project List

A. NJ Sate University

B. Category: Compliance, Environmental
C. Location: Power House

	TOTAL COST 7YR PROG	D. COST IN FY 02	D. COST IN FY 03	D. COST IN FY 04	D. COST IN FY 05 - FY 08	F. Rationale Code(s)	G. Estimate FTE Increase
General:	740	740	0	0	0	K	
Bond:	0	0	0	0	0		
Federal:	0	0	0	0	0		
Other:	0	0	0	0	0		
Sub-total:	**740**	**740**	**0**	**0**	**0**		

E. Project Description: The university had an oil spill some years ago, which contaminated the soil and ground water. The DEP has mandated that the ground water be pumped and treated. In addition, the soil must be removed and treated as hazardous waste.

B. Category: Infrastructure, Parking Lots
C. Location: Campus-wide

General:	560	0	360	200	0	D	N/A
Bond:	0	0	0	0	0		
Federal:	0	0	0	0	0		
Other:	0	0	0	0	0		
Sub-total:	**560**	**0**	**360**	**200**	**0**		

E. Project Description: Parking lots would be resurfaced and additional areas would be striped and paved to Increase available parking. Additional lighting and security features will be installed.

B. Category: Construction, New
C. Location: Academic Building, Main Campus

General:	8500	8500	0	0	0	D - 25% A - 75%	500
Bond:	0	0	0	0	0		
Federal:	0	0	0	0	0		
Other:	0	0	0	0	0		
Sub-total:	**8500**	**8500**	**0**	**0**	**0**		

E. Project Description: This project will provide needed classroom space to alleviate a current shortage of classroom space and to accommodate expected enrollment growth of 500 FTE by FY2009.

NEW JERSEY COMMISSION ON HIGHER EDUCATION
CAPITAL PLANNING SURVEY

COLLEGE/UNIVERSITY:

CAMPUS:

DATE SURVEY COMPLETED:

PERSON RESPONSIBLE FOR COMPLETING FORM:

NAME
TITLE
TELEPHONE
FAX
E-MAIL

DOES THE INSTITUTION HAVE A CURRENT FACILITIES MASTER PLAN? (yes/no)

IF SO, DATE LAST UPDATED (month, year):
NEXT SCHEDULED UPDATE (month, year):

I. GENERAL CAMPUS INFORMATION

A. ACREAGE INVENTORY (each campus)

Total	
Improved	
Unimproved-buildable	
Unimproved-not-buildable	
Owned	
Leased	

B. BUILDINGS INVENTORY

Number of buildings	
Gross square footage: Academic	
Gross square footage: Auxiliary	
Gross square footage: Total	

C. FUNCTIONAL SPACE AVAILABLE

Use Category	Functional Space (NASF) Owned	Leased	Total
a. Classroom Facilities			
b. Laboratory Facilities			
c. Office Facilities			
d. Study/Library Facilities			
e. Special Use Facilities			
f. General Use Facilities			
g. Support Facilities			
h. Health Care Facilities			
i. Residential Facilities			
j. Unclassified Facilities			
Total			

D. AGE OF FACILITIES

Gross square footage constructed or reconstructed:	
Pre-1900	
1900-1929	
1930-1949	
1950-1959	
1960-1969	
1970-1979	
1980-1989	
1990-1999	
2000-present	
Total	

E. REPLACEMENT VALUE

Use Category	GSF factor	RV
a. Classroom Facilities		
b. Laboratory Facilities		
c. Office Facilities		
d. Study/Library Facilities		
e. Special Use Facilities		
f. General Use Facilities		
g. Support Facilities		
h. Health Care Facilities		
i. Residential Facilities		
j. Unclassified Facilities		
Total		

NOTE: SHADED CELLS CONTAIN FORMULAS OR REFERENCES

COLLEGE/UNIVERSITY:

CAMPUS:

DATE COMPLETED:

II. CLASSROOM/LABORATORY INVENTORY

A. Number of Classrooms
- Seminar rooms (1-15 seats)
- Small classroom (16-35 seats)
- Medium classroom (36-57 seats)
- Large classroom/lecture hall (58 or more seats)

B. Number of Instructional Laboratories
- Science
- Engineering
- Computer
- Studios

C. Number of Research Laboratories

III. CLASSROOM/LABORATORY SCHEDULING

A. Scheduled classroom hours per week (see instructions)
- Avg. # of day hours/week (Mon. - Fri., 8:00 a.m. to 5:00 p.m.)
- Avg. # of evenings hours/week (Mon. - Fri.,5:00 p.m. to 10:00 p.m.)
- Avg. # of Saturday hours/week (8:00 a.m. to 1:00 p.m.)

B. Scheduled laboratory hours per week (see instructions)
- Avg. # of day hours/week (Mon. - Fri., 8:00 a.m. to 5:00 p.m.)
- Avg. # of evenings hours/week (Mon. - Fri.,5:00 p.m. to 10:00 p.m.)
- Avg. # of Saturday hours/week (8:00 a.m. to 1:00 p.m.)

IV. MAINTENANCE EXPENDITURE & DEBT

A. Expenditure for maintenance (FY 2001):

B. Institutional debt (FY 2001)

V. CAPITAL PLAN REQUIREMENTS

(Current dollar value of capital construction needed during the next seven years.) Attach project lists; see directions.
See special instructions for Community Colleges

- Preservation/maintenance
- Deferred maintenance
- Compliance
  - Americans with Disabilities Act
  - Life/Safety (e.g., fire)
  - Environmental (e.g., asbestos, storage tanks)
- Acquisition
- Construction
  - New Construction
  - Major Renovation
- Infrastructure
- Equipment & Technology

Total

NOTE: SHADED CELLS CONTAIN FORMULAS OR REFERENCES

Appendix A: Project List Format

A. Institution Name

FY02 - FY08 Capital Construction Needs ($000's)

B. Category: C. Location:	TOTAL COST 7YR PRO	D. COST IN FY 02	D. COST IN FY 03	D. COST IN FY 04	D. COST IN FY 05 - FY 08	F. Rationale Code(s)	G. Estimate FTE Increase
General:	0	0	0	0	0		
Bond:	0	0	0	0	0		
Federal:	0	0	0	0	0		
Other:	0	0	0	0	0		
Sub-total:	**0**	**0**	**0**	**0**	**0**		

E. Project Description:

B. Category:
C. Location:

General:	0	0	0	0	0		
Bond:	0	0	0	0	0		
Federal:	0	0	0	0	0		
Other:	0	0	0	0	0		
Sub-total:	**0**	**0**	**0**	**0**	**0**		

E. Project Description:

B. Category:
C. Location:

General:	0	0	0	0	0		
Bond:	0	0	0	0	0		
Federal:	0	0	0	0	0		
Other:	0	0	0	0	0		
Sub-total:	**0**	**0**	**0**	**0**	**0**		

E. Project Description:

NOTE: SHADED CELLS CONTAIN FORMULAS OR REFERENCES

New Jersey Commission on Higher Education **ATTACHMENT B**

Results of Capital Planning Survey

		Community Colleges	*State Coll/Univ.*	*Public Research Univ.*	*AICUNJ Independent Institutions*	*Overall*
I.	**GENERAL CAMPUS INFORMATION**					
	*Participating Institutions**	*19*	*8*	*3*	*12*	*42*
A.	**ACREAGE INVENTORY**					
	Total Acreage	*3,619*	*3,412*	*6,633*	*1,594*	*15,258*
B.	**BUILDINGS INVENTORY**					
	Number of buildings	*292*	*344*	*934*	*435*	*2,005*
	Gross square footage: Acad.	*7,184,495*	*6,584,002*	*15,653,089*	*6,641,169*	*36,062,755*
	Gross square footage: Total	*8,077,305*	*11,830,437*	*24,012,227*	*10,247,406*	*54,167,375*
C.	**FUNCTIONAL SPACE AVAILABLE (NASF)**					
	Classroom	*1,149,939*	*679,519*	*644,442*	*844,848*	*3,318,748*
	Laboratory	*1,031,675*	*714,145*	*2,069,801*	*333,424*	*4,149,045*
	Office	*1,031,574*	*1,032,261*	*2,914,496*	*1,074,283*	*6,052,614*
	Study/Library	*435,773*	*543,318*	*871,118*	*505,929*	*2,356,138*
	Special Use	*674,065*	*496,141*	*1,121,183*	*1,002,993*	*3,294,382*
	General Use	*669,091*	*1,031,729*	*928,570*	*635,909*	*3,265,299*
	Support	*391,752*	*858,436*	*2,002,721*	*279,036*	*3,531,945*
	Health Care	*5,679*	*16,944*	*569,897*	*39,562*	*632,082*
	Residential	*19,579*	*2,660,605*	*3,184,449*	*2,189,056*	*8,053,689*
	Unclassified	*291,803*	*202,467*	*28,038*	*123,899*	*646,207*
	TOTAL	*5,700,930*	*8,235,565*	*14,334,715*	*7,028,940*	*35,300,150*
D	**AGE OF FACILITIES**					
	GSF constr. since 1990	*1,742,180*	*3,146,049*	*5,114,836*	*2,239,657*	*12,242,722*
	% of GSF constr. since 1990	*22%*	*27%*	*21%*	*22%*	*23%*
	GSF > 30 yrs old	*1,866,995*	*3,951,496*	*9,314,401*	*5,938,990*	*21,071,882*
	% of GSF > 30 yrs old	*23%*	*33%*	*39%*	*58%*	*39%*
E.	**REPLACEMENT VALUE**					
	Estimated academic RV	*$1,419,648,366*	*$1,171,402,060*	*$2,458,735,281*	*$1,149,287,863*	*$6,199,073,570*
	Estimated auxiliary RV	*$176,418,281*	*$933,426,929*	*$1,377,226,500*	*$624,077,540*	*$3,111,149,250*

**Princeton University, and Stevens Institute of Technology chose not to participate in the survey. Thomas Edison State College was not included because the college's facility needs are met through acquisition or lease by the state and are maintained through the Department of Treasury.*

New Jersey Commission on Higher Education **ATTACHMENT B**

Results of Capital Planning Survey

	Community Colleges	*State Coll/Univ.*	*Public Research Univ.*	*AICUNJ Independent Institutions*	*Overall*
II. CLASSROOM/LABORATORY INVENTORY					
A. NUMBER OF CLASSROOMS					
Seminar rooms	*83*	*29*	*64*	*89*	*265*
Small classroom	*780*	*385*	*328*	*347*	*1,840*
Medium classroom	*372*	*229*	*228*	*216*	*1,045*
Large classroom/lecture hall	*80*	*74*	*117*	*53*	*324*
B. NUMBER OF INSTRUCTIONAL LABORATORIES					
Science	*252*	*177*	*273*	*149*	*851*
Engineering	*56*	*53*	*78*	*7*	*194*
Computer	*368*	*111*	*253*	*145*	*877*
Studios	*126*	*163*	*100*	*177*	*566*
B. NUMBER OF RESEARCH LABORATORIES					
TOTAL	*3*	*45*	*2,437*	*95*	*2,580*
III CLASSROOM/LABORATORY SCHEDULING					
A. *Classroom day hrs/wk Ave.*	*25*	*31*	*24*	*22*	*25*
Max - Min	*38 - 15*	*43 - 22*	*30 - 15*	*41 - 12*	*43 - 12*
Classroom even. hrs/wk Ave.	*13*	*14*	*10*	*11*	*12*
Max - Min	*20 - 8*	*24 - 9*	*20 - 2*	*25 - 4*	*25 - 2*
B. *Lab. day hrs/wk Ave.*	*21*	*18*	*24*	*14*	*19*
Max - Min	*38 - 8*	*35 - 10*	*29 - 16*	*39 - 5*	*39 - 5*
Lab. even. hrs/wk Ave.	*11*	*7*	*10*	*4*	*9*
Max - Min	*22 - 5*	*13 - 1*	*20 - 4*	*7 - 0*	*22 - 0*
IV. MAINTENANCE EXPENDITURE & DEBT (FY 2001)**					
A. Expenditure for maintenance	*$56,109,703*	*$75,935,320*	*$118,538,856*	*$60,424,884*	*$311,008,763*
(Includes maintenance, utilities, fire protection, property insurance, and similar items)					
B. Institutional debt	*$16,429,019*	*$649,406,085*	*$556,049,352*	*$367,851,587*	*$1,589,736,043*
(Indebtedness liability against the physical plant, excluding debt issued and paid for by the state or county)					
V. CAPITAL PLAN REQUIREMENTS					
Annual Preservation/maint.					
Min (1.5%)	*$23,941,000*	*$31,572,435*	*$57,850,536*	*$26,600,481*	*$139,964,451*
Max (3.0%)	*$47,881,999*	*$63,144,870*	*$115,701,071*	*$53,200,962*	*$279,928,903*

*** The data for maintenance expenditure and institutional debt for was not available for UMDNJ.*

New Jersey Commission on Higher Education **ATTACHMENT B**

Results of Capital Planning Survey

	Community Colleges	*State Coll/Univ.*	*Public Research Univ.*	*AICUNJ Independent Institutions*	*Overall*
V. CAPITAL PLAN REQUIREMENTS (contd.)					
Seven Year Capital Plan					
Deferred maintenance	*$48,284,550*	*$194,102,000*	*$229,509,000*	*$68,774,088*	*$540,669,638*
Compliance	*$13,589,940*	*$75,757,000*	*$98,335,000*	*$32,423,185*	*$220,105,125*
ADA	$6,157,182	$22,499,000	$4,621,000	$13,123,340	$46,400,522
Life/Safety	*$4,332,758*	*$38,779,000*	*$79,238,000*	*$14,487,745*	*$136,837,503*
Environmental	*$3,100,000*	*$14,479,000*	*$14,476,000*	*$4,812,100*	*$36,867,100*
Acquisition	*$40,464,850*	*$33,975,000*	*$28,118,000*	*$51,000,800*	*$153,558,650*
Construction	*$709,808,970*	*$1,488,561,000*	*$786,711,000*	*$990,942,117*	*$3,976,023,087*
New Construction	*$553,111,580*	*$1,158,299,000*	*$710,551,000*	*$299,933,017*	*$2,721,894,597*
Major Renovation	*$156,697,390*	*$330,262,000*	*$76,160,000*	*$691,009,100*	*$1,254,128,490*
Infrastructure	*$91,159,120*	*$102,310,000*	*$135,066,000*	*$47,261,753*	*$375,796,873*
Equipment & Technology	*$147,605,494*	*$156,203,070*	*$115,700,000*	*$61,974,667*	*$481,483,231*
TOTAL, Seven Year Capital Plan	*$1,050,912,924*	*$2,050,908,070*	*$1,393,439,000*	*$1,252,376,610*	*$5,747,636,604*
TOTAL	*$945,908,233*	*$2,098,266,722*	*$1,480,214,804*	*$1,278,646,322*	*$5,803,036,082*
VI. ENROLLMENT (FALL 2000)* **					
Undergraduate	*124,585*	*59,283*	*43,994*	*33,829*	*261,691*
Full-Time	*53,498*	*44,603*	*36,425*	*24,432*	*158,958*
% Full-Time	*45%*	*75%*	*83%*	*72%*	*62%*
Graduate	*--*	*11,706*	*19,216*	*13,089*	*44,011*
Full-Time		*1,654*	*9,147*	*3,531*	*14,332*
% Full-Time	*--*	*14%*	*48%*	*27%*	*33%*
Total	*124,585*	*70,989*	*63,210*	*46,918*	*305,702*
Full-Time	*53,498*	*46,257*	*45,572*	*27,963*	*173,290*
% Full-Time	*45%*	*65%*	*72%*	*60%*	*58%*

****The enrollment data is confined to the 42 participating institutions (Source: SURE data system, IPEDS).*