

Smart Infrastructure

To Create 1 Million Jobs

“An investment in knowledge
pays the best interest.”

BENJAMIN FRANKLIN



Michigan residents are \$2 billion richer annually due to the operational expenditures by the University, additional earnings as a result of increased human capital of graduates, and the graduate medical education payments that MSU has helped bring to state hospitals.

THE ECONOMIC IMPACT OF MICHIGAN STATE UNIVERSITY, PREPARED BY THE ANDERSON ECONOMIC GROUP, LLC



Overall, the \$1.403 billion of education-related expenditures attributable to the University of Hawai'i system generated \$1.973 billion in local business sales, \$1.243 billion in employee earnings, \$132 million in state tax revenues, and 35,800 jobs in Hawai'i in FY 2003.

THE UNIVERSITY OF HAWAII ECONOMIC RESEARCH ORGANIZATION. "THE CONTRIBUTION OF THE UNIVERSITY OF HAWAII TO HAWAII'S ECONOMY IN 2003." MARCH 2004



- 4,276** Colleges and Universities in the U.S.
- 1,290,426** Higher Education Faculty in the U.S.
- 2,088,661** Higher Education Staff in the U.S.
- 17,484,500** Higher Education Students in the U.S.

“The state of our economy calls for action, bold and swift, and we will act not only to create new jobs, but to lay a new foundation for growth... we will transform our schools and colleges and universities to meet the demands of a new age. All this we can do. All this we will do.”

Smart Infrastructure

▶▶ Fast Facts

Investment in teaching and research facilities for colleges and universities can quickly and efficiently create over 1 million jobs and promote economic activity by:

- Immediately employing people to construct educational facilities
- Providing needed growth in educational facilities to serve the projected increase of historically-disadvantaged segments of the population
- Generating new knowledge for new jobs – similar to the lasting success of Silicon Valley and Research Triangle Park

There are hundreds of university projects that are shovel-ready now or could be in three to six months. Here are the facts:

- \$50 million for a new academic facility would create up to 1,000 construction-related jobs over a two year period and would create space for long-term employment of 250 faculty and staff
- \$1 billion for a state-wide program of academic buildings would create 20,000 construction-related jobs and would create space for long-term employment of 5,000 faculty and staff
- A national program of \$50 billion would create 1 million construction-related jobs and would create space for long-term employment of 250,000 faculty and staff

This report is intended to confirm the resounding positive economic impact that our colleges and universities have on our nation.

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Making the Case for Support

Today, with millions of students, thousands of classrooms and laboratories, and outreach that touches countless communities in rural and urban America, higher education has the capacity to produce the people, ideas, and solutions our economy needs to regain its momentum.



Economic Engines

Investment in university facilities has a proven payback in jobs and economic advancement that outlives and outperforms investment in other types of potential stimulus programs.

For example, a study by the University of Virginia revealed that for every dollar spent locally by the University, the ultimate local spending generated by that activity was \$1.45. These and other statistics prove that the modern research university is both a knowledge factory and an economic machine.¹

¹ WELDON COOPER CENTER FOR PUBLIC SERVICE, UNIVERSITY OF VIRGINIA. "THE ECONOMIC IMPACT OF THE UNIVERSITY OF VIRGINIA." JUNE 2007



A Sustainable Future

Colleges and universities have consistently been the world leaders in sustainable design and green construction. “Green” university building projects could simultaneously create millions of green-collar jobs, reduce greenhouse gas emissions, and advance proven opportunities to deliver greener, more energy-efficient buildings.

President Obama has issued a recent commitment to make the United States a global leader in green, energy-efficient government facilities, calling for an overhaul of 75% of federal buildings in an effort to save \$2 billion through energy efficiency alone. Our universities have the proven track record to fulfill this commitment on their campuses, with more than 600 university Presidents signing the American College and University President’s Climate Commitment. This is a powerful reminder that universities can lead the way to create new buildings and campuses that embody our shared environmental and economic aspirations.



A True Stimulus as a Call to Action

The discoveries at our universities have led to the creation of industries, companies and tens of thousands of jobs throughout the United States. Today, these universities continue to be the source of discoveries that will be engines for future growth and economic development and can continue to be so with ongoing investment. However, many state university systems now face shrinking endowments and diminishing state and federal assistance. And as nations in Asia, the Middle East, and elsewhere are investing substantial government funds in basic research and development as well as in new research universities, our nation is losing ground.

Federal funding of much-needed new construction projects on our nation's campuses could create upwards of one million jobs and have a direct and immediate impact on economic activity beyond the dollars expended.



Smart Infrastructure

Why investing in college and university construction makes clear economic sense now and in the future:

John Adams, writing the Massachusetts Constitution of 1780, envisioned the central role that educational institutions would play in our nation's development as follows:

“It shall be the duty of legislatures and magistrates in all future periods...to cherish the interests of literature and the sciences...to encourage private societies and public institutions...for the promotion of agriculture, arts, sciences, commerce, trades, manufactures, and a natural history of the country...”

Today, 229 years later, educational institutions have redeemed in full measure this confidence and remain central to the present and future of the nation's social, cultural and economic life.

Now, at this critical time in our history, the leadership within our federal government has the opportunity to secure America's future in educational excellence and economic opportunity through the investment in our nation's colleges and universities – an initiative that can create millions of new immediate and long-term jobs.

Proof of Economic Impact

Our state university systems represent some of the most proven vehicles for regional economic impact in the history of our country. The following case studies are but a few of the success stories of how Universities have stimulated both intellectual and economic growth.



Arizona University System

Arizona's system of higher education consists of diverse institutions, located throughout the state.

Economic Impact on the State of Arizona:

Three institutions, Arizona State University, the University of Arizona, and Northern Arizona University, have a combined annual economic impact of more than \$6.1 billion on the State's economy (\$2.8 billion University of Arizona; \$2.3 billion Arizona State University; \$1 billion Northern Arizona University).

Through the multiplier effect, Arizona State University and University of Arizona together generate more than \$13 for every \$1 of state-appropriated funds (\$6.97 and \$6.70 respectively). The total employment impact of university-system employees and all other direct and indirect jobs directly and indirectly induced is 98,000 jobs. A job is created in the State for every \$8,120 of State appropriations.²

² OFFICE OF ECONOMIC AND POLICY ANALYSIS, UNIVERSITY OF ARIZONA. "THE UNIVERSITY OF ARIZONA ECONOMIC AND TAX REVENUE IMPACTS FY2004." NOVEMBER 2005.



MILL AVENUE COMMERCIAL DEVELOPMENT, ADJACENT TO ARIZONA STATE UNIVERSITY

Boston, Massachusetts

While companies in the private sector come and go, universities remain a stable base in their communities. One relevant example is the Boston area, where eight major universities employ 70,750 people, slightly more than Greater Boston's financial services industry.

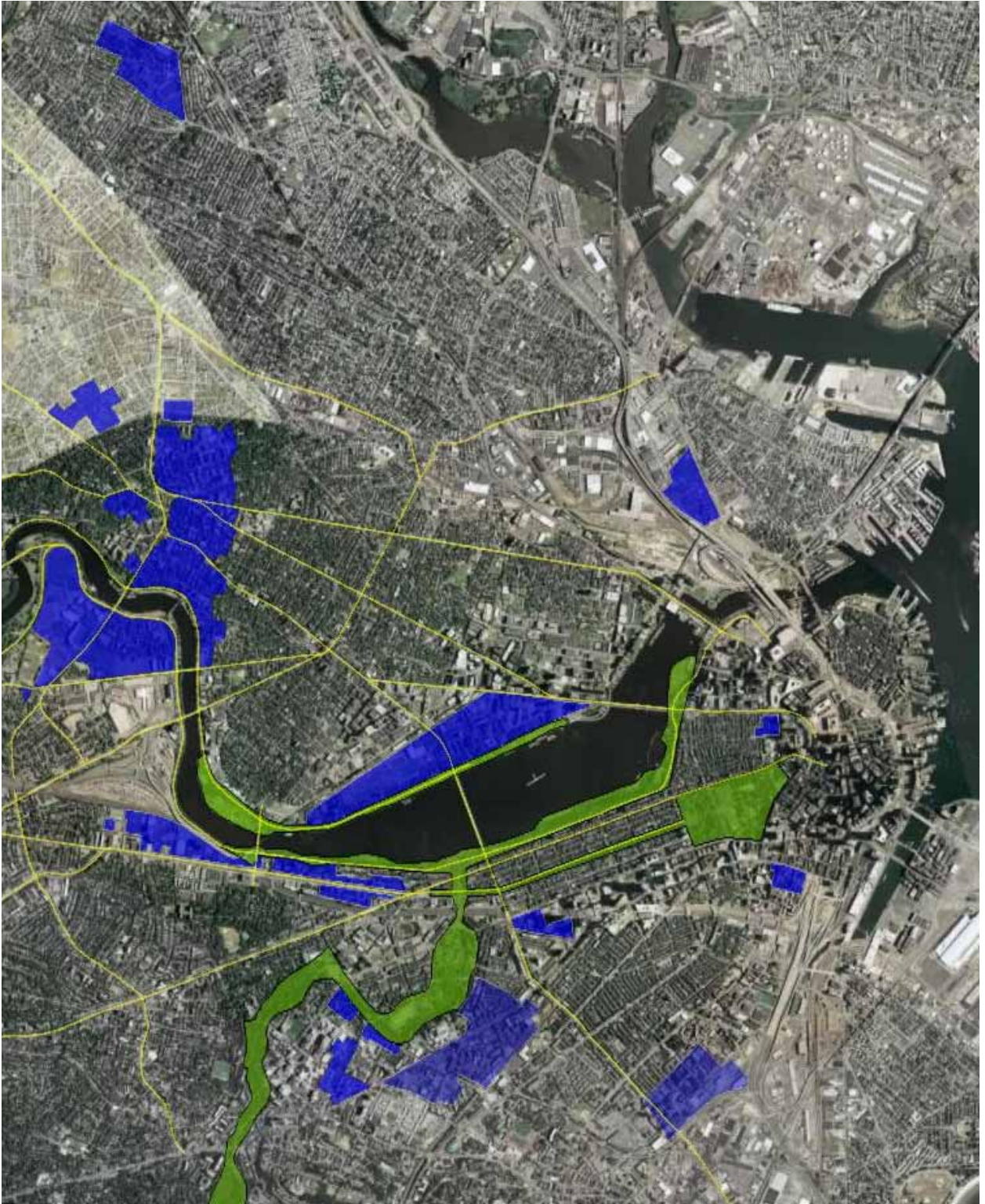
And while many industries have downsized, Boston's universities have remained a constant source of employment, while producing an educated populace. In Boston alone, four companies founded by graduates of the area universities are among the top 25 employers in the region.

The combined 2002 payroll of the eight universities in the Boston area totaled more than \$2.5 billion. That personal income, an average of more than \$51,000 per employee, in turn, became revenue for state and local tax collectors of income tax, property tax, excise tax and other taxes, and revenue for local businesses. Massachusetts' annual income tax revenue from university employees is estimated at more than \$115 million.

From 2002 to 2006, construction spending by the eight universities averaged about \$850 million per year. These construction projects supported approximately 5,100 full-time construction jobs during each of those years. In 2000 alone, new construction projects generated approximately 3,300 full-time jobs.

The students from the eight universities — 74,000 undergraduates and 44,300 graduate students — spend about \$850 million annually for food, entertainment, transportation and other needs. It is also estimated that visitors to the universities, whether a visiting researcher or family and friends of a university student, generate \$250 million in additional local spending in 2000. The eight universities themselves spend \$4.4 billion in the region on payroll, purchasing and construction.³

³ APPLESEED. "ENGINES OF ECONOMIC GROWTH: THE ECONOMIC IMPACT OF BOSTON'S EIGHT RESEARCH UNIVERSITIES ON THE METROPOLITAN BOSTON AREA." MARCH 2003.



■ BOSTON/CAMBRIDGE UNIVERSITIES

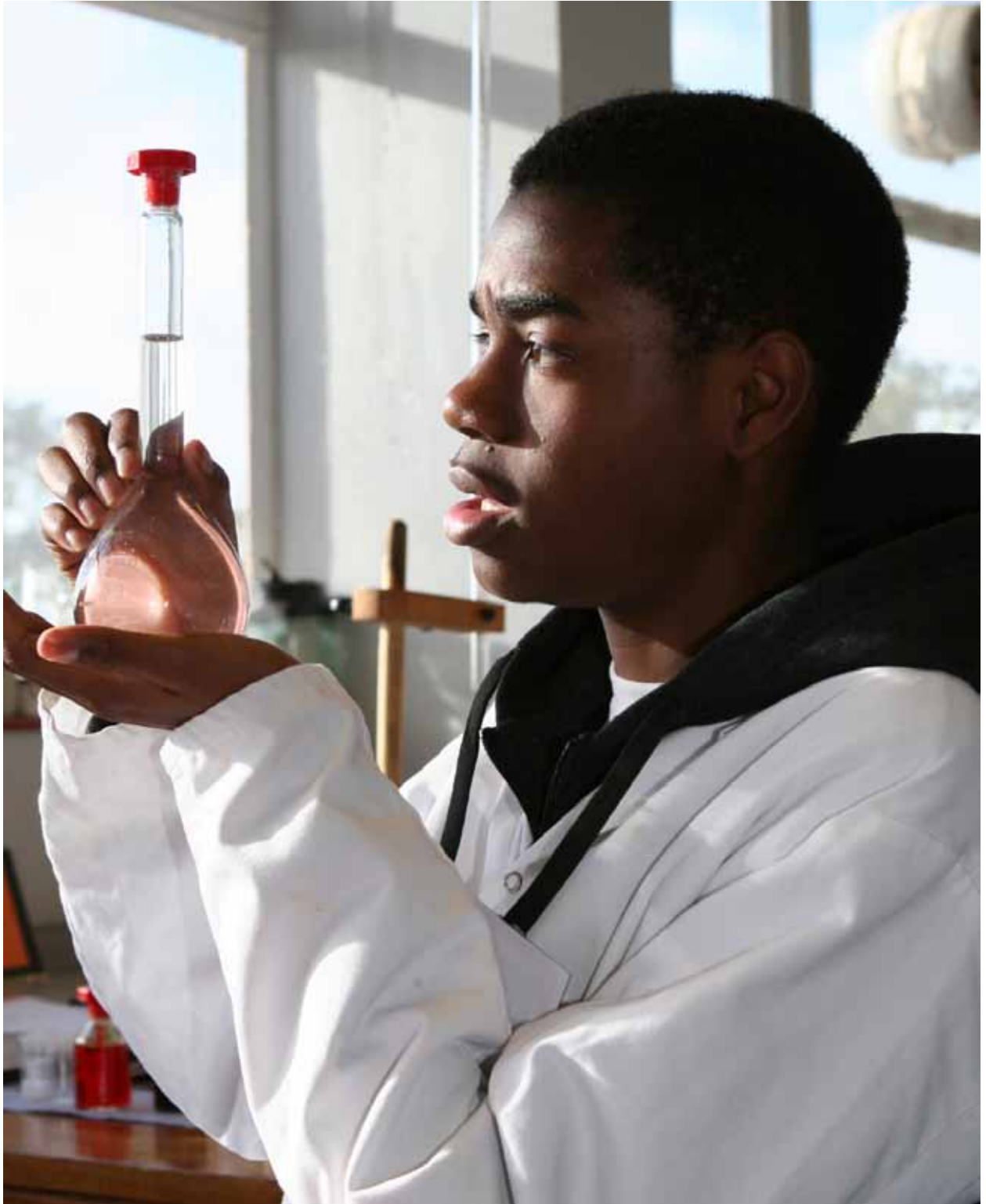
Historically Black Colleges and Universities

In 2006, the combined initial spending of all 101 Historically Black Colleges and Universities (HBCUs) in their host communities total \$6.6 billion. Public HBCUs accounted for 62 percent of this total amount while not-for-profit HBCUs accounted for the remaining 38 percent.

The total economic impact of the nation's HBCUs was \$10.2 billion in 2001. The input-output model estimated that 65 percent of this total was initial spending by the institutions and students, while the remaining 35 percent was the induced/respending impact, or multiplier effect.

The total employment impact of the 101 HBCU institutions included 180,142 total full and part-time jobs in 2001. To put that into perspective, the rolled-up employment impact of the nation's HBCUs exceeds the 177,000 jobs at the Bank of America in 2006, which is the nation's 23rd largest private employer.⁴

⁴ NATIONAL CENTER FOR EDUCATION STATISTICS. "ECONOMIC IMPACT OF THE NATION'S HISTORICALLY BLACK COLLEGES AND UNIVERSITIES." OCTOBER 2006.



The University System of Georgia

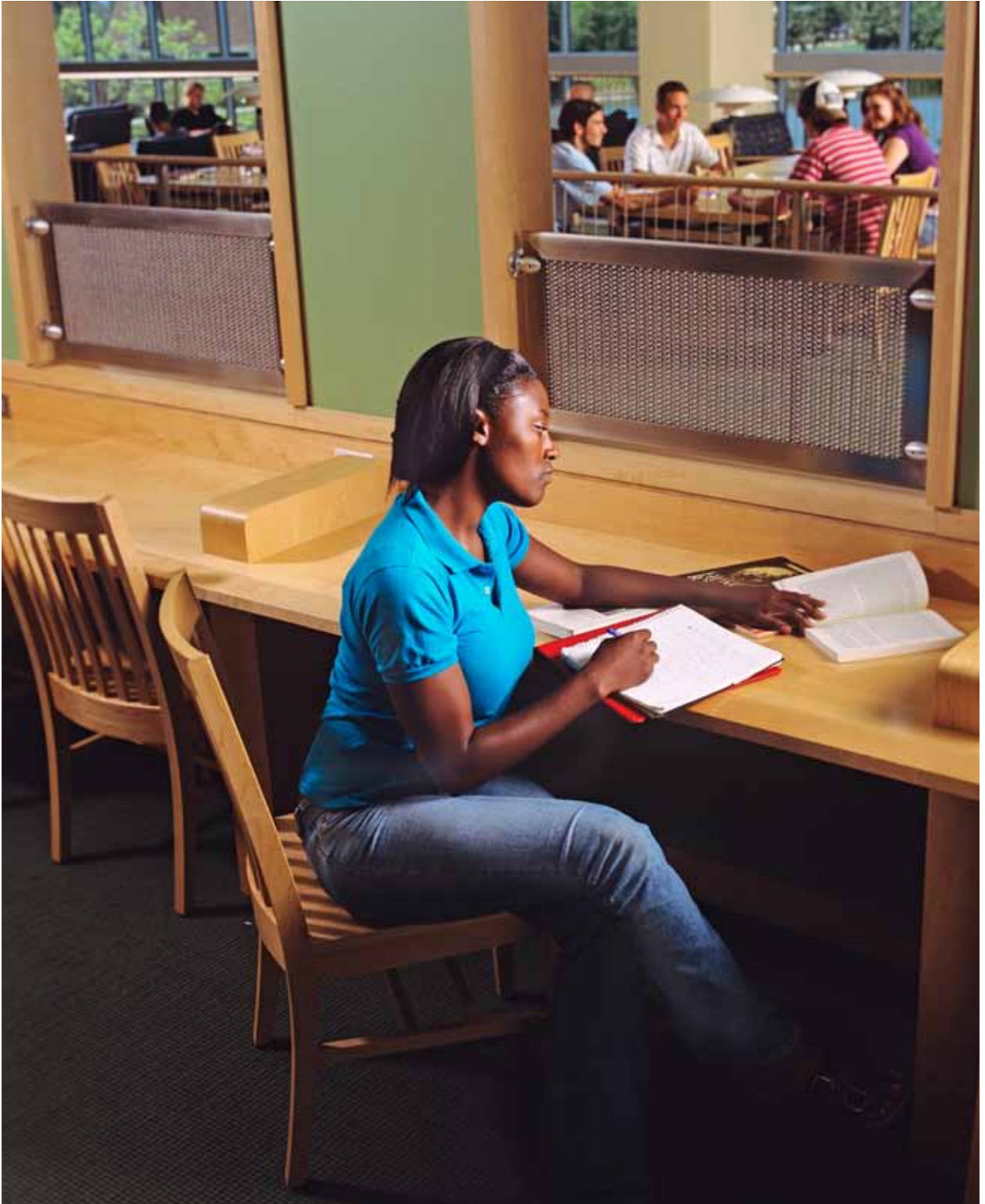
The statewide economic impact of the University System of Georgia's 34 institutions includes:

- \$9.7 billion in output
- \$5.9 billion in gross regional product
- \$4.4 billion in income
- 106,831 full and part-time jobs
(2.8% of all jobs held by Georgians)

These benefits permeate both the private and public sectors of the host communities. For example, for each job created on campus there are 1.7 off-campus jobs that exist because of spending related to the college or university. These economic impacts are especially significant given the sub-par performance of both the national and state economies.

Even in tough economic times, continued emphasis on colleges and universities as pillars of a state's economy translates into more jobs, higher incomes, and greater production of goods and services.⁵

⁵ SELIG CENTER FOR ECONOMIC GROWTH. "THE ECONOMIC IMPACT OF UNIVERSITY SYSTEM OF GEORGIA INSTITUTIONS ON THEIR REGIONAL ECONOMIES IN FY2004." JANUARY 2005.



The University of Maryland System

The University of Maryland System includes 15 institutions around the state. The flagship campus is the University of Maryland, College Park (UMCP), which makes many important contributions to the state's economy, business climate and quality of life. The university is a major source of economic activity in the state and has the following impacts:

- Total UMCP expenditures of \$813.3 million are leveraged with an additional \$1 billion in indirect “multiplier-effect” spending for a total economic impact of just under \$1.8 billion on the Maryland economy.
- In addition to UMCP's 16,759 employees, the university's construction spending of \$99.1 million creates an additional 1,121 construction-related jobs. Furthermore, there are an additional 21,126 jobs created by the university's indirect “multiplier-effect” economic impacts for a total of 39,006 jobs directly or indirectly supported by the university. These jobs represent more than 1% of all jobs in Maryland.
- UMCP generates \$5.93 in economic activity for every \$1.00 appropriated.

UMCP also makes important contributions to the business climate in Maryland. The university's sponsored research revenues have more than doubled over the past decade and the university accounts for 52% of public university research and development in Maryland. This research is an important source of new ideas and technologies to Maryland businesses. The university accounts for 84% of technology licensing activity by major Maryland public universities and 67% of all public university income from technology commercialization. Sixteen companies are currently in operation to develop university technology and 13 of these companies are located in Maryland.

In addition to the University of Maryland, College Park, the University of Maryland, Baltimore (UMB), is the flagship public provider of health and professional educational services in Maryland. UMB provides a major source of economic activity by purchasing of goods and services from Maryland suppliers and the salaries to its Maryland workforce, and providing a skilled and educated workforce. Additionally, UMB supports economic development in the state through the commercialization of new technologies.



Total UMB spending of \$1.15 billion generates more than \$1.4 billion in indirect economic impacts for a total impact on the Maryland economy of nearly \$2.6 billion. Direct UMB employment totals 6,572 jobs and is augmented by an estimated 18,630 jobs supported or created through indirect impacts, for a total employment impact of 25,202 jobs. There is a total of more than \$1.1 billion in salaries and wages associated with these jobs. The combined state and local fiscal impact of the wages and salaries paid to university employees or the employees supported by the university's operations is \$61.4 million in fiscal 2008.⁶

The University of Maryland, Baltimore generates \$15.11 in economic activity for each \$1.00 appropriated.

The State of North Carolina

Nearly eight years ago, the people of North Carolina made the decision to help secure their state's future when they approved the \$3.1 Billion 2000 Higher Education Bond Program. This initiative garnered sweeping bipartisan support from education, government, and business leaders across the state. The referendum passed statewide in all 100 counties by a 73 percent margin. The impact of this investment has been startling.

What was at stake?

- 16 Universities
- 3 University affiliates
- 59 community colleges
- 183,000 University students enrolled statewide
- 800,000 community college students enrolled statewide
- \$3.1 billion in capital investments

Thanks to the Higher Education Bond Program, this program has had an astonishing impact on the quality of education delivered and on the state's economy.

The U.S. Department of Commerce estimates that over the life of the University of North Carolina bond program, this capital investment will generate about 88,000 jobs.⁷

University of North Carolina Progress to Date

- 316 total projects
- 86 in design
- 154 under construction
- 41 completed

North Carolina Community College Progress to Date

- 31 projects completed
- \$134,011,080 expended
- \$425,426,724 approved for future projects

This bond program helped prepare the workers of tomorrow while creating more than 33,000 jobs in critical areas of academic and economic growth. This includes the fields of:

- Biotechnology
- Computer technology
- Engineering
- Nanotechnology
- Pharmaceuticals
- Genetics, proteomics, and bioinformatics
- Environmental sciences
- Materials science
- Optoelectronics
- Teaching
- Life sciences
- Nursing
- Allied health

⁷ SELIG CENTER FOR ECONOMIC GROWTH. "THE ECONOMIC IMPACT OF UNIVERSITY SYSTEM OF GEORGIA INSTITUTIONS ON THEIR REGIONAL ECONOMIES IN FY2004." JANUARY 2005.



THE UNIVERSITY OF NORTH CAROLINA AT CHAPEL HILL, CAMPUS AERIAL

“The bond construction program underway in the UNC system is a bright light in still often dark times for the construction industry in North Carolina. Its positive impact also is having a ripple effect across the state.”

STEVE GENNETT, PRESIDENT AND CEO OF CAROLINA'S ASSOCIATED GENERAL CONTRACTORS (AGC)

Even with this track record, there are many projects currently awaiting funding in North Carolina, many of which are shovel-ready. All of them would have an immediate and long-term impact on North Carolina's economy.

Shovel-Ready Projects

What follows is a small sampling of the numerous higher education projects that could be ready for construction within the next three to six months.

These projects are not fully funded. An investment of Federal dollars could make these projects possible, adding millions of immediate and long-term jobs, while helping to build our knowledge economy.

Phoenix Biomedical Campus

The city of Phoenix is one of the only major cities in America without an academic medical center. The site shown below is the location for the new Phoenix Biomedical Center – a project which will fill this void while employing thousands of people and creating an economic engine for this major metropolitan area.

Shovel-ready Date: April 2009

Construction Value: \$470,000,000

The Phoenix Biomedical Campus (PBC) is a combined vision of the City of Phoenix, Arizona Board of Regents, the University of Arizona, Arizona State University and Northern Arizona University. This project will focus on the education of healthcare professionals, related biomedical research and the application of clinical care.

- Economic impact studies estimate that the PBC will rank among Arizona's leading economic engines by 2025; the campus has the potential to generate between \$1.1 billion \$2.1 billion in annual economic impact for the State of Arizona.
- The Phoenix Biomedical Campus has the potential to generate between 14,653 and 24,074 jobs for Arizona residents by 2025.
- The campus has the opportunity to generate between \$60 million and \$110.2 million annually in state government revenue by 2025 (direct and indirect).
- It is estimated that the estimated \$470 million Phase 2 of the PBC project will generate 2,500 construction jobs.
- When completed it will employ 500 faculty and staff and provide educational services for up to 3,000 students per year. ⁸



Shovel-Ready Projects

North Carolina School of Science and Mathematics

Discovery Center

Shovel-ready Date: July 2009

Construction Value: \$66.7 million

The Discovery Center project presents an exciting opportunity for the North Carolina School of Science and Math to provide additional teaching and support spaces in order to accommodate the School's future growth. The Campus Master Plan, completed in October 2008, provides the framework for this expansion to the campus and envisioned the Discovery Center Project as one of multiple building additions located in the vicinity of the historic Watts building. These additions – at Reynolds East, Hill East, Hill West, and Bryan North – would provide new or renovated spaces for laboratories, classrooms, dining services, dormitory rooms, faculty offices, student lounge, and the library.

A major renovation to all floors of Bryan North and ground floor Bryan West is anticipated as well as minor renovation work to Hill in order to accommodate the expansions. A programming effort was undertaken which resulted in program needs of approximately 200,000 gsf of new construction and 77,000 gsf of renovation. A cost estimate prepared for the master plan anticipated construction costs for the project of approximately \$70M.

University of Alaska, Anchorage

Health Sciences Facility Phase 1

Shovel-ready Date: June 2009

Construction Value: \$46 million

The first phase of the Health Sciences Center is a 64,000 sf building that will bring Nursing, Allied Health, and WWAMI (medical school) programs together fostering a collaborative, interdisciplinary teaching/ learning environment. This facility is planned to house state of the art high fidelity simulation labs so that prospective Nurses, Physician Assistants and Physicians can work side-by-side in life – like scenarios in a controlled simulation environment. In addition to providing space for academic and academic support, the facility will serve as a health science resource to the community, regional medical centers, and the university system. This facility is the first phase of a multi-phased project that expands to include therapies (occupational, physical, massage), pharmacy, paramedic training, medical assisting, and medical imaging. All these disciplines will provide integrated high fidelity simulation to emulate real experiences.

University of Georgia

Science Teaching Facility

Shovel-ready Date: July 2009

Construction Value: \$49.5 million

One of the key points in UGA's Strategic Plan is to increase the quality of undergraduate instruction in science. Current teaching laboratory and instructional space in the sciences are deficient from both a quantity and quality standpoint. The complex of buildings in which laboratory instruction is concentrated – Biological Sciences, Chemistry and Physics – is approximately 50 years old. These facilities are nearing the end of their effective life cycles, are increasingly expensive and time-consuming to maintain, and are no longer adequate to accommodate modern instructional laboratory teaching methods. In fact, enrollment in several science majors is currently capped due to a lack of instructional laboratory space for basic science classes. This capping has a snowball effect, imposing severe limits on UGA's capacity to increase its overall undergraduate and graduate enrollments.

The Science Teaching Facility will contain approximately 95,000 square feet of instructional space, the majority of which will be comprised of teaching laboratories for science classes. The facility also will increase the quality of undergraduate instruction in the sciences and ease current enrollment bottlenecks. This strategic new facility will provide state of the art teaching spaces, will promote collaborative learning, and will also allow the institution to address deferred maintenance issues in 5 adjacent buildings. The renovation of these core sciences buildings, that are 50 years old, will allow the University to update to LEED building standards. This level of renovation will save diminishing resources, such as water, energy, and improve air quality. The amount of savings will be in excess of 35% of the existing building's energy consumption.

Texas State University San Marcos

Undergraduate Academic Center (UAC)

Shovel-ready Date: September 2009

Construction Value: \$40.4 million

The 129,000 gsf Undergraduate Academic Center is planned to become a campus gateway building that will be a main pedestrian entry to the campus while providing state-of-the-art classroom facilities, house academic tutoring labs for student athletes as well as departmental offices. The hilltop nature of the site will make the UAC visible for miles around the site, and will become an iconic image for the campus. The facility is being designed with sustainability at the forefront, with emphasis on dramatically reducing the amounts of energy and water consumption over the life of the building, along with utilizing large percentages of recycled materials in construction.

Shovel-Ready Projects

University of Arizona

Environment & Natural Resources Building, Ph. 2 (ENR 2)

Shovel-ready Date: Spring 2009

Construction Value: \$90 million

Centennial Hall Renovations

Shovel-ready Date: Summer 2009

Construction Value: \$12 million

Critical Building Renewal Renovations

Shovel-ready Date: October 2008

Construction Value: \$68 million

UA Science Center & Arizona State Museum Project

Shovel-ready Date: Summer 2009

Construction Value: \$130 million

Arizona State University

ISTB IV

Shovel-ready Date: February 2009

Construction Value: \$185 million

Biodesign C

Shovel-ready Date: Fall 2009

Construction Value: \$300 million

Northern Arizona University

Health Professions Expansion

Shovel-ready Date: Fall 2009

Construction Value: \$80 million

Native American Cultural Center

Shovel-ready Date: Fall 2009

Construction Value: \$6 million

University of California Riverside

Health Sciences Surge Building

Shovel-ready Date: March 2009

Construction Value: \$30 million

University of Delaware

Undergraduate Science Building

Shovel-ready Date: Fall 2009

Construction Value: \$125 million

Emory University

Woodruff Health Science Campus

Shovel-ready Date: Fall 2009

Construction Value: \$500 million

Medical University of South Carolina

BioEngineering Building

Shovel-ready Date: Fall 2009

Construction Value: \$58.25 million

Drug Discovery Building

Shovel-ready Date: Fall 2009

Construction Value: \$61.5 million

College of New Jersey

School of Education Building

Shovel-ready Date: May 2009

Construction Value: \$40 million

Centennial Hall Renovations

Shovel-ready Date: Summer 2009

Construction Value: \$12 million

Critical Building Renewal Renovations

Shovel-ready Date: Spring 2009

Construction Value: \$68 million

University of North Carolina at Chapel Hill

Biomedical Research Imaging

Shovel-ready Date: July 2009

Construction Value: \$239.5 million

Morehead Planetarium and Science Center

Shovel-ready Date: August 2009

Construction Value: \$50 million

Genome Science Building

Shovel-ready Date: June 2009

Construction Value: \$16.4 million

Repair and Renovation Projects

Shovel-ready Date: June 2009

Construction Value: \$43.2 million

University of North Carolina Charlotte

Energy Production and Infrastructure Center

Shovel-ready Date: August 2009

Construction Value: \$76.2 million

North Carolina State University

Combined Heating and Power Plant

Shovel-ready Date: Fall 2009

Construction Value: \$53,000,000

Engineering Building IV (EB IV)

Shovel-ready Date: Summer 2009

Construction Value: \$98 million

Engineering Building V (EB V)

Shovel-ready Date: Fall 2009

Construction Value: \$82 million

Wesleyan University

Molecular Life Science Building

Shovel-ready Date: March 2009

Construction Value: \$160 million

Summary

The current economic crisis poses a major challenge. 31 of 50 states are underfunded for their 2009 budgets. As a result, states and municipalities are forced to cut work forces and spending, as well as investment in our institutions of higher education. These measures have ripple effects on the economy and our nation's progress. As the newest stimulus package is approved, this report is a plea to reconsider now, or in the near future, the amount of funds allocated for the construction of new facilities on our nation's college and university campuses.

As the Carnegie Foundation's Higher Education Investment Act*- An Open Letter to President-Elect Obama and His Administration has stated:

“A commitment of 5 percent of the economic stimulus package—in the range of \$40 to \$45 billion—toward higher education facilities will provide the stimulus that will propel the nation forward in resolving its current economic crisis and lay the ground-work for international economic competitiveness and the well-being of American families into the future.”

One need look no further than the examples shown in this testimony such as the North Carolina 2000 bond bill to see the profound and long-lasting impact that this kind of investment will reap for our economy and the long-term strength of our country. The time to act is now.

The “ask” of this report is a simple one: invest \$50 billion of the stimulus package into shovel-ready university, teaching and research facilities. The result would be the creation of more than 1 million immediate jobs that will support the education and betterment of hundreds of thousands of Americans, while also stimulating our economy for years to come.

Sources

Appleseed. "Engines of Economic Growth: The Economic Impact of Boston's Eight Research Universities on the Metropolitan Boston Area." March 2003.

Carnegie Corporation of New York. "Higher Education Investment Act. An Open Letter to President-Elect Obama and His Administration." No date

The Chronicle of Higher Education. Volume LIV, No. 1. August 31, 2007.

National Center for Education Statistics. "Economic Impact of the Nation's Historically Black Colleges and Universities." October 2006.

Office of Economic and Policy Analysis, University of Arizona. "The University of Arizona Economic and Tax Revenue Impacts FY2004." November 2005.

Selig Center for Economic Growth. "The Economic Impact of University System of Georgia Institutions on Their Regional Economies in FY2004." January 2005.

The Jacob France Institute, Merrick School of Business, University of Baltimore. "The Economic Impact of the University System of Maryland." February 2002.

The University of Hawai'i Economic Research Organization. "The Contribution of the University of Hawai'i to Hawai'i's Economy in 2003." March 2004

The University of North Carolina System

Tripp Umbach. "Economic Impact Study." No date.

Weldon Cooper Center for Public Service, University of Virginia. "The Economic Impact of The University Of Virginia." June 2007

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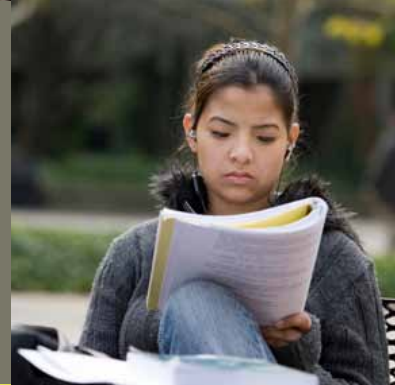
The Baltimore region's 15 colleges, universities and two affiliated University Hospitals annually pump more than \$17.2 billion into the local economy and support more than 62,000 jobs.

THE BALTIMORE COLLEGETOWN NETWORK, 2008



Cornell is one of New York State's largest non-governmental employers...Directly and indirectly, Cornell accounted for more than \$3.3 billion in economic activity in New York State in 2005, and 36,600 jobs.

CORNELL UNIVERSITY ECONOMIC IMPACT ON NEW YORK STATE. APPELSEED. FEBRUARY, 2007



The Consortium of Universities of the Washington Metropolitan Area estimated that in 1992 its twelve member institutions generated a total of \$9 billion within the Washington-area economy. If this total had included all of the area's institutions of higher education, it would have equaled an estimated \$14.4 billion.

THE ECONOMIC IMPACT OF GEORGE WASHINGTON UNIVERSITY ON THE WASHINGTON METROPOLITAN AREA. BY STEPHEN S. FULLER, PH.D., PROFESSOR OF PUBLIC POLICY, GEORGE MASON UNIVERSITY





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