

MESSAGE FROM THE NEW YORK BUILDING CONGRESS HIGHER EDUCATION COMMITTEE CO-CHAIRS

If asked to describe New York City, many would tell you it is the global capital of finance and business. Others would highlight its exceptional cultural offerings or its status as the world's media mecca.

Perhaps it is time to add "college town" to the Big Apple's long list of defining traits. As you will see in this report, New York City boasts an unparalleled concentration of higher education institutions, which ably serve the highest population of university and college students in the nation.

The main purpose of this report is to provide insights on the extraordinary amount of recent, ongoing, and planned investments in the physical campuses and facilities that collectively serve more than half a million students in degree-credit programs throughout the five boroughs. In addition, we have sought to measure the enormous economic benefits the City derives from these institutions and their capital projects.

But before we dive into the numbers, it is important that we take a step back to consider the other, less quantifiable contributions of higher education to this great City.

Our colleges and universities collectively embody the core belief that everyone is entitled to high-quality education as a means of social opportunity and mobility. The sheer number and diversity of institutional missions, fields of study, and degree programs offered by these schools attract the individual aspirations and talents of students from across the country and the world, while signaling New York's commitment to nurturing the next generation of professionals, scholars, leaders, and entrepreneurs.

Reaching into every borough and many neighborhoods, the City's vast higher education network is easily accessible via mass transit and offers an array of student housing options. And given the breadth of public and private institutions operating in New York City, current and prospective students enjoy a broad range of tuition and financial assistance options.

In today's global economy, where movement is swift and knowledge is king, New York City's competitiveness hinges in large part on its ability to cultivate a highly educated, skilled, and innovative workforce.

The fact that New York City is in the early stages of a higher education building boom is certainly great news in the near term for the construction industry and the local economy. Far more important, however, is what it means for our future. By investing billions of dollars to maintain, upgrade, and expand their facilities and campuses, these schools are confirming that they are thriving today while also preparing for an even brighter tomorrow.

Sincerely,



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INTRODUCTION

New York's 105 colleges and universities play a critical role in nearly every aspect of the City's everyday life. These institutions employ hundreds of thousands of New Yorkers, prepare our future leaders, foster the discoveries that will propel our economy for decades to come, and play an active role in their local communities.

Perhaps less well-known is higher education's role as a major purchaser of design and construction services. Bolstered by their confidence in the City's direction and ongoing successes in fundraising, New York's colleges and universities invested \$2 billion annually from fiscal years 2010 to 2012 to maintain their existing facilities and build for the future. And almost \$10 billion in additional physical investments are expected through 2017.

Many colleges and universities are building to support anticipated increases in enrollment. Some are accommodating the latest in educational technology, while others are seeking to maintain and expand their dominance in scientific and technological research. And in one case—Cornell Tech—the plan is to create a new, internationally renowned applied sciences and engineering campus focused on innovation, entrepreneurship, and collaboration between academia and industry.

Several of the planned investments are massive in scope, including Columbia University's 6.8 million square foot Manhattanville Campus expansion, New York University's (NYU) planned 1.9 million square foot expansion, Fordham University's Lincoln Center campus expansion, and The City University of New York's (CUNY) ongoing \$1.6 billion "Decade of Science" initiative, which includes two new facilities that will open in 2014, a 206,000 square foot Advanced Science Research Center and a 190,000 square foot science lab building for City College's Science Division.

These big-ticket investments, however, represent a fraction of the work.

Dozens of other institutions throughout the five boroughs are in the planning

or construction phases with a wide range of projects designed to improve libraries, student housing, performance venues, athletic facilities, nursing programs, and other facilities that house a variety of academic disciplines.

In addition to strengthening each individual institution, these projects are providing multiple benefits to the New York City economy in general and the construction industry in particular.



(above) Rendering of Cornell Tech Campus by Kilograph

(top right) Rendering of Academic Building, New York City College of Technology, by Perkins Eastman, courtesy of The City University of New York

Higher Education in NYC: A Snapshot



- New York City is currently home to 105 institutions of higher education. Counted among those ranks are:
 - » seventy-three private colleges and universities, including many of the nation's most prestigious, such as Columbia, NYU, Fordham, St. John's, and, most recently, Cornell Tech; and
 - » twenty-four colleges, professional schools, and community colleges that comprise the CUNY system and four institutions affiliated with the State University of New York (SUNY). SUNY and CUNY currently rank #2 and #4, respectively, among the nation's largest public university systems.
- Sixty-eight colleges and universities are based in Manhattan, followed by Brooklyn with fourteen, Queens with twelve, the Bronx with eight, and Staten Island with three.
- New York City boasts the highest population of college and university students in the nation, with nearly twice as many students as Los Angeles, which is second on the list.
 - » Student enrollment in undergraduate, graduate, and professional degree-credit programs in New York City climbed to 534,710 in 2012 (more than the entire population of Atlanta).
 - » Overall enrollment grew twenty-eight percent between 2000 and 2012.

Economic Contributions

The higher education sector is a major and largely underappreciated driver of New York City's economy. The City's colleges and universities account for substantial and growing contributions to regional employment, earnings, and population, as well as economic activity and output.

While total employment in other iconic sectors, such as finance and corporate headquarters, has been stagnant or declining, institutions of higher learning continue to add jobs at an impressive rate.

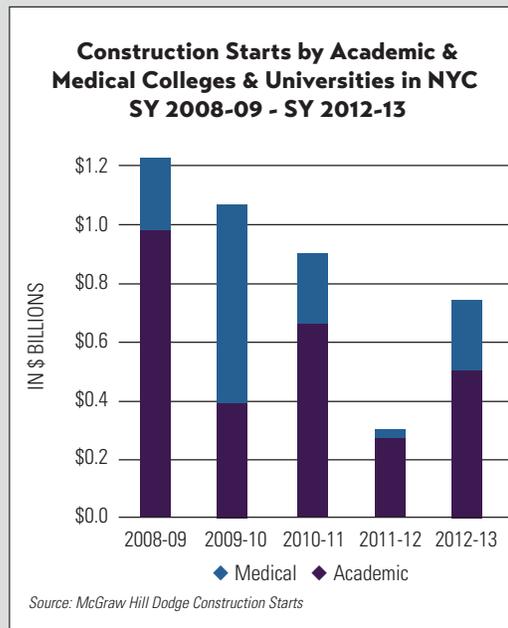
- New York's 105 higher education institutions:
 - » contributed an estimated \$7.5 billion to Gross City Product in 2012;
 - » employed 113,000 men and women in 2013, up from fewer than 79,000 workers in 2000, according to the New York State Department of Labor;
 - » accounted for fifteen percent of New York City's total job growth since 2000; and
 - » engaged in sponsored research projects that were valued at \$1.97 billion in 2012.
- In addition, the investments of its higher education institutions have fueled the City's strong performance in attracting, developing, and retaining a more educated population and workforce than the nation as a whole.
 - » In 2012, New York residents with a bachelor's or post-graduate degree earned a median annual income of approximately \$70,700, which ranks among the highest in the nation.
 - » Forty-two percent of the City's 2012 workforce had graduated from college.
 - » Thirty-five percent of the City's residents, twenty-five years of age or older in 2012, had a Bachelor of Arts degree or higher, compared to twenty-nine percent nationally.

2008-2013

ROBUST SPENDING IN UNCERTAIN TIMES

Over the past five school years, starting in the fall of 2008 through the summer of 2013, New York City's colleges and universities commenced work on 463 construction projects. With an estimated value of \$4.2 billion, the higher education sector represented approximately five percent of all public and private construction starts throughout the City. Of the total, academic institutions accounted for \$2.8 billion and medical colleges for \$1.4 billion of construction starts.

The total anticipated value of new, ground-up construction topped \$3.3 billion during this period and will ultimately yield six million square feet of new floor space. Projects involving alterations and renovations to existing facilities accounted for an additional \$900 million in total value.



The 463 construction projects were spread among all five boroughs. Although most construction occurred in Manhattan, significant construction activity also took place in Brooklyn and the Bronx. In Brooklyn, higher education spending in the Tech Triangle area of Downtown Brooklyn was spearheaded by the Polytechnic Institute of NYU, St. Francis College, the New York City College of Technology, and Long Island University, and outside the Tech Triangle by Brooklyn College and Medgar Evers College.

Fordham University, Lehman College, and Bronx Community College were heavily involved in facility improvements in the Bronx. A new home was created for the CUNY School of Law and facility upgrades were also undertaken by St. John's University in Queens and the College of Staten Island.

Higher education construction starts during this period correlated with the larger economy. For the 2008-2009 school year, construction starts reached \$1.2 billion in value, followed by \$1.1 billion in 2009-2010. As with other sectors of the economy, however, construction starts by colleges and universities were adversely affected by the aftershocks of the national recession.

The value of all higher education construction starts dropped to \$885 million in 2010-2011, and plummeted further—to \$299 million—in 2011-2012. The impact has thus far proven temporary, as construction starts rebounded to \$734 million in value during the 2012-2013 school year and are expected to rise with anticipated spending through fiscal year 2017.

Permitted construction starts do not account for all the capital spending activity of higher education institutions. By comparing responses to a recent survey of higher education institutions with historical construction starts data from McGraw Hill Dodge Construction, the New York Building Congress estimates that New York City's colleges and universities invested \$5.9 billion in capital projects over the past three fiscal years (FY 2010-2012).

2013-2017

NEAR-TERM OUTLOOK

In preparation of this report, the New York Building Congress, on the initiative of its Higher Education Committee, conducted a survey of New York City institutions of higher learning regarding recently completed, ongoing, and proposed construction spending.¹ The Building Congress, in collaboration with the research firm Urbanomics, used the survey responses in conjunction with other available data sources to derive its forecast for higher education construction spending in New York City from fiscal years 2013 through 2017.

Over that five-year period, the Building Congress forecasts higher education construction spending will reach \$9.85 billion. If realized, this would be a continuation of the nearly \$2 billion in physical investments these institutions made annually over the previous three years.

The higher education institutions surveyed for this report expect to make major investments in a wide range of existing and new facilities, including performing arts and research centers, new academic buildings, dormitories, and utilities, highlighted by construction of the first phase of the \$2 billion Cornell Tech campus on Roosevelt Island. Those survey respondents who shared information about annual maintenance and repairs estimate an average seventeen percent increase in outlays as a result of development that is underway or anticipated.

NYU alone anticipates fourteen major construction projects, including the \$345 million Center for Urban Science and Progress in Downtown Brooklyn. Columbia University also reported a number of major projects led by its ongoing construction of the 450,000 square foot Jerome L. Greene Science Center, which will focus on neuroscience research. CUNY expects to have eleven different projects in various stages of construction throughout its system, including a \$406 million, 360,000 square foot Academic Building at New York City College of Technology.

Other major players include Fordham University, which reported three major projects with a combined value of \$425 million, and

Weil Cornell Medical College, which is putting the finishing touches on its \$622 million Belfer Research Building.

While the majority of these projects will be privately financed by the sponsoring organizations, much of the cost for construction of public institutions will be paid by the State of New York, which operates the SUNY and CUNY systems, though CUNY also receives funding from the City of New York.

In addition to the direct and indirect economic benefits from this capital investment, which are described in more detail on the following page, the developments also will relieve pressure on capacity by allowing some future growth in institutional employment and enrollment. Those institutions with expected new development estimate an average eight percent growth in employment per year through 2017, and a five percent increase in enrollment per year through 2017. In addition, the Cornell Tech development is expected to require 780 faculty and administrative jobs while accommodating nearly 600 new students.

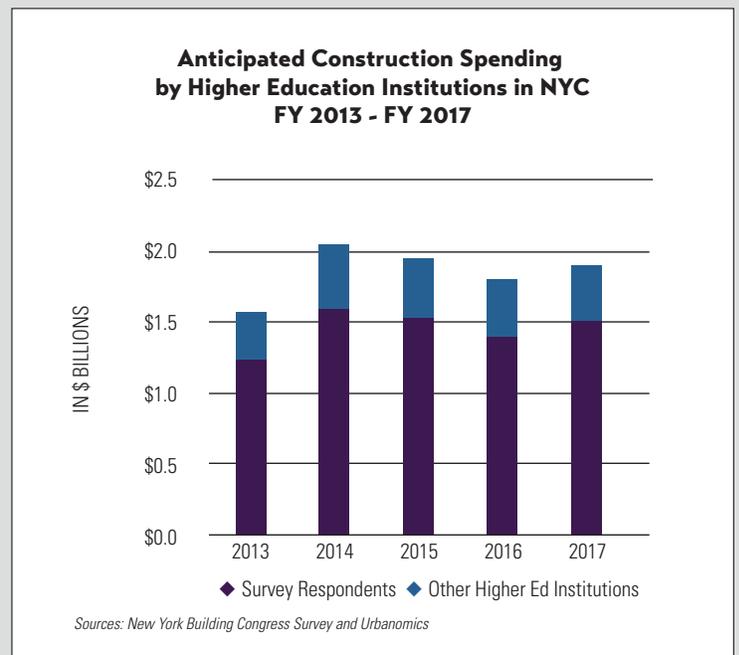


Photo of Manhattanville Campus Expansion, Columbia University, courtesy of Manhattanville Development Group
¹See page 7 for more information about the survey.

THE ECONOMIC IMPACT OF HIGHER ED CONSTRUCTION

Construction starts by New York's colleges and universities over the past five years accounted for approximately 30,000 person-years of construction employment. After factoring in the multiplier effect, construction activity was responsible for a total of 45,000 temporary jobs and \$3.6 billion in labor income for the overall New York City economy. In addition, the \$4.2 billion of direct spending generated \$6.5 billion of construction and related business sales in response to the expanded demand for construction-related materials and services.²

From fiscal years 2010 through 2012, \$2 billion per year was invested by all institutions in capital expenditures on new and improved facilities. It generated roughly 15,000 person-years of employment per year, and the labor income associated with this employment averaged \$1.2 billion per year.

The impact of this investment on the New York City economy was represented by the increase in Gross City Product generated by development. Most of the value added was reflected in employment and wages and represented a gain of \$3.9 billion over the three years. On average, business revenues rose directly by \$2 billion per year, in line with the institutional expenditures.

For the fiscal-year period 2013 through 2017, the Building Congress forecasts \$9.85 billion of direct capital investments by

the higher education sector in the City's economy. Specifically, these outlays will directly produce a dramatic \$6 billion increase in Gross City Product and a \$9.6 billion increase in construction-related business revenues, while likely creating 71,200 person-years of direct employment.

As impressive as the direct impact on the City's economy promises to be, the total economic impact will be much greater as the demand for building materials and development-related services recirculates through the economy, triggering successive rounds of production and consumption with multipliers that may reach as high as 1.57.

When this multiplier effect is considered, the planned expenditures of \$9.85 billion will likely generate \$14.65 billion in total output, or business earnings, and nearly \$10 billion in increased Gross City Product. On the employment side, based on a 1.4 multiplier, 100,000 person-years of employment should be created over the forecast period, and aggregate labor earnings should increase by \$8 billion.

**Direct and Total Economic Impact of Higher Education Construction Spending in NYC
FY 2010 - FY 2017**

	FY 2010-2012			Anticipated FY 2013-2017		
	Direct Effect	Total Economic Effect	Multiplier	Direct Effect	Total Economic Effect	Multiplier
Person-Years of Employment	44,892	63,450	1.41	71,183	100,609	1.41
Labor Income	\$3.67B	\$5.07B	1.38	\$5.81B	\$8.04B	1.38
Value Added	\$3.86B	\$6.04B	1.57	\$6.12B	\$9.58B	1.57
Output	\$6.05B	\$9.24B	1.53	\$9.59B	\$14.65B	1.53

Figures Expressed in Constant 2013 Dollars

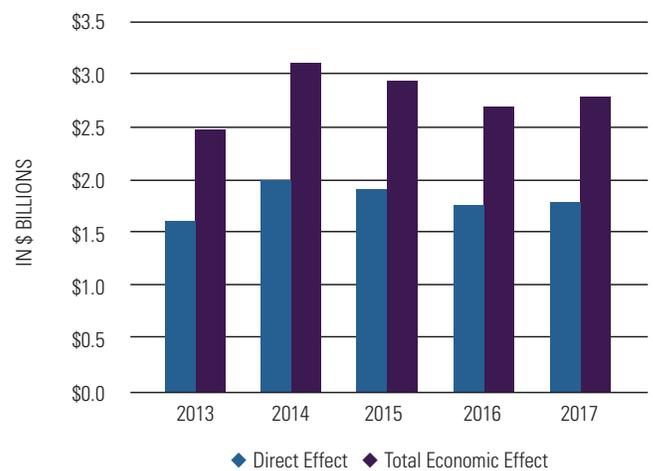
Sources: Implan Pro Model and Urbanomics

**Direct and Total Economic Impact
of Higher Education Construction Starts in NYC
SY 2008-09 - SY 2012-13**



Sources: Implan Pro Model and Urbanomics

**Direct and Total Impact of Higher Education
Construction Spending on Total Output in NYC
FY 2013 - FY 2017**



Sources: Implan Pro Model and Urbanomics

² Economic impact simulations in this report were run in the Implan Pro Model, an econometric inter-industry model calibrated on the New York City economy in 2011 by MIG, Inc. The model is a widely accepted tool for estimating indirect and induced effects of direct expenditures, price changes, or policy actions.

RECOMMENDATIONS

This report should foster a greater awareness of the enormous impact of higher education in New York City—both as an economic engine on par with finance, media, and new technology and as an incubator for future growth across all industries.

Moving forward, the key is to make progress on initiatives that leverage the intellectual capital, ingenuity, and research capabilities of New York's colleges and universities to spur job creation, spark new industries, and diversify the economy. Realizing this goal requires more than bold visions. It requires the active support and cooperation from government, business, civic organizations, and local communities—all of which benefit from and have a stake in a flourishing higher education sector.

- » The City should establish the Mayor's Office of Higher Education. This office would serve as a one-stop shop for higher education institutions seeking to expand to accommodate increasing student enrollments and respond to the needs of new and changing job sectors.



- » Building on the Applied Sciences NYC initiative, which is well underway, the City should implement a program that seeks to identify and facilitate new opportunities for partnerships among higher education institutions, the business community, and government to foster economic development.
- » Government and industry leaders should collaborate with higher education institutions on the use of “big data” to advance Smart Cities systems and technologies designed to address the critical challenges facing New York and other cities, including infrastructure, tech integration, energy efficiency, transportation congestion, public safety, and public health.
- » Business, civic, and community leaders should take an active role in working with higher education institutions to research, build, and implement workforce development strategies that ensure workforce needs are met today and workers are prepared for the jobs of the future.
- » Higher education institutions should explore opportunities to use their collective strength to realize individual goals, relieve budget pressures, and improve community relations. Consortia or other forms of cooperative arrangements can function to provide joint purchasing, promote sustainability programs, offer joint academic programs, and enhance legislative and public advocacy efforts, among other things.
- » Higher education institutions should develop or expand programs, such as NYU Wagner's capstone projects and the Macaulay Honors College at CUNY's interdisciplinary seminars with a focus on New York City, that bring learning outside of the classroom, utilizing the vast resources of the City. These types of educational opportunities turn students into engaged citizens, cultivating an appreciation for the City that continues long after graduation.

About the Survey

The Building Congress survey yielded responses from thirty-three institutions, which collectively dominate the higher education sector in terms of employment, enrollment, capital assets, recent investment, sponsored research, and construction activity. Of the \$4.2 billion in value of higher education construction starts between SY 2008 and SY 2013, these thirty-three schools were responsible for \$3.3 billion, or seventy-nine percent of all construction starts.

The survey respondents are responsible for fifty-three percent of all higher education employment and enroll 404,815 students in undergraduate, graduate/professional, and medical programs. In addition, several hundred thousand non-degree credit students are enrolled in continuing education programs.

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The New York Building Congress is a membership coalition of business, labor, association, and government organizations promoting the design, construction, and real estate industry in New York City.

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NYC•EDU was prepared with the assistance of Urbanomics by the New York Building Congress.

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