



Comparison of SUNY Renewal and Backlog -2007 to 2011

December 2012

Table of Contents

	<i>Page</i>
1.1 Introduction	2
1.2 General Overview and Summary Findings 2007	2
1.3 General Overview and Summary Findings 2011	2
1.4 Projected 2011 Results Compared to Actual 2011 – Results Overview	3
1.5 Backlog Reduction versus Investment	4
1.6 Growth of Backlog: Illustration of Growth and Comparison with Peer Institutions	6
1.7 Conclusion	8

1.1 Introduction

The State University of New York (SUNY) and the State University Construction Fund (Fund) commissioned the Rockefeller Institute of Government to complete an initial assessment of SUNY state-operated and statutory campuses renewal and backlog needs in 2007. In 2011, the Fund contracted with Sightlines/ Pacific Partners Consulting Group (PPCG) to update the 2007 study. This report presents the 2011 results compared to the report completed in 2007. In addition, this document illustrates the impact of the investments made over the previous five years by both the State and SUNY.

1.2 General Overview & Summary Findings for 2007

The initial study focused on creating a standardized approach to both categorize the condition of SUNY's academic facilities on the state-operated and statutory campuses and to provide a high level statistical analysis of backlog and renewal needs and the investment levels needed to address capital maintenance needs of the largest public higher education system in the country. This comprehensive report successfully cataloged the condition of over 1,800 academic buildings and associated infrastructure.

The 34 institutions had a total current replacement value (CRV¹) of \$25.7 billion in 2007, comprised of \$22.9 billion for buildings and \$2.8 billion for supporting infrastructure. The backlog of deferred capital maintenance in 2007 for these 34 institutions was \$3.2 billion, comprised of \$2.4 billion for building system renovations and \$695.9 million for renewal of supporting infrastructure with a facilities condition index (FCI²) of 12 percent. These results were reported in 2007 dollars. Therefore, to make a comparison to 2011 survey results, it is necessary to add inflation to the 2007 levels. The 2011 costs were calculated by escalating the original 2007 subsystem cost estimates by actual 2008 through 2011 inflation as measured by the Fund using published labor rates by the New York State Department of Labor along with actual material costs and escalation rates from prominent trade publications. The cumulative increase was 14.3 percent and is reflected in the results.

1.3 General Overview & Summary Findings for 2011

Working with the support of SUNY and the Fund, Sightlines employed the same methodology and process originally designed for the 2007 study. On its second review, SUNY and the Fund utilized lessons learned in 2007 and were able to produce a more comprehensive survey. In addition, five years of performing work on these critical components have produced a better understanding of facilities needs.

Total CRV for SUNY state-operated and statutory academic facilities is now \$30.0 billion. This number is comprised of \$26.7 billion for buildings and \$3.3 billion for supporting infrastructure. Further, the SUNY state-operated and statutory system as a whole

¹ Current Replacement Value (CRV) is the cost associated with replacing the building and its sub-systems. These costs were determined using actual project costs from SUNY campuses.

² Facilities Condition Index (FCI) is calculated by dividing the backlog by the CRV generating a figure that represents the percent of deficiencies in the building.

currently has a \$3.1 billion backlog of deferred capital maintenance, comprised of \$2.5 billion for building system renovations and \$593.6 million for renewal of supporting infrastructure resulting in a combined FCI of 10 percent.

1.4 Projected 2011 Results Compared to Actual 2011 – Results Overview (\$ in millions)

A reasonable method for a forecast of the 2011 accumulated backlog is to take the 2007 backlog, identified in the original study, and add the renewal needs projected for 2008, 2009, 2010, and 2011 (adjusting for inflation). By comparing this forecast with the actual accumulated backlog, one can ascertain whether or not an individual campus “made progress” in reducing its backlog. The chart below presents this analysis for each of the campuses and for the SUNY System as a whole. The variance column shows the difference between the forecast and the actual backlog between the campuses. Based upon the updated 2011 study, the backlog was calculated at \$3.1 billion. Therefore, the estimated backlog reduction over the past five years was \$2.3 billion. This confirms that the significant capital investments in SUNY state-operated and statutory academic facilities made by the State resulted in a major improvement in campus facilities and infrastructure by preventing the backlog from increasing.

Campus (\$ in millions)	Total 2007 Accumulated Backlog	2007-2011 Projected Backlog Growth	Plus 2008/2011 cost escalation	Projected 2011 Backlog With No Investment	Total 2011 Accumulated Backlog	Variance (2011 Reported Backlog versus projected)
University at Buffalo	\$484.2	\$192.5	\$96.8	\$773.4	\$239.0	(\$534.4)
Cornell	\$197.5	\$120.1	\$45.4	\$363.1	\$204.8	(\$158.3)
University at Albany	\$155.0	\$87.5	\$34.7	\$277.2	\$124.5	(\$152.7)
Binghamton University	\$144.0	\$86.7	\$33.0	\$263.7	\$121.3	(\$142.4)
The College of Brockport	\$145.8	\$55.0	\$28.7	\$229.5	\$94.0	(\$135.5)
Purchase College	\$133.9	\$57.7	\$27.4	\$219.0	\$120.2	(\$98.8)
SUNY New Paltz	\$98.6	\$48.0	\$21.0	\$167.7	\$78.1	(\$89.6)
SUNY Oswego	\$117.6	\$51.1	\$24.1	\$192.8	\$113.5	(\$79.3)
Buffalo State College	\$124.3	\$71.7	\$28.0	\$224.0	\$146.9	(\$77.1)
SUNY Plattsburgh	\$43.7	\$45.7	\$12.8	\$102.2	\$29.0	(\$73.2)
Farmingdale State College	\$94.6	\$39.0	\$19.1	\$152.7	\$82.0	(\$70.7)
SUNY Fredonia	\$80.6	\$24.7	\$15.1	\$120.4	\$50.1	(\$70.3)
College at Oneonta	\$60.7	\$33.6	\$13.5	\$107.8	\$45.7	(\$62.0)
DMC	\$190.7	\$74.6	\$37.9	\$303.2	\$245.4	(\$57.8)
Old Westbury	\$84.8	\$52.7	\$19.7	\$157.2	\$101.4	(\$55.8)
Geneseo	\$79.6	\$38.7	\$16.9	\$135.2	\$84.7	(\$50.5)
Cortland College	\$53.9	\$42.3	\$13.8	\$110.0	\$63.2	(\$46.7)
Stony Brook University	\$504.1	\$182.1	\$98.1	\$784.3	\$738.7	(\$45.6)
Maritime College	\$54.7	\$21.0	\$10.8	\$86.5	\$49.5	(\$37.0)
System Admin	\$23.5	\$14.0	\$5.4	\$43.0	\$7.5	(\$35.5)
SUNY Potsdam	\$39.0	\$29.1	\$9.7	\$77.9	\$43.8	(\$34.1)
ESF	\$48.7	\$29.4	\$11.2	\$89.3	\$59.6	(\$29.6)
SUNY Delhi	\$29.7	\$13.3	\$6.1	\$49.1	\$25.4	(\$23.7)
Alfred State College	\$11.7	\$17.0	\$4.1	\$32.8	\$10.5	(\$22.3)
SUNY Cobleskill	\$37.0	\$19.4	\$8.1	\$64.5	\$43.4	(\$21.1)
SUNY Canton	\$15.2	\$12.7	\$4.0	\$31.8	\$11.8	(\$20.0)
Upstate Medical University	\$24.7	\$22.4	\$6.7	\$53.8	\$38.0	(\$15.7)
Ceramics	\$8.3	\$6.2	\$2.1	\$16.5	\$4.0	(\$12.5)
College of Optometry	\$37.5	\$13.5	\$7.3	\$58.3	\$47.1	(\$11.2)
SUNYIT	\$3.5	\$10.7	\$2.0	\$16.2	\$12.9	(\$3.2)
Empire State College	\$1.1	\$1.6	\$0.4	\$3.2	\$0.0	(\$3.2)
Morrisville State College	\$24.4	\$18.4	\$6.1	\$49.0	\$68.8	\$19.8
Grand Total	\$3,153	\$1,532.3	\$670.0	\$5,354.9	\$3,104.8	(\$2,250.1)

1.5 Backlog Reduction versus Investment

In the time between April 2007 and September 2011, the State and SUNY have invested a total of \$2.4 billion on projects that focused - either in whole or in part - on the reduction of the capital maintenance backlog at SUNY's state-operated and statutory academic campuses. This effort resulted in a total reduction of the expected backlog at these institutions of \$2.3 billion (41.7 percent), from the projected level of \$5.3 billion to the actual level of \$3.1 billion, holding the backlog to the 2007 level.

This positive outcome was repeated at all but one campus³, and it is anticipated that successes in backlog reduction would be even higher if the time frame of this report had been extended by another year. Component rating data for the comparison was collected up until September 15, 2011, which was the time frame used to evaluate the impact of the capital investments. Several capital projects are underway that will further improve subsystems currently in backlog.

³ Morrisville's increased backlog figure has several contributing features, but most markedly is the cause of several – expensive – rehabilitation projects and the re-examining of component rating levels set in 2007.

Analyzing SUNY Facilities Renewal and Backlog Needs

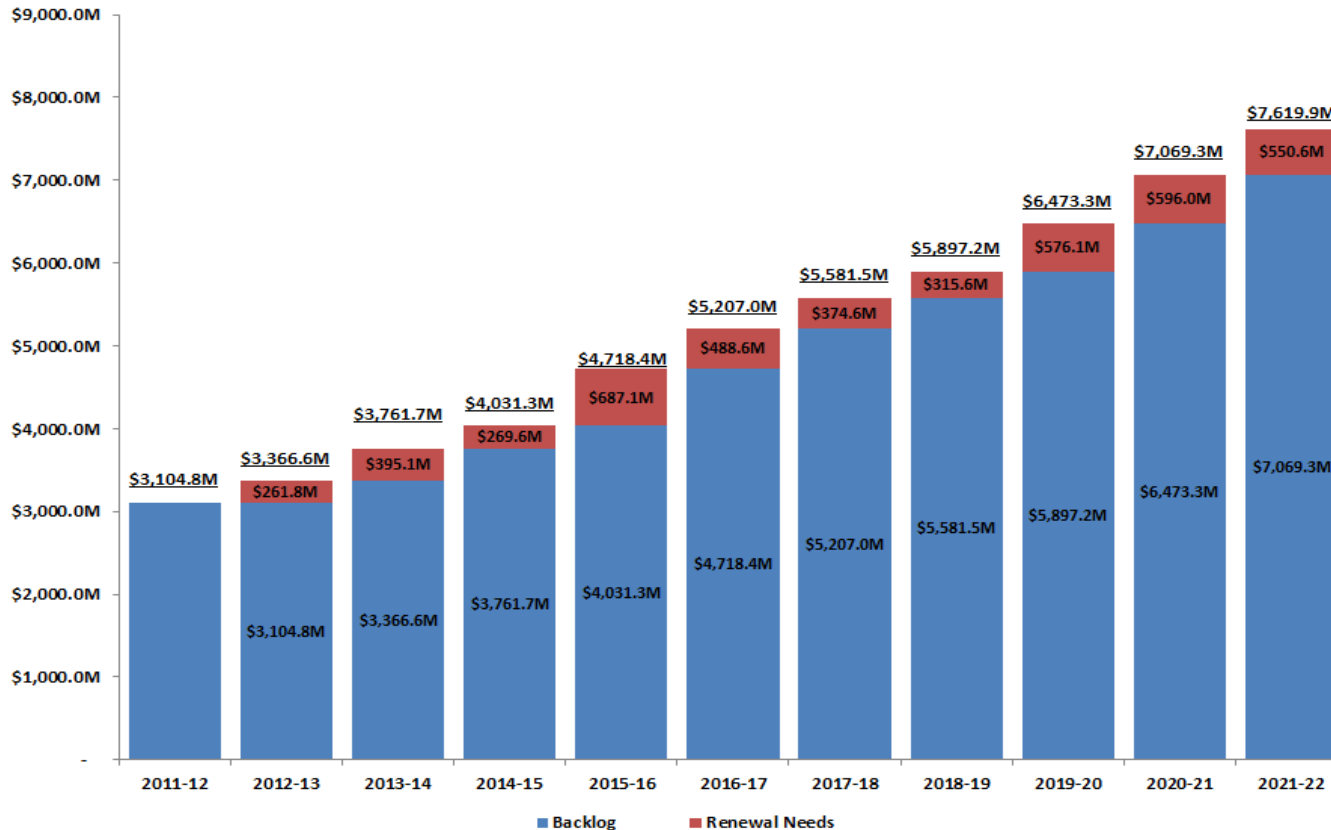
CAMPUS (\$ in millions)	Projected 2011 Backlog Assuming No Investment	2011 Actual Backlog	Backlog Reduction	% Difference	Investment in Critical Maintenance Projects - All Sources	Backlog Reduction in Excess of Investments
University at Albany	\$277.2	\$124.5	(\$152.7)	-55%	\$108.5	\$44.2
Ceramics	\$16.5	\$4.0	(\$12.5)	-76%	\$22.3	(\$9.8)
Alfred State College	\$32.8	\$10.5	(\$22.3)	-68%	\$36.7	(\$14.4)
Binghamton University	\$263.7	\$121.3	(\$142.4)	-54%	\$89.5	\$52.9
The College at Brockport	\$229.5	\$94.0	(\$135.5)	-59%	\$69.5	\$66.0
Buffalo State College	\$224.0	\$146.9	(\$77.1)	-34%	\$115.2	(\$38.1)
University at Buffalo	\$773.4	\$239.0	(\$534.4)	-69%	\$398.1	\$136.3
SUNY Canton	\$31.8	\$11.8	(\$20.0)	-63%	\$25.3	(\$5.3)
SUNY Cobleskill	\$64.5	\$43.4	(\$21.1)	-33%	\$26.1	(\$5.0)
Cornell	\$363.1	\$204.8	(\$158.3)	-44%	\$125.2	\$33.1
Cortland College	\$110.0	\$63.2	(\$46.7)	-42%	\$62.9	(\$16.2)
SUNY Delhi	\$49.1	\$25.4	(\$23.7)	-48%	\$32.6	(\$8.9)
DMC	\$303.2	\$245.4	(\$57.8)	-19%	\$94.3	(\$36.5)
Empire State College	\$3.2	\$0.0	(\$3.2)	-100%	\$3.0	\$0.2
ESF	\$89.3	\$59.6	(\$29.6)	-33%	\$12.1	\$17.5
Farmingdale State College	\$152.7	\$82.0	(\$70.7)	-46%	\$71.1	(\$0.4)
SUNY Fredonia	\$120.4	\$50.1	(\$70.3)	-58%	\$64.1	\$6.2
Geneseo	\$135.2	\$84.7	(\$50.5)	-37%	\$63.9	(\$13.4)
Maritime College	\$86.5	\$49.5	(\$37.0)	-43%	\$44.7	(\$7.7)
Morrisville State College	\$49.0	\$68.8	\$19.8	40%	\$34.4	(\$54.2)
SUNY New Paltz	\$167.7	\$78.1	(\$89.6)	-53%	\$73.7	\$15.9
Old Westbury	\$157.2	\$101.4	(\$55.8)	-36%	\$34.0	\$21.8
College at Oneonta	\$107.8	\$45.7	(\$62.0)	-58%	\$67.0	(\$5.0)
College of Optometry	\$58.3	\$47.1	(\$11.2)	-19%	\$19.6	(\$8.4)
SUNY Oswego	\$192.8	\$113.5	(\$79.3)	-41%	\$81.2	(\$1.9)
SUNY Plattsburgh	\$102.2	\$29.0	(\$73.2)	-72%	\$71.6	\$1.6
SUNY Potsdam	\$77.9	\$43.8	(\$34.1)	-44%	\$56.8	(\$22.7)
Purchase College	\$219.0	\$120.2	(\$98.8)	-45%	\$71.7	\$27.1
Stony Brook University	\$784.3	\$738.7	(\$45.6)	-6%	\$356.3	(\$310.7)
SUNYIT	\$16.2	\$12.9	(\$3.2)	-20%	\$9.0	(\$5.8)
System Admin	\$43.0	\$7.5	(\$35.5)	-83%	\$31.8	\$3.7
Upstate Medical University	\$53.8	\$38.0	(\$15.7)	-29%	\$60.4	(\$44.7)
	\$5,354.9	\$3,104.8	(\$2,250.1)	-42%	\$2,432.6	(\$182.5)

It is important to note that while the above chart illustrates where SUNY state-operated and statutory academic campuses stand now, capital backlog is not an issue that can ever be fully and completely eliminated. The continued impact of time and use will take a toll on a facilities buildings and infrastructure, causing new backlog to accrue over time.

1.6 Growth of Backlog: Illustration of Growth and Comparison with Peer Institutions

Reinvestment in SUNY’s buildings and infrastructure is needed in order to prevent further deterioration. When excluding outside impacts (i.e. further investment from existing or new funding sources, inflationary impact on the cost of component improvement, and the addition of new buildings and infrastructure with associated components) backlog is projected to grow to \$4.5 billion by 2021-22 resulting in a total backlog of \$7.6 billion without inflation. Assuming a CRV of nearly \$30.0 billion, this would result in an FCI of 16 percent by 2016-17 and 25 percent by 2021-22.

Existing Backlog and Growth Over Time



While such a rate of degradation is common, a comparison of SUNY against other higher education systems shows that not all systems deteriorate at the same pace. SUNY is not facing the same challenges. Out of eight public higher education systems surveyed, the rate of SUNY’s state-operated and statutory academic facilities backlog growth is in the top three, behind only the University’s of Hawaii and Texas which are decaying quicker.

Growth of Backlog Comparison with Peer Institutions

State Systems	Facility Condition Index (FCI)						2011-2012 thru 2016-2017 Growth	% Growth	Rank Lowest to Highest
	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016	2016-2017			
California State University	0.11	0.12	0.13	0.14	0.14	0.15	0.04	36%	1
University of California	0.23	0.25	0.27	0.30	0.32	0.34	0.11	48%	2
City University of New York	0.13	0.14	0.16	0.17	0.19	0.20	0.07	54%	3
Minnesota State Colleges and Universities	0.10	0.12	0.13	0.15	0.16	0.17	0.07	70%	4
Oregon University System	0.18	0.21	0.23	0.26	0.28	0.31	0.13	72%	5
State University of New York	0.09	0.10	0.11	0.12	0.15	0.16	0.07	78%	6
University of Hawaii	0.06	0.08	0.09	0.10	0.11	0.12	0.06	100%	7
University of Texas	0.03	0.06	0.08	0.09	0.11	0.12	0.09	300%	8

1.7 Conclusion

The 2007 study emphasized the need for significant and sustained investment in order to achieve reduction of backlog at SUNY's state-operated and statutory academic facilities. This essential funding would ensure that the physical integrity of the facilities was maintained while making headway on priority facility concerns that have an impact on the continued safety of students and staff.

The 2011 study reveals that investments by the State have had a significant impact. Backlog growth from 2007 to 2011 was estimated to be \$5.3 billion (\$4.3 billion buildings / \$1.0 billion infrastructure), but due to capital investments – coupled with SUNY and the Fund's planning efforts – this has been reduced by \$2.2 billion or 42 percent to \$3.1 billion (\$2.5 billion buildings / \$593.5 million infrastructure). Accordingly, the Facility Condition Index (FCI) of this sector of the SUNY System has been reduced from 12 percent to 10 percent overall. However, without continued funding and support from the State, these gains will quickly vanish. Over the next five years alone, combined building and infrastructure backlog is projected to grow by 70 percent, bringing the FCI to 16 percent. In the next ten years, the FCI is expected to reach 24 percent for buildings and 37 percent for infrastructure if no investment is made, bringing the total FCI to 25 percent.

The cyclical nature of facility maintenance requires consistent investment to keep pace with decline. While the State may have competing priorities for limited capital funding, lack of routine improvements only postpone long term need. Immediate and sustained investment reduces New York's financial exposure by avoiding costly emergency repairs to poorly maintained facilities and helps to maintain safe, healthy facilities.