Performance Standards for Sustainable, Energy-Efficient Public Buildings

Consolidated Report

Required under G.S. 143-135.39(g)

October 1, 2015

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Introduction

Per G.S. 143-135.39, the NC Department of Administration is responsible for administering the Sustainable Energy-Efficient Buildings Program. The Department has completed the directives in the statute, including creation of an Advisory Committee, development of policies and technical guidelines, and conducting education and training.

A report from the Sustainable, Energy-Efficient Buildings Advisory Committee can be found on the State Construction Office website along with a series of technical standards for energy and water efficiency[1]. A procedures flow chart is also provided[2]. The Sustainable, Energy-Efficient Buildings Advisory Committee work was completed during calendar year 2008 as required by the legislation.

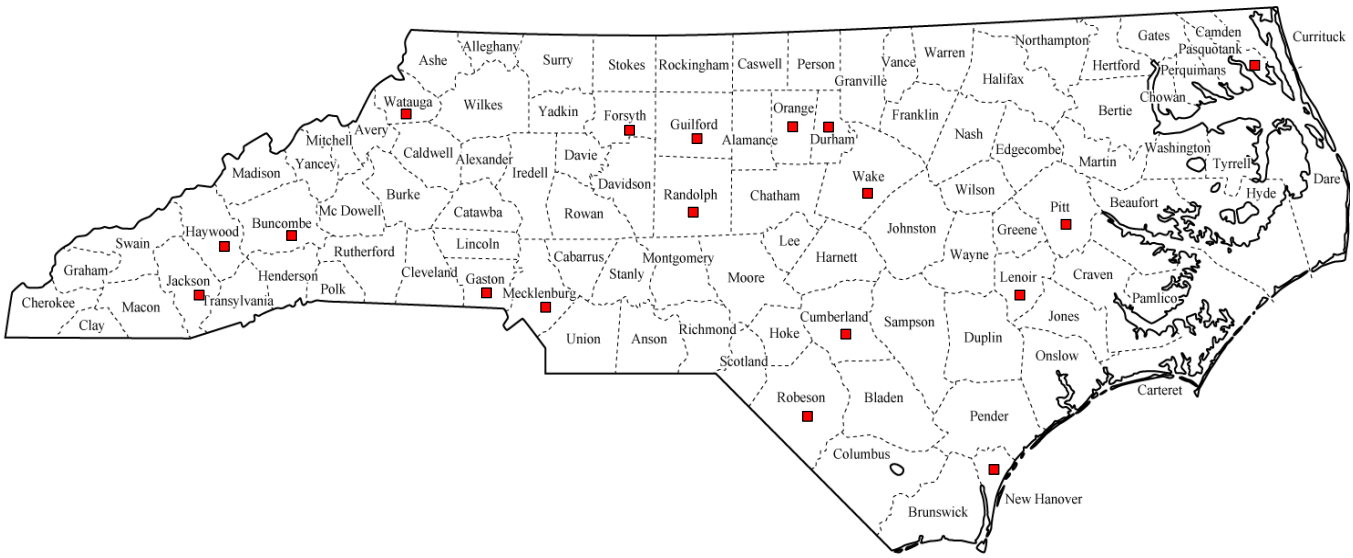
Education and training required by the program has consisted of the following:

- *Buildings Efficiency Conference* on October 29 and 30, 2008.
- *Sustainability/Energy Efficiency in Existing Buildings* presentation at the March 23, 2010 State Construction Conference[3].
- Life Cycle Cost Panel Discussion at the March 24, 2011 State Construction Conference.
- *Senate Bill 668 – A Case Study* presentation at the March 22, 2012 State Construction Conference[4].
- *Senate Bill 668 – The Sequel - The Case Studies* presentation at the March 28, 2013 State Construction Conference[5].
- *A Review of Performance of "High Performance Buildings"* presentation at the December 5, 2013 Triangle: GreenNC 2013 - Symposium for A/E/C[6].
- *Senate Bill 668 – Judgment Day* presentation at the March 27, 2014 State Construction Conference[7].
- *Commissioning Finds & Solutions* presentation at the March 26, 2015 State Construction Conference[8].
- *Building Performance Monitoring & Tracking* at the April 21-22, 2015 State Energy Conference.
- Ongoing design review and performance evaluation of state facilities required to comply with the legislation by the State Construction Office.
- State Construction Office participation in the High Performance Buildings (HiPerB) Task Force[9] quarterly meetings to share experiences and lessons learned in the design, construction and operation of energy efficient buildings.
- The State Construction Office homepage[10] includes the SCO Energy Benchmarking Project[11]. The SCO Energy Benchmarking Project contains basic performance data for each building designed under the legislation. The Project data is updated approximately once a month.

Performance Review

As part of the Sustainable, Energy-Efficient Buildings legislation, the Department is responsible for providing a consolidated report, including a performance review, State Building Commission report, and recommendations for improving the standards. The following information makes up the consolidated report.

Energy Efficient Public Buildings Reported by County
(County Map and Chart)

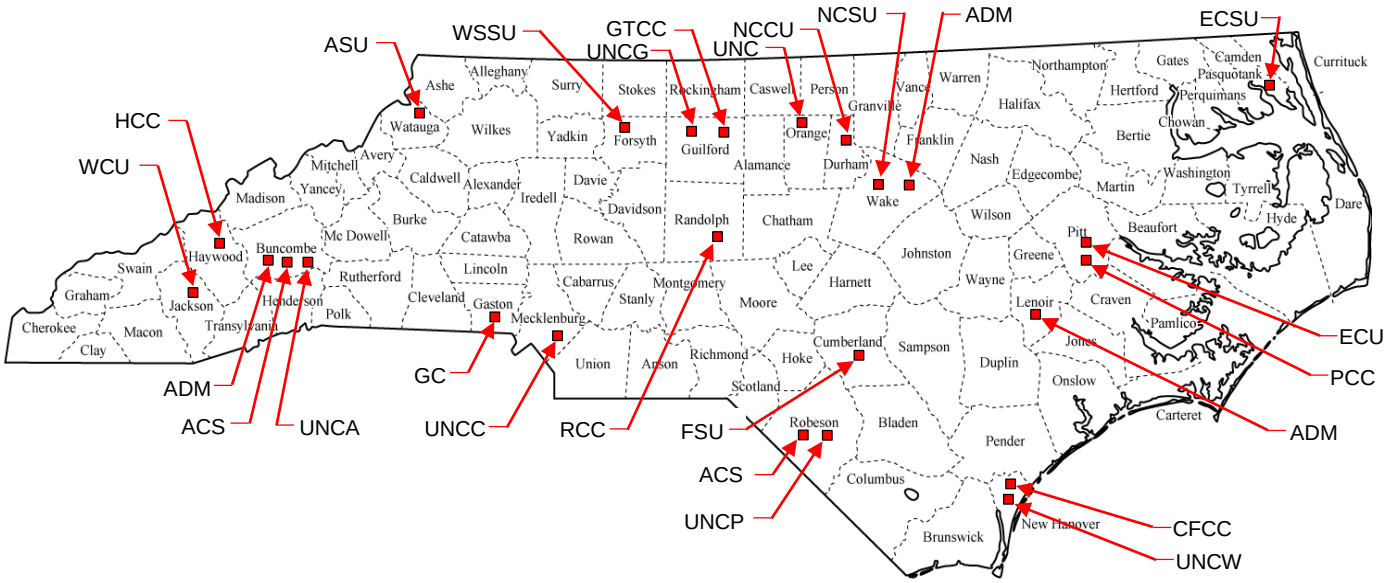


County	Number of Buildings	*Total Project Cost Public $	% of Total Project Cost
Buncombe	4	$ 48,628,346	5%
Cumberland	2	$ 18,894,214	2%
Durham	2	$ 43,927,192	4%
Forsyth	3	$ 40,194,420	4%
Gaston	1	$ 5,232,784	1%
Guilford	12	$ 55,317,947	5%
Haywood	1	$ 9,316,286	1%
Jackson	1	$ 14,587,035	1%
Lenoir	1	$ 14,088,404	1%
Mecklenburg	8	$ 248,162,742	24%
New Hanover	4	$ 114,337,485	11%
Orange	1		0%
Pasquotank	2	$ 30,396,623	3%
Pitt	3	$ 62,042,387	6%
Randolph	1	$ 6,774,300	1%
Robeson	2	$ 21,333,365	2%
Wake	10	$ 224,331,320	22%
Watauga	3	$ 68,447,213	7%
Total (18 Counties)	61	$ 1,026,012,063	100%

* Private $ amounts are not available or included.

Energy-Efficient Public Buildings by Agency

(County Map and Chart)



Agency	Number of Buildings	*Total Project Cost Public $	% of Total Project Cost
Administration (ADM)	3	$ 31,570,445	3%
Ag and CS (ACS)	2	$ 10,500,585	1%
ASU	3	$ 68,447,213	7%
Cape Fear CC (CFCC)	1	$ 44,492,096	4%
ECSU	2	$ 30,396,623	3%
ECU	2	$ 53,610,990	5%
FSU	2	$ 18,894,214	2%
Gaston College (GC)	1	$ 5,232,784	1%
Guilford TCC (GTCC)	1	$ 7,371,349	1%
Haywood CC (HCC)	1	$ 9,316,286	1%
NCCU	2	$ 43,927,192	4%
NCSU	9	$ 224,331,320	22%
Pitt CC (PCC)	1	$ 8,431,397	1%
Randolph CC (RCC)	1	$ 6,774,300	1%
UNCA	2	$ 25,093,065	2%
UNCC	8	$ 248,162,742	24%
UNCCH	1		
UNCG	11	$ 47,946,598	5%
UNCP	1	$ 16,886,020	2%
UNCW	3	$ 69,845,389	7%
WCU	1	$ 14,587,035	1%
WSSU	3	$ 40,194,420	4%
Total (22 Agencies)	61	$ 1,026,012,063	100%

* Private $ amounts are not available or included.

Implementation Cost

The first requirement in the performance review deals with the cost of implementing the energy-efficiency and water use standards. In budgeting funds for new buildings, it is estimated that a premium of between 2% and 4% should be added to account for energy-efficient design and construction. This premium includes additional design costs such as advanced planning and computer modeling of the buildings, as well as additional cost for commissioning. Additional construction costs for high-efficiency building systems are also included in the premium.

Implementation costs from data analyzed for 61 buildings completed under the program follow.

- Advanced planning fees for the 61 buildings completed under the program include project programming and budgeting which are not specifically related to saving energy. Unless specifically noted to include fees for energy modeling or LEED related expenses, advanced planning fees have not been included.
- Additional design fees for the 61 buildings completed under the program range from 0% to 2.03% of the construction cost with an average of 0.32% and a median of 1.02%. The average dropped slightly due to no additional design fees being noted for seven of the ten projects added this year. Many agencies voluntarily elect to pursue LEED accreditation for their projects separate from the requirements of this program. LEED accreditation also adds cost to the project that is included in the additional design fees noted here.
- Commissioning for the 61 buildings completed under the program have fees ranging from 0.29% to 1.77% of the construction cost with an average of 0.65% and a median of 0.89%. The lower percentage fees can be attributed to less complex and larger buildings while the higher percentage fees can be attributed to more complex and smaller buildings indicating that size and complexity matter when considering commissioning costs. Note that LEED certification also requires commissioning. 51 buildings received third party commissioning while ten buildings were not commissioned.
- Construction costs for energy saving systems have been estimated based on the designer's life cycle cost analysis and then deducted from the construction bid price for the project. The additional construction cost range from 0% to 25% of the construction bid price with an average of 6.71% and a median of 12.5%. Please note the designer's estimate is compared to construction bid prices. Both the estimates and bid prices change with market conditions. The designer's estimates are required by statute to be less than the construction budget to help ensure the projects are bid within budget.
- Total implementation cost for the 61 buildings completed under the program range from less than 1% to 25% with an average of 6.71% and a median of 12.5%. The low and high percentages are not the norm. The additional costs noted here are more than national averages of 2% to 4%. The data consists of estimates from the designer of record for the baseline building and the bid amount from the contractor awarded the project for the proposed or to be built building. Inaccurate designer estimates result in low or high implementation costs.

Operational Savings

The second requirement in the performance review deals with operating savings, particularly the utility savings. Standards are in place to ensure that buildings are designed to use 30% less energy and 20% less water than a basic code-compliant building, including forms to be completed and certified by the architect and engineer of record[12].

61 buildings have been completed and the project data required by the performance review is attached. Note the meter data is not conclusive due to a lack of steam or heating hot water and chilled water utility meter data for facilities connected to campus thermal utilities. Also, electrical and natural gas sub-meter data has proved difficult to obtain on sites or campuses with multiple buildings. Some owners have elected to charge utilities based on building size or square footage instead of utility consumption.

Employee Productivity

The third requirement in the performance review dealing with impacts on employee productivity are difficult to quantify with engineering analysis and have yet to be determined. Independent studies[13] have shown there are positive effects to employee productivity and visual satisfaction with the use of day-lighting and other features associated with energy efficient design.

Program Effectiveness

The fourth requirement in the performance review deals with program effectiveness. The legislation and the standards developed to administer the program have been effective in requiring architects and engineers to design new buildings that are 30% more energy-efficient than code and renovated buildings that are 20% more energy-efficient than code. The standards developed require all buildings designed to use 20% less water. The reporting forms certified by the engineer of record provide documentation to validate the improvements in energy-efficiency and water use. Accurate meter data provided by the owners has proved difficult to obtain as noted in the *Project Summary Tables* on pages 14 through 75 of this report.

The possible need for additional, stricter standards is addressed under the *Improvements to Energy-Efficiency Standards* section below.

Program Expansion

The fifth requirement in the performance review deals with expanding the program to include additional facilities. The size of buildings subject to this legislation, 20,000 square feet and larger, is a valid minimum for energy modeling and metering. Applying the standards to smaller buildings, with a few exceptions such as power plants and data centers, would reach diminishing returns and is not recommended.

Water savings can be achieved with the use of low flow plumbing fixtures in all state owned or supported facilities with little to no additional cost and with no loss of fixture performance. The program should be expanded to require low flow plumbing fixtures installed in all new and renovated facilities for additional water savings in buildings not currently impacted by the legislation.

House Bill 628 or Session Law 2013-242[14] amended the program by adding definition "(a1) Net Savings Required." The definition added by the amendment requires a maximum simple payback of 10 years for implementation of the program beginning with projects initiated on or after October 1, 2013. HB 628 has the potential to reduce or limit the program instead of expanding the program. Owners can elect to voluntarily continue to comply with the program.

Other Recommendations

The sixth and final requirement in the performance review deals with other recommendations. The year 2011, 2012, 2013 and 2014 Performance Reviews noted the Advisory Committee had identified technical corrections needed for the energy-efficiency statutes. The following technical corrections are repeated for the year 2015 performance review:

- 143-135.37(a) should be revised for compliance with the legislative intent stated in 143-135.35. The current wording allows major facilities financed entirely through local funding to avoid compliance with the program requirements. The language in regards to funding from "an appropriation in the State capital budget or through a financing contract" should be removed from the statute.
- 143-135.37(c1) should change the word "stormwater" to "groundwater" throughout to accordance with Senate Bill 668 and the definition of "potable", as groundwater is typically potable, but stormwater is not.
- 143-135.37(c) replace the building code language to "on the basis of conventional irrigation of landscaped areas" since there are no irrigation requirements addressed by the North Carolina State Building Codes.

Recommendations:

- Indoor water consumption is required to exceed the 2006 North Carolina Plumbing Code. Two building code cycles have lapsed since the program went into effect. All code references should be corrected to indicate current code instead of reference to a specific year. Note that changing to the current North Carolina Plumbing Code will not change maximum water consumption rates for plumbing fixtures since the code requirements have not changed.
- An emphasis on cost savings will help reduce utility costs through rate negotiations with the public utility and installation of peak shaving systems such as thermal storage. Currently, there are no rewards in the energy-efficiency legislation for achieving energy cost savings. The year 2011, 2012, 2013 and 2014 Performance Reviews also noted it would be helpful to reference energy cost savings in the legislation.
- The program requires the water savings to be measured in gallons. There is no requirement to model the cost savings associated with the water savings and compare the modeled cost to the actual cost of water consumed. It would be helpful to reference water cost savings in the legislation.
- Value engineering to bring a project within the construction budget often removes from the project key components used to bring the building into compliance with the program. An example is removing automated heating and cooling controls and replacing with manual heating and cooling controls. A post bid energy model should be required to evaluate the impact of value engineering on the building energy consumption.
- Encourage building owners to input, track and compare building energy consumption through EPA Energy Star Portfolio Manager[15]. Building owners can compare their buildings to similar buildings from statewide to regionally to nationwide.

State Building Commission Report

There have not been any applications to the State Building Commission to exempt a project from the requirements of the Sustainable Energy-Efficient Buildings Program.

Improvements to Energy-Efficient Standards

Under G.S 143-135.40, the Department of Administration is responsible for monitoring the development of improved energy-efficiency standards and recommending stricter or additional requirements.

The Sustainable Energy-Efficient Buildings Program standards described in G.S. 143-135.37(b) require a new building to be 30% more efficient than ASHRAE 90.1-2004 and a renovated building to be 20% more efficient than ASHRAE 90.1-2004. The 2006 North Carolina Energy Conservation Code (NCECC) was in effect when the program was implemented and the 2006 NCECC referenced ASHRAE 90.1-2004.

The 2012 NCECC[16] references ASHRAE 90.1-2007 as the code basis. ASHRAE 90.1-2007 has been determined to be 6% more efficient than ASHRAE 90.1-2004. Also, Chapter 5, section 501.1 of the 2012 NCECC states that commercial buildings shall exceed ASHRAE 90.1-2007 standard by 20%. The NC Building Code Council has issued an interpretation allowing the use of ASHRAE 90.1-2010[17] as an optional compliance path. ASHRAE 90.1-2010 has been shown to be 30% more efficient than ASHRAE 90.1-2004 which is equivalent to the program.

The following improvements should be made:

- New buildings should be changed to meet the requirements of ASHRAE 90.1-2010. This change will continue to meet the energy efficiency requirements stated in the program and exceed the code requirements stated in the 2012 NCECC.
- Renovated buildings should be changed to meet the requirements of ASHRAE 90.1-2010. This change will meet the energy efficiency minimum requirements in the 2012 NCECC and exceed the program requirements of being 20% better than ASHRAE 90.1-2004.

Indoor water consumption is required to be tracked as part of the program, but there is no cost of water required to be tracked. The program should include calculating the baseline cost of water along with the metered cost of water.

The life-cycle cost statute G.S. 143-64.15 was last written in year 2001[18] and is recommended for update in coordination with updates to the Sustainable Energy-Efficient Buildings Program. The State Construction Office is working to update the Life-Cycle Cost Manual with a publication goal of March 28, 2016.

Conclusions and Findings

Performing the analysis to develop this performance review of the actual data and comparison to the energy model and life cycle cost analysis has given the State Construction Office data to share with agencies and institutions and designers to further develop and refine the program and provide realistic results. Individual building findings are noted in the *Project Summary Tables* section. The buildings are listed in order of acceptance by the State Construction Office on behalf of the State of North Carolina.

Note that 43 of the 61 buildings completed under the program were required by the owning agency to meet the requirements of LEED certification independent of the energy and water savings legislation. LEED and the energy and water savings legislation have many of the same goals except the energy and water savings legislation requires meter data to be collected and

compared to the modeled energy data while LEED does not. Current versions of LEED require meter data to be collected.

Energy and water utility meter data for the 61 buildings completed under the program continues to be inconsistent due to an absence of meters, bad meters, lack of data, etc. Energy and water utility meter data should continue to be analyzed to gain confidence in the collection and tracking of the data. The building model data should also be analyzed against other state owned facility models along with national and regional averages for similar buildings.

- 117 buildings have been studied since the legislation was passed and implemented on August 8, 2008.
- 61 buildings have been accepted, occupied for at least one year and meter data received. These 61 buildings are presented in detail in the *Project Summary Tables* section.
- Nine buildings have been completed and one year of meter data received with the current sampling or fifth year (2014).
    - One building was accepted during the first year (2010)
    - Seven buildings were accepted during the second year (2011)
    - 18 buildings were accepted during the third year (2012)
    - 26 buildings were accepted during the fourth year (2013)
    - Nine buildings were accepted during the fifth year (2014)
- Note the significant increase in buildings in years three (2012) and four (2013) are due to the following:
    - Advance planning, programming and design typically takes 18 to 24 months.
    - Construction typically takes 18 to 24 months.
    - Meter data after acceptance is 12 months.
    - Total time is 48 months (4 years) to 60 months (5 years).
- 18 buildings have been accepted and occupied in the past year (2014-2015) and will be included in the report for October 1, 2016 or the sixth year of the program. The building total at that time will be 79.
- Four buildings are under construction with expected completion dates in time to be included in the October 1, 2017 report. The building total at that time will be 83.
- The smallest building completed to date is the Campus Police Facility at the UNC School of the Arts at 9,023 gross square feet. The Campus Police Facility will be included in the October 1, 2016 report. This facility is below the 20,000 square foot minimum for complying with the legislation, but the using agency voluntarily elected to comply with the legislation.
- The largest building completed to date is NCSU Hunt Library at 253,028 gross square feet. Hunt was accepted on October 18, 2012. Metered energy performance has not met modeled energy performance. NCSU is analyzing meter performance and data to reconcile metered and modeled energy performance.
- The largest building studied to date is NCSU Talley Student Center at 294,736 gross square feet. Talley will be included in the report for October 1, 2016.
- UNC Greensboro has the most buildings completed under the legislation with 11 buildings, all residence halls. Seven of the buildings were renovations and four of the buildings were new construction.
- Guilford County has the most buildings completed under the legislation with 12 buildings. 11 of the buildings are residence halls at UNCG and one is an aviation classroom building at Guilford Technical Community College.

- Modeling data for the 61 buildings presented ranges from low to extremely high as compared to similar buildings. SCO is tracking the buildings analyzed under the program and advising designers when buildings are out of range. The SCO Energy Benchmarking Project is available for owners and designers to compare proposed buildings to existing similar state owned facilities[11].
- Metered utility data collected by the agencies has been inconsistent. Examples include water consumption at a dormitory indicating 148 gallons/student/year which is unrealistically low, to no steam utility data, and to total building energy consumption that is below local, regional and national averages.
- Steam utility meters continue to be difficult in obtaining accurate readings. A more reliable, but less accurate option is to use condensate meters.
- Indoor water consumption for facilities other than residence halls is difficult to model and predict.
- Metered indoor water consumption for residence halls averages 7,245 gallons/student/year for the 27 residence halls metered to date. This information is used to guide designers and owners on future residence hall projects.
- Utility rates used in the energy model do not always agree with the energy rates billed to the owner. Put another way, incorrect utility rates were used in the model. Metered energy consumption can exceed modeled energy consumption while metered energy cost for the same building will be less than modeled energy cost.
- Commissioning typically continues during the first year of occupancy and meter data which indicates energy consuming systems are still being fine-tuned at the same time as the first year of energy consumption data.
- Some owners are metering central campus thermal utilities based on the size of the building in square feet instead of actual utility consumption.
- Obtaining accurate and consistent meter data has been the greatest challenge in fulfilling the requirements of the legislation for the following reasons:
    - Meters were not part of the design and construction.
    - Meters were removed from the project due to budget or for cost savings.
    - Meters have not been read.
    - Meters were not properly installed.
    - Meters are not operating.
    - Meters are not reporting accurately.
    - Facilities billed by size or square footage instead of utilities used or consumed.

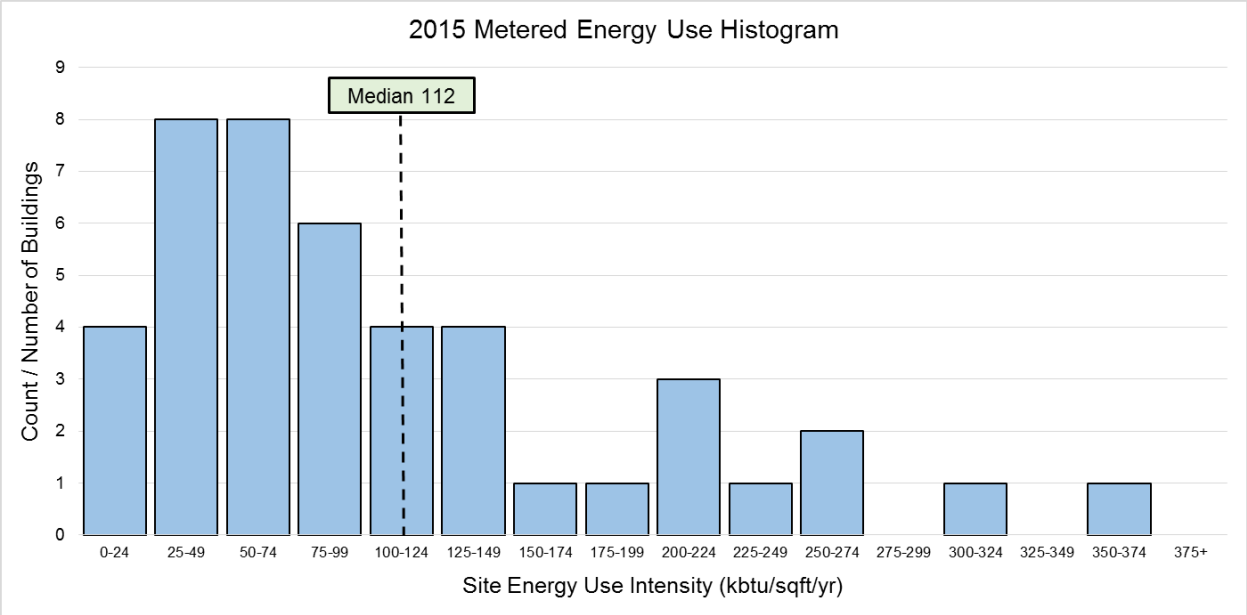
Additional findings not required by the legislation follow:

- 7,095 residence hall beds have been renovated or added.
- 27 residence halls have had meter data collected, the largest occupancy or category of building use.
- 5,109,640 gross square feet of building have been renovated or added to the state inventory under the program.
- Modeled energy savings equates to 168,705,000,000 Btus/year or enough energy to power 23,435 homes[19] for a year.
- Modeled energy savings represents a 33% improvement over code compliant buildings.
- Modeled energy savings, or avoided energy costs, in dollars equals $2,795,482/year.

- Modeled energy savings, or avoided energy costs, in dollars represents a 33% improvement over code compliant buildings.
- Modeled water savings equates to 34,551,885 gallons/year or enough water to fill 52 Olympic size swimming pools every year.
- Total project costs equal $1,054,277,145 which includes construction, design fees and commissioning fees for projects completed with public, not foundation, monies. Foundation project funding is not included in this total.

Metered Energy Use

The following chart represents metered site energy use intensity or EUI (kbtu/sqft/year) for the 44 buildings with meter data. The median or average EUI is 112.



Acknowledgements

The State Construction Office, NC Department of Administration prepared the consolidated report. Owning agencies contributed to the content of the report.

The State Construction Office, NC Department of Administration wishes to express appreciation to the members of the Sustainable, Energy-Efficient Buildings Advisory Committee for providing their time and expertise to work on the Committee.

Submitted by: State Construction Office

Engineering Supervisor, Leonard Thagard

Project Summary Tables

Project summaries for the 61 buildings accepted and occupied for at least one year are presented over the next 61 pages. The buildings are listed in order of acceptance.

2014-2015 Performance Standards Review

Appalachian State University

Cone Residence Hall Renovation

	Basic Project Data	
	Total Project Cost	$ 8,538,280
	Project Size (SF)	58,803
	Cost/Square Foot	$ 145
	LEED Certification	Gold (1)
	Fees and Costs	
A	Basic Design Fee	$ 832,067
B	Additional Design Fees	$ 58,613
C	Total Design Fee	$ 890,680
	% of Total Gen Cont(G)	0.77%
D	Commissioning Fees (Cx)	$ 62,500
	% of Total Gen Cont(G)	0.82%
E	Estimated Basic Costs	$ 5,965,486
F	Estimated Additional Costs	$ 1,619,614
G	Total General Contract	$ 7,585,100
	% of Total Gen Cont(G)	21%
H	Baseline Utilities Cost	$ 81,830
I	Metered Utilities Cost	$ 119,427
J	Avoided Utility Cost	$ (37,597)
K	% Avoided Utility Savings	-46%
	Indoor Water (Gallons)	
	Baseline Water Use	2,000,376
	Metered Water Use	1,690,223
	Avoided Water Use	310,153
	% Avoided Water Use	16%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 58,613
	Commissioning Fees (Cx)	$ 62,500
	Estimated Additional Costs	$ 1,619,614
	Total	$ 1,740,727
	% of Total Gen Cont(G)	23%

Cone Residence Hall Renovation is an eight story high rise residence hall that houses 278 students. Cone was first presented as a case study at the 2012 State Construction Conference and again at the 2013 and 2014 State Construction Conferences. Cone was accepted on June 23, 2010. This is the fifth year of meter data for Cone.

The five years of metered energy and water consumption has been higher than the modeled energy and water consumption, but was still lower than national averages. Further analysis revealed the modeled energy consumption was low for a residence hall, lower than other residence halls studied for this report.

Additional construction costs are inflated due to replacement of the windows and plumbing fixtures.

ASU is working to provide correct metering.

Cone does not meet the requriements of the legislation due to the low modeled energy consumption.

(1) http://www.usgbc.org/projects/asu-cone

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Charlotte

Prospector Hall Renovation

	Basic Project Data	
	Total Project Cost	$ 4,389,300
	Project Size (SF)	22,705
	Cost/Square Foot	$ 193
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 295,000
B	Additional Design Fees	$ -
C	Total Design Fee	$ 295,000
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 65,100
	% of Total Gen Cont(G)	1.62%
E	Estimated Basic Costs	$ 3,944,812
F	Estimated Additional Costs	$ 84,388
G	Total General Contract	$ 4,029,200
	% of Total Gen Cont(G)	2%
H	Baseline Utilities Cost	$ 30,538
I	Metered Utilities Cost	$ 74,557
J	Avoided Utility Cost	$ (44,019)
K	% Avoided Utility Savings	-144%
	Indoor Water (Gallons)	
	Baseline Water Use	48,654
	Metered Water Use	4,749,015
	Avoided Water Use	(4,700,361)
	% Avoided Water Use	-9661%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 65,100
	Estimated Additional Costs	$ 84,388
	Total	$ 149,488
	% of Total Gen Cont(G)	4%

Prospector Hall is a two story dining facility and student center. Prospector was accepted on May 30, 2011. This is the fourth year of meter data for Prospector Hall partial renovation.

Modeled energy and water consumption is for the renovated area only. The metered energy and water usage is for the partial renovation and existing building combined. Therefore, the metered consumption for the partial renovation and existing building is much greater than just the partial renovation and the resulting energy savings is a negative number and percentage. The same comparison exists with the indoor water consumption data where the addition is compared to the partial renovation and existing building combined. Also, Prospector Hall is a dining facility and the indoor water consumption did not include water consumption for food service preparation and cleaning which was considered process load.

Prospector does not meet the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Charlotte

Miltimore Residence Hall

	Basic Project Data	
	Total Project Cost	$ 35,978,870
	Project Size (SF)	173,086
	Cost/Square Foot	$ 208
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	$ 2,747,550
B	Additional Design Fees	$ 58,700
C	Total Design Fee	$ 2,806,250
	% of Total Gen Cont(G)	0.18%
D	Commissioning Fees (Cx)	$ 177,000
	% of Total Gen Cont(G)	0.54%
E	Estimated Basic Costs	$ 32,995,620
F	Estimated Additional Costs	$ -
G	Total General Contract	$ 32,995,620
	% of Total Gen Cont(G)	0%
H	Baseline Utilities Cost	$ 478,677
I	Metered Utilities Cost	$ 152,079
J	Avoided Utility Cost	$ 326,598
K	% Avoided Utility Savings	68%
	Indoor Water (Gallons)	
	Baseline Water Use	6,961,135
	Metered Water Use	4,749,015
	Avoided Water Use	2,212,120
	% Avoided Water Use	32%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 58,700
	Commissioning Fees (Cx)	$ 177,000
	Estimated Additional Costs	$ -
	Total	$ 235,700
	% of Total Gen Cont(G)	1%

Miltimore Residence Hall was the third building completed under the program. Miltimore is a five story residence hall that houses 431 students. Miltmore was accepted on July 19, 2011. This is the fourth year of meter data for Miltimore.

Modeled energy consumption is the highest presented for any state owned residence hall and greatly exceeds the national and regional averages for residence halls. Otherwise the metered utility use meets the expectations for similar residence hall buildings.

Miltimore meets the requirements of the legislation for energy and water use reductions due to the high modeled energy consumption compared to a typical residence hall.

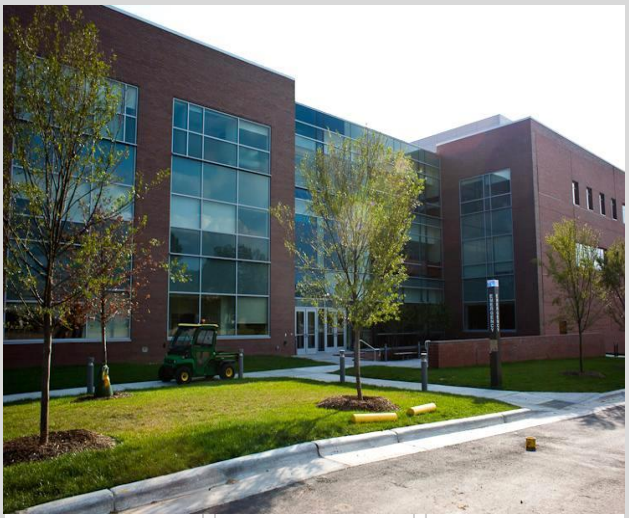
(1) http://www.usgbc.org/projects/unc-charlotte-phase-ix-residence-housing

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC Central University

Nursing Building



	Basic Project Data	
	Total Project Cost	$ 18,359,406
	Project Size (SF)	69,610
	Cost/Square Foot	$ 264
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	$ 1,795,875
B	Additional Design Fees	$ 99,050
C	Total Design Fee	$ 1,894,925
	% of Total Gen Cont(G)	0.61%
D	Commissioning Fees (Cx)	$ 265,694
	% of Total Gen Cont(G)	1.64%
E	Estimated Basic Costs	$ 16,003,466
F	Estimated Additional Costs	$ 195,321
G	Total General Contract	$ 16,198,787
	% of Total Gen Cont(G)	1%
H	Baseline Utilities Cost	$ 148,249
I	Metered Utilities Cost	$ 53,111
J	Avoided Utility Cost	$ 95,138
K	% Avoided Utility Savings	64%
	Indoor Water (Gallons)	
	Baseline Water Use	871,150
	Metered Water Use	573,514
	Avoided Water Use	297,636
	% Avoided Water Use	34%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 99,050
	Commissioning Fees (Cx)	$ 265,694
	Estimated Additional Costs	$ 195,321
	Total	$ 560,065
	% of Total Gen Cont(G)	3%

Nursing Building was the fourth building completed under the program. Nursing Building was recently discovered to have been absent from the data collection associated with the energy legislation. Nursing was accepted on August 5, 2011. This is the fourth year of meter data for Nursing.

Metered energy consumption for Nursing Building does not include steam consumption. The steam meter was not operational for the 2014/2015 reporting period. The electrical and steam submeters were not operational which has been and continues to be a recurring theme for buildings on campus utilities.

Nursing Building does not meet the requirements of the legislation due to incomplete meter data.

(1) http://www.usgbc.org/projects/school-nursing

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC Central University

Chidley Residence Hall

	Basic Project Data	
	Total Project Cost	$ 25,567,786
	Project Size (SF)	133,570
	Cost/Square Foot	$ 191
	LEED Certification	Gold (1)
	Fees and Costs	
A	Basic Design Fee	$ 2,012,550
B	Additional Design Fees	$ 173,500
C	Total Design Fee	$ 2,186,050
	% of Total Gen Cont(G)	0.75%
D	Commissioning Fees (Cx)	$ 104,934
	% of Total Gen Cont(G)	0.45%
E	Estimated Basic Costs	$ 21,956,196
F	Estimated Additional Costs	$ 1,320,606
G	Total General Contract	$ 23,276,802
	% of Total Gen Cont(G)	6%
H	Baseline Utilities Cost	$ 292,778
I	Metered Utilities Cost	$ 90,017
J	Avoided Utility Cost	$ 202,761
K	% Avoided Utility Savings	69%
	Indoor Water (Gallons)	
	Baseline Water Use	6,283,057
	Metered Water Use	6,365,099
	Avoided Water Use	(82,042)
	% Avoided Water Use	-1%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 173,500
	Commissioning Fees (Cx)	$ 113,132
	Estimated Additional Costs	$ 1,320,606
	Total	$ 1,607,238
	% of Total Gen Cont(G)	7%

Chidley Residence Hall was the fifth building completed under the program. Chidley is a four story residence hall that houses 528 students. Chidley was accepted on August 10, 2011. This is the fourth year of meter data for Chidley.

Metered energy consumption for Chidley does not include steam consumption. The steam meter was not operational for the 2014/2015 reporting period. The steam submeter was not operational which has been and continues to be a recurring theme for buildings on campus utilities.

Metered water usage is 12,055 gallons/student/year which is approximately 4,000 gallons more than average for this report.

Chidley does not meet the requirements of the legislation due to incomplete meter data.

(1) http://www.usgbc.org/projects/chidley-north-residence-hall

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Chapel Hill

The Loudermilk Center for Excellence

	Basic Project Data	
	Total Project Cost	Not Available
	Project Size (SF)	170,189
	Cost/Square Foot	Not Available
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	Not Available
B	Additional Design Fees	
C	Total Design Fee	
	% of Total Gen Cont(G)	
D	Commissioning Fees (Cx)	Not Available
	% of Total Gen Cont(G)	
E	Estimated Basic Costs	Not Available
F	Estimated Additional Costs	
G	Total General Contract	
	% of Total Gen Cont(G)	
H	Baseline Utilities Cost	$ 116,674
I	Metered Utilities Cost	$ 274,420
J	Avoided Utility Cost	$ (157,746)
K	% Avoided Utility Savings	-135%
	Indoor Water (Gallons)	
	Baseline Water Use	1,518,337
	Metered Water Use	1,871,000
	Avoided Water Use	(352,663)
	% Avoided Water Use	-23%
	Total Additional Fees & Costs	
	Additional Design Fees	Not Available
	Commissioning Fees (Cx)	Not Available
	Estimated Additional Costs	Not Available
	Total	Not Available
	% of Total Gen Cont(G)	Not Available

Loudermilk Center was the sixth building completed under the program and is a foundation project funded by The Rams Club. Therefore, construction and design cost data is not available. Loudermilk was accepted on August 18, 2011. This is the fourth year of meter data for Loudermilk.

The baseline or modeled utilities cost are low when compared to comparable buildings while the metered utilities cost is typical for this type of facility. The negative avoided utility cost is due to the low baseline cost not due to an inefficient building.

Loudermilk does not meet the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC Department of Agriculture and Consumer Services

Davis Arena Addition and Renovation

	Basic Project Data	
	Total Project Cost	$ 6,053,240
	Project Size (SF)	67,904
	Cost/Square Foot	$ 89
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	$ 469,000
B	Additional Design Fees	$ 33,000
C	Total Design Fee	$ 502,000
	% of Total Gen Cont(G)	0.60%
D	Commissioning Fees (Cx)	$ 43,640
	% of Total Gen Cont(G)	0.79%
E	Estimated Basic Costs	$ 5,351,000
F	Estimated Additional Costs	$ 156,600
G	Total General Contract	$ 5,507,600
	% of Total Gen Cont(G)	3%
H	Baseline Utilities Cost	$ 72,840
I	Metered Utilities Cost	$ 67,409
J	Avoided Utility Cost	$ 5,431
K	% Avoided Utility Savings	7%
	Indoor Water (Gallons)	
	Baseline Water Use	109,500
	Metered Water Use	913,308
	Avoided Water Use	(803,808)
	% Avoided Water Use	-734%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 33,000
	Commissioning Fees (Cx)	$ 43,640
	Estimated Additional Costs	$ 156,600
	Total	$ 233,240
	% of Total Gen Cont(G)	4%

Davis is a single story multiuse agricultural facility that hosts diverse uses from roller derby to flower shows. Davis was accepted on August 19, 2011. This is the fourth year of meter data for Davis Arena.

Energy consumption and cost for Davis is difficult to model due to the diverse use for this facility as noted above.

Davis shares a water meter with another building at the site. Metered water use for Davis is not available. The metered use provided is for two buildings.

Davis does not meet the requirements of the legislation.

(1) http://www.usgbc.org/projects/davis-arena-renovation-and-expansion

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design amendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC State University

Student Health Center Addition

	Basic Project Data	
	Total Project Cost	$ 6,758,383
	Project Size (SF)	24,663
	Cost/Square Foot	$ 274
	LEED Certification	Gold (1)
	Fees and Costs	
A	Basic Design Fee	$ 567,570
B	Additional Design Fees	$ 66,475
C	Total Design Fee	$ 634,045
	% of Total Gen Cont(G)	1.10%
D	Commissioning Fees (Cx)	$ 106,438
	% of Total Gen Cont(G)	1.77%
E	Estimated Basic Costs	$ 5,778,782
F	Estimated Additional Costs	$ 239,118
G	Total General Contract	$ 6,017,900
	% of Total Gen Cont(G)	4%
H	Baseline Utilities Cost	$ 68,316
I	Metered Utilities Cost	$ 227,816
J	Avoided Utility Cost	$ (159,500)
K	% Avoided Utility Savings	-233%
	Indoor Water (Gallons)	
	Baseline Water Use	320,198
	Metered Water Use	227,816
	Avoided Water Use	92,382
	% Avoided Water Use	29%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 66,475
	Commissioning Fees (Cx)	$ 106,438
	Estimated Additional Costs	$ 239,118
	Total	$ 412,031
	% of Total Gen Cont(G)	7%

Student Health Center Addition is a two story addition to the existing student health center to accomodate a growing student population. The Center contains medical examination and treatment rooms as well as offices for staff. The Center was accepted on September 12, 2011. This is the fourth year of meter data for Student Health.

Modeled energy and water consumption is for the addition only. The metered energy and water metered consumption is for the addition and existing building combined. Therefore, the metered consumption for the addition and existing building is much greater than just the addition, which means the resulting energy savings is a negative number and percentage.

Student Health does not meet the requirements of the legislation.

(1) http://www.usgbc.org/projects/ncsu-student-health-center-add-reno

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Elizabeth City State University

Gilchrist Education and Psychology Building

	Basic Project Data	
	Total Project Cost	$ 16,637,177
	Project Size (SF)	48,112
	Cost/Square Foot	$ 346
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	$ 1,654,600
B	Additional Design Fees	$ 35,000
C	Total Design Fee	$ 2,186,050
	% of Total Gen Cont(G)	0.24%
D	Commissioning Fees (Cx)	$ 57,000
	% of Total Gen Cont(G)	0.40%
E	Estimated Basic Costs	$ 13,822,099
F	Estimated Additional Costs	$ 572,028
G	Total General Contract	$ 14,394,127
	% of Total Gen Cont(G)	4%
H	Baseline Utilities Cost	$ 64,655
I	Metered Utilities Cost	$ 76,577
J	Avoided Utility Cost	$ (11,922)
K	% Avoided Utility Savings	-18%
	Indoor Water (Gallons)	
	Baseline Water Use	1,506,938
	Metered Water Use	56,395
	Avoided Water Use	1,450,543
	% Avoided Water Use	96%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 35,000
	Commissioning Fees (Cx)	$ 57,000
	Estimated Additional Costs	$ 572,028
	Total	$ 664,028
	% of Total Gen Cont(G)	5%

Gilchrist is a three story university classroom and office facility. Gilchrist was accepted on February 1, 2012. This is the third year of meter data for Gilchrist.

Metered utility consumption is 30% less than the modeled baseline while the metered utilities cost is 18% more as noted to the left. The utility rates used in the model do not agree with the metered utility rates.

Metered utilities consumption and cost is consistant with the previous years data.

Metered water use exceeded the requirements of the legislation at 96 percent avoided use which was consistent with the previous year of meter data.

Gilchrist has met the requirements of the legislation.

(1) http://www.usgbc.org/projects/education-and-psychology-building

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Charlotte

EPIC

	Basic Project Data	
	Total Project Cost	$ 67,918,534
	Project Size (SF)	200,164
	Cost/Square Foot	$ 339
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 5,792,635
B	Additional Design Fees	$ 221,084
C	Total Design Fee	$ 6,013,719
	% of Total Gen Cont(G)	0.36%
D	Commissioning Fees (Cx)	$ 404,815
	% of Total Gen Cont(G)	0.66%
E	Estimated Basic Costs	$ 51,725,930
F	Estimated Additional Costs	$ 9,774,070
G	Total General Contract	$ 61,500,000
	% of Total Gen Cont(G)	16%
H	Baseline Utilities Cost	$ 284,103
I	Metered Utilities Cost	$ 518,841
J	Avoided Utility Cost	$ (234,738)
K	% Avoided Utility Savings	-83%
	Indoor Water (Gallons)	
	Baseline Water Use	3,172,838
	Metered Water Use	663,641
	Avoided Water Use	2,509,197
	% Avoided Water Use	79%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 221,084
	Commissioning Fees (Cx)	$ 404,815
	Estimated Additional Costs	$ 9,774,070
	Total	$ 10,399,969
	% of Total Gen Cont(G)	17%

EPIC or Energy Production and Infrastructure Center is four stories high and includes an engineering teaching classrooms and research laboratories. EPIC was accepted on April 12, 2012. This is the third year of meter data for EPIC.

Estimated Basic Costs (E) by the designers of record was almost ten million dollars below the Total General Contract of $61,500,000 resulting in a larger than normal premium for compliance with the legislation.

Metered utilities consumption was more than double the baseline modeled utilities consumption.

LEED certification could not be verified through the USGBC website although design fees included LEED certification.

EPIC does not meet the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC Department of Agriculture and Consumer Services

SENC Agriculture Events Center

	Basic Project Data	
	Total Project Cost	$ 4,447,345
	Project Size (SF)	55,605
	Cost/Square Foot	$ 80
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 363,080
B	Additional Design Fees	$ -
C	Total Design Fee	$ 363,080
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 11,870
	% of Total Gen Cont(G)	0.29%
E	Estimated Basic Costs	$ 3,919,435
F	Estimated Additional Costs	$ 152,960
G	Total General Contract	$ 4,072,395
	% of Total Gen Cont(G)	4%
H	Baseline Utilities Cost	$ 42,886
I	Metered Utilities Cost	$ 12,829
J	Avoided Utility Cost	$ 30,057
K	% Avoided Utility Savings	70%
	Indoor Water (Gallons)	
	Baseline Water Use	243,256
	Metered Water Use	594,770
	Avoided Water Use	(351,514)
	% Avoided Water Use	-145%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 11,870
	Estimated Additional Costs	$ 152,960
	Total	$ 164,830
	% of Total Gen Cont(G)	4%

The SENC Agriculture Events Center is a single story multipurpose agriculture and events building with office space and bathrooms. The Ag Center was accepted on April 12, 2012. This is the third year of meter data for SENC Ag Center.

The project as bid exceeded the construction budget. Value Engineering (VE) to remove the ducted HVAC system from the design brought the project within budget. The resulting heating and ventilation system was not modeled, but resulted in significantly less energy consumption than the previously designed and modeled system.

The Ag Center had issues with water leaks and broken pipes resulting in higher than normal indoor water use.

The Events Center has met the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC Department of Administration - Veteran's Administration

Swannanoa Nursing Home

	Basic Project Data	
	Total Project Cost	$ 17,482,041
	Project Size (SF)	108,770
	Cost/Square Foot	$ 161
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 1,250,000
B	Additional Design Fees	None
C	Total Design Fee	$ 1,250,000
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 96,941
	% of Total Gen Cont(G)	0.60%
E	Estimated Basic Costs	$ 15,834,228
F	Estimated Additional Costs	$ 300,872
G	Total General Contract	$ 16,135,100
	% of Total Gen Cont(G)	2%
H	Baseline Utilities Cost	$ 213,106
I	Metered Utilities Cost	$ 173,459
J	Avoided Utility Cost	$ 39,647
K	% Avoided Utility Savings	19%
	Indoor Water (Gallons)	
	Baseline Water Use	4,378,540
	Metered Water Use	3,709,584
	Avoided Water Use	668,956
	% Avoided Water Use	15%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 96,941
	Estimated Additional Costs	$ 300,872
	Total	$ 397,813
	% of Total Gen Cont(G)	2%

The Swannanoa Nursing Home is a single story skilled nursing facility that houses 100 veterans. The Swannanoa Nursing Home was accepted on May 24, 2010. This is the third year of meter data for Swannanoa.

Metered energy consumption was higher than baseline utilities energy consumption, but the costs were lower indicating the utility rates used in the model did not agree with the metered utility rates. The resulting avoided utility cost is not correct due to the difference in the utility rates.

Metered water use was lower (15%) than the estimated baseline water use, but greatly exceeds the average usage for a residence hall of approximately 7,245 gallons/resident/year at 37,096 gallons/resident/year.

Further review of utility rates and utility consumption is required for a more accruate analysis.

Swannanoa VA Home does not meet the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Pitt Community College

Russell Classroom Building

	Basic Project Data	
	Total Project Cost	$ 8,431,397
	Project Size (SF)	50,434
	Cost/Square Foot	$ 167
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 943,138
B	Additional Design Fees	$ 52,150
C	Total Design Fee	$ 995,288
	% of Total Gen Cont(G)	0.71%
D	Commissioning Fees (Cx)	$ 42,310
	% of Total Gen Cont(G)	0.57%
E	Estimated Basic Costs	$ 7,243,287
F	Estimated Additional Costs	$ 150,512
G	Total General Contract	$ 7,393,799
	% of Total Gen Cont(G)	2%
H	Baseline Utilities Cost	$ 91,928
I	Metered Utilities Cost	$ 86,351
J	Avoided Utility Cost	$ 5,577
K	% Avoided Utility Savings	6%
	Indoor Water (Gallons)	
	Baseline Water Use	1,217,970
	Metered Water Use	340,018
	Avoided Water Use	877,952
	% Avoided Water Use	72%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 52,150
	Commissioning Fees (Cx)	$ 42,310
	Estimated Additional Costs	$ 150,512.00
	Total	$ 244,972
	% of Total Gen Cont(G)	3%

Russell Classroom Building is a two story classroom and office building. Russell was accepted on June 27, 2012. This is the third year of meter data for Russell.

Previous metered utilities consumption was incorrect due to the use of a utility meter that metered three buildings on campus including Russell.

Metered utility consumption was 32% less than the baseline modeled utility consumption while the metered utility cost was 6% less than baseline modeled utility cost. Indicating the utilities cost used in the model was not the same as the utilities cost applied at the meter.

Russell has met the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

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UNC Greensboro

Bailey Residence Hall Renovation

	Basic Project Data	
	Total Project Cost	$ 6,849,514
	Project Size (SF)	30,735
	Cost/Square Foot	$ 223
	LEED Certification	Gold (1)
	Fees and Costs	
A	Basic Design Fee	$ 600,745
B	Additional Design Fees	$ 11,429
C	Total Design Fee	$ 612,174
	% of Total Gen Cont(G)	0.18%
D	Commissioning Fees (Cx)	$ 40,879
	% of Total Gen Cont(G)	0.66%
E	Estimated Basic Costs	$ 6,016,156
F	Estimated Additional Costs	$ 180,305
G	Total General Contract	$ 6,196,461
	% of Total Gen Cont(G)	3%
H	Baseline Utilities Cost	$ 59,608
I	Metered Utilities Cost	$ 21,545
J	Avoided Utility Cost	$ 38,063
K	% Avoided Utility Savings	64%
	Indoor Water (Gallons)	
	Baseline Water Use	327,880
	Metered Water Use	463,600
	Avoided Water Use	(135,720)
	% Avoided Water Use	-41%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 11,429
	Commissioning Fees (Cx)	$ 40,879
	Estimated Additional Costs	$ 180,305
	Total	$ 232,613
	% of Total Gen Cont(G)	4%

Bailey Residence Hall is four stories and houses 86 students. Bailey renovation was part of a seven building project as shown above. Bailey was accepted on July 1, 2012. This is the third year of meter data for Bailey.

Campus utilities are billed on a square foot basis instead of metering utilities used by the building. Therefore, metered utilities cost is not accurate and are low for this report.

Baseline water use was low for this type of facility while the metered water use is typical. The negative avoided water use and negative percent avoided water use indicates the estimated baseline water use was low for a residence hall. Typically water consumption averages around 7,245 gallons/student/year.

The Quad Residence Hall renovation project includes six identical residence halls that should have similar meter data.

Bailey has met the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncg-quad-housing-project

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

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UNC Greensboro

Coit Residence Hall Renovation

	Basic Project Data		
	Total Project Cost	$	6,849,514
	Project Size (SF)		30,735
	Cost/Square Foot	$	223
	LEED Certification		Gold (1)
	Fees and Costs		
A	Basic Design Fee	$	600,745
B	Additional Design Fees	$	11,429
C	Total Design Fee	$	612,174
	% of Total Gen Cont(G)		0.18%
D	Commissioning Fees (Cx)	$	40,879
	% of Total Gen Cont(G)		0.66%
E	Estimated Basic Costs	$	6,016,156
F	Estimated Additional Costs	$	180,305
G	Total General Contract	$	6,196,461
	% of Total Gen Cont(G)		3%
H	Baseline Utilities Cost	$	59,608
I	Metered Utilities Cost	$	14,805
J	Avoided Utility Cost	$	44,803
K	% Avoided Utility Savings		75%
	Indoor Water (Gallons)		
	Baseline Water Use		327,880
	Metered Water Use		465,900
	Avoided Water Use		(138,020)
	% Avoided Water Use		-42%
	Total Additional Fees & Costs		
	Additional Design Fees	$	11,429
	Commissioning Fees (Cx)	$	40,879
	Estimated Additional Costs	$	180,305
	Total	$	232,613
	% of Total Gen Cont(G)		4%

Coit Residence Hall is four stories and houses 86 students. Coit renovation was part of a seven building project as shown above. Coit was accepted on July 1, 2012. This is the third year of meter data for Coit.

Campus utilities are billed on a square foot basis instead of metering utilities used by the building. Therefore, metered utilities cost is not as accurate as could be and are low for this report.

Baseline water use was low for this type of facility while the metered water use is typical. The negative avoided water use and negative percent avoided water use indicates the estimated baseline water use was low for a residence hall. Typically water consumption averages around 7,245 gallons/student/year.

The Quad Residence Hall renovation project includes six identical residence halls that should have similar meter data. Coit's meter data is unrealistically low.

Coit has met the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncg-quad-housing-project

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

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UNC Greensboro

Cotten Residence Hall Renovation

	Basic Project Data	
	Total Project Cost	$ 6,849,514
	Project Size (SF)	30,735
	Cost/Square Foot	$ 223
	LEED Certification	Gold (1)
	Fees and Costs	
A	Basic Design Fee	$ 600,745
B	Additional Design Fees	$ 11,429
C	Total Design Fee	$ 612,174
	% of Total Gen Cont(G)	0.18%
D	Commissioning Fees (Cx)	$ 40,879
	% of Total Gen Cont(G)	0.66%
E	Estimated Basic Costs	$ 6,016,156
F	Estimated Additional Costs	$ 180,305
G	Total General Contract	$ 6,196,461
	% of Total Gen Cont(G)	3%
H	Baseline Utilities Cost	$ 59,608
I	Metered Utilities Cost	$ 19,763
J	Avoided Utility Cost	$ 39,845
K	% Avoided Utility Savings	67%
	Indoor Water (Gallons)	
	Baseline Water Use	327,880
	Metered Water Use	525,800
	Avoided Water Use	(197,920)
	% Avoided Water Use	-60%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 11,429
	Commissioning Fees (Cx)	$ 40,879
	Estimated Additional Costs	$ 180,305
	Total	$ 232,613
	% of Total Gen Cont(G)	4%

Cotten Residence Hall is four stories and houses 86 students. Cotten renovation was part of a seven building project as shown above. Cotten was accepted on July 1, 2012. This is the third year of meter data for Cotten.

Campus utilities are billed on a square foot basis instead of metering utilities used by the building. Therefore, metered utilities cost is not as accurate as could be and are low for this report.

Baseline water use was low for this type of facility while the metered water use is typical. The negative avoided water use and negative percent avoided water use indicates the estimated baseline water use was low for a residence hall. Typically water consumption averages around 7,245 gallons/student/year.

The Quad Residence Hall renovation project includes six identical residence halls that should have similar meter data.

Cotten has met the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncg-quad-housing-project

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Greensboro

Gray Residence Hall Renovation

	Basic Project Data		
	Total Project Cost	$	6,849,514
	Project Size (SF)		30,735
	Cost/Square Foot	$	223
	LEED Certification		Gold (1)
	Fees and Costs		
A	Basic Design Fee	$	600,745
B	Additional Design Fees	$	11,429
C	Total Design Fee	$	612,174
	% of Total Gen Cont(G)		0.18%
D	Commissioning Fees (Cx)	$	40,879
	% of Total Gen Cont(G)		0.66%
E	Estimated Basic Costs	$	6,016,156
F	Estimated Additional Costs	$	180,305
G	Total General Contract	$	6,196,461
	% of Total Gen Cont(G)		3%
H	Baseline Utilities Cost	$	59,608
I	Metered Utilities Cost	$	19,024
J	Avoided Utility Cost	$	40,584
K	% Avoided Utility Savings		68%
	Indoor Water (Gallons)		
	Baseline Water Use		327,880
	Metered Water Use		496,800
	Avoided Water Use		(168,920)
	% Avoided Water Use		-52%
	Total Additional Fees & Costs		
	Additional Design Fees	$	11,429
	Commissioning Fees (Cx)	$	40,879
	Estimated Additional Costs	$	180,305
	Total	$	232,613
	% of Total Gen Cont(G)		4%

Gray Residence Hall is four stories and houses 86 students. Gray was accepted on July 1, 2012. This is the third year of meter data for Gray.

Campus utilities are billed on a square foot basis instead of metering utilities used by the building. Therefore, metered utilities cost is not as accurate as could be and are low for this report.

Baseline water use was low for this type of facility while the metered water use is typical. The negative avoided water use and negative percent avoided water use indicates the estimated baseline water use was low for a residence hall. Typically water consumption averages around 7,245 gallons/student/year.

The Quad Residence Hall renovation project includes six identical residence halls that should have similar meter data.

Gray has met the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncg-quad-housing-project

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

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UNC Greensboro

Hinshaw Residence Hall Renovation

	Basic Project Data	
	Total Project Cost	$ 6,849,514
	Project Size (SF)	30,735
	Cost/Square Foot	$ 223
	LEED Certification	Gold (1)
	Fees and Costs	
A	Basic Design Fee	$ 600,745
B	Additional Design Fees	$ 11,429
C	Total Design Fee	$ 612,174
	% of Total Gen Cont(G)	0.18%
D	Commissioning Fees (Cx)	$ 40,879
	% of Total Gen Cont(G)	0.66%
E	Estimated Basic Costs	$ 6,016,156
F	Estimated Additional Costs	$ 180,305
G	Total General Contract	$ 6,196,461
	% of Total Gen Cont(G)	3%
H	Baseline Utilities Cost	$ 59,608
I	Metered Utilities Cost	$ 23,001
J	Avoided Utility Cost	$ 36,607
K	% Avoided Utility Savings	61%
	Indoor Water (Gallons)	
	Baseline Water Use	327,880
	Metered Water Use	536,100
	Avoided Water Use	(208,220)
	% Avoided Water Use	-64%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 11,429
	Commissioning Fees (Cx)	$ 40,879
	Estimated Additional Costs	$ 180,305
	Total	$ 232,613
	% of Total Gen Cont(G)	4%

Hinshaw Residence Hall is four stories and houses 86 students. Hinshaw was accepted on July 1, 2012. This is the third year of meter data for Hinshaw.

Campus utilities are billed on a square foot basis instead of metering utilities used by the building. Therefore, metered utilities cost is not as accurate as could be and are low for this report.

Baseline water use was low for this type of facility while the metered water use is typical. The negative avoided water use and negative percent avoided water use indicates the estimated baseline water use was low for a residence hall. Typically water consumption averages around 7,245 gallons/student/year.

The Quad Residence Hall renovation project includes six identical residence halls that should have similar meter data.

Hinshaw has met the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncg-quad-housing-project

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

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UNC Greensboro

Jamison Residence Hall Renovation

	Basic Project Data	
	Total Project Cost	$ 6,849,514
	Project Size (SF)	30,735
	Cost/Square Foot	$ 223
	LEED Certification	Gold (1)
	Fees and Costs	
A	Basic Design Fee	$ 600,745
B	Additional Design Fees	$ 11,429
C	Total Design Fee	$ 612,174
	% of Total Gen Cont(G)	0.18%
D	Commissioning Fees (Cx)	$ 40,879
	% of Total Gen Cont(G)	0.66%
E	Estimated Basic Costs	$ 6,016,156
F	Estimated Additional Costs	$ 180,305
G	Total General Contract	$ 6,196,461
	% of Total Gen Cont(G)	3%
H	Baseline Utilities Cost	$ 59,608
I	Metered Utilities Cost	$ 19,586
J	Avoided Utility Cost	$ 40,022
K	% Avoided Utility Savings	67%
	Indoor Water (Gallons)	
	Baseline Water Use	327,880
	Metered Water Use	525,200
	Avoided Water Use	(197,320)
	% Avoided Water Use	-60%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 11,429
	Commissioning Fees (Cx)	$ 40,879
	Estimated Additional Costs	$ 180,305
	Total	$ 232,613
	% of Total Gen Cont(G)	4%

Jamison Residence Hall is four stories and houses 86 students. Jamison was accepted on July 1, 2012. This is the third year of meter data for Jamison.

Campus utilities are billed on a square foot basis instead of metering utilities used by the building. Therefore, metered utilities cost is not as accurate as could be and are low for this report. Metered utilities cost was low while metered utilities consumption was high. The data does not agree.

Baseline water use was low for this type of facility while the metered water use is typical. The negative avoided water use and negative percent avoided water use indicates the estimated baseline water use was low for a residence hall. Typically water consumption averages around 7,245 gallons/student/year.

The Quad Residence Hall renovation project includes six identical residence halls that should have similar meter data.

Jamison has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncg-quad-housing-project

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

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UNC Greensboro

Shaw Residence Hall Renovation

	Basic Project Data		
	Total Project Cost	$	6,849,514
	Project Size (SF)		54,847
	Cost/Square Foot	$	125
	LEED Certification		Gold (1)
	Fees and Costs		
A	Basic Design Fee	$	600,745
B	Additional Design Fees	$	11,429
C	Total Design Fee	$	612,174
	% of Total Gen Cont(G)		0.18%
D	Commissioning Fees (Cx)	$	40,879
	% of Total Gen Cont(G)		0.66%
E	Estimated Basic Costs	$	6,016,156
F	Estimated Additional Costs	$	180,305
G	Total General Contract	$	6,196,461
	% of Total Gen Cont(G)		3%
H	Baseline Utilities Cost	$	59,608
I	Metered Utilities Cost	$	38,727
J	Avoided Utility Cost	$	20,881
K	% Avoided Utility Savings		35%
	Indoor Water (Gallons)		
	Baseline Water Use		327,880
	Metered Water Use		925,800
	Avoided Water Use		(597,920)
	% Avoided Water Use		-182%
	Total Additional Fees & Costs		
	Additional Design Fees	$	11,429
	Commissioning Fees (Cx)	$	40,879
	Estimated Additional Costs	$	180,305
	Total	$	232,613
	% of Total Gen Cont(G)		4%

Shaw Residence Hall is four stories and houses 118 students along with living/learning classrooms. Shaw was accepted on July 1, 2012. This is the third year of meter data for Shaw.

Campus utilities are billed on a square foot basis instead of metering utilities used by the building. Therefore, metered utilities cost is not as accurate as could be and are low for this report.

Baseline water use was low for this type of facility while the metered water use is typical. The negative avoided water use and negative percent avoided water use indicates the estimated baseline water use was low for a residence hall. Typically water consumption averages around 7,245 gallons/student/year. Shaw was much higher than the remainder of the Quad.

The Quad Residence Hall renovation project includes six identical residence halls that should have similar meter data.

Shaw has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncg-quad-housing-project

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

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Western Carolina University

Harrill Residence Hall Renovation

	Basic Project Data	
	Total Project Cost	$ 14,587,035
	Project Size (SF)	71,505
	Cost/Square Foot	$ 204
	LEED Certification	Gold (1)
	Fees and Costs	
A	Basic Design Fee	$ 998,800
B	Additional Design Fees	None
C	Total Design Fee	$ 998,800
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 153,235
	% of Total Gen Cont(G)	1.14%
E	Estimated Basic Costs	$ 11,750,000
F	Estimated Additional Costs	$ 1,685,000
G	Total General Contract	$ 13,435,000
	% of Total Gen Cont(G)	13%
H	Baseline Utilities Cost	$ 114,129
I	Metered Utilities Cost	$ 96,703
J	Avoided Utility Cost	$ 17,426
K	% Avoided Utility Savings	15%
	Indoor Water (Gallons)	
	Baseline Water Use	2,675,470
	Metered Water Use	1,553,840
	Avoided Water Use	1,121,630
	% Avoided Water Use	42%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 153,235
	Estimated Additional Costs	$ 1,685,000
	Total	$ 1,838,235
	% of Total Gen Cont(G)	14%

Harrill Residence Hall is a ten story high-rise residence hall renovation that houses 350 students. Harrill was accepted on August 2, 2012. This is the third year of meter data for Harrill.

The modeled utility cost is less than the metered utility cost resulting in a smaller percentage of avoided utility savings.

Indoor water use for Harrill equates to 4,440 gal/student/year while typical residence hall use is 7,245 gal/student/year.

The Estimated Additional Costs (F) are high at 14% as a result a low Estimated Basic Cost (E) from the designers of record. Using the estimate increased investment cost presented in the LCCA of $502,319 instead of $1,685,000 resulted in total additional fees and costs of 5% instead of 14% and is typical of other buildings complying with the legislation.

Harrill has met the requirements of the legislation.

(1) http://www.usgbc.org/projects/harrill-hall-renovations

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

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Fayetteville State University

Renaissance Residence Hall

	Basic Project Data	
	Total Project Cost	No contract
	Project Size (SF)	85,000
	Cost/Square Foot	No Data
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	No contract
B	Additional Design Fees	No contract
C	Total Design Fee	
	% of Total Gen Cont(G)	
D	Commissioning Fees (Cx)	No contract
	% of Total Gen Cont(G)	
E	Estimated Basic Costs	No contract
F	Estimated Additional Costs	$ 850,000
G	Total General Contract	No contract
	% of Total Gen Cont(G)	
H	Baseline Utilities Cost	$ 174,915
I	Metered Utilities Cost	No data
J	Avoided Utility Cost	
K	% Avoided Utility Savings	
	Indoor Water (Gallons)	
	Baseline Water Use	2,636,463
	Metered Water Use	No data
	Avoided Water Use	
	% Avoided Water Use	
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	
	Estimated Additional Costs	$ 850,000
	Total	$ 850,000
	% of Total Gen Cont(G)	No Data

Renaissance Residence Hall is a three story facility that houses 340 students. Renaissance was accepted on August 7, 2012. This is the third year of meter data for Renaissance.

Renaissance is a privately funded project on state land that is required to meet the program. Since the project is privately funded, SCO does not have data related to design and construction costs. Estimated additional costs were provided by the design team as part of the life cycle cost analysis.

Metered energy and water consumption data has not been received for this facility.

Renaissance has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/renaissance-hall-student-housing-project

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Pembroke

The Health Sciences Building

	Basic Project Data	
	Total Project Cost	$ 16,886,020
	Project Size (SF)	87,000
	Cost/Square Foot	$ 194
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	$ 2,004,260
B	Additional Design Fees	$ 47,460
C	Total Design Fee	$ 2,051,720
	% of Total Gen Cont(G)	0.32%
D	Commissioning Fees (Cx)	$ -
	% of Total Gen Cont(G)	0.00%
E	Estimated Basic Costs	$ 14,419,316
F	Estimated Additional Costs	$ 414,984
G	Total General Contract	$ 14,834,300
	% of Total Gen Cont(G)	3%
H	Baseline Utilities Cost	$ 98,379
I	Metered Utilities Cost	$ 130,335
J	Avoided Utility Cost	$ (31,956)
K	% Avoided Utility Savings	-32%
	Indoor Water (Gallons)	
	Baseline Water Use	2,606,625
	Metered Water Use	848,245
	Avoided Water Use	1,758,380
	% Avoided Water Use	67%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 47,460
	Commissioning Fees (Cx)	$ -
	Estimated Additional Costs	$ 414,984
	Total	$ 462,444
	% of Total Gen Cont(G)	3%

The Health Sciences Building is a three story building that houses classrooms, teaching laboratories and offices. The building was accepted on August 7, 2012. This is the third year of meter data for Health Sciences.

Metered energy usage for the first year of occupancy was 6% higher than the modeled building and did not meet the program requirements. Metered energy cost was 23% higher than modeled. The disparity between energy costs and use indicates the energy rate used in the model was not the same energy rate billed to the building. Indoor water consumption was 67% less than modeled and much lower than expected for a classroom and office building.

The third year of meter data follows the trend set by the first year of data noted above.

Health Sciences has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncp-nursing-and-health-building

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Asheville

Overlook Residence Hall

	Basic Project Data	
	Total Project Cost	$ 18,237,600
	Project Size (SF)	91,370
	Cost/Square Foot	$ 200
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 1,685,000
B	Additional Design Fees	$ -
C	Total Design Fee	$ 1,685,000
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 85,000
	% of Total Gen Cont(G)	0.52%
E	Estimated Basic Costs	$ 14,927,082
F	Estimated Additional Costs	$ 1,540,518
G	Total General Contract	$ 16,467,600
	% of Total Gen Cont(G)	9%
H	Baseline Utilities Cost	$ 89,281
I	Metered Utilities Cost	No data
J	Avoided Utility Cost	
K	% Avoided Utility Savings	
	Indoor Water (Gallons)	
	Baseline Water Use	2,888,310
	Metered Water Use	No data
	Avoided Water Use	
	% Avoided Water Use	
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 85,000
	Estimated Additional Costs	$ 1,540,518
	Total	$ 1,625,518
	% of Total Gen Cont(G)	10%

Overlook Residence Hall is a four story facility that houses 300 students. Overlook was accepted on August 8, 2012. This is the third year of meter data for Overlook.

Meter data was not received for Overlook for this report.

Overlook was not designed for LEED requirements.

Estimated Additional Costs (F) are high resulting in a high estimate for complying with the legislation.

Overlook has not met the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Elizabeth City State University

Viking Tower Residence Hall

	Basic Project Data	
	Total Project Cost	$ 13,759,446
	Project Size (SF)	53,896
	Cost/Square Foot	$ 255
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 1,159,950
B	Additional Design Fees	$ 40,000
C	Total Design Fee	$ 1,199,950
	% of Total Gen Cont(G)	0.32%
D	Commissioning Fees (Cx)	$ 85,000
	% of Total Gen Cont(G)	0.68%
E	Estimated Basic Costs	$ 12,222,788
F	Estimated Additional Costs	$ 251,708
G	Total General Contract	$ 12,474,496
	% of Total Gen Cont(G)	2%
H	Baseline Utilities Cost	$ 217,417
I	Metered Utilities Cost	$ 64,911
J	Avoided Utility Cost	$ 152,506
K	% Avoided Utility Savings	70%
	Indoor Water (Gallons)	
	Baseline Water Use	1,193,460
	Metered Water Use	2,650,586
	Avoided Water Use	(1,457,126)
	% Avoided Water Use	-122%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 40,000
	Commissioning Fees (Cx)	$ 85,000
	Estimated Additional Costs	$ 251,708
	Total	$ 376,708
	% of Total Gen Cont(G)	3%

Viking Tower Residence Hall is a three story facility that houses 210 students. Viking Tower was accepted on August 17, 2012. This is the third year of meter data for Viking Tower.

The baseline utilities consumption and cost for Viking were higher than for similar facilities.

Indoor water use was high and did not meet the requirements of the legislation. Water consumption should be reviewed by the owner for future reporting.

Viking Tower has met the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Wilmington

Teaching Laboratory Building

	Basic Project Data	
	Total Project Cost	$ 18,260,650
	Project Size (SF)	85,000
	Cost/Square Foot	$ 215
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	$ 2,458,630
B	Additional Design Fees	$ 156,820
C	Total Design Fee	$ 2,615,450
	% of Total Gen Cont(G)	1.00%
D	Commissioning Fees (Cx)	$ -
	% of Total Gen Cont(G)	0.00%
E	Estimated Basic Costs	$ 15,440,699
F	Estimated Additional Costs	$ 204,501
G	Total General Contract	$ 15,645,200
	% of Total Gen Cont(G)	1%
H	Baseline Utilities Cost	$ 142,633
I	Metered Utilities Cost	$ 206,165
J	Avoided Utility Cost	$ (63,532)
K	% Avoided Utility Savings	-45%
	Indoor Water (Gallons)	
	Baseline Water Use	751,030
	Metered Water Use	858,349
	Avoided Water Use	(107,319)
	% Avoided Water Use	-14%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 156,820
	Commissioning Fees (Cx)	
	Estimated Additional Costs	$ 204,501
	Total	$ 361,321
	% of Total Gen Cont(G)	2%

Teaching Laboratory Building is a three story building that houses classrooms, teaching laboratories and offices.Teaching Lab was accepted on August 24, 2012. This is the third year of meter data for Teaching Lab.

Metered utility consumption and cost exceeded the baseline modeled utility consumption and cost.

Metered utility consumption exceeded metered utility cost by a large margin. The utility rates used in the model are not the same as the utility rates at the meter.

Further review of the modeled and metered data is required to reconcile the differences.

Teaching Lab has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/unc-wilmington-teaching-labs

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Asheville

Rhoades Hall Renovation

	Basic Project Data		
	Total Project Cost	$	6,855,465
	Project Size (SF)		40,434
	Cost/Square Foot	$	170
	LEED Certification		None
	Fees and Costs		
A	Basic Design Fee	$	782,665
B	Additional Design Fees	$	76,500
C	Total Design Fee	$	859,165
	% of Total Gen Cont(G)		1.28%
D	Commissioning Fees (Cx)		
	% of Total Gen Cont(G)		0.00%
E	Estimated Basic Costs	$	5,834,600
F	Estimated Additional Costs	$	161,700
G	Total General Contract	$	5,996,300
	% of Total Gen Cont(G)		3%
H	Baseline Utilities Cost	$	98,370
I	Metered Utilities Cost		No data
J	Avoided Utility Cost		
K	% Avoided Utility Savings		
	Indoor Water (Gallons)		
	Baseline Water Use		957,500
	Metered Water Use		No data
	Avoided Water Use		
	% Avoided Water Use		
	Total Additional Fees & Costs		
	Additional Design Fees	$	76,500
	Commissioning Fees (Cx)	$	-
	Estimated Additional Costs	$	161,700
	Total	$	238,200
	% of Total Gen Cont(G)		4%

Rhoades Hall Renovation is a three and four story bulding that houses classrooms, laboratories and offices. Rhoades was accepted on September 10, 2012. This is the second year of meter data for Rhoades.

Meter data has not been received for Rhoades.

Rhoades has not met the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

East Carolina University

School of Dental Medicine / Ledyard E. Ross Hall

	Basic Project Data	
	Total Project Cost	$ 38,917,314
	Project Size (SF)	157,410
	Cost/Square Foot	$ 247
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 5,294,860
B	Additional Design Fees	$ 100,000
C	Total Design Fee	$ 5,394,860
	% of Total Gen Cont(G)	0.30%
D	Commissioning Fees (Cx)	$ 346,397
	% of Total Gen Cont(G)	1.04%
E	Estimated Basic Costs	$ 32,922,547
F	Estimated Additional Costs	$ 253,510
G	Total General Contract	$ 33,176,057
	% of Total Gen Cont(G)	1%
H	Baseline Utilities Cost	$ 420,065
I	Metered Utilities Cost	No data
J	Avoided Water Use	
K	% Avoided Water Use	
	Indoor Water (Gallons)	
	Baseline Water Use	1,373,584
	Metered Water Use	No data
	Water Savings	
	Percent Water Savings	
	Total Additional Fees & Costs	
	Additional Design Fees	$ 100,000
	Commissioning Fees (Cx)	$ 346,397
	Estimated Additional Costs	$ 253,510
	Total	$ 699,907
	% of Total Gen Cont(G)	2%

Ross Hall is a four story dental teaching building containing classrooms, laboratories, dental clinics and offices. There is a partial mechanical basement and full mechanical penthouse in addition to the four occupied floors. Ross was accepted on September 14, 2012. This is the second year of meter data for Ross Hall.

Ross Hall has not been submitted for LEED certification.

The fourth floor shell space has been completed which will increase energy and water use for the facility above the modeled energy and water use.

Energy and water data has not been received for Ross.

Ross has not met the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Gaston College

Lena Sue Beam Renovation

	Basic Project Data	
	Total Project Cost	$ 5,232,784
	Project Size (SF)	31,418
	Cost/Square Foot	$ 167
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 474,000
B	Additional Design Fees	$ -
C	Total Design Fee	$ 474,000
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 56,984
	% of Total Gen Cont(G)	1.21%
E	Estimated Basic Costs	$ 4,657,494
F	Estimated Additional Costs	$ 44,306
G	Total General Contract	$ 4,701,800
	% of Total Gen Cont(G)	1%
H	Baseline Utilities Cost	$ 36,406
I	Metered Utilities Cost	No data
J	Avoided Utility Cost	
K	% Avoided Utility Savings	
	Indoor Water (Gallons)	
	Baseline Water Use	689,715
	Metered Water Use	No data
	Avoided Water Use	
	% Avoided Water Use	
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 56,984
	Estimated Additional Costs	$ 44,306
	Total	$ 101,290
	% of Total Gen Cont(G)	2%

Lena Sue Beam renovation is a two story classroom and office building. Lena Sue Beam was accepted on October 3, 2012. This is the second year of meter data for Lena Sue Beam.

Energy and water data has not been received for Lena Sue Beam.

Lena Sue Beam has not met the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC State University

James B. Hunt, Jr. Library

	Basic Project Data	
	Total Project Cost	$ 91,740,961
	Project Size (SF)	253,028
	Cost/Square Foot	$ 363
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	$ 9,629,956
B	Additional Design Fees	$ 200,000
C	Total Design Fee	$ 9,829,956
	% of Total Gen Cont(G)	2.03%
D	Commissioning Fees (Cx)	$ 605,005
	% of Total Gen Cont(G)	0.74%
E	Estimated Basic Costs	$ 80,844,228
F	Estimated Additional Costs	$ 461,772
G	Total General Contract	$ 81,306,000
	% of Total Gen Cont(G)	1%
H	Baseline Utilities Cost	$ 268,448
I	Metered Utilities Cost	$ 709,070
J	Avoided Utility Cost	$ (440,622)
K	% Avoided Utility Savings	-164%
	Indoor Water (Gallons)	
	Baseline Water Use	4,536,750
	Metered Water Use	709,070
	Avoided Water Use	3,827,680
	% Avoided Water Use	84%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 200,000
	Commissioning Fees (Cx)	$ 605,005
	Estimated Additional Costs	$ 461,772
	Total	$ 1,266,777
	% of Total Gen Cont(G)	2%

Hunt Library is the largest building completed under the program at 253,028 square feet. Construction costs for the project have been difficult to accurately determine due to the number of bid packages and the scope of the project which not only included the library building itself, but parking structure, site utilities and other features. Hunt was accepted on October 18, 2012. This is the second year of meter data for Hunt.

Baseline water consumption estimated during the design process is noted as very high for a library buidling with water use limited to waterclosets and lavatories. Plug and process loads were not included in the energy model or baseline utilities cost while plug and process loads are currently carried in the metered utility cost. The comparison is not accurate with this data.

Hunt has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/james-b-hunt-jr-library

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design amendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC Department of Administration - Veteran's Administration

Kinston Nursing Home

	Basic Project Data	
	Total Project Cost	$ 14,088,404
	Project Size (SF)	108,770
	Cost/Square Foot	$ 130
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 1,077,600
B	Additional Design Fees	$ -
C	Total Design Fee	$ 1,077,600
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 107,804
	% of Total Gen Cont(G)	0.84%
E	Estimated Basic Costs	$ 12,602,128
F	Estimated Additional Costs	$ 300,872
G	Total General Contract	$ 12,903,000
	% of Total Gen Cont(G)	2%
H	Baseline Utilities Cost	$ 213,106
I	Metered Utilities Cost	$ 195,648
J	Avoided Utility Cost	$ 17,458
K	% Avoided Utility Savings	8%
	Indoor Water (Gallons)	
	Baseline Water Use	4,378,540
	Metered Water Use	2,992,050
	Avoided Water Use	1,386,490
	% Avoided Water Use	32%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 107,804
	Estimated Additional Costs	$ 300,872
	Total	$ 408,676
	% of Total Gen Cont(G)	3%

The Kinston Nursing Home houses 100 service member veterans in a skilled nursing facility. The Kinston Nursing Home was accepted on October 31, 2012. This is the second year of meter data for Kinston.

The Kinston and Swannanoa Nursing homes are identical and should perform similarly and have similar utility consumption and cost.

Construction costs for the Kinston VA home were less than the identical Swannanoa VA home due to site costs of the mountains versus the coastal plains.

Kinston has not met the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Charlotte

Judy W. Rose Football Center

	Basic Project Data	
	Total Project Cost	$ 16,534,972
	Project Size (SF)	43,290
	Cost/Square Foot	$ 382
	LEED Certification	Certified (1)
	Fees and Costs	
A	Basic Design Fee	$ 3,403,472
B	Additional Design Fees	$ 45,000
C	Total Design Fee	$ 3,448,472
	% of Total Gen Cont(G)	1%
D	Commissioning Fees (Cx)	$ 99,500
	% of Total Gen Cont(G)	0.77%
E	Estimated Basic Costs	$ 12,521,456
F	Estimated Additional Costs	$ 465,544
G	Total General Contract	$ 12,987,000
	% of Total Gen Cont(G)	4%
H	Baseline Utilities Cost	$ 65,175
I	Metered Utilities Cost	$ 143,892
J	Avoided Utility Cost	$ (78,717)
K	% Avoided Utility Savings	-121%
	Indoor Water (Gallons)	
	Baseline Water Use	1,349,491
	Metered Water Use	2,243,237
	Avoided Water Use	(893,746)
	% Avoided Water Use	-66%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 45,000
	Commissioning Fees (Cx)	$ 99,500
	Estimated Additional Costs	$ 465,544
	Total	$ 610,044
	% of Total Gen Cont(G)	5%

Rose Football Center is a two story football training center, locker room and meeting space. Rose was accepted on October 31, 2012. This is the second year of meter data for Rose Football Center.

The design fee and construction cost are for the entire football complex, not just the Rose Football Center. The cost per square foot is grossly inflated since the football center was not designed and bid separately. The football center has been estimated at $300/GSF and used to calculate the Total General Contract (G).

Metered utility consumption was more than double the baseline utilities cost. The metered utility consumption includes the athletic field lights.

Rose Football Center has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/football-complex-fieldhouse

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Randolph Community College

Klaussner Building Renovation

	Basic Project Data	
	Total Project Cost	$ 6,774,300
	Project Size (SF)	43,967
	Cost/Square Foot	$ 154
	LEED Certification	Gold (1)
	Fees and Costs	
A	Basic Design Fee	$ 363,200
B	Additional Design Fees	$ -
C	Total Design Fee	$ 363,200
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 49,800
	% of Total Gen Cont(G)	0.78%
E	Estimated Basic Costs	$ 6,060,565
F	Estimated Additional Costs	$ 300,735
G	Total General Contract	$ 6,361,300
	% of Total Gen Cont(G)	5%
H	Baseline Utilities Cost	$ 67,485
I	Metered Utilities Cost	$ 70,681
J	Avoided Utility Cost	$ (3,196)
K	% Avoided Utility Savings	-5%
	Indoor Water (Gallons)	
	Baseline Water Use	544,858
	Metered Water Use	15,177
	Avoided Water Use	529,681
	% Avoided Water Use	97%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 49,800
	Estimated Additional Costs	$ 300,735
	Total	$ 350,535
	% of Total Gen Cont(G)	6%

Klaussner Building Renovation involved converting a former furniture factory into an office, classroom and technology teaching building. Klaussner was accepted on November 27, 2012. This is the second year of meter data for Klaussner.

Metered utility consumption and cost exceeded the baseline utility consumption and cost and did not meet the requirements of the legislation. The modeled baseline utility consumption was low and should be reconciled with the building as constructed and used.

Metered water consumption was much less than the baseline water consumption estimate. Estimating water consumption has proved to be difficult due to varying use and occupancy in the building.

Klaussner has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/continuing-ed-industrial-center-renov

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Appalachian State University

Plemmons Student Union Addition

	Basic Project Data	
	Total Project Cost	$ 16,289,276
	Project Size (SF)	50,560
	Cost/Square Foot	$ 322
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	$ 894,572
B	Additional Design Fees	$ 90,950
C	Total Design Fee	$ 985,522
	% of Total Gen Cont(G)	0.60%
D	Commissioning Fees (Cx)	$ 71,248
	% of Total Gen Cont(G)	0.47%
E	Estimated Basic Costs	$ 14,629,006
F	Estimated Additional Costs	$ 603,500
G	Total General Contract	$ 15,232,506
	% of Total Gen Cont(G)	4%
H	Baseline Utilities Cost	$ 53,367
I	Metered Utilities Cost	$ 298,171
J	Avoided Utility Cost	$ (244,804)
K	% Avoided Utility Savings	-459%
	Indoor Water (Gallons)	
	Baseline Water Use	1,220,706
	Metered Water Use	2,355,609
	Avoided Water Use	(1,134,903)
	% Avoided Water Use	-93%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 90,950
	Commissioning Fees (Cx)	$ 71,248
	Estimated Additional Costs	$ 603,500
	Total	$ 765,698
	% of Total Gen Cont(G)	5%

Plemmons Student Union Addition is a four story addition to the existing student center. The Addition was accepted on December 18, 2012. This is the second year of meter data for Plemmons.

Meter data received for Plemmons was for the entire building instead of for the addition. Due to the size of Plemmons Student Union and the high plug and process loads, the meter data is not applicable for the addition. The meter data presented indicates a large difference between the model data for the addition and the meter data for the entire building.

Plemmons has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/asu-plemmons-addition

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Appalachian State University

Summit Residence Hall and Appalachian Hall

	Basic Project Data	
	Total Project Cost	$ 43,619,657
	Project Size (SF)	128,585
	Cost/Square Foot	$ 339
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	$ 2,569,633
B	Additional Design Fees	$ 94,925
C	Total Design Fee	$ 2,664,558
	% of Total Gen Cont(G)	0.23%
D	Commissioning Fees (Cx)	$ 263,882
	% of Total Gen Cont(G)	0.65%
E	Estimated Basic Costs	$ 39,309,739
F	Estimated Additional Costs	$ 1,381,478
G	Total General Contract	$ 40,691,217
	% of Total Gen Cont(G)	3%
H	Baseline Utilities Cost	$ 153,208
I	Metered Utilities Cost	$ 298,171
J	Avoided Utility Cost	$ (144,963)
K	% Avoided Water Use	-95%
	Indoor Water (Gallons)	
	Baseline Water Use	3,388,865
	Metered Water Use	2,355,609
	Avoided Water Use	1,033,256
	% Avoided Water Use	30%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 94,925
	Commissioning Fees (Cx)	$ 263,882
	Estimated Additional Costs	$ 1,381,478
	Total	$ 1,740,285
	% of Total Gen Cont(G)	4%

Summit Residence Hall is an 11 floor residence hall and the attached Appalachian Hall is a three story office and classroom facility / living learning center. Summit was accepted on December 18, 2012. This is the second year of meter data for Summit.

The baseline or modeled utilities cost are low when compared to similar buildings while the metered utilities cost is typical for this type of facility. The negative avoided utility cost is due to the low baseline cost, not due to an inefficient building.

The metered water use shows savings typical for low flow fixtures and typical residence hall use patterns.

Summitt has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/asu-llc

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Wilmington

MARBIONC

	Basic Project Data	
	Total Project Cost	$ 27,470,401
	Project Size (SF)	68,000
	Cost/Square Foot	$ 404
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	$ 2,694,677
B	Additional Design Fees	$ 110,280
C	Total Design Fee	$ 2,804,957
	% of Total Gen Cont(G)	0.45%
D	Commissioning Fees (Cx)	$ 294,243
	% of Total Gen Cont(G)	1.21%
E	Estimated Basic Costs	$ 19,975,000
F	Estimated Additional Costs	$ 4,396,201
G	Total General Contract	$ 24,371,201
	% of Total Gen Cont(G)	18%
H	Baseline Utilities Cost	$ 425,995
I	Metered Utilities Cost	$ 340,591
J	Avoided Utility Cost	$ 85,404
K	% Avoided Utility Cost	20%
	Indoor Water (Gallons)	
	Baseline Water Use	5,139,169
	Metered Water Use	No Data
	Avoided Water Use	
	% Avoided Water Use	
	Total Additional Fees & Costs	
	Additional Design Fees	$ 110,280
	Commissioning Fees (Cx)	$ 294,243
	Estimated Additional Costs	$ 4,396,201
	Total	$ 4,800,724
	% of Total Gen Cont(G)	20%

MARBIONC is a two story marine research laboratory building that also contains offices. This type of building is energy intensive with high usage and bills to match. MARBIONC was accepted on January 29, 2013. This is the second year of meter data for MARBIONC.

Baseline indoor water consumption at 5,139,169 gallons/year was very high for any type of building and the highest usage/square foot estimated for any state building. There is not a water meter for the facility. Metered water use data is not available for MARBIONC.

The total additional fees and costs at 20% are not realistic due to the simplified estimate for basic costs used by the designer at 15% of the cost of the proposed building.

MARBIONC has met the requirements of the legislation for energy consumption.

(1) http://www.usgbc.org/projects/marine-biotechnology-research-facility

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC Department of Administration

NC State Bar Headquarters

	Basic Project Data	
	Total Project Cost	$ 14,143,900
	Project Size (SF)	54,565
	Cost/Square Foot	$ 259
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	$ 1,119,000
B	Additional Design Fees	$ 6,000
C	Total Design Fee	$ 1,125,000
	% of Total Gen Cont(G)	0%
D	Commissioning Fees (Cx)	$ 56,200
	% of Total Gen Cont(G)	0.43%
E	Estimated Basic Costs	$ 12,687,413
F	Estimated Additional Costs	$ 275,287
G	Total General Contract	$ 12,962,700
	% of Total Gen Cont(G)	2%
H	Baseline Utilities Cost	$ 45,238
I	Metered Utilities Cost	$ 83,918
J	Avoided Utility Cost	$ (38,680)
K	% Avoided Utility Cost	-86%
	Indoor Water (Gallons)	
	Baseline Water Use	175,310
	Metered Water Use	220,660
	Avoided Water Use	(45,350)
	% Avoided Water Use	-26%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 6,000
	Commissioning Fees (Cx)	$ 56,200
	Estimated Additional Costs	$ 275,287
	Total	$ 337,487
	% of Total Gen Cont(G)	3%

The NC State Bar Headquarters is a four story office building that also houses mock courtrooms and support spaces. This privately owned building is required to comply with the energy legislation since it was built on state owned land. The NC State Bar Headquarters was accepted on April 25, 2013. This is the second year of meter data for the NC State Bar.

The modeld baseline utilities consumption and cost for this type of building was very low. The metered utilities consumption and cost is typical for this type of building. The building is performing as expected for similar buildings.

Baseline and metered water use was essentially the same. The water savings requirement of 20% has not been met.

State Bar has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/nc-state-bar

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Fayetteville State University

Science and Technology Building

	Basic Project Data	
	Total Project Cost	$ 18,894,214
	Project Size (SF)	65,861
	Cost/Square Foot	$ 287
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	$ 1,441,000
B	Additional Design Fees	$ 135,000
C	Total Design Fee	$ 1,576,000
	% of Total Gen Cont(G)	0.79%
D	Commissioning Fees (Cx)	$ 290,182
	% of Total Gen Cont(G)	1.70%
E	Estimated Basic Costs	$ 16,327,000
F	Estimated Additional Costs	$ 701,032
G	Total General Contract	$ 17,028,032
	% of Total Gen Cont(G)	4%
H	Baseline Utilities Cost	$ 151,889
I	Metered Utilities Cost	No Data
J	Avoided Utility Cost	
K	% Avoided Utility Cost	
	Indoor Water (Gallons)	
	Baseline Water Use	2,163,492
	Metered Water Use	No Data
	Avoided Water Use	
	% Avoided Water Use	
	Total Additional Fees & Costs	
	Additional Design Fees	$ 135,000
	Commissioning Fees (Cx)	$ 290,182
	Estimated Additional Costs	$ 701,032
	Total	$ 1,126,214
	% of Total Gen Cont(G)	7%

The Science and Technology Building is a four story building with two wings that house research and teaching laboratories in one wing and office and classroom space in the other wing with a connector that contains meeting spaces and a coffee shop. The Science and Technology Building was accepted on May 21, 2013. This is the second year of meter data for the Science and Technology Building.

Meter data has not been received.

The Science and Technology Building has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/fayetteville-state-u-lab

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Wilmington

Student Recreation Facility Addition

	Basic Project Data	
	Total Project Cost	$ 24,114,338
	Project Size (SF)	93,917
	Cost/Square Foot	$ 257
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	$ 2,295,110
B	Additional Design Fees	$ 215,000
C	Total Design Fee	$ 2,510,110
	% of Total Gen Cont(G)	1.00%
D	Commissioning Fees (Cx)	$ 126,000
	% of Total Gen Cont(G)	0.59%
E	Estimated Basic Costs	$ 20,845,432
F	Estimated Additional Costs	$ 632,796
G	Total General Contract	$ 21,478,228
	% of Total Gen Cont(G)	3%
H	Baseline Utilities Cost	$ 351,452
I	Metered Utilities Cost	$ 220,427
J	Avoided Utility Cost	$ 131,025
K	% Avoided Utility Cost	37%
	Indoor Water (Gallons)	
	Baseline Water Use	810,220
	Metered Water Use	1,160,700
	Avoided Water Use	(350,480)
	% Avoided Water Use	-43%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 215,000
	Commissioning Fees (Cx)	$ 126,000
	Estimated Additional Costs	$ 632,796
	Total	$ 973,796
	% of Total Gen Cont(G)	5%

Student Recreation Facility Addition doubles the size of the existing student recreation facility with a two story addition. The Addition was accepted on May 22, 2013. This is the second year of meter data for this building.

Metered utilities consumption was 7% higher than modeled baseline utilities consumption while the metered utilities cost was 37% less than the mddeled baseline utilities consumption. This indicates the modeled and metered utilities rates do not agree.

Metered water use exceeded the estimated baseline water use. As noted previously, water use is difficult to estimate.

Student Recreation has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/unc-wilmington-student-recreation-center

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Winston-Salem State University

Reaves Student Activities Center

	Basic Project Data	
	Total Project Cost	$ 28,088,950
	Project Size (SF)	91,513
	Cost/Square Foot	$ 307
	LEED Certification	Gold (1)
	Fees and Costs	
A	Basic Design Fee	$ 2,230,879
B	Additional Design Fees	$ 177,240
C	Total Design Fee	$ 2,408,119
	% of Total Gen Cont(G)	0.70%
D	Commissioning Fees (Cx)	$ 287,625
	% of Total Gen Cont(G)	1.13%
E	Estimated Basic Costs	$ 25,315,267
F	Estimated Additional Costs	$ 77,939
G	Total General Contract	$ 25,393,206
	% of Total Gen Cont(G)	0%
H	Baseline Utilities Cost	$ 105,529
I	Metered Utilities Cost	$ 193,521
J	Avoided Utility Cost	$ (87,992)
K	% Avoided Utility Cost	-83%
	Indoor Water (Gallons)	
	Baseline Water Use	1,434,603
	Metered Water Use	625,747
	Avoided Water Use	808,856
	% Avoided Water Use	56%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 177,240
	Commissioning Fees (Cx)	$ 287,625
	Estimated Additional Costs	$ 77,939
	Total	$ 542,804
	% of Total Gen Cont(G)	2%

Reaves Student Activities Center is a three student dining, recreation and multiuse building. Reaves was accepted on June 24, 2013. This is the second year of meter data for Reaves.

Thermal utilities are metered based on the size or square footage of the building, not on consumption. Any efficiencies in utility consumption by this building are average with the other campus facilities served by campus steam and/or campus chilled water.

Reaves has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/wssu-student-activities-center

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Haywood Community College

Creative Arts Building

	Basic Project Data	
	Total Project Cost	$ 9,316,286
	Project Size (SF)	40,722
	Cost/Square Foot	$ 229
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	$ 801,000
B	Additional Design Fees	$ 50,000
C	Total Design Fee	$ 851,000
	% of Total Gen Cont(G)	0.60%
D	Commissioning Fees (Cx)	$ 80,000
	% of Total Gen Cont(G)	0.95%
E	Estimated Basic Costs	$ 6,402,774
F	Estimated Additional Costs	$ 1,982,512
G	Total General Contract	$ 8,385,286
	% of Total Gen Cont(G)	24%
H	Baseline Utilities Cost	$ 65,069
I	Metered Utilities Cost	No data
J	Avoided Utility Cost	
K	% Avoided Utility Cost	
	Indoor Water (Gallons)	
	Baseline Water Use	977,508
	Metered Water Use	No data
	Avoided Water Use	
	% Avoided Water Use	
	Total Additional Fees & Costs	
	Additional Design Fees	$ 50,000
	Commissioning Fees (Cx)	$ 80,000
	Estimated Additional Costs	$ 1,982,512
	Total	$ 2,112,512
	% of Total Gen Cont(G)	25%

The Creative Arts Building is a multilevel and multistory building that houses art studios, offices and classrooms. The building is classified as a three story building. The Creative Arts Building was accepted on June 30, 2013. This is the second year of meter data for the Creative Arts Building.

Innovative mechanical and electrical systems include a solar powered water chiller for air conditioning, under slab heating, photovoltaics for electricity and storm water harvesting for irrigation.

Meter data is incomplete. Eight months of meter has been collected for calendar year 2015. 12 months of meter data is not available due to software issues with recording the data.

Creative Arts Building has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/haywood-cc-creative-arts-building

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Charlotte

Belk Residence Hall

	Basic Project Data	
	Total Project Cost	$ 32,381,074
	Project Size (SF)	164,377
	Cost/Square Foot	$ 197
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 2,041,790
B	Additional Design Fees	$ 126,000
C	Total Design Fee	$ 2,167,790
	% of Total Gen Cont(G)	0.42%
D	Commissioning Fees (Cx)	$ 186,000
	% of Total Gen Cont(G)	0.62%
E	Estimated Basic Costs	$ 30,027,284
F	Estimated Additional Costs	$ -
G	Total General Contract	$ 30,027,284
	% of Total Gen Cont(G)	0%
H	Baseline Utilities Cost	$ 149,183
I	Metered Utilities Cost	$ 149,630
J	Avoided Utility Cost	$ (447)
K	% Avoided Utility Cost	0%
	Indoor Water (Gallons)	
	Baseline Water Use	2,719,308
	Metered Water Use	8,471,370
	Avoided Water Use	(5,752,062)
	% Avoided Water Use	-212%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 126,000
	Commissioning Fees (Cx)	$ 186,000
	Estimated Additional Costs	$ -
	Total	$ 312,000
	% of Total Gen Cont(G)	1%

Belk Residence Hall is a five story residence hall housing 400 students. Belk was accepted on July 9, 2013. This is the second year of meter data for Belk Residence Hall.

Metered utilities cost equal the baseline utilities cost and did not meet the requirements of the legislation. The baseline model utility consumption was low for this type. The baseline model and the metered utilities consumption is typical for this type of building.

Metered water usage was almost four times the estimated baseline water use. The excessive usage was due to three months of a malfunctioning cooling tower. The problem was discovered and repaired, bringing the remaining months of water usage into a typical range for this type of building.

Belk did not meet the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC State University

Cherry Building Renovation

	Basic Project Data	
	Total Project Cost	$ 2,962,771
	Project Size (SF)	22,482
	Cost/Square Foot	$ 132
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 292,501
B	Additional Design Fees	$ -
C	Total Design Fee	$ 292,501
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ -
	% of Total Gen Cont(G)	0.00%
E	Estimated Basic Costs	$ 2,645,494
F	Estimated Additional Costs	$ 24,776
G	Total General Contract	$ 2,670,270
	% of Total Gen Cont(G)	1%
H	Baseline Utilities Cost	$ 27,666
I	Metered Utilities Cost	$ 33,166
J	Avoided Utility Cost	$ (5,500)
K	% Avoided Utility Cost	-20%
	Indoor Water (Gallons)	
	Baseline Water Use	166,500
	Metered Water Use	120,550
	Avoided Water Use	45,950
	% Avoided Water Use	28%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ -
	Estimated Additional Costs	$ 24,776
	Total	$ 24,776
	% of Total Gen Cont(G)	1%

Cherry Building is a two story renovation that houses an early college high school program. Cherry was accepted on July 15, 2013. This is the second year of meter data for Cherry.

Cherry is unusual because there were no additional design fees for compliance with the energy legislation. The owner and designer also did not require third party commissioning.

Cherry did not meet the requirements of the legislation for energy savings.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Charlotte

Hunt Residence Hall

	Basic Project Data	
	Total Project Cost	$ 24,655,367
	Project Size (SF)	144,175
	Cost/Square Foot	$ 171
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 2,078,598
B	Additional Design Fees	$ -
C	Total Design Fee	$ 2,078,598
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 297,680
	% of Total Gen Cont(G)	1.21%
E	Estimated Basic Costs	$ 22,816,693
F	Estimated Additional Costs	$ 1,838,674
G	Total General Contract	$ 24,655,367
	% of Total Gen Cont(G)	7%
H	Baseline Utilities Cost	$ 141,674
I	Metered Utilities Cost	$ 144,088
J	Avoided Utility Cost	$ (2,414)
K	% Avoided Utility Cost	-2%
	Indoor Water (Gallons)	
	Baseline Water Use	1,100,206
	Metered Water Use	2,377,256
	Avoided Water Use	(1,277,050)
	% Avoided Water Use	-116%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 297,680
	Estimated Additional Costs	$ 1,838,674
	Total	$ 2,136,354
	% of Total Gen Cont(G)	9%

Hunt Residence Hall is a five story residence hall that houses 436 students. Hunt was accepted on July 29, 2013. This is the second year of meter data for Hunt Residence Hall.

Metered utilities use was 17 percent lower than the baseline utilities use while the metered utilities cost was 2 percent higher than the baseline utilities cost. The utility rates used in the model were lower than the metered utility rates.

Metered water use was approximately twice times baseline water use. The estimated baseline water use was low for a residence hall while the metered water use was typical for a university residence hall on a per student basis.

The owner and designer are required to review the model and meter data for reconciliation.

Hunt did not meet the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC State University

Lakeview Hall - Wolf Ridge at Centennial Building 6

	Basic Project Data	
	Total Project Cost	$ 15,250,636
	Project Size (SF)	67,202
	Cost/Square Foot	$ 227
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	$ 995,827
B	Additional Design Fees	$ -
C	Total Design Fee	$ 995,827
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 47,050
	% of Total Gen Cont(G)	0.33%
E	Estimated Basic Costs	$ 11,410,140
F	Estimated Additional Costs	$ 2,797,619
G	Total General Contract	$ 14,207,759
	% of Total Gen Cont(G)	20%
H	Baseline Utilities Cost	$ 76,622
I	Metered Utilities Cost	$ 91,338
J	Avoided Utility Cost	$ (14,716)
K	% Avoided Utility Cost	-19%
	Indoor Water (Gallons)	
	Baseline Water Use	1,630,661
	Metered Water Use	571,472
	Avoided Water Use	1,059,189
	% Avoided Water Use	65%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 47,050
	Estimated Additional Costs	$ 2,797,619
	Total	$ 2,844,670
	% of Total Gen Cont(G)	20%

Wolf Ridge is a six building student housing complex on NCSU's Centennial Campus. Lakeview Hall is six stories and houses 151 students. Lakeview was accepted on August 1, 2013. This is the second year of meter data for Lakeview.

Estimated additional costs were calculated for Plaza only. Estimated additional costs for Plaza equated to $41.63/GSF which is extremely high and not realistic for traditional energy efficient building systems. Lakeview presented here comes with a 20 percent premium for compliance with the legislation.
Estimated baseline water use was high for a residence hall and the metered water use is lower than typically seen for a residence hall.

Lakeview does not meet the requirements of the legislation.

(1) Silver certification not viewable from USGBC website

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC State University

Tower Hall - Wolf Ridge at Centennial Building 1

	Basic Project Data	
	Total Project Cost	$ 35,113,293
	Project Size (SF)	154,726
	Cost/Square Foot	$ 227
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	$ 2,292,794
B	Additional Design Fees	$ -
C	Total Design Fee	$ 2,292,794
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 108,329
	% of Total Gen Cont(G)	0.33%
E	Estimated Basic Costs	$ 26,270,928
F	Estimated Additional Costs	$ 6,441,243
G	Total General Contract	$ 32,712,171
	% of Total Gen Cont(G)	20%
H	Baseline Utilities Cost	$ 220,350
I	Metered Utilities Cost	$ 300,412
J	Avoided Utility Cost	$ (80,062)
K	% Avoided Utility Cost	-36%
	Indoor Water (Gallons)	
	Baseline Water Use	5,618,485
	Metered Water Use	1,964,248
	Avoided Water Use	3,654,237
	% Avoided Water Use	65%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 108,329
	Estimated Additional Costs	$ 6,441,243
	Total	$ 6,549,572
	% of Total Gen Cont(G)	20%

Wolf Ridge is a six building student housing complex on NCSU's Centennial Campus. Tower Hall is six stories and houses 251 students along with a dining facility. Tower was accepted on August 1, 2013. This is the second year of metered data for Tower.

Estimated additional costs were calculated for Plaza only. Estimated additional costs for Plaza equated to $41.63/GSF which is extremely high and not realistic for traditional energy efficient building systems. Tower comes with a 20 percent premium for compliance with the legislation.

Estimated baseline water use was high for a residence hall and the metered water use is higher than typically seen for a residence hall.

Tower did not meet the requirements of the legislation.

(1) Silver certification not viewable from USGBC website

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Greensboro

Spartan Village Building 1
Lee Residence Hall

	Basic Project Data	
	Total Project Cost	Not available
	Project Size (SF)	116,224
	Cost/Square Foot	Not available
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	Not available
B	Additional Design Fees	
C	Total Design Fee	
	% of Total Gen Cont(G)	
D	Commissioning Fees (Cx)	
	% of Total Gen Cont(G)	Not available
E	Estimated Basic Costs	
F	Estimated Additional Costs	
G	Total General Contract	Not available
	% of Total Gen Cont(G)	
H	Baseline Utilities Cost	$ 127,318
I	Metered Utilities Cost	$ 78,621
J	Avoided Utility Cost	$ 48,697
K	% Avoided Utility Cost	38%
	Indoor Water (Gallons)	
	Baseline Water Use	2,900,134
	Metered Water Use	1,941,869
	Avoided Water Use	958,265
	% Avoided Water Use	33%
	Total Additional Fees & Costs	
	Additional Design Fees	
	Commissioning Fees (Cx)	
	Estimated Additional Costs	
	Total	Not Available
	% of Total Gen Cont(G)	

Spartan Village is a foundation project that is privately developed on state owned land. Project cost data is not available since the project was developed with private money. Lee is an apartment style, four story residence hall that houses 243 students. Lee was accepted on August 7, 2013. This is the second year of meter data for Lee.

Model data was provided for one building and applied to the four different size buildings including Haywood. The model to meter comparison will not be accurate except for Haywood.

Metered utilities consumption and cost meet the requirements of the legislation.

Baseline and proposed water use is high for typical residence hall usage. Metered usage is also high, but meets the requirements of the legislation.

Lee meets the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncg-spartan-village-hsng-building-1

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Greensboro

Spartan Village Building 3
Haywood Residence Hall

	Basic Project Data	
	Total Project Cost	Not Available
	Project Size (SF)	56,295
	Cost/Square Foot	
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	Not Available
B	Additional Design Fees	
C	Total Design Fee	$ -
	% of Total Gen Cont(G)	
D	Commissioning Fees (Cx)	Not Available
	% of Total Gen Cont(G)	
E	Estimated Basic Costs	
F	Estimated Additional Costs	
G	Total General Contract	Not Available
	% of Total Gen Cont(G)	
H	Baseline Utilities Cost	$ 127,318
I	Metered Utilities Cost	$ 46,913
J	Avoided Utility Cost	$ 80,405
K	% Avoided Utility Cost	63%
	Indoor Water (Gallons)	
	Baseline Water Use	1,736,095
	Metered Water Use	699,260
	Avoided Water Use	1,036,835
	% Avoided Water Use	60%
	Total Additional Fees & Costs	
	Additional Design Fees	
	Commissioning Fees (Cx)	
	Estimated Additional Costs	
	Total	Not Available
	% of Total Gen Cont(G)	

Spartan Village is a foundation project that is privately developed on state owned land. Project cost data is not available since the project was developed with private money. Haywood is an apartment style, four story residence hall that houses 130 students. Haywood was accepted on August 7, 2013. This is the second year of meter data for Haywood.

Model data was provided for one building and applied to the four different size buildings. The model to meter comparison will not be accurate except for Haywood.

Metered utilities consumption and cost meet the requirements of the legislation.

Baseline and proposed water use is high for typical residence hall usage. Metered water usage meets the requirements of the legislation.

Haywood meets the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncg-spartan-village-hsng-building-3

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Greensboro

Spartan Village Building 4
Union Residence Hall

	Basic Project Data	
	Total Project Cost	Not Available
	Project Size (SF)	89,104
	Cost/Square Foot	
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	Not Available
B	Additional Design Fees	
C	Total Design Fee	
	% of Total Gen Cont(G)	
D	Commissioning Fees (Cx)	Not Available
	% of Total Gen Cont(G)	
E	Estimated Basic Costs	
F	Estimated Additional Costs	
G	Total General Contract	Not Available
	% of Total Gen Cont(G)	
H	Baseline Utilities Cost	$ 127,318
I	Metered Utilities Cost	$ 57,266
J	Avoided Utility Cost	$ 70,052
K	% Avoided Utility Cost	55%
	Indoor Water (Gallons)	
	Baseline Water Use	2,627,757
	Metered Water Use	1,202,269
	Avoided Water Use	1,425,488
	% Avoided Water Use	54%
	Total Additional Fees & Costs	
	Additional Design Fees	
	Commissioning Fees (Cx)	
	Estimated Additional Costs	
	Total	Not Available
	% of Total Gen Cont(G)	

Spartan Village is a foundation project that is privately developed on state owned land. Project cost data is not available since the project was developed with private money. Union is an apartment style, four story residence hall that houses 209 students. Union was accepted on August 7, 2013. This is the second year of meter data for Union.

Model data was provided for one building and applied to the four different size buildings including Haywood. The model to meter comparison will not be accurate except for Haywood.

Metered utilities consumption and cost meet the requirements of the legislation.

Baseline and proposed water use is high for typical residence hall usage. Metered water usage meets the requirements of the legislation.

Union meets the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncg-spartan-village-hsng-building-4

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Winston-Salem State University

Martin-Schexnider Residence Hall

	Basic Project Data	
	Total Project Cost	Not Available
	Project Size (SF)	55,626
	Cost/Square Foot	Not Available
	LEED Certification	Certified (1)
	Fees and Costs	
A	Basic Design Fee	Not Available
B	Additional Design Fees	
C	Total Design Fee	$ -
	% of Total Gen Cont(G)	
D	Commissioning Fees (Cx)	Not Available
	% of Total Gen Cont(G)	
E	Estimated Basic Costs	$ 9,516,280
F	Estimated Additional Costs	$ 483,720
G	Total General Contract	$ 10,000,000
	% of Total Gen Cont(G)	5%
H	Baseline Utilities Cost	$ 87,219
I	Metered Utilities Cost	$ 93,752
J	Avoided Utility Cost	$ (6,533)
K	% Avoided Utility Cost	-7%
	Indoor Water (Gallons)	
	Baseline Water Use	2,317,437
	Metered Water Use	2,293,936
	Avoided Water Use	23,501
	% Avoided Water Use	1%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ -
	Estimated Additional Costs	$ 483,720
	Total	$ 483,720
	% of Total Gen Cont(G)	5%

Martin-Schexnider Residence Hall is a foundation project built with private money and therefore data on the cost of the project is not public. Construction contract amounts are from the designer's life cycle cost analysis and are estimates only, not bid prices. The building has two residential towers that are four stories each with a single story connector housing a lobby and offices. The building houses 227 students. Martin-Schexnider was accepted on August 13, 2013. This is the second year of meter data for Martin-Schexnider.

Natural gas consumption is prorated based on the size of square footage of the building rather than actual building consumption. Therefore, metered utilities cost is not as accurate as it could be with utility meters for energy consumption.

Metered water use was much higher than expected for a typical residence hall.

Martin-Schexnider did not meet the requirements of the legislation.

(1) http://www.usgbc.org/projects/wssu-new-residence-hall

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Cape Fear Community College

Union Station

	Basic Project Data	
	Total Project Cost	$ 44,492,096
	Project Size (SF)	233,900
	Cost/Square Foot	$ 190
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	$ 5,773,835
B	Additional Design Fees	$ 339,250
C	Total Design Fee	$ 6,113,085
	% of Total Gen Cont(G)	0.89%
D	Commissioning Fees (Cx)	$ 237,711
	% of Total Gen Cont(G)	0.62%
E	Estimated Basic Costs	$ 37,627,193
F	Estimated Additional Costs	$ 514,107
G	Total General Contract	$ 38,141,300
	% of Total Gen Cont(G)	1%
H	Baseline Utilities Cost	$ 407,210
I	Metered Utilities Cost	$ 410,213
J	Avoided Utility Cost	$ (3,003)
K	% Avoided Utility Cost	-1%
	Indoor Water (Gallons)	
	Baseline Water Use	1,939,781
	Metered Water Use	2,997,984
	Avoided Water Use	(1,058,203)
	% Avoided Water Use	-55%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 339,250
	Commissioning Fees (Cx)	$ 237,711
	Estimated Additional Costs	$ 514,107
	Total	$ 1,091,068
	% of Total Gen Cont(G)	3%

Union Station is the largest Community College project and second largest project overall at 233,900 square feet completed under the energy savings legislation. The building is five stories and houses classrooms, offices and a large audtiorium. Union Station was accepted on August 22, 2013. This is the second year of meter data for Union Station.

Metered utilities consumption was 126% higher than modeled baseline utilities consumption while the metered utilities cost was 1% more than the modeled baseline utilities consumption. This indicates the modeled and metered utilities rates do not agree.

Metered water use was much more than predicted.

Union Station did not meet the requirements of the legislation.

(1) http://www.usgbc.org/projects/cfcc-union-station-building

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

East Carolina University

Smith-Williams Center
Minges Basketball Practice Facility

	Basic Project Data	
	Total Project Cost	$ 14,693,676
	Project Size (SF)	49,170
	Cost/Square Foot	$ 299
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 736,500
B	Additional Design Fees	$ -
C	Total Design Fee	$ 736,500
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 128,800
	% of Total Gen Cont(G)	0.93%
E	Estimated Basic Costs	$ 12,357,348
F	Estimated Additional Costs	$ 1,471,028
G	Total General Contract	$ 13,828,376
	% of Total Gen Cont(G)	11%
H	Baseline Utilities Cost	$ 48,568
I	Metered Utilities Cost	No Data
J	Avoided Utility Cost	
K	% Avoided Utility Cost	
	Indoor Water (Gallons)	
	Baseline Water Use	347,984
	Metered Water Use	No Data
	Avoided Water Use	
	% Avoided Water Use	
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 128,800
	Estimated Additional Costs	$ 1,471,028
	Total	$ 1,599,828
	% of Total Gen Cont(G)	12%

Smith-Williams Center is an addition to Minges Coliseum and serves as the practice facility and coaching offices for the men's and women's basketball teams. Smith -Williams was accepted on August 27, 2013. This is the second year of meter data for Smith-Williams Center.

Additional design fees associated with the energy legislation were not identified as part of the design contract. The Estimated Basic Costs (E) were part of the life cycle cost analysis and are not part of an estimate by the contractor. Additional design fees were identified but for additional scope not associated with the practice facility.

Meter data is incomplete for this report and has not been included.

Smith-Williams has not met the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC State University

Plaza Hall - Wolf Ridge at Centennial Building 2

	Basic Project Data	
	Total Project Cost	$ 19,261,636
	Project Size (SF)	84,876
	Cost/Square Foot	$ 227
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	$ 1,257,728
B	Additional Design Fees	$ -
C	Total Design Fee	$ 1,257,728
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 59,424
	% of Total Gen Cont(G)	0.33%
E	Estimated Basic Costs	$ 14,286,216
F	Estimated Additional Costs	$ 3,533,388
G	Total General Contract	$ 17,944,484
	% of Total Gen Cont(G)	20%
H	Baseline Utilities Cost	$ 102,040
I	Metered Utilities Cost	$ 109,251
J	Avoided Utility Cost	$ (7,211)
K	% Avoided Utility Cost	-7%
	Indoor Water (Gallons)	
	Baseline Water Use	2,385,879
	Metered Water Use	1,422,696
	Avoided Water Use	963,183
	% Avoided Water Use	40%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 59,424
	Estimated Additional Costs	$ 3,533,388
	Total	$ 3,592,812
	% of Total Gen Cont(G)	20%

Wolf Ridge is a six building student housing complex on NCSU's Centennial Campus. Plaza Hall is six stories and houses 223 students. The building was accepted on December 5, 2013. This is the first year of meter data for Plaza Hall.

Estimated additional costs were calculated for Plaza only. Estimated additional costs for Plaza equated to $41.63/GSF which is extremely high and not realistic for traditional energy efficient building systems. Plaza comes with a 20 percent premium for compliance with the legislation.

Estimated baseline water use was high for a residence hall and the metered water use is higher than typically seen for a residence hall.

Plaza Hall did not meet the requirements of the legislation.

(1) http://www.usgbc.org/projects/ncsu-ccsh-building-2

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Greensboro

Spartan Village Building 2
Highland Residence Hall

	Basic Project Data	
	Total Project Cost	Not Available
	Project Size (SF)	56,295
	Cost/Square Foot	Not Available
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	Not Available
B	Additional Design Fees	
C	Total Design Fee	$ -
	% of Total Gen Cont(G)	
D	Commissioning Fees (Cx)	Not Available
	% of Total Gen Cont(G)	
E	Estimated Basic Costs	
F	Estimated Additional Costs	
G	Total General Contract	Not Available
	% of Total Gen Cont(G)	
H	Baseline Utilities Cost	$ 127,318
I	Metered Utilities Cost	$ 74,606
J	Avoided Utility Cost	$ 52,712
K	% Avoided Utility Cost	41%
	Indoor Water (Gallons)	
	Baseline Water Use	2,916,495
	Metered Water Use	1,541,790
	Avoided Water Use	1,374,705
	% Avoided Water Use	47%
	Total Additional Fees & Costs	
	Additional Design Fees	
	Commissioning Fees (Cx)	
	Estimated Additional Costs	
	Total	Not Available
	% of Total Gen Cont(G)	

Spartan Village is a foundation project that is privately developed on state owned land. Project cost data is not available since the project was developed with private money. Highland is an apartment style, four story residence hall that houses 231 students. Highland was accepted on January 9, 2014. This is the first year of meter data for Highland.

Model data was provided for one building and applied to the four different size buildings. The model to meter comparison will not be accurate except for building 3.

The estimated baseline water use was very high for a residence hall while the metered water use was higher than expected. The percent avoided water use exceeded the requirements of the legislation, but should be reviewed further.

Highland Residence Hall has met the requirements of the legislation.

(1) http://www.usgbc.org/projects/uncg-spartan-village-hsng-building-2

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Charlotte

PORTAL

	Basic Project Data	
	Total Project Cost	$ 28,203,608
	Project Size (SF)	102,914
	Cost/Square Foot	$ 274
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 2,215,000
B	Additional Design Fees	$ -
C	Total Design Fee	$ 2,215,000
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 240,424
	% of Total Gen Cont(G)	0.93%
E	Estimated Basic Costs	$ 24,736,184
F	Estimated Additional Costs	$ 1,012,000
G	Total General Contract	$ 25,748,184
	% of Total Gen Cont(G)	4%
H	Baseline Utilities Cost	$ 142,246
I	Metered Utilities Cost	$ 93,136
J	Avoided Utility Cost	$ 49,110
K	% Avoided Utility Cost	35%
	Indoor Water (Gallons)	
	Baseline Water Use	776,459
	Metered Water Use	98,968
	Avoided Water Use	677,491
	% Avoided Water Use	87%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 240,424
	Estimated Additional Costs	$ 1,012,000
	Total	$ 1,252,424
	% of Total Gen Cont(G)	5%

PORTAL or the Partnership, Outreach, and Research To Accelerate Learning facility is a four floor office facility that houses business suites for workspace and an innovation center for regional and global business pioneers. PORTAL was accepted on January 28, 2014. This is the first year of meter data for PORTAL.

Metered utilities cost indicated a 35% reduction from the baseline utilities cost while the metered utilities consumption indicated a 41% increase from the baseline utilities consumption. The difference indicates the utilities rates used to generate the baseline data did not agree with the utilities rates applied to the building as metered.

Water use is limited to flushing fixtures and lavatories and is difficult to predict for an office building.

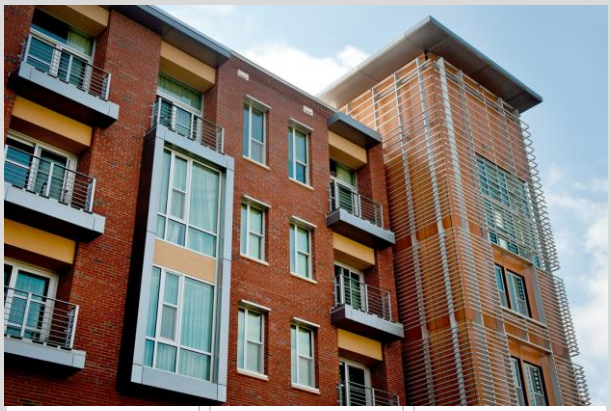
PORTAL did not meet the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC State University

Innovation Hall - Wolf Ridge at Centennial Bldg 3



	Basic Project Data	
	Total Project Cost	$ 20,086,784
	Project Size (SF)	88,512
	Cost/Square Foot	$ 227
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	$ 1,311,607
B	Additional Design Fees	$ -
C	Total Design Fee	$ 1,311,607
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 61,970
	% of Total Gen Cont(G)	0.33%
E	Estimated Basic Costs	$ 15,028,452
F	Estimated Additional Costs	$ 3,684,755
G	Total General Contract	$ 18,713,207
	% of Total Gen Cont(G)	20%
H	Baseline Utilities Cost	$ 91,459
I	Metered Utilities Cost	$ 96,718
J	Avoided Utility Cost	$ (5,259)
K	% Avoided Utility Cost	
	Indoor Water (Gallons)	
	Baseline Water Use	2,343,922
	Metered Water Use	690,404
	Avoided Water Use	1,653,518
	% Avoided Water Use	71%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 61,970
	Estimated Additional Costs	$ 3,684,755
	Total	$ 3,746,725
	% of Total Gen Cont(G)	20%

Wolf Ridge is a six building student housing complex on NCSU's Centennial Campus. Innovation Hall is six stories and houses 219 students. Innovation was accepted on February 6, 2014. This is the first year of meter data for Innovation.

Estimated additional costs were calculated for Plaza only. Estimated additional costs for Plaza equated to $41.63/GSF which is extremely high and not realistic for traditional energy efficient building systems. Innovation comes with a 20 percent premium for compliance with the legislation.

Estimated baseline water use was high for a residence hall and the metered water use is lower than typically seen for a residence hall.

Baseline and metered utilities cost and consumption are approximately the same, indicating the correct utility rates were used in the model.

Innovation does not meet the requirements of the legislation.

(1) Silver certification not viewable from USGBC website

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Winston-Salem State University

Hill Hall Renovation

	Basic Project Data	
	Total Project Cost	$ 12,105,470
	Project Size (SF)	37,898
	Cost/Square Foot	$ 319
	LEED Certification	Gold (1)
	Fees and Costs	
A	Basic Design Fee	$ 1,025,000
B	Additional Design Fees	$ 100,000
C	Total Design Fee	$ 1,125,000
	% of Total Gen Cont(G)	0.92%
D	Commissioning Fees (Cx)	$ 90,000
	% of Total Gen Cont(G)	0.83%
E	Estimated Basic Costs	$ 10,890,470
F	Estimated Additional Costs	$ -
G	Total General Contract	$ 10,890,470
	% of Total Gen Cont(G)	0%
H	Baseline Utilities Cost	$ 41,267
I	Metered Utilities Cost	$ 80,823
J	Avoided Utility Cost	$ (39,556)
K	% Avoided Utility Cost	-96%
	Indoor Water (Gallons)	
	Baseline Water Use	2,719,308
	Metered Water Use	184,307
	Avoided Water Use	2,535,001
	% Avoided Water Use	93%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 100,000
	Commissioning Fees (Cx)	$ 90,000
	Estimated Additional Costs	$ -
	Total	$ 190,000
	% of Total Gen Cont(G)	2%

Hill Hall is a renovation project of an existing three floor building for an office and tutoring center. The building also received small additions. Hill Hall was accepted on March 25, 2014. This is the first year of meter data for Hill Hall.

The designer's estimate for additional construction costs was negative, so zero was used here. Neither number is accurate.

Thermal utilities or chilled water and steam are billed on building size instead of metered consumption. Therefore, the utilities cost will not be accurate.

Baseline water use was very high for this type of building leading to a high amount of avoided water use.

Hill Hall did not meet the requirements of the legislation.

(1) http://www.usgbc.org/projects/wssu-hill-hall-renovation

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC State University

Grove Hall - Wolf Ridge at Centennial Bldg 5

	Basic Project Data	
	Total Project Cost	$ 14,216,565
	Project Size (SF)	62,645
	Cost/Square Foot	$ 227
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	$ 928,299
B	Additional Design Fees	$ -
C	Total Design Fee	$ 928,299
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 43,860
	% of Total Gen Cont(G)	0.33%
E	Estimated Basic Costs	$ 10,636,495
F	Estimated Additional Costs	$ 2,607,911
G	Total General Contract	$ 13,244,406
	% of Total Gen Cont(G)	20%
H	Baseline Utilities Cost	$ 73,439
I	Metered Utilities Cost	$ 73,829
J	Avoided Utility Cost	$ (390)
K	% Avoided Utility Cost	-1%
	Indoor Water (Gallons)	
	Baseline Water Use	1,557,237
	Metered Water Use	757,724
	Avoided Water Use	799,513
	% Avoided Water Use	51%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 43,860
	Estimated Additional Costs	$ 2,607,911
	Total	$ 2,651,771
	% of Total Gen Cont(G)	20%

Wolf Ridge is a six building student housing complex on NCSU's Centennial Campus. Grove Hall is six stories and houses 144 students. Grove Hall was accepted on April 9, 2014. This is the first year of meter data for Grove.

Estimated additional costs were calculated for Plaza only. Estimated additional costs for Plaza equated to $41.63/GSF which is extremely high and not realistic for traditional energy efficient building systems. Grove comes with a 20 percent premium for compliance with the legislation.

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Estimated baseline water use was high for a residence hall and the metered water use is typical for a residence hall resulting in a higher than expected amount of avoided water use.

Baseline and metered utilities cost and consumption are approximately the same, indicating the correct utility rates were used in the model.

Grove does not meet the requirements of the legislation.

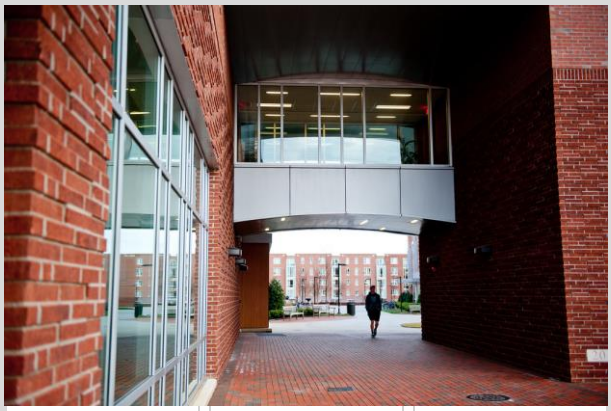
(1) Silver certification not viewable from USGBC website

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

NC State University

Valley Hall - Wolf Ridge at Centennial Bldg 4



	Basic Project Data	
	Total Project Cost	$ 18,940,291
	Project Size (SF)	83,460
	Cost/Square Foot	$ 227
	LEED Certification	Silver (1)
	Fees and Costs	
A	Basic Design Fee	$ 1,236,745
B	Additional Design Fees	$ -
C	Total Design Fee	$ 1,236,745
	% of Total Gen Cont(G)	0.00%
D	Commissioning Fees (Cx)	$ 58,433
	% of Total Gen Cont(G)	0.33%
E	Estimated Basic Costs	$ 14,170,673
F	Estimated Additional Costs	$ 3,474,440
G	Total General Contract	$ 17,645,113
	% of Total Gen Cont(G)	
H	Baseline Utilities Cost	$ 96,219
I	Metered Utilities Cost	$ 77,047
J	Avoided Utility Cost	$ 19,172
K	% Avoided Utility Cost	20%
	Indoor Water (Gallons)	
	Baseline Water Use	2,343,922
	Metered Water Use	160,072
	Avoided Water Use	2,183,850
	% Avoided Water Use	93%
	Total Additional Fees & Costs	
	Additional Design Fees	$ -
	Commissioning Fees (Cx)	$ 58,433
	Estimated Additional Costs	$ 3,474,440
	Total	$ 3,532,873
	% of Total Gen Cont(G)	20%

Wolf Ridge is a six building student housing complex on NCSU's Centennial Campus. Valley Hall is six stories and houses 219 students. Valley Hall was accepted on May 9, 2014. This is the first year of meter data for Valley.

Estimated additional costs were calculated for Plaza only. Estimated additional costs for Plaza equated to $41.63/GSF which is extremely high and not realistic for traditional energy efficient building systems. Valley comes with a 20 percent premium for compliance with the legislation.

Estimated baseline water use was high for a residence hall while metered usage equates to 731 gallons/student/year and is not realistic.

The owner is required to review meter readings for reconciliation with the model.

Valley Hall does not meet the requirements of the legislation.

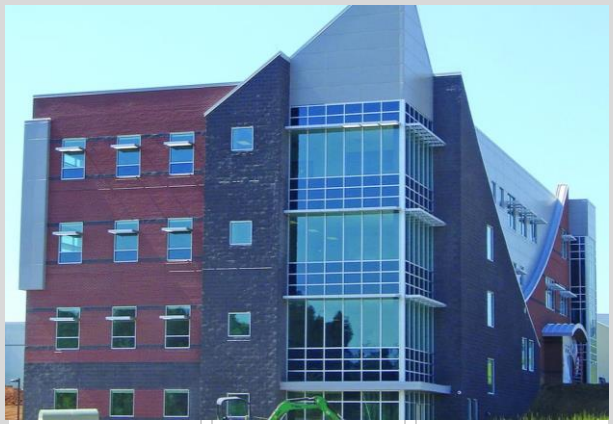
(1) Silver certification not viewable from USGBC website

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

Guilford Technical Community College

Aviation Center III Building



	Basic Project Data	
	Total Project Cost	$ 7,371,349
	Project Size (SF)	42,087
	Cost/Square Foot	$ 175
	LEED Certification	In Progress (1)
	Fees and Costs	
A	Basic Design Fee	$ 666,500
B	Additional Design Fees	$ 20,000
C	Total Design Fee	$ 686,500
	% of Total Gen Cont(G)	0.31%
D	Commissioning Fees (Cx)	$ 149,249
	% of Total Gen Cont(G)	2.28%
E	Estimated Basic Costs	Not Available
F	Estimated Additional Costs	$ -
G	Total General Contract	$ 6,535,600
	% of Total Gen Cont(G)	
H	Baseline Utilities Cost	$ 68,705
I	Metered Utilities Cost	$ 53,290
J	Avoided Utility Cost	$ 15,415
K	% Avoided Utility Cost	22%
	Indoor Water (Gallons)	
	Baseline Water Use	1,135,125
	Metered Water Use	51,612
	Avoided Water Use	1,083,513
	% Avoided Water Use	95%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 20,000
	Commissioning Fees (Cx)	$ 149,249
	Estimated Additional Costs	$ -
	Total	$ 169,249
	% of Total Gen Cont(G)	3%

Aviation Center III Building is a four floor office, lab and classroom building that houses GTCC's Aviation Management and Career Pilot programs as well as additional classrooms for customized industry training. Aviation III is the first building and land that GTCC owns at the Piedmont Triad International Airport. Aviation III was accepted on July 21, 2014. This is the first year of meter data for Aviation III.

Metered utilities cost indicated a 22% reduction from the baseline utilities cost while the metered utilities consumption indicated a 3% reduction from the baseline utilities consumption. The difference indicates the utilities rates used to generate the baseline data did not agree with the utilities rates applied to the building as metered.

Baseline water use is high while metered water use is quite low. Water use is difficult to predict for a classroom building.

The baseline modeled energy consumption was low for this type of building while the metered utilites consumption is fairly normal.

Aviation III has not met the requirements of the legislation.

(1) http://www.usgbc.org/projects/gtcc-aviation-classroom-building

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

2014-2015 Performance Standards Review

UNC Charlotte

Martin Residence Hall

	Basic Project Data	
	Total Project Cost	$ 38,101,017
	Project Size (SF)	174,657
	Cost/Square Foot	$ 218
	LEED Certification	None
	Fees and Costs	
A	Basic Design Fee	$ 2,718,245
B	Additional Design Fees	$ 15,000
C	Total Design Fee	$ 2,733,245
	% of Total Gen Cont(G)	0.04%
D	Commissioning Fees (Cx)	$ 175,000
	% of Total Gen Cont(G)	0.50%
E	Estimated Basic Costs	$ 29,686,104
F	Estimated Additional Costs	$ 5,506,668
G	Total General Contract	$ 35,192,772
	% of Total Gen Cont(G)	16%
H	Baseline Utilities Cost	$ 306,609
I	Metered Utilities Cost	$ 144,171
J	Avoided Utility Cost	$ 162,438
K	% Avoided Utility Cost	53%
	Indoor Water (Gallons)	
	Baseline Water Use	4,970,906
	Metered Water Use	3,504,533
	Avoided Water Use	1,466,373
	% Avoided Water Use	29%
	Total Additional Fees & Costs	
	Additional Design Fees	$ 15,000
	Commissioning Fees (Cx)	$ 175,000
	Estimated Additional Costs	$ 5,506,668
	Total	$ 5,696,668
	% of Total Gen Cont(G)	16%

Martin Residence Hall is a six story residence hall that houses 408 students. Martin was accepted on August 13, 2014. This is the first year of meter data for Martin Residence Hall.

The avoided utilies cost based on meter data is 53% less than the baseline utilities cost.

The estimated additional construction costs at 16% of the total general contract are much higher than typically seen for a residence hall and results in a much higher than typical increase in total estimated project cost. The 16% increase is also much higher than national average.

Metered water use was much higher than expected for a typical residence hall.

Martin Residence Hall has met the requirements of the legislation.

	Fees and Costs Defined:
A	Basic Design Fee: noted on the design contract or calculated from total design fee less additional design fees
B	Additional Design Fees: noted as LEED, SB 668, energy legislation, etc. on design contract (None used when no fees noted)
C	Total Design Fee: from the design contract (Fee does not include design ammendments)
D	Commissioning Fees: contract amount with owner
E	Estimated Basic Costs: the total general contract less the estimated additional costs (E=G-F)
F	Estimated Additional Costs: from the designer's life cycle cost analysis
G	Total General Contract: from the construction contract (Amount does not include change orders)
H	Baseline Utilities Cost: from the designer's life cycle cost and energy model analysis
I	Metered Utilities Cost: meter data from the owner
J	Avoided Utility Cost: modeled utilities cost less actual utilities cost (J=H-I)
K	Percent Savings: percent savings calculated from the designer's modeled utility cost and the actual utility cost

Sustainable, Energy-Efficient Buildings Advisory Committee Members (*)

Committee Co-chairs:

Herb Stanford, Mechanical Engineer
Doug Brinkley, Architect, PBCL Architecture

Committee Members - Private Sector:

Renee Hutcheson, Architect, Small Kane Architects
Julie McLaurin, Architect, O'Brien Atkins
Ginger Scoggins, Mechanical Engineer, Engineered Designs
Jim Wise, Electrical Engineer, RMF Engineers

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Tom Hunter, System Facilities Engineer, NC Community College System
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(*) Advisory Committee Member status from 2008.

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