
University Building Official Annual Report

Annual Report
July 2014 – June 2015

Elaine B. Gall, P.E., CBO
University Building Official

INTRODUCTORY INFORMATION

The Office of the University Building Official (OUBO) consists of professional engineers, licensed architects, and certified code officials dedicated to ensuring that buildings at the University of Virginia are compliant with state and federal regulations as well as the University's Facility Design Guidelines. OUBO utilizes highly trained staff to evaluate the complex structures required by the University to achieve its mission. This includes modern health care facilities and a teaching hospital, large places of assembly, student housing, medical and engineering research, academic buildings, and historically significant structures and grounds. Engineers who specialize in structures, fire protection, electrical and mechanical systems are joined by architects with expertise in both modern and historic construction materials and methods.

OUBO staff reviews construction documents, issues building permits, performs inspections, and provides knowledgeable technical assistance in support of building construction and renovation. Reviews and inspections are based on state regulations governing health and safety as well as federal standards for accessibility and the UVA Facility Design Guidelines. The office is led by University Building Official Elaine Gall.

The Office of the University Building Official was formed in 2006 as part of the management agreement between the University and the Commonwealth of Virginia under the Higher Education Restructuring Act. As such, the University Building Official reports solely and directly to the University's Board of Visitors.

REPORT SUMMARY

The following report details work performed and goals achieved by the Office of the University Building Official from July 1, 2014 to June 30, 2015. The report contains:

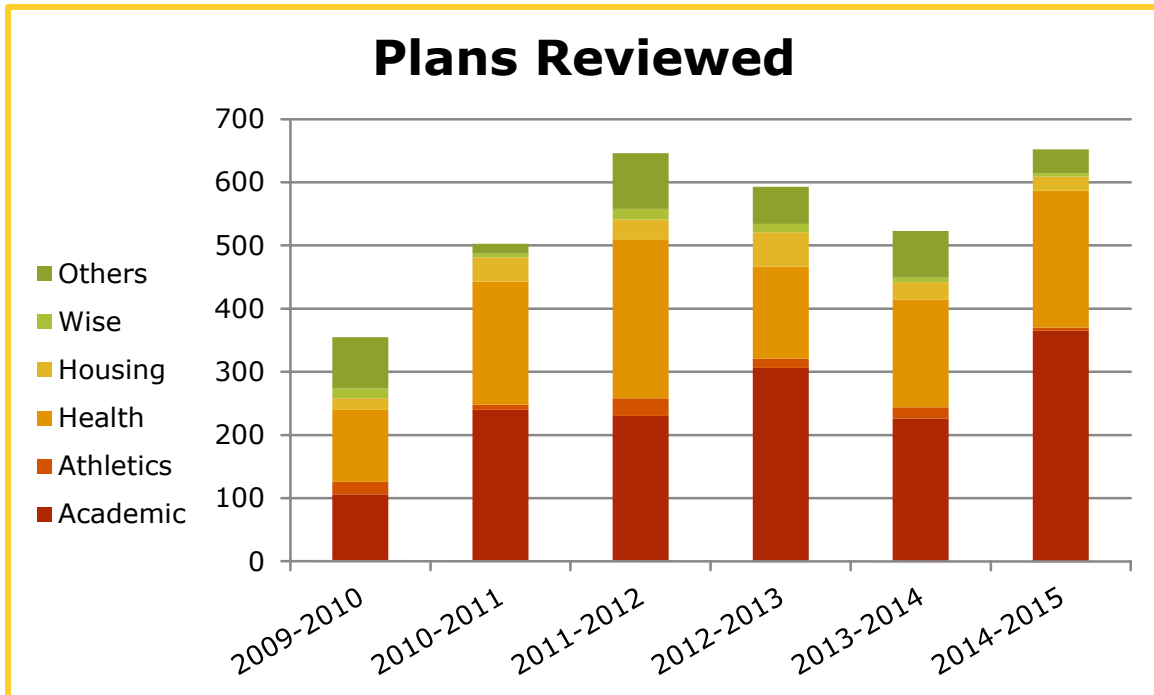
- Summaries of work including:
 - Plans reviewed
 - Building permits issued
 - Major project inspections and completions
- Results of 2014-2015 Organizational Goals
- 2015-2016 Organizational Goals
- Additional OUBO staff activities in support of the University
- OUBO staff biographies.

PLANS REVIEWED

The Office of the University Building Official reviewed 652 submittals in 2014-2015 which is an increase of nearly 20% over last year. Much of this growth is related to the increase in numbers of small projects. In addition, there is a growing trend for projects to have multiple addenda issued after a project has gotten under way to allow changes to occur during construction. The numbers of submittals break down amongst our major categories as follows:

Academic:	365
Athletics:	5
Health:	217
Housing:	22
UVa Wise:	5
Others:	38

The "Plans Reviewed" chart that follows illustrates data from six continuous years. Only 2011-2012 had a comparably high number with those of this reporting year. Despite the record number of submittals, OUBO successfully met or beat desired turnaround times for 99% of all submittals. This is largely due to new efficiencies that have been put into place in the last three years.



This year marked a year of transition as Virginia adopted new codes in July 2014. The state allowed projects under construction or developed through preliminary design to stay under previous codes while all others had to be reviewed and inspected under the new code. In addition, Virginia now requires all renovations to be handled under the Virginia Rehabilitation Code. This new requirement resulted in a great deal of training and study by both OUBO staff and our clients.

Staff also confirms that projects are built to meet the University's Facility Design Guidelines so that new buildings are of appropriate quality and energy efficiency. To achieve these goals, OUBO staff reviews drawings, offers technical expertise, and performs onsite inspections in order to verify that designs and construction meet these standards. When compliance with such requirements is infeasible, OUBO provides assistance in developing alternatives.

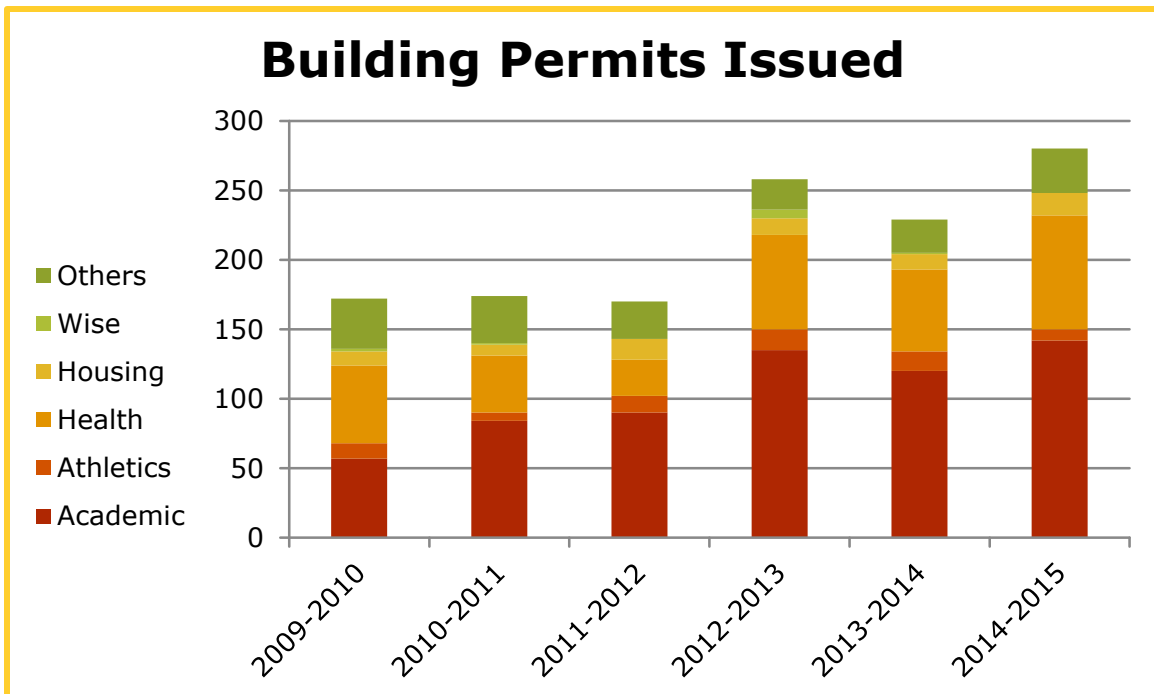
BUILDING PERMITS

OUBO issued 280 building permits in the 2014-2015 fiscal year which equates to an 18% increase. In addition to construction and renovations, OUBO also issued permits for temporary stages, bleachers, and modular structures such as the type used for the temporary Public Safety Substation and for catering at Scott Stadium. Permits issued during 2014-2015 included:

Academic:	142
Athletics:	8
Health:	82
Housing:	16
UVa Wise:	0
Others:	32

The chart that follows shows how the number of permits issued this year compares with that of previous years. Similar to plans reviewed, we issued more permits in 2014-2015 than in any preceding year.

Once permits are issued, OUBO staff members are on the construction sites regularly to confirm proper installation and operation of various engineered systems. Staff performs such tasks as riding on top of elevators to inspect elevator shafts, testing fire suppression and fire alarm systems, measuring accessibility features, checking electrical systems and evaluating egress components. OUBO also provides guidance and recommendations to project teams based on past experiences and lessons learned.



PROJECTS COMPLETED:

OUBO performed numerous inspections leading up to the approval for occupancy/reoccupancy of 97 projects. We also issued Temporary Occupancy approvals for 15 buildings to be used as emergency evacuation shelters during outdoor events. Major projects approved this year include:

Battle Building

Carruthers Data Center Upfit

Corner Building Renovations

Gooch-Dillard Renovations - Phase 1

Gross Anatomy Lab Renovations

Landers Lab

McLeod Hall Renewal - final phase and closeout

New Cabell Hall Renewal - final phase, courtyard, and closeout

O'Neil Hall Renewal

Old Jordan Hall Biomedical Research Lab

Public Safety Substation Mobile Unit

Radiology Department Renovations – final phase and closeout

Ruffner Hall Renewal

Winston-Ely Health and Wellness Center (Wise)

ADDITIONAL STAFF DUTIES AND OUTREACH

The newest Facility Design Guidelines were developed by OUBO and released in November 2014. Rather than simply changing a few sections as needed, we embarked on a complete rewrite and evaluation of every requirement to determine if the requirement was still applicable and necessary. The result is a document that is much improved and reduced in size by 45%. The next major edit is planned to correspond with the adoption of new state codes in 2017. Until then, minor updates will be made as needed to reflect advances in technology, materials, and construction methods.

OUBO also worked to proactively reach out to our customers and colleagues this year. The purpose of some sessions were to provide education while others were to dialog and gain insight on our customers' needs. Presentations were made to FM Directors, Business Operations, Facilities Planning and Construction Spark Sessions, and Energy and Utilities staff. OUBO also partnered with Facilities Management Project Services team to visit with stakeholders on Grounds involved with construction and renovations. The purpose of these meetings was to get to know University representatives better and to gather information which can help us to further improve our services.

During 2014-2015, OUBO staff members were involved in a number of special committees and projects, providing expertise and active engagement with UVA inter-departmental technical committees related to accessibility, HVAC systems, sustainability, fire protection, and electrical safety. In addition, staff frequently provides technical assistance to fire marshals for both the Health System and Environmental Health and Safety. Staff participated in a statewide adhoc committee to find more reasonable approaches to research laboratories than the industrial standards currently used by the state.

Mutually beneficial relationships with local and state officials have been developed and maintained. The Charlottesville Fire Department is regularly consulted to ensure that acceptable provisions are made for emergency access to UVA buildings. We also maintain good working relationships with building officials from Charlottesville, Albemarle County, Virginia Tech, and members of the local Virginia Building and Code Officials Association.

Perhaps our most important achievement of the year was the attainment of Certified Building Official (CBO) status by Benjamin Hays, Ronald Herfurth, and Katherine Grove. This brings the total number of CBO certified individuals to six, up from just one only 18 months ago. Scott Clough achieved Electrical Plan Review certification as well. Certifications offer OUBO flexibility in succession planning as well as cross-training which assists us with continuation of services. All staff members have listed their certifications in biographies at the end of this report.

FY2014-15 ORGANIZATIONAL GOALS RESULTS

Goal 1: Proactively Seek Customer Feedback through New Outreach Surveys

Goal 1 is being achieved through a series of one-on-one meetings with our customers. Originally our plan for achieving this goal involved the development of surveys similar to those used in 2012. However, an opportunity arose to partner with FM Project Services in a series of Stakeholders' Meetings to meet individually with each separate school and business unit at UVa. These meetings have provided us the chance to personally share information about OUBO services and tools available to shorten the approval process. More importantly, the Stakeholders' Meetings have given us the opportunity to ask for feedback and areas for improvements. By September 2015, we will have met with representatives from all UVa stakeholders who utilize our services. Insight gained from meetings we've held thus far has already served to inform current decisions and future goals.

Goal 2: Extend Technical Outreach

The purpose of Goal 2 was to continue OUBO's focus on being more proactive in providing our customers with assistance, knowledge, and resources to minimize urgent needs or avoidable mistakes. OUBO staff members are each highly trained in construction, codes, and their individual areas of expertise. Thus we were able to provide a variety of learning opportunities for our clients, students, and other officials throughout the state. Programs provided this year included:

1. *Significant Code Changes* - FM Facilities, Planning, and Construction employees.
2. *Mechanical and Plumbing Concerns to Look For During Inspections* – FM Building Maintenance Inspectors. Similarly, educational sessions were also held regarding *Structural Concerns* and *Electrical Concerns*.
3. *Rotunda Structural Systems* – International Construction History Conference. Also locally to visiting Johns Hopkins students and to Rotunda contractors.
4. *Applying New Codes to a Historical Structure at the Rotunda* – Annual State Meeting of the Virginia Building and Code Officials Association. Also, *Fire Extinguisher Requirements for New Buildings* to the local chapter of the Virginia Building and Code Officials Association.
5. *Structural Design Analysis* – two semesters providing classes to UVa students as substitute for a professor on sabbatical from the UVa School of Architecture.

Goal 2 also entailed ensuring that OUBO's web page was kept up to date with timely information provided which has been accomplished through collaboration with the Facilities Management Webmaster.

Goal 3: Provide Specialized Technical Services

Goal 3 was listed as a "Stretch Goal" meaning that we knew it would be a challenge but that we wanted to pursue it. Significant progress has recently been made towards restructuring administrative duties and improving administrative services to our clients. Through cooperation with FM Facilities Planning and Construction, we have greatly expanded the administrative services provided to us from an existing FP&C employee. This person is now performing administrative functions previously performed by technical staff including adding OUBO Approval Stamps to plans and preparing memoranda documenting project closeout approvals. This person will also serve as our primary customer service representative, initiating communication with customers early in project development to inform them of resources and contact persons. She is also being trained to serve as our Gatekeeper after which she will check submittals to ensure all necessary information has been submitted prior to delivery to reviewers. This will minimize delays caused by incomplete submittals.

Staff has also worked to develop tools to assist clients with both simple and highly technical tasks. This includes guidelines for filling out temporary stage permits and how to apply the International Existing Building Code to small projects.

In addition to providing formal educational programs described in Goal 2, OUBO employees also lent their expertise to the University and the community through participation on various committees including:

1. Green Building Standards Working Group
2. Environmental Stewardship Subcommittee to the UVa Committee on Sustainability
3. UVa Water Reduction Goal Task Force
4. Student/Staff Water Working Group (staff member serves as co-chair)
5. UVa Fire and Life Safety Committee
6. UVa Accessibility Committee

Goal 4: Strive for Continued Process Simplification and Organizational Excellence

Goal 4 is an ongoing process as OUBO continuously strives for ways to improve our efficiency and the service provided to our customers throughout the approval process.

OUBO continues to collect critical construction type and use group information on existing buildings. This information saves both OUBO and our clients time in development of projects and when filling out building permits.

While we have worked towards having a single location where clients can submit plans, response comments, and building permits, this has been more complicated than anticipated due to the need for plans to be submitted to the FM Geospatial Resource Center. The University Building Official is actively working with the FM Geospatial Manager to jointly seek out a program that can permanently store required information as prescribed by the Virginia Uniform Statewide Building Code with UVa's permanent geospatial information. This program can also be used to process and track building permits.

Goal 5: Improve Professional Work Environment

OUBO's office area is now an efficient and professional workspace with upgrades completed in February 2015. With the ever increasing numbers of submittals, new systems were needed for workflow and storage. Custom cabinets were designed by staff to arrange for the unique storage challenges of construction drawings. All staff members now have two computer monitors to better serve the need for simultaneous study of documents and codes. With an eye towards sustainability, improved monitors for the purpose of reviewing small projects electronically dramatically reduced paper printing for non-capital projects. One staff member is testing a new large screen with high resolution with an eye towards going paperless for most if not all future plan reviews.

FY2015-16 ORGANIZATIONAL GOALS

Goal	Desired Steps
<p>Goal 1: Proactively Seek Customer Feedback Through Continued Customer Outreach and Surveys</p>	<p>To achieve Goal 1:</p> <ol style="list-style-type: none"> 1. Continue Stakeholders' Meetings in Partnership with FM Project Services. 2. Develop plan review customer feedback questionnaire. 3. Implement survey, and then analyze feedback received for use in developing 2016-2017 Organizational Goals.
<p>Goal 2: Extend Outreach to Focus on Proactive Customer Assistance and Problem Solving</p>	<p>To achieve Goal 2:</p> <ol style="list-style-type: none"> 1. Identify at least 3 key areas where proactive education will benefit clients. Develop and implement strategies to address those areas. 2. Each OUBO staff member will develop and present at least one educational program.
<p>Goal 3: Provide Specialized Technical Services To More Fully Protect the University's Resources and Heritage. Utilize Unique Expertise to Assist Other Departments and Resolve Complex Issues.</p>	<p>To achieve Goal 3:</p> <ol style="list-style-type: none"> 1. Improve OUBO staff concentration on services not related to plan review. Develop formal program to increase employee time spent out of the office interacting with customers and other UVA Departments 2. Utilize extensive in-house expertise to help protect the University's unique resources. Support the primary purpose of the University by being involved with interdepartmental committees and proactively seeking opportunities to exchange information with other departments. 3. Participate in local, state, and national organizations and conferences to stay abreast of changing technologies and industry standards.

<p>Goal 4: Strive for Continued Process Simplification and Organizational Excellence, Concentrating on Improved Automation</p>	<p>To achieve Goal 4: 1. Consolidate location where clients send plan review requests, response comments, and building permit requests into a single email address.2. Work in partnership with Jennifer Heckman to implement a records repository that complies with the VUSBC and an automated building permit system.</p>
<p>Goal 5: Automation of Inspection Requests and Tracking</p>	<p>To achieve Goal 5:</p> <ol style="list-style-type: none"> 1. Develop process for each reviewer to mark which inspections they need for each project and to share this information with client at the beginning of each project. 2. Automate inspections tracking.

UNIVERSITY BUILDING OFFICIAL STAFF

ELAINE GALL, PE, CBO, CFO

University Building Official

B.S. Mechanical Engineering, Virginia Tech

M.E. Fire Protection Engineering, University of Maryland

Elaine was appointed University Building Official in 2009. She joined the University of Virginia in 2006, serving first as Senior Fire Protection Engineer. Prior to joining UVa, Elaine served in the Virginia State Fire Marshal's Office as Regional Engineer for a 20 county area in Western and Central Virginia. She also served as Building Commissioner for Roanoke County. Elaine has 30 years of professional experience in construction, code enforcement, and fire protection engineering. She has been actively involved in code development on both the state and national levels throughout her career.

Elaine's current role involves the administration of Office of the University Building Official, including the code compliance program for all construction projects at UVa. This includes UVa College at Wise, Blandy Farm, and UVa's various other properties throughout the state. She is also actively involved in inspections and provides technical guidance to staff and clients.

Elaine is a registered Professional Engineer and is a Certified Building Official. She is also a Certified Fire Official and holds certifications in Mechanical, Building, and Fire Code Plan Review and Inspections. She is a member of the Virginia Building and Code Officials Association and the Virginia Fire Prevention Association where she serves as First Vice-President and Chair of the Education Committee. Elaine also served as a Governor-appointed member of the Virginia Fire Services Board for four years and represented that Board as a member of the Virginia Board of Housing and Community Development for two years. Elaine currently participates on the Virginia Building and Code Officials' Building Code Committee and the Virginia Fire Services Board Code Committee.

ROBERT WAITE, AIA, CBO

Review Unit Managing Architect

B.S. Architecture, University of Virginia

Bob joined OUBO as Senior Review Architect in December 2008. He has over 25 years of professional experience in architectural design, project management and code compliance inspections. He has experience in all types of building uses including health care facilities, residential and dining facilities, athletic facilities and classroom and laboratory facilities.

At OUBO, Bob is responsible for the Review Unit. As such, he supervises plan reviewers and coordinates all plan reviews, distributing comments and subsequent assistance to customers. He coordinates with Project Managers and helps them schedule the reviews for their projects. He also assigns the processing of all building permits. He provides ADA compliance inspections and expertise when needed and assists in reviews for architectural code compliance, constructability, ADA compliance, and compliance with UVA's Facility Design Guidelines. Finally, he assists the University Building Official on an as-needed basis and acts on her behalf when she is on leave.

Since serving with the US Army as a 1st Lieutenant with the 101st Airborne Division in the Republic of Vietnam, Bob has become a registered Professional Architect in Virginia and is a member of the American Institute of Architects. He also holds certifications with the Virginia Department of Housing and Community Development as a Residential Building Inspector and a Combination Building Plans Examiner.

RONALD HERFURTH, PE, CBO

Senior Mechanical Engineer

B.S. Mechanical Engineering, Virginia Tech

Ron joined OUBO as Senior Mechanical Engineer in 1991. He joined the University of Virginia in 1988. At OUBO he reviews mechanical and plumbing plans and specifications and participates in inspections of mechanical and plumbing systems. He also serves as in-house consultant for mechanical systems and value management studies. He also serves as Chairman of the interdepartmental Facilities Management HVAC Committee and is a member of American Society of Heating Refrigeration and Air-Conditioning Engineers.

Ron is a registered Professional Engineer in Virginia and holds DHCD certification as mechanical plans examiner, plumbing plans examiner, commercial energy plans examiner, commercial mechanical inspector, commercial plumbing inspector, and commercial energy inspector. Ron obtained both energy certifications last year and is one of the first in Virginia to have done so. This year Ron successfully completed International Code Council (ICC) and Virginia Certification requirements to become a Certified Building Official. He also attended the DHCD courses on 2012 Code Changes and Nonpotable Water Systems.

BEN HAYS, PE, CBO, SE, LEED AP

Senior Civil/Structural Engineer

B.S. Civil Engineering, Virginia Tech

M.S. Civil Engineering, Virginia Tech

M.A. Theology, Fuller Seminary

M.A. Architectural History, University of Virginia

Ben joined OUBO as the Senior Civil / Structural Engineer in November 2011. At OUBO he reviews plans and specifications and conducts inspections related to civil and structural engineering. Additionally, he provides in-house consultation for structural engineering related projects and participates in large-project value management studies. Throughout the past year, he has helped prepare repair plans for several buildings on the lawn, including the colonnades and Old Cabell Hall.

Ben has over a dozen years of professional design, management, and review experience and has worked as a civil and structural engineer on both the east and west coasts. He holds licenses in both Virginia and California and is also an ICC certified Commercial Plans Examiner, an ICC certified Commercial Building Inspector, a LEED Accredited Professional and an ICC and Virginia Certified Building Official. This last certification was earned over the past year.

Ben is a member of several professional organizations, including an Associate Member of the American Society of Civil Engineers (ASCE), a member of the National Trust for Historic Preservation, a member of the Construction History Society of America (CHSA) and a member of the Southeast Chapter of the Society of Architectural Historians (SESAH). During the fall of 2014 and spring 2015, Ben taught the graduate and undergraduate structures courses in the School of Architecture. Additionally, his ongoing research on the Guastavino structures at UVa (namely the Rotunda dome and the vaults in Old Cabell hall) recently won the second Guastavino Biennial. He will travel to Catalonia Spain this fall to receive this international award.

KATHERINE GROVE, AIA, CBO, LEED AP

Senior Review Architect

B.S. Architecture with Minor in Architectural History, University of Virginia

M.A. Architecture, Syracuse University

Katherine joined OUBO as Senior Review Architect in April 2012. She provides review, in-house consultation and value-management input for architectural projects with regard to code and ADA compliance,

constructability, and compliance with UVA's Facilities Design Guidelines. She also conducts building inspections for code, ADA compliance, and occupancy. Katherine is a member of UVA's Environmental Impact Subcommittee where she co-chairs the Water Working Group. She was also elected to the newly formed FM Sustainability Council for a 2 year term and is part of the FM Green Building Standards Working Group.

In 2014 Katherine received Virginia DHCD and ICC certification as a Certified Building Official and completed training for the Virginia code change update to VUSBC 2012. In 2015 she completed UVA's Leadership Prep classes as well as training in Hazardous Materials and Use of Control Areas. Katherine is a registered Professional Architect in Virginia and also holds Virginia DHCD and ICC certified Commercial Building Inspector and Commercial Building Plans Examiner licenses. Katherine is a member of the American Institute of Architects (AIA) and is a Leadership in Energy and Environmental Design (LEED) Accredited Professional.

Katherine has 25 years of professional experience in architectural design including 15 years as a Director/Project Manager specializing in sustainable design/consulting and construction of institutional, mixed-use and residential projects. She was Project Manager for multiple LEED certified Gold and Platinum projects, has presented at the national AIA and Greenbuild conventions, and maintains a licensed architectural practice specializing in sustainable design.

SCOTT CLOUGH, PE, LEED AP

Senior Electrical Engineer

B.S. Electrical Engineering, Purdue University

Scott joined OUBO as Senior Electrical Engineer in January 2014. Prior to joining UVA, he worked as a Senior Project Manager in Ohio. He has 16 years of engineering experience including consulting, peer review, standards, and electrical design for education, healthcare, hospitality, and utility projects. At OUBO, he reviews plans and specifications and participates in inspections for electrical and fire alarm systems. He also serves as in-house consultant for electrical systems, lighting, fire alarm, and value management studies.

Scott is a member of UVA's Electrical Safety Committee and the FM Green Building Standards Working Group. He is also a Leadership in Energy and Environmental Design (LEED) Accredited Professional and a member of the Institute of Electrical and Electronics Engineers (IEEE).

Scott is a registered Professional Engineer in Virginia and 12 other states. He is licensed by Virginia DHCD and ICC as a certified Electrical Plans Examiner

and Commercial Electrical Inspector. Scott recently completed training for the Virginia code change update to VUSBC 2012.

DAVID COOPER, CBO

Senior Fire Protection Engineer

David joined OUBO as a Fire Protection Engineer in June 2014 bringing with him a broad range of valuable code enforcement experience in all areas of expertise. Prior to joining UVA he spent 10 years as the Building Official for Fauquier County. He has 28 years of experience in the construction field as a field inspector, plan reviewer and general code compliance reviewer. His experience includes field inspections for all building trades, plan review and oversight of all processes of a County Building Department. Additionally he has spent several years with The State Fire Marshal's Office where he performed construction and general fire safety inspections for existing and new construction of State owned universities and hospitals. At OUBO his primary responsibility is plan review and consultation related to fire safety provisions including fire suppression, egress and fire resistance rated construction.

David provides valuable proficiency in many areas of code enforcement and holds an astounding 14 certifications from Virginia Department of Housing and Community Development including: Certified Building Official, Fire Protection Plans Examiner, Commercial Plans Examiner, Commercial Electrical Plans Examiner, Combination Commercial Inspector; which includes Commercial Building, Electrical, Plumbing, and Mechanical Inspector Certifications; Combination Residential Inspector; which includes Residential Building, Electrical, Plumbing and Mechanical Inspector Certifications, Fire Protection Inspector, Elevator Inspector, and Amusement Device Inspector.

Continuing education is an integral part of staying up to date with changing codes and requirements and David has completed CEU training in fire suppression from NFPA as well as training in other job related specialties. During the past year David has also completed State mandated Building Code update training for all disciplines to maintain his State of Virginia certification status.

David is a member of the Virginia Building and Code Officials Association.