INSTITUTE FOR THE BUILT ENVIRONMENT

2014 YEAR IN REVIEW

Colorado State University
College of Health and Human Sciences

www.ibe.colostate.edu
MISSION

to foster stewardship and sustainability of the built and natural environments through interdisciplinary research and educational forums.

VISION

to be a premier forum for integrating research and practice toward environmentally, socially and economically regenerative places. This vision is accomplished by engaging diverse partners to elevate the conversation and equip leaders in order to shift the marketplace.

20 YEARS!

The Institute for the Built Environment was created in 1994, thanks to the vision of a few faculty and the leadership of Nancy Hartley who had just become dean of the College of Applied Human Sciences (now College of Health and Human Sciences). Faculty from interior design, construction management, and historic preservation came together at Pingree Park, Colorado State University’s mountain retreat campus, with a goal of creating a multidisciplinary forum to collaborate on quality design and construction research and education.

I want to especially acknowledge Dean Hartley’s guidance. She believed in the power of cross-disciplinary teams, though she was aware that university evaluation and research spending systems of that era did not easily reward cross-college efforts. Nancy secured two years of seed money from various university offices which allowed the co-directors to establish a mission, goals, a plan of action, and a set of initial projects. Now, 20 years later, hundreds of people have been involved in IBE programs and have participated in highly collaborative projects that have impacted school systems, neighborhoods, and communities in Colorado and other states.

And, while it is gratifying to look back at the communities and projects that have benefitted from IBE’s assistance and expertise, the most rewarding part of our work has been the engagement of the numerous students from various disciplines, all of whom have contributed to each successful project and have then gone on to successful careers in the sustainable design, development, and construction industries.

As I look forward, it is easy to visualize 1. today’s (and tomorrow’s) IBE interns continuing to learn by doing and 2. IBE continuing its progression of contributing to not just a “green,” but a “living and regenerative” built environment. Our research teams of faculty, students, and off-campus professionals are discovering glimpses of a future where our built environments support and enhance our natural environments. We invite you to support the start of our next 20 years through our new “IBE Partners” program – together we will work to contribute to a healthy, living future for the next generation of buildings, communities, and students!

Thanks for your support!

Brian Dunbar, Executive Director
During the past year, IBE realized significant operational efficiencies, resulting in positive turnaround for net revenue and overall financial standing. While income was down 14 percent compared to FY13, expenses were down 28 percent. Further, cash on hand, accounts receivable, and open contracts rose by over 50 percent. The trend line from the 2014 fiscal year provides promise that 2015 will be a great year (see chart).

Because IBE is a self funded entity within Colorado State University, it is essential that we have a stable and diverse income stream across our service offerings, research, trainings, and donations. We successfully increased the diversity of our sustainability and green building consulting services, though we were less successful in reaching our goals related to increasing income from research, donations, and trainings.

Off-Campus Services remain our largest source of income. Our service-learning project work income represents the applied learning opportunities that provide CSU students with meaningful professional experience. Salaried staff continue to be our most significant expense, as they are essential to providing both student mentorship and quality assurance to our clients and research funders.

### Revenue by Year

<table>
<thead>
<tr>
<th>Year</th>
<th>Off-Campus Service</th>
<th>On-Campus Service</th>
<th>Research</th>
<th>Trainings</th>
<th>Donations</th>
<th>Total Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>$362,098</td>
<td>$279,412</td>
<td>$279,412</td>
<td>$301,864</td>
<td>$279,412</td>
<td>$1,103,296</td>
</tr>
<tr>
<td>2013</td>
<td>$427,901</td>
<td>$301,864</td>
<td>$279,412</td>
<td>$279,412</td>
<td>$279,412</td>
<td>$1,103,296</td>
</tr>
<tr>
<td>2012</td>
<td>$421,349</td>
<td>$301,864</td>
<td>$279,412</td>
<td>$279,412</td>
<td>$279,412</td>
<td>$1,103,296</td>
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<tr>
<td>2011</td>
<td>$279,412</td>
<td>$279,412</td>
<td>$279,412</td>
<td>$279,412</td>
<td>$279,412</td>
<td>$1,103,296</td>
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*Note: IBE’s Fiscal Year is July 1, 2013 - June 30, 2014*
IBE offers a unique mentorship program for Colorado State University students who share a passion for sustainability and the built environment. Our interdisciplinary approach enriches interns’ exposure to the many facets of sustainability and allows for meaningful collaboration between disciplines and departments across campus.

Through our mentorship program, we empower and equip the next wave of professionals to make a meaningful and lasting positive impact on the built environment.

Our program offers experiential education and practical knowledge for students who aspire to be leading professionals and change makers in the green building industry. Senior staff mentor each student while students provide professional work products for our clients. Throughout their internship, students sharpen their skills in client communications, task management, decision making, budget management, and sustainability consulting, ultimately transforming into well-equipped project managers.

As proven by past interns, the professional work experience gained at IBE becomes an invaluable portion of students’ education and helps them secure meaningful employment in their desired fields of work.

Students and alumni listed from top, left to right

<table>
<thead>
<tr>
<th>2014 STUDENTS</th>
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<tbody>
<tr>
<td>» Colin Day, M.S. Landscape Architecture</td>
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<tr>
<td>» Alyssa Stephens, M.S. Sociology</td>
</tr>
<tr>
<td>» Austin Good, B.S. Landscape Architecture</td>
</tr>
<tr>
<td>» Allison Smith, M.S. Construction Management</td>
</tr>
<tr>
<td>» Diana Butler, M.S. Conservation Leadership</td>
</tr>
<tr>
<td>» Reanna Putnam, M.S. Sociology</td>
</tr>
<tr>
<td>» Evan Hughes, M.S. Construction Management</td>
</tr>
<tr>
<td>» Cassandra Kliewer, B.S. Construction Management</td>
</tr>
<tr>
<td>» Gary Gross, M.S. Horticulture</td>
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<table>
<thead>
<tr>
<th>2014 ALUMNI &amp; POSITIONS</th>
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<tbody>
<tr>
<td>Scott Preston, M.S. Landscape Architecture</td>
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<tr>
<td>Landscape Designer, Jacobs/Ryan Associates</td>
</tr>
<tr>
<td>Anderson Lewis, M.S. Construction Management</td>
</tr>
<tr>
<td>Project Engineer, Adolfson &amp; Perterson</td>
</tr>
<tr>
<td>Cole Schumacher, MMP Management &amp; CIS</td>
</tr>
<tr>
<td>Business Analyst, Motivity Solutions</td>
</tr>
<tr>
<td>Samala Hartley, M.S. Interior Design</td>
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<tr>
<td>Erin Nuckols, M.S. History</td>
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<tr>
<td>Environmental Services, City of Fort Collins</td>
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</table>
Several priorities guided our research activities this past year and expanded our expertise and alignment with topics that are critical to today’s market. This year, we focused on the following activities:

**EPA Grant Application.** A key priority this past year was to write and submit a research grant for a large, longitudinal study on the effect of green school buildings on occupants. The EPA announced funding for this research topic and in October 2013 we submitted a $1 million dollar grant application in collaboration with the Department of Sociology and the Department of Epidemiology. Awards will be announced in October 2014.

**The Social Network of Integrative Design.** An ongoing initiative within IBE is to define and disseminate our Integrative Design Process methodology. Through a grant from CSU’s Energy Institute we have written a white paper and will publish in the fall of 2014.

**Mason UniverCity District Urban Lab.** Last year saw the development of the Urban Lab in partnership with UniverCity Connections and with funding from the CSU School of Global Environmental Sustainability. The lab is becoming a hub where professionals, students, and community members come together to propose initiatives for the Fort Collins community.

### Completed Projects
- Whole-School Sustainability Report | USGBC Center for Green Schools
- Knowledge Network Development | U.S. General Services Administration

### Ongoing Projects
- Integrative Design Process White Paper | CSU Energy Institute
- Carbon Footprint Metric | NSF
- LENSES Application Guide Development
- Mason UniverCity District Urban Lab | Fort Collins, Colo.

### Selected Publication
- Complete Publications List
EDUCATION

As we stated in our 2013 year in review, a strategic priority for 2014 was to develop a professional certificate program on integrated sustainability management. In order to best align with the needs of working professionals, we created a modular, online certificate program. Our project experience and research over the last twenty years indicates that sustainability requires an integrated, ongoing approach, and that in order to meet conservation goals, the alignment of the facility, people, resource management, and organization is required.

In addition to the certificate program, we continue to give talks to organizations and at conferences in order to disseminate our findings from our research projects. Key topics this past year included “Low and No Cost Opportunities to Reduce Cost and Use in Existing Buildings” and “Implementing the Whole School Sustainability Framework.”

Finally, our blog program continues to provide a platform for our students to share what they are learning and for our leadership to share updates and insights on project work and industry trends. The continued growth of our blog indicates that it is a useful and educational resource for readers.
In the past year, we have seen a 40 percent increase in the number of active projects as compared to 2013. While there was only a slight increase in the number of local, regional, and national new construction projects pursuing LEED certification, we did see an increase of over 70 percent in the number of non-LEED project types, including early design facilitation, sustainability consulting, and organizational sustainability. Furthermore, there has been a hesitation to pursue LEED v4 certification and an increased interest in other green building rating systems such as Green Communities and Green Globes.

Through the past years’ projects, we have seen increased focus in:

**Ongoing energy analysis and benchmarking of existing buildings and focus on maintenance and occupant behavior.** We see that these efforts are explicitly tied to larger sustainability efforts of an organization and often require a shift in culture in order for an organization to implement new practices and ways of thinking.

**Third-party facilitation of early design decision making.** The value of a third-party facilitator, one who manages a process where building professionals and owner/occupants collaborate and come together around innovative, unifying, and strategic solutions, has become even more clear to our team and to our clients.

### Completed Projects

- Aurora Community Center
- Avenir Museum of Design & Merchandising at CSU
- Campus Crest Corporate Sustainability
- City of Fort Collins Green Building Technical Assist
- City of Fort Collins Utility Administration Building
- City of Fort Collins Utility Services Center
- Denver Office of Sustainability Vision Map
- evo Graduate Student Life Center, Philadelphia
- FCHA Redtail Ponds Enterprise Green Communities
- Foothills Mall Waste Diversion Assessment
- Harrison Street Real Estate Capital Sustainability
- High Plains Elementary School
- Homewood Suites
- Larimer County Courthouse Offices, Loveland
- LSC South Revitalization at CSU
- National Western Center Revitalization
- The GaRden at Coors Field
- UCA Art Gallery Addition at CSU

### Ongoing Projects

- Campus Crest Corporate Office
- City of Fort Collins Civic Center Master Plan
- Summit Hall EB+OM Certification at CSU
- Curt Gowdy Visitor Center
- Engineering II at CSU
- FCHA Community Workshops/Redtail ponds
- Hampton Inn & Suites, Gunbarrel
- Health Pro Medical Facility, Puerto Rico
- Revive

### 2014 Project Achievements

- 35% Average Energy Cost Savings
- 5,730 Kgal Cumulative Annual Water Savings
- 11,007 Tons Construction Waste Diverted

We offer professional services in four key areas: integrated design and green building certification, sustainability consulting, community engagement and facilitation, and organizational sustainability.
Our new Partner Program has been developed to engage our network and generate discretionary dollars to support our mission. Our Partners are change builders. Together, we work passionately to build positive changes in the building industry, our communities, and the world.

Become a Partner and join with us and the network of leading companies and individuals who are equally passionate about realizing a regenerative future.

<table>
<thead>
<tr>
<th>Programs</th>
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<tbody>
<tr>
<td>When you become a Partner, your donation goes to the following:</td>
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<tr>
<td>50% Students for Change mentoring the next wave of Change Builders</td>
</tr>
<tr>
<td>25% Change at Work developing ground-breaking new projects</td>
</tr>
<tr>
<td>25% Change for All sharing 20 years of research and innovation</td>
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</tbody>
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**Partner Project Highlight**

**Urban Lab | Mason UniverCity District**

This year, foundation funds were utilized to build the Urban Lab, a hub where professionals, students, and community members come together to propose initiatives for the Fort Collins community. The first project was focused on the Mason UniverCity District.

As one of Fort Collins’ jewels, this dynamic area is ripe for redevelopment. It draws people from throughout the community and University to come live, work, and play.

The lab aims to create unique character and identity by developing ‘green district’ design guidelines that incorporate artistic features, improve alleyways and parking, reduce development barriers, and incorporate biodiversity.

**Partnership Structure & Suggested Annual Donation**

- Individual Partner - $500
- Small Company Partner - $3,000
- Large Company Partner - $6,000
Established by Nancy Hartley, College of Applied Human Sciences dean, as an interdisciplinary institute.

1995
- Established mission: Fostering stewardship and sustainability of the natural and built environments through research-based interdisciplinary education forums, Brian Dunbar named director.

1997
- Launched first professional outreach education course: Introduction to Green Design.

1998
- Assisted The Brendle Group to create the PSD Sustainable Design Guidelines.

1999
- Established Maho Bay Green Building Course with Department of Design & Merchandising and Department of Construction Management.

2004
- First LEED project, Fossil Ridge High School, and hire of first salaried employee, Josie Plaut.

2007
- First LEED Platinum Project, Seven Generations Office Park.

2008
- Created first version of LENSES Framework.

2010
- Green Building and Green Homes certificate programs on campus and at CSU Denver retired after serving 1000+ professionals between 2003-2010.

2013
- Expansion of services and research on the human element in the built environment by appointing Jeni Cross Ph.D., associate professor of sociology, as Research Director.

2014
- Whole-School Sustainability Framework published by USGBC Center for Green Schools as national model.

2014
- Became CSU Energy Institute member center.

2013
- Moved to our first real home, historic Routt Hall. More than a home to us, it offers both work space and opportunity for collaboration among complementary organizations.

2012
- Established CLEAR - Center for Living Environments & Regeneration, a non-profit established through CSU Ventures.

2010
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LEADERSHIP

» Brian Dunbar
   Executive Director

» Jeni Cross
   Research Director

» Stephanie Barr
   Projects Manager

» Lenora Bohren
   Research Advisor

» Josie Plaut
   Associate Director

» April Brown
   Projects Manager

» Helene Gotthelf
   Projects Manager

Advisory Board

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Katharine Leigh | Professor, Interior Design
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John Fitch | President, Sustaining Tomorrow Today Institute
Steve Steinbicker | Principal, Architecture West

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