BUILD SIMPLE INC. FINANCIAL REPORT

2016: 43 learned at 7 training sessions

2016: 283 hours volunteered

2016

Building for the Future www.Build Simple.org

Since many aid organizations in Nepal are choosing to rebuild with earthbag, requests for advice and information have intensified during 2016.

BSI structural information has been used by engineers and architects in many parts of the world. BSI's years of building a network and laying test groundwork has paid off as BSI is growing to enable more natural, inexpensive housing for those who need it.


UNM4Nepal student builders


Walter from LA


Bruce Stouter drop testing

During 2016 BSI provided:

Advice for Buildings	Reviews and email advice about buildings for Nepal, Congo, and Uganda. Clients included Impact Nations, Kung Foundation, LA International Baptist Church, Good Earth Nepal, and Steadfast Nepal.
New Online Publications	Structural Information for Earthbag- 73 pages describing research about gravel bag, sand bag and contained earth walls. Structural Data Outline- 8 pages with the most important structural information. Earth Walls Defying Earthquakes- 12 pages explaining why contained earth matters and what we need to know. Contained Earth How Tos: Solid Walls, Vibration Damping Base, Tying Corners- slide shows about reinforcement techniques. Soil Tests for Earthbag or Contained Earth: Builder's Study Guide, Designer's Guide to Soils, Designer's Guide to Unit Tests- 5 slide shows teaching how to test soils for strength with simple equipment.
Training	2 sessions for the student group UNM4Nepal University of New Mexico alternative materials course one session. Continuing education sessions for two engineering groups. Trained 2 individuals involved in aid in basic earthbag techniques. Trained intern for 2 months in soils and earthbag techniques as well as evaluating building plans.
Mentoring Researchers	Spanish engineer Samuel Canadell UK architecture student Aditya Tognatti
Testing	Intern Christian Ernstsen of Denmark improved BSI's systems of testing and data processing immensely during two months of on-site work! Structural testing: 3 strong fill solid earthbag wall portions 4 strong and weak fill modular (conventional) earthbag wall portions Better field tests for soil strength. Developed testing plans with Nepali aid organization, Clemson University, and UNM or University of Nevada Reno.

New Collaboration

Engineers working with several aid organizations have asked BSI for help or provided advice about testing. This collaboration may be responsible for the favorable responses of the national engineering organization in Nepal towards earthbag. But more testing is needed.

Some engineers base calculations on old data that does not reflect the strength of cohesive soils in earthbag walls. And improved reinforcement will not be used until its benefits are proven.

Although we continue to keep in touch with professors at local universities, to date no engineering classes in NM are considering studies that relate to earthbag.

Many engineers and researchers from other parts of the world have given encouragement and/ or advice this past year. BSI is so grateful for the chance to work together to apply life-saving engineering knowledge to inexpensive sustainable buildings.

Funding for Accelerated Testing

During 2016 two potential donors asked BSI for help. One is interested in funding research to ensure that their buildings are as safe as possible.

After writing proposals and requesting proposals from researchers at several universities, BSI began a testing program in September with some support to cover costs of our in-house tests. If more funds become available, we hope to also work with students at Clemson University under the direction of Brandon Ross.

Engineers: Samuel Canadell, Rajesh Dhakal, Bill Druc, Allison Lau, Gabriel Miller, Awais Malik, Hugh Morris (U Auckland), Fernando Pacheco, Manish Prasad

Students: Sherif Aboubakr, Lauren Jaramillo, Tahmin Tisha ,Aditya Tognatti, Jennifer Van Osdel

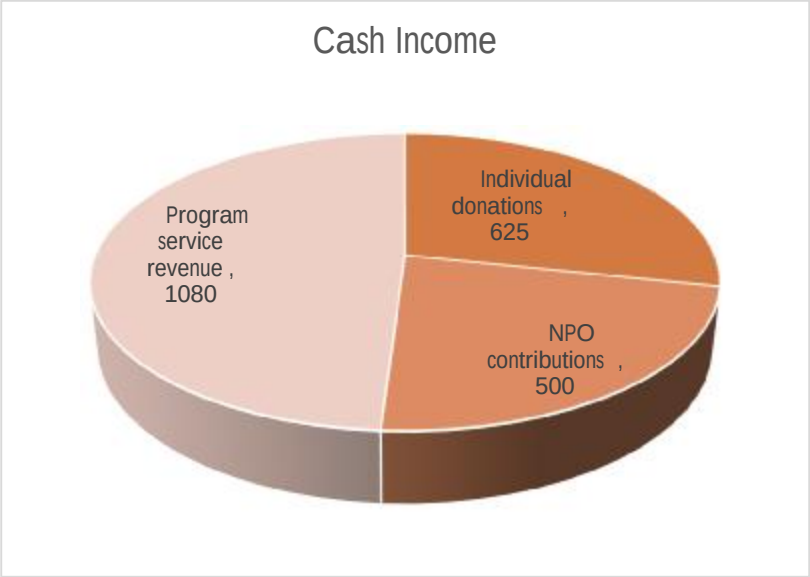
Professors: Francisco Uvina and Fernando Alonso (U New Mexico)

AND: the Batchelors, the Castellis, Michael Cocchini, Owen Geiger of GRISB; Harrison Presbyterian Church, NY; Paul Krause, Joyce Kung, Dan Lasota, Walter Lillo, Dr. David Smith; Kateryna Zemskova of Good Earth Nepal; Chris Ziglar, and many earth builders who kindly share information, photographs, and videos.

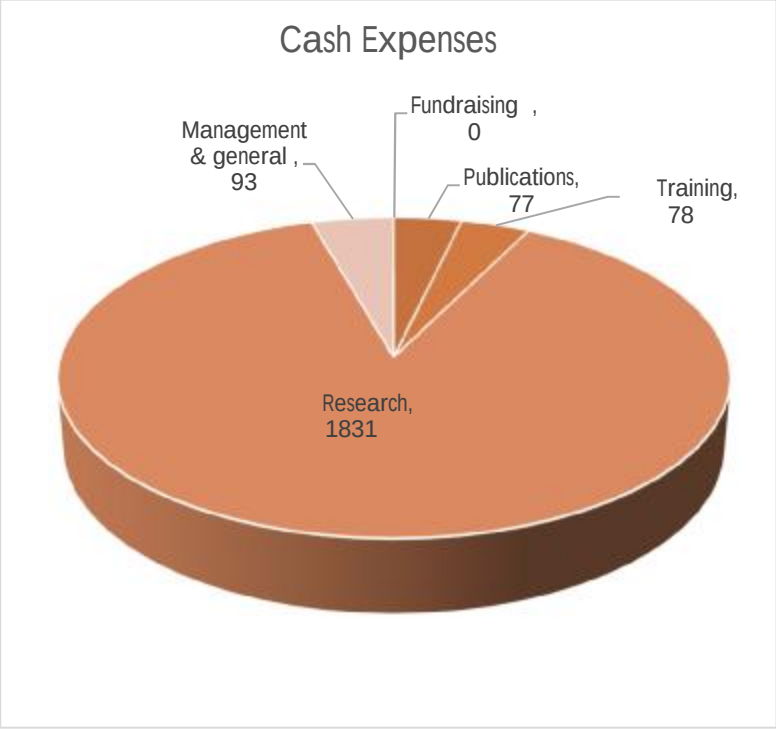
Thanks to so many for such generous assistance!

Cash Flow for 2016 Estimated to Year-End

Income	
Contributions:	
Individual donations	625
NPO contributions	500
Other revenue:	
Program service revenue	1080
Total revenue and support:	2205



Expenses	
Program services	
Publications	77
Training	78
Research	1831
Supporting services:	
Management & general	93
Fundraising	0
Total expenses:	2079



Build Simple Income and Expense by Cost Centers

Estimate for the Year Ending December 31, 2016

(Gifts-in-kind, Donated Services, and Depreciation not Included)

	Programs				General	Fund raising	Totals
	Building advice	Pub-lications	Research & testing	Training			
Income:							
Donations from Individuals	-	-	-	-	625	-	0
NPO contributions	-	-	-	-	500	-	0
Program service revenue	-	-	1080	-	-	-	-
Total Cash Income	0	0	1080	0	1125	0	2205
Expenses:							
Subcontractors	-	-	540	-	-	-	540
Professional fees (lab testing)	-	-	771	-	-	-	771
Office supplies	-		-	-	12	-	12
Construction materials, supplies	-	-	520	-	-	-	520
Phone, internet	-	77	-	-	-	-	77
Taxes, permits, fees	-	-	-	-	78	-	78
Travel expenses	-	-	-	78	-	-	-
Miscellaneous Expenses	-	-	-	-	3	-	3
Total Cash Expenses	0	77 (4%)	1831 (88%)	78 (4%)	93 (5%)	0	2079 (100%)
Excess Income/(Loss)		-77	-751	-78	1032		126

Planning for 2017

Work in Progress

BSI has about $1800 of planned funding that will be due in December or January as tests currently in progress are completed. Some of this may be spent on engineering fees.

Current plans include an additional $800 for an additional test wall and structural evaluation of the New Zealand Standards adapted for earthbag. Problems with testing current solid walls caused us to miss a window of opportunity to build this 3'x 3.5'test wall inside an insulated garage at a house under construction. More funds may be required to pay for rental space and heat to cure this during the winter.

The next phase for this donor would be tests of gravel and cement-stabilized soil fill that can be built during the winter. These need to be tested with a vibrating base. BSI really needs a good mechanic to volunteer for this project, since it appears that Bruce will still be busy until Spring with his work.

The donor will consider further funding for Clemson University or others if they can reduce some of their overspending on current construction in Nepal. They are good businessmen, but it is not known if they can meet these goals. They have 7 teams building in Nepal at present and are willing to work with the Kung Foundation on school construction in Uganda.

Proposed Immediate Goals

Structural information must be updated so that engineers can use this data quickly. When the 7 existing walls are tested, current BSI publications on structure must be updated.

Guidelines for sizing and locating bracing walls can be adapted from the New Zealand Standards. This requires help from an engineer. The current donor may fund an engineering review if Gabriel Miller provides a reasonable cost estimate in a timely fashion. Getting work done quickly is difficult with volunteer help, and Mr. Miller is a young engineer who also works fulltime. Other engineers approached have not been willing to provide proposals for this work.

Proposed Long Term Goals

A long term goal is to begin to publish research in respected professional journals. A friend at church has experience reviewing research and recommends an article about simple testing processes for an online journal focusing on measurement. The new field tests for soil strength may be appropriate for this publication.

Samuel Canadell's published article in Materials and Design in April of 2016 focused on domes and ignored the inherent strength of the cured soil fill. He is willing to write more, and has access to the computer program used for the calculations presented. It would be helpful if he would produce a more accurate simulation for vertical walls built of strong soil.

Using Volunteers

Volunteers are not very helpful as laborers for accurate construction of small test walls or samples.

Engineering students could be helpful either assisting with tests or calculating structural issues for buildings. Although UNM states that it is helpful for students to work on real projects, the teacher of the structural dynamics class does not appear open to have students work on designs using earth. But notices can be put on the bulletin board to ask for student interns.

UNM students may also be helpful for accounting, photography, videography, web design, and writing. At this date architecture students are not needed. Additional notices should be placed and different departments contacted, but this can only be done at a time when Patti is not overwhelmed with work.

Patti is trying to develop friendships with retired structural or mechanical engineers in the area. To date one elderly engineer at her church is interested.

Several people have recommended that BSI approach Sandia labs for assistance. This large federally funded research institution has programs to help local Albuquerque businesses with research or technical needs. There is one contact at church, a young man, who may be able to direct us.

One critical volunteer would be an accountant or bookkeeper willing to receive and process donations. We have a friend from a former church that we might ask, but time has been short to get in touch.

Future Funds

Because of the amount of research and quality of results that BSI is producing, we may have a chance to apply for grants. This is a major step, that could ensure income in the future.

Any assistance from grant writers could be very helpful. A major part of the process is to identify foundations who focus on similar types of projects.

Program Related Income

BSI has anticipated selling certain more detailed publications or packages of drafted details. One possibility is a program to calculate building costs.

But it may be more reasonable to begin by requiring a fee to review full sets of plans.

It is important to differentiate between local developing world projects and those which are funded by foreign aid organizations.

Another income source could be providing workshops and/ or distance education. There are two types of classes: structural design for architects and engineers working on institutional buildings, or simpler schematic design of houses for builders. Soil testing could be a related course.

Our mission: to make safe housing SIMPLE-

housing that increases self-respect and self-reliance, that is healthier and more affordable for all.

Staff

Patti Stouter Founder, landscape architect and building designer
e: simple_earth@yahoo.com
Bruce Stouter Treasurer

Office

2909 Rio Vista Court SW, Albuquerque, NM 87105
(505)312-7163
Website: www.BuildSimple.org;