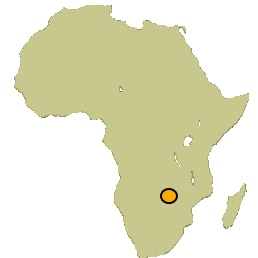




- **SCALEAfrica** is a 501(c)(3) tax-exempt organization dedicated to the design and construction of vital school infrastructure in rural Zambia. Through culturally responsive, sustainable architecture and an active community participation model, SCALEAfrica seeks to increase educational access and effectiveness, as a means of alleviating poverty and lessening the impact of major public health threats affecting rural sub-Saharan African communities.
- **Founded in 2007 by:**  
Erinn McGurn, 38, Licensed Architect with 16 years experience in residential and civic architecture. Acts as Executive Director.  
Guy Baron, 38, Originally from Zimbabwe, with 15 years experience in investment banking. Acts as Treasurer & Board Member.  
Board of Directors includes 3 other members with extensive educational, operational and local community experience.



# Our Vision

- Socially responsible design has the potential to change a seemingly static condition. Responsive, sustainable architecture and community-built schools improve access, enhance learning, and support local economies. This equates to children that are supported on all levels in their pursuit of an education. With education comes better economic opportunities, better access to messages surrounding public health issues that will save their lives, and a shared sense of purpose that drives real change.
- The name SCALE implies a model for long-term, future growth and universally effective strategies.

*Good design with a social conscience*



# Our Focus/How We Work

## Responsive Design

- A design approach that is responsive to the people it serves, local procedures and customs, and the site/climate of its intended location.

## Community Participation

- Engaging the community to actively participate in design and construction.
- Actively seeking to identify the ideas and concerns of students, parents, teachers, the tribal Chief and government officials.

## Sustainable Building Practices

- Implementation of passive design principles and site specific materials.
- Use of local labor and suppliers to improve skills and increase economic development.



# Our Focus/Why We Work

## **Education & Public Health**

- The single best long term way to eradicate poverty in the developing world is to educate and elevate girls/young women.
- Schools are the primary source of education and information on the prevention of malaria, HIV/AIDS and proper hygiene.
- Higher education level correlates to lower birth rate & lower maternal mortality.
- The majority of children in developing nations lack access to clean drinking water, proper sanitation, and medical care.

## **Economic**

- Increased quality of education drives economic improvement as qualified students enter the workforce. Women, especially, are an untapped human resource.
- Support of local labor and small business creation - women more likely than men to start & sustain small businesses within their local communities.

## **Social**

- Community involvement - real change occurs when those affected are the primary players in making it happen and sustaining the effects.
- Create sense of ownership to facilitate preservation and upkeep.
- Create spaces that encourage community gathering and continuity.

***Positive social change begins at the root - with a seat in a classroom.***



# Education & Public Health - Zambia\*

- **Location:** Landlocked in Sub-Saharan Africa
- **Area size:** 290,734 sq km (size of Texas)
- **Population:** 11.7 mm
- **Official language:** English
- **GDP:** \$7.8 bn (1.22 trillion in US)
- **Avg. annual income per capita:** <\$750
- **Poverty rate:** Rural: 83%/ Urban: 56%
- **Avg. Life Expectancy:** 48 yrs (Declining)
  - 50% under age 15 yrs
- **Literacy rate:** 70% (140th in the world)
  - 83% young men
  - 68% young women
- **Primary school enrollment rate:** 78%
- **Secondary school enrollment rate:** 28%
- **Secondary school completion rate:**
  - 25% boys
  - 10% girls
- **Estimated HIV Adult Prevalence:** 15.6%
  - 0.3% in US
- **Leading Causes of Death:**
  - #1 HIV/AIDS, #2 Lower Respiratory Infection, #3 Malaria
- **Lifetime Risk of Maternal Mortality:** 1:38
- **Child Marriage in Rural Areas:** 49%



\* Statistics sourced from UNICEF, WHO, & USAID

# Current Projects

## **Chiutika Basic School – Mfuwe, Zambia**

- 1600+ student primary school; Grades 1 - 8
- 13 teachers
- Pre SCALE: 4 classrooms, 1 teacher office, 2 store rooms, 3 pit latrines
- Current: 11 classrooms, 4 teacher offices, 5 store rooms, teacher meeting room, library. Teacher housing and 12-stall sanitation block with gravity fed plumbing in process.

### **Classroom Facilities (completed)**

- Restoration of old 4 classroom block
- Construction of a new 5,000 sq ft 4 classroom block with offices/store rooms
- New blackboards and student desks
- \$85,000

### **Library & Workshop (completed):**

- Restoration of existing small building shell for library and life-skills workshop
- Estimated \$17,000

### **Teacher Housing (in process):**

- Construction of 2 new teacher houses
- Construction of 12-stall sanitation blocks for students and teachers
- Estimated \$100,000

## Current Projects (cont'd)

### **Pop-up Tents Project (completed)**

- Canvas material donated by anonymous global technology company
- Design and construction of 25 large mobile, pop-up tents
- Act as temporary classroom space and shelter for school ceremonies
- Distributed throughout South Luangwa Valley

### **Book Donations (in process)**

- In partnership with Room To Read
- Donation and distribution of thousands of books to area schools. block with offices/store rooms

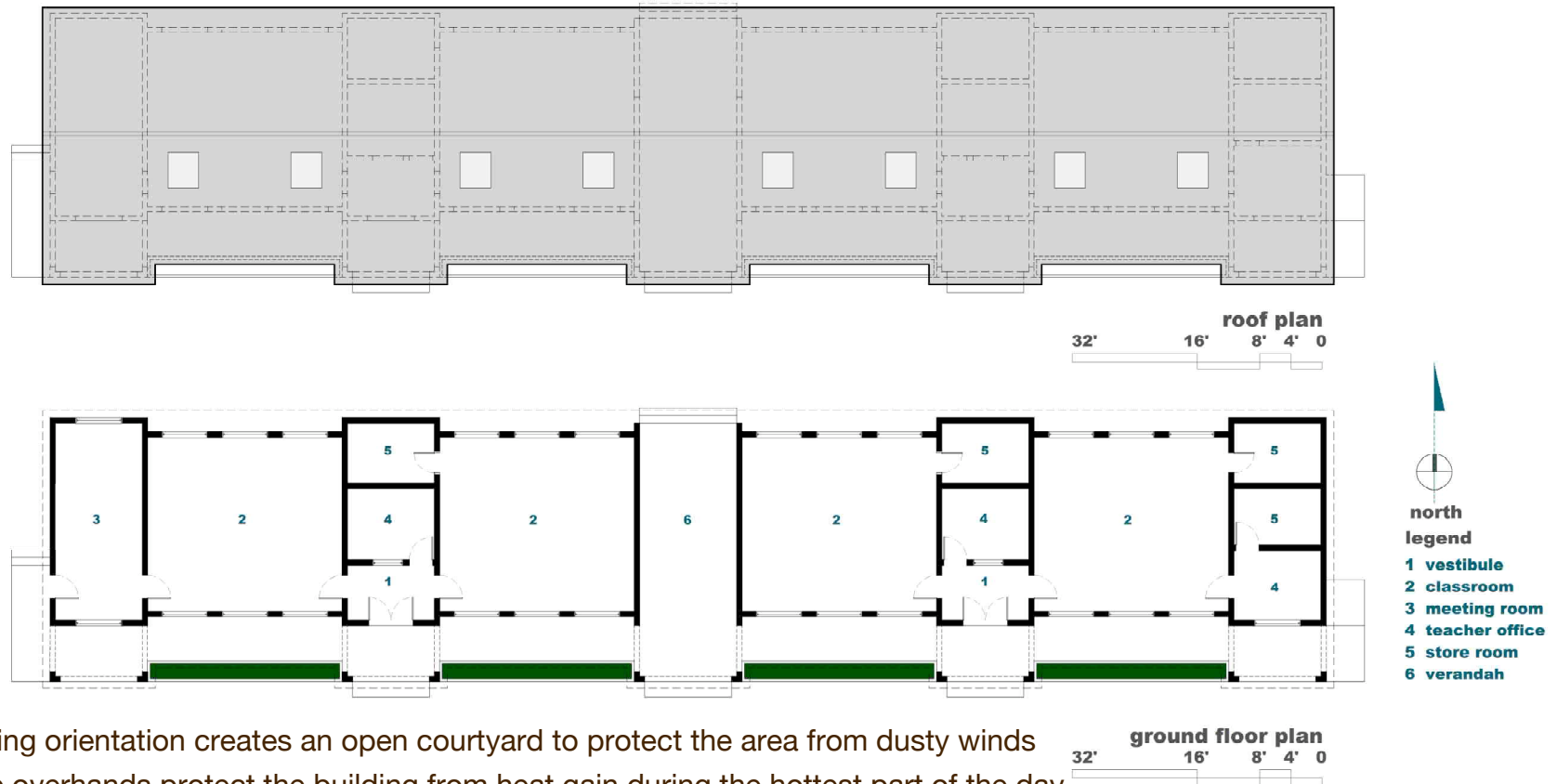






**Existing Conditions Before SCALEAfrica's Involvement**

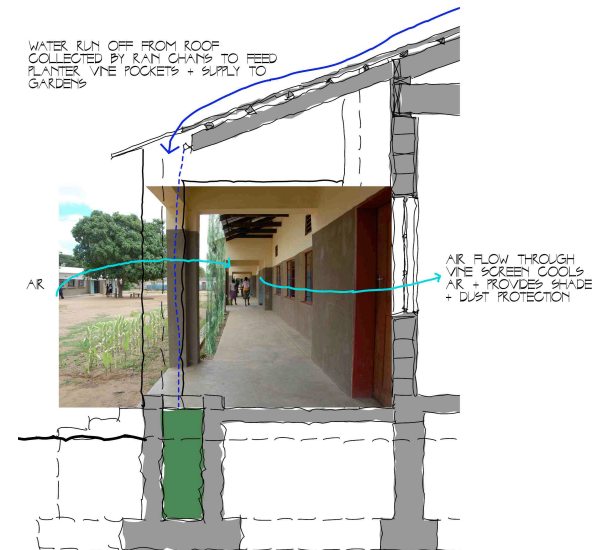




- Building orientation creates an open courtyard to protect the area from dusty winds
- Large overhands protect the building from heat gain during the hottest part of the day
- Thick mud brick walls insulate the interior from the inside out, keeping the building cool during the day and warm at night
- Oriented east-west to take advantage of natural daylighting
- Large eave and roof vents create continuous air circulation to promote natural ventilation
- All brick and concrete block made on site - Brick & Block moulds distributed to community, reused to form micro-businesses
- Locally sourced materials to support local economy and reduce environmental impact
- All labor locally sourced to support local economy

## New Classroom Block Design

**Classroom Block**  
chiutika basic school  
location: mfuwe, zambia



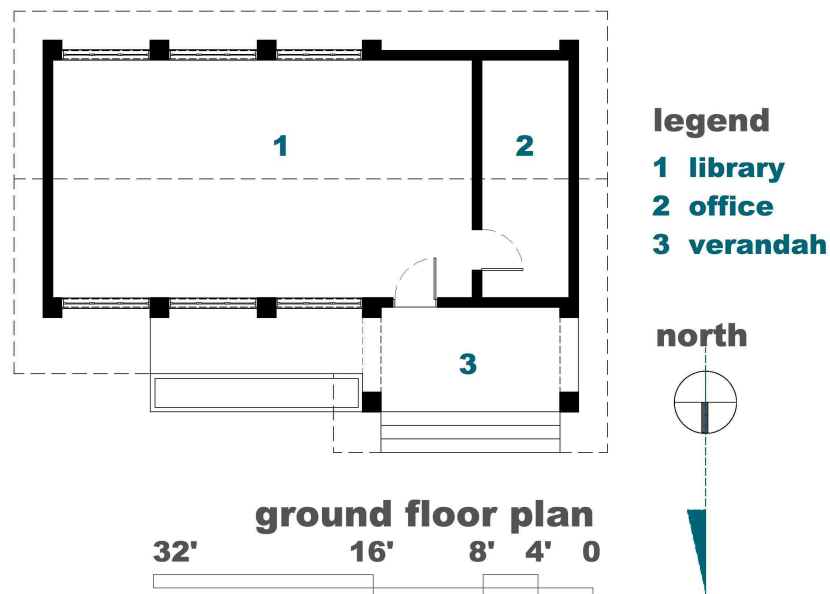
**Classroom Construction Process**





**New Completed Four-Classroom Block**





**New Library & Life Skills Workshop**

**Life Skills Workshop**  
 chiutika basic school  
 location: mfuwe, zambia



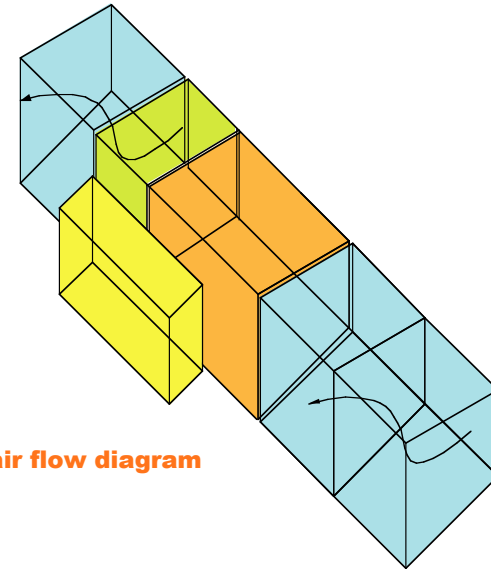
## Design of Teacher Housing

- Adaptable building blocks to accommodate families & single teachers
- Three bedroom house = 950sf
- Exterior Kitchen & Sanitation Facilities

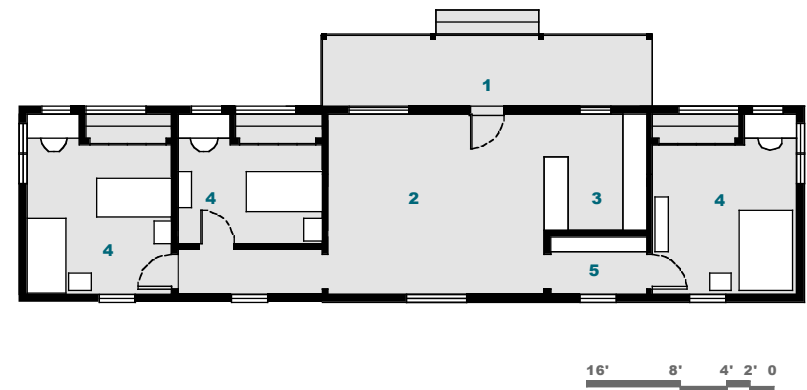
## Materials/Passive Techniques

- Oriented East-West to minimize solar exposure & maximize daylighting
- Sited near deciduous shade trees
- Individually moulded concrete block foundation formed on site
- Screens & overhangs of locally sourced bamboo
- Locally fabricated operable windows
- Windows oriented to catch prevailing breezes
- Corrugated metal roof with ridge & eave venting, insulated with sisal mats

## Teacher Housing - Existing & Proposed



massing & air flow diagram



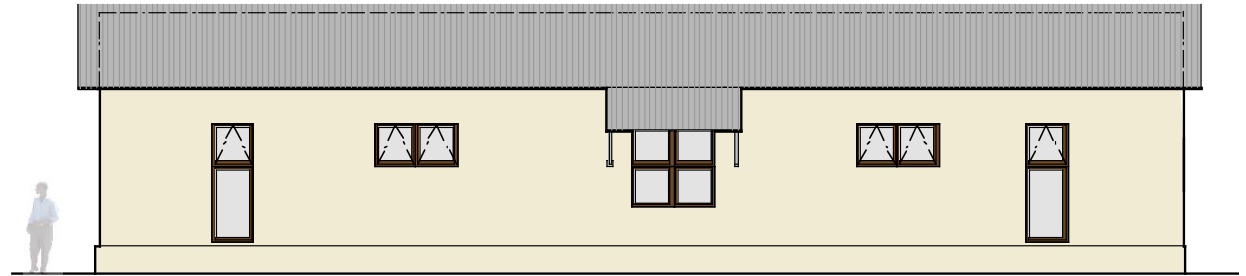
### legend

- 1 verandah/outdoor room
- 2 living room
- 3 pantry
- 4 bedroom
- 5 utility





**NORTH ELEVATION**

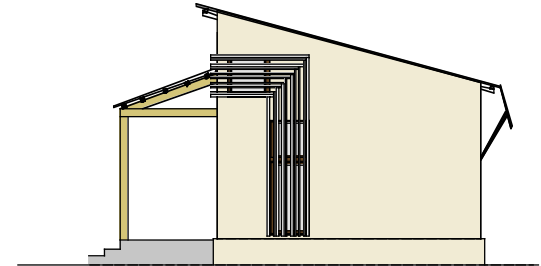
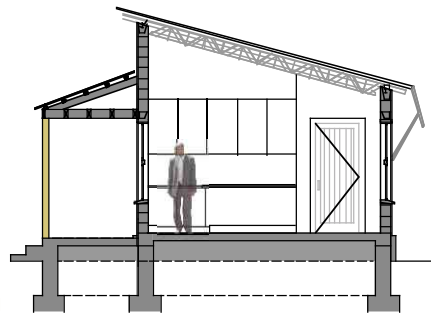


- CORRUGATED METAL ROOF ON OPEN WEB STEEL JOISTS
- BAMBOO SCREENS
- CLEAR CORRUGATED ROOFING @ COVERED PORCH
- OPERABLE WINDOWS

**SOUTH ELEVATION**



**BUILDING SECTION**



## New Teacher Housing - Elevations & Sections





# Followers & Fundraising

## **Funds raised since inception: ~\$200,000**

- All through private donations; no grants or corporate funding
- 125 active donors; 800 current mailing list recipients; 730+ Facebook Fans

## **Demographic of Followers:**

- Primarily 25-45 year-old, educated professionals
- Secondarily college students ages 17-22
- 60/40 Female to Male ratio
- In Banking, Technology, Education, Design & Arts
- 90% U.S. based, primarily on the East Coast
- 10% International - London, South Africa, Zambia, Spain, Germany

