



Build Change, 3D Modelling of Construction Details for Disaster-Resistant Informal Houses

Project location: Medellín, Colombia, with potential travel to Bogotá

Proposed start/end date: July 2017 – August 2017

Organization Description

Build Change is an award-winning international non-profit social enterprise based in Denver, Colorado which has been in operation since 2004. Build Change saves lives in earthquakes and typhoons by empowering people in emerging nations to build homes and schools that will protect their families and children. Build Change works to strengthen buildings before and after natural disasters strike in Colombia, Guatemala, Haiti, Indonesia, the Philippines, Nepal, and formerly China. Over 26,600 people have been trained on disaster-resistant design and construction who have in turn built more than 166,000 safer buildings. In the process, Build Change has created more than 12,500 jobs and more than 250,000 people are living in safer houses and learning in safer schools. Please visit our website for further information.

Project Description

Engaging with local stakeholders, the Build Change engineering team performs seismic retrofits of existing informal houses in Colombia. Most of the time, construction is performed by workers without experience in reading 2D construction drawings. In addition, principles behind seismic-resistant details are often unclear to more educated technical people, as they might not be part of their background. Build Change has an extensive library of 2D construction drawings and detail solutions based on local material and techniques and is seeking to generate 3D views of them in Revit, together with the collaboration of Autodesk students. The main objective is to facilitate details visualization and understanding, and to help the process of conceptualization and implementation of disaster-resistant houses.

About this Internship Project

For this internship, you will gain hands-on, real-world experience by:

- Working with the lead engineer and the rest of the local team to develop an understanding of the individual components and construction sequence for specified construction details and building types;
- Develop explicit 3D models composed of the individual components for each of the selected construction details, building components types;
- Train local Build Change staff in the basic principles of 3D component;
- Work with local and expatriate staff;

Qualifications, Skills & Experience

The ideal candidate should possess the following:

- Enrollment in the [Autodesk Student Expert](#) program prior to the internship commencing **required**. *Please provide documentation if you are already enrolled in the program.*
- Experience with using Autodesk software to develop 3D component and structure models (Revit or 3D Max or Inventor);
- Experience in civil or structural engineering solutions;
- Technical educational background. Educational or work experience background in building design or construction, such as technician, engineer, and architect is a plus;
- English fluency required; Spanish is a plus;
- Good communication skills and excellent teamwork abilities;
- No ego, drama, or pessimism; the successful candidate will be flexible, humble, patient, and have a good sense of humor;

What's in it for you

- Opportunity to work for an award-winning international non-profit social enterprise
- Gain experience on construction methodology in developing countries;
- Understand and implement sustainable solutions;
- Work in an international environment;
- Expand your own network of contacts;
- Be involved in a pro-bono program, contributing to the main aim of saving lives;
- Paid compensation with housing, food and transportation provided

Please submit your resume and a cover letter to Trena Moya, trena@buildchange.org, by 30th April 2017 and include **3D Modeling Intern - Colombia** in the subject line. Applications will be reviewed as they are received and interviews may be scheduled prior to the closing date.