International Students Association, Northwestern University

Sustainable Development Project, Sunampe, Chincha

The Building of a Community Center in Chincha, Peru

International Students Association
Multicultural Center
1936 Sheridan Road
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Dear Northwestern University Civil and Environmental Engineering Department,

The students involved in The International Students Association (ISA) of Northwestern University would like to invite you to be part of Project Sunampe – Chicha, Peru 2010. A group of ten international students, supported by ISA and Northwestern University’s International Office, will be travelling to Chicha, Peru between March 20 and 28, 2010 to build a community center in an earthquake disaster zone.

The International Students Association (ISA), a Northwestern student group formed in 2007, has experienced exponential growth since its formation. Our vision is to promote interaction among students from different cultural and religious backgrounds, serving as a platform for the international student community at Northwestern to voice their opinions and concerns and encourage campus-wide dialogue on global issues and cultural diversity.

ISA’s Philanthropy Committee has worked diligently for the past few months to plan its first international project to Chicha, Peru, a city devastated by an earthquake (of magnitude 8.0) in 2007. During Spring Break 2010, a group of ten students will be travelling to Chicha and working alongside Harry Hildebrand, a Professor at Markham College (a Peruvian High School), in the construction of a Community Center in Sunampe. The center will consist of a multi-use central room, a kitchen, a storeroom, a common room, a playroom for children and a covered patio. The main objective of the project is to improve the quality of life of local residents, to strengthen ties within the respective communities, and to provide a location for emergency support and public information. The beneficiaries of this project will be 500 to 1000 people in the communities of Chacarita and Huaca Grande in the District of Sunampe, Province of Chinchá, Department of Ica.

These goals have been achieved in previous projects undertaken by Markham College in this region, and we are willing to contribute to Sunampe’s development. Two of the ten students in the group are Peruvian citizens and have participated in Mr. Hildebrand’s projects in the past.

Through Project Chinchá, several McCormick students will analyze a simple structural design consisting of wooden frames and arches that serve as support columns in a unit made of prefabricated compressed cement panels assembled together. This fundamental concept of structural design will offer undergraduate Civil Engineering students an opportunity to build up a strong and durable structure by following simple guidelines. Moreover, students will learn about building materials and will use machinery (such as drills and cement mixers) in real construction circumstances which will enrich students with very useful building knowledge and experience. Even better, the project’s ease of adaptation will offer students a chance to discuss design alternatives to fit the wants and needs of the community. We believe this is an excellent way of testing skills learnt in classes such as EDC, because it involves team planning, generating alternatives, building mockups and performing the final design in a series of iteration of steps. We believe this is an invaluable opportunity to learn Engineering outside the classroom for McCormick students.

The Civil and Environmental Engineering Department should be interested in Project Chinchá because during the project, Northwestern students will gain firsthand experience regarding building a sustainable community center that also teaches environmental sustainability to children. The community center itself will be environmentally friendly by being built using minimal amounts of construction materials and requiring almost trivial amounts of water and electricity to maintain it. The community center will be socially, economically, and environmentally sustainable. After the project has been completed, our group would happily give a presentation to the Civil and Environmental Engineering students with our findings and experiences about how environmental sustainability is approached in an underdeveloped town in rural Peru, how to realize environmental sustainability in the design of a small building, and how to promote environmental sustainability to the youth of a community.

Since this is an entirely student-run project, it is difficult for us to meet the financial needs of our vision. During the 2009-2010 academic school year, members of ISA have been and will continue to raise money for this project through a variety of fundraising activities. However, despite our own fundraising efforts, we will not be able to fully cover our budget. The construction materials will cost $3,500 US Dollars. Our total budget amounts to $10,000; however, we are only asking for enough sponsorship to cover the construction costs. Depending on what sponsorship level you feel appropriate, we ask you for your generous contribution to our cause.
Construction Steps

Flattening Terrain
Delivery of Materials For Concrete
Contours of Slab marked out
Mixing of Concrete

Pouring of concrete
Cleaning of slab
Cutting of timber to correct lengths
Making of panels

Assembling of panels
Placing of roof
Placing of window covers
Painting

Painting with the children of the community
Painting of mural
Objectives and Overview

Main Objectives

To construct a Community Centers in Sunampe, Chincha in order to improve the quality of life of locals, and to strengthen ties within the respective communities. This has been the case with previous projects undertaken by Markham in this region.

Specific Objectives

- Construct a community centers with the following features:
  - A multi use central room as a-
    - Meeting space
    - Dining room
  - Kitchen
  - Storeroom
  - Common room
  - Playroom for children
  - Covered patio.

- Improve the communities’ capacity to organize themselves (responsibility of Sra. Grimaldi)
- Provide the communities with a source of sustainable development, and encourage the unity of the community.
- Provide a location for emergency support and public information.
- Create green areas, and at the same time provide the communities with a productive activity that may be run by minors (planting of native trees, gardens and orchards). This part of project to be developed by the NGO ANIA www.mundodeania.org
- And, bring together Northwestern students of several different geographical and cultural regions and community members of a small Peruvian town in an act of positive cultural exchange.

Chronogram of Activities

Monday 22\textsuperscript{nd} March – Flattening of terrain, concrete slab
Tuesday 23\textsuperscript{rd} March – Making of panel frames
Wednesday 24\textsuperscript{th} March – Making of panels
Thursday 25\textsuperscript{th} March – Painting/ assembling of panels / Placing of roof

Total project budget: Current estimate is at $10,000. (This projection may vary slightly with changes in material costs or currency fluctuations.) However, the construction materials will only cost $3,500.

People Contacts in Peru

Harry Hildebrand: General Director. (Based in Lima), hildebra@markham.edu.pe
Marcelo Rochabrun: Logistics & Finance
The Building of a Community Center in Chincha, Peru

Sustainability

On a Social Level

The community centers are meant to encourage the cooperation, and unity within the communities. Democratically elected leaders of the community are in charge of organizing various activities within it such as workshops or meetings. If worse comes to worse, in the case of a disaster, such as a repetition of the 2007 earthquake that devastated the region, the people in the community will be in a better position to help each other as a result of the tight cooperative network that is built up in this project.

On an Economic Level

The central idea of a community center is that it is economically viable. The committees charge a monthly quota to their members, with which they can pay the expenses of the daily use of the center (electricity for example). They also have the task of organizing workshops for the manufacture of different manually made products, which can then be sold. We do our best to help them find a market for these articles, but it is important to keep in mind that our aim is for the centers to be independent, and that they can organize their own projects and methods of generating an income, so that they may improve their standard of living. One such example is the Markham teacher training project food provisioning. Teachers from Lima give training sessions to teachers from local schools. The centers take turns to cook, and sell their lunch to these teachers.

On an Environmental Level

We currently have the participation of the NGO ANIA. It will be responsible for the development of the ‘Tierra de los niños’, which is to be established around the area where the center is built. We hope this relatively new addition to the project can be introduced in centers that are already built. The principle of the ‘Tierra de los niños’ initiative is relatively straightforward as every child is given their own small plot of land and allowed to do with it what he/she wishes. The idea is that the children learn, and are encouraged to cultivate different types of plants. It also raises their environmental awareness and allows them to experience the independence and responsibility that comes with being the owner of ‘their own plot of land’.
Construction Methodology

The basic idea is to organize pre-existing communities, and give them a locale where they can develop a supportive relationship and realize different activities such as meeting, lunches, workshops. Some of the communities in Sunampe operate in deplorable conditions, and do not receive any state support. A Community Center has proven to be an effective way to counter this, and at the same time help as many people as possible.

The communities that wish to have a community center are required to send a letter of application. Some representatives of the project then visit the community along with Mrs. Grimaldi, in order to establish how much they would benefit from having one. (This implies that they have to be capable and willing to organize themselves). This is done so that the centers can have the maximum possible positive impact. We consider communication with the community very important, in order to establish what it is exactly they want to use their center for (which may lead to design adaptations), and we also try to encourage their participation in the actual construction of the center.

The center consists of prefabricated panels that are assembled to create the completed unit. This approach gives certain flexibility to the building’s shape, size and quantity of rooms. This can all be easily adapted to fit the wants and needs of the community. The walls of the panels are made from ‘super board or sheetrock’, a board of compressed cement, which is both strong and durable. These boards are nailed and glued to a wooden frame, which may be compared to the support columns if we were talking about a brick structure. There are 4 basic panel types; which are of course still open to alteration if deemed necessary for a particular center. There are Panels with a door, panels with windows, closed panels, and finally arches, which do not have a board nailed to them, but have an important support function. See diagrams for further clarification of panel types.
History of Project

The Project was initiated just after the Earthquake as an emergency aid response by Markham College teachers and students. The initial response consisted of putting together survival packs (thanks to donations made by parents, and students), that could sustain a family for a week. Almost immediately the decision was also made to reconstruct school 22266 in the region of Sunampe, which had been completely destroyed. This has now been completed, and the new school is up and running.

After the initial response, 6 provisional classrooms were built for the school 22266. They were consisted of wooden panels which were made in school, by students, and then transported to the site to be assembled. This was done on a weekend in September 2007. Later, in October 2007 volunteers from different schools in Lima built another 16 classrooms, under the management of Mr. Harry Hildebrand (Markham teacher). Today, the total number of temporary classrooms built in this project is 23, allowing 1200 students to continue their studies in the year 2008, and another 800 in 2009 while classrooms are rebuilt.

This is how the emergency phase was concluded, which focused on emergency needs, such as education, and survival. The idea was to look for a way to encourage more long term development. This is how the Community Center project was born, based on the design concept of the temporary classrooms, but with more resilient materials. Up until now, 21 Community Centers have been built in the region of Sunampe.

Current project

This current project consists of the construction of another center. However, as explained, the main emphasis is no longer only on the development of infrastructure; but on organizing and helping the communities in post- earthquake region to become more independent. Great importance is given to the education about environment and the democratic rights of the people within the communities.

Situation Diagnostic

Population Statistics

- **Place:** District de Sunampe, Province of Chincha, Department of Ica
- **Inhabitants:** 45,000 approximately
- **Child death rate (per thousand):** 5.3
- **Life expectance upon birth:** 75.3 years for women, 70.3 years for men.
- **Services (water and electricity):** Exist but are generally unreliable.

Education

- **Students that finish primary school:** 82.4 %
The Building of a Community Center in Chincha, Peru

- Students in the second grade of secondary with sufficient performance in communication: 20.3%

Budget Breakdown

**Construction Materials**

*This cost includes the cost to transport these materials.

**Please view Appendix 1 for details regarding the Construction Supplies Budget Breakdown

Total Construction Materials Cost: **$3500

**Transportation**

- Flight Cost (Chicago to Lima, Lima to Chicago): $590 each.
  
  For 10 people: $590 x 10 = $5900

- Car Travel (Lima to Sunampe, Sunampe to Lima) = $20 each.
  
  For 10 people: $20 x 10 = $200

Transportation TOTAL: $5900 + $200 = **$6100

**Personal Costs**

- Lodging: $5/person/night
  
  For 10 people for 4 nights: $5 x 10 x 4 = $200

- Meals: $5/person/day
  
  For 10 people for 4 days: $5 x 10 x 4 = $200

Personal Costs TOTAL: $200 + $200 = **$400

**TOTAL COSTS:** $3500 + $6100 + $400 = **$10,000**
Donations

The International Students Association requests your generosity with this previously-successful, sustainable project to work with the community of Sunampe to improve their quality of life. Since this is an entirely student-run project, it is difficult for us to meet the financial needs of our vision. During the 2009-2010 academic school year, members of ISA have been and will continue to raise money for this project through a variety of fundraising activities. However, despite our own fundraising efforts, we will not be able to fully cover our budget. The construction materials alone will cost $3,500 US Dollars. Our total budget amounts to $10,000; however, we are only asking for enough sponsorship to cover the construction costs. Depending on what donation amount you feel appropriate, we ask you for your generous contribution to our cause. All donations are tax deductible. If possible, we would greatly appreciate donations within the next month and half due to the time of our construction (March 20-28).

Sponsoring Project Chincha provides phenomenal exposure and positive publicity at a great value. The positive publicity gained by contributing to Project Chincha includes being formally and internationally recognized as a notable donator to ISA’s Project Chincha, being publically recognized and extolled as a sponsor on ISA’s website (http://groups.northwestern.edu/isa/), being recognized as a sponsor in all future ISA and NU newsletters and news publications regarding Project Chincha 2010, and having your Department’s title printed on all 2010 Project Chincha T-shirts and clothing apparel as a generous contributor. Our public recognition of you as a sponsor is designed to give your institute an instant philanthropic presence among our students, faculty, and community, and solidify your status as our principal ally for the building of a community center in Chincha, Peru.

How to Donate:

Please make checks payable to “Northwestern University,” and write “ISA” in the memo line.

Please mail the check to:

International Students Association
c/o Alexis Tubb
717 University Pl
Evanston, IL 60201

Appendix 1

Construction Supplies Budget Breakdown

Note: Construction materials are bought from Sodimac/Perno for discounted prices.

All prices are in Nuevo Soles: where the current exchange rate from $US to Peruvian Soles is 2.8900 Soles to 1.00 U.S. dollar as of December 31, 2009, according to the Bureau of the United States Department of the Treasury.

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<td>6</td>
<td>42661X</td>
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<td>7</td>
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### The Building of a Community Center in Chincha, Peru

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**Items Bought Hardware Store: PERNO SHOW**

- **Floor Bolts 3/8 x 3"**
  - 25
  - 121.06 | 121.06
- **Long Bolts 3/8 x 6"**
  - 130
  - 437.06 | 437.06
- **watchers 3/8**
  - 155
  - 43.40 | 43.40
- **Screws**
  - 80
  - 17.00 | 17.00
- **watchers (Screws)**
  - 80
  - 14.40 | 14.40
- **Bit 3/8 Wood**
  - 2
  - 29.80 | 29.80
- **Bit 1/8 Cement**
  - 2
  - 12.20 | 12.20
## Extra Expenses

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<td>Tools rented from Markham College</td>
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Total: 674.92
Appendix 2

Map of ICA

Map of Chinca

Sunampe