Application: 33407 | General

Colombia Infrastructure upgrading for displaced communities

Started at: 4/10/2023 08:29 AM - Finalized at: 4/14/2023 09:53 AM

**Page: Project Title**

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Colombia Infrastructure upgrading for displaced communities

**Page: Contact Information**

**Has this project been funded in the past with a CU Boulder Outreach Award?**
Yes

**Has the faculty applicant received a CU Boulder Outreach Award in the past?**
Yes

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(If there are more than 3 co-applicants, include the additional names and information in the "Faculty Member Roles" section.)

**Co-Applicant #3 First Name**

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**Page: Proposal Narrative**

### Demonstrated Need

La Honda is a community situated on the slopes of the Andes Mountains, approximately 50 minutes from downtown Medellín. Its residents fled violence in other parts of Colombia and came together there to build their own homes, businesses, and community infrastructure. However, their infrastructure is precarious, putting all community members at high risk, especially during the rainy season when pathways turn into creeks, causing floods and landslides. Moreover, they cannot access essential services like potable water, pathways paving, and healthcare, living outside the official city perimeter.

La Honda community has been working tirelessly to acquire raw materials, connect their houses to municipal infrastructure, and establish essential services like education and healthcare. They are also doing site analysis to understand the possible projects to access water and planning ideas to enhance collaboration spaces. However, they lack the expertise and resources to design and build their most-needed pieces of infrastructure.

To address this, The Outreach grant and the work of CU Boulder Students would respond to the community's request for help. We would collaborate to design and build essential infrastructure, including projects to mitigate environmental-related risks like landslides. These initiatives would improve the lives of up to nine thousand residents of this informal community.

### Project Goals and Objectives

The overall goal of the Medellin Practicum: Planning Informality is to use the La Honda neighborhood as a case study for research and action to help students learn firsthand about the process and form of fast, informal urbanization and its consequences. It provides students with theoretical and practical knowledge to intervene in these contexts.

This hands-on planning and architecture studio will collaborate directly with community members in La Honda, Medellin. We will assist them in prioritizing a joint project from their community development plan using collaborative planning and design tools during our engagement with the community. Together, we will prioritize, design, and build the things they need. Which could be paving steps, updating gathering spaces, expanding the potable water network, and improving food security among others.

Students and faculty will develop this project during the summer of 2024. This collaboration began in 2017 with a pilot class that started a project selection process. Since 2018, with the help of the Outreach and Engagement Grant, we have collaborated with several communities in Medellin struggling with infrastructure issues. We have planned, designed, and built paths, gathering spaces, improvements to infrastructure and to community dining spaces.

This current grant will be instrumental in implementing this process in a new community, La Honda. Inhabitants hope that the engagement with our team will help them refine their community plans and execute some of their intended projects. We will also collaborate with the architecture department at the Universidad San Buenaventura in Medellin and the NGO Convivamos.

### Project Plans and Timeline

The Medellin Global Seminar is a six-week abroad program in Medellin, Colombia that includes pre-travel engagement, on-site modules, and post-experience evaluation. The program focuses on collaborative planning and design of infrastructure projects in informal settlements.

During the pre-travel engagement, local partners are identified, and they help us identify what are the key issues to explore during the abroad experience. The project schedule and goals are also agreed upon during this phase.

On-site, the program includes five modules. In the first week, students engage with the community and develop a site plan. In the second week, the selected project is designed collaboratively with the community, taking into account design scope, impact, community skills, budget management, and logistics. The third and fourth weeks focus on project implementation and construction, including off-site manufacturing, material sourcing, and assembly. In the fifth and sixth weeks, construction is completed, and the project is delivered to the community.

After six months, a post-travel evaluation is conducted to review project performance and collect outcomes. This includes class reviews and partner meetings to develop a document that complements the students' book on the experience. The program is designed to provide students with theoretical and practical knowledge of intervening in informal settlements and to improve the lives of community members by addressing their infrastructure needs.

### Diversity, Equity, Inclusion, Accessibility Objectives and Goals

The engagement of the students, faculty and community in the Medellin Global Seminar abroad course curriculum is a crucial aspect of CU-Boulder's commitment to diversity and inclusion. This long-term project has been active in Medellin for over five years and is an excellent example of merging multiple areas of DEI into its teaching, scholarship, creative work, and service.

The course curriculum promotes intercultural competence, and the engagement of all participants helps to build a community of critical thinkers who are better equipped to embrace multiple perspectives. Moreover, this project demonstrates CU-Boulder's support for the development of infrastructure and projects that support historically marginalized communities. For instance, the program is committed to engaging with communities displaced by violent groups, demonstrating the institution's dedication to DEI.

The project's DEI approach is notable as it ensures that all participants' knowledge is equally valued. Furthermore, the program avoids pre-configurations of project ideas, which helps to create a space where all concepts are created by fusing the diverse set of participants' knowledge.

Finally, founding this project shows how financial resources and incentives are set up to undertake diversity, equity, and inclusion work. By putting into effect the DEI campus plan's comprehensive approach, this project demonstrates how the campus is actively pursuing its DEI goals, “not just top-down but also down-up, top-down, sideways, and in all directions.” This project is an example of how institutions can engage with communities, students, and faculty to promote DEI, and it provides a framework for other institutions to follow.

### Primary Applicant and Co-Applicant Roles

My work focuses on sustainable urban growth and operates at the intersection of urban informality (commonly referred to as "slums") and violent urban conflict. As an architect, urban designer, and planner, I teach several courses at CU, including an introductory course on planning (ENVD 2004), a course on urban conflict (ENVD 5346), and several planning studios (ENVD 1040, 1140, 2100) for ENDV majors. In these classes, I introduce students to the theoretical issues of informal development in global urbanization and provide an international experience for firsthand exposure to the phenomena.

Born in Medellin, Colombia, I received my Bachelor of Architecture from the Universidad Nacional de Colombia Sede Medellin. Living in the US for two decades has prepared me to serve as a cultural translator between the US and the local Colombian culture. As a researcher of informality, Medellin is one of my crucial case studies, and I am very familiar with the history, diverse locales, and people of the city. Additionally, I maintain professional relationships with two architecture schools in Medellin, where I have given lectures and participated in research endeavors over the years.

Furthermore, I have twelve years of experience supervising students in study abroad programs, and I have created and led study abroad programs in Colombia within four academic institutions: Duke University, Emerson College, MIT, and now CU Boulder. This work builds on my longstanding relationships with local grassroots organizations in marginalized communities all over Medellin.

### External Partner Role

The non-CU Boulder project partners in this collaboration include the planning team at community of La Honda and their Junta de Accion Comunal, the Corporation Convivamos, the director of the Escuela Territorial de Barrios de Ladera Adolfo Taborda, and the Universidad San Buenaventura school of architecture and their dean Sandra Carrion.

These partners will be involved in different aspects of the planning and implementation of the community redevelopment project. The planning team at Community of La Honda and their Junta de Accion Comunal will represent all families in La Honda and provide approval for student ideas. The Corporation Convivamos will maintain on-the-ground contact with community members during the visit and when CU Boulder students are not in Colombia. The director of the Escuela Territorial Adolfo Taborda will help collaborate to create the engagement schedule and set up primary project goals with community members. The Universidad San Buenaventura school of architecture and the Dean Sandra Carrion will provide local students and faculty and facilitate tools, manufacturing facilities, and studio space, and help with post-project evaluation.

This partnership is mutually beneficial for both university and community collaborators. The university partners will help CU Boulder students gain hands-on experience in designing and implementing community redevelopment projects while working with local communities and partners. The community partners will benefit from the expertise and resources provided by the university partners to develop sustainable and effective solutions for their community.

### Audience Served

This project's primary audience is the community of La Honda, an informal neighborhood in the periphery of the city of Medellin, Colombia. Living outside of the city's utility line and on the Andes' high slopes forces these families to cope by themselves with the most basic necesities, such as water (potable and otherwise), power, sewer, roads, and housing. As is the case with many in the periphery of Medellin, most of the community members are refugees (in Colombia called Desplazados) from the violent conflict in the country's rural areas.

La Honda has an estimated population of nine thousand inhabitants. Education attainment in the neighborhood is low, with less than 0.3% of the population having any education beyond high school. The median income for a family in La Honda is around 400,000 pesos per month, which translates to $87.72 US dollars per month. La Honda is a subset of the entire neighborhood, comprising about 30% of the area; however, it is the most hazardous area because it is not inside the city perimeter. Residents here are significantly poorer than those in the already marginal Comuna 3 Manrique.

Up to 37% of Medellin is an informal settlement. Projects implemented in this neighborhood serve as tools to demonstrate how marginal and at-risk communities can develop and implement their resilience plans. The learning from this experience helps to share horizontal knowledge across other communities. Our collaboration with local partners such as the Corporacion Convivamos guarantees that type of knowledge transfer.

### Student Involvement (if applicable)

During our time in Medellin, students will learn through workshops, lectures, site visits, studio work, and hands-on experience. The overall goal of this trip is for students to understand the potential impact of our project. Additionally, they will develop and refine their design skills and learn how to work with members of a community in need.

Upon arrival in the first week, students will develop research skills through fieldwork, including photography, video, recording, and sketches of the La Honda community. They will gather information from the community through observation and interviews. In addition, students will work together to produce a narrative of key learning objectives.

The following week, students will develop skills to inform design through research. They will understand the manifestations of informal forms and illustrate these relationships. A collection of our research will be presented to the community.

The third week focuses on identifying community goals and their equivalent urban forms. Understanding catalyst projects for the development of community goals is crucial to the success of planning these urban forms. Exploring project alternatives and identifying potential stakeholders will come next. After careful analysis of these subjects, students will create presentation boards to showcase their design intentions.

The final period up to the sixth week in Medellin will be spent on building the design and producing physical interventions to improve the community's social and ecological conditions. At the end a closure ceremony is done, where the final projects are delivered and a document reporting those project is made.

### Contingency Plan

During 2020, students could not travel, and we had to adjust the outreach experience to accommodate the pandemic-imposed challenges. The following plan comes from how we conducted outreach while coping with the social distancing necessities of both countries.

We will move to an online model, following a similar curriculum for student engagement in Boulder. We will extend the six-week abroad studio's goals to five times a week with video calls. We will maintain the same process of searching for a problem, developing the design, managing construction, and adding a final phase to document the process in Spanish and English.

From the community side in Colombia, we will arrange Zoom calls every weekend for all participating members. In Colombia, some members will meet at the local partner site Convivamos, and others will meet through their mobile devices. We will follow local government guidelines for in-person meetings. Those measures will be essential for the construction phase, including the purchase of materials and the gatherings necessary for the construction's physical labor. In addition, we will coordinate with the organization's guidelines for all participating members and ensure that all protocols are followed during meetings.

With Convivamos and Mobility-Movilidad, community members will prepare virtual site tours, hold workshops, and follow project progress meetings. Students will prepare designs, construction manuals, and lists of materials purchased online to be delivered on-site in Colombia. We will buy materials online, follow the delivery and construction progress via Zoom and WhatsApp, and hold meetings to evaluate project progress.

### Continuing or Previously Funded Applicants (if applicable)

The project began in the summer of 2017. During this period, the first experience of the program helped set priorities alongside the Mantiales de Paz and Colombia community. We spent six weeks on-site planning and identifying the key issues that needed to be addressed with our collective resources. In 2018, we implemented a test of our efforts by building a rain collection system to provide cleaner water and paving of roads in Manantiales de Paz's community. In 2019, we started collaborating with the community of Carpinelo 2, which was in a similar environmental risk situation as Manantiales de Paz. Here, the project helped construct the community center and paved up to a hundred steps to remediate mobility and risk of flooding. In 2020, 2021, and 2022, we followed the same strategy, by today we have built more than 689 feet of stairs, 2067 linear meters of new sewer lines and potable water lines, a community shed, community garden, and water collection tank in Carpinelo.

In 2023, with the support of continued funding, we will move to a new community called La Honda, which is in a similar condition to Carpinelo 2 a few years ago. La Honda is a community of over 9,000 inhabitants without potable water, paved roads, or structural facilities. The continuation of this project next summer is crucial to supporting these efforts and an incredible opportunity to make a difference in this community's lives and our students' academic experiences.

### Page: Assessment/Evaluation Impact

**Assessment/ Evaluation Plans**

Several data collection sources will monitor the quality of outreach work. The project's goal is to develop a consistent engagement over several years with the same community. Each year's evaluation would refine the outcomes of the following year's project and ultimate goals.

Individual Student work would be evaluated based on the following criteria: Achievement of the weekly objectives. Students will be graded on the projects mentioned above.

The community members of La Honda would provide one of the most essential sources of evaluation. In the first week, the planning process will include an entry survey that will establish goals for the community outreach for all parties. In addition, the design project will develop plans for each stage of the project. At the delivery of the project, a community evaluation of the project's success will be gathered from an exit survey.

During the post-travel phase, two critical tasks would be developed. The first one is overseeing project performance over time by following up communications with community partners at one, three, and six months after delivery. This evaluation would review the project's long-lasting impact, the performance of the structures, and sustainability over time.

Finally, the work that is done in the studio, including drawings, plans, writings, etc. will be well-documented and posted online in book format after the experience. The experience book would serve as a document to be revised by external peers on the value of the outreach experience. (See book example in the annex of 2022 Final Report).

Provide a breakdown of the estimated number of those who will be involved and directly affected by the project. (Note: This is not to suggest that more is better; the committee understands that some outreach work may go deeper but serve fewer people.)

**CU Boulder Faculty**

2

**CU Boulder Staff**

0

**CU Boulder Graduate Students**

0

**CU Boulder Undergraduate Students**

14

**External Constituents**

500

**Page: Budget Information**

**Budget Narrative**

The funding for this grant would serve to implement the project that the community select. All the grant money goes directly to fund the project. The project budget is divided into the following phases: planning, design, materials, fabrication, and logistics. Since this is a co-production project, the team would create scenarios (options), and the community would determine the allocation of funds. Phases and options as follow:

Planning: First week meeting with community members, flyers for communication and printing of materials for community workshops refreshments for attendees, renting of video and audio equipment to engage with 200 people.
Design: Materials for the community design workshop and student's studio materials to create a 3d model of the selected project.

Materials: Construction materials for three potential projects from which one would be selected with three options a community space expansion, a community kiosk, or the paving of streets.

Fabrication: Different fabrication options include the manufacture of tables and benches for 50 people. Wall coverings for the kiosk option the fabrication of attachment pieces, and roof attachment supports. Fabrication of stage and railings. For paving, the cutting of plywood for concrete forms and urban furniture.

Logistics: Materials sourcing and transportation of materials to the site.

Final event: Final week event of delivery of the project. Presentation of results and process and evaluation of project completion. Flyers for communication and printing of materials for community workshops, refreshments for attendees, renting of video and audio equipment to engage with 200 people.

**Other Funding Sources**

The project has other sources of funding that cover some of the expenses, including travel expenses, housing, students' transportation, and faculty to the site and accommodation. These expenses are already covered by the abroad experience's fee, which is estimated at $ 138,698 (including flight cost). Additionally, local university partners will provide the facility and equipment needed to fabricate specialty parts. The community of La Honda will also contribute their time, labor, and building experience to the project. However, the outreach award funds are crucial to purchase construction materials, materials transportation to the site and building tools needed for the project. Therefore, the outreach award funds are essential to the project's success and sustainability.

**Funding Requested**

10999.68

Provide a breakdown of the project budget.

**Project Expenses**

Budget Expenses

7900
Construction materials and fabrication
materials/supplies/equipment

960
Trasnportation of materials to site
materials/supplies/equipment

200
Materials for planing workshop and final event
materials/supplies/equipment

107
Renting audio visual equipment for two events
materials/supplies/equipment

900
Community design studio workshop
materials/supplies/equipment

100
Refreshment for two events with community members
other direct costs

832.68
8.19 GAIR
GAIR

**Page: Endorsement and Final Report Upload**

Share the draft of your proposal with your department chair/director in advance of submission and obtain a one-page endorsement letter that includes details on how the program will be supported and is tied to the outreach and engagement mission of the department/campus program. This is an important part of your application.

Note: if the faculty applicant is also a chair/director, the applicant cannot endorse their own project. Please have a dean or associate dean submit a letter on the applicant's behalf.

**Chair/Director Endorsement Letter**

Download File (https://cuboulderoutreach-engage.secure-platform.com/file/40342/eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJtZWRpYUlkIjo0MDM0MiwiYWxsb3dOb3RTaWduZWRVcmwiOiJGYWxzZSIsImlnbm9Gl0b1BdJR1dH4zdkjhxp8MRrhJvN4?Director%20support%20letter%20Office%20of%20Outreach%20and%20Engagement%202023.pdf)

If you were awarded outreach funds in the past, you are required to submit a Final/Status Report, even if you have not yet completed the current project.

Only applies if continuing the same outreach award project or are building on previous work for a new project. A final/status report needs to be submitted even if the continuing project has a new faculty applicant.

You do not need to submit a report if the project was funded with a community impact grant or micro grant received from the Office for Outreach Engagement.

The final report form can be downloaded from the Office for Outreach and Engagement website (https://www.colorado.edu/outreach/ooe/outreach-awards/individual-award-application-process).

**Final/Status Report**

Download File (https://cuboulderoutreach-engage.secure-platform.com/file/40343/eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJtZWRpYUlkIjo0MDM0MywiYWxsb3dOb3RTaWduZWRVcmwiOiJGYWxzZSIsImlnbm
W07XZmAlZFqq47pC24?Colombia%20fy22-23_final-report-form.pdf)