

Habitat for Humanity Global Village: Trinidad and Tobago

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For my senior project I chose to help build a home for Habitat for Humanity Global Village in Trinidad and Tobago. Habitat's mission is to provide shelter for those in need, and they do so in many countries around the world. I experienced working in another country with a lack of building codes and equipment. The experience challenged me and taught me many lessons in working with teams and in foreign places. Our team was set out to construct the foundation of a home, but due to weather impacts and lack of equipment, our group did not completely finish the task. Unfortunately, after we left our project came to a halt. This report outlines my experience, the organization, my recommendations, and lessons learned.

Key Words: Habitat for Humanity, Global Village, foundation, residential construction, volunteer

Introduction

Habitat for Humanity's (Habitat) mission is to improve communities by building and improving homes for those in need (About Habitat, n.d.). I knew I wanted to help others, and physically build something, so partnering with Habitat was the perfect opportunity. I combined my love for philanthropy, construction, and travel, and chose to volunteer for Habitat's Global Village Division.

I originally signed on to join the Habitat team heading to Trinidad and Tobago with no idea who the project was benefitting, and no other knowledge besides that we would be building a home. I had a skewed idea of what we would do: I thought we were to complete an entire home during our week there (assuming foundation and some framing was already done); however, this was not the case. When our team arrived, Trinidad was being plagued with one of the biggest storms they had seen in years. According to *ReliefWeb* (2018), approximately 150,000 people were affected by "a full month's worth of rain [in] two days." The heavy rain caused massive flooding which affected 4,333 households, including our Habitat Volunteer Coordinator's home. Despite 80% of the country having been affected, our group still moved forward with our project: a home for a young expectant mother and her family. Our team was tasked with completing the foundation for the home, a project that sounds a lot easier than it was. This paper will describe the experience of working with the Habitat organization, visiting Trinidad and Tobago, and doing construction there.

Habitat for Humanity

Habitat for Humanity Global Village is very similar to Habitat for Humanity, although it is a separate entity. Like the local organization, their mission is to help communities, though they offer other opportunities "including building one house or many houses at a time, advocating for policy while building, disaster recovery, minor and major home repairs, energy efficiency projects, working with vulnerable populations like children or the disabled, and also trips just for women" (About Habitat, n.d.). They have various project options besides homes, such as community centers, schools and more shown below in *Figure 1*.

Trip types

 Blitz build Join hundreds of volunteers to build many houses in one week.	 Green building Help build energy-efficient homes with those in need.
 Build Louder: Advocate & build Build with partner families and advocate for policies and systems to advance affordable housing.	 Healthy homes Upgrade existing houses with smokeless stoves, water filtration systems, new bathrooms and more.
 Community development Volunteer with a holistic development project that builds decent housing as well as economic growth and communal resources.	 Home construction Help build new homes with those in need.
 Critical home improvement Improve existing shelters to make them safe, decent places to live.	 Vulnerable populations Bring stability and opportunity to orphans, vulnerable children and other people experiencing extreme difficulties.
 Disaster recovery Build back stronger after a disaster and learn about Habitat's work to increase stability and reduce risks.	 Women Build Build homes with women and children while exploring a new country.

Figure 1: Habitat for Humanity Global Village Trip Types
Source: Habitat.org

Founders, Millard and Linda Fuller, worked outside of the country as early as 1973, but did not establish the Habitat for Humanity Organization until 1976 (Habitat's history, n.d.). The organization was founded as an international one, though, the branches operate separately. Habitat for Humanity in Trinidad and Tobago (T&T) didn't begin until 1997 (Our Impact, n.d.). To date, around 17,300 residents have been impacted by the organization (Our Impact, n.d.).

When I volunteered to be a part of this trip, I was unsure of the free time we would have after building. One of the most exciting parts about the trip was being able to go on mini-excursions throughout the country after we had finished our work for the day. Some of the fun things we did were: visit Maracas beach, watch a traditional Indian dance, sightsee the national birds on a boat tour, and take a tour of the capital city, Port of Spain. On our final day in Trinidad and Tobago, our group flew over to the island of Tobago and had a wonderful day snorkeling, hanging out at the beach, and tasting some of the local cuisine.



Figure 2: Trinidad and Tobago Excursions



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Trinidad and Tobago

Trinidad and Tobago are the two southernmost islands of the Caribbean (Brereton, Robinson, & Watts, 2019). They lie just 7 miles from Venezuela and take up a total of 1,980 square miles total (Brereton, Robinson, & Watts, 2019).

T&T was first settled by the Island Carib and Arawak peoples (Trinidad and Tobago: History, n.d) but later claimed by Christopher Columbus in 1498. About 300 years later, the islands were taken over by the British, after being fought over many times (Trinidad and Tobago: History, n.d.). By 1962, Trinidad and Tobago finally gained their independence, and later in 1976 they became a republic (Trinidad and Tobago: History, n.d.).

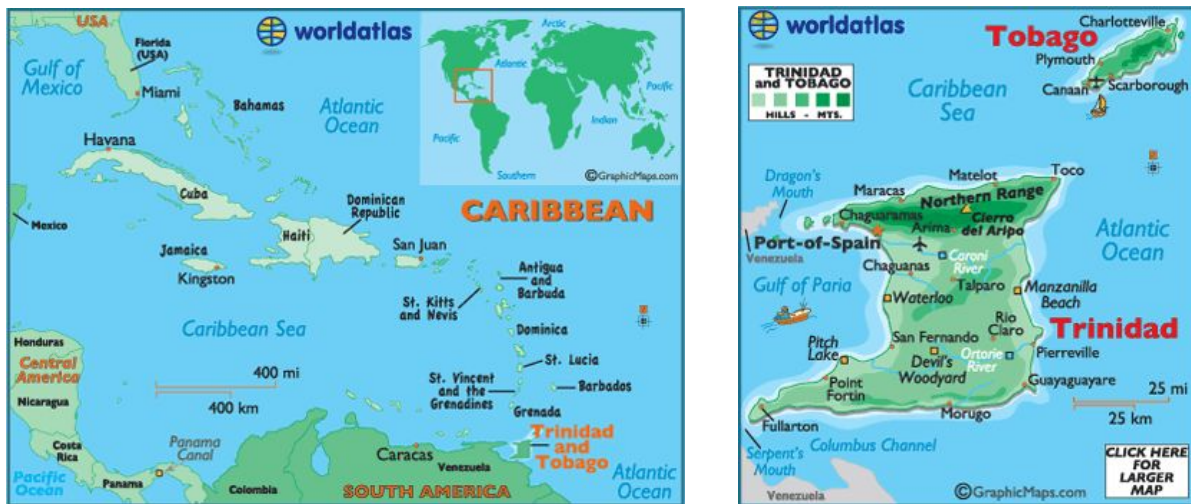


Figure 3: Trinidad and Tobago Maps

Source: Worldatlas.com

The population consists of: 37.6% Indian, 36.3% African, and 24.2% mixed races (Demographics, 2017). The total population rounded out to be about 1.3 million people in 2011. They have their own currency called the Trinidad and Tobago Dollars (TT\$). One US dollar is about 7 TT\$. T&T’s economy runs on petroleum and natural gas reserves, although oil production has declined since its peak in the late 1970’s. They also have large natural asphalt deposits in Pitch Lake. Outside of that they have “deposits of coal, gypsum, limestone, sand and gravel, iron ore,

argillite, and fluorspar” (Brereton et al., 2019). On the other hand, being a Caribbean island, T&T also depends on tourism. Tourists are typically drawn to the beaches, Tobago, and the country’s annual Carnival event. Unfortunately, although the country is categorized as a “high-income country” poverty is around 22% (Blandau, 2017). The high rates of poverty are largely due to the crash in the oil industry and current recession, but also the uneven distribution of wealth and education (Blandau, 2017).

Project Description

Upon arriving in Trinidad, our team discovered our particular project was to benefit a young woman and her family. The T&T director had a heart for this young woman although she did not meet all the requirements to be selected as a beneficiary. The requirements include the ability to pay back the organization over time (income must be in excess of living expenses), a certain amount of “sweat equity” hours, and owning a piece of land for the home to be located.

Our team was to start the project, so we set out to build the foundation for the home. Constructing the foundation consisted of digging the footings, tying rebar cages and placing them, placing vertical rebar, pouring concrete in all the footings, grouting rows of concrete masonry unit (CMU) blocks on top of all the footings, backfilling and leveling the foundation pad, and pouring the final slab. The group was to be followed by a team from Canada who would be tasked with the next step in the building process. Each day after arriving on-site, we awaited instruction as to what our task for that day would be. The team typically finished what was expected of us, packed up, and then headed back to the hotel before our excursion of the day.

Unfortunately, the impact our group had on this family and the community was minor. Not only did we not finish the foundation completely, but after our team left, this specific project came to a halt. Our team was able to finish everything up to the foundation slab. As a group, we learned a lot about means and methods, working together, and for those of us not in the construction field, how to build a basic foundation.

Daily Activities

Each day, after about an hour commute from our hotel in the Port of Spain to the jobsite, we applied our sunscreen, put on our gloves, and awaited our instruction for the day. Some days the group’s supervisors were ready and other days they were not. Each day our team would set a goal, stopping only for lunch and water breaks, and around 2:00pm we would clean up and head back to the Port of Spain. Below is a description of our tasks on each day.

Day 1: Dig Footings. When our group arrived on site we were surprised to see our footings already laid out and dug down one foot. The team had to dig another foot all around and two extra feet in each corner. Some of the group also starting folding rebar and tying rebar cages.



Figure 4: Day One photos

Day 2: Continue to dig and place rebar cages. When our group arrived on the second day we were sad to see that rain had flooded our footings. Our team drudged out the water with a bucket brigade and then finished digging the footings to the proper depths. Lastly, we placed our rebar cages and were done for the day since our concrete materials had not yet been delivered.



Figure 5: Day Two photos

Day 3: Mix concrete to fill footings and place vertical rebar. The third day was one of the toughest. Our group set out to mix concrete (right on the ground!) and we used buckets to pour the concrete into the footings; this allowed us to fill about half of the footings.



Figure 6: Day Three photos

Day 4: Mix more concrete to fill remaining footings and place CMU blocks. Our group finished pouring the other half of all the footings, then laid and grouted CMU blocks on each section of footings.



Figure 7: Day Four photos

Day 5: Compact foundation, lay wire mesh, and place waterproofing on top. On our last day our team prepped the foundation for its final slab pour. Our team did not have enough time or materials to finish the pour but, we were assured the next group of volunteers would finish the task.



Figure 8: Day Five photos

Analysis and Discussion

Although the team's goal of finishing the foundation was certainly possible, the weather conditions made it extremely difficult. Given the proper equipment, guidance, and help, our team could have certainly finished the foundation, and even done the rough framing for the home.

Our team did not have any training or proper equipment to complete our necessary tasks. Unlike my expectations, community members were not helping us, and even the "construction team" was not helpful or supportive to us and, quite frankly, did not seem to know the plan or how to do it at all. It is imperative that the T&T team finds an experienced general contractor and construction team, or a set of capable volunteers to give assistance on all projects they tackle.

Some of the major construction tasks our group completed were digging the footings and compacting the soil for the slab pour. Our group hand-dug the footings, which was very difficult and could have been done much faster, and with a lot less effort had we been able to use a mini-excavator. On the other hand, after finishing the footings and stacking two rows of CMU blocks on top of them, we backfilled the area with native soil, and compacted it using a handmade tool as shown in *Figure 5* above. The soil was very clayey and saturated, so it was not ideal soil to be used for the foundation of a home. Tamping and slamming the tool into the soil flattened it out, but definitely didn't do a great job of actually compacting it. Overall, the compacting was not efficient and the use of native soil was a very unsafe choice. Filling with imported soil and using the handmade tool with shallow soil lifts may have provided proper compaction, however, an automated upright compactor would have been more efficient.

Recommendations

It is quite difficult to rally a team of tired, old and young, inexperienced and experienced, volunteers to all work together to build. With some of the group not knowing what we should be doing, and others of us feeling exhausted and needing a break, productivity was very low. The team faced many challenges including weather, mismanagement, group dynamics, and lack of materials/tools/guidance. With proper training and a clear schedule this could be hugely improved.

T&T should instate building codes and enforce them, especially in residential construction because they do not currently have any enforced standard building practices (Thompson, 2018). Since that will take many years and a lot of money, the Habitat Organization should take it upon themselves to enforce building codes on their projects. This includes but is not limited to: proper use of tools and equipment, soil testing, plans generated by a licensed architect, and quality control and assurance by a licensed supervisor or construction management company. There are a lot of companies out there that would be willing to donate their time, money, and knowledge to help this cause, especially if it meant a near-future of building safer homes for people in need.

Lessons Learned

The experience of building in another country has taught me many lessons. First, nothing is as simple as it seems; this is a lesson for all things in life, but became even clearer in the construction process in Trinidad. Second, not all developed countries have a set building code in place; this was very surprising. In Trinidad and Tobago they have plenty of commercial buildings; knowing that there are standards, but they are just not followed in the residential industry was shocking and disappointing. Third, and last, the strength one has can be just as useful as an actual tool. Much of the work the group did was by hand (digging, twisting wire repeatedly, mixing concrete, and tamping the soil) and although we didn't have many tools, we used what we could and with the strength of the team, anything nearby became a tool.

Conclusion

After all was said and done, our team was very proud of the work we had completed. Given the weather implications and lack of equipment, we were still able to dig out all the footings, create rebar cages, mix and pour concrete, level the foundation, and cover it with waterproofing. Our final task, pouring the foundation slab, was not completed due to the extra time it took to excavate the site. Unfortunately, the project was not completed after our team left Trinidad, so our work did somewhat go to waste, but I am hopeful that one day the project might be completed. From this project, I learned the importance of the building codes, cooperative teamwork, skilled laborers, and supportive leaders. The experience working with Habitat for Humanity was very rewarding and fun; I would love to work with them again in the future, and would encourage anyone interested in volunteering and traveling to look into a Global Village trip.

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