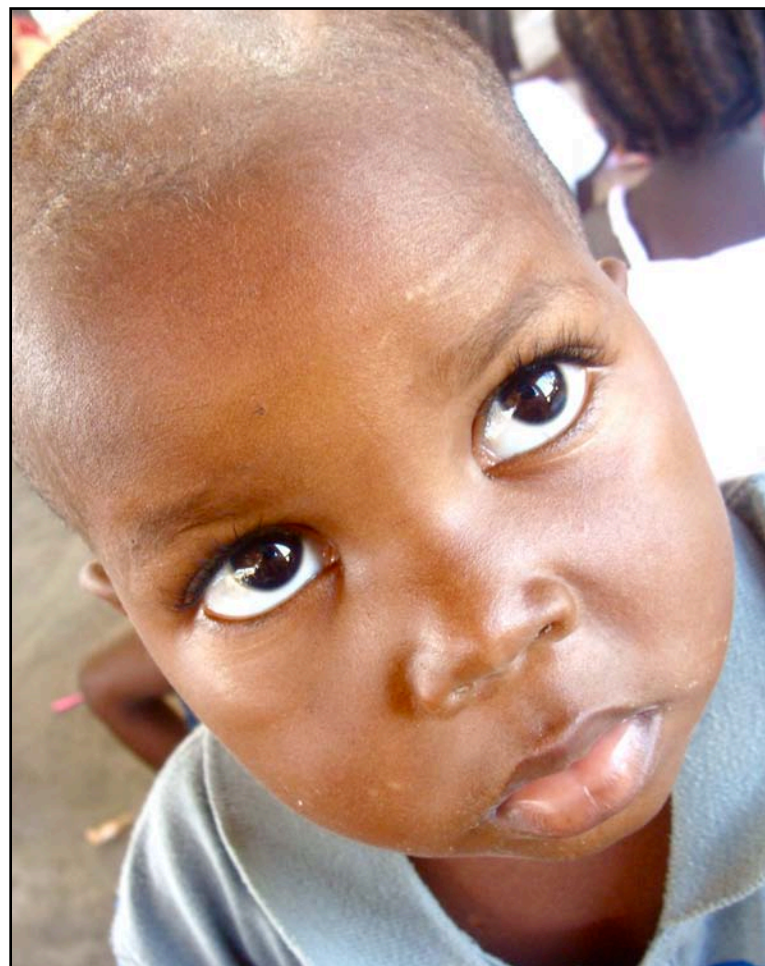

Chapter Four

Process of Creating The Built Environment



“Hope coincides with an increasingly critical perception of the concrete conditions of reality. Society reveals itself as something unfinished, not as something inexorably given; it becomes a challenge rather than a hopeless limitation.”

- Paulo Freire, *Education for Critical Consciousness*



Four • *Inspiration for Program and Typology*

• **Theoretical Concept Phase One**

The last day of a first visit, this 'place' becomes visible. Containing cultural diversity and poverty, a walk upon a deserted beach led to the discovery of the conceptual premise for this thesis design. It became apparent through the experiences with the children and the adults that there was something within the special relationships that were held here in Barahona between the people. This needed to be discovered and clearly represented within this thesis. Walking over trash, empty medicine bottles, barbie dolls, and clothes, a piece of coral lay within the remains upon the beach. Looking at this piece of coral the thought of its meaning immediately came to mind in the sense of experiencing a once living organism that was now laying in its dead form upon a beach. Coral is best known in its living form within the ocean; its natural environment. When coral becomes an inhabitant out of its natural environment its form becomes a very hard structure, and usually of a light color.

Within Barahona the numbers of families living within the Bateys and Barrios, Dominican and Haitian,

is that of very high numbers. These people living within poverty, and struggling day by day to maintain a happy and healthy lifestyle. Sometimes the impossible becomes a permanent aspect of their lives. This piece of coral becomes a symbolic representation of the structure of their family and community, containing the most important aspects such as faith. No matter if this structure is living or dead it is still maintained within its same form. The structure of the people of Barahona holds its strong form, but struggles to become the living organism it strives to be. Through the addition of a secondary form, the people are enabled to become empowered through a system of support.





Fig. 4.1_ Sketch of coral; symbolic of the structure of the people of Barahona within the Bateys and Barrios

- **Theoretical Concept Phase Two**

As stated previously, through the addition of a secondary form, the people of Barahona are enabled to become empowered through a system of support. This system of support is symbolically represented with two hands. Each hand individually represents a different person. The hand holding the piece of coral represents the hand of the people of Barahona. This hand visually conveys the multi-cultural society of the Dominican Republic. The grasp upon the coral, represents the tight hold upon the structure of their family and community. Although the coral is viewed as dead within this hand, it clearly shows the remnants of their family values, faith and their communities. Under the hand of the people of Barahona is the hand of support. This hand is visually represented as a neutral and natural support system. The work of a missionary, organization, or architect can thus be represented as this hand. Through the support of 'Children of the Nations' within the Bateys and Barrios of Barahona, the people have with stained support and ways in which they can proceed their lives into new ventures and opportunities. Now becomes the time when the hand of an architect comes into context, becoming the support of the hands of the people. Constantly keeping in context the views,

opinions, needs and wants of the people, the development of a design can be created from within this relationship. Thus this hand becomes a symbolic representation of how a new form of architecture can become integrated into their natural environment. This architecture can support the people to move forward within their communities. The coral is still contained within the hands of the people, and will once again have the opportunities to become a living organism again within its own natural environment.



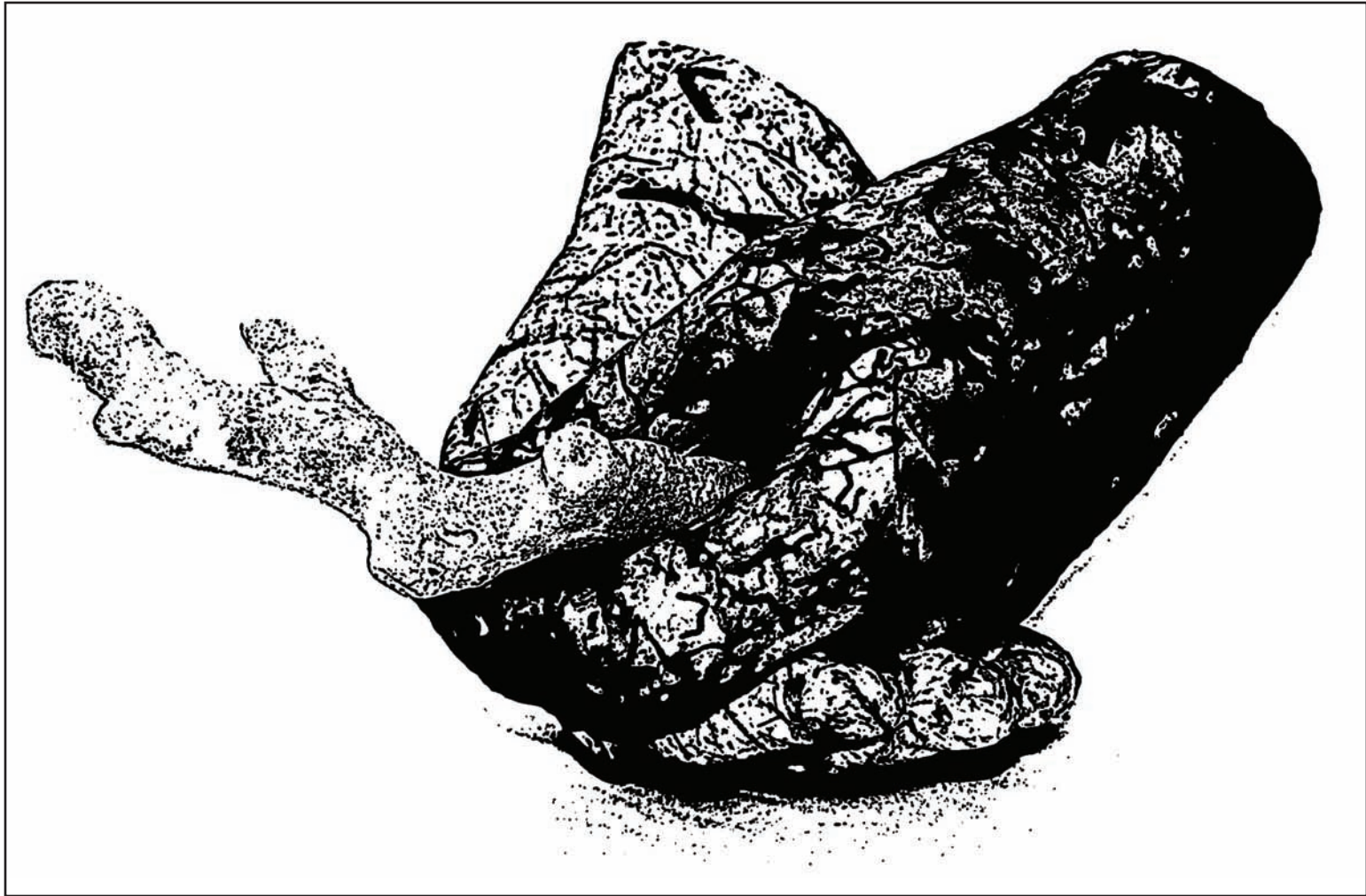


Fig. 4.2_ Sketch rendered image of the two hands combining together with the structure being contained within the hand symbolic of the people of Barahona

Four • *Inspiration for Program and Typology*

• **Historical / Cultural / Social / Economic**

The inspiration for the program development of this thesis thrives solely from the people and diverse cultures of this environment. Through the analysis of the diverse cultures of this country and especially within the region of Barahona, the awareness of long-standing issues arise. These issues form the needs to develop an architecture that may begin to rekindle and redevelop the relationships that have never been able to form between the Haitian and Dominican population. The economic system of the Dominican Republic relies heavily upon the Haitian population, providing large numbers of work force. The lives of many inhabitants of the Bateys and Barrios revolve solely around labor that in turn brings home the resources for their families and communities. Through the design and the phases of construction, the people will be able to take part in creating a new community complex that will in turn provide knowledge and skills, that can be taken forth into their own communities.

As a designer, it is most important to respond to the identity of the people of Barahona, and not one's own. This

becomes the defining precept in order to be successful in creating a community complex for the people of Barahona. The clash of cultures that is seen within the Dominican Republic as a whole becomes the façade, behind which many other factors have determined the problems in existence today. These other problems can be defined in terms of the historical, social and economical matters of the Dominican Republic and Haiti. The historical context of the country of Hispaniola has contained many corrupt events and leaders, ultimately allowing for the anti-Haitian attitude to grow within the economic standing of the country as a whole. These two races live within the same island that contains a weak economy and political standing that is the resultant of the issues lying visible present today. Through the identification of the people through the historical, cultural, social and economical standing, the knowledge forms that allows to design a place of neutrality, harmony and connectivity.

Through the development of the program for the community complex these factors are the inspiration behind the reasoning of developing specific programmatic functions. This community complex calls for the programmatic necessities specific for large numbers of

people and children throughout the region of Barahona. Ultimately this allows for this design to become a center of interest for the surrounding communities to take inspiration from, in order to develop the disconnected relationships in other towns, Bateys and Barrios. The inspiration although lies within the children of the Bateys and Barrios. Through the numerous site visits and the building of relationships has allowed a circle of communication and knowledge to form in order to create a space that encompasses the hopes and dreams of every individual user. Taking the historical, social, cultural, and economical aspects as a learning curve towards creating a different future for the next generation of children. This thesis thrives to explore the specific needs of families and communities in order to provide the maximum possibilities for a third world country. The program will be planned to become individual buildings that can thus be taken from the complex design and into the individual Bateys and Barrios. The large programmatic functions of the complex are of great importance even in their form of simplicity. A region that calls for the simplest form of shelter, but the need for education within design and construction. Within these simple forms of shelter, the most basic type of architecture, program is of no context

within the design. The homes of the Bateys and Barrios become one large space that is subdivided with temporary divisions all in accordance to the changing needs of a family. The allowance of program into design is something never taken into consideration before. Therefore through the exemplification of the design for the community complex, the program will provide new knowledge and inspiration for the communities of Barahona. Programmatic functions within architecture will form from the realization that this important aspect of architecture currently is not of existence within the Bateys and Barrios.



Fig. 4.3_ Primary users

Four • *Program Planning Goals for the Individual User Needs*

• **Individual User 01_ Employees**

The design of the community complex is specifically for the in country goals, programs and work of the non-profit organization 'Children of the Nations'. This organization works within the region of Barahona in the Dominican Republic and within five Bateys and Barrios specifically. COTN partners with nationals to provide the care that enables the organization to create positive and lasting change in the nation. The design of the community complex will pertain directly to the employees, as it will be the place in which the work of COTN will originate from. Many individuals work together to create the working operation of the organization within this country. The community complex will become the new central 'Hub' for COTN, and will be the daily space that the employees will operate from.



Fig. 4.4_ Staff member in the kitchen



Fig. 4.5_ COTN staff members

- **Individual User 02_ *Missionaries / Interns***

'Children of the Nations' offers venture programs, which enable those to participate in COTN missions. These trips utilize their skills, resources, and relationships to accomplish the ultimate vision of the organization. The programs offer the opportunities to know the children, meet national staff, and to become a part of a global movement of people. The venture programs are believed to make an impact on the seven cultural influences. These are as follows: politics, environment, media/arts, education, church, family and business. Through the design of the community complex the venture programs will operate from within the grounds. This user group becomes very important to the overall operation of the facility. The operation of COTN is helped greatly by the constant flow of teams, interns and consultants within the country. The typical team members are from age six and older, and the trip durations are either seven, ten or fourteen days in length. The typical interns are between the age of eighteen and twenty-four years old, and the trip durations are either eight week or one year in length. Finally the typical consultants are of any age, but require five plus years of experience within their field, and the trip duration are dependent upon what the purpose of their trip entails.



Fig. 4.6_ Missionary Jill Luse feeding a baby girl in Altgracia



Fig. 4.7_ Teaching art to a class in a school in the Barrio Pueblo Nuevo

• **Individual User 03_ *The Children***

‘Children of the Nations’ work alongside nationals (local community members) and are solely focused upon providing for the children of the Barrios and Barrios. Through the design of the community complex many new functions will be available to the most important of the three user groups; the children. They children within COTN are provided with medical attention, educational tutoring, youth sport events, leadership development, and biblical training. All of which will become in full progress within the community complex when constructed. One hundred percent of the needs of the children will be allowed to develop within the complex, allowing COTN to reach their goals. Seeking to end the cycle of poverty and allowing the children to have a chance at a life far different from one they currently sustain. The community complex will become a new home for many children and will be used upon a daily basis to provide the needs of each individual child.



Fig. 4.8_ Coloring activities in the Barrio Don Bosco



Fig. 4.9_ Coloring activities in the Barrio Don Bosco



Fig. 4.10_ Architecture teaching classes



Fig. 4.12_ Future architect of Don Bosco



Fig. 4.11_ Teaching architecture classes in Barrio Don Bosco



Fig. 4.13_ Teaching architecture classes in Barrio Don Bosco

Four • Building Program Pre-analysis in Response to User Needs

• **Program Discussion One**

Where: Barahona, Dominican Republic
When: July 2009
With: Members of COTN Board & Staff

This first meeting began with the discussion of 'Children of the Nations' need to develop the infrastructure of buildings for the organization within Barahona. This included clinics, service centers, education programs, and forming classes. The "Camp" idea was first brought to attention by the board within this meeting. The concept of the "Camp" would include facilities such as baseball, hurricane shelter, classrooms, green spaces, communal areas, both indoor and outdoor, swimming pools and sleeping quarters.

The communal space requires approximately one square meter (approx. 10 sq. ft) per two persons. The board requested a building large enough for five hundred to six hundred people. They want to include this building

to become a multi-functional space that would also act as a hurricane shelter. Two floors for the construction of this building was discussed of being an option also.

The cafeteria was discussed as needing to become a separate building from the communal space. This building would also house the large kitchen.

The dormitories need to house boys and girls separately, and would hold numbers from five hundred to six hundred people. There is a need for sleeping quarters for the COTN staff and missionaries through the organization. Each room would house twelve children and one advisor. Also each room would need one bathroom, containing three plus showers, and one plus toilets.

The finish the meeting, the ultimate needs of the "Camp" were discussed. These included administration office, warehouse storage, library, laundry facilities, bathrooms, security office, two pools, clinic, basketball courts, baseball field, volleyball courts, and a playground for the smaller children.

- **Program Discussion Two**

Where: Phone Meeting
When: September 8th, 2009
With: Chris Clark (CEO / Founder of COTN)

This second meeting involved the direct discussion of the entire project with the CEO and founder of 'Children of the Nations', Chris Clark. He discussed the current situation of the "Camp" that occurs on a yearly basis through the organization for the children of Barahona. Currently the organization has to transport the selected children to the north of the country to a camp that is only used on a yearly basis.

He stated that the design of a high school is of great importance. Previous to 'Children of the Nations' there had been no value in school, and now after ten years of working within the Bateys and Barrios, the organization would like to proceed in designing and building the first high school. Chris stated that his organization maintains its goal: "to transform children, to transform a nation". The children are the main priority and concern of this organization.

The discussion of a previous project that had failed

came into context as the idea for a large scale "camp" ideas had been proposed at a current site of the skill center in Pueblo Nuevo. The organization was misinformed of the land quality to build, therefore larger plans never made it to construction.

Chris has large plans for 'Children of the Nations' and through the design of the community complex, these plans may have the opportunity to be transformed from dreams into reality.



• **Program Discussion Three**

Where: Phone Meeting
When: November 2009
With: Ben Holman, Brian Bauer (ILB)

This third meeting involved discussing specifics for the baseball side of the design. Within the design of the community complex for 'Children of the Nations' lies the need to develop a new home for 'I Love Baseball'. Currently operating within a public space in downtown Barahona, this discussion was necessary in order to develop an understanding of the programmatic needs of ILB.

The design of the high school is connected to the programmatic needs of ILB. They discussed the need to educated numbers of two hundred and fifty to three hundred teenagers within the new school. They want all the children together in an shared environment, and the design of a two story structure is a possibility. Currently ILB has twenty-three boys and their goal is to have between fifty to seventy.

The needs of the baseball team outside of the high school are as follows: enclosed batting cage(s), bleachers

that are enclosed and permanent, locker rooms, a club house, the dug outs, batting cages, and possible a smaller field (infield).



Fig. 4.14

• Program Discussion Four

Where: Barahona, Dominican Republic

When: December 2009

With: ILB Players, Coach, USA Staff

This fourth meeting involved an open discussion with the 'I Love Baseball' team, coach and American staff that were visiting. The project was introduced to the boys and after the question was asked 'what do you want to see within the design of the community complex?' Their responses were as follows: a dining room, pool, gym/weight/therapy room, batting cage, one full field, one practice infield, sixty yard dash marking for running and warm-ups, a church for up to thirty people, showers and locker rooms, a warehouse for storage of the equipment, permanent seating for two hundred people. They specified on the seating of the audience to be made from concrete and wood, and would like permanent stands in which people could sell food, drinks, and merchandise for ILB during the games. They identified the need for a wall around the entire camp in order to secure the facility. This field would become the home for try-outs and therefore they made

clear for the need of a place that would be specifically for visiting scouts to view the games. Also this would house an area for a commentator. The discussion of a private outdoor green space was greatly liked for eating and hanging out with their family and friends.

The discussion of fund-raiser ideas was also mentioned in order to raise the money to build the facility. The group mentioned bricks with names engraved and seat plates that would be sold here in the United States. The Clubhouse was an important part of the discussion because it becomes the central building of the facility for ILB. Education is also important to the boys outside of the school environment, therefore a library was mentioned. In which they would be able to explore the areas of music, art and architecture.

The discussion arose of the classrooms themselves. The color blue for the exterior of the buildings, and cream for the interior was agreed upon by the entire room. They agreed upon the need for higher ceilings in their architecture as it becomes very hot in the smaller current schools of the Bateys and Barrios. They would also like a room specifically dedicated to computers, as 'Children of the Nations' currently has in the skill center at Pueblo Nuevo.

The idea of a museum was derived during this discussion. This museum would house the history of baseball in the Dominican Republic, as well as the achievements of the players within ILB. They agreed that if this building was to be designed it would be a smaller sized building, approximately fifty by twenty feet. This idea is not necessarily a necessity, but could be included within the design of the clubhouse for 'I Love Baseball'.

The idea of a farm was also derived. There is a great want for the children to take part in cultivating something of their own. They discussed how they could grow their own fruits and vegetables to sell and provide to the complex, and their families. Also housing chickens, pigs, cows, and goats.

Finally the group finished the discussion by making clear the need for the natural environment of the site to be used and integrated into the design. They would like to see hills around the fields, for exercise, and a track to walk and run around. They also noted that the walls that would surround the entire complex need to become integrated into the natural environment, possibly by allowing plants to grow up and around. Finally they made clear the problem of water upon current fields, which hopefully can be resolved

to some extent through the design of the complex.



Fig. 4.15

• Program Discussion Five

Where: Barahona, Dominican Republic

When: December 2009

With: Julio, Dante, David (COTN Staff)

This final meeting was arranged in the last days of the most recent visit to Barahona. The total area of land that the staff believe to be used for the complex will be between thirty-thousand (322,917 sq.ft) and sixty-thousand square meters (645,835 sq.ft). This is entirely dependent upon the number of buildings, the sizes of each and the recreational fields.

They discussed that this community complex is for the purpose for the development of children in a physical and spiritual sense. It will house the staff, the missionaries and the children. These are the three user groups for the complex.

They would like a small church, housing to facilitate for approximately four hundred people. This is significantly lower than the first meeting in July 2009. The housing will also be home to permanent residents.

The other buildings discussed in this meeting were

as follows: community center, kitchen, high school for two hundred children, computer room, a library, a clinic, and a gymnasium. The recreational fields required are as follows: basketball, volleyball, and baseball.

Finally this meeting ended upon the discussion of a hotel upon the site. It is currently owned by the Bank and was previously looked at for purchase by 'Children of the Nations'. The bank currently owns this property because it was taken over as the previous owner became bankrupt. The previous price was very high, but currently the building is for sale. The discussion of purchasing the hotel to develop for the housing for the complex was agreed as an option.

Four • *Building Program Post-analysis in Response to User Needs*

• **Program Evaluation**

After five discussion groups with the three user groups for the community complex, it became necessary to filter down the discussions into one final program for the designing to begin. Through the analysis of the five discussion groups with the users, it becomes clear the actual needs of the complex and the wants. Through the extensive research within the region for the development of the program, it is clear to identify that the programmatic needs become separate buildings. Designing one large building filled with the programmatic functions and requirements of the users is somewhat of an impossibility working with an area such as Barahona, Dominican Republic. The majority of their architecture is small, personal and a place that many can come together to communicate. This pushed the decisions to create a community complex that will house the major programmatic needs within individual buildings. The buildings have been divided into a temporary number of nine, housing all the necessary program for the complex.

• **The Buildings**

- (1) The Community Center
- (2) Administration Offices
- (3) Housing Units
- (4) The Clinic
- (5) The Library
- (6) Education Units
- (7) Chapel
- (8) High School
- (9) ILB Clubhouse

• **The Recreational Areas**

- Baseball field
 - Infield
 - Basketball Court(s)
 - Volleyball Court(s)
-

Four • *Description of Spatial Qualities*

• **Building 01: The Community Center**

This building will be the largest building upon the site. It will become the core of the community complex, all of the remaining buildings surrounding this focal point. It was requested that this building become a hurricane shelter in times when needed due to the occurrence of natural disasters within islands such as Hispaniola. It is uncertain at this point if this building will be a one-story or two-story height structure, but it will act as a multi-functional space for the entire complex. This building will house a theatre, eating hall, kitchen and bathrooms. The space will be designed to adapt to the necessary uses of the inhabitants within that space at a certain time. Enclosed community spaces within the Bateys, Barrios and downtown Barahona are of non-existence. The interaction between the interior and exterior spaces are of great importance as many Dominicans and Haitians enjoy communal time outside in hot climate of the Dominican Republic. This building will need to have a occupancy level for up to four hundred people.

Light is very important within this building in order to create a successful interior communal space. The

allowance of light into buildings currently in Barahona have very limited light, due to the small openings. Materiality of this building will mainly consist of CMU block and concrete. The integration of wood to form intricate detailing within large spaces would create a beautiful design aesthetic, but may not be an option due to the lack of wood available.

The views exceeding out from this building will look upon the entire site and surrounding buildings. It becomes a place to reflect upon the site as an entirety. This space allows for people to come together and discuss their daily events, eat, and celebrate special occasions. The word community defines the quality of this entire space.

• **Building 01: Bubble Diagram**

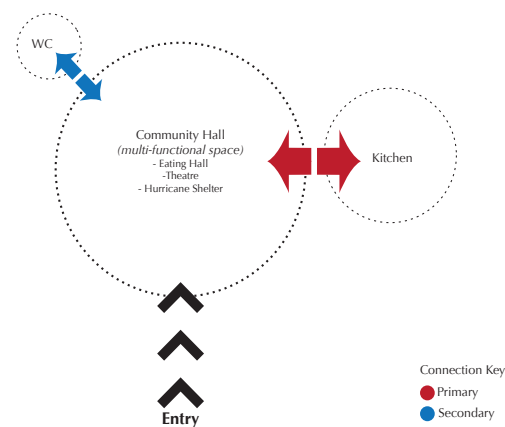


Fig. 4.16

• **Building 02: Administration Office**

This building will be of a smaller size as 'Children of the Nations' currently owns and operates from a larger office in the downtown area of Barahona. This administration office will primarily serve for the needs of the complex and the employees that will need to be working on site on a daily basis. The building will also contain a security office and outdoor area for security to sit. This building will be in close proximity to the entrance to the facility so that when guests enter they may do so through the office. Also within this building there needs to be a storage area for equipment and resources for the children and the organization. This building has the potential to become a two story building in order to allow for more offices in a smaller floor space.

Light is also important within this building as for the employees working within this space all day need to have views to the exterior. This will create a light, healthy environment for the long days within the office. Currently the light qualities of the office for COTN are very poor, due to small windows and no windows in some rooms. The construction of this building will be of CMU Block and concrete, as for the majority of the buildings. If the opportunity of a second floor was to be explored through

design, there is an opportunity to open the office views to look out over the entire complex. Balconies may be introduced to allow for visitors to have a preview of the complex before entering the site by ground. Overall this building will be a very functional building with smaller spaces within for offices.

• **Building 02: Bubble Diagram**

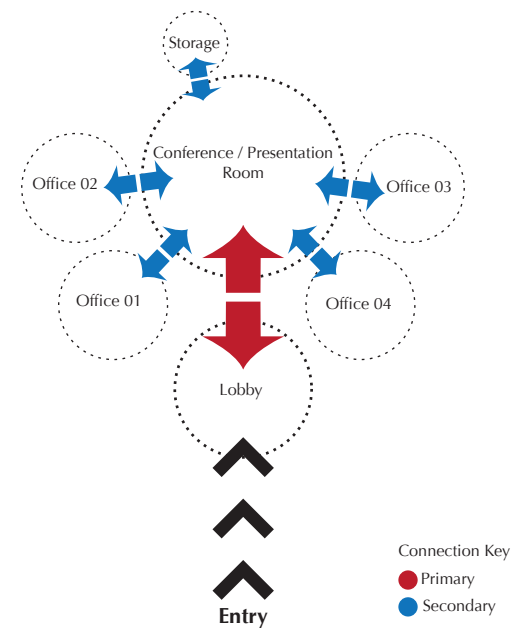


Fig. 4.17

• Building 03: The Housing “Pods”

These “Pods” will be numerous buildings for the housing of the venture teams, employees and children, if necessary. The reason behind breaking this program into numerous buildings is to break down the numbers of inhabitants in one single building. The complex will house approximately four hundred people and therefore it would not be successful to design a very large building for the entire number needed. The idea of each pod is to house two to four rooms, each room housing twelve children and one advisor. For the venture teams, each room will house thirteen people. Each room will have three showers and one plus toilets. Closets also will be integrated into the design of the interior of the rooms for interns, whom often stay within the country for eight weeks, and consultants whom stay much longer. The idea of having a communal outdoor devotion space is also a possibility for each of the pods. This area will be open to the pods inhabitants to interact, have meetings and daily devotions.

Light is extremely important within these rooms, as the current lighting within the living quarters at Casa Besteda is almost non-existent. Wind cannot pass through the building through openings that are also used for light.

The design of operable windows would be a successful design decision within the housing pods. Each of the Pods would be constructed from CMU Block and concrete. The vision of the outdoor devotion area would include the design of a wood structure, which would allow for the user to be outdoor but somewhat protected from the direct sunlight. Views into this courtyard area would create a beautiful private garden aspect to each of the rooms, allowing the user to feel at home within their temporary housing. For the children it would allow them to feel within an indoor home environment and their own outdoor private space.

• Building 03: Bubble Diagram

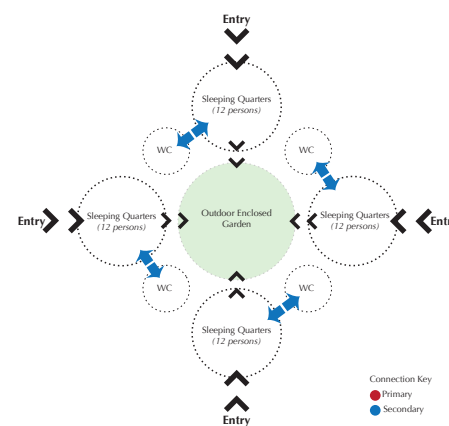


Fig. 4.18

• **Building 04: The Education “Pods”**

These “Pods” will be numerous small buildings constructed according to necessity of space for venture teams teaching in country. Currently when a venture team travels to Barahona and requests to teach classes to either adults or children, the space used is within the “Children of the Nations’ office in the downtown area. This sometimes causes the issues, especially when offering classes to the older children, of transportation to get here. These pods will be separate from the high school and will be specifically for the classes taught by venture teams. Through research it became clear that many of the children wanted to take part in art, music, and architecture classes. These classes have the opportunity to be offered within these spaces. These pods could be constructed on a need basis by COTN.

Through surveys with the children for the purpose of finding out the needs and wants of a school environment, they believed by having large views and windows created distraction within the classroom environment. Although this may be true, it is necessary to create large openings to allow in maximum daylight to reduce the need for artificial lighting within these small spaces. Openings to allow for natural breezes to flow through the space would also create

a cool and comfortable learning environment.

This building will also look at the modular design of shipping containers. The Pods upon the site could be constructed from a range of materials. The Pods could be designed to be an outdoor/indoor structure allowing the classes to expand to the site. The pods could also be constructed with the traditional CMU block and concrete. The idea of using the modular form of a shipping container as the dimensions for these pods will also allow for the integration of temporary education pods situated in the Bateys for short-term or long-term periods of time.

• **Building 04: Bubble Diagram**

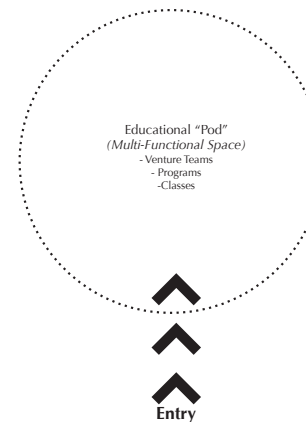


Fig. 4.19

• Building 05: The Library

This building will be of a small size. The need for a library within Barahona is great, especially for the children of the Bateys and Barrios. Upon the first site visit, this necessity for this programmatic function within the design of the community complex became apparent from talking with both employees and venture teams. The desire to create an environment in which a child can enter and choose a book to read is something that is not possible currently. Books are of a rarity even within the schools of the Bateys and Barrios. The production of a library will allow for 'Children of the Nations' to request the support of schools in the United States to provide books, which will ultimately push the educational opportunities to new levels.

Light is not of a necessity within this space because the more light in this space, the possibility of the books becoming damaged from the strong sunlight is a possibility. This small building could potential open out into an enclosed outdoor space, where the children could sign out their books and proceed to the courtyard to begin reading. Artificial light will be utilized within this building, which calls for the investigation for the use of solar panels in order to provide electricity without relying upon the city supply.

This building also has the opportunity to explore modular design as do the majority. Through this exploration there is the future possibility that libraries could be introduced into the Bateys, Barrios, and even the downtown area of Barahona. The main structure of the building would be entirely enclosed for the security and protection of the books. The construction of this building will be of CMU block and concrete.

• Building 05: Bubble Diagram

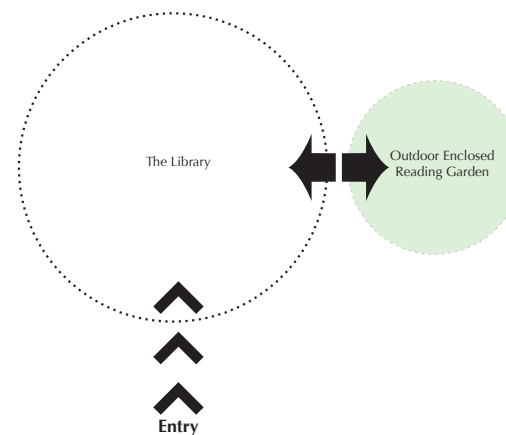


Fig. 4.20

• **Building 06: The Clinic**

This building would be a small modular design. The idea is that this building could easily be recreated within the Bateys and Barrios. These are areas that are far from the 'Children of the Nations' clinic and also local clinics in town. The daily care for children in the Bateys whom are very sick is not of a possibility currently. This modular clinic design that would be derived from the complex design would become of great importance in applying the construction within the Bateys and possible in the neighboring country Haiti. The lack of clinics is in high numbers, especially clinics in which are available for anyone to come for help. This building would be a one-story structure, and the space within would be flexible according to the daily needs of the clinic and where it is situated.

Light is not necessarily of great importance within the clinic as the main function of the space is to take care of the people. Certain rooms will not require light. The idea of implementing an small office for the volunteer medical personal to be stationed it an option within this small space. There will need to be a space in close proximity to the office within which patients can sign in and wait to be seen by a medical personal.

This building will begin to look closely into the modular design of shipping containers. It would be designed to be built from CMU block and concrete within the complex, and wherever else it is needed as a permanent structure. Designing this building in the modular form of a shipping container allows for the clinic to be designed, constructed, filled and shipped or transported to numerous sites. The clinic becomes a moveable modular building that can serve in places most in need at different times of the year. Other buildings will also be considered in this design exploration of shipping containers.

• **Building 05: Bubble Diagram**

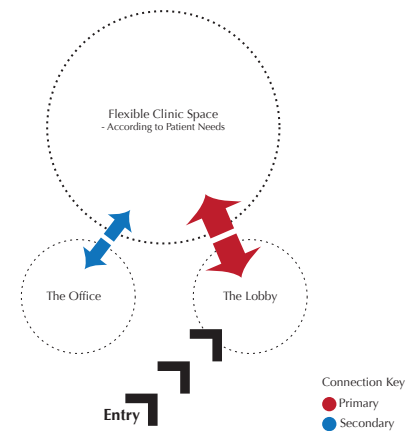


Fig. 4.21

• Building 07: Chapel

This building will be of a small to medium size structure. Through the discussions with the children, they suggested the church to house approximately thirty people. The number of people and size of church was decided upon by the children and staff of numerous program discussions. This church becomes very important to the children within this complex, as shown through the research of the needs and wants of the users. There are currently churches within the Bateys and Barrios, but are of a very small size for the entire community. With this complex becoming the new home for 'Children of the Nations' to operate from, the idea of a chapel also becomes relevant, to allow all users to use the church twenty-four hours, three-hundred and sixty-five days of every year. This church will be a communal space for the children, employees and venture teams to interact and share their religious beliefs, having a shared space to worship God.

Within the design of a church, light is very important. Light becomes symbolic of the light of God working within the hands and hearts of the users of the complex. The design of high ceilings, a longitudinal space, large windows and openings to allow breezes throughout, will allow for a space

to be created that will be used by high numbers of people even in the hottest of days. Heat is often an issue within the churches of Barahona, therefore the design for this building will investigate the design for a sustainable and comfortable environment. Views also become important looking out into the natural environment surrounding the buildings upon the site. The construction of this building will be of CMU block and concrete. There is also the possibility of allowing this design to be taken into the Bateys and Barrios for the construction of new and more churches, as COTN continues to share their love and faith within these communities.

• Building 06: Bubble Diagram

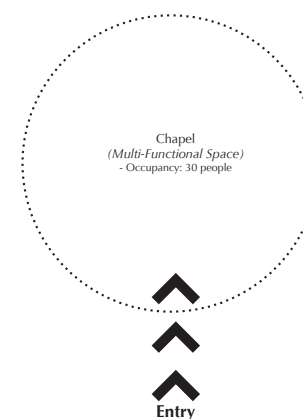


Fig. 4.22

• **Building 08: The High School**

This school will consist of numerous smaller longitudinal buildings that will be situated in close proximity to one another, ultimately creating outdoor “in between” spaces that can be utilized for communal areas. The design of this school within the complex is extremely important as it will be the first high school built by ‘Children of the Nations’ in Barahona. Currently all schools operated within the Bateys and Barrios by COTN are of elementary and middle school level. The interest of education beyond this level has been lost due to many children wanting to concentrate on their baseball career. This high school will allow for the ILB to offer daily classes to their current number of twenty-three players. Education is of importance to these players, and many other older children, and this high school will allow for this level of education to grow within COTN. The high school will be designed for numbers up to two hundred teenagers. These buildings will be one-story and each building will be one classroom housing thirty students.

Light will be carefully designed for these classrooms and the windows will allow for maximum views out over onto the baseball and other recreational fields. There is a need to minimize east to west facing windows, to use north

facing windows primarily for day lighting, and to use south facing windows for passive heating benefits. The colorful architecture of the Dominican Republic will be represented within the numerous buildings of the complex, and the high school being of a blue color. There is a need to maximize day lighting in these individual one-story structures. Also attached to the high school will be a computer room. The construction of these buildings will be of CMU block and concrete.

• **Building 08: Bubble Diagram**

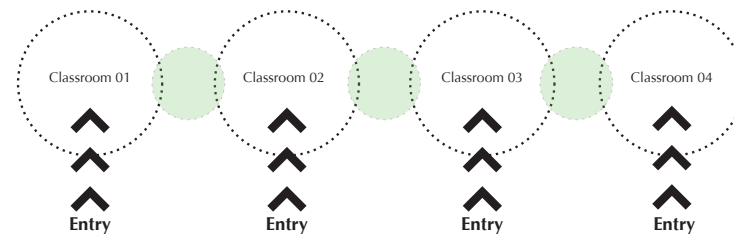


Fig. 4.23

• Building 09: ILB Clubhouse

'I Love Baseball' discussed the need for a clubhouse among other programmatic functions. The design intent is to pull all the programmatic functions for ILB together in one main building. This being the clubhouse. The clubhouse will be in direct proximity to the baseball field(s) (semi pro) and other outdoor facilities specifically for ILB and their program. The main baseball field will need two different locker houses for each of the teams playing on the field. These locker rooms will be located within the clubhouse on the first story level. The exploration of multiple stories for this building is an option due to the importance of an outdoor area specific for the viewing of the game by scouts. This outdoor area is very important and through design analysis, this space could be most successful upon the second story level of this main building. The ILB team expressed the great need for a gym and a therapy room(s). This is something they do not have anywhere in Barahona for young players currently. The idea of a museum for ILB and the history of baseball in the Dominican Republic was also discussed, but this will be a programmatic function related to a want not specifically a need. Outdoor spaces for the boys to communicate and meet with their families is also

very important to the outdoor function of this clubhouse.

Light is not necessarily important within the locker rooms within this building. A entry, communal space would become the space where light would become important and large windows would allow views out onto the baseball field(s). Functions for ILB and COTN could be held within this space. The construction of this building will also pertain to the traditional CMU block and concrete.

• Building 09: Bubble Diagram

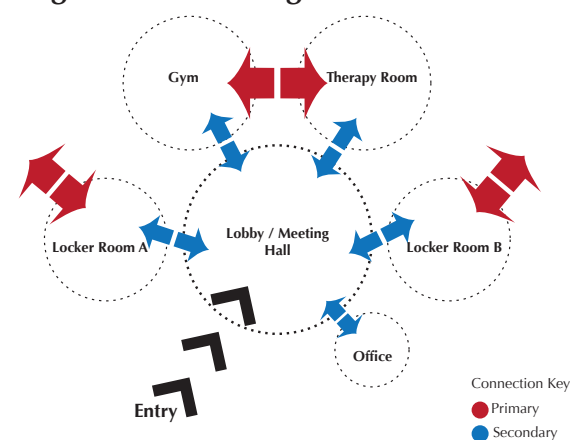
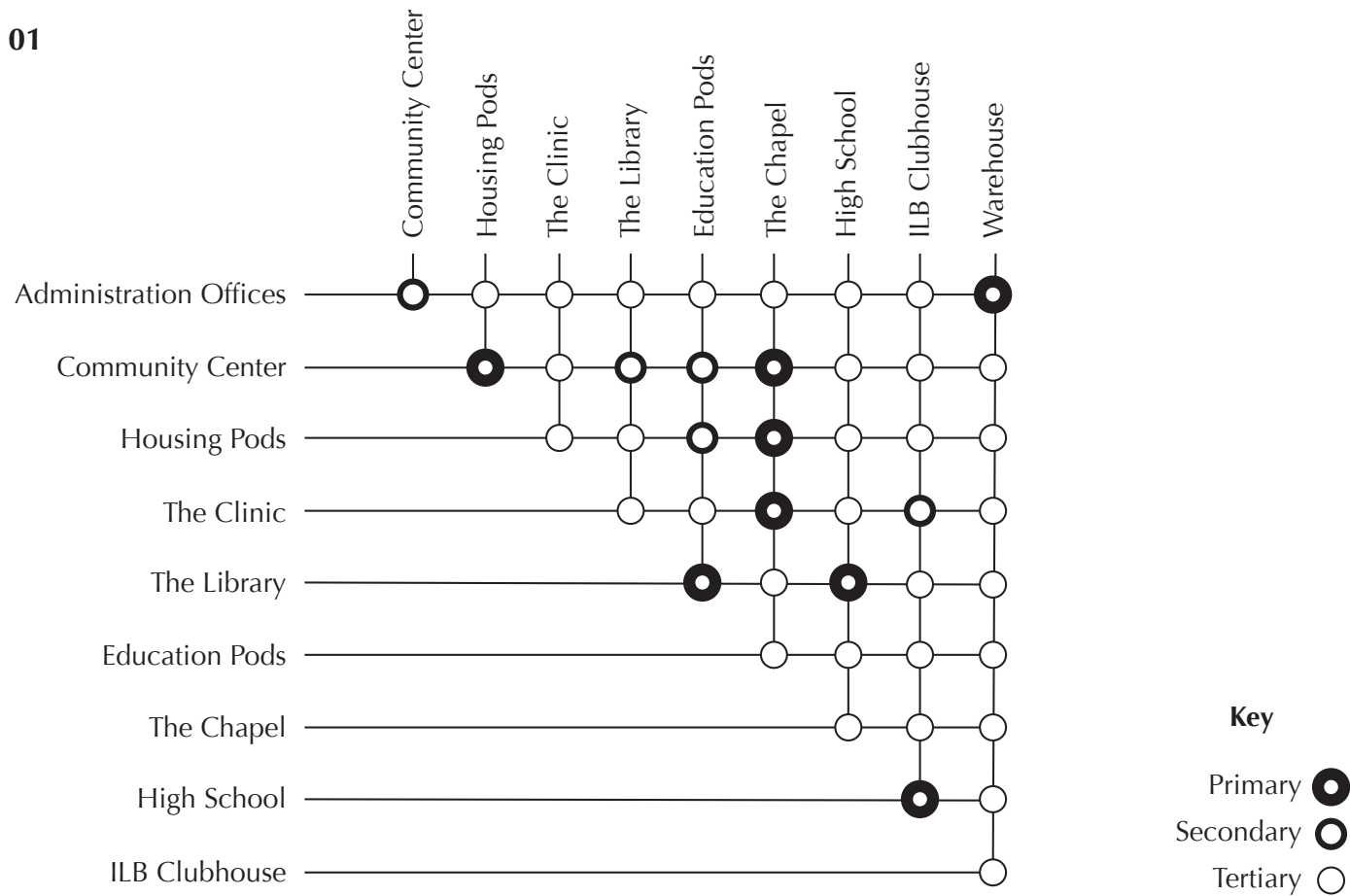


Fig. 4.24

Four • *Location and Proximity of the Buildings*

• **Matrix 01**



- **Bubble Diagram**

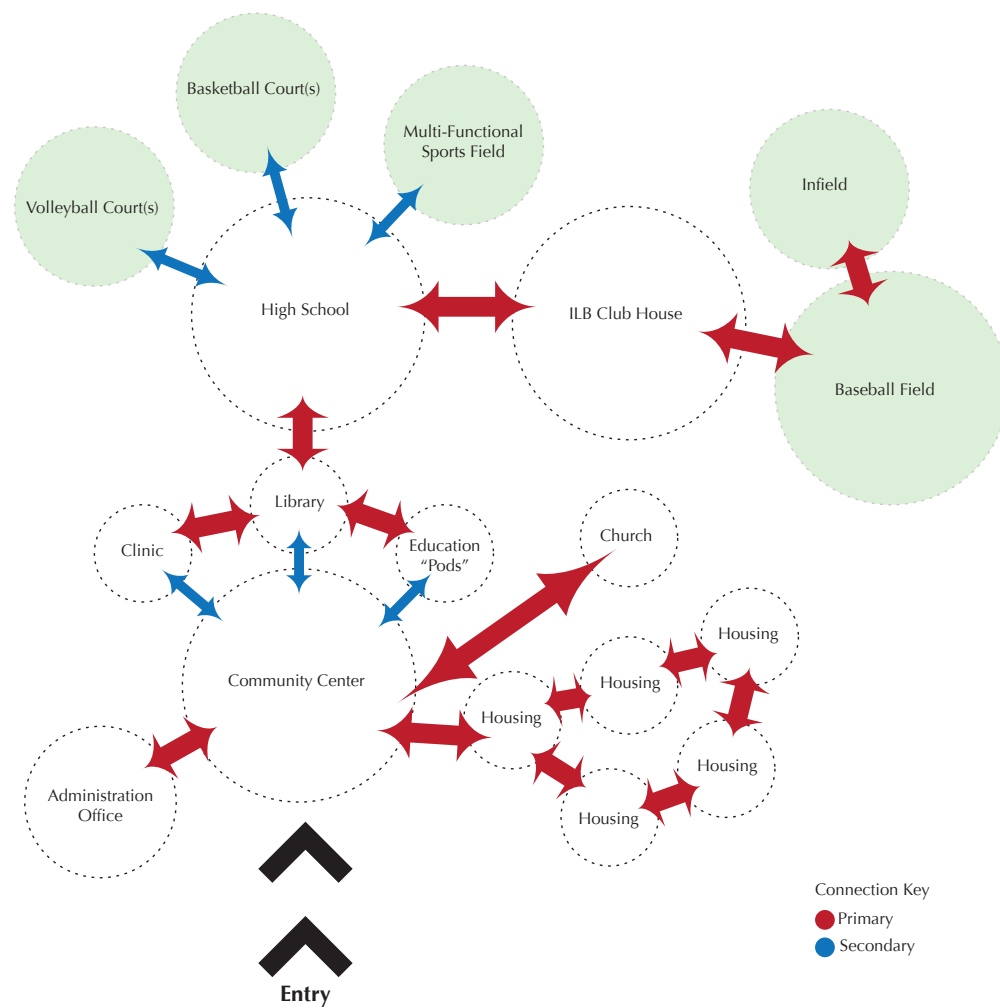


Fig. 4.25

Four • *Inspirational Case Studies*

• **Building 01: The Community Center**

This project was designed by Studio3-Institute for Experimental Architecture in Johannesburg, South Africa in 2006. Under the direction of Volker Giencke, the Institute for Experimental Architecture at the University of Innsbruck has been involved in various support projects for developing countries. For this low-tech and low-cost architecture project, a group of students developed and built a kindergarten for the Olivantsvlei Primary School in Johannesburg, South Africa in collaboration with local workers within a period of six weeks.¹ Although this design is for a kindergarten school, the double skin design and areas for the children to play upon the building create an exciting and interactive environment needed for the design of the community center.



Fig. 4.26



Fig. 4.27

Four • *Inspirational Case Studies*

• **Building 02: Administration Building**

This facility was designed for a remote area within Australia that could be used for both the community and tourists. There were a number of key considerations for this building, the tight budget, and the remoteness of the site. It had to be prefabricated and transportable to the site, and capable of being erected in a relatively short period of time by unskilled labor. The low-pitched roofs have large overhangs to provide solar shading and, with the glazing at clerestory level just below these roof, there is little solar gain. The building has a concrete floor to provide some thermal mass.² Although this building operates as a communal and tourist center, the design can be taken into consideration for the administration offices. The amount of light entering this building through clerestory height level windows will allow for the offices to be well-lit all day. There is the potential to utilize large slanted roofs also for solar paneling, which will provide all the electrical needs for the purposes of the office.



Fig. 4.28



Fig. 4.29

Four • *Inspirational Case Studies*

• **Building 03: The Housing “Pods”**

These 13 small camping cabins were designed by local architects’ Ubaldo Garcia Torrente in La Torerera, Spain. The form is unusual and uses modern materials to create dwellings that are both charming and unobtrusive. The cabins are steel-framed and sit upon a concrete platform, and the whole of the southern facade is an up-and-over door that opens to a balcony. The roof overhangs to provide some shade. Internally the layout is simple and basic. A double bunk, accessed by a ladder, projects over a small lavatory and kitchen as the north end of the cabin. Running down from these is a long shelf on which two children can sleep end to end. During the day this can provide seating with a space in front of it for eating simple meals.³ The design of these camping cabins can be looked at for inspiration for the housing “pods” within the complex. The use of the interior space is especially interesting and shows a small space that utilizes every inch of the building. The interaction between the user on the interior is also important to the housing “pods” as they will opening out onto shared green spaces.



Fig. 4.30



Fig. 4.31

Four • *Inspirational Case Studies*

- **Building 04: The Education “Pods”**

This old pig shed was created into a exhibition space. It is designed by a Stuttgart-based practice that is, however, intensely serious about its work, and not afraid to impose its ideas on its clients. So this architect decided to use this structure for the new building. Once all the non-original elements has been cleared away, only the shell remained, and the key decision was made to insert new interior elements that would be entirely separate structurally. The architect decided to ‘embrace’ even though the structure was only a pig shed. Whatever the inherent historic value of this building, the architect had demonstrated that preserving it has allowed the creation of space that blends new and old in a way that seems entirely appropriate to this rather urban use in a rural environment.⁴ The education “pods” can take great inspiration from this project as these pods need to become spaces in which the children may be within a natural environment that has evolved into a new space. Taking an average Batey and implementing these same design aspects could have a profound effect upon the ways an educational environment can be created.



Fig. 4.32



Fig. 4.33

Four • *Inspirational Case Studies*

• **Building 05: The Library**

The Vodka Ceremony Pavilion in Moscow, Russia was designed and built in 2003. The project by Russian artist Alexander Brodsky was commissioned as an installation for the ArtKlyazma 2003 Art Festival in Moscow. It turned out to be an architectural statement through its use of material and cultural messages. It is a simple spatial and material metaphor of the Russian way of life. The main materials used are window frames salvaged from a demolition site in the centre of Moscow. These were fixed onto a simple wooden frame and painted white. Timber is used in Russia for a universal medium of architecture and memory.⁵ This building is very unusual and could be used for the building needed to house the library. The library is an enclosed structure that will open out into a green space. The construction of this building is interesting in context to the cultural environment. The construction of the library could involve the community salvaging materials to create a similar building form, thus relating and symbolically representing their culture.



Fig. 4.34



Fig. 4.35

Four • *Inspirational Case Studies*

• **Building 06: The Clinic**

Shipping containers are uncompromising objects, but that has not prevented architects wanting to turn them into buildings. They have an industrial aesthetic, a quality of 'found' objects and they are of course delightfully modular. Typically it costs shippers \$900 to send back an empty container, so they are often thrown away and pile up like other debris. As a result, it is possible to buy a basic 6-metre (20 foot) container at prices starting at \$1200. This example, named the pushbutton house was designed by Adam Kalkin in the USA. The house has no openings in the exterior of the container, but opens out to reveal the interior.⁶ This example pertains greatly to the design of the clinic. It has been mentioned through meetings with 'Children of the Nations' that shipping container design is of great interest due to the modular design that can be moved and placed in areas, when and where needed. The clinic within the community complex will act as a reference to implement this type of modular design into areas such as the Bateys, Barrios and even Haiti, where at current times mobile clinic centers are very much needed.



Fig. 4.36



Fig. 4.37

Four • *Inspirational Case Studies*

• **Building 07: Chapel**

Designing a building for a religious purposes is one of the most demanding tasks of architecture today. The requirement that this architecture should be an ecumenical space with no obvious Christian symbolism can make it more difficult. This is a challenge that a Finnish student Vesa Oiva accomplished greatly with a building that uses modest materials to create a numinous space. Oiva came up with the concept of a three-pronged building that was triangular in section, reminiscent of the nave of a church. It was constructed from plywood and glue laminated timber, and has only one decorative element, which is a tree cut out of birch plywood.⁷ This chapel is an important example of a small, but successful Christian church that can be implemented in the design of the community complex. The church is very important to the children and the openness and flexibility of the space within this structure would allow for children and adults to come and go and the number of users within the space to be very flexible. The use of a large facade which allows light to enter can serve as an example to how light can effect an interior holy space.



Fig. 4.38

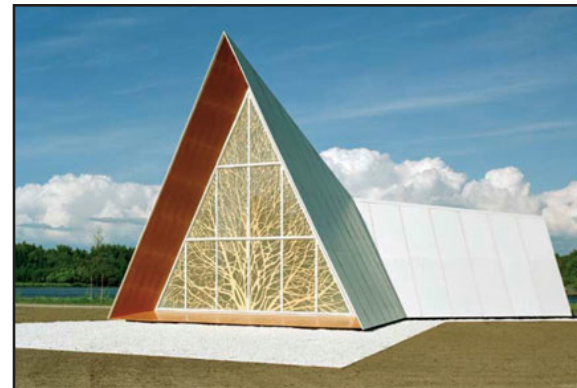


Fig. 4.39

Four • *Inspirational Case Studies*

• **Building 08: The High School**

The micro-compact home was developed and designed by British architect Richard Horden. It is designed to solve housing shortages in as agreeable and effective a way as possible. The intended use is by students and other birds of passage more concerned with having a roof over their heads than generous dimensions. Horden claims that the concept is based on the Japanese tea house. It measures 2.6 meters (8.5 feet) in each dimension. The materials used are aluminum, perspex and epoxy-coated OSB. The windows incorporate privacy blinds, and the lighting consists of LEED low-temperature technology, avoiding overheating. There is also the potential for placing photovoltaics panels on both the mast and the flat roof.⁸ This is an excellent example of a modular design that can be implemented into the design of the high school. The high school needs to become small individual buildings that may be replicated upon growth of the students. The users of the community complex are as this design states more concerned with a roof over their heads than generous dimensions in buildings such for educational purposes.



Fig. 4.40



Fig. 4.41

Four • *Inspirational Case Studies*

• **Building 09: ILB Clubhouse**

Upon the second in-country visit, the opportunity arose to visit the METS complex training facility in Boca Chica. This was an important case study in order to develop the inspiration and vision for the area of the community complex that will be designed for 'I Love Baseball'. The buildings within the METS complex were of a very high standard in comparison to the typical construction of the Dominican Republic. The use of outdoor sheltered communal areas was very nicely designed. By looking at the quality of these buildings it became clear that the correct construction methods are known but may cost a lot more money to be enforced. Within this complex they had three fields. One regular playing field, one regular field with artificial grass (to play in rain), and the last a smaller infield. It was important to see these and document the fields in order to have an understanding of how the fields are designed and what the ultimate long-term needs of 'I Love Baseball' are. This case study was also conducted with staff member of 'I Love Baseball'.



Fig. 4.42



Fig. 4.43



Fig. 4.44



Fig. 4.46



Fig. 4.45



Fig. 4.47

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Four • Summary Statement

Chapter Four begins discussing the conceptual premise for this thesis. The first conceptual phase was identified after the first site visit in July 2009. The second conceptual phase was developed by the identification of the exemplification of 'support' throughout the final analysis of research conducted in country. The conceptual premise clearly represents the professional and personal needs and wants of the thesis outcomes for both the people of Barahona and 'Children of the Nations'.

Developing the program for the community complex came through the five discussion meetings that were conducted over a five month period prior to January 2010. These discussions were conducted with numerous adults and children, each representing one of the three user groups. The three user groups are clearly identified as the employees, venture teams/interns, and the children.

Post-analysis of these five discussion groups it became clear that the programmatic functions of the overall complex design needed to be broken down into numerous buildings. This in turn turned into the development of nine buildings each containing a major programmatic function for the complex. Each building was then described and

detailed to a certain extent. The square footage for these buildings are currently unknown but have been identified as either a small, medium or large building. These sizes will be developed further through analysis. Looking to the code requirements of spaces in the United States, will act as a comparison to the existing square footages of buildings in Barahona, which will ultimately create a modular form that can be used to derive the nine buildings within the complex. The use of case studies will allow for the inspiration and vision for these buildings to become evident and for the spaces to evolve.

The relationships between these nine buildings have been analyzed according to the matrix which determines their location and proximity to one another based on one to three scale, one being the most important. This diagram will be taken fourth into chapter five in order to help develop the spaces for the community complex.



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Four • *Endnotes*

¹ Klanten, Robert, and Lukas Feireiss Die Gestalten Verlag. Space Craft fleeting architecture and hideouts. Berlin: Die Gestalten Verlag, 2007. Print.

² Slavid, Ruth. Micro: Very Small Buildings. London: Laurence King Publishers, 2009. Print.

³ Ibid.

⁴ Ibid.

⁵ Ibid.

⁶ Ibid.

⁷ Ibid.

⁸ Ibid.
