Redefining All-Inclusive: Sustainable Tourism in the Dominican Republic

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TABLE OF CONTENTS

page

LIST OF FIGURES

page

LIST OF FIGURES

LIST OF FIGURES

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To my parents, for their support and encouragement. This thesis would not existing if I did not have the pleasure of spending time at home, in the Dominican Republic.

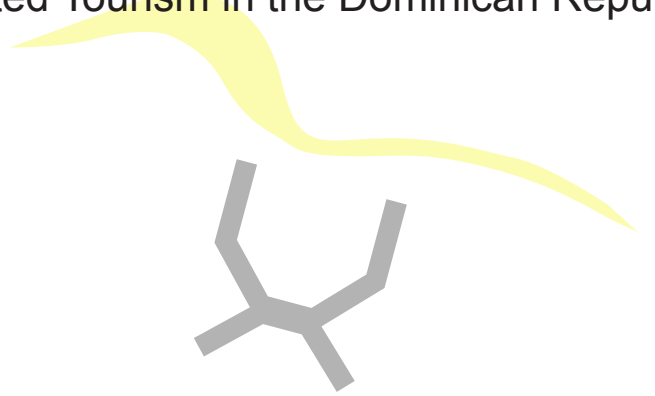
To my friends and family, for cheering me on.

To my roommate, Grace Ericson, for taking care of my home life so I could live in studio.

To my advisors, Kathryn Merlino and Kate Simonen, for their guidance and knowledge.

Redefining *All-Inclusive:*

Integrated Tourism in the Dominican Republic



CHAPTER 1: INTRODUCTION

Take nothing but Pictures, leave nothing but footprints, and waste nothing but time.

– Unknown

REDEFINING ALL-INCLUSIVE

FIGURE 1: Map of existing building, Dominican Republic. The existing resort building sits just off the northern coast of Sosúa, Dominican Republic.

FIGURE 2: Diagrammatic Map of Hispaniola

Redefining All-Inclusive is a proposal for sustainable tourism through the adaptive reuse of large scale [all-inclusive] resort building typologies, to create an integrated environment for tourists and locals to interact. The impacts of building demolition are extremely harmful to the environment and do not support sustainability. Due to the fact that the resort building typology is very specific (narrow floor plates and a large amount of interior partitions) it poses a greater challenge for reuse than other large building typologies. With the world tourism industry expected to reach 1.5 billion travelers by 2020[1], the reuse of the resort typology is becoming more prevalent.

The Dominican Republic has become the number one tourist destination in the Caribbean region in the past 40 years. Once an unknown destination, the country has seen a 220% increase in the world tourism market since the 1970s. This increase has led to the construction of over 60,000 hotel rooms, while the market continues to grow and demand new building stock.

As an answer to the booming tourist population in the Dominican Republic the all-inclusive resort typology expanded. The all-inclusive resort is typically found in tropical climates, particularly in the Caribbean. The all-inclusive resort is defined as one that, in addition to providing lodging, includes a wide range of amenities such as unlimited food and drink, sports activities and daily entertainment, all for a set price. However, this model often excludes the experience of the local people and culture and displaces them in their own country.[2]

This thesis proposes reusing an existing all-inclusive resort structure in a manner that redefines the meaning of all-inclusive to imply something that is all-encompassing of everyone, in order to generate an interface between a transient tourist population and locals. The creation of a center for Agritourism will provide a place for interaction by integrating a vacation resort with a local agriculture trade school and interpretive center.

AN UNFINISHED MEGA-RESORT

Along the northern coast of the Dominican Republic, a 240,000 square foot, 500 room, all-inclusive model resort sits partially finished and vacant, having never been occupied. Built in 1993 of the modernist style and constructed of over 500,000 square feet of concrete, the building raises the question of what to do with the underutilized building stock – reuse or demolish?

The selected building sits in between Cabarete and Sosúa, coastal towns in the Puerto Plata district of the Dominican Republic. The area has been known as a tourism location since the 1980s and has seen extensive growth as a result. Built in 1993, the structure has been decaying on the site for 20 years. The project was originally funded by selling some of the units as private shares. Nevertheless, the developer went bankrupt in the process and the building was never finished; the property has remained vacant since. As a result, the northwest wing of the building was nearly finished with plumbing and tile installed while the northeast wing was barely constructed and is now a ruin of cmu blocks.

FIGURE 3: Panorama of south elevation

Five years ago a Canadian developer attempted to buy all the shares and pay off the debt of the property to obtain full ownership. The developer was discovered to be laundering money from the Royal Canadian Monte Pension fund and once again progress was halted. The abandoned building remains as a reminder of the tourism boom that occurred decades ago. It also is a display of the insensitivity tourism can have on a local culture and environment. Most potential buyers may be interested in the valuable beach front property, but deterred by the cost of demolishing the incredibly large structure.

FIGURE 4: Panorama of north elevation


Gulf of Mexico
Bahamas
Atlantic Ocean
Cuba
Haiti
Dominican Republic
Puerto Rico
Lesser Antilles
Jamaica
Greater Antilles
Caribbean Sea

CHAPTER 2: PROBLEM DESCRIPTION [tourism]

A lot of tourists have a consumer attitude -- what can I get, instead of what can I learn. We have to put aside our own cultural biases and learn as much as possible from the people we visit. I find that if you stay long enough, learn the language, you get a sense of who locals are as people.

- Clay Hubbs[3]

This thesis originated in the selection of a vacant building to be reused for sustainable tourism. The selected site and building are products of the tourism industry that has been developed by the Dominican government over the past 40 years. Research on the history of tourism in the Caribbean region was informative about the industry's effect on the land, people, and economy, and gave insight on initial programmatic ideas.

TOURISM OVERVIEW

The United Nations designated 1967 to be the International Tourism Year, as it was viewed to be a solution to third world nations' economic problems.[4] Since that time tourism has become a global industry that accounts for more than one-third of the global trade services and it is projected that tourist arrivals will reach 1.5 billion by 2020.[5]

Tourism is a generator of foreign exchange and integrates countries into the globalized economy. The industry employs a large number of people, contributing to the alleviation of poverty. It also promotes sustainable development and in certain locations relies on the natural assets of sand and sun, eliminating the need for industrial growth. Additionally, tourism leads to better infrastructure since most resorts invest in improving the areas beyond their property limits.

FIGURE 5: Map of the Caribbean
The Dominican Republic occupies the eastern two-thirds of the island of Hispaniola.

Overall the industry stimulates social and economic development and promotes positive change.[6] In comparison, tourism can be viewed as a “monocrop controlled by foreigners and a few elites” that distorts cultural patterns and leads to social displacement.[7] Although the industry generates much needed revenue for the government, there is still significant economic leakage in the industry (economic leakage refers to when foreign currency earned through tourism does not remain within the host country and also refers to the necessity to import goods, foods, and beverages to maintain the tourist industry).[8] Other negative impacts of tourism that have been largely sited are environmental degradation, depletion of local energy supplies, pollution and social disorganization. However, if tourism is implemented sustainably it can act as a means to promote and improve on these issues rather than worsen them.

THE CARIBBEAN

The Caribbean is known as a “pleasure periphery” for tourists, highly traveled to by Americans and Europeans for leisure activities. It was labeled the “most tourism-oriented region” in the world by the International Labor Organization. The industry is an indispensable source of foreign exchange for the region, as a fifth of its GDP is produced for tourist. Since 1985, the region has seen an annual growth of 6.2% in tourist arrivals and has added over 62,000 hotel rooms to accommodate the growth. The largest destinations -Cuba, Puerto Rico and Jamaica- have been developing their tourism infrastructure since the early twentieth century. The Dominican Republic

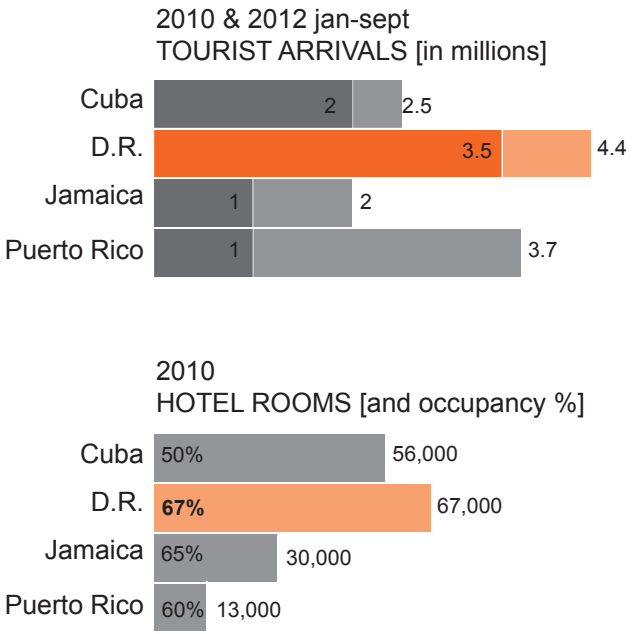


FIGURE 6: Caribbean Tourists Statistics

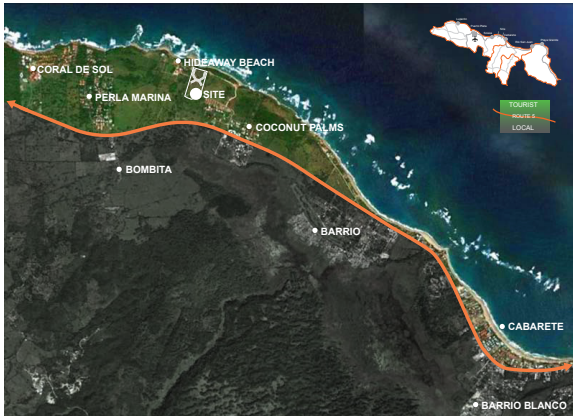
Tourists arrivals and hotel room numbers for the top four Caribbean destinations.

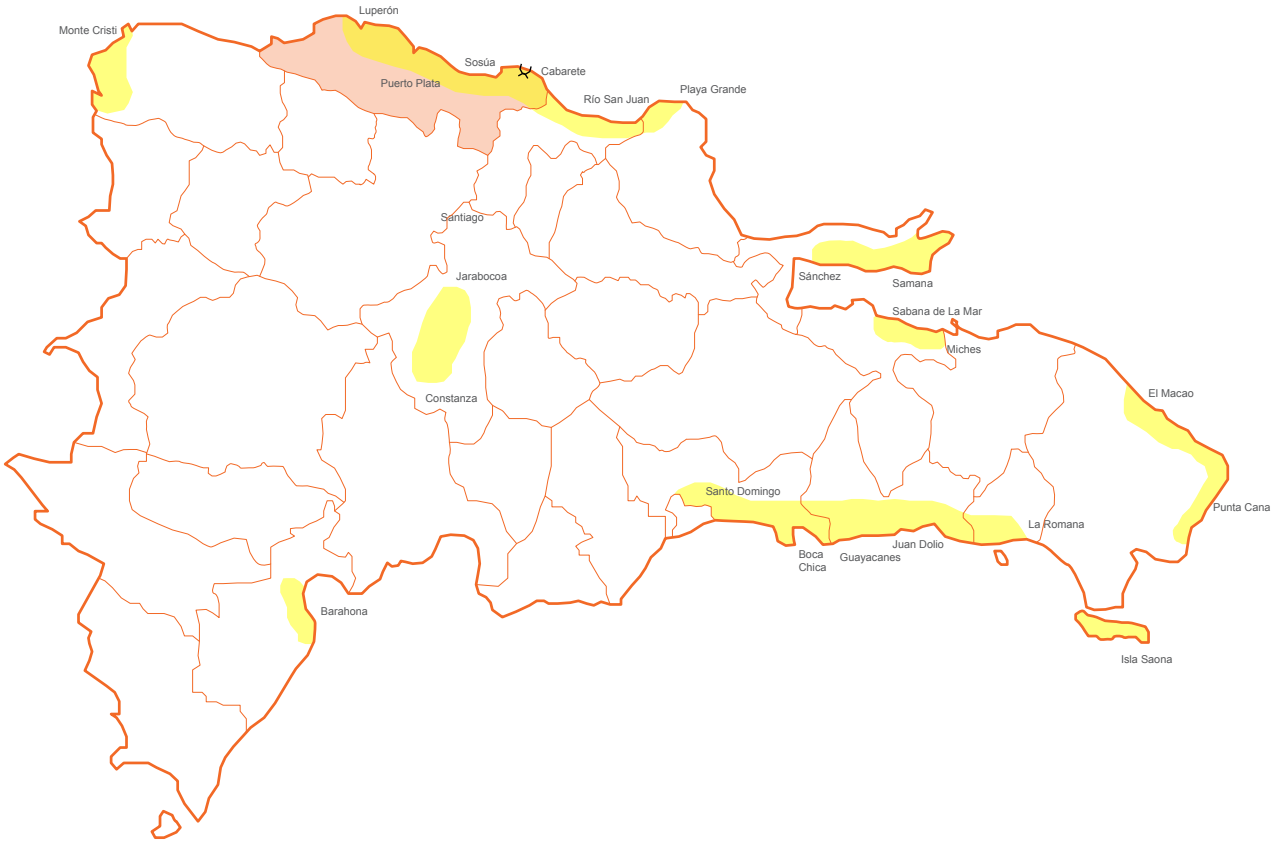
got a late start in the tourism boom due to political issues under the dictatorship of Trujillo from 1930 -1961. However, the D.R. accounted for nearly 30% of the increase in accommodations post-1970 and has become the region's largest destination in terms of room capacity.[9]

Tourism continued to grow at an astounding rate from 1990-2005. The world tourism market grew 83.6% over 15 years. While the Caribbean area only grew at 65.8%, the Dominican Republic's growth totaled 222.4%.[10] Presently the D.R. has over 60,000 hotel rooms and maintains a 67% occupancy rate. The country has already seen over 3.5 million tourist arrivals in 2012; over 1.5 million more arrivals than Cuba, the Caribbean's second largest competitor.[11]

THE DOMINICAN REPUBLIC

In the 1970s the country shifted its economy from manufacturing and sugarcane to tourism and free-trade zones. [12] Prior to the shift, the infrastructure to support tourism was minimal and the country had only 1,134 hotel rooms to accommodate tourists. The Monetary Board of the Central Bank of the Dominican Republic created the Development of Tourism Infrastructure department (INFRATUR) in 1971. The department objectives were to promote tourism, develop the entire industry, and induce the needed investment. Private investment was originally sought from domestic investors but soon foreign investment was greatly encouraged because it was seen as having a higher quality of services and new market sources.





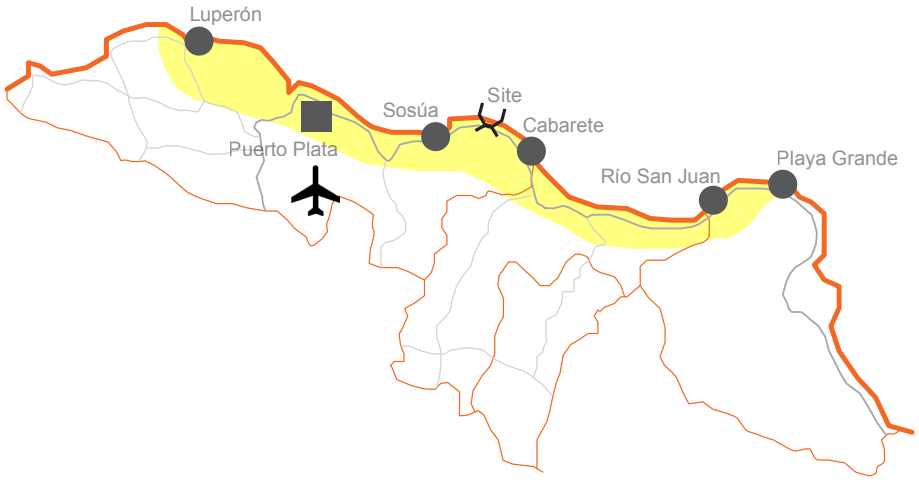
The government began the planning of tourism development by designating nine principal regions based on feasibility studies. The regions were ranked in order of importance with the North Coast being the second most important development zone. In order to develop the zones land was expropriated from the government as well as private land owners, who had no choice but to accept the offered compensation. Puerto Plata, on the Costa Ambar, was the first tourist zone to be developed in the Dominican Republic and started out with a strict spatial limitation of twelve miles between the city of Puerto Plata and Sosúa. Today, the zone expands across 75 miles of coastline from Luperon to Playa Grande. Within the province tourism is more focused in the districts of Cabarete, Luperon, and Puerto Plata.[13]

TABLE 1. GROWTH IN HOTEL ROOM CAPACITY, DOMINICAN REPUBLIC, 1970-1990

	1	2	3	4	5
Pre-1970	358	639	137	1,134	—
1970-1974	507	1,577	1,175	3,259	287
1975-1979	812	2,663	1,604	5,079	155
1980-1984	965	2,839	3,329	7,133	140
1985-1990	1,163	3,498	16,849	21,510	302

1) Inland Areas
2) Santo Domingo
3) Beach Areas
4) Total No. of Rooms
5) % Increase

Sources: Secretary of Tourism, 19 June 1991; *Santo Domingo News*, 1988.



(from left to right)

FIGURE 7: Regional Land Appropriation Map
Route 5, highlighted in orange, separates the tourist designated land from the rest of the island.

FIGURE 8: Site Land Appropriation Map
Route 5, highlighted in orange, separates the tourist designated land from the rest of the island.

FIGURE 9: Map of the Dominican Republic
There are nine designated tourism zones in the D.R., one of which crosses through the Puerto Plata province.

FIGURE 10: Hotel Capacity Chart
In beach areas, hotels grew from 137 before 1970 to over 16,000 in 1990.

FIGURE 11: Map of Puerto Plata
The tourist zone spans from Luperon to Playa Grande.

As the province of Puerto Plata was the first zone to be developed it is one of the oldest and more developed tourism areas of the country.[14] By the mid 1990s the area had 133 hotels that contained 10,515 rooms, thirty-two of which had occupancy of at least 100 rooms. Hotels of over 100 rooms were not common in the D.R. prior to the 1980s building boom. Large construction became more popular due to material shortages, high financing costs, and limited funds for loans.[15] At present 95% of the resorts in the D.R. operate under the all-inclusive model, which have a reputation for being “gilded ghettos” or segregated spaces that exclude Dominicans while providing luxury accommodations for tourists.[16] Furthermore, the larger hotels and tourism centers have a tendency to leak foreign exchange and often operate as all-inclusive establishments that exclude Dominicans.[17] They operate as a small town providing foreigners with electricity, sewage, running water, and paved roads; basic infrastructure that most Dominicans do not have.[18]

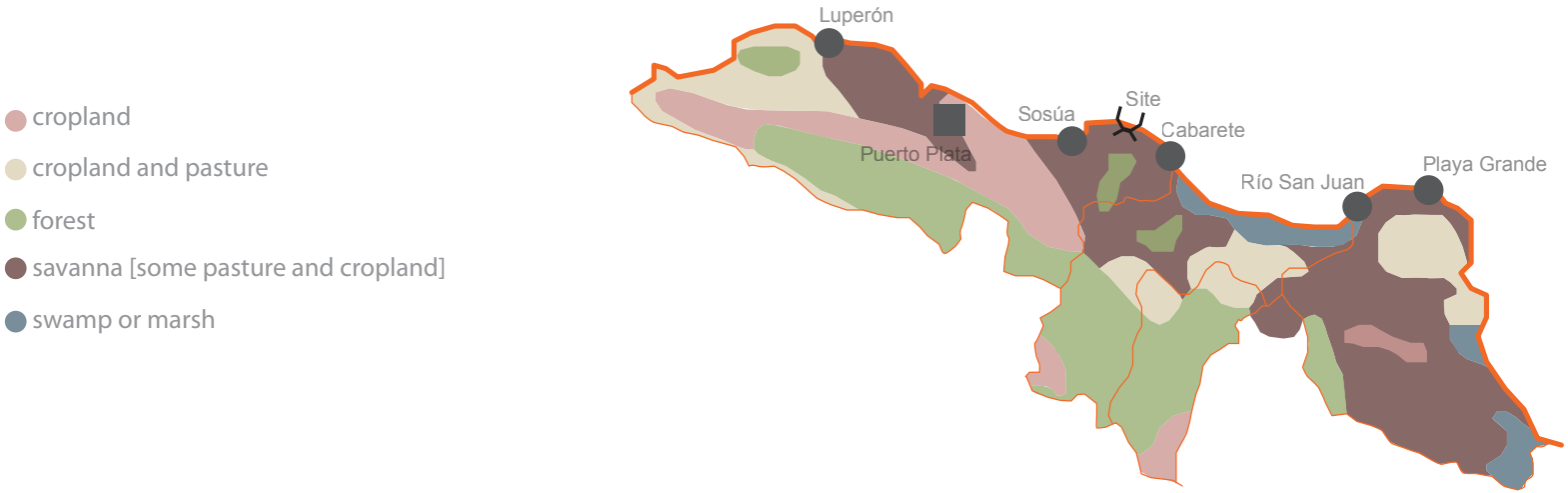
Presently, the gross domestic product of the Dominican Republic is US $54.4 billion and the growth rate is at 4.5% (from 2011) and the per capita nominal GDP is US $5,780. Today, agriculture makes up 7.3% of the GDP while services, including tourism, represent 64.7%. The

other large player is manufacturing which makes up 21.3% of the GDP. [19] In comparison, 60.2% of the work force is devoted to services, 15.5% to manufacturing, 11.5% to construction, 11.3% to agriculture and 1.5% to mining. Small-scale farmers barely earn a living from their crop production alone and often supplement their incomes selling handicrafts.[20]

TOURISM AND AGRICULTURE

Due to rapid growth, the tourism industry surpassed agriculture as the economic mainstay in the Dominican Republic. However, the country has been unable to decrease the amount of economic leakage, mainly the need to import food for industry. The amount of imported goods needed to sustain the tourism industry is astounding; in 2008 only 25% of retail profits remained in the host country.[21]

This disconnect is in part due to local suppliers' limited access to the tourism market. A few of the reasons there is no link between tourism and agriculture are that imported food has become cheaper than local food, large hotels demand superior quality food than local farms can provide, local farmers cannot increase their food production to meet demands and they lack the knowledge of the types and quantities of food desired by hotels. Additionally, the demand of tourist centers is typically too large for small local farmers and business to support therefore internal and foreign outsourcing occurs.[22]



The industry has the potential to positively influence other sectors of the economy such as agriculture. However, there currently is no plan to connect local manufacturing and agriculture with regional tourist establishments. An effort needs to be made by the government to integrate tourism into the countries overall environmental, economic and social framework. [23]

CONCLUSIONS

The Dominican Republic has successfully built its tourism industry within the time frame of 40 years with positive and negative effects to the countriy's well-being. Although the extension of hotel infrastructure has led to better overall infrastructure for the area, the all-inclusive hotel model has been promoted and new construction leaves many older structures abandoned. Fiscally, the much needed revenue generated from tourism comes at the cost of high economic leakage. Additionally, the disconnect between tourism and agriculture supports economic leakage and weakens the local agriculture industry. There is an opportunity on the selected site to integrate agriculture and tourism, eliminating economic leakage and educating farmers about the needs of hotels by way of a direct relationship.

FIGURE 12: Dominican All-inclusive Resorts

FIGURE 13: Dominican All-inclusive Resort

FIGURE 14: Dominican All-inclusive Resort

FIGURE 15: Map of Land Use in Puerto Plata
The site is located in a savanna area used for pasture and cropland.

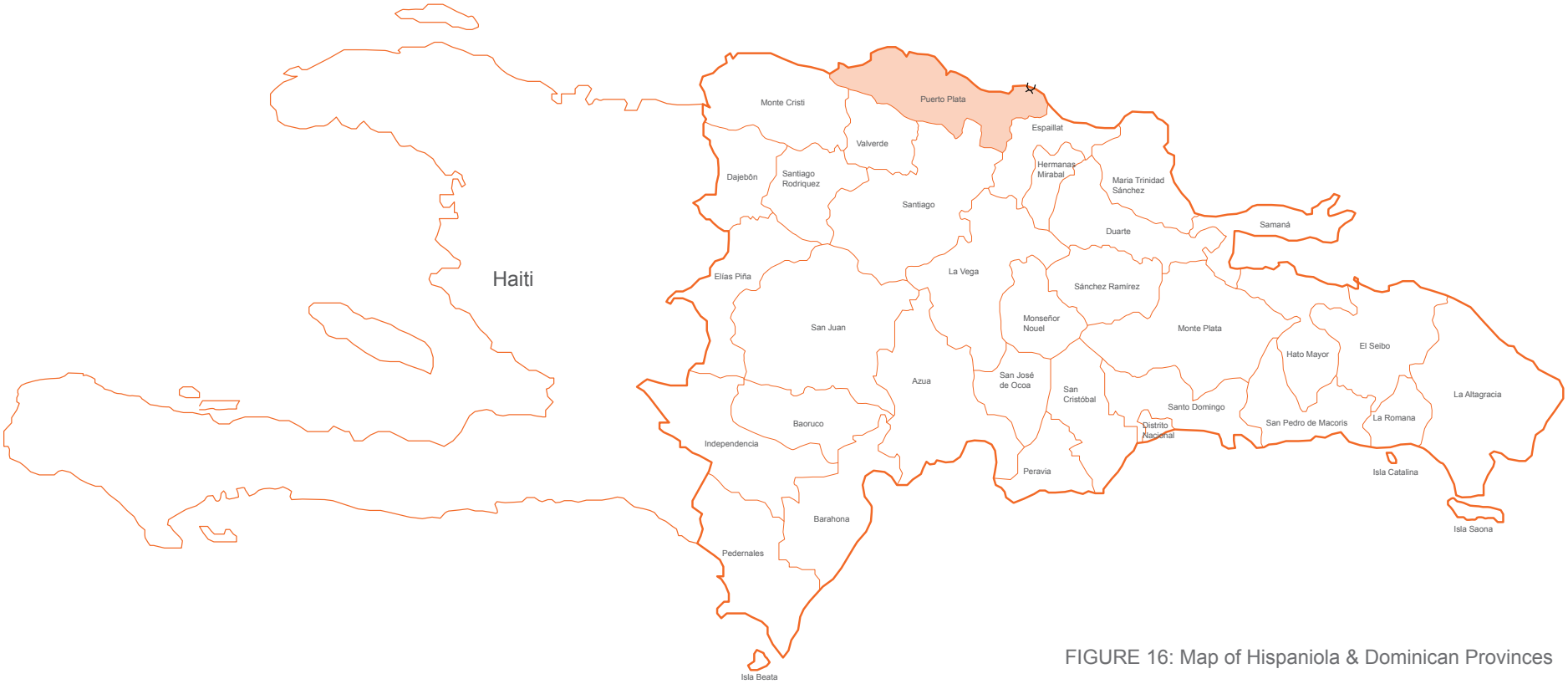


FIGURE 16: Map of Hispaniola & Dominican Provinces

CHAPTER 3: SITE DESCRIPTION [the Dominican Republic]

In addition to specific information about tourism, research on the general history, physical features, climate and economy of the Dominican Republic was informative of overarching programmatic and architectural design decisions.

DOMINICAN REPUBLIC OVERVIEW

Located in the heart of the Caribbean, the Dominican Republic consumes the eastern two-thirds of the island of Hispaniola, sharing its border with Haiti. The island of Hispaniola is the second largest island in the Caribbean, second to Cuba, at 18,704 square miles.[24] The island spans 178 miles from north to south and 242 miles from east to west and has over 1000 miles of coastal land, 250 miles of which are quality beaches. The Atlantic Ocean and Caribbean Sea surround the island to the north and south, respectively.[25]

The country is divided into 31 provinces; the capital city of Santo Domingo has its own designated province, Distrito Nacional. Other main hubs are Santiago, Puerto Plata, La Romana, and La Altagracia. The D.R. has the third largest population, 10.09 million, behind Cuba and Haiti. The country's largest foreign population is Haitians, many of whom have immigrated illegally and have found employment in lower paying job sector. Less than half of Dominicans live in rural areas.[26]

The education system in the country is functional but needs improvement. There are six years of compulsory education; primary schooling and then a two-year intermediate school (middle

school). Relatively few lower class students continue on to the four-year secondary course because it is seen as only useful for those preparing for university. Vocational education, particularly in the field of agriculture, is available but only reaches a small percentage of the population. While public education is free, there is a 70% attendance rate and only 84.7% of the population is literate.[27]

FIGURE 17: Elementary education in the D.R.

The Dominican Republic's climate is referred to as the "endless summer" boasts a mild maritime tropical climate; the annual mean temperature is 77 degrees F. Rainfall varies from 30 -100 inches in various parts of the island; the northwest regions are the driest. There is a potential for hurricanes in the late summer and early fall, however the Northwest coast is more protected from such natural disasters.[28]

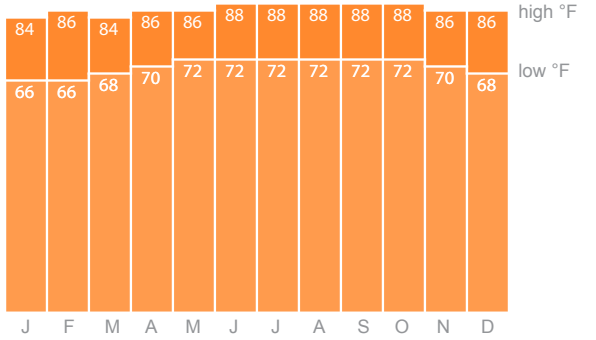


FIGURE 18: Mean Temperatures [F]

Electricity is a huge concern in the D.R. The country has the third highest rate of electricity distribution loss in the world. For the past two years the government has been increasing the electricity rates by about 10%, citing rise in oil prices, however a 40% distribution loss due to low collection rates, theft, infrastructure problems and corruption is the main concern. Additionally, 85% of Dominicans receive subsidized electricity, costing the government an incredible U.S. $1 billion per year. [29] The increase of the tourism industry has had a huge effect on demand as well. While much of the country is chaotic and still lacks plumbing, electricity, and paved roads, areas surrounding resorts have been repaired and have full access to electricity and water. [30]

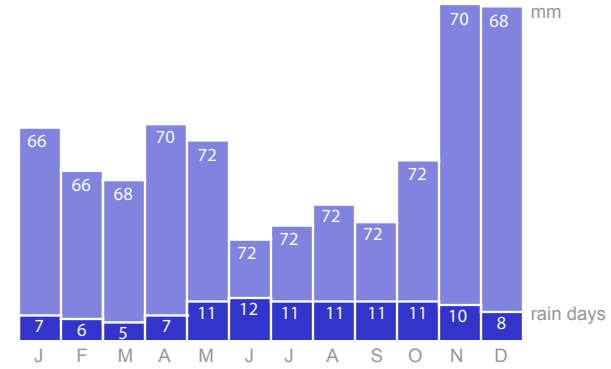


FIGURE 19: Mean Rainfall [mm]

CONCLUSIONS

Now that there is an understanding of the need for a connection between tourism and agriculture, other country wide issues, such as the lack of continuing education opportunities is important to understand. Incorporating a trade school into the agriculture component of the program aligns with the present day needs of the entire country, and the model could be applied throughout the provinces. Also, architecture in the Dominican Republic has the opportunity to address a lot of the environmental and economic issues the country faces. Buildings can take advantage of the favorable climate and harness natural resources, such as solar energy and clean water, to address issues such as the electricity crisis.

REGIONAL CONTEXT

For one to understand how the site connects to its surrounding context on a larger scale, a description of the province and town that the site is situated in is necessary. Research on the demographics, architectural character, and tourism features of the region was informative of the program and the conceptual site design.

PROVINCE OF PUERTO PLATA

The province of Puerto Plata is located on the northern coast of the D.R. near the western border with Haiti, in the Cordillera Septentrional region. Covering an area of 715 square miles, it has a population of 490,733. The province is subdivided into nine municipalities, including San Felipe

de Puerto Plata, the capital, and Sosúa, which includes Cabarete and Sabaneta de Yasica. Sosúa is located on the coast, near the eastern border of the province. The district municipal of Sosúa has a population of 69,885; 72% of which is rural.

The Puerto Plata area has become an increasing popular coastal tourism destination since the late 1990s, mainly for travelers interested in fine beaches and water sports. Over the past decade the area has been adding adventure features among its natural resources such as zip lines, mountain cable cars, and whale watching tours. Beyond the gimmicks that attract tourists, the Puerto Plata province has a lot of culture to offer: from the historic Spanish fortress, Fortaleza San Felipe, to sandstone sculptures and Dominican Amber (the area is known as the Amber Coast).

TOWNS OF SOSÚA AND CABARETE

The population of the municipal districts of Sosúa and Cabarete are 70% rural. The urban populations, consisting of around 2,000 people, are sprawled out along the coast. Sosúa is the larger of the two towns, and the majority of its residents are Dominicans. The town fills the area between the country road and the coast, and contains most of the areas offices, shops, and domestic residences. Alternatively, Cabarete is widely known for its kite surfing beaches, and as a result has attracted many foreigners to take up residency there.

The tourism architectural character of the area reflects the typical Caribbean style. Most buildings are constructed out of concrete with clay tile shingled roofs and painted white or a bright, tropical color. Smaller structures and canopies are often built out of wood with thatch roofs. Many buildings are open air or built with single-pane operable windows. In juxtaposition to the bright and colorful landscape of the tourism-related buildings are the homes of the lower-class locals in their neighborhood developments. Concrete is still the preferred building material, however these houses are often much smaller, unpainted, and have rusting corrugated metal roofs. Additionally, many unfinished and decaying concrete structures blight the landscape. These structures often sit adjacent to new construction projects. With so much land available in the area the structures are neither torn down nor reused; they are left there to deteriorate.

The site of the abandoned resort structure is located in a rural area between the towns of Cabarete and Sosúa, on coastal land designated for tourism. With the exception of three surf school establishments, the only buildings in proximity to the site are tourist-oriented developments: a resort, all-inclusive complex, housing development and golf course. A new housing development is emerging immediately south of the property, on the adjacent lot. Although the land is designed for tourism, there are earthen structures scattered across the land that are inhabited by Dominicans in poverty. Additionally, much of the neighboring property is beach front, or land used for cattle grazing or farming.


ROUTE 5
SOSUA
CABARETE

EXISTING CONDITIONS

Given that this thesis proposes the reuse of an existing building it is important to describe -- through photos, drawings, and text -- the site and building in great detail. This aids the author and the reader, who has not experienced the building themselves, in completely understanding the main features.

THE SITE

The unfinished concrete structure is located on the northern side of the rectangular lot, along the coastline. With large single family homes to the west and vacant fields to the east, the building is out of scale in its immediate environment. The site is 16.5 acres and measures 600 by 1200 feet, 1000 feet north of the island road. The site is oriented 15 degrees off of due north with its width running east-west. It is bound to the north by the Atlantic Ocean, just 200 feet from the coast; a coastal tree zone separates the lot from the beach. Along the beach, under the tree canopy, three surf schools run by Dominicans have illegally squatted and constructed temporary structures to house their growing business. The beach suffers from extensive shoreline erosion that has created cliff edges up to ten feet at the line between the tree canopy and sand. To the west is an expatriate housing development with eight private properties, a 15-unit apartment building, shared pool and restaurant. The two properties are separated by a heavy line of trees and shrubbery, and a gravel access road. To the east a vacant property is being used for cattle grazing. The south is framed by a paved connector road, on the other side of which is a new housing development.

FIGURE 20: Site Land Appropriation Map
The surrounding resort buildings are designed as private homes and small apartment buildings.

tourist and local means of accessing the site

separate beach access to surf schools

existing detached structures

FIGURE 21: Site Analysis Series

foundation remnants

building defined exterior spaces

existing building footprint highlight the wing in ruins

FIGURE 22: Thatch roof surf school

FIGURE 23: Shoreline Erosion

The site is primarily surrounded by grass fields with a few scattered palm trees and other tropical flora. The first 600 feet of the site is grass with a gravel path along the western edge that runs from the connector road to the entrance port. A small detached structure sits just south-west of the building, hosting a family of Haitian squatters. The ground shows a grid pattern of indentations to the south of the building, indicating that more construction was planned for the project before it came to a halt. Two triangular pockets of vegetative spaces are created between the north and south wings of the “X” on either side of the property. The long, narrow north wings border the

FIGURE 24: Detached concrete huts in the north courtyard

FIGURE 25: Foundation remnant; 12’ x 12’ hole

property and open up to ocean, creating an 118,500 square foot inner exterior space. There are five smaller concrete structures in the inner space, just north of the main building. More traces of foundation work appear recessed in the ground in the inner exterior space, indicating an earlier building that existed on the site.

The main building is located on the northern half of the site and extends to the east and west property lines. The footprint utilizes 80,000 square feet of the lot. It’s unique x-shape structure is dominating from aerial view and is a strong generator of spaces on the site.

THE RESORT BUILDING

The 240,000 square foot building is a three-story X-shaped structure. It was designed to be a beach resort with 500 single and double-room units but due to financial reasons the project was never completed. As a result, construction came to a halt and has never resumed. What is left is a concrete structure with varying degrees of completeness. Overtime the building has been looted for its building materials; plumbing fixtures and tiles have been removed and pried way. The most sought after material was the clay tile shingles, implicit by their scattered remains along the roof.

FIGURE 26: Building Entrance

FIGURE 27: Southern orthogonal resort units

FIGURE 28: Northern sawtooth resort units

The northwest wing was furthest along when construction stopped. The wing's structure and envelope were completed, aside from windows. Many rooms had been tiled and plumbed, and fixtures such as sinks and toilets were installed. The roof was fully shingled with clay tiles. The

central hub and south wings were slightly less completed, lacking any interior finishes. The least finished portion of the building was the northeast wing. The concrete columns and beams were poured but only some of the cmu blocks were in place and had not been sealed. Today the wing appears as a ruin with crumbling cmu walls and protruding rebar.

The building was constructed entirely out of concrete. The southwest bar of the “X” on the ground floor was constructed as larger spaces to house the “back-of-house” functions of the resort such as the kitchen, storage, and laundry. The northern bars are fifty feet wide and designed to contain the rooms. The saw tooth design for the ocean-front rooms generated an undulating façade with private balconies for every room facing the ocean. A six foot wide double-loaded corridor gives access to forty rooms per floor, in both wings. The central node of the building is triple

FIGURE 29: Ruins wing

FIGURE 30: Third floor ruins

FIGURE 31: Looted plumbing

FIGURE 32: Looted floor tiles

height, with an expansive floor plate and minimal cladding; it was designed to be open to the outdoors and have a view through to the ocean. A double-height, eight-post entrance vehicle port is located in front of the central node and still retains most of its clay tile shingles in good shape. The main portion of the roof is flat roof concrete construction with sloped clay tile overhangs to give the building a Caribbean architectural style. The entire roof is accessible from several of the communicating stairways and at three stories high, the roof offers an amazing view of the ocean as it rises above the shoreline tree canopy.

The overall condition of the concrete is good. The floor, never having been sealed, is in the worst condition of anything; most of the concrete is rough and has been dug up in some rooms by looters. The cmu block walls that were left unfinished are deteriorating and falling down. Where the concrete walls were sealed, the biggest deterioration is man-made, with crumbling concrete around the plumbing fixtures, or what is left of them. Additionally, the looting of the finishes has left a mess of broken tile and plumbing parts, making the building appear in worse shape than it is.

FIGURE 33: Triple height entrance

FIGURE 34: Panorama from the roof

FIGURE 35: Ground floor photos

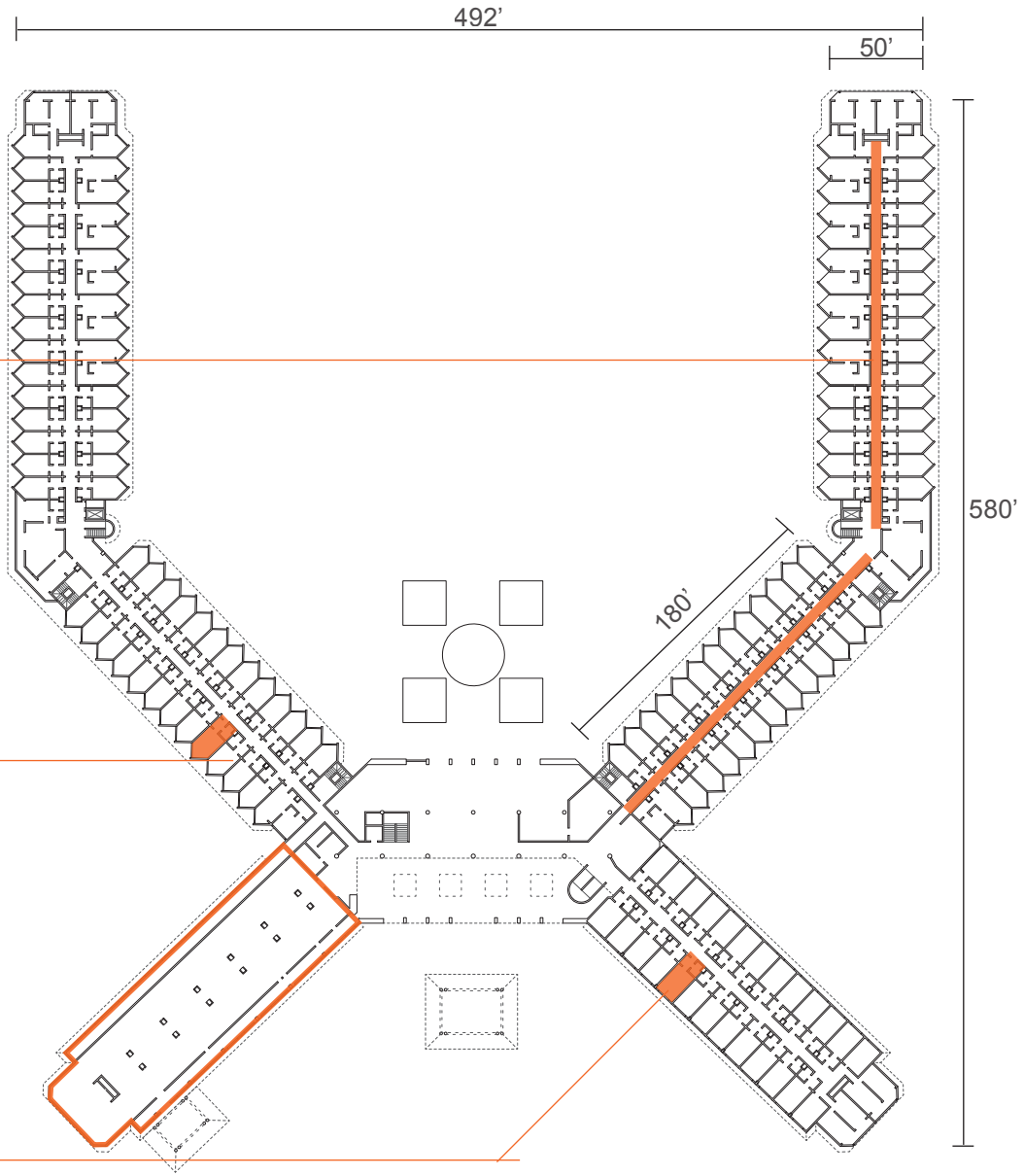


FIGURE 36: Ground floor plan

FIGURE 37: Second floor photos

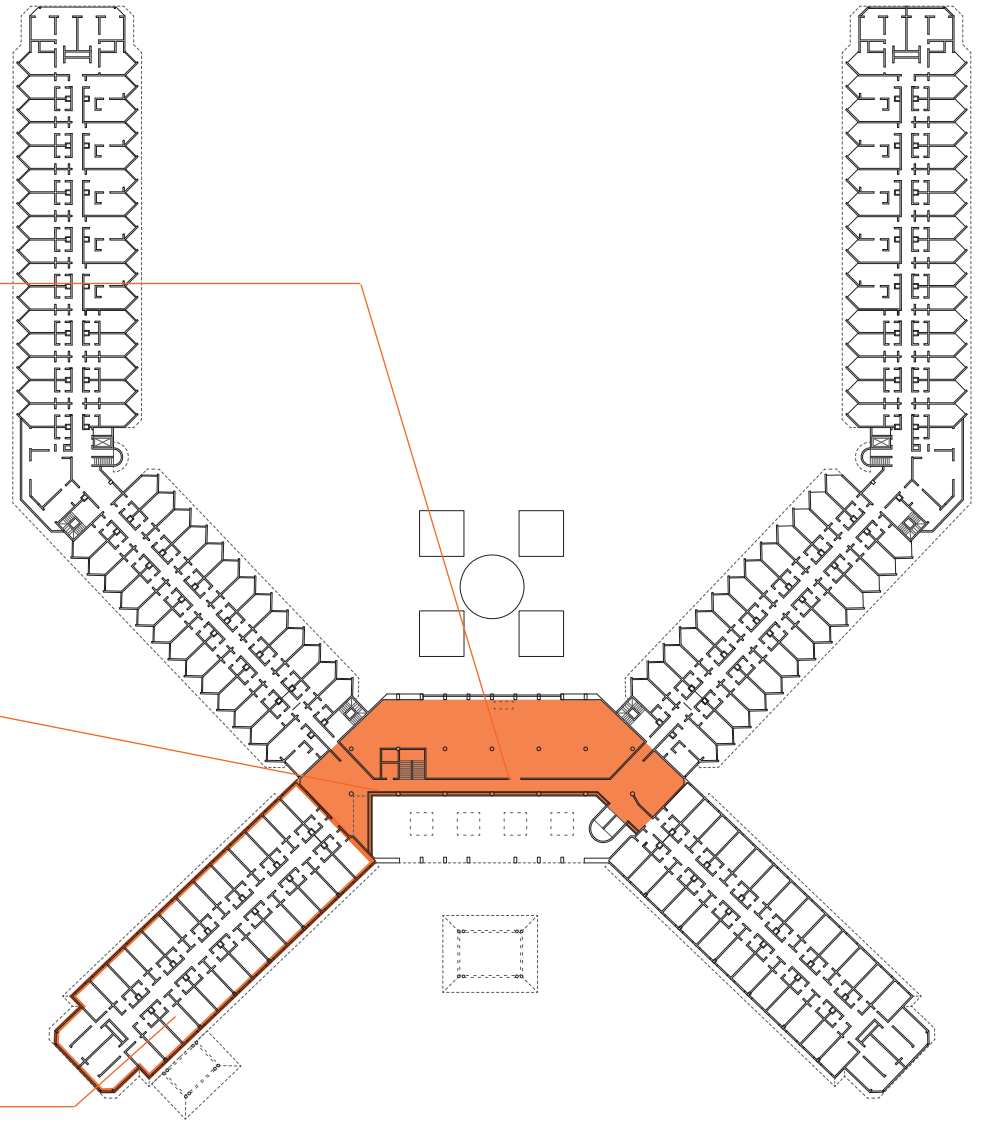


FIGURE 38: Second floor plan

FIGURE 39: Third floor photos

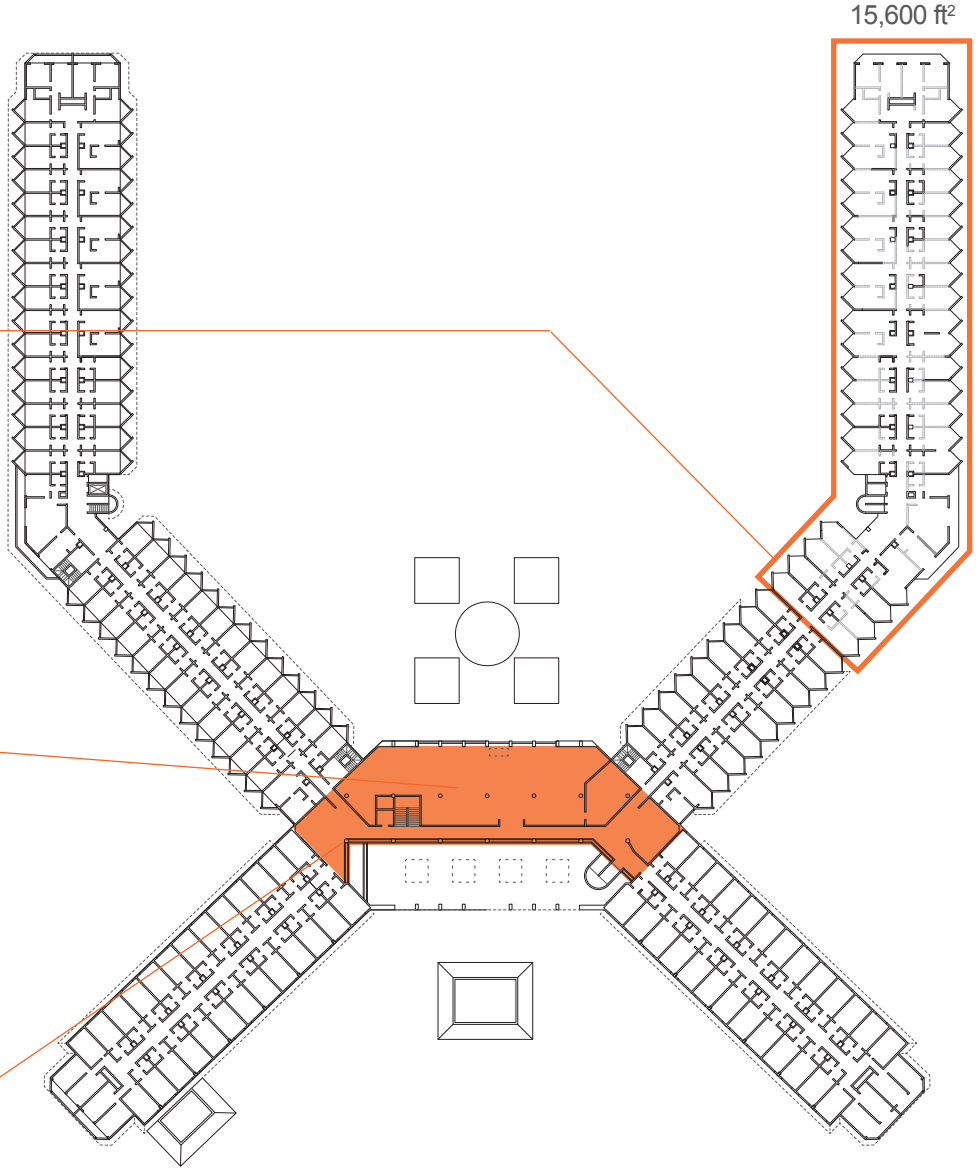


FIGURE 40: Third floor plan

FIGURE 41: Roof photos

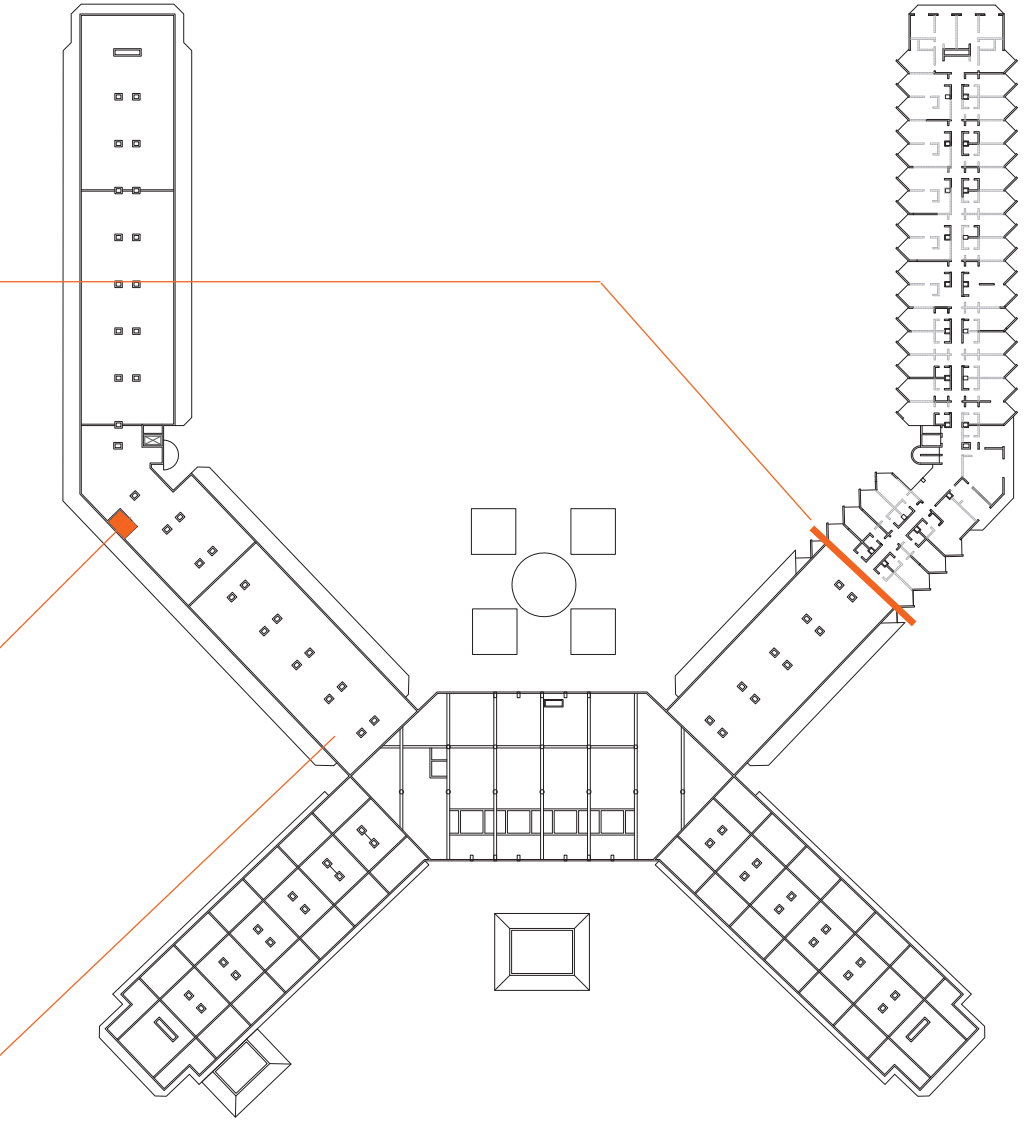


FIGURE 42: Roof plan

CHAPTER 4: THEORETICAL FRAMEWORK

Redefining all-inclusive is a sustainable tourism building reuse project with an overarching goal of integrating locals and tourists on the selected site to redefine all-inclusive as a typology that is inclusive of everyone. Background research has led to the conclusion that combining the tourism and agriculture economies in a sustainable way can achieve this goal.

Research has been divided into three primary topics: Building Reuse, Sustainable Tourism and Permaculture. Projects of architectural and social importance from each topic were used as precedents to further develop a framework for the design of the sustainable tourism reuse project in the Dominican Republic.

BUILDING REUSE STRATEGIES

"We cannot build our way to sustainability; we must conserve our way to it."

-Carl Elefante[31]

BUILDING REUSE

Building reuse in the past has focused only on the historic preservation of older, traditional building types. Carl Elefante, in his article "The Greenest Building Is…One That is Already Built" advocates for expanding the scope of buildings that are deemed worthy of salvation.[32] Ordinary buildings need to be embraced for their contribution to the larger context of the environment.

The theories of historic preservation and building reuse are mainly implemented in developed countries that have a larger building stock and greater understanding of the values of reuse. In

the Dominican Republic, a country that has a seen a boom in construction in the last forty years, there is not an extensive amount of older buildings. Nevertheless, a building in the Dominican Republic has equally negative environmental impact as one in the U.S.A. and Elefante's case for salvaging all types of underutilized buildings resonates.

CONCRETE BUILDING REUSE

Concrete is the main construction material in the Dominican Republic. Concrete structures have great potential for adaptive reuse. The durability, strength and versatility of the material provide an opportunity for concrete buildings to live beyond their original use. A longer life span results in a smaller ecological footprint, eliminates material waste, and lowers the maintenance costs of a building.

In regards to material waste, one-third of landfill waste in the world consists of construction and demolition waste. Furthermore, concrete is the most common construction material in the world and approximately 200 million tons are generated annually; 50% of which is dumped in a landfill. The physical space that broken down concrete consumes is extensive. [33]

The negative impacts go beyond the physical space; the overall economic impact of concrete reuse is significant. The preservation of buildings is a financially smarter choice. Referring back

to the landfill, there are very high transportation costs for debris and often the material is illegally dumped. Also, preservation is overall more labor intensive than new construction and a larger percentage of the total construction costs go towards labor rather than building material.[34] Moreover, by reusing a structure, foundation costs such as earthwork and soil removal are nearly eliminated and costs for new building materials are lowered. [35]

In addition to concrete's material qualities, there are many environmental benefits of concrete reuse. The conservation of embodied energy, waste and virgin material reduction, preservation of cultural identity, and the lessening of ecological damage, are a few of the benefits.

EXISTING RESORT BUILDING STATISTICS

The existing building has an 80,000 sf footprint and was intended to be a 240,000 sf building (15,000 sf was left unfinished).The building was constructed entirely out of concrete. It has a poured-in-place concrete column and beam structure, with poured concrete floors and cmu block walls. Overall, 273,000 sf (6,800 cubic yards) of cmu block and 300,000 sf (7,500 cubic yards) of poured-in-place were utilized.

Reusing the entire structure would eliminate nearly all of the demolition waste for the selected site, preventing 573,000 sf (14,300 cubic yards) of concrete from entering a landfill. A 2008 UN

Report stated that the Dominican Republic had insufficient space for landfills. The United Nations Program for Development calculated that the country only had the capacity for each person to consume two acres of waste, in comparison to the needed 4.5 acres.[36] The demolition of the resort would consume 11.5 acres of waste, or the allotted space of two and a half people.

The existing building can be measured for its monetary value in addition to its waste value. Real Estate companies in the Dominican Republic report that building costs for a finished house with windows, fixture, and tile are about US $45-50 per square foot.[37] The DR1 online forum further speculates that the building cost of unfinished concrete buildings is around US $30 per square foot.[38] At 240,000 sf, the building would cost between US $7.2 -$12 million if built within recent years.

CONCLUSIONS

This thesis considers the theories of building reuse to be a sufficient argument for the reuse of the resort building. The large size of the building is reason enough to propose its reuse over demolition. The fact that the building has never been occupied only increases the practicality of giving a new use. The high cost of demolishing the building and rebuilding something of similar status would be uneconomical. The environmental impact would be significant as well. The reuse of the building contributes to the sustainable factor of the proposed tourism center.

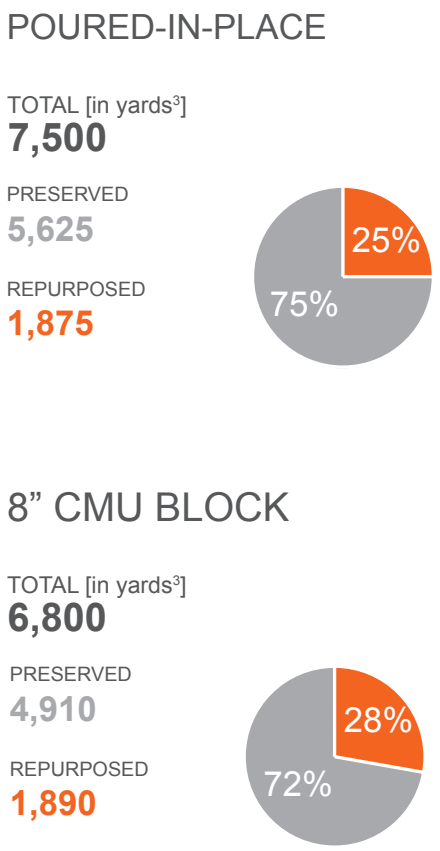


FIGURE 43: Concrete Reuse Diagrams
It is estimated that 25% of the building was demolished for the design.

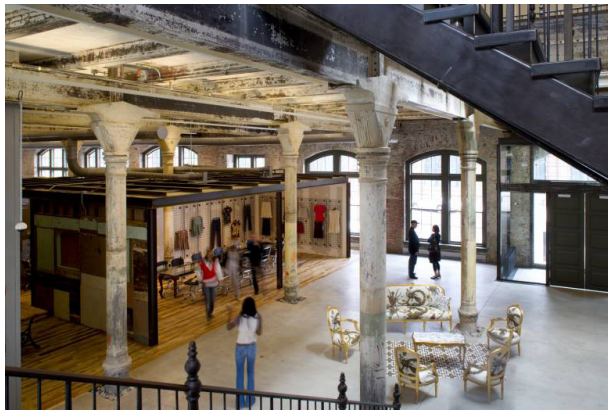


FIGURE 44: Building Reuse Case Study

CASE STUDY

Project: Urban Outfitters Corporate Campus
Location: Philadelphia, Pennsylvania
Architect: Meyer, Scherer, and Rockcastle with D.I.R.T Studios
Size: 341,000 SF Stories: 1-3
Completion: 2006, (1872-1945 original) Material: Brick and concrete

Form: There are five buildings that were renovated by Urban Outfitters. All are brick exterior and have a long, narrow floor plate of about 60' wide. Large windows are placed between the columns and the space is free span across the 60'. Light monitors are used above the long, central corridors.

Circulation: Most brands organize with open work stations and exterior corridors, while some do occupy the perimeter with closed offices. Some spaces utilize double height, having removed the mezzanine that was not original.

Reuse: Naval shipyard to Corporate Campus. Urban Outfitters purchased 5 buildings in the shipyard of over 260 buildings. Many of the original features were repaired and exposed.
The buildings had repair and replacement of exterior granite, brick, and cast iron. Windows were restored by reglazing. Metal roof truss systems were exposed. Concrete floors were raised to meet code.

Program: Office spaces with partial and full height walls, conference rooms, bathrooms, and storage. One building functions as the training complex for all the companies and has a cafeteria, fitness center, etc.[39]

SUSTAINABLE TOURISM STRATEGIES

Irresponsible travel to me is where the focus is entirely on the visitor, to the neglect and detriment of the host and their community. - Jane Crouch[40]

SUSTAINABLE TOURISM PROGRAMS

The United Nations has decidedly promoted *Sustainable* Tourism as the future of the industry.[41] Although everyday tourism is by and large beneficial to the socio-economic development of the world, if uncontrolled it can degrade the environment, destroy ecosystems, and cause social and cultural conflict.[42]

The Dominican Republic Sustainable Tourism Alliance (DRSTA) is a subset of the Global Sustainable Tourism Alliance (GSTA), and one of six countries the program is involved with. Their goal is to “advance the state-of-the-practice in sustainable tourism development and allied fields”. DRSTA aims to do so by strengthening existing small to medium and community-based projects, specifically in the tourism designated areas created by the government in the 1970s. Their three main investments are in moving tourism “clusters” towards self-sufficiency, increasing environmental management capabilities, and working with protected area management initiatives.[43]

SUSTAINABLE DESIGN

David Orr, in the essay, “Architecture, Ecological Design, and Human Ecology”, discusses ecological design principles and what ecological design is *not* about. Most importantly the goals are to make architecture fit in its context gracefully over a long period of time and changing the mind set from “Is this better? to “Do we need it?”. Five design principles are bulleted as follows: preserving diversity, utilizing current solar income, creating little or no waste, accounting for all costs, and respecting cultural and social patterns.[44] Standard sustainable design techniques adhere to ecological design. Passive heating and cooling strategies, water conservation and collection, etc should be implemented.

CONCLUSIONS

This thesis applies the ideas and concepts of the DRSTA initiative projects to the conception of a detailed program. The initiative the DRSTA has taken to promote and implement sustainable tourism is a step in the right direction. The variety of projects and programs that generate interest from tourists while supporting the local economy and culture is remarkable. Additionally, the design of the sustainable tourism center will remain simple and follow the “Do we need it?” mindset that blends nicely with the concepts of permaculture.

COMMUNITY-RUN HOTEL IN PEDERNALES

The Fundacion para el Desarrollo de la Comunidad Integral de Pedernales (FUNDACIPE)

Ecotourism has been identified in Pedernales as a way to attract tourists and increase economic benefits for the local people. FUNDACIPE has sponsored the construction of a hotel and interpretation center to promote ecotourism and generate revenue for the community.

The interpretation center will be for natural resources and aims to educate visitors about the flora and fauna of the area, while providing environmental education to the community on the natural resources they have to offer.

An offset of the buildings is funding for tour guides and visitor transportation services.[45]

COMMUNITY AGRO-TOURISM PROJECT IN PROCONUCO

Fundacion ProConuco

An argi-tourism route will be created through the communities of Altamira in an attempt to integrate land owners, community members and tourists. Infrastructure will be built to improve the quality of operations. It is estimated that 675 people will benefit from the new agri-tour route.

The route will incorporate land lots and orchards that will provide jobs for local rural inhabitants and increase the food supply in the region, with a variety of local fruits and vegetables.[46]

PERMACULTURE DESIGN STRATEGIES

“Permaculture is the conscious design and maintenance of agriculturally productive systems which have the diversity, stability, and resilience of natural ecosystems. It is the harmonious integration of the landscape with people providing their food, energy, shelter and other material and non-material needs in a sustainable way.” *- Graham Bell*[47]

DESIGN PRINCIPLES

Permaculture is a branch of ecological design which develops sustainable architecture and agriculture systems modeled from natural ecosystems. The design of permaculture focuses on how each element can be placed for maximum benefit of the overall system; emphasis is not on the separate element but the relationship between multiple elements when placed together.

There are three core beliefs and twelve design principles that make up the theory of permaculture design. The beliefs are 1) earth care, 2) people care and 3) fair share. Earth care promotes ongoing care of all living systems, people care promotes people working together and looking out for each other and fair share promotes the need to set limits to consumption and share surplus.

FIGURE 45: Sustainable Tourism Case Study

FIGURE 46: Sustainable Tourism Case Study

The twelve design principles are “thinking tools” that encourage design that uses less energy and resources. The principles are 1) observe and interact, 2) catch and store energy, 3) obtain a yield,

4) apply self-regulation and accept feedback, 5) use and value renewable resources and services, 6) produce no waste, 7) design from patterns to details, 8) integrate rather than segregate, 9) use small and slow solutions, 10) use and value diversity, 11) use edges and value the marginal and 12) creatively use and respond to change. Principles 8 and 10 are indicative of the type of interaction this thesis aims to generate between the locals and tourists occupying the site.[48] :

8) Integrate rather than segregate: By putting the right things in the right place, relationships develop between those things and they work together to support each other.[49]

10) Use and value diversity: Diversity reduces vulnerability to a variety of threats and takes advantage of the unique nature of the environment in which it resides.[50]

ZONES & LAYERS

Permaculture design often utilizes zones as a way of organizing the placement of design elements on the basis of the frequency of human use and plant needs. Zoning is an organization of the plan strictly in terms of the horizontal placement of elements. There are typically 6 zones, 0-5, however not all zones occur in all designs. The zones begin with zone 1, the most human intensive zone, and radiate out to zone 5, the wilderness zone meant for observation only. There is also zone 0, the building, which focuses on using the structure to harness natural resources and creating a sustainable environment to work and live in.[51]

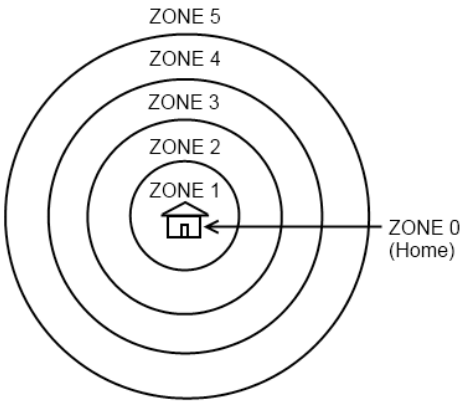


FIGURE 47: Permaculture Zone Diagram

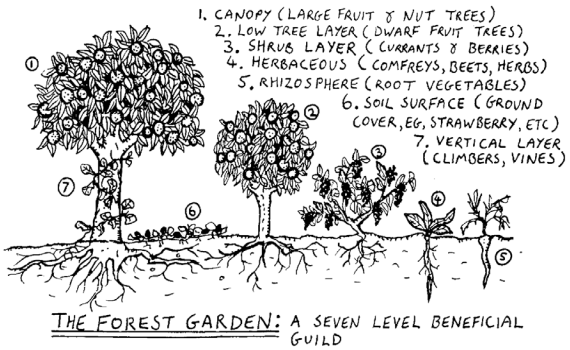
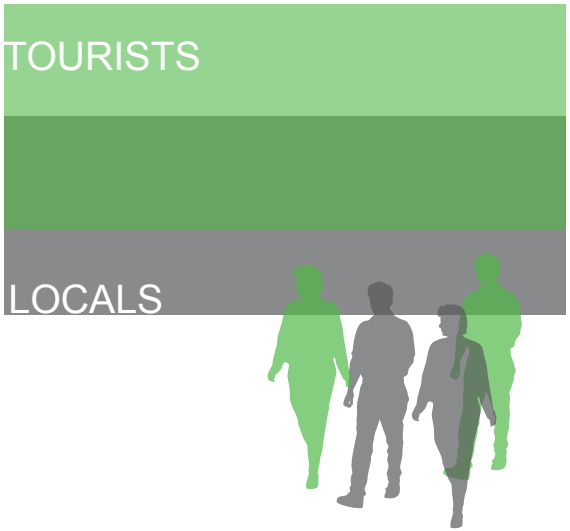


FIGURE 48: Permaculture Layer Diagram

Layers are utilized as a way of organizing vertically how plants can be placed, taking advantage of the different heights that plants grow to. As a result a diverse amount of life is able to grow in a small space within each zone; zones do not imply elements of the same size. There are generally seven layers that can grow together: 1) the canopy (tall trees), 2) low tree layer, 3)shrubs, 4) herbaceous (annuals), 5) rhizosphere (root crops), 6) soil surface (cover crops) and 7) vertical layer (vines).[52]

CONCLUSIONS

This thesis applies the design ideas of permaculture to both the physical landscape and the two users groups of the site. Permaculture will be the main agriculture theory taught at the trade school, promoting sustainable growing practices. The theory of zones will guide the conceptual site design so that the most efficient planting plan is produced. The theory of layering is taken advantage of to further diversify the elements within each zone. The idea of diversity and integration of the crops will take root in the architectural design of the programs to create the same sustainable relationships between locals and tourists.


TOURISTS
LOCALS

CHAPTER 5: PROGRAM DESCRIPTION

Tourism often only benefits the traveler and not the host. The conclusions developed from the background research on tourism, agriculture, and Dominican Republic have informed the programmatic decisions for the reuse of the existing building. Additionally, principles from the framework of reuse, sustainable tourism, and permaculture are incorporated into the selection, layout, and design of the holistic program. The Sosúa Center for Agritourism will work to integrate tourists with local Dominicans by merging beach leisure tourism with a Dominican agriculture trade school.

PROGRAM

The existing building and site are divided into three programmatic elements: Agritourism Resort, Agriculture Trade School, and Interpretive Center. The concept of permaculture is used a design guideline for the entire site and works integrate the building and program with the user groups.

AGRICULTURE TRADE SCHOOL (45,000 SF)

The trade school will be for teens and adults who have completed the mandatory six years of general education. The school will provide skills to Dominicans in the field of agriculture, ranging from growing techniques to management and marketing. The agriculture school will focus on tropical permaculture design principles.

CLASSROOMS (12,000 SF)

The large spaces on the ground floor of the southwest wing will be converted to classrooms and labs for the trade school.

STUDENT HOUSING (20,000 SF)

The upper floors of the southwest resort wing will be reused as-is for student housing. 50 rooms can accommodate 1 or 2 students, for a maximum of 100 students living on campus. A separate common area with laundry, kitchen, and lounge facilities will be provided.

RESTAURANT & BAR (4,000 SF)

The restaurant will be a teaching restaurant that uses the food grown from the trade school. By using the food grown by the students, their hard work and success is visualized, and they have a direct buyer. Therefore the kitchen will be spacious and provide space for observation. To accommodate the 40 unit hotel and outside visitors the restaurant should seat 70 at full capacity. Other spaces include a bar and bathrooms.

FARMER'S MARKET (2,000 SF)

In addition to serving prepared food grown on site in the restaurant, a permanent student run farmer's market will provide resort guests and visitors the opportunity to buy their own produce and prepare it themselves.

LIBRARY (3,000 SF)

The library will provide materials that both the students and the tourists will have access to. It will also provide computers and internet access for all users.

ADMINISTRATION (20,000 SF)

The administration will include offices and conference space for professors at the trade school and offices for the people running the interpretive center.

INTERPRETIVE CENTER (1O,000 SF)

Based off the existing interpretive center in Pedernales, on the southwest border of Haiti, an interpretive center will be a source for detailed information about the province's different tourism attractions such as the Damajagua River and its 27 waterfalls adventure. The center will inform visitors and educate the community about their resources and how to preserve them. Currently the towns have tour booths scattered about and subpar websites to relay tourism information.

GALLERY (7,000 SF)

The gallery space will be used to display photos and other sources of information about tourism in the area and can also be used by the school to display projects about agriculture. The space should be designed to be adapted to a large event space when needed.

THEATER (3,000 SF)

Similar to the gallery, the theater is a hybrid space for both the interpretive center and the school. The theater will be used to show films and other digital media about tourism and agriculture and can also be used as a large lecture room for the school.

AGRITOURISM RESORT (4O,000 SF)

RESORT (38,000 SF)

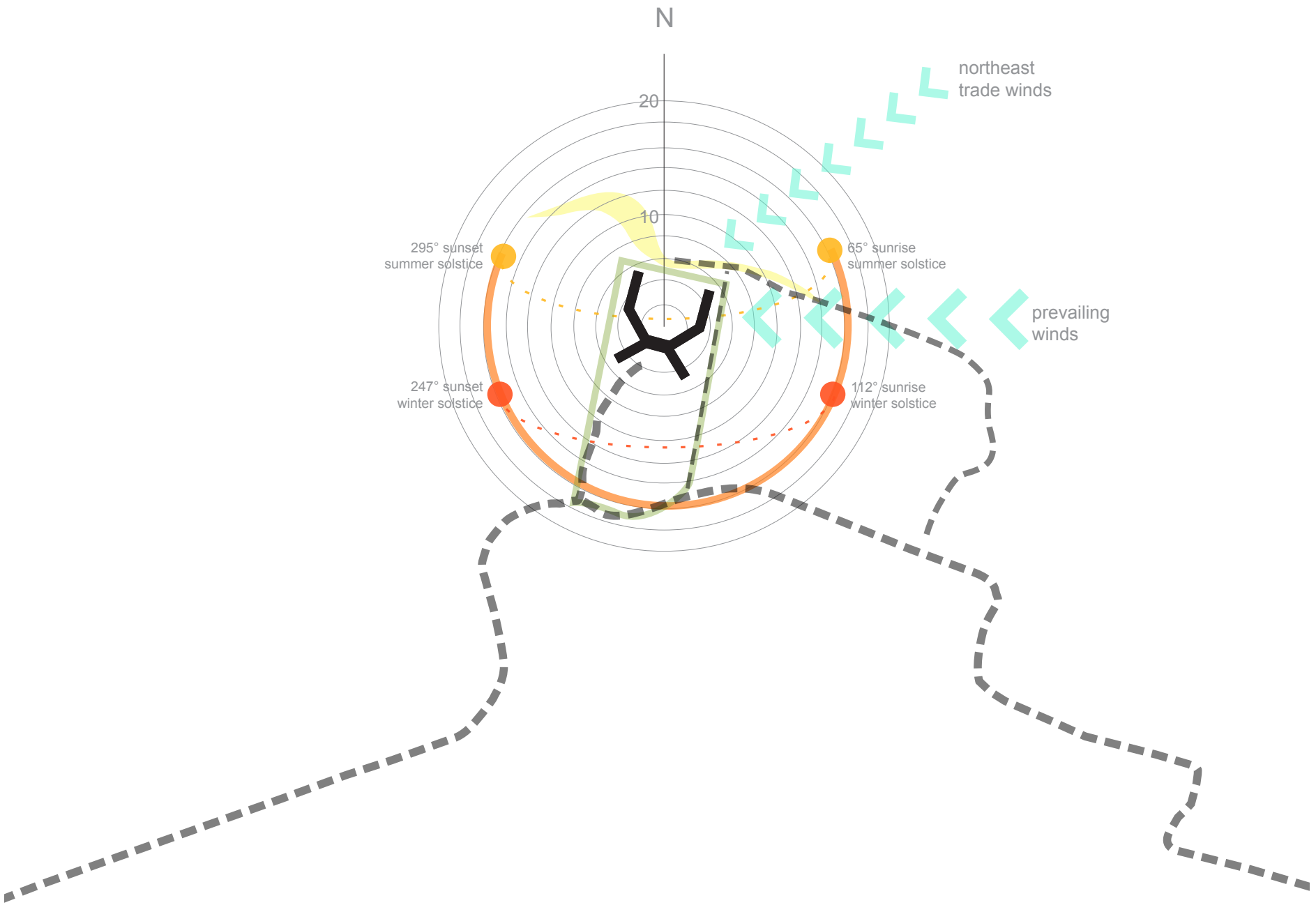
The resort will have 40 apartment units; a mixture of single, double, and triple rooms, utilizing the existing structure. The apartments will be designed in similar fashion to the other resorts in the area in order to appeal to the tourist demand, while taking advantage of environmental conditions to be as passive as possible.

INFORMATION (2,000 SF)

A central check-in center will have offices for staff and provide information for all the programs.

FIGURE 49: Program Visuals

ideas for agritourism, the interpretive center, and an agriculture school


N
20
10
northeast
trade winds
prevailing
winds
65° sunrise
summer solstice
112° sunrise
winter solstice
247° sunset
winter solstice
295° sunset
summer solstice

CHAPTER 6: DESIGN

FIGURE 50: Environment Site Analysis
The wind comes predominantly from the northeast and east.

FIGURE 51: Permaculture Site Design

The design proposal for the Sosúa Center for Agritourism consists of a holistic conceptual site design and the detailed design of two nodes of the program, the retreat wing and the social center. Designing the project on multiple scales demonstrates how the strategies of permaculture, building reuse, and social integration work at a variety of scales.

CONCEPTUAL SITE DESIGN

The conceptual site design is driven by the design theory of permaculture and its relationship to the existing building. It consists of a landscaping plan for the agriculture school, access paths through the site, and concepts about representative moments of the project. Additionally, the building reuse strategy of selected demolition and the programmatic layout are represented at this scale.

PERMACULTURE DESIGN

The project focuses on two of the design principles of permaculture for the site design: *integrate rather than segregate* and *use and value diversity*. The conceptual site design is organized around the horizontal zone organization strategy that divides the 16.5 acre property into five organizing element zones on the basis of human use intensity. The zones radiate out from the buildings edge, taking full advantage of the extensive building perimeter the unique “x” shape provides.

ZONE 0 THE BUILDING

Solar panels placed on the roof have the potential to provide all the needed electricity for the center. The roof placement allows for the rest of the site to be utilized for farming and animal grazing. Also, an extensive green roof will aid in cooling the interior spaces.

ZONE 1 INTENSIVE CROPS

Zone one permeates the spaces on the ground floor and filters outward from building perimeter, creating a direct connection between the crops and the farmers The zone consists of vegetable and herb raised garden beds. The beds are raised to accommodate for the poor soil quality.

ZONE 2 LESS INTENSIVE CROPS

Zone two is also in close proximity to the building's perimeter, sharing the southern edge of zone one. It contains itself to the inland side of the building, using it as a screen from the salt water. Perennial plants and row crops that require less frequent attention are located within this zone.

ZONE 3 OCCASIONALLY VISITED CROPS

Zone three is the largest zone, enveloping the first two zones and spanning most of the length of the site. The elements located in zone three are managed weekly and have high yields for the low amount of maintenance required.

ZONE 4 WILD PLANTS

Zone four requires no human intervention as it is a wilderness area filled with native wild and planted trees. It is placed along the south and east edges to act as a privacy screen and a wind break for the other planted zones.

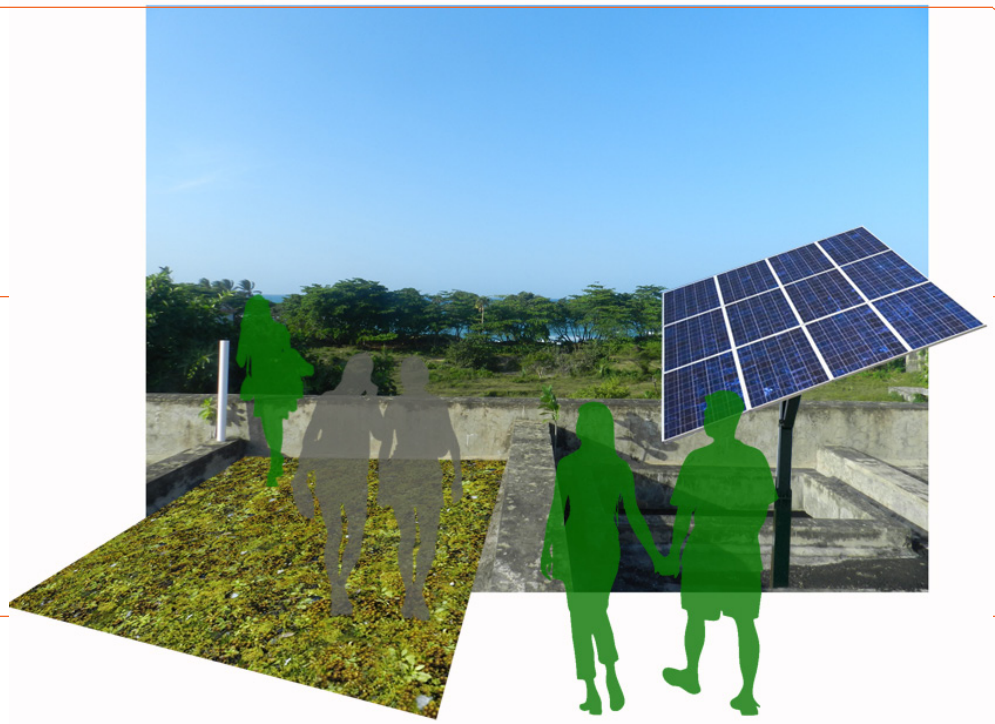


FIGURE 52: Roof design concept

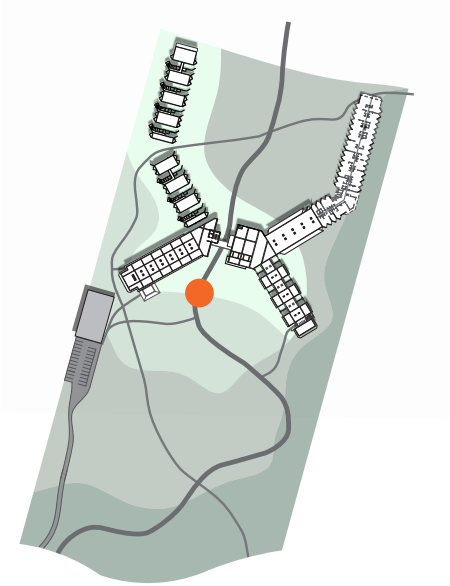
FIGURE 53: Permaculture zone diagram

FIGURE 54: Permaculture path concept

ACCESS PATHS

Three scales of access paths were then created to provide the main circulation through the site and connections between the different programs. The access paths are intended mainly for pedestrian use and vehicles needed for farming.

The site plan shows the primary access path through the site. The path is wide and inviting and made of crushed red clay roof tiles from the existing roofs. It is intended as the main path to the social center but also an educational experience about permaculture. As visitors wind through the zones of the permaculture field, information about the plant types and the edges of the zones is presented; the path culminates at the entrance to the beach.



The secondary paths are overlaid to connect the main spaces together. The sole vehicle path connects to a parking lot hidden behind the existing detached structure. The secondary paths connect the lot to the classrooms, the primary path, and the retreat wing; the intention here is that guests cannot park adjacent to their apartment and are encouraged to experience the fields.

The tertiary paths, which appear in the detailed plans, are narrower and discrete, connecting people to more private places, such as their apartment units.

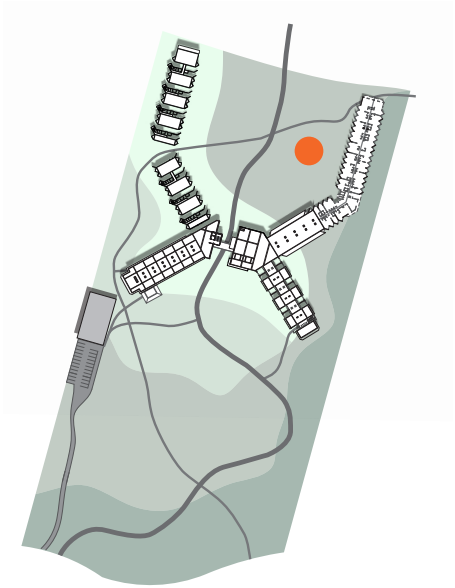
FIGURE 55: Ruins concept

REUSE STRATEGIES

OVERVIEW

The new design of the building began by making decisions about which parts of the building to preserve and which to demolish. At 240,000 square feet, the building greatly exceeded the needed space. Phasing the building out for future remodeling and construction, based on the

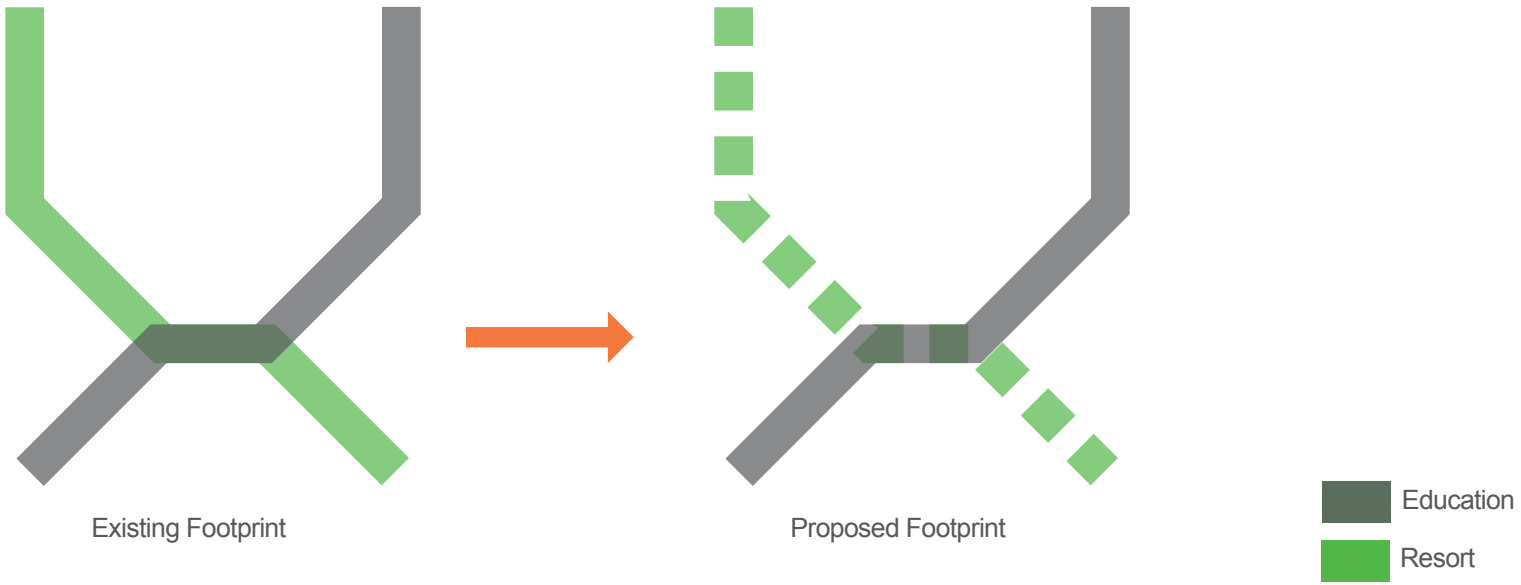
economic success of the project, was a major discussion. In the end, the overarching idea of the project was to design all portions of the building and leave the ruins untouched. In the future, if the project was successful, the developer could rebuild the ruins with whatever additional program was needed.



THE RUINS

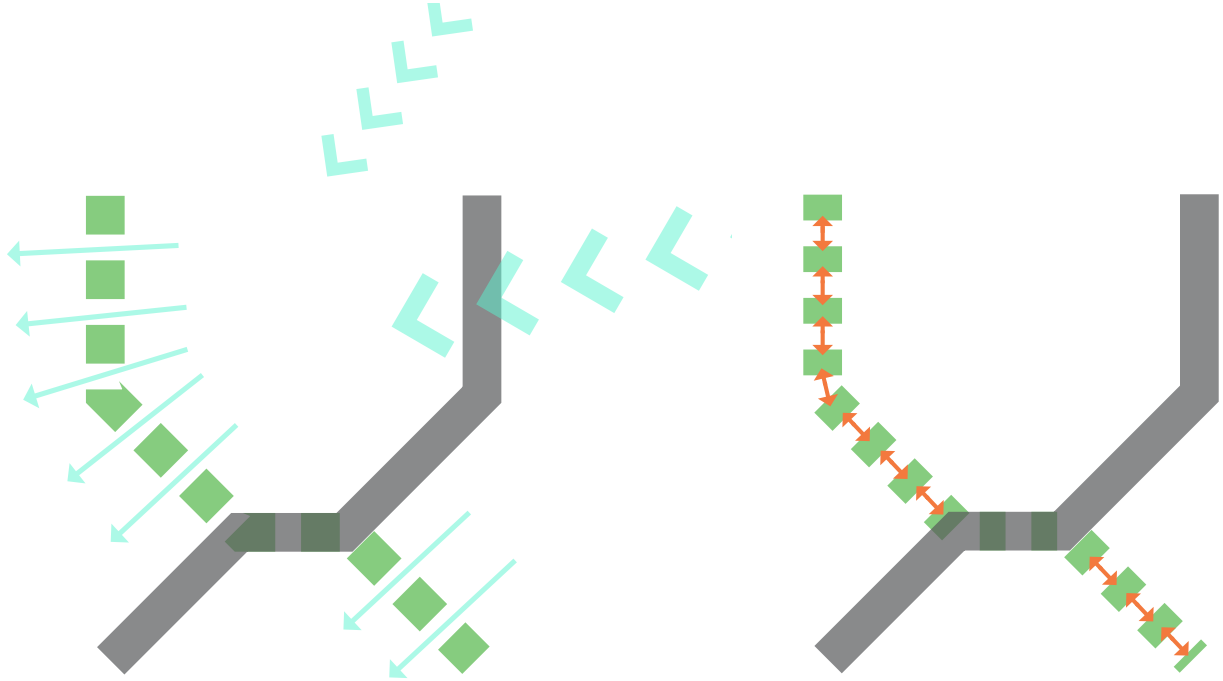
The decision to leave the ruins as is was mainly romantic decision. The unfinished wing of cmu rubble and encroaching vegetation is aesthetically pleasing. Furthermore, the fact that the building is only 20 years old makes the young ruin more intriguing. The design aimed to reuse this part of the building without implementing any permanent architecture. The ground level, already overtaken by soil and plants, was an opportune place to relocate the pig animal runs so that they could still be engaged with the users on the site. The unfinished structure provides shade and place to contain the animals.

However, engaging the ruins architecturally was also an important idea that did not develop beyond a conceptual level. The theory of disjunction, the idea of distinguishing between old and new, is the generated the proposal of constructing temporary huts off of the ruins structure to provide small programmatic pieces. A permanent walkway with new structural supports along the third floor will engage people with the ruins and provide access to the temporary huts.



DEMOLITION

A major part of the design process was the strategic demolition of pieces of the building to generate a new language that did not read as an all-inclusive mega-resort. The major decision was to remove every other column bay (25’ on center) from the northwest and southeast wings, to create detached apartment flats. The two main reasons for the deconstruction were cross-ventilation and economic drivers. The wind blows from the northeast and therefore the current double-loaded corridor scheme prevented the western facing rooms from receiving any breeze. By removing every other bay and making the new apartment units span the entire width of the



wing, breezes can flow through the units and in-between the new detached apartment buildings. From an economic point of view, the detached apartments provide private spaces and reflect the language of the other resorts in the area, making them more appealing in the tourism market.

The second major demolition move was removing two bays of the center of the “x”, on all floors. The opening created a connection between the north and south plots on the site, with the intention of the permaculture landscaping flowing through the ground floor space. Additional interior walls and floors were strategically removed to accommodate the new programs.

FIGURE 56: Reuse Diagram

FIGURE 57: Reuse Diagram

MATERIALS

An overall material language was also generated for clarity in the project. Since there are only two materials used in the existing building, poured-in-place concrete and cmu block, to emphasize what is old and new, three alternate materials are introduced for new construction; wood, glass, and gabion walls.

All the wood products in the D.R. are imported because deforestation is illegal, and therefore wood is used sparingly to accent spaces. Cedar is used for the frames of all the doors and windows in the project; its hardiness can withstand the saltwater better than other woods. Cedar is also used to construct the new access stairs for the retreat area and to highlight the inserted program boxes in the social center. Glass is used to define the larger public spaces, to retain visible connections between the spaces.

The decision to remove significant portions of the building generated a lot of demolished concrete; around 25% of the total amount. A guideline for reusing the demolished concrete was setup to prevent as much waste as possible from ending up in a land fill. The demolished concrete is used to construct four different types of gabion walls to be used throughout the site.

Gabion revetments and walls are built along the shoreline to mitigate the erosion from the northeast trade winds and create spaces for people to sit and enjoy the ocean.

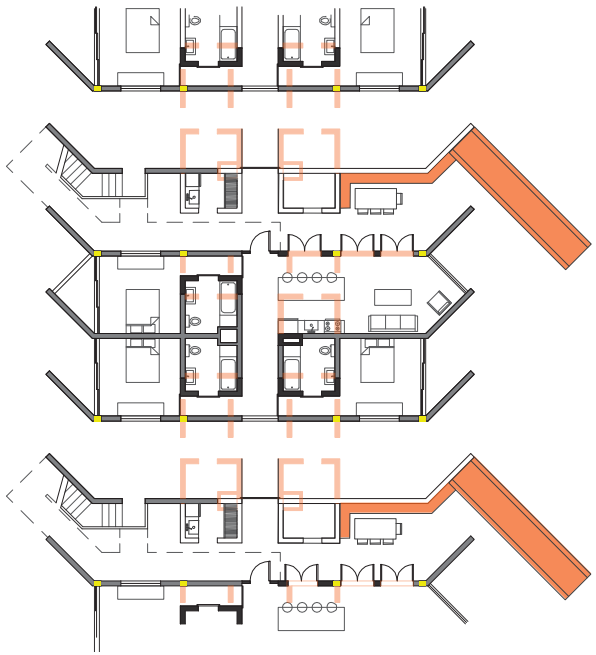


FIGURE 58: Ground floor demo & reuse plan

FIGURE 59: Gabion reuse strategies
gabion revetments, gabion furniture, gabion garden bed, gabion partition wall

Since the climate in the D.R. does not require conditioned spaces, new partition walls in the large program spaces are constructed of two foot wide gabion walls that allow airflow through the crushed concrete pieces.

Smaller gabion walls and removed concrete beams and columns are used to make raised planter beds for the zone one intensive vegetable and herb beds. The raised planters transition into outdoor furniture pieces in the private retreat areas for dining and sitting in the garden.

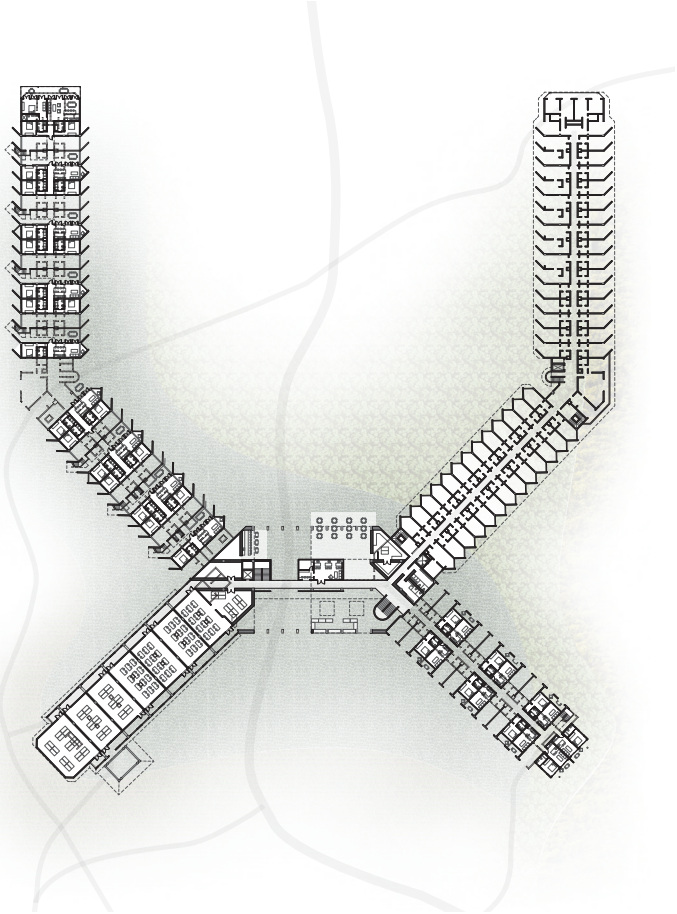
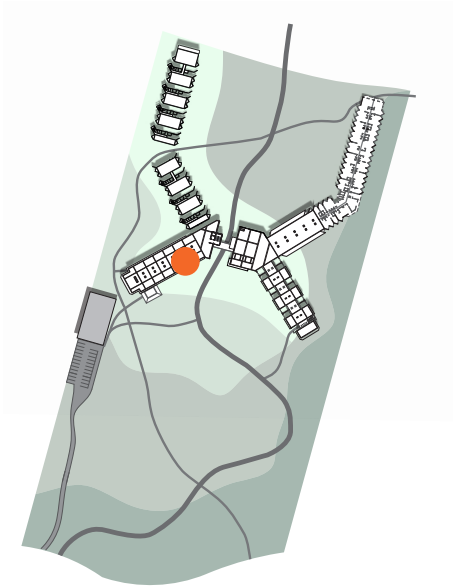


FIGURE 60: Proposed ground floor plan

the permaculture agriculture permeates through the new building spaces.

FIGURE 61: Encroaching vegetation

FIGURE 62: Site cross-section



THE GROUND LEVEL

The ground level of the project is the most developed because of its relationship to permaculture fields. At present vegetation has made its way into the building on every level. Trees have grown in the triple height center space where a pig run has been constructed. The northeast trade winds have blown soil and sand into the resort units where plants have sprouted and vines have made their way up to the roof. The northeast wing of the ruins has been completely engulfed.

The site concept in relation to the building was to allow the vegetation to continue to encroach upon the building and blur the line between building and landscape. The two-bay portions of structure that were demolished in the northwest and southeast wings allow zone one of the permaculture plan to really filter through the apartment units and create new garden spaces. The new site design begins to read as building within the landscape rather than its current presence as a mega-resort dominating the land.

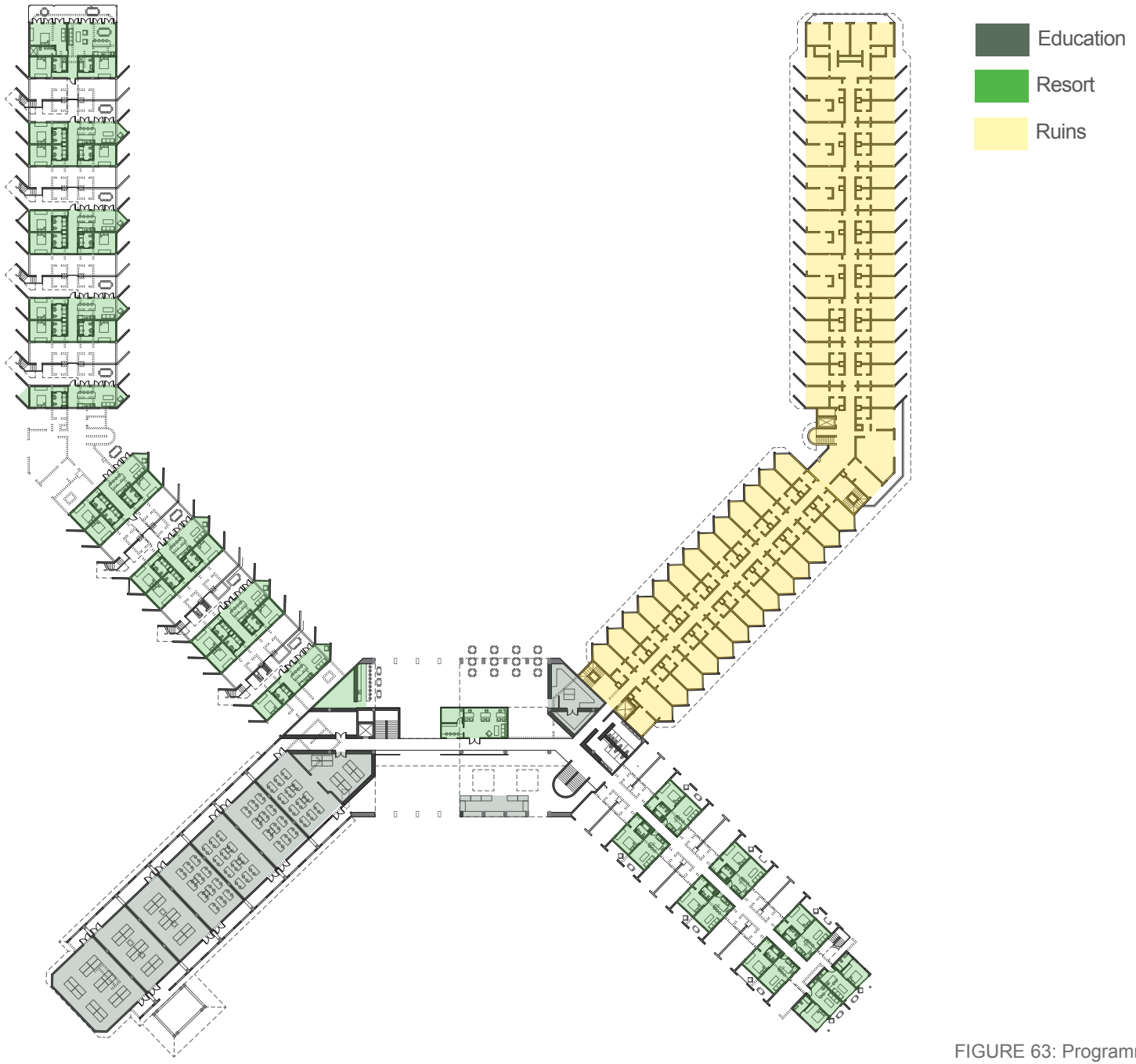
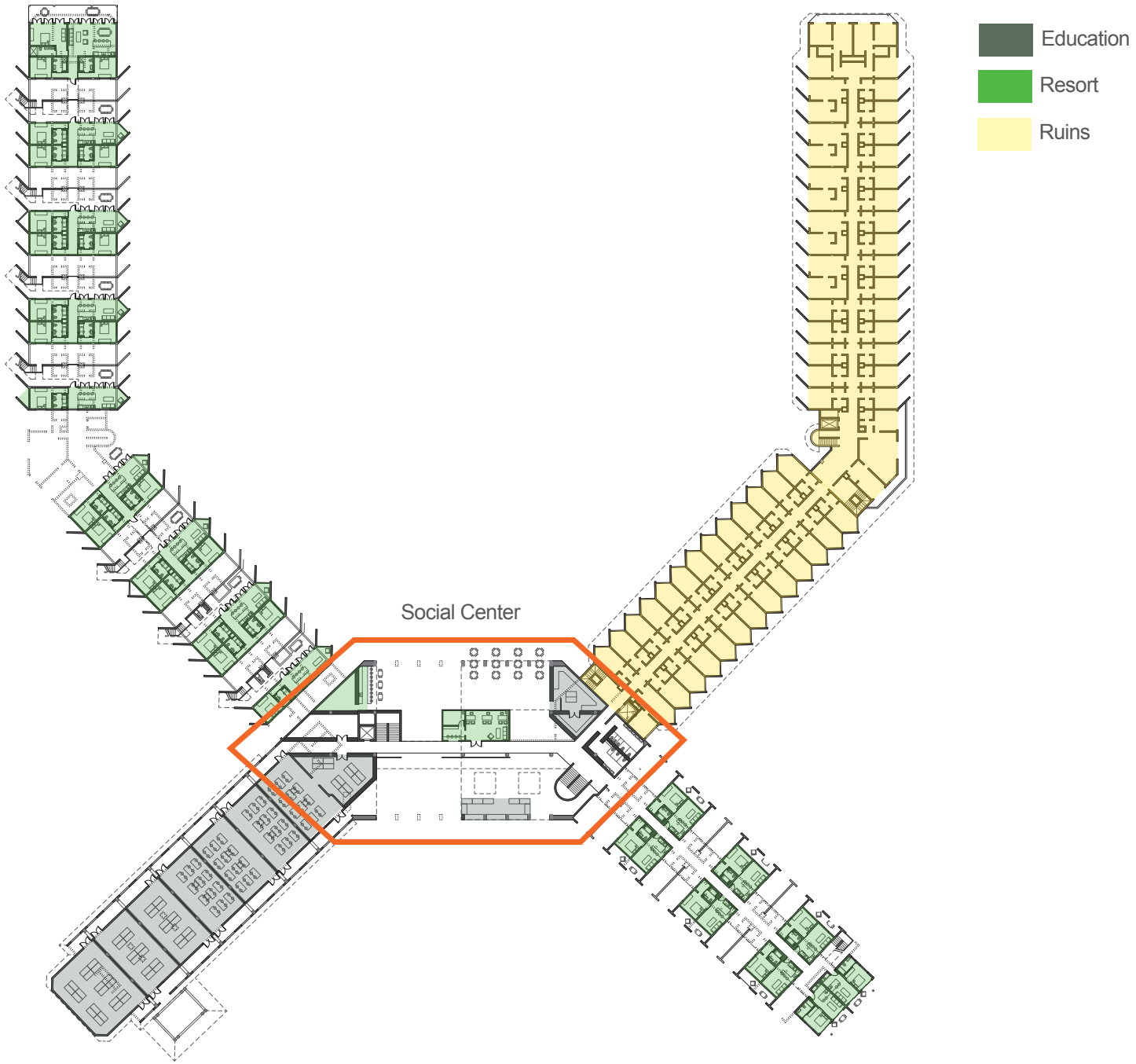


FIGURE 63: Programmatic ground floor

PROGRAM ORGANIZATION

The different programs are organized within the footprint of the existing building. This design decision was made largely because the footprint of the building is 80,000, presenting sufficient amount of space for the proposed program. In terms of sustainability, it was logical to not take up anymore land on the property. The overarching idea was to organize the three program types around the center of the “x” and have them disperse into the four wings.

Each program type is organized within the existing footprint based on the structure and interior layout and its location on the site. The classrooms are larger, semi-public spaces, and are therefore located on the ground floor of the southwest wing, where the larger, back-of-house spaces were built. The retreat units are a mix of two to four of the existing hotel units, so they are located on all three floors along the northwest – south east corridors where there is an existing, consistent hotel unit layout. The flexible spaces of the interpretive center and trade school are the largest and most public programs, and for that reason they are located at the center of the “x”, distributed among all three floors.


Education
Resort
Ruins
Social Center

DETAILED DESIGN

Due to the scale of the project, only two of the building programs were developed in detail. The social center (hub of the “x”) and the retreat wing are the most essential parts in conveying the overarching ideas of the thesis. The reuse strategies of these nodes are indicative of the intent of all the spaces.

SOCIAL CENTER

OVERVIEW

The social center is located in the center of the “x” and is programmed with the more public and flexible of the trade school and interpretive center programs. The area has a footprint of 14,000 square feet. Two cedar-cladded “program boxes” were inserted into the space to frame the entrance path and soften the concrete material palette. The insertions highlight the reused main circulation core and the new interpretive center theater.

FIGURE 64: View from the permaculture fields proposed redesign of the entrance and new resort wing with permaculture fields in the foreground.

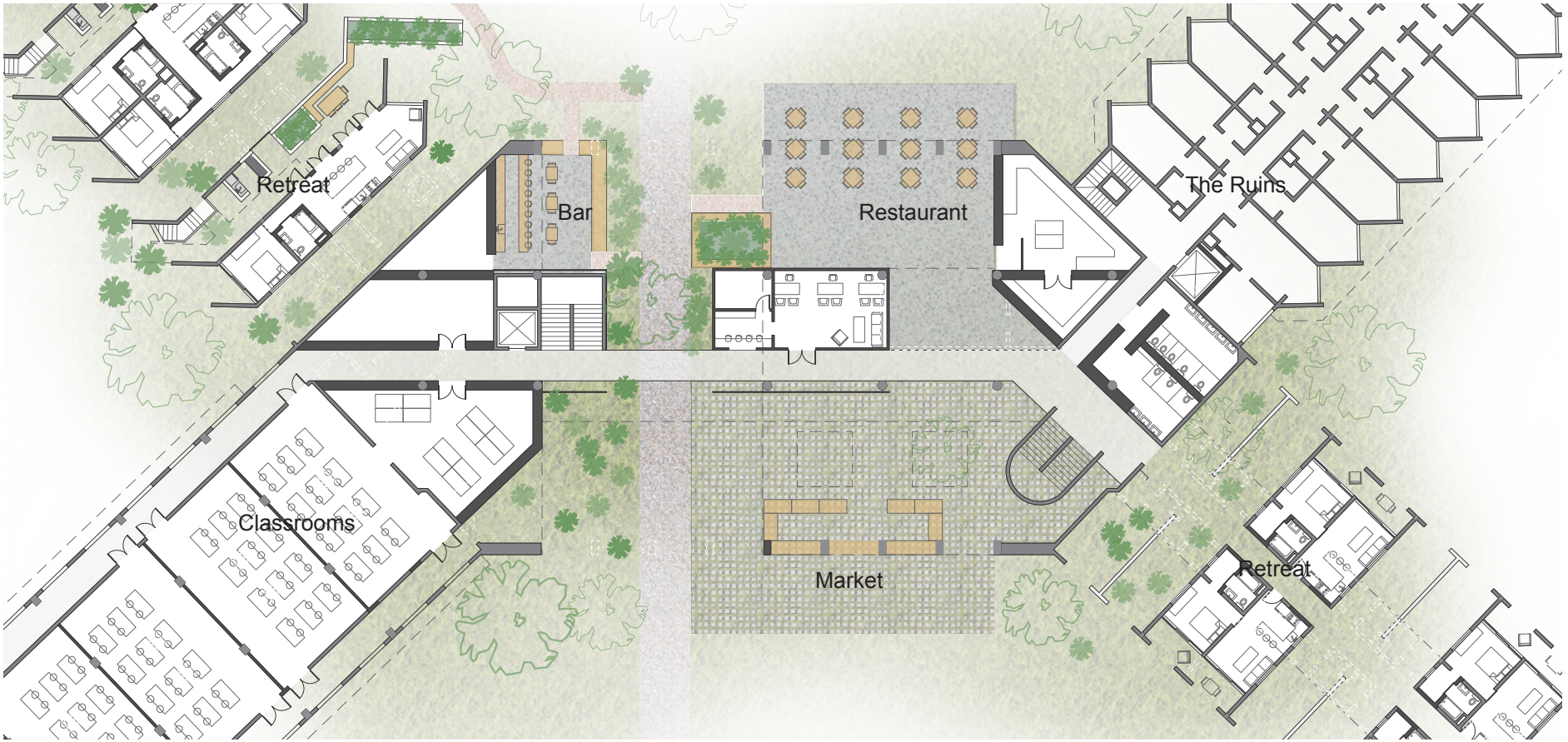


FIGURE 65: Social center ground floor plan

GROUND FLOOR

The ground floor is kept open and permeable by the permaculture landscape. The demolished section through the center creates a visual connection from the front property to the ocean. The triple-height covered space demarcates the spaces, provides shade and covering from the rain, while inviting users into the social center. The overarching idea is that the space reads as a continuation of the permaculture landscape with inserted hardscaping to define programmatic spaces.

FIGURE 66: Social center section

The information center for the retreat and interpretive center is placed in the center of the space for accessibility and its form is used to define the other programmatic spaces. The student-run farmers market frames the southeast corner and connects directly to the agriculture field. Its front-and-center placement enlivens the space and is very visible to visitors. The restaurant and bar hold the northern corners with views out to the ocean, and activate the space throughout the day. The sectional quality of the space creates a visual connection between the different program spaces. The glass faced student commons, located on the top floor, overlooks all the activities happening in the social center. Events in the library and gallery can be observed from the restaurant and bar on the ground floor.

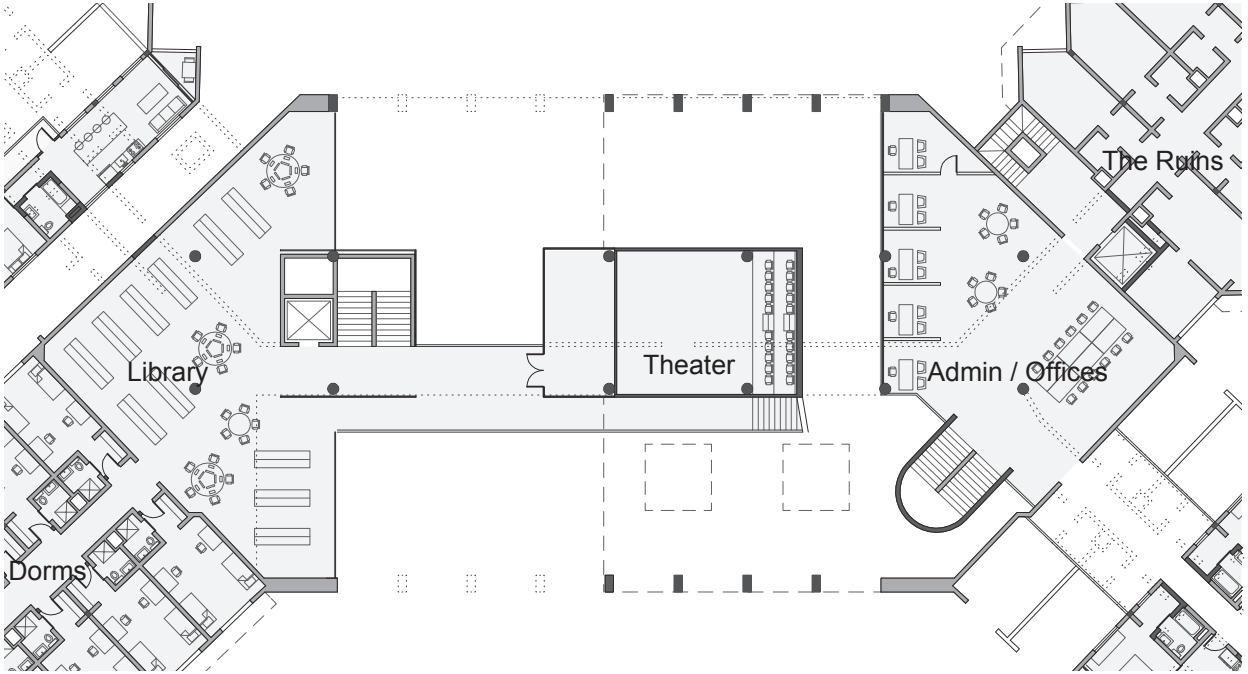


FIGURE 67: Social center second floor plan

SECOND FLOOR

The middle of the second floor was demolished to create double-height spaces on the ground level; only the corners remain. The west corner houses the library which connects to the student dorm corridor. The east corner houses the administration offices and conference spaces. Access to the ruins has been blocked off for structural safety purposes on this level. The lower performance level of the theater is accessed from the second floor. A new wood walkway cantilevers off the existing column structure creates a space to view the activities on the ground floor and connects the library and theater to the third floor gallery space.

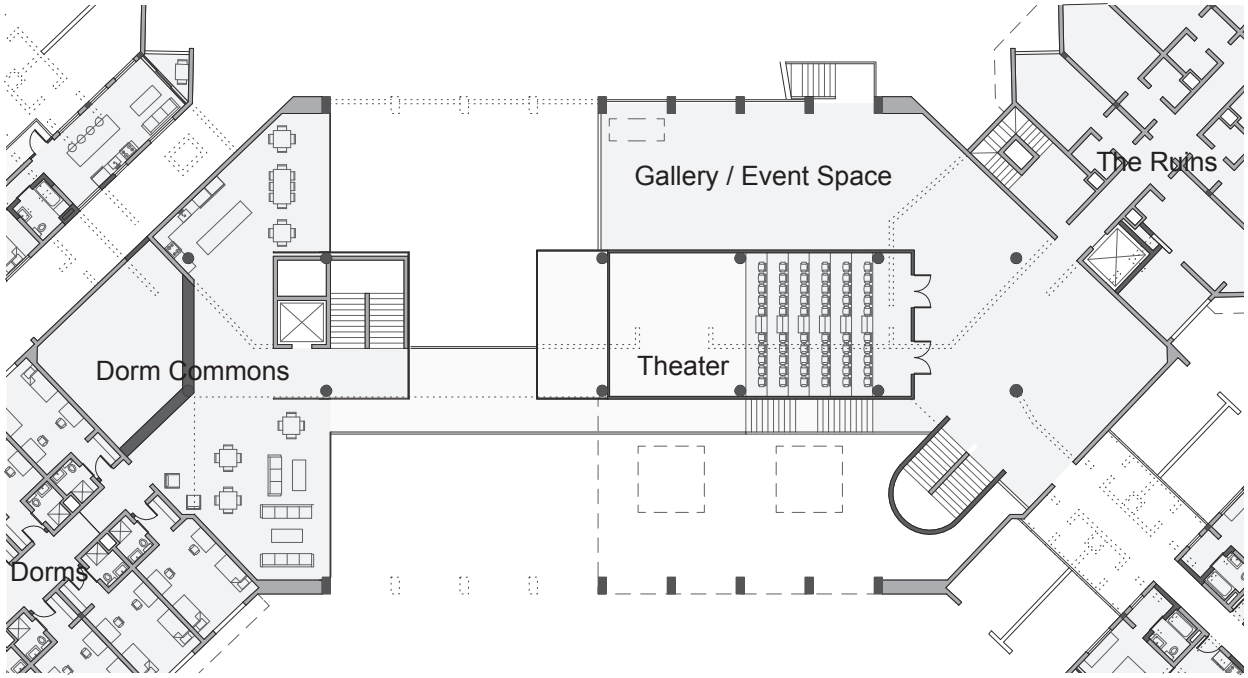


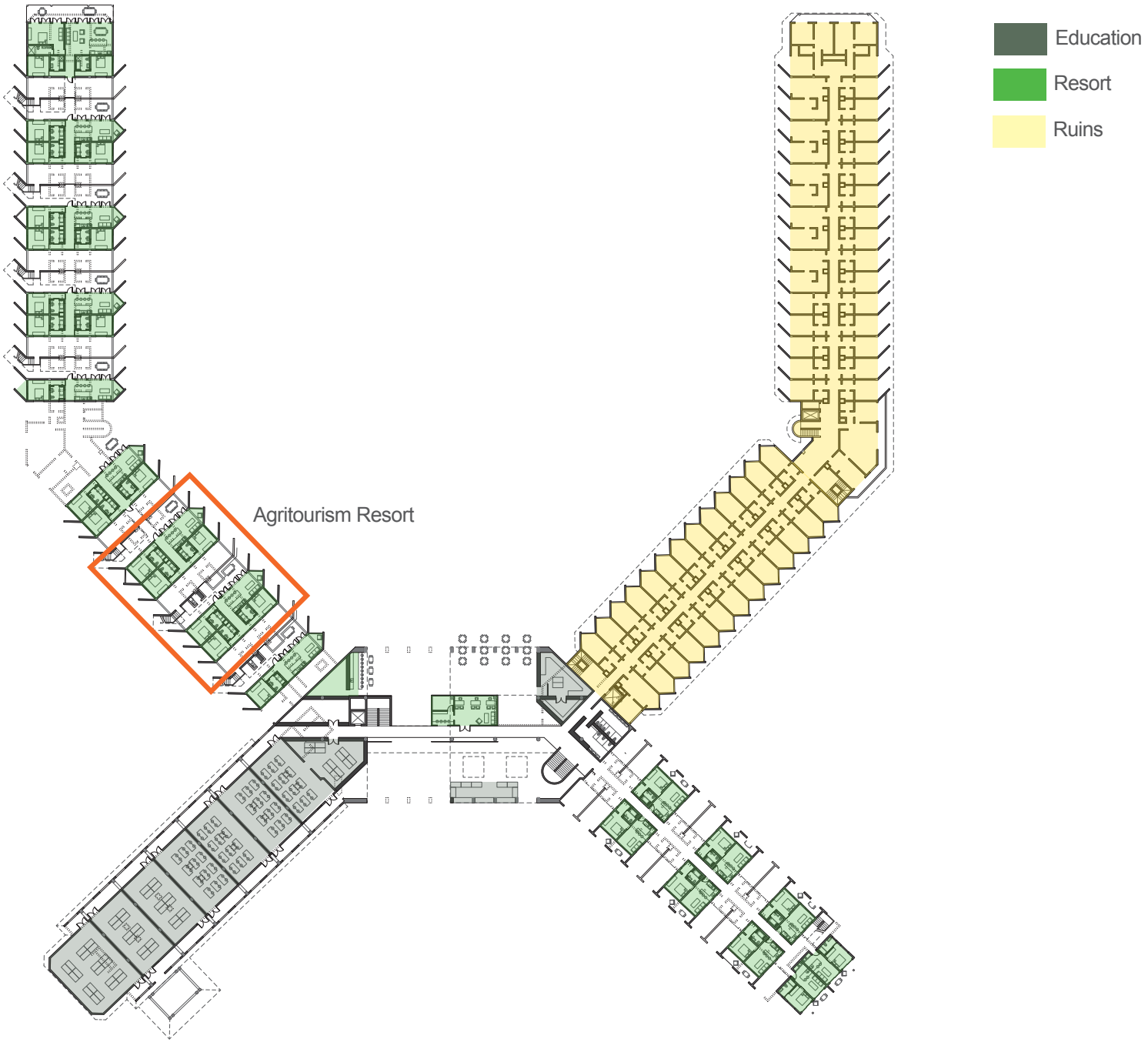
FIGURE 68: Social center third floor plan

THIRD FLOOR

The third floor is divided into two spaces from the demolition cut. The west corner houses the common spaces for the student dorms and connects to the second student form corridor. The west corner is accessed from the main circulation and has no direct connection to the gallery across the gap, making the commons a more private space for the students without obstructing visibility. The gallery space uses the existing concrete structure and is a large, open space that can be used for other events such as Agritourism conferences. The main entrance to the theater seating is accessed from the gallery. Additionally, the new pathway through the ruins is accessed from this space.

FIGURE 69: View of the market

FIGURE 70: View of the restaurant, bar & gallery


Agritourism Resort
Education
Resort
Ruins

RESORT WING

OVERVIEW

The retreat wing consumes the northwest and southeast wings of the existing structure. The southeast wing is divided into five apartment buildings that are accessed by a central open-air corridor and connect to the social center. The northwest wing is divided into nine apartment buildings that are accessed by new, private stairs. The design intentions here are to provide large and more private ocean side units and more economical one-bedroom units on the entrance side.

FIGURE 71: View of the deconstructed resort units the permaculture agriculture is integrated into the agritourism resort

FIGURE 72: Resort wing ground floor plan

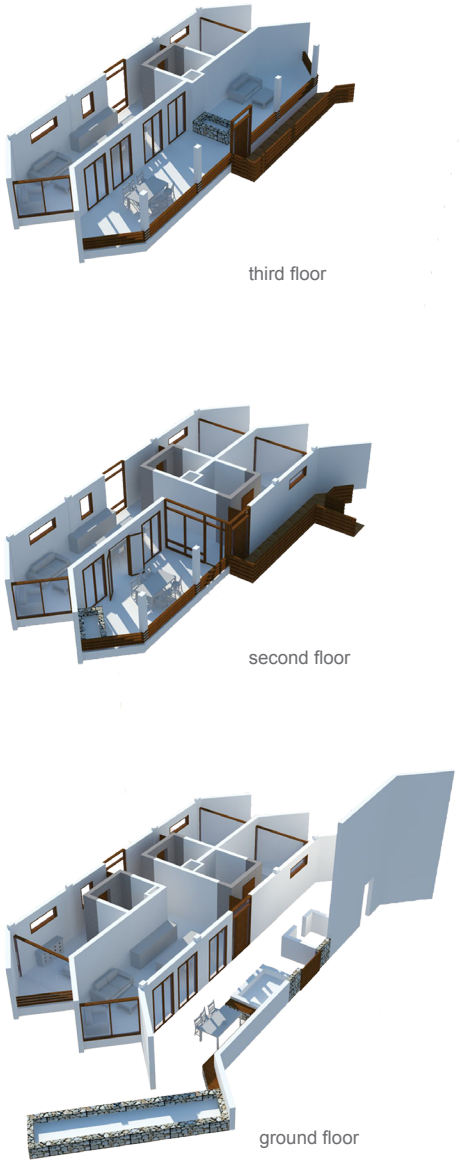


FIGURE 73: Typical apartment unit

GROUND FLOOR

The width of the new apartment buildings consist of one structural bay (two hotel units) and are equal to the exterior spaces created from demolition. The outdoor spaces are divided into a public crossing to the north and private garden for the ground floor unit to the south. The two spaces defined by a four foot garden wall, retained from the existing structure. Within the private garden, the remnants of the demolished bathrooms are reused as an outdoor grill and raised garden bed. The new stairs enclose the space to the left.

FIGURE 74: Resort wing section

The ground floor units are typically three bedroom / three bathroom units with a kitchen and living area. The unit is entered from the north, through a private garden space. The outdoor spaces are placed in the north so that they are permanently shaded from the sun and comfortable.

In any unit, the existing interior was retained as much as possible. The bedroom / bathroom layout is fit within the existing units, with the exception of enlarging the bathrooms. The kitchen and living areas remove the bathroom walls completely.

FIGURE 75: Resort wing second floor plan

SECOND FLOOR

The second floor units are typically two bedroom / two bathroom units with a kitchen and living area. In order to provide the upper floor units with private outdoor space, a bedroom is removed and the kitchen moved to the south side so that the outdoor space is located to the north. The unit is accessed from the new wood stair structure and is shared only with the unit above.

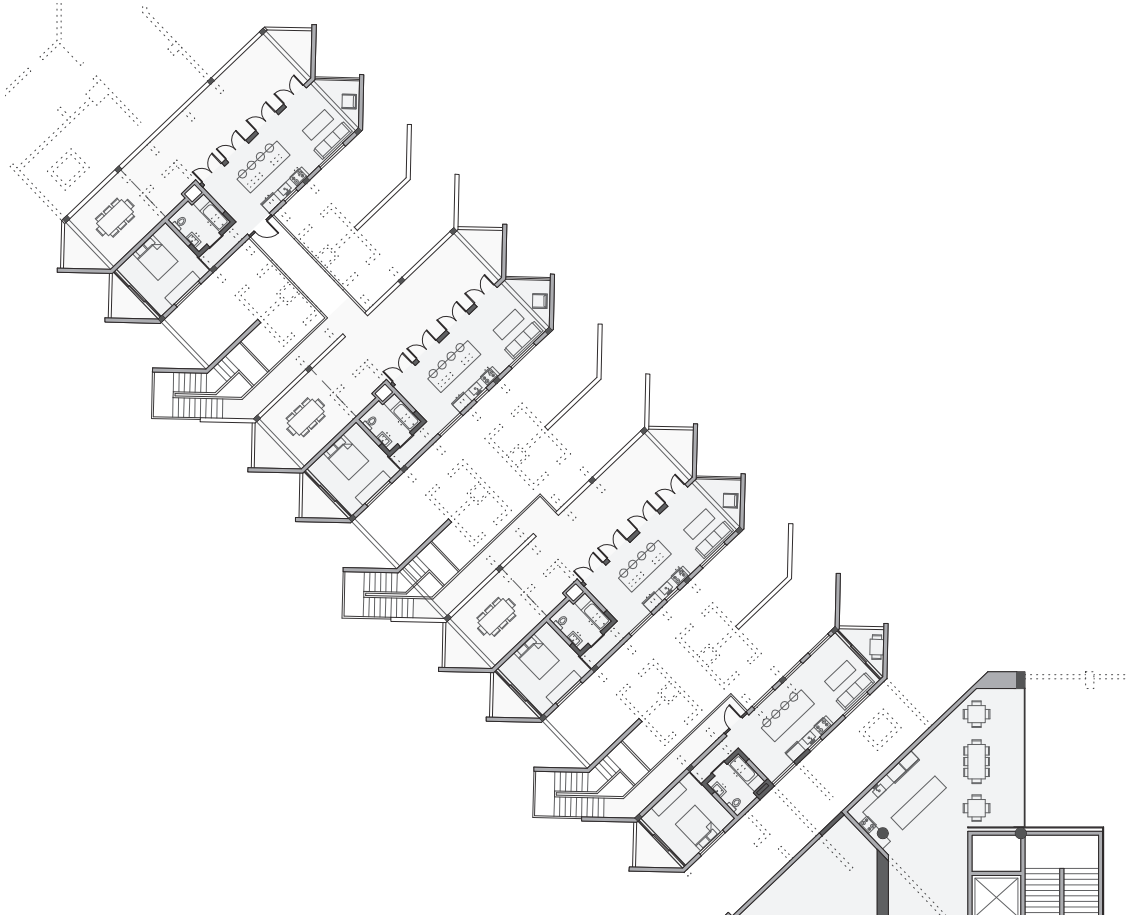


FIGURE 76: Resort wing third floor plan

THIRD FLOOR

The third floor units are one bedroom / one bathroom units with a kitchen and living area. This provides the top floor unit with a large, covered exterior space. The layout can work as a two bedroom unit as well, but for clarity and variety of units they are all represented as one bedroom units.

FIGURE 77: View from ground floor resort unit

FIGURE 78: View of private garden unit

CHAPTER 7: CONCLUSIONS

SUMMARY

This thesis began with the desire to reuse the existing concrete resort building. The fact that the building is an incredibly large structure, especially within its context, and had never been occupied, let alone completed, caught my attention and resonated with my position on the importance of building reuse. Further research on the province of Puerto Plata and the Dominican Republic informed the programmatic decision of introducing an agriculture trade school, resort, and interpretive center. Proposing a Center for Agritourism was a way to integrate tourists and locals without attempting to change how people think and act. A goal of this project was to begin to integrate leisure tourists with locals without trying to change how people act.

DESIGN REVIEW 12.04.12

The design review addressed two major topics to be further developed: 1) how the selected site can relate to the larger context and 2) creating more moments of tension within the site between tourists and locals. Initial comments focused on the site selection and the viability of the program in such a large setting, on a secluded site. The importance of stressing that this thesis was founded on the idea of reusing the selected building became apparent. Although a viable argument was made about integrated tourism being more successful in smaller scale, home-stay projects within existing towns, that was not the intention of this thesis.

There was an important discussion about zooming out from the building and focusing on

interventions within a larger context, most importantly how the selected site could connect to the main road and the towns of Sosúa and Cabarete. For example, in the design the farmer's market engaged the center existing structure with proximity to the students and guests. Relocating this program to the entrance off the main road could create an interface with other people on the island, inviting them to explore the property further and increase food sales for the school.

The comments about creating more tensions between the two user groups and better illustrating them began to address some of the concepts that were not fully flushed out in the project. I feel that the minimal of discussion about the design of the programmed spaces was indicative of the importance of concepts for this project over design specifics. While it was essential to fully redesign the main spaces of the existing building and layout the program in a way that created an interface between user groups, the actual design of the spaces was immaterial. The key moments of the thesis were the juxtapositions between tourists and locals, the described "edge effect" of permaculture. One idea discussed was taking the temporary structure concept for the ruins and relocating the squatters on the property to these structures, creating juxtaposition between tourist and local, permanent and temporary structure.


Take nothing but pictures, leave nothing but footprints, and waste nothing but time.
– Unknown

FIGURE 79: The beach adjacent to the resort

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FIGURE CREDITS

All images were created by or are property of the author, unless otherwise noted.

FIGURE 1: Map from Google Earth

FIGURE 7: Map from Google Earth

FIGURE 8: Map from Google Earth

FIGURE 10: Freitag, Tilman G. “Tourism and the Transformaton of a Dominican Coastal Community.” *Anthropology and Studies of Cultural Systems and World Economic Developmen*t 25, no. 3 (Fall 1996): 225

FIGURE 12: “Hotels.” Dominican Vacations Online, http://dominicanvacations.blogspot.com/.

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FIGURE 14: ”Hotels.” Dominican Vacations Online, http://dominicanvacations.blogspot.com/.

FIGURE 20: Map from Google Earth

FIGURE 21: Map from Google Earth

FIGURE 44: “Urban Outfitters Corporate Campus / Meyer, Scherer & Rockcastle” 01 Dec 2010. *ArchDaily*. <http://www.archdaily.com/92989>

FIGURE 45:“Community-Run Hotel Draws Tourism to Pedernales,” (2008), <http://www.gstalliance.net/index.php?option=com_content&task=view&id=85&Itemid=113.>

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FIGURE 47: David Holmgren, “Permaculture Principles,” Telford, Richard, http://permaculture principles.com/principles.php; ibid.

FIGURE 48: David Holmgren, “Permaculture Principles,” Telford, Richard, http://permaculture principles.com/principles.php; ibid.

FIGURE 50: Map from Google Earth

FIGURE 59: Rochelle. “All About Gabions : Cheap Retaining and Other Garden Features.” In Studio ‘G’

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