
ON RESURRECTING THE TIEMPO MUERTO

Rehabilitation of the Industrial District
Guánica Centrale, Puerto Rico

INTERPRETATIVE ANALYSIS AND RECOMMENDATIONS

PREPARED FOR

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Prologue

From the early days of the Spanish Conquista, sugarcane was one of the staple crops produced in the Caribbean Basin, including Puerto Rico. Post-18th century international demand for the product; the warm climate; the existing unclaimed extensions of uncultivated, pristine land; and the inexpensive, available labor force were powerful incentives for its cultivation. Sugarcane (*Saccharum officinarum*), a native species of the South Pacific,¹ was brought to the Western Hemisphere from Europe via India. Although folklore recites that Christopher Columbus² first introduced the sugary stalks to the Caribbean milieu (Fernando Cortés supposedly followed lead in Mexico), the first stage of development of the industry in Puerto Rico dates to the 16th century. From that moment on, sugar and its by-products – rum and molasses – became intrinsic components of the island’s economy.

According to historians: “Although other crops were grown in the basin, sugar reigned supreme during colonial days and was the main reason for the competition among European powers for possession of the Caribbean islands.”³ Many also believe that the Spanish islands (Cuba and Puerto Rico) did not become export-oriented agricultural centers until after sugar concerns started to develop. As a result, “[t]he Caribbean . . . came to be the classic region of plantation society and development,”

¹ Experts affirm that the plant grew in New Guinea as early as 10,000 to 8,000 years ago.

² Sources vary regarding this information. According to some, Columbus had knowledge of the plant’s agricultural potential as a result of his experience with sugar plantations located in the Madeira Islands. Even if true, it is highly improbable that Columbus dedicated any time to planting during his first brief visit to the island in 1493.

³ Edward E Craig, *Historic Architecture in the Caribbean Islands* (Gainesville, Florida: University Press of Florida, 1994), p 51. While the Spanish-controlled Caribbean islands started sugar cultivation during the 16th century, the English islands initiated the activity later. Barbados was the first in 1640.

becoming “the great laboratory of imperialism in the Americas.”⁴ After the 1898 American invasion, sugarcane cultivation grew exponentially until it became the paradigmatic agricultural activity, and sugar the local economic king. The sweetener truly transformed the whole basin not once, but several times.

The first transformation in Puerto Rico took place during the last decades of the 18th century. Tobacco, the until then staple crop in the island, could be grown in relatively petite farms where a small group of indentured servants provided the labor force. This was not the case with the sugar-producing centers that started to appear at this time. During the 19th century, the minimum profitable size was 300 acres of land and 30 slaves, although there is evidence that some 3,000 plus acres holdings existed. Sugar production needed large plantations as well as a sizeable work force. The natives were by then almost exterminated and slavery became the solution to the problem of the labor force. According to historians, the introduction of slavery to the Caribbean was a direct result of the desire to produce sugar. The maxim seems to have been: the larger the plantation (both in terms of acres and workers), the bigger the profit.

After 1898, American sugar-processing establishments took this idea to heart, providing the stage for the second relevant transformation of the activity in the island. During the early decades of the 20th century, the Caribbean’s second largest such establishment,⁵ both in terms of size and production, was Puerto Rico’s Guánica Centrale. Its commercial control spanned over several municipalities, as well as two islands (Puerto Rico and Santo Domingo). There was no slavery at the time, but the islanders provided an inexpensive labor force. One more time, as was the case during slavery, the life rhythms of hundreds of Puerto Rican families depended on sugar’s manufacturing cycle.

⁴ Ralph Lee Woodward, “The South in the Caribbean” (MS: Presented at The 1996 Porter L Fortune Symposium), 1996.

⁵ In the Basin, only Cuba had a larger production center.

There were, however, striking differences between the old (pre-1898) concerns and the American way of life. When American centrals or *centrales* took the place of the 18th and 19th centuries *haciendas* and *ingenios*, they used a new architectural typology: the company town or worker's colony. This late 19th century idea organized – in an efficient and controlling manner – all aspects of the sugar production process. The world needed and wanted the product, and soon sugar produced in the island centrals was being shipped, not only to the United States, but also to far-flung places, such as Scandinavia and the Baltic states. Its manufacturing had to be carefully monitored, for sugar was not only the stuff that made life sweeter, but also a kind of gold. The company town was the key instrument in achieving high, profitable production.

Even before 1898, for several centuries all over the Caribbean, the pursuit nurtured a particular ethos, a “sugar culture,” one in which Sugar King established its own life rhythms, goals, dreams, and nightmares. After 1898, sugar production was deemed to be such an important activity that, on many occasions, it was perceived as the island's *raison d'être*. Guánica Centrale was the jewel in this King's crown. The New Jersey-based South Porto Rico Sugar Company owned more than just the Centrale. It was the real power behind the throne of Puerto Rico's governorship, prompting don Pedro Albizu Campos to declare: *El gobernador americano es un títere del administrador de la Guánica. ¡A quien hay que matar no es al gobernador sino al administrador de la Central Guánica!*⁶

Throughout the centuries, in a similar manner as cotton growing in the United States' South and the operation of the Potosí mines in Bolivia, sugarcane cultivation and trade has been related to practices that can be described as exploitative at best and inhuman at worst. The activity is shamefully associated with both the slave trade and the oppression of the less privileged who, for all practical purposes, during the first decades of the 20th century, were as downtrodden as the slaves had been during the previous century. It is interesting to note that, to this day, sugarcane cultivation – the

⁶ Quoted in: Luis Muñoz Marín, *Memorias 1898-1940* (San Juan de Puerto Rico: Universidad Interamericana de Puerto Rico, 1982), pp 63-64.

paradigmatic example being Cuba – can be darkly associated with the oppression of many by a few (in Cuba’s case by the government).⁷

The Spaniards introduced sugarcane cultivation to the island and during the 18th and 19th centuries absentee owners controlled many of the most important manufacturing centers. This pattern repeated itself during the heyday of the activity, after 1898. The only difference was that the absentee owners were now Americans. Because of this, the manufacturing of the product in the island is not only associated with infamous practices such as slavery but also with colonial control, whether European or American.

Finally, as evidenced by the closing of the Centrale in 1983, after several years of slow decline, the activity became synonymous with the Commonwealth [*sic*] of Puerto Rico’s lack of management competence. In spite of the fact that the government had bought most of the privately owned holdings all over the Puerto Rican archipelago some decades before and that it created a special agency, the Autoridad de Tierras, to handle local sugar concerns, the bureaucrats failed to grasp that there was no future in the centuries old trade, as traditionally understood. The market responded enthusiastically to the less expensive substitute products and cane sugar became a luxury item. As a result and after much in-fighting and enormous financial losses, all the government-controlled centrals closed.

It is not surprising that the once almighty sugar culture mentality has almost all but disappeared from the island’s panorama. The huge centrals have closed one by one: (Coloso (Aguada), Aguirre (Guayama), Plata (San Sebastián), Mercedita and Coloso (Ponce), and Roig (Yabucoa), leaving many to believe that it is impossible to have healthy economic sugar production without outright workers exploitation or mismanagement. Is it possible that Puerto Rican sugar culture is truly on the verge of extinction? Only time will tell for sure.

After each central closed, most of the sites were abandoned to their fate. Impotent to do anything about the administrative and mercantile aspects of the activity, the government was even less

⁷ It is common knowledge that, until very recently, the Cuban government measured its yearly “success” in terms of

competent in preserving the sites and buildings that once framed the pursuit on which so many lives depended upon. As a result, most of these enclaves, including Guánica Centrale, fell prey to deterioration and dilapidation losing many of their distinguishing components. The few embattled architectural artifacts that still exist are on the verge of disappearing with every single day that goes by.

This work deals with the industrial district of the once mighty Guánica Centrale established by American entrepreneurs in 1901 in the *ensenada*,⁸ next to the bay and town of Guánica in the southern coast of the island. The enclave was organized as a company town, an independent community where Sugar King reigned supreme from 1903 until 1981 (when the first and last *moliendas* took place) and where apartheid was the way of life. The company town – also known by the name of Ensenada – was responsible for more than just economic growth in the area. The American corporate towns in the island, as was also the case with the military bases, generated important social and cultural impacts that need be taken into account if one is to understand the historic and cultural significance of such sites in a holistic manner.

Many of the basic components of the Centrale's industrial district have been lost irreversibly. The remaining ones are in serious danger of disappearing altogether. The time has come to organize the rehabilitation process of what is left of this nucleus that once, for all practical purposes, ruled the southern portion – if not all (as Dr Albizu believed) – of the island. The primary goal of this study is to better understand the architectural artifacts that contribute to the cultural significance of this site and to offer recommendations as to which ones should be included in the rehabilitation plan for the site. Their significance is distilled by means of their cultural interpretation.

The basic notion underlying this interpretative analysis is that architectural artifacts are repositories of cultural significance. In this particular case, they represent individual phenomena and also the Centrale's *genius loci* (spirit of place). The company town, whether understood as originally

the sugarcane crop.

⁸ *Ensenada* is the Spanish term for a kind of bay. Since time immemorial, the western part of Guánica bay has been known by this name.

conceived or by means of the remnants that still exist, in its totality or in small districts, is a cultural phenomenon that impacted in more ways than one Guánica, Puerto Rico, and the United States. As explained in Chapter I, this particular perspective allows not only to better understand the site and its historical significance but also to face the task this generation must shoulder: preserving, restoring, and rehabilitating this very significant cultural locus.

The author wishes to thank Mr Christopher Young and Ms Rosa de la Sota, YSA Architecture Principals, and also Mr Hernán Hernández, Hernández y Alayón Principal, for their unfailing interest in the rehabilitation of this exquisite and unique tesserae of the island's cultural mosaic. She thanks them all for confiding in her this work but most particularly for their sensitivity, respect, and concern towards both the intangible and tangible characteristics that mark Guánica Centrale's socio-historic significance. The author also wishes to thank Mr William Pérez, Mr Ángel A Quiles and Mr Samuel Vélez, from the Autoridad de Tierras, for their help during the research phase of this work.

1

“La yerba del diablo”

ON INTERPRETING GUÁNICA CENTRALE

Sugarcane cultivation endowed Puerto Ricans with more than just a historic anecdote of a now almost forgotten economic activity. The concern provided a complex and distinguishable heritage, donating to the island an impressive corpus of architectural and archaeological resources. It also fostered a rich socio-cultural legacy amply expressed by means of literature and language. Words, such as *zafra*, *bagazo*, *libreta*, *molienda* and *tiempo muerto*, transformed themselves into philosophical concepts that reflect the activity's profound impact upon the collective memory. According to Heidegger:

Who gives us a standard at all by which we can take the measure of the nature of dwelling and building?

It is language that tells us about the nature of a thing, provided that we respect language's own nature. . . . Man acts as though *he* were the shaper and master of language, while in fact language remains the master of man. Perhaps it is before all else man's subversion to *this* relation of dominance that drives his nature into alienation.⁹

If we follow this line of thought, the appropriation of sugar culture related language by every day life provides us with an important social clue regarding the real impact the cultivation of the beautiful white plumed stalks carry for most islanders.

Tiempo muerto (off time), for example, implies much more than just a break in the sugar cane industry work routine. During the six long months, when no work was forthcoming, many truly courted death. Time (*tiempo*) was truly dead (*muerto*) because there was no hope; many workers had

no work and, thus, no money. Bagasse (*bagazo*), in turn, was used not only to describe crushed cane but also the destitute, those abandoned by fate and society. During the *tiempo muerto*, many workers became human bagasse, excess baggage, abandoned to their fate. These words and phrases, as many others, have come to mean much more to Puerto Ricans than the dictionary's official pronouncements. Such was the power of sugar production in the island.

By analyzing spoken and written language usage from this special perspective, Heidegger is proven right: language shapes and masters our perception of life, for it gives forms to our constructs, desires, and dreams. That is the reason why one of the best ways to understand sugarcane cultivation concerns in Puerto Rico is by means of literature, one of its harshest and most consistent critics. From Abelardo Díaz Alfaro's *El tiempo muerto* to Rosario Ferré's *Eccentric Neighborhoods*, writers have dwelled on the activity's powerful social and cultural impact. Ms Ferré described its impact in the following fashion:

He had believed that San Ciprián, coming four short years after San Felipe, was sugarcane's *coup de grâce*, that the *yerba del diablo*, or devil's weed, had been stamped out for good. The island would finally rid itself of the absentee sugar consortiums, as well as of the exploiting *criollo hacendados*.¹⁰

Why should we concern ourselves with such dense arguments? What does Heidegger, Díaz Alfaro or Ferré have to do with the rehabilitation of Guánica Centrale's industrial district? For one and to keep it simple, because it is impossible for most islanders to remain impassive when the *yerba del diablo* (the devil's weed) is mentioned. The crop symbolism transcends its utility for it is an icon that represents much, particularly things gone wrong. This special appreciation – which is negative in most cases – spills over the architectural artifacts that once framed the concern. The architectural ruins present at the Centrale's industrial district are illuminated by a very special kind of historic beam. If we are to adequately interpret their cultural significance, we need to understand the connection the activity had to the island's ethos.

⁹ Martin Heidegger, "Building, Dwelling and Thinking," *Rethinking Architecture A Reader in Cultural Theory*, Neil Leach (ed), (New York: Routledge, 1997), p 100.

Rehabilitating the past

Architecture, like the printed or spoken word, is a language. While silent, it does something the word is unable to do: create three-dimensional artifacts that are symbols of our perception of life. The architectural typology of the sugar central, like the many special language concepts the enterprise gestated, is truly an image that embodies: “the dreams of society,”¹¹ in this particular case, Puerto Rico’s. In interpreting the Centrale’s architectural artifacts, a most peculiar socio-historic road is traveled, one that touches upon Spanish, American, and Puerto Rican societal goals, aspirations, dreams, and, also, nightmares.

Therefore, the ruins of the former Ensenada company town are more than just remains of old, abandoned buildings. They are evidence, the only physical evidence we have, of things that are no more, of the transformations – both positive and negative – experienced by the *ensenadeños* and many islanders during the past century. This architectural group, an amalgam of ideas from four different civilizations: Amerindian, Spanish, African, and American, speaks, silently yet eloquently, about Puerto Rican culture. Umberto Eco has explained that culture is really a form of communication. Guánica Centrale, in spite of the fact that it was – at first glance – the product of a different society, is part of the cultural language that gave shape to the island. These architectural remains are mute witnesses of the islanders’ younger and more naïve past. They are embodiments of simpler, bucolic, and more innocent times, when need made the locals accept things they do not any more. Part of the cultural significance of the site is directly related to these aspects.

Curiously, the Centrale – even in its extremely deteriorated state – resonates loudly in the collective memory. The industrial district with its imposing physical remains not only generates powerful recollections but it also allows some to construct or nurture romantic fantasies that, at times, cloud our understanding of the site and its cultural significance. Depending on each point of view and

¹⁰ Rosario Ferré, *Eccentric Neighborhoods* (New York: Farrar, 1998), p 208.

¹¹ Siegfried Kracauer, “The Hotel Lobby,” *Rethinking Architecture*, pp 51-64.

personal experience, the company town is perceived through either a rose-colored or extremely dark viewing glass. In this respect, public perception of the Centrale differs from that of most “historic monuments.” Architectural cultural resources are usually accepted in a non-judgmental fashion. We view them with awe, admiration and, in many cases, even with affection. The Centrale, however, is a different kind of icon. Like other architecturally related typologies, such as Southern plantations in the mainland, it represents a past that, while extremely beneficial to a few, was forged upon the manipulation of the downtrodden. In spite of the fact that this was also the case with 18th and 19th centuries sugar enclaves, reaction to the Centrale is not as passive as to pre-1898 historic examples. Although it is simplistic (some would even think oxymoronic) to qualify the past as “good” or “bad” that is exactly what most do when confronted with the Centrale.

The past is simply [*sic*] the past. That is the reason it has rightly been compared to a “foreign country.”¹² We are privy to some of its secrets and privileged to find enjoyment in its contemplation, yet we seldom understand it completely. As with foreign countries, we do not have the standing to force upon it our way of thinking. However, if this is the correct attitude, why do so many *ensenadeños* and islanders qualify the past in this fashion? According to Gaston Bachelard¹³ some buildings and sites have the power to generate concentric circles of cultural significance. This is certainly the case with the industrial district that once ruled the social, political, and architectural entity known as Guánica Centrale. From this now-abandoned field, such circles are organized. Some of these imaginary concentric figures speak of things that no longer exist because they belong to a Puerto Rico that is no more. That long-gone culture is only real in old photographs and writings and in the minds of those whose lives were directly touched by it.

By interpreting Bachelard’s circles, understanding can be gained of the *lacunae* that plague the “foreign country” we define as the past. Guánica Centrale is a kind of portal, the center of many such

¹² David Lowenthal, *The Past is a Foreign Country* (Cambridge: Press Syndicate of the University of Cambridge, 1985).

circles, a place that allow us to understand the ethos of the “foreign country” that created these buildings. However, in order to understand and correctly interpret the cultural significance embodied by the manufacturing structures at the Centrale, in order to comprehend their silent language, some of the Bachelard-type circles have to be deconstructed. They are, in a sense, askew geometric figures that cause confusion and, therefore, make correct, non-prejudiced understanding difficult.

Before such deconstruction takes place, it is necessary to understand that, by interpreting the Centrale’s industrial district, past and present Puerto Rican “reality” is analytically and critically studied. The architectural artifacts the site contains provide physical shape to these realities. To further complicate matters, they also possess a reality of their own. In other words, the structures at the site possess their own architectural reality. Noted architectural critic Peter Eisenman defines architectural reality as: “What we reassemble after dissembling the illusion of beliefs, stories and norms of the traditional past.” How do we achieve this? By deconstructing and reconstructing the past. The *casitas amarillas* (Spanish name for the workers domestic dwellings at the Centrale, always painted yellow), for example, speak of two different realities as to what a family was all about in 1902 and today. However, they also embody an architectural “reality” of their own. Contrasting and comparing all three “realities,” the askew Bachelard-type circles are firmly and correctly centered again.

In order to achieve this, it is imperative to deconstruct some of the illusions, beliefs, and legends that have been circumscribed around the Centrale. Why is there a need to do this? Noted French contemporary philosopher Jacques Derrida explains: “To be liberated, we would need to deconstruct the relationship of the built environment and culture, since the built environment and culture are built things; that is, our culturally built world is a sham of social, historical embodiments of the metaphysics of presence.”

We deconstruct by means of displacement, a violent situating of difference. Displacement aims to reverse the relationship of binary terms and call into question the preceding system. The strategy is to

¹³ Gaston Bachelard, *The Poetics of Space The Classic Look at How We Experience Intimate Places* (Boston: Beacon Press), 1994.

subvert the system of sham meaning and operation, to refuse the falsely comforting reconciliation or identities by which the tradition has swallowed difference.¹⁴

We need to disassemble myths woven around the Centrale in order to better understand its reality in holistic fashion. By the same token, we have to deconstruct society's artificial and superficial constructions about the company town in order to correctly interpret its cultural significance.

Deconstructing cultural constructions

One common cultural construction regarding the Central is imbued in the interpretation that the company town framed a black and white world, one in which the Americans were the "bad guys" and the locals the "good guys." Following this line of thought, some believe that the first group "invaded" the island again in 1902, established a colonial hold (parallel to the political one many believe still exists) by means of the Centrale, and forged commercial concerns with just profit in mind. They accomplished all these goals by abusing native workers. In this much-repeated scenario, locals are the victims of the bad "foreigners" and the enclave an example of American colonialism.

It is interesting to note that some proponents of this cultural construction, in an effort to strengthen their position, fail to recognize that the commercial ties that fostered colonial dependency between the United States and the island existed long before 1898. (This "reality" is analyzed in Chapter 2). True, colonialism reared its ugly head in Guánica, just as it did in every sugar processing concern owned by European interests during the 18th and 19th centuries. It is also true that the American administration at Guánica implemented apartheid practices, thus, demeaning the natives. However, a parallel situation existed before 1898 for it is known that slavery was practiced in Puerto Rican *haciendas* and *ingenios* for centuries. There is truth (ample one at that) in stating that only a few benefited from the Centrale's production. Cheap labor provided by downtrodden islanders generated vast sums for the rich owners. However, this was also the case before 1898. Just a handful of

¹⁴ Robert Mugerauer, "Derrida and Beyond," *Theorizing a New Agenda for Architecture An Anthology of Architectural Theory 1965-1995* (New York: Princeton Architectural Press: 1996, 184-197), pp 189-190.

hacendados, many of them absentee owners, benefited from the work of thousands of enslaved human beings, including children.

There is no justification for such practices, whether pre or post 1898. In order to correctly interpret the architectural resources at the Centrale we need to deconstruct the idea that abuses happened solely within the American centrals. Unfortunately, such practices were traditional in the island whether Americans, Spanish, French, or locals owned the sugar-producing centers. For several centuries, the industry exploited people – even to the extent of enslaving them – so that a few could profit. Exploitation of the downtrodden did not start in 1902; American commercial concerns did not have a monopoly on this unfortunate practice. By 1898, the island had an infamous history regarding this issue; the island’s slate was not clean prior to this date. In order to deconstruct biased concepts we should remember that there are no generic “bad” or “good” guys. Any human being, whether American, Spanish, French, Chinese or Puerto Rican, who knowingly profits from the suffering and exploitation of others is a “bad guy.”

Just as there are no generic “good” or “bad guys,” there is no such thing as a “good” or “bad” past, much less “evil” architecture. Such blanket preconceptions are the result of polarization. This kind of thinking is organized along the following mental path: since the administrators were the “bad guys,” any service provided by the Centrale – particularly, architecture – was also “bad” and, hence, demeaning. For example, it is often repeated that at the Centrale architecture was a symbol of your place in the corporate ladder that ruled the company town. While the *casitas amarillas* were small and humble, and the Puerto Rican white collar employees’ houses were medium size, the houses inhabited by the Americans (*casas de los americanos* or *casas de los jefes*) were big, located along the main road and almost luxurious in their morphological organization and aesthetic aspirations.

Architecture has always been – whether accepted or not – a measure of the wealth and social standing of its inhabitant. Yes, the *casitas amarillas* were indeed small and humble if compared to the *casas de los americanos*. Maybe all people deserve to live in larger, more aesthetically conceived

domestic artifacts. However, the fact that rich people live better than most is an inescapable, even if sad, reality of life. Spanish 18th and 19th centuries palatial houses in old San Juan were quite different from the places the poor inhabited. The *casa grande* (“big house”) present in most 18th and 19th centuries Puerto Rican *haciendas* or *ingenios* was quite different from the *bohíos* or *ranchitos* inhabited by the *arrimaos* (indentured servants) and the slaves. To this day, residences in Guaynabo suburbs bear a striking difference to public housing complexes. The same is true of people in the upper rungs of the corporate ladder. They have grander offices, and more expensive cars and luxurious houses than the rest. It is a fact, albeit unfortunate, of life. The Centrale did not introduce this kind of contrast to the island.

Some miss the point because seldom is the architectural “reality” of the *casitas amarillas* analyzed. Even if small by today standards, they were a vast improvement to the artifacts the vast majority of the population called home during the first half of the 20th century. Historic photographs of El Fanguito and similar areas, located in the San Juan Metropolitan Area, show slums dotted with hundreds of shacks, *ranchitos* or *bohíos* that sported just one room, sometimes inhabited by more than five people. The *casitas amarillas*, in addition to two bedrooms, were designed with the unheard (at the time) of luxury of a bathroom area.

Because of the polarity that usually ensues when analyzing by ascribing “good” and “bad” values to architectural artifacts, some fail to notice that the ideas and behaviors represented by means of the architectural artifacts – once analyzed impartially – have been part of humanity’s excess baggage for a long, long time. This is not to say that one should justify the unjustifiable. However, understanding the historic and cultural significance of architectural artifacts requires the deconstruction of biased moral judgments that cloud the interpretative process and the just and partial analysis of the “foreign country” we call the past.

The author, upon encountering apologies related to the good, humble and abused locals (who, after all is said and done, were not forced to work at the Centrale, and were provided with services and

houses that, when compared to the *bohios* scattered all over the island, can only be described as adequate and substantial) often wonders why the same concerns are not shown for the slave population that was forced to work without pay, lacking the most basic of rights and services. If we find fault with the administration of the Centrale, should we not also find fault with the local system that allowed such inhuman treatment of thousands of beings for centuries? When and if passing moral judgment upon the past, it would do us well to remember Aristotle. According to the Greek philosopher, any interference with nature is unjust,¹⁵ regardless who perpetrates it. The Americans involved in the oppression of hundreds (by providing unjust working conditions and allowing apartheid stances) are at fault, as was everyone, including Puerto Ricans, who allowed slaves to work in the cane fields for the sake of profit.

Methodology design

The methodology devised for this study took into account the need to deconstruct myths, whether social or architectural (as the ones mentioned above), so that true cultural significance of the site and its architectural artifacts could be adequately interpreted. This study analyzes architectural artifacts from a professional perspective. Therefore, it avoids to morally categorize the three dimensional objects that housed the different manufacturing activities at the Centrale.

The goal of this interpretative work is to better understand the architectural artifacts at Guánica Centrale's industrial district and to offer recommendations regarding which ones should be included in the rehabilitation of the site due to their significance as cultural components. Usually, in most projects, this task is preceded by a detailed inventory and a so-called historical context analysis that interprets the broad patterns of cultural significance characteristic to the property. According to The National Preservation Act of 1966,¹⁶ as amended in 1992, a historical context analyzes and interprets: “[T]hose patterns, themes, or trends in history by which a specific occurrence, property or site is understood and

¹⁵ Quoted in: Daniel Boorstin, *The Seekers The Story of Man's Continuing Quest to Understand His World* (New York: Vintage Books, 1999), p 66.

¹⁶ The author uses this legal frame of reference since it is legally effective in the island and because there are no local guidelines for architectural cultural resources interpretative studies.

its meaning (and ultimately its significance) within history or prehistory is made clear.” Because of its inherent traits, such an analysis is the cornerstone of cultural resources identification, evaluation and management activities.

The author lacked such work as a basis for her analysis. Under any other conditions, this would have proven to be an insurmountable obstacle. However, during the past six years, she has worked in several projects related to Guánica. Therefore, she has gained a profound understanding of the historical background that made possible the development of the Centrale and its interaction with the Guánica social, political, and architectural contexts. In 1996, she collaborated in an architectural inventory¹⁷ of the urban core of the town of Guánica. This was followed by an interpretative study of the Guánica Spanish lighthouse,¹⁸ another one dealing with the Civilian Conservation Corps (CCC) intervention at the Guánica Dry Forest, including the Fort Capron structure,¹⁹ and the National Register nomination draft of the invasion landing site. Finally, she co-authored a book²⁰ that examines the urban and architectural history of Guánica.

With this general background, she was able to design the present study’s methodology, which allowed her to analyze and interpret the cultural and architectural patterns present in the architectural resources at the Centrale’s industrial district. This was done from two perspectives. First, the site is understood as a fragment of a larger culturally significant type (an American sugar company town in the island). Second, the architectural artifacts are interpreted within their very own typological, morphological and architectural contexts. In other words, the industrial center is construed as a distinct

¹⁷ Arleen Pabón; Eduardo Regis and Olga Torres, *Inventario de los recursos culturales arquitectónicos del municipio Guánica* (San Juan de Puerto Rico: State Historic Preservation Office, Office of the Governor, 1996).

¹⁸ Arleen Pabón, “The Guánica Lighthouse: An Interpretative Analysis” (MS: San Juan de Puerto Rico, 1998). Prepared for the UMA Group, Ottawa, Canada.

¹⁹ Arleen Pabón, “Taking the *Fiesta* to the Forest: The Civilian Conservation Corps and Puerto Rico Interpretative Analysis of Guánica’s Camp Borinquen and Fort Capron” (MS: San Juan de Puerto Rico, 1999). Prepared for the UMA Group, Ottawa, Canada.

²⁰ Arleen Pabón Charneco and Eduardo A. Regis, *Guánica: El origen de su memoria* (San Juan de Puerto Rico: State Historic Preservation Office, 1996).

unit that was also part of a larger entity (the company town). In addition, the artifacts are understood as individual architectural pieces.

The following activities were undertaken personally by the author in order to create this study: archival research, field survey, data analysis, interpretation, and, finally, report preparation. One of the most important determinants (and limitations) of this study was that time was of the essence. This was due to the fact that the client is interested in presenting this assessment to the Planning Board as soon as possible. As a result, the author had approximately four weeks to carry out not only research work but also analytical and interpretative activities, including visits to the site and the writing of this report.

Because she has worked on so many Guánica-related projects and has carried out extensive research activities at such centers as the Colección Puertorriqueña of the University of Puerto Rico General Library, the Archivo General de Puerto Rico, the National Archives (Washington DC and Maryland), among others, she believes that the fact that no new visits could be scheduled (due to the limitations in time) does not pose any significant problem to the correct and professional interpretation of the industrial district. In addition, as part of the methodology design, YSA Architects carried out research work at the Archivo de Arquitectura y Construcción of the School of Architecture, University of Puerto Rico. The author, in collaboration with Mr Christopher Young, planned the strategy that guided research at this center. She reviewed all historical material gathered by YSA Architects, and also visited the Autoridad de Tierras archives (Santa Rita, Guánica). She spent three days at the site, analyzing each one of the architectural artifacts at the industrial district. This was not her first visit to the site; she has visited it on several occasions during the past six years and spent several hours some months ago analyzing the place with the YSA Architects Principal and other consultants.

During the visits to the industrial district, visual reconnaissance and photographic inventory activities were carried out of all architectural artifacts. The author took the customary field notes, recording types of buildings and artifacts, including special aspects present in some. During one of the visits, personnel from the Administración de Tierras accompanied her. They clarified doubts and

provided information on specific buildings and their original use. These visits, albeit furtive at times due to the delinquents that frequent the place, were extremely important for they enabled the author to better understand the buildings, particular their present state of integrity. After the three days field trip, she spent much time analyzing the gathered data and comparing her original ideas on the subject and the architectural drawings found with what she was able to directly experience at the site. The visits also provided an opportunity to compare the enclave with other company towns the author has visited, such as the Colonia Güell in Spain and Pullman City in Illinois.

She figured her first task regarding the interpretation of the site was to understand the sugar culture in the island, as well as the development of the architectural typology that framed it. As a result, a short description of how architecture and sugar intersected is included in the present study. Although this work concentrates on the property owned by the client (the industrial district), the team and the author never lost sight of the fact that the site was once part of the entity known as Guánica Centrale. This is the reason the methodology design included some investigation into the company town morphology historical development. A brief analysis of this unique type is included in recognition of the impact the idea had regarding the Centrale's organization.

Then came the task of deconstructing certain myths and ideas related to the Centrale (some are mentioned in the first part of this Chapter) in order to make sure the analysis of the site was done in an unbiased fashion. In order to accomplish this and whenever possible, the architectural artifacts were studied within the context of their architectural reality. In the third place, after visiting the site, a list of the character defining and contributing resources was generated. These are the structures the author is recommending undergo rehabilitation. Federal guidelines for determining cultural significance and for the rehabilitation of historic structures were used as a frame of reference. Finally, the author developed some general recommendations that can be taken into account so that the rehabilitation process of the industrial district is done in an adequate and sensitive manner, in keeping with the site's cultural

relevance. All these activities and stages guarantee that the site was interpreted from a cultural, historical and architectural perspective.

On things unseen

Consideration of intangible components of site significance was not within the scope of this work. Many countries have started to take into account this important aspect of the cultural heritage. Although in the United States the national landmark status at times gives appropriate coverage to this kind of significance perspective, the National Register makes no provision for it. Still, the author feels duty bound to mention that Guánica Centrale has a powerful *genius loci*. In other words, it is not an ordinary site, even if every structure was removed from it.

Not only is there ample evidence of prehistoric and historic archaeological sites located close to the industrial district, consideration that the area was a component of the Ensenada company town, the first of its kind in the island, needs to be taken into account. Furthermore, the Centrale is located across one of the island's most relevant historic sites: the invasion-landing place where on July 25, 1898 American troops first entered the island. Because the Guánica bay served as portal for this act, the second most relevant social transformation of the island, any development within the area has the potential to impact in more ways than one its cultural significance. The author is aware that no such recognition is existent nowadays. The monument [*sic*] built some decades ago to mark the invasion site is in a sorry state of maintenance with discarded tires, rotting wood and darkly polluted water surrounding it. It is unfortunate that the government and the people have failed to realize the significance of this locus. Ours is not to reason why but to point out realities. Whether the general public and the government recognize it or not, the site is one that possesses a great degree of cultural and historic relevance. The author hopes that the present proposed project will be but a first step in the complete and total rehabilitation of Guánica bay.

One of the most significant intangible components of the *genius loci* of the site is the sense of community most residents of the former company town experience. The Centrale is gone but the Ensenada community is very much alive. It is certainly outside the scope of this work to deal with this aspect but the author recommends it is given detailed thought and analysis in a near future.

Miranda warnings

There were important limitations that shaped – in one way or another – this study’s methodology, particular approach and, finally, the work itself. In the first place, since time was of the essence, only limited historical research regarding the Centrale was carried out. Another important obstacle is that it was dangerous to visit the site in the usually detailed fashion the author is accustomed to, due to the criminal activity that apparently takes places within. Another relevant limitation was that no historical or architectural context study of the site has been generated. This situation created some lacuna in terms of the interpretative activities. This “mirandization” is offered to better explain the complete frame of reference of this work; it is not to be taken as a personal excuse for any shortcomings.

2

“Honey without bees”

SUGAR CULTIVATION, ARCHITECTURE, AND PUERTO RICO

During the 4th century BC, Nearchos described sugarcane growing by the Indus River as “honey without bees.”²¹ This is one of the first of many historical descriptions comparing sugarcane juice to honey, the most common sweetener known to humans before the invention of sugar. Until the advent of the product, ours was a world that lacked jams, fruit preserves, and many other such treats we consider staple foods of our diet. There is historical evidence that other sweeteners were used, such as date and fig syrup, grape juice and, even, malted grains. The main disadvantage present in most of these was that their production was limited to specific geographic locales. There were, for example, no dates or figs in the northern part of the continent and no grapes in Britain and in the Scandinavian region. Not taking into account the fact that it is extremely difficult to sweeten tea or coffee with grape juice (even if it is available to you), only sugar dissolves without leaving an aftertaste. Of the above-mentioned sweeteners, only sugar is truly, purely, “sweet.”²²

Cultivation of sugar took some time to reach Europe. Although Persia grew the stalks by the year 500, Egypt followed suit two centuries later, in 710, followed by Spain in 755, and Sicily in 950. Crusaders are credited with expanding the continent’s understanding of its possibilities. At this time, the product obtained from the canes was known by the Greek name of *saccharum in panibus* (sugar in

²¹ Nearchos’, one of Alexander the Great’s admirals, full description reads: “A type of reed by the River Indus that yields honey without bees.”

loaves). An analysis of the origin of the word “sugar” provides evidence of the “route” discovery of the crop took. One of the first words used to describe it was Sanskrit *sarkar* (a kind of grain), which became *shekar* in East India, and later *al zucar* in Arabic. The Arabs introduced sugar to the continent via Spain and from their word we get: *azúcar* (Spanish), *sucre* (French), *Zucker* (German), and, finally, sugar (English).²³

At first, the crystals were considered a luxury, a spice, and a medicine that, supposedly, helped digestion. This is the reason Queen Elizabeth I reputedly sprinkled all of her meals, including meats, with sugar. The other one was related to the fact that, for many, sugar was a symbol of aristocratic wealth and power. During the Renaissance, it was as highly priced as pepper, saffron and cinnamon, three of the most expensive spices.

By the 16th century, Antwerp was the most important center of sugar production, although by the 17th century Amsterdam too had dozens of refineries. During the next century, two events made demand for the product grow. In the first place, many monasteries closed after the Reformation in northern Europe. These centers were the main producers of honey, a by-product of bee keeping, an inexpensive way to obtain wax for candles. As honey became scarce, some kind of sweetener was urgently needed. In the second place, there was an ever-growing demand for chocolate, tea, and coffee. Since honey was in short supply, sugar became an indispensable condiment. As time went on, from a luxury only few could have, it became something the masses demanded.

Sugarcane cultivation and sugar production reached Sicily via Spain. The Italian island is credited with the invention of the roller mill similar to the ones used in many Caribbean *trapiches* to squeeze the cane juice from the 16th century on. The *trapiche* was the paradigmatic architectural typology during the early stages of development of the industry in America. A mule or ox (it was also common in Sicily to use men) treaded in a circle making the grinding stone work. As a result of this

²² The issue of aftertaste is still, according to some, valid. This is the main reason many people are able to detect the difference between cane sugar and all other sugars.

²³ When crusader Albert von Aachen became acquainted with the product in Tripoli he called it *Zukra*.

innovation, during the 18th century, sugar refineries existed not only in Antwerp and Amsterdam but also in most European industrial centers, such as Hamburg and London. In the southern part of the continent, the Venetians were considered the main traders of the product, specializing in both the raw and refined versions.

One historic description of the working conditions inside these places reads as follows: “[T]he men who worked there being blackened by the smoke from the fires, dirty, sweaty and scorched, more like demons than men.”²⁴ The writer described the experience of visiting a sugar-manufacturing center as entering the Forge of Vulcan. Europe was not the only location where workers dedicated much time and energy to the backbreaking task. Mirror (if not worse) images were played out in the sunny Caribbean. In spite of these harsh realities, there was an ever-growing demand for sugar.²⁵

The New World, with its vast extensions of agricultural land, mild climate, and cheap labor was the answer to all sugar related prayers. Originally, the natives were used as the primary labor force in the *trapiches*. (See Figure 1.) After their extermination, African slaves took their place, allowing the huge *ingenios* or *haciendas* to become a reality. In the Caribbean, sugar production in large quantities went hand in hand with a capitalist plantation system. The system’s intent was to produce a highly commercial crop while braving the hurricanes, floods, droughts, plagues, and insect pests that characterized the Basin. In order to make some profit in these isolated locales, an archaic and inhuman form of labor (slavery or indentured servants) was established. In the island (with the possible exception of cotton), the staple crops before sugar, coffee and tobacco, had not required such a large amount of labor force as sugar did. As mentioned in the Prologue, historians agree that sugar cultivation was the most important factor in the growth of slavery in the Caribbean. This was also the case regarding Puerto Rico.

²⁴ Quoted in: Luis Martínez Fernández, *Torn Between Empires Economy, Society and Patterns of Political Thoughts in the Hispanic Caribbean 1840-1878* (London: University of Georgia Press, 1994).

²⁵ It reigned supreme as the preferred sweetener until 1799 when Andreas Marggraf, a Berlin chemist, invented beet sugar.

Arguably, sugar entered America, via Columbus and Cortés. This last man is credited with the construction of the first Mexican mill in 1535, seven years before the first Puerto Rican center or *trapiche* is reputed to have come into existence. From that moment on, with many setbacks and several golden moments, sugar came to be associated with the island. One such golden age took place during the 19th century.

At that time, Puerto Rico, characterized by a subsistence agricultural pattern that stemmed all the way back to the Middle Ages, became fixated with the idea of becoming an export economy. As a result, during the second half of the 19th century, the island (as well as Cuba) was: “[C]olonized simultaneously by United States commercial interests and Spanish colonial control.” Interestingly, the United States supplanted Great Britain as the main supplier of sugar machinery by the mid 1840’s. By this time and in what can best be described as a double-pronged commercial attack, the United States tariff regulations started to encourage the export of Cuban raw sugar. As a result, “Cuba and Puerto Rico suffered the worst two kinds of colonialism: economic subordination to the powerful, expanding United States and political-fiscal subjection to decadent Spain.” By preserving its colonial hold and its export economy, Spain was – unwittingly – “preserving United States neo-colonialism.”²⁶ After the 1898 invasion made possible for the United States to acquire Puerto Rico and to control Cuba’s sugar production, the second golden period of the product was gestated.

Sugarcane cultivation played an important role in Puerto Rico, in more ways than merely contributing to its commercial progress. As mentioned before, sugar culture directly inspired the island literature and language. The use of sugar culture vocabulary in everyday phrases and words like *tiempo muerto* and *bagazo* illuminates its idiosyncrasies and unique perspective on life. Architecture also lent itself to mirror the activity’s special concerns. Individual buildings and special architectural typologies and morphologies were created to serve the enterprise. To this day, many such remains dot the countryside, silent witnesses of the sugar ethos development and transformations. To better understand

the growth of this unique enterprise, it is relevant to present a bird's eye view of how sugar cultivation and architecture intersected in the island.

Sugar and the island

Historians affirm that, in 1549, Father Diego Lorenzo introduced water-powered sugar mills to the island. Whether water, air or animal driven, at this time local *trapiches* produced raw sugar or *azúcar mascabada*²⁷ (also known in Spanish as *azúcar morena*, *azúcar a granel*, *azúcar cruda*, and *azúcar moscabada*). In spite of the fact that, by the end of the 16th century, there were eleven manufacturing centers in the island, producing a total of 187.5 tons per year,²⁸ during the 17th century, production dramatically declined. As a result, few sugar production centers survived into the first decades of the 18th century.²⁹ In fact, historical sources document that during this phase the island bought sugar from her sister island, Cuba. This was one of many such dark moments. In spite of the demand for the product, it was a risky commercial venture.

In 1765, a *cédula de Gracia* granted by the Spanish government made trade between the island and seven Spanish ports – other than Seville or Cádiz – a reality. By 1790, trade authorization included several American and foreign ports. This commercial expansion gave a boost to the sugar industry, the most important reason for the golden period experienced during the 19th century. The enclaves, many of which were owned by absentee European owners, depended on slave work. As expected, after the 1873 slave emancipation, the enterprise suffered dramatically as slavery disappeared. Thus, it entered a period of decline.

However, just when many were probably thinking that the activity was destined to completely disappear, another golden period occurred. After the Spanish American War and the 1898 American

²⁶ Luis Martínez Fernández, *Torn Between Empires Economy, Society and Patterns of Political Thoughts in the Hispanic Caribbean 1840-1878* (London: University of Georgia Press, 1994), p 88.

²⁷ According to the Real Academia de la Lengua Española the correct terms are *azúcar mascabada* and *moscabada* (adj). *Diccionario de la Lengua Española* (Madrid: Real Academia Española, 1992).

²⁸ A. Ramos Mattei, *La Hacienda Azucarera: Su Crecimiento y Crisis en Puerto Rico (Siglo XIX)* (San Juan de Puerto Rico: CEREP, 1981), p 18.

invasion, both Puerto Rico and Cuba promptly found themselves center stages for the industry. Guánica, Aguirre, Coloso, Mercedita, Cambalache, and Roig centrals, among others, came to be as a result of this halcyon period. American capital made possible new, huge enclaves to exist. In a curious parallel, the centrals were quite similar to the new (at the time) military bases the United States was establishing all over the island. They were rigidly managed compounds, ruled along apartheid lines, which tried to be as self-sufficient as possible.

It is instructive to read a 1940 Puerto Rico Reconstruction Administration (PRRA) description of how sugar production became an American enterprise during the 20th century:

With civil government established, the Island began to attract North American capital. The tobacco and sugar industries, with their tariff protection, were among the first to be expanded. Sugar soon displaced coffee as Puerto Rico's dominant industry, its fortune linked with the mainland's tariff. Plantation factories making moscavado sugar on individual estates gave way to modern sugar centrals where cane from thousands of acres could be ground. Family properties merged into corporations. By 1900, the 22 centrals and 249 individual sugar haciendas reported in 1899 had been merged into 41 highly modernized sugar centrals.

The growth of the sugar industry to a considerable degree shifted agriculture economy from that of direct consumption crops to commercial crops for export. Development of the tobacco and citrus fruits industries followed the same lines, but coffee the chief export crop during Spanish days, was not protected by the tariff and sank to an unimportant place.

The native agricultural economy transformed itself in more ways than one. Other traditional products, such as coffee, not protected by the special tariffs, cease to be profitable ventures. The island truly put all her agricultural eggs into the sugar basket, a container owned by outsiders.

The PRRA thinly disguised apologia further explains that an estimate of more than 300,000 acres and two hundred individual raw sugar producers were "consolidated" (i e merged) into the centrals backed by American capital. Individuals who were not "consolidated," known in the island as *colonos*, sold sugar to the huge centrals on the basis of the sucrose content of the cane. Those desiring to own a private sugar-producing center had to either "consolidate" their establishment to an American central entity or be a *colono*. In any case, most (including the *colonos*) depended on the huge American

²⁹ Carlos Solís Magaña and Miguel Rodríguez, *Phase II Archaeological Evaluation for Hacienda El Palenque* (San Juan de Puerto Rico: MS, 1997), p 19.

centrals in order to make a living and some profit. One by one, the old pre-1898 sugar centers closed or became tesserae of the impressive “consolidated” American economic sugar mosaic orchestrated in Puerto Rico. For many decades, Sugar King reigned supreme over a powerful American monopoly. Not surprisingly, this strategy was: “one of the paramount causes for sugar becoming the mainstay of the island.”³⁰

Although numbers vary according to the different sources, it is interesting to analyze how production of sugar historically fared in the island. From the third export product during the 19th century (after coffee and tobacco), it became the island’s most important activity during the first half of the 20th century. As can be seen in Table I, production increased exponentially after the establishment of the American centrals.

Production of Sugar in Puerto Rico	
Year	Amount
1553	24,000 pounds
end of the 16 th century	400,000 pounds
early 19 th century	9,391 tons
1898	60,285 tons
1899	52,089 tons
1900	81,526 tons
1932	992,335 tons
1934	1,103,822 tons

TABLE I
 PRODUCTION OF SUGAR IN PUERTO RICO FROM 1553 UNTIL 1934.³¹

³⁰ Puerto Rico Reconstruction Administration, *Puerto Rico A Guide to the Island of Boriquen* (New York: The University Society, Inc., 1940), p 57.

³¹ Table prepared by the author using numbers provided in: Puerto Rico Reconstruction Administration, *Puerto Rico A Guide to the Island of Boriquen* (New York: The University Society, Inc., 1940), p 79.

In 1940, reforms were introduced after years of workers' unrest. The island government acquired two of the centrals, subdivided the land and established the Autoridad de Tierras. In addition, laws were enacted that limited the size of the centrals to 500 acres. When Operation Bootstrap was established during the 1950's light manufacture and not agriculture was given the go ahead by the government, providing further assistance to the demise of the sugar industry. When quotas and subsidies protecting Hawaiian and Puerto Rican sugar ended in 1983, the final knoll sounded for the industry. It is interesting to note that, as of today, there is no relevant sugar producing activity in the island.

Architecture and sugar

In Puerto Rico, a sugarcane agricultural establishment is known as an *ingenio de azúcar*, *ingenio azucarero* and also as a *hacienda de azúcar* or *hacienda azucarera*. In addition, the term *central azucarera* is also utilized. *Trapiche azucarero* is usually reserved for the earliest type of mill, when human or animal labor generated the power that made possible the squeezing of the juice. Although the first five terms are used interchangeably, they relate to two distinct types of typologies, the pre 1898 establishment and the American-financed one.

The term *ingenio de azúcar/azucarero* or *hacienda de azúcar/azucarera* is defined³² as a farm (*finca*) that is composed of the planted sugarcane fields (*el cañamelar*; aka *cañaver*) and an administrative area (*las oficinas de beneficio*). It also includes the industrial equipment needed for the processing of the sugar (*conjunto de aparatos para moler la caña y obtener la azúcar*). In other words, the terms describe the sugarcane fields, the enterprise area, and the mill proper. Although some use these names indistinctly with *central azucarera*, in the island, the word centrals (*centrales*) is usually reserved for post 1898 establishments (i.e. Guánica Centrale³³ and Aguirre). However, it should be

³² Definition per *Diccionario de la Lengua Española* (Madrid: Real Academia Española, 1992).

³³ The author was unable to find out the reason for the spelling of the word central as "centrale" at the Guánica enclave.

noted that 19th century establishments that depended on steam power were also called *centrals azucareras*.

Whatever force was used to produce energy (human, animal, water, or steam) the endeavor was a multi-faceted and complex one. Not counting the preparation of the fields and the planting of the seed, originally there were six basic stages to the production of sugar: cutting, grinding, purifying, boiling, curing, and shipping. In addition, in most 20th century centers, raw sugar was processed into refined or white sugar. Since each stage had its own needs, all generated different architectural morphologies to adequately house the production processes. Although in most cases, it is common to see the same materials, structural solutions and aesthetic treatment throughout all buildings, there were unique characteristics to them. All these architectural artifacts are symbols that speak of the laborious and time-consuming processes that transformed canes into the crystals that make life a bit sweeter.

Although some aspects changed with time, the basic ritual of transforming the stalks into the white crystals remained the same for centuries. Once the cultivated fields were ready, the canes were cut by hand, in the Caribbean, with the time-honored machetes. This tradition continued throughout the 20th century. (To this day, machetes are still the instrument cutters use in Cuba.) This instrument was also used at the Centrale to cut cane. In Spanish, the cutting period is known as the *zafra*, a word that is used for both the severing activity and the time span it occupies. The *zafra* marks the initiation of a joyous, albeit backbreaking, period, when plenty of work is available. The period ends the agricultural phase of the enterprise and makes possible the start of the industrial one.

Within 24 hours,³⁴ whether by oxen-carts (in the early days), special trains, steel cars hauled by tractors, or trucks, the canes are taken to the mill. All these methods were used, at one time or another, to transport the canes from the different fields into the Guánica Centrale mill. The private enclaves that either had their sugarcane processed at the Centrale (an additional service provided by the company town) or were *colonos* of the enclave used the island's train. Once it reached the Santa Rita station, the

³⁴ If more time elapses, the juice becomes acidic. This reaction is colloquially known as: *el jugo se avinagra*.

cargo was transported to the mill by means of three train lines that connected the station to the mill. For some years, sugar was brought from Santo Domingo to be processed at the Centrale. The locals still remember *La Romanita*, one of the ships that transported the canes from the neighboring island.

The stalks, *sans* the leaves (*rabo de caña*), are deposited in a building, the first formal structure of the sugar processing sequence, known as the mill building. Here they are grounded using animal, wind, water, or steam power. Not one ounce of sugar can be obtained if the juice or syrup (*guarapo*) is not squeezed from the canes. Hence, the importance of the mill building, for it is here that the manufacturing process is initiated. The first Caribbean mills, the *trapiches de azúcar*, made use of the Sicilian or similar kind of rollers and one or more mules (or oxen) to operate them. As mentioned before, there is ample evidence that in some *trapiches*, including some in Sicily, humans provided the labor force at this stage. The person or animal was harnessed to long shafts that made a central spindle rotate. As the spindle moved, the rollers turned, crushing and grinding the cane, squeezing the juice. The crushed stalks or bagasse fell to the floor, while the syrup went into special containers.

At a later stage of development in the production of sugar, harnessed wind and waterpower were also used to crush cane. Even though steam power was introduced during the late 18th century, it was not used in the Caribbean on a wide scale until the 19th century. It took time for it to take hold but when it did, it revolutionized the industry. Huge factories – known as *haciendas azucareras*, *ingenios azucareros* and *centrales azucareras* became common. Not all farmers, however, could afford the specialized and expensive foreign machinery.³⁵ As a direct result, by the middle of the 19th century, decentralization was quite common. Smaller plantations limited their activity to the planting and cultivation of the crop while the cut stalks were processed in big *ingenios* that, on many occasions, were owned by others. This system, known in the island as the *colono* system, characterized Guánica Centrale. As mentioned before, some of the *colonos* of the Centrale were located as far away as Santo Domingo.

The grounding of the stalks is known as the *molienda*. This phase is carried out by the mill (*Molino*). As previously explained, the grinding or squeezing of the canes results in two by-products: juice and bagasse. For most workers, particularly hired hands, the *zafra* and the *molienda* were synonymous with good times, when work was a-plenty for several months. After the six months period, during which these two activities took place, came the off season (*tiempo muerto* or *invernazo*).³⁶ At this time, most of the hired workers lost their jobs, many ousted like crushed stalks or bagasse. In the island, the word *bagazo* has come to signify more than just crushed canes. It is also used to describe the abandoned and downtrodden. However, it is interesting to note that, in spite of this special connotation, bagasse was not discarded. It was recycled and used as a fuel source, well into the 20th century.

In the old days, the juice was transported from the mill building or area to the factory proper, known as the boiling house (*caldera*) and its boiling bench. It was here that the syrup was transformed by means of evaporation. First, however, it went into a cistern where it was tempered with lime and other purifiers (*clarificadores*) to reduce its impurities. After this process, it was ready for the boiling bench.

During the 19th century, the juice was heated in the boiling bench in a series of copper vats at increasingly higher temperatures, until it reached the smallest container. This type of boiling bench is known in the island as the Jamaican train (*tren jamaicano*), evidencing the social and commercial links that existed within the Caribbean basin. Furnaces fueled by the bagasse (which was kept dry in the trash house or bagasse shed until ready to be used) provided the heat. The characteristic chimney (the older ones were made out of bricks and later of reinforced concrete) of most pre-1898 *ingenios* or *centrales* is associated to this particular stage.

³⁵ Originally, Liverpool and Manchester were favorite places to obtain this equipment. As mentioned before, by the mid 19th century, most of the machinery used in the island was bought in the United States.

³⁶ *Periodo de inactividad en los ingenios de azúcar, Diccionario de la Lengua Española* (Madrid: Real Academia de la Lengua Española, 1992).

The boiling bench was instrumental in reducing the juice to raw sugar. This type of sugar is brown in color, extremely sweet and still has to undergo additional chemical transformation in order to become white or refined sugar. In the old days, the raw sugar was then placed in moulds or casks and moved to the curing house (*casa de purga*). In most *haciendas* and *ingenios*, a special architectural artifact housed this activity.

At the curing house, crystals would settle as molasses³⁷ (*mieles* or *melao*) drained off. Because of this, the *casa de purga* building was always well ventilated and had special racks on which the moulds could rest. In this state, the product was known as sugar loaf (*pan de azúcar*), due to the conical shape of the molds. After the curing period ended, the product, now somewhat similar to the white crystals most are familiar with, was taken to the wharf and shipped to far-flung destinations. This refined sugar is related to the commonly used variety. It is the end result of molasses draining from the raw sugar. At a later stage, special machinery substituted the slow draining process. These are known as vaporizers (*evaporadores*) and centrifugal machines (*centrífugas*), all of which were used at the Centrale.

By the 20th century, the sugar manufacturing process had experienced some changes. In 1940, the processing stages were described in the following manner:

[C]ane is cut rapidly by revolving knives and then crushed in a tandem of heavily loaded rolls or mills which extract about 95 percent of the juice. . . . The juice from the crusher and the first mill is treated with milk of lime, heated and pumped into the primary clarifier. The juice from the second mills also treated with milk of lime, heated and passed to the second clarifier from which it goes back to be mixed with the juices of the crusher and the first mill. This process clarifies the juices, i e removes some of the impurities from it. The clarified juice is then concentrated in the pre-evaporators and quadruple effects which boil this juice and, by reducing its water content, turns it into syrup. The syrup is then furthered boiled in vacuum pans under low pressure, which turns it into a mass containing a large proportion of sugar crystals. This is called “A” sugar. The “A” sugar is passed through the centrifugals (rapidly revolving baskets working on the same principle as the cream-separator), and the “mother-syrup” is separated from the sugar. The syrup is then processed again and a second and third “strike” of lower purity sugars obtained.

The residue of this process is known as final molasses. This by-product can be converted into solvents – butyl alcohol and acetone. At Central Lafayette . . . a factory has been built for the manufacture of these by-products.

³⁷ Molasses are the basic ingredient in the creation of rum.

The raw (brown) sugar is bagged and shipped to the United States for refining, some of it being sold for local consumption in the Island. Raw sugar consists of about 96 per cent sucrose and 4 per cent impurities and moisture.”³⁸

At the Centrale, after the canes were washed and cut into smaller pieces, they went into the mills (*molinos*) where the juice was squeezed. Then the liquid was collected by special conduits and taken into tanks where, after being purified against bacteria, it was pumped, so that the clarifying process could take place and additional impurities (including cane straw or *cachasa*) taken away. Then now pure juice was pumped in order for the evaporation process to take place. At this stage, it was condensed until it transformed itself into thick syrup. Then it was sent to the individual condensation units (*tachos*) for the crystallization stage. The resulting cooked mass then went to the centrifugal machinery where the molasses were separated from the raw sugar.

Regardless the century, sugarcane cultivation is a labor-intensive process that needs a large work force (whether slaves or unskilled workers and many other professionals). For the cutters, it is a backbreaking, miserable job that requires extreme physical exertion, lasting many hours under the harsh, broiling tropical sun. It is a well-known fact that *zafra* days usually begin very early (when slaves did the work, sometimes the working day started before sunrise) in order to avoid the hours when the sun is at its most intense. In addition to the oppressive heat and humidity, the fields are plagued with all sorts of animals (i e scorpions and biting insects). The bits of stalk (*paja de caña*) and straw continually float around, producing all sorts of uncomfortable sensations (including skin and eye burning and itching) as well as allergies.

In addition, sugar manufacturing requires substantial processing facilities. Once the cane is cut, the process cannot stop, work is around the clock. Smoke, soot and other kinds of environmental pollution, including noise, are characteristic of these centers. The sometimes romantically described potent smell drenches every square centimeter within range for weeks. Regarding this issue, it is

³⁸ Centrifugal machinery is known in the island as *centrifugas*. Puerto Rico Reconstruction Administration, *Puerto Rico A Guide to the Island of Boriquen* (New York: The University Society, Inc., 1940), p 275.

instructive to point out that – to this day – the raw sugar warehouse at the Centrale still smells of syrup and sugar. Therefore, olfactory, as well as noise pollution, is also a result of the activity.

Many stages of the manufacturing process generated its own building morphology. While, to the untrained eye all buildings at the industrial district of any sugar enclave look quite similar, whether 19th or 20th century examples – interiors and, at times, details in the exteriors – reflect the varying needs.

The architectural typology

The cultivation of sugar in the island spans over a period of several centuries during which different manners of achieving the end result were experimented with. Because of this, the sugar-processing center architectural type developed over a long period of time, borrowing concepts from neighboring islands in both form and organization. While in some cases, the influence can be specifically attributed to the source (i.e. the *tren jamaicano* [Jamaican train] from Jamaica; *el batey* from native Puerto Rican architecture), it is difficult to ascertain the sources for many architectural and technical influences.

Regardless of its date of construction, in a sugar processing enclave different buildings sheltered the varied traditional activities, such as: crushing the canes, boiling the juice, curing of the raw sugar, storing the final product and, finally, shipping. In addition, bagasse sheds, shops, stables, cisterns, a windmill tower (when using wind-power), aqueducts for providing water (particularly, when using water power but also needed for the planted fields and during some of the manufacturing stages), a “village” organized by the huts of the workers and the owner’s house were also present in most pre-1898 establishments.

Whether termed an *ingenio*, a *hacienda*, or a *central*, whether a private concern or a company town, all sugar production centers in the island needed several distinct areas or precincts. In the pre-1898 enclaves, they are usually listed as follows: “[T]he owner/manager domestic precinct, the

manufacturing precinct, the slave/worker domestic precinct and the agricultural fields.”³⁹ Missing from this list are the storage area, the port facilities, and the community service buildings that characterized sugar company towns in the island. In both cases, individual buildings created separate work quadrants or areas and sheltered the varying array of activities. However, in spite of their differences, the pre-1898 examples and the worker’s colony were all conceived as single working units that carried on a continuous fight for survival and economic gain. In all these establishments, everything centered on work. In fact, “seasons” were established according to the different tasks. *La zafra* and *la molienda* are the paradigmatic examples.

In spite of its size and general departure from the traditional pre-1898 model, some of the buildings present at the Centrale borrowed from the sugar-producing center architectural typology tradition. For example, even though there was no single “big house,” the manager’s house (*casa del administrador*) and the houses reserved for the American employees (*casas de los americanos* or *casas de los jefes*) located along Lajas Road (Road # 325), took its place. The *casitas amarillas*, in turn, served as domestic dwellings for the workers. Organized around the *batey*, they mimicked (although at a much larger scale) the traditional settlements where the workers lived within the 19th century prototypes. However, since it was also conceived as a town, many other services were provided for: from private port facilities, post office and stores to hospitals, hotels, restaurants, and a temporary pantheon.

Regardless of the historical time frame, the working precinct (the mill and processing area) was of vital importance for it was here that the canes were transformed into juice, syrup, and then sugar. Its most relevant visual element was the chimney. These tall structures, which can still be seen all over the island, acted as architectural sentinels, expressing to the world the kind of work carried by the establishment. In the old days, this area was usually located within sight of the main house. Following this centuries old tradition, at the Centrale all domestic quarters (American, white-collared Puerto

³⁹ Carlos Solís Magaña, *Colonial Archaeology of San Juan de Puerto Rico: Excavations at the Casa Rosa Scarp Wall*,

Ricans and unskilled workers) are located around the epicenter of activity: the industrial district. Because of the – at times – incongruent physical proximity, care was taken to protect the house from the working area activities. Chimneys, for example, were usually placed so that the trade winds would carry the smoke and ashes away from the main house. It is the author’s belief that the planning strategy that governed the Centrale, made sure that the *casas de los americanos* and the *casa del administrador* were protected from the soot that the trade winds would invariably carry, once the sugar-manufacturing process started.

This intimacy between the living and the working areas might strike modern sensibilities as an unusual one. However, the perception that these two activities (work and domesticity) belong to different spheres is quite modern. Until very recently, you worked in order to live, so you lived for your work. In addition, in all traditional 18th and 19th enclaves, the “big house” served as the administrative center. From its interior and balconies you could – at all times – visually control all activities. It is not a coincidence that the *casas de los americanos* at the Centrale were located along the main road, close to the formal entrance (and exit) of the central. The administrator’s house, in turn, was located on a hill, the highest point of the industrial district. In this manner, it had visual control of the whole site while serving as a physical symbol to all.

In the 18th and 19th centuries establishments, the owner/manager domestic precinct was known as the *casa grande*, *casa de la hacienda*, and *casa de los amos* (American equivalent of the “big house”). Even if the mill was the most important area work-wise, architecturally and symbolically the house was treated as the most important component of the whole establishment. Its materials, architectural sophistication, and sense of permanence spoke to all about the successful entrepreneur nestled within. Even though the working precinct chimney was the tallest structure, real power resided within the four walls of the main domestic dwelling. Not much is known about the day-to-day living in these houses, nor about other family members’ (vis-à-vis its usual male owner) expectations and

San Juan National Historic Site, Puerto Rico (Alabama: Office of Archaeological Research, 1988), p 132.

concerns. If the house had two stories, the family domestic quarters were usually located in the second floor. Many big houses had a first level that was used for many purposes: as a dwelling place for slaves, shed, stable, storage, and, at times, as an additional office area.

Traditional balconies and *antepechos* intermingled with generic *aposentos* organized using European *en enfilade* or shotgun models. The personality of these rooms depended exclusively on the furniture placed within. If a big table and chairs were located here, it was a dining room; if a bed a bedroom. Many families owning *haciendas*, *ingenios* or *centrales*, also had houses in nearby towns. However, during the 18th and 19th centuries, continuous travel to and from the family houses (if indeed, the family in question had such a property) was quite limited. In Guánica, as mentioned before, the administrator's house and the American domestic dwellings took the place of the traditional "big house" where the owner and his family lived.

In every enclave, in addition to the "big house" precinct, there was another domestic area organized by the humble huts (*bohíos* or *ranchitos*) of the workers. Usually, these structures were placed in a informal manner, with no strict:

organization between them. There is no way we can describe them within the modern description of "houses," archeological excavations . . . ha[ve] found evidence of constructions that must have consisted of simple wooden huts or *bohíos*, with wooden posts anchoring them to the terrain for support. There is no evidence for us to conclude if slaves slept in th[ese] area[s] or if they were *acuartelados* in [other places]. Still one thing is clear, whether you were a slave or a worker, your life was probably just as miserable.

Although in some large enclaves, the *bohíos* or *ranchitos* were located in a somewhat secluded place (usually in non-productive agricultural land), the small village (*villorrio*), particularly when slaves provided the labor force, was usually located within view of the main house. Sometimes, they even shared an open area, the *batey*. However, in most cases,

there was no formal organizational tie between the main house and the workers dwellings, [as was the case] in some southern plantations in the United States. . . . As they looked one unto the other, each one must have been a constant reminder to the other of the social chasm that divided both groups.⁴⁰

⁴⁰ Arleen Pabón, "Interpretative Analysis of Architectural Remains Hacienda House El Palenque Barceloneta, Puerto Rico" (San Juan de Puerto Rico: MS, 1998). Prepared for Law-Gibb Environmental.

At the Centrale, varied precincts also housed the different social strata. The only difference was that a third one, for Puerto Rican white-collared workers, was added. While the American dwellings lined the entrance road to the enclave, Brandon Street nestled the white natives who worked in the administration of the place. They were considered the second ruling class of the place. Unskilled workers were sheltered in the *casitas amarillas* and also in *cuarteles* clustered around the huge *batey*. The architectural differentiation present in of all three precincts was both signifier and signified.

The fifth precinct, the planted fields, was an important one for it was here that the crops were cultivated until harvested. In the 18th and 19th centuries examples, the fields (*el campo de siembra*, *cañaveral* or *cañamelar*) usually surround all other precincts with no apparent formal relationship between them. This was also the case at the Centrale, even though the center also processed crops from neighboring farms and from far away ones in Santo Domingo. The cultivation of the stalks was the only activity that did not generate a specific type of architectural artifact.

This was the physical organization most sugar processing centers exhibited until 1898. When American capital transformed the venture, it also transformed the architectural typology, introducing a second type of organization. From the centuries old type came the general idea that the enclave had to be a self-supporting and that everything revolved around the crop of slender stalks. Other specific concepts were also adapted, such as the *batey* and the subdivision of the entity into different precincts. However, the size of the new enclaves (both in terms of production and number of employees) made necessary to import a new organizational scheme. Europe and the United States provided the needed architectural typology: the workers' town, also known as the company town. Because of its cultural and social significance, and the impact the concept had on the Centrale, it is relevant to present some general aspects regarding this influence.

3

“Honey which is a cane”

INDUSTRY, COMPANY TOWNS, AND THE CENTRALE

With the Industrial Revolution, life as known changed dramatically. Naturally, so did the urban milieu. Agglomeration and pollution forced planners to reinterpret human beings’ most traditional frame of reference: the city. This organism, which had staged human activity for millennia without undergoing any dramatic changes, faced new challenges during the 19th century. Profound transformations dramatically altered its traditional composition, for the city now grew in a new and complex manner.

“Two different and representative types of accretions occurred: 1) residential communities designed for wealthy or middle-class residents and 2) workers’ colonies (or villages or towns).” Known by the name of “pseudurbias,”⁴¹ both occupied the previous no man’s land outside the city walls. The rich moved away from the inner city, trying to escape from its noise and pollution. At the same time, the bigger and more complex manufacturing centers also moved away from the inner city. The train, the new method of transportation, made the this double-pronged growth possible. Although usually interpreted as two different, isolated, and, at times, contradictory entities, Guánica Centrale evidences the curious intersection of both types. While it framed industrial activities and housing areas for the workers, it also provided an elegant and bucolic suburban dwelling locus for the privileged American families that lived here.

⁴¹ Françoise Choay, *The Modern City: Planning in the 19th Century* (New York: George Braziller, 1969), p 27.

Company towns are an example of the progressist model of planning that characterized Europe during the late 19th and early 20th centuries. First present in the ideas of Robert Owen, Charles Fourier, and Ebenezer Howard, the philosophy received much support from Marx and Engels theories. Whether conceived as one building, known as *phalanstère* or *familistère*,⁴² or as an independent town or village, the aim of the second type of accretion was always the same: to create better and more ordered working and living conditions for workers. The other side of the coin was that it was also an effort to augment profit while lending an air of respectability to commercial ventures.

In the early phase, these new working class agglomerations followed a very rudimentary pattern, revealing no concern with matters of aesthetics. They were characterized by separation of housing and working functions, orthogonal layouts, and standardization of elements. A basic minimum of public utilities and services was provided (the *nefarious* pub was more often than not excluded by moralizing employers), while the public park represented the only element of luxury. All the effort went into housing, whose models became one of the attractions of the first world's fairs. The movement was inaugurated by Great Britain, and was followed by industrialized Europe, and then by the United States. The varying characteristics of these settlements reflect different degrees of a benevolent paternalism on the part of the employers who might or might not choose to welcome residents who were not connected with their business.⁴³

The salt mines at Arc-et-Senans in Chaux, France (after 1775) by Claude-Nicolas Ledoux is one of the first examples of the type. In this case, all the mining activities were framed by the “company town,” owned by the French King. Although never finished, it is an important example that demonstrates the origins of this kind of mentality. Later, other such enclaves were constructed, including: Bessbrook in Ireland (1846), established by the Benjamin Ward family for its 2,500 workers, and Saltaire in Bradford, United Kingdom (1852) created for Titus Salt's 4,000 textile workers. The idea caught rapidly all over Europe: the Krupp family was responsible for several company towns in Germany: Schederhof, Alfredshof, Atenhof, and Margarethenhof, while Count Eusebi Güell had Antoni Gaudí and collaborators work in one such scheme, known as the Colonia Güell in Catalonia, Spain. The concept also found a niche in the United States. As early as 1867, George M Pullman founded and funded Pullman City for his train workers.

⁴² Puerto Rico's best example of this architectural typology is the building known as the Falansterio in Puerta de Tierra, San Juan, built during the 1930s.

⁴³ Françoise Choay, *The Modern City: Planning in the 19th Century*, p 29.

The concept of having your workers clustered around your commercial concerns, whether cultivation or industrial, had existed for a long time in the island. As explained before, all local *haciendas* and *ingenios* depicted a similar kind of organization. The “big house” was located in front of the *batey*. The workers houses, the industrial buildings, and the cultivation areas were clustered around it. Such loci were characteristic from the time Spaniards had first settled the island. However, a company town was a novel idea. What was the difference?

In the first place, technically speaking, people were now free; working was as an exercise of their free will. The old relationship master/slave, *dueño/arrimao* had experienced a change. Even though most workers suffered extreme hardship, in theory, at least, people had choices. Employers like the Centrale probably felt something had to be offered in order to entice workers. A company town, with its distinct, ordered and organized type of life seemed to be the perfect answer.

In addition and probably of more relevance, during the 19th century all sorts of scientific and sociological analyses were made regarding workers incentives and profit. Studies revealed that happy workers translated into more profits. This was another powerful reason for the invention of the architectural typology of the company town: a desire to better the daily life of the workers and their families in order to guarantee the progress of the commercial venture.

The third contributing factor in the creation of the company towns is a bit more obscure and, on many occasions, taken out of context, when and if considered at all. Victorian times (and most of the 19th and early 20th centuries were permeated by this point of view) were profoundly moralistic. It was understood, for example, that one of the responsibilities of both the government and powerful private concerns, was to help in the moral and spiritual betterment of workers and their families. The *phalanstère* and *familistère* are the best architectural examples of this belief. These mega buildings provided much more than just a home next to a place of work. Schools, churches, and places where individual and group activities took place, were also included in order to provide an educational and

moralizing ambiance. Management carefully monitored both the working and leisure hours of the workers and their families. A “new,” more socially conscious being was expected to emerge from this manipulation.

All these concerns are present at the Centrale. In addition, there is another interesting perspective. Of particular importance is the fact that the Americans were still trying to understand “our [American] islands” and “their people.”⁴⁴ Regarding “their” Puerto Rico and “its people,” the mainlanders encountered a completely foreign environment, where natives abided by their own rules and spoke a foreign language (from the English-speaking point of view). Their religion, social mores, cultural customs, *en fin*, everything seemed to be different and puzzling. Something had to be done to organize work in such an exotic milieu.

As was the case with other American intervention efforts in the island at this time, the attitude exhibited by the management was a patronizing one in that it tried to make allowances [*sic*] for a “weird” (because it was different) four centuries old ethnicity. The American company town was an instrument designed to promote cultural change. The architectural typology was one of many American accouterments by means of which the new (at the time) sovereign power tried to integrate islanders into its mainstream. It was probably one of the first concerted efforts to “melt” islanders into the American “pot.” Since apartheid was a way of life in the United States (particularly, in the South), it was also imported to the island as an instrument to control the “Others” (Puerto Ricans).

All these ideas permeated the decision-making process that took place during the first two years of the 20th century, if not before. If the growing and processing of the “honey which is a cane”⁴⁵ scheme was to be successful, an architectural instrument was needed to both organize and control all production processes. The company town and its planned settlement presented the perfect tool to

⁴⁴ This play on words is inspired by the well-known book *Our Islands and Their People, As Seen with Camera and Pencil* Bryan (St. Louis, Missouri: William S Thompson Publishing Company, 1899), 2 vols. The book presents dozens of photographs of the former Spanish *ultramar* colonies: Cuba, Puerto Rico and the Philippines, now regarded by the Americans as “our islands.” Curiously, the inhabitants were not described as “our people” but as “their [the islands’] people.”

categorize by systematizing both responsibility and social standing: the scheme in which each district responded to a specific role. The lush, tropical environment of the old Guánica *ensenada* was organized in such manner. Every aspect of both work and daily life was carefully monitored to make sure the main objective always remained within sight.

In order to fully understand the industrial district and even though this work is designed to solely concentrate on this particular area, it is important to briefly analyze other relevant areas of the company town. Not counting the industrial district, the cane fields and the *batey*, the rest of the company town was dedicated to housing and related services. This is not surprising. Locals described to the author that *miles de personas* lived during the season (*temporada*) at the company town when work was on a seven day twenty-four hours a day basis. The place was described as *un monstruo*, a huge enclave. In spite of the many housing artifacts, dozens *dormían en hamacas* since *no había sitio para ellos en ninguna parte*.⁴⁶

Each corporate stratum was a social class and domestic architecture reflected – in a direct manner – each one’s personality. The houses created for the Americans, for example, were spacious abodes relating to the natural milieu as if to an English garden. They were described as “cottages” in the architectural plans, signed by Benj V White, Architects.⁴⁷ Bungalow-type details, verandahs, screened porches, elegant stairs, and complex rooflines characterized them. Painted in white, they presented a stark contrast to the dozens of small yellow houses where the workers lived. Brandon Street houses, in turn, constructed for the white-collared Puerto Ricans, depicted an intermediate approach. Smaller than the *casas de los americanos*, they had open balconies (albeit smaller than the American porches) and were painted in white with green detailing. It is interesting to note that the domestic artifacts at the company town sported different sizes and morphologies, as well as colors. As

⁴⁵ Theophrastus description of the crop, dated 287 BC.

⁴⁶ Personal communication, don Ángel Quiles and don Samuel Pérez. June 2001.

⁴⁷ The architectural drawings are dated 1907; the firm was a New York City one. Another name related to the site is that of Architect Louis Kellogg (designer for the company town store, 1907). Engineer Van Allen Harris is credited with the building that substituted Kellogg’s design in 1910).

in the old days of the *haciendas* and *ingenios*, architecture was used to silently express your social rank in life.

Industrial architectural élan

It is interesting to compare the Victorian rigid organizational patterns and motivations present in the use of the company town scheme with the architectural expression present in the most significant buildings at the Centrale, the ones found at the industrial district. In order to better understand this relevant aspect, a bird's eye perspective of industrial architecture at the time is warranted at this point.

By the end of the 19th century, several transformations had taken place that caused a major revolution regarding industrial architecture, a typology that had not formally existed before this time. Experimentation with both metal structural skeletons and reinforced concrete provided new materials that created bold new morphologies. In 1826, German architect Karl Friedrich Schinkel was one of the first professionals to analyze the subject. His critical comments regarding Britain's industrial centers, such as Liverpool, presented the issue of how aesthetic concerns should be incorporated to the innovative types of buildings constructed with new materials. He decried what he considered inhuman working and living conditions and wrote extensively on how architecture could be an instrument to generate not only more agreeable urban conditions but also individual buildings to house manufacturing concerns.

Historians consider Peter Behrens' AEG Factory in Berlin (1908) the paradigmatic design regarding these aspirations presented by Schinkel. The design dealt with the issue of how to transform industrial sheds into architectural objects. The interior is organized as a long basilical rectangle with a slightly curved roofline, created by means of metal trusses that are supported by metal columns. In order to emphasize the bulk of the building, Behrens de-emphasize the role of the walls and treats them in curtain wall fashion. Large glass sections cover the openings between the huge side piers. While this is considered the classic answer to how industrial architecture should cope with aesthetic concerns,

both Britain and the United States had a long history of experimentation with non-traditional industrial architectural artifacts, such as warehouses and train stations. The Marshall Field Warehouse Building in Chicago by HH Richardson (mid 19th century), King's Cross Station in London by Lewis Cubit (1851-1852) and Paddington Station also in the same city by Sir MD Wyatt and IK Brunel (1852-1854) are but a few of the examples which point out to the bold new world of so-called industrial architecture.

The experimentation with architecture's industrial élan explored in both European and American examples, found its way to the Guánica. The Centrale industrial buildings follow the patterns established by European and American prototypes. Basilical organization is used all over (probably an influence from train stations and warehouses), while columns and trusses create the structural skeleton. The interior arrangement makes use of the open (free) plan arrangement, one of the basic characteristics of American examples. In addition, lateral walls are de-emphasized by underscoring their role as structural components and the liberal use of metal corrugated sheathing plates.

Metal is the protagonist of all the buildings at the Centrale's industrial district. It appears in many forms: trusses, columns, and in corrugated and non-corrugated plates. The material is used both to create the bulky structural elements and the delicate sheathing most buildings exhibit, as well as most doors and windows. At the time, metal structures were a relatively new architectural solution, one that allowed for wider spans and free plans while carrying enormous loads. By using prefabricated, standardized metal supporting elements (columns), and imposing trusses, easily assembled skeletons could be created that spanned impressive distances.

One of the most interesting architectural concepts present at the Centrale is the creativity shown in the use of the "galvanized corrugated iron roof"⁴⁸ plates. They are used in the sheathing of the metal columns, in the creation of lateral walls, in the assembly of the roof, and also for the windows and doors. The advantages of the material were many. The plates were far more resistant and cheaper than

⁴⁸ The architectural drawings found by the team, describe in this manner the material. The size of the plates is given as "2x7." This information is quite interesting for the plates are usually described as being made of zinc. The author recommends that an analysis of this material be made in order to determine both its composition and provenance.

any other kind of treatment. In addition, they were prefabricated in standard sizes. Therefore, they were easy to transport and assemble. Furthermore, their generic personality made possible to use them as both walls and roof material. When correctly soldered, they provided secure protection to any interior. Easy to transmit heat, they also allowed for the interior to cool rapidly, probably a much-desired condition in a tropical milieu. As can be observed at the site, the plates last a long time and need a limited amount of care. In addition, they can be easily replaced without affecting other parts of the structure. In fact, if so desired, even opening can be organized after completion of the building. While the plates were not unknown in the island (the locals had long used them as a roof material and fancier versions covered walls and even lined the interiors of certain buildings), this was the first time that such a wide array of uses was found for the material. At the Centrale the metal corrugated and non-corrugated plates had no direct relationship to any particular social standing. The material roofed from the most elegant (the *casas de los americanos*) to the humblest of dwellings (the *casitas amarillas*). It also was utilized as roofing material for the huge industrial buildings. One is tempted to consider the use of the material as both a signifier and signified, an example of democratization by means of an architectural material.

In addition to metal, the other material used at the site is reinforced concrete. While Europe had experimented with its use for some time, by the first decades of the 20th century: “[I]ts use in American had been limited. However, the demand for fire resisting construction of garages, hangars and factories has been responsible for the use of reinforced concrete . . .”⁴⁹ In the island, until 1898, the use of this material was limited to certain architectural treatments and finishes, such as roofs and floors. Known by Spanish engineers as *cemento hidráulico*, there was no real interest (before 1898) to employ the material as the structural protagonist of any building. The Americans, however, had ample use for it. At the Centrale’s raw sugar warehouse building, concrete is used as a fire-resisting material and also as a structural one. The internal metal columns are partly encased in the material; the lateral walls are

made of reinforced concrete until they reach a certain height. At this point metal corrugated plates give shape to the walls and hide the metal columns. It is obvious that a desire to protect the metal elements from accidental fires was the key motivator for this scheme. This study was not designed to include any specific analysis of the individual materials or to determine how they were used in the different buildings. However, mention should be made that the reinforced concrete areas were left exposed. Since no stucco covering was used, the size of the slats that formed the forms are still visible to the naked eye.

It is interesting to note the width and girth of both the metal and concrete structural elements. Their size evidences the era's limited knowledge of the materials and their behavior. Metal and, particularly, reinforced concrete were still in the early stages of development. Engineers and architects were learning how to best use them. It was common at the time to "err" on the safe side: designing columns and walls that far exceed the needed sections.

Of the original buildings of the Centrale's industrial district only a handful still stand today. Natural deterioration, vandalism, and lack of use have colluded with time, affecting even the largest of buildings. In spite of this situation, enough remnants exist to allow us to interpret the site's cultural significance. Since it was here that – for more than seventy years – the heart and *raison d'être* of the enclave resided, it is here where cultural significance embodiment needs to be searched first.

⁴⁹ George A Hool and W S Kinne, *Reinforced Concrete and Masonry Structures* (New York: Mc Graw Hill Book Co, Inc, 1924), p 318.

4

“Sugar King”

THE GUÁNICA CENTRALE INDUSTRIAL DISTRICT

Cultural and architectural triage

When facing a catastrophe and the daunting labor of trying to save some lives amidst such an occurrence, medical personnel perform a triage. The strongest, the ones that have the best chance to survive are chosen to be treated first. The rest wait until the medical staff finishes the task of saving the lives of the elected. Destruction and vandalism at Guánica Centrale have resulted in a cultural disaster. A most significant site has been (still is) completely abandoned to its fate. We have inherited only an empty, ruinous shell, a grotesque caricature of what used to be the industrial district of the former company town. What are we to do with this cultural carnage? We know that many significant buildings have disappeared while others suffer daily degradation and dilapidation. Should we abandon all hope? What are we to do in the face of such a disaster? More importantly, what should be done?

In spite of the conditions of the site, the author believes that some actions can still be taken in order to partially rehabilitate the industrial district. In order to plan these “life-saving” activities, she devised a particular methodology that performs a kind of cultural and architectural triage for the area. The basic two-pronged question asked and answered was: Which buildings at the Centrale’s industrial district can **and** should be preserved? How are they to be rehabilitated effectively and adequately? How can new life be imparted upon these huge and forbidding structures? This study was not designed to answer these last two questions. But by answering the first one, strategies can be generated to make

sure the district and some of its structures are given their rightful place within our cultural present. The first pair of considerations can lead the way for the decision-making process that will solve the other two issues.

In spite of the fact that none of the responsible agencies have made a formal determination in terms of the cultural significance of the site, it would appear that the industrial district of the Centrale is indeed a culturally significant entity. This work, although not designed to cover determination of eligibility aspects, needs to touch – even if summarily – on this particular issue. Is the manufacturing area an architectural cultural resource? Is it part of the island’s historic heritage? Why should we dwell on this issue? We need to analyze the subject because if the site possesses no cultural significance every one of its architectural artifacts can simply be torn down.

At this point, there is a need to analyze the site in terms of the National Register of Historic Places criteria. These guidelines legally bind projects requiring federal intervention (whether in the form of authorization or comments) in the island. In addition, the Junta de Planificación de Puerto Rico’s guidelines on the topic are directly inspired by them. Cultural significance was defined by The National Preservation Act of 1966, as amended in 1992. If a property complies with, at least, one of the following criteria, it is considered culturally significant and, hence, eligible for inclusion to the National Register:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction, or
- D. That have yielded, or may be likely to yield, information important in prehistory or history.⁵⁰

⁵⁰ National Park Service, US Department of the Interior, “The National Register of Historic Places.”

At first glance, it would appear that the Centrale's manufacturing area qualifies under three of these criteria: A, C, and D, thus possessing historic, architectural and archaeological significance. A quick analysis of these perspectives is merited at this point.

In the first place, the establishment of the largest and first American central in Puerto Rico (and the second largest one in the Caribbean) had a far-reaching impact not only in terms of the island's broad historical and social patterns but also within the context of the mainland. As previously mentioned, the company town was not only a working place, but also a social and cultural locus. As such, it deeply impacted the collective memory of the locals, contributing in more ways than one to the development of the vernacular sugar culture. The Centrale is the best example we have of the last stage of development of the sugar processing activity in the island. Because it was a place where experimentation with new manufacturing techniques and methods constantly took place and because of its size, it was considered the paradigmatic center during its halcyon days. Since the industrial district was an intrinsic and character-defining area of the enclave, it would seem that it qualifies for inclusion to the National Register under Criterion A.

In the second place, there is no doubt that the manufacturing area, in spite of the fact that it is but a portion of the original company town, represents a unique and relevant entity, in terms of the architectural typologies and morphologies present, as per Criterion C. The Centrale was the first workers' village in the island. As such, the Centrale followed a careful philosophical social, urban, and architectural program (the creation of a planned company town). In addition, the individual typologies and morphologies experimented with by means of the different architectural artifacts, and the creativity shown in the use of some construction materials also contribute to its architectural significance. Taking into account all these aspects, it would appear that the site also qualifies for inclusion under Criterion C.

In the third place, the site possesses archaeological potential (both prehistoric and historic), as described by Criterion D. Although it is probable that prehistoric archaeological information will be limited, due to the earth movement and construction activities that took place at the site when the

industrial buildings were constructed, all of the Guánica *ensenada* area is characterized by the this cultural presence.⁵¹ In addition, there is obvious potential for historic information, particularly significant given the physical closeness between the site, the 1898 landing place, and the American encampment areas established after the invasion. Finally, there is prospective industrial information to be obtained at the site regarding: innovative construction techniques, and bold use of materials that, at the time, were new to the island. Therefore, the now abandoned site and its surroundings nestle great research potential. This is also true regarding architectural and engineering concepts, ideas, and solutions. Since the industrial district is likely to yield relevant information regarding all these aspects, it would seem that it is also eligible for inclusion under Criterion D.

It is quite rare for a building or site to amass cultural significance on so many levels: socio-historic (Criterion A), architectural (Criterion C), and archaeological (Criterion D). This, however, appears to be the case of the Centrale's industrial district. There is a layering that grants the site its cultural and historical relevance. Taking all these points of view into consideration, is the district as a unit eligible for inclusion to the National Register? Caution should be exercised at this point for there is one fly in the ointment.

The National Register, in addition to compliance with at least one of the above-analyzed criteria, imposes another requisite, best defined in the formal (and legal) introduction to the principles:

The quality of significance in American history, architecture, archeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess **integrity** [bold emphasis added] of location, design, setting, materials, workmanship, feeling, and association.⁵²

As the use of the word “and” before all four criteria explicitly requires, any property needs **both** things: to comply with at least one criterion and to possess integrity. This most important aspect is required on many levels: physical (“location,” “setting,” and “materials”), architectural (“design” and “workmanship”) and, for lack of a better word, emotive (“feeling” and “association”).

⁵¹ It is common knowledge, for example, that a big prehistoric site was destroyed when the Playa Santa towers were constructed by the government some years ago.

⁵² National Park Service, US Department of the Interior, “The National Register of Historic Places.”

The author feels it is important to clarify, one more time, that the goal of this study is **not** to generate a formal determination of eligibility for the site. However, she feels duty bound to point out that – on the basis of her professional experience and taking into account the National Register requirements – the integrity of the Centrale’s industrial area, as per federal definition, presents a borderline case. The present state of decay of the few still standing buildings and the fact that many character-defining architectural artifacts have been lost, makes it questionable whether or not the National Register would accept the site for inclusion.⁵³

A preliminary analysis in terms of eligibility of the rest of the original company town is much easier to undertake. It is possible to consider that the original company town has lost its cultural integrity. Except for the layout of some streets, the *batey*, some original buildings (probably less than 5%), the rest is gone. Therefore, the industrial district’s significance needs to be analyzed on its own merits. It cannot be understood as part of its original totality because the basic component (the company town) does not exist anymore and, therefore, possesses no integrity.⁵⁴

Contrary to popular belief, cultural and historical integrity is neither eternal nor reversible. In its absence, the property loses its cultural significance. Because of this, even if a determination of eligibility has been made or if a property has been listed in the National Register, it can be removed if it loses its integrity. In spite of the fact that the concept of integrity is one that carries international validation, the author is aware that many do not properly understand the many subtleties inherent to the notion. For example, the Junta de Planificación might have a different point of view. Since there is no local written information on the subject it is difficult to know what parameters will be used when evaluating the industrial area.

⁵³ It is relevant to point out that it might be possible to list buildings at the industrial district individually, even if the site is found to be not eligible for inclusion to the National Register. Naturally, the building in question would have to comply with at least one criterion and possess integrity.

⁵⁴ This finding by the author should be consulted with the Puerto Rico State Historic Preservation Office (PRSHPO) as soon as possible, even if on a technical assistance basis, in order to make sure they agree with this preliminary determination.

In spite of this situation and acting unilaterally (due to the fact that none of the government agencies has made a determination, whether of specific individual architectural artifacts, the industrial area, or of the site as a whole), the author believes that – as of the date of this study and regardless whether the manufacturing area as a district is eligible or not – there are some individual structures at the site under study that deserve to be preserved. Although most lack integrity, some – the raw sugar warehouse building comes to mind – still possess it. However, the author believes that, even if the site is declared to be not eligible, some effort should be made to salvage the structures that might be eligible on their own. In addition, there are artifacts that should be preserved, even if only as an act of cultural triage. The rationale followed in the triage determination is explained below.

Using as a general frame of reference the basic assumption that the industrial area was a contributing district of the original Centrale, the author decided to analyze each one of the architectural artifacts within the industrial sector from two slightly different, although at times parallel and intertwining, points of view. The first one judged each building or artifact on the basis of whether or not it was character defining to the industrial park and the work performed here. In other words, was the artifact part of the manufacturing area’s “personality”? Was it an essential component of the sugar processing cycle? Following this reasoning, for example, the original brick chimney was considered one such artifact. The modern cyclone fence surrounding the enclave was not.

Once this aspect was analyzed, each artifact was studied keeping in mind whether or not it could be considered a contributing element of the industrial site. According to the National Register of Historic Places, when analyzing districts, there are resources that contribute directly to the significance of the place while others do not. The first ones are termed contributing resources; the rest non-contributing resources. While the last type is considered part of the personality of the site (even if only in a superficial manner), it does not contribute in any intrinsic way to its cultural significance.

The presence of contributing resources, on the other hand, should be carefully analyzed. The National Register has defined a contributing resource in the following fashion:

A contributing building, site, structure or object adds to the historic associations, historic architectural qualities, or archaeological values for which a property is significant because

- It was present during the period of significance, relates to the documented significance of the property, and possesses historic integrity or is capable of yielding important information about the period; or
- It independently meets the National Register criteria.⁵⁵

In this particular study, the rehabilitation of an artifact is recommended if it is considered to be a contributing and character-defining architectural resource that possesses **some** integrity, even if not to the degree recommended by federal guidelines. The author believes that just as the Centrale's industrial park is culturally relevant, even if it presents a borderline case regarding its integrity, so is the case of the architectural artifacts littered within the area under study. Some contribute to the personality of the site, even if they lack integrity as per federal definition while others might be eligible in their own right. They can and should be infused with a new life.

As mentioned before, the author determined that character-defining artifacts present at the park could be described as those structures that played an important role in the sugar processing activities. Therefore, an artifact was considered contributing if it was character defining to the industrial process that took place at the site. The rationale closely mirrors the client's wishes: even if the industrial site as a unit represents a borderline case in terms of integrity and, as such, eligibility is doubtful, artifacts that are imbued with a particular resonance as to what the essence of the site was truly all about, are to be preserved and rehabilitated.

The third perspective from which each individual architectural artifact was examined is directly related to their physical integrity. For example, while no one doubts that the structure where the centrifugal process took place was a character-defining one and, hence, contributing, it no longer exists.

⁵⁵ Department of the Interior, National Park Service, "National Register Bulletin How to Complete the National Register Registration Form" (1997), p 16.

The triage technique best explains the author's analysis regarding the three white sugar storage warehouses (# 3, 5, and 6). According to her methodology, only one (#3) possesses enough integrity to merit any rehabilitation strategy. (See Figure 12.) Warehouse #6 burned to the ground some years ago while the former Warehouse #5 lays in ruins under several tons of plants. (See Figure 13.) It possesses no modicum of integrity whatsoever.

Therefore, according to the author's philosophical point of view, there are both contributing and non-contributing architectural components in the industrial park. Because those belonging to the first group that possess integrity are character-defining in terms of the original personality of the district, they directly contribute to the cultural significance of the site. The author recommends they undergo some sort of rehabilitation strategy as she feels that sensitive intervention can bring provide them with a new life. In some cases, she suggests minimal intervention, such as consolidation and preservation. At other times, rehabilitation activities are suggested. These recommendations are of a general and preliminary nature, for this study's goal was not to generate guidelines as to what kind of specific treatment each artifact should undergo.

The task faced by the author was to analyze and interpret the architectural artifacts present at the industrial district and to classify them according to their cultural significance standing. The contributing and non-contributing factor was essential to this decision. This is how the author came up with a short list of individual cultural resources she feels belong to the first group. This is the group analyzed in some detail because these are the ones she feels should, if possible, be rehabilitated.

As part of her interpretation, the author also considered other three-dimensional artifacts and how they contribute (or not) to the significance of the site. Some of these are: the stairs which originally led to the *casa del administrador*, the remains of the conveyor belt, some railroad lines that crisscross the area, the tanks, the structure that supports the crane at the pier, and the remnants of the pier. Although these elements cannot be considered traditional architecture (even if we stretch the word infinitely), they have been interpreted as architectural artifacts because of their three-dimensional

presence. In spite of the fact that they lack physical integrity as traditionally understood, they are an intrinsic part the site's landscape and help define its unique personality. Therefore, some effort should be made to rehabilitate these fragments and to incorporate them to contemporary life.

At this time, a short analysis of each building recommended to receive some kind of preservation and rehabilitation treatment will be presented. The author's short list of contributing resources uses the identification names present in a plan of the buildings, dated 1959. (See Figure 2.) These are: the raw sugar warehouse, the machine shop, the general equipment warehouse, the administrative office and the locomotive shop, and the warehouse #3 buildings, in addition to the chimneys and the port compound.

The raw sugar warehouse building

While the number and type of buildings used in the different sugar industrial parks established by the Americans varied according to the particular needs of each enclave, the raw sugar warehouse building was an ever-present type. (See Figures 3, 4 and 5.) The imposing structure is known by the locals as the *almacén de azúcar a granel*. By the time the sugar-processing cycle made use of this building, the following stages had taken place: cane washing, cutting into smaller pieces, milling, purification, clarification, evaporation, crystallization and centrifugal separation. It was during this last stage that raw sugar was separated from molasses.

At the Centrale, after this long and complex journey, raw sugar entered the warehouse. It was here that the tons of the product were distributed and shipped to their final destinations. A special conveyor belt (styled as a shuttle conveyor in the architectural plans) ran lengthwise, close to the highest point of the roof. Because of this, the main roof truss was designed to structurally resist 7,000 pounds. The funnels present at floor level were also part of the transportation system. The building

was connected by means of the conveyor belt (to the locals, *conveyo*) to the different areas and to the pier. In this last place, sugar was introduced into the ships by means of a *soplete*.⁵⁶

The raw sugar warehouse building is the largest structure at the site. In terms of the cultural significance of the industrial district, it is probably its most important character-defining component. It was here that the main product was distributed, packaged and sent to the pier for the final stage of its journey, a trip that started in the fields and ended at the table. If properly rehabilitated, its imposing size and morphological arrangement guarantee that it will be a key participant of any contemporary architectural scheme.

Upon entering the building, now home to all sorts of animals, the visitor receives a surprise, for the interior still smells of sugar after all these years. If smells could be preserved, this would be the first and most important goal towards its rehabilitation.⁵⁷ The aroma of what was would provide a powerful reminder of the dozens of *zafras* and *moliendas* that made possible the existence of this cavernous building.

The interior of the building is roughly organized in basilical fashion: aisles run longitudinally divided by lines of vertical supports. The gabled roof, in turn, follows this organization, the central portion being the highest and the lowest ones resting atop the columns. The interior space under the main gable was used to locate the previously mentioned internal transportation system that ran along the building lengthwise. The central section of the roof has a gabled clerestory that also runs lengthwise along the whole structure. Fenestrations are located under these two smaller sloping sections of the roof. The clerestory was a device probably used to control both light and ventilation within the interior of the naves, the main working area. Since hot air rises it can exit the interior via the openings in the clerestory.

⁵⁶ Personal communication, don Ángel Quiles. June 2001.

⁵⁷ The author is familiar with preservation projects (the Medieval fortifications of the city of York, United Kingdom come to mind) where smells are part of the interpretation. These are not, however, original to the sites.

The building represents the merging of several structural techniques. Metal columns – partly encased by a reinforced concrete casing – support a system of metal trusses that run across the considerable interior span. The trusses, in turn, support the roof, constructed of corrugated metal plates. Lateral walls depict a combination of materials: a reinforced concrete base and metal columns. The corrugated plates sheath the lateral walls except for a segment of the concrete base. This outer layer of plates provides the structure with its almost delicate personality in spite of its huge size and solid structural components. (See Figures 4 and 5.) As mentioned before, reinforced concrete was used due to its fire resistance qualities. It is also possible that it was used to create a physical barrier (a solid wall) around the perimeter of the building. A detailed study of the architectural organization of each building needs to be made in order to fully understand how the different structural and morphological components work within this structure.

Very few openings pierce the walls of this building. Probably, there was an interest in controlling the entrance of light and air into the interior, due to its use as a warehouse. The main door is located at the north side (one of the two short façades). The conveyor belt entrance is to the west and is still partly in place. In some areas, translucent plates allow for light to filter into the interior. The author has not been able to determine if these were original to the building or not. Since no historical study of the building and the site has been generated, the construction date is unknown although the author assumes the warehouse is one of the original structures of the site. She recommends such a study be undertaken in order to better interpret the structure.

Probably as a result of the importance of its original function and detailed construction, the building is in a relatively good state of conservation. Because of its significance (as a character-defining element of the industrial district) and because it still possesses a large degree of integrity, the author believes that the structure is eligible – on an individual basis – for inclusion to the National Register. Although there has been some material degradation and some of the metal plates are missing,

on the whole, the structure appears to be in fine shape. Its rehabilitation – material wise – should pose no major problem.⁵⁸

Probably, the most relevant difficulty in terms of its rehabilitation is related to its gigantic size and unique architectural personality. Finding a compatible use (as required by federal standards) for this huge – albeit beautiful and culturally significant – “white elephant” is a most fascinating challenge. It is not the goal of this work to suggest specific rehabilitation strategies for each building. However, when the time comes, we recommend a liberal interpretation that allows for a contemporary use while preserving its most relevant character-defining features. For example, side openings and careful dismantling of certain metal plates can allow light into the interior and create a user-friendly interior. The Secretary of the Interior’s Standards for Rehabilitation provide excellent guidelines regarding the design of compatible interventions.

The machine shop building

The machine shop building, known to the locals as the *edificio de la fundición* (metal foundry), is an interesting structure. (See Figures 3, 6, 7, 8 and 9.) The Centrale, as many similar enclaves, was a self-sufficient locus. In its heyday, it handled most pedestrian needs (there was a department store, a bakery and, even, restaurants). It also was able to take care of most special needs directly related to the day-to-day activities at the industrial site. Within this building, the Centrale was able to make *sus propios moldes y piezas de metal requeridas sin necesidad de importarlas de afuera*.⁵⁹ The remains of the foundry’s brick chimney are still in place. (See Figure 7.) According to local sources, in addition to providing foundry services, a laboratory was also located here at one time, as well as a small carpenter shop, located at the north end of the building. At this point, there is no way of knowing with certainty whether the carpenter shop was added at a later stage or if it was one of the original services the Centrale provided.

⁵⁸ Naturally, this is a preliminary finding. A structural study of the building needs to be done in order to completely assess its real physical condition.

The longitudinal structure, the second largest at the site, is placed at a slight angle to the raw sugar warehouse building. This creates a kind of open corridor or alleyway. The building is almost as high and as long as the raw sugar warehouse structure, although much smaller in terms of its interior area. It has no reinforced concrete walls and the metal columns were left exposed with no reinforced concrete casing at their base. (See Figure 7.) The interior three-aisled basilical arrangement is masked by the exterior gabled roofline. The metal columns support trusses made of the same material that, in turn, hold the corrugated metal plates of which the roof is made. A delicate (if compared to the girth of the columns and the trusses) metal structural frame provides support for the corrugated metal plates that form the lateral walls. The plates sheath the building as they do at the raw sugar warehouse. However, the lateral walls of the machine shop have no concrete base, as was the case of this last building.

While the south façade exhibits a large door opening and a window close to the gable, at the north and west elevations there are still vestiges of the conveyor belt that united the building to the rest of the industrial structures and the port. The machine shop lateral walls are pierced with several windows and doors. The building is a good example of how diverse was the use of metal plates, whether corrugated or non-corrugated, at the Centrale. They were utilized to create roofs, walls, doors and windows. It is instructive to study how non-corrugated metal plates were used to create closings (doors and windows) for the openings. (See Figure 8.) The versatility present is truly an engineering and architectural feat.

This building is in a poor state of conservation, amply demonstrated by the many missing structural elements and the great amount of vegetation growing on its inside. Significant parts of its structural and architectural personality are missing, such as whole sections of both the roof and lateral walls. There are several areas where the metal plates evidence an advanced stage of dilapidation. Many plates are not only rusted but also exhibit big holes where oxidation has rusted away the original fabric.

⁵⁹ Personal communication, don Ángel Quiles. June 2001.

As a direct result, water freely enters the interior causing damage to other structural elements, such as the trusses and the columns.

The author believes that this building, on its own, is a borderline case in terms of its eligibility to the National Register. Although it could be argued that it qualifies under Criteria A, C, and, probably D, the state of its integrity is not as clear-cut. The PRSHPO needs to be consulted regarding this aspect. Even if proven to be not eligible, the author recommends that careful thought be given to the possibility of preserving certain sections of the building to act as a physical reminder of the structure. Following her triage's philosophical approach, in this manner the structure would have mnemonic presence for the present and future generations.

Any rehabilitation strategy regarding this structure needs to first stabilize the original structure and fabric. Specialized studies have to be made in order to understand if, for example, the rusted metal plates and roof trusses are irreversibly damaged or not. If some sort of treatment can be devised for them, then proper rehabilitation activities can be generated. Immediate intermediate solutions should be taken, such as keeping water out of the interior, so that preservation of the original fabric can be effected.

Because of its size, it is possible that finding a compatible use for this structure might be an easier task than trying to do the same for the size raw sugar warehouse building. Due to its present state of decay, the rehabilitation of the building can follow more flexible guidelines than those that might be applicable to the raw sugar warehouse building. As with this last structure, partial dismantling (in this particular case there are already missing areas due to its deterioration) of some sections can allow more flexibility in terms of finding a compatible use for this structure.

The general equipment warehouse building

This small building is located close to the south façade of the raw sugar warehouse structure and helps organize the open corridor or alleyway between this last building and the machine shop one. (See

Figure 3.) According to some sources, *millones de dólares*⁶⁰ in all sorts of machinery, equipment and varied wares were stored here at any given time. The warehouse was located close to the machine shop in an obvious effort to make communication between these two related service points easier. The author could not find any connection (be means of the conveyor belt) between the warehouse and other buildings. This is probably due to the fact that its use was not directly related to the processing of the sugar.

The building has a longitudinal shape and a gabled roof that slopes in two different directions. Windows and doors pierce the lateral walls and reveal a basilica-type interior organization. Three distinct chimney-like vents⁶¹ (in Spanish, *ventiladores*) are placed along the crown of the roof. As with similar cases, these vents were probably needed in order to guarantee proper ventilation. The interior has a metal columns and trusses structural arrangement and the characteristic corrugated metal plate sheathing. The corrugated kind is used for the walls and roof while the non-corrugated type was used in the construction of the window shutters.

Some might consider that a general warehouse is not an extraordinary structure in terms of the cultural significance of the site, particularly since it is not character defining in terms of the sugar manufacturing process. The author, however, believes that its role as general warehouse and its unique location (it helps define the exterior corridor or alleyway between the two most important extant buildings) generates a layer of significance. The building, therefore, is important to the spatial definition of the site. In addition, a cursory study reveals that it is the best preserved building on the site. Its apparent good state in terms of integrity, and the fact that it probably qualifies for inclusion to the National Register under Criteria C and D (individually) suggests that it should be included in any rehabilitation plans of the district.

⁶⁰ *Ibid.*

⁶¹ This type of chimney/ventilator is to be a fairly common device in this kind of buildings. The author has seen it used in buildings located in United States military bases in Puerto Rico and also in industrial structures in the mainland.

As was the case with the previously analyzed two buildings, the author suggest flexible guidelines when trying to find a compatible contemporary use and also in the design of the rehabilitation strategies. This should be done after a detailed analysis of the structural conditions of the building is performed. An interpretation of the character defining elements of the building should also be carried out, in order to make sure that they are not irreversibly impacted. These should be preserved at all costs in any rehabilitation intervention.

The remains of another structure that, according to local sources, was used as an additional warehouse are located close to the south façade of the general warehouse building. This additional warehouse does not appear in the 1959 site plan. (See Figure 2 and 3.) Only some columns, deteriorated segments of the original roof trusses, and rusted plates, in many cases precariously dangling, remain. Since only some highly deteriorated structural elements currently exist, the artifact possesses no physical integrity whatsoever, as per federal definition. At this time, the author is **not** recommending the preservation of these ruins.

The BP office and locomotive shop building

The structure that housed some of the administrative functions of the Centrale and the locomotive shop completes the formal organization of the four major extant buildings. (See Figure 10.) Known as the BP office and locomotive shop building in the plan, it ends the exterior corridor or alleyway created by the raw sugar warehouse, the machine shop, and the general warehouse buildings. (See Figures 3 and 11.) Its roofline repeats the profile seen in the raw sugar warehouse: a gabled roof crowned by a higher gabled structure that runs lengthwise and serves as a clerestory. The author has been unable to find out what specific administrative operations were housed here, although its internal morphology helps define the area apparently dedicated to each function.

The train⁶² played an important role at Guánica Centrale. Before cars and trucks became the standard transportation mode, the canes from the different *colonos* and from the far away areas of the Centrale were transported this way. Trains #7, #3, and #85 would reach the Santa Rita station (one of American Railroad's train stations in the island). This locale was connected to the Centrale by means of three private lines. The lines, known locally as *güay* (from the English way?), served as the bloodlines of the enclave, connecting the company town with the rest of the island. Sugarcane from far away Añasco, for example, was transported from the northwest until it reached El Limón. Here it was transported to the Centrale private locomotives.

The interior of this building is divided into three aisles and follows the standard basilical organization used in most structures at the site. Several windows and doors pierce the long lateral walls. Metal columns support metal trusses and both the roof and the sheathing of the walls were constructed by means of corrugated metal plates. The walls have a reinforced concrete base covered by the plates. All windows shutters were made using non-corrugated metal plates.

The integrity of this building presents a borderline case. While some parts evidence a regular state of preservation, others show great deterioration. This is seen in certain areas where there are missing structural elements and also in the deteriorated state of the original fabric. When a detailed analysis is made of the structure and a determination of the real conditions of its integrity is analyzed, interested parties will be able to adequately ascertain its eligibility for inclusion. At this point it is risky to state whether or not the building qualifies on its own for inclusion.

As stated before, during the early decades of the 20th century, the train was the Centrale's main communication link with the rest of the island. Within the industrial district, a special conveyor line united all the industrial buildings. Both these means of communication were serviced from this structure. Therefore, it can be understood as a character-defining component of the enclave. Because of this, the author believes that – in spite of the serious state of deterioration many parts of the building

⁶² All information related to the Centrale train service was provided by Mr Ángel Quiles. June 2001.

evidence and even if at a later time it is determined to be not eligible for inclusion to the National Register – some effort should be made to preserve this building, even if only architectural fragments of it.

In other words, in spite of its lack of integrity, triage salvage operations could be effected upon it. The author is recommending this type of intervention because she feels that, in its current state, the building is seriously deteriorated. Any effort to restore it to its former self would imply drastic measures of intervention that could compromise its historical integrity. Of all the structures analyzed thus far, with the possible exception of the machine shop building, this is the one that would require the most flexible of rehabilitation treatments. The author realizes that these recommendations might be considered far too liberal. However, they would accomplish two objectives: compliance with federal guidelines regarding cultural significance issues and preservation of some tangible evidence of the structure.

Warehouse #3 building

This building, located to the east of the BP office and locomotive shop and to the north of the raw sugar warehouse buildings, was one of three warehouses used to store white refined packaged sugar (*azúcar en sacos*). (See Figure 12.) As mentioned before, the Centrale's big warehouse was only used to store raw sugar, shipped in this state to the different destinations where further processing might or might not take place. When raw sugar underwent additional processing it became white refined sugar. The bags of this product were stored here and in two other warehouses (# 5 and #6), close to the industrial district train lines.

The building is organized along basilical lines, with metal columns and trusses dividing it into longitudinal naves. There is a section in the interior that exhibits wooden columns and trusses; probably a later addition. (See Figure 12.) The remains of a movable ramp used in the transportation

of the sugar (part of the conveyor belt) are still in place. It was probably used to transport both the sugar and the final packages.

According to several sources, there were three such structures: warehouses #3, #5, and #6. The last one (#6) burned to the ground some years ago and only charred fragments remain. A few columns and sections of dangling metal trusses exist of the second one (#5), covered by vegetation (See Figure 13.) Therefore, warehouse #3 is the only one of the original trio that still exists, albeit in a dilapidated state.

Most of the interior structural elements are in a serious state of degradation and sections of several trusses have completely disappeared in several places. The structure, in general, is in bad shape, the roof is missing from several areas, and the wooden elements have rotted away, making its stability a serious concern. It is the author's opinion that it possesses no integrity, as per definition, and is not eligible – on its own – for inclusion into the National Register.

However, it is the only remaining fragment symbolic of a relevant and character defining activity of the industrial center. It is an icon that stands for the many sacks of white refined “Guánica” and “Parrot” sugar consumed by the islanders for generations. Taking into consideration the above-mentioned issues and the triage philosophy the author deems appropriate to use regarding the decision-making process concerning the industrial district, thought could be given as to how to best preserve at least some sections of this building. Incorporating these elements to the new design, however, might prove to be difficult and, even, dangerous given the present state of the structure. It is the author's opinion that decisions regarding the future of this structure require a study regarding its structural integrity, a liberal interpretation of preservation and rehabilitation strategies, and direct consultation with the PRSHPO.

The chimneys

The paradigmatic architectural object of every sugar-processing center, regardless of time, was its chimney. (See Figure 14.) The smoke from the fuel found its way into the atmosphere by means of this element. To this day, each chimney can be considered an icon of things that are no more. They stand like soldiers of a long-gone past. At the Centrale, the original brick chimney played an additional role. Its whistle called to work every day and was also used to signal important events that happened at the enclave, like the death of a worker. The two Guánica chimneys were (still are) visible from many places and, as of today, are the highest structures of the enclave.⁶³ In a sense, they acted a bit like “Big Brother,” always there to remind the company town of its *raison d’être*.

Although the author has been unable to find the exact date, old photographs point out that the Centrale’s chimneys were constructed at different times. At least one was needed to oust the steam needed to process sugarcane juice into raw sugar. In the old days (regardless the source of energy), the traditional material used for these structures was terra cotta brick, until reinforced concrete became a common construction material in the island. In 18th and 19th century *haciendas* or *ingenios*, the chimney was connected to the Jamaican train; at the Centrale it was close to the eight cauldrons or *calderas*.

The two Guánica chimneys are more or less the same height. The oldest one is constructed of light terracotta color bricks and the second one of exposed reinforced concrete.⁶⁴ The first one – at least from the vantage point from where it was studied by the author (the top of her car) – depicts beautiful workmanship, accentuated by the simplicity of its lines and proportions. It is possible that the bricks used in its construction were imported from the mainland. The facts that their color and shape seems to be standard all over the structure, that they must be special kind of bricks (able to withstand high temperatures), and that there are no highly visible cracks evidences the high quality of this material. Both chimneys appear to be in a good condition; the author could not spot the traditional cracks that

⁶³ The author was told that the telegraph poles of the Centrale were much higher than the chimneys. These have dissappeared.

usually affect these structures. She was unable to study them at close quarters, so this is a tentative description of the present day state of the structures.

Some might consider that chimneys are not architectural artifacts. In most cases, this is probably a correct appreciation. The Guánica pair, however, due to their size, physical relevance, and design merit (if only structural), break traditional perception and interpretative modes. If we define architecture as the transformation of space into place, the structures certainly comply with such a description. They generate not just any place, but a special one, as do all architectural examples. The author believes that, taking into account their features and their character-defining role they qualify for inclusion to the National Register, on their own. In addition, they represent some of the changes that took place with time regarding this character-defining morphology. From brick to reinforced concrete, the chimney artifact is the same although the material and shape reflects the time they were designed and built.

The original enclave, as seen in old photographs of the Centrale, needed only one chimney. However, the two chimneys are now part of the personality of the site. The author has been unable to confirm the much-repeated date of the 1960's as the construction period for the second chimney. She recommends that – if possible – both chimneys be preserved. If only one can be conserved, the older one (brick) should have priority, not just because it is the original one, but also because of the quality present in its materials and construction technique. In addition, the chimney, due to its locally famed whistle is part of Ensenada's collective memory. Since this structure has impacted the community in more ways than one and because it possesses integrity, all efforts should be made to preserve and rehabilitate it.

The port

⁶⁴ The author was unable to study the structures in close proximity since the only access was across an overflowed (with raw sewage discard) area, where the structure housing the centrifugal machinery had once been located.

The Centrale's very important communication with the exterior world beyond the sea was achieved by means of its port facilities. (See Figures 15, 16, 17 and 18.) At the dock located here, sugar was shipped, sugarcane from Santo Domingo was received, passengers alighted both ways, and supplies were received, among many other activities. When the Centrale was first established its closeness to a good bay (in naval terms) and proximity to the ocean, were considered of paramount importance. The bay, deep enough for big ships to come in, protected the enclave from the sea activity while allowing a direct connection with the Caribbean Sea.

In spite of its dilapidated state (even the pier is now gone), the remains evidence how impressive these facilities must have been in their heyday. The long, massively built dock, the huge crane, and the conveyor belt structure attest to this. It is significant to note that, in Guánica, the designers excelled themselves not only in more traditional ventures (industrial and domestic architecture) but also in marine architectural artifacts. At this point, it is convenient to remember another impressive maritime enterprise orchestrated by the designers of the Centrale. The *ensenada* area originally had a small island (at times, styled as Isla de los Puercos). As part of the construction of the Centrale, the little island was united to the mainland; the place is now called Punta Pera. The author is recommending a sub-aquatic archaeological study be made of this enterprise that, as can be readily understood, possesses its very own kind of cultural significance. The engineering feat reflects the spirit of the time: architecture and engineering could be used to drastically alter the natural environment.

At the port, an immense crane (known by the locals as *la grúa*) was located and used to move cargo from the ships to the ground and vice versa. The connection between this structure and the conveyor belt is truly fascinating. From afar, the ensemble looks like a Calder mobile. (See Figures 15, 16 and 17.) The crane and conveyor belt visually and physically united the seashore to the rest of the industrial enclave. To the author, they are powerful icons of the Centrale and, naturally, character-defining elements within the industrial district organism.

According to the locals, the pier was still in place until Hurricane Georges hit the island a few years ago. Except for its piling, it has lost most of its fabric, lacking integrity. Therefore, the author believes it is not eligible for inclusion to the National Register, even though it was one of the main components of the enclave. Since nowadays projects have to comply with certain guidelines regarding natural resources (such as the seashore) the author feels she should not venture into the decision making process as to whether or not the ruins of the port can and should be preserved. On the other hand, the author believes that the crane structure still possesses a modicum of integrity. Therefore, she recommends that a concerted effort be made to preserve and rehabilitate this structure.

The port area is littered with many kinds of architectural artifacts. What to do with them is not a clear-cut task. Lets take, as an example, the three huge tanks that sit on top of the hill overlooking the port that, according to some sources, were used to store fuel. (See Figure 19.) Since no historical and architectural analysis has been made of the individual artifacts, the author has not been able to find the specific date of their construction. In spite of the fact that they might be considered character defining to the site, it is possible that the National Register might not consider them architectural artifacts. In addition and keeping in mind the triage philosophy that has permeated this interpretative analysis, it would be extremely difficult to rehabilitate such objects. What kind of compatible contemporary use can be found for such structures? The author, recognizing the difficulty inherent in the preservation of these artifacts and understanding that they are not eligible on their own for inclusion to the National Register is **not** recommending they be preserved.

Another interesting structure at the port facilities area is the little wooden shed from where, apparently, the officer in charge controlled all activities. (See Figure 20.) The author could find no information as to the date of this artifact. If structural studies reveal it is in good condition, she recommends it be moved from its location (there is no evidence that this was an original structure) and placed where the public might enjoy it. Its humble ethos and curious polychromatic combination

present a good example of the varied architectural typologies and morphologies experimented with at the Centrale.

These two recommendations dealing with the tanks and the little shed are to be understood within a specific context: they are personal opinions of the author. In the first place, this study was not geared to be a determination of eligibility or a generation of specific preservation strategies either for architectural or non-architectural artifacts. In the second place, no preservation philosophy has been yet generated for the rehabilitation of the site. In both cases, her comments are based on the fact that the structures – on their own – would not be eligible for inclusion to the National Register. Before any final decision is made, further study and documentation is needed and the PRSHPO needs to be consulted.

Additional artifacts

Two interesting additional artifacts present at the industrial district are the train tracks and the conveyor belt structures, still visibly crisscrossing different areas of the site. (See Figures 4, 9, 10, 12, 15, 16, 17 and 19.) Some might not considered them architecture, in spite of the fact that both are character defining. They were truly the lifelines of the place, making possible the interconnection between all the necessary work stages of the sugar manufacturing process. They acted as arteries, allowing the “blood” that sugar was to move throughout all the necessary processing stages until it was shipped to its final destination.

It is possible that preserving all extant fragments of these two elements will prove to be an impossible task. The author recommends that some sections be preserved so that visitors to the site can understand how the Centrale worked. As mentioned before, the goal of this work is not to suggest specific preservation or interpretative strategies. More detailed analysis is needed before deciding which sections should and can be preserved and how they should be presented to the general public.

For example, the team might decide that missing sections can be represented throughout the new pavement.

A third architectural fragment within the industrial district the author is recommending consideration be given to its preservation are the ruins of the staircase that led into the administrator's house. (See Figure 21.) As mentioned before, the *casa grande* or *casa de los amos* was a staple typology, present in all 18th and 19th century sugar concerns. Guánica Centrale was a company town and its administrator was perceived as its "owner." Folklore has made some of these men local heroes while others are infamous (i.e. French T Maxwell)⁶⁵ for their lack of sensibility and their unfair treatment of the workers.

The Centrale's administrator was truly "Big Brother." The author was told how one of this personages would walk each morning around the company town, as early as 6:00 AM, in an activity curiously similar to the *voltear la finca* that characterized most owners or administrators of Puerto Rican agricultural concerns. She was told that if during this walk: *Veía un papelito, en un patio, levantaba al residente y le ordenaba que lo cogiera.*⁶⁶ While this personal interest in the cleanliness and beauty of the site is accepted as a good thing, other administrators are singled as either ugly Americans or incompetent. This last description is a common one given by the locals to describe the "Cubans" that controlled the enterprise during the sixties and the early seventies. The administrator of the Centrale truly occupied the position of the historic owner or *amo*. He could, technically speaking, do or break the company town.

Since he was the most relevant figure of the enclave, his house was located on the highest point of the site. This hill commands both a magnificent view of the port and the bay of Guánica (to the south) and of the industrial district proper (to the north). It also visually controlled the rest of the company town, as well as the entrance road. Because the administrator's house (no longer extant, except for the ruins of a reinforced concrete garage) had an iconic significance for the whole settlement

⁶⁵ Other administrators were: J A Isacks, John G Allbright, among others.

and because it was character defining, the stairs can serve as a memory of this very important and now non-existent icon. Interpreted as part of a landscape design, the remains can be an interesting component of any new design.

The final typology in terms of the architectural artifacts that was analyzed by the author, were the tanks that have a presence all over the site. In addition to the three located at the port area, there are three others similar ones (used as part of the water supply system) located on top of the hill that faces the industrial district (across the road). All were quite important to the site to the extent of being character-defining objects. However, considering they are not examples of a unique architectural typology, and the limitations imposed by their size and morphology, the author believes that – if no compatible and safe use can be orchestrated for them – they need not be preserved.

⁶⁶ Personal communication, don Ángel Quiles. June 2001.

5

“A kind of concentrated honey”

ADDITIONAL RECOMMENDATIONS

Guánica Centrale, one of the places where the “kind of concentrated honey”⁶⁷ was processed into sugar in the island, is no more. An impressive set of ruins occupies what was once a bustling commercial venture that transformed both the town of Guánica and the southern part of the island. How is this generation to preserve such a place? How can we make it –again – part of our daily lives? That is the objective of this work: to initiate the interpretative activities related to the site in an effort to design adequate rehabilitation strategies.

The goal of this work is two-pronged. A concise photographic inventory and a descriptive analysis were made of all architectural artifacts that contributed to the cultural significance of the industrial district of the former Guánica Centrale. It is expected that their preservation and rehabilitation will be given some thought by means of a compatible architectural compatible design for the industrial site. Since each standing artifact has been analyzed for its possible contributing role to the cultural significance of the area, it is expected that a better understanding of these structures has been gained.

In addition to the expected task, the author feels that there are a series of general recommendations that will benefit any work dealing with this site. These are listed below in no particular order of importance. She would like to point out that this list is non-inclusive and that, at

times, the recommendations represent her professional opinion. Consultation with the proper agencies, including the PRSHPO is highly recommended to the team, as soon as possible.

First

All the recommendations on preservation treatments presented in this study, whether dealing with specific artifacts or the site, although strictly adhering to federal guidelines, are preliminary in nature. Since no in-depth analyses (i.e. study of the conditions of the structural members of the buildings) have been made of any of the artifacts, the author has no scientific way to understand how each one is truly behaving from a structural point of view. It may be that a particular structure has passed the point of no return regarding its integrity and that its rehabilitation is impossible or unfeasible at this late date. The author's analysis should be taken as a **preliminary** interpretation of the present state of integrity. Further analysis is needed as well as consultation with the different government agencies.

Second

The parameters used in this interpretative analysis for deciding whether an architectural artifact should and could be preserved and, thus, rehabilitated were designed by the author using federal regulation and guidelines applicable to the island. As mentioned before, she is aware that requirements from some agencies might be more subjective in nature. For example, the Junta de Planificación is given by law the responsibility of determining cultural resources. Although their standards closely follow the National Register's, no additional documentation or guidelines is available regarding how to interpret their criteria. She recommends the design team meet with the different agencies (whether created by local or federal law) in order to make sure that they have a chance to comment on these and other preliminary findings.

Third

⁶⁷ A historical description of sugarcane.

The author is aware that many would like to see, as the end product of any intervention at the site, a reproduction of the original Guánica Centrale, in the manner of a museum. It is important for the team and the agencies to remember that this is an impossible task. As mentioned on several occasions, most structures at the industrial district are really borderline cases regarding their historic integrity. Since, unfortunately, many in the island believe integrity is reversible, some might feel an effort should be made to duplicate the Centrale as was.

It is possible to state that efforts to preserve the Centrale should have been started by the government (either municipal or state-wide) years ago. At that time, many of the original buildings still existed and degradation and dilapidation was not as rampant as it is today. It is a sad thing to admit but all concerned, particularly the public should understand that it is too late to restore all of the company town or even the industrial district to its former glory. Although the team should make every possible effort to preserve the most relevant buildings and artifacts, the proposed project (or any project for that matter) will not be able to turn the clock back.

Fourth

It is necessary for the agencies that will be involved in this project to realize the condition of the site and the many limitations some of the buildings impose upon any rehabilitation plan. That is one of the reasons why they should be consulted at an early stage. The author recommends dialogue so that maximum flexibility in the rehabilitation treatment designed for each structure is allowed by the concerned agencies. These should keep in mind that the Secretary of the Interior has defined rehabilitation as the process of providing a new, contemporary use for a historic structure while preserving its character-defining aspects. To make sure this goal is met, a detailed structural and architectural study needs to be carried out for the site and each structure to be rehabilitated in order to ascertain its physical integrity and rehabilitation possibilities. This work should be handled by the architect of the project, a structural engineer and the historic preservation specialist.

Fifth

After recommendation fourth is worked out, the philosophical framework for the rehabilitation process should be spelled out. The author realizes that some might think this is an obtuse, dense, and needless process. She, as well as true professionals in the preservation field, believes differently. Rehabilitation goals can serve as powerful guidelines to the architectural design and to the intervention processes planned. This framework (that needs not be more than a paragraph long) should be generated in consultation with the appropriate agencies.

Sixth

The author believes that the following studies need to be carried out before any further major stage is developed and undertaken.

- Detailed structural analysis describing the present conditions of each artifact and its rehabilitation potential.
- Architectural study interpreting the historical, architectural, and engineering contexts of both the industrial site and the company town.
- Determination of eligibility formally analyzing the issue of whether or not the buildings and the sites are eligible for inclusion to the National Register. Although the author has presented in this study her opinion on this relevant subject, a formal study needs to address the issue. Consultation with the proper agencies is mandatory at this point.
- Interpretative analysis defining, and describing the interpretative activities the team is proposing for the site. This includes both the global philosophical outlook of the rehabilitation process and the generation of individual instruments, such as interpretative signage.
- Management plan describing how the buildings and the site will be managed at short and long term.

Seventh

There are three original structures close to the site that have a potential to impact in a positive manner the rehabilitation and interpretation of the Centrale's industrial district. The small wooden structure located across the main entrance to the site served as the worker's hospital. (See Figure 22.) It is a most relevant structure and the team should make every possible effort to convey its cultural relevance to the proper authorities so that preservation strategies are designed for it. Quite close by, the weighing scale (known by the locals as *la romana*) used to weigh the canes is still in place. (See Figure 23.) Every possible effort should be made to preserve this important object in a safe place until rehabilitation is completed. At a later stage, once the project is completed, it can be exhibited *in situ* or in some area within the new area.

Conclusion

This study has listed all architectural artifacts that possess cultural significance in terms of the Centrale's industrial district. It has also singled out objects within the site that might possess significance in terms of the enclave. Although a daunting task, some effort should be made to preserve all recommended artifacts and to incorporate them into the contemporary design scheme proposed for the place. Because of their size, the uniqueness of their use, their deteriorated state, and plain difficulty in finding a compatible contemporary use, the author is recommending flexibility in terms of their rehabilitation. While federal guidelines request that rehabilitation strategies preserve the character defining elements of such structures, it should also be remembered that the same guidelines suggest flexibility in order to accomplish the principal goal of any rehabilitation process: bring back to life historic structures by actively incorporating them to our daily existence.

Figure 1. Woodcut of a typical sugar-processing center during the 16th century, showing how the natives provided the labor force. The following activities are depicted: crushing of the stalks (background), boiling of the cane juice (forefront left) and placement of raw sugar in molds (to the right).

Figure 2. Site plan entitled “Main Water Lines So PR Sugar Corp’n, Ensenada, Puerto Rico” and dated June 30, 1959. Autoridad de Tierras Archives, Guánica, Puerto Rico.

Figure 3 The machine shop, general warehouse and raw sugar warehouse buildings, Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 4 The west façade of the raw sugar warehouse building, Guánica Centrale, Puerto Rico. (APC, 2000)

Figure 5 Detail of the west façade of the raw sugar warehouse buildings, Guánica Centrale, Puerto Rico showing the reinforced concrete base and the corrugated zinc plates sheathing. (APC, 2000)

Figure 6 South façade of the machine shop building, Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 7 Interior of the machine shop building showing a brick chimney, Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 8 Window opening, east façade of the machine shop building, Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 9 North façade of the machine shop building, Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 10 South façade of the BP office and locomotive shop building, Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 11 Alleyway or open corridor surrounded by the machine shop, the general warehouse, the raw sugar warehouse and the BP office and locomotive shop (in the distance) buildings Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 12 Interior of Warehouse #3 building, Guánica Centrale. (APC, 2001)

Figure 13 Remains of Warehouse #5 building, Guánica Centrale. (APC, 2001)

Figure 14 Chimneys, Guánica Centrale. (APC, 2001)

Figure 15 The port showing the conveyer belt and crane, Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 16 The conveyor belt as it reaches the crane at the dock, Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 17 The crane and part of the conveyor belt at the dock, Guánica Centrale, Puerto Rico.
(APC, 2001)

Figure 18 The dock, Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 19 The three fuel tanks located at the port facilities, Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 20 Detail of the door of the guard's house at the port, Guánica Centrale, Puerto Rico.
(APC, 2001)

Figure 21 Ruins of the staircase to the administrator's house, Guánica Centrale, Puerto Rico.
(APC, 2001)

Figure 22 Workers' hospital, Guánica Centrale, Puerto Rico. (APC, 2001)

Figure 23 Weighing scale (known by the locals as *la romana*), Guánica Centrale, Puerto Rico. In the background another original structure is seen. (APC, 2001)

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