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LIBERATED CONFINEMENT
Puertorican Hacienda and Prison Environments

Adriana Concepcion
Thesis Prep Book
Fall 2011
Prof. Stenson
Prof. Vassilev
**Terms**

**User is Controlled:** Programmatic control through architectural form; the need for surveillance as a means to control the masses mobility and spatial personalization.

**User controls:** Extreme personalization of space in an acquired area—where limitations are less implied or delineated by adjacent individualization of spaces. Control becomes an absent quality of the spaces.

**Transition Areas:** buildings linkage, non-existent in first generation prisons. Second and Third generation prisons transition areas become controlled outdoor areas. Fourth generation prisons propose programmatic transitional areas where security no longer becomes a focal architectural icon, i.e. panopticon.

**Landscape 1:** The psychological confinement of defined outdoor areas and productive landscapes in Haciendas environment, code name for the physical environment provided for the use of inmates.

**Landscape 2:** Visual environment provided by the nature of the site, provides views of the outside world a blur of physical barriers that contain In or Out.
De-Institutionalized: A building where the outside viewer re-thinks or rather wonders the programmatic usage of such building; its physical appearance negates any sort of institution or confined space.

Remote Surveillance: The incorporation and adaptation of technology as a security strategy, Atlas and Dunham argue how these electronic aids are unobtrusive without significantly detracting from the unit environment.

Fourth Generation Prison: a development of this thesis research, the possibility of a less confined environment with careful generation of program and field relationships.
Introduction

The understanding of prisons as a typology within the architectural realm can be often disregarded, but its similarities to hospital and hotel architecture cannot be denied, given that a provision for all physical needs of guests, inmates and patients must be accomplished on a daily basis (Swaan, Abram). However the architectural possibilities of prisons have been avoided by many architects, leaving the physical environment in hands of 300 year old architectural practices. Introducing a new physical environment, prisons and its users can be liberated from its usual confined architectural elements. Understanding the similarities between constrained environments in colonial Puerto Rican Haciendas and the typological needs of prison architecture, the exploration of both confinement systems and programs can lead to the re-activation of a typical puertorican plantation. Consequentially a shift from prison’s historical identity, from panopticon’s main purpose of controlling the masses to a de-centralization of surveillance, through the provision of personalized spaces within confined environments can re-structure constrained architecture to produce liberated, flexible spaces, without sacrificing security.
The organization of the 19th Century Puertorican Hacienda is developed around a theory of confinement as a necessity to control its labor-force, leading to a rapid development of such typology. The presence of confinement in Hacienda is closely associated with the need of captivity in the nature of prisons. This can be seen in detail in Cuban dialectical relationship between owner’s control of plantation space and its laborers, which developed “jail like structures” by combining Courtyard Barracks typology (barracón de Patio) with walled town’s spatiality to develop a controlled environment (Singleton). Although this extreme measure was not implemented in Puerto Rico, remnants of detached linear barracks (barracón de Nave) as a space of confinement in Haciendas make a direct link to early examples of linear prison organization in Kassel, Germany 1720s.

By the 1800s the abolition of slavery led to the decline of the presence of spatial confinement in Haciendas, ultimately adjusting its typological identity to new
labor needs. This eventually led to the development of joint program/services in order for the hacienda to be self-sustained. Looking closely at the specific time when hacienda and confinement ideologies were linked as one building typology, I propose to explore a re-purposed overlap of the confinement systems and programs imbedded in Puerto Rican haciendas and prisons. This revived overlap has the possibilities of extracting re-purposed environments within Haciendas productive landscape and providing a viable work force in order to accommodate both typologies. This shift from Hacienda – as a historical site, de-functional space for its intended purpose – to Hacienda – as a Re-structured confined environment by the development of a fourth generation prison model – creates a new level of functionality that surges from both the user and the architectural response to such hybridization. The openness of plantation environment has the possibilities of developing new relationships between prison – user and nature where the productive
landscape becomes a visual and physical element of prison freedom.
Focusing on the fast developments of Haciendas around Adjuntas, Puerto Rico an architectural analysis can be extracted from the organization of living quarters in such environments. Relationships to Creole (criollo) architectural variations and European influences from colonial times are seen throughout the island’s haciendas whether on L-shaped buildings and courtyards or two story piano nobile influences. In this instance Hacienda is no longer family based, it becomes private or governmental as a result of the replacement of users, where an overlap of architecture by carefully identifying the essential characteristics of both typologies – the Puerto Rican hacienda and prison – is able to keep spatial and architectural essences of confined environments. Utilizing Hacienda’s environment as a model for less constrained environments, a new re-purposing of Hacienda organization can be abstracted, from turistical de-functional environments as plantations to a re-configuration of its programmatic function to accommodate and give a new meaning to prison architecture in a productive field.

Hacienda’s as colonial economic establishments in Puerto Rican
fields, ultimately become phycologically confined environments, where physical barriers are not established but delineated by a green canopy. The typical 18th century building organization became a cluster of programmatic spaces around a central plaza. This “plaza” served as a flexible working or gathering space limited by the surrounding buildings but with the ability to extend throughout the landscape. The organization of the buildings with the same physical relation to such open plaza can be understood to present a layout where every building had the same status and relationship to outdoor spaces—constructed or natural.
HACIENDA
or the puertorican coffee plantation

Walled city in Hacienda environment
Cafetal del Padre, Cuba.

Living Quarter’s typology
Barracon de Patio  Barracon de Nave

plantation organization

Forbes, Edgar Aller
Los Rabanos
“large, depersonalized institutions, in the name of efficiency; blocks of windowless, caged enclosures, in the name of security and effective surveillance; and increasingly sophisticated mechanical and physical barriers between staff and inmates, in the name of safety”

- Farbstein
Three generations
Three Generations: Prison design ideals

Dungeons, towers, fortresses... have been utilized as prisons for many centuries not as reformative spaces but as transient confinement environments for people awaiting their outcome. From Alberti to Palladio’s writing on prisons a new light to prison architecture suggested more humane environments – i.e. through scale, resources, and daylight to living quarters. 17th century an era labeled by Foucault as the ‘Great Confinement movement’ came to the development of Bentham’s Panopticon; A clear and hierarchical reformatory system between guard and prisoner that served as a “mechanism of power reduced to its ideal form, a particular institution closed upon itself” (Foucault). However focusing on the re-structure to prison architecture not in the reformation of prison systems, the pan-opticon became a clear influence in prison architecture all over Europe (examples:
Edinburg Bridewell and Sligo County Jail in Scotland as a half panopticon). This shift from rectangular non-radial prisons to circular or radial architectural typologies quickly served as a model for institutionalized – “confined” environments. The quick adaptation of this rather totalitarian prison form spread to buildings in need of a certain level of captivity such as hospitals and asylums. However modern architectural discourses have infiltrated prison building by attempting to humanize confined environments through productive landscapes, scale and materiality. These highly oppressed environments during the 20th century have been re-structured, providing humane environments where the user is no longer encapsulated from the outside world but carefully connected to reality.
First Generation: radial perspectives

Dating back to the 18th century, first generation prisons were a way of thinking and designing based on 200 year old models, the Auburn and Pennsylvania system. As heavy and imposing structures – castle like protection – the inflexibility of such designs created cage like day rooms and living areas where a clear separation of inmate and the outside world and a non-existent relationship between staff and inmate resulted in inhumane spatial organizations. Auburn’s radial layout clear relationship with Bentham’s panopticon, “were conceived as places in which offenders might come to feel penitence for their sins through a monastic existence of solitude, hard work and discipline” (Wortley). These high tensed environments – programmatically and architecturally, in its scale, materiality and organization – in comparison to Puerto Rican Haciendas question the centrality of authorities as opposed the centrality of confined people, i.e. cells and common areas, where new relationships between inmate-staff-environment can be developed. First generation prisons become a surveillance paradox where the centrality of security in radial prisons rather than provide direct view of cells, present an intermittent surveillance model where view of confined areas is possible through movement of such authoritarian center.
Auburn Prison Plan, 1825

Linear cell organization, clear separation from prison facilities and day rooms. Containment of inmates.

Eastern State Penitentiary Philadelphia 1821
First Generation: radial perspectives

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Second Generation: controlled movements

The development of prisons during the 1970s categorized as second generation prisons shift from cage like structures to podular architectural organizations. Second generation prisons present a clear separation between staff and inmates. New physical barriers including technological surveillance, walls and landscape create new levels of confinement and segregation from the outside world. Living quarters with small day rooms become separated from inmate services, visitors and staff. Movement becomes controlled by a third party: technology, the visual interaction with people is no longer needed or required. Although an institutional scale is no longer visual in the architectural appearance, the re-structuring and organization of first generation prisons is still present (Farbestein). The need of constant controlled movement resulted in environments that are more tense and frustrating than traditional prisons (Wortley).
Inmates
Cell Blocks

Space Division where inmates are segregated in group pods of 8 to 40 people.

Outside World
Staff
Washing Rooms
Visitors
Dinning Areas
Services
Health aids

Inmates Cell Blocks
Inmates Cell Blocks
Inmates Cell Blocks
Clear spatial barrier between inmate and surveillance staff, where technology replaces staff.
Third Generation: technological empowerment

Third Generational or new generation prisons can be interpreted as confined housing units supplied with spatial needs that promote little mobilization of inmates. Remote surveillance and separation becomes more apparent, where observation of the masses becomes visually non-existent. These “electronic zoos” (Nagle) decentralization of authorities within housing “pods” provides positive spatial relationship between inmates and their surrounding environment. This potential relationship, interpreting the environment as Hacienda’s productive landscape, provides inmates confinement needs as a driver for spatial organization of services and connection with the landscape – visually and physically. This field-inmate connection becomes a proposition of Hacienda as a less constrained environment for a development of a Fourth Generation prison model re-structuring previous spatial organization throughout prison developments.
Double spatial division, between staffing members and prisoners, where the living pods can accommodate daily needs without the need of excessive movement.
User is Co

Programmatic control through architectural form; the need for surveillance as a means to control the masses behavior, whether Masdar City. Control becomes mediated through given space.
Program constant user controlled through the usage of walls, city grids and urban ideals that limit user’s spatial flexibility.

Voluntary prisoners of architecture.

Continuous monument

woodhull

Program

SPECTRUM OF CONFINEMENT

panopticon, bentham

Masdar City. Control becomes mediated through given space.

Masdar City.
Die Lage und Topografie des Baugrundstückes für das Justizzentrum ergibt schlüssig die Anordnung des Gerichtsgebäudes zur Stadt hin gewandt und dahinter liegend die Justizanstalt. Mit sehr klaren und in ihrer Dimension der Nutzung entsprechen den Baukörpern wird ein städtebauliches Zeichen für die Zentrumserweiterung von Leoben gesetzt.


Durch die Doppelfassade im Verwaltungstrakt war es möglich, die innere Haut mit einer Holzoberfläche zu gestalten.


In Leoben wurde dieses System sehr kompakt ausgeführt, wobei wichtigstes organisatorisches und gestalterisches Kriterium die Optimierung der Aufenthaltsqualität für Angestellte und Insassen war. Dabei wurden Lebensumstände geschaffen, die bezüglich der Wohn-, Arbeits- und Freizeitsituation dem Alltag in Freiheit ähneln und Resozialisierungsmaßnahmen bestenfalls überflüssig machen.
Chaos within a given grid

User controls

slum city, Hong Kong

habitatt 67

Lloyd's Building

shantytowns
User controls

Extreme personalization of space in an acquired area—where limitations are less implied or delineated by adjacent individualization of spaces. Control becomes an absent quality of the spaces.
User Controlled

Bentham’s Panopticon
lack of spatial flexibility
for user personalization
Courts, at Clinton Prison
user acquires space with
the ability to personalize within
the constrains of prison environment
Levitown planning given spaces where user is able to personalized at will
Archigram’s Plug-in city ability to acquire space and personalize, thus changing the overall appearance.
(Small Scale) Living Flexibilities

Having determined architectural issues that can increase flexibility within the confined environment of a prison, such as the surrounding environment, spatial accessibilities and boundaries, and the decentralization of technological constraints at large scales, a small scale re-interpretation of the living environments directly related to inmates prison cells has the capability of developing personalized and flexible living spaces for the individual.

Control of changes, movement and spatial use within the inmate’s court spaces in Clinton Prison is completely managed by the prisoners, who personalize each space by creating boundaries between neighbors and establishing programs within their “living-outdoor space”. Although limitations like height codes for better surveillance are established by the warden, the sense of privacy through individualization is not lost. Individual privacy is exchanged for control and flexibility. Privacy is also given up to flexibility in Shigueru ban’s naked house which “gives everyone the freedom to have individual activities in a shared atmosphere” (Shigueru). Such freedom can be analyzed as an overlap between USER not controlled (within the space) and USER cannot control (the given enclosure) as seen in the Confinement Spectrum. Lab Zero’s ICH studio house is another
example of such condition; however the spatial flexibility is determined by pre-configured architectural components, in contrast to the naked house where the free plan and movable rooms gives the user an almost exhausting possibility of configurations. Re-positioning spatial ideologies of the courts at Clinton from outdoor-temporary spaces to interior-living spaces, personalization within prison confinement can be achieved through architectural flexible components.
Radical Living conditions

Leisure space
- garden areas
- dining areas
- living area
- confined space
- social space
- multi-purpose space
- bathing facilities
- storage space
- quiet areas
- surveillance offices
- open space

user defined spaces
Clinton courts

space segregation
Third generation prison
75% of the time is spent inside a prison cell

Lack of privacy
Dormitory, by Wang Qingsong

Extreme isolation
Cuban prison, Stanley B. Burns
Re-imagining living conditions

The naked House

Living quarters development
18th century cells — modern cells

multipurpose area
Felipe Campolina: portable housing

**Search for Privacy**

- isolation
- lack of privacy

**The Freedom to Choose**

- screens
- hotel style layout
- mobility
TREATMENT OF LANDSCAPE WITHIN A BOUNDARY CONDITION

existing landscape relationships

- First Generation Prisons
  no landscape visible

- Second Generation Prisons
  Landscape beyond physical barrier

- Third Generation Prisons
  Landscape within physical barrier

possible landscape relationships

- Between buildings
- Courtyard condition
- Over building
Confinement

Puerto Rican Hacienda
no visible physical barrier

Inside building
Side of the building

Kerr Country Jail in Texas
The Lorain County Jail in Ohio
Kingston Prison Ontario
Controlled grid, space and movement. The Panopticon disregards inmate’s time outside of the prison cell as a psychological reformatory system. In this environment the user has neither rights nor control over their given space. Spatial segregation negates a sense of community within a prison where solitude is cherish above all.
Although a given grid is provided within the confinement grounds of the Clinton Prison the inmates have the ability and choice to shape and choose their court locations, despite given organization. The User’s control over their parcel, simulates suburban housing conditions and community relationships with neighboring courts. The courts becomes an independent system from the prison.
Levittown suburban planning, as an established grid with repeated de-personalized structures, allows the user control over acquired parcel. User has the control to establish physical boundaries between neighboring parcels, but it is restrained beyond the confinements of the allowed space. The user’s alteration and personalization of owned space, alters their parcel as a segregated area of a complex, instead of altering the aesthetical view of the community as one entity.
Archigram’s City established systematic “plug-in” structure provides modular flexibility and connectivity with the freedom to combine and alter program location through the grid structure. User’s combination and module location in consequence alters the aesthetical perspective of the building as a single entity.

Modular configuration flexibility

change through addition of modules
City Park
Orestad City Copenhagen
Denmark
2008
City park landscape and program becomes an intermediate space for the adjacent housing users. Programmatic nodes within the landscape tie together both ends of the housing units where public meeting spaces and activities take place. Landscape delineations – in circle form in this case – become boundary conditions for individual programs where the openness and ambiguity of program leaves space for flexibility and user interpretation. Sidewalks become hallways. Such nodes interpreted as buildings – or structures – as in Tschumi Park La Villette’s follies, or Archigram’s plug in city interpreted as landscape, where one can imagine user’s needs densifying and overlapping the landscape.
Decentralization as flexibility

This vast public and fauna preservation park in Madrid, deals with the superimposition of planes as an organizing element of the landscape. Its shape offers a clear boundary between the city urban scape and the landscape. A confinement of landscape through multiple layers and juxtaposition of space with the provision of programmatic elements plugged as interior and exterior spaces, a larger scale of the City Park in Orestad City. The juxtaposition of different areas becomes a decentralization of a single element; opposed to Beijing’s business District Park clearly offers a centralized “icon” as a radial organizing element, such as a surveillance tower in a panopticon prison. As a plantation program reinterpretation of each plane as different crop areas between infrastructures allows buildings to have different relationships and experiences with the landscape in accordance to positioning within the site.

Beijing Central Business District
2006
centralized
ex. panopticon
decentralization

control of height = reduction of visual pollution

juan carlos I park
Koolhaas, exodus
Park as Prison

- Wall system
- Circulation system
- Confinement of nature
- Plug in courts
- Wall system
Martini Hospital
Groningen, the Netherlands

by: SEED architects 2007
The Martini Hospital by SEED architects, studied thoroughly flexibility in the design in order to provide physical and programmatic needs for the future life span of the building. The Hospital becomes a play in double interaction and building connectivity of two main bars or sectors that provide spaces that can be transformed – “patient ward into day care units” (Wagenaar). This juxtaposition of building – space and program decreases the need of physical boundaries, fostering department relationships and better patient care units. This interpretation of connection as the means to provide flexible spaces applied to third generation prisons has the ability to bring together program and facilities, decreasing the need for extreme surveillance and mobility of inmates from space to space – building to building. Such connectivity is expressed directly in the building envelope through different material conditions and opacities of spaces, like vertical service shafts and protruding public spaces.
Die Lage und Topografie des Baugrundstückes für das Justizzentrum ergibt schlüssig die Anordnung des Gerichtsgebäudes zur Stadt hin gewandt und dahinter liegend die Justizanstalt. Mit sehr klaren und in ihrer Dimension der Nutzung entsprechen den Baukörpern wird ein städtebauliches Zeichen für die Zentrumserweiterung von Leoben gesetzt.


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The envelope’s material usage and façade continuity of Daimiel’s health care center leaves interpretation for new boundary possibilities in prison design. Re-interpreting the health care center as prison, the confinement needs are achieved through the architecture of the building with double façade elements, as seen in Leoben’s prison in Australia. The play of bar thicknesses and proximities reveal interior programmatic spaces, as well as exterior framed views where the architect has the freedom to control privacy levels in relationship to the public street. Spatial freedom within is achieved by different height configurations of where open terraces become contained public waiting areas.
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Leoben Prison
Australia
2004
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The border can no longer be thought of as a simple physical obstacle which demarcates a line of division, but must be examined as the paradigmatic image of formative processes that organise a fair amount of the social dynamic. Different social and institutional relationships are structured along with the border. These relationships promote mobility, work environment and economic flows, territorial management, cultural (in)comprehension and even certain imaginaries of desire.

- Matí Peran
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This border proposition for the Mexican border by Fratello architects explores the possibilities of programming boundary conditions, providing new meanings and functionalities for either side of the boundary. Re-understanding the architectural possibilities of a "simple fence condition", by establishing relationships between each 'façade' of the border, the potentiality of re-inventing prison confinement elements can psychologically and visually blur boundaries between confined spaces and the outer world. Border as a mediation space – “no man’s land” – provides a sense of equality and freedom between inmates – staff – visitors. Border-Wall as infrastructure transforms prison’s programmatic organization where different interpretations of such spaces programs can completely alter the prisons system.

Due to the strict border controls and national planning regulations the program has to be split into two separate buildings. However, the air above the site is not governed by these restrictions and is considered as a "no mans land" without any jurisdiction.

- Victor Hadjikyriacou, Border Blood Bank
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Rael San Fratello’s lab Labyrinth becomes a realization of the extreme measures and expenses that the need to separate societies develop. Salvador Ortiz also tackles the idea of vague terrain in his project Tijuana Makes me Happy, where an explosion of buildings create a main large linear building holding programmatic functions for both sides of the border.

“The linear park, in turn, has the potential to increase adjacent property values and the quality of life on both sides of the border while providing an important green corridor through the city”

- dpr barcelona
Die Lage und Topografie des Baugrundstückes für das Justizzentrum ergibt schlüssig die Anordnung des Gerichtsgebäudes zur Stadt hin gewandt und dahinter liegend die Justizanstalt. Mit sehr klaren und in ihrer Dimension der Nutzung entsprechenenden Baukörpern wird ein städtebauliches Zeichen für die Zentrumserweiterung von Leoben gesetzt.


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Halden Prison
Norway
2010
Housing over 200 prisoners in Halden, the architects proposed an interaction between hard and soft of the landscape and the architectural ‘roughnesses of a typical prison. A play with the prison’s boundary condition by stenciling motivational art throughout the interior façade and breaking its continuity with glass paneled doors, strong enough to avoid barred openings for security, proposes innovative uses of materials and prison elements. An exchange of fence to wall, as if the building itself has expanded and encompassed the landscape, changes the prisoner’s perspective physically – free occupation of a “middle ground” – and psychologically through the suggestion of future freedom through the use of art.
Exodus: Voluntary prisoners of architecture

Rem Koolhaas, Madelon Vreisendorp, Elia Zenghelis, and Zoe Zenghelis
1972
Solification of Boundary

Exodus wall delineation act as a division of society IN or OUT exploring confinement and segregation as a voluntary process where citizens have the opportunity to escape the oppressive environment of the urban landscape. The development of prison as a community where opportunistic relocation becomes a distortion of the meaning prison can be directly related to the solidification process of the Mexican border. Such ideals require levels of societal control, such as proposed in Koolhaas series of collages, where access and belongings are monitored. Exodus master plan organization suggests an equivalent structural mix between complexes and urban scape, where viewing platforms of the world beyond the confinement of the prison can be visually admired. Exodus’ treatment of boundary as solid concrete wall that appears to be thick enough to be programmed as proposed by Fratello architects in Border-wall as Infrastructure.
Each view creates a different experience within itself and aesthetic view of the surrounding environment; in Koolhaas Exodus, the exterior façade is intended as a serene view of monuments in which the interior becomes a chaotic experience and overdose of symbols, an experience that the programmatic mix of coffee plantation and prison reverse through the nature of the site.

**confinement of people/ society as a whole vs. confinement of individual architecture**

**boundary as a division of outside conditions**

3 types of environment: confined IN, mediation condition and confined OUT.

The City of the Captive Globe Project, New York, New York, Axonometric
Rem Koolhaas (Dutch, born 1944) and Madelon Vriesendorp (Dutch, born 1945)
Co-existance between nature and urban environments
direct relationships prison and plantation system

Confinement of natural environment
The City of the Captive Globe Project, New York, New York,

Axonometric

Rem Koolhaas (Dutch, born 1944) and Madelon Vriesendorp (Dutch, born 1945)
The City of the Captive Globe Project, New York, New York,
Axonometric
Rem Koolhaas (Dutch, born 1944) and Madelon Vriesendorp
(Dutch, born 1945)
location. Adjuntas, Puerto Rico
site. mountain range, agricultural
maximum altitude. 2377ft.
buildable area. 559,571sq.ft.
Hacienda network system

SITE

Figure 1.3-1 Generalized land use in Puerto Rico in 1977.
Tourist Haciendas

Hacienda El Jibarito
Hacienda La Casona
Hacienda Lareño
Hacienda Eco Bello
Hacienda Safra
Hacienda Buena Vista
Hacienda Patricia
Hacienda Aca
Hacienda San Pedro
Hacienda Delicias

Production Haciendas

Hacienda Morales
Hacienda Lambert
Hacienda Varema
Hacienda Miraflora
Hacienda Delicias
Hacienda San Pedro
Hacienda Constantina
Hacienda Espino
Hacienda Manuela
Hacienda Pavezar
Hacienda Llanada
Hacienda Monroe
Hacienda Indira
Hacienda Rigol
Hacienda La Juana
Hacienda Santini
Hacienda Perla
Hacienda Artau
Hacienda Santa Engracia
Hacienda Rataz
Hacienda Burene
Hacienda El Banco
Hacienda Carmella
Hacienda La Gloria
Hacienda Ibarra
Hacienda Teyun
Hacienda Butler
Hacienda Peirano
Hacienda La Juanita
Hacienda Indiera

Hacienda network density

SITE
Land Use and Plantation proximity to the site

- Agriculture, pasture, fallow fields
- Forest, rangeland
- Water bodies
- Mines, quarries
- Residential areas

Figure 1.3-1 Generalized land use in Puerto Rico in 1977.
Site: Altitude Levels

- 2377 ft
- 2258 ft
- 2160 ft
- 2052 ft
- 1940 ft
- 1858 ft
Site Conditions

image: generated from websoilsurvey.com generator
Predominant soil type in site:
HmF2: Humatas Clay, 40 to 60% slopes, slow water movement
LuF: Los Guineos clay, 40 to 60% slopes

The site provides the required necessities of a coffee tree.
Slopes for good drainage and altitude for cooler temperatures.
Low High Precipitation

-- General Land-Use Patterns in Puerto Rico and the U.S. Virgin Islands --

Figure 1.3-1


Image: University of Oregon
Sun chart, Adjuntas Puerto Rico
Lat: 18.24; Long: -66.77
Solar time zone: -8
Sunrise: East - West

ATLAS OF GROUND-WATER RESOURCES IN PUERTO RICO AND THE U.S. VIRGIN ISLANDS
By Thalia D. Veve and Bruce E. Taggart (editors)
Adjuntas: Volcanic soil

Temperature (low and high) and precipitation chart (inches), annual graph
Adjuntas, PR.
Site: town relationship

Adjuntas, Puerto Rico

- Agriculture, fallow fields
- Forest, rangeland
- Town center

Distance: 6 miles
Site topography

buildable area: 559,571 sq.ft.

Panoramic view from site
goole earth snapshot image collage

photograph looking towards radio station tower
plantation coffee cultivation area

plantation - building relationship

south
Basing the prison’s program needs on a national student competition on a community correctional center in conjunction with Puerto Rican coffee plantation procedures. An exploration of program relationships through spatial diagrams organizes a series of spatial lists that can be interpreted as free floating structures (diving plantation program from prison program) or as a single structure encompassing each program topic on a plantation landscape.
COMPONENTS AND SPACES AREA

System Administration
- Administration 10 Offices 6 Work Areas 400 S.F.
- Staff Development 10 Offices 7 Work Areas 400 S.F.
- Information and Records 8 Work Areas 200 S.F.
- Administrative Support 9 Library 12 Conference 2 Reproduction 5 Terminal 11 Supply 4 Restroom 1 Lobby/Lounge 1,800 S.F.

TOTAL 2,800 S.F.

Facility Administration
- Administration 8 Offices 3 Work Areas 7 Conference 700 S.F.
- Security 9 Office 4 Control Center 5 Movement Control Stations 10 Vault Arsenal 600 S.F.
- Staff Support 2 Dressing 6 Shower 1 Lounge 10 Vault Arsenal 300 S.F.

TOTAL 1,600 S.F.
Intake
Reception Services 600 S.F.
1 Sally Port
4 Interview/Holding (4)
6 Offices
2 Waiting/Lounge

Processing Services 800 S.F.
2 Waiting/Lounge
3 Interview/Holding (4)
5 Offices

TOTAL 1,400 S.F.

Residence
Residential Modules 12,650 S.F.
3 Supervisory/Control
7 Counseling/Office
9 Sleeping Room (70-80 S.F. each)
10 Shower Areas
5 Quiet Living Areas
6 Activity/Dining Areas
4 Meeting Areas
14 Storage

Residential Services 1,500 S.F.
1 Contact Visiting
2 Interview Visiting
8 Restroom
11 Kitchen
12 Commissary
13 Barber

TOTAL 14,150 S.F.
<table>
<thead>
<tr>
<th>Program</th>
<th>Area</th>
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<tbody>
<tr>
<td>Pretrial Release Services</td>
<td>650 S.F.</td>
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<tr>
<td>5 Offices</td>
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<tr>
<td>3 Interview</td>
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</tr>
<tr>
<td>Pretrial Intervention Services</td>
<td>650 S.F.</td>
</tr>
<tr>
<td>6 Offices</td>
<td></td>
</tr>
<tr>
<td>3 Interview</td>
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</tr>
<tr>
<td>Residential Assessment Services</td>
<td>650 S.F.</td>
</tr>
<tr>
<td>7 Offices</td>
<td></td>
</tr>
<tr>
<td>8 Interview</td>
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</tr>
<tr>
<td>2 Work Areas</td>
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</tr>
<tr>
<td>Program Support</td>
<td>1,000 S.F.</td>
</tr>
<tr>
<td>1 Lounge</td>
<td></td>
</tr>
<tr>
<td>4 Conference</td>
<td></td>
</tr>
<tr>
<td>10 Supply Storage</td>
<td></td>
</tr>
<tr>
<td>9 Restroom</td>
<td></td>
</tr>
<tr>
<td>Recreation</td>
<td>800 S.F.</td>
</tr>
<tr>
<td>11 Multipurpose</td>
<td></td>
</tr>
<tr>
<td>12 Offices</td>
<td></td>
</tr>
<tr>
<td>14 Storage</td>
<td></td>
</tr>
<tr>
<td>Medical Services</td>
<td>800 S.F.</td>
</tr>
<tr>
<td>13 Examination/treatment</td>
<td></td>
</tr>
<tr>
<td>15 Infirmary (2-bed)</td>
<td></td>
</tr>
<tr>
<td>16 Restroom/Bath</td>
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</tr>
<tr>
<td>17 Storage/Supply</td>
<td></td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>4,550 S.F.</td>
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</table>

Diagram of PRISON BUILDING with numbered dots representing different areas and their respective floor plans.
1. Service Entrance
2. Parking Area
3. Reception Services
4. Processing Services
5. Access
6. Security
7. Administration Support
8. Staff Support
9. Recreation
10. Administration
11. Staff
12. Security
13. Administration
14. Residential Modules
15. Program Support
16. Residential Services
17. Medical Services
18. Recreation
19. Pretrial Release
20. Pretrial Intervention
21. Residential Assessment
<table>
<thead>
<tr>
<th>Services</th>
<th>700 S.F.</th>
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<tbody>
<tr>
<td>Administration</td>
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<tr>
<td>Offices</td>
<td></td>
</tr>
<tr>
<td>Work Areas</td>
<td></td>
</tr>
<tr>
<td>Conference</td>
<td></td>
</tr>
<tr>
<td>Security</td>
<td>600 S.F.</td>
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<tr>
<td>Office</td>
<td></td>
</tr>
<tr>
<td>Control Center</td>
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<tr>
<td>Movement Control Stations</td>
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<tr>
<td>Inmate Services</td>
<td>1200 S.F.</td>
</tr>
<tr>
<td>Offices</td>
<td></td>
</tr>
<tr>
<td>Classrooms</td>
<td></td>
</tr>
<tr>
<td>Support Offices</td>
<td></td>
</tr>
<tr>
<td>Public Services</td>
<td>800 S.F.</td>
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<tr>
<td>Reception Area</td>
<td></td>
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<tr>
<td>Exchange Offices</td>
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</tr>
<tr>
<td>Supply Storage</td>
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<tr>
<td>Plantation</td>
<td>3100 S.F.</td>
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<tr>
<td>Supply Storage</td>
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<td>Crop Storage</td>
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<tr>
<td>Shower Areas</td>
<td></td>
</tr>
<tr>
<td>Restroom Facilities</td>
<td></td>
</tr>
<tr>
<td>Nursery Beds</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Outdoors</th>
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<tbody>
<tr>
<td>Recreation</td>
<td></td>
</tr>
<tr>
<td>Exercise Areas</td>
<td></td>
</tr>
<tr>
<td>Exterior Patio - general purpose</td>
<td></td>
</tr>
<tr>
<td>Access</td>
<td></td>
</tr>
<tr>
<td>Public Entrance</td>
<td></td>
</tr>
<tr>
<td>Security Entrance</td>
<td></td>
</tr>
<tr>
<td>Vehicular Access</td>
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</tr>
<tr>
<td>Sheltered or Screened</td>
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<tr>
<td>Service Entrance</td>
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</tr>
<tr>
<td>Parking Area</td>
<td></td>
</tr>
<tr>
<td>Staff - 30-40 spaces</td>
<td></td>
</tr>
<tr>
<td>Visitor - 20 spaces</td>
<td></td>
</tr>
<tr>
<td>Intake - 4 spaces</td>
<td></td>
</tr>
</tbody>
</table>

TOTAL 6,400 S.F.
1. Parking Area
2. Entrance
3. Plantation
4. Administration
5. Security
6. Public Services
7. Inmate Services
Prison-Plantation System

The development of a Prison in the environment of a puertorican coffee plantation becomes a strategy to re-function the programmatic needs of the 18th century Hacienda restoring its peaked productivity. Carefully choosing a site that accommodates the cultivation needs of a typical plantation, social connections can be established between surrounding coffee haciendas and the prison-plantation system, where exchanges of crops and labor creates a network that connects the inmates’ to the outside world. The prison-plantation system’s central relationship to coffee haciendas, and the hacienda’s demand for coffee labor, engages the prison in three possible scenarios. The first, engages prison solely as a crop exchange plantation where the cultivation of coffee and export of the raw fruit, relieves adjacent hacienda owner’s lack of labor. The second extends prison functionality to other haciendas, where a rotation of prisoner’s work force physically relieves adjacent labor deficiencies. The third becomes a combination of A and B where communities become engaged in the prisoner’s life and routines both inside the prison-plantation and exterior activities within different haciendas.

The expansion of typical prison activities promotes landscape-building relationships where the understanding of program and processes can distill instances where building and landscape meet spatially and structurally. For
example A- the need for structures and programs that easily engages prisoner’s mobility without sacrificing security and B- architecture’s involvement in early stages of coffee plantation, with the provision of structural shading devices for nurseries and spatial division between crops as seen in Juan Carlos I Park in Madrid.

Main commercial coffee in the island: Café de Arabica, grown in cool areas, elevated areas of the tropics at about 3300 feet or more above sea level with a life span of 10 years.
BUILDING

System Administration
Facility Administration
Intake
Program
Residence

CIRCULATION 30% OF TOTAL BUILDING AREA
Services
<table>
<thead>
<tr>
<th>Area</th>
<th>Total</th>
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<tbody>
<tr>
<td>2,800 S.F.</td>
<td>24,500 S.F.</td>
</tr>
<tr>
<td>1,600 S.F.</td>
<td>7,350 S.F.</td>
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<tr>
<td>1,400 S.F.</td>
<td>6,400 S.F.</td>
</tr>
<tr>
<td>4,550 S.F.</td>
<td></td>
</tr>
<tr>
<td>14,150 S.F.</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>38,250 S.F.</strong></td>
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</tbody>
</table>
40% coffee crop loss

1/3 less coffee workers in the past decade

$4.25 per gallon of bucket of coffee beans picked

Utilization of prisoners from Municipal Prisons, to alleviate coffee production decline
40% coffee crop loss

1/3 less coffee workers in the past decade

$4.25 per gallon of bucket of coffee beans picked

Utilization of prisoners from Municipal Prisons, to alleviate coffee production decline
40% coffee crop loss

1/3 less coffee workers in the past decade

$4.25 per gallon of bucket of coffee beans picked

Utilization of prisoners from Municipal Prisons, to alleviate coffee production decline

113

No shade "sun coffee"

Controlled density | nurseries

Shade monoculture

Low density area

Commercial polyculture

Medium density area

1st generation prisons

Prison and landscape composite

Maximum visibility

Coffee Drying area

Plantation Circulation

Recreation Areas

Nurseries

Vehicular Circulation

Plantation Program

Prison Services

System Administration

Intake Facilities

Residential Areas

Communal Areas

Connection Bridge

Exterior Gardens

Public Area. Outside prison

most controlled

less controlled

less controlled

less controlled
40% coffee crop loss
1/3 less coffee workers in the past decade
$4.25 per gallon of bucket of coffee beans picked
1st generation prisons

Prison and landscape composite

Controlled density nurseries
Shade monoculture
Low density area
Commercial polyculture
Medium density area

1st generation prisons

1st generation prisons

1st generation prisons

Exterior Gardens
Public Area, Outside prison

Residential Areas
Communal Areas
Connection Bridge

Nurseries
Vehicular Circulation
Plantation Program

Coffee Drying area
Plantation Circulation
Recreation Areas

Prison Services
System Administration
Intake Facilities

1st generation prisons

1st generation prisons

1st generation prisons

1st generation prisons

1st generation prisons

1st generation prisons

1st generation prisons

1st generation prisons
The constant participation of the prisoners within the landscape and the community allows them to have more flexibility and control over their surroundings. Such flexibility is explored through the physical boundaries that a prison requires to maintain a certain level of surveillance and control. Exploring different boundary conditions by incorporating the landscape and the program’s requirements starts developing a set of confinement levels that can be adopted in the coffee plantation: most controlled to less confined (inmates cells – outside world); whereas in the plantation it would be interpreted as more controlled to less controlled (coffee nurseries – highly dense tree canopy). This juxtaposition of controlled strategies necessitates different boundary conditions, allowing prisoners to interact with both staff and the outside communities on a daily basis.
Longitudinal Section
1/8" = 1'0"
Meditation Space 3/16" = 1’0”

Prison building Boundary detail 3/16” = 1’0”


Images

Cover: Exodus or The Voluntary Prisoners of Architecture collage, Rem Koolhaas, 1972

11. Forbes, Edgar Allen Los Rabanos plantation, Puerto Rico
12. Google images aerial view, Hacienda Buena Vista, Adjuntas Puerto Rico

15. Wall chronology between Tijuana and San Ysidro image sequence, Teddy Cruz
23. Commonwealth of Pennsylvania, bureau of Corrections. Howard, Roberta
27. Metro Toronto West Regional Detention Center. Howard, Roberta
34. Masdar Development, Foster and Partners, 2007
Woodhull Medical and Mental Health Center
Rem Koolhaas, Exodus: or the Voluntary prisoners of architecture
35. Ildefonso Cerda’s plan for Barcelona.
Unite d’Habitation, Marseilles, le Corbusier
Paimio Sanatorium, Paimio Finland, by Alvar Aalto, 1932
Levitown development, Aerial view of Levittown, N.Y., c. 1950s
Leoben Prison, Styria Austria by Joseph Hohensinn, 2004

Forbes, Edgar Allen Los Rabanos plantation, Puerto Rico
Google images aerial view, Hacienda Buena Vista, Adjuntas Puerto Rico
Linked Building, Steven Holl architects, Beijing China, 2003-2009
37. Nakagin Capsule Tower, Kisho Surokawa, 1972
   Plug-in City, Archigram
   Slum City, Hong Kong


40. Lloyd’s of London, Richard Rogers Partnership, 1986

46. ICH! Studio House, by Lab Zero architecture

48. Dormitory, photography by Wang Qingsong for the architecture Venice biennale


50. Skyscraper Competition: portable housing 2010 by Felipe Campolina


57. Juan Carlos Park, Madrid Barajas 1989; by: Jose Luis Esteban Penelas and Emilio Esteras

58. Beijing Central Business District 1000 X Landscape Architecture, page 828


64. Axonometric drawing of Damiel’s Health Care Center: http://www.entresitio.com/
   Fences: http://www.northwestfenceutah.com/
   Wire Fences in Fort 13 of the Jilava jail in Jivala, Romania

65. Leoben Prison, Styria Austria by Joseph Hohensinn, 2004


73. Halden Prison, Norway boundary condition by Erik Moller Arkitekter, 2010 http://www.ema.dk/

75. Rem Koolhaas, Exodus: or the Voluntary prisoners of architecture

Back: Exodus or The Voluntary Prisoners of Architecture collage, Rem Koolhaas, 1972