Redefining the Constraint | Designing Control to Support Rehabilitation

Jessica Borri
REDEFINING CONSTRAINTS
Designing Observation for Rehabilitation

Syracuse University School of Architecture undergraduate research, theory, analysis, and design to obtain the Bachelor of Architecture degree
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Designing Observation for Rehabilitation

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Bachelor of Architecture | Class of 2016
Advisor: Yutaka Sho
INTRODUCTION

The topic of incarceration has been a widely public political debate and has only increased as we progress toward 2016. As presidential candidate, Hillary Clinton mentions at the 18th Annual Dinkins Forum, “We need to come up with a solution that reduces prison population while keeping our community safe...And I believe that by reducing the incarceration spending our community would be not be less safe.” Like the concrete minimalistic cells of a prison, we need to create a new ways of designing their private spaces and how we see and understand these facilities as architecture.

When one knows they are being watched, they tend to exhibit positive behavior for fear of consequences. If we make this proposition architectural and provide spaces they can enjoy, we could go beyond bolted cameras, but have surveillance systems become a part of the architectural design thus changing these monotone spaces. By using the landscape as a means of control, we allow for the inmates to feel unconfined because of that transparent barrier while allowing for ample light and air in most spaces. Many courtyard plans give the feeling of confinement but if one end is open it allows for a sense of freedom while still maintaining proper distances and control placement. By indoctrinating all prison rehabilitation programs from Puppy Programs to agriculture, it becomes a new, forward thinking, innovative, rehabilitation center that changes inmate lives and the lives of those around.

The architectural risk upheld is the constant social image of a despondent object in a field containing habitants that are confined by ball and chain of which only architecture is to blame. “There can be no justification for deliberately designing unwholesome accommodation or choosing dowdy colors, dim lighting and excessively harsh materials. This sends out the quite the wrong message and inhabits the hopes of encouraging prisoners back into society...[this form] only brutalizes society as a whole.”

Currently, one in every 28 children, in our country, has a parent in prison. The penal system often transfers inmates to further federal prisons making it evermore difficult for families to visit. When asked what they wanted in a prison, the inmates responded with “Peace Rooms,” rooms that enable the inmates to connect with the community so they can discuss important issues or make amends before attending court or further prosecution. This provides an opportunity to take outcasts in society, revamp surveillance technology into the architectural realm, and reclaim architecture to make a lasting difference psychologically in multiple ways.
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“There can be no justification for deliberately designing unwholesome accommodation or choosing dowdy colors, dim lighting and excessively harsh materials. This sends out the quite the wrong message and inhabits the hopes of encouraging prisoners back into society...this form of institutional brutality only brutalizes society as a whole.”

- Prison Architecture, pg 41
I. Thesis Contention

This thesis focuses on the theory of spatial control in architecture. How an observer views and watches the participant, how the participant experiences and senses their surroundings of which architecture controls making this thesis a catalyst for social control. By studying and using different real world technology, landscape, layouts for control (i.e. surveillance), and undergoing material investigation, we can create a system by which proves architecture impacts the psychological health and welfare of the human and questions the visibility of boundary and observation that can support the goal of rehabilitation. Creating a new standard rehabilitation that makes surveillance tactics and systems architecturally designed and noticed in the space will lead inmates to better behavior in a supportive environment while reducing national incarceration rates.
HISTORY OF PRISON CONTROL
**Prehistorical incarceration (-18th cent):**
Incarceration was based on punishment without clear penological philosophy or goals.

**Early reformist-moralist institutions (late 18th – mid 20th):**
Change the nature of punishment by changing the behavior of the inmate

Rectangular Layouts (Everthope Hull, England)

**Modern traditional institutions: (mid 20th century – current):**
Intended to improve settings without changing goal of reform.

Courtyard or Self-Enclosed (Danbury, CT and Leesburg, NJ)

Radial Plans (Stateville)

Telephone-Pole (California Medical Facility at Facaville)
Solution: Louisiana State Penitentiary

**Modern reforms in corrections design and management (late 20th century to present) early reformist-moralist institutions (late 18th – mid 20th):**
Design change based on different goal of rehabilitation and better preparation to release.

High-Rise (The Chicago Correctional Facility)
Triangular (Otsville, NY)

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In the 1830s prisons were organized around ideologies of order and regularity and isolated each prisoner in a cell enforcing rules of complete silence. In the 1900s, prisons adapted the idea of prisoners working on the land, which would place them slowly into society after their release. Over the course of the 19th century prisons began to specialize and introduce prisons for women, mentally ill and in the 20th centuries further distributing among minimum-, medium-, and maximum-security prisons.

In 1789-1865, the United States was establishing the key rights of the nation, one of which being freedom creating a nation that was based on openness of society, boundless frontiers and equality. European civilizations often visited American prisons because they answered questions requiring “moving between the prison and the society, reckoning not only with crime and punishment but also with ideas about social order, social disorder, and the destiny of a new republic.”

When some towns lacked the law enforcement needed, physical punishment would occur to maintain social control.

To these colonial Americans the British punishment and law was far to harsh, thus they lessened the capital punishment constraint and created prisons for longer sentences instead of just acquiring jails where the criminal would only be for a short time.

Newgate became the first prison in NY followed by Auburn Correctional Facility.

New York and Pennsylvania decided to be model cohorts to experiment with rehabilitation prison systems. Auburn adopted the congregate system and later at Sing Sing (current name) and Pennsylvania with the separate system at the Penitentiary and Philadelphia Prison.

The idea of rehabilitation started in 1820 with the Jacksonian Americans who believed the prison should teach inmates the lessons of order and discipline.


PANOPTICISM

Control is not only governing the inmates but the officials as well. Authority figures are assigned posts, units, and schedules, breaks that are all part of the daily routine. How he/she should be characterized, where they must be, how they are to be recognized while maintaining complete control and surveillance over their territory. With this job of course requires strict training and discipline to be prepared for any possible scenario.

Through architecture, the back lighting that provides a silhouette of the inmate, which increases surveillance since it makes the inhabitant completely isolated in the cell. Compare this to a theater in which the monologue has pure focus on actor. It is in this design where "controlling the user" takes play since the tower can see their every move. "Hence the major effect oft the Panopticon: to induce in the inmate a state of conscious and permanent visibility that assures the automatic functioning of power. The inmates should be caught up in power situation of which they are themselves the bearers. In view of this, Bentham laid down the principle that power should be visible and unverifiable."¹

Foucault mentions that the Panopticon is a great place for human experimentation from punishment to medications turning it into a laboratory. The idea of a prison should not be experimentation, but rehabilitation. In this case the inspector in the central tower was not only an observer, but also a controller.

"Discipline may be defined neither with an institution nor with an apparatus; it is a type of power,, a modality for its exercise, comprising a whole set of instruments, techniques, procedures, levels of application, targets; it is a ‘physics’ or an ‘anatomy’ of power, a technology."²


"But the Panopticon must not be understood as a dream building: it is the diagram of a mechanism of power reduced to its ideal form; its functioning...must be represented as a pure architectural and optical system: it is in fact a figure of political technology that may and must be detached from any specific use."

- Discipline & Punish pg.205
Arguably so, the subjects of Panopticism are menagerie in the guard’s display case. This iconic reference entails the lack of privacy and sensibility of personal space. Being that the Panopticon is so transparent, there is an extreme lack of privacy for the inmates who can be observed from the central watchtower and from society looking from the outside in through the windows on the exterior. One of the most important virtues of an inmate is privacy. They need a place to reflect and be alone without the constant watchful eye of control and surveillance. In current maximum or moderate security prisons, fights can develop among the inmates in common areas. Usually they are led back to their individual cells (if existing in that facility) until the blood pressure in the room settles. Although there is a very slim chance of outbreak in the Panopticon, one still needs that privacy. The Panopticon, one could argue, is like a SHU (solitary housing unit). An inmate is put into a concrete boxed cell with nothing else but a toilet and a sink with very little or any communication with other inmates or even guards. Various mental illnesses develop from a lack of communication from the outside world. Although exposed to natural lighting, the atmosphere may be better, but the lack of privacy can be just as detrimental to one’s mental state.

There is some overlap as to the arrangement of the Panopticon and the architecture of theatres, circuses and temples. All of which contain a multitude of people focusing on a central object. These programs engage the public and are thus a spectacle. Although prisons contain felons who mostly are there by force, and entertainment spaces contain observers that are there by choice, felons are a part of society. They were born into society and into society they shall return. “We are neither in the amphitheater, nor on the stage, but in the panoptic machine, invested by its effects of power, which we bring to ourselves since we are part of its mechanism.”

**THE AUBURN SYSTEM**

The Auburn system: prisoners have single cells and only came together to eat, work in the shop, and strictly prohibited eye contact and talking between inmates.

The Pennsylvania system: prisoners were always confined to their cells as in solitary confinement and only allowed to see selected visitors.

The prison rehabilitation sought to reform the prisoners that have not learned social morals in church, school, or at home. “The Boston Prison Discipline Society deemed architecture one of the most important of the moral sciences. ‘There are principles in architecture, by the observance of which great moral changes can be more easily produced among the most abandoned of our race… Other things being equal, the prospect of improvement in morals, depends, in some degree, upon the construction of buildings.’”

**POST CIVIL WAR**

Post Civil war conclusion: multilevel cellblocks that were so small that they endangered the physical health and psychological well being of inmates:
- Connecticut state prison at Whethersfield 7’ x 3 ¼’ x 7’ high
- Michigan State prison at Jackson 3.5’ x 6.5’ x 7’ high
- Charlestown Prison near Boston (model prison) 8.5’ x 4 ¾’ x 7 2/3’ high

**20TH CENTURY**

“By the opening decades of the 20th century, a frankly therapeutic model was in effect: offenders were ‘sick’ and were to be ‘cured’ of their criminality in a setting that approximated, a normal society. Crime was the result of learned behavior, and rehabilitation programs in a prison setting were to compensate for inadequate socialization that followed family breakup or neglect. The prison was to become a problem-solving community.”

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We can create futuristic prison rehabilitation by designing supportive spaces that can change or adapt to individual needs. This approach allows for mixed use spaces to interconnect, creating businesses, employment opportunities, and personal growth for inmates.

The current trend with prison design is designing supportive spaces that can change or adapt based on the needs of the residents. Architects have been creating better atmospheres to rehabilitate the resident inmates.

A significant number of inmates have fallen off track due to violence charges, theft, or addiction. Prison systems, including probation, parole, jail, and prison, can hold 7 million more people in the U.S. than the nation's population of 324 million.

The American Correction Association (ACA) creates guidelines and rules for correctional effectiveness. They publish reports and host conferences about correctional operation issues.

In New York City, with a population of just over 8 million people in 5 boroughs, it cost $1.1 billion that year to hold 240 inmates.

Inmate stays are often short-term, with 50% returning to prison after their sentence. However, 60% of recently released inmates face long-term unemployment.

The U.S. Bureau of Justice Statistics reports that 7 million inmates are incarcerated, including probation, parole, jail, and prison.

Inmates have a right to privacy, labor/work, recreation, and religion. Visitors can share, service yard, and to see their life does not end when released, it can start a new.

We need to come up with a solution that reduces the mass incarceration trend. It is time to end the era of mass incarceration. We cannot continue to hold 1 inmate.

The cost of incarcerating inmates is significant. Paying 80 Billion to keep them there is not a viable solution.

1.5 Million people are incarcerated in the U.S., which is 5% of the world’s population. The U.S. has the highest rate of incarceration in the world.

The United States holds 25% of the world’s incarcerated population.

The U.S. has the largest prison system in the world. 8 Million people are incarcerated, with New York City holding 1.1 Million.

1.5 Million black men are missing from their families due to incarceration and premature death. Overall, 1 in 3 black men are incarcerated for life. What does that mean for the children? It means that they are not there for their children or to give a paycheck.

120+72+180+96+108+144+12+36+54+72+180+240+120+72+48+36+24+12+<12

VIOLENCE: 240+
PROPERTY: 180+
DRUG: 120+
COERCIVE: 72+
JUVENILE: 48+

Sentence Component/area: Jails Prisons

Living Units: Few hours, few days, no more than 1 year

Sentence: More than 1 year


Breaking Down the Offense:

Drug: 240+
Property: 180+
Violence: 120+
Coercive: 72+
Juvenile: 48+

Breaking Down the Months:

<12: 12
12: 24
24: 36
36: 54
54: 72
72: 96
96: 108
108: 144
144: 180
180: 240

Breaking Down the City:

New York City $1.1B
Los Angeles
Chicago
Prisons
Houston

1st: Largest city in the U.S.
4th: New York City


MONEY MATTERS

1 YEAR in a NJ state prison cost $34,000 = Tuition at Princeton

If less people were incarcerated, we would save $28 BILLION a year.

FAMILY MATTERS

1 in 28 children have a parent in prison

In order to steer away from typical prison-like structures, KMD and HMC wanted to create the prison campus like a higher education campus to influence and promote movability between buildings while still being under control. Unlike traditional jails and prisons, where most services are housed centrally in enclosed environments with little natural light or outdoor space, this campus is broken down into zones - administrative, communal, programmatic, and housing - connected by a central quad or village green intended for recreation, akin to a typical university. The environment is designed to balance safety and security with independence by minimizing physical and psychological barriers but allowing for clear sight lines, making supervision easy.

Las Colinas is operating a “Direct Supervision” system. Although common for most prisons, this design differentiates by allowing officers to be among the inmate residences fully exposed instead of behind a segregated office control room. This allows for new concepts such as the “barrier-free supervision, which avoided remote-controlled automatic door, locks and separate observation and office facilities in the living units and brought staff members into active association with inmates.” Civilian-quality furniture and sanitary equipment were housed, wooden doors sustained the inmates, and bright cheery colors were used instead of the steel and institutional grey and white.


WHO  Is the Client?

ACA (The American Correction Association): creates guidelines and rules for correctional effectiveness. Although the executive branch of the government builds these projects, it is the ACA that creates standards from security cameras to overall design, host conferences and “Corrections Today” publications about correctional operation issues. Also, certain architecture firms that have Justice Facility Design such as HDR, HOK.

WHAT  Is the trend?

The current trend with prison design is designing supportive spaces that can change or rehabilitate the resident inmates. Architects have been creating better atmospheres through interior design and finishes. However, what if we used the architecture to monitor the inmates instead of relying on CCTVs? Or, advance technology to better mold or sculpt to the architecture while still maintaining control. What would happen if we loosened the strings and allowed for surveillance but with half of the staff. This would save costs and the prisoner would be able to safely monitor themselves and prepare themselves for life after prison without re-conviction.

WHY  does this matter?

There are approximately 7 Million U.S. citizens in carceral system including probation, parole, jail and prison. That means there can be 7 million more people in the U.S. who can create businesses, be employed, and serve the country. Yes, major crimes deserve time, but to those that have fallen off track (violence charges, theft, addiction), their life does not have to end when released, it can start a new.

Inmates have a right to privacy, labor/work, recreation, religion, and to see visitors (although this could get revoked upon bad behavior).

HOW  are we going to change control architecturally?

One thing great about designing prisons is that it allows for mixed use spaces to interact with each other. Prisons are like small towns they incorporate housing, dining, recreation, vocation spaces and commissary. By allowing these spaces to feed off of one another and place less emphasis on control and more on how architecture can impact control and the inmates, we can create futuristic prison rehabilitation.

The 5 barriers of entry are not only specific to prisons but to the above programs as well. Each diagram forward follows the same color code as the image on the right. Of course the spaces change, airports have security check points and courthouses have 3 sets of elevators, however the idea that there are spaces inside other controlled spaces still remains the same.

5 BARRIERS OF CONTROL

Zone 1: Building Perimeter:
Spaces that are limited to function of the facility and are located outside the secure perimeter. Typically controlled by direct staff observation and may or may not include electronic systems.
- public lobby, administration offices, and employee spaces, visitation

Zone 2: Security Perimeter:
Contains the facilities building and security fences including areas. Accesses to these spaces are typically through checkpoints (known as security valves) with interlocking doors (sally ports). The master or central control room in this zone controls the sally ports. This master or central control room is not to be confused with the control rooms in housing pods.
- intake/release, program areas (vocational), medical areas where inmates are working (kitchen)

Zone 3: Local (Unit) Control:
More associated with jails than prisons, the area supervises and controls movement in and out of the housing unit through use of unit control.
- multipurpose rooms, and outdoor exercise areas in the housing units

Zone 4: Housing Unit (Pod) Control:
Defined by having a control officer responsible for all inmate activities in the housing unit and the movement in and out of the unit. This is where direct and indirect supervision is implemented; open desk or secure control room.
- housing unit dayroom, and dining (if in the pod)

Zone 5: Cells:
Maintained and supervised by the pod officer controlling access into and out of the cells.

DIRECT SUPERVISION

Direct supervision: when the officer has control and complete vision over 1 pod. CCTV optional. There is no barrier between the inmates and the officers. “Direct supervision can also reduce costs through the improved staffing and other efficiencies.” This setting allows for a better officer-inmate relationship thus giving a sense of community which is highly desirable among the inmates. This interaction between staff and inmates can minimize tensions, vandalism and resolve problems and conflicts.

INDIRECT SUPERVISION

Indirect supervision: when the officer has control over several pods (2-3) and the need for CCTV is implemented. Officer in control room has clear line of sight in each common space of the pod. This method tends to leave more freedom for the inmates to move about their pod territory only. CCTV’s and other 2-way cell systems, closed-circuit T.V., electric doors, and remote surveillance can be seen from the control posts in which officers can control over 200-300 prisoners with ease. “Communication with these inmates is by intercom or public address.


CENTRALIZED PLANNING

Centralized Plans: centralizing all services and programs like visitation and dining in a way where the inmate population needs to leave the cellblock.

CONFINEMENT SYSTEM

There are various, almost endless, boarders and conditions from the prison’s lot lines to the confines of a prison cell. Each boundary represents a passage through the next stage in control. This method of control is prevalent in all categories and extremes of prison design and can be easily understood as a “Russian doll.” Inside one object there is another just like it but smaller that further encapsulates the objects inside it and so forth.

DIFFERENT ENTRYWAYS

1. Secure pedestrian and vehicular sally ports for the transport of prisoners and access by authorized personnel

2. Service entrances that can handle large trucks moving to and from shipping and receiving docks,

3. The public entrance for visitors.

Site Selection: Delivery for inmate programs, professional commuting, and closeness to a hospital should be taken into consideration. “When it is developed as a stand-alone facility, the image conveyed is often one of function and economy. If it is part of a larger complex, the facility may be less likely to have an independent architectural identity.”

Site design: Security of the perimeter and the passage through the perimeter.


The control of day-to-day exercises in prisons has often been compared to the life of the clergy, hospital patients and pre-college school students. For instance, the clergy start their day praying, wash hands before work, complete the work, eat, congregate and repeat until ending the day with prayer. In hospitals, patients have designated times like clockwork in which they are given medications and mealtimes. One could also argue that we all have day-to-day schedules that keep our lives active. The daily commuter has a set time of leave and arrival. What is distinctive about prison inmates?

The ultimate control is marching soldiers. Each step is timed and sized so each group acts like one individual. The marching tactics of 1766 is understood as rhythm and controlled discipline. This amount of control dictates the body; each leg and arm must be in unison with the other soldier in front. “The act is broken down into its elements; the position of the body, limbs, articulations is defined; to each movement are assigned a direct, an aptitude, a duration; their order of succession is prescribed. Time penetrates the body and with it all the meticulous controls of power.”

“Disciplinary control does not consist simply in teaching or imposing a series of particular gestures; it imposes the best relation between a gesture and the overall position of the body, which is its condition of efficiency and speed.” This breakdown is directly relatable to the order that is conduct control is formed in prisons. When during a visitation period, the inmate not allowed to hug their visitor or an extended period of time as to avoid smuggling into the prison. Although inmates are not controlled or dictated to be on the same foot in a marching sequence, they do however travel as a unit to certain areas during their designated times, such as recreation or dining spaces.

“Discipline, on the other hand, arranges a positive economy; it poses the principle of a theoretically ever-growing use of time: exhaustion rather than use; it is a question of extracting, from time, ever more available moments and, from each moment, ever more useful forces.”

CONTROLLING PROGRAMS

Using the observation as an apparatus for power, thus a means of control. In the classical age, we see observatories rise starting with the telescope to study constellations.

1. In the animal world, observation has been built into the DNA of most species in which species of prey tend to always be on the look out for the unseen. The hunters are always on the look out for the exposed. This same condition can be thought about when discussing the perspectival relationship between official and inmate where the inmate may or may not recognize they are being watched. This was the concept that Panopticon achieved successfully.

2. “Spatial nesting” contains a series of spaces that face one another with an authority figure at the end of the row. Each space is a certain amount of fee apart along the main line of circulation. This example is primarily seen in military camps and has been used in hospitals, prisons, and schools in which hierarchized surveillance is prevalent.

“The perfect disciplinary apparatus would make it possible for a single gaze to see everything constantly. A central point would be both the source of light illumination everything, and a locus of convergence for everything that must be known; a perfect eye that nothing would escape and a center toward which all gazes would be turned.”

3. Surveillance in the classroom. Classrooms are set up so the teacher has complete surveillance over the pupils. They could be assisting one student yet know who is misbehaving behind them. “A relation of surveillance defined and regulated is inscribed at the heart of practice of teaching, not as an additional or adjacent part, but as a mechanism that is inherent to it and which increases its efficiency.”

“The power in the hierarchized surveillance of the disciplines is not possessed as a thing, or transferred as a property; it functions like a piece of machinery. And, although it is true that its pyramidal organization gives it a ‘head’, it is the apparatus as a whole that produces ‘power’ and distributes individuals in this permanent and continuous field.”

CASE STUDIES OF CONTROL
Like all other country borders, there are 2 fences or walls. Between them is “no-man land” in which the space is neither country. This space is often patrolled for those attempting to cross the border. There are a series of checkpoints along the U.S.-Mexican border. One could pass through by car, truck, or on foot. These checkpoints act as the security perimeter or “building control” as one approaches these gates.

The Puerta Este México (East Gate) is a $6 Million pedestrian checkpoint facility that recently opened in August of 2015. It currently received and surveys 20,000 people per day. Those staying more than 7 days in Mexico need to pay a 330 peso fee ($20).

Chek Lap Kok Airport designed by Foster & Partners in Antau Island, Hong Kong works like most other airports. There are a series of portals that one passes through from arrival to security to the gate in order to board the plane. Taking the same legend these portals can be easily connected to the zones in prisons with only different titled spaces.
Daniel P. Moynihan Courthouse designed by Kohn Pederson Fox & Association in Foley Square, New York City. This facility has 3 sets of elevators. One for the judges, one for inmates, and one for the public. The jurors act like Zone 3 in this situation because they act as a mediator between the judges and the citizens. Inmates who are transferred from other facilities are delivered on site from the basement and brought up vertically to the correct courtroom.

### Differences of Jails and Prisons

<table>
<thead>
<tr>
<th>Component/ area</th>
<th>Jails</th>
<th>Prisons</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operations</td>
<td>Decentralization and lack of movement among arrested because of their unknown behavior, trial, and sentencing</td>
<td>Movement accepted because inmates are confined longer periods of time</td>
</tr>
<tr>
<td>Sentence</td>
<td>Few hours, few days, no more than 1 year</td>
<td>More than 1 year</td>
</tr>
<tr>
<td>Living Units</td>
<td>Smaller/ subdivided by multiple custody classification</td>
<td>Larger/ single custody levels with a separate special management unit</td>
</tr>
<tr>
<td>Dining</td>
<td>Decentralized to living unit(s)</td>
<td>Centralized in dining hall(s)</td>
</tr>
<tr>
<td>Recreation</td>
<td>Adjacent to living unit; generally no large outdoor areas; often a indoor gym</td>
<td>Centralized in gymnasium(s) and outdoor recreation field(s)</td>
</tr>
<tr>
<td>Programs</td>
<td>Limited, due to short time inmates are held in facility</td>
<td>Education, vocational, and industry activities provided to encourage maximum inmate participation</td>
</tr>
<tr>
<td>Medical</td>
<td>Adjacent to living units; centralized medical treatment and infirmary</td>
<td>Treatment/ Infirmary centralized; triage adjacent to living units</td>
</tr>
<tr>
<td>Intake Processing</td>
<td>Large number of inmates; intensive activity centralized; adjacent to classification housing unit</td>
<td>Scheduled admittance; less inmate movement/turnover</td>
</tr>
<tr>
<td>Visitation</td>
<td>Noncontact type located adjacent to living units to limit inmate movement</td>
<td>Centralized to encourage inmate movement and control activity and visitor’s facility penetration</td>
</tr>
<tr>
<td>Vehicular Sally Port</td>
<td>Drive thru for volume of inmate and delivery</td>
<td>Courtyard setting, separated from, but can share, service yard</td>
</tr>
<tr>
<td>Security Perimeter</td>
<td>Building envelope usually serves as primary security perimeter</td>
<td>Perimeter is fenced, with detection system(s), and patrolled; often includes guard towers</td>
</tr>
</tbody>
</table>

New York City had the highest rate of incarceration in the State of New York in 2003. In New York City, with a population of just under 8 million people in 5 boroughs, it cost $1.1 billion that year to incarcerate more than 13,200 residents. 55% of those incarcerated from New York City that year will likely be released within 1-4 years.
EASTERN STATE PENITENTIARY

Eastern State Penitentiary built in 1836 in Philadelphia became a pioneer for prison rehabilitation of its time by creating a courtyard space for each of the independent cells. In an era that was mainly focused on punishment instead of rehabilitation, this design tactic was one of its kind. The images are interesting to study to see how the site and its surroundings evolved over its history to accommodate for the increasing prison population.

FIRST WESTERN PENITENTIARY

First Western Penitentiary built in 1833 in Pittsburgh became one of the few prisons that allowed the inmates to gather at the very center of the project and be easily observed from four control points. This is different than the Panopticon for which the inmates never leave the cells. In the First Western Penitentiary, they can leave (on scheduled times) to go to the central dining space or to other locations such as the infirmary and chapel spaces.
<table>
<thead>
<tr>
<th>CASE STUDY</th>
<th>Location (Date)</th>
<th>No. of Cells</th>
<th>Gender</th>
<th>Size (sf)</th>
<th>Level of Security</th>
<th>Positive</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Louis County Dept of Justice</td>
<td>Clayton, Missouri (1998)</td>
<td>602</td>
<td>M/W</td>
<td>204,029</td>
<td>Maximum</td>
<td>Non-contacts are located adjacent to housing pods</td>
<td>Contact Visits are downstairs; no other activities</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>797,928</td>
<td>Maximum</td>
<td>Adjacent to Visitations which could allow the community to gather in the education spaces</td>
<td>Sound issues; small enough uses</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>204,029</td>
<td>Maximum</td>
<td>End of housing pod for easy direct surveillance</td>
<td>Half Court and lack of other exercise programs</td>
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<td>150,000</td>
<td>Maximum</td>
<td>Direct surveillance; fewer units</td>
<td>No definition of space</td>
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<tr>
<td>Niagara County Jail</td>
<td>Lockport, New York (1996)</td>
<td>320</td>
<td>M/W</td>
<td>164,000</td>
<td>Maximum</td>
<td>Inmates leave there housing unit</td>
<td>No other activity</td>
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<td></td>
<td>150,000</td>
<td>Maximum</td>
<td>Has library and classroom; away from housing unit</td>
<td>Small not enough uses</td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>797,928</td>
<td>Maximum</td>
<td>Joins 2 housing units together; centralized for easy viewing</td>
<td>Lack of other exercise programs</td>
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<td></td>
<td>164,000</td>
<td>Maximum</td>
<td>Good shape for surveillance; definition of Space</td>
<td>Lacks multipurpose space</td>
</tr>
<tr>
<td>South Correctional Entity (SCORE)</td>
<td>Des Moines, Washington (2011)</td>
<td>296</td>
<td>M/W</td>
<td>5756</td>
<td>Maximum</td>
<td>Plenty of light and air; more open floor plan; technology</td>
<td>Lack of private conversations</td>
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<td></td>
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<td></td>
<td></td>
<td>164,000</td>
<td>Maximum</td>
<td>Good for surveillance; not connected to housing unit</td>
<td>Small not enough uses</td>
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<td></td>
<td></td>
<td></td>
<td>797,928</td>
<td>Maximum</td>
<td>Large space; shared among all units</td>
<td>Half Court and lack of other exercise programs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5756</td>
<td>Maximum</td>
<td>Interlocking of units allows for 8 units to be controlled by 1 unit control room</td>
<td>No definition of space</td>
</tr>
<tr>
<td>Mas d’Enric Penitentiary</td>
<td>Tarragona, Spain (2009)</td>
<td>684</td>
<td>M/W</td>
<td>797,928</td>
<td>Maximum</td>
<td>Hotel for visiting families on 1st and 2nd floor; plenty of non-contact booths</td>
<td>Separation between control room and visitation room</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>797,928</td>
<td>Maximum</td>
<td>Plenty of classroom spaces and sizes; nice light and air; good for surveillance</td>
<td>Located in same building as housing units; inmates rarely leave housing unit</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5756</td>
<td>Maximum</td>
<td>Swimming pool, 4 basketball courts, rock wall (plenty of activities)</td>
<td>Located at far end of the campus so the inmates are unable to interact with their visitors</td>
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<td></td>
<td></td>
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<td></td>
<td>164,000</td>
<td>Maximum</td>
<td>Single loading corridor; easily controlled by 1 control room; view of courtyard</td>
<td>No dayroom/inmate lounge on floor</td>
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<tr>
<td></td>
<td></td>
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<td></td>
<td>5756</td>
<td>Maximum</td>
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</table>
Architect: Sverdru/Heilmuth Obata Kassabaum Architects
Location: Clayton, Missouri
Size: 204,029 sf (175,056 w/o court)
Number of Cells: 602 (Men and Women)
Security Level: Maximum (Low level to high level offenders)
Sentence: Less than 1 year
Date: 1998

Recreation
- Provides physical activity and releases tensions, and relief through physical fitness. "Recreational activities provide inmates with an opportunity to improve their physical and mental health, develop good sportsmanship, and improve morale." – 85
- The gym should be located adjacent to other centralized services to improve security observations. Visibility must be provided to observe inmate behavior since games can get out of hand at times.
- Also within the pod, spaces such as reading areas, multipurpose areas, and TV viewing are to be acoustically controlled to not disturb other inmates in the pod.
- Also within the pod, spaces such as reading areas, multipurpose areas, and TV viewing are to be acoustically controlled to not disturb other inmates in the pod.

Education
- Some individuals find that they prefer working with adult students. For me, I've found that many [adult] students are very agreeable to school from the beginnings. Most of them, at some point, feel that education is relevant and important to them and their future. Many of [my students] have children, and oftentimes feel ashamed that they don't have basic skills. They feel very proud that they can go home and help their kids with schoolwork. Teachers use that as a motivator for them. A corrections classroom is much like a classroom you'd see in any school: same desks, tables, and textbooks. Some have chalkboards, some have smart boards — the usual amenities. People seem to be shocked that they are so similar! [Another misconception] is that academics are not the vocational shops are often used to undertake community service projects (e.g. building park benches), which has positive impact on the area.

Visitation
- Inmates can either travel independently or be escorted. The control room is often located at the entrance to this area to observe and monitor movement in and out of this space. Circulation in this

Inmate housing, as a rule of thumb, typically consumes 50% of the total gross square footage. 100 years ago, living was an endless corridor with no opportunity for a common area or the ability to move outside the confines of the cell. Now, pods are more popular, grouping 32 single cells around a day room area. Shapes include square, rectangular, or hexagonal. Day shift, (1-2 shifts), 5 days per week

Day shift, (1-2 shifts), 5 days per week

Why might someone prefer to teach in the corrections facility? Why do you?

“Some individuals find that they prefer working with adult students. For me, I’ve found that many [adult] students are very agreeable to school from the beginnings. Most of them, at some point, feel that education is relevant and important to them and their future. Many of [my students] have children, and oftentimes feel ashamed that they don’t have basic skills. They feel very proud that they can go home and help their kids with schoolwork. Teachers use that as a motivator for them. A corrections classroom is much like a classroom you’d see in any school: same desks, tables, and textbooks. Some have chalkboards, some have smart boards — the usual amenities. People seem to be shocked that they are so similar! [Another misconception] is that academics are not the only things that are taught. There are also vocational programs where students can learn skills in fields such as mechanics, electrical and plumbing. Anything you can imagine in a vocational school setting, there are probably classes for that in the correctional system as well.”

Some individuals find that they prefer working with adult students. For me, I've found that many adult students are very agreeable to school from the beginnings. Most of them, at some point, feel education is relevant and important to them and their future. Many of my students have children, and oftentimes feel ashamed that they don't have basic skills. They feel very proud that they only things that are taught. There are also vocational programs where students can learn skills in fields such as mechanics, electrical and plumbing. Anything you can imagine in a vocational vocational shops are often used to undertake community service projects (e.g. building park benches), which has positive impact on the area.

Inmates can either travel independently or be escorted. The control room is often located at the entrance to this area to observe and monitor movement in and out of this space. Circulation in this space must be kept straight to maintain visuals from control posts. These spaces are typically designed for 15-20 inmates at one time. Why might someone prefer to teach in the corrections facility? Why do you?
Visitation

2 shifts, varies from weekdays-only to all days
*A visitation program can assist the inmate in reducing negative psychological effects of incarceration and establishing a positive attitude for reentry into society.*1 Problems can be resolved if members of the clergy, law enforcement and attorneys come to visit. In prison environments, inmates are allowed to travel across campus or across the facility whereas in jails, a corridor that feeds to the visitation center separating the housing units from the center. The private visitation rooms are preferred for attorneys and clergy in order to conduct private conversations with the inmates. One way of patrolling this area is through one-way glass that enables the staff to observe inmate behavior. Contact (non-barrier) and non-contact (barrier) design is available. Non-contact is typically arranged for inmates that potentially pose a danger to staff or visitors. The design usually separates the individuals by glass partition with communication by either holes in the glass or by telephone. "After visitors have been screened in the public lobby (outside of security) they enter a sallyport… once inside of security visitors generally move on their own to the visitation areas and are usually observed from a control station. The visitation officer will open the door to the visitation room for visitors, and inmates will enter form different and separated entrances."2

Visitation, lobby
Inmate entry to visitation
Unit control
Sally Ports

Day shift, (1-2 shifts), 5 days per week
Services in this area include education for those that have not completed their GED, library services, vocational education, and administration support such as guidance counselors. One benefactor of this program is CPR demonstration and training. "Academic education and vocational education are given to provide inmates with competency-based functional mathematics, reading, and writing skills with Adult Basic Education (ABE) courses." Libraries are particularly important to inmates to learn about laws that may affect their case, contain periodicals and audiovisuals. Inmates can either travel independently or be escorted. The control room is often located at the entrance to this area to observe and monitor movement in and out of this space. Circulation in this space must be kept straight to maintain visuals from control posts. These spaces are typically designed for 15-20 inmates at one time. "While most jails do not have correctional industries areas, vocational shops are often used to undertake community service projects (e.g. building park benches), which has positive impact on the area."
2 shifts, 7 days per week
Provides physical activity and releases tensions, and relief through physical fitness. "Recreational activities provide inmates with an opportunity to improve their physical and mental health, develop good sportsmanship, and improve morale."¹

Housing unit on a rotational basis usually schedules use of recreational facilities for 1 hour per day. There are often evening recreation hours to expand on the time allowed.

The gym should be located adjacent to other centralized services to improve security observations. Visibility must be provided to observe inmate behavior since games can get out of hand at times. Locate directors office to they could monitor and control the smaller rooms such as weight rooms and storage areas. If showers are provided, they must have privacy screens but be generally open to the main activity areas for supervision.

Active 24 hours a day (3 shifts), 7 days per week
Inmate housing, as a rule of thumb, typically consumes 50% of the total gross square footage. It is preferred that outdoor recreation is adjacent to day rooms because it reduces tensions and naturally allows for more light into the space and the inmates do not have to move outside of the housing unit to do so. It is possible to lower the bottom cell floor by 2-3 feet from the food service and control room because it provides better visual observation, spatial diversity (an opportunity for special architectural treatment of activities like carpeted TV room and hardened concrete dining floors), and reduced volume (to produce an interior character of residential living that improves inmate behavior and preparation for release).

Solitary housing units are still being used, but several AIA members and the ADPSR (Architects designers and planners for social responsibility) signed a petition to eliminate the SHU unit used by all moderate to maximum security prisons because they claim SHUs are a violation of human rights, which is rightfully so. 10% of the inmate population requires special needs whether it is mentally or by behavior. All spaces are equivalent to general housing. Special needs have little to no engagement with general housing inmates.


VISITATION

EDUCATION

Plan reproduced by myself using Autodesk Revit.
We believe that a penitentiary needs to be a living space, where architecture contributes to improving the difficult experience of confinement by building spaces that lend themselves to appropriation, which promote a certain feeling of belonging. While taking into account the specificities of the functional program as well as the internal and external security criteria, the design for Mas d’Enric Penitentiary proposes a humanized solution that is economically sustainable and integrated into the landscape, in order to encourage the penitentiary’s central aim: the reinsertion of inmates. The programmatic needs of this project make it necessary for the project open onto a controlled, courtyard-like space. The continuous loop of the plan alleviates space between buildings, better security control for freer use of interior space.
Visitation

We believe that a penitentiary needs to be a living space, where inmates are open onto a controlled, courtyard-like space. The continuous loop of the plan alleviates space between buildings, better security control for freer use of interior space. The programmatic needs of this project make it economically sustainable and integrated into the landscape, in taking into account the specificities of the functional program as appropriation, which promote a certain feeling of belonging. While confinement by building spaces that lend themselves to appropriation, which promote a certain feeling of belonging. While confinement by building spaces that lend themselves to appropriation, which promote a certain feeling of belonging. While confinement by building spaces that lend themselves to appropriation, which promote a certain feeling of belonging. While confinement by building spaces that lend themselves to appropriation, which promote a certain feeling of belonging.

Education

We believe that a penitentiary needs to be a living space, where the programmatic needs of this project make it economically sustainable and integrated into the landscape. Mas d’Enric penitentiary proposes a humanized solution that is taking into account the specificities of the functional program as well as the internal and external security criteria. The design for confinement by building spaces that lend themselves to appropriation, which promote a certain feeling of belonging. While the continuous loop of the plan alleviates space between buildings, better security control for freer use of interior space.

Number of Cells: 684
Size: 797,928 sf
Location: Tarragona, Spain
Architect: AiB Estudi d’Arquitectes
Date: 2009

FENCING AND PERIMETER DETAILS

SALLY PORT

Fencing and perimeter details

PROPOSAL

Fencing Concepts

Sally Ports (checkpoints)


**LEOBEN PRISON**

Syria, Austria | 2004

In Europe, Josef Hohensinn’s design has become a model and has become an opening statement in a debate about what it means to construct a better prison. There are plans to build similar outside of Berlin.

The cells have french balconies which are nonextended balconies. One simply opens the window to a set of bars flush with the facade.

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**HALDEN PRISON**

Halden, Norway | 2004

This facility holds 250 inmates. Fun Fact: Officers are not required to wear arms and over half of them are women.

The inmates have individual cells with a bathroom and a flat-screen TV. The windows are made out of reinforced glass and have no bars. There is a shared kitchen and a lounge for every 10-12 cells, which resembles a student dormitory.

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**CONFINEMENT**

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<th>Physical</th>
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<td>Sally port</td>
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<td>Recreation</td>
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<td>Dayroom</td>
<td>Infirmary</td>
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<td>Non-contact visitation booths</td>
<td>CCTV cameras</td>
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<td>Audio</td>
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### WHAT WE CAN CHANGE

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<th>CHANGE</th>
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<tr>
<td>Wall and door frame types</td>
<td>Materials (limited colors)</td>
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<tr>
<td>Sally ports</td>
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<td>Door locks</td>
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<td>Operations (intake/release)</td>
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United States | Aim | Europe

**Visitation**

**Classroom**

**Recreation**

**Housing**

REFORMATION OF THE PRISON UNIT
The plainness and lack of architectural design has historically led to the emphasis of exclusion from the architectural realm thus removing the convicts from the social realm. There is nothing but penal functionalism. Not only do the inmates need improvement but also the architecture in which they inhibit leading the inmates to be a reflection of the architecture. Although inmates respond negatively toward their surroundings, they happen to respond more positively to newer accommodations by keeping it cleaner and kept. The officers are also often unhappy with the quality of life in these facilities.

There comes a point where surveillance and control need to step back and allow freedom in this prison setting. Privacy is highly precious in these facilities. Most county jails still have bar doors and allow for complete exposure between the officer and the inmate. This is counted as “a dehumanizing effect” which causes an imposition on the inmate. “There can be no justification for deliberately designing unwholesome accommodation or choosing dowdy colors, dim lighting and excessively harsh materials. This inhibits the hopes of encouraging prisoner back into society, which to them, sometimes looks as though it has given up on them. This form of institutional brutality only brutalizes society as a whole.”

An interest model for spatial control is circulation. When a pedestrian sees a path alongside a carpeted area, their reaction in to follow it and use it as a circulation route. This same occurrence happens in prison. Not only can the architecture control the inmates as to where they can go, but also interior design can control their movement through the facility.

In order to change the social image of prisons we need to reconfigure how we control such a program. Inmates need control and discipline, but they also need rehabilitation and help to develop societal skills. Various programs have been implemented in the penal system such as G.E.D. classes and vocational skills. All that is great, but in order to be successful individuals in society, they need have successful and positive humanities.

“Prisons are places from which inmates must not escape, and that should be expressed in the design. However, they should also be places that can be accepted, even adopted, by the community, with local people invited to participate in suitable activities.”

Each category of general housing allows for limited air ventilation and natural lightening. Both of these characteristics are very important for rehabilitation. Thus, reconfiguring this space to accommodate these needs should be of major concern. Also, this study shows where the guards (control) is located in relation to the bunks and privacy of the inmates.
The current condition as it exists now is not only monotone and dreary but also discourages natural cross-air ventilation into the day room. Some prisons do not allow for operable windows so the only ventilation that the cells and receive is from the dayroom.

This concept proposal is a critique of the current condition. It questions the visibility of the control room by placing it above the cells behind louvers. These louvers are carried down above the door to provide ventilation from cell to dayroom. The inmates know they are being watched, but the visibility is lowered. Same applies to the cameras hidden in the ceiling. When the ceiling is designed in such a way, they hidden but the inmates still understand there are cameras in the area.
“The stereotype of a correctional facility is a grim, hulking presence – thick walls, sharp wire, high watchtowers.” The ACA (American Correctional Association) requires that each cell has natural light that is no more than 20 feet away. The natural environment that the inmates would receive is considered part of the physical and psychological well being while reducing energy consumption and increasing viewing abilities for guards. Light is not just a luxury for inmates. It is the only form of contact with the outside life (especially in an urban setting). The window treatments raise certain questions “Does the public want to see so blatantly what happens inside? And do those inside want to become a public spectacle?”

“Designed to counteract gloom and darkness, depression and danger, includes decisions about the colors and reflectance values of finishes. Light colors in warm tones, with non specular surfaces for paint and dull finishes for metal, are preferable.” Inmates show positivity to bright colors and art, especially when drawn by a fellow prisoner. These aesthetics control the visual proportions of a room. Certain colors are to be avoided: hues of blue, red, black, and yellow as they are predominately gang-related colors in society.

The term normative design is the architectural intervention of using civilian furnishing such as carpets, various color and finish materials, wood and higher quality furnishing for those that are nearing the end of their sentence. Why would it be just for the “soon to be released”? Architects should make this part of the design for all low and medium security prisons like the Federal Metropolitan Correctional Center in San Diego.

“Single-occupancy inmate rooms are judged to be most desirable for several reasons. The privacy they afford to inmates can contribute to a more normative environment.”


96 97
CREATING A NEW REHABILITATION IN A CONTROLLED ENVIRONMENT
SIGNIFICANCE OF REHAB PROGRAMS

Rehabilitation can go beyond the classroom setting or alcoholics anonymous. Programs such as Habitat for Humanity, Coloring books for Toys for Tots, Mediations rooms, agriculture, quilting and especially dog programs can help people mentally and physically during their time in incarceration. This thesis creates a facility that can accommodate many non-government funded correctional programs such as quilting. Architecture is the beginning of influencing other people’s lives. In order to have a successful life after an unsettling past, one needs a new path in life starting with the tools to succeed that can only be given through architecture. If a facility is inefficient, dark, and crowded, most inmates will return to a life of crime, remain violent. We as architects need to take the sublime and think about how it affects people in these spaces. Dog programs not only have the superb capacity and ability to teach us patience, trust, and responsibility among others. Many inmates lack trust and could possibly be naturally aggressive. By integrating a program that allows them to interact with dogs in particular, they would acquire the above social skills.

Mediation and Peace Rooms were started by Deanna VanBuren, architect and founder of FORUM Design Studio that focuses on combining design with restorative justice. Restorative justice allows for the convicted and the victim’s family to converse and heal together. Deanna started the “Creating Justice, Creating Spaces” exercise where inmates are given paper and drawing materials to draw and make what they think a “Peace Room” and their housing pods should look like.

Goose Creek Correctional Center has created a program where inmates are able to create coloring books for the Toys for Tots campaign. The inmates take great pride in the time and effort they gave to this project. The coloring books were 11 x 17 inches and consist of hand-drawn pictures of animals, boats, trucks, dragons, airplanes and well-known characters especially Disney. The books ended up under an appreciative child’s tree in time for Christmas. This space is quite basic with only a few necessities: art supplies, idea books, storage, and furniture.

Jefferson City Correctional Facility, a maximum security prison in Missouri, created a program that allows inmates to create quilts for those in need or other charities such as Backpacks of Love and Boys and Girls Town at no cost to the federal government. Dave Dormire, JCCC’s superintendent, oversees this program and compares this facility to others of the same and lesser security. Due to programs such as these, JCCC has the lowest rate of misconduct and violence. “We don’t have a lot of serious fights; we don’t have serious assaults,” he says. “It also makes [the prisoners] feel good. It is just win-win.” The spaces needed to run this program include storage and training rooms. The only technology needed to run this program are sewing machines.
**Habitation for Humanity**

Iowa State Penitentiary is one of the very few maximum security prisons that adopted construction rehabilitation programs. The Habitat for Humanity program inside this prison’s maximum-security unit employs 33 inmates full time to construct oak cabinets and household wall panels for Habitat programs statewide. “You have to want to work, and you have to want to be here to be part of this program,” said Fields, serving a 30-year sentence for an attempted murder. “We have pretty fair supervisors, and the program helps unfortunate people who can’t afford homes. This is the best job in the prison, if you ask me.” This space requires woodshop equipment, observation desk, tool closet with a monitor, training rooms, and metal detection. The minimum ceiling height is 14 ft.

**Agriculture**

Eastern Correctional Institution in Maryland is a maximum security prison that adopted the agriculture program into prison culture. “These guys have probably never seen something grow out of the ground,” says Kathleen Green, the warden at Eastern Correctional Institution, watching her inmates till the soil. “This is powerful stuff for them.” The inmates sometimes work 10 hours in the field when it is prime harvest season. The necessary spaces for this program is a compost, greenhouse, and storage facility for gardening equipment. The size of the field can vary depending on what is being grown. The Eastern Correctional Institution grows cabbage, strawberries, peppers, squash, eggplant and lettuce. Unlike other facilities, this facility donates their crops to neighboring impoverished communities; communities that many of these inmates originate from. The only forbidden crop in prisons are fiery habaneros, which are used to make pepper spray.
NEAD AND PROGRAMS

Typically those in need spend a lot of money on hospital bills, doctor appointments and medications thus; they often don’t have much extra money. “The average expense of training a service dog in the Civilian world is $10,000 - $12,000, but the cost is only about $4,000.”

Prisons that host these programs: juvenile, adult (men and women) in Juvenile setting puppy programs teach responsibility, respect, honesty, and pride in accomplishment, military prisons, maximum and minimum security, (not detention center due to short length of stay)

NEADS (National Education for Assistance Dog Services) has the oldest hearing dog program for those that are deaf or physically disabled and has trained 80 dogs. Eight-week-old puppies are places with chosen inmates in a minimum-security prison where a NEADS trainer visits once a week for a 2-hour training class. The Labradors and Golden Retrievers live with the inmates.

Governor George Voinovich mandated that all state prison in Ohio have to acquire community service, and animal training and care programs.

There are 5 conditions in regards to animal treatment that need to be recognized when designing spaces for animals.

1. Food and water
2. Appropriate environment for shelter and comfortable resting area
3. Medical attention
4. Large enough space to provide normal behavior; and to be around the same species
5. Beneficial conditions that do not cause stress or fear (ie. Appropriate lighting).

SUBSTANCE ABUSE

56 clients (46 men, 10 women) were a part of a 12 week rehabilitation project that met once weekly for 1 hour. 64% (28 men, 8 women) of the participants claimed to enjoy the interaction with the dogs, involving petting, feeding, talking to, and et cetera. Alexis is a pit pull, a breed commonly found in drug busts of which 19% of participants have shared incidents of violence against humans by street fights, domestic violence, child abuse, among others.

Many clients may have had a dog as a pet in their history, and considered it family. When separated from the dog due to domestic issues, these participants took drugs as a supportive method for getting them through loss, emotional or physical abandonment, and values that have happened in their past. Like the lower blood pressure charts, the presents of dogs made 56% of the participants more opened to interact spontaneously with their history in violence, loss, self-esteem, and drug and alcohol abuse.

“Therapy programs in prison have been shown you uplift the spirits of detainees and reduce violence in the facility.”

“The men who have completed this program have for the most part shown considerable change in their outlook toward others and their sense of self-worth, as well beings and their sense of achieving a better gal in life…”

The evidence suggests that the participants have changed their behavior in several respects... particularly in terms of responsibility, and altercations with others, and the use of drugs. Nine Lives Program at Pendleton Correction Facility is a program specifically for cats and kittens at shelters. The program pulled 59 cats and kittens from the shelter and gave them to inmates to care for them for 8-hour shifts. “One inmate serving time for manslaughter says of the program, ‘It makes me feel better about myself. Something to care about. It’s a win-win solution because the extra attention the cats receive from the prisoners will result in better socialization alleviating stress and depression they often develop while in cages. The offender gets the chance to give back to society.’”


ANIMAL PROGRAM NEEDS
Recently there has been reported issues that many of the donations that the ASPCA and the Humane Society of the United States receive goes toward staff salary and other funding to stop animal cruelty leaving very little to the animals individually. One half of 1% (maximum) goes toward shelters that are “supported” by these organizations. Persons who give to these organizations are warned and advised to donate to their local shelter personally, not through the phone that is mentioned on commercials. The Humane Society is slightly understandable as they do not only protect domestic felines, canines and farm stock, but also wildlife foundations and habitat protection. Since they support so many animals, it would be only natural that not much of that money would go to animal shelters, but that does not let the ASPCA off the hook as they do fully fund domestic animals.

Surprisingly, the public would much rather spend hundreds of dollars on a pet store animal or breeder, than spend $15- $75 on cats to large dogs, respectively. October is “Adopt a shelter dog month” further lowering the costs of adoption. Why?


-The Animal Rights Movement’s Financial Footprint-
**DOB PROGRAM REQUIREMENTS**

Dogs:
Individual and Quarantine Kennels: raised bed surface, min. temperature 50, max is 78. Natural and supplementary light with view outside the kennel.

Group Housing: only after 10 days in quarantine. Not suitable for ill or injured or nursing. Separation of sexes. Active kennel buildings can improve rehousing rate.

Cats:
Individual or Quarantine: Cubicles plus exercised should be 23sf with open mesh front. Bed, litter tray, and space from food and bowls. Ventilation, cubicles should face each other should be separated by 6ft to prevent disease.

Group housing: bedding not required, great for socializing. 50 – 78 degrees. One litter tray per cat. Maximum size of a group is 50.

**Visibility:** so there is high foot traffic instead of the traditional “out of the way” “call for directions” shelter. "Today it's being recognized that locating shelters in high-visibility locations not only increases visitors and the number of pets adopted to new homes but also reduces the need for euthanasia and helps build public awareness and community goodwill."

**Accessibility:** easy access to roadway. Should not be 15-20 min. utes from the town center.

**Suitability:** availability of sewage and utility lines, zoning restrictions.

**Kennel Layout:** areas of severe summers or winters prefer indoor kennels. This is required in an area that is surrounded by housing where noise level is considered.

**Courtyard design:** kennel opens to courtyard for security and noise and are confined to the facility at night.

**Jumbo Doubles:** 6x6 inside, 6x10 outside | singles (4x6 inside , 5x10 outside) | puppy pens (3x5) | small breed/larger pups (5x6) | single stray: 4x6 inside 4x10 outside | Quarantine: 4x6 indoor 4x10 outside | isolation 4x6 indoor 54x10 outdoor

**Cat community room** with 20 cats (avg.) 24 cages 18’x30’; kitten community sun porch (10x13) Quarantine: 18x18 | feral 3 stacks high, | isolation 15x18 | stray 18x39

**Animal Food Preparation:** This area has a sink with hot and cold water; disinfect feeding bowl area, refrigerator, sufficient counter space. Food storage should be adjacent and stored off the floor. Hygiene Area: wash area and toilets, shower

**Medical:** Separate ventilation system to discourage spreading diseases and isolation units to prevent physical contact between sick and healthy dogs.

PET ARCHITECTURE

One goal is to create a piece of animal furniture that controls them without bars or fences. This typology would be implemented in the inmates prison cells creating a private personalize ideal for animal so both the inmate and the dog or cat has a sense of privacy and place.

Designing for dogs may prove to be more of a challenge because they are typically not as agile compared to cats. Cats require certain needs like scratching posts and shelving spaces.

These propositions can also form alternatives to kenneling and holding areas for cats and dogs in shelters such as the image below.

RNL, ‘Our Kitty Condo allows cats to survey the world from multiple turf-lined vantage points while comfortably hiding behind 23 layers of wood slats, which protect them from harm’

HOK, cat shelter is a modernist, pentagonal structure which creates two scales of shelter; ‘smaller modular units placed within a large enclosure to create a ‘home within a home.’

SITE SELECTION
CURRENT TRANSPORT

The current trends and larger scheme of controlling inmates is where to put them. Many convicts are arrested in the metropolitan New York City, Syracuse, and Albany. However since most of those prisons are full in capacity, the recently arrested are being transported to upstate New York. This influx and mass migration of inmates to upstate has cause an increase in crime rates in certain cities like Syracuse and Albany thus keeping crime and population in Syracuse steady instead of increasing like a typical city would. Should we try to enhance upstate or central New York, or should we seek out the source and stop the spread?

The chosen site is in Howe’s Cave, N.Y. This site would provide corrections for Syracuse, New York City and Albany.
SITE IMAGES

View A

Western Sequence | Mining Property

Southern Sequence

View A
CONTEXT MATERIALS
DESIGN
**PRECEDENT PLANNING**

**Concept**: to develop an “open courtyard” system that has strict enough security that allowing inmates the freedom to walk about the grounds through passive boundary systems using landscape.

Mas d’Enric, Spain
- enclosed courtyard (promenade)

Las Colinas, San Diego | CA
- open exploded plan (campus plan, non continuous fabric)

**PROPOSAL**

Program

<table>
<thead>
<tr>
<th>Recreation</th>
<th>Kitchen</th>
<th>Education</th>
<th>Visitation</th>
<th>Housing</th>
<th>Medical</th>
<th>Workshop</th>
<th>Farming</th>
<th>Multi-use</th>
<th>Office</th>
<th>Booking</th>
</tr>
</thead>
</table>

Proposed

University

Campus Plans

Prison

Campus Plans
PROCESS + METHODS
DEVELOPMENT
DEVELOPMENT

The ha-ha is a farming technique that disallows for cattle to walk beyond a certain point. This same technique could be applied to prison surveillance instead of dowdy chain link fencing or walls. It would provide a sense of “freedom” by allowing the inmates a view to the valley below.
Housing Model
3/16" = 1'-0"

Education Model
3/32" = 1'-0"
Housing Sections

These sections accurately describe the ha-ha boundary condition as a means of control. However, these ha-has and the walls that shape them need to be designed. If left untreaded as earth, an inmate could escape by means of digging. Since the surrounding context is mostly made up of farms, the use of materials for these walls reflect the materials used for barns and sheds such as corrugated metal thus using this material for the walls of the ha-has. This metal would rust overtime presenting this red hue, classic of barns.

The panels of the corrugated metal reflect the shape of the housing units in plan. This undulating motif is evident in plan and elevation as a reflect of the landscape and its hill views.
Housing Detail

The corrugated metal tiling on the ha-ha walls is the same pattern used to design the mesh pattern on the housing unit screen system for the housing facade. This mesh could be used to hang planters or art work while still providing light and air to the units. This planting technique is also used on the education screen (below) however in winter, due to run off the water that cascades down the screen freezes forming ice which creates a rather beautiful view from the interior.

The screen technique on the backside of the dining area facing the stone cliff allows for inmates to weave materials through the perforations creating a personable space that unifies the inmates of that floor or housing unit.
EDUCATION

The education portion of this project is highly influential when it comes to inmate rehabilitation. It is also one of the most complex areas when designing a prison because of the multiple users that operate and work in these spaces. The amount of control needs to be defined so the volunteers or workers (teachers) who are outside of the prison system can work in safety.

This part of the design uses landscape as two ledges allowing the guard to be 3 feet higher than the classrooms. This grants the guard views into the classroom spaces above the inmate and teacher’s head thus allowing for optimal control. The first ledge contains spaces such as industrial, loading dock, and kitchen. The second ledge (at lower elevation) incorporates spaces such as art, animal program, and classrooms. The wall elevation below shows how the cliff wall can be used as an art piece that inmates can use to draw inspiration. The water basin to the left is used for water arts.
WALL INTERVENTIONS

**Art Wall**

- Planters
- Dining/Activities
- 16'

**FENCING TECHNIQUES**

- Vendor awning
- Ha-Ha (Landscape Barrier)
- Camera
- Planting | Art
- Dining and Activities
- 16'

**What We Can Change**

United States

- Aim
- Europe

- Locations

- Leoben prison

- Foot patrol

- Sally port

**Substitutions (and textures)**

- Color Palette to Avoid

**Spatial Technical**

- Furniture
- Fencing
- Audio
- CCTV cameras

**Current Maximum Security**

- 14' - 11 25/32"
- 8' - 9 3/8"
- 5' - 2 3/32"
- Birches
- Student's dormitory

**Classroom**

- Dayroom
- Recreation
- Infirmary
- Planters

**Room Interiors**

- Poor Natural Lighting
- Dull Cell Interiors

**Materials**

- Limited colors

**asures**

- Can't
- Can't

**PROBLEM SOLUTION PRECEDENT**

- Halden Prison
- Half of them are women.
- Fun fact: Officers are not required to wear arms and overgarments.
- Rockwall
- Mutter-Kind-Heim

**What works and doesn't Work**

- Inmates housed in rooms in cottages.
- The prison has a glass roof to allow for some natural light into the interior of cells to their liking.
- Inmates may arrange the interior of cells to their liking.
- Some prison cells have glass doors and have no bars. There is a set of bars flush with the facade.
- One simple opends the windo to a view of the outside of Berlin.
- What it means to construct a better prison. There are plans to build similar outside of Berlin.

**Early Concepts**

- Sally Ports (checkpoints)
- Door locks
- Non-contact visitation booths
- Sally ports
- Wall and door frame types

**Corrections Today**

- Operations (Intake/release)
- Door locks
- Non-contact booths
- Sally ports

**Concretion**

- Stockholm
- Helsinki
- Stockholm
- Birches
- Student's dormitory
- 10-12 cells, which resembles of a cottage.
- There is a bathroom and a flat-screen TV. The set of bars flush with the facade.

**What works and doesn't Work**

- Poor Natural Lighting
- Dull Cell Interiors

**Operations (Intake/release)**

- Door locks
- Non-contact booths
- Sally ports

**Wall Interventions**

- Water feature
- Analysis
- Recreation Yoga
- Housing Detail_Winter

**Water Feature**

- 1/4” = 1’-0”

**Current Concept**

- Rooms Cubicles
- Single | Double | Quad Group / Dorm Rooms
- Open Dormitory Small Occupancy
II. Bibliography

Books and Publications (PDFs):


Website and online publications: (including image reference)

(continued):


Other:


U.S. Bureau of Justice
Research, critical thinking, and design has become an integral part of an architectural education. The hard work and dedication to fulfill this thesis has been challenging yet rewarding.

Thank you for reading this Thesis Document.
Designing Observation for Rehabilitation

This thesis focuses on the theory of spatial control in architecture. How an observer views and watches the participant, how the participant experiences and senses their surroundings of which architecture controls making this thesis a catalyst for social control. By studying and using different real world technology, landscape, layouts for control (i.e. surveillance), and undergoing material investigation, we can create a system by which proves architecture impacts the psychological health and welfare of the human and questions the visibility of boundary and observation that can support the goal of rehabilitation. Creating a new standard rehabilitation that makes surveillance tactics and systems architecturally designed and noticed in the space will lead inmates to better behavior in a supportive environment while reducing national incarceration rates.