

A modern, bright hallway with large windows and a glass door. The hallway is clean and well-lit, with a white ceiling and walls. The windows are large and multi-paned, providing a view of the outdoors. A glass door is visible on the left side of the hallway. The overall atmosphere is bright and airy.

NELSON

**TRAUMA INFORMED CARE:
DESIGN GUIDELINES FOR A
CORRECTIONAL ENVIRONMENT**

TABLE OF CONTENTS

- > Impact of Trauma
- > Programming & Design
- > Staff Accessibility & Accountability
 - > Life Safety
 - > Building Security
 - > Visibility | Privacy
 - > Comfort & Amenities
- > Interior Construction | Finishes | Color
 - > Electronic Security



IMPACT OF TRAUMA



Trauma, as defined in the correctional setting is “ exposure to actual or threatened death, serious injury or sexual violence in one or more of four ways: (a) directly experiencing the event; (b) witnessing, in person, the event occurring to others; (c) learning that such an event happened to a close family member or friend; (d) experiencing repeated or extreme exposure to aversive details of such events, such as with first responders” (Kubiak, S., Covington’s presentation for Family Drug Court (FDC) Symposium September 6, 2012 Anaheim, CA, from American Psychiatric Association, 2013, pp. 271--280).

For youth, the statistics are staggering; with at least 75 percent of offenders having experienced traumatic victimization. A comprehensive study of youth in detention completed in June 2013 by U.S. Department of Justice (Office of Justice Programs, Office of Juvenile Justice and Delinquency) found that over 90 percent of youth had experienced at least one trauma, 84 percent experienced more than one trauma, and over 55 percent reported being exposed to trauma six or more times.



For adults, a study completed in 2011 (Trauma and Life Event Stressors Among Young and Older Adult Prisoners, by Tina Maschi, PhD, LCSW, Sandy Gibson, PhD, LSW, Kristen M. Zgoba, PhD, and Keith Morgen, PhD, LPC, NCC) found that approximately 40% of young and older adult prisoners reported exposure to violent victimization. Young prisoners were significantly more likely to report witnessing physical assault, whereas older prisoners were significantly more likely to report experiencing a natural disaster, life-threatening illness, or the death of a loved one.

And, for women: A 1999 study found that 82% of women at New York’s Bedford Hills Correctional Facility had a childhood history of severe physical and/or sexual abuse and that 94% had suffered physical or sexual violence in their lifetimes. Additionally, 75% of the women had experienced severe physical violence by an intimate partner during adulthood. Nationwide, more than 57% of women in state prisons and 55% of women in local jails report having been physically and/or sexually abused in the past. 61% of female state detainees with histories of abuse and 67% of female jail detainees with histories of abuse report that the abuse was perpetrated by an intimate partner. (WOMEN IN PRISON PROJECT, Fact Sheet, 2009, Correctional Association of New York)



TRAUMA INFORMED CARE

Numerous articles and statistics have been published regarding this subject. Recent attention to PTSD in veterans has also heightened public awareness. Trauma informed care, in the correctional environment, is a direct response to the realization, based on actual data, that many offenders suffer from Trauma and that Trauma based treatment models have an impact on offender behavior. The Substance Abuse and Mental Health Services Administration (SAMHSA) (<https://www.samhsa.gov/>) contains numerous articles on Trauma Informed Care Models as does the National Institute of Corrections (NIC) (<https://nicic.gov/>).

ENVIRONMENTAL IMPACT

As Justice Designers, Architects are trained to believe that design has an impact on how people feel and behave, and the correctional environment is no exception.

Due to the improved data available and the recent focus on reducing the numbers of incarcerated individuals, NELSON has recently updated our design standards to reflect the impact the environment has on trauma informed care models of treatment within a correctional setting. Though the environment is only a small piece of the treatment-based approach, it is critical to the wellbeing of both offenders and staff.

The purpose of this document is to give the reader an insight into items to consider and is generally based on the following guidelines, summarized in Kubiak, S., Covington's presentation for Family Drug Court (FDC) Symposium September 6, 2012 Anaheim, CA.

Five Core Values of Trauma Informed Services:

1. Safety
2. Trustworthiness
3. Choice
4. Collaboration
5. Empowerment

(Fallot & Harris, 2006)

Starting with the five core values of Trauma Informed services, defining the overall mission and objective of a facility is critical in achieving a successful design. The following is a very general example that establishes design parameters.

Design a facility that creates a safe environment for staff and youth, promotes healing, education and training opportunities in as normative environment as possible.

The key factor is that the environment should be designed to support the operational goals of the facility. Translating this into more specific design goals, the following categories will be addressed:

1. Programming
2. Staff Accessibility
3. Life Safety
4. Building Security
5. Visibility /Privacy
6. Comfort and Amenities
7. Incorporating the Natural Environment
8. Finishes and Color
9. Invisible Security

PROGRAMMING & DESIGN



The first phase of each project shall be to develop a program that meets the needs of all components of a facility. New facilities shall include but not be limited to:

- Facility Administration and Staff Support
- Security and Central Control
- Visiting
- Programs including Religious Services, Education, Vocational Training
- Support including Food Service, Commissary, Laundry
- Medical Services and Infirmary
- Mental Health Services
- Admissions
- Vocational Training
- Recreation, Indoor and Outdoor
- Living Units
- Facility Maintenance and Support



PROGRAMMING

In Trauma Informed Care models, emphasis should be placed on programs, vocational training, mental health services and living unit design, with additional staffing and square footage requirements.

Specific care should be taken to address the following during programming:

- Upon entry, provide an area for evaluations that result in individualized goals and programming for each detainee that addresses each individual's needs and training.
- Education: number of classrooms, accommodations for special needs. Meet all State and local education criteria.
- Library for research and recreational reading; consider allowing detainees to checkout tablets for homework and recreational reading.
- Vocational Programs: work with local businesses and technical schools to develop training programs that deliver real jobs and/or a diploma upon graduation.
- Mental health: Working closely with mental health providers, provide spaces that match services for detainees including, group rooms, offices, individual counseling rooms, quiet rooms and specialized living units where dictated by detainee populations. Additional offices and conference rooms for staff.
- Living Units: Design should be designed with the smallest number of detainees as possible, based on actual staffing requirements. Where appropriate, based on security levels, consider self-contained units that include laundry, kitchenettes, living areas, individual or group dorms for sleeping, TV areas, group rooms, game rooms, and staff areas with direct visibility and accessibility to detainees.
- Staff: Generally, staff should be present an accessible at all times, however, areas should be provided for breaks, training, debriefings and shift change consultations.



DESIGN

Design has a direct impact on the environment and on the individuals living or working in a space, and a correctional facility is no exception. At NELSON, our goal is to design an environment that supports operational goals and to boldly transform the occupants.

Design Strategies to be investigated with each Owner include:

- Implement a residential scale, both interior and exterior.
- Create a welcoming entry.
- Provide upgraded staff support areas.
- Consider a hierarchy of security levels within a facility.
- Keep detainee population groupings small where possible.
- Provide spaces for supervised family interaction.
- Provide accommodations for quiet areas.
- Keep living units “homey” where security allows.
- Include natural daylight.
- Include color and texture.
- Include natural elements such as wood, stone and landscape areas.
- Include “softer” finishes
- Include acoustics
- Include art work and environmental graphics

- Eliminate the “maze” of hallways; where necessary, include natural daylight.
- Keep major hallways wide and open feeling.
- Allow access to the exterior.
- Create an environment that reduces stress.

INCORPORATE THE NATURAL ENVIRONMENT

Access to nature has been shown to reduce stress levels. In a secure environment, this can be difficult. Design strategies include:

- Incorporate windows with views to the outside.
- Provide indoor/outdoor space where weather permits in areas such as visitation and dayrooms with attached courtyards.
- Provide courtyards with landscaping and benches.
- Provide outdoor activities and classrooms.
- Provide outdoor recreation areas with grass and other greenery.
- In locations where outdoor access is not possible, include landscape murals and lighting that simulates natural daylight.
- Consider a “pet” program, allowing detainees to take care of animals.
- Consider white noise systems with nature sounds.
- Encourage gardening and horticultural programs, even if the only thing available are container gardens.



STAFF ACCESSIBILITY & ACCOUNTABILITY



STAFF ACCESSIBILITY & ACCOUNTABILITY

In a Trauma Informed Care Model, Staff are immediately accessible to detainees and generally have mental health training in addition to security training.

Due to this proximity and familiarity between Staff and Detainee, it is critical that measures are put in place to protect both parties. The design should include some, if not all, of the following provisions:

- Provide view windows in all doors or sidelights to allow casual observation. This includes storage rooms, private offices, janitor closets and other rooms that might not normally be included.
- Provide appropriate privacy measures at showers, toilets and other sensitive areas.
- Provide direct line of sight to all detainee areas.
- Include cameras in all areas not easily visible, or where recording capabilities are desired.
- Provide car key access at rooms where tracking of occupants is desired.
- Consider RFID systems that track detainee and staff whereabouts that can notify you when they leave their designated zone, providing additional protection for staff, and control over detainees.

Electronic technology can provide an unobtrusive way of monitoring the correctional environment, which is critical in creating a normal environment in a correctional setting.



LIFE SAFETY



As one of the guidelines for Trauma Informed Care, creating a safe and secure facility requires a significant attention to detail, starting with compliance with all Codes, Guidelines and Standards.

The life safety codes establish a minimum standard and, in direct contrast to correctional environments designed to contain people, are generally designed to release people in case of emergency. It takes detailed discussions with code officials, fire chiefs, and the facility administrators to keep staff and detainees safe.



1. All current local codes must be followed for new construction.
2. Generally, renovations may be designed to the code in effect at the time of original construction, SUBJECT TO APPROVAL BY THE AUTHORITY HAVING JURISDICTION.
3. In the absence of specific code requirements, or if the following code requirements are more restrictive, the following Codes, Ordinances and Guidelines are to be used by the Design Professional in designing this facility.
 - a. Most current edition of the International Energy Conservation Code
 - b. Most current edition of the International Building Code - Commercial construction
 - c. Most current edition of the Uniform Plumbing Code – Commercial
 - d. Most current edition of the Uniform Mechanical Code – Commercial
 - e. Most current edition of ANSI/ASHRAE/IESNA Standard 90.1 (Energy Standard for Buildings Except Low-Rise Residential Buildings)
 - f. SMACNA, HVAC Duct Construction Standards
 - g. Most current edition of NFPA 90A, Standard for the Installation of Air-Conditioning and Ventilating Systems
 - h. Most current edition of NFPA 90B, Standard for the Installation of Warm Air Heating and Air-Conditioning Systems
 - i. Most current edition of the National Electrical Code - All electrical installations
 - j. Most current edition of NFPA 110, Standard for Emergency and Standby Systems
 - k. Most current edition of NFPA 20, Standard for the Installation of Stationary Pumps for Fire Protection
 - l. American Correctional Association, Current Standard and Edition.
 - m. Relevant State Facility Requirements.
 - n. Most current edition of the International Fire Code,
 - o. NFPA 101, Life Safety Code, latest Edition.
 - p. NFPA 80, Standards for Fire Doors and Fire Windows, latest Edition.
 - q. NFPA 105, Installation of Smoke Control Door Assemblies, latest edition.
 - r. 2010 Federal Accessibility Guidelines.
 - s. Any other codes that apply to the design and construction of this proposed facility.
4. Creation and adherence to emergency protocol for fires, riots, weather emergencies and any other event requiring shelter in place or evacuation strategies.
5. Factory Mutual (FM) Requirements: FM sets minimum standards for roofing and fire protection to prevent property damage during significant weather events. It is the Design Professional’s responsibility to ascertain these requirements, design to meet these requirements, and secure FM approvals of the design.
6. Meet requirements of the 2010 Federal Accessibility Guidelines, and other requirements of the Authority having Jurisdiction.

BUILDING SECURITY



One of the tenants of trauma informed care is to provide a safe environment for staff and detainees. The first component of this is to provide secure barriers between the public and the detainee, between various zones within a facility and even between detainee areas.

ASTM F33 sets the standards for correctional facilities and shall be followed in accordance with standard practice, based on the security level of the facility.

1. ASTM A627-03 (2011), Standard Test Methods for Tool-resisting Steel Bars, Flats, and Shapes for Detention and Correctional Facilities;
2. ASTM F1450-12a, Standard Test Methods for Hollow Metal Swinging Door Assemblies for Detention and Correctional Facilities;
3. ASTM F1592-12, Standard Test Methods for Detention Hollow Metal Vision Systems;
4. ASTM F1915-05 (2012), Standard Test Methods for Glazing for Detention Facilities; and
5. ASTM F2322-12, Standard Test Methods for Physical Assault on Vertical Fixed Barriers for Detention and Correctional Facilities.
6. ASTM WK9092, Standard Test Methods for Physical Assault on Overhead Horizontal Fixed Barriers for Detention and Correctional Facilities;
7. ASTM WK14507, Guide for Selection of Security Fasteners for Detention and Correctional Facilities; and
8. ASTM WK25858, New Test Method for Anchor Systems Used for Detention Hollow Metal Vision Systems and Door Assemblies.

SECURE CONSTRUCTION DESCRIPTION

The Security Levels described below are typical for correctional environments, though every jurisdiction has its own nuances and preferences. The following is intended as a guide to be utilized in establishing project specific criteria based on the security level desired and the classification of the detainee.



There are three Secure Construction Grades (Levels 1 through 3) for wall, roof, partition, door, and window construction for the building within the secure perimeter of the facility. Additionally, there are two non-secure construction levels (Levels 4 and 5) included. These level designations have been based on Security Grades outlined in the ASTM F2322-12 (Standard Test Methods for Physical Assault on Vertical Fixed Barriers for Detention and Correctional Facilities) and other F33 documents referenced above are applicable to the complete building, or rooms, and/or secure envelopes within the building. These secure construction level designations are applicable to all facility custody levels. Secure envelopes indicated include the walls, roof or ceiling, integral door and window, and the floor of the area indicated.

- Secure Construction Grade (Level 1) provides the highest level of containment, and is normally, but not limited to, those areas which have contents of a sensitive nature; sensitive due to activities or function and located in heavy detainee traffic areas and areas where containment is necessary for security control. Refer to Matrix on following pages for locations. All cells/sleeping rooms shall be Level 1 and may be prefabricated modules.

- Secure Construction Grade (Level 2) provides a high level of containment and is normally, but not limited to, areas in the Exterior Facility Perimeter. Refer to Matrix on Following pages for locations.
 - Secure Construction Grade (Level 3) provides substantial construction and is for areas under supervision but where escape is of less concern. Grade 3 construction typically is used inside the Facility Perimeter. Refer to Matrix on Following pages for locations.
 - Non-Secure Construction Grade (Level 4) provides substantial construction for areas where detainees are not present on a regular basis but still must be durable and vandal resistant.
 - Non-Secure Construction Grade (Level 5) provides a “softer” construction type in areas where abuse and vandalism are generally not a concern and may only be utilized in staff areas.
1. Secure walls must be constructed continuously from a secure floor deck or a cap of secure construction below the roof deck in high bay areas. The continuity of the secure wall construction must be maintained by tying the wall reinforcing or steel members with weld plate connections into the secure floor and ceiling construction.
 2. Continuity of materials is preferred to facilitate a continuous security enclosure. Where dissimilar materials occur, design sufficient connections to prevent deflection of materials; or continuously weld deck to a continuous steel member anchored to wall or foundation.
 3. Security bars must be continuous at all intersections. In other words, the bars must go around the corners and continue into adjacent slabs.
 4. Security barriers are required on all penetrations in secure walls, floors and ceilings where the opening is larger than 5” x 8” or larger than a 5” slit which exceeds 24” in length.
 5. Detention hardware provides a safe and secure working and living environment for both staff and detainees in all custody levels

- and is generally provided in all Security Grade partitions.
6. All frames for doors and lites inside the secure perimeter in areas accessible to detainees shall be specified as fully grouted.
 7. Design shall specify tamper resistant fasteners in all areas accessible to Detainees.
 8. Design shall specify security caulk per the matrix provided later in this chapter.

SECURE CONSTRUCTION GRADE (LEVEL 1).

1. Wall Construction:
 - a. Concrete Masonry construction or precast concrete, width and reinforcing as required to meet F33.
 - b. Alternate wall construction type tested and in compliance with Grade 1 of ASTM F33.
2. Floor Construction: Concrete, of various construction types, designed by structural engineer.
3. Roof Construction: Concrete, of various construction types, designed by structural engineer.
4. Doors:
 - a. Penetrations in a Level 1 wall will be through a remotely controlled and monitored secure vestibule.
 - b. Doors throughout facility shall be swing type.
 - c. Doors are to be Detention Grade Hollow Metal (galvanized at exterior) 10-gauge frames fully grouted/ 10-gauge doors.
 - d. Locks and hardware will be consistent with required security level. See Security Hardware matrix.
5. Windows:
 - a. Windows will be detention type.
 - b. Interior windows shall be Security Grade, 10-gauge steel, fully grouted, glazed per Glazing Standards in Part VI.

- c. Glazing stops minimum height 1¼”.
 - d. Bars, mesh or expanded metal shall not be permitted.
6. Ceiling Construction: Concrete, of various construction types, designed by structural engineer.

SECURE CONSTRUCTION GRADE (LEVEL 2):

1. Construction is identical to Level 1 except as follows:
 - a. Wall Construction: Amount of reinforcing in masonry wall is generally reduced.
 - b. Roof Construction: Metal deck is permissible and may be modified further based on clear height, accessibility, and other security considerations.
 - c. Doors are to be Detention Grade Hollow Metal (galvanized at exterior) 12-gauge frames fully grouted/ 12-gauge doors.
Ceiling Construction: Security Acoustic Metal Deck and Abuse resistant board over 12 gauge flattened, carbon steel, hot rolled, 1-1/2 #6 expanded metal is permissible based on clear height, accessibility, and other security considerations.

SECURE CONSTRUCTION GRADE (LEVEL 3):

1. Construction is identical to Level 2 except as follows:
 - a. Wall Construction: Amount of reinforcing in masonry wall is generally reduced to reinforcing required to maintain structural integrity.
 - b. Roof Construction: Metal roofing is permissible based on clear height, accessibility, and other security considerations.
 - c. Doors: Vestibule is not required.
 - d. Ceiling Construction: Acoustical lay-in ceiling is permissible based on clear height, accessibility and other security concerns.

NON-SECURE CONSTRUCTION GRADE (LEVEL 4):

1. Construction is identical to Level 3 except as follows:
 - a. Doors: Builders Grade Hollow Metal, 18-gauge or aluminum type with concealed fasteners, with Builder’s Grade Hardware. Solid core wood doors are permitted
 - b. Windows: builder’s grade hollow metal, 18-gauge minimum, or aluminum type, concealed fasteners.
(1) Windows to the outside will be galvanized or stainless or aluminum, concealed fasteners
 - c. Ceiling Construction: ½” gypsum board is permitted.

NON-SECURE CONSTRUCTION (LEVEL 5):

1. Durable Construction for areas located in non-secure areas of a facility and are not required to be “hard” construction.
2. Construction is identical to Level 4 except as follows:
 - a. Wall Construction: Metal stud walls with gypsum wallboard finish. Walls may extend approximately one foot above the ceiling but must be braced to structure.
 - b. Doors: commercial hollow-metal. The locking device is typically builder’s hardware, with ASSA cylinder.
 - c. Construction will be consistent with generally accepted commercial construction.

BUILDING SECURITY

The following Matrix is an example of the level of detail required to define security levels. The level of containment described above needs to be balanced with an environment that is non-institutional. Fortunately, most of the security components described above are invisible if implemented correctly.

| PROGRAM SPACE | FACILITY TYPE/CONSTRUCTION LEVEL | | | | |
|--|----------------------------------|------------------------|-------------------------|--------------------------|--|
| | SMU | LEVEL 5 CLOSE SECURITY | LEVEL 4 MEDIUM SECURITY | LEVEL 3 MINIMUM SECURITY | OTHER (TRANSITION CENTERS, TREATMENT CENTERS) SECURITY |
| Facility Exterior Wall (Secure) | 1 | 1 | 2 | 2 | Varies |
| Facility Exterior Wall (Non-Secure) | 4 | 4 | 4 | 4 | 4 |
| Exterior Walls – Housing Buildings | 1 | 1 | 1 | 1 | 1 |
| Housing – Cells/ Sleeping Rooms | 1 | 1 | 1 | 1 | 1 |
| Housing Control Rooms | 1 | 1 | 1 | 2 | 2 |
| Housing Program Spaces & Offices | 4 | 4 | 4 | 4 | 4 |
| Chases Inside Perimeter | 3 | 3 | 3 | 3 | 3 |
| Departmental Suite Perimeter Walls | 3 | 3 | 3 | 3 | 3 |
| Departmental Suite – Interior Walls (Medical Intake, Etc.) | 4 | 4 | 4 | 4 | 4 |
| Departmental Suite – Interior Walls (Admin, Only.) | 5 | 5 | 5 | 5 | 5 |
| Visitation – Contact | 3 | 3 | 3 | 3 | 3 |
| Armory | 1 | 1 | 1 | 1 | 1 |
| Central Control Room | 1 | 1 | 1 | 1 | 1 |
| Security Electronics Room | 1 | 1 | 1 | 1 | 1 |
| Sally ports & Safety Vestibules | 2 | 2 | 2 | 2 | 2 |
| Detainee Dining | 3 | 3 | 3 | 3 | 3 |
| Kitchen | 3 | 3 | 3 | 3 | 3 |
| Central Warehouse outside Perimeter | 4 | 4 | 4 | 4 | 4 |

| PROGRAM SPACE | FACILITY TYPE/CONSTRUCTION LEVEL | | | | |
|---|----------------------------------|------------------------|-------------------------|--------------------------|--|
| | SMU | LEVEL 5 CLOSE SECURITY | LEVEL 4 MEDIUM SECURITY | LEVEL 3 MINIMUM SECURITY | OTHER (TRANSITION CENTERS, TREATMENT CENTERS) SECURITY |
| Secure Areas within Central Warehouse (Tool Storage, High Theft Item Storage) | 2 | 2 | 2 | 2 | 2 |
| Warehouse within Perimeter | 2 | 3 | 3 | 3 | 3 |
| Commissary | 2 | 2 | 2 | 2 | 2 |
| Medical Facilities | 4 | 4 | 4 | 4 | 4 |
| Medical – Cells | 1 | 1 | 1 | 1 | 1 |
| Pharmacies | 1 | 1 | 1 | 1 | 1 |
| Exam Rooms | 4 | 4 | 4 | 4 | 4 |
| Mechanical Rooms Within Perimeter | 2 | 3 | 3 | 3 | 3 |
| Mechanical Rooms Outside Perimeter | 3 | 3 | 3 | 3 | 3 |
| Electrical Rooms Within Perimeter | 2 | 3 | 3 | 3 | 3 |
| Electrical Rooms Outside Perimeter | 3 | 3 | 3 | 3 | 3 |
| Intake & Release | 3 | 3 | 3 | 3 | 3 |
| Property Storage | 3 | 3 | 3 | 3 | 3 |
| Program Spaces | 4 | 4 | 4 | 4 | 4 |
| Records Rooms | 3 | 3 | 3 | 3 | 3 |
| Secure Recreation Spaces | 2 | 2 | 3 | 3 | 3 |
| Mail Rooms-Outside Perimeter | 4 | 4 | 4 | 4 | 4 |
| Mail Rooms-Inside Perimeter | 3 | 3 | 3 | 3 | 3 |
| Vocational Training Inside Perimeter | 3 | 4 | 4 | 4 | 4 |
| Maintenance | 4 | 4 | 4 | 4 | 4 |
| Maintenance Tool Room | 3 | 3 | 3 | 3 | 3 |

SITE SECURITY CONSIDERATIONS

In a normative environment, site Security should generally be achieved through design, as opposed to via security fencing.

Site shall be designed with the following considerations in mind:

- Provide active and passive areas for recreation that are easily monitored.
- Eliminate blind spots.
- Site circulation shall be clear and easy to navigate.
- Provide landscape areas that are easy to maintain, do not impede visibility, and do not provide a means to escape.
- Avoid railings and large changes in grade where ever possible.

A secure perimeter fence is generally desired, except at minimum security facilities, or facilities that are staff secure. Where fencing is desired, two options are currently prevalent for correctional facilities; a single row of curved fence or a double row of straight fence. At a minimum, fence Construction shall be designed to accommodate wind and lateral loads. Based on security level, perimeter fencing may include razor ribbon, though never in areas accessible to detainees.



Any openings through the perimeter shall be through a sally port, either for vehicles or pedestrians. Where piping passes under the perimeter fence, limit size of openings to less than 5". Additionally, all manholes in detainee areas shall have strap bar and locks, or other means of keeping covers closed.

Design shall include vehicle deterrence at buildings, sally ports and other entrances to minimize attack by vehicle.

DEVICES AND ACCESSORIES IN DETAINEE AREAS

1. Grills, diffusers, light fixtures, sprinkler heads, and all other devices located in detainee areas shall be vandal resistant, anti-ligature, security grade products.
2. In Detainee areas, all fire alarm strobes, smoke detectors, thermostats, and other devices shall have clear security covers as approved by the AHJ. This strategy protects the code required devices from tampering, yet the clear covers are less intrusive and offensive than metal cages.



DETENTION EQUIPMENT

Detention equipment is a necessary component in a correctional environment, however some of it is harsh and institutional. This equipment shall be utilized judiciously, and only where security levels dictate.

SECURITY HOLLOW METAL DOORS AND FRAMES

Detention type Doors and Frames are a heavier gauge and are generally detailed to wrap around the substrate it is mounted to. However, the frames themselves are "normal" in appearance.

1. Include Detention Grade Security Hollow Metal Doors and Frames at all openings in walls within the Facility Secure Perimeter. Doors must comply with Security Grades as

- indicated in Security criteria; Minimum 10, 12 or 14 gauge.
2. Include galvanized steel doors and frames at all exterior and wet area openings that meet the requirements of ASTM A 60.
 3. Include stainless steel or prefinished powder coated doors and frames at all shower openings designated for security hardware.
 4. Minimize the use of cuff ports/food passes.
 5. All frames shall be fully grouted.
 6. Openings in doors and frames shall be enclosed with security glazing (Refer to Section VI) Utilize the largest door lights feasible, based on cost and security level.
 7. Avoid the use of bars and metal grating for containment.

DETENTION GRADE DOOR LOCKING SYSTEMS

1. Refer to Section VII for Hardware Matrix.
2. 24VDC Electro-Mechanical Motorized Detention Grade Security Locking Systems where required due to operational concerns or for required exits.
 - a. Consider 2” jamb locks at areas not subject to abuse. Avoid solenoid type locks, due to the loud noise present during operation.
 - b. Include Deadlock Indicator switches and Door Position Switches at all remotely controlled or monitored swinging doors, roof hatches and fence gates, and at sensitive areas such as mechanical and electrical rooms, property storage, pharmacy or commissary.



SECURITY FURNITURE AND FURNISHINGS

1. Include Security Furnishings and Furniture as indicated and as necessary, including but not limited to the following:
 - a. Bunks, desks, stools, privacy panels, dayroom tables, break away clothes hooks, shelves, gun lockers, benches, Control Room Pass-Throughs, Detainee Storage Lockers
 - b. For a normative environment, the use of steel furnishings shall be minimized, relying instead on “plastic” and dormitory type furnishings where security levels permit.



ANTI-LIGATURE CONSIDERATIONS

All areas for detainees should be designed with anti-ligature design criteria from placement of furniture to specifying all devices to be anti-ligature. A few examples are:

- Avoid sharp corners, loose edges, easily removable accessories, metal, screws, or other items.
- Avoid the use of wire glass, or expanded metal as a fire rated and protective device as it is very dangerous, once it is broken.
- Specify door hardware without closed loops, and hinges with sloped tips.
- Specify security grills and other devices with small holes, as opposed to grids.
- Eliminate the use of bars.
- Furniture shall have rounded edges.
- Ensure that light fixtures, sprinkler heads and other devices do not have protruding edges or hinges.
- Utilize break away type hooks for clothing and towels.
- Include anti-ligature floor drains, and floor mounted water closets.

For additional information, refer to the Behavioral Health Design Guide Edition 7.3, February 2018 that be found at: <http://www.bhfcllc.com/wp-content/uploads/2018/02/Design-Guide-7.3-180218.pdf>



VISIBILITY | PRIVACY



An integral part of a secure facility is maintaining visibility to all areas where detainees are present. Additionally, privacy criteria have been established for correctional environments, particularly through the Prison Rape Prevention Act (PREA).

DESIGN GUIDELINES

Design of correctional facilities relies on both casual and active observation, much of which occurs through glazing. In general, glazing shall be utilized to provide a view into detainee areas; however, privacy, screens, partitions or curtains should be included as well.

The following criteria applies to detention glazing and it's anticipated attack level in the case of a riot or other destructive event. This criterion is variable, based on the security level of the facility. The Table below is an example of glazing types and thicknesses.

SECURITY WINDOWS: GENERAL

1. Single-rabbit, fully grouted, vision frames per ASTM F1592, with removable glazing stops, depth as required for ballistic and forced-entry ratings indicated but a minimum of 1-1/4".
2. Fasteners: Torx head security screws at 8 inches o.c. Provide break-off button head security screws at windows where detainees can access both sides.

SECURITY GLASS AND GLAZING

1. Include Glass-Clad Polycarbonate or Polycarbonate Security Glass at all openings in Secure Walls complying with ASTM F 1915
 - a. Polycarbonate scratches but is more readily available but generally may not be used in fire rated openings.
 - b. Glass-Clad Poly Carbonated is more readily breakable and is generally preferred at exterior and fire rated openings.
2. Maximum opening width in one direction shall not exceed 36". Minimize number of opening sizes as much as possible.
3. Include Tint in compliance with the energy code at exterior locations.

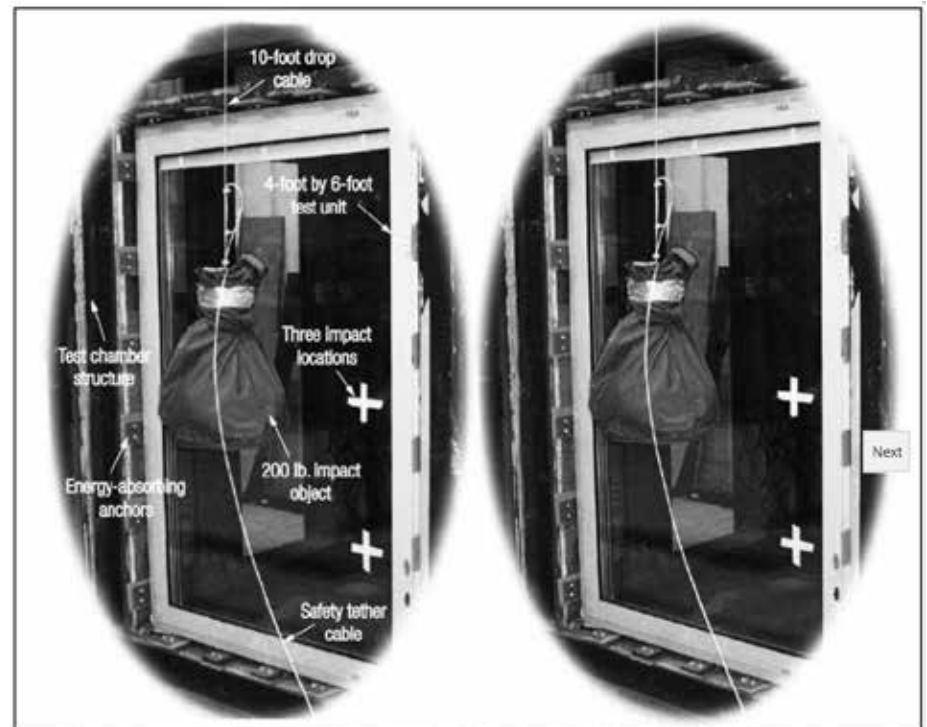


Image 2 of 2 - American Architectural Manufacturers Association (AAMA) 501.6, Standard Test Method for Determination of Resistance to Human Impact of Window Systems Intended for Use in Psychiatric Applications, involves using a weighted impact device to apply a force simulating shoulder impact from a patient running full-speed into a window.

GLAZING TYPES

| TYPE | ASTM F 1915-ATTACK RATINGS | | GLASS CLAD POLYCARBONATE (GCP) | POLYCARBONATE (P) |
|------|----------------------------|------------|-----------------------------------|-------------------|
| | | RATING | THICKNESS (INCHES) | SPEC |
| 1 | | 90 MINUTES | 1 ¼" | SP 1250 |
| 2 | | 60 MINUTES | 1 | RC 750 (3/4) |
| 3 | | 40 MINUTES | 3/4 | MPC 500 |
| 4 | | 20 MINUTES | 11/16 | MPC 325 |
| 5 | | 10 MINUTES | 9/16 | ½" MRID |

AREA OPENING/GLAZING REQUIREMENTS

| AREA | ATTACK RATING | GLAZING TYPE |
|---------------------|---|--|
| CENTRAL CONTROL | 1 | P AT INTERIOR/GCP AT EXTERIOR WITH PASS DRAWER |
| HOUSING CONTROL | 1 | P WITH PASS DRAWER |
| DAYROOM ENTRY | 2 | P |
| DAYROOM EXTERIOR | 4 | GCP W/ WELDED MESH |
| CELL FRONT | 3 | P, 4" X OPENING OR WELDED MESH |
| CELL EXTERIOR | 4 | GCP W/ WELDED MESH |
| MULTI-PURPOSE ROOM | 4 AT HOUSING 5 IN OTHER DETAINEE AREAS | P |
| INTERVIEW ROOM | 4 AT HOUSING 5 IN OTHER DETAINEE AREAS | P |
| CLASSROOMS | 4 AT HOUSING 5 IN OTHER DETAINEE AREAS | P |
| VISITATION | 1 | P |
| SEGREGATION CONTROL | 1 | P |
| SALLYPORT | 2 | P |
| PHARMACY/PILL CALL | 2 | P AT INTERIOR/GCP AT EXTERIOR WITH PASS-THRU FOR DISPENSING MEDICATION |
| COMMISSARY | 3 | P AT INTERIOR/GCP AT EXTERIOR WITH PASS-THRU |

COMFORT & AMENITIES



As a public building, correctional, detention and training facilities shall be designed for longevity, ease of maintenance and energy efficiency. Additionally, the facilities shall be planned for 24/7 hours of use and a high degree of vandalism.

PRINCIPLES OF DESIGN

The following design principles shall be implemented where ever feasible:

1. Wind: If possible, design to shield entrances from prevailing wind.
2. Cleanliness: Design shall include above grade elements, fixtures, and equipment that prevent attraction and adherence of dust and air-borne dirt and soot and are washed reasonably clean by normal precipitation.
3. Appearance: Fit the new activities on site to the topography, soils, and existing vegetation as much as possible.
4. Finished Surfaces: Design finished surfaces smooth and uniform in appearance, without depressions that collect water. No areas of standing water or "bird baths" allowed.
5. Include environmentally friendly landscaping with low water and maintenance requirements. Include features such as rain gardens that can reduce run-off and improve water quality.
6. Avoid designing places for detainees to hide from view and insure that details are developed to minimize hiding of items deemed as contraband.
7. Vehicular Safety: Comply with code. At a minimum, include guard rails at edge of pavement where adjacent slope is greater than 1:1.

SITE CONSIDERATIONS

1. Weather Resistance of Plants and Turf: Design shall include plants that will withstand extremes of weather likely to occur in any 5 years without supplementary irrigation and without seasonal protection other than mulch.
2. Traffic Resistance: Finished site surfaces shall be designed that are permanently resistant to the type of traffic to be expected, under all weather conditions.

3. Flooding: Control storm water runoff as required to prevent damage to project elements, including vegetation, and to prevent damage to neighboring utilities and sites, including vegetation.
4. Design to minimize the probability of vehicular impact on site fixtures and accidental driving on lawns and landscaped areas. Utilize curbs, bollards and other site accessories as required.

BASIC BUILDING SYSTEMS:

1. For New Construction, design shall provide for the following services:
 - a. Plumbing: Means of delivery of water to points of utilization; automatic heating and conditioning of domestic water; and unattended removal of water, rainwater, and liquid waste.
 - b. HVAC: Artificial means of maintaining interior space comfort and air quality, including heating, cooling, ventilation, and energy supply.
 - c. Fire Protection: Automatic fire detection, suppression, and warning and manual fire-fighting equipment.
 - d. Smoke Evacuation: Means of fully purging smoke from the building.
 - e. Electrical Power: Energy to operate all electrically operated devices, including those included under other services and those provided separately by the Owner.
 - f. Artificial Lighting: Means of illuminating spaces and tasks, both interior and exterior, independent of reliance on natural light.
 - g. Process Utilities: Services that include specially processed water, special waste removal or treatment, air, fuels, HVAC, special fire protection, special telecommunications and special measurement and control.
2. Utility Sources and Outlets:
 - a. Water Source: Existing public utility.
 - b. Sewage Disposal: Connect building sewer to the existing public sewage system, or in remote areas, include sewage treatment plant.
 - c. Rain Water Drainage Outlet: Existing public utility

- storm drainage system independent of sanitary sewer, or on site detention in remote areas.
 - d. Electrical Power Source: Existing public utility.
 - e. Natural gas, if available: Existing public utility.
 - f. Propane (where required): Coordinate with local provider.
3. Amenity and Comfort:
- a. Service Access:
 - 001. Design shall provide reasonable access space to all equipment and utilities that require service. Mechanical chases shall be designed with reasonable service access. Specify a mock-up of the proposed chase layout for review prior to construction.
 - 002. Artificial Illumination: Design shall provide illumination for all interior spaces that is adequate in level and quality for comfortable performance of tasks typical for each space and as required by ACA or other governing authority, regardless of the availability of natural light.
 - b. Airborne Sound: Design shall maintain the sound transmission characteristics of assemblies through which services must pass. All sounds of flushing and of liquid running through pipes ("bathroom sounds") are prohibited outside of the rooms housing toilets, bathtubs, and showers, with the exception of when doors to those rooms are open.
 - c. Structure-Borne Sound and Vibration: Design shall prevent transmission of perceptible sound and vibration from services equipment that rotates, vibrates, or generates sound, by isolating such equipment from superstructure or by isolating equipment support foundations from building foundations.
 - d. Odors: Design shall eliminate, isolate, or exhaust odors produced by occupant functions and building services.
 - e. Appearance: Design shall conceal services elements from view to greatest extent possible, with exposed portions of simple, neutral design and color.
4. Health and Safety:
- a. Fire Safety:
 - 001. Design shall maintain fire resistance of walls, floors, ceilings, and other fire-rated assemblies that services must pass through, in accordance with requirements of the chapter in which the fire-rated assembly is specified and local code.
 - 002. Design shall provide fire-rated separations between equipment rooms and other spaces where required, and as specified by, the code.
 - b. Safety Hazards: Avoid safety hazards wherever possible; where services must involve flammable materials or hazardous operations, comply with code.
 - c. Electric Shock: Design shall provide equipment which protects personnel from electrical shock.
5. Health Hazards:
- a. Design to prevent growth of fungus, mold, and bacteria on surfaces and in concealed spaces.
 - b. Indoor Air Quality: Design and construct to comply with the code. Acceptable air quality as defined by ASHRAE 62-1999.
6. Structure: Structure will be designed to meet all Building Codes and the Security Requirements outlined above.
- a. Wind Loads: Accommodate loads as prescribed by code. Service life spans of individual elements that differ from the overall project life span are defined elsewhere herein.
 - b. Seismic: Defined on a case by case basis. Some Areas of Facilities may be designated as essential, resulting in a higher seismic category.
7. Provide code compliant, UL certified smoke control system, meeting requirements of IBC and NFPA 101, whichever is more stringent.



FACILITY MAINTENANCE GENERAL CRITERIA

1. Roof Design: Design roof for positive drainage.
 - a. If downspouts are used, provide heavy-duty piping for downspouts; provide no-climb cover to a height of 16-foot minimum at detainee access areas.
2. Exterior Painting: Building design may include factory or field finished walls; all walls shall be designed with prefinished or integral color and sealer where possible. All metal doors and door and window frames, and exposed surfaces that are not specified as factory painted, shall be painted with epoxy paint.
3. Metal fencing components that are galvanized or stainless steel do not require painting.

COMFORT GENERAL CRITERIA

1. Thermal Performance: Design to provide comfortable interior environment in accordance with the Energy Code (ASHRAE 90.1as a minimum) and the following:
 - a. Summer Interior Design Conditions:
 001. Daytime Setpoint for Cooling: 75 deg F.
 002. Night Setback: 78 deg F.
 003. Interior Relative Humidity: 50 percent maximum.
 - b. Winter Interior Design Conditions:

001. Daytime Setpoint Heating: 72 deg F.

002. Night Setback: 68 deg F.

003. Interior Relative Humidity: 10 percent, minimum.

2. Energy Design Wind Speed: As required by code, based on facility location.
3. Fresh air requirements in compliance with ACA Standards for air recirculation, and local building codes, whichever is more stringent.

OPERATION AND ENERGY EFFICIENCY

1. Energy Efficiency: Minimize energy consumption while providing function, amenity, and comfort specified.
2. Consider water reclamation system at laundry.
3. Ease of Operation: Design facility, equipment, and systems that are easily operated by personnel with little prior training for the specific activities.
 - a. Minimize the need for specialized training in operation of specific equipment or systems; identify all equipment and systems for which the manufacturer recommends or provides training programs.
4. Ease of Maintenance: Minimize the amount of maintenance required.
5. Ease of Replacement: Where elements require periodic replacement, provide provision for replacement with minimal disruption.
6. Durability: All power distribution equipment, ducts, piping, and wiring, sprinkler heads, plumbing valves, shut offs and fixtures shall be designed to last the life of the building, except as indicated below.
 - a. HVAC Heating and Cooling Equipment: Minimum 30 years.
 - b. Secondary Equipment: Minimum 10 years.
 - c. Control Components, Except Wiring: Minimum 10 years.
 - d. Lighting Fixtures: Minimum 20 years.
 - e. Software and Firmware Integral to Operation of Services Equipment: Minimum 20 years functional life without reprogramming required.
7. Water treatment is required to achieve 6-18 grains of hardness or as otherwise required by equipment manufacturer's requirements.

GREEN BUILDING CONSTRUCTION

The analysis of life-cycle cost verses first-cost is an important consideration. The cost of operation is an important factor. These issues will be reviewed on a project-by-project basis with the design professional. Items to be considered, based on the project location and budget are as follows:

- Water control system shall be provided for all detainee plumbing fixtures in detainee housing.
- Heat recovery.
- Passive or active solar systems.
- Rain water reclamation for irrigation and other non-potable water systems.
- Wind generation.
- Geothermal energy

Include natural daylight in the design, both as a means to reduce artificial lighting requirements, and to enhance the environment. Utilize overhangs, glass tinting and other design strategies to reduce solar heat gain.



BUILDING SHELL

Design shall include permanently enclosed spaces for all functional areas shown in the project program unless noted otherwise. The design shall provide a physical enclosure that keeps out weather and insects without requiring specific action by staff, while providing safe and convenient movement of staff between inside and outside.

1. **Thermal Performance:** Construction assemblies that will have thermal resistance as necessary to maintain interior comfort levels specified, in accordance with code, and to minimize condensation under normal interior temperature and relative humidity conditions.
2. **Air Infiltration:** Meet the requirements of the current energy code.
3. **Water Penetration:** Design and select materials to prevent water penetration into the interior of the building, under conditions of rain driven by wind speeds required by local code. All horizontal surfaces of building shall to be sloped to direct water away from building.
4. **Firestopping: Floor, Wall and Roof Construction:**
 - a. As required for construction type and condition of use and as required by local jurisdiction.
 - b. Design fire stopping systems that are produced and installed to resist the spread of fire and the passage of smoke and other gases.
 - c. Avoid exposed penetrations in secure locations with detainee access.
5. **Exterior Walls; Exterior Skin:**
 - a. **Preferred Wall Materials:** Materials that are not only durable on the exterior, but also damage resistant (especially in detainee occupied or accessible areas) from the interior are required.
 - b. **Non-secure areas:** Consistent with generally accepted practices in commercial and institutional buildings.
6. **Sealants:** Joints between dissimilar material and other construction joints provide space for hiding contraband, decreasing the safety of a facility. The appropriate sealant is necessary to keep joints inaccessible. Provide

pick resistant joint sealants in areas where detainees are located.

- a. At joints subject to excessive movement and at expansion joints, provide joint covers. Provide standard expansion joint covers with tamper resistant or concealed fasteners at non-detainee areas. Provide heavy gage steel or stainless-steel plate covers in detainee areas.
 - b. At rated assemblies, provide approved rated sealant where required in addition to security sealant in detainee areas.
7. Parapets
- a. Parapet heights where required to be kept to a minimum to facilitate visual monitoring of roofs; maximum height of 1'; minimum height required for flashing.
8. Exterior Louvers, Grilles, and Screens
- a. Secure (Detainee access) areas: Provide security bars at louvers located in security walls, maximum 4" x 8" opening, welded to frame and embed in wall.
 - b. Non-Secure areas (outside secure perimeter): no restrictions.
9. Exterior Soffits
- a. Soffit construction and finish at non-secure areas outside secure perimeter may be of any construction allowed by code; finishes to be durable and require minimal maintenance.
 - b. Soffits inside secure perimeter to be metal, plaster, or security-grade. Soffits for entry canopies and the like to be metal that does not offer the opportunity for climbing or for hiding of any item.
10. Exterior Painting
- a. General: Avoid coatings on exterior surfaces where possible. All color and finishes shall be integral, or factory finished.
 - b. All exposed surfaces that are not pre-finished shall be painted, except where the finish is to remain unpainted or is a natural or factory finish not requiring painting.
11. Roof shall provide a weather-proof enclosure over the entire

"top-side" of building, while shedding and resisting water and preventing water infiltration, withstanding anticipated loading conditions, and providing required access.

- a. Secure construction is required in detainee housing and other selected areas.
 - b. Non-secure but durable construction is acceptable in other areas.
 - c. Meet all required structural codes.
 - d. Meet Factory Mutual requirements.
12. Roof Openings:
- a. Plastic Skylight Units: prefabricated plastic, thermally broken, double glazed units with condensation control and prefabricated curbs,
 - b. Other Roofing Openings: Roof hatches for maintenance, escape and rescue shall be considered at all buildings. Avoid locating in detainee areas.
 - c. Include security bars at all roof top openings such as skylights, mechanical equipment, with bars placed at 5" o.c. in each direction welded to frame and embedded in wall.
13. Exterior Doors and Windows
- a. Exterior Windows are covered under Section VI
 - b. Security Doors and Frames are covered under Section V.
 - c. Exterior hollow metal doors and frames shall be Custom galvanized hollow metal
 - d. Standard aluminum storefront is permitted in non-detainee areas.

HARDWARE

1. Builder's hardware shall be institutional grade with high security cylinders approved by OWNER.
2. See Section V for Security Hardware.
3. The following table indicates typical hardware requirements.



DOOR HARDWARE MATRIX

Note: All doors shall receive mortise lockset, hinges, closer where appropriate, kick plate where appropriate, door stop if no closer, silencers in non-detainee areas.

| ROOM TYPE | HARDWARE REQUIREMENT | REMARKS |
|--|----------------------|--|
| Lobby | Builder's Hardware | Office function with automatic entrance at front door. Door may be monitored and controlled by receptionist. |
| Briefing | Builder's Hardware | Classroom function |
| Staff Offices | Builder's Hardware | Office function |
| Storage in Staff areas or other areas designated as non-secure | Builder's Hardware | Office function |
| Staff Break Room | Builder's Hardware | Passage set |
| Showers: Staff Locker | Builder's Hardware | Passage set |
| Toilets: Staff (Admin.) | Builder's Hardware | Privacy set on individual toilets, push/pull at gang toilets except where positive latch is required by AHJ |
| Sally ports | Security Hardware | Electric large jamb lock with mogul cylinder, monitored. |
| Corridor: Non-secure (Admin.) | Builder's Hardware | Function varies, some locations may have card access and be monitored |
| Suite Entry doors from Corridor in Secure Perimeter | Security Hardware | Function varies, some locations may have card access and be monitored |
| Pharmacy | Security Hardware | Large jamb lock with mogul cylinder, may have card access and shall be monitored. |
| Pharmacy storage | Security Hardware | Large jamb lock with mogul cylinder, may have card access. |
| Mailroom | Builder's Hardware | Office function may be monitored. |
| Holding Cells | Security Hardware | Electric large jamb lock with mogul cylinder, monitored. |
| Control Rooms | Security Hardware | Electric large jamb lock with mogul cylinder, monitored. |
| Food Service (Kitchen and secure storage areas) | Security Hardware | Electric large jamb lock with mogul cylinder, monitored. Local operation during normal kitchen hours. |

COMFORT & AMENITIES

| ROOM TYPE | HARDWARE REQUIREMENT | REMARKS |
|--|----------------------|---|
| Exercise Yards | Security Hardware | Electric large jamb lock with mogul cylinder, monitored. |
| Multipurpose | Builder's Hardware | Classroom Function |
| Interview | Builder's Hardware | Office function |
| Min. Security Dormitory | Security Hardware | Electric large jamb lock with mogul cylinder, monitored. |
| Electronic Security / IT Rooms | Security Hardware | Manual lock, mogul cylinder, monitored. |
| HVAC Rooms Inside Perimeter | Security Hardware | Manual lock, mogul cylinder, monitored. |
| HVAC Rooms Outside Perimeter | Builder's Hardware | Storeroom Function, monitored, electric strike with LMO button. |
| Maintenance | Builder's Hardware | Office function monitored. |
| Secure Areas in Warehouse, Maintenance | Security Hardware | Manual lock, mogul cylinder, monitored. |
| Warehouse inside perimeter | Security Hardware | Manual lock, mogul cylinder, monitored. |
| Warehouse outside perimeter | Builder's Hardware | Storeroom Function monitored. |
| Correctional Industries | TBD, based on use | TBD, based on use |
| Commissary | Security Hardware | Manual lock, mogul cylinder, monitored. |
| Entry Bunker | Security Hardware | Electric large jamb lock with mogul cylinder, monitored. |

INTERIOR CONSTRUCTION | FINISHES | COLOR





BASIC INTERIOR CONSTRUCTION FUNCTION

1. Design shall provide for appropriately finished interiors for all spaces and equipped with interior fixtures as required to function properly for specific occupancies.
2. Design shall provide physical separation between spaces, constructed to achieve fire ratings required by code, appropriate security between adjacent spaces, and visual, acoustical, and atmospheric isolation as necessary to maintain desirable conditions in each space.
3. Specify finishes for interior surfaces that are appropriate for the functions of each space. Generally, finishes must require minimal maintenance, and will not require re-coating or replacement for a period of at least 10 years.
4. Refer to Section VI for Sealant Schedule.

SIGNAGE

Interior and Exterior Identifying Devices are required for wayfinding, security and maintenance.

1. Room signs.
 - a. Design shall include accessible signage for offices, restrooms and other spaces in Administration, and at staff only program spaces within housing, and at Medical areas.
 - b. Design shall include additional directional and area signage.
 - c. Specify attachment with tamper resistant fasteners, concealed fasteners or epoxy adhesive.
 - d. Specify stenciled room number both sides of all doors, size and font readable by CCTV system.
2. Signage Schedule: See below for typical signage locations and criteria.
3. Directional Egress Plans in English and Spanish are required and shall be coordinated with OWNER and the Authority Having Jurisdiction.

SIGNAGE MATRIX

All applied signage shall meet Handicapped Accessibility Guidelines including, size, contrast, location and braille. Exact requirements shall be coordinated with Georgia Department of Corrections.

| ROOM TYPE | SIGNAGE REQUIREMENTS | REMARKS |
|---|---|---|
| Lobbies and Public Waiting | Wall mounted, engraved acrylic lens, | May include directories, directional instructions, visiting instructions, sign in areas, etc. |
| Public Toilets | Wall mounted, engraved acrylic lens | Room Name and Number: Men, Women, Unisex, Family toilets |
| Staff Only Rooms in Admin Areas (File Room, Storage, Conference, Break Room, Locker Room, etc.) | Wall mounted, engraved acrylic lens, with inter-changeable room names | Room number, room name and custom graphic |
| Staff Offices | Wall mounted, engraved acrylic lens, with inter-changeable room names | Room number, room name and custom graphic |
| Toilets: Staff (Admin.) | Wall mounted, engraved acrylic lens | Room Name and Number: Men, Women, Unisex, Family toilets |
| Mechanical, Electrical, ESC, Stairs, and Fire Protection Rooms, in Staff Admin areas | Wall mounted, engraved acrylic lens | Room number, room name and custom graphic |
| Corridor: Non-secure (Admin.) | Wall mounted, engraved acrylic lens, with inter-changeable room names | Directional signage, door numbers and room names or area designations such as “Administration”, “Staff Training”, etc. |
| Suite Entry doors from Corridor in Detainee Areas | Wall mounted, engraved acrylic with concealed or tamper resistant fasteners and adhesive. | Directional signage, door numbers and room names or area designations such as “Medical”, “Education”, etc. |
| Offices and other Rooms in Detainee Areas except housing | Wall mounted engraved acrylic with concealed or tamper resistant fasteners and adhesive. | Room name and number |
| Detainee Cells/Sleeping Rooms | Stenciled | Room Number |
| Offices and other Rooms in housing | Stenciled | Room Number |
| Exterior Parking Lot | Enameled metal sign, post-mounted (Correctional Industries where feasible) | Handicapped parking, designated parking spots for staff, designated visitor parking, directional signage for Service Entry, Intake and Visitors |
| Exterior Fence | Enameled metal sign, post-mounted designated distance from fence (Correctional Industries where feasible) | Guard line, do not cross |
| FDC and Fire Department Access | Enameled metal sign, post or wall mounted (Correctional Industries where feasible) | Room name and directional signs as required by Authority Having Jurisdiction |
| Exterior Building Signs | Wall mounted engraved acrylic with concealed fasteners or adhesive approved for exterior use | Building Name |
| Exterior Mechanical, Electrical, ESC, Stairs and Fire Protection Rooms | Wall mounted engraved acrylic with concealed fasteners or adhesive approved for exterior use | Room name and number |

- c. Carpet Tiles at Administrative Staff areas or other areas requiring acoustics in detainee areas.
- 6. Ceiling Finishes:
 - a. Gypsum board Ceiling Finish:
 - 001. ½” or 5/8” Type X as required by design parameters, painted.
 - 002. Use impact resistant gypsum board with security mesh in detainee areas.
 - b. Acoustical Ceiling Treatment:
 - 001. Locate in non- secure areas or 16’ above finish floor in detainee areas.
 - c. Security Metal Ceilings at detainee areas shall be prefinished, welded in place.

- d. Interior Room Type Finish Schedule: Finishes Indicated below are considered durable and easily maintainable.
- 7. Paint:
 - a. Interior Paint: Latex based system suitable for substrate, except as noted below.
 - b. Metal doors and frames, hand rails and miscellaneous metal items exposed to view shall be epoxy paint, semi-gloss.

ROOM TYPES FINISH SCHEDULE

| ROOM TYPE | FLOORS | WALLS | CEILING | COMMENTS |
|------------------------------------|--|---------------------------|---|---|
| Lobby | LVT & rubber base; Stained & sealed concrete | Paint | Painted gypsum board | Lobby finishes may include higher quality materials |
| Staff Office, Conference, Briefing | Carpet & rubber base | Paint | Lay-in acoustical ceiling | |
| Staff Break Room | LVT & rubber base | Paint | Lay-in acoustical ceiling | |
| Showers: Staff Locker | Ceramic Tile | Ceramic Tile | Moisture resistant gypsum board, epoxy paint | Epoxy paint on all non-tile surfaces |
| Toilets: Staff (Admin.) | Ceramic Tile | Ceramic Tile at wet walls | Painted gypsum board | Epoxy paint on all non-tile surfaces |
| Corridor: Non-secure (Admin.) | Carpet & rubber base | Paint | Lay-in acoustical ceiling | |
| Pharmacy | LVT & rubber base | Paint | Painted gypsum board | |
| Medical Exam | LVT & rubber base; | Paint | Painted gypsum board | |
| Medical Dayroom and Patient Rooms | Seamless floor with integral base | Epoxy Paint | Epoxy Paint | |
| Mailroom | LVT & rubber base; | Paint | Painted gypsum board | |
| Holding Cells | Stained, sealed concrete | Special Coating | Concrete, with special coating or prefinished steel security ceiling, | |
| Control Room | LVT/Carpet & rubber base | Paint | Lay-in acoustical ceiling | |

| ROOM TYPE | FLOORS | WALLS | CEILINGS | COMMENTS |
|--|--|--|--|----------|
| Food Service (Kitchen and associated spaces) | Resinous floor system with integral base | Special Coating; stainless steel liner | Epoxy painted gypsum board | |
| Multipurpose/ Interview | LVT, painted base | Paint | Painted gypsum board | |
| Dormitories and Dayrooms | LVT, painted base | Paint | Painted gypsum board or lay-in acoustical ceiling | |
| Cells/Sleeping Rooms | Stained, sealed concrete | Paint: concrete, CMU, or prefinished steel wall system | Concrete, painted | |
| Showers: Detainee | Special coating floor system | Special coating | Special Coating | |
| Toilets: Detainee | Special coating floor system | Special coating | Special Coating | |
| Mech. Chases | Sealed concrete | No finish | Structure, no finish | |
| Corridor: Secure | LVT, painted base | Paint: concrete, CMU, or steel wall system | Painted or lay-in acoustical ceiling | |
| Mechanical/ Electrical / IT / ESC Rooms | Sealed concrete | No finish | Structure, no finish | |
| Storage Rooms | LVT, painted base | No finish | Structure, painted | |
| Maintenance/ Warehouse | Sealed concrete | Painted walls in office area | Structure, painted Lay-in acoustical tile in offices | |
| Correctional Industries/ Vocational | TBD, based on use | TBD, based on use | TBD, based on use | |
| Commissary | Sealed concrete | Painted CMU | Painted gypsum board | |
| Armory/ Keys | LVT, rubber base | Painted CMU | Painted concrete | |

COLORS

Numerous studies have been done on colors to utilize to create a soothing environment. However, over time, it has been discovered the impact on behavior is reduced, freeing the designer to create a restorative and normal environment.



Color is subjective, meaning that everyone has different likes and dislikes. Generally, colors shall be bright and warm, similar to those found in schools, college dormitories and other public spaces. We use the following guidelines when designing a color scheme:

1. Utilize a warm neutral color such as beige, cream, or grey as a base, and to tie everything together.
2. Add patterns in carpet and flooring.
3. Rely on accent colors to break-up large spaces and draw your eye to certain areas.
4. Add soft and more natural surfaces such as bright colored and patterned fabrics.
5. Include natural finishes such as wood, stone, or faux finishes that mimic.
6. Consider wall murals and environmental graphics.
7. Avoid traditionally institutional colors such as hospital green.
8. Too many colors can be overwhelming and difficult to maintain.
9. Allow areas for detainees to “decorate” once they have moved in.

LIGHTING

1. The design of lighting systems is critical for security and safety, as well as the design of the facility. Illumination levels shall be based on “maintained” factors, in accordance with Illumination Engineering Society (IES) criteria and methods, for each area.
2. All interior lighting shall be LED in general, with specialty fixtures used as appropriate to the function. Appropriate Kelvin temperature shall be utilized based on location.
 - a. Minimum maintained illumination levels shall be as required by ACA, local requirements or codes, but not less than as follows.

| ROOM | AVERAGE MAINTAINED FOOTCANDLES (HORIZONTAL) |
|-------------------------------|--|
| Cells | 20 on writing surface and grooming area with cell nightlight |
| Corridors | 30 |
| Dayrooms | 15/30 |
| Offices | 25/75 (dual level switching or dimmer) |
| Control Rooms | 25/75 (dual level switching or dimmer) |
| Restrooms/Toilets | 30 |
| Warehouse/Storage/Maintenance | 20 with 40 at work areas |
| Conference Rooms | 30 |
| Break Rooms | 15 |
| Classrooms | 40 |
| Gymnasium | 50 |
| Correctional Industries | 30-100 based on use |

Other functional areas: Conform to mid-range levels recommended by Illumination Engineering Society standards for specific tasks performed in the space.

3. Exterior lighting shall be a combination of wall mounted, pole and high mast LED designed for the specific applications. All poles shall be metal and shall have a lowering device for fixture maintenance. No light shall cause glare that impacts the ability to discern and identify a person when looking toward any of the exterior face of building walls.
 - a. Minimum maintained illumination levels shall be as follows:
 001. Face of buildings: 2 Footcandles (horizontal)
 002. Area around HSU: 2 Footcandles (at ground), average, with maximum of 3/1 ratio, to 100 feet from building; full cut-off in direction away from building.
 003. Recreation yards: conform with IES; 5FC horizontal, minimum.
 004. Design professional shall confirm with security cameras specified.
4. Amenity and Comfort:
 - a. Control of lighting in all areas shall be determined in concert with owner representatives,
 - b. Occupancy sensors may be used in administrative areas and other areas.
 - c. Lighting in control rooms shall be dimmable. Provide additional task lighting at work surface on separate control.
 - d. Interface shall be provided to facilitate controlling each cell/sleeping room's normal and night light via the security electronics system, using a relay or similar device for each cell/outlet. Day room lighting shall also be controllable via the electronics security system and shall be distinct from the exercise ("rec") yard lighting. The dayroom TV outlet shall also be controllable from the security system.
5. Health and Safety:
 - a. Lighting fixtures used shall be rated for the level of designated security, and failure of any one fixture within any interior

secured space shall not leave that area in total darkness.

- b. There shall be at least two light fixtures on any pole. No area shall be left in total darkness if a fixture fails.
- c. Life safety and lighting required to maintain safety and security shall remain on under all operating conditions.
 001. Minimum levels of lighting is required in all detainee areas at all times and shall be circuited as such.

TELECOMMUNICATIONS AND IT EQUIPMENT

Numerous systems are required for efficient operation of a correctional environment and may be included as part of the building package or be provided by the Owner. The typical systems that need to be coordinated, furnished and installed are as follows:

1. Utility control systems, watch tour (if applicable), public address,
2. Video conferencing and CCTV systems.
3. CATV
4. Detainee phone system
5. IT equipment; networks, computers and VOIP Phone systems.
6. Man-down system
7. Officer Radio System
8. Detainee kiosks
9. Video Visitation
10. Wireless Network



FURNISHINGS AND EQUIPMENT

1. Kitchen equipment
2. All detainee bunks, stools, tables, and security accessories
3. Office furniture and equipment;
4. Residential appliances,
5. Medical and dental equipment;
6. Metal detector; Package x-ray; Ion scanner;
7. Key watcher;
8. Commissary kiosk;
9. Time clocks; and TV Brackets.



MECHANICAL SYSTEMS

HEATING, VENTILATING, AND AIR CONDITIONING

1. HVAC Systems shall meet all required codes and shall be a complete system consisting of piping, equipment, ductwork, and air distribution devices.

2. Include a Building Automation System with a web-based Energy Management system to control indoor space temperatures, humidity control, lighting controls and the ability to monitor energy consumption.
3. Control Rooms, Computer Equipment, Security Electronics, and IT rooms: Include dedicated HVAC (cooling) system based on projected heat load generated by equipment and occupancy.

Smoke Evacuation and Smoke Control System shall be a complete and fully operational smoke evacuation system to all buildings, as required by current Building Codes.

1. All components must meet UL requirements.
2. Under no circumstances is the building smoke evacuation system to be used for ventilation in a power failure.
3. Smoke Control must be integrated with other life safety systems such as fire alarm and sprinkler system.
4. Touch screen electronic security control system shall have the ability to override system, as approved by Authority Having Jurisdiction (AHJ).

PLUMBING

Building Plumbing System: Design shall include a complete and fully operational plumbing systems for all buildings including but not limited to the following systems:

1. A centralized boiler system and/or tankless hot water heaters shall be included. Water heater drains shall be piped to floor drain for overflow and maintenance.
2. Domestic water piping distribution system to all Plumbing Fixtures and Equipment.
3. Domestic hot water heating equipment, circulating pumps, valves and accessories. Domestic hot water system shall be a circulation loop system. Use of heat maintenance cable is not allowed.

4. Sanitary waste piping distribution to all plumbing fixtures and equipment.
5. Plumbing fixtures for all areas, including all required stainless-steel penal fixtures. Stainless-steel fixtures should be closely evaluated, as they are not conducive to creating a normative environment. Where used, shield from view.
 - a. All penal toilets shall include pinned cleanouts.
 - b. All detainee showers shall be rear access type with accessible chases.
6. Valves, fittings and hardware required for operational installation of all plumbing fixtures and equipment. Specify plumbing fixture hardware with a minimum number of working parts. Specify push button flush valves with mechanical linkage.
7. Condensate water lines are required for all air handling equipment.
8. Include floor drain system in all mechanical rooms, janitor's closets and restrooms including all associated venting and drainage lines.
9. Include trench drains full length of kitchen hood, each side as required and for other areas in kitchen, based on kitchen equipment design.

FIRE PROTECTION

Design services and systems to protect life and property.

Fire protection comprises the following elements:

1. Fire Sprinkler and Extinguishing Systems: Elements which automatically extinguish fires.
2. Fire Detection and Alarm: Elements required detecting fires and communicating fire location to building occupants, building management, and firefighting personnel. Provide automatic fire suppression for the entire building.
3. Water Use: Include a water supply to sprinkler systems that is sufficient to extinguish fires inside the structure.

FIRE SPRINKLER SYSTEM:

1. Include institutional detention sprinklers or concealed heads in all detainee areas.
2. Design shall include a standpipe system per NFPA 14 (2003) with hose valves located such that all areas can be reached with 200' of hose and 30' of hose stream and not accessible to detainees.
3. A fire pump, if required, shall be designed in accordance with NFPA 20 (2003) to provide the system pressure requirements.
4. Include a backflow preventer in the sprinkler system water supply system in accordance with requirements of AHJ.
5. Include monitored sprinkler system isolation valves at each zone or pod in accordance with NFPA requirements.
6. In recreation areas, locate sprinkler heads to protect from damage, or with covers approved by AHJ.
7. Include sprinklers when required by code in covered outdoor areas. In those areas, where required by weather conditions, include dry pipe system.



FIRE ALARM SYSTEM:

1. Include fire alarm and detection system in accordance with local code requirements.
2. Design shall include smoke and/or heat detectors in air conditioning exhaust/return ducts or other locations not accessible to detainees.
3. Hoods in kitchen shall be monitored in compliance with current codes.
4. Include manual pull stations only in areas not accessible to detainees.
5. Fire alarm system shall monitor the fire pump, if provided, for pump running, electrical power and phase reversal.
6. Fire alarm system shall monitor the sprinkler system for water flow (flow or pressure switches) and valves moved from normal (tamper switches).
7. Locate graphic annunciator panel in central control for entire facility.

ELECTRONIC SECURITY





Electronic Security is an integral part of providing supervision and accountability for both detainee and staff behavior. Where used properly, it provides additional viewing capability, protection for staff, as well as recording at locations where evidence may be required. It should not be considered as a replacement for staff, but as a tool to provide better security and accountability.

Today's technology can be primarily invisible except for the cameras themselves. Camera technology is changing rapidly and low profile, high resolution cameras are available for use in a correctional environment. Include current and proven technology that meets the intent described below.

BASIC FUNCTION

1. Include completely integrated PLC based door control and monitoring system. PLC Control Software shall be non-proprietary. Electronic Perimeter Detection System (PDS) may be integrated into the system. Locate all PLC's and equipment racks and switches in separate rooms with sufficient cooling to maintain designated design temperatures. Any equipment located in control rooms shall be placed in locked, ventilated cabinets.

2. Wiring shall be enclosed in 3/4" inch minimum rigid conduit in detainee areas. There shall be no exposed electrical wires or CCTV cabling.
3. System shall be on emergency generators & have 30-minute battery backup.
4. Code: Make all portions of the project comply with standards and code. The code referred to herein consists of all applicable local, state, and federal regulations.

SYSTEM PERFORMANCE AND REQUIREMENTS

1. Monitor and control all security door hardware
2. Interface and control CCTV switching system
3. Interface and control intercom/paging system
4. Interface and control cell lights (and night lights), dayroom lights, housing and cell USB ports, cell water controls, showers, TV power.
5. Interface with man-down system.
6. Interface with Smoke Control system.
7. Response time from initiation to field device activation shall be 200 milliseconds or better.
8. System shall fail secure. No doors shall become unlocked if the system fails or when it is being brought back on line.

CONFIGURATION

The size and layout of control stations is highly dependent on the design and the number of cameras. These control stations shall be able to communicate to any remote PLC and shall be able to control and monitor doors, gates, intercoms and utilities facility wide. Typical Touchscreen / Touchpanel Station Locations and Functions minimum requirements are as follows:

1. 2 (two) touchscreen control "stations" in Central Control. Consisting of 1 (one) 32" Flat Panel Touch Screen and a minimum of 4 (four) 32" Flat Panel CCTV monitors.

2. 1 touchscreen control “station” in each Housing Unit where desired. Each “station” shall consist of 1 (one) 32” Flat panel touchscreen and a minimum of 2(two) 32” Flat Panel CCTV monitors.
3. Each of these touchscreens shall be set up to control and monitor doors, intercoms, utilities. Intercom communication will be integrated.
4. Acceptable Technology
 - a. Non-Proprietary, PLC Based control system suitable for correctional use.
 - b. Touch screen technology shall be surface acoustic wave type.
 - c. Fiber communication backbone.
5. Installation Standards
 - a. National Electrical Code, NFPA -70
 - b. Life Safety Code, NFPA - 101
 - c. 2010 Federal Accessibility Standards
 - d. NECA Standard of Installation

PLC NETWORKS

1. Ring or Buss Technology
2. Fully Isolated, does not appear in Telecom Rooms
3. PLC Equipment
 - a. System Performance
 001. Monitor and control all integrated security system functions
 002. Command response time less than 200 milliseconds
 - b. Installation Standards
 001. All active equipment installed in security equipment rooms
 002. Program shall be fully commented and labeled
 003. No active components shall be located behind control panels. This means that all control panel interfaces shall be in the secure equipment rooms no remote I/O or multiplexor components shall be behind the panels.

4. PLCs, keyboards, and UPS in control rooms shall be in locked, ventilated millwork with restricted keys.

TOUCHSCREEN CONTROL SOFTWARE AND EQUIPMENT

1. Non-proprietary “Wonderware” software.
2. Touchscreen Equipment Performance
 - a. Screen updates 150 milliseconds or less
 - b. Command response 100 milliseconds or less
 - c. Surface Acoustic Wave

DATA-LOGGING WORKSTATION

1. Monitor and Workstation for data logging and reports.
 - a. 20” LCD monitor with 1600 x 1200 native resolution
 - b. Network Communication Processor with on-board gigabit ethernet compatible, CSMA/CD media access
 - c. USB mouse with three customizable buttons.

CCTV SYSTEM

1. Detention Grade, Dome or Box Style, fixed Color Cameras at both sides of all remotely controlled doors, dayrooms, recreation yards, kitchen, medical, perimeter, sally ports, and as necessary for detainee movement and monitoring, and at all areas where detainees are present. Include detention Grade Pan-Tilt-Zoom (Day-Night) cameras at exterior to cover movement outside of building.
2. Multiple, flat panel CCTV monitors at Touchscreen Control “stations”.
3. System shall be designed to support remote access of all CCTV cameras by OWNER through ATT approved system and IP address.
4. Design shall include lockable racks and cabinets with keys for designated staff.
5. Cabling shall be Cat 6 minimum.

6. All cameras at suspended ceilings shall be mounted to a bar/ Unistrut above ceiling at a minimum, grid to grid.
7. Digital Video Recording (DVR):
 - a. DVR system with sufficient capacity to record all cameras and retain data for a period of 30 days. DVR's should record on motion only to save recording capacity.
8. CCTV Design Criteria
 - a. Video Bandwidth 10 MHz
 - b. Crosstalk -60 dB
 - c. Residual Noise -60 dB
 - d. Impedance 75 ohms
9. Acceptable Technology
 - a. Color CCTV Cameras
 - b. Color LCD Monitors
 - c. Screen Splitters/Multiplexors
 - d. Programmable Matrix Switcher
 - e. Digital Video Recording
 - f. Fiber Optic Transmitter/Receivers
10. Installation Standards
 - a. EIA RS-170
 - b. EIA RS-330
11. Performance Testing
 - a. Vertical Phase all cameras
 - b. Video Frequency Response all paths
 - c. Maximum of ± 2 dB from 60 Hz to 9 MHz
 - d. Maximum of -4 dB at 10 MHz
 - e. Visual Image Quality
 - f. Selective Call-up from Touch Screen
 - g. Ganged Call-up with Intercoms and Alarms



INTERCOM/PAGING SYSTEMS

1. Include Detention Grade intercom stations at all cells/sleeping rooms and both sides of all remotely operated doors/gates. Intercoms are also required outside each control room.
 - a. Intercom Operation: The Control Room Station Intercom System is comprised of a goose-neck microphone and a speaker connected to an intercom master which routes through the PLC relay interface boards to connect the desired remote intercom station to the intercom master. The touchscreen control stations in Central Control room will be able to talk to any remote intercom facility wide. However, only one touchscreen will be able to talk to the same area at one time.
2. Facility Wide Paging System. Provide ability to page from each Control Station in Central Control and all Housing Unit Workstations, including those with no door controls.
 - a. The Paging System will consist of a PLC based switching system. Each touchscreen control station shall have its

own intercom master and paging amplifier which will allow one way audio paging communications to the remote paging speakers and/or horns from the touchscreen

b. System Performance

001. Simplex Operation (Push-to-Talk)

002. Signal to Noise -60 dB

003. Total Harmonic Distortion Maximum 5% 100Hz to 5kHz

004. Crosstalk less than -60 dB

005. AGC range 20 dB

3. Acceptable Technology

a. Intercom/Paging Master at Touchscreen/Touchpanel Stations

001. Separate speaker and microphone for each touchscreen or touchstation

002. Only listen volume control accessible to operator

003. Panel mounted push-to-talk switch

004. Above devices mounted adjacent to touchscreen or touchpanel

005. Footswitch provided for alternative push-to-talk operation also

4. Intercom Stations

a. Detention Grade water and puncture resistant speaker

b. 25-volt line transformer

c. Mechanical Call-in button

5. Duress Intercom Stations

a. Water and puncture resistant Speaker

b. 25-volt line transformer

c. Mechanical Call-in button - Red Mushroom type

6. Intercom Amplifier

a. Two Independently adjustable channels in single housing

b. Manual Push-to-Talk operation

c. Maximum 15-watt Output

d. 25-volt line connections

7. Audio Switching Relays

a. Selection Controlled by Security PLC system

b. Coil 24-volt, DC 30 ma

c. Contacts Bifurcated silver with gold cladding, 2-amp maximum rating

d. Two or Four pole, double throw

UPS SYSTEM

1. UPS system shall be of sufficient size to protect all Security Controls components.

2. System Performance

a. Design shall provide for continuous power for all integrated security control system components except for locks and powered sliders.

b. Design shall provide for line conditioning for both UPS and normal power

c. Minimum runtime 30 minutes under full load

d. Design shall provide for alarm contacts for trouble and inverter on Touchscreen

e. Design shall provide for units capable of being assigned an IP address on the facility network for monitoring of status and condition.

f. Double conversion or other technology that provides no break power to the load on transfer to battery

g. Design shall provide for external bypass switch sized for full load of connected UPS

CATV SYSTEM

1. CATV System (Some components may be Owner provided)

a. Design shall provide for complete conduit, raceway, backboxes, and pull strings, CATV system and wiring.

b. Design shall provide for CATV outlet in all Dayrooms, Central Control, some sleeping rooms/cells, designated offices, conference rooms, muster.

VIDEO VISITATION SYSTEM

1. Design shall provide for conduit, raceway system, backboxes as required for Video Visitation Stations:
 - a. Video Visitation System shall be approved by Owner and shall be capable of monitoring from a remote location, timed sessions, and web-based access.
 - a. Equipment and monitors shall be housed in secure cabinets or lockable millwork with appropriate ventilation.



PERIMETER ELECTRONIC DETECTION SYSTEM

1. Fiber or microwave System based on current technology and owner input.
2. Graphic workstation with identified zones.
3. Bi-directional system
4. Head end/Control system must emit audible alarm/sound when fence is tapped or climbed. System must not auto reset but should require clearing by Perimeter officer and control room officer. Audible alarm/speaker shall be internal, so it cannot be disconnected.
5. Must provide coverage of sally port openings with microwave or laser sensors.
6. System must allow heavy traffic areas to be set as access zones for periods up to 8 hours. Establishing or changing access zones after initial programming and training should not require a programmer.
7. Changes to zones or graphics workstations and sensitivity setting must be easily accomplished by OWNER PDS staff.
8. All sensitive wire/fiber should have an estimated useful life of seven or more years.
9. Server must record all alarms and print a log as well. Printer must be provided.
10. System must have the ability to alert or push data to Perimeter vehicle in the event of emergency alert.

STAFF CARD KEY ACCESS

Include card access system for staff only doors where tracking of movement is desired. Typical locations are key control, control rooms, property rooms, pharmacy, designated housing areas, and administrative suites. Multiple technologies exist and shall be evaluated with the Owner to determine most appropriate system. Consideration shall be given to existing systems that may be issue at other locations.

RFID TRACKING TECHNOLOGY

RFID systems are currently in evaluation in order to track locations of equipment, staff and detainees. This allows staff protection in case of a hostage taking, finding a stolen transport vehicle, and allows detainees to be granted additional freedom while still monitoring their location.

RFID systems can replace man-down systems and create additional accountability and communication. Due to their accuracy, staff locations can be tracked and pinpointed. If staff leave their zone without notifying control, an alarm will sound, allowing control to immediately check on the status of the staff member, ensuring their safety.

Vehicles and tools can be monitored and tracked via barcode, assuring that dangerous equipment is returned to a secured location, and stolen vehicles can be quickly located in case of an escape or hostage situation.

RFIDs can be designed to use detainee bracelets which are encoded with a unique number assignment specific to each individual detainee. The encoded chip number coordinates with the correctional facilities detainee data record. Bracelets can also be created with bar codes that correlate with an detainees' medication order, law library book check out or commissary order. The encoded RFID bracelet data can be retained and regenerated for reports which reflect a tracking history of an inmate's location at a specific time. The report can specify how many minutes they spent at various locations throughout the facility. Tracking is recorded through scanning the coded bracelet during events such as headcounts, meals or before entering different facilities for meetings or upon housing into a unit. Some RFID systems offer a two second update on detainee locations. RFID systems can even pinpoint detainee location down to a particular room within a designated area.

DETAINEE CALL CAPTURE

Detainee call capture is one technology with enormous potential to save lives and protect the public, while preserving public safety communications. It allows and passes through all 9-1-1 and authorized calls, and rejects unauthorized calls, including those placed by or made to detainees. At its first trial in the correctional facility in Parchman, Mississippi, this technology stopped 216,000 illegal calls made by and to detainees from ever reaching their destination in just one month.

Detainee call capture does not jam signals but rather acts like a cellular base station that picks up calls made within the facility and passes along only authorized calls. If a cell phone number is on an approved list, the call will be instantaneously handed off to the cellular phone company and handled normally. If the call is not on this list, meaning it is illegally placed by or to a detainee; the call will not be completed and can receive an intercept message stating that the call is not authorized. Detainee call capture technologies offer investigative tools for corrections officials to pursue other enforcement action when properly authorized.

Detainee call capture systems can be operated remotely, and the controlling base station and antenna can be mounted on towers, mobile platforms, or other locations outside of the facility in areas inaccessible to detainees or staff.