

# Regional Jail Feasibility Study

Allegan, Kalamazoo and Kent Counties, Michigan

Submitted to the *Regional Jail Exploratory Committee*

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## APPENDIX G:

### Design Notes

## APPENDIX G: Design Notes<sup>1</sup>

All three counties are committed to major jail construction projects in the near future:

- Allegan County is planning to build a new jail on a new site.
- Kalamazoo County is planning to renovate and expand its current jail, adding more than 300 new beds in the first phase of construction.
- Kent County secured voter approval in August 2008 to raise approximately \$27 million for jail renovation and, hopefully, to add beds.

This appendix identifies resources that should be consulted by all three counties as they plan, design and build jail improvements. It also identifies a new approach to designing inmate housing units that has proven very cost efficient in other jurisdictions.

### A. PLANNING AND DESIGN RESOURCES

Most counties participate in jail planning and design projects only once every 30 or 40 years. Local officials should not be expected to be familiar with the latest jail design developments, or to know the full range of options that are available at each step of the process. Several helpful resources should be used throughout the planning and design process. Using these tools will ensure that the counties are independently well-informed of their options at all times.

#### 1. Design Guide for Adult Local Detention Facilities

The National Institute of Justice (NIJ) provided funding to the American Correctional Association (ACA) in 1993 to develop a comprehensive guide that provides jail owners and operators with the information and guidance needed to be a “good client” throughout the process. The *Design Guide for Adult Local Detention Facilities* is available without cost and has been provided to the three counties as a PDF file.

The *Design Guide* was developed to ensure that county officials are not solely dependent on planners and architects for information throughout the design process. The *Guide* empowers owners and operators by clearly describing the range of options available at each decision point, and exploring the implications of each option in terms of:

- Construction Costs
- Operating Costs
  - Staffing
  - Maintenance
  - Other
- Flexibility
- Security/Supervision
- Movement
- Conditions of Confinement
- Constitutional Requirements

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<sup>1</sup> This text has been adapted, with permission, from the *Detention Reporter*, published by CRS Inc.

Figure G.1 displays the structure of the options analysis provided in the *Design Guide*.

**Figure G.1: Format for Range of Practice and Implications,  
*Design Guide for Adult Local Detention Facilities***

Range of Practice: <span style="float: right;">←-----→</span>
<b>Implications:</b>
Construction Costs
Oper Costs-- Staffing Mainten. Other
Flexibility
Security/ Supervision
Movement
Cond. Conf.
Constitutional

Figure G.2 provides a sample of the continuum approach. The sample displays the range of practices regarding location of housing for inmates who are in release programs (such as work release).

**Figure G.2: Range of Practice and Implications for Location of Inmates in Release Programs**

<i>Range of Practice: Location of Inmates in Release Programs</i>				
In the community	On Jail site, in sep. facil.	Separate part of jail with sep. entrance	Separate housing unit in jail	In with general popula- tion
← ^	← ^	← ^	← ^	← ^ →
1	2	3	4	5

<b>Implications:</b>
Security    higher-----lower
Movement   less-----more
Cond. Conf.   normalized-----institutional

The *Design Guide* provides similar continuums and outlines the corresponding implications for many key planning and design decisions, including:

- Planning Decisions
  - Work and release programs
  - Future expansion of capacity
  - Capacity and cell occupancy
  - Inmate management
  - Supervision and security
  - Movement within the jail
  - Conditions of confinement
- Design Decisions
  - Size, organization and location
  - Inmate housing
  - Dayrooms
  - Furnishings
  - Light
  - Plumbing
  - Environmental conditions
  - Special needs inmates
  - Special management housing
  - Work/Educational release
  - Programs, activities and services
  - Administrative and staff areas
  - Support services
  - Security and control
  - Building and safety codes

The *Design Guide* provides dozens of drawings that illustrate various design approaches and that also show the difference between standards compliance and non-compliance. Figure G.3 provides a sample of such annotated drawings.

**Figure G.3: Annotate Drawing, Access to Natural Light**

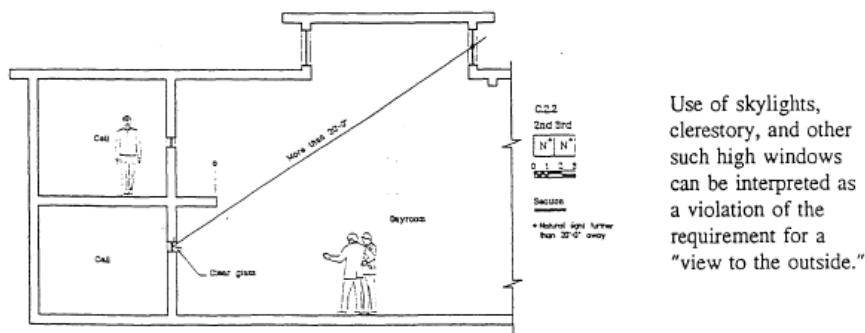
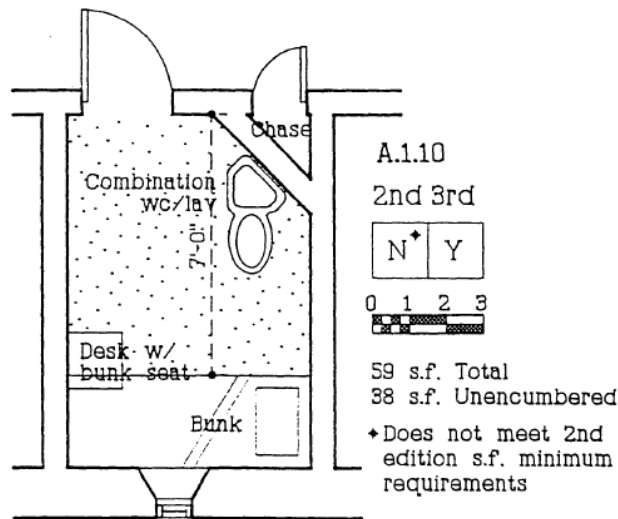


Figure G.4 provides an example of an annotated drawing of a single occupancy cell that complies with the ACA Third Edition standards, but which did not comply with the previous Second Edition standards.

#### G.4: Annotated Drawing of Single Occupancy Cell



In this example, compliance with the 60 s.f. of area was not achieved under the Second Edition standards, but it does not meet the new unencumbered space requirement.

The Guide also provides extensive “design checklists” to use at each stage of the process to ensure that nothing was missed.

### 2. Other Design Guides

The National Institute of Corrections (NIC) has developed several tools to guide counties through the planning, design and transition process. These include:

- Jail Planning and Expansion: Local Officials and Their Roles
- Jail Design Guide: A Resource for Small and Medium Size Jails
- Jail Design Issues
- Jail Design Review Handbook
- Managing Jail Design and Construction

All of these documents, and many other resources that will prove useful, are available without cost from NIC at their website: [www.nicic.org](http://www.nicic.org)

### 3. Training and Technical Assistance

NIC has a long and successful history of providing timely and useful training and technical assistance, including the following ongoing training programs:

- PONI- Planning a New Institution
- Jail Design Review
- Local Systems Assessment

As with other NIC services, these resources are available without cost. For more information contact NIC through its website: [www.nicic.org](http://www.nicic.org)

## **B. STANDARDS**

In recent years, Michigan has decreased the scope of its jail standards, inspection and technical assistance efforts. Prior to these cuts, Michigan jails could count on assistance and advice from the Michigan Department of Corrections (MDOC). The remaining professionals at MDOC are ready to provide assistance, as time allows.

Michigan jail standards have been amended in recent years, leaving fewer standards to guide local jail operators and designers. The Department offers a “Construction Handbook for Jails and Lockups” that should be consulted through the design process.

The American Correctional Association (ACA) is currently field testing Core Jail Standards that offer a comprehensive set of minimum standards to guide jail operations, management and facilities. The latest copy of these standards has been provided to the counties as a PDF file.

ACA has provided comprehensive *professional* jail standards to the field for more than 30 years. The latest standards, *4<sup>th</sup> Edition Performance-Based Standards for Adult Local Detention Facilities* include the groundbreaking new outcome-based approach to standards and compliance.

The consultants recommend attention to *all* of the standards described above throughout the planning and design process.

## **C. NEW DESIGN OPTION FOR HOUSING UNITS**

The evolution of jail design is interesting and is helpful to gain an understanding some of the fundamental design elements encountered in new jails. A brief history is provided here as an introduction to an emerging approach to housing unit design.

Arguably, the greatest influence on jail design in the past fifty years was exerted by the National Clearinghouse for Criminal Justice Planning and Architecture (NCCJPA). In the 1960’s and 1970’s the Clearinghouse operated under contract to the U.S. Department of Justice, establishing detailed standards for the planning and design of jails. Compliance with these standards was required for all jails that received federal construction funds through the Law Enforcement Assistance Agency (LEAA).

Two design features were the cornerstones of the Clearinghouse approach to jails:

- Single occupancy cells
- Windows in every cell

These features are found in every jail that used LEAA funding, and many other jails that followed state and professional standards that advocated these design components.





According to an NIJ report<sup>3</sup> that examined conditions of confinement standards and practices:

- Longstanding standards require 35 *square* feet of dayroom space for each inmate in the housing unit
- The average dayroom in new facilities encompassed 55 *square* feet per inmate occupant (57% more than required)

In a 1,000 bed facility, this amounts to 20,000 additional net square feet of building area, and substantially more gross square feet of construction.

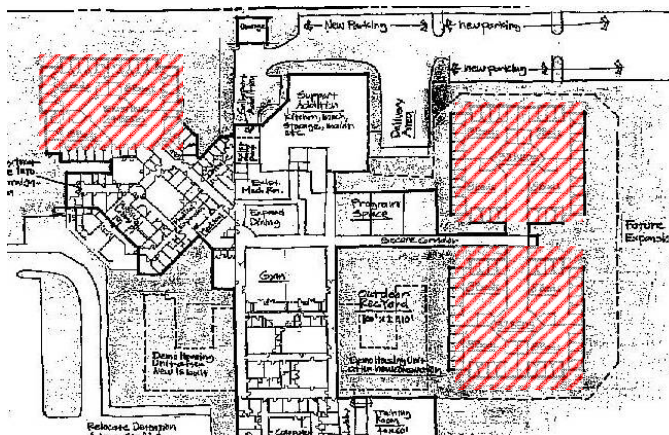
Figure G.7 shows the layout of the newer housing units in Kent County. All of the cells are arrayed around the outer wall, creating dayspaces that are not provided with natural light. The photo of the dayroom shows the cell doors located on the exterior wall.

**Figure G.7: Kent County Housing Unit Layout and Interior View**



The exterior cell window concept continues to be considered in Kent County, as shown in the concept plan for the juvenile detention center in Figure G.8. Note the housing units (highlighted) pulled away from the main building to provide windows in every cell.

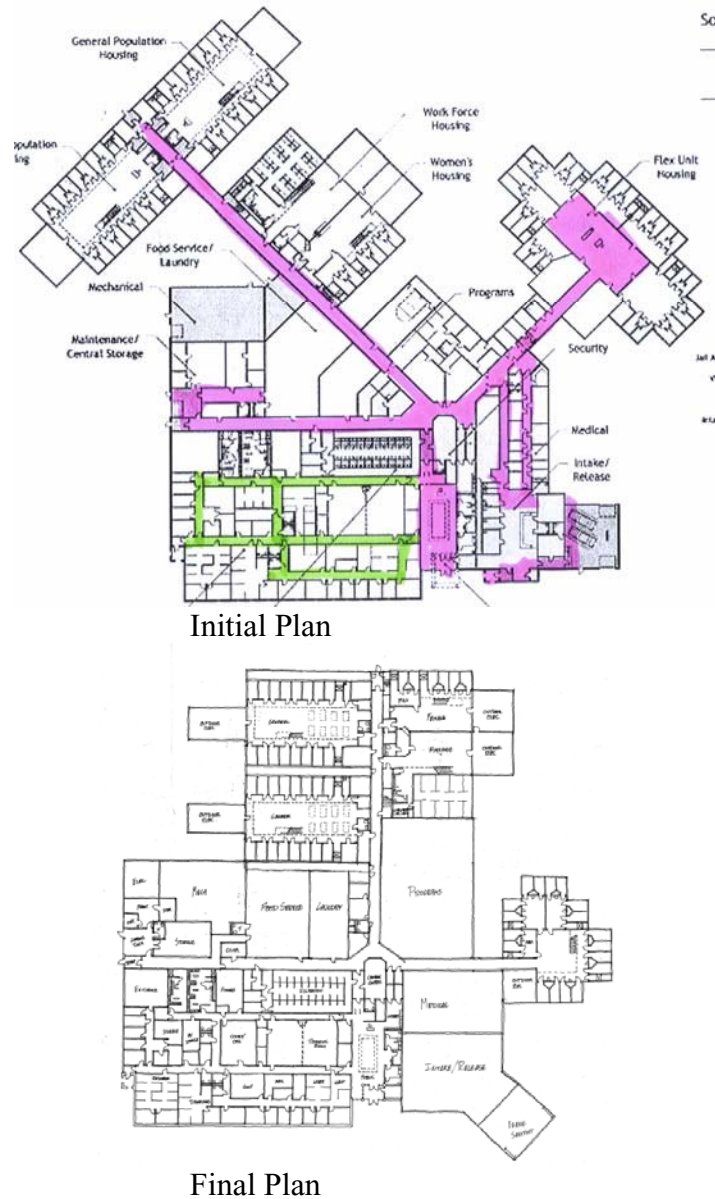
**Figure G.8: Concept Design for Kent County Juvenile Detention Center**



<sup>3</sup> Carter, Steven, Rod Miller and Richard Wener PhD. *Research Findings and Recommendations: Conditions of Confinement, Physical Plant Standards Revision*. American Correctional Association, with National Institute of Justice funding. 1989.

Some recently-built jails started with the assumption that all cells would have an outside window. Somerset County Jail in Madison, Maine, opened its new 234-bed jail in November 2008. Figure G.9 shows the initial plans for the new jail (top) providing windows in every cell, and the final plans that employed in-board cells for most of the housing units.

**Figure G.9: Initial and Final Plans, Somerset County, Maine**



In order to provide a window in each cell for the initial plan, the designers had to “pull” housing units away from the main building, providing more perimeter on which the cells could be located. As a result, the primary circulation corridors (shaded in Figure G.8) were longer, the overall building perimeter was substantially larger, and the perimeter was more complicated. The two plans in Figure 8 are in the same scale, illustrating the marked reduction in the facility footprint.

The final layout for the jail provides natural light to most cells through windows in dayrooms. Cells for high security inmates, who spend more time in their cells, were provided with an outside window.

In Somerset County, using the standards-compliant option of bringing natural light into dayrooms reduced the length of security corridors, overall facility size, net-to-gross ratio for the facility, and the amount of perimeter that was built.

Somerset County was careful in designing the manner in which dayrooms would receive natural light. Designers found that the current ACA standard was woefully inadequate and did not call for enough glazing to provide sufficient natural light. Computer models were generated and care was taken in the way that the adjacent outdoor exercise yard was covered. The result is shown in Figure G.10, a recent photo of a typical “in-board cell” dayroom (note the large windows on the right of the photo, providing natural light).

**Figure G.10: Somerset County (Maine) Dayroom**



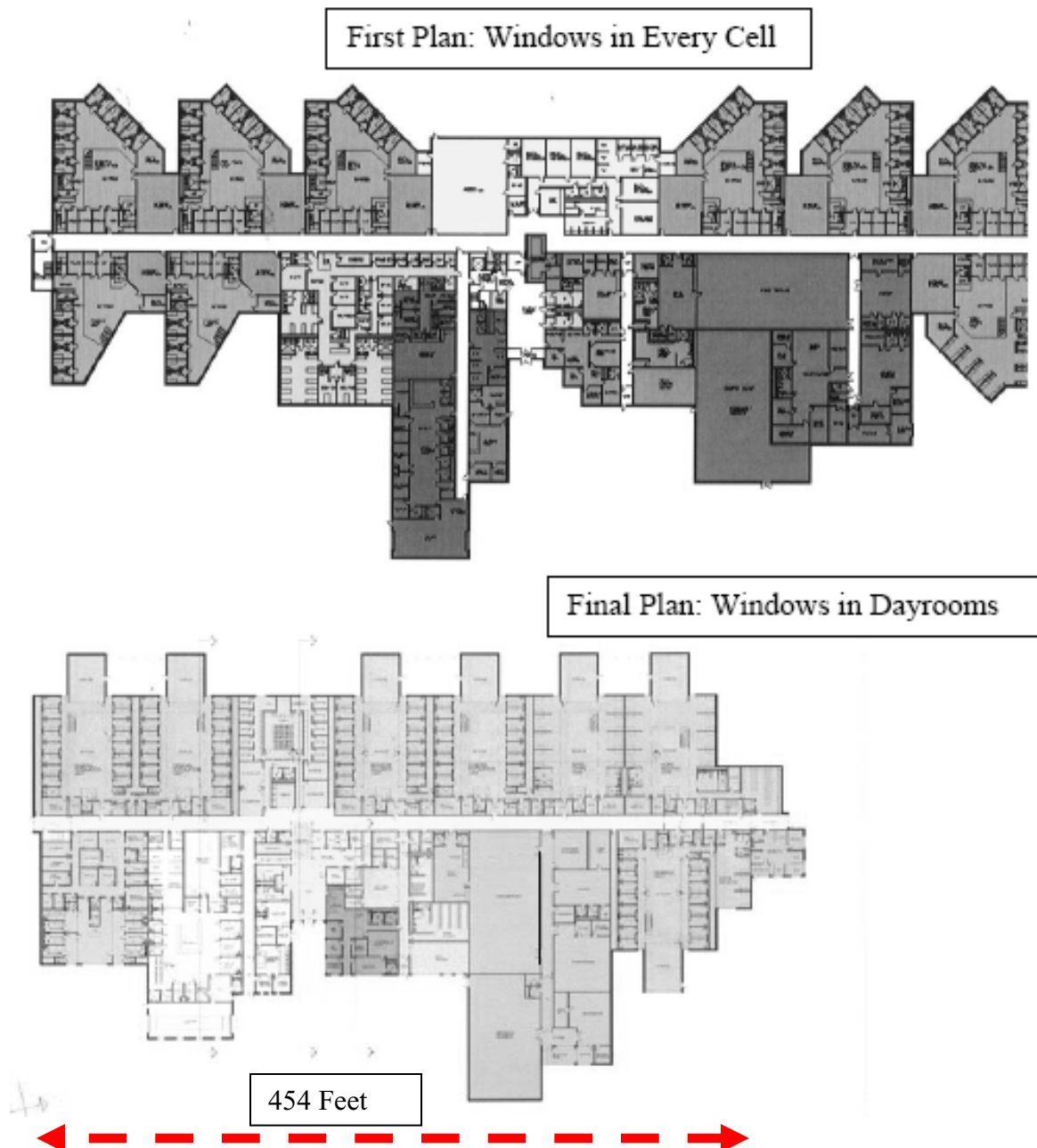
By contrast, Figure G.11 shows a dayroom that has windows in each cell, depriving the dayroom of access to natural light.

**Figure G.11: Dayroom Without Natural Light**



Figure G.12 provides another case study, from Franklin County, Pennsylvania. The new 400-bed jail was opened in 2007. The first plan is shown at the top of the figure; it provided windows in every cell. The final layout is shown at the bottom of the figure, employing in-board cells. The two plans are presented in the same scale in Figure G.12. The main corridor in the final plan is 454 feet (22%) shorter than the corridor in the first plan.

**Figure G.12: Initial and Final Plans, Franklin County Jail, Pennsylvania**



Franklin County realized significant construction costs savings by choosing the second approach. Staffing demand was reduced when the overall size of the facility, and its main corridor, were reduced. Operating costs (heat, cooling, maintenance) were lowered by the smaller and simplified perimeter allowed by the in-board cell approach.

The current ACA standards require that “all inmate rooms/cells provide access to natural light.”<sup>4</sup> When natural light is not provided by an exterior window in each cell, the standards require:

*Each dayroom provides a minimum of 12 square feet of transparent glazing with a view to the outside, plus two additional square feet of glazing per inmate whose room/cell does not contain an opening or window with a view to the outside.*  
4-ALDF-1A-17

Experience in new jails that have adopted the in-board cell option underscores the importance of *exceeding* the ACA standard and ensuring that the amount and quality of light (and view) brought into dayrooms is sufficient.

A few jails have provided a hybrid approach, bringing natural light into the dayroom and into some of the cells. Another hybrid solution provides windows in the dayroom and in all of the cells. The natural light decision has major cost implications, but is not an all or nothing choice.

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<sup>4</sup> 4-ALDF-1A-15 Revised August 2006.