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Oklahoma Prison Expansion Saves Time and Money

By Charles B. DeWitt and Cindie A. Unger

When prisons became crowded in Oklahoma, officials there needed a fast and cost-effective solution. Limited funding and severe crowding ruled out any costly and time-consuming approach.

Using the lessons of past experience, Oklahoma saved time and money. Rather than start from scratch, Oklahoma expanded an existing institution by building a new minimum-security housing unit. The design was adapted from a previous project, and the construction method relied upon prefabrication. The result was a 90-cell housing unit, completed in only 9 months for a cost of less than $17,000 per inmate.

Prison crowding

Like those in other States, Oklahoma's prison population has grown rapidly in recent years, as shown in Figure A.

After a period of relative stability from 1970 to 1979, the inmate population suddenly increased starting in 1980, threatening a substantial shortfall in bedspace by 1983. While many States failed to address such problems immediately, Oklahoma anticipated the shortfall and was ready to proceed in 1982. That year, officials decided to meet the pressing demand by building a new minimum-security facility on the grounds of the Lexington Assessment and Reception Center, a

From the Director

The dilemma of too many serious crimes with injured victims and not enough space to incarcerate convicted criminals is a major domestic policy issue. Convicted violent and repeat serious offenders have contributed to swelling prison and jail populations which outstrip capacity in many jurisdictions.

The gravity of the problem is recognized by officials throughout the criminal justice system. In fact, when the National Institute of Justice asked criminal justice officials to name the most serious problem facing the system, police, courts, and corrections officials reached a virtually unanimous consensus: prison and jail crowding is the number one concern.

Attorney General Edwin Meese III has spoken out repeatedly on the dimensions of the crisis and the need to help State and local jurisdictions find less costly ways to increase corrections capacity so convicted serious criminals are prevented from preying on people, communities, and our economy.

Responding to the need, the National Institute of Justice established the *Construction Information Exchange* to help State and local officials make informed decisions on building or expanding facilities.

This *Construction Bulletin* is one of a series designed to share information on innovative approaches to building and financing corrections construction.

The *Bulletin* shows how Oklahoma met the challenge of limited funding, severe crowding, and a mushrooming prison population.

By expanding an existing prison, Oklahoma was able to avoid the cost of support facilities such as kitchens and laundries. By reviewing classifications, the State officials were able to build minimum-security space rather than more expensive higher security. By adapting existing designs with prefabricated components, costs stayed low while 90 new cells went up in only 9 months.

In addition to these *Bulletins*, the National Institute of Justice has also published a *National Directory of Corrections Construction*, based on the results of a national survey, which provides a wealth of information on construction methods and costs for jails and prisons built since 1978.

The National Institute also maintains, at our National Criminal Justice Reference Service, a computerized data base on corrections construction. Through this *Construction Information Exchange*, those planning to build or expand facilities are put in touch with officials in other jurisdictions who have successfully used more efficient building techniques.

James K. Stewart
Director
National Institute of Justice

maximum- and medium-security institution. The new 90-bed facility would house inmates who would perform maintenance and support services for the 1,800-acre compound.

Security classification

Corrections experts agree that effective inmate classification is a vital element in management of an institution. Classification is also a key, often overlooked, to more economical construction of new facilities.

When planning to build, officials must seek maximum impact on the crowding problem with a minimum expenditure of public funds. However, a common reaction to critical crowding has been construction of a new maximum-security facility. Upon closer study, many officials have learned that it would have been more desirable to simply add minimum- or medium-security housing. Jurisdictions such as Oklahoma have found that this objective can be achieved when construction efforts are matched to classification needs, and economical minimum-security facilities are built to accommodate crowding.

All too often, construction begins without a comprehensive review of classification. When the custody population is examined for objective security classifications, it often becomes clear that many inmates could be rehoused, if space were available. Without a careful study of classification, the result is often construction of facilities that are more costly than is needed.

Table 1

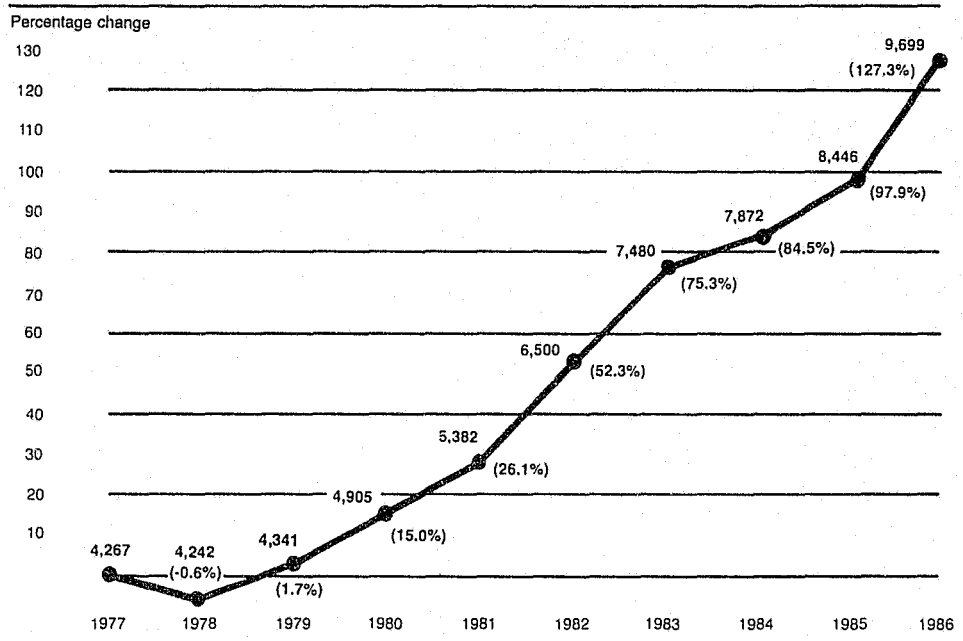
Prison population

Year	Number of inmates	Change from prior year	Increase from 1977
1977	4,267		
1978	4,242	-.6%	-.6%
1979	4,341	+2.3%	+1.73%
1980	4,905	+13.0%	+15.0%
1981	5,382	+9.7%	+26.1%
1982	6,500	+20.8%	+52.3%
1983	7,480	+15.1%	+75.3%
1984	7,872	+5.2%	+84.5%
1985	8,446	+7.3%	+97.9%
1986	9,699	+14.8%	+127.3%

Source: Oklahoma Department of Corrections

Figure A

Oklahoma prison population



Source: Oklahoma Department of Corrections

For example, inmates are sometimes assigned to a higher level of security simply because there is insufficient minimum-security housing. Adding more economical beds at lower levels of security can thus release more valuable high-security space that had previously seemed unavailable.

Expansion options

Oklahoma corrections officials rejected choices that would require a lengthy construction period, recognizing that new beds would be available faster if a housing unit were built on the grounds of an already existing institution near Lexington, Oklahoma.

Moreover, the Oklahoma approach saved the substantial costs required for a security perimeter, roads, utilities, and such support services as kitchen and laundry. This concept is also exemplified by a previous NIJ *Construction Bulletin,* "Florida Sets Example With Use of Concrete Modules." The expansion approach presumes, of course, that existing support facilities are adequate to accommodate the additional housing.

For this reason, expansion requires both caution and careful planning. Oklahoma first determined that the existing prison at Lexington could provide some, but not all, of the needed support services. Officials then compromised through construction of a multipurpose building, located adjacent to the housing unit, to provide space for dining, visiting, and religious services. In this way, the new housing unit relies upon the main institution for many services while providing some of the needed support.

As Oklahoma's experience shows, officials need to evaluate the feasibility of expansion options and the extent to which existing support services can absorb the excess population.

Many jurisdictions now operate institutions with populations far in excess of their design capacity. Although support services such as kitchen and visiting facilities may be adequate, existing housing units are crowded, and lack sufficient showers, toilets, and dayroom space. For these agencies, construction of an expansion unit may create permanent housing, offering an economical way to stop placing two inmates in a single cell, a practice commonly termed "double-bunking."

Facility design

The housing unit at Lexington is a two-level facility with 90 cells. A central control station divides the rectangular building into two modules while providing visual supervision of the unit. The building includes six detention cells for temporary holding

of inmates who are awaiting transfer to a higher security institution, have been convicted of minor disciplinary infractions, or present other special management concerns.

As shown in Figures B and C, the unit has several distinct sections. Each housing area contains 45 single-occupancy cells, arranged along three sides of the module. Cells contain approximately 63 square feet of space and are secured by manual-locking steel doors. A common dayroom and recreation area is centrally located on the ground floor. This area is equipped with weight machines, pool tables, table games, and television. Large skylights above the recreation area provide natural lighting. Office space has also been provided for classification and counseling activities.

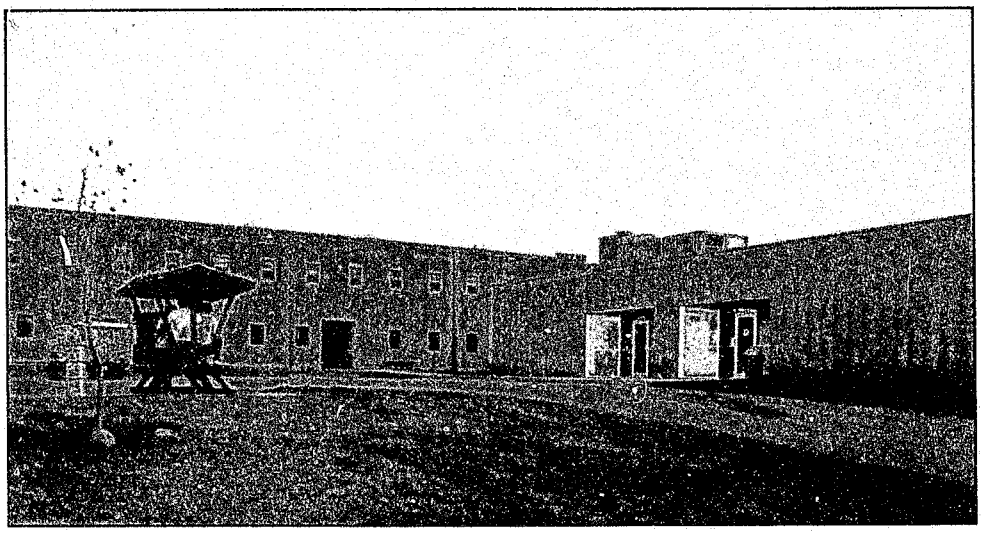
Although the building can be used to secure the population continuously, over 90 percent of its inmates are currently assigned to work crews on the compound grounds or to special work programs outside the facility. Those remaining in the unit are free to participate in recreational and program activities. Inmates may enter and leave their cells at will.

Officials realized substantial savings by selecting less costly fixtures and hardware for certain areas. Doors are institutional-grade and operate by swinging rather than sliding. Toilet and lavatory fixtures are china rather than stainless steel.

While the facility operates as a minimum-security unit, it was designed to be easily upgraded to medium security. The addition of such features as perimeter fencing and appropriate hardware would enable the unit to accommodate prisoners requiring tighter controls.

Since the unit was designed as an ancillary building, it does not contain a complete array of core services. Staff from other buildings in the compound deliver medical services as well as educational and vocational programming.

The unit's design allows for efficient staffing. Supervision of inmates can be provided by two security officers. One officer staffs the central glass-enclosed control station, while the second directly supervises inmates from the floor. However, the floor officer must cover both modules.



Oklahoma housing unit and contiguous multipurpose building.

During the day shift, one to two senior officers are also assigned to the unit.

Computer support

The design was developed using a Computer-Aided Drafting System (CADS). This state-of-the-art system combines computer-based drafting tools, three-dimensional display, and design analysis programs to accelerate and enhance the planning process. Standardized graphics increase the quality of the design and eliminate repetitive drawing, thereby permitting designers to spend more time on other important tasks.

This is especially the case when the building is rectangular and symmetrical, as one side is a mirror reflection of the other. When drawn by computer, this simplicity further reduces design time.

Site adaption

To save time, the department decided to use a design previously developed for the minimum-security facility at nearby Ouachita Correctional Center. Plans for the Ouachita Center had recently been completed by the Benham Group, Oklahoma City, and the department was satisfied that they would meet the needs of both facilities.

Several States have shown that a good design may be used more than once. A lengthy planning process is required only for the initial facility, and subsequent prisons may utilize its proven details. States adopting this approach include Virginia, South Carolina, New York, New Mexico, Arkansas, and California. Like both California and South Carolina, Oklahoma proceeded with the same plan simultaneously at multiple locations.

Construction method

Prefabrication was a key to early completion, and construction was greatly facilitated by the simplicity of the design. The floorplan and cell arrangement are rectangular, eliminating curves and angles, and this uncomplicated approach permitted speedy offsite production of building components. Insulated wall panels and solid floor slabs were fabricated at a precast plant in Oklahoma City, and then transported approximately 45 miles to the site.

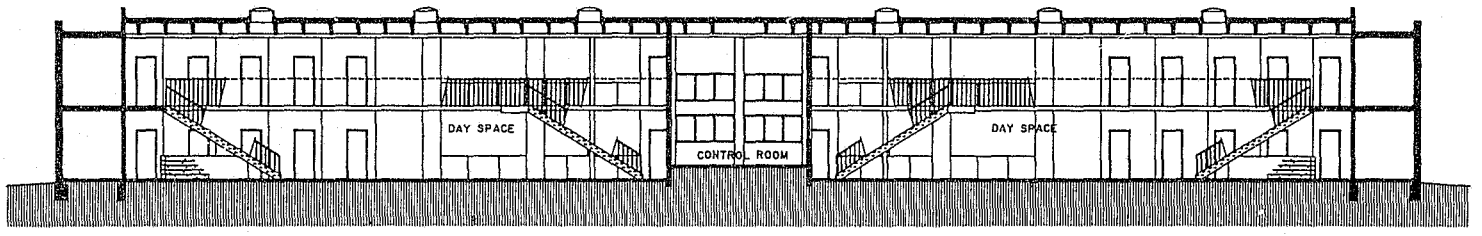
The precast concrete technique is described in NIJ's *Construction Bulletin*,"California Tests New Construction Concepts." This technology has been thoroughly tested in corrections, having been used for more than two dozen jails and prisons.

Exterior walls were designed for efficient use of large precast panels containing appropriate insulation for the harsh Oklahoma winters. The wall panels have an attractive texture termed a "raked finish," a surface treatment resulting from a special process at the precast plant.

Use of precast concrete structural beams resulted in expansive dayroom areas and permitted an open floor area not interrupted by structural columns. Correctional officers have a clear line of sight to all areas in the housing unit.

Figure C

Longitudinal section



Where to turn for more help...

The *Construction Information Exchange* has more information on this and other projects. The *Construction Information Exchange* is a Federal initiative that provides information on construction methods and costs for jails and prisons built since 1978. Through the Exchange, those planning to build or expand facilities are put in touch with officials in other jurisdictions who have successfully used efficient building techniques.

Publications include these *Bulletins* and the *National Directory of Corrections Construction*, covering building methods and costs for more than 100 prisons and jails. For more information, or to submit information for inclusion in the Exchange, contact:

Construction Information
Exchange/NCJRS
Box 6000
Rockville, MD 20850
Telephone: 800–851–3420
or 301–251–5500

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This construction method offers a special advantage for jurisdictions where adverse weather conditions may bring field construction to a halt. Use of prefabricated components reduces the labor required at the site, and permits rapid construction in regions with difficult periods of weather. Since groundbreaking at Lexington was held in September 1982, construction spanned the winter months. Despite these conditions, the advanced construction method enabled officials to complete the project in just 9 months.

Jail applications

Although part of a prison, this 90-bed facility also serves as an example for local jurisdictions in need of fast and economical expansion. A sheriff could use the same building configuration and construction method for a county jail. In fact, the majority of jails in the United States house 90 inmates or fewer.

Both design and construction of this Oklahoma housing unit may be useful in a variety of applications. The level of security may be tailored to specific needs, and any type of inmate management may be employed.

The expansion approach can also make sense for cities and counties. Many jurisdictions have outlying facilities for sentenced inmates where expansion units can be built within the security perimeter.

Key points

Faced with a shortage of beds, Oklahoma moved quickly to provide needed prison space. Jurisdictions now facing comparable problems may wish to consider these important features of the Oklahoma response:

- *Security classification:* Rather than immediately selecting a maximum-security design, Oklahoma officials saved time and money by first reviewing classification, then adding minimum-security space that can be adapted to a higher level of security if needed.

- *Expansion unit:* Rather than build an entirely new institution, Oklahoma saved time and money by building on the grounds of an already existing prison. This approach also avoided the difficult process of site selection and approval.

- *Prototype plans:* Rather than starting from scratch, officials used an existing design from another Oklahoma prison and adapted the plans to the new construction site. In this way, design time was drastically reduced when compared to the traditional process.

- *Prefabricated components:* Rather than build with conventional materials, Oklahoma utilized advanced construction methods involving precast concrete components. This approach was responsive to weather conditions and saved valuable construction time.

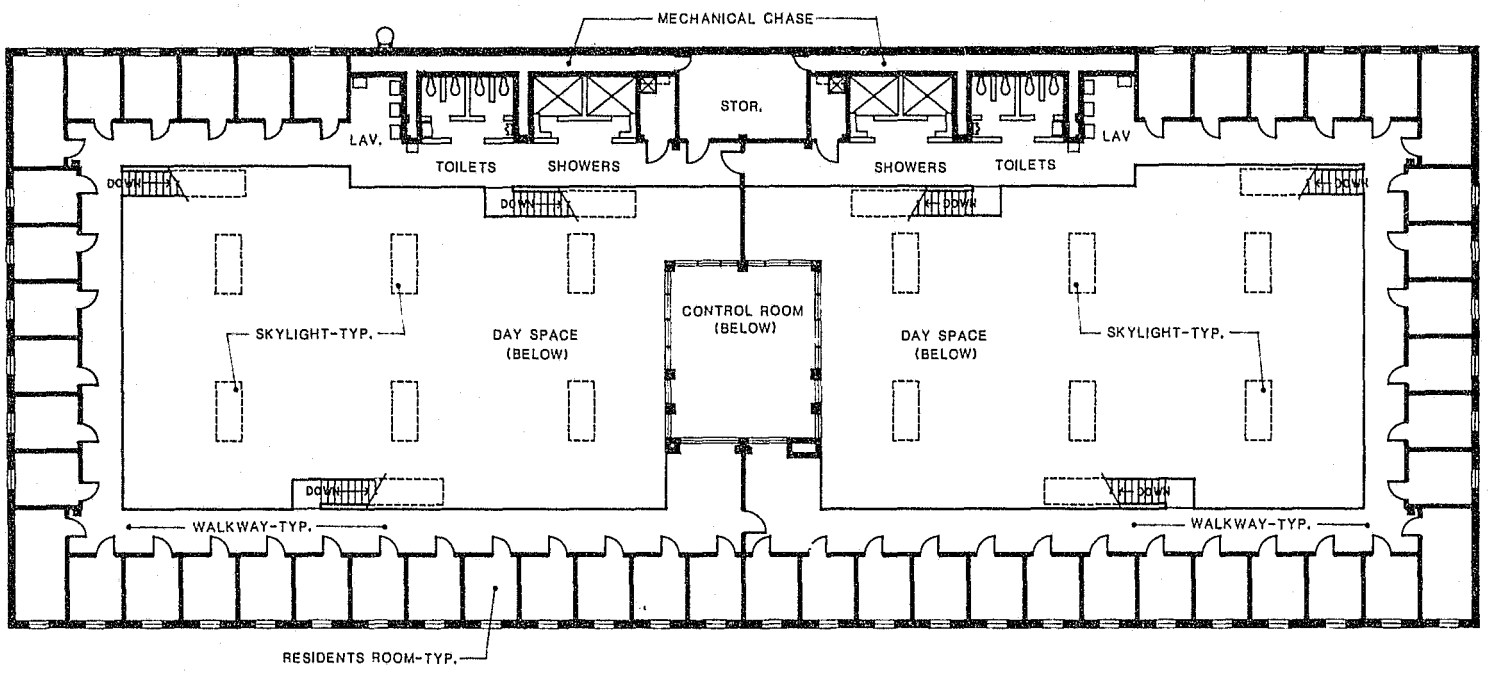
- *Building design:* Rather than a complex design, Oklahoma selected an uncomplicated rectangular shape that avoided the time and cost of curves or angles and facilitated use of precast concrete components. The design exhibits expansive areas that offer unobstructed sight lines for correctional officers.

Oklahoma has set an example of fast, economical construction. Choosing low security and expansion of an existing facility kept the cost below $17,000 per inmate. Planning was accelerated by adapting plans from another facility. Selection of a plant-fabricated building system cut construction time. Other State and local officials facing demands for construction may wish to consider how Oklahoma turned this simple approach into a successful solution.

Large dayroom has open floor area, not interrupted by structural columns.

Figure B

Second level floor plan



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- *Cindie A. Unger* assisted in the preparation of this report. She is Vice President of Correctional Services Group, Inc., and recently directed the Private Sector/Prison Industry Enhancement Technical Assistance Project for the Bureau of Justice Assistance under a subcontract to the American Correctional Association. Ms. Unger also managed two studies funded by the National Institute of Corrections and was the principal author of their final reports: *The Disruptive Maximum Security Inmate Guide* and *Managing Long-Term Inmates: A Guide for the Correctional Administrator*.

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405–348–9801

Facility profile

Lexington Housing Unit

Jurisdiction: Oklahoma Department of Corrections
Facility: State prison, expansion unit
Type of construction: New housing unit built at existing prison with support services
Number of beds: 90 males
Cell size: 62.7 square feet (8′9″ × 7′2″)
Number of cells: 90 single cells
Total costs including site work: $1,539,000 housing; $280,408 multipurpose
Building costs only: $1,489,408 housing; $262,592 multipurpose
Building costs per cell: $16,549
Total cost per cell: $16,773
Building cost per square foot: $60
Size of facility: 24,625 square feet housing unit; 4,600 square feet multipurpose
Space per inmate: 274 square feet (housing only); 324 square feet (with multipurpose)
Start date: September 1982
Completion date: June 1983
Construction time: 9 months