Proposed Site Summary

Vigo County Sheriff's Office & Jail
March 16, 2017

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Proposed Location: Adjacent to Existing Vigo County Jail

Following is a conceptual level analysis of the potential of constructing a new jail and sheriff's office adjacent to the existing Vigo County Jail. This evaluation focuses on the amount of land available at the proposed site. This summary is consistent with previous conversations regarding this location.

1. The city block containing the existing Jail, Courthouse, City Hall and parking lot is approximately 10.6 acres.
2. The 10.6 acres is comprised of the following (see attached aerial drawing):
    a. Courthouse 2.8 acres
    b. City Hall 2.1 acres
    c. Existing Jail 3.2 acres
    d. Parking Lot 2.5 acres
3. Assuming the Courthouse, City Hall, and the Jail continue in operation during construction, the new facility must be built on the 2.5 acre parking lot.
4. 2.5 acres is equal to 108,900 square feet. (Parking for the jail, courthouse, and city hall during construction which would need to be provided in an alternate location which has not been considered).
5. 108,900 square feet will need to accommodate the following needs:
    a. Parking (155 spaces @ 400sf/space)= 62,000 SF
    b. Setbacks (per code, estimated at 10%)= 10,890 SF
    c. Green space (estimated at 5%)= 5,445 SF
    d. Future Expansion (all future expansion would need to be vertical)= 0 SF
6. Subtracting the value of (a) through (d) above, 30,565 SF remains available to construct a new facility.

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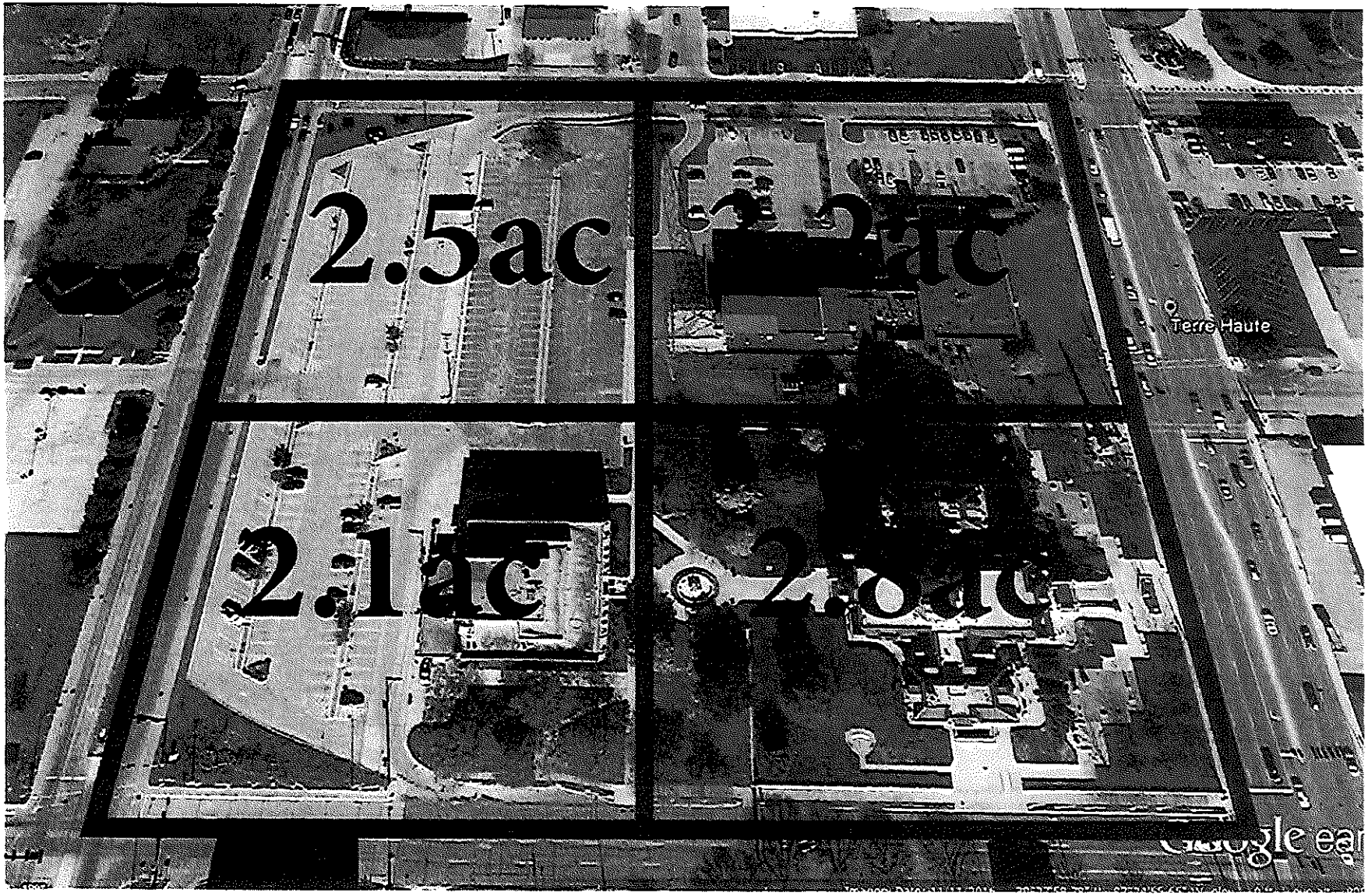
7. Using the current programmed square footage of 162,103 (which was the result of recent reductions) and then adding 10% for vertical circulation (assumed value to account for stairwells, elevator shafts, mechanical chases), the gross square footage required is 178,313.
8. Dividing the gross square footage (178,313) by the square footage available on the site (30,565) results in 5.83, or in other words, a six story structure would be necessary on this parcel.

Please note the following:

- No design work has been performed for a multi-story facility. It is possible the gross square footage required could increase once adjacencies and initial layout are developed. The information above has been developed for the purpose of conceptual discussions and must be reviewed and validated by the design consultant if this location is considered viable.
- This assumes that the property required, and not currently owned by the County, could be acquired from the City.
- No parking solution has been developed for the jail, courthouse, or city hall during construction.
- Construction duration for multi-story construction could be longer than that of single story construction (which is currently estimated at 22 months).
- Operational costs would increase due to a multi-story jail according to the Jail Design Guide.
- Future expansion would be vertical which is more costly according to the Jail Design Guide.
- Higher level of exterior materials would be required for a multi-story building at that location.

Reference info (attached):

- Jail Design Guide-Third Edition; U.S. Dept. of Justice, National Institute of Corrections
    - Pages 19-20 Site Size, Building Area, Multiple Level Facilities, Parking
    - Pages 57, 315 Staffing and Operational Impacts
    - Page 60 Single Level versus Multilevel Design
    - Pages 10-11 Expansion, Vertical Versus Horizontal Expansion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Chapter 3

Site Selection and Design

The location of the jail will affect its operations, access to other components of the criminal justice system, and the convenience of staff and visitors for years to come. It will also affect construction, project, and annual operating costs.

Site selection is frequently a difficult political issue. Finding a location acceptable to the public has been a major stumbling block to many projects, resulting in delays and, in some cases, the termination of an otherwise well-planned effort.

Careful site selection is one of the most important features of a successful facility development process, as is the consideration of a site's impact on design. This chapter presents information about site selection and design needs that must be taken into account in choosing and developing a site for a new jail. The various issues surrounding site selection can be organized around three primary factors: size, location, and cost.

Site Size

The size of the site will greatly influence design. Size needs are a function of the size of the ground-level area of the building (including areas for nonjail functions) and other areas needed for expansion, parking, building access and roads, outdoor activities, landscaping buffers, and support elements such as outdoor equipment. In rural sites, nonbuilding elements may comprise 80 percent of the site area.

Building Area

When first considering site possibilities, it is important for jurisdictions to appreciate how much larger a new jail will be as compared with the existing jail. It is not unusual, for example, for new facilities to be four to six times larger than older facilities, even though they have only twice the capacity. This is typically due to the increase in bed capacity and several other key factors:

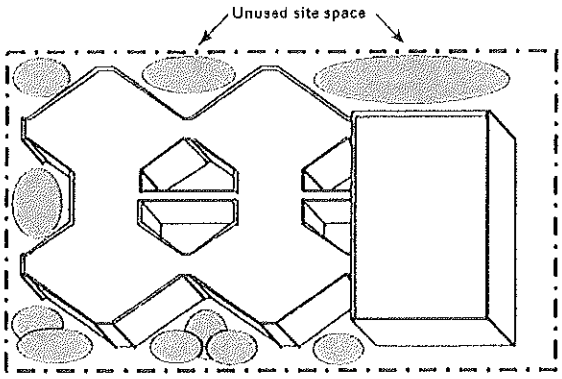
- Increased requirements for square footage per bed in housing areas.
- Increased provision of program and support space.
- Inclusion of oversized support and program areas to accommodate future expansion of bed capacity.
- Compliance with jail standards.

Jurisdictions may expect the new jail to be only twice as large because the projected capacity need is only twice as great. This misperception has led to difficulties in developing a useful list of site possibilities and to early public commitments to sites that were too small.

The actual ground area required for the building is critical to determining site size. However, for the following reasons, ground area is rarely the same as the total square footage documented in the space program developed during predesign planning.

- **Irregular shapes.** To achieve interior efficiency, many jails have irregular (e.g., nonsquare or nonrectangular) shapes that create unusable spaces between portions of the building (exhibit 3-1).
- **Multiple levels.** Whereas small and medium-sized jails tend to be most effectively developed as one-level structures, larger facilities may require multiple levels because of their large size. Additionally, the facility, whatever the size, might be developed on multiple levels

Exhibit 3-1. Typical Irregular Shape of Jail



if it is to house other criminal justice functions (e.g., law enforcement, courts). Such multilevel structures might include a basement level for mechanical systems, computer rooms, and storage. Jurisdictions are cautioned against deciding to build a multilevel jail merely to save on the amount of site area needed. Before committing to a multilevel jail, jurisdictions should confirm that such a structure will not compromise the functioning and security of the building and will not increase staffing needs beyond acceptable and supportable levels. If a multilevel jail must be developed, the functions that must be on the ground level should be identified and potential sites studied to see if they can accommodate those functions.

- **Two-tier housing.** Some designs use two-tier housing—one cell over another and sharing a common single-level dayroom—thus saving ground area coverage.

Building Expansion

Many new jails are designed without consideration of the need to expand capacity in the future. With the many changes that have occurred and can occur in criminal justice philosophy, state law, and arrest rates, expansion planning must be part of any facility development process. In establishing the size of the required site, jurisdictions must consider the potential need for future expansion in the following areas:

- Bed capacity.
- Jail support services and program area.
- Nonjail functions that share the building or site, for example:
  - Law enforcement.
  - Courts and court services.
  - Clerk of courts.
  - Prosecuting attorney.
  - Probation/parole.
  - Pretrial services.
  - Day reporting or other alternatives to incarceration.
  - Other county offices.

In the absence of specific expansion plans, providing twice the area of the jail for expansion needs would not be unreasonable.

Parking

The parking needs of a jail facility can be considerable and, at approximately 350–400 square feet per car, can represent a significant onsite requirement. Jurisdictions should consider the number of facility staff, family and professional visitors for inmates, and other visitors when determining the amount of space allocated for parking.

Staff

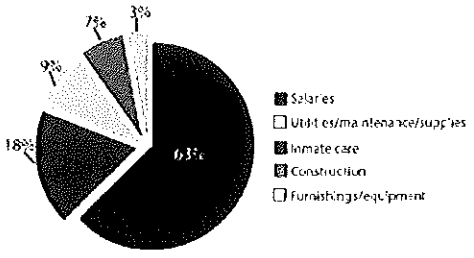
Planners should estimate one car per employee on the largest two shifts combined to allow adequate parking at shift change. For example, if 9 employees work on shift 1 and 7 employees work

Staffing Impact

Without adequate numbers of trained staff who are properly assigned and supervised, the jail will not be able to respond to day-to-day operational requirements or to emergency situations. Unfortunately, a poor understanding and appreciation of staffing requirements and determinants, combined with scarce monetary resources, has resulted in the understaffing of many jails.

Planners and local officials must recognize one particular finding of national studies: over the 30-year life cycle of a correctional facility, construction costs for the average, standards-compliant new jail will amount to only about 10 percent of the total combined cost of operations and construction (exhibit 7-1). This means that for every $1 million invested in capital construction, communities will spend another $9 million for operations over 30 years. Of this $9 million, an average of $7.8 million will be spent on staffing. The impact of staffing on design, and vice versa, is clearly one of the most important issues to consider in developing any new jail.

Exhibit 7-1. Average 30-Year Life Cycle Costs



Source: Kimme & Associates, Inc., Champaign, Illinois.

The impact of staffing can be more acute for smaller jails than for larger ones because the high ratio of inmates to staff found in large jails cannot be realized easily, if at all, in smaller jails. When one considers the challenge of separating different classifications (especially by gender) and the variety of possible surveillance approaches available, the impact of design on staff efficiency and costs becomes readily apparent.

Although an indepth analysis of staffing requirements is beyond the scope of this guide, staffing analysis is an important component of jail planning. This chapter reviews the basic concepts necessary for calculating staffing by net annual work hours (NAWH) and examines how jail design can affect staffing requirements. Previous editions of the *Jail Design Guide* discussed calculating staffing using the shift relief factor (SRF) method. The primary difference between the two methods is that with the SRF method, shifts are often considered independently, which may fail to consider many categories of time off (e.g., jury duty, light duty assignments, provisions of the Family and Medical Leave Act of 1993). The NAWH method considers each job classification independently and does not calculate by shift. It also takes multiple leave factors into consideration in determining the number of hours staff are actually available to work. For a more indepth presentation on how to use NAWH to calculate staffing needs, see *Staffing Analysis Workbook for Jails, Second Edition*.[1]

Readers are advised to review chapter 5, "Classification/Separation," and chapter 6, "Surveillance/Supervision," in conjunction with

[1] Dennis R. Liebert and Rod Miller, *Staffing Analysis Workbook for Jails, Second Edition* (Washington, DC: U.S. Department of Justice, National Institute of Corrections, 2003).

to consider operational issues before committing to the renovation project. Given that a building designed for a different function is being converted, the renovation layout is frequently not as effective or efficient as a new design and may have inevitable, unacceptable functional compromises. Other planning concerns, such as the need for expansion, sufficient parking, and public access, may also be compromised.

Operational Costs

Operational costs, particularly those of staffing, are actually the biggest part of a jail's economics. Over the long run, the costs of staffing and operating a jail will far exceed the costs of construction and project financing. If the price of cheaper construction is the addition of one or two more 24-hour-a-day, 7-day-a-week posts, the economic impact on a jail can be devastating. The cost analysis in exhibit 28-5 demonstrates the differences over a 20-year life cycle between a new 125-bed jail and a renovated facility of equal capacity. The essential differences are that renovation costs are assumed to be 20 percent less than new construction and the staffing for the renovated facility is greater by one officer per shift. An average interest rate of 6 percent and an inflation rate of 4 percent are used.

Acquisition Costs

A key factor in assessing project costs is the acquisition cost of the site and building being considered for renovation. The purchase price of the facility could be greater than any potential savings over new construction. Also, if private property is purchased, the cost calculation must take into account tax receipts that will be lost once the property is removed from the tax rolls.

Conclusion

Local officials should by all means examine renovation options before committing to new construction. Construction cost savings may be there to find within the context of creating secure facilities that meet local needs.

However, experience shows that many renovation options either fail to offer the savings initially expected or offer measurable savings at the cost of functionality, safety, or staff efficiency. Before a jurisdiction enters into public or private commitments, it should temper its enthusiasm for renovation options with a reasoned analysis of a building's ability to meet preestablished goals for inmate classification, surveillance/supervision, safety/security, staffing efficiency, and true convertibility.

and movement, shared activities, security perimeter, emergency response, staff backup, nature of staff posts, cell occupancy, electronic monitoring versus staff monitoring, and work environment.

Facility Location

In many cases, when the jail is located some distance from the court, full-time staff positions are required to transport inmates to and from court. Additional transportation staff may also be needed to transport inmates to doctor's visits, the hospital, or other outside appointments or between facilities.

Those contemplating building a new jail at a location remote from court facilities should consider the staffing impact and whether alternatives to in-court appearances, such as video first appearance or a first appearance court at the jail, would be feasible. Designers must also consider the following effects of frequent movement to court facilities:

- Separating the flow of inmates, the public, and court personnel.
- Searches before and after court appearances.
- Temporary court holding.
- Holding at the remote court facilities.
- Potential meal service, attorney visits, and emergency medical services.

Another staff-consuming activity is providing transportation to, and security at, medical facilities in the community. When possible, providing the ability for minor triage and treatment at the facility and the support space needed to do so will reduce the requirement to transport the inmate for medical and/or dental care and may reduce the need for additional transport staff.

Single-Level Versus Multilevel Design

A multilevel design in a smaller jail that has just 20–30 beds on each floor can drive staffing costs to unaffordable levels. For example, assuming the 24-hour-a-day, 7-day-a-week posts require 5 staff to cover each post (see calculations for master control shown above under "24-Hour Coverage") and each floor requires a minimum of 1 post, a 3-floor jail with a capacity of 90 beds could well require a minimum of 15 housing area security staff just to meet minimum standards in some states and to ensure safety and security. To properly manage the behavior of inmates on each floor, a staff post should be staffed on each floor. This does not include administrative staff, support staff, or any other security staff such as master control, booking, and movement officers.

In addition, movement of people and services (food service and laundry, for example) can become more time consuming and complicated in a multilevel facility, particularly a small one with fewer staff. Required stairways and elevators present the jail staff with additional surveillance problems and security risks. Multiple levels also add to fire safety complications in terms of design and evacuation. Also, the potential exists for increased maintenance problems and costs (elevator service, more potential for equipment failure, and more problems in managing operations when essential equipment fails).

Multiple levels also eliminate the ability to create direct sightlines between staff posts and preclude any direct interrelationship between them unless an attempt is made at some sort of vertical connection, such as a stairway (exhibit 7-2).

Vertically Connected Posts

Any attempt to connect fixed posts on two or more levels must be carefully evaluated, as this approach has potentially serious limitations:

Chapter 12

Expansion

A jail is a large capital expenditure for a community, so it is paramount that the facility has a long and useful life. The key to ensuring the jail's longevity is to plan for future expansion.

Why Plan for Expansion?

Many communities have the foresight to build a jail that not only meets their capacity needs today, but also their projected needs for the next 15 to 20 years. Sometimes these projections are correct, and sometimes they are not. Developing bed capacity projections is not entirely precise because key assumptions that go into formulating the projections may change. For example, the jurisdiction's population may grow or its crime rate may increase faster than anticipated.[1]

Totally unforeseen factors can also affect the size of the jail population. Recently, two phenomena—mandatory sentences and overcrowded state prison systems—have increased jail populations, forcing many jurisdictions to build additional beds they did not think they would need. Sometimes the additions are needed within a few years after a new jail opens.

The failure to develop an expansion plan can have significant consequences for a community in terms of public safety and the overall budget. For example, if a jail does not have the ability to expand because of design or site constraints, it could be rendered obsolete because it does not meet the jurisdiction's capacity needs. If the facility is relatively new (e.g., less than 15 years old), it may be difficult to persuade taxpayers to approve funding for a new jail. If that happens, the jurisdiction may be forced to crowd the jail beyond its capacity—to the detriment of safety and security—or board inmates in other jurisdictions at considerable expense.

Expansion Options

A number of basic options are available to local jurisdictions as they plan their expansion strategy.

Satellite Jail

Many jurisdictions have built "satellite jails" as an adjunct to their existing jail. Typically, they have pursued this course because:

- Site constraints do not permit expansion of the existing jail.
- The existing jail is relatively new and it would not be prudent (for political and/or fiscal reasons) to discontinue its use.
- The jurisdiction is interested in developing a separate treatment or program facility.

The following costs are normally associated with a satellite jail:

- **Site acquisition.** Purchasing a new site could be required if the jurisdiction does not own a suitable parcel of land.
- **Duplicate building components.** Several components of the existing jail (such as exercise and visiting areas) cannot be shared with the satellite jail and must be replicated.
- **Duplicate staff.** The jurisdiction will lose some staffing efficiency because of the need for

[1] For guidance on estimating future capacity needs, see David M. Bennett and Donna Lattin, *Jail Capacity Planning Guide: A Systems Approach* (Washington, DC: U.S. Department of Justice, National Institute of Corrections, 2009).

some duplicate staff (such as shift supervisors) in two facilities.

Double Bunking

Many jurisdictions view double bunking of single cells as an expansion option because it can increase capacity quickly and inexpensively. However, this option has several major drawbacks, which are discussed at length in chapter 27, "Single Versus Multiple Occupancy," in section 4.

Planned Additions to the Jail

Constructing additions to the jail (such as new housing pods) is the preferred expansion option because it is less expensive and more staff efficient than building a satellite jail. It is preferred over double bunking because the fundamental security and management capabilities of the initial construction can be maintained.

When To Develop an Expansion Plan

Planning for expansion should begin during the predesign planning phase and continue through the development of the facility program because the expansion plan will affect the jail's site selection, design, and operations. It is important to realize that the expansion plan will greatly affect the initial design of the jail because it will tell the architect how each component will grow and by how much. The architect must then arrange and design the components to allow for that growth. The expansion plan will assist with site selection because it will give the architect information to determine how many square feet are needed for the building as well as the need for off-street parking.

The expansion plan should contain the following information:

- The expansion capacity of the facility (generally, the jail's ultimate bed capacity).
- How each component of the facility should expand and by how much (in terms of cells, square feet, equipment needs, or policy changes).
- The capacity to increase the amount of parking spaces.

Setting Expansion Capacity

One method for setting expansion bed capacity is to use bed capacity projections developed during the needs assessment step of predesign planning. If the determination of initial capacity is based on a projection for the next 15 years, it would be reasonable to use the same data to project a future expansion capacity for the next 25 to 30 years.

No matter what method or expansion capacity number is chosen, it is best to project for the addition of more beds than may actually be needed. The expansion plan does not mean the jurisdiction is committed to build additional beds; however, if additional capacity is ever needed, it can be accommodated by the building and the site as specified in the plan.

Vertical Versus Horizontal Expansion

Additions to a jail can be built in two ways—vertically or horizontally.

Vertical expansion assumes that future construction will be on top of the existing jail. In the case of housing, expansion is typically planned to be built on top of an existing housing pod, with the new pod having the same basic design and perimeter wall footprint as the pod below. **Horizontal expansion** assumes that future construction will be adjacent and contiguous to the existing building.

The major benefit of vertical expansion is that a smaller site can be used because the expansion will take place on top of the existing building. This may be desirable if the jail is to be built on a small downtown site. However, several drawbacks to the vertical expansion approach should be considered:

- Potential adverse effects of the initial design on future expansion.
- Higher initial construction cost.
- Disruption to facility operations.

Potential Adverse Effects of Initial Design on Future Expansion

If housing expansion is going to be constructed above an existing housing pod, it is usually assumed that the future pod will be designed in the same way as the pod below. This could, however, adversely affect the design of the expansion housing by eliminating design flexibility.

For example, assume that the vertical expansion plan calls for a dormitory to be built above an existing dormitory but, because of changing circumstances, a high-security housing pod with single cells is needed instead of a dormitory. Unless there is major renovation to the dormitory, the high-security housing cannot easily be built above it, because the locations of interior plumbing and mechanical chases are not compatible with high-security housing.

In the same vein, jail standards could change from the time the jail is built to the time when expansion is needed. New standards may dictate different requirements for cell size, dayroom size, number of showers per inmate, and so forth. As in the example above, the housing area below dictates the design of vertical expansion housing to a great extent.

Horizontal expansion, on the other hand, can provide flexibility. It will not be constrained by an existing building footprint or the plumbing and mechanical chases of a housing unit below.

Higher Initial Construction Cost

If vertical expansion is to be used, initial construction costs for the structural elements of the building will be higher because the structure (columns, beams, and so forth) must be designed and built so that it will support the weight of the future expansion construction. The initial design of stairs, elevators, and the mechanical system must also account for future capacity.

Disruption to Facility Operations

Vertical expansion will likely disrupt facility operations during construction because construction workers, tools, and equipment will need to be inside the security envelope. If expansion housing is to be built on top of an existing housing area, that area may need to be vacated during construction. This would be extremely disruptive because the use of beds in that area could be eliminated for a long period of time.

Expansion Concept for Each Component

The expansion plan should not only include an expanded bed capacity, but also an expansion concept for every functional component of the jail. These expansion concepts will tell the designer how each component will accommodate future capacity requirements and will, in turn, begin to dictate design and location. Considerations and options for expanding each component follow.

Master Control

Allowance must be made for future control systems, touch screens, panels, equipment racks,