



Lancaster County Correctional Facility

Schematic Design Report

August 2024

DRAFT

TRANSYSTEMS

in association with

HDR

DISCLAIMER

The Schematic Design (SD) serves as a baseline for the Lancaster County Correctional Facility project as it continues through the subsequent design phases. It is important to understand design is an iterative process that requires response to conditions such as site constraints, building adjacencies, technology upgrades and changing industry standards. As such, it is not uncommon for elements such as square footages included within the Program document to vary up to the point of procuring construction documents.

The current direction from the Board of Commissioners is to plan for a facility to support a total capacity of approximately 1,000 beds and that is reflected in the SD design.

Although the Board of Commissioners will approve the SD, **a subsequent official vote will need to be taken to establish the overall budget for this project.** The SD will then be refined as necessary to fall within this constraint.

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EXECUTIVE SUMMARY

The Schematic Design (SD) for the new Lancaster County Correctional Facility (LCCF) aims to develop a state-of-the-art correctional facility that supports the well-being of inmates and staff while adhering to strict security protocols. It is designed to be adaptable and flexible to meet the needs of the ever-changing criminal justice system now and well into the future.

The design responds to the LCCF Mission Statement that defines the project goals and provides a vision of the future LCCF.

“Construction of the LCCF will result in a facility that is professional, operates with the utmost integrity and adheres to facility and corrections best practices to prepare individuals to re-enter society as law abiding and productive citizens while providing a safe environment for the incarcerated, staff, visitors and the community.”

Additionally, the LCCF Guiding Principles serve as a guide for project development. Before any major design decisions are made, the team refers to these principles to ensure the project stays in line with the stated goals.

1. Create a safe and supportive environment for staff, detainees, inmates, and the public.
2. Focus programming to support the reduction of recidivism.
3. Plan a facility that will serve the community well into the future.
4. Establish a positive community footprint.

General

Upon the execution of the Design Team Services Agreement, Transystems and our consultant team began working with the County through a program review and verification process, and subsequently developing a series of conceptual site plans and floor plans. Regular conference calls and countless in-person work sessions were conducted during this process. The County was well represented during every meeting and actively participated in the true spirit of collaboration. After progressing through several iterations of design concepts over the past several months, the County ultimately selected one option for the design team to focus on. This option was further developed into the design that is presented in this SD report.

It is important to note that SD is only the first of three design phases, with Design Development (DD) and Construction Documents (CD) being the latter two. During the SD phase, our team develops the overall concept and general layout for the project. We explore the spatial relationships, form, function, and general appearance of the building. The goal is to develop a general site plan, basic floor plans and exterior elevations, and preliminary building system information that will establish the foundation for the subsequent design phases.

The information provided in the SD is very high-level and does not contain a lot of detail at this stage of design. Ideas and concepts developed during SD will be further developed and refined during the DD and CD phases. For example, during the DD phase, tasks such as identifying construction types, selecting appropriate materials and finishes, coordinating mechanical and electrical systems, and integrating sustainability features into the design will be completed. In other words, as we progress through each design phase, we steadily move our view of the project from a 'sky high' level to the 'ground' level.

Once the SD phase is approved by the County and the project enters the subsequent design phases, any major deviations from the current concept or significant revisions to the SD design could have schedule and cost impacts. The current SD design has been thoroughly vetted by the County for spatial needs and adjacencies, circulation, and operational efficiencies in accordance with the Program so we do not anticipate any major revisions moving forward.

Program

Upon the County's acceptance of the Facility Program Final Report (Program) developed by CGL, our team went to work reading and comprehending its contents. As is typical in a program review and verification process, all core components of the facility were discussed thoroughly to confirm the County's needs and requirements for the project. Many revisions to the Program were suggested, discussed, and accepted by consensus of the County. In addition, the County gave the direction to reduce the design capacity of the facility from 1,212 beds (as stated in the Program) down to approximately 1,000 beds. Accordingly, the current design contains a total of 994 beds. This reduction, along with the accepted revisions throughout the program, led to a significant decrease in the size of the proposed facility design. The original program called for 482,381 gross square feet and the current SD is reflecting a total of 433,018 gross square feet, for a total reduction of nearly 50,000 gross square feet.

Along with the decision to reduce the bed capacity of the facility, it was also directed to reduce the central service core and functions like food service, laundry, warehouse, central plant (central mechanical & electrical rooms) to only accommodate 1,000 beds, NOT the full build-out capacity of 1,212 beds. In the future, if the need for additional bed space arises, these central service core spaces may need to be expanded to accommodate the additional capacity. The area designated to construct future additional housing, if the County is so inclined, is shown on the site plan on the southern end of the building.

During SD, the County requested the design team to consider the inclusion of a Central Booking area within the Intake component, possibly as part of a future expansion. Through several discussions with the County, it was agreed to include this area in the design now in lieu of some point in the future. The Central Booking function is integral to the Intake process and would be difficult to simply construct additional space to accommodate this in the future. It would require a major, if not complete, redesign

of the Intake component if incorporated later. Therefore, the current SD includes the Central Booking function which added approximately 3,000 gross square feet to the building.

It should be noted that the revisions to the program described above were primarily made to create efficiencies in the design and better suit the operations of the LCCF. These revisions had little to no impact on the guiding principles for the project and maintained the overall integrity of the original Program.

| Schematic Submission SF Totals - Program vs Actual Summary | | | |
|---|--|--------------------|----------------|
| Program | | Square Foot Totals | |
| No. | Name | Prog | Actual |
| 1.0 | Public Entrance and Visitation | 4,848 | 4,818 |
| 2.0 | Facility Administration (Outside Security) | 6,120 | 6,780 |
| 3.0 | Staff Entrance & Support | 19,071 | 26,358 |
| 4.0 | Main Control | 865 | 1,027 |
| 5.0 | Intake, Transport and Release | 24,128 | 30,160 |
| 6.0 | Inmate Programs | 9,446 | 9,730 |
| 7.0 | Commitment Housing | 32,353 | 32,442 |
| 8.0 | Male Housing | 172,389 | 124,060 |
| 9.0 | Female Housing | 29,715 | 15,401 |
| 10.0 | Specialty Housing | 28,824 | 23,188 |
| 11.0 | Work Release Housing | 11,956 | 14,812 |
| 12.0 | Juvenile Detention | 6,448 | 10,537 |
| 13.0 | Medical and Specialty Services | 16,808 | 24,426 |
| 14.0 | Laundry | 2,575 | 3,096 |
| 15.0 | Food Production and Delivery Prep | 9,553 | 9,162 |
| 16.0 | Building Support and Warehouse | 24,003 | 22,525 |
| 17.0 | Central Plant | 13,200 | 10,635 |
| | Sub - Total | 412,302 | 369,157 |
| | Ancillary Mechanical Space | | 20,337 |
| | Circulation - Horizontal / Vertical | | 43,524 |
| | Program Building Grossing Factor | 1.17% | |
| GRAND TOTALS | | 482,392 | 433,018 |

Schematic Design

The project site is situated on an old agricultural field bounded by the Conestoga River and is accessed from Highland Avenue by a single access drive that will be extended to the project site. After a preliminary analysis of the site, there were a few site constraints identified that helped inform the overall building concept and configuration:

- The Conestoga River bounds the east, south, and west sides of the property.
- A legacy quarry on the northern end of the property.
- High voltage transmission line on the western side of the property.
- Steep topography on the east, south, and west sides of the property.

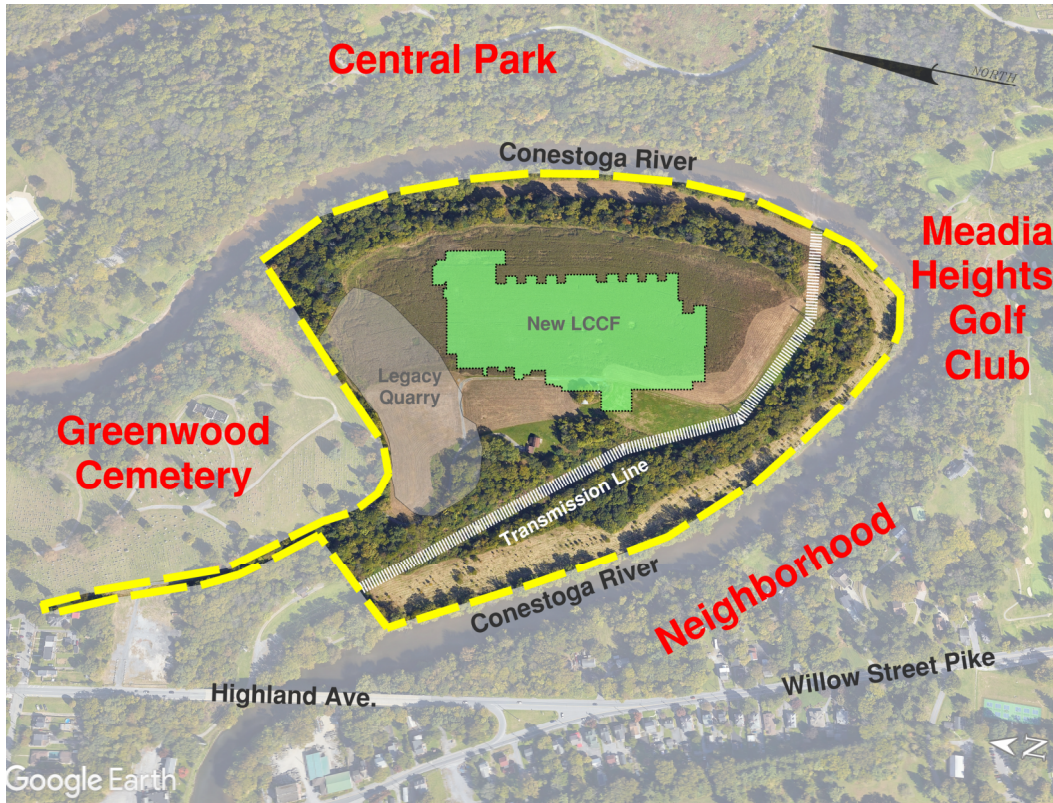


Fig. 1 - Site Constraints

These constraints along with the County’s desire to have a single-story facility posed some challenges related to the building configuration but ultimately the concept was able to fit quite well on the site and avoid any potential costs associated with mitigating the afore mentioned constraints.

Key site design features include:

- The building has a non-institutional aesthetic that complements its surroundings by using muted earth tones. The single-story facility maintains a low profile, so it is not very prominent or visible from the surrounding areas.
- There will be an abundance of green space, trees, and landscaping to provide a beautiful, serene, and welcoming aesthetic. The trees and landscaping will be designed to also provide visual screening from the adjacent properties where appropriate.
- The building configuration is such that the potentially noisy components of the LCCF are positioned away from the neighborhood on the western side of the property. The majority of Housing Units, along with their associated outdoor recreation spaces, are situated on the eastern side and the Loading Dock/Service Yard where large trucks will be making deliveries, is located on the northern end of the property.
- Light pollution to surrounding areas will be minimized by using shielding on light poles and exterior building lighting that will direct light downward.

- The building exterior walls are considered the secure perimeter, so no security perimeter fencing is planned except for the service yard loading dock area.
- There is adequate parking for both visitors and staff.
- There is future building expansion capabilities on the southern end of site.



Fig. 2 - Site Plan

The building is a single-story facility with mezzanine levels on the housing units. It prioritizes the health and well-being of those employed and incarcerated inside the facility with a safe, flexible and efficient design approach.

The main entrance is community friendly, with a prominent 2-story massing that clearly identifies the visitors entrance to the facility. The building components are arranged such that there is a clear separation between the non-secure and secure portions of the facility. The facility is navigated by way of 10-foot wide main corridors, two of which are nearly 700-feet long.

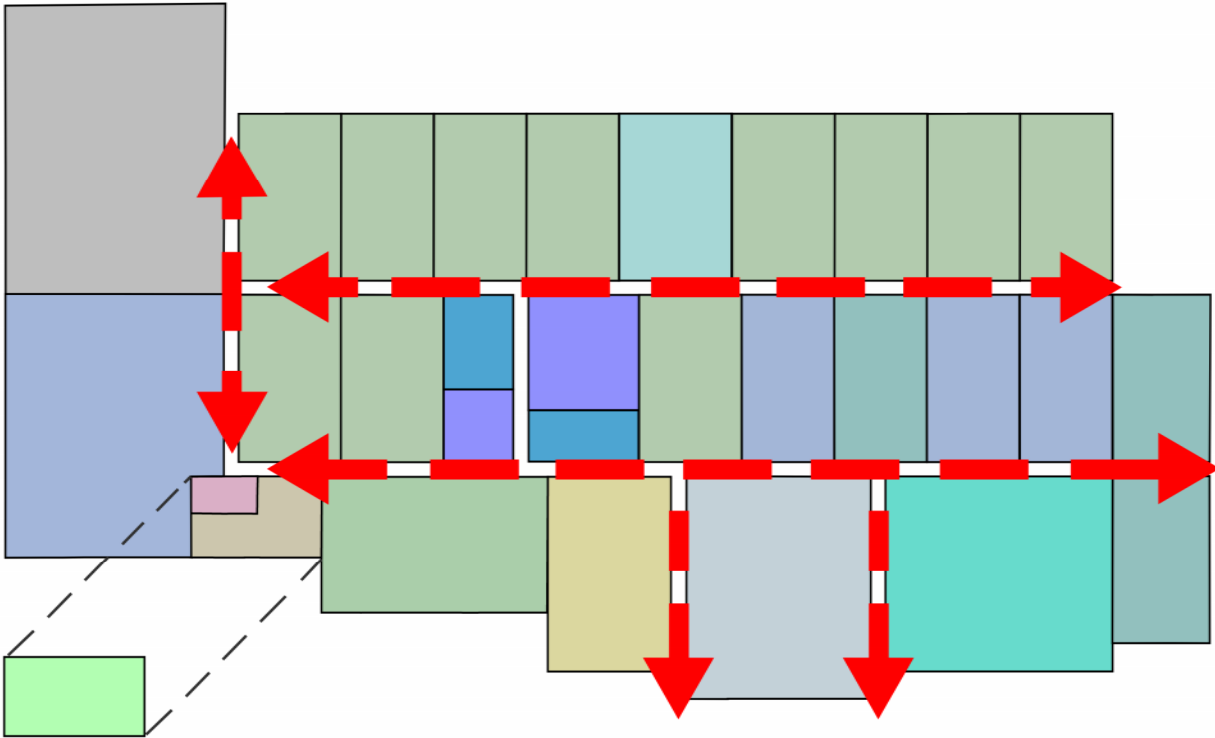


Fig. 3 – Concept Floor Plan

Key building design features include:

- Compliant with American with Disabilities Act (ADA).
- Compliant with current American Correctional Association standards.
- 100% climate controlled.
- Separate visitor and staff entrances.
- Several areas focused on staff safety and well-being including ample training space, fitness room, staff break area with outdoor courtyard, and second floor administration offices with rooftop patio area.
- Total of 994 beds located in 21 Housing Units.
 - Allows for proper classification and treatment of inmates.
 - All bottom-tier beds (no bunk beds).
 - Flexible design with mixture of single, double, and quad cell configurations as well as sub-dayrooms.
 - Maximum capacity of any Housing Unit is 64 beds – allows for better supervision and interaction between officer and inmates.
 - Dayrooms have an abundance of natural daylight.
 - Each Housing Unit has a recreation area that can be used year-round and during inclement weather that provides fresh air and natural light.
- Several spaces for inmate programming and counseling are located in each Housing Unit, Housing Cluster support areas, and centralized programming area.



Fig. 4 – Preliminary Housing Unit Concept

- Purpose-built Wellness Center (Medical) component will provide inmates with more access to care and allow staff to provide more effective treatment.
 - Designed similar to community-based facility that allows more procedures/interventions to occur in facility.
 - Less acute clinical functions located near entrance.
 - Exam rooms sized for multiple acuity levels – creates flexibility.
 - Exam bays for observations and rule-outs.
 - Two (2) infectious isolation rooms.
 - Four (4) rooms for inmate-patients of size (+500lbs).
 - Normalized finishes/environment to facilitate treatment and recovery.
 - Dedicated space for healthcare staff
- Sustainable design strategies that will optimize operations and reduce energy costs.

Sustainability / Operational Efficiency

We strive to design buildings and environments that are energy-efficient, resource-conscious, and harmonious with their natural surroundings. With building and energy codes becoming more stringent in their requirements, there are many sustainable strategies that we utilize in our designs to comply with these regulations and follow current best practices. The goal is to implement the appropriate combination of services, materials, equipment, and systems that will lead to operational efficiencies throughout the facility. This will create a positive return on investment for the County and its taxpayers by reducing the use of costly resources such as time, personnel, space, and money. Some examples of sustainable strategies currently proposed for the LCCF include:

- Thermally efficient building envelope to reduce heating and cooling demands.
- White colored roofing membrane.
- Utilize modular cell construction to minimize waste and improve efficiency.
- Maximize the use of natural daylighting.
- High performance mechanical equipment (target goal of >20% above code required efficiencies)
- Mechanical system controls such as optimum start/stop, economizer controls, and supply air temperature reset (SATR).
- No Chlorofluorocarbon (CFC) or Hydrochlorofluorocarbon (HCFC) based refrigerants shall be used in HVAC equipment.
- Commissioning of building systems.
- Low flow plumbing fixtures.
- Water management controls.
- Hot water recirculation.
- High efficiency water heaters with storage tanks.
- LED lighting.
- Automatic shutoff controls such as occupancy sensors and timer switches.
- Daylighting controls.
- Recycled materials.

There are several other sustainable strategies that go far beyond what is required by code. These items typically have large up-front costs associated with them but could potentially be beneficial to the County in the long term by saving on operational and energy costs. Throughout the next design phase (DD), we will further explore several of these strategies and determine the viability of implementing them into this project and the cost impact they may have. Some examples of these additional strategies include:

- Green/vegetative roof.
- Cooling towers & water-cooled chillers.
- Geothermal system.
- Chillers that provide heat recovery.
- Rainwater harvesting.
- Grey water recycling.
- Solar water heating for supplemental water heating assistance.
- Solar photovoltaic (PV) system.

Opinion of Probable Costs

The SD phase opinion of probable project costs developed by our independent cost estimator is between **\$890/SF and \$940/SF**.

This includes off-site development, site development and building construction costs as is depicted in the current design. Please note that we are still very early on in the design process and many things are still very much subject to change. This is merely a snapshot in time.

In addition to the construction costs described above, there are other costs associated with the project that are included in the overall project budget, known as soft costs. Soft costs typically include items such as professional fees, Inspections, Legal, FF&E (furniture, fixtures, and equipment), and other costs not directly related to hard construction costs.

While this range of costs is consistent with comparable correctional projects being constructed today, it is important to note that the numbers we are presenting are **estimates only** and we won't know actual construction pricing until we receive bids on bid day. Our numbers are based on historical data and a combination of what current market conditions indicate and what we expect market conditions to be at the time this project is bid. Despite all that, the total construction numbers could vary, potentially significantly, on bid day. Keep in mind that the County is not locked into anything until it receives bids and executes construction contracts.

In the meantime, the Project Team will continue working with the County throughout the completion of design and beyond to optimize the design and to ensure the County is getting the best value and the most 'bang for its buck' with this project.

Schedule

It is anticipated that the SD package will be approved by the County near the end of August 2024 along with a Notice to Proceed with the remainder of design. The next design phase, Design Development (DD), is expected to be completed in 3 months and the final design phase, Construction Documents (CD), approximately 6 months. The timeline should also allow for a 1-month County review period at the end of each design phase. With that in mind, we anticipate having bid documents completed and ready for bid by July 2025, barring any unforeseen circumstances.

Bidding and Contract Award typically will last 3-4 months, and Construction is expected to take at least two (2) years. At this point, we would tentatively expect construction to be completed near the end of 2027 with full occupancy of the new LCCF a few months afterwards.

It should be noted that it is anticipated the County will retain the services of a Construction Manager (CM) firm sometime during the DD phase. As part of the CM's services, they will develop an overall project schedule for bidding and construction that may differ from what is described above.

Section 1.0

SD Drawings

LANCASTER COUNTY
CORRECTIONAL FACILITY

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POTENTIAL

CONSENT PLANS

**LANCASTER COUNTY
CORRECTIONAL FACILITY**

PROJECTS

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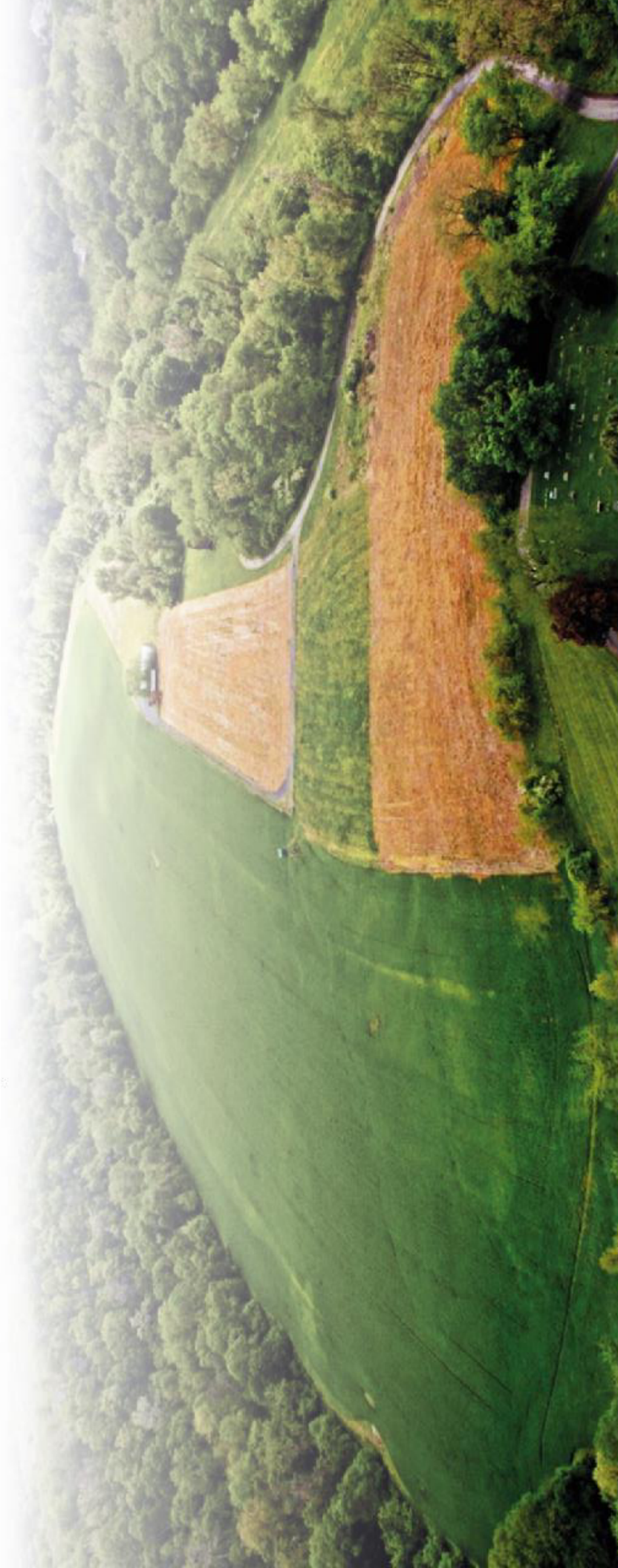




LANCASTER COUNTY CORRECTIONAL FACILITY

Draft Schematic Design Update

August 13, 2024



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The current direction from the Board of Commissioners is to plan for a facility to support a total capacity of approximately 1,000 beds and that is reflected in the current SD.

Although the Board of Commissioners will approve the SD, **a subsequent official vote will need to be taken to establish the overall budget for this project.** The SD will then be refined as necessary to fall within this constraint.



AGENDA

1. Purpose of Schematic Design
2. Mission Statement & Guiding Principles
3. Site Description
4. Schematic Design Presentation
5. Sustainability / Operational Efficiency
6. Opinion of Probable Costs
7. Next Steps



1 – Purpose of Schematic Design

Schematic Design is the first phase of the architectural design process. Utilizing the work completed to date such as the needs assessment and the program, the schematic design outlines the project into an overall concept to guide the future design of the new Lancaster County Correctional Facility (LCCF).

- The LCCF Schematic Design is currently in **DRAFT** form.
- Revisions will be made based on the comments received.



2 - MISSION STATEMENT

“Construction of the LCCF will result in a facility that is professional, operates with the utmost integrity, and adheres to facility and corrections best practices to prepare individuals to re-enter society as law-abiding and productive citizens while providing a safe environment for the incarcerated, staff, visitors and the community.”

2 - GUIDING PRINCIPLES

Create a safe and supportive environment for staff, inmates and the public

- Design areas for staff wellness, including sufficient workstations, training space and break areas
- Ensure staff, inmates and the public are safe and feel supported
- Plan for spaces to support special populations

Focus programming to support the reduction of recidivism

- Set the tone and behavioral expectations at intake: preparation for community re-entry process starts at the intake process
- Improve access to justice system stakeholders to connect inmates to the community
- Provide flexible spaces that can support a variety of program opportunities

2 - GUIDING PRINCIPLES

Plan a facility that will serve the community well into the future

- Right-size housing units for operational adaptability and the populations served
- Allow for adaptability of design to incorporate future needs
- Integrate technology to advance and enhance operations, programs, facility maintenance and security

Establish a positive community footprint

- Create a facility that is mindful of the surrounding community, including impacts related to building appearance, noise, light pollution and traffic
- Serve as good stewards of resources
- Incorporate nature outside the facility and biophilic features inside the facility

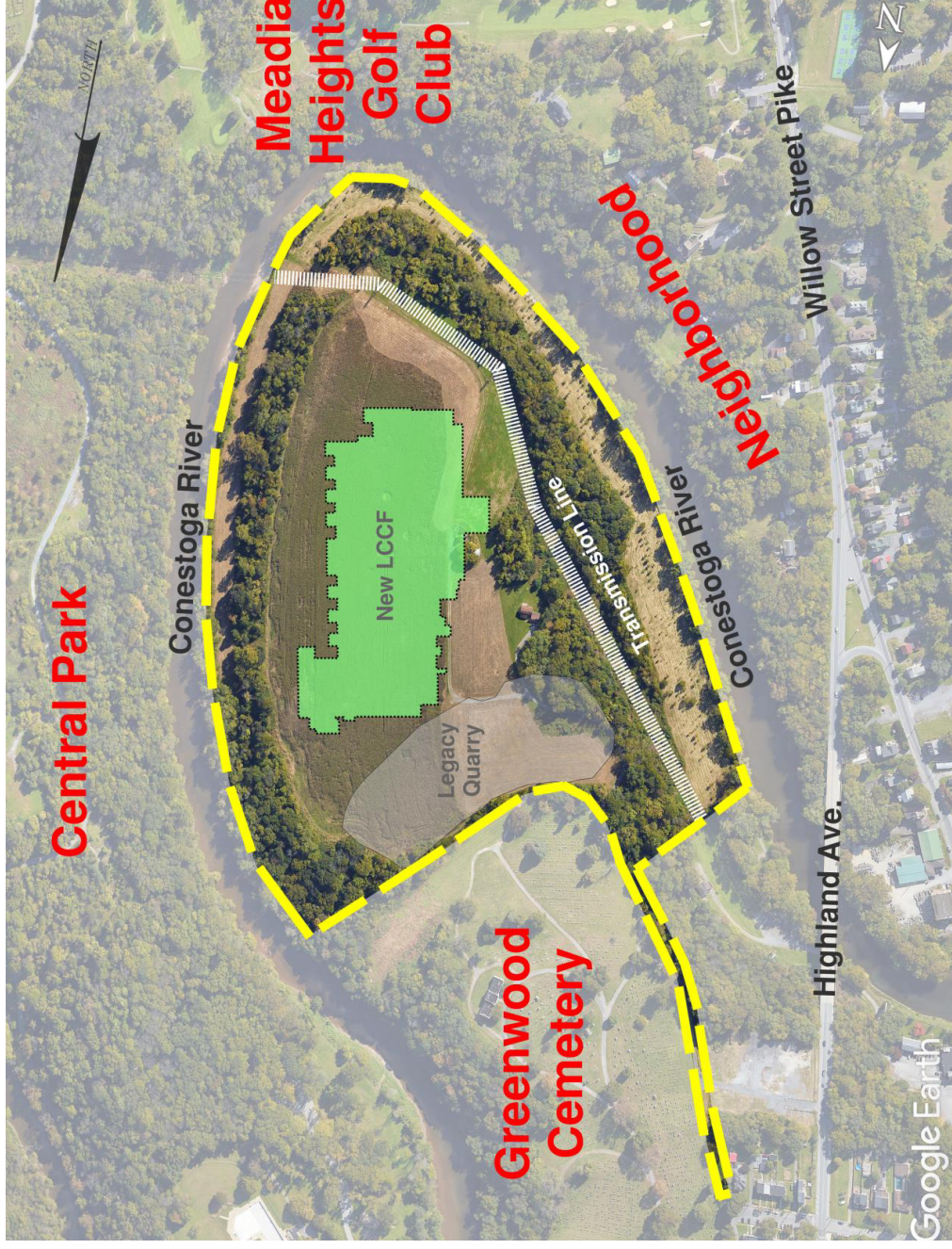
3 - Site

Site Constraints

- Conestoga River
- Legacy Quarry
- Transmission Line
- Topography

Key Considerations

- Community
- Sustainability / Operational Efficiency



3 - Site

Key Design Features

- Non-Institutional Aesthetic
- Green Space, Trees, and Landscaping
- Limited Sound and Light Pollution
- Adequate Parking for Visitors and Staff
- Future Expansion Capability



3 - Site



3 - Site



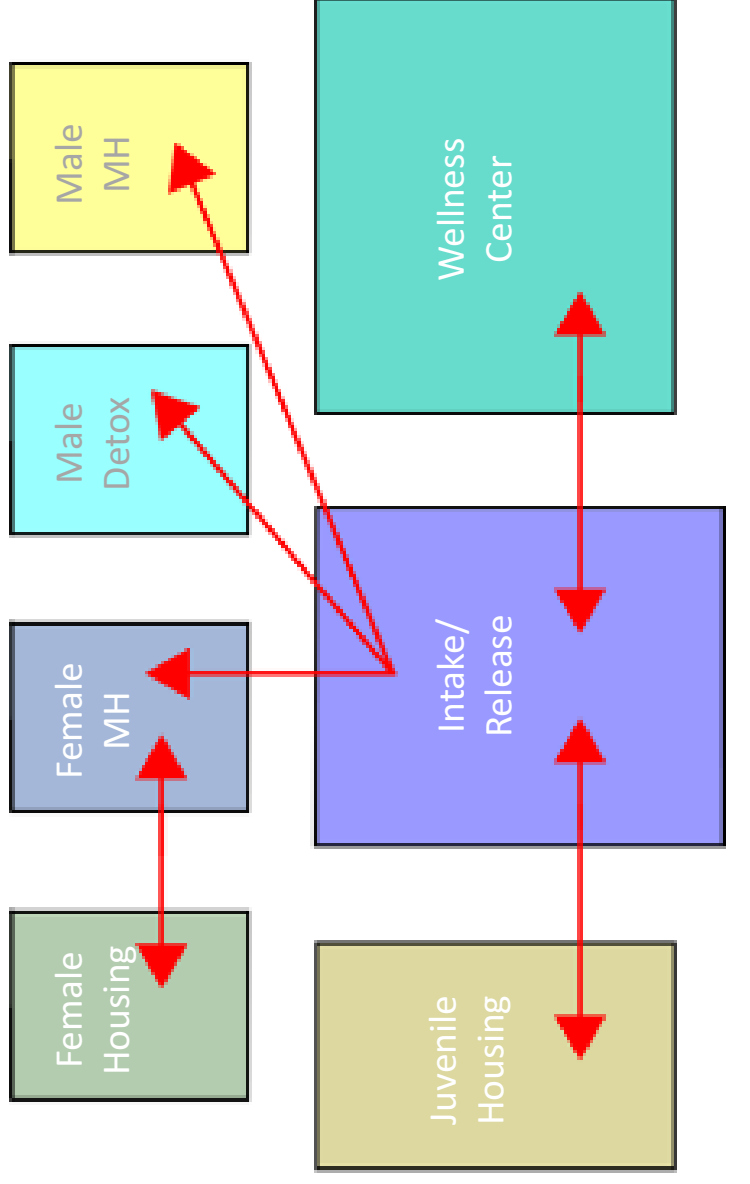
3 - Site



4 – Schematic Design

Program Verification

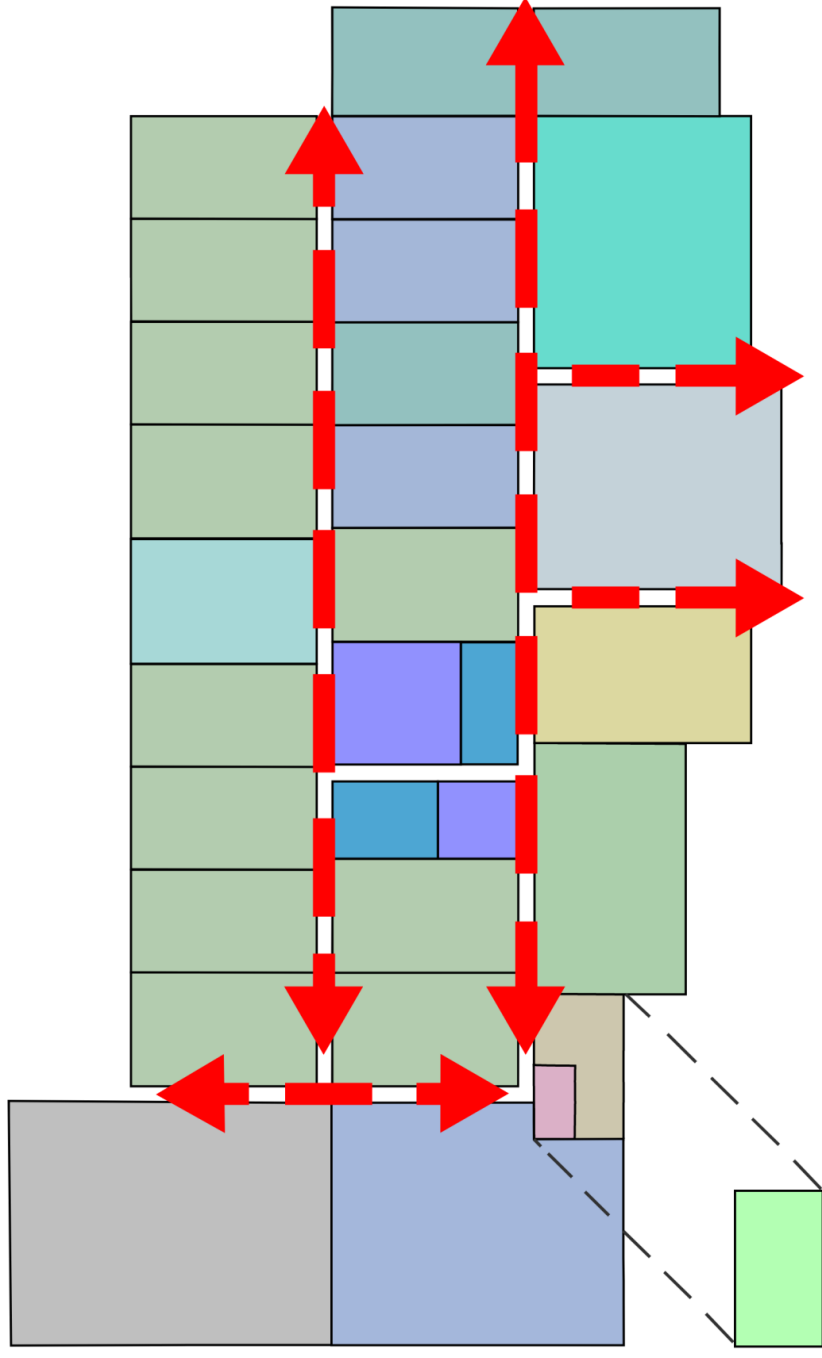
- Reviewed each building component to ensure it meets the needs and requirements of the County
- Created spatial blocks representing each component based on projected square footage from the Program
- Explored the adjacencies of each component and how they function and interact together



4 – Schematic Design

Schematic Plan

- Arranged component blocks to create an overall building concept
- Explored circulation paths throughout building
- Looked for operational efficiencies
- Test-fit concept plan within site constraints



4 – Schematic Design

Key Design Features:

- Single-story facility with mezzanine levels on housing units
- Prioritizes health and well-being of those employed and incarcerated
- Compliant with American with Disabilities Act (ADA) & American Correctional Association (ACA) Standards
- 100% Climate Controlled
- Utilizes sustainable practices to support high-performance construction and cost-effective operations.



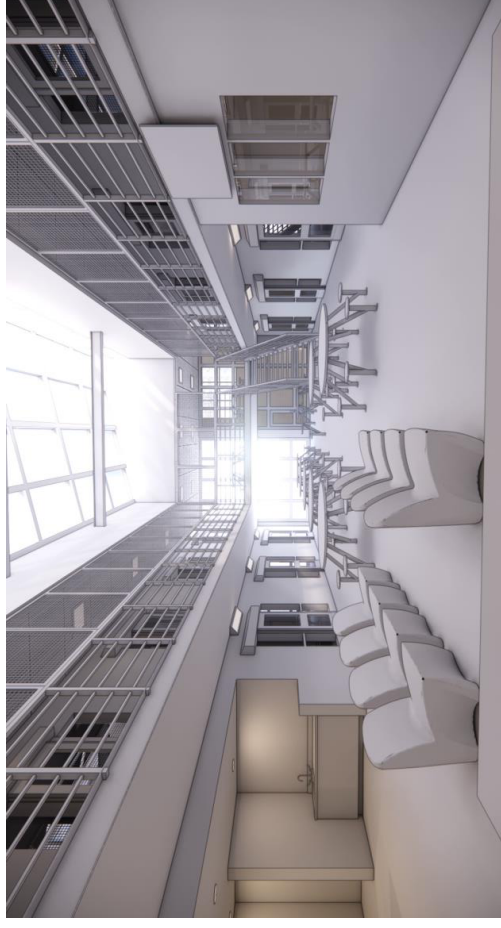
4 – Schematic Design

Key Design Features (continued):

- Adequate housing capacity for proper classification and treatment of inmates
 - 994 Beds / 21 Housing Units
 - Average of 64 beds per unit allows for better supervision and interaction between officers and inmates
 - Dedicated spaces for Programming, Treatment, Counseling, and Video Visitation



Preliminary Housing Unit Concept



Preliminary Housing Unit Concept

4 – Schematic Design

Key Design Features (continued):

- Other key design features of Housing:
 - Creates a sense of community
 - Flexible and efficient design
 - Ample natural daylight
 - Normative environment
 - All single-level beds (no bunk beds)
 - Access to recreation areas that provide fresh air and natural light

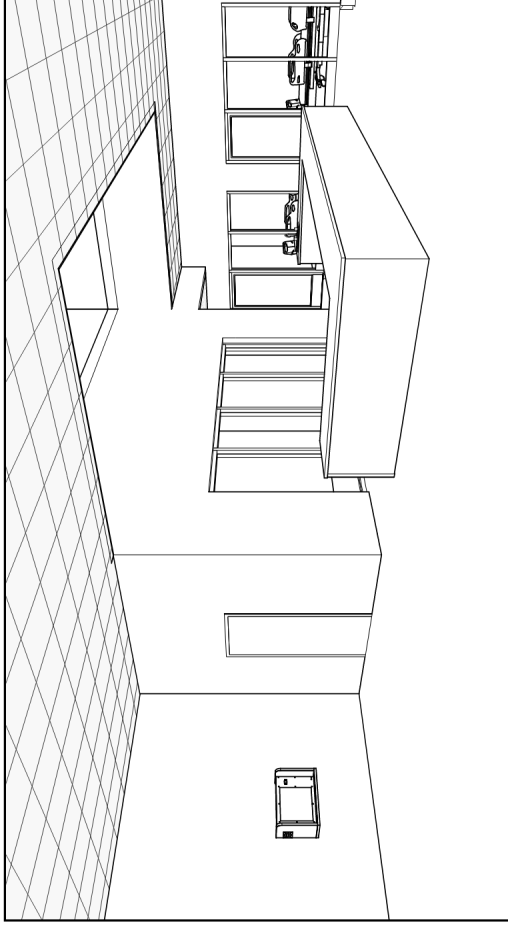


Preliminary Housing Unit Concept

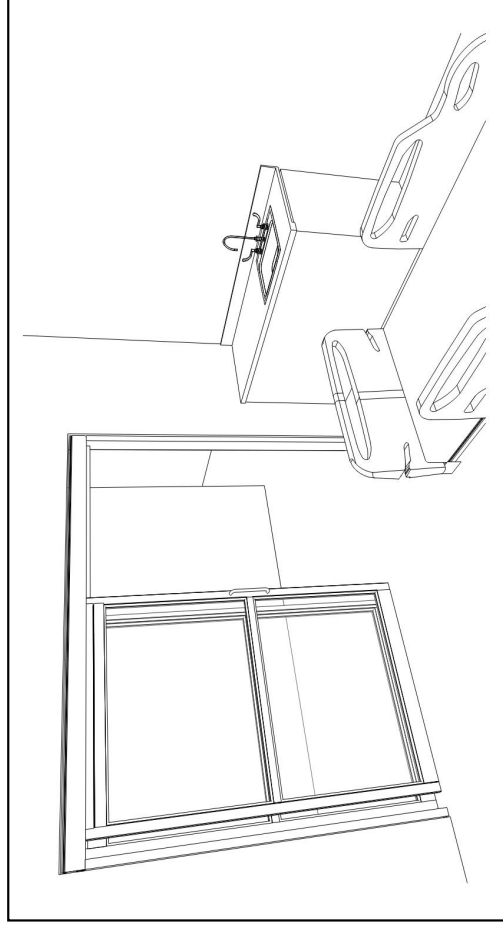
4 – Schematic Design

Key Design Features (continued):

- Purpose-built Wellness Center will provide inmates with more access to care and allow staff to provide more effective treatment
- Key design features of Wellness Center:
 - Similar to community-based facility that allows more procedures/interventions to occur in facility
 - Wide corridors and large treatment rooms
 - Normalized finishes/environment to facilitate treatment and recovery



Preliminary Wellness Center Concept

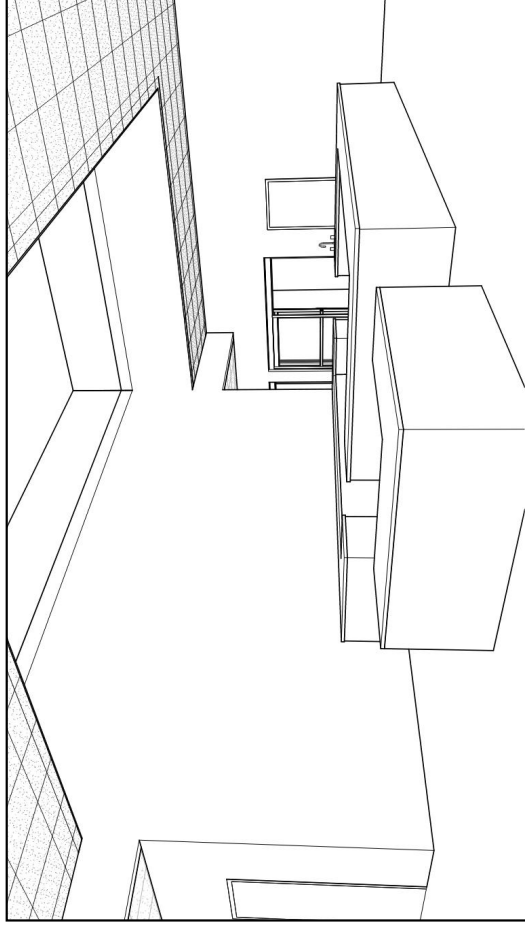


Preliminary Wellness Center Concept

4 – Schematic Design

Key Design Features (continued):

- Dedicated space for healthcare staff
- Designed to adapt to multiple inmate characteristics – Age, Size, and Handicap Accessibility
- Infectious isolation spaces
- Dedicated pharmacy



Preliminary Wellness Center Concept

5 – Sustainability / Operational Efficiency

Standard Sustainable Design Features:

- Thermally efficient building envelope (walls, roof, windows).
- White colored roofing membrane.
- Maximize natural daylighting.
- High performance mechanical equipment /controls.
- Low flow plumbing fixtures.
- High efficiency water heaters.
- LED lighting.
- Lighting controls – Occupancy sensors/timer switches.
- Recycled materials.



5 – Sustainability / Operational Efficiency

Optional Design Features Pending Further Consideration:

- Green/vegetative roof.
- Cooling towers & water-cooled chillers.
- Geothermal system.
- Chillers that provide heat recovery.
- Rainwater harvesting.
- Grey water recycling.
- Solar photovoltaic system.



6 – Opinion of Probable Costs

Project Costs Could Range Between \$890/square foot to \$940/square foot

Notes:

- Includes both hard construction costs and soft costs.
 - Hard Construction Costs – Off Site Development, Site Development, Building Construction
 - Soft Costs – Design Fees, Inspections, Legal, Insurance, FF&E
- Design is still in very early stage; many things are still subject to change.
- This is an **Estimate ONLY!** Won't know actual cost until Bid Day.
- Numbers are based on historical data and what current and future market conditions indicate.
- The County is NOT locked into anything until it executes construction contracts.

7 - Next Steps

- ❖ Commissioner and Staff Review - August 2024
- ❖ Prison Board - August 15, 2024
- ❖ Public Listening Session - August 21, 2024
- ❖ Board of Commissioners Approval - TBD

Design Development will begin once the Board of Commissioners have approved the Schematic Design.