



SESSION # CD-06

SEPTEMBER 20, 2013 | 09:45 AM

CALIFORNIA'S NEW PRISON HEALTH CARE FACILITY



**The
Future
Is Now:
Alternative
Project Delivery**

AIA AAJ NATIONAL CONFERENCE
PORTLAND, OR | SEPTEMBER 18-21 2013



THE AMERICAN INSTITUTE
OF ARCHITECTS
Academy of Architecture for Justice

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Course Description

The 2,855-bed California Health Care Facility in Stockton, California is the California Department of Corrections and Rehabilitation's new prison health care facility and their first design/build project.

Hear about the challenges and successes of delivering this complex facility from the owner, criteria architect, and representatives from the project's three design/build teams.



Learning Objectives

1. Participants will be able to assess the suitability of the design/build delivery method for complex correctional projects.
2. Participants will be able to understand the challenges of Providing a healing environment in a correctional setting and how innovative approaches to project delivery facilitated success.
3. Participants will be able to have a basic understanding of the design/build selection process used by the California Department of Corrections and Rehabilitation with perspectives from the owner, architects and builders.
4. Participants will be able to apply lessons learned from the CHCF and DNCA projects to their own projects.



Presenters



Mike Meredith
CDCR Project Director

Paul Nagashima
DB Package 2 Architect

George Dyckes
Criteria Architect

Bill Prindle
DB Package 2 Architect

Shannon Gustine
DB Packages 1 & 3 Operations Manager

Colin Blaney
DB Package 2 Structural Engineer

Jeff Goodale
DB Packages 1 & 3 Architect

Mike Justice
DB Package 3

Mark Radell
DB Package 2 Project Manager



Design-Build Delivery Method

- Saves 2-3 years over typical capital outlay process
- Best value qualifications-based selection assures:
 - Highly-qualified team
 - Team motivated to look out for owner's interest
- “Master Builder” approach
 - Builder's input during design
 - Major subs included on team
- Shifts risk

COURTS

THREE
JUDGE
PANEL

PLATA
RECEIVER
Medical

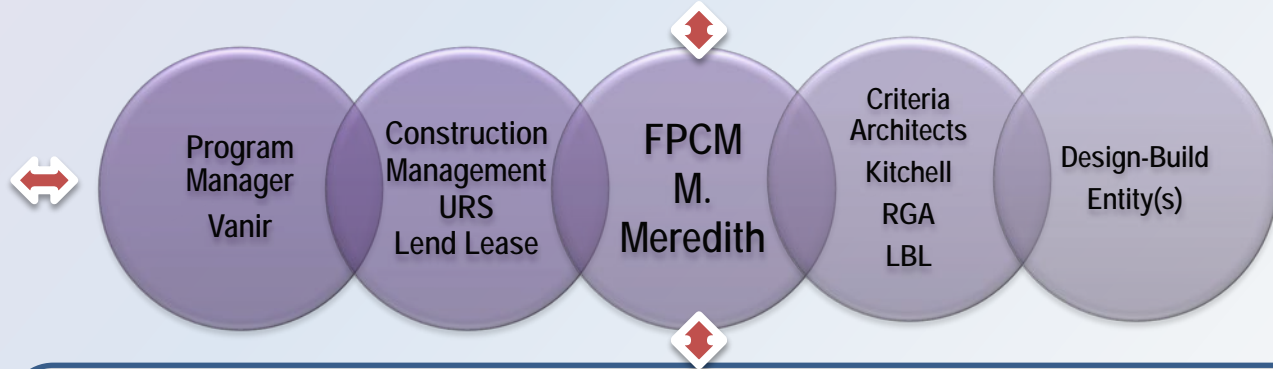
PEREZ
MONITORS
Dental

ARMSTRONG
MONITORS
ADA

COLEMAN
COURT
MONITORS
Mental

COORDINATION POINTS

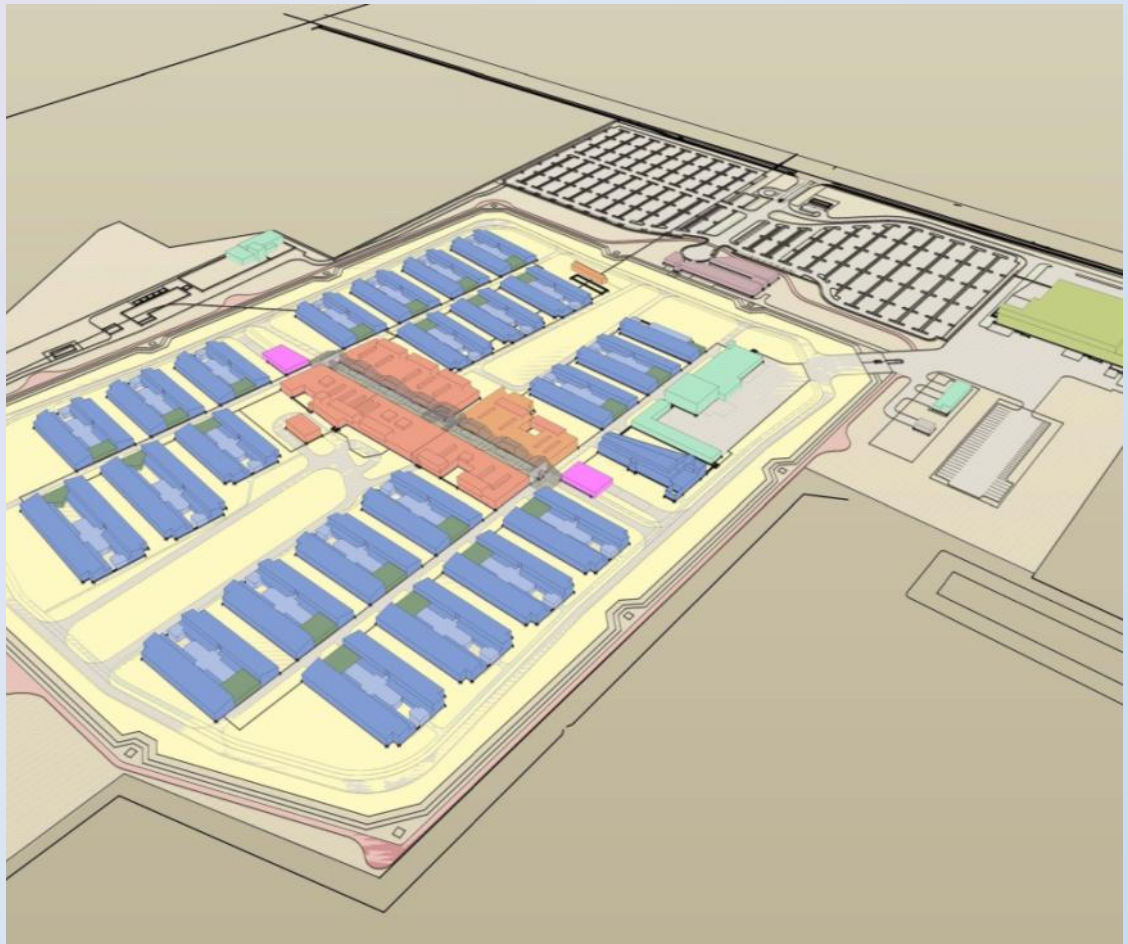
Legislature/JLBC	Licensing: Dept. of Health	State Fire Marshal	ADA Code Consultant: Sally Swanson	Food Service	CEQA Mitigation	Due Diligence: Real Property
Dept. of Finance: Bond Sale Funding	EIS-IT	FF&E: Agency Retained Items PIA	PG&E: Electrical Service	ME&P	Site Co-Location: DJJ, Re-Entry, DeWitt, CCC, CHCF	Caltrans
CEQA Consultants: Civil HazMat/Geo	Security Electronics	Materials Handling	OSHPD Peer Review: JC Chang/Vanir	Medical Equipment	Greater Stockton Chamber of Commerce City of Stockton San Joaquin County	JCAHO Accreditation
Central Plant: Air Quality Control Board	CPHCS Allied Health: Diagnostic Pharmacy / Lab Medical Records	Medical Process	Public Relations	Operational Unions Labor Force	Oversight	ISP Architectural Program



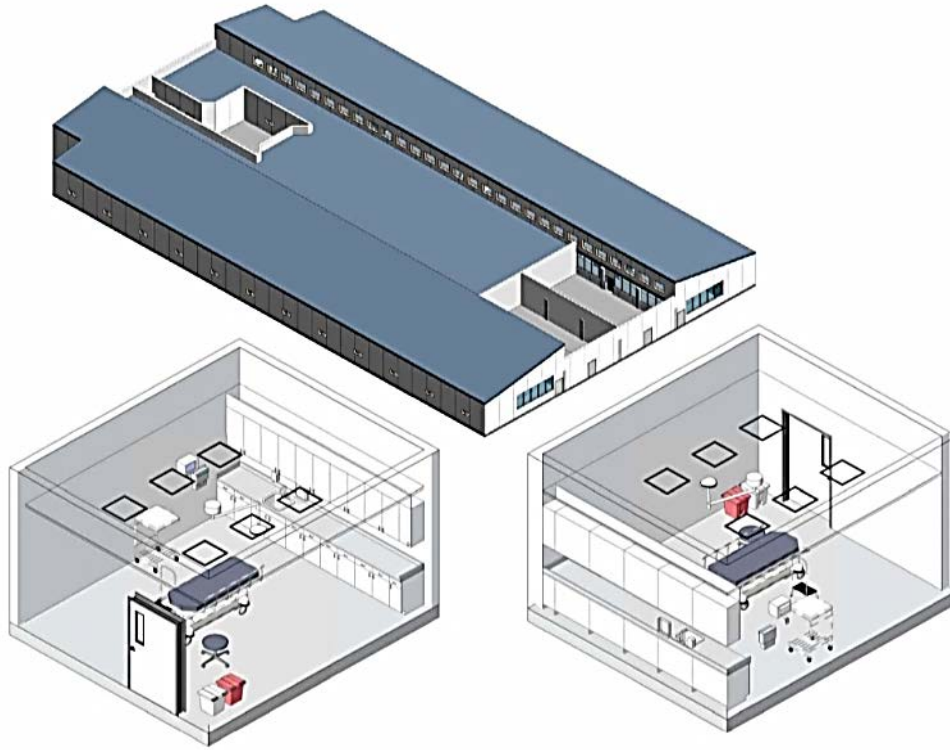
STAKEHOLDERS/USER GROUP/OPERATION

Division of Juvenile Justice (DJJ): Occupancy	Receiver: Dental, Medical, Mental, Activation, Court Reporting	Department of Mental Health (DMH)	CDCR Mental: Health Dental	CDCR Custody: Security Operations	FPCM Facilities: Operations Maintenance
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- New Correctional Health Care Facility
- Licensed – OSHPD-4 (CTC)
 - 1,722 Beds Total
 - 1,010 Medical
 - 612 Mental Health
 - 100 Work Crew
- 57 Buildings
- 1.2 Million GSF
- 144-Acre Site
- LEED Silver



Overview – California Health Care Facility CHCF



Project Overview – CHCF

Clinical

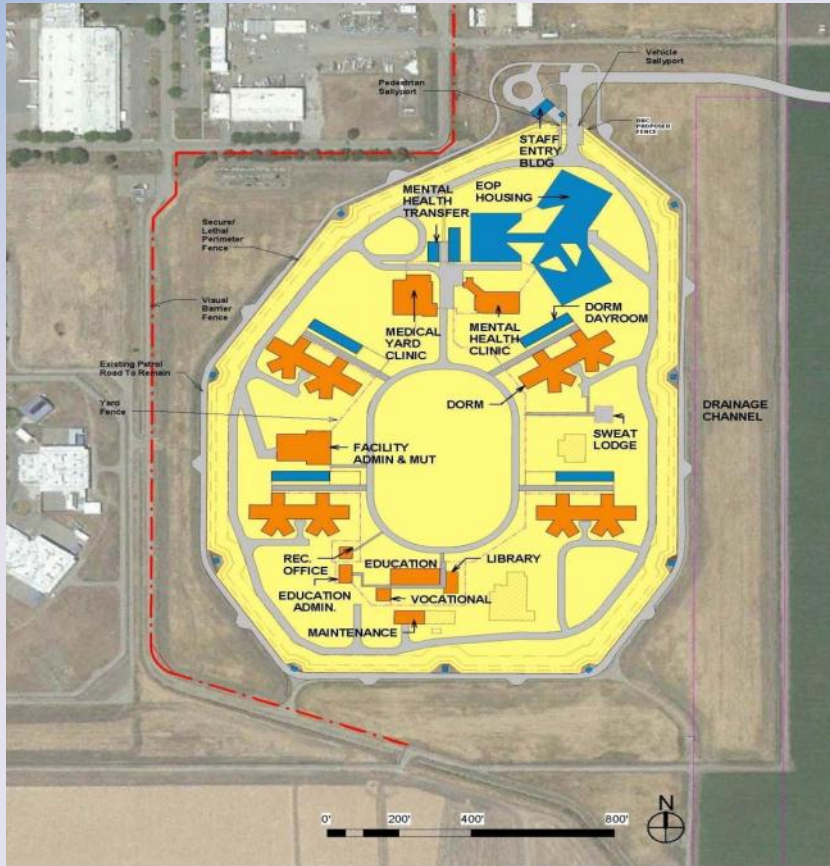
- Medical
- Dental
- Mental Health
- Standby Emergency
- Dialysis
- Imaging & Procedures
- PT/OT
- Pharmacy
- Laboratory

Programs

- Education
- Library
- Religious

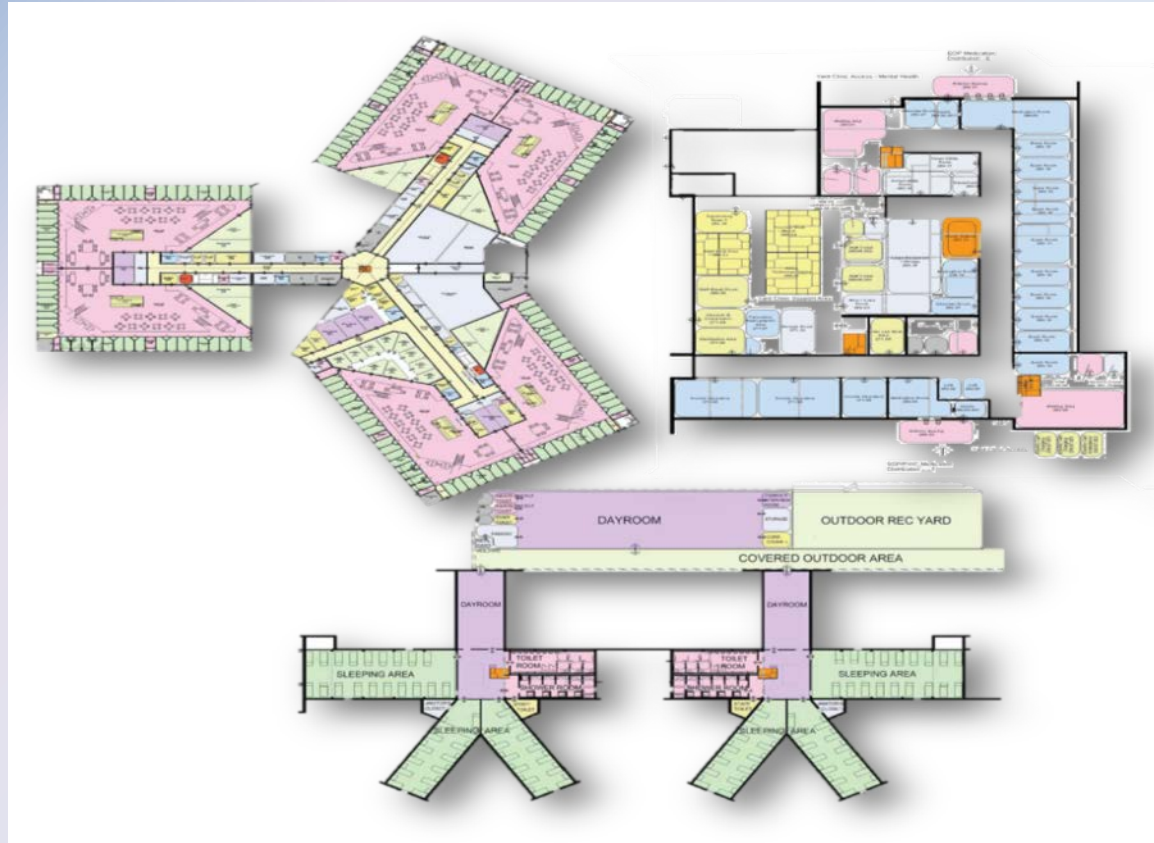
Support

- Administrative
- Material Handling
- Kitchen
- Maintenance
- Central Utility Plant



- Renovation & Addition to an Existing Juvenile Facility
- 1,133 Beds Total
 - 528 Specialized General Population (Medical)
 - 425 Enhanced Outpatient Program (Mental Health)
 - 180 Work Crew
- 26 Buildings
- 250,000 GSF
- 90-Acre Site
- LEED Silver – New EOP Housing

Overview – DeWitt Nelson Correctional Annex (DNCA)



Project Overview – DNCA

Clinical

- Medical
- Dental
- Mental Health
- Pharmacy

Programs

- Education
- Library
- Religious
- Recreation

Support

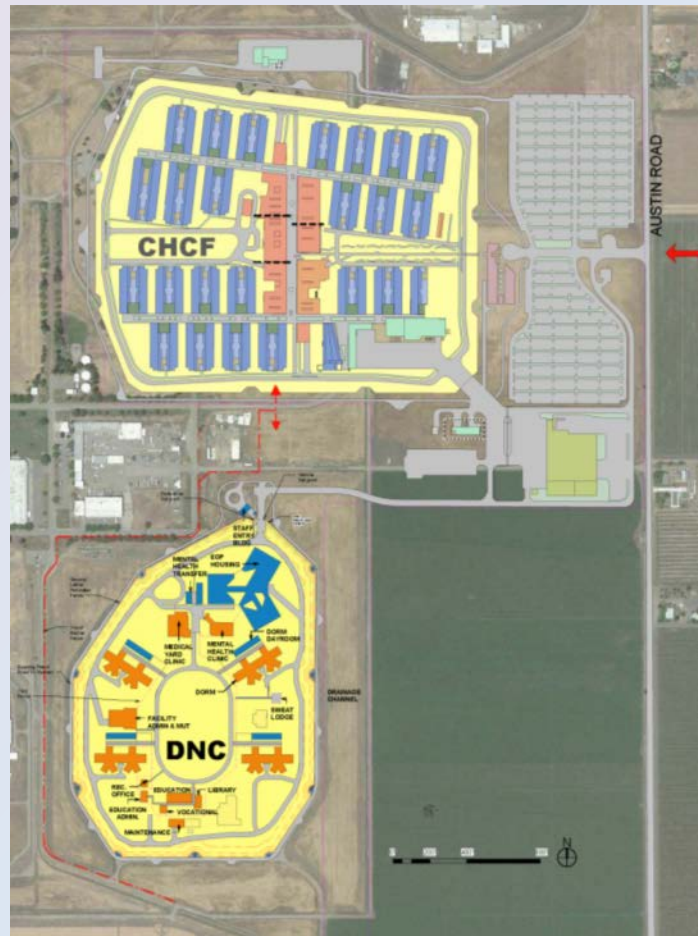
- Administrative
- Material Handling
- Maintenance

DB1 – CHCF Site & Unsecured Facilities

- \$129 million Stipulated Sum
- Granite Hensel Phelps
- HOK Lead Architect

DB2 – CHCF Housing & Health Care

- \$513 million Stipulated Sum
- Clark McCarthy A Joint Venture
- HDR, Inc. Lead Architect



DB3 – DeWitt Nelson Correctional Annex

- \$123 million Stipulated Sum
- Hensel Phelps Construction Co.
- HOK Lead Architect
- Dewberry Assoc. Architect

Project Structure

- Schedule, Schedule & Schedule
- Enormous Stakeholder Group
- CDCR's First Design-Build Project
- Coordination
- Complexity - Provide a Healing Environment in a Prison Setting

Challenges

- ?
- ?
- ?
- ?
- ?

Response



Need Site plan that represents
all of CHCF including DB1

Design Evolution – CHCF

Material Management System



Vendor Traffic

Facility Truck Traffic

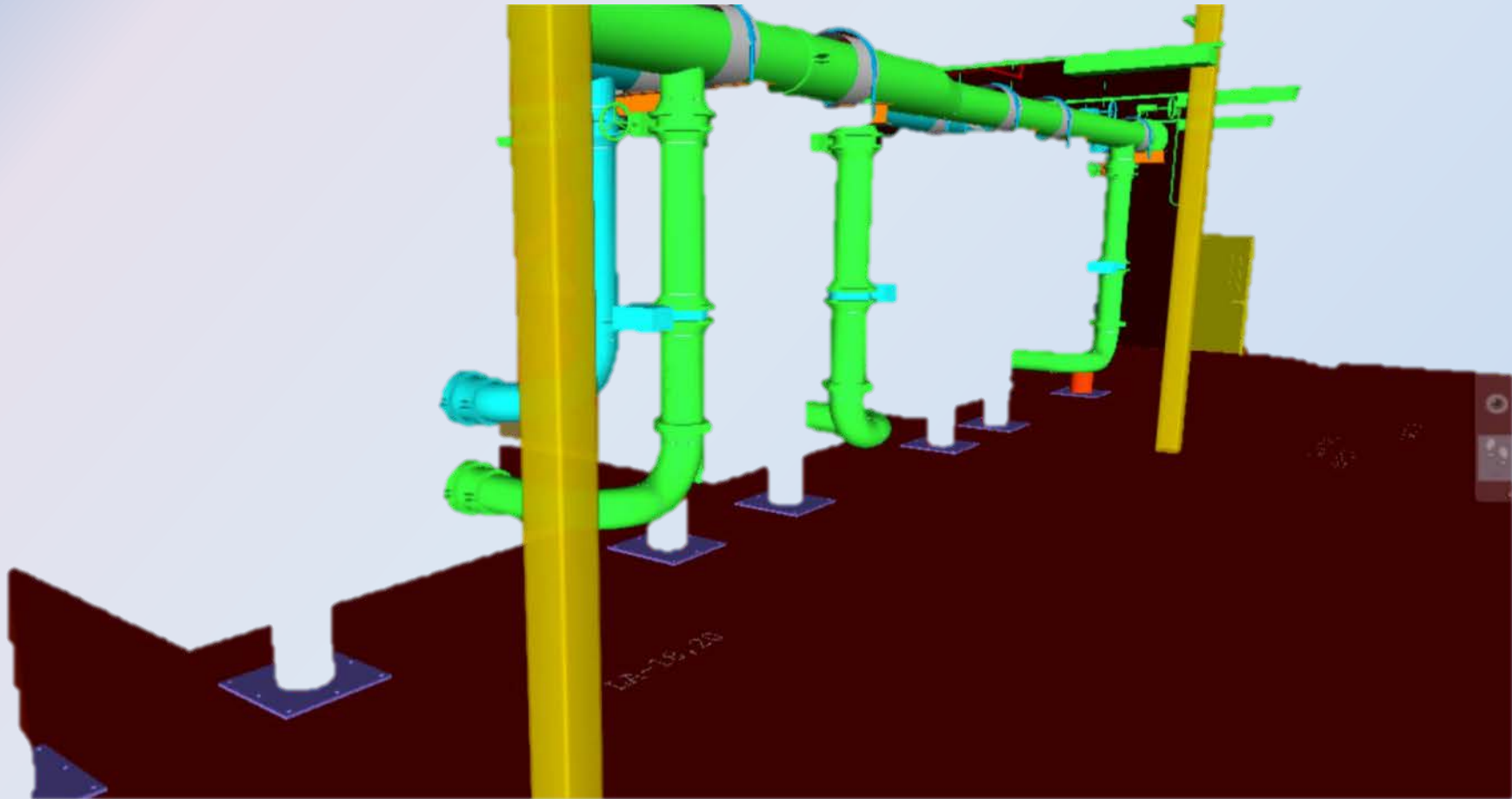
Carts/Tug Traffic



11,000 SF Central Utility Plant For Entire Campus.
Includes 3,700 Tons Of Chillers & 28,050 MBH Of Boiler Capacity.



Central Utility Plant







11 Typical Guard Towers, Vehicle Sallyport & Vehicle Sallyport Guard Tower, Communications/Lockshop Building, Armory Building, Outside Grounds Building & Gatehouses.



Turned Over Radio Trunk Room In August 2012.



Completed And Turned Over Communications & Lockshop In November 2012.



Completed Guard Towers, Armory and all other support buildings in April 2013.

Support Buildings





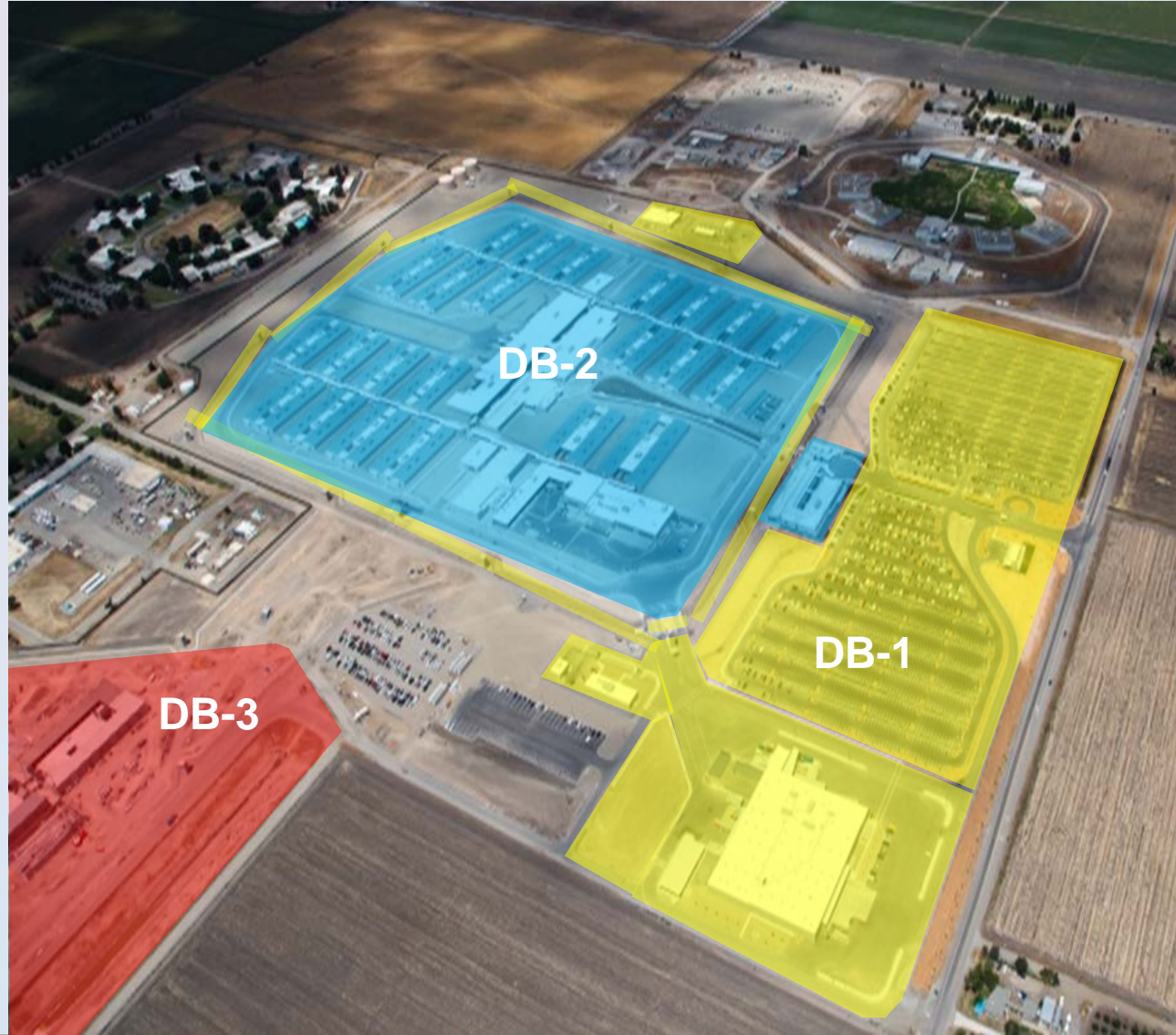




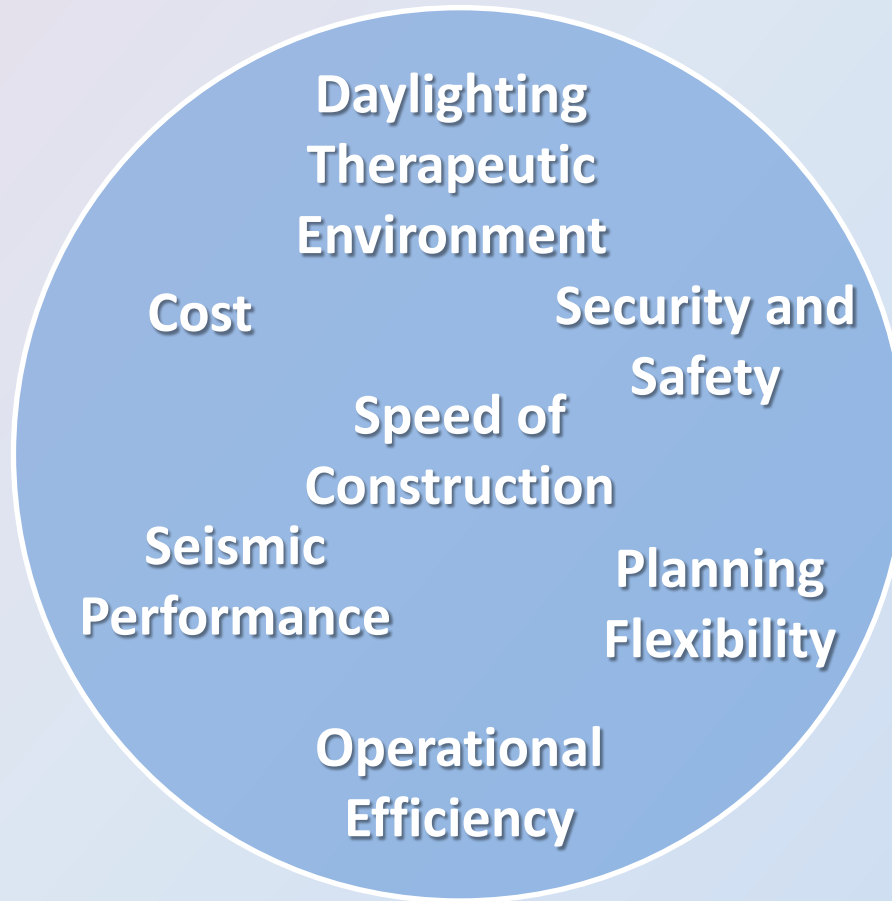
Design-Build

Three Design-Build Components:

- DB-1: Lethal Perimeter ; C.U.P.; Central Warehouse; Parking & Other Support Facilities Outside the Fence
\$129,100,000
- DB-2: Clark-McCarthy/HDR
31 Buildings, Over 1 Million SF Inside Secure Perimeter-
77Acres; Administration/Entry Building
\$512,900,000
- DB-3: Renovation/Re-purposing of Former DeWitt-Nelson Youth Correctional Facility, Currently Underway



Holistic Approach



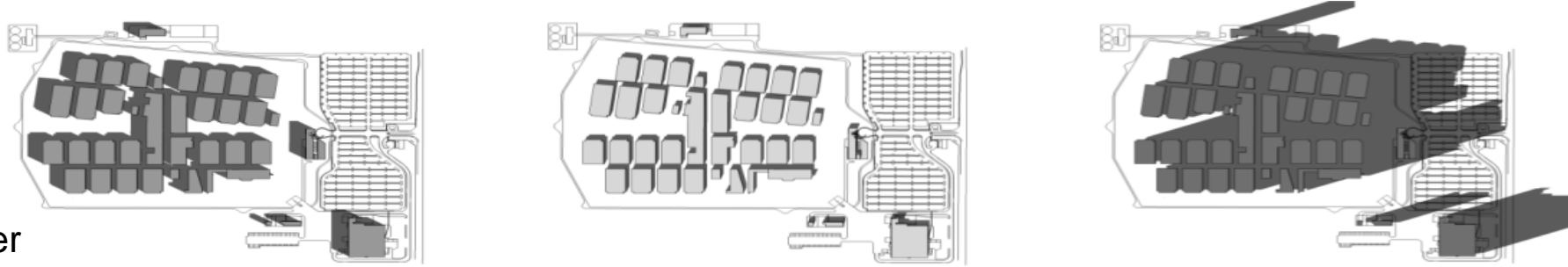
Housing

- High Acuity Medical
- Low Acuity Medical
- Intermediate Care Facility (ICF), *Operated by the Department of Mental Health*
- Acute Psychiatric Program (APP),
Operated by the California Department of Mental Health
- Mental Health Crisis Beds (MHCB)
- Permanent Work Crew (PWC)

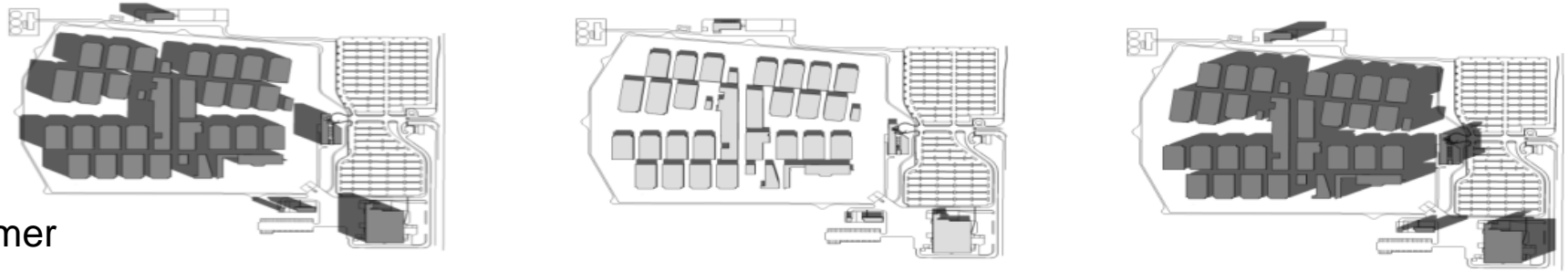


Solar Orientation

Winter



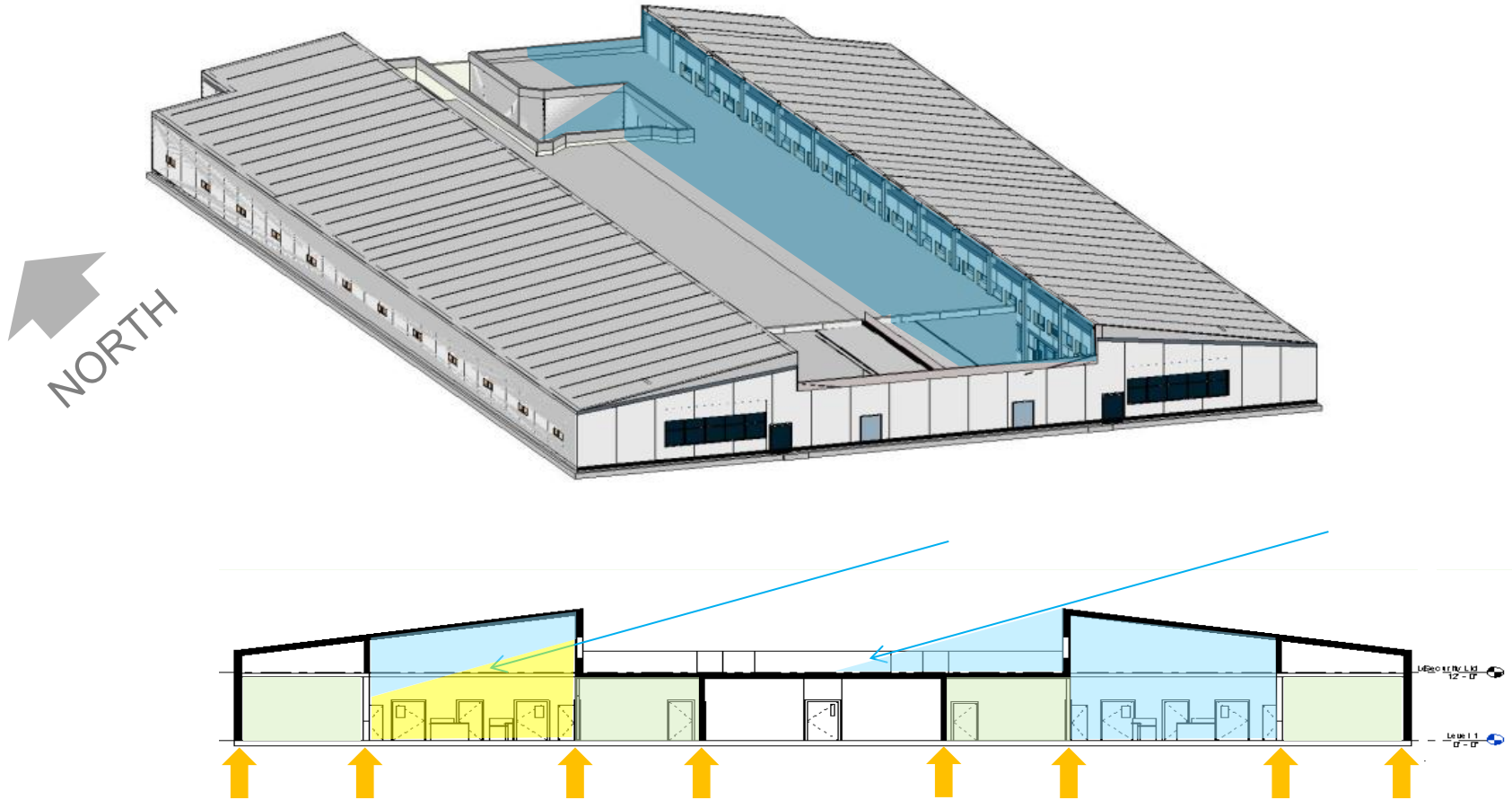
Summer



Spring/Fall



Typical Housing Unit Per RFP



Daylight – RFP Clerestory

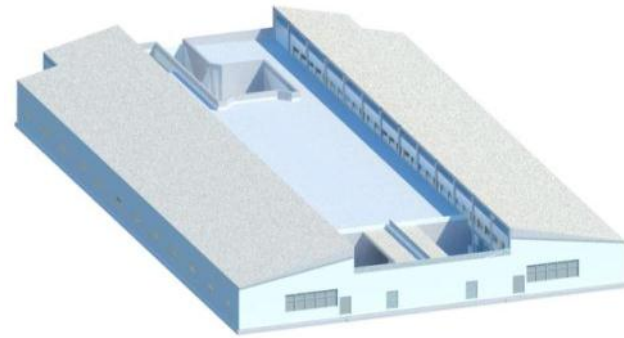


Afternoon Light

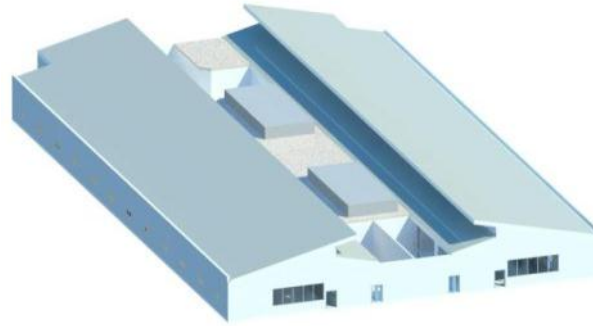


Morning Light

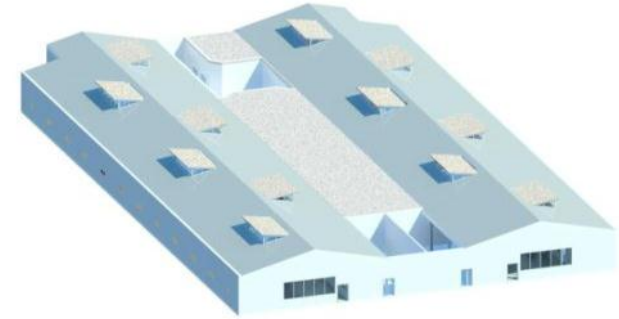
Daylight – Alternative Roof Studies



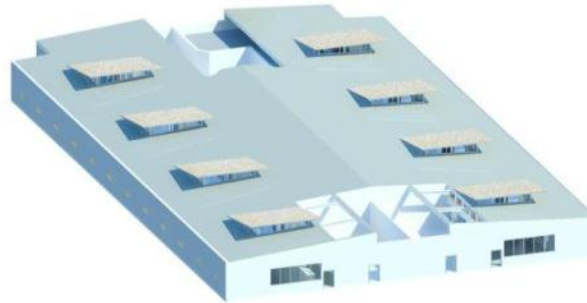
RFP - Clerestory



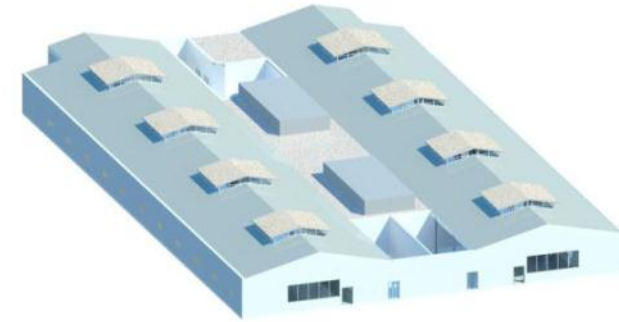
Clear Span - Clerestory



Staggered Clerestory

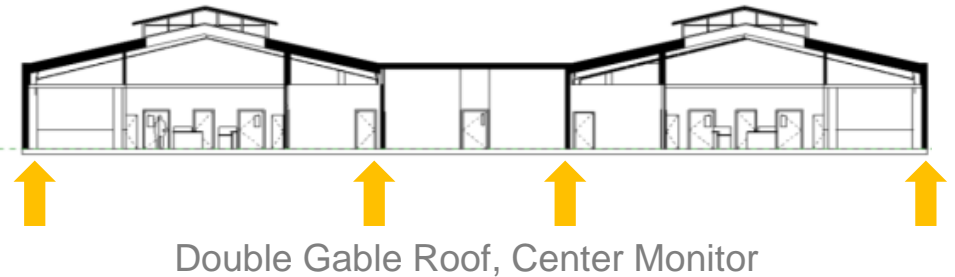
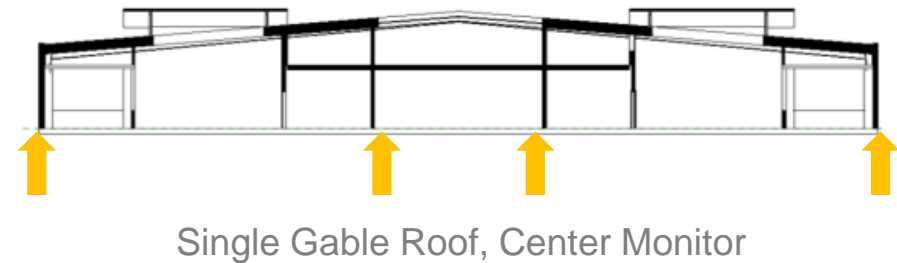
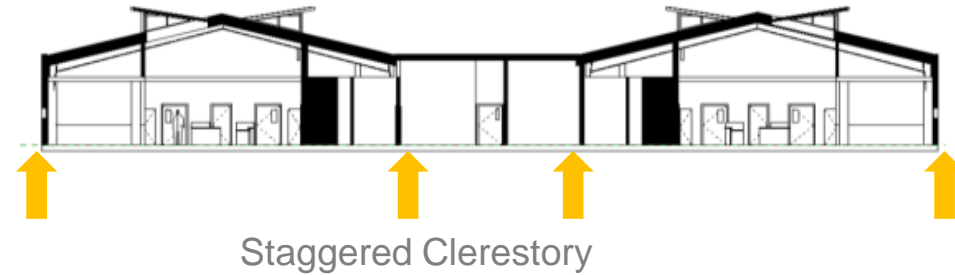
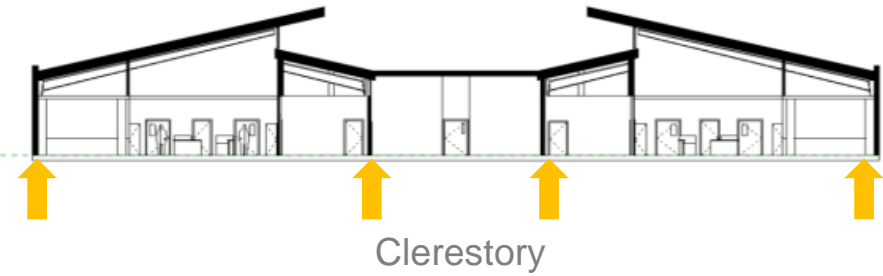


Single Pitch – Center Monitor

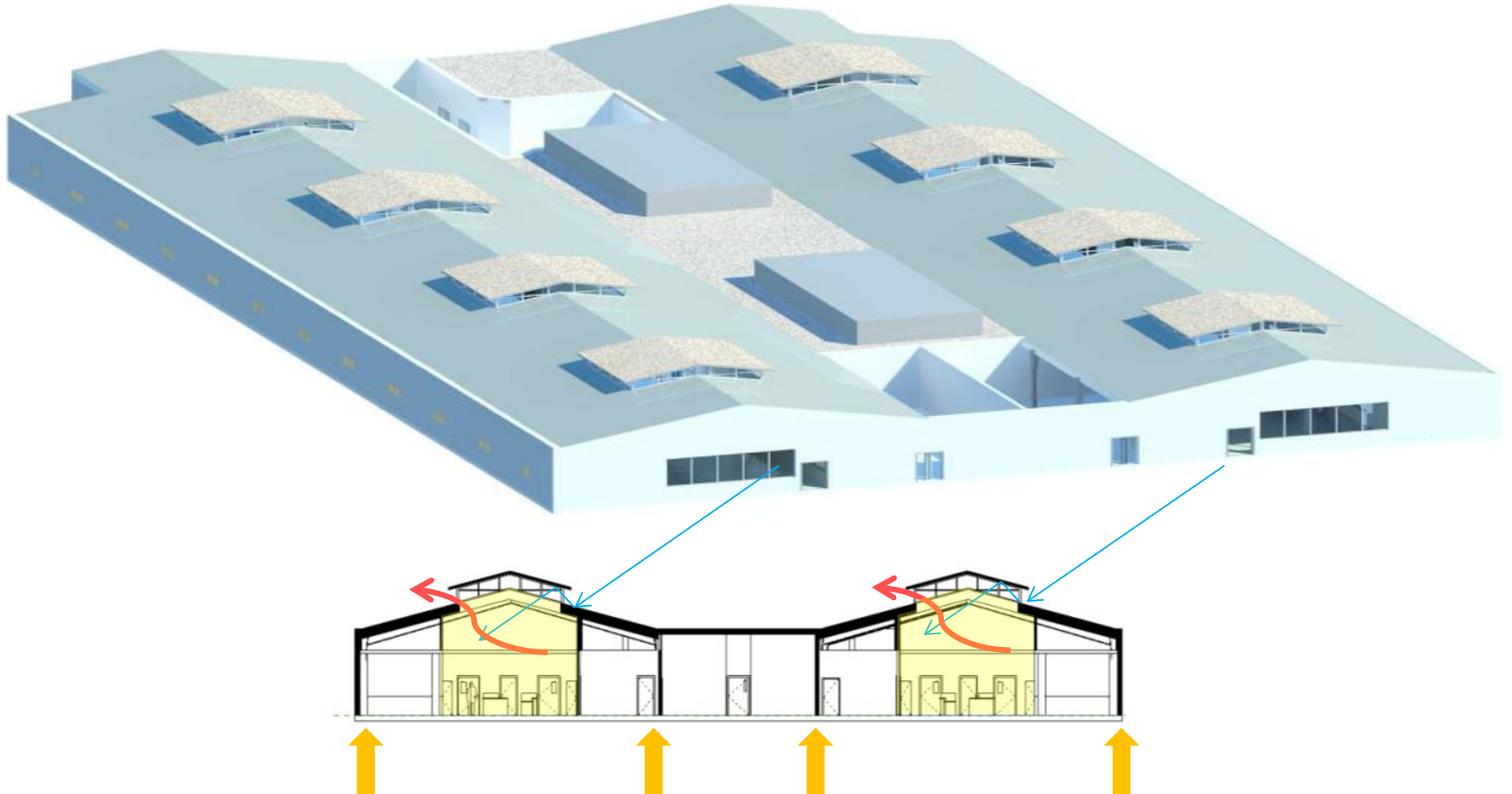


Double Gable – Monitor

Daylight – Alternative Roof Studies



Double Gable Roof with Center Monitors

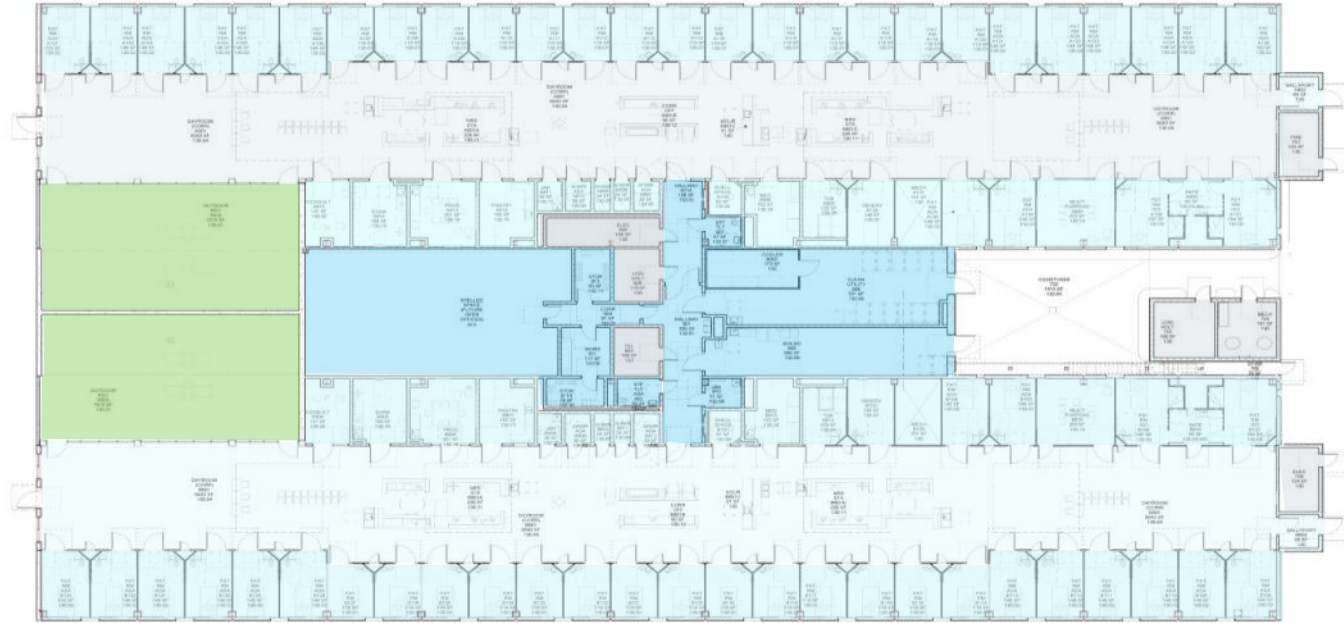


Double Gable Roof with Center Monitors



Housing Unit Plan – High Acuity Medical

- Prototypical Design – Flexibility
- High Acuity Medical Unit - Base Prototype (Low Acuity and Mental Health Crisis beds similar)
- Low Acuity Medical - 2-Bed & 4-Bed Wards
- Intermediate Care Facility (ICF), Acute Psychiatric Program (APP) identical



Systems Evaluations

Shell & Core

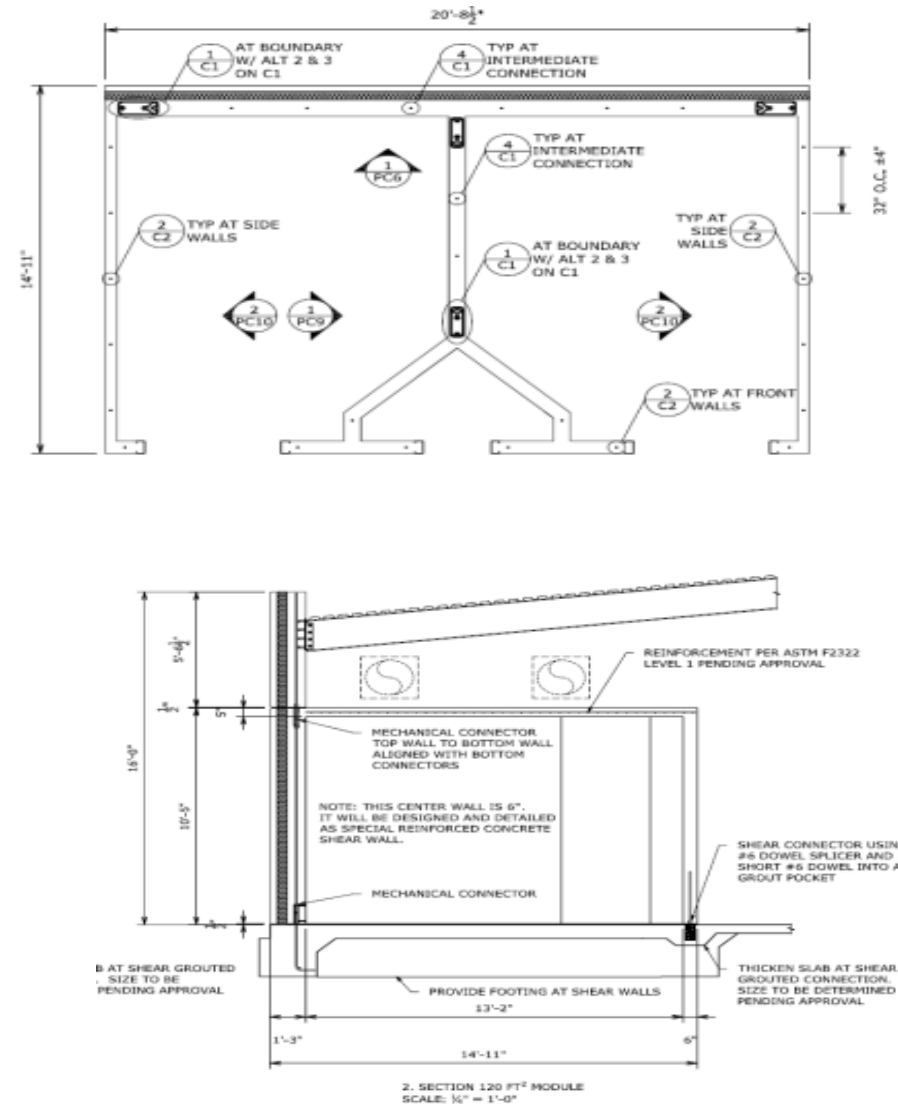
- Pre-engineered modular concepts

Exterior Structural Systems

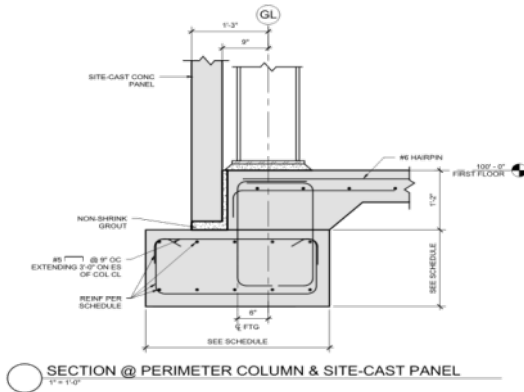
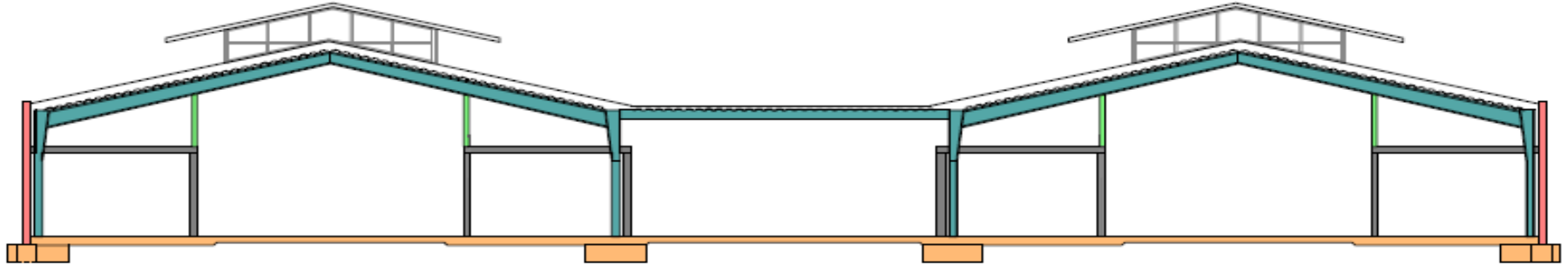
- Load bearing & non-load bearing site-cast concrete
- Load bearing modular precast concrete
- Insulated versus non-insulated panels
- CMU

Interior Systems

- Pre-cast concrete panels
- CMU
- Modular metal wall panels (Truss-Built)



Structure – Fast, Flexible, Safe



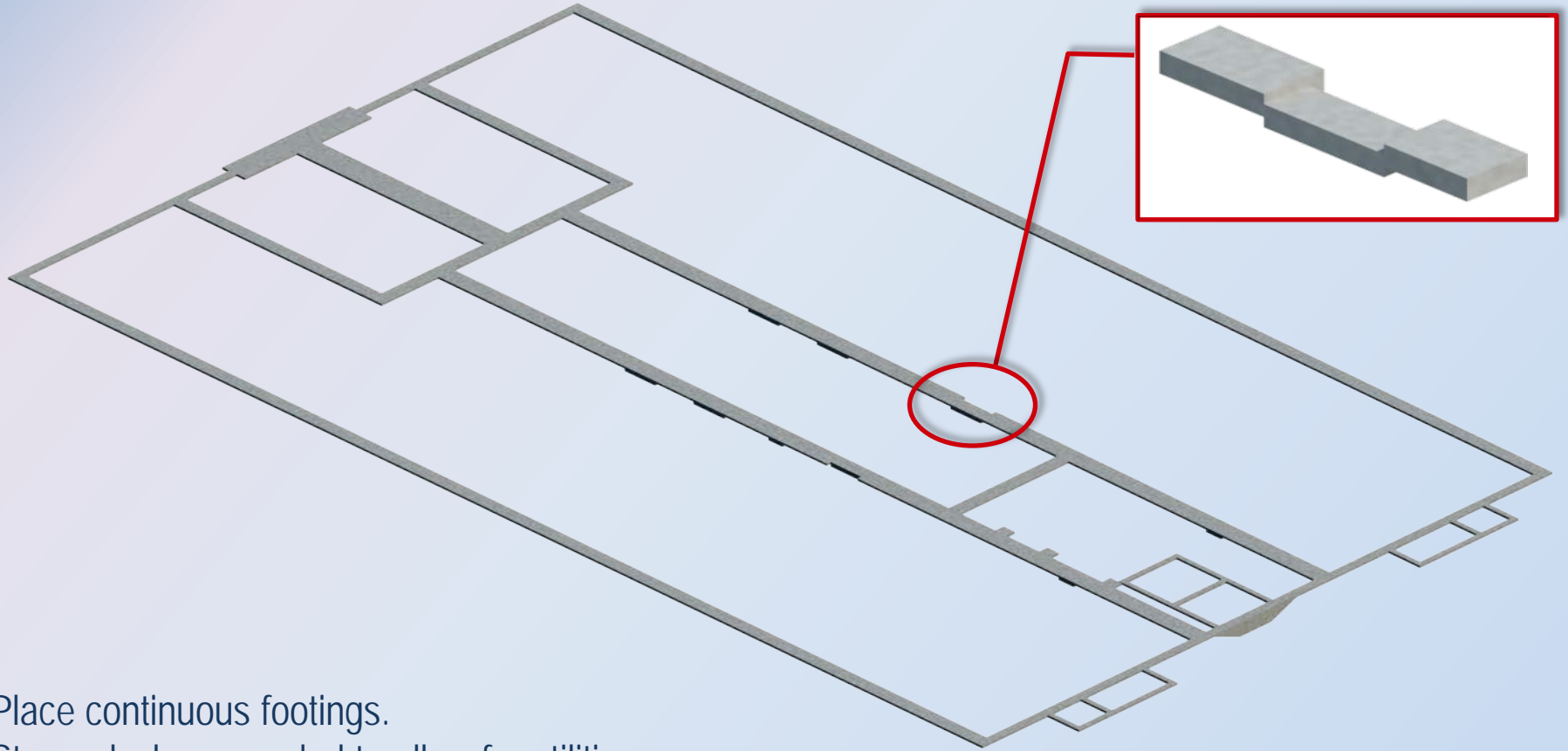
Pre-Engineered Building Concepts

- Highly Modular System – Simple
- Perimeter Steel Frame – Bolted connections, fast/safe
- Placed Directly on the Slab
- System is Self-Bracing – Flexible Erection Sequencing

Structural Systems Approach

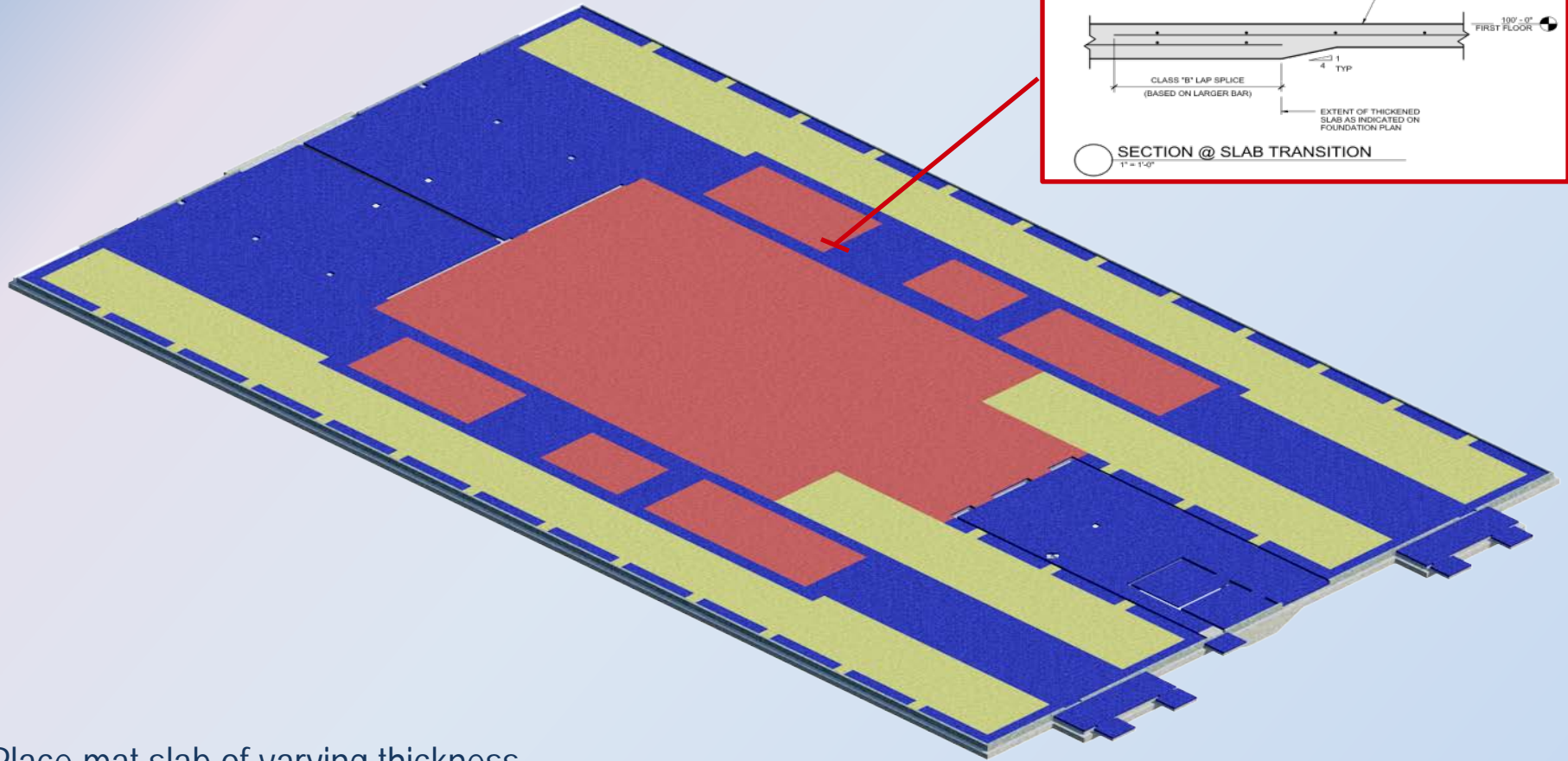
	Expedite Construction	Reduce Schedule Risk	Expedite Design	Design Flexibility	Simplify Review	Future Flexibility
Consistent Grids	X	X	X		X	
Decoupled Struct	X	X	X		X	
Perimeter Steel	X	X	X	X	X	X
Limited Members	X	X	X	X	X	X
Bolted Connections	X	X			X	X
Long-Spans	X	X		X		X
Self-Bracing	X	X		X		
Strip Foundations	X	X		X	X	X
Thickened Slabs	X	X	X	X		X
Exterior Security Skin- FSS	X	X		X	X	X

Construction Sequence



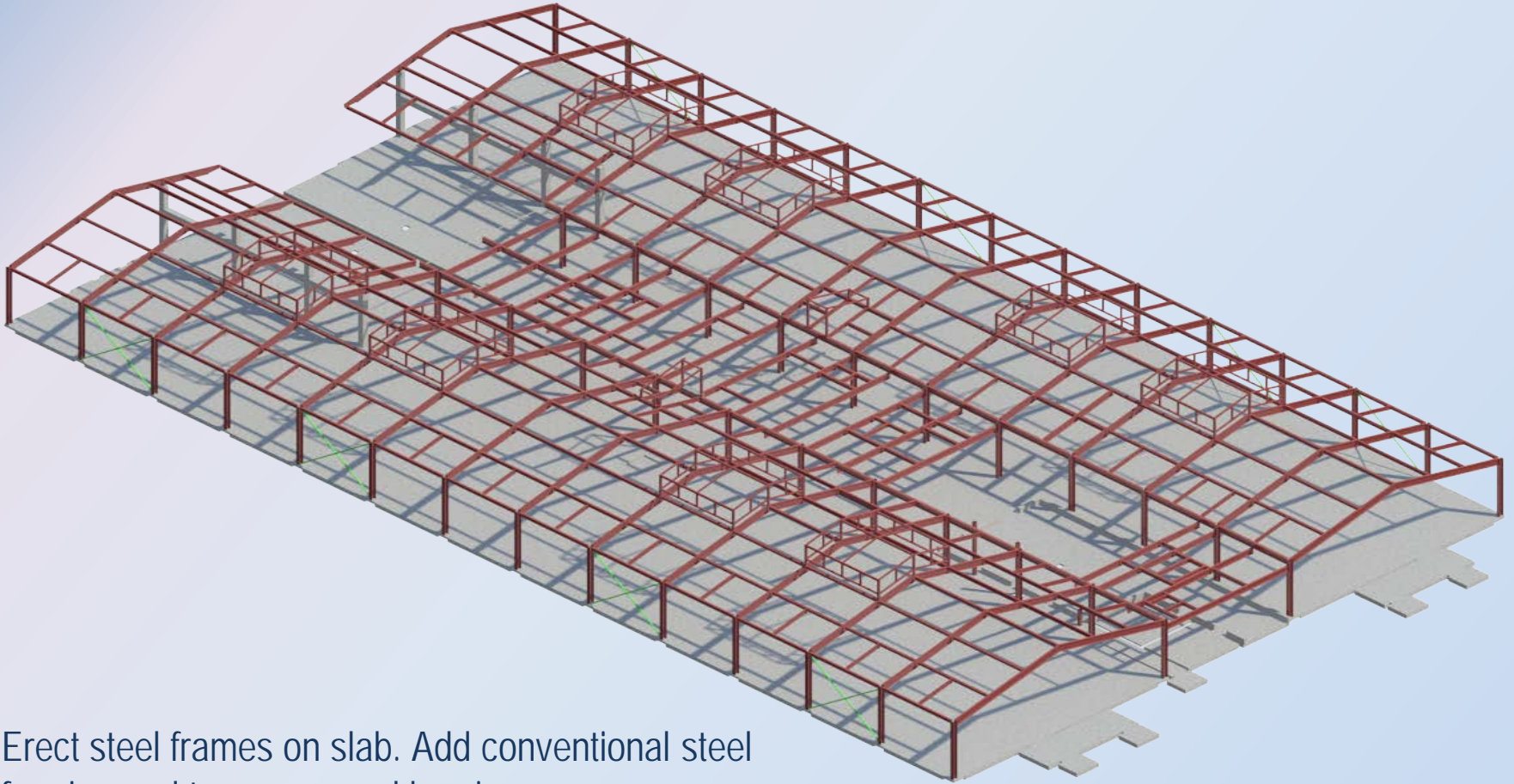
Place continuous footings.
Stepped where needed to allow for utilities.

Construction Sequence



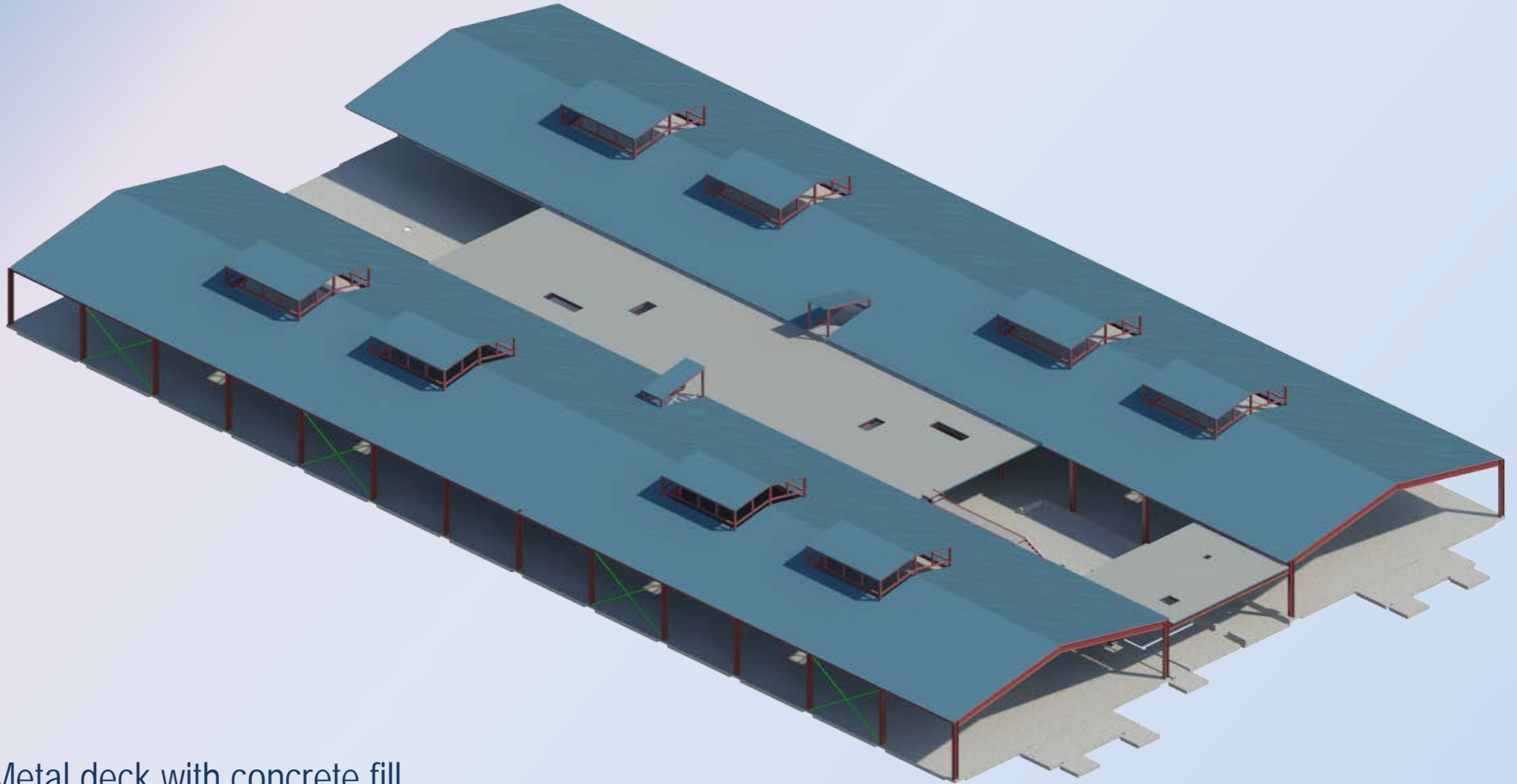
Place mat slab of varying thickness.

Construction Sequence



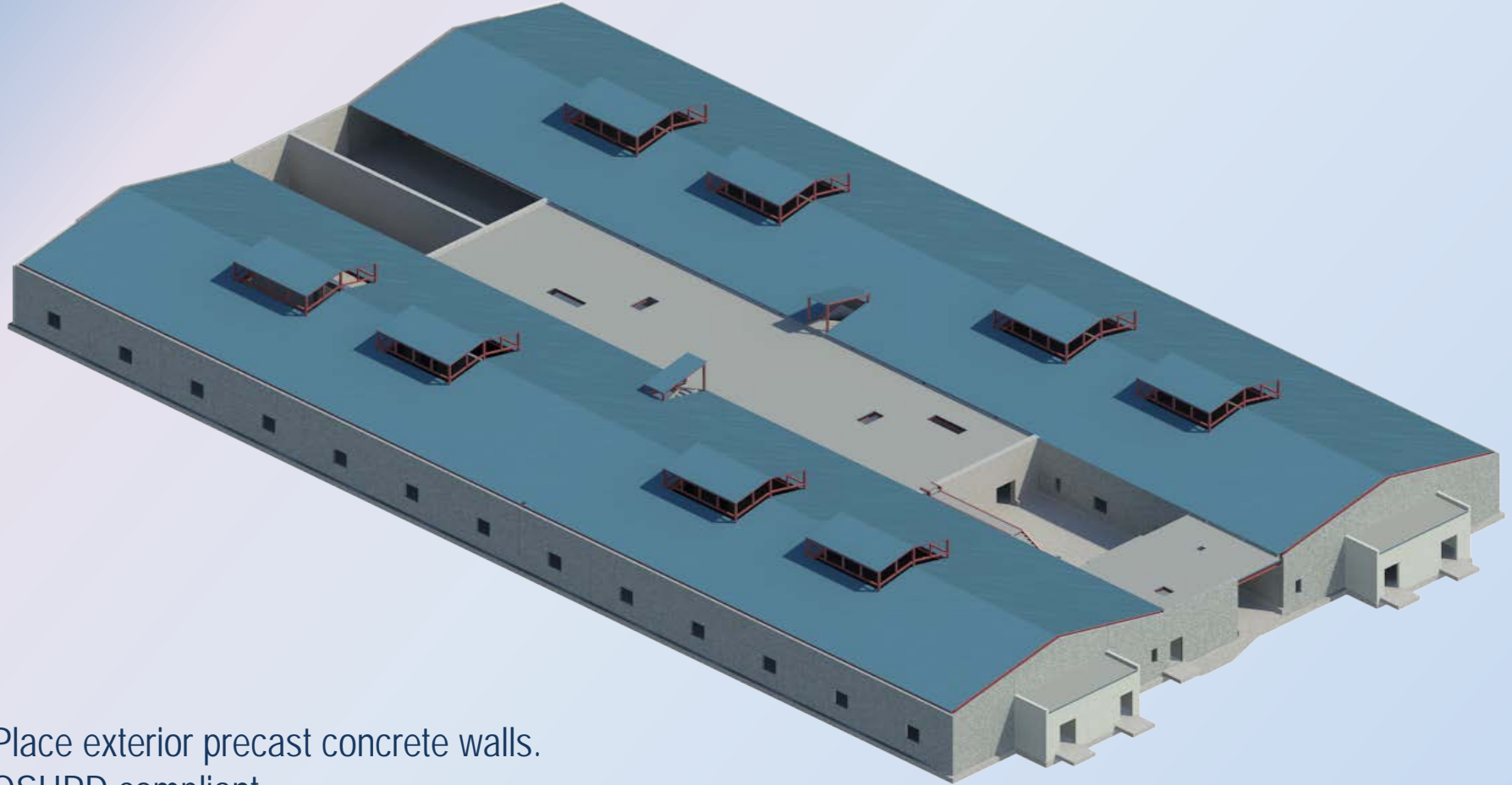
Erect steel frames on slab. Add conventional steel framing and temporary rod bracing.

Construction Sequence



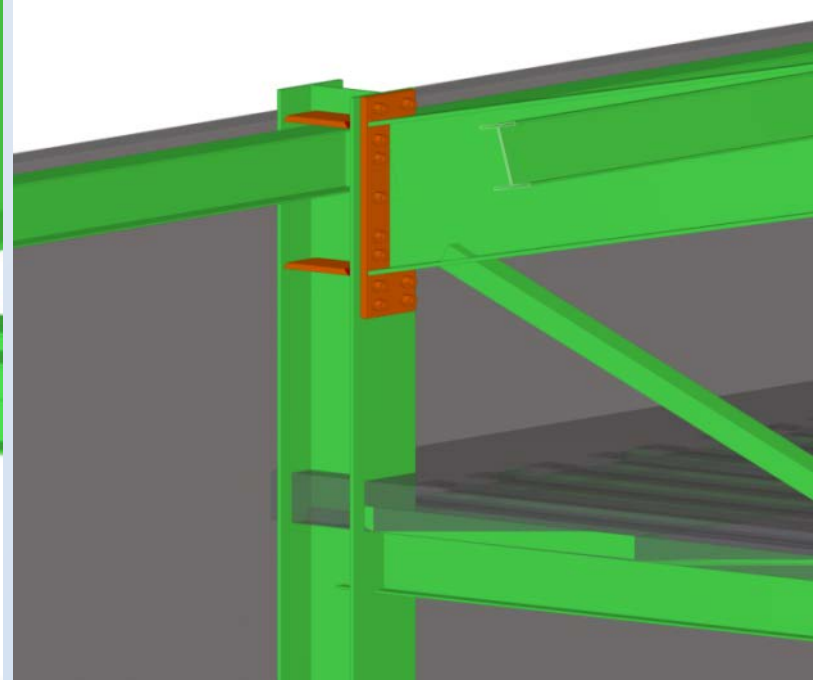
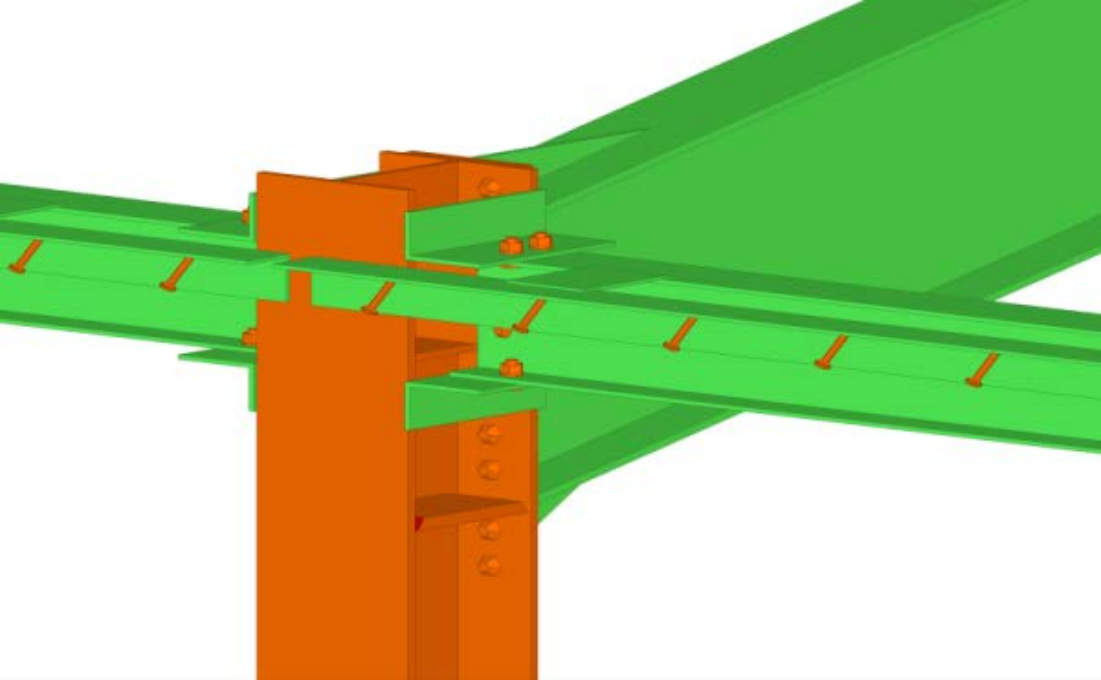
Metal deck with concrete fill.

Construction Sequence



Place exterior precast concrete walls.
OSHPD compliant.

Structural Details





Typical Dayroom View



Typical Dayroom View



View to Housing Along Staff/Visitor Entry Path



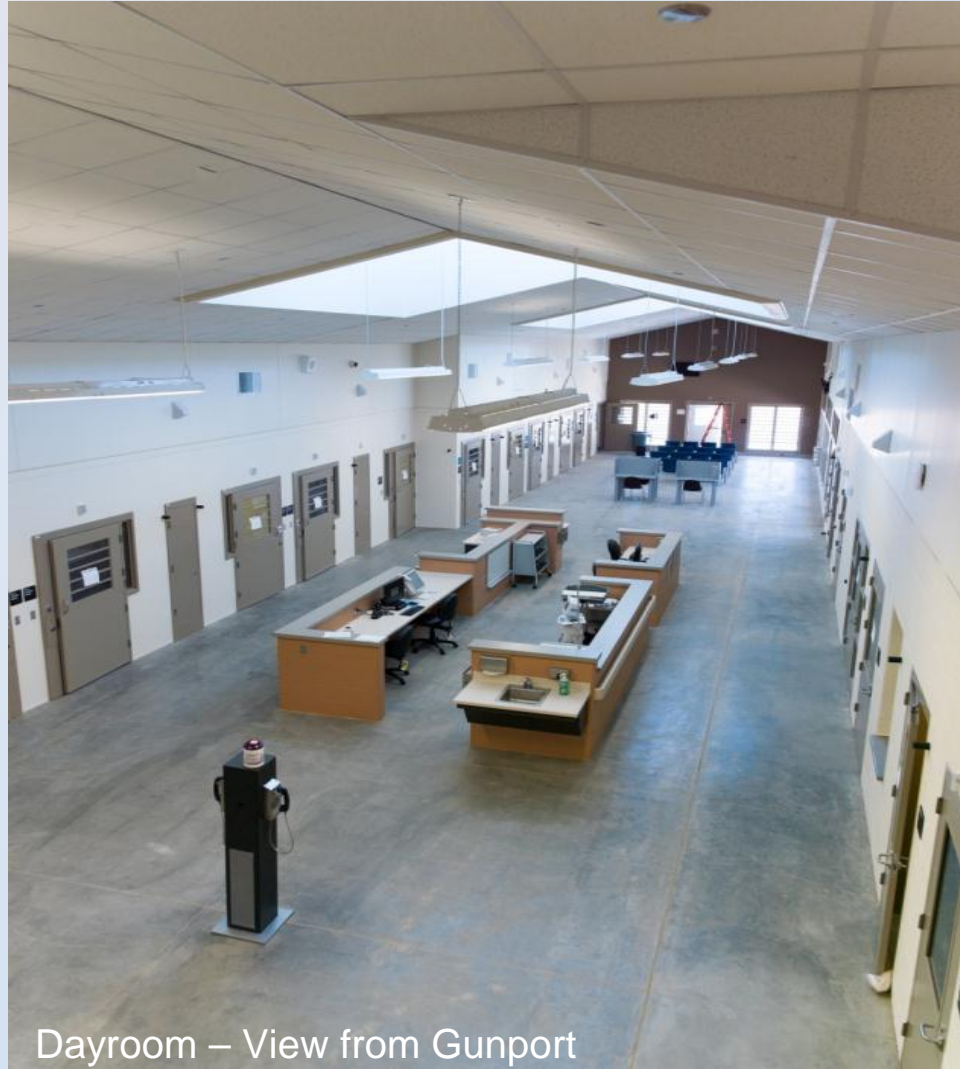
Low Acuity Housing “Street”



Typical Medical Housing Unit Dayroom



Dayroom – View from Gunport



Dayroom – View from Gunport



Outdoor Recreation Yard



Pantry with Re-Therm Units



Typical Medications Room



Typical Examination Room



Isolation Room



Typical Medical Inmate-Patient Room



Typical ADA Combination Toilet with Nurse Call



Ward Unit – Typical Toilet/Shower



Low Acuity Housing Typical 4-Bed Ward



Mental Health Housing "Street"



Typical ICF/APP Housing Unit Nurse Station



Mental Health Crisis Bed (MHCB) Housing "Street"



Typical MHCB Housing Unit Nurse Station



Typical Safety Cell



Typical Mental Health Inmate-Patient Room



MHCB Clinicians' Office Area



Covered Walkway at Permanent Work Crew Housing (PWC)