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Navigating Code Evolution: Insights from the Lee Health Fort Myers Hospital Project

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September 28, 2025



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1

OBJECTIVE

Identify key changes in the FGI Guidelines from 2018 to 2022 and their implications on healthcare facility design

2

OBJECTIVE

Analyze anticipated modifications in the 2022–2026 FGI Guidelines and predict their potential impact on projects similar to the Lee Health Fort Myers Hospital.

3

OBJECTIVE

Examine recent and upcoming ASHRAE standard updates affecting mechanical, electrical, and plumbing systems in healthcare facilities

4

OBJECTIVE

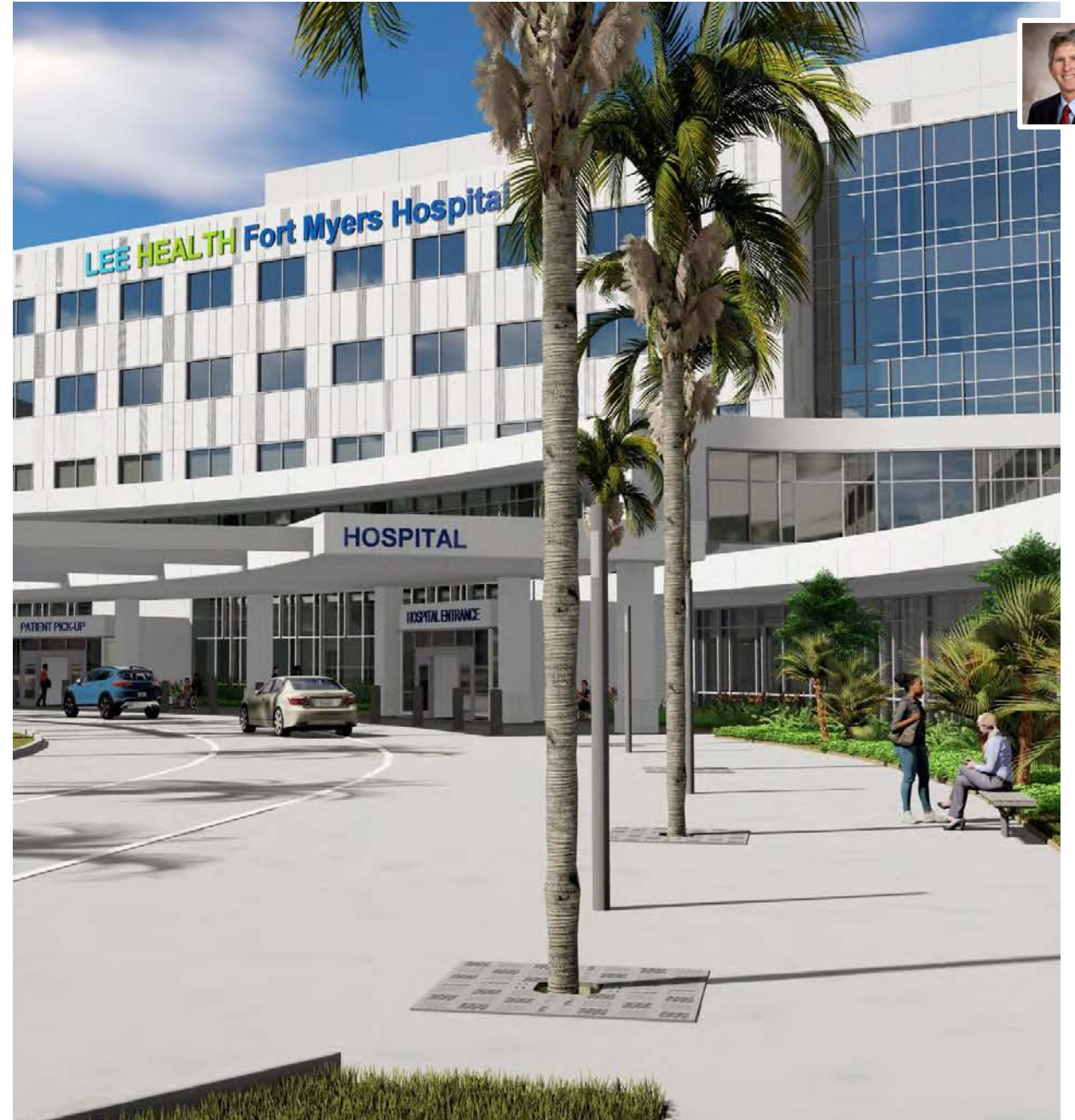
Evaluate the timing and impact of Florida Building Code (FBC) changes on healthcare facility design and construction, with a focus on adoption strategies and compliance.

Navigating Code Evolution:

Insights from the Lee Health
Fort Myers Hospital Project



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09.28.2025

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Agenda



01

ANNOUNCEMENTS & INTRODUCTIONS

02

PROJECT OVERVIEW

03

SITE SELECTION & MASTER PLAN

04

PICKING A CYCLE – 2020 vs. 2023

05

WHAT'S NEXT?

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Presenters



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Agenda



01

ANNOUNCEMENTS & INTRODUCTIONS

02

PROJECT OVERVIEW

03

SITE SELECTION & MASTER PLAN

04

PICKING A CYCLE – 2020 vs. 2023

05

WHAT'S NEXT?

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Lee Health Replacement Hospital

Architect	Flad
MEP Engineer	TLC
Const. Manager	Skanska

Hospital	533,000 SF
MOB	127,000 SF
CEP	22,000 SF
Daycare	7,000 SF
Total	682,000 SF
260 Beds	



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Master Plan Development Summary



Planned Unit Development (PUD)

650 Beds

330,000 SF Medical Office Space

222,000 SF Clinical Training (GME),
Wellness, Office and Commercial

53-Acre Site

6.2-Acres Water Management
(ponds & dry detention)

125 Hotel Rooms

100 Multi-family Dwellings

Daycare

2 Parking Garages

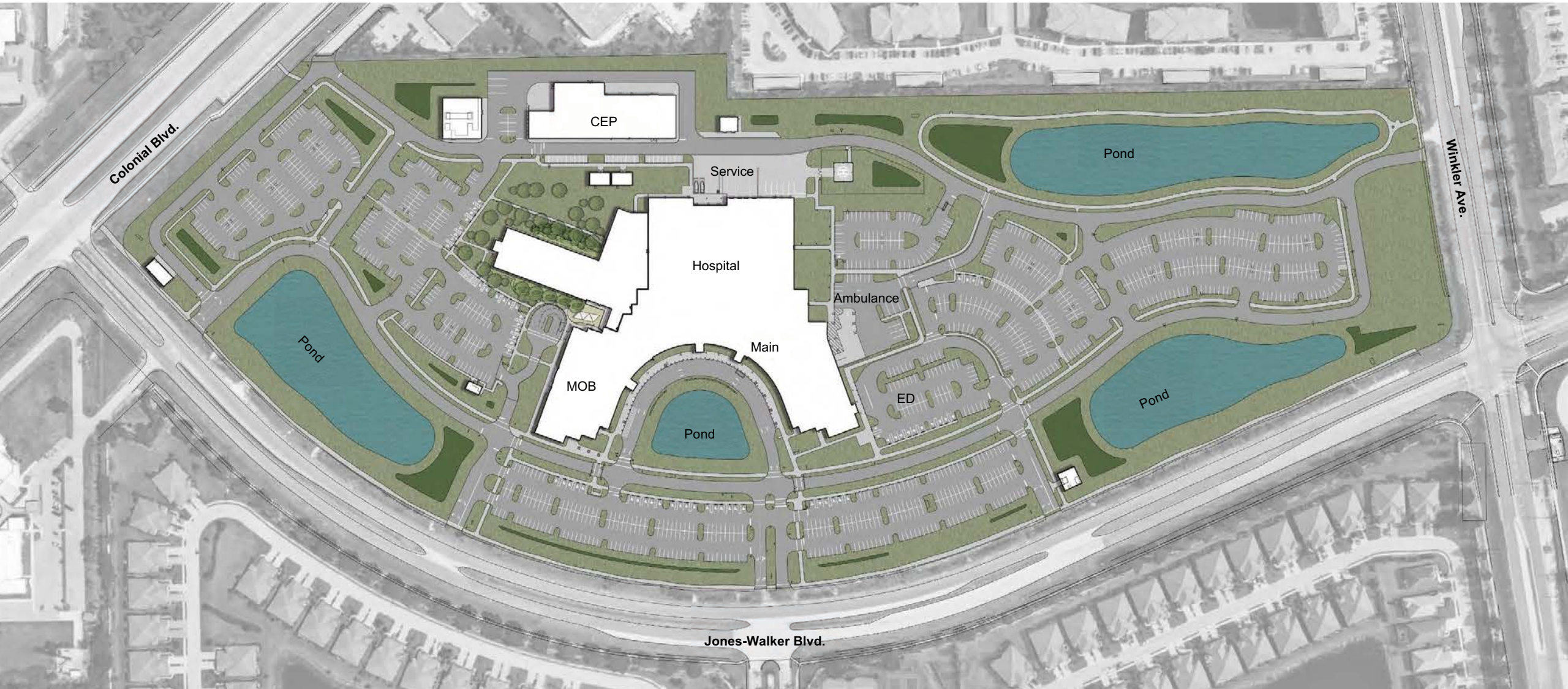
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Master Plan Build-out



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Phase 1 Site Plan



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41st Annual FPC Seminar + Expo

Agenda



01

ANNOUNCEMENTS & INTRODUCTIONS

02

PROJECT OVERVIEW

03

SITE SELECTION & MASTER PLAN

04

PICKING A CYCLE – 2020 vs. 2023

05

WHAT'S NEXT?

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Site Selection: Critical Checklist

- Access to critical utilities – power, water, sewer, fiber
- Site elevation relative to FBC requirements
- Wetland considerations
- Subsoil conditions
- Environmental history issues (CERCLA)
- Endangered species
- Road access
- Expansion capacity for future growth and stormwater management





Wetland Regulations

- 1972** Clean Water Act
Regulated dredging and filling. Section 404 program
- 1989** North American Wetlands Conservation Act
Funded conservation projects
- 1990** Water Resources Development Act
Introduced goal of “no net loss” of wetlands
- 1995** EPA & Core of Engineers (USACOE)
Issues formal guidance for establishing and operating mitigation banks
- 2008** Final Mitigation Rule
Established uniform standards for all compensating
- 2020** Florida became the third state to assume authority over Section 404 permitting from the USACOE
- 2024** Federal judge vacated Florida’s authority over Section 404 permitting returning it to the USACOE



Endangered Species

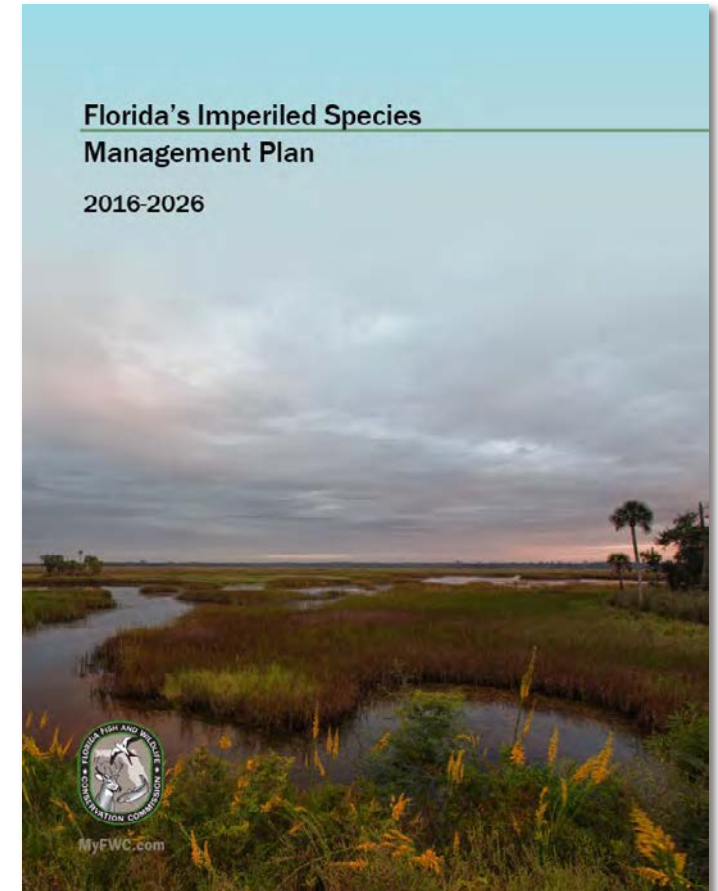


1966 Endangered Species Preservation Act

- Mandated a Federal list of endangered animals and prohibited the taking of listed animal species on all National wildlife refuges
- Interior, Agriculture and Defense Departments were directed to preserve species' habitats on Federal lands

2010 Florida enacts its own Florida Endangered and Threatened Species Act

2025 Florida has more endangered and threatened species than any other continental state



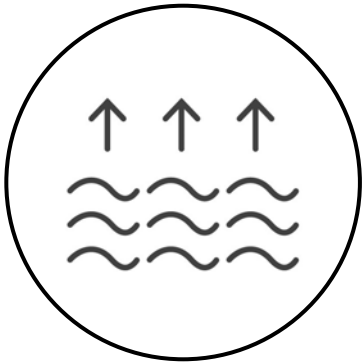


Florida Endangered or Threatened Species

// Related to Inland Development

Florida Panther	Endangered (State & Federal)	Requires large, connected tracts of undeveloped land – development can fragment habitat
Gopher Tortoise	Threatened (State)	Burrows provide shelter for over 350 other species; relocation permits required before land clearing
Eastern Indigo Snake	Threatened (Federal)	Often found in gopher tortoise burrows; habitat loss is a major threat
Wood Stork	Threatened (Federal)	Wetland-dependent: development in or near wetlands may require consultation
Red-Cockaded Woodpecker	Endangered (Federal)	Requires mature pine forests; protected nesting trees can halt timber or land clearing
Florida Scrub Jay	Threatened (Federal)	Lives in scrub habitats; highly sensitive to habitat fragmentation
Sand Skink	Threatened (Federal)	Found in Central Florida's sandy ridges; often overlooked but can delay projects
American Crocodile	Threatened (Federal)	Found in South Florida; development near coastal mangroves may be restricted
Burrowing Owl	Threatened (State)	Found throughout the peninsula of Florida; burrowing owls inhabit open prairies in Florida that have very little understory (floor) vegetation

Site Selection and Master Plan: Flood Elevation Impacts



HOSPITAL ELEVATION REQUIRED (FEMA)

100 yr + 2' Elevation = 21' NAVD (88) ▶▶ ▶▶

100 yr + 1' Elevation = 20' NAVD (88) ▶▶ ▶▶

FEMA Firm Elevation = 19' NAVD (88) ▶▶ ▶▶

CHANGES IN CODE REQUIREMENT TIMELINE

2020 FBC—Greater of 100 yr Flood Elevation + 2' or CAT 3 SLOSH

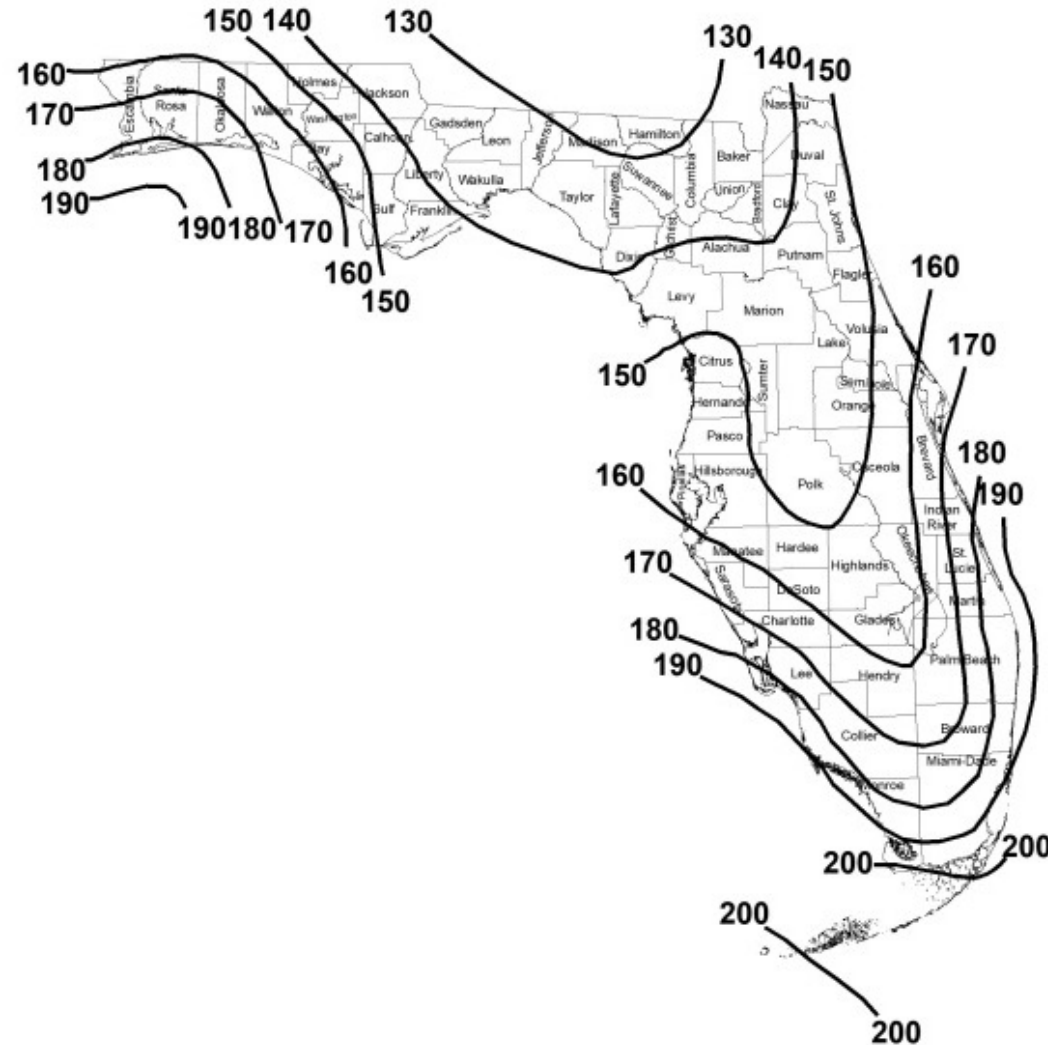
2010 FBC—Greater of 100 yr Flood Elevation + 1' or CAT 3 SLOSH

2001 FBC—Greater of 100 yr Flood Elevation or CAT 3 SLOSH

Prior to 2000 SBC - FEMA FIRM 100 yr Flood Elevation

CAT 3 SLOSH Elevation = NA (below existing grade NAVD (88))
SWFMD 100 yr – 3 day flood height = 22.2' +1 = 23.2' NAVD(88)

Site Selection and Master Plan: Wind Speed Impacts



Notes:

1. Values are ultimate design 3-second gust wind speeds in miles per hour (m/s) at 33 ft (10m) above ground for Exposure C category.
2. Linear interpolation between contours is permitted.
3. Islands and coastal areas outside the last contour shall use the last wind speed contour of the coastal area.
4. Mountainous terrain, gorges, ocean promontories, and special wind regions shall be examined for unusual wind conditions.
5. Wind speeds correspond to approximately a 1.6% probability of exceedance in 50 years (Annual Exceedance Probability = 0.00033, MRI = 3000 Years).
6. Location-specific wind speeds shall be permitted to be determined using the ASCE Wind Design Geodatabase. The ASCE Wind Design Geodatabase can be accessed at the ASCE 7 Hazard Tool (<https://asce7hazardtool.online>) or equivalent.

FIGURE 1609.3(3) ULTIMATE DESIGN WIND SPEEDS, V_{ULT} , FOR RISK CATEGORY IV BUILDINGS AND OTHER STRUCTURES



Site Selection and Master Plan: Planning and FGI

FGI Emergency Conditions

Creation of the DEVA (Disaster, Emergency, and Vulnerability Assessment)

- Added to Safety Risk Assessment
- Consideration for hurricanes, floods, tornadoes, wildfires, infectious disease outbreaks

Considerations

- Plan for 96 hours of utility interruption
- Plan for interruption to water supply and medical gases
- Access for tractor trailers to provide interim services
- Locations for temporary structures for disaster / surge capacity



Site Selection and Master Plan: MEP Key Considerations

Central Energy Plant Planning

- Align plant size and location with full buildout and hospital program
- Select and size chillers and generators with redundancy and 100% backup
- Plan footprint for future flexibility
- Coordinate early with FPL and Civil

Designing for Future Expansion

- Spare duct banks and piping mains
- Strategic valve placement
- Avoid utility conflicts with future buildings

Code Compliance & Collaboration

- Proactive early engagement with owner and architect to understand program
- Identify applicable codes (FBC, FGI, ASHRAE, NEC)
- Participation in code committees to provide foresight on upcoming code changes

Design Flexibility Examples

- Fire pump sized for future high rise patient tower
- High pressure domestic water line is routed and capped for future use
- Stair pressurization shaft provided for a stair that will serve the high rise
- Reserved space in the CEP for future equipment

Agenda



01

ANNOUNCEMENTS & INTRODUCTIONS

02

PROJECT OVERVIEW

03

SITE SELECTION & MASTER PLAN

04

PICKING A CYCLE – 2020 vs. 2023

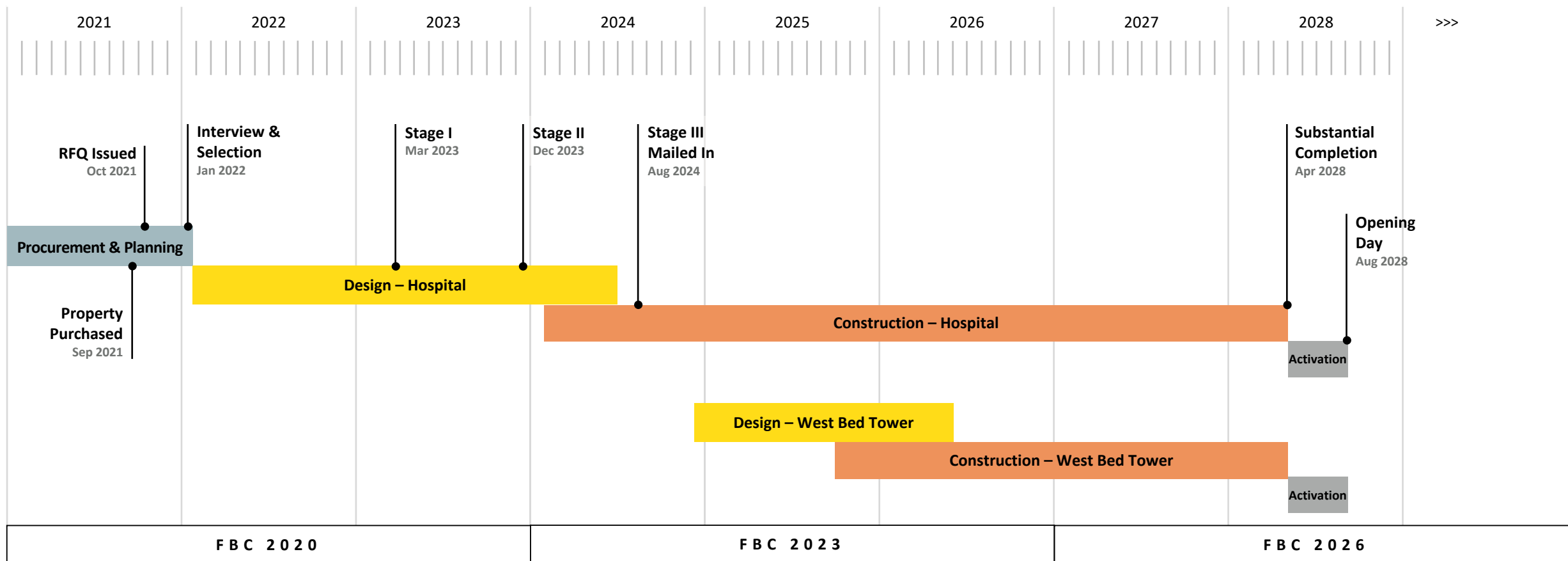
05

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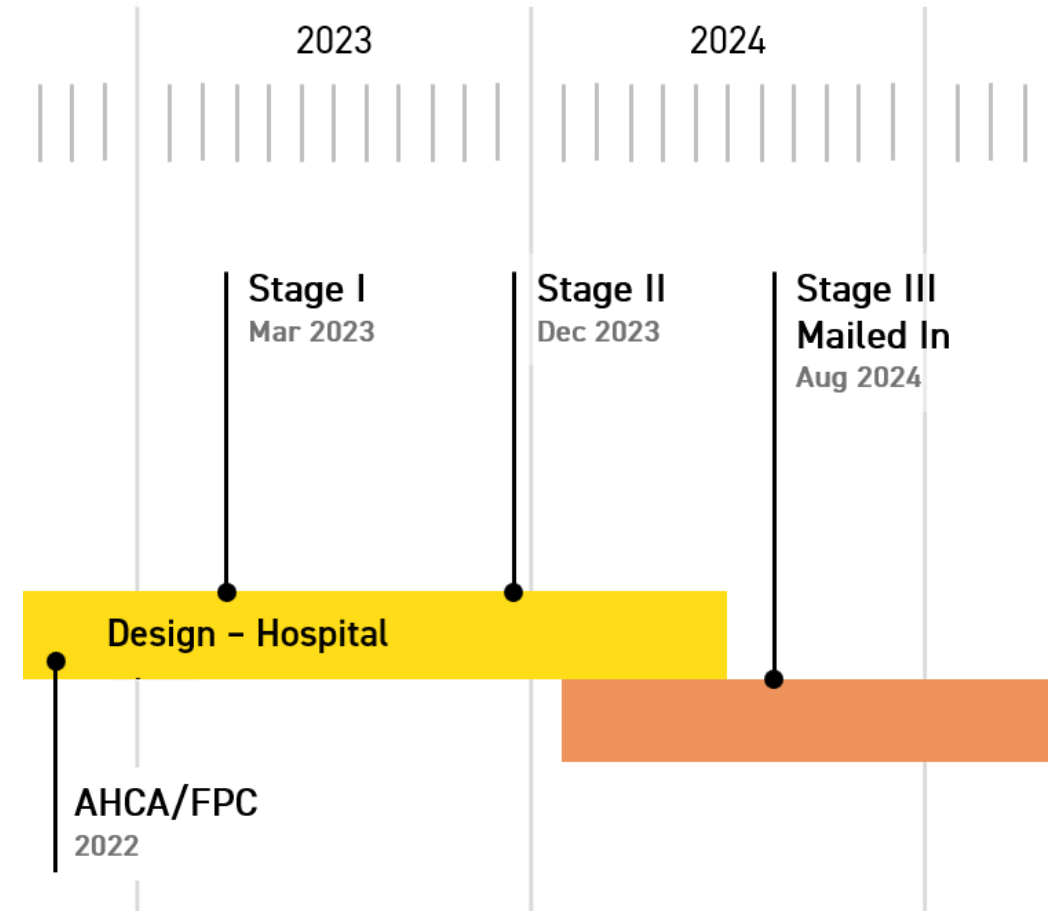
Navigating Code Cycles: Project Schedule





Navigating Code Cycles: 2020 vs. 2023

- Adoption of FBC 2023 announced at FPC in 2022
- Deadline for mandatory use of FBC 2023 was having Stage II by 12/31/2023
- Scheduled Stage II for 12/13/2023!
- Expectation was to stick with FBC 2020
- Planned for worst case, schedule slide, etc.
- Last second decision to upgrade to FBC 2023



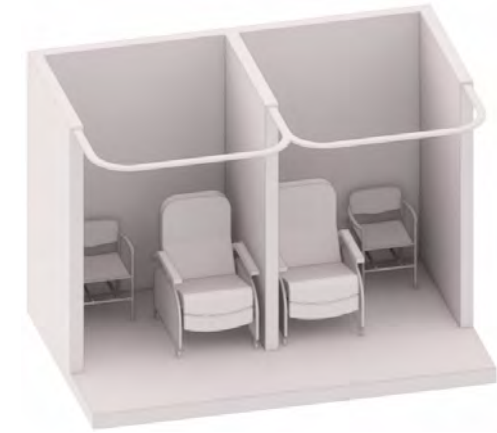


Navigating Code Cycles: 2020 vs. 2023

Ability to Maximize Emergency Patient Care Spaces

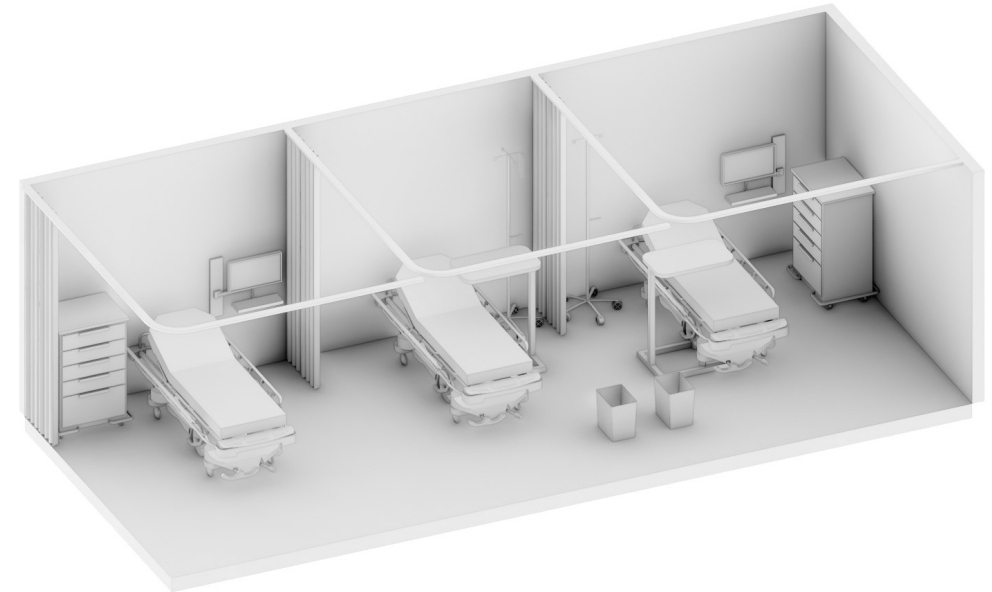
Low Acuity Patient Treatment Areas

- Require less space with recliner
- Ability to maximize patient treatment areas
- Limits patient acuity to be treated in the space



Multi-person Treatment Areas

- Stretcher bay requires more space
- Greater flexibility on patient acuity level that can be treated in the area





Navigating Code Cycles: 2020 vs. 2023 MEP

Multidisciplinary Code Review

- Architectural, Structural, MEP teams evaluated impacts

Key Code Updates and Impacts

FGI / ASHRAE 170

- Removed fire/smoke dampers from smoke barriers between compartments → cost and maintenance savings
- Added HEPA diffusers in OR ceilings → improved infection control
- Limited non-recirculated hot water branch piping → increased patient safety
- Eliminated exhaust for nuclear medicine and hot labs → energy savings

Electrical Circuiting Impacts

- NFPA 99 and NEC/FBC have different circulating requirements for headwalls in Category 1 spaces
- NFPA 99 requires half of the receptacles to be circuited to normal branch
- NEC/FBC require only two duplex receptacles to be circuited to normal branch

Agenda



01

ANNOUNCEMENTS & INTRODUCTIONS

02

PROJECT OVERVIEW

03

SITE SELECTION & MASTER PLAN

04

PICKING A CYCLE – 2020 vs. 2023

05

WHAT'S NEXT?

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Anticipating What's Next

- What changes do we think are coming?
- How can we prepare for them?





Anticipating What's Next: 2026 Code Updates

- **Reminder!** Plan for the worst – e.g. 67" ADA turning circle
- Potential upcoming changes (IBC 2024)
 - Incidental Uses – ambulatory storage ratings (509.1)
 - Ceilings Counting as Smoke Barrier (710.4)
 - Adult changing table (1110.4)
 - Healthcare Plumbing Fixtures (2902.1)
- Flood Hazard Area Definition – IBC 2027



Anticipating What's Next: 2026 Code Updates

FGI Changes

Classification of Imaging Rooms

- Responsibility of owner/clinicians to determine
- FGI checklist to assist evaluation in FGI Handbook

Patient Discharge Lounge

- For patients that have been discharged and awaiting ride
- Patients that are mobile or in wheelchairs
- No stretcher patients allowed
- Waiting room with minimal supervision





Anticipating What's Next: 2026 Code Updates

NEC Updates

- Definitions consolidated to Article 100
- Expanded GFCI requirements
- Electrical room clearances: 6.5 ft working space height, open equipment doors now impact layouts

FGI 2026 Draft Highlights

- Refined outlet tables
- Night lights: motion-activated and patient-controlled
- Plumbing: flushing capability required
- SPD water: AAMI ST108 compliance

ASHRAE 170 2025 Impacts

- Filter and imaging room standards aligned with FGI
- Outpatient design parameter table includes unoccupied turndown

Strategic Planning Tips

- Stay informed
- Monitor code trends
- Use tools: FGI, MADCAD, FBC/AHCA sites
- Share lessons learned across project teams
- Understand the program and which codes apply
- Apply the more stringent requirement when there are discrepancies
- Ask AHCA when in doubt



Questions?



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Thank you for your attention!

