

A photograph of an industrial demolition site. A bright blue laser line is projected across the scene, illuminating a complex network of pipes and structural elements. The background is dark, and the foreground shows industrial machinery and a large red wheel.

2026 NEHES Fall Conference

Betting on **Better** Information

**Reducing Risk Before
Demolition Begins**

-
- Early scanning
 - Existing-condition validation
 - Integrated coordination
 - Better decisions

Presenters

Alex Perry, CHC • Brenda Wall P.Eng • Melissa Saucier, Assoc. AIA • Greg Murphy

Meet the Team



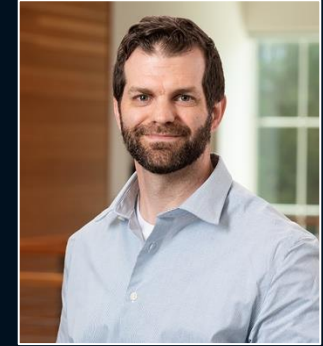
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Three Outcomes for Today and Key Topics

01

Discuss

Early Validation Reduces Uncertainty

02

Evaluate

Field Data Informs Better Decisions

03

Apply

Lessons for Active Healthcare Renovations



Active Radiology

Live Diagnostic Environment



Continuity

Two MRIs must remain operational throughout



Critical Neighbors

ED, NICU, Recovery & Ultrasound



Compliance

FGI & DPH



Constraints

Limited swing space and capital budget



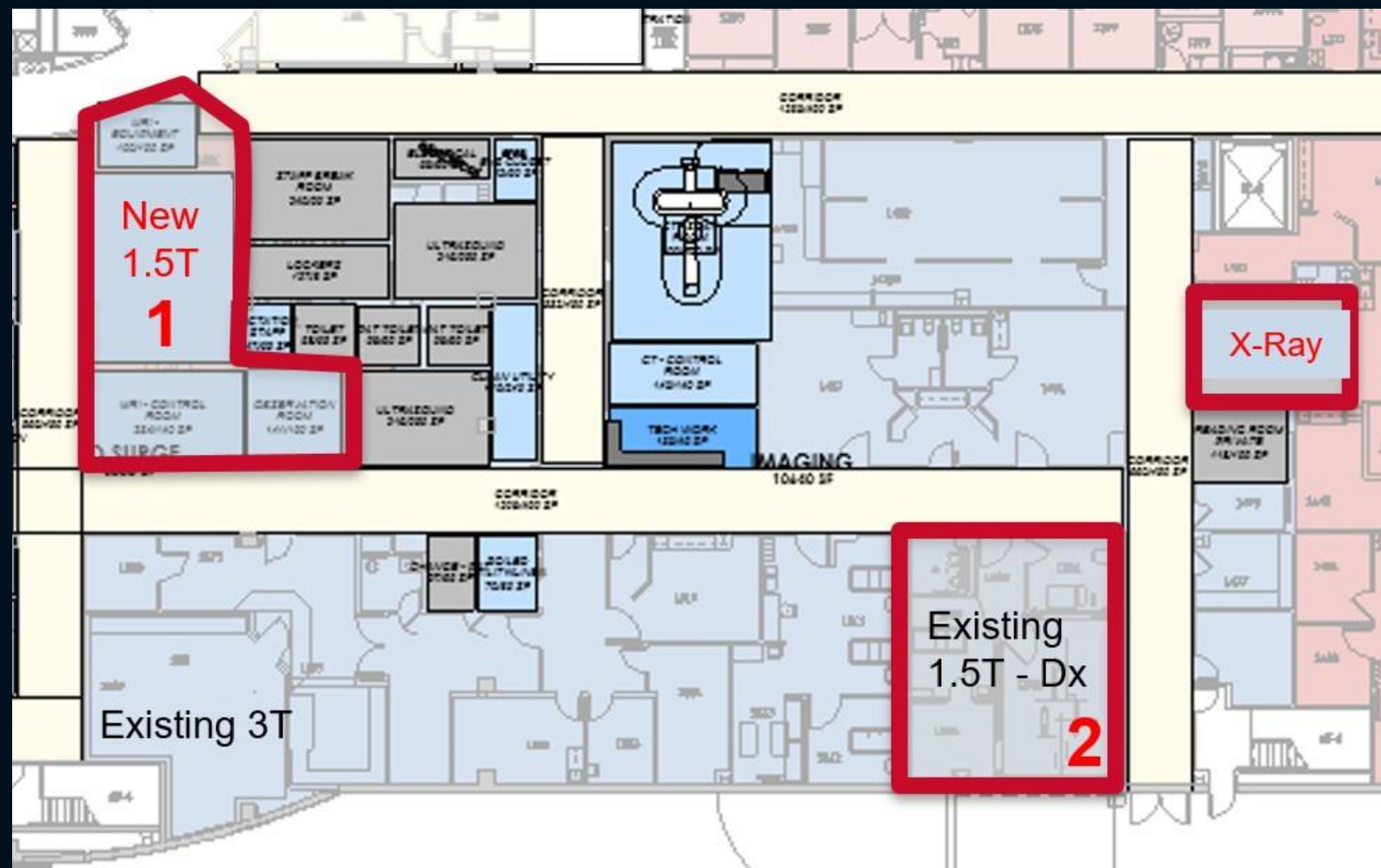
STARTING POINT

The 2023 Concept

New MRI Locate new 1.5T in Area 1A

Future X-ray Use the former CT area

Old MRI Decommission existing 1.5T after transition





August – September 2024

FEASIBILITY

Testing the Hypothesis

Scan, measure, compare — before committing to either location.



Compare

Test both Option 1 and Option 2 before any commitment to construction documents



Measure

Verify M/E/P routing and life-safety infrastructure against design assumptions



Scan

Field capture of existing conditions via SLAM mobile scan and LiDAR

Two Locations. Neither was Easy

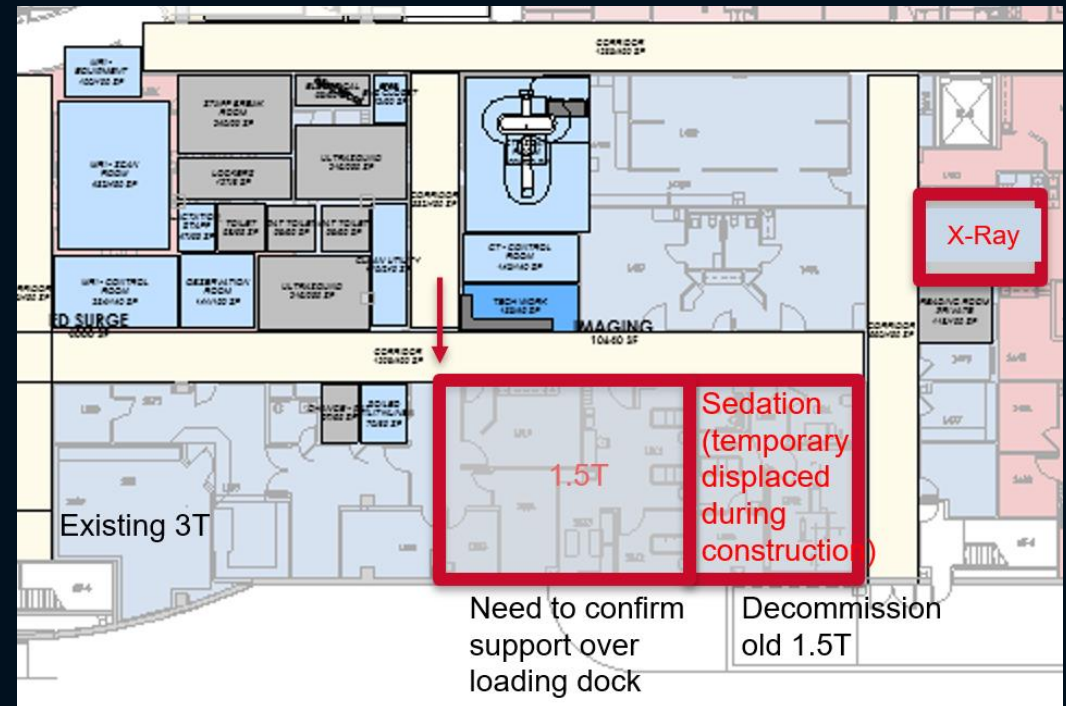
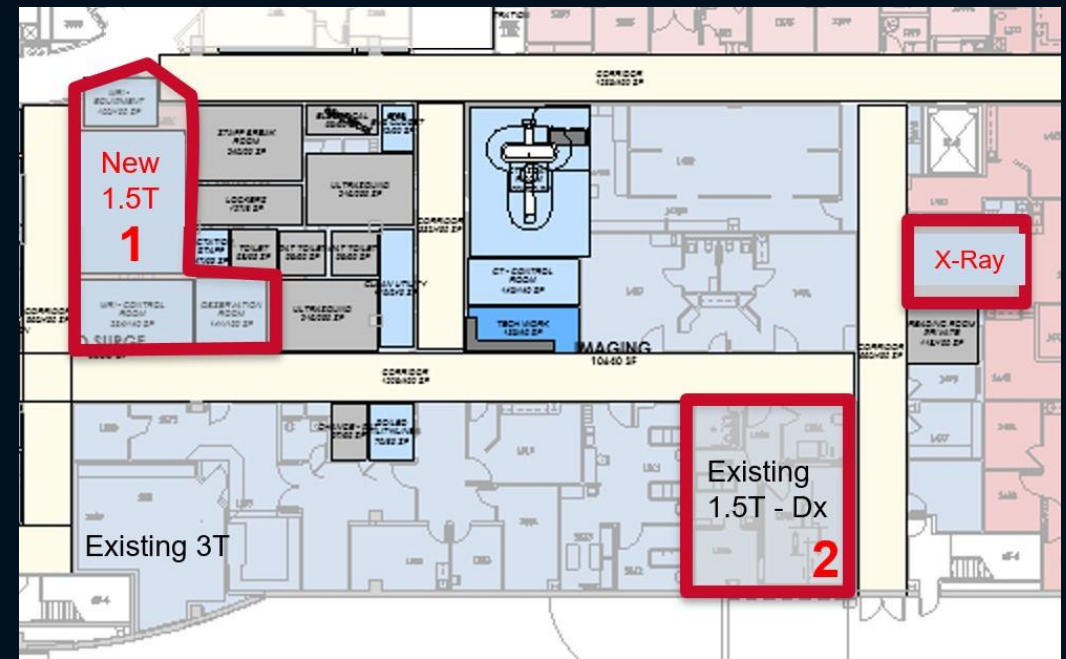
ORIGINAL CONCEPT Area 1A

- ✓ Apparent floor-plan simplicity
- ⚠ High infrastructure exposure

OPTION #2 Recovery / Perimeter

- ✓ Better program alignment
- ⚠ Complex phasing sequence

💡 The simpler-looking plan was not the lower-risk solution.

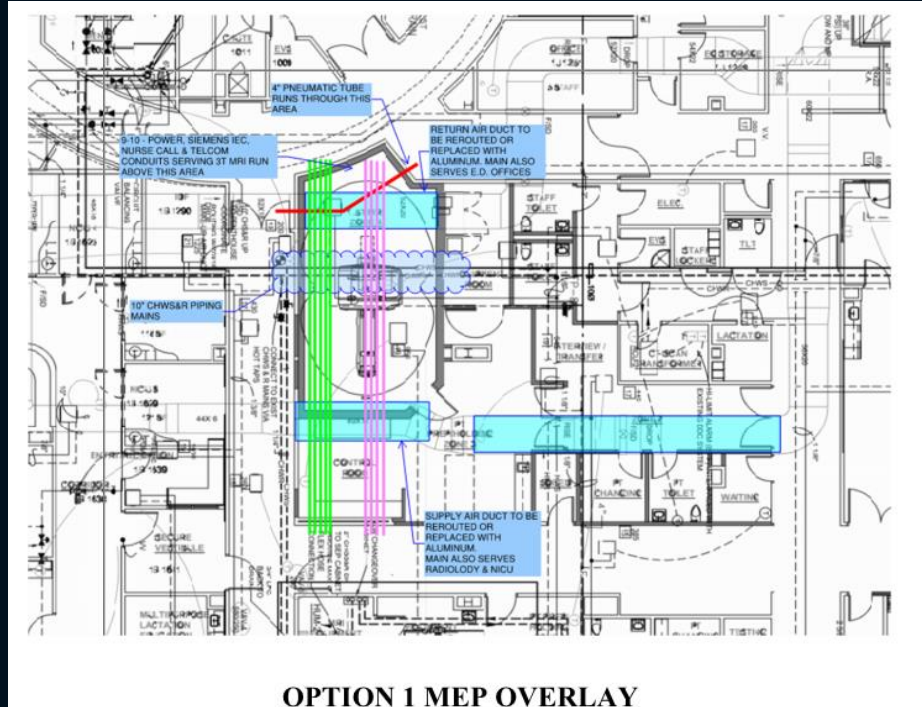


Melissa Saucier



Infrastructure Changed the Calculus

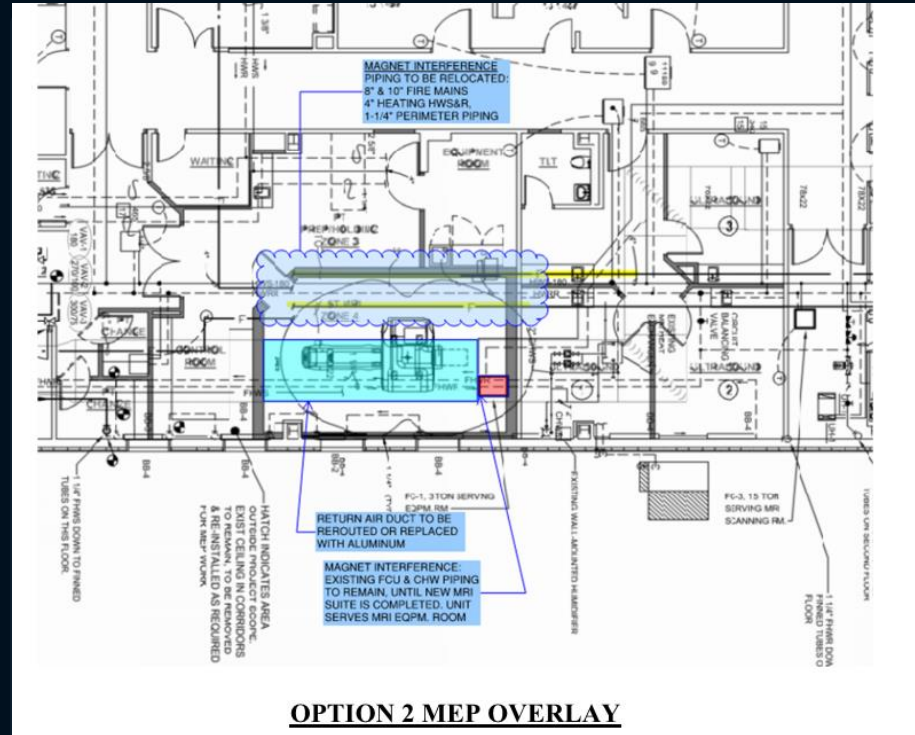
OPTION 1 Area 1A



OPTION 1 MEP OVERLAY

High conflict: Major mains and critical power serving the active 3T MRI run through this zone

OPTION 2 Perimeter



OPTION 2 MEP OVERLAY

Better separation: Improved infrastructure clearance, but complex phasing sequence required



Option 1 Risk

Critical infrastructure serving the active 3T MRI runs through this zone — any work creates direct operational exposure



Option 2 Tradeoff

Better infrastructure separation — but complex phasing sequence adds construction and continuity coordination

Key Insight

Floor-plan efficiency is not the same as project efficiency



Floor-plan efficiency is not the same as project efficiency.



Validate Before You Commit



SLAM Mobile Scan

Rapid floor-level geometry capture



LiDAR Data

Precise point-cloud existing conditions



360° Photography

Visual documentation of above-ceiling and field conditions



Targeted Ceiling Access

Spot investigations at critical infrastructure junctions



Engineering Review

MEP systems interpreted against design assumptions

FEASIBILITY STAGE



Field Priority

Capture MEP + life-safety conditions while the hospital stays active

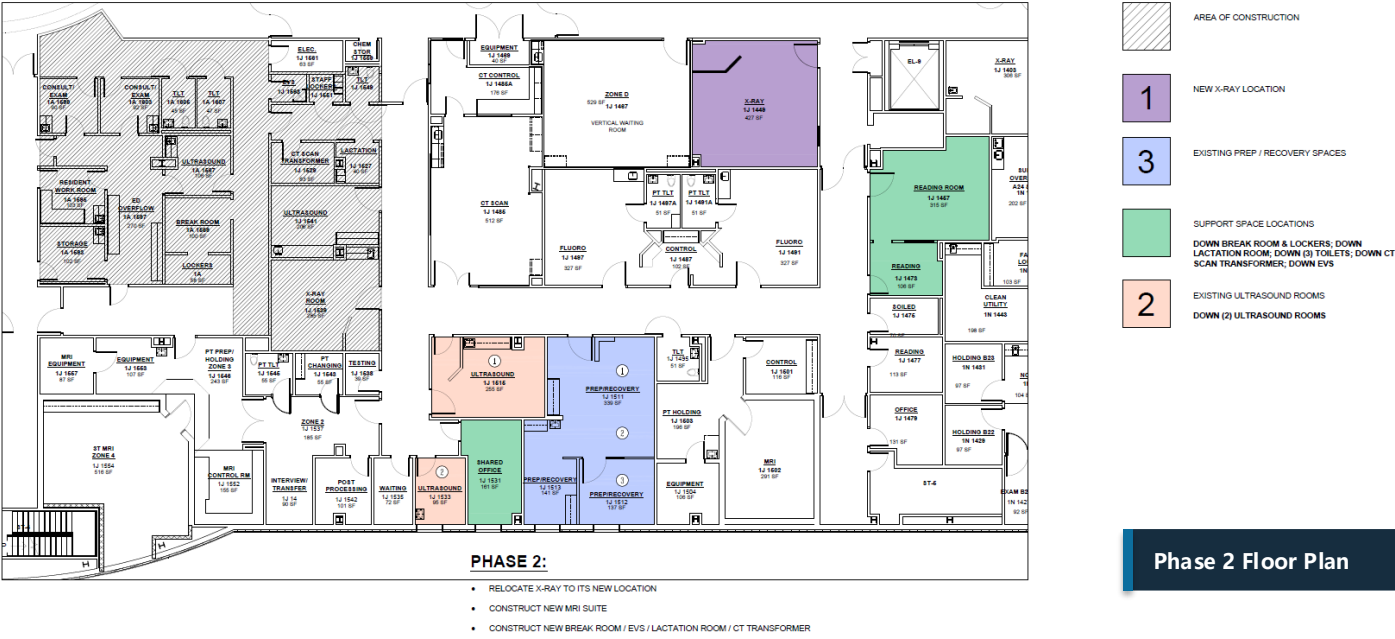
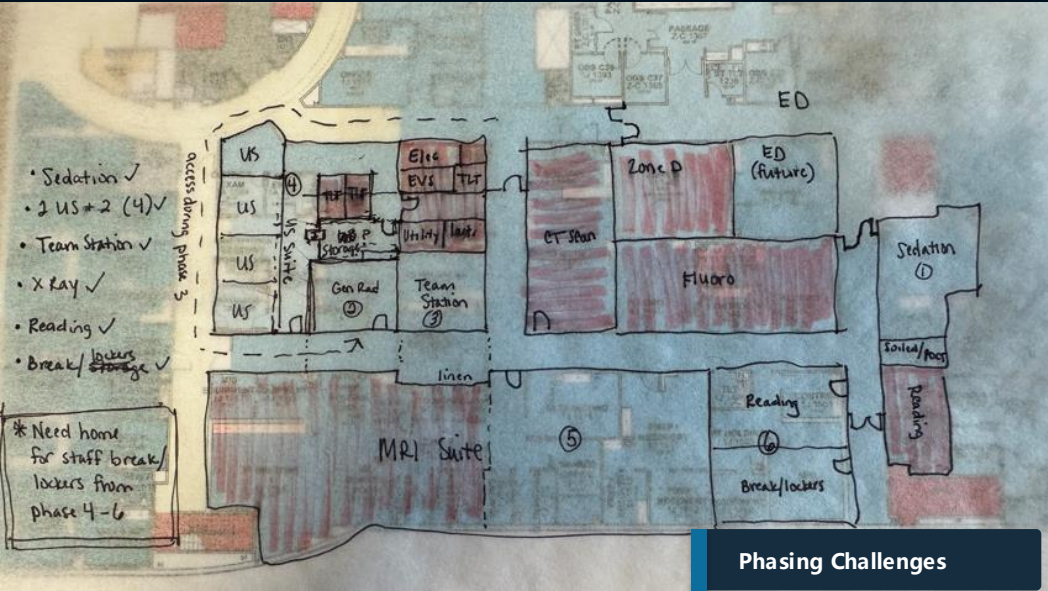
Five targeted field methods, applied during August–September 2024. No disruption to active clinical operations.



Use targeted access and field data to test assumptions before demolition.

Phasing Became the Design Problem

February 2025: With Area 1A rejected, the team designed around the perimeter — and discovered that keeping the hospital running was the hardest design constraint of all.



💡 Once continuity was fixed, phasing became the central design constraint.



Compliance Is a Design Input, Not a Final Check

Clinical Goal

4 Ultrasound rooms plus team station



Space Constraint

Full program could not fit while maintaining directly adjoining toilets



Early DPH Coordination

DPH clarified its interpretation before the design was finalized



Final Program

3 Ultrasound rooms plus team station with adjoining toilets

Early regulatory coordination allowed the team to resolve the program before documents were fixed.





Greg Murphy

COST & INFRASTRUCTURE PIVOTS

When the Temporary Solution Became the Problem

May–June 2025: Pricing arrived. Infrastructure conflicts emerged. The team had to ask a harder question.



Cost Pivot

\$1M+ Temporary Build → Demolish

Pricing revealed significant capital spend on space that would later be removed or reworked.



Infrastructure Risk

ED Return-Air Duct Conflict

A major Emergency Department HVAC duct crossed the planned perimeter MRI location — a technically possible move with institution-level risk.



The Harder Question

Are We Solving the Project or Moving the Problem?

Leadership stepped back to challenge the premise — and reframed the path forward.



Questioning the Assumption

⚠ Temporary

- 🔧 **Build temporary recovery space**
Significant capital deployed for short-term use
- ➔ **Project proceeds as planned**
Construction moves forward on current phasing sequence
- ✖ **Demolish and rework later**
Space is removed or significantly reworked after MRI transition

\$ **Paying twice for the same space**

vs

✓ Permanent

- ↔ **Challenge the assumption**
Explore relocating reading room and physician office instead
- 🏢 **Invest once — lasting value**
Create permanent Radiology Recovery now, not temporary space
- 📈 **Improve the business case**
Avoid paying heavily for disposable work

★ **Better alignment with long-term institutional value**

💡 *Leadership is not defending the current answer. It is testing the premise behind it.*



One More Constraint: The Emergency Department



Constraint

A major ED return-air duct crossed the planned perimeter MRI location



Consequence

Relocation would require a major Emergency Department HVAC shutdown



Risk Level

Institution-Level

Technically possible — operationally unacceptable



A technically possible move created an unacceptable operational risk.



A Small Rotation Changed the Entire Project



Brenda Wall & Melissa Saucier

Before

Perimeter-Side MRI — ED Conflict
Perimeter-side MRI with ED return-air conflict requiring a major HVAC shutdown to proceed

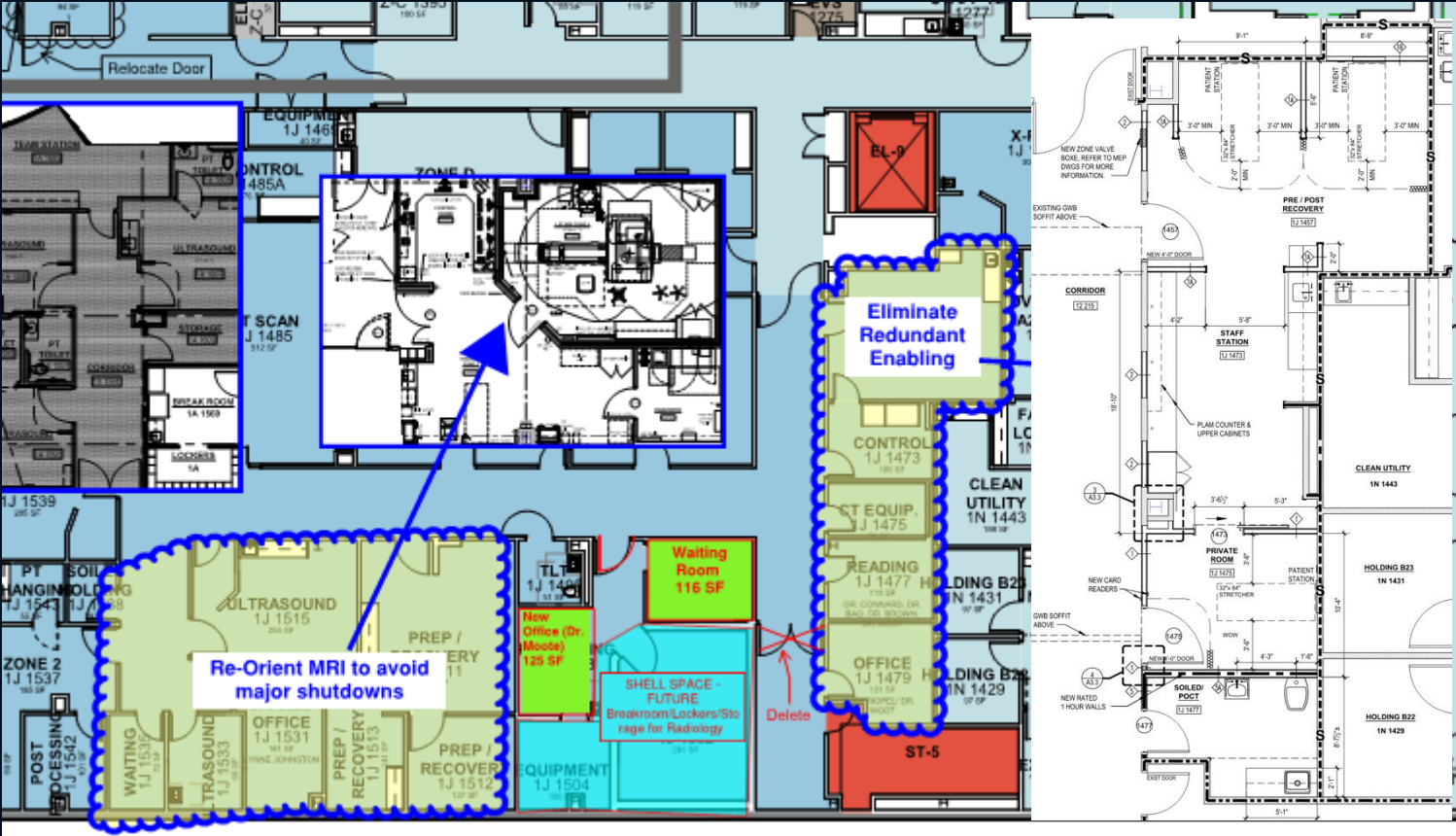
After

MRI Reoriented — Duct Cleared
MRI reoriented toward the corridor, clearing the critical duct path and eliminating the shutdown dependency

Result

Integrated Solution
Permanent Recovery enabled, redundant enabling work eliminated, infrastructure exposure reduced

Mechanical engineering + design + PD&C reframed the geometry and removed the shutdown dependency.



Final Decision



✓ Lower Initial Cost – MRI Focused

✓ Greater Long Term Institutional Value – Master Plan Focused

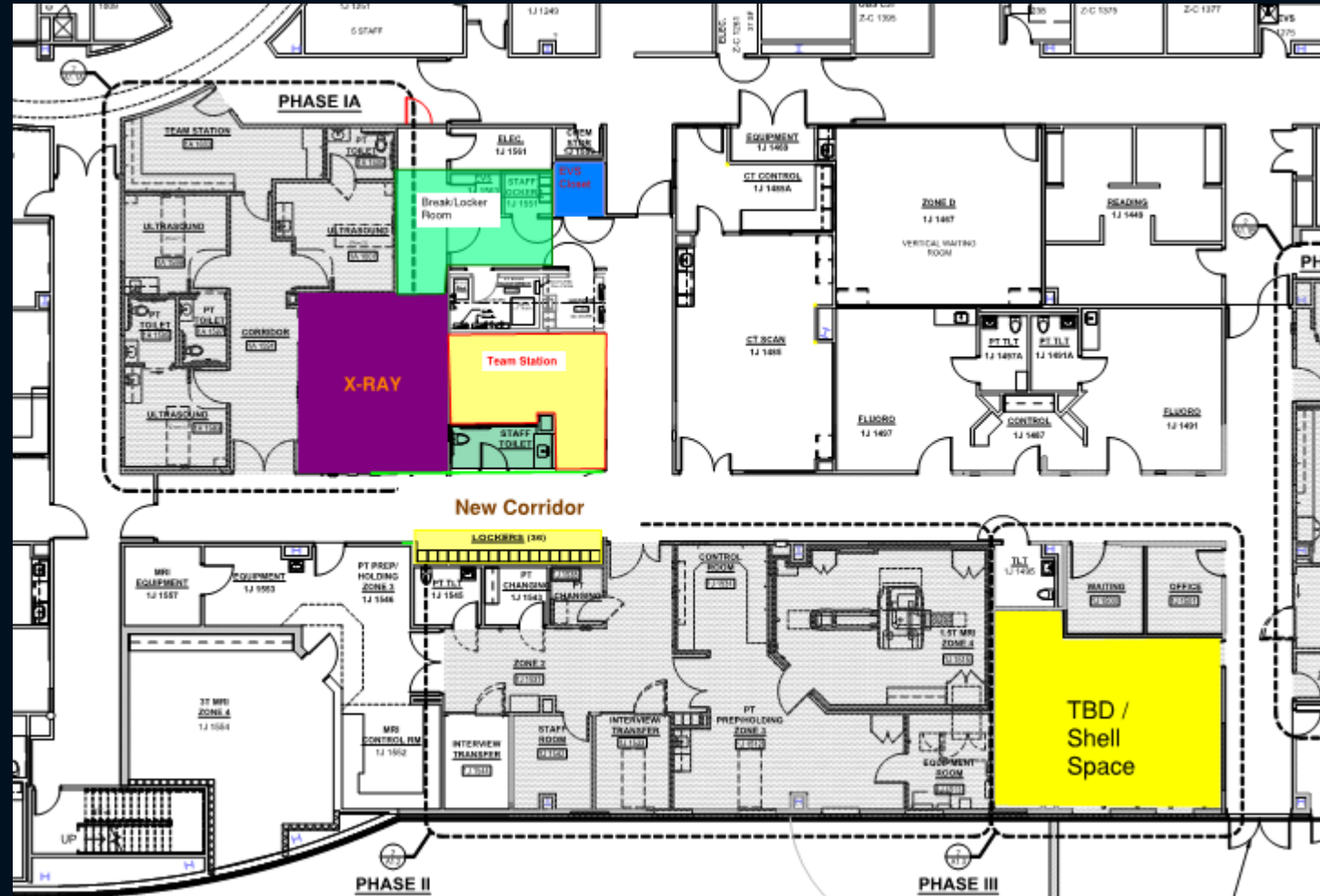
	MRI Focused	Master Plan Focused
Cost	✓ Lowest First Cost Minimum upfront capital	✓ Permanent Recovery Invest once — lasting institutional value
Operations	⚠ Operational Compromises Disruptions to clinical continuity	✓ Fewer Shutdowns Reduced disruption to critical systems
Flexibility	🔄 Greater Future Rework Higher exposure to double spending	✓ Future X-Ray Readiness Phased plan enables next capital move
Future Rework	✗ Limited Alignment Does not support master plan	✓ Reduced Double Spending No disposable temporary construction
Program Fit		

💡 The decision was not simply cost. It was first cost versus operational and programmatic value



The Recommended Programmatic Fit

- **MRI** — Corridor-side orientation, infrastructure exposure reduced
- **Recovery** — Permanent Radiology Recovery established
- **Ultrasound** — At planned three-room capacity
- **Future X-ray** — Enabled in phased plan
- **Shell / flex space** — Preserved for future investment



Today's project became an enabling move in a longer capital sequence.



Bets that Paid Off

01**Patient Care**

Continuity maintained throughout construction

02**Operations**

Fewer disruptive shutdowns

03**Capital**

Less temporary and disposable construction

04**Infrastructure**

Reduced critical system exposure

05**Future Planning**

Enabled the next capital project

 The integrated team optimized the institution, not only the construction package.





Lessons Learned

1

Capture Existing Conditions

Before committing to layouts



2

Set Operational Non-Negotiables

Before design choices narrow the options



3

Use Field Data to Price Phasing

Before temporary work becomes fixed cost



4

Challenge Temporary Solutions

Before paying twice for the same space



5

Design Today Around Tomorrow

Before the next capital request arrives



💡 Better information reduced risk because it arrived early enough to change the decision.



Betting on Better Information

“

Innovation is not the tool by itself. Its value comes when field data and collaboration arrive early enough to change the decision.



Questions

