

Primary Beamline Radio-Activated Water (RAW) Preliminary Design Review

Absorber Hall RAW - General Overview

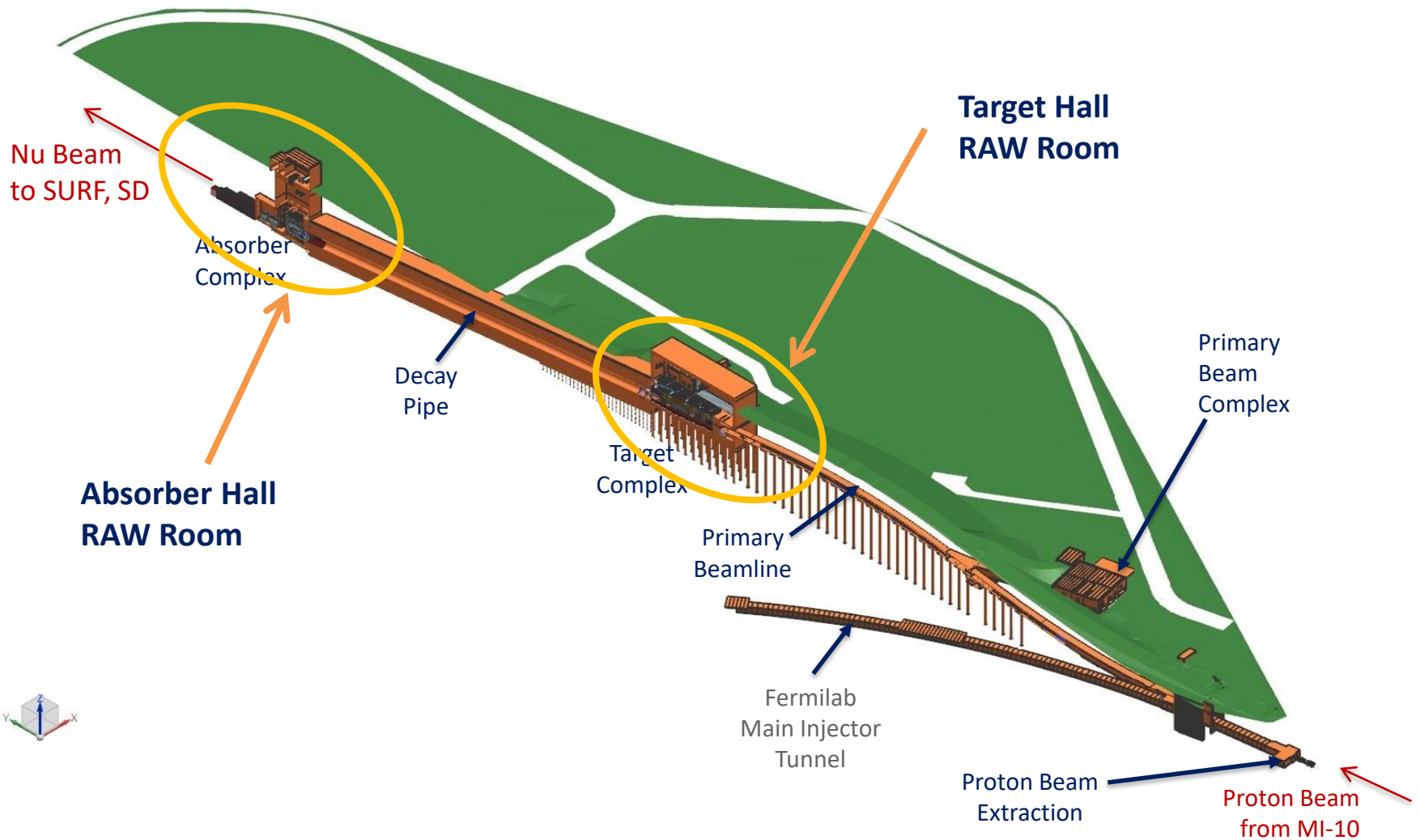
Karlon E. Williams, II

February 19 & 20, 2020



RAW System - Preliminary Design Review

ISO Section View of Near Site – MI-10 to LBNF-30 Absorber Complex



RAW System - Preliminary Design Review

Absorber Hall RAW Systems

Systems located within the Absorber Hall RAW Room

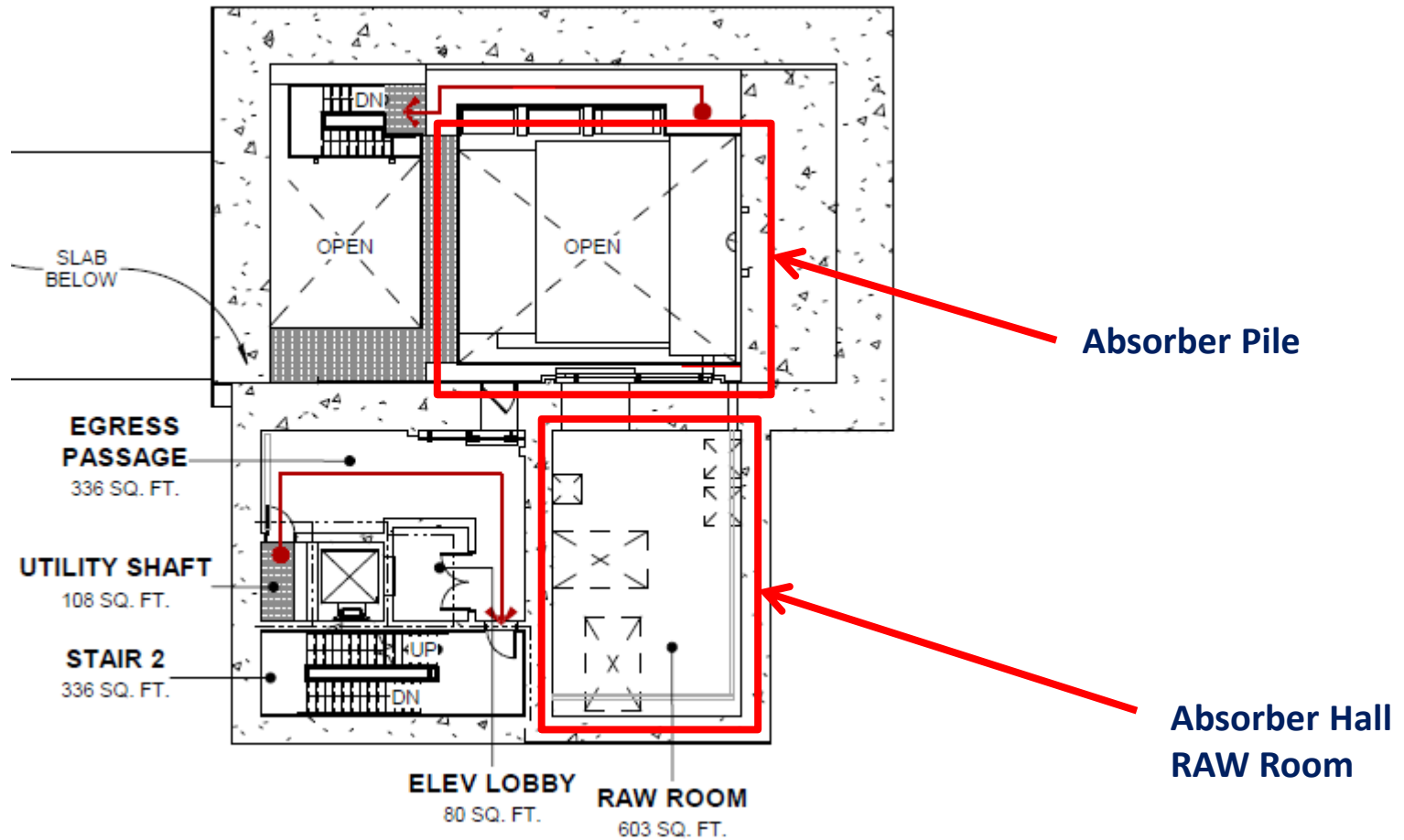
- Absorber RAW
- AH RAW Exchange
- AH Intermediate

Other support equipment just outside the AH RAW Room

- RAW Capture Station
- Air Compressors
- Bottle Farm

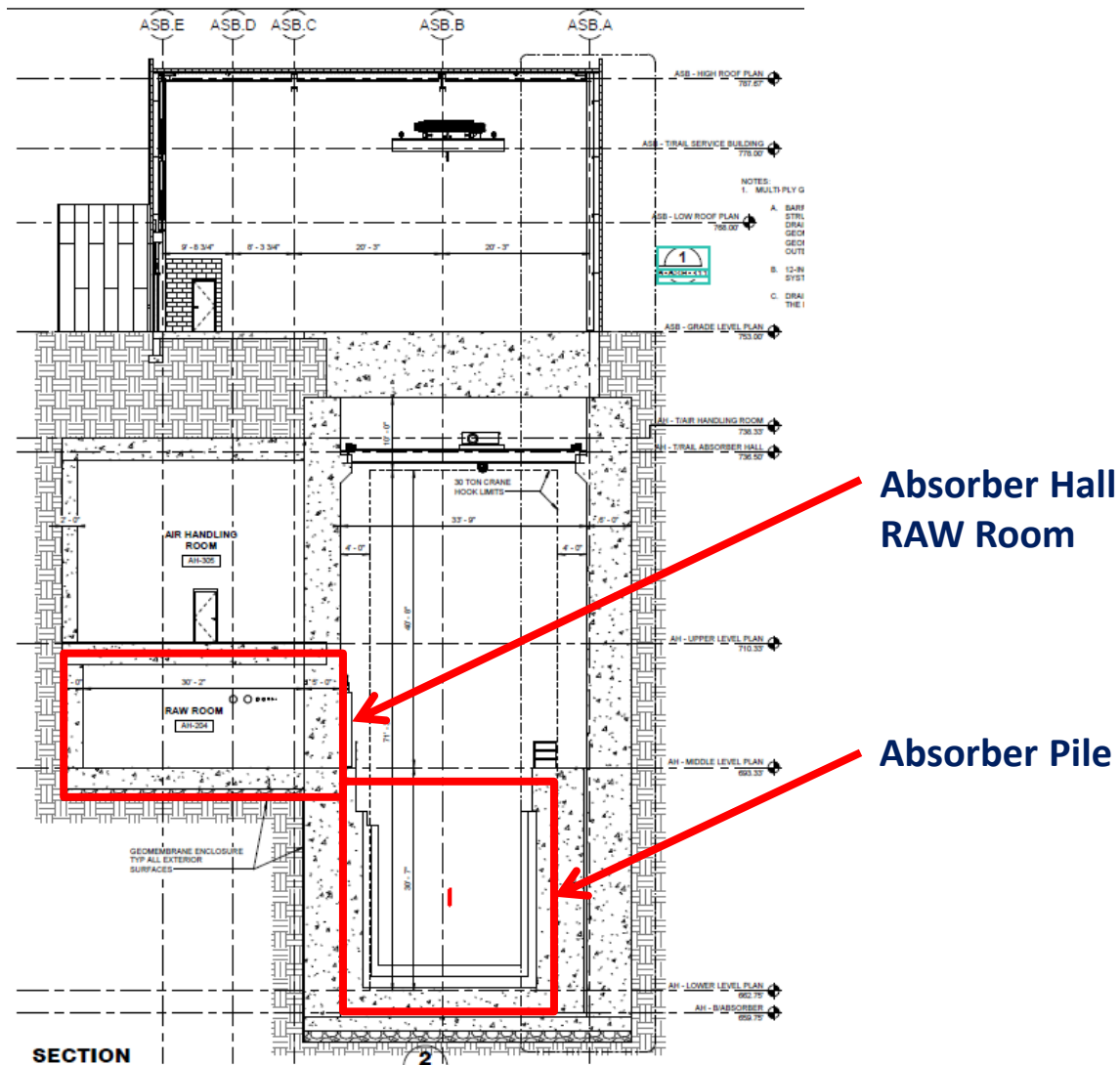
RAW System - Preliminary Design Review

AH RAW Room



RAW System - Preliminary Design Review

AH RAW Room

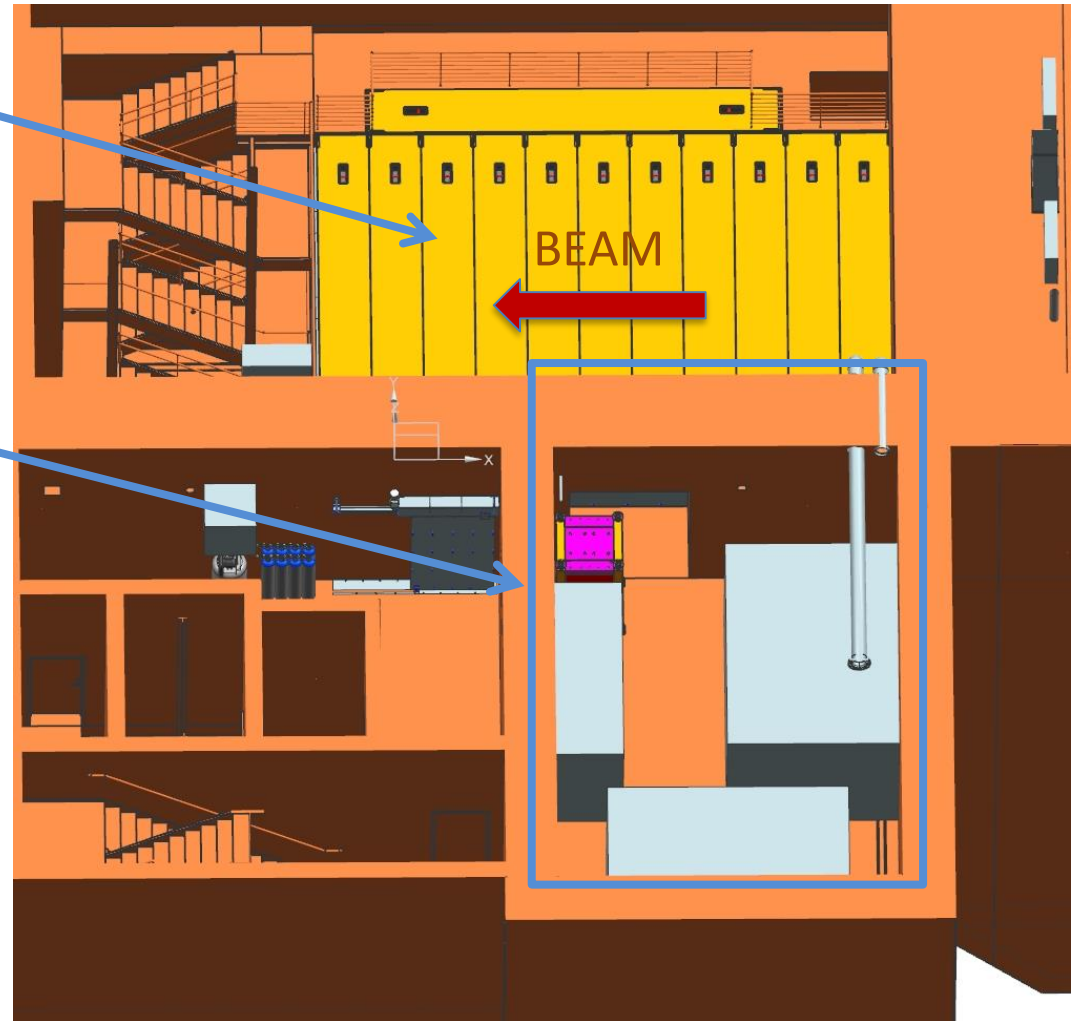


RAW System - Preliminary Design Review

AH RAW Room

Absorber Pile

Absorber Hall
RAW Room

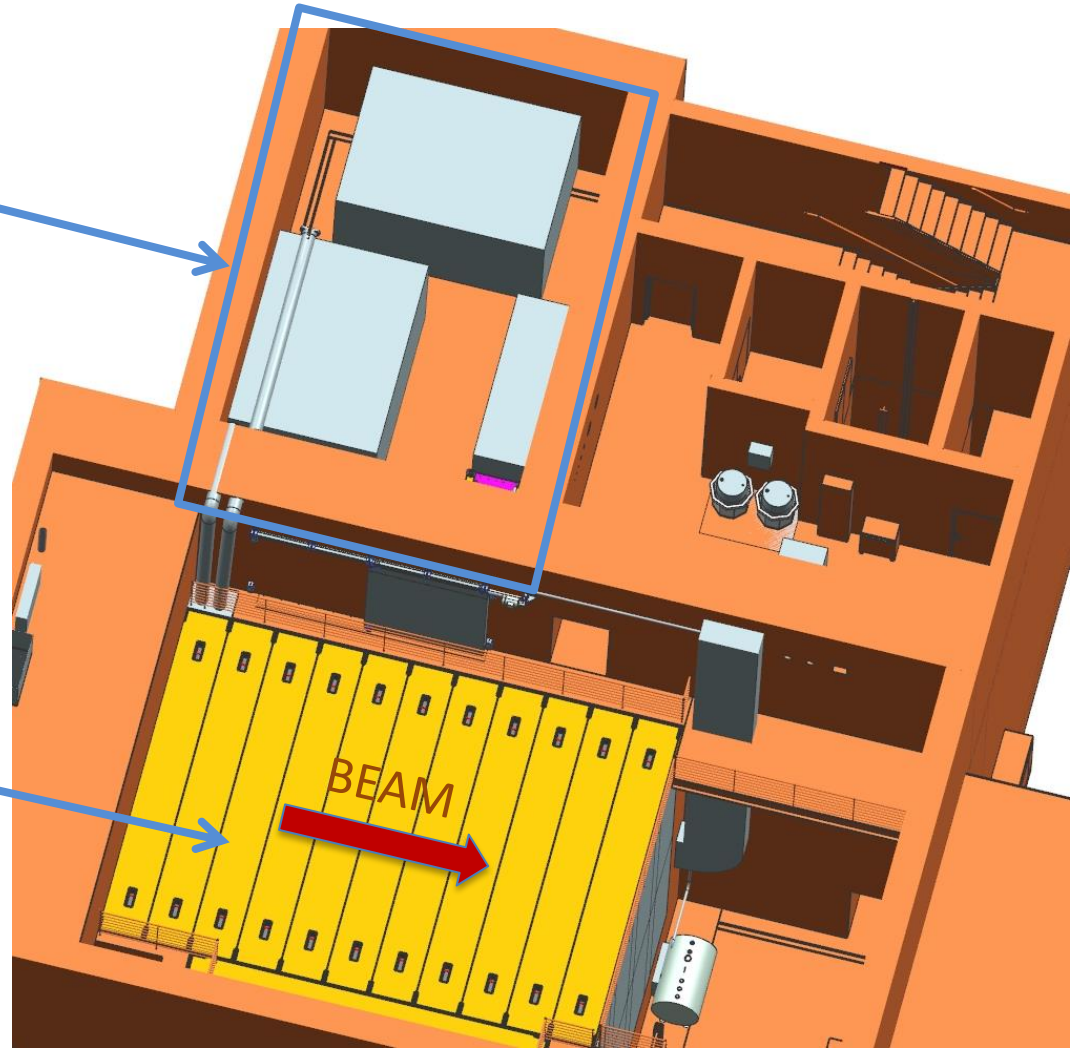


RAW System - Preliminary Design Review

AH RAW Room

Absorber Hall
RAW Room

Absorber Pile



RAW System - Preliminary Design Review

AH RAW Room - General Notes

- NSCF was reasonably certain about current layout, changes would be minimal
- On lower level just above Absorber Pile
- Accessible only when beam is off
- Large room, 30' x 20' x 11' ceiling
- System outline boxes as shown are for area approximation only, not set in stone
- Has containment for each system
- All AH leaks flow to controlled sumps
- Fill for all systems is by barrels of distilled water

RAW System - Preliminary Design Review

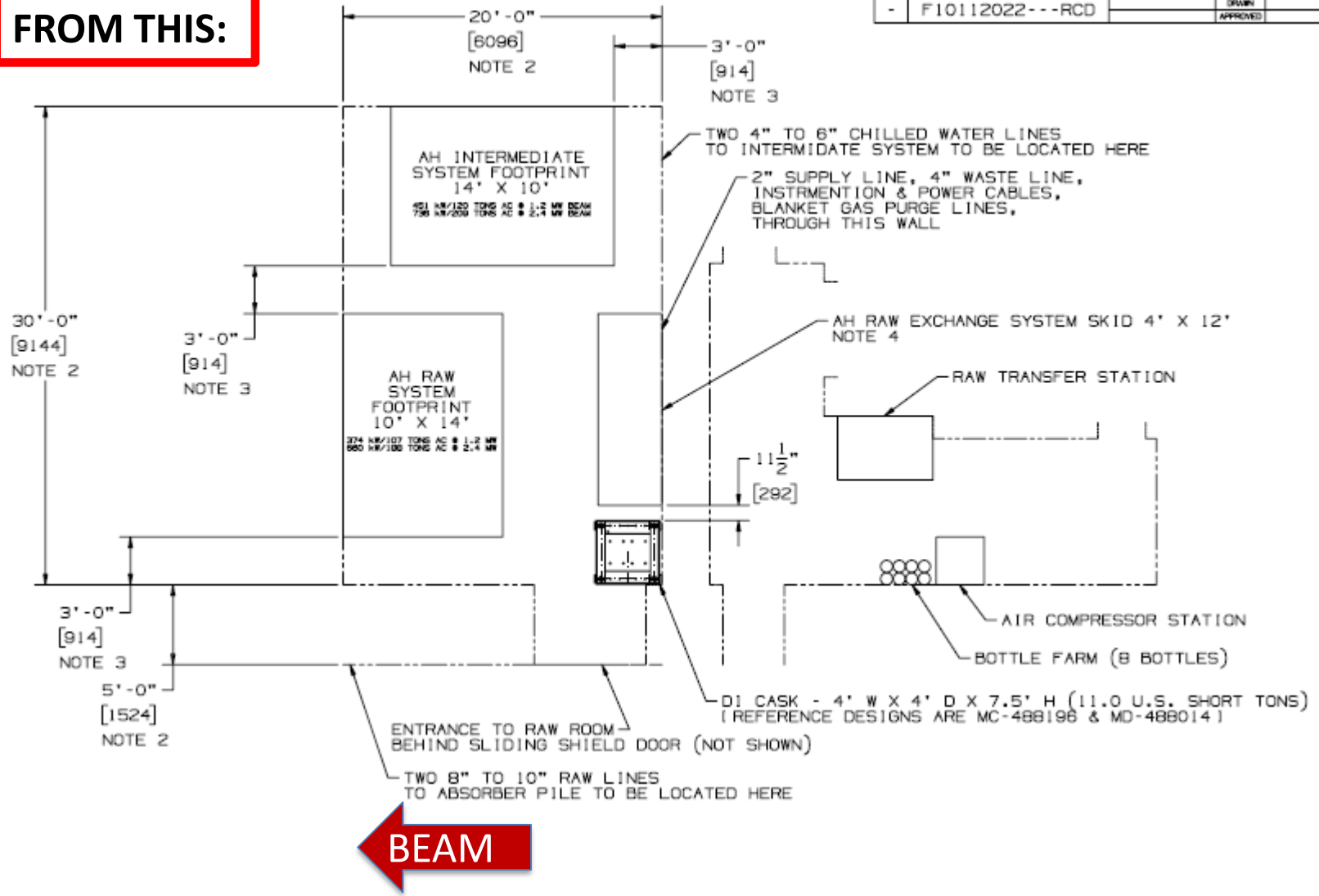
AH RAW Room - General Notes

- NSCF is proceeding with different design for the Absorber Hall
- Uses large circular bore into earth, rather than built-up square block construction
- Far more cost-effective
- RAW Room changes shape to pie slice shape
- Remainder of RAW Room details remains virtually unchanged

Absorber RAW Cooling System: Layout

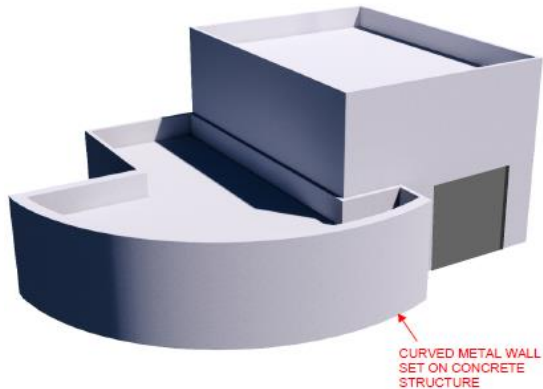
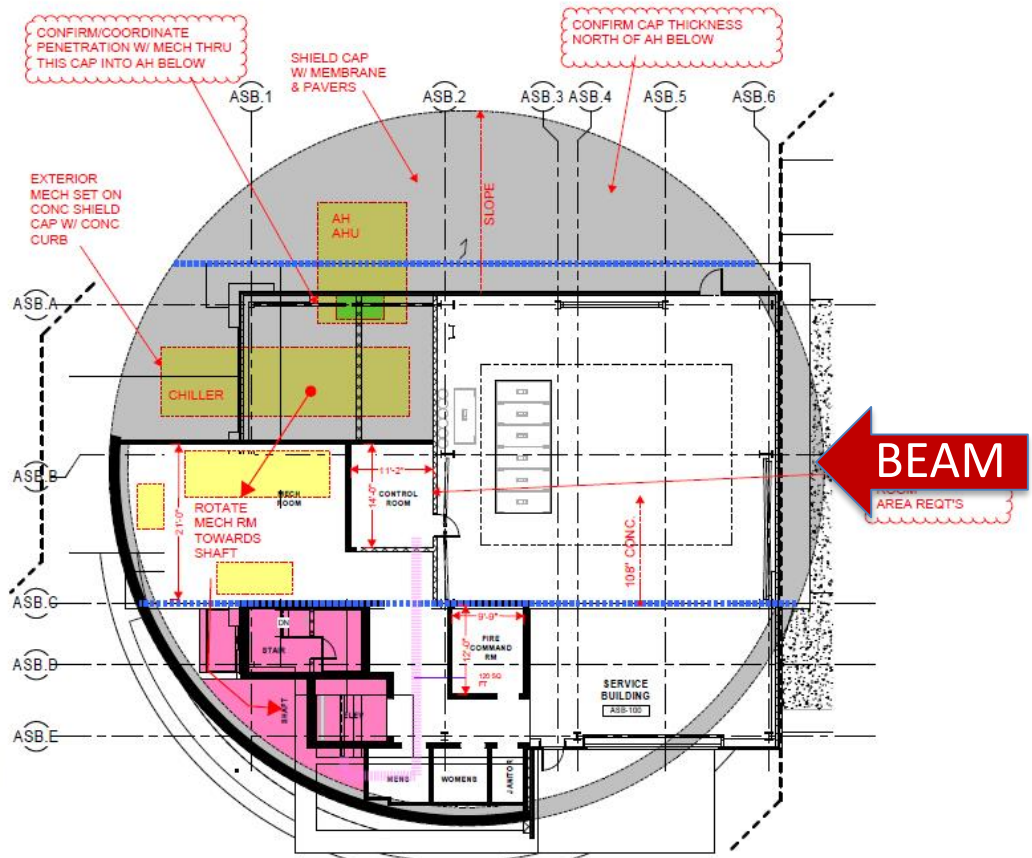
FROM THIS:

PROJECT NO.	F10112022---RCD	DATE	
DRAWN		APPROVED	



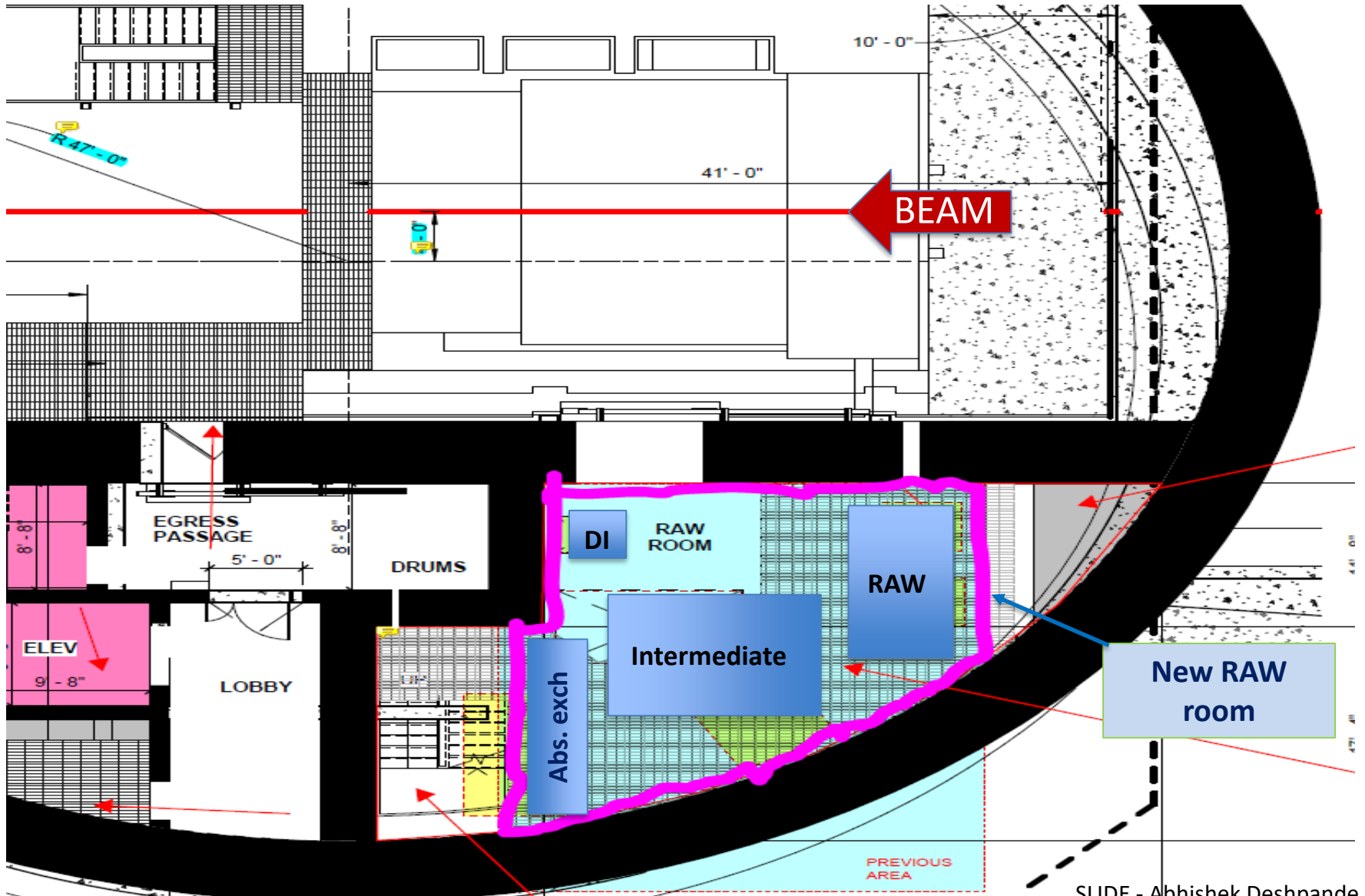
Absorber RAW Cooling System: Layout, Building Design Change

TO THIS:



SLIDE - Abhishek Deshpande

Absorber RAW Cooling System: Layout, New AH concept



SLIDE - Abhishek Deshpande

RAW System - Preliminary Design Review