

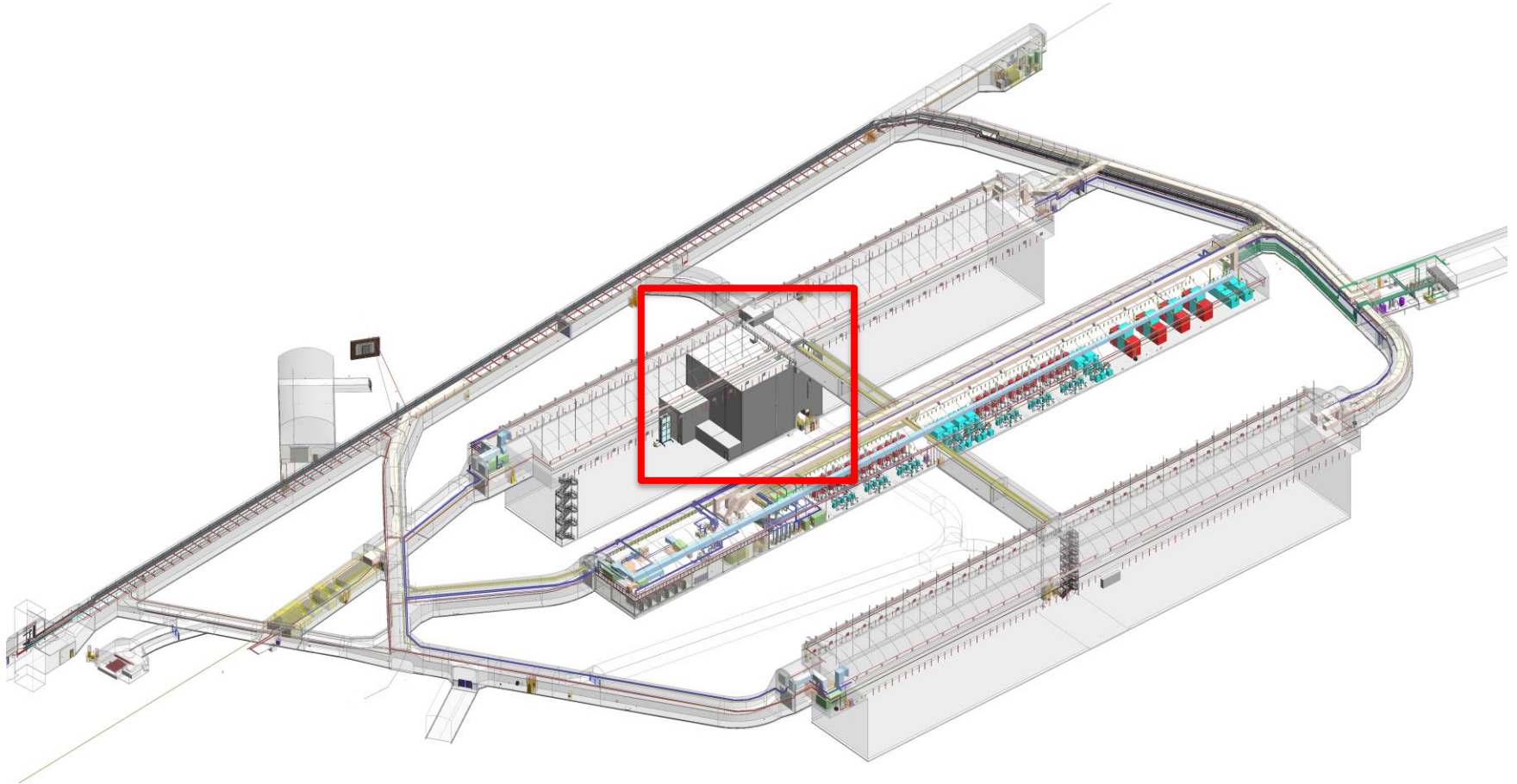
Clean Room Layout

Justin Freitag

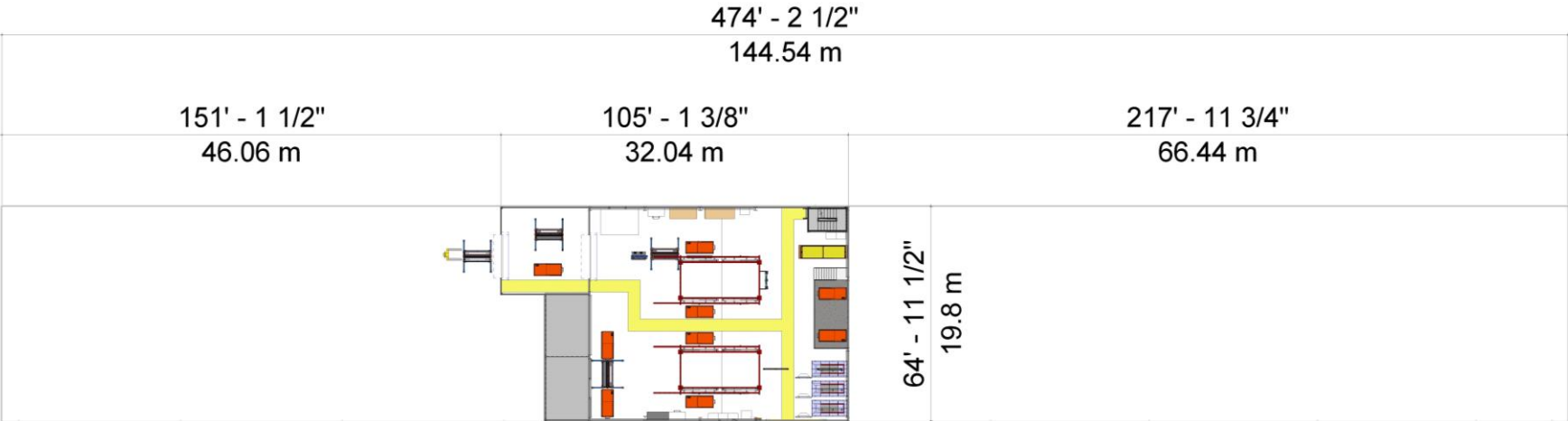
Installation Planning

Feb. 4, 2020

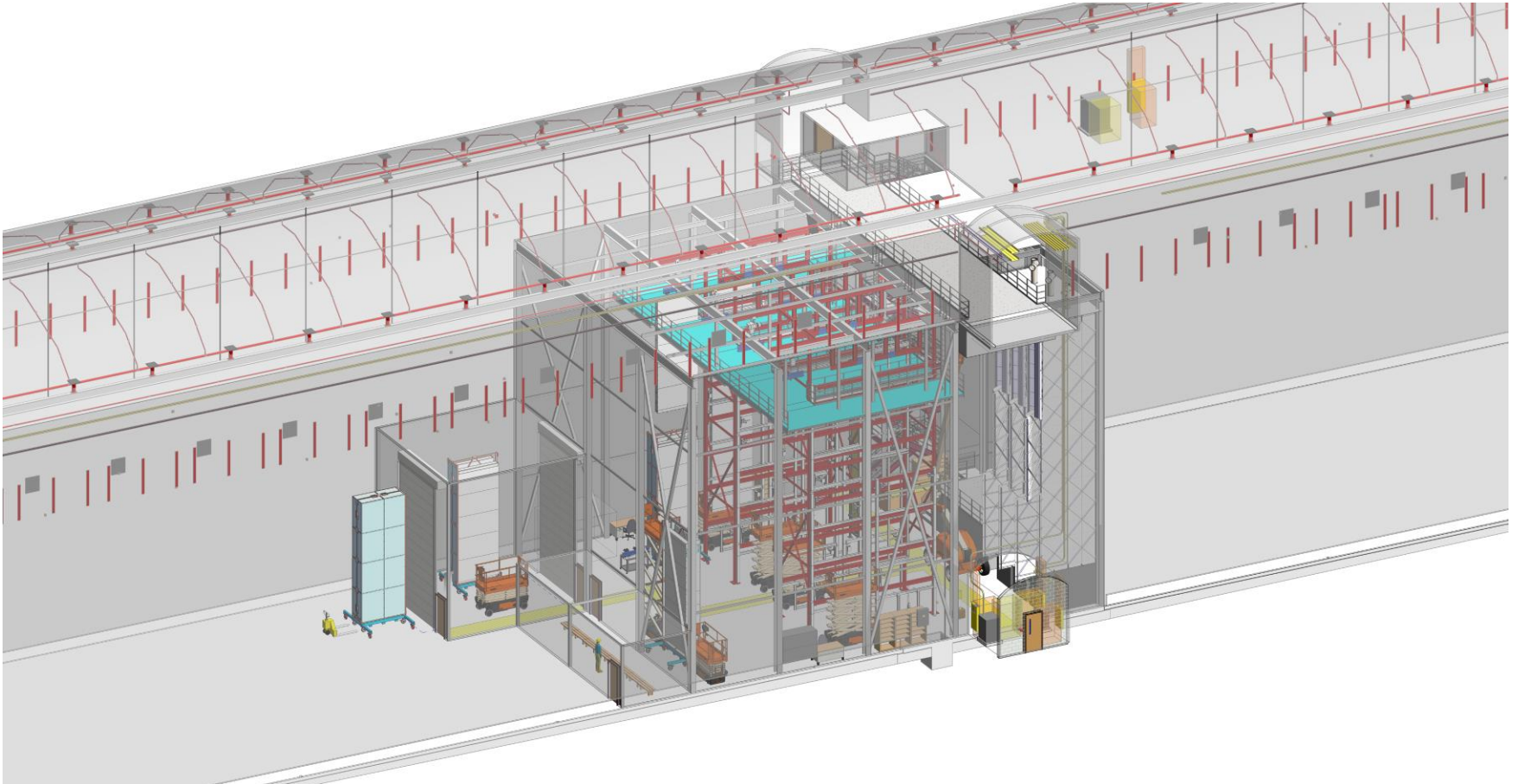
Overall Clean Room



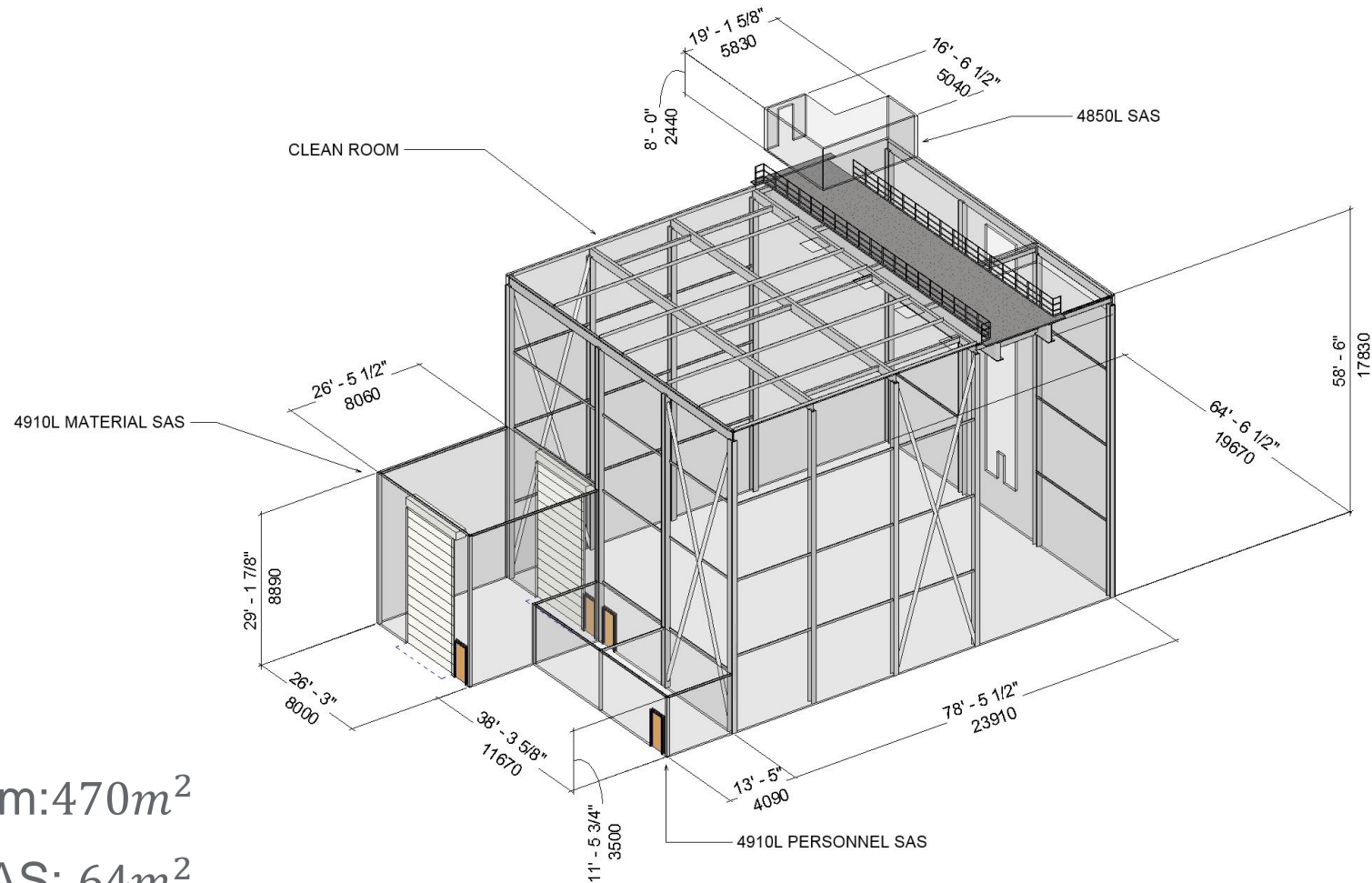
Clean Room Footprint



Overall Clean Room – Iso View



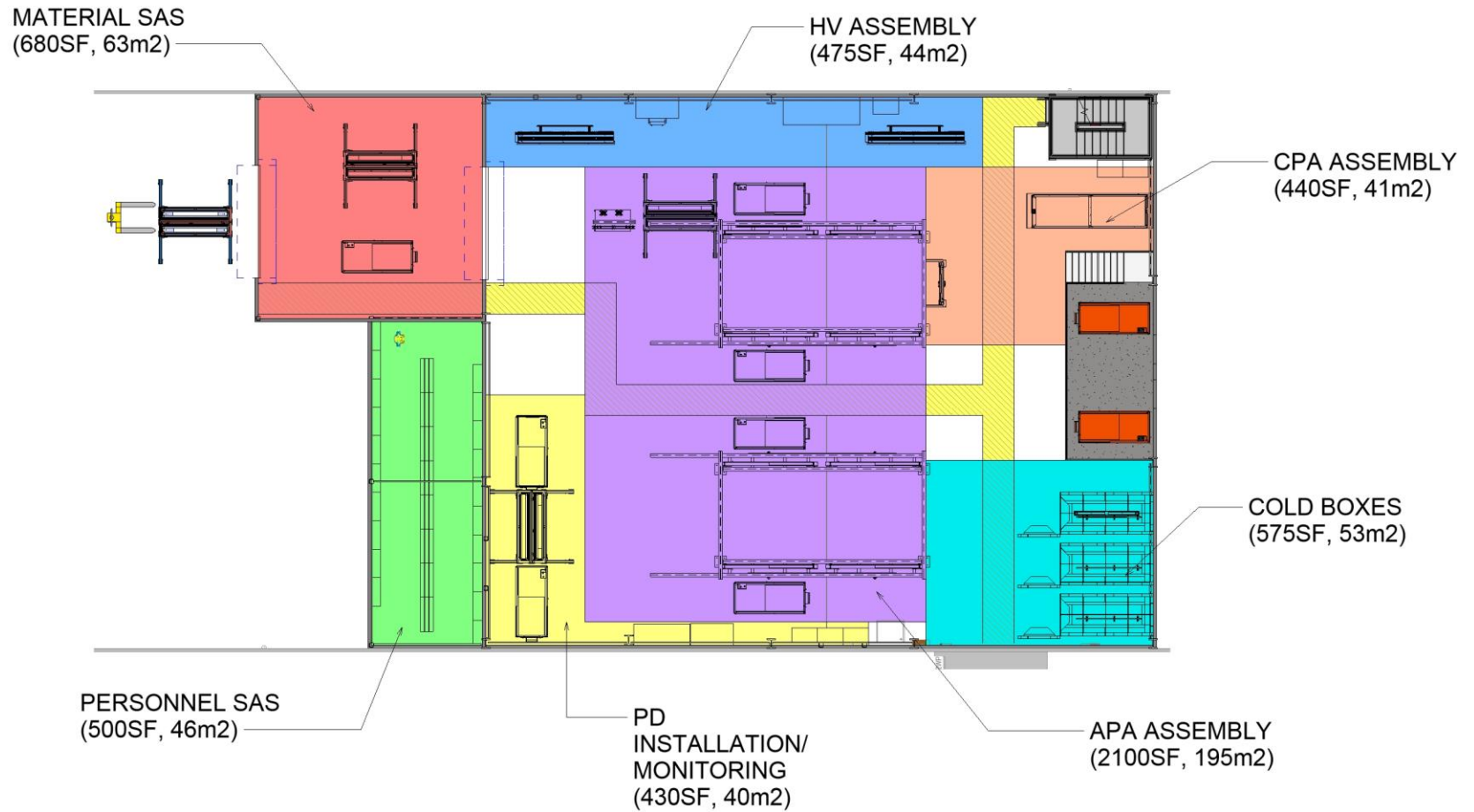
Overall Clean Room Dimensions



Footprints

- Clean Room: $470m^2$
- Material SAS: $64m^2$
- 4910L Personnel SAS: $47m^2$
- 4850L SAS: $25m^2$

Clean Room Areas 4910L



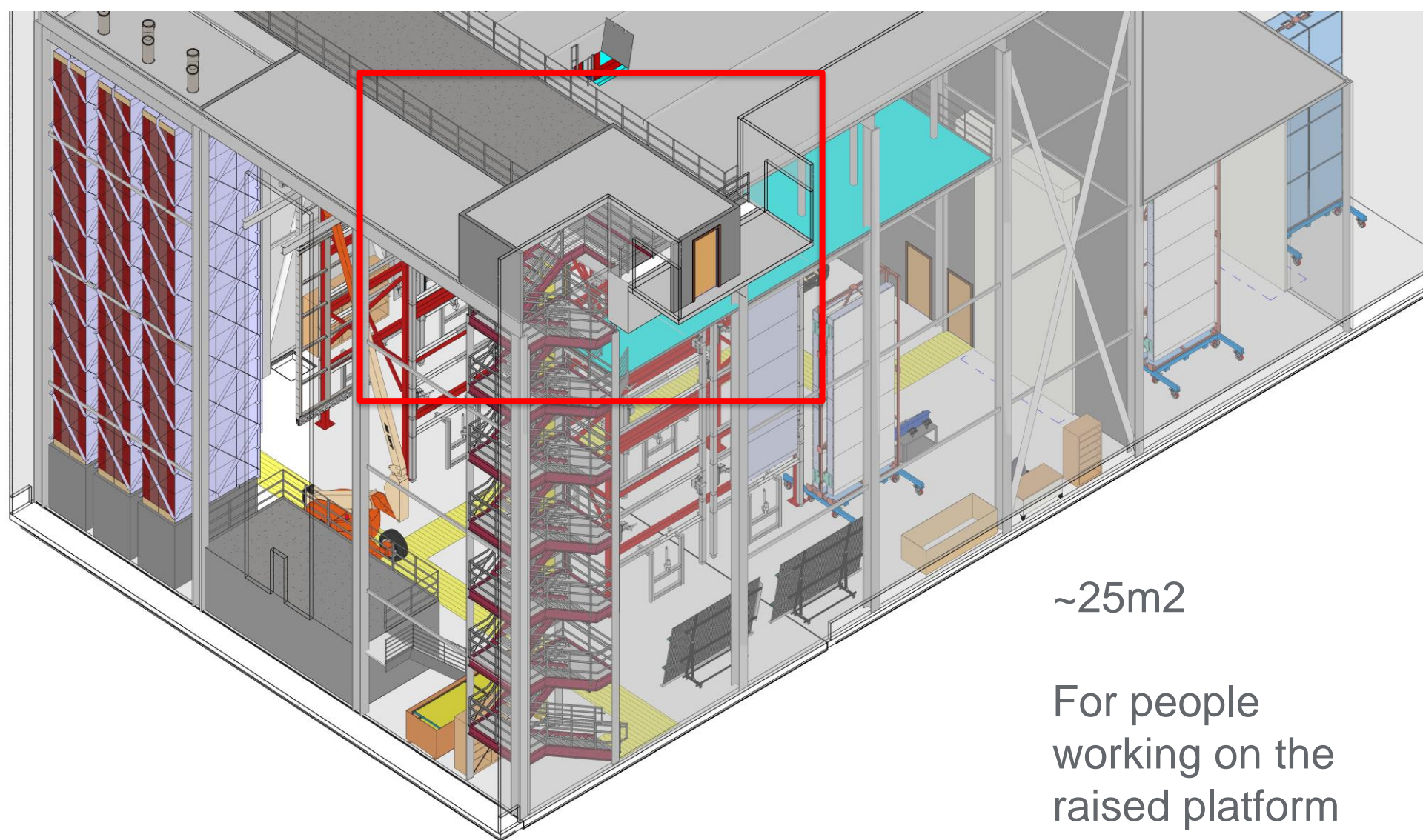
Personnel SAS (4910L)

SAS for gowning up in preparation for entering clean room.

(11.6mx4mx3.5m)



Personnel SAS (4850L)



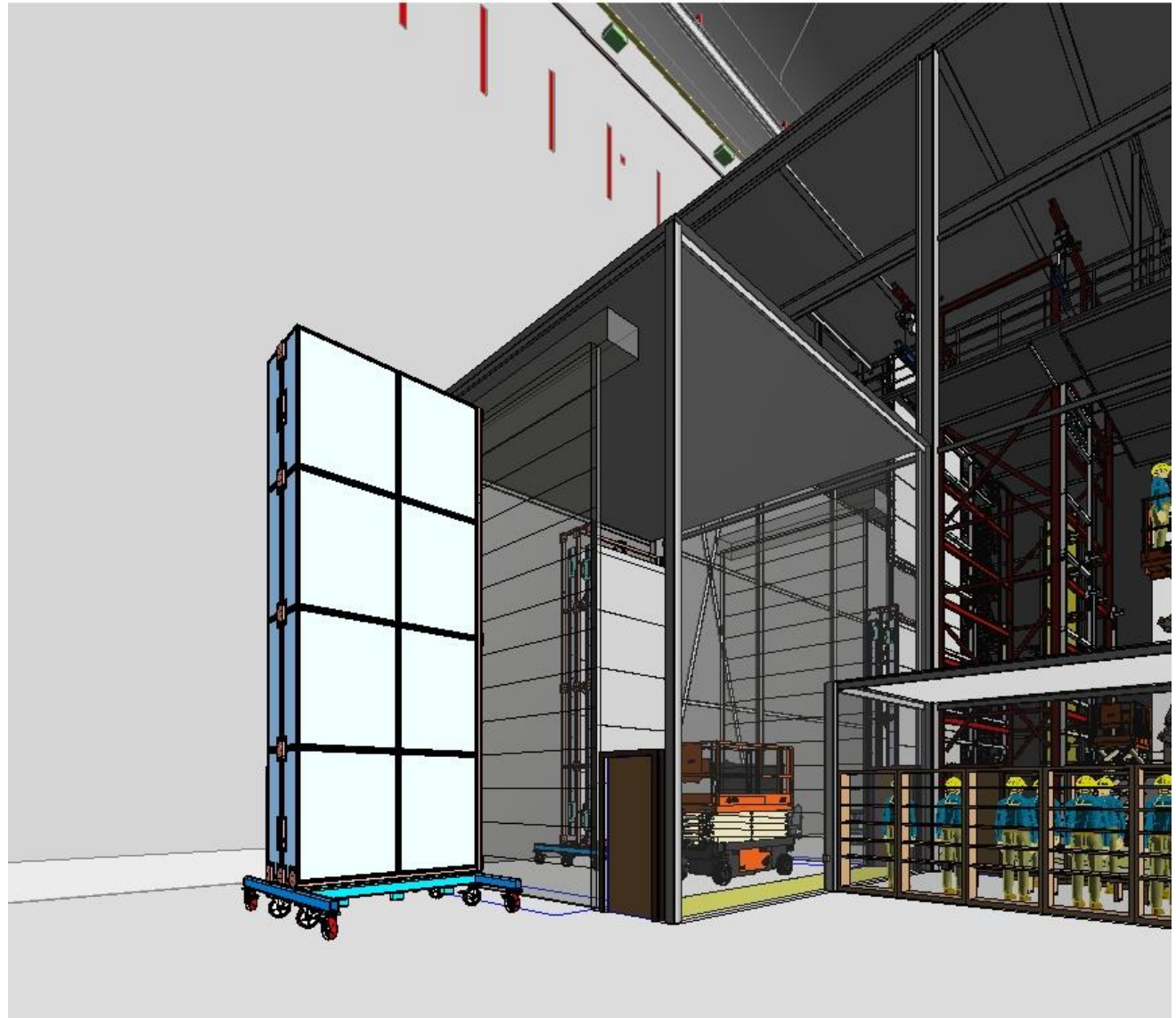
~25m²

For people
working on the
raised platform

Material SAS

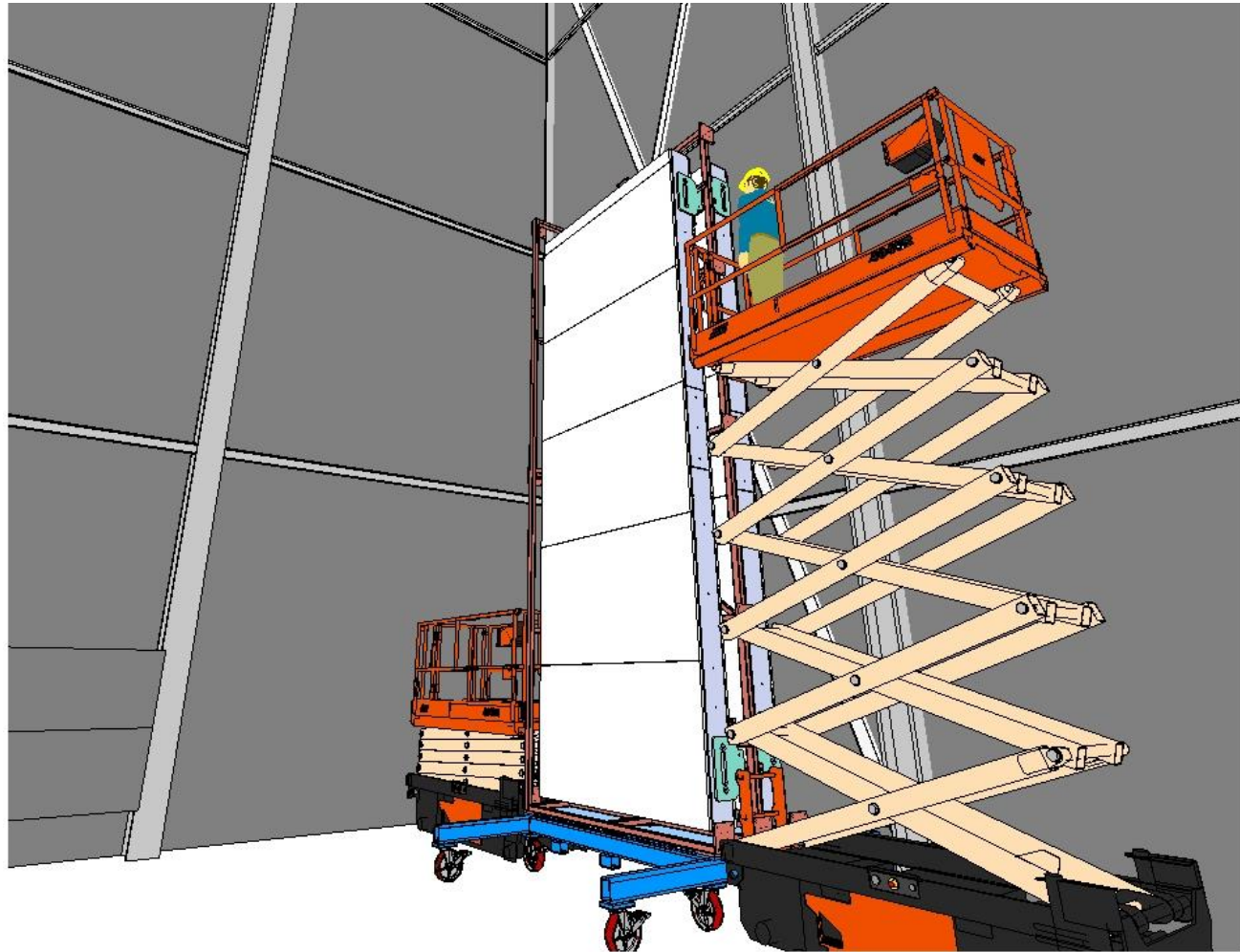
Clean room doors sized for APA on carts. (4mx8m)

Removing APA protective covers and cleaning all other components prior to entering clean room.
(8mx8mx9m)



PD Installation

Lifts needed to
access sides of
APA and centers
of front or back
face

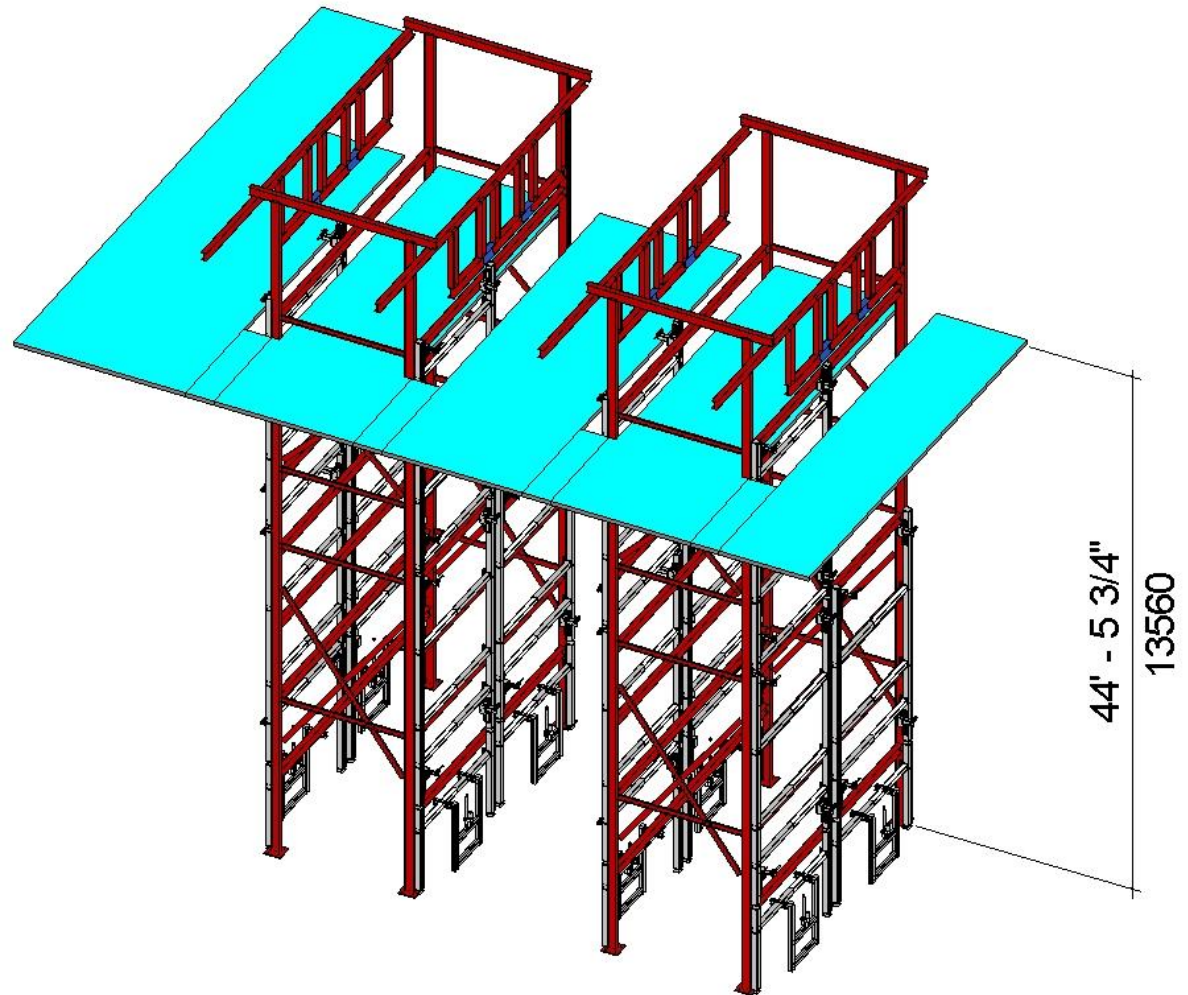


APA Assembly Towers/Platforms

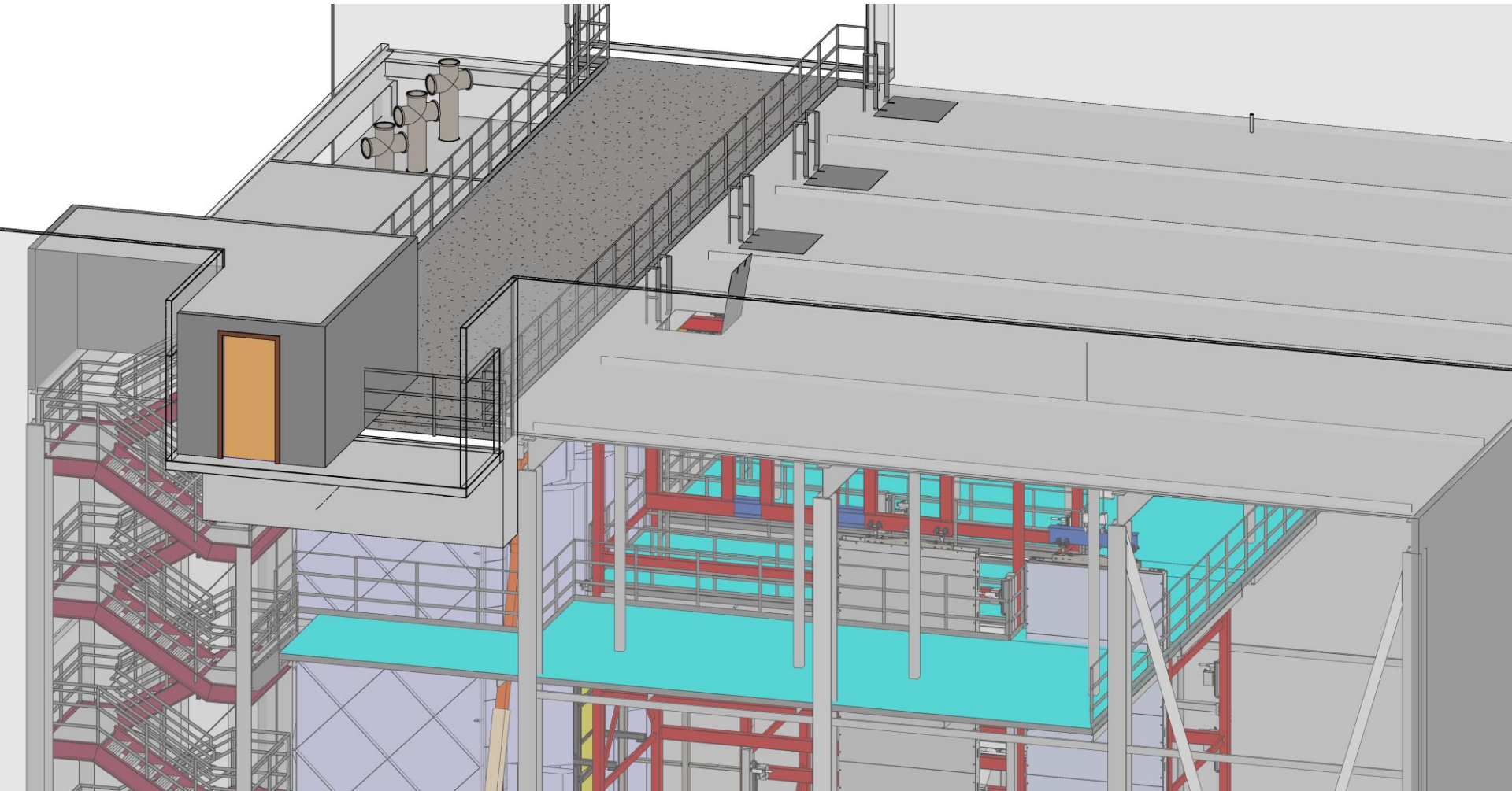
Assembly towers with 8 total stations for APA assembly.

Elevated platforms for installing electronic equipment.

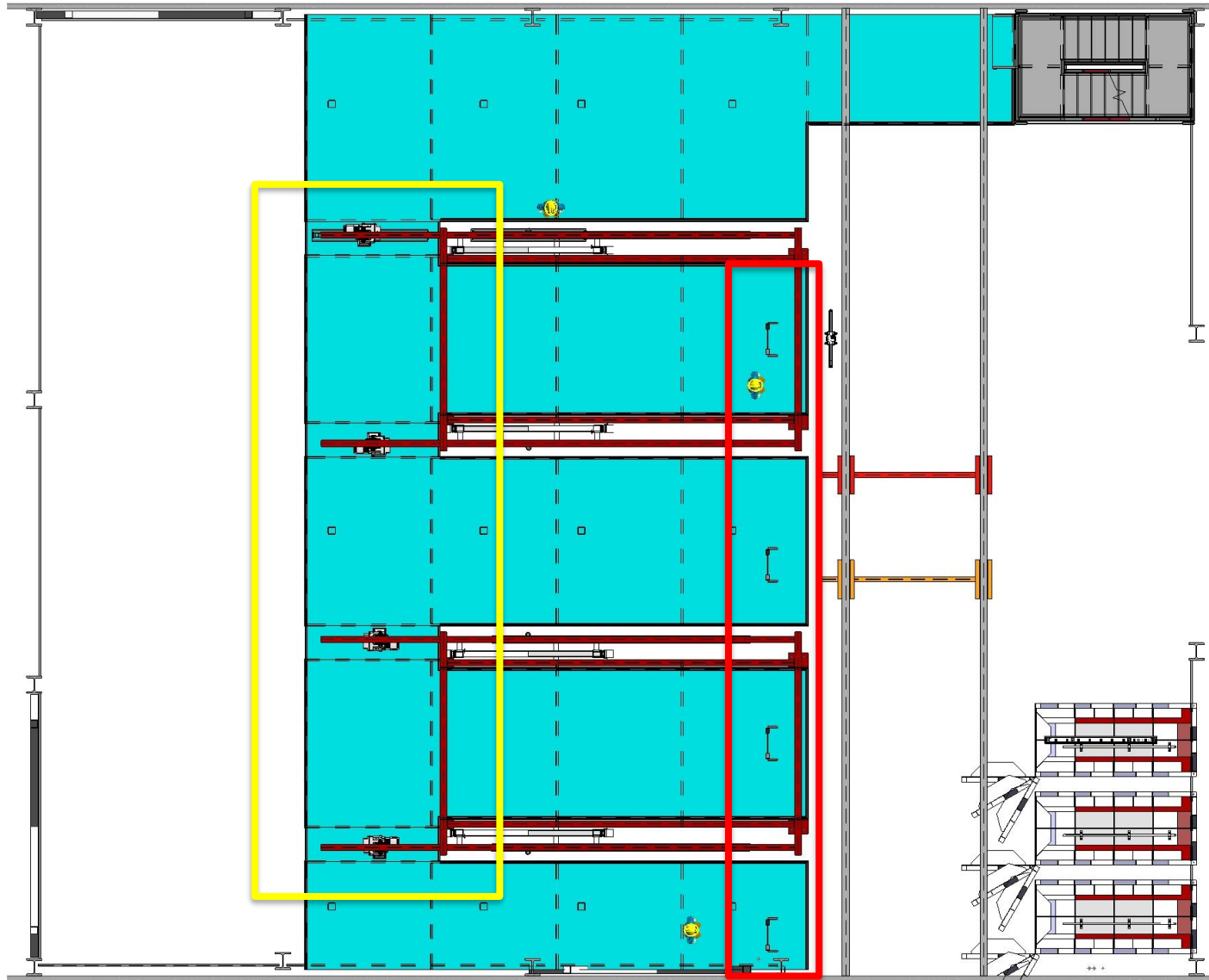
APA fixtures with stabilizers.



APA Assembly Towers/Platforms Access



APA Assembly Towers/Platforms



APA Assembly Towers/Platforms



FC/EW Assembly Area

Space for field cage installation on carts

End wall assembly

Workspace and component delivery crates



CPA Assembly

Storage area for
CPA components
crate

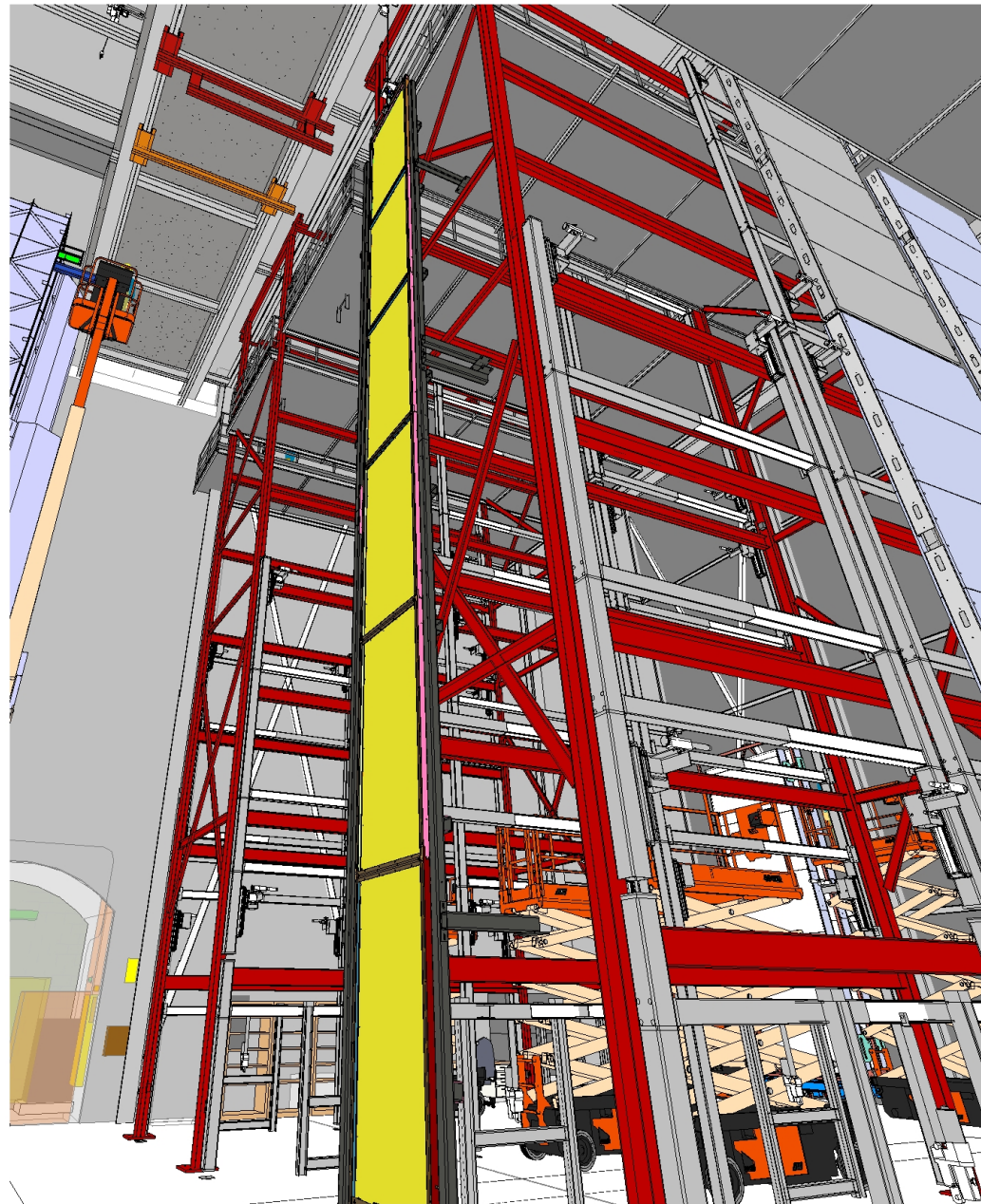
Specific tooling/
other hardware



CPA Assembly Tower

CPA panels lifted onto
CPA assembly tower
with overhead
crane/hoist

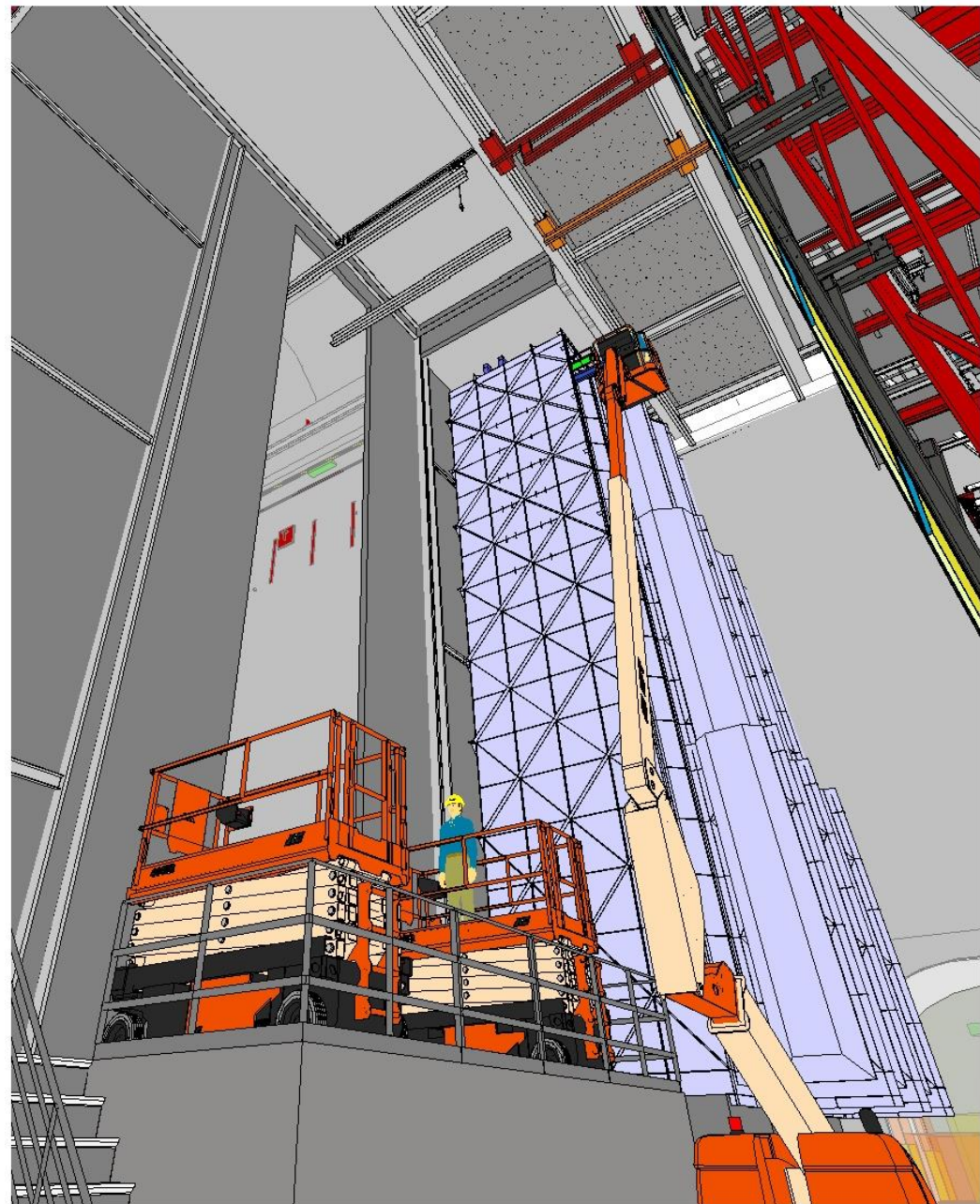
CPA assemblies
moved to TCO beams



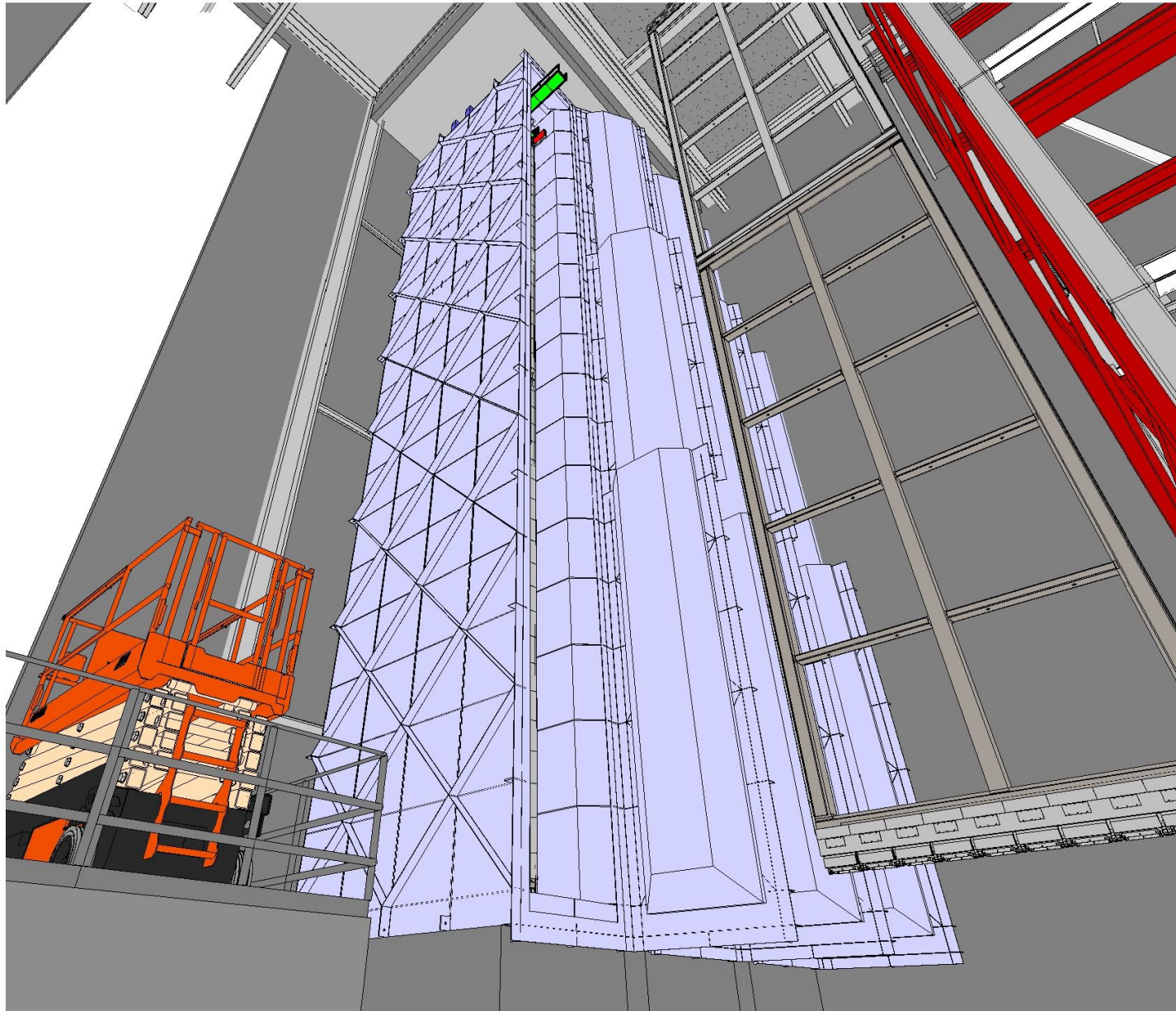
TCO/DSS

Detector elements
entering the cryostat

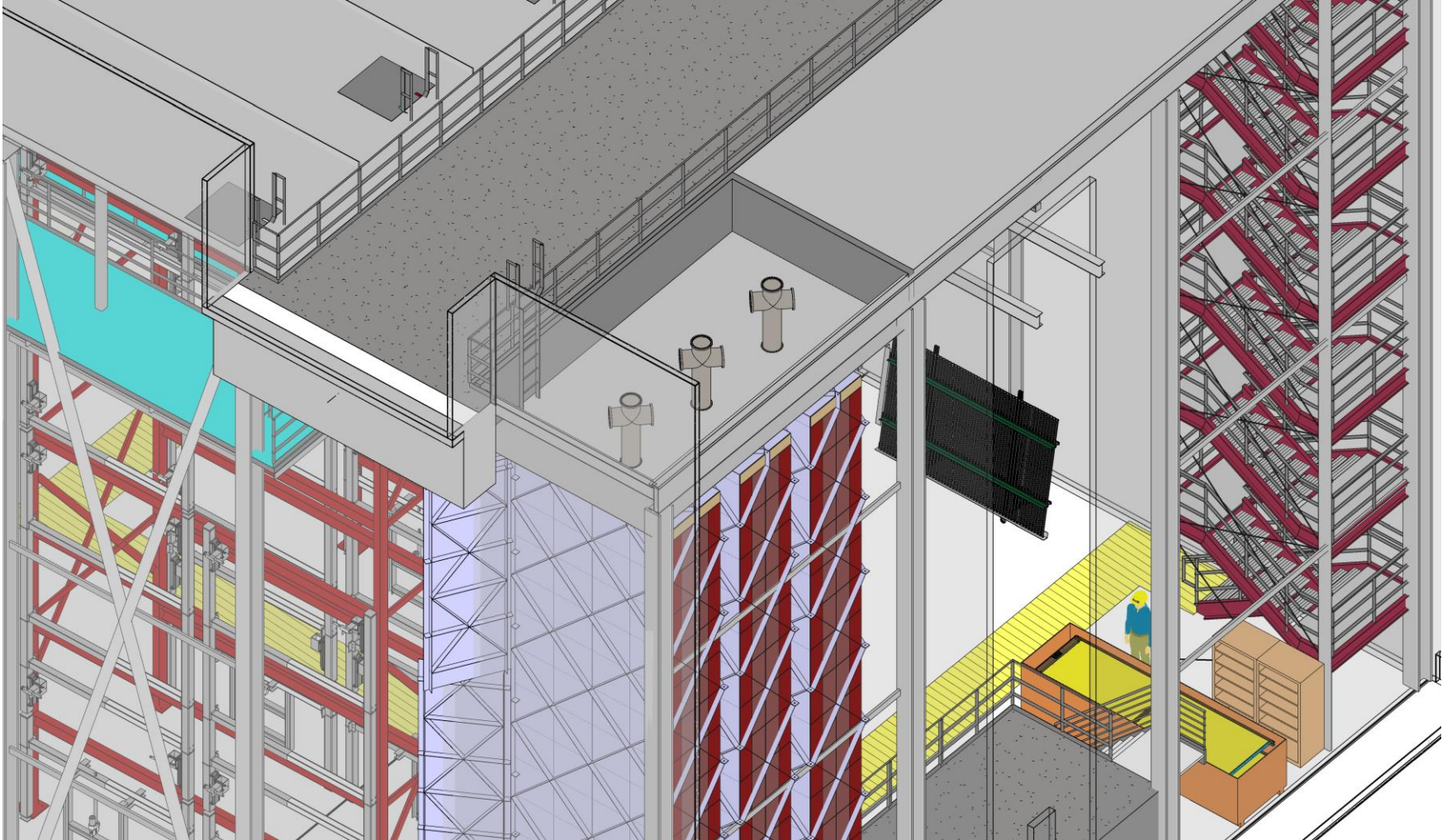
Used for assembly of
FC/GP to CPA



Cold Boxes

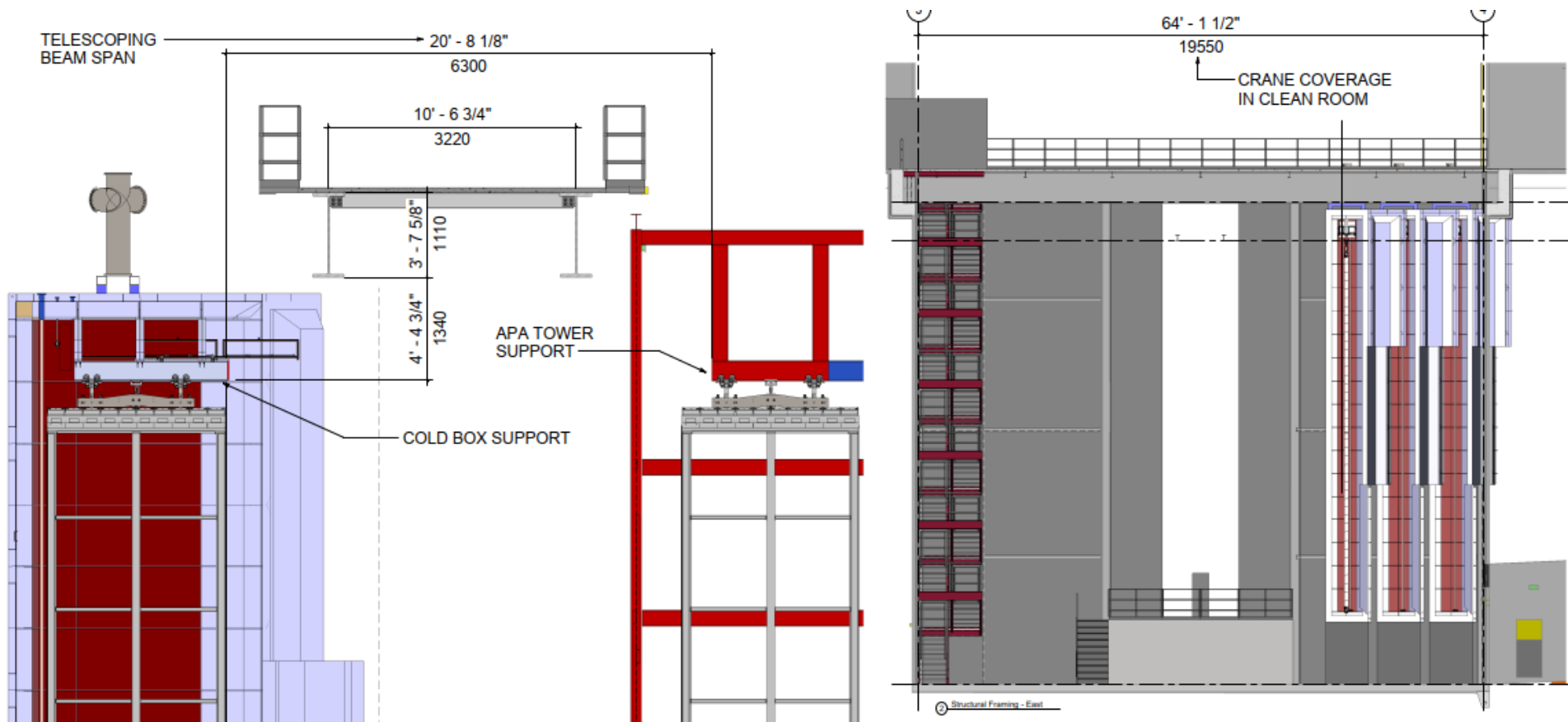


Cold Box Roof Access



General Comments

- Bridging the gap
 - Cold Box & TCO beams from APA tower



General Comments

- Telescoping (projecting) bridge crane
 - Underhung crane with secondary bridge that extends beyond the end of main bridge
 - Eliminates need for installing splice beams

