

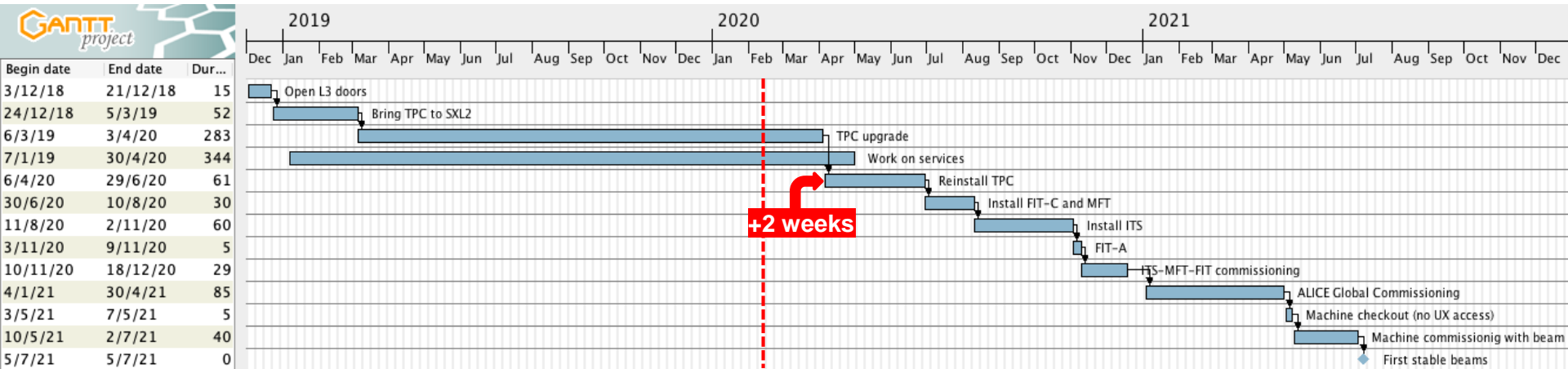
LS2 planning meeting

A.Tauro



LS2 master plan (v36)

Start of the detector installation sequence shifted by **2 weeks** with respect to last week:
+2 weeks to replace OROC A08



Installation of TPC: Apr. 6th 2020
 Installation of ITS: Aug. 11th 2020
 Start of global commissioning: Jan. 4th 2021
 End of access to the cavern: May 1st 2021
 → 116 days of global commissioning = 17 weeks = 4 months

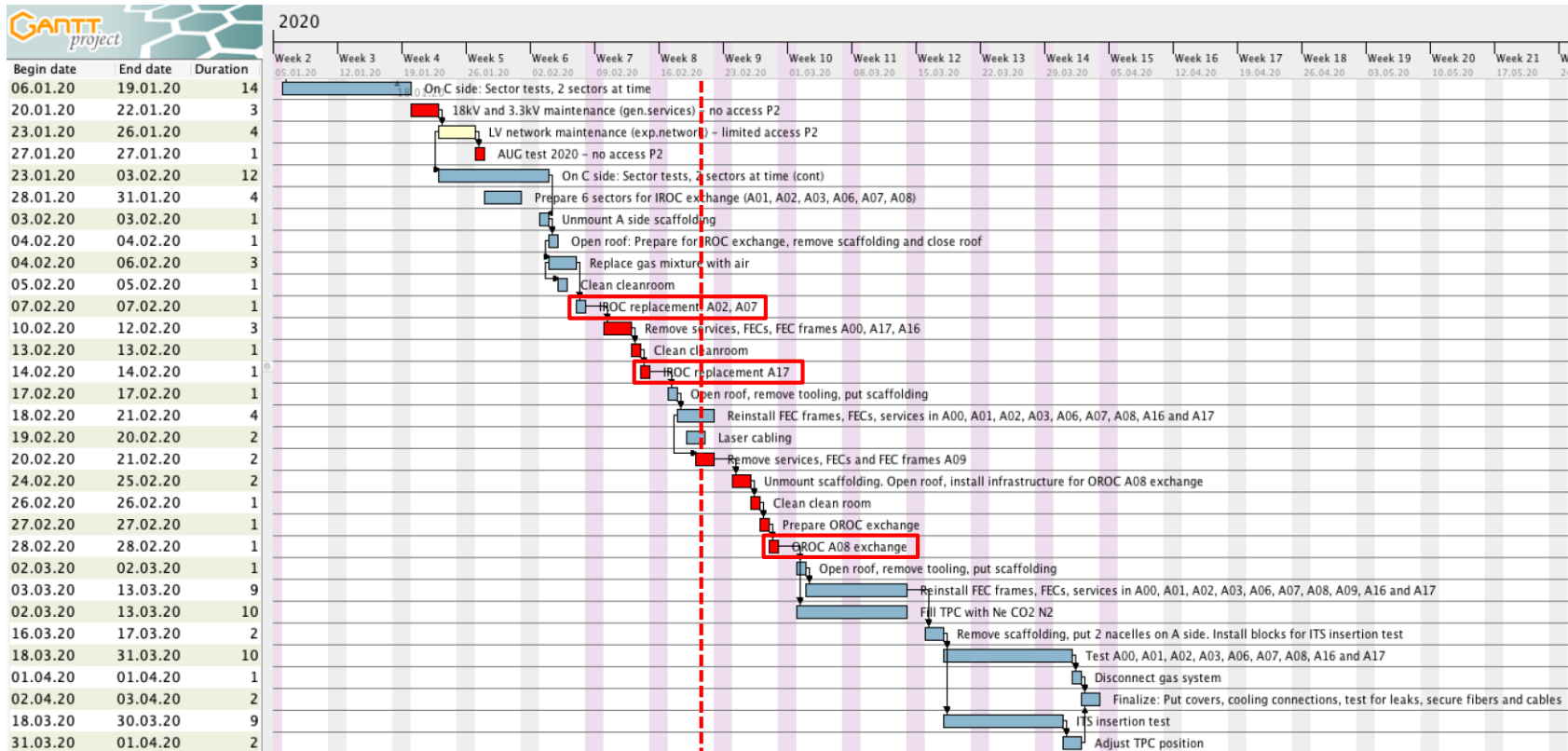
Key dates

Activity	Date
Move TPC to SX2	6 Apr 2020
Install TPC (parking position)	7 – 30 Apr
Install cage and central beampipe	4 May – 1 Jun
Move TPC to IP	2 – 4 Jun
Install Miniframe	25 – 26 Jun
FIT-C & MFT installation and checks	30 Jun – 10 Aug
ITS installation and checks	11 Aug – 2 Nov
FDD-C installation	First half Aug*
FDD-A installation	1-10 Sep
FIT-A installation	3 – 9 Nov
ITS & MFT commissioning time	6w
ALICE global commissioning time	17w
End of LS2 – stop UX25 access	1 May 2021
Start commissioning with beam – ALICE in super-safe	10 May 2021

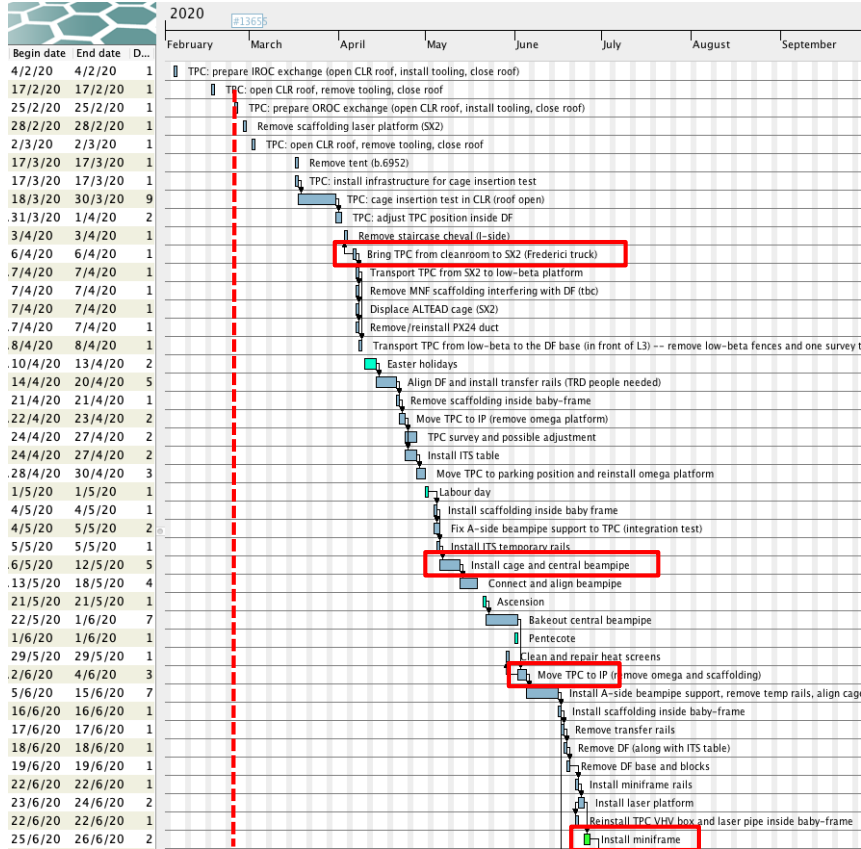
* we need to redo tightness UX-RB26 before w35 (start cool down S23)

TPC upgrade sequence

TPC schedule v43



TPC & miniframe reinstallation sequence



Feb 4th – Apr 3rd - complete TPC, cage insertion test in SXL2 cleanroom, prepare for TPC transportation

Apr 6th - transportation TPC to SX2

Apr 7th - May 5th - reinstall TPC
TPC moved to IP, adjusted and put back to parking position

May 6th - Jun 1st - install cage and central beampipe

Jun 2nd - 4th - move TPC to IP - start connection TPC to services

Jun 5th - 24th - prepare miniframe installation

Jun 25th - 26th - reinstall miniframe

TPC upgrade sequence



Done

Remove Services and FEE
(outside cleanroom)



Done

Uninstall MWPC ROC



Done

Install GEM ROC



Done

Install new FEC + test



Ready for transportation to
SX2

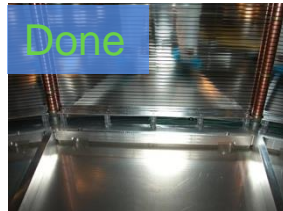


Done

TPC in cleanroom.
Cleaning & irradiation tests

7 Mar

11 Apr



Done

FC HV infrastructure
modification

25 Apr (A)
5 Aug (C)

13 May (A)
16 Aug (C)



Done

Survey, shimming,
sealing

14 Jun (A)
25 Aug (C)

5 Jul (A)
16 Sep (C)



Ongoing

Pre-commissioning with
cosmic, Laser, pulser, Xray

14 Oct (A)
31 Oct (C)

25 Nov (A)
3 Feb (C)

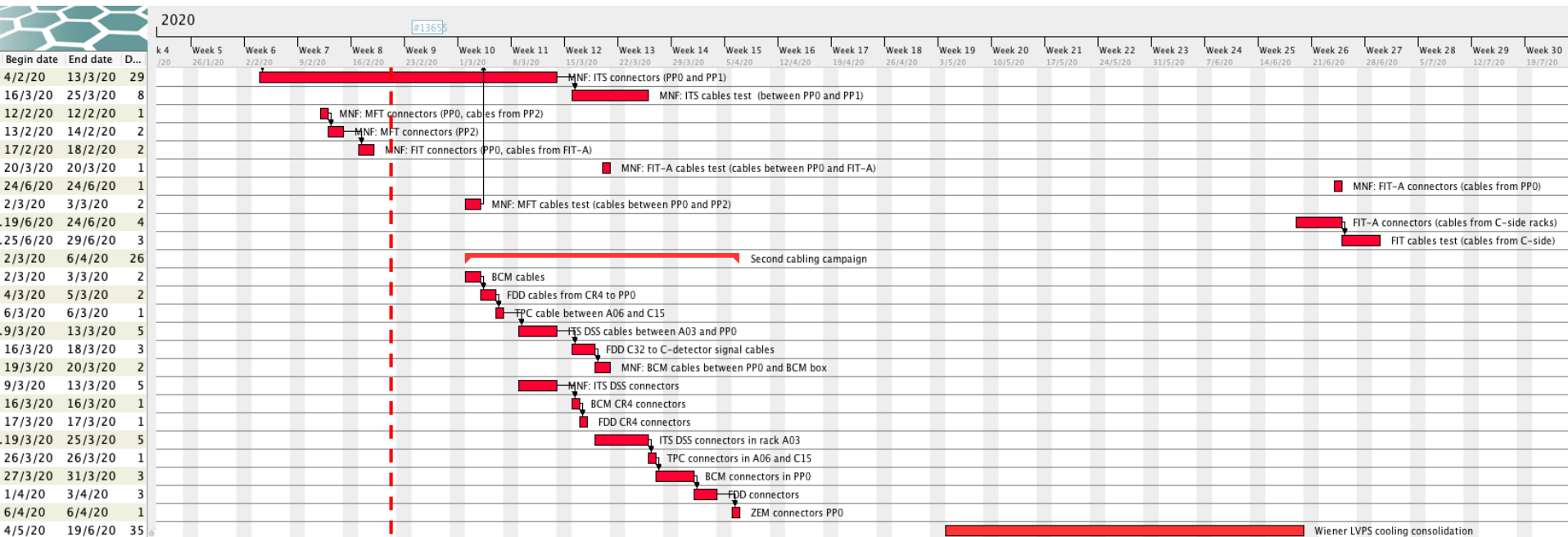
3 Apr 2020

TPC schedule v42

TPC: remove infrastructure

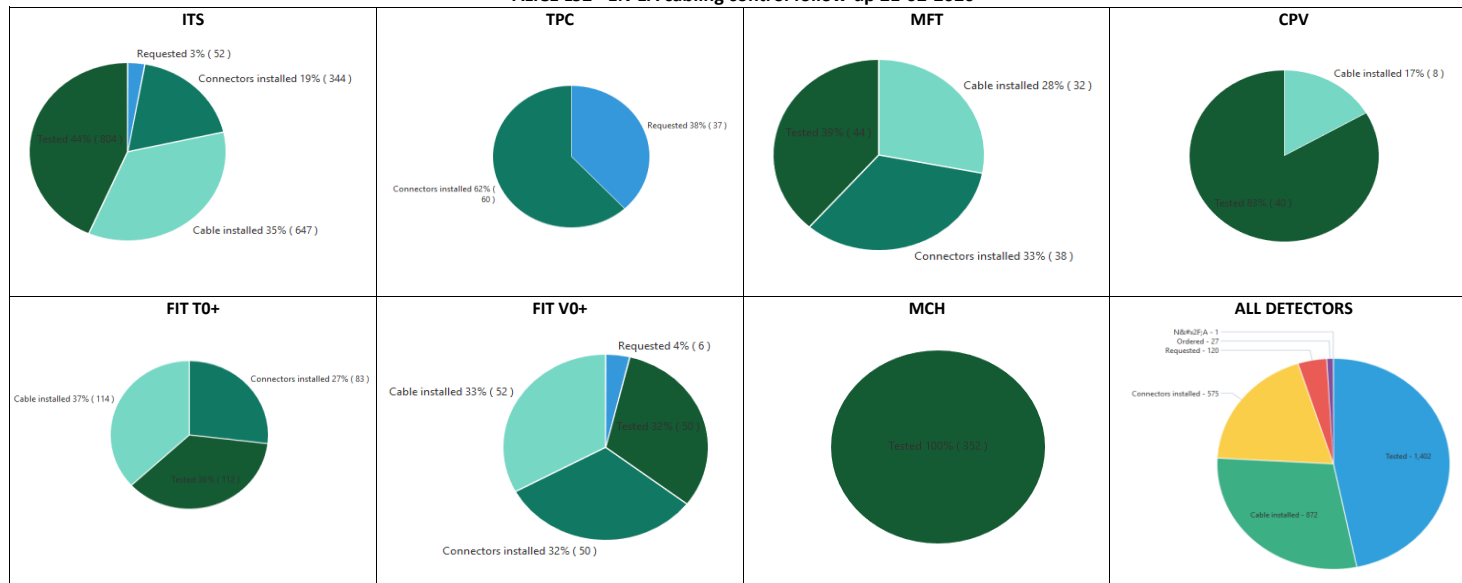


Copper cables (EN-EA)



Copper cables (EN-EA)

ALICE LS2 - EN-EA cabling control follow-up 21-02-2020



Progress pulling: 96%
 Progress connectors: 67%
 Progress test: 47%

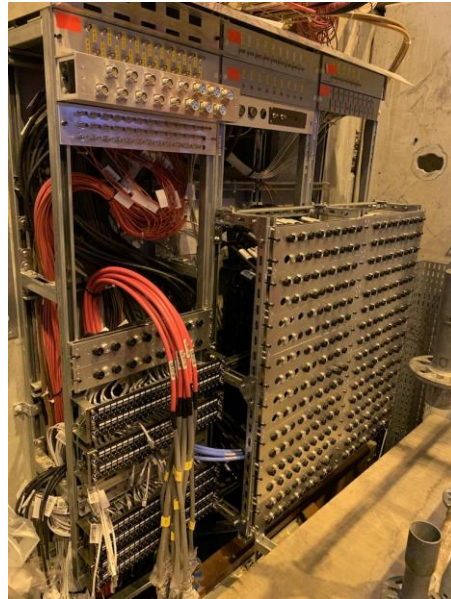
Copper cables (EN-EA)



Copper cables (EN-EA)



PP0 I-side



PP0 O-side



ITS racks
A12-13



ITS racks
A07-08-09

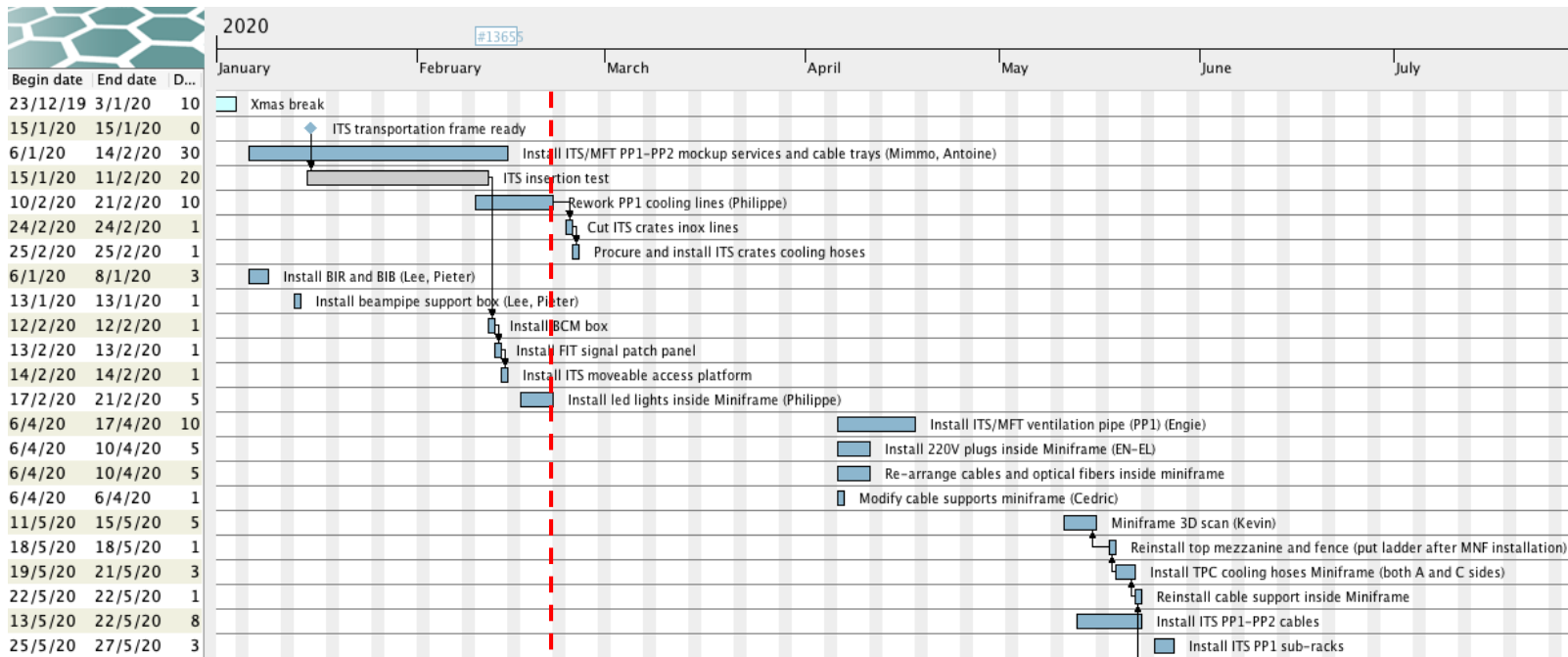
Optical fibers (EN-EL)



Description		December												January 2020												Febuary																												
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12										
TPC-C & TOF trunk (FASS O-Side) (10.70)	POSE																																																					
	TERMINATION																																																					
	MATERIEL																																																					
60 TRUNK 144 OF 27m (SURFACE)	POSE																																																					
	TERMINATION																																																					
	MATERIEL																																																					
MFT trunk (FASS O-Side) (50)	POSE																																																					
	TERMINATION																																																					
	MATERIEL																																																					
INSTALLATION D'UN DUCT ET SOUFLAGE D'UN CÂBLE	POSE																																																					
	TERMINATION																																																					
	MATERIEL																																																					



Miniframe schedule



EN-EL interventions

- 18kV, 3.3kV and LV network maintenance: 20-24 Jan 2020 – Done
- AUG on Monday 27 January 2020 – Done
- Auto transfer test: 27-29 Apr 2020
- Test secours (10 min at 6:00 AM): 26 May 2020

Racks status

- Racks currently powered on:
 - HMPID: I01, I02
 - PHOS-CPV: A16, A17, C05
 - CTP: C24, C25, C26, C27 (CTP) (and VME crates on)
 - MCH: C08, C10, C37, C39
 - TOF: O03, O04, O05, O30, O31, O32, I03, I04, I05, I30, I31, I32
 - TRD: O06, O08, O26-29, I06, I08, I26-29, C16-19, C29
 - Dcal, EMcal: A14, O12
- Detectors can be powered, compatible with current activities inside L3

CR3 status

(A.Augustinus)

- February
 - (10.02 – 21.02) Modify water circuit (add TA valves) – kept DCS up and running – DONE (valves in CR4 are also installed)
 - Extension of main network starpoint outside CR2 (preparation)
 - Arrival of new racks end of February (t.b.c.)
- March
 - (02.03 – 20.03) Installation of new racks, water connections
 - (from 23.03) Installation of network fibres (between CR1,starpoint and CR3), electricity
 - Arrival of new servers end of March
- April
 - Installation of the servers in the new racks
 - Installation of network infrastructure (some network interruptions to be foreseen, details to be defined with IT-CS)
- May-June-July
 - Migration from old servers to new servers (first central systems, then detector systems)
- July-August
 - Removal of old servers and last old racks

EN-CV interventions

- **Big maintenance:**
 - SF: from Nov 2019 to mid Jan 2020. NO impact on ALICE as both magnets will be OFF – done
 - UW: **stop UX mixed water** for 2 days in week 41/2019 (October) – Tue 8 and Wed 9 Oct – done
 - SU: various small perturbations + 1 day **stop all cooling UX** + 1 day **stop all cooling SXL2** in week 16/2020 (April)
- **Small maintenance:**
 - UW: from mid Aug 2020 to mid Sep 2020. **Stop mixed water UX** for 1 day in week 37/2020 (September).
 - SF+SU: weeks 45-47/2020: cleaning towers (stop SF 1 week) + 1 day **stop all cooling UX**.
- Renovation transformer UIAC220 in w10/2020 → transparent but need to reduce mixed-water consumption
- **Stop demineralized water from 17 to 20 December 2019**
- **Ventilation:**
 - ~~SG2 (2019): w7/2019~~
 - ~~SG2 (2020): Tue-Wed - w3/2020~~
 - ~~Gas extraction: w8/2019~~
 - ~~UX25 cavern: w2/2020~~
 - ~~MCH and MTG: Mon-Thu - w3/2020~~
 - L3: need to replace extractor → 2 days stop → will cut flammable gases (maybe in week 17)
 - ITS: → will be done before end June
- **Raw water:**
 - Test after Apr 2019. Short interruption (1 day), can be used tap water during the test.

Other tests foreseen in 2020-21

2020:

- LASS functional test: no access to UX25 on Monday 3 Aug 2020 whole day (weekend 8-9 Aug as contingency)
- LASS global verification of entire LHC: 1 day no access to UX25 (date tbc)
- BIW test: no access underground on 5 and 6 Oct 2020 from 18:00 to 00:00

2021:

- DSO test: no access to UX25 on 8 and 9 Mar 2021 (tbc)
- LHC sector test (beam through ALICE): no access to UX25 from 26 to 29 March 2021

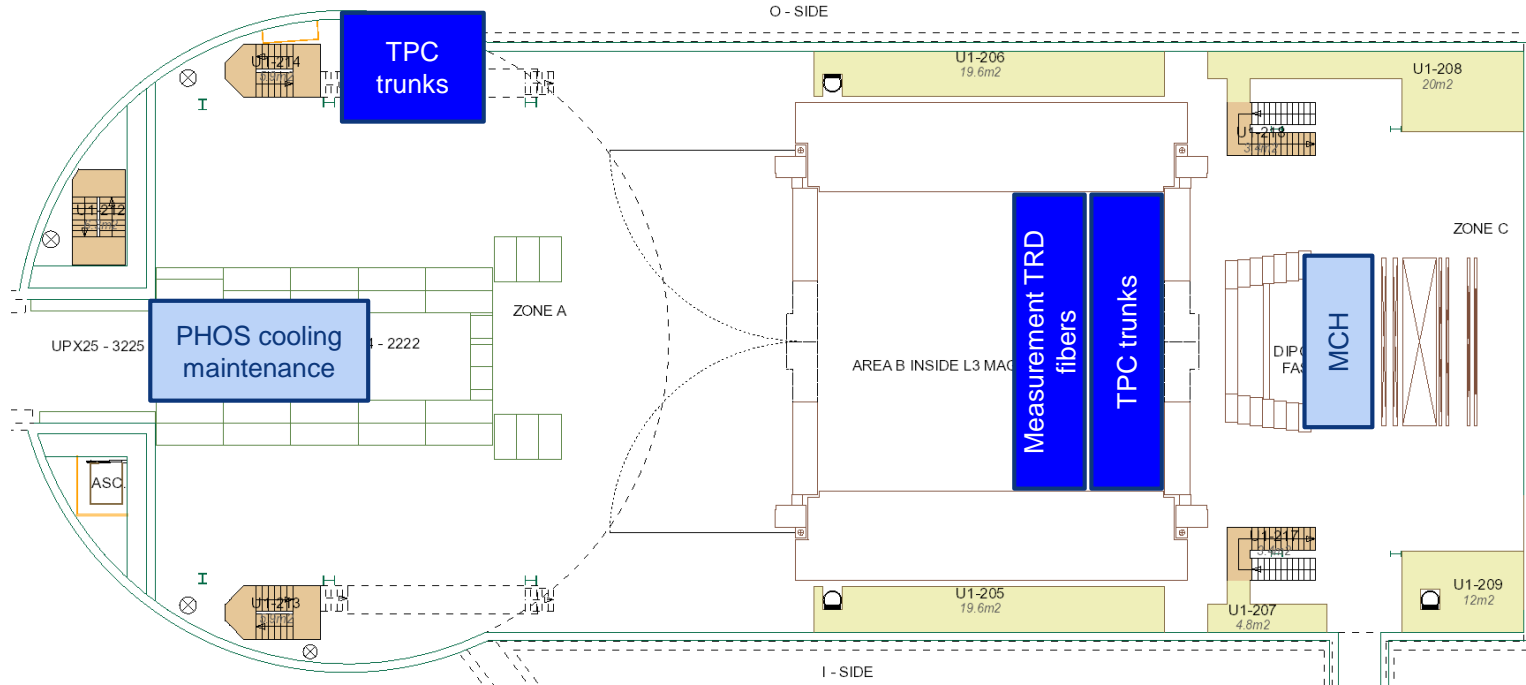
Day-by-day sequence w8



UX25 activities w8 – Mon 17 Feb 2020

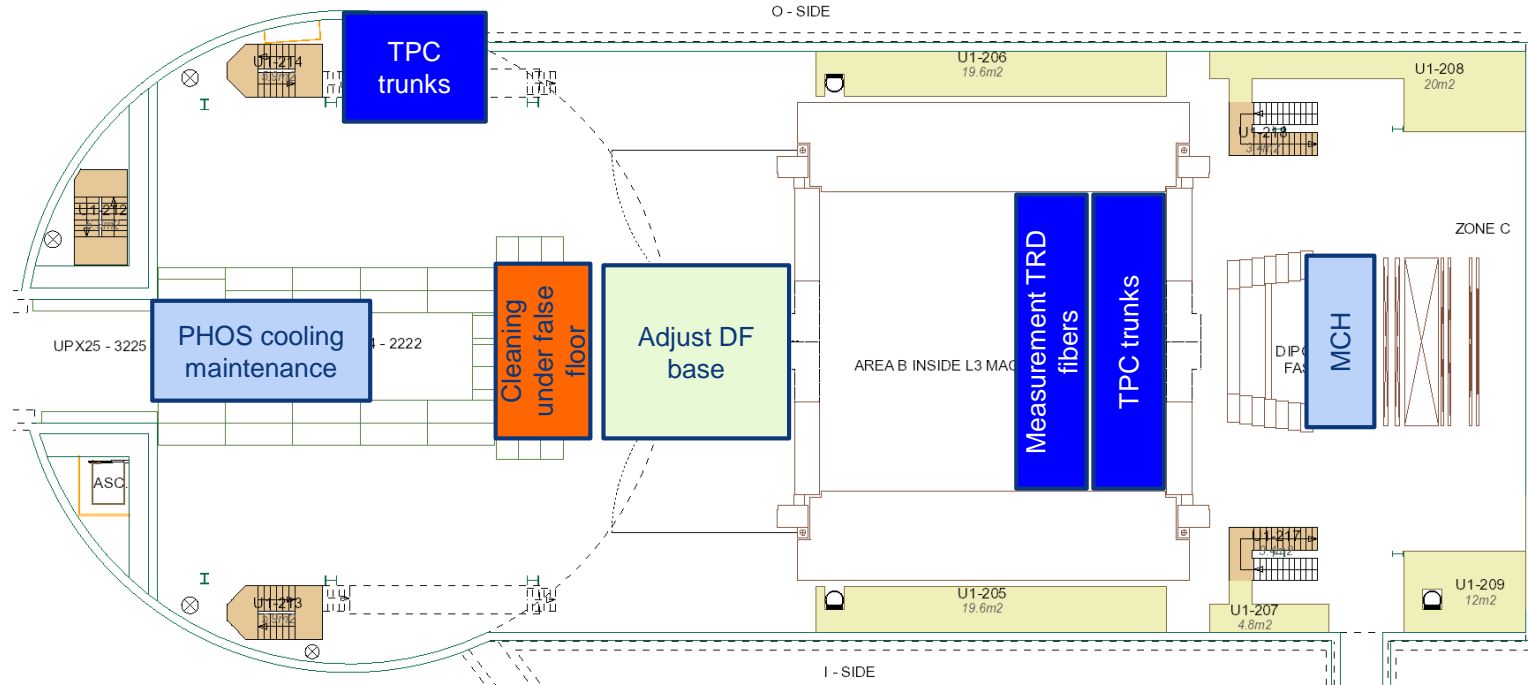
Delivery at P2 of 9 wooden boxes (60x70x75, ~45kg each)

Modifications for EN-EL (requested by Iacopo) (Didier)



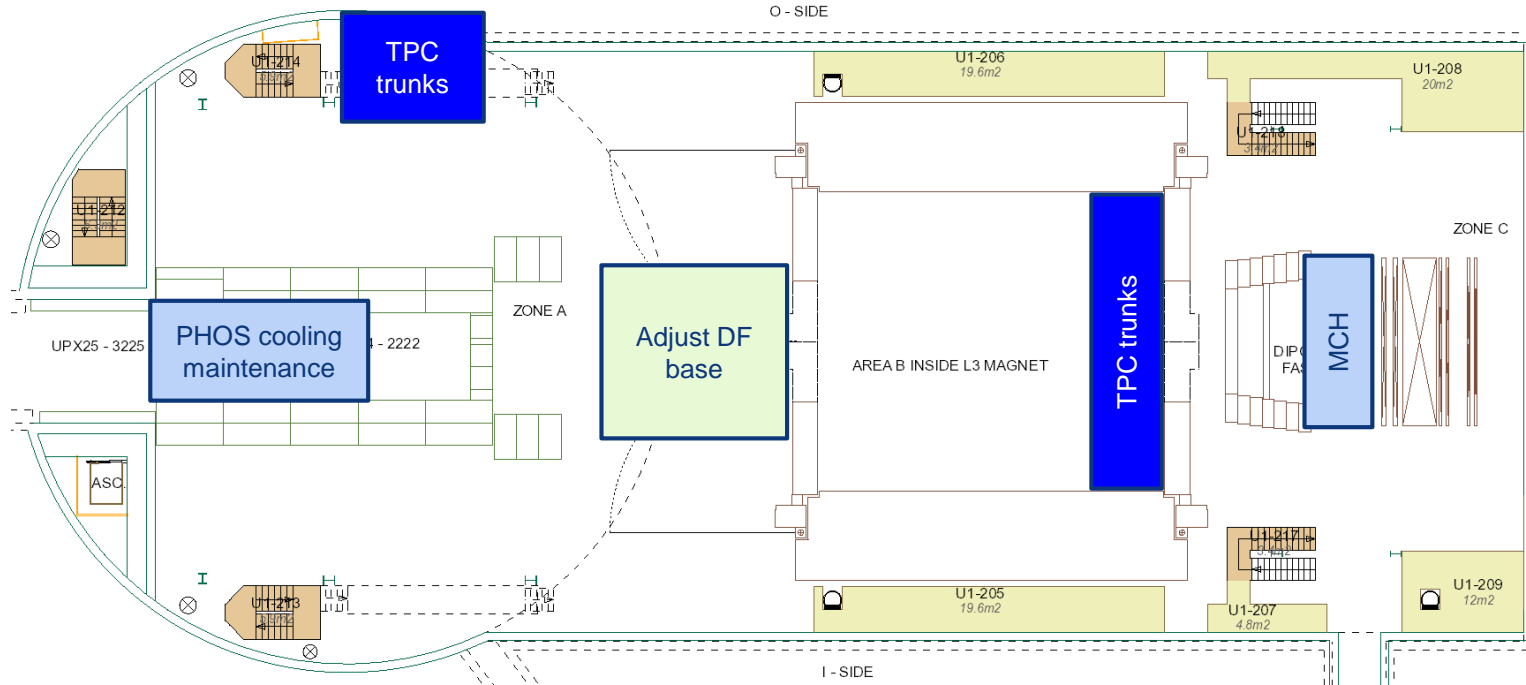
UX25 activities w8 – Tue 18 Feb 2020

Cleaning cavern (Topnet): 13:00 to 15:00



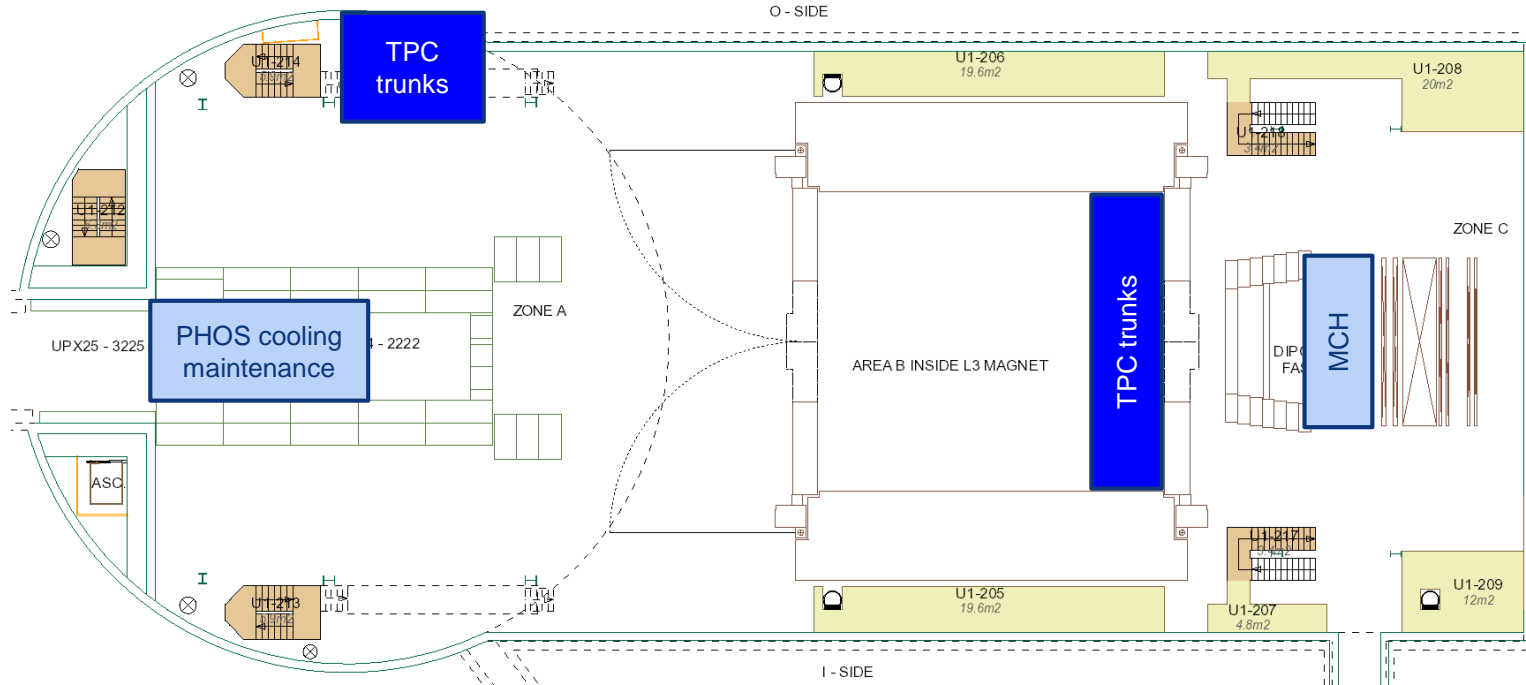
UX25 activities w8 – Wed 19 Feb 2020

Load test FIT transportation box

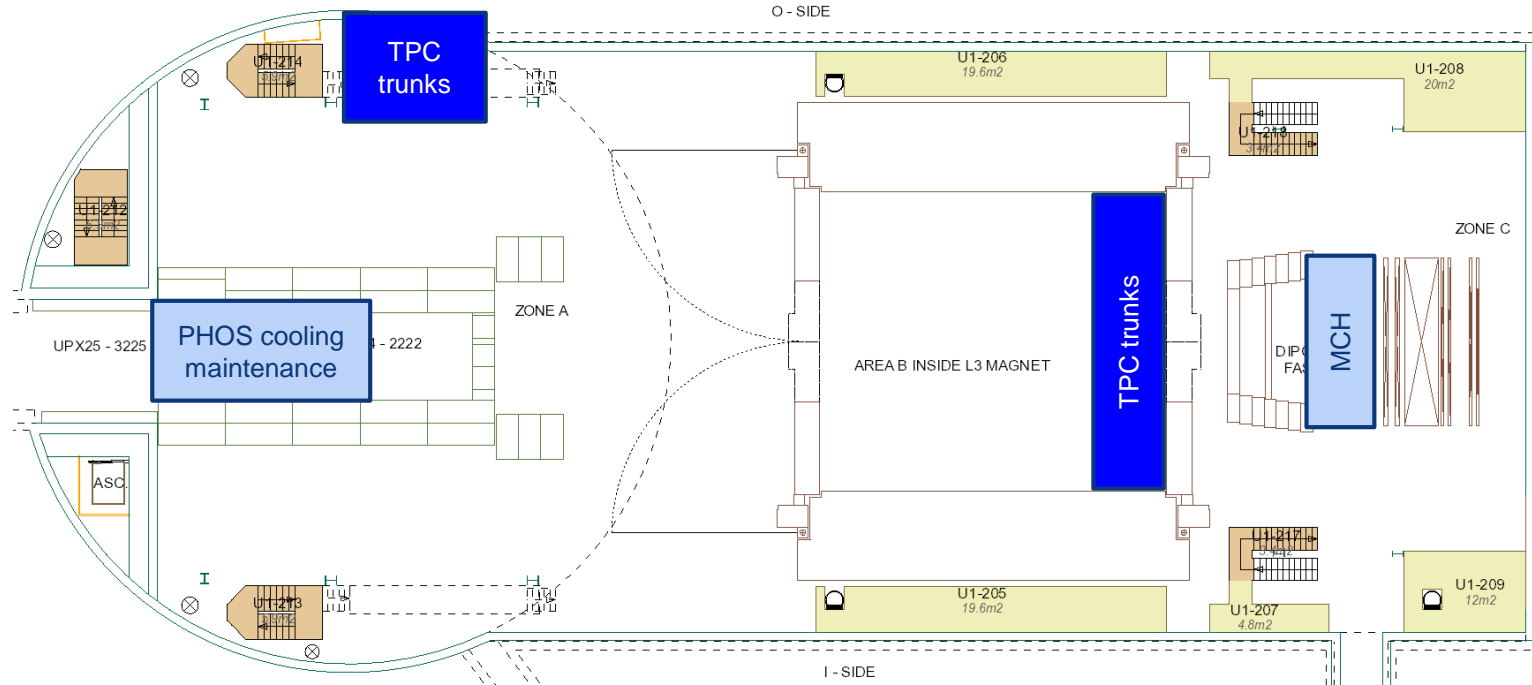


UX25 activities w8 – Thu 20 Feb 2020

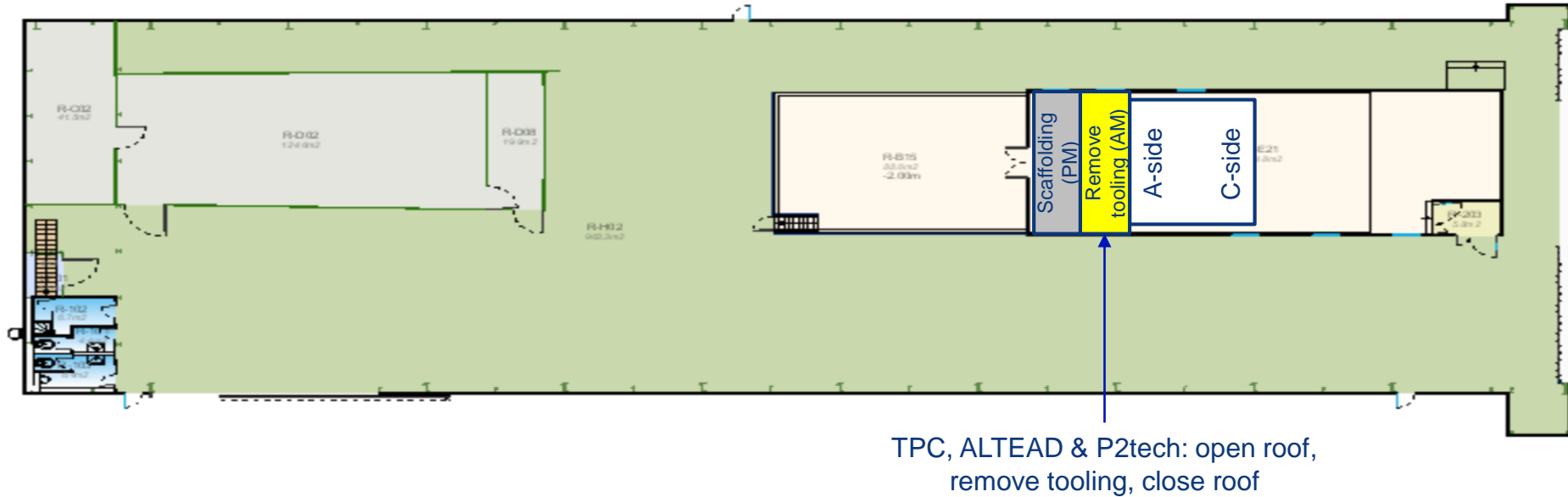
Cavern lift maintenance: no access to UX25 from 6:00 AM to 8:00 AM



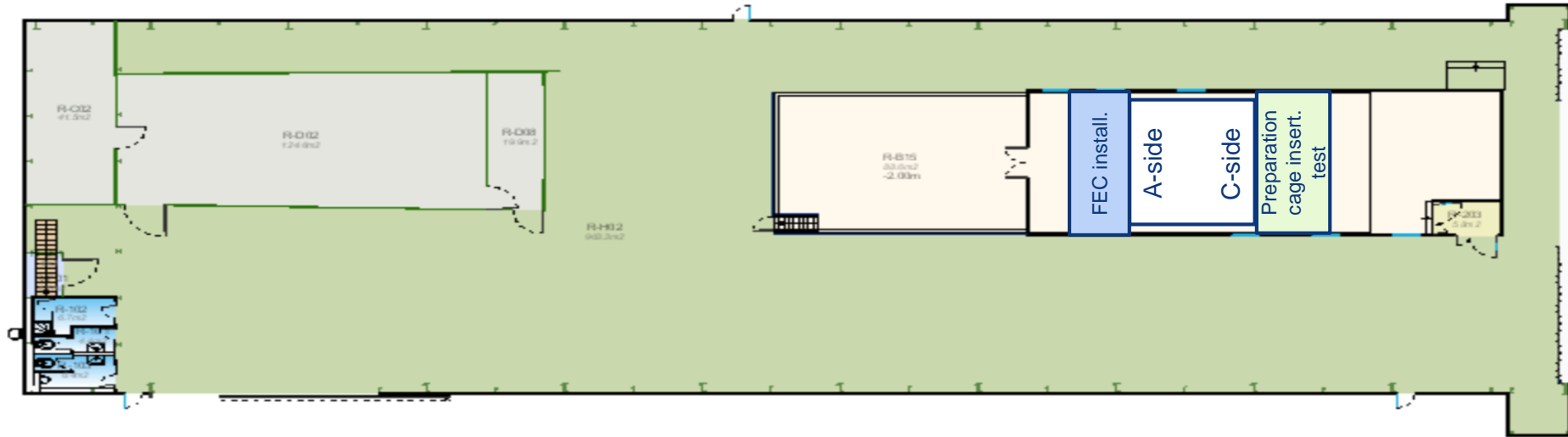
UX25 activities w8 – Fri 21 Feb 2020



SXL2 activities w8 – Mon 17 Feb 2020



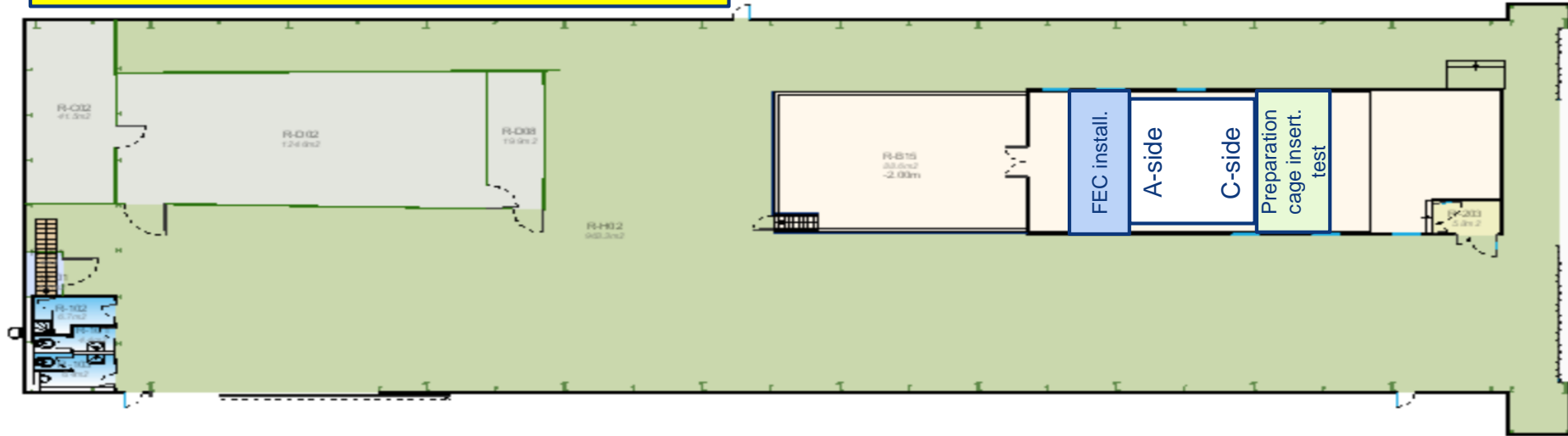
SXL2 activities w8 – Tue 18 Feb 2020



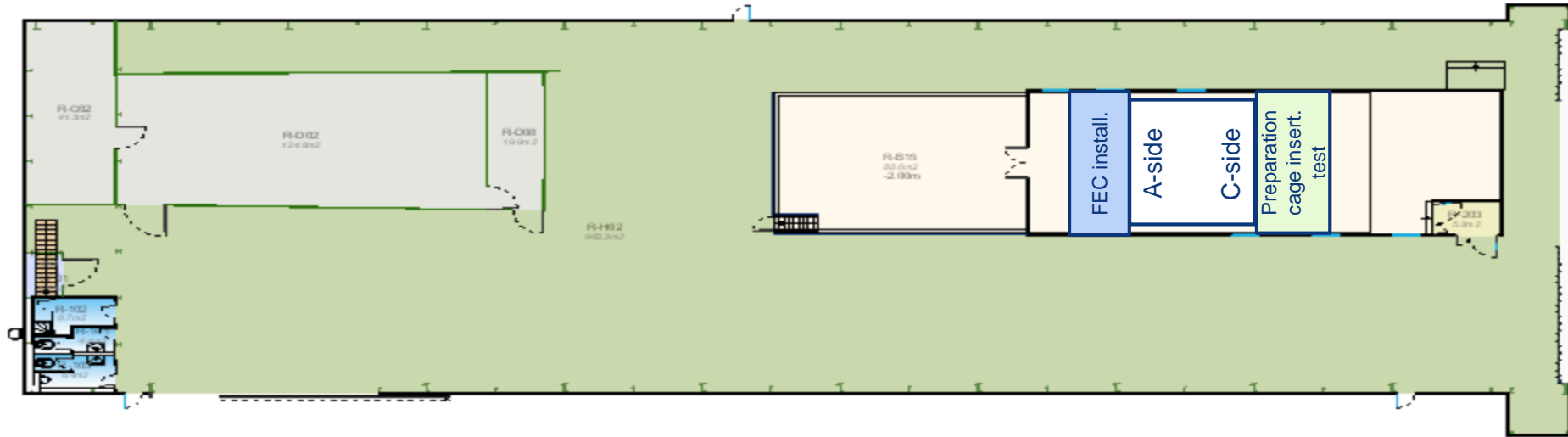
SXL2 activities w8 – Wed 19 Feb 2020

TPC survey from C-side (preparation cage insertion test)

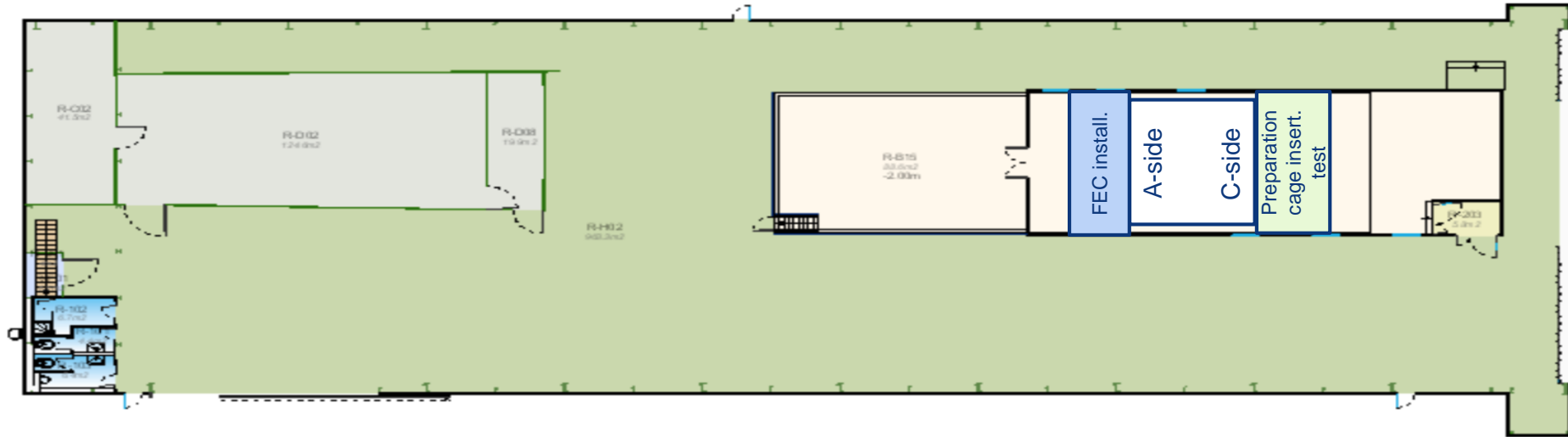
Reinstall shaft DCal rotator and re-assemble it



SXL2 activities w8 – Thu 20 Feb 2020

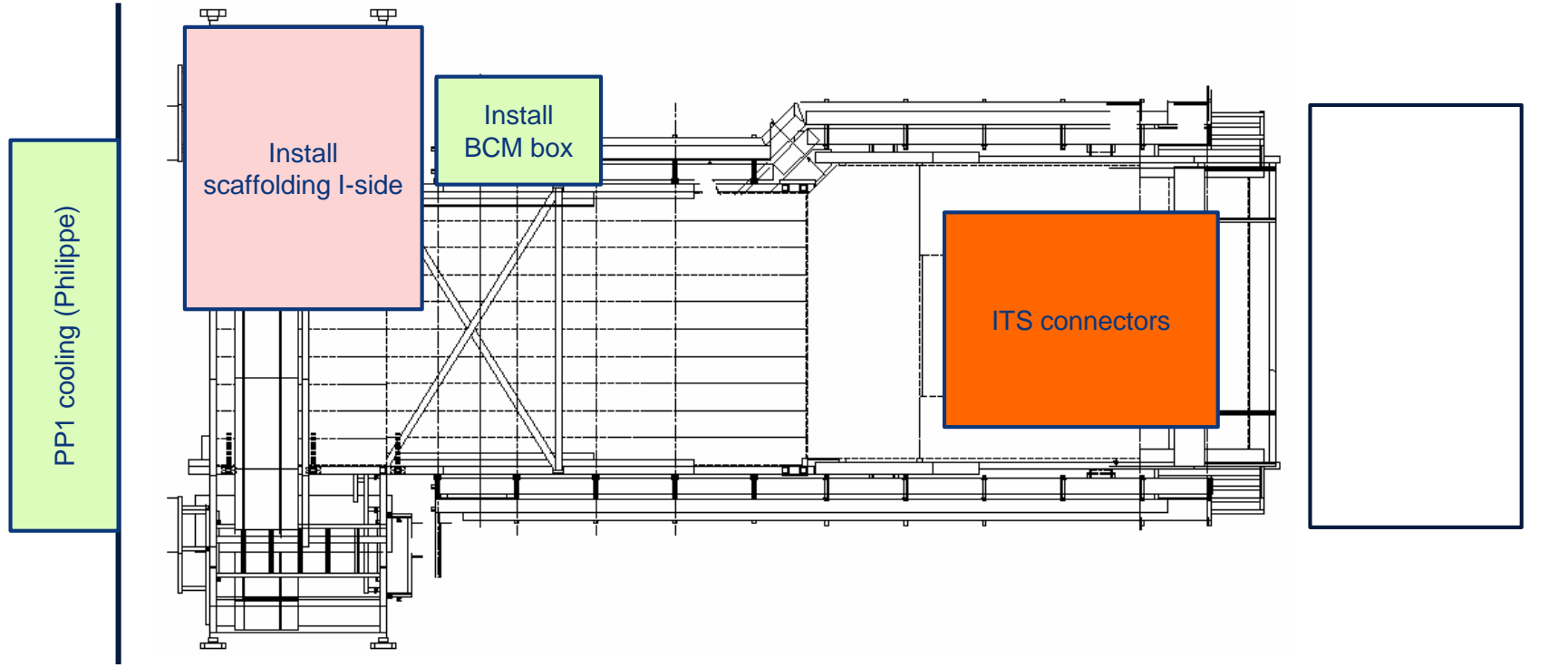


SXL2 activities w8 – Fri 21 Feb 2020

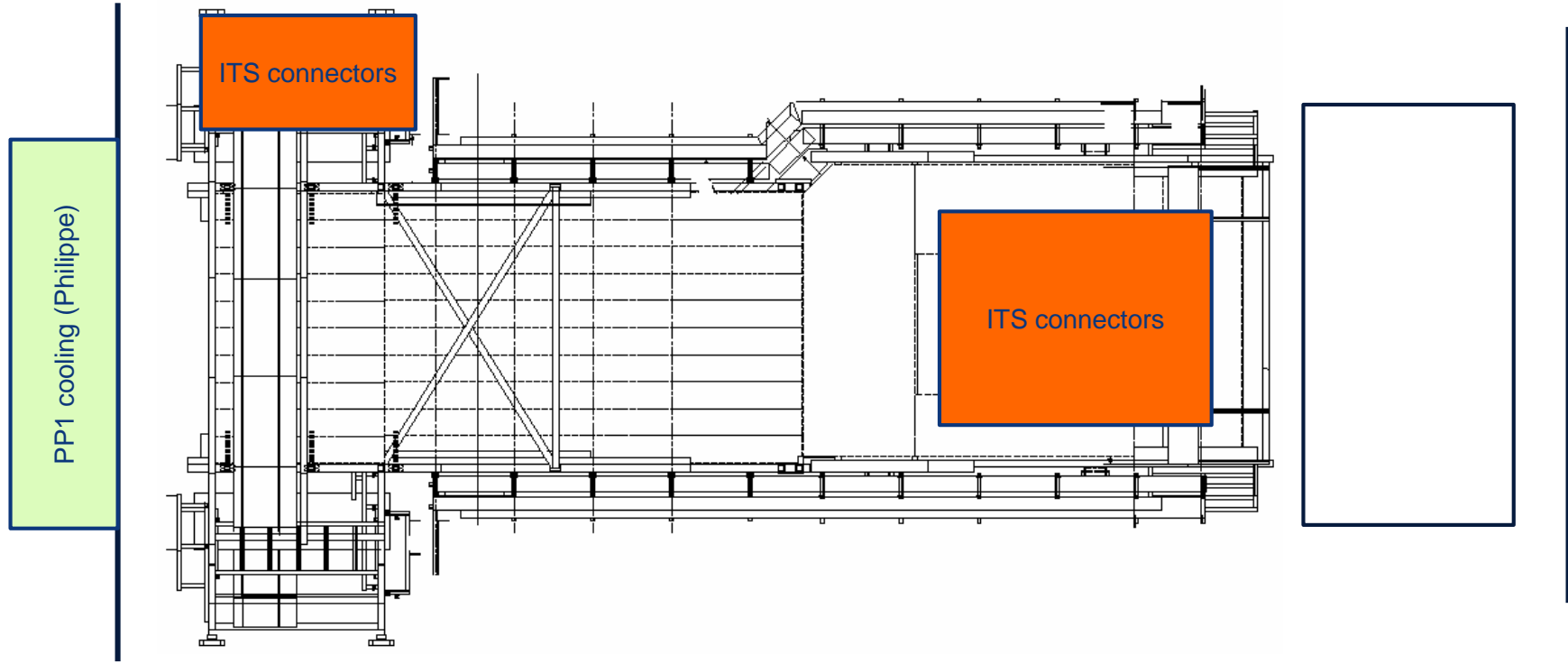


Miniframe activities w8 – Mon 17 Feb 2020

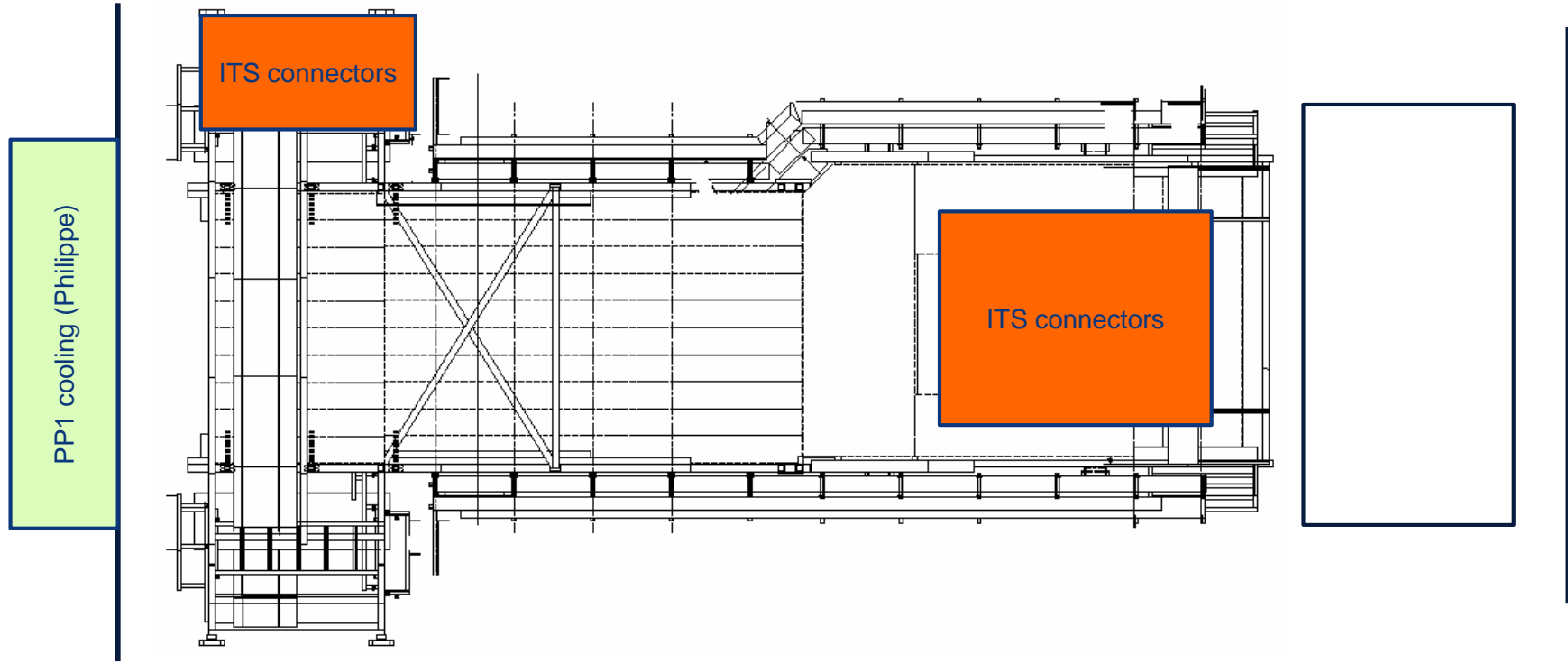
Finish ITS rack supports; build ITS access trap and FIT patch panel (Cedric)



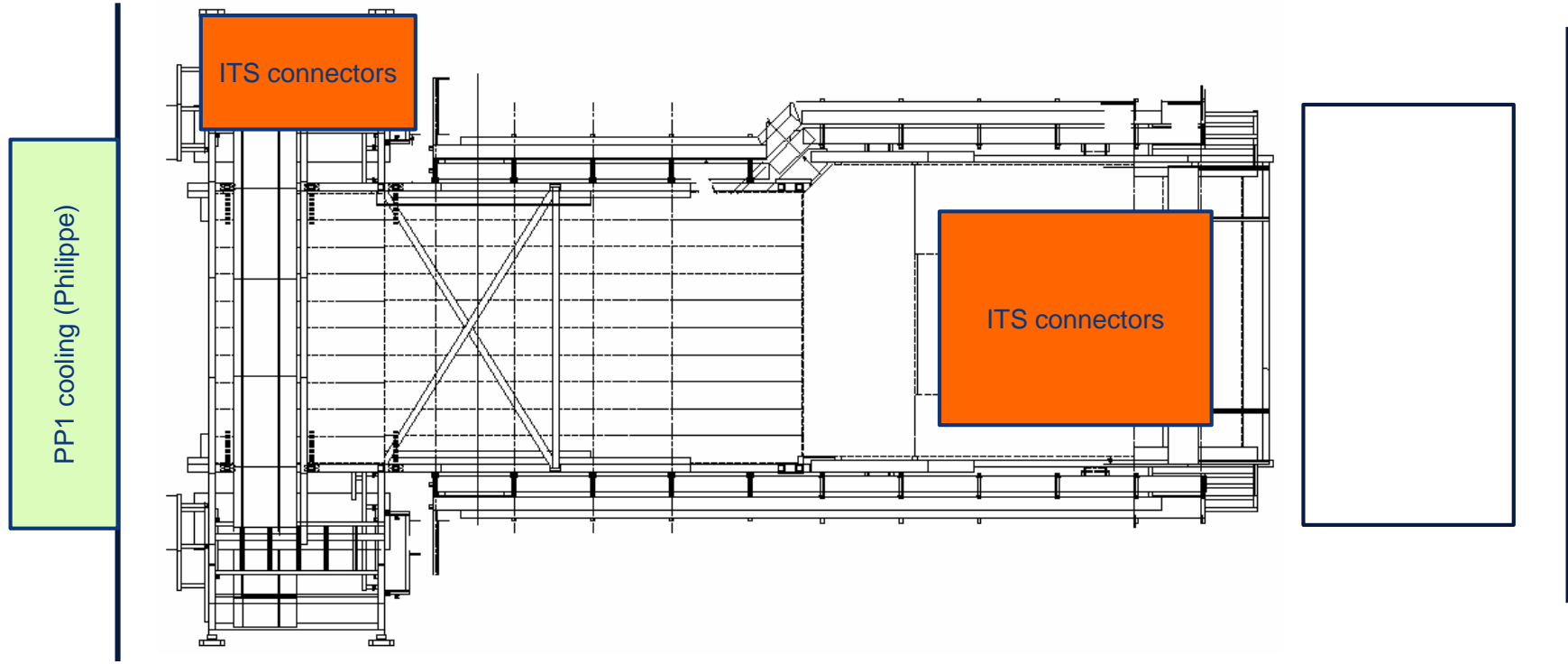
Miniframe activities w8 – Tue 18 Feb 2020



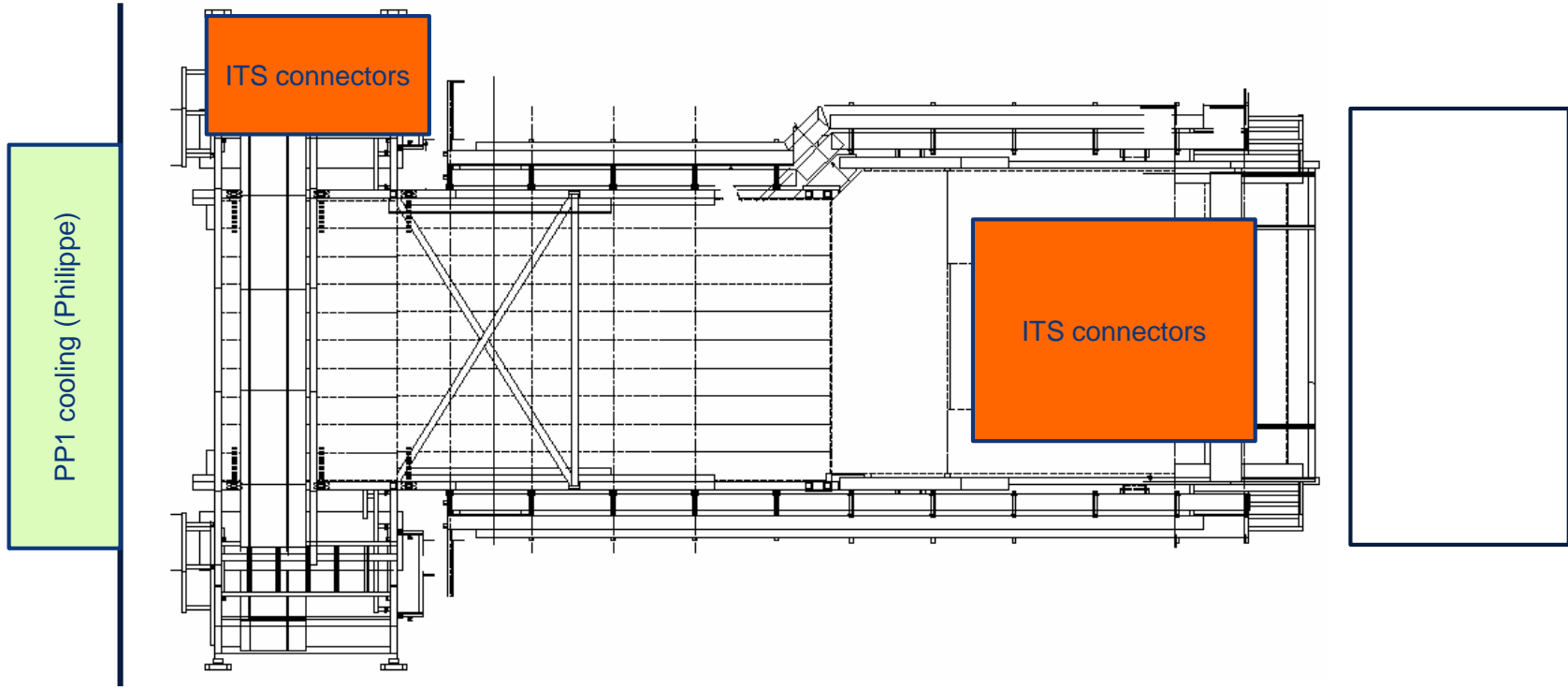
Miniframe activities w8 – Wed 19 Feb 2020



Miniframe activities w8 – Thu 20 Feb 2020



Miniframe activities w8 – Fri 21 Feb 2020

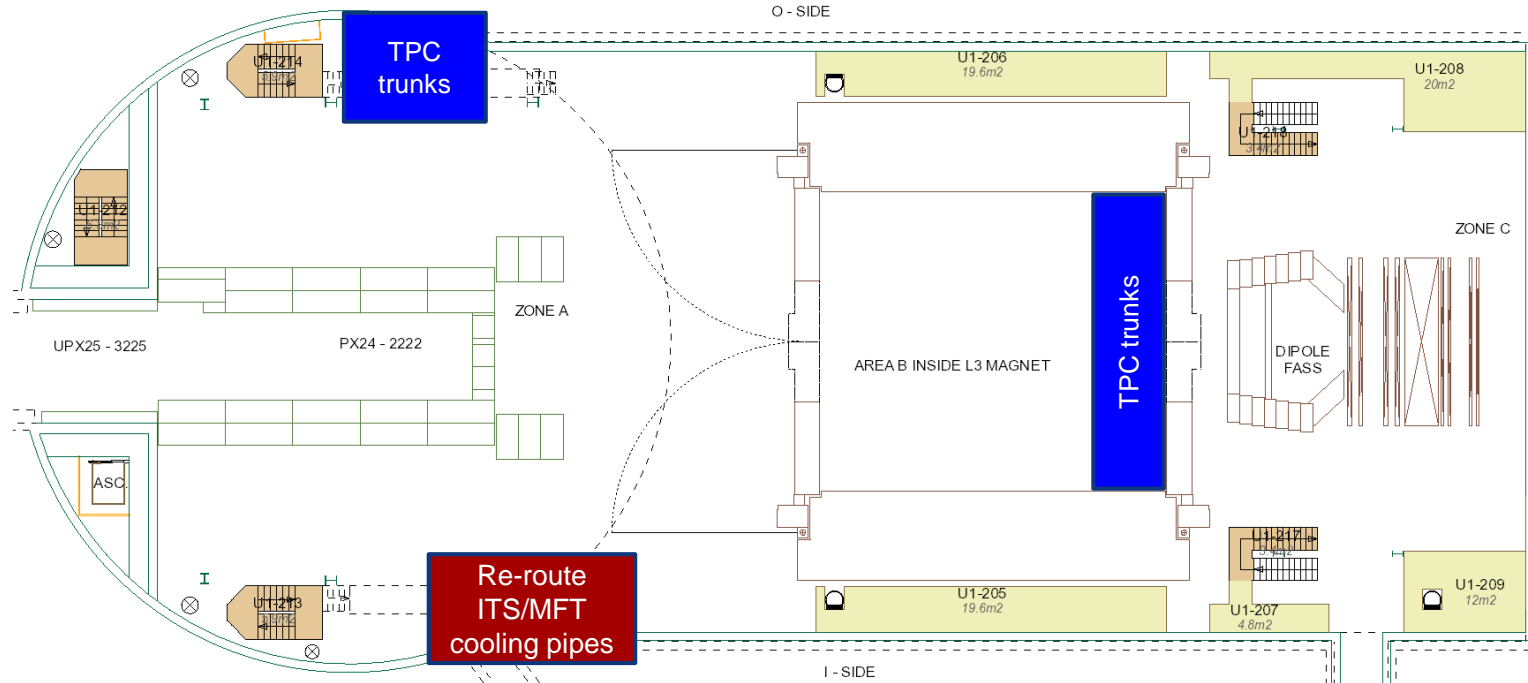


Day-by-day sequence w9



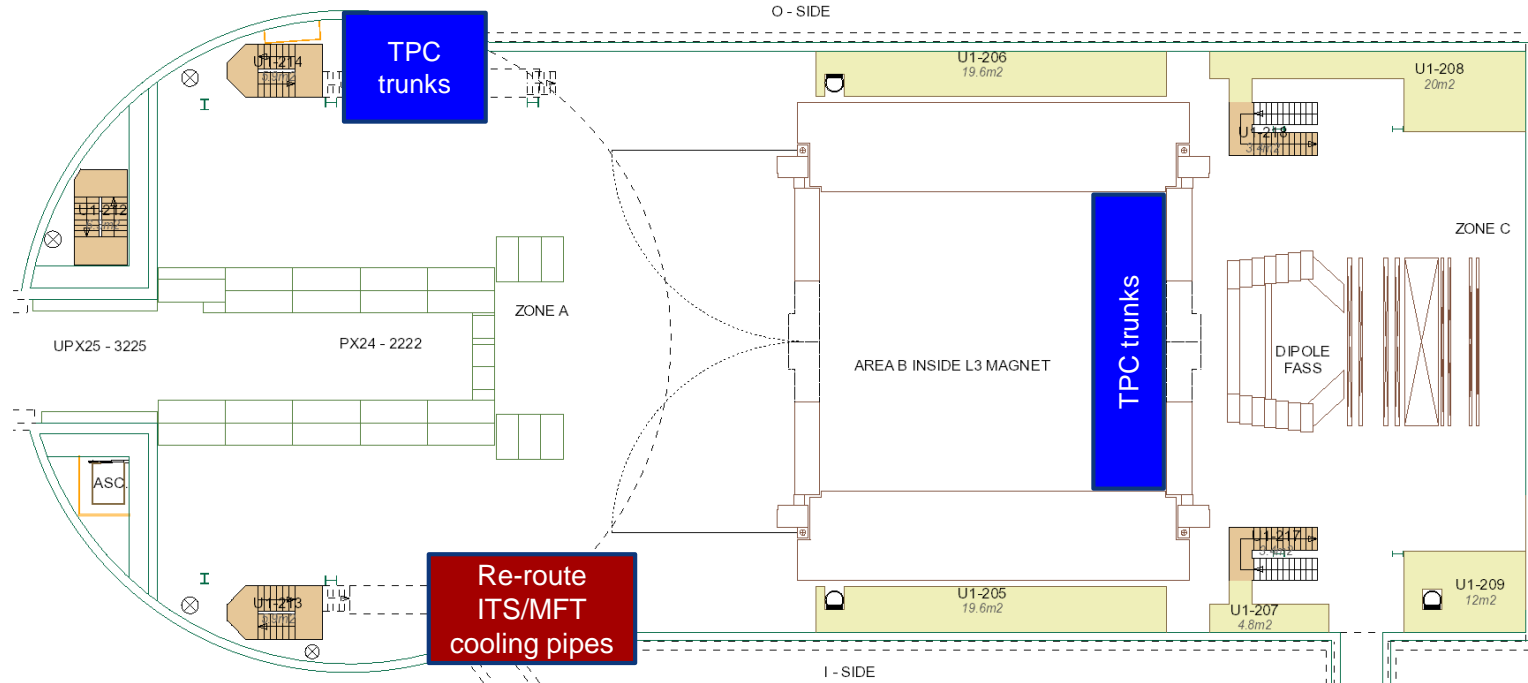
UX25 activities w9 – Mon 24 Feb 2020

MCH: X-ray tests ST1 quadrants in SX2 RP bunker (whole week)

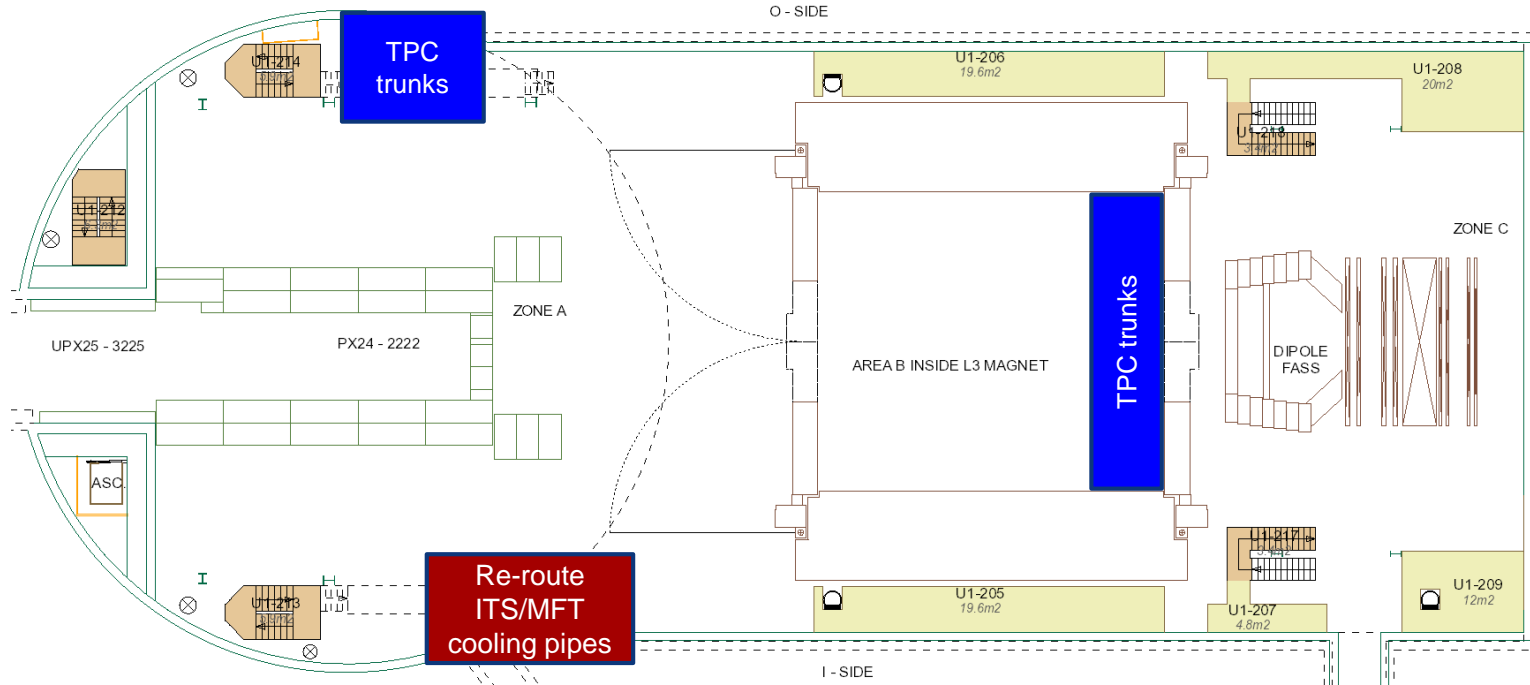


UX25 activities w9 – Tue 25 Feb 2020

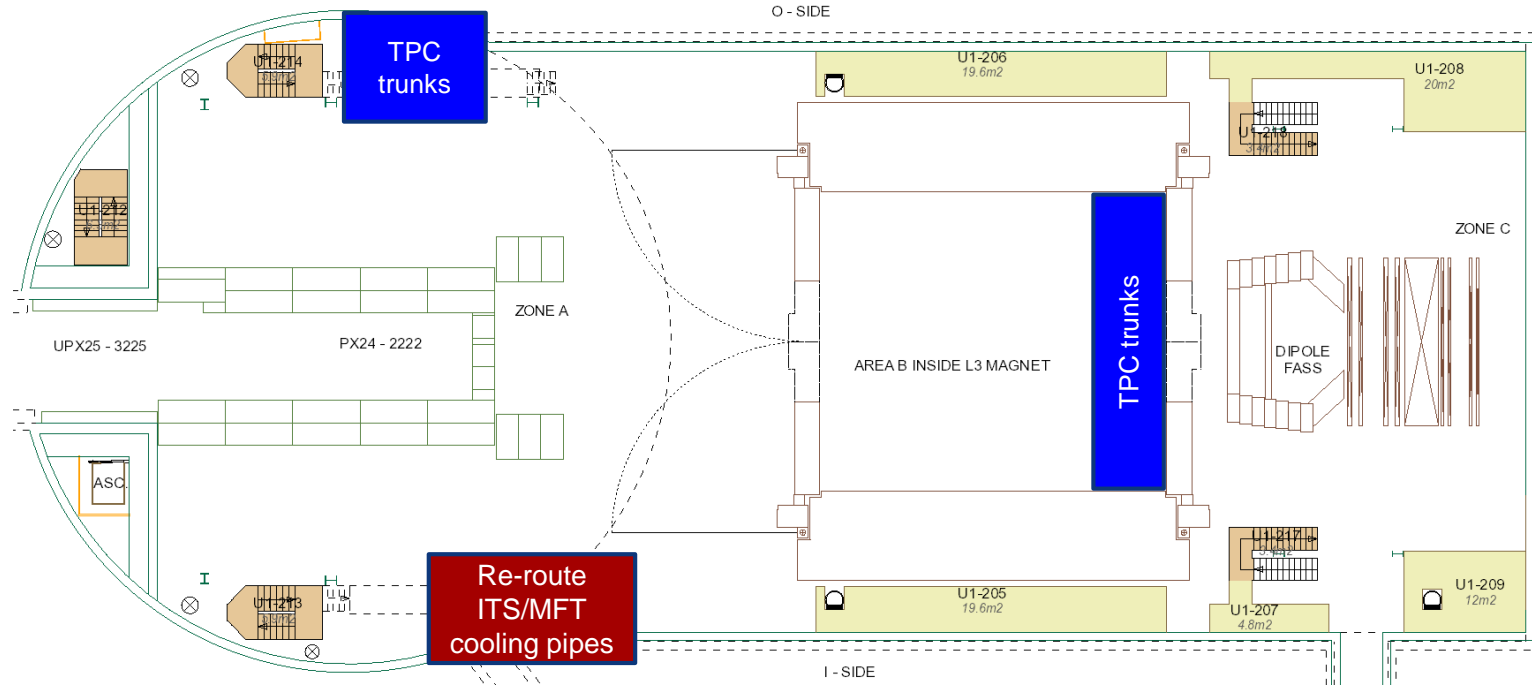
Cleaning cavern (Topnet): 13:00 to 15:00



UX25 activities w9 – Wed 26 Feb 2020

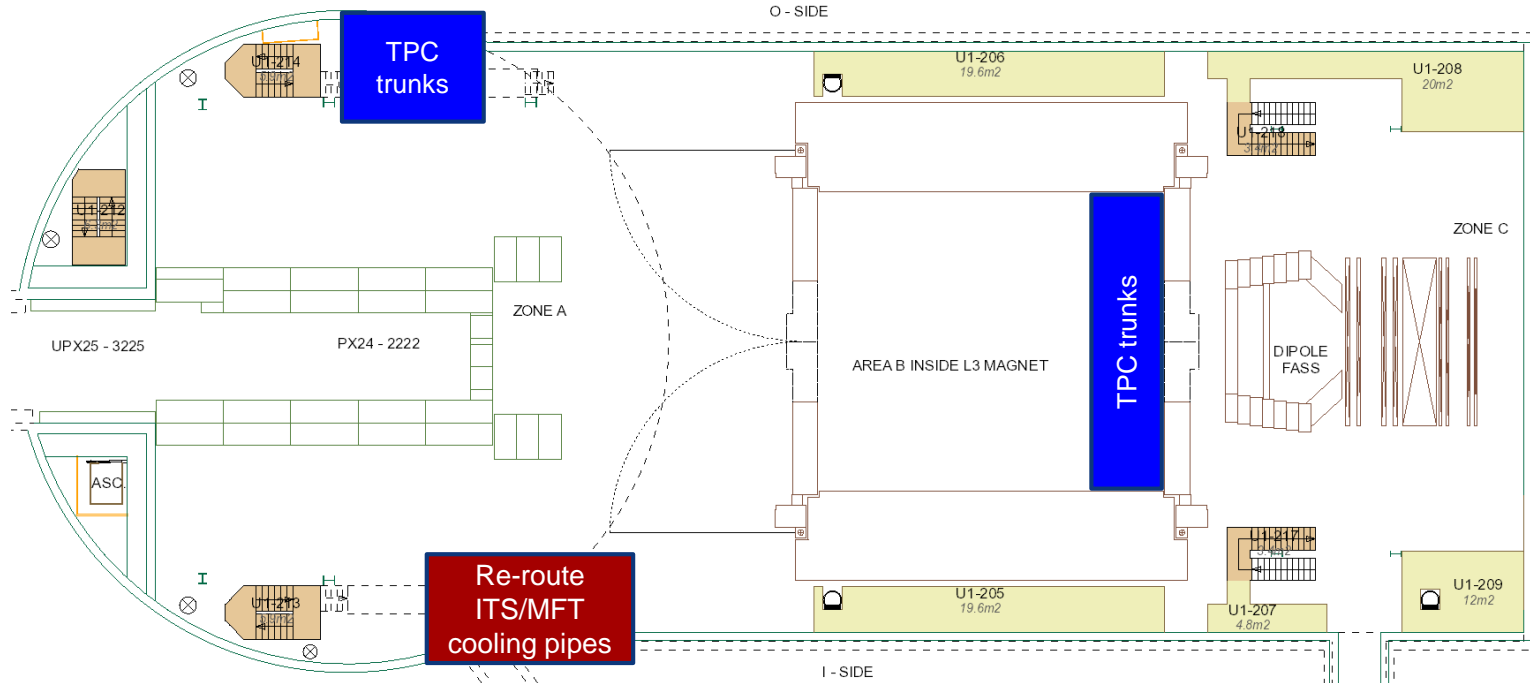


UX25 activities w9 – Thu 27 Feb 2020

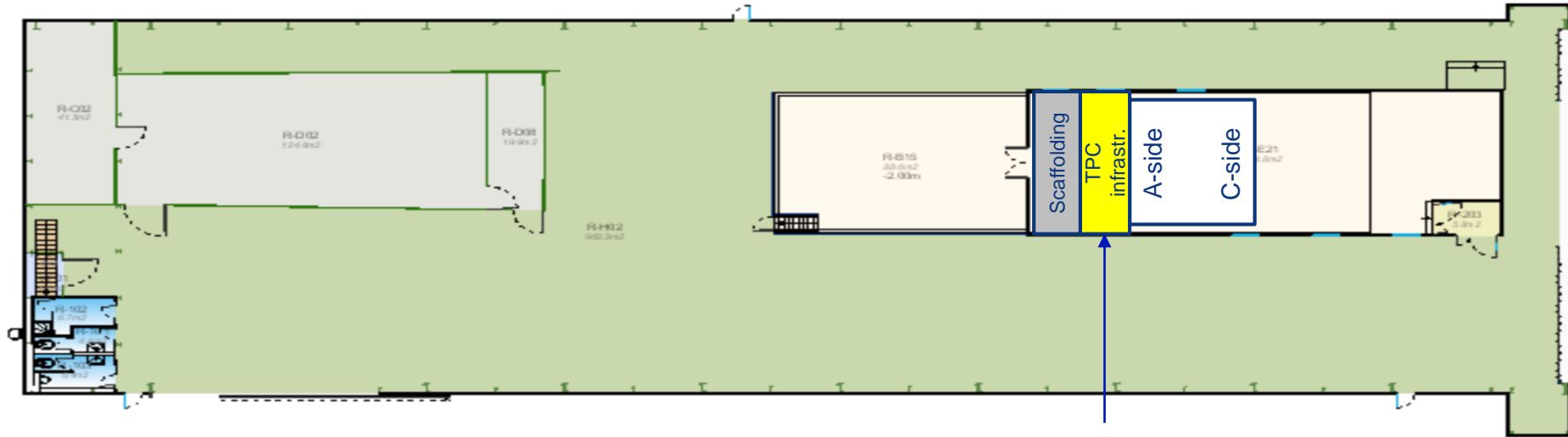


UX25 activities w9 – Fri 28 Feb 2020

Remove scaffolding laser platform in SX2 (Ouvaroff)

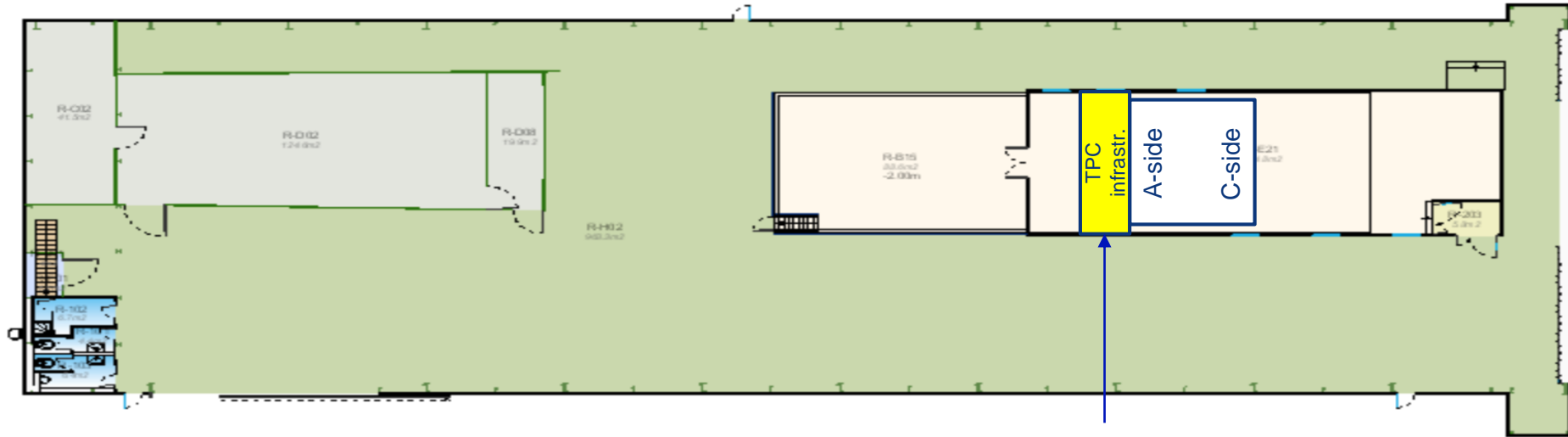


SXL2 activities w9 – Mon 24 Feb 2020



TPC, ALTEAD & P2tech: open roof,
install blocs, blue structure,
staircase and fan unit

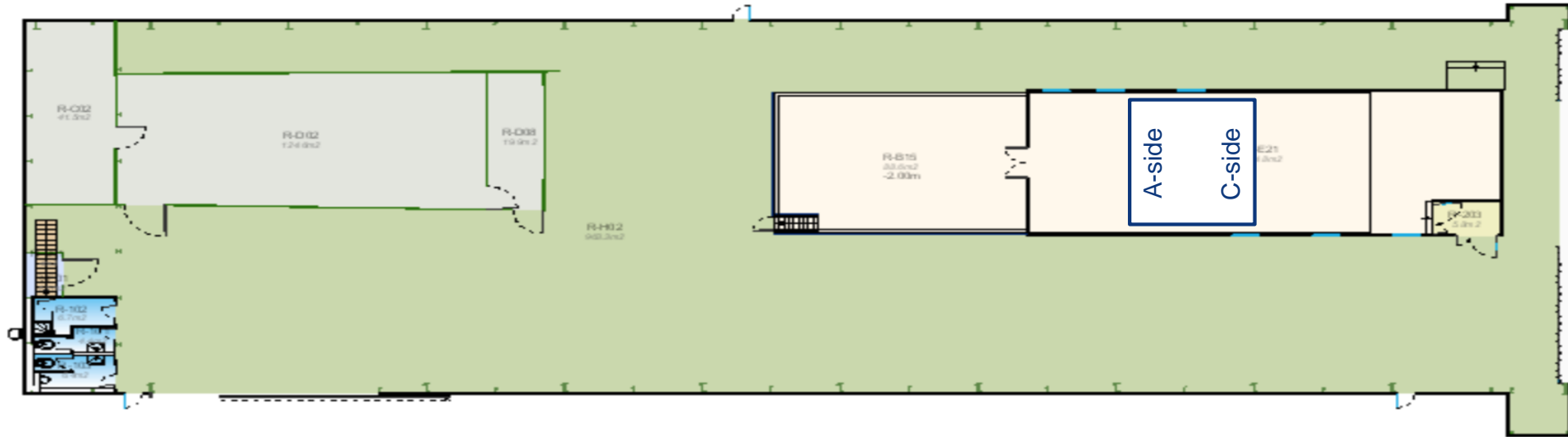
SXL2 activities w9 – Tue 25 Feb 2020



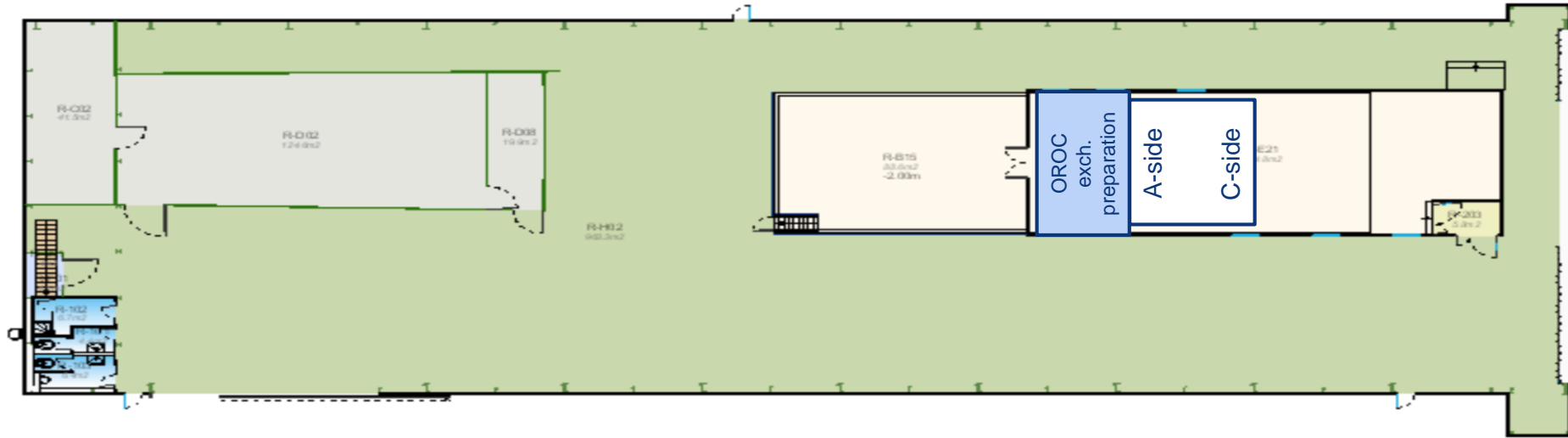
TPC, ALTEAD & P2tech: cutout and sealing into roof, install electric winch, close roof

SXL2 activities w9 – Wed 26 Feb 2020

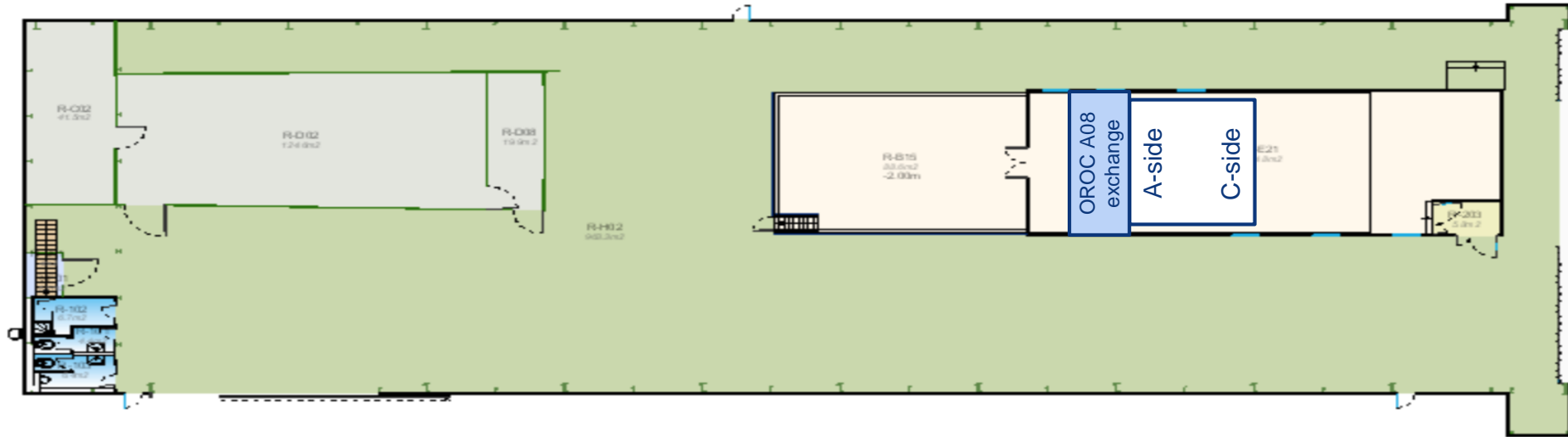
Cleaning cleanroom (DOSIM)



SXL2 activities w9 – Thu 27 Feb 2020



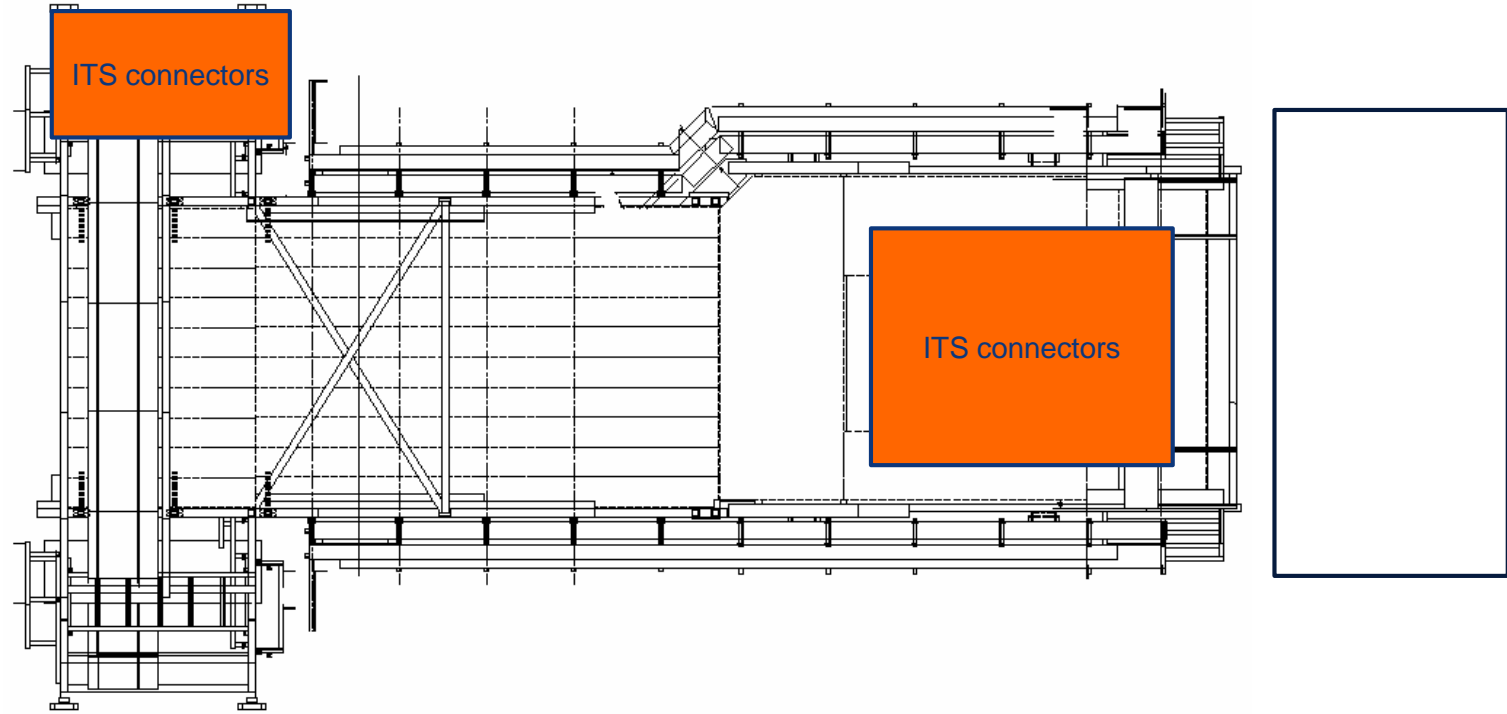
SXL2 activities w9 – Fri 28 Feb 2020



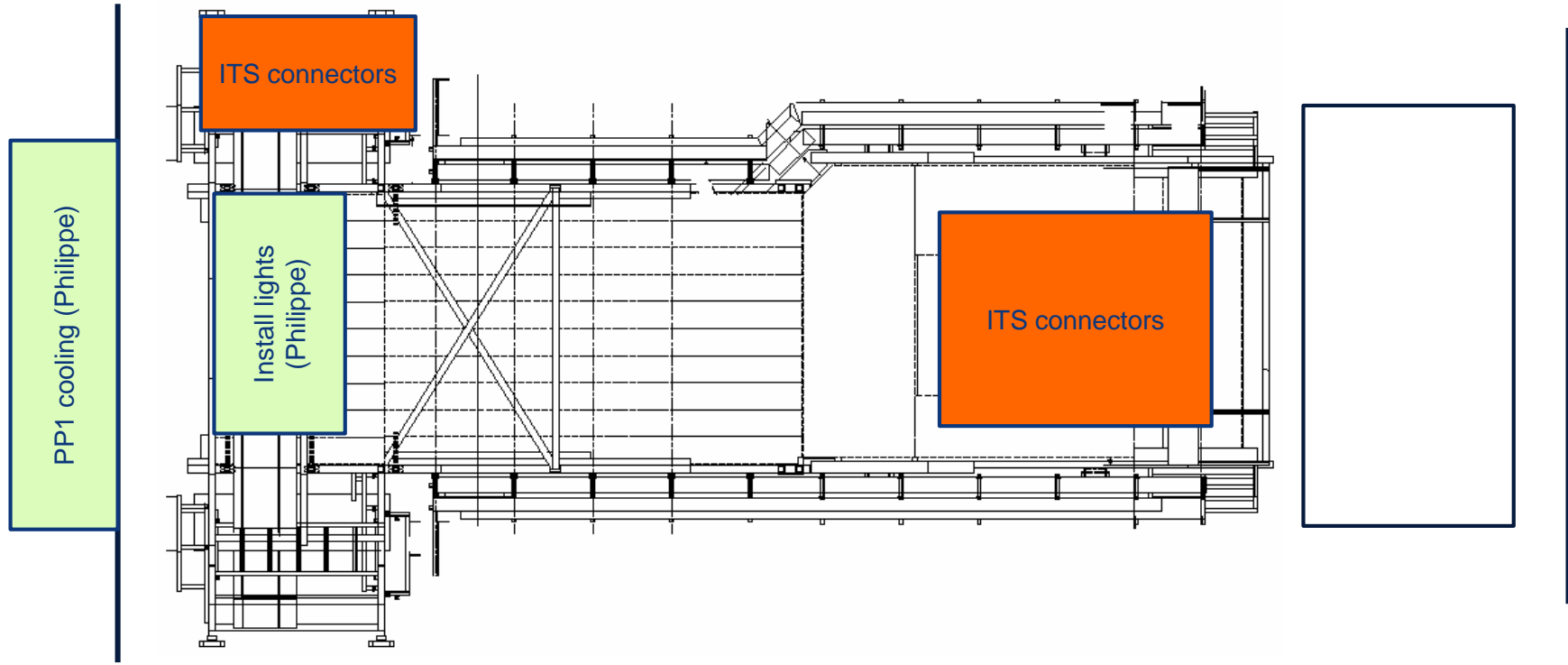
Miniframe activities w9 – Mon 24 Feb 2020

Finish ITS rack supports; build ITS access trap and FIT patch panel (Cedric)

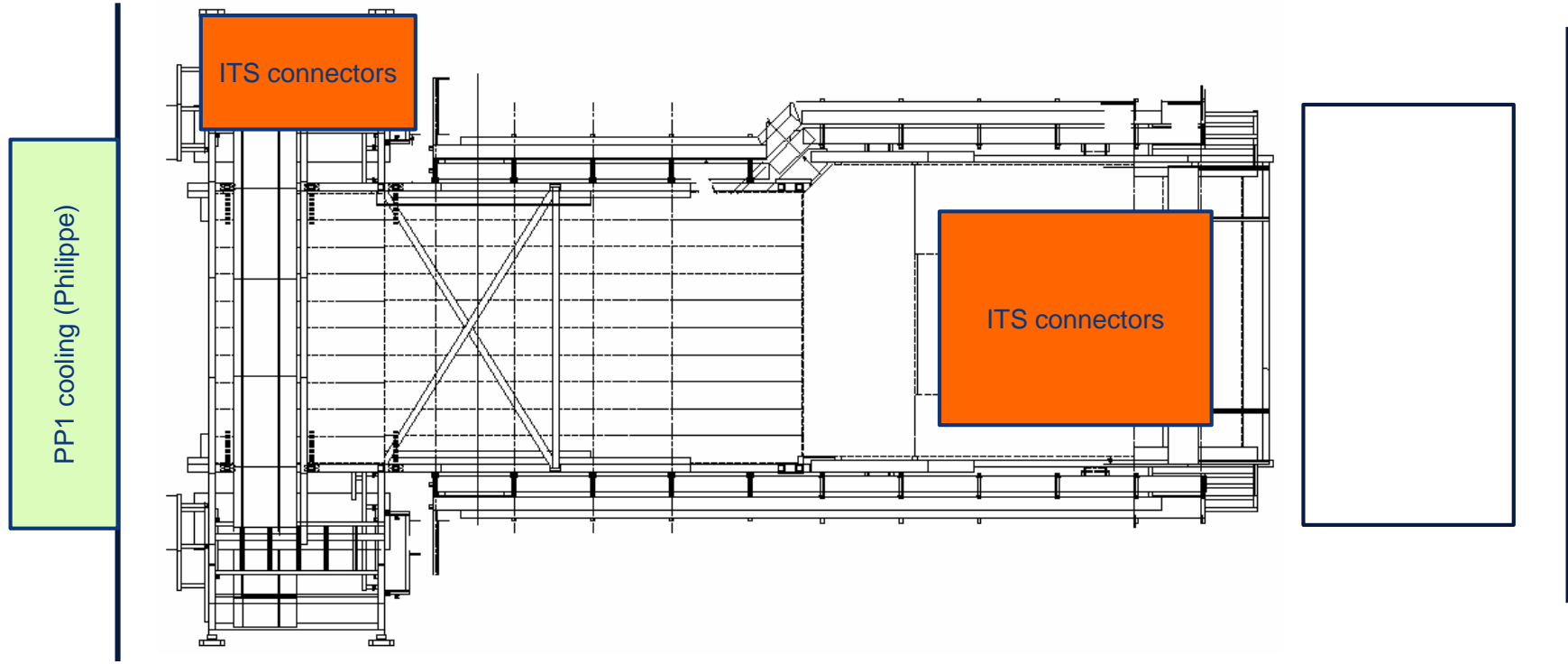
PP1 cooling (Philippe)



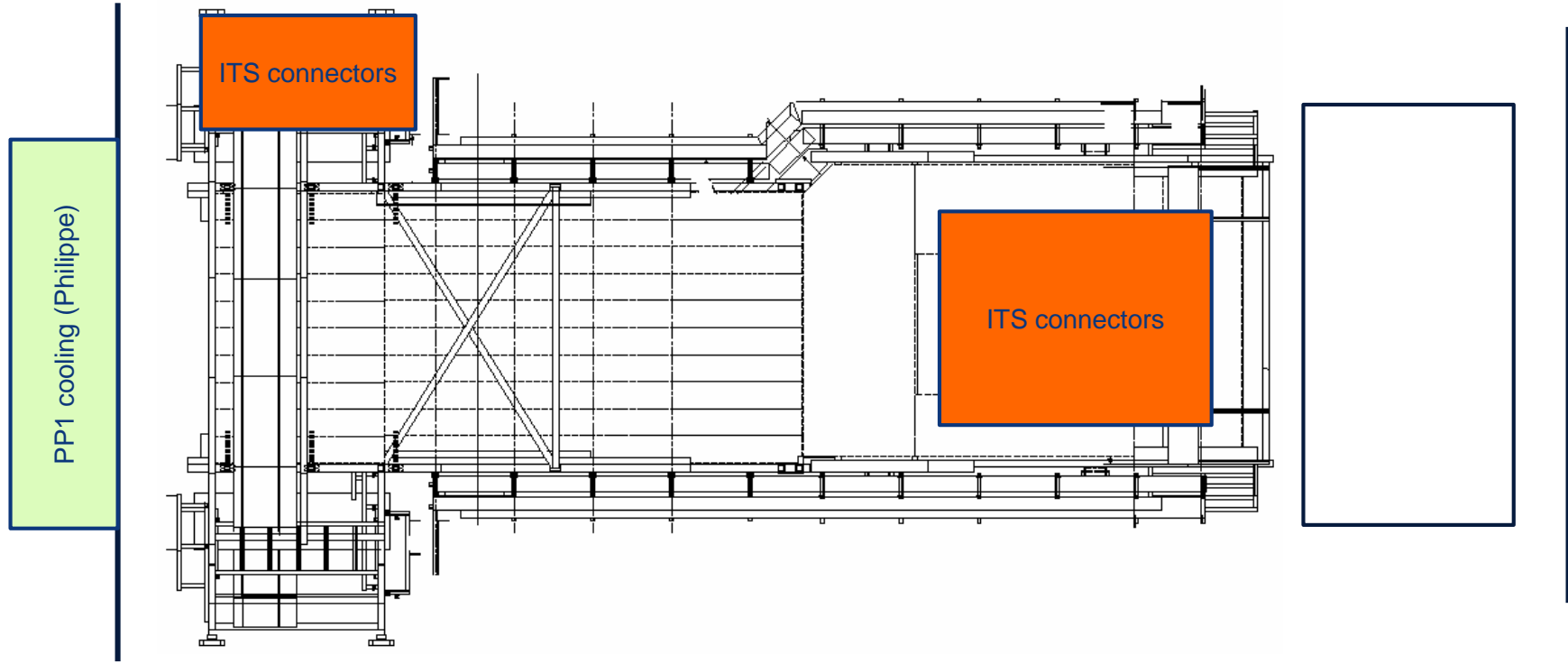
Miniframe activities w9 – Tue 25 Feb 2020



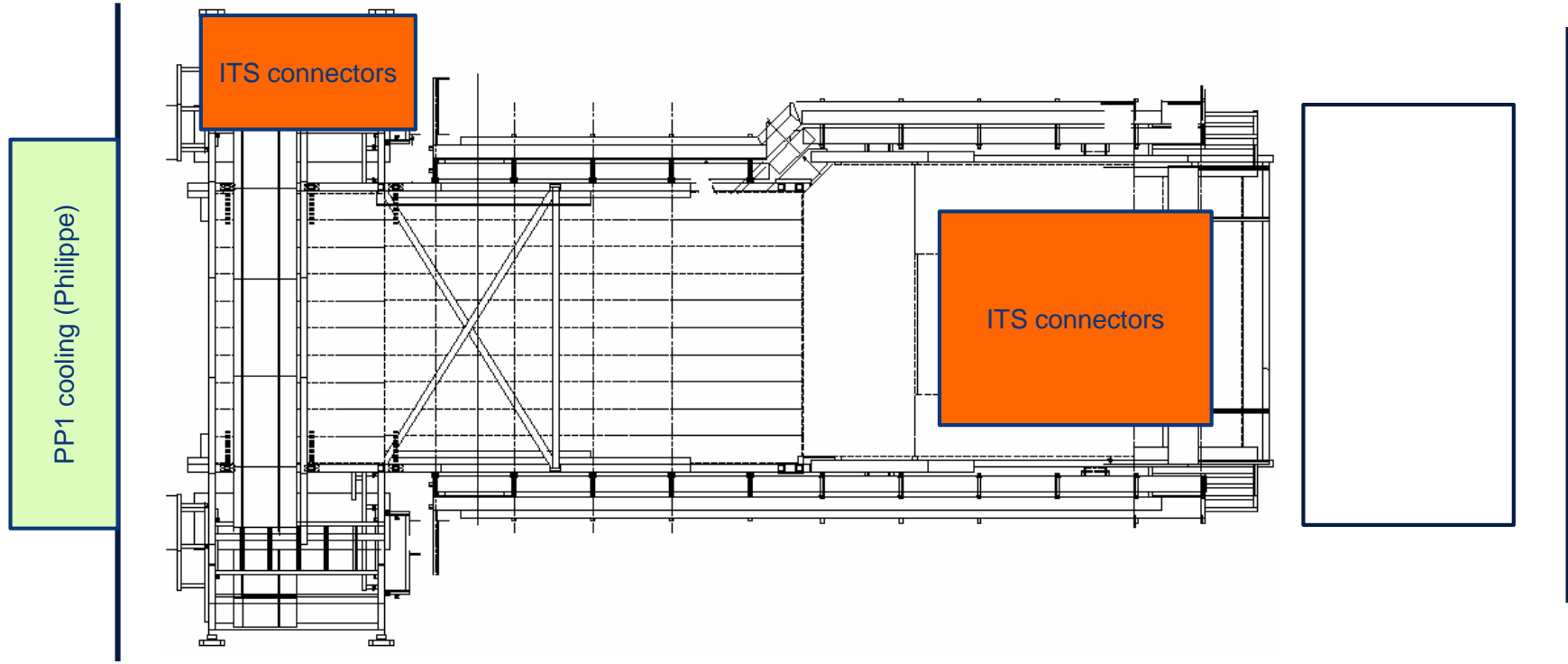
Miniframe activities w9 – Wed 26 Feb 2020



Miniframe activities w9 – Thu 27 Feb 2020



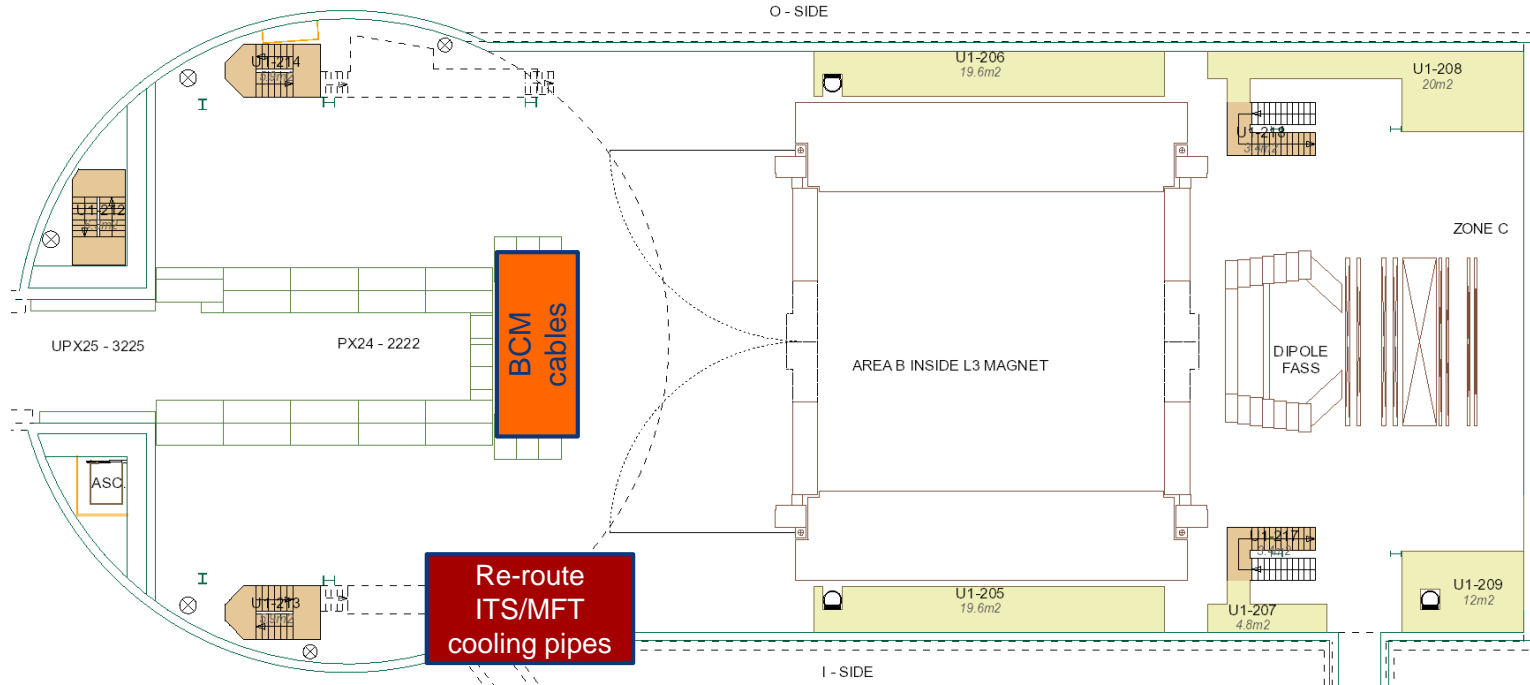
Miniframe activities w9 – Fri 28 Feb 2020



Day-by-day sequence w10



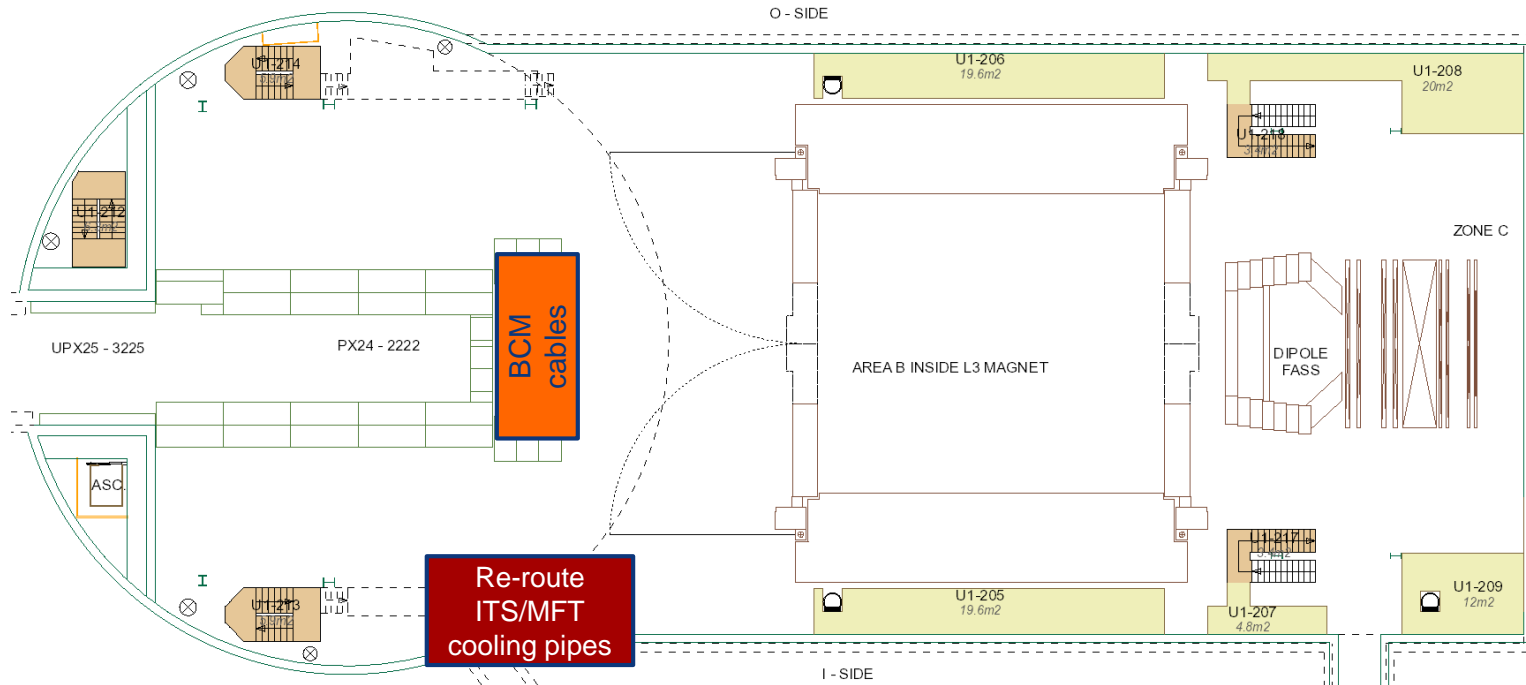
UX25 activities w10 – Mon 2 Mar 2020



UX25 activities w10 – Tue 3 Mar 2020

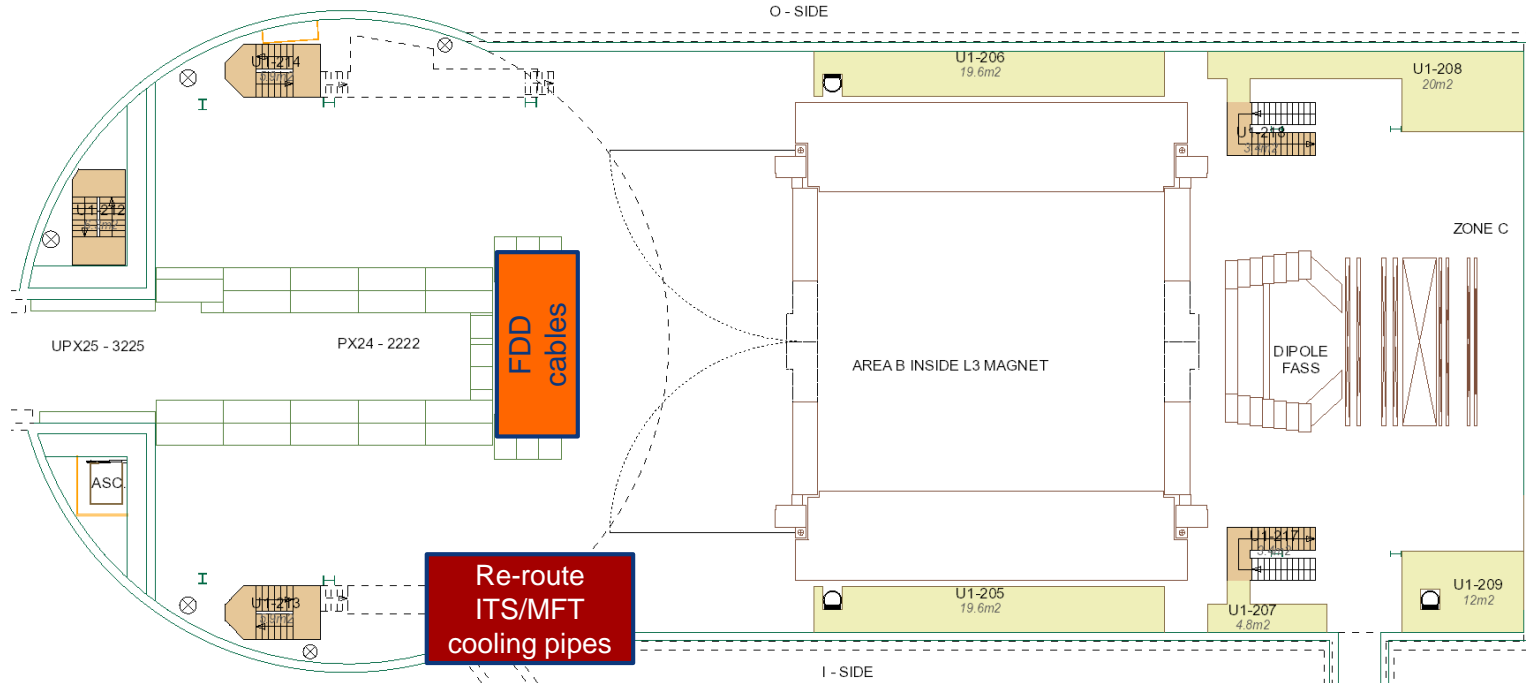
Cavern lift maintenance: no access to UX25 from 6:00 AM to 8:00 AM

Cleaning cavern (Topnet): 13:00 to 15:00



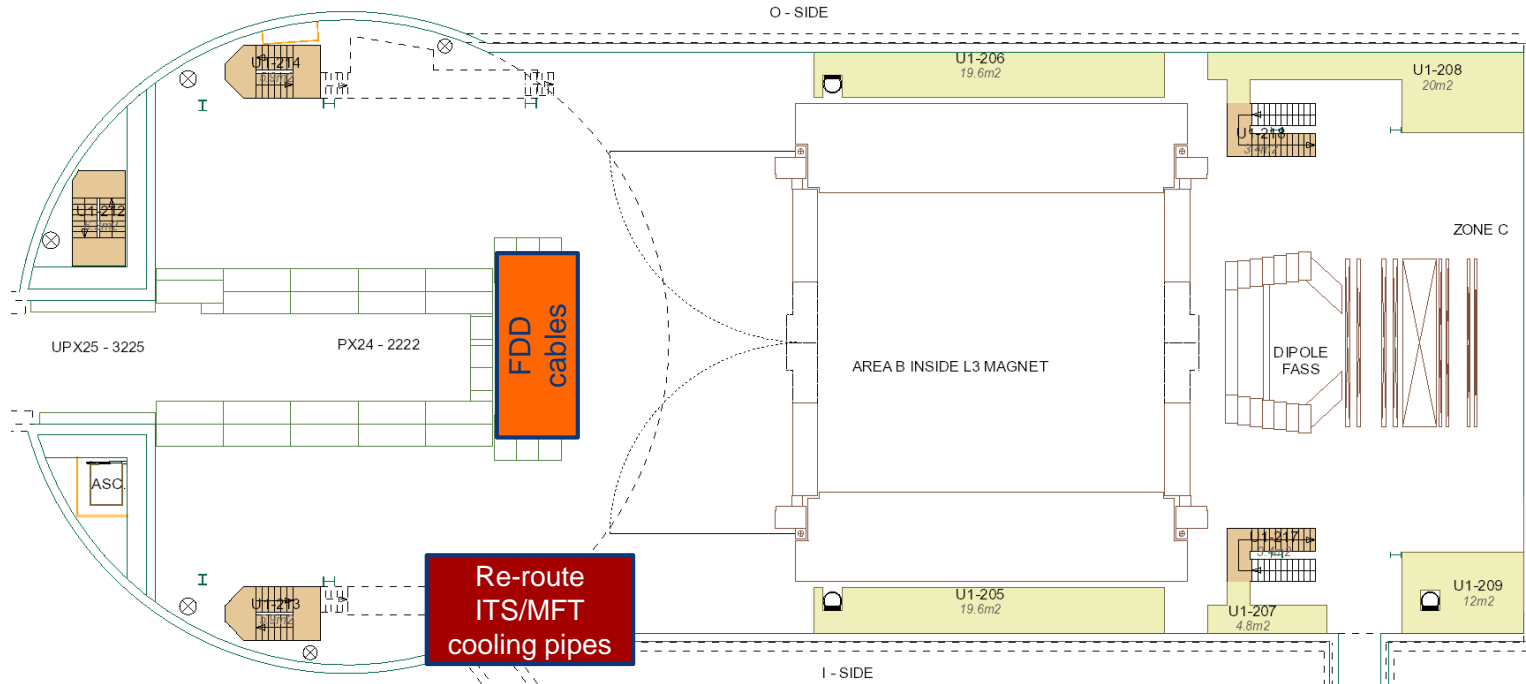
UX25 activities w10 – Wed 4 Mar 2020

IT: install power line for CR2 starpoint in SX2 (COMSA) (Wed – Fri)

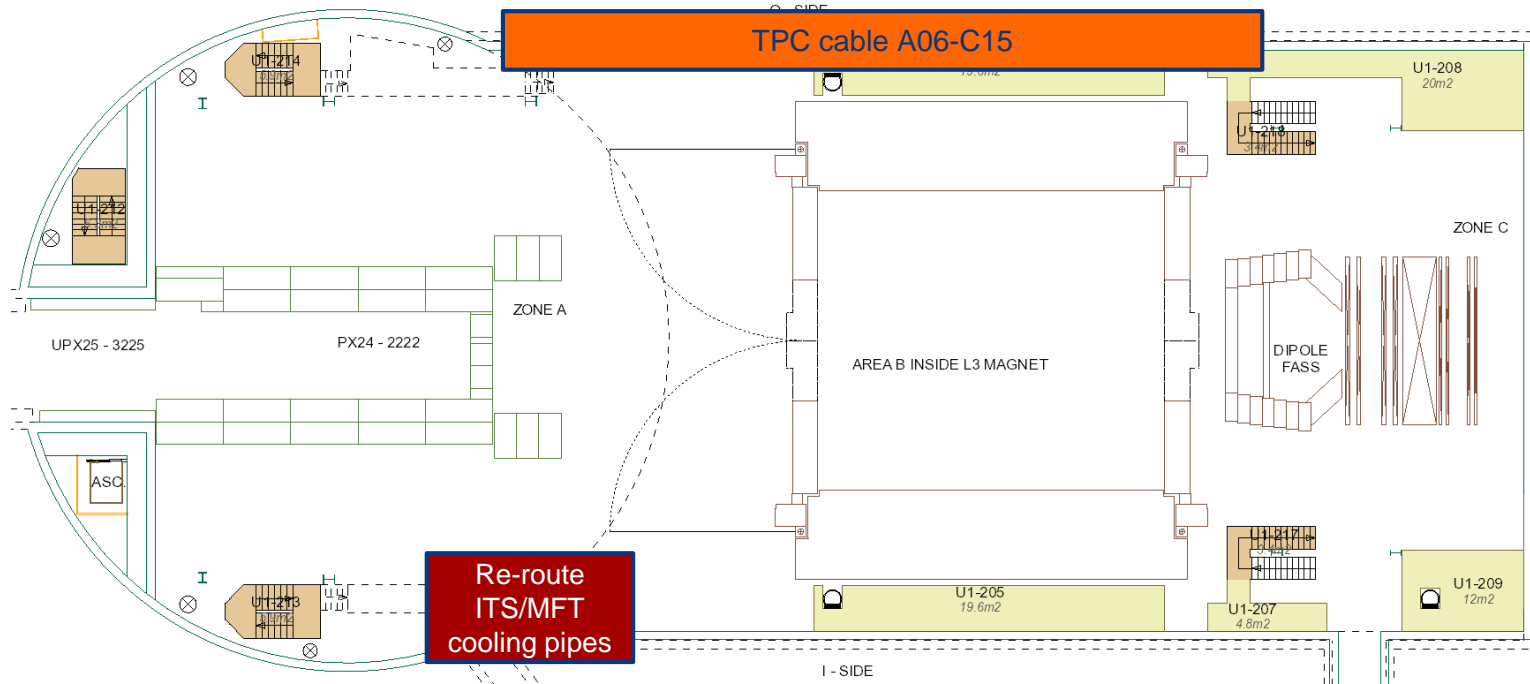


UX25 activities w10 – Thu 5 Mar 2020

Remove scaffolding inside tent 6952

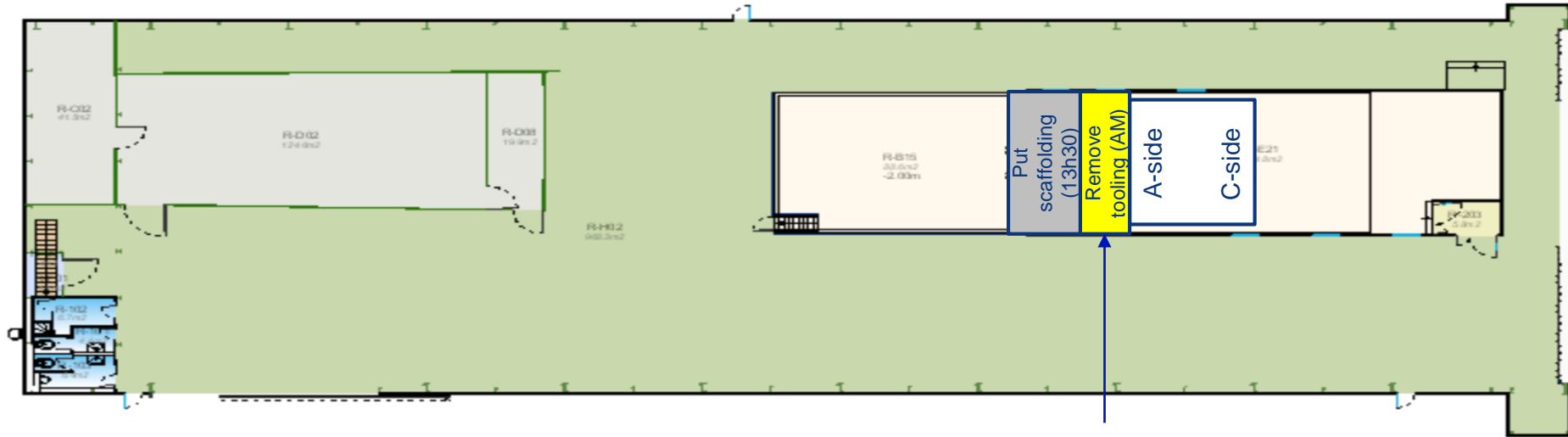


UX25 activities w10 – Fri 6 Mar 2020



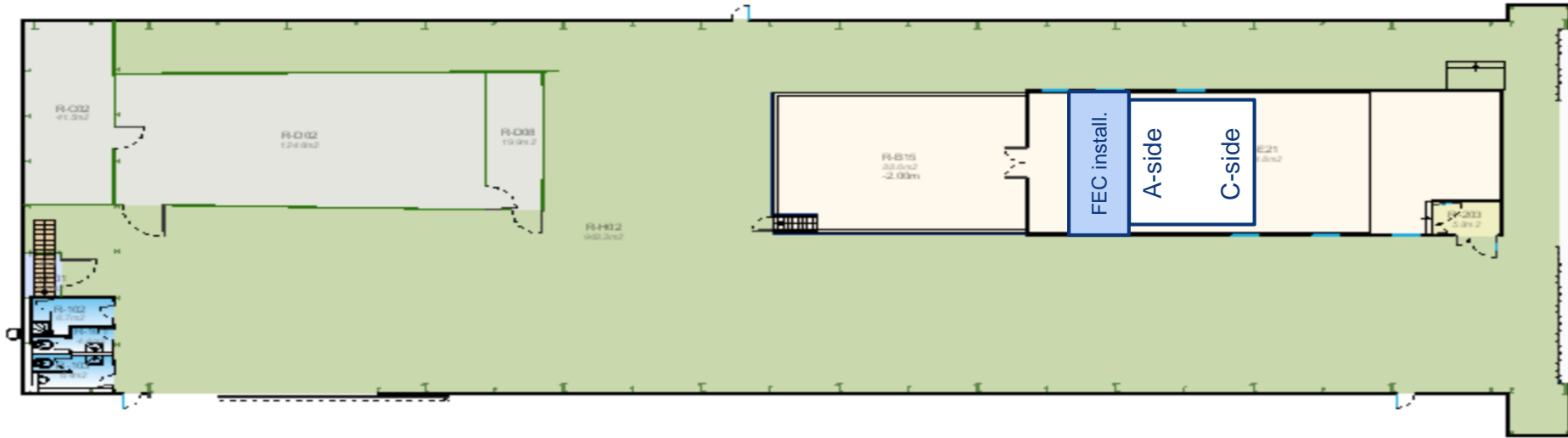
SXL2 activities w10 – Mon 2 Mar 2020

TPC: replace gas mixture with Ne-CO₂-N₂

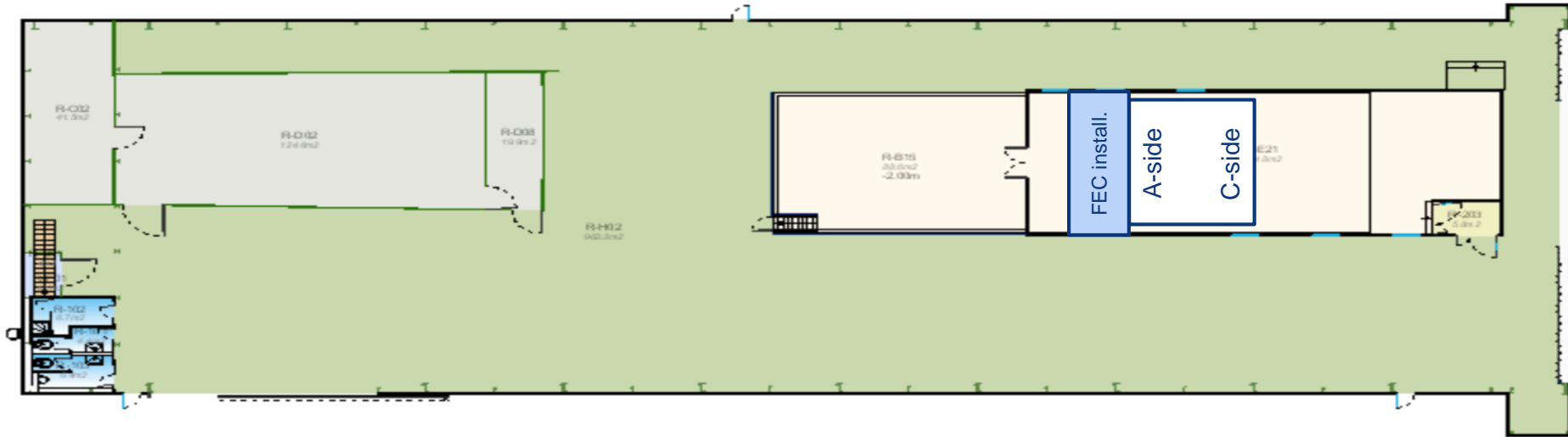


TPC, ALTEAD & P2tech: open roof,
remove tooling, close roof

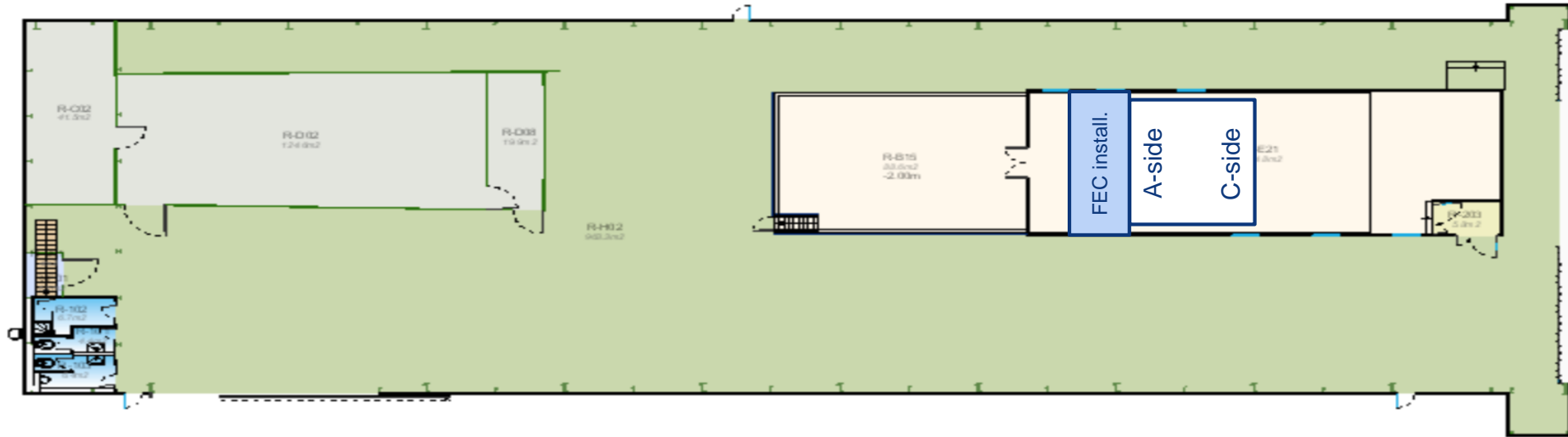
SXL2 activities w10 – Tue 3 Mar 2020



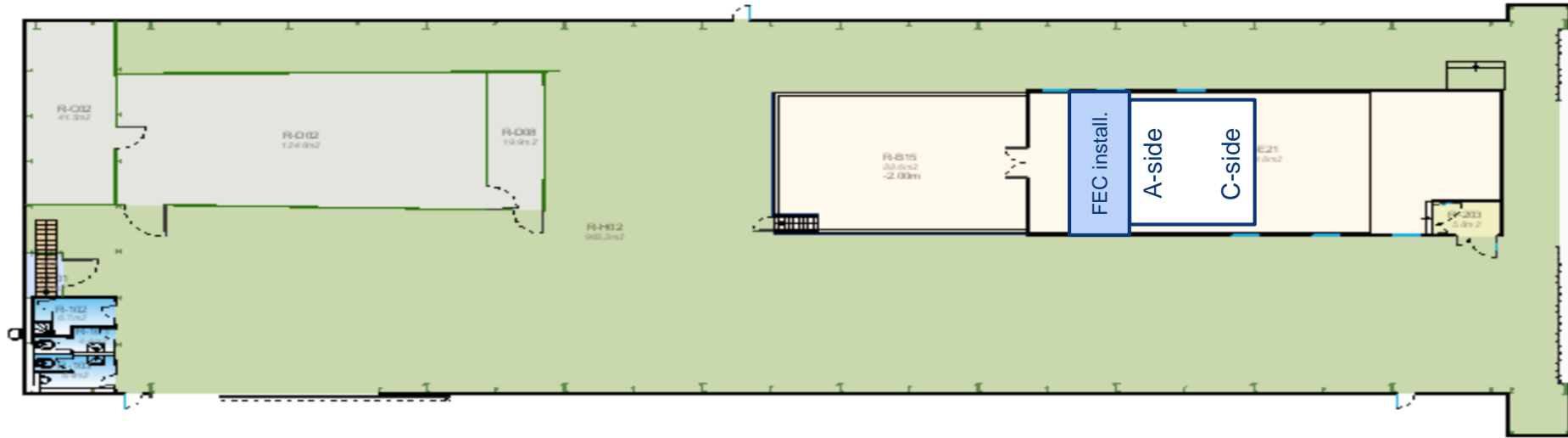
SXL2 activities w10 – Wed 4 Mar 2020



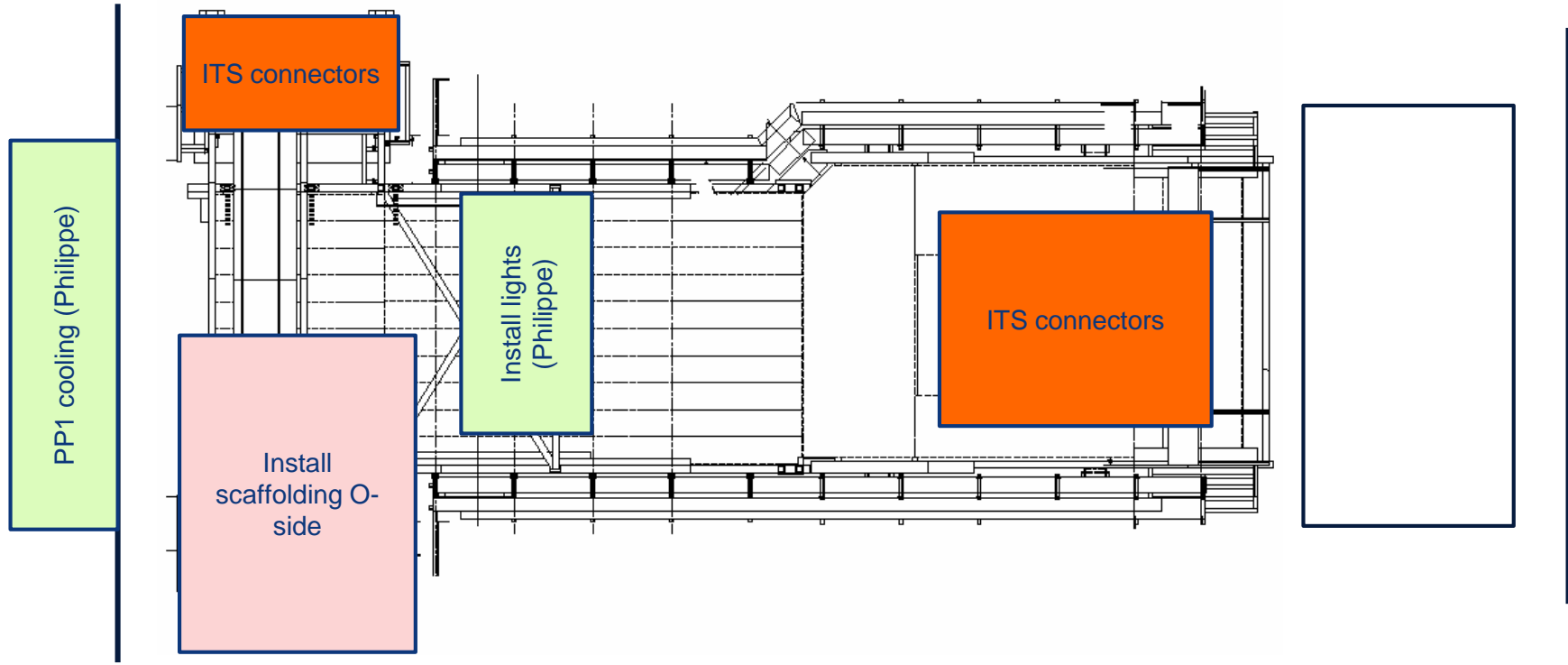
SXL2 activities w10 – Thu 5 Mar 2020



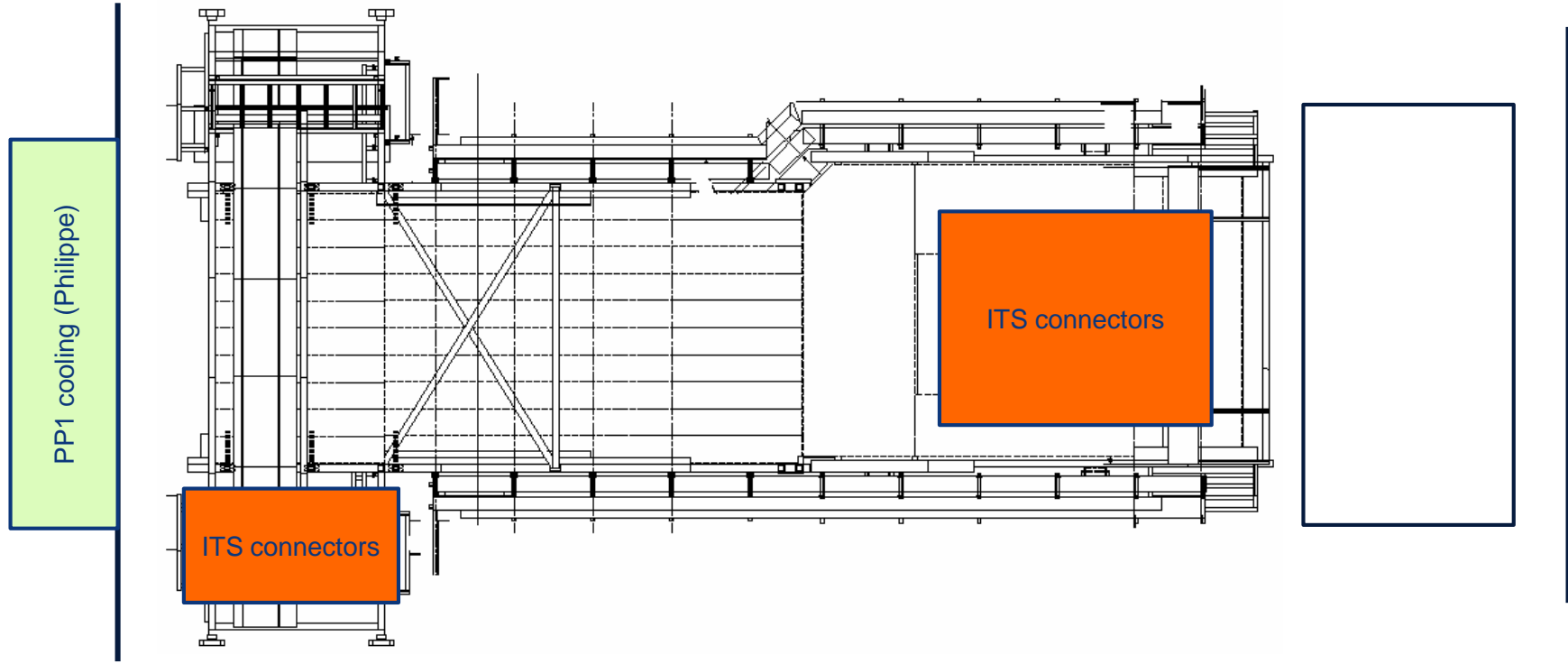
SXL2 activities w10 – Fri 6 Mar 2020



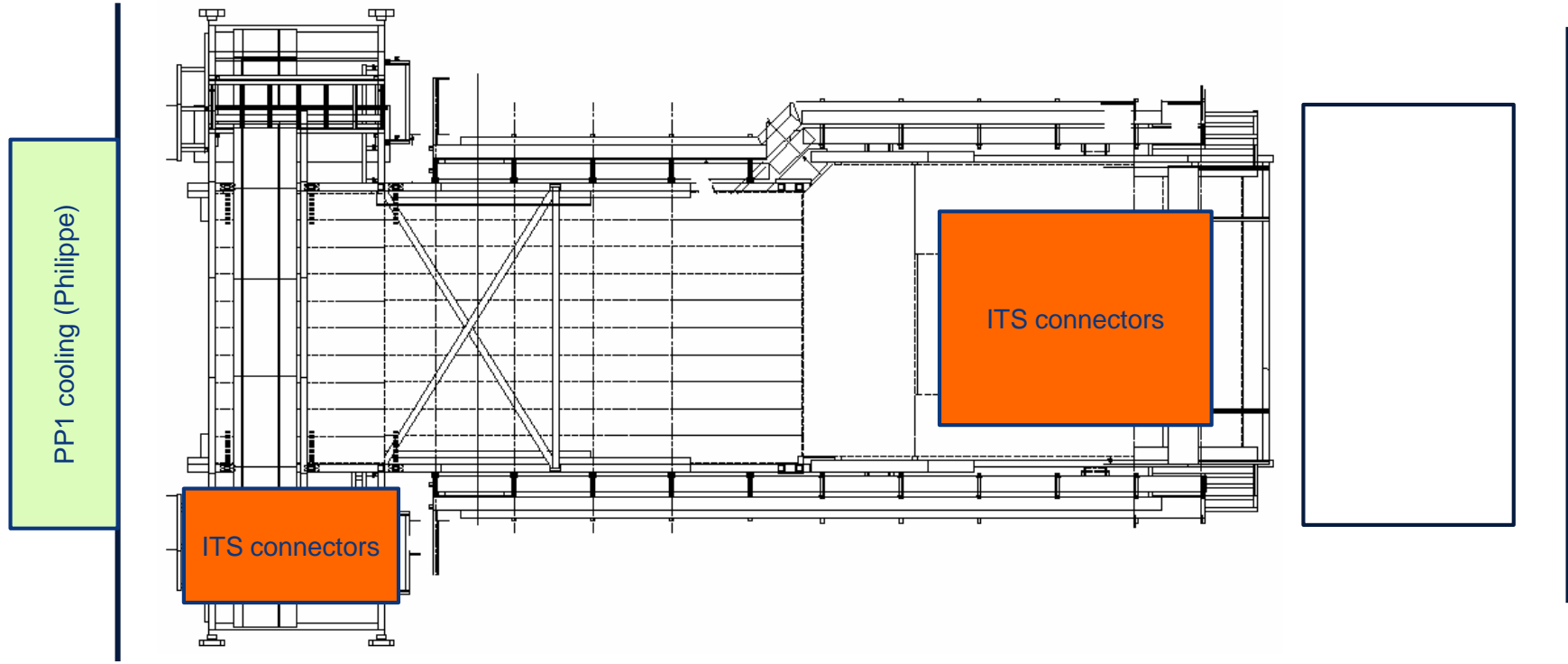
Miniframe activities w10 – Mon 2 Mar 2020



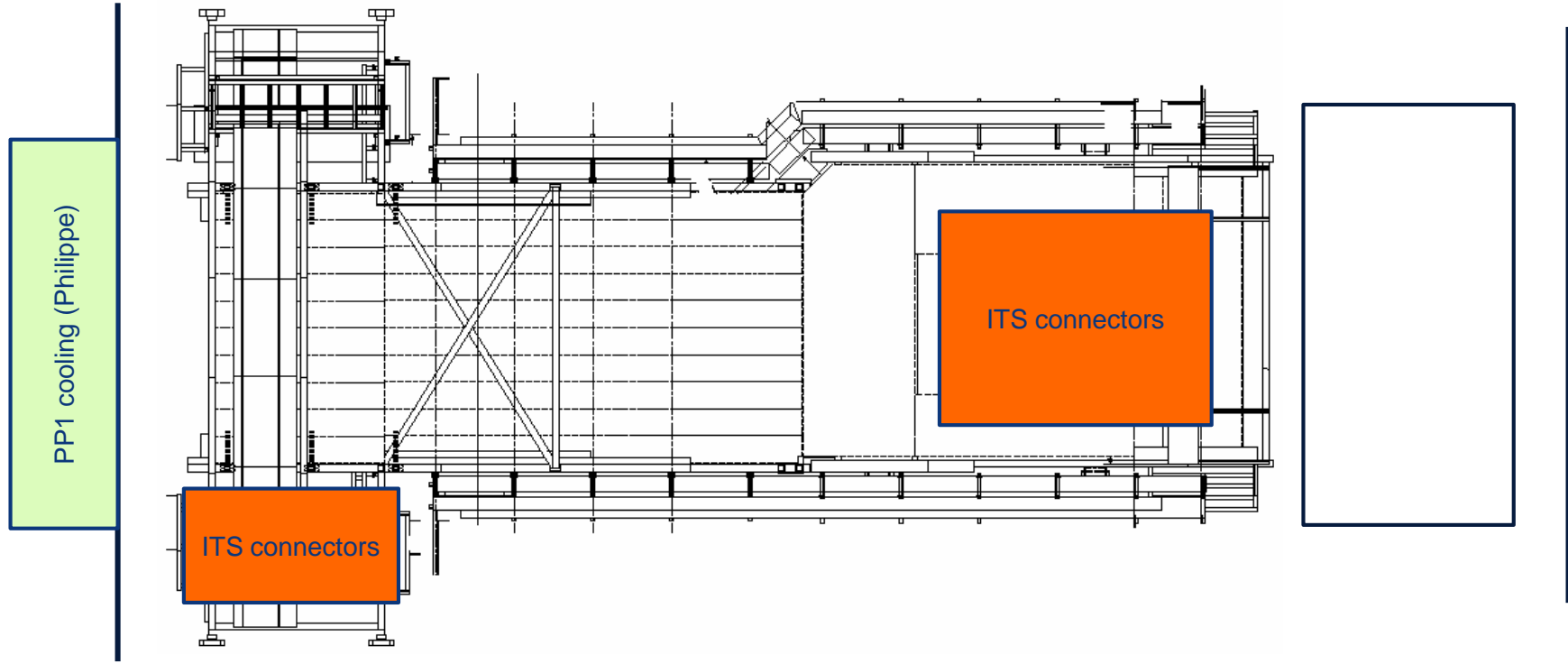
Miniframe activities w10 – Tue 3 Mar 2020



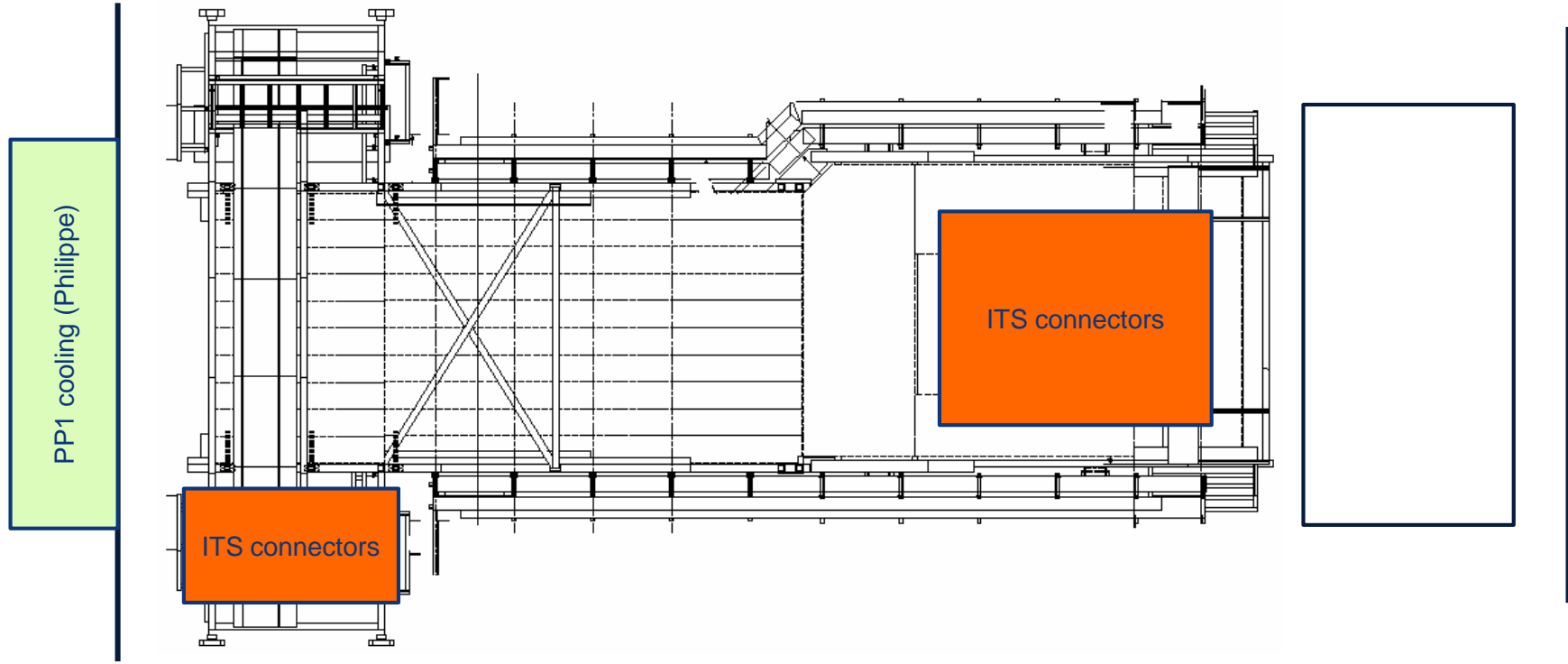
Miniframe activities w10 – Wed 4 Mar 2020



Miniframe activities w10 – Thu 5 Mar 2020



Miniframe activities w10 – Fri 6 Mar 2020



AOB

- No meeting next week. Next LS2 planning meeting Fri March 6th