

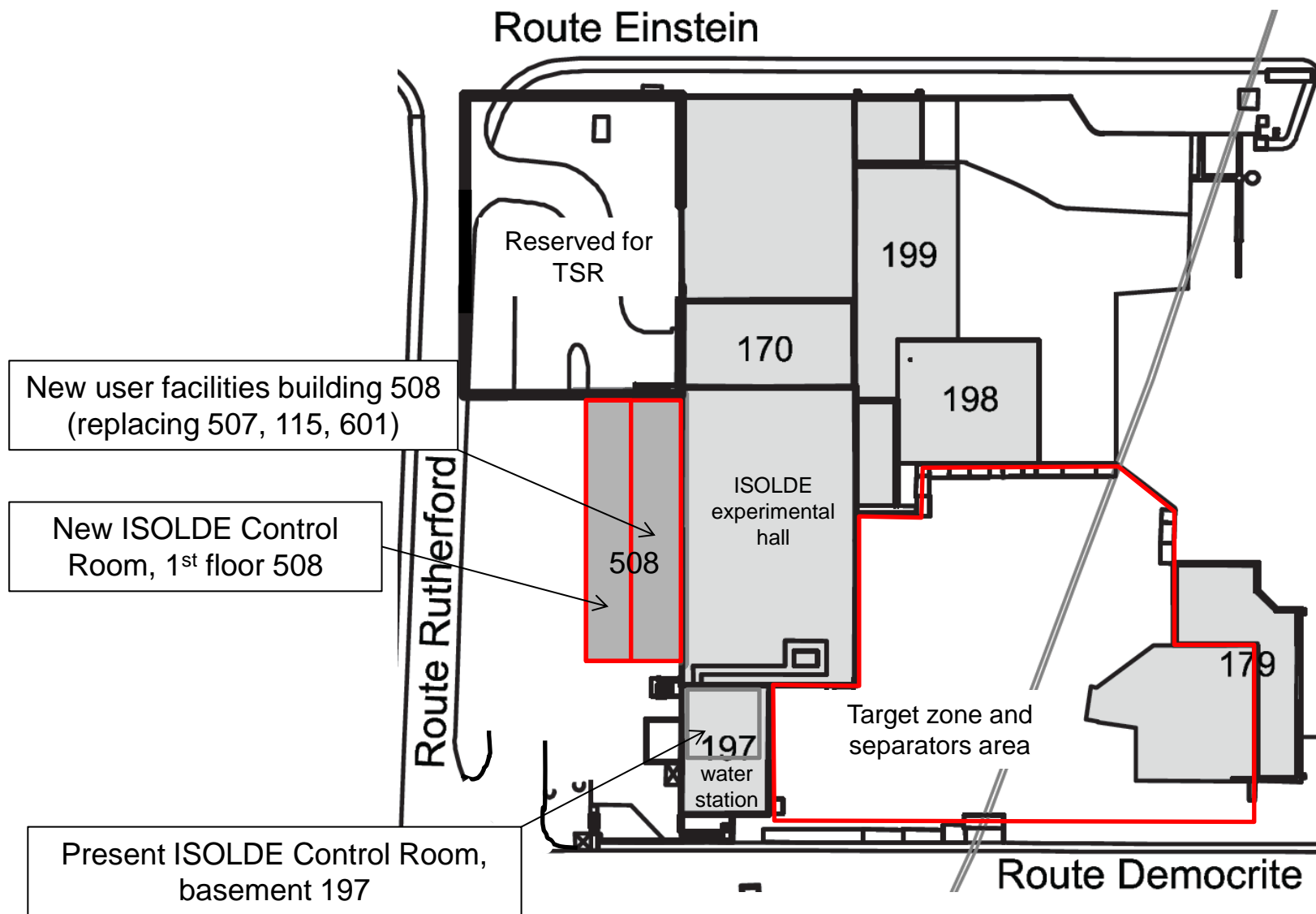
ISOLDE: Status report building 508

69th ISCC meeting

CERN, 31 March 2014

Erwin Siesling, Magda Kowalska

- **Status new building 508:**
 - Progress on the construction
 - Building layout (final)
 - Progress on infrastructure
 - Costs and timeline



Progress during the winter:

- Preparation of the terrain November
- Pouring of the concrete floor (with disconnected workshop floor) December
- Installation of the metal structure Feb-March
- Installation of the isolated walls March
- Ongoing: Installation of the windows and doors & inner walls



Building 508 layout:

Light metal structure with 2 concrete floors: Total surface 864m²

Ground floor (only accessible from within the classified area): 432 m²

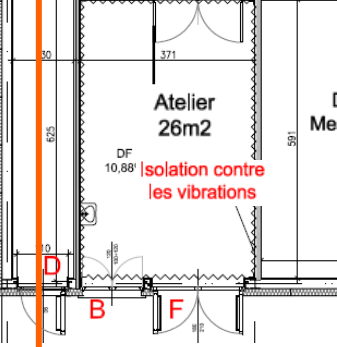
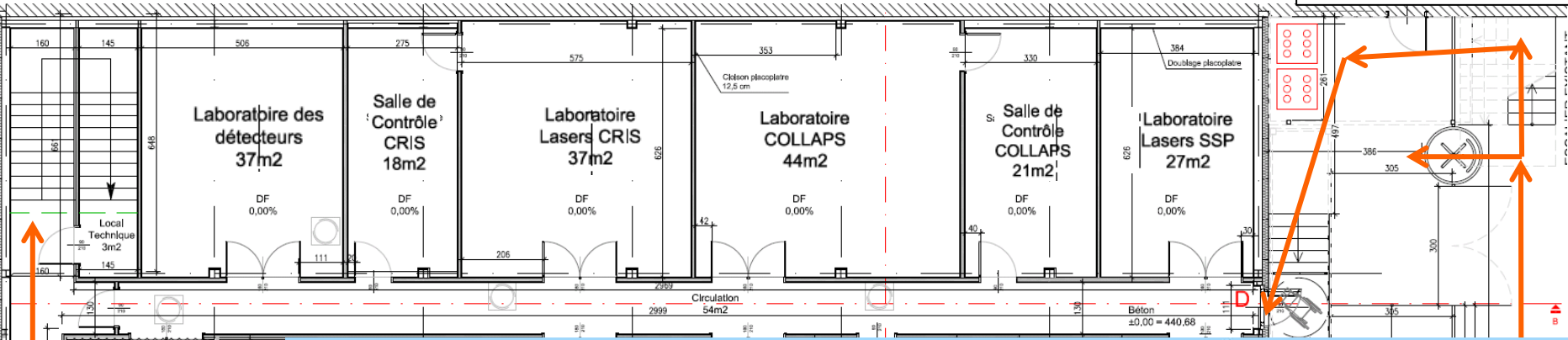
- Solid state, Laser labs and workshop

First floor (accessible outside the classified area): 432m²

- Data Acquisition rooms
- Meeting room/Visitors Center
- Kitchen
- Isolde Control Room

Ground floor B508:

Access 1st floor

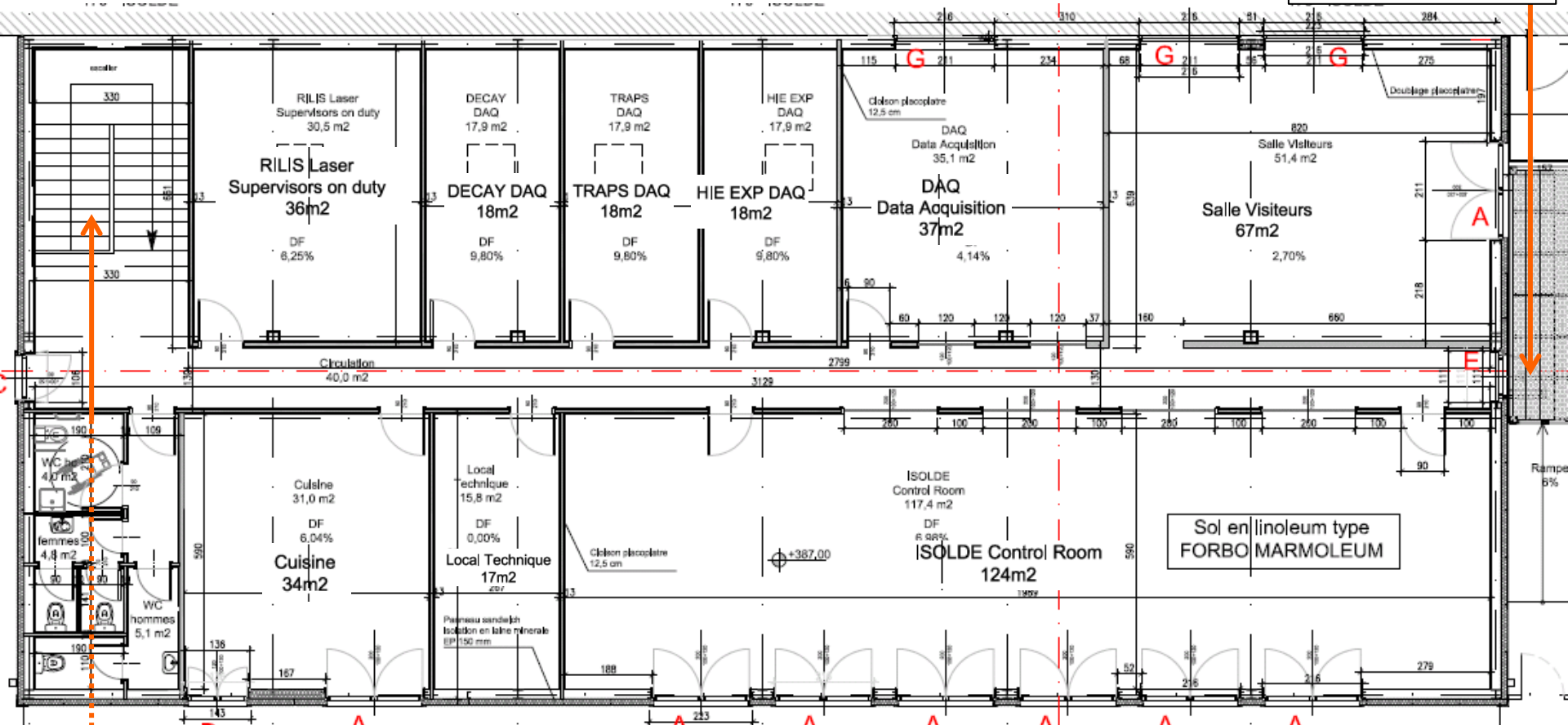


Access 1st floor

Surface nette 1er étage	: 432m ²
Surface nette rez de chaussée	: 432m ²
Surface nette totale	: 864m ²

1st floor B508:

Access 1st floor



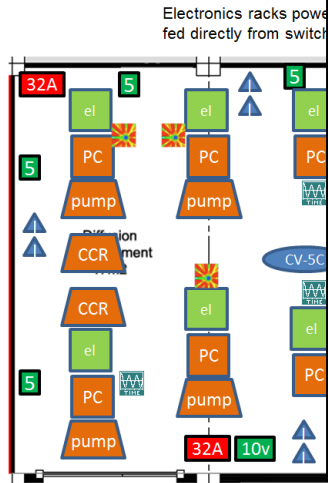
Access 1st floor

Surface nette 1er étage : 432m²
 Surface nette rez de chaussée : 432m²
 Surface nette totale : 864m²

Infrastructure:

- Needs for the users have been collected by Maria and Magda
- Implementation by the different groups and contractors ongoing (EL, CV, IT)
- Finalized plans with regard to infrastructure to be ready asap (Urgent!)

Icon	Item	Yes/no (and #)
5 10	Power plugs (5 or 10)	Yes: 3
XA	3phase plugs (X=16, 25, 32, 64 A)	Yes: 2
PC	PCs	Yes: 5(?)
el	electronic racks	Yes: 4(?)
3ph ase	3 phase equipment	Yes
CV-5C	Standard aircon (5C stab.)	Yes
CV-1C	Special aircon (lasers)	No
air	Pressurized air	YBNAN
cables	Signal cables from ISOLDE	No
Local emerg. switch	Local emerg. switch	Yes
heat	radiators	Yes
water	Water cooling	Yes
Network (2 plugs)	Network (2 plugs)	Yes: 6
pump	Prepump exhaust	Yes
gas	Gas connection	YBNAN(?)
Patch panel	Patch panel	No

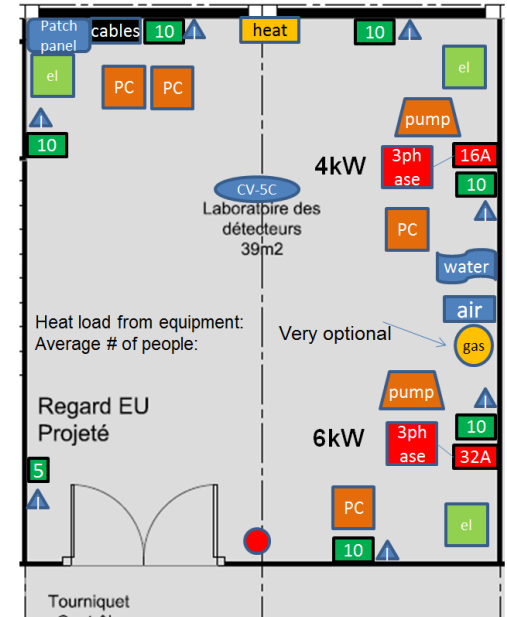


CCR	Closed cycle refrigerator / chiller	Yes: 3
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AAA TIME	PAC labeling Digital + analog	Emission Channeling labeling	
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Icon	Item	Yes/no (and #)
5 10	Power plugs (5 or 10)	1,6
XA	3phase plugs (X=16, 25, 32, 64 A)	1,0,1,0
PC	PCs	4
el	electronic racks	3
3ph ase	3 phase equipment	2
CV-5C	Standard aircon (5C stab.)	1
CV-1C	Special aircon (lasers)	no
air	Pressurized air	yes
cables	Signal cables from ISOLDE	10
Local emerg. switch	Local emerg. switch	1
heat	radiators	1
water	Water cooling	yes
pump	Network (2 plugs)	7
gas	Prepump exhaust	2
Patch panel	Gas connection	yes
	Patch panel	yes

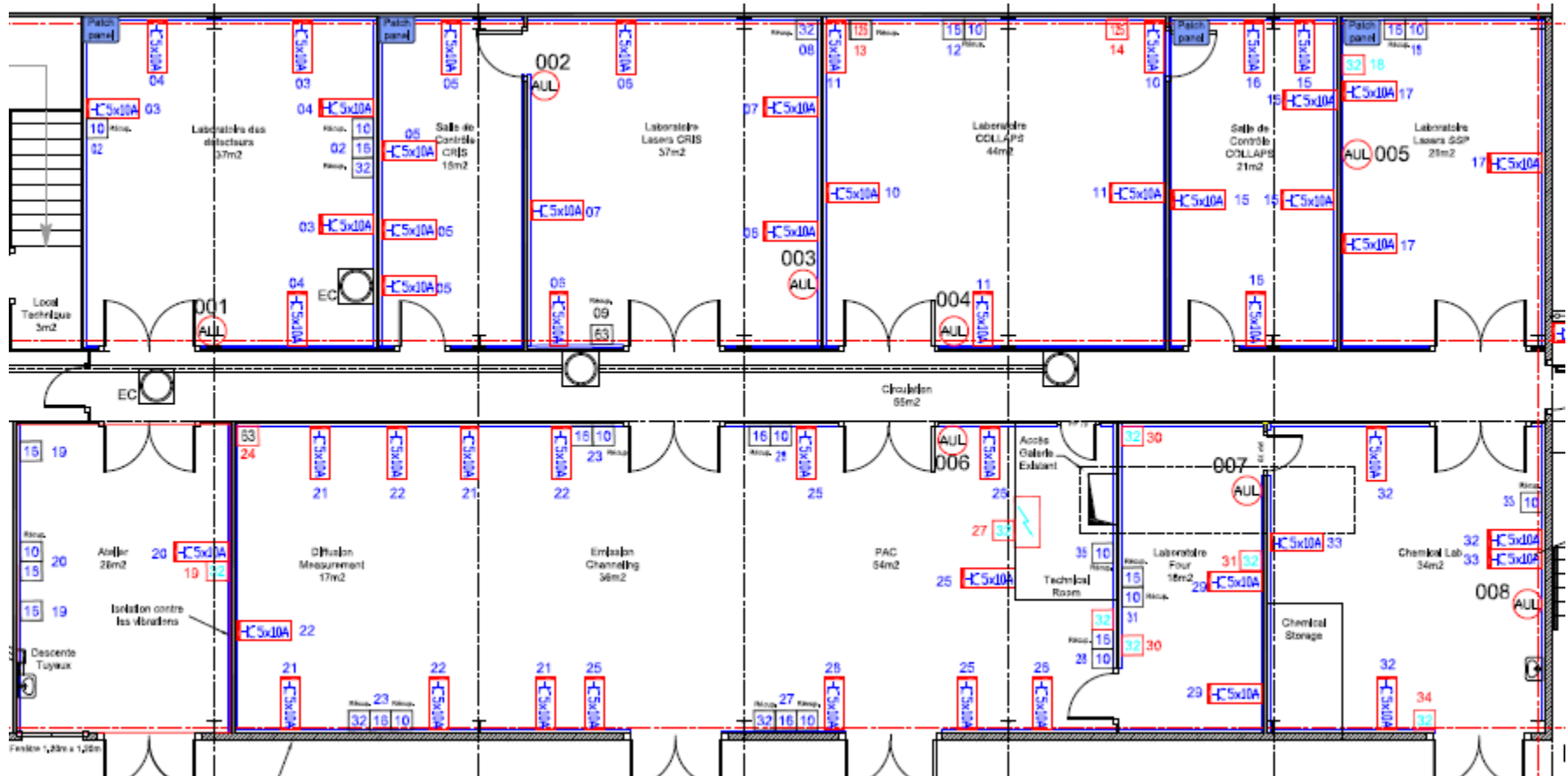
Detector lab



Courtesy Magda Kowalska

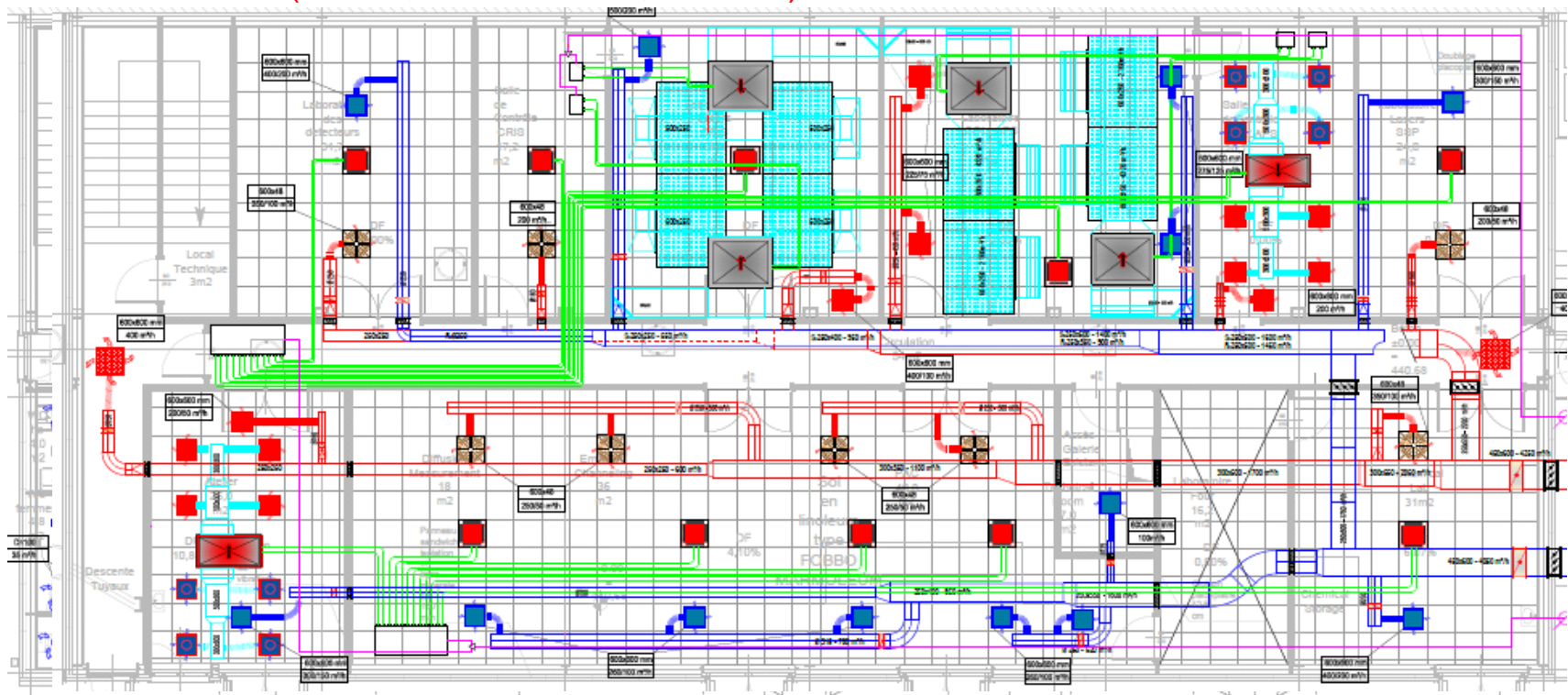
Electricity:

- Latest iterations user needs: 200kW
- Waiting for estimate of Cooling & Ventilation needs: 130, 170, or 220kW



Cooling and ventilation:

- The proposed solution by the contractor contains two HVAC (Heating Ventilation and Air Conditioning) systems based on a refrigerant liquid:
 - General system for the whole building + Technical cooling for the ground floor labs
 => too expensive and requires new electrical design (=delays), suggestion:
 - Keep general system for the building as proposed
 - Technical cooling: **Re-use available chilled water and install fan-coils; 4x7kW fan-coils (1 SSP, 2 COLLAPS, 1 CRIS) as used before in B507**



Costs:

Total costs building 508 (incl. services):
estimate **2MCHF** Exact costs HVAC awaiting

Timeline:

- Building ready April 2014
- Infrastructure ready June 2014
- Installation controlled access June 2014
- Installations users as of July 2014 (Move of the ICR during shutdown 2014/15)
- Milestone: Protons to Isolde 10 July 2014;
physics start 21 July