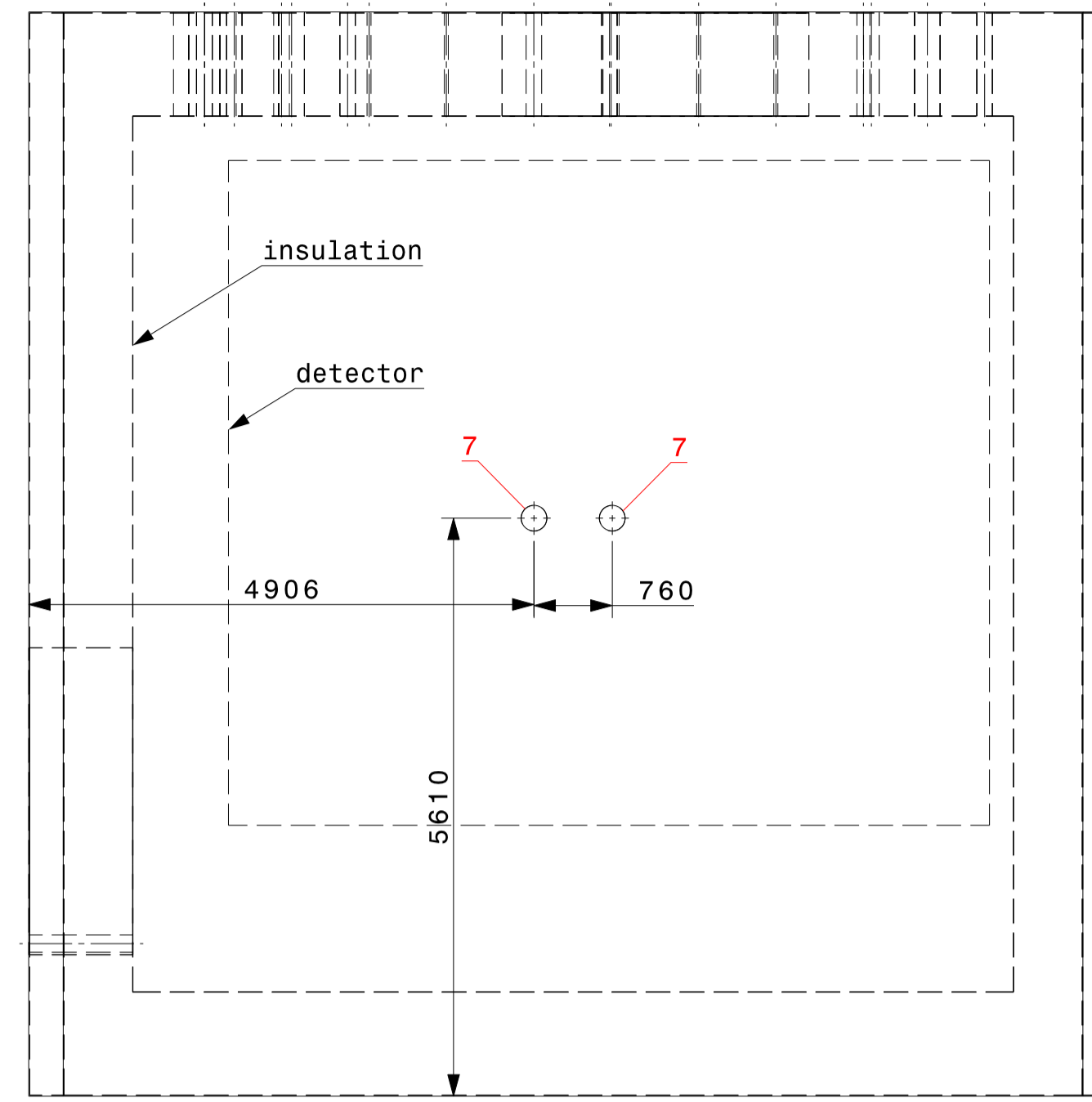
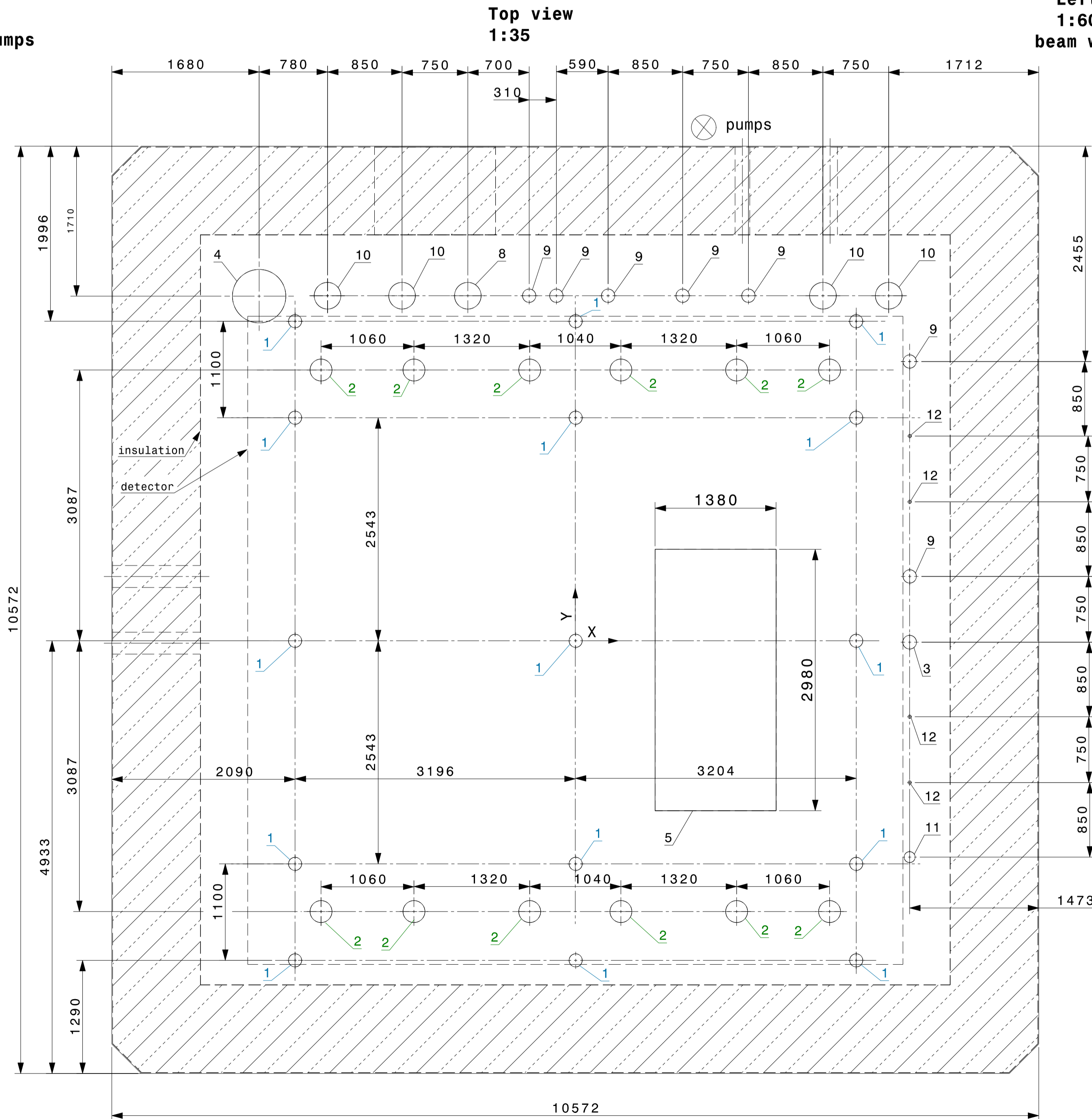
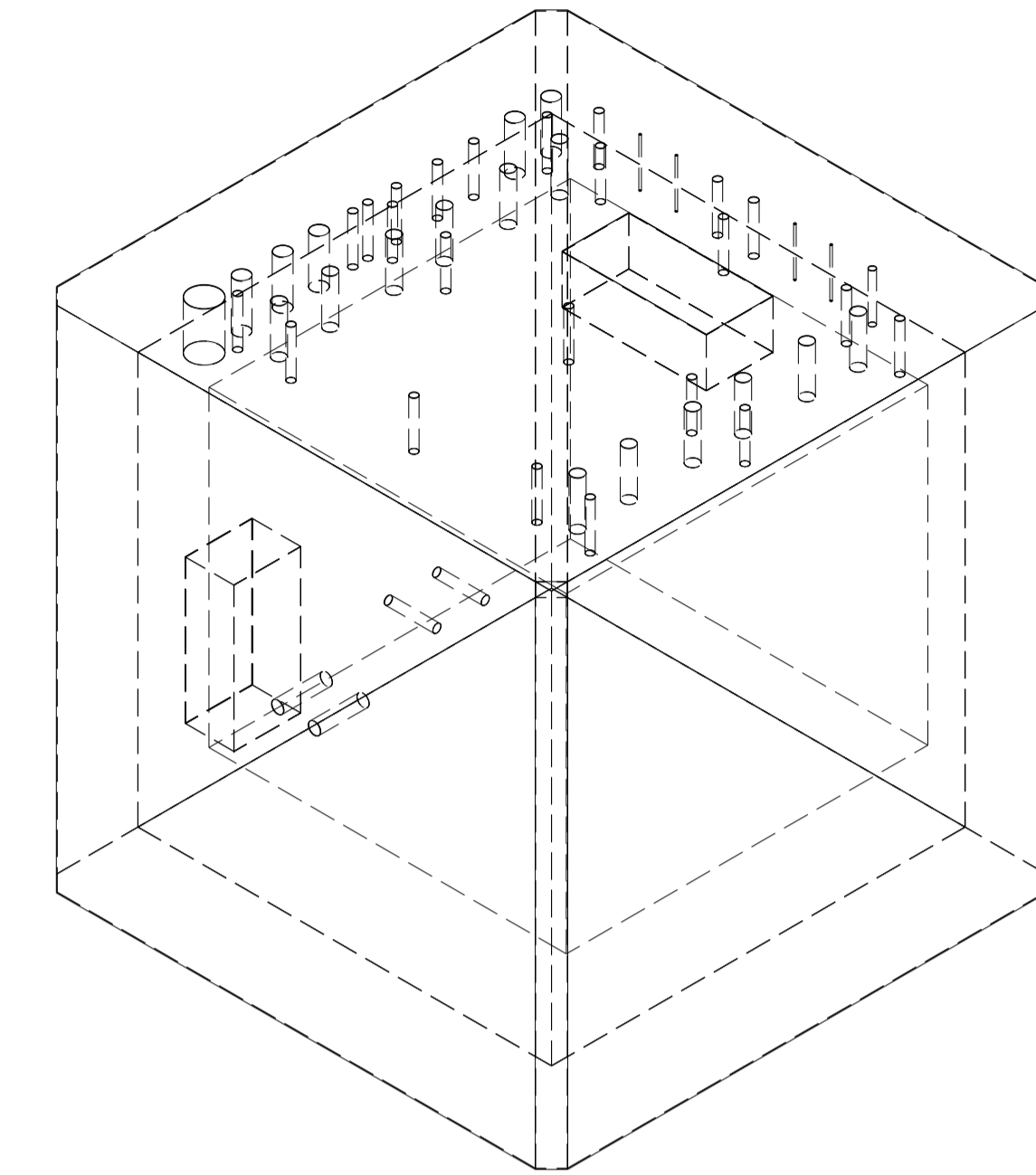


Front view
1:60
technical construction, pumps



Left view
1:60
beam windows



Detector penetrations

Pos.	Diameter [mm]	Qty.	Description
1	Ø150	15	3xCenter CPA Support Rail 6xAPA support rail 3.6m Drift 6xAPA support rail 2.5m Drift
2	Ø250	12	Signal Chimneys FTS
3	Ø156	1	High Voltage Feedthrough
4	Ø609	1	Manhole
5	2980x1380mm	1	Access Hatch for installation
6	2980x1380mm	TCO	Technical Construction Opening
7	Ø250	2	Beam Window

Cryogenic penetrations

Pos.	Diameter [mm]	Qty.	Description
8	Ø304	1	GAr Combo
9	Ø152	7	LAr Cooldown LAr Distribution LAr to Cold Roof LAr Cooldown to Condenser GAr Boil Off Spare Spare
10	Ø304	4	Cryostat Pressure Relief 1 Cryostat vacuum Relief 1 Cryostat Pressure Relief 2 Cryostat vacuum Relief 2
11	Ø125	1	Instrumentation
12	Ø38	4	LAr level probe LAr level probe Instrumentation Instrumentation
13	Ø168 (See NB in Front view)	2	LAr Pump 1 LAr Pump 2

DUNE Cryostat		SCALE	DRAWN	A. SELETSKIY	2015-10-03
PROTODUNE PENETRATIONS		CONTROLLED	RELEASED		
		APPROVED			
		CAD Document Number	STO708332_02		
		REPLACES			
NON VALABLE POUR EXECUTION NOT VALID FOR EXECUTION		GAC	-	CENDUNCRO001	SIZE IND.
				1	

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