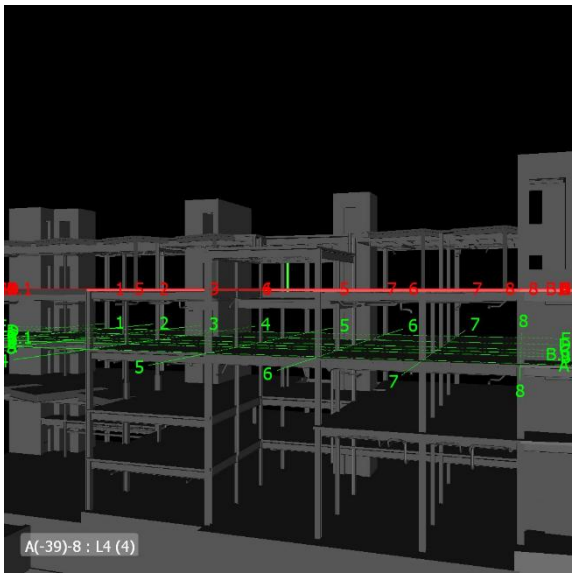
Clash Detection Report

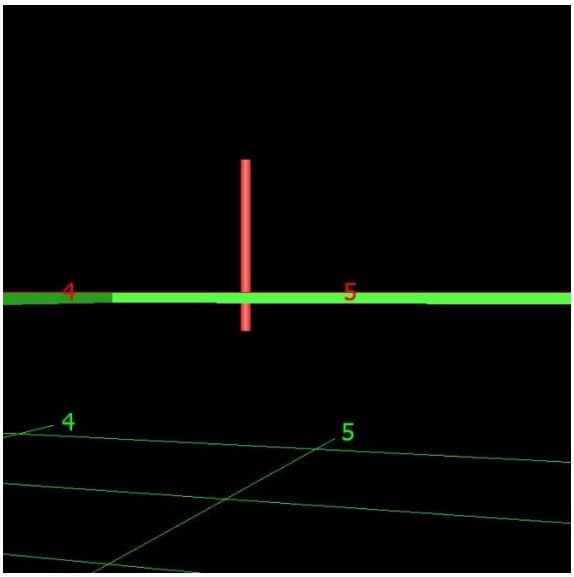
We decided to do a clash test between the structural and the HVAC Model. This gave an initial value of 48 clashes. We have decided to solve the first three clashes, as indicated below:

Clash Name	Status	Result Status	Grid Location	Object	Element ID	Layer	Item Name	Item Type	X Coordinate	Y Coordinate	Z Coordinate	Distance	Created Date
Clash1	new	New	D-5 : L4	Object 1	2xfbcISavBXOKD2eq9TYQx	L5			417614,156	78717,128	251,765	-0,652	2025-12-15 12:06
Clash1	new	New	D-5 : L4	Object 2	1KpZCW3Gn25x9tpICCoFnN	L5			417614,156	78717,128	251,765	-0,652	2025-12-15 12:06
Clash2	new	New	D-5 : L2	Object 1	0CW5ZygHT5FfccaQkMoDYQ	L2			417614,296	78717,085	243,637	-0,341	2025-12-15 12:06
Clash2	new	New	D-5 : L2	Object 2	0WshSsQ7H51M4vbXCqI4d1	L3			417614,296	78717,085	243,637	-0,341	2025-12-15 12:06
Clash3	new	New	F-4 : L1 - Block 35	Object 1	2y7XTtm5P8693dX9Q6pyXn	Parking			417607,247	78719,644	236,588	-0,283	2025-12-15 12:06
Clash3	new	New	F-4 : L1 - Block 35	Object 2	2apjdxdJ9MRHnxeL47w5I	L1_37_Med			417607,247	78719,644	236,588	-0,283	2025-12-15 12:06

Clash 1

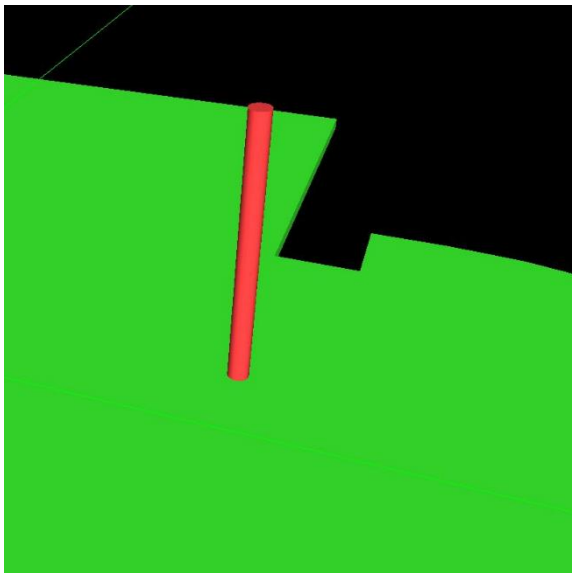
On grid D-5 at level L4, a round duct tee runs confidently through the ceiling zone, only to run straight into a concrete floor slab above. Both elements sit on layer L5, which means the duct and the NW concrete-on-metal-deck floor are competing for exactly the same vertical space. In practice, this reads as a mechanical service trying to pass through a structural floor without a proper opening or coordination.

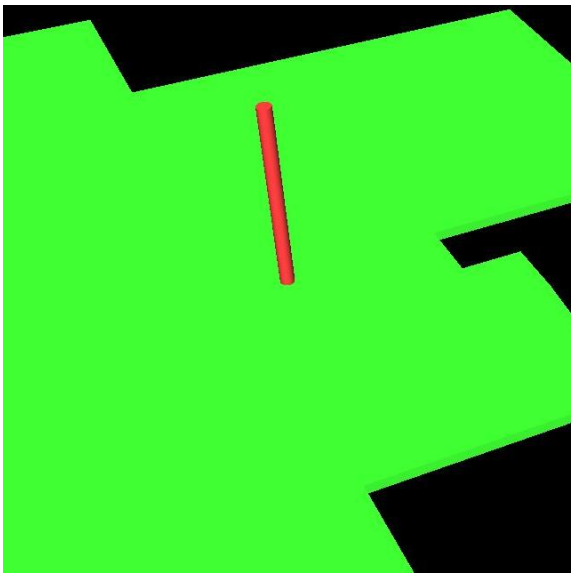


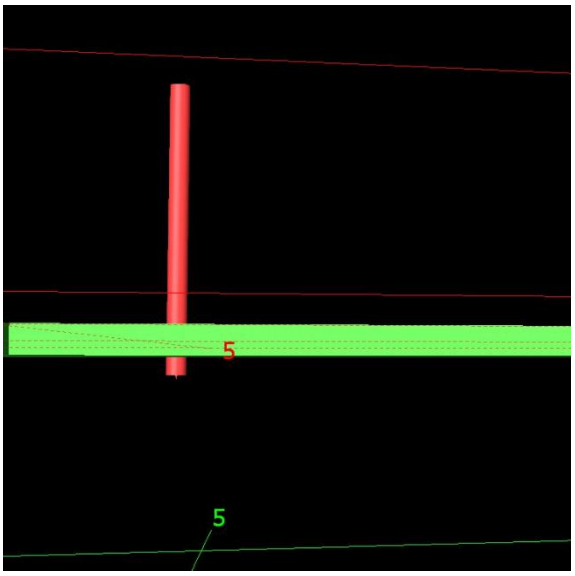


Clash 2

A little lower in the building, still at grid D-5 but on level L2, another round duct tee tries to thread its way through the structure. This time the duct sits on layer L2 while a concrete floor from level L3 drops into its path, so the Level 2 ductwork is pushing up into the underside of the Level 3 slab. The clash shows a vertical coordination issue between the mechanical distribution at L2 and the structural floor system above.

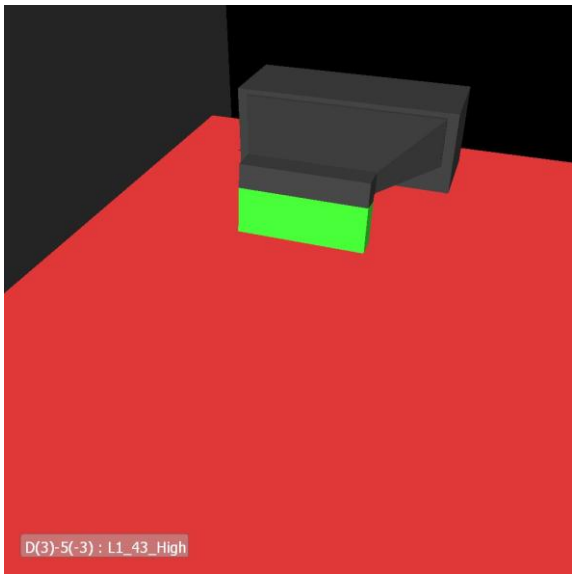


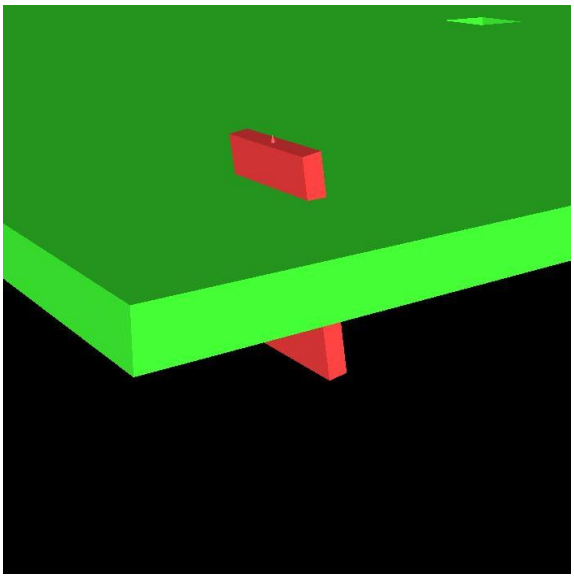


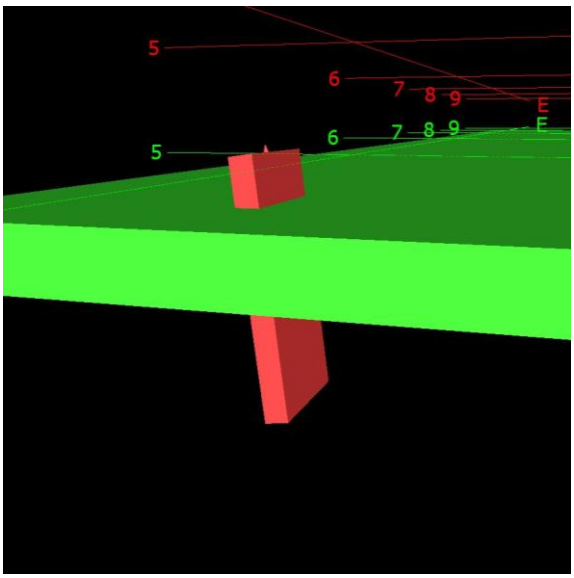


Clash 3

Over at grid E-4 on level L1 in Block 35, the conflict shifts into the parking area where a rectangular duct with mitered elbows attempts to navigate through a tight zone. The duct, assigned to the Parking layer, collides with a relatively thin “Concrete 10” floor on layer L1_37_Med, indicating that the parking ventilation route slices into the structural floor plane. This clash highlights a coordination problem between the parking ventilation strategy and the slab geometry at that block and level.







Clash resolution

We solved all the clashes in Revit, after this we tested again in Navisworks and some of the clashes were solved. In the initial models we had 48 clashes after this we start by solving each time one clash and after each test we checked if there was one less clash in the models. We solved three of the clashes by adjusting the structural model in Revit, as shown below: