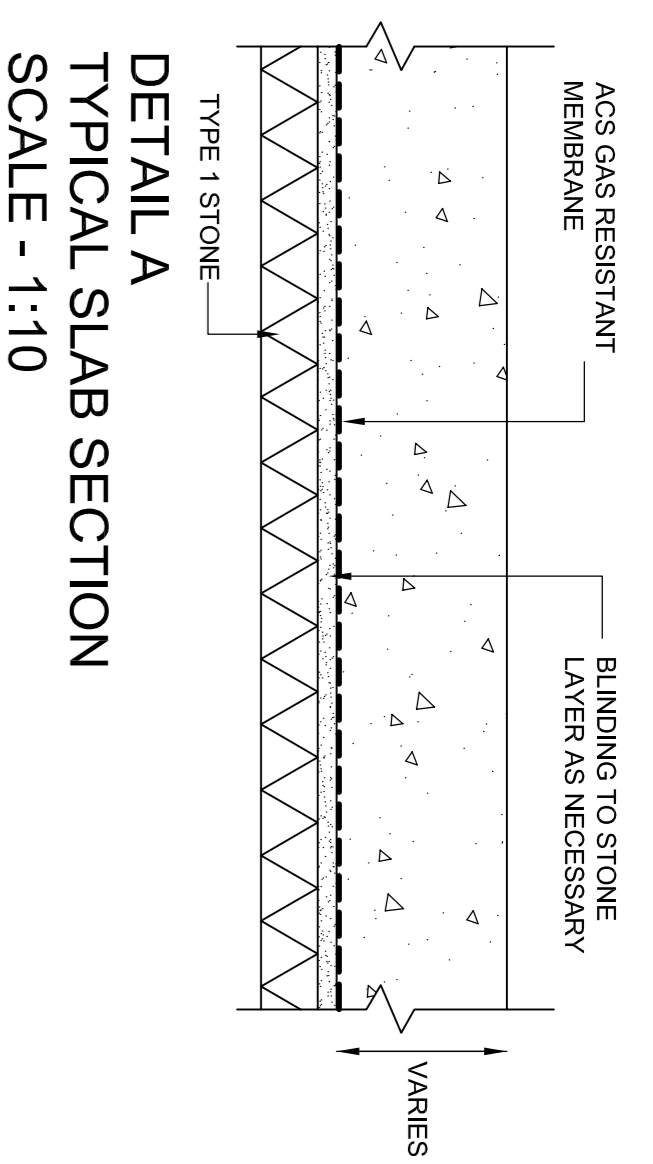
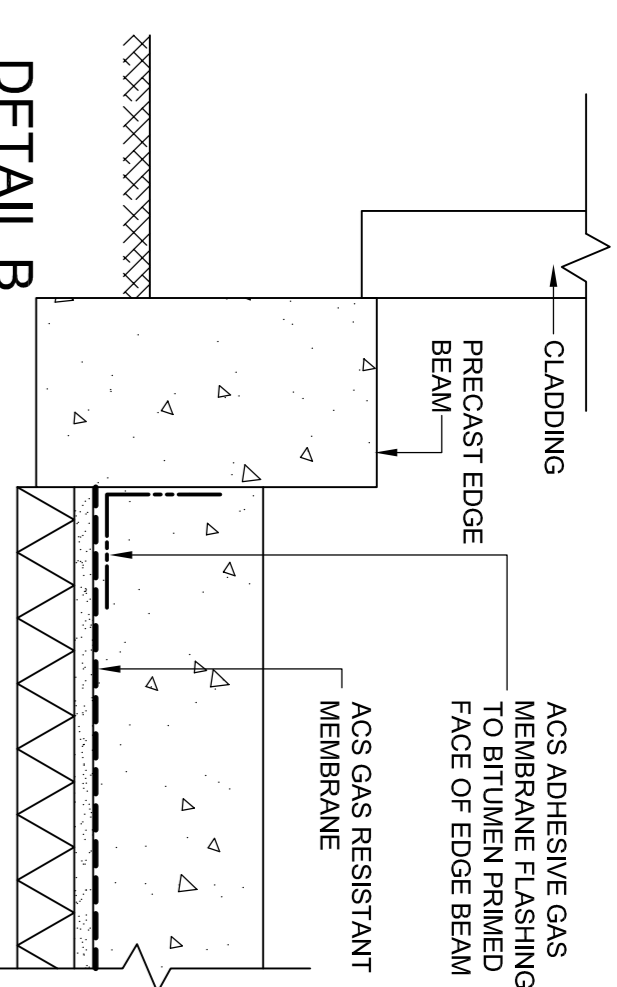


**SPECIFICATION FOR GAS PROTECTION MEASURES**

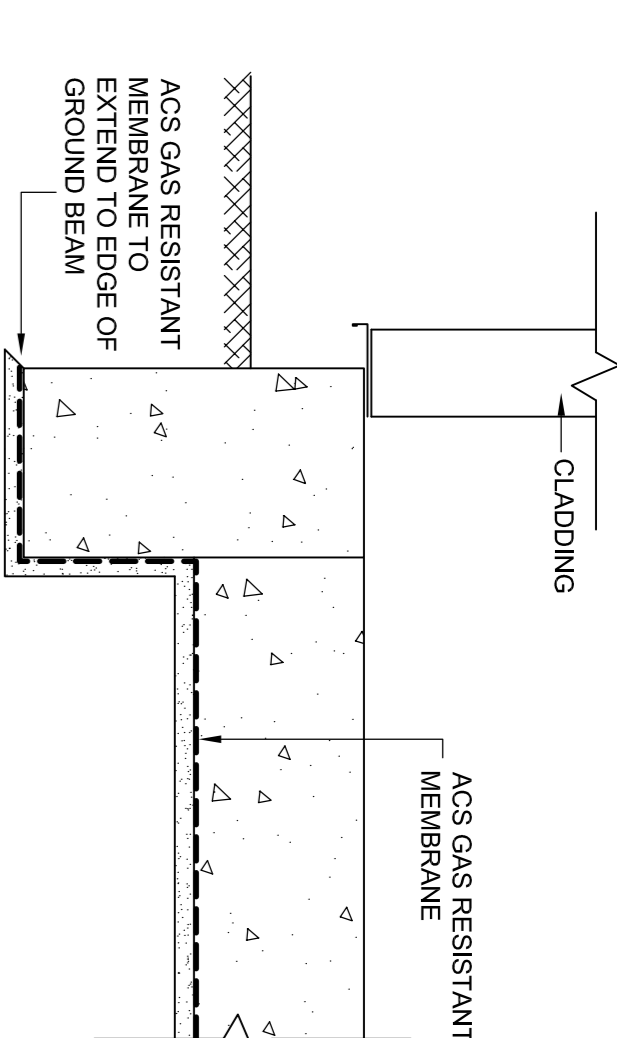
- Membrane**
- Gas resistant membrane to be high performance loose lay membrane containing encapsulated aluminium core. Maximum methane permeability  $1 \times 10^{-10} \text{ m}^3/\text{m}^2/\text{s}$ . (ACS Gas Resistant Membrane)
  - Installation and protection in accordance with manufacturers recommendations. Membrane to be laid on blinded stone throughout.
  - Individual membrane sheets to be lapped minimum 100mm and sealed with 30mm wide proprietary butyl tape (ACS Butyl Sealant Tape).
  - All services and other penetrations to be sealed with self adhesive gas resistant membrane (ACS Adhesive Gas Membrane).
- Sub-Slab Diffusers**
- Sub-slab depressurisation with individual diffusers comprising a 1000mm length of perforated 100mm ID HDPE pipe backfilled with 10mm to 40mm no fines stone.
- Pipework**
- Diffusers linked to external depressurisation unit via 100/150mm ID HDPE twin wall pipe.
  - All pipework to be jointed with proprietary push-fit connectors.
  - All pipework to have a minimum 150mm cover from underside of slab to top of pipe.
  - Pipework to be laid within or below granular stone or hardcore layer.
  - Excavation and backfilling for pipework to be carried out by MAIN CONTRACTOR.
- Depressurisation Units**
- Depressurisation units to comprise 13A single phase flame-proof fans mounted in extract pipework. Fan housing by others and to Architects requirements. Location of depressurisation units to be agreed with contractor.
  - Extract pipework to comprise 150mm dia. grey uPVC pipe extending a minimum 3000mm above external ground level and filled with static vent cowl (ACS Cowl S150)



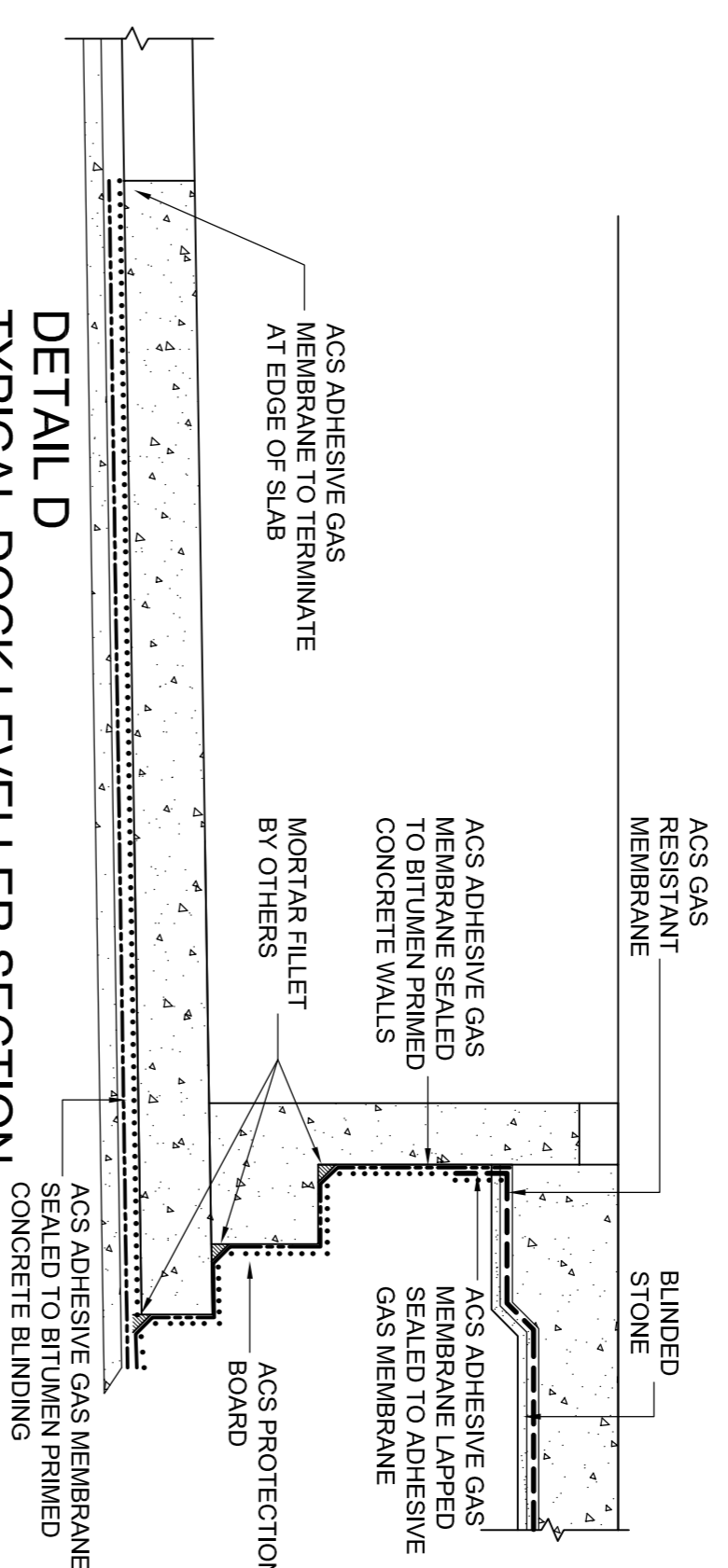
**DETAIL A**  
TYPICAL SLAB SECTION  
SCALE - 1:10



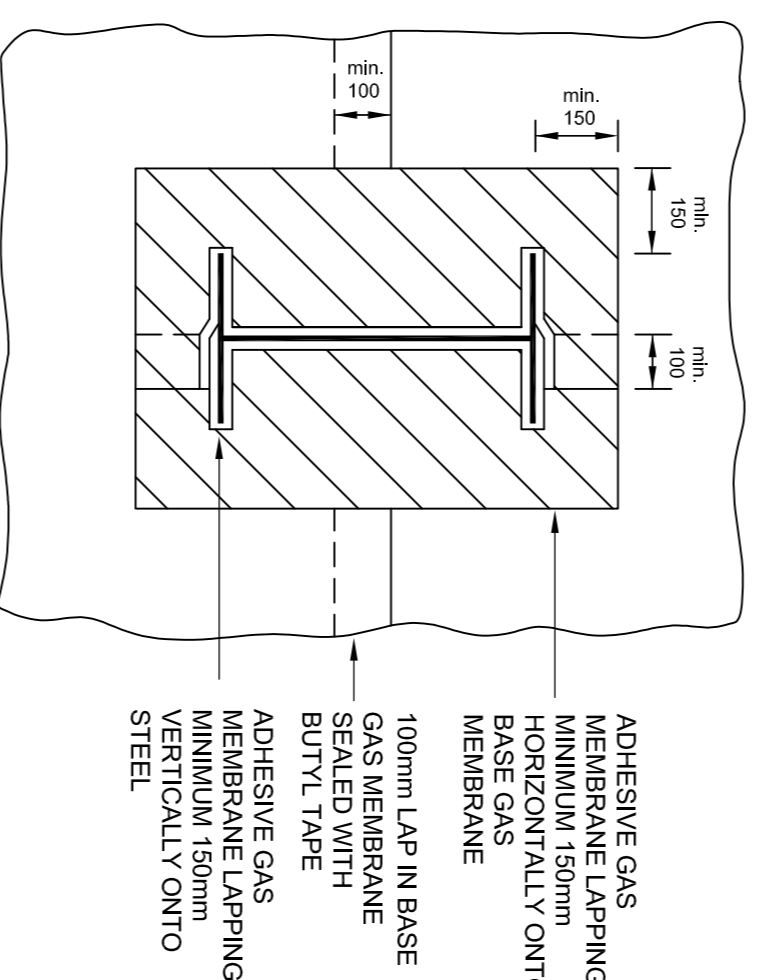
**DETAIL B**  
TYPICAL PERIMETER SECTION (WAREHOUSE)  
SCALE - 1:10



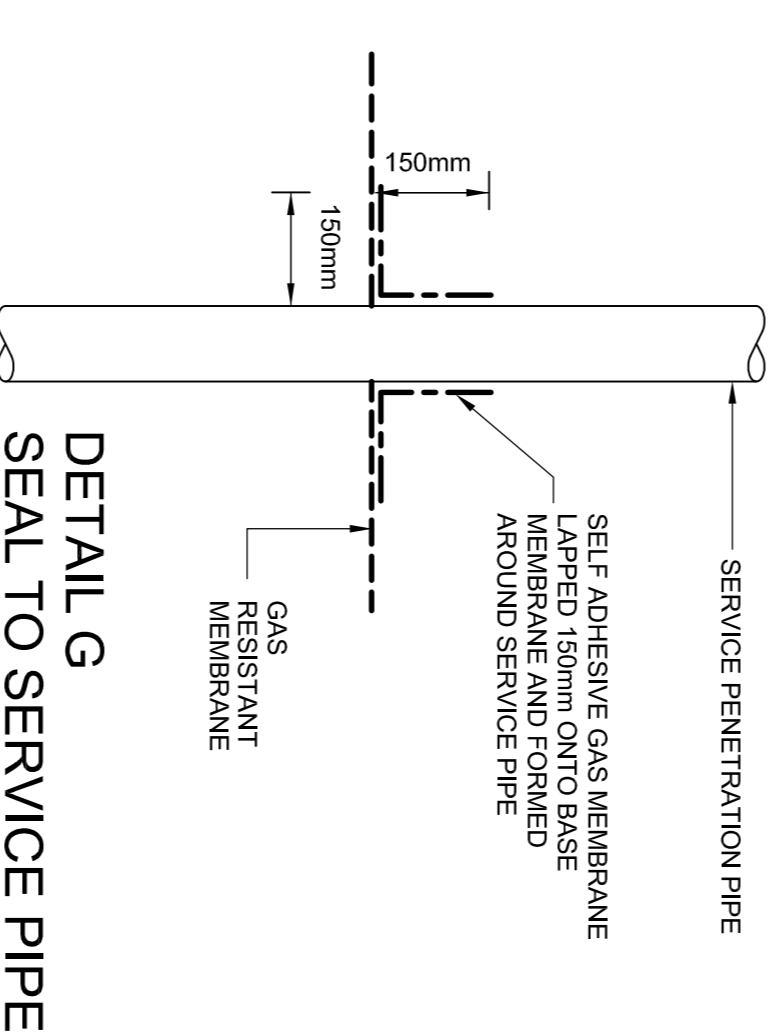
**DETAIL C**  
TYPICAL PERIMETER SECTION (OFFICES)  
SCALE - 1:10



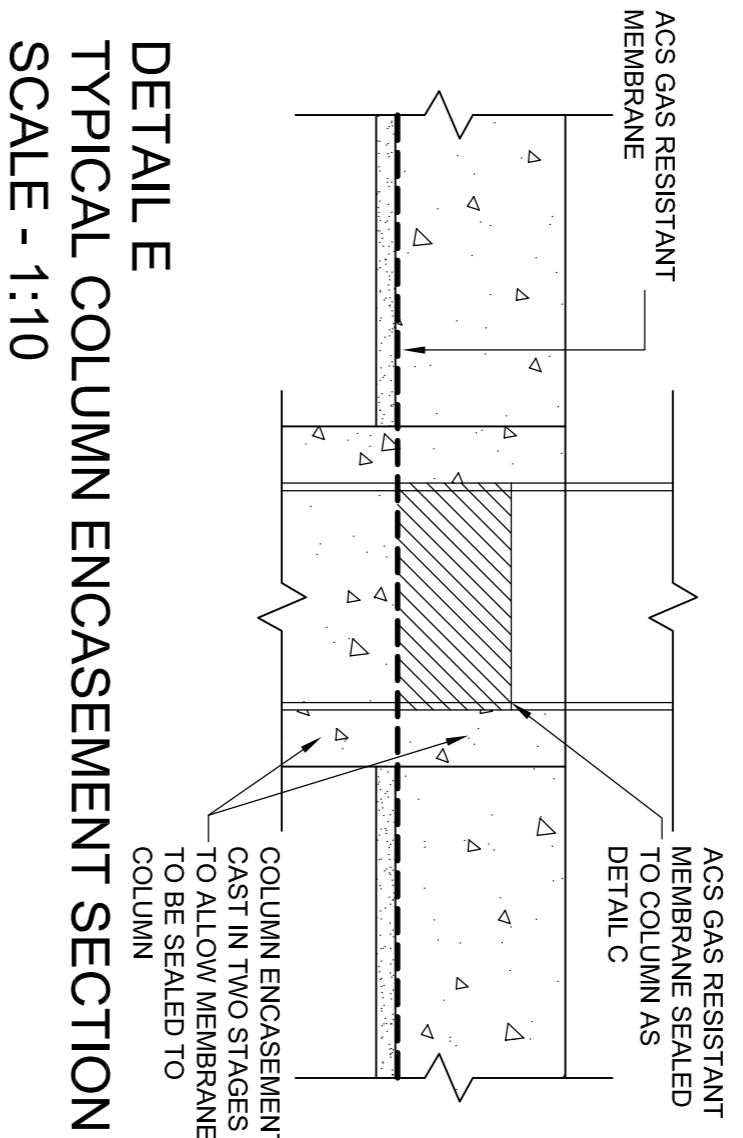
**DETAIL D**  
TYPICAL DOCK LEVELLER SECTION  
SCALE - 1:20



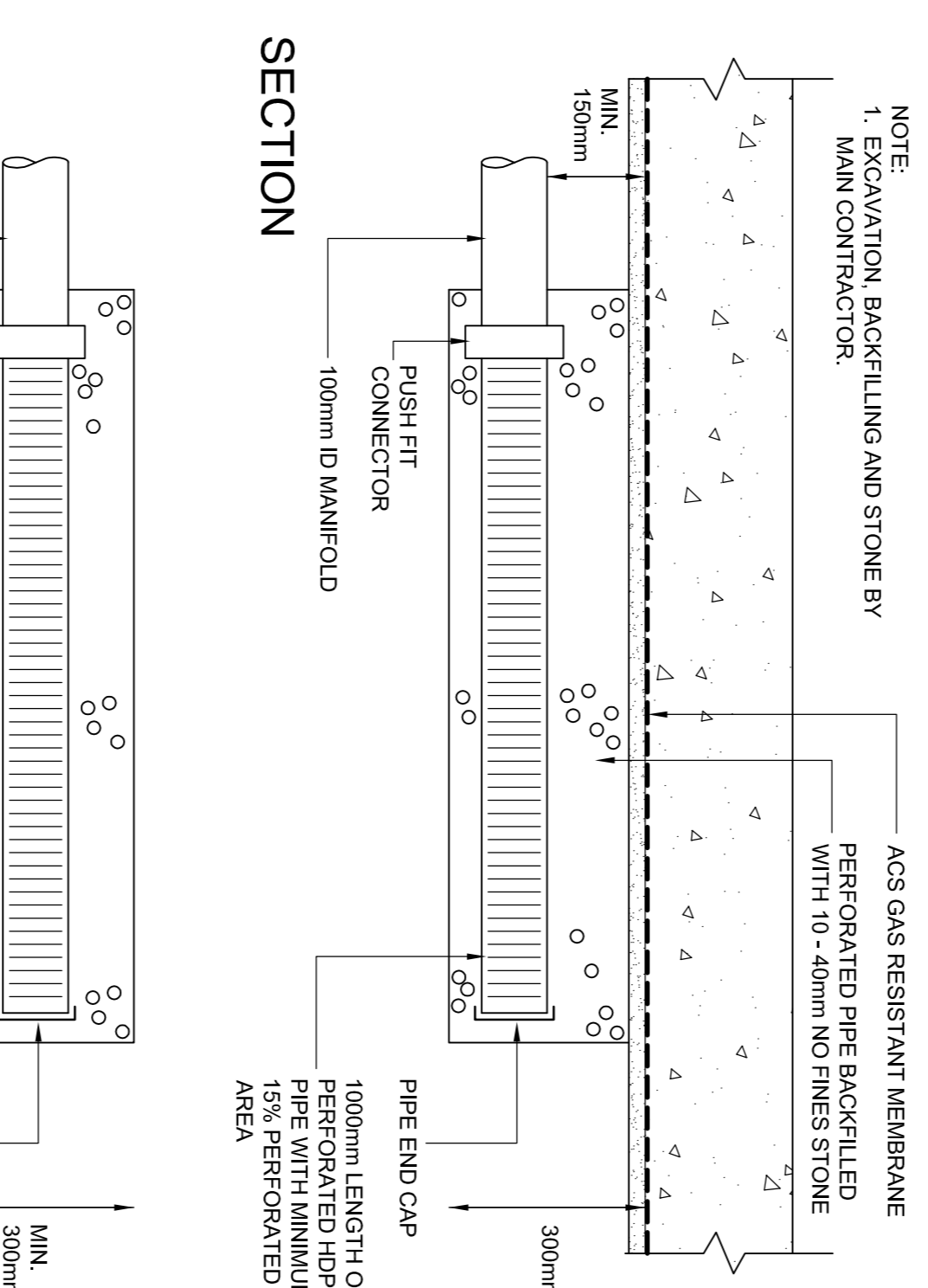
**DETAIL F**  
STEEL COLUMN FLASHING  
N.T.S.



**DETAIL G**  
SEAL TO SERVICE PIPE  
NOT TO SCALE



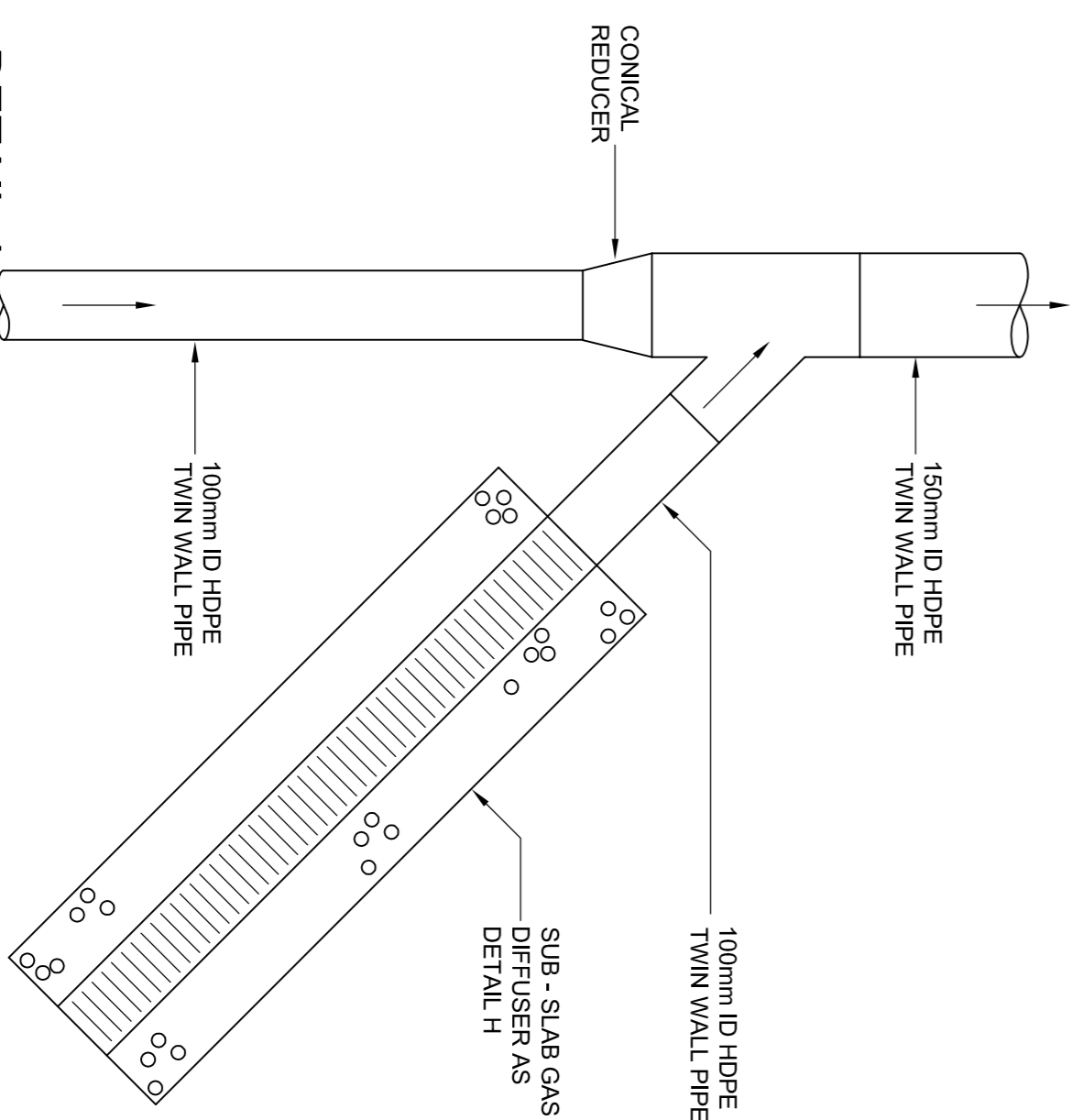
**DETAIL E**  
TYPICAL COLUMN ENGAGEMENT SECTION  
SCALE - 1:10



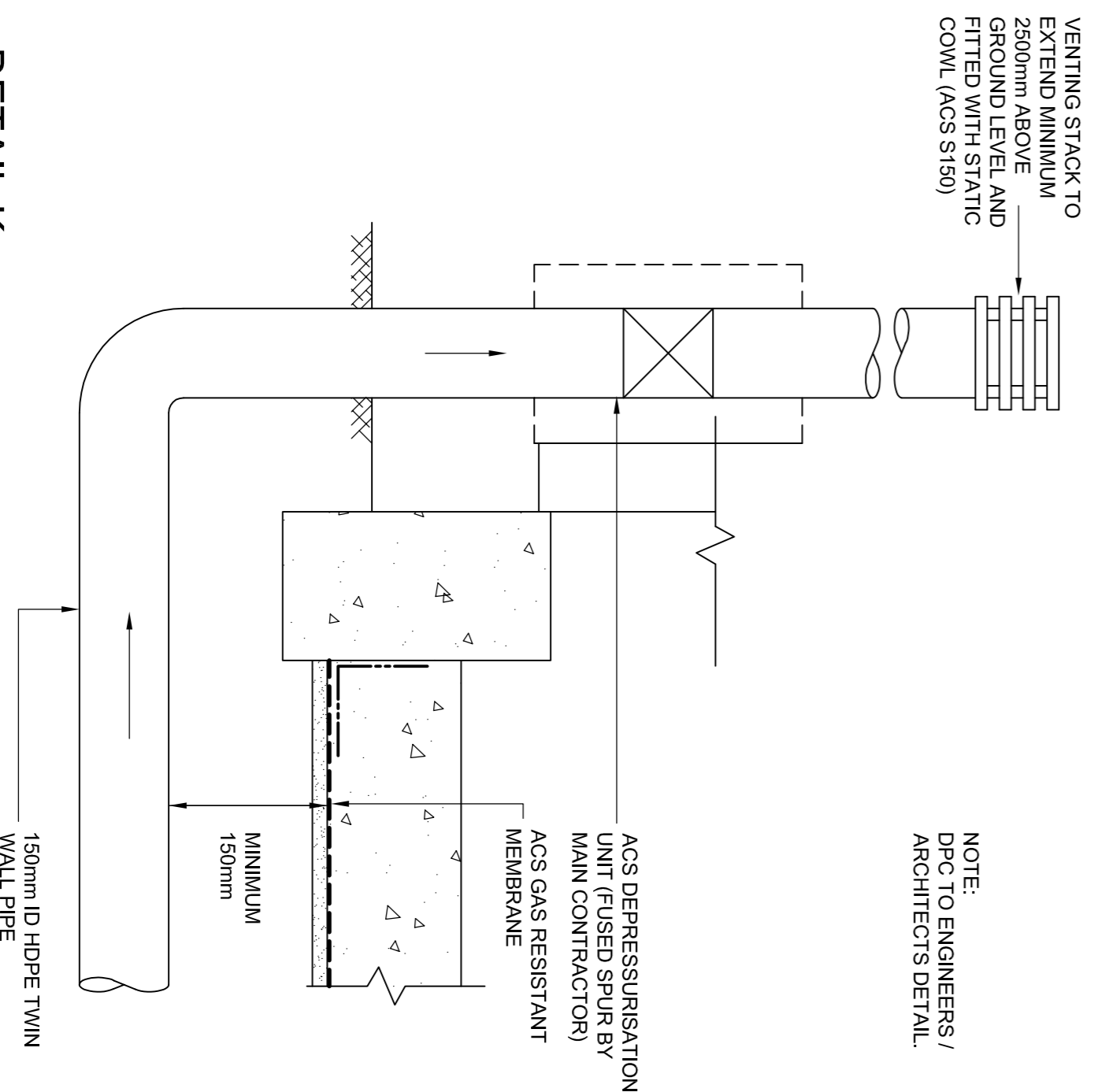
**SECTION**

**PLAN**

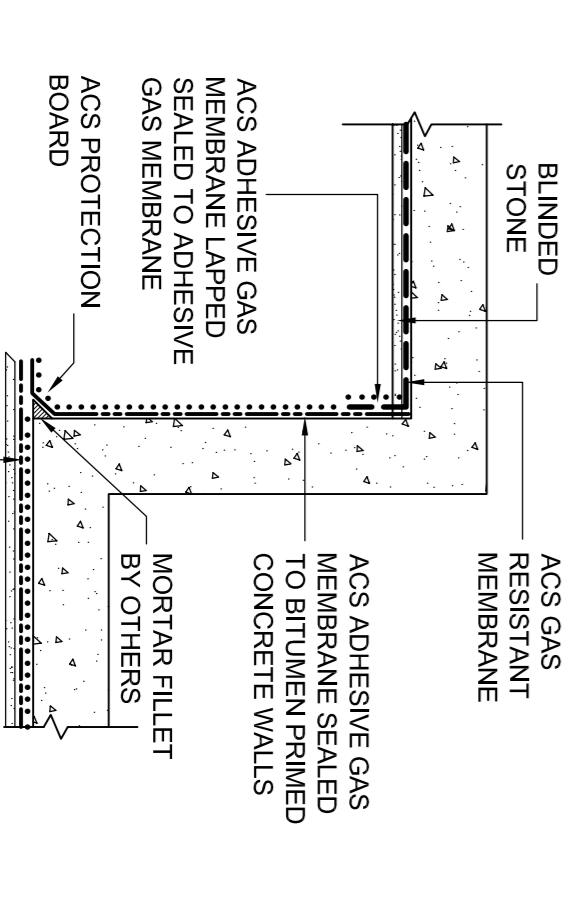
**DETAIL H**  
SUB-SLAB GAS DIFFUSER  
SCALE - 1:10



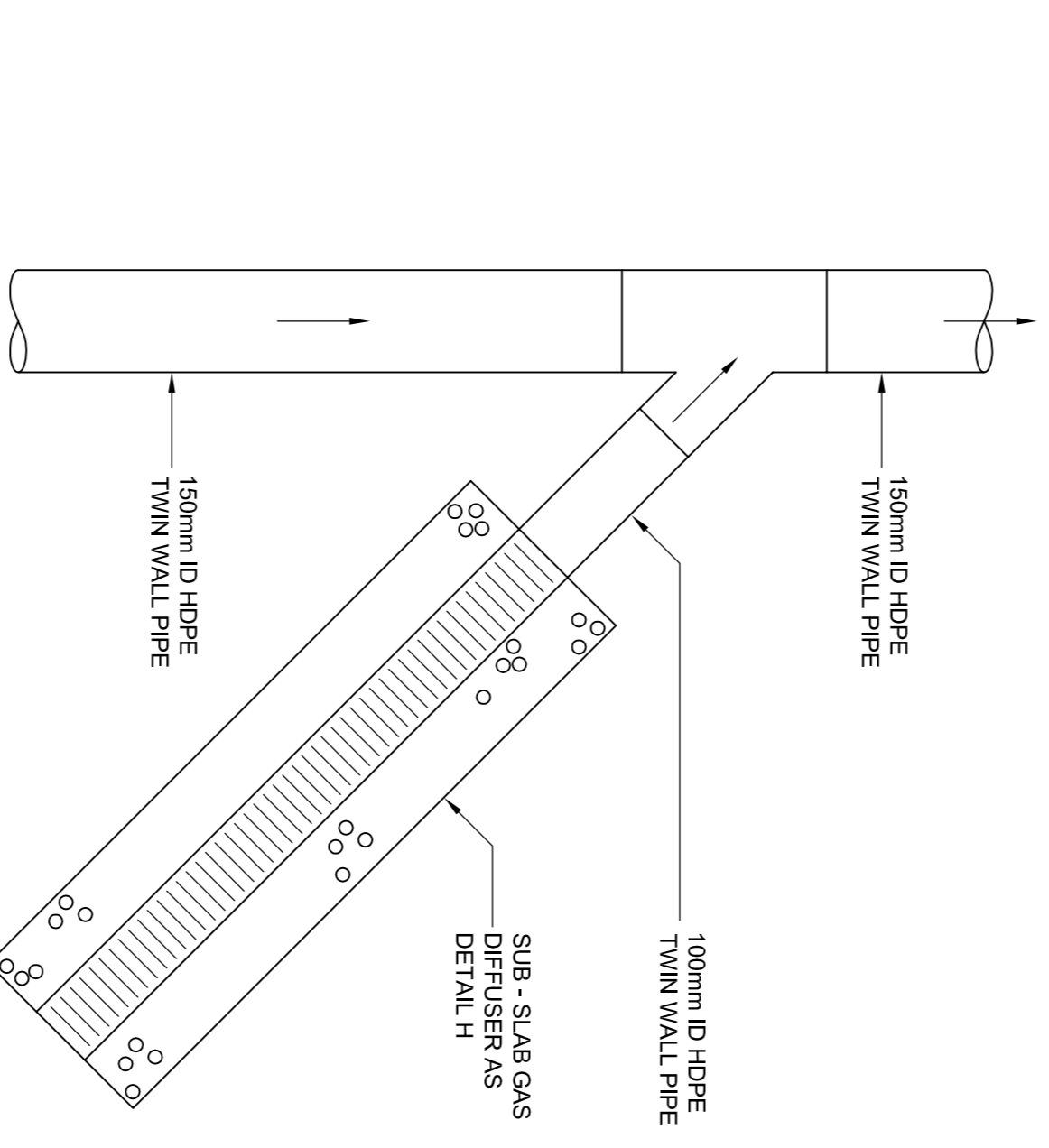
**DETAIL J**  
CONNECTION TO 150mm / 100mm ID  
PIPE INTERFACE  
SCALE - 1:10



**DETAIL K**  
TYPICAL PERIMETER SECTION AT DEPRESSURISATION UNIT  
SCALE - 1:10



**DETAIL L**  
TYPICAL PIT SECTION  
SCALE - 1:20



**DETAIL I**  
CONNECTION TO 150mm ID PIPE  
SCALE - 1:10

**CONSTRUCTION STATUS**

REVISION	DESCRIPTION	CHECKED	APPROVED	DATE
B	Minor amendments.	HDS	HDS	29/07/04
A	Minor amendments. Issued for Construction.	HDS	HDS	16/07/04



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CLIENT	SIMON CONSTRUCTION LIMITED	TITLE	GAS VENTING (DETAILS)
PROJECT	PROJECT ANNONA	DRAWN	SABH
CHECKED	HDS	APPROVED	HDS
DATE	MAY 2004	SCALE	AS SHOWN
	J04052	DRAWING No.	J04052/02