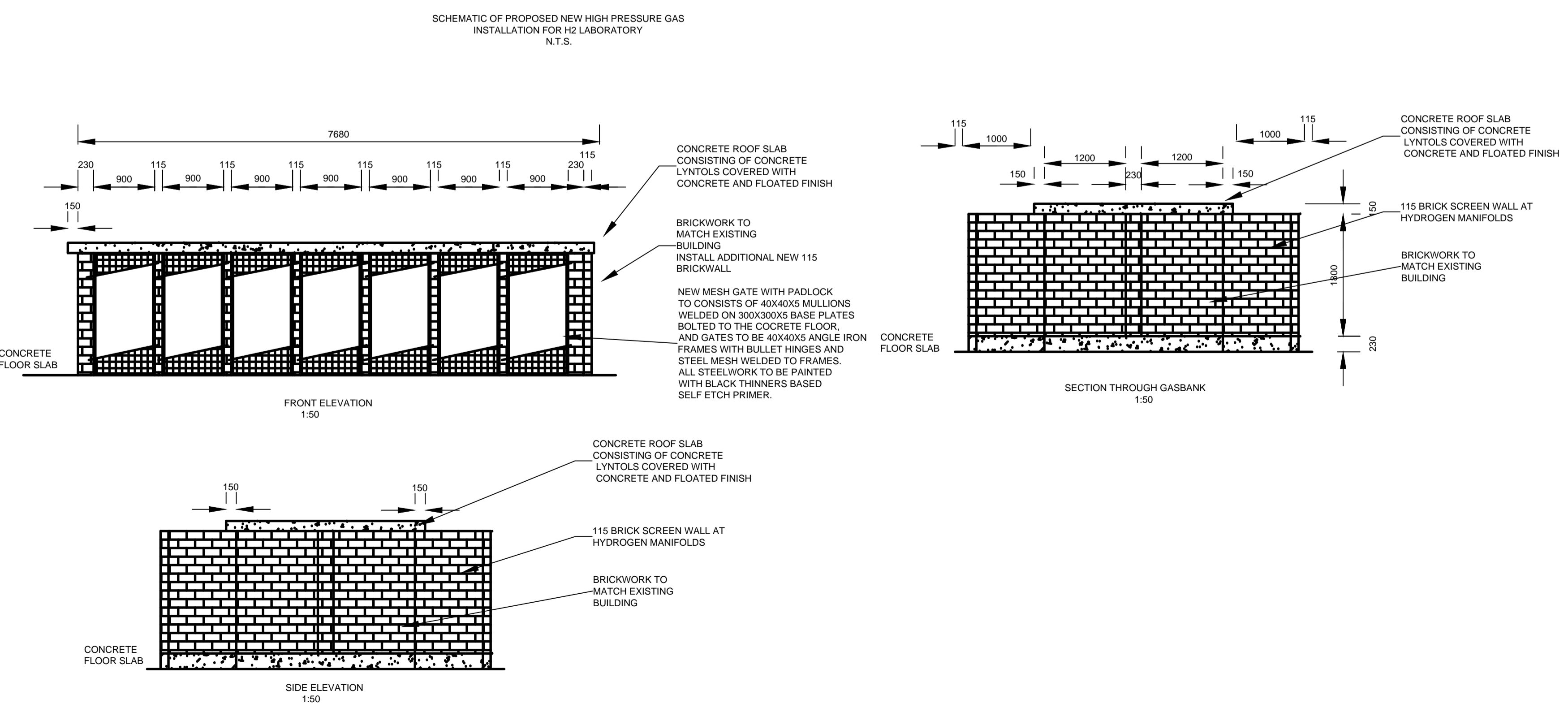
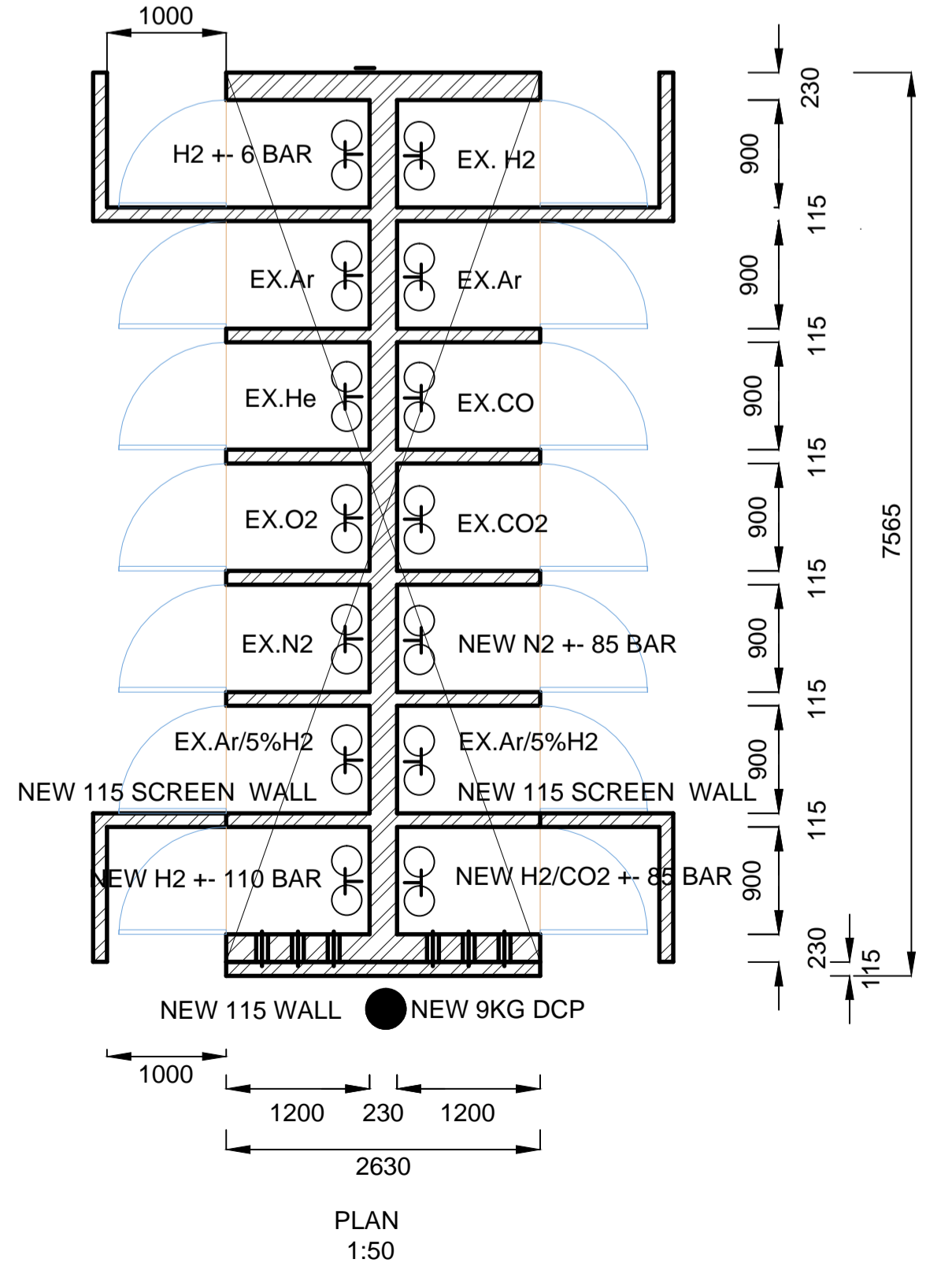
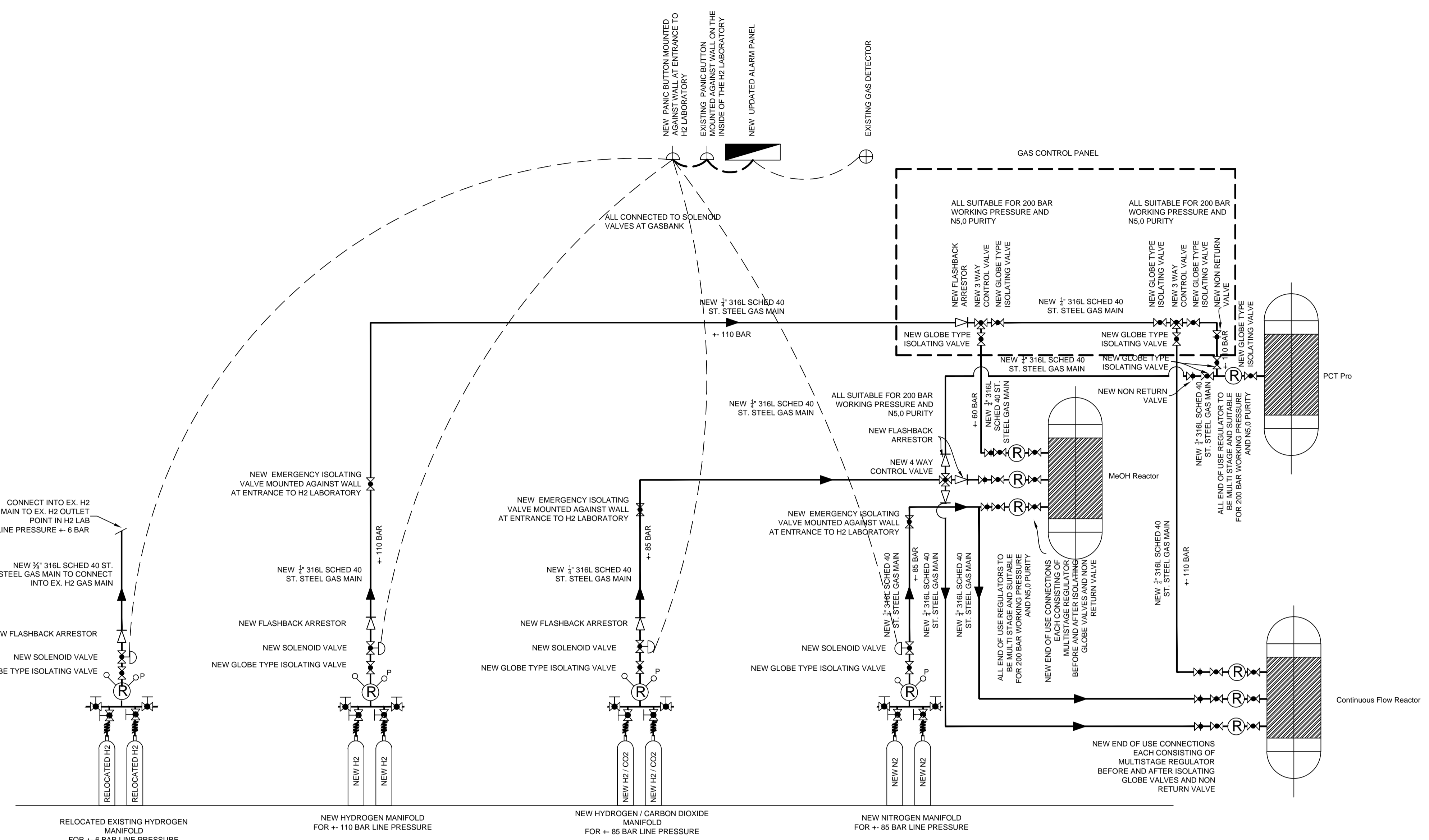


- EX. HYDROGEN
- EX. HELIUM
- EX. OXYGEN
- EX. NITROGEN
- EX. ARGON / HELIUM MIX
- EX. ARGON
- EX. CARBON MONOXIDE
- EX. CARBON DIOXIDE
- EX. METHANE
- EX. L.P.G.
- NEW HYDROGEN FOR MeOH Reactor / PCT Pro / Charge / Discharge Demo
- NEW HYDROGEN / CO2 MIX FOR MeOH Reactor
- NEW N2 FOR MeOH Reactor
- NEW MIXTURE FOR PCT Pro / Charge / Discharge Demo
- NEW EMERGENCY GLOBE TYPE ISOLATING VALVE
- NON RETURN VALVE
- NEW FLASHBACK ARRESTOR FOR HYDROGEN
- NEW SOLENOID VALVE
- NEW THREE PORT CONTROL VALVE
- GAS DETECTOR
- PANIC BUTTON
- GAS ALARM PANEL

- NOTES:
- THE LATEST AMENDMENTS OF THE FOLLOWING SHALL BE COMPLIED WITH:
1. THE STANDARD REGULATIONS FOR WIRING OF PREMISES ISSUED BY THE SOUTH AFRICAN INSTITUTE OF ELECTRICAL ENGINEERS.
 2. MACHINERY AND OCCUPATIONAL SAFETY ACT NO. 85 OF 1993 AS AMENDED.
 3. SANS 10087: PART 1, 2, 3, 7 OF 2000 LATEST AMENDMENT.
 4. SANS 10260: PART 1, 2, 3, 4 OF 2000 LATEST AMENDMENT.
 5. ALL PIPEWORK SHALL BE COLOUR CODED ACCORDING TO SANS 10140-3 OF 2010.
 6. WARNING NOTICES SHALL BE POSITIONED ADJACENT TO THE VALVES CLEARLY AND PROMINENTLY STATING THAT THE VALVES SHALL NOT BE CLOSED BY UNAUTHORISED PERSONS.
 7. PRESSURE GAUGES SHALL BE OF THE BOURDON DIAL TYPE.
 8. ALL TESTING OPERATIONS SHALL BE WITNESSED BY THE ENGINEER.
 9. NEW GASBANK IS TO BE FURNISHED WITH 1 x 9 KG DCP FIRE EXTINGUISHERS IN A LOCKABLE CABINET WITH BREAK GLASS.
 10. ALL GAS PIPES SHALL BE SLEEVED WHERE PIPES PASS THROUGH WALLS AND SLABS, AND SEALED WITH SUITABLE FLUE GAUZE.
 11. ALL RELEVANT SAFETY SIGNS MUST BE MOUNTED AT THE GASBANK. NO NAKED FLAME, NO SMOKING FLAMMABLE AND DANGER.
 12. DUE TO THE HIGH LINE PRESSURES INVOLVED ONLY SUITABLE QUALIFIED GAS CONTRACTORS FOR HIGH PRESSURES MAY PERFORM THE LABORATORY GAS INSTALLATION.

- NOTES:
- HYDROGEN: HYDROGEN / CARBON DIOXIDE MIXTURE; NITROGEN TO HAVE 2X1 MANUAL CHANGE OVER MANIFOLDS WITH MULTISTAGE REGULATORS AND WORKING PRESSURE OF 200 BAR AND GAS PURITY N5.0
- HYDROGEN: HYDROGEN / CARBON DIOXIDE MIXTURE; NITROGEN TO HAVE END OF USE MULTISTAGE REGULATORS COMPLETE WITH CONTACT GAUGE AND GLOBE TYPE ISOLATING VALVE AND GAS PURITY N5.0 AND SUITABLE FOR 200 BAR WORKING PRESSURE
- HYDROGEN: HYDROGEN / CARBON DIOXIDE MIXTURE; NITROGEN TO HAVE NORMALLY CLOSED SOLENOID VALVES, INTRINSIC SAFE, SPARK PROOF; FLAME PROOF CONNECTED TO THE PANIC BUTTON, ALARM PANEL AND GAS DETECTOR AND SUITABLE FOR 200 BAR WORKING PRESSURE AND GAS PURITY OF N5.0
- HYDROGEN AS WELL AS HYDROGEN / CARBON DIOXIDE TO HAVE FLASHBACK ARRESTOR SUITABLE FOR WORKING PRESSURE OF 200 BAR AND GAS PURITY OF N5.0
- ALL PIPEWORK TO BE 316L SCHED. 40 STAINLESS STEEL FOR A WORKING PRESSURE OF MINIMUM 200 BAR.
- NONE FLAMMABLE GASES: 191.91 KG
FLAMMABLE GASES: 2.22 KG



REV.	DESCRIPTION	BY	DATE

CLIENT/PROJECT
C.S.I.R. BRUMMERIA, PRETORIA

TITLE
**PROPOSED LABORATORY GAS INSTALLATION FOR H₂SA AT BUILDING NO.15
NEW GASBANK DETAILS
NEW HIGH PRESSURE GAS INSTALLATION SCHEMATIC**

SCALE - AS SHOWN

NAME	DATE	REF. No.
DRAWN	25-08-2021	
CHECKED	25-08-2021	DRAWING No.
APPROVED	25-08-2021	REV

01/02/2020-MG-03 1