

	7	6	5	4	3	2	1
E	TABLE 1: ANNUNCIATORS/ALARM LIGHTS						
	INDICATION	FUNCTION	SOURCE OF SIGNAL				
	ALARM	LOW REACTOR WATER LEVEL 1.5	LOGIC OUTPUT				
	ALARM	HIGH DRYWELL PRESSURE	LOGIC OUTPUT				
	ALARM	HPCF PUMP MOTOR OVERLOAD LOOP B	M/C HPCF PUMP B POWER FAILURE				
D	ALARM	HPCF PUMP MOTOR OVERLOAD LOOP C	M/C HPCF PUMP C POWER FAILURE				
	ALARM	OVERLOAD ANY HPCF VLV MOTOR LOOP B	MOTOR CONTROL CENTER				
	ALARM	OVERLOAD ANY HPCF VLV MOTOR LOOP C	MOTOR CONTROL CENTER				
	ALARM	HPCF LOOP B MANUAL INITIATION ARMED	PBS				
	ALARM	HPCF LOOP C MANUAL INITIATION ARMED	PBS				
	ALARM	HIGH REACTOR WATER LEVEL 8	LOGIC OUTPUT				
	ALARM	HPCF LOOP B INITIATED	LOGIC OUTPUT				
	ALARM	HPCF LOOP C AUTO INITIATION	LOGIC OUTPUT				
	ALARM	HPCF LOOP B OUT OF SERVICE	LOGIC OUTPUT, COS				
	ALARM	HPCF LOOP C OUT OF SERVICE	LOGIC OUTPUT, COS				
C	ALARM	HPCF PUMP B LOW-LOW SUCTION PRESSURE	PSZ603B				
	ALARM	HPCF PUMP C LOW-LOW SUCTION PRESSURE	PSZ603C (NOT HARDWIRED)				
	ALARM	HPCF PUMP B DISCHARGE LINE NOT FILLED	PSZ602B-2				
	ALARM	HPCF PUMP B HIGH SUCTION PRESSURE	PSZ602B-1				
	ALARM	HPCF PUMP C DISCHARGE LINE NOT FILLED	PSZ602C-2				
	ALARM	HPCF PUMP C HIGH SUCTION PRESSURE	PSZ602C-1				
	WHITE LIGHT	HPCF PUMP B MANUAL OVERRIDE	LOGIC OUTPUT, CS				
	WHITE LIGHT	HPCF PUMP C MANUAL OVERRIDE OF AUTO INITIATION	LOGIC OUTPUT, CS				
	WHITE LIGHT	HPCF INJECTION VALVE F003B MANUAL OVERRIDE	LOGIC OUTPUT, CS				
B	WHITE LIGHT	HPCF INJECTION VALVE F003C MANUAL OVERRIDE OF AUTO INITIATION	LOGIC OUTPUT, CS				
	WHITE LIGHT	HPCF LOOP B INITIATION SEALED-IN	LOGIC OUTPUT				
	WHITE LIGHT	HPCF LOOP C AUTO INITIATION SEALED-IN	LOGIC OUTPUT				
	ALARM	HPCF C MANUAL INITIATION (DIVERSE)	LOGIC OUTPUT				
	ALARM	HPCF C PUMP C LOW-LOW SUCTION PRESSURE	PS603C (HARDWIRED)				
	WHITE LIGHT	HPCF C MANUAL INITIATION SEALED-IN	LOGIC OUTPUT				
A	WHITE LIGHT	HPCF C INJECTION VALVE F003C MANUAL OVERRIDE OF (DIVERSE) MANUAL INITIATION	LOGIC OUTPUT, CS (DIVERSE)				
	TABLE 1: ANNUNCIATORS/ALARM LIGHTS (CONT'D)						
	INDICATION	FUNCTION	SOURCE OF SIGNAL				
	ALARM	HPCF LOOP B LOW CST WATER LEVEL	LOGIC OUTPUT				
	ALARM	HPCF LOOP B HIGH SUPPR POOL WATER LEVEL	LOGIC OUTPUT				
	ALARM	HPCF LOOP C LOW CST WATER LEVEL	LOGIC OUTPUT				
	ALARM	HPCF LOOP C HIGH SUPPR POOL WATER LEVEL	LOGIC OUTPUT				
	WHITE LIGHT	HPCF LOOP B HIGH REACTOR WATER LEVEL 8 SEALED-IN	LOGIC OUTPUT				
	WHITE LIGHT	HPCF LOOP C HIGH REACTOR WATER LEVEL 8 SEALED-IN	LOGIC OUTPUT				
	ALARM	HPCF LOOP B PUMP CONTROL SW IN PULL LOCK	PULL LOCK				
	ALARM	HPCF LOOP C PUMP CONTROL SW IN PULL LOCK	PULL LOCK				
	ALARM	HPCF LOOP B LOSS OF LOGIC POWER SOURCE	LOGIC OUTPUT				
	ALARM	HPCF LOOP C LOSS OF LOGIC POWER SOURCE	LOGIC OUTPUT				
	ALARM	HPCF LOOP B TESTING	CS				
	ALARM	HPCF LOOP C TESTING	CS				
	ALARM	HPCF PUMP B TRIP	LOGIC OUTPUT				
	ALARM	HPCF PUMP C TRIP	LOGIC OUTPUT				
	ALARM	EMERGENCY CONTAINMENT FLOODING-CST/SP SUCTION TRANSFER OVERRIDE LOOP B	KOS				
	ALARM	EMERGENCY CONTAINMENT FLOODING-CST/SP SUCTION TRANSFER OVERRIDE LOOP C	KOS				
	ALARM	MCC EQUIPMENT IN TEST MODE (THERMAL RELAY NOT BYPASSED) FOR LOOP B	KOS				
	ALARM	MCC EQUIPMENT IN TEST MODE (THERMAL RELAY NOT BYPASSED) FOR LOOP C	KOS				
	ALARM	HPCF LOOP B FLOW LOW	FIS-Z608B, PS-Z607B				
	ALARM	HPCF LOOP C FLOW LOW	FIS-Z608C, PS-Z607C				

Figure 7.3-1 – High Pressure Core Flooder System IBD (Sheet 2 of 17)

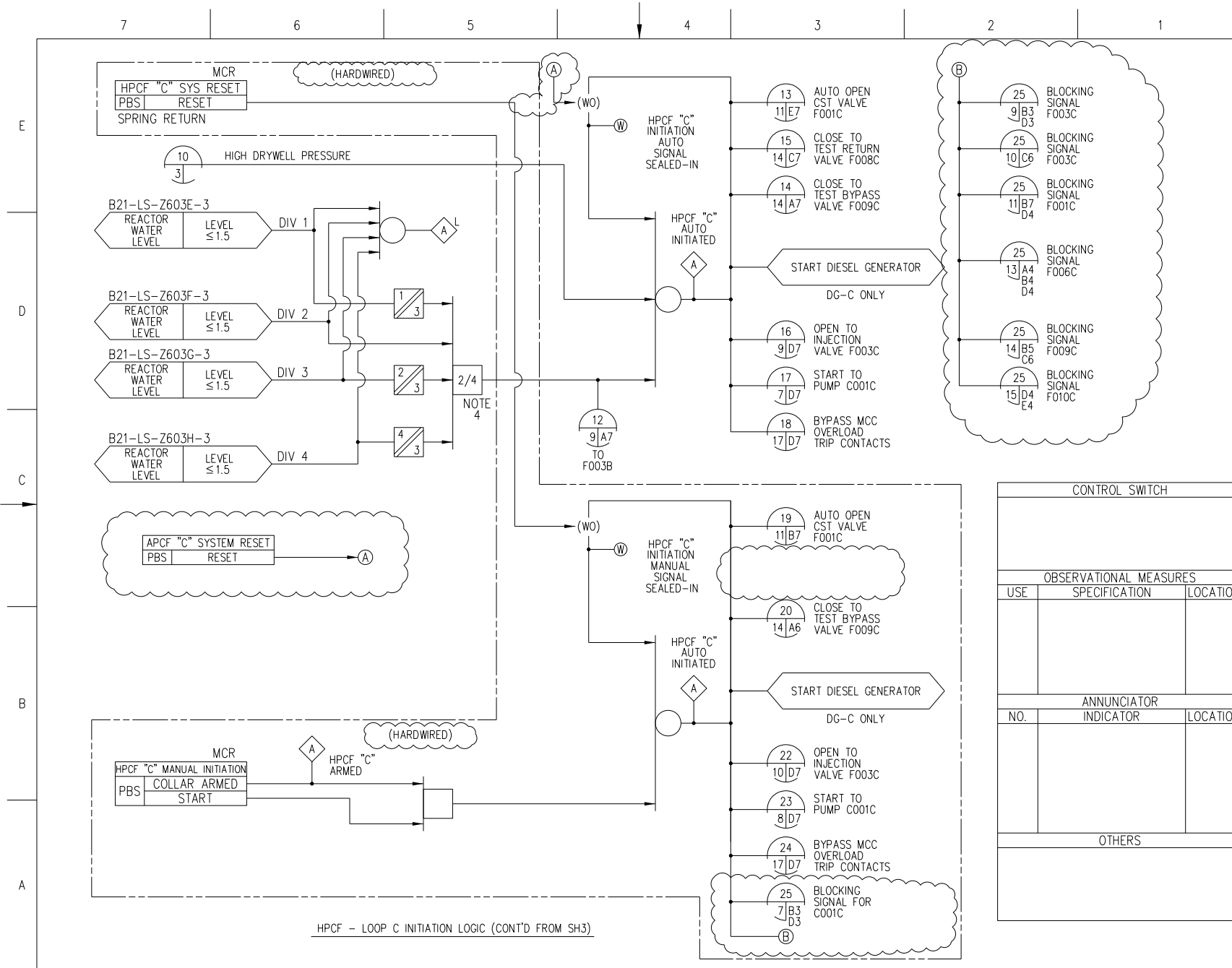
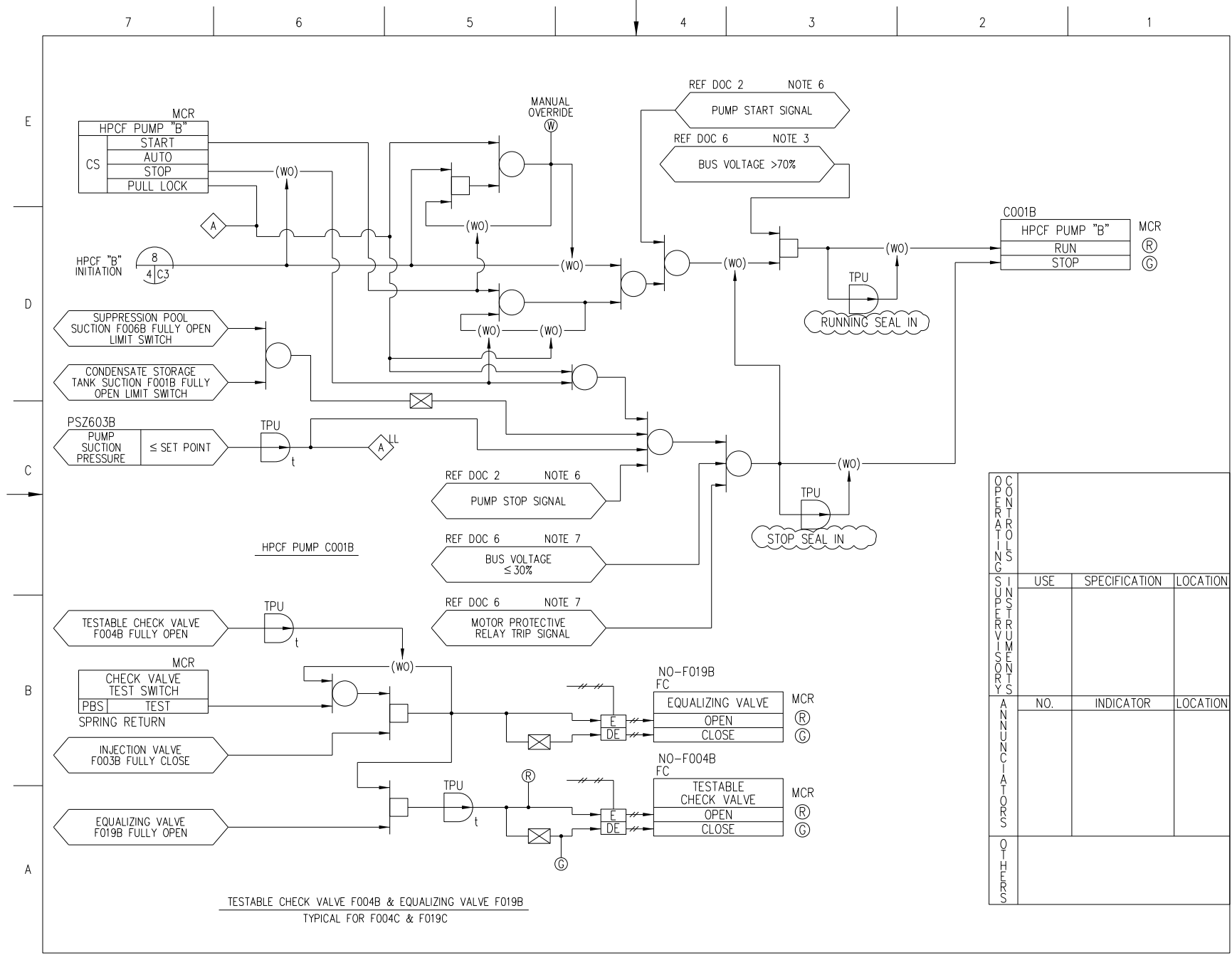


Figure 7.3-1 High Pressure Core Flooder System IBD (Sheet 5 of 17)



CONNECTIONS	USE	SPECIFICATION	LOCATION
NOT-REQUIRED			
ANNUNCIATORS	NO.	INDICATOR	LOCATION
OTHERS			

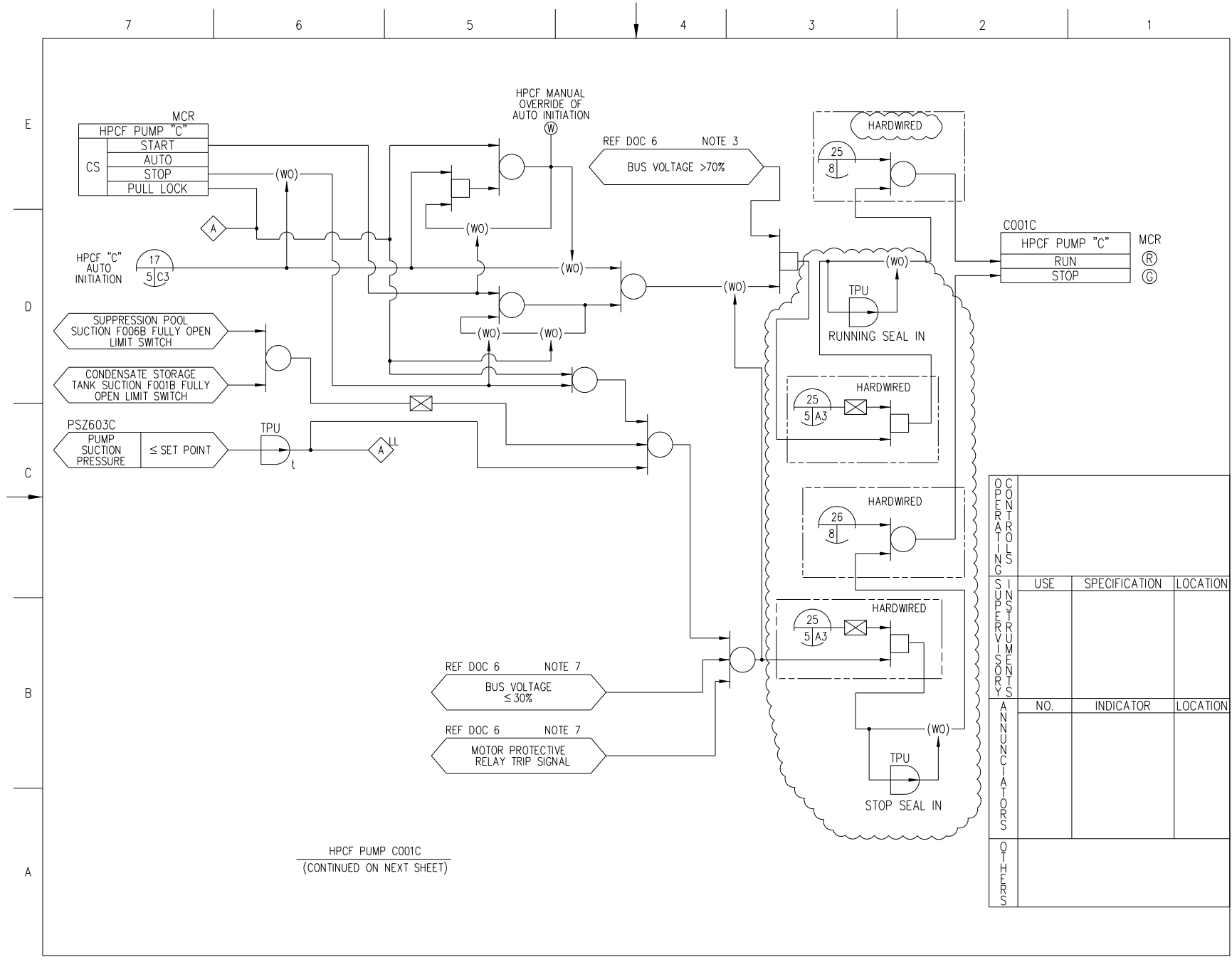


Figure 7.3-1 – High Pressure Core Flooder System IBD (Sheet 7 of 17)

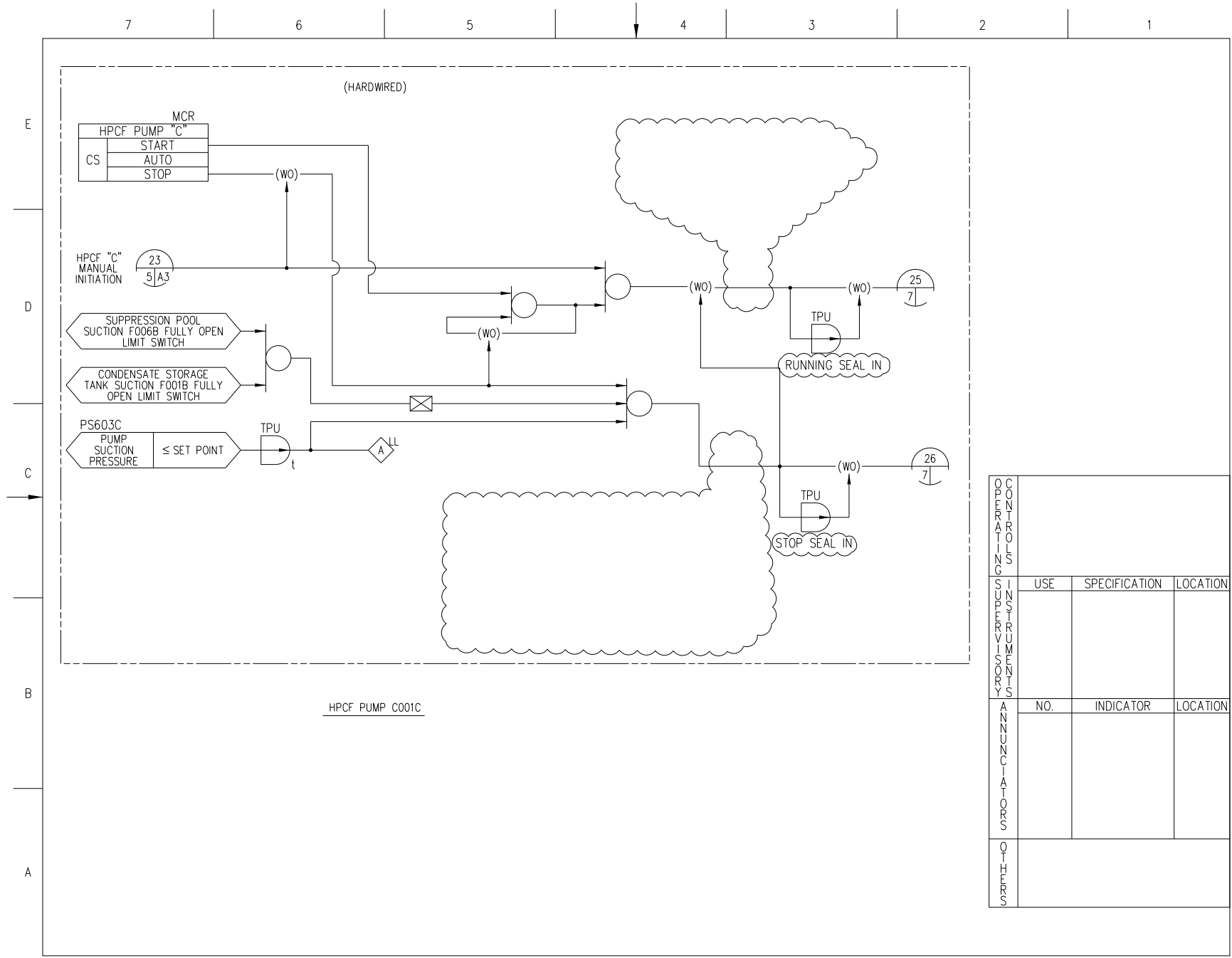


Figure 7.3-1 – High Pressure Core Flooder System IBD (Sheet 8 of 17)

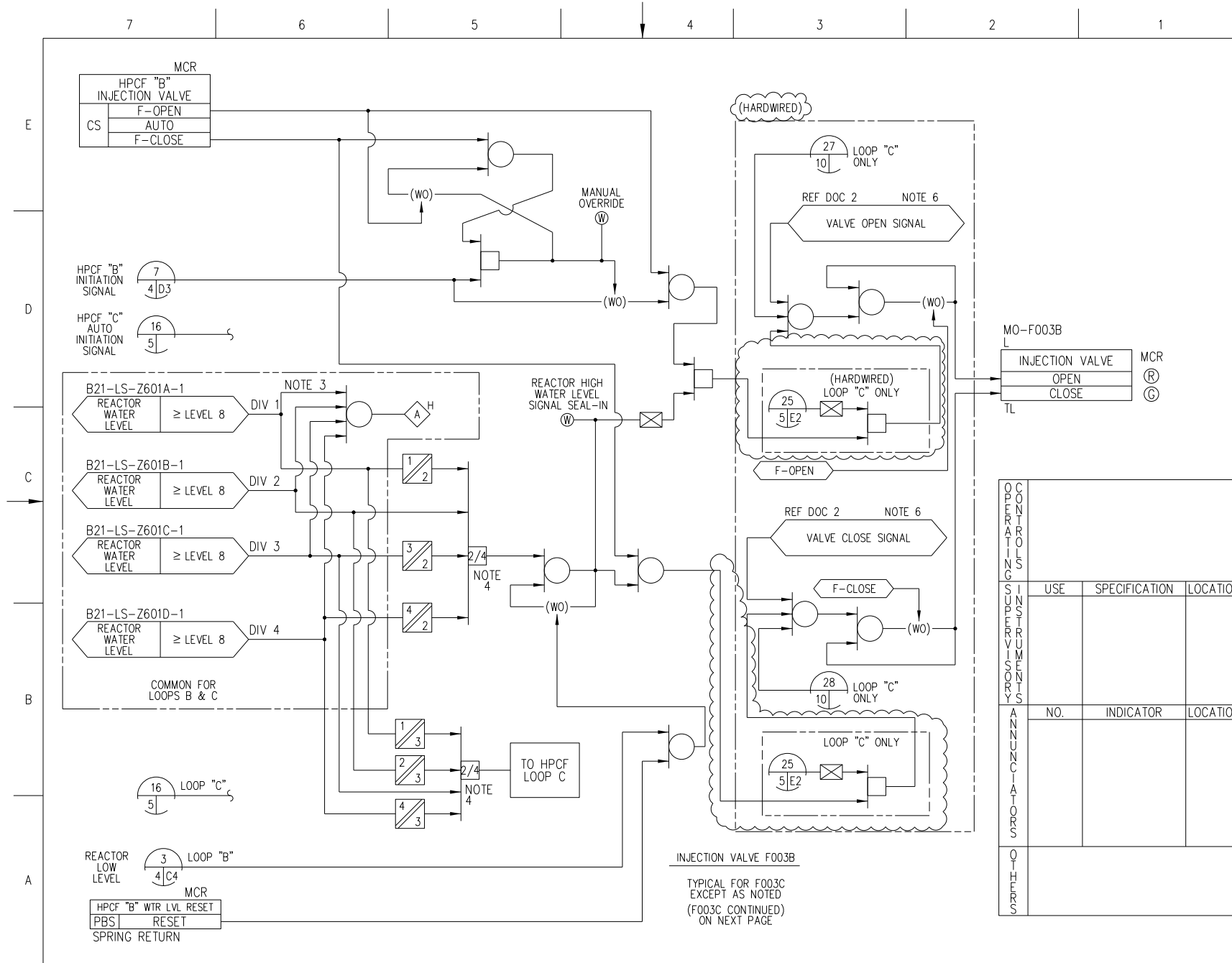
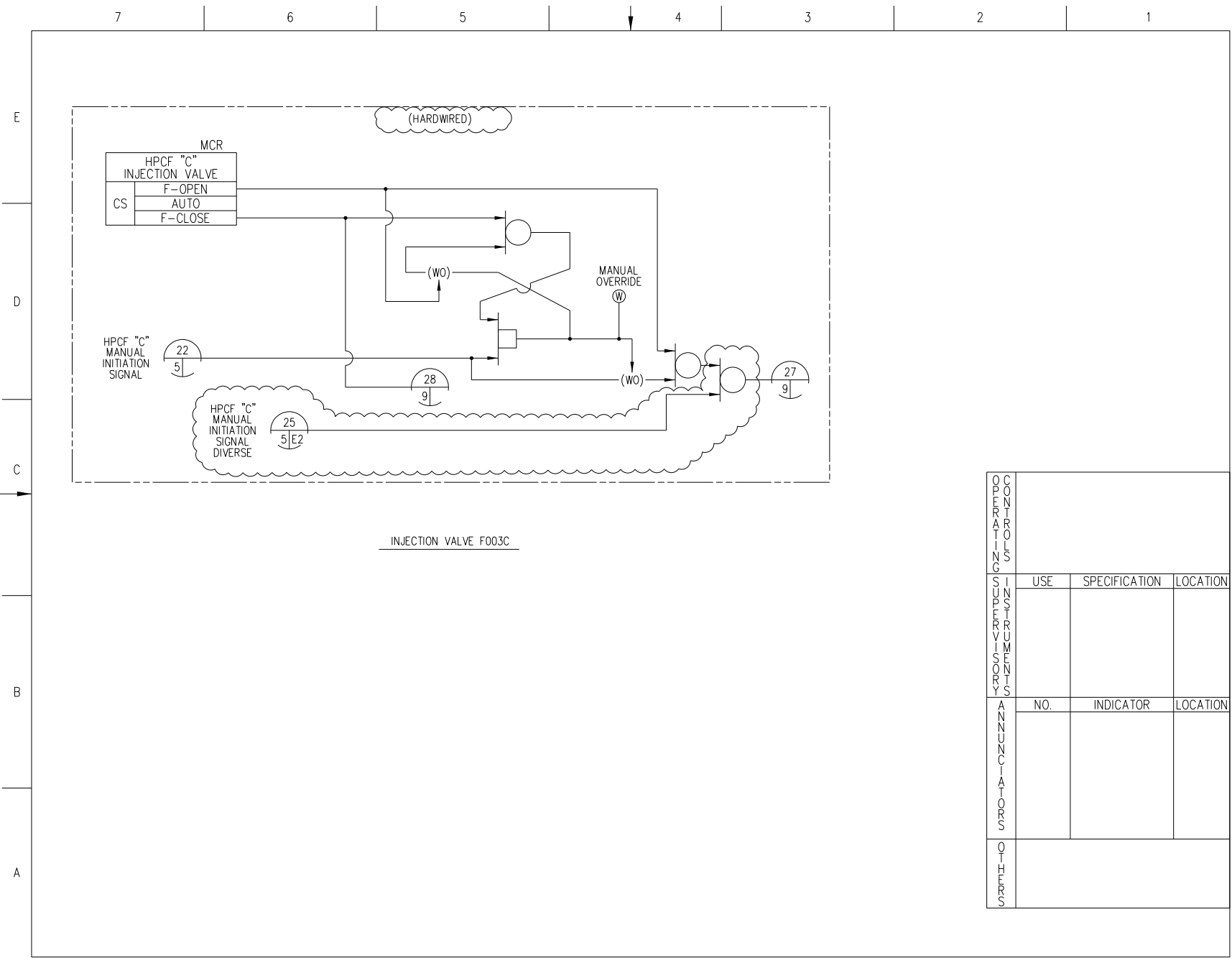


Figure 7.3-1 – High Pressure Core Flooder System IBD (Sheet 9 of 17)



OTHER SIGNALS	USE	SPECIFICATION	LOCATION
ANNUNCIATORS	NO.	INDICATOR	LOCATION
OTHERS			

Figure 7.3-1 – High Pressure Core Flooder System IBD (Sheet 10 of 17)

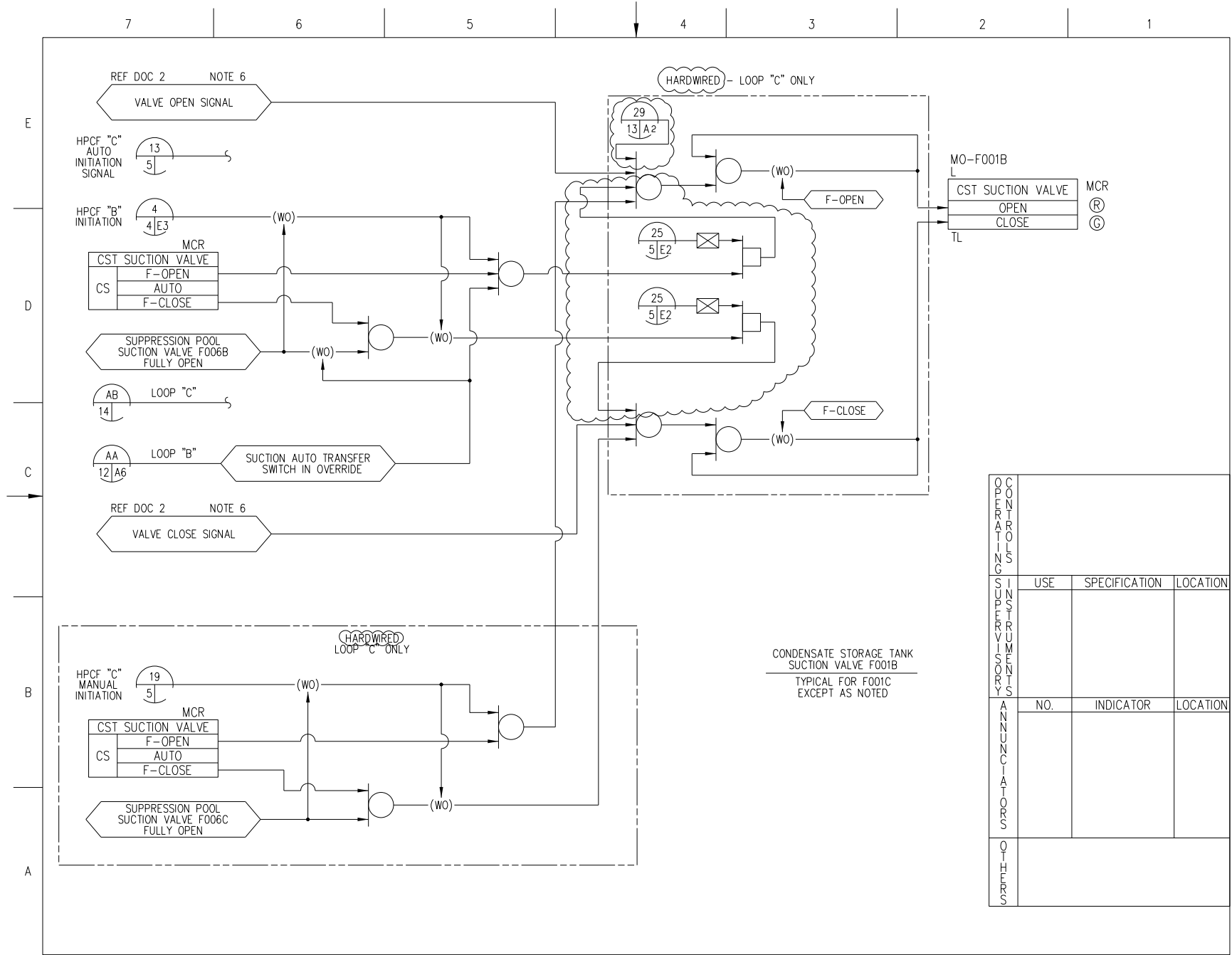


Figure 7.3-1 – High Pressure Core Flooder System IBD (Sheet 11 of 17)



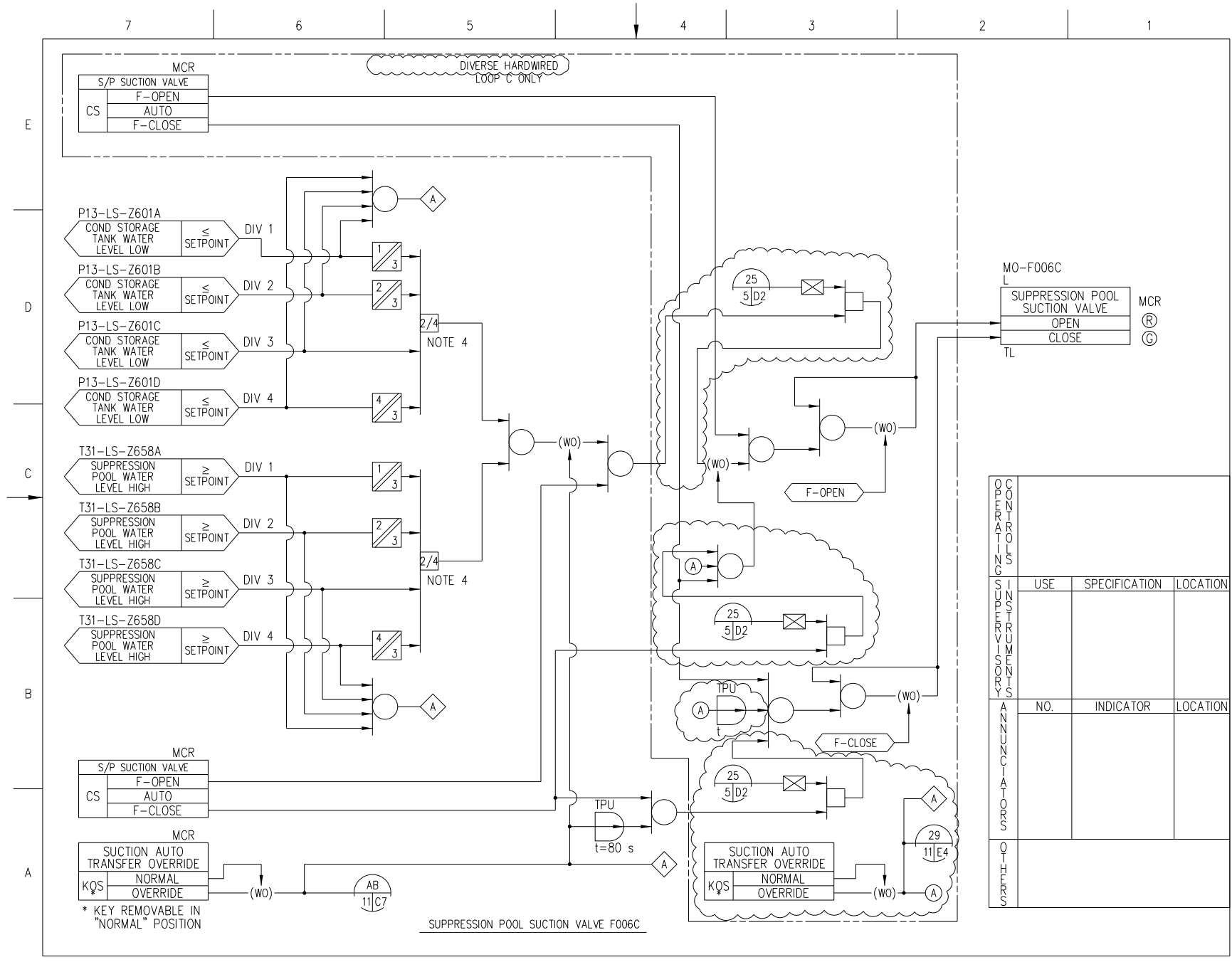


Figure 7.3-1 – High Pressure Core Flooder System IBD (Sheet 13 of 17)

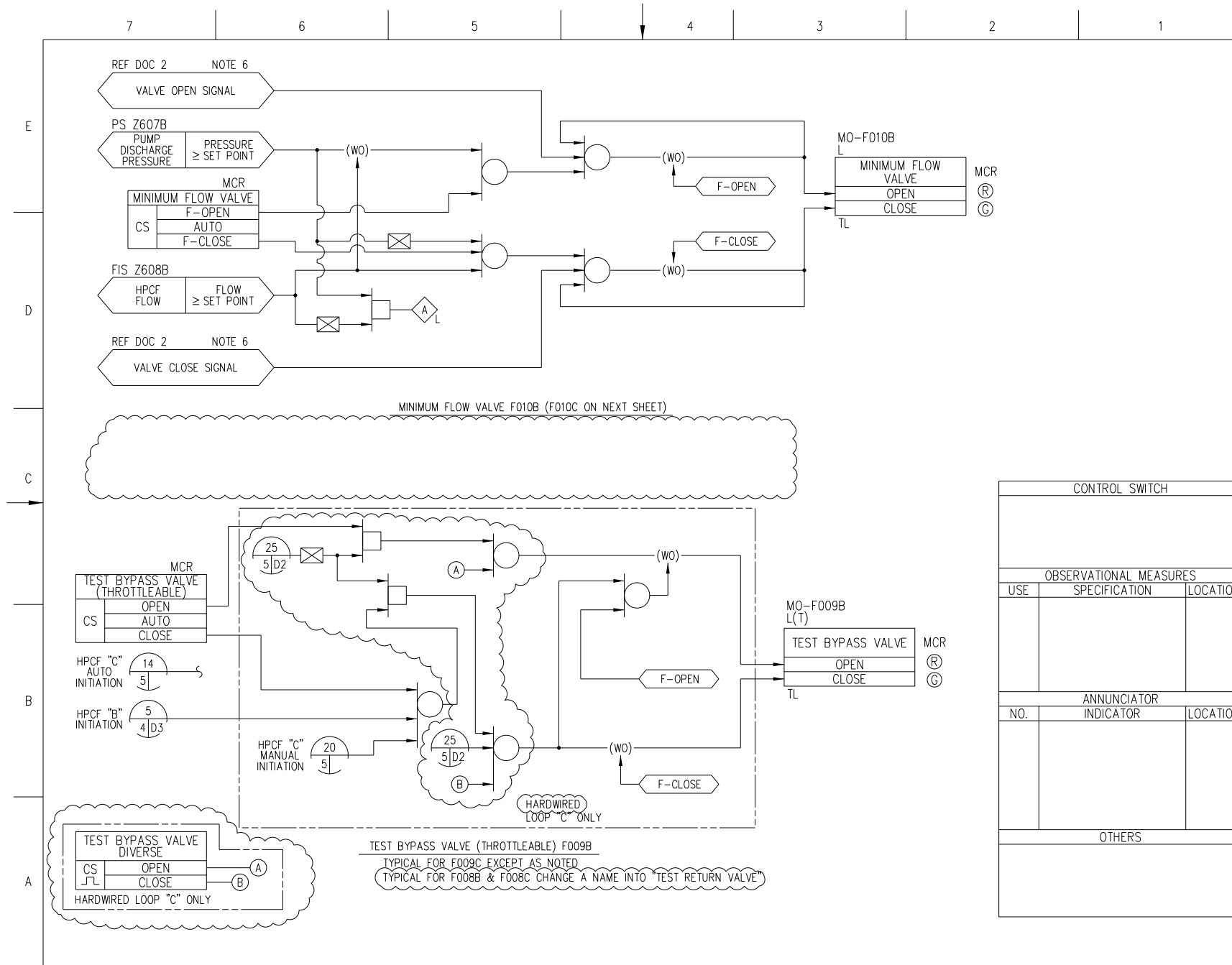


Figure 7.3-1 – High Pressure Core Flooder System IBD (Sheet 14 of 17)

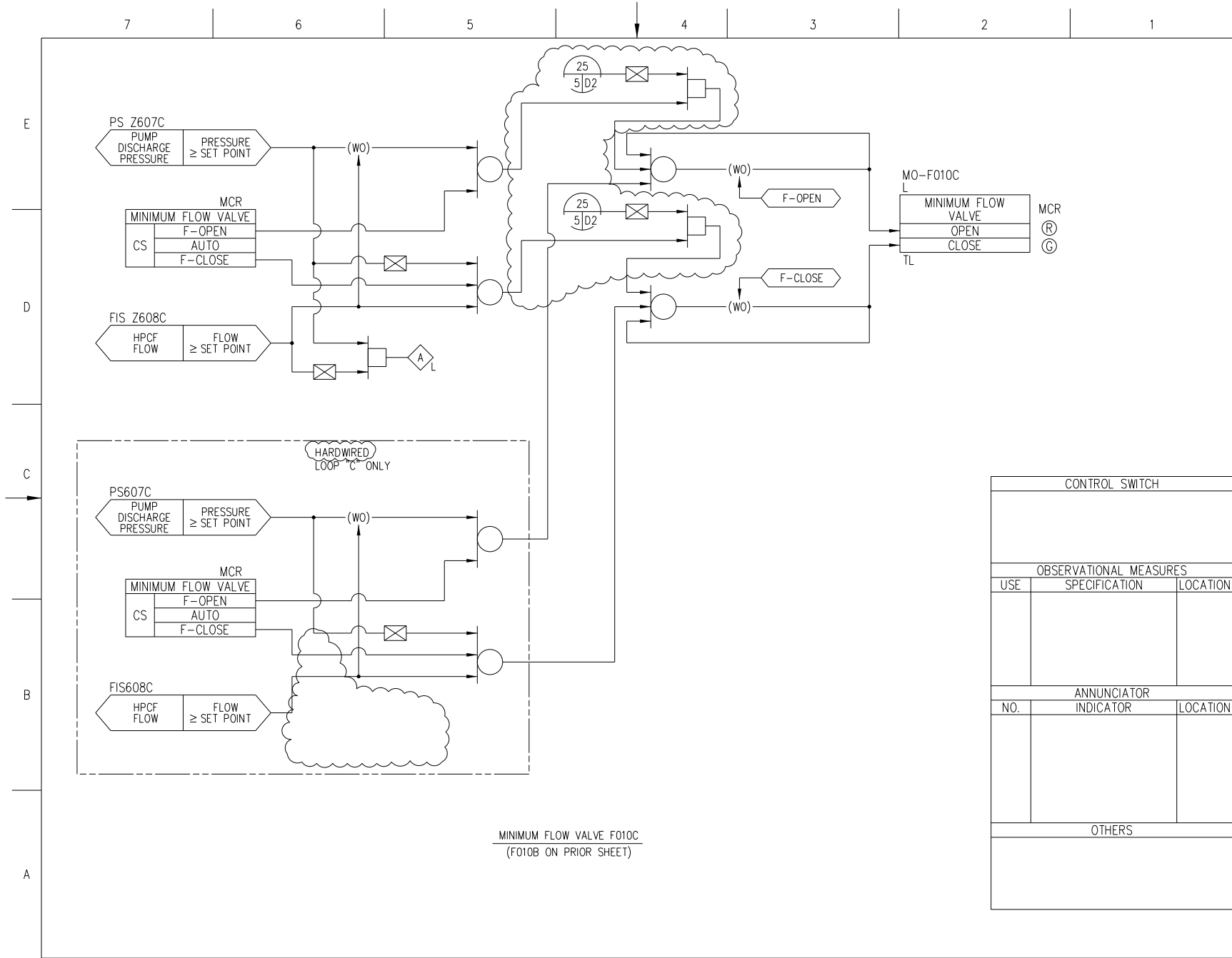


Figure 7.3-1 – High Pressure Core Flooder System IBD (Sheet 15 of 17)

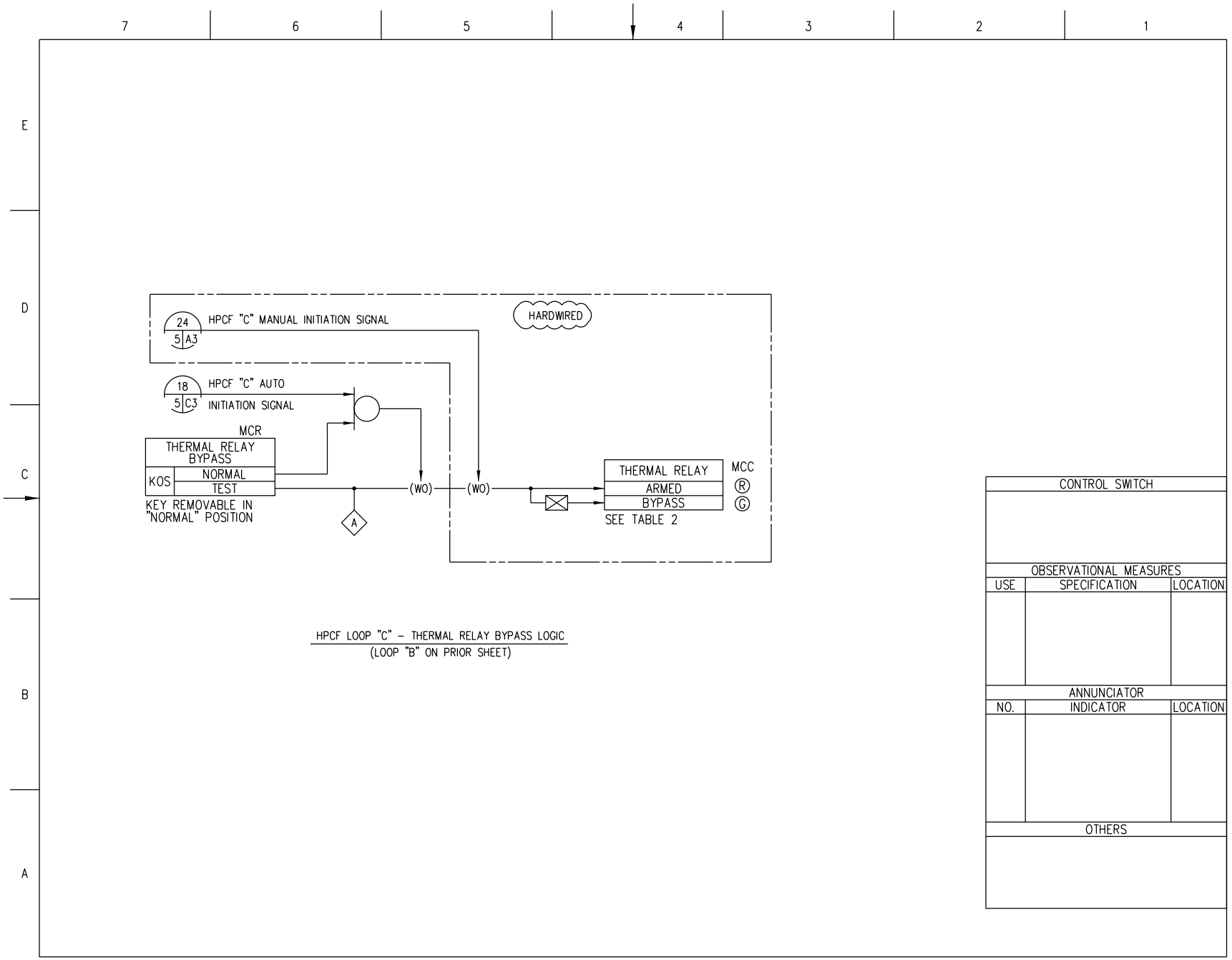


FIGURE 7.3-1 HIGH PRESSURE CORE FLOODER SYSTEM IBD (Sheet 17 of 17)  
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CONTROL SWITCH		
OBSERVATIONAL MEASURES		
USE	SPECIFICATION	LOCATION
ANNUNCIATOR INDICATOR		
NO.	INDICATOR	LOCATION
OTHERS		

Figure 7.3-1 – High Pressure Core Flooder System IBD (Sheet 17 of 17)

SH. NO.	TITLES
1	CONTENTS
2	NOTES AND REFERENCES
3	SRV LOGIC AND CONTROL DIVISION 1 FOR SRV F010P
4	SRV LOGIC AND CONTROL DIVISION 2 FOR SRV F010J
5	SRV LOGIC AND CONTROL DIVISION 3(2,3) FOR SRV'S F010M(F010S, F010B)
6	SRV LOGIC AND CONTROL DIVISION 1 FOR SRV F010G
7	SRV LOGIC AND CONTROL DIVISION 1 FOR SRV F010K
8	SRV LOGIC AND CONTROL DIVISIONS 2(3,1) FOR SRV'S F010E(F010U, F010D)
9	SRV LOGIC AND CONTROL DIVISIONS 2(3,1,2) FOR SRV'S F010N(F010H, F010T, F010C)
10	SRV LOGIC AND CONTROL DIVISIONS 3(1,2,3) FOR SRV'S F010L(F010F, F010R, F010A)
11	ADS LOGIC AND CONTROL
12	ADS LOGIC AND CONTROL (CONTINUED)
13	ADS LOGIC AND CONTROL (CONTINUED)
14	ADS LOGIC AND CONTROL (CONTINUED)
15	ADS LOGIC AND CONTROL (CONTINUED)
16	ADS LOGIC AND CONTROL (CONTINUED)
17	ADS LOGIC AND CONTROL (CONTINUED)
18	ADS LOGIC AND CONTROL (CONTINUED)
19	FEEDWATER VALVES F001A(F001B)
20	FEEDWATER CHECK VALVES F003A(F003B)
21	FEEDWATER GATE VALVES F005A(F005B)
22	CUW RETURN FW LOOP SELECTOR VALVES F007A(F007B)
23	MAIN STEAM BYPASS/DRAIN ISOLATION VALVE F011(F012)
24	STEAM LINE DRAIN VALVES F013(F014, F016)
25	MAIN STEAM DRAIN LINE AOV'S F015(F017)
26	RPV HEAD VENT VALVES F018(F019, F020)
27	RPV WATER LEVEL ALARMS AND INDICATORS
28	LOW RPV METAL & BOTTOM DRAIN TEMPERATURE ALARM & RECORDER
29	HIGH DRYWELL PRESSURE ALARMS AND INDICATORS
30	SRV VALVE STEM POSITION ALARM
31	SRV DISCHARGE LINE AND RPV VENT DISCHARGE LINE HIGH TEMP ALARM
32	MSIV VALVE STEM POSITION SWITCHES
33	RPV HEAD SEAL LEAKOFF HIGH PRESSURE ALARM
34	ANNUNCIATOR LIST
35	ANNUNCIATOR LIST (CONTINUED)
36	ELCS (LDS/ECCS) BLOCK DIAGRAM DIV 1 (TYPICAL FOR DIV 2 & DIV 3)
37	ELCS (LDS/ECCS) BLOCK DIAGRAM (CONTINUED)

MPL NO. B21-1030

CONTENTS

Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 1 of 37)

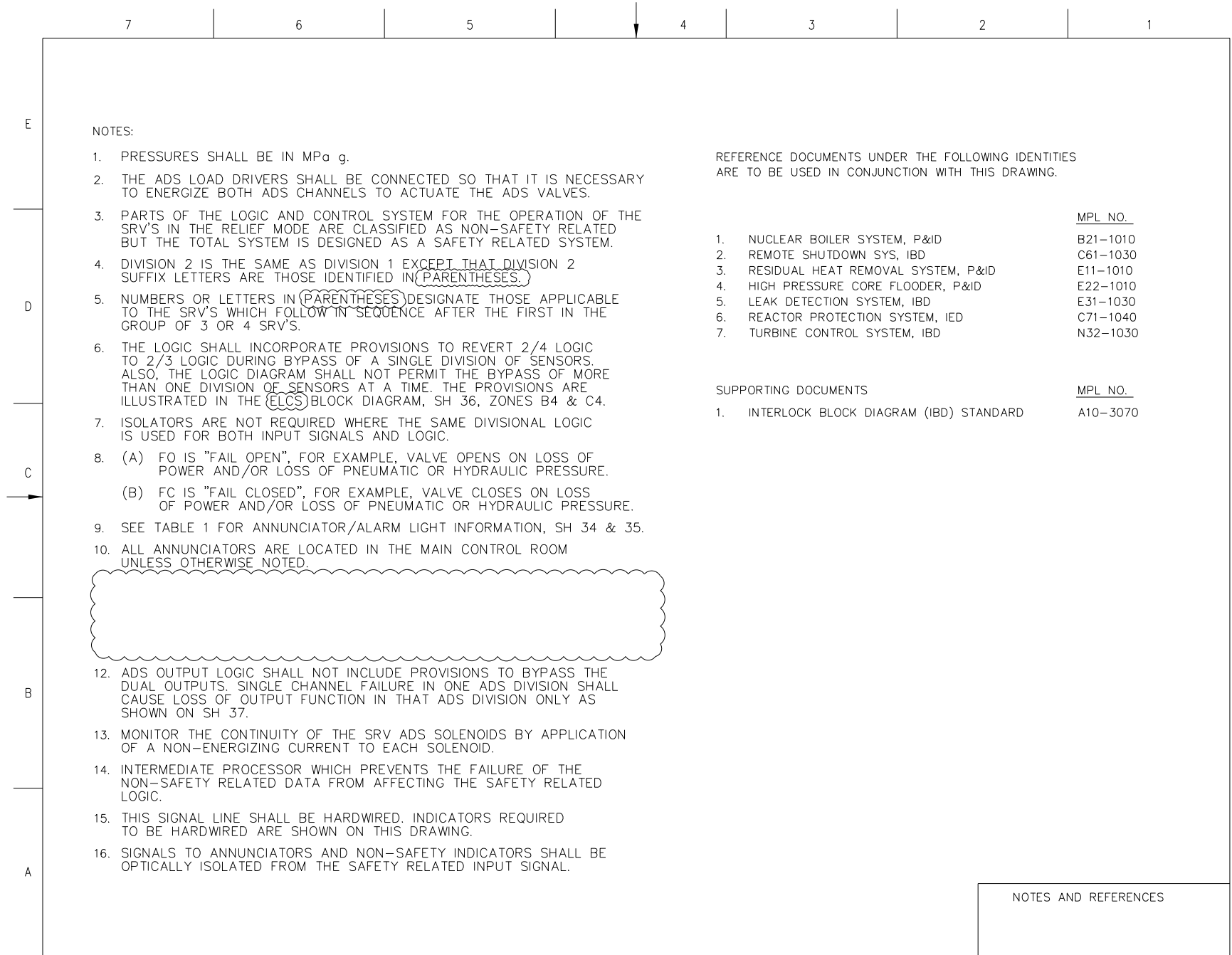


Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 2 of 37)

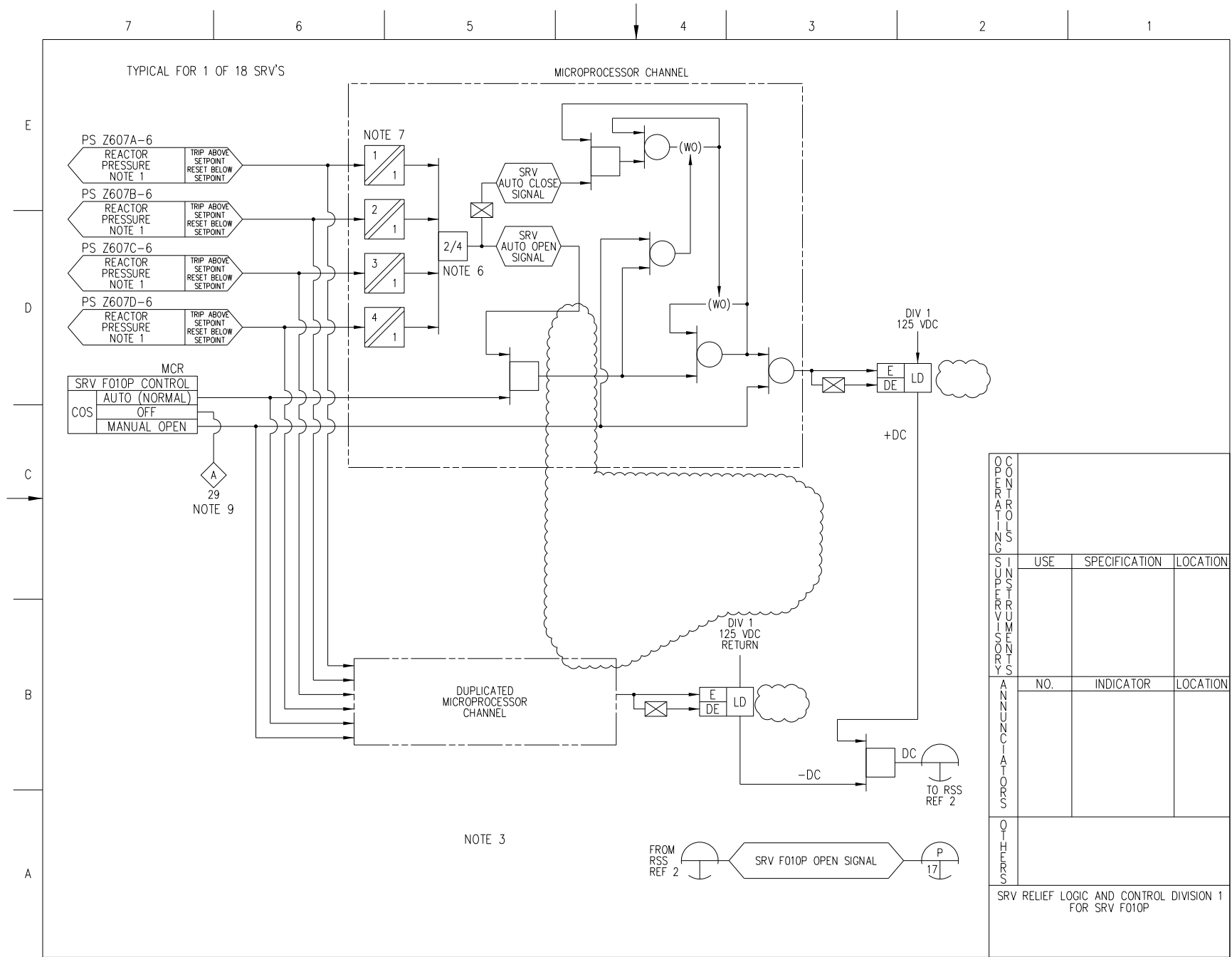
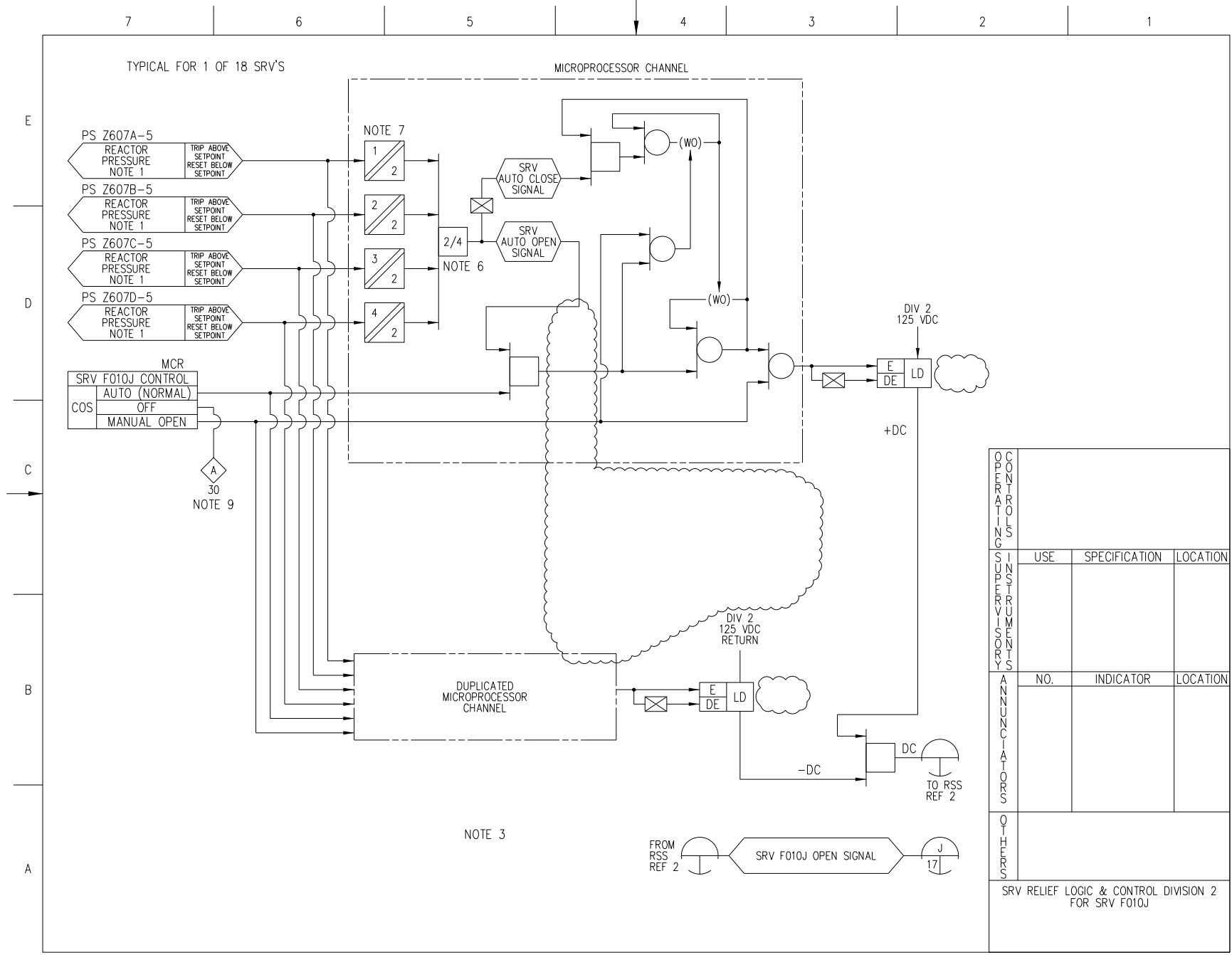


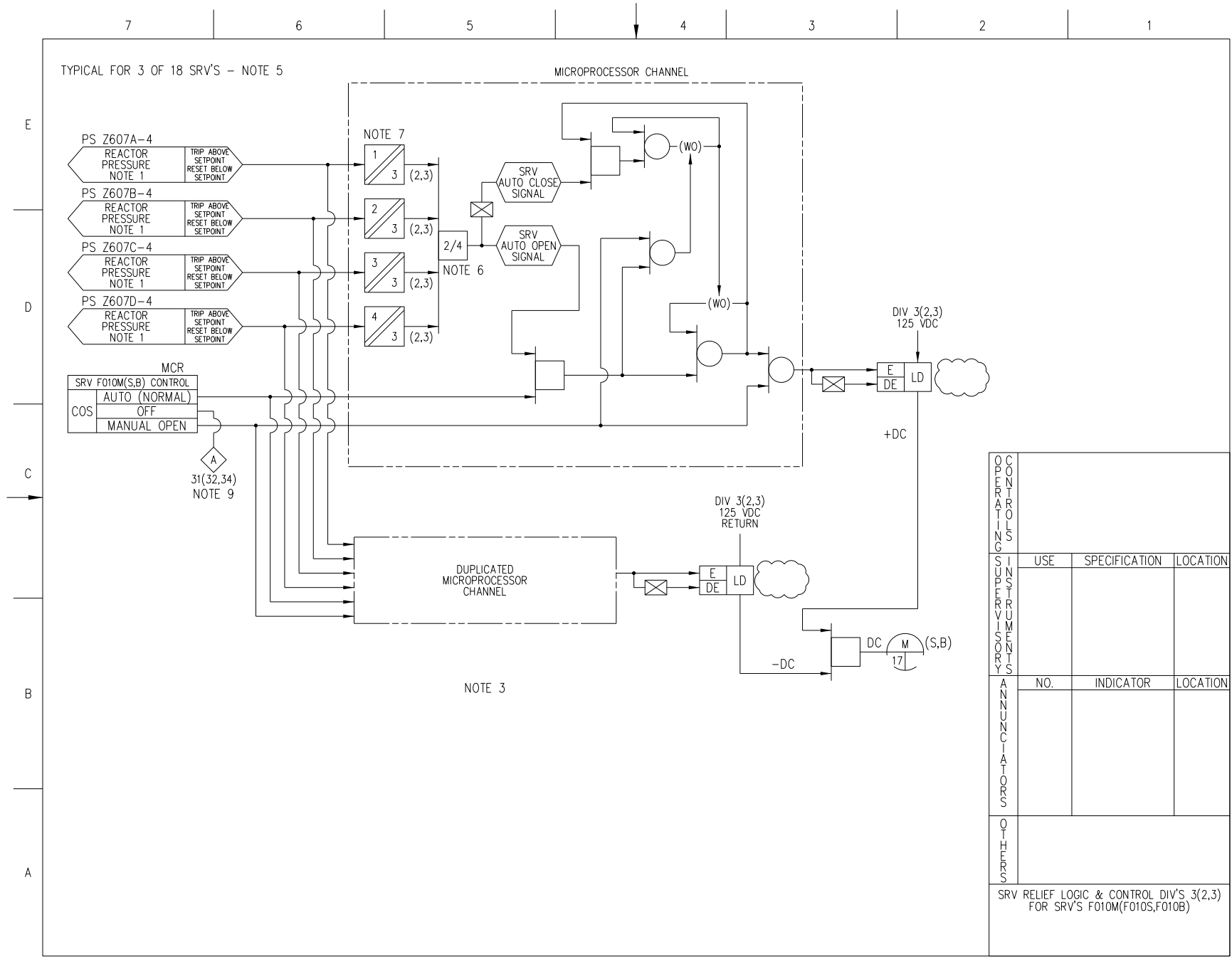
Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 3 of 37)



CONTROLS RELIEF VALVES	USE	SPECIFICATION	LOCATION
ANNUNCIATORS	NO.	INDICATOR	LOCATION
OTHERS			
SRV RELIEF LOGIC & CONTROL DIVISION 2 FOR SRV F010J			

Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 4 of 37)





FUNCTIONS	USE	SPECIFICATION	LOCATION

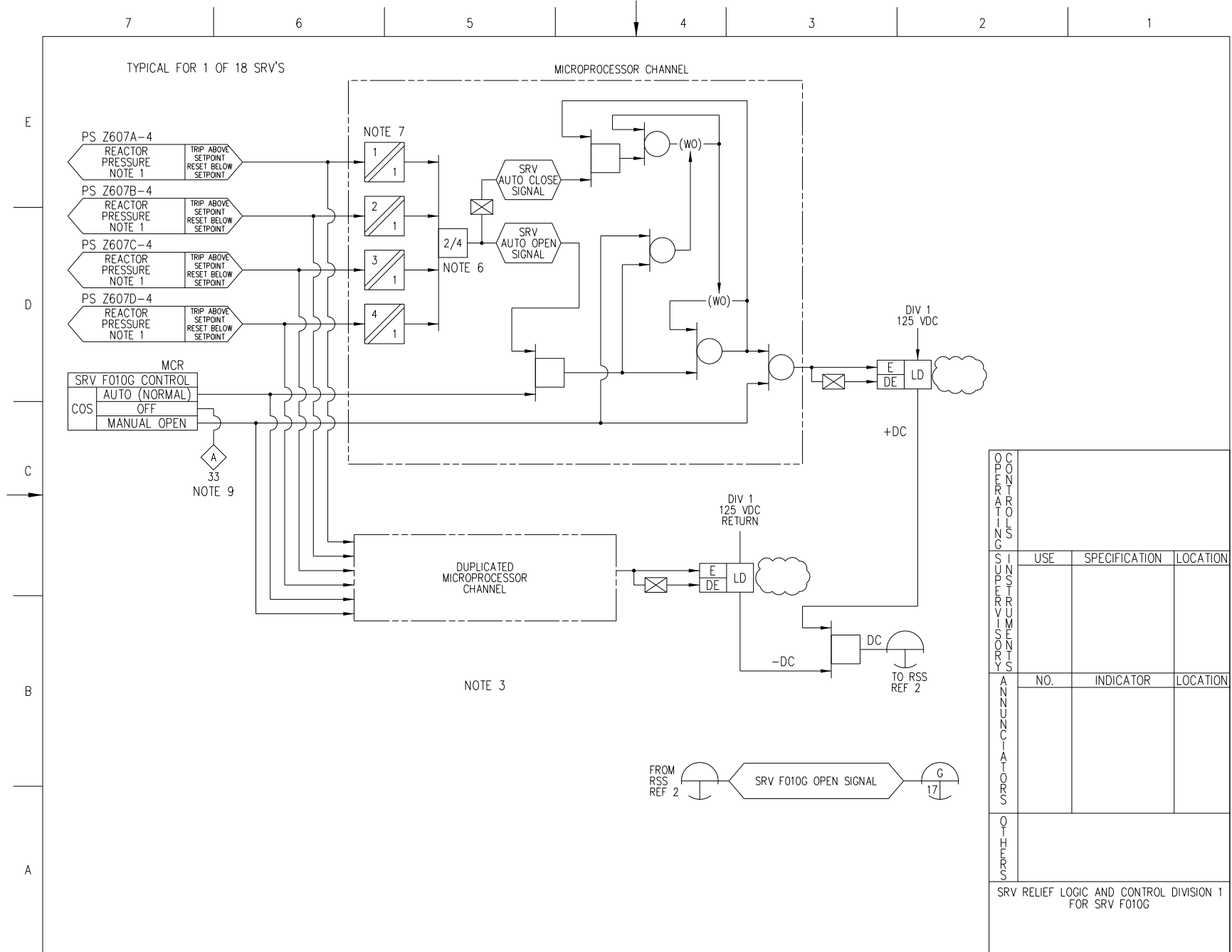
ANNUNCIATORS	NO.	INDICATOR	LOCATION

OT			

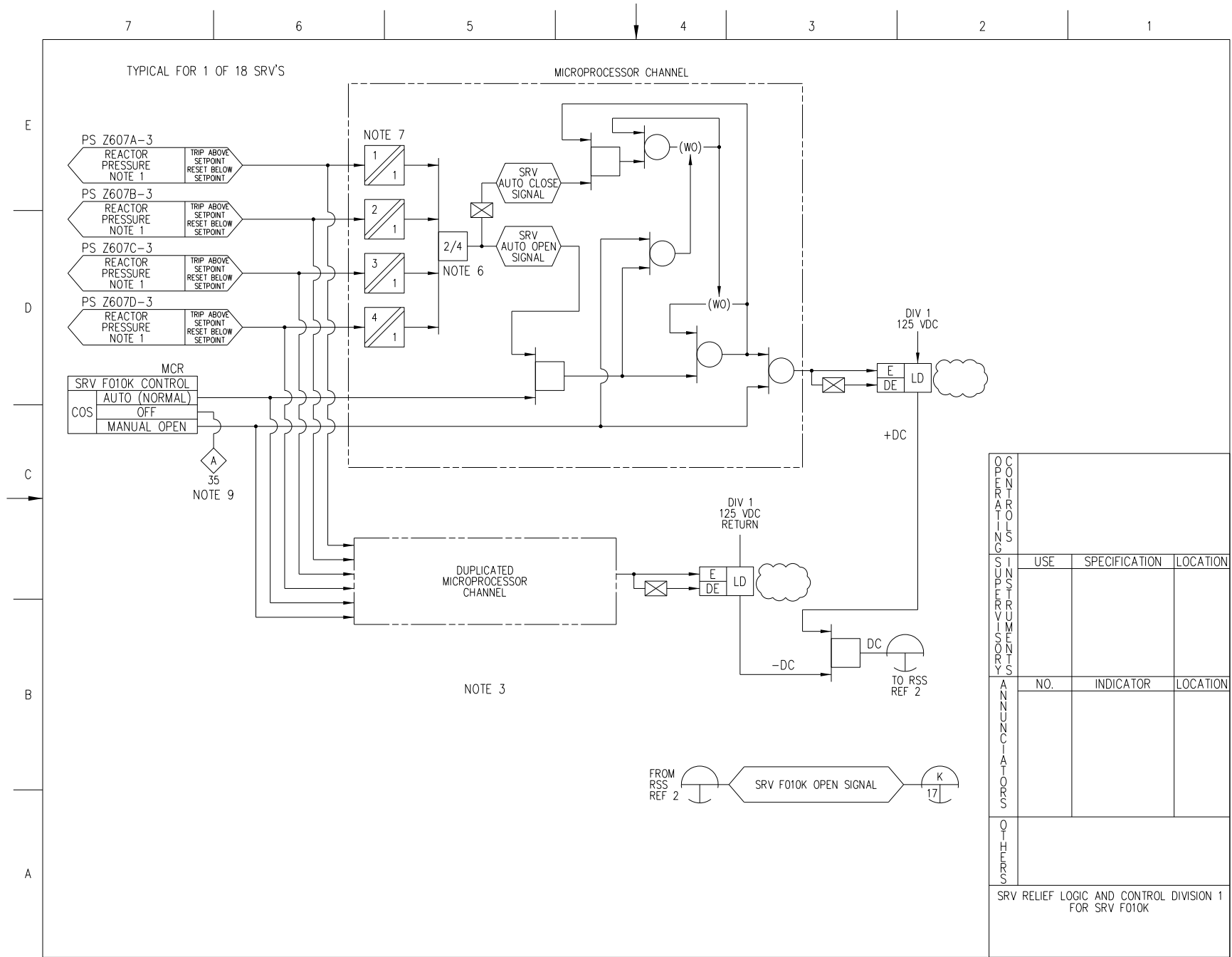
SRV RELIEF LOGIC & CONTROL DIV'S 3(2,3) FOR SRV'S F010M(F010S,F010B)

Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 5 of 37)



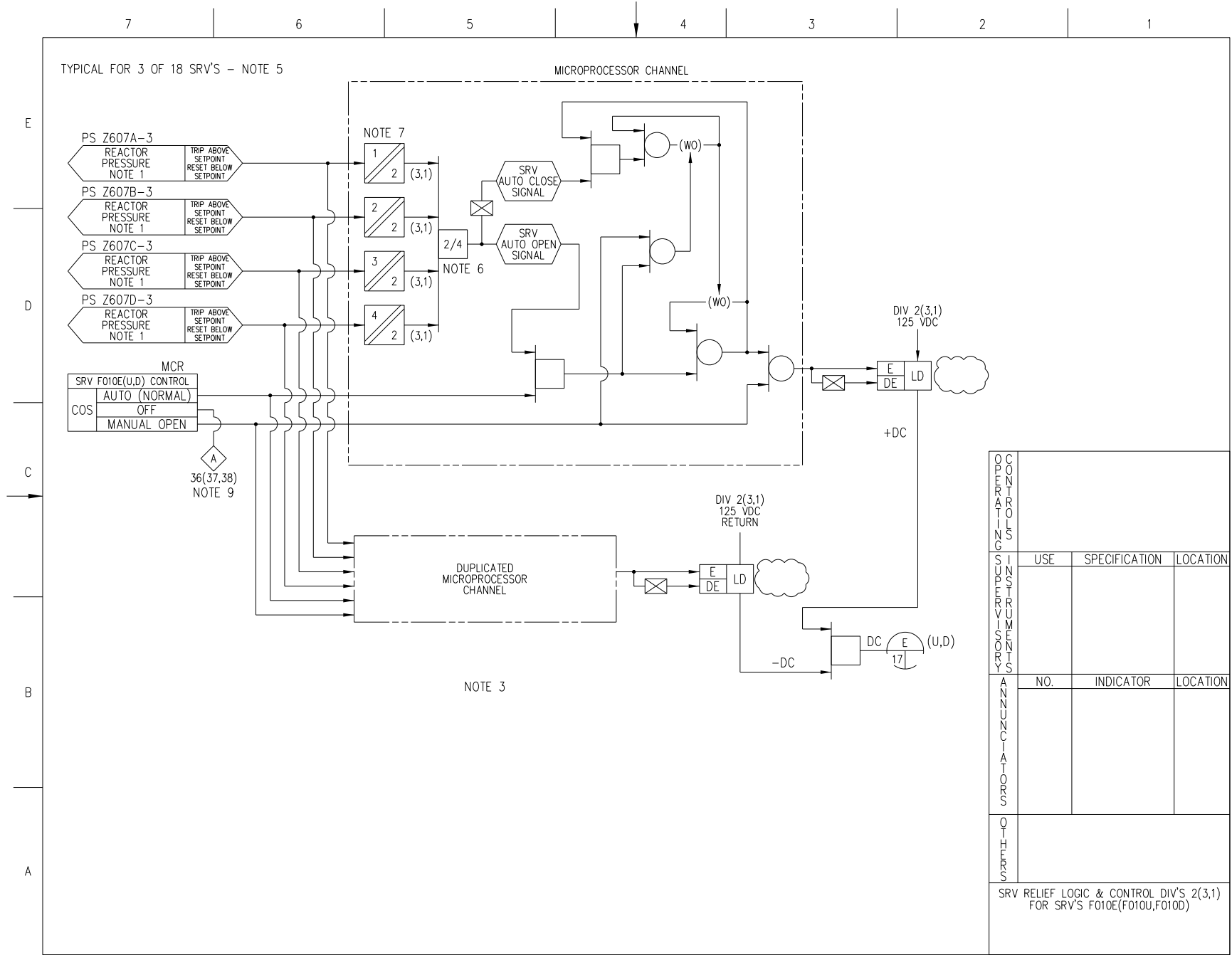
CONTRACTORS	USE	SPECIFICATION	LOCATION
SUBCONTRACTORS			
ANNUNCIATORS	NO.	INDICATOR	LOCATION
OTHERS			
SRV RELIEF LOGIC AND CONTROL DIVISION 1 FOR SRV F010G			

Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 6 of 37)



CONTRACTORS	USE	SPECIFICATION	LOCATION
ANNUNCIATORS	NO.	INDICATOR	LOCATION
OTHERS			
SRV RELIEF LOGIC AND CONTROL DIVISION 1 FOR SRV F010K			

Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 7 of 37)



COMMUNICATIONS	USE	SPECIFICATION	LOCATION
ANNUNCIATORS	NO.	INDICATOR	LOCATION
OTHERS			
SRV RELIEF LOGIC & CONTROL DIV'S 2(3,1) FOR SRV'S F010E(F010U,F010D)			

Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 8 of 37)

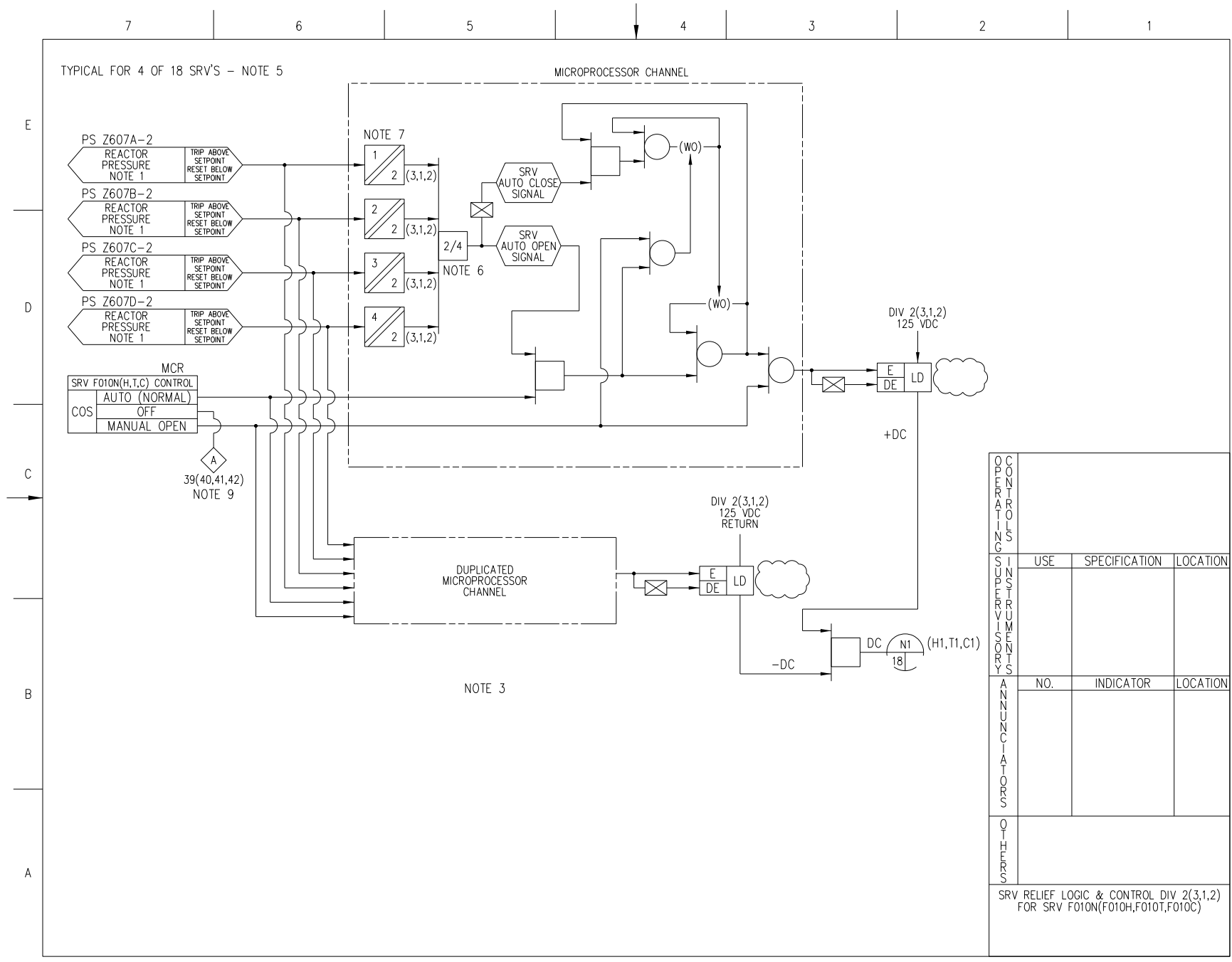


Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 9 of 37)

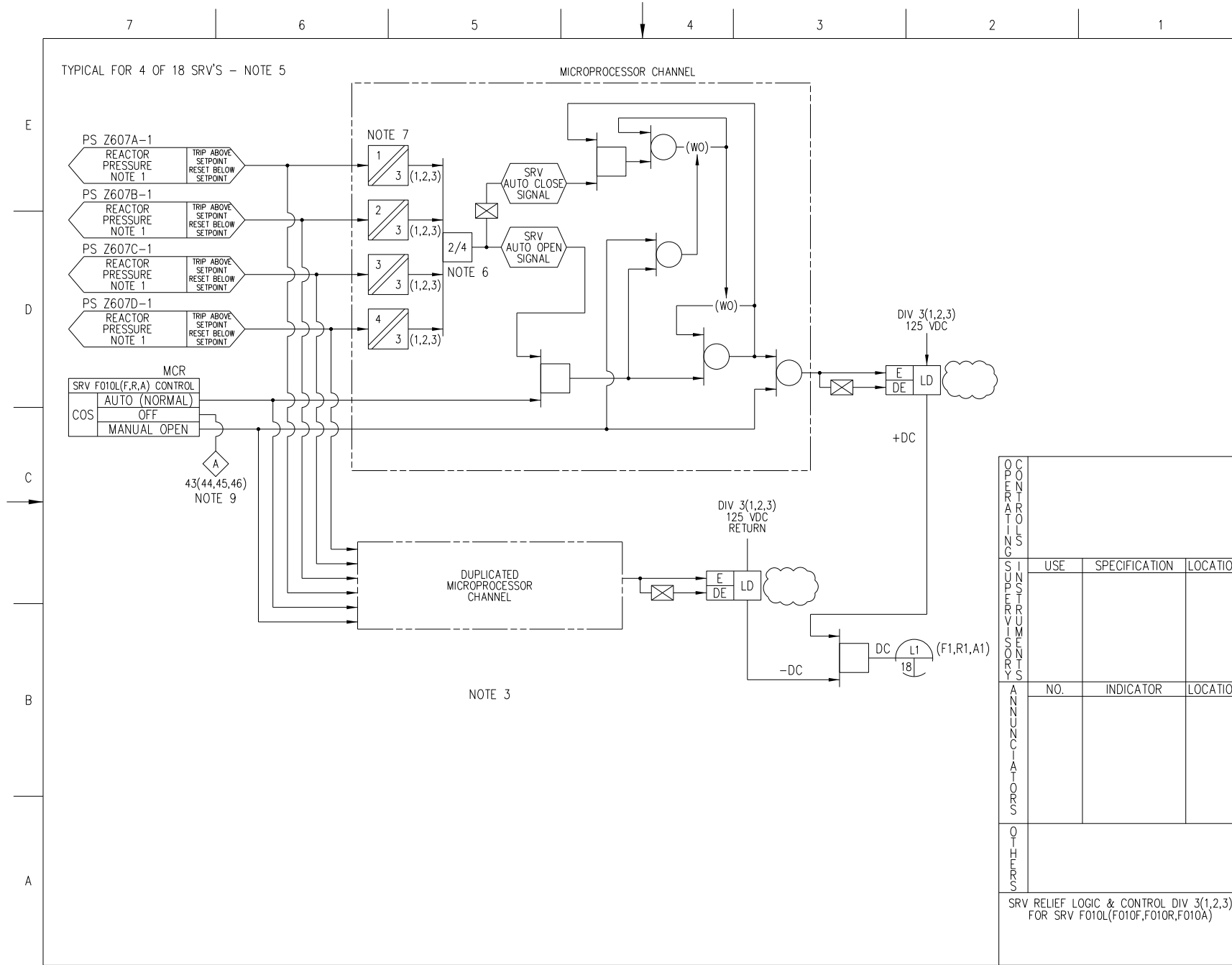


Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 10 of 37)

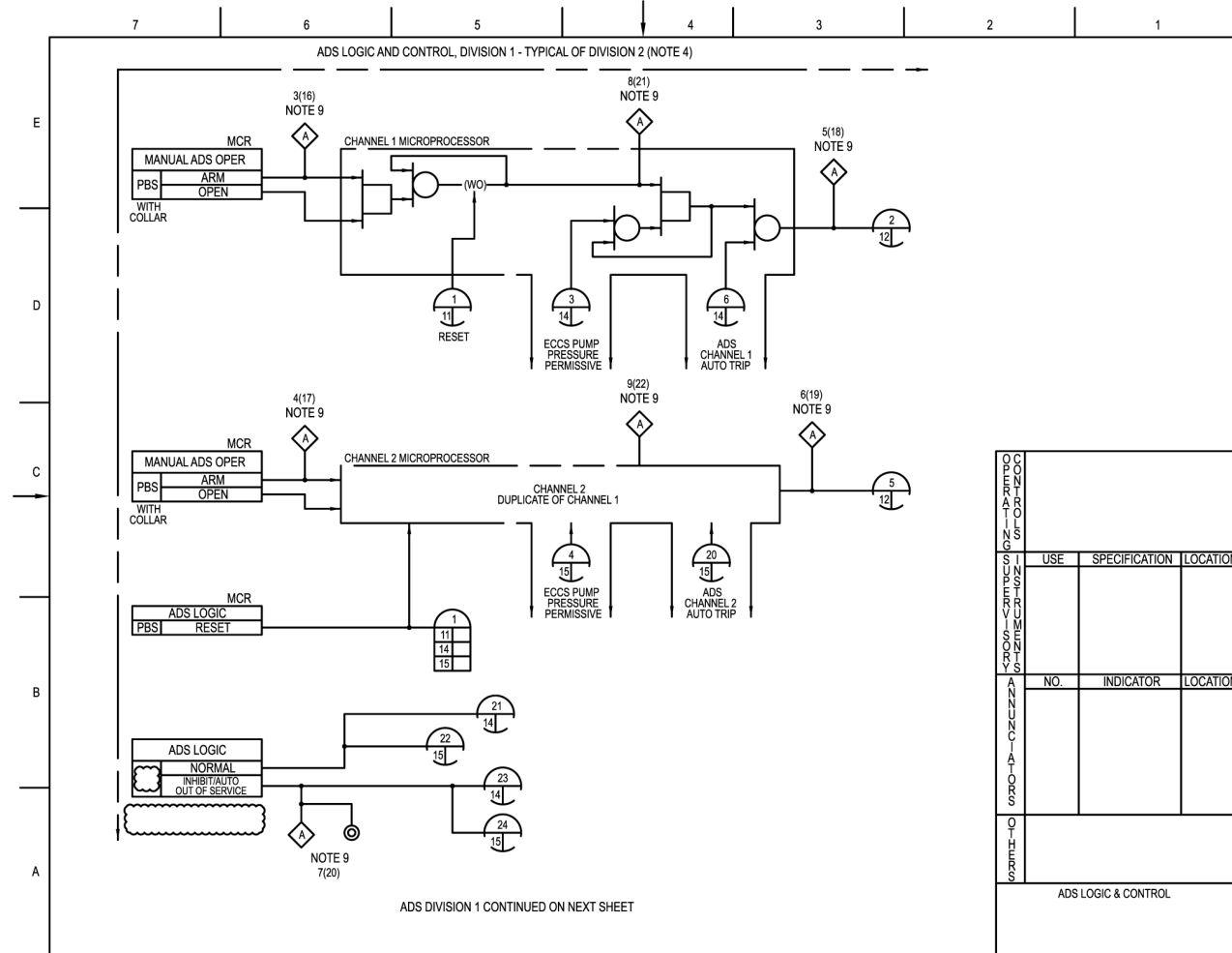


Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 11 of 37)

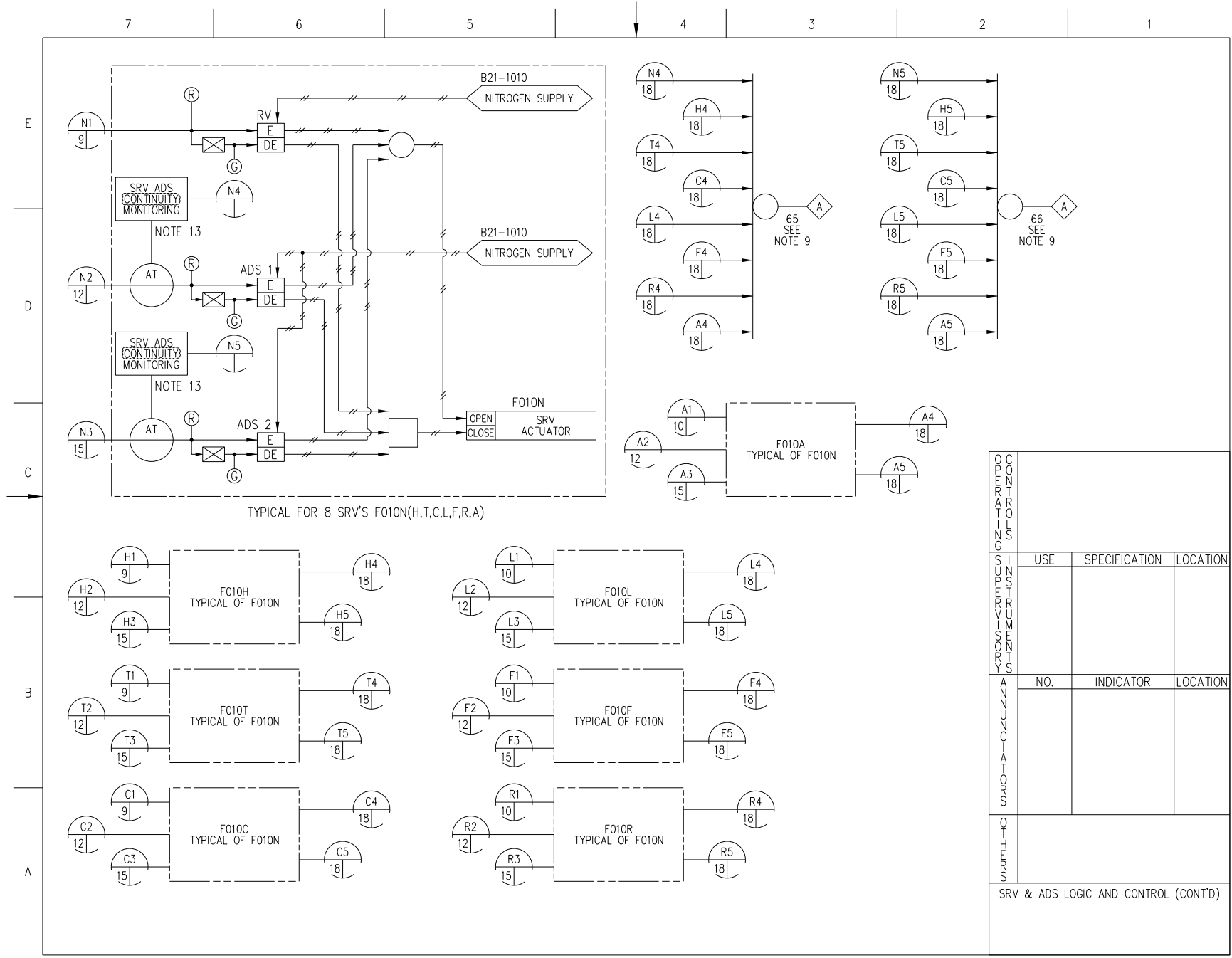


Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 18 of 37)



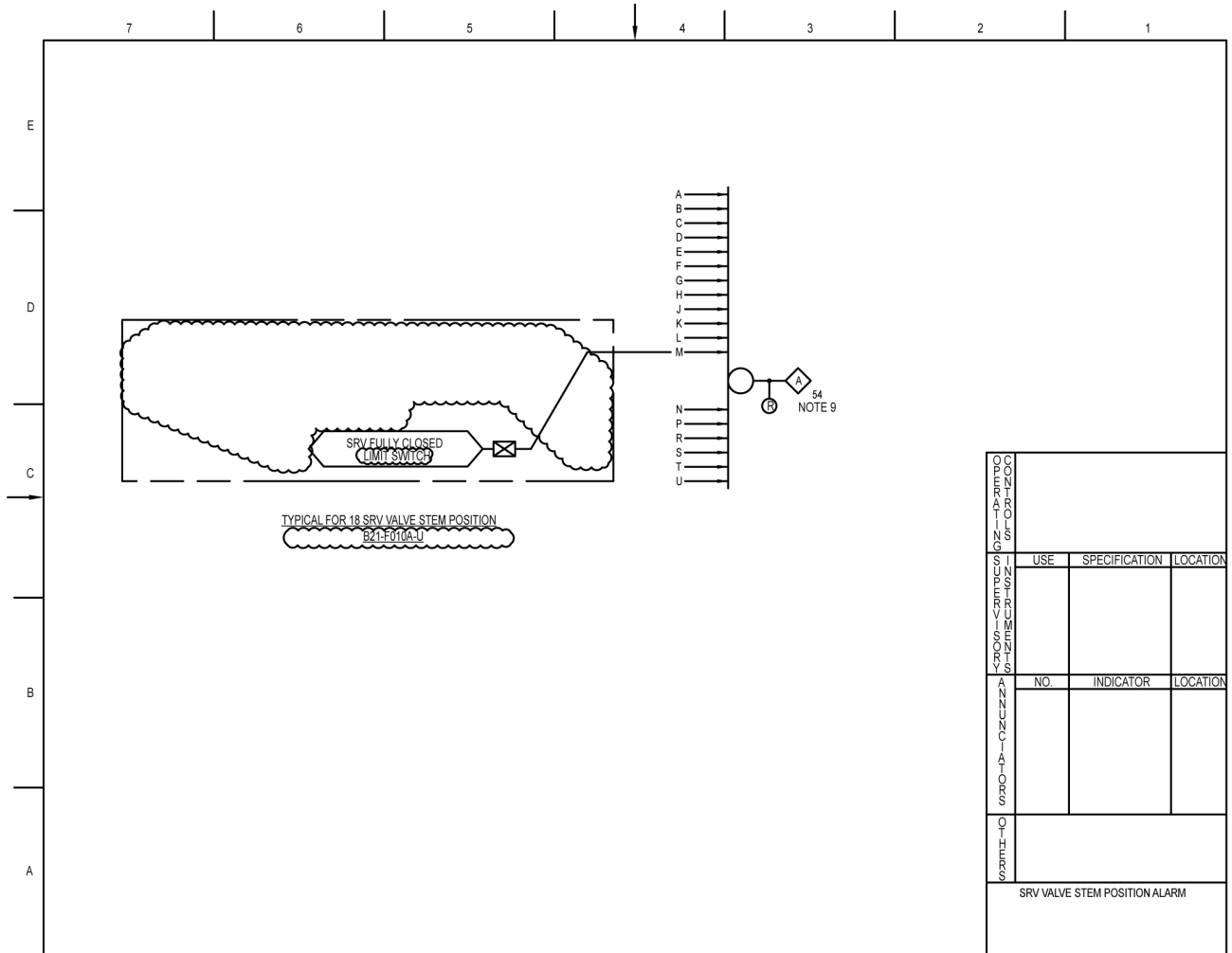


Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 30 of 37)

TABLE 1: ANNUNCIATOR/ALARM LIGHTS - NOTE 10				TABLE 1: (CONT)			
ALARM NO.	INDICATION	FUNCTION	SOURCE OF SIGNAL	ALARM NO.	INDICATION	FUNCTION	SOURCE OF SIGNAL
3	ALARM	ADS CHANNEL 1 ARMED DIVISION 1	LOGIC OUTPUT SHEET 11	30	ALARM	SRV RELIEF "J" SWITCHED OFF	SWITCH OUTPUT SHEET 4
4	ALARM	ADS CHANNEL 2 ARMED DIVISION 1	LOGIC OUTPUT SHEET 11	31	ALARM	SRV RELIEF "M" SWITCHED OFF	SWITCH OUTPUT SHEET 5
5	ALARM	ADS CHANNEL 1 TRIP DIVISION 1	LOGIC OUTPUT SHEET 11	32	ALARM	SRV RELIEF "S" SWITCHED OFF	SWITCH OUTPUT SHEET 5
6	ALARM	ADS CHANNEL 2 TRIP DIVISION 1	LOGIC OUTPUT SHEET 11	33	ALARM	SRV RELIEF "G" SWITCHED OFF	SWITCH OUTPUT SHEET 11
7	ALARM/ORANGE LIGHT	ADS INHIBIT SWITCH IN INHIBIT POSITION DIVISION 1	LOGIC OUTPUT SHEET 11	34	ALARM	SRV RELIEF "B" SWITCHED OFF	SWITCH OUTPUT SHEET 5
8	ALARM	ADS CHANNEL 1 MANUAL PERMISSIVE DIVISION 1	LOGIC OUTPUT SHEET 11	35	ALARM	SRV RELIEF "K" SWITCHED OFF	SWITCH OUTPUT SHEET 7
9	ALARM	ADS CHANNEL 2 MANUAL PERMISSIVE DIVISION 1	LOGIC OUTPUT SHEET 11	36	ALARM	SRV RELIEF "E" SWITCHED OFF	SWITCH OUTPUT SHEET 8
10	ALARM	ADS 29 SECOND TIMER RUNNING CHANNEL 1 DIVISION 1	LOGIC OUTPUT SHEET 14	37	ALARM	SRV RELIEF "U" SWITCHED OFF	SWITCH OUTPUT SHEET 8
11	ALARM	ADS 29 SECOND TIMER RUNNING CHANNEL 2 DIVISION 1	LOGIC OUTPUT SHEET 15	38	ALARM	SRV RELIEF "D" SWITCHED OFF	SWITCH OUTPUT SHEET 6
12	ALARM	ADS HIGH DRYWELL PRESSURE PERMISSIVE CHANNEL 1 DIV 1	LOGIC OUTPUT SHEET 14	39	ALARM	SRV RELIEF "N" SWITCHED OFF	SWITCH OUTPUT SHEET 9
13	ALARM	ADS HIGH DRYWELL PRESSURE PERMISSIVE CHANNEL 2 DIV 1	LOGIC OUTPUT SHEET 15	40	ALARM	SRV RELIEF "H" SWITCHED OFF	SWITCH OUTPUT SHEET 9
14	ALARM	ADS ECCS PUMP DISCH PRESS PERMISSIVE CHANNEL 1 DIV 1	LOGIC OUTPUT SHEET 14	41	ALARM	SRV RELIEF "T" SWITCHED OFF	SWITCH OUTPUT SHEET 9
15	ALARM	ADS ECCS PUMP DISCH PRESS PERMISSIVE CHANNEL 2 DIV 1	LOGIC OUTPUT SHEET 15	42	ALARM	SRV RELIEF "C" SWITCHED OFF	SWITCH OUTPUT SHEET 9
16	ALARM	ADS CHANNEL 1 ARMED DIVISION 2	LOGIC OUTPUT SHEET 11	43	ALARM	SRV RELIEF "L" SWITCHED OFF	SWITCH OUTPUT SHEET 10
17	ALARM	ADS CHANNEL 2 ARMED DIVISION 2	LOGIC OUTPUT SHEET 11	44	ALARM	SRV RELIEF "F" SWITCHED OFF	SWITCH OUTPUT SHEET 10
18	ALARM	ADS CHANNEL 1 TRIP DIVISION 2	LOGIC OUTPUT SHEET 11	45	ALARM	SRV RELIEF "R" SWITCHED OFF	SWITCH OUTPUT SHEET 10
19	ALARM	ADS CHANNEL 2 TRIP DIVISION 2	LOGIC OUTPUT SHEET 11	46	ALARM	SRV RELIEF "A" SWITCHED OFF	SWITCH OUTPUT SHEET 10
20	ALARM/ORANGE LIGHT	ADS INHIBIT SWITCH IN INHIBIT POSITION DIVISION 2	LOGIC OUTPUT SHEET 11	47	ALARM/RED LIGHT	ENHANCED RPV WATER LEVEL LOW DIV 1	LOGIC OUTPUT SHEET 27
21	ALARM	ADS CHANNEL 1 MANUAL PERMISSIVE DIVISION 2	LOGIC OUTPUT SHEET 11	48	ALARM/RED LIGHT	ENHANCED RPV WATER LEVEL LOW DIV 2	LOGIC OUTPUT SHEET 27
22	ALARM	ADS CHANNEL 2 MANUAL PERMISSIVE DIVISION 2	LOGIC OUTPUT SHEET 11	49	ALARM/ORANGE LIGHT	LOW RPV METAL OR BOTTOM DRAIN TEMP	LOGIC OUTPUT SHEET 28
23	ALARM	ADS 29 SECOND TIMER RUNNING CHANNEL 1 DIVISION 2	LOGIC OUTPUT SHEET 14	50	ALARM/RED LIGHT	HIGH DRYWELL PRESSURE DIVISION 1	LOGIC OUTPUT SHEET 29
24	ALARM	ADS 29 SECOND TIMER RUNNING CHANNEL 2 DIV 2	LOGIC OUTPUT SHEET 15				
25	ALARM	ADS HIGH DRYWELL PRESS PERMISSIVE CHANNEL 1 DIV 2	LOGIC OUTPUT SHEET 14				
26	ALARM	ADS HIGH DRYWELL PRESS PERMISSIVE CHANNEL 2 DIV 2	LOGIC OUTPUT SHEET 15				
27	ALARM	ADS ECCS PUMP DISCH PRESS PERMISSIVE CHANNEL 1 DIV 2	LOGIC OUTPUT SHEET 14				
28	ALARM	ADS ECCS PUMP DISCH PRESS PERMISSIVE CHANNEL 2 DIV 2	LOGIC OUTPUT SHEET 15				
29	ALARM	SRV RELIEF "P" SWITCHED OFF	SWITCH OUTPUT SHEET 3				

ANNUNCIATOR LIST

Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 34 of 37)

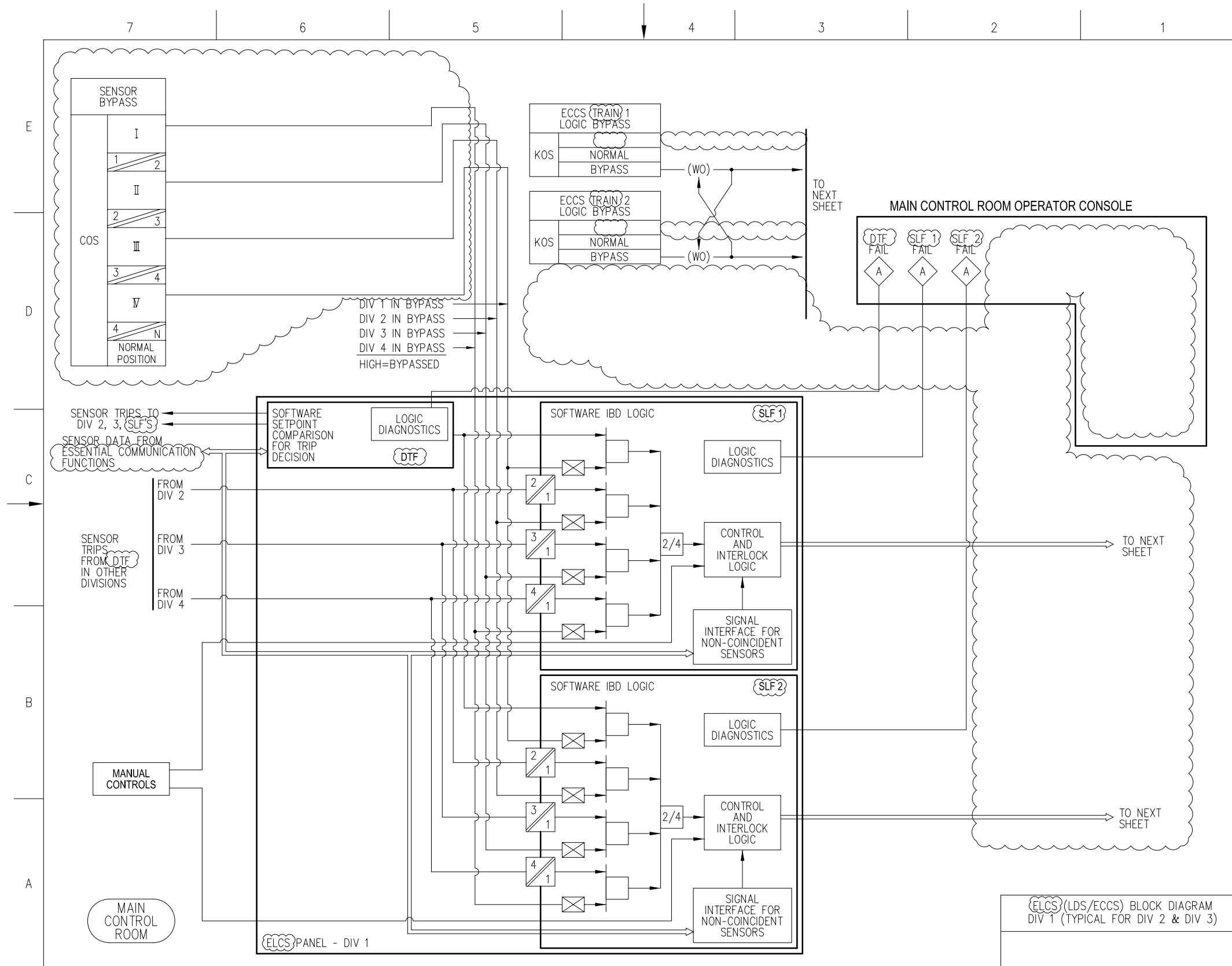


Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 36 of 37)

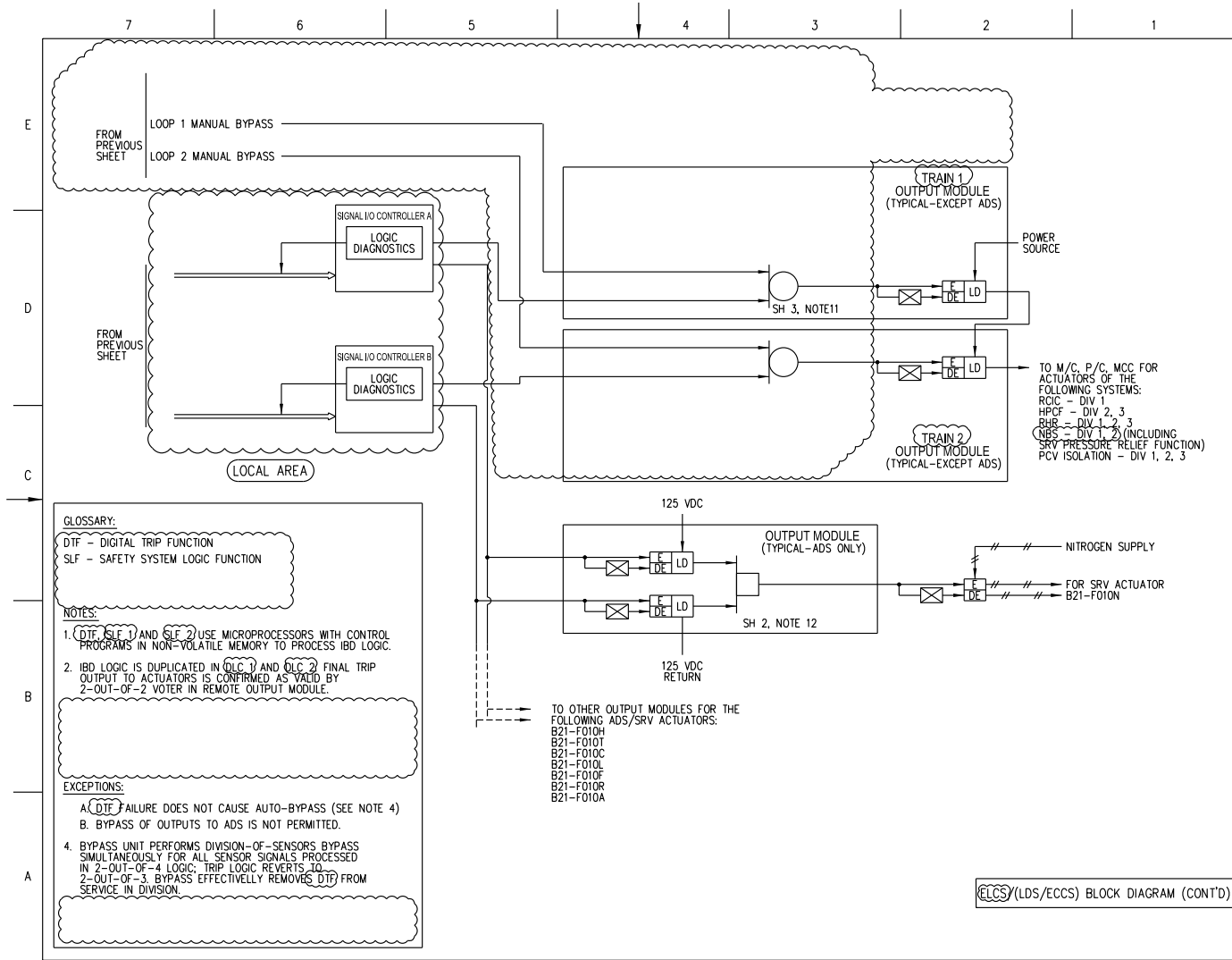


FIGURE 7.3-2 NUCLEAR BOILER SYSTEM IBD (Sheet 37 of 37)  
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Figure 7.3-2 – Nuclear Boiler System IBD (Sheet 37 of 37)