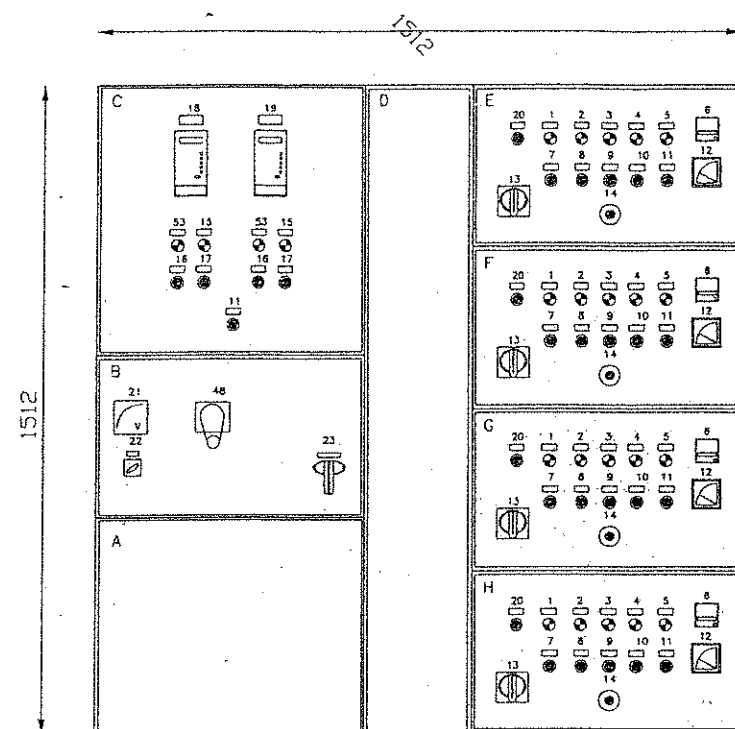
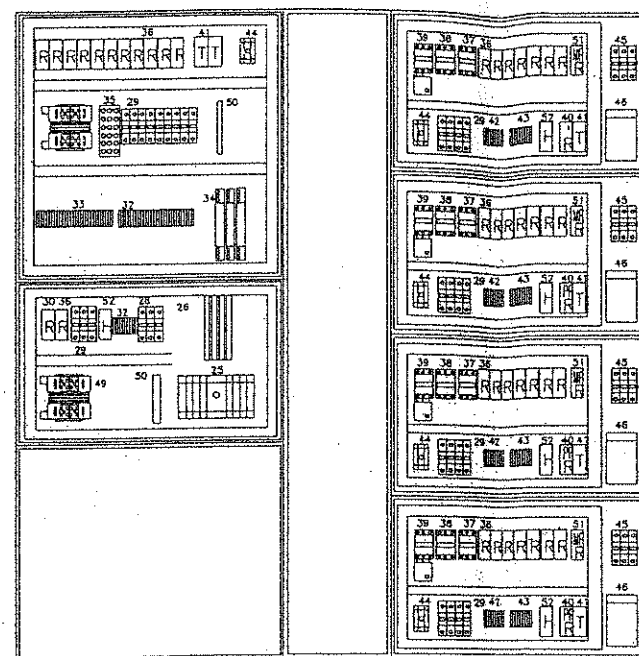
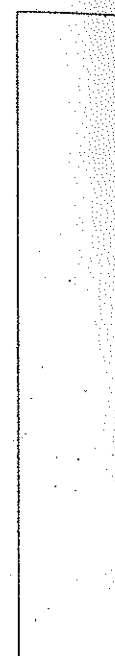




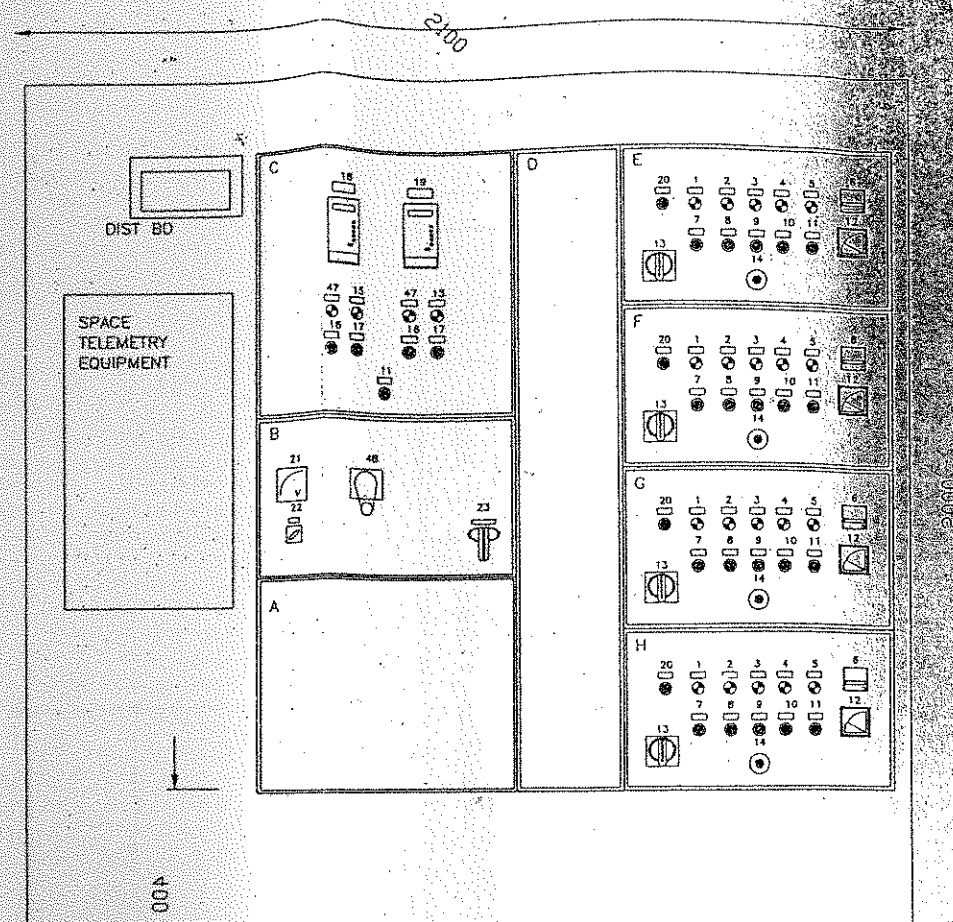
EXTERNAL VIEW



INTERNAL VIEW



END VIEW



PROPOSED KIOSK BACKBOARD ARRANGMENT

COMPARTMENT NAMES

LETTER	DESCRIPTION	MAKE
A	ESB SECTION	TABULA
B	MAIN INCOMER	TABULA
C	CONTROL & INSTRUMENTATION	TABULA
D	CABLE WAY	TABULA
E	PUMP No1	TABULA
F	PUMP No2	TABULA
G	PUMP No3	TABULA
H	PUMP No4	TABULA

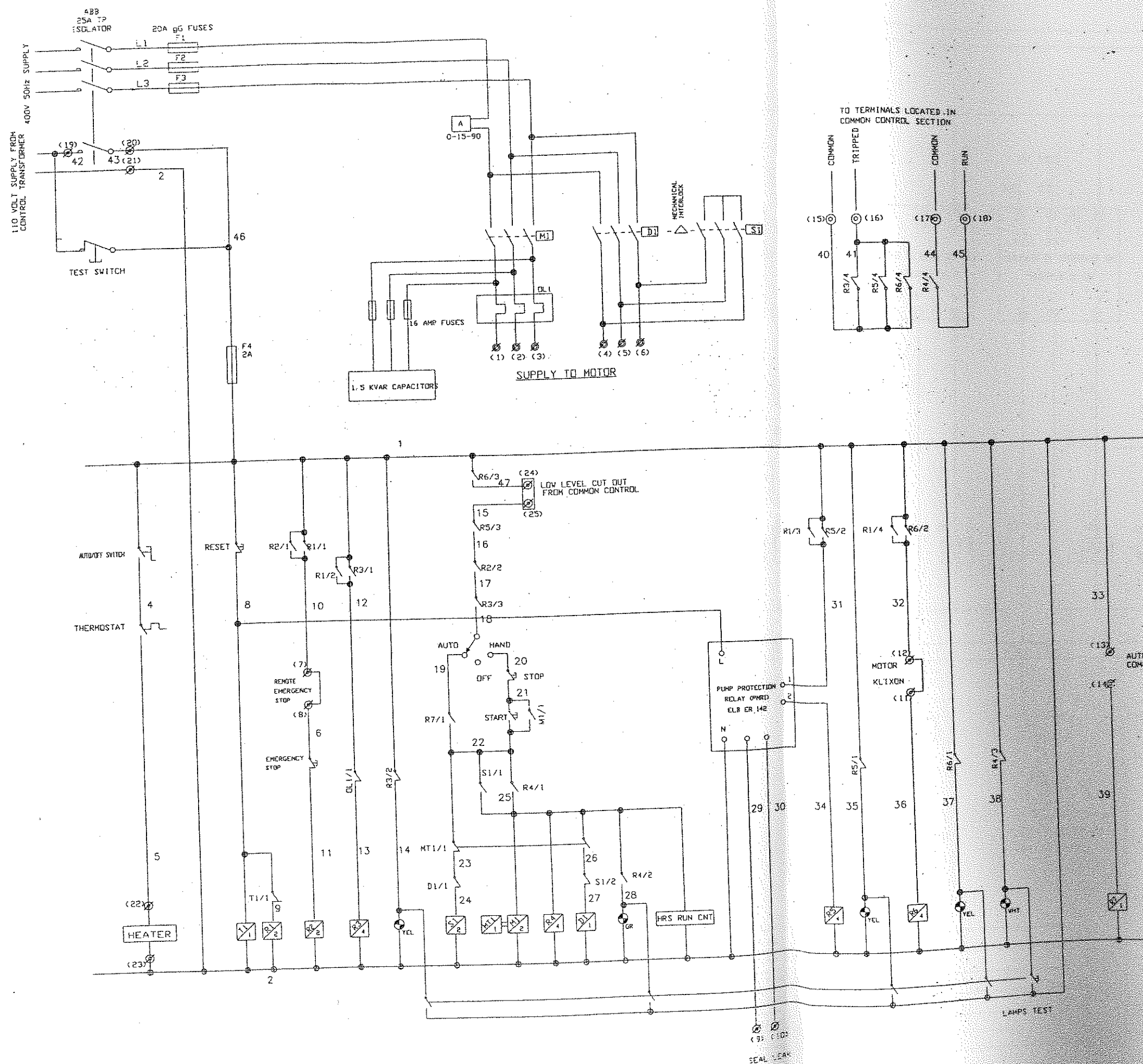
DOOR MOUNTED EQUIPMENT

NUM	DESCRIPTION	MAKE
1	STOPPED AVAILABLE	RAAS
2	MOTOR RUNNING LAMP	RAAS
3	MOTOR TRIPPED LAMP	RAAS
4	SEAL FAIL INDICATOR	RAAS
5	MOTOR HIGH TEMPERATURE TRIP INDICATOR	RAAS
6	HOURS RUN COUNTER	CROMPTON GREAVES
7	HAND OFF AUTO SWITCH	RAAS
8	START PUSH BUTTON	RAAS
9	STOP PUSH BUTTON	RAAS
10	RESET PUSH BUTTON	RAAS
11	LAMP TEST	RAAS
12	ANMETER	CROMPTON GREAVES
13	ISOLATOR HANDLE	ABB
14	EMERGENCY STOP	RAAS
15	HIGH LEVEL ALARM INDICATOR	RAAS
16	BACKUP DUTY SELECT	RAAS
17	PUMP RUN ON SELECT KEY SWITCH	RAAS
18	SUMP No 1 LEVEL CONTROLLER	MILTRONICS
19	SUMP No 2 LEVEL CONTROLLER	MILTRONICS
20	SECTION HEATER OFF AUTO SWITCH	RAAS
21	MAINS VOLT METER	CROMPTON GREAVES
22	VOLT PHASE SELECT SWITCH	RAAS
23	MAINS CHANGE OVER SWITCH	ABB
48	24V SOCKET OUTLET	RAAS
53	DUTY PUMP ON BACKUP FLOAT	ABB

PANEL MOUNTED EQUIPMENT

NUM	DESCRIPTION	MAKE
24	MAINS SWITCH	ABB
25	GENERATOR SWITCH	ABB
26	150 AMP BUSBAR	FINDER
27	CURRENT TRANSFORMERS	SACI
28	MAINS FUSES	GOULD
29	CONTROL FUSES	GOULD
30	PHASE FAIL RELAY	FINDER
31	24V TRANSFORMER	TRANLAMP
32	TELEMETRY TERMINALS (ORANGE)	CONTA CLIP
33	SECTION & FIELD TERMINALS	CONTA CLIP
34	IS BARRIERS	MTL 5018
35	24VDC POWER SUPPLY	TELE SRNG 1 AMP
36	CONTROL RELAYS	FINDER
37	STAR CONTACTOR	ABB
38	DELTA CONTACTOR	ABB
39	MAIN CONTACTOR	ABB
40	PUMP PROTECTION RELAY	FREE ISSUE
41	CONTROL TIMER	TELE
42	SECTION TERMINALS	CONTA CLIP
43	FIELD TERMINALS	CONTA CLIP
44	SECTION ISOLATOR	ABB
45	PFC FUSES	GOULD
46	PFC CAPACITORS	CONAR
49	110V TRANSFORMER	TRANLAMP
50	NEUTRAL LINK	GOULD

01	AS MANUFACTURED	14-01-08	DC	PM	SMA
REV	DETAILS OF MODIFICATIONS	DATE	DRAWN	DESIGN	REVIEW
MALLON ENVIRONMENTAL ENGINEERING LTD. 22 UPPER KILDRESS ROAD COOKSTOWN CO. TYRONE, BT80 9RS TELEPHONE No : 048-86761277 FACSIMILE No : 048-86767736		CLIENT EPS PUMPING & TREATMENT SYSTEMS MOLLOW Co CORK IRELAND TEL:022-31200 FAX:022-31250			
PROJECT <u>SUIR RIVER PUMPING STATIONS</u>		ENGINEERS E.G. PETTIT & CO SPRINGVILLE HOUSE BLACKROCK ROAD CORK TEL:021-966400 FAX: 021-966153			
DRAWING TITLE PANEL LAYOUT CP1 PUMPING STATION No 1		SCALE NTS		DRAWN MM	
		SHEET 1 OF 1		DESIGN PM	
DATE 19-09-01 REVIEW SMA					



NOTES

WIRING COLOURS

COLOUR	CABLE
BROWN	BROWN PHASE L1
RED	RED PHASE L3
YELLOW	YELLOW PHASE L2
BLUE	NEUTRAL
GREEN / YELLOW	EARTH
WHITE	TELEMETRY
GREY	110V CONTROL

MINIMUM SIZES (internal wiring)

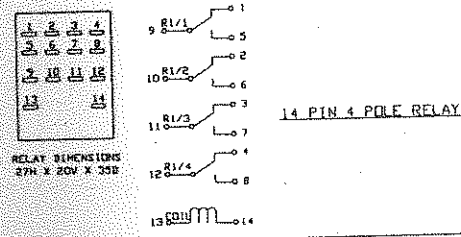
APPLICATION	SIZE (mm)
MOTOR SUPPLY & POWER	2.5MM
CONTROL WITHIN ASSEMBLIES	0.75
TELEMETRY CONTROL / DIGITAL SIGNALS	0.75

MOTOR DETAILS

M1	MOTOR RATING	5.5 Kw
D1	FULL LOAD CURRENT	10.5 AMP
S1	MAIN CONTACTOR	A9-30-10
DL	DELTA CONTACTOR	A9-30-10
	STAR CONTACTOR	A9-30-10
	OVERLOAD	TA25DU14

RELAY SCHEDULE

RELAY	DESCRIPTION	TYPE
R1	MAINS RESET RELAY	14 PIN 110V MINIATURE RELAY
R2	EMERGENCY STOP RELAY	14 PIN 110V MINIATURE RELAY
R3	OVERLOAD TRIP RELAY	14 PIN 110V MINIATURE RELAY
R4	RUN RELAY	14 PIN 110V MINIATURE RELAY
R5	SEAL LEAK RELAY	14 PIN 110V MINIATURE RELAY
R6	MOTOR KLIXON RELAY	14 PIN 110V MINIATURE RELAY
R7	AUTO START RELAY	14 PIN 110V MINIATURE RELAY
T1	MAINS RESET TIMER	14 PIN 24V MINIATURE RELAY
PHR1	PUMP PROTECTION RELAY	PSK
M1	MAIN CONTACTOR	ABB
S1	STAR CONTACTOR	ABB
D1	DELTA CONTACTOR	ABB
DL	OVERLOAD	ABB



02	AS MANUFACTURED	14-01-02	DC	PM	SMA
01	AS PER CLIENT MARKUP	24-10-01	DC	PM	SMA
REV	DETAILS OF MODIFICATIONS	DATE	DRAWN	DESIGN	REVIEW

MALLON
ENVIRONMENTAL ENGINEERING LTD.
22, UPPER KILDRESS ROAD
COOKSTOWN, CO. TYRONE, BT80 9RS
TELEPHONE No : 028 66761277
FACSIMILE No : 028 66767736

CLIENT
EPS PUMPING & TREATMENT SYSTEMS

MOLLOW, Co. CORK,
IRELAND
TEL: 022-31200
FAX: 022-31250

ENGINEERS
E.G. PETTIT & CO
SPRINGVILLE HOUSE
BLACK ROCK ROAD
CORK
TEL: 021-966400
FAX: 021-966153

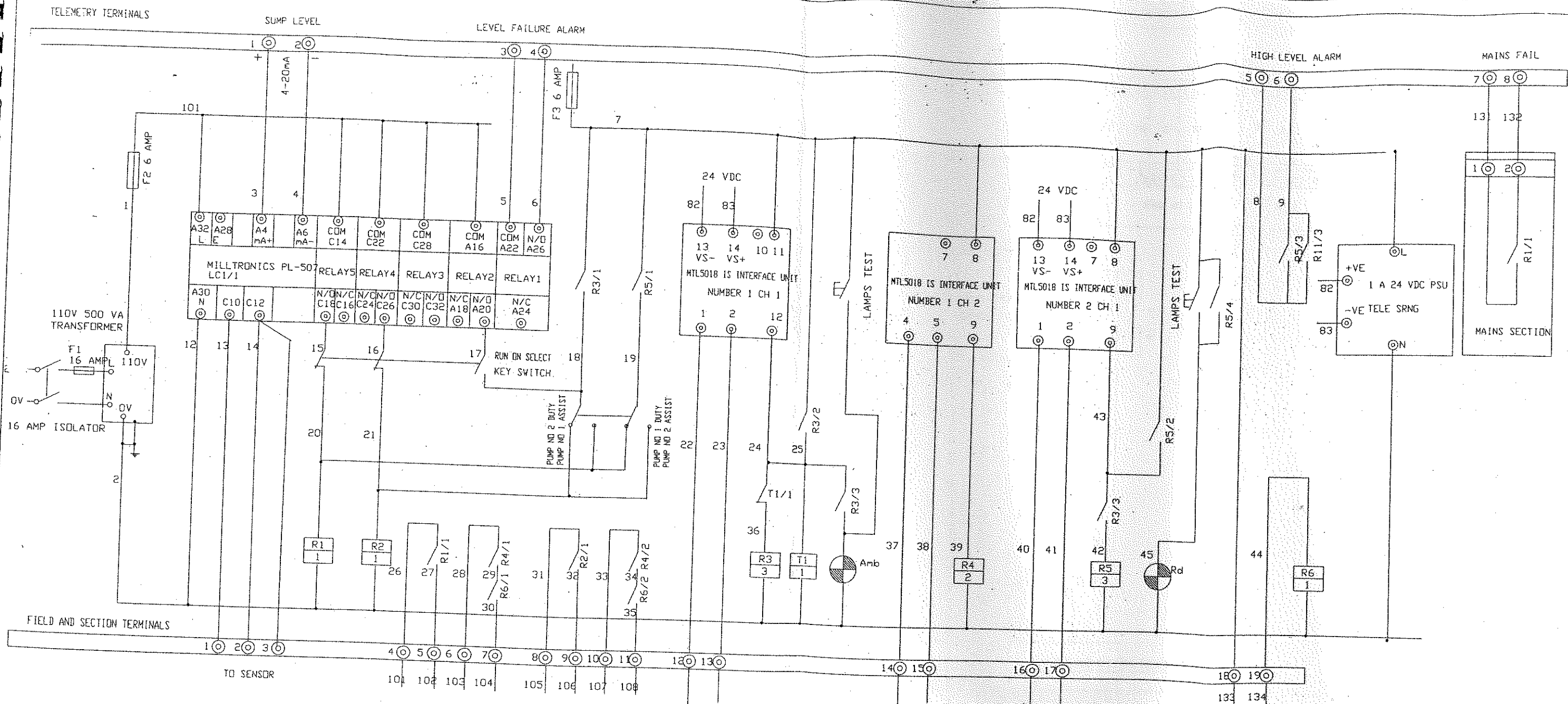
PROJECT
SUIR RIVER PUMPING STATION

DRAWING TITLE
SCALE NTS
DRAWN MM

MOTOR STARTER
CP: CONTROL PANEL
SHEET 1 OF 1
DESIGN FM

DATE 19/09/01
REVIEW SMA

DRAWING No 01-20-1-14C



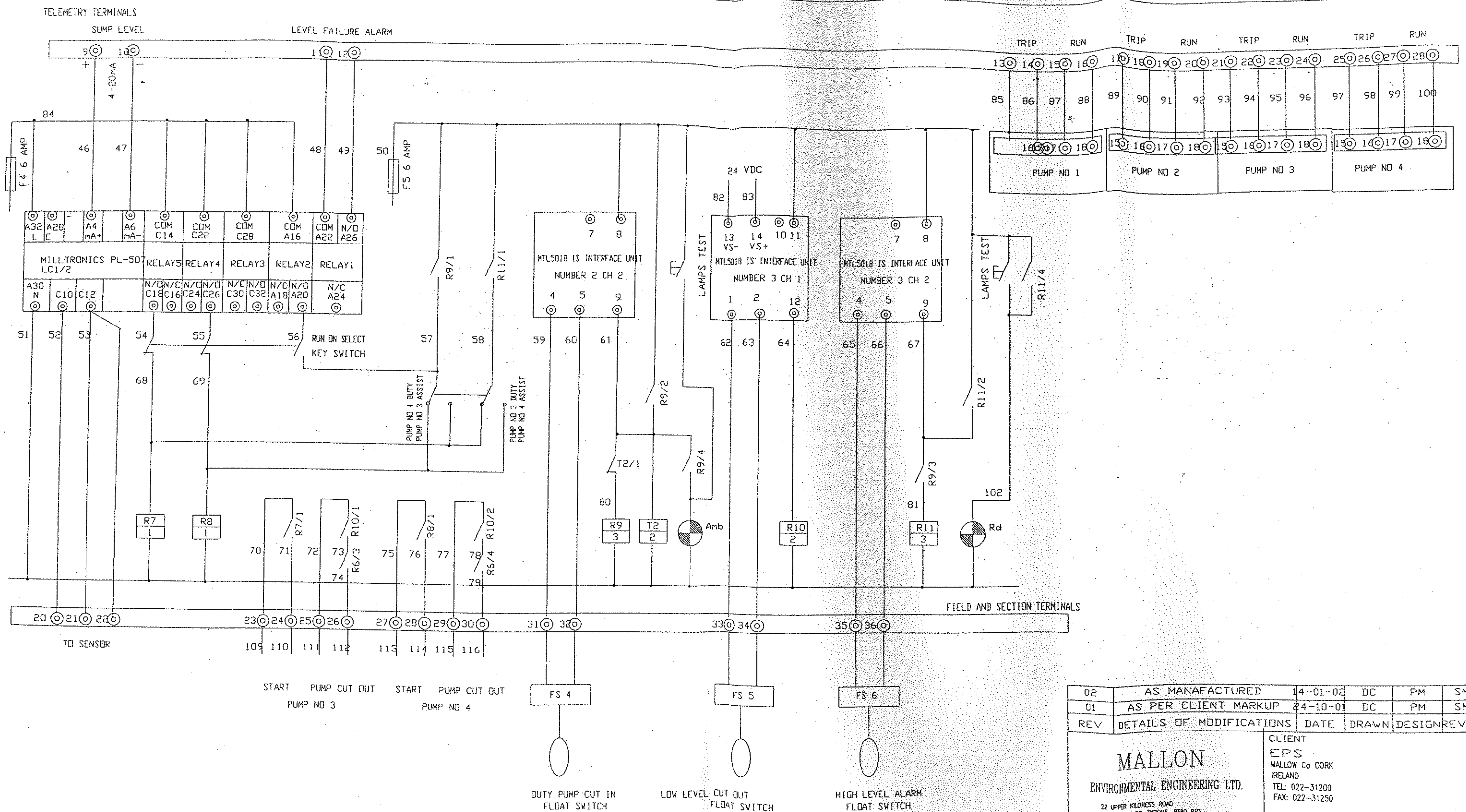
LEVEL CONTROL

- Assist pump start on high level float switch Note 1 Duty pump auto rotate
High level alarm (FS3) panel indication and telemetry duty assist enabled
Level controller high level alarm Relay 3 LED Note 3 Run on shall be enabled by key switch
- Duty pump starts on back up float (rising level) Note 4 When run on is enabled duty pump shall be manually selected
Assist pump stop signal on back up float (falling level) Note 5 Back up controls manual duty select
- Pump No 1 starts/stops on level controller
Pump No 2 starts/stops on level controller
- Note 6 High level alarm shall auto reset at duty pump cut in level
Note 7 Controller indication
- Relay 1 Controller fail
 - Relay 2 run on level
 - Relay 3 high level alarm
 - Relay 4 Pump No2 start
 - Relay 5 Pump No1 start
- Pump No 1 starts/stops on level controller
Pump No 2 starts/stops on level controller
Duty pump run on level
- Low level cut out pump inhibited in manual and auto

R1	PUMP No 1 START RELAY
R2	PUMP No 2 START RELAY
R3	DUTY PUMP START ON BACKUP FLOAT SWITCH RELAY
R4	LOW LEVEL CUT OUT RELAY
R5	HIGH LEVEL ALARM RELAY
R6	MAINS FAIL RELAY

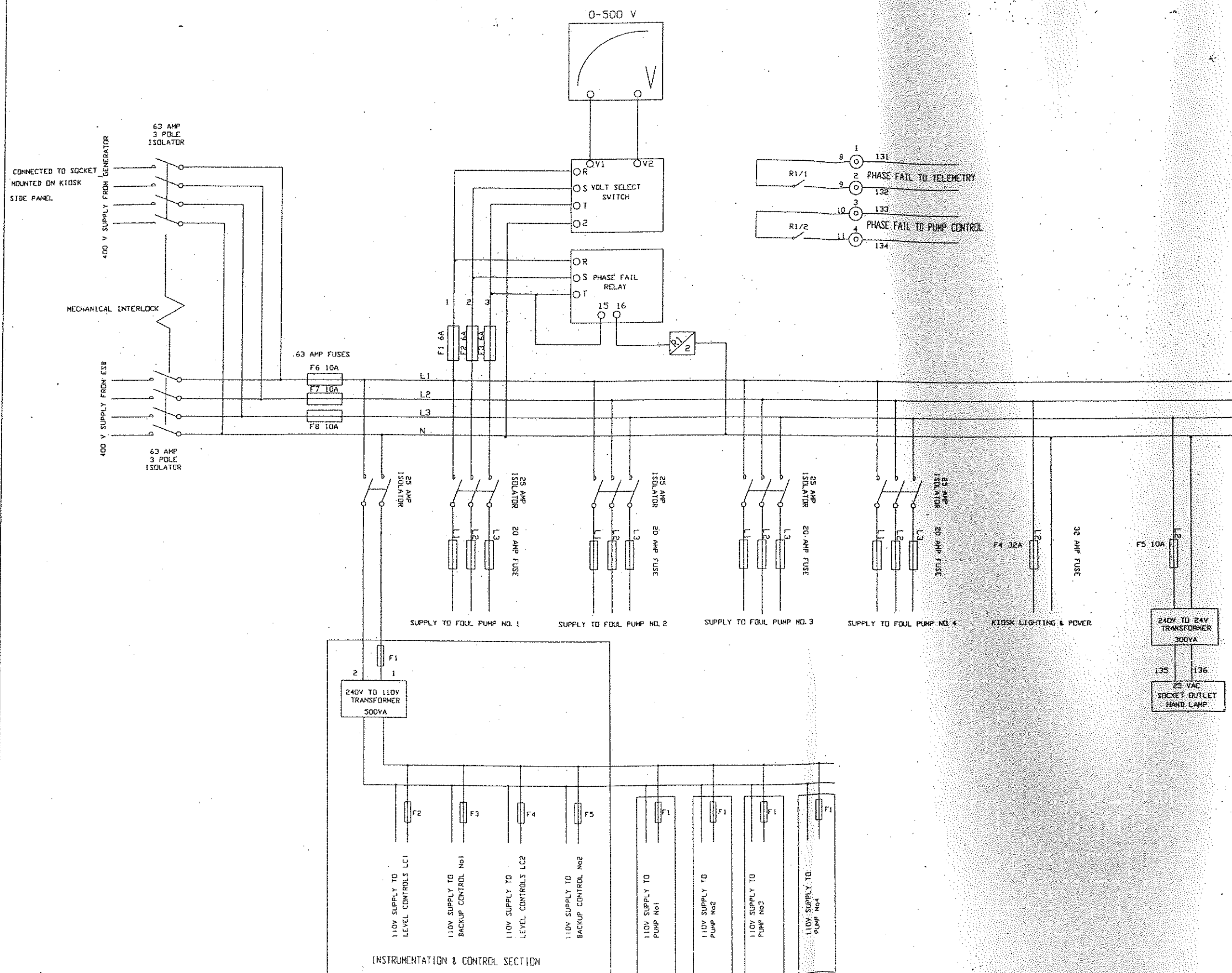
02	AS MANUFACTURED	14-01-02	DC	PM	SMA
01	AS PER CLIENT MARKUP	24-10-01	DC	PM	SMA
REV	DETAILS OF MODIFICATIONS	DATE	DRAWN	DESIGN	REVIEW

MALLON ENVIRONMENTAL ENGINEERING LTD. 22 UPPER KILDESS ROAD COOKSTOWN, CO. TYRONE, BT80 9RS TELEPHONE No : 048-85761277 FACSIMILE No : 048-85767735			CLIENT EPS MALLOW Co CORK IRELAND TEL: 022-31200 FAX: 022-31250		
PROJECT SUIR RIVER PUMPING STATION			ENGINEERS E.G. PETTIT & CO SPRINGVILLE HOUSE BLACKROCK ROAD CORK TEL: 022-966400 FAX: 022-966153		
DRAWING TITLE INSTRUMENTATION AND CONTROL PUMP No1 & No2			SCALE NTS DRAWN MM		
			SHEET 1 OF 2 DESIGN PM		
			DATE 18-09-01 REVIEW RH		
			DRAWING No 01-20-1-120		



R7	PUMP No 3 START RELAY
R8	PUMP No 4 START RELAY
R9	DUTY PUMP START ON BACK UP FLOAT SWITCH RELAY
R10	LOW LEVEL CUT OUT RELAY
R11	HIGH LEVEL ALARM RELAY

02	AS MANUFACTURED	14-01-02	DC	PM	SMA
01	AS PER CLIENT MARKUP	24-10-01	DC	PM	SMA
REV	DETAILS OF MODIFICATIONS	DATE	DRAWN	DESIGN	REVIEW
MALLON ENVIRONMENTAL ENGINEERING LTD. 22 UPPER KILDRESS ROAD, COOKSTOWN, CO. TYRONE, BT80 9RS TELEPHONE No : 048-85761277 FACSIMILE No : 048-85767736			CLIENT EPS MALLOW Co CORK IRELAND TEL: 022-31200 FAX: 022-31250		
PROJECT SUIR RIVER PUMPING STATION			ENGINEERS E.G. PETTIT & CO SPRINGVILLE HOUSE BLACKROCK ROAD CORK TEL: 022-966400 FAX: 022-966153		
DRAWING TITLE INSTRUMENTATION AND CONTROL PUMP NO3 & NO4			SCALE NTS	DRAWN MM	
			SHEET 2 OF 2	DESIGN PM	
			DATE 18-09-01	REVIEW PH	
			DRAWING No	01-20-14-130	



01	AS MANUFACTURED	14-01-02	DC	PM	SMA
REV	DETAILS OF MODIFICATIONS	DATE	DRAWN	DESIGN	REVIEW
MALLON ENVIRONMENTAL ENGINEERING LTD. 22 UPPER KILDESS ROAD COOKSTOWN CO. TYRONE BT80 9HS TELEPHONE No : 048-86761277 FACSIMILE No : 048-86767736		CLIENT EPS PUMPING & TREATMENT SYSTEMS MOLLOW CO CORK IRELAND TEL:022-31200 FAX:022-31250			
PROJECT <u>SUIR RIVER PUMPING STATIONS</u>		ENGINEERS E.G. PETTIT & CO SPRINGVILLE HOUSE BLACKROCK ROAD CORK TEL:021-966400 FAX: 021-966153			
DRAWING TITLE CONTROL PANEL CP1 MAINS DISTRIBUTION		SCALE NTS		DRAWN MM	
		SHEET 1 OF 1		DESIGN PM	
		DATE 19-05-01		REVIEW SMA	
DRAWING No 01-20-01-PL					