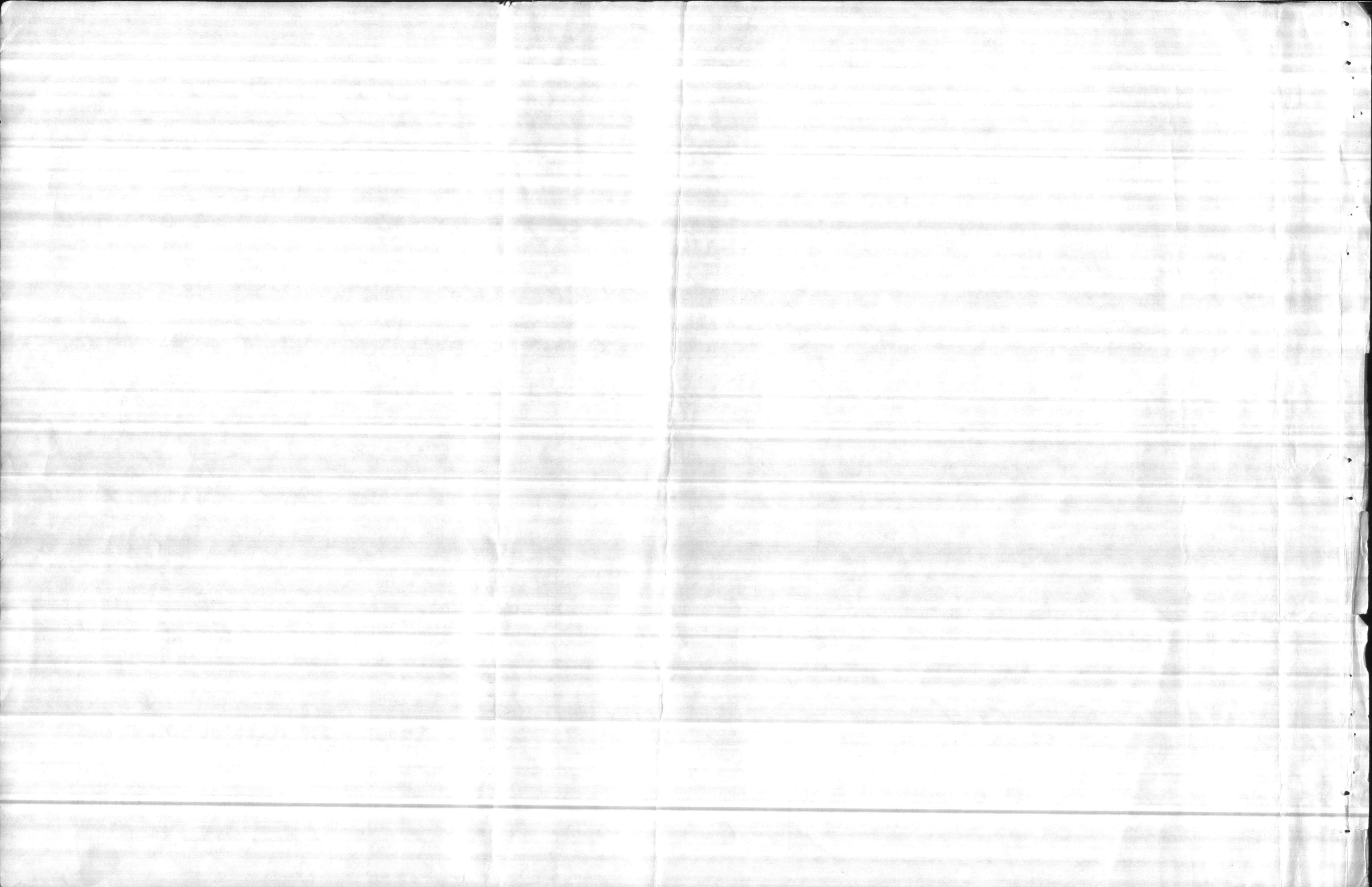


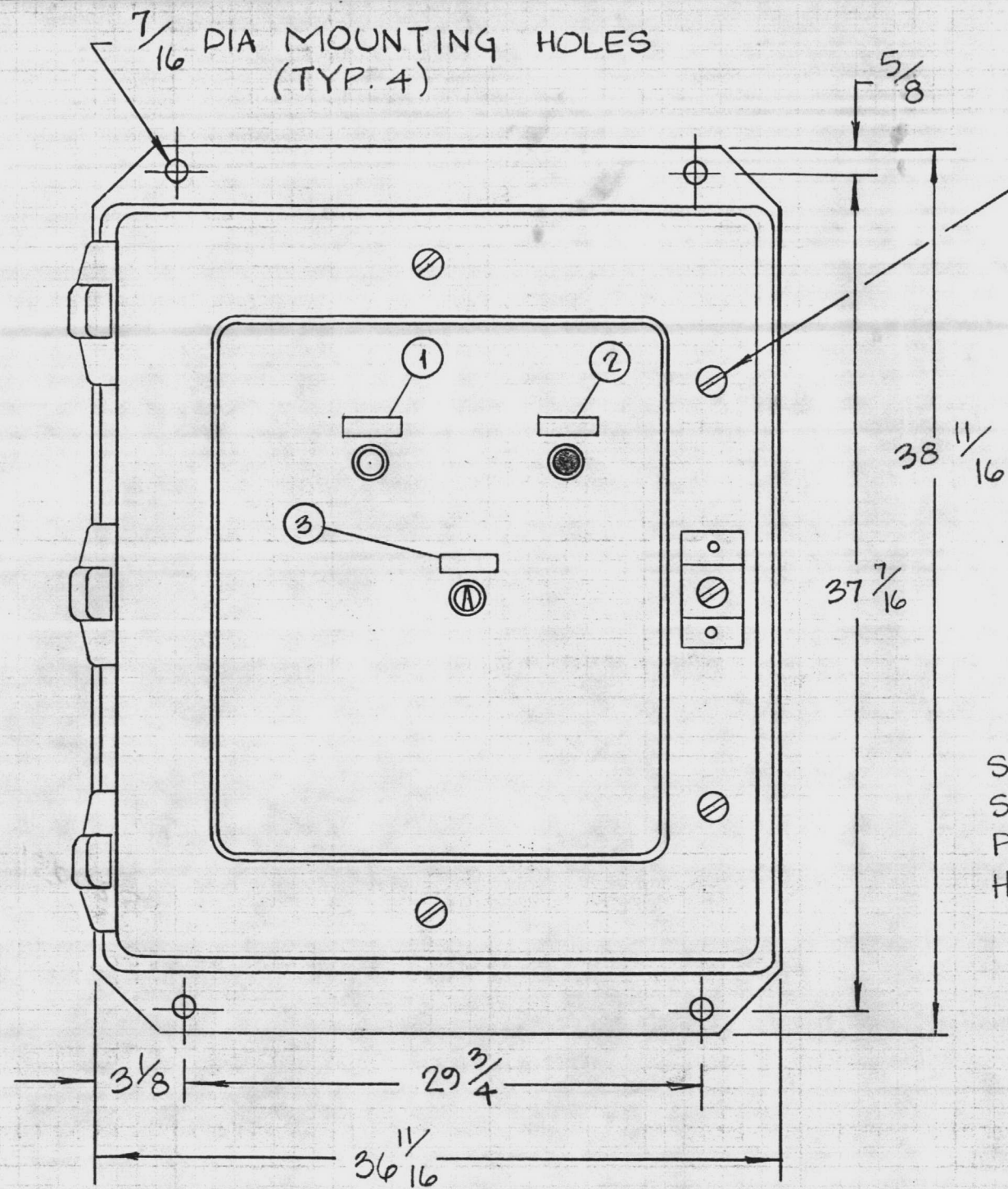
ORIGINAL

REVISIONS:  
A AS BUILT  
1-26-86 RCE

NOTES:  
1. ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.

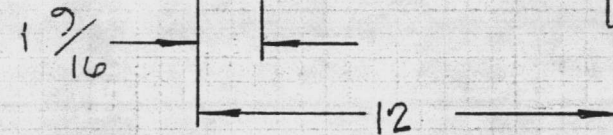
<b>AQUATROL CORPORATION</b>		TOTAL CONTROL	ST. PAUL MINNESOTA
PROJECT: HOLCOMB BLVD. W.T.P. CAMP LEJEUNE, NORTH CAROLINA.			
DR: MFT	DATE: 5-13-85	APP: KCE	DATE: 5-21-85
CNR:	DATE:	SCALE:	SHT. OF
TITLE: SYSTEM LAYOUT		DWG NO. DC4758-1	1 OF 1





STAINLESS STEEL CAPTIVE DOOR FASTENERS (TYP. 5)

STAINLESS STEEL PADLOCKING HASP



UNITS "100" - "1800"  
WELL FIELD REMOTE TELEMETRY  
UNITS (18 IDENTICAL UNITS)

NOTES:

1. ENCLOSURE: NEMA 4X FIBERGLASS.
2. FINISH: GRAY.
3. WIRING DIAGRAMS PER DWG. DC4758-3&4
4. NAMEPLATE SCHEDULE PER C4758-NPI.

**AQUATROL**  
CORPORATION

TOTAL CONTROL

ST. PAUL MINNESOTA

PROJECT: HOLCOMB BLVD. W.T.P.  
CAMP LE JEUNE, NORTH CAROLINA

DR: THIRDLER

DATE: 11-7-85

APP: RCE

DATE: 11-8-85

CHK:

DATE:

SCALE: ~

SHT. OF

TITLE:

PANEL LAYOUT

DWG NO.

BC 4758-2

REV.

B

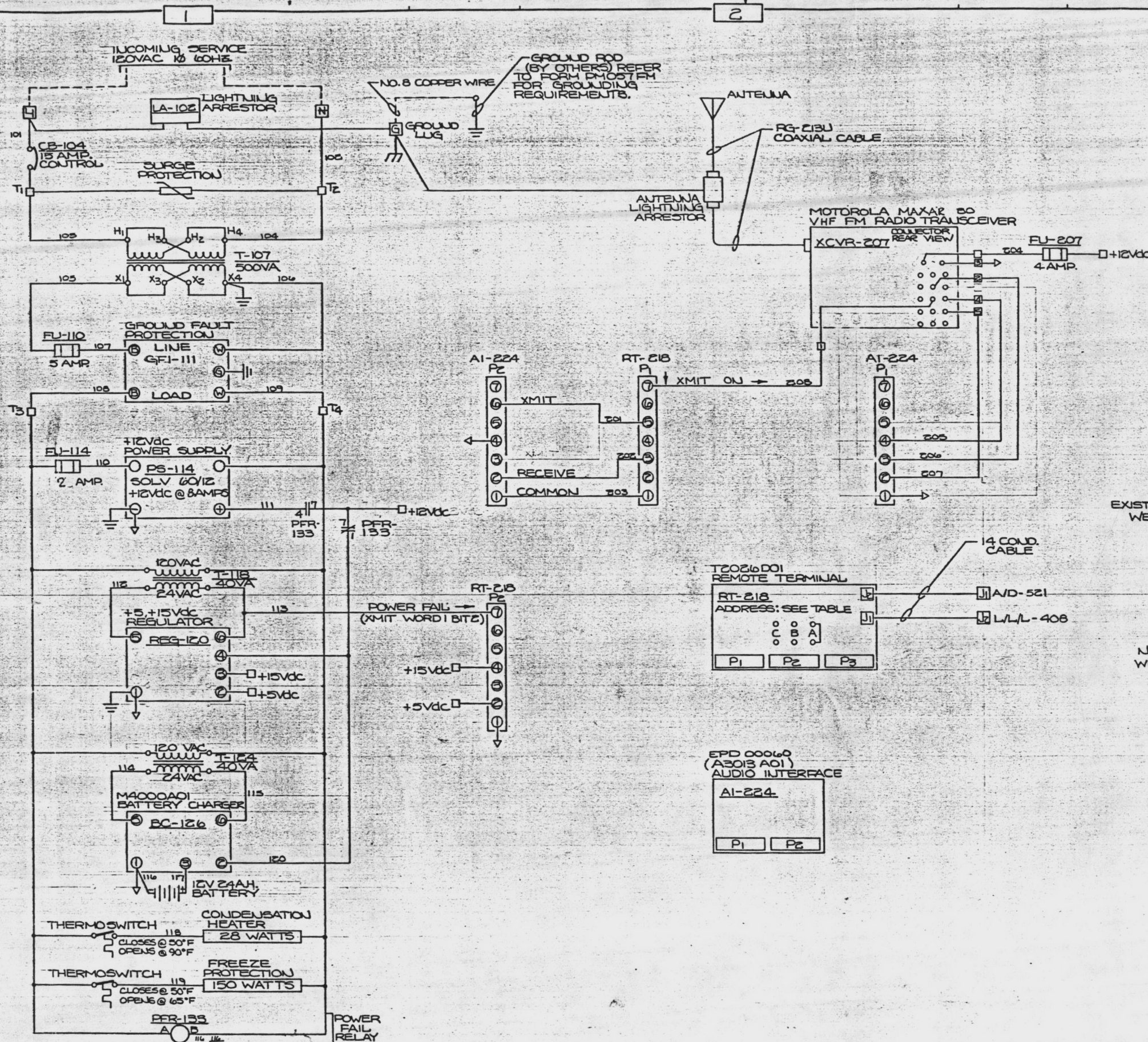
REVISIONS:

A	REDRAWN PER SUBMITTAL 11-7-85 RCE
B	AS BUILT 9-26-86 RCE

FIRST USED ON:

CRS '9/18/75 37548

157.125



UNIT	LOCATION	TELEMETRY ADDRESS	WELL PUMP FLOW RANGE
*100'	WELL SITE NO. 643	01	0- G.P.M.
*200'	WELL SITE NO. 644	02	0- G.P.M.
*300'	WELL SITE NO. 645	03	0- G.P.M.
*400'	WELL SITE NO. 646	04	0- G.P.M.
*500'	WELL SITE NO. 647	05	0- G.P.M.
*600'	WELL SITE NO. 648	06	0- G.P.M.
*700'	WELL SITE NO. 649	07	0- G.P.M.
*800'	WELL SITE NO. 650	08	0- G.P.M.
*900'	WELL SITE NO. 1	09	0- G.P.M.
*1000'	WELL SITE NO. 2	10	0- G.P.M.
*1100'	WELL SITE NO. 3	11	0- G.P.M.
*1200'	WELL SITE NO. 4	12	0- G.P.M.
*1300'	WELL SITE NO. 5	13	0- G.P.M.
*1400'	WELL SITE NO. 6	14	0- G.P.M.
*1500'	WELL SITE NO. 7	15	0- G.P.M.
*1600'	WELL SITE NO. 8	16	0- G.P.M.
*1700'	WELL SITE NO. 9	17	0- G.P.M.
*1800'	WELL SITE NO. 10	18	0- G.P.M.

ORIGINAL

UNITS \*100'-1800'  
WELL FIELD REMOTE  
TELEMETRY UNITS (18 IDENTICAL UNITS)

AGUATROL CORPORATION		TOTAL CONTROL	ST. PAUL MINNESOTA
PROJECT: HOLCOMB BLVD. WTP CAMP LEJEUNE, NORTH CAROLINA			
DR: T.C.T.	DATE: 5-13-85	APP: RCE	DATE: 5-21-85
CHK:	DATE:	SCALE:	SHT. OF
TITLE: WIRING DIAGRAM		DWG. NO. DC4758-3	C

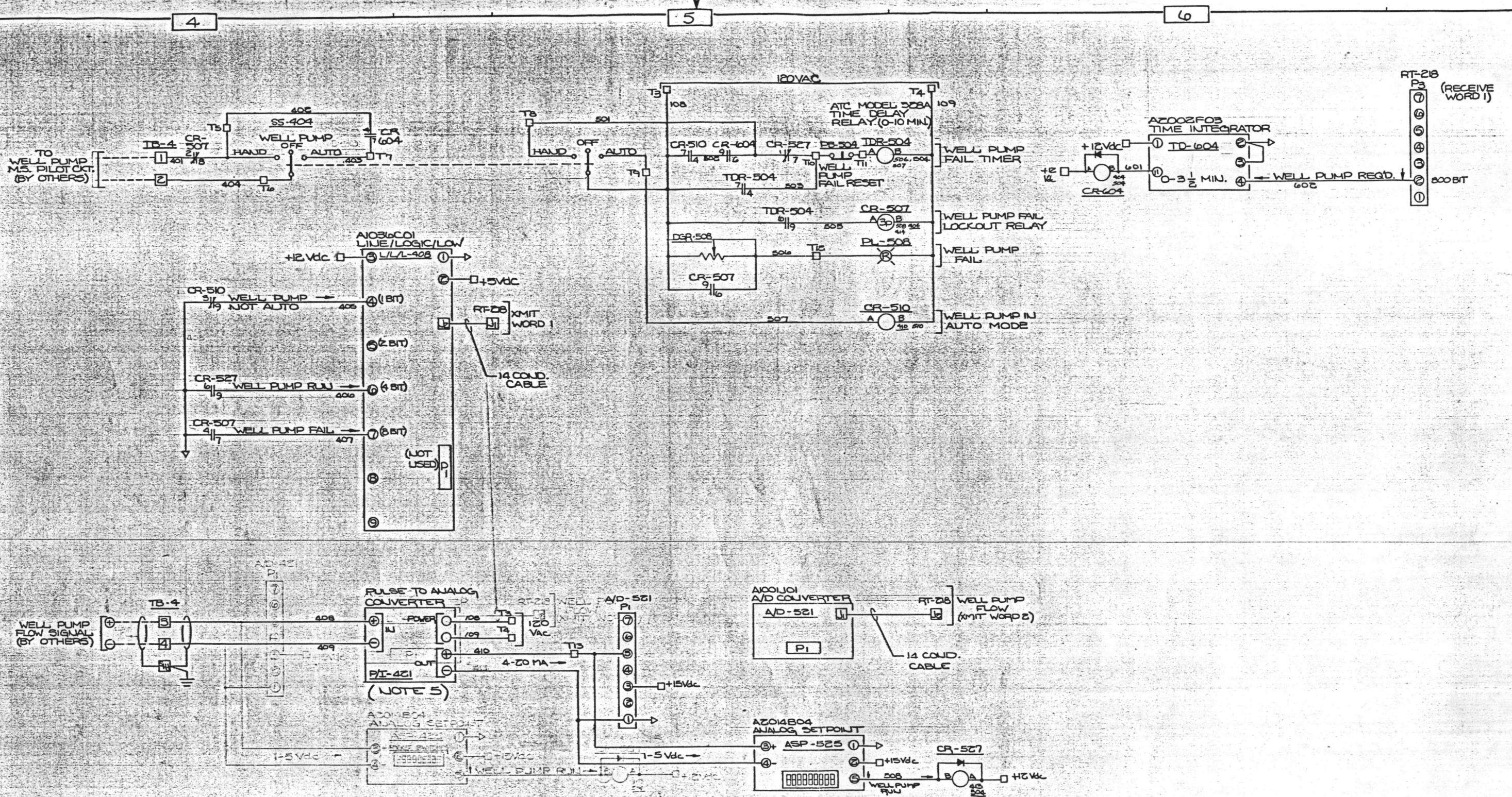
REVISIONS:

A	PER SUBMITTAL	11-7-85	RCC
B	PER REVISIONAL	6-23-86	RCC
C	AS BUILT	9-26-86	RCC

- NOTES:
1. ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.
  2. PANEL LAYOUT PER DWG. BC4758-2.
  3. U.L. LABEL.
  4. BRADY LABEL ALL WIRES.

KWP 11 D 13

12 JDC



ORIGINAL

UNITS '100'-'1800'  
WELL FIELD REMOTE TELEMETRY  
UNITS (18 IDENTICAL UNITS)

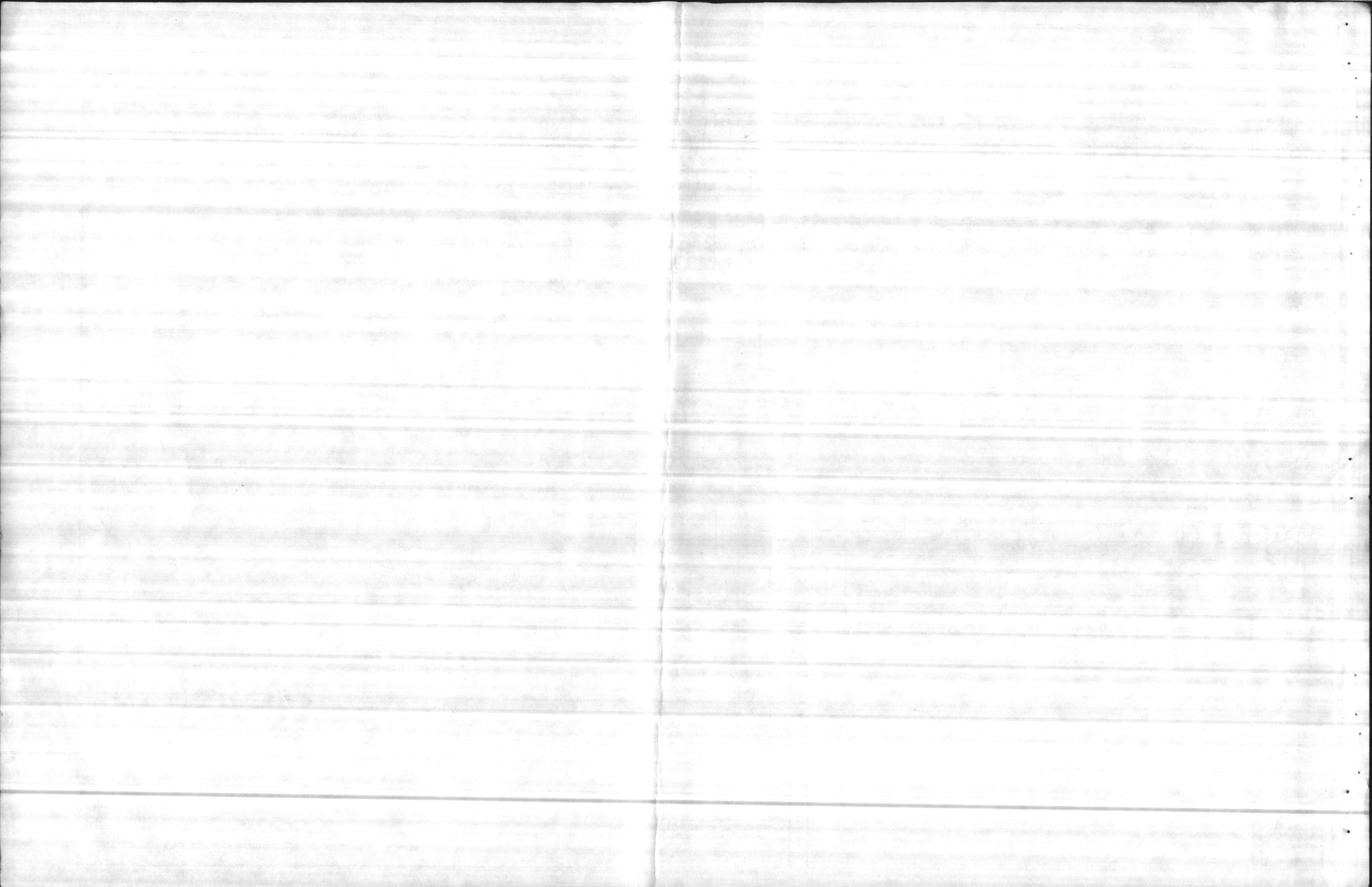
<b>AQUATROL</b>		TOTAL CONTROL	ST. PAUL MINNESOTA
PROJECT: HOLCOMB BLVD. W.T.P. CAMP LE JEUNE, NORTH CAROLINA			
DR: T.C.T.	DATE: 5-14-85	APP: RCE	DATE: 5-27-85
CNR:	DATE:	SCALE:	SHT. OF
TITLE: WIRING DIAGRAM		DWG. NO. DC4758-4	11 B

- NOTES:
1. ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.
  2. PANEL LAYOUT PER DWG. BC4758-2.
  3. U.L. LABEL.
  4. BRADY LABEL ALL WIRES.
  5. LEAVE 3"X3" SPACE ON CHASSIS FOR P/I CONVERTER TO BE SUPPLIED & MOUNTED BY OTHERS.

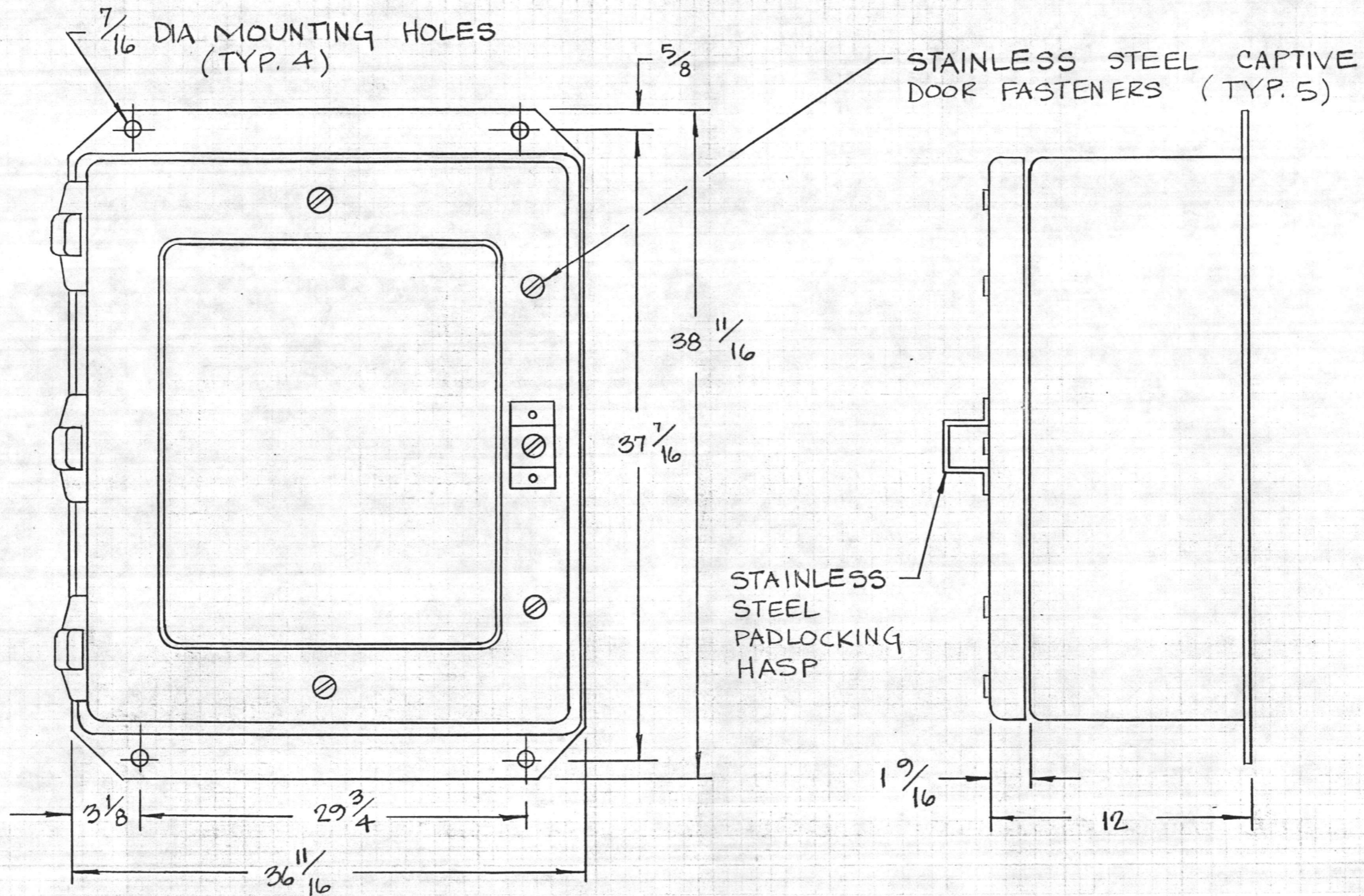
REVISIONS:

A	PER SUPPLEMENTAL 6-23-86 RCE
B	AS BUILT 9-26-86 RCE

DATE: 9/18/75  
FIRST USED ON:



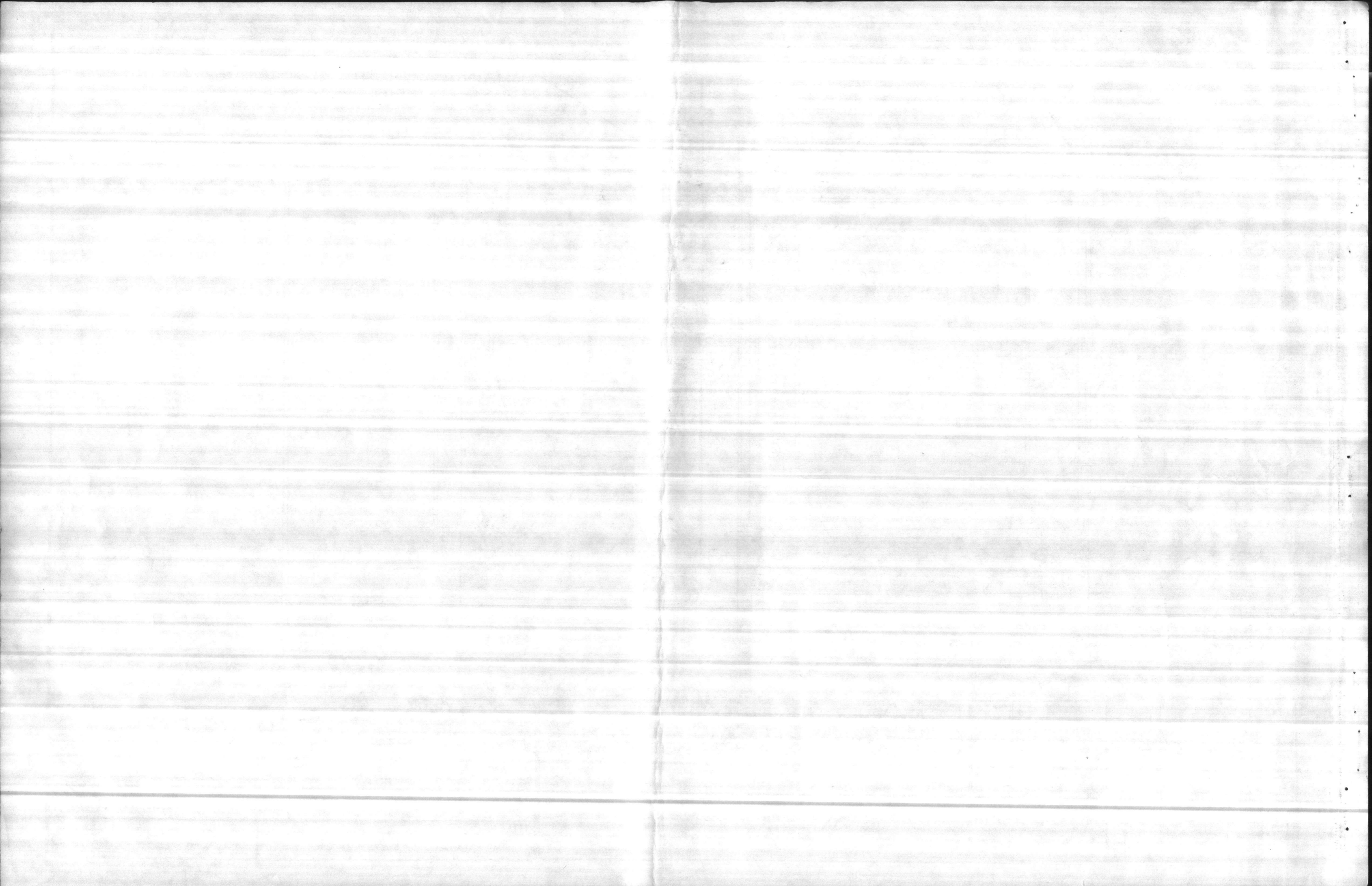


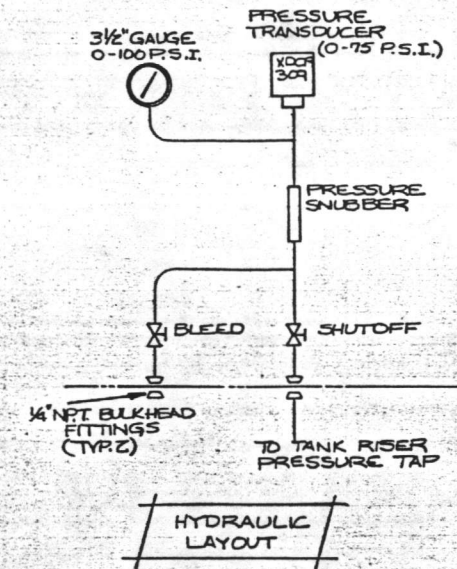
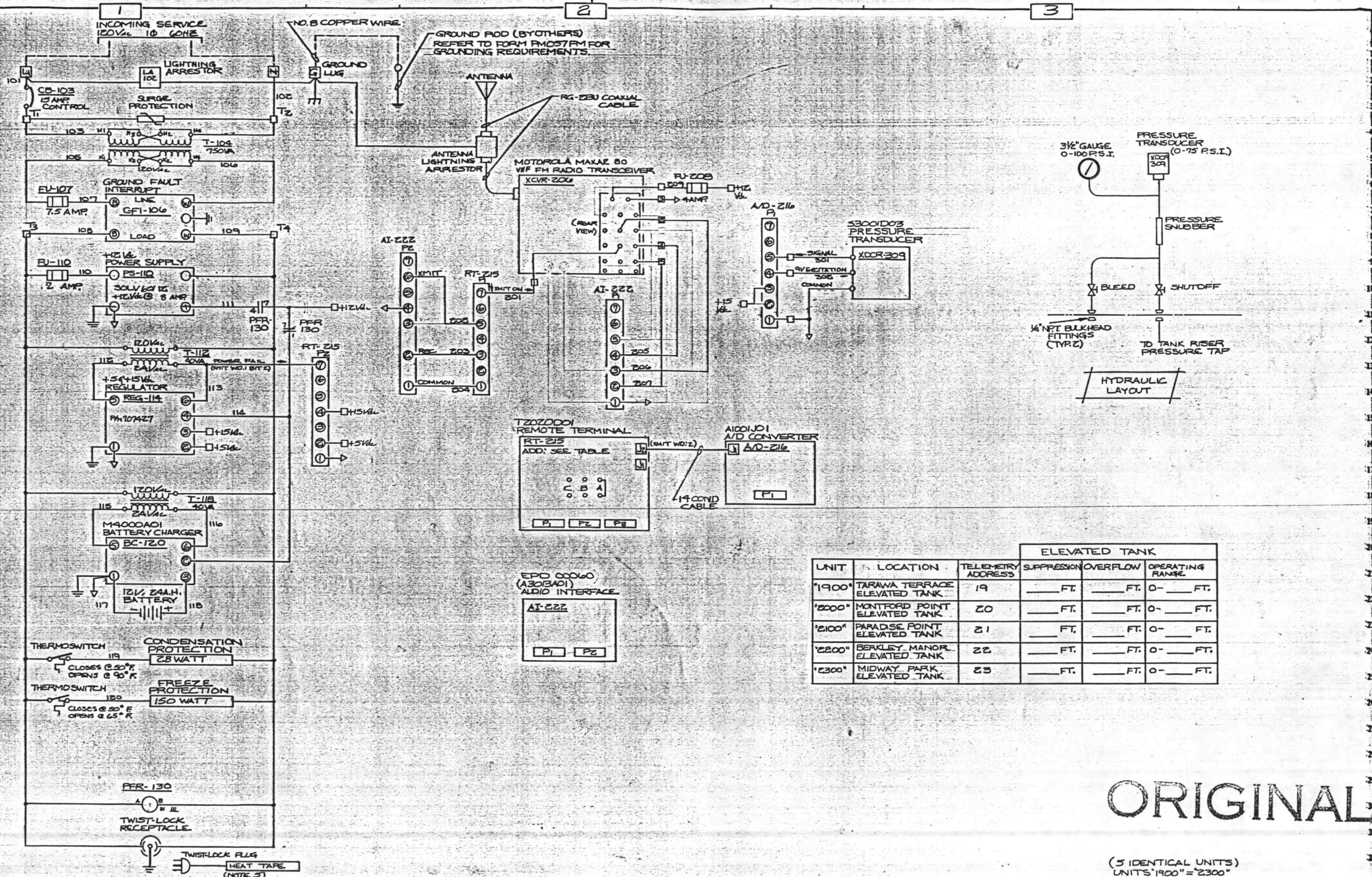


UNITS "1900" - "2300" (5 IDENTICAL UNITS)  
ELEVATED TANK LEVEL TRANSMITTERS

Ces 9/18/75 37548

FIRST USED ON:	REVISIONS:	A REDRAWN PER SUBMITTAL 11-7-85 RCE	NOTES:	1. ENCLOSURE: NEMA 4X HOFFMAN.	<b>AQUATROL</b> CORPORATION TOTAL CONTROL ST. PAUL MINNESOTA	
		B AS BUILT 9-26-86 RCE		2. FINISH: GRAY FIBERGLASS.		PROJECT: HOLCOMB BLVD. W.T.P. CAMP LE JEUNE, NORTH CAROLINA
			3. WIRING DIAGRAM PER DWG, DC4758-6.	DR: T.HIRDLER	DATE: 11-7-85	
				CHK:	DATE:	
				TITLE: PANEL LAYOUT	APP: RCE	DATE: 11-8-85
				DWG NO. BC-4758-5	SCALE: ~	SHT. OF
				REV. B		





ELEVATED TANK					
UNIT	LOCATION	TELEMETRY ADDRESS	SUPPRESSION	OVERFLOW	OPERATING RANGE
'1900'	TARAWA TERRACE ELEVATED TANK	19	___ FT.	___ FT.	0- ___ FT.
'2000'	MONTFORD POINT ELEVATED TANK	20	___ FT.	___ FT.	0- ___ FT.
'2100'	PARADISE POINT ELEVATED TANK	21	___ FT.	___ FT.	0- ___ FT.
'2200'	BERKLEY MANOR ELEVATED TANK	22	___ FT.	___ FT.	0- ___ FT.
'2300'	MIDWAY PARK ELEVATED TANK	23	___ FT.	___ FT.	0- ___ FT.

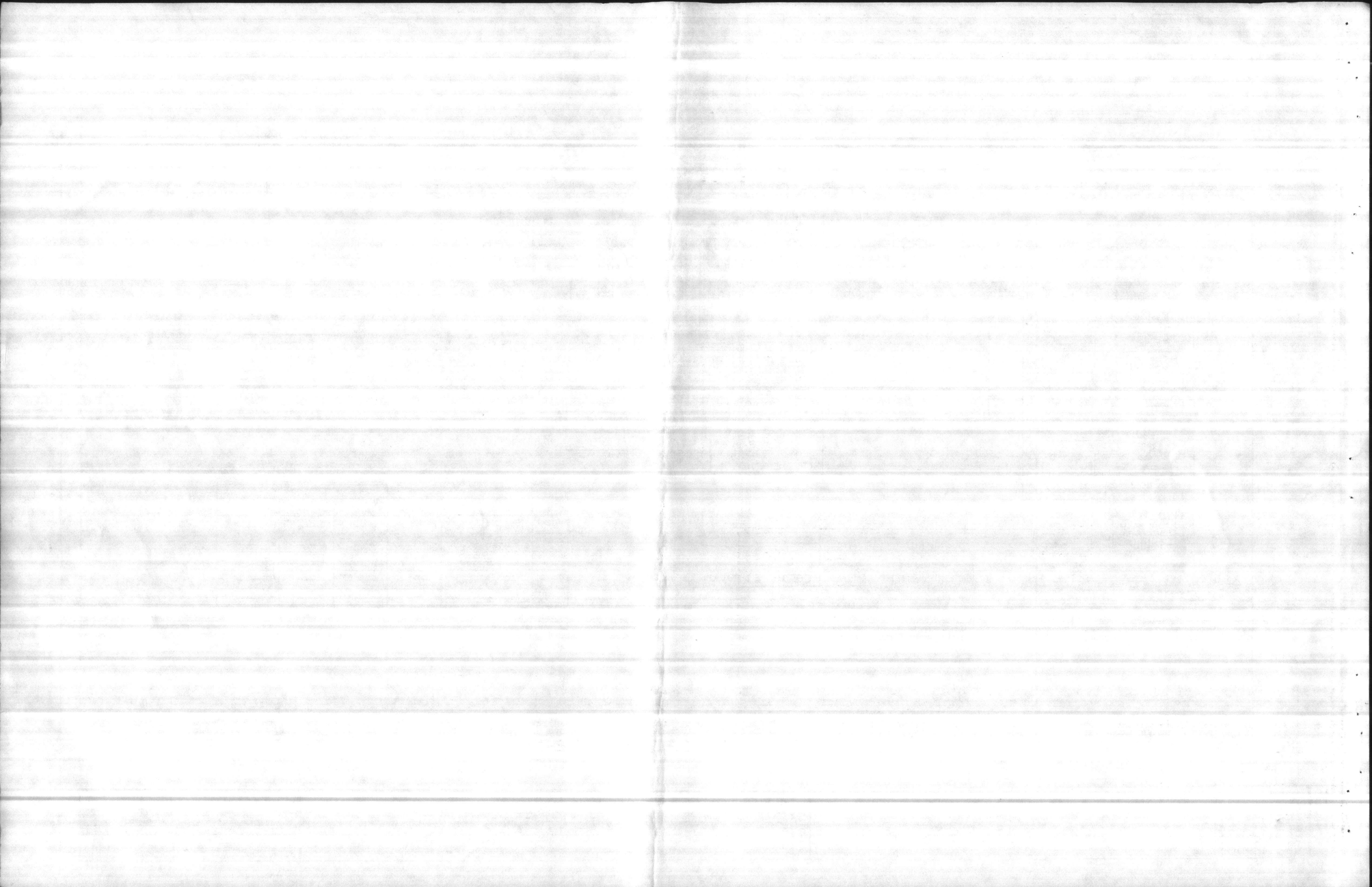
**ORIGINAL**

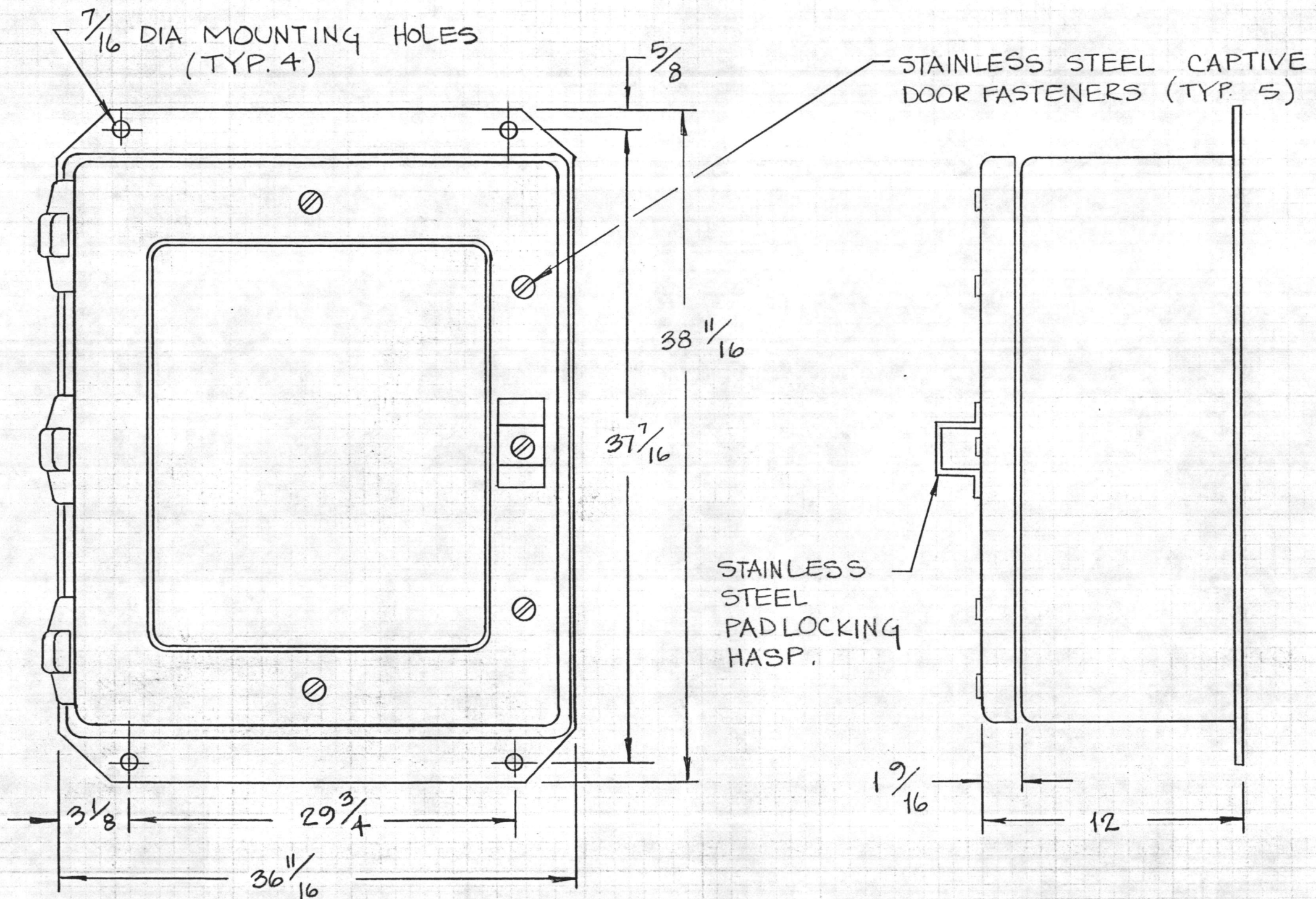
(5 IDENTICAL UNITS)  
UNITS '1900' - '2300'  
ELEVATED TANK LEVEL TRANSMITTER

REVISED	DATE	BY
A PER SUBMITTAL	11-7-85	RCE
B PER RESUBMITTAL	6-23-86	RCE
C AS BUILT	9-26-86	RCE

- NOTES:**
1. ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.
  2. PANEL LAYOUT PER DWG BC4758-5.
  3. U.L. LABEL.
  4. BRADY LABEL ALL WIRES.
  5. PROVIDED BY AQUATROL FOR MOUNTING ON TANK RISER TAP LINE.

<b>AQUATROL CORPORATION</b>		TOTAL CONTROL	ST. PAUL MINNESOTA
PROJECT: HOLCOMB BLVD. W.T. P. CAMP LEJEUNE, NORTH CAROLINA			
DR: MFM	DATE: 5-12-85	APP: RCE	DATE: 5-21-85
CHK: MFM	DATE:	SCALE:	SHT. OF
TITLE: HYDRAULIC LAYOUT & WIRING DIAGRAM		DWG NO. DC-4758-6	C

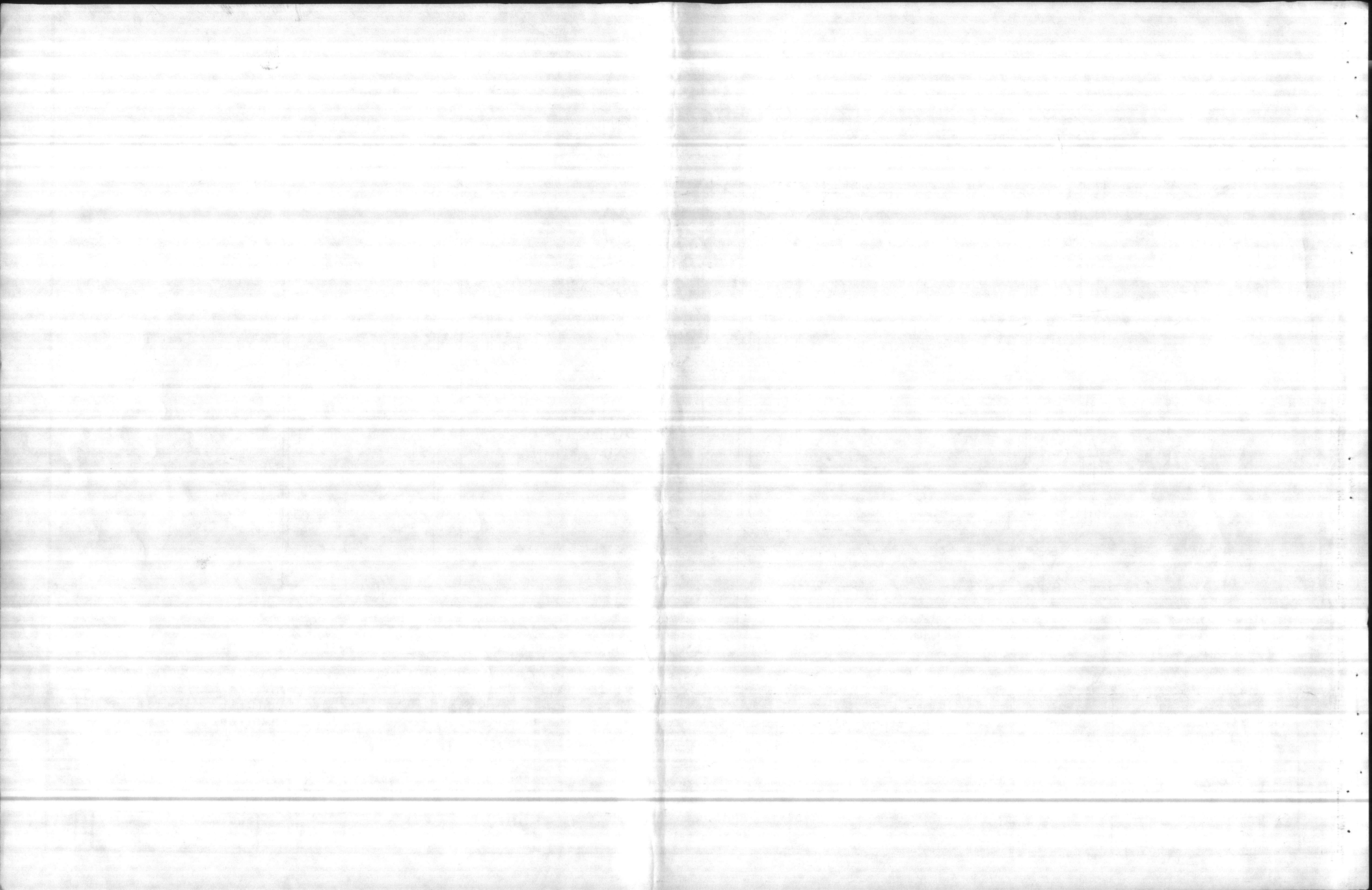


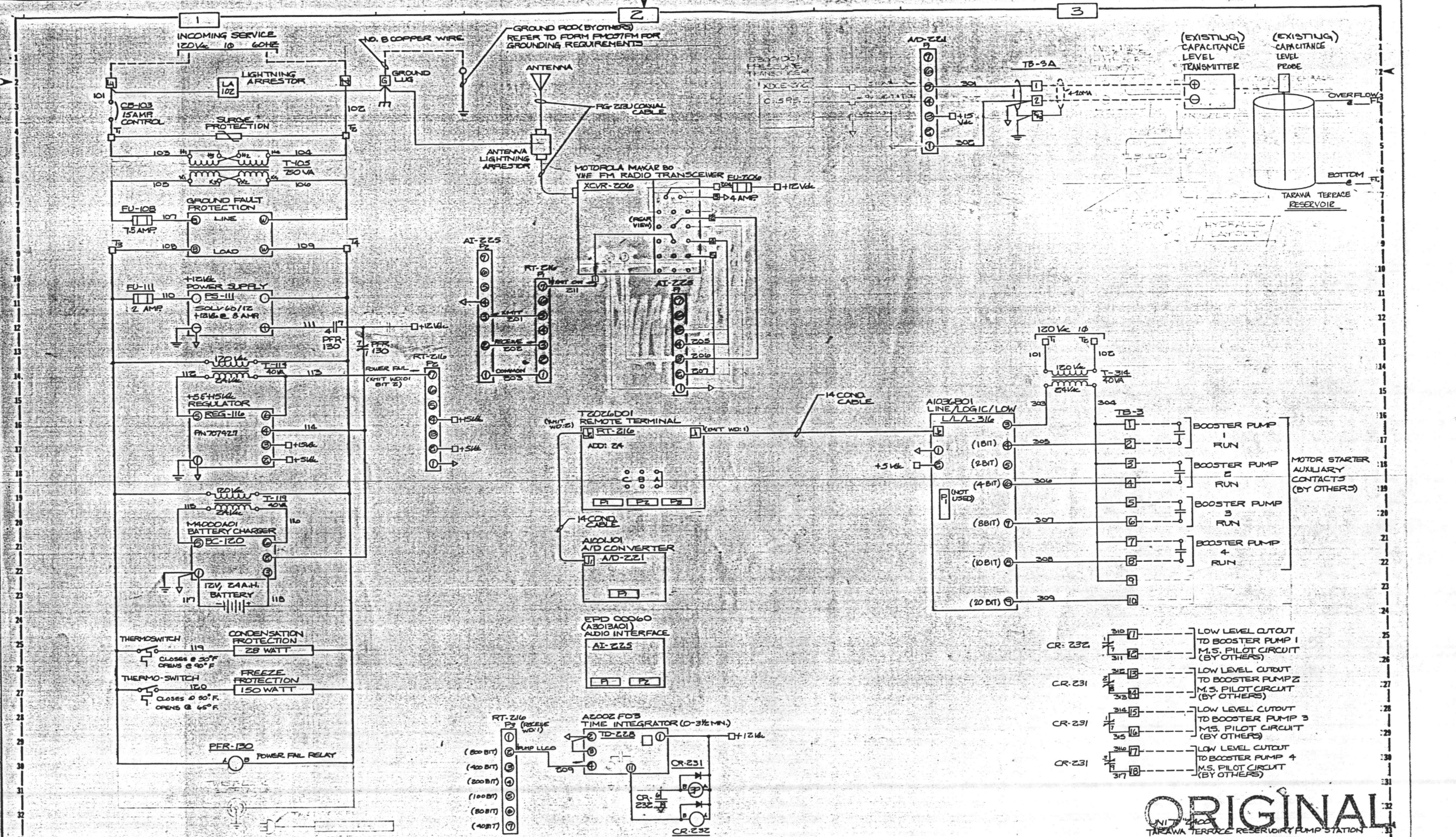


UNIT "2400"  
 TARAWA TERRACE RESERVOIR & PUMP STATION

CRES '9/18/75 37548

FIRST USED ON:	REVISIONS:	A REDRAWN PER SUBMITTAL 11-7-85 RCE	NOTES:	1. ENCLOSURE: NEMA 4X HOFFMAN.	<b>AQUATROL</b> CORPORATION TOTAL CONTROL ST. PAUL MINNESOTA	PROJECT: HOLCOMB BLVD. W.T.P. CAMP LE JEUNE, NORTH CAROLINA
		B AS BUILT 9-26-86 RCE		2. FINISH: GRAY FIBERGLASS.		
			3. WIRING DIAGRAM PER DWG. DC4758-8.	CHK: DATE: SCALE: SHT. OF	TITLE: PANEL LAYOUT	DWG NO. BC4758-7
						REV. B





DATE: 5/18/75  
FIRST USED ON:

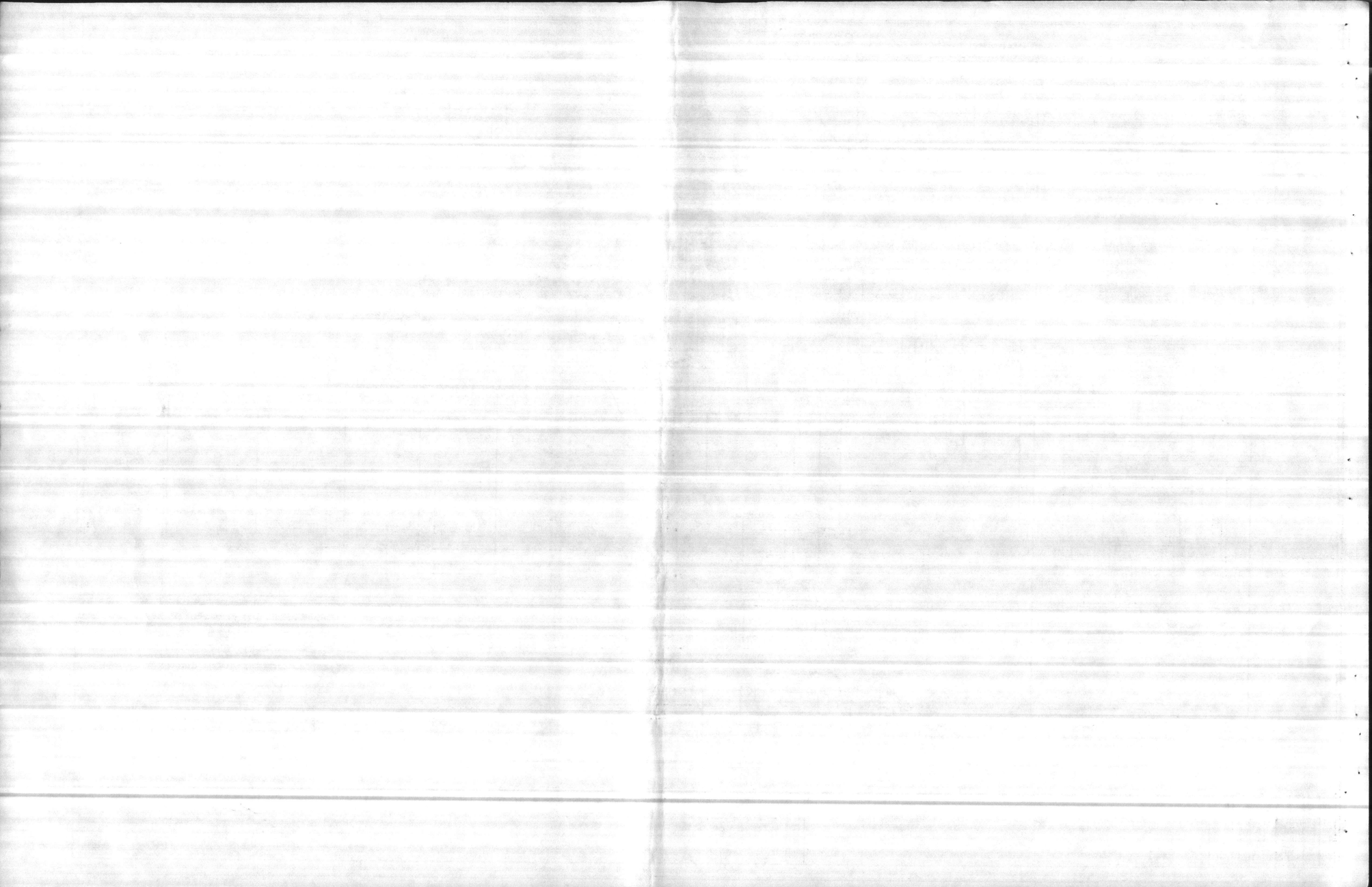
REVISIONS:	BY:	DATE:
A	PER SUBMITTAL	11-7-85
B	PER RESUBMITTAL	1-23-86
C	AS BUILT	7-26-86

- NOTES:
1. ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.
  2. PANEL LAYOUT PER DWG. BC4758-7.
  3. U.L. LABEL.
  4. BRADY LABEL ALL WIRES.

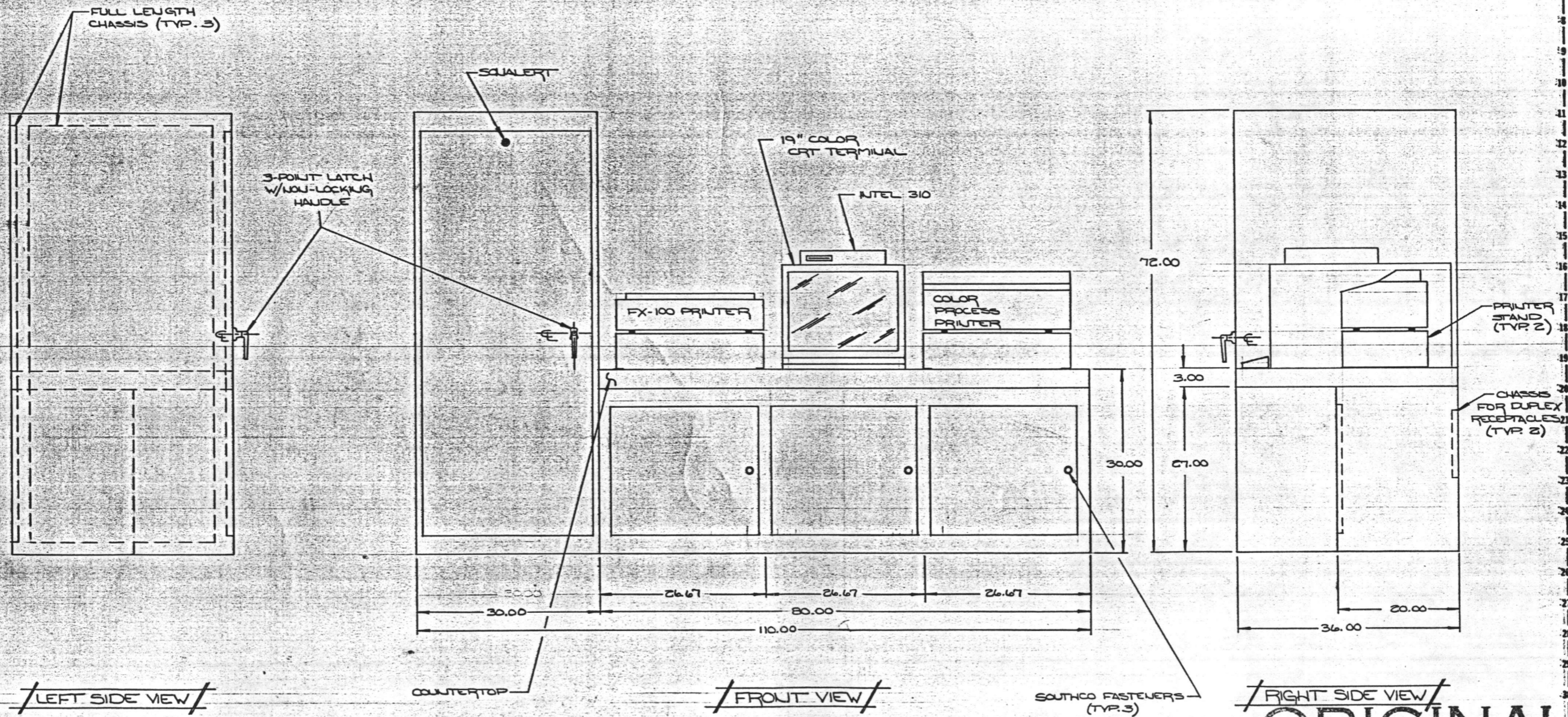
**ORIGINAL**

TARAWA TERRACE RESERVOIR PUMP STATION

<b>AQUATROL CORPORATION</b>		<b>TOTAL CONTROL</b>		<b>ST. PAUL MINNESOTA</b>	
PROJECT: HOLCOMB BLVD. W.T.P. CAMP LEJEUNE, NORTH CAROLINA					
DR: MFM	DATE: 5-14-85	APP: RCE	DATE: 5-21-85		
CHK: MFM	DATE:	SCALE:	SHT. OF		
TITLE: WIRING DIAGRAM	DWG. NO. DC4758-B				







**ORIGINAL**

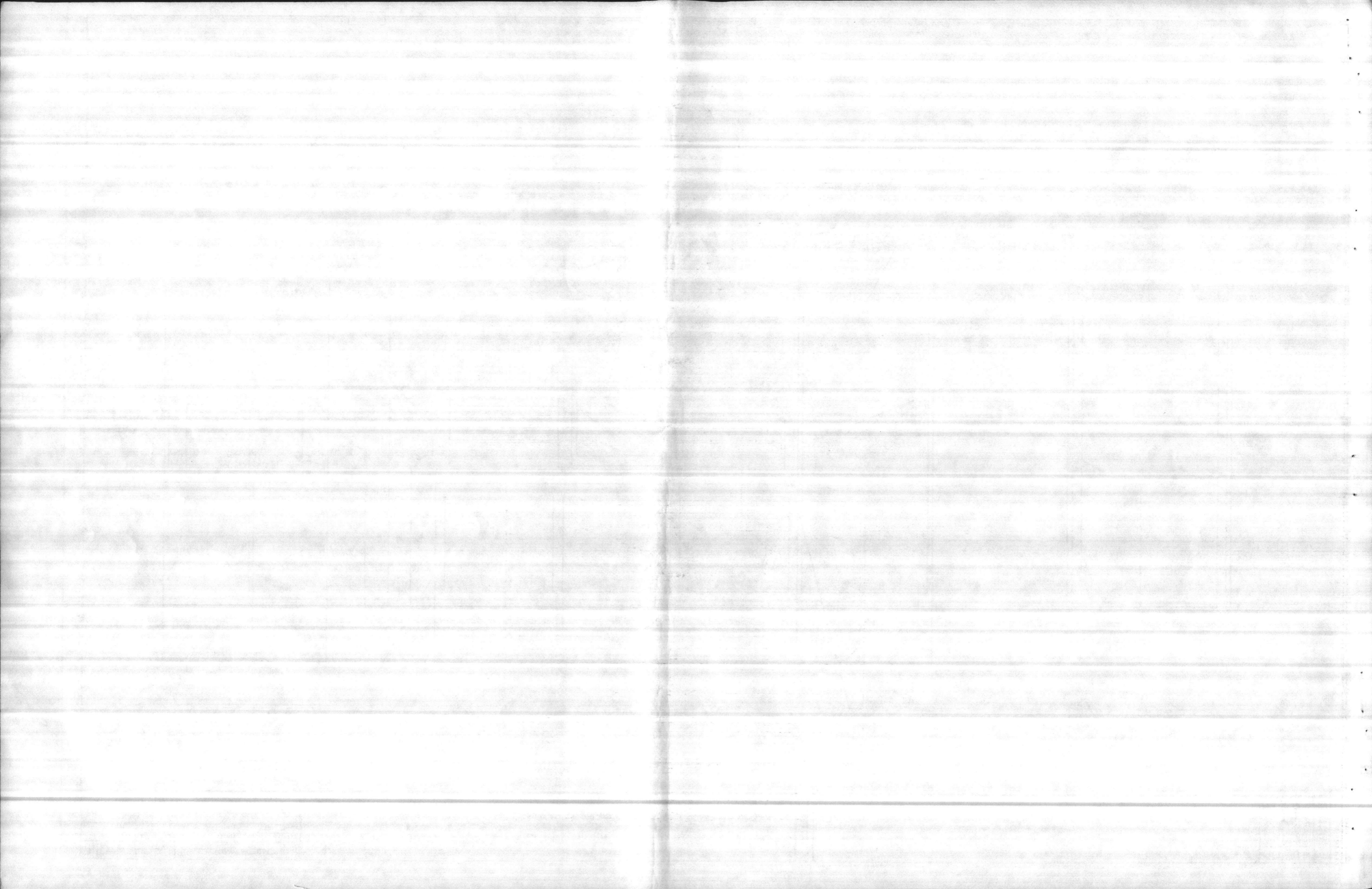
UNIT 2500  
TREATMENT PLANT  
COMPUTER CONSOLE

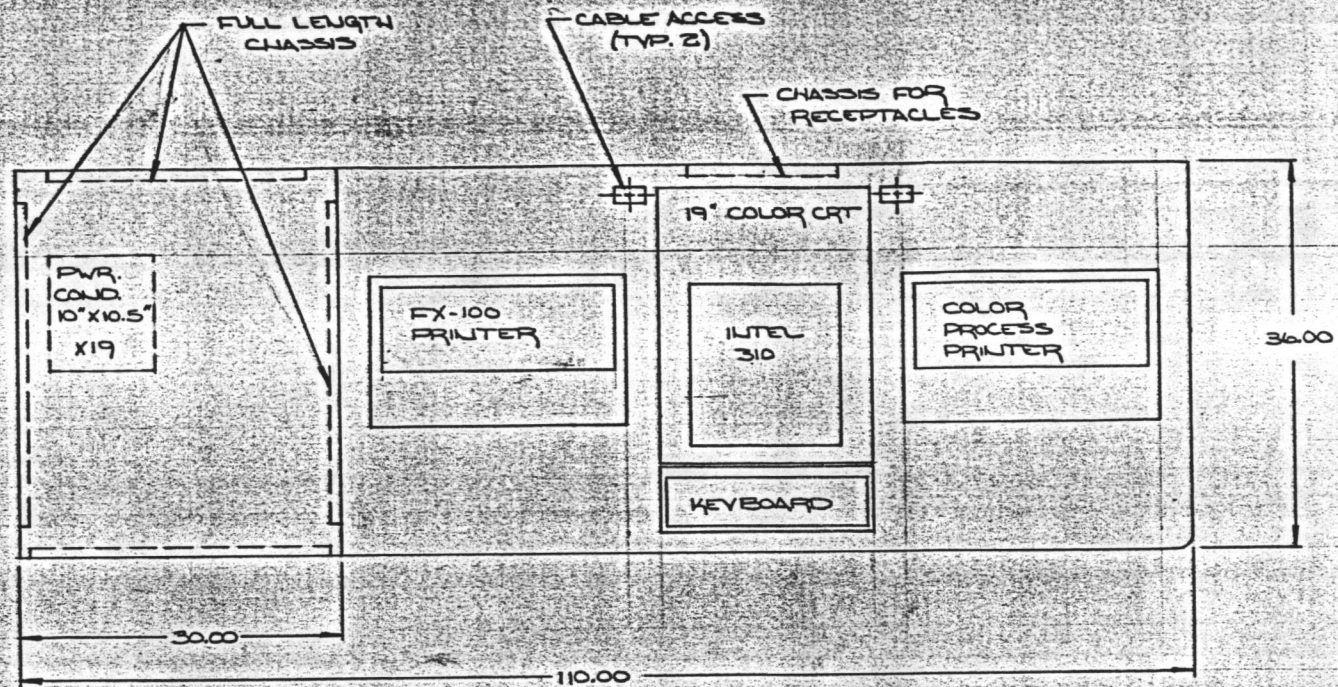
DATE: 07/18/75  
FIRST REVISION

REVISIONS:	BY	DATE
A	PER SUBMITAL	6-25-86
B	AS BUILT	7-26-86

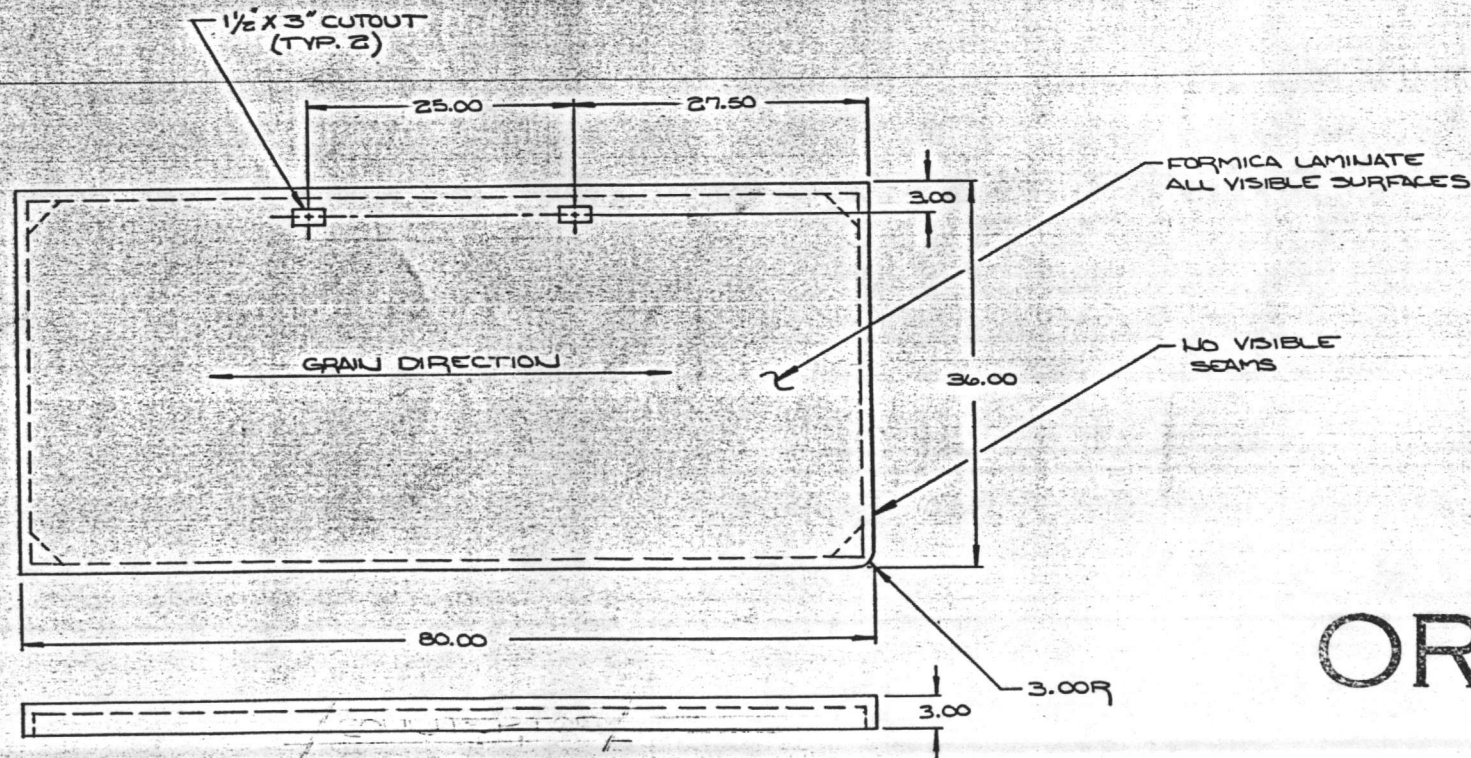
- NOTES:**
- ENCLOSURE: NEMA 1, 12GA. CRP.
  - FINISH:
  - WIRING DIAGRAMS PER DWGS DC4758-10 THRU 16.

<b>AQUATROL CORPORATION</b>		TOTAL CONTROL	ST. PAUL MINNESOTA
PROJECT: HOLCOMB BLVD. WTP CAMP LEJEUNE, NORTH CAROLINA			
DR: JRL	DATE: 6-25-86	APP:	DATE:
CHK:	DATE:	SCALE: 1/8" = 1'	SMT. 1 OF 2
TITLE: PANEL LAYOUT		DWG NO. DC4758-9	B





**TOP VIEW**



**COUNTERTOP**

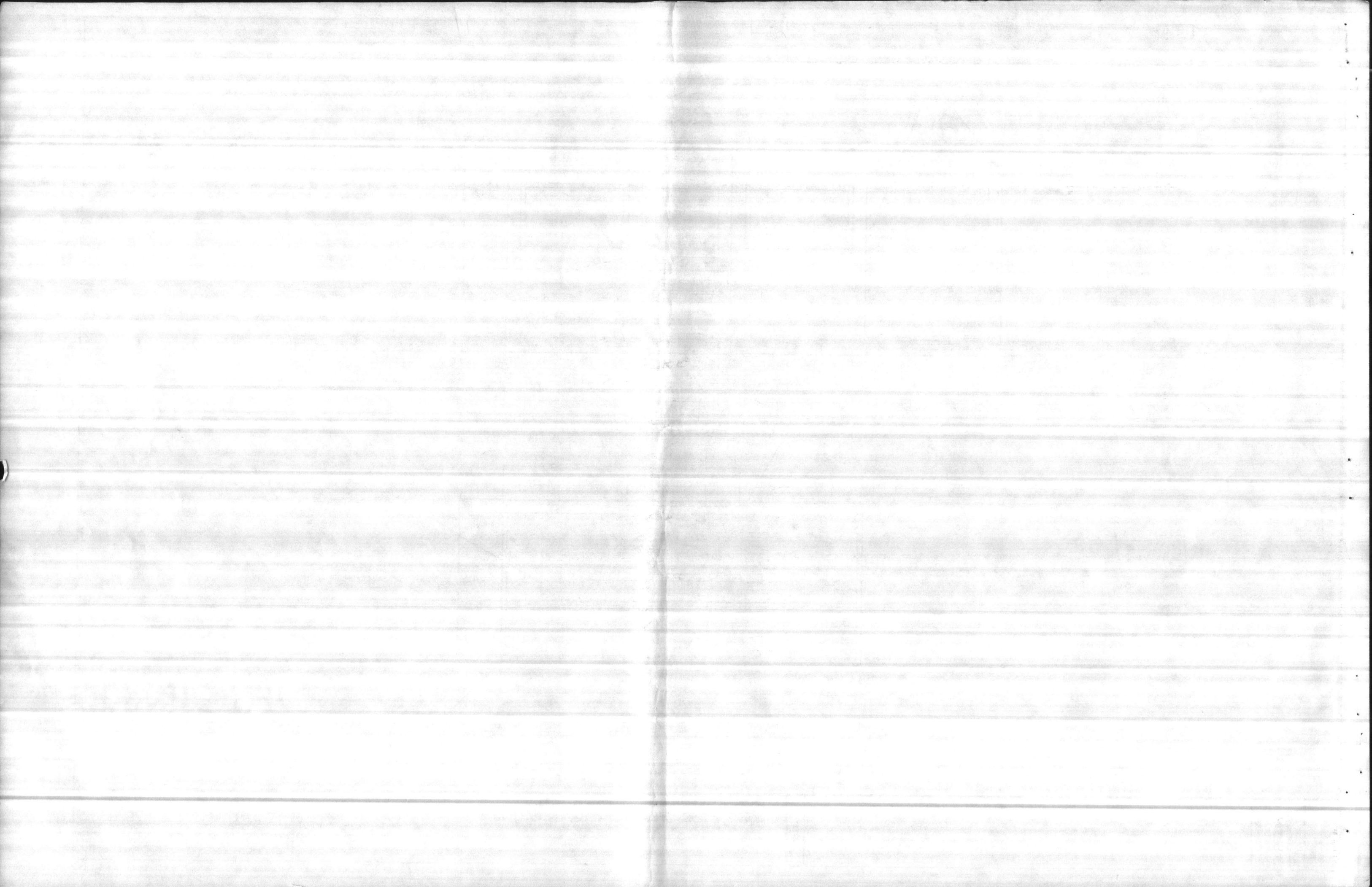
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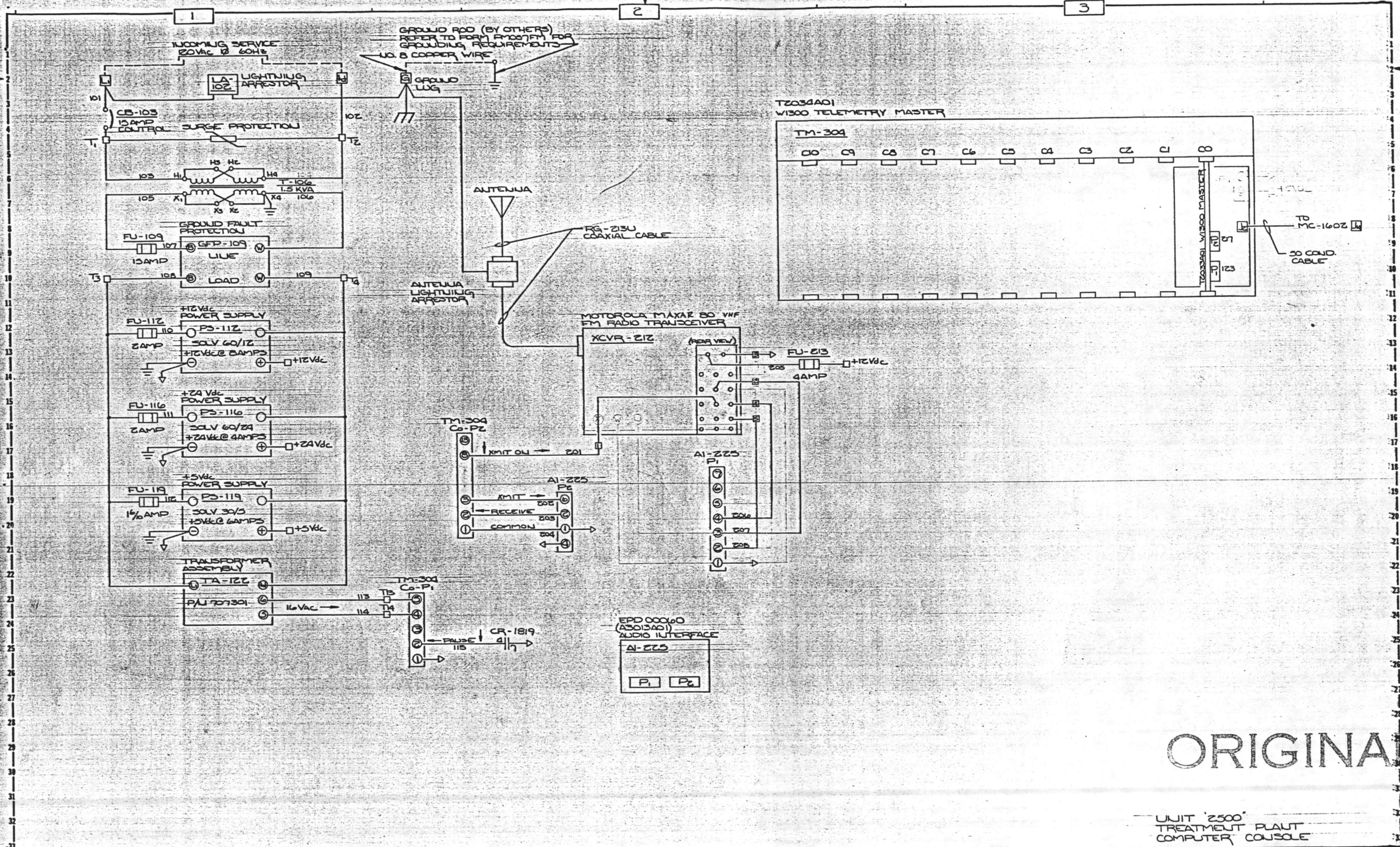
UNIT 2500  
TREATMENT PLANT  
COMPUTER CONSOLE

DATE: 1/15/75
FIRST USED ON:
<b>REVISIONS:</b>
A PER SUBMITTAL 6-53-56 SEE
B AS BUILT 9-26-56 SEE

- NOTES:**
1. LAMINATE: WHITE KID LEATHER: 65F.
  2. BEVEL ALL EDGES.
  3. WIRING DIAGRAMS PER DWGS. DC4758-10 THRU 16.

<b>AQUATROL CORPORATION</b>		TOTAL CONTROL	ST. PAUL MINNESOTA
PROJECT: HOLCOMB BLVD. WTP CAMP LEJEUVE, NORTH CAROLINA			
DR: JRM	DATE: 6-25-76	APP:	DATE:
CNR:	DATE:	SCALE: 1/8" = 1"	SHT. 2 OF 2
TITLE: PANEL LAYOUT	DWG NO. DC4758-9		





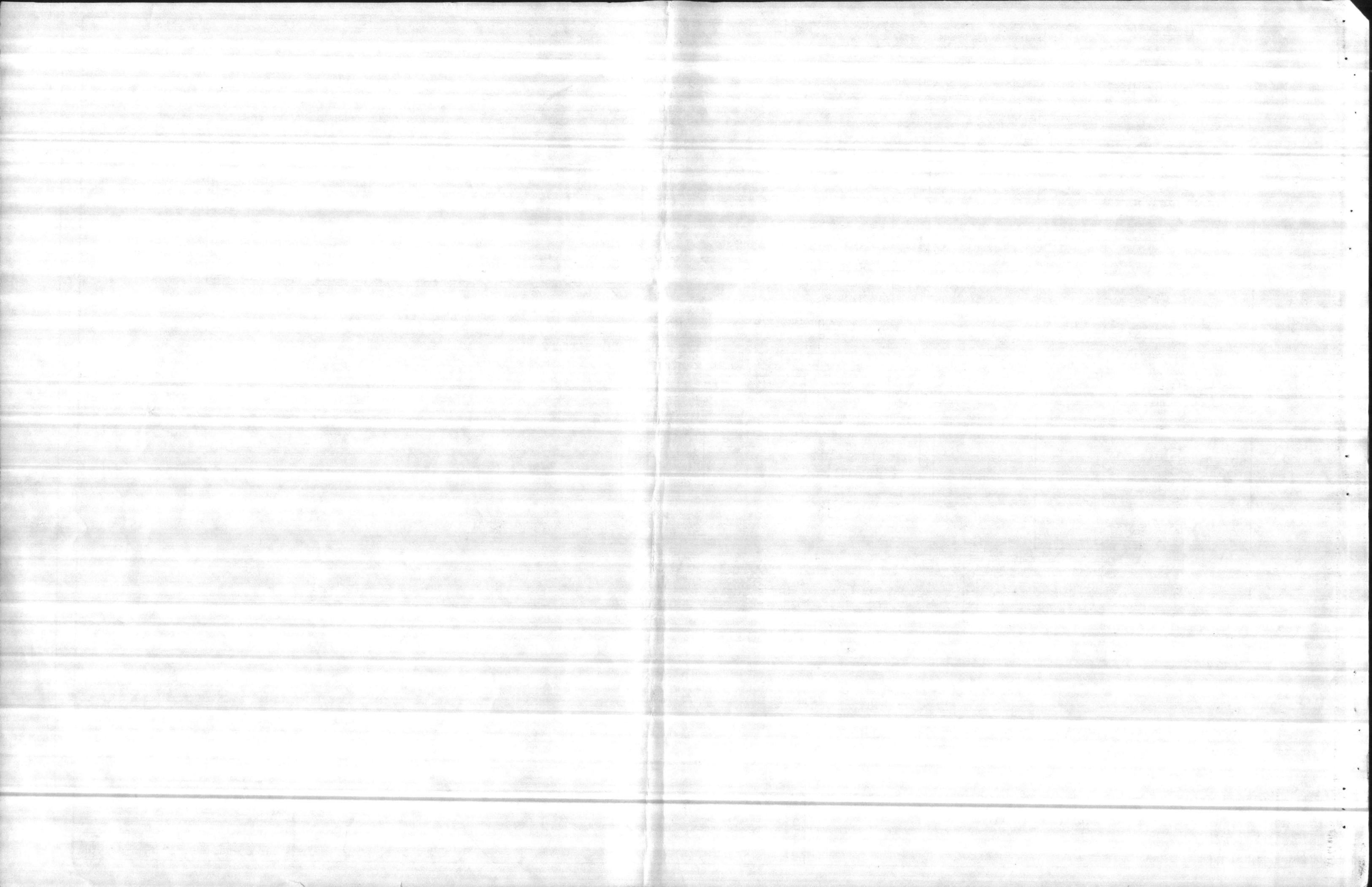
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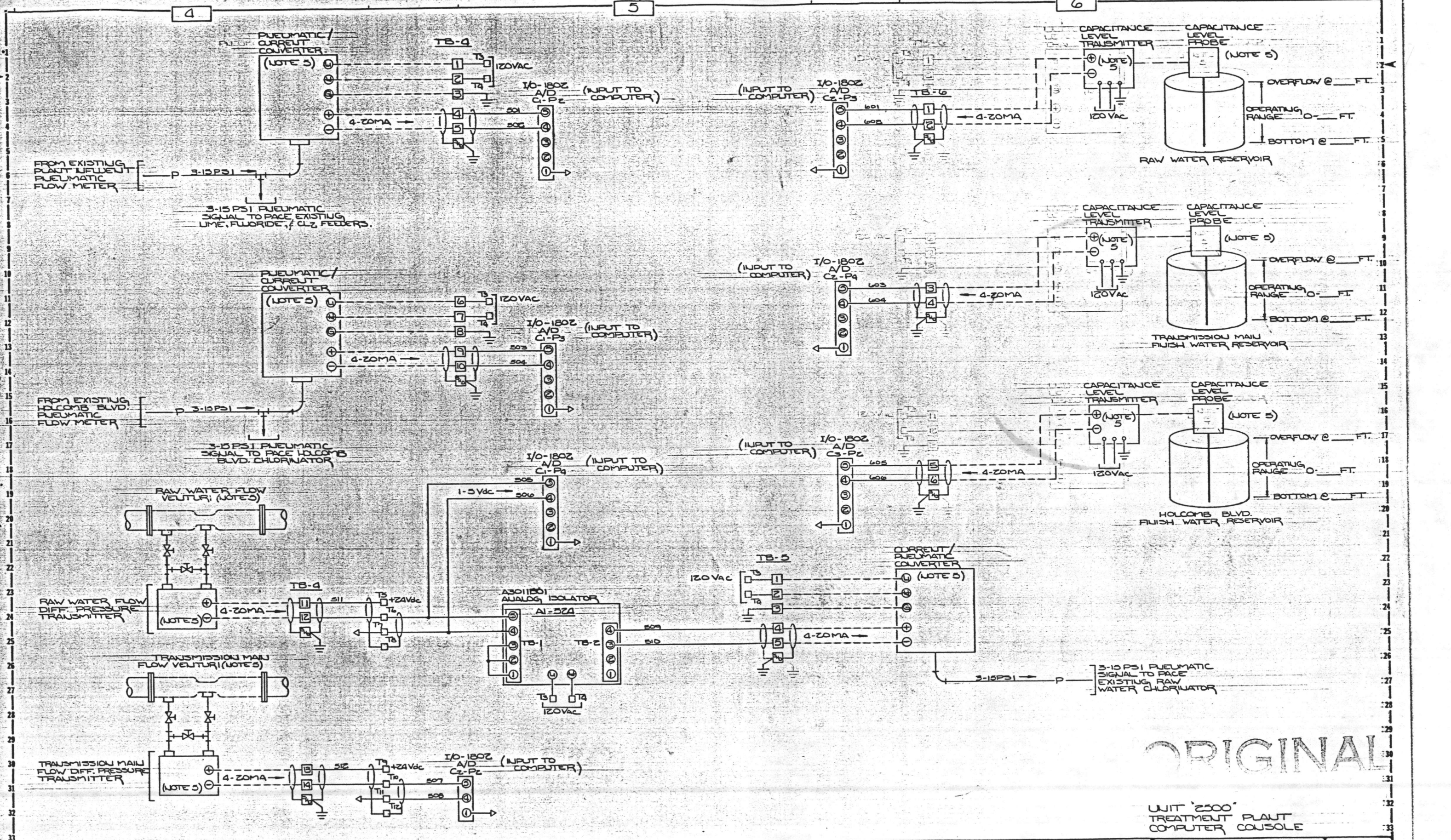
UNIT 2500  
TREATMENT PLANT  
COMPUTER CONSOLE

REVISED BY	DATE
REVISIONS:	
A PER SUBMITTAL 11-7-85	RCE
B PER RESUBMITTAL 6-23-86	RCE
C AS BUILT 9-26-86	RCE

- NOTES:
1. ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.
  2. PANEL LAYOUT PER DWG. DC4758-9.
  3. U.L. LABEL.
  4. BRADY LABEL ALL WIRES.

<b>AQUATROL CORPORATION</b>		TOTAL CONTROL	ST. PAUL MINNESOTA
PROJECT:	HOLCOMB BLVD. WTP		
DR:	CAMP LEJEWIE, NORTH CAROLINA		
CHK:	DATE:	SCALE:	SMT. OF
TITLE:	DWG. NO.		
WIRING DIAGRAM	DC4758-10		C





ORIGINAL

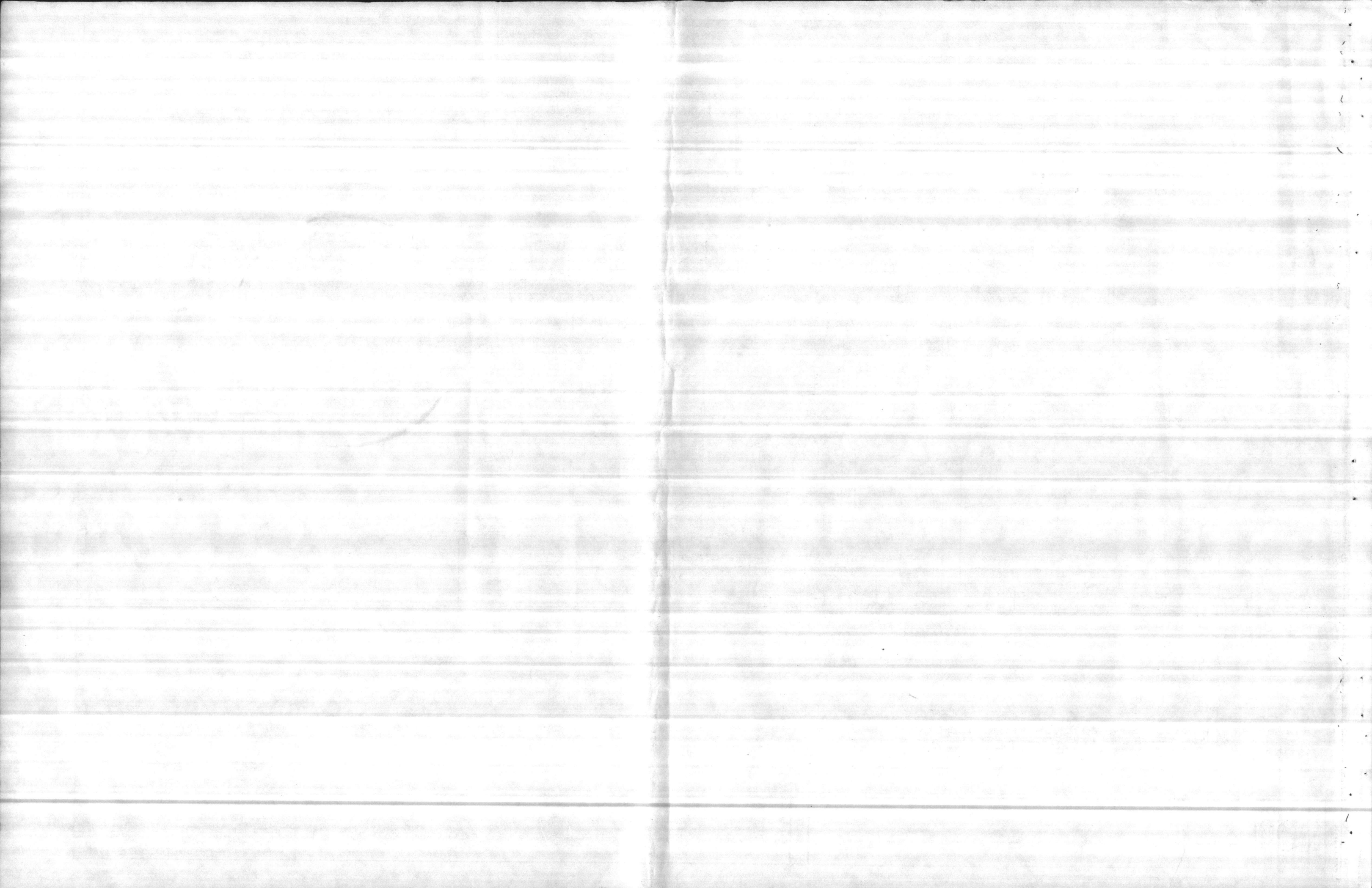
UNIT '2500'  
TREATMENT PLANT  
COMPUTER CONSOLE

DATE: 9/18/75  
FIRST USED ON:

REVISIONS:
A PER SUBMITTAL 6-23-76 KCE
B AS BUILT 7-28-76 KCE

- NOTES:
1. ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.
  2. PANEL LAYOUT PER DWG. DCA758-9.
  3. U.L. LABEL.
  4. BRADY LABEL ALL WIRES.
  5. PROVIDED BY PROCESS CONTROL SERVICES FOR INSTALLATION BY OTHERS.

<b>AGUATROL CORPORATION</b>		TOTAL CONTROL	ST. PAUL MINNESOTA
PROJECT: HOLCOMB BLVD. WTP CAMP LEJEUVE, NORTH CAROLINA.			
DR: JRT	DATE: 5-19-85	APP: KCE	DATE: 5-21-85
CHE: [ ]	DATE: [ ]	SCALE: [ ]	SHT. OF [ ]
TITLE: WIRING DIAGRAM	DWG. NO. DCA758-11	[ ]	

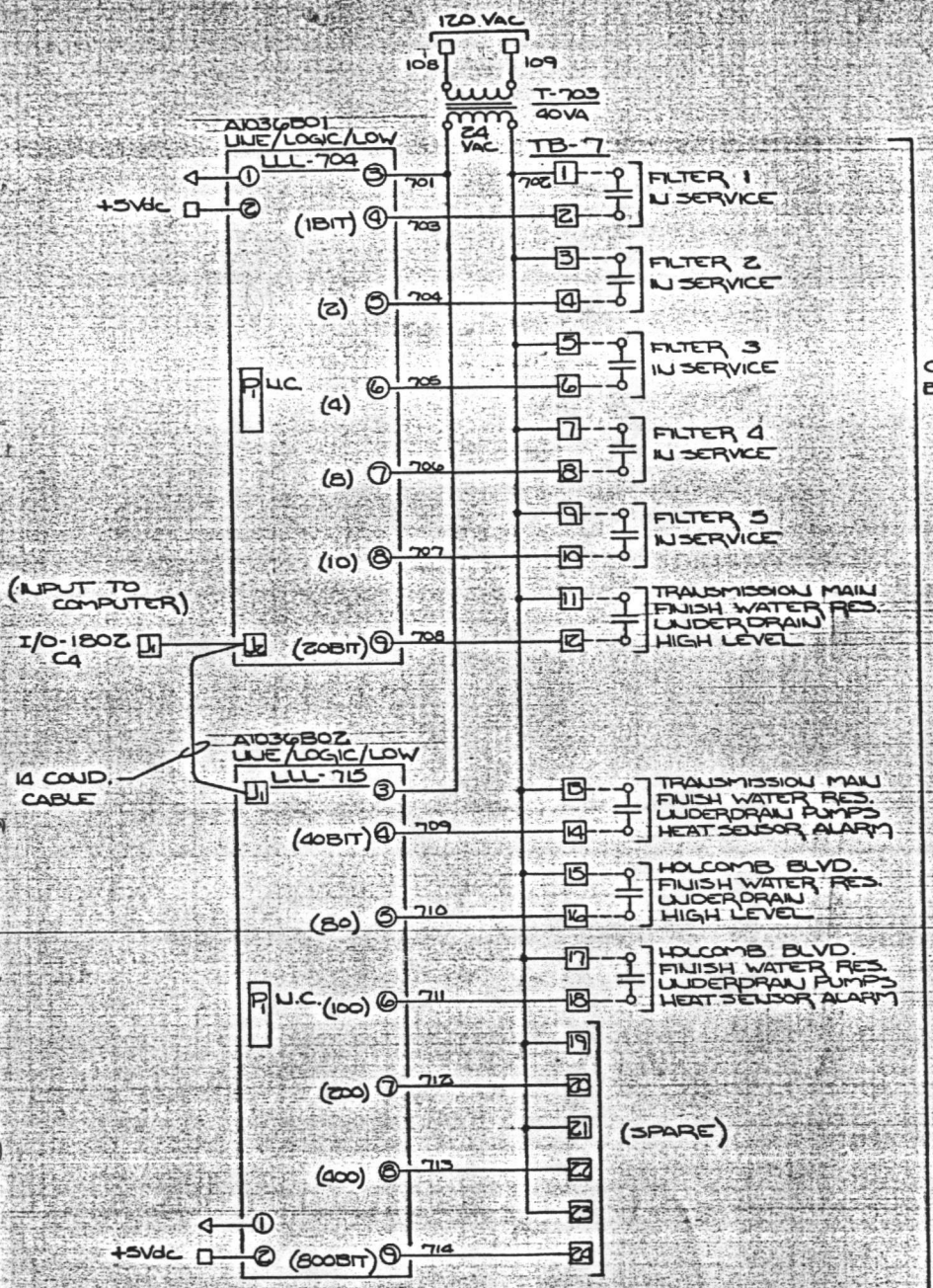




7

8

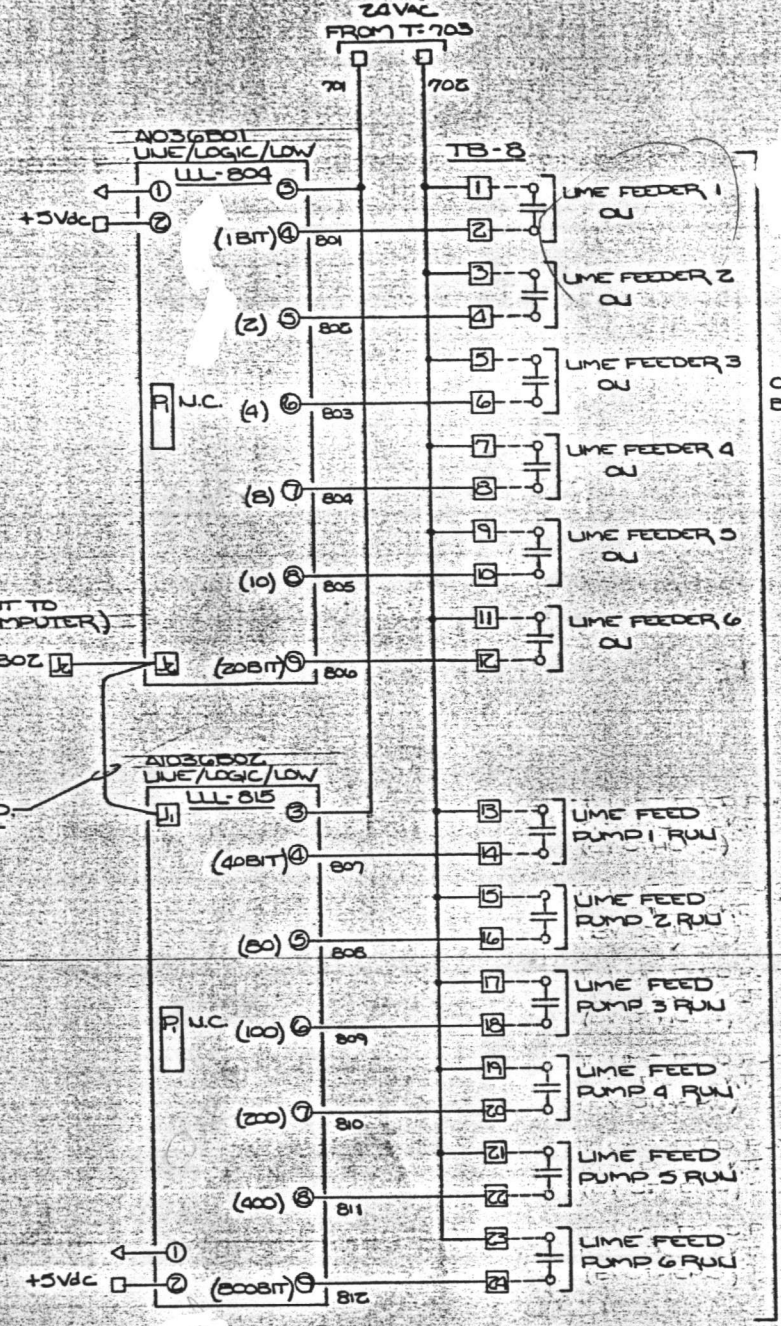
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CONTACTS BY OTHERS

(INPUT TO COMPUTER)

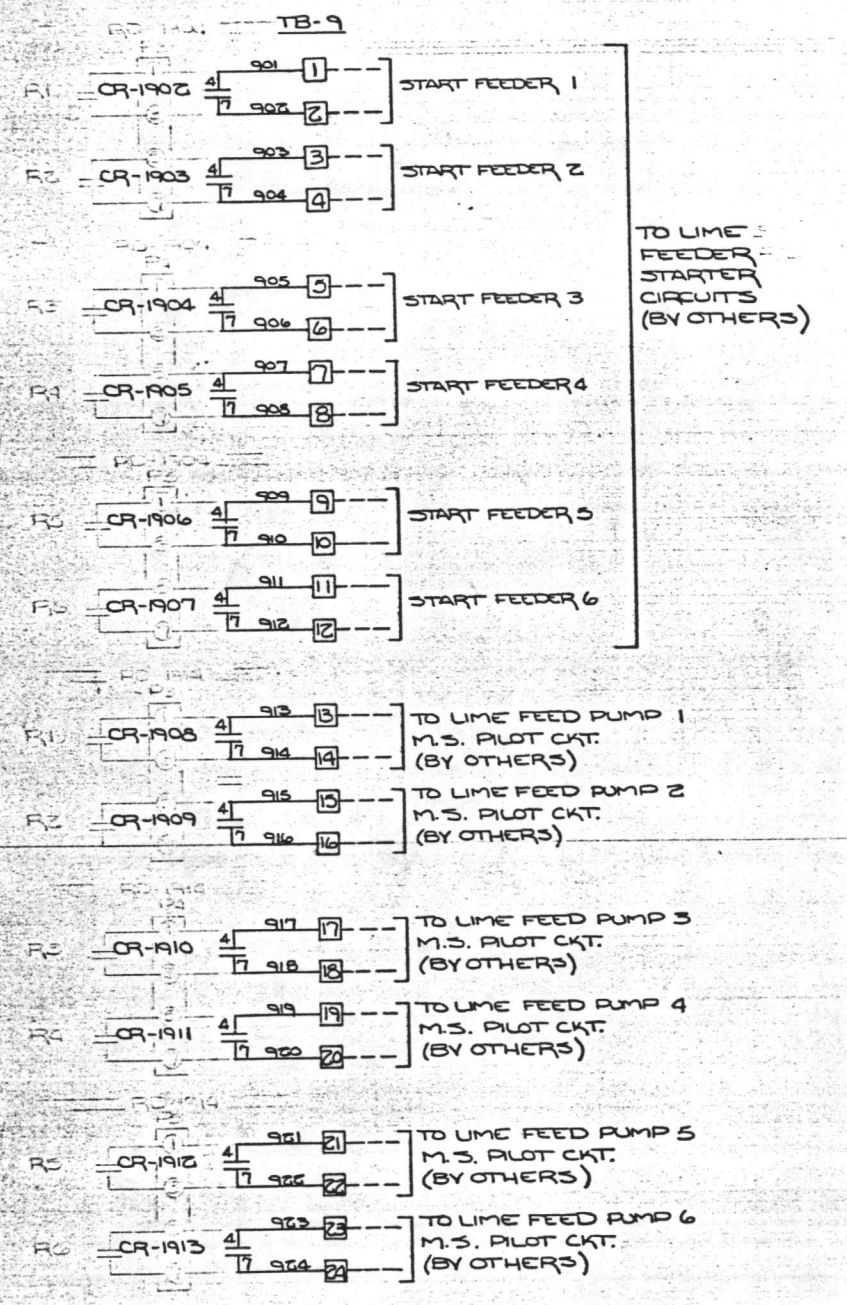
14 COND. CABLE



CONTACTS BY OTHERS

(INPUT TO COMPUTER)

14 COND. CABLE



TO LIME FEEDER STARTER CIRCUITS (BY OTHERS)

# ORIGINAL

UNIT "2500"  
TREATMENT PLANT  
COMPUTER CONSOLE

9/18/78

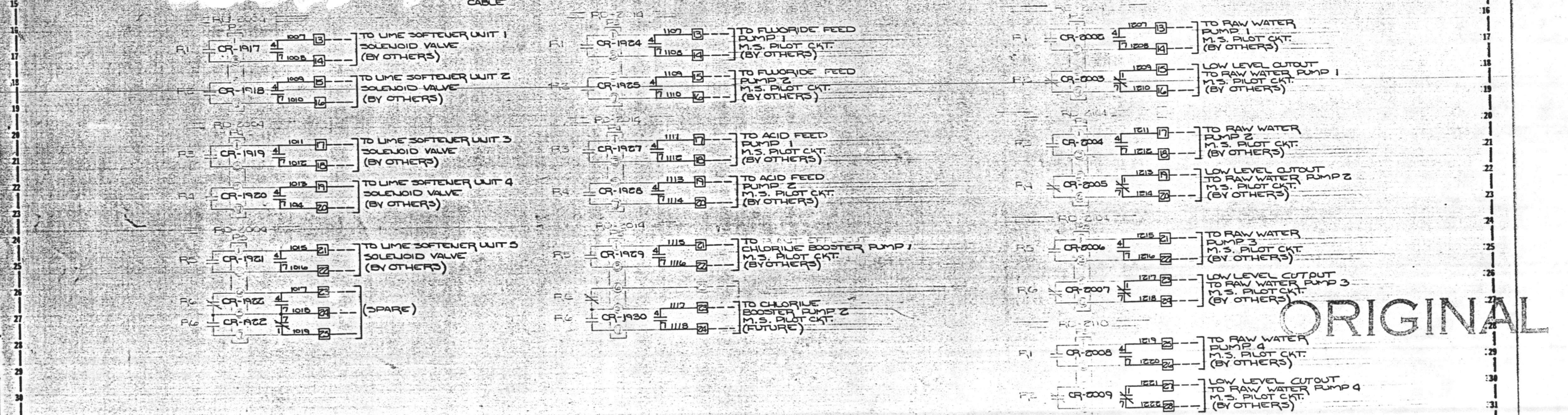
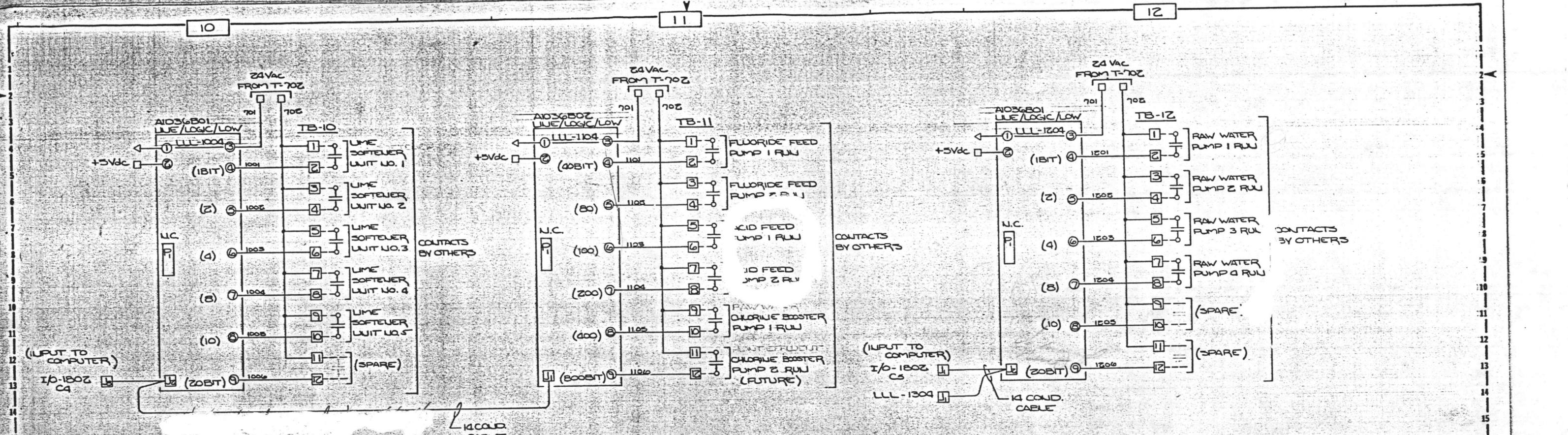
REVISIONS:
A PER SUBMITAL 6-03-06 RCE
B AS BUILT 7-20-00 RCE

- NOTES:
1. ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.
  2. PANEL LAYOUT PER DWG. DC4758-9.
  3. U.L. LABEL.
  4. BRADY LABEL ALL WIRES.

<b>AQUATROL CORPORATION</b>		TOTAL CONTROL	ST. PAUL MINNESOTA
PROJECT: HOLCOMB BLVD. WTP CAMP LEJUNE, NORTH CAROLINA			
DR: JRH	DATE: 5-14-85	APP: RCE	DATE: 5-21-85
CHK: [ ]	DATE: [ ]	SCALE: [ ]	SHT. OF [ ]
TITLE: WIRING DIAGRAM		DWG. NO. DC4758-12	13

Handwritten notes in the top left corner, possibly including the number '100' and some illegible characters.





ORIGINAL

UNIT "2500"  
TREATMENT PLANT  
COMPUTER COUSLE

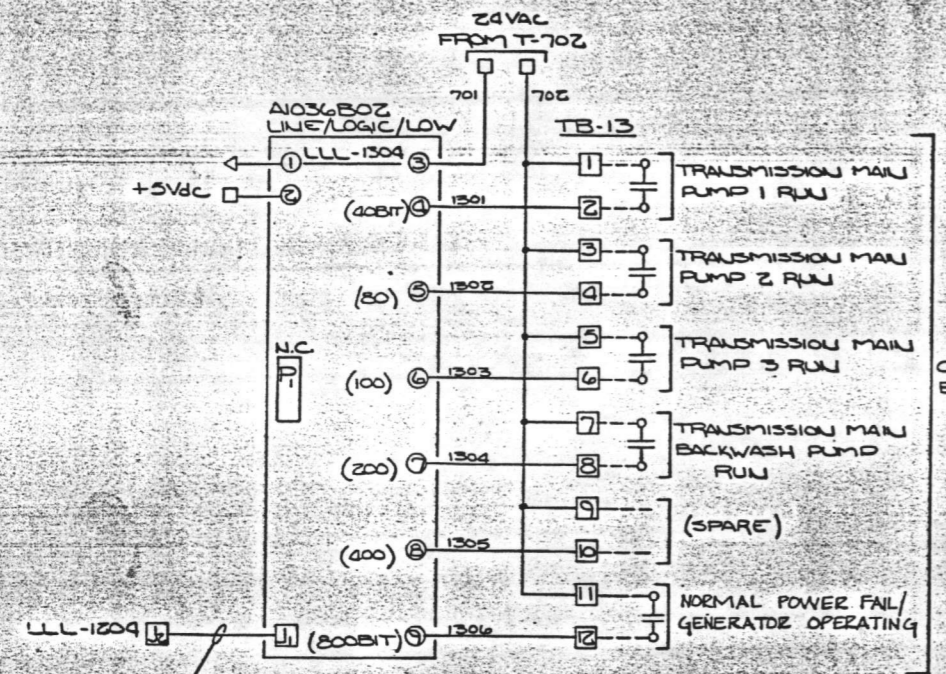
REVISED:  
A PER SUBMITTAL  
6-03-86 RCE  
B AS BUILT  
4-26-86 RCE

- NOTES:
1. ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.
  2. PANEL LAYOUT PER DWG DC4758-9.
  3. U.L. LABEL.
  4. BRADY LABEL ALL WIRES.

AQUATROL CORPORATION		TOTAL CONTROL	ST. PAUL MINNESOTA
PROJECT: HOLCOMB BLVD. WTP CAMP LEJUE, NORTH CAROLINA			
DR: JRL	DATE: 5-14-85	APP: RCE	DATE: 5-21-85
CHE: JRL	DATE:	SCALE:	SHT. OF
TITLE: WIRING DIAGRAM		DWG NO. DC4758-13	11B

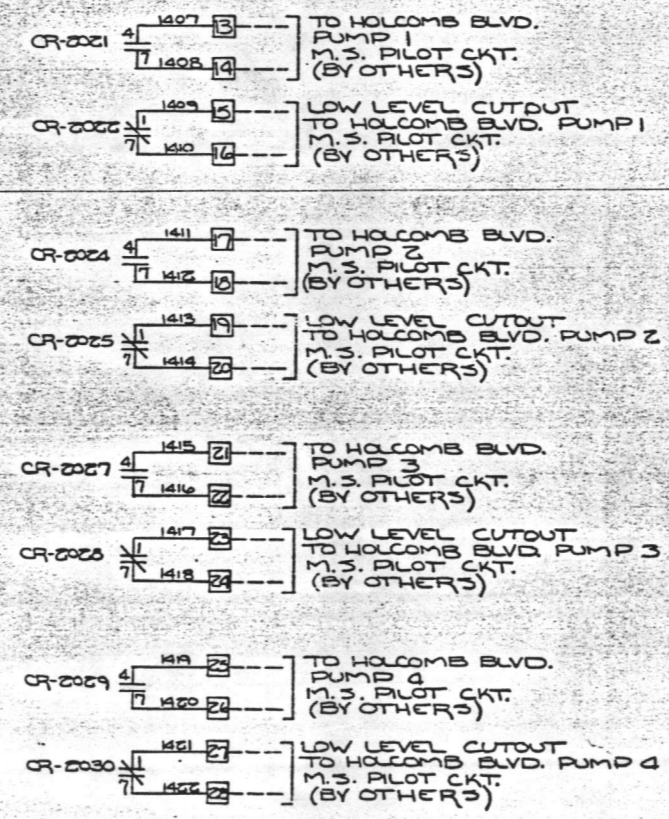
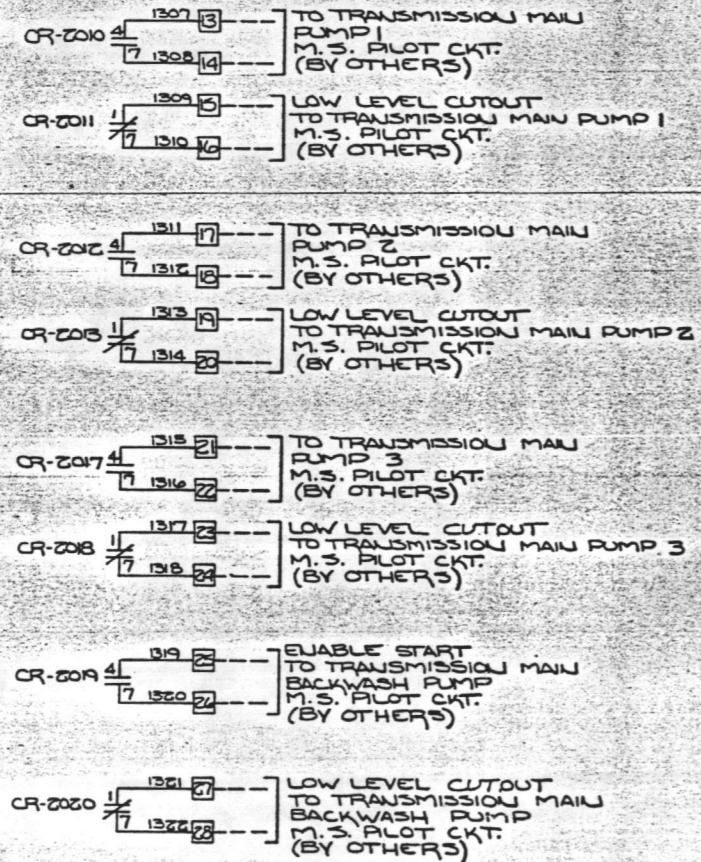
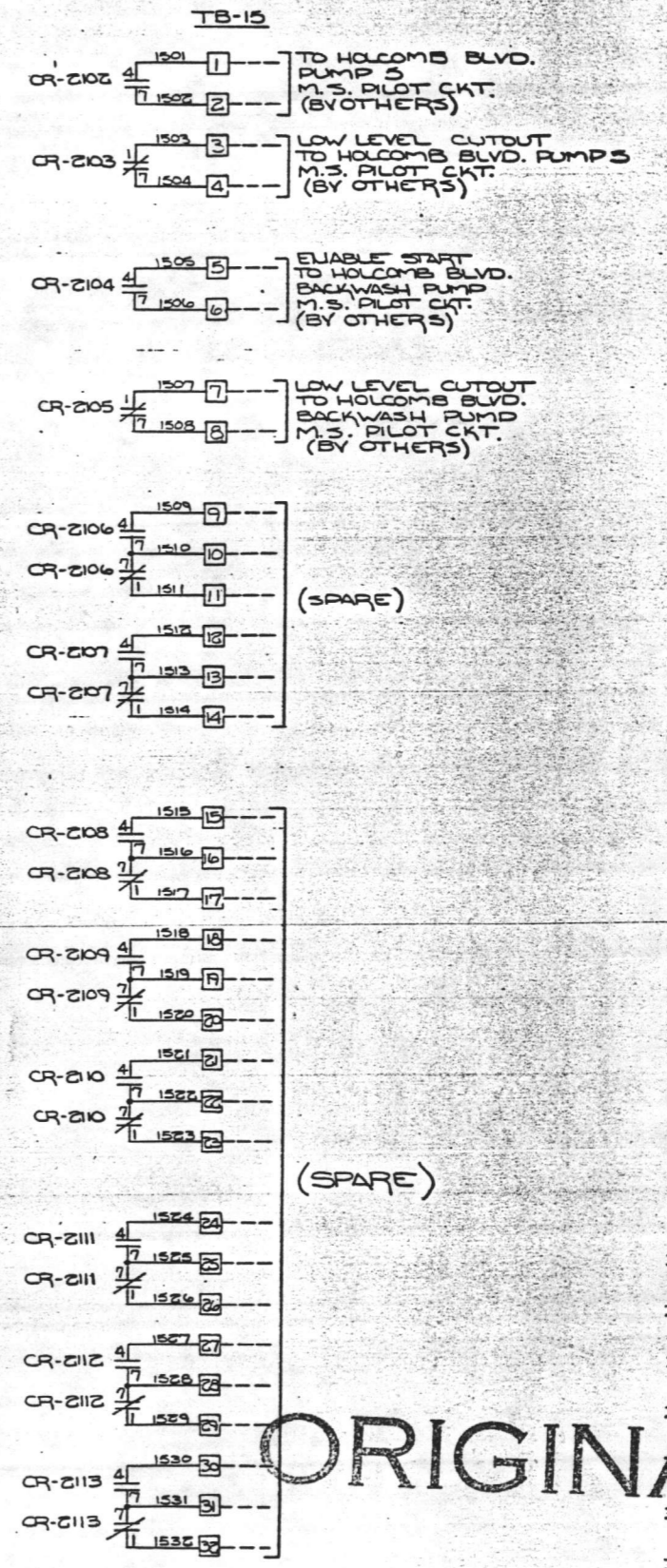
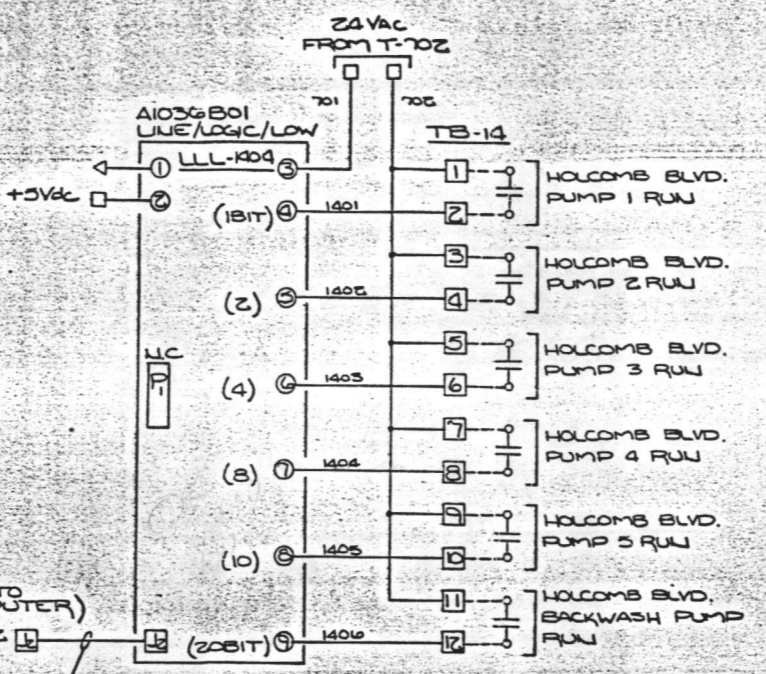


17th August 1941



CONTACTS BY OTHERS

(INPUT TO COMPUTER) I/O-180Z CS



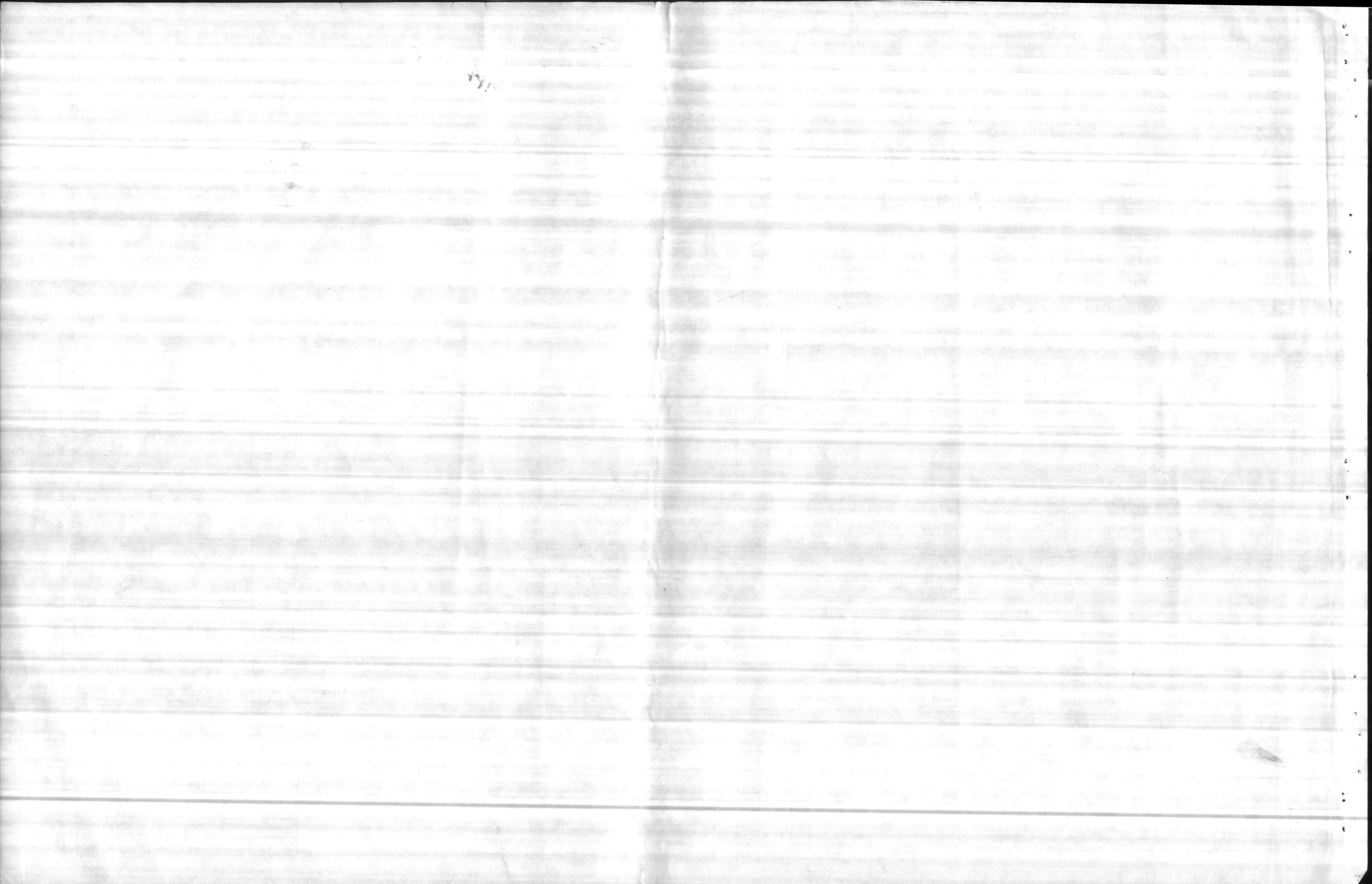
ORIGINAL

UNIT '2500' TREATMENT PLANT COMPUTER CONSOLE

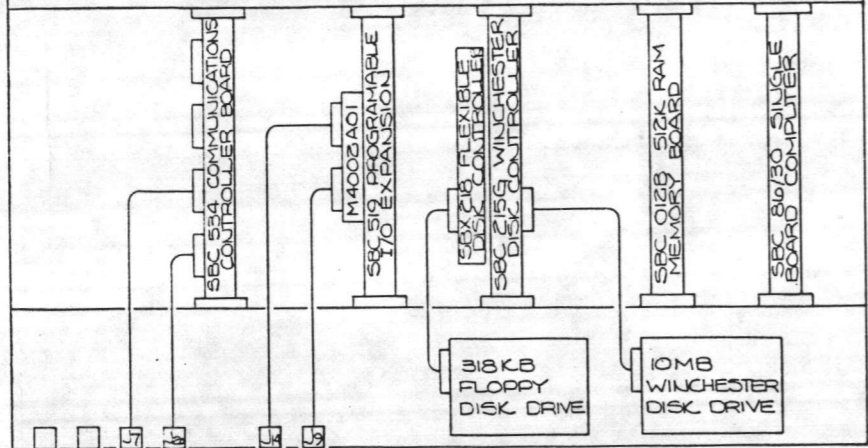
REVISIONS:	DATE	BY	DESCRIPTION
A	PER SUBMITTAL 11-7-85	KCE	
B	PER SUBMITTAL 6-24-86	KCE	
C	AS BUILT 7-28-86	KCE	

- NOTES:
- ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.
  - PANEL LAYOUT PER DWG. DC4758-9.
  - U.L. LABEL.
  - BRADY LABEL ALL WIRES.

<b>AQUATROL CORPORATION</b>		TOTAL CONTROL	ST. PAUL, MINNESOTA
PROJECT:	HOLCOMB BLVD. WTP		
DR:	CAMP LEJEUNE, NORTH CAROLINA		
DATE:	5-14-85	APP: RCE	DATE: 5-21-85
CNS:	DATE:	SCALE:	SHT. OF
TITLE:	WIRING DIAGRAM		DWG. NO. DC4758-14



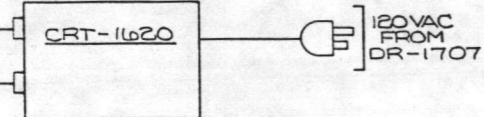
W8016  
MICROCOMPUTER (INTE 310-3)  
MC-1602



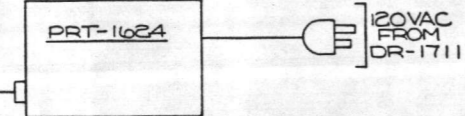
150 COND. CABLE

FROM TM-304

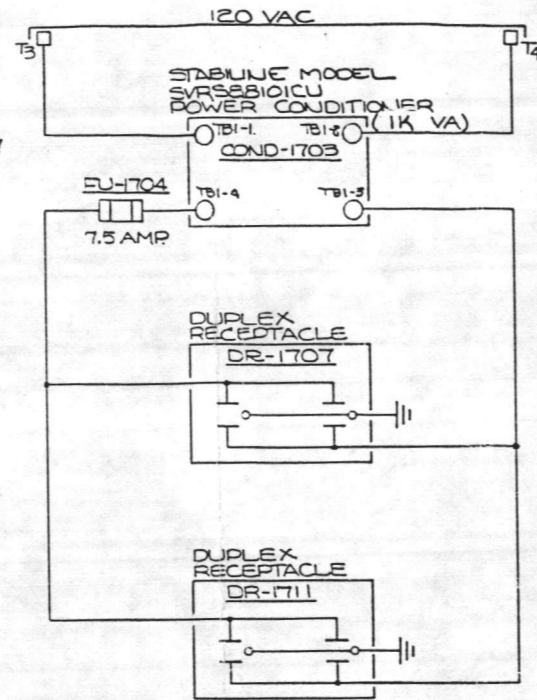
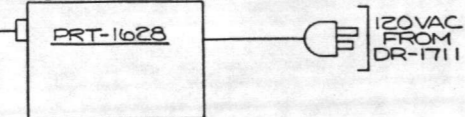
CCC MODEL XL-19  
19" COLOR CRT TERMINAL  
W/KEYBOARD



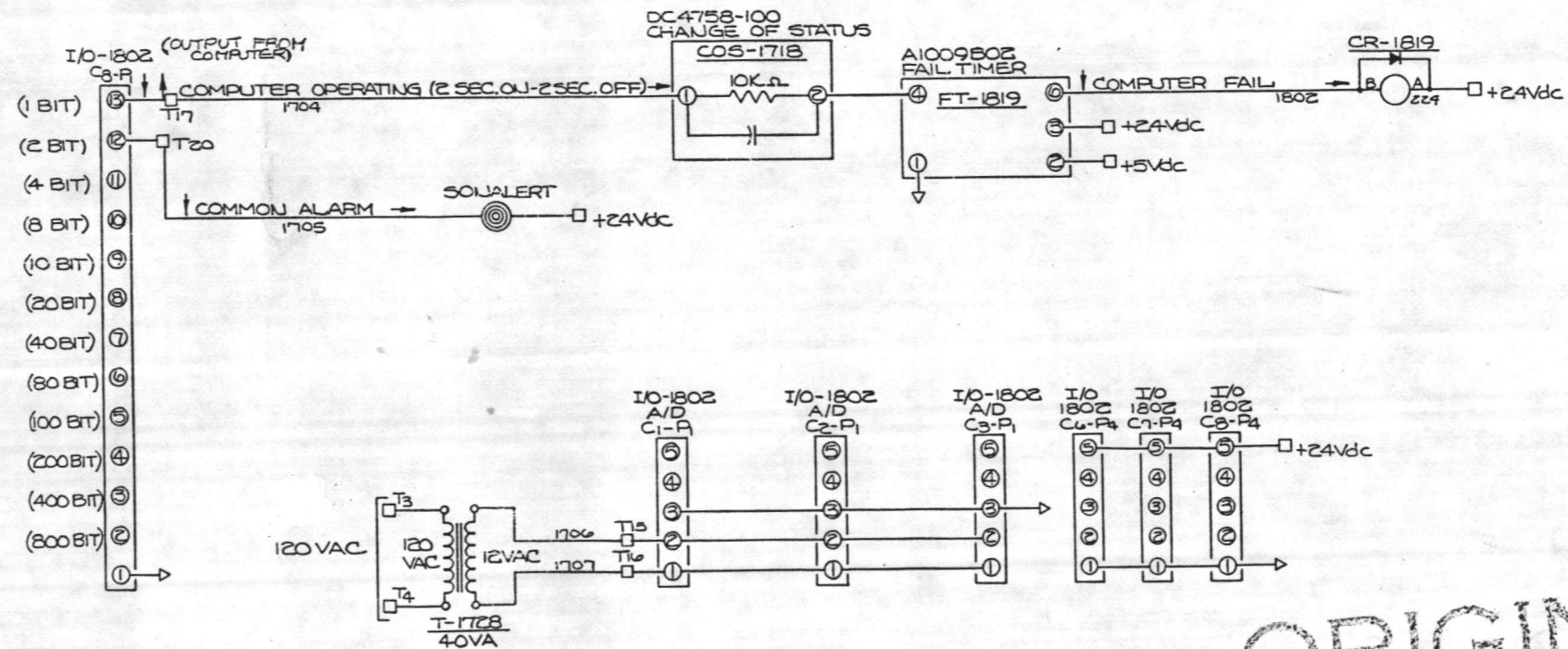
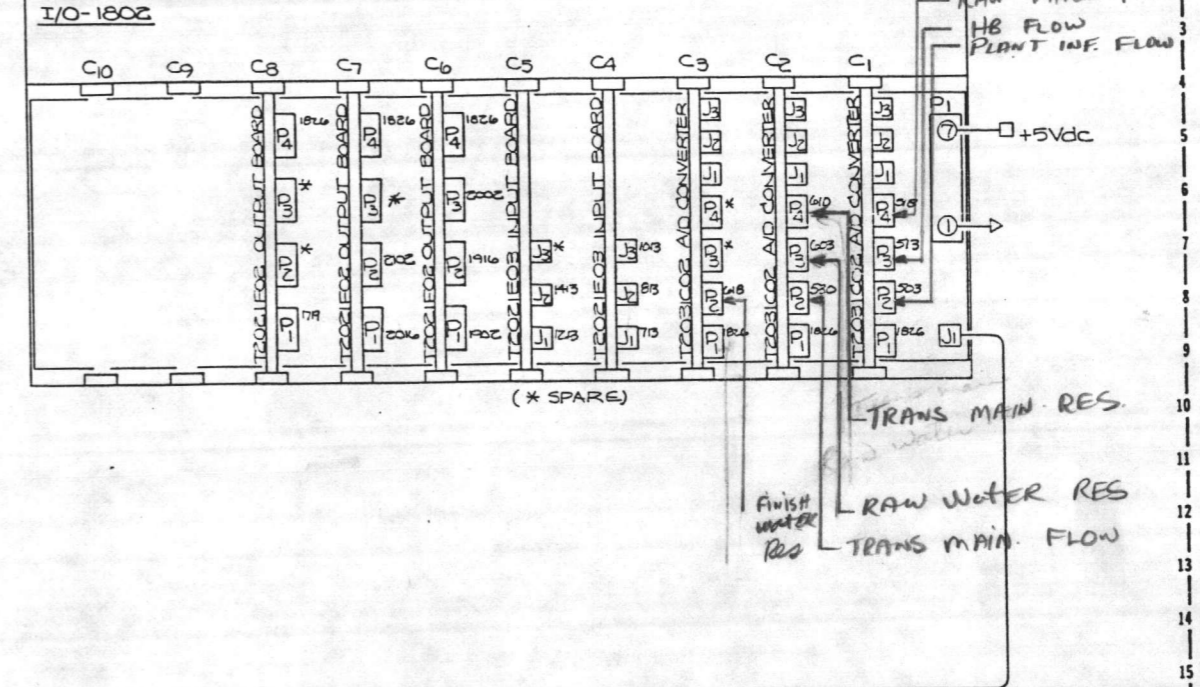
PRINTACOLOR  
MODEL TC1040  
7-COLOR PRINTER



EPSON MODEL FX-100  
DOT MATRIX PRINTER



T2034802  
I/O CARD RACK  
I/O-1802

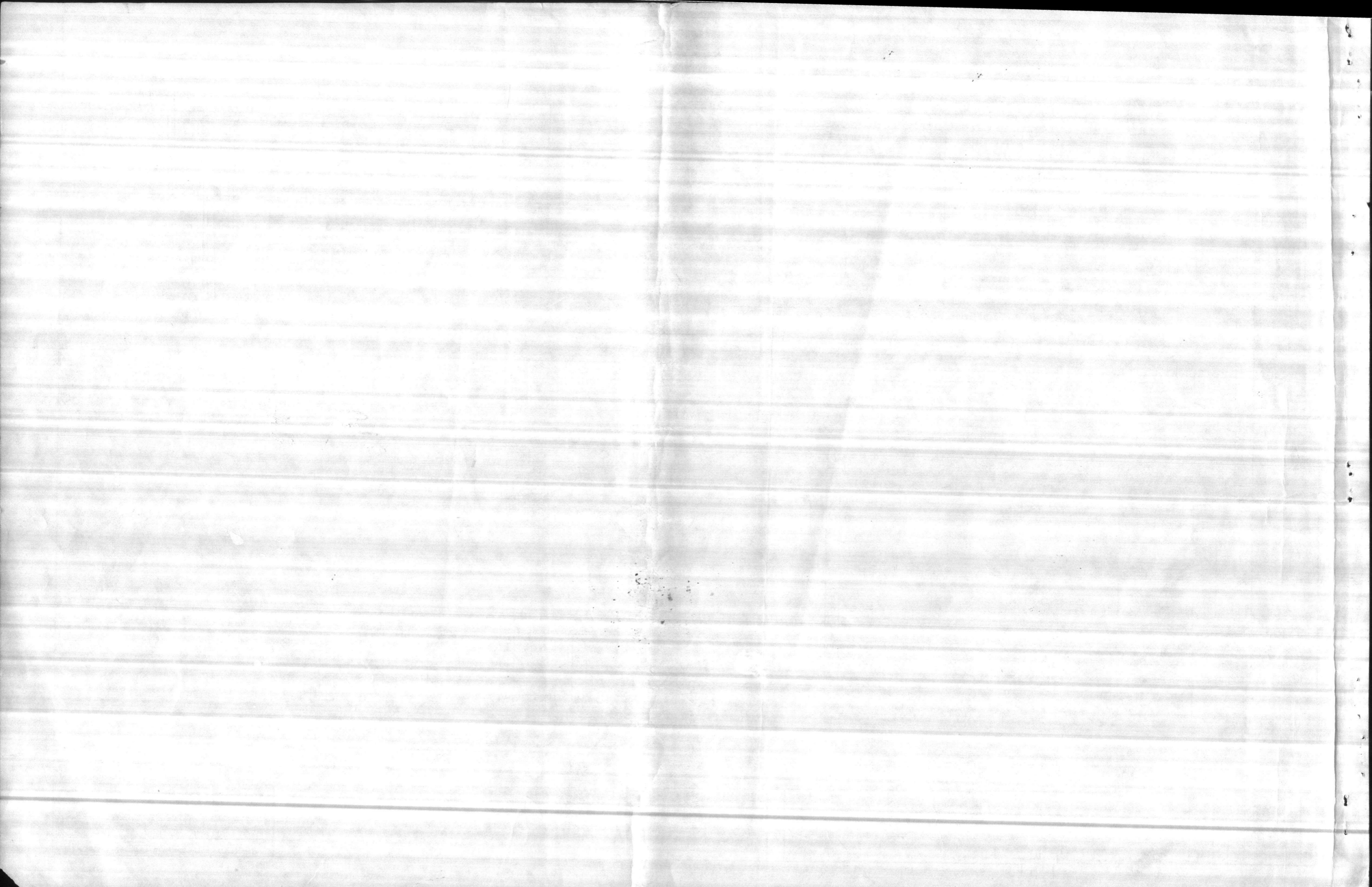


ORIGINAL

REV	DATE	BY	DESCRIPTION
A	11-7-85	PER SUBMITTAL	11-7-85
B	6-24-86	PER REVISION	6-24-86
C	7-26-86	AS BUILT	7-26-86

- NOTES:
1. ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.
  2. PANEL LAYOUT PER DWG. DC4758-9.
  3. U.L. LABEL.
  4. BRADY LABEL ALL WIRES.

UNIT '2500'		TOTAL CONTROL		ST. PAUL MINNESOTA
PROJECT: HOLCOMB BLVD. W.T.P. CAMP LE JUNE, NORTH CAROLINA				
DR: T.C.T.	DATE: 5-14-85	APPR: RCE	DATE: 5-21-85	
CHN:	DATE:	SCALE:	SHT. OF	
TITLE: WIRING DIAGRAM		DWG. NO. DC4758-15	REV. C	

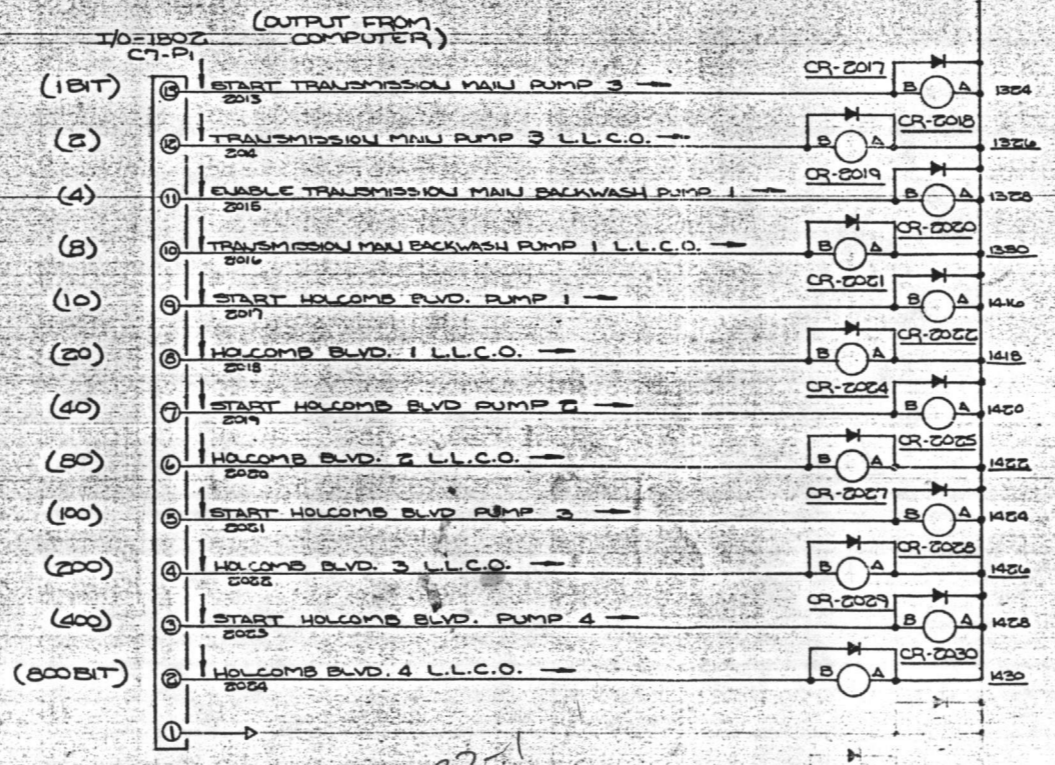
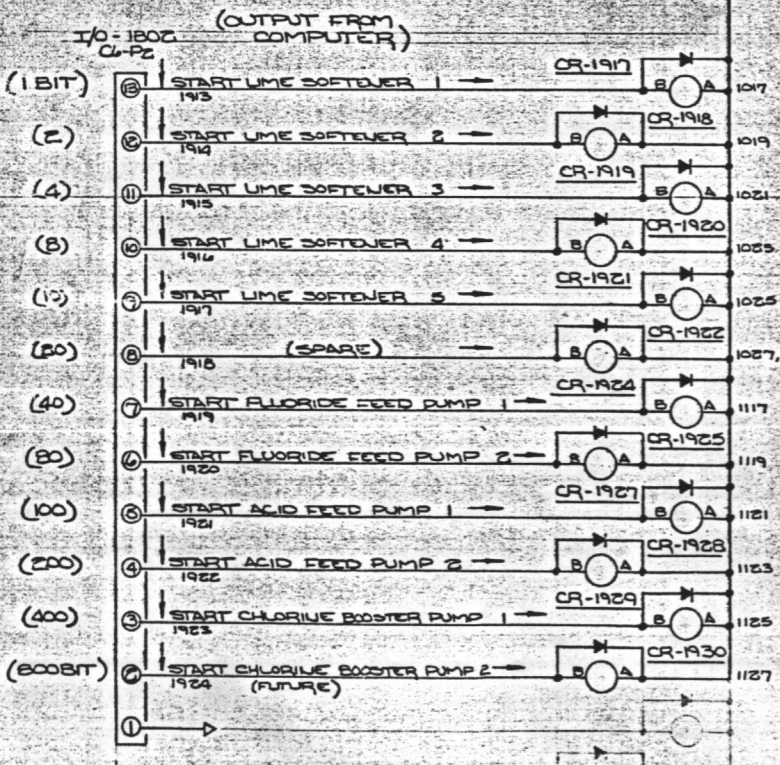
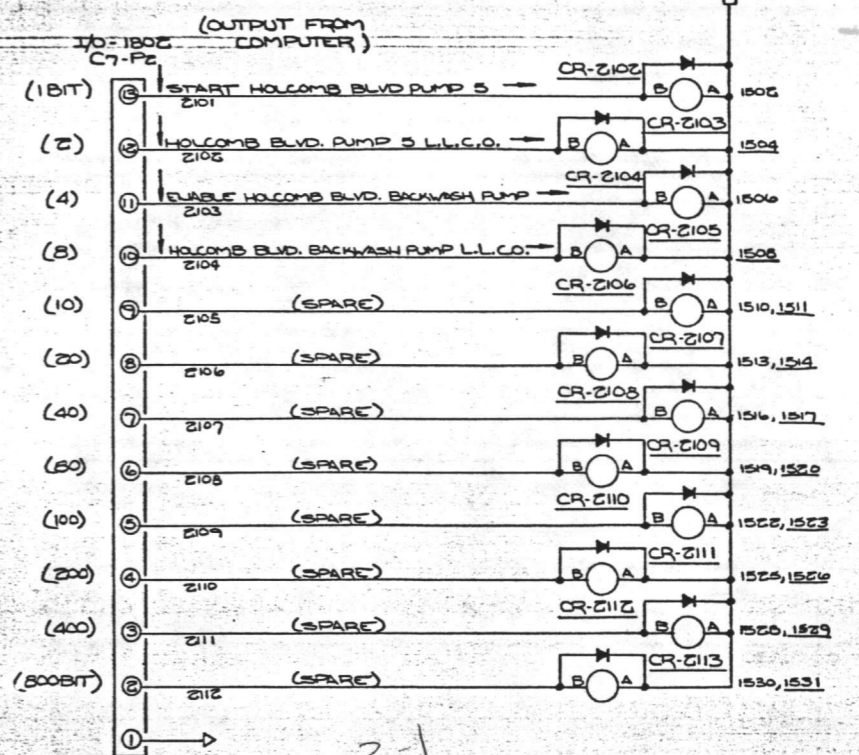
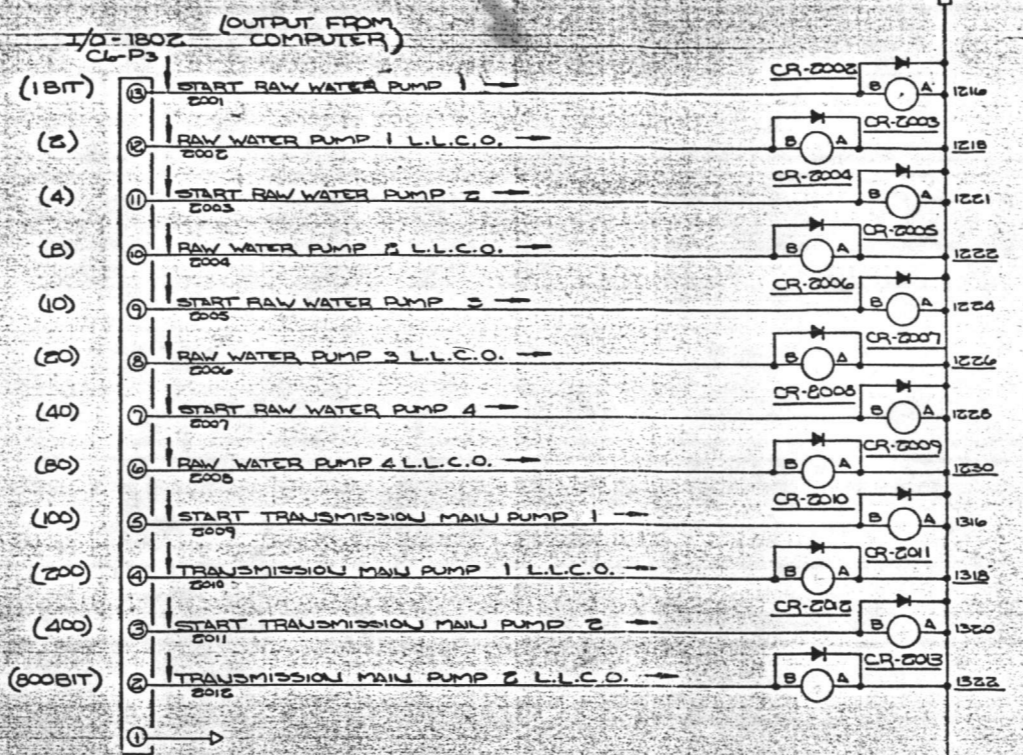
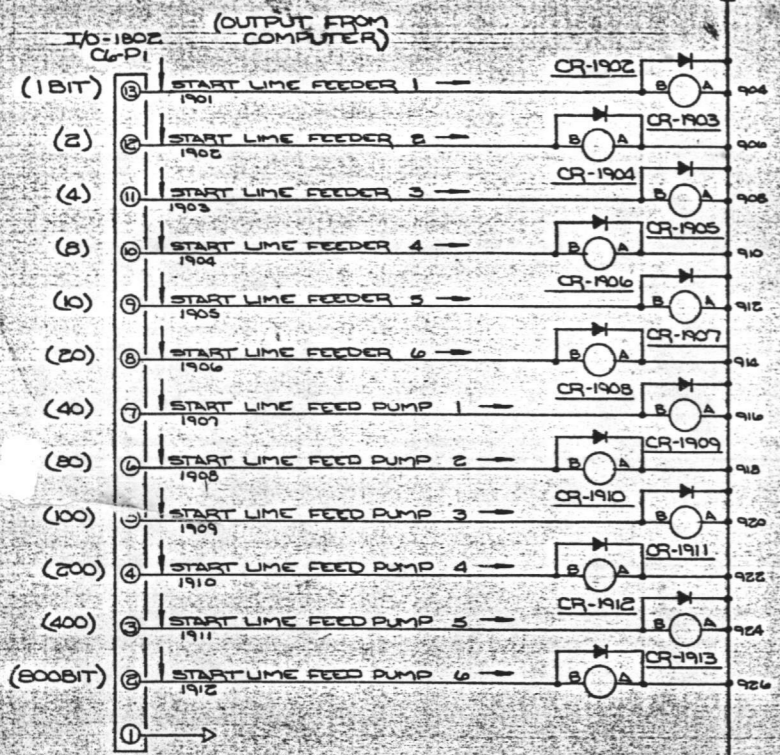




19

20

21



19-1 → 23-1  
↓  
↓

18-1 → 22-1  
↓  
800

ORIGINAL

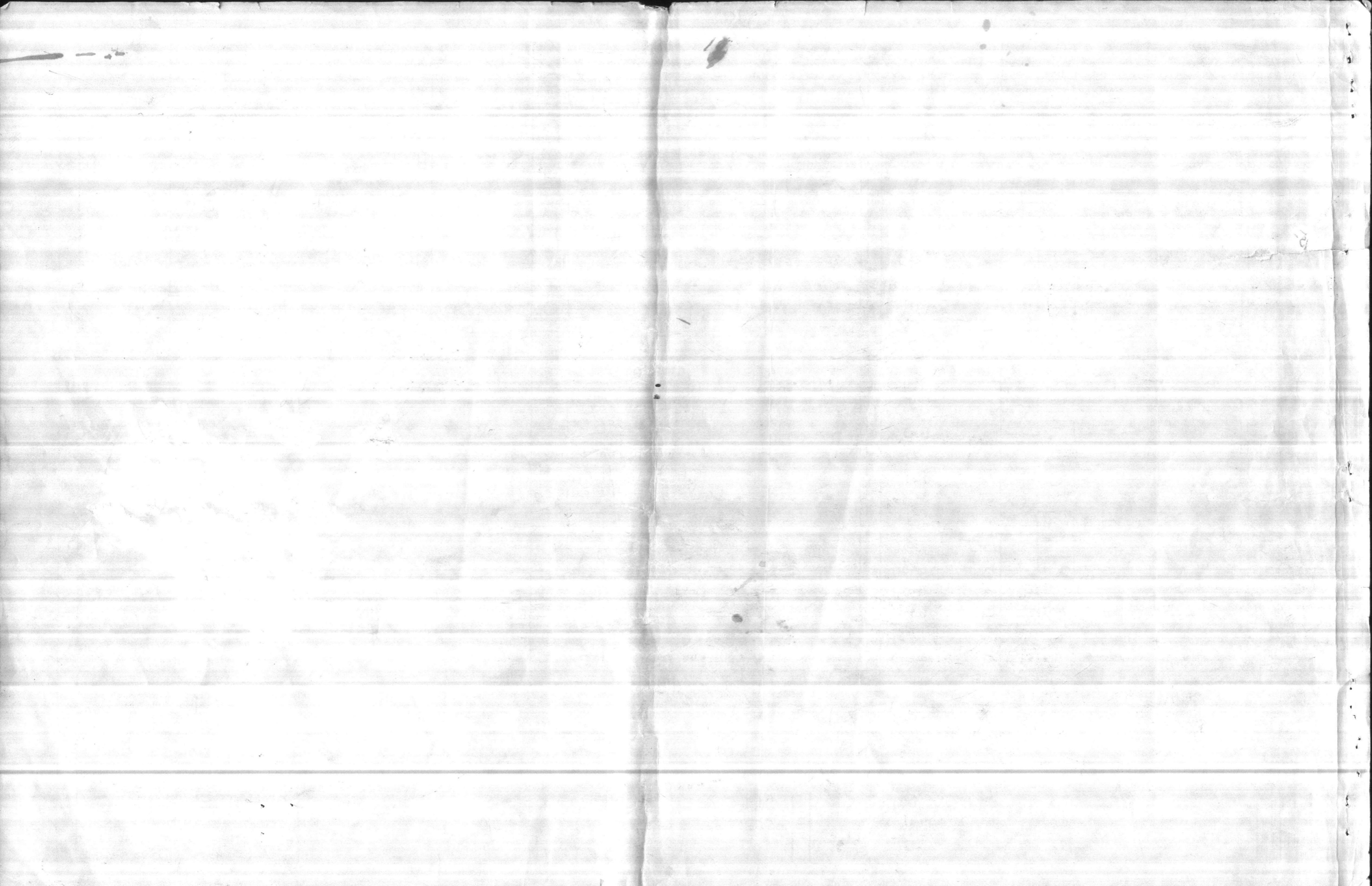
UNIT 2500  
TREATMENT PLANT COMPUTER CONSOLE

REVISIONS:

A	PER SUBMITTAL
B	AS BUILT

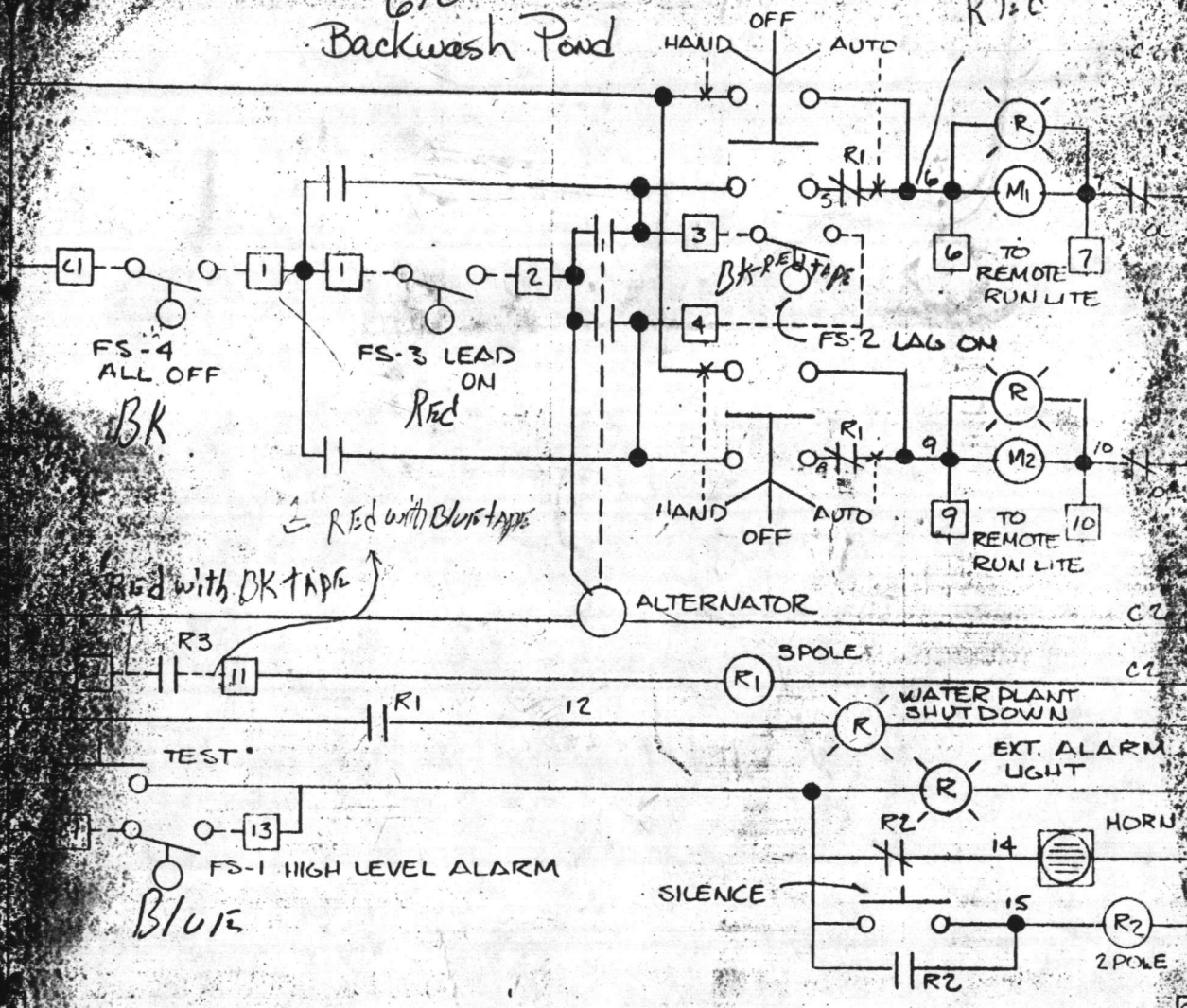
- NOTES:
1. ELECTRICAL AND HYDRAULIC SYMBOLS PER 10-2000.
  2. PANEL LAYOUT PER DWG DC4758-9.
  3. U.L. LABEL.
  4. BRADY LABEL ALL WIRES.

<b>AQUATROL</b>		TOTAL CONTROL	ST. PAUL MINNESOTA
PROJECT: HOLCOMB BLVD. W.T.P. CAMP LEJEWEE, NORTH CAROLINA			
DR: JRM	DATE: 2-24-64	APP:	DATE:
CHK:	DATE:	SCALE:	SHT. OF
TITLE: WIRING DIAGRAM		DWG NO. DC4758-16	REV. B



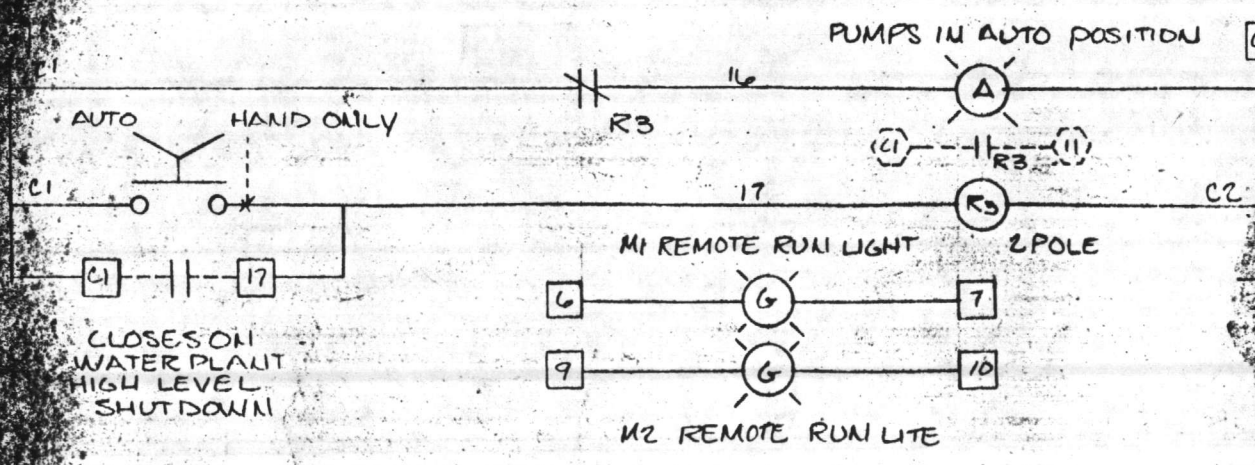
# 670 Backwash Pond

Red



TO WATERTREATMENT PLANT

FROM DUPLEX PUMP PANEL NO. 4 LOCATION III-1



189

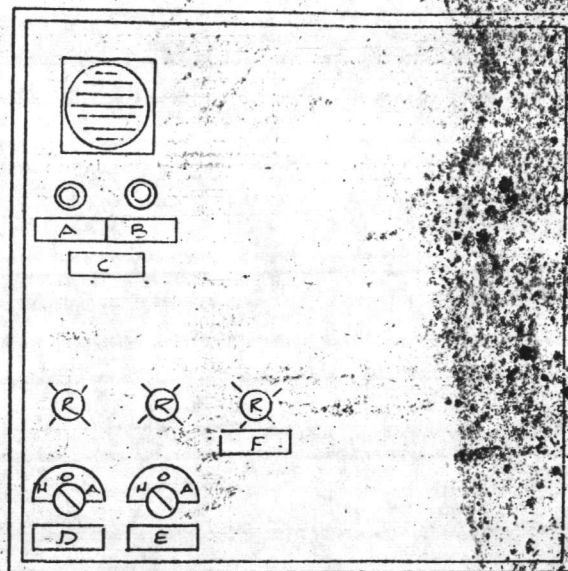
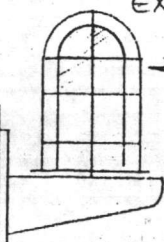
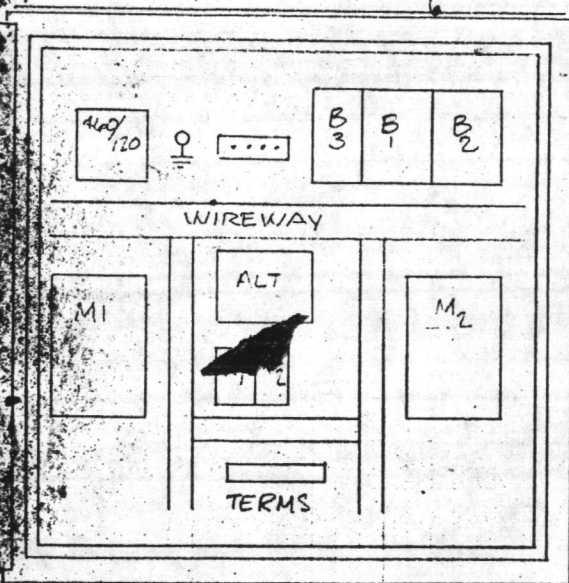
1890





RAIN SHIELD

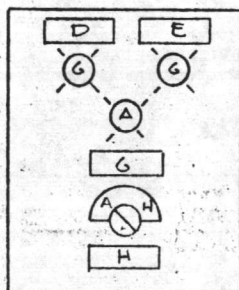
EXT. ALARM LIGHT



- BACK PANEL -

- FRONT ELEVATION -

- NAMEPLATE SCHED -



- (A) TEST
- (B) SILENCE
- (C) ALARM
- (D) PUMP 1
- (E) PUMP 2
- (F) WATERPLANT SHUTDOWN
- (G) AUTO MODE
- (H) AUTO-HAND ONLY

PANEL AT WATER TREATMENT PLANT

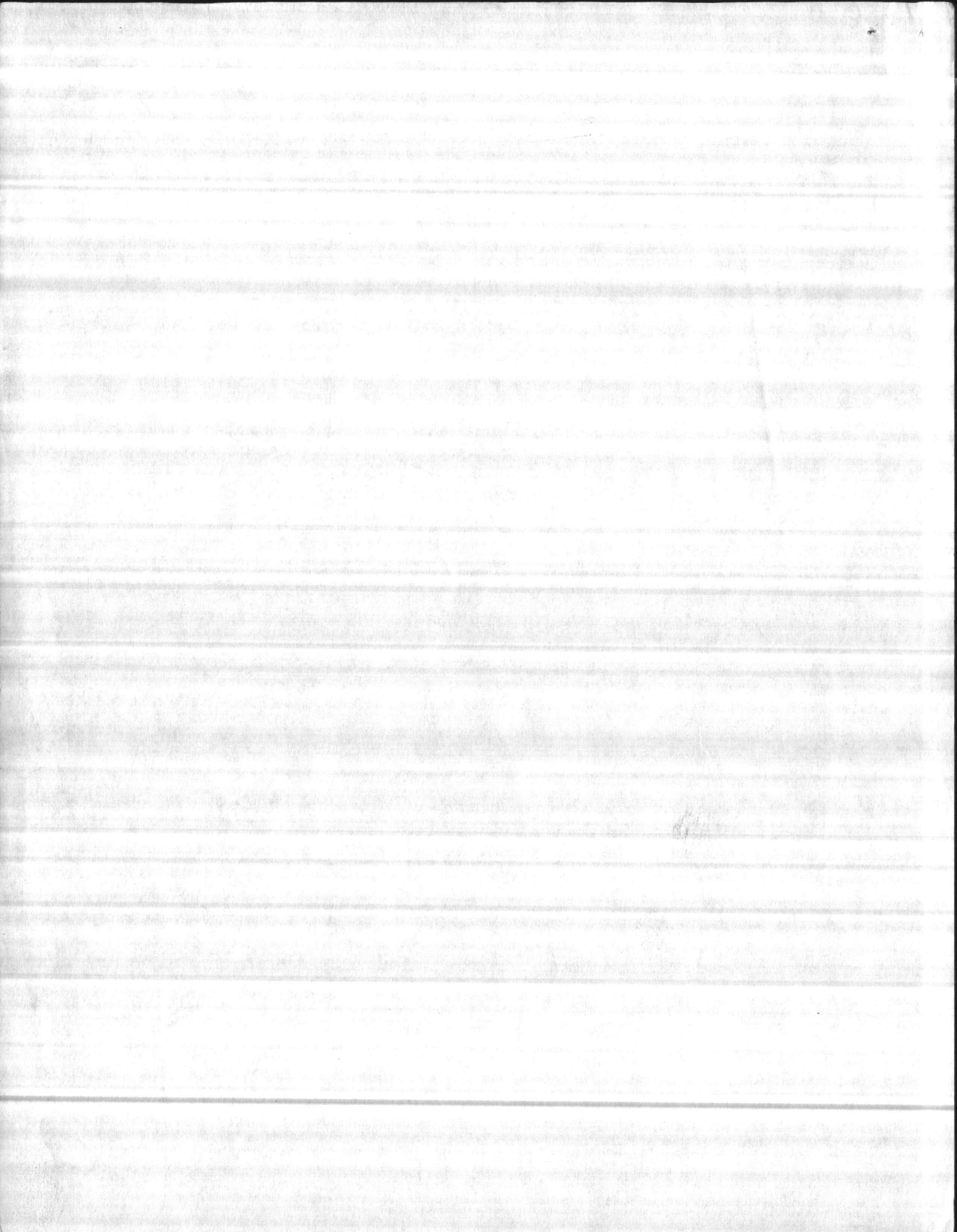
*Wired with BX TAPE  
RFD with Bl. TAPE  
Blade with Bl. TAPE  
RUE w RED TAPE*

- TERMINAL STRIP - PUMP

1	2	3	4	5	6	7	8	9	10	11	12
FS-4	FS-3	FS-2	FS-1	SHUT DOWN	M1 RUN LITE	M2 RUN LITE				115VAC LINE OUT	

- TERMINAL STRIP WATER PLANT -

1	2	3	4	5	6	7	8	9	10	11
115VAC LINE IN	WATER PLANT SHUT DOWN	M1 RUN LITE	M2 RUN LITE	AUTO SHUT DOWN						





# ELECTRICAL COMPONENTS

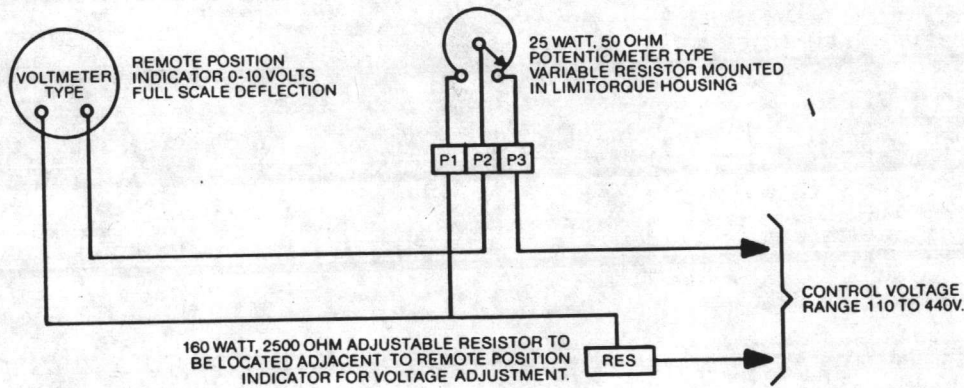
## Remote Position Indicators

Setting and Installation Instructions/  
Slidewire Type Position Indicator:

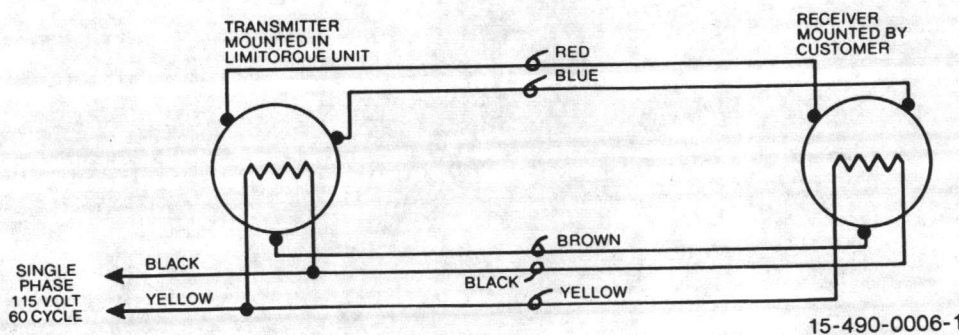
**CAUTION:** The voltmeter indicator is built to accept a maximum of ten (10) volts only. Therefore, it will be necessary to use a separate test voltmeter with a scale suitable for the maximum incoming control voltage.

1. Refer to P.G.C. Wiring Diagram 15-477-0183-1.
2. Mount the adjustable resistor as near as possible to the voltmeter indicator.
3. WITH POWER OFF connect all wires as shown on the W/D except the two on the voltmeter indicator; connect these two to the test meter, (see caution above).
4. Move the slider of the adjustable resistor to the extreme opposite end of the resistor from the power connection.

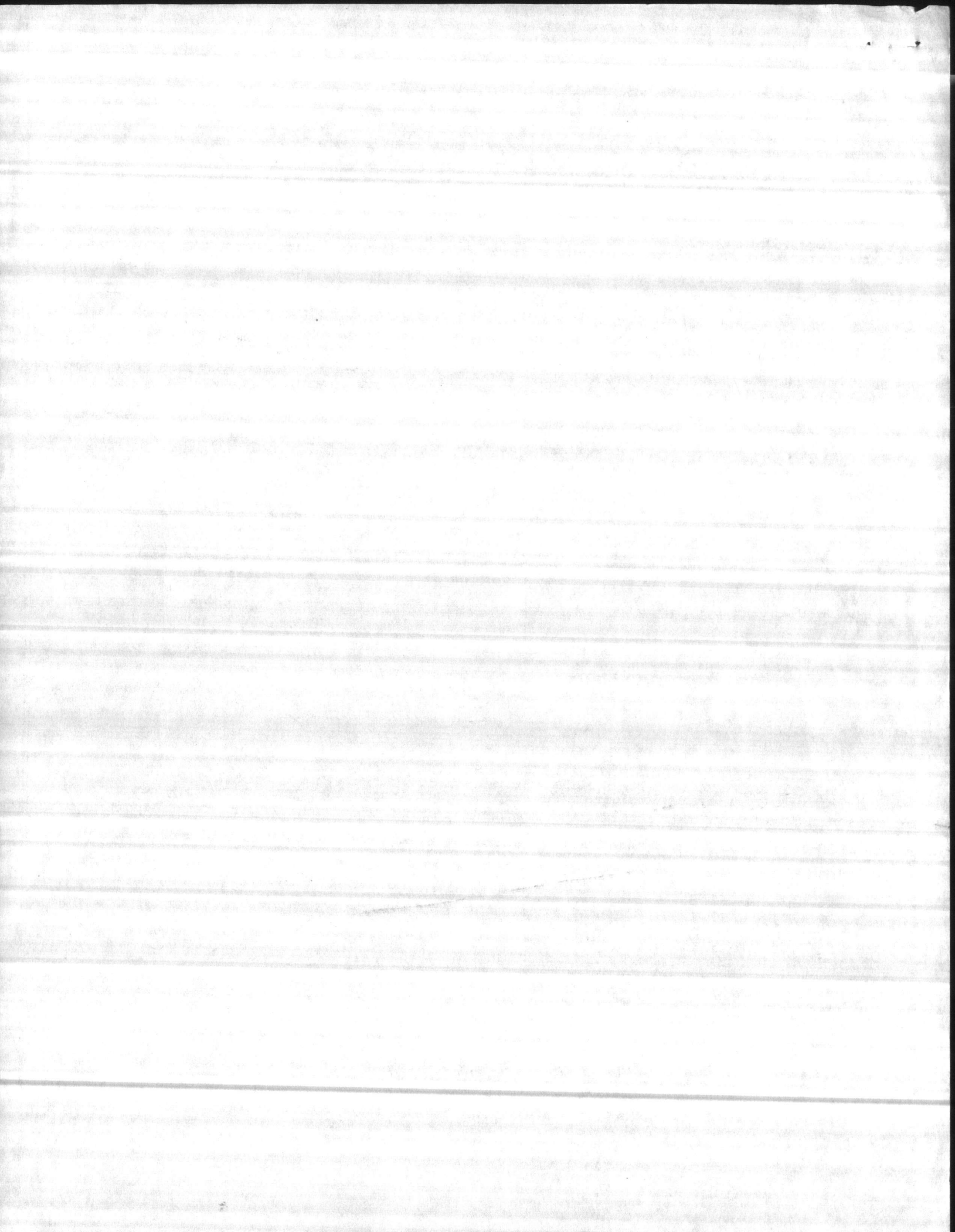
5. Open the indicator compartment of the Limitorque unit and uncouple transmitter shaft from gearing.
6. Operate Limitorque to a fully closed position of the valve.
7. Rotate wiper arm of transmitter to the zero degree position and recouple shaft.
8. Turn POWER ON. Test meter should now read "zero" or almost zero.
9. Run or crank unit to the fully open position.
10. Move the adjustable resistor slider toward the power connected end until the test meter reads ten (10) volts.
11. Turn Power Off—Disconnect the test meter and connect the leads to the voltmeter indicator.
12. Turn Power On—Indicator should now read full open.
13. Final adjustment may be necessary. If Indicator reads less than full open move the adjustable resistor slider ahead slightly being careful not to exceed full open position on the dial. If meter reads more than zero, when unit is fully closed repeat setting starting with step #7.
14. After setting indicator, lock adjustable resistor slider in place.



15-477-0183-1



15-490-0006-1



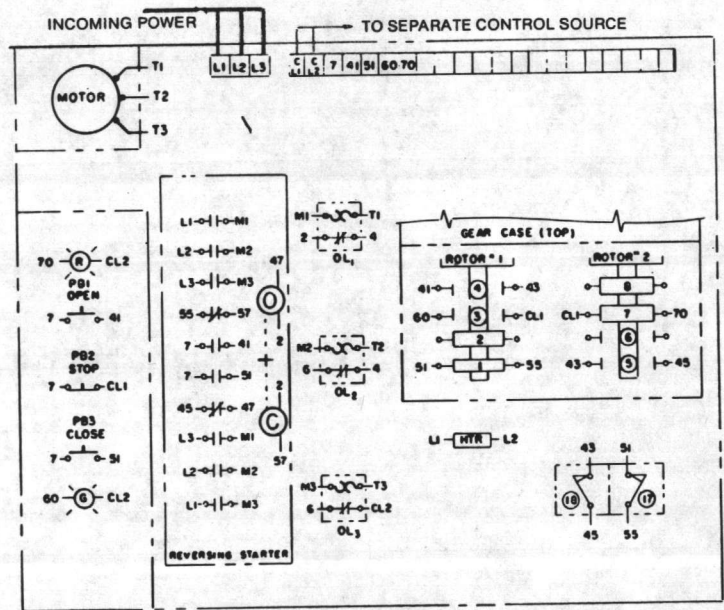
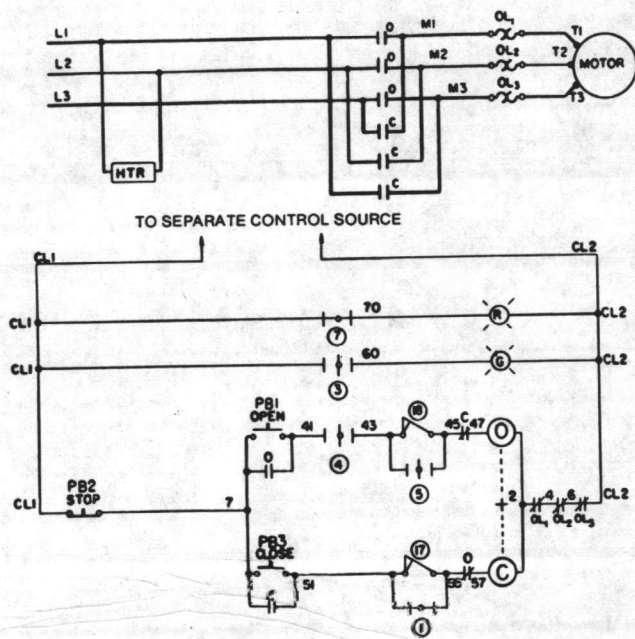
# TYPICAL WIRING DIAGRAMS

The following drawings are typical Limit-torque wiring diagrams showing built in motor controls for a 3 phase power supply for the electric motor. In the first drawing, the arrangement is a typical one for

a wedge type gate valve or globe valve where the closing direction is limited by the torque switch, and the opening direction is limited by the geared limit switch. The second drawing is one which could be used in controlling the opening and closing of butterfly valves, ball valves, plug valves or sluice gates, where the closing and opening directions are limited by the geared limit switch. The torque

switches are wired in series with the geared limit switches to protect against mechanical overloads anywhere between full open and closed positions of the valve.

Both arrangements are shown with a three button (open, stop, close) pushbutton setup, and two lights to indicate full open or close positions of the valve. When the valve is at some intermediate position of travel, both lights will be on.



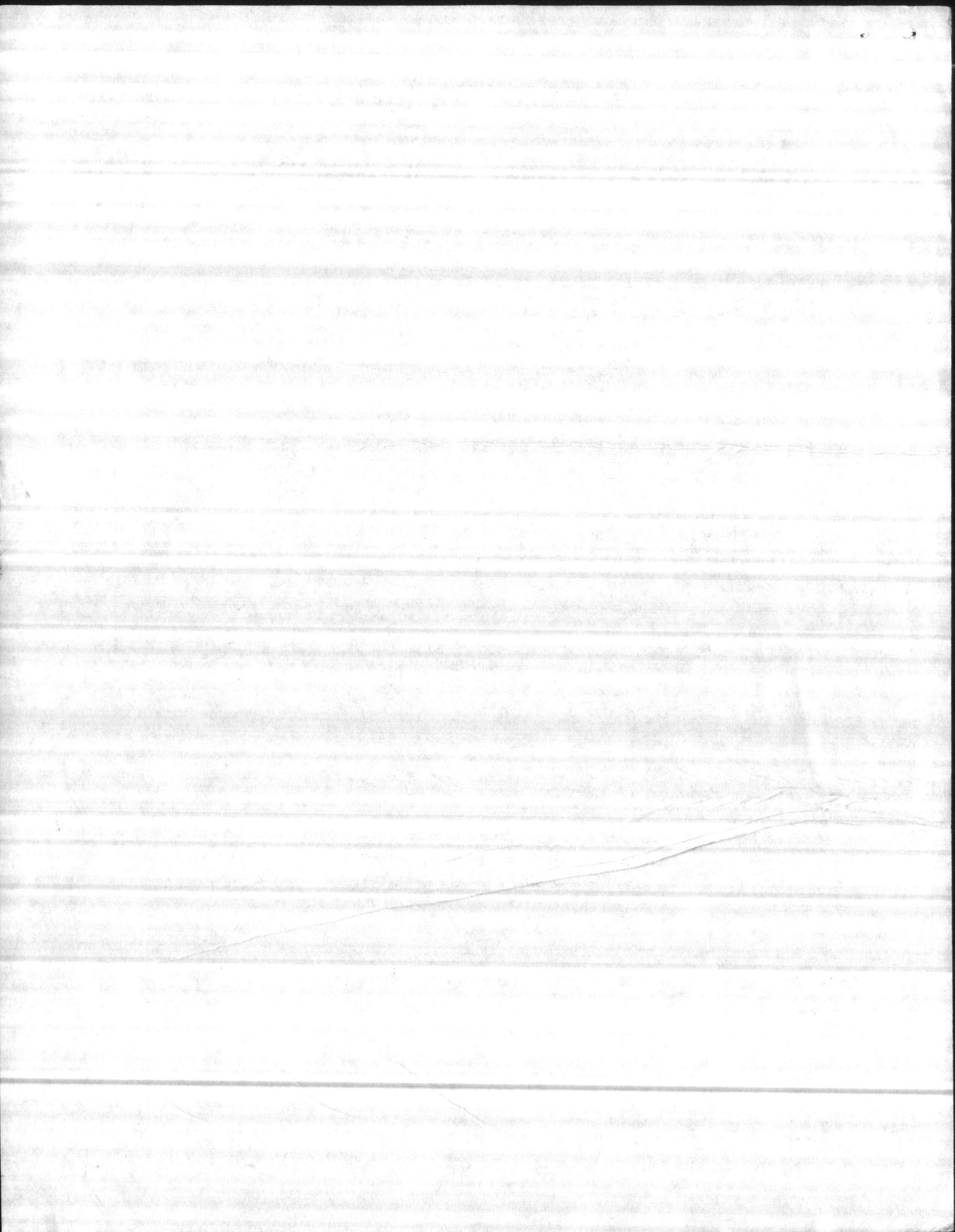
LIMIT SWITCH COMPARTMENT 15-476-0055-3

VALVE SHOWN IN FULL OPEN POSITION

ROTOR CONTACT	LIMIT SWITCH COMPARTMENT		FUNCTION
	FULL OPEN	FULL CLOSED	
1	1	1	BY PASS CIR
2	1	1	SPARE
3	1	1	IND. LIGHT
4	1	1	OPEN LIMIT
5	1	1	BY PASS CIR
6	1	1	SPARE
7	1	1	IND. LIGHT
8	1	1	SPARE

NOTES  
 1 — CLOSED CONTACT  
 2 — OPEN CONTACT

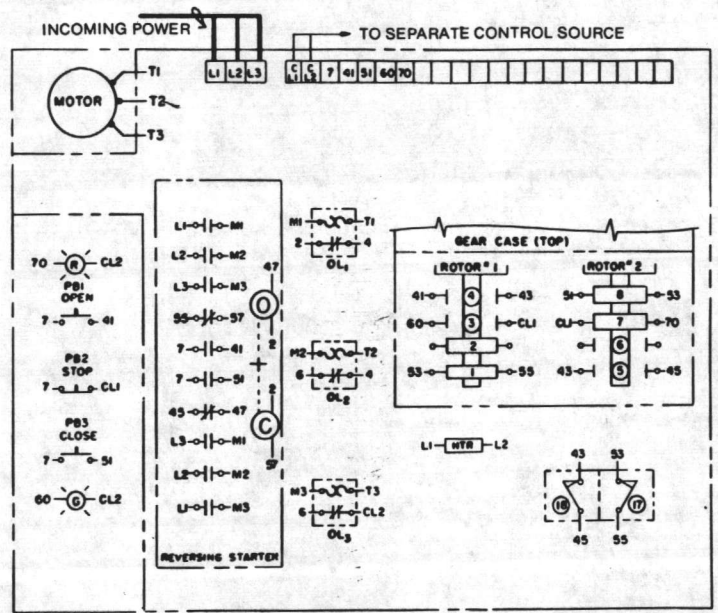
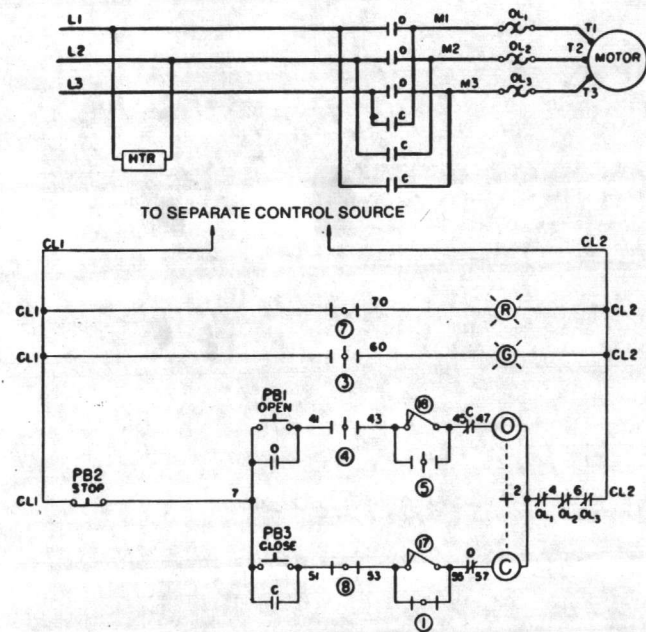
- 17 CLOSING TORQUE SWITCH INTERRUPTS CONTROL CIRCUIT IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE OF FULLY CLOSED VALVE.
- 18 OPENING TORQUE SWITCH INTERRUPTS CONTROL CIRCUIT IF MECHANICAL OVERLOAD OCCURS DURING OPENING CYCLE.



# TYPICAL WIRING DIAGRAMS

## Legend:

- C—CLOSE CONTACT
- O—OPEN CONTACT
- ⊖—CLOSING COIL
- ⊕—OPENING COIL
- ⊙—GREEN INDICATING LIGHT
- ⊙—RED INDICATING LIGHT
- PB1—OPEN PUSHBUTTON
- PB2—STOP PUSHBUTTON
- PB3—CLOSE PUSHBUTTON
- OL—OVERLOAD RELAY (1,2,8,3)
- HTR—SPACE HEATER (LS COMP)
- +—MECHANICAL INTERLOCK



LIMIT SWITCH COMPARTMENT

15-476-0023-3

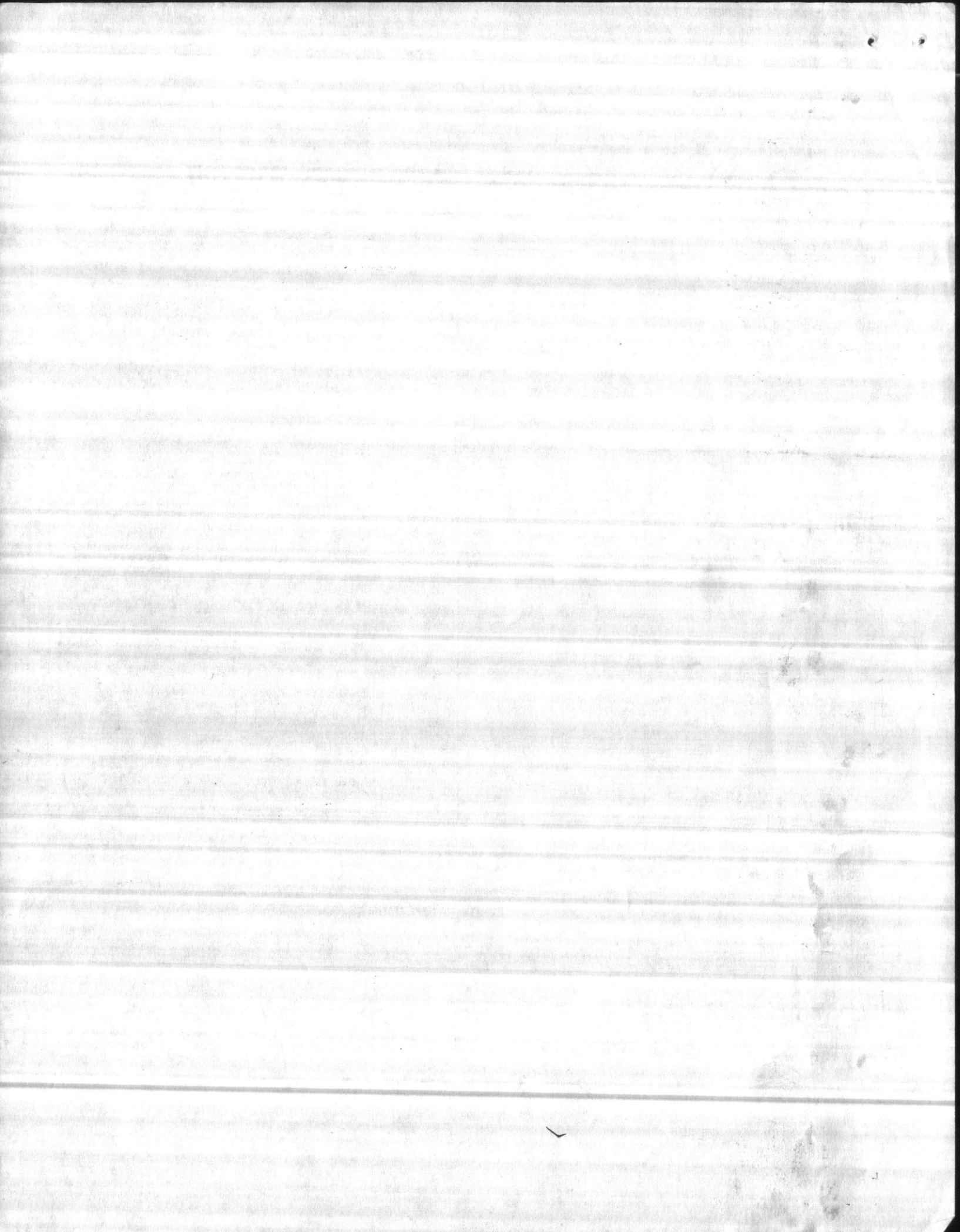
### VALVE SHOWN IN FULL OPEN POSITION

ROTOR	LIMIT SWITCH COMPARTMENT			FUNCTION
	CON-TACT	VALVE POSITION		
		FULL OPEN	FULL CLOSED	
1	1	—	—	BY PASS CIR
	2	—	—	SPARE
	3	—	—	IND. LIGHT
	4	—	—	OPEN LIMIT
2	5	—	—	BY PASS CIR
	6	—	—	SPARE
	7	—	—	IND. LIGHT
	8	—	—	CLOSE LIMIT

#### NOTES

- 1 — CLOSED CONTACT
- 2 --- OPEN CONTACT

- 17 CLOSING TORQUE SWITCH INTERRUPTS CONTROL CIRCUIT IF MECHANICAL OVERLOAD OCCURS DURING CLOSING CYCLE.
- 18 OPENING TORQUE SWITCH INTERRUPTS CONTROL CIRCUIT IF MECHANICAL OVERLOAD OCCURS DURING OPENING CYCLE.









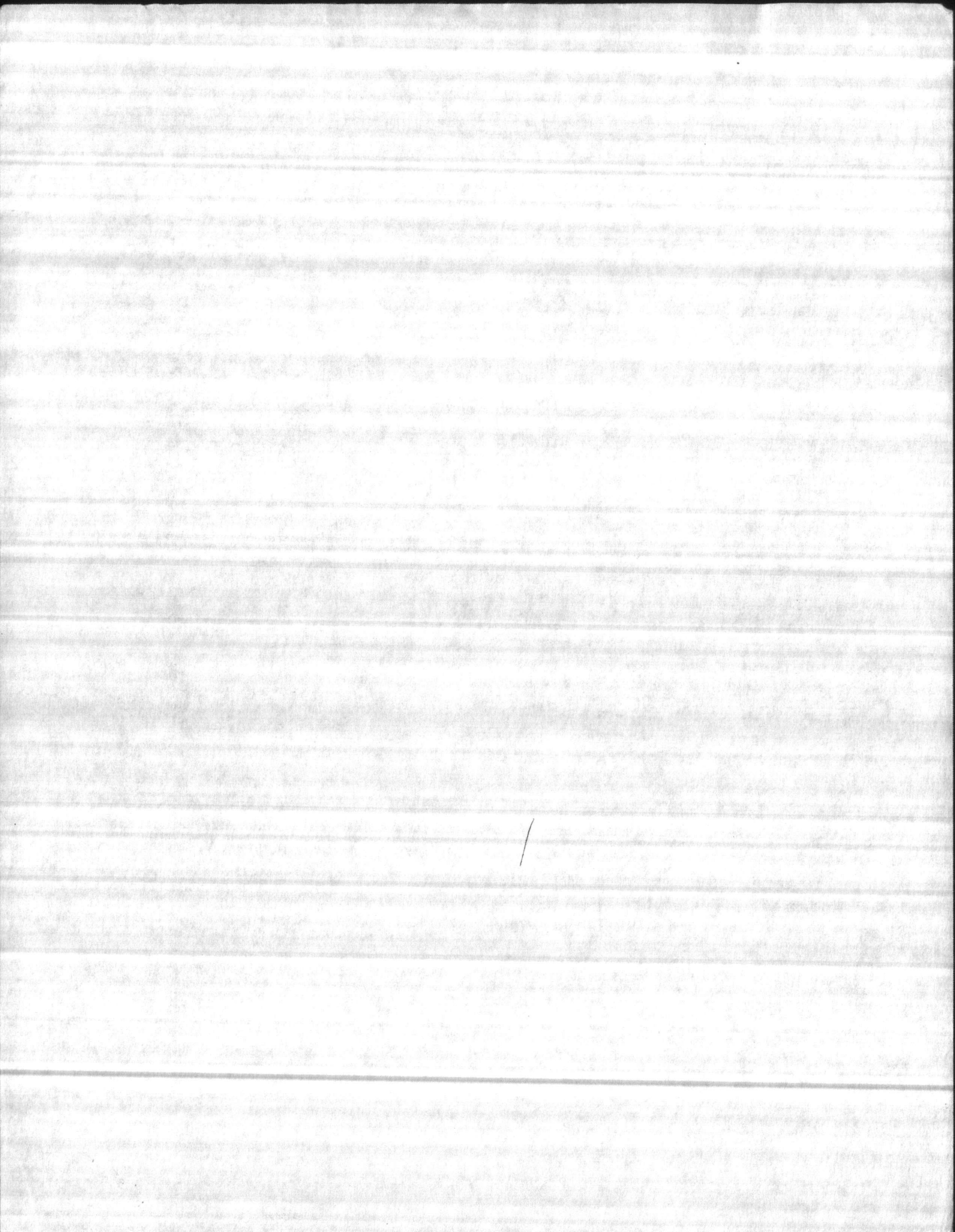
WATER TREATMENT REMOTE TERMINAL REPORT

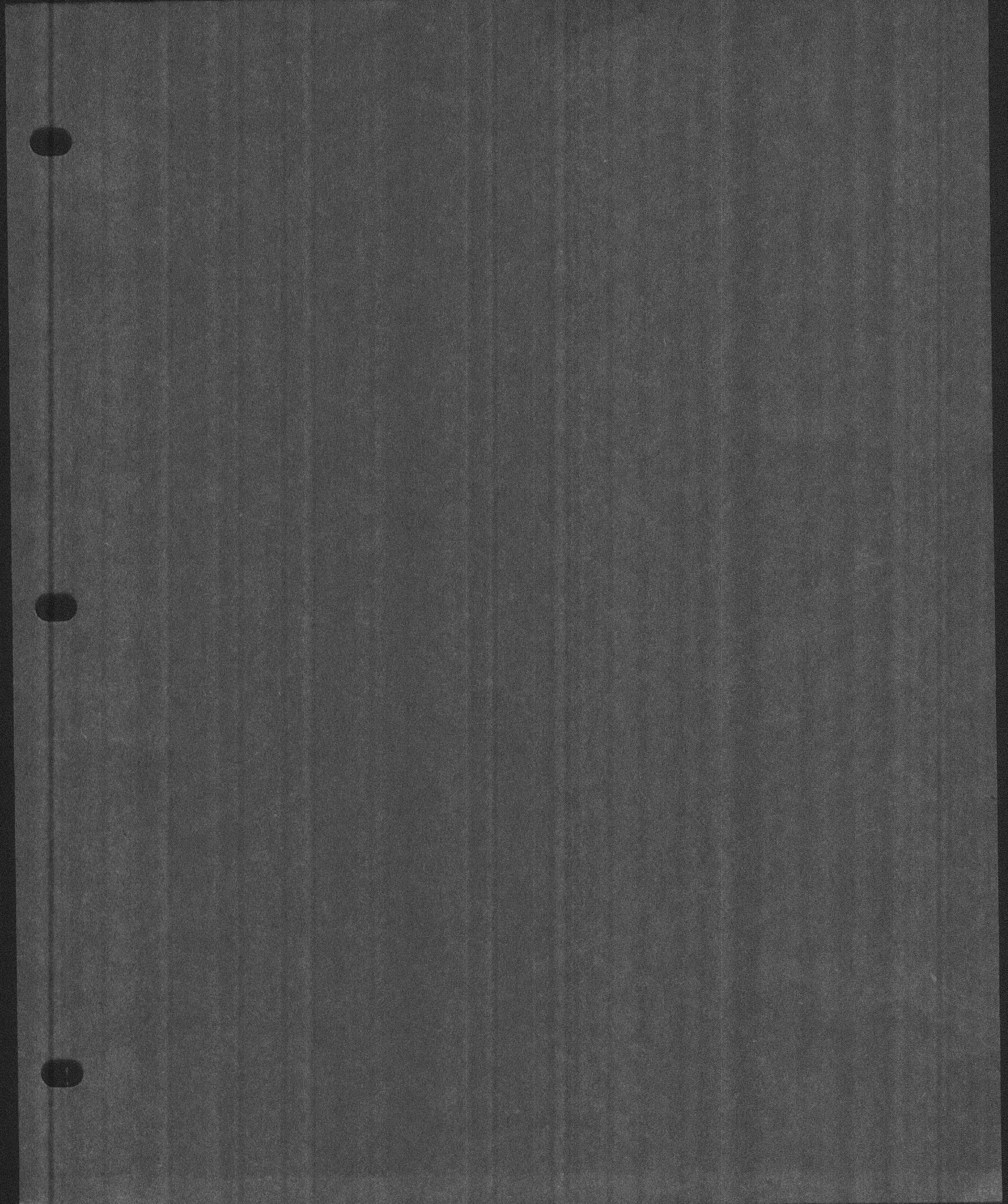
DATE: 5 JAN 1992

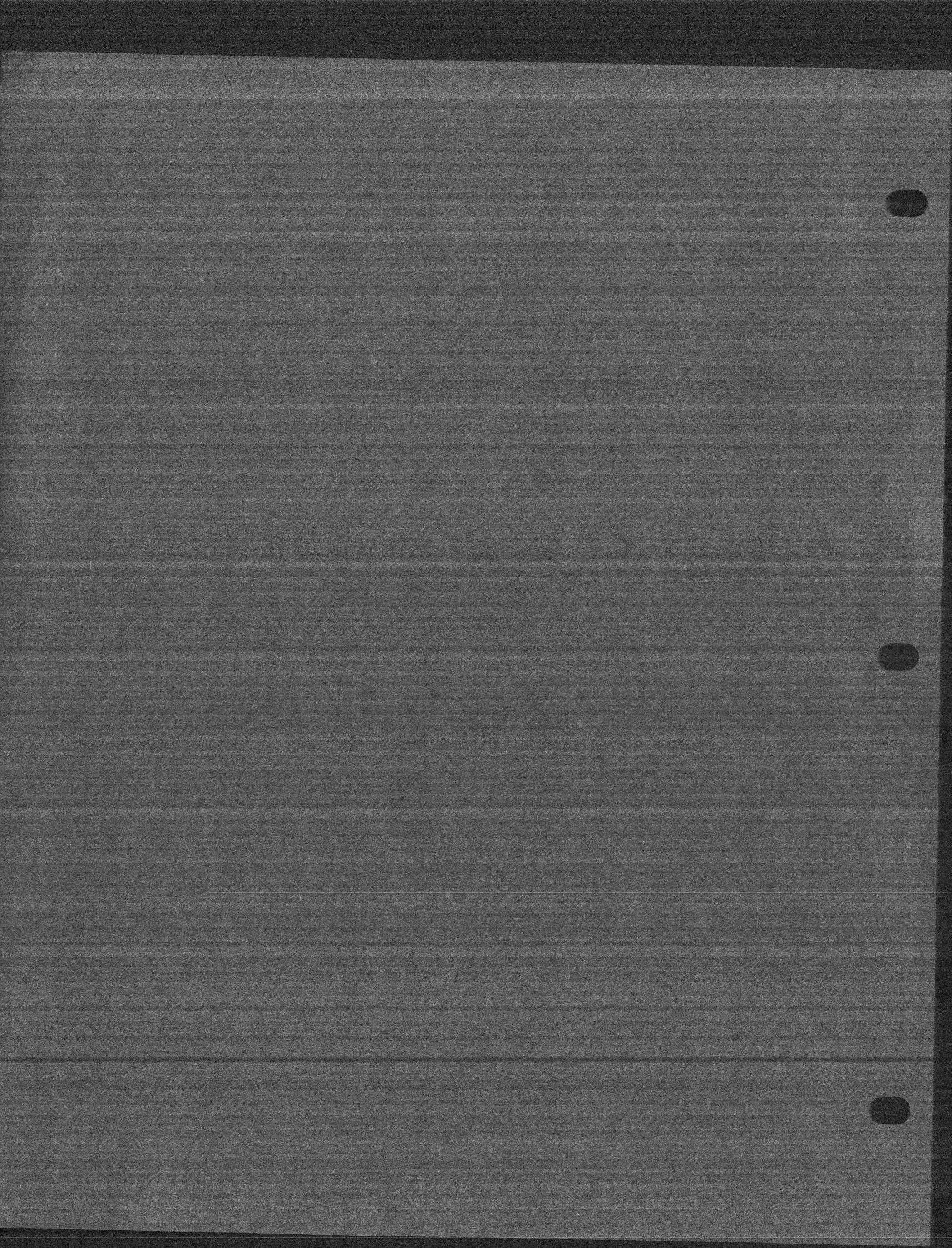
REMOTE	DATAFAIL	PWR/FAIL	H/O/A	F/RUN	B/VLT	ANALOG
1	643	OK	OK	OK	13.5	160
2	644	OK	OK	OK	13.6	130
3	638	NOT TESTED				
4	646	OK	OK	OK	12.5	180
5	647	OK	OK	OK	12.5	280
6	648	OK	OK	OK	13.5	280
7	649	OK	OK	OK	13.1	150
8	650	OK	OK	OK	12.6	NOT ON
9	698	OK	OK	OK	13.2	75
10	699	OK	OK	OK	12.6	140
11	700	OK	OK	OK	12.8	150
12	701	OK	OK	OK	13.1	140
13	703	OK	OK	OK	13.2	200
14	704	OK	OK	OK	13.1	75
15	705	OK	OK	OK	12.6	250
16	706	OK	OK	OK	12.2	225
17	707	OK	OK	OK	13.1	75
18	708	OK	OK	OK	13.5	260
19	TTET	OK	OK	N/A	13.1	935
20	MFET	OK	OK	N/A	13.1	920
21	PPET	OK	OK	N/A	13.5	935
22	BMET	OK	OK	N/A	13.2	940
23	MPET	OK	OK	N/A	13.1	950
24	TTPS	OK	OK	N/A	13.5	OK
25	OB	OK	OK	N/A	13.1	OK
26	B236	OK	OK	N/A	13.2	OK
27	M139	OK	OK	N/A	12.7	OK
28	B540	OK	OK	N/A	12.9	OK
29						
30						
31						
32						

COMMENTS 10 BATTERIES REPLACED  
WELL 700 DIESEL FUEL LEAKS

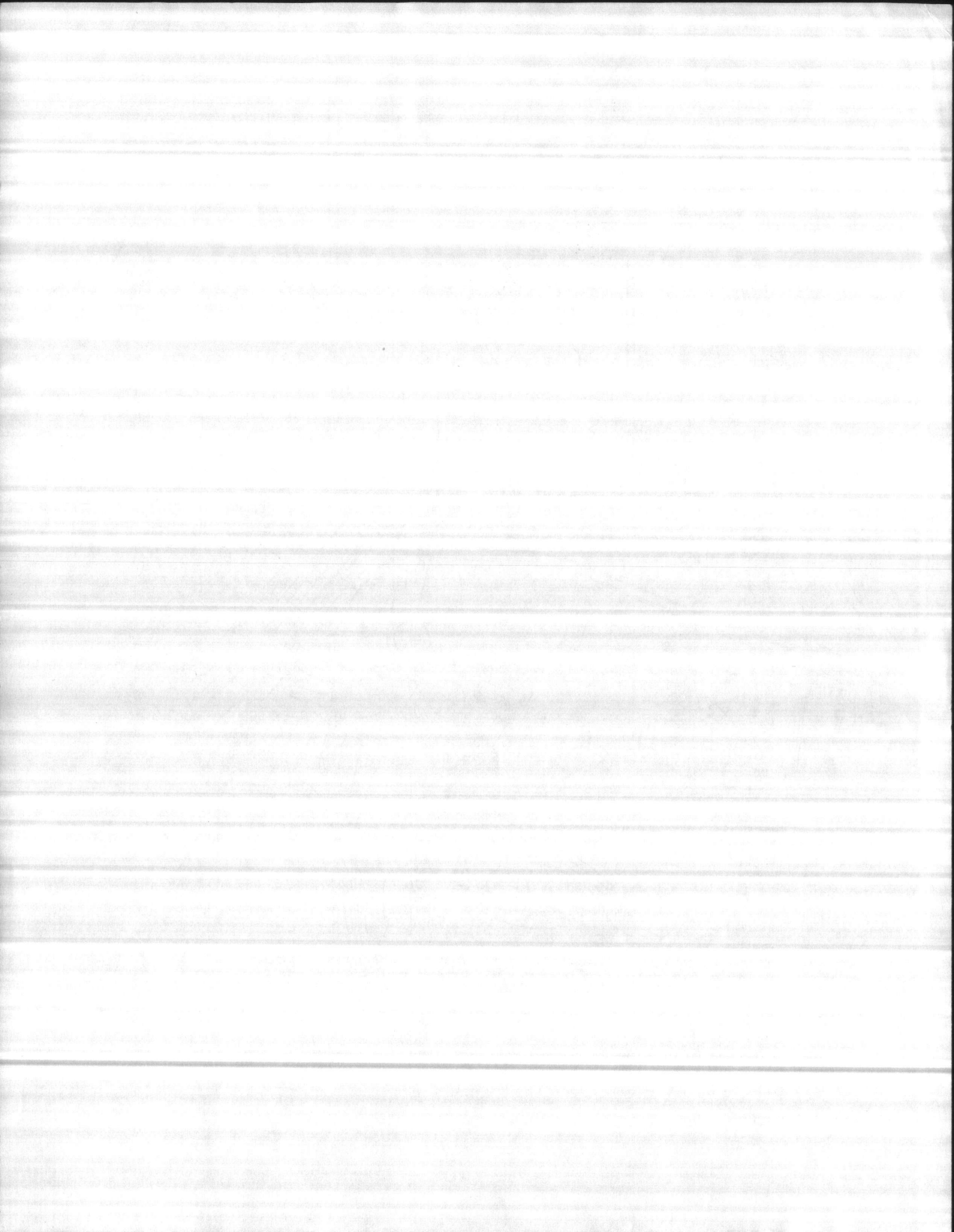
INSPECTOR L. BROWN, R. VICK



















**CATHODIC PROTECTION SYSTEMS  
THIRTEEN (13) ELEVATED WATER STORAGE TANKS - VARIOUS LOCATIONS  
CAMP LEJEUNE, NORTH CAROLINA**

**OPERATIONS IN GENERAL**

This cathodic protection system features an automatic potential controlled rectifier unit and platinized/niohium anode system complete with two (2) copper-copper sulfate reference electrodes. This system is designed for continuous operation with a ten (10) year design life.

The bowl anode system is submerged in the tank approximately as shown on the shop drawings and requires no maintenance. This anode circuit will operate only when the tank water level reaches the minimum level required to submerge the anode element. It is recommended that the tank water level be maintained at fifty percent (50%) or more in the winter season when ice may be present in the tank to avoid damage to this anode system.

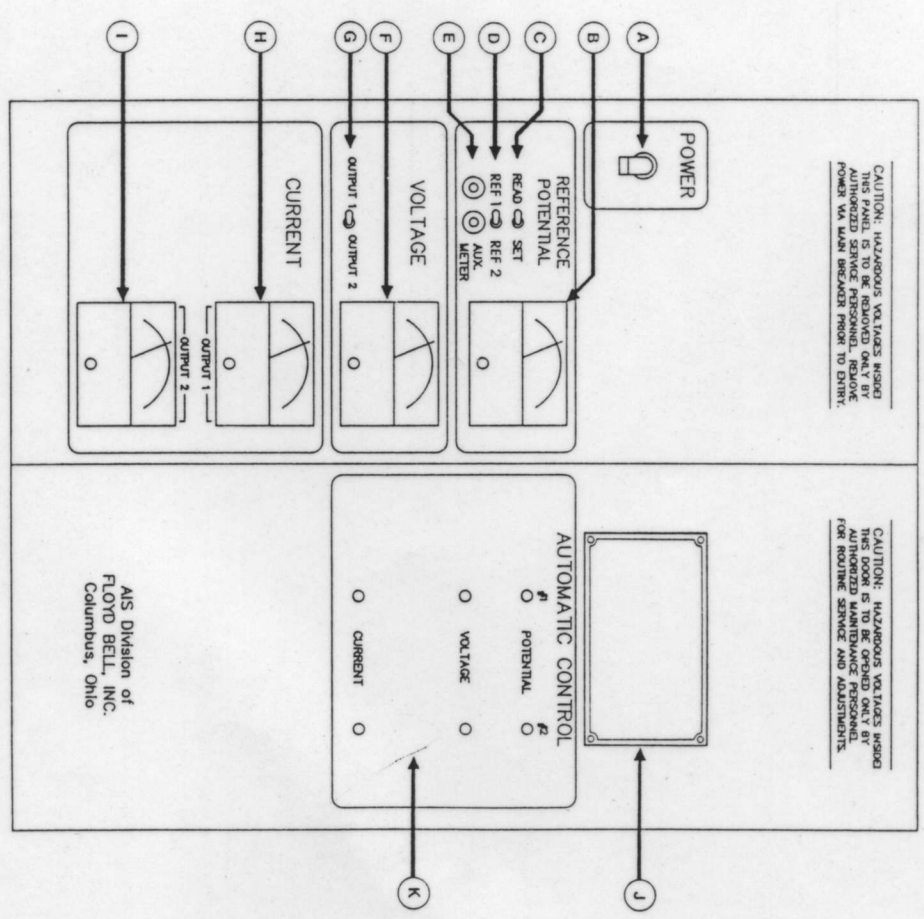
The riser anode system is located in the center of the riser pipe and extends from the top of the riser pipe to the bottom of the pipe. The platinized/niohium anode in the riser anode system does not extend into the tank bowl and operation of the riser system has only limited effect in the tank bowl. As in the case of the bowl anode system, no regular maintenance is required on this anode.

The copper-copper sulfate reference electrodes are located, one (1) in the tank bowl, and the second in the riser pipe. They are monitored by the potential meter in the rectifier unit. Protection levels may be monitored in the bowl or riser pipe by selecting (bowl electrode) or (riser electrode) with the selector switch located in the left side door of the rectifier cabinet. No regular maintenance is required on these reference electrodes, but they should not be kept out of submersion for more than two (2) weeks at a time. Contact Corpro Companies, Inc. for recommendations if you expect to have this tank empty for more than two (2) weeks continuously.

The automatic potential controlled rectifier unit should be inspected once a month and all meter readings recorded. This will aid in maintaining the system at optimum operation. A pulsing green potential indicator light is an indication if the rectifier is in potential control mode and operating properly.

See your most recent Water Tank Inspection Report for specific recommended operating ranges. If repairs or adjustments become necessary refer to the Operating and Maintenance Manual.

**WARNING:** Repair and adjust by experienced personnel only.

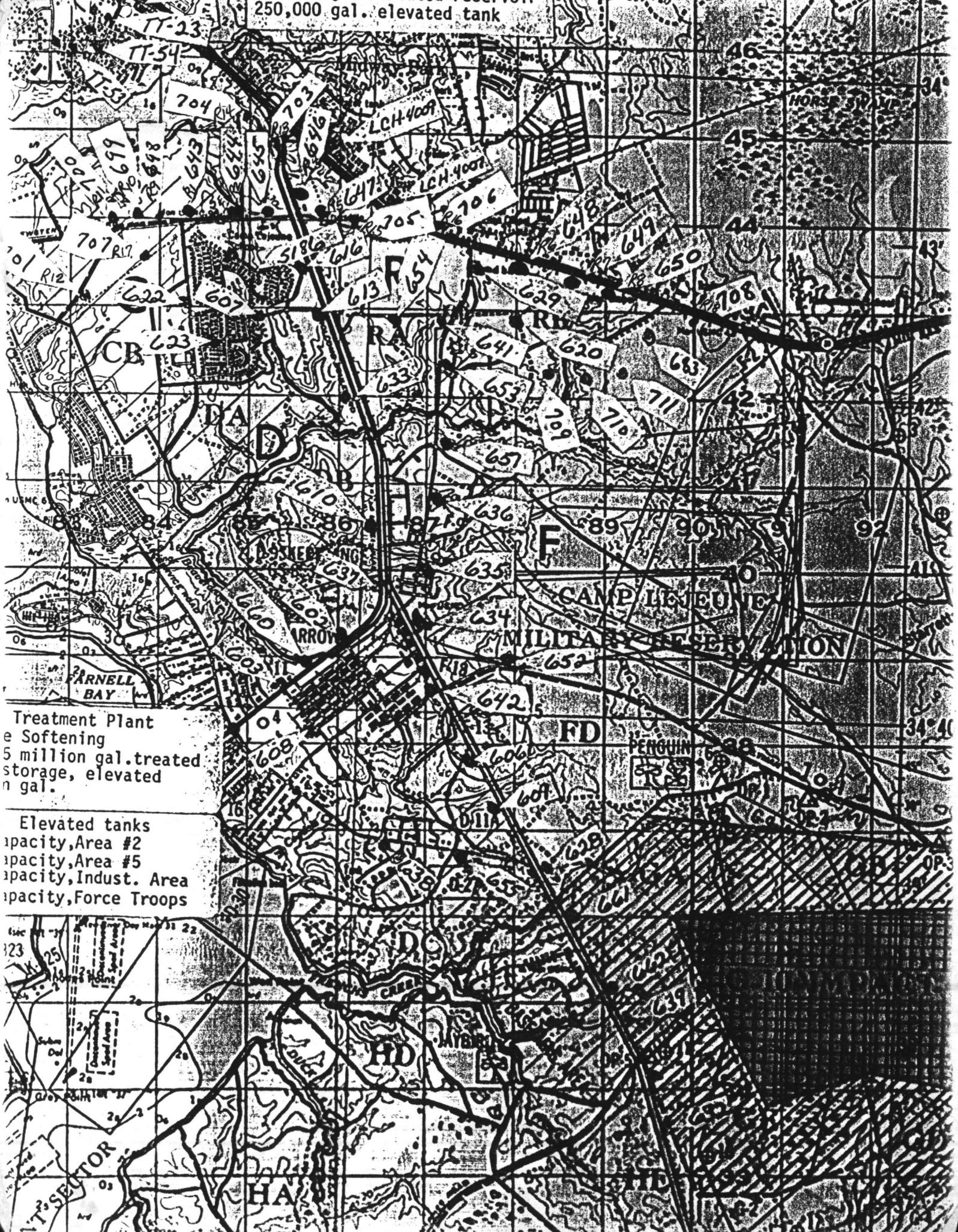


- A — On/Off power switch
- B — Reference potential meter
- C — Read/Set switch
- D — Reference #1/#2 switch
- E — Auxiliary meter outputs
- F — Voltage meter

- G — Voltage output selector switch
- H — Current meter: output #1
- I — Current meter: output #2
- J — Serial number plate
- K — Automatic Control display

**IV - OPERATOR INSTRUCTIONS - General Instructions**

50,000 gal. treated reservoir  
250,000 gal. elevated tank



Treatment Plant  
e Softening  
5 million gal. treated  
storage, elevated  
n gal.

Elevated tanks  
capacity, Area #2  
capacity, Area #5  
capacity, Indust. Area  
capacity, Force Troops



Q 2A7 78L

120 V 50-60 Hz

38 V.A.

24 V Nema Type D

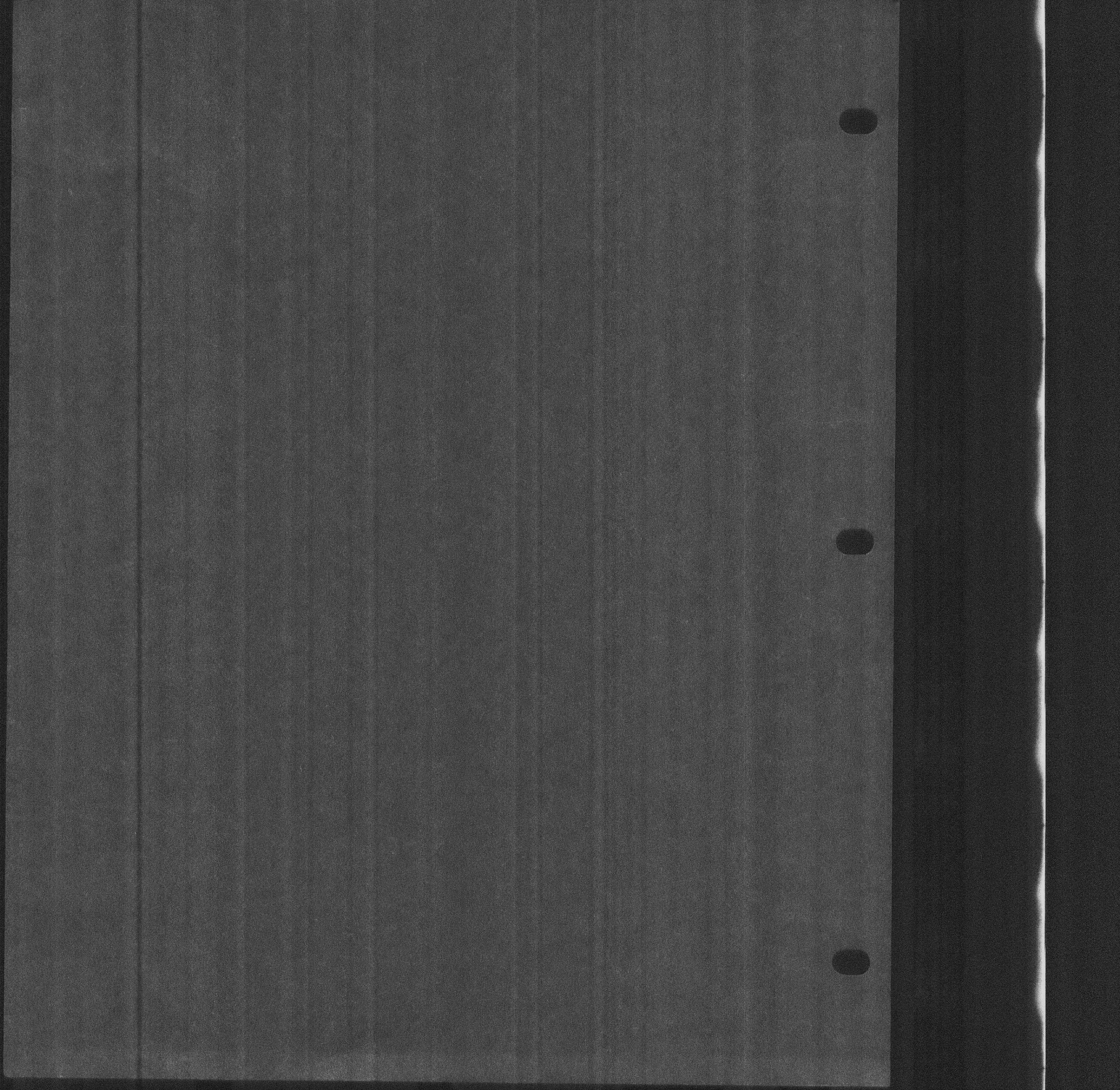
P/N AT72D 1089

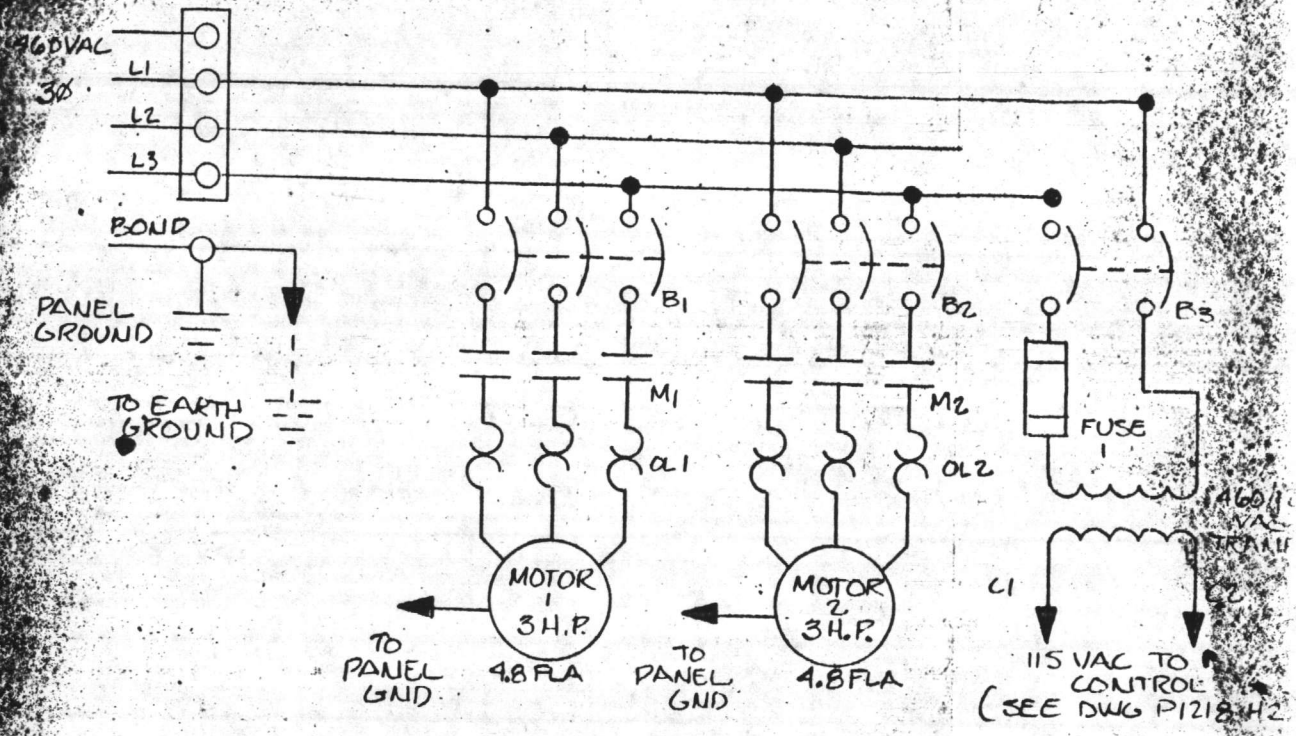
model 8917

Honeywell Inc.

Minneapolis Minn.







POWER WIRING

NOTE - THIS DRAWING (P1218-H1) IS APPLICABLE TO  
PANEL NO. 4 LOCATION III-1

- PARTS SCHEDULE -

- (1) B1 & B2 ~ SQUARE D FAL 3401S Δ
- (2) B3 ~ SQUARED FAL 2401S Δ
- (3) M1 & M2 ~ KLOCKNER-MOELLER DIL-006-40 NA
- (4) OL1 & OL2 ~ KLOCKNER-MOELLER ZO-6.6 KNA
- (5) TRANSFORMER ~ MICRON B200-BT2 13 JK
- (6) ALTERNATOR ~ PROTROL A/NO-NO
- (7) R1 ~ IDEC RH3B (115VAC)
- (8) R2 & R3 ~ IDEC RH2B (115VAC)
- (9) HORN ~ FARADAY 4"
- (10) PILOT LIGHTS ~ KLOCKNER-MOELLER La (color)/FB-NA
- (11) HOA ~ KLOCKNER-MOELLER TI-1-15431/e-NA
- (12) PUSH BUTTONS ~ KLOCKNER-MOELLER DTa-1K/KNA
- (13) ON-OFF SELECTOR ~ KLOCKNER-MOELLER TI-1-15431/e-NA
- (14) ENCLOSURE ~ HOFFMAN-AZ4 2408LP

Protrol, Inc.  
Electrical Control Panels + Systems  
2691 Ave. G. N.W.  
P.O. Box 1203 813-299-2953  
WINTER HAVEN, FL 33880

Winter Haven, FL 32880  
P.O. BOX 1508  
213 • 544 • 2023  
2nd Fl. Bldg. 6. N.W.  
Electrical Control Rooms & Systems





