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# COX

Research and Technology, Inc.

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DUPLEX PUMP  
CONTROL PANEL  
TIMBERLINE BAPTIST CHURCH

Cox Research and Technology, Inc.  
14697 S. Harrells Ferry Road  
Baton Rouge, LA. 70816  
(225) 756-3271 Fax (225) 755-1030

CP-1697

VOLTAGE	<u>277/480V</u>	(480V, 277/480V, 240V, 120/240V, 208V, 120/208V)
PHASE/HZ	<u>3/60</u>	
NO. MOTORS	<u>2</u>	
HP	<u>16.1</u>	
FLA	<u>21.3</u>	
TYPE OF PUMP	<u>Submersible</u>	(Self-Priming, Submersible)
MANUFACTURER	<u>ABS</u>	
CATALOG NUMBER	<u></u>	

CONTROL VOLTAGE	<u>120V</u>	(120V, Other)
ENCLOSURE	<u>NEMA 4X</u>	(NEMA 1, NEMA 3R, NEMA 4, NEMA 4X)
ENCLOSURE MATERIAL	<u>Fiberglass</u>	(Painted Steel, Stainless Steel, Fiberglass)
CONTROL SENSOR	<u>Floats</u>	(Floats, Bubbler, Other)
CAPACITORS	<u>No</u>	(Yes, No)
CAPACITOR WIRING FIGURE	<u>N/A</u>	
THERM. & SEAL FAIL WIRING FIGURE	<u></u>	

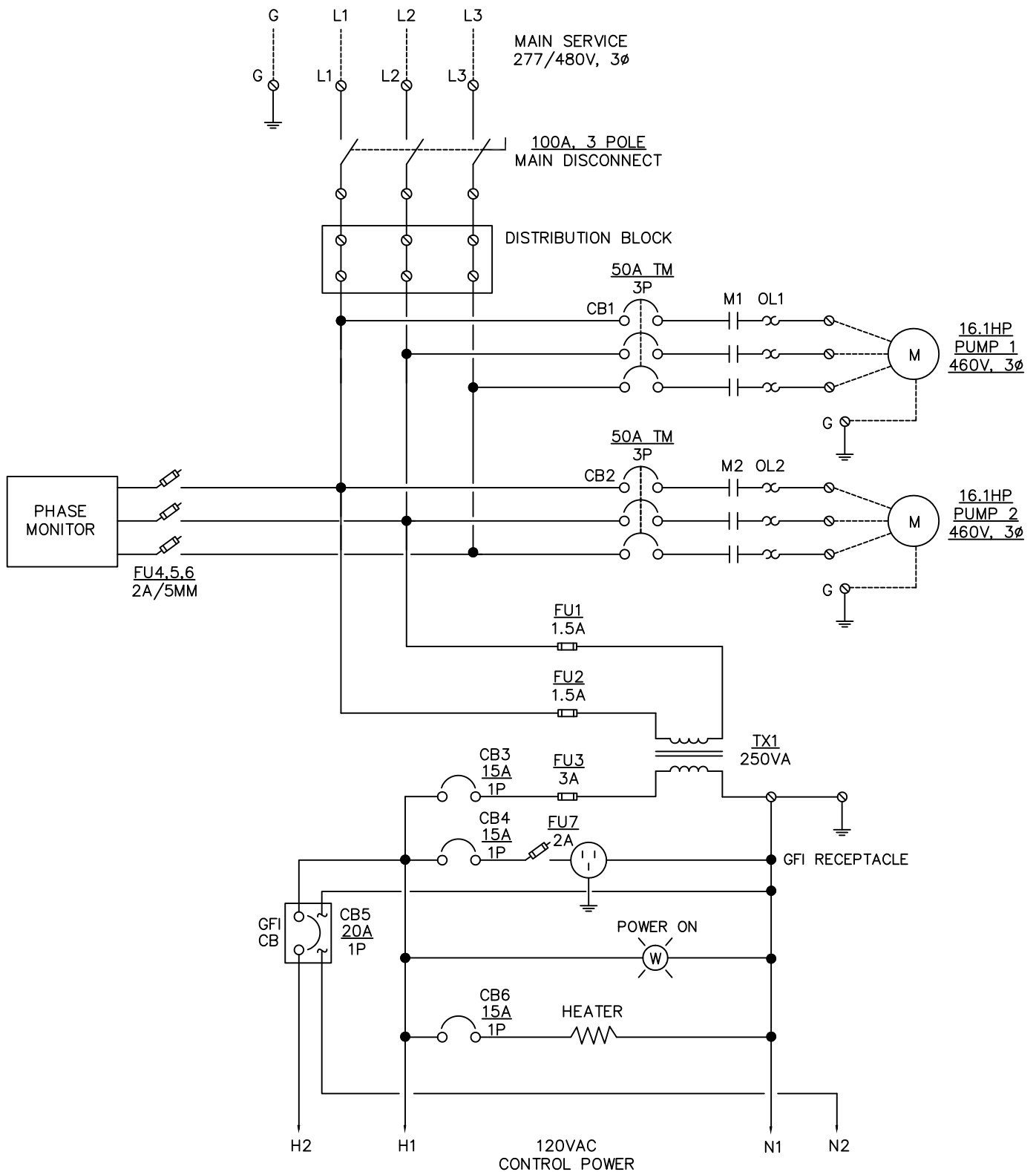
OPTIONS:

SEAL FAIL LIGHTS	<u>X LED</u>	(Submersible Only)
SEAL FAIL RELAYS	<u>X Seal Minder</u>	(Submersible Only)
SEAL FAIL PUMP SHUTDOWN	<u></u>	(Submersible Only)
HT PUMP SHUTDOWN	<u>X</u>	(Self-Primer, Submersible)
ALARM HORN	<u>X</u>	
ALARM LIGHT	<u>X Strobe</u>	
LIGHT PANEL MTD	<u>X</u>	
LIGHT REMOTE MTD	<u></u>	
LIGHT FLASHER	<u>X</u>	
LIGHTNING ARRESTER	<u>X</u>	
ELAPSED TIME METER	<u>X</u>	
PHASE MONITOR	<u>X</u>	
NEMA RATED STARTERS	<u>X</u>	
GROUND FAULT RECPT.	<u>X</u>	
GREEN RUN LIGHTS VS. RED	<u>X LED</u>	
POLE, BOX, SEAL	<u></u>	
INTRINSICALLY SAFE RELAYS	<u></u>	
HIGH TEMP. LOCKOUT, MANUAL RESET	<u></u>	
ECONOMY VERSION	<u></u>	

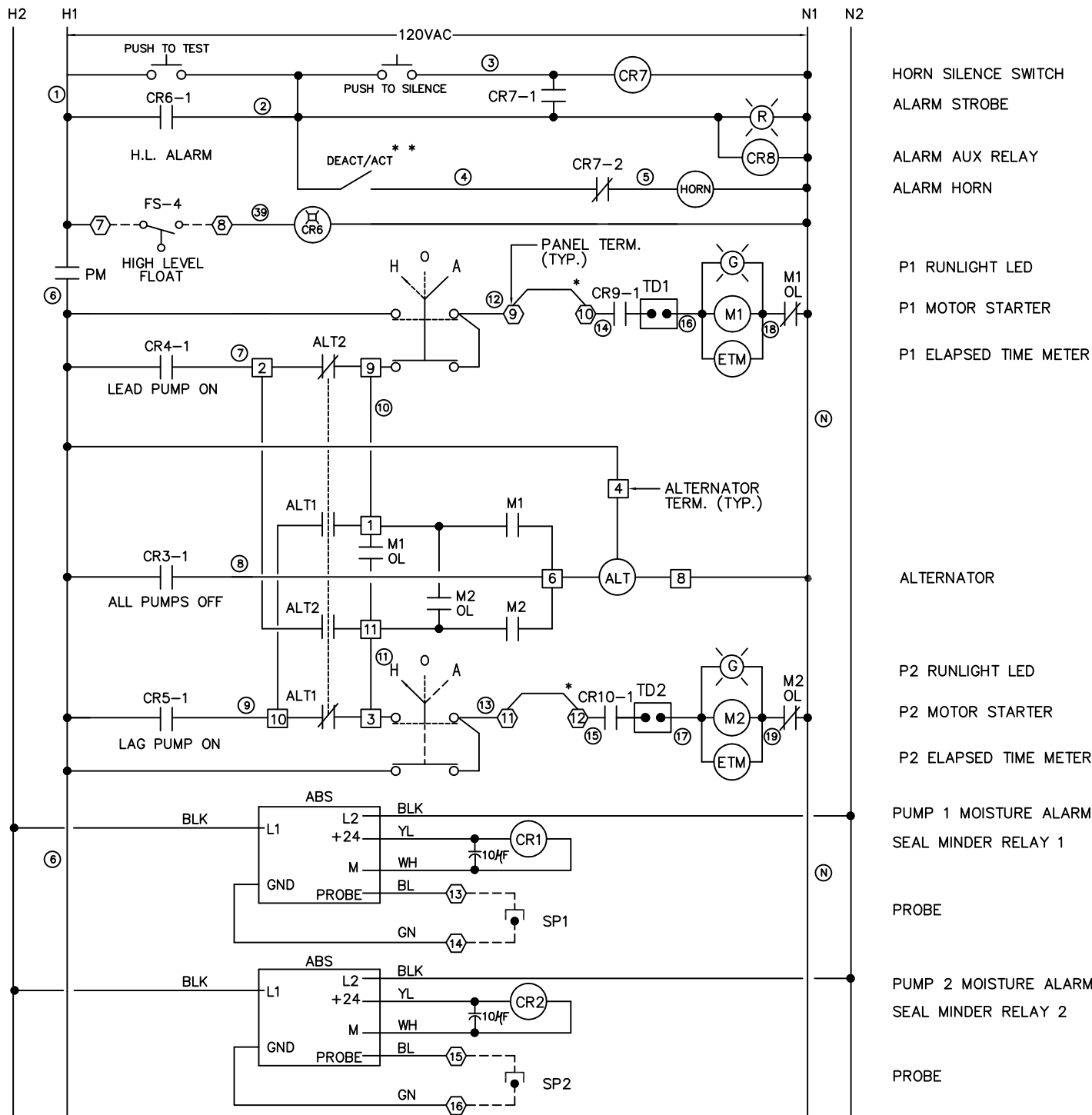
SOLD TO: CF ENGINEERED EQUIPMENT - DALLAS, TX  
TAG : TIMBERLINE BAPTIST CHURCH

SHIP TO: CF ENGINEERED EQUIPMENT - DALLAS, TX

	Drawing Title						
	PANEL DESCRIPTION						
DATE 11/14/03		REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	DRAWN BY C. RACHAL	ECN	DATE
	Project Title	<div>COX</div> <div>Research and Technology, Inc.</div>			P.O. Box 77808 Baton Rouge, LA 70809		PURCHASE ORDER NUMBER
	DUPLEX PUMP CONTROL PANEL				Ph. (225)756-3271 Fax (225)756-1030		DRAWING NUMBER CP-1697
							SHEET NUMBER 1



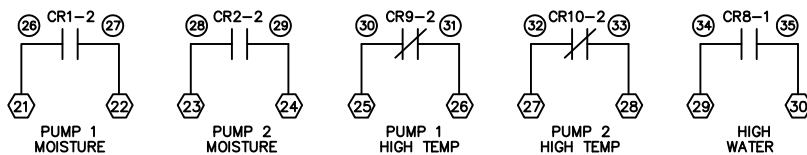
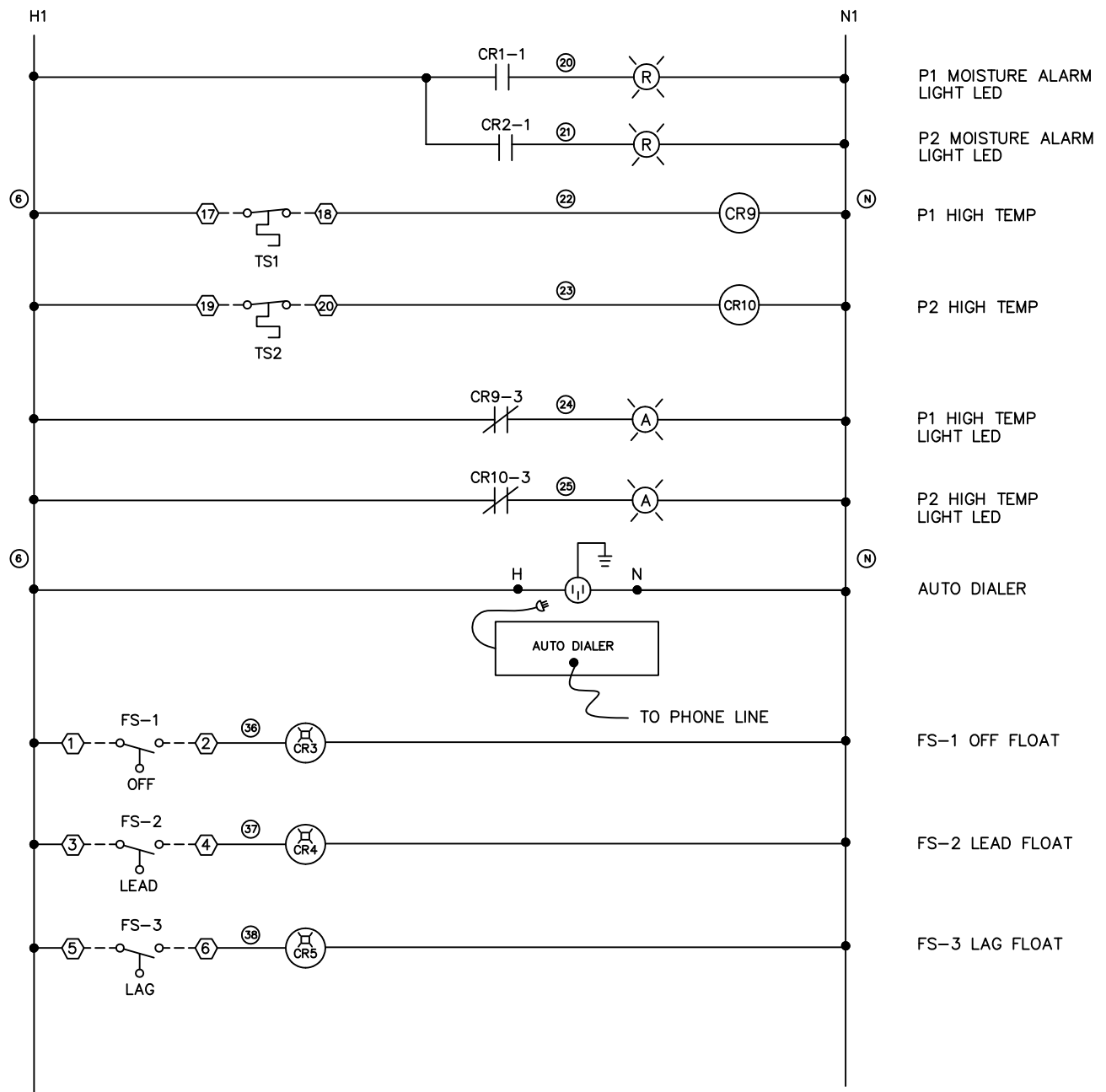
	Drawing Title								
	POWER DIAGRAM								
DATE		REFERENCE DRAWING	NO.	REVISION-LOCATION	ECN	DATE	BY		
11/14/03		S/N	Sales Engineer C.C.	Application Engineer R.C.	BY C. RACHAL		APPROVED		
	Project Title						PURCHASE ORDER NUMBER		
	DUPLEX PUMP CONTROL PANEL						DRAWING NUMBER CP-1697		
							SHEET NUMBER		2



\* REMOVE JUMPERS AND INSTALL LOCKOUT DEVICES IF REQUIRED  
 \*\* DEACTIVATE/ACTIVATE SWITCH LOCATED ON BACKPLATE

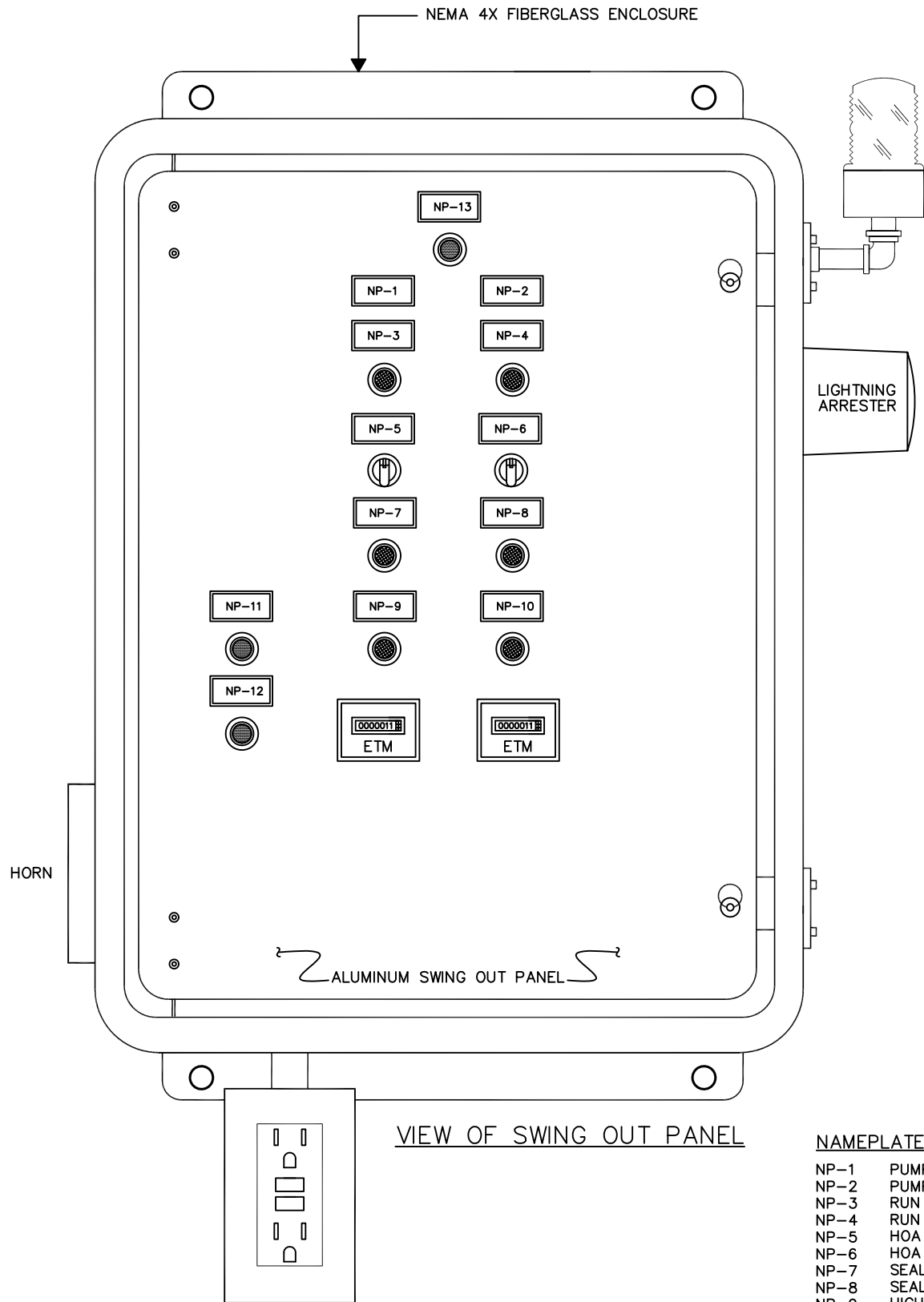
CR3-6, RELAYS WITH LED FOR FLOAT POSITION INDICATION

Drawing Title	CONTROL DIAGRAM					
DATE	11/14/03	REFERENCE DRAWING	NO.	REVISION-LOCATION	ECN	DATE
Project Title	DUPLEX PUMP CONTROL PANEL	S/N	Sales Engineer C.C.	Application Engineer R.C.	BY C. RACHAL	APPROVED
		COX			PURCHASE ORDER NUMBER	
		Research and Technology, Inc.			DRAWING NUMBER CP-1697	
		P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)756-1030			SHEET NUMBER 3	



TELEPHONE DIALER	
CHANNEL 1:	PUMP 1 & 2 MOISTURE ALARM
CHANNEL 2:	HIGH WATER ALARM
CHANNEL 3:	PUMP 1 HIGH TEMP
CHANNEL 4:	PUMP 2 HIGH TEMP

	Drawing Title    CONTROL DIAGRAM								
DATE 11/14/03			REFERENCE DRAWING S/N		NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.		DRAWN BY C. RACHAL	ECN BY
	Project Title   DUPLIX PUMP CONTROL PANEL		COX  Research and Technology, Inc.			P.O. Box 77808 Baton Rouge, LA 70809  Ph. (225)756-3271 Fax (225)756-1030		PURCHASE ORDER NUMBER  DRAWING NUMBER CP-1697  SHEET NUMBER 4	



**NOTE:**  
SEWER GASSES WILL DESTROY COMPONENTS IN PANEL.  
PROPER SEALS MUST BE INSTALLED EXTERNAL TO THE  
PANEL TO PREVENT ENTRY OF GASSES.

#### NAMEPLATE SCHEDULE

NP-1	PUMP 1
NP-2	PUMP 2
NP-3	RUN
NP-4	RUN
NP-5	HOA
NP-6	HOA
NP-7	SEAL FAIL
NP-8	SEAL FAIL
NP-9	HIGH TEMP
NP-10	HIGH TEMP
NP-11	ALARM SILENCE
NP-12	ALARM TEST
NP-13	POWER ON

Drawing Title	ENCLOSURE		REFERENCE DRAWING	NO.	REVISION-LOCATION	ECN	DATE	BY
DATE	11/14/03		S/N	Sales Engineer	Application Engineer	DRAWN		APPROVED
				C.C.	R.C.	BY C. RACHAL		BY DATE
Project Title	DUPLEX PUMP CONTROL PANEL		PURCHASE ORDER NUMBER					
			DRAWING NUMBER			CP-1697		
			SHEET NUMBER			5		

## BILL OF MATERIALS

ITEM	QTY	MANUFACTURER	PART NO.	DESCRIPTION
1	1	ALLIED	AM302410RL	ENCLOSURE FIBERGLASS 4X
1a	1	ALLIED	PA3024	BACKPLATE
1b	1	ALLIED	HFP3024	DEAD FRONT
2	1	ABB	OT100E3	MAIN DISC. SWITCH
3	1	MARATHON	1323580	DISTRIBUTION BLOCK
4	2	ABB	SIN050TL	CB1,2
5	2	ABB	A26-30-10-84	MS1,2
6	2	ABB	TA25DU25	OL1,2 (18-25A)
7	1	SQUARE D	9070TF250D1	TRANSFORMER
8	2	ACI	JR22P3M20B	HOA SWITCH
9	2	ACI	JR22FG	RUN LIGHT
10	2	ACI	JR22FR	SEAL FAIL LIGHT
11	1	TIMEMARK	261DT120	ALTERNATOR
12	1	TOMAR	490S-120-R	STROBE
13	2	REDDINGTON	5120-2200	ELAPSED TIME METER
14	1	STOCK		GFI RECEPTACLE
15	1	EDWARDS	870P-N5	HORN
16	2	ACI	JR22AN11B	PUSH BUTTONS
17	1	TEEL	1D008	HEATER
18	3	SQUARE D	QOU115	CB3,4,6
19	1	CH	QCGF1020	CB5
20	1	CH	CHSA03	LIGHTNING ARRESTER
21	1	SSAC	PLMU11	PHASE MONITOR
22	2	DAYTON	2A561	TD1,2
23	1	MICROTEL	DIALSTAT 4	AUTO DIALER
24	2	ABS	SEAL MINDER	SEAL FAIL RELAYS
25	1	ACI	JR22FW	POWER ON LIGHT
26	2	OMRON	G2R2SDC24	CR1-2
27	4	OMRON	MY21N120	CR3-6
28	2	OMRON	G2R2SAC120	CR7-8
29	2	OMRON	MY41N120	CR9-10
30				

\* SUPPLIED BY CFE

	Drawing Title							
	<b>BILL OF MATERIALS</b>							
DATE 11/14/03		REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	DRAWN BY C. RACHAL	ECN	DATE	BY
		<b>COX</b> Research and Technology, Inc.		P.O. Box 77808 Baton Rouge, LA 70809  Ph. (225)756-3271 Fax (225)756-1030		PURCHASE ORDER NUMBER  DRAWING NUMBER CP-1697 SHEET NUMBER 6		
	Project Title							
	<b>DUPLEX PUMP CONTROL PANEL</b>							