
COX

Research and Technology, Inc.

DUPLEX PUMP
CONTROL PANEL
WEST KENTUCKY

AS BUILTS

JUNE 29, 2010

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

CP-2206

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>120</u>	
FLA	<u>148</u>	
TYPE OF PUMP	<u>Submersible</u>	(Self-Priming, Submersible)
MANUFACTURER	<u>GR</u>	
CATALOG NUMBER	<u>JS8AD60-E120</u>	

CONTROL VOLTAGE	<u>120V</u>	(120V, Other)
ENCLOSURE	<u>NEMA 3R</u>	(NEMA 1, NEMA 3R, NEMA 4, NEMA 4X)
ENCLOSURE MATERIAL	<u>Painted Steel</u>	(Painted Steel, Stainless Steel, Fiberglass)
CONTROL SENSOR	<u>Submersible Transducer</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:

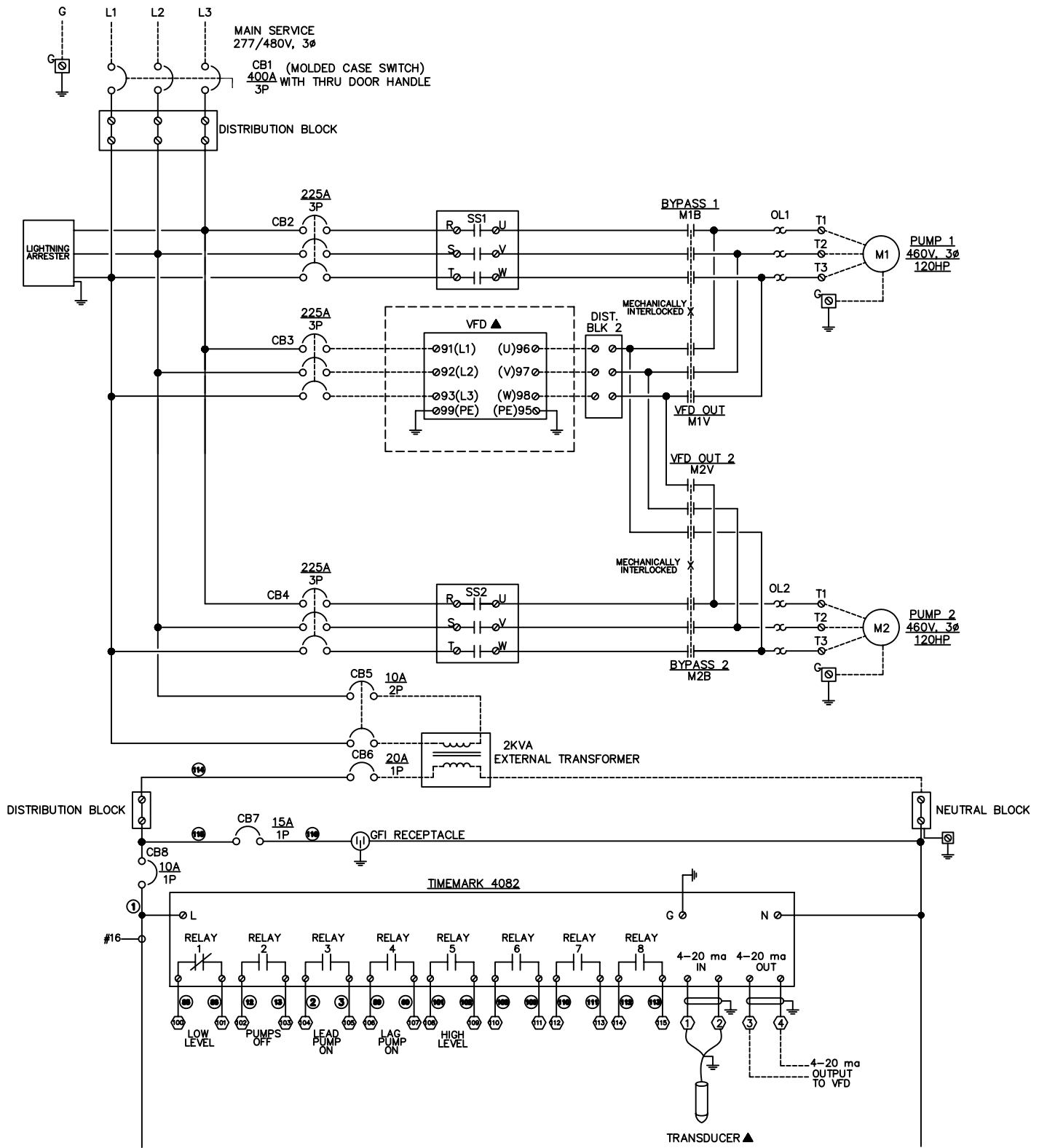
SEAL FAIL LIGHTS	<u></u>	(Submersible Only)
SEAL FAIL RELAYS	<u></u>	(Submersible Only)
SEAL FAIL PUMP SHUTDOWN	<u>X</u>	(Submersible Only)
HT PUMP SHUTDOWN	<u>X</u>	(Self-Primer, Submersible)
ALARM HORN	<u>X</u>	
ALARM LIGHT	<u>X</u>	
LIGHT PANEL MTD	<u>X</u>	
LIGHT REMOTE MTD	<u>X</u>	
LIGHT FLASHER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

SOLD TO: Delta Process - Ruston, LA

TAG : West Kentucky

SHIP TO: Delta Process - Ruston, LA

	Drawing Title						
	PANEL DESCRIPTION						
DATE 3/07/06		REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	DRAWN BY C. RACHAL	ECN	DATE
	Project Title	<div style="text-align: center;"> COX 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)755-1030		DRAWING NUMBER CP-2206
							SHEET NUMBER 1



▲ EXTERNALLY MOUNTED, NOT SUPPLIED BY CONTROL PANEL MANUFACTURER

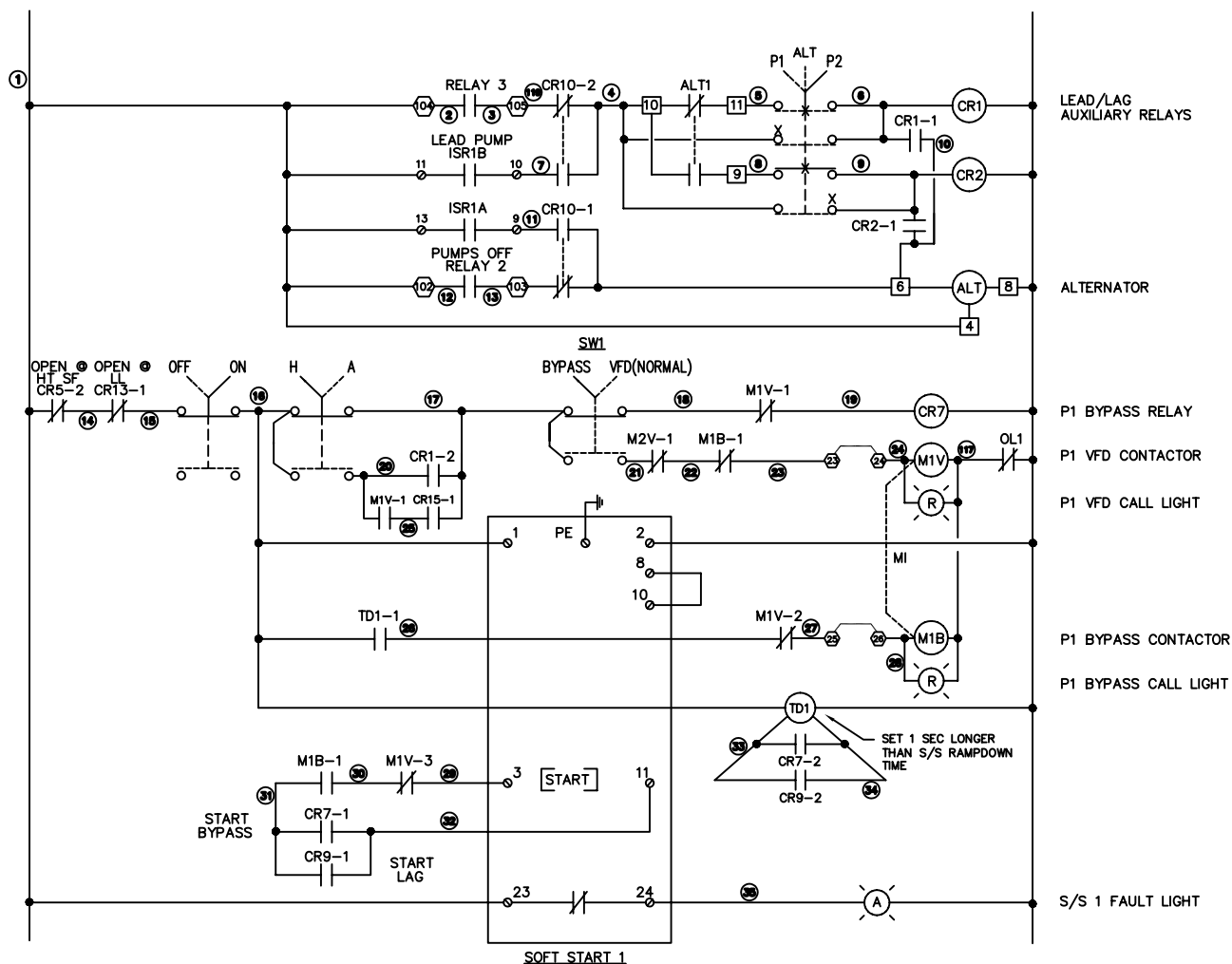
Drawing Title									
POWER DIAGRAM									
DATE		REFERENCE DRAWING		NO.		REVISION-LOCATION		ECN	
3/07/06		S/N		Sales Engineer		Application Engineer		DATE	
Project Title		C.C.		R.C.		BY C. RACHAL		APPROVED	
DUPLIX PUMP CONTROL PANEL								BY	
								DATE	
								PURCHASE ORDER NUMBER	
								DRAWING NUMBER	
								CP-2206	
								SHEET NUMBER	
								2	

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NOTES:

- VFD RAMP DOWN TIME MUST BE LONGER THAN SOFT START RAMP DOWN TIME.(RECOMMEND 8 SEC. MINIMUM.)
- TO RESET SOFT START FAULT, TURN "OFF-ON" SWITCH OFF, THEN BACK ON.
- LOW LEVEL WILL LOCK OUT SOFT STARTS AND CAUSE FAULT LIGHTS TO COME ON. PRESS RESET BUTTON WHEN LEVEL RISES.
- ON OVERLOAD TRIP, TURN POWER OFF BEFORE RESETTNG OVERLOADS.

FACTORY TIME DELAY SETTINGS:

TD1: 6 SEC.	TD4: 2 SEC.	SS1 RAMP UP: 5 SEC.
TD2: 6 SEC.	TD5: 5 SEC.	SS1 RAMP DN: 3 SEC.
TD3: 2 SEC.	TD6: 2 SEC.	SS2 RAMP UP: 5 SEC.
		SS2 RAMP DN: 3 SEC.

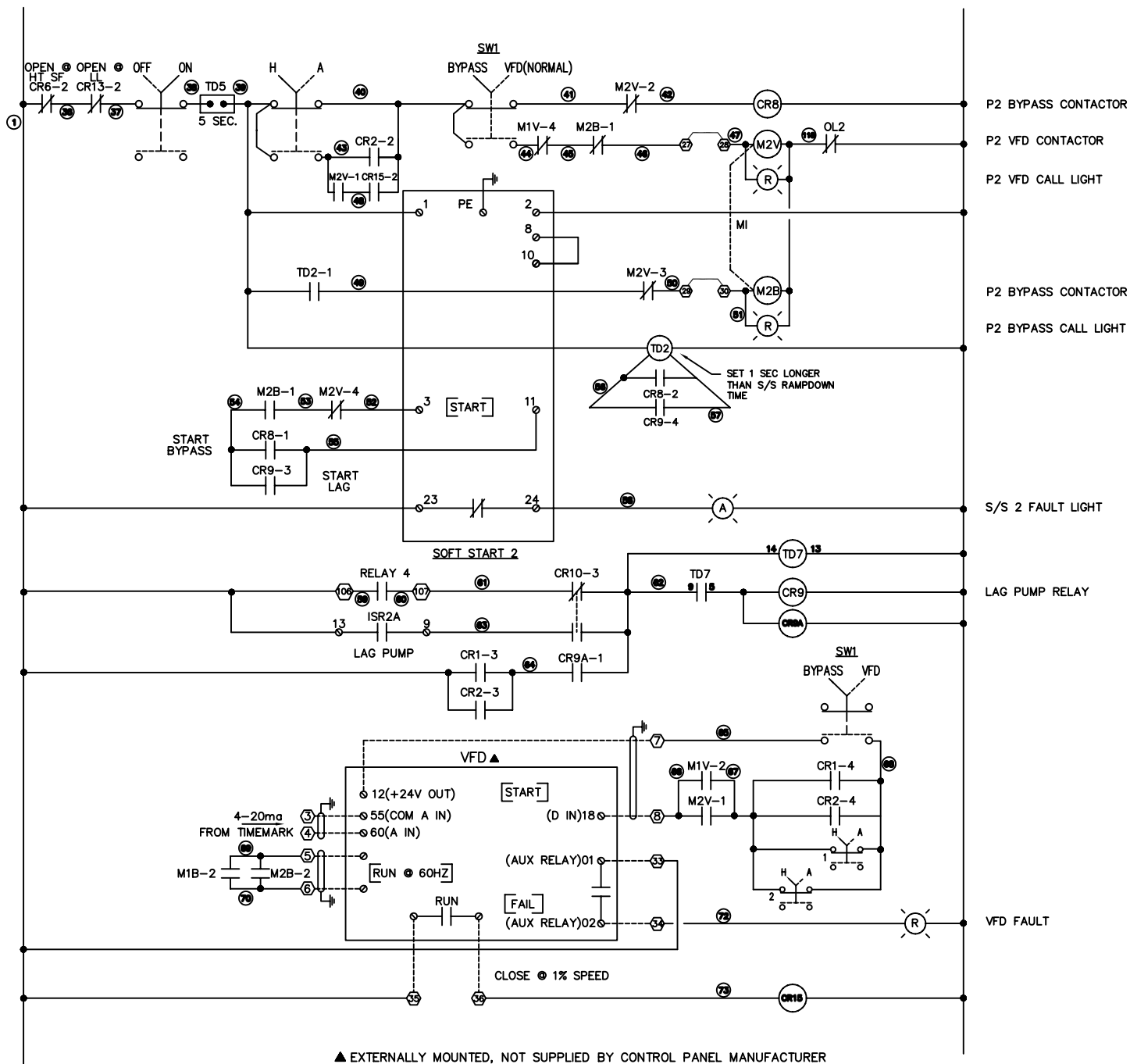
Drawing Title							
CONTROL DIAGRAM							
DATE 3/07/06	REFERENCE DRAWING		NO.	REVISION-LOCATION		ECN	DATE
	S/N		Sales Engineer C.C.	Application Engineer R.C.		BY C. RACHAL	APPROVED
Project Title						PURCHASE ORDER NUMBER	
DUPLIX PUMP CONTROL PANEL						DRAWING NUMBER CP-2206	
						SHEET NUMBER	
						3	

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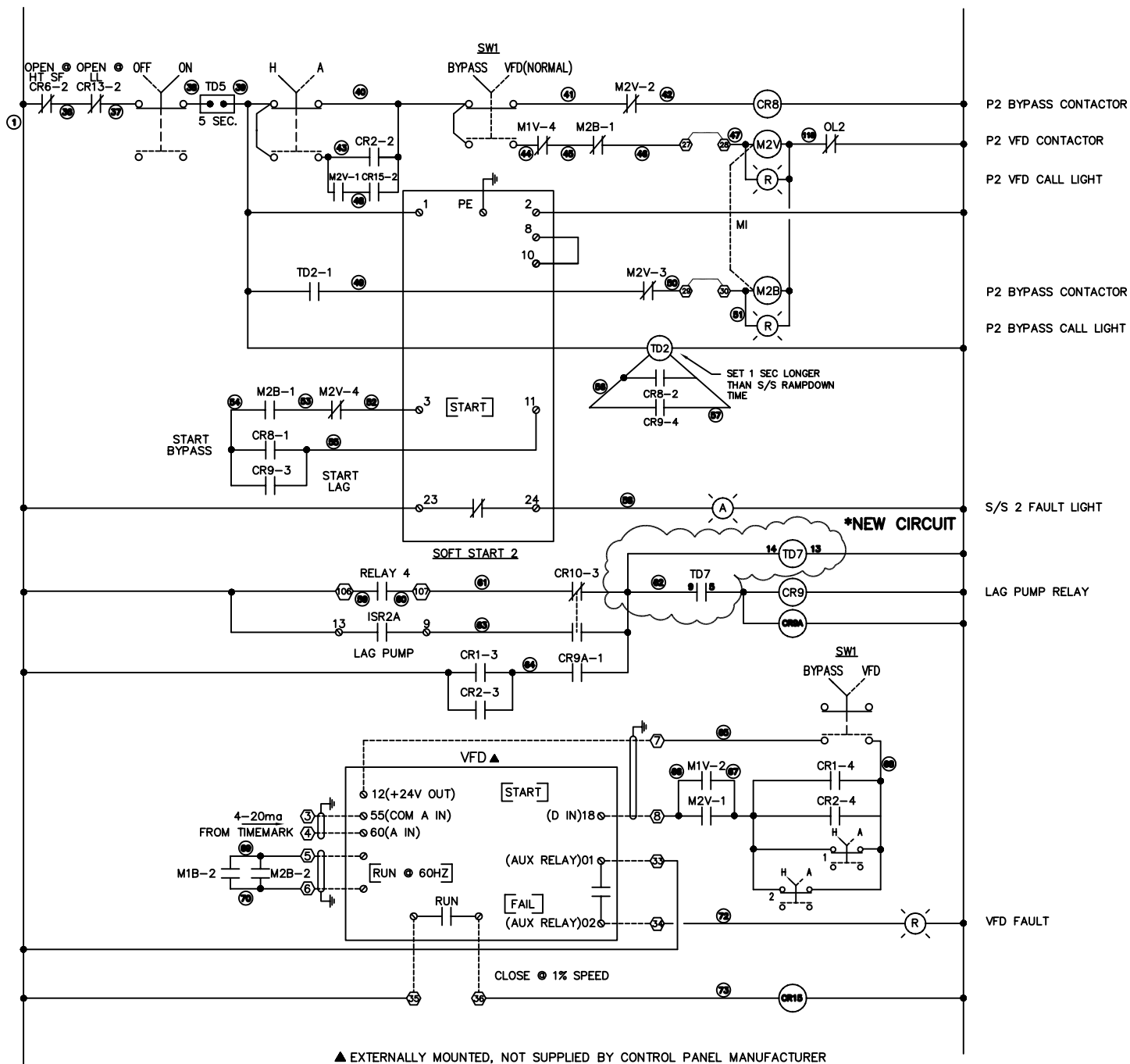
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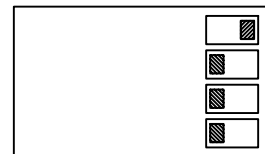


Drawing Title									
CONTROL DIAGRAM									
DATE 5/10/06	REFERENCE DRAWING		NO.		REVISION-LOCATION		ECN	DATE	BY
	S/N		Sales Engineer C.C.		Application Engineer R.C.		DRAWN BY C. RACHAL		APPROVED
Project Title								PURCHASE ORDER NUMBER	
DUPLEX PUMP CONTROL PANEL								DRAWING NUMBER CP-2206	
								SHEET NUMBER	
								4	



* REMOVE WIRE #62 FROM CR9 & 9A, MOVE TO TD7 Ø 9, 14
 RUN NEW WIRE FROM TD7 Ø 5 TO CR9, 9A
 RUN NEW WIRE FROM CR9 NEUTRAL TO TD7 Ø 13

DIP SWITCH
 SETTINGS



Drawing Title							
DATE 5/10/06		LAG PUMP TIME DELAY CIRCUIT		REFERENCE DRAWING		NO.	
				S/N		Sales Engineer C.C.	
Project Title		Application Engineer R.C.		REVISION-LOCATION		ECN	
Project Title		DRAWN		DATE		BY	
		BY C. RACHAL		APPROVED		DATE	
Project Title		PURCHASE ORDER NUMBER		BY		DATE	
		DRAWING NUMBER		CP-2206		SHEET NUMBER	
		4A					

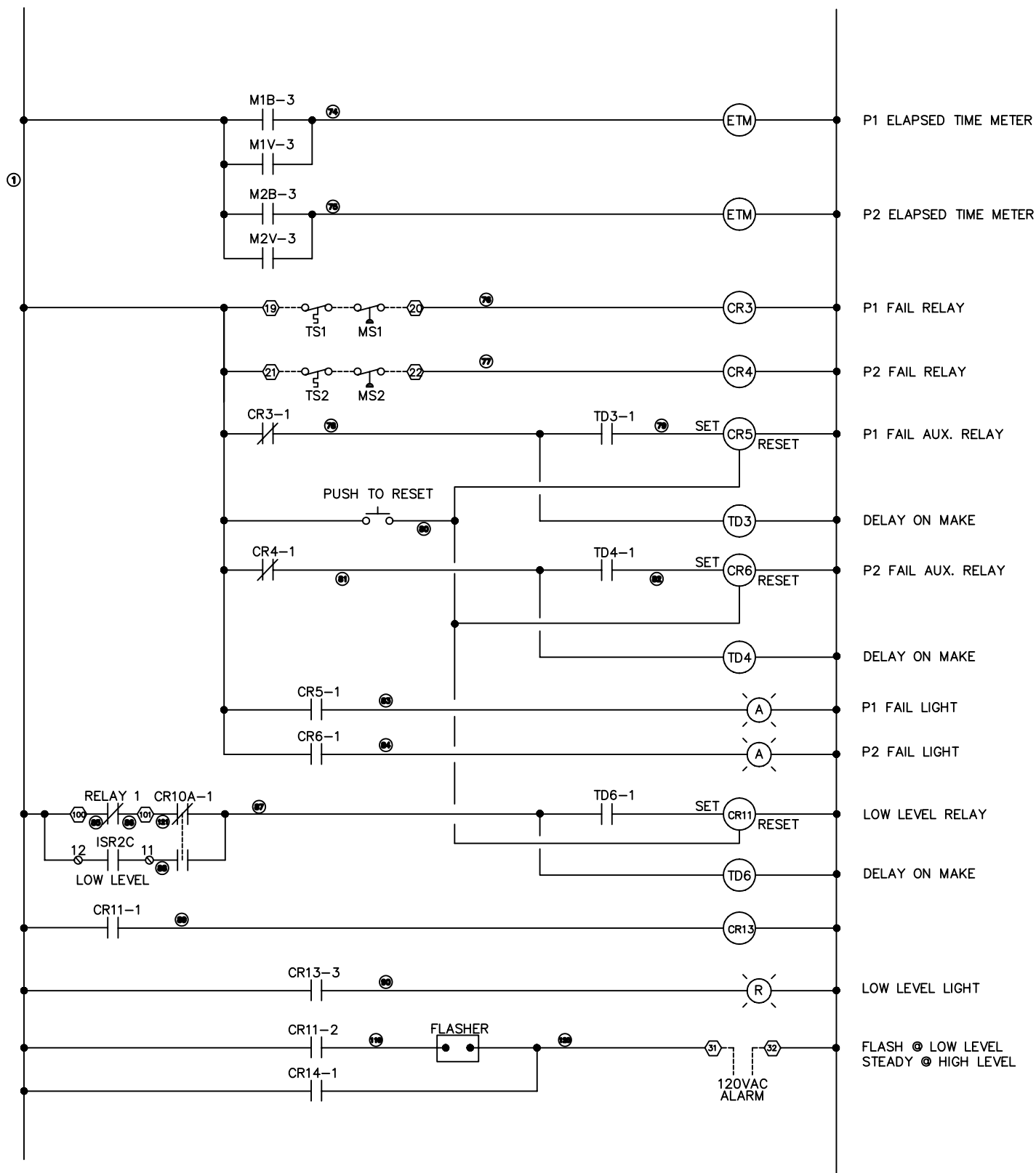
DUPLEX PUMP
 CONTROL PANEL

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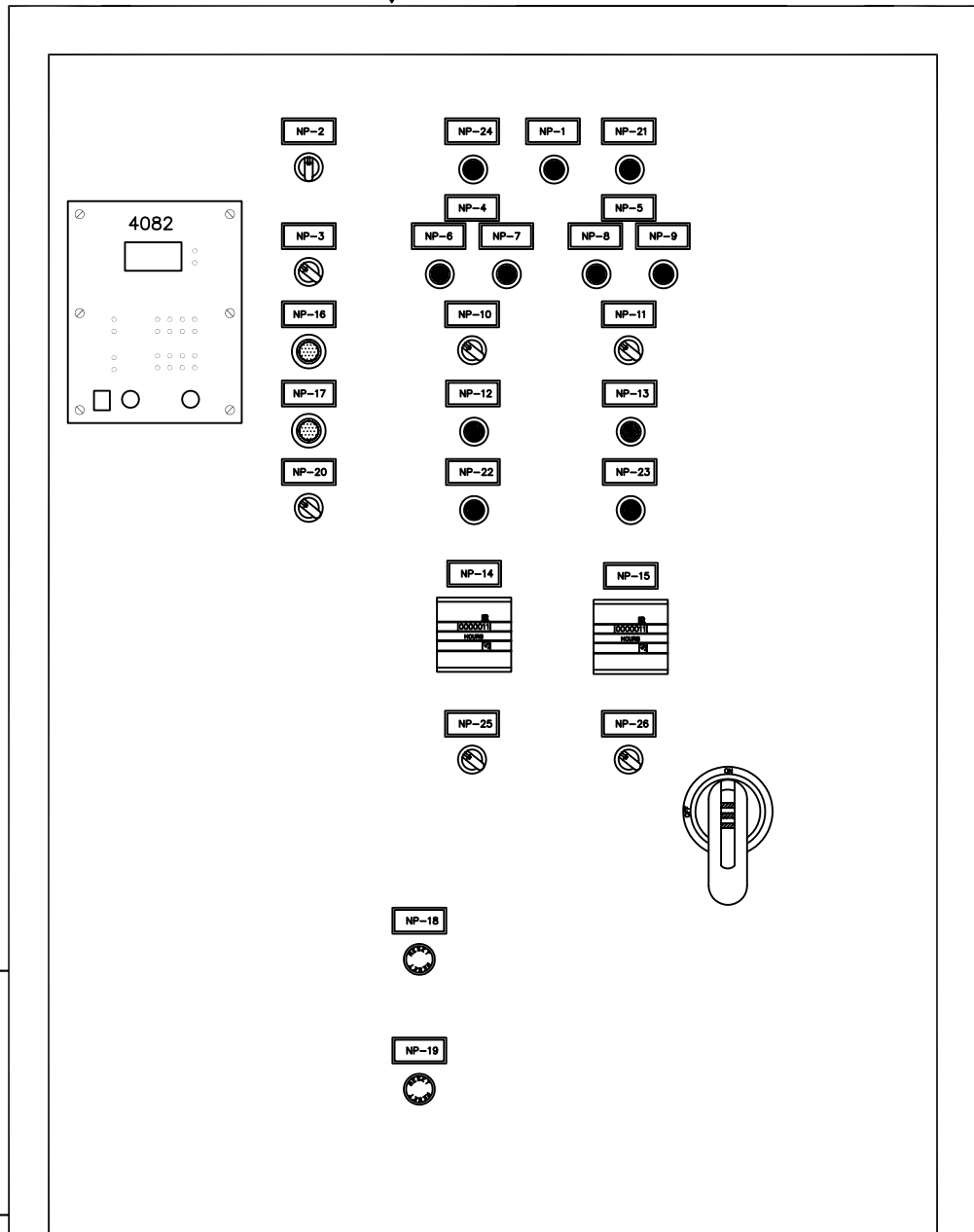
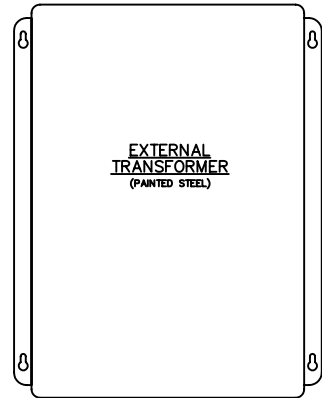
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	Drawing Title CONTROL DIAGRAM								
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	S/N	Sales Engineer C.C.	Application Engineer R.C.		DRAWN BY C. RACHAL		APPROVED BY DATE		
	Project Title DUPLEX PUMP CONTROL PANEL		<div>COX</div> <div>Research and Technology, Inc.</div>			P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)755-1030		PURCHASE ORDER NUMBER	
DRAWING NUMBER CP-2206									
SHEET NUMBER									
5									

NEMA 3R PAINTED STEEL ENCLOSURE



LIGHTNING ARRESTER

HORN

VIEW OF SWING OUT PANEL

NAMEPLATE SCHEDULE

NP-1	HIGH LEVEL	NP-11	OFF-ON
NP-2	P1-ALT-P2	NP-12	PUMP FAIL
NP-3	BYPASS-VFD	NP-13	PUMP FAIL
NP-4	PUMP 1	NP-14	RUN TIME
NP-5	PUMP 2	NP-15	RUN TIME
NP-6	VFD CALL	NP-16	SILENCE
NP-7	BYPASS CALL	NP-17	ALARM RESET
NP-8	VFD CALL	NP-18	PUMP 1 OVERLOAD/RESET
NP-9	BYPASS CALL	NP-19	PUMP 2 OVERLOAD/RESET
NP-10	OFF-ON	NP-20	TRANSDUCER/FLOATS
		NP-21	LOW LEVEL
		NP-22	SOFT START FAULT
		NP-23	SOFT START FAULT
		NP-24	VFD FAULT
		NP-25	H-A
		NP-26	H-A

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

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	ENCLOSURE								
DATE 3/07/06		REFERENCE DRAWING	NO.	REVISION-LOCATION	ECN	DATE	BY		
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	DUPLEX PUMP CONTROL PANEL				Ph. (225)756-3271 Fax (225)755-1030	DRAWING NUMBER CP-2206			
						SHEET NUMBER			7

BILL OF MATERIALS

ITEM	QTY	MANUFACTURER	PART NO.	DESCRIPTION
1	1	C&I	C604816DRH	ENCLOSURE
1a	1	C&I	CI-6048P	BACKPLATE
1b	1	C&I	CI-6048SPA	DEAD FRONT
2	1	ABB	S5H400DW	MOLDED CASE SWITCH
3	4	ABB	A260N5-30-11-84	MOTOR STARTERS
4	2	ABB	TA200DU175	OVERLOAD 1,2
5	3	ABB	S3N225TW	CB2, CB3, CB4
6	1	SQUARE D	2S1F	TRANSFORMER
7	1	TIMEMARK	261DT120	ALTERNATING RELAY
8	7	A-B	800H-QR10R	RED PILOT LIGHT
9	1	DAYTON	2A561	TD5
10	1	ABB	K5VDM	MECHANICAL OPERATOR
11	1	ABB	OXF10X225	SHAFT
12	1	ABB	OHB95J10	HANDLE
13	6	A-B	800H-HR2A	2 POSITION SWITCH
14	1	SQUARE D	QOU115	CB7
15	1	SQUARE D	QOU110	CB8
16	4	A-B	800H-QR10A	AMBER PILOT LIGHT
17	2	REDINGTON	711-0190	ELAPSED TIME METER
18	3	MAGNECRAFT	W388AMLCPX-9	LATCHING RELAY CR 5,6,11
19	2	A-B	800H-AR2A	PUSH BUTTON
20	1	TIMEMARK	4082	LIQUID LEVEL CONTROLLER
21	2	MARATHON	1321580	DISTRIBUTION BLOCK
22	2	ABB	KPR3-104B	O.L. RESET
23	1	EDWARDS	870P-N5	HORN
24	14	IDEC	RU4S-A110	CR1,2,3,4,7,8,9,9A,10,10A,12,13,14,15
25	1	SQUARE D	QOU120	CB6
26	1	STOCK		GFI
27	14	ABB	CAL5-11	AUXILIARY CONTACTS
28	1	TURCK	MK13-22EXOR-115VAC	ISR1
29	1	ABB	S202UP-K10	CB5
30	1	DELTA	LA603	LIGHTNING ARRESTER
31	2	ABB	VM300H	MECHANICAL INTERLOCK
32	1	SQUARE D	9080LBA365106	DISTRIBUTION BLOCK
33	2	SQUARE D	9080LB53	DIST. BLOCK COVERS
34	1	SQUARE D	9080LBA3652021	DISTRIBUTION BLOCK
35	2	ABB	ATK300/2	TERMINAL LUG 2 POLE
36	4	ABB	ATK300	TERMINAL LUG
37	1	SSAC	FS126RC	FLASHER
38	6	ABB	K4TD	BREAKER LUGS
39	2	ABB	K5TG	BREAKER LUGS
40	1	TURCK	MK13-33EXOR/115VAC	ISR2
41	3	OMRON	H3YN2AC120	TD 3,4,6
42	2	DAYTON	5YZ88N	TD 1,2
43	2	WEG	SSW060170T2257ESZ	SOFT START 1,2
44	1	SQUARE D	9001KS401B	3 POSITION SWITCH
45	1	SQUARE D	9001KA1	CONTACT BLOCK
46	1	SQUARE D	9001KA2	CONTACT BLOCK
47	1	SQUARE D	9001KA3	CONTACT BLOCK
48				
49				

	Drawing Title						
	<h2 style="margin: 0;">BILL OF MATERIALS</h2>						
DATE 3/07/06		REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	DRAWN BY C. RACHAL	APPROVED BY	DATE
		<div style="border: 1px solid black; padding: 5px; margin: 0 auto; width: 100px;"> <h3 style="margin: 0;">COX</h3> <p style="margin: 0; font-size: small;">Research and Technology, Inc.</p> </div>		<p style="margin: 0; font-size: small;">P.O. Box 77808 Baton Rouge, LA 70809</p> <p style="margin: 0; font-size: small;">Ph. (225)756-3271 Fax (225)755-1030</p>		<p style="margin: 0; font-size: small;">PURCHASE ORDER NUMBER</p> <hr/> <p style="margin: 0; font-size: small;">DRAWING NUMBER CP-2206</p> <hr/> <p style="margin: 0; font-size: small;">SHEET NUMBER 8</p>	
	Project Title	<h2 style="margin: 0;">DUPLEX PUMP CONTROL PANEL</h2>					