
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	277/480V	(480V, 277/480V, 240V, 120/240V, 208V, 120/208V)
PHASE/HZ	3/60	
NO. MOTORS	2	
HP	120	
FLA	148	
TYPE OF PUMP	Submersible	(Self-Priming, Submersible)
MANUFACTURER	GR	
CATALOG NUMBER	JS8AD60-E120	
CONTROL VOLTAGE	120V	(120V, Other)
ENCLOSURE	NEMA 3R	(NEMA 1, NEMA 3R, NEMA 4, NEMA 4X)
ENCLOSURE MATERIAL	Painted Steel	(Painted Steel, Stainless Steel, Fiberglass)
CONTROL SENSOR	Submersible Transducer	(Floats, Bubbler, Other)
CAPACITORS	No	(Yes, No)
CAPACITOR WIRING FIGURE	N/A	
THERM. & SEAL FAIL WIRING FIGURE		

OPTIONS:

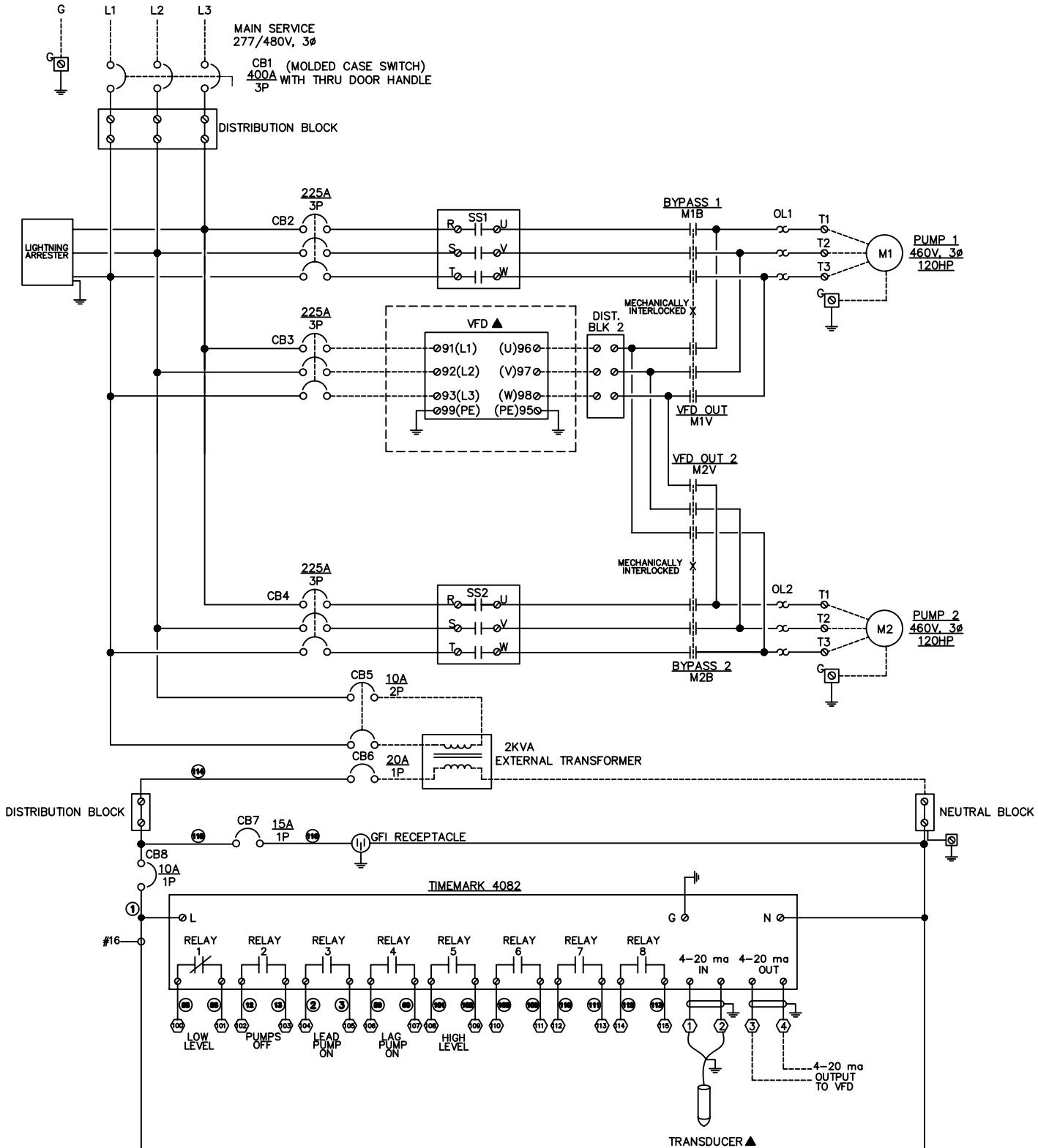
SEAL FAIL LIGHTS	_____	(Submersible Only)
SEAL FAIL RELAYS	_____	(Submersible Only)
SEAL FAIL PUMP SHUTDOWN	X	(Submersible Only)
HT PUMP SHUTDOWN	X	(Self-Primer, Submersible)
ALARM HORN	X	
ALARM LIGHT	X	
LIGHT PANEL MTD	X	
LIGHT REMOTE MTD	X	
LIGHT FLASHER		
LIGHTNING ARRESTER	X	
ELAPSED TIME METER	X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

SOLD TO: Delta Process - Ruston, LA

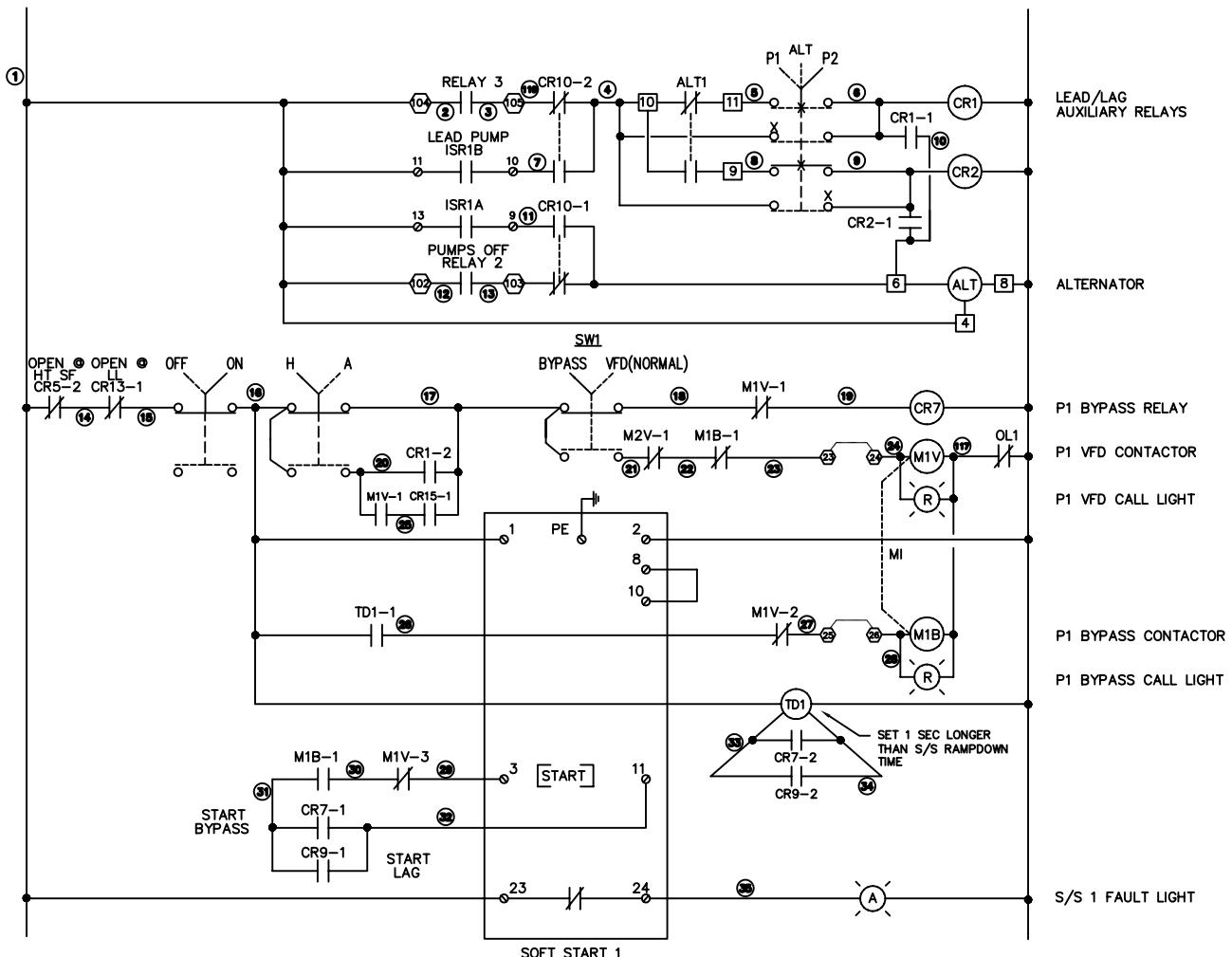
TAG : West Kentucky

SHIP TO: Delta Process - Ruston, LA

Drawing Title	PANEL DESCRIPTION						
		REFERENCE DRAWING	NO.	REVISION-LOCATION	ECN	DATE	BY
DATE 3/07/06	S/N	Sales Engineer	Application Engineer	DRAWN	APPROVED		
	C.C.		R.C.	BY C. RACHAL	BY	DATE	
Project Title	DUPLEX PUMP CONTROL PANEL	COX	Research and Technology, Inc.	P.O. Box 77808 Baton Rouge, LA 70809	PURCHASE ORDER NUMBER		
				Ph. (225)756-3271 Fax (225)755-1030	DRAWING NUMBER	CP-2206	
					SHEET NUMBER		1



	Drawing Title				
	POWER DIAGRAM				
DATE 3/07/06		REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	ECN DRAWN BY C. RACHAL
	Project Title				DATE APPROVED BY DATE
	DUPLEX PUMP CONTROL PANEL	COX Research and Technology, Inc.		P.O. Box 77808 Baton Rouge, LA 70809	PURCHASE ORDER NUMBER
				Ph. (225)756-3271 Fax (225)755-1030	DRAWING NUMBER CP-2206
					SHEET NUMBER 2

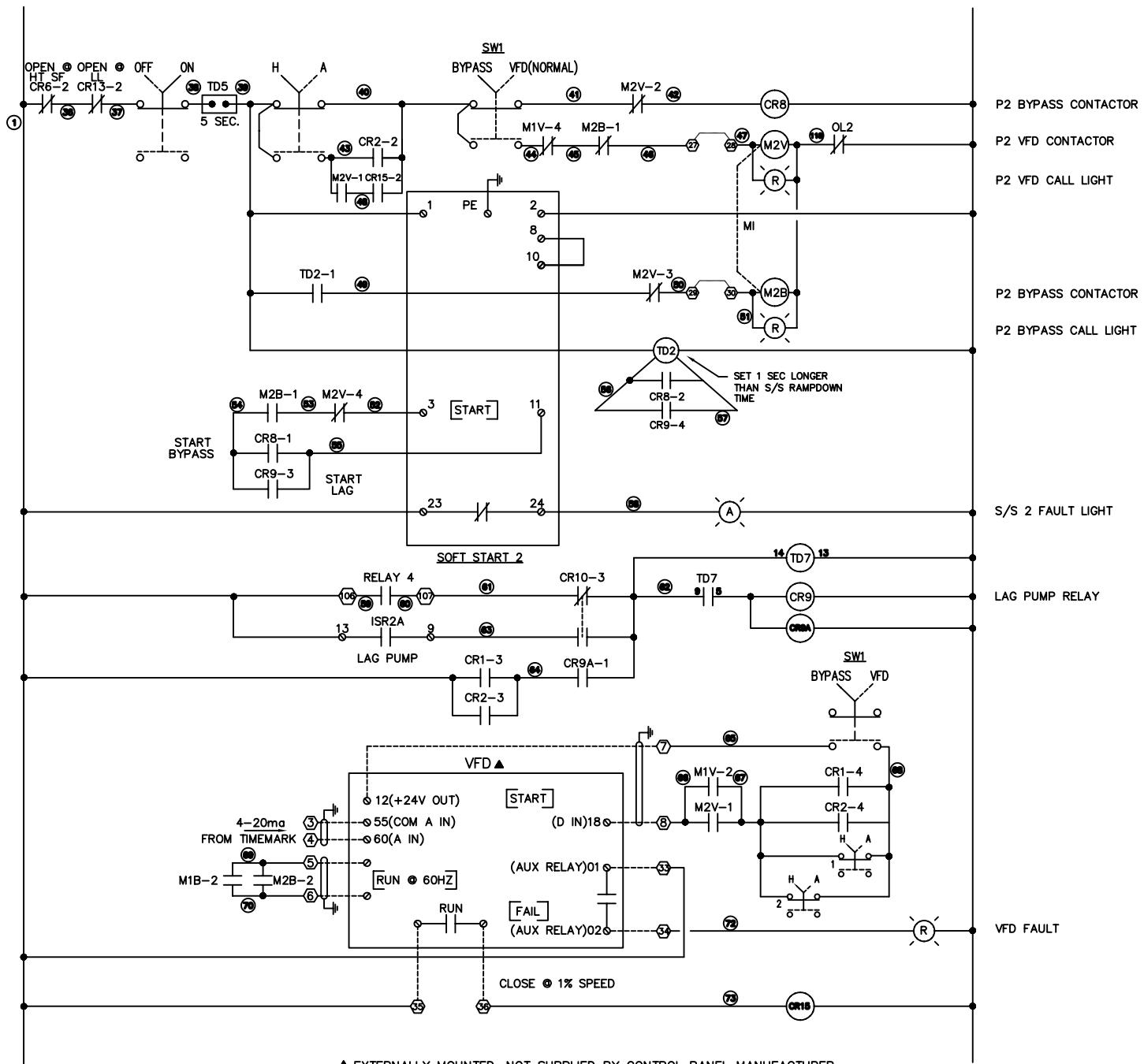

NOTES:

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

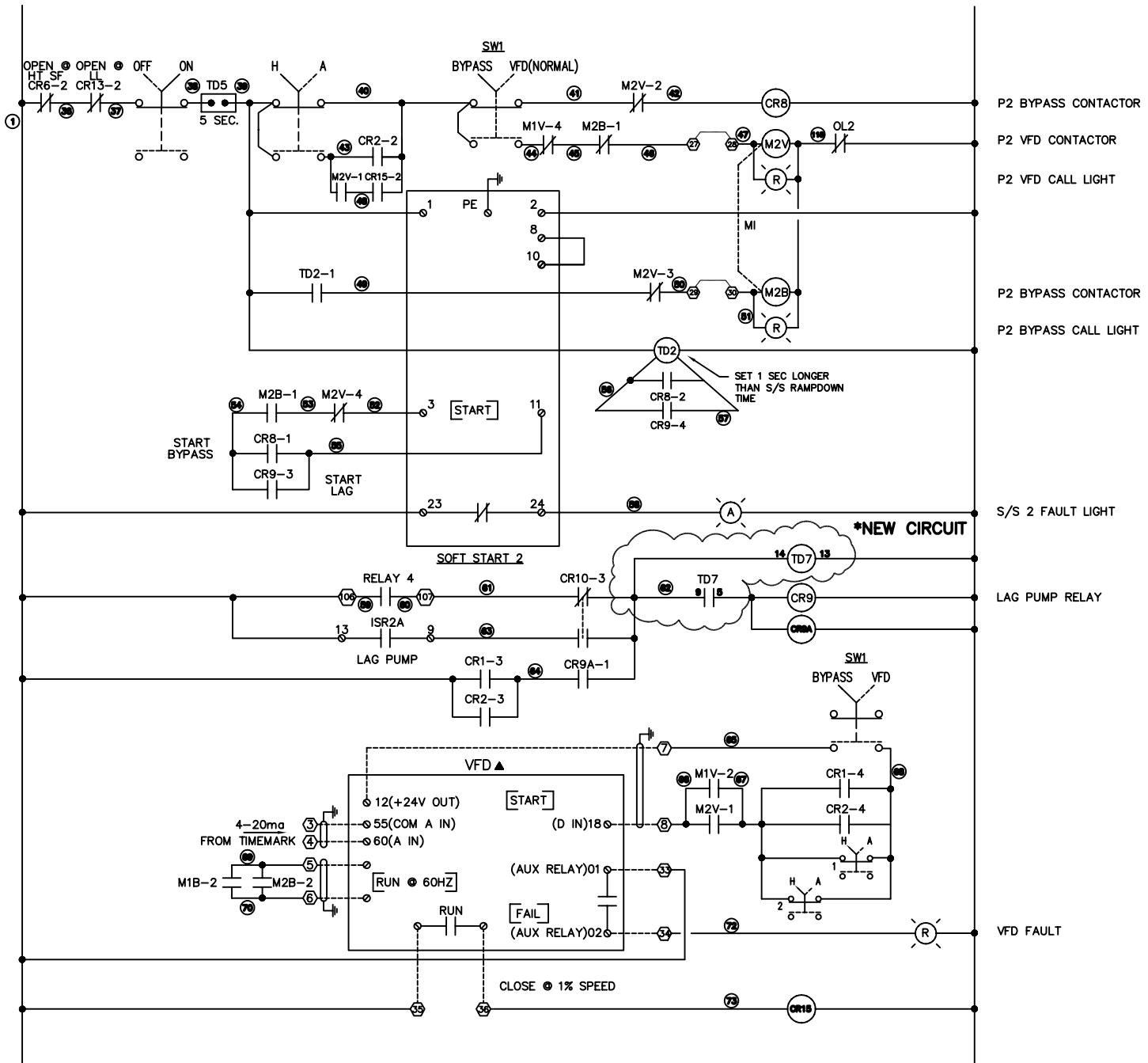
FACTORY TIME DELAY SETTINGS:

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				
	REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	ECN DRAWN BY C. RACHAL
DATE 3/07/06				DATE APPROVED BY DATE
Project Title DUPLEX PUMP CONTROL PANEL	COX Research and Technology, Inc.		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 3

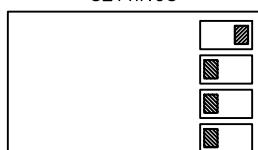


▲ EXTERNALLY MOUNTED, NOT SUPPLIED BY CONTROL PANEL MANUFACTURER

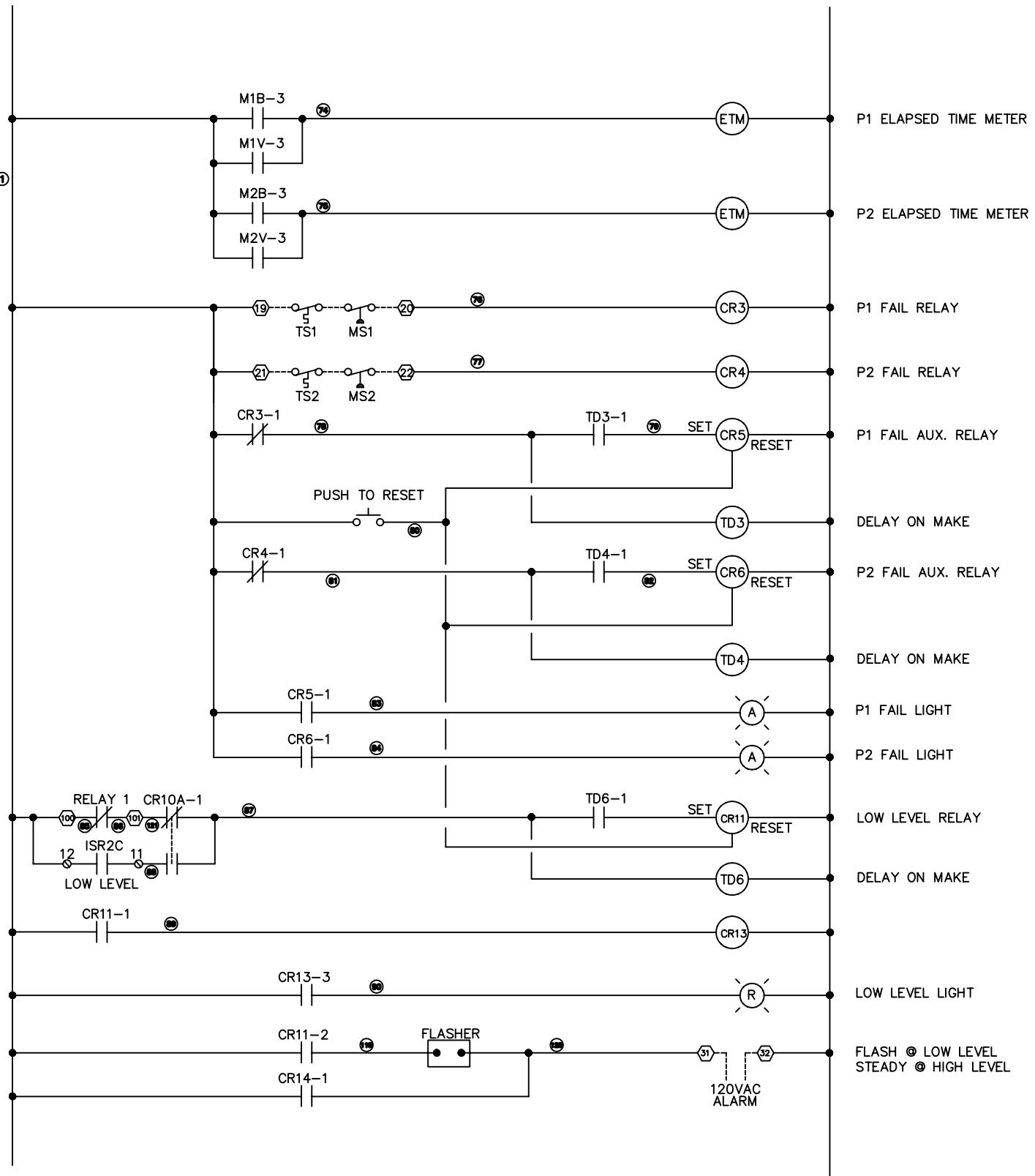


* REMOVE WIRE #62 FROM CR9 & 9A, MOVE TO TD7 # 9, 14
RUN NEW WIRE FROM TD7 # 5 TO CR9, 9A
RUN NEW WIRE FROM CR9 NEUTRAL TO TD7 # 13

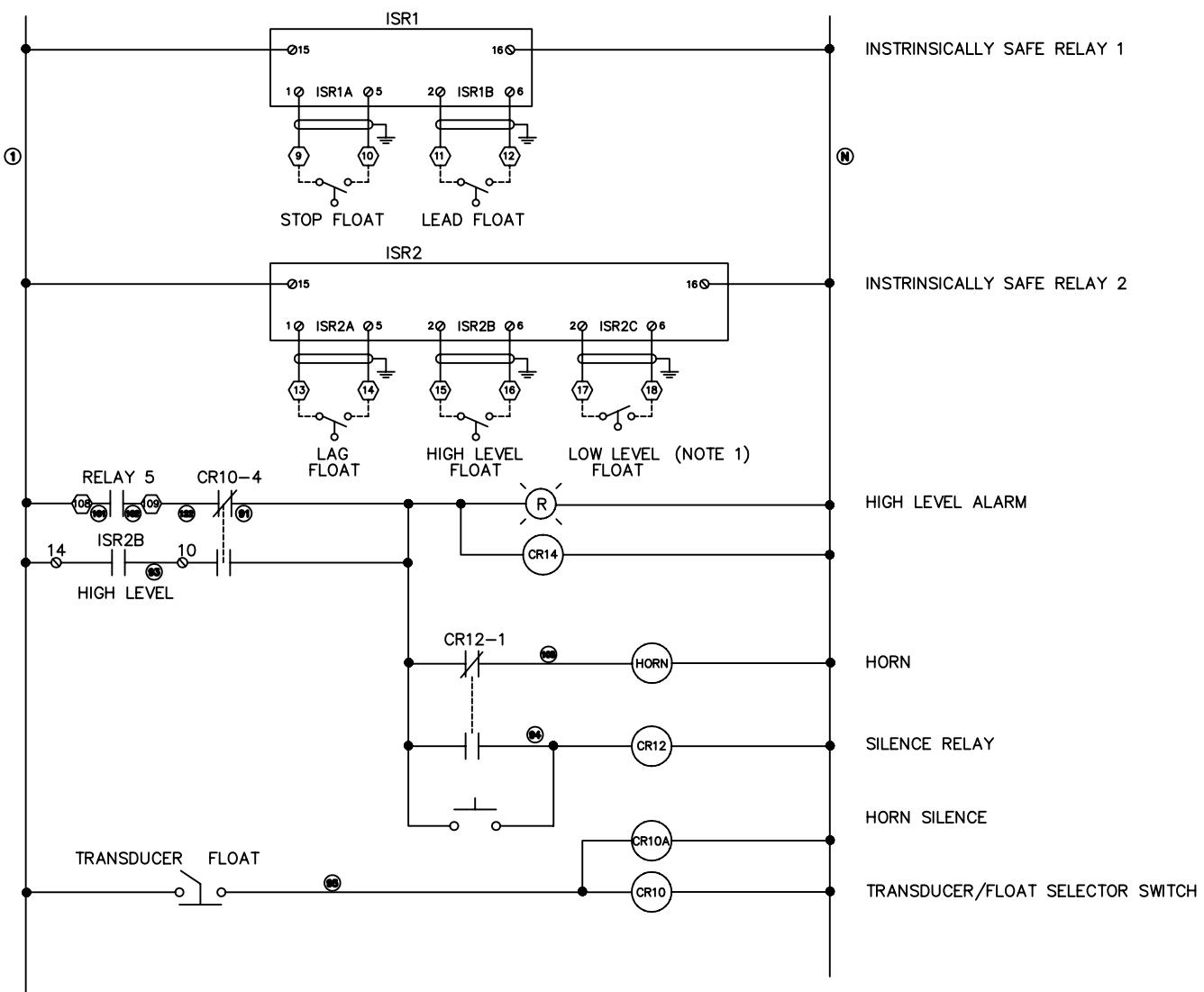
DIP SWITCH SETTINGS



Drawing Title				
DATE 5/10/06	LAG PUMP TIME DELAY CIRCUIT			
	REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	ECN DRAWN BY C. RACHAL
				DATE APPROVED BY DATE
Project Title	COX Research and Technology, Inc.			P.O. Box 77808 Baton Rouge, LA 70809
DUPLEX PUMP CONTROL PANEL				PURCHASE ORDER NUMBER DRAWING NUMBER CP-2206 SHEET NUMBER 4A Ph. (225)756-3271 Fax (225)755-1030



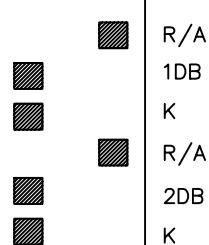
	Drawing Title CONTROL DIAGRAM				
DATE 3/07/06	REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	ECN DRAWN BY C. RACHAL	DATE APPROVED BY DATE
Project Title DUPLEX PUMP CONTROL PANEL	COX Research and Technology, Inc.			P.O. Box 77808 Baton Rouge, LA 70809 Ph. (225)756-3271 Fax (225)755-1030	PURCHASE ORDER NUMBER DRAWING NUMBER CP-2206 SHEET NUMBER 5



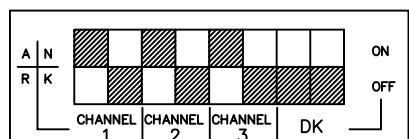
NOTE:

1. THIS FLOAT MUST BE A NORMALLY CLOSED FLOAT

ISR1
DIP SWITCH SETTINGS

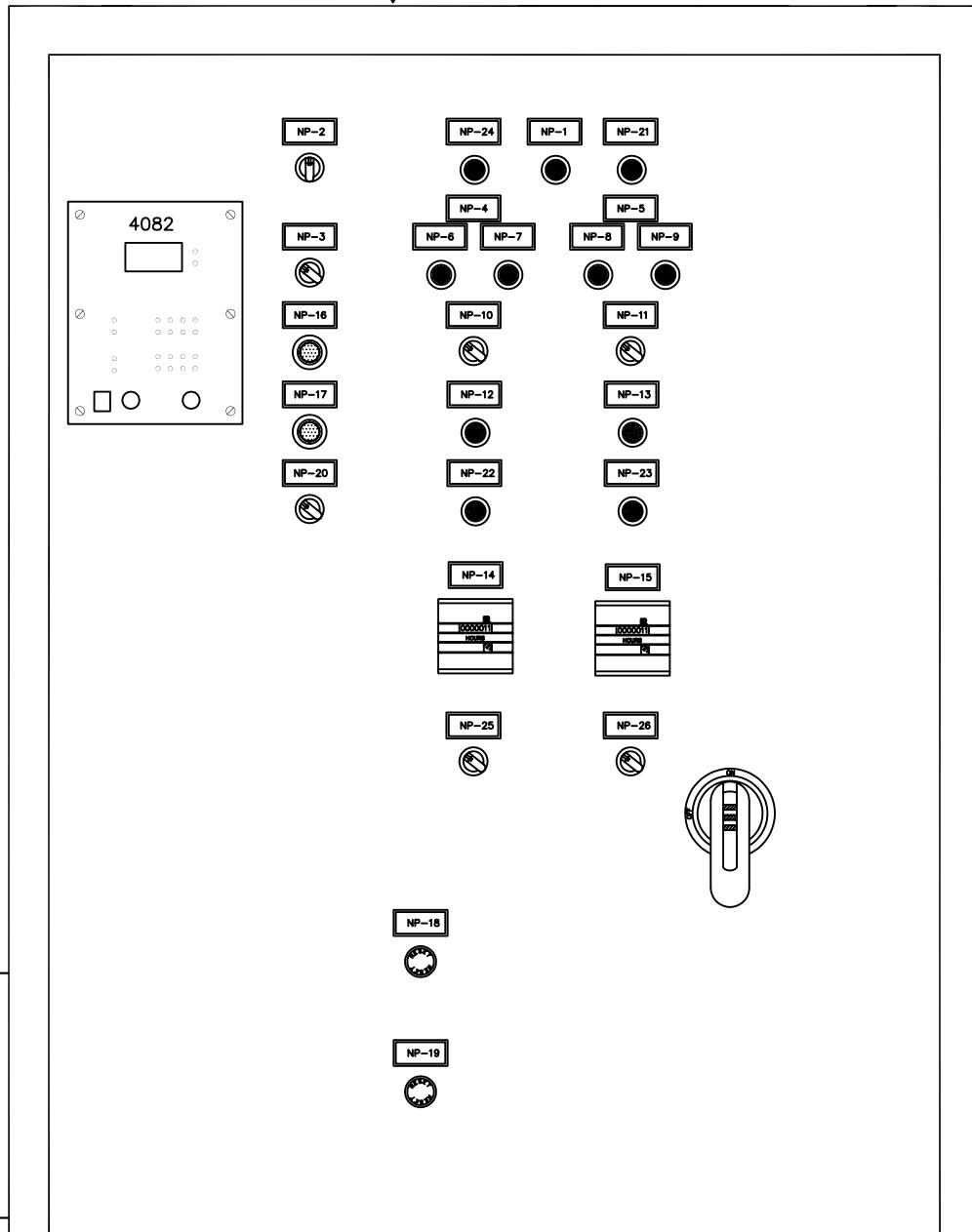
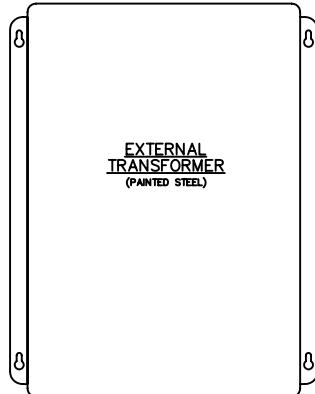


ISR2
DIP SWITCH SETTINGS

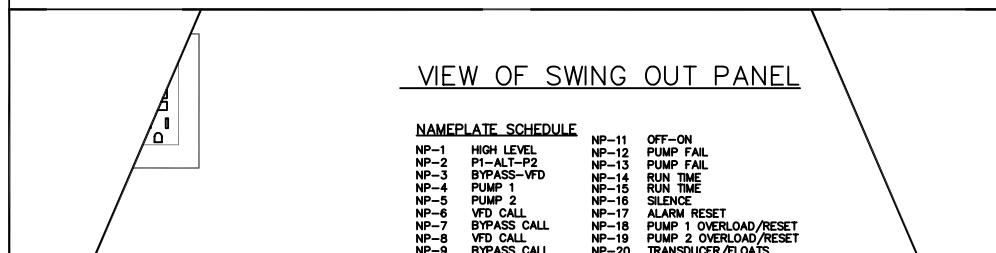


	Drawing Title CONTROL DIAGRAM								
		REFERENCE DRAWING S/N	NO. Sales Engineer C.C.	REVISION-LOCATION Application Engineer R.C.	ECN DRAWN BY C. RACHAL	DATE APPROVED BY			
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				Ph. (225)756-3271 Fax (225)755-1030	DRAWING NUMBER CP-2206				
					SHEET NUMBER 6				

NEMA 3R PAINTED STEEL ENCLOSURE



HORN



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

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	SERVICE
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

DATE 3/07/06	Drawing Title ENCLOSURE									
		REFERENCE DRAWING		NO.	REVISION-LOCATION		ECN			
		S/N	Sales Engineer C.C.	Application Engineer R.C.	DRAWN		DATE BY			
					BY C. RACHAL	APPROVED	BY DATE			
Project Title DUPLEX PUMP CONTROL PANEL		<hr/> <hr/> <hr/> COX <hr/> <hr/> <hr/> Research and Technology, Inc. <hr/> <hr/> <hr/>			P.O. Box 77808 Baton Rouge, LA 70809		PURCHASE ORDER NUMBER			
					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	OXP10X225	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 POSTION 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 BILL OF MATERIALS							
	REFERENCE DRAWING S/N		NO. Sales Engineer C.C.	REVISION-LOCATION DRAWN BY C. RACHAL		ECN APPROVED BY	DATE DRAWN BY APPROVED DATE
DATE 3/07/06							
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