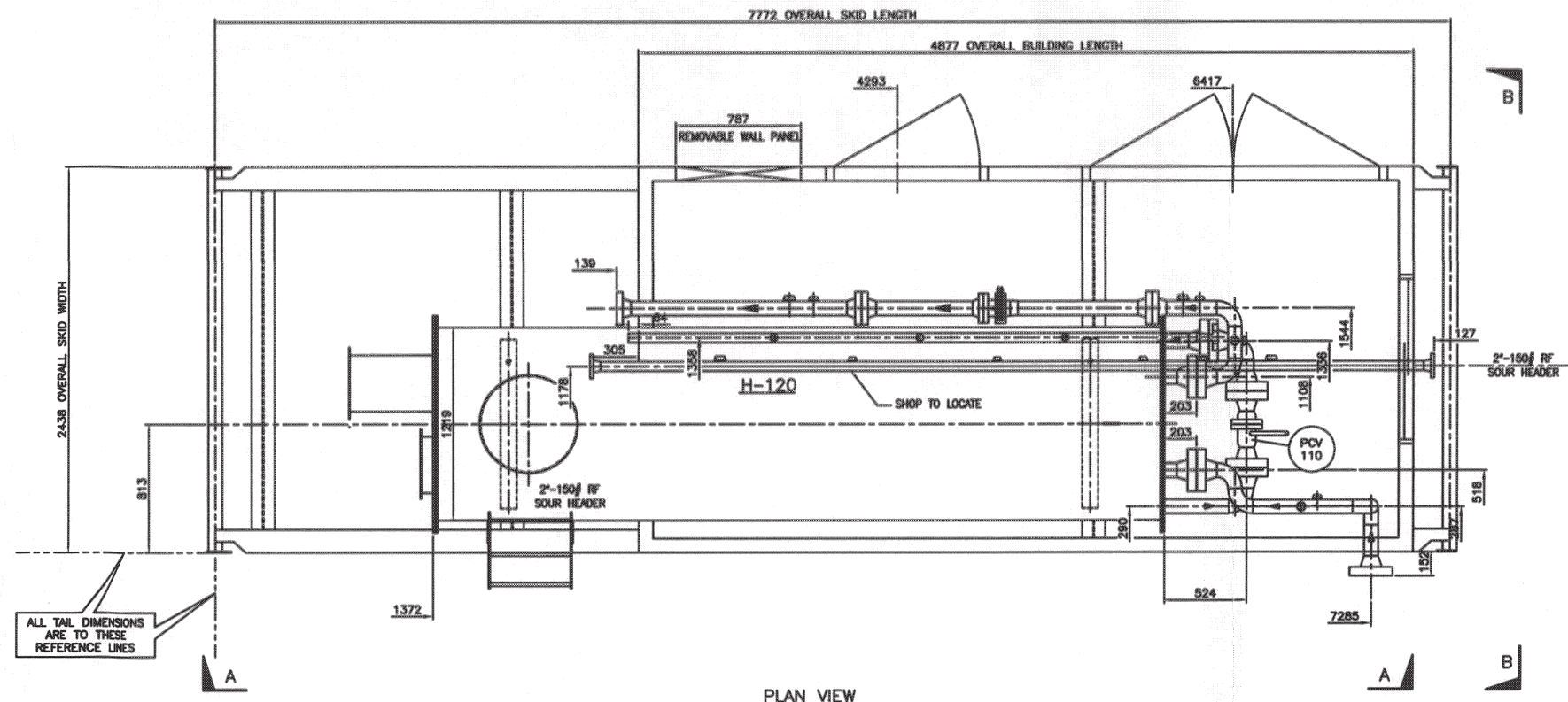


GENERAL NOTES:
 1. PIPING DESIGNED TO ASME CODE B31.3 - 2004 EDITION, - ADDENDA
 2. ALL TUBING FITTINGS AND VALVES SHALL BE SWAGELock 316 STAINLESS STEEL.

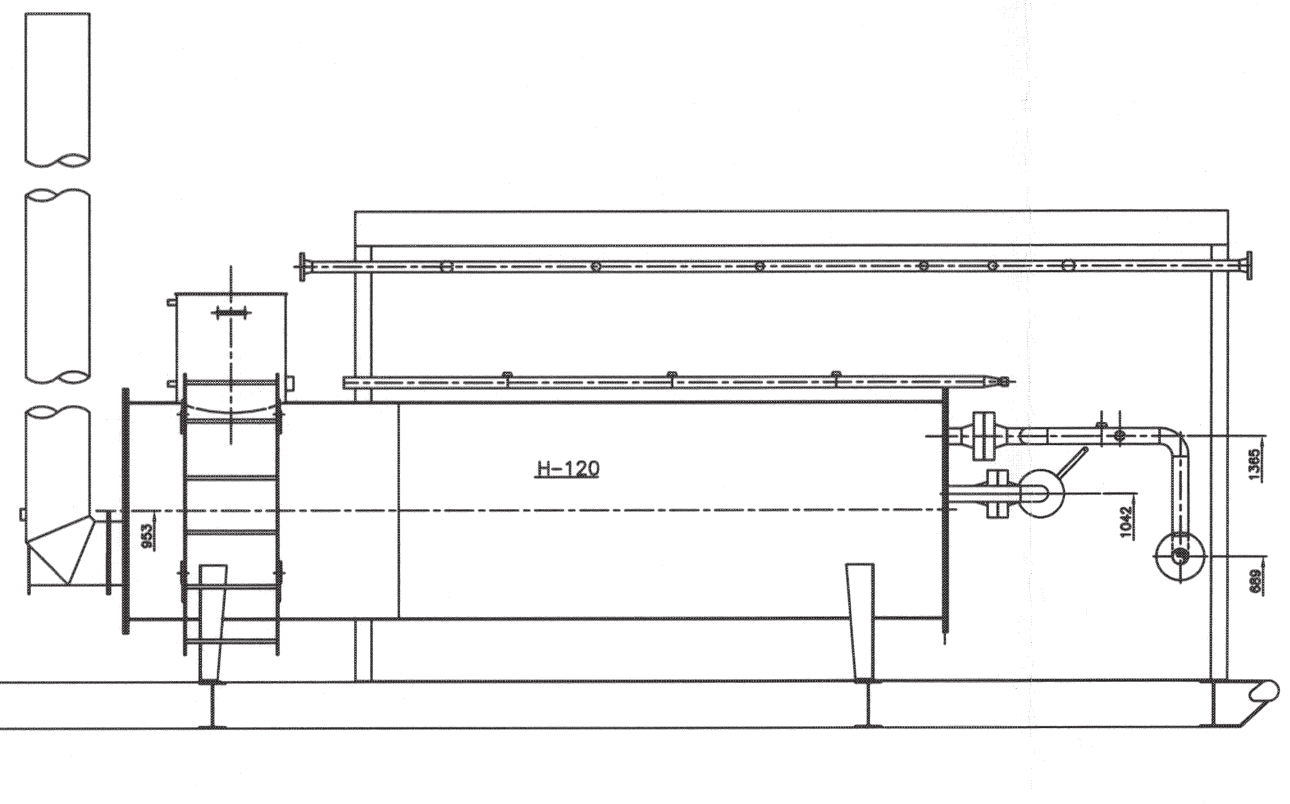
TAG	DESCRIPTION	SIZE/RATING	PIPE SPEC.	TAG	DESCRIPTION	SIZE/RATING	PIPE SPEC.
CUSTOMER CONNECTIONS				CUSTOMER CONNECTIONS			

REV	DATE	REV BY	APPD BY	DESCRIPTION
0	10/12/07	GHW	JF	ISSUED FOR CONSTRUCTION
A	09/13/07	GHW	JF	ISSUED FOR APPROVAL

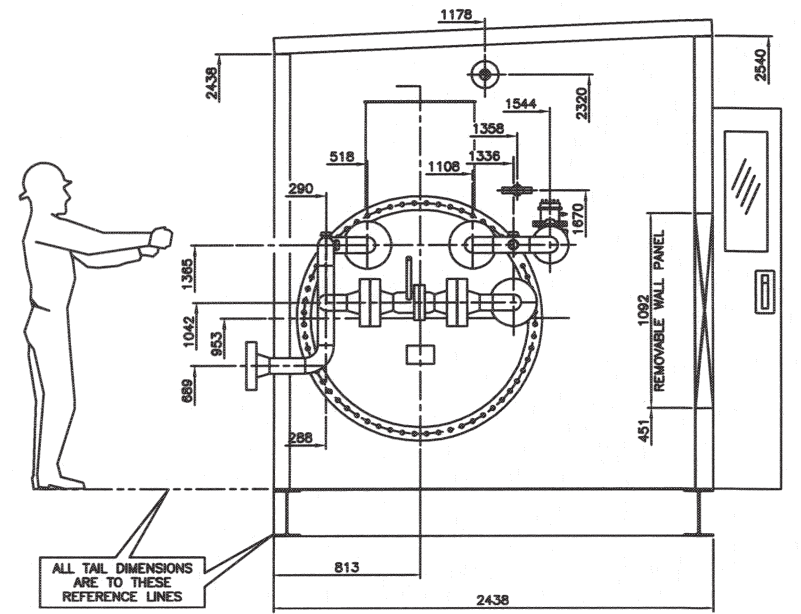
NATCO CANADA			
CALGARY	ALBERTA	CANADA	
TITLE PROCESS AND INSTRUMENTATION DIAGRAM (P&ID) 48" (1219mm) x 15'-0" (4572mm) LG 1.25 MMBTU/HR LINE HEATER			
CUSTOMER ENCANA OIL AND GAS			
LOCATION	REVISIONS	EXTENSION	DATE
		GARY W 212	03/27/07
CUST. REF. NO.	CONTRACT NO.	UNITS REQ	DRAWN BY
	8729	2	GARY W
		PROJ. CODE	SCALE
		D-8729-01	NONE
		SHT. 1 OF 1	REV
			0



PLAN VIEW



SECTION 'A'



SECTION 'B'

- GENERAL NOTES:**
1. PIPING DESIGNED TO ASME CODE B31.3 2004 EDITION, - ADDENDA.
 2. UNLESS OTHERWISE INDICATED, SHOP SHALL LOCATE ALL CUSTOMER CONNECTIONS NOT SHOWN ON DRAWING.
 3. ALL SKID EDGE DIMENSIONS SHALL HAVE A TOLERANCE OF $\pm 1/4$ " OF THE INDICATED DIMENSIONS.
 4. WELD GAP = 2 mm. SHOP TO ADJUST AS REQUIRED.
 - 5.

TOTAL PACKAGE WEIGHT (LBS/Kg):		7800 LBS. 3447K Kg	
TOTAL SHIPPING WEIGHT (LBS/Kg):		7800 LBS. 3447 Kg	
OVERALL	25'-8"/7772	8'-0"/2438	10'-5"/3185
SHIPPING	25'-8"/7772	8'-0"/2438	10'-5"/3185
DESCRIPTION	LENGTH (FT-IN/MM)	WIDTH (FT-IN/MM)	HEIGHT (FT-IN/MM)
OVERALL PACKAGE DIMENSIONS/WEIGHTS			

REV	DATE	REV BY	CHKD BY	APPR BY	DESCRIPTION
0	09/27/07	GHW	JF		ISSUED FOR CONSTRUCTION
REVISIONS					

This drawing is the property of NATCO CANADA and is lent to the recipient for his confidential use only. In consideration of the loan of this drawing, the recipient promises and agrees that it shall not be used in any way detrimental to the interests of NATCO CANADA, that it shall be returned upon request, and that it shall not be reproduced, copied, lent or otherwise disposed of, directly or indirectly, without the written approval of NATCO CANADA.

NATCO CANADA

CALGARY ALBERTA CANADA

TITLE: PIPING & EQUIPMENT GENERAL ARRANGMENT
48"(1219mm)O.D. x 15'-0"(4572mm) 1.25 MMBTU/HR LINE HEATER

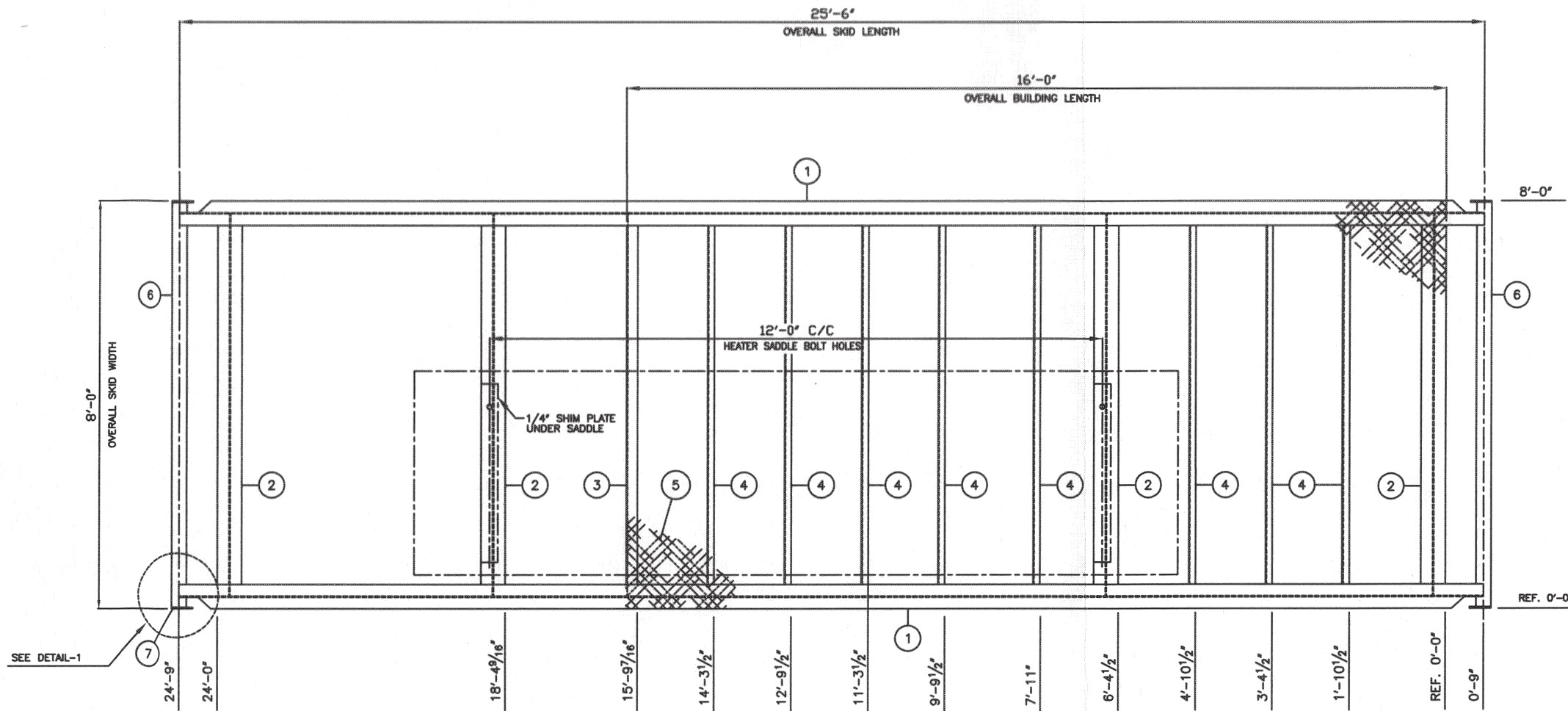
CUSTOMER: ENCANOA OIL AND GAS

LOCATION: -

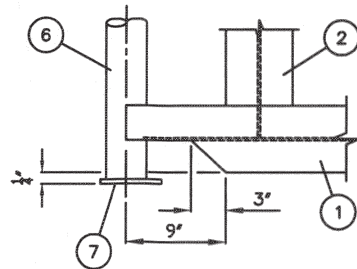
DESIGNER: GARY W. 212 DATE: 03/27/07
CHECKED: JIM F. DATE: 03/27/07
DRAWN: GARY W. SCALE: 1:20

CLASS. REF. NO. CONTRACT NO. 8729 SHEETS REQUIRED 1 SHEET NO. D-8729-02 SHIT. 1 OF 1 REV 0

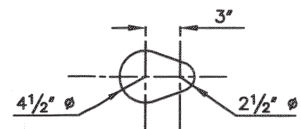
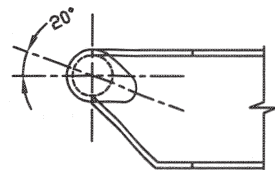
TAG	DESCRIPTION	SIZE-UNIT	TAG	DESCRIPTION	SIZE-UNIT
CUSTOMER CONNECTIONS					



PLAN VIEW



DETAIL - 1



ITEM #7 DETAIL
(LAZER CUT PART)

MATERIAL LIST

ITEM	QTY	PART/COMP. No.	DESCRIPTION	MATERIAL
1	2	22511027	W10 x 22 lb/ft BEAM x 25'-6"(7772mm)LG	SA-36/44W
2	4	22511027	W10 x 22 lb/ft BEAM x 7'-6"(2286mm)LG	SA-36/44W
3	1	221112027	C10 x 15.3 lb/ft CHANNEL x 7'-6"(2286mm)LG	SA-36/44W
4	8	22111427	C4 x 5.4 lb/ft CHANNEL x 7'-0 1/2"(2135mm)LG	SA-36/44W
5	1	20025100	CHIEFER PLATE 1/4" THK x 18'-0"(4877mm) x 8'-0"(2438mm)LG	SA-36/44W
6	2	13021379	PIPE: 3" SCH 180 SMLS PIPE x 8'-0"(2438mm)LG	SA-106-B
7	4	4253704008	PLATE: 1/4" THK x 4 1/2" (114mm) x 7 3/4" (197mm)LG	SA-36/44W

- ALL FILLET WELDS TO BE 1/4" UNLESS OTHERWISE NOTED.
- ALL MEMBERS ARE TO BE FLUSH WITH THE TOP OF SKID, UNLESS OTHERWISE NOTED.
- SEE PAINTING SCHEDULE B409-90.
- CHK. PLATE SEAMS TO BE LOCATED ON FULL DEPTH MEMBER AND CONTINUOUSLY WELDED.
- CHK. PLATE TO BE STITCH WELD 2" IN 12" AROUND SKID PERIMETER.
- SURFACE PREPARATION AND PAINT AS PER PROJECT INFORMATION LIST.
- SKID TO BE WELED WITH 7018 / FLUX CORE WIRE.

SKID WEIGHT

WEIGHT OF STEEL (LBS/Kg)	3917 LBS / 1777 Kg
WEIGHT OF BUILDING (LBS/Kg) @ 3.5 LBS/Sq.FT	1971 LBS / 894 Kg
TOTAL WEIGHT (LBS/Kg)	5888 LBS / 2668 Kg

REV	DATE	REV BY	CR'D BY	APP'D BY	DESCRIPTION
0	08/06/07	GLW			ISSUED FOR CONSTRUCTION

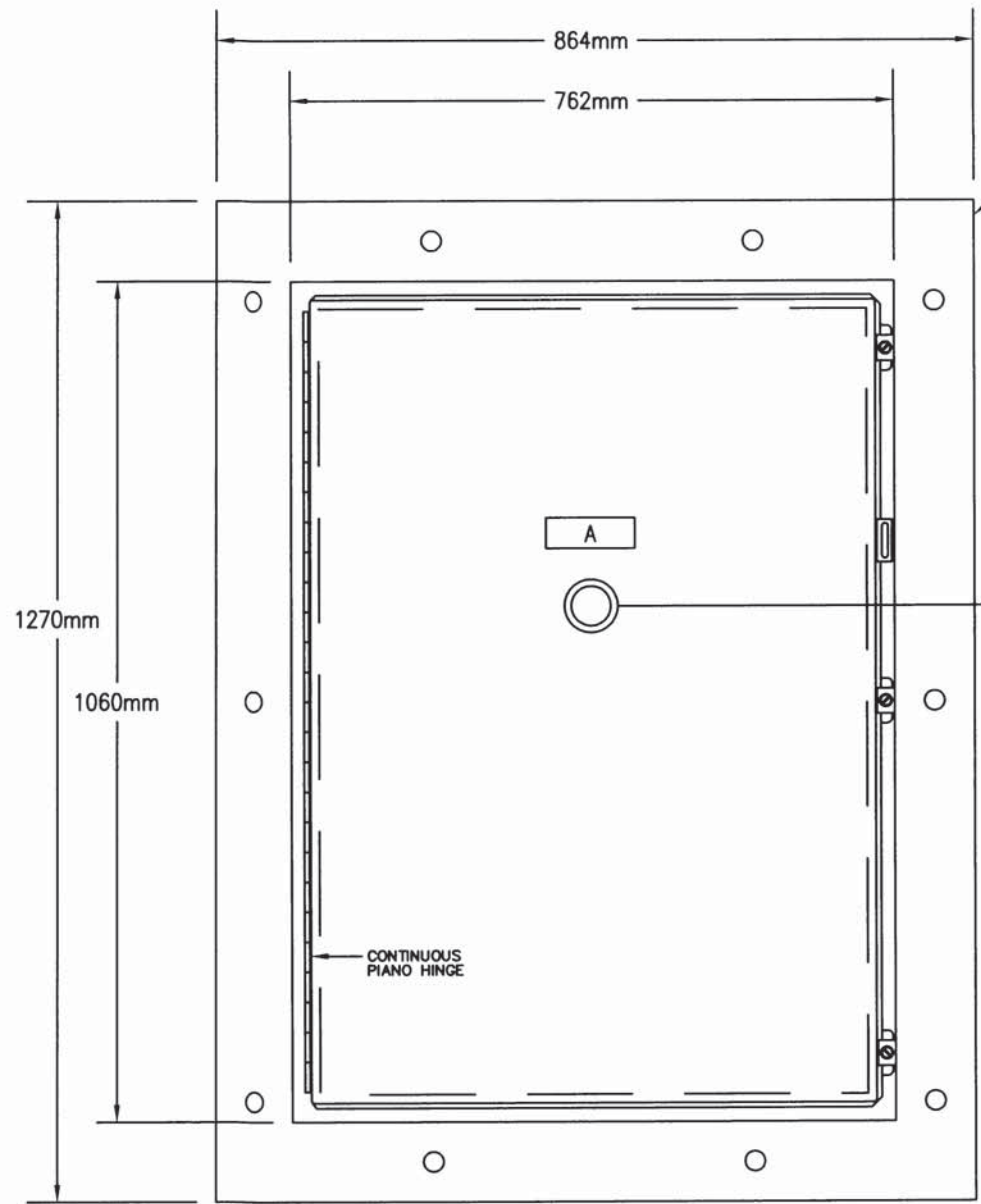
REVISIONS

This drawing is the property of NATCO CANADA and is lent to the recipient for his confidential use only. In consideration of the loan of this drawing, the recipient promises and agrees that it shall not be used in any way detrimental to the interests of NATCO CANADA, that it shall be returned upon request, and that it shall not be reproduced, copied, lent or otherwise disposed of, directly or indirectly, without the written approval of NATCO CANADA.

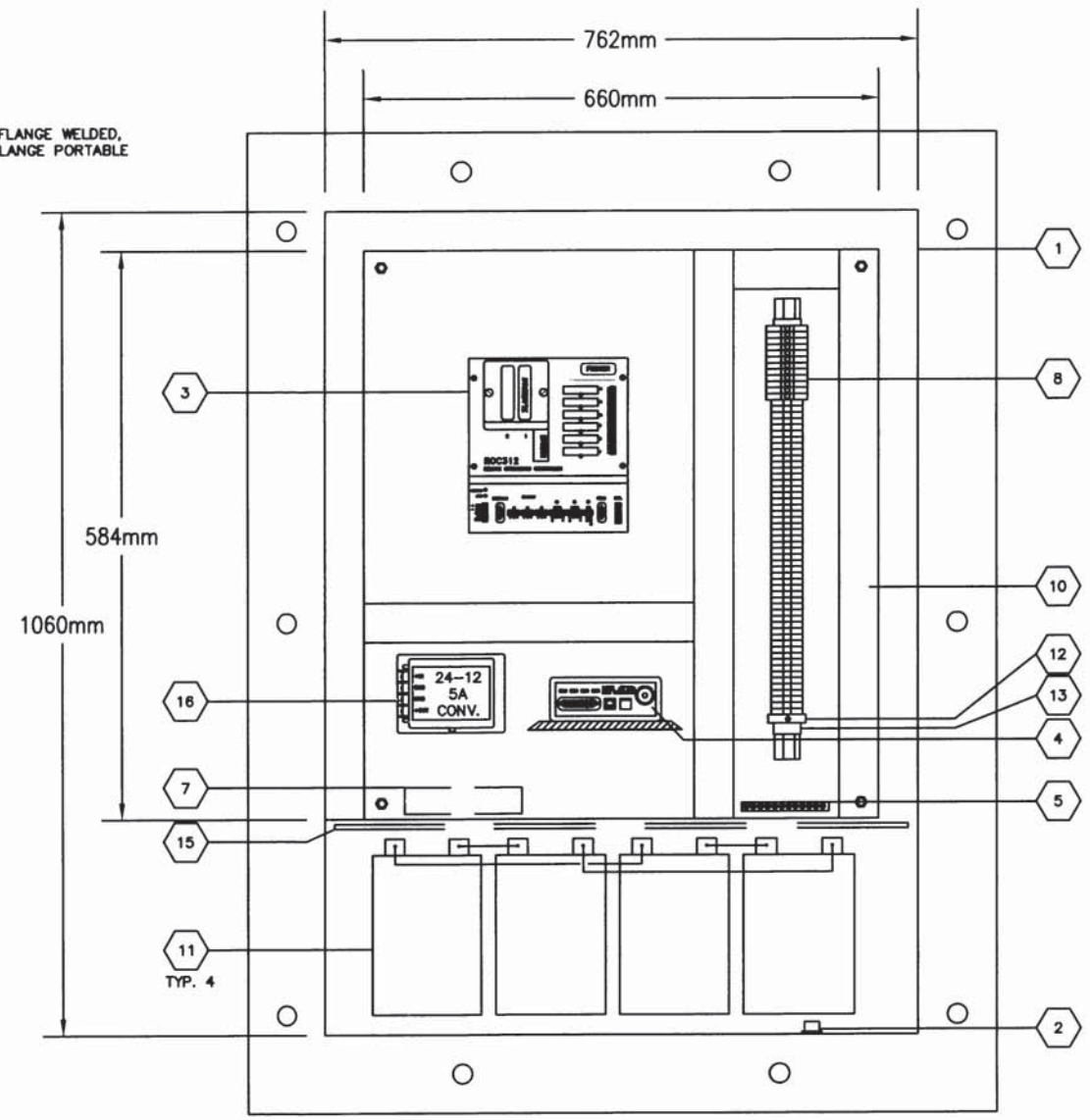
NATCO CANADA

CALGARY	ALBERTA	CANADA
TITLE: 8'-0"(2438mm) x 25'-6"(7772mm) STRUCTURAL SKID		
CUSTOMER: ENCANO OIL AND GAS		
LOCATION:	ISSUED BY: GARY W	DATE: 03/27/07
CONTRACT NO.:	212	SCALE: 3/4"=1'-0"
LIMITS:	JIM F.	REV: 0
8729	D-8729-04	SHT. 1 OF 1

1	2	3	4	5	6	7	8	9
FULL SIZE CONNECTION	FULL SIZE CONNECTION	REDUCED CONNECTION	FLOOR SUPPORT FULL COPE	FLOOR SUPPORT NO COPE	FLOOR PLATE TO SKID CONNECTION	FLOOR PLATE SEAMS	TYPICAL BOLTING	FULL STRENGTH FULL DEPTH CONNECTION
						UNLESS OTHERWISE NOTED		



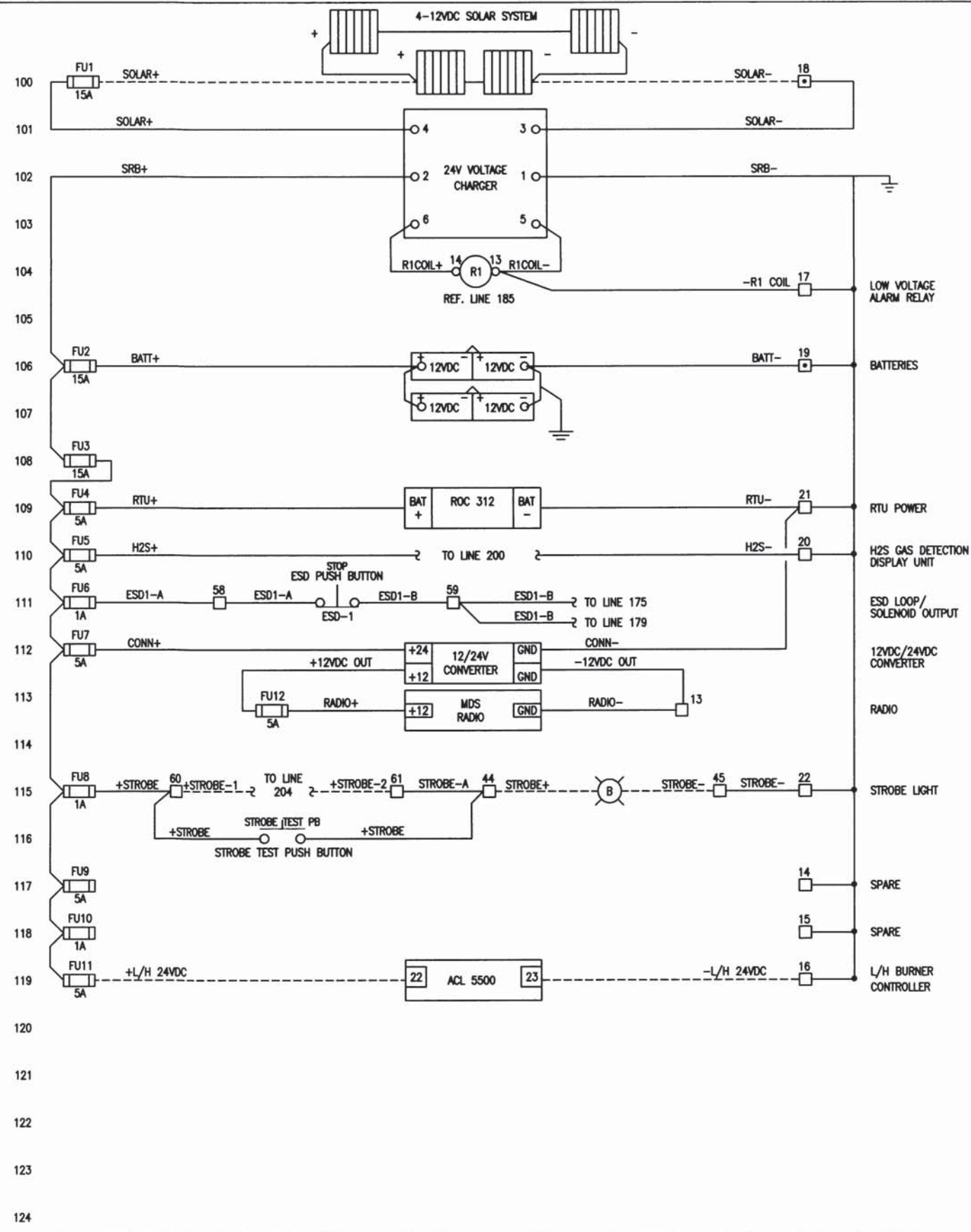
NOTE:
FRONT FLANGE WELDED,
BACK FLANGE PORTABLE



MATERIAL LIST		
ITEM	QUANTITY	DESCRIPTION
1	1	NEMA 4 TYPE ENCLOSURE, FLANGED 2 SIDED WALL MOUNT, 1060H X 762W X 406D C/W BACKPAN, HINGED DOOR, 14 GAUGE STEEL CONSTRUCTION, INSULATED OUTSIDE WALLS AND DOOR, POWDER COAT PAINTED TEXTURE BLACK, SECURITY LATCH
2	1	POLYPHASE C/W 52" LONG COAX CABLE FOR CONNECTION TO RADIO
3	1	RTU FISHER ROC 312 1 - ANALOG OUTPUT (SOURCE) 3 - DIGITAL INPUT (SOURCE) 1 - PULSE INPUT (SOURCE) 1 - ANALOG INPUT (LOOP) 1 - COM CARD 1 - FLASH PAC 512KB AGA 92 VER 2.11
4	1	RADIO 9600 BAUD. MOUNT HORIZONTAL ON ALUM. BRACKETS WITH LED'S FACING OUT MDS 4710(b) HL
5	1	GROUND BUS BAR
7	1	SUN SAVER MORNING STAR CHARGE CONTROLLER (PART NO. SS-20L-24VDC)
8	14	TERMINAL BLOCK, 24V POWER, WEIDMULLER WDU 2-5
	6	WEIDMULLER GROUND TERMINAL PART NO. WPE 2-5
	36	WEIDMULLER KNIFE TERMINAL PART NO. WTR 2-5
	9	WEIDMULLER MINI FUSED (GDA FUSES SAND FILLED) PART NO. WSI 6
	3	WEIDMULLER MINI FUSED (MDA FUSES SAND FILLED) PART NO. WSI 6
	1	WEIDMULLER TERMINAL PLACE HOLDER PART NO. WEW 35/2
	2	WEIDMULLER END PLATE #105000 WAP 2.5/4/6/10 PART NO. WTR2-5
	LOT	WEIDMULLER TS 35 DIN RAIL, JUMPER COMBS, STAND OFF BLOCKS DECA FIX NUMBERS
	2	DIODES
10	LOT	WIREWAY 2"W X 2"H WHITE C/W COVER
11	4	12V LEAD ACID SEALED BATTERIES, 100 AMP HOURS, CL. 1 DIV. 2
12	1	STAHL N.O. PUSH BUTTON PTB Nr. EX-92.C.1092U (BEACON TEST LIGHT)
13	2	4PDT, 24VDC RELAY C/W BASE, OMRON MY4H, C/W SOCKET
14	1	ALLEN BRADLEY MAINTAINED ESD PUSH BUTTON ASSEMBLY PART NO. 800T
15	1	PLEXIGLASS BATTERY COVER, TO FIT PANEL SIZE 1/4" x 27" x 9"
16	1	POWER CONVERTER, 24VDC TO 12VDC, 5 AMP, CL. 1 DIV. 2
17		
18		
19		
20		

LAMACOID LIST			
ITEM	QNTY.	DESCRIPTION	SIZE
A	1	ESD	25mm X 75mm BLACK LETTERS ON WHITE

DRAWING	REFERENCE	No.	REV.	DATE	BY	APPD.	REVISION	DESIGN BY:	DATE:	TYPICAL ROC 312 PANEL LAYOUT			
								KRS	02/21/08	DRAWING TITLE			
								MDS	02/21/08	PROJECT No.	CAD FILE	DRAWING No.	REVISION
								KRS	02/21/08	P21708001	E-100	B-E-100	0
			0	02/21/08	KRS	KRS	ISSUED FOR INFORMATION						

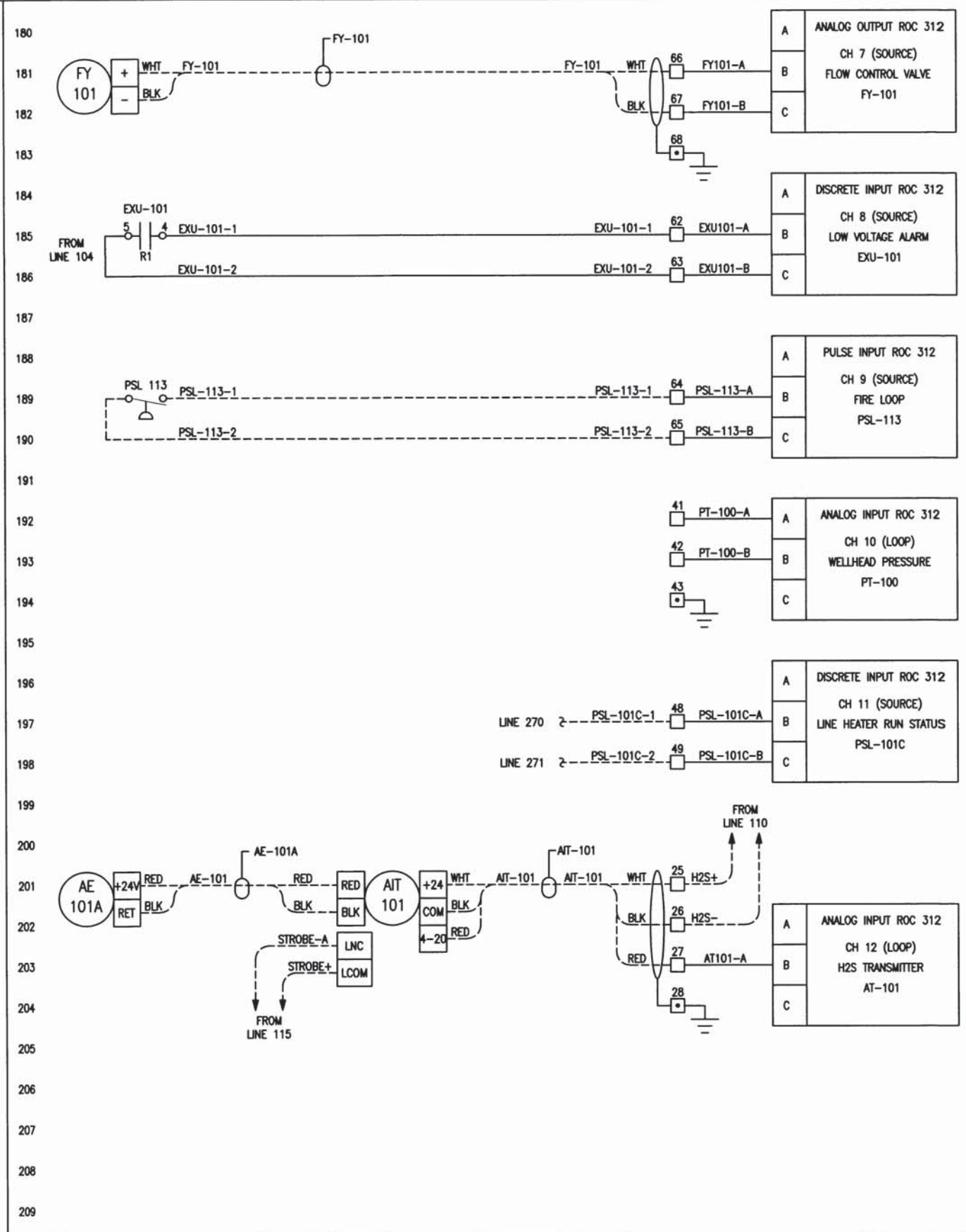
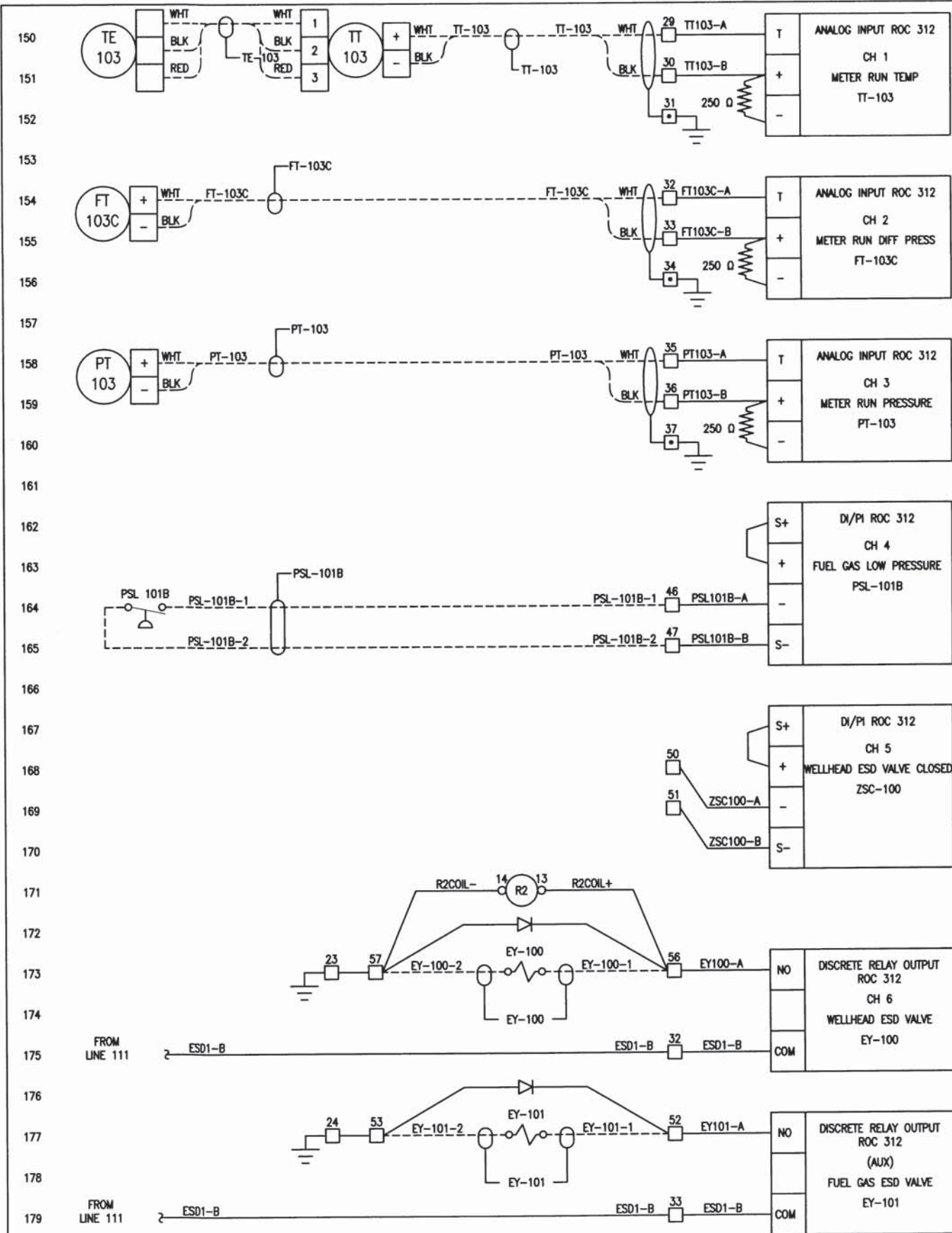


125
126
127
128
129
130
131
132
133
134
135
136
137
138
139
140
141
142
143
144
145
146
147
148
149

TERMINAL BLOCK LEGEND

	RTU PANEL FUSED
	RTU PANEL GROUNDING TERMINAL
	RTU PANEL FEED-THROUGH
	VENDOR TERMINAL
	PANEL WIRING
	FIELD WIRING

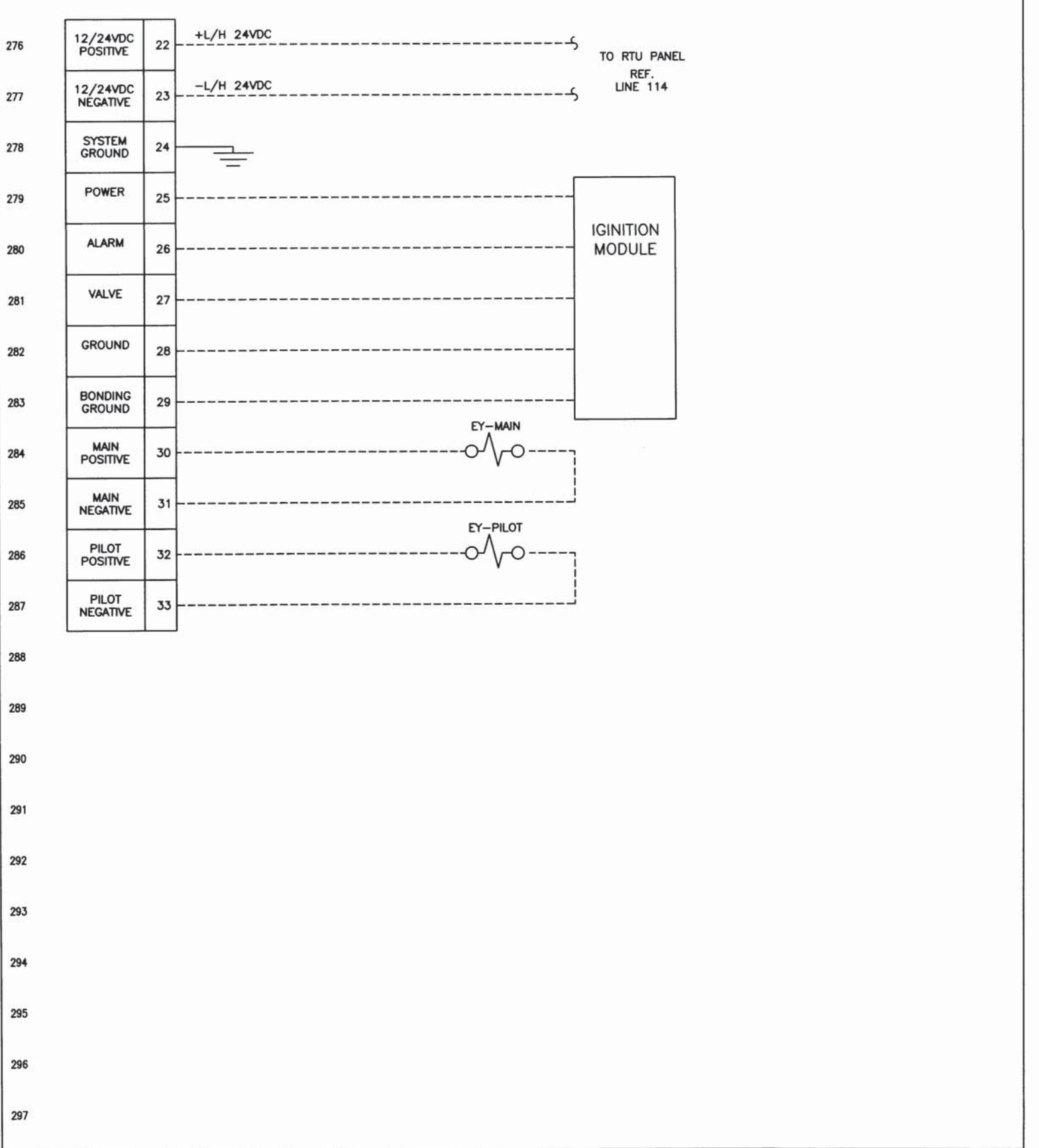
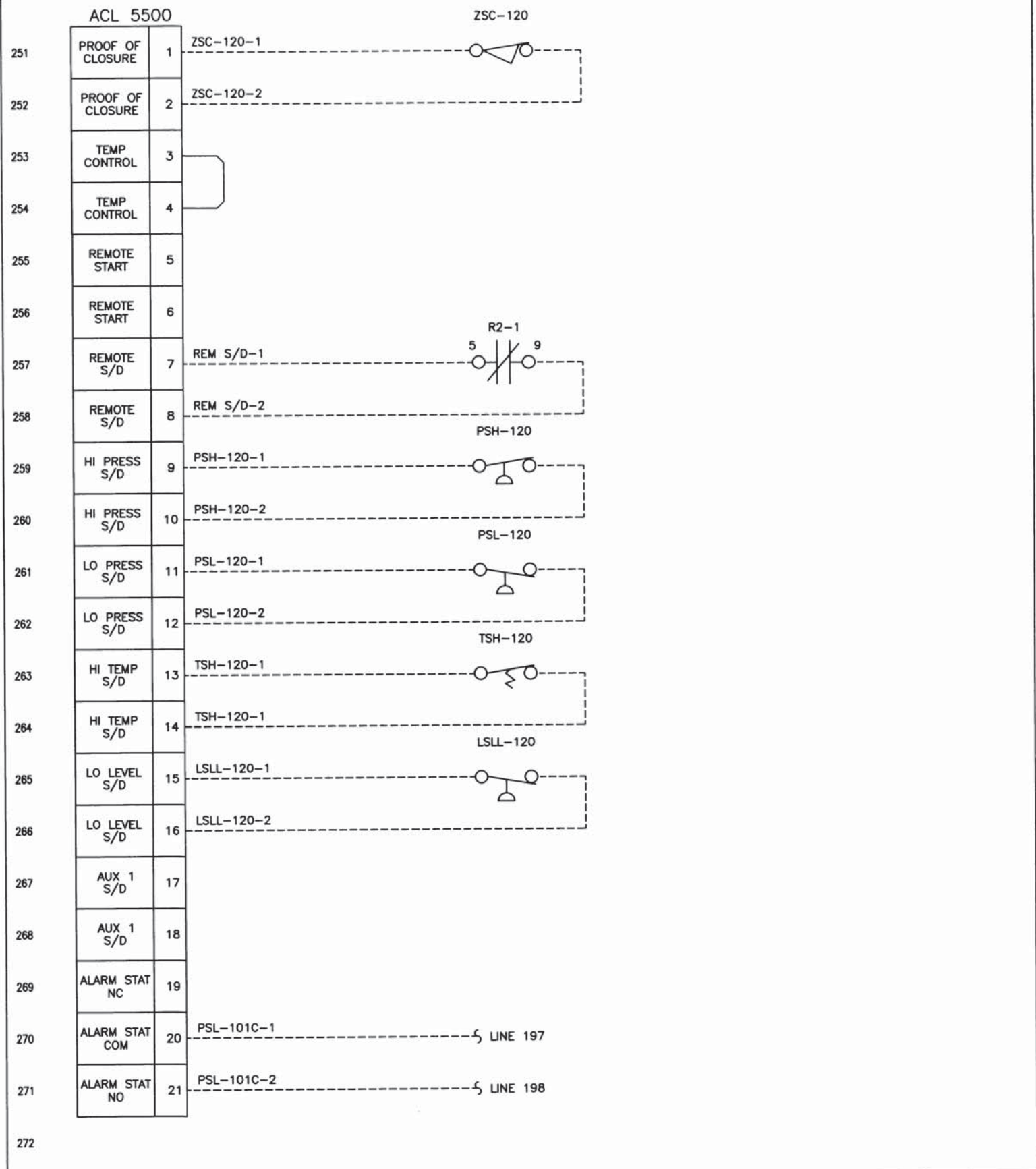
DRAWING	REFERENCE	No.	REV.	DATE	BY	APPD.	REVISION	DESIGN BY:	DATE:
								KRS	02/21/08
								MDS	02/21/08
								KRS	02/21/08
TYPICAL ROC 312 PANEL WIRING 1 OF 2									
DRAWING TITLE									
PROJECT No.		CAD FILE		DRAWING No.		REVISION			
P21708001		E-101		B-E-101		0			
		0	02/21/08	KRS	KRS	ISSUED FOR INFORMATION			



TERMINAL BLOCK LEGEND

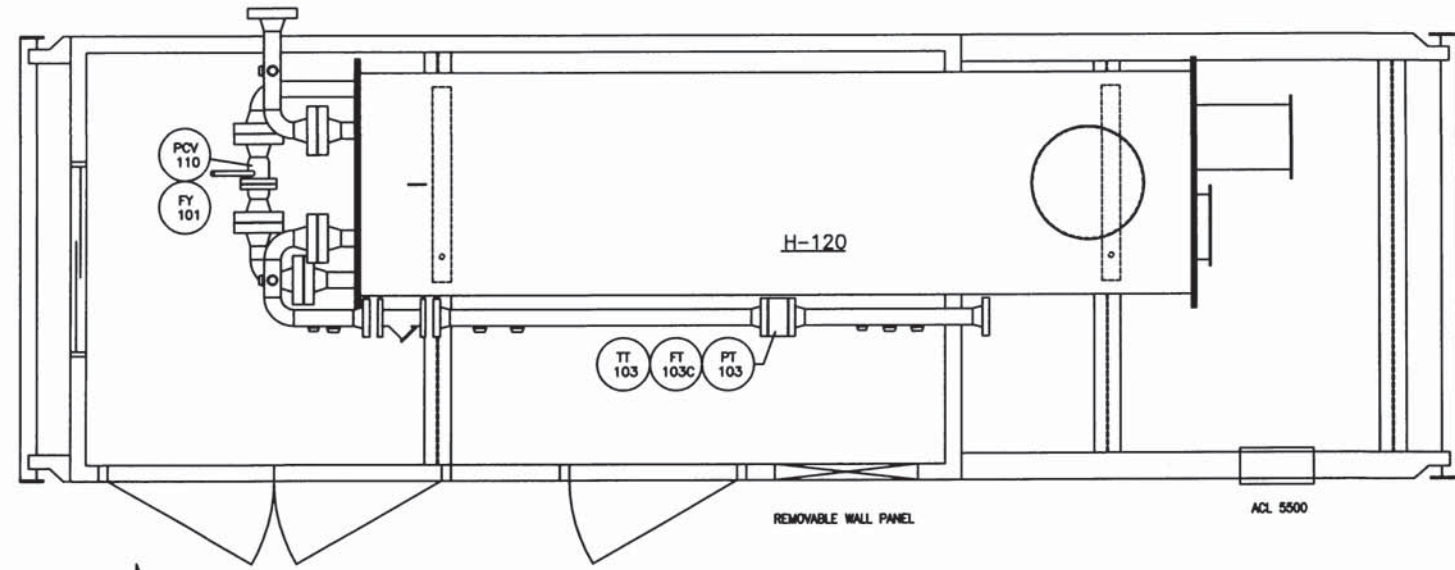
- RTU PANEL FUSED
- RTU PANEL GROUNDING TERMINAL
- RTU PANEL FEED-THROUGH
- VENDOR TERMINAL
- PANEL WIRING
- - - - FIELD WIRING

DRAWING	REFERENCE	No.	REV.	DATE	BY	APPD.	REVISION	DESIGN BY:	DATE:	
								DRAWN BY: KRS	DATE: 02/21/08	
								CHECKED BY: MDS	DATE: 02/21/08	
								APPD. BY: KRS	DATE: 02/21/08	
TYPICAL ROC 312 PANEL WIRING 2 OF 2										
DRAWING TITLE										
PROJECT No.		CAD FILE		DRAWING No.		REVISION				
P21708001		E-102		B-E-102		0				
							ISSUED FOR INFORMATION			

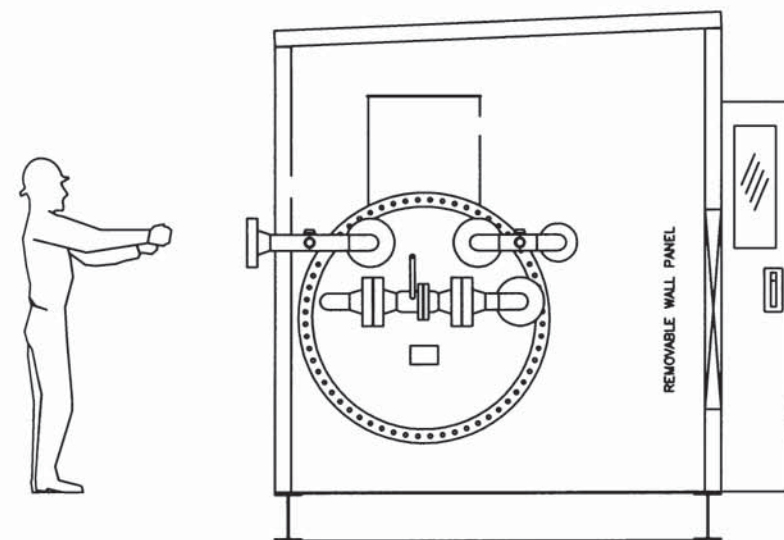


DRAWING	REFERENCE	No.	REV.	DATE	BY	APPD.	REVISION	DESIGN BY:	DATE:	TYPICAL ACL 5500 WIRING			
								DRAWN BY: KRS	DATE: 02/21/08	DRAWING TITLE			
								CHECKED BY: MDS	DATE: 02/21/08	PROJECT No.	CAD FILE	DRAWING No.	REVISION
								APPD. BY: KRS	DATE: 02/21/08	P21708001	E-103	B-E-103	0
			0	02/21/08	KRS	KRS	ISSUED FOR INFORMATION						

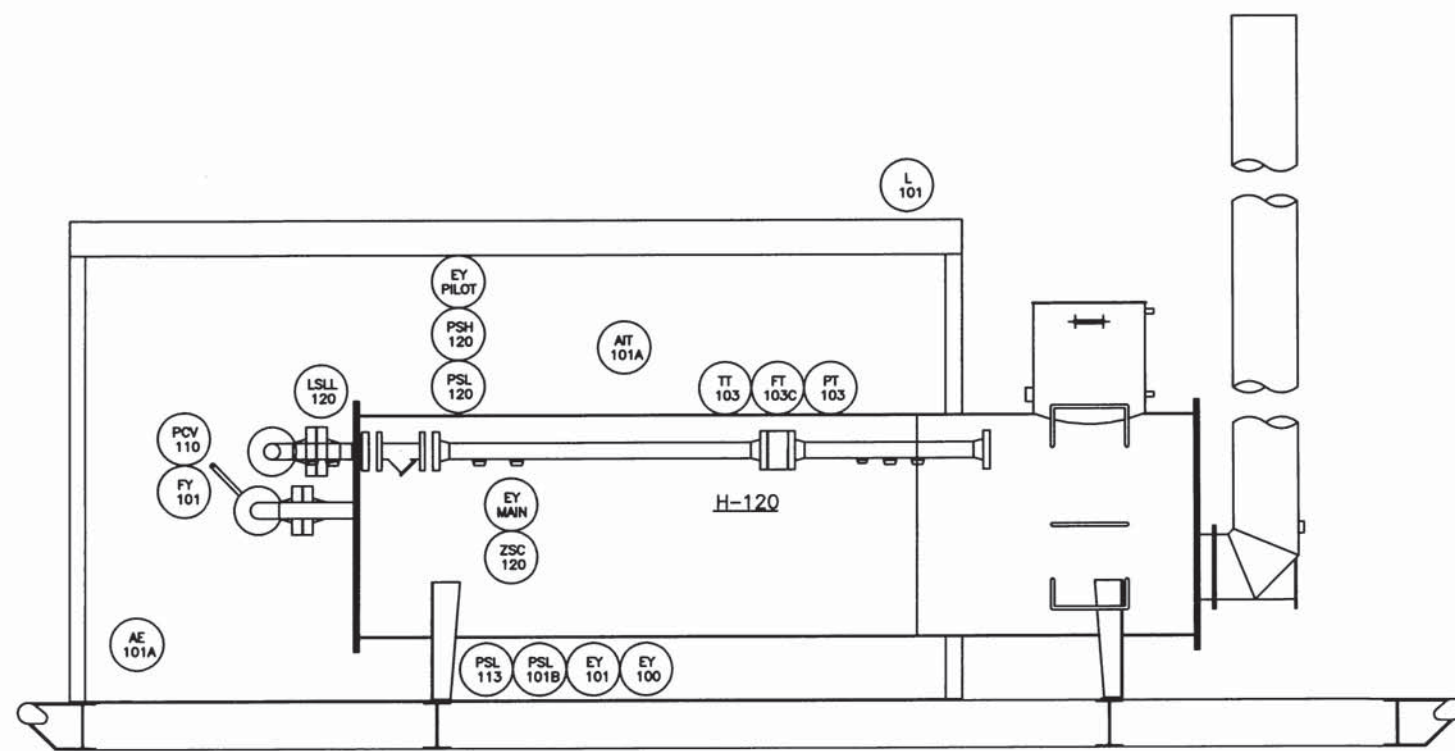
B



PLAN VIEW



SECTION 'B'



SECTION 'A'

DRAWING	REFERENCE	No.	REV.	DATE	BY	APPD.	REVISION	DESIGN BY:	DATE:	TYPICAL SKID LAYOUT			
								KRS	02/21/08	DRAWING TITLE			
								MDS	02/21/08	PROJECT No.	CAD FILE	DRAWING No.	REVISION
								KRS	02/21/08	P21708001	E-104	B-E-104	0
			0	02/21/08	KRS	KRS	ISSUED FOR INFORMATION						

512 8729-52 "B"

5 996







