

U-5000
72" LINE HEATER SHELL
72" OD x 24'-0" s/s
-20°F/200°F
c/w 36" OD x 5'-7" EXPANSION TANK,
20" OD x 46'-0" TOTAL LENGTH FIRETUBE,
RATED FOR 2,500,000 BTU/Hr

FABS-5010
BURNER/FIRED HEATER
TYPE: SINGLE BURNER
RATING: 2,500,000 BTU/Hr
BMS-5001: ACL 5100

C-5020
REHEAT COIL
(8) PASSES OF 4"-2500CL
MAWP: 5020 PSIG
-20°F/200°F
0.076" CORROSION ALLOWANCE
REGISTERED IN AB

C-5010
PREHEAT COIL
(8) PASSES OF 4"-2500CL
MAWP: 5020 PSIG
-20°F/200°F
0.076" CORROSION ALLOWANCE
REGISTERED IN AB

ACL TC200
TEMP. CONTROL

FABS-5010
MAIN PILOT
IGNITION/FLAME SENSE
PILOT
MAIN

U-5000
C-5010
C-5020

ACL 5100
PSHH/PSLL/LSLL/HTSD
PILOT
MAIN

V-5010
FUEL GAS SCRUBBER
6" x 30" OAL
MAWP: 150 PSIG
-20°F/650°F
1/16" CORROSION ALLOWANCE
c/w INTEGRAL HLSD

F-5050
FILTER
MAKE: HEADLINE
MODEL: 360A-HP-1
MAWP: 232PSIG
144SCFM
c/w REPLACEMENT CARTRIDGE
MODEL: 25-64-70C

UH-5091
NATURAL GAS HEATER
MAKE: CATADYNE, WK SERIES
12" x 12", 12VDC START
c/w GRILL
SSOV-5091: ASV375 SAFETY SHUTOFF VALVE
TCV-5091: AC-TC-8000N-7 THERMOSTATIC TEMP.
CONTROLLER
PRV-5091: AC-R-2511 LOW PRESSURE REGULATOR
PRV-5092: AC-R-ES404-7 MAX APPLIANCE
REGULATOR

VALVE LEGEND

END CONNECTION:
FLANGED RF= 1
FLANGED RTJ=2
BUTTWELDED= 3
THREADED F-F= 4
THREADED M-F= 5
SOCKETWELD= 6
SW/THRD= 7
TUBING= 8

VALVE SERVICE:
NORMAL TEMP, SWEET PROCESS=1
NORMAL TEMP, SOUR PROCESS=1S
LOW TEMP, SWEET PROCESS=2
LOW TEMP, SOUR PROCESS=2S

ANSI CLASS:
CL150=A
CL300=B
CL400=C
CL600=D
CL900=E
CL1500=F
CL2500=G

THREADED/SOCKET WELDED CLASS:
API 602 WOG
CLASS 800=H 250 WOG=L
CLASS 1500=J 1000 WOG=M
CLASS 2500=K 2000 WOG=N
2160 WOG=O
3000 WOG=P
3600 WOG=Q
6000 WOG=R
10000 WOG=S
TUBING RATING=T

TAG	QTY.	MAKE	DESCRIPTION
PSV-5010	1	MERCER	PRESSURE SAFETY VALVE, MODEL: 9100 1"-MNPT x 1"-FNPT, WCB BODY, SET@150 PSIG, "D" ORIFICE
PSV-5011	1	MERCER	PRESSURE SAFETY VALVE, MODEL: 9100 1"-MNPT x 1"-FNPT, WCB BODY, SET@30 PSIG, "D" ORIFICE
THF-5011	1	(CUSTOMER SUPPLIED)	THIEF HATCH, 16oz PRESSURE RELIEF, 0.4oz VACUUM
PI-5012	1	WGI	PRESSURE GAUGE, LIQUID FILLED, SS 2 1/2" FACE x 1/4"-NPT, 0-30 PSIG
TC-5001	1	ACL	TEMPERATURE CONTROLLER, MODEL: TC200
XY-5011-12	2	ASCO	2 WAY SOLENOID VALVE, 1"-NPT, 24VDC, 30 PSIG MAWP
XY-5013	1	(CUSTOMER SUPPLIED)	2 WAY SOLENOID VALVE, 1/4"-NPT, 24VDC
XY-5010/14	2	ASCO	3 WAY SOLENOID VALVE, 1/4"-NPT, 24VDC

TAG	QTY.	MAKE	DESCRIPTION
BMS-5001	1	(CUSTOMER SUPPLIED)	COMBUSTION SAFETY CONTROLLER, MODEL: ACL 5100
PI-5014	2	(CUSTOMER SUPPLIED)	PRESSURE GAUGE, LIQUID FILLED, SS 2 1/2" FACE x 1/4"-NPT, 0-30 PSIG
PI-5011	1	(CUSTOMER SUPPLIED)	PRESSURE GAUGE, LIQUID FILLED, SS 2 1/2" FACE x 1/4"-NPT, 0-60 PSIG
PRV-5011	1	FISHER (CUSTOMER SUPPLIED)	PRESSURE REGULATOR, 627, 250 PSIG MAWP 1"-NPT, 5-20 PSIG RANGE, 1/4" ORIFICE, NYLON DISC
PRV-5012-14	3	FISHER (CUSTOMER SUPPLIED)	PRESSURE REGULATOR 67CFR-362TB 1/4"-NPT, 0-35 PSIG RANGE, 250 PSIG MAWP
PSHH-5011	1	(CUSTOMER SUPPLIED)	HIGH PRESSURE SWITCH, 1/2"-NPT, SET@ 20 SPIG MODEL: 12SHSN9B
PSLL-5011	1	(CUSTOMER SUPPLIED)	LOW PRESSURE SWITCH, 1/2"-NPT, SET@ 5 PSIG MODEL: 12SHSN9A
TE-5011	1	WIKA	DUAL TYPE-K THERMOCOUPLE, 12" LG STEM, 304SS c/w 1/2"-FNPT x 3/4"-MNPT x 12" 316 SST THERMOWELL
TW-5011	1	WIKA	DUAL TYPE-K THERMOCOUPLE, 12" LG STEM, 304SS c/w 1/2"-FNPT x 3/4"-MNPT x 12" 316 SST THERMOWELL
TCV-5014	1	KIMRAY	MOTOR CONTROL VALVE, 1400SMT 1"-NPT, 1/2" ORIFICE w/ TRAVEL STOP
FA-5011	1	WENCO (CUSTOMER SUPPLIED)	FLAME ARRESTOR, RATED FOR 2.5MM, TO FIT 20" FIRETUBE 4" ECLIPSE BURNER NOZZLE w/ PILOT & AIR PLATE w/ 5/16" ORIFICE
BRN-5011	1	(CUSTOMER SUPPLIED)	5/8" TUBULAR LEVEL GLASS, 1/2"-NPTx5/8"GLASS, 1TC GAUGE COCKS
LG-5011	1	(CUSTOMER SUPPLIED)	5/8" TUBULAR LEVEL GLASS, 1/2"-NPTx5/8"GLASS, 1TC GAUGE COCKS
LSLL-5011	1	KIMRAY	ELECTRIC LEVEL SWITCH, 2"-NPT, MODEL: CEC2
PCV-5010	1	MASTER FLO (CUSTOMER SUPPLIED)	P3E ANGLE CHOKE VALVE, 4"-2500CL RTJ, FC NACE SERVICE, c/w PDA 100 ACTUATOR
PY-5010	1	(CUSTOMER SUPPLIED)	MODEL: DVC6200HC DIGITAL FIELD-VUE POSITIONER
SD-5014	1	SMC	NAS-200D-NO2 SPEED CONTROL VALVE

TAG	QTY.	MAKE	DESCRIPTION
1/2"BA4P1	5	(CUSTOMER SUPPLIED)	1/2"-NPT 3000 WOG RP BALL VALVE
1"BA4P1	1	(CUSTOMER SUPPLIED)	1"-NPT 3000 WOG RP BALL VALVE
2"GA1A1	1	(CUSTOMER SUPPLIED)	2"-150CL RF GATE VALVE
1/4"NE5R1	4	(CUSTOMER SUPPLIED)	1/4"-NPT MxF 10,000 PSIG NEEDLE VALVE, SS

TAG	QTY.	MAKE	DESCRIPTION
1/4"BAPF	1	NEO	1/4"-NPT 2500 SERIES BALL VALVE, SS
1/2"BAPF	4	NEO	1/2"-NPT 2500 SERIES BALL VALVE, SS
1"BAPF	3	NEO	1"-NPT 2500 SERIES BALL VALVE, SS
1"YPF	1	ACL	1"-NPT T-STRAINER, SS, MODEL: 1T6YS

TAG	QTY.	DESCRIPTION
HUTCH		2'-0" WIDE x 6'-0" LONG FOAM PANEL
HEIGHT		6'-0"
INSULATION		R12 IN ROOF & WALLS
EXTERIOR/INTERIOR		1 1/2" GALVALUME FOAM PANEL
DOOR	1	5' x 5' FOAM PANEL DOUBLE
VENT	1	9" x 7" ADJUSTABLE LOUVER c/w SCREEN
HARDWARE		CHECK CHAINS & SWEEP, BARREL BOLT, CHAIN BOLT, WEATHER STRIPPING
SHELL INSULATION		1 1/2" INSULATION ON LINE HEATER SHELL NOT COVERED BY HUTCH c/w 0.02" STUCCO EMBOSSED ALUMINUM CLADDING
SKID		11'-0" WIDE x 29'-5" LONG
SKID PREP & PAINT		SSPC-SP3, 1 COAT CLOVERDALE PRIMER, 1 COAT CLOVERDALE GREY ENAMEL
PIPE EXTERIOR		SSPC-SP3, 1 COAT CLOVERDALE PRIMER, 1 COAT CLOVERDALE GREY ENAMEL
FIRETUBE & STACK		SSPC-SP3, 1 COAT CLOVERDALE HIGH TEMP FLAT BLACK

- NOTES:**
- QUANTITIES IN B.O.M. ARE FOR ONE (1) UNIT.
 - ALL PIPING TO BE IN ACCORDANCE WITH THE LATEST EDITION OF ASME B31.3 PRESSURE PIPING CODE.
 - WELDED PIPING TO BE: SA-106B SMLS (SA-333 GR.6 OUTSIDE BLDG);
• SPEC F/FL - 1" THRU 6": SCH. XXS
 - THREADED PIPING TO BE: SA-106B SMLS (SA-333 GR.6 OUTSIDE BLDG);
• SPEC AG/AA - 1/4" THRU 1 1/2": SCH. XS
 - WELDED FITTINGS TO BE: SA-234-WPB (SA-420-WPL6 OUTSIDE BLDG).
 - FORGED STEEL FITTINGS TO BE: SA-105N (SA-350 LF2 CL1 OUTSIDE BLDG), CL3000 (min.) RATING.
 - TUBING DETAILS;
• INSTRUMENT: 3/8"(0.035"WT) 316SS TUBING
• PROCESS: 1/2"(0.049"WT) 316SS TUBING
• c/w HY-LOK 316SS FITTINGS & FERRULES.
 - PROTECT ALL OPENINGS FOR SHIPMENT.
 - VENT ALL INSTRUMENTS OFF SKID (o/s).
 - PIPING & INSTRUMENTS SECURELY SUPPORTED.
 - ELECTRICAL SUPPLIES & EQUIPMENT INSTALLED BY OTHERS.
 - 100% X-RAY OF ALL WELDED PIPING.
 - NO PWHT ON ALL WELDED PIPING.
 - P.ENG STAMPED P&ID & LINE LIST ON IFC DWG'S.
 - BURNER FUEL GAS TRAIN TO BE CSA B149.3-15 COMPLIANT & APPROVED BY A CSA B149.3 CERTIFIED INSPECTOR.

NO.	DATE	REVISION	BY	APP
1	21-01-04	AS BUILT	KG	
0	20-08-11	ISSUED FOR CONSTRUCTION	KG	JB

CAPE MANUFACTURING LTD.
PO BOX# 216 HALKIRK, AB T0C 1M0
TELEPHONE: (403) 884-2442

CLIENT: BIRCHILL CANADA LTD. PARTNERSHIP
c/o:

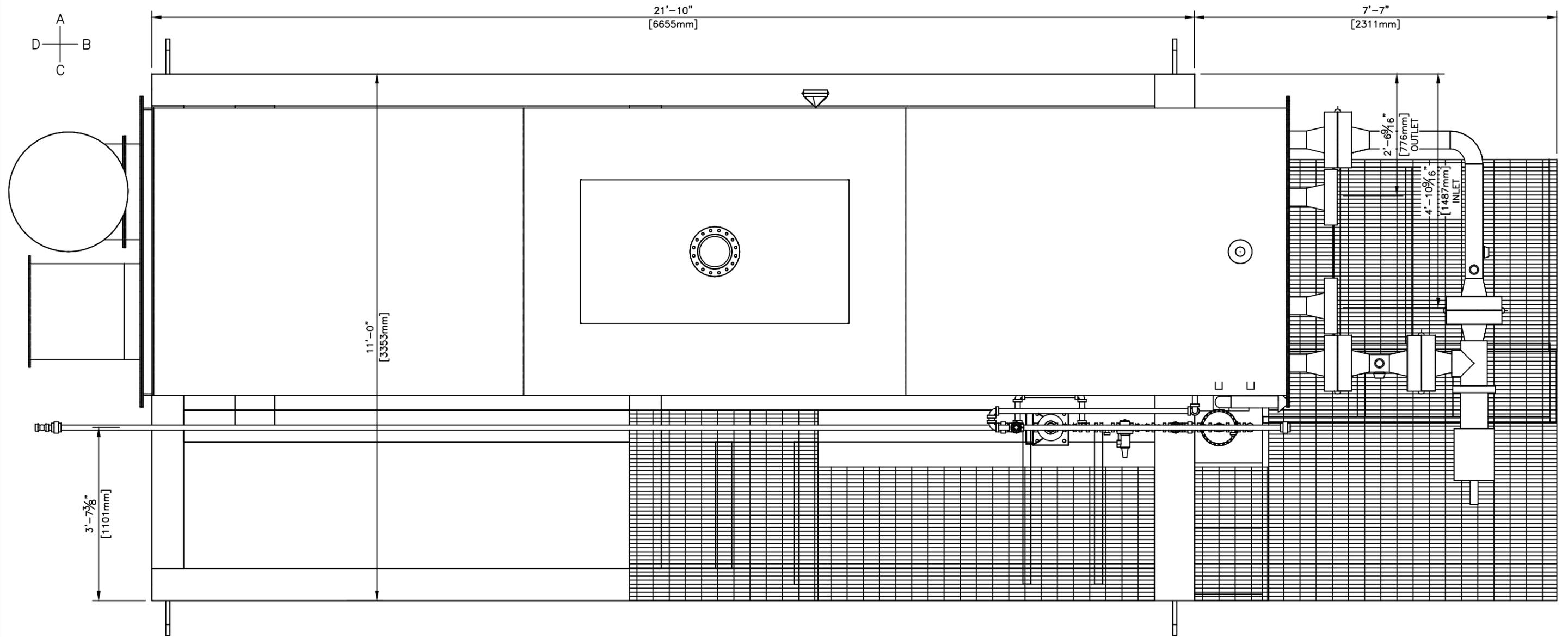
LSO: 16-20-43-13 W5M
DATE: 20-08-10
JOB NO.: CML-170683
SCALE: N.T.S.
DRAWN BY: KG
CHECKED BY: KG

2.5MM BTU LINE HEATER
72" OD x 24'-0" F/F
16 PASSES OF 4"-2500CL RTJ

DWG NO.: CML-170683PID
REV. 1

THE CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION

PROPERTY OF CAPE MANUFACTURING LTD.



PLAN VIEW
SCALE: 1:25

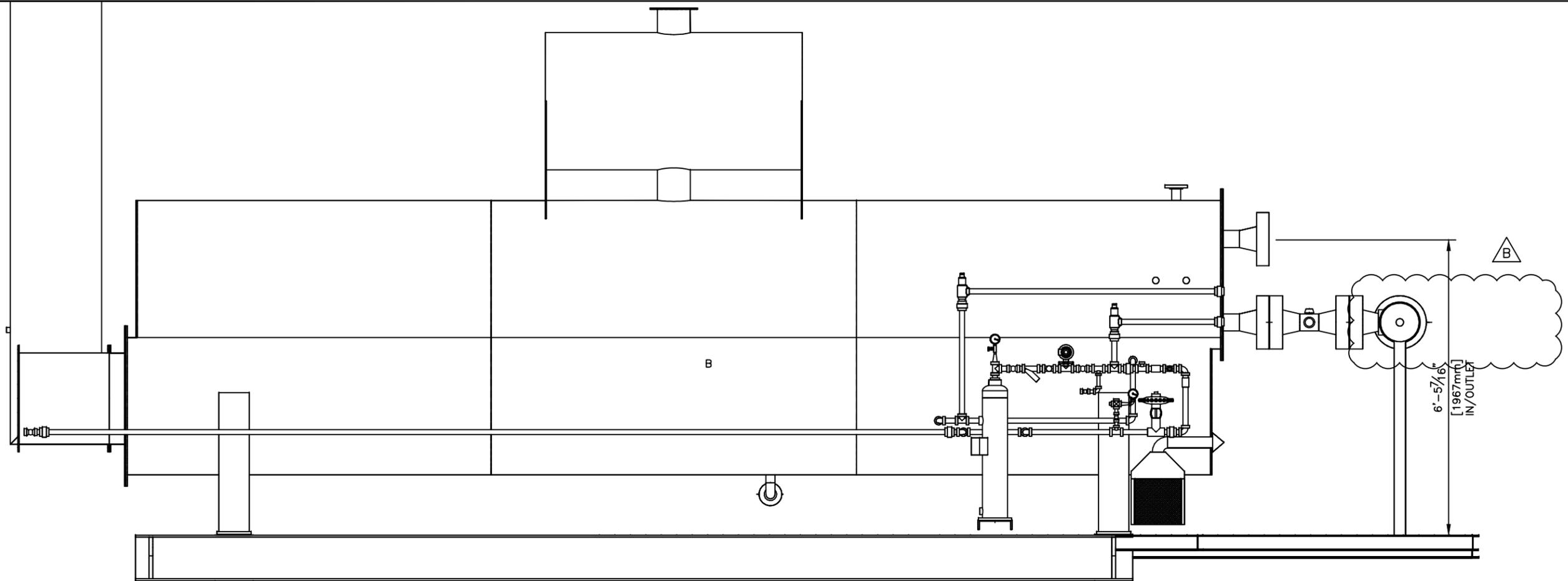
SHIPPING DIMENSIONS

LENGTH: 36'-6" (11,125mm)
 WIDTH: 12'-6" (3810mm)
 HEIGHT: 13'-6" (4115mm)
 APPROX. WEIGHT: 40,000LBS (18,145kgs)

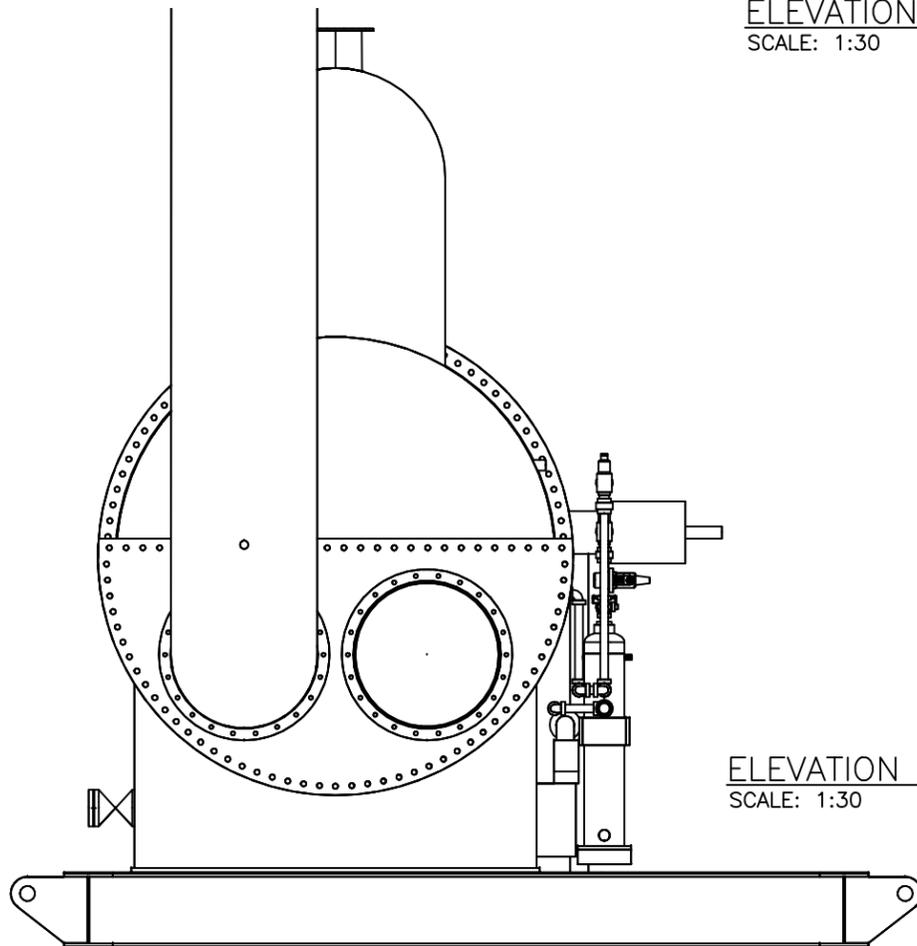
1	21-01-04	AS BUILT	KG	
0	20-08-17	ISSUED FOR CONSTRUCTION	KG	JB
NO.	DATE	REVISION	BY	APP
CAPE MANUFACTURING LTD.				
PO BOX# 216 HALKIRK, AB T0C 1M0 TELEPHONE: (403) 884-2442				
CLIENT: BIRCHILL CANADA LTD. PARTNERSHIP				
c/o:				
LSD:	16-20-43-13 W5M	2.5MM BTU LINE HEATER		
DATE:	20-08-10	72" OD x 24'-0" F/F		
JOB NO.:	CML-170683	16 PASSES OF 4"-2500CL RTJ		
SCALE:	SEE DWG.			
DRAWN BY:	KG			
CHECKED BY:		DWG NO.:	CML-170683PLAN	REV. 1
SHEET 1 OF 2				

THE CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION

PROPERTY OF CAPE MANUFACTURING LTD.



ELEVATION VIEW C
SCALE: 1:30



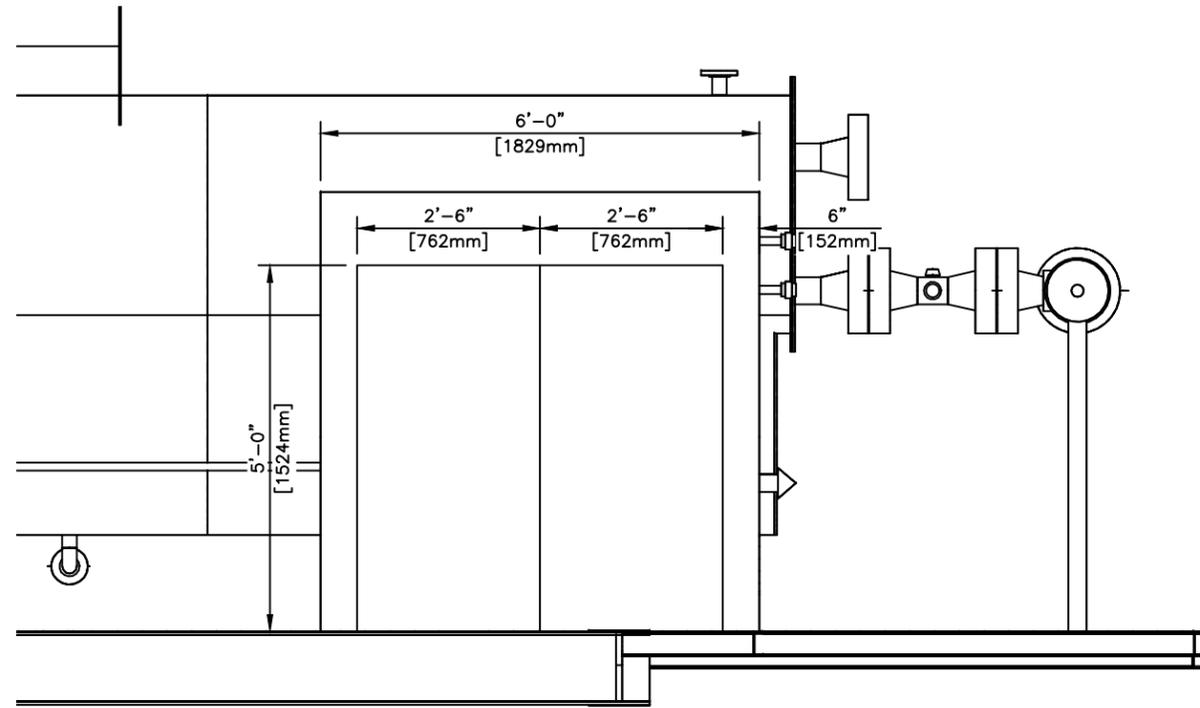
ELEVATION VIEW D
SCALE: 1:30

NO.	DATE	REVISION	BY	APP
1	21-01-04	AS BUILT	KG	
0	20-08-17	ISSUED FOR CONSTRUCTION	KG	JB

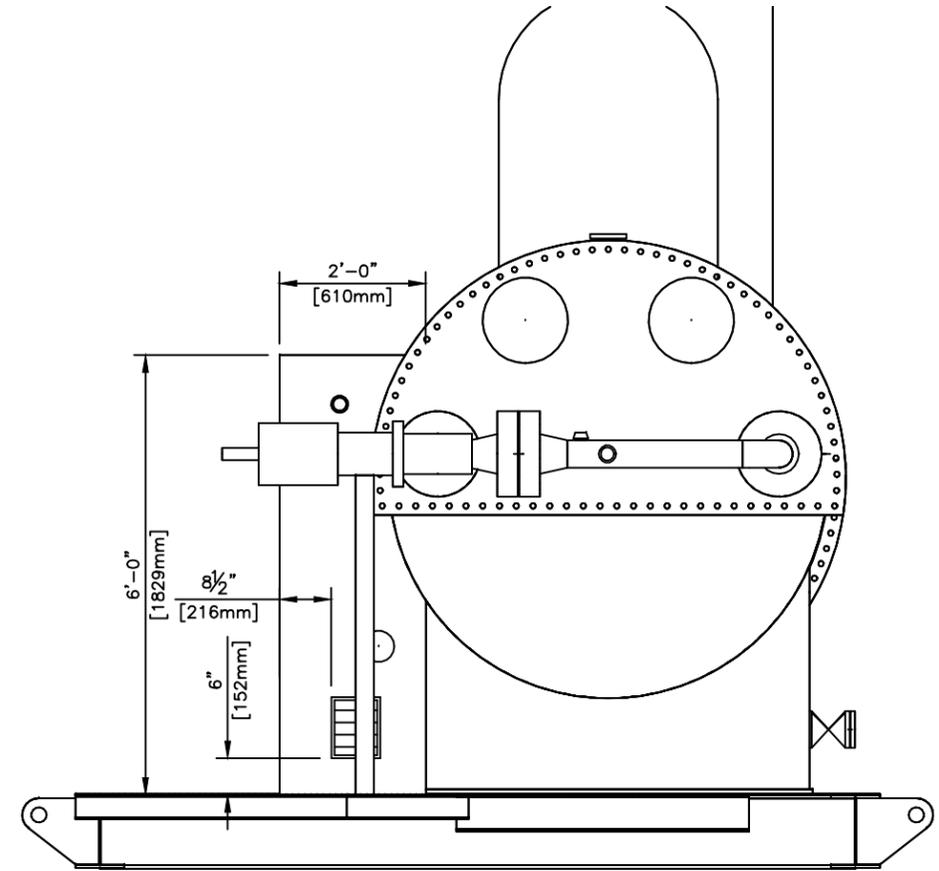
 CAPE MANUFACTURING LTD. PO BOX# 216 HALKIRK, AB T0C 1M0 TELEPHONE: (403) 884-2442		
CLIENT: BIRCHILL CANADA LTD. PARTNERSHIP c/o:		
LSD: 16-20-43-13 W5M	2.5MM BTU LINE HEATER	
DATE: 20-08-10	72" OD x 24'-0" F/F	
JOB NO.: CML-170683	16 PASSES OF 4"-2500CL RTJ	
SCALE: SEE DWG.	DWG NO.:	REV.:
DRAWN BY: KG	CML-170683ELE	1
CHECKED BY:	SHEET 2 OF 2	

THE CONTENTS OF THIS DRAWING ARE CONFIDENTIAL AND MAY NOT BE REPRODUCED WITHOUT WRITTEN PERMISSION

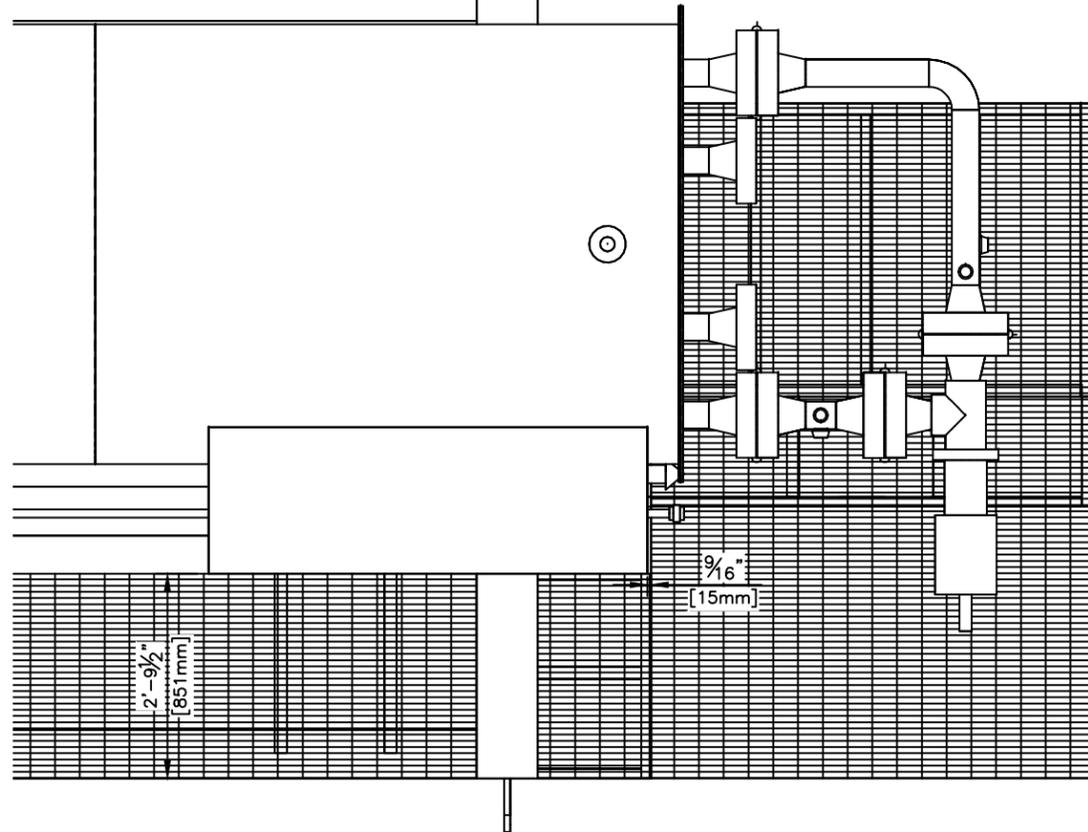
PROPERTY OF CAPE MANUFACTURING LTD.



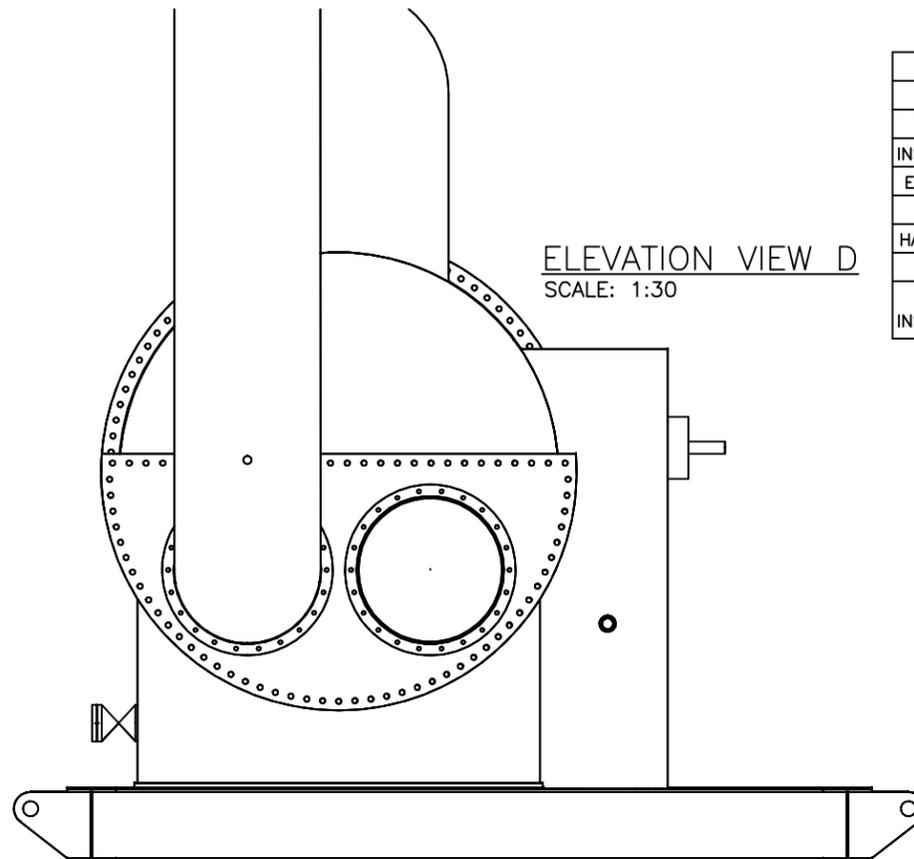
ELEVATION VIEW C
SCALE: 1:30



ELEVATION VIEW B
SCALE: 1:30



PLAN VIEW
SCALE: 1:30



ELEVATION VIEW D
SCALE: 1:30

TAG	QTY	DESCRIPTION
HUTCH		2'-0" WIDE x 6'-0" LONG, FOAM PANEL
HEIGHT		6'-0"
INSULATION		R12 IN ROOF & WALLS
EXTERIOR		1 1/2" 24 GA GALVALUME FOAM PANEL
DOOR	1	5' x 5' FOAM PANEL DOUBLE
HARDWARE		CHECK CHAINS & SWEEPS, BARREL BOLT, CHAIN BOLT, & WEATHER STRIPPING
VENTS	1	9" x 7" ADJUSTABLE LOUVRES & SCREENS
SHELL INSULATION		1 1/2" INSULATION ON LINE HEATER SHELL NOT COVERED BY HUTCH c/w 0.02" STUCCO EMBOSSED ALUMINUM CLADDING

NO.	DATE	REVISION	BY	APP
1	21-01-04	AS BUILT		KG
0	20-08-17	ISSUED FOR CONSTRUCTION		KG JB

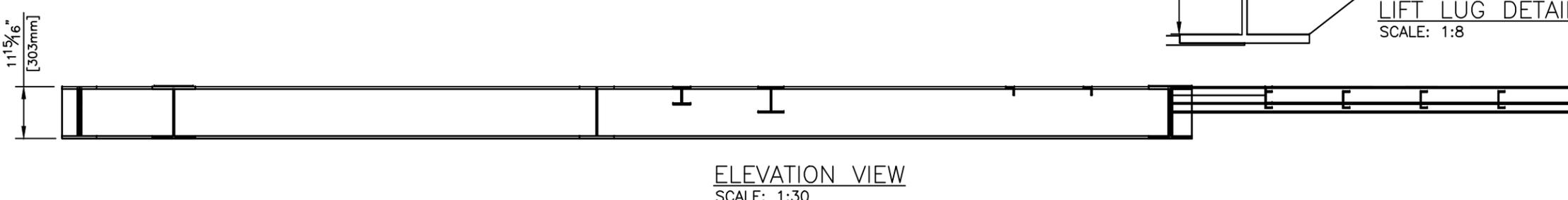
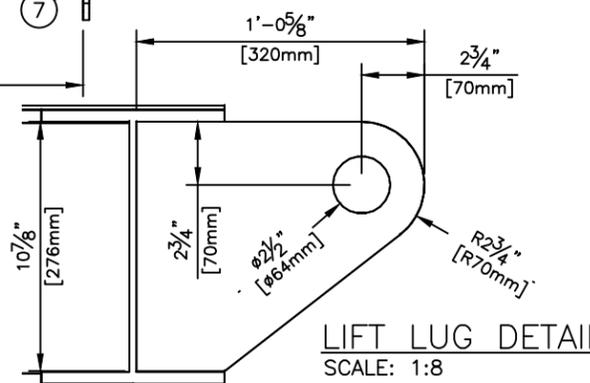
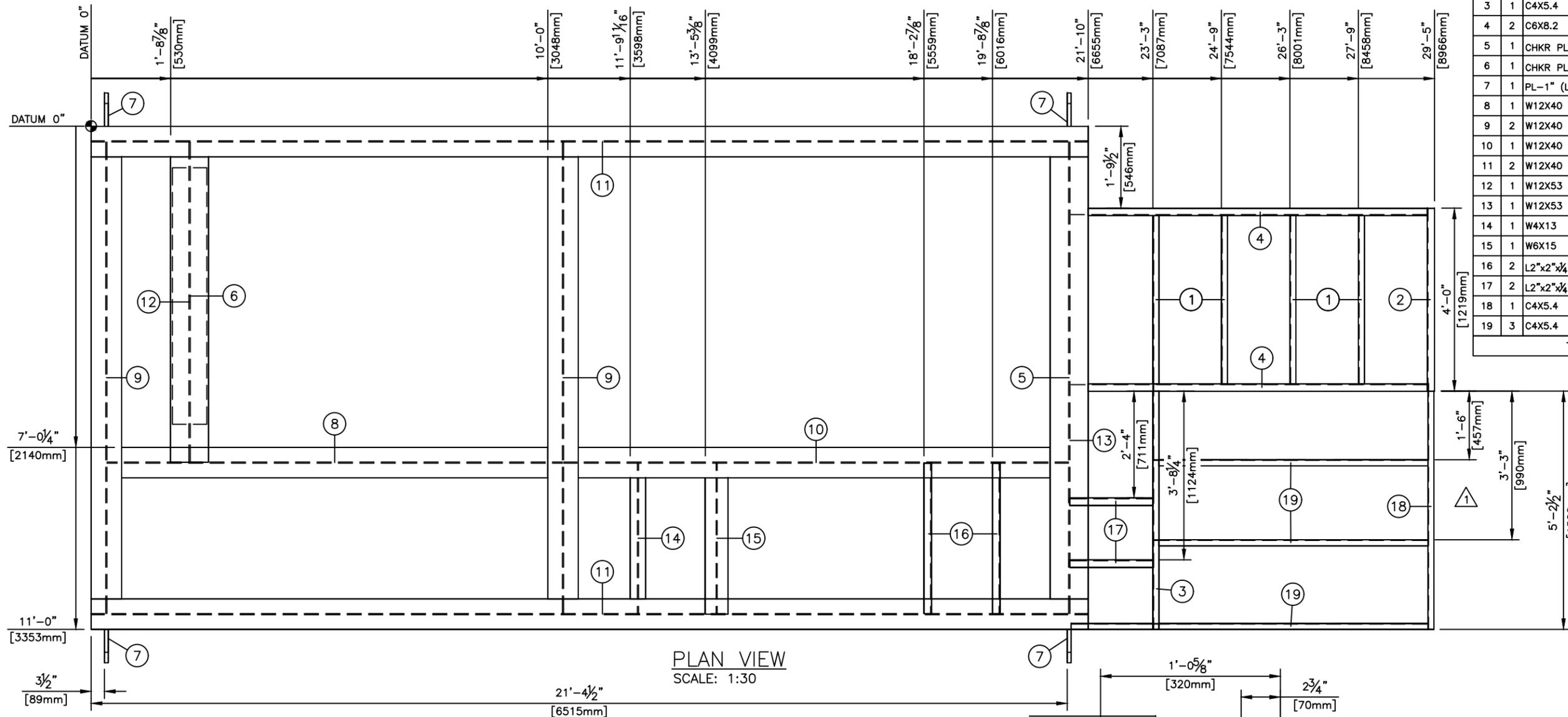
CAPE MANUFACTURING LTD.
 PO BOX# 216 HALKIRK, AB T0C 1M0
 TELEPHONE: (403) 884-2442

CLIENT:	BIRCHILL CANADA LTD. PARTNERSHIP
c/o:	
LSD:	16-20-43-13 W5M
DATE:	20-08-10
JOB NO.:	CML-170683
SCALE:	SEE DWG.
DRAWN BY:	KG
CHECKED BY:	
SHEET 1 OF 1	

2.5MM BTU LINE HEATER
72" OD x 24'-0" F/F
16 PASSES OF 4"-2500CL RTJ
DWG NO.: CML-170683BLDG
REV. 1

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PROPERTY OF CAPE MANUFACTURING LTD.



BILL OF MATERIAL

MARK	QTY	LONG ANNOTATION	LENGTH	WIDTH	WEIGHT
1	4	C4X5.4	44 3/16"		79.54
2	1	C6X8.2	48"		32.80
3	1	C4X5.4	64 1/4"		28.91
4	2	C6X8.2	93 5/16"		128.38
5	1	CHKR PL-3/16"	132"	10"	73.52
6	1	CHKR PL-3/16"	67 5/16"	9 1/16"	33.97
7	1	PL-1" (LIFT LUG SEE DETAIL)	129 1/8"	10 7/8"	28.56
8	1	W12X40	119 1/16"		380.52
9	2	W12X40	123 1/16"		787.70
10	1	W12X40	132 1/16"		422.11
11	2	W12X40	262"		1746.65
12	1	W12X53	83 5/16"		359.95
13	1	W12X53	124"		524.76
14	1	W4X13	39 7/16"		39.53
15	1	W6X15	39 7/16"		47.72
16	2	L2"x2"x3/4"	39 7/16"		21.06
17	2	L2"x2"x3/4"	21 3/16"		11.65
18	1	C4X5.4	64 1/2"		29.02
19	3	C4X5.4	72 1/16"		97.32
TOTAL WEIGHT:					4906.11 LBS

2	21-01-04	AS BUILT		KG	
1	20-08-05	EXTEND ADDITION		KG	JB
0	20-07-28	ISSUED FOR CONSTRUCTION		KG	JB
NO.	DATE	REVISION	BY	APP	

CAPE MANUFACTURING LTD.
 PO BOX# 216 HALKIRK, AB T0C 1M0
 TELEPHONE: (403) 884-2442

CLIENT: BIRCHILL CANADA LTD. PARTNERSHIP
 c/o: OEL PROJECTS LTD.

LSD:	16-20-43-13 W5M	11'-0" x 27'-11" SKID 2.5MM BTUH LINEHEATER 4 LIFTING LUGS			
DATE:	20-07-28				
JOB NO.:	CML-170683				
SCALE:	SEE DWG.				
DRAWN BY:	KG				
CHECKED BY:		DWG NO.:	CML-170683S	REV.:	2
SHEET 1 OF 1					