

ENERFLEX

P&ID's

PLOT 08 May, 2015 - 10:50am, sjohnsen THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

PROJECT DESCRIPTION

ONE (1) DRU OFF-GAS COMPRESSOR PACKAGE
 FOR: MEG ENERGY
 LOCATION NAME: HI-Q FIELD DEMO PILOT, BRUDERHEIM, AB
 LSD: SE 1/4-34-055-20 W4M

FABRICATED BY:

ENERFLEX LTD.
 CALGARY, ALBERTA, CANADA

TANK CAPACITIES

GLYCOL (CLOW) EXPANSION TANK: 20 US GALLONS
 GLYCOL STORAGE TANK: 260 US GALLONS
 WASTE OIL STORAGE TANK: 260 US GALLONS

POWER REQUIREMENTS

COMPRESSOR MOTOR (5KM-1401) VOL: 4000 VAC/3PH/60HZ 700 HP
 SUCTION FILTER DRAIN PUMP MOTOR (5PM-1101) VOL: 575 VAC/3PH/60HZ 1.5 HP
 BUILDING HEATER (5BH-2101 A/B) VOL: 575 VAC/3PH/60HZ 10 KW
 BUILDING FAN MOTOR (5BFM-2104) VOL: 120 VAC/1PH/60HZ 0.25 HP
 GLYCOL CIRCULATION PUMP MOTOR (5PM-6101) VOL: 575 VAC/3PH/60HZ 5 HP
 COOLER MOTOR (5EM-2101) VOL: 575VAC/3PH/60HZ 25 HP
 IMMERSION HEATER (5HTR-1201) VOL: 575 VAC/3PH/60HZ 3KW
 CONTROL PANEL: VOL: 120 VAC AMPS: NOM: 5
 FIRE DETECTION: VOL: 24 VDC AMPS: NOM: 5
 GAS DETECTION: VOL: 24 VDC AMPS: NOM: 5
 INT. LIGHTS: VOL: 347 VAC AMPS: NOM: 1.7
 EXT. LIGHTS: VOL: 347 VAC AMPS: NOM: 0.8
 RECEPTACLES: VOL: 120 VAC AMPS: NOM: 30

SYSTEM CONSUMABLES

COMPRESSOR LUBE OIL: EFX S5-150, 135 US GALLONS
 GLYCOL: 50% ETHYLENE INHIBITED GLYCOL/WATER SOLUTION, 46 US GALLONS
 INSTRUMENT AIR: 300 SCFD

DESIGN SPECIFICATION:

ENERFLEX LTD. (EFX) SCOPE OF SUPPLY ON THIS PROJECT CONSISTS OF ONE SCREW SKIDDED GAS COMPRESSOR PACKAGE.

PACKAGE CONSISTS OF ONE (1) TECO 700HP EMD DRIVING A FRICK SGC-2821, ONE STAGE, DRU OFF-GAS COMPRESSOR.

PRIMER (VESSELS, PIPING, STRUCTURAL) -FIN-1A, CLOVERDALE 703 SERIES, ECOPRIME WATER-BASED PRIMER, GREY
 PAINT (VESSELS, PIPING, STRUCTURAL) -FIN-1A, CLOVERDALE 703 SERIES, ECOLOGIC WATER-BASED INDUSTRIAL ENAMEL, F-34 WARM GREY
 PROCESS PIPING (SWEET): -10% RADIOGRAPHIC TESTING
 -1/16" CORROSION ALLOWANCE
 -NO PWHT
 -SSPC-SP3
 -NO PICKLING
 FLARE HEADER PIPING (SOUR): -100% RADIOGRAPHIC TESTING
 -1/8" CORROSION ALLOWANCE
 -PWHT
 -SSPC SP3
 -NO PICKLING
 VESSELS: -5% RADIOGRAPHIC TESTING - RT2
 -UT ON ALL CAT. 'D' WELDS
 -1/16" CORROSION ALLOWANCE
 -NO PWHT
 -SSPC-SP3
 -NO PICKLING

DESIGN CRITERIA & APPLICABLE CODES

SITE ELEVATION: 3000 FT ABOVE MEAN SEA LEVEL
 BAROMETRIC PRESSURE: 13.2 PSIA
 AMBIENT TEMPERATURE: 90°F
 PROCESS INLET: DESIGN 230 PSIG @ 300°F
 PROCESS FINAL DISCHARGE: DESIGN 230 PSIG @ 300°F
 INSTRUMENT AIR: MINIMUM PRESSURE 90 PSIG
 MAXIMUM PRESSURE 150 PSIG
 APPLICABLE CODE: QUALITY FILTERED/DRY, 50°F MAXIMUM DEW POINT
 CODE PIPING B31.3 - 2012
 NON-CODE PIPING EFX C01, 1mm (0.039") CA
 VESSEL ASME SECTION VIII, DIV 1
 EXCHANGER ASME SECTION VIII, DIV 1
 STRUCTURAL CWB
 ELECTRICAL CEC 2012
 REGISTRATION: VESSEL AB
 MISCELLANEOUS: GASKETS CG TYPE, SPIRAL WOUND, GRAPHITE FILLED, 316SS
 BOLTING STUDS - SA-193-B7, NUTS - SA-194-2H
 PROCESS PIPE CARBON STEEL
 UTILITY PIPE CARBON STEEL
 FLANGES RAISED FACE (UNLESS OTHERWISE NOTED)
 ELECTRICAL: RIGID ALUMINUM CONDUIT
 SUITABLE FOR USE IN: CLASS I, DIV. 2, GROUP D & CLASS I, ZONE 2, GROUP IIA

FINAL AS BUILT
 NAME S.JOHNSEN DATE MAY 05/15

DATE FEB 13/14		SCALE NTS		MEG ENERGY		ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM PROJECT DESCRIPTION & OVERVIEW
DRAWN BY A. TRAN		CHECKED BY N. REZAEYAN		APPROVED BY B. LANGER			
PROJECT MANAGER B. LANGER		PROJECT ENGINEER N. REZAEYAN		1500 BPD H1-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		DWG NO E001123-01-099	SHT 1
CUST PO -		OPER. CODE 490 511 591		WORK ORDER E001123-01			
REV	DESCRIPTION	DATE	BY	APR	APEGA PERMIT No: P8651		

PLOT 08 May, 2015-10:50am. sghmsen THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD., AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

TUBING SPECIFICATIONS

PROCESS TUBING		UTILITY TUBING	
TUBING SPECIFICATION	ENERFLEX: G-S04-CSZ-CS-S16-375	TUBING SPECIFICATION	ENERFLEX: G-S04-CSZ-CS-S16-375
TUBING MATERIAL	304SS	TUBING MATERIAL	304SS
FITTING MATERIAL	ZINC PLATED CARBON STEEL C/W SS BACK FERRULE	FITTING MATERIAL	ZINC PLATED CARBON STEEL C/W SS BACK FERRULE
OUTSIDE DIAMETER	MINIMUM WALL THICKNESS	OUTSIDE DIAMETER	MINIMUM WALL THICKNESS
1/4"	0.035"	1/4"	0.035"
3/8"	0.035"	3/8"	0.035"
1/2"	0.049"	1/2"	0.049"
-	-	3/4"	0.065"
-	-	1"	0.083"

SMALL BORE NPT & SW PIPING & FITTINGS

PROCESS & SCREW PIPING SPECIFICATIONS

SWEET SERVICE (-20-650°F, 1/16"CA)						
EFX PIPE SPECIFICATION		PIPING				FITTINGS
		NPT		SW		NPT & THREDOLET
C11	150#	1/2"	160	1/2"-1 1/2"	XS	1/2"-2" 3000#
		3/4"-2"	XS	2"	STD	

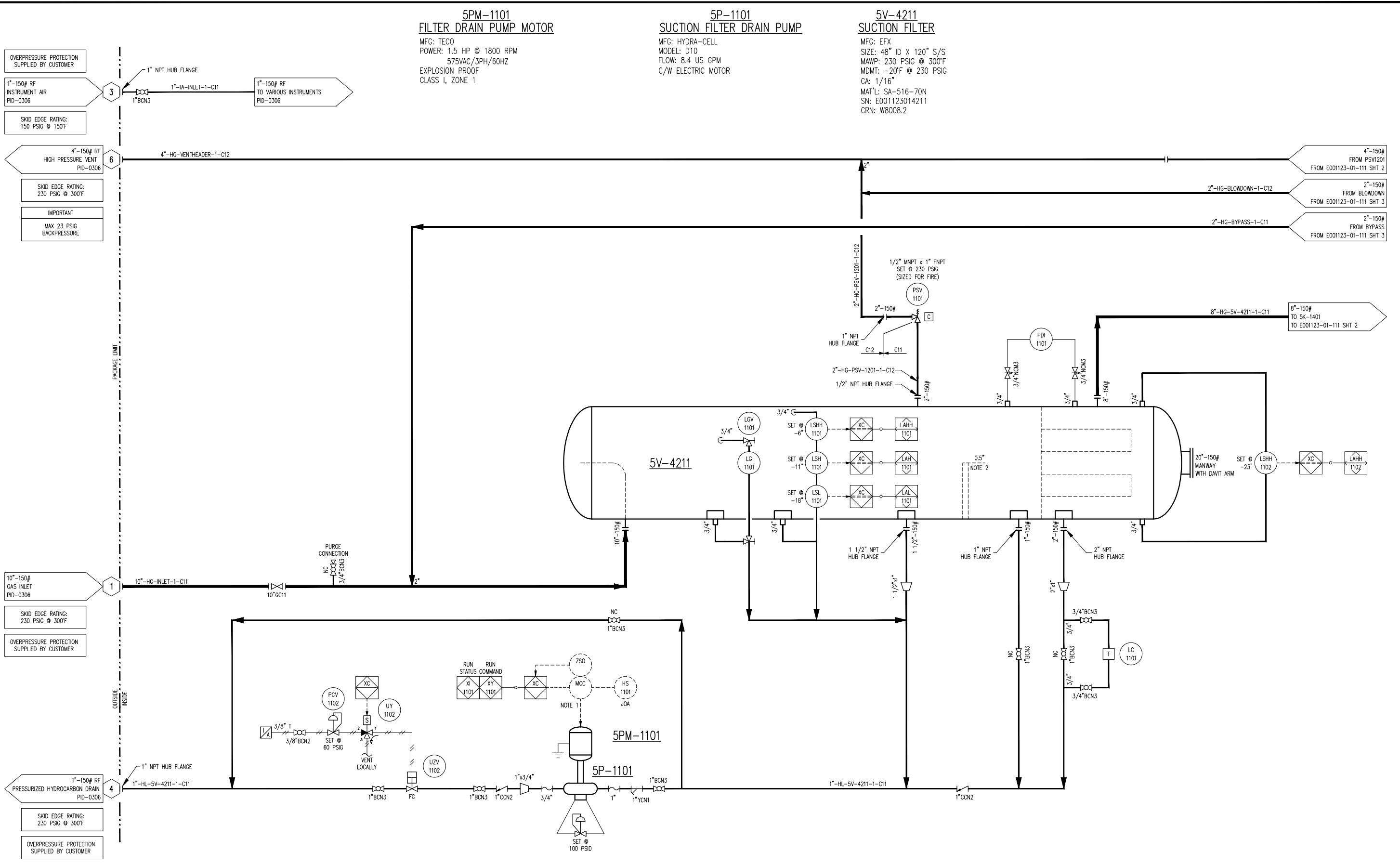
UTILITY PIPING SPECIFICATIONS

SMALL BORE NPT & SW PIPING & FITTINGS LOW PRESSURE UTILITY SERVICE						
EFX PIPE SPECIFICATION		PIPING				FITTINGS
		NPT		SW		NPT & THREDOLET
C01 NON-CODE		1/2"-3/4"	160	1/2"-1 1/2"	XS	1/2"-2" 3000#
		1"-2"	XS	2"	STD	

FINAL AS BUILT
NAME S.JOHNSEN DATE MAY 05/15

2	AS BUILT	MAY 05/15	SJ	NR	DATE FEB 12/14	SCALE NTS	MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401	ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM PROJECT DESCRIPTION & OVERVIEW	
1	ISSUED FOR CONSTRUCTION	JAN 13/15	TR	NR	DRAWN BY A. TRAN	CHECKED BY N. REZAEYAN				APPROVED BY B. LANGER
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ	NR	PROJECT MANAGER B. LANGER	PROJECT ENGINEER N. REZAEYAN				
B	ISSUED FOR APPROVAL	OCT 09/14	TW	NR	CUST PO -					
A	ISSUED FOR APPROVAL	JUL 14/14	SJ	NR	APEGA PERMIT No: P8651	OPER CODE 490 511 591	WORK ORDER E001123-01	DWG NO E001123-01-099	SHT 2	REV 2
REV	DESCRIPTION	DATE	BY	APR						

PLOT 08 May, 2015-10:50am. sghmsen THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD., AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.



5PM-1101
FILTER DRAIN PUMP MOTOR
 MFG: TECO
 POWER: 1.5 HP @ 1800 RPM
 575VAC/3PH/60HZ
 EXPLOSION PROOF
 CLASS 1, ZONE 1

5P-1101
SUCTION FILTER DRAIN PUMP
 MFG: HYDRA-CELL
 MODEL: D10
 FLOW: 8.4 US GPM
 C/W ELECTRIC MOTOR

5V-4211
SUCTION FILTER
 MFG: EFX
 SIZE: 48" ID X 120" S/S
 MAWP: 230 PSIG @ 300°F
 MDMT: -20°F @ 230 PSIG
 CA: 1/16"
 MAT'L: SA-516-70N
 SN: E001123014211
 CRN: W8008.2

OVERPRESSURE PROTECTION
 SUPPLIED BY CUSTOMER

1"-150# RF
 INSTRUMENT AIR
 PID-0306

SKID EDGE RATING:
 150 PSIG @ 150°F

4"-150# RF
 HIGH PRESSURE VENT
 PID-0306

SKID EDGE RATING:
 230 PSIG @ 300°F

IMPORTANT

MAX 23 PSIG
 BACKPRESSURE

10"-150#
 GAS INLET
 PID-0306

SKID EDGE RATING:
 230 PSIG @ 300°F

OVERPRESSURE PROTECTION
 SUPPLIED BY CUSTOMER

1"-150# RF
 PRESSURIZED HYDROCARBON DRAIN
 PID-0306

SKID EDGE RATING:
 230 PSIG @ 300°F

OVERPRESSURE PROTECTION
 SUPPLIED BY CUSTOMER

NOTES:
 1. WIRING AND MCC FOR PUMP CONTROL AND POWER ARE BY OTHERS.
 2. DIMENSIONS ARE FROM VESSEL CENTERLINE.
 3. ALL VALVES ARE NORMALLY OPEN UNLESS NOTED OTHERWISE.

FINAL AS BUILT
 NAME: S. JOHNSON DATE: MAY 05/15

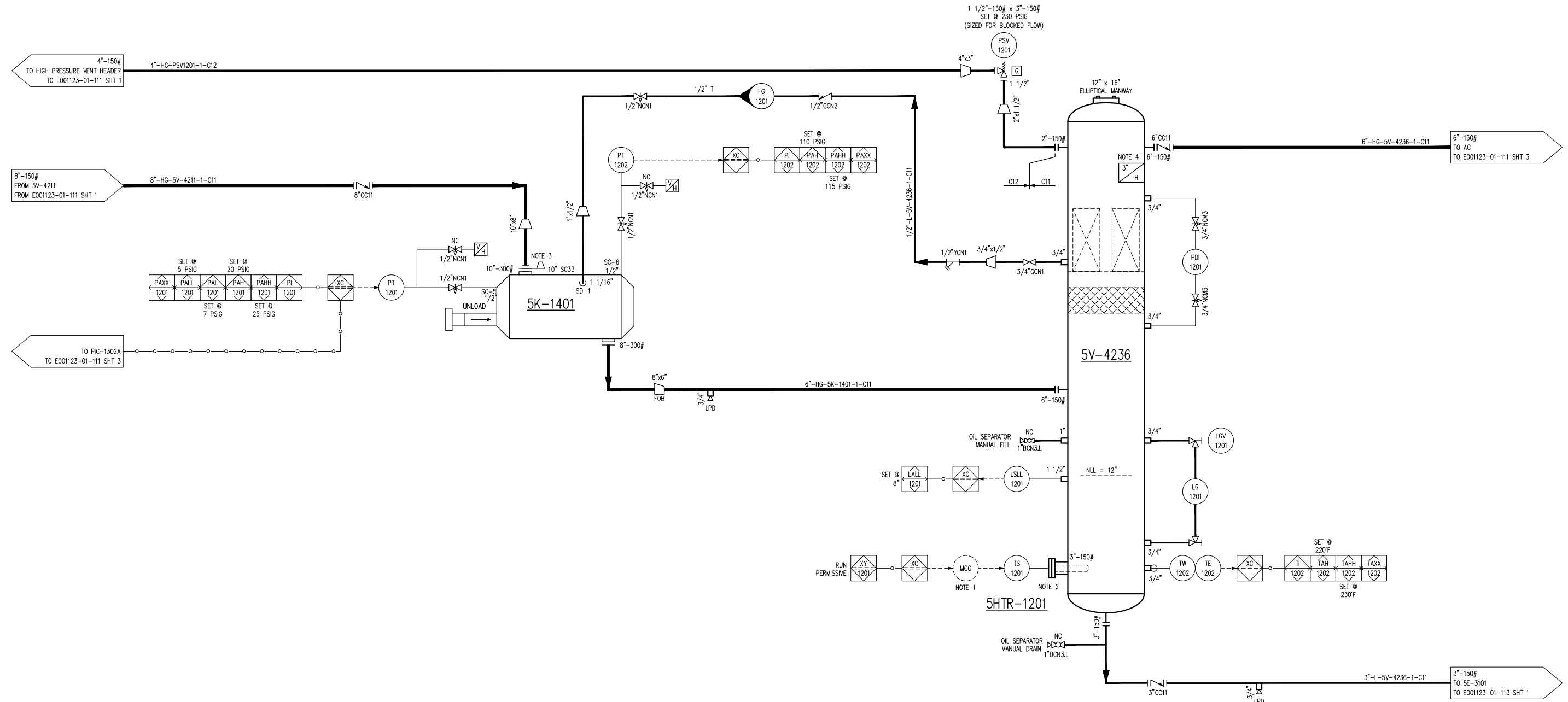
3	AS BUILT	MAY 05/15	SJ	NR	DATE	FEB 11/14	SCALE	NTS	MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401	ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM PROCESS GAS					
2	ISSUED FOR CONSTRUCTION	MAR 18/15	SJ	NR	DRAWN BY	A. TRAN	CHECKED BY	N. REZAEYAN				APPROVED BY	B. LANGER			
1	ISSUED FOR CONSTRUCTION	JAN 13/15	TR	NR	PROJECT MANAGER	B. LANGER	PROJECT ENGINEER	N. REZAEYAN								
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ	NR	CUST PO											
B	ISSUED FOR APPROVAL	OCT 09/14	TJ	NR												
A	ISSUED FOR APPROVAL	JUL 14/14	SJ	NR												
REV	DESCRIPTION	DATE	BY	APR	APEGA PERMIT No:	P8651	OPER CODE	490 511 591	WORK ORDER	E001123-01	DWG NO	E001123-01-111	SHT	1	REV	3

PLOT 08 May 2015-10:50am, sjhmsen THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD., AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

5K-1401
SCREW GAS COMPRESSOR
 MFG: FRICK
 MODEL: SGC-2821
 OPERATING SPEED: 3585 RPM
 DESIGN CAPACITY: 4.725 MMSCRD
 DESIGN DIFFERENTIAL PRESSURE: 90 PSIG

5HTR-1201
IMMERSION HEATER
 MAKE: CALORITECH
 MODEL: CXFT303F332X-OXX
 POWER: 3KW, 575V/3PH/60HZ
 WATT DENSITY: 14 W/in²
 BUILT IN THERMOSTAT

5V-4236
OIL SEPARATOR
 MFG: EFX
 SIZE: 36" ID X 102" S/S
 MAWP: 230 PSIG @ 300°F
 MDMT: -20°F @ 230 PSIG
 CA: 1/16"
 MAT'L: SA-516-70N
 SN: E001123014236
 CRN: W8114.2



- NOTES:
1. WIRING FROM MCC TO HEATER BY OTHERS.
 2. SET @ MINIMUM HEIGHT ABOVE SEAM.
 3. CONE STRAINER C/W COMPRESSOR.
 4. INSULATION MATERIAL IS MINERAL WOOL.
 5. ALL VALVES ARE NORMALLY OPENED UNLESS NOTED OTHERWISE.

FINAL AS BUILT
 NAME S.JOHNSEN DATE MAY 05/15

3	AS BUILT	MAY 05/15	SJ	NR	DATE	FEB 11/14	SCALE	NTS
2	ISSUED FOR CONSTRUCTION- LINE # CHANGE	MAR 18/15	SJ	NR	DRAWN BY	A. TRAN	CHECKED BY	N. REZAEYAN
1	ISSUED FOR CONSTRUCTION	JAN 13/15	TR	NR	APPROVED BY	B. LANGER	PROJECT MANAGER	B. LANGER
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ	NR	PROJECT ENGINEER	N. REZAEYAN	CUST PO	-
B	ISSUED FOR APPROVAL	OCT 09/14	TW	NR	APEGA PERMIT No:	P8651	OPER CODE	490 511 591
A	ISSUED FOR APPROVAL	JUL 14/14	SJ	NR	WORK ORDER	E001123-01	DWG NO	E001123-01-111
REV	DESCRIPTION	DATE	BY	APR				

MEG ENERGY
 1500 BPD H1-Q FD PILOT
 DRU OFF-GAS COMPRESSOR
 5K-1401

ENERFLEX
 Calgary, Alberta,
 Canada

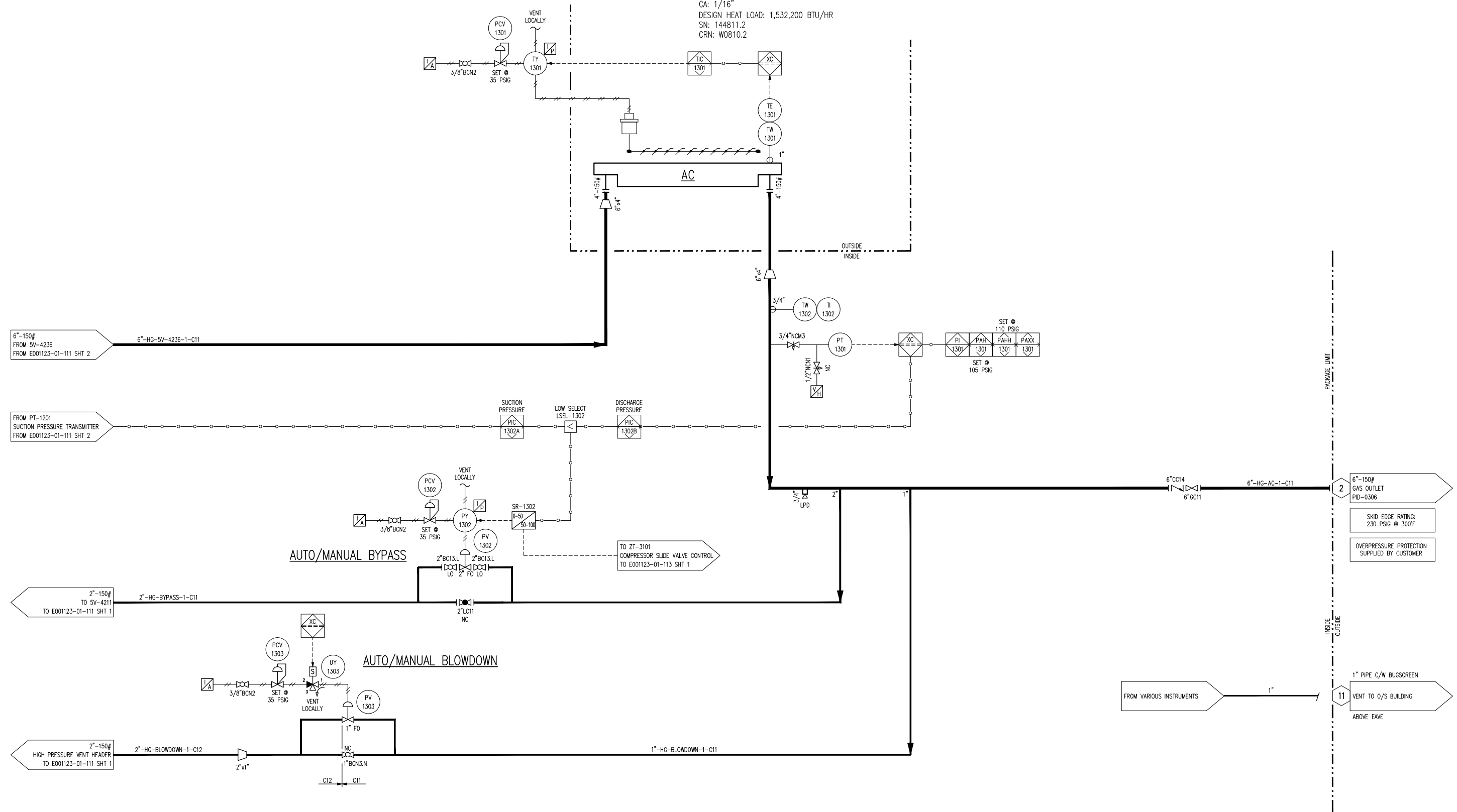
P & I DIAGRAM
 PROCESS GAS

SHT 2 REV 3

PLOT 08 May, 2015 - 10:50am. sghmsen THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

AC PROCESS GAS COOLER SECTION

MFG: AIR-X-LIMITED
 MODEL: 96AEF
 MAWP: 230 PSIG @ 300°F
 MDMT: -20°F @ 230 PSIG
 CA: 1/16"
 DESIGN HEAT LOAD: 1,532,200 BTU/HR
 SN: 144811.2
 CRN: W0810.2



FINAL AS BUILT
 NAME: S. JOHNSON DATE: MAY 05/15

NOTES:
 1. ALL VALVES ARE NORMALLY OPEN UNLESS NOTED OTHERWISE.

3	AS BUILT	MAY 05/15	SJ	NR	DATE FEB 11/14	SCALE NTS	MEG ENERGY 1500 BPD H1-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401	ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM PROCESS GAS	
2	ISSUED FOR CONSTRUCTION - LINE # CHANGE	FEB 18/15	SJ	NR	DRAWN BY A. TRAN	CHECKED BY N. REZAEYAN				APPROVED BY B. LANGER
1	ISSUED FOR CONSTRUCTION	JAN 13/15	TR	NR	PROJECT MANAGER B. LANGER	PROJECT ENGINEER N. REZAEYAN				
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ	NR	CUST PO					
B	ISSUED FOR APPROVAL	OCT 09/14	TW	NR						
A	ISSUED FOR APPROVAL	JUL 14/14	SJ	NR						
REV	DESCRIPTION	DATE	BY	APR	APEGA PERMIT No: P8651	OPER CODE 490 511 591	WORK ORDER E001123-01	DWG NO E001123-01-111	SHT 3	REV 3

**5K-1401
SCREW GAS COMPRESSOR**

MFG: FRICK
MODEL: SGC2821
OPERATING SPEED: 3600 RPM
SN: 10241F42495803Z

**5KM-1401
COMPRESSOR MOTOR**

MFG: TECO
FRAME: 5810A
ENCLOSURE: TEFC
POWER: 700 HP @ 3600 RPM
4000VAC/3PH/60HZ
CLASS 1, DIV. 2, GROUPS B/C/D/
CLASS 1, ZONE 2, GROUPS IIB+H2, IIB & IIA
SN: RFZC144675T1-1

**5CP-2102
CONTROL PANEL**

MFG: EFX
POWER: 120 VAC
PROCESSOR: COMPACT LOGIX

**5BFM-2104
BUILDING FAN MOTOR**

SUPPLIED WITH BUILDING
POWER: 1/4 HP
120VAC/1PH/60HZ
CLASS 1, ZONE 1

**5BFM-2104
BUILDING FAN**

SUPPLIED WITH BUILDING

**5BH-2101 A/B
BUILDING HEATER**

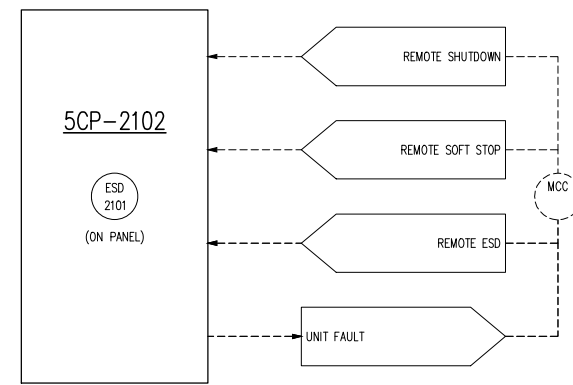
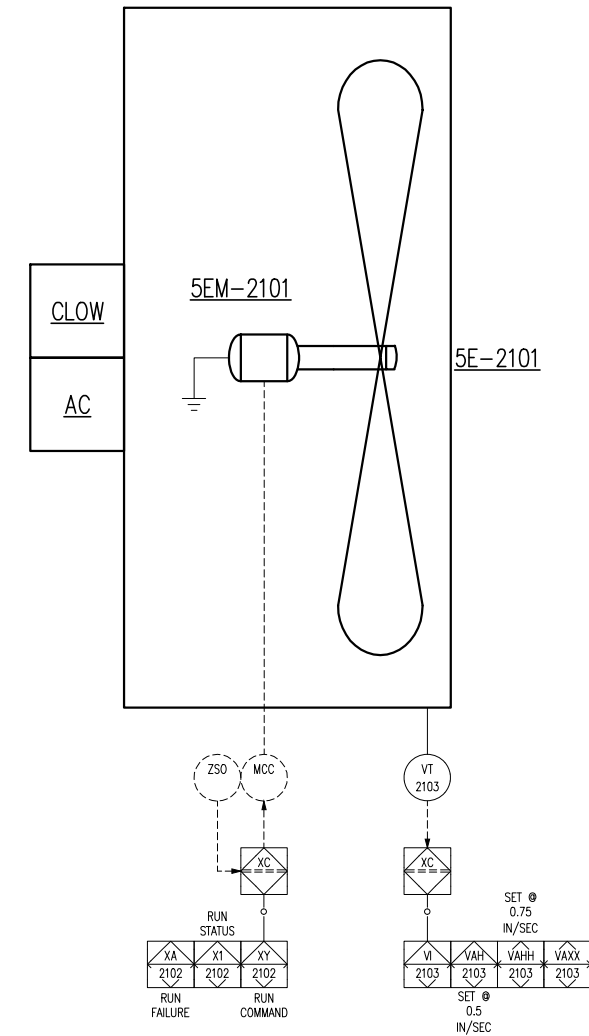
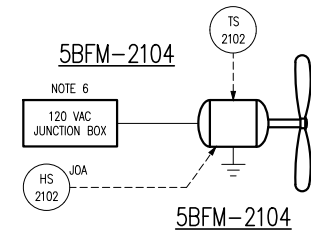
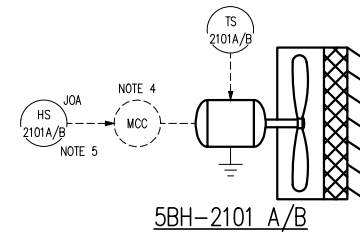
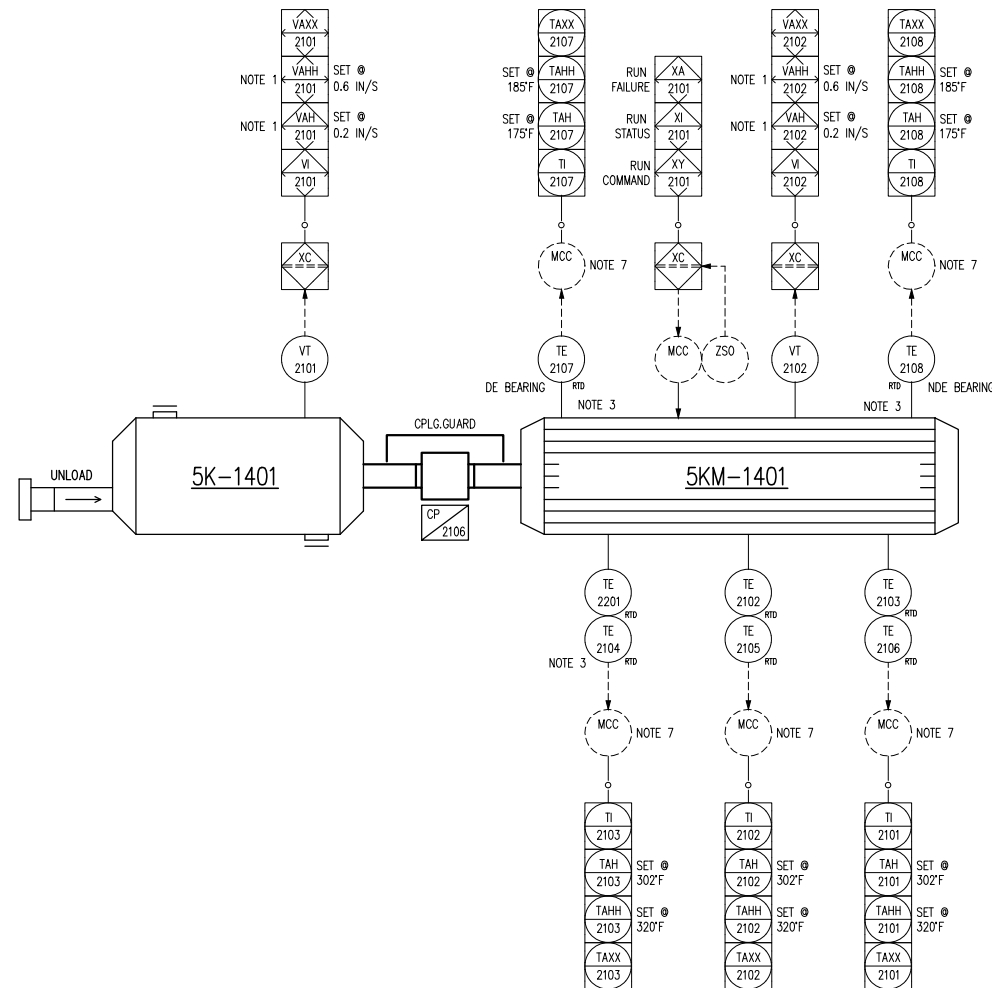
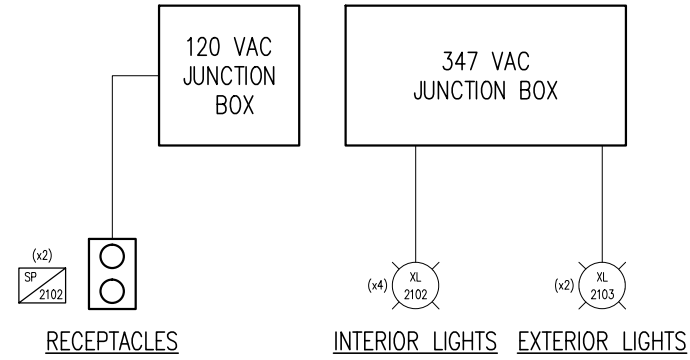
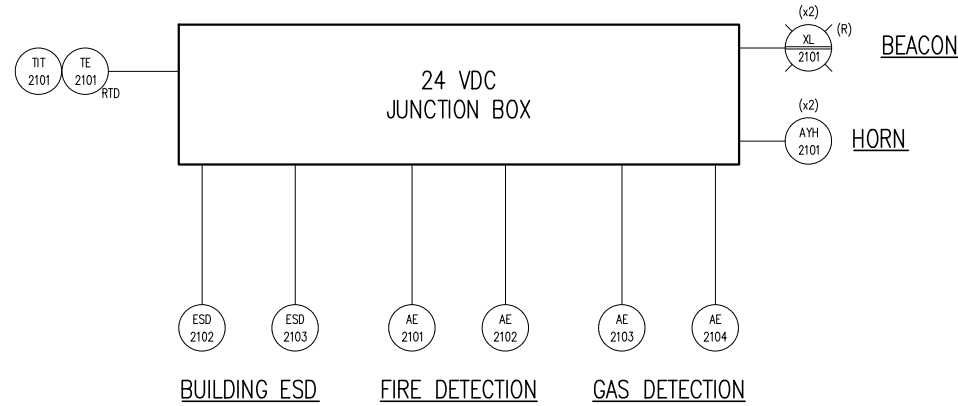
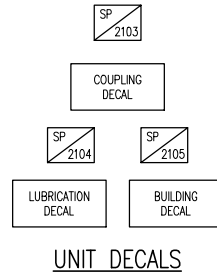
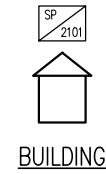
MFG: RUFFNECK
MODEL: FX5-575360-100
RATING: 10KW
575VAC/3PH/60HZ
CLASS 1, ZONE 2

**5E-2101
PACKAGE COOLER**

MFG: AIR-X-LIMITED
MODEL: 96AEF
TYPE: FORCED DRAFT
FAN TYPE: MOORE 10K-36VT, 96" DIA X 6 BLADES
FAN POWER: 18 HP @ 1800 RPM
FAN BLADE PITCH: 19.5 DEGREES
AMBIENT AIR: 90°F

**5EM-2101
PACKAGE COOLER MOTOR**

POWER: 25 HP @ 1800 RPM
575VAC/3PH/60HZ
TEFC, VFD COMPATIBLE
CLASS 1, DIV 2 & CLASS 1, ZONE 2
SN: 144811



- NOTES:
- SET POINTS TO BE SET AND VERIFIED IN THE FIELD.
 - DETECTOR TO BE SHIPPED LOOSE AND INSTALLED ON SITE BY OTHERS.
 - RTD'S SUPPLIED WITH MOTOR. 3 SPARES AVAILABLE FOR WINDING RTD'S.
 - WIRING FROM MCC TO HEATER BY OTHERS.
 - SHIPPED LOOSE, INSTALLATION AND WIRING BE OTHERS.
 - FAN IS WIRED TO 120 VAC JUNCTION BOX.
 - WIRING RTD'S TO MCC BY OTHERS.

FINAL AS BUILT
NAME: S. JOHNSON DATE: MAY 05/15

2	AS BUILT	MAY 05/15	SJ	NR	DATE	FEB 11/14	SCALE	NTS	MEG ENERGY 1500 BPD H1-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401	ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM DRIVE TRAIN /CONTROL PANEL BUILDING SYSTEMS		
1	ISSUED FOR CONSTRUCTION	JAN 13/15	TR	NR	DRAWN BY	A. TRAN	CHECKED BY	N. REZAEYAN				APPROVED BY	B. LANGER
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ	NR	PROJECT MANAGER	B. LANGER	PROJECT ENGINEER	N. REZAEYAN					
B	ISSUED FOR APPROVAL	OCT 09/14	TW	NR	CUST PO	-							
A	ISSUED FOR APPROVAL	JUL 14/14	SJ	NR	DATE	FEB 11/14	SCALE	NTS					
REV	DESCRIPTION	DATE	BY	APR	APEGA PERMIT No:	P8651	OPER CODE	490 511 591	WORK ORDER	E001123-01	DWG NO	E001123-01-112	
											SHT	1	
											REV	2	

PLOT 08 May 10:50am. THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

5T-6103
WASTE GLYCOL STORAGE TANK
 MFG: EFX
 CAPACITY: 260 US GALLONS

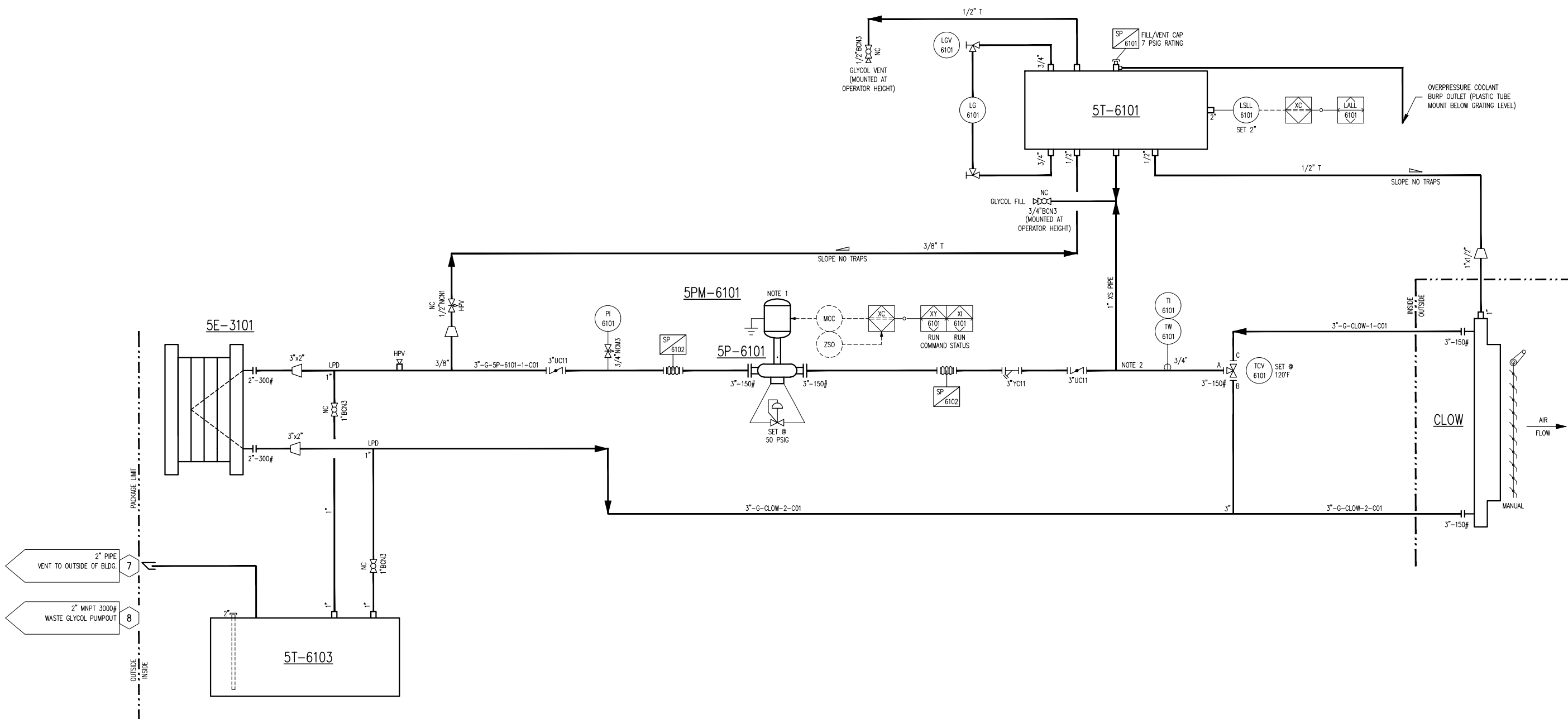
5E-3101
COMPRESSOR OIL COOLER (GLYCOL SIDE)
 MFG: GEA
 MODEL: FPA10X20-70-UM
 PLATES: S.S.
 MAWP: 400 PSIG @ 250°F
 MDMT: -20°F @ 400 PSIG
 DESIGN HEAT LOAD: 779,000

5P-6101
GLYCOL CIRCULATION PUMP
 MAKE: VIKING
 MODEL: SG-41436
 FLOW: 79 US GPM
 C/W ELECTRIC MOTOR

5PM-6101
GLYCOL CIRCULATION PUMP MOTOR
 MAKE: WEG
 POWER: 5 HP @ 1150 RPM
 575VAC/3PH/60HZ
 EXPLOSION PROOF
 CLASS I, ZONE 1

5T-6101
GLYCOL EXPANSION TANK
 MFG: EFX
 CAPACITY: 10 US GALLONS
 VOLUME REQUIRED FOR
 FILL LEVEL: 6 US GALLONS

CLOW
GLYCOL COOLER SECTION
 MAWP: 14 PSIG @ 300°F
 MDMT: -20°F @ 14 PSIG
 SN: 144811.1



PLOT 08 May, 2015-10:51am, sjohnsen THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD., AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

FINAL AS BUILT
 NAME: S. JOHNSEN DATE: MAY 05/15

NOTES:
 1. WIRING AND MCC FOR PUMP CONTROL AND POWER ARE BY OTHERS.
 2. TIE IN AS CLOSE AS POSSIBLE TO PUMP.

2	AS BUILT	MAY 05/15	SJ	NR	DATE	FEB 11/14	SCALE	NTS	MEG ENERGY 1500 BPD H1-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401	ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM COOLING SYSTEM CLOW COOLER SECTION			
1	ISSUED FOR CONSTRUCTION	JAN 13/15	SJ	NR	DRAWN BY	A. IRAN	CHECKED BY	N. REZAEYAN				APPROVED BY	B. LANGER	
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ	NR	PROJECT MANAGER	B. LANGER	PROJECT ENGINEER	N. REZAEYAN						
B	ISSUED FOR APPROVAL	OCT 09/14	TW	NR	CUST PO									
A	ISSUED FOR APPROVAL	JUL 14/14	SJ	NR	APEGA PERMIT No:	P8651	OPER. CODE	490 511 591				WORK ORDER	E001123-01	
REV	DESCRIPTION	DATE	BY	APR					DWG NO	E001123-01-116	SHT	1	REV	2

PLOT DATE: May 08, 2015, 5:18pm THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

LINE IDENTIFICATION

A-B-CD-EF-GHIJ-KL,M-N

A : NOMINAL LINE SIZE IN INCHES
B : FLUID / SERVICE

A	AMMONIA	IG	INSTRUMENT GAS
AM	AMINE	L	LUBE OIL
C	CARBON DIOXIDE	N	NITROGEN
CO	CARBON MONOXIDE	NG	NATURAL GAS
CW	COOLING WATER	O	OXYGEN
F	FREON	P	PROPANE
FG	FUEL GAS	PG	PURGE GAS
G	GLYCOL	R	REFRIGERANT
H	HYDROGEN	S	STEAM
HE	HELIUM	SG	SYNGAS
HG	HYDROCARBON GAS	V	PRODUCED WATER
HL	HYDROCARBON LIQUID	W	WATER
IA	INSTRUMENT AIR		

C : EQUIPMENT TYPE / MODIFIER (IF REQUIRED)

B	BLOWER OR FAN	H	HEATER
C	COMPRESSOR	JB	JUNCTION BOX
CPL	CONTROL PANEL	P	PUMP
D	DRIVER (MOTOR/ENGINE)	T	TOWER OR TANK
E	EXCHANGER	UH	UNIT HEATER
F	FILTER	V	PRESSURE VESSEL
FS	FLARE STACK		

D : EQUIPMENT NUMBER:
101 TO 999 SEQUENTIAL NUMBERS

CD LINES TO/FROM SKID CALLED UP AS
INLET, OUTLET, HEADER, DRAIN, SUPPLY, ETC.

EF : LINE NUMBER:
E : 1 TO 9 SEQUENTIAL NUMBERS FROM EQUIPMENT
1.1 FOR 1ST BRANCH CONNECTION FROM 1ST LINE
1.2 FOR 2ND BRANCH CONNECTION FROM 1ST LINE
F : SKID/AREA REFERENCE LETTER (A, B, C,...)
(*X SIGNIFIES OFF SKID/INTERCONNECTING PIPE)

GHIJ : PIPING SPECIFICATION

G : MATERIAL GROUP

C	CARBON STEEL
L	LOW TEMPERATURE CARBON STEEL
S	STAINLESS STEEL

H : ANSI 16.5 FLANGE CLASS

0	NON CODE				
1	150#	6	600#	15	1500#
3	300#	9	900#	25	2500#

I : LINE MATERIAL SPECIFICATION REFERENCE:
PIPING SPECIFICATION NUMBER

J : R RECIPROCATING PACKAGE SPECIFICATION
BLANK FOR PROCESS PACKAGE SPECIFICATION

KL,M : INSULATION (IF REQUIRED)

K : INSULATION TYPE

C	COLD	HT	HEAT TRACING
H	HOT	PP	PERSONAL PROTECTION
HC	HOT/COLD		

L : INSULATION THICKNESS IN MILLIMETERS OR INCHES (*)

M : TRACING (IF REQUIRED)

ET	ELECTRICAL TRACING
GT	GLYCOL TRACING
ST	STEAM TRACING

N : PED PIPE IDENTIFICATION SUFFIX (IF REQUIRED)

SEP	SOUND ENGINEERING PRACTICE LINE
CATI	CATEGORY I LINE
CATII	CATEGORY II LINE
CATIII	CATEGORY III LINE

EXAMPLE: 3"-HG-V101-1A-C61R-HTXX,ET-CATII

3" - NOMINAL LINE SIZE
 HG - HYDROCARBON GAS
 V101 - PRESSURE VESSEL TAG NUMBER
 1A - 1 FIRST LINE FROM VESSEL
 C61R - C CARBON STEEL LINE
 6 600# ANSI FLANGE RATING
 1 LINE MATERIAL SPECIFICATION REFERENCE
 R RECIPROCATING PACKAGE PIPE SPEC.
 HT - HEAT TRACING INSULATION
 XX - THICKNESS IN MILLIMETERS OR INCHES (*)
 ET - ELECTRIC TRACING
 CATII - PED CATEGORY II LINE

VALVE IDENTIFICATION

A"BCDE,F

A : NOMINAL VALVE SIZE IN INCHES
B : TYPE

A	ANGLE GLOBE	N	NEEDLE
B	BALL	P	PLUG
C	CHECK	S	START-UP STRAINER
G	GATE	T	TEE STRAINER
L	GLOBE	U	BUTTERFLY
M	MANIFOLD	Y	Y PATTERN STRAINER

C : BODY MATERIAL

B	BRONZE	L	LOW TEMP. CARBON STEEL
C	CARBON STEEL	S	STAINLESS STEEL
I	CAST IRON		

D : END CONNECTIONS

1	FLANGED 150#	B	BUTT WELD
3	FLANGED 300#	C	SW BY NPT
6	FLANGED 600#	F	NPT BY FLANGE (MANIFOLD)
9	FLANGED 900#	M	NPT MALE BY NPT FEMALE
15	FLANGED 1500#	N	NPT (THREADED)
25	FLANGED 2500#	S	SW (SOCKETWELD)
		T	TUBE (IE: SWAGELOK)

E : UNIQUE DESCRIPTION
REFER TO VALVE DATA SHEETS

F : MODIFIER

C	CHAIN OPERATOR	O	OXYGEN SERVICE/CLEANING
E	EXTENDED BONNET	P	FULL PORT DESIGN
G	GEAR OPERATOR	R	RTJ FLANGED
L	LOCKING DEVICE	S	SPRING HANDLE (CLOSE)
N	NACE TRIM	X	SPECIAL SPECIFICATIONS

EXAMPLE: 6"GC11,C

6"	VALVE SIZE	1	150#
G	GATE	1	API-600
C	CARBON STEEL	C	CHAIN OPERATOR

LINE CODE

—————	PRIMARY PROCESS LINE
—————	SECONDARY PROCESS LINE
—————	MINOR PROCESS LINE
—————	AUXILIARY PROCESS LINE
—————	INSTRUMENT/IMPULSE LINE
-----	ELECTRIC SIGNAL
xxxxxxx	FILLED CAPILLARY TUBE
///////	PNEUMATIC LINE
●●●●●	MECHANICAL LINK
○-○-○-○	INSTRUMENT DATA LINK
-----	INTERCONNECTING PIPING
-----	SKID LIMIT
-----	FUTURE
~~~~~	SONIC OR ELECTRO-MAGNETIC SIGNAL (GUIDED)
~~~~~	SONIC OR ELECTRO-MAGNETIC SIGNAL (UN-GUIDED)

VALVE CONNECTIONS

(COMBINATIONS MAY BE USED)

	THREADED
	SOCKET WELDED
	BUTT WELDED
	FLANGED

VALVE TYPES

	ANGLE GLOBE VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	DIAPHRAGM VALVE
	DUMP VALVE
	GATE VALVE
	GAUGE VALVE
	GLOBE VALVE
	NEEDLE VALVE
	NEEDLE VALVE W/BLEED
	MANIFOLD VALVE
	PLUG VALVE
	PINCH VALVE
	QUICK ACTING VALVE
	VALVE W/PLUG
	3-WAY VALVE
	4-WAY VALVE

CONTROL VALVES

	DIAPHRAGM CONTROL VALVE
	DIAPHRAGM CONTROL VALVE W/ POSITIONER
	INLET PRESSURE REGULATOR SELF-CONTAINED
	OUTLET PRESSURE REGULATOR SELF-CONTAINED
	DIFFERENTIAL PRESSURE REGULATOR SELF-CONTAINED
	INLET PRESSURE REGULATOR
	OUTLET PRESSURE REGULATOR
	HYDRAULIC / PNEUMATIC PISTON OPERATED OR SPRING RETURN
	PNEUMATIC RELAY VALVE
	2-WAY SOLENOID VALVE
	MOTOR ACTUATED
	ROTARY MOTOR ACTUATED
	3-WAY SOLENOID VALVE
	THERMOSTATIC CONTROL VALVE
	PRESSURE SAFETY /RELIEF VALVE
	PRESSURE SAFETY /RELIEF VALVE PILOT OPERATED

MISCELLANEOUS

	INLINE FLANGE SET
	SPECTACLE BLIND (LINE OPEN)
	SPECTACLE BLIND (LINE CLOSED)
	UNION (NPT)
	ORIFICE FLANGE W/ SPACER
	PADDLE BLIND
	BLEED RING
	BASKET STRAINER
	CONE STRAINER
	CONCENTRIC REDUCER
	ECCENTRIC REDUCER
	EXPANSION JOINT
	FLEXIBLE HOSE
	FLEXIBLE COUPLING
	TEE STRAINER
	Y-PATTERN STRAINER
	MAGNETIC METER
	VENTURI
	SIGHT GLASS
	SONIC FLOW METER
	POSITIVE DISPLACEMENT METER
	TURBINE OR PROPELLOR METER
	VORTEX METER
	BALL CHECK VALVE
	THROTTLE BLOCK
	PIG LAUNCHER / RECEIVER
	METER RUN
	FLOW INDICATOR
	CONTINUOUS LIQUID DRAINER OR STEAM TRAP
	SPEC BREAK
	OPEN DRAIN
	INSULATION TYPE
	INSULATION BLOCK W/ ELECTRIC HEAT TRACE
	INSULATION BLOCK W/ GLYCOL OR STEAM HEAT TRACE
	SPECIALTY ITEM

INSTRUMENT IDENTIFICATION GENERAL REFERENCE (ISA - S5.1)

FIRST LETTER	SUCCEEDING LETTERS	PRIMARY ELEMENT	INDICATOR	RECORDER	CONTROLLER										CONTROL VALVE OR REGULATOR	SELF-ACTIVATED VALVE	RELAY OR CONVERTOR
					BLIND	INDICATING	RECORDING	TRANS-MITTER	SWITCH	ALARM	CONTROL VALVE OR REGULATOR	SELF-ACTIVATED VALVE	RELAY OR CONVERTOR				
A	ALARM	AE	AI	AR	AC	AIC	ARC	AT	AS()	AA()	AV						
B	BURNER FLAME																
C	CONDUCTIVITY	CE	CI	CR	CC	CIC	CRC	CT	CS()	CA()	CV						
D	DENSITY OR MASS (DIFFERENTIAL)	DE	DI	DR	DC	DIC	DRC	DT	DS()	DA()	DV						
E	VOLTAGE	EE	EI	ER	EC	EIC	ERC	ET	ES()	EA()	EV						
F	FLOW (RATIO OR FRACTION)	FE	FI	FR	FC	FIC	FRC	FT	FS()	FA()	FV	FCV					
G	GAUGING	GE	GI	GR	GC	GIC	GRC	GT	GS()	GA()	GV						
H	HAND				HC	HIC	HRC	HT	HS()		HV	HCV					
I	CURRENT	IE	II	IR	IC	IIC	IRC	IT	IS()	IA()							
J	POWER (SCAN)	JE	JI	JR	JC	JIC	JRC	JT	JS()	JA()							
K	TIME		KI	KR	KC	KIC	KRC	KT	KS()	KA()	KV						
L	LEVEL	LE	LI	LR	LC	LIC	LRC	LT	LS()	LA()	LV	LCV					
M	MOISTURE, HUMIDITY	ME	MI	MR	MC	MIC	MRC	MT	MS()	MA()	MV						
N	USER'S CHOICE																
O	USER'S CHOICE																
P	PRESSURE OR VACUUM	PE	PI	PR	PC	PIC	PRC	PT	PS()	PA()	PV	PCV					
Q	QUANTITY OR EVENT (INTEGRATE/TOTALIZE)		QI	QR	QC	QIC	QRC	QT	QS()	QA()	QV						
R	RELIEF OR RESTRICTION OR RADIOACTIVITY	RE	RI	RR	RC	RIC	RRC	RT	RS()	RA()							
S	SPEED OR FREQUENCY		SI	SR	SC	SIC	SRC	ST	SS()	SA()							
T	TEMPERATURE	TE	TI	TR	TC	TIC	TRC	TT	TS()	TA()	TV	TCV					
U	MULTI-VARIABLE		UI	UR	UC	UIC	URC				UV						
V	VIBRATION OR VISCOSITY	VE	VI	VR	VC	VIC	VRC	VT	VS()	VA()	VV						
W	WEIGHT OR FORCE	WE	WI	WR	WC	WIC	WRC	WT	WS()	WA()	WV						
X	LIGHT	XE	XI	XR	XC	XIC	XRC	XT	XS()	XA()	XV						
Y	USER'S CHOICE																
Z	POSITION	ZE	ZI	ZR	ZC	ZIC	ZRC	ZT	ZS()	ZA()							

MISCELLANEOUS

	PIPE SLOPE DIRECTION
	VORTEX BREAKER
	DIAPHRAGM SEAL
	RUPTURE DISC FOR PRESSURE RELIEF
	RUPTURE DISC FOR VACUUM RELIEF
	EYE WASH
	SAFETY SHOWER
	SKID TIE-POINTS
	INSTRUMENT AIR
	INSTRUMENT GAS
	CURRENT/PRESSURE
	SPRAY NOZZLE
	VENT CAP
	BEVELED PIPE END
	END CAP
	PLUG
	LINE BREAK
	CONTINUATION ARROW
	CONTINUATION ARROW DUAL DIRECTION

INSTRUMENTS

	LOCAL MOUNTED
	LOCAL PANEL MOUNTED
	LOCAL PANEL MOUNTED BEHIND OR INSIDE
	MAIN PANEL MOUNTED
	MAIN PANEL MOUNTED BEHIND OR INSIDE
	BY OTHERS
	HUMAN MACHINE INTERFACE HMI (DCS)
	HUMAN MACHINE INTERFACE HMI (PLC)
	ENGINE CONTROL
	PROGRAMMABLE LOGIC CONTROLLER (PLC)
	XC REPRESENTS GENERAL LOGIC
	INTERLOCK
	ELECTRICAL INTERLOCK (HARDWIRED)
	THERMOWELL (THREADED)
	THERMOWELL (SOCKET WELDED)
	THERMOWELL (FLANGED)
	* PILOT LIGHT
	* COLOUR (A) AMBER (B) BLUE (G) GREEN (O) ORANGE (R) RED (W) WHITE

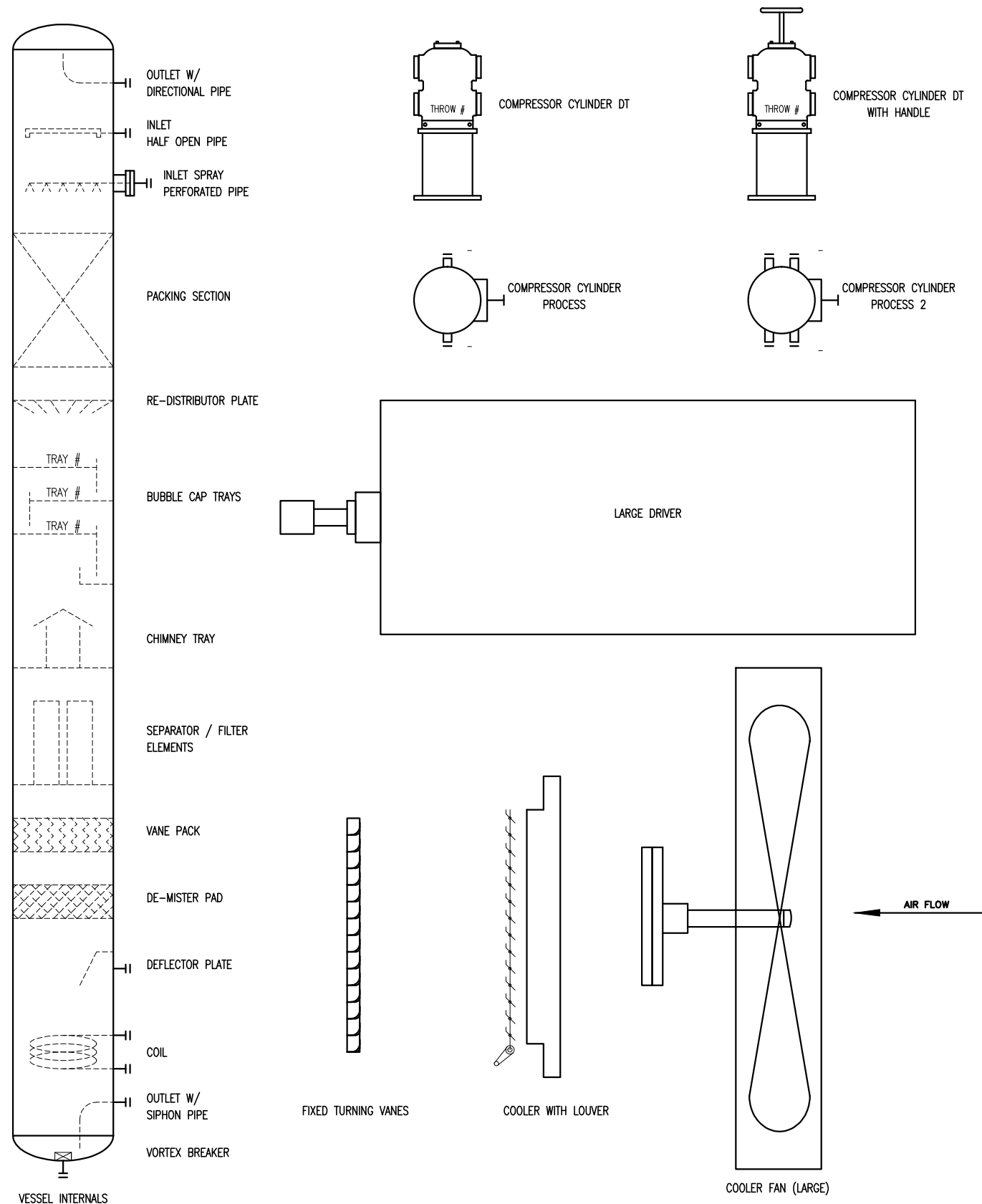
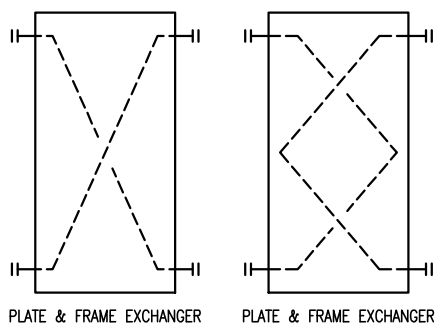
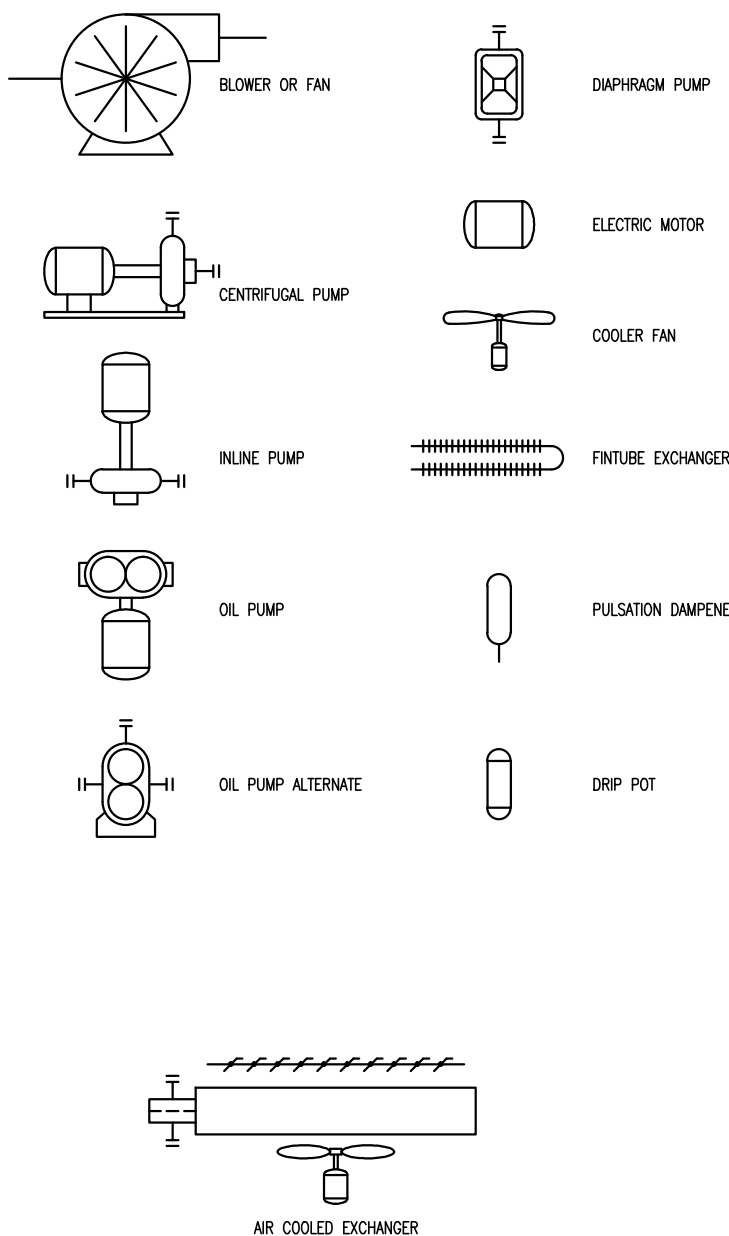
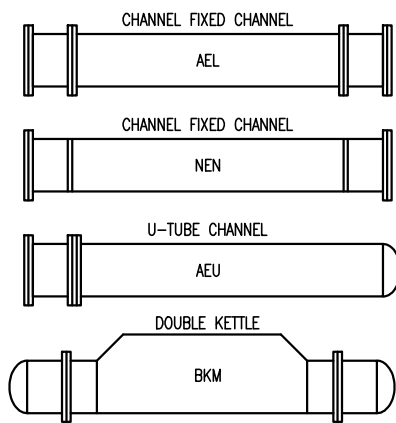
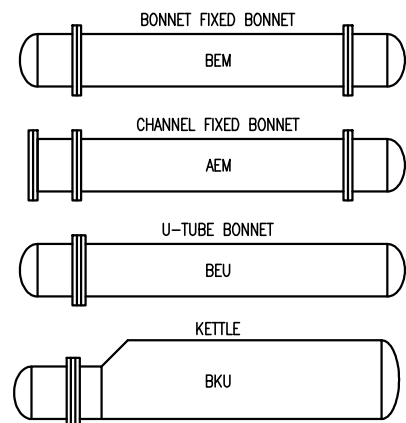
FOR REFERENCE ONLY
 NAME S.JOHNSON DATE JUL 23/14

DATE	FEB 11/14	SCALE	NTS	MEG ENERGY 1500 BPD HI-Q FD PILOT REACTOR GRU COMPRESSOR 5K-1403		ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM LEGENDS & SYMBOLS	
DRAWN BY	A. TRAN	CHECKED BY	N. REZAEYAN	APPROVED BY	B. LANGER			
PROJECT MANAGER	B. LANGER	PROJECT ENGINEER	N. REZAEYAN	DWG NO		E001123-01-199	SHT	1
CUST PO	-	OPER CODE	490 511 591	WORK ORDER	E001123-01	REV	A	
A	ISSUED FOR REFERENCE	JUL 23/14	SJ	NR				
REV	DESCRIPTION	DATE	BY	APR				

PLOT DATE: May 08, 2015, 5:18pm - THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD., AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

ABBREVIATIONS

AMB	AMBIENT	M2	SQUARE METERS
ATM	ATMOSPHERE	M3	CUBIC METERS
BW	BUTT WELD	MAX	MAXIMUM
BOP	BOTTOM OF PIPE	MAWP	MAXIMUM ALLOWABLE WORKING PRESSURE
CA	CORROSION ALLOWANCE	MCC	MOTOR CONTROL CENTER
CC	CORROSION COUPON	MDMT	MINIMUM DESIGN METAL TEMPERATURE
CS	CARBON STEEL	MIN	MINIMUM
CSC	CAR SEAL CLOSED	MM	MILLIMETER
CSO	CAR SEAL OPEN	NB	NATIONAL BOARD
CUST	CUSTOMER	NC	NORMALLY CLOSED
DB	DEADBAND	NLL	NORMAL LIQUID LEVEL
Δ	DELTA (DIFFERENTIAL)	NO	NORMALLY OPEN
DBB	DOUBLE BLOCK & BLEED	NPT	NATIONAL PIPE THREAD
DEG.C	DEGREES CELSIUS	OAL	OVERALL LENGTH
DEG.F	DEGREES FARENHEIT	OD	OUTSIDE DIAMETER
DIR	DIRECT ACTING	PB	PUSH BUTTON
EL	ELEVATION	PL	PILOT LIGHT
ESD	EMERGENCY SHUTDOWN	PLC	PROGRAMMABLE LOGIC CONTROLLER
ESDV	EMERGENCY SHUTDOWN VALVE	PPD	PINTS PER DAY
FC	FAIL CLOSED	PSIA	POUNDS / SQUARE INCH ABSOLUTE
FF	FLAT FACED	PSID	POUNDS / SQUARE INCH DIFFERENTIAL
FL	FAIL LAST	PSIG	POUNDS / SQUARE INCH GAUGE
FLG	FLANGED	REV	REVERSE ACTING
FO	FAIL OPEN	RF	RAISED FACE
FOB	FLAT ON BOTTOM	RFLX	REFLEX GAUGE
FOT	FLAT ON TOP	RO	RESTRICTION ORIFICE
FT2	SQUARE FEET	RTD	RESISTANCE TEMPERATURE DEVICE
FT3	CUBIC FEET	RTJ	RING TYPE JOINT
FV	FULL VACUUM	SCFM	STANDARD CUBIC FEET PER MINUTE
FVCP	FIXED VOLUME CLEARANCE POCKET	SCR	SILICON CONTROLLED RECTIFIER
FX	FROST EXTENSION	S/F	SEAM TO FACE OF FLANGE
HI	HIGH	SO	SLIP ON
HLL	HIGH LIQUID LEVEL	SP	SETPOINT
HP	HIGH POINT	SPC	CALCULATED SETPOINT
HPV	HIGH POINT VENT	SS	SELECTOR SWITCH
HTR	HEATER	S/S	SEAM TO SEAM
ID	INSIDE DIAMETER	SVU	SUCTION VALVE UNLOADER
KGS	KILOGRAMS	SW	SOCKET WELD
KPAA	KILOPASCAL ABSOLUTE	TC/K	THERMOCOUPLE / (TYPE)
KPAD	KILOPASCAL DIFFERENTIAL	T/L	TUBE LENGTH
KPAG	KILOPASCAL GAUGE	TS/TS	TUBESHEET TO TUBESHEET
KW	KILOWATTS	VB	VORTEX BREAKER
LBS	POUNDS	V/H	VENT HEADER
LC	LOCKED CLOSED	VTA	VENT TO ATMOSPHERE
LLL	LOW LIQUID LEVEL	VTH	VENT TO HEADER
LO	LOCKED OPEN	WCP	VARIABLE VOLUME CLEARANCE POCKET
LP	LOW POINT	W/	WITH
LPD	LOW POINT DRAIN	W/O	WITHOUT



FOR REFERENCE ONLY
NAME: S. JOHNSON DATE: JUL 14/14

				DATE: FEB 11/14	SCALE: NTS	MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada		P & I DIAGRAM LEGEND		
				DRAWN BY: A. TRAN	CHECKED BY: N. REZAEYAN							APPROVED BY: B. LANGER
				PROJECT MANAGER: B. LANGER	PROJECT ENGINEER: N. REZAEYAN							
				CUST PO: -								
				APEGA PERMIT No: P8651	STEP CODE: 490 511 591	WORK ORDER: E001123-01						
				REV: A	ISSUED FOR REFERENCE	DATE: JUL 23/14	BY: SJ	NR			DWG NO: E001123-01-199	
										SHT: 2	REV: A	

ENERFLEX

P&ID's (P.Eng Stamped)

PLOT 19 Mar, 2015 - 7:06am. ajhansen THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

PROJECT DESCRIPTION

ONE (1) DRU OFF-GAS COMPRESSOR PACKAGE
 FOR: MEG ENERGY
 LOCATION NAME: HI-Q FIELD DEMO PILOT, BRUDERHEIM, AB
 LSD: SE 1/4-34-055-20 W4M

FABRICATED BY:

ENERFLEX LTD.
 CALGARY, ALBERTA, CANADA

TANK CAPACITIES

GLYCOL (CLOW) EXPANSION TANK: 20 US GALLONS
 GLYCOL STORAGE TANK: 260 US GALLONS
 WASTE OIL STORAGE TANK: 260 US GALLONS

DESIGN CRITERIA & APPLICABLE CODES

SITE ELEVATION:		3000 FT ABOVE MEAN SEA LEVEL
BAROMETRIC PRESSURE:		13.2 PSIA
AMBIENT TEMPERATURE:	MAXIMUM	90°F
	MINIMUM	-20°F
PROCESS INLET:	DESIGN	230 PSIG @ 300°F
PROCESS FINAL DISCHARGE:	DESIGN	230 PSIG @ 300°F
INSTRUMENT AIR:	MINIMUM PRESSURE	90 PSIG
	MAXIMUM PRESSURE	150 PSIG
APPLICABLE CODE:	QUALITY	FILTERED/DRY, 50°F MAXIMUM DEW POINT
	CODE PIPING	B31.3 - 2012
	NON-CODE PIPING	EFX C01, 1mm (0.039") CA
	VESSEL	ASME SECTION VIII, DIV 1
	EXCHANGER	ASME SECTION VIII, DIV 1
	STRUCTURAL	CWB
	ELECTRICAL	CEC 2012
REGISTRATION:	VESSEL	AB
MISCELLANEOUS:	GASKETS	CG TYPE, SPIRAL WOUND, GRAPHITE FILLED, 316SS
	BOLTING	STUDS - SA-193-B7, NUTS - SA-194-2H
	PROCESS PIPE	CARBON STEEL
	UTILITY PIPE	CARBON STEEL
	FLANGES	RAISED FACE (UNLESS OTHERWISE NOTED)
ELECTRICAL:		RIGID ALUMINUM CONDUIT
SUITABLE FOR USE IN:		CLASS I, DIV. 2, GROUP D & CLASS I, ZONE 2, GROUP IIA

POWER REQUIREMENTS

COMPRESSOR MOTOR (5KM-1401)	VOL: 4000 VAC/3PH/60HZ 700 HP
SUCTION FILTER DRAIN PUMP MOTOR (5PM-1101)	VOL: 575 VAC/3PH/60HZ 1.5 HP
BUILDING HEATER (5BH-2101 A/B)	VOL: 575 VAC/3PH/60HZ 10 KW
BUILDING FAN MOTOR (5BFM-2104)	VOL: 120 VAC/1PH/60HZ 0.25 HP
GLYCOL CIRCULATION PUMP MOTOR (5PM-6101)	VOL: 575 VAC/3PH/60HZ 5 HP
COOLER MOTOR (5EM-2101)	VOL: 575VAC/3PH/60HZ 25 HP
IMMERSION HEATER (5HTR-1201)	VOL: 575 VAC/3PH/60HZ 3KW
CONTROL PANEL	VOL: 120 VAC AMPS: NOM: 5
FIRE DETECTION:	VOL: 24 VDC AMPS: NOM: 5
GAS DETECTION:	VOL: 24 VDC AMPS: NOM: 5
INT. LIGHTS:	VOL: 347 VAC AMPS: NOM: 1.7
EXT. LIGHTS:	VOL: 347 VAC AMPS: NOM: 0.8
RECEPTACLES:	VOL: 120 VAC AMPS: NOM: 30

SYSTEM CONSUMABLES

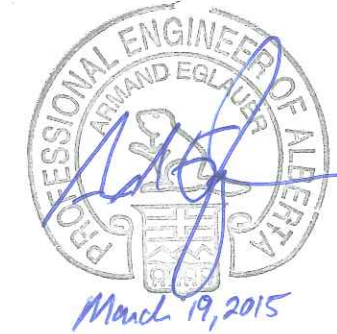
COMPRESSOR LUBE OIL: EFX S5-150, 135 US GALLONS
 GLYCOL: 50% ETHYLENE INHIBITED GLYCOL/WATER SOLUTION, 46 US GALLONS
 INSTRUMENT AIR: 300 SCFD

DESIGN SPECIFICATION:

ENERFLEX LTD. (EFX) SCOPE OF SUPPLY ON THIS PROJECT CONSISTS OF ONE SCREW SKIDDED GAS COMPRESSOR PACKAGE.

PACKAGE CONSISTS OF ONE (1) TECO 700HP EMD DRIVING A FRICK SGC-2821, ONE STAGE, DRU OFF-GAS COMPRESSOR.

PRIMER (VESSELS, PIPING, STRUCTURAL)	-FIN-1A, CLOVERDALE 703 SERIES, ECOPRIME WATER-BASED PRIMER, GREY
PAINT (VESSELS, PIPING, STRUCTURAL)	-FIN-1A, CLOVERDALE 703 SERIES, ECOLOGIC WATER-BASED INDUSTRIAL ENAMEL, F-34 WARM GREY
PROCESS PIPING (SWEET):	-10% RADIOGRAPHIC TESTING -1/16" CORROSION ALLOWANCE -NO PWHT -SSPC-SP3 -NO PICKLING
FLARE HEADER PIPING (SOUR):	-100% RADIOGRAPHIC TESTING -1/8" CORROSION ALLOWANCE -PWHT -SSPC SP3 -NO PICKLING
VESSELS:	-5% RADIOGRAPHIC TESTING - RT2 -UT ON ALL CAT. 'D' WELDS -1/16" CORROSION ALLOWANCE -NO PWHT -SSPC-SP3 -NO PICKLING



ISSUED FOR CONSTRUCTION
 NAME T.RAWLYCK DATE JAN 13/15

				DATE FEB 13/14	SCALE NTS	MEG ENERGY 1500 BPD H1-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM PROJECT DESCRIPTION & OVERVIEW	
				DRAWN BY A. TRAN	CHECKED BY N. REZAEYAN	APPROVED BY B. LANGER			DWG NO E001123-01-099	SHT 1
1	ISSUED FOR CONSTRUCTION	JAN 13/15	TR	NR	PROJECT MANAGER B. LANGER		PROJECT ENGINEER N. REZAEYAN			
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ	NR	CUST PO -					
B	ISSUED FOR APPROVAL	OCT 09/14	TW	NR	APEGA PERMIT No: P8651		OPER 490 511 591		WORK ORDER E001123-01	
A	ISSUED FOR APPROVAL	JUL 14/14	SJ	NR						
REV	DESCRIPTION	DATE	BY	APR						

PLOT 18 Mar, 2015-7:05am, siphason THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD., AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

TUBING SPECIFICATIONS

PROCESS TUBING		UTILITY TUBING	
TUBING SPECIFICATION	ENERFLEX: G-S04-CSZ-CS-S16-375	TUBING SPECIFICATION	ENERFLEX: G-S04-CSZ-CS-S16-375
TUBING MATERIAL	304SS	TUBING MATERIAL	304SS
FITTING MATERIAL	ZINC PLATED CARBON STEEL C/W SS BACK FERRULE	FITTING MATERIAL	ZINC PLATED CARBON STEEL C/W SS BACK FERRULE
OUTSIDE DIAMETER	MINIMUM WALL THICKNESS	OUTSIDE DIAMETER	MINIMUM WALL THICKNESS
1/4"	0.035"	1/4"	0.035"
3/8"	0.035"	3/8"	0.035"
1/2"	0.049"	1/2"	0.049"
-	-	3/4"	0.065"
-	-	1"	0.083"

SMALL BORE NPT & SW PIPING & FITTINGS

PROCESS & SCREW PIPING SPECIFICATIONS

SWEET SERVICE (-20-650°F, 1/16"CA)						
EFX PIPE SPECIFICATION		PIPING			FITTINGS	
		NPT	SW		NPT & THREADOLET	SW & SOCKOLET
C11	150#	1/2"	160	1/2"-1 1/2"	XS	1/2"-2" 3000#
		3/4"-2"	XS	2"	STD	

UTILITY PIPING SPECIFICATIONS

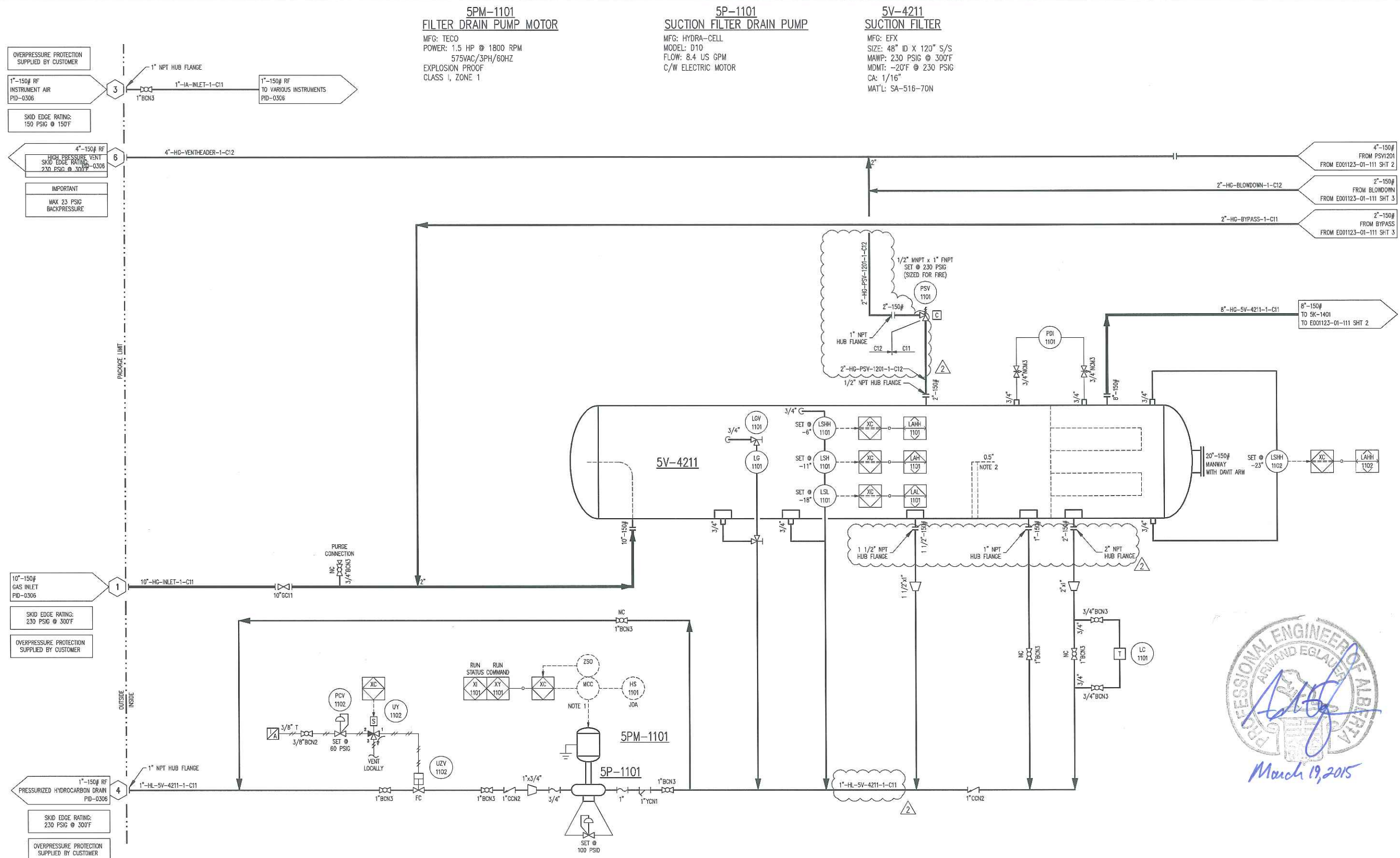
SMALL BORE NPT & SW PIPING & FITTINGS LOW PRESSURE UTILITY SERVICE						
EFX PIPE SPECIFICATION		PIPING			FITTINGS	
		NPT	SW		NPT & THREADOLET	SW & SOCKOLET
C01 NON-CODE		1/2"-3/4"	160	1/2"-1 1/2"	XS	1/2"-2" 3000#
		1"-2"	XS	2"	STD	



ISSUED FOR CONSTRUCTION
NAME: J.PAWLYCK DATE: JAN 13/15

DATE	FEB 12/14	SCALE	NTS	MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada	P&I DIAGRAM PROJECT DESCRIPTION & OVERVIEW
DRAWN BY	A. TRAN	CHECKED BY	N. REZAEYAN	APPROVED BY	B. LANGER		
PROJECT MANAGER	B. LANGER	PROJECT ENGINEER	N. REZAEYAN	CUST PO		DWG NO	E001123-01-099
ISSUED FOR CONSTRUCTION	JAN 13/15	TR	NR	OPER. CODE	490 511 591	WORK ORDER	E001123-01
ISSUED FOR APPROVAL	OCT 09/14	TW	NR	APEGA PERMIT No:	P8651	SHT	2
ISSUED FOR APPROVAL	JUL 14/14	SJ	NR	REV		REV	1


PLOT 19 Mar, 2015-9:03am sbl/iam THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.



5PM-1101
FILTER DRAIN PUMP MOTOR
 MFG: TECO
 POWER: 1.5 HP @ 1800 RPM
 575VAC/3PH/60HZ
 EXPLOSION PROOF
 CLASS I, ZONE 1

5P-1101
SUCTION FILTER DRAIN PUMP
 MFG: HYDRA-CELL
 MODEL: D10
 FLOW: 8.4 US GPM
 C/W ELECTRIC MOTOR

5V-4211
SUCTION FILTER
 MFG: EFX
 SIZE: 48" ID X 120" S/S
 MAWP: 230 PSIG @ 300°F
 MDMT: -20°F @ 230 PSIG
 CA: 1/16"
 MAT'L: SA-516-70N


 March 19, 2015

ISSUED FOR CONSTRUCTION
 NAME: S. JOHNSON DATE: MAR 18/15

NOTES:
 1. WIRING AND MCC FOR PUMP CONTROL AND POWER ARE BY OTHERS.
 2. DIMENSIONS ARE FROM VESSEL CENTERLINE.
 3. ALL VALVES ARE NORMALLY OPEN UNLESS NOTED OTHERWISE.

REV	DESCRIPTION	DATE	BY	APR
2	ISSUED FOR CONSTRUCTION	MAR 18/15	SJ	NR
1	ISSUED FOR CONSTRUCTION	JAN 13/15	TR	NR
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ	NR
B	ISSUED FOR APPROVAL	OCT 09/14	TW	NR
A	ISSUED FOR APPROVAL	JUL 14/14	SJ	NR

DATE	FEB 11/14	SCALE	NTS
DRAWN BY	A. IRAN	CHECKED BY	N. REZAEYAN
PROJECT MANAGER	B. LANGER	APPROVED BY	B. LANGER
		PROJECT ENGINEER	N. REZAEYAN
CUST PO			
APEGA PERMIT No:	P8651	OPER. CODE	490 511 591
WORK ORDER	E001123-01		

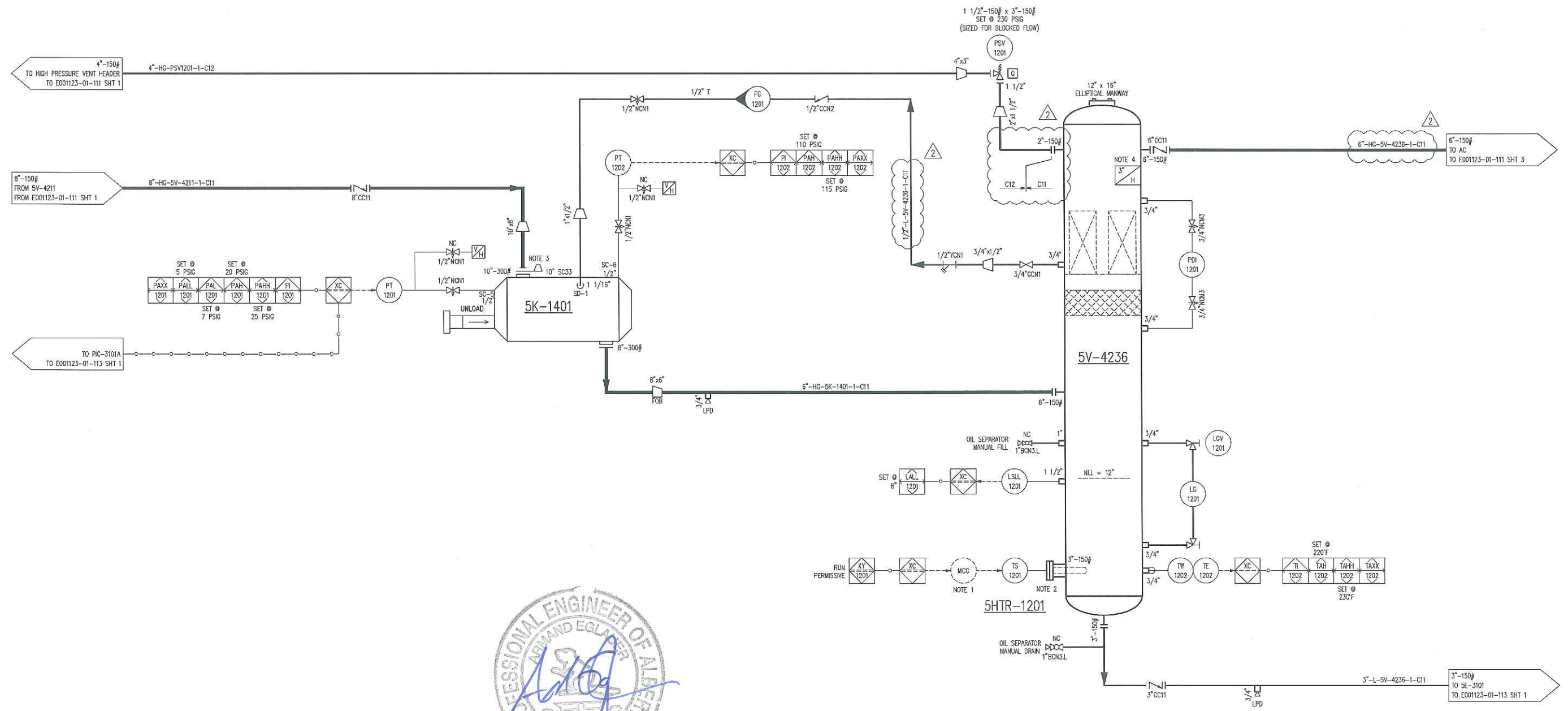
MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM PROCESS GAS	
DWG NO	E001123-01-111		SHT	1
REV				2


PLOT 18 Mar, 2015 - 7:06am. E:\p\meson THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

5K-1401
SCREW GAS COMPRESSOR
 MFG: FRICK
 MODEL: SGC-2821
 OPERATING SPEED: 3585 RPM
 DESIGN CAPACITY: 4.725 MMSOCD
 DESIGN DIFFERENTIAL PRESSURE: 90 PSIG

5HTR-1201
IMMERSION HEATER
 MAKE: CALORITECH
 MODEL: CXFT303F332X-OXX
 POWER: 3KW, 575V/3PH/60HZ
 WAIT DENSITY: 14 W/in²
 BUILT IN THERMOSTAT

5V-4236
OIL SEPARATOR
 MFG: EFX
 SIZE: 36" ID X 102" S/S
 MAWP: 230 PSIG @ 300°F
 MDMT: -20°F @ 230 PSIG
 CA: 1/16"
 MAT'L: SA-516-70N




 Maud: 19, 2015

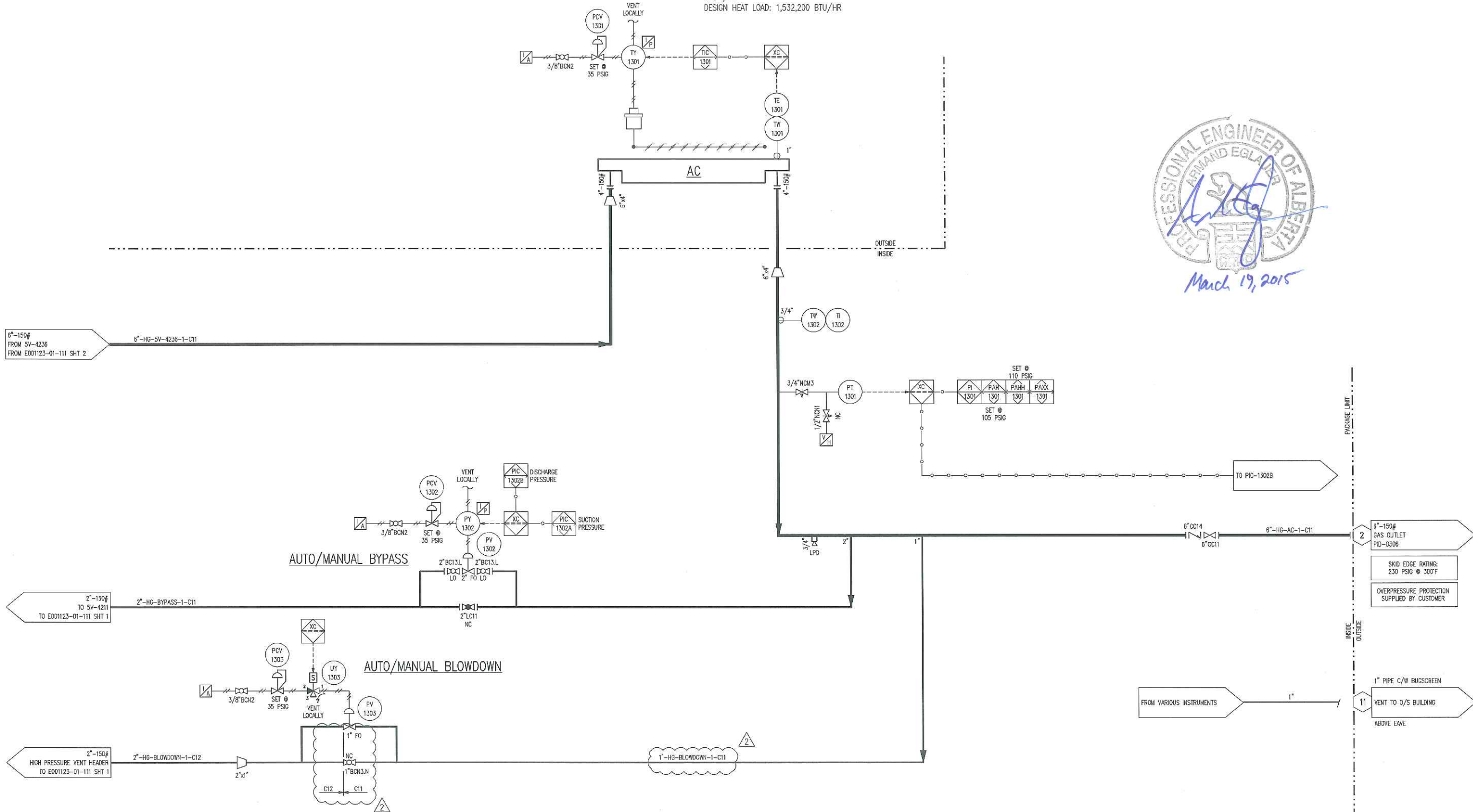
ISSUED FOR CONSTRUCTION
 NAME: S. JOHNSON DATE: MAR 18/15

- NOTES:
1. WIRING FROM MCC TO HEATER BY OTHERS.
 2. SET @ MINIMUM HEIGHT ABOVE SEAM.
 3. CONE STRAINER C/W COMPRESSOR.
 4. INSULATION MATERIAL IS MINERAL WOOL.
 5. ALL VALVES ARE NORMALLY OPENED UNLESS NOTED OTHERWISE.

REV	DESCRIPTION	DATE	BY	APR	DATE	SCALE	NTS	MEG ENERGY 1500 BPD H1-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401	ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM PROCESS GAS	DWG NO	SHT	REV
2	ISSUED FOR CONSTRUCTION- LINE # CHANGE	MAR 18/15	SJ	NR	FEB 11/14	SCALE	NTS				E001123-01-111	2	2
1	ISSUED FOR CONSTRUCTION	JAN 13/15	TR	NR									
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ	NR									
B	ISSUED FOR APPROVAL	OCT 09/14	TW	NR									
A	ISSUED FOR APPROVAL	JUL 14/14	SJ	NR									
					DATE	FEB 11/14	SCALE	NTS					
					DRAWN BY	A. IRAN	CHECKED BY	N. REZAEEYAN	APPROVED BY B. LANGER				
					PROJECT MANAGER	B. LANGER	PROJECT ENGINEER	N. REZAEEYAN					
					CUST PO								
					APEGA PERMIT No:	P8651	OPER. CODE	490 511 591	WORK ORDER	E001123-01			

AC
PROCESS GAS COOLER SECTION

MFG: AIR-X-LIMITED
MODEL: 96AEF
MAWP: 230 PSIG @ 300°F
MDMT: -20°F @ 230 PSIG
CA: 1/16"
DESIGN HEAT LOAD: 1,532,200 BTU/HR



ISSUED FOR CONSTRUCTION

NAME S. JOHNSON DATE MAR 18/15

NOTES:
1. ALL VALVES ARE NORMALLY OPEN UNLESS NOTED OTHERWISE.

REV	DESCRIPTION	DATE	BY	APR
2	ISSUED FOR CONSTRUCTION- LINE # CHANGE	FEB 18/15	SJ	NR
1	ISSUED FOR CONSTRUCTION	JAN 13/15	TR	NR
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ	NR
B	ISSUED FOR APPROVAL	OCT 09/14	TW	NR
A	ISSUED FOR APPROVAL	JUL 14/14	SJ	NR

DATE	FEB 11/14	SCALE	NTS
DRAWN BY	A. IRAN	CHECKED BY	N. REZAEYAN
PROJECT MANAGER	B. LANGER	APPROVED BY	B. LANGER
CUST PO		PROJECT ENGINEER	N. REZAEYAN
APEGA PERMIT No:	P8651	OPER. CODE	490 511 591
WORK ORDER	E001123-01		

MEG ENERGY
1500 BPD H1-Q FD PILOT
DRU OFF-GAS COMPRESSOR
5K-1401

ENERFLEX
Calgary, Alberta,
Canada

P & I DIAGRAM
PROCESS GAS

DWG NO E001123-01-111

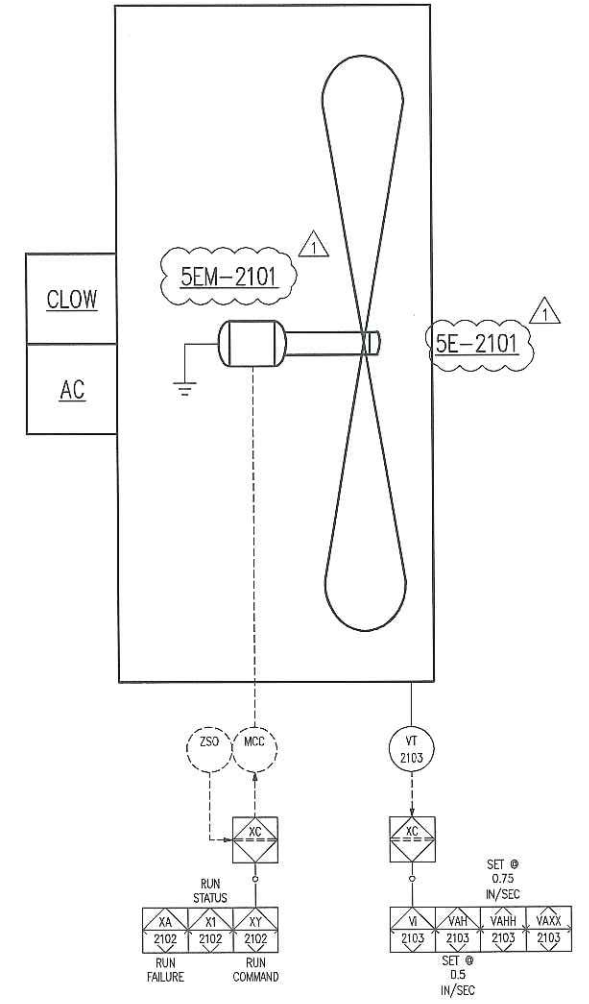
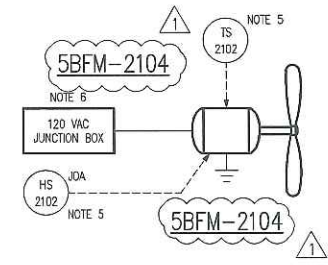
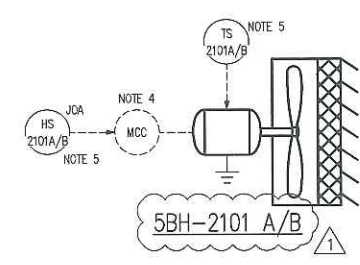
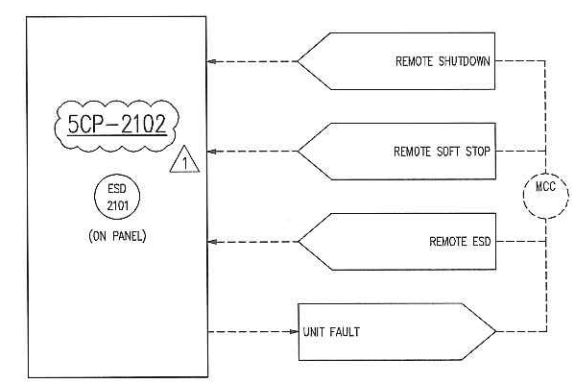
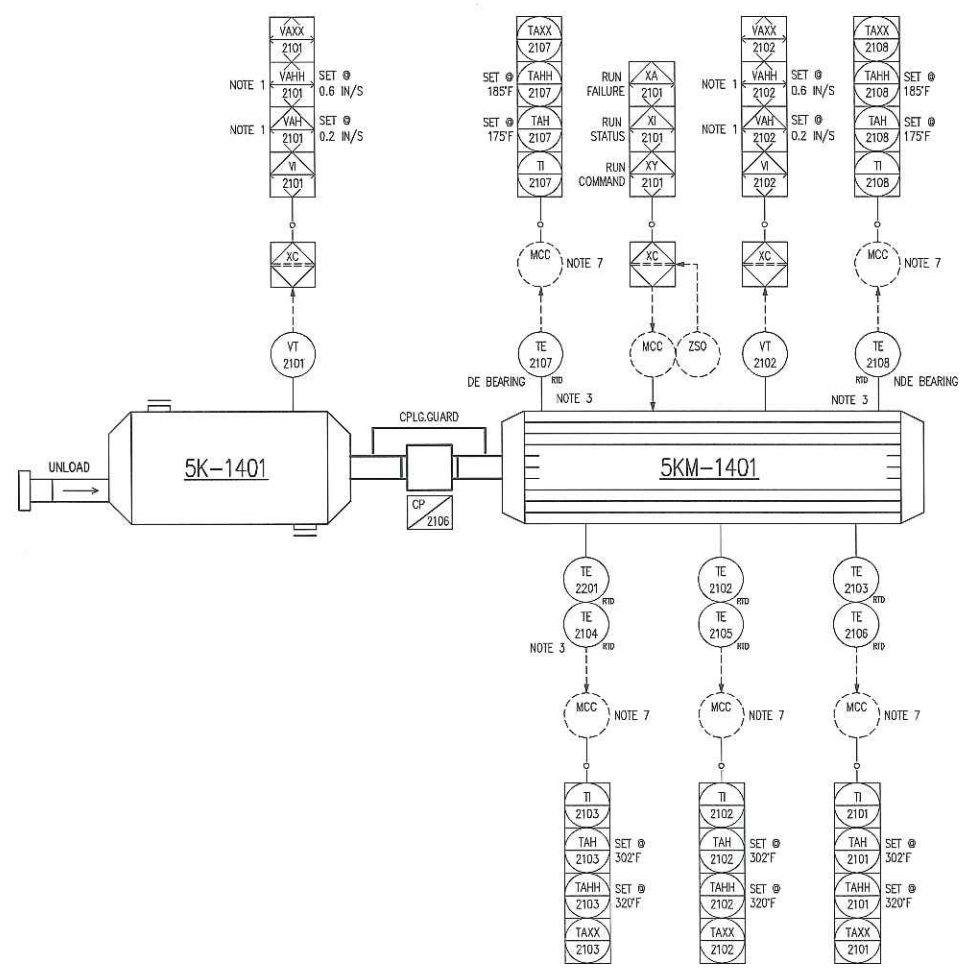
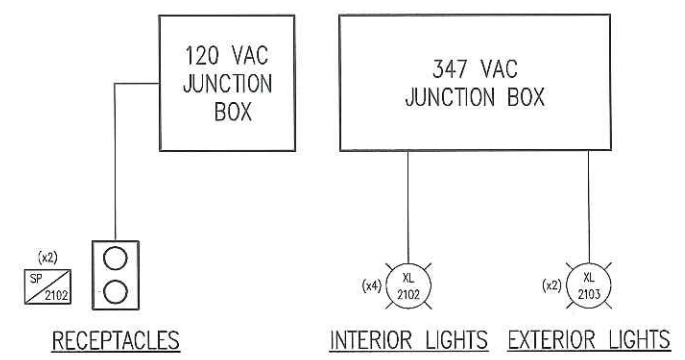
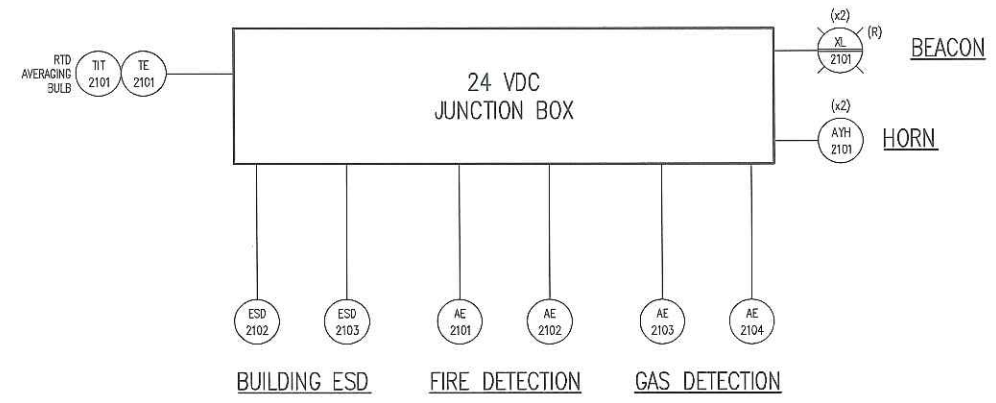
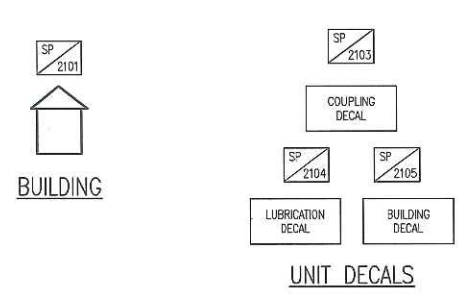
SHT 3

REV 2

PLOT 18 Mar, 2015 - 7:05am. sjohnson THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

PLOT 19 Mar, 2015-9:03am, sjhman THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

- 5K-1401 SCREW GAS COMPRESSOR**
MFG: FRICK
MODEL: SGC2821
OPERATING SPEED: 3600 RPM
- 5KM-1401 COMPRESSOR MOTOR**
MFG: TECO
FRAME: 5810A
ENCLOSURE: TEFC
POWER: 700 HP @ 3600 RPM
4000VAC/3PH/60HZ
CLASS 1, DIV. 2, GROUPS B/C/D/
CLASS 1, ZONE 2, GROUPS IIB+H2, IIB & IIA
- 5CP-2102 CONTROL PANEL**
MFG: EFX
POWER: 120 VAC
PROCESSOR: COMPACT LOGIX
- 5BFM-2104 BUILDING FAN MOTOR**
SUPPLIED WITH BUILDING
POWER: 1/4 HP
120VAC/1PH/60HZ
CLASS 1, ZONE 1
- 5BFM-2104 BUILDING FAN**
SUPPLIED WITH BUILDING
- 5BH-2101 A/B BUILDING HEATER**
MFG: RUFFNECK
MODEL: FX5-575360-100
RATING: 10KW
575VAC/3PH/60HZ
CLASS 1, ZONE 2
- 5E-2101 PACKAGE COOLER**
MFG: AIR-X-LIMITED
MODEL: 96AEF
TYPE: FORCED DRAFT
FAN TYPE: MOORE 10K-36VT, 96" DIA X 6 BLADES
FAN POWER: 18 HP @ 1800 RPM
FAN BLADE PITCH: 19.5 DEGREES
AMBIENT AIR: 90°F
- 5EM-2101 PACKAGE COOLER MOTOR**
POWER: 25 HP @ 1800 RPM
575VAC/3PH/60HZ
TEFC, VFD COMPATIBLE
CLASS 1, DIV 2 & CLASS 1, ZONE 2



- NOTES:**
1. SET POINTS TO BE SET AND VERIFIED IN THE FIELD.
 2. DETECTOR TO BE SHIPPED LOOSE AND INSTALLED ON SITE BY OTHERS.
 3. RTD'S SUPPLIED WITH MOTOR. 3 SPARES AVAILABLE FOR WINDING RTD'S.
 4. WIRING FROM MCC TO HEATER BY OTHERS.
 5. SHIPPED LOOSE. INSTALLATION AND WIRING BY OTHERS.
 6. FAN IS WIRED TO 120 VAC JUNCTION BOX.
 7. WIRING RTD'S TO MCC BY OTHERS.

ISSUED FOR CONSTRUCTION
NAME: T. RAWLYCK DATE: JAN 13/15

				DATE: FEB 11/14	SCALE: NTS	MEG ENERGY 1500 BPD H1-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM DRIVE TRAIN /CONTROL PANEL BUILDING SYSTEMS	
1 ISSUED FOR CONSTRUCTION		JAN 13/15	TR	NR	DRAWN BY: A. IRAN CHECKED BY: N. REZAEYAN APPROVED BY: B. LANGER		DWG NO: E001123-01-112		SHT: 1	REV: 1
0 ISSUED FOR CONSTRUCTION		NOV 27/14	SJ	NR	PROJECT MANAGER: B. LANGER PROJECT ENGINEER: N. REZAEYAN					
B ISSUED FOR APPROVAL		OCT 09/14	TW	NR	CUST PO: -		OPER. CODE: 490 511 591		WORK ORDER: E001123-01	
A ISSUED FOR APPROVAL		JUL 14/14	SJ	NR	APEGA PERMIT No: P8651		OPER. CODE: 490 511 591		WORK ORDER: E001123-01	
REV	DESCRIPTION	DATE	BY	APR						

PLOT 19 Mar, 2015 - 9:03am. s:\plant\ THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

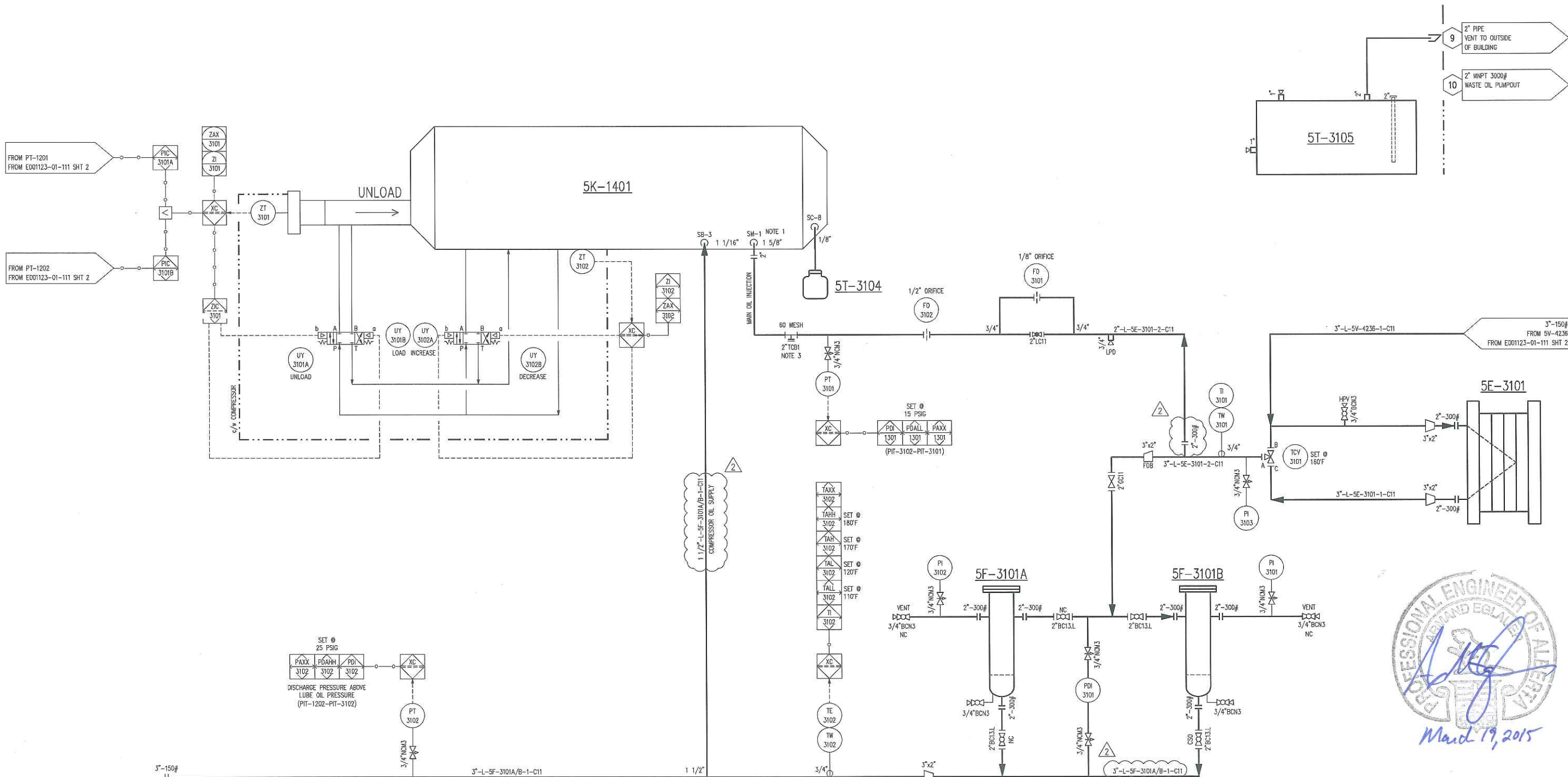
5K-1401
SCREW GAS COMPRESSOR
 MFG: FRICK
 MODEL: SGC2821
 OPERATING SPEED: 3600 RPM

5T-3104
MECHANICAL SEAL DRAIN POT
 MFG: EFX
 SIZE: 1 US GALLON

5F-3101 A/B
LUBE OIL FILTER
 MFG: EFX
 SIZE: 8 5/8" OD X 26" S/F
 MAWP: 460 PSIG @ 650°F
 MDWT: -20°F @ 460 PSIG
 CA: 1/16"
 ELEMENT: (1) MODEL 1833C10 10 MICRON
 MAT'L: CARBON STEEL

5T-3105
WASTE OIL STORAGE TANK
 MFG: EFX
 CAPACITY: 260 US GALLON

5E-3101
COMPRESSOR OIL COOLER (OIL SIDE)
 MFG: GEA
 MODEL: FPA10X20-70-UM
 PLATES: S.S.
 MAWP OIL SIDE: 400 PSIG @ 250°F
 MDMT: -20°F @ 400 PSIG
 DESIGN HEAT LOAD: 779,000 BTU/HR



ISSUED FOR CONSTRUCTION
 NAME: S. JOHNSON DATE: FEB 18/15

- NOTES:
 1. ORIFICE TO BE REMOVED FROM COMPRESSOR AND DISCARDED.
 2. ALL VALVES ARE NORMALLY OPEN UNLESS NOTED OTHERWISE.
 3. REFRIGERATION SPECIALTIES STRAINER.

REV	DESCRIPTION	DATE	BY	APR
2	ISSUED FOR CONSTRUCTION- LINE # CHANGE	FEB 18/15	SJ	NR
1	ISSUED FOR CONSTRUCTION	JAN 13/15	TR	NR
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ	NR
B	ISSUED FOR APPROVAL	OCT 09/14	TW	NR
A	ISSUED FOR APPROVAL	JUL 14/14	SJ	NR

DATE	FEB 11/14	SCALE	NTS
DRAWN BY	A. IRAN	CHECKED BY	N. REZAEYAN
PROJECT MANAGER	B. LANGER	PROJECT ENGINEER	N. REZAEYAN
CUST PO	-		
MEGA PERMIT No:	P8651	OPER. CODE	490 511 591
WORK ORDER	E001123-01		

MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM PROCESS GAS	
DWG NO	E001123-01-113		SHT	1
REV	2			

PLOT 18 Mar. 2015 - 3:07am. Splitman THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

5T-6103

WASTE GLYCOL STORAGE TANK
 MFG: EFX
 CAPACITY: 260 US GALLONS

5E-3101

COMPRESSOR OIL COOLER (GLYCOL SIDE)
 MFG: GEA
 MODEL: FPA10X20-70-UM
 PLATES: S.S.
 MAWP: 400 PSIG @ 250°F
 MDMT: -20°F @ 400 PSIG
 DESIGN HEAT LOAD: 779,000

5P-6101

GLYCOL CIRCULATION PUMP
 MAKE: VIKING
 MODEL: SG-41436
 FLOW: 79 US GPM
 C/W ELECTRIC MOTOR

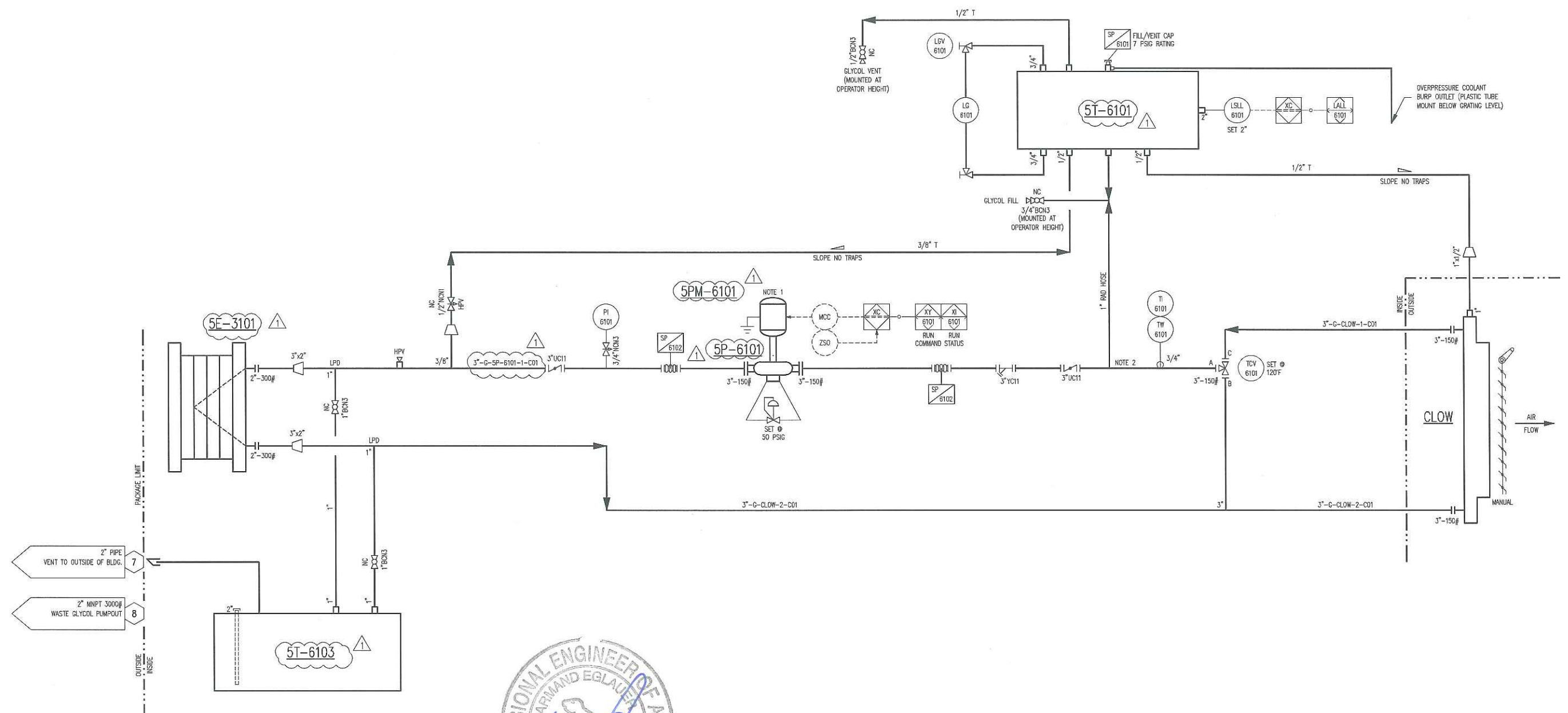
5PM-6101

GLYCOL CIRCULATION PUMP MOTOR
 MAKE: WEG
 POWER: 5 HP @ 1150 RPM
 575VAC/3PH/60HZ
 EXPLOSION PROOF
 CLASS 1, ZONE 1

5T-6101

GLYCOL EXPANSION TANK
 MFG: EFX
 CAPACITY: 10 US GALLONS
 VOLUME REQUIRED FOR
 FILL LEVEL: 6 US GALLONS

CLOW
GLYCOL COOLER SECTION
 MAWP: 14 PSIG @ 300°F
 MDMT: -20°F @ 14 PSIG



ISSUED FOR CONSTRUCTION
 NAME: T. RAWLYCK DATE: JAN 13/15

NOTES:
 1. WIRING AND MCC FOR PUMP CONTROL AND POWER ARE BY OTHERS.
 2. TIE IN AS CLOSE AS POSSIBLE TO PUMP.

				DATE: FEB 11/14	SCALE: NTS	MEG ENERGY 1500 BPD H1-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM COOLING SYSTEM CLOW COOLER SECTION	
1	ISSUED FOR CONSTRUCTION	JAN 13/15	SJ NR	DRAWN BY: A. IRAN	CHECKED BY: N. REZAEYAN	APPROVED BY: B. LANGER			DWG NO: E001123-01-116	SHT: 1
0	ISSUED FOR CONSTRUCTION	NOV 27/14	SJ NR	PROJECT MANAGER: B. LANGER	PROJECT ENGINEER: N. REZAEYAN					
B	ISSUED FOR APPROVAL	OCT 09/14	TW NR	CUST PO: -						
A	ISSUED FOR APPROVAL	JUL 14/14	SJ NR							
REV	DESCRIPTION	DATE	BY	APR	APEGA PERMIT No: P8651	OPER. CODE: 490 511 591	WORK ORDER: E001123-01			

PLOT DATE: Mar 18, 2015, 9:38am THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

LINE IDENTIFICATION A-B-CD-EF-GHIJ-KL,M-N

A : NOMINAL LINE SIZE IN INCHES
B : FLUID / SERVICE

A	AMMONIA	IG	INSTRUMENT GAS
AM	AMINE	L	LUBE OIL
C	CARBON DIOXIDE	NG	NITROGEN
CO	CARBON MONOXIDE	NB	NATURAL GAS
CW	COOLING WATER	O	OXYGEN
F	FREON	P	PROPANE
FG	FUEL GAS	PG	PURGE GAS
G	GLYCOL	R	REFRIGERANT
H	HYDROGEN	S	STEAM
HE	HELIUM	SG	SYNGAS
HG	HYDROCARBON GAS	V	PRODUCED WATER
HL	HYDROCARBON LIQUID	W	WATER
IA	INSTRUMENT AIR		

C : EQUIPMENT TYPE / MODIFIER (IF REQUIRED)

B	BLOWER OR FAN	H	HEATER
C	COMPRESSOR	JB	JUNCTION BOX
CPL	CONTROL PANEL	P	PUMP
D	DRIVER (MOTOR/ENGINE)	T	TOWER OR TANK
E	EXCHANGER	UH	UNIT HEATER
F	FILTER	V	PRESSURE VESSEL
FS	FLARE STACK		

D : EQUIPMENT NUMBER:
101 TO 999 SEQUENTIAL NUMBERS

CD : LINES TO/FROM SKID CALLED UP AS
INLET, OUTLET, HEADER, DRAIN, SUPPLY, ETC.

EF : LINE NUMBER:
E : 1 TO 9 SEQUENTIAL NUMBERS FROM EQUIPMENT
 1.1 FOR 1ST BRANCH CONNECTION FROM 1ST LINE
 1.2 FOR 2ND BRANCH CONNECTION FROM 1ST LINE
F : SKID/AREA REFERENCE LETTER (A, B, C,...)
 (*X SIGNIFIES OFF SKID/INTERCONNECTING PIPE)

GHIJ : PIPING SPECIFICATION

G : MATERIAL GROUP

C	CARBON STEEL
L	LOW TEMPERATURE CARBON STEEL
S	STAINLESS STEEL

H : ANSI 16.5 FLANGE CLASS

0	NON CODE				
1	150#	6	600#	15	1500#
3	300#	9	900#	25	2500#

I : LINE MATERIAL SPECIFICATION REFERENCE:
PIPING SPECIFICATION NUMBER

J : R RECIPROCATING PACKAGE SPECIFICATION
BLANK FOR PROCESS PACKAGE SPECIFICATION

KL,M : INSULATION (IF REQUIRED)

K : INSULATION TYPE

C	COLD	HT	HEAT TRACING
H	HOT	PP	PERSONAL PROTECTION
HC	HOT/COLD		

L : INSULATION THICKNESS IN MILLIMETERS OR INCHES (*)
M : TRACING (IF REQUIRED)

ET	ELECTRICAL TRACING
GT	GLYCOL TRACING
ST	STEAM TRACING

N : PED PIPE IDENTIFICATION SUFFIX (IF REQUIRED)

SEP	SOUND ENGINEERING PRACTICE LINE
CATI	CATEGORY I LINE
CATII	CATEGORY II LINE
CATIII	CATEGORY III LINE

EXAMPLE: 3"-HG-V101-1A-C61R-HTXX,ET-CATII

3" - NOMINAL LINE SIZE
 HG - HYDROCARBON GAS
 V101 - PRESSURE VESSEL TAG NUMBER
 1A - 1 FIRST LINE FROM VESSEL
 A - LOCATED ON SKID/AREA 'A'
 C61R - C CARBON STEEL LINE
 6 - 600# ANSI FLANGE RATING
 1 - LINE MATERIAL SPECIFICATION REFERENCE
 R - RECIPROCATING PACKAGE PIPE SPEC.
 HT - HEAT TRACING INSULATION
 XX - THICKNESS IN MILLIMETERS OR INCHES (*)
 ET - ELECTRICAL TRACING
 CATII - PED CATEGORY II LINE

VALVE IDENTIFICATION A"BCDE,F

A : NOMINAL VALVE SIZE IN INCHES
B : TYPE

A	ANGLE GLOBE	N	NEEDLE
B	BALL	P	PLUG
C	CHECK	S	START-UP STRAINER
G	GATE	T	TEE STRAINER
L	GLOBE	U	BUTTERFLY
M	MANIFOLD	Y	Y PATTERN STRAINER

C : BODY MATERIAL

B	BRONZE	L	LOW TEMP. CARBON STEEL
C	CARBON STEEL	S	STAINLESS STEEL
I	CAST IRON		

D : END CONNECTIONS

1	FLANGED 150#	B	BUTT WELD
3	FLANGED 300#	C	SW BY NPT
6	FLANGED 600#	F	NPT BY FLANGE (MANIFOLD)
9	FLANGED 900#	M	NPT MALE BY NPT FEMALE
15	FLANGED 1500#	N	NPT (THREADED)
25	FLANGED 2500#	S	SW (SOCKETWELD)
		T	TUBE (IE: SWAGelok)

E : UNIQUE DESCRIPTION
REFER TO VALVE DATA SHEETS

F : MODIFIER

C	CHAIN OPERATOR	O	OXYGEN SERVICE/CLEANING
E	EXTENDED BONNET	P	FULL PORT DESIGN
G	GEAR OPERATOR	R	RTJ FLANGED
L	LOCKING DEVICE	S	SPRING HANDLE (CLOSE)
N	NACE TRIM	X	SPECIAL SPECIFICATIONS

EXAMPLE: 6"GC11,C
 6" VALVE SIZE 1 150#
 G GATE 1 API-600
 C CARBON STEEL C CHAIN OPERATOR

LINE CODE

—————	PRIMARY PROCESS LINE
—————	SECONDARY PROCESS LINE
—————	MINOR PROCESS LINE
—————	AUXILIARY PROCESS LINE
—————	INSTRUMENT/IMPULSE LINE
-----	ELECTRIC SIGNAL
-----	FILLED CAPILLARY TUBE
-----	PNEUMATIC LINE
-----	MECHANICAL LINK
-----	INSTRUMENT DATA LINK
-----	INTERCONNECTING PIPING
-----	SKID LIMIT
-----	FUTURE
-----	SONIC OR ELECTRO-MAGNETIC SIGNAL (GUIDED)
-----	SONIC OR ELECTRO-MAGNETIC SIGNAL (UN-GUIDED)

VALVE CONNECTIONS (COMBINATIONS MAY BE USED)

	THREADED
	SOCKET WELDED
	BUTT WELDED
	FLANGED

VALVE TYPES

	ANGLE GLOBE VALVE		GATE VALVE		PLUG VALVE
	BALL VALVE		GAUGE VALVE		PINCH VALVE
	BUTTERFLY VALVE		GLOBE VALVE		QUICK ACTING VALVE
	CHECK VALVE		NEEDLE VALVE		VALVE W/PLUG
	DIAPHRAGM VALVE		NEEDLE VALVE W/BLEED		3-WAY VALVE
	DUMP VALVE		MANIFOLD VALVE		4-WAY VALVE

CONTROL VALVES

	DIAPHRAGM CONTROL VALVE		OUTLET PRESSURE REGULATOR		3-WAY SOLENOID VALVE
	DIAPHRAGM CONTROL VALVE W/ POSITIONER		HYDRAULIC / PNEUMATIC PISTON OPERATED OR SPRING RETURN		THERMOSTATIC CONTROL VALVE
	INLET PRESSURE REGULATOR SELF-CONTAINED		PNEUMATIC RELAY VALVE		PRESSURE SAFETY /RELIEF VALVE
	OUTLET PRESSURE REGULATOR SELF-CONTAINED		2-WAY SOLENOID VALVE		DESIGNATES API ORIFICE SIZE
	DIFFERENTIAL PRESSURE REGULATOR SELF-CONTAINED		MOTOR ACTUATED		PRESSURE SAFETY /RELIEF VALVE PILOT OPERATED
	INLET PRESSURE REGULATOR		ROTARY MOTOR ACTUATED		DESIGNATES API ORIFICE SIZE

MISCELLANEOUS

	INLINE FLANGE SET		BALL CHECK VALVE		PIPE SLOPE DIRECTION
	SPECTACLE BLIND (LINE OPEN)		THROTTLE BLOCK		VORTEX BREAKER
	SPECTACLE BLIND (LINE CLOSED)		PIG LAUNCHER / RECEIVER		DIAPHRAGM SEAL
	UNION (NPT)		METER RUN		RUPTURE DISC FOR PRESSURE RELIEF
	ORIFICE FLANGE W/ SPACER		FLOW INDICATOR		RUPTURE DISC FOR VACUUM RELIEF
	PADDLE BLIND		CONTINUOUS LIQUID DRAINER OR STEAM TRAP		EYE WASH
	BLEED RING		SPEC BREAK		SAFETY SHOWER
	BASKET STRAINER		OPEN DRAIN		SKID TIE-POINTS
	CONE STRAINER		INSULATION TYPE		INSTRUMENT AIR
	CONCENTRIC REDUCER		INSULATION BLOCK W/ ELECTRIC HEAT TRACE		INSTRUMENT GAS
	ECCENTRIC REDUCER		INSULATION BLOCK W/ GLYCOL OR STEAM HEAT TRACE		CURRENT/PRESSURE
	EXPANSION JOINT		SPECIALTY ITEM		SPRAY NOZZLE
	FLEXIBLE HOSE		CONTINUATION ARROW		VENT CAP
	FLEXIBLE COUPLING		CONTINUATION ARROW DUAL DIRECTION		BEVELED PIPE END
	TEE STRAINER				END CAP
	Y-PATTERN STRAINER				PLUG
	MAGNETIC METER				LINE BREAK
	VENTURI				
	SIGHT GLASS				
	SONIC FLOW METER				
	POSITIVE DISPLACEMENT METER				
	TURBINE OR PROPELLOR METER				
	VORTEX METER				

(C) -CLOSE (O) -OPEN
 (H) -HIGH ALARM (L) -LOW ALARM
 (HH) -HIGH SHUTDOWN (LL) -LOW SHUTDOWN
 (XX) -DIAGNOSTIC SHUTDOWN (USED TO INDICATE THE DIAGNOSTIC CHECK REQ'D ON THE ANALOG INPUT)

INSTRUMENTS

	LOCAL MOUNTED		INTERLOCK
	LOCAL PANEL MOUNTED		ELECTRICAL INTERLOCK (HARDWARE)
	LOCAL PANEL MOUNTED BEHIND OR INSIDE		THERMOWELL (THREADED)
	MAIN PANEL MOUNTED		THERMOWELL (SOCKET WELDED)
	MAIN PANEL MOUNTED BEHIND OR INSIDE		THERMOWELL (FLANGED)
	BY OTHERS		PILOT LIGHT
	HUMAN MACHINE INTERFACE HMI (DCS)		* COLOUR (A) AMBER (B) BLUE (G) GREEN (O) ORANGE (R) RED (W) WHITE
	HUMAN MACHINE INTERFACE HMI (PLC)		
	ENGINE CONTROL		
	PROGRAMMABLE LOGIC CONTROLLER (PLC)		
	XC REPRESENTS GENERAL LOGIC		

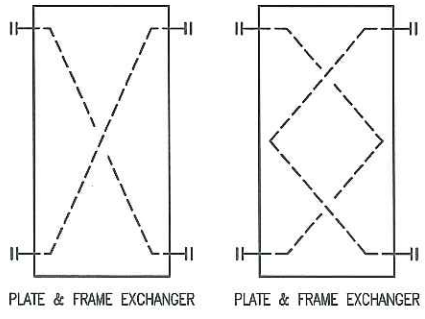
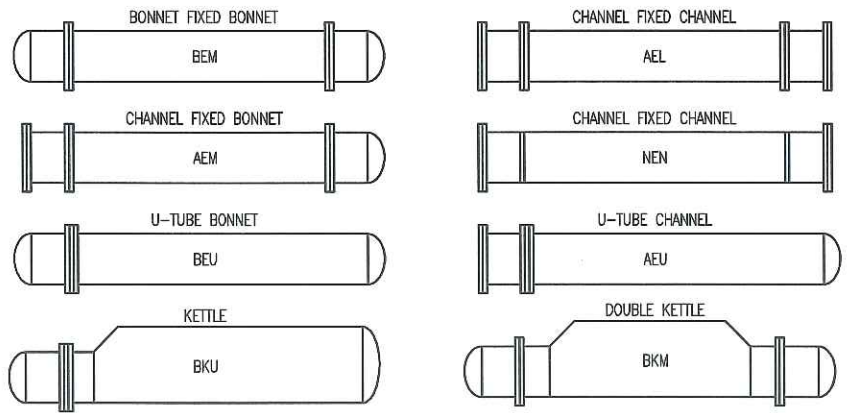
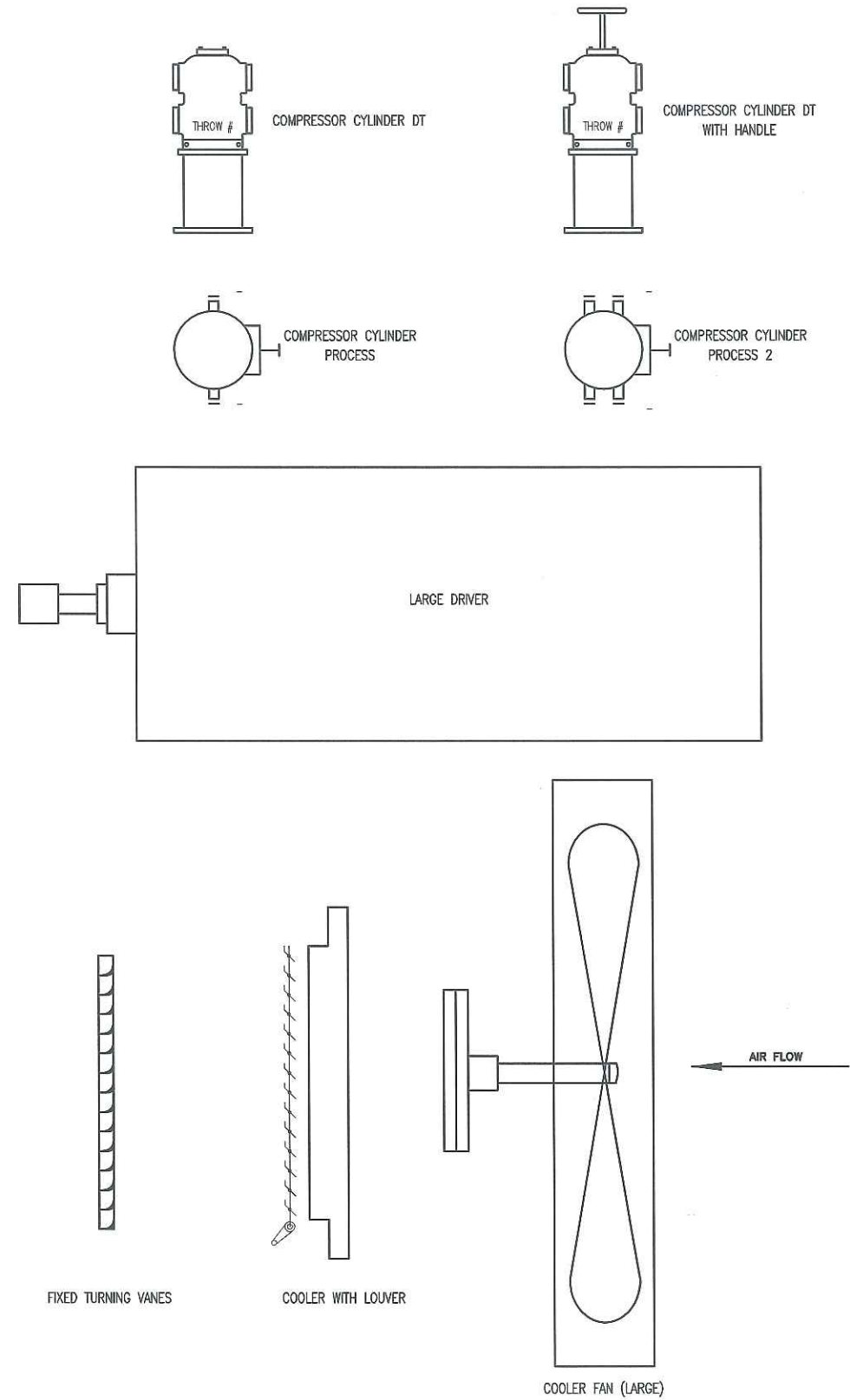
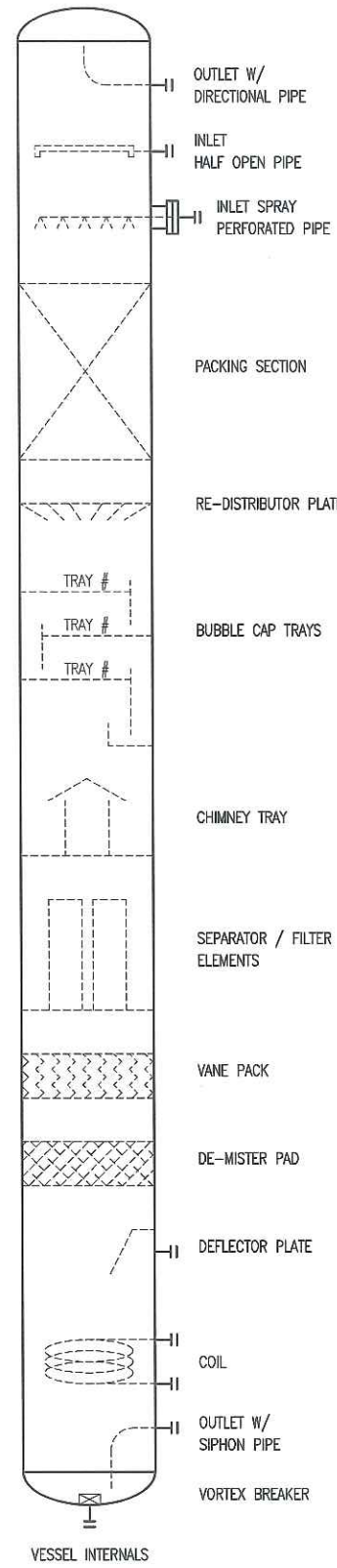
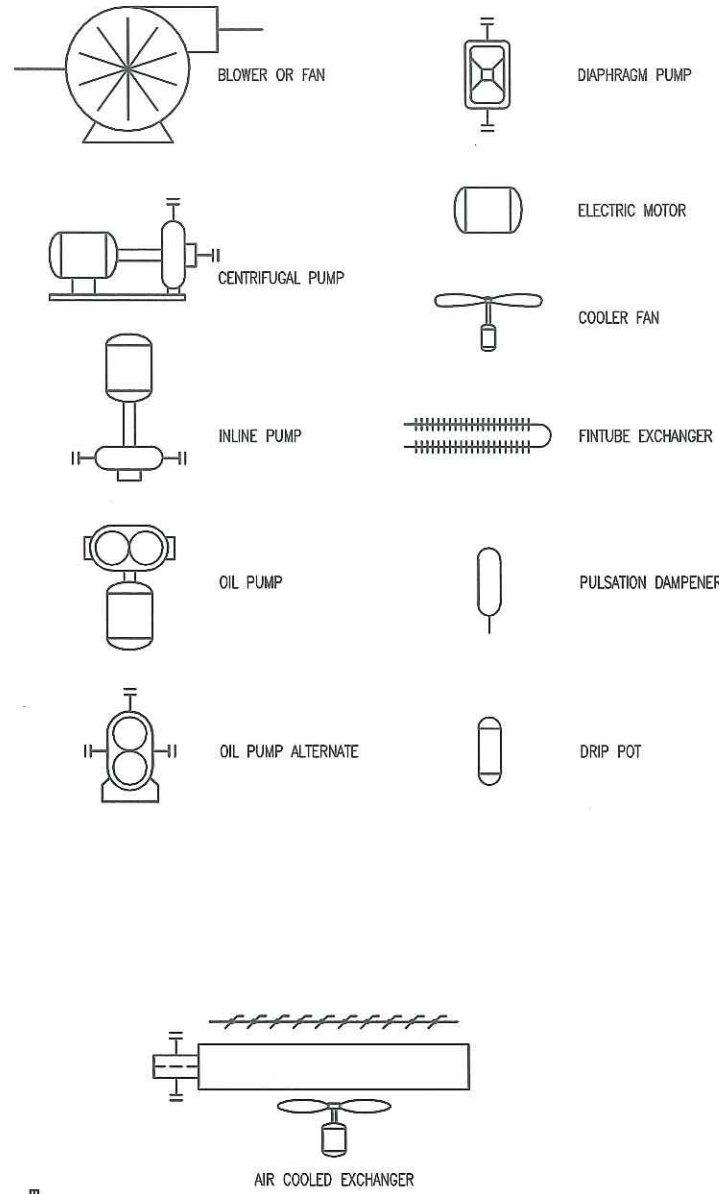
FOR REFERENCE ONLY
 NAME: S.JOHNSON DATE: JUL 23/14

DATE	FEB 11/14	SCALE	NTS	MEG ENERGY 1500 BPD HI-Q FD PILOT REACTOR GRU COMPRESSOR 5K-1403		ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM LEGENDS & SYMBOLS
DRAWN BY	A. IRAN	CHECKED BY	N. REZAEYAN	APPROVED BY	B. LANGER		
PROJECT MANAGER	B. LANGER	PROJECT ENGINEER	N. REZAEYAN			DWG NO	E001123-01-199
CUST PO				OPER. CODE	490 511 591	SHT	1
ISSUED FOR REFERENCE	JUL 23/14	BY	SJ	NR	APR	REV	A

PLOT DATE: Mar 18, 2015, 9:38am THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

ABBREVIATIONS

AMB	AMBIENT	M2	SQUARE METERS
ATM	ATMOSPHERE	M3	CUBIC METERS
BW	BUTT WELD	MAX	MAXIMUM
BOP	BOTTOM OF PIPE	MAWP	MAXIMUM ALLOWABLE WORKING PRESSURE
CA	CORROSION ALLOWANCE	MCC	MOTOR CONTROL CENTER
CC	CORROSION COUPON	MDMT	MINIMUM DESIGN METAL TEMPERATURE
CS	CARBON STEEL	MIN	MINIMUM
CSC	CAR SEAL CLOSED	MM	MILLIMETER
CSO	CAR SEAL OPEN	NB	NATIONAL BOARD
CUST	CUSTOMER	NC	NORMALLY CLOSED
DB	DEADBAND	NLL	NORMAL LIQUID LEVEL
Δ	DELTA (DIFFERENTIAL)	NO	NORMALLY OPEN
DBB	DOUBLE BLOCK & BLEED	NPT	NATIONAL PIPE THREAD
DEG.C	DEGREES CELSIUS	OAL	OVERALL LENGTH
DEG.F	DEGREES FARENHEIT	OD	OUTSIDE DIAMETER
DIR	DIRECT ACTING	PB	PUSH BUTTON
EL	ELEVATION	PL	PILOT LIGHT
ESD	EMERGENCY SHUTDOWN	PLC	PROGRAMMABLE LOGIC CONTROLLER
ESDV	EMERGENCY SHUTDOWN VALVE	PPD	PINTS PER DAY
FC	FAIL CLOSED	PSIA	POUNDS / SQUARE INCH ABSOLUTE
FF	FLAT FACED	PSID	POUNDS / SQUARE INCH DIFFERENTIAL
FL	FAIL LAST	PSIG	POUNDS / SQUARE INCH GAUGE
FLG	FLANGED	REV	REVERSE ACTING
FO	FAIL OPEN	RF	RAISED FACE
FOB	FLAT ON BOTTOM	RFLX	REFLEX GAUGE
FOT	FLAT ON TOP	RO	RESTRICTION ORIFICE
FT2	SQUARE FEET	RTD	RESISTANCE TEMPERATURE DEVICE
FT3	CUBIC FEET	RTJ	RING TYPE JOINT
FV	FULL VACUUM	SCFM	STANDARD CUBIC FEET PER MINUTE
FVCP	FIXED VOLUME CLEARANCE POCKET	SCR	SILICON CONTROLLED RECTIFIER
FX	FROST EXTENSION	S/F	SEAM TO FACE OF FLANGE
HI	HIGH	SO	SLIP ON
HLL	HIGH LIQUID LEVEL	SP	SETPOINT
HP	HIGH POINT	SPC	CALCULATED SETPOINT
HPV	HIGH POINT VENT	SS	SELECTOR SWITCH
HTR	HEATER	S/S	SEAM TO SEAM
ID	INSIDE DIAMETER	SVU	SUCTION VALVE UNLOADER
KGS	KILOGRAMS	SW	SOCKET WELD
KPAA	KILOPASCAL ABSOLUTE	TC/K	THERMOCOUPLE / (TYPE)
KPAD	KILOPASCAL DIFFERENTIAL	T/L	TUBE LENGTH
KPAG	KILOPASCAL GAUGE	TS/TS	TUBESHEET TO TUBESHEET
KW	KILOWATTS	VB	VORTEX BREAKER
LBS	POUNDS	V/H	VENT HEADER
LC	LOCKED CLOSED	VTA	VENT TO ATMOSPHERE
LLL	LOW LIQUID LEVEL	VTH	VENT TO HEADER
LO	LOCKED OPEN	WCP	VARIABLE VOLUME CLEARANCE POCKET
LP	LOW POINT	W/	WITH
LPD	LOW POINT DRAIN	W/O	WITHOUT



FOR REFERENCE ONLY
 NAME: S.JOHNSEN DATE: JUL 14/14

				DATE: FEB 11/14	SCALE: NTS	MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada	P & I DIAGRAM LEGEND	
				DRAWN BY: A. TRAN	CHECKED BY: N. REZAEYAN	APPROVED BY: B. LANGER			DWG NO: E001123-01-199	SHT: 2
				PROJECT MANAGER: BLANGER	PROJECT ENGINEER: N. REZAEYAN					
				CUST PO: -	MEGA PERMIT No: P851	STEP CODE: 400 511 591	WORK ORDER: E001123-01			
REV: A	ISSUED FOR REFERENCE			DATE: JUL 23/14	BY: SJ	NR	APR			

ENERFLEX

Line List (P.Eng Stamped)

LINE LIST

Document Version 0, 22-Sept-2014

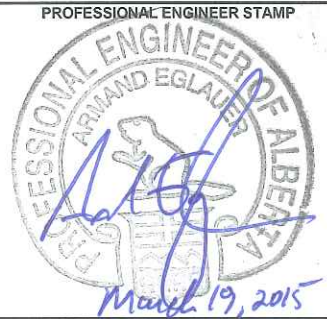
ENERFLEX

Customer:	MEG Energy					
	1500 BPD HI-Q FD Pilot DRU Off-gas Compressor 5K-1401					
Project:	E001123-01					
EFX Job #:	E001123-01					

Revisions					
NO.	ISSUE	DATE	By	Checked	Approved
1	For Registration	16/03/2015	Nika Rezaeyan		<i>[Signature]</i>

NOTE: THE FLOW DRAWINGS AND THIS LINE LIST HAVE BEEN P. ENG STAMPED BASED ON THE ORIGINAL PACKAGE DESIGN DURING FABRICATION. ENERFLEX IS NOT RESPONSIBLE FOR THE CHANGES THAT MAY HAVE OCCURRED DURING THE FIELD INSTALLATION AND OPERATION OF THE UNIT

APEGA PERMIT # P8651

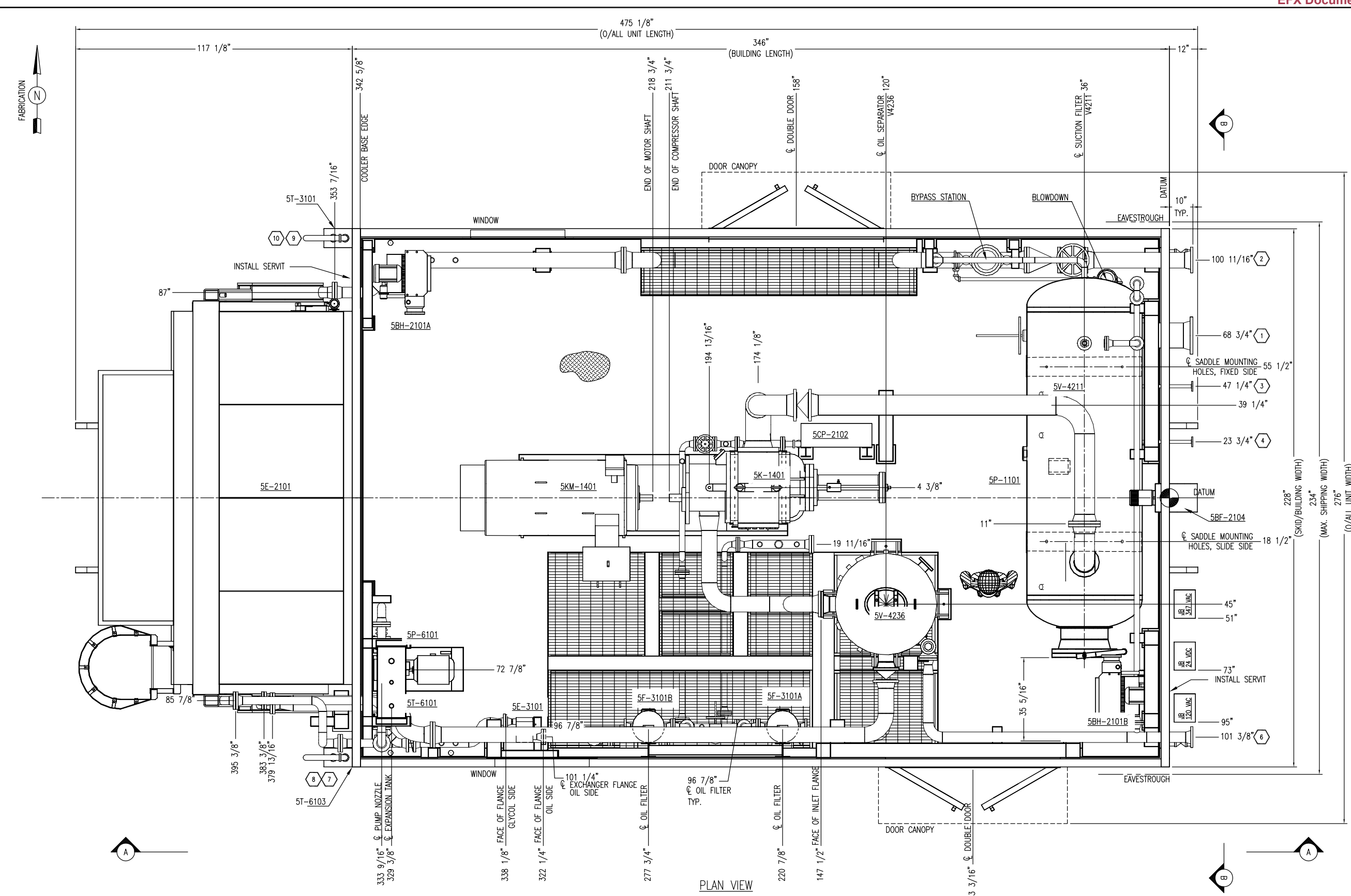


P&ID	P&ID Rev.	Line Number	SERVICE	SIZE (INCH)	PIPE SCHEDULE	FROM	TO	PIPE SPEC	ANSI CLASS	DESIGN PRESSURE (psig)	DESIGN TEMP. (°F)	C.A. (INCH)	TEST PRESSURE (psig)	TYPE OF TEST	X-RAY (%)	PIPE MATERIAL	FLANGE MATERIAL	IMPACT TEST (Y/N)	PWHT (Y/N)	NOTES
E001123-01-111 SHT 1	2	10"-HG-INLET-1-C11	Sweet Hydrocarbon gas	10"	STD (40)	Gas inlet connection 1	Suction Filter 5V-4211	C11	150	230	300	1/16"	400	Hydro	10%	SA-106-B	SA-105N	N	N	
E001123-01-111 SHT 1 & SHT 2	2	8"-HG-5V-4211-1-C11	Sweet Hydrocarbon gas	8"/ 10"	STD (40)	Suction Filter 5V-4211	Compressor 5K-1401	C11	150	230	300	1/16"	400	Hydro	10%	SA-106-B	SA-105N	N	N	
E001123-01-111 SHT 2	2	6"-HG-5K-1401-1-C11	Sweet Hydrocarbon gas	8"/ 6"	STD (40)	Compressor 5K-1401	Oil separator 5K-4236	C11	150	230	300	1/16"	400	Hydro	10%	SA-106-B	SA-105N	N	N	
E001123-01-111 SHT 2 & SHT 3	2	6"-HG-5V-4236-1-C11	Sweet Hydrocarbon gas	6"/ 4"	STD (40)	Oil separator 5K-4236	Process gas cooler AC	C11	150	230	300	1/16"	400	Hydro	10%	SA-106-B	SA-105N	N	N	
E001123-01-111 SHT 3	2	6"-HG-AC-1-C11	Sweet Hydrocarbon gas	4"/ 6"/ 2"	STD (40)	Process gas cooler AC	Gas outlet connection 2, \	C11	150	230	300	1/16"	400	Hydro	10%	SA-106-B	SA-105N	N	N	
E001123-01-111 SHT 3 & SHT 1	2	2"-HG-BYPASS-1-C11	Sweet Hydrocarbon gas	2"	STD (40)	6"-HG-AC-1-C11	10"-HG-INLET-1-C11	C11	150	230	300	1/16"	400	Hydro	10%	SA-106-B	SA-105N	N	N	
E001123-01-111 SHT 3	2	1"-HG-BLOWDOWN-1-C11	Sweet Hydrocarbon gas	1"	XS	6"-HG-AC-1-C11	2"-HG-BLOWDOWN-1-C12	C11	150	230	300	1/16"	253	Pneumatic	N/A	SA-106-B	SA-105N	N	N/A	Threaded
E001123-01-111 SHT 3 & SHT 1	2	2"-HG-BLOWDOWN-1-C12	Sour Hydrocarbon gas	2"	XS	1"-HG-BLOWDOWN-1-C11	4"-HG-VENTHEADER-1-C12	C12	150	230	300	1/8"	400	Hydro	100%	SA-106-B	SA-105N	N	YES	
E001123-01-111 SHT 1	2	1/2"-HG-PSV-1201-1-C11	Sweet Hydrocarbon gas	2" / 1/2"	STD (40) XS	Suction Filter 5V-4211	PSV-1101	C11	150	230	300	1/16"	253	Pneumatic	N/A	SA-106-B	SA-105N	N	N/A	Threaded
E001123-01-111 SHT 1	2	2"-HG-PSV-1201-1-C11	Sour Hydrocarbon gas	1" / 2"	XS	PSV-1101	4"-HG-VENTHEADER-1-C12	C12	150	230	300	1/16"	253	Pneumatic	N/A	SA-106-B	SA-105N	N	N/A	Threaded
E001123-01-111 SHT 2 & SHT 1	2	4"-HG-PSV-1201-1-C12	Sour Hydrocarbon gas	4"/ 2"/ 1 1/2"	STD (40) XS	PSV-1201	4"-HG-VENTHEADER-1-C12	C12	150	230	300	1/8"	400	Hydro	100%	SA-106-B	SA-105N	N	YES	
E001123-01-111 SHT 1	2	4"-HG-VENTHEADER-1-C12	Sour Hydrocarbon gas	4"	STD (40)	4"-HG-PSV-1201-1-C12	High pressure vent connection 6	C12	150	230	300	1/8"	400	Hydro	100%	SA-106-B	SA-105N	N	YES	
E001123-01-111 SHT 1	2	1"-HL-5V-4211-1-C11	Sweet Hydrocarbon Liquid	2"-1 1/2"-1"	XS	Suction Filter 5V-4211	Pressurized Hydrocarbon Drain connection 4	C11	150	230	300	1/16"	253	Pneumatic	N/A	SA-106-B	SA-105N	N	N/A	Threaded
E001123-01-111 SHT 1	2	1"-IA-INLET-1-C11	Instrument air	1"	XS	Instrument air inlet connection 3	Various Instruments	C11	150	230	300	1/16"	253	Pneumatic	N/A	SA-106-B	SA-105N	N	N/A	Threaded
E001123-01-111 SHT 3	2	1/2"-L-5V-4236-1-C11	Oil	1" / 3/4" / 1/2"	XS	5V-4236	Compressor Coalescer Bleed SD-1	C11	150	230	300	1/16"	253	Pneumatic	N/A	SA-106-B	SA-105N	N	N/A	Threaded

ENERFLEX

General Arrangements

PLOT DATE: May 06, 2015, 15:00 P:_SAP_C&P_Canada_Projects\E001123-01_Meg_c-o_Toyo_Eng - HI-Q Pilot - 700HP EMD_SCC2821_4_Drafting\Issued\As-Built\E001123-01-201-As-Built.dwg



NOZZLE SCHEDULE				
MARK	SERVICE	SIZE	RATING	TYPE
1	GAS INLET	10"	150#	RF
2	GAS/LIQUID OUTLET	6"	150#	RF
3	INSTRUMENT AIR	1"	150#	RF
4	PRESSURIZED HYDROCARBON DRAIN	1"	150#	RF
5	-	-	-	-
6	HIGH PRESSURE VENT	4"	150#	RF
7	WASTE GLYCOL TANK VENT	2"	-	PIPE
8	WASTE GLYCOL TANK PUMP OUT	2"	3000#	MNPT
9	WASTE OIL TANK VENT	2"	-	PIPE
10	WASTE OIL TANK PUMP OUT	2"	3000#	MNPT
11	INSTRUMENT VENT	1"	-	PIPE

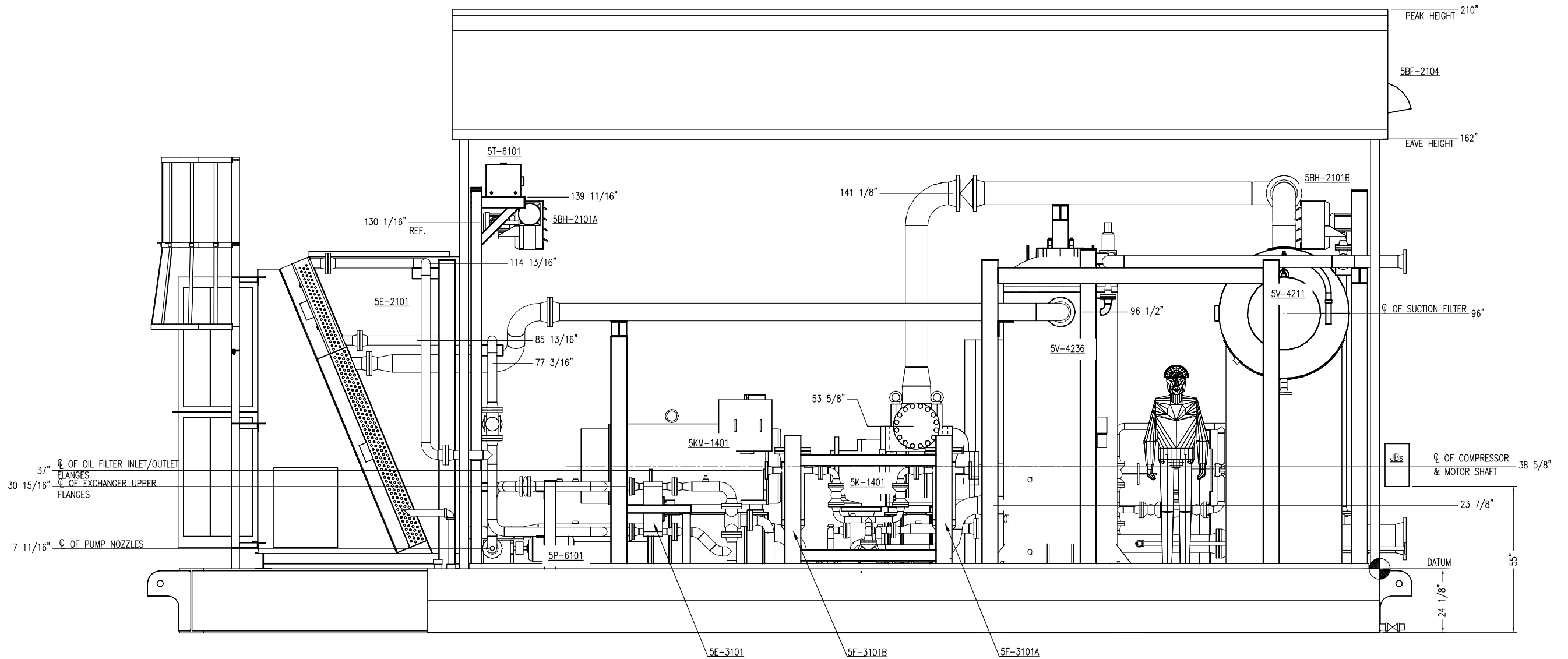
GENERAL SPECIFICATIONS	
OPERATING PACKAGE DIMENSIONS:	
LENGTH	475 1/8" [12,068mm]
WIDTH	276" [7,010mm]
HEIGHT	234 1/8" [5,947mm]
WEIGHT	98,523 LBS
SHIPPING DIMENSIONS (Single Piece):	
LENGTH	475 1/8" [12,068mm]
WIDTH	276" [7,010mm]
HEIGHT	234 1/8" [5,947mm]
WEIGHT	98,523 LBS
CENTER OF GRAVITY: TBD	
X	"X" FROM REFERENCE POINT: 197 1/2"
Y	"Y" FROM REFERENCE POINT: -1 3/16"
Z	"Z" FROM REFERENCE POINT: 46 1/2"
CRANE: NONE	
LOADING METHOD: CRANE/JACK+ROLL	
NOTES:	
1. ALL (Z) DIMENSIONS TAKEN FROM TOP OF SKID.	
2. ALL SKID EDGE CONNECTIONS ±1/4" TOLERANCE.	
3. ALL TAIL DIMENSIONS FROM REFERENCE POINT.	
4. SKID DEPTH: 24"	

PLAN VIEW

FINAL AS BUILT
NAME: H.SUN DATE: MAR 26/15

DATE: JUL 04/14 SCALE: NTS		MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada	GENERAL ARRANGEMENT PLAN VIEW	
DRAWN BY: H.SUN CHECKED BY: K.OXFORD APPROVED BY: N.REZAEYAN		PROJECT MANAGER: B.LANGER PROJECT ENGINEER: N.REZAEYAN			DWG NO: E001123-01-201	SHT: 1
2	AS BUILT	MAR 26/15	HS	NR		
1	CORRECTED DRAWING AS PER CUSTOMER'S MARK-UP	JAN 12/15	HS	NR		
0	ISSUED FOR CONSTRUCTION	DEC 02/14	HS	NR		
REV	DESCRIPTION	DATE	BY	APR		
APEGGA PERMIT No: P8651		OPER. CODE: 198/298/490/511/591		WORK ORDER: E001123-01		

THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.



A-A ELEVATION VIEW

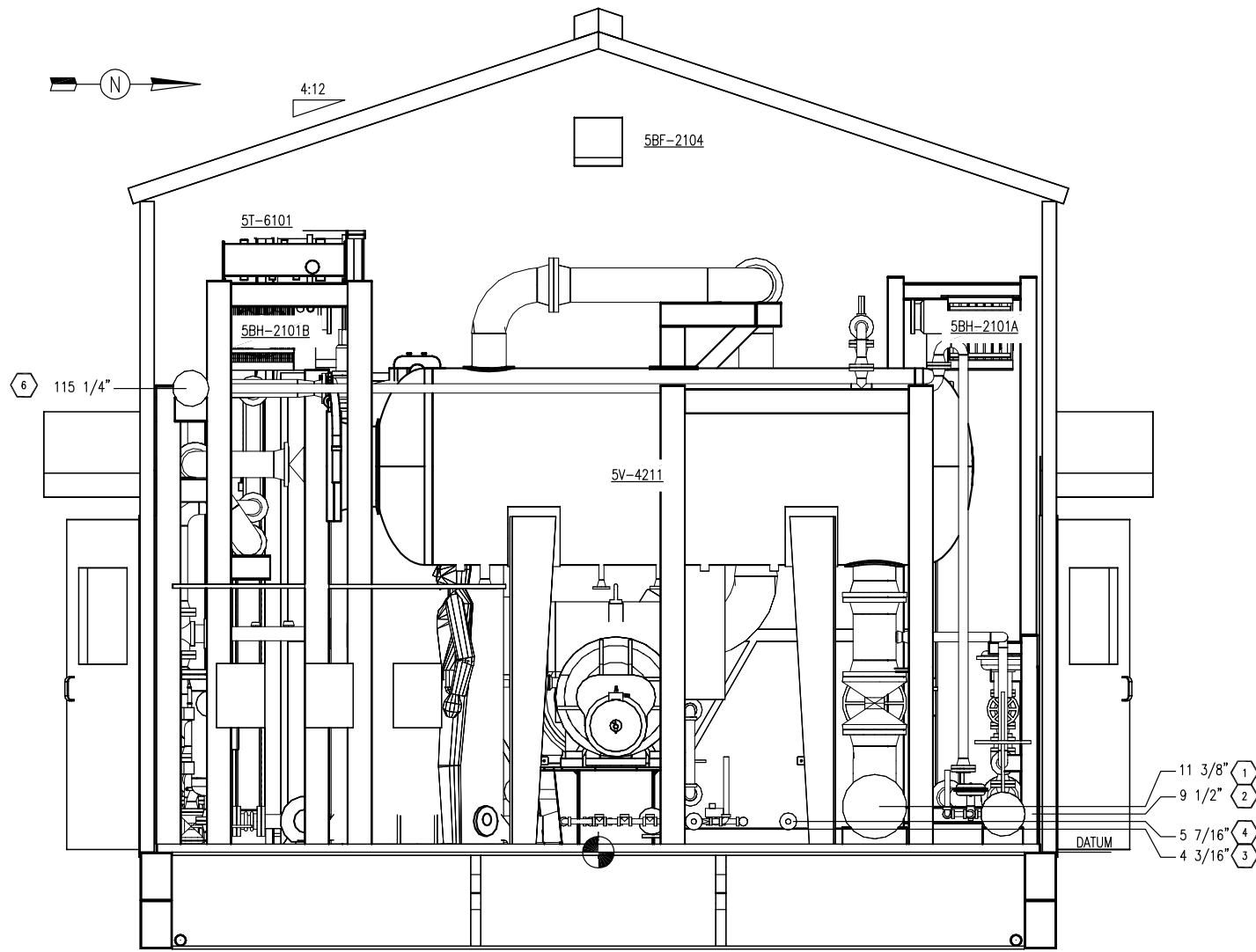
FINAL AS BUILT
 NAME H.SUN DATE MAR 26/15

DATE JUL 04/14		SCALE NTS		MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada	GENERAL ARRANGEMENT A-A VIEW	
DRAWN BY H.SUN		CHECKED BY K.OXFORD		APPROVED BY N.REZAEYAN			DWG NO E001123-01-201	SHT 2
PROJECT MANAGER B.LANGER		PROJECT ENGINEER N.REZAEYAN		CUST PO N/A		OPER. 198/298/490/511/591		
APEGGA PERMIT No: P8651		WORK ORDER E001123-01		REV				
2	AS BUILT	MAR 26/15	HS	NR				
1	CORRECTED DRAWING AS PER CUSTOMER'S MARK-UP	JAN 12/15	HS	NR				
0	ISSUED FOR CONSTRUCTION	DEC 02/14	HS	NR				
REV	DESCRIPTION	DATE	BY	APR				

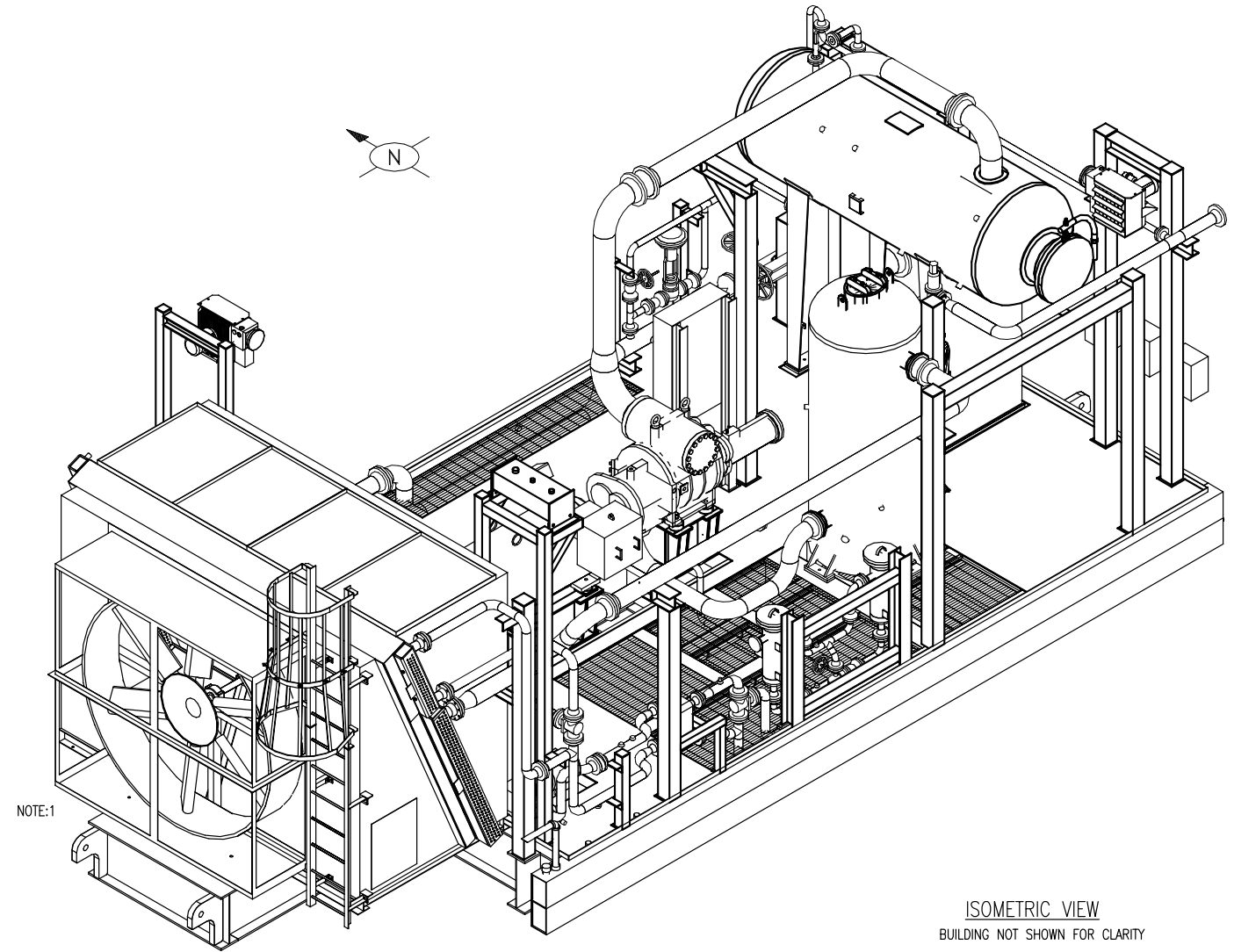
P:_snp_cxp_canada_projects\E001123-01-201-002\Drawings\Issued\As-Built\E001123-01-201-As-Built.dwg

PLOT DATE May 06, 2015, 15:00

THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.



B-B ELEVATION VIEW



ISOMETRIC VIEW

BUILDING NOT SHOWN FOR CLARITY
NOTE:1 COOLER BUG SCREEN NOT SHOWN FOR CLARITY

FINAL AS BUILT
NAME: H.SUN DATE: MAR 26/15

DATE: JUL 04/14		SCALE: NTS		MEG ENERGY		ENERFLEX Calgary, Alberta, Canada	GENERAL ARRANGEMENT B-B & 3D VIEW
DRAWN BY: H.SUN		CHECKED BY: K.OXFORD		APPROVED BY: N.REZAEYAN			
PROJECT MANAGER: B.LANGER		PROJECT ENGINEER: N.REZAEYAN		1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		DWG NO: E001123-01-201	SHT: 3
CUST PO: N/A		OPER. CODE: 198/298/490/511/591		WORK ORDER: E001123-01			
REV	DESCRIPTION	DATE	BY	APR	APEGGA PERMIT No: P8651		
2	AS BUILT	MAR 26/15	HS	NR			
1	CORRECTED DRAWING AS PER CUSTOMER'S MARK-UP	JAN 12/15	HS	NR			
0	ISSUED FOR CONSTRUCTION	DEC 02/14	HS	NR			

PLOT DATE: May 06, 2015, 11:50 AM
P:_SAP_C&P_Canada Projects\E001123-01_Meg c-o Toyo Eng - HI-Q Pilot - 700HP EMD_SCS2821_4_Drafting\Issued\As-Built\E001123-01-201-As-Built.dwg

THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

ENERFLEX

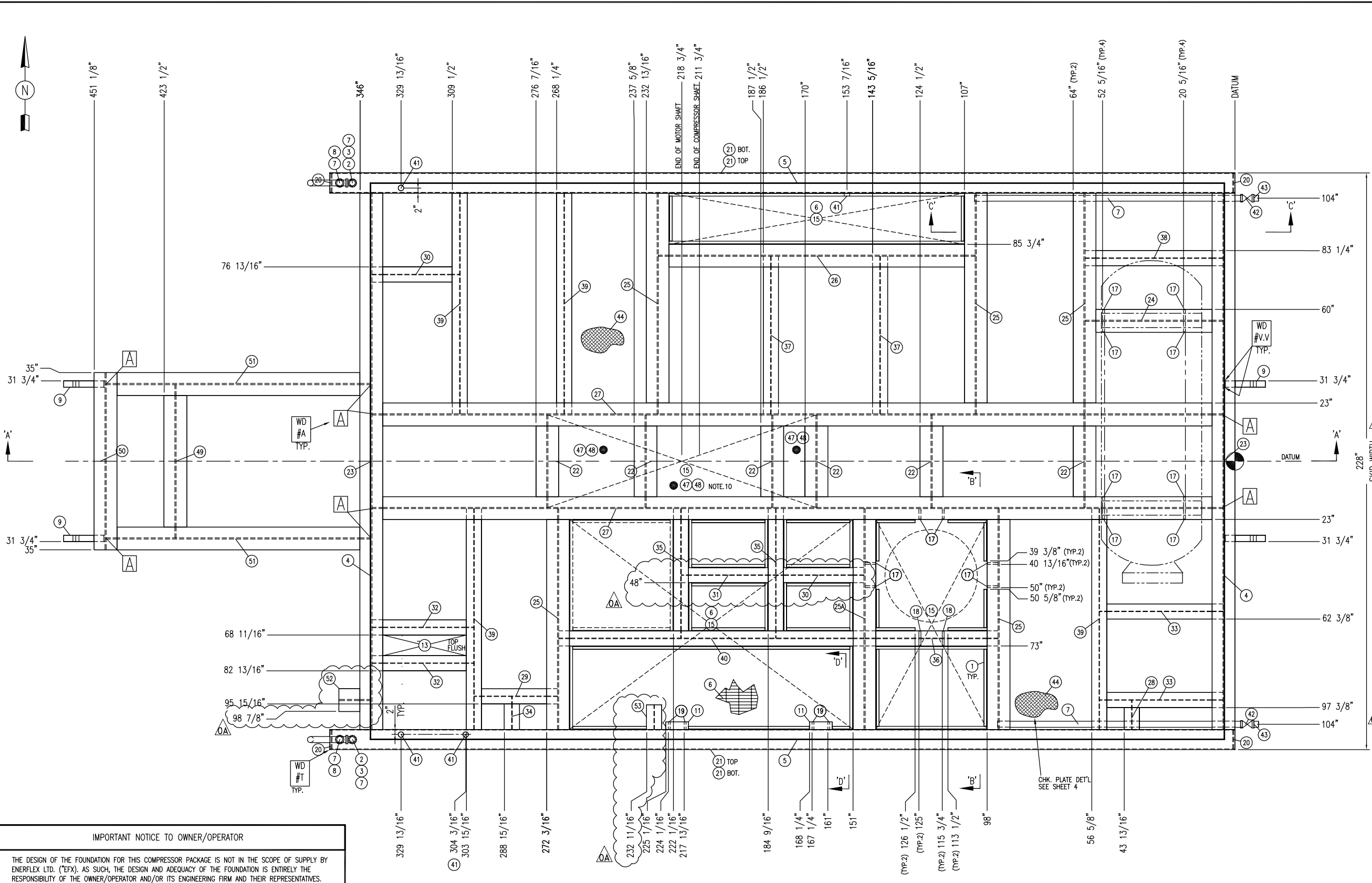
Pile / Anchor Bolt Diagram

ENERFLEX

Structural Steel

P:_SAP C&P Canada Projects\E001123-01_Meg_e-o_Tyco_Eng - H-Q Plant - 700HP EMD 5022821\4_Drafting\E001123-01-201.dwg

PLOT DATE Nov 06, 2014, 10:58



PLAN VIEW

BILL OF MATERIAL				
MARK	QTY	LONG ANNOTATION	MATERIAL	LENGTH
1	1	ANGLE, 1-1/4" X 1-1/4", 3/16" THK (C.T.S.)	G40.2144W	1200
2	2	COUPLING, 2", 3000# NPT, HALF	SA-105-N	
3	2	ELBOW, 2", 3000# NPT	SA-105-N	
4	2	FLAT BAR, 2" X 1/4" THK	G40.2144W	219 1/2
5	2	FLAT BAR, 2" X 1/4" THK	G40.2144W	337 15/16
6	1	GRATING, UNPAINTED, 1" X 3/16" (19-4) 100 FT ²	G40.2144W	100 FT ²
7	1	PIPE, 2", S/80(XS), ERW (C.T.S.)	SA-106-B	320
8	2	CAP, 2", 3000# NPT	SA-105-N	
9	2	DRIVING - WOKING LUG (P-LUG), 2-1/2", 1"-10 9/16" X 1'-4 5/16" (SEE DWG. DRAWING - WOKING LUG-35 Ton)	G40.21350WT CAT.4	
10	-	-	-	-
11	2	PLATE, 1", SMOOTH X 9 X 3	G40.2144W	9
12	-	-	-	-
13	1	PLATE, 1/4", SMOOTH X 33 X 8 1/4	G40.2144W	33
14	-	-	-	-
15	1	PLATE, 1/2", SMOOTH, 140 FT ² (C.T.S.)	G40.2144W	
16	-	-	-	-
17	14	PLATE, 3/4", SMOOTH X 22 5/16 X 4 1/8	G40.2144W	22 5/16
18	4	PLATE, 3/4", SMOOTH X 5 X 3	G40.2144W	5 1/4
19	4	PLATE, 3/4", SMOOTH X 6 11/16 X 2 11/16 (SEE DETAIL)	G40.2144W	6 11/16
20	4	PLATE, 3/8", SMOOTH X 23 3/8 X 7 3/8	G40.2144W	23 3/8
21	4	TUBING, 12" X 8", 1/4" THK	G40.21350W	358
22	6	WIDE FLANGE, 24" X 84#	G40.2150W	36 9/16
23	2	WIDE FLANGE, 24" X 84#	G40.2150W	212
24	1	WIDE FLANGE, 24" X 84#	G40.2150W	54 1/2
25	6	WIDE FLANGE, 24" X 84#	G40.2150W	87 1/4
26	1	WIDE FLANGE, 24" X 84#	G40.2150W	125 5/16
27	2	WIDE FLANGE, 24" X 84#	G40.2150W	336 1/2
28	1	WIDE FLANGE, 6" X 15#	G40.2150W	11 1/2
29	1	WIDE FLANGE, 6" X 15#	G40.2150W	32 15/16
30	2	WIDE FLANGE, 6" X 15#	G40.2150W	34 5/8
31	1	WIDE FLANGE, 6" X 15#	G40.2150W	37 1/4
32	2	WIDE FLANGE, 6" X 15#	G40.2150W	40 3/16
33	2	WIDE FLANGE, 6" X 15#	G40.2150W	48 13/16
34	1	WIDE FLANGE, 6" X 15#	G40.2150W	12 15/16
35	2	WIDE FLANGE, 6" X 15#	G40.2150W	51 3/16
36	1	WIDE FLANGE, 6" X 15#	G40.2150W	52 9/16
37	2	WIDE FLANGE, 6" X 15#	G40.2150W	62 1/4
38	1	WIDE FLANGE, 6" X 15#	G40.2150W	54 1/2
39	4	WIDE FLANGE, 6" X 15#	G40.2150W	87 1/4
40	1	WIDE FLANGE, 6" X 15#	G40.2150W	120 11/16
41	4	COUPLING, 1", 3000# NPT, HALF	SA-105-N	
42	2	GATE VALVE, 2" NPT, 800#	-	
43	2	PLUG, 2", 3000# NPT, HEX	SA-105-N	
44	1	PLATE, 3/16", CHECKER X 337 X 219	G40.2144W	520 FT ²
45	4	PLATE, 1/2", SMOOTH X 14 15/16 X 4 3/4	G40.2144W	14 15/16
46	-	-	-	-
47	60	ANCHOR STUD, NELSON, 5/8" X 9/16" LONG ANCH	-	
48	1	CONCRETE, MIX 20BSGN1, 20 MPA, STRENGTH C/W AIR, 2292 KG/M ³ , (2.0 M ³ TOTAL)	-	
49	1	WIDE FLANGE, 24" X 84#	G40.2150W	60 9/16
50	1	WIDE FLANGE, 24" X 84#	G40.2150W	70
51	2	WIDE FLANGE, 24" X 84#	G40.2150W	104 5/8
52	1	WIDE FLANGE, 24" X 84#	G40.2150W	12 5/8
53	1	WIDE FLANGE, 6" X 15#	G40.2150W	9 3/4

IMPORTANT NOTICE TO OWNER/OPERATOR

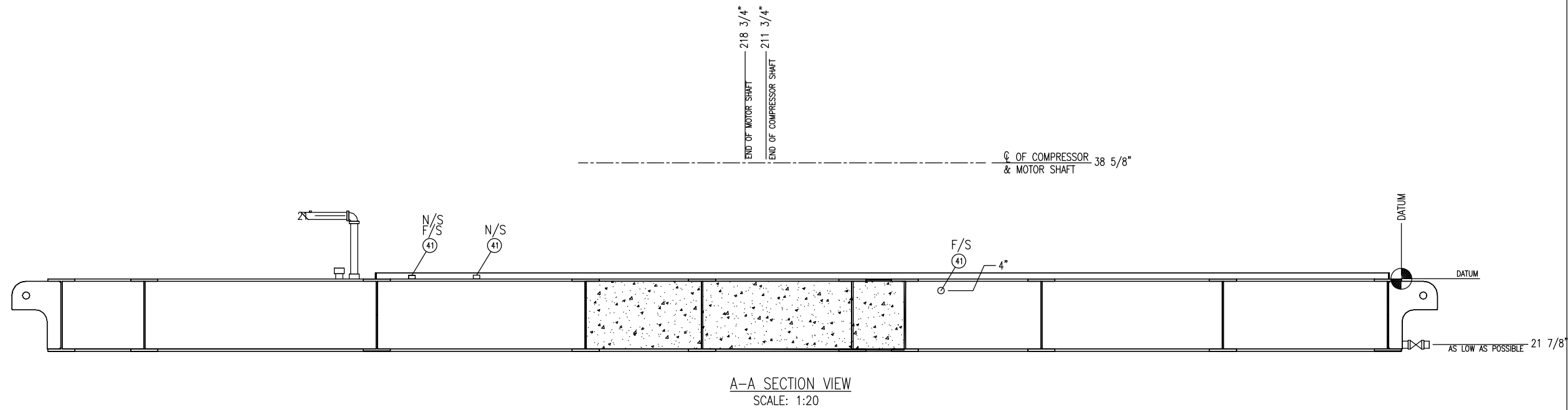
THE DESIGN OF THE FOUNDATION FOR THIS COMPRESSOR PACKAGE IS NOT IN THE SCOPE OF SUPPLY BY ENERFLEX LTD. ("EFX"). AS SUCH, THE DESIGN AND ADEQUACY OF THE FOUNDATION IS ENTIRELY THE RESPONSIBILITY OF THE OWNER/OPERATOR AND/OR ITS ENGINEERING FIRM AND THEIR REPRESENTATIVES. REFER TO EFX DWG. NO. E001123-01-351, SHEET 1 FOR FURTHER INFORMATION, AND OWNER/OPERATOR'S OBLIGATIONS AND LEGAL LIMITATIONS.

- NOTES**
- GRIND ALL ROUGH EDGES & WELD SPLATTER.
 - INTERNAL SANDBLASTING NOT REQUIRED; PREFORM VISUAL INSPECTION PRIOR TO CLOSING. INTERNAL SURFACE DEBRIS CONCERNS ARE TO BE FORWARDED TO PROJECT ENGINEER FOR CONSIDERATION.
 - AIR PRESSURE TEST GLYCOL & OIL TANKS TO 15 PSI. & HOLD FOR 15 MINUTES MINIMUM.
 - CONSTRUCT STRUCTURE FLUSH TO TOP UNLESS OTHERWISE NOTED.
 - ALL TAIL DIMENSIONS FROM REFERENCE POINT.
 - WEIGHT OF SKID 32,400 lbs. (w/o CONCRETE), 41,700 lbs. (w/ CONCRETE)
 - FOR ALL WELDS & COPING DETAILS, REFER TO DWG. E001123-01-399.
 - FULL PENETRATION & 100% MPI REQUIRED ON THE LIFTING LUGS.
 - ALLOWABLE MATERIAL SUBSTITUTIONS:
SA-105N FOR SA-105
SA-516-70N FOR SA-516-70
SA-516-70 FOR SA-36
 - CONCRETE REQUIRED UNDER MAJOR EQUIPMENT, FILL TO TOP OF INDICATED REGION, INCLUDE RAISED BASE.
 - SEAL PAN ONLY REQUIRED FOR GRATING AREA, ELEVATION AS SHOWN ON THE DRAWING.

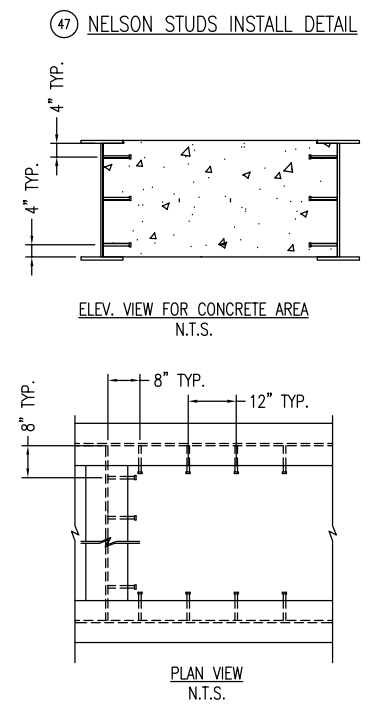
ISSUED FOR CONSTRUCTION
NAME: H.SUN DATE: NOV 06/14

DATE	OCT 10/14	SCALE	NTS	MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401	ENERFLEX Calgary, Alberta, Canada	SKID STEEL STRUCTURE PLAN VIEW	DWG NO E001123-01-301	SHT 1	REV 0A		
DRAWN BY	H.SUN	CHECKED BY	K.OXFORD							APPROVED BY	N.REZAEYAN
PROJECT MANAGER	B.LANGER	PROJECT ENGINEER	N.REZAEYAN								
REV	DESCRIPTION	DATE	BY	APR	APEGGA PERMIT No: P8651	OPER CODE 400	WORK ORDER E001123-01				
0A	ADDED STEEL STRUCTURE AS PER STUDY	NOV 6/14	HS	NR							
0	ISSUED FOR CONSTRUCTION	NOV 3/14	HS	NR							

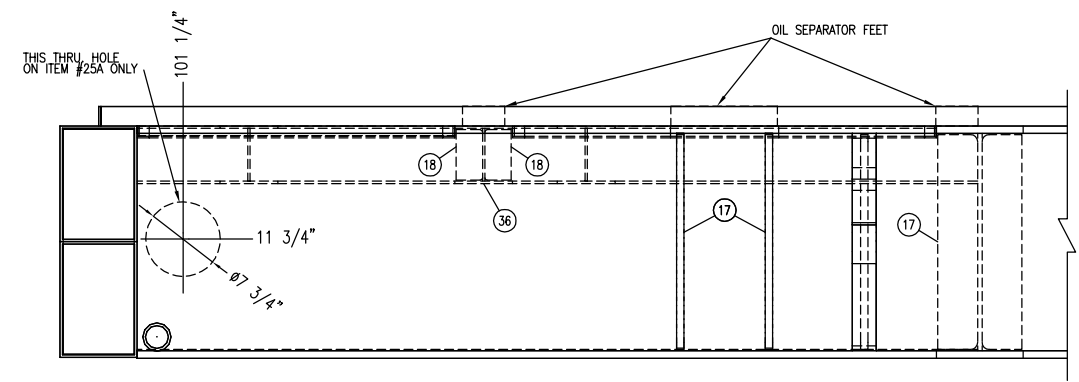
THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.



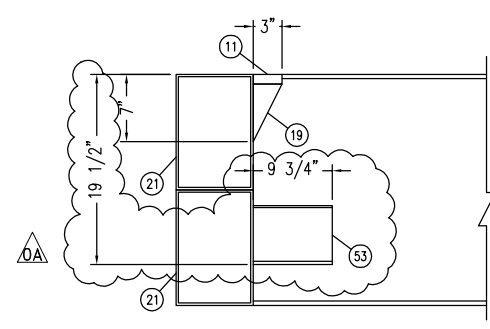
A-A SECTION VIEW
SCALE: 1:20



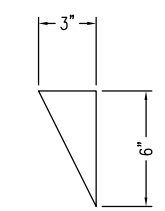
- NOTES
1. A SPACING OF 12" IS TO BE USED FOR STUD LAYOUT.
 2. TWO ROWS OF NELSON STUDS SHALL BE PLACED IN CONCRETE, 4" FROM TOP AND BOTTOM OF THE CONCRETE.



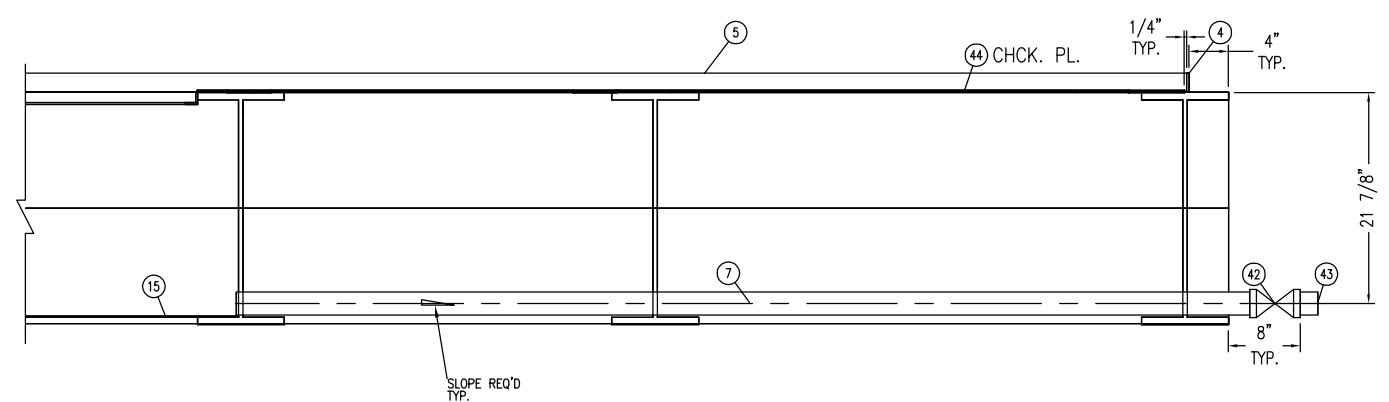
B-B SECTION VIEW
SCALE: 1:10



D-D SECTION VIEW
SCALE: 1:10



ITEM #19 DETAIL
SCALE: 1:5



C-C SECTION VIEW
SCALE: 1:10

ISSUED FOR CONSTRUCTION
NAME: H.SUN DATE: NOV 06/14

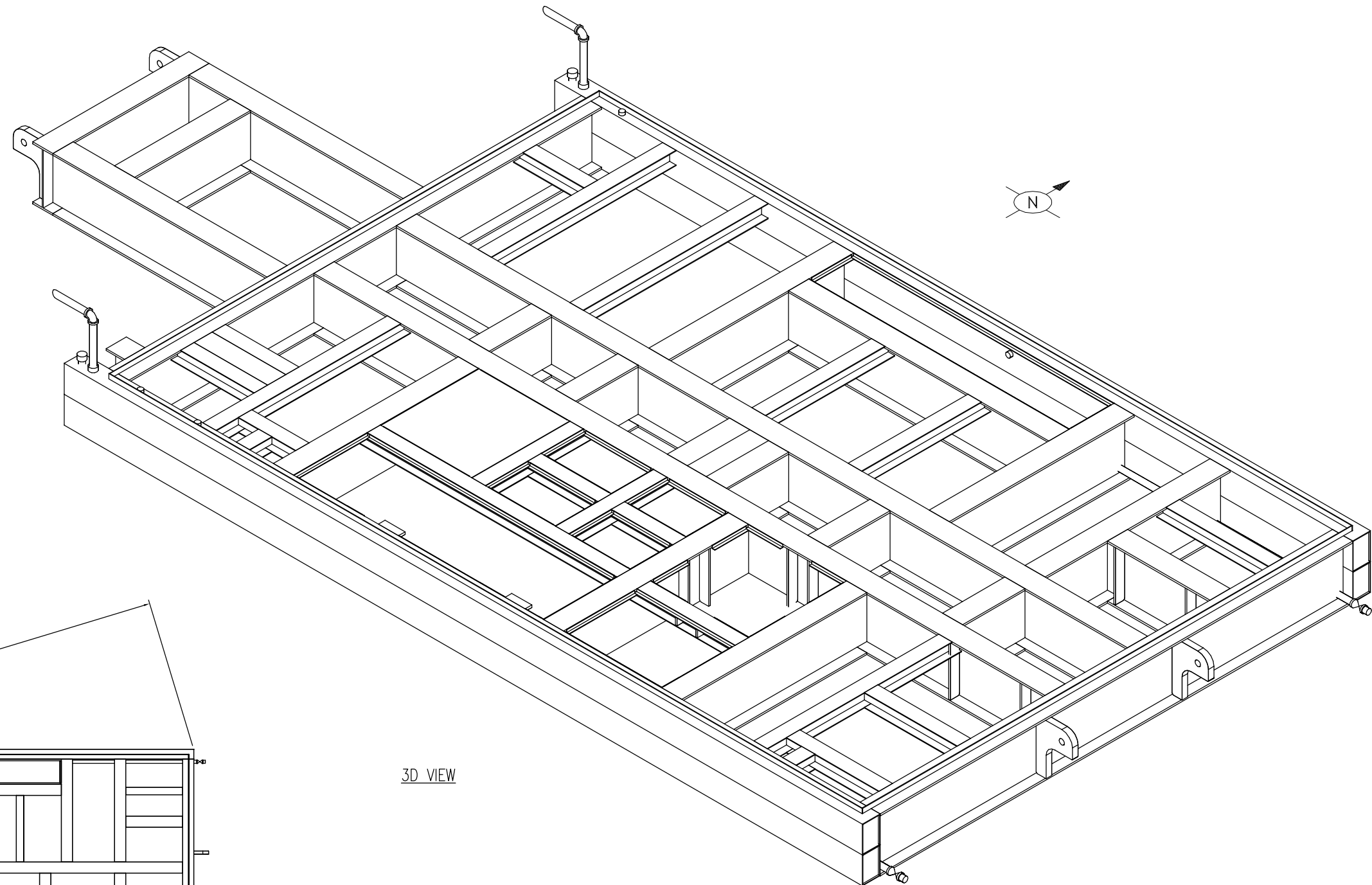
NOTE:
ALL TAIL DIMENSIONS ARE TAKEN FROM SKID DATUM

DATE: OCT 10/14		SCALE: NTS		MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada	SKID STEEL STRUCTURE SECTIONS VIEW
DRAWN BY: H.SUN		CHECKED BY: K.OXFORD		APPROVED BY: N.REZAEYAN			
PROJECT MANAGER: B.LANGER		PROJECT ENGINEER: N.REZAEYAN		CUST PO: N/A		DWG NO: E001123-01-301	SHT: 2
APEGGA PERMIT No: P8651		OPER CODE: 400		WORK ORDER: E001123-01			
REV	DESCRIPTION	DATE	BY	APR			
0A	ADDED STEEL STRUCTURE AS PER STUDY	NOV 6/14	HS	NR			
0	ISSUED FOR CONSTRUCTION	NOV 3/14	HS	NR			

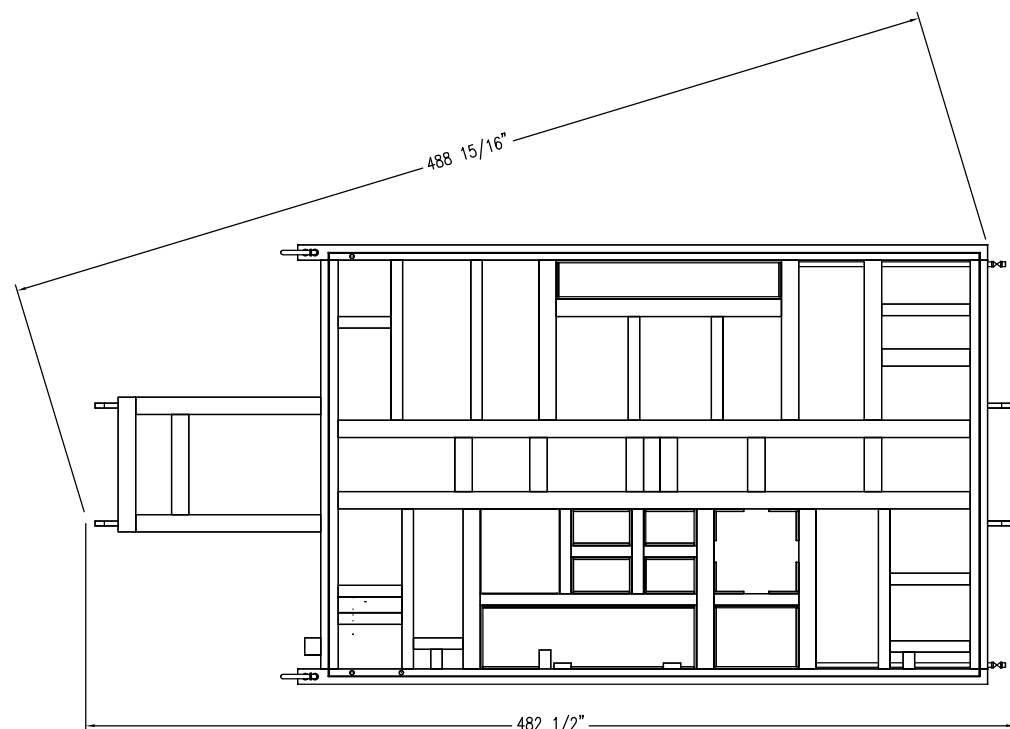
THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

PLOT DATE: Nov 06, 2014, 10:00 AM
F:_SAP C&P Canada Projects\001123-01 Meg c-o Type Eng - Hi-Q Plant - 700HP EMD 5022821\4. Drafting\E001123-01-201.dwg

P:_SAP C&P Canada Projects\E001123-01 Meg e-o Type Eng - H-Q Plant - 700HP EMD 5022821\4. Drafting\E001123-01-201.dwg
 PLOT DATE: Nov 06, 2014, hsun



3D VIEW



SQUARE VIEW

ISSUED FOR CONSTRUCTION

NAME: H.SUN DATE: NOV 06/14

DATE	OCT 10/14	SCALE	NTS	MEG ENERGY 1500 BPD HI-Q FD PILOT DRU OFF-GAS COMPRESSOR 5K-1401		ENERFLEX Calgary, Alberta, Canada	SKID STEEL STRUCTURE 3D VIEW	DWG NO E001123-01-301	SHT 3	REV 0A
DRAWN BY	H.SUN	CHECKED BY	K.OXFORD	APPROVED BY	N.REZAEYAN					
PROJECT MANAGER	B.LANGER	PROJECT ENGINEER	N.REZAEYAN	CUST PO	N/A					
REV	DESCRIPTION	DATE	BY	APR	APEGGA PERMIT No: P8651	OPER CODE 400	WORK ORDER E001123-01			
0A	ADDED STEEL STRUCTURE AS PER STUDY	NOV 6/14	HS	NR						
0	ISSUED FOR CONSTRUCTION	NOV 3/14	HS	NR						

THE INFORMATION CONTAINED HEREIN IS THE CONFIDENTIAL PROPERTY OF ENERFLEX, LTD. AND IS NOT FOR PUBLICATION, AND NO PART THEREOF SHALL BE COPIED OR COMMUNICATED TO A THIRD PARTY WITHOUT AUTHORIZATION FROM ENERFLEX, LTD.

ENERFLEX

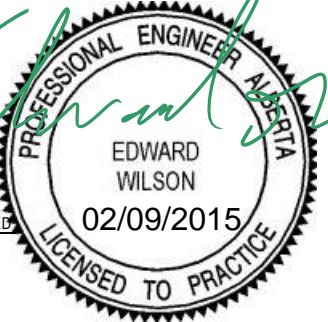
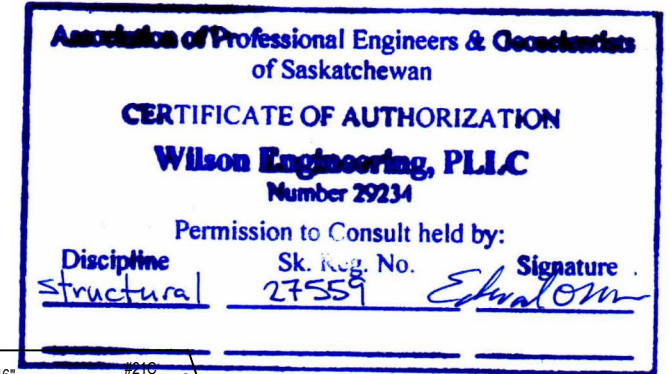
Building Drawing(s)

BUILDING NOTES:

1. EXTERIOR WALLS: 22GA GALVALUME
2. EXTERIOR ROOF: 22GA GALVALUME
3. EXTERIOR TRIM: 22GA GALVALUME
4. MAN DOOR(S) COLOUR: GREY
5. INTERIOR LINER: 24GA WHITE FLUTED ALUMINUM
6. WALL INSULATION: R-12 FIBERGLASS BATT
7. ROOF INSULATION: R-12 FIBERGLASS BATT
8. VAPOUR BARRIER: HEAVY
9. SURFACE AREA: -1,929 SQR/FT
10. APPROX. SHIP WEIGHT: - 8,200 LBS BUILDING ONLY
11. 2 - DOUBLE DOOR CANOPIES (SHIP LOOSE)
12. SKID PATCHING REQUIRED
13. REGULAR FASTENERS

HVAC SUPPLIED:

- 2 - 18" x 32" MANUALLY OPERABLE LOUVERS c/w BIRD SCREENS
- 1 - 12" XP. WALL MOUNTED EXHAUST FAN 115/230v, 1ph, 60hz (8ACPH) CLASS1, DIV1, GROUP C&D c/w DAMPER & STORM HOOD



APX. OVERALL BLDG. DIMENSIONS:
 WIDTH = 243"
 HEIGHT = 206" PLUS SKID
 SAFETY TIE OFF HEIGHT = 212" PLUS SKID

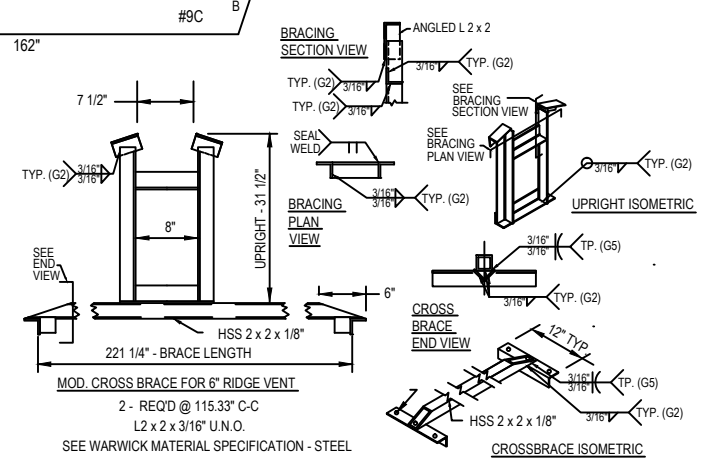
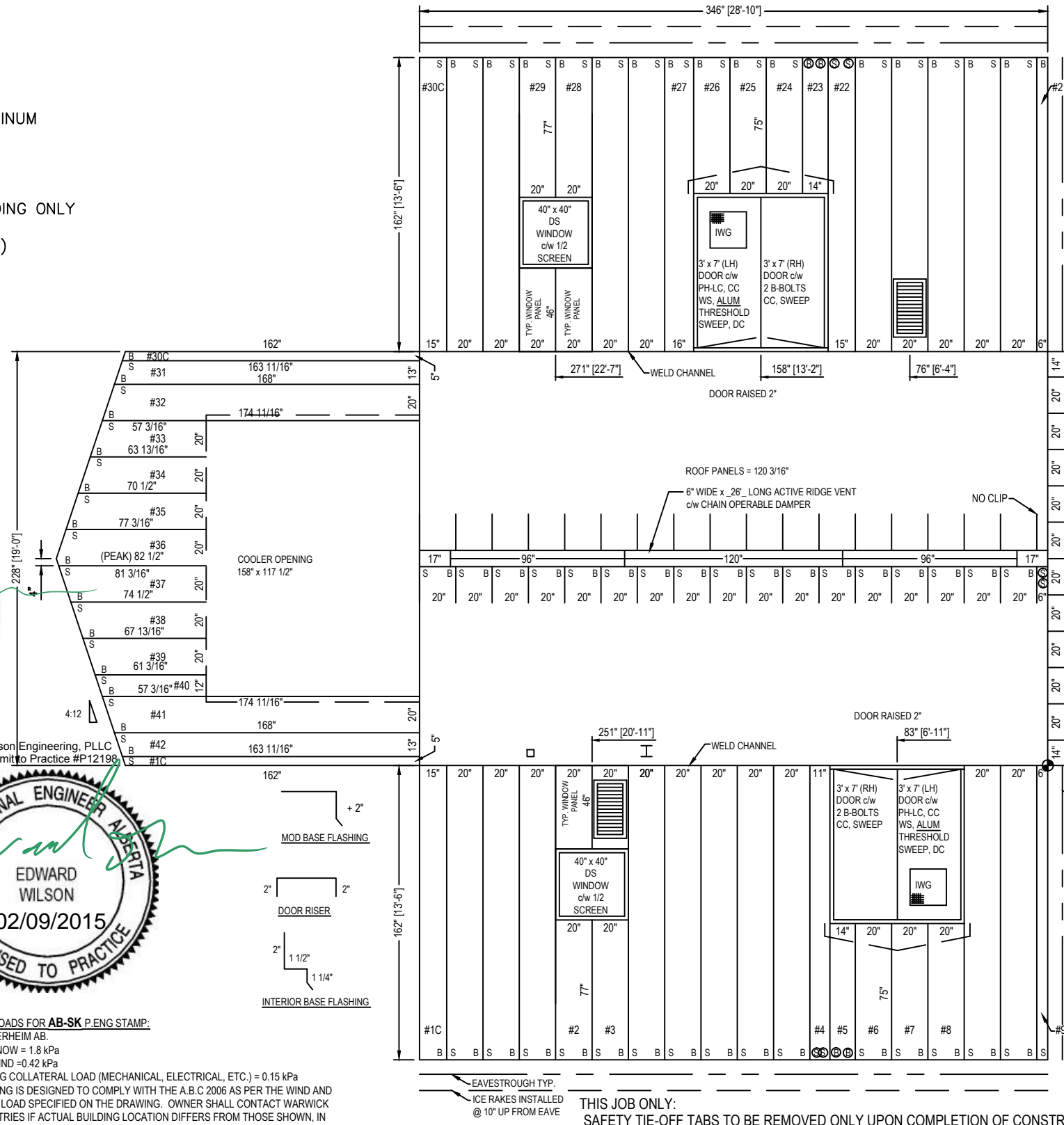
IN THIS PROJECT WE USED:
 3"WP NO R FOR WALLS
 3"RP-6 FOR ROOF

SCHEDULE OF FASTENERS:

- BASE CHANNEL ANCHORING: (1) #14 x 1 1/2" SCREW OR WELDED WASHER 1 PER PANEL MIN.
- WALL PANEL TO BASE CHANNEL: (4) #10 x 3/4" w/ WASHER
- WALL PANEL RIB TO BASE CHANNEL & TOP CHANNEL: (1) #8 x 1/2"
- WALL PANEL TO TOP CHANNEL: (4) #8 x 1/2"
- ROOF PANEL TO DRIP CHANNEL: (6) #10 x 3/4" w/ WASHER
- ROOF PANEL TO RIDGE: (6) #10 x 3/4"
- DRIP CHANNEL TO TOP CHANNEL: (1) #8 x 1/2" EVERY 12" STAGGERED
- CROSS BRACE: (4) 3/8" Ø x 1 1/4" BOLTS (GRADE 5) EA. END
- ICE RAKES: (1) #14 x 1 1/2" PER PANEL RIB
- STITCH SCREWS:**
- WALL PANELS: (1) #8 x 1/2" EVERY 36"
- ROOF PANELS: (1) #10 x 3/4" EVERY 36" TOP & SIDE OF RIB

DOOR LEGEND	
DS = DOUBLE GLAZED	CC = CHECK CHAIN
IWG = INDUSTRIAL WIRE GLASS	WS = WEATHERSTRIPPING
RH = RIGHT HAND SWING	DC = HYDRAULIC CLOSURE
LH = LEFT HAND SWING	SG = INTERIOR SLIDE GATE
PH = PANIC HARDWARE	GA = GAUGE
LC = LOCK CYLINDER	INS = INSULATED
R-12 = CORE INSULATION (R-12)	LS = LOCK SET

SITE LOADS FOR AB-SK P.ENG STAMP:
 BRUDERHEIM AB.
 1/50 SNOW = 1.8 kPa
 1/50 WIND = 0.42 kPa
 CEILING COLLATERAL LOAD (MECHANICAL, ELECTRICAL, ETC.) = 0.15 kPa
 BUILDING IS DESIGNED TO COMPLY WITH THE A.B.C 2006 AS PER THE WIND AND SNOW LOAD SPECIFIED ON THE DRAWING. OWNER SHALL CONTACT WARWICK INDUSTRIES IF ACTUAL BUILDING LOCATION DIFFERS FROM THOSE SHOWN, IN ORDER TO VALIDATE THE SUITABILITY OF DESIGN FOR THE INTENDED LOCATION.



THIS JOB ONLY:
 SAFETY TIE-OFF TABS TO BE REMOVED ONLY UPON COMPLETION OF CONSTRUCTION

NO.	DATE	REVISION	DRN	CHK	ENG	APR
0	9/12/2014	FOR APPROVAL	AD	AD	EW	AD
1	6/02/2015	FOR CONSTRUCTION	AD	AD	EW	AD

GENERAL NOTES

1. ALL WALL PANELS ARE TO BE TYPICAL B/S (BIG/SMALL) PANELS UNLESS NOTED OTHERWISE.
2. ALL DIMENSIONS ARE IN IMPERIAL FOR SHOP USE. METRIC DIMENSIONS ARE REFERENCE ONLY.
3. ALL DIMENSIONS TO WINDOWS AND DOORS ARE TO ROUGH OPENINGS.
4. DO NOT SCALE DRAWING.
5. CONFIRM LOCATIONS OF ANY FANS AND LOUVERS PRIOR TO INSTALLATION.
6. CENTRE BUILDING ON SKID.
7. BUILDING INSTALLATION AND ASSEMBLY SHALL BE AS PER WARWICK STRUCTURES GROUP LTD SELF-FRAME INSTALLATION MANUAL AND DETAILS. WHERE THERE ARE CONFLICTS INFORMATION ON DRAWINGS SHALL BE TAKEN AS CORRECT.
8. "POST CONSTRUCTION DRAWINGS" ARE GENERATED FROM CONSTRUCTION CHANGE INFORMATION FORWARDED TO WARWICK STRUCTURES GROUP LTD. BY THE OWNERS FIELD SUPERVISORS AND OR HIRED CONTRACTORS. ANY CHANGES NOT DOCUMENTED WILL NOT APPEAR ON THE DRAWINGS AND THEREFORE THE DRAWING MAY NOT BE AN ACCURATE REPRESENTATION OF THE CONSTRUCTED FACILITY.
9. PRIOR TO THE COMMENCEMENT OF ANY CONSTRUCTION AND OR EXCAVATION IT SHALL BE THE RESPONSIBILITY OF THE OWNERS REPRESENTATIVE TO VERIFY THE LOCATION AND STATUS OF ANY PIPING, ELECTRICAL EQUIPMENT OR BUILDINGS.
10. ANY REVISIONS MADE TO EXISTING EQUIPMENT, ELECTRICAL OR INSTRUMENTATION ON A FACILITY NOT DESIGNED BY WARWICK STRUCTURES GROUP LTD. IS ONLY SHOWN AS REPRESENTATION OF WHAT EXISTS AND MUST BE VERIFIED BY THE OWNER.



ENGINEERING RECORD	
BY	DATE
DRAWN	AD 9/12/2014
CHECKED	AD 6/02/2015
DESIGNED	-
REVIEWED	-

ENERFLEX	
E001123-01 MEG ENERGY DRU OFF GAS COMP. 5K-1401 PANEL LAYOUT	
DRAWING NUMBER	REV
W34148-01	0

CONTRACT No.	4500166859
PROJECT No.	W34148