

- GENERAL NOTES**
1. ALL PRESSURE PIPING TO BE BUILT IN ACCORDANCE WITH ASME B31.3 2010
 2. ALL PRESSURE PIPING IS DESIGNED WITH 1/16" CORROSION ALLOWANCE
 3. ALL PRESSURE PIPING TO BE HYDROSTATICALLY TESTED 1.5 X DESIGN @ AMBIENT
 4. ALL TUBING TO BE 304SS WITH CS FITTINGS (SWAGelok) 1/4"-1/2" 0.035" 3/4"-1" 0.049"

C-10
 FEED AIR COMPRESSOR
 LEROI LG30143H5FE
 L/D 1.66 VI 5.0
 1500 SCFM @ 1800 RPM
 MOP: 200 PSIG
 MAWP: 220 PSIG

V-10
 LUBE OIL SEPARATOR
 LEROI 69-854-7 48543
 SIZE: 36" OD X 60" E/E
 MAWP: 230 PSIG
 -20/400F
 CRN#: TBD

E-10A/B
 LUBE OIL COOLER
 API SB7M-60 X 2
 DUTY: 1,360,000 BTU/HR
 MAWP: 450 PSIG
 -148/365F
 CRN#: TBD

E-11
 FEED AIR AFTERCOOLER
 AIR-X 108EH - IC1
 DUTY: 152,270 BTU/HR
 MAWP: 230 PSIG
 -20/300F
 MANUAL SHUTTER OPERATED
 CRN# V4945.23
 SERIAL# 110466.5

WARM GLYCOL
 FE11001-PID-04
 TO AUX/CLOW COOLER E-41

COLD GLYCOL
 FE11001-PID-04
 FROM CLOW PUMP P-41

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PROCESS FLOW DIAGRAM	FE11001-PFD-01	2	A	ISSUED FOR REVIEW	05.07.2011	CM	JW	JC
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			3	AS-BUILT	12.13.2011	JC	CK	TS

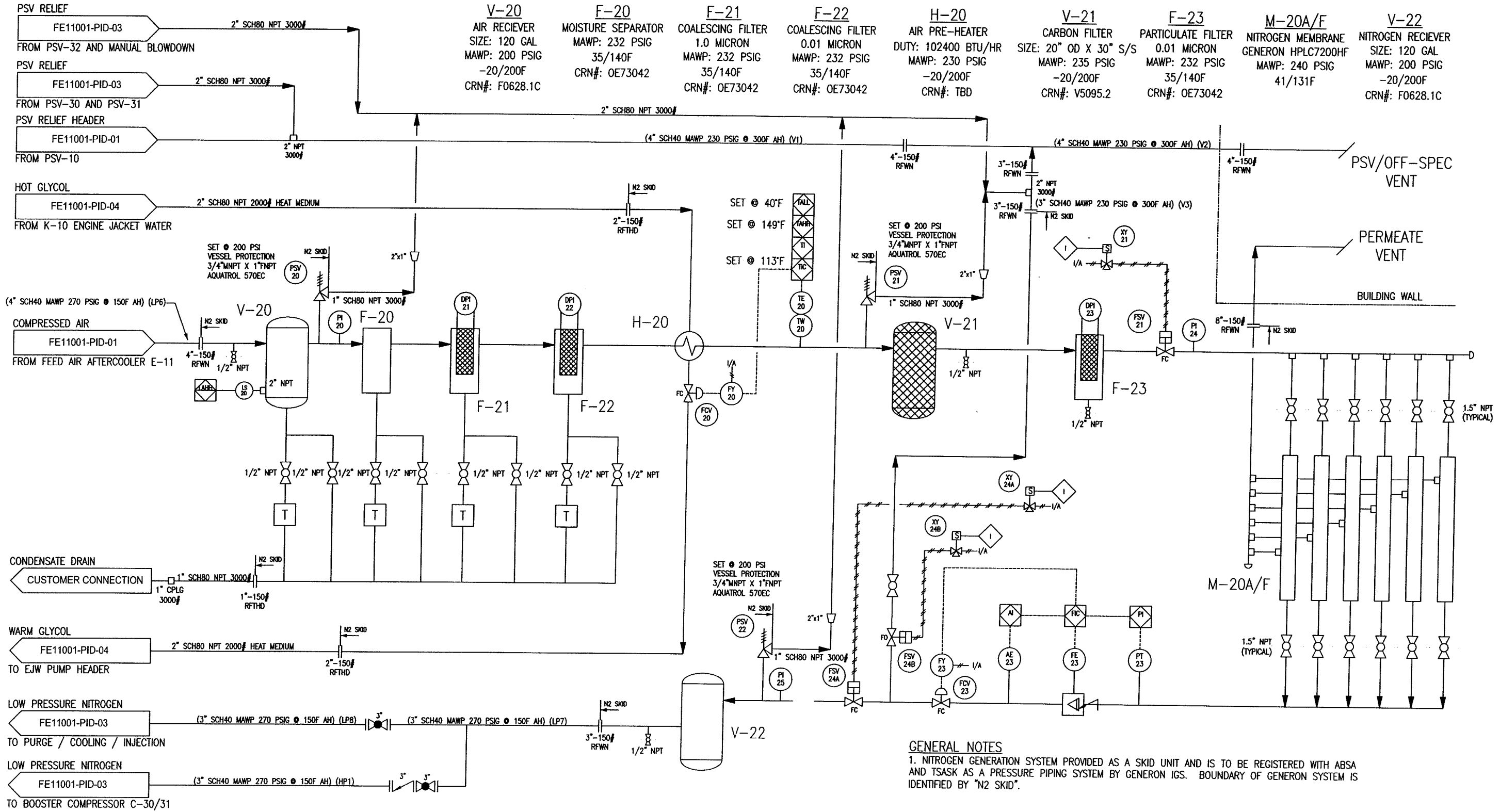
FUEL ENERGY SERVICES LTD.

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**NITROGEN GENERATION / INJECTION
 FEED AIR COMPRESSOR PROCESS DIAGRAM**

PROJECT: FE11001-PID-01
 REV: 3
 DWG: FE11001-PID-01
 SHEET: 1/8

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GENERAL NOTES
 1. NITROGEN GENERATION SYSTEM PROVIDED AS A SKID UNIT AND IS TO BE REGISTERED WITH ABSA AND TSASK AS A PRESSURE PIPING SYSTEM BY GENERON IGS. BOUNDARY OF GENERON SYSTEM IS IDENTIFIED BY "N2 SKID".

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**NITROGEN GENERATION / INJECTION
 NITROGEN MEMBRANE PROCESS DIAGRAM**

PROJECT: FE11001-PID-02
 REV: 3
 DWG: FE11001-PID-02
 SHEET: 2/8

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GENERAL NOTES

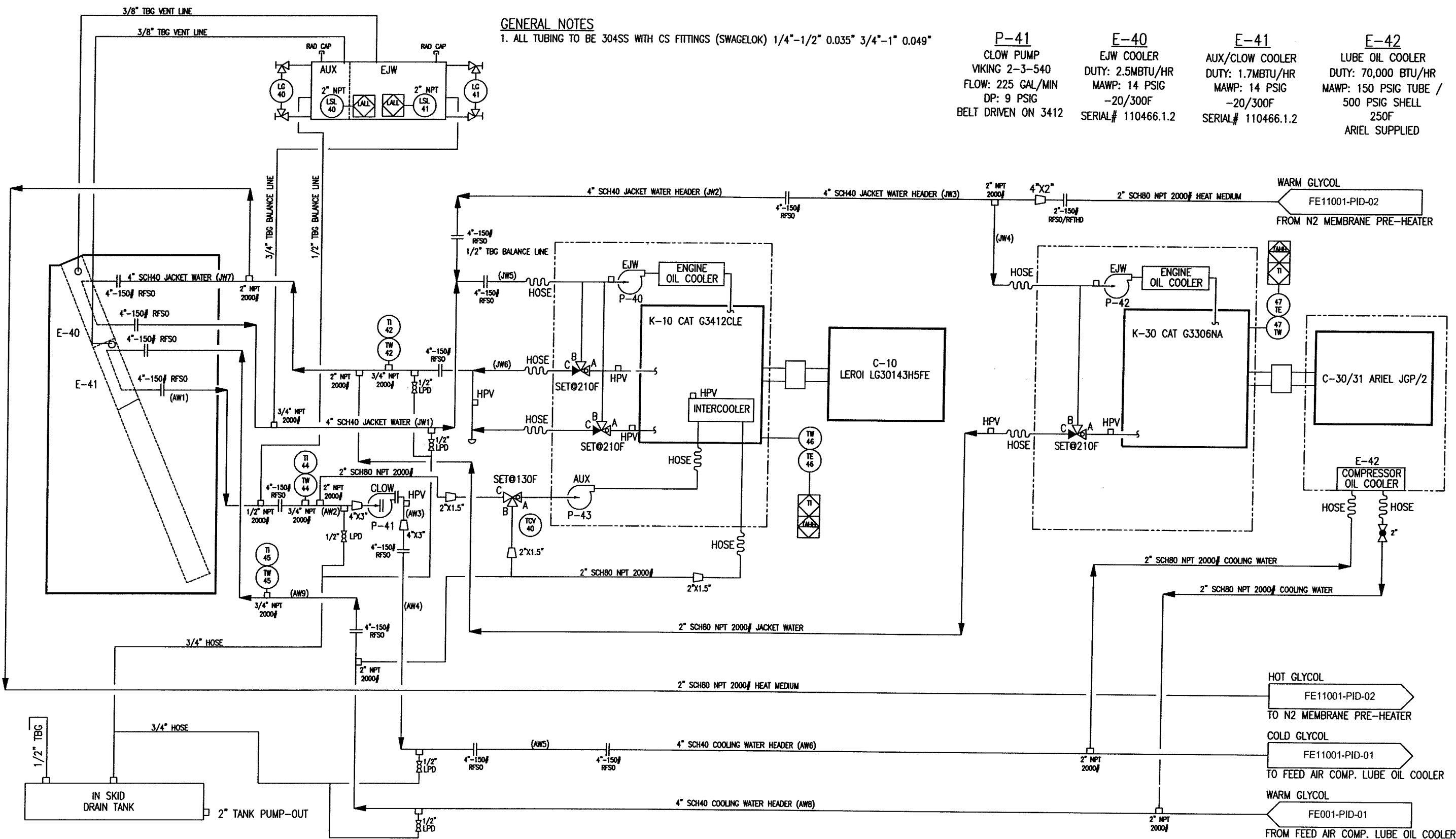
1. ALL TUBING TO BE 304SS WITH CS FITTINGS (SWAGELOK) 1/4"-1/2" 0.035" 3/4"-1" 0.049"

P-41
CLOW PUMP
VIKING 2-3-540
FLOW: 225 GAL/MIN
DP: 9 PSIG
BELT DRIVEN ON 3412

E-40
EJW COOLER
DUTY: 2.5MBTU/HR
MAWP: 14 PSIG
-20/300F
SERIAL# 110466.1.2

E-41
AUX/CLOW COOLER
DUTY: 1.7MBTU/HR
MAWP: 14 PSIG
-20/300F
SERIAL# 110466.1.2

E-42
LUBE OIL COOLER
DUTY: 70,000 BTU/HR
MAWP: 150 PSIG TUBE /
500 PSIG SHELL
250F
ARIEL SUPPLIED



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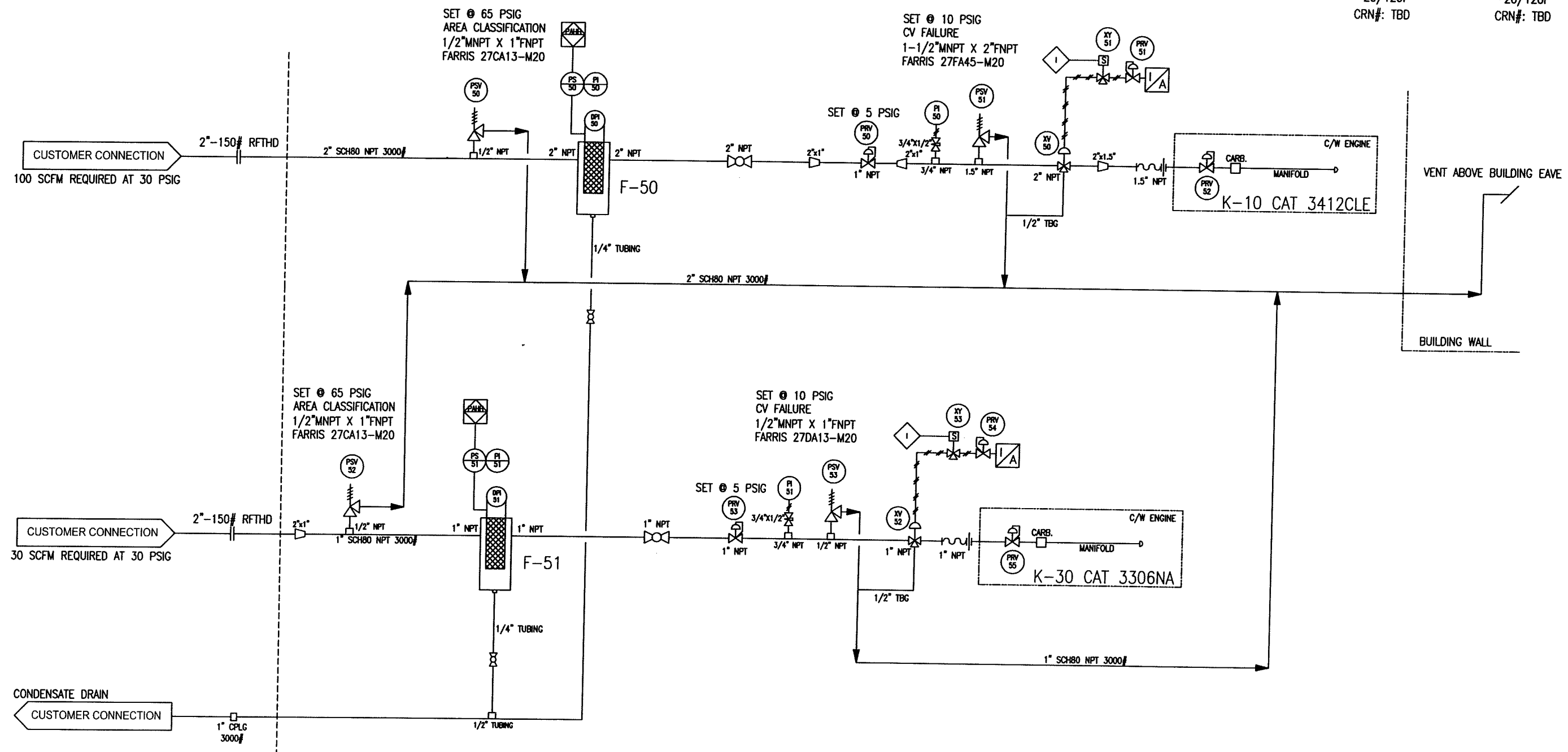
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T
NITROGEN GENERATION / INJECTION
COOLANT UTILITY DIAGRAM
PROJECT REV DWG SHEET
3 FE11001-PID-04 4/8

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F-50
 FUEL GAS FILTER
 HEADLINE 390AF-50C
 MAWP: 250 PSIG
 -20/120F
 CRN#: TBD

F-51
 FUEL GAS FILTER
 HEADLINE 385AF-50C
 MAWP: 250 PSIG
 -20/120F
 CRN#: TBD



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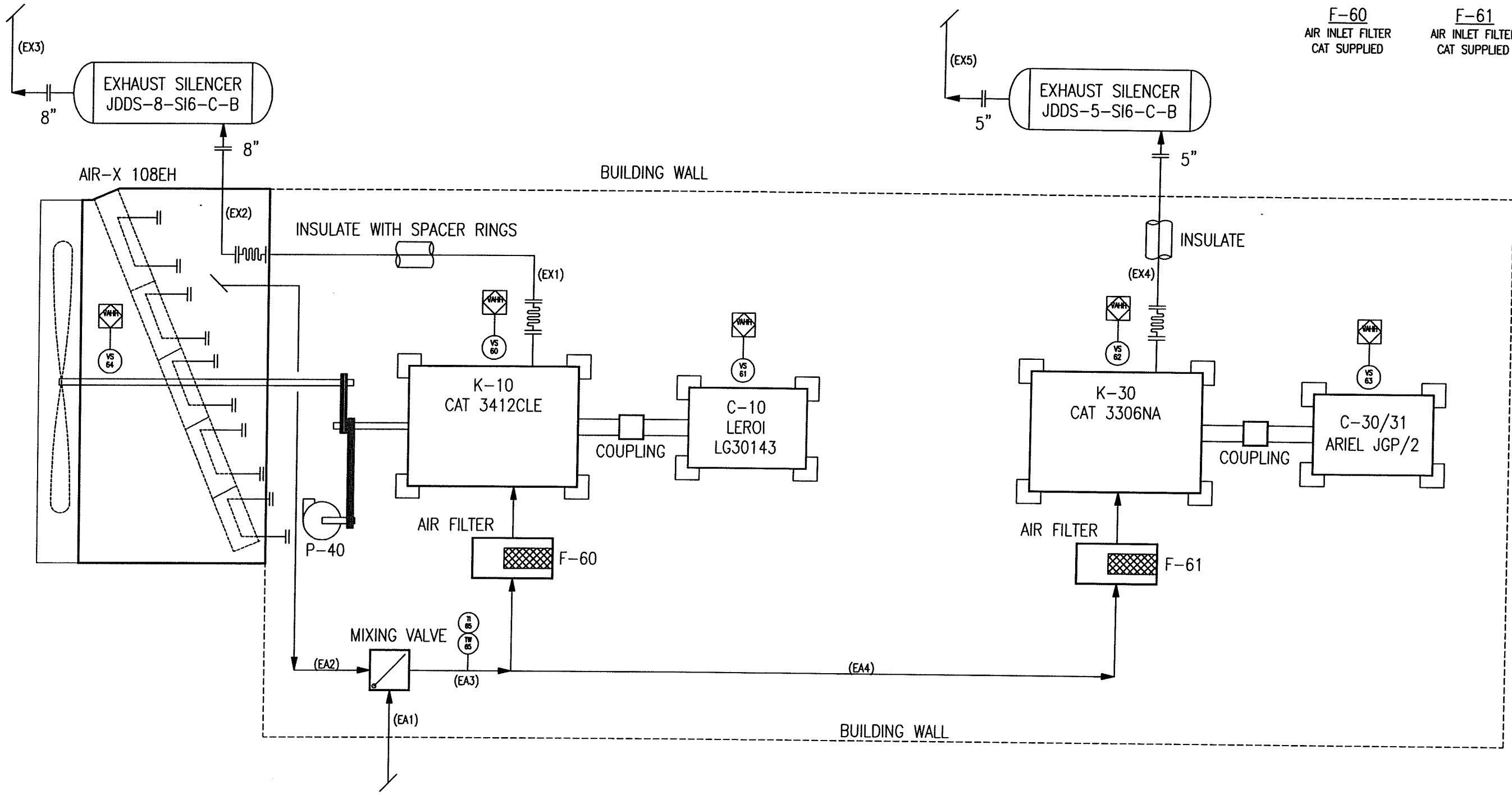
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PROJECT: _____ REV: 3 DWG: FE11001-PID-05 SHEET: 5/8

NITROGEN GENERATION / INJECTION
 FUEL GAS UTILITY DIAGRAM

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F-60 AIR INLET FILTER CAT SUPPLIED
 F-61 AIR INLET FILTER CAT SUPPLIED

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STAMP

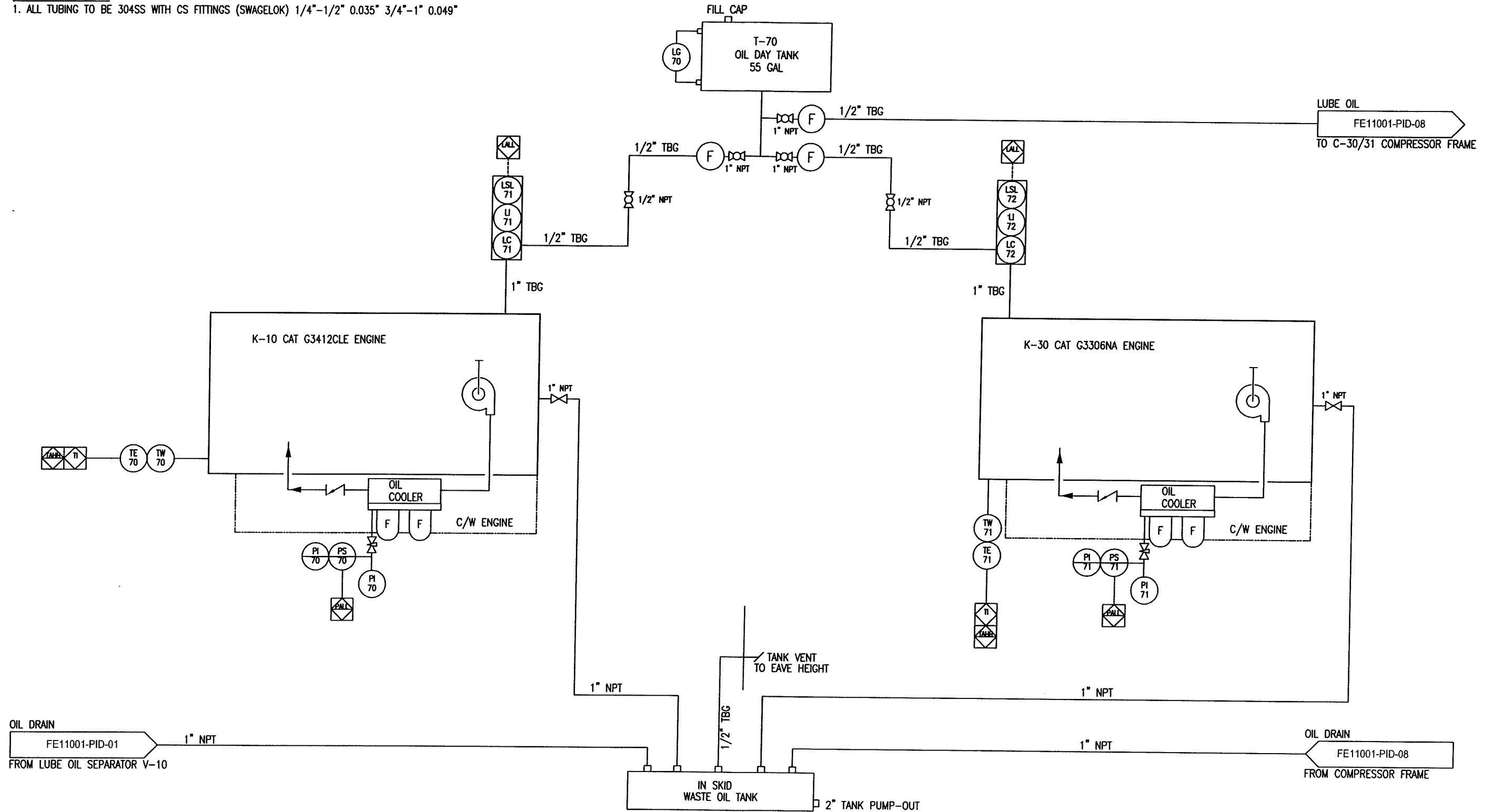
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T
 NITROGEN GENERATION / INJECTION
 MAJOR EQUIPMENT UTILITY DIAGRAM
 PROJECT REV DWG SHEET
 3 6/8
 FE11001-PID-06

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			3	AS-BUILT	12.13.2011	JC	CK	TS	

PROJECT: _____
 REV: 3
 DWG: FE11001-PID-07
 SHEET: 7/8

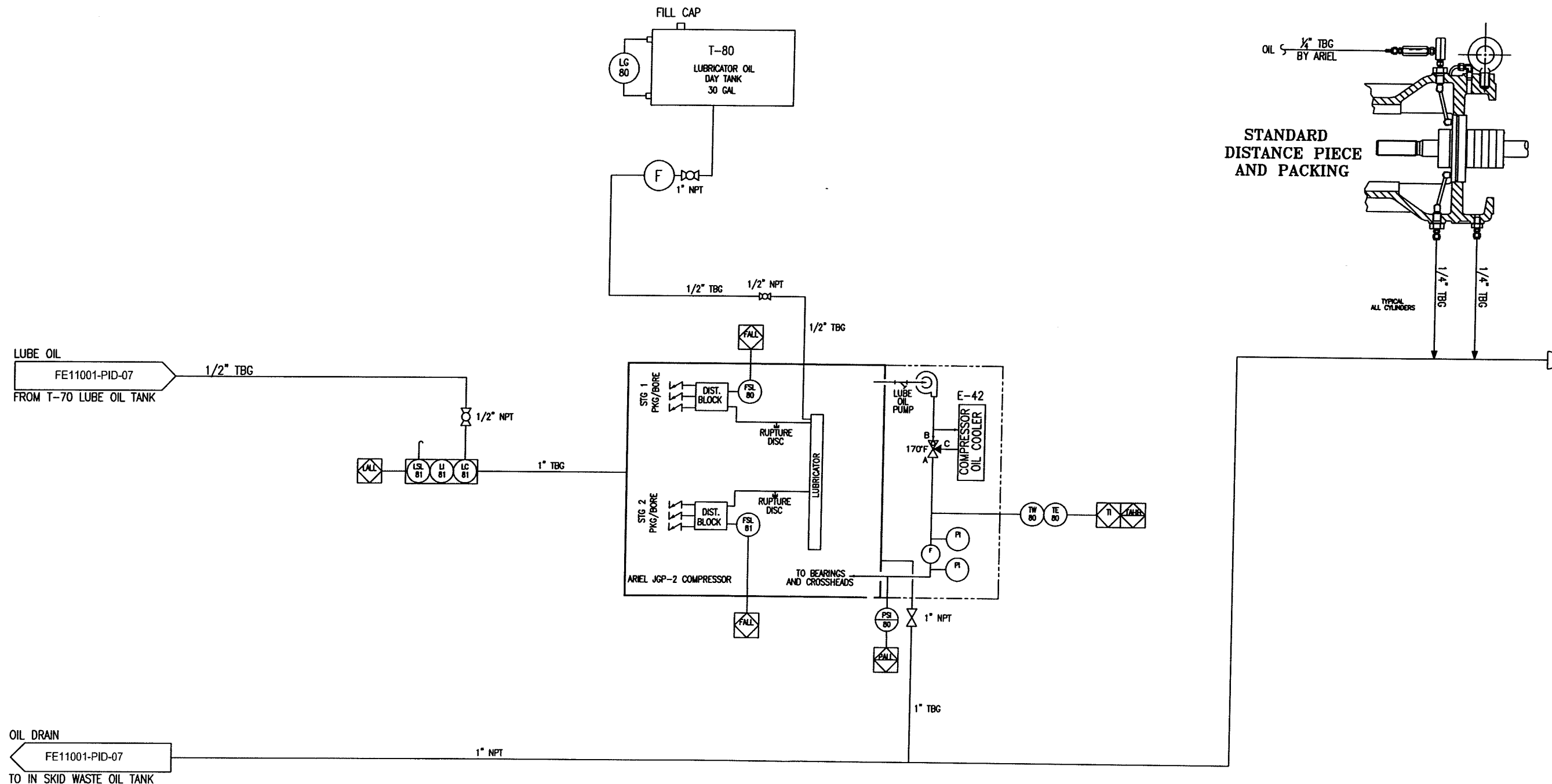
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NITROGEN GENERATION / INJECTION
 ENGINE OIL UTILITY DIAGRAM

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NITROGEN GENERATION / INJECTION
COMPRESSOR OIL UTILITY DIAGRAM

PROJECT	REV	DWG	SHEET
	3	FE11001-PID-08	8/8

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