

BILL OF MATERIALS - DUPLEX COMPAIR/GD L07-130 INSTRUMENT AIR COMPRESSOR PACKAGE (FC1-WS1-PK-1300)

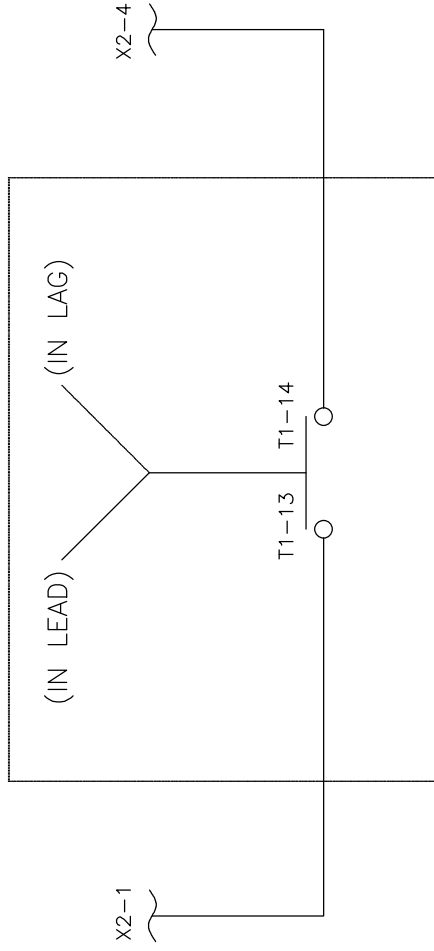
JOB: NW2165-RH
 CLIENT: CENOVUS C/O PROPAK
 PO# P482340
 LOCATION: FROSTER CREEK WEST PADS SAP (WS1 STORAGE FACILITY), AB
 LSD: TBA
 DOCUMENT #: NW2165BOM
 REV.4



AS BUILT

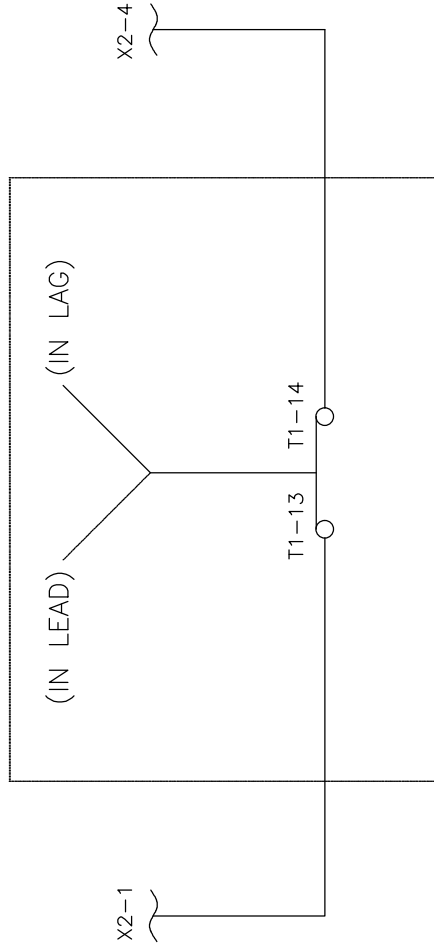
ITEM	QTY.	DESCRIPTION	PART #
FC1-WS1-K-1300A/B	2	Compressor, CompAir/GD L07-130 Rotary Screw, 36 SCFM @ 105 PSIG, c/w 10HP motor, 3600 RPM 575V/3PH/60Hz (Non-yellow & Swagelok)	L07GD-130-575
FC1-WS1-V-1310	1	Wet Air Receiver, Samuel, 120 gal. Vertical c/w skirt, 24" O.D. x 67" long, rated for a MAWP of 200 PSIG @ 450° F, MDMT: -20° F @ 200 PSI, C.A 0.063" CRN	A13671
FC1-WS1-F-1330	1	Heatless Air Dryer, Northwest NW40 w/ Ecotronic, rated for 42 SCFM @ 105 PSIG inlet pressure for a -40° F. Dewpoint, 115V/1 PH/60Hz electrical supply, rated for MAWP of 150 PSIG, c/w SS tubing & fittings, 3000# fittings, NEMA 4 enclosure. (Non-yellow & Swagelok)	NW40-Y
FC1-WS1-F-1320A/1320B	2	Pre-Filter, ASCO Coalescer 0.01 Micron	F901D-04GZ
FC1-WS1-F-1340A/1340B	2	After-Filter, ASCO Coalescer 1.0 Micron	F901H-04GZ
3/4BS-20A20	9	3/4", Ball Valves, KF or others from AML, 2000psig, CWP, SW, ASTM A105-N, Soft seat, Full port,	JAG FLOCOMPONENTS B3 SERIES P# B3-F07SW09N
1/2BT-20A20	8	1/2", Ball Valves, KF or others from AML, 2000psig, THRD, ASTM A105-N	TBA
3/4CS-08A20	4	3/4", Check Valves, Velan or others from AML, CL800, SW, ASTM A105-N, PISTON, TRIM 8,	DSI P# 4311A818
FC1-WS1-PSV-1300A/B	2	Relief Valve, Farris, 1/2" RF INLET x 1" RF OUTLET, Rated for 196 SCFM, Set @ 150 PSI, CRN. C/W Test Cert.	27CA13-170
FC1-WS1-T-1300	1	Condensate Drain Tank, Samuel, 60 gal. 20" O.D. X 48" long, rated for a MAWP of 200 PSIG @ 400 °F, ASME labeled (Shipped Loose)	A10029
FC1-WS1-80-LG-1300	1	Level Gauge, Jerguson, Series 300L, size 111, reflex sight glass, 3/4" NPT end connected, CS chamber and cover	111R300L-A696C CS-3/4" JRG
FC1-WS1-PSV-1310	1	Relief Valve, Farris, 1/2" RF Inlet x 1" RF Outlet, Rated for 196 SCFM, Set @ 150 PSI, CRN. C/W Test Cert. (Wet Receiver),	27CA13-170
FC1-WS1-1/2NT-30A00	1	1/2", Needle valve, Anderson Greenwood or others from AML, 3000 psig CWP, TE, ASTM A105-N, (Wet Air Receiver)	STEM CENTURY P# CM21M44TDT
FC1-WS1-PG-1310	1	Pressure Gauge, WGI Elite 400, 4" dial x 1/2" NPT, bottom mounted, liquid filled, 0-200 PSI (Wet Receiver)	WH10954P
1/2STR902	1	YS3000 Y-Strainer, Carbon Steel 1/2" FNPT, Threaded ALTA Y Strainer, CS body NACE	YS3000 1/2"
FC1-WS1-PDG-1320A/1320B/1340A/1340B	4	Differential Pressure Indicator, c/w FC1-WS1-F-1320/1325/1340/1345 (Built into filters)	OEM Standard
FC1-WS1-XV-1330A/B	2	Exhaust Solenoid Valve, ASCO, 1/4" NPT (c/w Dryer assembly)	ESG - DN20
FC1-WS1-XV-1340	1	ASCO 3-Way Solenoid Valve, 0-150 psig, 1/4" NPT	ASCO Series 8210
FC1-WS1-XV-1345	1	Inlet Pilot 3-way Ball Valve w/ Actuator (c/w Dryers assembly)	IWA Namur Series
FC1-WS1-PSV-1330A/B	2	Relief Valve,Farris, 1/2" RF Inlet x 1" RF Outlet, Rated for 196 SCFM, Set @ 150 PSI, CRN. C/W Test Cert. (Dryer towers)	27CA13-170
FC1-WS1-PG-1330A/B	2	Pressure Gauge, 2-1/2" dial x 1/2" NPT, back mounted, liquid filled, 0-200 PSI (Dryer towers)	Trerice-D30 Series
FC1-WS1-PCV-1340	1	Purge Regulator, Numatic, 1/4" NPT, maximum pressure 250 PSI, maximum temperature 175° F, Set @ 30 PSI (9 cfm)	V-Tork Model: VT050
FC1-WS1-AIT-1340	1	Ecotronic Dew Point Analyzer, c/w Kahn-EA2-TX-100 Moisture Indicating Probe & Transmitter, c/w Dryers	Kahn Instruments-EA2-TX-100
FC1-WS1-XV-1310 FC1-WS1-XV-1320	2	ASCO Timed Condensate Drain Solenoid Valve, 120VAC, SS, c/w timer assembly and power cord	SC8262H086 /106086-001 /106096-001
FC1-WS1-SS-101A/B	2	Cutler Hammer, Selector switch, 2 position, Lead/Lag, c/w 1 Contact Block (10250T2) (for K-1300A, K-1300B)	10250T1311
NW2165SK	1	Structural Skid, 9'x 5', C6 x 8.2, (4x) lifting lugs	NW2165SK

NOTE: REFER TO NW2165PF
SS 101A



FC1-WS1-K-1300A

NOTE: REFER TO NW2165PF
SS 101B



FC1-WS1-K-1300B

WARNING:
DO NOT RUN BOTH
COMPRESSORS IN LAG

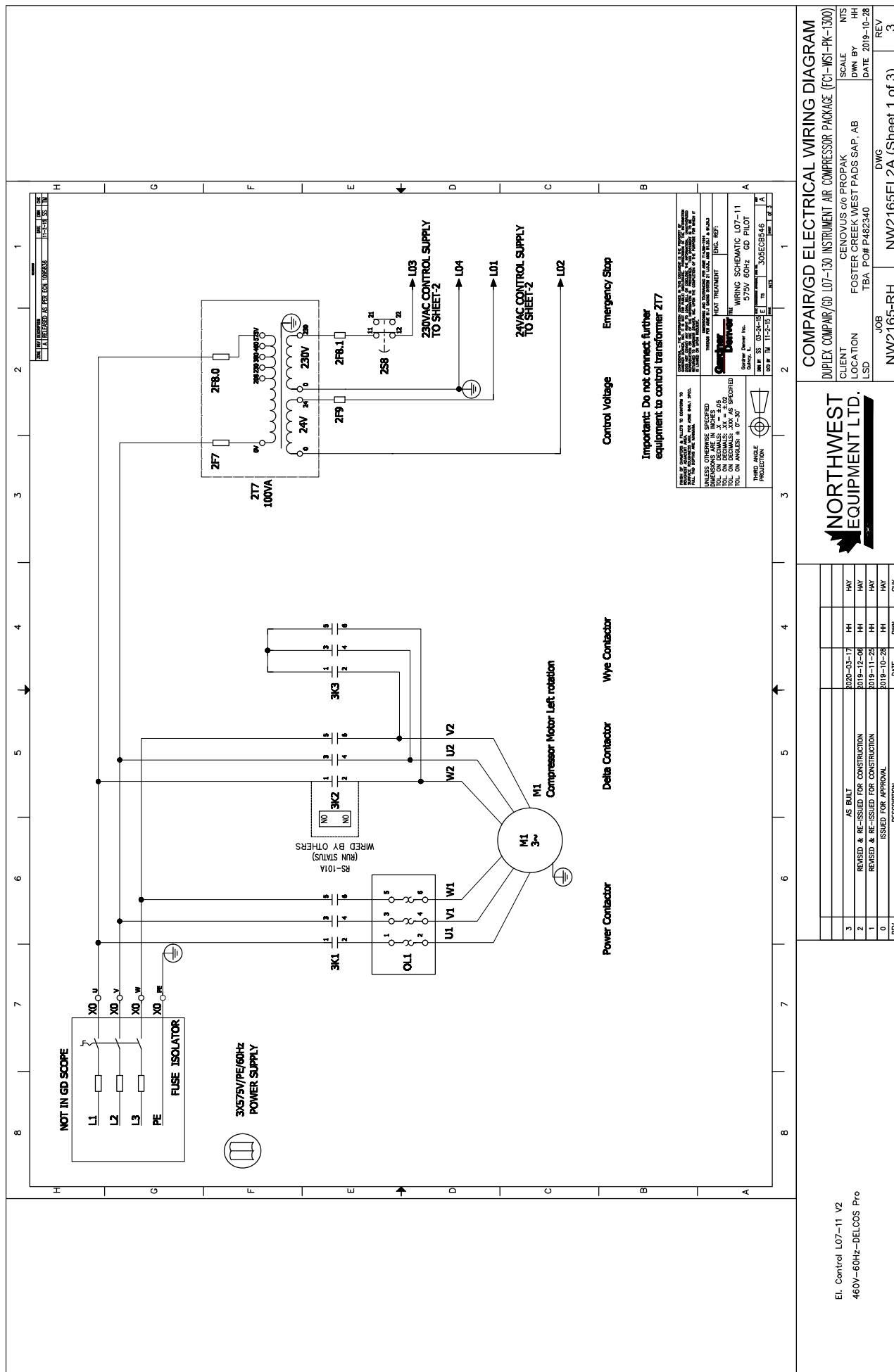
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0	ISSUED FOR APPROVAL	2019-10-31	HH						HAY
REV	DESCRIPTION	DATE	DWN						CHK

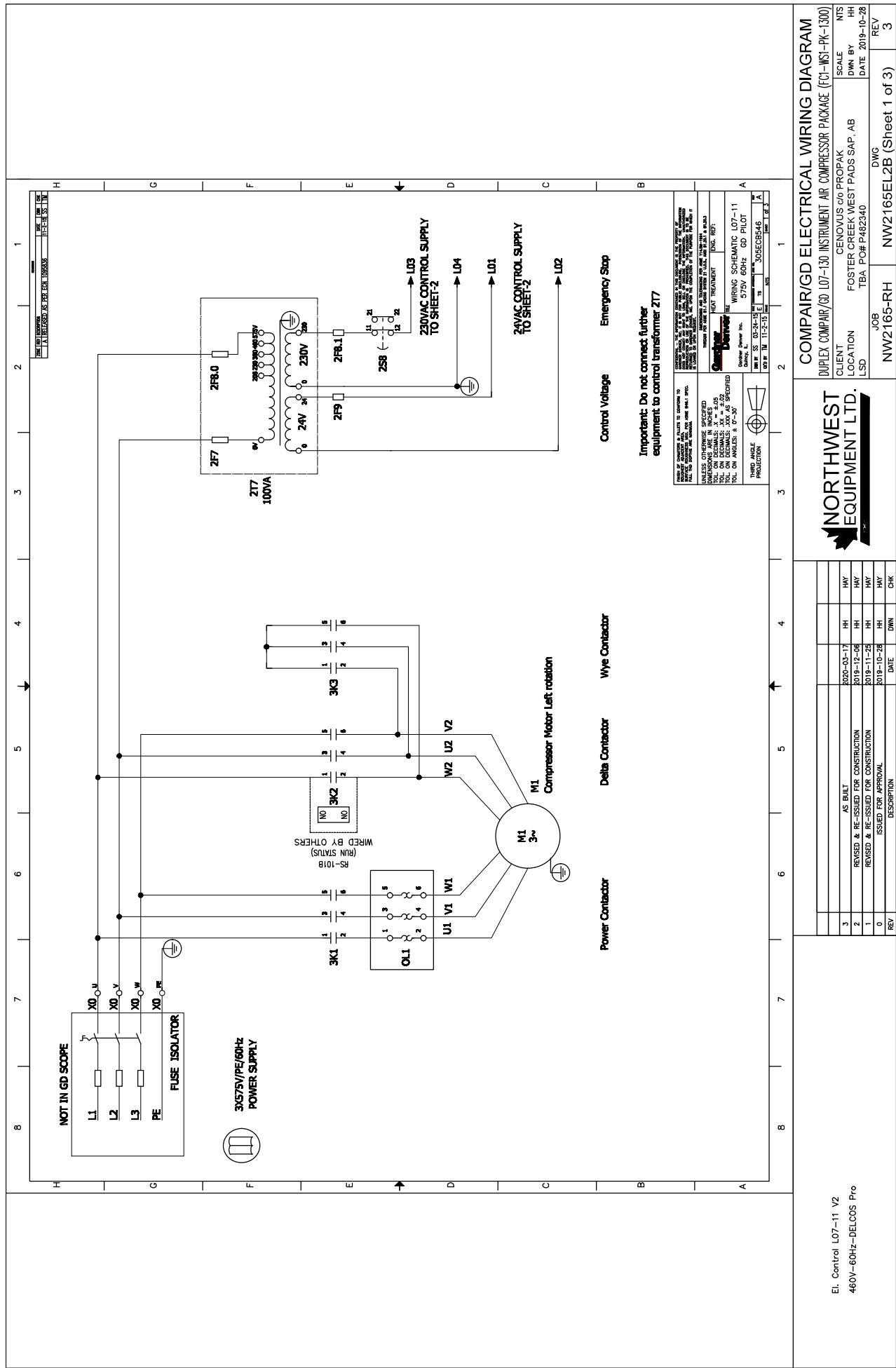


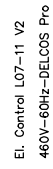
ELECTRICAL WIRING DIAGRAM

LEAD/LAG SELECTOR SWITCHES (SS 101A & SS 101B)

CLIENT	CENOVUS CO PROPAC	SCALE	NTS
LOCATION	FOSTER CREEK WEST PADS SAP, AB	DWN BY	HC
LSD	TBA PO# P482340	DATE	2019-10-28
JOB	NW2165-RH	DWG	REV
		NW2165EL1	1







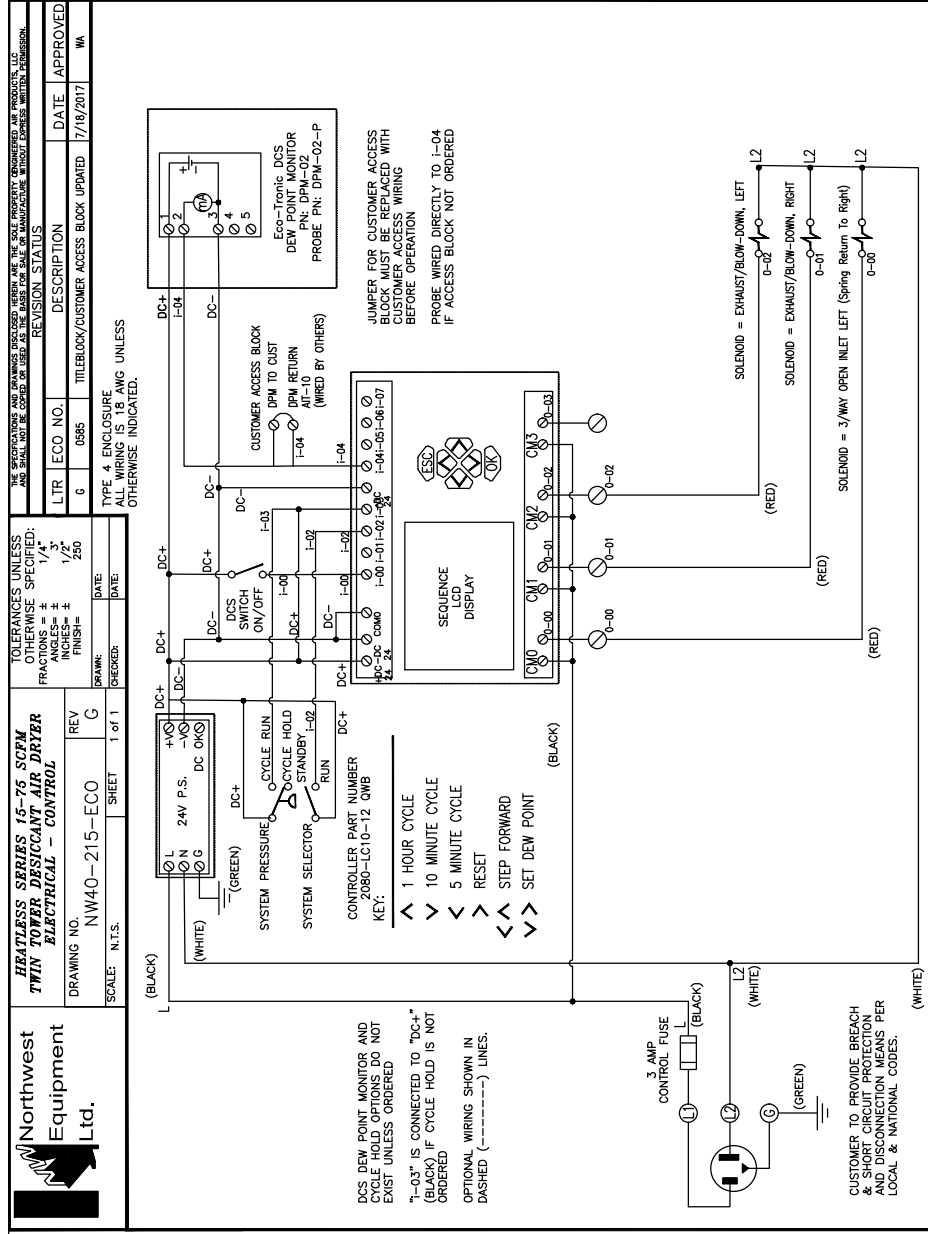
3	AS BUILT	2020-03-17	HH	HHY
2	REMOVED & RE-ISSUED FOR CONSTRUCTION	2019-12-06	HH	HHY
1	REMOVED & RE-ISSUED FOR CONSTRUCTION	2019-11-25	HH	HHY
0	ISSUED FOR APPROVAL	2018-10-28	HH	HHY
REV	DESCRIPTION	DATE	DWN	CHK

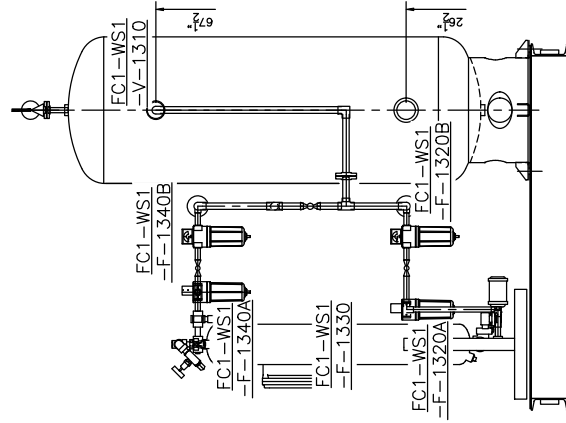
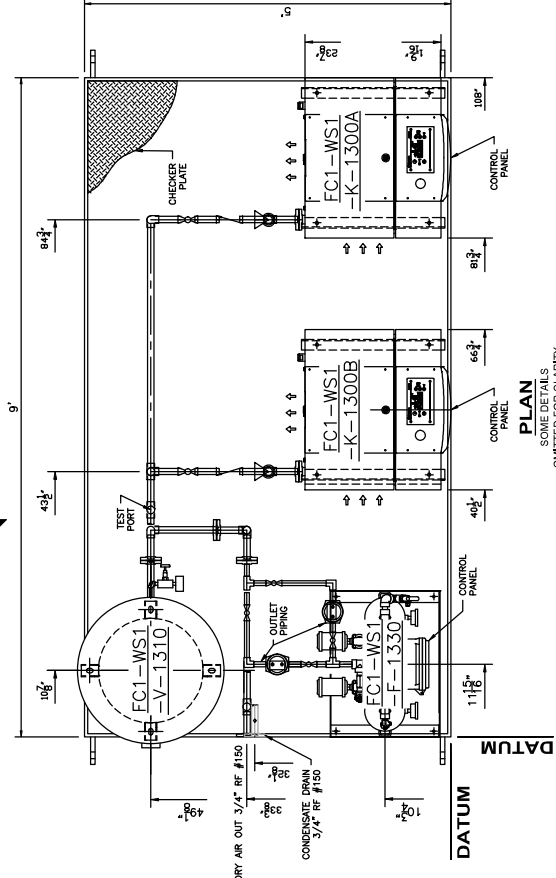
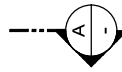
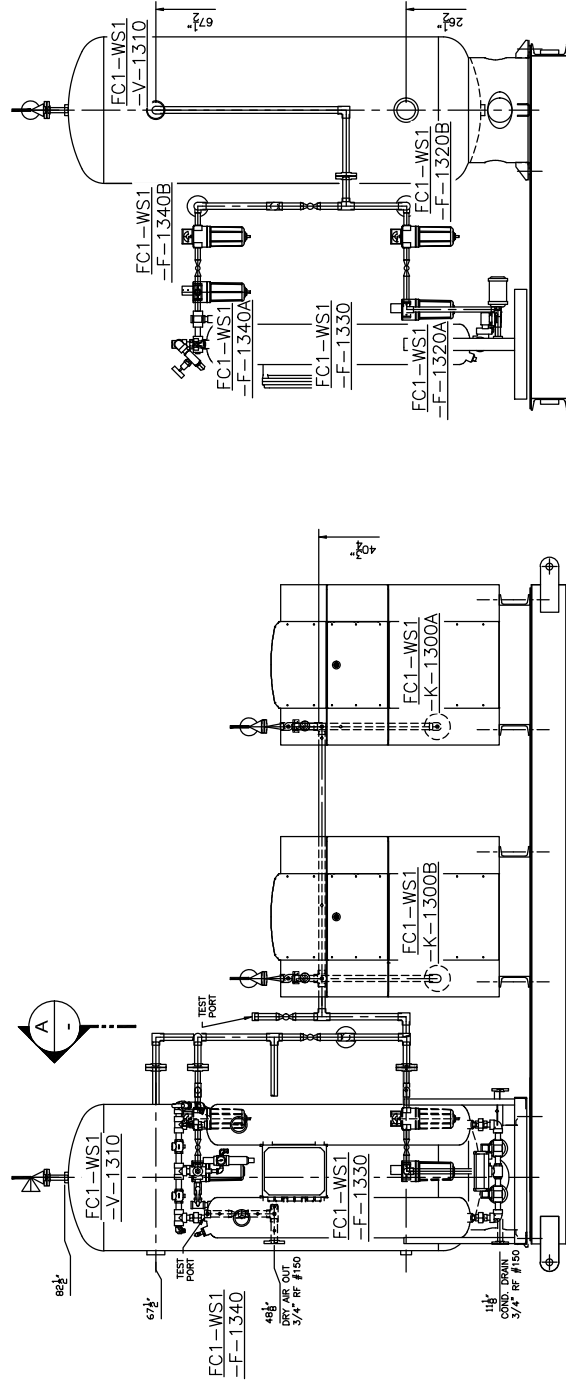


**NORTHWEST
EQUIPMENT LTD.**

COMPARISON OF ELECTRICAL WIRING DIAGRAM

DUPLICATE COMPANY (20) L07-130 INSTRUMENT AIR COMPRESSOR PACKAGE (FCI-W51-PK-1300)		SCALE	NTS
CLIENT	GENOVUS c/o PROPAC	DATE	2018-10-10
LOCATION	FOSTER CREEK WEST PADS SAP, AB	DWG	REV
LSD	TBA PO# P482340	NW2165E-LB	3

[illegible]



MAJOR EQUIPMENT LIST

TAG NO.	QTY.	DESCRIPTION	LBS.
FCI-WSI-AK-1300A/B	2	COMPRESSOR, COMPAR/G3, L07, 10 HP, 36 SCFM @105 PSIG, 575W/3PH/60Hz	1162
FCI-WSI-F-1300A/B	1	HEAT EXCHANGER, NW40-Y 42, SCFM @ 105 PSIG, 115W/1PH/60Hz	225
FCI-WSI-V-1310	1	AIR RECEIVER, 120GAL, SAMUEL TBA	330
FCI-WSI-F-1320A/1320B	2	PRE-FILTER, COALESCING, ASCO F901D-04G2	10
FCI-WSI-F-1340A/1340B	2	AFTER-FILTER, COALESCING, ASCO F901H-04G2	10
NW2655K	1	STRUCTURAL SKID, C6 x 8.2 CHANNEL	993
-	-	PIPING & MISC.	200
		(APPROX.) TOTAL WEIGHT	2930

1.

THE DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS STAMPED 'ISSUED FOR CONSTRUCTION'.

2.

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.

3.

ALL WELDS TO BE 1/4" FILLET UNLESS OTHERWISE NOTED.

4.

REFER TO NW2166P/F FOR GENERAL PIPING NOTES.

5.

ALL WELDS AND JOINTS TO BE PAINTED AS PER NWE SPEC: (1) COAT PRIMER, (2) COAT, (3) FINISH COAT.

6.

AIR RECEIVERS AND PIPING SURFACE PREPARATION SSPC-SP3.

5	AS BUILT	2020-06-08	HH	HAY
3	REVISED CHANGES & RE-ISSUED FOR CONSTRUCTION	2020-01-30	HH	HAY
4	REVISED MARKUPS & RE-ISSUED FOR CONSTRUCTION	2020-01-10	HH	HAY
2	REVISED & ISSUED FOR CONSTRUCTION	2019-12-18	HH	HAY
1	REVISED & RE-ISSUED FOR APPROVAL	2019-11-28	HH	HAY
0	ISSUED FOR APPROVAL	2019-10-28	HH	HAY
REV	DESCRIPTION	DATE	DWN	CHK

NORTHWEST

EQUIPMENT LTD.

GENERAL ARRANGEMENT

DUPLEX COMPAR/G3, L07-130 INSTRUMENT AIR COMPRESSOR PACKAGE (FCI-WSI-PK-1300)	SCALE	NTS
CLIENT	CENOVUS C/O PROPAC	
LOCATION	FOSTER CREEK WEST PADS SAP, AB	
LSD	TBA PO#P462340	
JOB	DWG	
NW2165-RH	NW2165GA	1 / 1
		SHEET
		REV

DUPEX COMPAIR/GD L07-130 INSTRUMENT AIR COMPRESSOR PACKAGE (FS1-WS1-PK-1300)									
CLIENT	Conovus Co Proxak								
LOCATION	Foster Creek West Pads SAP (WST Storage Facility), AB								
LSD	TBA PO# P482340								
JOB	NW2165-AH								
DOCUMENT #	NW2165LL								
REV	3								



LINE LIST

LINE LIST																				
LINE TAG#	PIPE SPEC	SIZE	LINE CLASS / ASME RATING	START POINT	END POINT	DESIGN CODE	SCH	C.A. (mm)	MAT'L	DESIGN HIL TEMP.[°C]	OPER. TEMP.[°C]	DESIGN PRESS.[PSI]	OPER. PRESS.[PSI]	TEST MEDIUM	TEST PRESS. [PSI]	X-RAY (min %)	STRESS RELIEF	NOTES	REFERENCE DRAWING	
IA-AAA-3/4-1295	AAA	3/4"	3000#	FC1-WS1-H-1300A/FC1-WS1-H-1300B	FC1-WS1-V-1310	B31.3	80	1.6	A-106-B	49 / 29	20	150	105	HYDRO	225	10%	NO	2.4.5.6	NW2165PF	
IA-AAA-3/4-1296	AAA	3/4"	3000#		FC1-WS1-V-1310	FC1-WS1-F-1320	B31.3	80	1.6	A-106-B	49 / 29	20	150	105	HYDRO	225	10%	NO	2.4.5.6	NW2165PF
IA-AAA-3/4-1298	AAA	3/4"	3000#		IA-AAA-3/4-1296	Skid Edge (Dry Air Out)	B31.3	80	1.6	A-106-B	49 / 29	20	150	105	HYDRO	225	10%	NO	2.4.5.6	NW2165PF
IA-AAA-3/4-1297	AAA	3/4"	3000#		FC1-WS1-F-1345	IT-AAA-3/4-1299	B31.3	80	1.6	A-106-B	49 / 29	20	150	105	HYDRO	225	10%	NO	2.4.5.6	NW2165PF
L16	AAA	3/8"	3000#		FC1-WS1-V-1310	Skid edge (Cond. Drain)	B31.3	80	1.6	A-106-B	49 / 29	20	150	105	HYDRO	225	10%	NO	2.4.5.6	NW2165PF
L17	AAA	3/8"	3000#	XV-1310	IA-AAA-3/4-1297	B31.3	0.049	0	TP316/316L	49 / 29	20	150	105	AIR	165	N/A	NO	1.3.5.6	NW2165PF	
			3000#	FC1-WS1-F-1320A/FC1-WS1-F-1320B	IA-AAA-3/4-1297	B31.3	0.049	0	TP316/316L	49 / 29	20	150	105	AIR	165	N/A	NO	1.3.5.6	NW2165PF	
PSV DATA:																				
DESIGNATION	MAKE	MODEL	SIZE	SPECIFICATION																
PSV-1310	FARRIS	27CA13-170	INLET 1/2" RF OUTLET 1" RF	SET @ PSIG (KPaG)																
PSV-1300AB	FARRIS	27CA13-170	INLET 1/2" RF OUTLET 1" RF	MAX FLOW 196SCFM, BASIS: BLOCKED FLOW																
PSV-1330AB	FARRIS	27CA13-170	INLET 1/2" RF OUTLET 1" RF	MAX FLOW 196SCFM, BASIS: BLOCKED FLOW																
				MAX FLOW 196SCFM, BASIS: BLOCKED FLOW																
				Fittings: A-105N, A-234WPB																
				Flanges: A-105N																
				Piping: A-106-B																
				Gaskets: RF Spiral Wound 304SS																
				Bolts & Nuts: A193-B7/A194-2H																
				Specifications: ASME B31.3-2016																

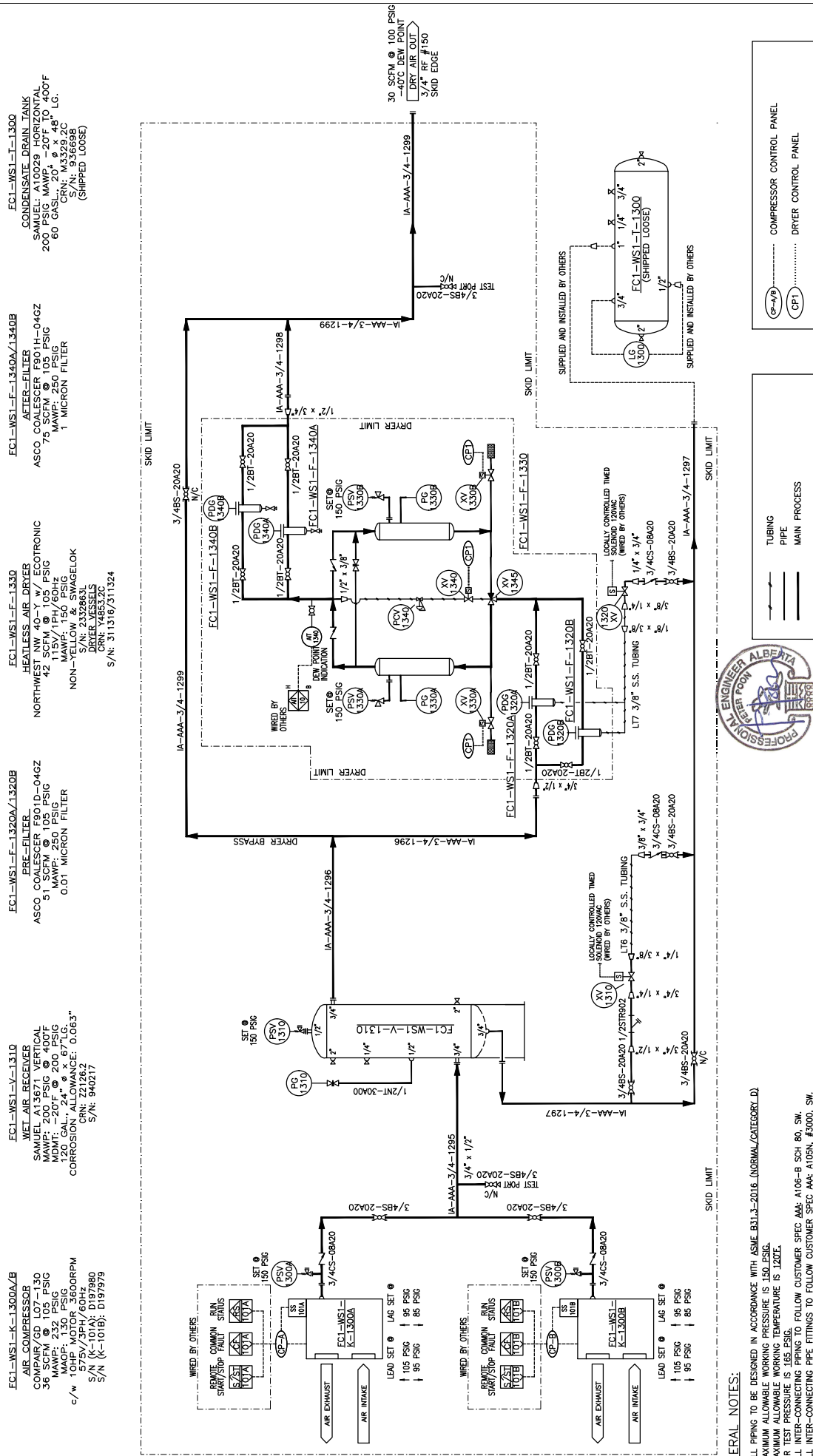
NOTES:

1. Threaded line.
2. Socket Weld.
3. All threaded lines in accordance with Northwest Equipment Quality System manual Reg.# AQP-21275
4. All welded lines in accordance with Baxter's Welding Inc. Quality System manual Reg.# AQP-1570.
5. Operating temperature will change based on actual conditions.
6. For pipe spec, please refer to the notes section on NW2165PF.



April 16, 2020

Northwest Equipment Ltd.
Tel. [403] 945-1988
Fax. [403] 945-1910



BILL OF MATERIALS			
MK QTY.	DESCRIPTION	LENGTH	TOTAL LBS.
01	2 CHANNEL C6 x 8.2	108"	56 -6 3/16"
02	2 CHANNEL C6 x 8.2	56 3/16"	463
03	1 CHANNEL C6 x 8.2	104 3/16"	-
04	4 CHANNEL C6 x 8.2	23 9/8"	-
05	4 CHANNEL C6 x 8.2 (CODE ONE END)	32 9/16"	-
06	4 FLATBAR 3" x 1/2" THK (LIFTING LUG)	9"	3'-0"
07	1 CHANNEL C6 x 8.2	7 7/8"	-
08	1 CHECKER PLATE	45 S.F.	507
	(APPROX.) TOTAL WEIGHT		993



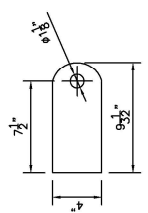
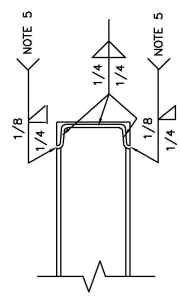
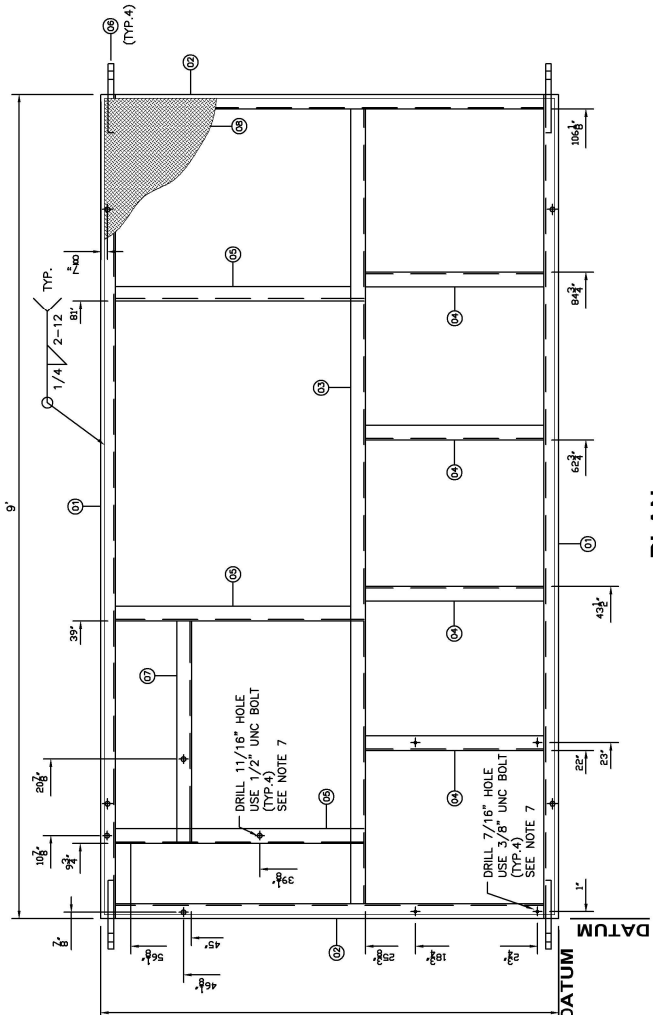
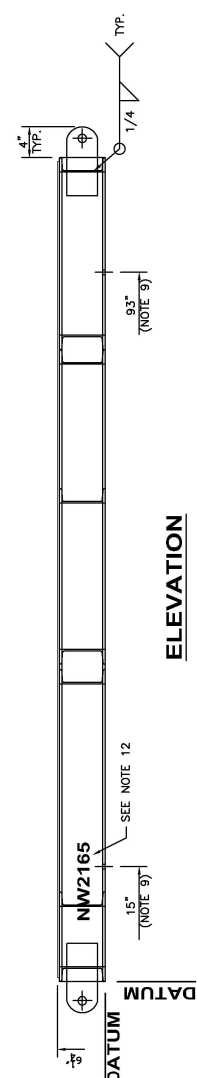
GENERAL NOTES:

- THIS DRAWING IS NOT TO BE USED FOR CONSTRUCTION UNLESS STAMPED 'ISSUED FOR CONSTRUCTION'.
- ALL DIMENSIONS IN INCHES UNLESS OTHERWISE NOTED.
- WELD MEMBERS TO BE FULL PENETRATION WELDS, ALL OTHER WELDS TO BE 1/4" FILLET UNLESS OTHERWISE NOTED.
- WELDS TO BE FULL PENETRATION WELDS, ALL OTHER WELDS TO BE 1/4" FILLET UNLESS OTHERWISE NOTED.
- GRIND FLUSH ALL WELDS ON TOP AND BOTTOM OF SKID.
- SKID TO BE PAINTED AS PER NINE SPEC. (1) COAT PRIMER, (2) COATS ENAMEL WARM GREY.
- WELD DRILLING BY NINE.
- SURFACE PREPARATION (SSPC-SP-3).
- DRILL 5/8" BOLT DOWN HOLE THROUGH BOTTOM FLANGE ONLY (TYP-2 EACH SIDE).
- CHANNEL & ANGLE CSA C40.21-44W, LIFTING LUGS CSA C40.21-350WT Gr.4.
- 100% MPI FOR LIFTING LUGS ATTACHMENT WELDS.
- WELD 'NICKETS' ON OUTSIDE WEB OF CHANNEL AS DRAWING SHOWN CLOSE TO DATUM.

REV	DESCRIPTION	DATE	DWN	CHK
2	AS BUILT	2020-02-12	HH	HAY
1	REVISED & RE-ISSUED FOR CONSTRUCTION	2019-12-18	HH	HAY
0	ISSUED FOR APPROVAL	2019-10-25	HH	HAY



STRUCTURAL SKID			
DUPLEX COMPART (QD L07-30) INSTRUMENT AIR COMPRESSOR PACKAGE (FCI-MS-PK-1300)			
CLIENT	CENOVUS, 06 PROPAC	SCALE	NTS
LOCATION	FOSTER CREEK WEST PADS SAP, AB	DWN BY	HH
LSD	TBA PO# P482940	DATE	2019-10-25
JOB	DWG	SHEET	REV
NW2165-RH	NW2165SK	1 / 1	2



C6x8.2 TO C6x8.2

DETAIL
COPING DETAILS

DETAIL
ITEM# 06
(4) REQUIRED