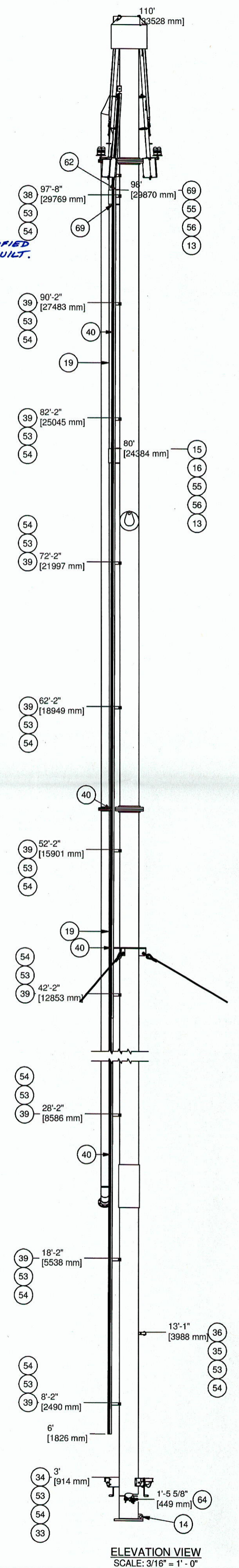
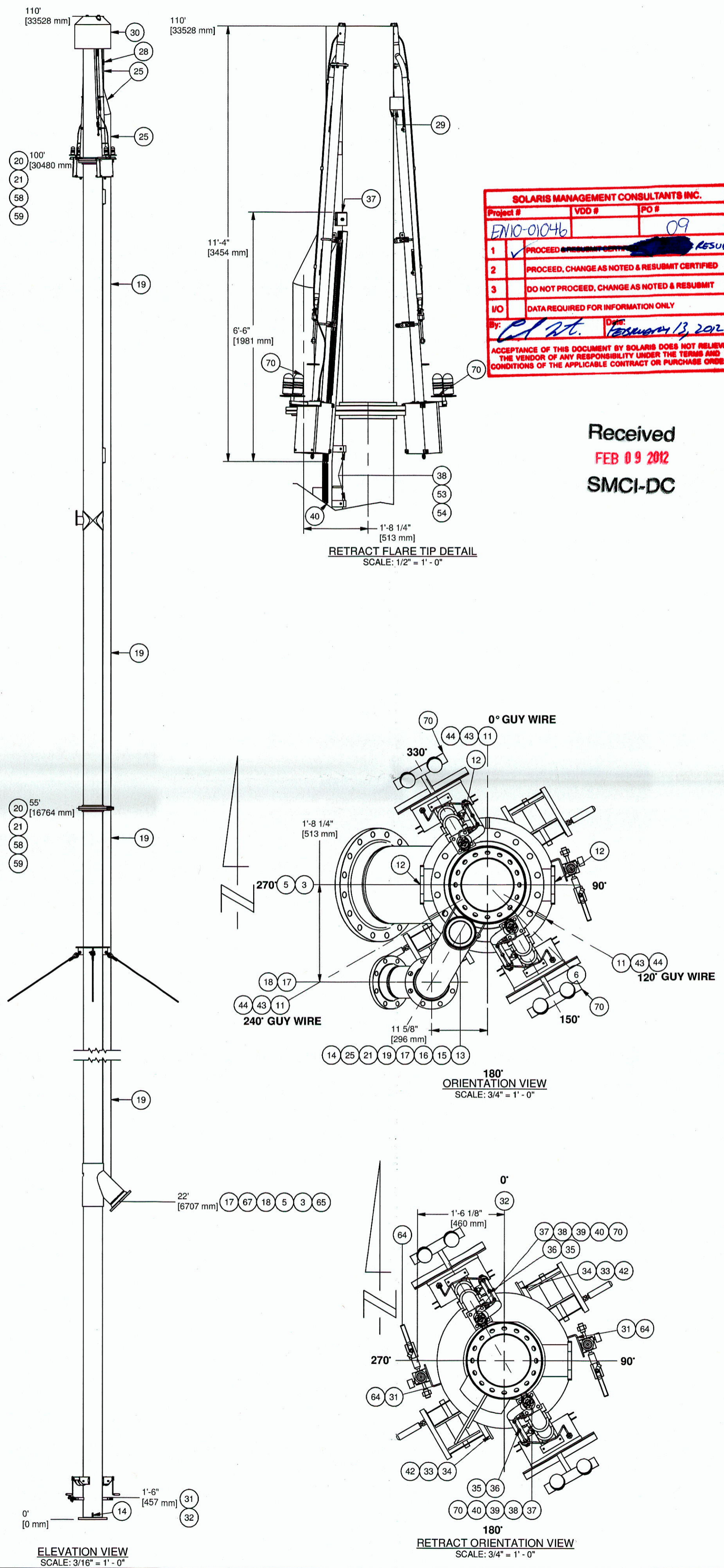
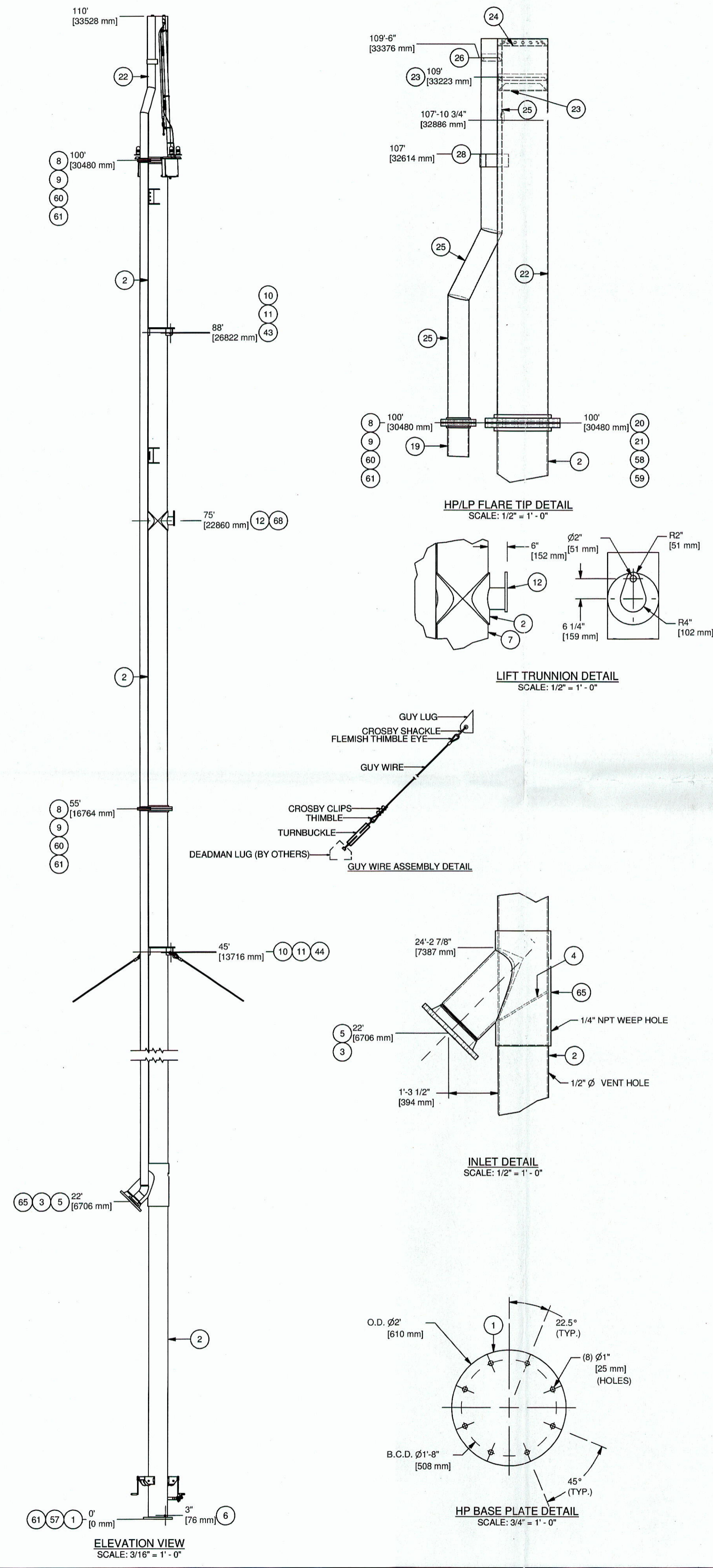


THIS DRAWING IS THE EXCLUSIVE PROPERTY OF MACTRONIC AND MAY NOT BE REPRODUCED WITHOUT PERMISSION.



**SOLARIS MANAGEMENT CONSULTANTS INC.**

Project # EN10-0146 VDD # 09 PO #

1.  PROCEED, CHANGES NOTED & RESUBMIT CERTIFIED AS-BUILT.

2.  PROCEED, CHANGES AS NOTED & RESUBMIT CERTIFIED

3.  DO NOT PROCEED, CHANGES AS NOTED & RESUBMIT

NO DATA REQUIRED FOR INFORMATION ONLY

Date: February 13, 2012

ACCEPTANCE OF THIS DOCUMENT BY SOLARIS DOES NOT RELIEVE THE VENDOR OF ANY RESPONSIBILITY UNDER THE TERMS AND CONDITIONS OF THE APPLICABLE CONTRACT OR PURCHASE ORDER.

**Received**  
**FEB 09 2012**  
**SMCI-DC**

ITEM		DESCRIPTION		Parts List		MATERIAL	
QTY	SIZE	QTY	SIZE	QTY	SIZE	QTY	MAT
1	Base/Mating Plate	2	1 1/2" THK Plate x 24" O.D.				SA-36/44W
2	FLARE STACK PIPE	1	16" SCH STD				SA-106B
3	Inlet Nozzle	1	16" SCH XH				SA-106-B
4	Baffle Plate	1	1/2" THK PLATE (C.T.S. @ 30 DEG.)				SA-36/44W
5	Flange (RFWN)	1	16" SCH XH - 150#				SA-105-N
6	Drain (HALF COUPLING)	1	1/2" NPT - 3000#				SA-105-N
8	Gasket Spiral Wound (FLEXITALLIC)	2	16" -150#				316 SS
9	Flange (RFSC)	4	16" -150#				SA-105-N
10	Guy Lug Ring	2	3/4" THK Plate X 16 3/16" L.D. X 28" O.D.				SA-36/44W
11	Guy Lug	6	3/4" THK Plate				SA-36/44W
12	LIFT TRUNNION	2	3/4" THK Plate, 6" SCH STD				SA-36/44W/SA-106-B
13	Stat. Bracket Stiffner Plate	4	1/2" THK Plate				SA-36/44W
14	Tail Lug	1	3/4" THK Plate				SA-36/44W
15	Sliding Bracket (SLOTTED)	1	1/2" THK Plate				SA-36/44W
16	Sliding Bracket (HOLE)	1	1/2" THK Plate				SA-36/44W
17	Flange (RFWN)	1	6"-150# SCH STD				SA-105-N
18	Elbow (45 DEG.)	1	6" SCH STD (LONG RADIUS)				SA-234-WPB
19	(LP) Flare Riser	1	6" SCH STD				SA-106-B
20	Gasket Spiral Wound (FLEXITALLIC)	2	6"-150#				316 SS
21	Flange (RFSC)	4	6"-150#				SA-105-N
22	(HP) Flare Tip	1	16" SCH 10S				SA-312-316L
23	Purge Seal (16" SCH 10S TIP)	1	1/8" THK (ROLLED) Plate				SA-240-316L
24	Retention Ring (16" SCH 10S TIP)	1	1/4" THK (ROLLED) Plate				SA-240-316L
25	(LP) Flare Tip	1	6" SCH 10S				SA-312-316L
26	Purge Seal (6" SCH 10S TIP)	1	1/8" THK (ROLLED) Plate				SA-240-316L
28	Horse Shoe Bracket	1	1/4" THK x 4" (W) Flat Bar				SA-240-316L
29	Shroud Gasket	1	1/4" THK x 4" (W) x				SA-36/44W
30	Windshroud (CONICAL)	1	1/8" THK (ROLLED) Plate				SA-240-316L
31	Instrumentation Clip	2	1/4" THK x 2"				SA-36/44W
32	Name Plate Bracket	1	3/16" THK x 1/4" THK				SA-36/44W
33	Winch Plate Bracket	2	3/8" THK Plate				SA-36/44W
34	Winch Plate	2	WINC-BARR-003x080				SA-36/44W
35	Pulley Bracket	4	3/8" THK x 2" Flat Bar				SA-36/44W
36	Pulley (LOWER OFFSET)	2	Standard (EXTENDED)				SA-36/44W
37	Pulley	2	Standard				SA-36/44W
38	Track Bracket	4	3/8" THK x 2" Flat Bar				SA-240-316L
39	Track Bracket	20	3/8" THK x 2" Flat Bar				SA-36/44W
40	Track (DUAL) c/w 3/8" THK Standoffs	2	MAC Track				SA-36/44W/GALV.
41	MODEL 850 PILOT w/ SINGLE ELEMENT THERMOCOUPLE TYPE K	2					
42	WINCH	2					
43	Guy Wire Assembly (TOP)	3	3/4" DIA. Wire Rope x 125 ft LG.				EIPS IWRC/GALV.
	Shackle	3	1/2 Ton (ANCHOR BOLT) G-2130				
	Heavy Thimble Eye	3	3/4"				
	Wire Rope Clips	12	3/4" G 450				
	J&J Turnbuckles	3	1" x 24"				
44	GUY WIRE ASSEMBLY (BOTTOM)	3	1/2" DIA. WIRE ROPE 100 ft LG.				EIPS IWRC/GALV.
	SHACKLE	3	1/2 TON (ANCHOR BOLT) G-2130				
	HEAVY THIMBLE EYE	3	1/2"				
	WIRE ROPE CLIPS	9	1/2" G 450				
	J&J TURNBUCKLES	3	1" x 24"				
53	Hex Bolt (TRACK/WINCH/LOWER PULLEY)	46	1/2" Dia. x 2 1/2" LG.				GR. 5
54	Hex Nut	92	1/2" Dia.				GR. 5
55	Hex Bolt (LP SUPPORT BRACKETS)	7	3/4" Dia. x 3" LG.				GR. 5
56	Hex Nut	14	3/4" Dia.				GR. 5
57	Stud (BASE PLATE)	8	1" Dia. x 6" LG.				SA-193-B7M
58	Stud (6" FLANGE)	16	3/4" Dia. x 4" LG.				SA-193-B7M
59	Nut	32	3/4" Dia.				SA-194-2HM
60	Stud (16" FLANGE)	32	1" Dia. x 5 1/2" LG.				SA-193-B7M
61	Nut	64	1" Dia.				SA-194-2HM
64	Reg. Gauge (SEE DWG#11-0329-REG)	2	3/4" THK				SA-36/44W
65	REPAD C/W WEEP HOLE	1	3/4" THK				SA-36/44W
68	TRUNNION REPAD	1	1/2" THK x 5" ALL AROUND				SA-36/44W
69	Fixed Bracket (HOLE)	2	1/2" THK Plate				SA-36/44W
70	AWL (LED)	2	STD				STD

- GENERAL NOTES:**
- SURFACE PREPARATION: ABRASIVE BLAST CLEAN TO SSPC-SP6. SURFACE PROFILE OF 1.5 TO 2.5 MILS.
  - COATINGS: PRIME WITH CLOVERDALE RUSTEX 71024 AT A MIN. OF 1.5 MILS DFT. TOP COAT WITH CLOVERDALE INDUSTRIAL ENAMEL AT A MIN. OF 2.5 MILS DFT. COLOUR: SEVEN EQUAL BANDS OF FEDERAL SAFETY ORANGE AND WHITE BEGINNING AND ENDING WITH FEDERAL SAFETY ORANGE AS PER DOT SPECIFICATIONS.
  - APPROXIMATE SHIPPING WEIGHT: 12,991 lbs (5,723 kg)
  - ALL FLANGES TO BE TWO HOLED TO CENTER LINE.
  - SOME ITEMS ARE SHOWN OUT OF POSITION FOR CLARITY.
  - ANCHOR RODS AND FOUNDATION DONE BY OTHERS.
  - MILL TEST CERTIFICATES ARE AVAILABLE FOR ALL PROCESS PIPING.
  - THE FOLLOWING ARE THE FABRICATION TOLERANCES UNDER 50":  
 IMPERIAL LINEAR DIMENSION: ±.018 inch  
 METRIC LINEAR DIMENSION: ±.3 mm  
 ANGULAR DIMENSION: ±.2%  
 DIMENSION OVER SILL: ±.010 degrees
  - THE MACTRONIC ENERGY EFFICIENT PILOT CONSUMES 45 SCFH OF NATURAL GAS WITH A RECOMMENDED SETTING OF 10 PSIG.
  - GUY WIRE RADIUS: 75'-0"
  - PIPE WELDS TO BE INTERPRETED TO ASME B31.3 QUALITY, 100% RADIOGRAPHY OF BUTT WELDS IN CONTACT WITH PROCESS FLARE GAS.
  - 100% MPI ON TRUNNIONS AND TAIL LUG.

**DESIGN NOTES:**

1/8" CORROSION ALLOWANCE	
DESIGN WIND SPEED:	29 m/s
<b>UNFACTORED BASE LOADS</b>	
MOMENT:	60 kN-m
SHEAR:	8 kN
VERTICAL:	158 kN
<b>UNFACTORED GUY ANCHOR LOADS</b>	
SHEAR:	48 kN
UPLIFT:	45 kN
<b>UNFACTORED GUY WIRE TENSION</b>	
INITIAL TOP TENSION:	5880 LBS
INITIAL BOTTOM TENSION:	2660 LBS

**REVISION BLOCK**

REV:	DATE:	DESCRIPTION:	BY:
0	04-OCT-11	APPROVAL	CGW
1	07-DEC-11	ISSUED FOR APPROVAL	CGW
2	16-DEC-11	ISSUED FOR APPROVAL	CGW
3	10-JAN-12	ISSUED FOR APPROVAL	CGW
4	09-FEB-12	FABRICATION	CGW

**MACTRONIC**  
A DIVISION OF FLARE INDUSTRIES

CLIENT: ENCANCA c/o SOLARIS MCI

LOCATION: SWAN COMPRESSOR	P.O. #: EN10-0146-09
LSD: c-12-b / 93-p-9	TAG #:

TITLE: 16" DIA. x 110' - 0" HIGH GUY SUPPORTED FLARE STACK

DRAWN BY: CGW	CHECKED BY:	DATE: 03-OCT-11	SHEET: 1 OF 1
APP. BY:	PROJECT BY:	SCALE: AS SHOWN	SIZE: REV:

JOB ORDER #: 11-0329 DRAWING #: 11-0329-FS D 4