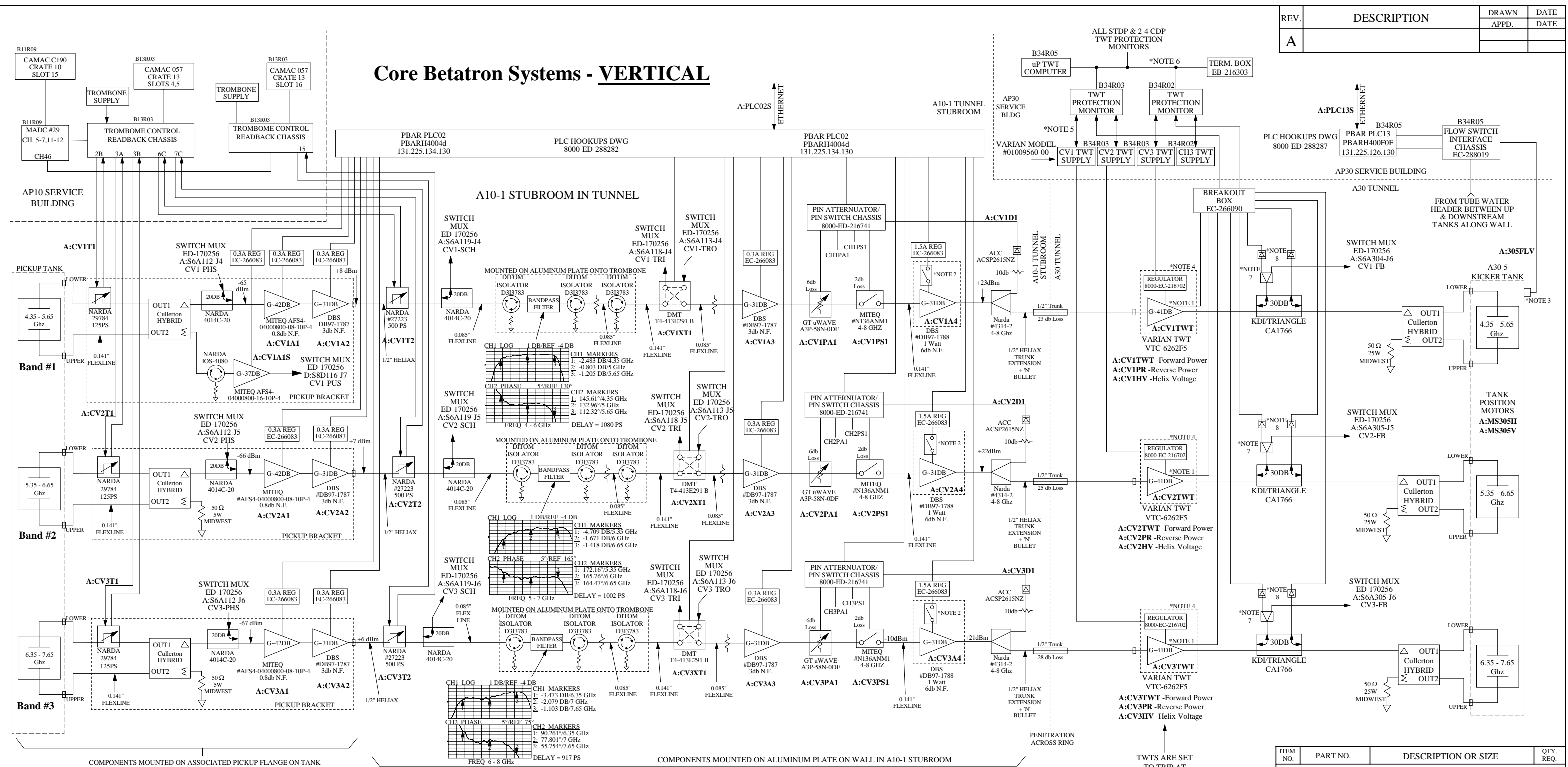


# Core Betatron Systems - VERTICAL



- NOTES:**
- 1) AN EXTERNAL TEMPERATURE KLIXON IS ATTACHED TO THE HOT (COLLECTOR) END OF TWT. KLIXON BY ELMWOOD SENSORS, MODEL 3100-56-162L250. NORMALLY CLOSED, SET TO OPEN AT ~ 250°F ± 9°F.
  - 2) TEMPERATURE KLIXONS ARE MOUNTED ON COPPER CHILL PLATE WITH AMP AND OPEN AT 120°F. MODEL #3100-3-1439, FROM ELMWOOD SENSORS. AMP IS WATER COOLED OFF OF ~90°F TUNNEL MAGNET WATER.
  - 3) TANK FLOW SWITCHES ARE VORTEX TYPE BY UNIVERSAL FLOW MONITORS, INC. COOLPOINT MODEL CP-1/4. THEY ARE MOUNTED NEAR CEILING ABOVE THEIR ASSOCIATED TANK.
  - 4) TWT AND TWT REGULATOR ARE MOUNTED ON A WATER COOLED COPPER CHILL PLATE (DWG. 2214-MC-187479).
  - 5) TWT PM (TRAVELLING WAVE TUBE PROTECTION MONITOR), DWG. 8000-ED-170660, CABLING TO TWT POWER SUPPLY CONSISTS OF THREE RG58 COAX FOR HELIX VOLTAGE MONITOR, HELIX MODULATION, AND FAULT INTERLOCK, TWO 10C/22 AWG CABLES TY-RAPPED INTO ONE CONNECTOR FOR REMOTE CONTROL STATUS. THERE ARE ALSO FOUR RG-174 COAX FROM DIODE DETECTORS FOR FORWARD/REVERSE POWER PROTECTION AND TWO RG-108 (TWINAX) FOR CHILL CABLE (OVERTEMP) FAULTS (SEE NOTE 9 ALSO).
  - 6) EXTERNAL DATA BUS IS A 50C RIBBON CABLE DAISY-CHAINED THRU ALL THE TWT PM's TO TPM.
  - 7) SPLITTERS ON TWT COUPLERS ARE BY XXXXX, MODEL XXXXX.
  - 8) TWT FORWARD AND REVERSE DIODE DETECTORS ARE BY HEROTEK, INC., MODEL DHM124NBM.

8/30/09

TWTS ARE SET TO TRIP AT 15 WATTS MAX POWER TO PROTECT KICKER TANK

REV.	DESCRIPTION	DRAWN	DATE
A		APPD.	DATE

ITEM NO.	PART NO.	DESCRIPTION OR SIZE	QTY.
PARTS LIST			
UNLESS OTHERWISE SPECIFIED		ORIGINATOR	RALPH PASQUINELLI
FRACTIONS	DECIMALS	ANGLES	DRAWN
			WES MUELLER
			4/29/02
+	-	+	+
			CHECKED
1. BREAK ALL SHARP EDGES			APPROVED
1/64 MAX.			USED ON
2. DO NOT SCALE DRAWING			
3. DIMENSIONING IN ACCORD WITH ANSI Y14.5 STD'S			
✓ MAX. ALL MACHINED SURFACES			MATERIAL-
<b>FERMI NATIONAL ACCELERATOR LABORATORY</b> UNITED STATES DEPARTMENT OF ENERGY			
<b>ANTI-PROTON SOURCE</b> <b>4-8 GHZ CORE BETATRON</b> <b>VERTICAL COOLINGS SYSTEMS</b>			
SCALE	FILMED	DRAWING NUMBER	REV.
		8000 - ED - 288202	