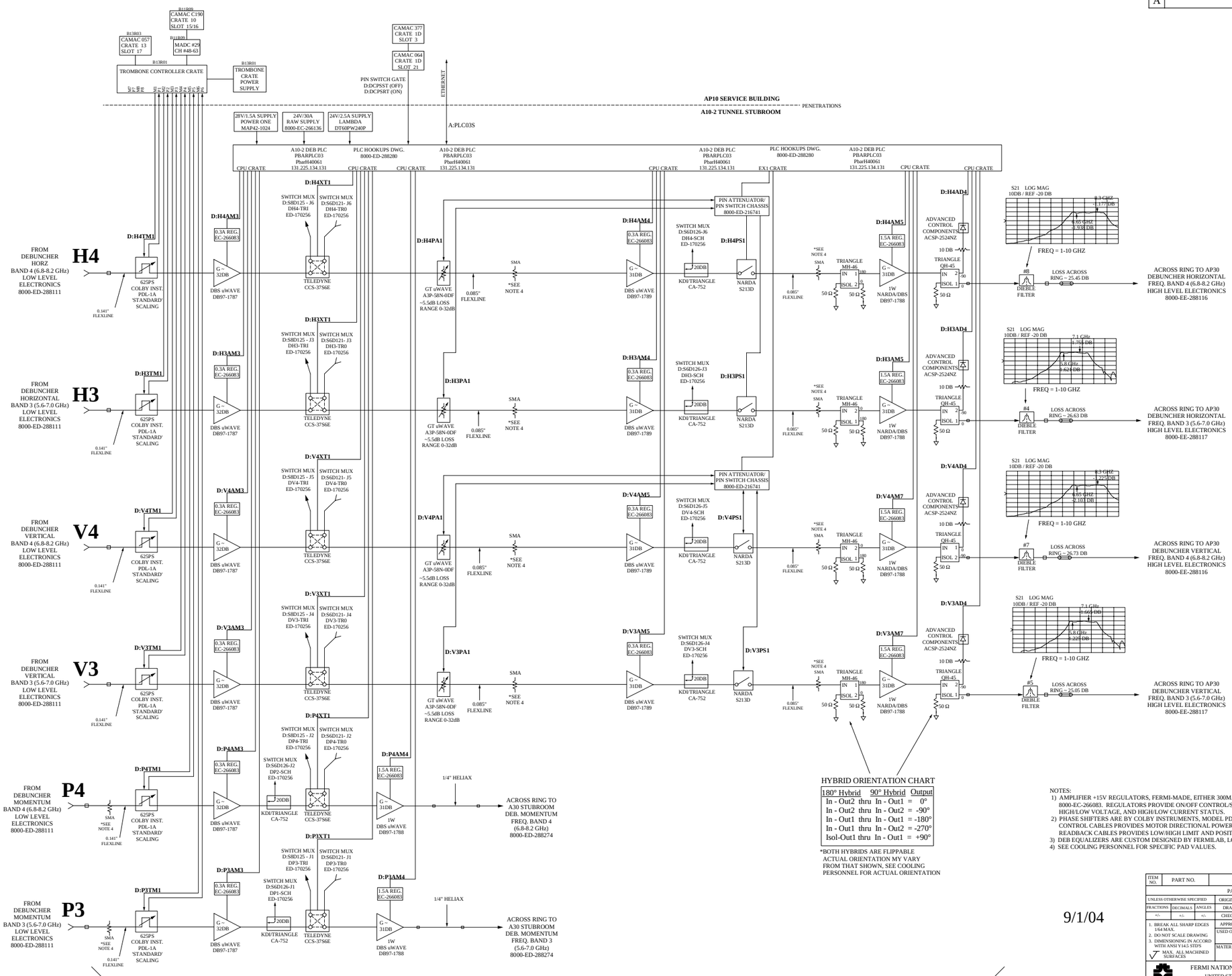
REV.	DESCRIPTION	DRAWN / APPD.	DATE / DATE
A			



HYBRID ORIENTATION CHART

180° Hybrid	90° Hybrid	Output
In - Out2 thru	In - Out1 =	0°
In - Out2 thru	In - Out2 =	-90°
In - Out1 thru	In - Out1 =	-180°
In - Out1 thru	In - Out2 =	-270°
Isol-Out1 thru	In - Out1 =	+90°

*BOTH HYBRIDS ARE FLIPPABLE ACTUAL ORIENTATION MY VARY FROM THAT SHOWN, SEE COOLING PERSONNEL FOR ACTUAL ORIENTATION

NOTES:
1) AMPLIFIER +15V REGULATORS, FERMI-MADE, EITHER 300MA OR 1.5A, SEE DWG 8000-EC-266083. REGULATORS PROVIDE ON/OFF CONTROL/STATUS, HIGH/LOW VOLTAGE, AND HIGH/LOW CURRENT STATUS.
2) PHASE SHIFTERS ARE BY COLBY INSTRUMENTS, MODEL PDL-1A. CONTROL CABLES PROVIDES MOTOR DIRECTIONAL POWER ON/OFF, READBACK CABLES PROVIDES LOW/HIGH LIMIT AND POSITION.
3) DEB EQUALIZERS ARE CUSTOM DESIGNED BY FERMILAB, LOSS ~8 DB MAX.
4) SEE COOLING PERSONNEL FOR SPECIFIC PAD VALUES.

9/1/04

ITEM NO.	PART NO.	DESCRIPTION OR SIZE	QTY. REQ.
PARTS LIST			

UNLESS OTHERWISE SPECIFIED			ORIGINATOR	RALPH RASQUINELLI	
FRACTIONS	DECIMALS	ANGLES	DRAWN	WESLEY MUELLER	3/11/98
+/-	+/-	+/-	CHECKED		
1. BREAK ALL SHARP EDGES 1/64 MAX. 2. DO NOT SCALE DRAWING 3. DIMENSIONING IN ACCORD WITH ANSI Y14.5 STD'S			APPROVED		
			USED ON		
√ MAX. ALL MACHINED SURFACES			MATERIAL-		

FERMI NATIONAL ACCELERATOR LABORATORY
UNITED STATES DEPARTMENT OF ENERGY

ANTI-PROTON SOURCE DEBUNCHER MEDIUM LEVEL DOWNSTREAM ELECTRONICS

SCALE	FILMED	DRAWING NUMBER	REV.
		8000 - EE - 288113	