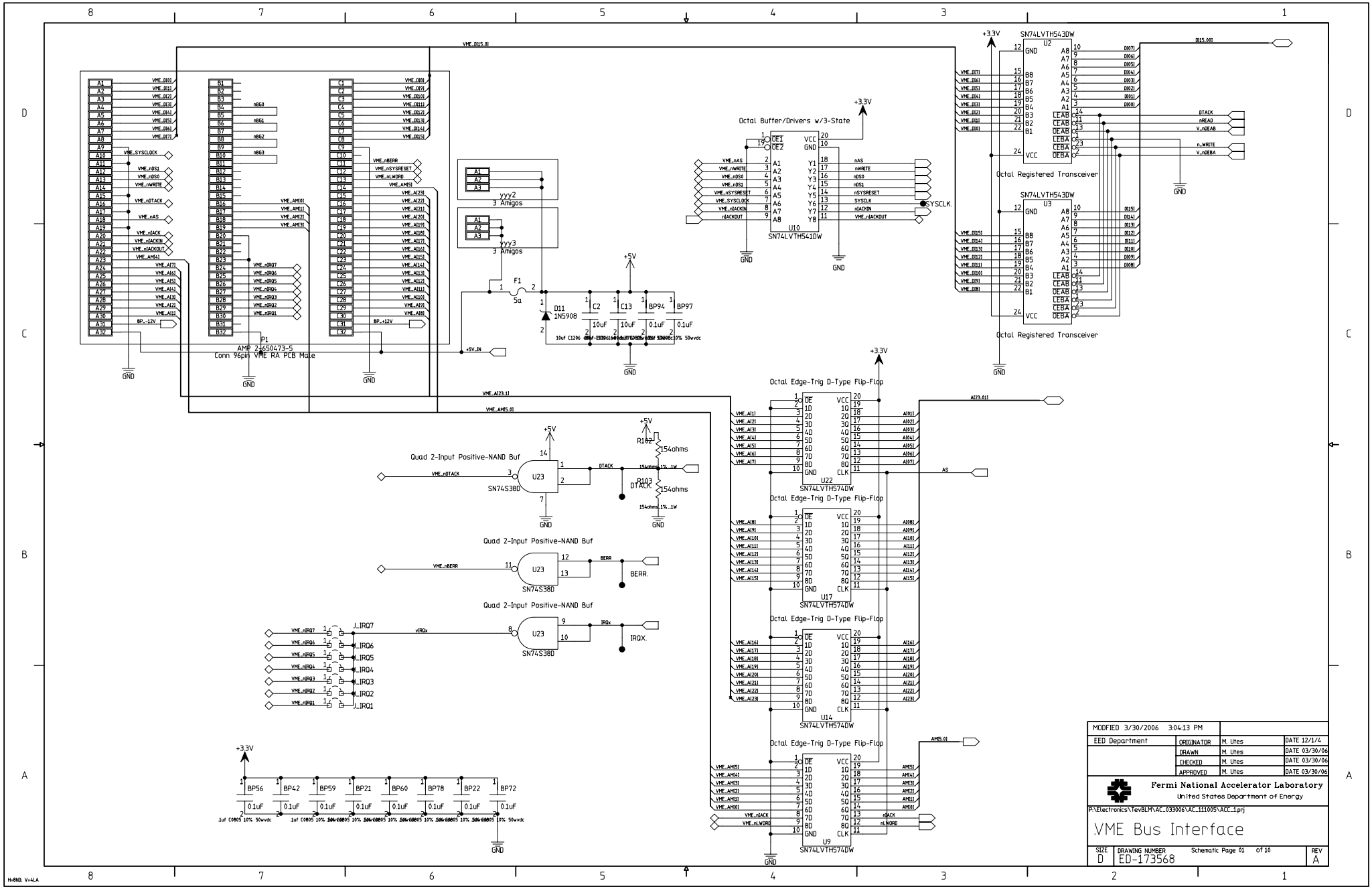
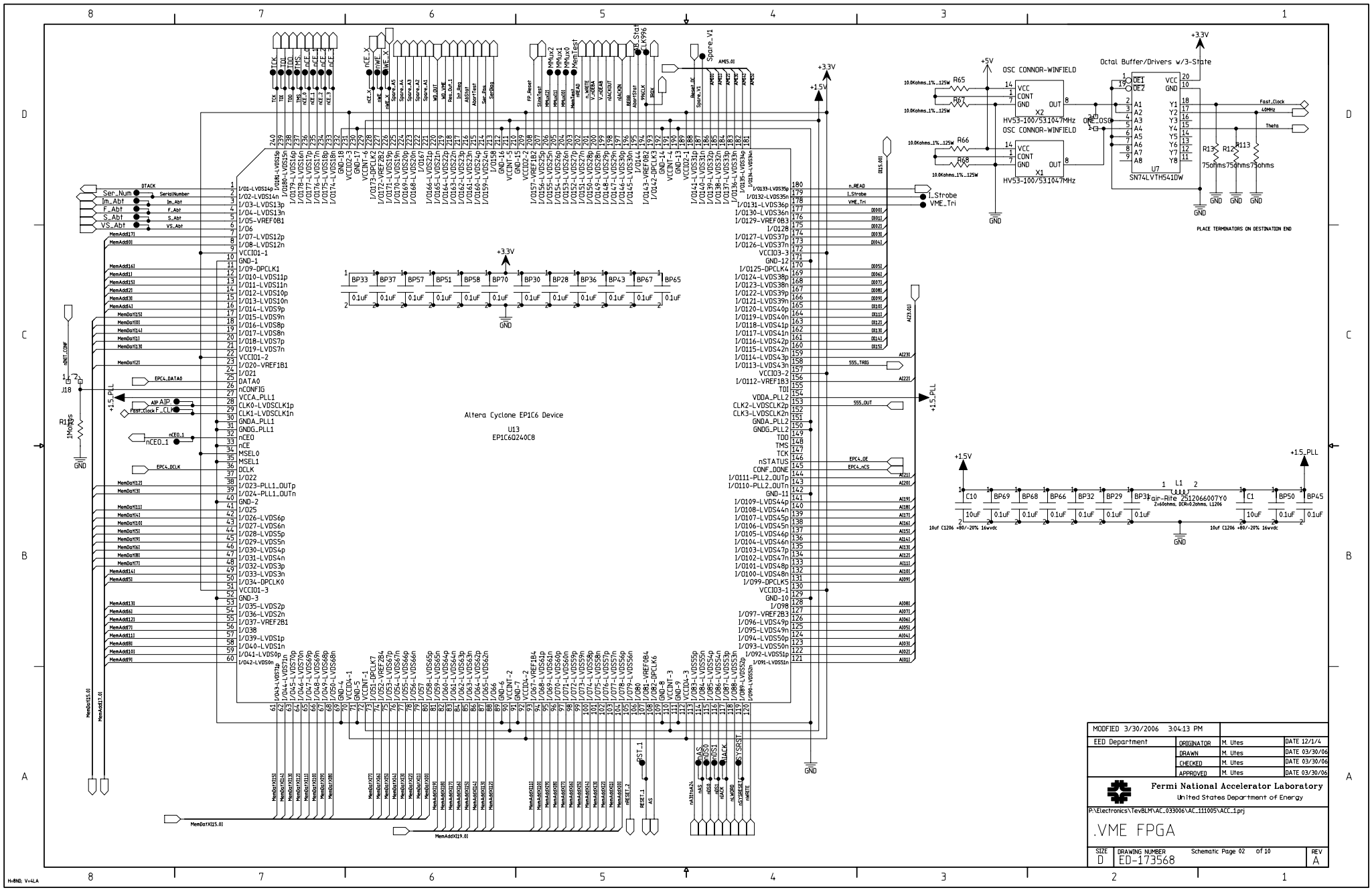
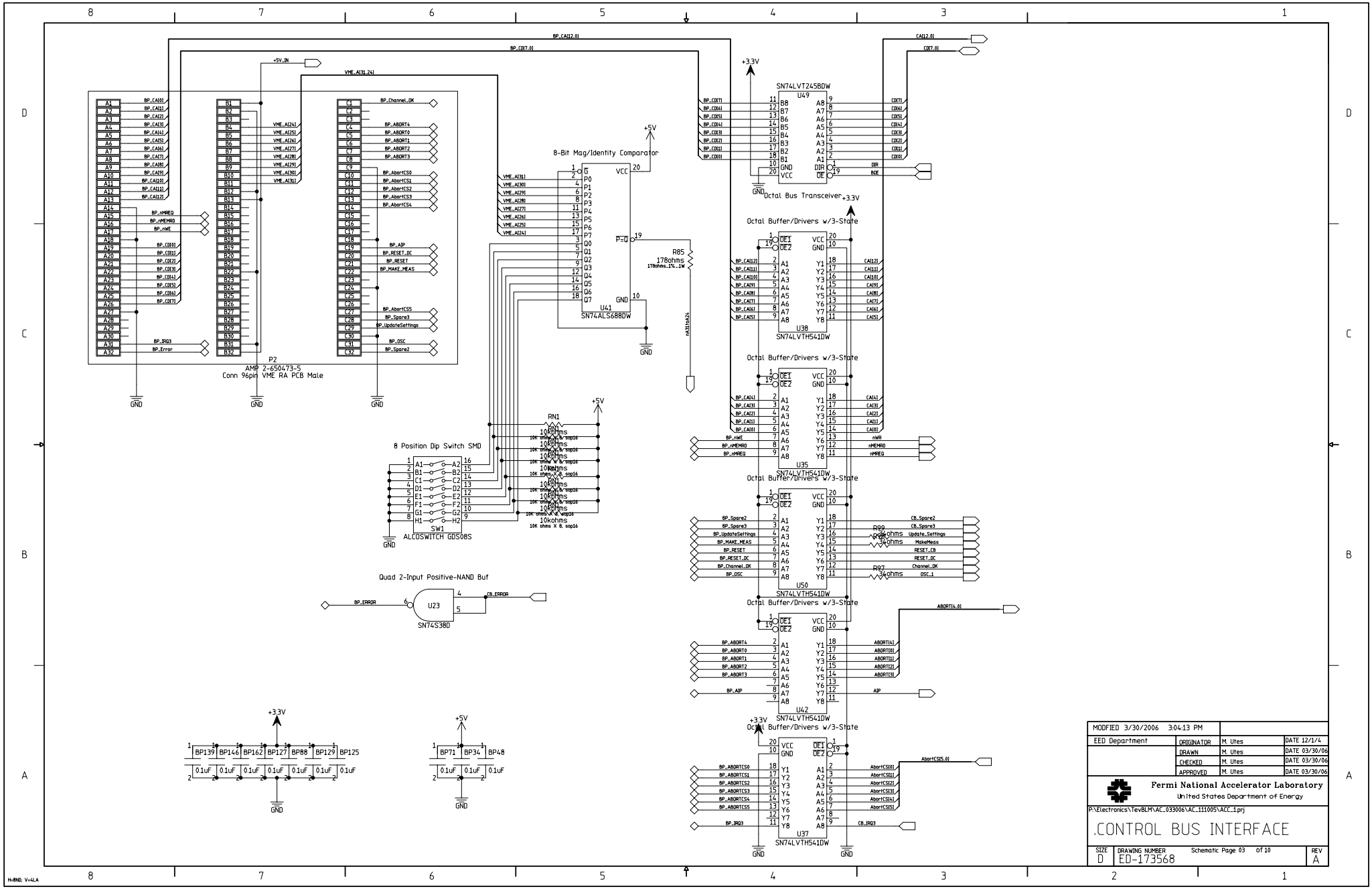

P1
AMP 2-650473-5
Conn 96pin VME RA PCB Male
yyy2
3 Amigos
yyy3
3 Amigos
F1
5a
D11
1N5908
Octal Buffer/Drivers w/3-State
U10
SN74LVTH541DW
SYSCLK.
U2
SN74LVTH543DW
Octal Registered Transceiver
U3
SN74LVTH543DW
Octal Registered Transceiver
Quad 2-Input Positive-NAND Buf
SN74S38D
DTACK.
BERR.
IRQX.
Octal Edge-Trig D-Type Flip-Flop
U22
SN74LVTH574DW
U17
SN74LVTH574DW
U14
SN74LVTH574DW
U9
SN74LVTH574DW
MODIFIED 3/30/2006 3:04:13 PM
EED Department
ORIGINATOR M. Utes DATE 12/1/4
DRAWN M. Utes DATE 03/30/06
CHECKED M. Utes DATE 03/30/06
APPROVED M. Utes DATE 03/30/06
Fermi National Accelerator Laboratory
United States Department of Energy
P:\Electronics\TevBLM\AC_033006\AC_111005\ACC_1.prj
VME Bus Interface
SIZE D
DRAWING NUMBER ED-173568
Schematic Page 01 of 10
REV A


Altera Cyclone EP1C6 Device
U13
EP1C6Q240C8
OSC CONNOR-WINFIELD
HV53-100/53.1047MHz
Octal Buffer/Drivers w/3-State
SN74LVTH541DW
PLACE TERMINATORS ON DESTINATION END
Fair-Rite 2512066007Y0
Z=600ohms, DCR=0.2ohms, L1206
10uF C1206 +80/-20% 16vvdc
MODIFED 3/30/2006 3:04:13 PM
EED Department
ORIGINATOR M. Utes DATE 12/1/4
DRAWN M. Utes DATE 03/30/06
CHECKED M. Utes DATE 03/30/06
APPROVED M. Utes DATE 03/30/06
Fermi National Accelerator Laboratory
United States Department of Energy
P:\Electronics\TevBLM\AC_033006\AC_111005\ACC_1.prj
.VME FPGA
SIZE D
DRAWING NUMBER ED-173568
Schematic Page 02 of 10
REV A



MODIFIED 3/30/2006 3:04:13 PM			
EED Department	ORIGINATOR	M. Utes	DATE 12/1/4
	DRAWN	M. Utes	DATE 03/30/06
	CHECKED	M. Utes	DATE 03/30/06
	APPROVED	M. Utes	DATE 03/30/06

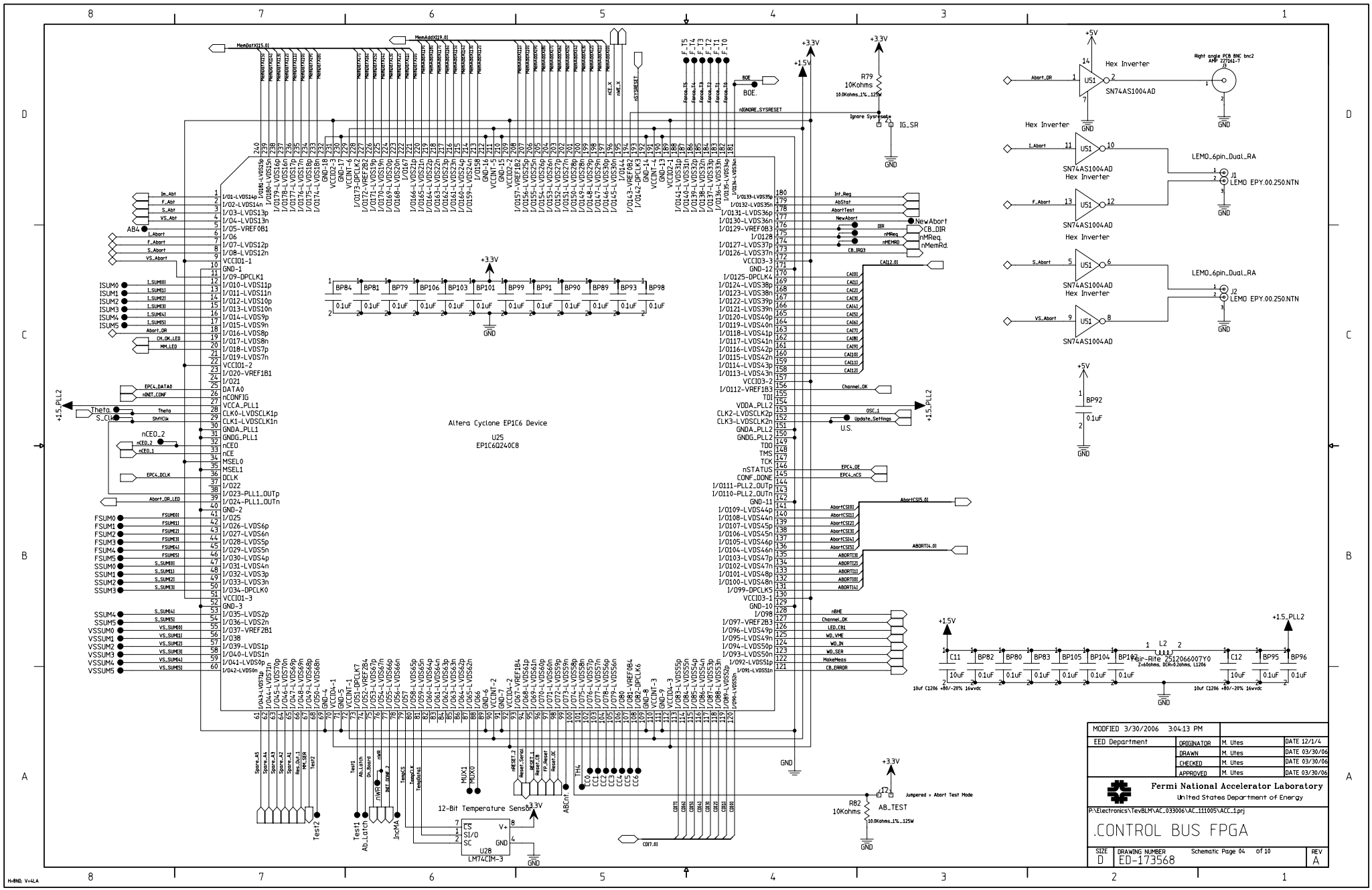
Fermi National Accelerator Laboratory
United States Department of Energy

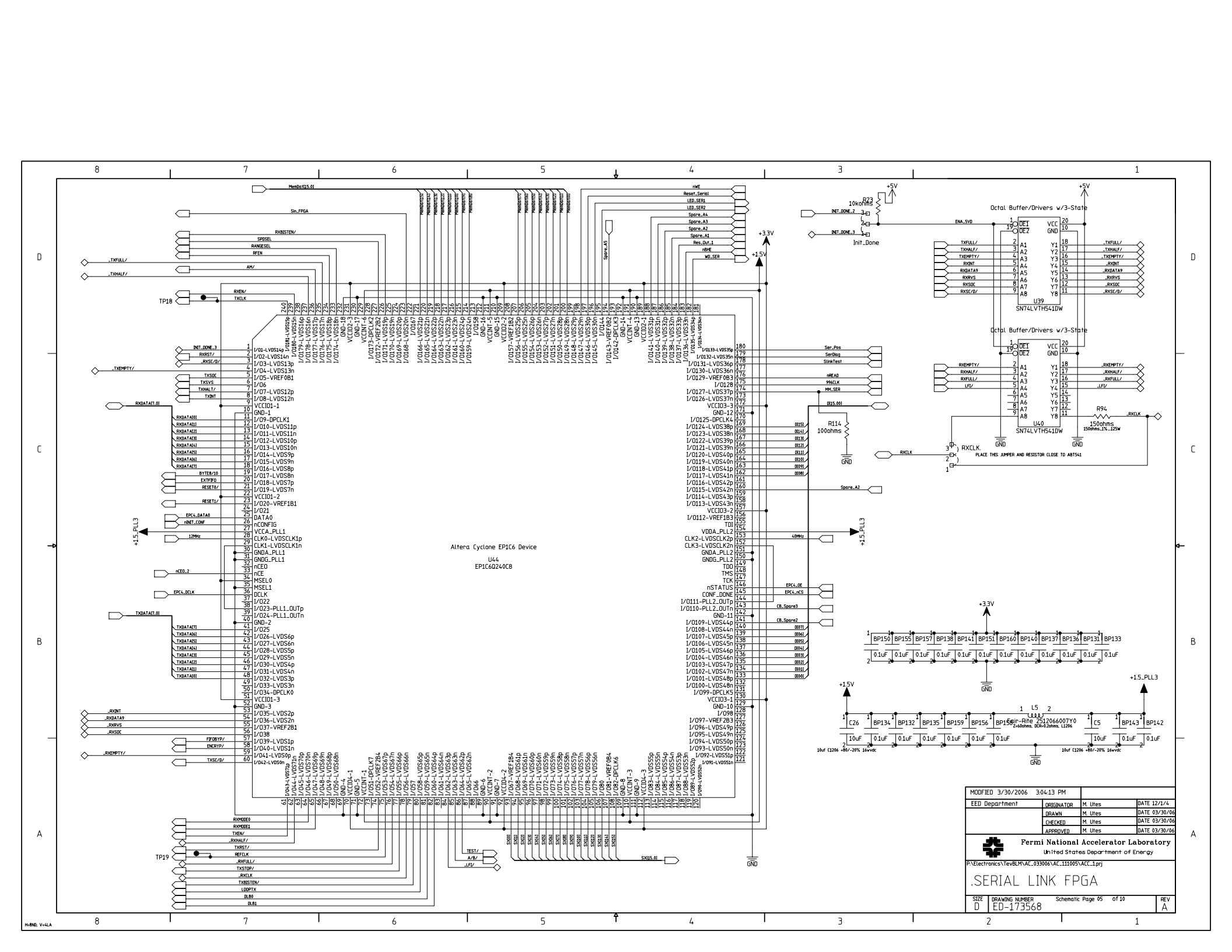
P:\Electronics\TevBLM\AC_033006\AC_111005\ACC_1.prj

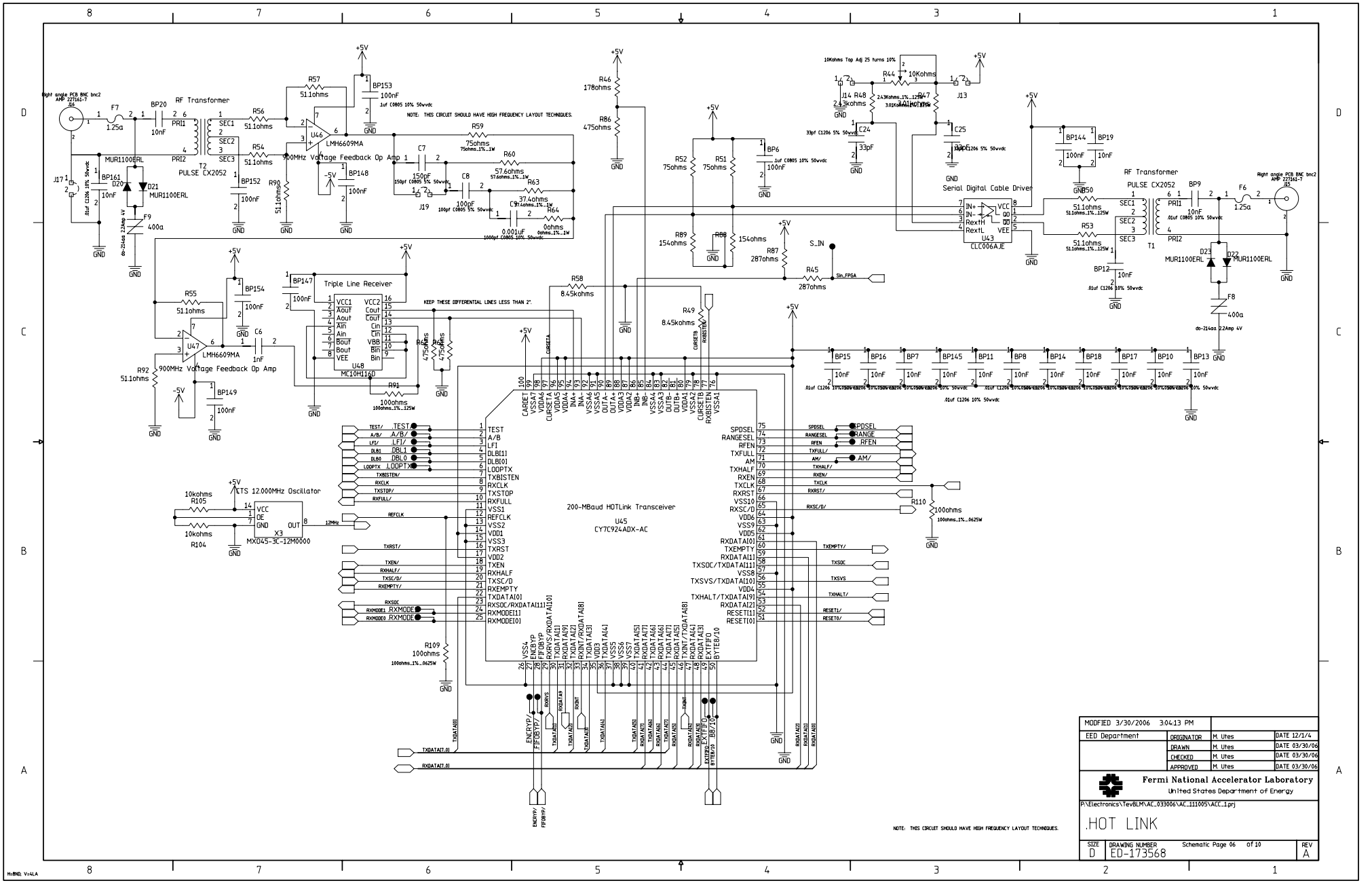
.CONTROL BUS INTERFACE

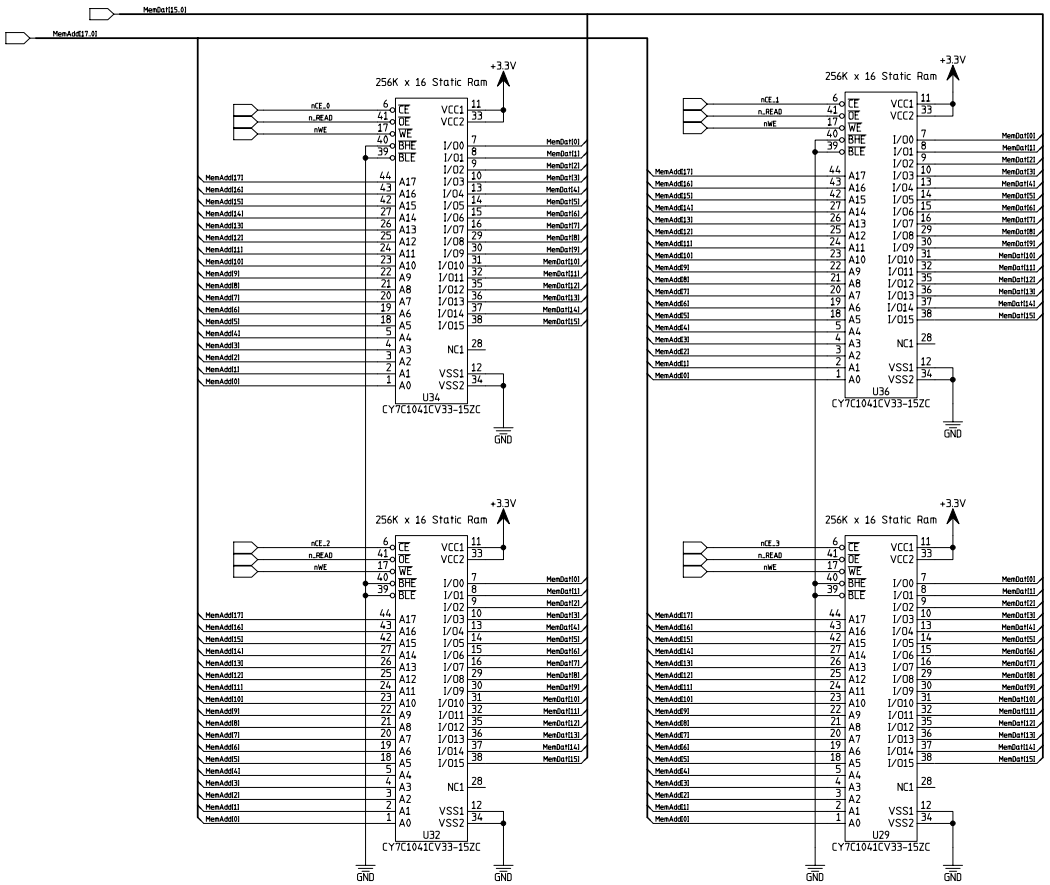
SIZE	DRAWING NUMBER	Schematic Page 03 of 10	REV
D	ED-173568		A

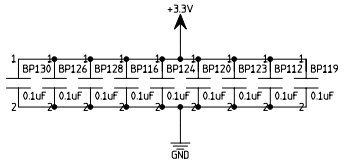
H=BND; V=4LA


Altera Cyclone EP1C6 Device
U25
EP1C6Q240C8
12-Bit Temperature Sensor
U28
LM74CIM-3
SN74AS1004AD
Hex Inverter
LEMO_6pin_Dual_RA
LEMO EPY.00.250.NTN
MODFIED 3/30/2006 3:04:13 PM
EED Department
ORIGINATOR M. Utes DATE 12/1/4
DRAWN M. Utes DATE 03/30/06
CHECKED M. Utes DATE 03/30/06
APPROVED M. Utes DATE 03/30/06
Fermi National Accelerator Laboratory
United States Department of Energy
P:\Electronics\TevBLM\AC_033006\AC_111005\ACC_1.prj
.CONTROL BUS FPGA
SIZE D
DRAWING NUMBER ED-173568
Schematic Page 04 of 10
REV A


Altera Cyclone EP1C6 Device
U44
EP1C6Q240C8
Octal Buffer/Drivers w/3-State
U39
SN74LVTH541DW
U40
SN74LVTH541DW
Init_Done
R23
10kohms
R114
100ohms
R94
150ohms
150ohms,1%,.125W
PLACE THIS JUMPER AND RESISTOR CLOSE TO ABT541
MODIFIED 3/30/2006 3:04:13 PM
EED Department
ORIGINATOR M. Utes DATE 12/1/4
DRAWN M. Utes DATE 03/30/06
CHECKED M. Utes DATE 03/30/06
APPROVED M. Utes DATE 03/30/06
Fermi National Accelerator Laboratory
United States Department of Energy
P:\Electronics\TevBLM\AC_033006\AC_111005\ACC_1.prj
.SERIAL LINK FPGA
SIZE D
DRAWING NUMBER ED-173568
Schematic Page 05 of 10
REV A


RF Transformer
PULSE CX2052
LMH6609MA
900MHz Voltage Feedback Op Amp
Triple Line Receiver
MC10H116D
CTS 12.000MHz Oscillator
MX045-3C-12M0000
200-MBaud HOTLink Transceiver
U45
CY7C924ADX-AC
Serial Digital Cable Driver
CLC006AJE
MUR1100ERL
.HOT LINK
Fermi National Accelerator Laboratory
United States Department of Energy
MODIFIED 3/30/2006 3:04:13 PM
EED Department
ED-173568
Schematic Page 06 Of 10
REV A
SIZE D





MODIFIED 3/30/2006 3:04:13 PM			
EED Department	ORIGINATOR	M. Utes	DATE 12/1/4
	DRAWN	M. Utes	DATE 03/30/06
	CHECKED	M. Utes	DATE 03/30/06
	APPROVED	M. Utes	DATE 03/30/06

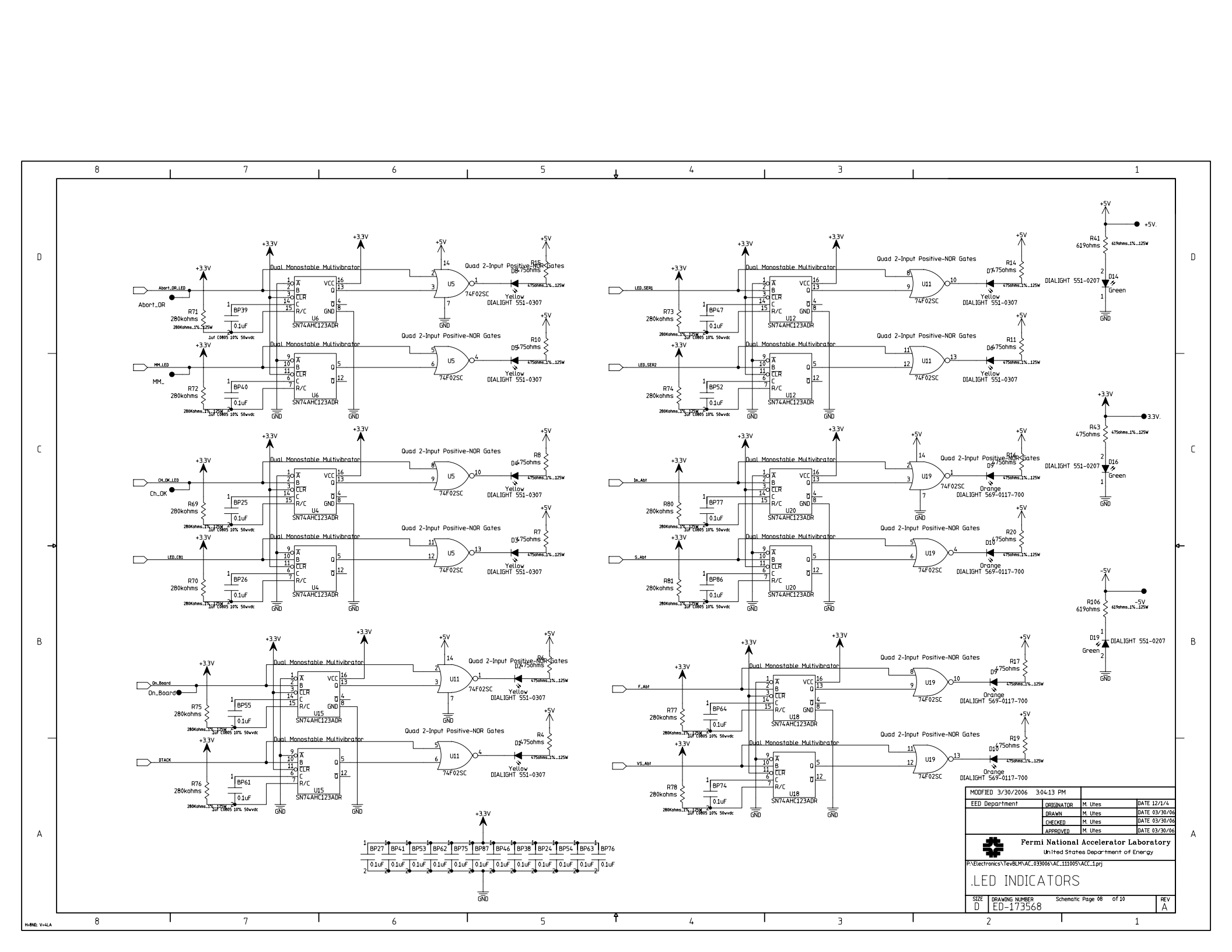
Fermi National Accelerator Laboratory
United States Department of Energy

P:\Electronics\TevBLM\AC_033006\AC_111005\ACC_1.prj

.CIRCULAR BUFFER MEMORY

SIZE	DRAWING NUMBER	Schematic Page 07 of 10	REV
D	ED-173568		A

H=BND; V=4LA



MODFIED 3/30/2006 3:04:13 PM			
EED Department	ORIGINATOR	M. Utes	DATE 12/1/4
	DRAWN	M. Utes	DATE 03/30/06
	CHECKED	M. Utes	DATE 03/30/06
	APPROVED	M. Utes	DATE 03/30/06

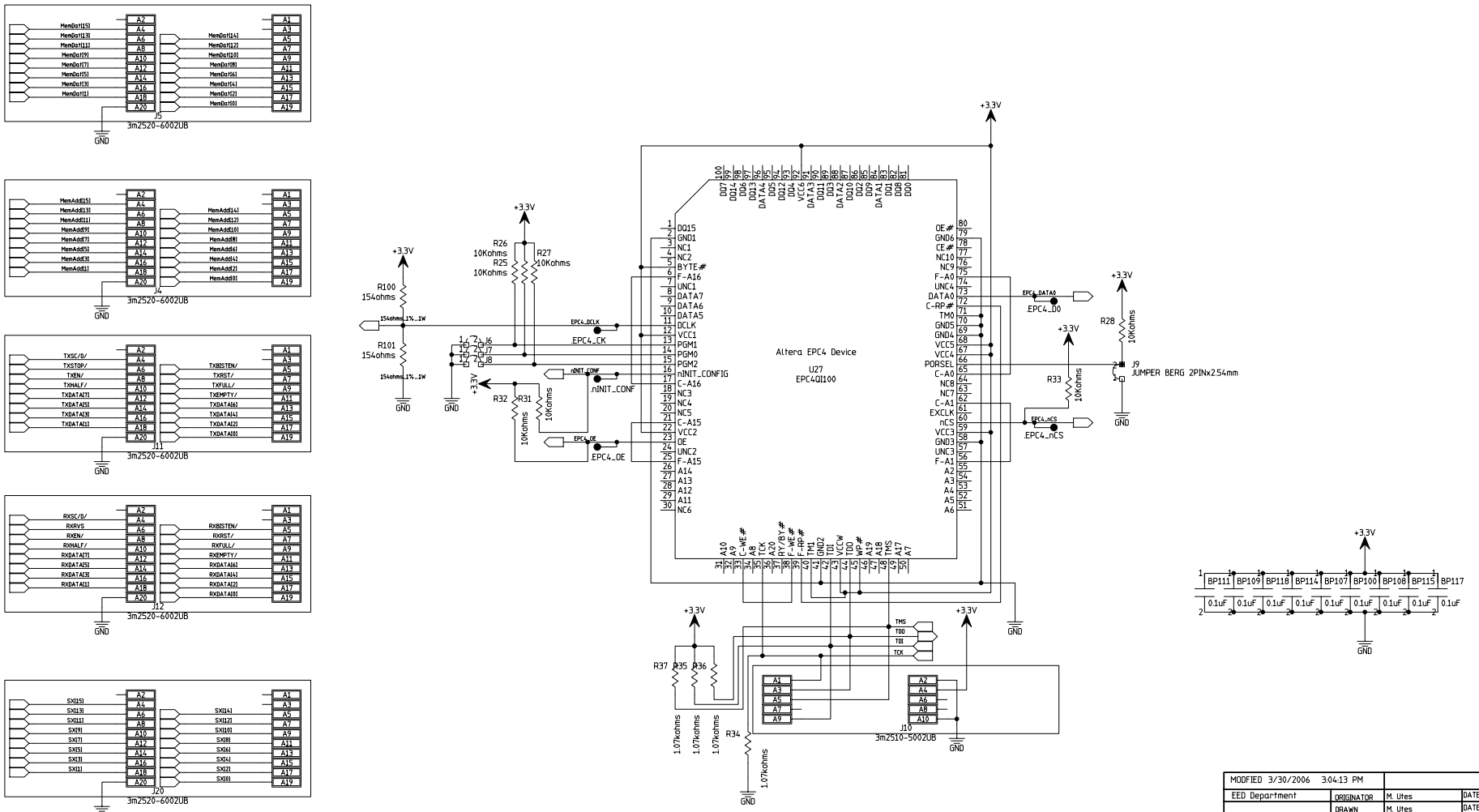
Fermi National Accelerator Laboratory
United States Department of Energy

P:\Electronics\TevBLM\AC_033006\AC_111005\ACC_1.prj

.LED INDICATORS

SIZE	DRAWING NUMBER	Schematic Page 08 of 10	REV
D	ED-173568		A

H=BND; V=4LA



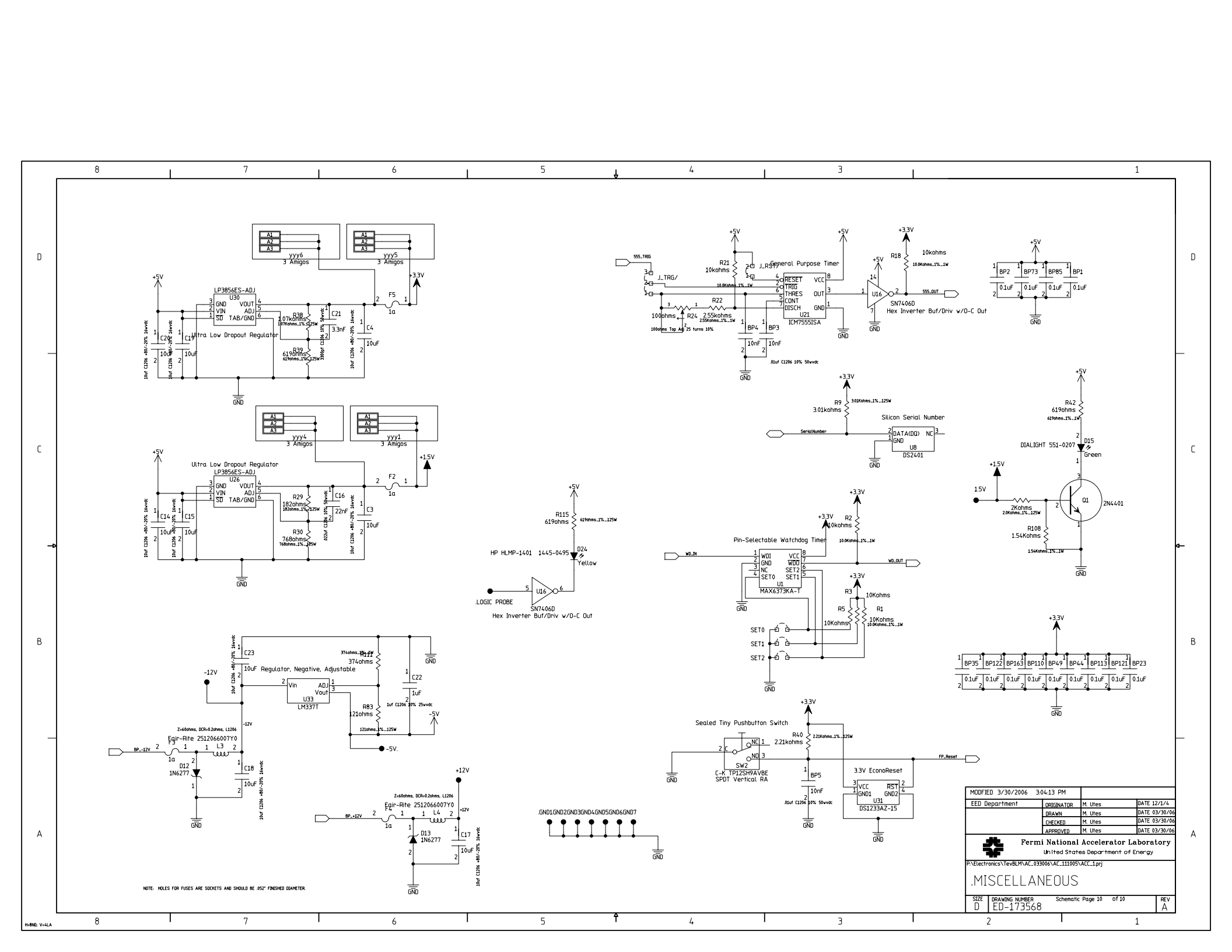
MODIFIED 3/30/2006 3:04:13 PM			
EED Department	ORIGINATOR	M. Utes	DATE 12/1/4
	DRAWN	M. Utes	DATE 03/30/06
	CHECKED	M. Utes	DATE 03/30/06
	APPROVED	M. Utes	DATE 03/30/06

Fermi National Accelerator Laboratory
United States Department of Energy

P:\Electronics\TevBLM\AC_033006\AC_111005\ACC_1.prj

CONFIGURATION DEVICE & L.A. HEADERS

SIZE	DRAWING NUMBER	Schematic Page 09 of 10	REV
D	ED-173568		A


yyy6
3 Amigos
yyy5
3 Amigos
LP3856ES-ADJ
U30
Ultra Low Dropout Regulator
+5V
+3.3V
F5
1a
R38
1.07kohms
R39
619ohms
C21
3.3nF
C4
10uF
C20
C19
10uF
yyy4
3 Amigos
yyy1
3 Amigos
Ultra Low Dropout Regulator
LP3856ES-ADJ
U26
+1.5V
F2
1a
R29
182ohms
R30
768ohms
C16
22nF
C3
10uF
C14
C15
10uF
GND
555_TRIG
J_TRG/
J_RST/
General Purpose Timer
R21
10kohms
R22
2.55kohms
R24
100ohms
100ohms Top Adj
25 turns 10%
RESET
TRIG
THRES
CONT
DISCH
VCC
OUT
GND
U21
ICM7555ISA
BP4
BP3
10nF
10nF
.01uf C1206 10% 50wvdc
R18
10kohms
U16
SN7406D
Hex Inverter Buf/Driv w/O-C Out
555_OUT
BP2
BP73
BP85
BP1
0.1uF
R9
3.01kohms
Silicon Serial Number
SerialNumber
DATA(DQ)
NC
U8
DS2401
R42
619ohms
D15
DIALIGHT 551-0207
Green
R115
619ohms
D24
HP HLMP-1401 1445-0495
Yellow
LOGIC PROBE
U16
SN7406D
Hex Inverter Buf/Driv w/O-C Out
Pin-Selectable Watchdog Timer
WD_IN
WD_OUT
WDI
GND
NC
SET0
VCC
WDO
SET2
SET1
U1
MAX6373KA-T
R2
10kohms
R3
10Kohms
R5
10Kohms
R1
10Kohms
SET0
SET1
SET2
1.5V
2Kohms
R108
1.54Kohms
Q1
2N4401
BP35
BP122
BP163
BP110
BP49
BP44
BP113
BP121
BP23
C23
10uF Regulator, Negative, Adjustable
-12V
Vin
ADJ
Vout
U33
LM337T
R121
374ohms
C22
1uF
R83
121ohms
-5V
Z=60ohms, DCR=0.2ohms, L1206
Egir-Rite 2512066007Y0
F3
1a
L3
D12
1N6277
C18
10uF
Sealed Tiny Pushbutton Switch
SW2
C-K TP12SH9AVBE
SPDT Vertical RA
R40
2.21kohms
BP5
10nF
.01uF C1206 10% 50wvdc
3.3V EconoReset
VCC
RST
GND1
GND2
U31
DS1233AZ-15
FP_Reset
F4
L4
D13
1N6277
C17
10uF
.GND1GND2GND3GND4GND5GND6GND7
NOTE: HOLES FOR FUSES ARE SOCKETS AND SHOULD BE .052" FINISHED DIAMETER.
MODIFIED 3/30/2006 3:04:13 PM
EED Department
ORIGINATOR M. Utes DATE 12/1/4
DRAWN M. Utes DATE 03/30/06
CHECKED M. Utes DATE 03/30/06
APPROVED M. Utes DATE 03/30/06
Fermi National Accelerator Laboratory
United States Department of Energy
P:\Electronics\TevBLM\AC_033006\AC_111005\ACC_1.prj
.MISCELLANEOUS
SIZE D
DRAWING NUMBER ED-173568
Schematic Page 10 of 10
REV A