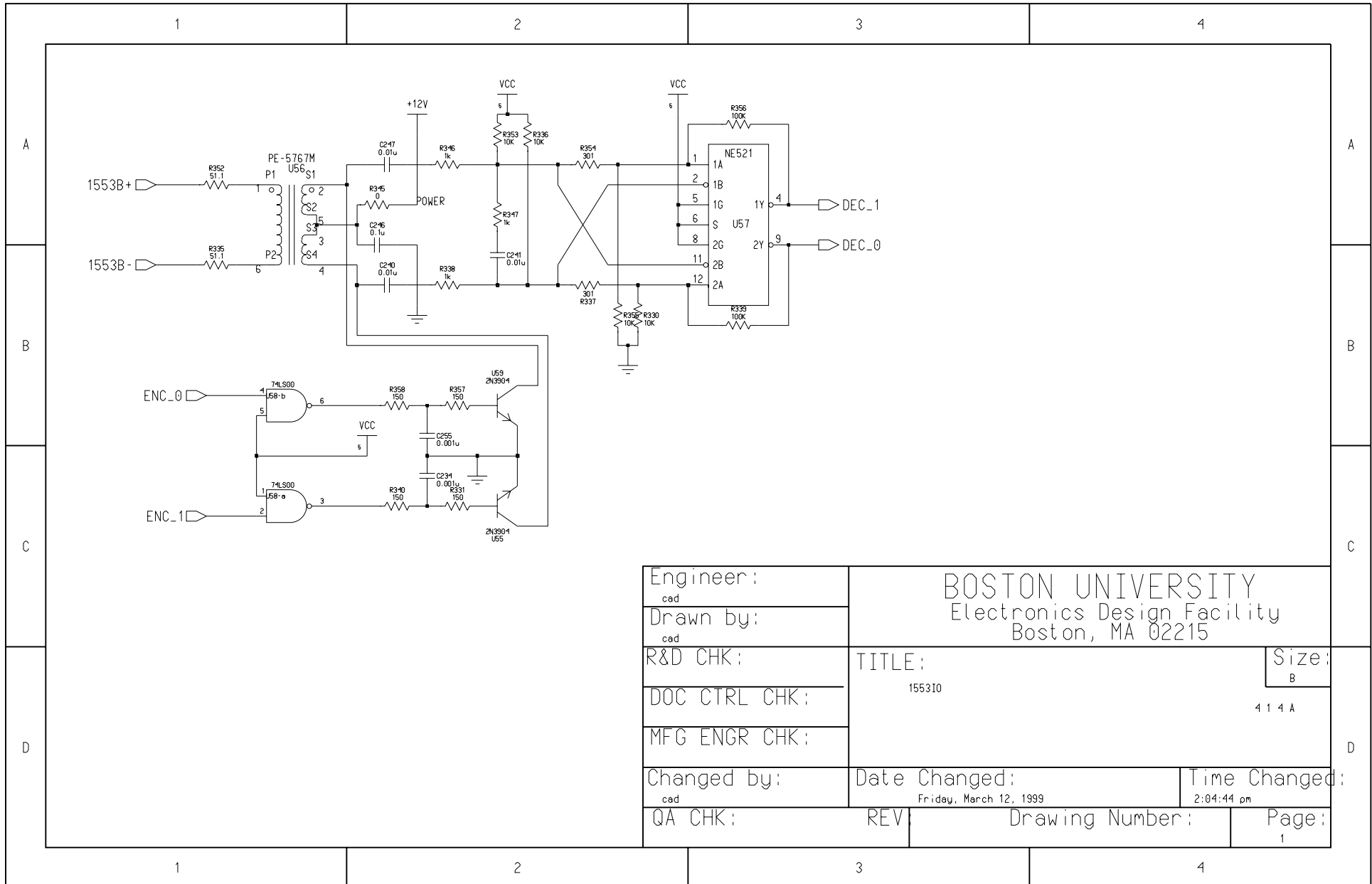
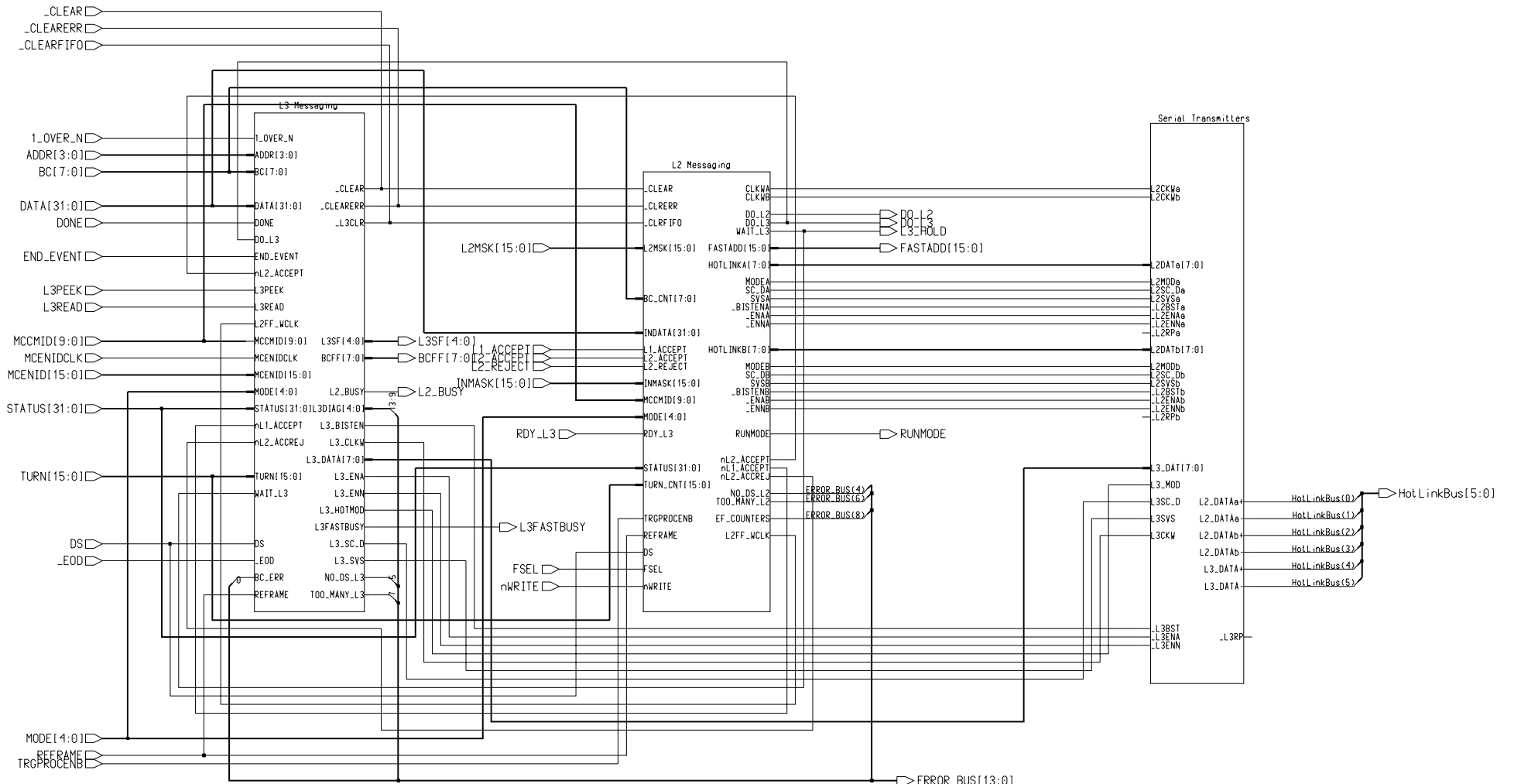


Engineer:	BOSTON UNIVERSITY		
Drawn by:	Electronics Design Facility		
R&D CHK:	TITLE:		Size
DOC CTRL CHK:	Serial Control Links		D
MFG CTRL CHK:			815A
QA CHK:	REV	Drawing Number:	Page:
			1

Changed by: Date Changed: Time: 12:59:01 pm

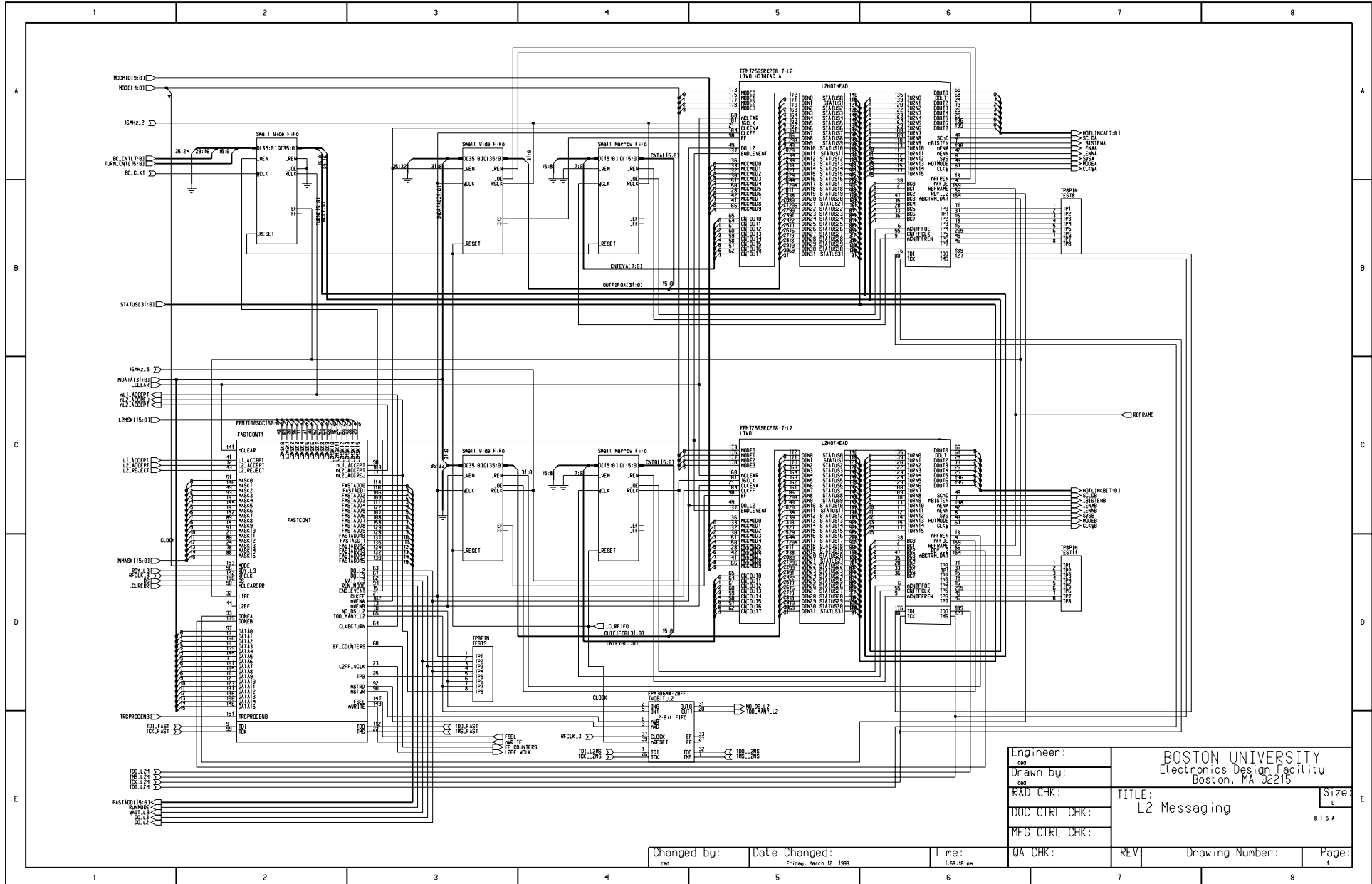


Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size: B
Drawn by: cad			TITLE: 155310
R&D CHK:			
DOC CTRL CHK:			
MFG ENGR CHK:			
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 2:04:44 pm	
QA CHK:	REV:	Drawing Number:	Page: 1

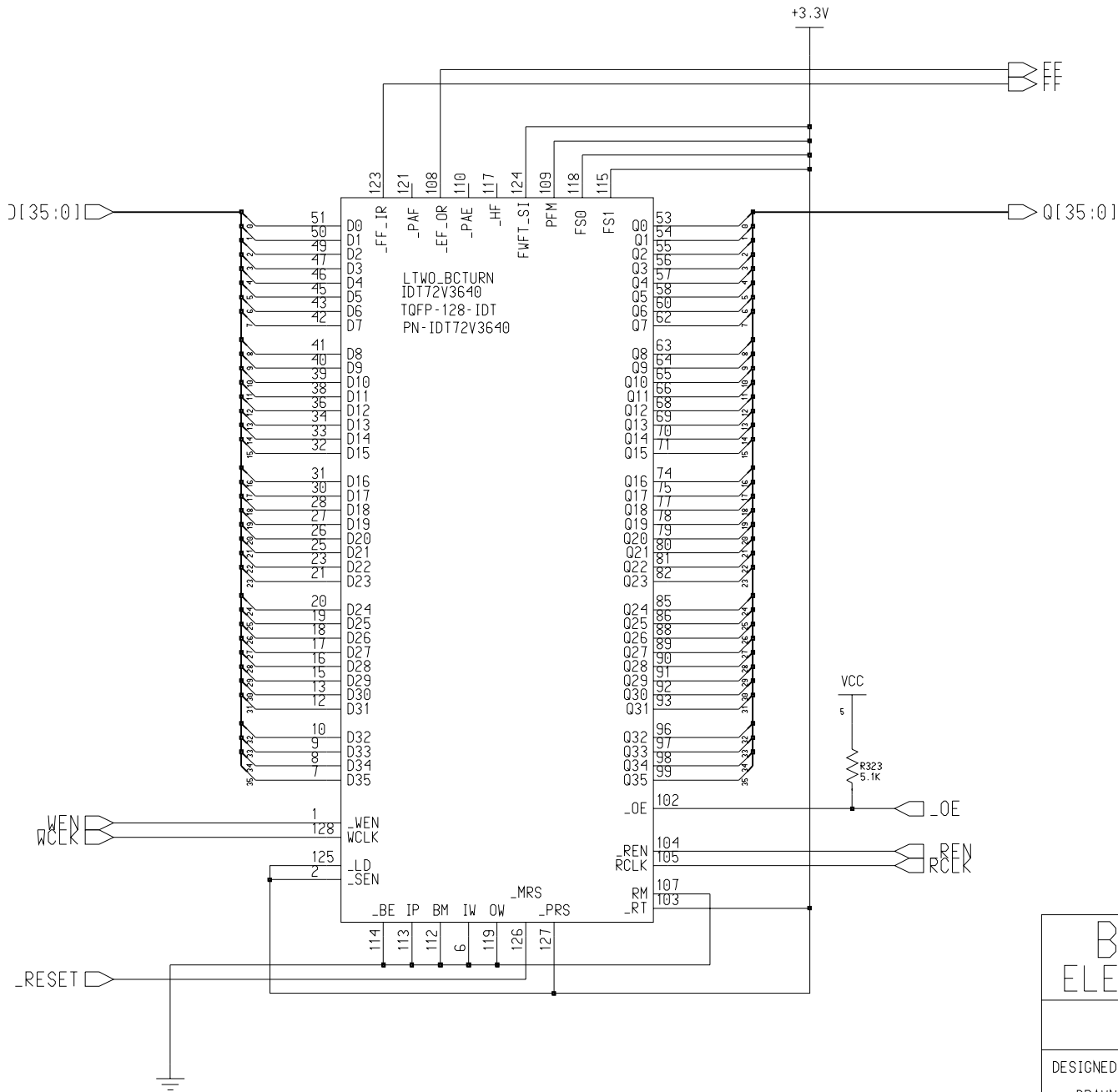


BOSTON UNIVERSITY
ELECTRONICS DESIGN FACILITY

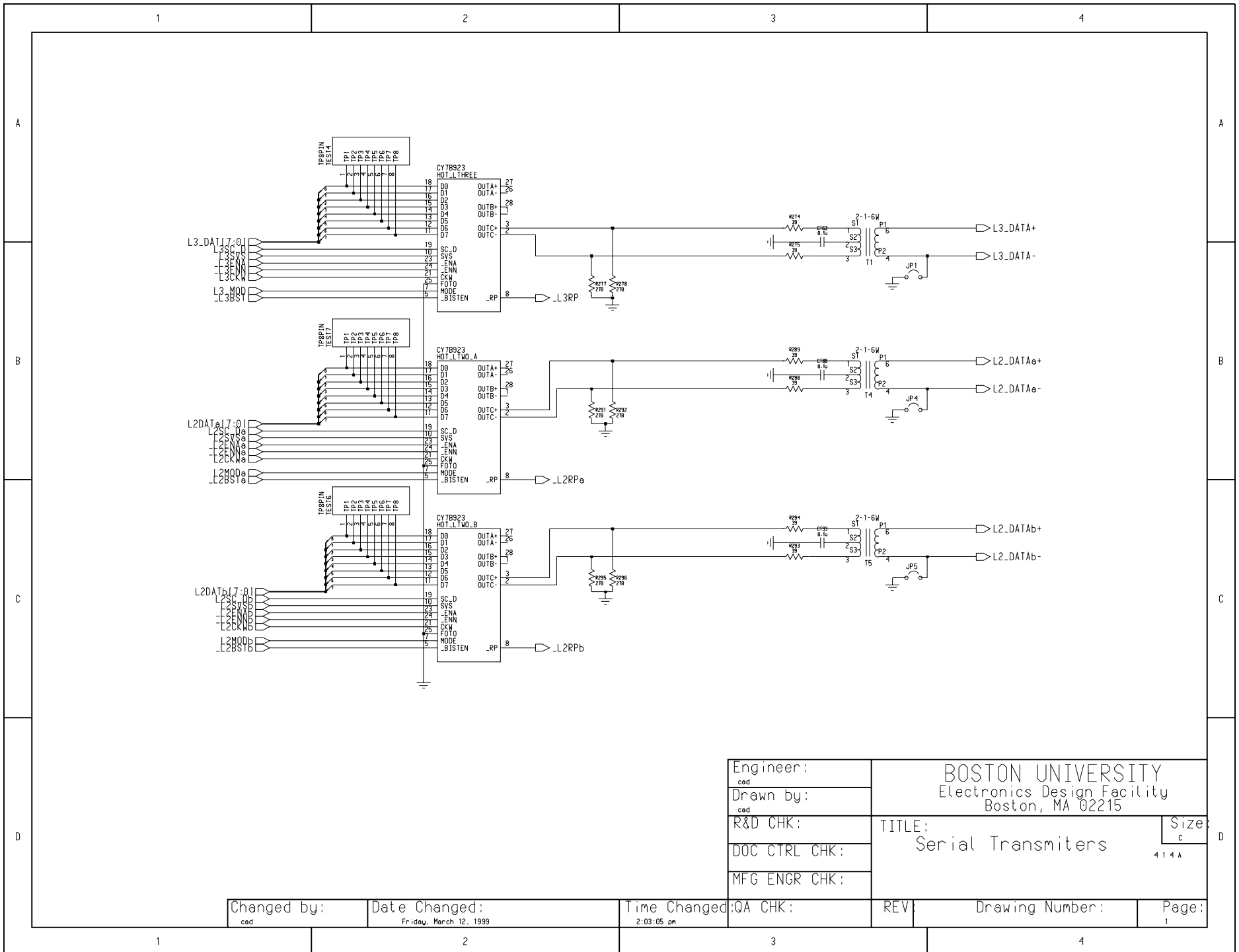
MCCM Message Handling			
DESIGNED BY	Emanuel Machado	BLOCK	
DRAWN BY	Emanuel Machado	PART NO	XXX-A REV A
SHEET	0	OF	0
DATE	9/98	PRELIMINARY	Y
		ECO'S	N
		RELEASED	N
		AS BUILT	N
PATH //home/cad/emanuel/modules/MCCM/design.tib			



Engineer: cnd	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215	
Drawn by: cnd	TITLE: L2 Messaging	Size: D
R&D CHK: cnd		815A
DOC CTRL CHK:		
MFG CTRL CHK:		
QA CHK:	REV	Page:
Date Changed: Friday, March 12, 1999	Drawing Number:	

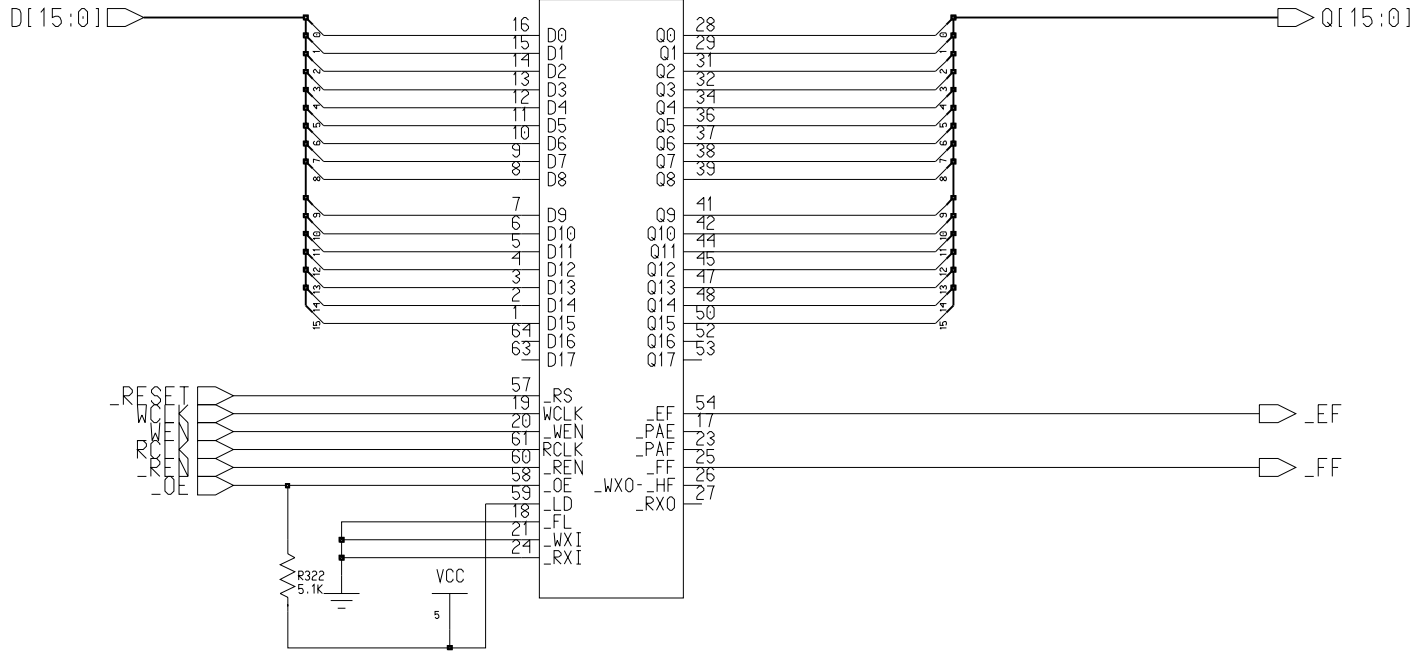


BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN SMALL AND WIDE FIFO			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	21 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



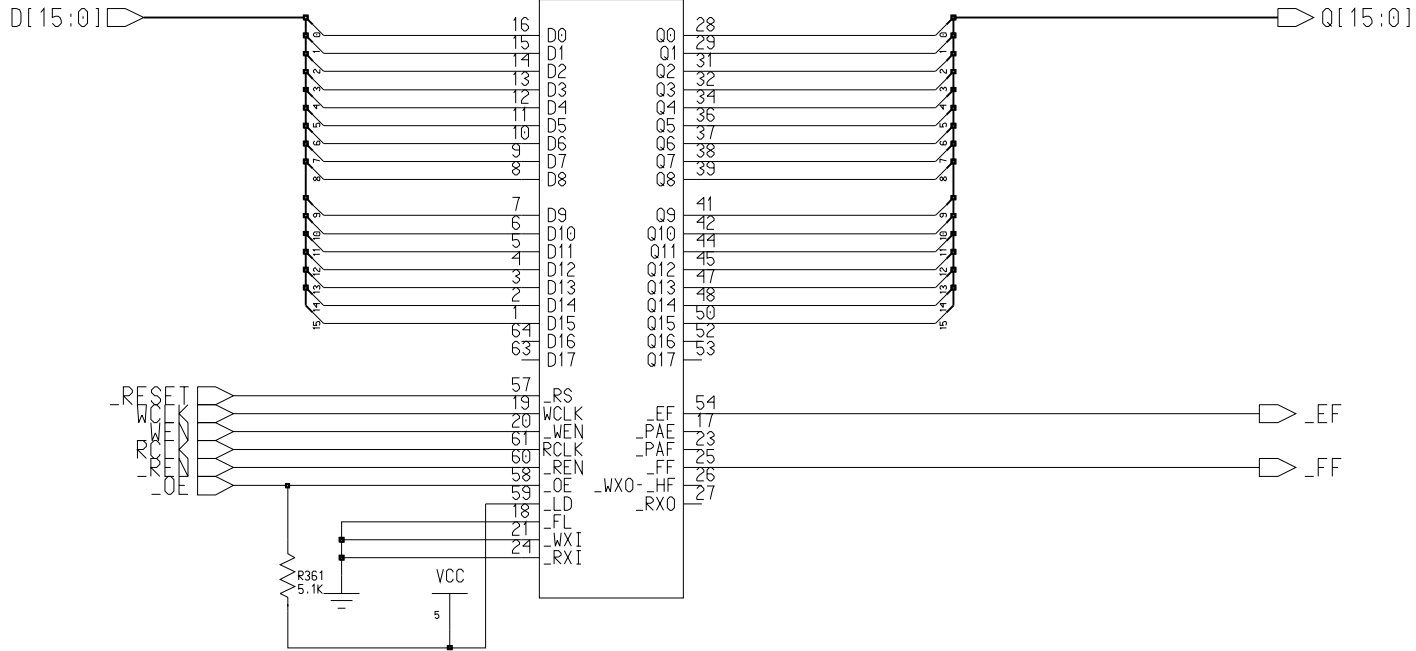
Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size c			
Drawn by: cad						
R&D CHK:	TITLE: Serial Transmitters		411A			
DOC CTRL CHK:						
MFG ENGR CHK:						
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 2:03:05 pm	QA CHK:	REV:	Drawing Number:	Page: 1

IDT72205LB
LTWO_CNT_A

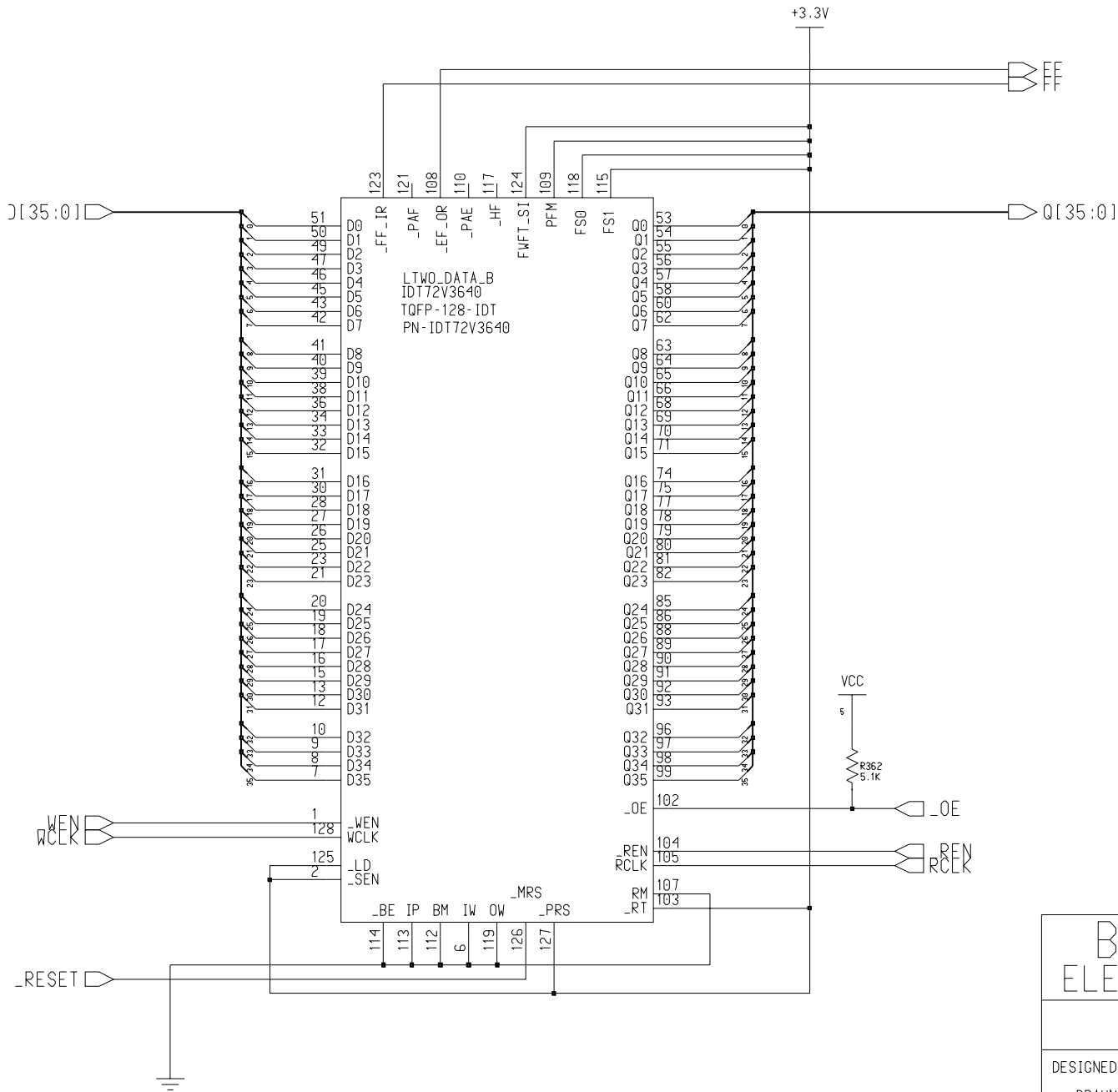


<h2 style="margin: 0;">BOSTON UNIVERSITY</h2> <h3 style="margin: 0;">ELECTRONICS DESIGN FACILITY</h3>			
<p>MCEN SMALL AND NARROW FIFO</p>			
DESIGNED BY	<input type="text" value="Emanuel Machado"/>	BLOCK	<input type="text" value="/AAA/BBB/CCC"/>
DRAWN BY	<input type="text" value="Emanuel Machado/GSV"/>	PART NO	<input type="text" value="MCEN"/> REV <input type="text" value="B"/>
	SHEET <input type="text" value="21"/> OF <input type="text" value="36"/>	PRELIMINARY	<input type="text" value="Y"/> ECO'S <input type="text" value="N"/>
DATE	<input type="text" value="3/14/00"/>	RELEASED	<input type="text" value="N"/> AS BUILT <input type="text" value="N"/>
PATH	<input type="text" value="PATH"/>		

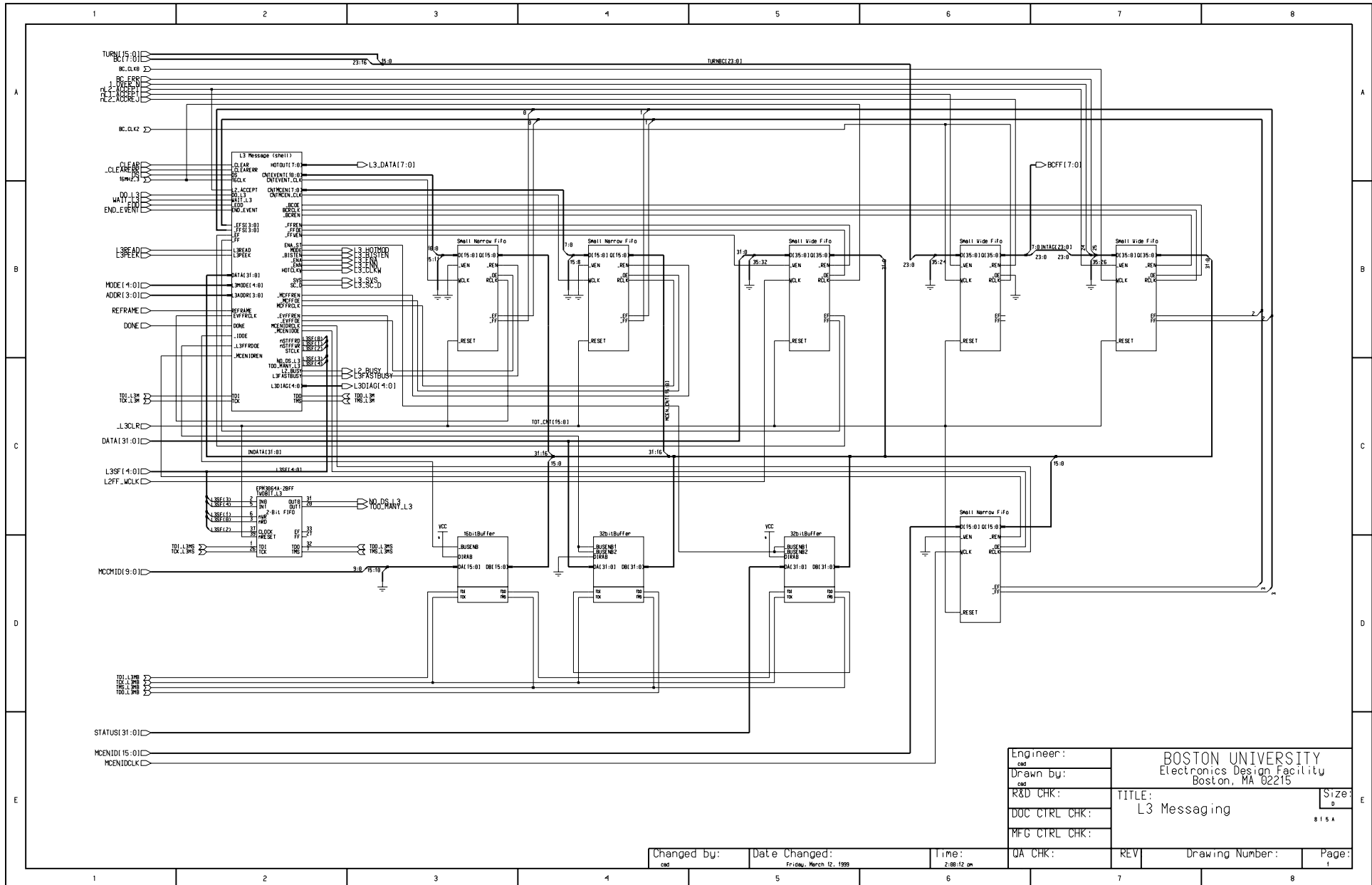
IDT72205LB
LTWO_CNT_B



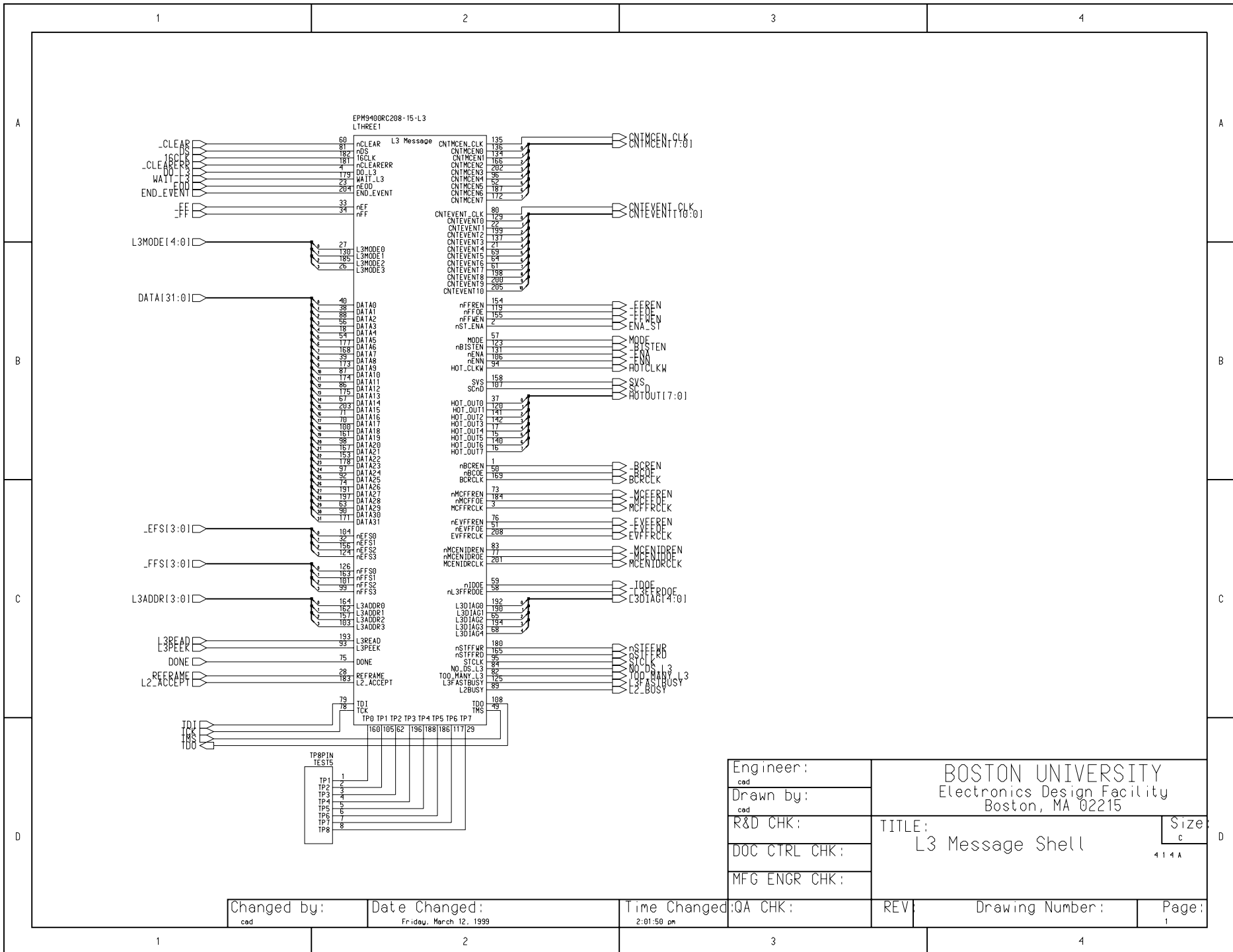
<h2 style="margin: 0;">BOSTON UNIVERSITY</h2> <h2 style="margin: 0;">ELECTRONICS DESIGN FACILITY</h2>			
<p>MCEN SMALL AND NARROW FIFO</p>			
DESIGNED BY	<input type="text" value="Emanuel Machado"/>	BLOCK	<input type="text" value="/AAA/BBB/CCC"/>
DRAWN BY	<input type="text" value="Emanuel Machado/GSV"/>	PART NO	<input type="text" value="MCEN"/> REV <input type="text" value="B"/>
	SHEET <input type="text" value="21"/> OF <input type="text" value="36"/>	PRELIMINARY	<input type="text" value="Y"/> ECO'S <input type="text" value="N"/>
DATE	<input type="text" value="3/14/00"/>	RELEASED	<input type="text" value="N"/> AS BUILT <input type="text" value="N"/>
PATH	<input type="text" value="PATH"/>		

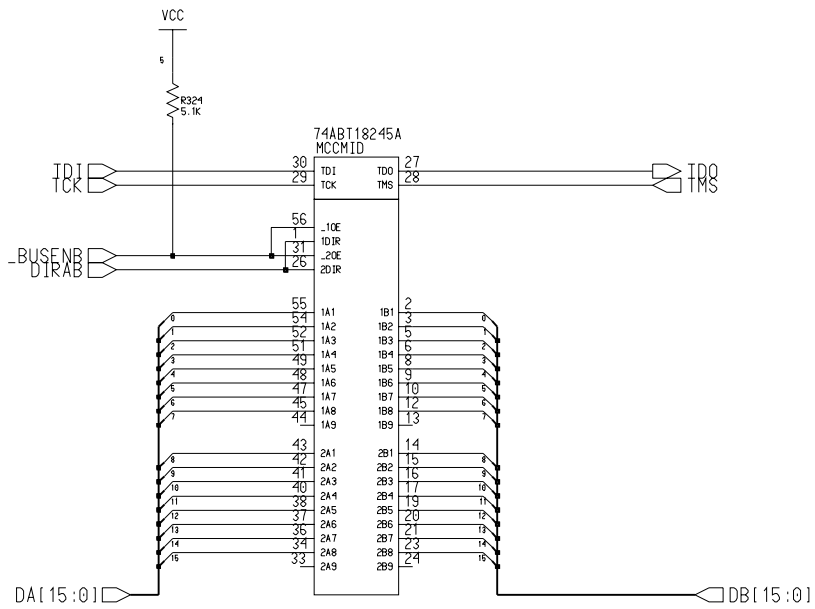


BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN SMALL AND WIDE FIFO			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	21 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		

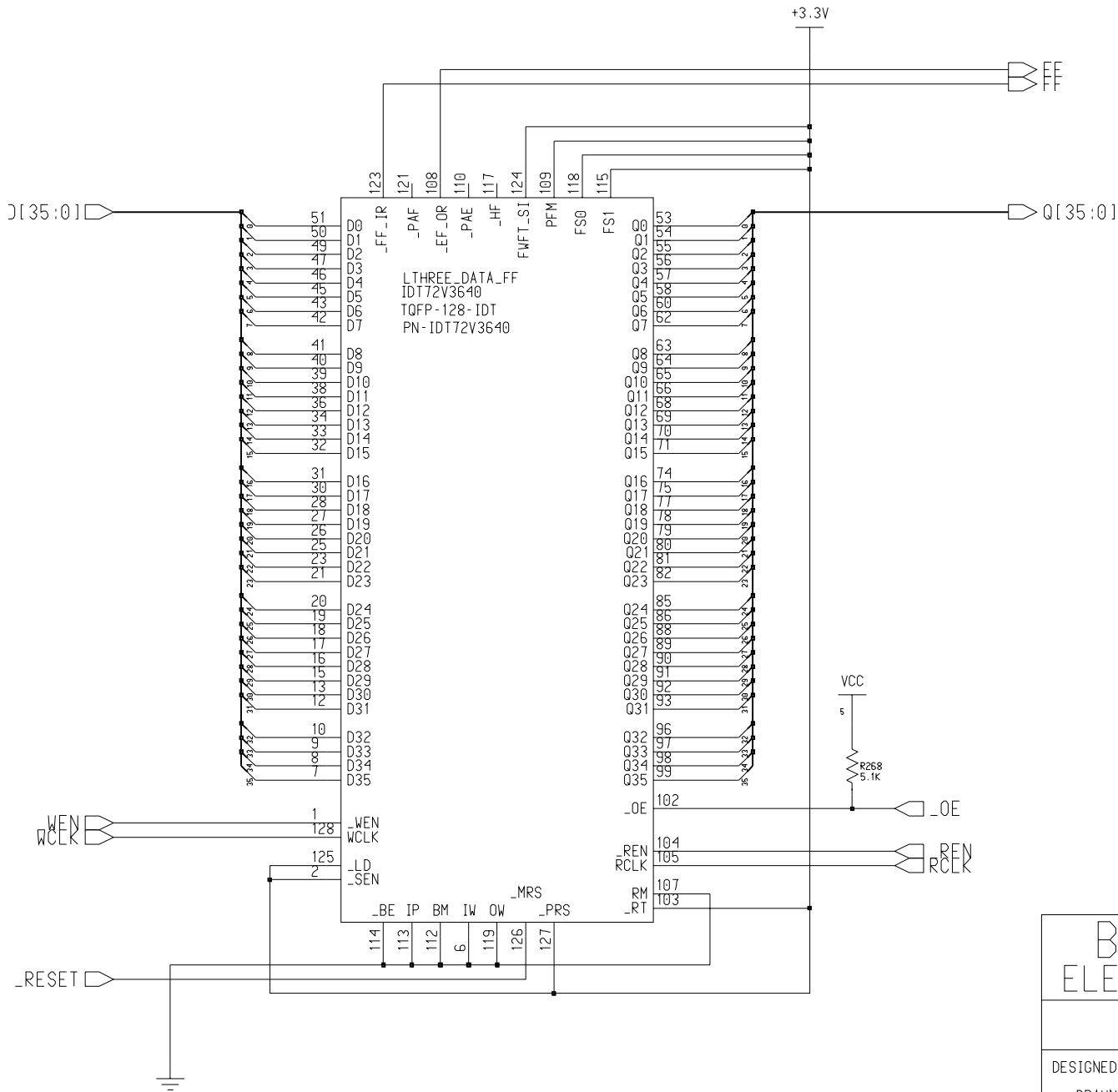


Engineer:	BOSTON UNIVERSITY		
Drawn by:	Electronics Design Facility Boston, MA 02215		
R&D CHK:	TITLE:	L3 Messaging	
DOC CTRL CHK:	Size:	815A	
MFG CTRL CHK:	QA CHK:	REV	Page:
Changed by:	Date Changed:	Time:	Drawing Number:
cad	Friday, March 12, 1999	2:08:12 am	1

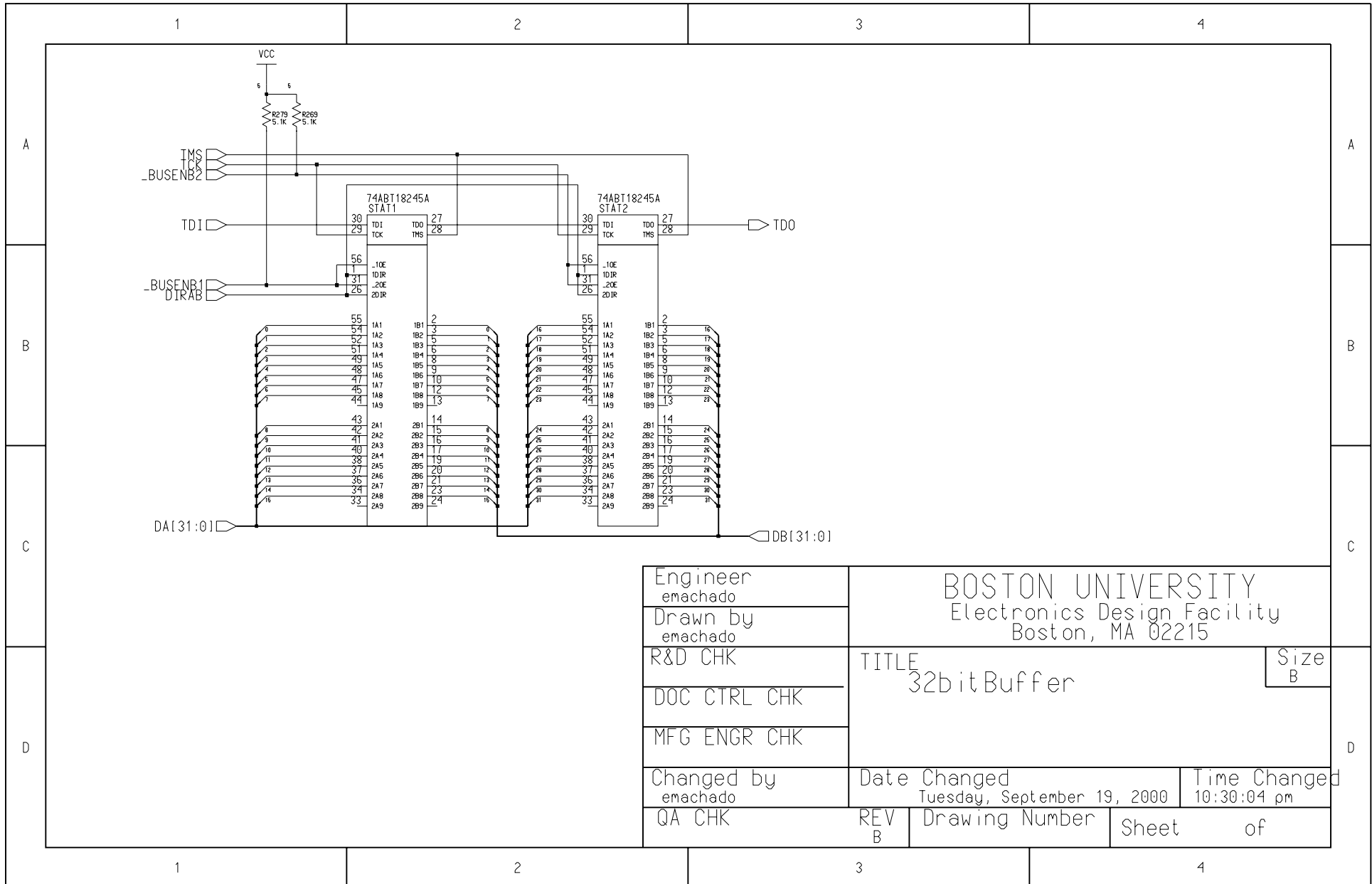




Engineer emachado	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size B
Drawn by emachado			
R&D CHK	TITLE 16bit Buffer		
DOC CTRL CHK			
MFG ENGR CHK			
Changed by emachado	Date Changed Thursday, September 21, 2000	Time Changed 1:28:11 pm	
QA CHK	REV B	Drawing Number	Sheet of

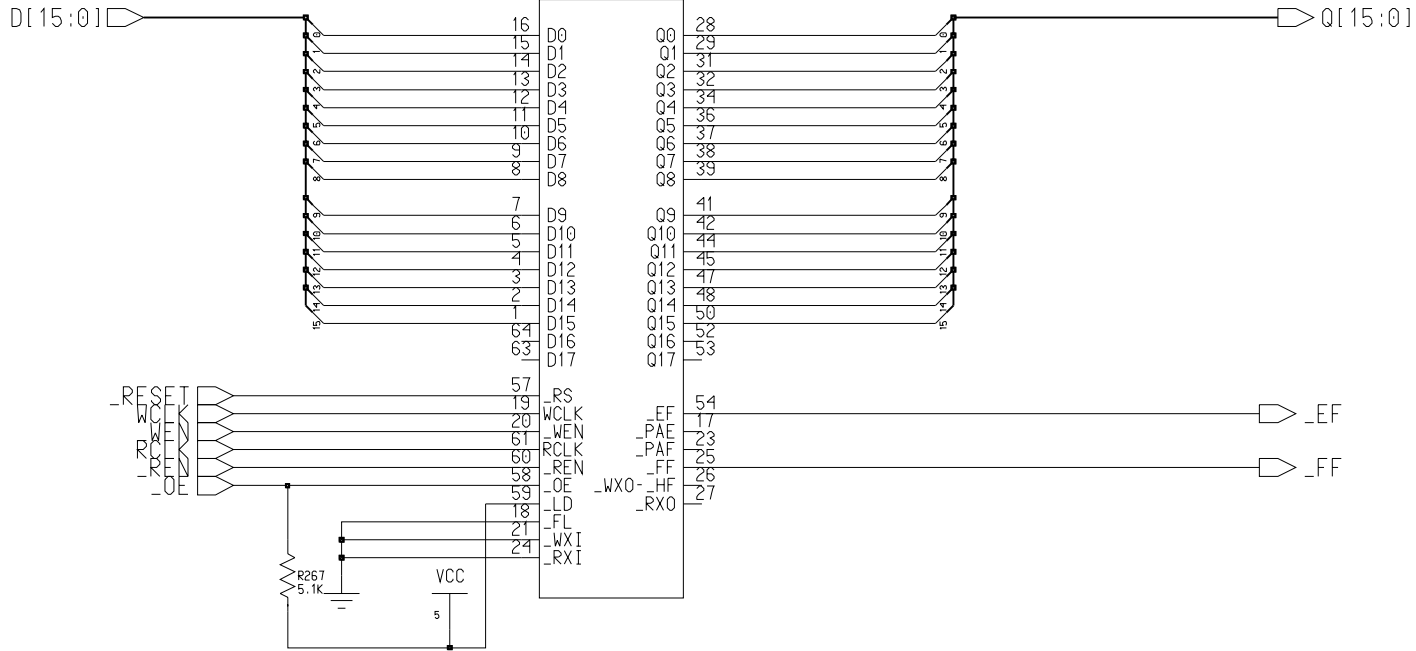


BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN SMALL AND WIDE FIFO			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	21 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		

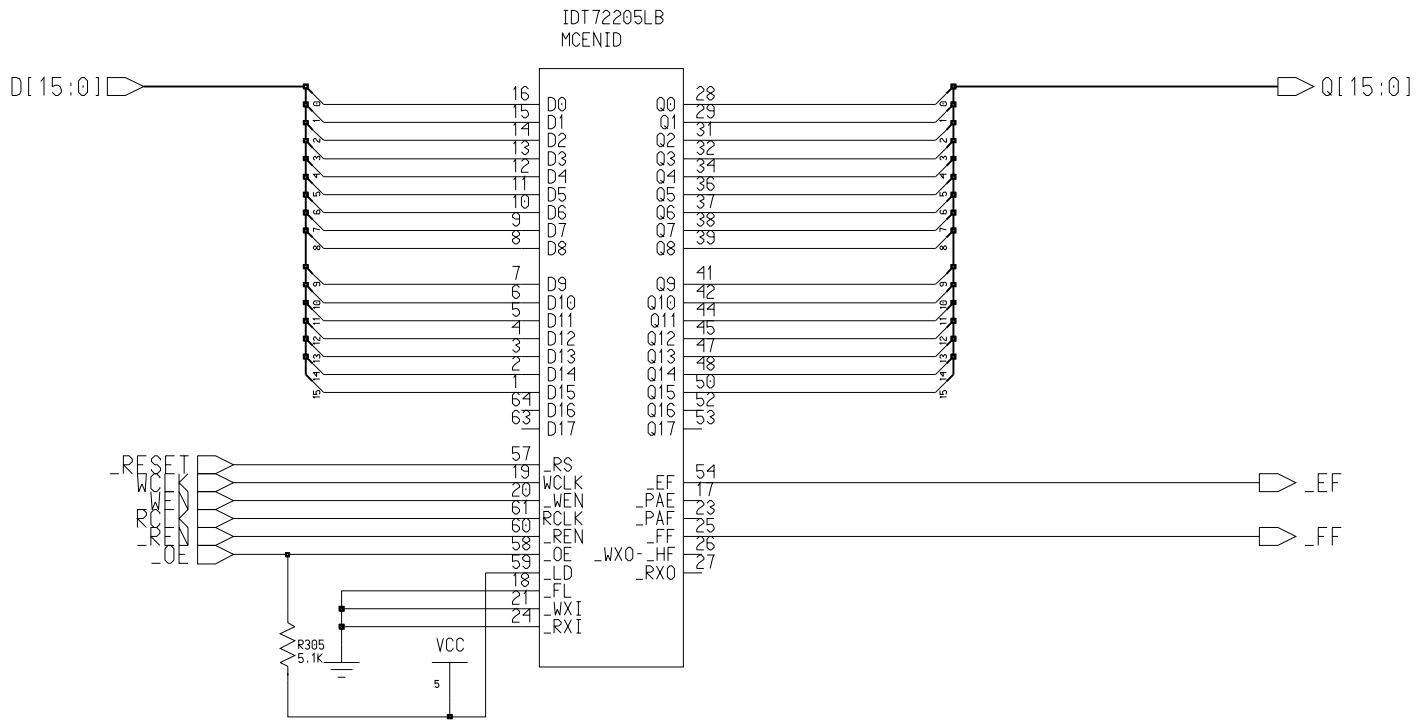


Engineer emachado	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size B
Drawn by emachado			
R&D CHK	TITLE 32bit Buffer		
DOC CTRL CHK			
MFG ENGR CHK			
Changed by emachado	Date Changed Tuesday, September 19, 2000	Time Changed 10:30:04 pm	
QA CHK	REV B	Drawing Number	Sheet of

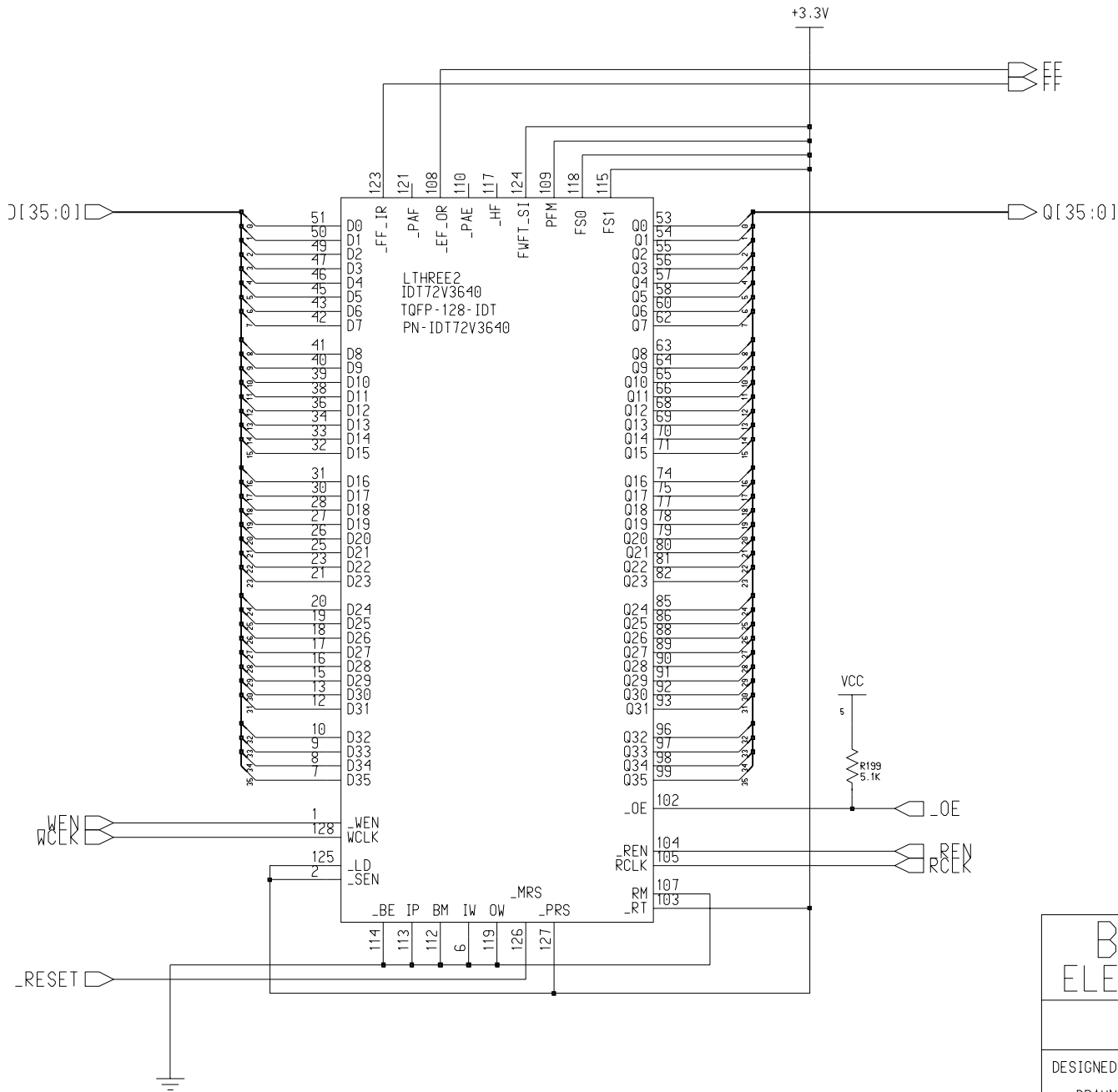
IDT72205LB
EVNT_CNT_FF



<h2 style="margin: 0;">BOSTON UNIVERSITY</h2> <h3 style="margin: 0;">ELECTRONICS DESIGN FACILITY</h3>			
<p style="margin: 0;">MCEN SMALL AND NARROW FIFO</p>			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
	SHEET 21 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



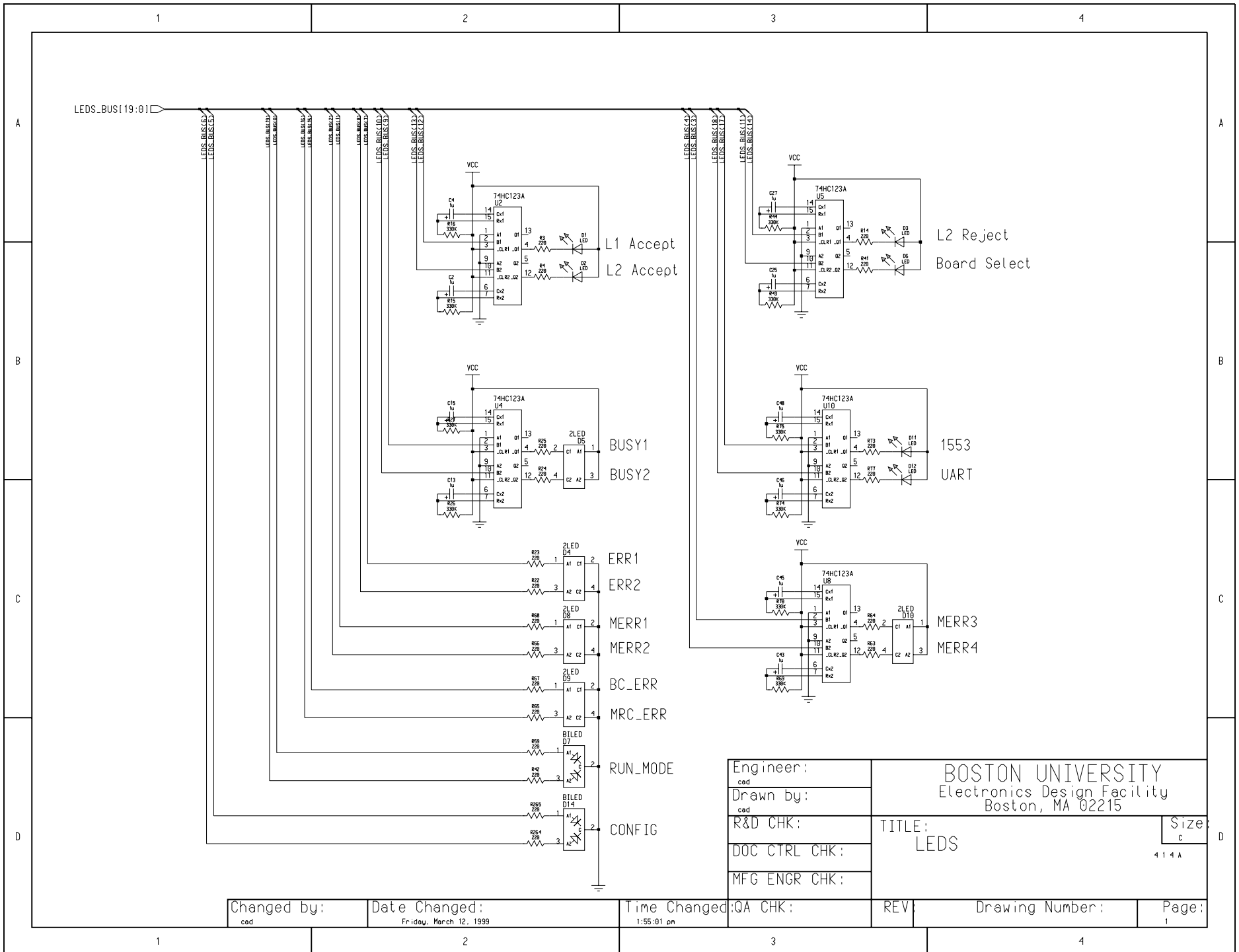
BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN SMALL AND NARROW FIFO			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
	SHEET 21 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



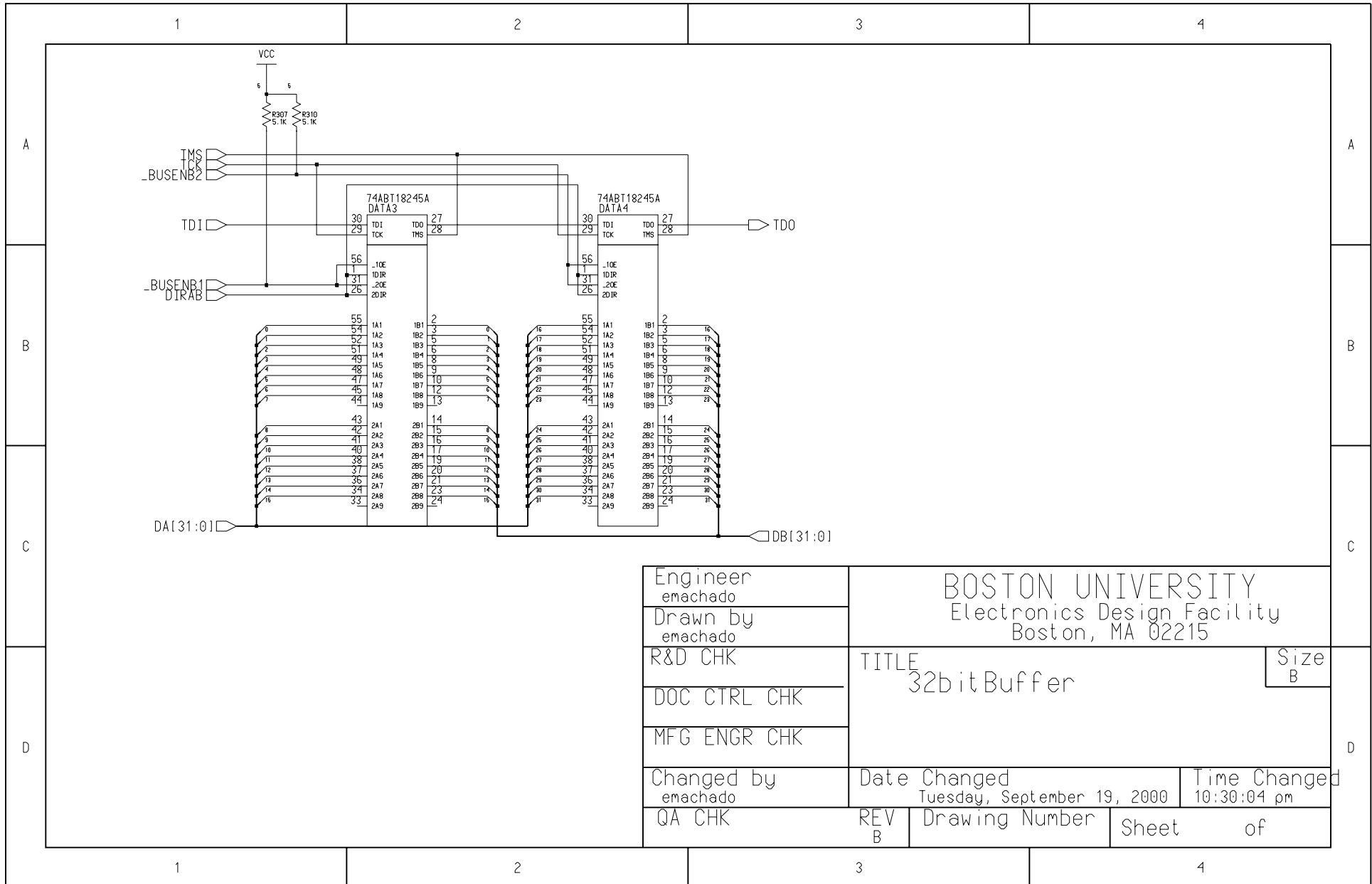
BOSTON UNIVERSITY
 ELECTRONICS DESIGN FACILITY

MCEN
 SMALL AND WIDE FIFO

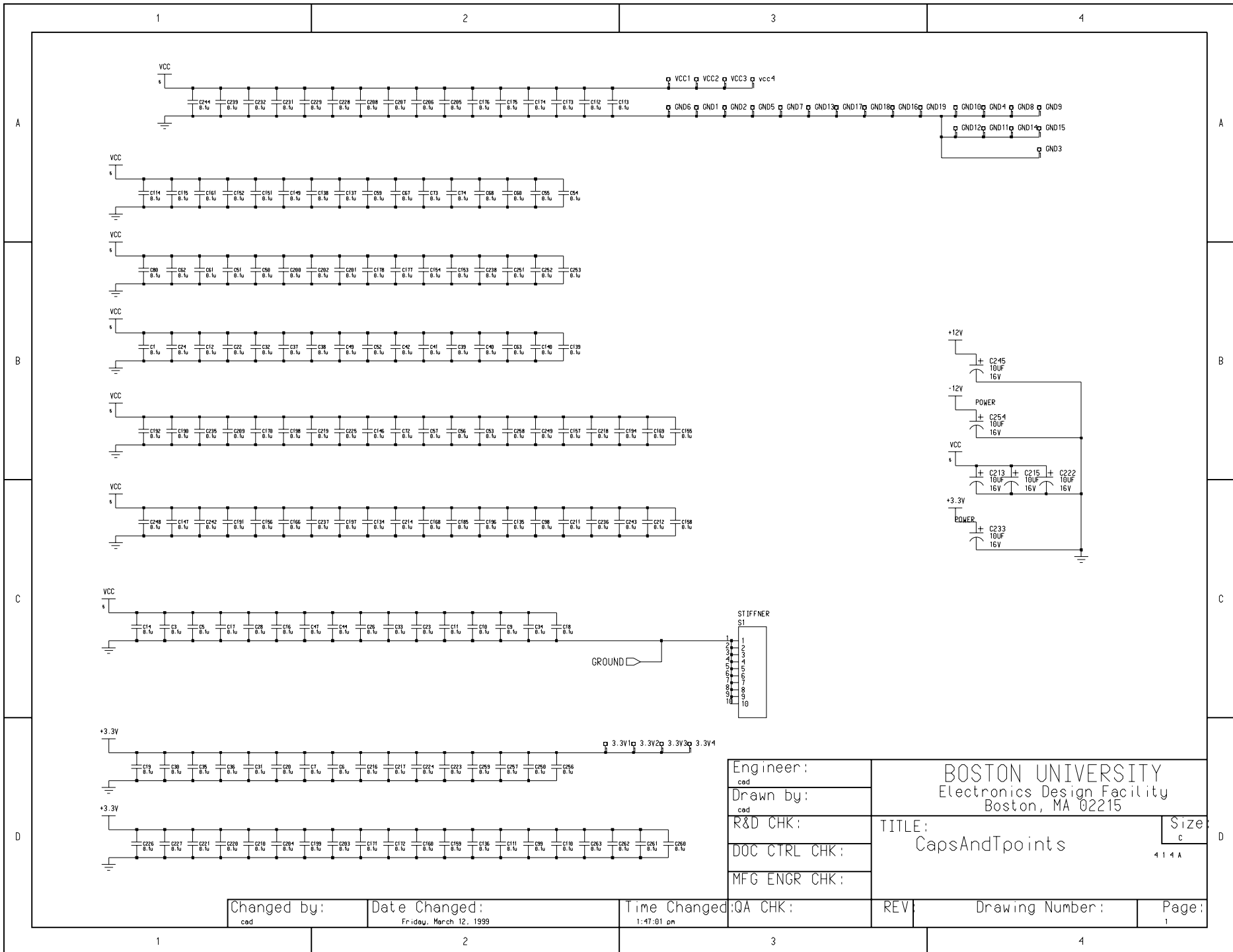
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN
SHEET	21	OF	36
DATE	3/14/00	PRELIMINARY	<input type="checkbox"/>
		ECO'S	<input type="checkbox"/>
		RELEASED	<input type="checkbox"/>
		AS BUILT	<input type="checkbox"/>
PATH	PATH		



Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size C
Drawn by: cad	TITLE: LEDS		
R&D CHK:	DOC CTRL CHK:		4 1 4 A
MFG ENGR CHK:	REV:		
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 1:55:01 pm	QA CHK:
Drawing Number:		Page: 1	

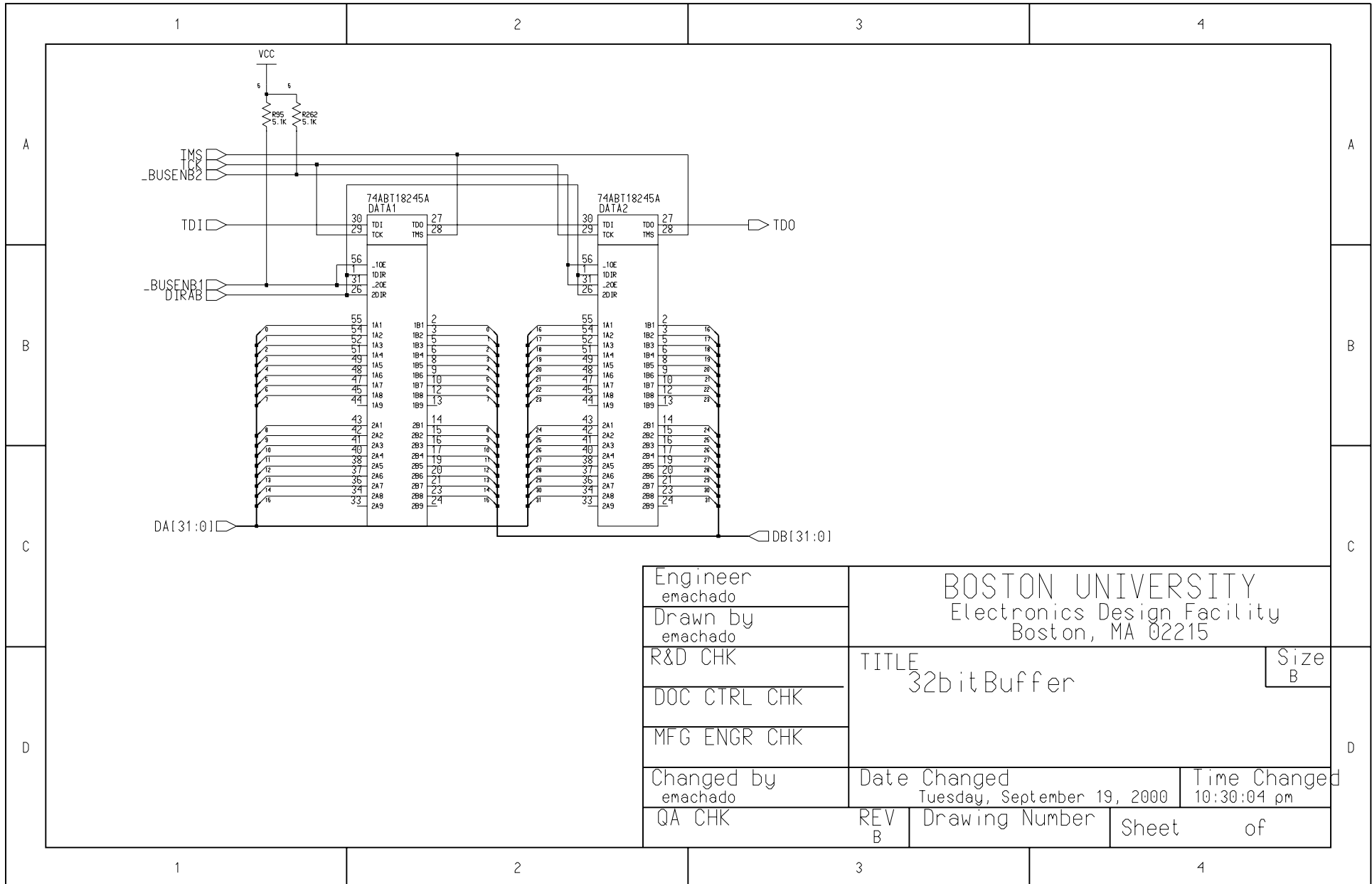


Engineer emachado	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size B
Drawn by emachado			
R&D CHK	TITLE 32bit Buffer		
DOC CTRL CHK			
MFG ENGR CHK			
Changed by emachado	Date Changed Tuesday, September 19, 2000	Time Changed 10:30:04 pm	
QA CHK	REV B	Drawing Number	Sheet of

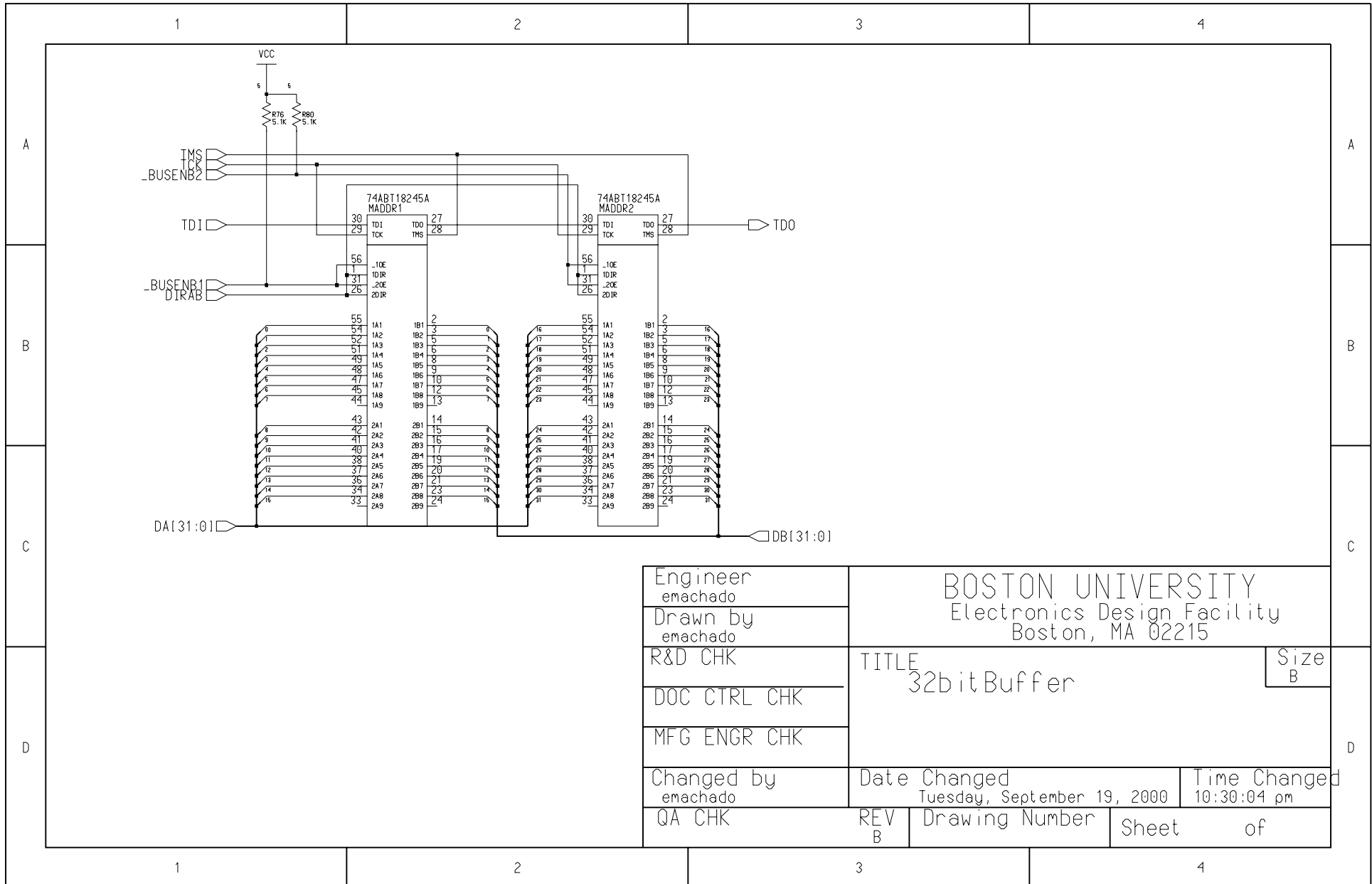


Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215	
Drawn by: cad	TITLE: CapsAndTpoints	Size c
R&D CHK:		4 1 4 A
DOC CTRL CHK:		
MFG ENGR CHK:	REV:	

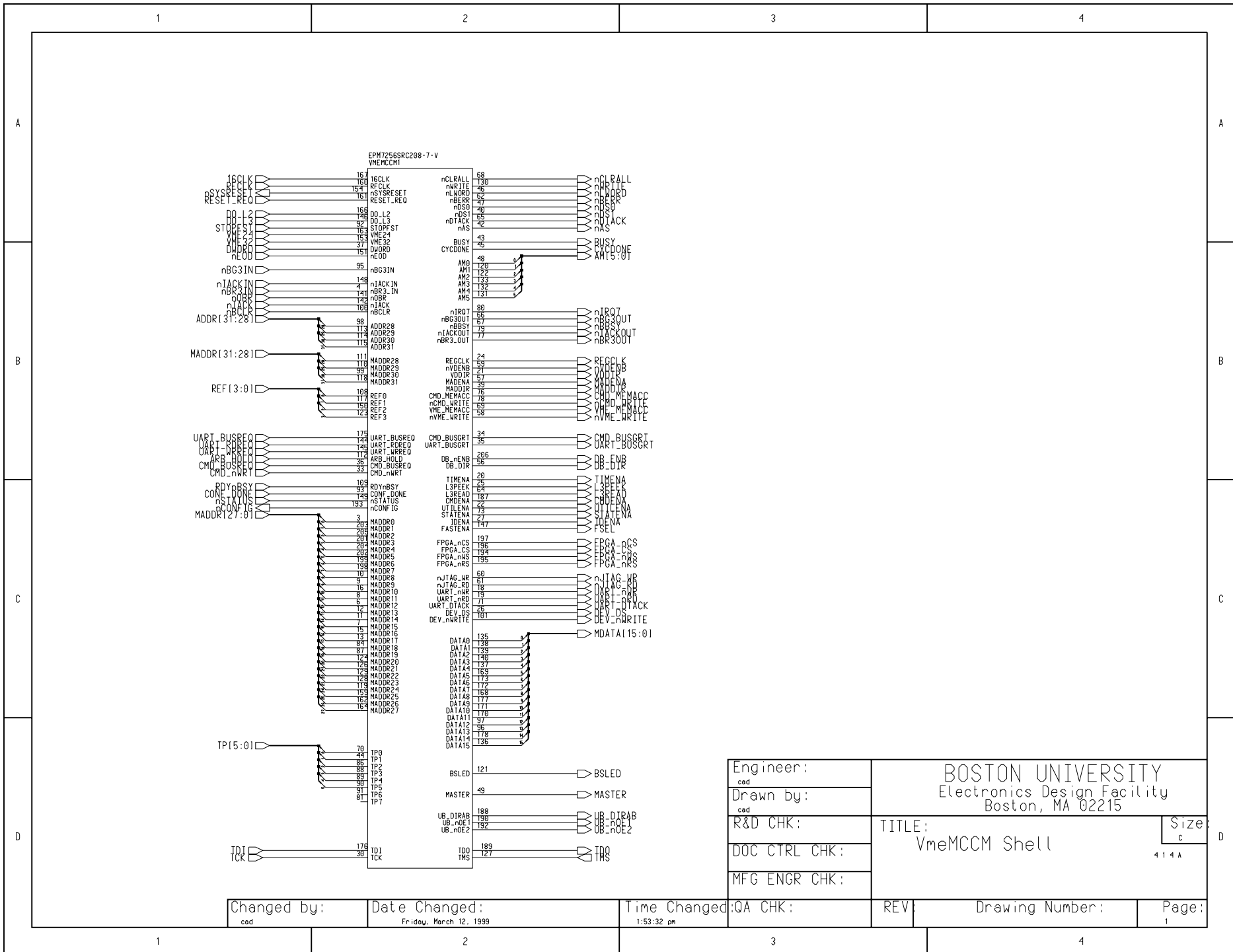
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 1:47:01 pm	QA CHK:	REV:	Drawing Number:	Page: 1
--------------------	---	-----------------------------	---------	------	-----------------	------------



Engineer emachado	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size B
Drawn by emachado			
R&D CHK	TITLE 32bit Buffer		
DOC CTRL CHK			
MFG ENGR CHK			
Changed by emachado	Date Changed Tuesday, September 19, 2000	Time Changed 10:30:04 pm	
QA CHK	REV B	Drawing Number	Sheet of



Engineer emachado	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size B
Drawn by emachado			
R&D CHK	TITLE 32bit Buffer		
DOC CTRL CHK			
MFG ENGR CHK			
Changed by emachado	Date Changed Tuesday, September 19, 2000	Time Changed 10:30:04 pm	
QA CHK	REV B	Drawing Number	Sheet of



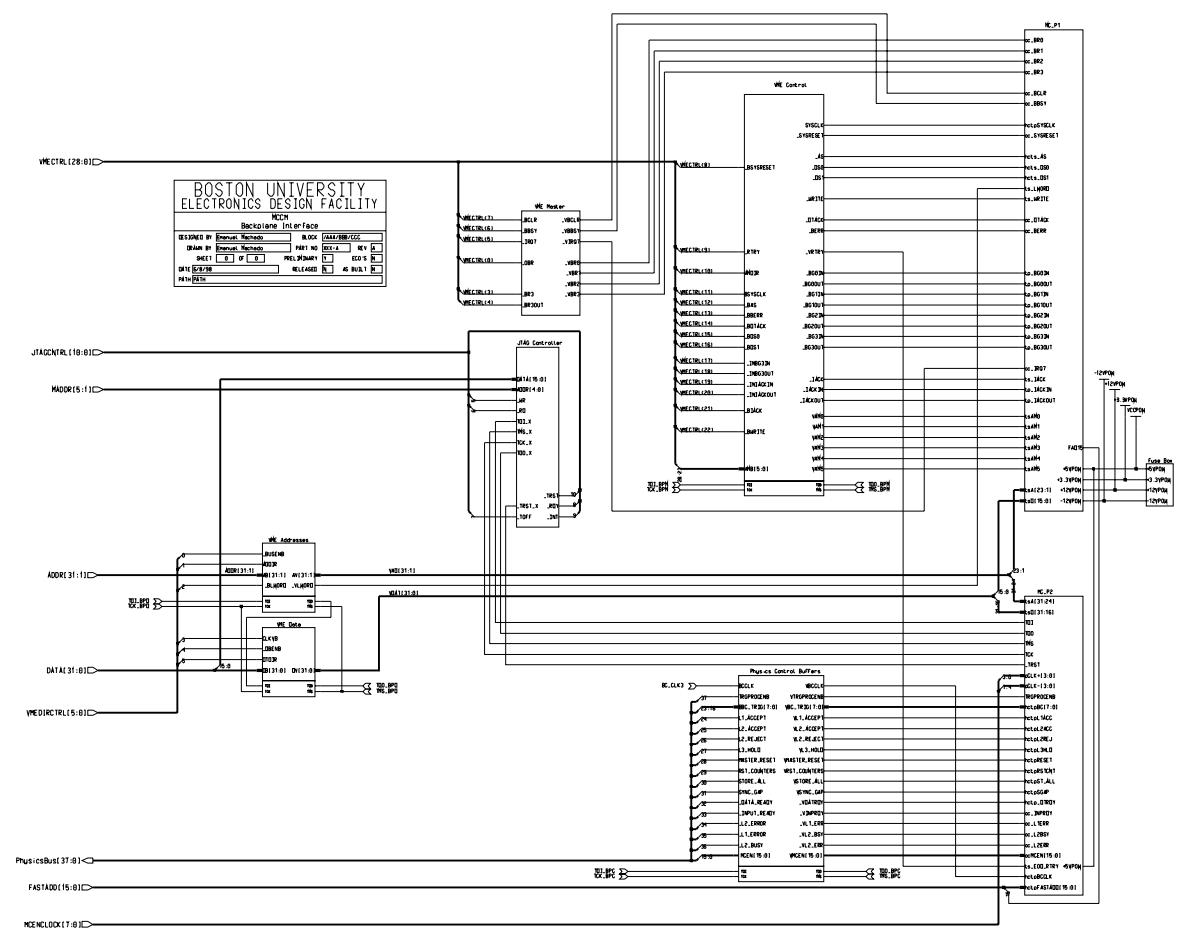
Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size c
Drawn by: cad			
R&D CHK:	TITLE: VmeMCCM Shell	4 1 4 A	
DOC CTRL CHK:	REV:	Drawing Number:	Page: 1
MFG ENGR CHK:	Time Changed: 1:53:32 pm	QA CHK:	

Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 1:53:32 pm	QA CHK:	REV:	Drawing Number:	Page: 1
--------------------	---	--------------------------	---------	------	-----------------	------------

**BOSTON UNIVERSITY
ELECTRONICS DESIGN FACILITY**

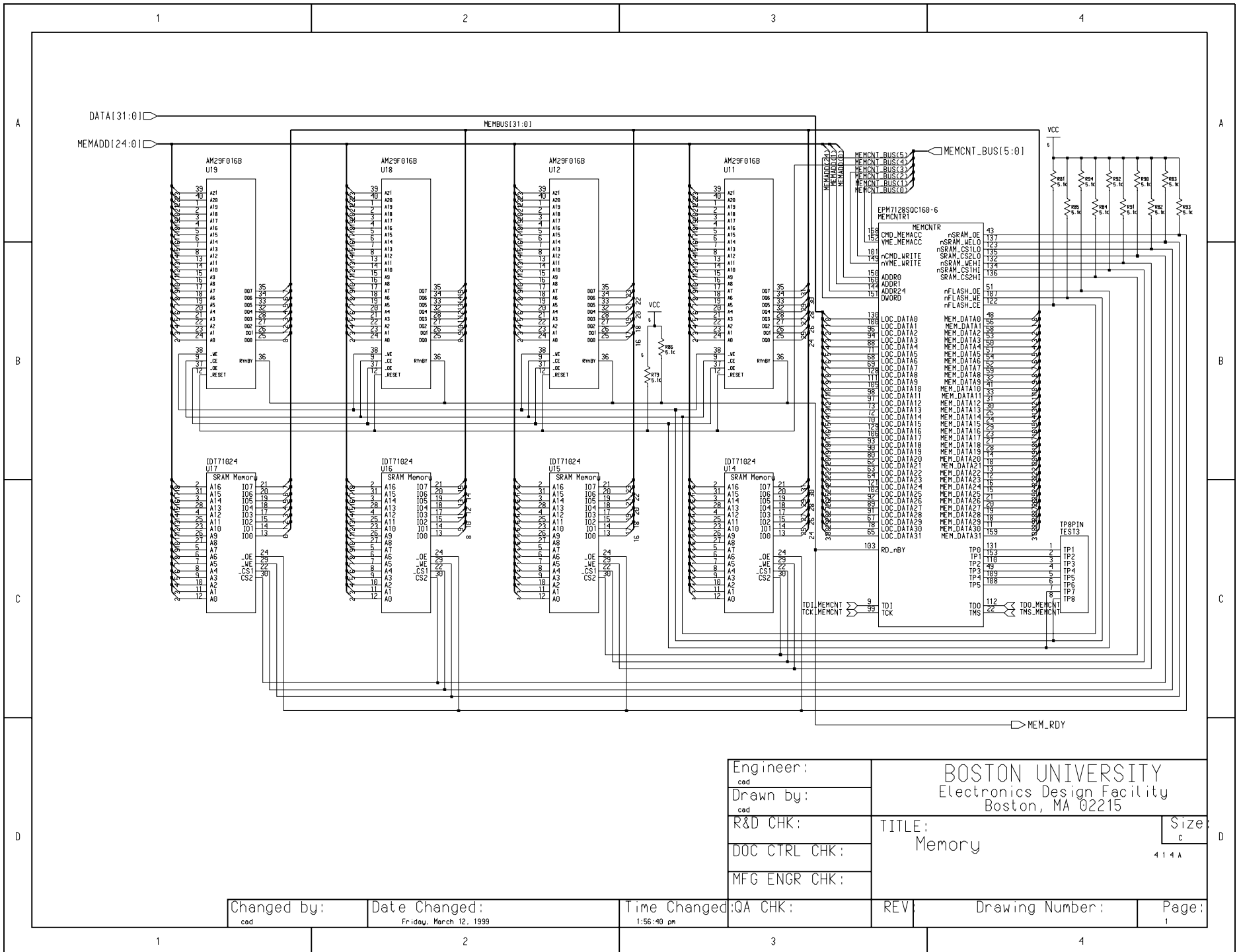
Backplane Interface

DESIGNED BY	REVIEWED BY	DATE	REV
DRW BY	CHKD BY	DATE	REV
DATE	RELEASED BY	DATE	REV

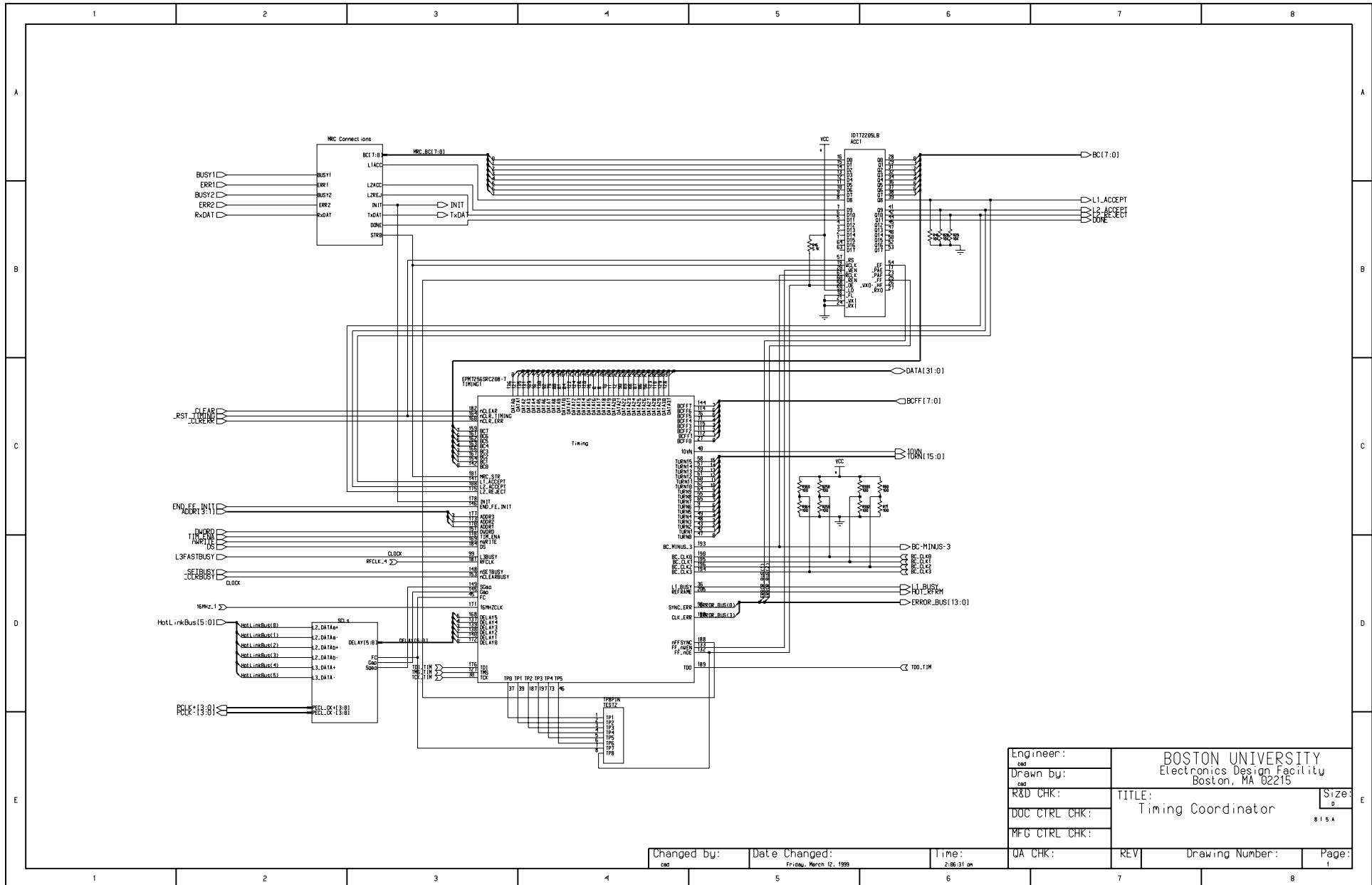


Engineer:	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215	Size
Drawn by:		1/8 x 1/4
R&D CHK:		TITLE:
DOC CTRL CHK:		Backplane Interface
MFG ENGR CHK:		REV

Changed by:	Date changed:	Time changed:	DA CHK:	Drawing Number:	Page:
ed	Fr. day, March 12, 1999	1:03:10 pm			1

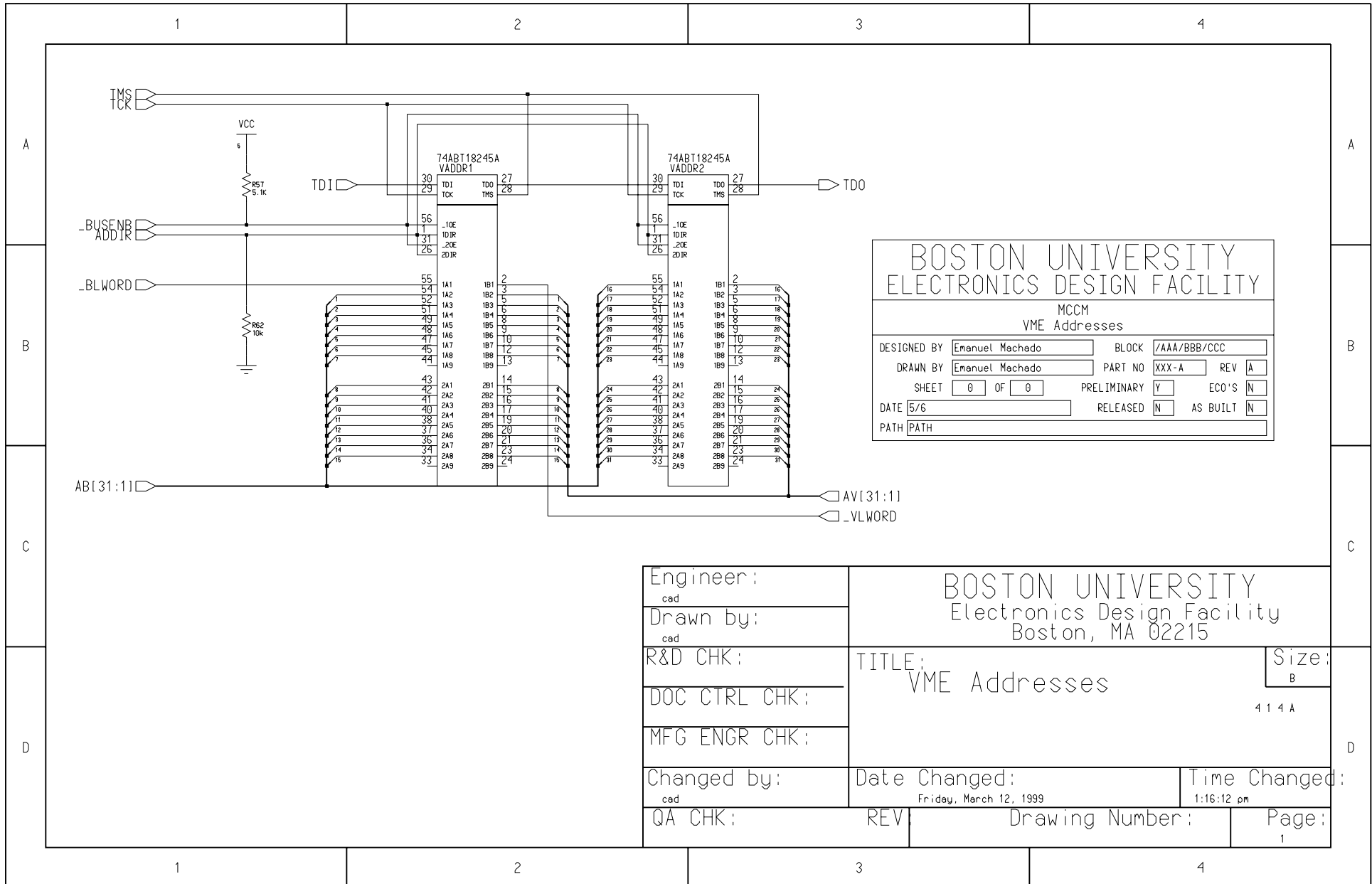


Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size c
Drawn by: cad	TITLE: Memory		4 1 4 A
R&D CHK:	REV:		Page: 1
DOC CTRL CHK:	Drawing Number:		
MFG ENGR CHK:	Time Changed: 1:56:40 pm		
QA CHK:	REV:		
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 1:56:40 pm	Page: 1



Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		
Drawn by: cad	TITLE: Timing Coordinator	Size: D	815A
R&D CHK:			
DOC CTRL CHK:			
MFG CTRL CHK:			
QA CHK:	REV	Drawing Number:	Page: 1

Changed by: cad Date Changed: Friday, March 12, 1999 Time: 2:46:31 pm

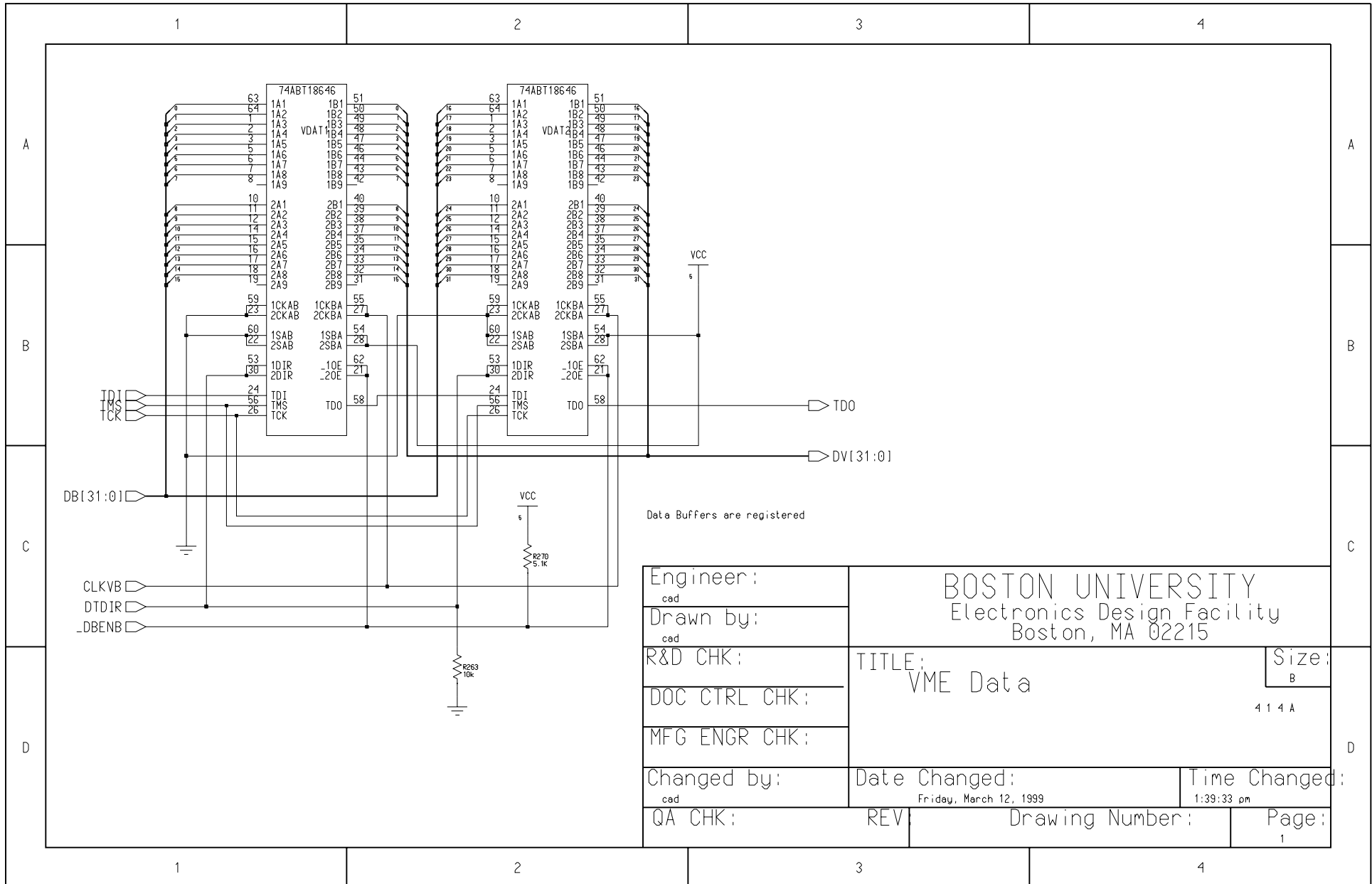


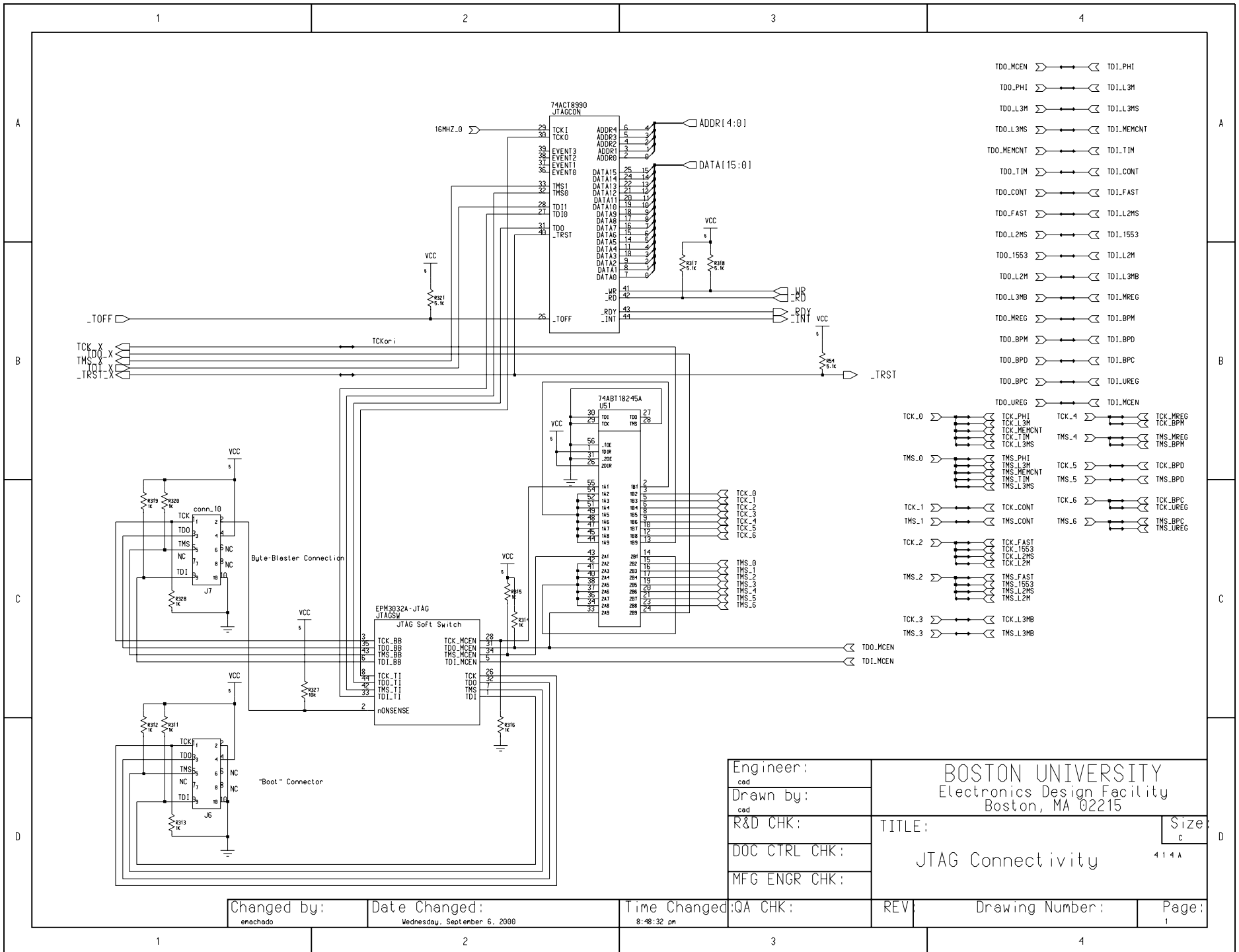
**BOSTON UNIVERSITY
ELECTRONICS DESIGN FACILITY**

MCCM
VME Addresses

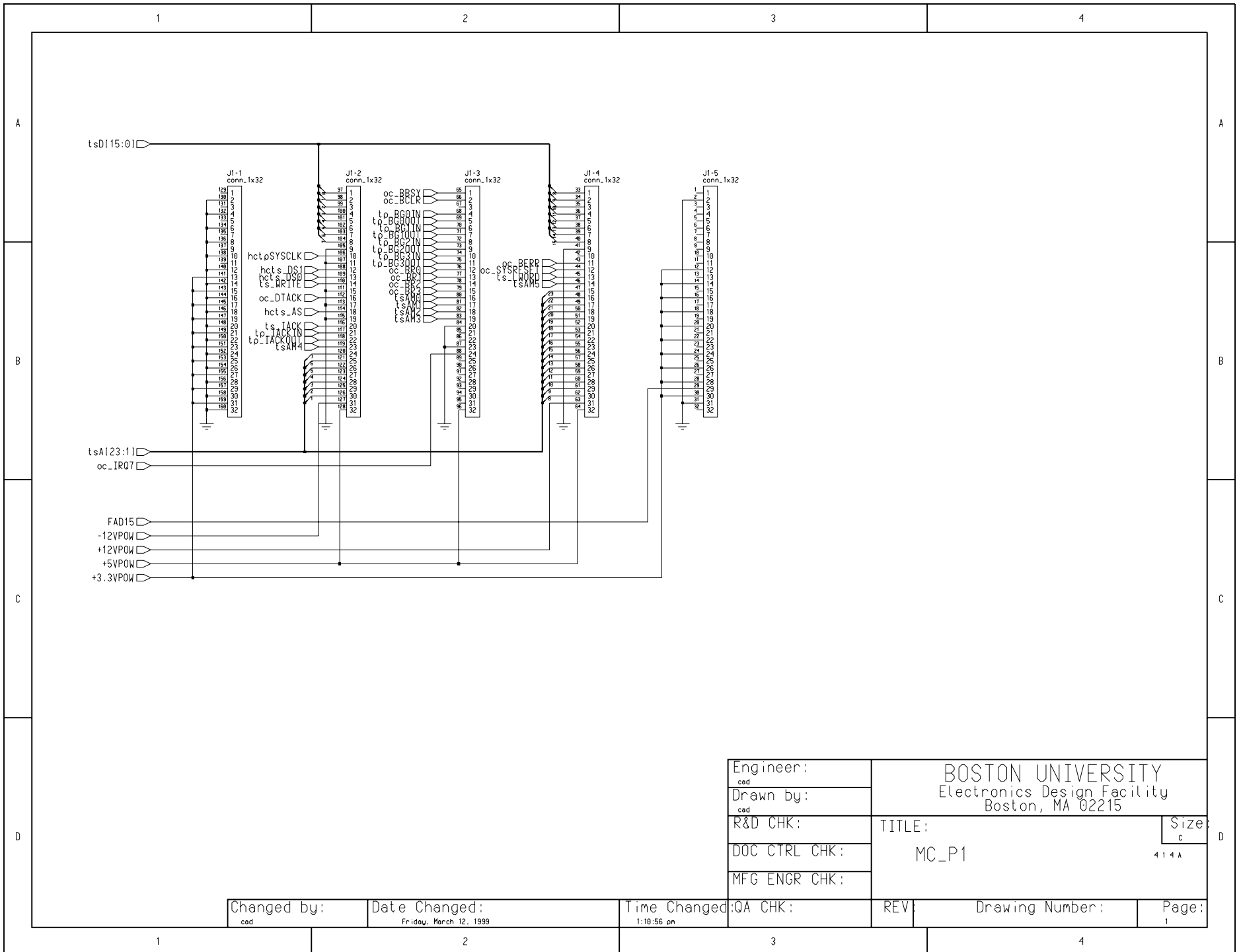
DESIGNED BY Emanuel Machado	BLOCK /AAA/BBB/CCC
DRAWN BY Emanuel Machado	PART NO XXX-A REV A
SHEET 0 OF 0	PRELIMINARY Y ECO'S N
DATE 5/6	RELEASED N AS BUILT N
PATH PATH	

Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size: B
Drawn by: cad	TITLE: VME Addresses		4 1 4 A
R&D CHK:			
DOC CTRL CHK:			
MFG ENGR CHK:			
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 1:16:12 pm	
QA CHK:	REV:	Drawing Number:	Page: 1

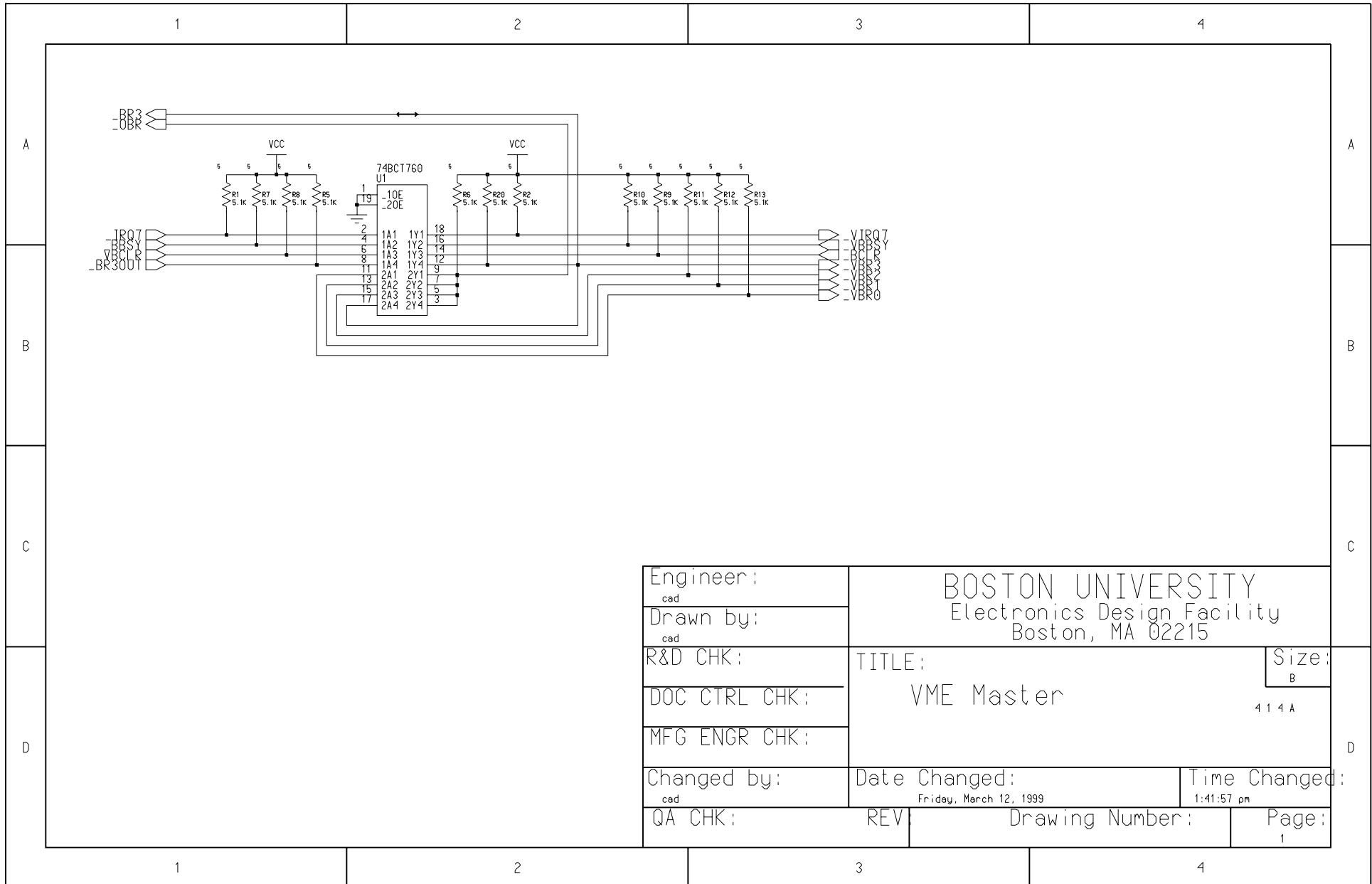




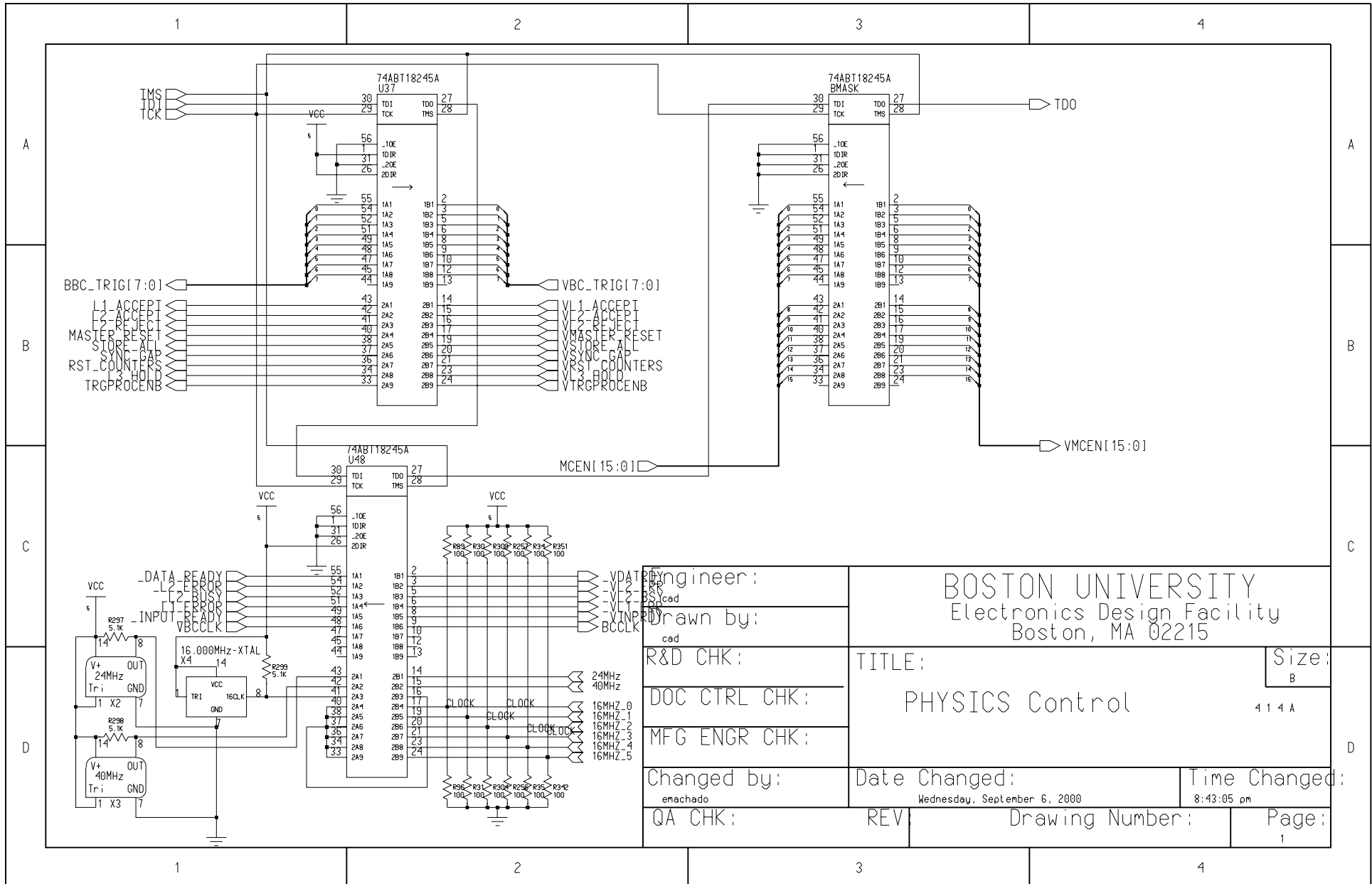
Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size c
Drawn by: cad			
R&D CHK:	TITLE:	414A	
DOC CTRL CHK:	JTAG Connectivity		
MFG ENGR CHK:			
Changed by: enachado	Date Changed: Wednesday, September 6, 2000	Time Changed: 8:48:32 am	Page: 1



Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size c
Drawn by: cad			
R&D CHK:	TITLE:	414A	
DOC CTRL CHK:	MC_P1		
MFG ENGR CHK:			
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 1:10:56 pm	Page: 1

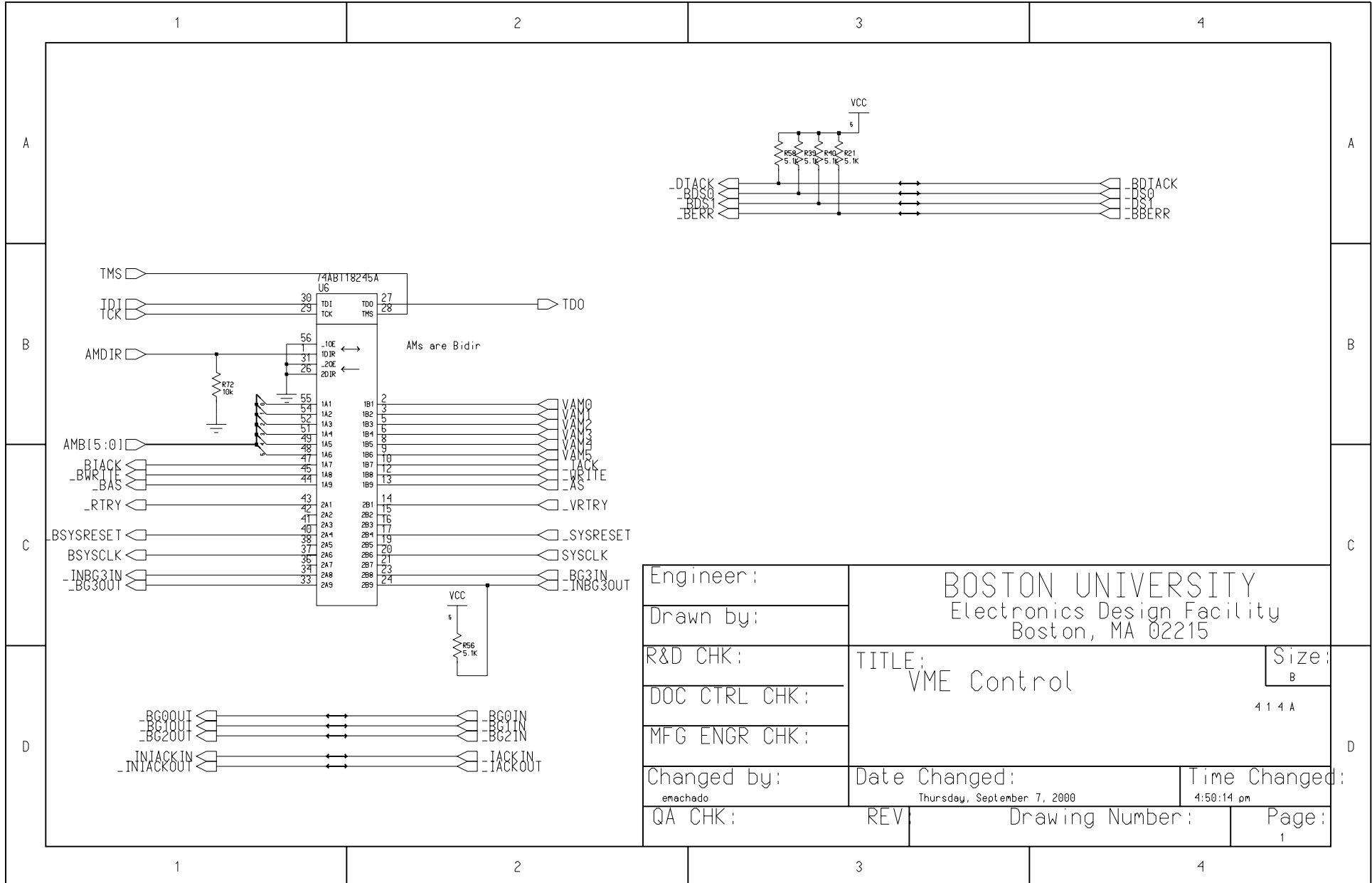


Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size: B
Drawn by: cad			
R&D CHK:	TITLE: VME Master	4 1 4 A	
DOC CTRL CHK:			
MFG ENGR CHK:			
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 1:41:57 pm	
QA CHK:	REV:	Drawing Number:	Page: 1



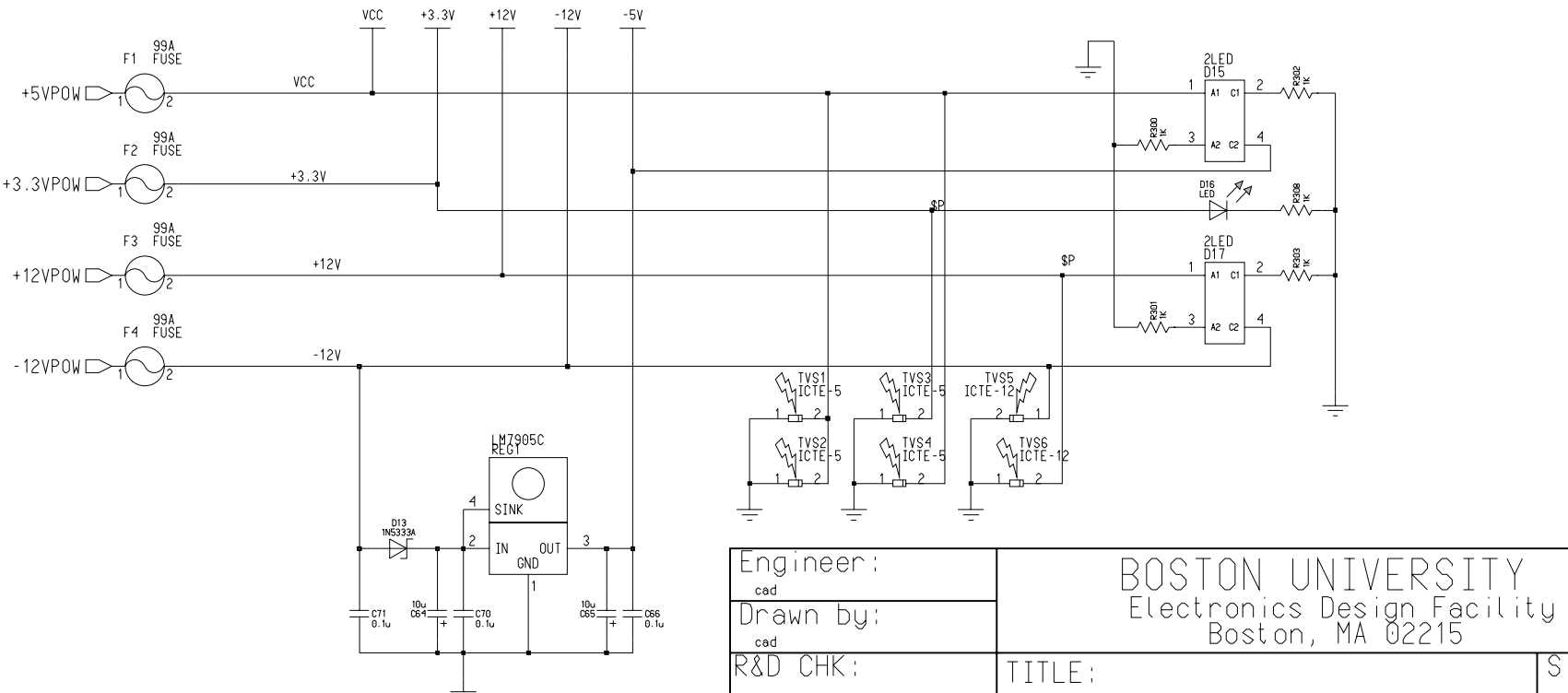
Engineer:	
Drawn by:	
R&D CHK:	
DOC CTRL CHK:	
MFG ENGR CHK:	
Changed by:	emachado
QA CHK:	

BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215	
TITLE:	Size: B
PHYSICS Control	4 1 4 A
Date Changed:	Time Changed:
Wednesday, September 6, 2000	8:43:05 pm
REV:	Page: 1
Drawing Number:	

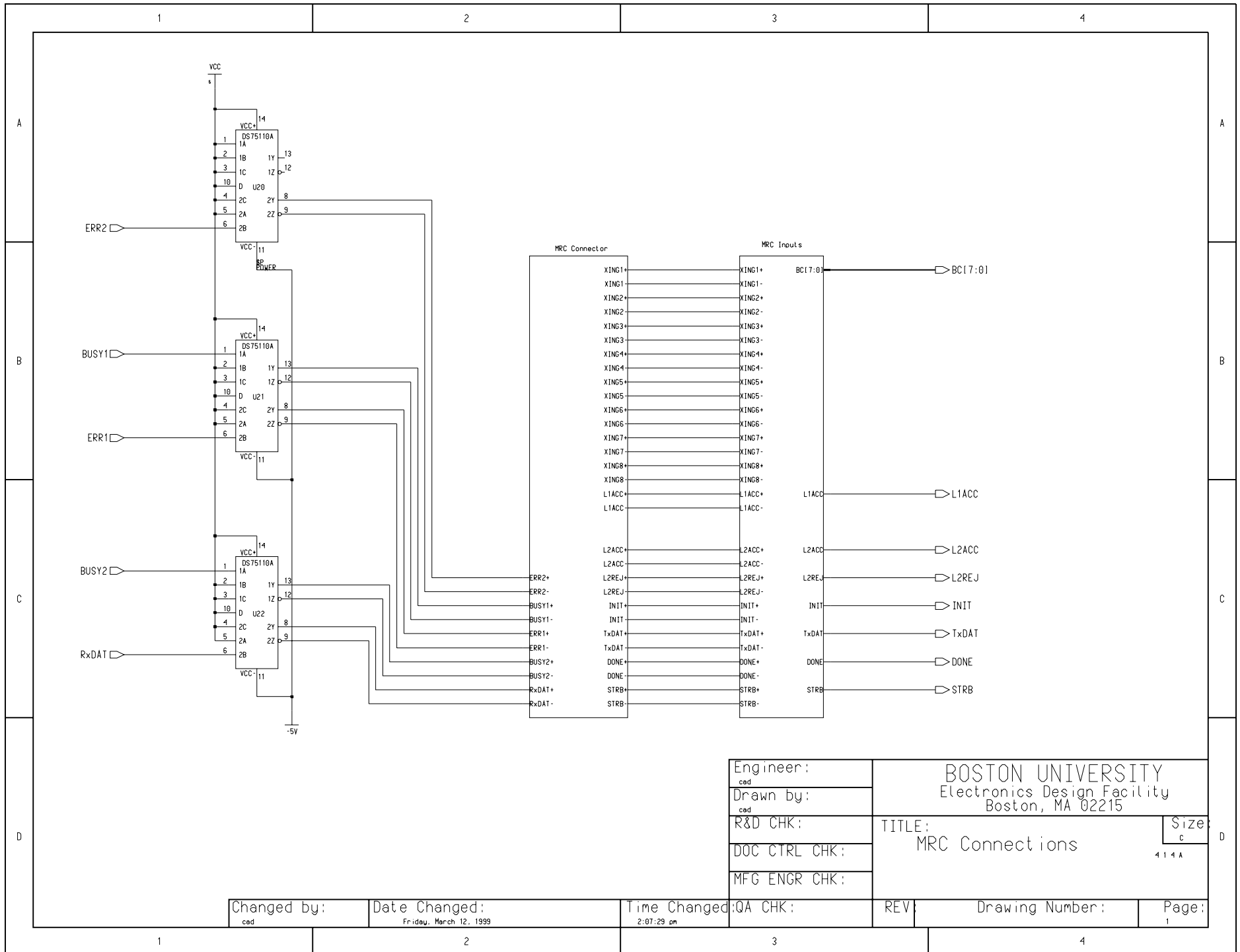


Engineer:	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size: B
Drawn by:			4 1 4 A
R&D CHK:	TITLE: VME Control		
DOC CTRL CHK:			
MFG ENGR CHK:			
Changed by: emachado	Date Changed: Thursday, September 7, 2000	Time Changed: 4:50:14 pm	
QA CHK:	REV:	Drawing Number:	Page: 1

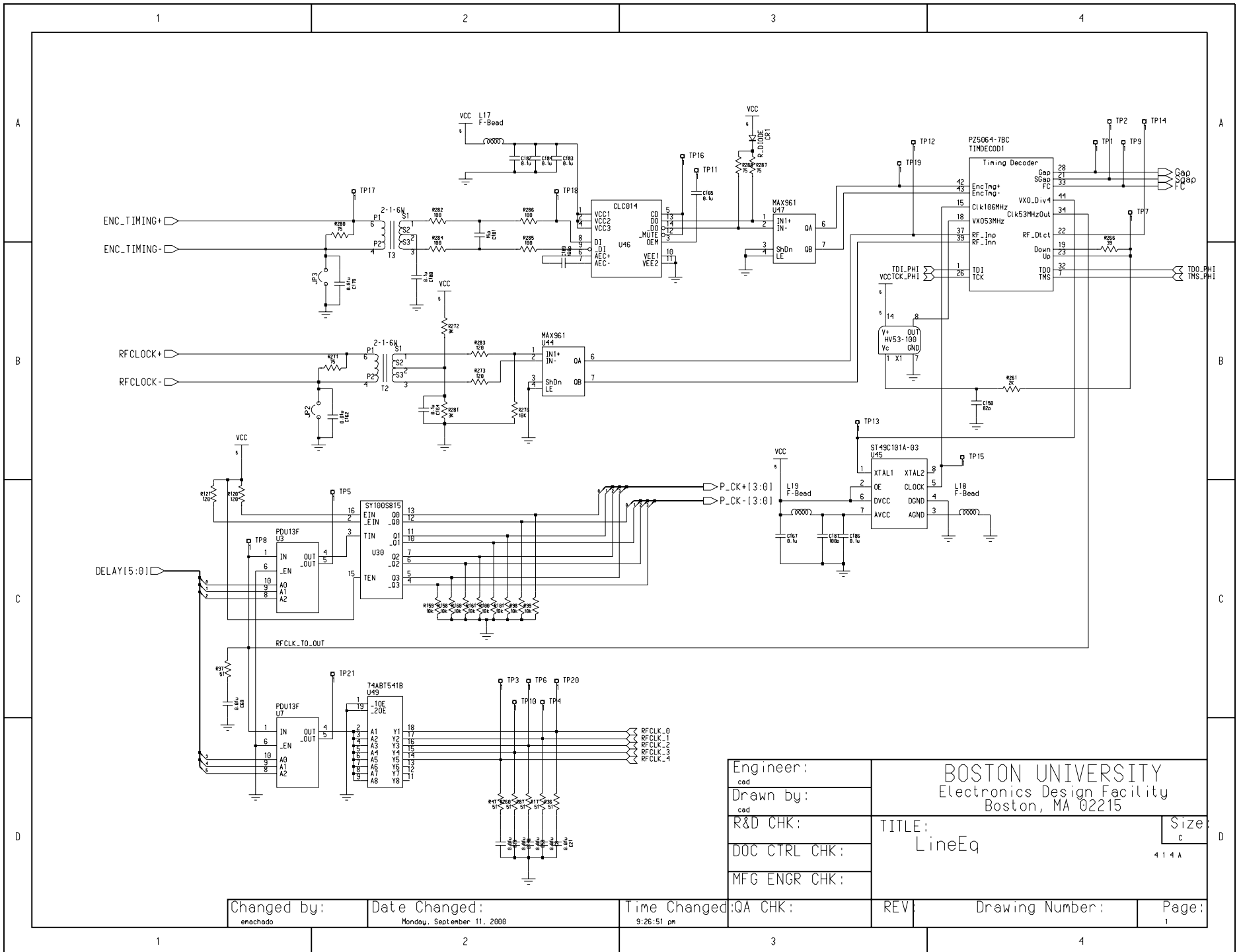
Power Leds are Green



Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size: B
Drawn by: cad	TITLE: Fuse Box		4 1 4 A
R&D CHK:	MFG ENGR CHK:		
DOC CTRL CHK:	Date Changed: Friday, March 12, 1999		Time Changed: 1:05:57 pm
Changed by: cad	REV:	Drawing Number:	Page: 1



Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size c			
Drawn by: cad						
R&D CHK:	TITLE: MRC Connections		4 1 4 A			
DOC CTRL CHK:						
MFG ENGR CHK:						
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 2:07:29 pm	QA CHK:	REV:	Drawing Number:	Page: 1

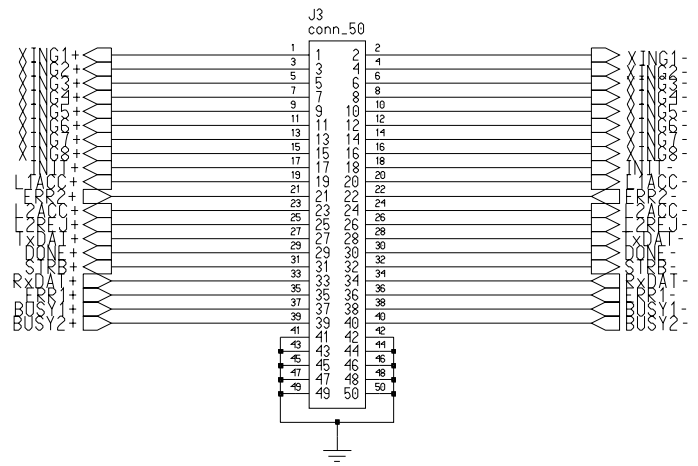


Engineer:	BOSTON UNIVERSITY		
Drawn by:	Electronics Design Facility		
	Boston, MA 02215		
R&D CHK:	TITLE:	Size	
DOC CTRL CHK:	LineEq	c	
MFG ENGR CHK:		4 1 4 A	
Changed by:	Date Changed:	Time Changed:	Page:
enachado	Monday, September 11, 2000	9:26:51 pm	1

1 2 3 4

A

A



B

B

C

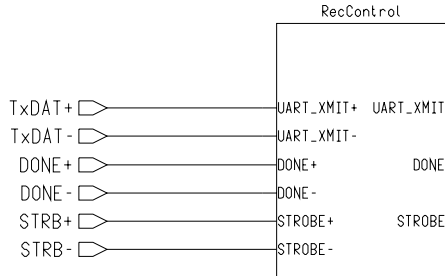
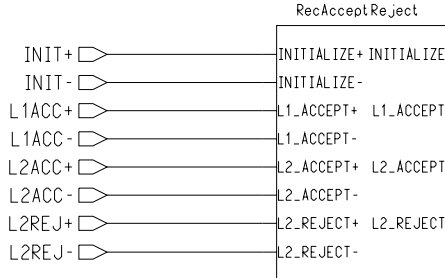
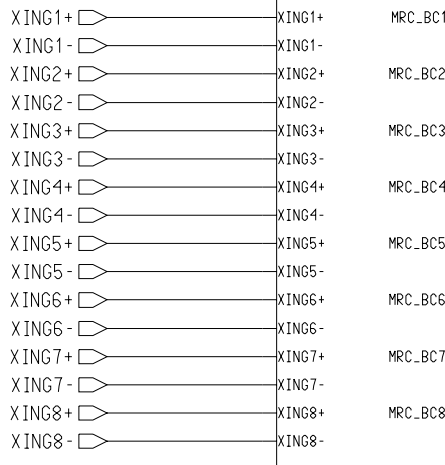
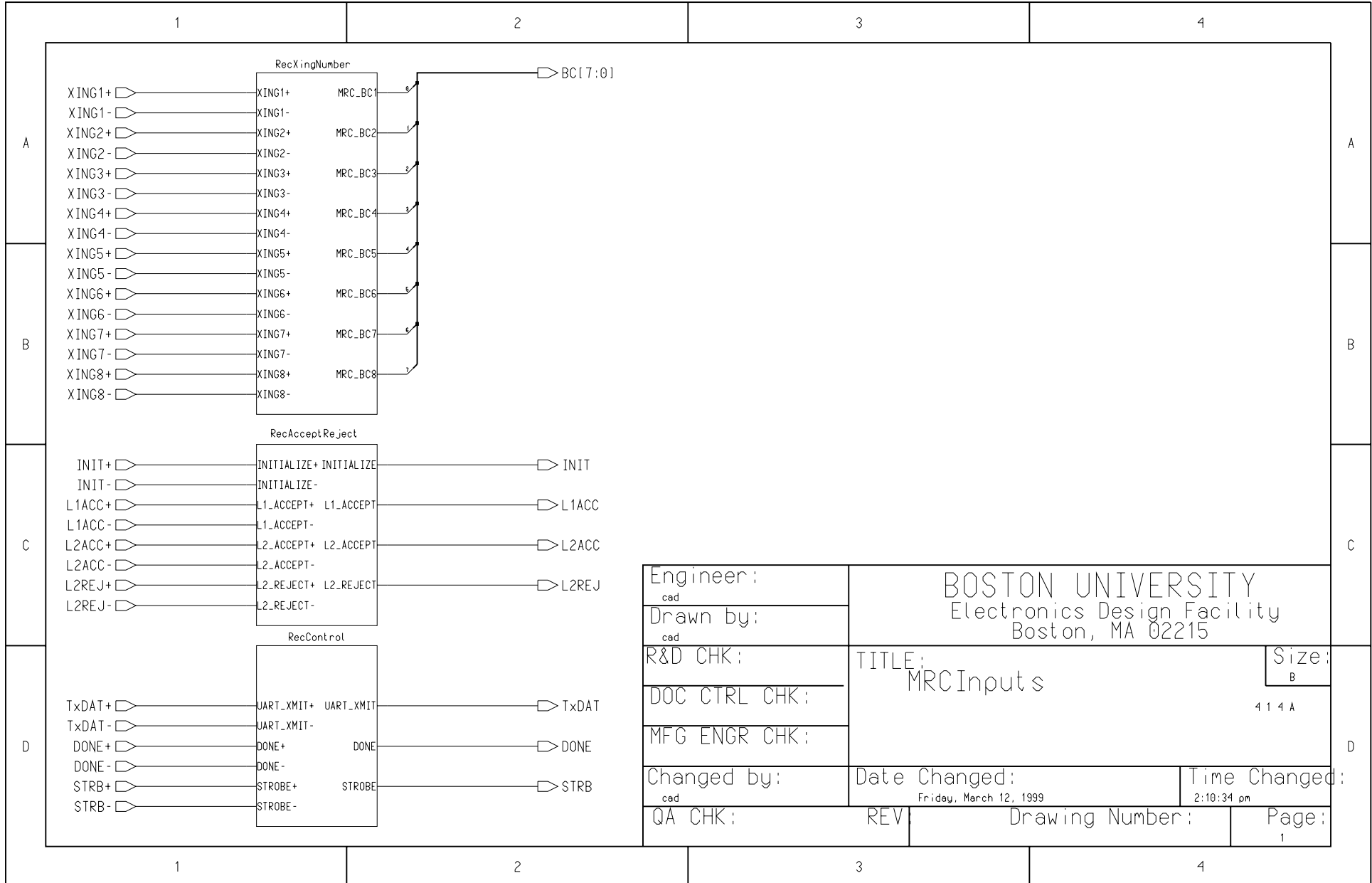
C

D

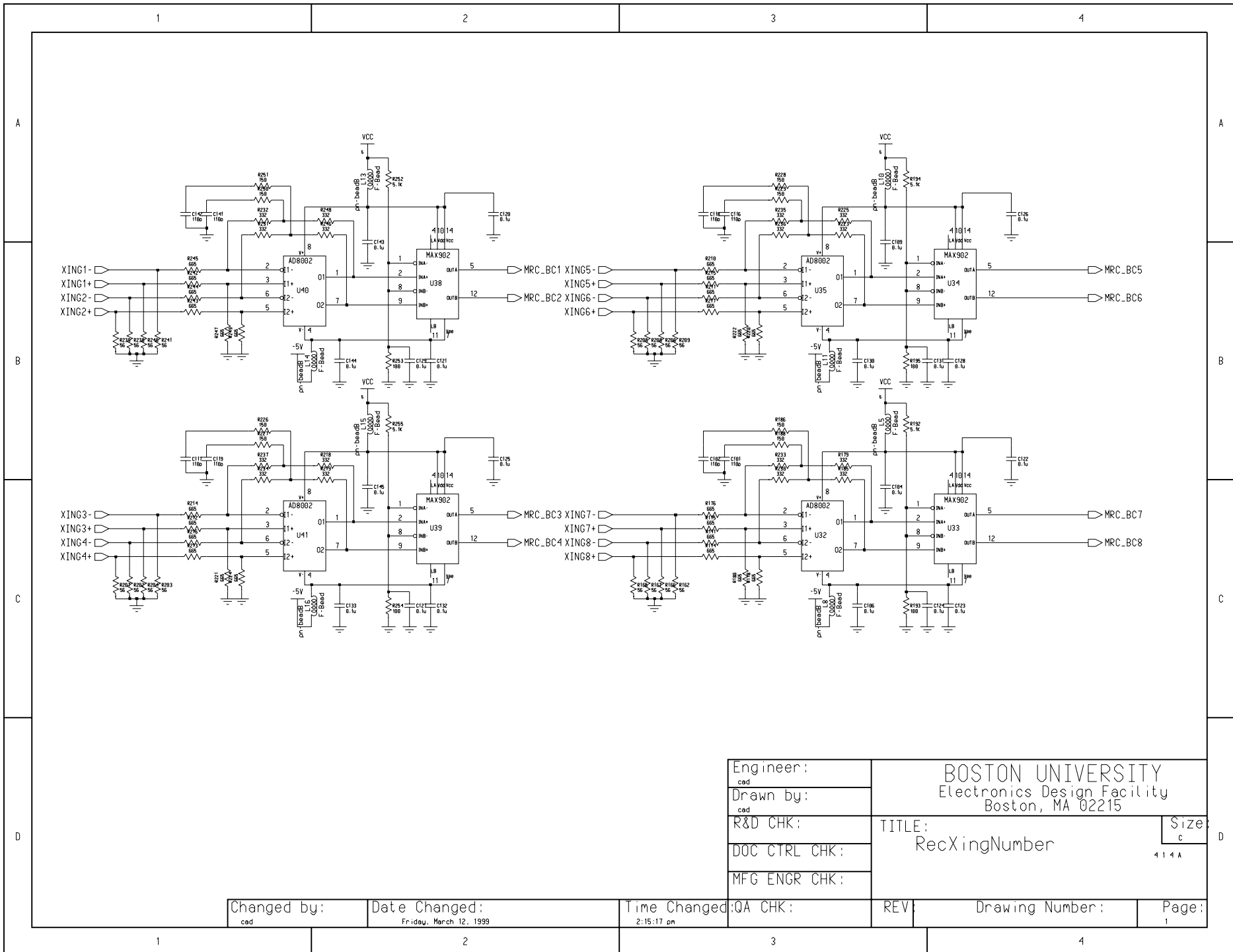
D

1 2 3 4

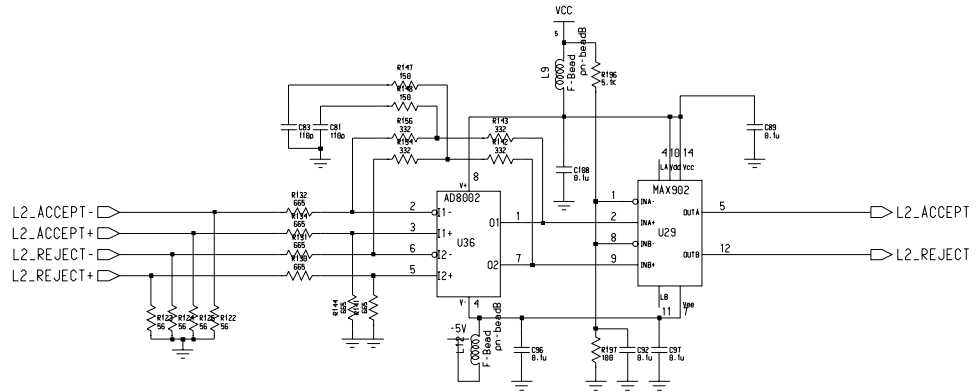
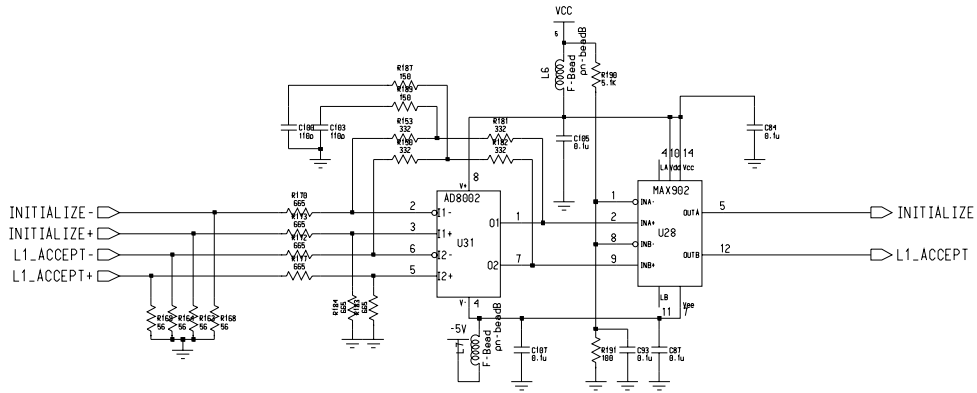
Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size: B
Drawn by: cad			MRC Connector
R&D CHK:	TITLE:		
DOC CTRL CHK:	MFG ENGR CHK:		
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 2:09:04 pm	
QA CHK:	REV:	Drawing Number:	Page: 1



Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size: B
Drawn by: cad			TITLE: MRCInputs
R&D CHK:	4 1 4 A		
DOC CTRL CHK:			
MFG ENGR CHK:			
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 2:10:34 pm	
QA CHK:	REV:	Drawing Number:	Page: 1



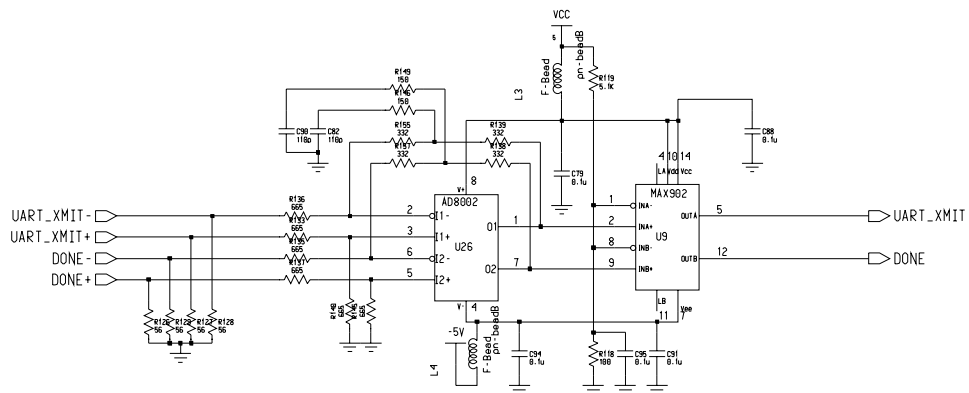
Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size c			
Drawn by: cad						
R&D CHK:	TITLE: RecXingNumber	4 1 4 A				
DOC CTRL CHK:						
MFG ENGR CHK:						
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 2:15:17 pm	QA CHK:	REV:	Drawing Number:	Page: 1



Engineer: cad	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size c			
Drawn by: cad						
R&D CHK:	TITLE: RecAcceptReject		4 1 4 A			
DOC CTRL CHK:						
MFG ENGR CHK:						
Changed by: cad	Date Changed: Friday, March 12, 1999	Time Changed: 2:12:08 pm	QA CHK:	REV:	Drawing Number:	Page: 1

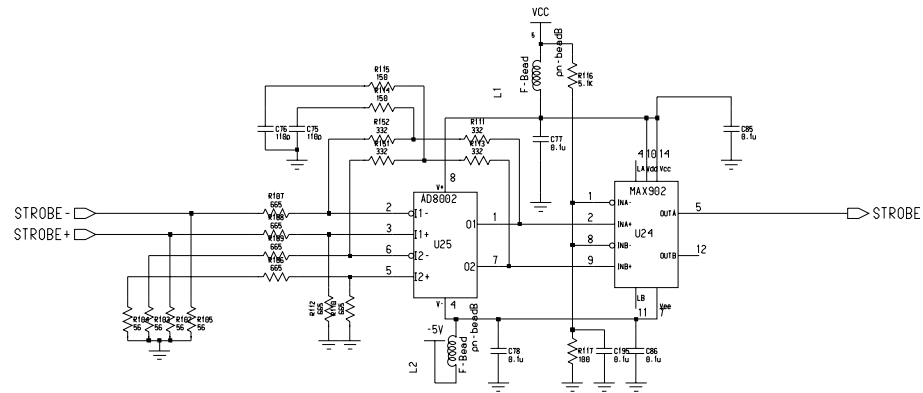
A

A

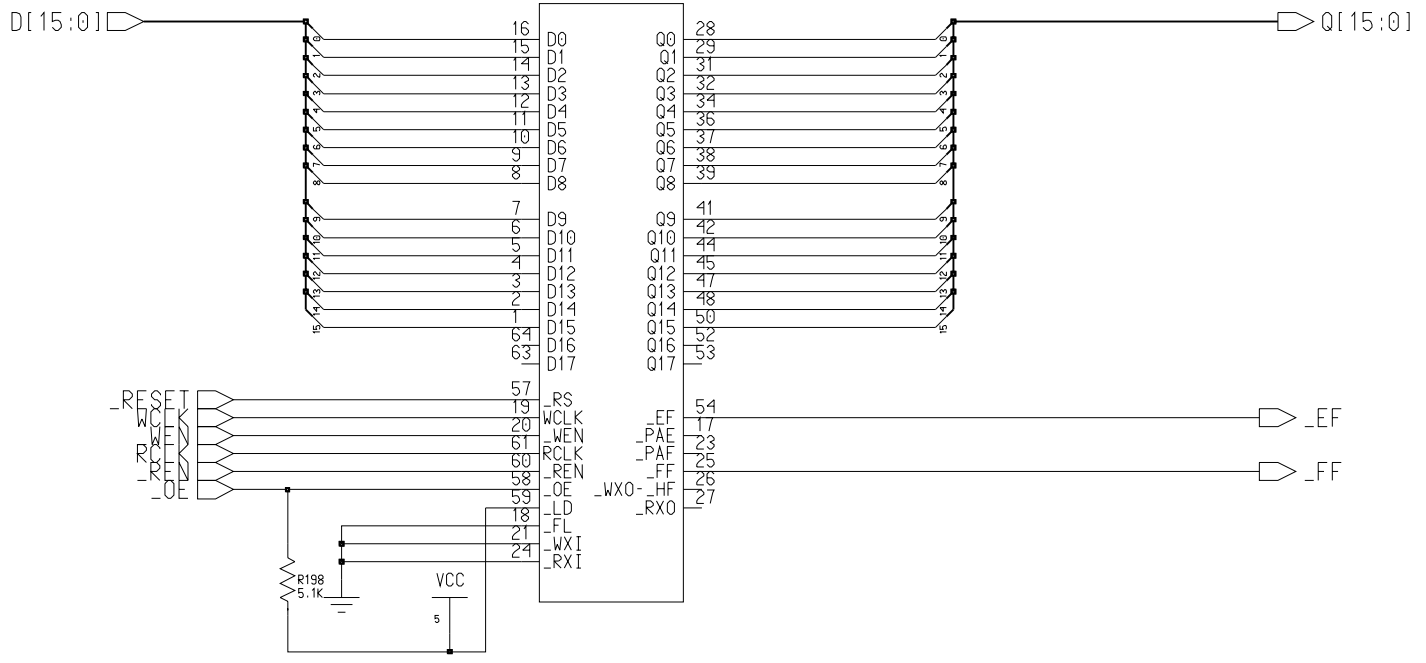


B

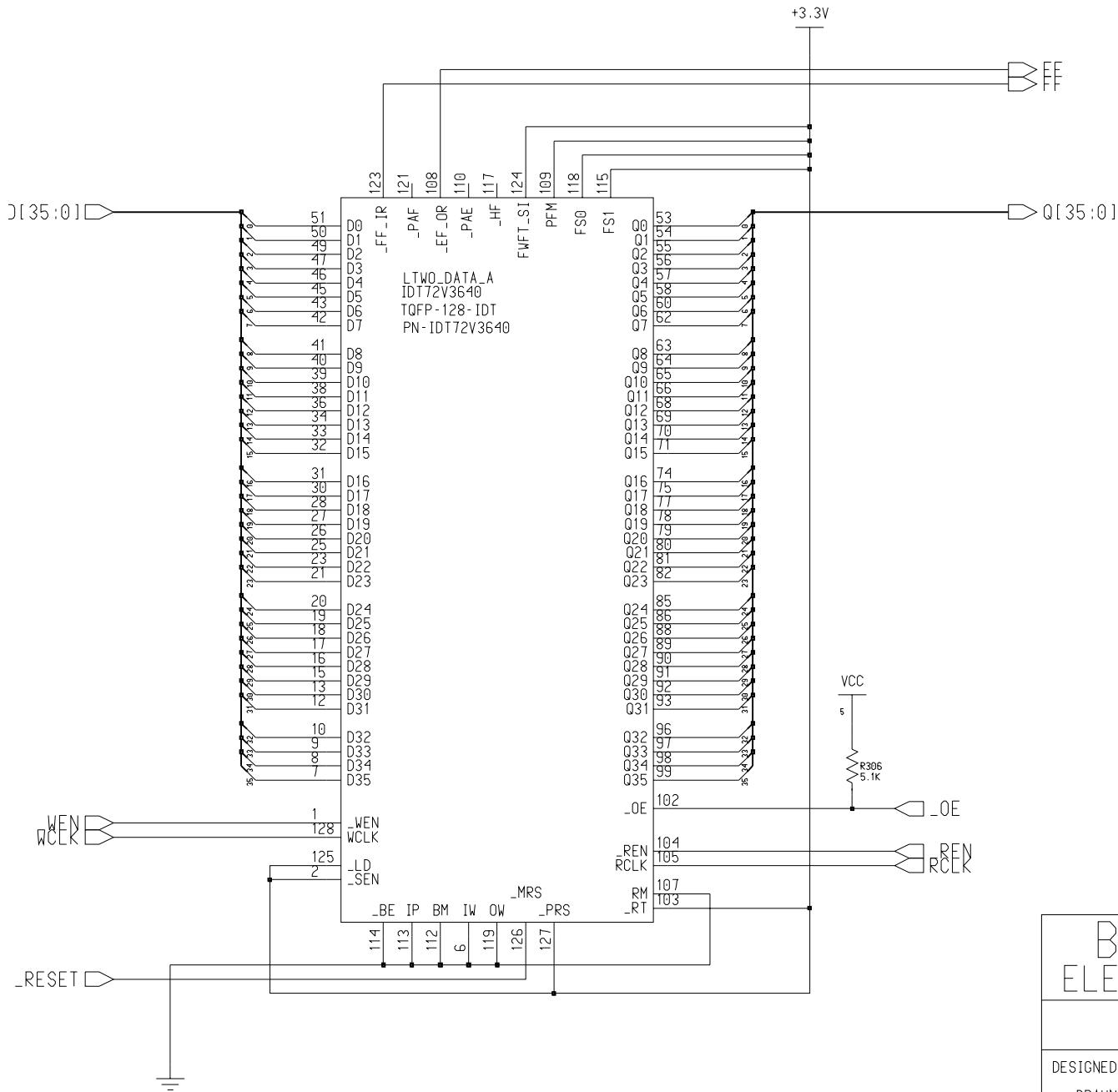
B



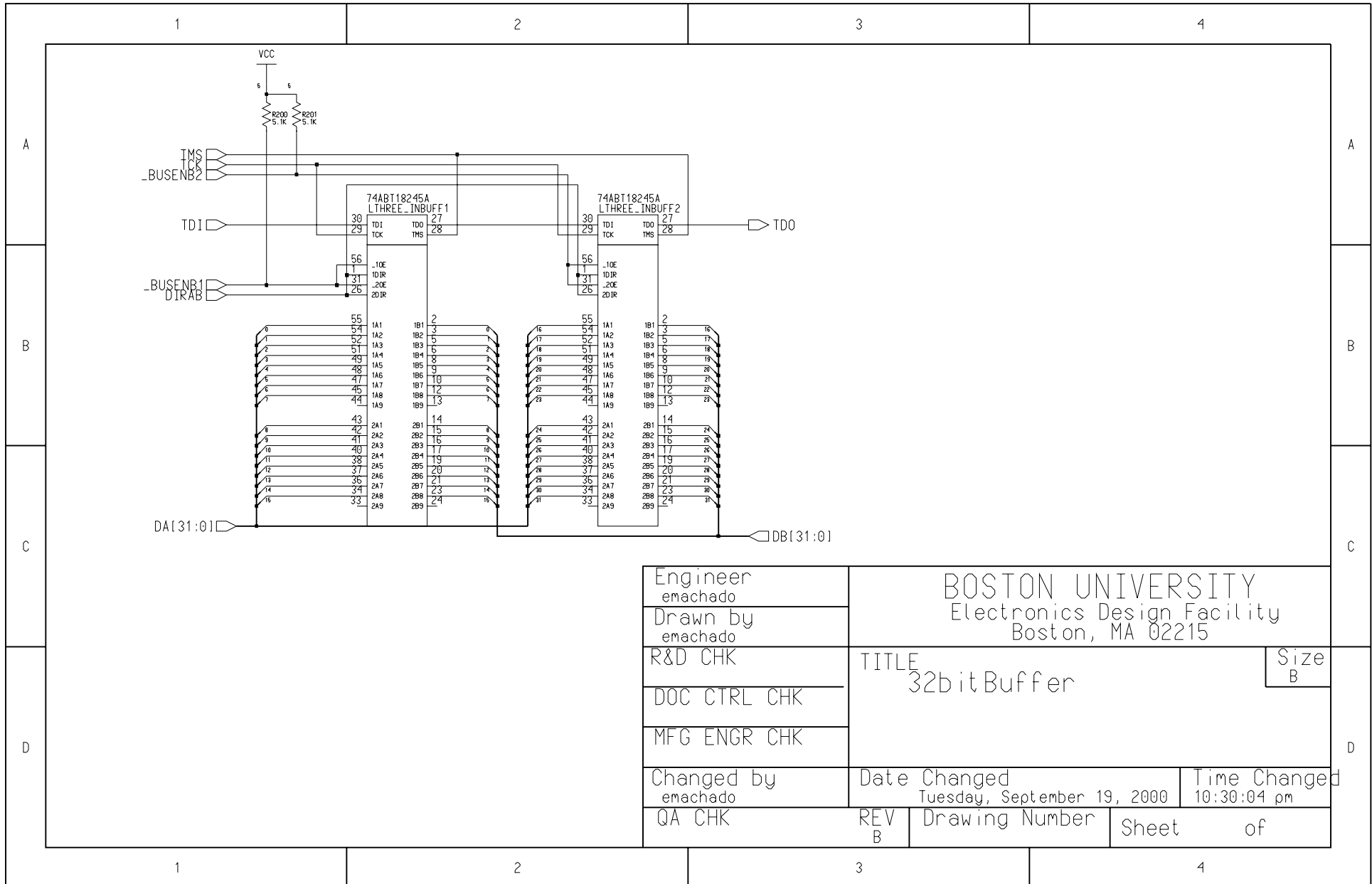
IDT72205LB
MCEN_CNT_FF



<h2 style="margin: 0;">BOSTON UNIVERSITY</h2> <h3 style="margin: 0;">ELECTRONICS DESIGN FACILITY</h3>			
<p>MCEN SMALL AND NARROW FIFO</p>			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	21	OF	36 PRELIMINARY Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



<h2 style="margin: 0;">BOSTON UNIVERSITY</h2> <h3 style="margin: 0;">ELECTRONICS DESIGN FACILITY</h3>			
<p>MCEN SMALL AND WIDE FIFO</p>			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	21 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



Engineer emachado	BOSTON UNIVERSITY Electronics Design Facility Boston, MA 02215		Size B
Drawn by emachado			
R&D CHK	TITLE 32bit Buffer		
DOC CTRL CHK			
MFG ENGR CHK			
Changed by emachado	Date Changed Tuesday, September 19, 2000	Time Changed 10:30:04 pm	
QA CHK	REV B	Drawing Number	Sheet of