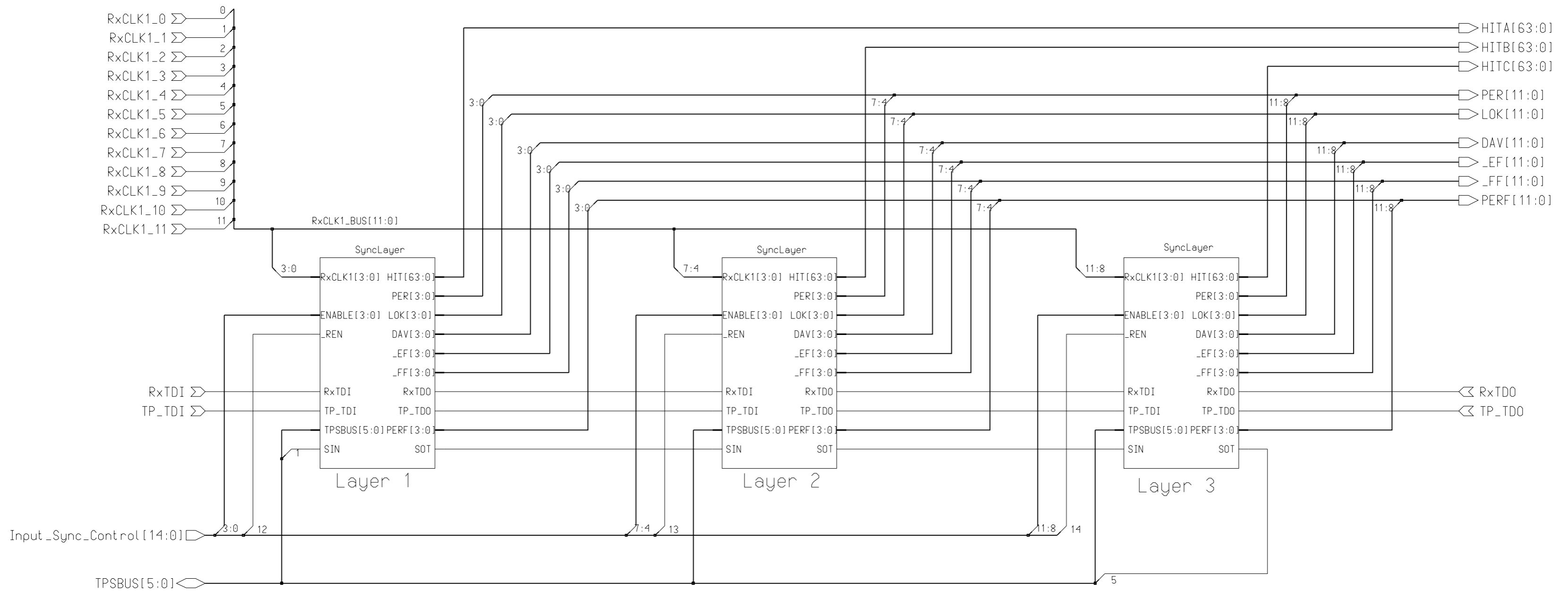


**BOSTON UNIVERSITY**  
**ELECTRONICS DESIGN FACILITY**

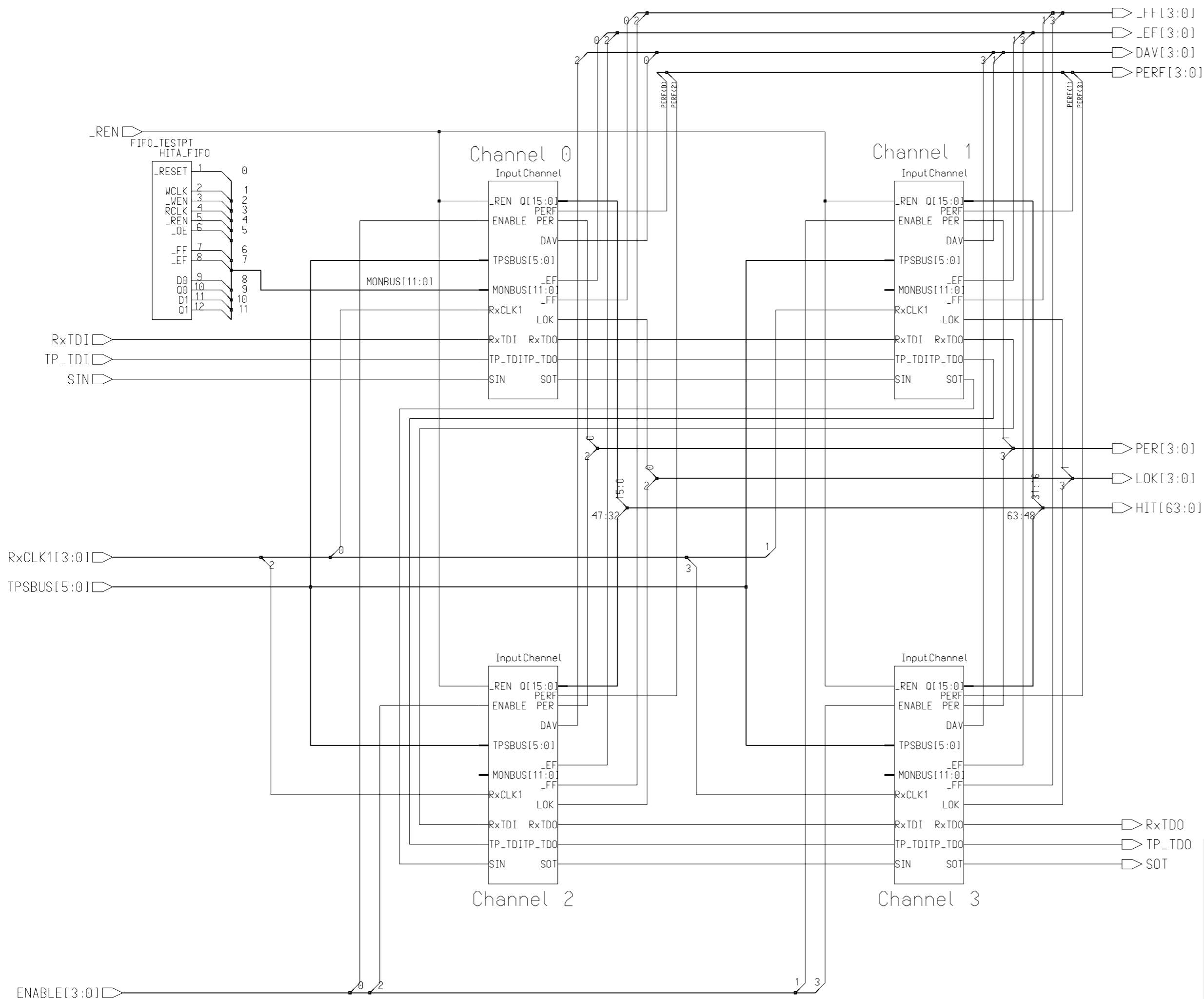
MCEN  
 TOP VIEW

DESIGNED BY Emanuel Machado	BLOCK /AAA/BBB/CCC
DRAWN BY Emanuel Machado/GSV	PART NO MCEN REV B
SHEET 1 OF 36	PRELIMINARY Y ECO'S N
DATE 3/14/00	RELEASED N AS BUILT N
PATH PATH	

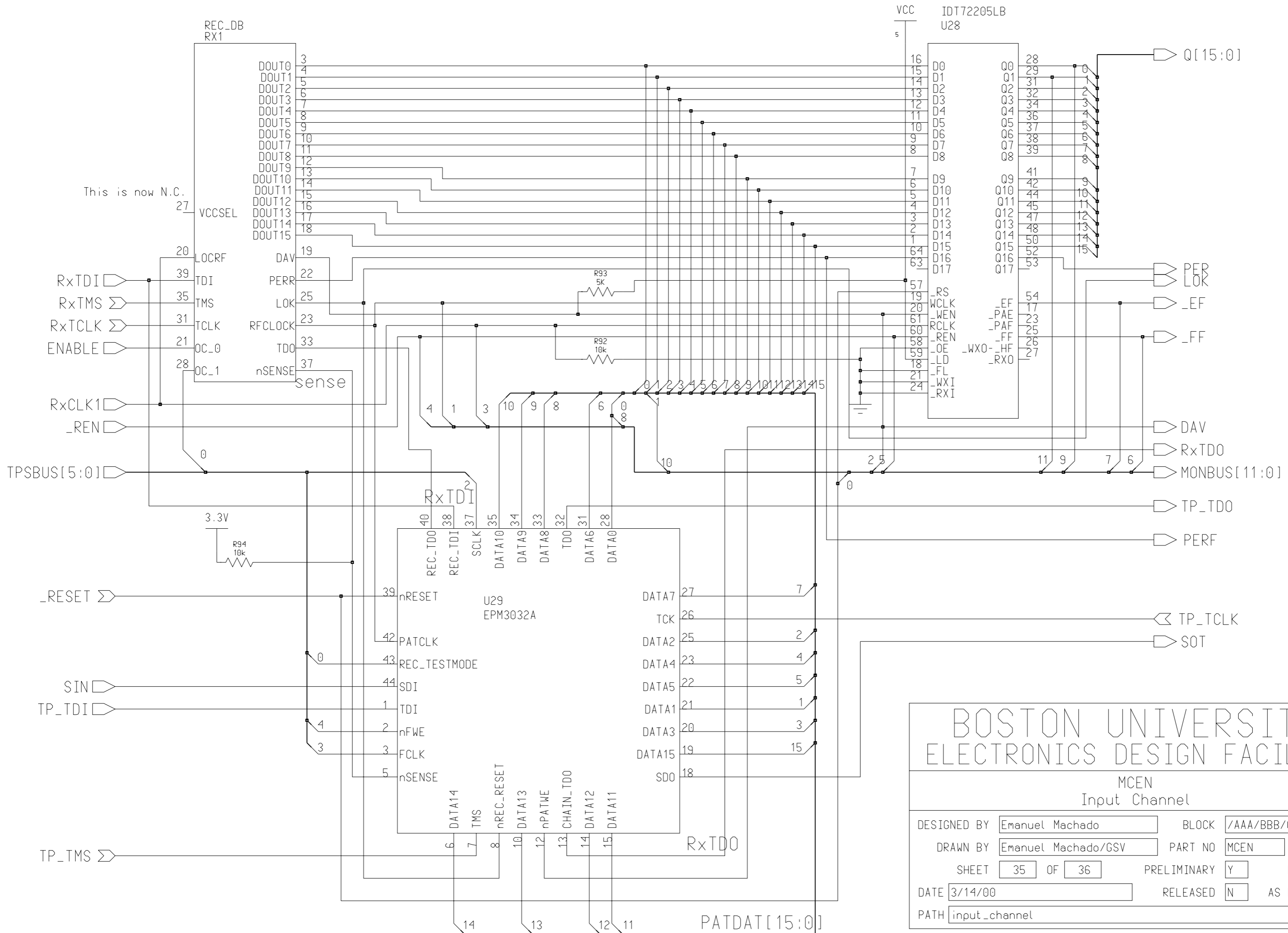


Input\_Sync\_Control[14:0]  
 11:0 = ENABLE[11:0]  
 14:12 = 3 copies \_REN

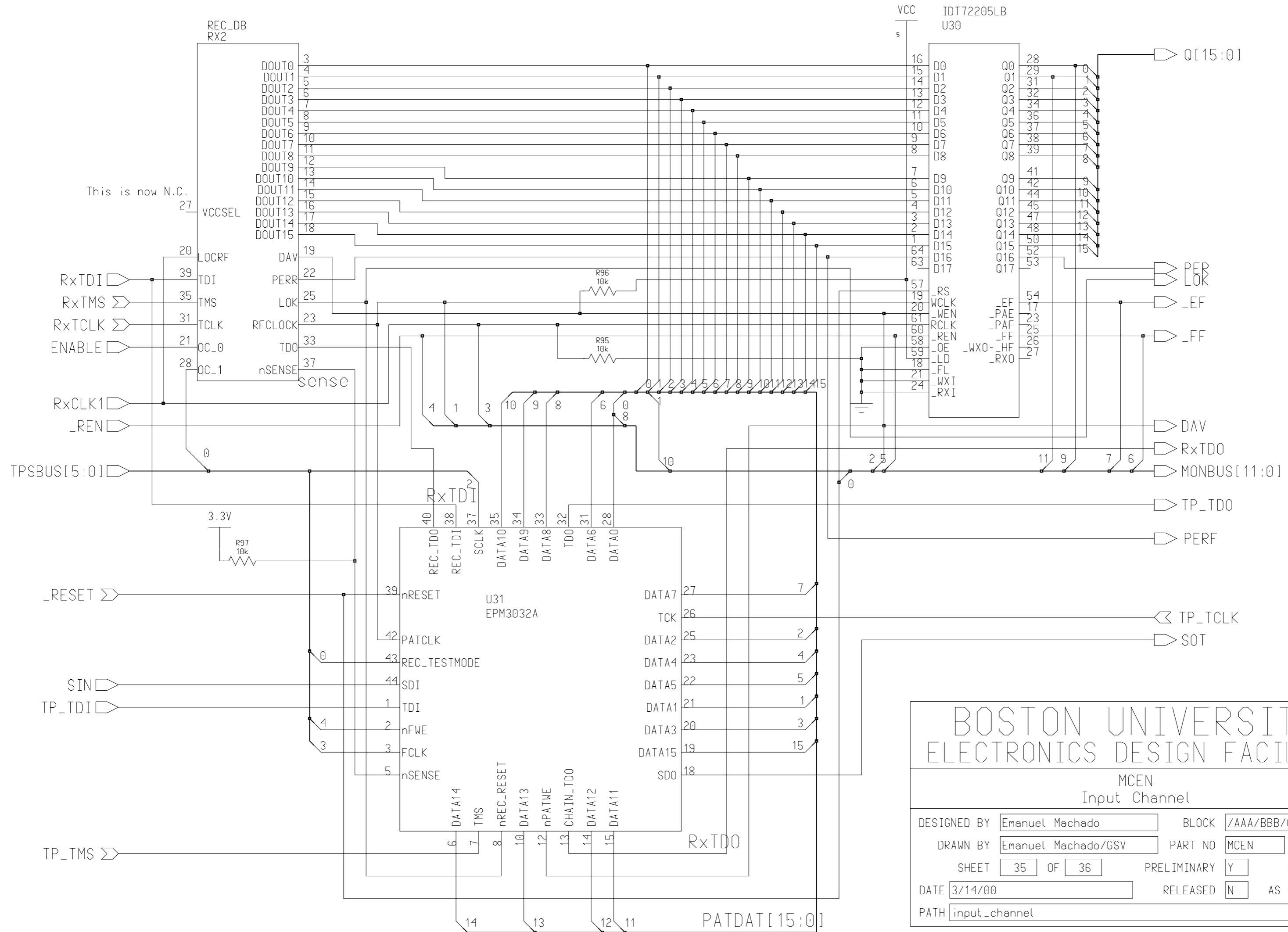
BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN Input Synchronization			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	33 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	input_sync		



BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN Synchronization Layer			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	34 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN Input Channel			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	35 OF 36	PRELIMINARY	Y N ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	input_channel		



BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
Input Channel

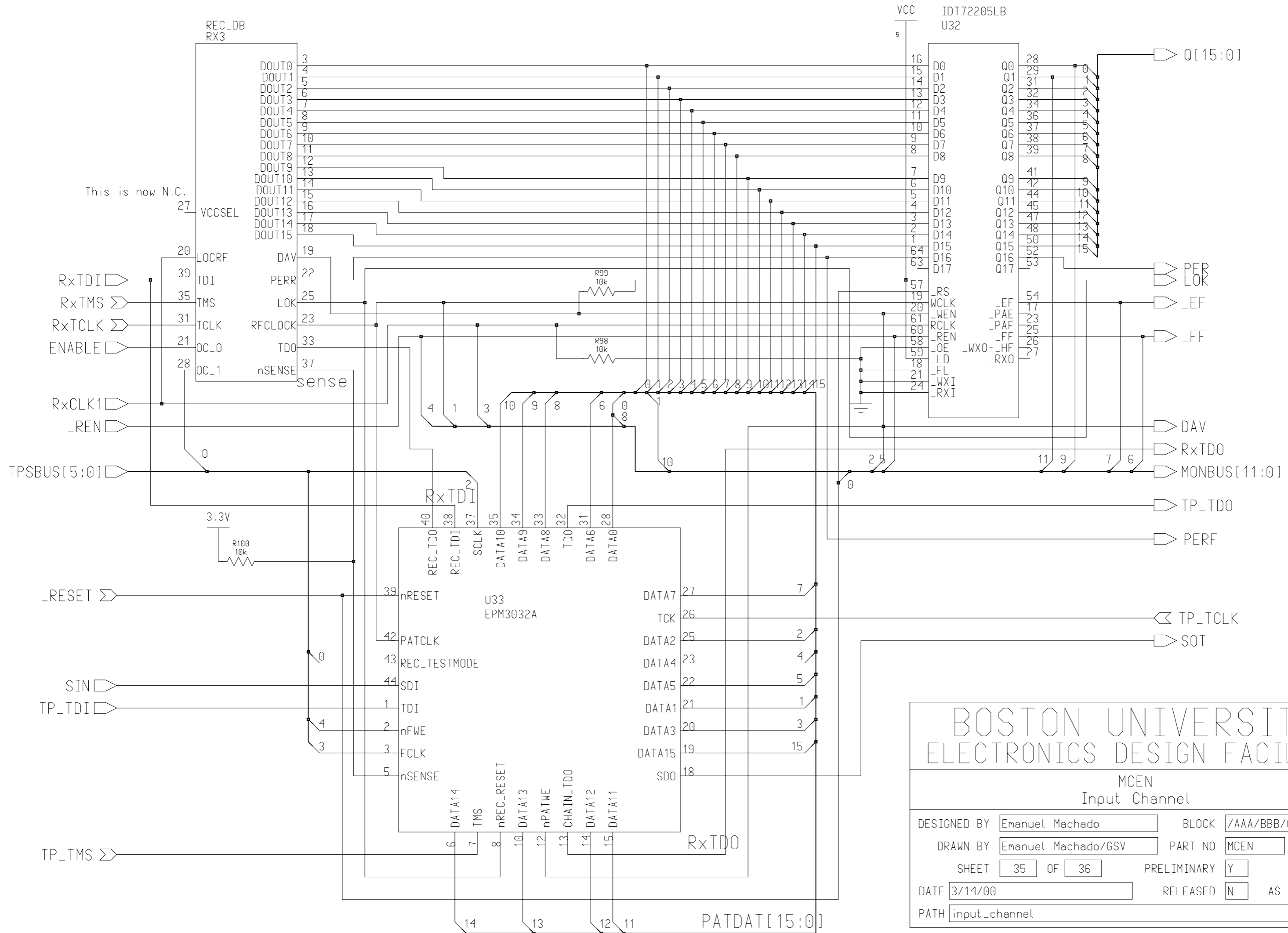
DESIGNED BY Emanuel Machado BLOCK /AAA/BBB/CCC

DRAWN BY Emanuel Machado/GSV PART NO MCEN REV B

SHEET 35 OF 36 PRELIMINARY Y ECO'S N

DATE 3/14/00 RELEASED N AS BUILT N

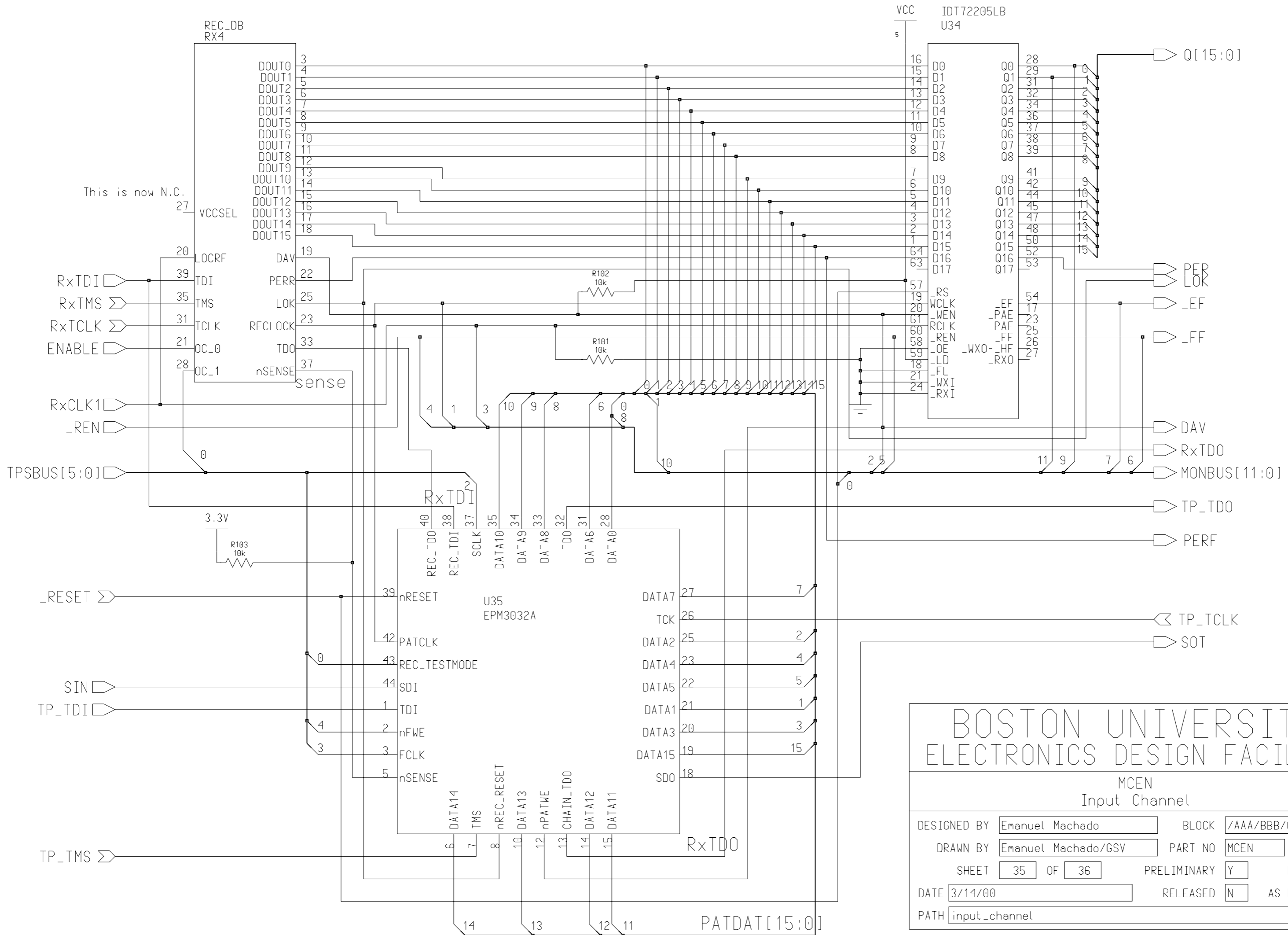
PATH input\_channel



BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
Input Channel

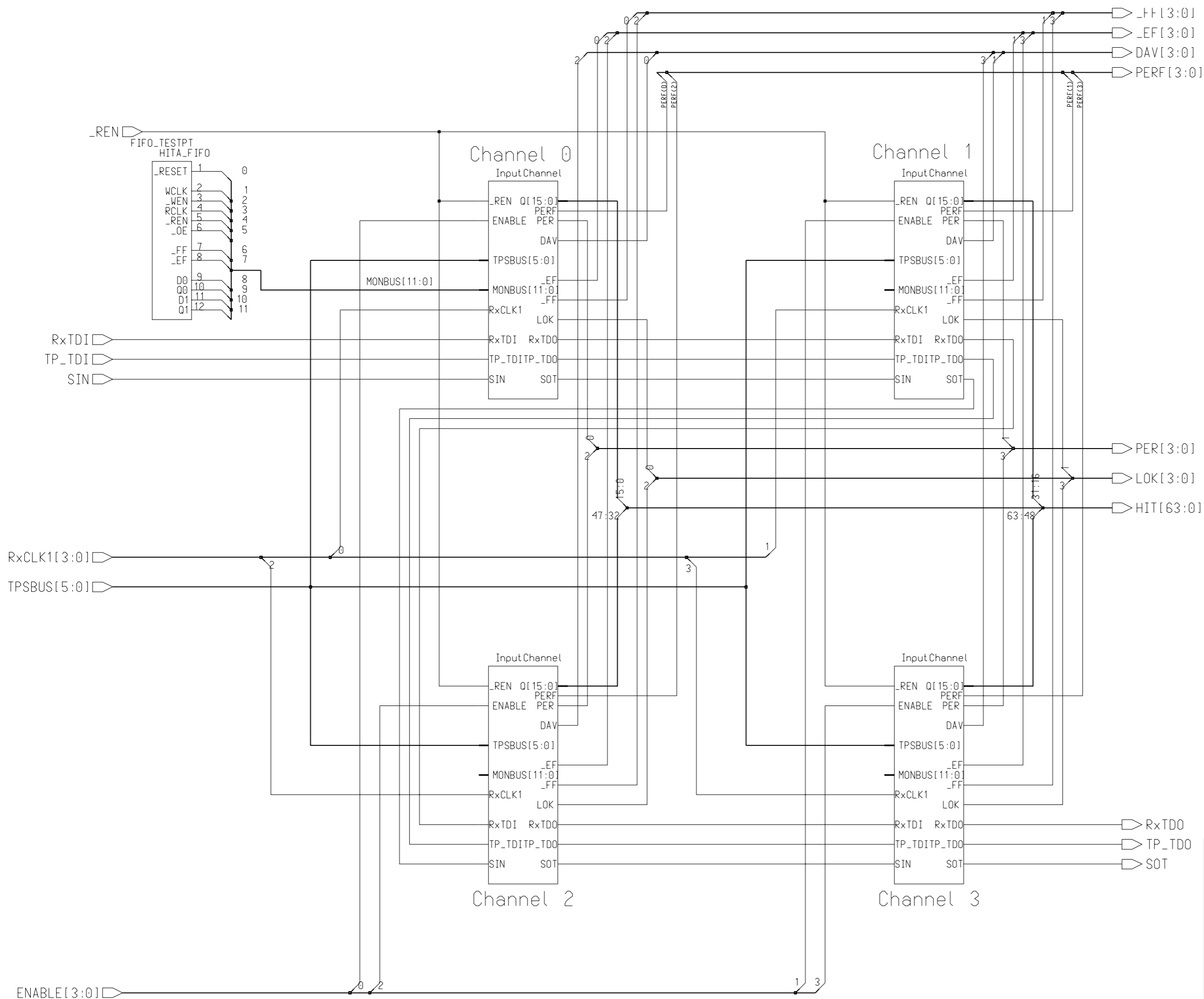
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	35 OF 36	PRELIMINARY	Y N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	input_channel		



BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
Input Channel

DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	35 OF 36	PRELIMINARY	Y N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	input_channel		

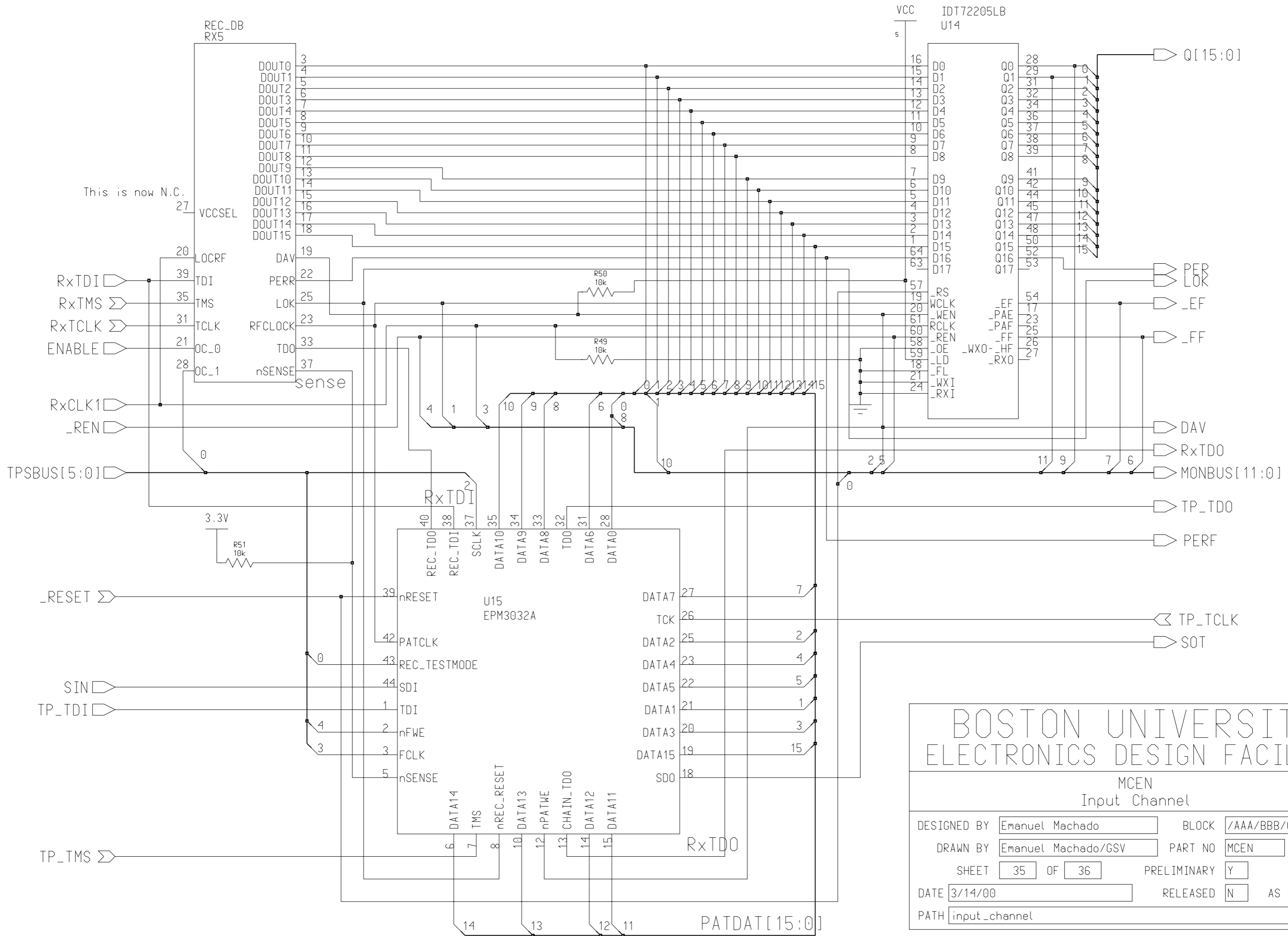


**BOSTON UNIVERSITY**  
ELECTRONICS DESIGN FACILITY

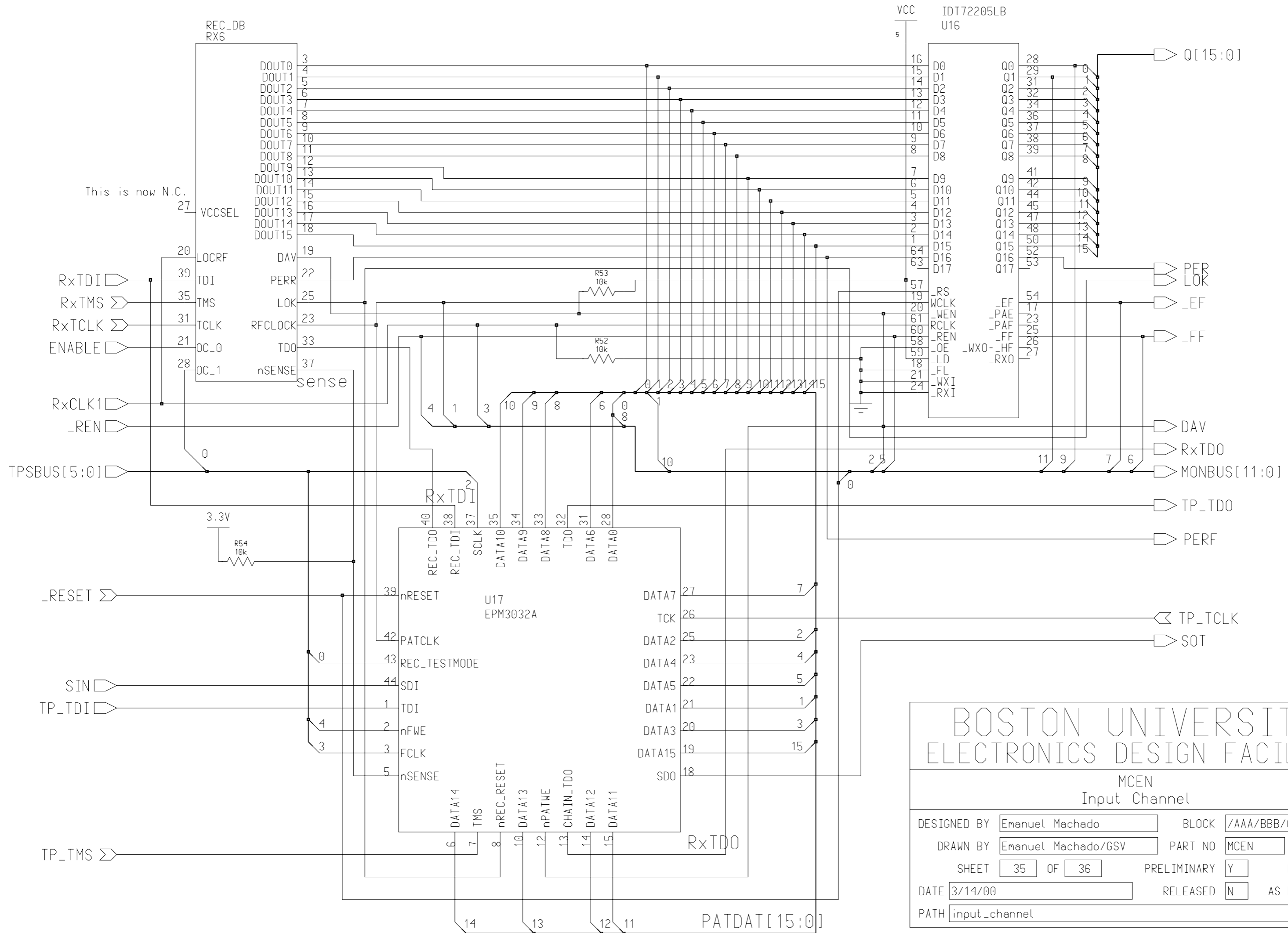
MCEN  
Synchronization Layer

DESIGNED BY Emanuel Machado	BLOCK /AAA/BBB/CCC
DRAWN BY Emanuel Machado/GSV	PART NO MCEN REV B
SHEET 34 OF 36	PRELIMINARY Y ECO'S N
DATE 3/14/00	RELEASED N AS BUILT N
PATH PATH	





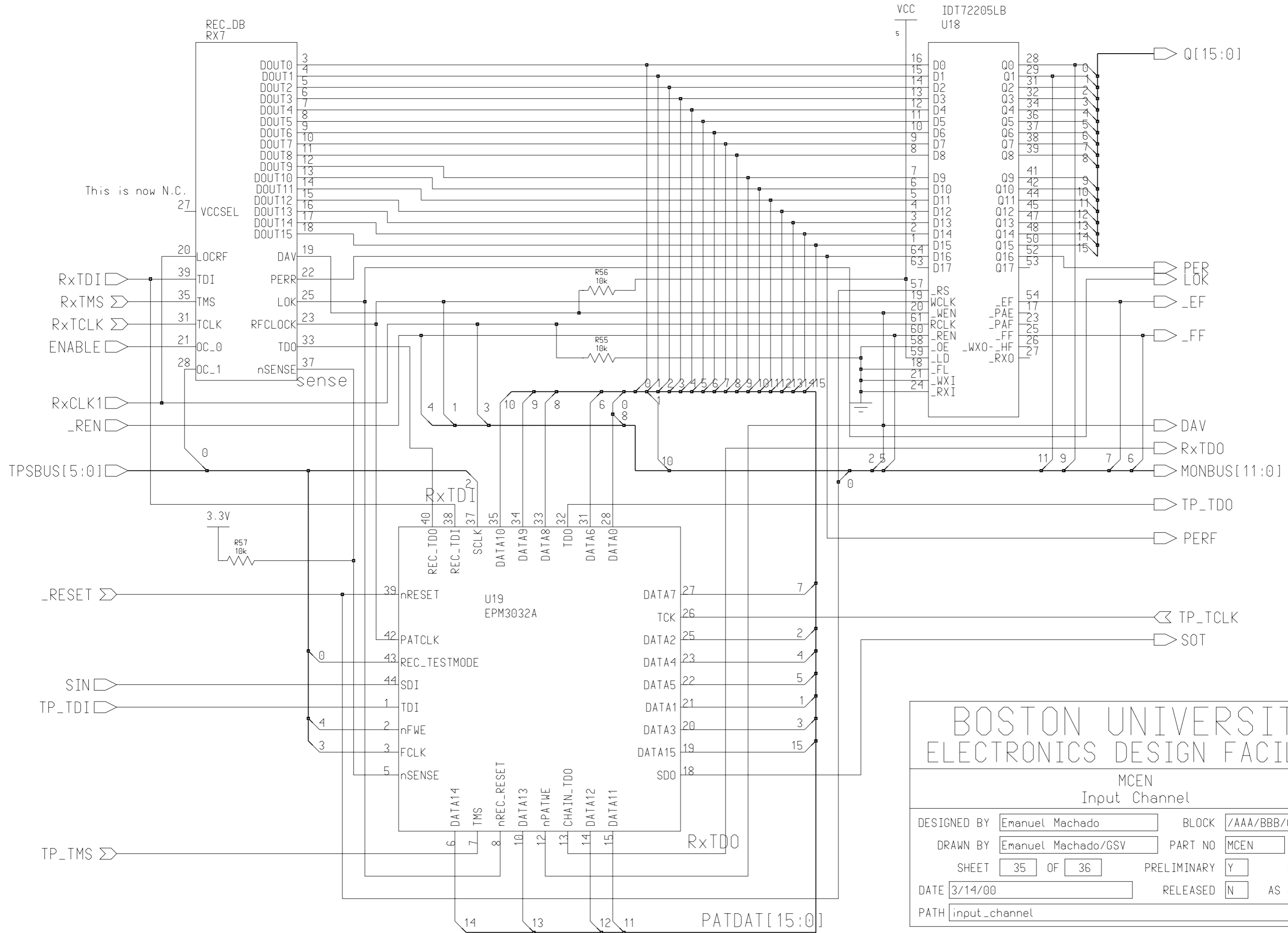
<b>BOSTON UNIVERSITY</b>			
<b>ELECTRONICS DESIGN FACILITY</b>			
MCEN Input Channel			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	35 OF 36	PRELIMINARY	Y N ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	input_channel		



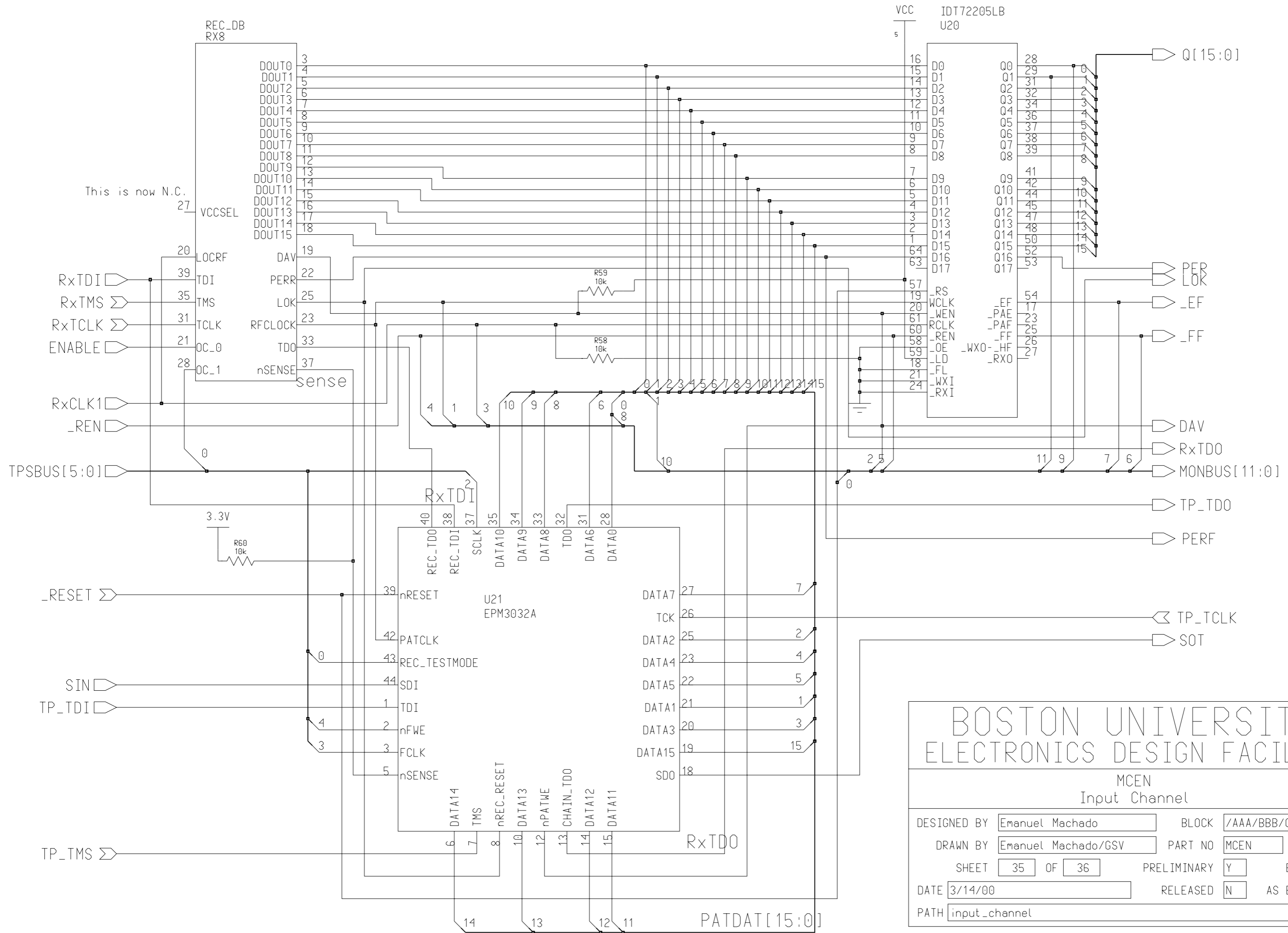
BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
Input Channel

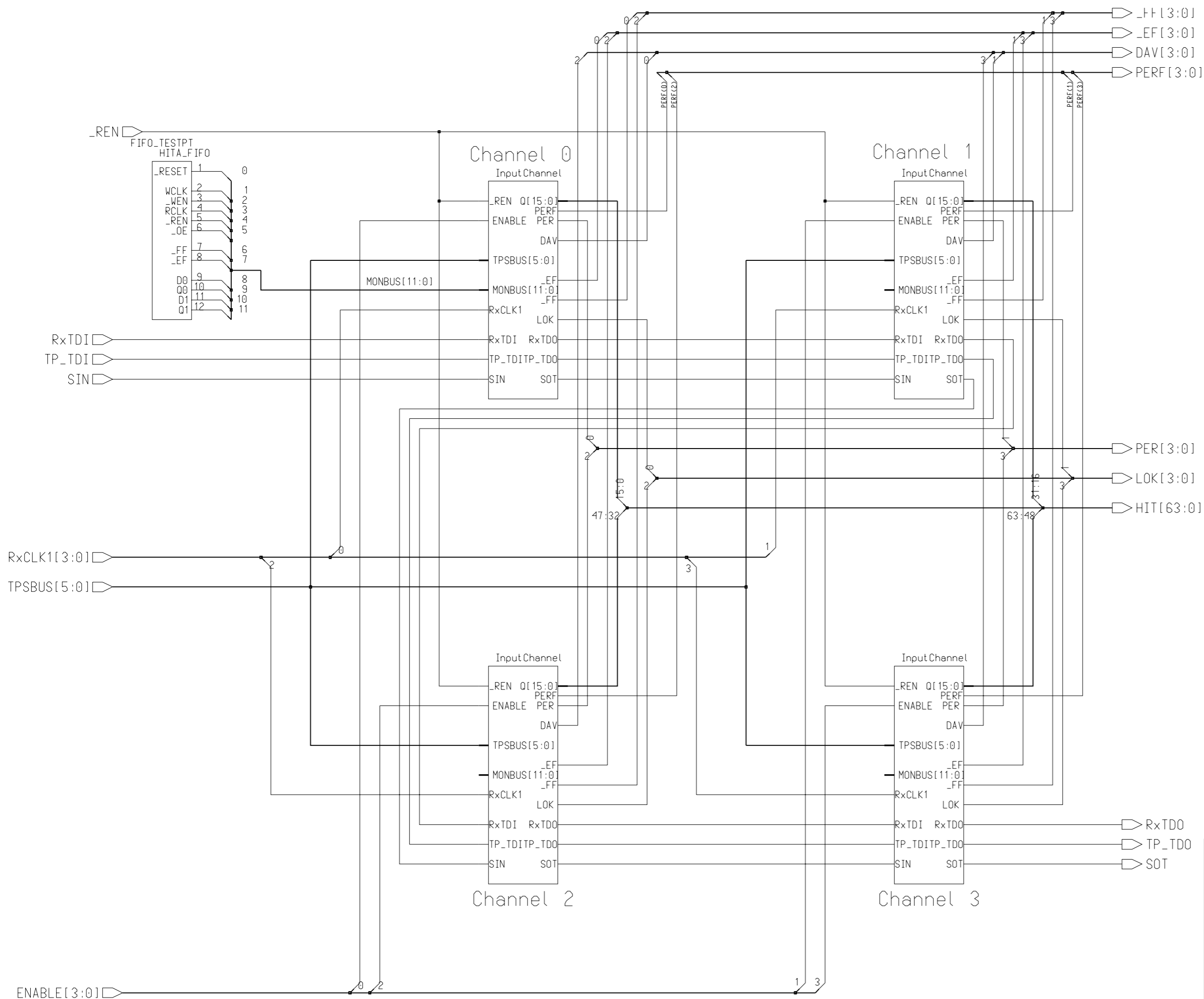
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	35 OF 36	PRELIMINARY	Y N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	input_channel		



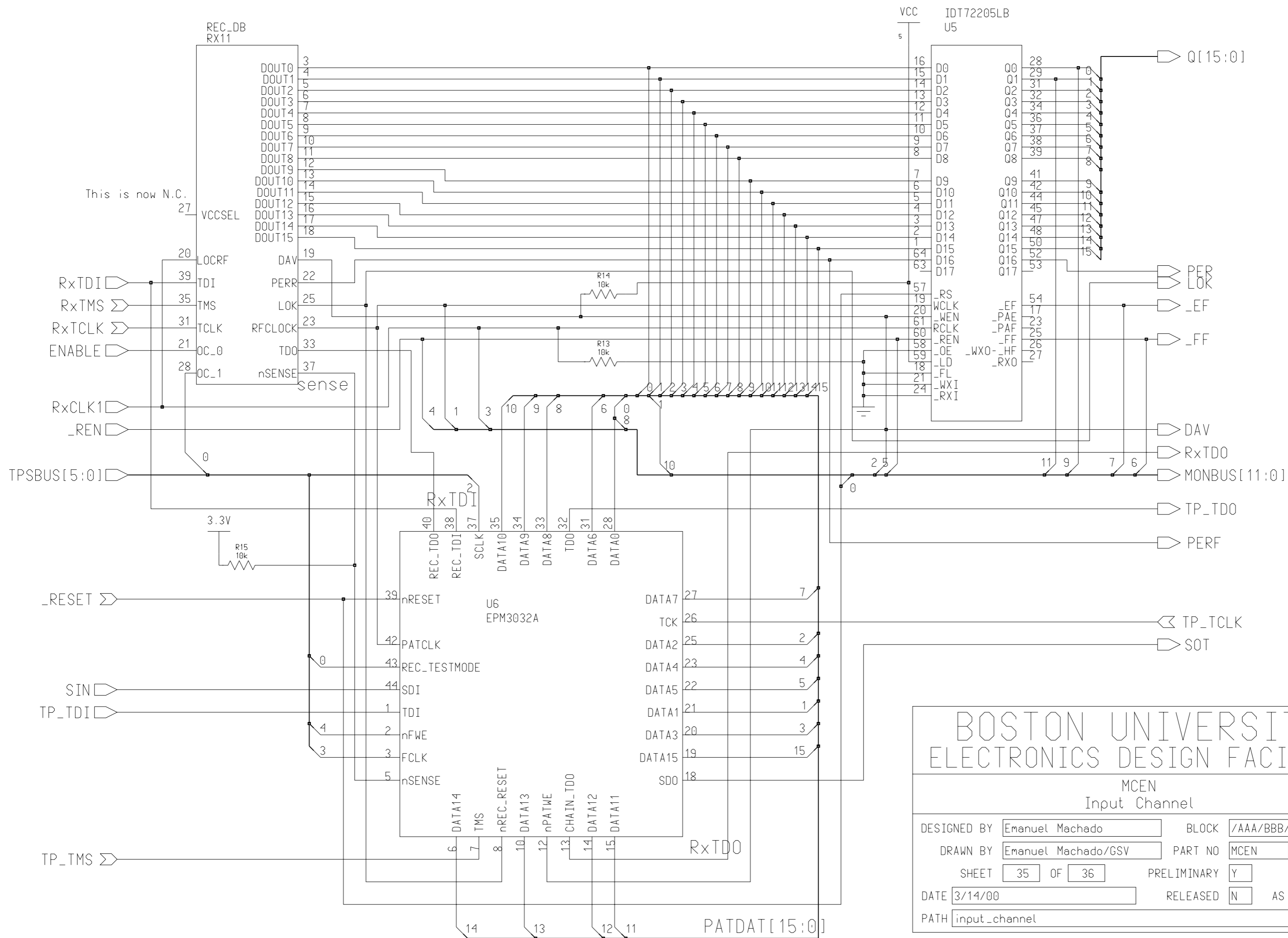
BOSTON UNIVERSITY				
ELECTRONICS DESIGN FACILITY				
MCEN				
Input Channel				
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC	
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN	REV B
	SHEET 35 OF 36	PRELIMINARY	Y	ECO'S N
DATE	3/14/00	RELEASED	N	AS BUILT N
PATH	input_channel			



BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN Input Channel			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	35 OF 36	PRELIMINARY	Y N ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	input_channel		



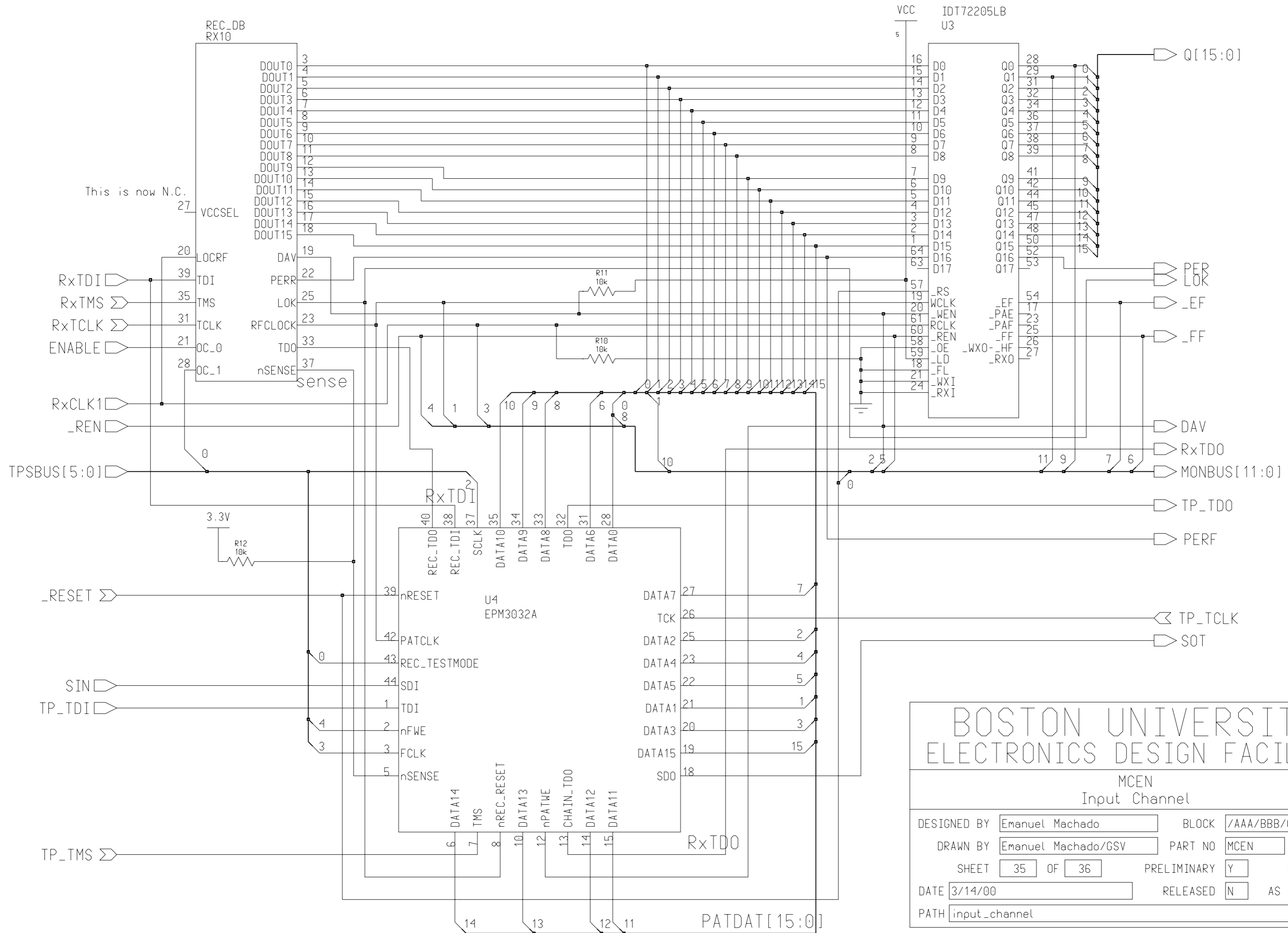
BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN Synchronization Layer			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	34 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



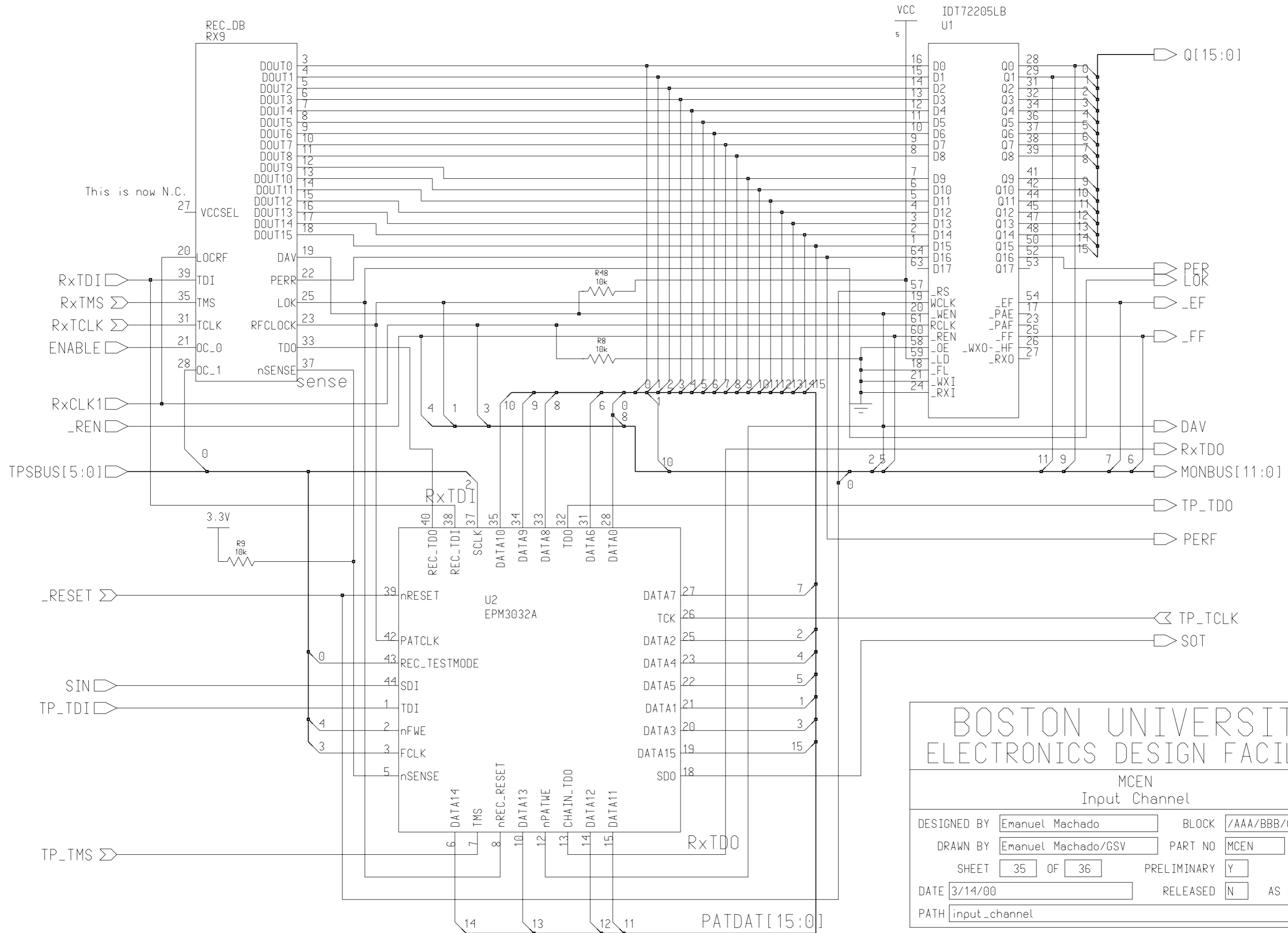
BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
Input Channel

DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	35 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	input_channel		

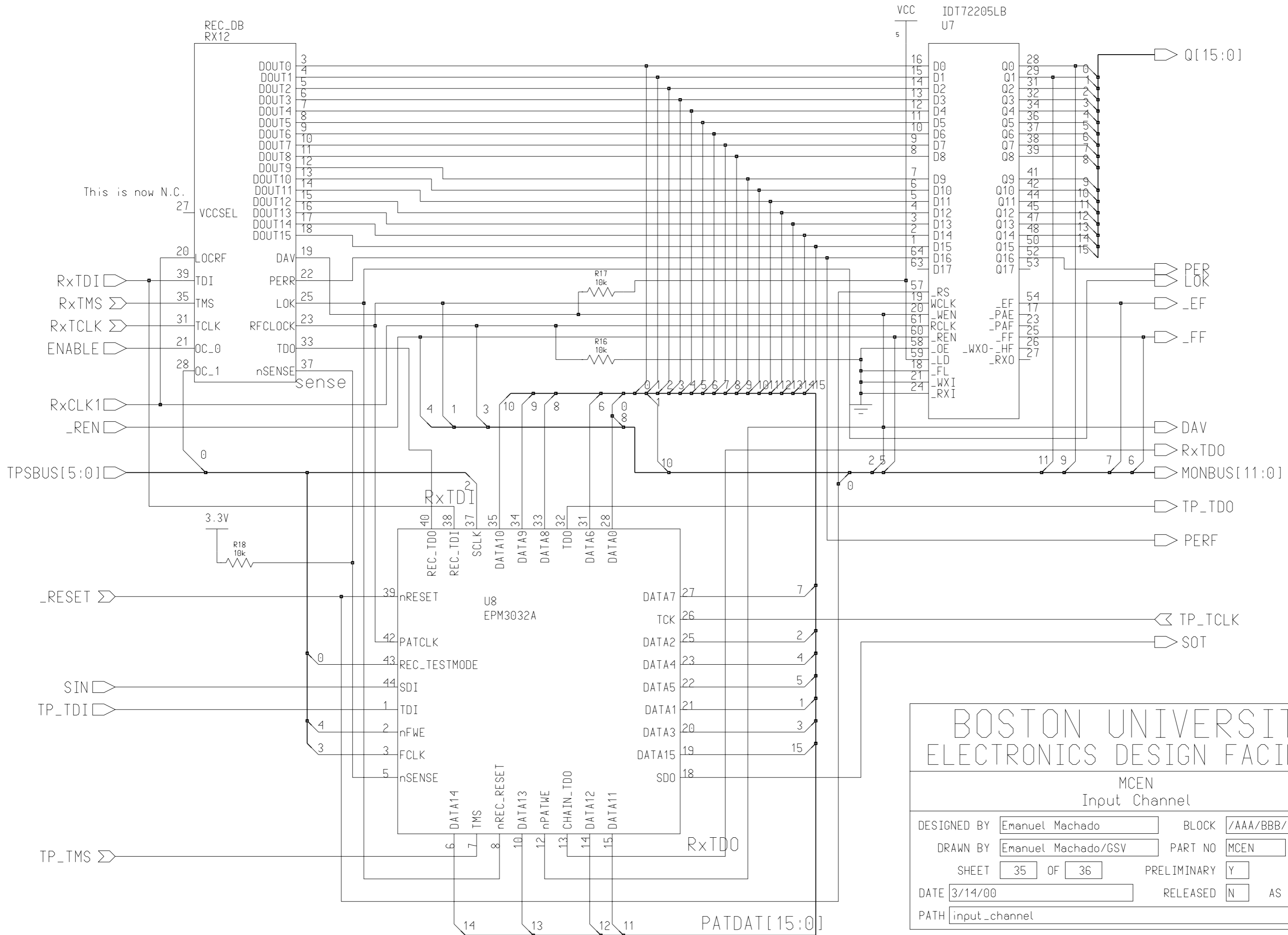


BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN Input Channel			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	35 OF 36	PRELIMINARY	Y N ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	input_channel		

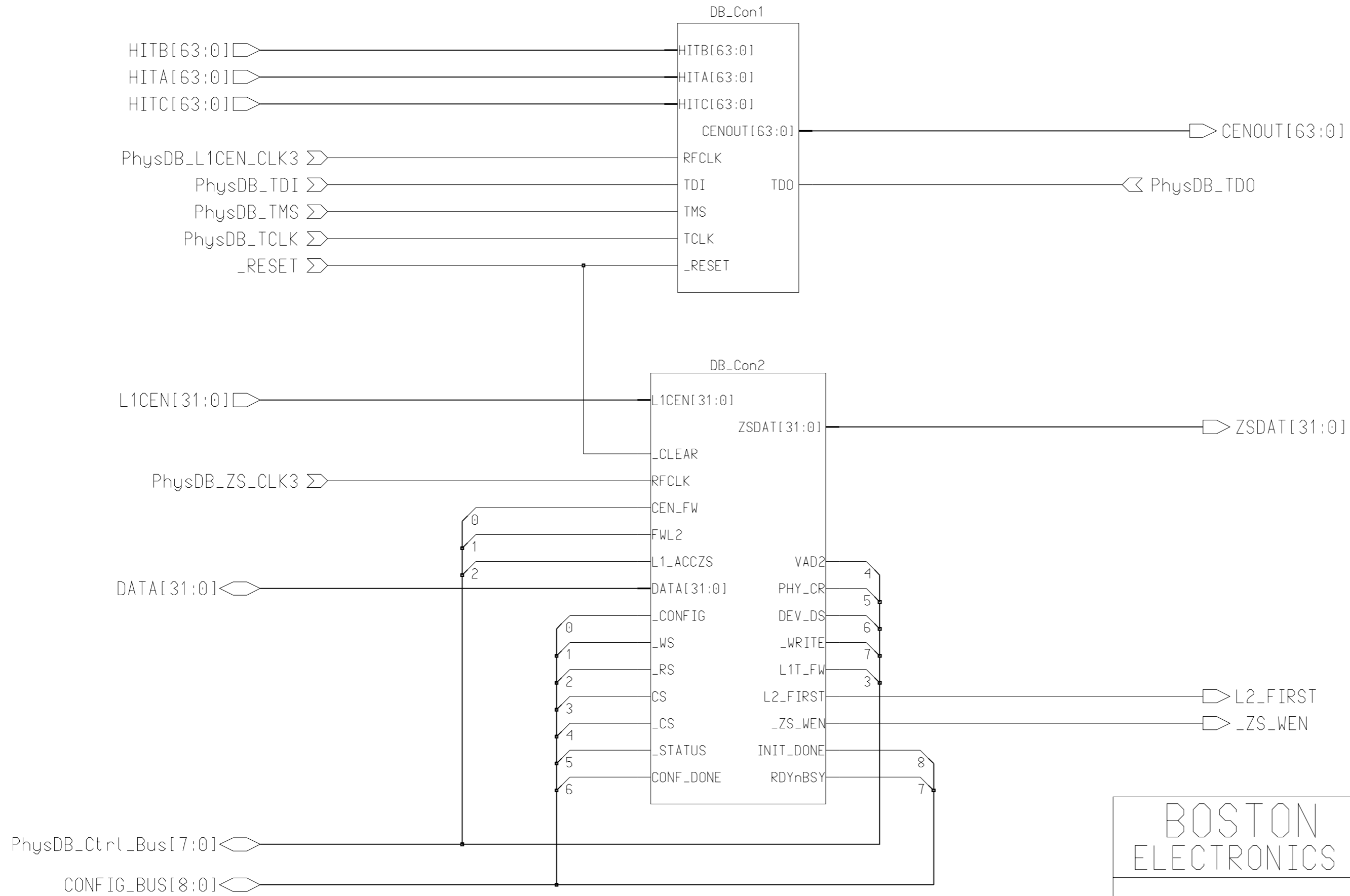


BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN Input Channel			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	35 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	input_channel		





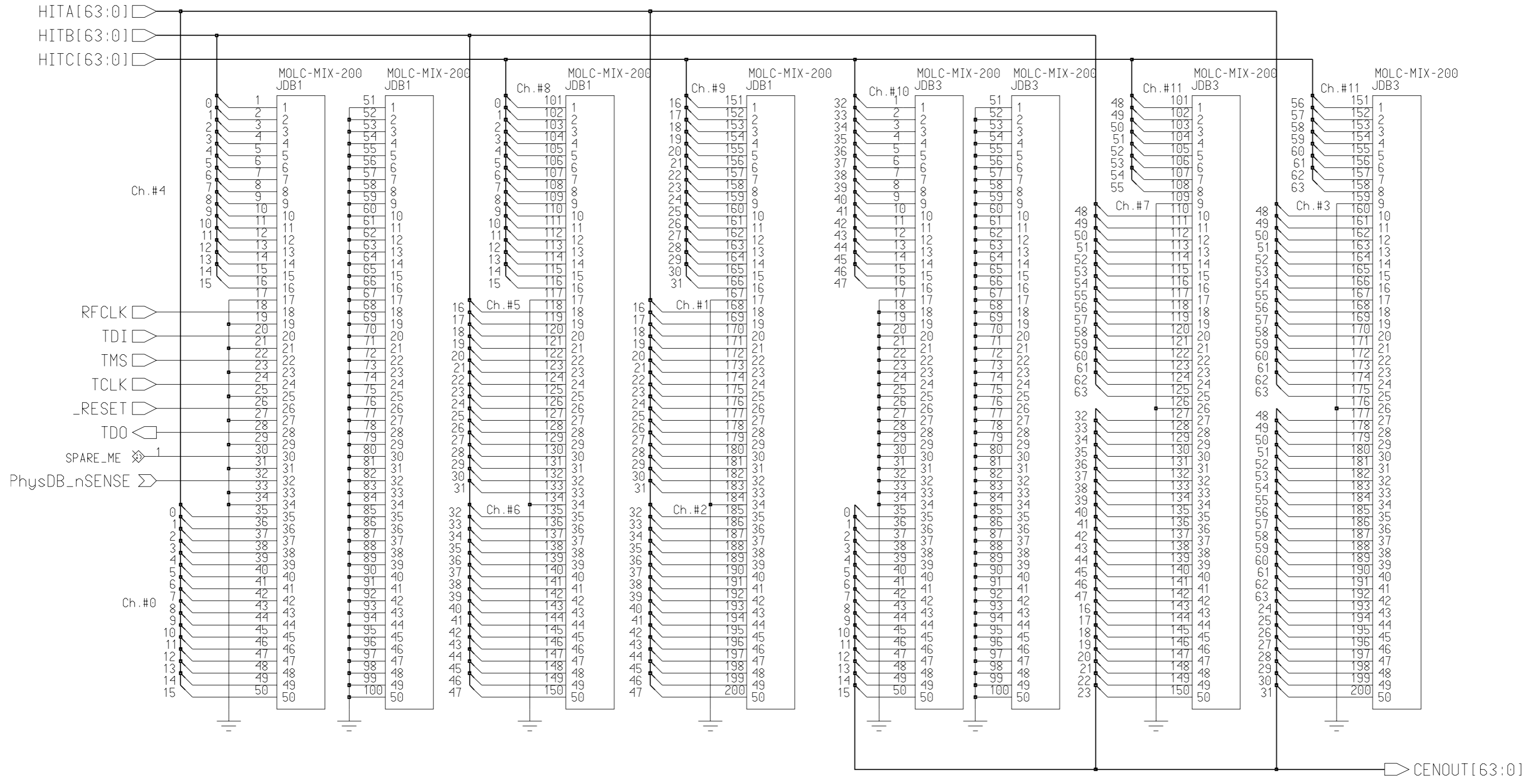
BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN Input Channel			
DESIGNED BY	<input type="text" value="Emanuel Machado"/>	BLOCK	<input type="text" value="/AAA/BBB/CCC"/>
DRAWN BY	<input type="text" value="Emanuel Machado/GSV"/>	PART NO	<input type="text" value="MCEN"/> REV <input type="text" value="B"/>
	SHEET <input type="text" value="35"/> OF <input type="text" value="36"/>	PRELIMINARY	<input type="checkbox"/> Y <input type="checkbox"/> N ECO'S <input type="checkbox"/> N
DATE	<input type="text" value="3/14/00"/>	RELEASED	<input type="checkbox"/> N <input type="checkbox"/> AS BUILT <input type="checkbox"/> N
PATH	<input type="text" value="input_channel"/>		



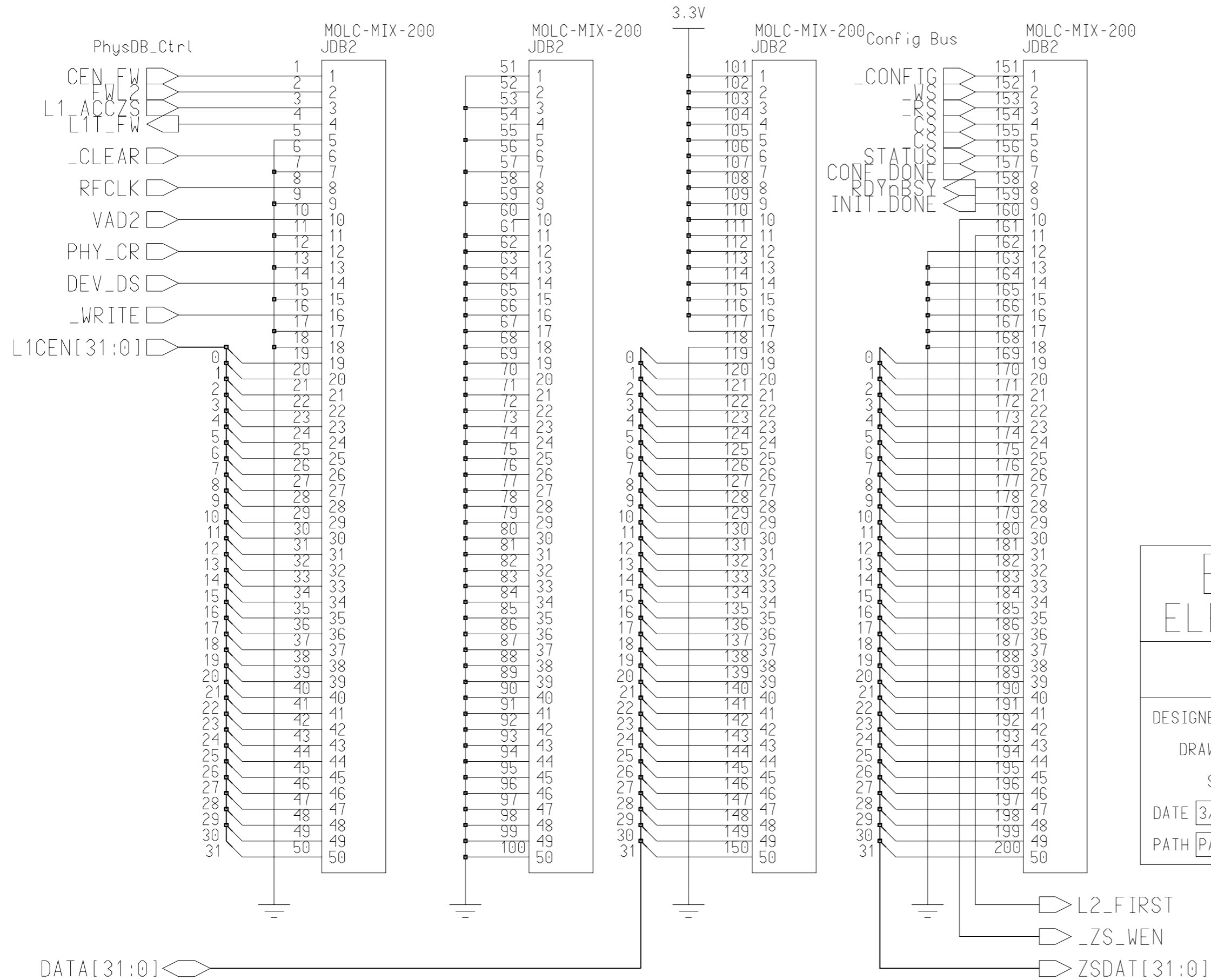
BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
Physics Daughterboard

DESIGNED BY	ETM/GSV	BLOCK	/AAA/BBB/CCC
DRAWN BY	GSV	PART NO	MCEN REV B
SHEET	30	OF	36 PRELIMINARY Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



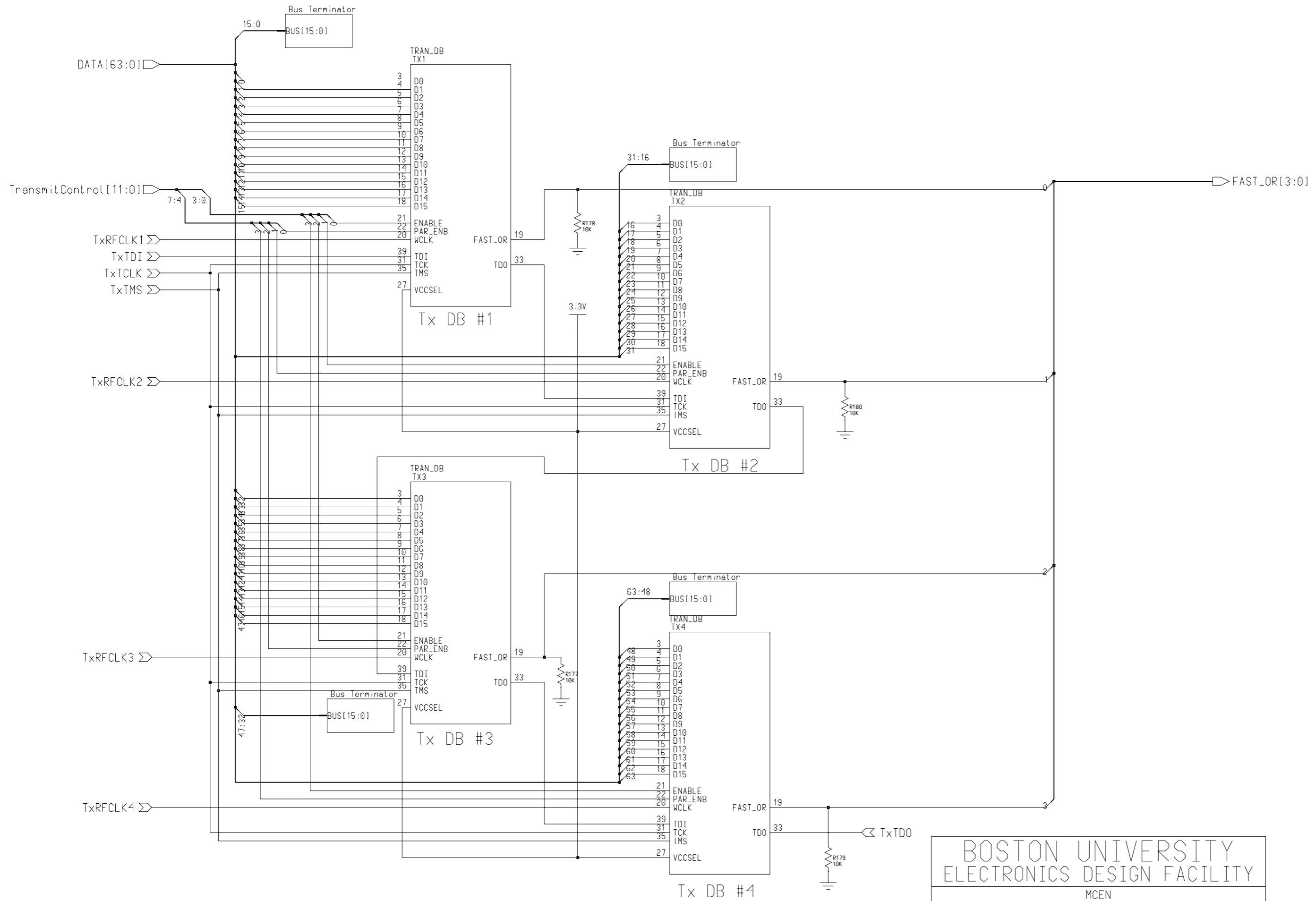
BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN Physics Daughterboard Connector 1 and 3			
DESIGNED BY	GSV	BLOCK	/AAA/BBB/CCC
DRAWN BY	GSV	PART NO	MCEN REV B
SHEET	31	OF	36 PRELIMINARY Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

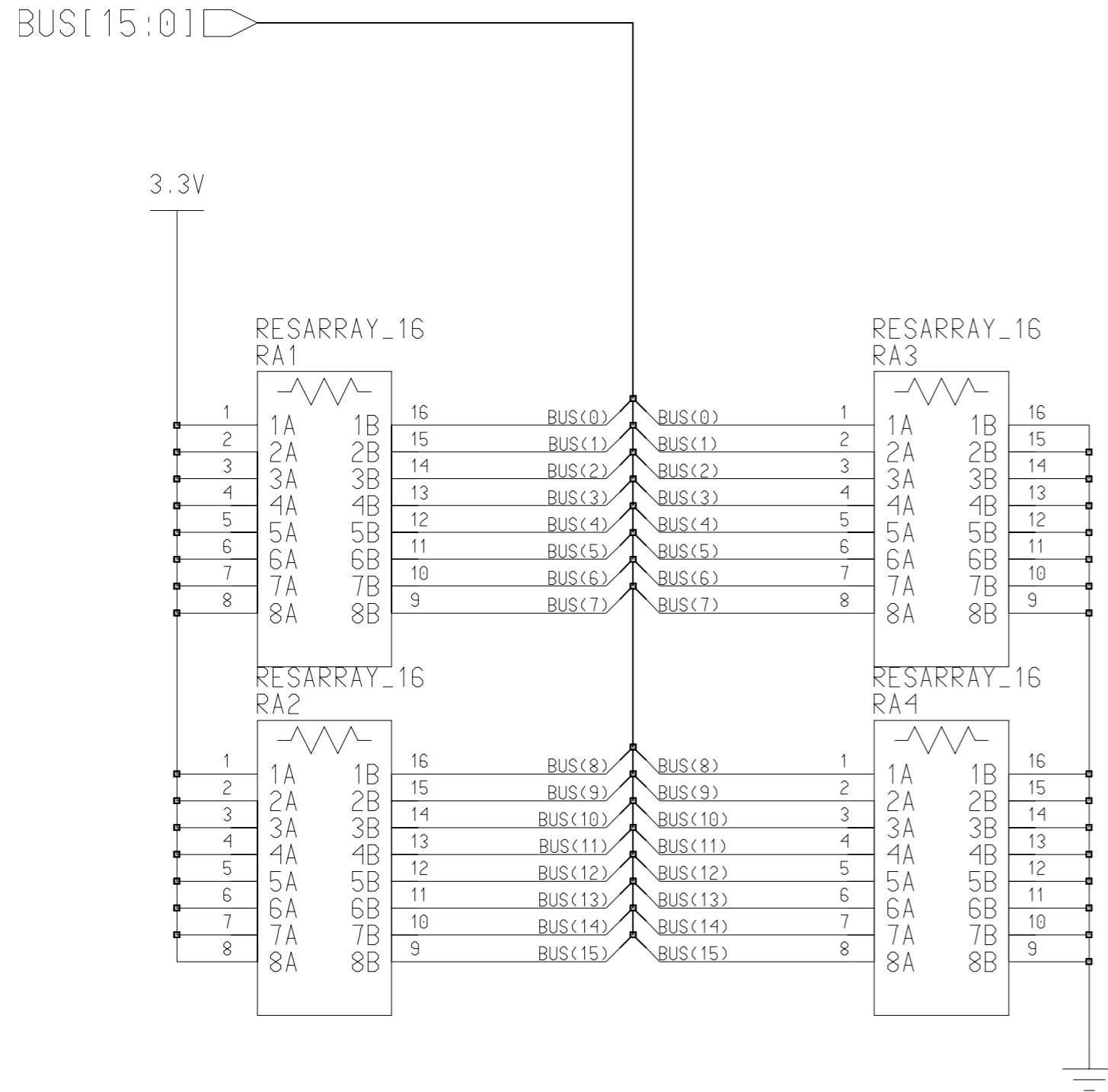
MCEN  
Physics Daughterboard Connector 2

DESIGNED BY	<input type="text" value="GSV"/>	BLOCK	<input type="text" value="/AAA/BBB/CCC"/>
DRAWN BY	<input type="text" value="GSV"/>	PART NO	<input type="text" value="MCEN"/> REV <input type="text" value="B"/>
SHEET	<input type="text" value="32"/> 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  
 L1 Transmit

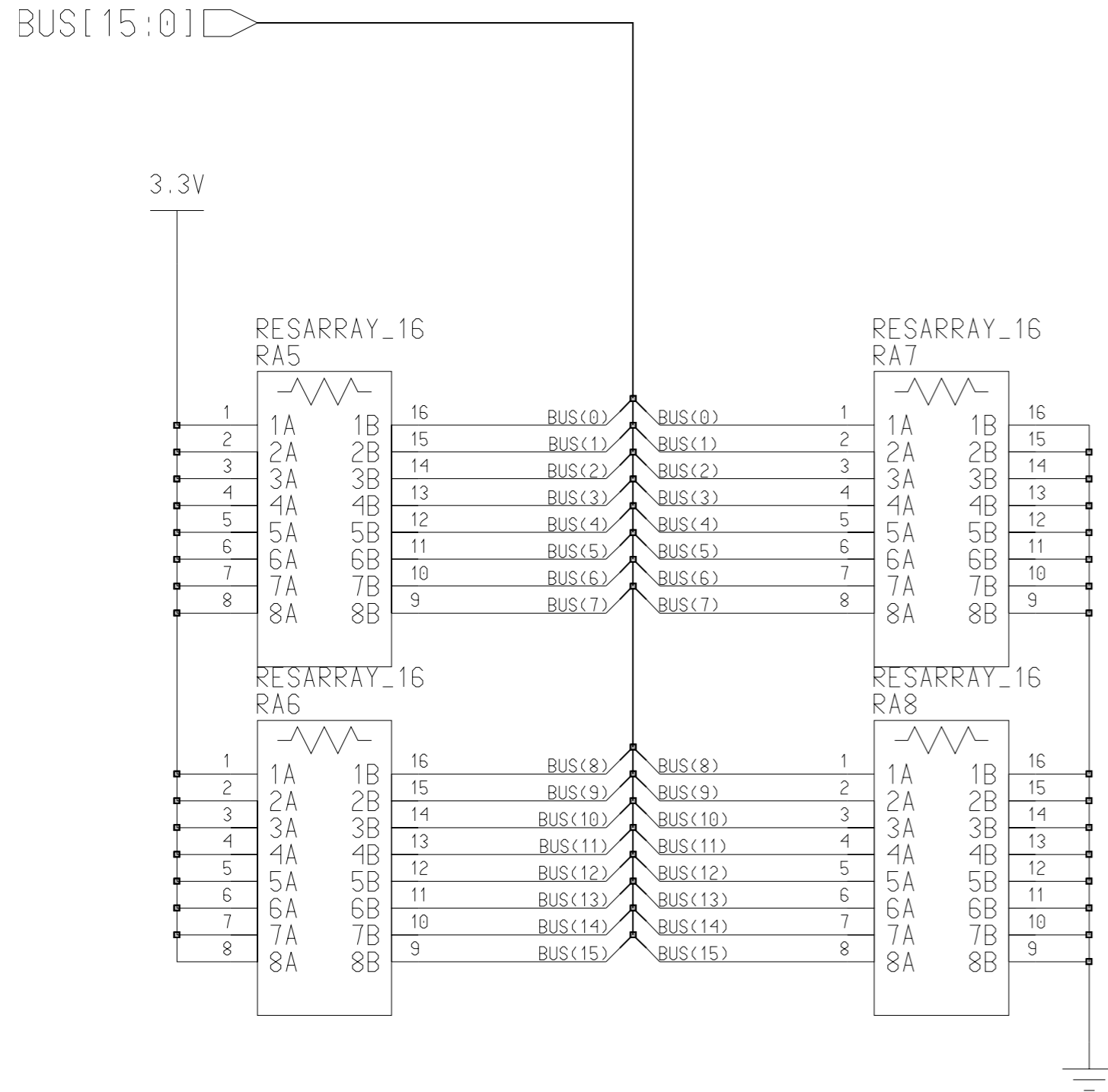
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	23 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH L1_Transmit			



# BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY

MCEN Rev. B1  
Bus Terminations

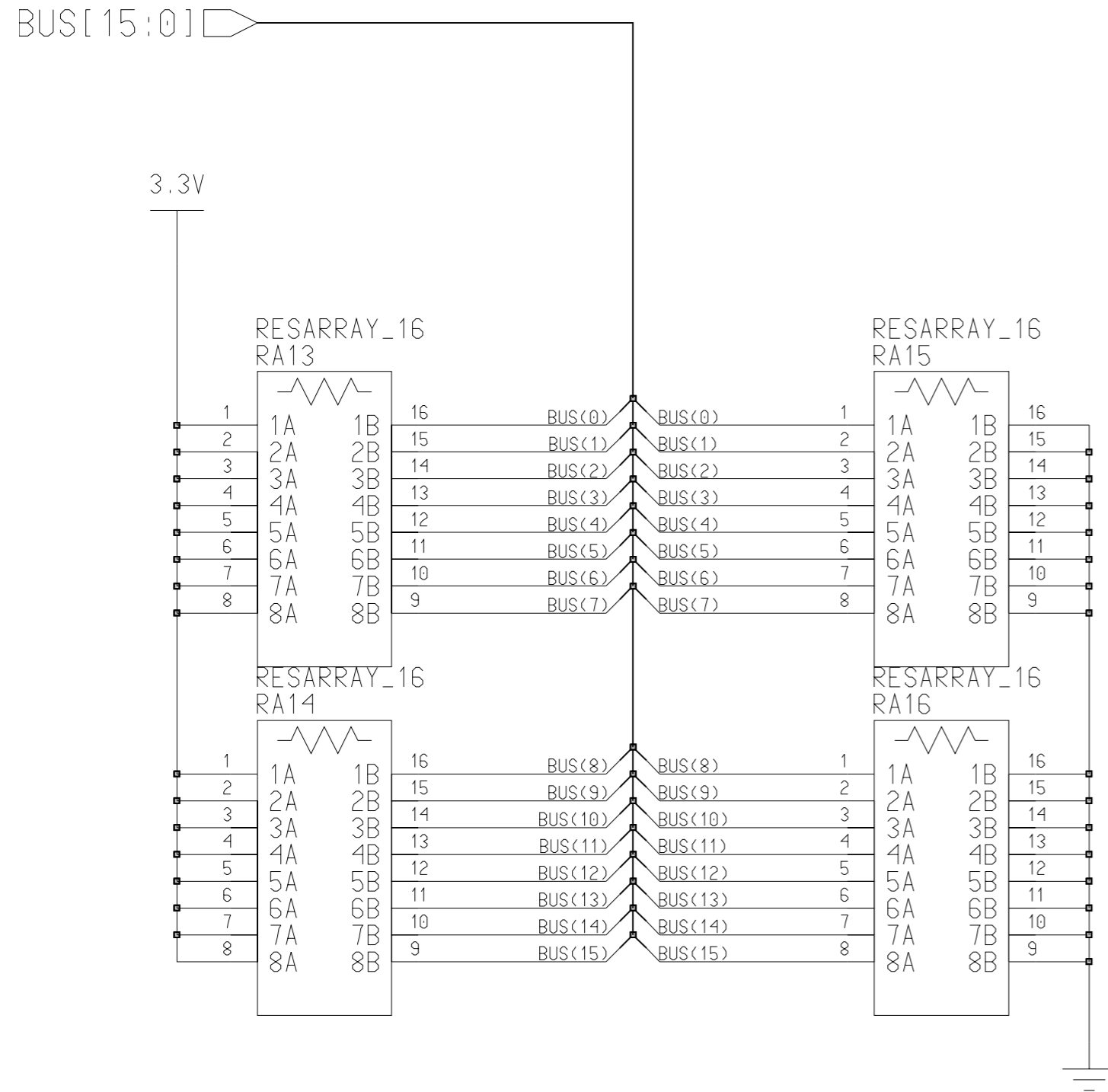
DESIGNED BY	<input type="text" value="RUDIGER GUGGENWIESER"/>	BLOCK	<input type="text" value="/AAA/BBB/CCC"/>	
DRAWN BY	<input type="text" value="UWE SCHWANGENGAENGER"/>	PART NO	<input type="text" value="XXX-A"/>	REV <input type="text" value="A"/>
SHEET	<input type="text" value="0"/>	OF	<input type="text" value="0"/>	PRELIMINARY <input type="text" value="Y"/>
DATE	<input type="text" value="DATE"/>	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 Rev. B1  
Bus Terminations

DESIGNED BY	<input type="text" value="RUDIGER GUGGENWIESER"/>	BLOCK	<input type="text" value="/AAA/BBB/CCC"/>	
DRAWN BY	<input type="text" value="UWE SCHWANGENGAENGER"/>	PART NO	<input type="text" value="XXX-A"/>	REV <input type="text" value="A"/>
SHEET	<input type="text" value="0"/>	OF	<input type="text" value="0"/>	PRELIMINARY <input type="text" value="Y"/>
DATE	<input type="text" value="DATE"/>	RELEASED	<input type="text" value="N"/>	AS BUILT <input type="text" value="N"/>
PATH	<input type="text" value="PATH"/>			

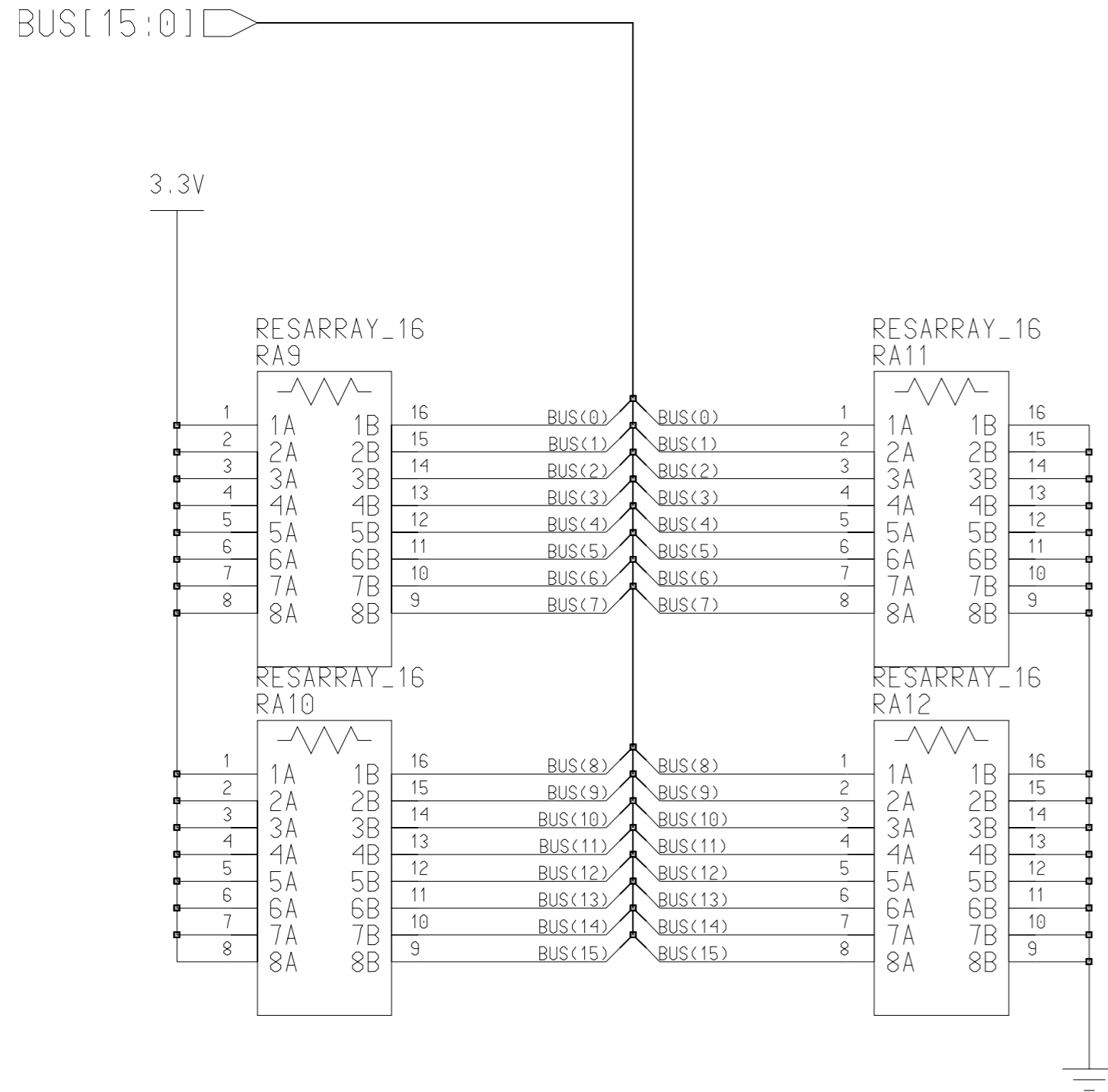


# BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY

MCEN Rev. B1  
Bus Terminations

DESIGNED BY	<input type="text" value="RUDIGER GUGGENWIESER"/>	BLOCK	<input type="text" value="/AAA/BBB/CCC"/>	
DRAWN BY	<input type="text" value="UWE SCHWANGENGAENGER"/>	PART NO	<input type="text" value="XXX-A"/>	REV <input type="text" value="A"/>
SHEET	<input type="text" value="0"/>	OF	<input type="text" value="0"/>	PRELIMINARY <input type="text" value="Y"/>
DATE	<input type="text" value="DATE"/>	RELEASED	<input type="text" value="N"/>	AS BUILT <input type="text" value="N"/>
PATH	<input type="text" value="PATH"/>			

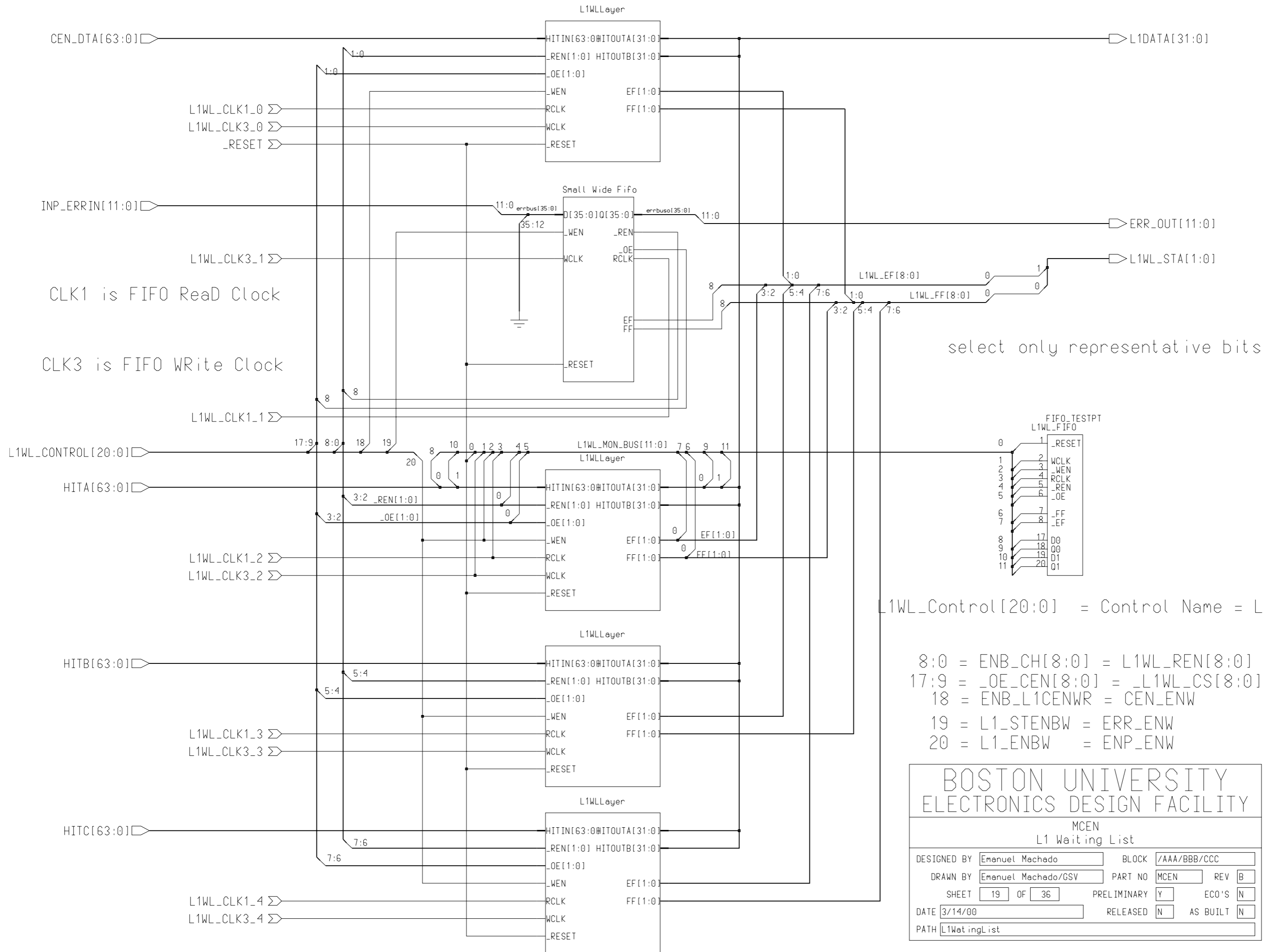




# BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY

MCEN Rev. B1  
Bus Terminations

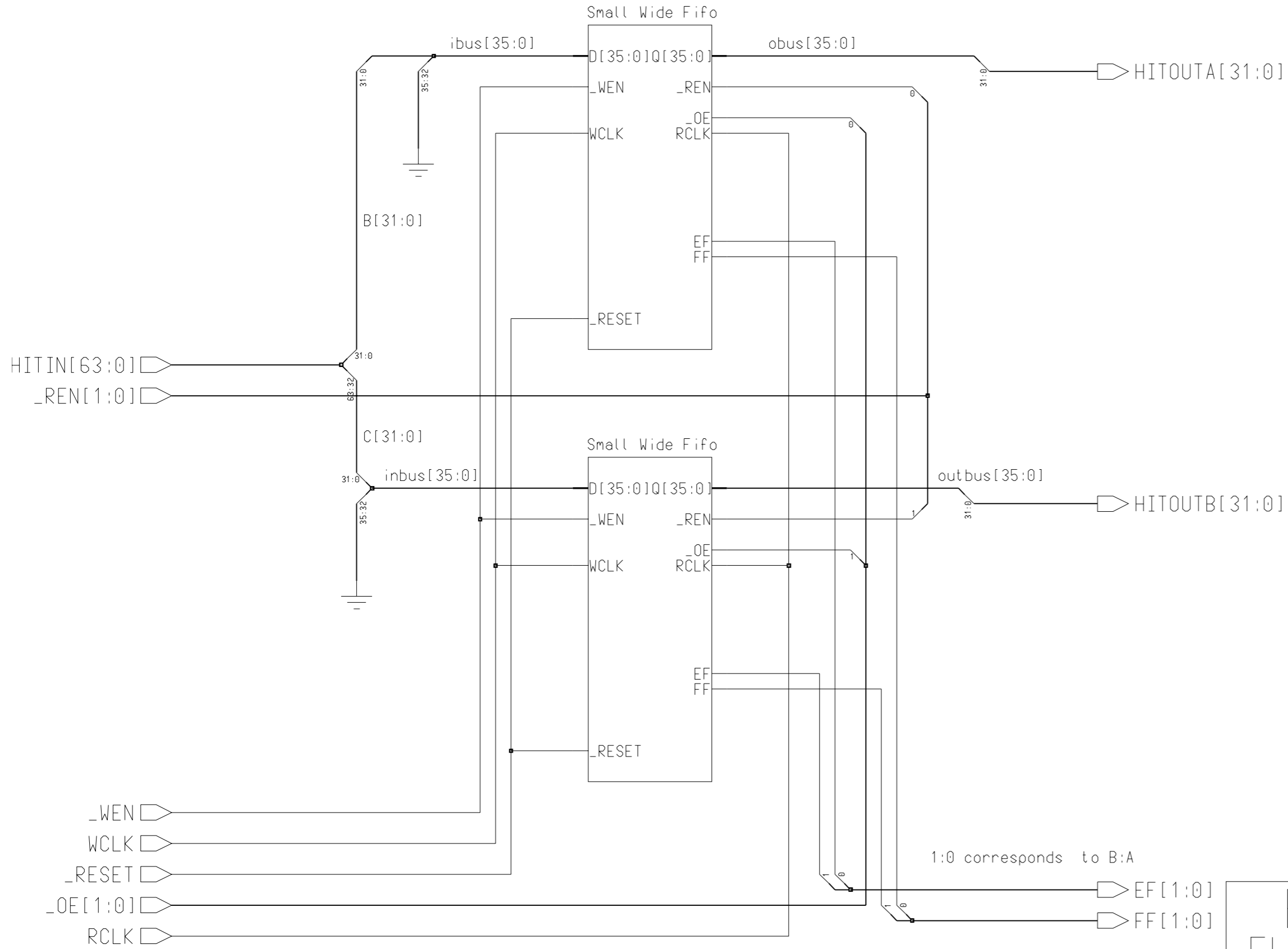
DESIGNED BY	<input type="text" value="RUDIGER GUGGENWIESER"/>	BLOCK	<input type="text" value="/AAA/BBB/CCC"/>	
DRAWN BY	<input type="text" value="UWE SCHWANGENGAENGER"/>	PART NO	<input type="text" value="XXX-A"/>	REV <input type="text" value="A"/>
SHEET	<input type="text" value="0"/>	OF	<input type="text" value="0"/>	PRELIMINARY <input type="text" value="Y"/>
DATE	<input type="text" value="DATE"/>	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  
L1 Waiting List

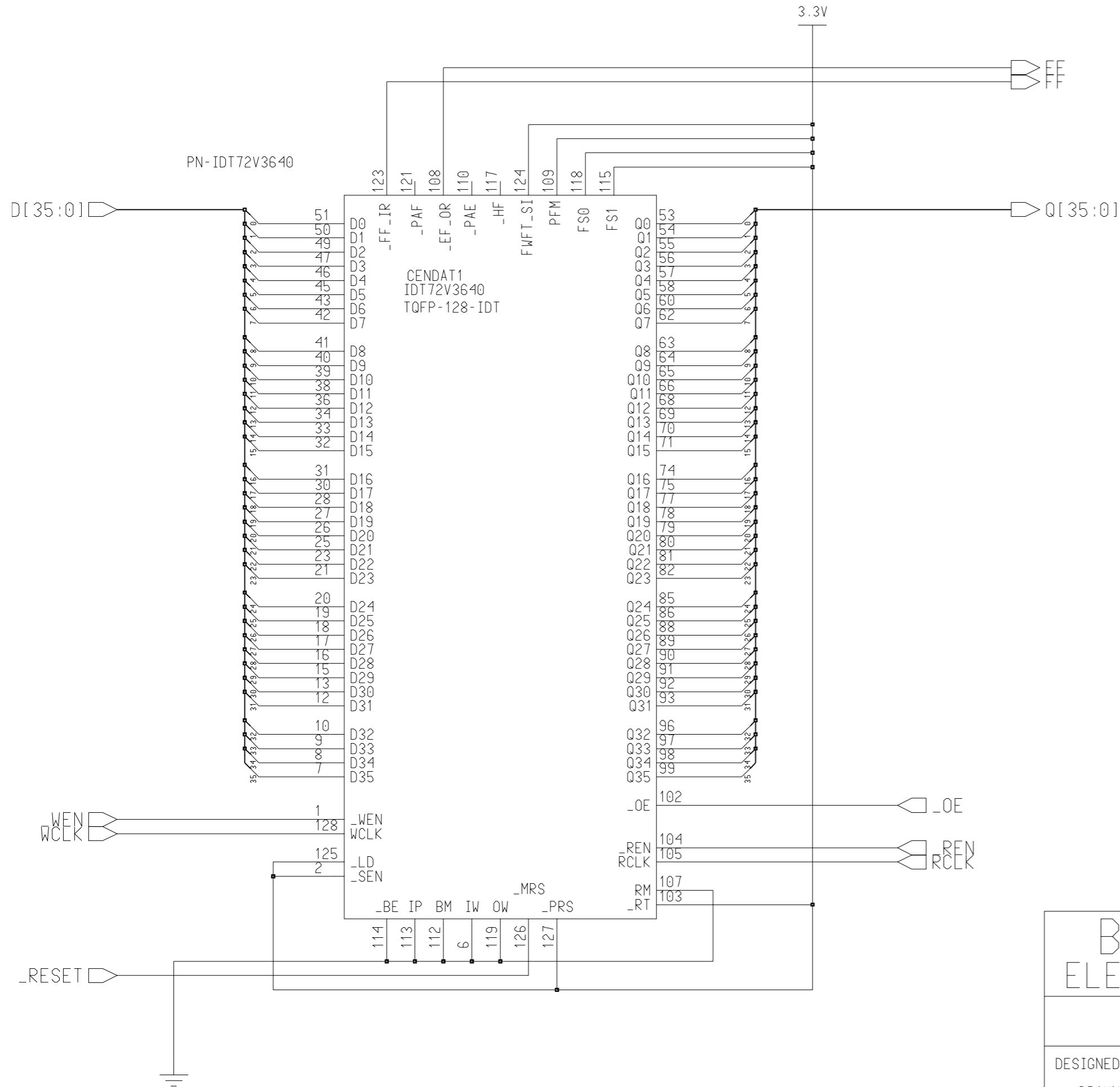
DESIGNED BY Emanuel Machado	BLOCK /AAA/BBB/CCC
DRAWN BY Emanuel Machado/GSV	PART NO MCEN REV B
SHEET 19 OF 36	PRELIMINARY Y ECO'S N
DATE 3/14/00	RELEASED N AS BUILT N
PATH L1WaitingList	



BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
L1 Waiting List Layer

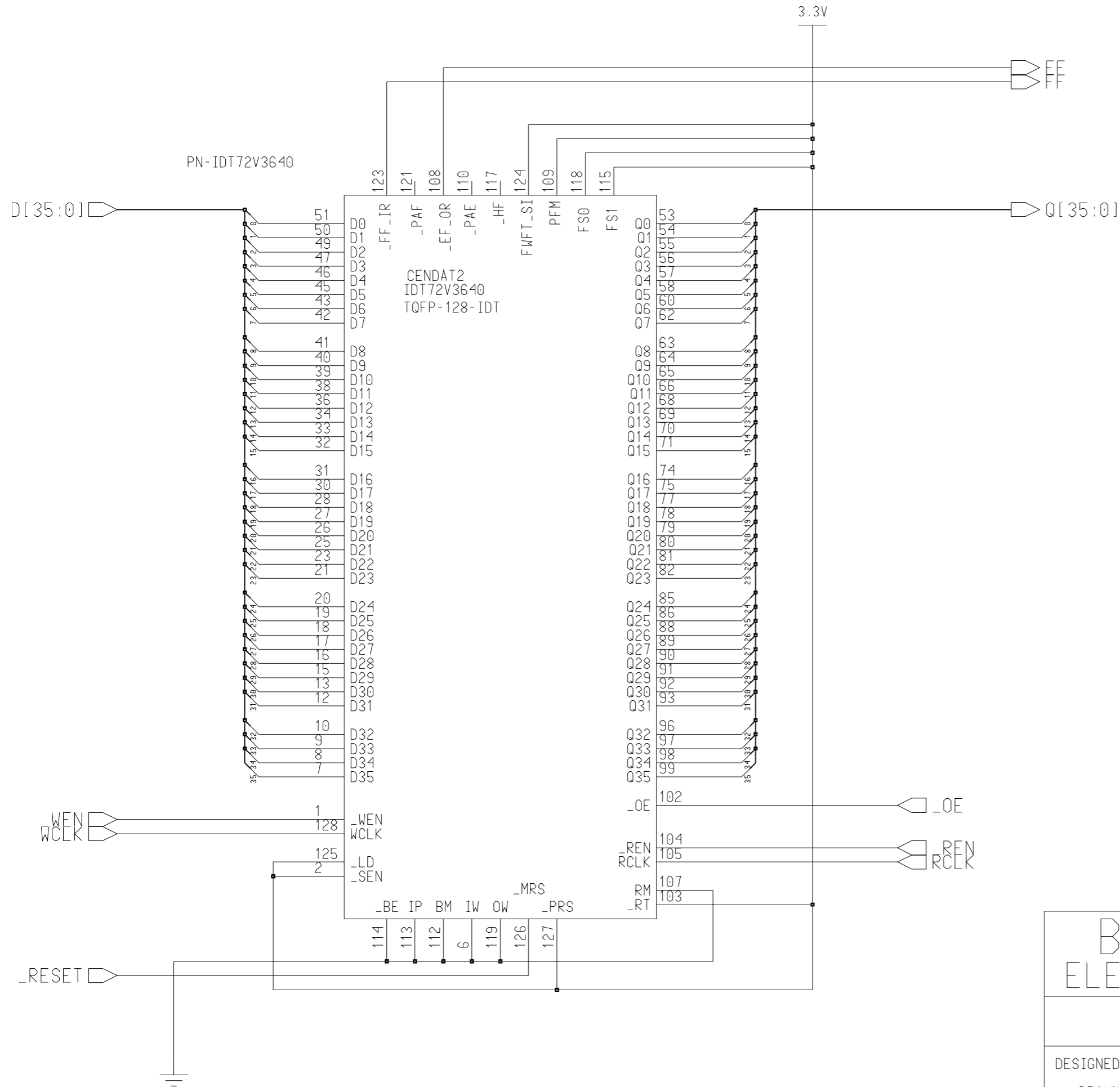
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	20 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	L1WaitingList		



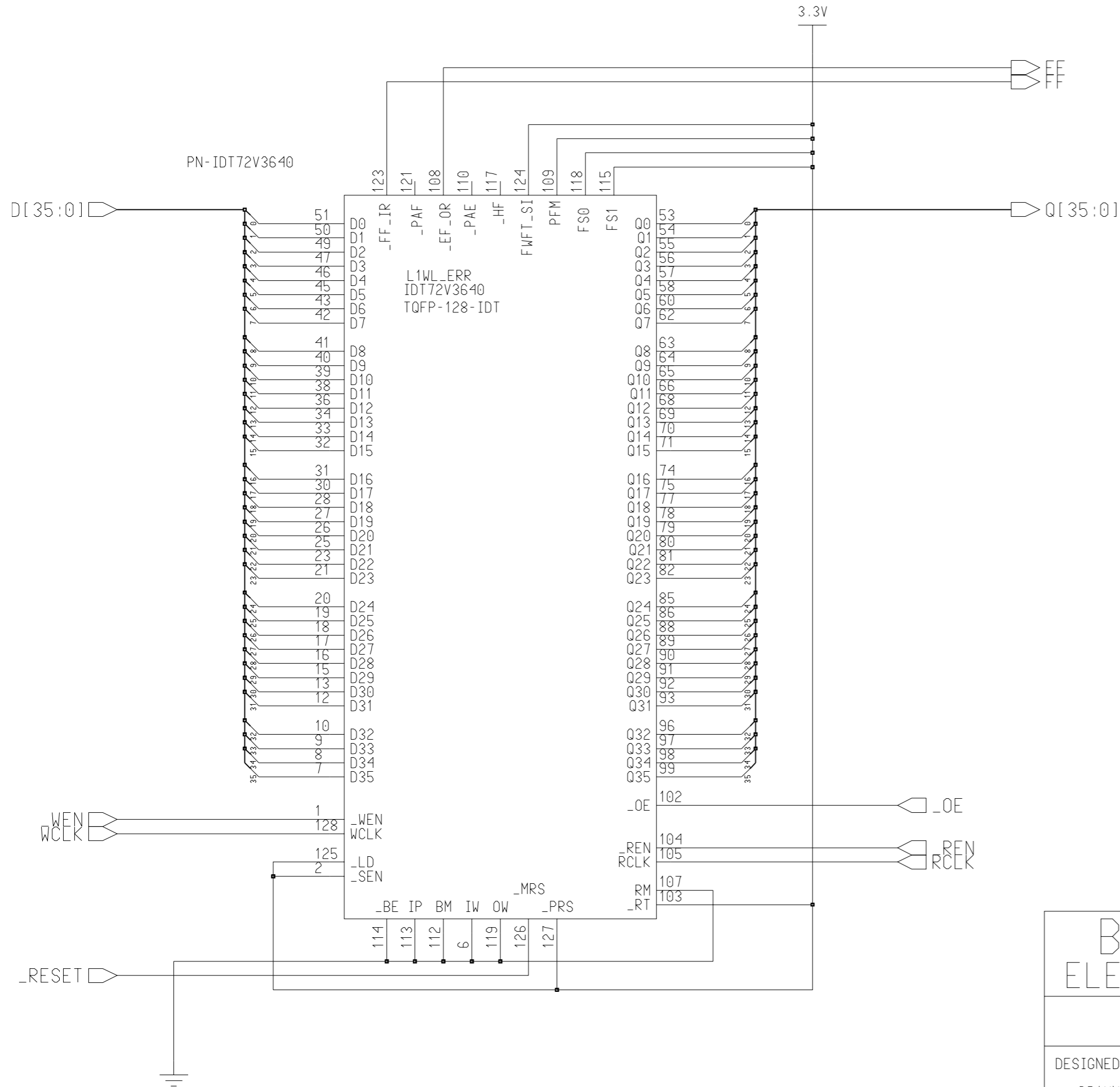
BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
SMALL AND WIDE FIFO

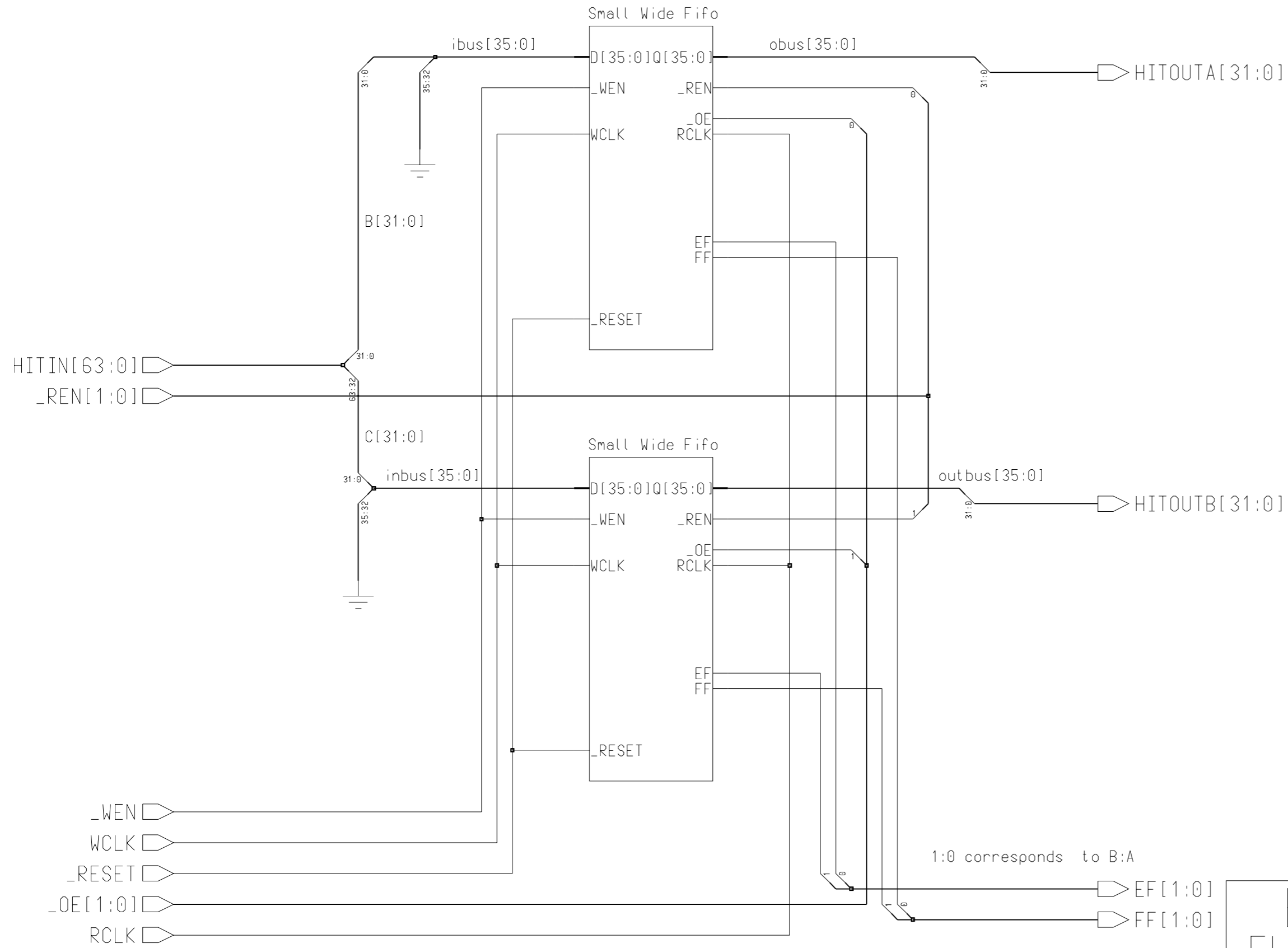
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN
		REV	B
SHEET	21	OF	36
PRELIMINARY	Y	ECO'S	N
DATE	3/14/00	RELEASED	N
AS BUILT	N		
PATH	PATH		



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		



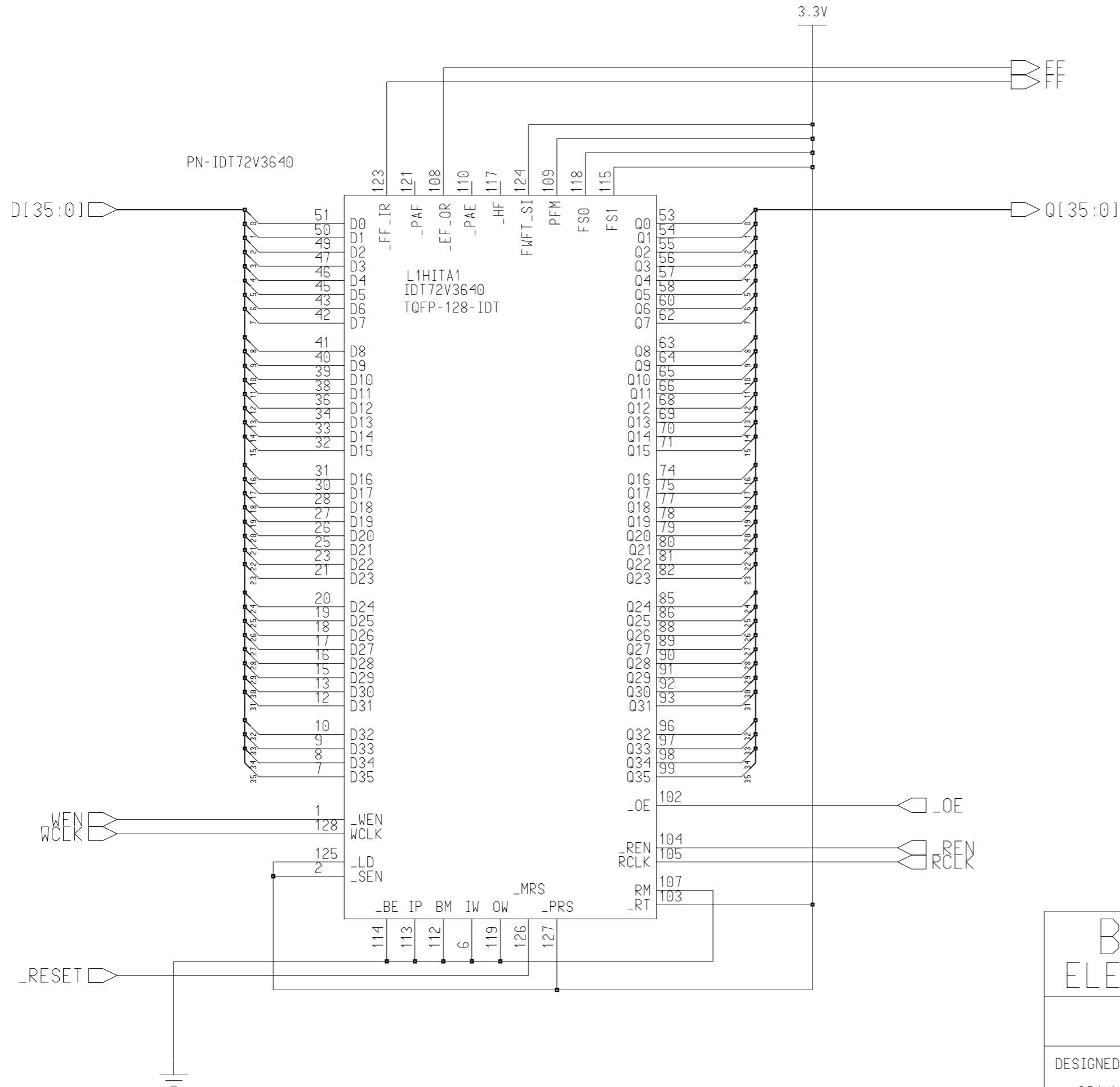
BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN SMALL AND WIDE FIFO			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN
		REV	B
SHEET	21	OF	36
PRELIMINARY	Y	ECO'S	N
DATE	3/14/00	RELEASED	N
AS BUILT	N		
PATH	PATH		



BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

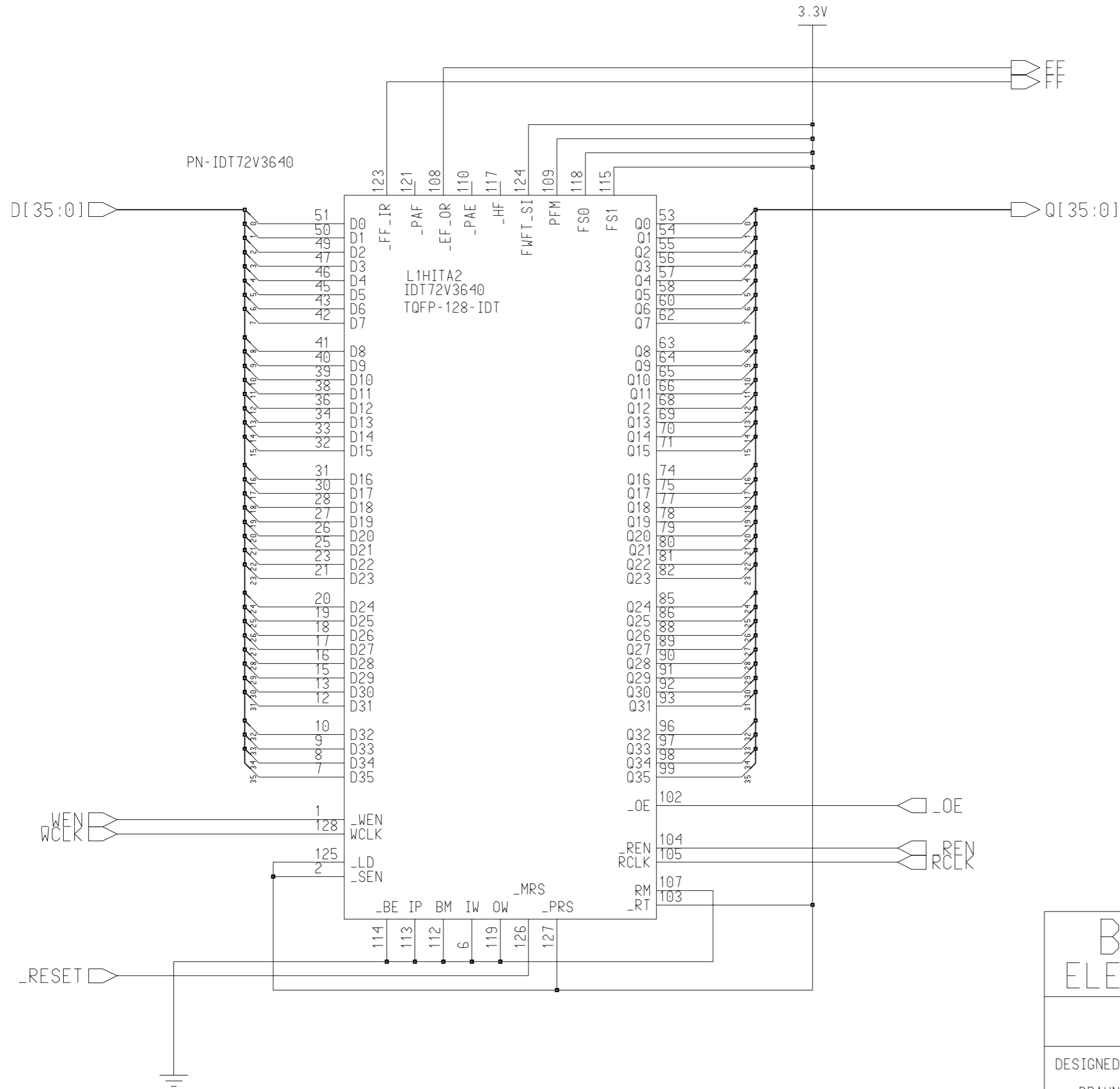
MCEN  
L1 Waiting List Layer

DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	20 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	L1WaitingList		

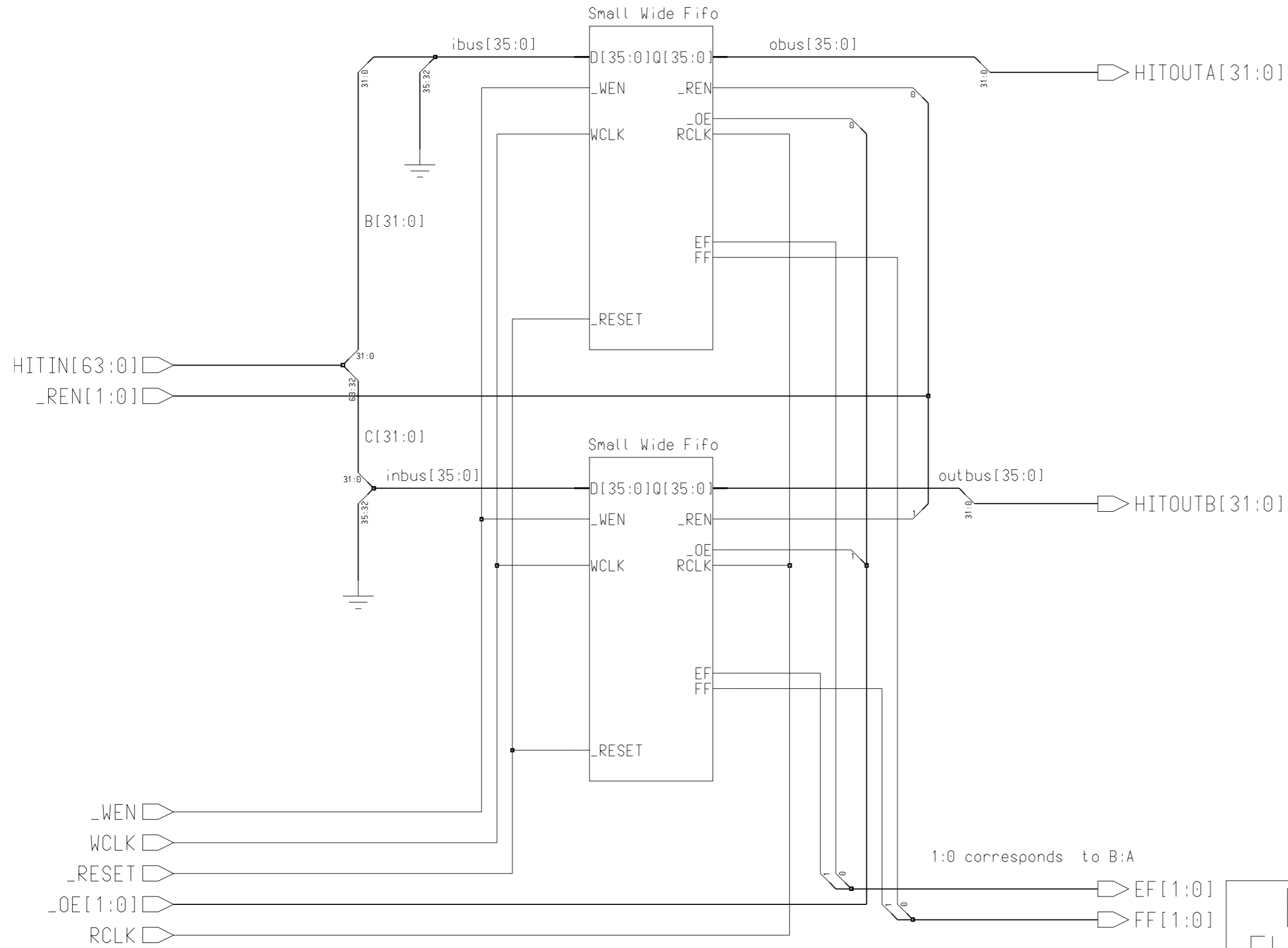


BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN SMALL AND WIDE FIFO			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	21 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		





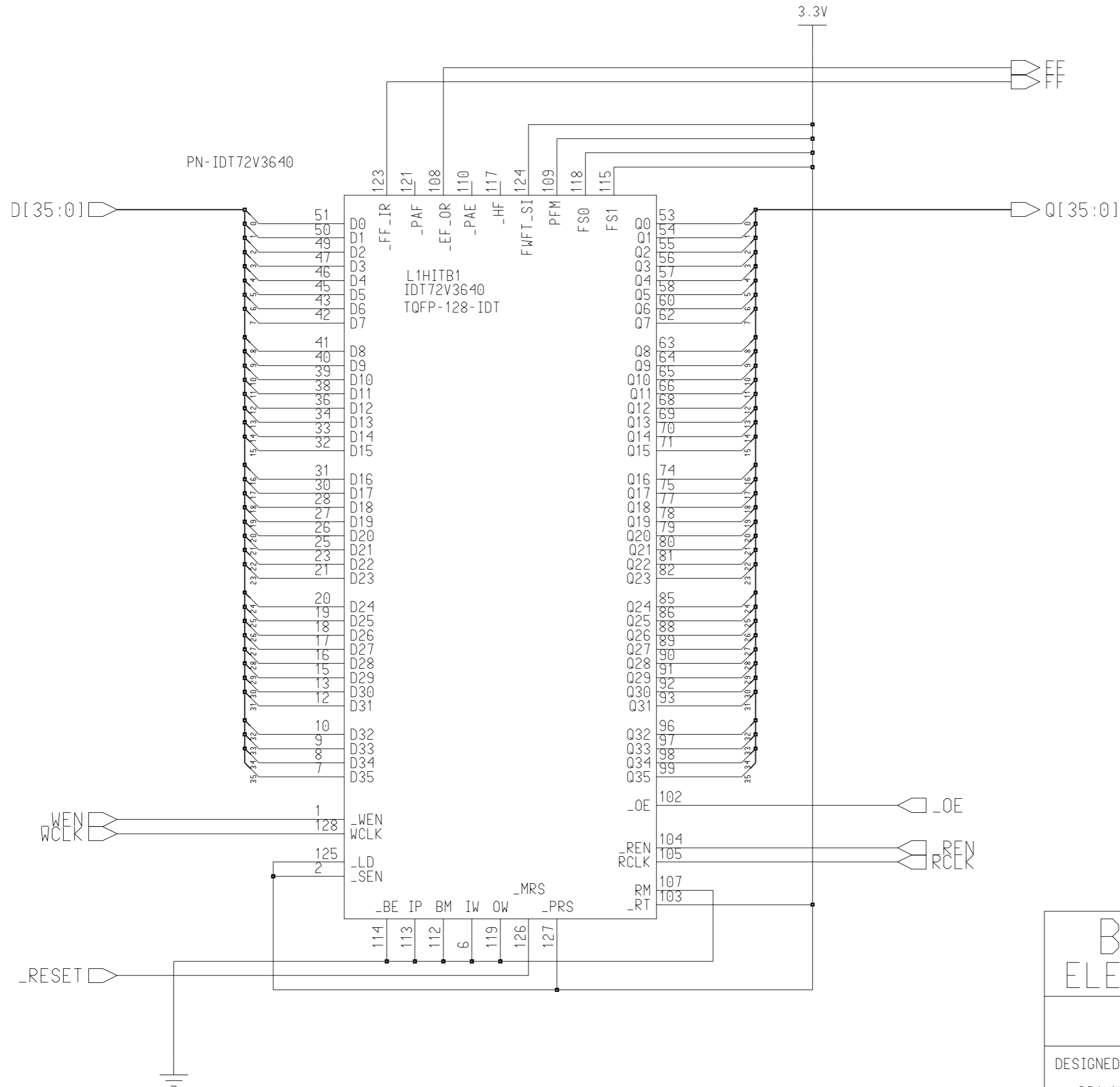
BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN SMALL AND WIDE FIFO			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN
		REV	B
SHEET	21	OF	36
PRELIMINARY	Y	ECO'S	N
DATE	3/14/00	RELEASED	N
		AS BUILT	N
PATH	PATH		



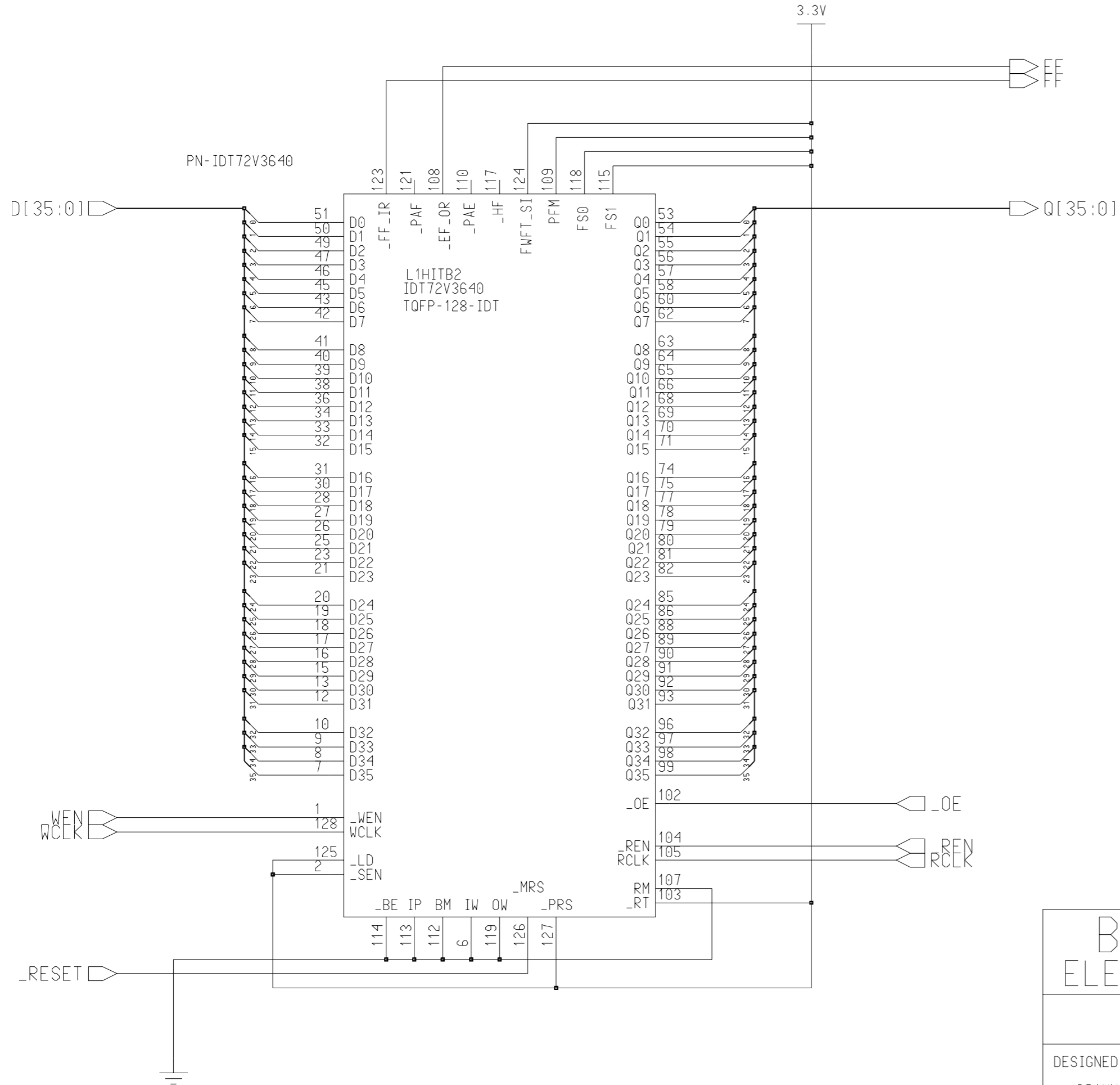
BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
L1 Waiting List Layer

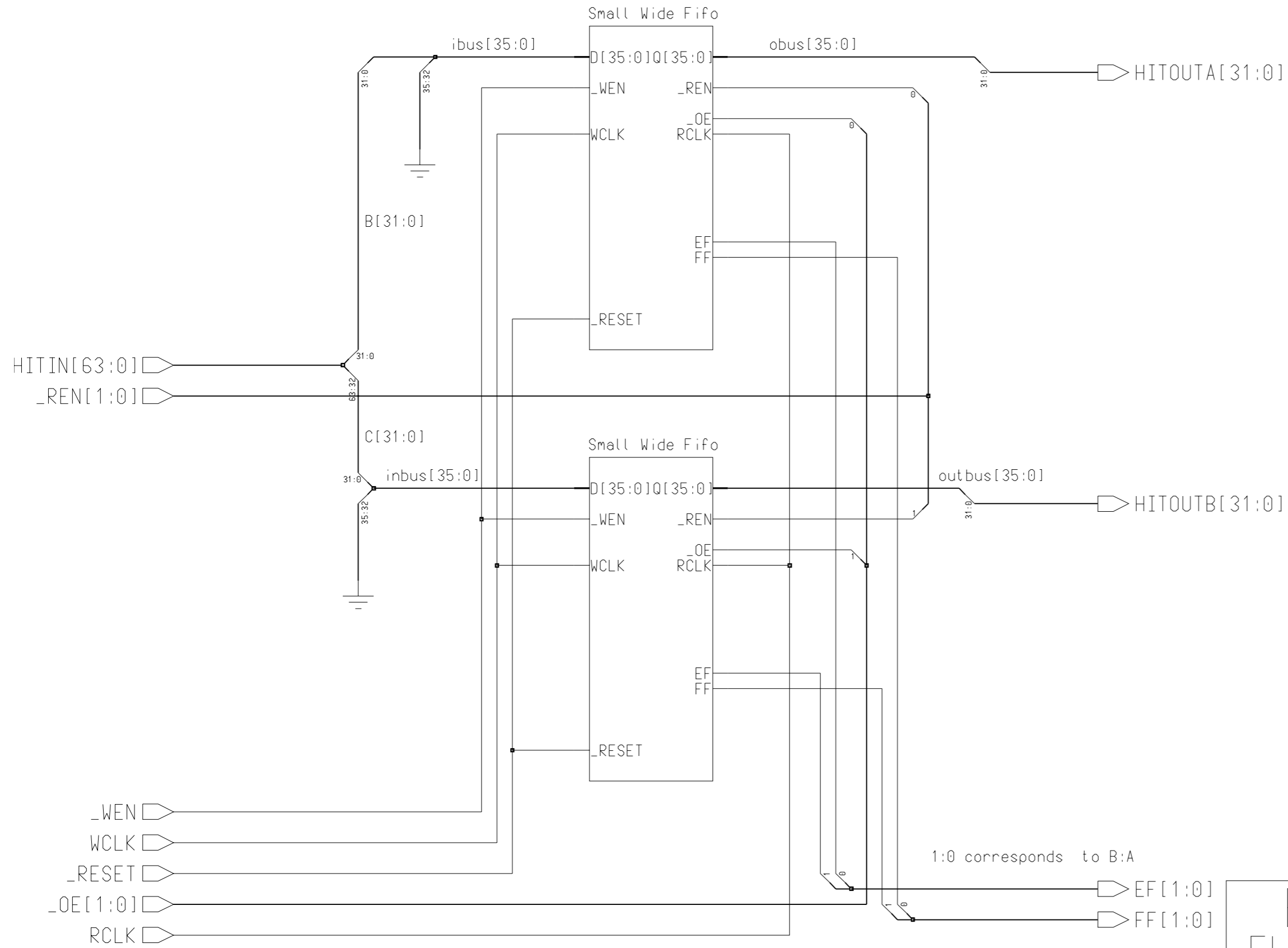
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN
		REV	B
	SHEET 20 OF 36	PRELIMINARY	Y
		ECO'S	N
DATE	3/14/00	RELEASED	N
		AS BUILT	N
PATH	L1WaitingList		



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		



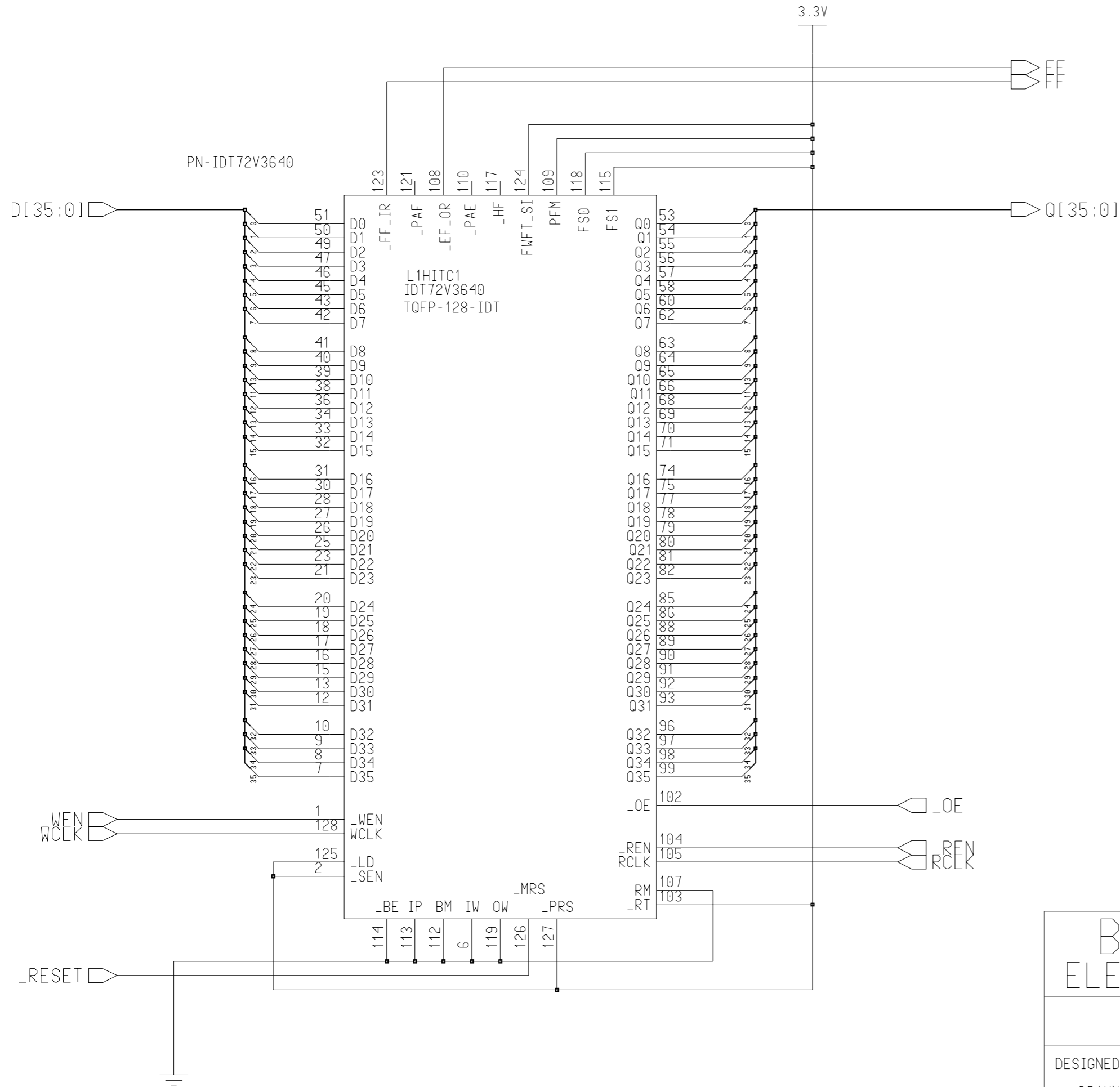
BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN SMALL AND WIDE FIFO			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	21 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
L1 Waiting List Layer

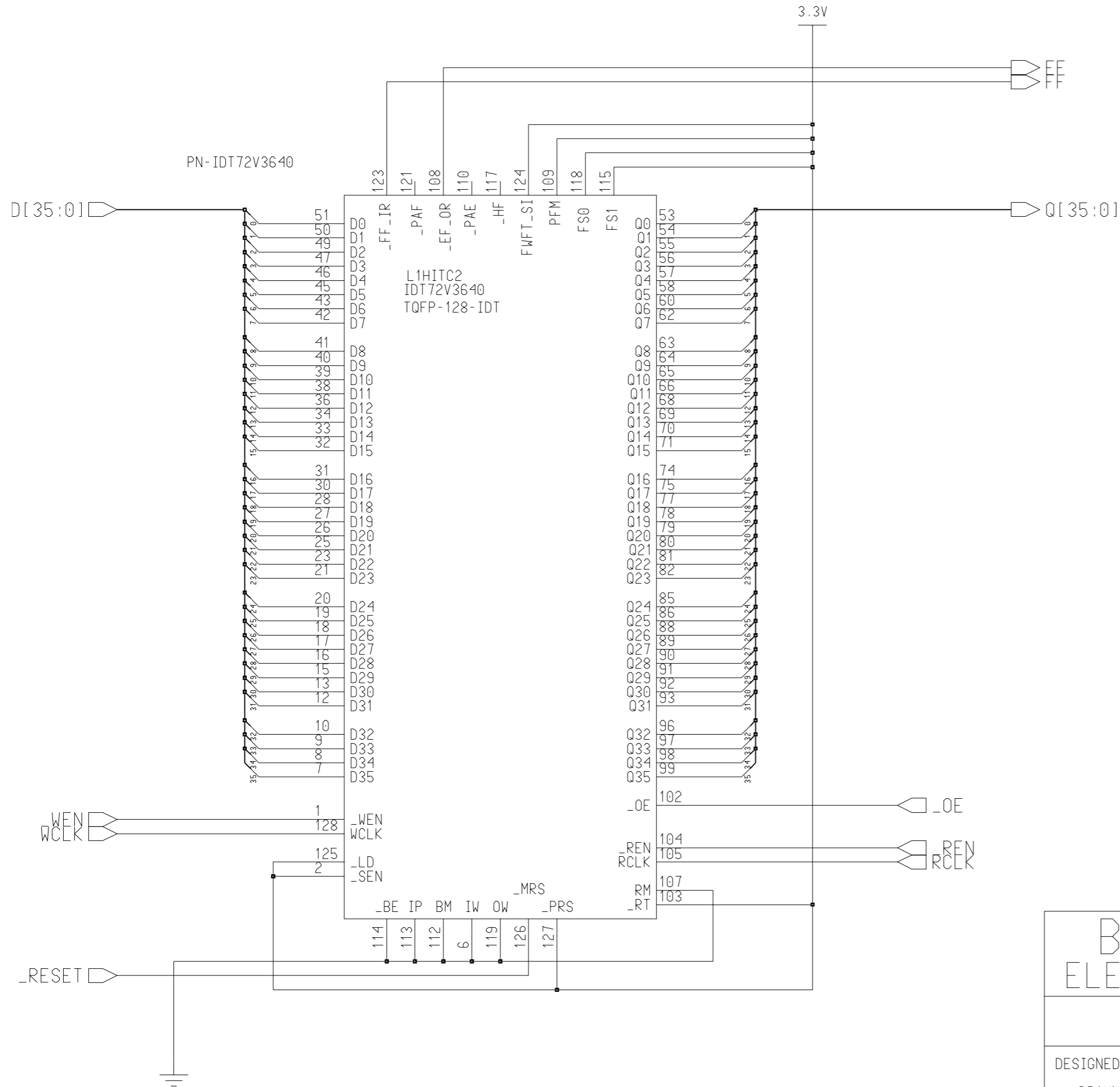
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	20 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	L1WaitingList		



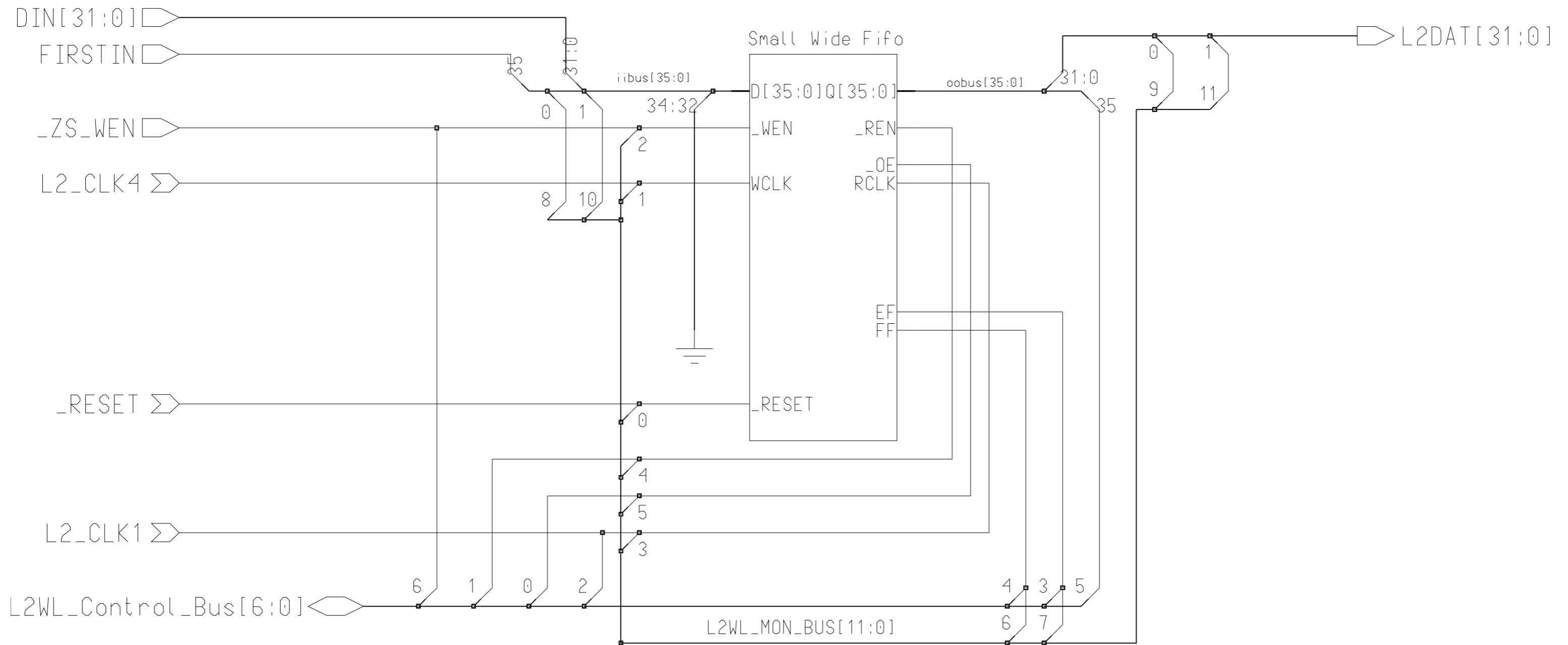
BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
SMALL AND WIDE FIFO

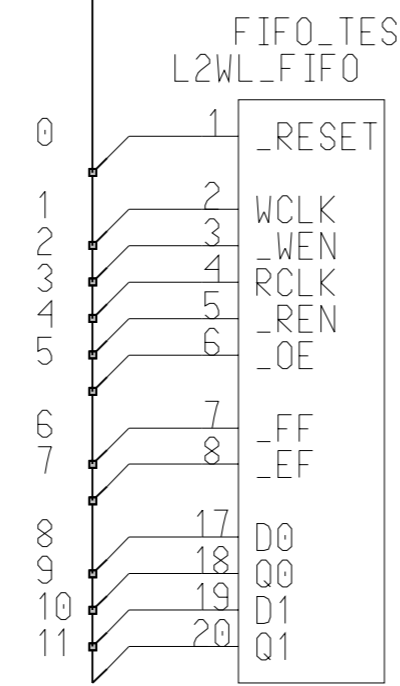
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN
		REV	B
SHEET	21	OF	36
PRELIMINARY	Y	ECO'S	N
DATE	3/14/00	RELEASED	N
AS BUILT	N		
PATH	PATH		



<h2 style="margin: 0;">BOSTON UNIVERSITY</h2> <h3 style="margin: 0;">ELECTRONICS DESIGN FACILITY</h3>			
<p style="margin: 0;">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
DATE	3/14/00	PRELIMINARY	Y
RELEASED	N	AS BUILT	N
PATH	PATH		



0 \_OEL2RD = \_L2OE  
 1 L2\_REN\_RD = L2REN  
 2 L2\_RDCLK = RCLK  
 3 L2\_DATRDY = \_L2EF  
 4 L2\_FFULL = \_L2FF  
 5 L2\_FIRST = FIRSTOUT  
 6 \_WEN



# BOSTON UNIVERSITY

## ELECTRONICS DESIGN FACILITY

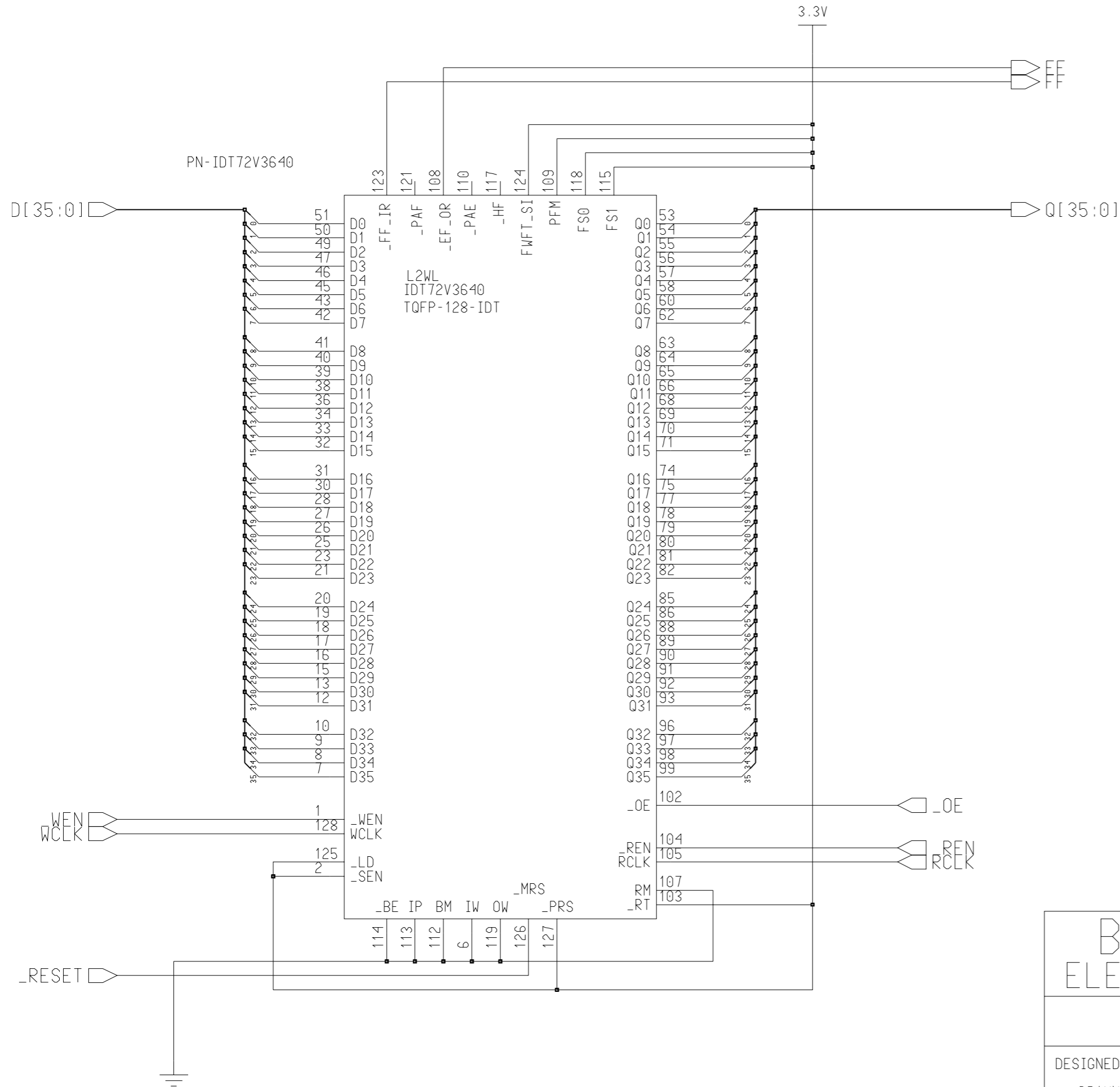
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### MCEN

#### L2 Waiting List

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="24"/> 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"/>		

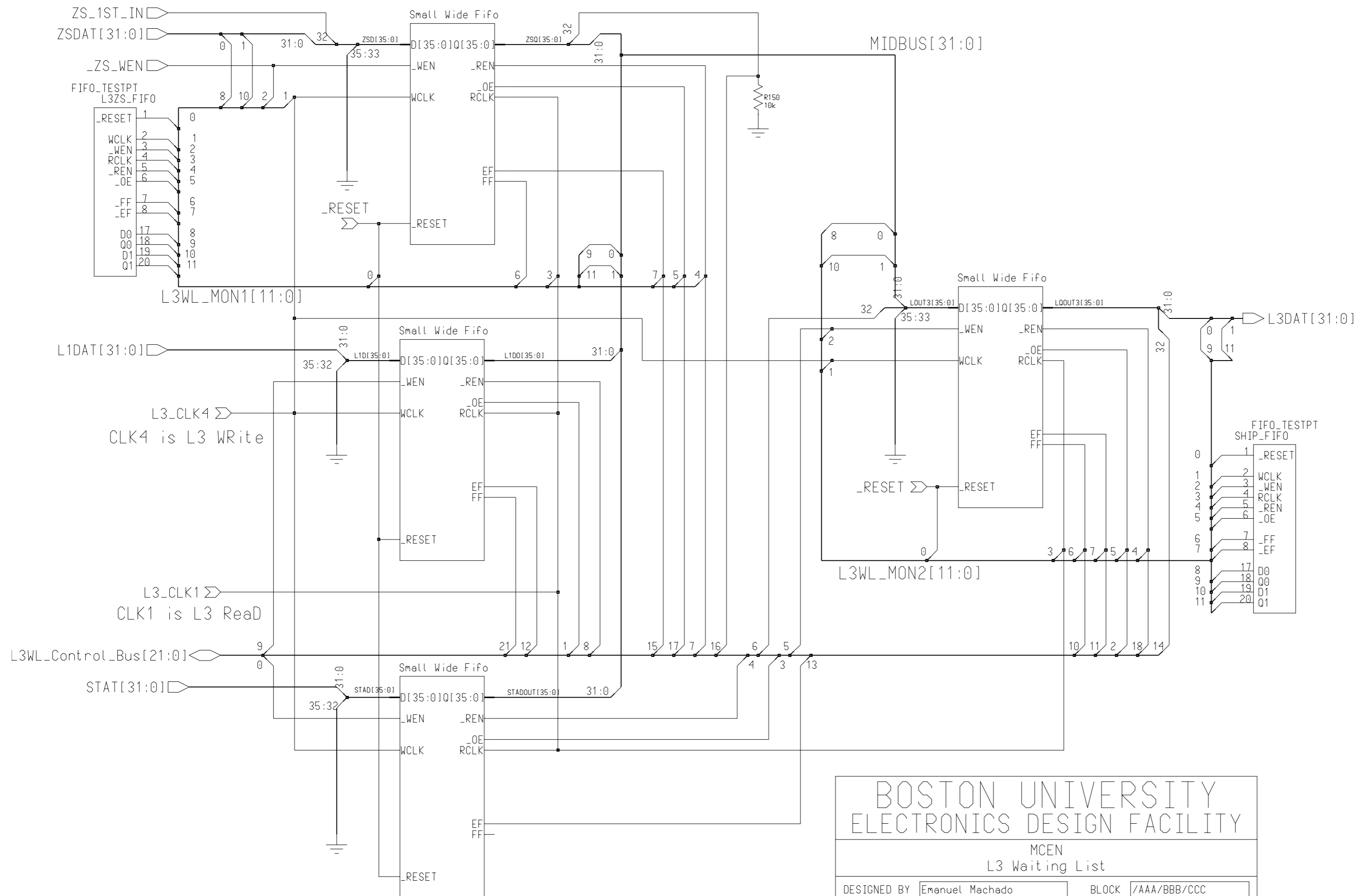




BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
SMALL AND WIDE FIFO

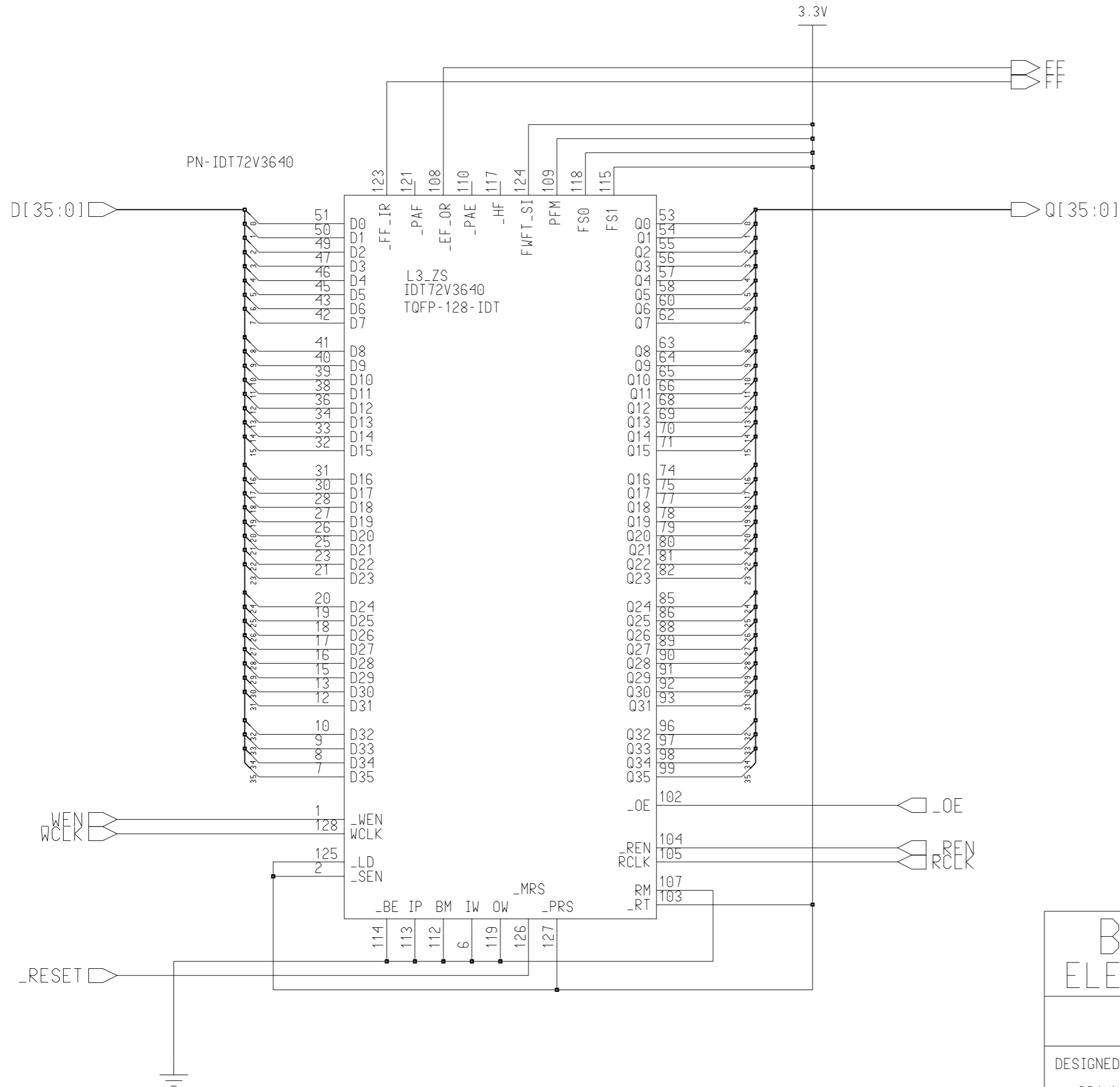
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN
SHEET	21	OF	36
DATE	3/14/00	PRELIMINARY	Y
RELEASED	N	AS BUILT	N
PATH	PATH		



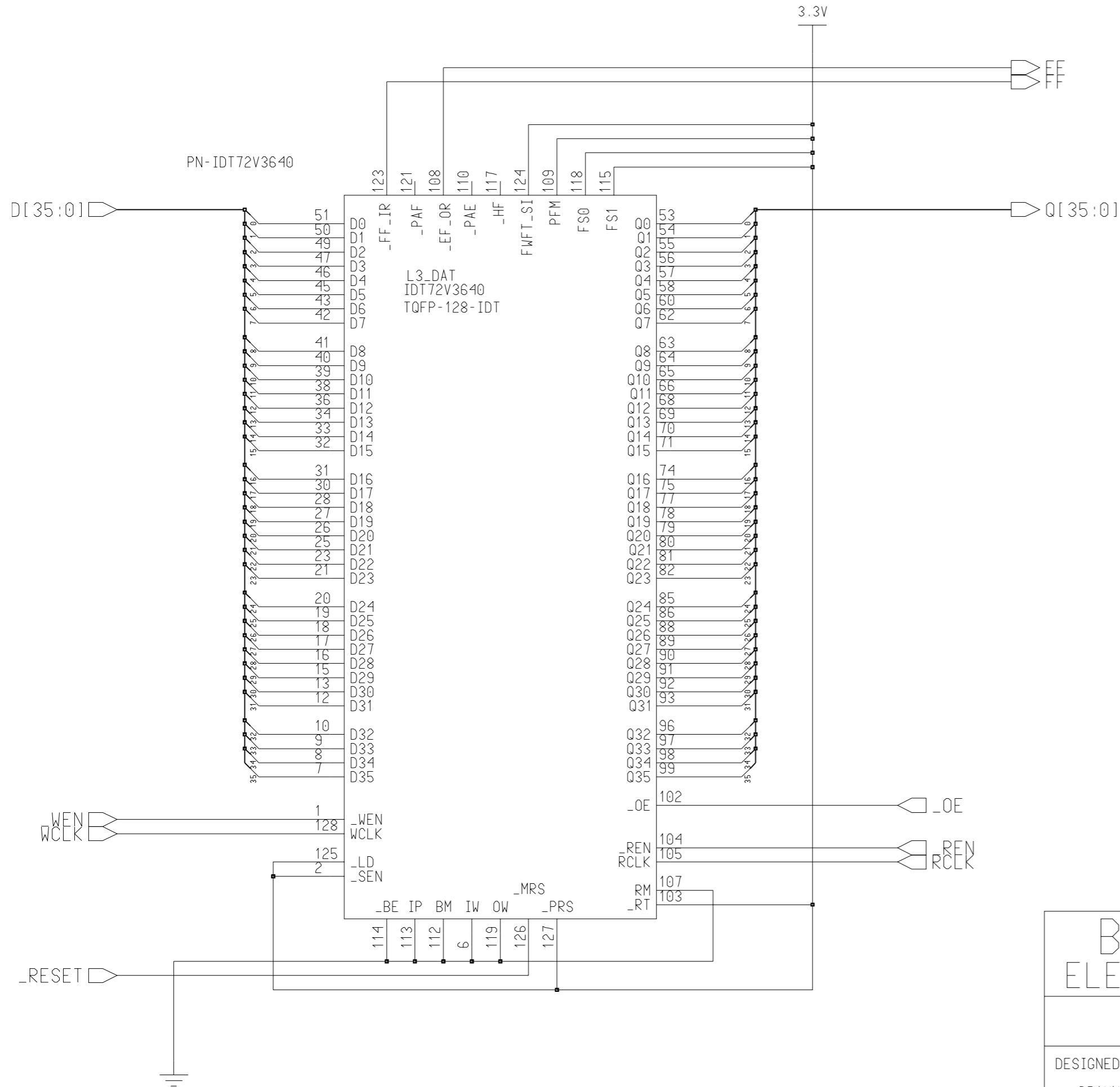
BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
L3 Waiting List

DESIGNED BY Emanuel Machado	BLOCK /AAA/BBB/CCC
DRAWN BY Emanuel Machado/GSV	PART NO MCEN REV B
SHEET 26 OF 36	PRELIMINARY Y ECO'S N
DATE 3/14/00	RELEASED N AS BUILT N
PATH PATH	



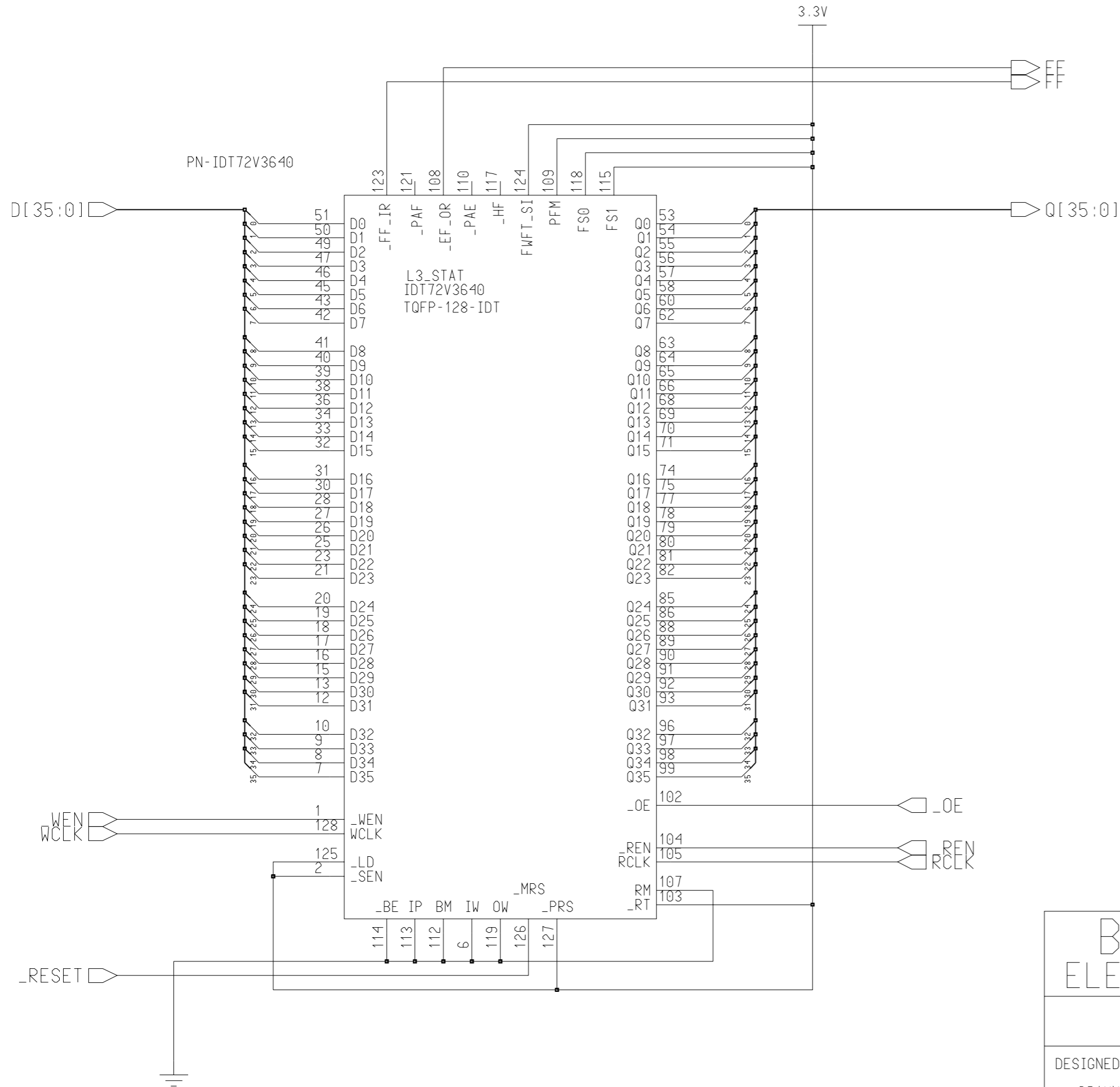
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<p style="margin: 0;">MCEN SMALL AND WIDE FIFO</p>			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	21	OF	36
DATE	3/14/00	PRELIMINARY	Y
RELEASED	N	AS BUILT	N
PATH	PATH		



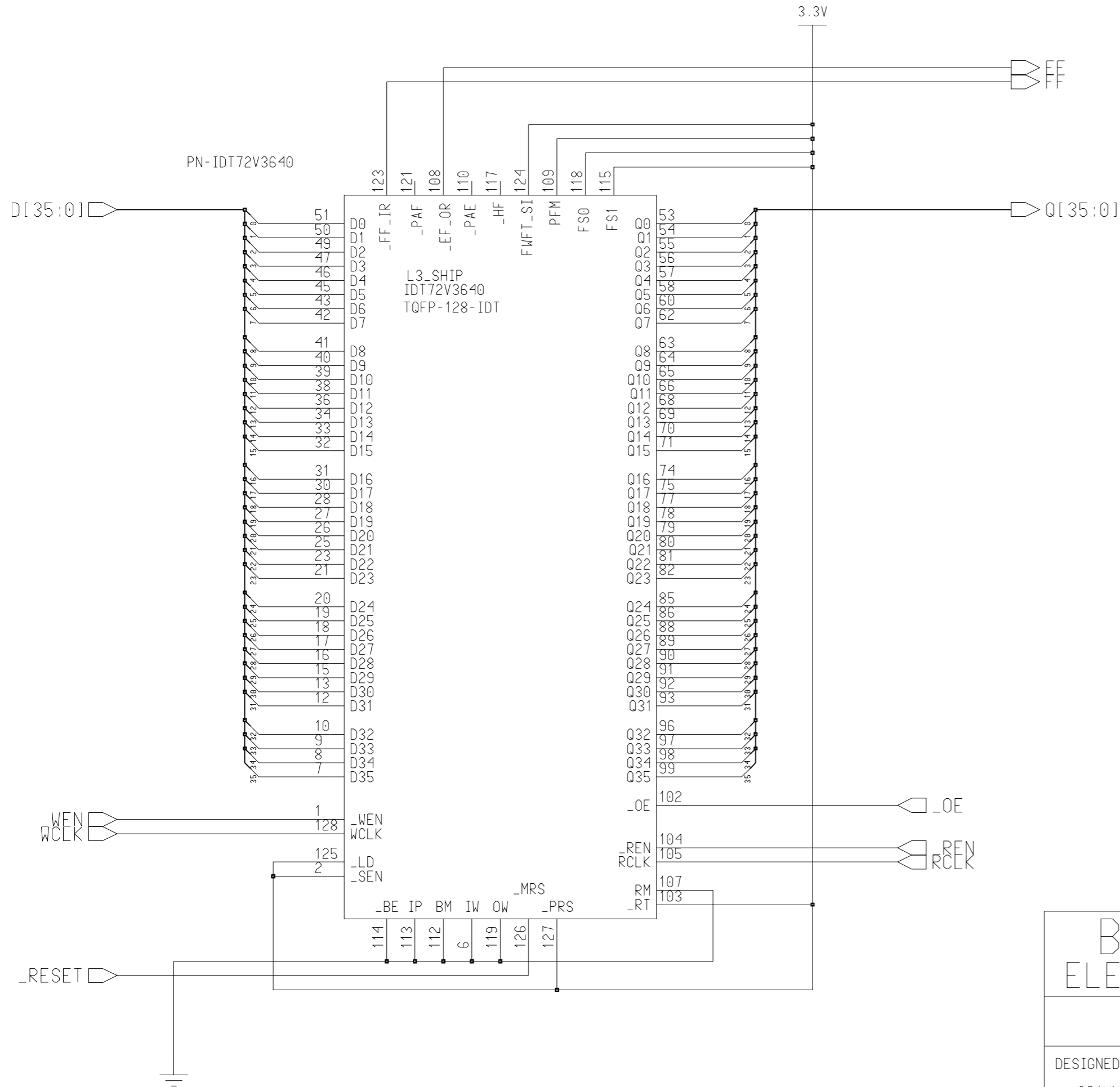
BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
SMALL AND WIDE FIFO

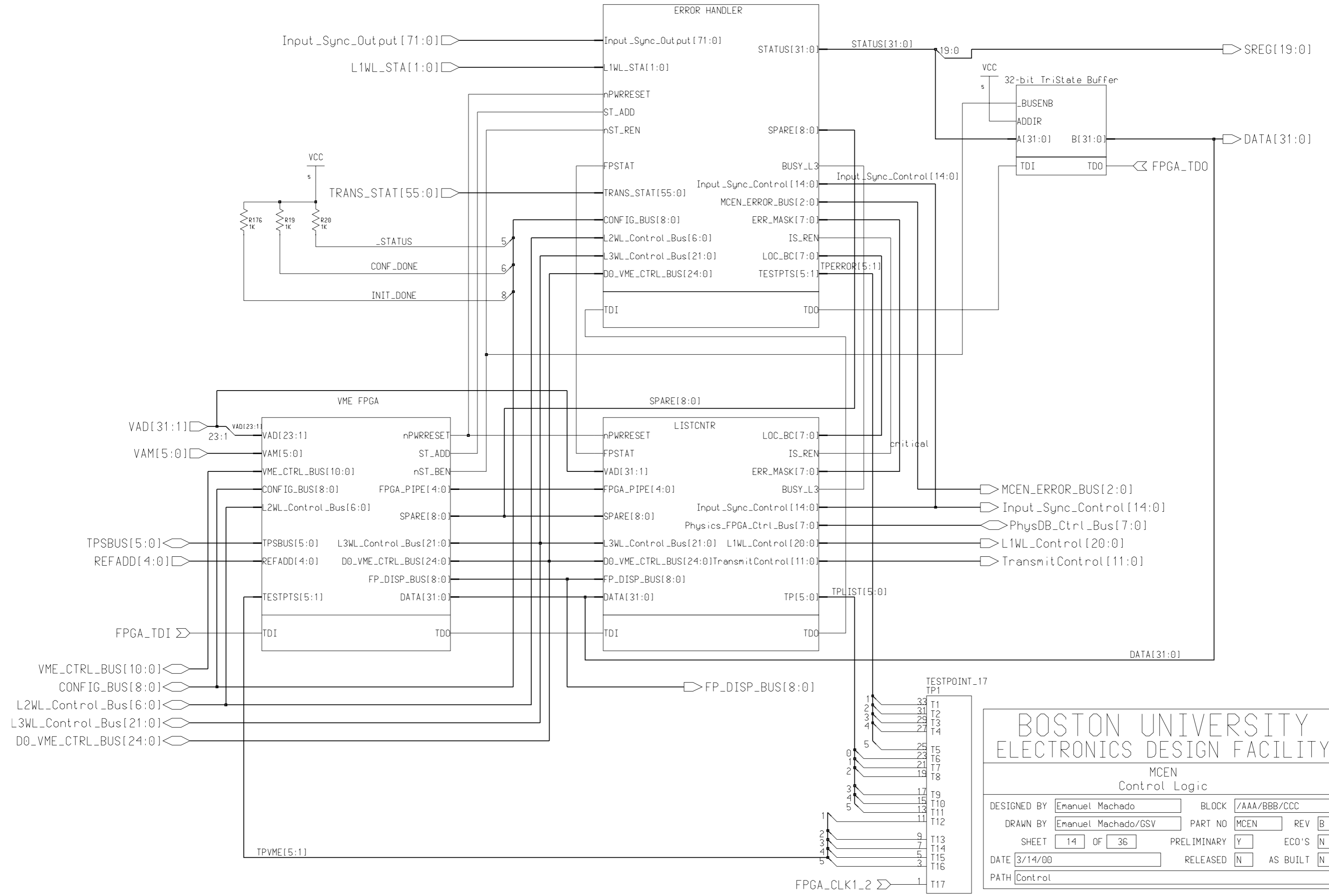
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN
SHEET	21	OF	36
PRELIMINARY	Y	ECO'S	N
DATE	3/14/00	RELEASED	N
AS BUILT	N		
PATH	PATH		



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
		REV	B
SHEET	21	OF	36
PRELIMINARY	Y	ECO'S	N
DATE	3/14/00	RELEASED	N
AS BUILT	N		
PATH	PATH		



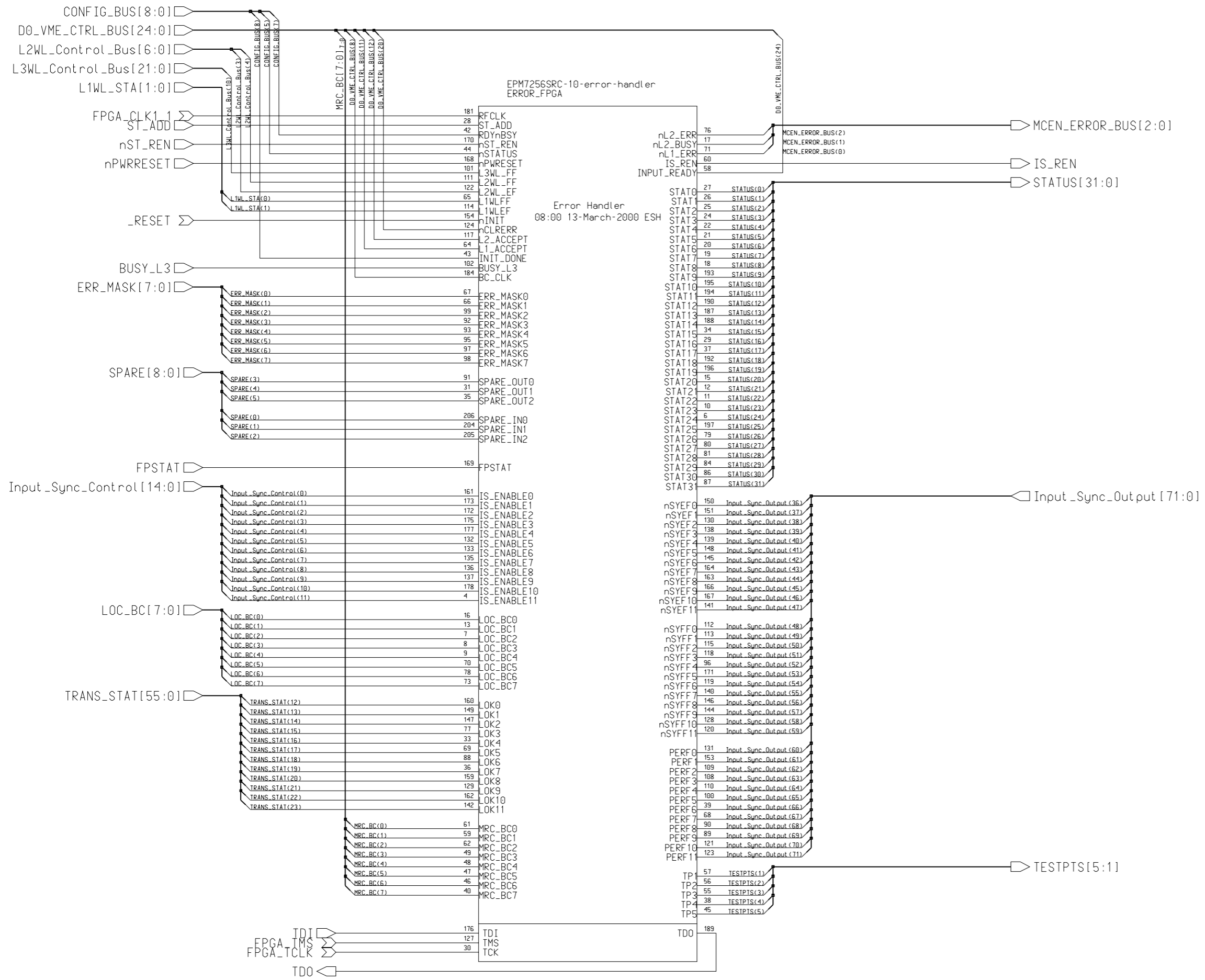
BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN SMALL AND WIDE FIFO			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	21	OF	36 PRELIMINARY Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

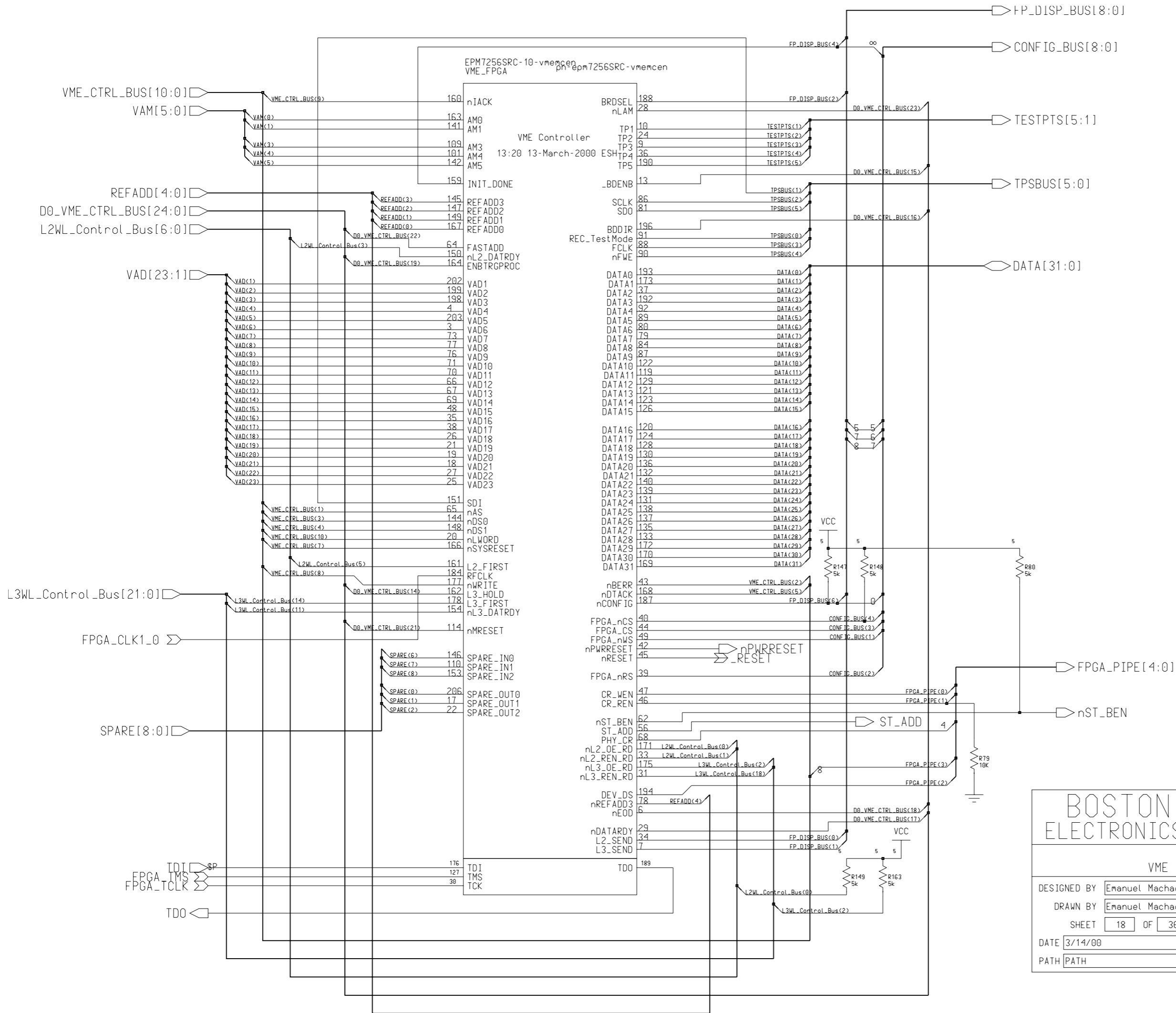
MCEN  
Control Logic

DESIGNED BY Emanuel Machado	BLOCK /AAA/BBB/CCC
DRAWN BY Emanuel Machado/GSV	PART NO MCEN REV B
SHEET 14 OF 36	PRELIMINARY Y ECO'S N
DATE 3/14/00	RELEASED N AS BUILT N
PATH Control	



BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN Status and Error Handler FPGA			
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="17"/> 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"/>		

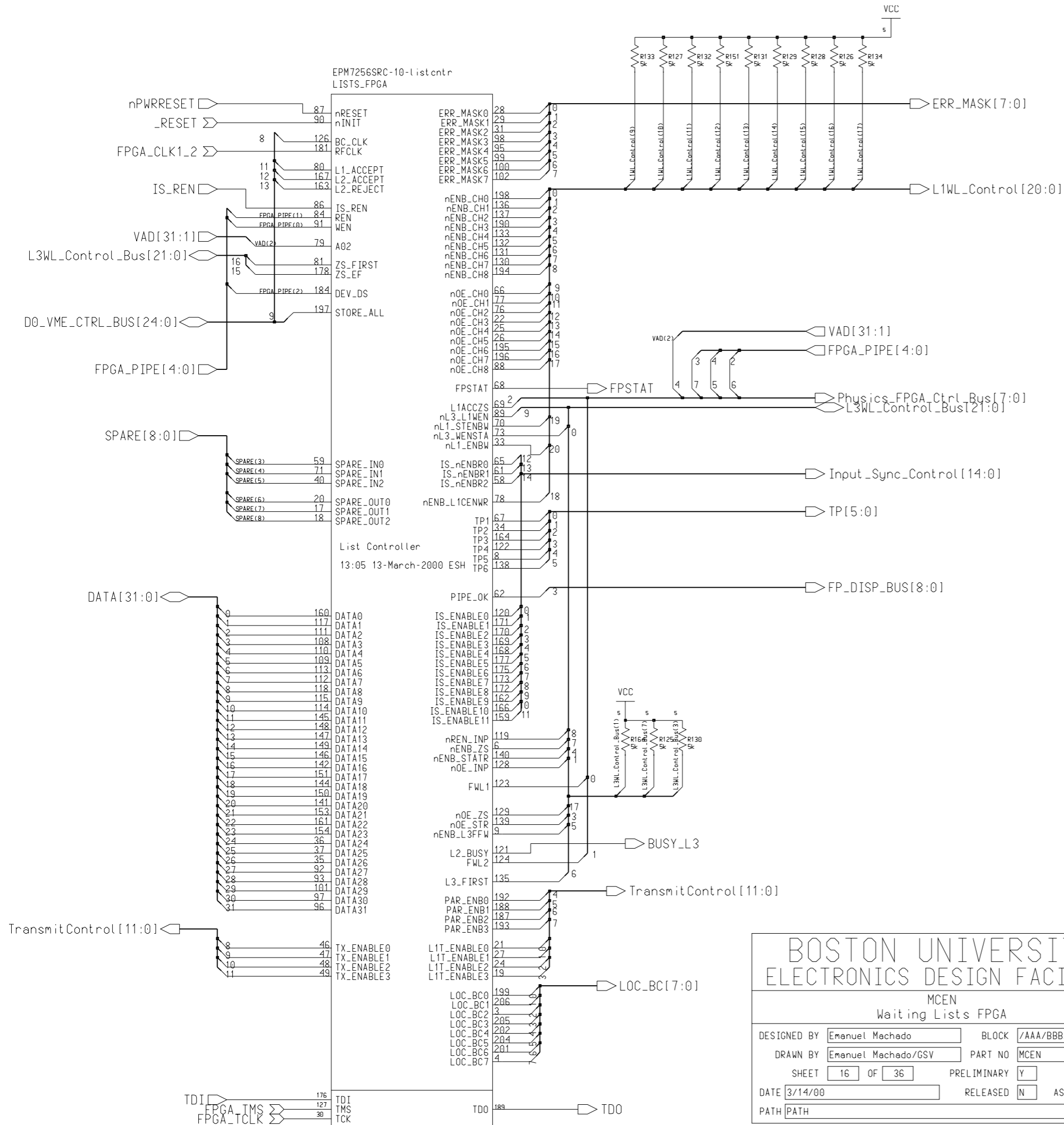




**BOSTON UNIVERSITY**  
**ELECTRONICS DESIGN FACILITY**

MCEN  
 VME Controller FPGA

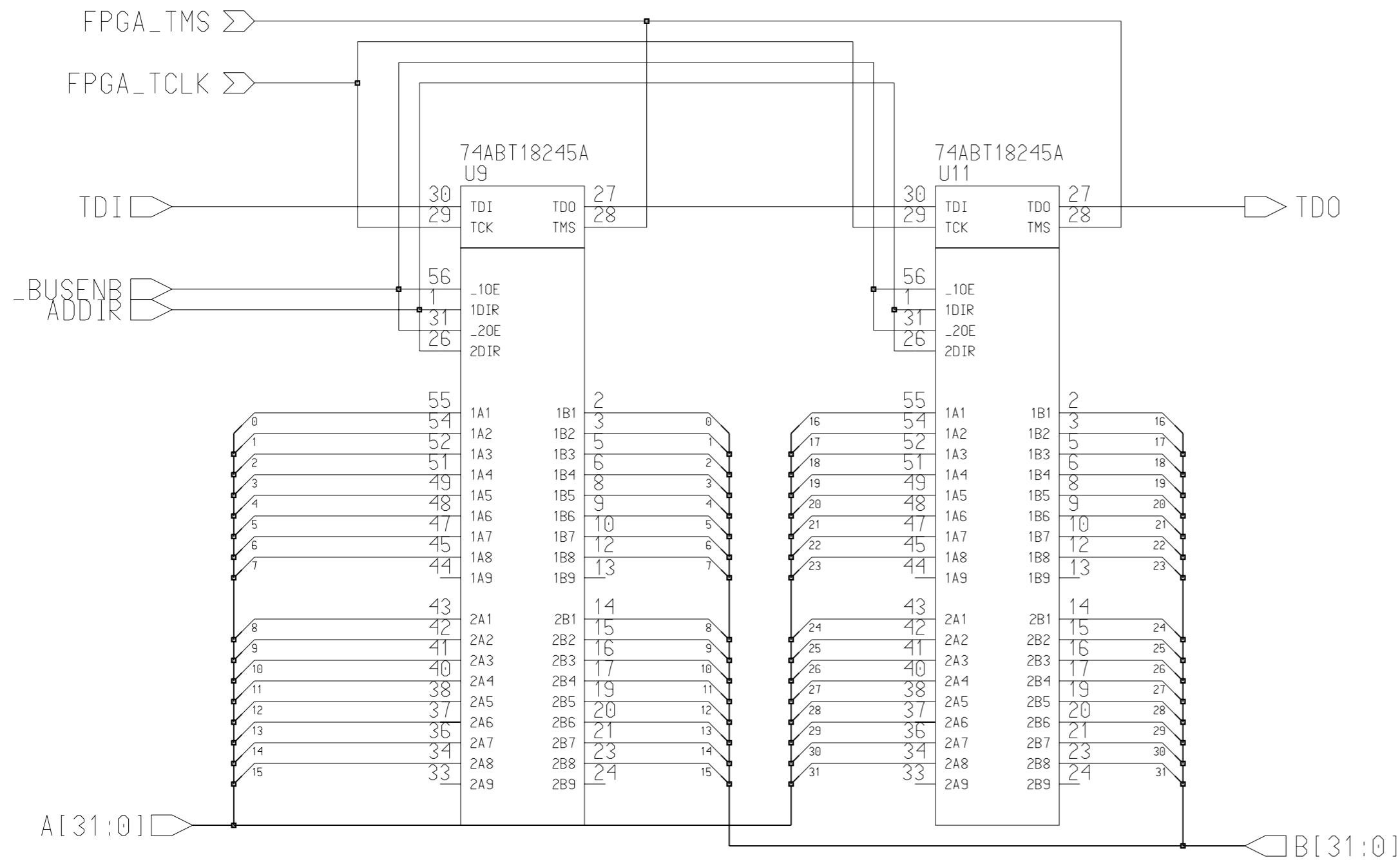
DESIGNED BY Emanuel Machado	BLOCK /AAA/BBB/CCC
DRAWN BY Emanuel Machado/GSV	PART NO MCEN REV B
SHEET 18 OF 36	PRELIMINARY Y ECO'S N
DATE 3/14/00	RELEASED N AS BUILT N
PATH PATH	



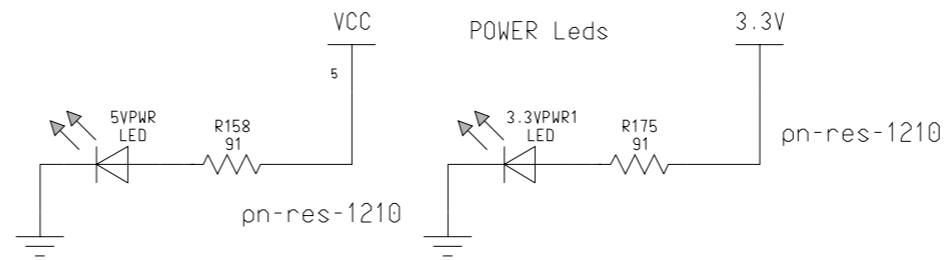
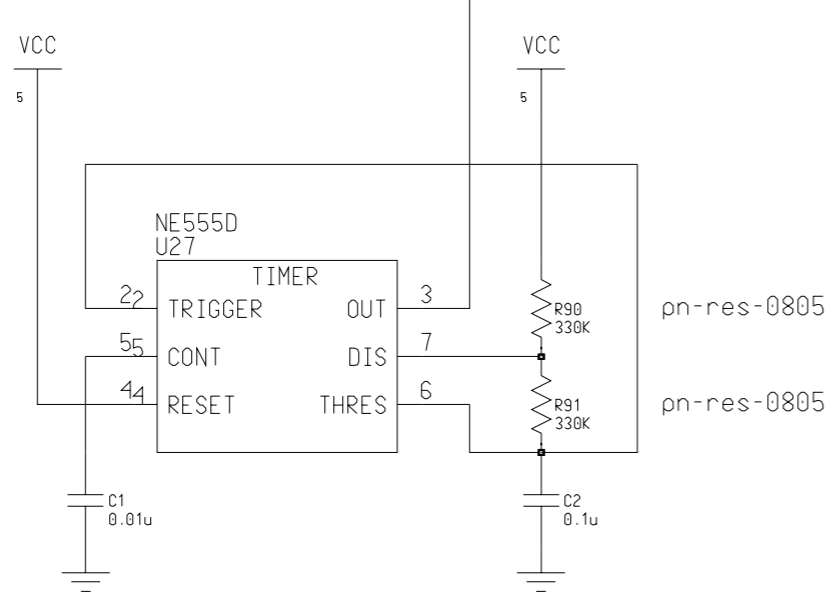
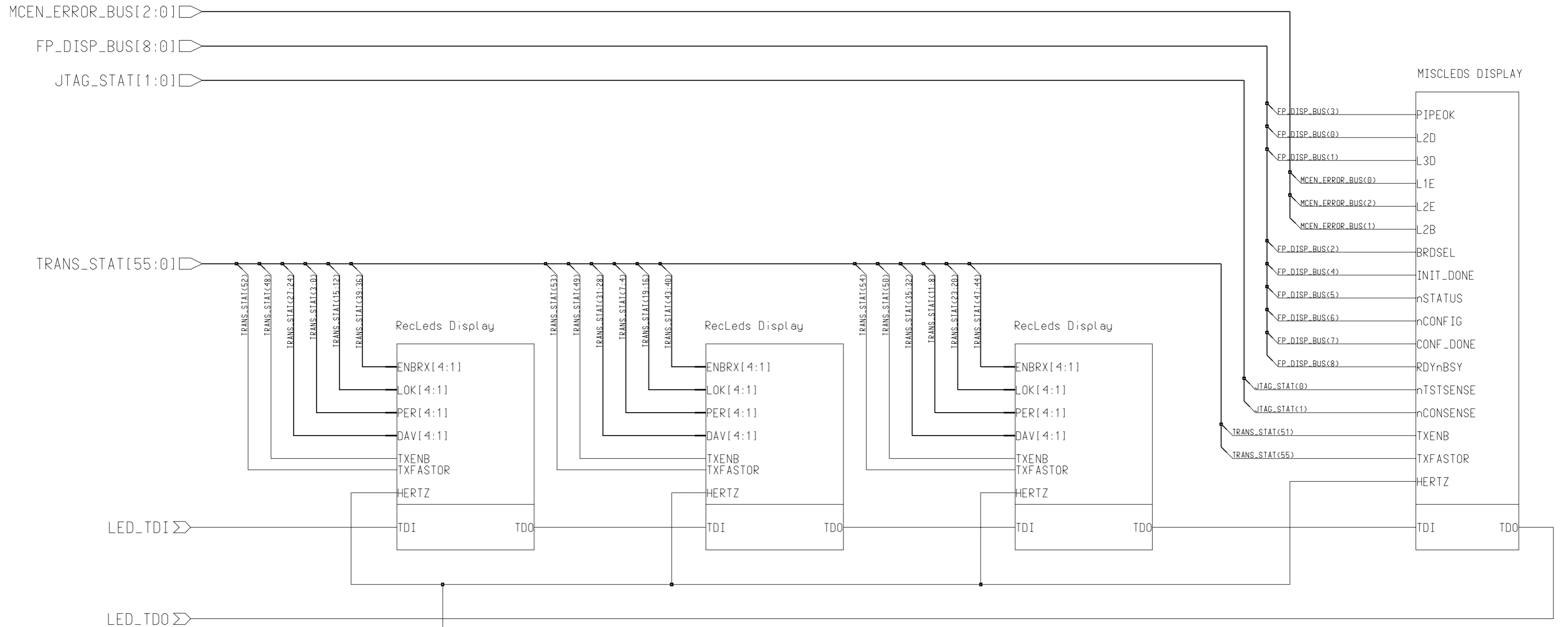
**BOSTON UNIVERSITY**  
**ELECTRONICS DESIGN FACILITY**

MCEN  
 Waiting Lists FPGA

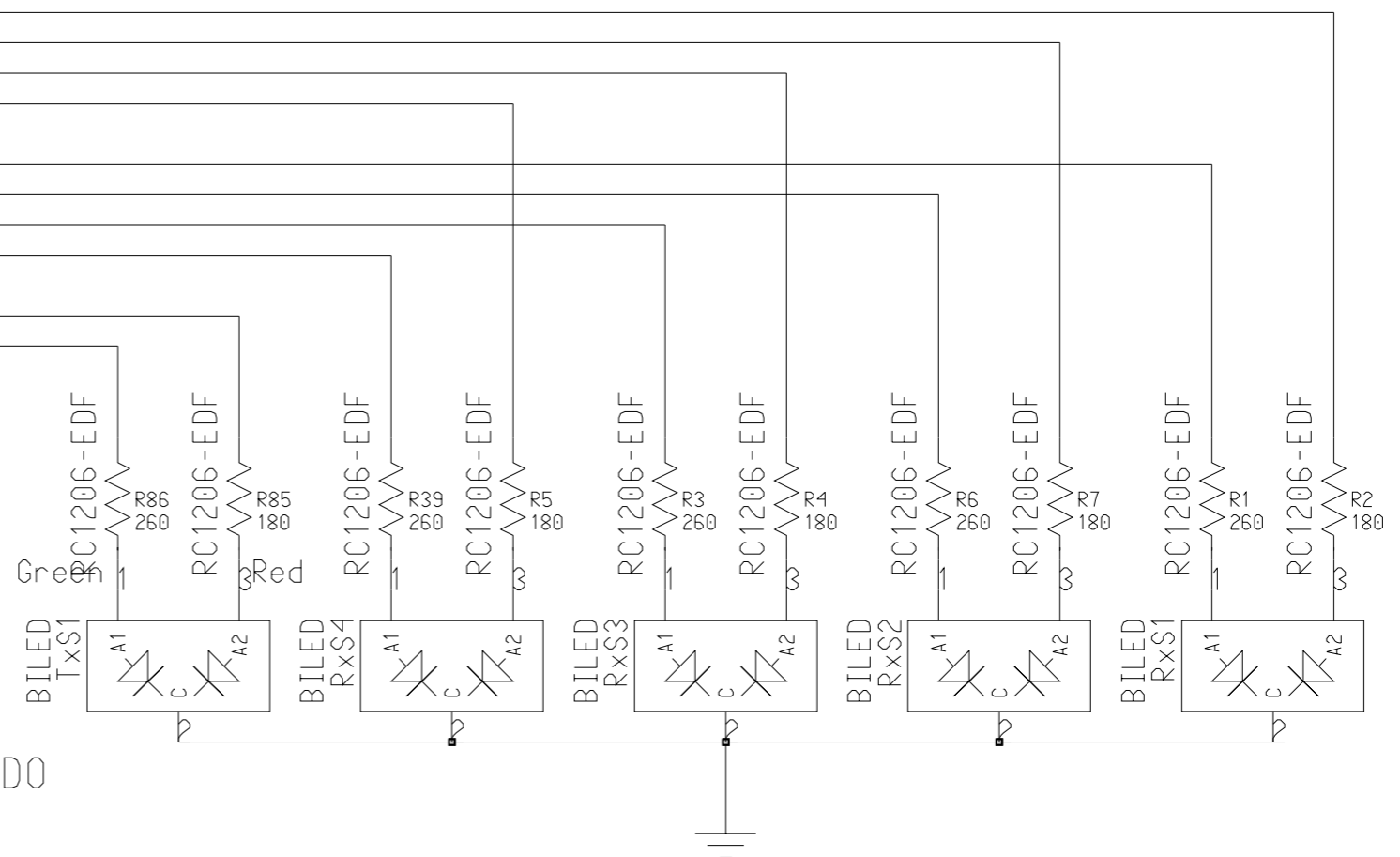
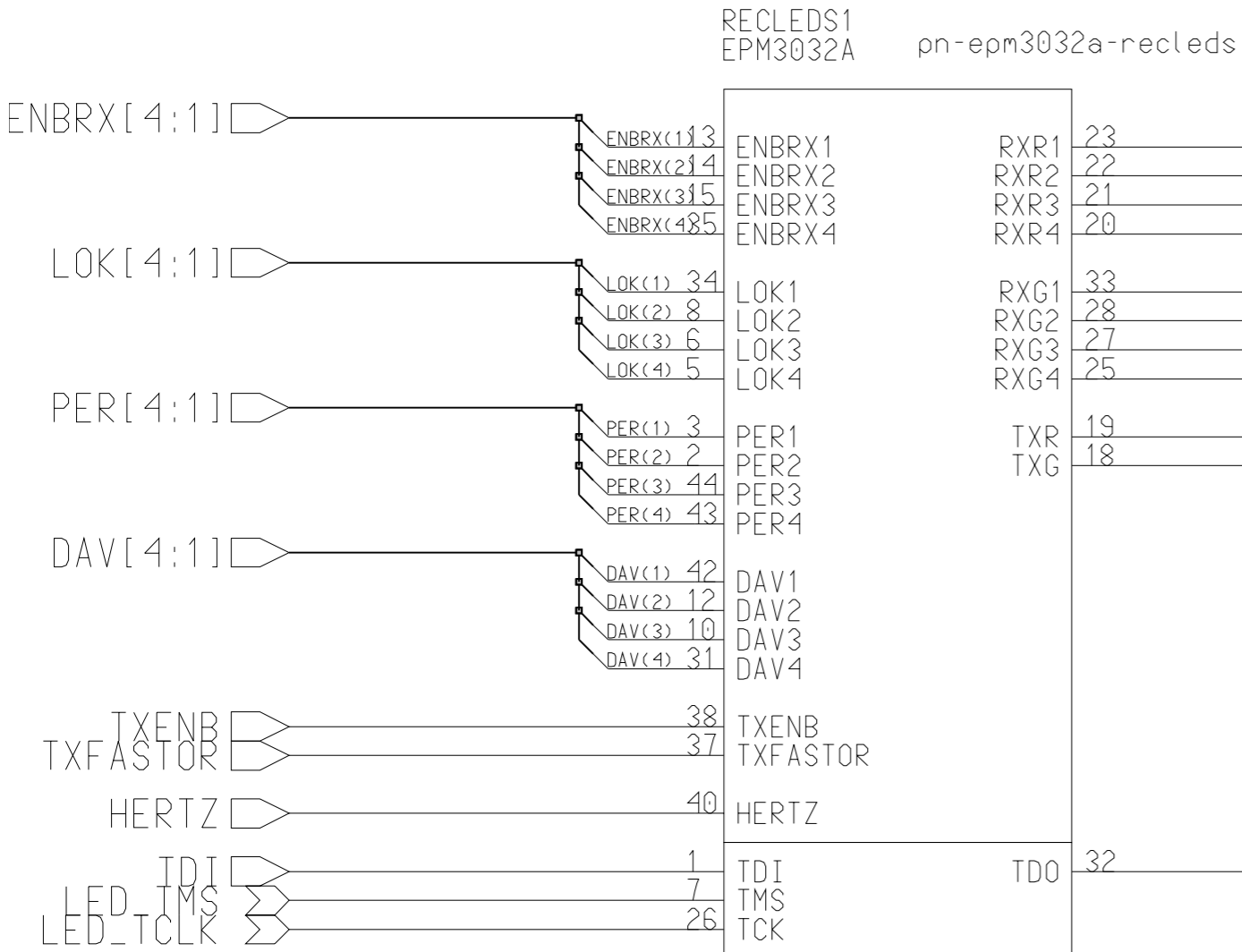
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN
SHEET	16	OF	36
DATE	3/14/00	PRELIMINARY	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N
DATE	3/14/00	RELEASED	<input type="checkbox"/> N <input checked="" type="checkbox"/> AS BUILT
PATH	PATH		



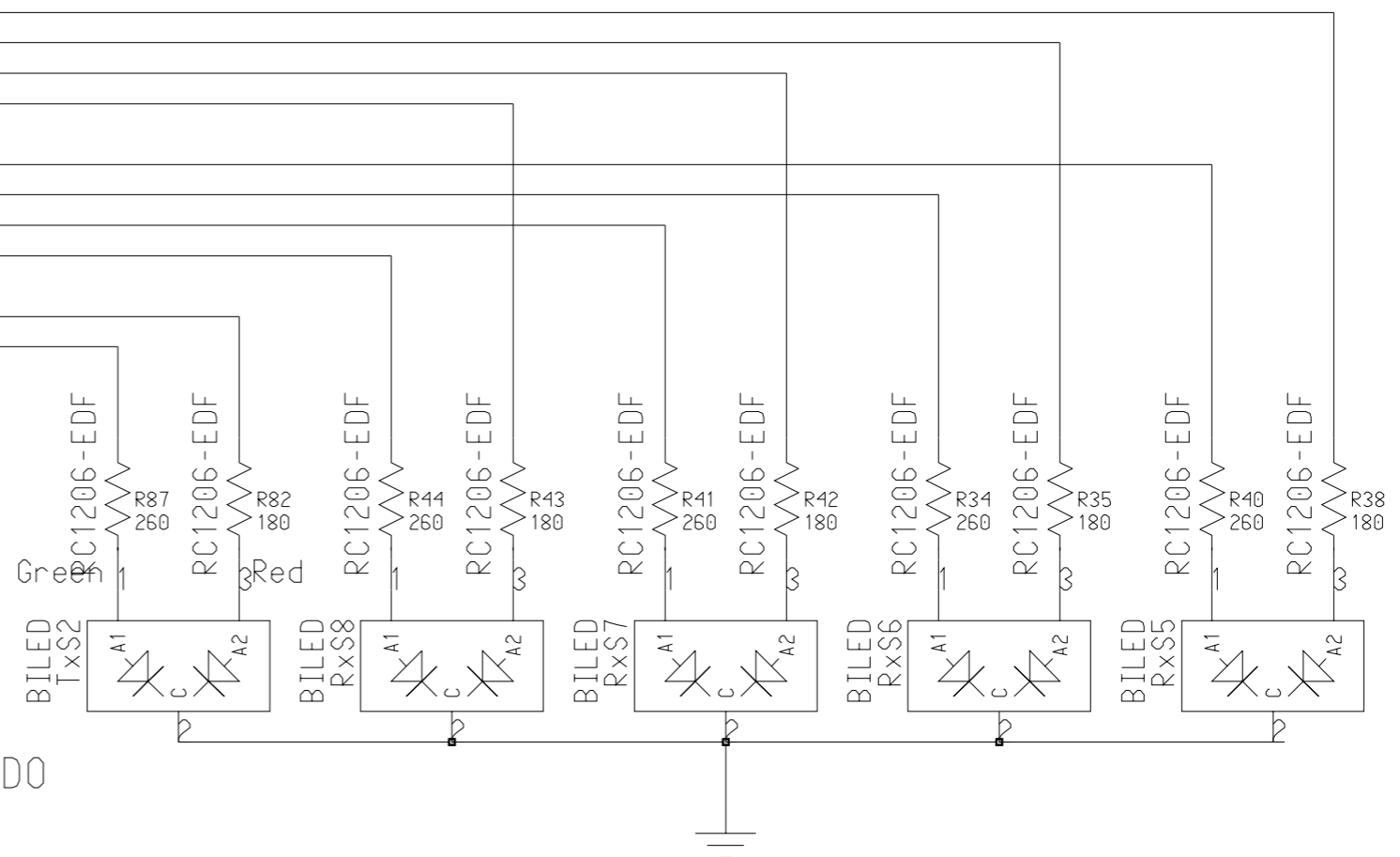
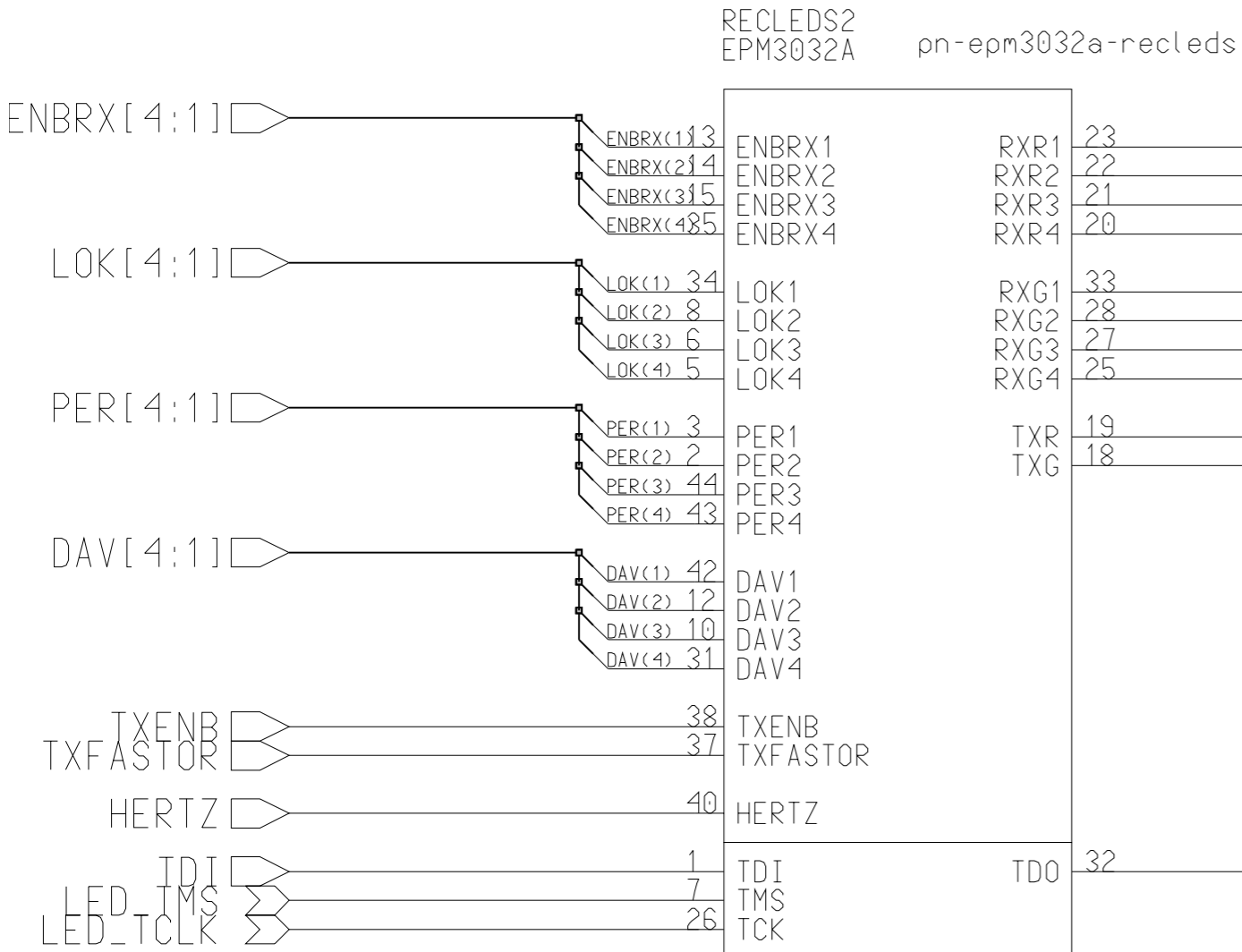
BOSTON UNIVERSITY					
ELECTRONICS DESIGN FACILITY					
MCEN					
32-bit TriState Buffer					
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC		
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN	REV	B
SHEET	15	OF	36	PRELIMINARY	Y
DATE	3/14/00	RELEASED	N	AS BUILT	N
PATH	PATH				



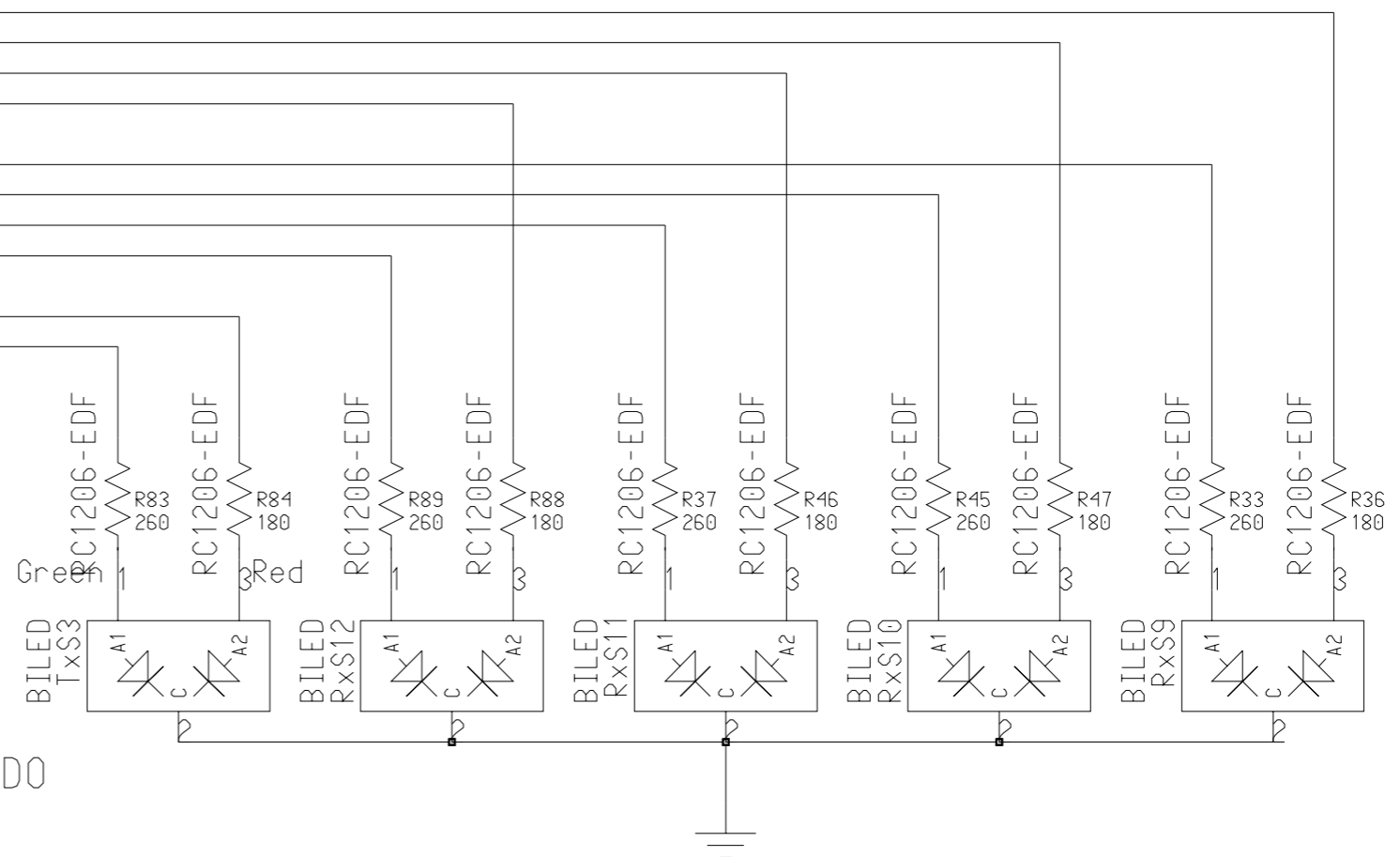
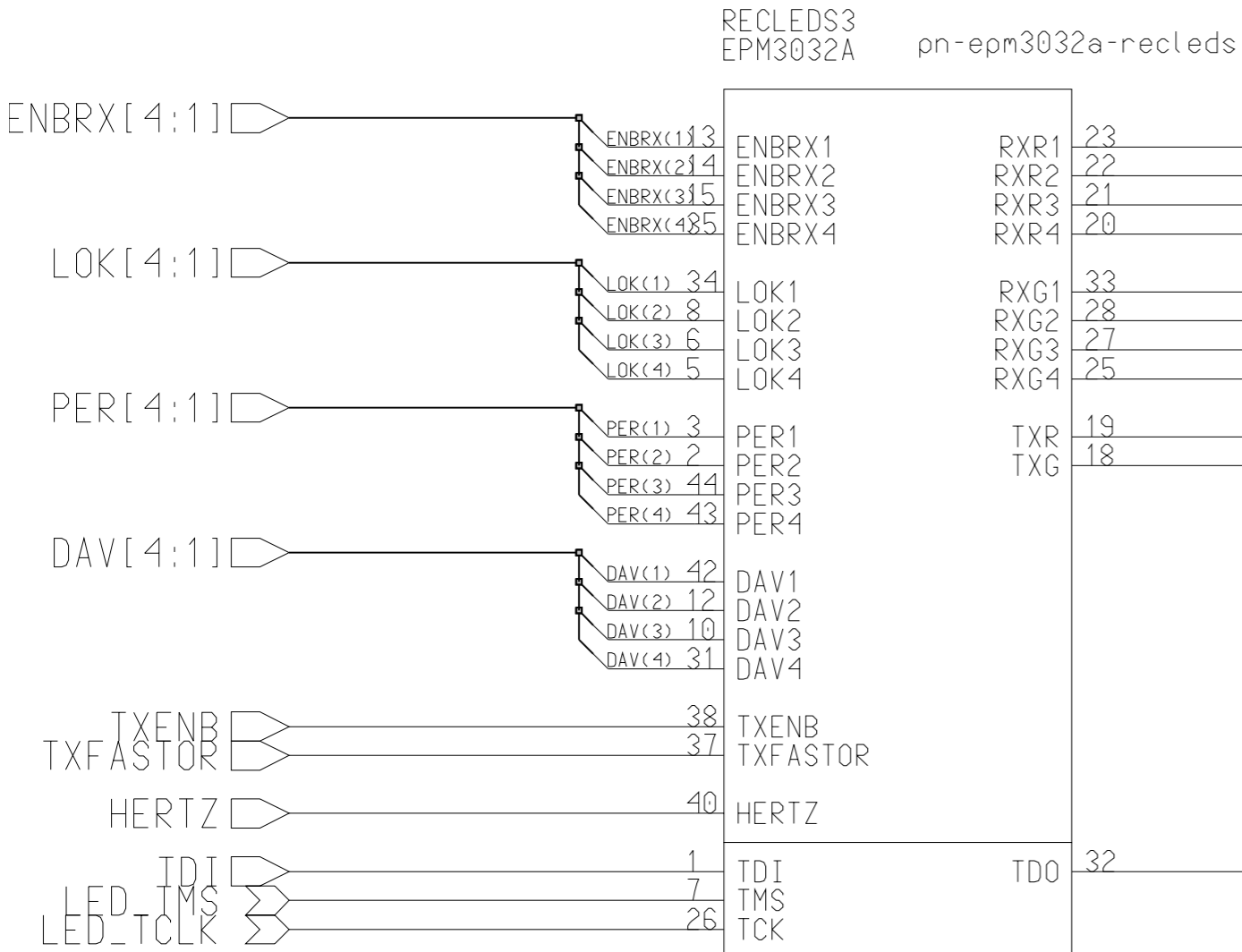
BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN LED DISPLAYS			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	29 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH MCEN_displays			



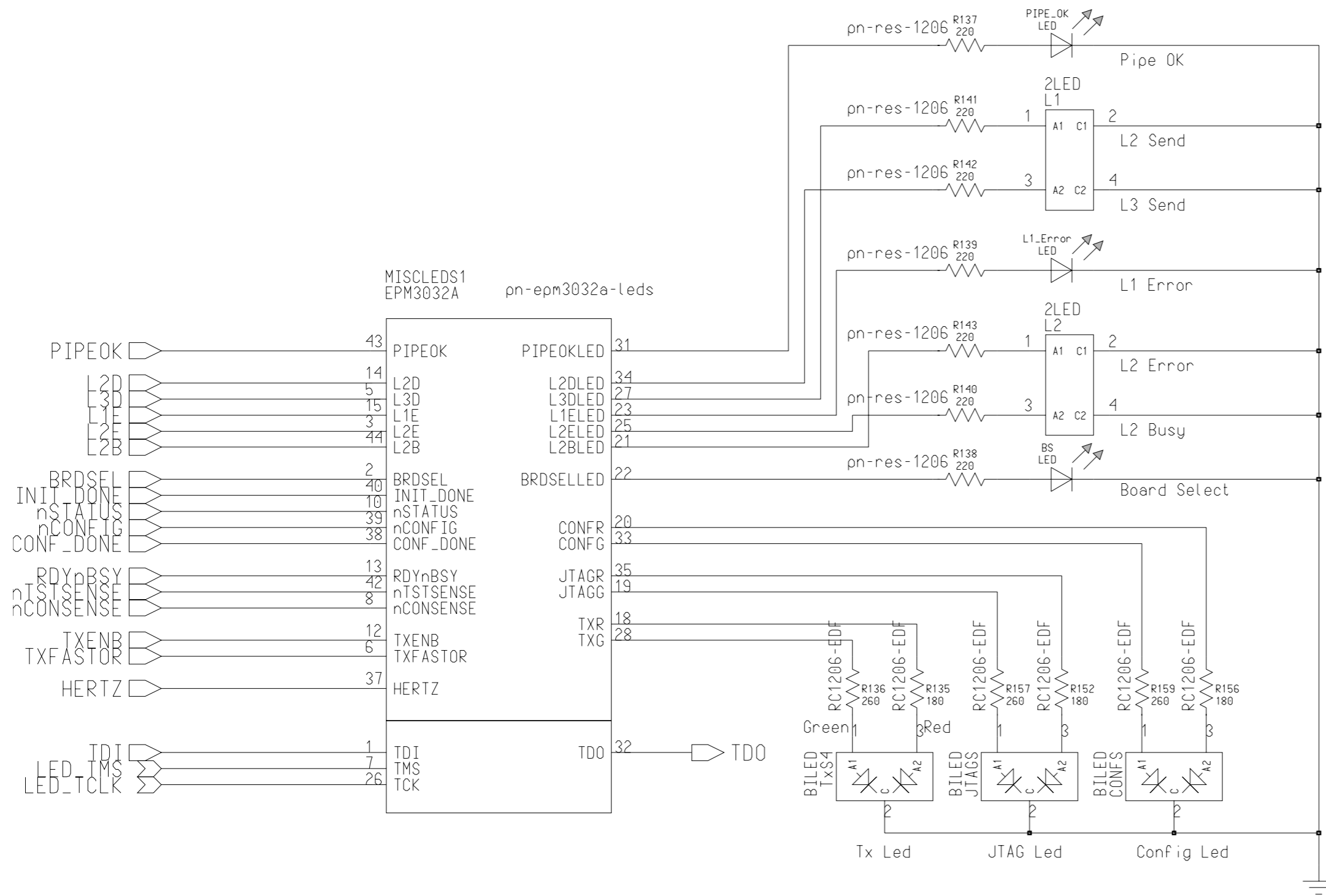
BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN RECLEDS DISPLAY			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN    REV    B
SHEET	36    OF    36	PRELIMINARY	Y    ECO'S    N
DATE	3/14/00	RELEASED	N    AS BUILT    N
PATH	recleds_display		



<h1 style="margin: 0;">BOSTON UNIVERSITY</h1> <h2 style="margin: 0;">ELECTRONICS DESIGN FACILITY</h2>			
<p>MCEN RECLEDS DISPLAY</p>			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN    REV    B
SHEET	36    OF    36	PRELIMINARY	Y    ECO'S    N
DATE	3/14/00	RELEASED	N    AS BUILT    N
PATH	recleds_display		

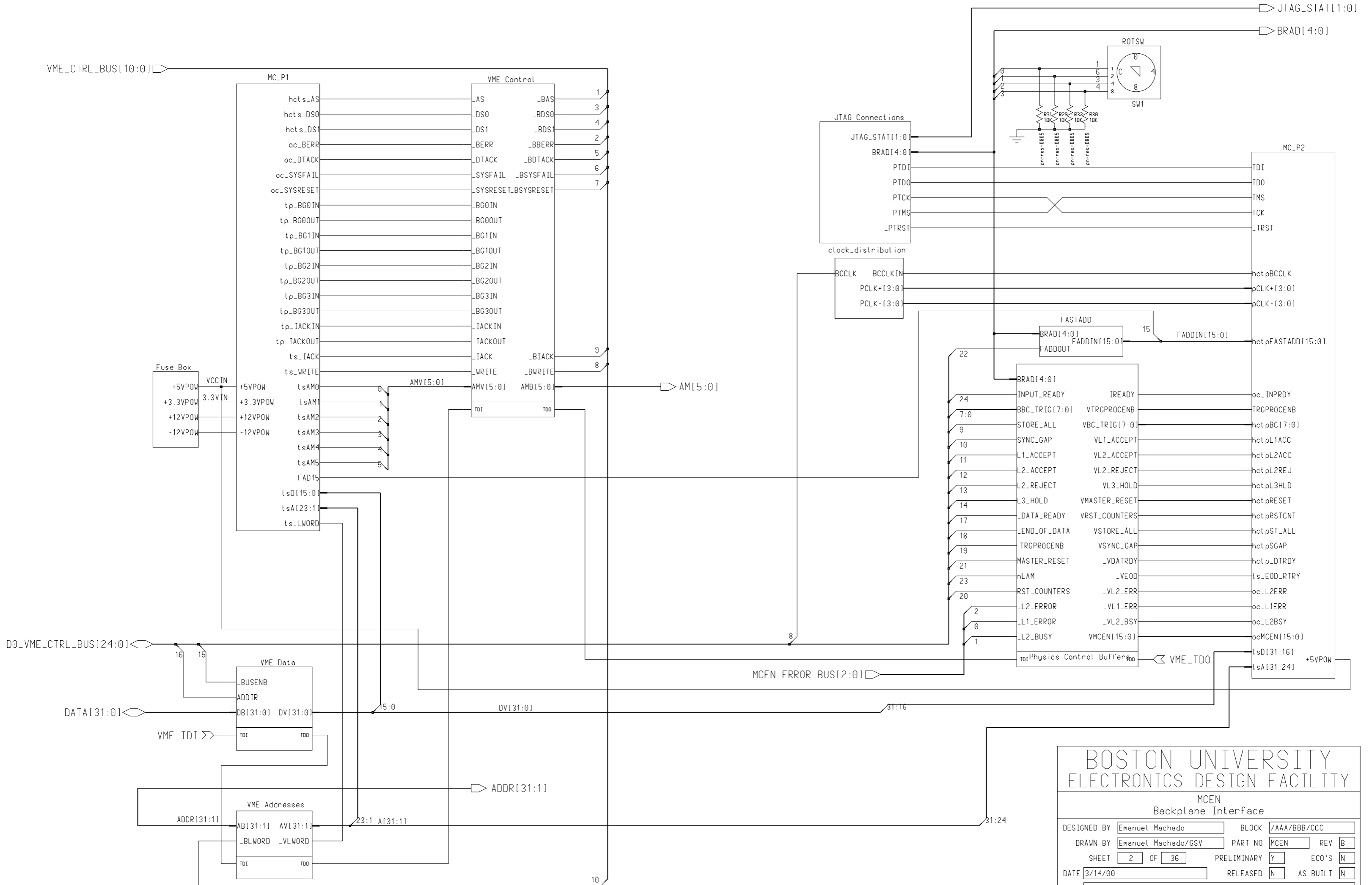


BOSTON UNIVERSITY			
ELECTRONICS DESIGN FACILITY			
MCEN			
RECLEDS DISPLAY			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN    REV    B
SHEET	36    OF    36	PRELIMINARY	Y    ECO'S    N
DATE	3/14/00	RELEASED	N    AS BUILT    N
PATH	recleds_display		

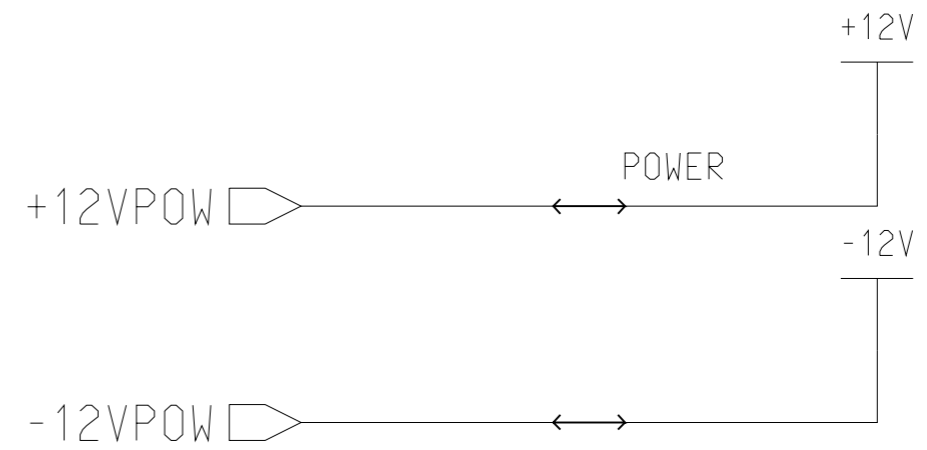
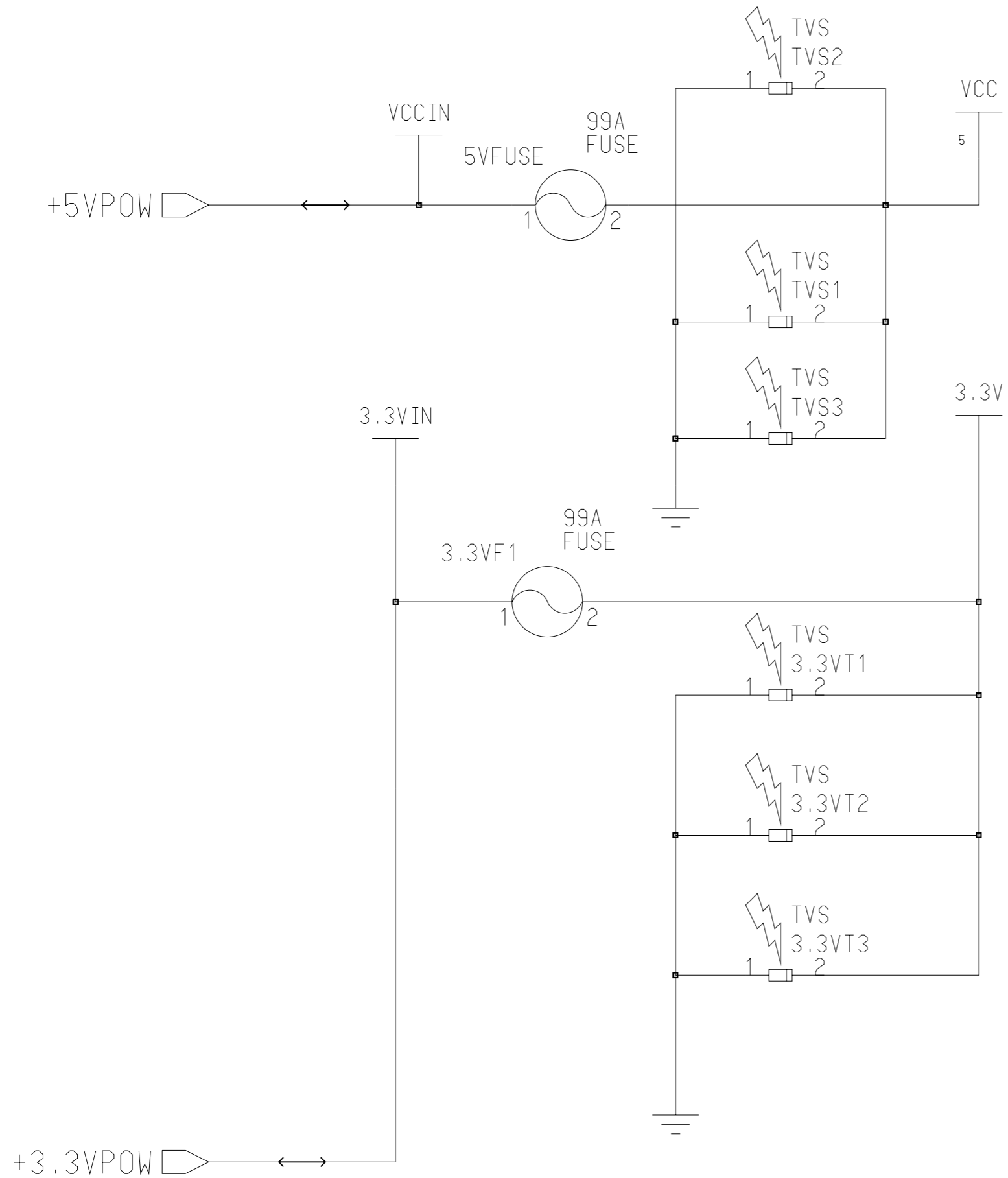


BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN MISC LEDES DISPLAY			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	27	OF	36 PRELIMINARY Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	miscleds_display		





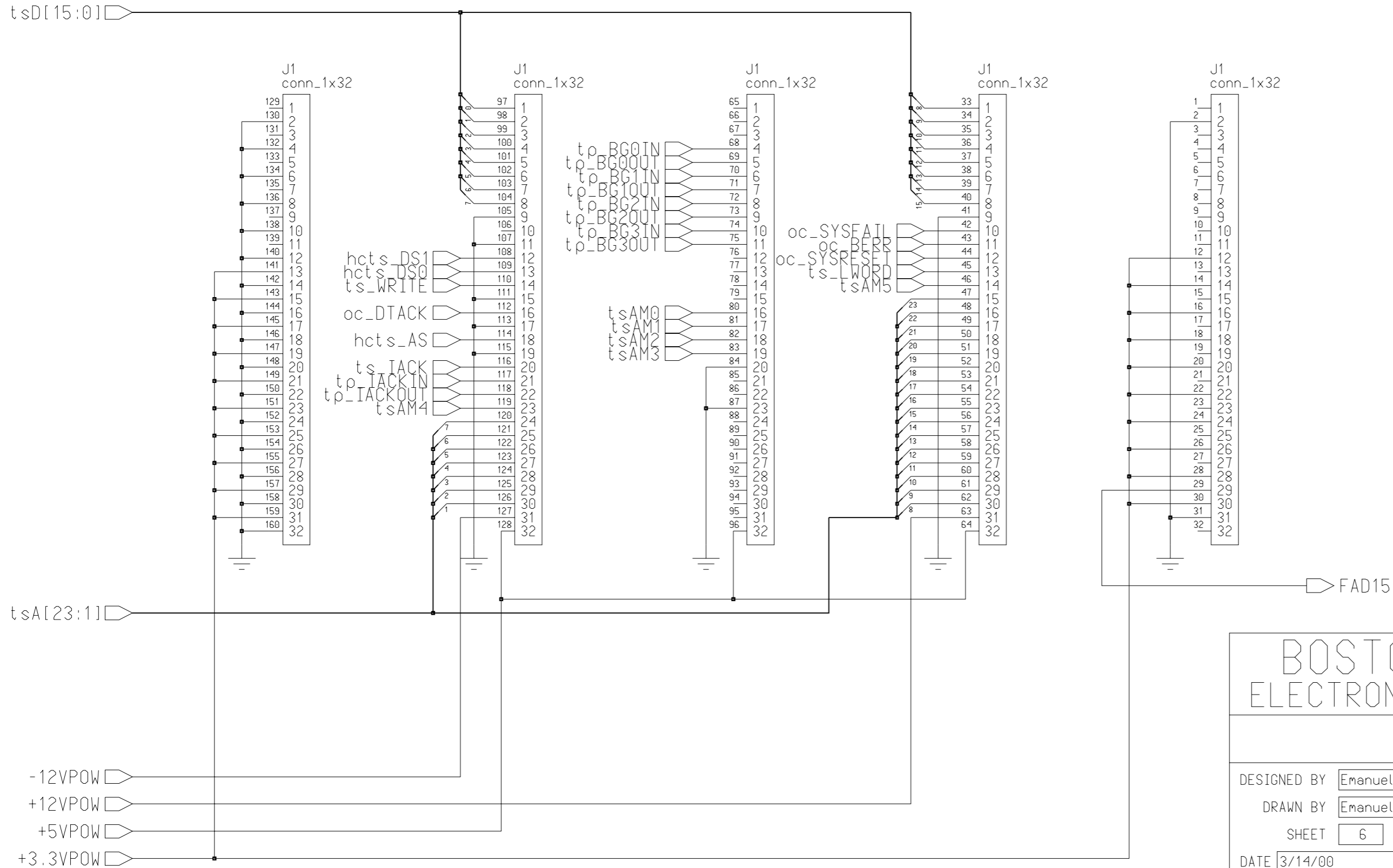
<b>BOSTON UNIVERSITY</b> <b>ELECTRONICS DESIGN FACILITY</b>			
<b>MCEN</b> Backplane Interface			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	2 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH PATH			



# BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY

## MCEN Fuse Box

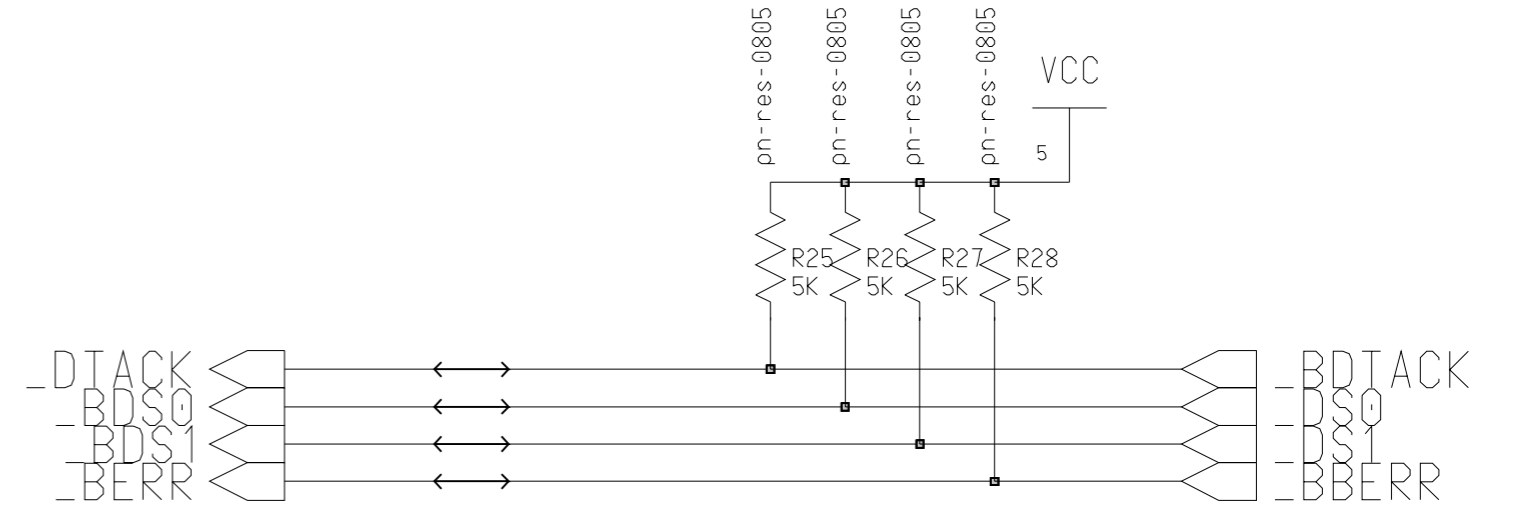
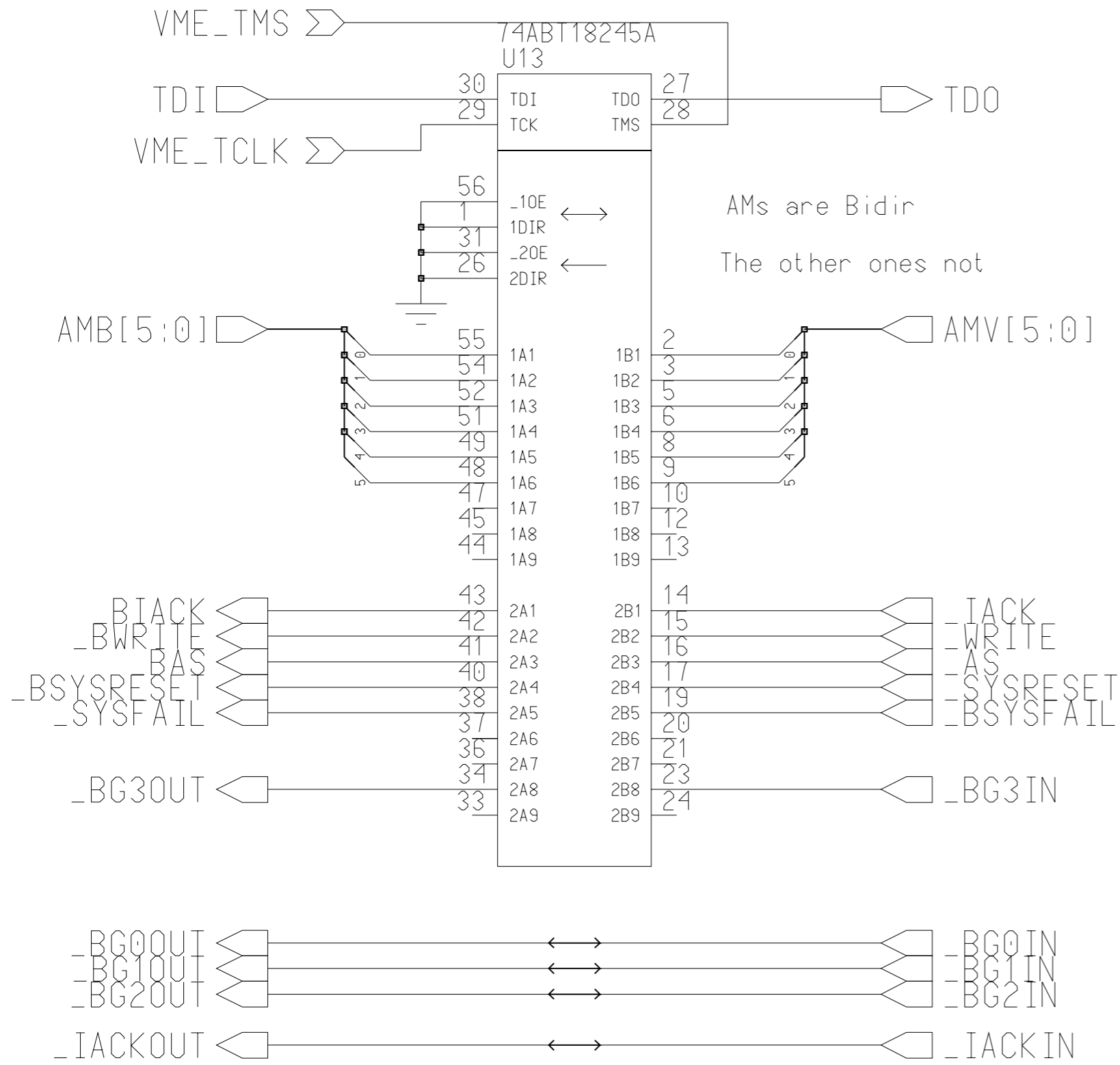
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	4 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



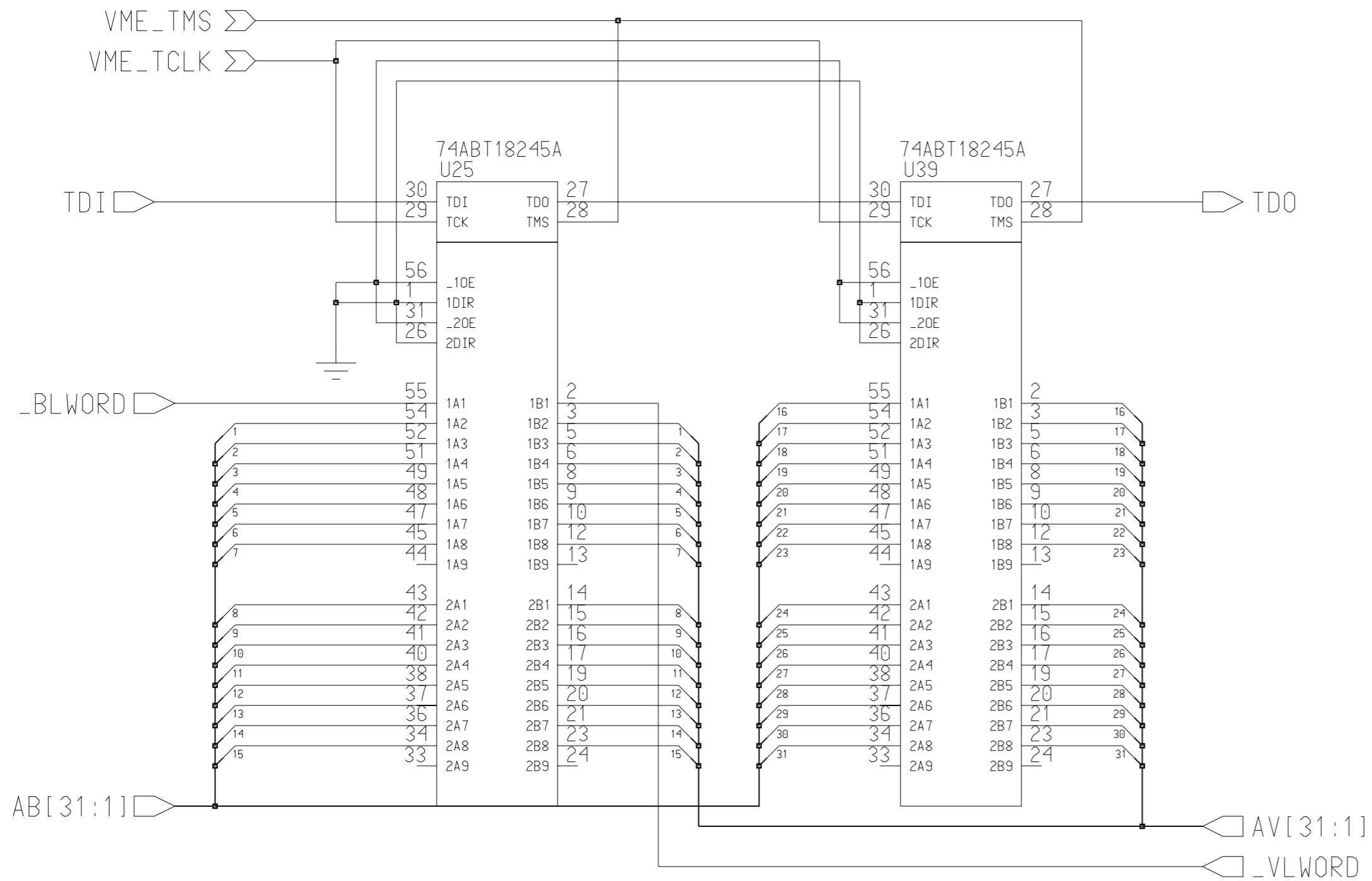
BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
VME P1

DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	6 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	MC_P1		



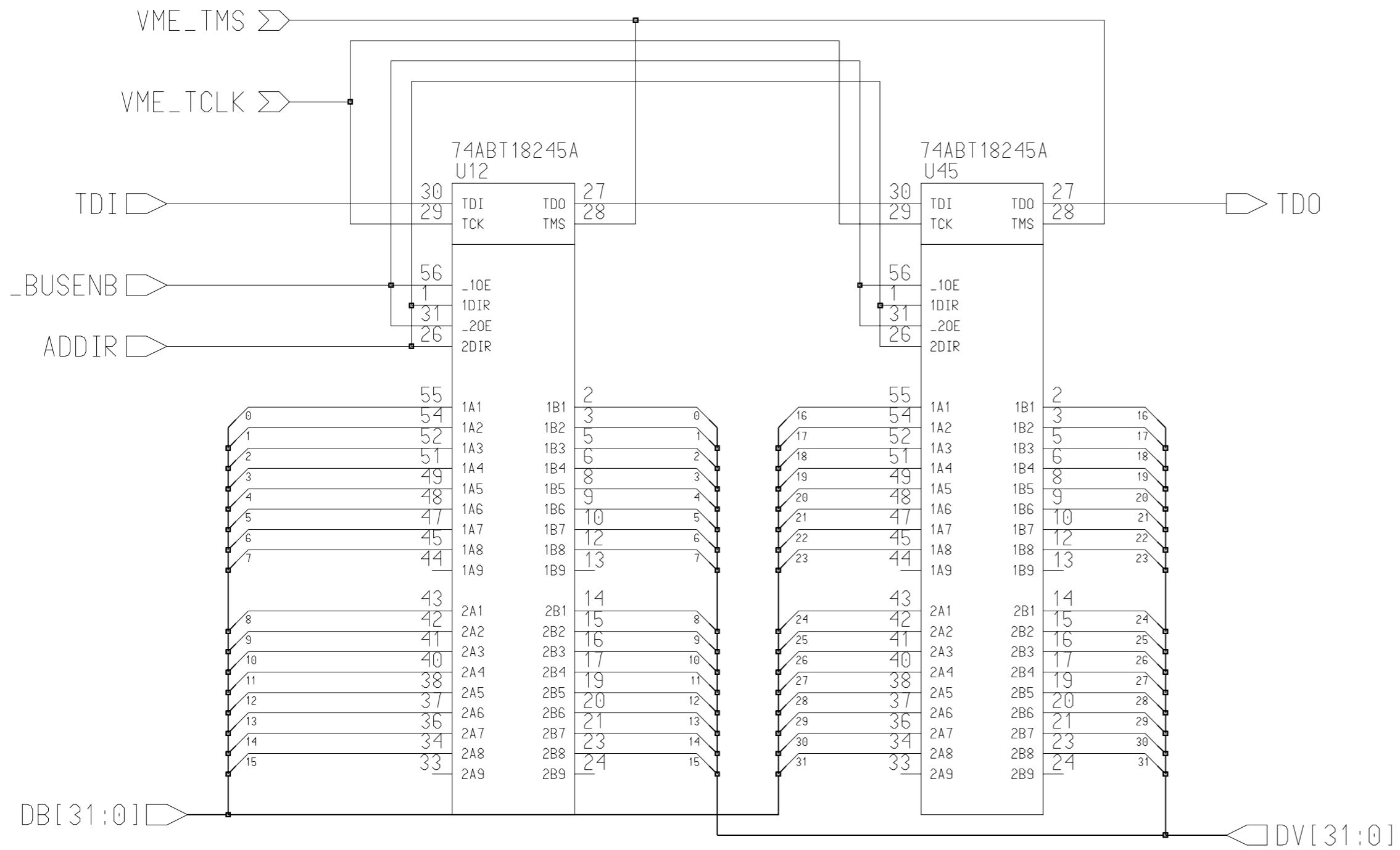
<h1 style="margin: 0;">BOSTON UNIVERSITY</h1> <h2 style="margin: 0;">ELECTRONICS DESIGN FACILITY</h2>					
<h3 style="margin: 0;">MCEN</h3> <h4 style="margin: 0;">VME Control Buffers</h4>					
DESIGNED BY	Emanuel Machado		BLOCK	/AAA/BBB/CCC	
DRAWN BY	Emanuel Machado/GSV		PART NO	MCEN	REV B
SHEET	10	OF	36	PRELIMINARY	Y
DATE	3/14/00		RELEASED	N	AS BUILT N
PATH	PATH				



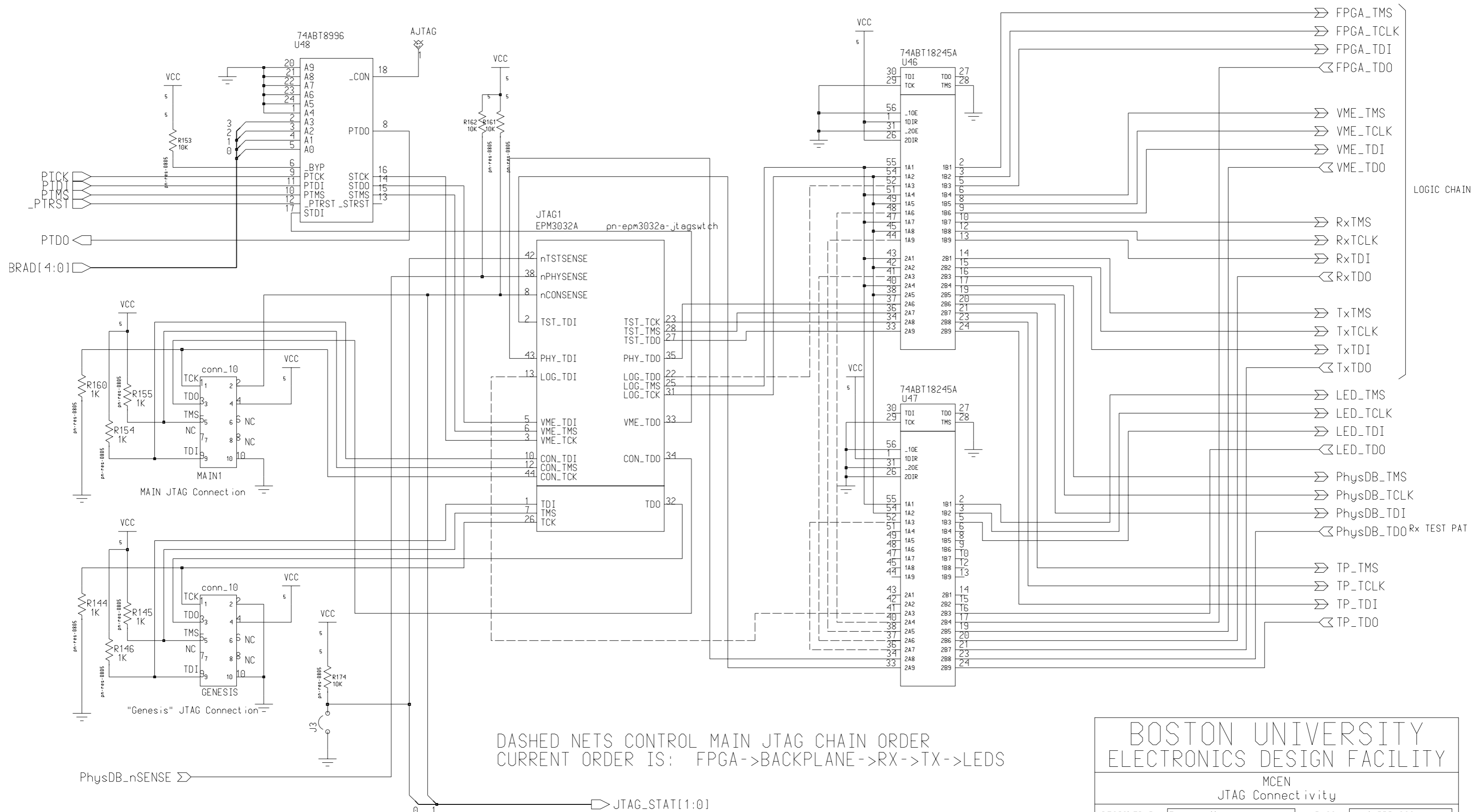
# BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY

## MCEN VME Addresses

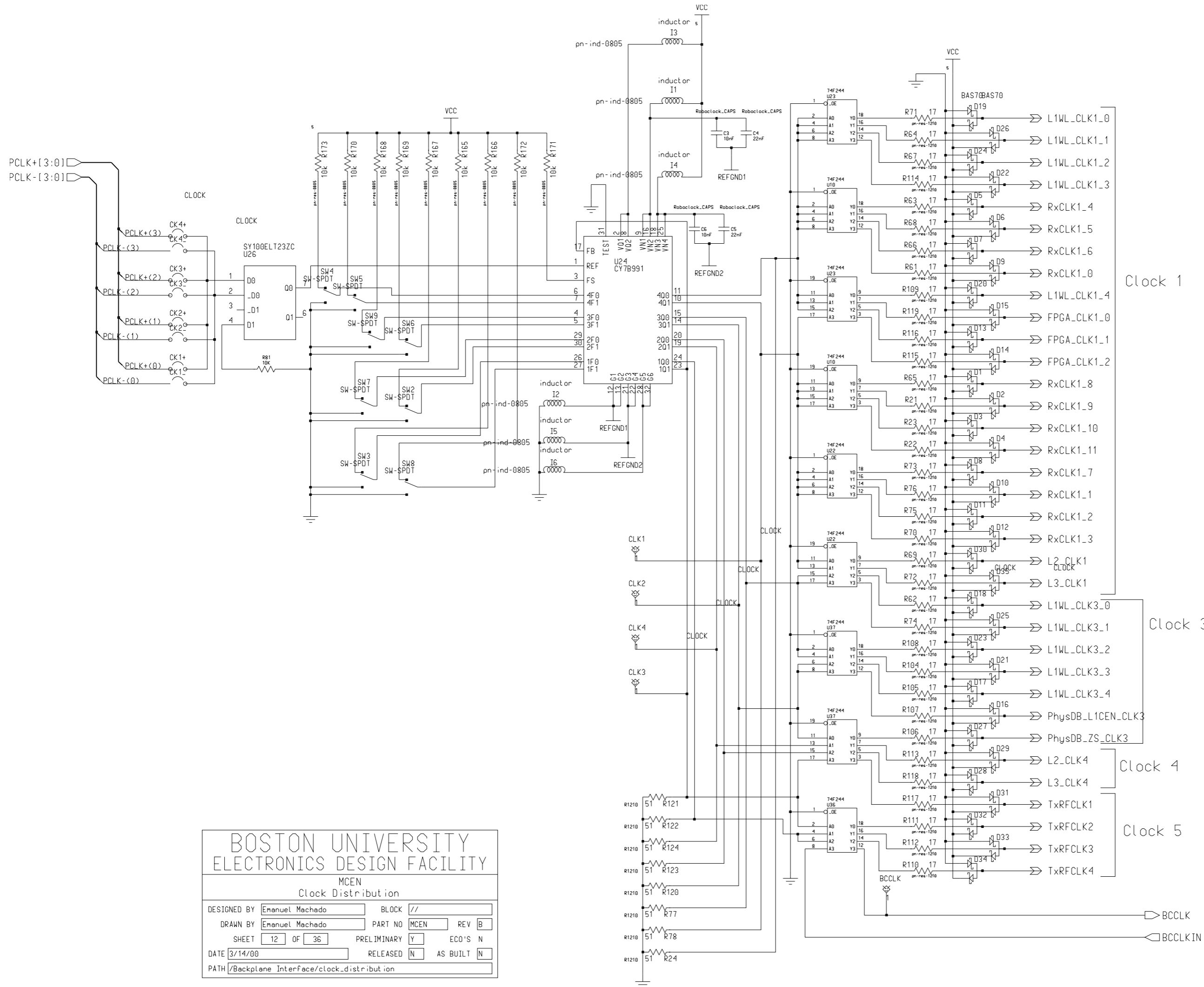
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC	
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN	REV B
SHEET	9	OF	36	PRELIMINARY Y
DATE	3/14/00	RELEASED	N	ECO'S N
PATH	PATH			



BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN VME Data			
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="11"/> 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 JTAG Connectivity			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	5 OF 36	PRELIMINARY	Y ECO'S N
DATE		RELEASED	N AS BUILT N
PATH	_jtag		



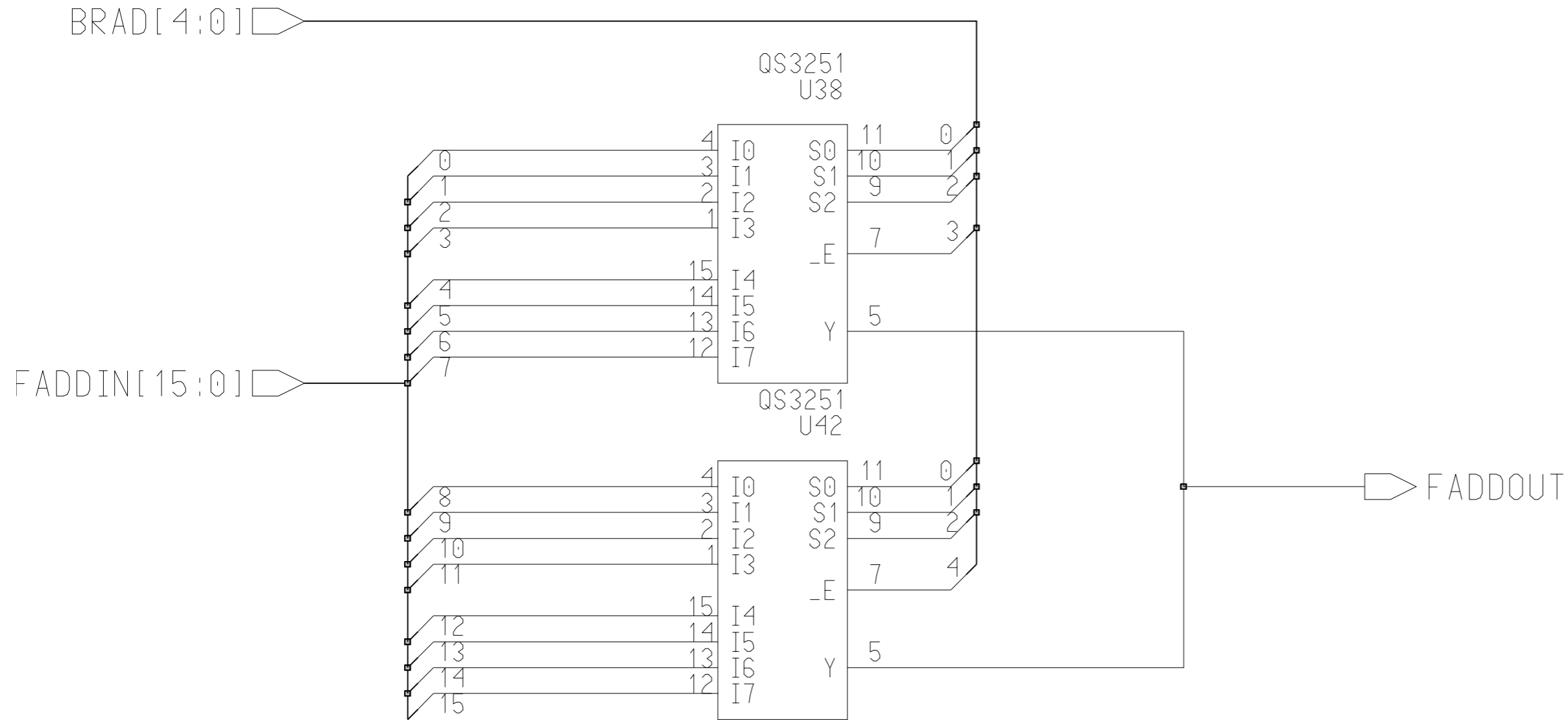
**BOSTON UNIVERSITY**  
ELECTRONICS DESIGN FACILITY

MCEN  
Clock Distribution

DESIGNED BY Emanuel Machado	BLOCK //
DRAWN BY Emanuel Machado	PART NO MCEN
SHEET 12 OF 36	PRELIMINARY Y
DATE 3/14/00	RELEASED N
	AS BUILT N

PATH /Backplane Interface/clock\_distribution

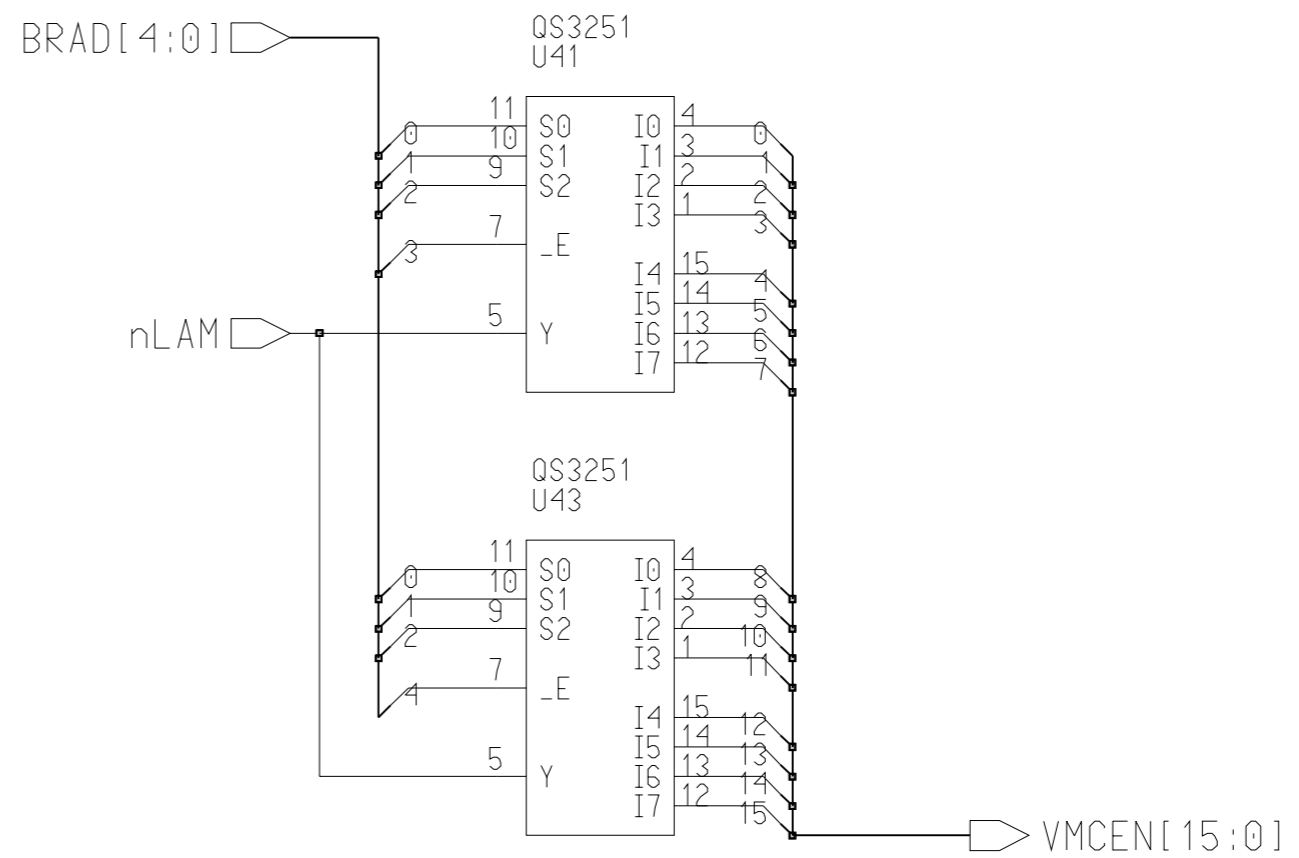
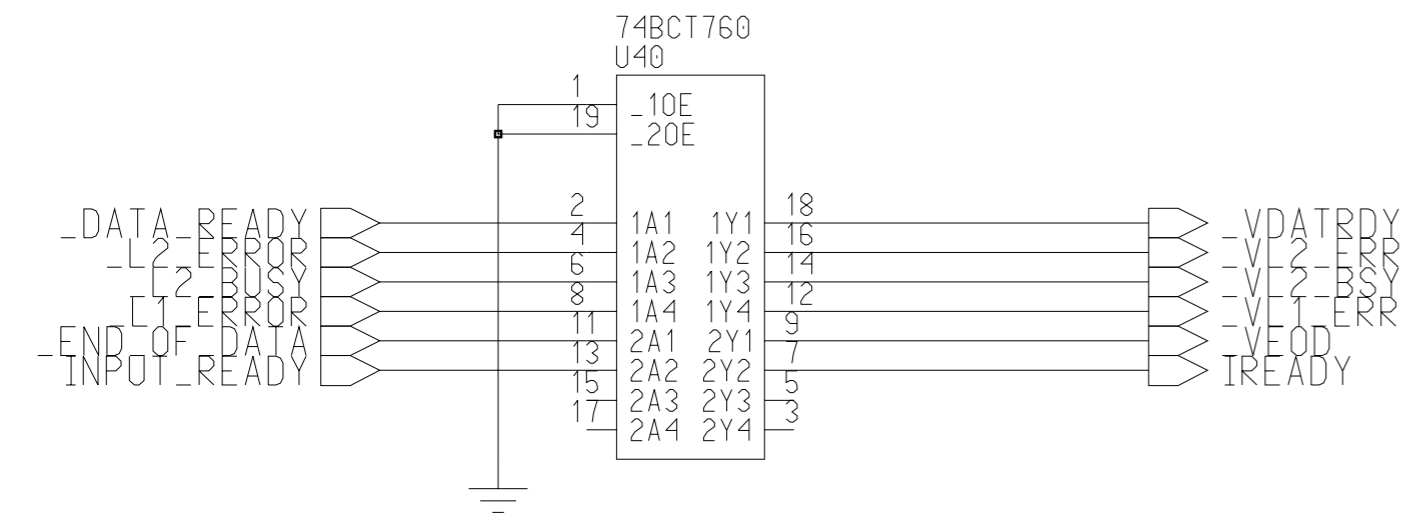
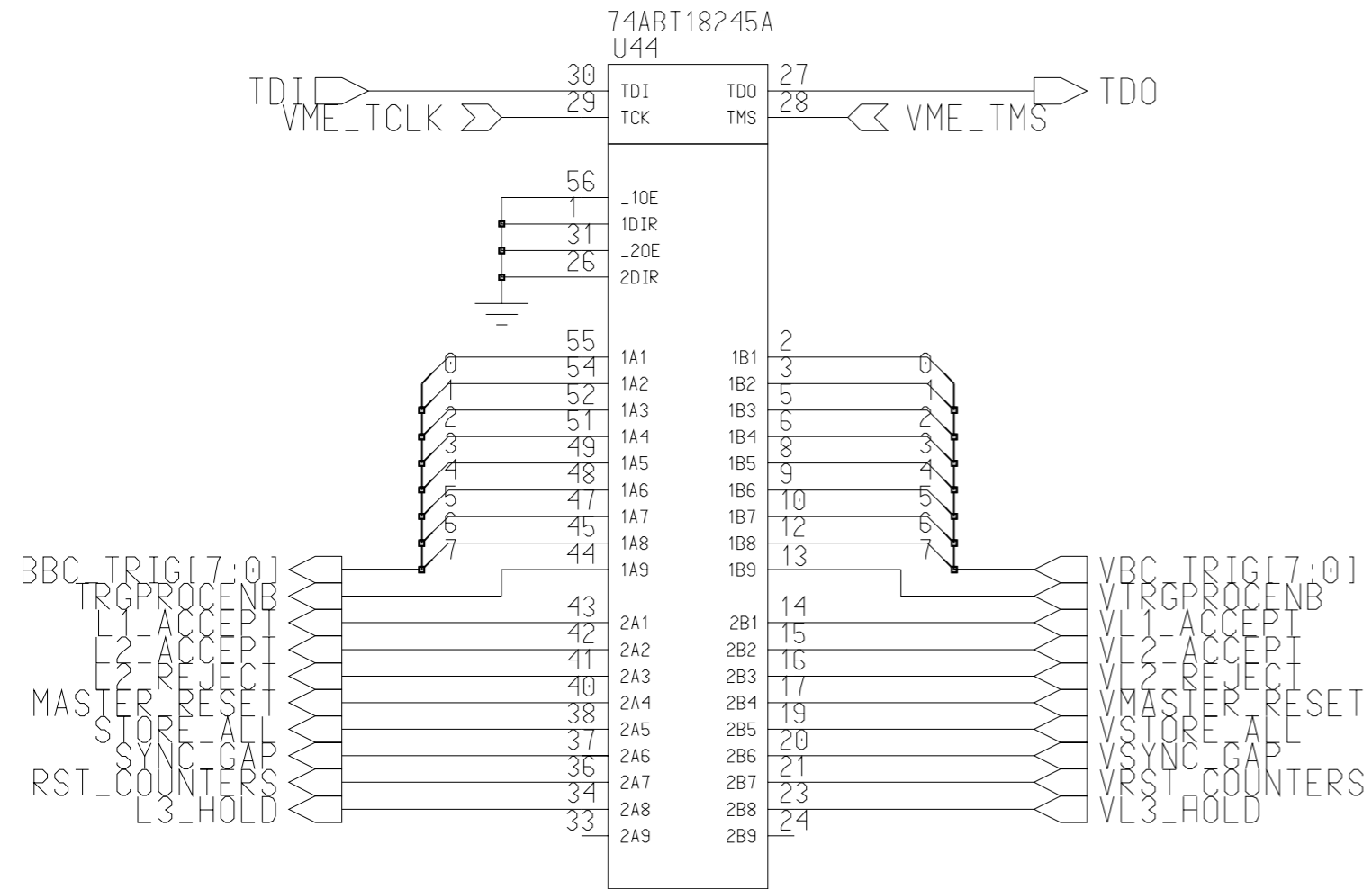




# BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY

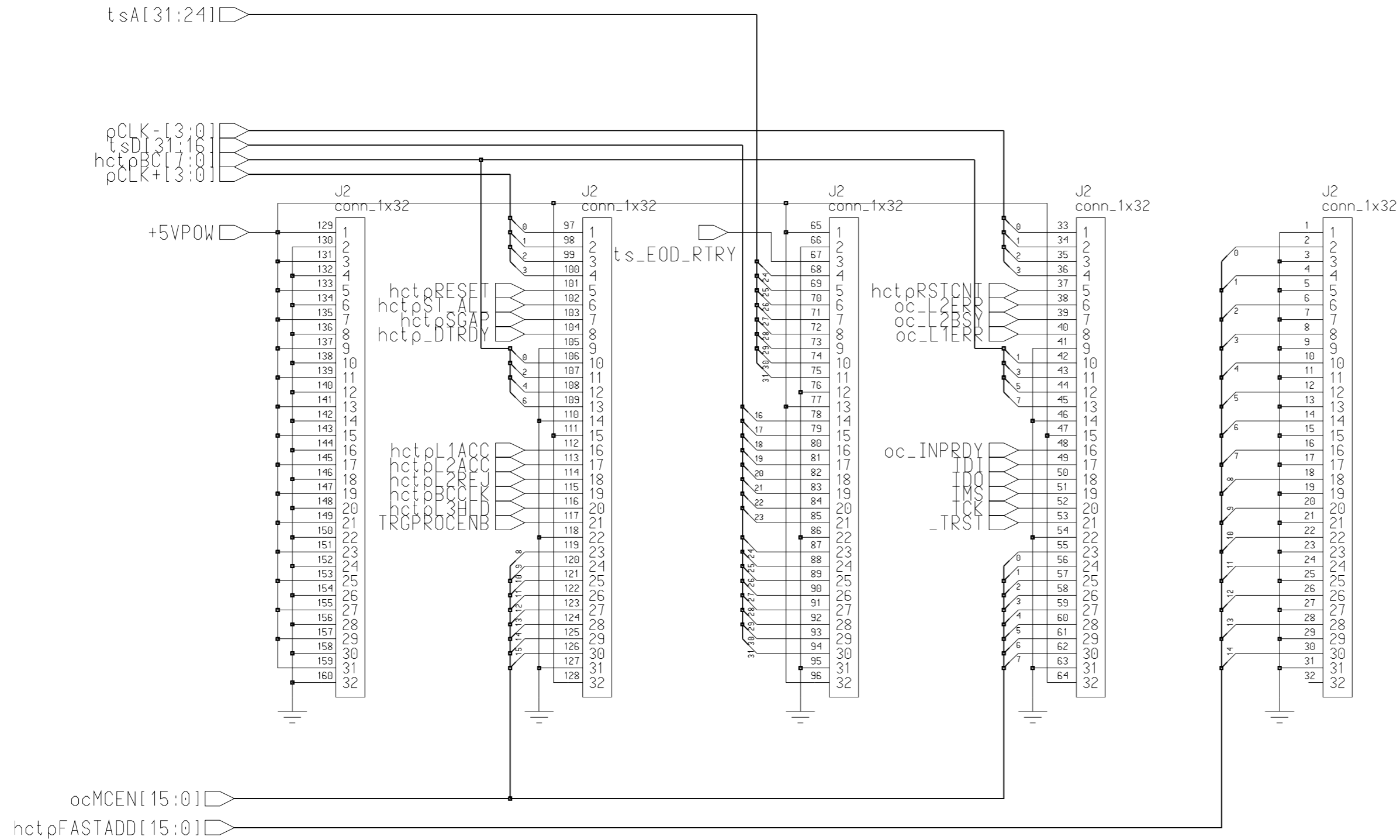
## MCEN Fast Address Selector

DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC		
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN	REV	B
SHEET	3	OF	36	PRELIMINARY	Y
				ECO'S	N
DATE	3/14/00	RELEASED	N	AS BUILT	N
PATH	PATH				

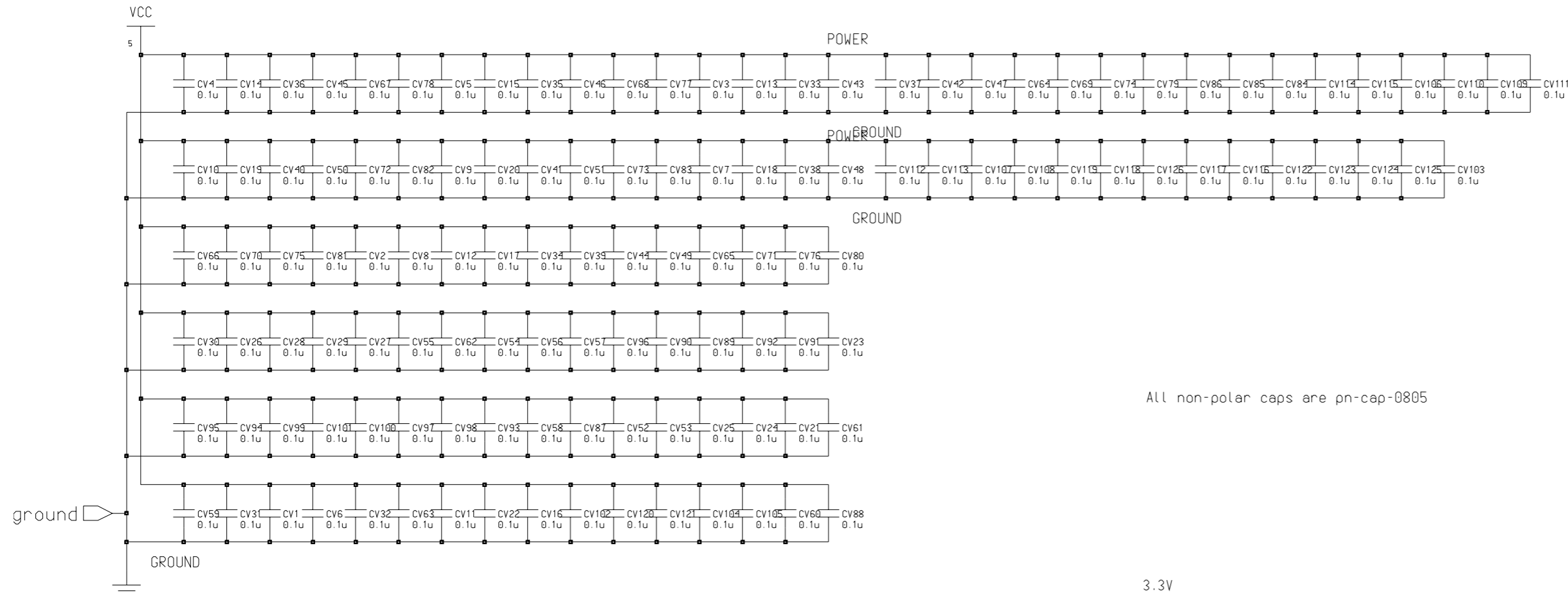


74BCT757 changed to 74BCT760.

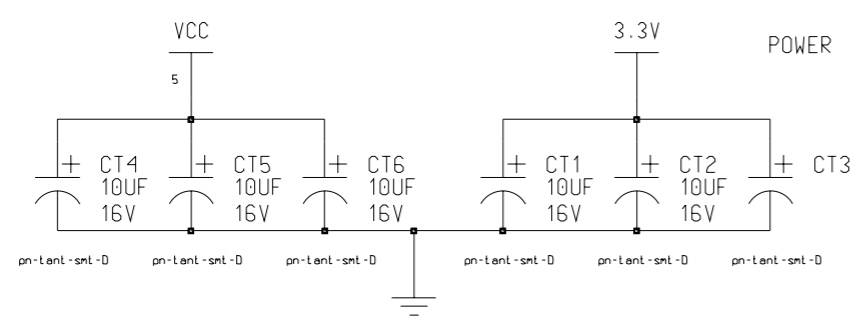
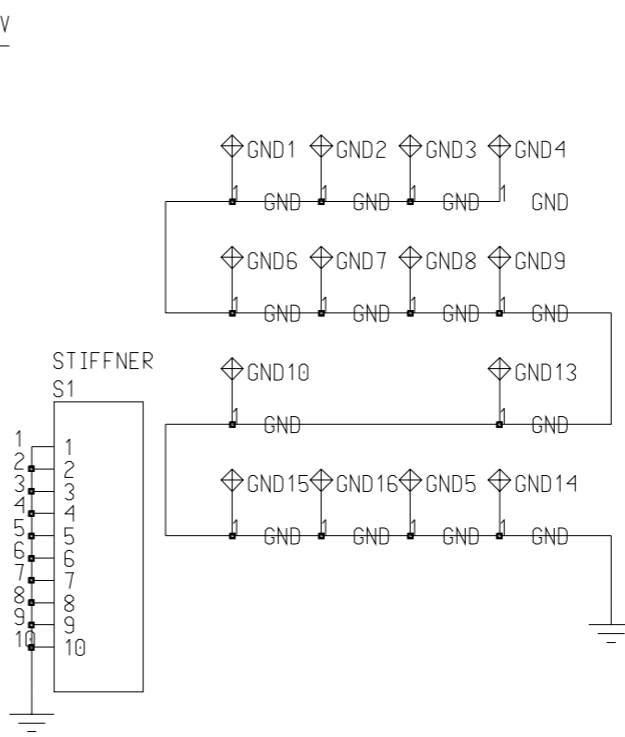
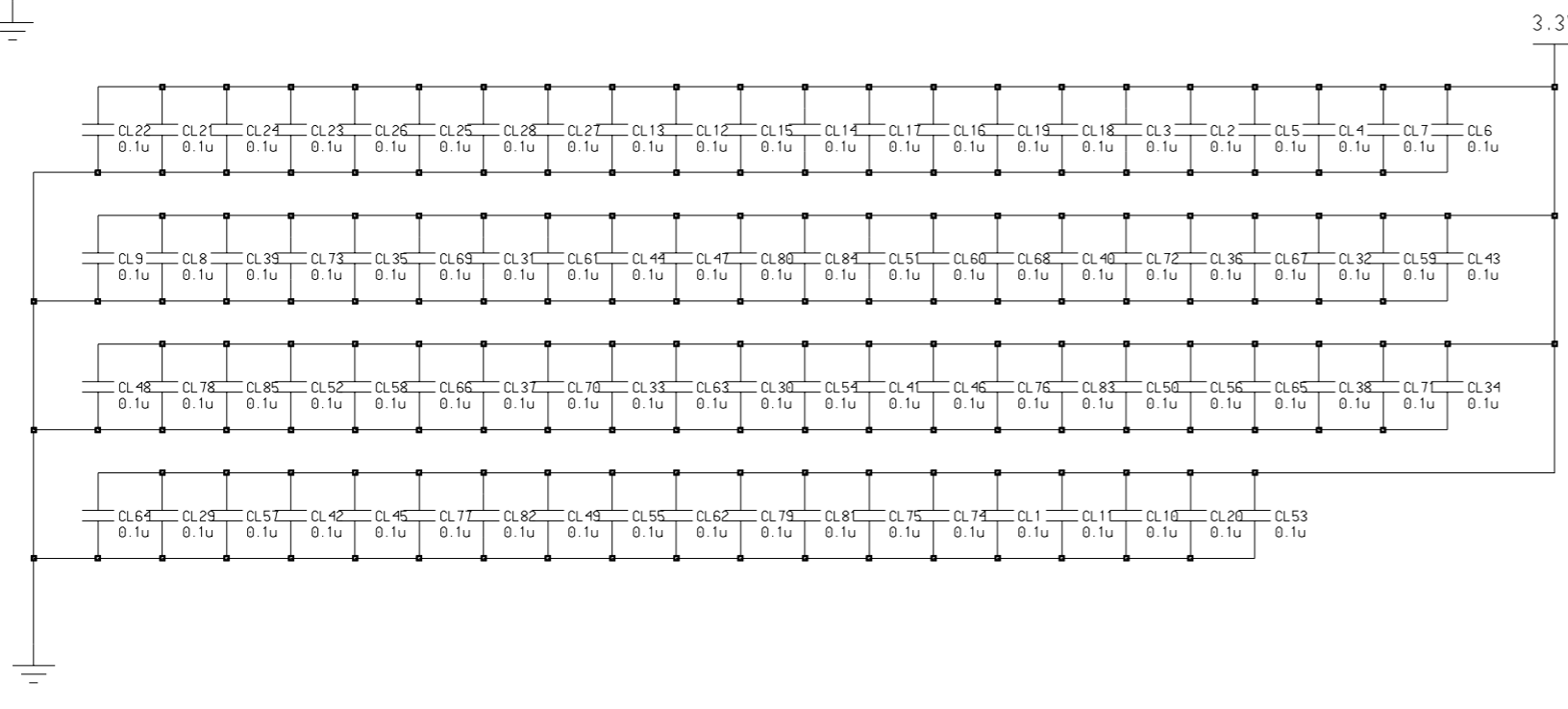
BOSTON UNIVERSITY			
ELECTRONICS DESIGN FACILITY			
MCEN			
PHYSICS Control Buffers			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	8 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	PATH		



BOSTON UNIVERSITY ELECTRONICS DESIGN FACILITY			
MCEN P2 With Private Bus			
DESIGNED BY	Emanuel Machado	BLOCK	/AAA/BBB/CCC
DRAWN BY	Emanuel Machado/GSV	PART NO	MCEN REV B
SHEET	7 OF 36	PRELIMINARY	Y ECO'S N
DATE	3/14/00	RELEASED	N AS BUILT N
PATH	MC_P2		



All non-polar caps are pn-cap-0805



BOSTON UNIVERSITY  
ELECTRONICS DESIGN FACILITY

MCEN  
Extra Capacitors and Test Points

DESIGNED BY Emanuel Machado	BLOCK /AAA/BBB/CCC
DRAWN BY Emanuel Machado/GSV	PART NO MCEN REV B
SHEET 13 OF 36	PRELIMINARY Y ECO'S N
DATE 3/14/00	RELEASED N AS BUILT N
PATH PATH	