

Digital Equipment Corporation
Maynard, Massachusetts

digital

**Maintenance Manual
Volume II**

RK8 Disk System

**RK8 DISK SYSTEM
MAINTENANCE MANUAL
VOLUME II**

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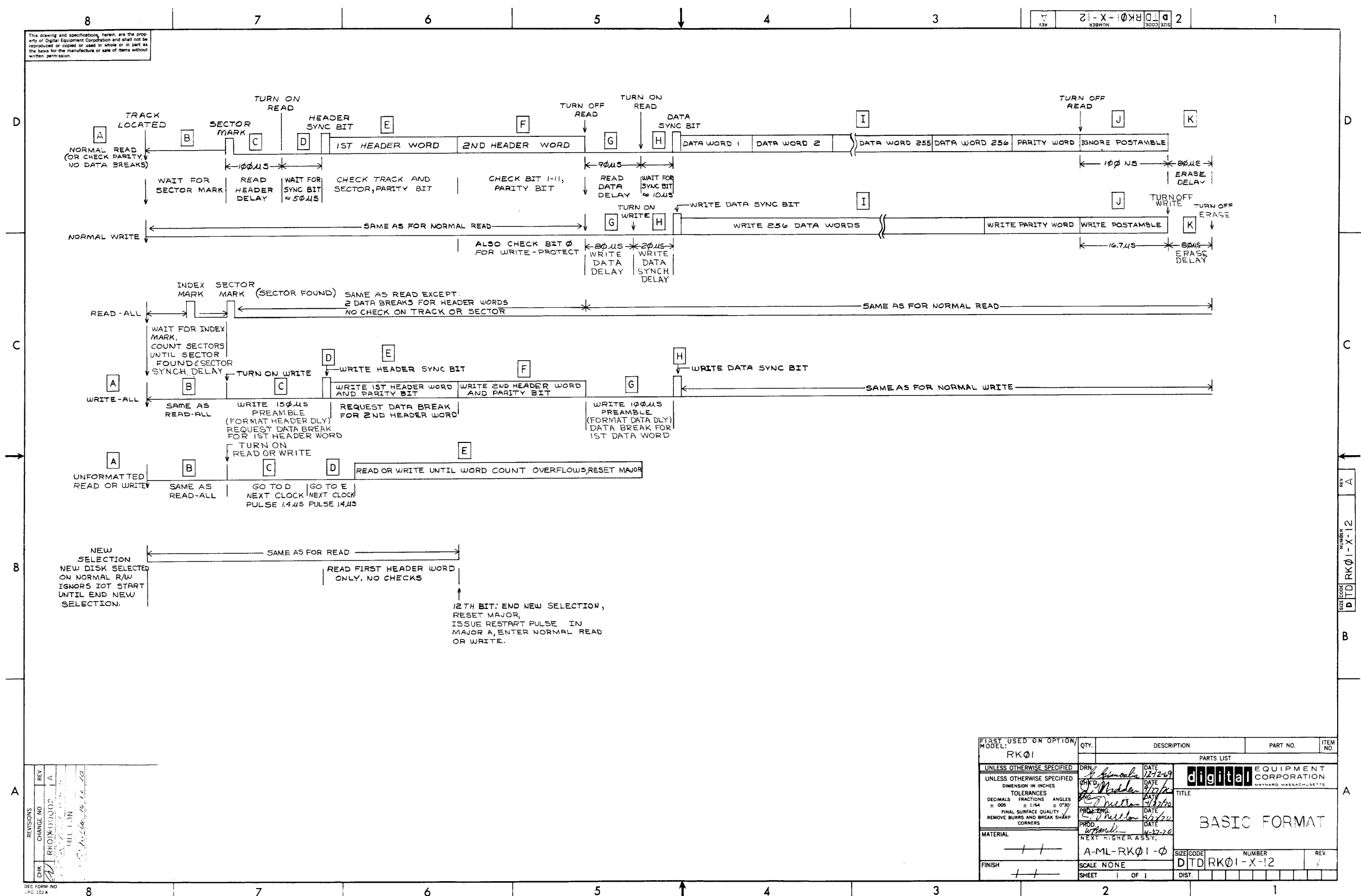
DEC	PDP
FLIP CHIP	FOCAL
DIGITAL	COMPUTER LAB

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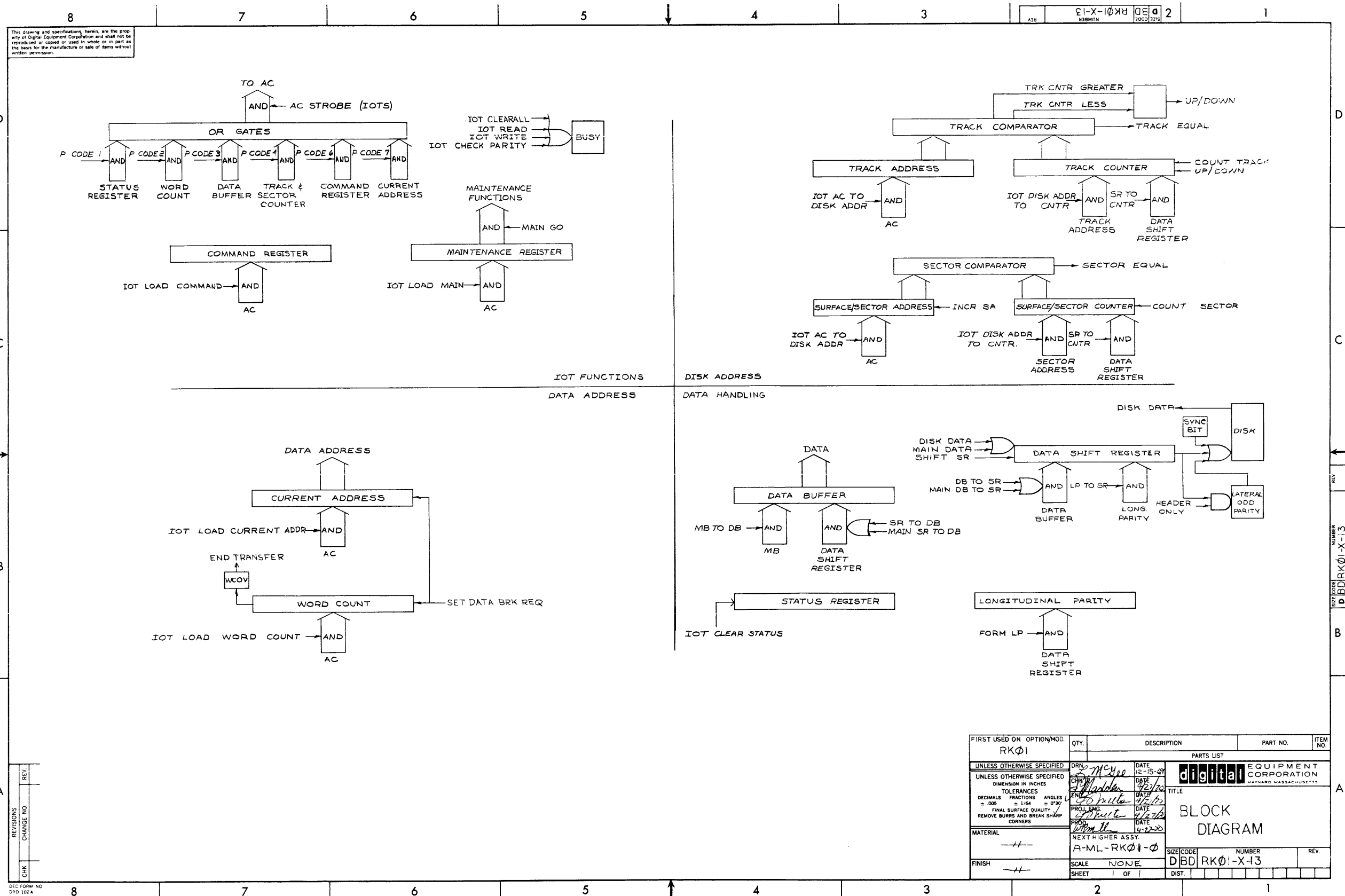
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REV	1 A
CHANGE NO	RK01-X-12
CHK	MILLIN
DATE	11-16-66
BY	11-16-66

FIRST USED ON OPTION/ MODEL:	QTY.	DESCRIPTION	PART NO.	ITEM NO.
RK01				
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
DIMENSION IN INCHES	CHK'D	DATE	TITLE	
TOLERANCES	BY	DATE	BASIC FORMAT	
DECIMALS FRACTIONS ANGLES	BY	DATE		
± .005 ± 1/64 ± 0°30'	BY	DATE		
FINAL SURFACE QUALITY	PROD	DATE		
REMOVE BURRS AND BREAK SHARP CORNERS	BY	DATE		
MATERIAL	NEXT HIGHER ASSY.			
FINISH	A-ML-RK01-0			
SCALE NONE	SIZE CODE	NUMBER	REV.	
SHEET 1 OF 1	D1D	RK01-X-12		

Figure II-1 RK01 Basic Format Diagram



REV	
CHANGE NO.	
CHK	

FIRST USED ON	OPTION/MOD.	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST					
UNLESS OTHERWISE SPECIFIED	DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		
DIMENSION IN INCHES	CHK	DATE	TITLE		
TOLERANCES		DATE	BLOCK DIAGRAM		
DECIMALS FRACTIONS ANGLES		DATE	SIZE CODE NUMBER		
± .005 ± 1/64 ± 0°30'		DATE	DBD RK01-X-13		
FINAL SURFACE QUALITY	PROJ. ENG.	DATE	REV.		
REMOVE BURRS AND BREAK SHARP CORNERS	PROD.	DATE	DIST.		
MATERIAL	NEXT HIGHER ASSY.				
FINISH	A-ML-RK01-0				
	SCALE NONE				
	SHEET 1 OF 1				

Figure II-2 RK01 Block Diagram

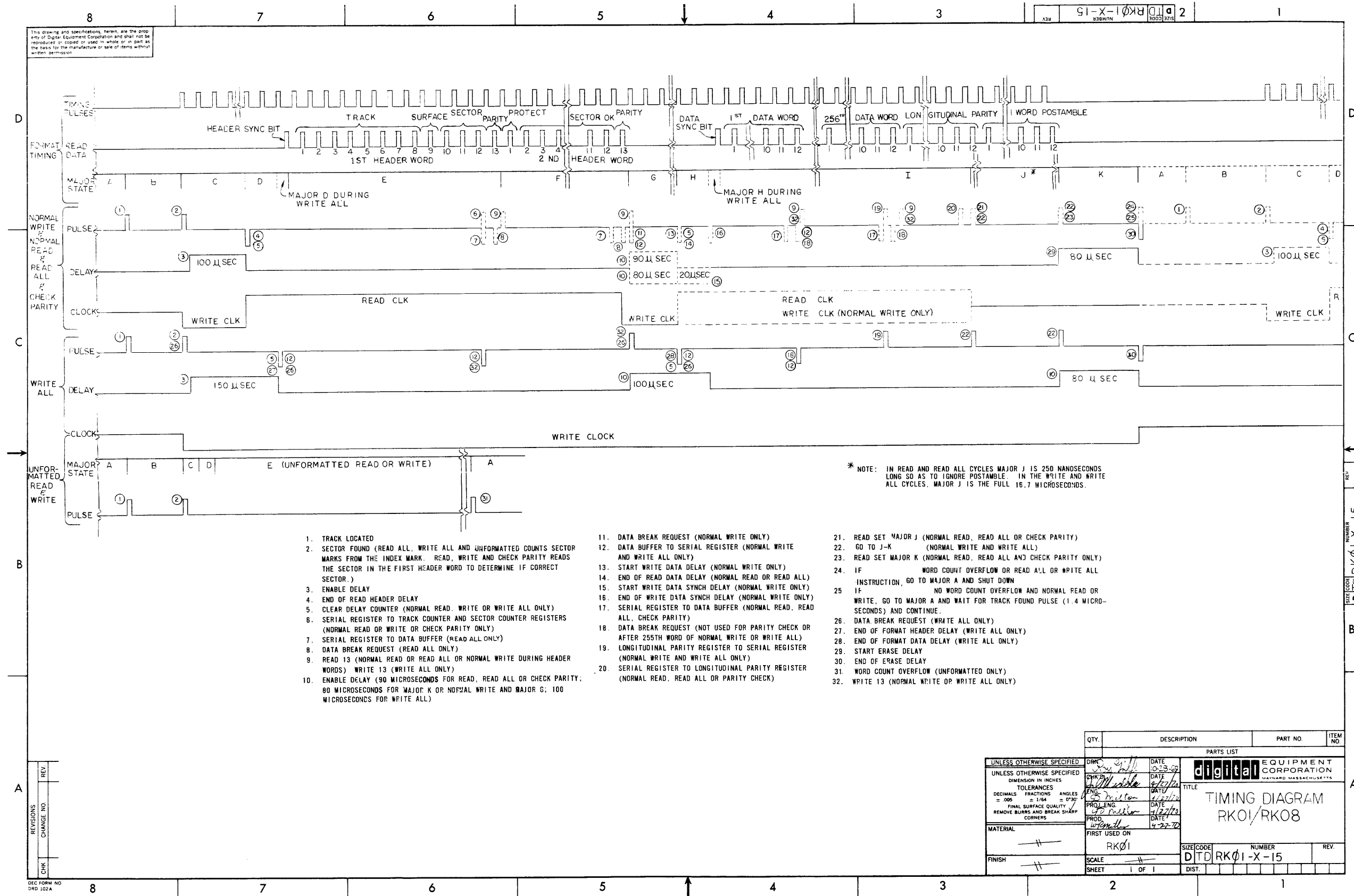
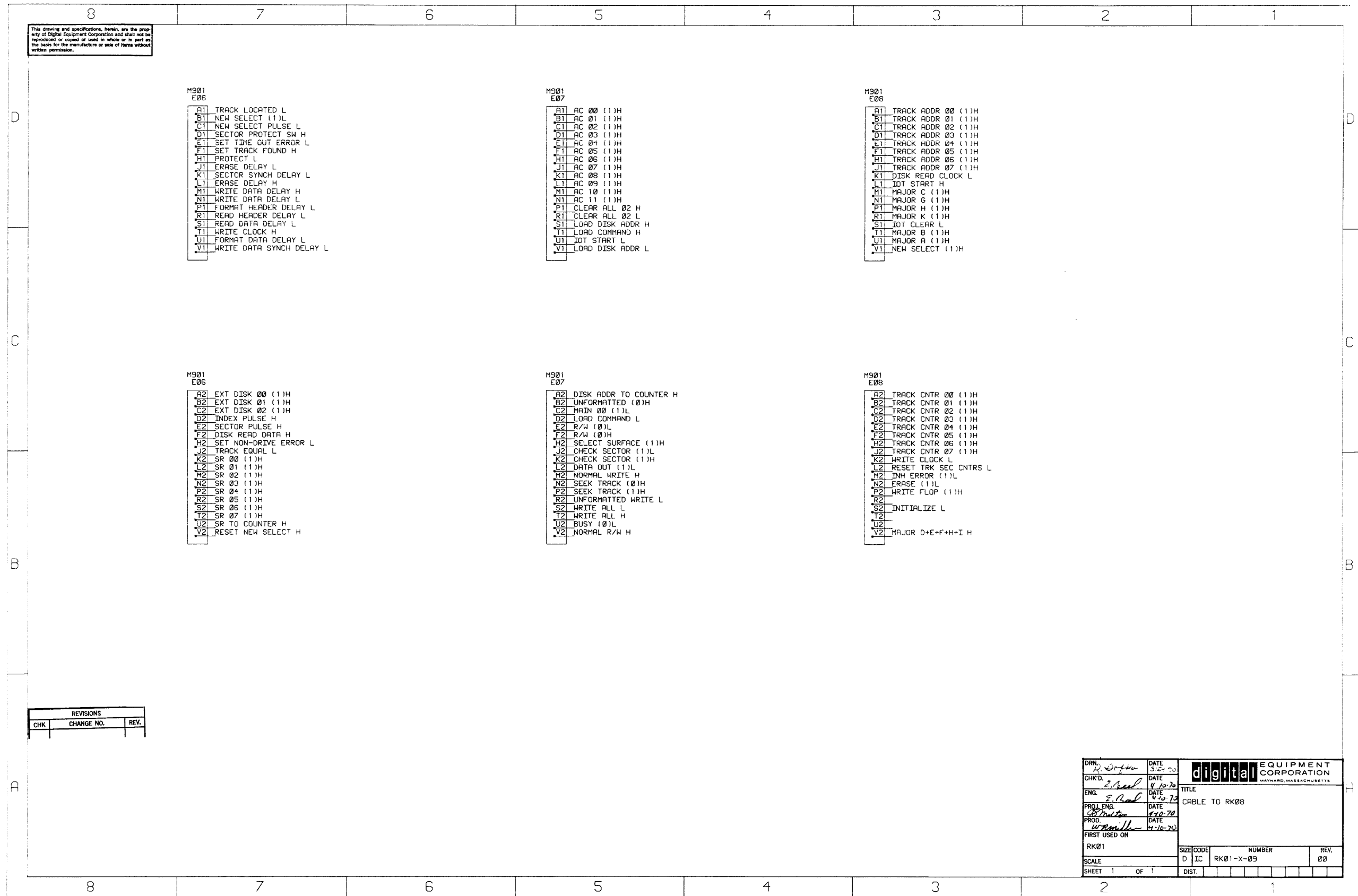


Figure II-4 RK01/RK08 Timing Diagram



DRN: <i>S. Brad</i>	DATE: 5-20-70	digital EQUIPMENT CORPORATION <small>MAYNARD, MASSACHUSETTS</small>
CHK'D: <i>S. Brad</i>	DATE: 4-10-70	
ENG: <i>S. Brad</i>	DATE: 4-10-70	
PROJ. ENG: <i>W. Miller</i>	DATE: 4-10-70	
PROD. <i>W. Miller</i>	DATE: 4-10-70	
FIRST USED ON		TITLE
RK01		CABLE TO RK08
SCALE	SIZE CODE	NUMBER
SHEET 1 OF 1	D IC	RK01-X-09
	DIST.	REV. 00

Figure II-6 Cable to RK08 Block Schematic Diagram

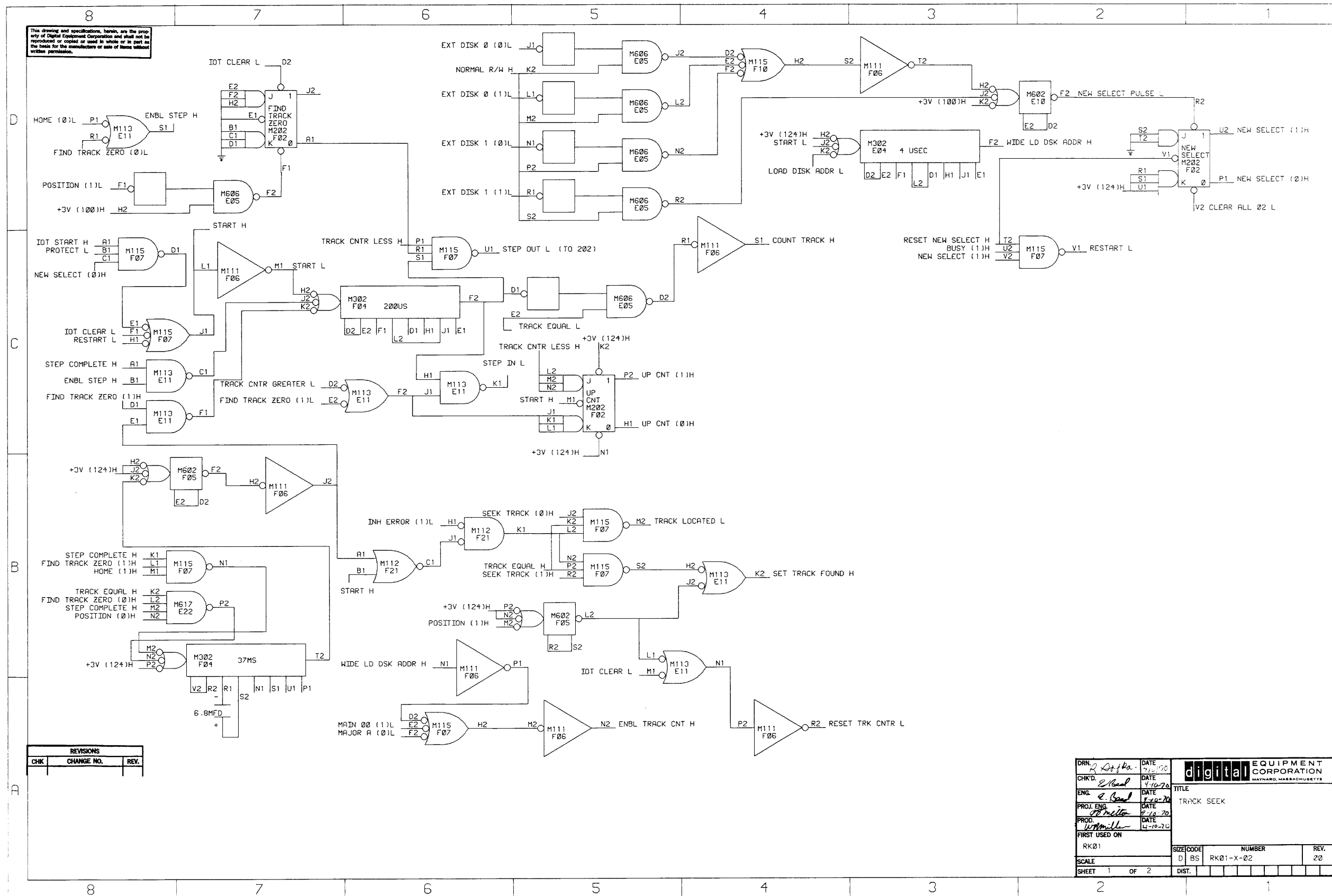
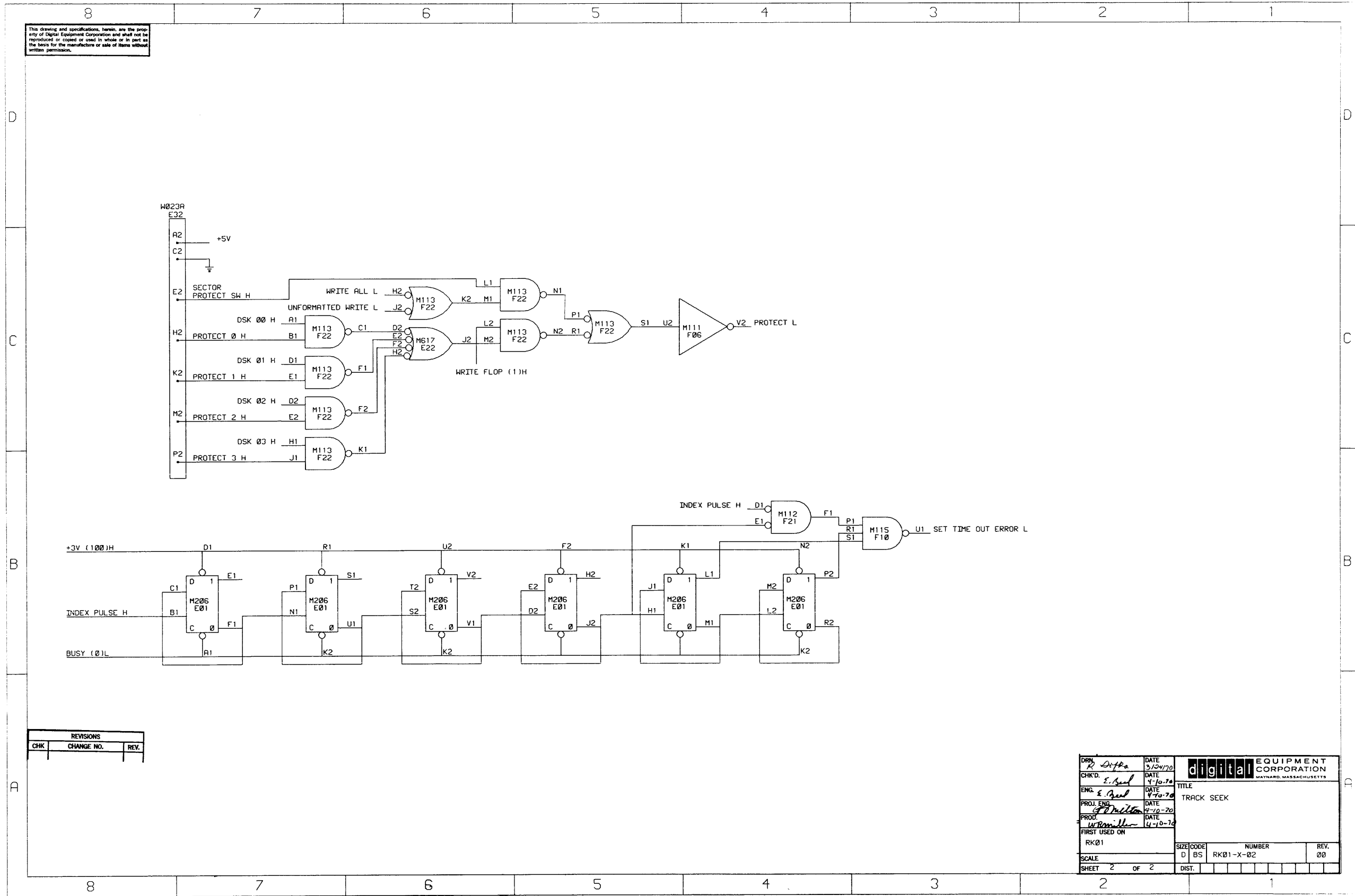


Figure II-7 Track Seek Block Schematic Diagram (Sheet 1)



REVISIONS		
CHK	CHANGE NO.	REV.

DRW <i>P. DiPa</i>	DATE 3/24/70	digital EQUIPMENT CORPORATION WAYNARD, MASSACHUSETTS
CHK'D <i>E. Reed</i>	DATE 4/10/70	
ENG <i>E. Reed</i>	DATE 4/10/70	TITLE TRACK SEEK
PROJ. ENG. <i>G. Miller</i>	DATE 4-10-70	SIZE CODE D BS
PROD. <i>W. Bonner</i>	DATE 4-10-70	
FIRST USED ON RK01	SCALE	NUMBER RK01-X-02
SHEET 2 OF 2	DIST.	REV. 00

Figure II-7 Track Seek Block Schematic Diagram (Sheet 2)

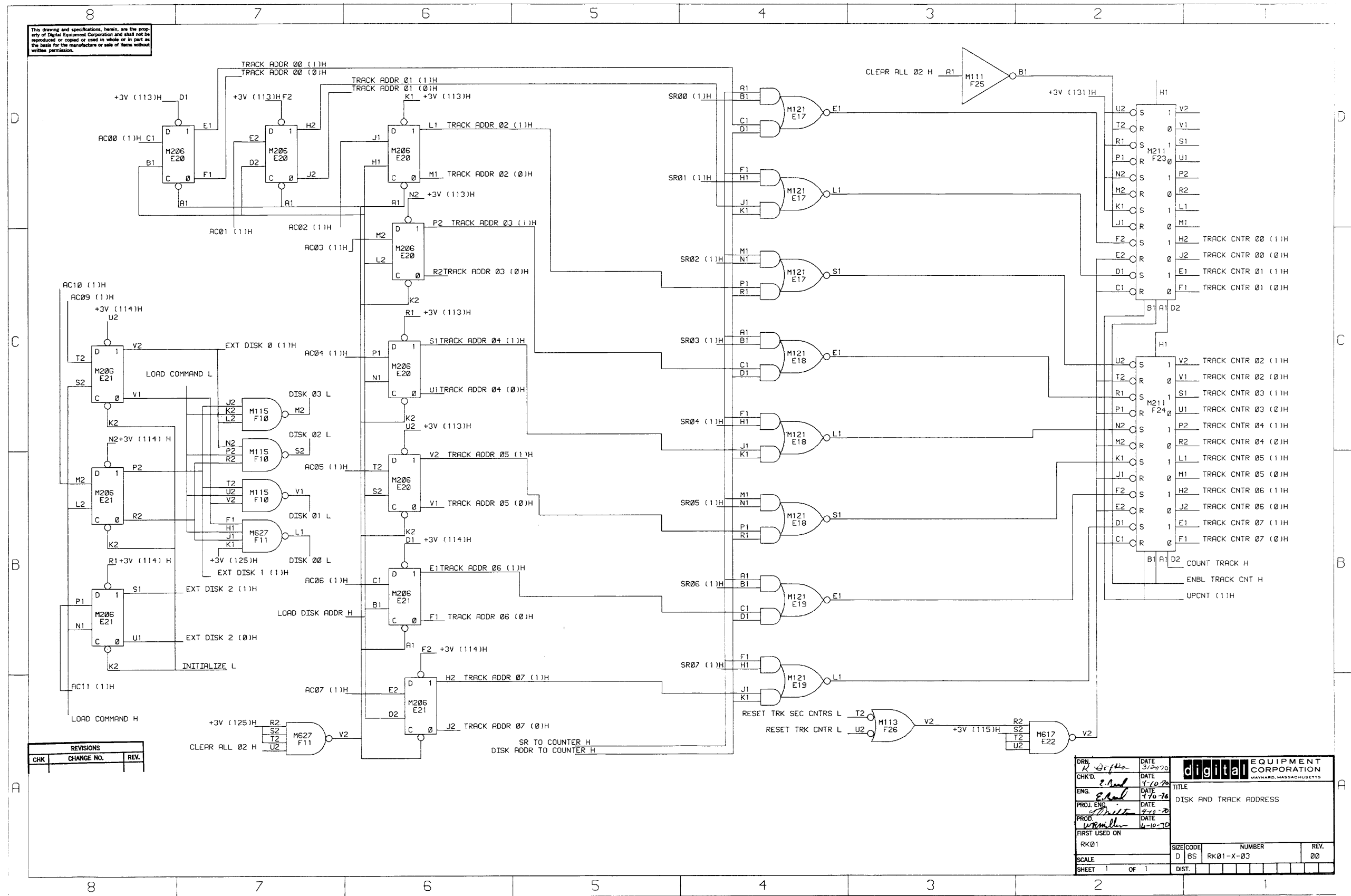


Figure II-8 Disk and Track Address Block Schematic Diagram

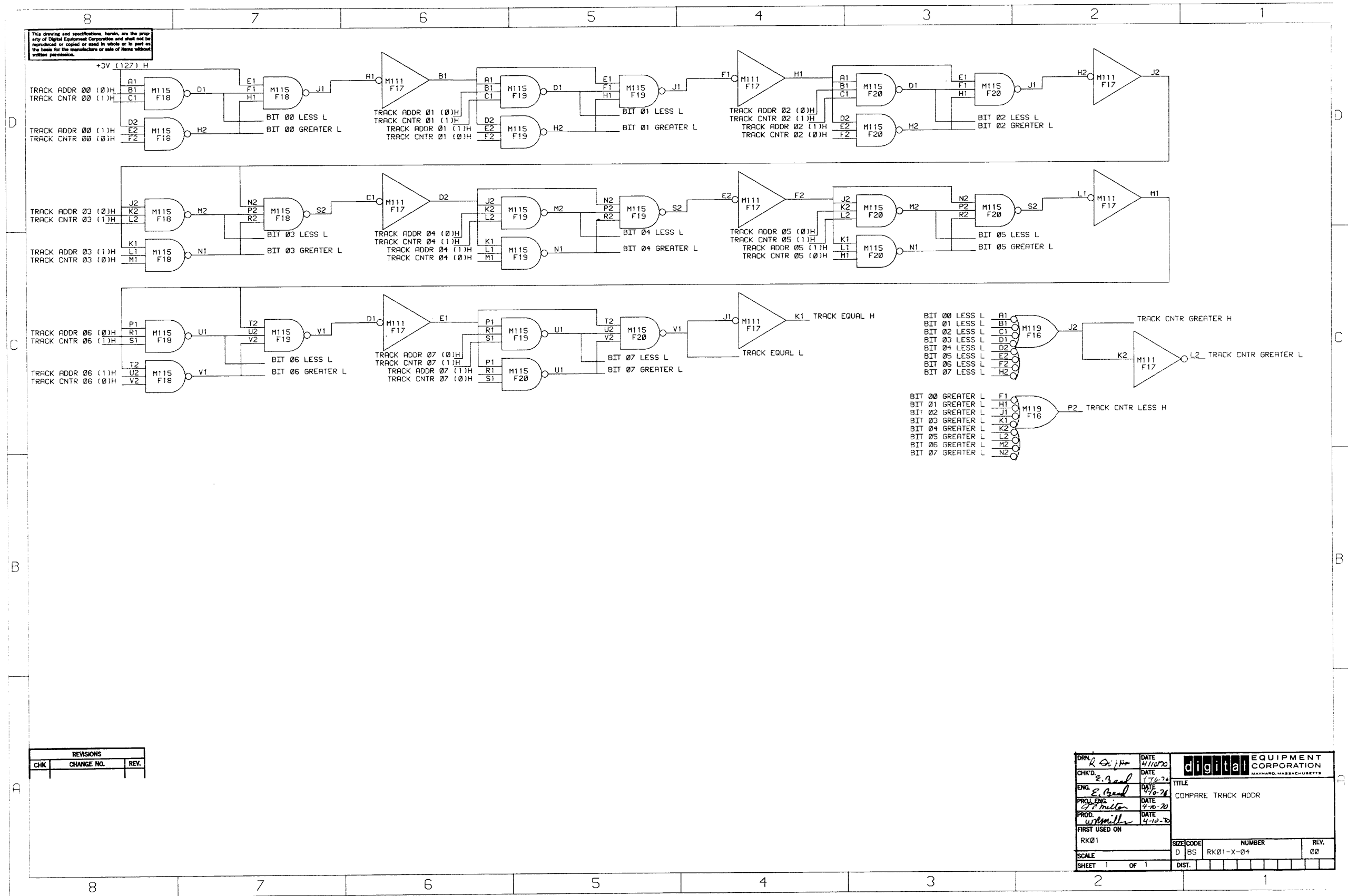
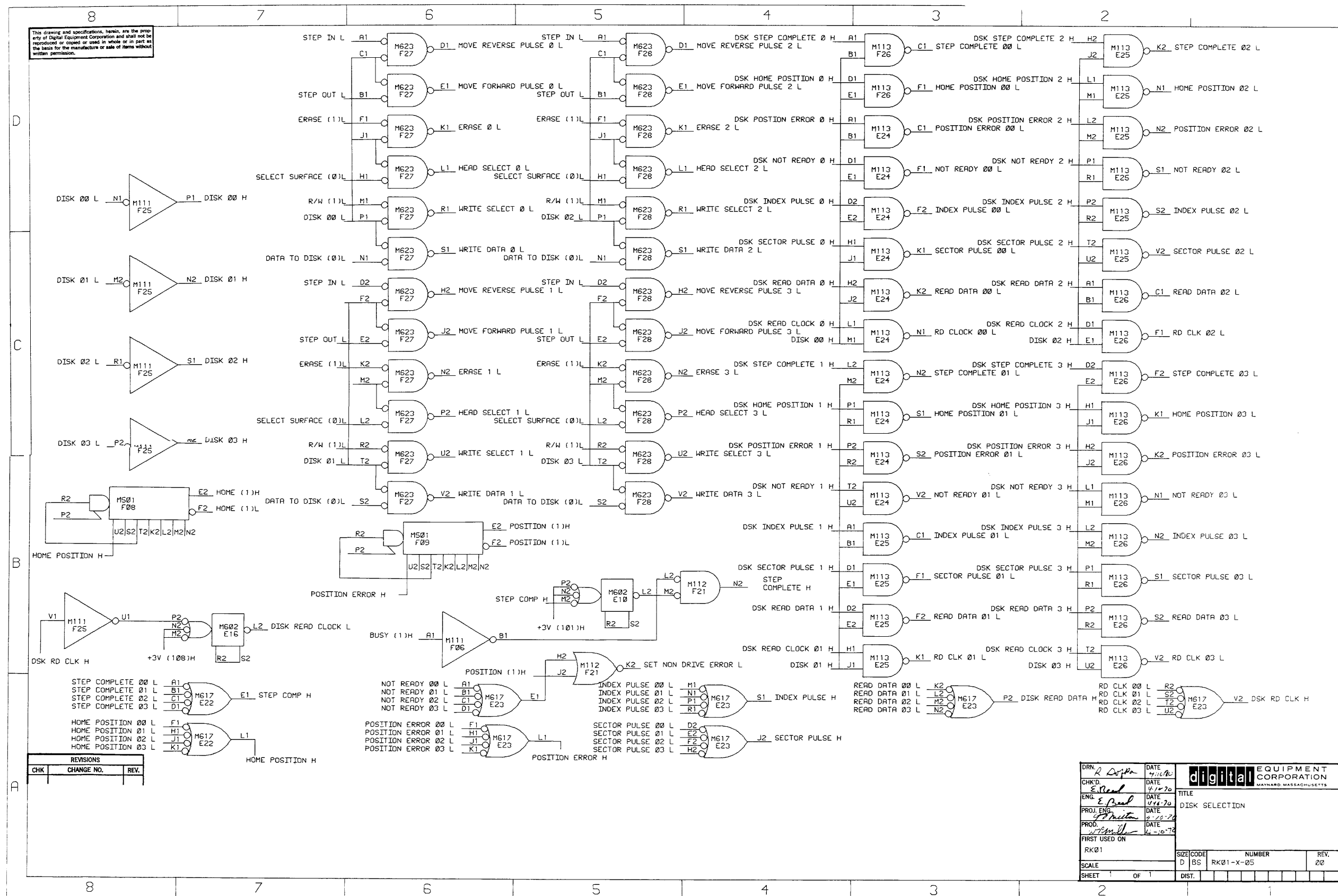


Figure II-9 Compare Track Address Block Schematic Diagram



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REVISIONS		
CHK	CHANGE NO.	REV.

DRN: <i>R. Dwyer</i>	DATE: 4-16-70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D: <i>E. Paul</i>	DATE: 4-16-70	
ENG: <i>E. Paul</i>	DATE: 4-16-70	TITLE: DISK SELECTION
PROJ. ENG: <i>E. Paul</i>	DATE: 4-16-70	
PROD: <i>E. Paul</i>	DATE: 4-16-70	
FIRST USED ON: RK01		
SCALE: D BS	SIZE CODE: RK01-X-05	NUMBER: 08
SHEET: 1 OF 1	DIST.:	REV. 00

Figure II-10 Disk Selection Block Schematic Diagram

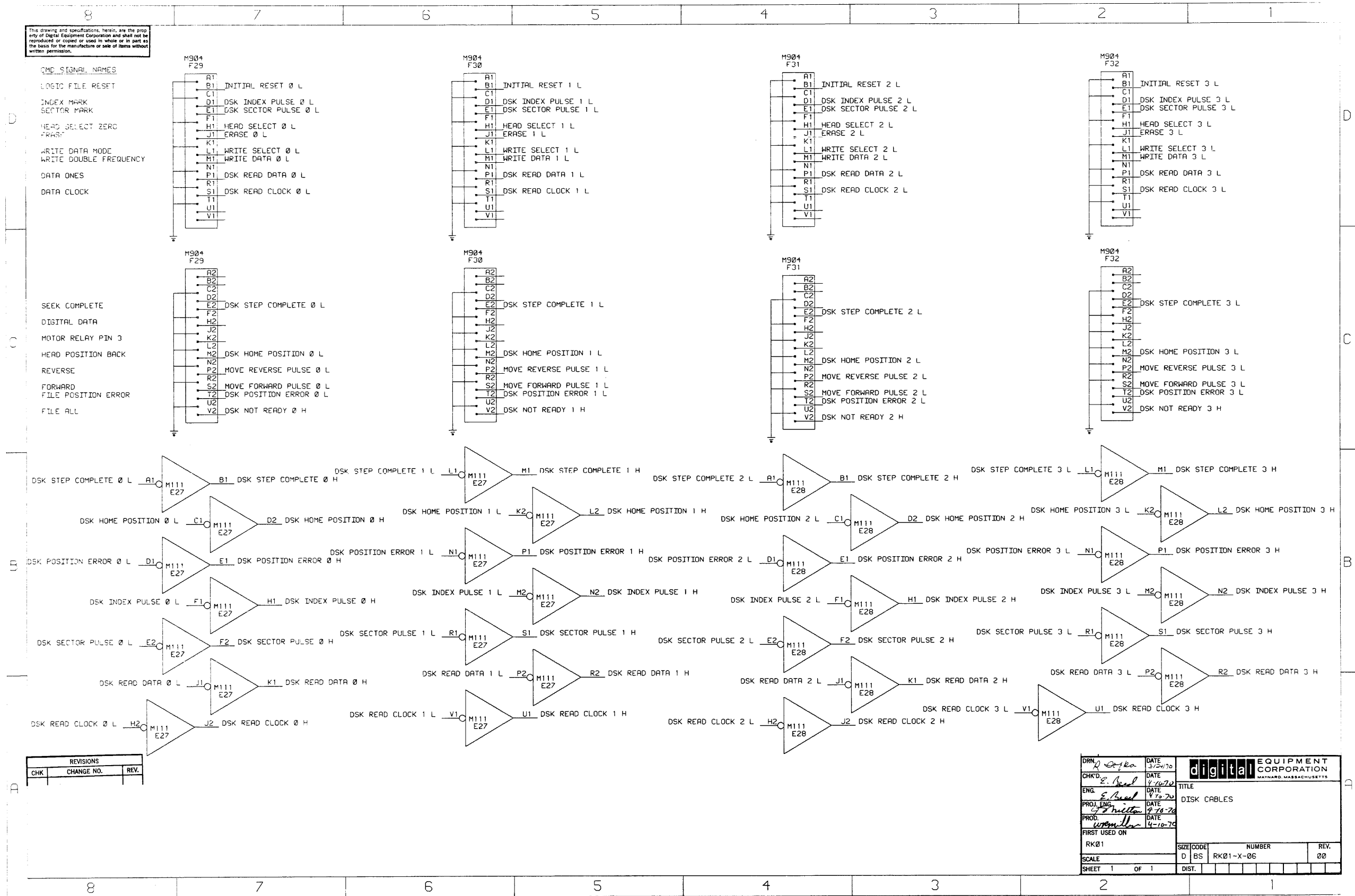
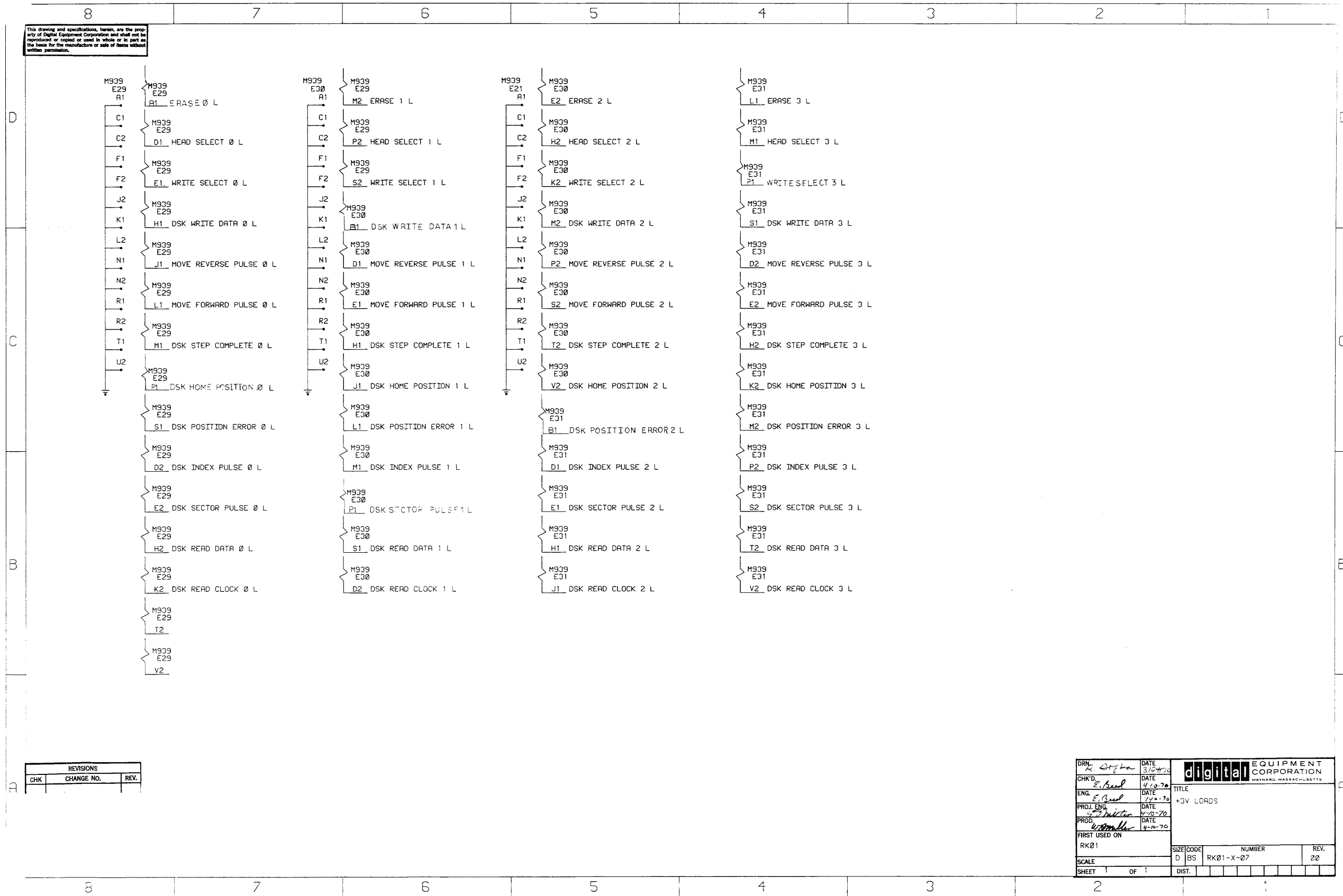


Figure II-11 Disk Cables Block Schematic Diagram



REVISIONS		
CHK	CHANGE NO.	REV.

DRN. <i>R. D. ...</i>	DATE 3/10/70	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D. <i>E. Reed</i>	DATE 4/10/70	
ENG. <i>E. Reed</i>	DATE 1/10/70	TITLE +3V LOADS
PROJ. ENG. <i>E. Reed</i>	DATE 4/10/70	
PROD. <i>W. ...</i>	DATE 4/10/70	
FIRST USED ON RK01	SIZE CODE D BS	NUMBER RK01-X-07
SCALE	DIST.	REV. 00
SHEET 1 OF 1		

Figure II-12 +3V Loads Block Schematic Diagram

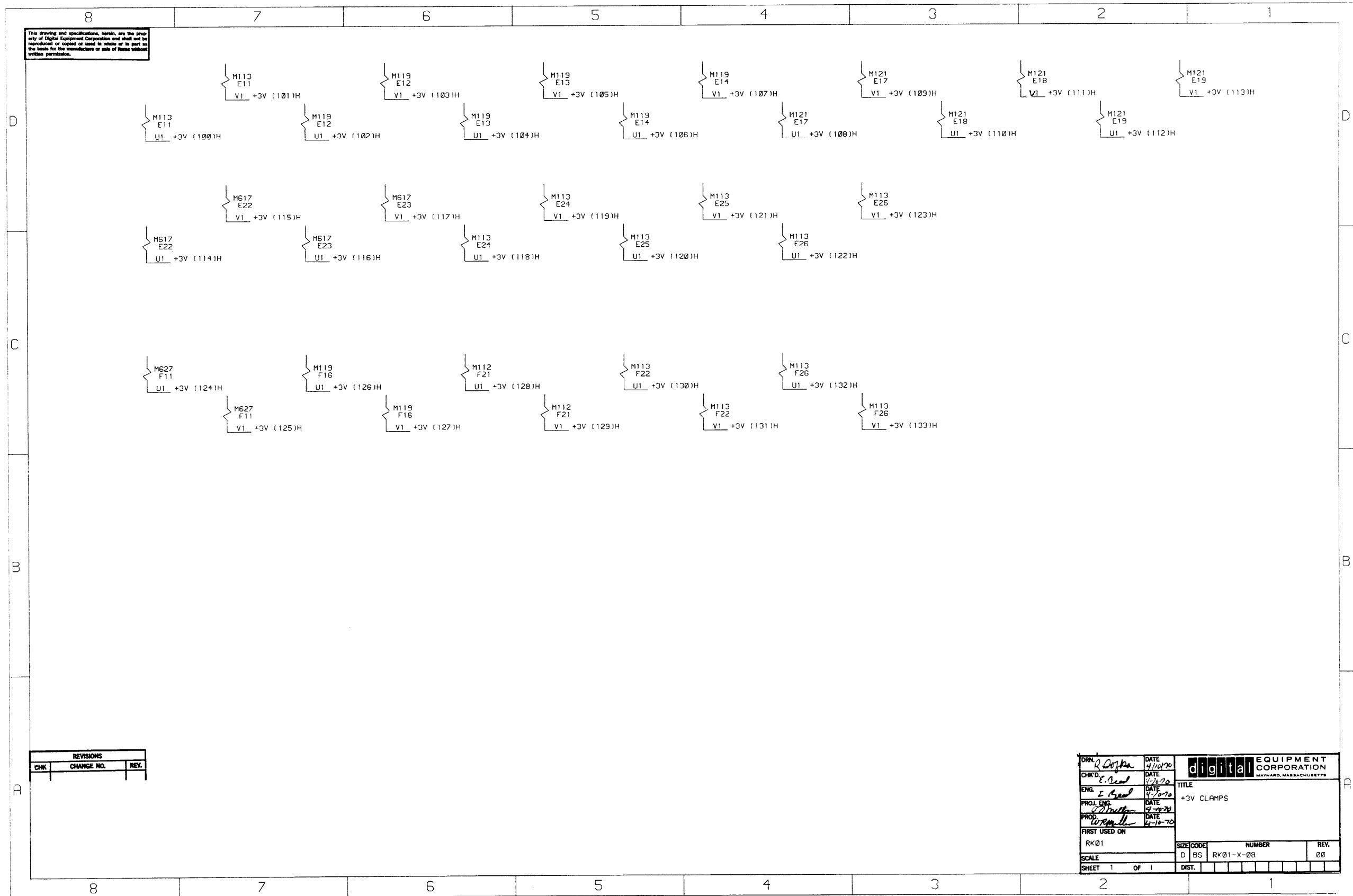
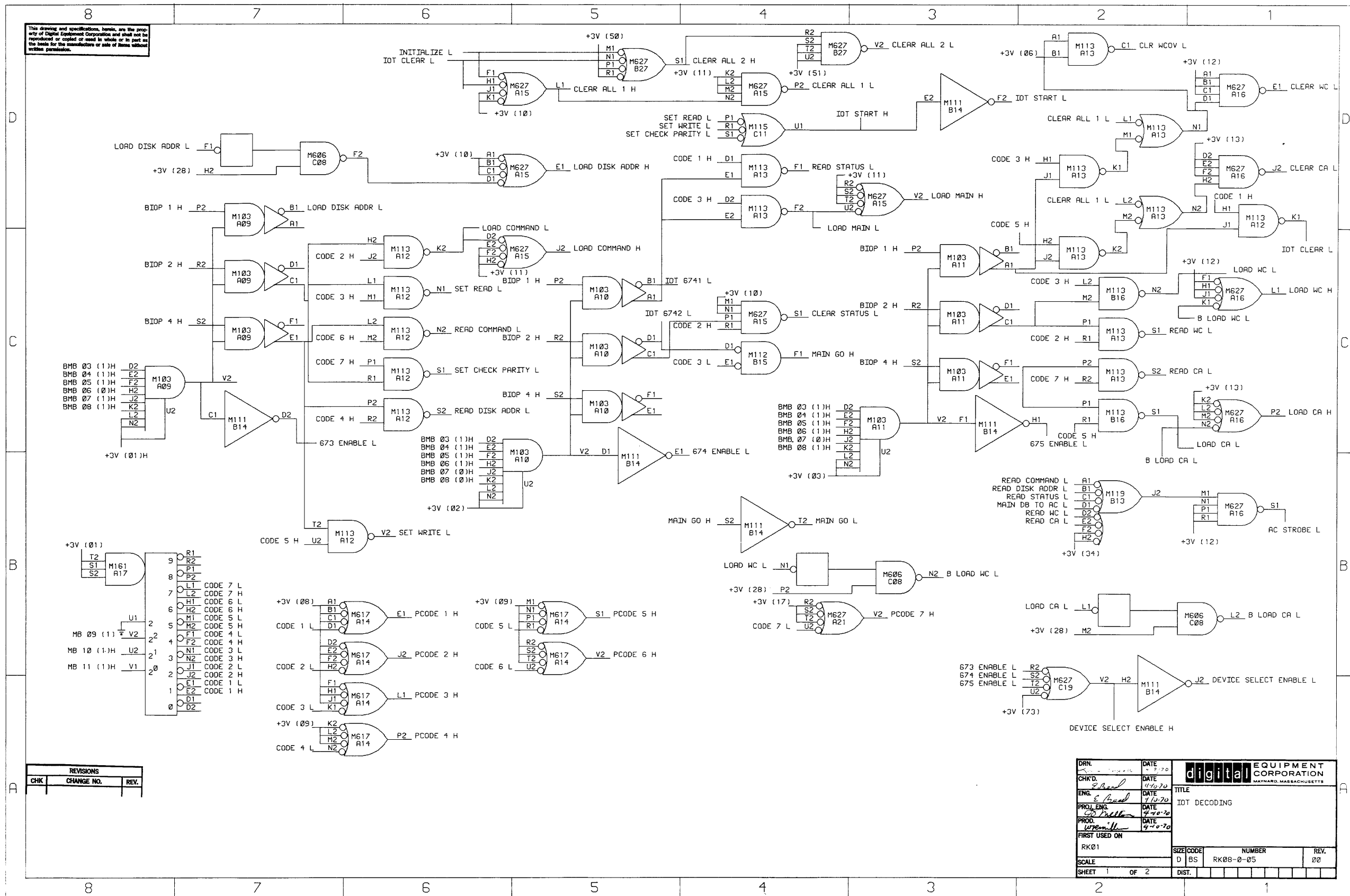


Figure II-13 +3V Clamp Block Schematic Diagram



REVISIONS		
CHK	CHANGE NO.	REV.

DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D	DATE	
ENG.	DATE	TITLE
PROJ. ENG.	DATE	IOT DECODING
PROD.	DATE	
FIRST USED ON		
RK01		
SCALE	SIZE CODE	NUMBER
SHEET 1 OF 2	D	RK08-0-05
	DIST.	REV. 00

Figure II-14 IOT Decoding Block Schematic Diagram

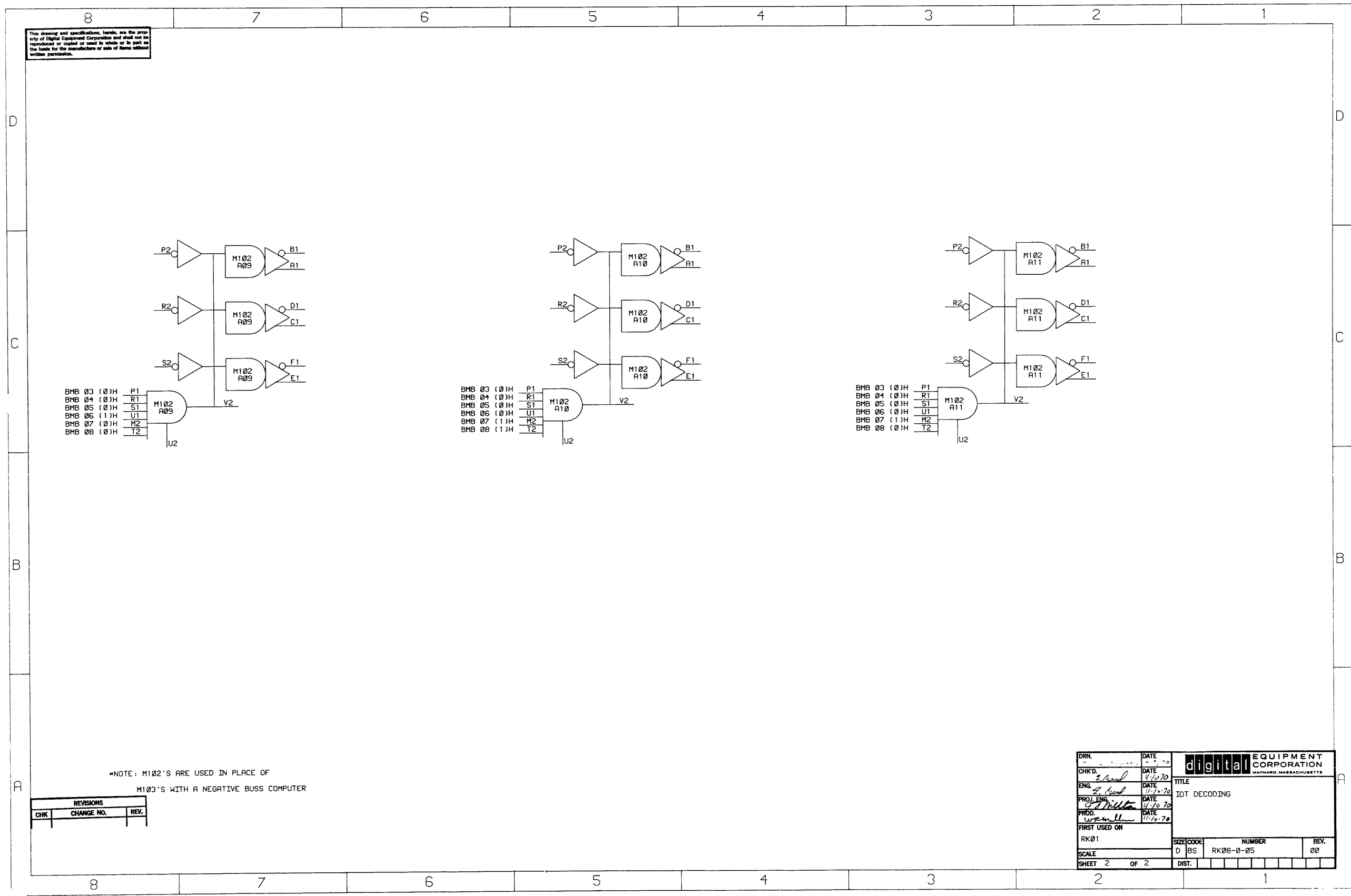


Figure II-15 IOT Decoding Block Schematic Diagram

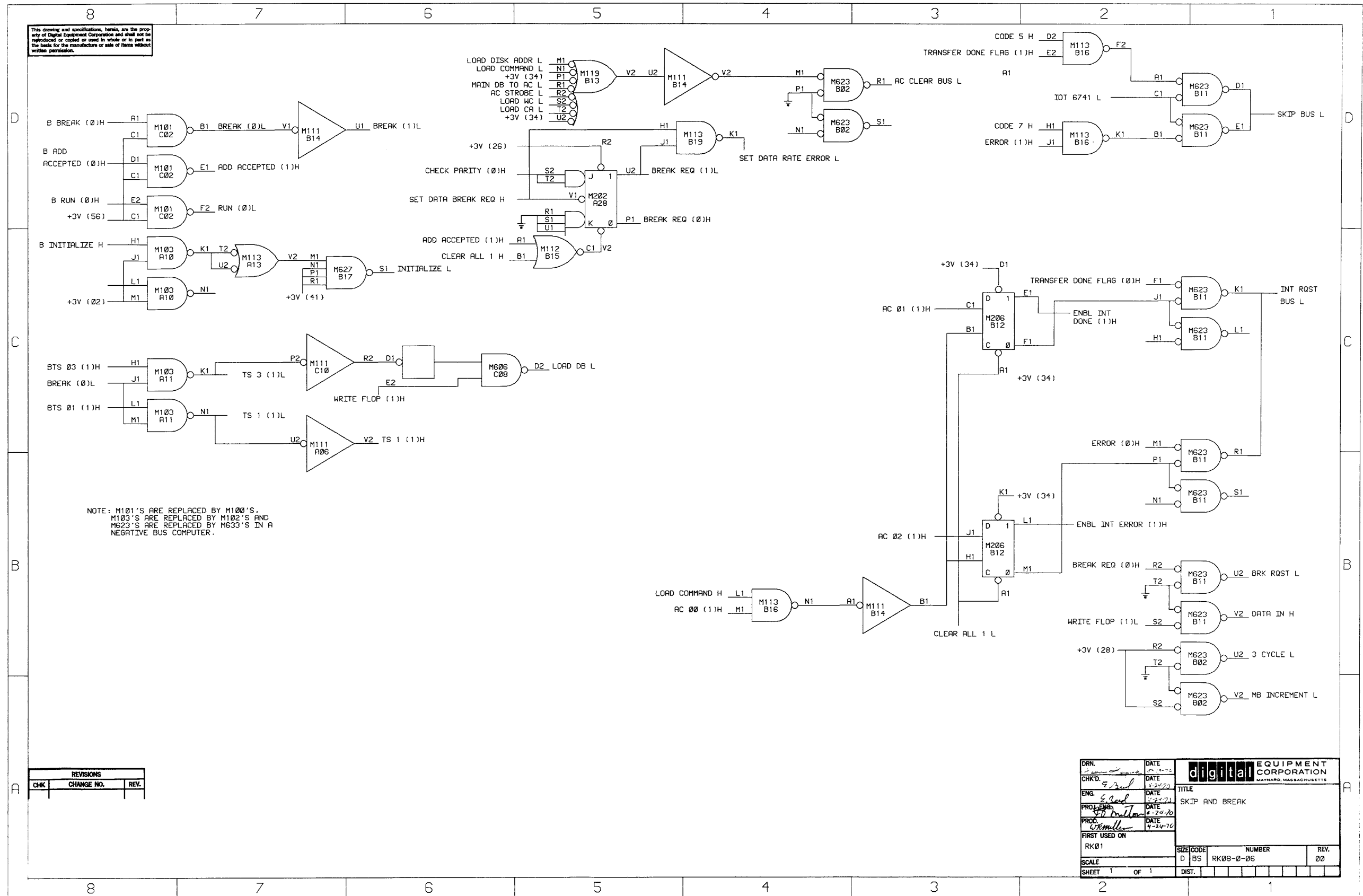


Figure II-16 Skip and Break Block Schematic Diagram

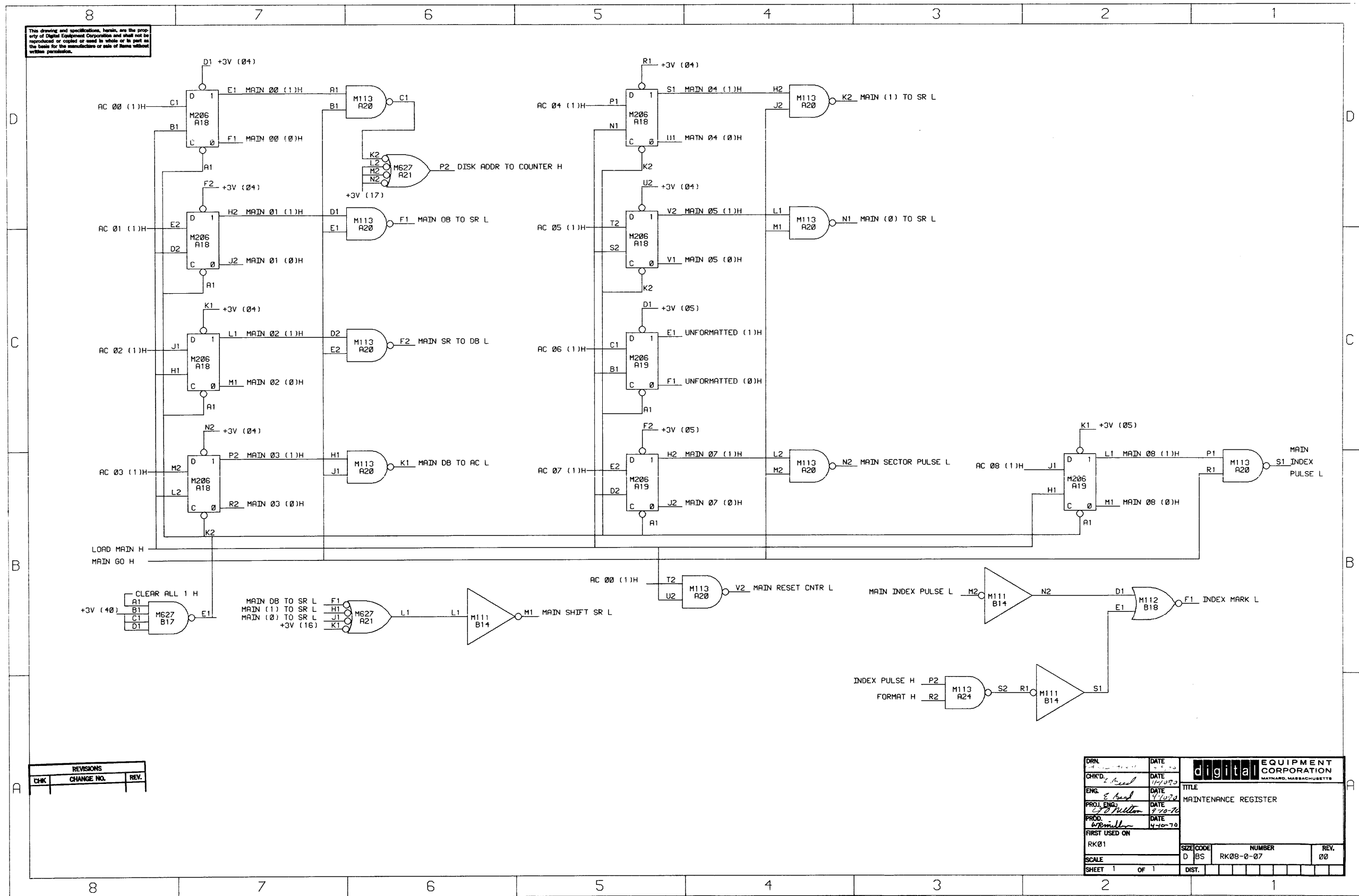


Figure II-17 Maintenance Register Block Schematic Diagram

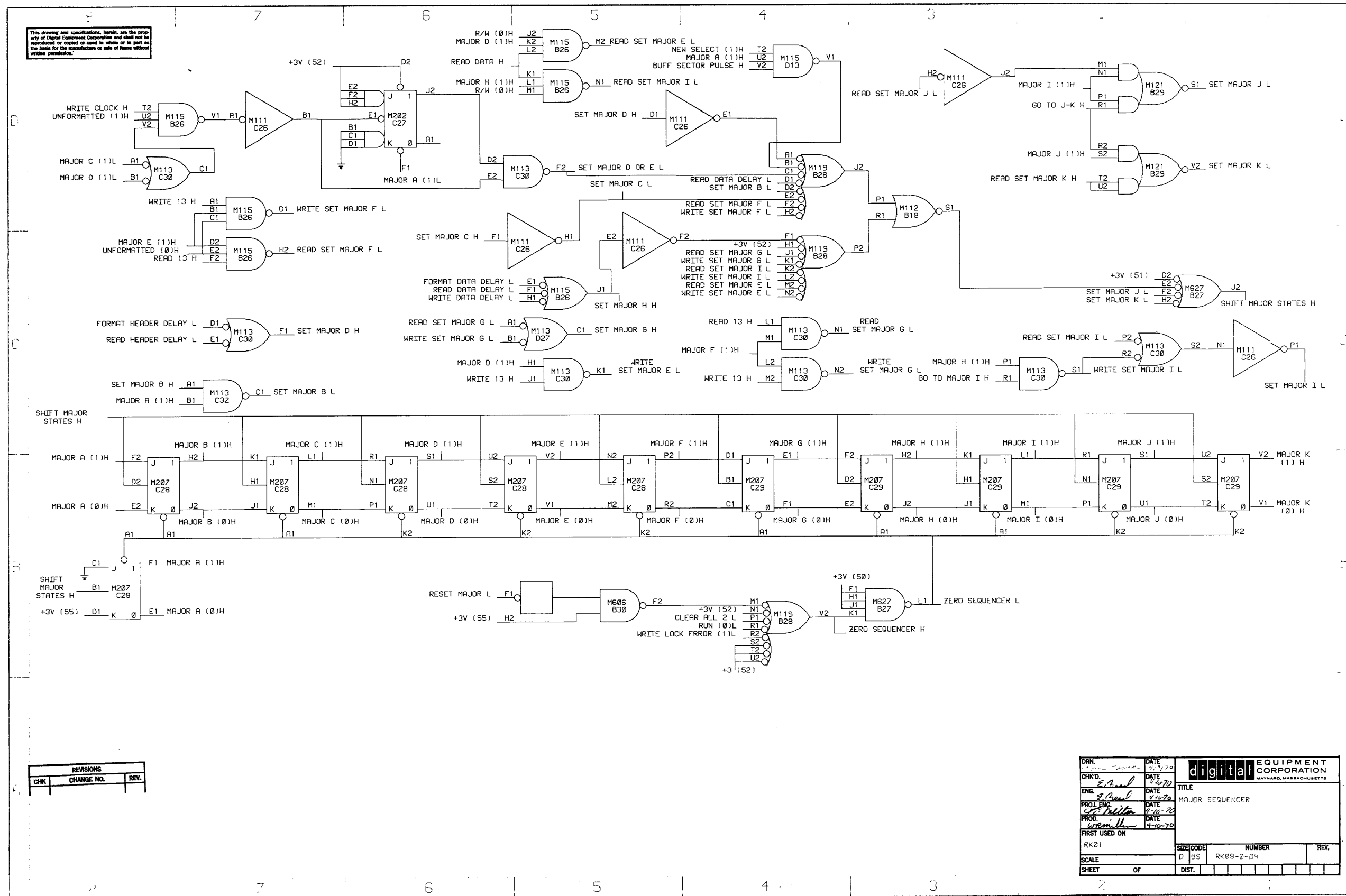


Figure II-18 Major Sequencer Register Block Schematic Diagram

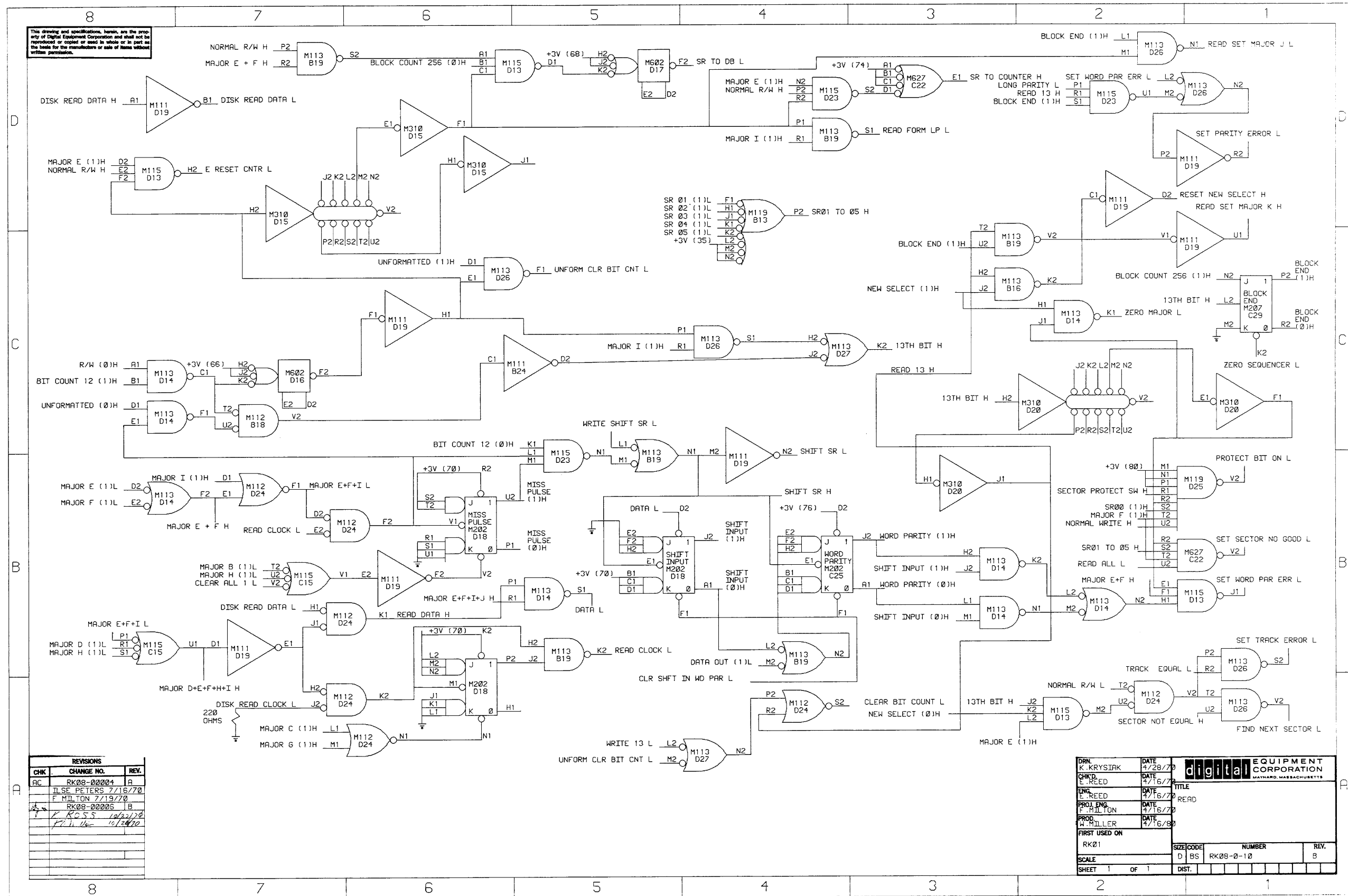


Figure II-20 Read Block Schematic Diagram

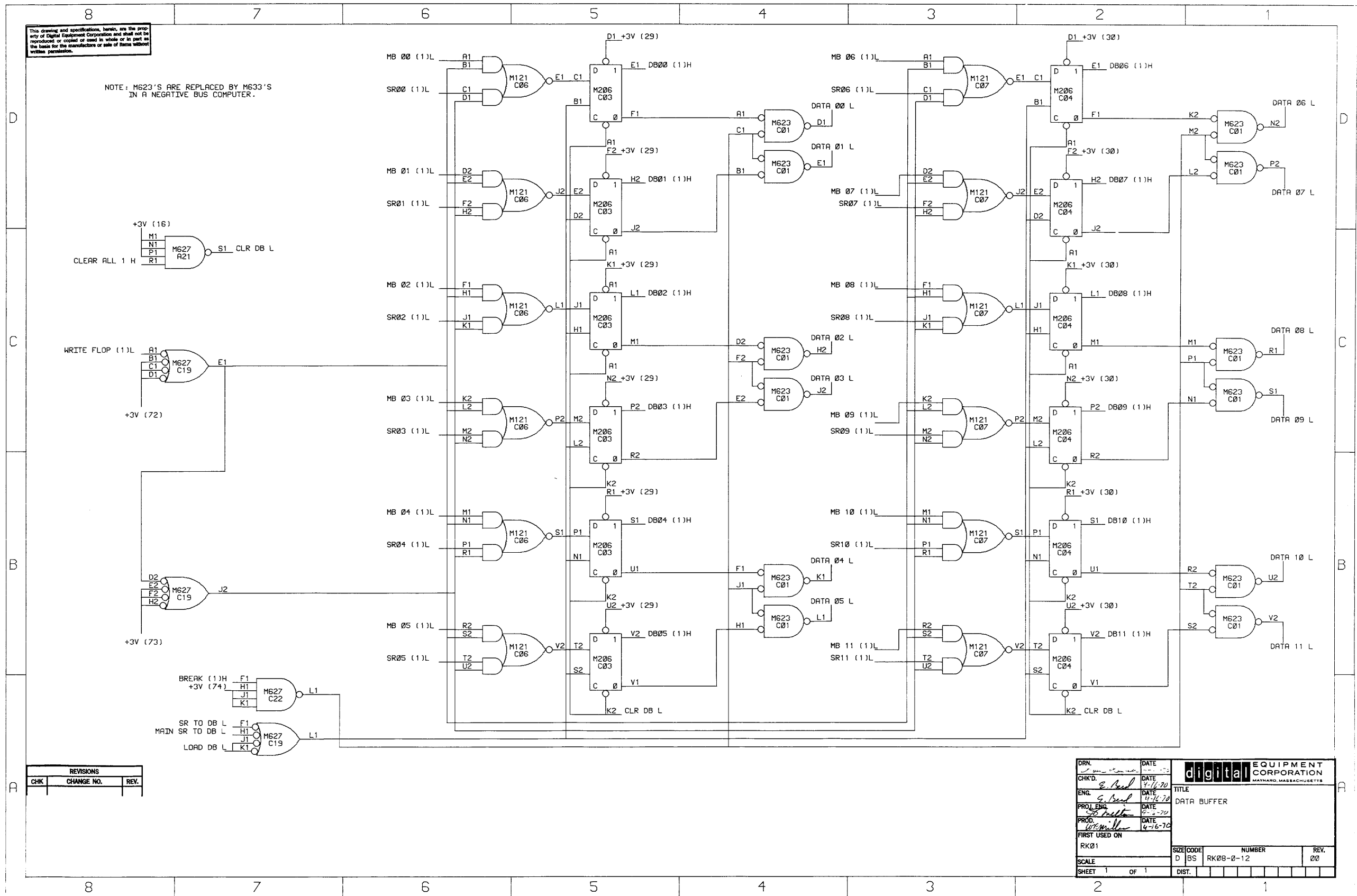


Figure II-22 Data Buffer Block Schematic Diagram

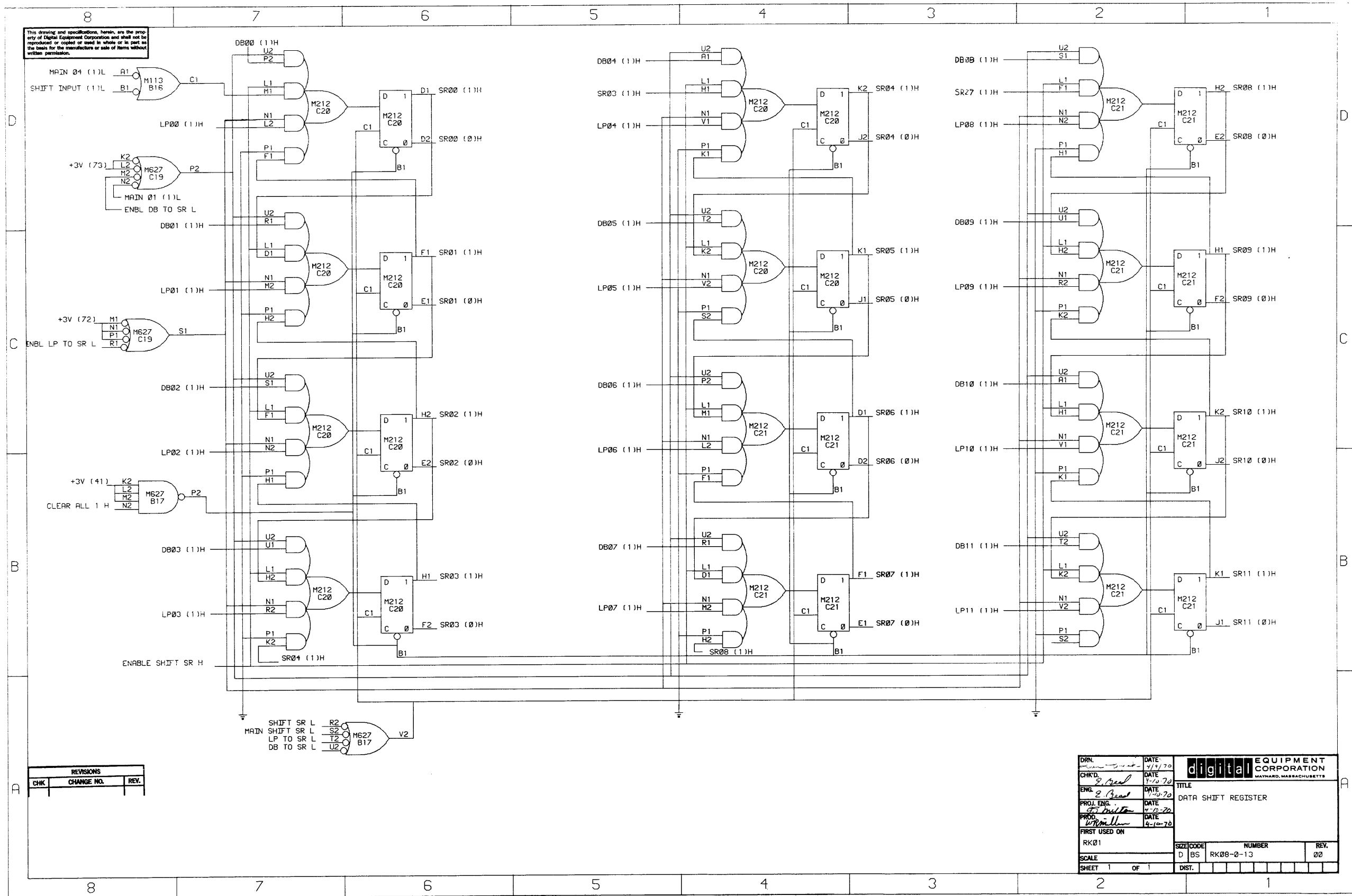


Figure II-23 Data Shift Register Block Schematic Diagram

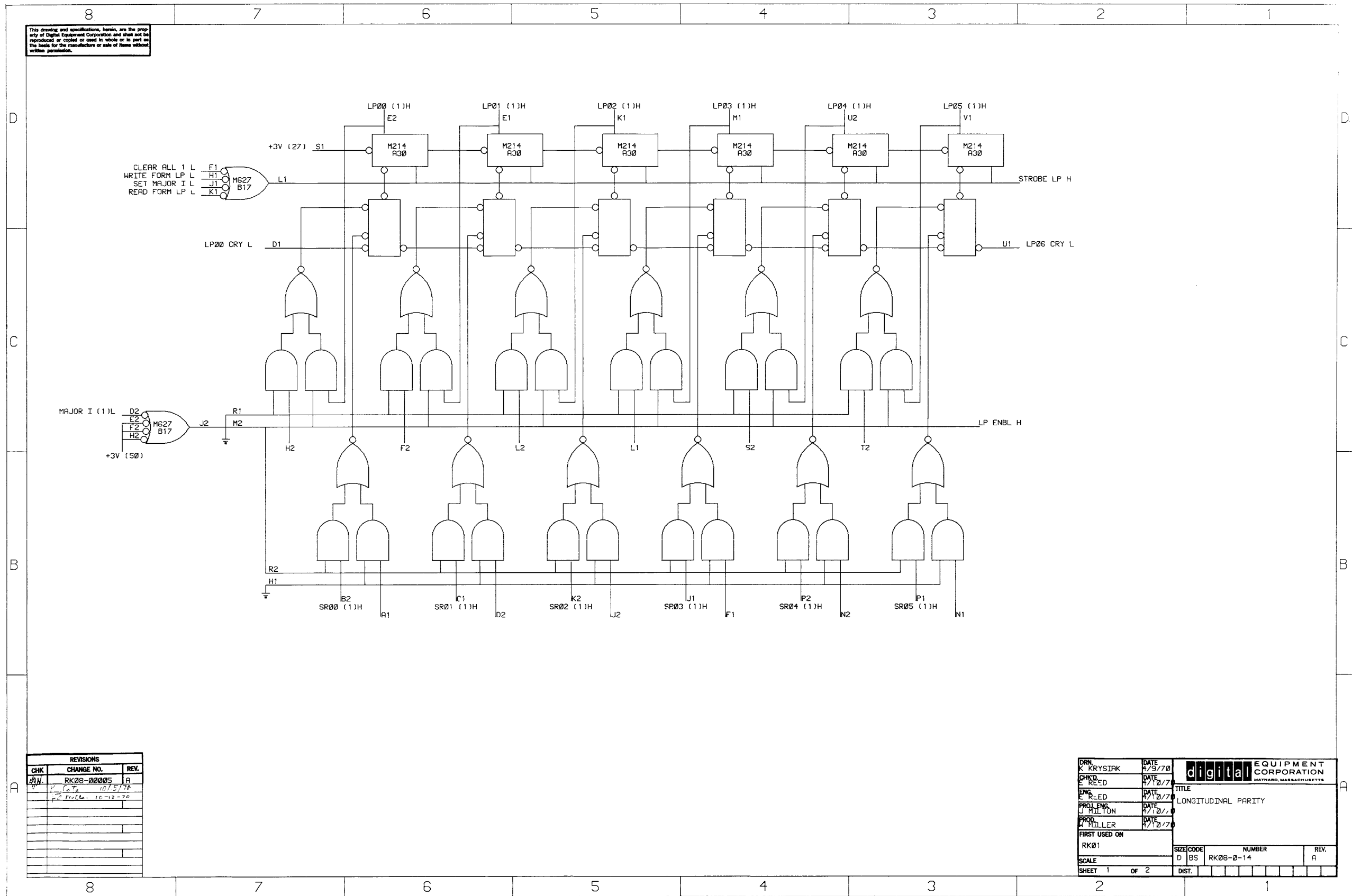


Figure II-24 Longitudinal Parity Block Schematic Diagram
(Sheet 1 of 2)

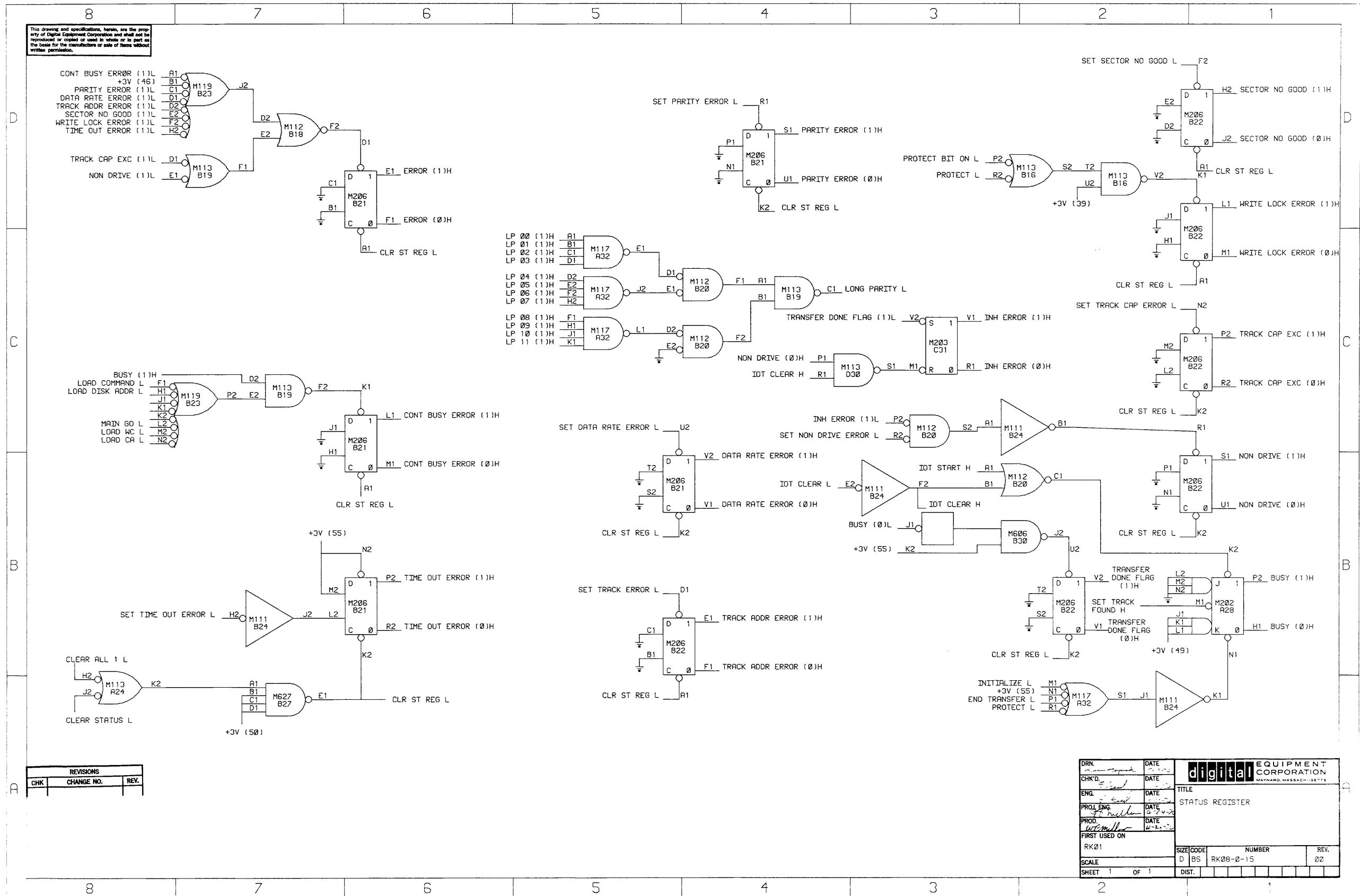
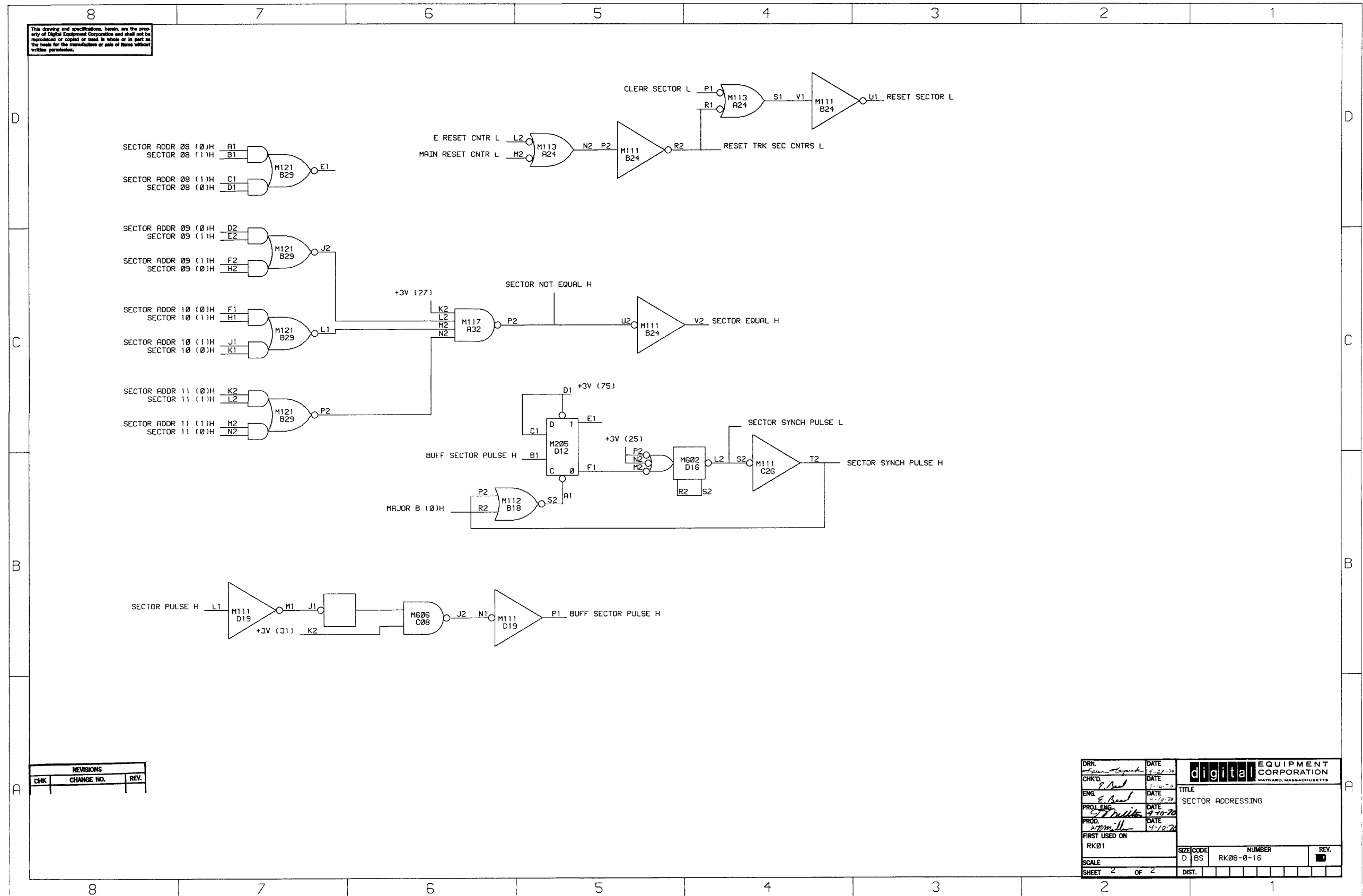


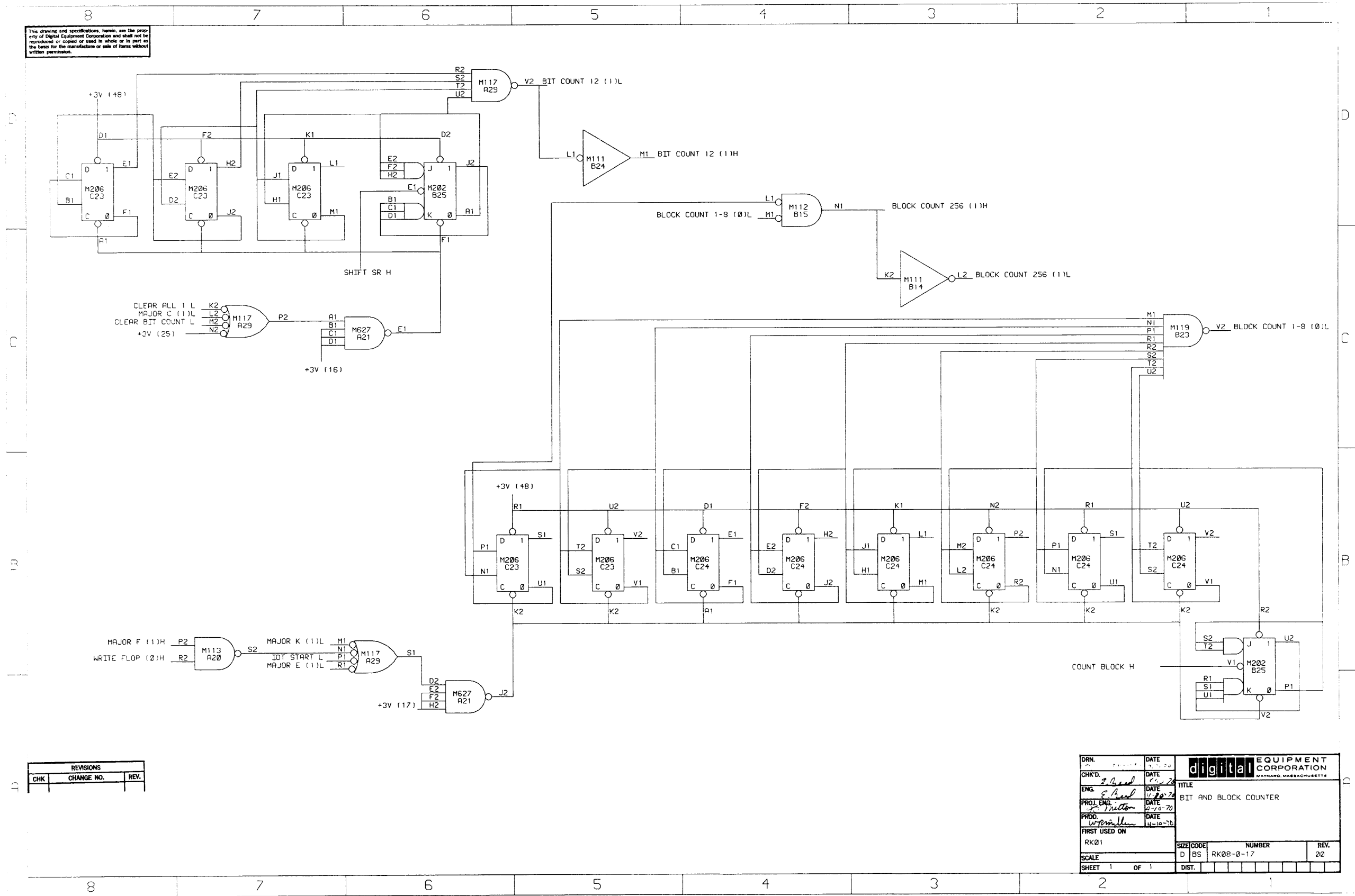
Figure II-26 Status Register Block Schematic Diagram



REVISIONS		
CHK	CHANGE NO.	REV.

DRN. <i>Ken B...</i>	DATE 4-27-70	 digital EQUIPMENT CORPORATION WATNARD, MASSACHUSETTS
CHK'D <i>E. Reed</i>	DATE 4-27-70	
ENG. <i>E. Reed</i>	DATE 4-12-70	TITLE
PROJ. ENG. <i>S.P. Miller</i>	DATE 4-10-70	SECTOR ADDRESSING
PROD. <i>S.P. Miller</i>	DATE 4-10-70	
FIRST USED ON		
RK01		
SCALE	SIZE CODE D BS	NUMBER RK08-0-16
SHEET 2 OF 2	DIST.	REV.

Figure II-28 Sector Addressing Block Schematic Diagram
(Sheet 2 of 2)



REVISIONS		
CHK	CHANGE NO.	REV.

DRN.	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE BIT AND BLOCK COUNTER
CHK'D.	DATE		
ENG.	DATE		
PROJ. ENG.	DATE		
PROD.	DATE		
FIRST USED ON		SIZE	CODE
RK01		D	BS
SCALE	SHEET	NUMBER	REV.
1	OF 1	RK08-0-17	00
DIST.			

Figure II-29 Bit and Block Counter Block Schematic Diagram

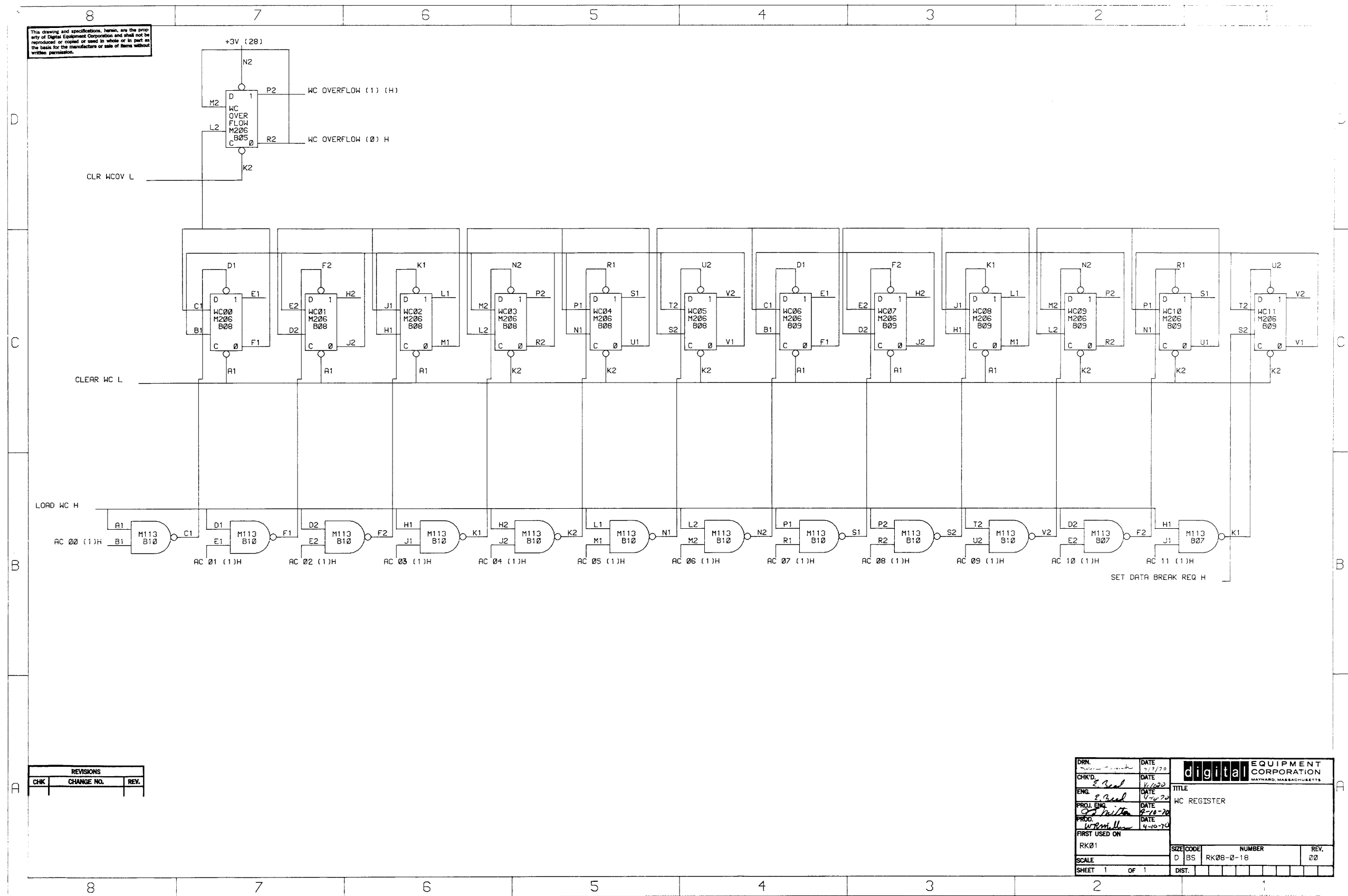


Figure II-30 Word Count (WC) Register Block Schematic Diagram

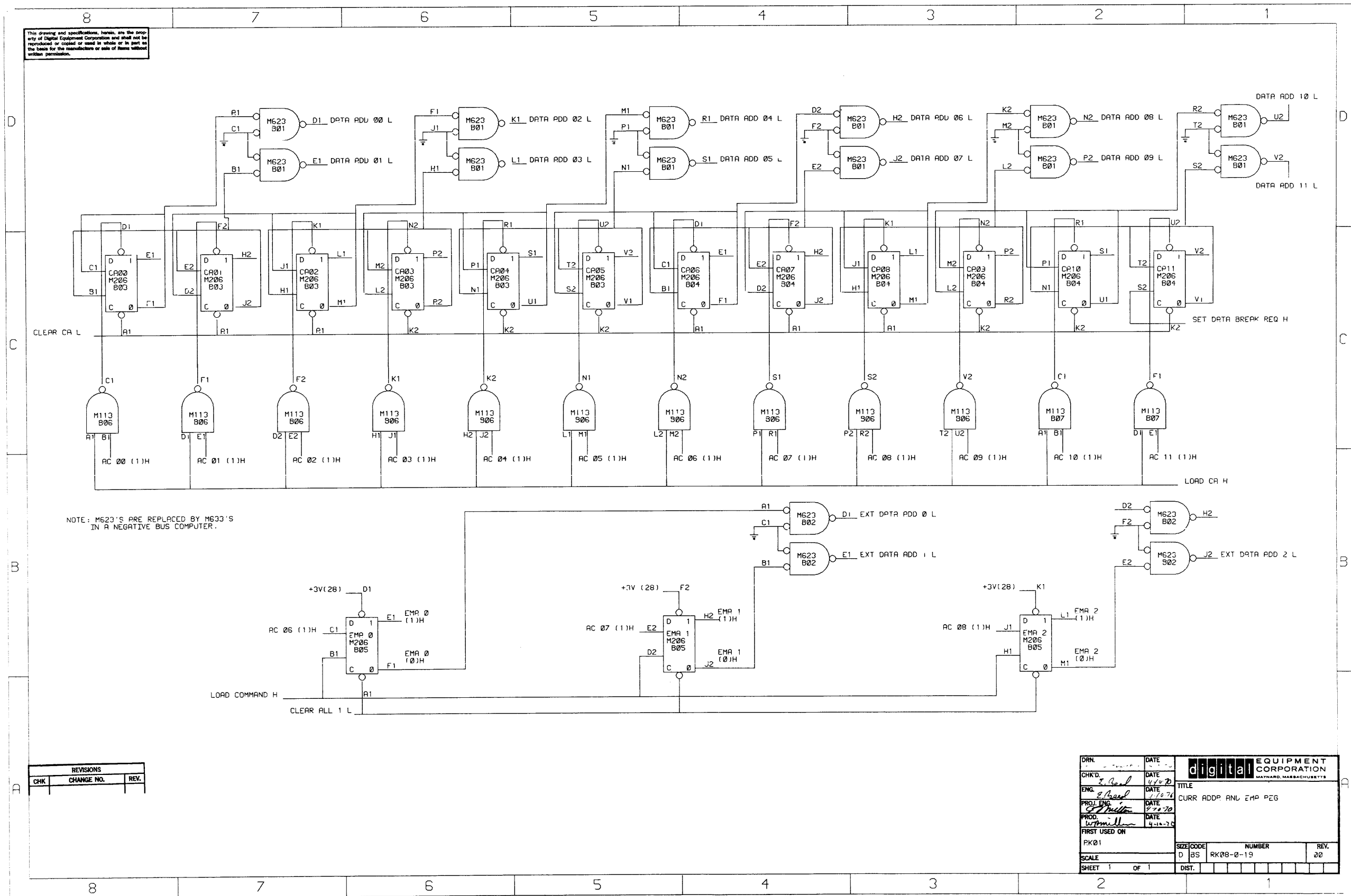


Figure II-31 Current Address and EMA Register Block Schematic Diagram

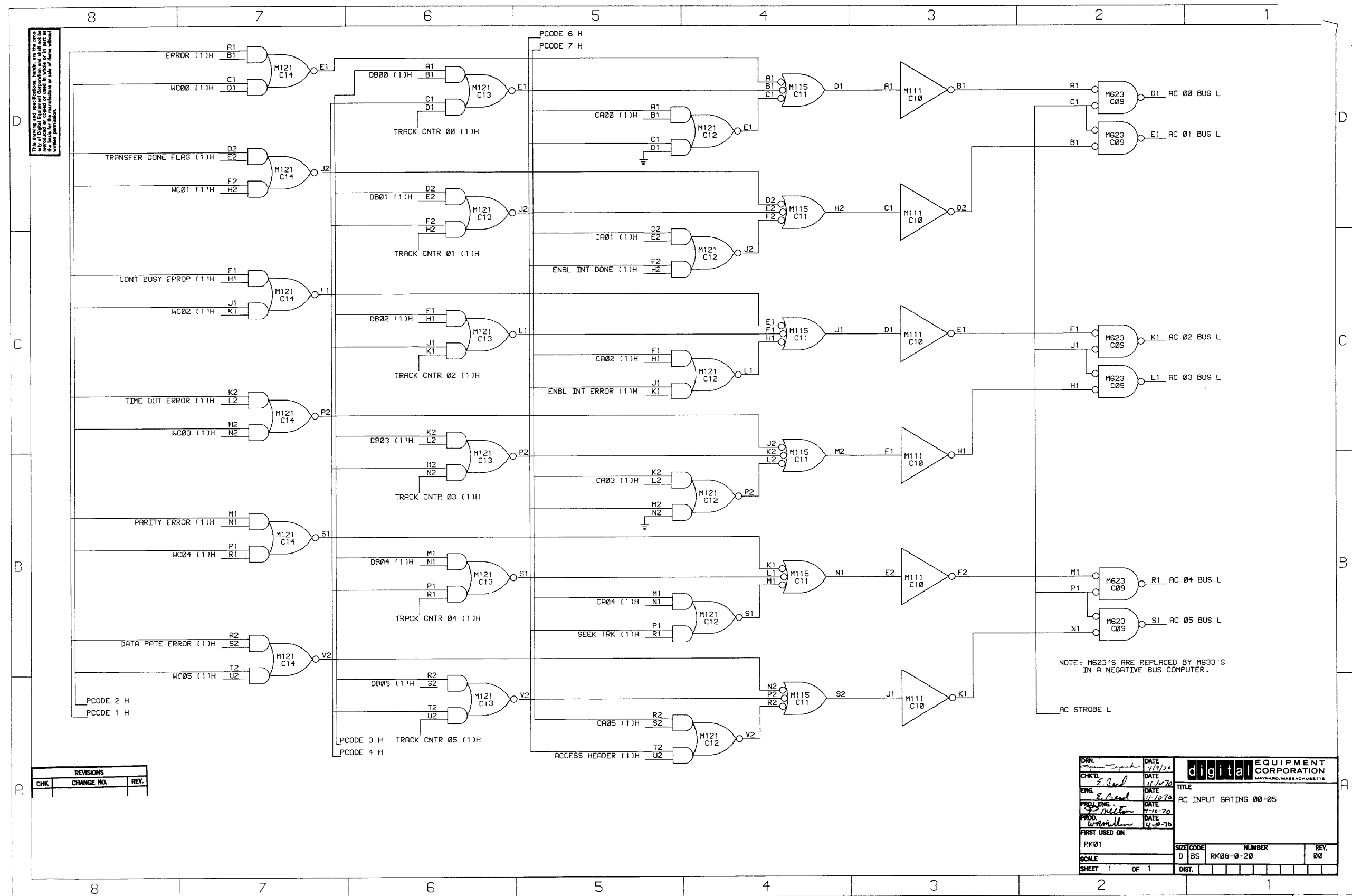


Figure II-32 AC Input Gating 00-05 Block Schematic Diagram

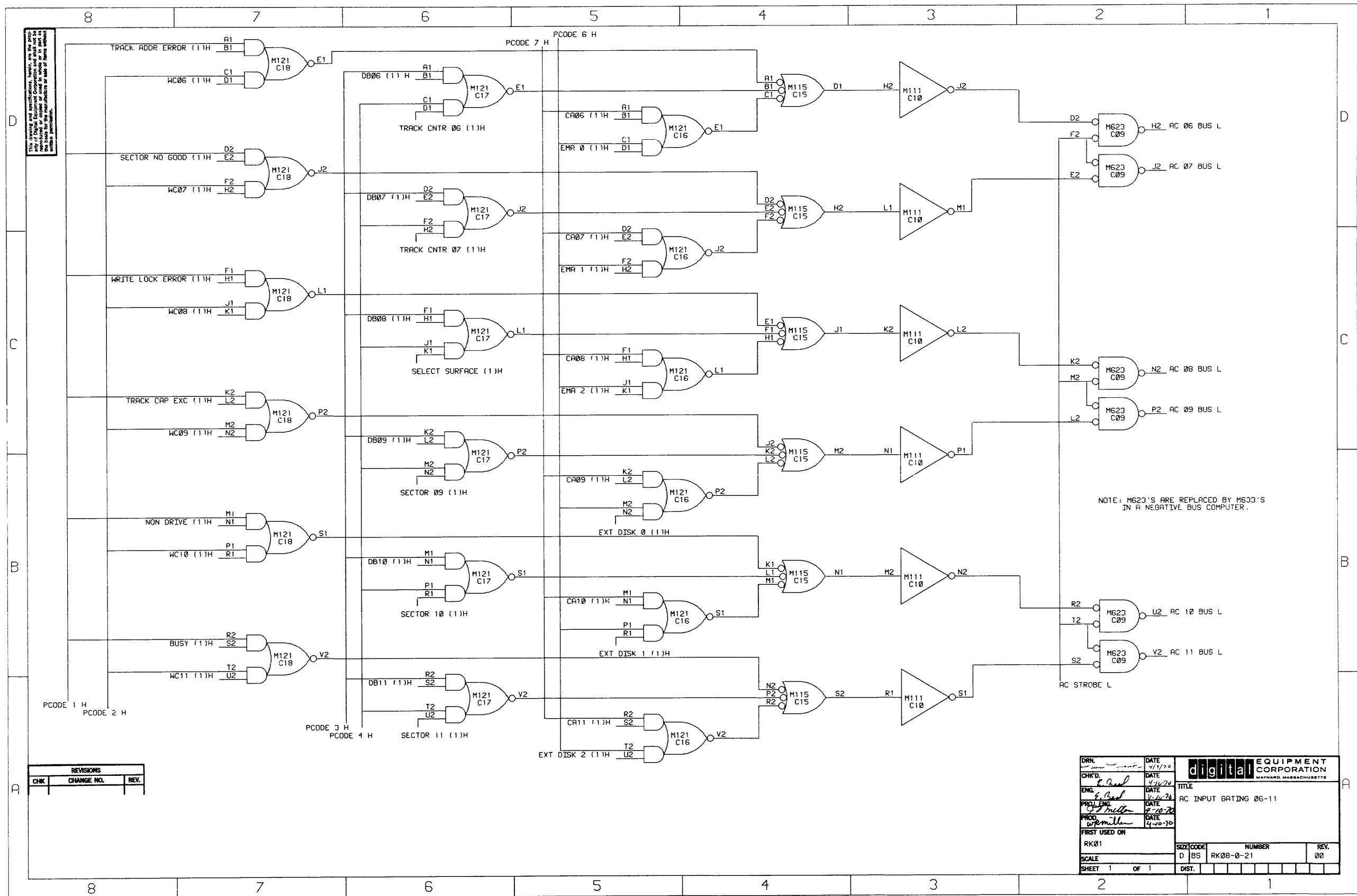


Figure II-33 AC Input Gating 06-11 Block Schematic Diagram

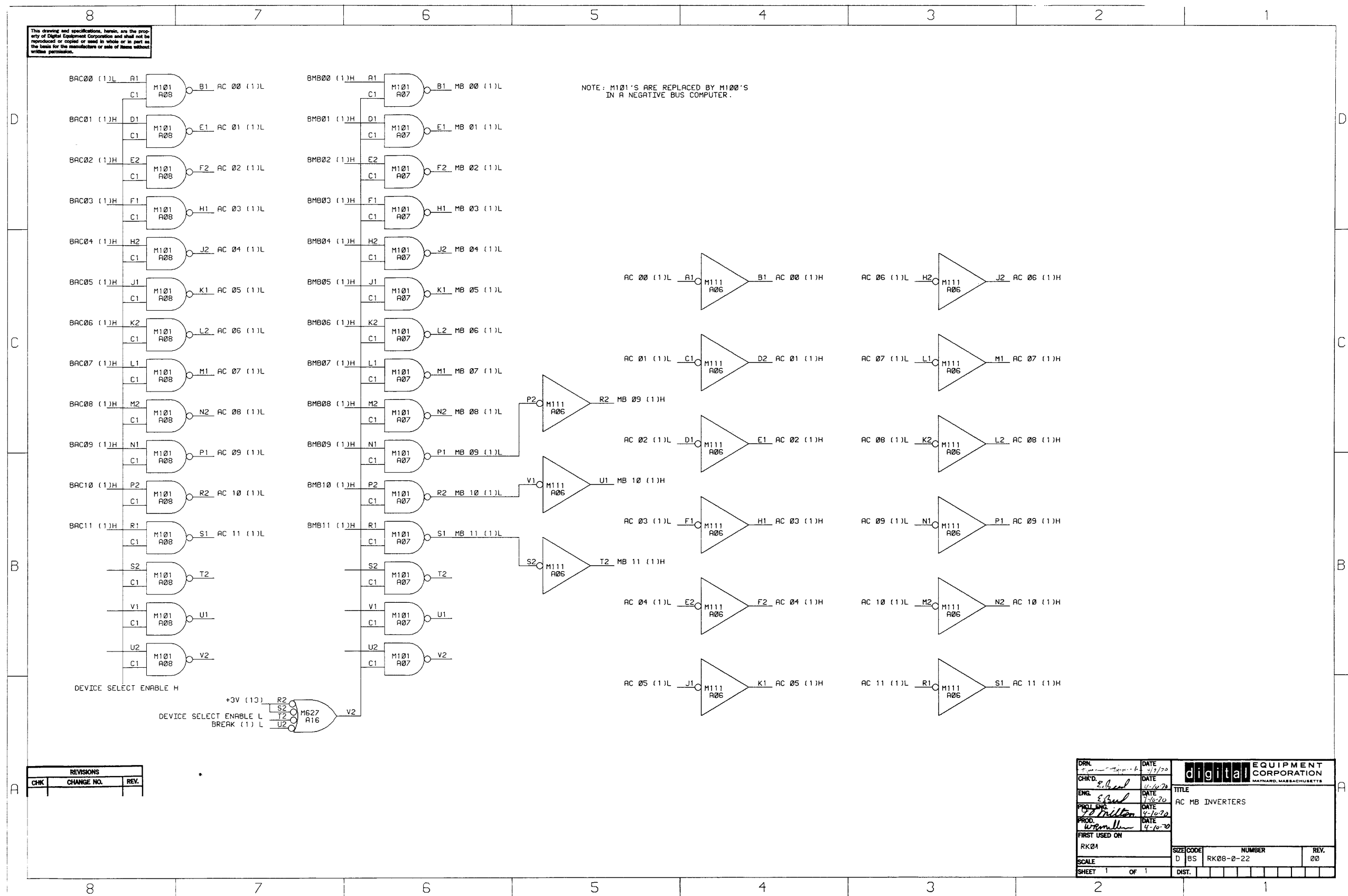


Figure II-34 AC Memory Buffer (MB) Inverters Block Schematic Diagram

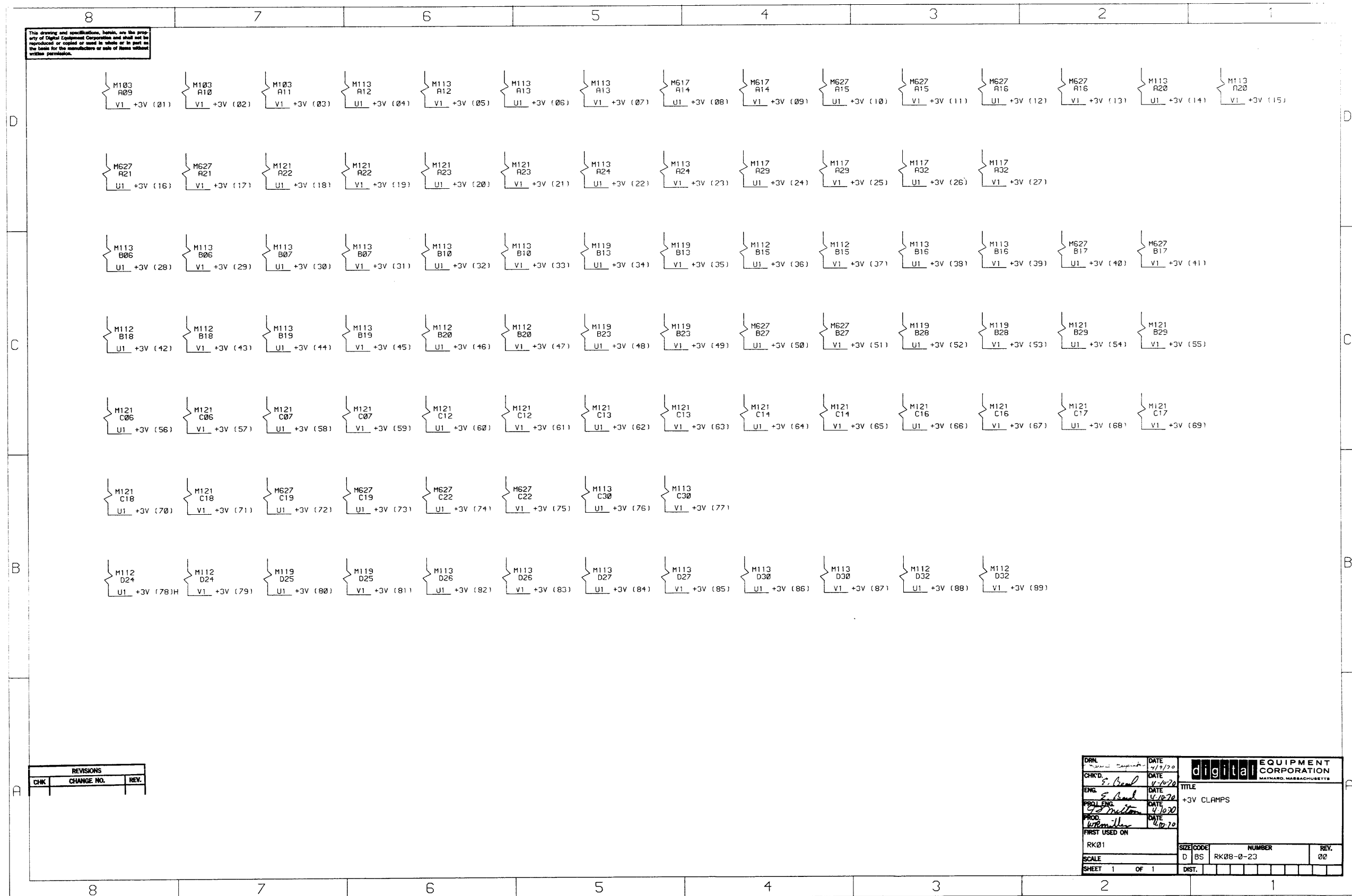


Figure II-35 +3V Clamps Block Schematic Diagram

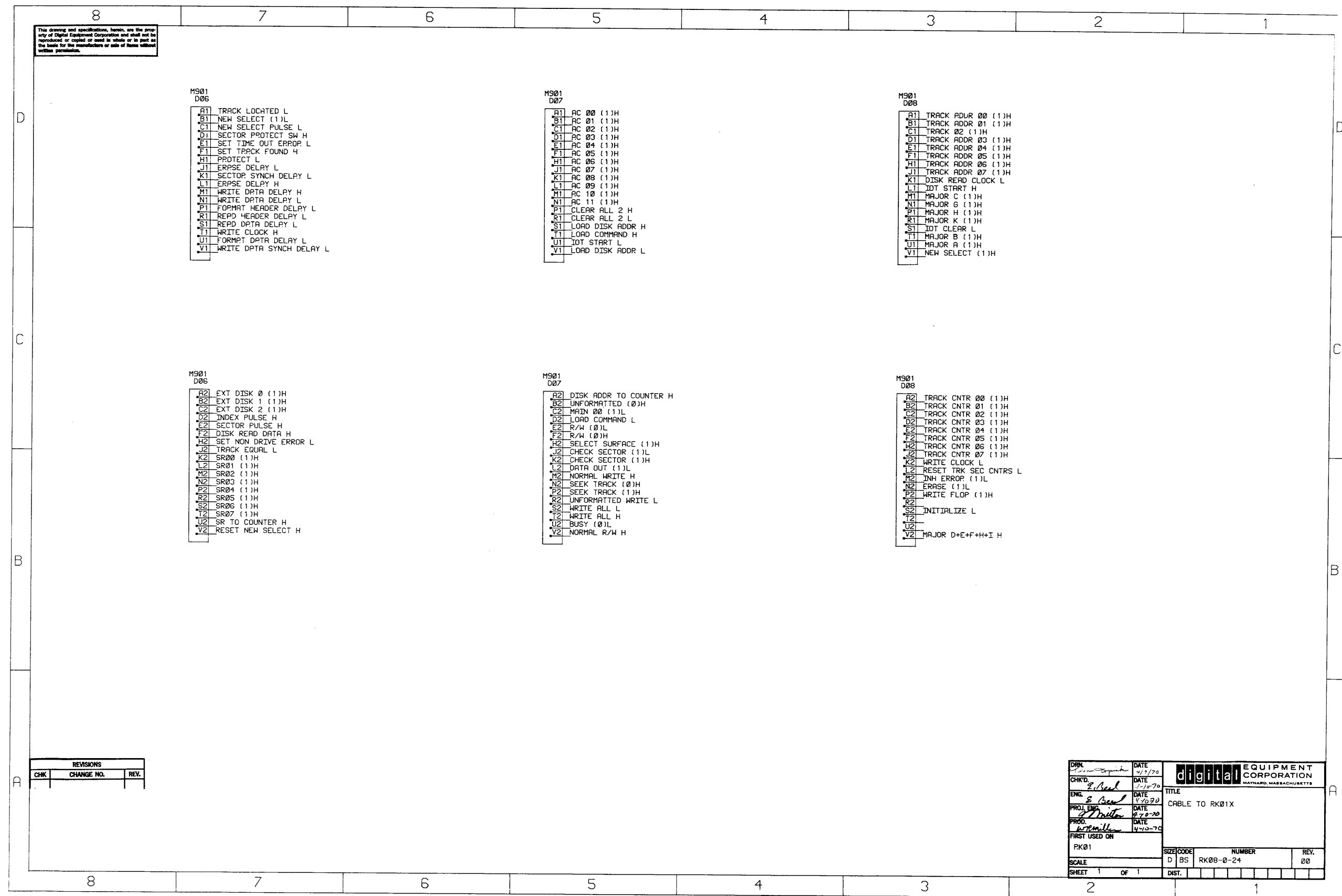


Figure II-36 Cable to RK01-X Block Schematic Diagram

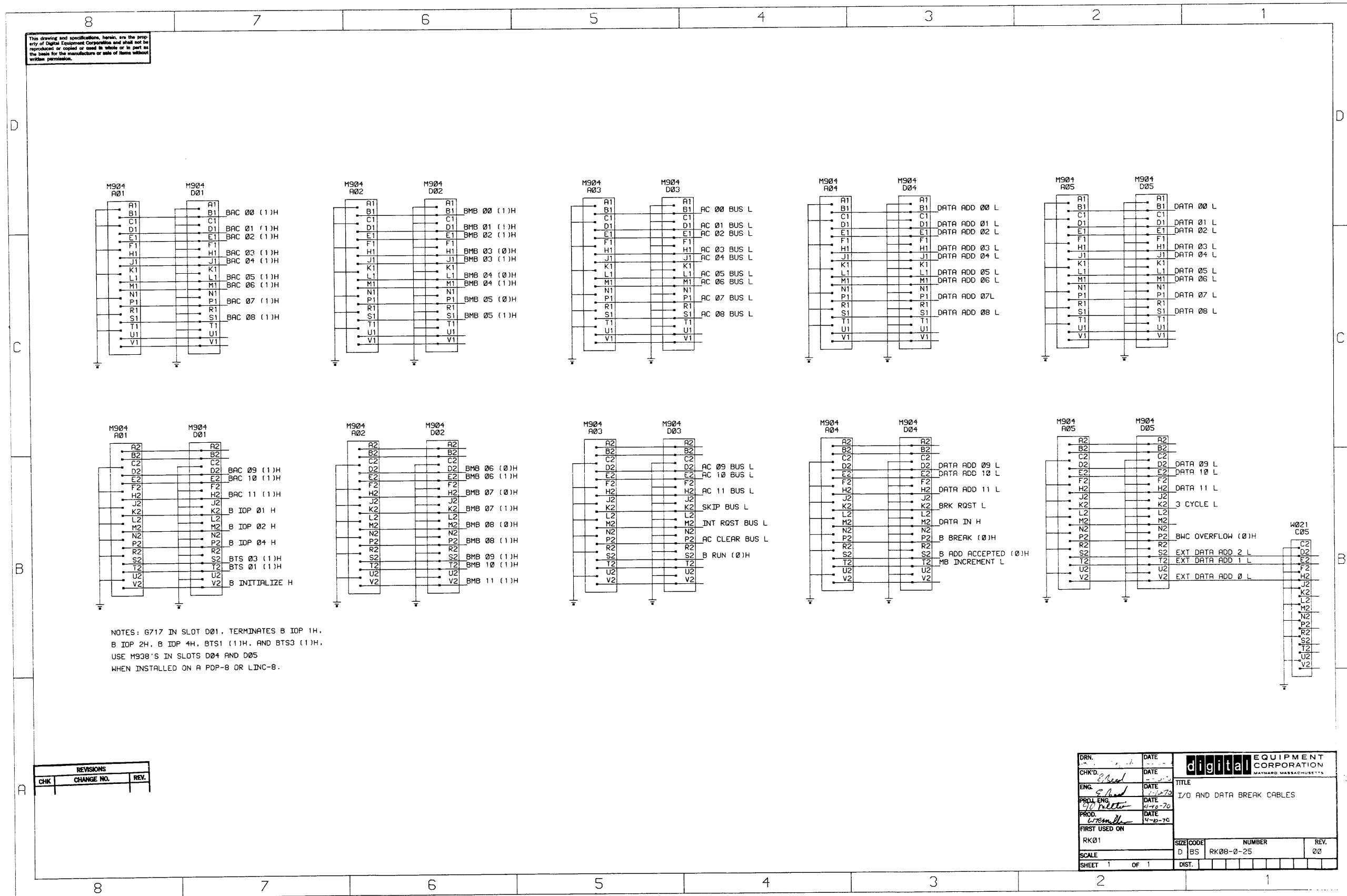


Figure II-37 I/O and Data Break Cables Block Schematic Diagram

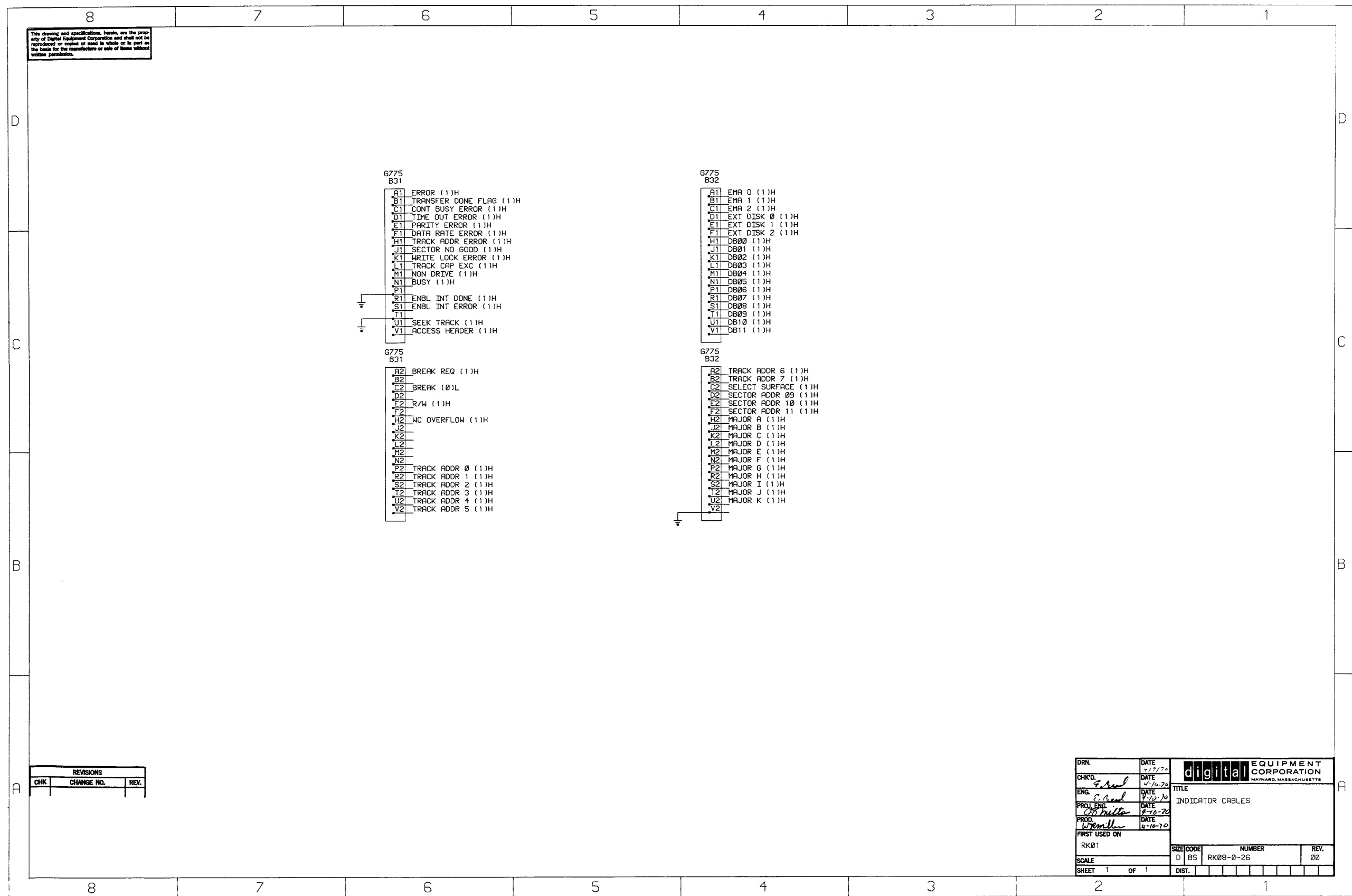


Figure II-38 Indicator Cables Block Schematic Diagram

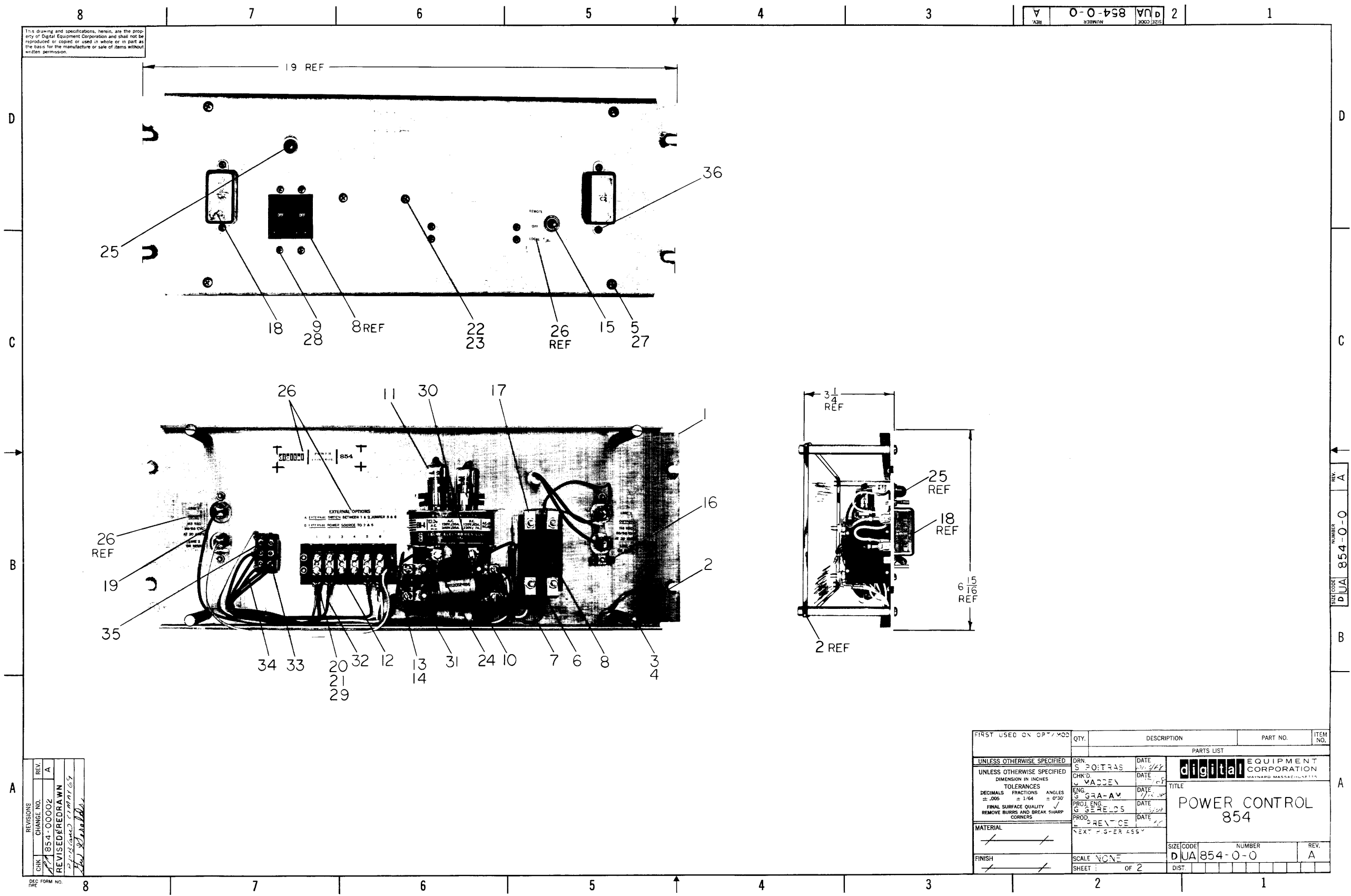


Figure II-41 Type 854 Power Control Panel
 Component Pin Location Diagram
 (Sheet 1)

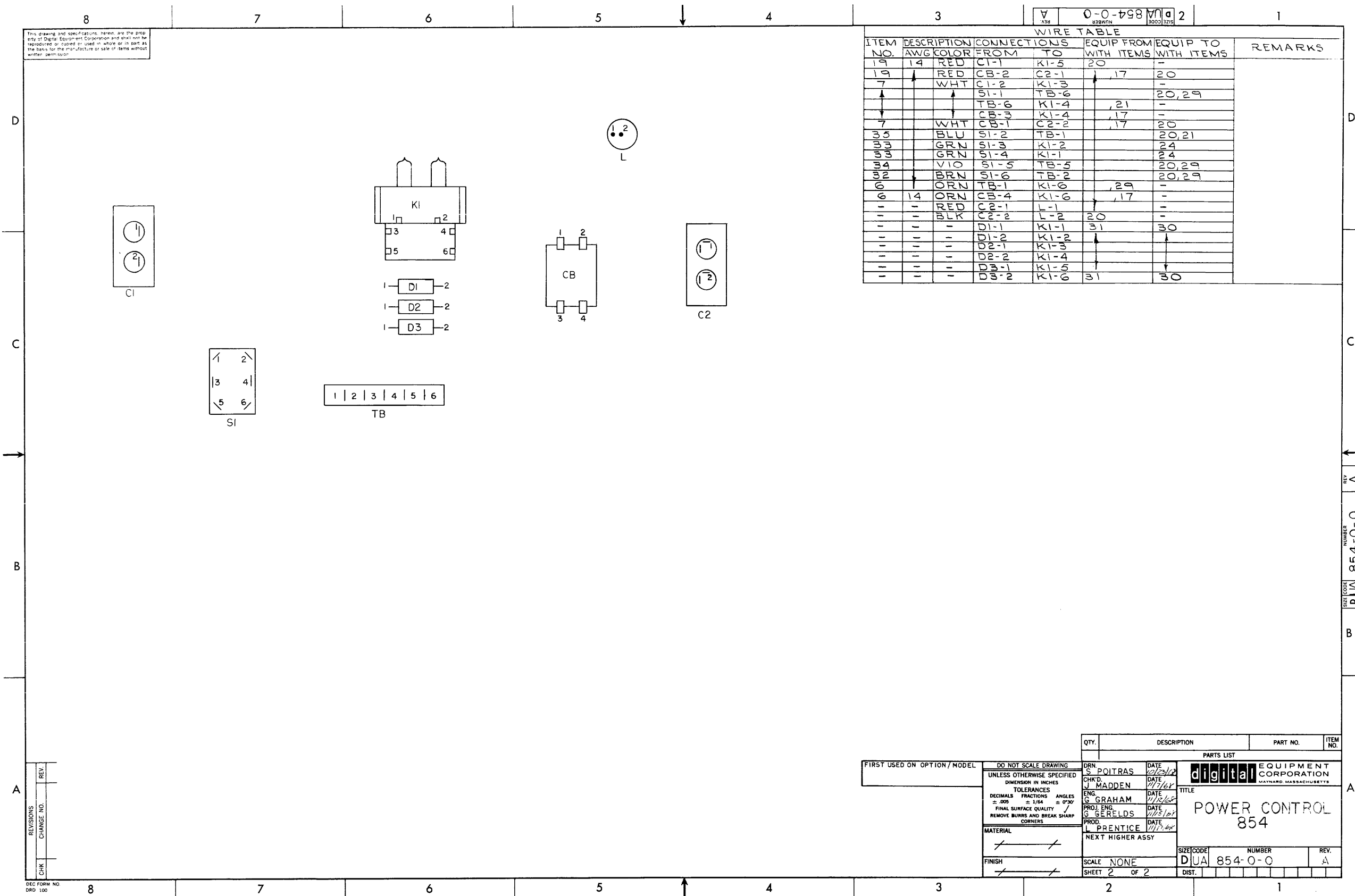


Figure II-41 Type 854 Power Control Panel
Component Pin Location Diagram
(Sheet 2)

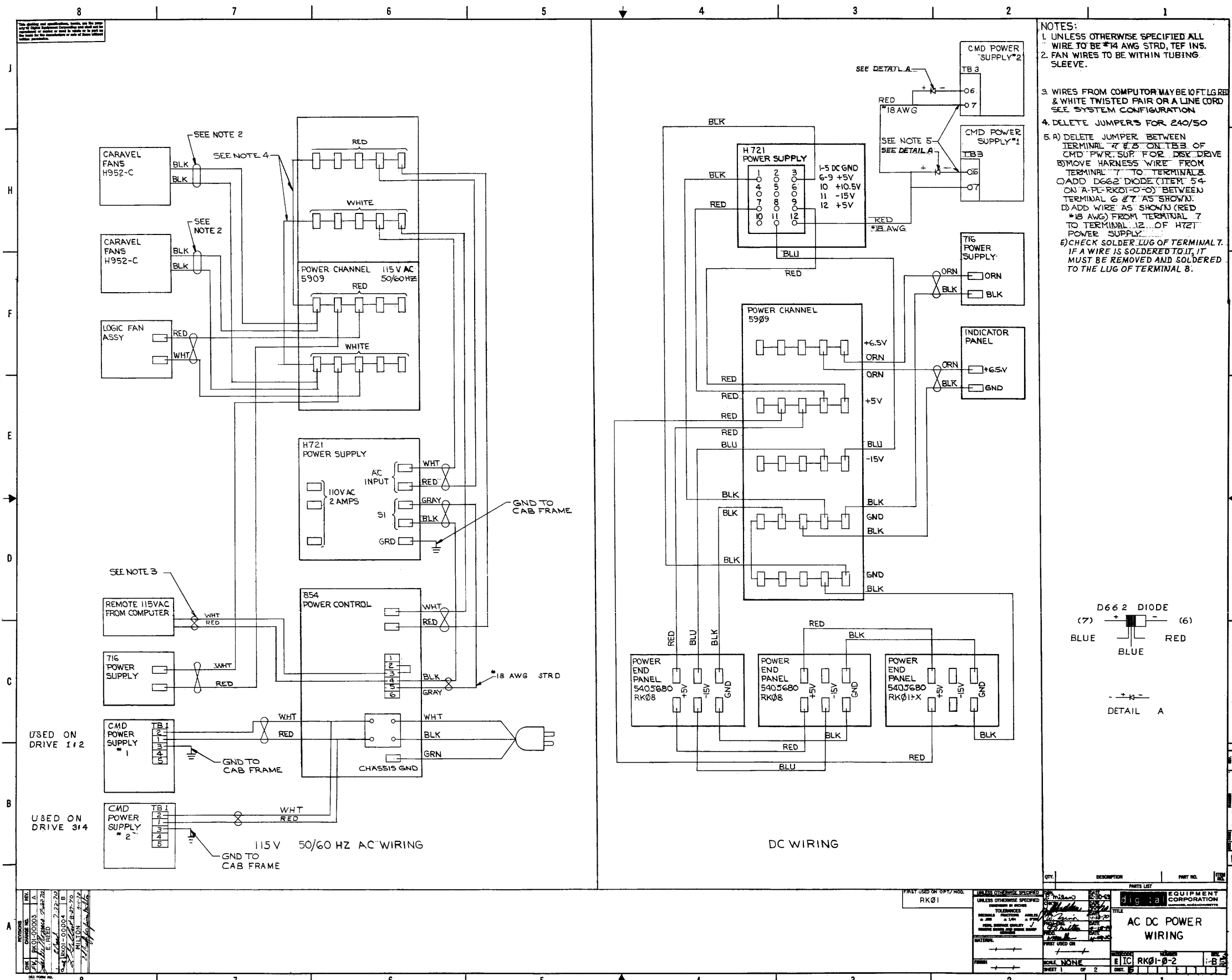
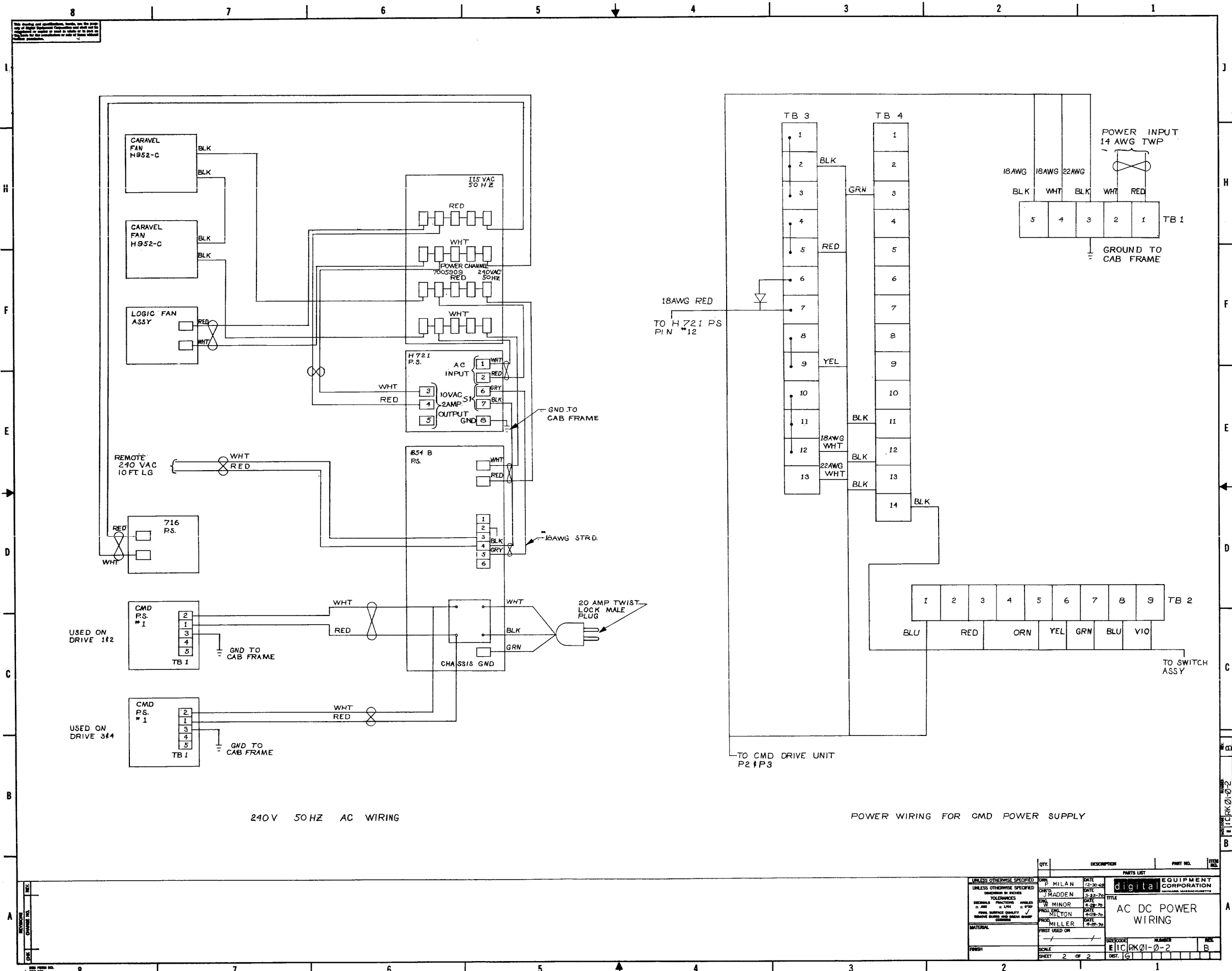


Figure II-44 AC/DC Power Wiring Diagram



240V 50HZ AC WIRING

POWER WIRING FOR CMD POWER SUPPLY

UNLESS OTHERWISE SPECIFIED		QTY.	DESCRIPTION	PART NO.	ITEM NO.
DRG	MILAN	DATE	EQUIPMENT CORPORATION		
CHKD	RADDEN	DATE	digital		
REV	MINOR	DATE	TITLE		
PROJ	EXTN	DATE	AC DC POWER WIRING		
PROJ	MILLER	DATE	DRAWN BY		
MATERIAL	FIRST USED ON		REVISION		
FINISH	SCALE		ELECTRICAL		
	SHEET	2 OF 2	DIST. [G]		