

DIRECT SUPPORT AND GENERAL SUPPORT MAINTENANCE MANUAL

AUTOMATIC TELEPHONE

CENTRAL OFFICES

**AN/TTC-38(V)1
(NSN 5805-00-186-0681)**

AND

**AN/TTC-38(V)2
(NSN 5805-00-186-0640)**

This copy is a reprint which includes current pages from Changes 1 through 3.

DEPARTMENTS OF THE ARMY AND THE NAVY

FEBRUARY 1974

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No.3

DEPARTMENTS OF THE ARMY,
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Washington, DC, 16 November 1983

**Direct Support and General Support
Maintenance Manual**

**AUTOMATIC TELEPHONE CENTRAL OFFICES
AN/TTC-38(V)1 (NSN 5805-00-186-0681) AND
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Direct Support and General Support Maintenance Manual

AUTOMATIC TELEPHONE CENTRAL OFFICES

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AN/TTC-38(V)1 (NSN 5805-00-186-0681) AND
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CHAPTER 8**LOGICS**

8-1. General

This chapter contains logic diagrams for assemblies in AN / TTC-38(V1 (*). Where logic is identical for more than one assembly, only the logic for the lowest numbered reference designator is provided.

8-2. Central Processor A8, A9

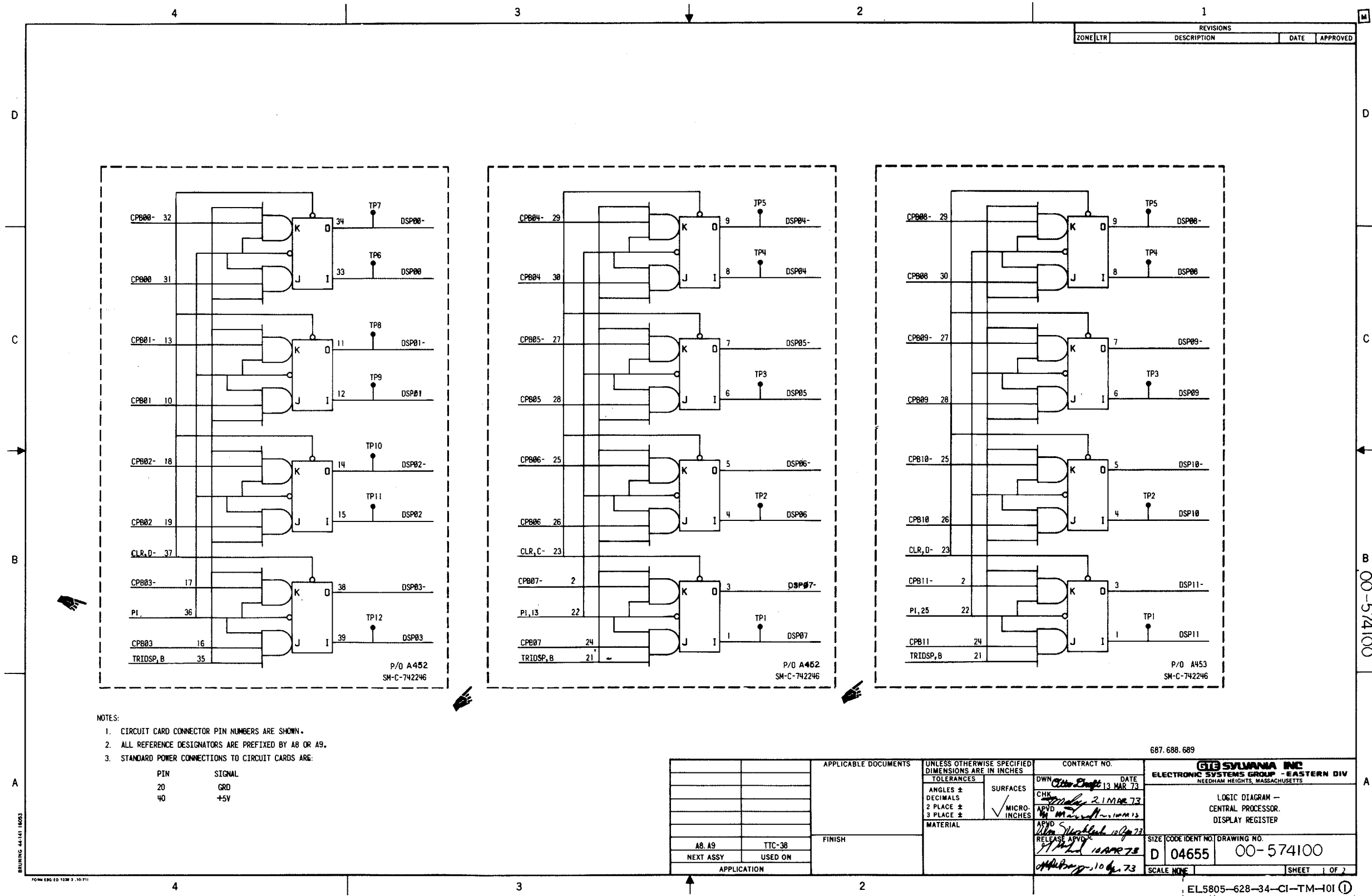
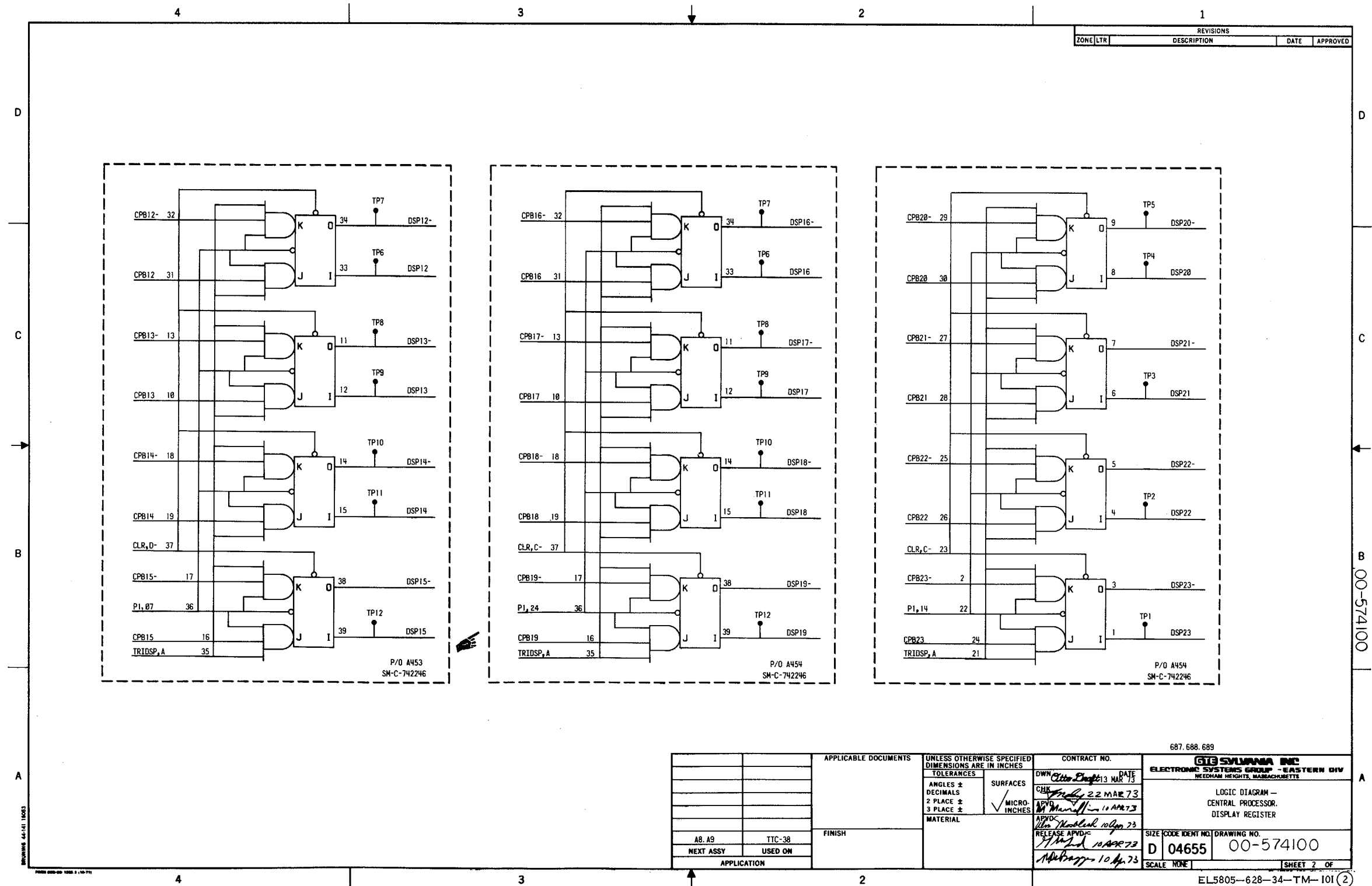


Figure 8-1(1). Central processor display register (sheet 1 of 2).



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P/O A453
SM-C-742246

P/O A454
SM-C-742246

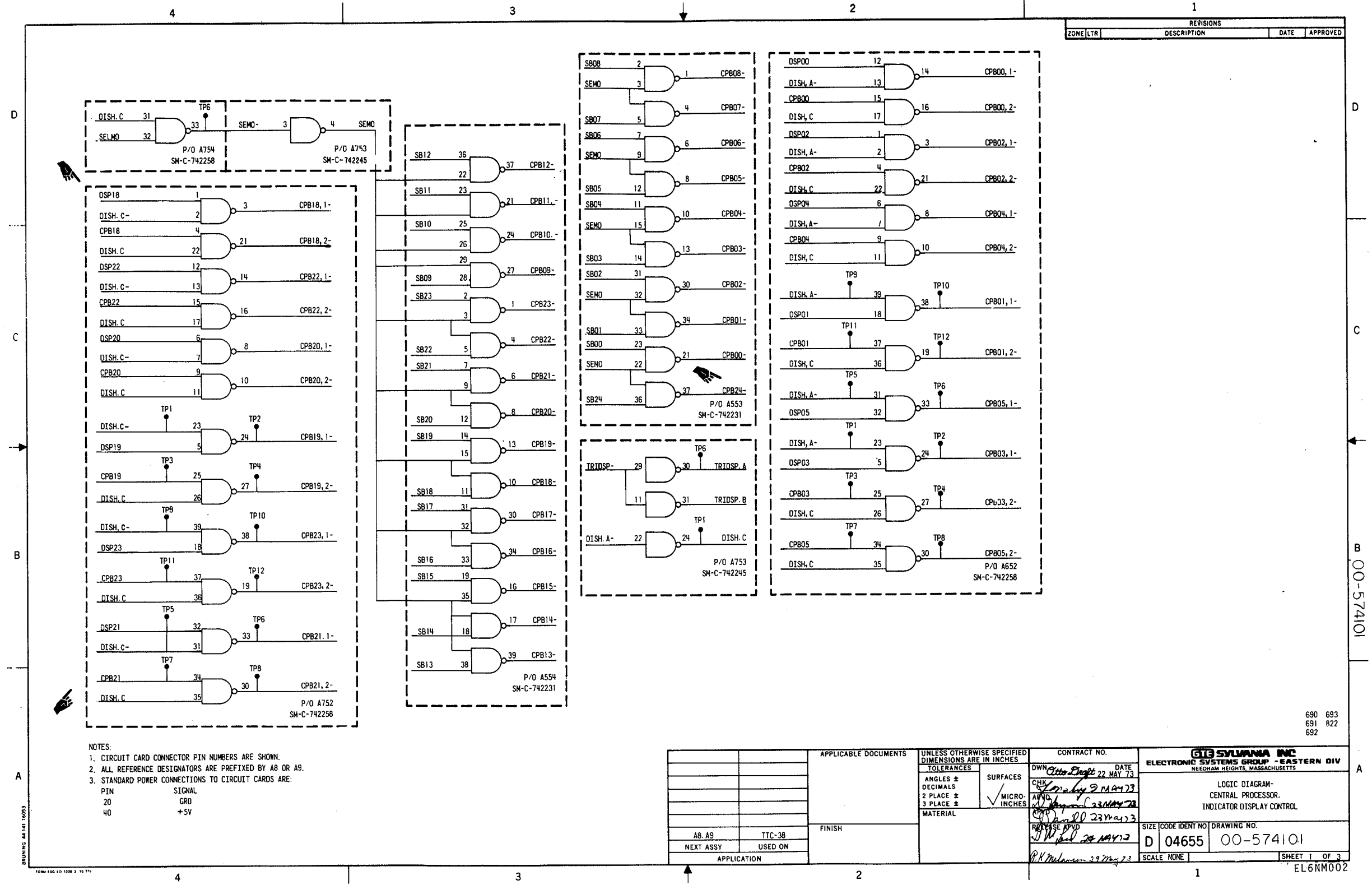
P/O A454
SM-C-742246

687.688.689

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
FINISH		TOLERANCES		DATE		LOGIC DIAGRAM - CENTRAL PROCESSOR. DISPLAY REGISTER	
AB, A9		ANGLES ±		DWN <i>Other Draft</i> 13 MAR 73		SIZE CODE IDENT NO. DRAWING NO.	
NEXT ASSY USED ON		SURFACES		CHK <i>Other Draft</i> 22 MAR 73		D 04655 00-574100	
APPLICATION		MICRO-INCHES		APVD <i>M. Marshall</i> 11 APR 73		SCALE NONE SHEET 2 OF	
		MATERIAL		APVDC <i>Alan Marshall</i> 10 APR 73		E.L.5805-628-34-TM-101 (2)	

Figure 8-1(2). Central processor display register (sheet 2 of 2).

Change 3 8-3



- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

PIN	SIGNAL
20	GRD
40	+5V

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FINISH		FINISH		SIZE [CODE IDENT NO] DRAWING NO.		LOGIC DIAGRAM- CENTRAL PROCESSOR. INDICATOR DISPLAY CONTROL	
A8, A9 NEXT ASSY USED ON APPLICATION		TTC-38 USED ON		D 04655 00-574101		SCALE NONE SHEET 1 OF 3 EL-6NM002	

Figure 8-2(1). Central processor indicator display register (sheet 1 of 3)

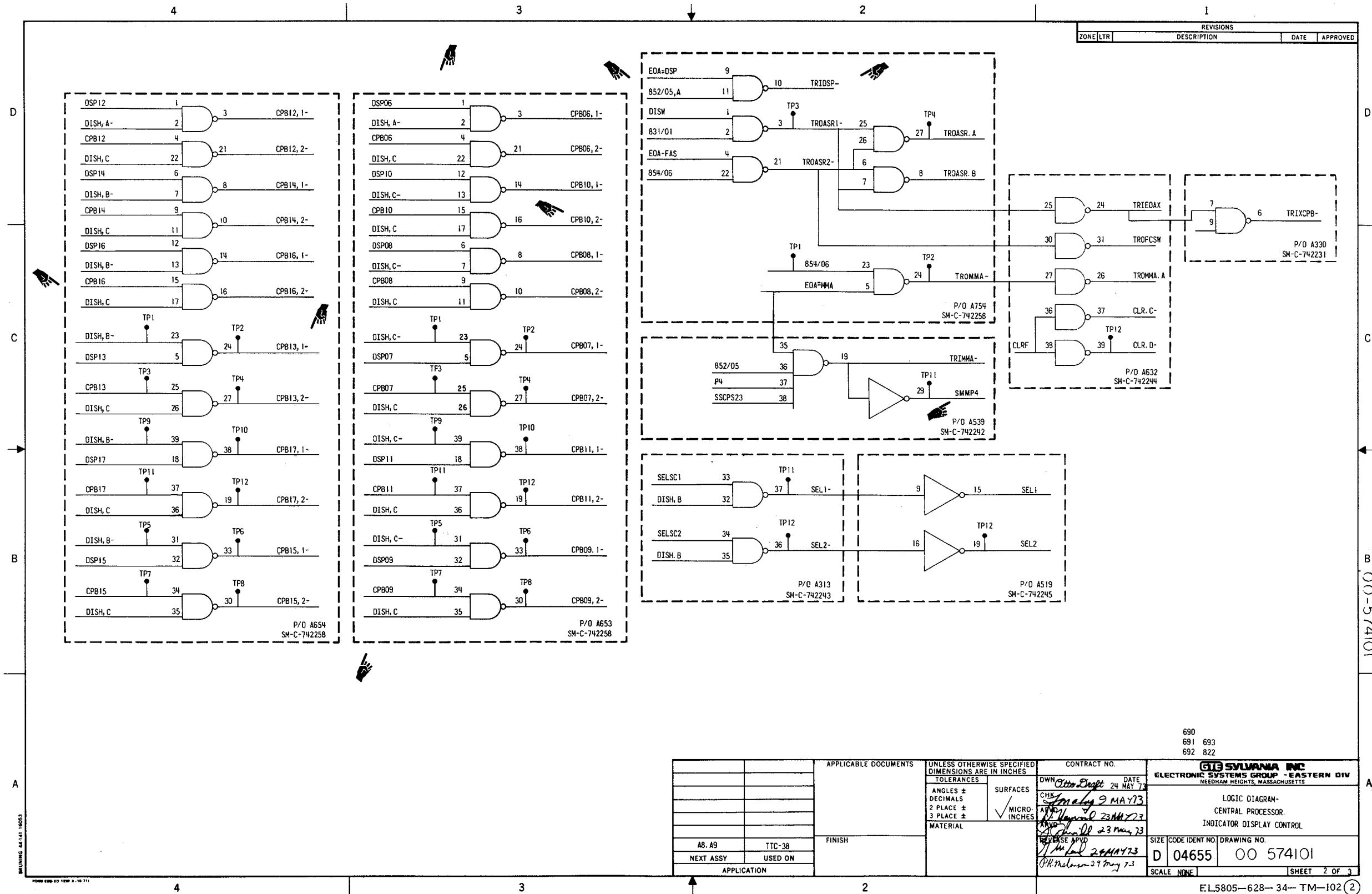
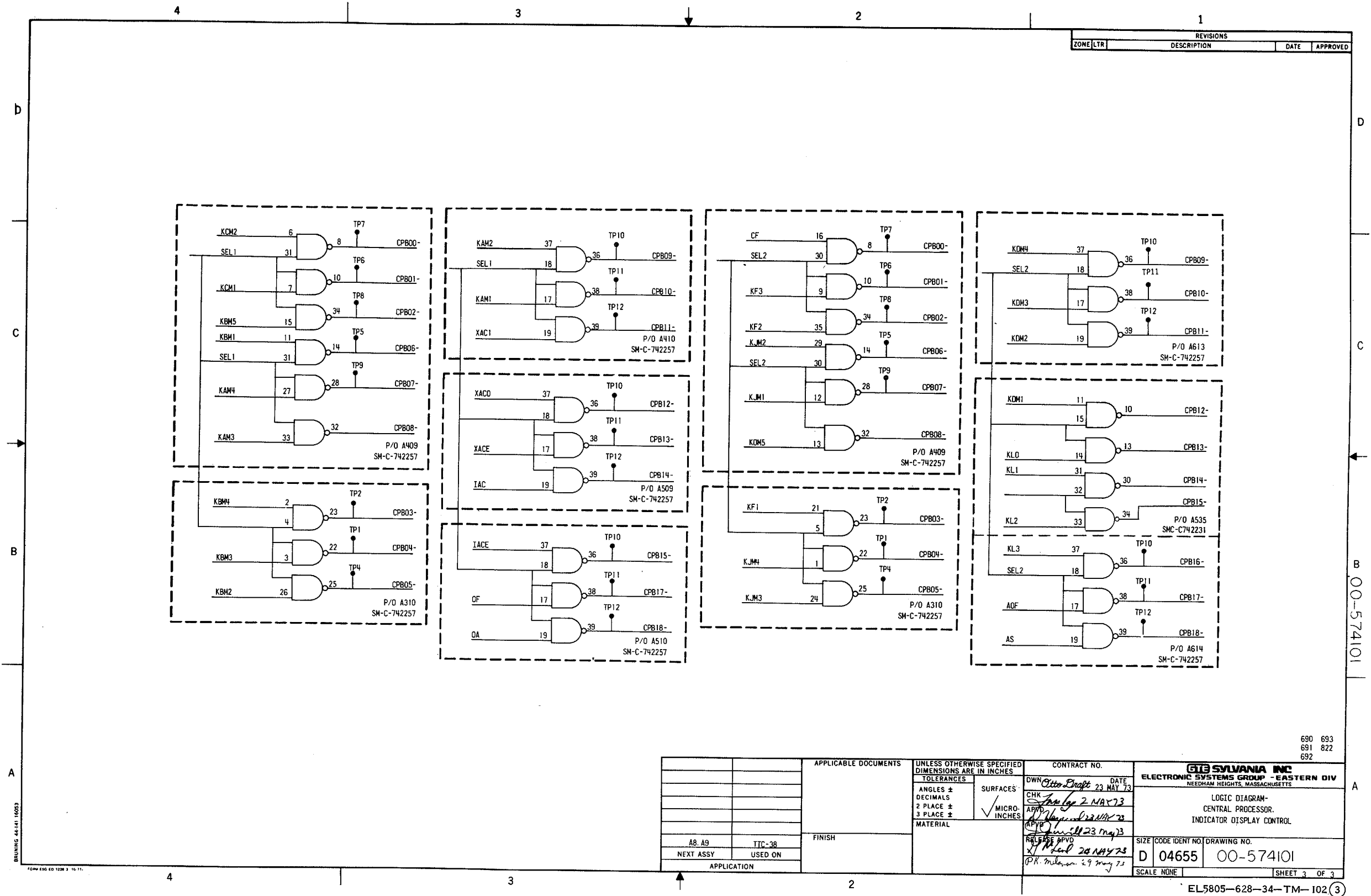


Figure 8-2(2) . Central processor indicator display register (sheet 2 of 3)



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690 693
691 822
692

<table border="1"> <tr> <td>AB, A9</td> <td>TTC-38</td> </tr> <tr> <td>NEXT ASSY</td> <td>USED ON</td> </tr> <tr> <td colspan="2">APPLICATION</td> </tr> </table>		AB, A9	TTC-38	NEXT ASSY	USED ON	APPLICATION		FINISH FINISH	APPLICABLE DOCUMENTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MICRO- INCHES	SURFACES: ✓ MICRO- INCHES	CONTRACT NO. DWN <i>Otto Draft</i> DATE 23 MAY 73 CHR <i>Jamlog 2 MAY 73</i> APYD <i>Jamlog 23 MAY 73</i> P/R <i>Milman 29 May 73</i>	ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS LOGIC DIAGRAM- CENTRAL PROCESSOR. INDICATOR DISPLAY CONTROL	SIZE CODE IDENT NO. DRAWING NO. D 04655 00-574101	SCALE NONE SHEET 3 OF 3
AB, A9	TTC-38														
NEXT ASSY	USED ON														
APPLICATION															

Figure 8-2(3) . Central processor indicator display register (sheet 3 of 3)

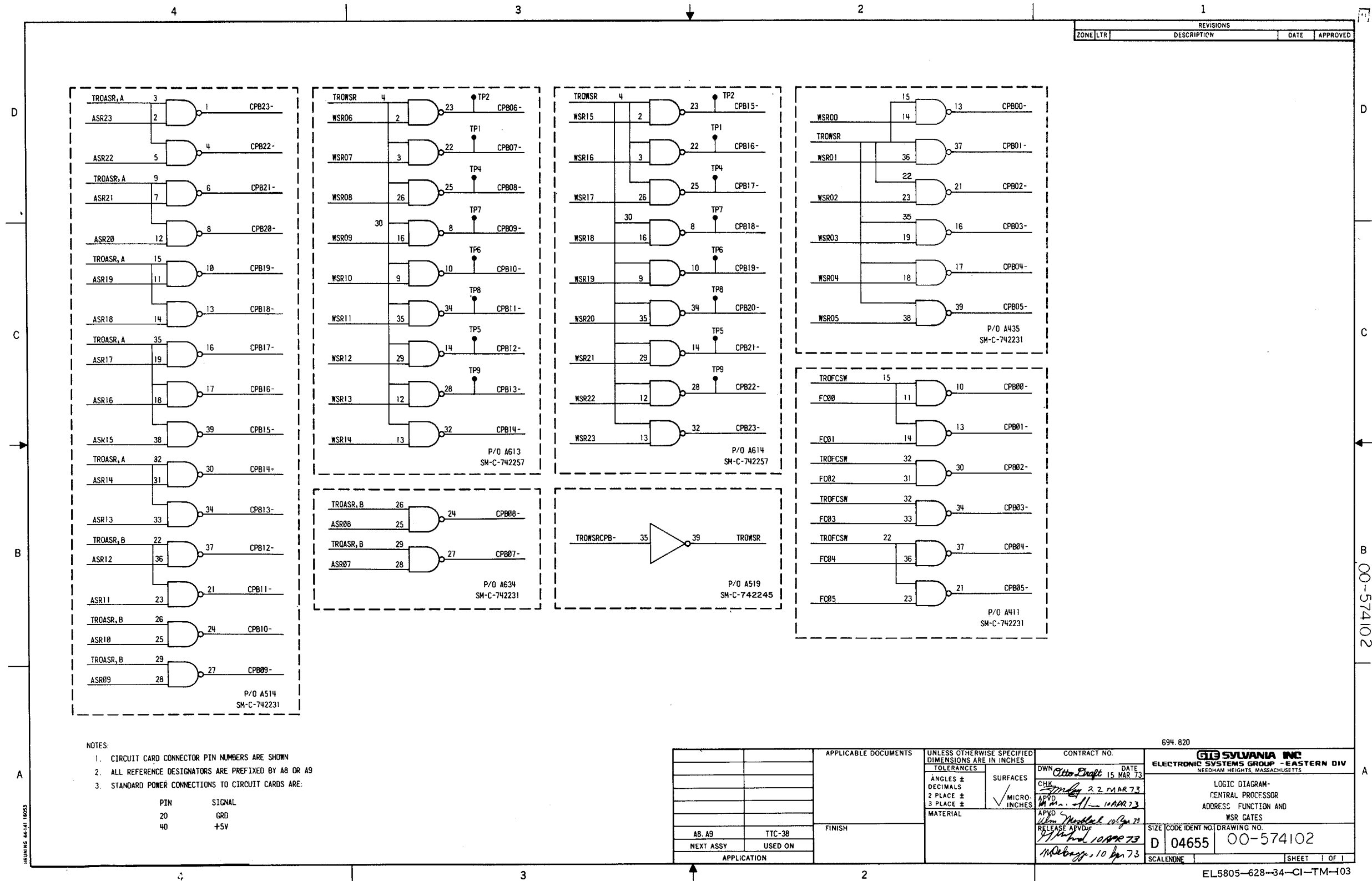


Figure 8-3. Central processor address, function gates.

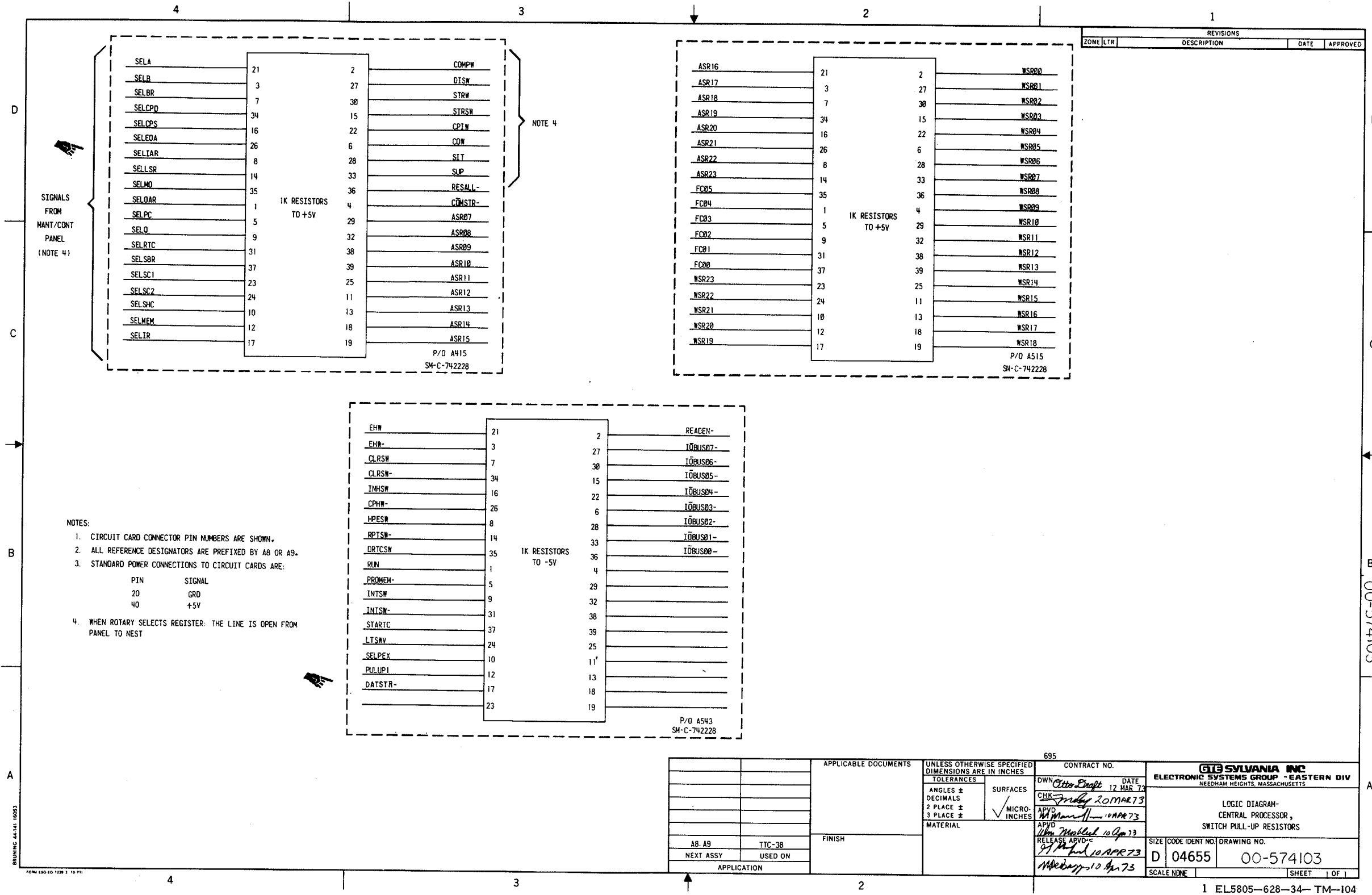
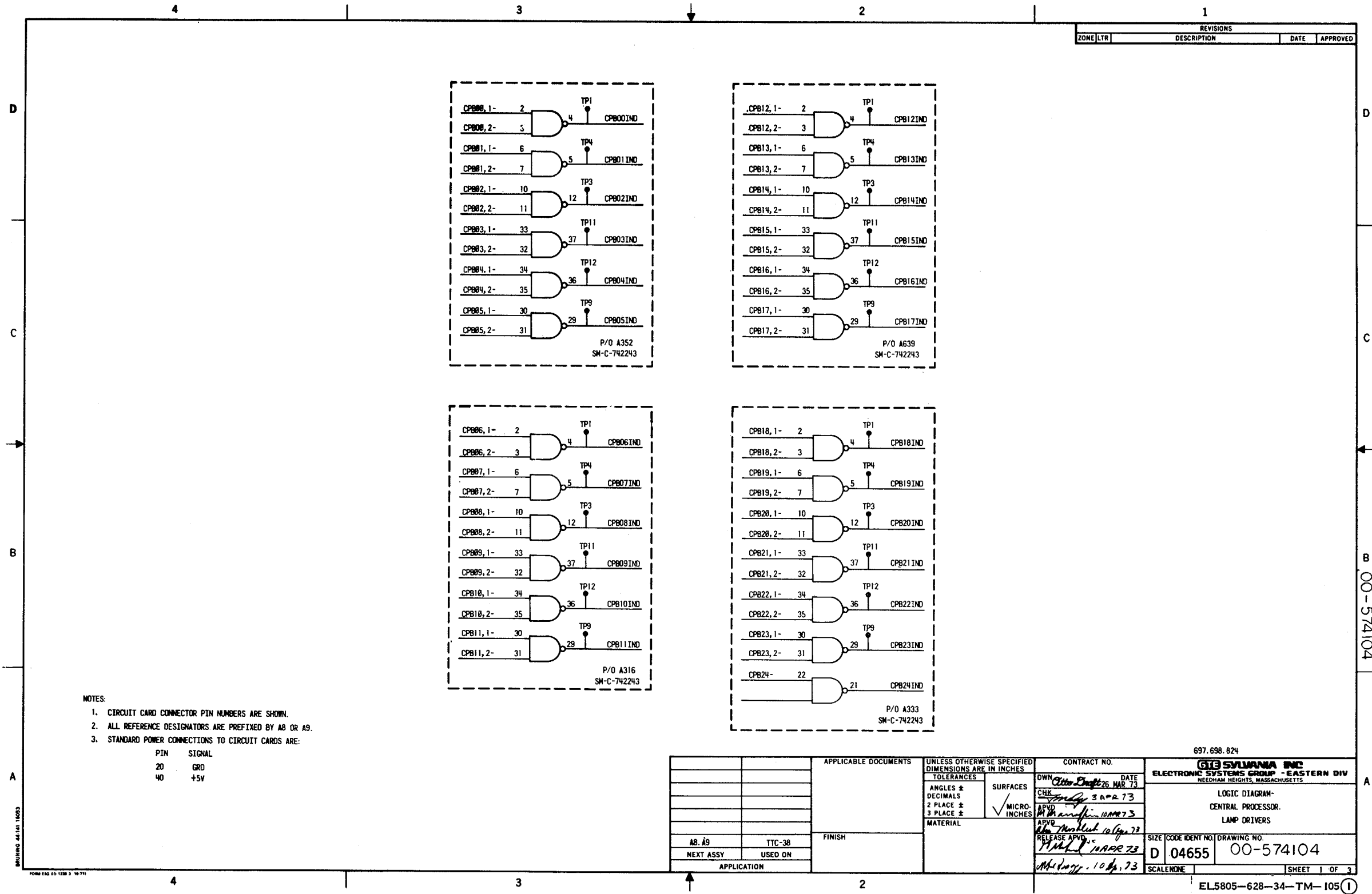


Figure 8-4. Central processor switch pull-up resistors.



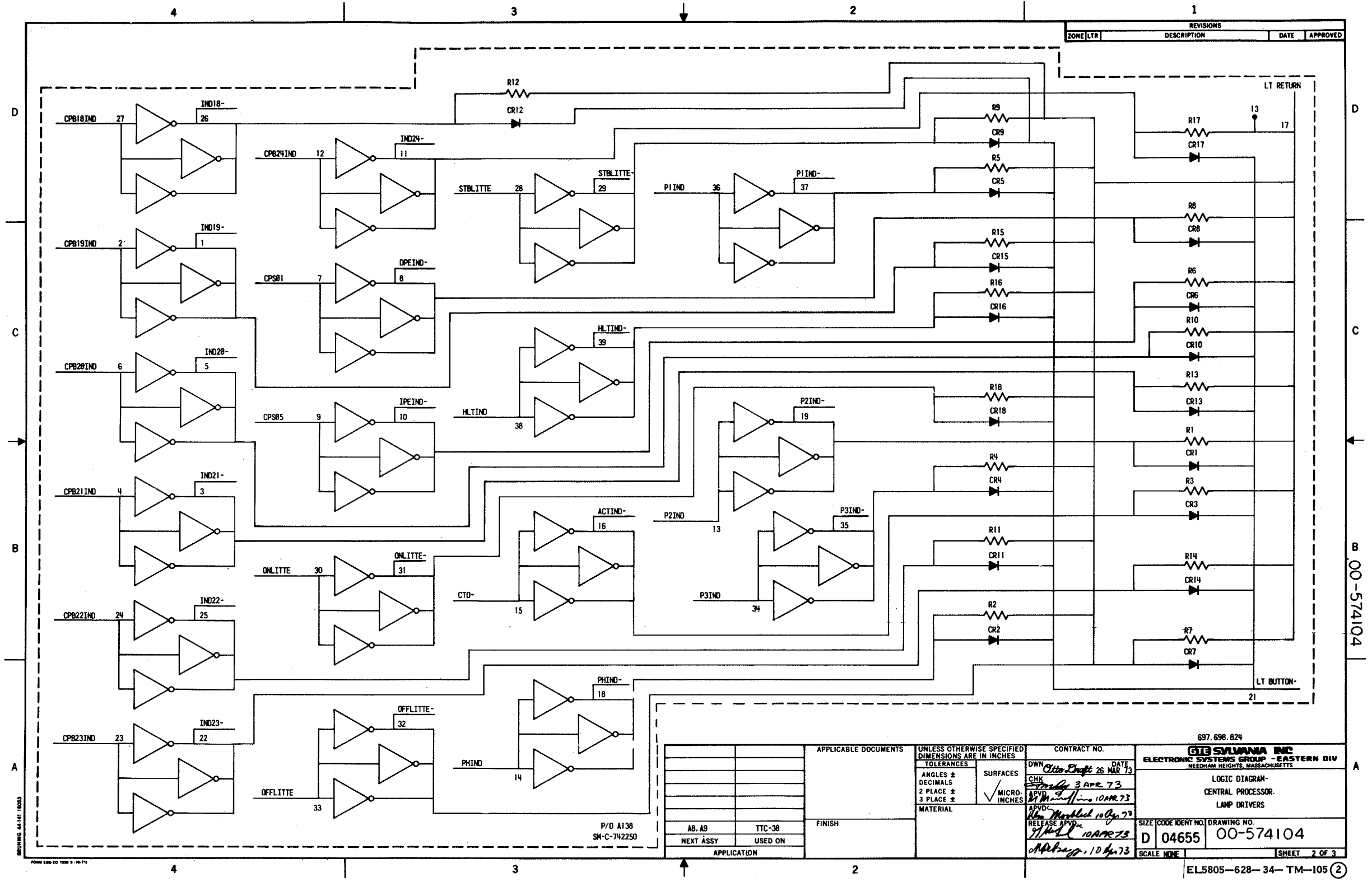
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ZONE	LTR	DESCRIPTION	DATE

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1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

PIN	SIGNAL
20	GRD
40	+5V

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		DECIMALS		CHK <i>[Signature]</i> 30 MAR 73	
		2 PLACE ±		APVD <i>[Signature]</i> 10 MAR 73	
		3 PLACE ±		RELEASE APVD <i>[Signature]</i> 10 MAR 73	
		MATERIAL		APVD <i>[Signature]</i> 10 MAR 73	
		SURFACES		SIZE CODE IDENT NO. DRAWING NO.	
		✓ MICRO-INCHES		D 04655 00-574104	
A8, A9		FINISH		SCALE NONE	
NEXT ASSY		USED ON		SHEET 1 OF 3	
APPLICATION				EL5805-628-34-TM-105 (1)	

Figure 8-5(1). Central processor lamp drivers (sheet 1 of 3).



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APPLICATION				NEEDHAM HEIGHTS, MASSACHUSETTS	
				LOGIC DIAGRAM-	
				CENTRAL PROCESSOR.	
				LAMP DRIVERS	
				SIZE (CODE IDENT NO) DRAWING NO.	
				D 04655 00-574104	
				SCALE NONE SHEET 2 OF 3	

Figure 8-5(2). Central processor lamp drivers (sheet 2 of 3).

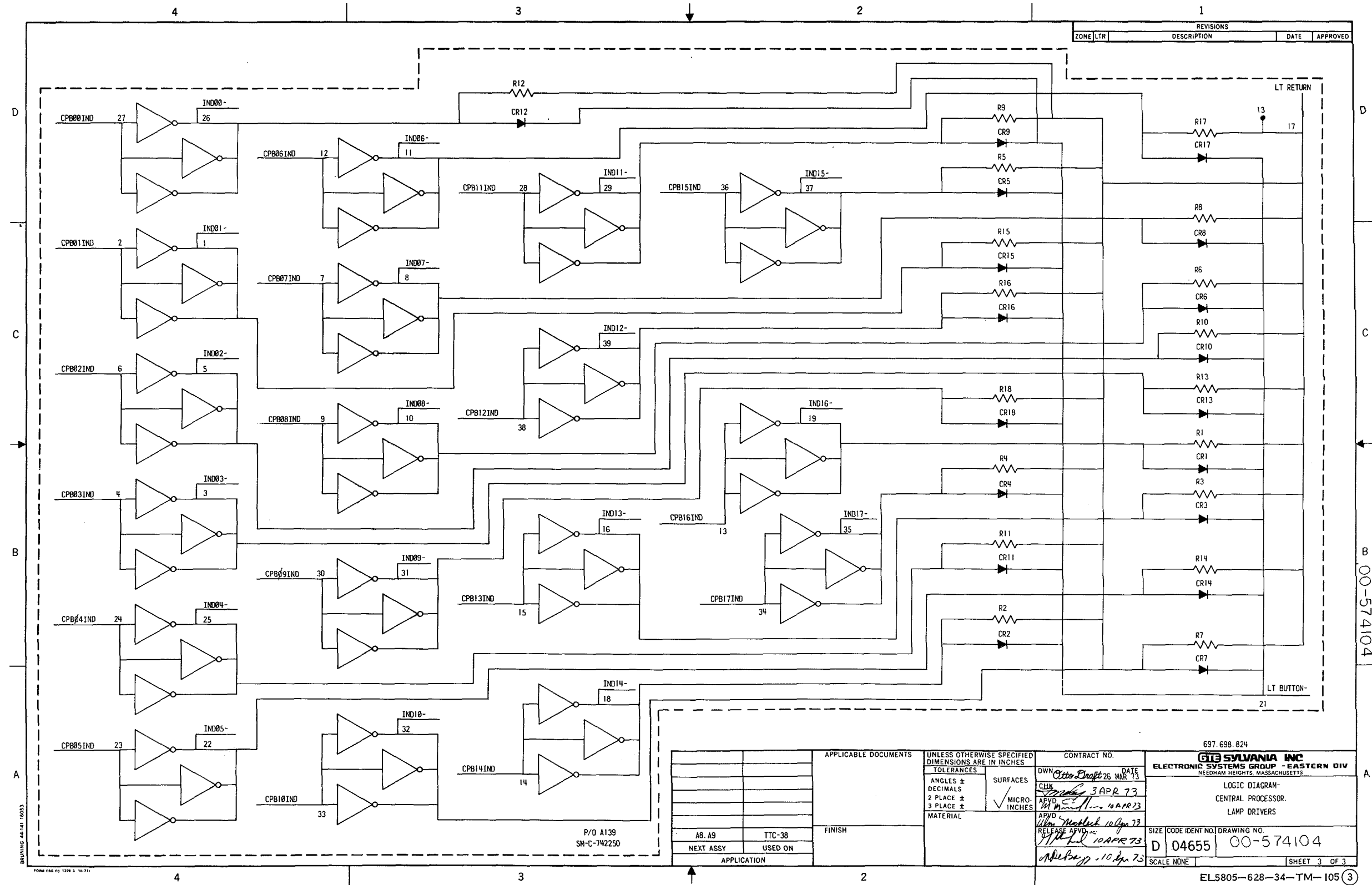
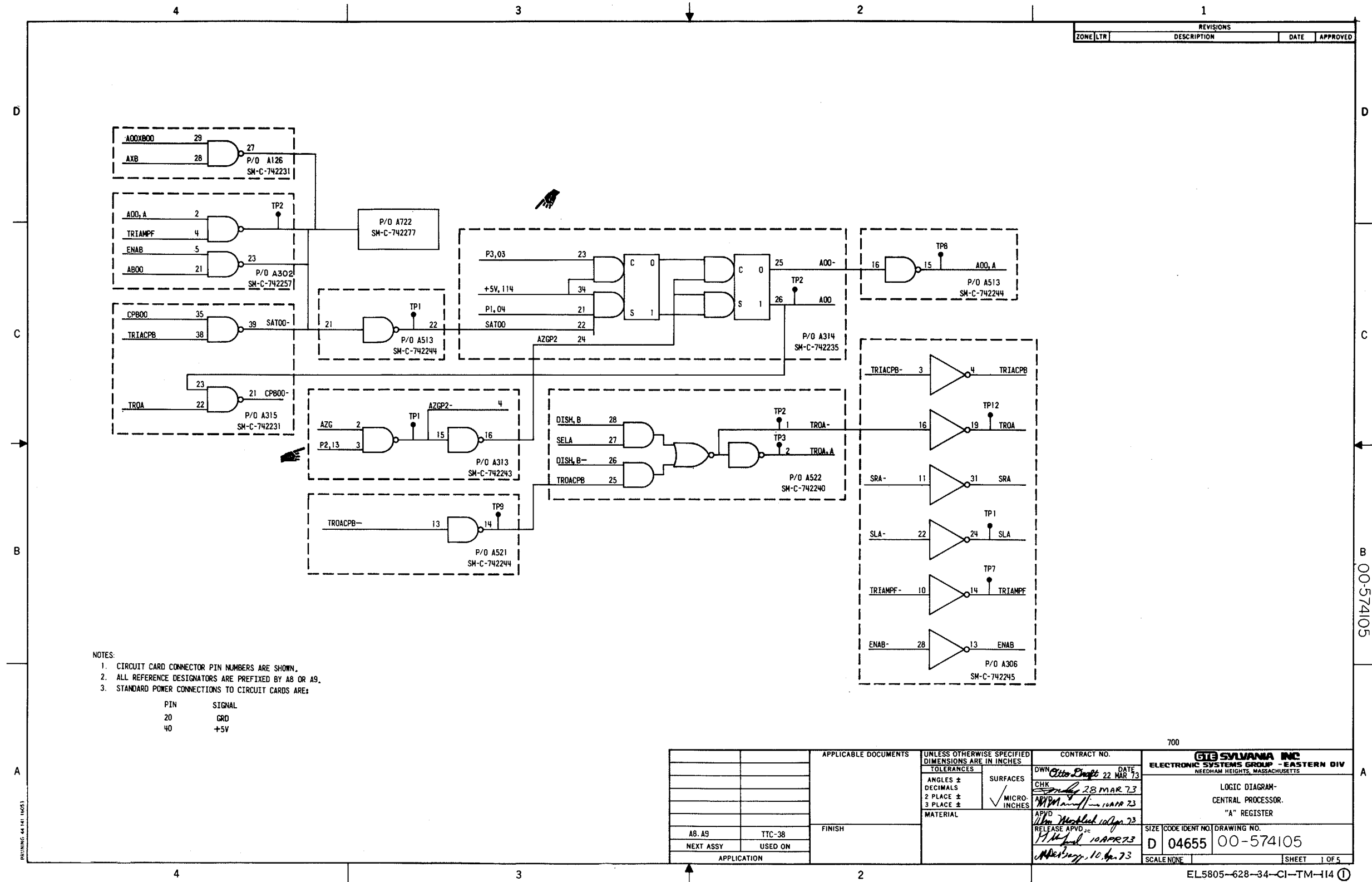


Figure 8-5(3). Central processor lamp drivers (sheet 3 of 3).



NOTES:
 1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

PIN	SIGNAL
20	GRD
40	+5V

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO. 700	
		TOLERANCES		DATE 22 MAR 73	
		ANGLES ±		OWN <i>Other Draft</i>	
		DECIMALS ±		CHK <i>28 MAR 73</i>	
		2 PLACE ±		APVD <i>10 APR 73</i>	
		3 PLACE ±		RELEASE APVD <i>10 APR 73</i>	
		MATERIAL		APVD <i>10 APR 73</i>	
FINISH		SURFACES		ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
A8, A9		MICRO-INCHES		LOGIC DIAGRAM - CENTRAL PROCESSOR. "A" REGISTER	
NEXT ASSY USED ON		MATERIAL		SIZE CODE IDENT NO. DRAWING NO. D 04655 00-574105	
APPLICATION		MATERIAL		SCALE NONE SHEET 1 OF 5	

Figure 8-6(1) . Central processor A register (sheet 1 of 5).

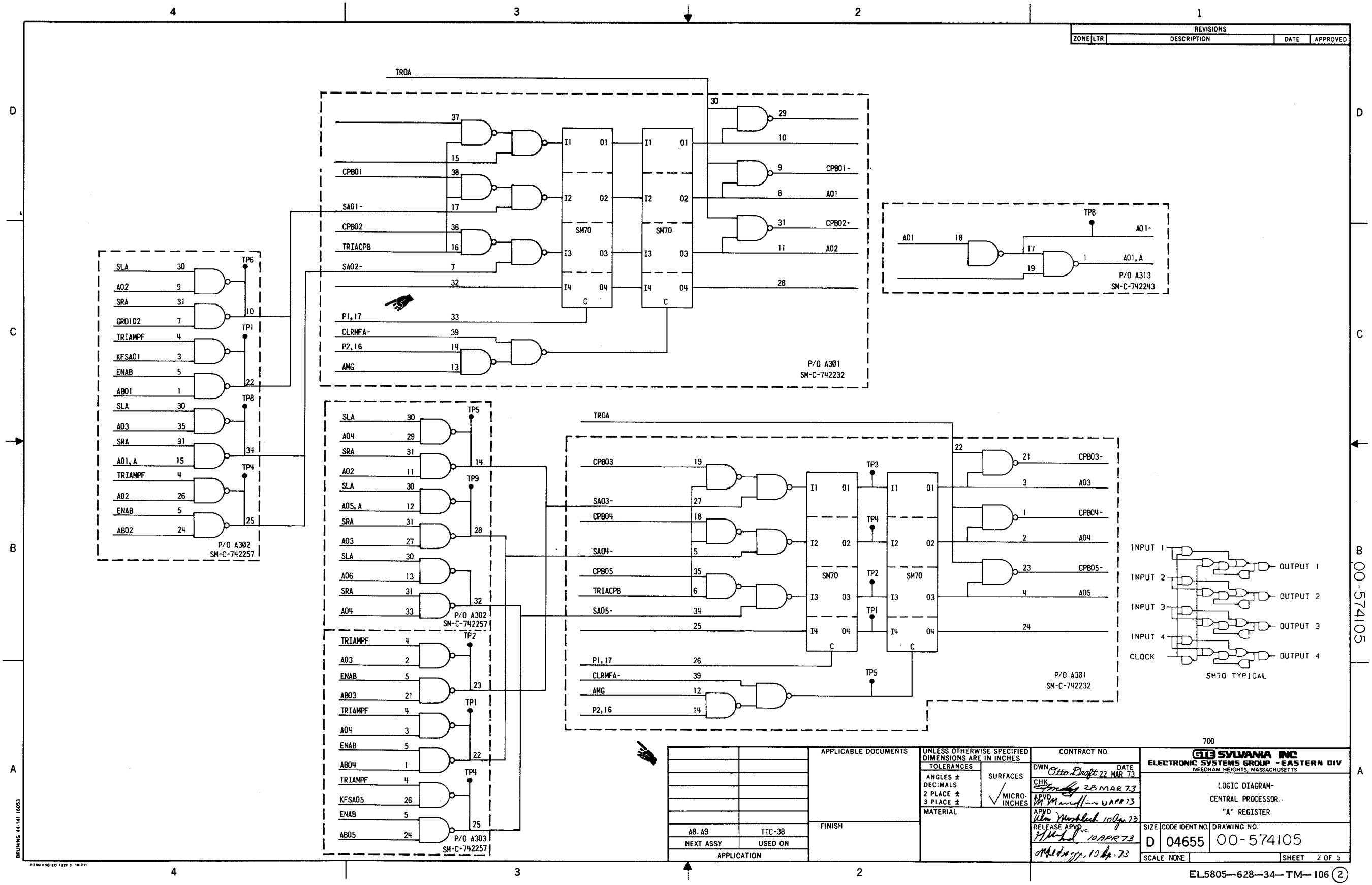


Figure 8-6(2). Central processor A register (sheet 2 of 5)

Change 3 8-13

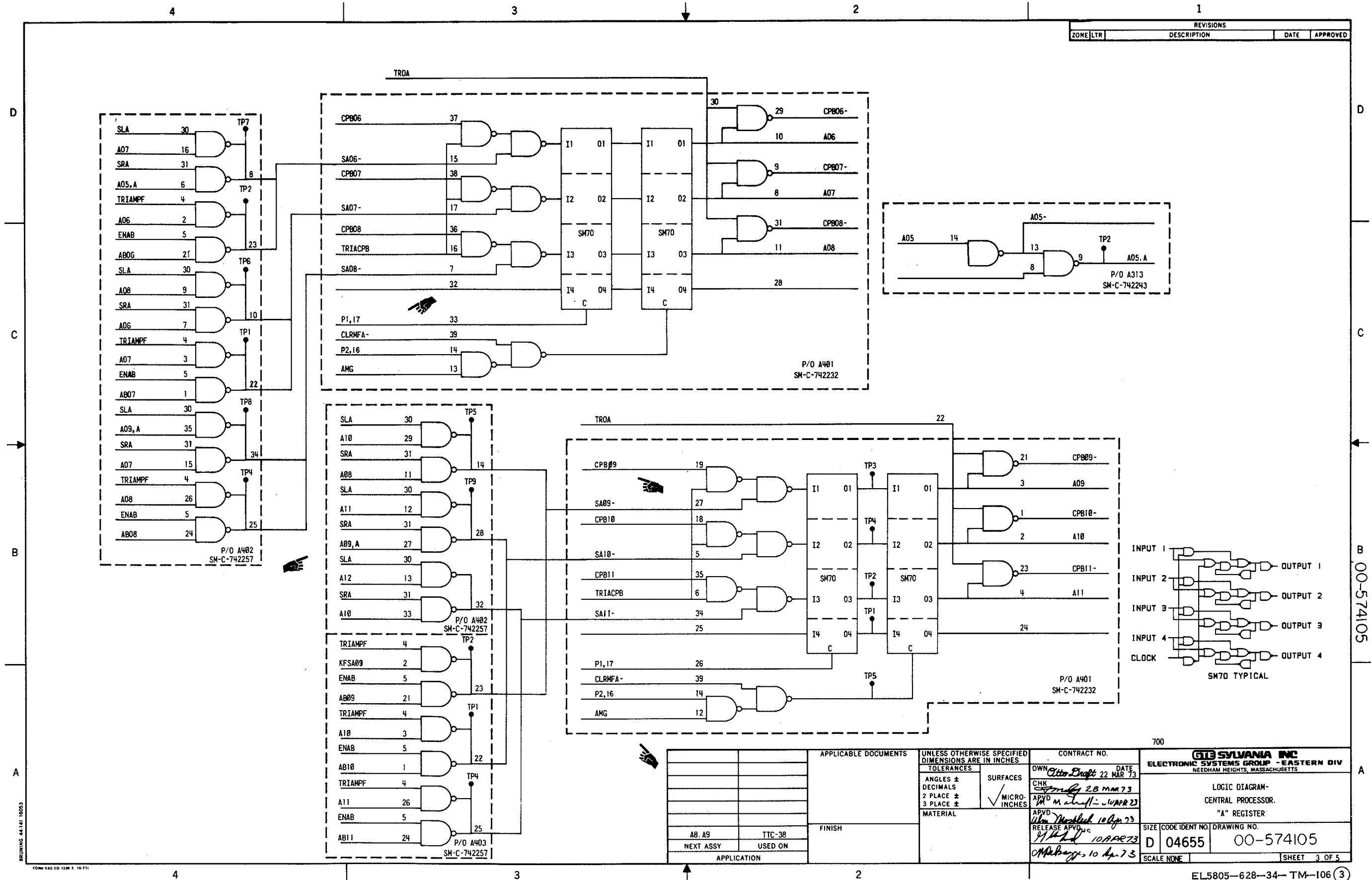


Figure 8-6(3) . Central processor A register (sheet 3 of 5)
Change 3 8-14

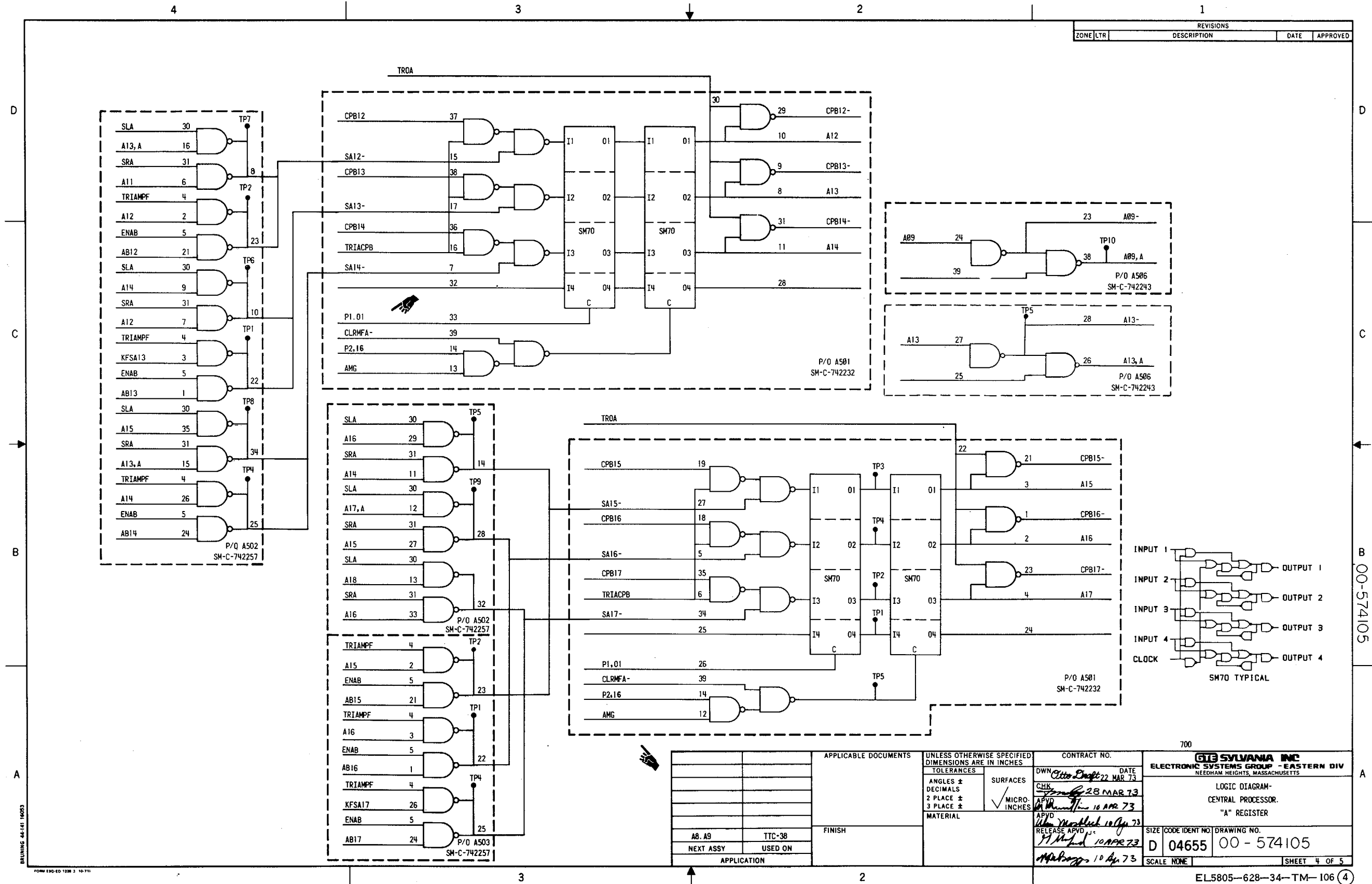


Figure 8-6(4). Central processor A register (sheet 4 of 5).

Change 3 8-15

00-574105

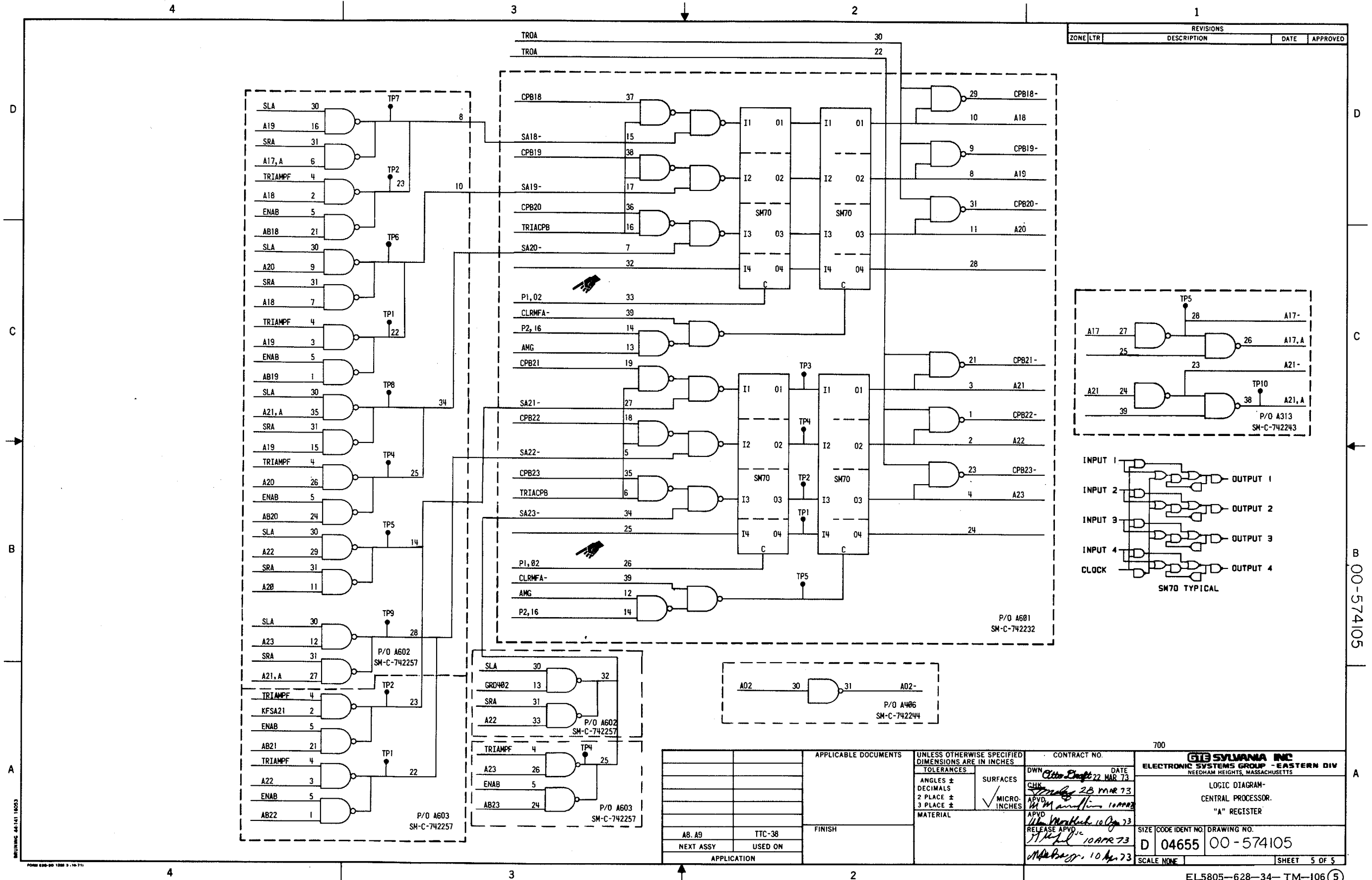
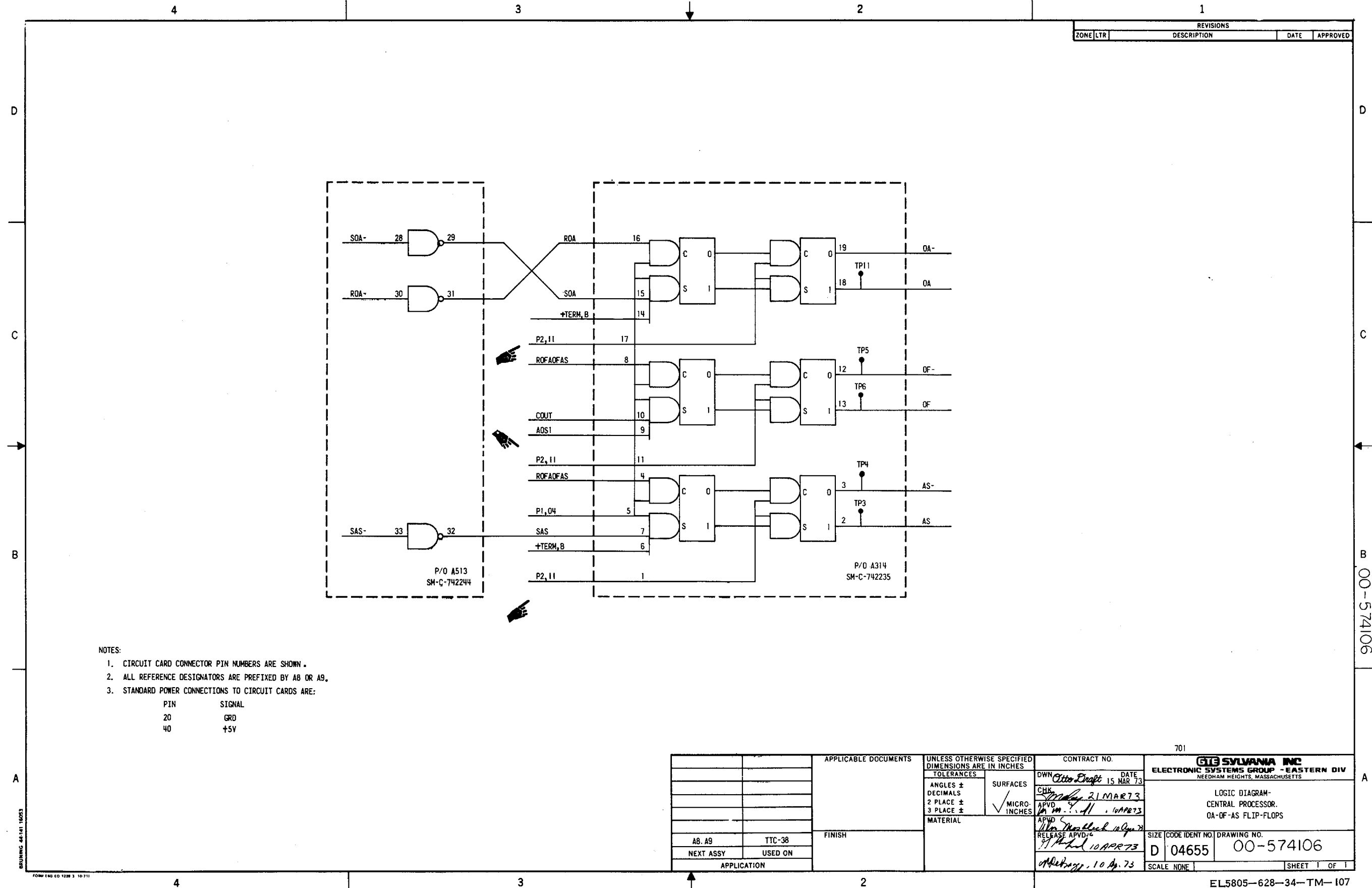


Figure 8-6(5). Central processor A register (sheet 5 of 5)
Change 3 8-16



NOTES:

1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN .
2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

PIN	SIGNAL
20	GRD
40	+5V

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		701	
FINISH		TOLERANCES		DWN <i>Otto Draft</i> DATE 15 MAR 73		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
NEXT ASSY		ANGLES ±		CHK <i>W. J. M. 21 MAR 73</i>		LOGIC DIAGRAM- CENTRAL PROCESSOR. OA-OF-AS FLIP-FLOPS	
USED ON		DECIMALS		APVD <i>W. J. M. 10 APR 73</i>		SIZE CODE IDENT NO. DRAWING NO.	
APPLICATION		2 PLACE ±		RELEASE: APVD: <i>W. J. M. 10 APR 73</i>		D 04655 00-574106	
		3 PLACE ±		APVD <i>W. J. M. 10 APR 73</i>		SCALE NONE SHEET 1 OF 1	
		MATERIAL		APVD <i>W. J. M. 10 APR 73</i>		EL5805-628-34-TM-107	

Figure 8-7. Central processor OA-OF-AS flip flops.
Change 3 8-17

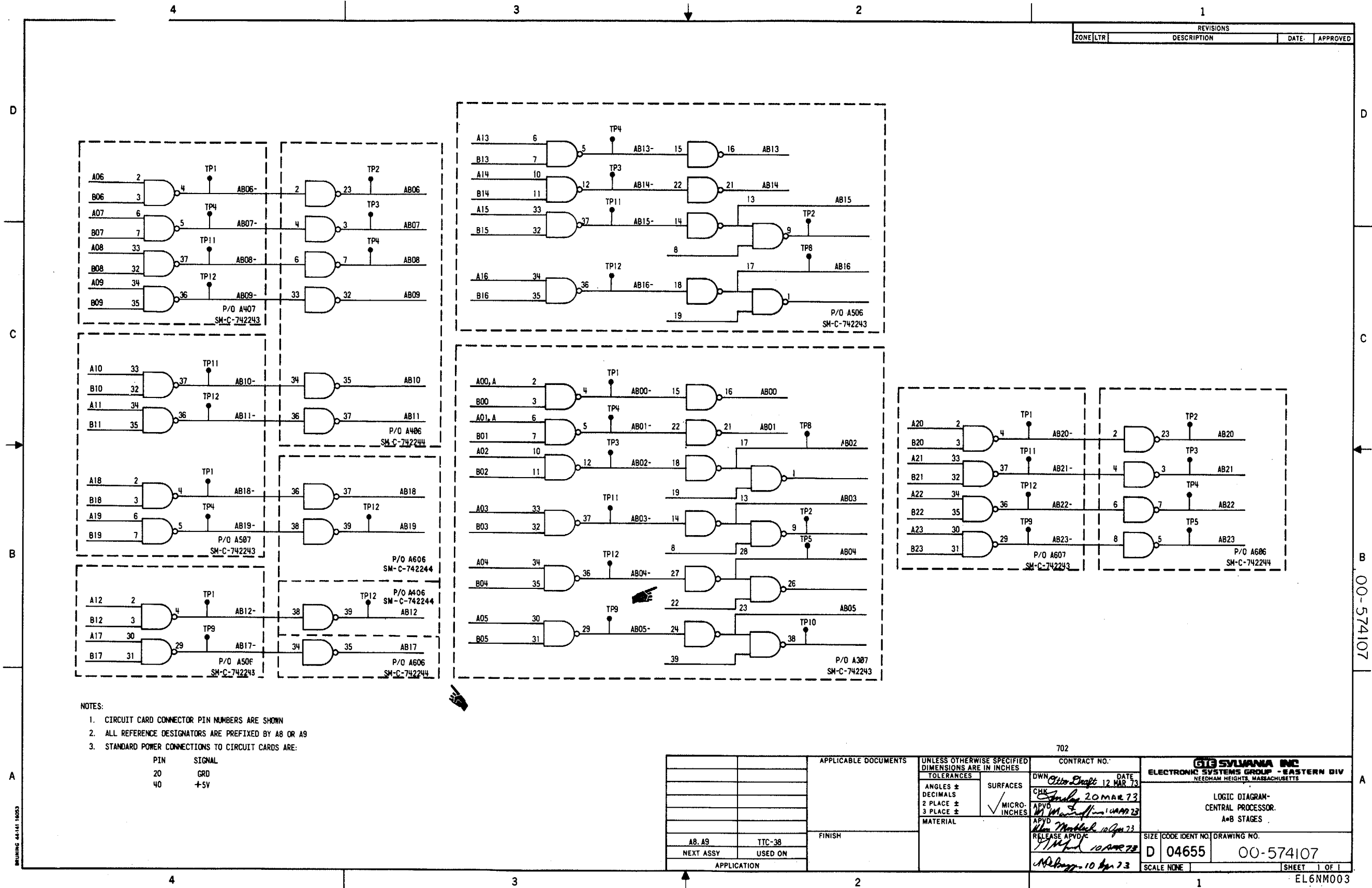
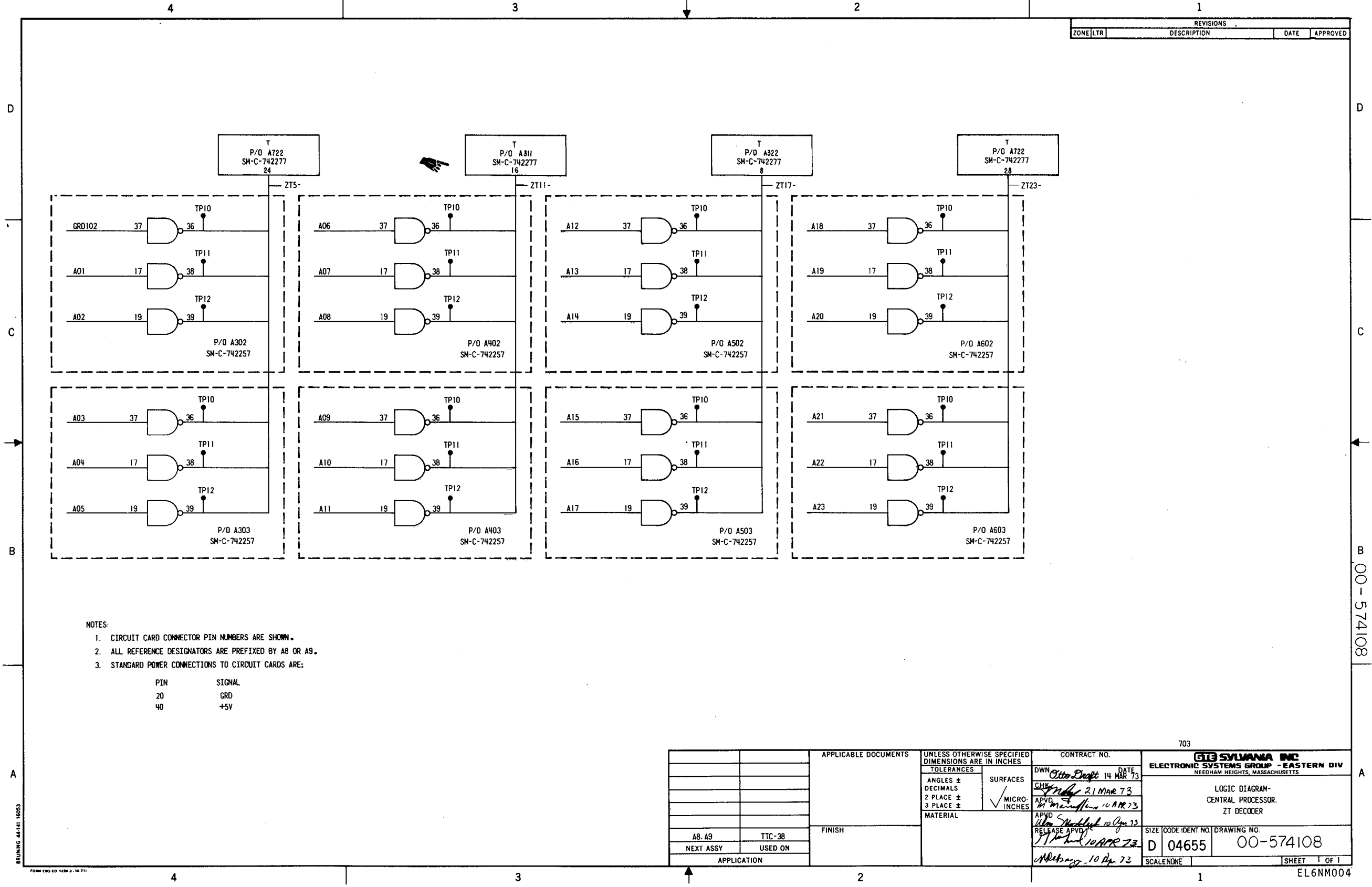


Figure 8-8. Central Processor A · B stages



REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED

- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

PIN	SIGNAL
20	GRD
40	+5V

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		703	
		TOLERANCES		DWN <i>Otto Draft</i> 14 MAR 73		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		ANGLES ±		CHK <i>[Signature]</i> 21 MAR 73		LOGIC DIAGRAM - CENTRAL PROCESSOR. ZT DECODER	
		DECIMALS		APVD <i>[Signature]</i> 10 APR 73		SIZE CODE IDENT NO. DRAWING NO.	
		2 PLACE ±		RELEASE APVD <i>[Signature]</i> 10 APR 73		D 04655 00-574108	
		3 PLACE ±		APVD <i>[Signature]</i> 10 APR 73		SCALE NONE SHEET 1 OF 1	
		MATERIAL					
A8, A9		TTC-38		FINISH			
NEXT ASSY		USED ON		APPLICATION			

Figure 8-9. Central processor ZT decoder.

BRUNING 44-141 10053

00-574108

EL6NM004

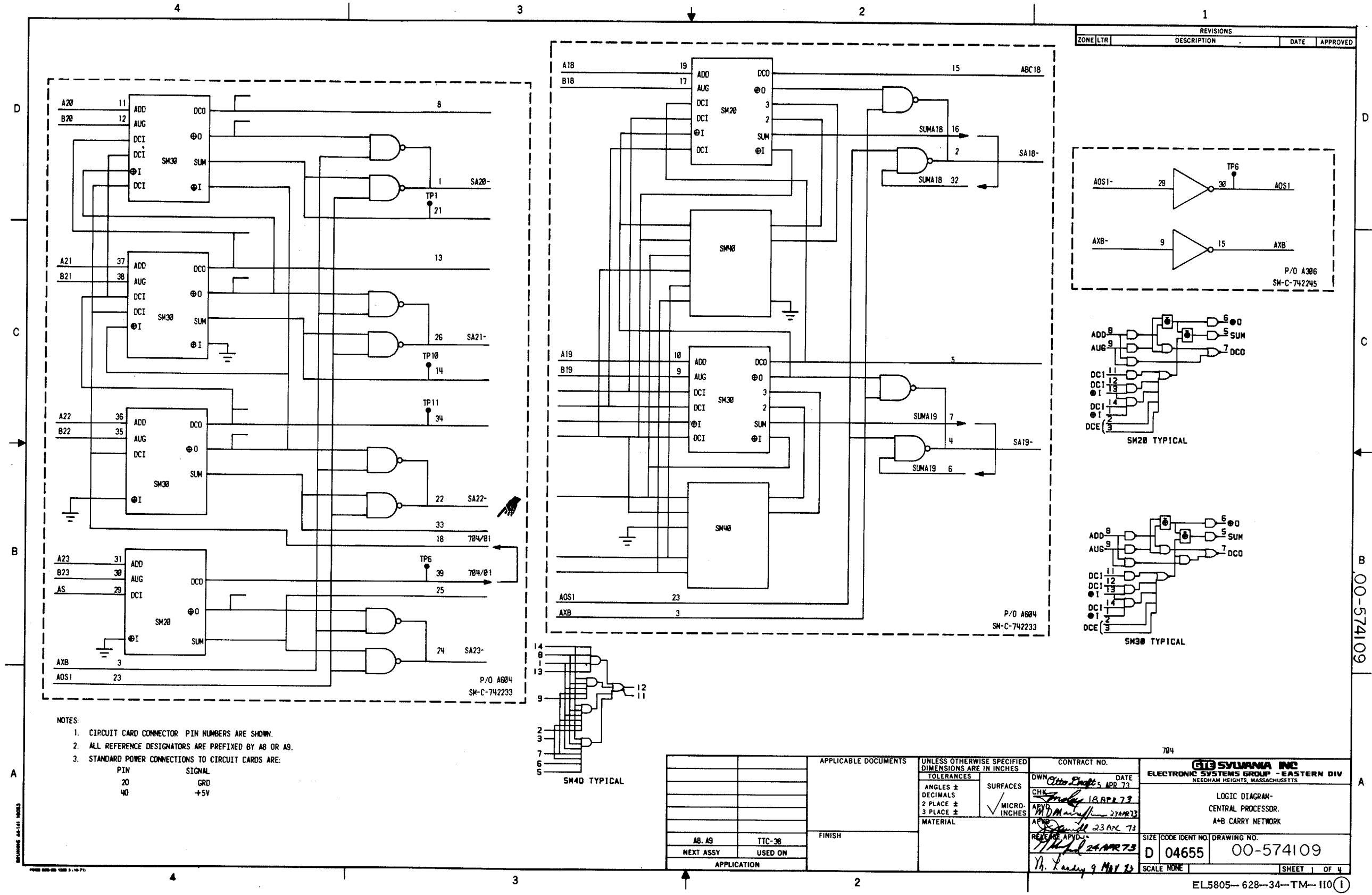


Figure 8-10(1). Central processor A + B carry network (sheet 1 of 4)

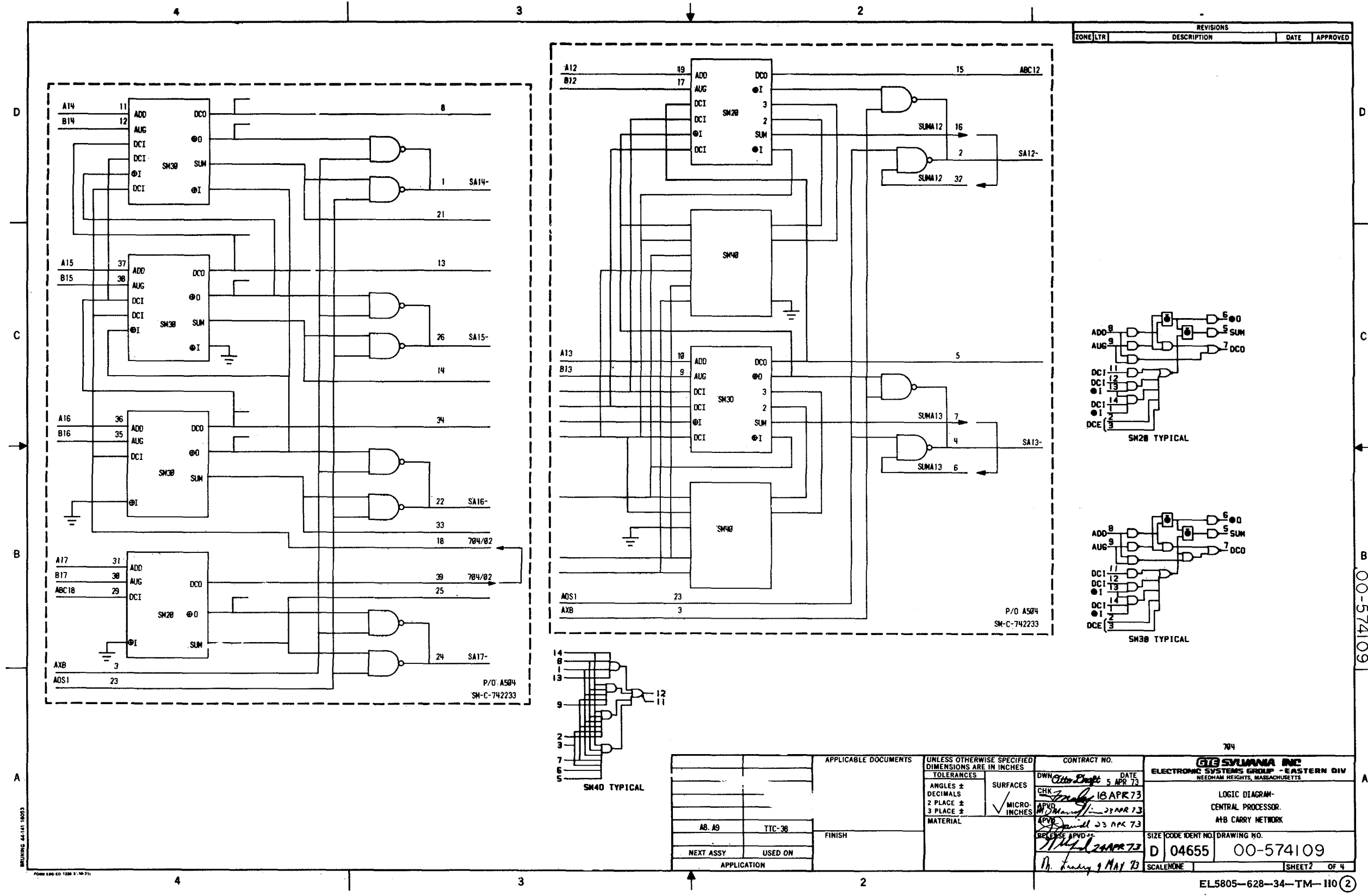


Figure 8-10(2). Central processor A + B carry network (sheet 2 of 4)

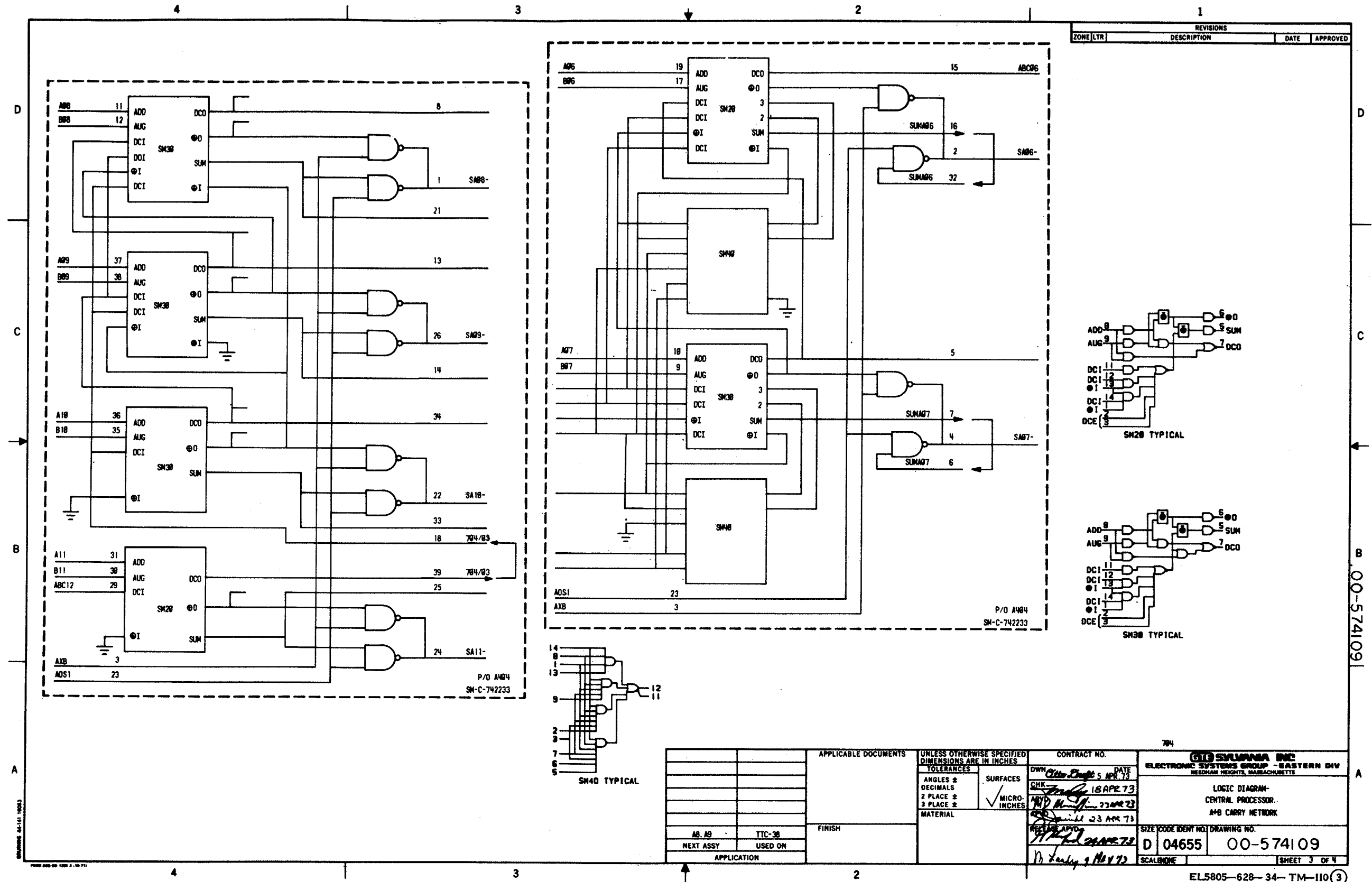


Figure 8-10(3). Central processor A + B carry network (sheet 3 of 4)

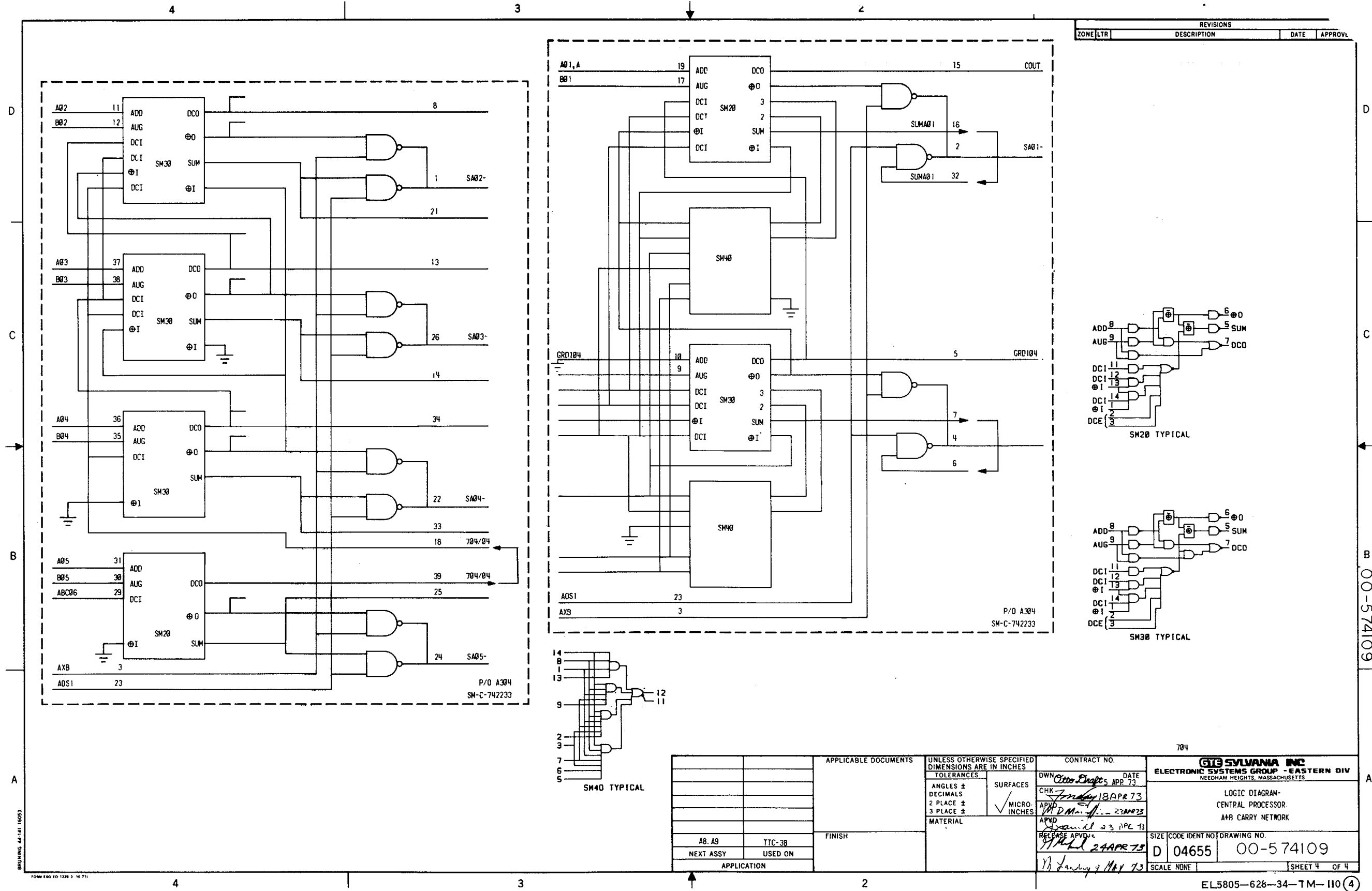


Figure 8-10(4). Central processor A + B carry network (sheet 4 of 4)

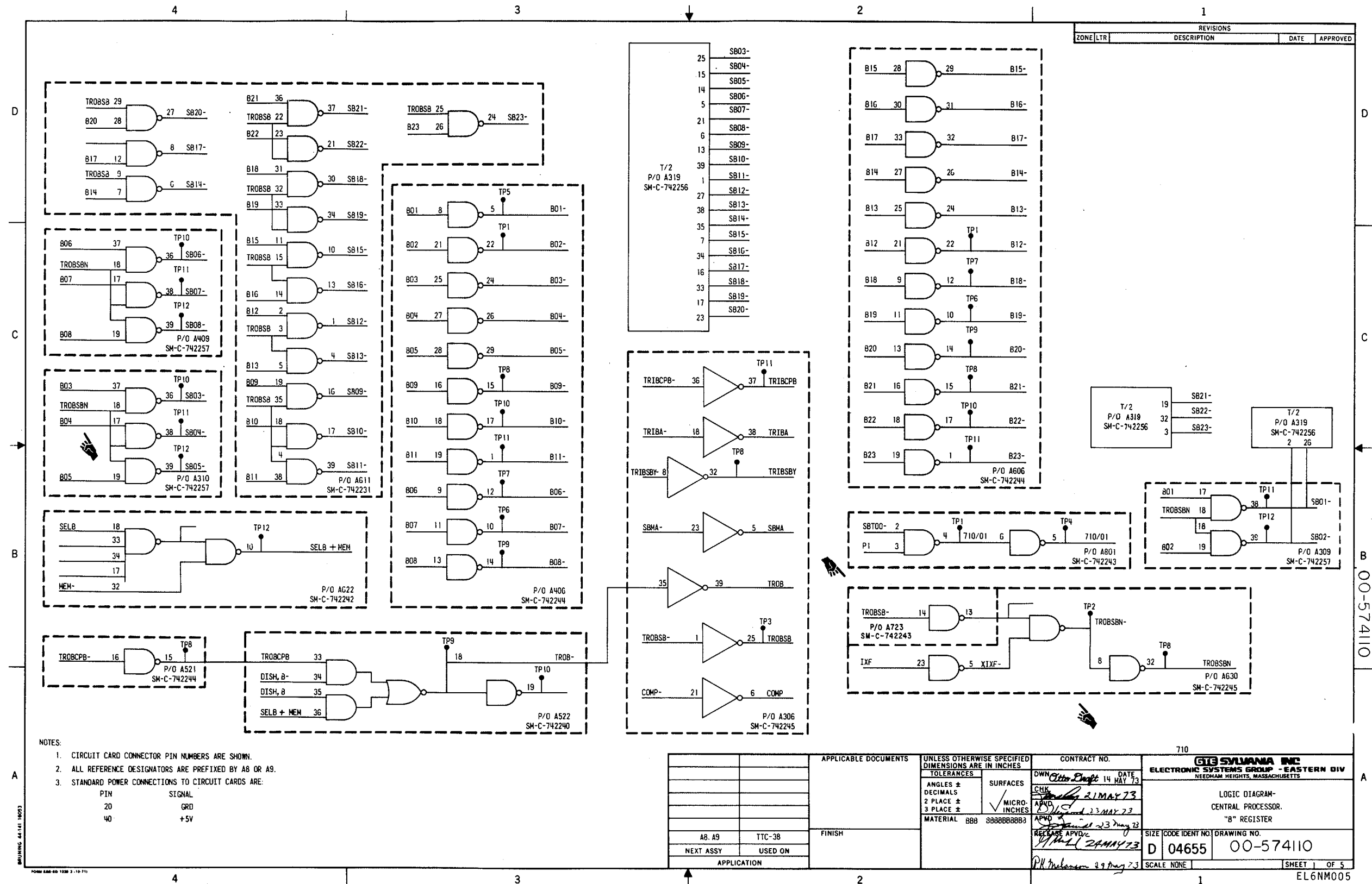
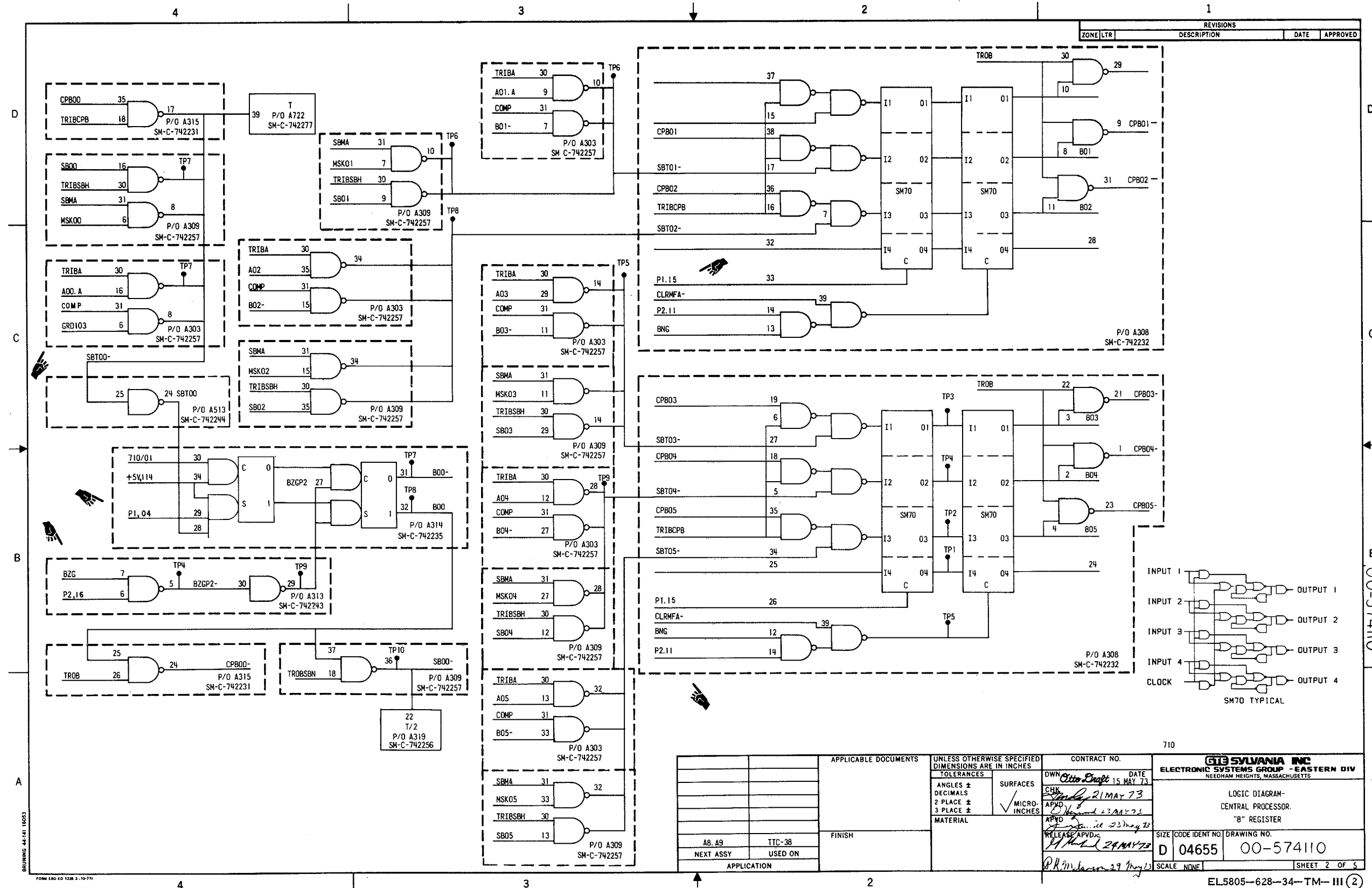


Figure 8-11(1). Central processor B register (sheet 1 of 5)



REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
FINISH		TOLERANCES		DATE		LOGIC DIAGRAM - CENTRAL PROCESSOR. "B" REGISTER	
AB, A3		ANGLES ±		15 MAY 73		SIZE (CODE IDENT NO) DRAWING NO.	
NEXT ASSY		DECIMALS		21 MAY 73		D 04655 00-574110	
USED ON		2 PLACE ±		23 MAY 73		SCALE NONE SHEET 2 OF 5	
APPLICATION		3 PLACE ±		29 MAY 73		EL5805-628-34-TM-III (2)	
		MATERIAL					
		SURFACES					
		✓ MICRO-INCHES					

Figure 8-11(2). Central processor B register (sheet 2 of 5)

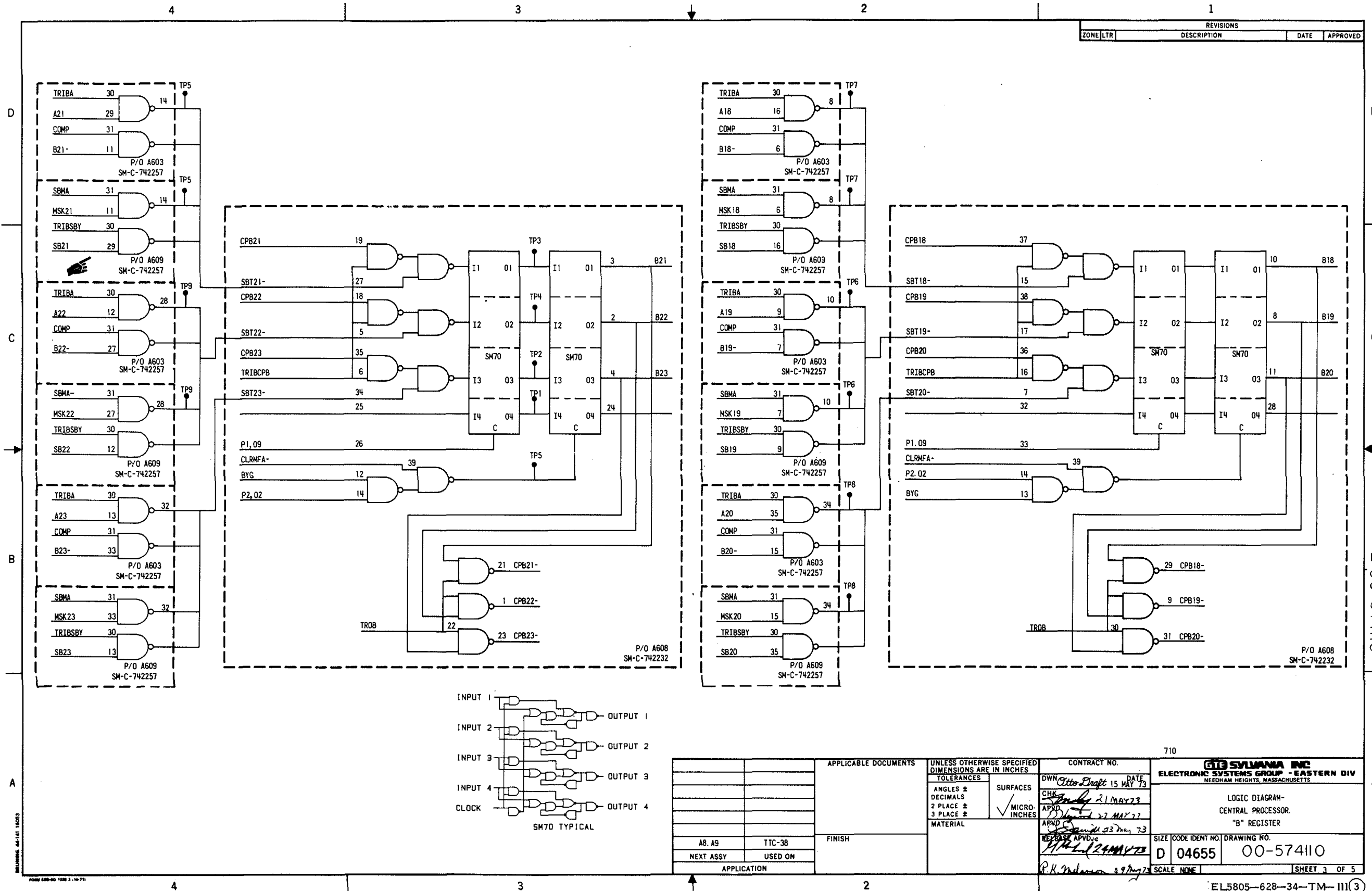
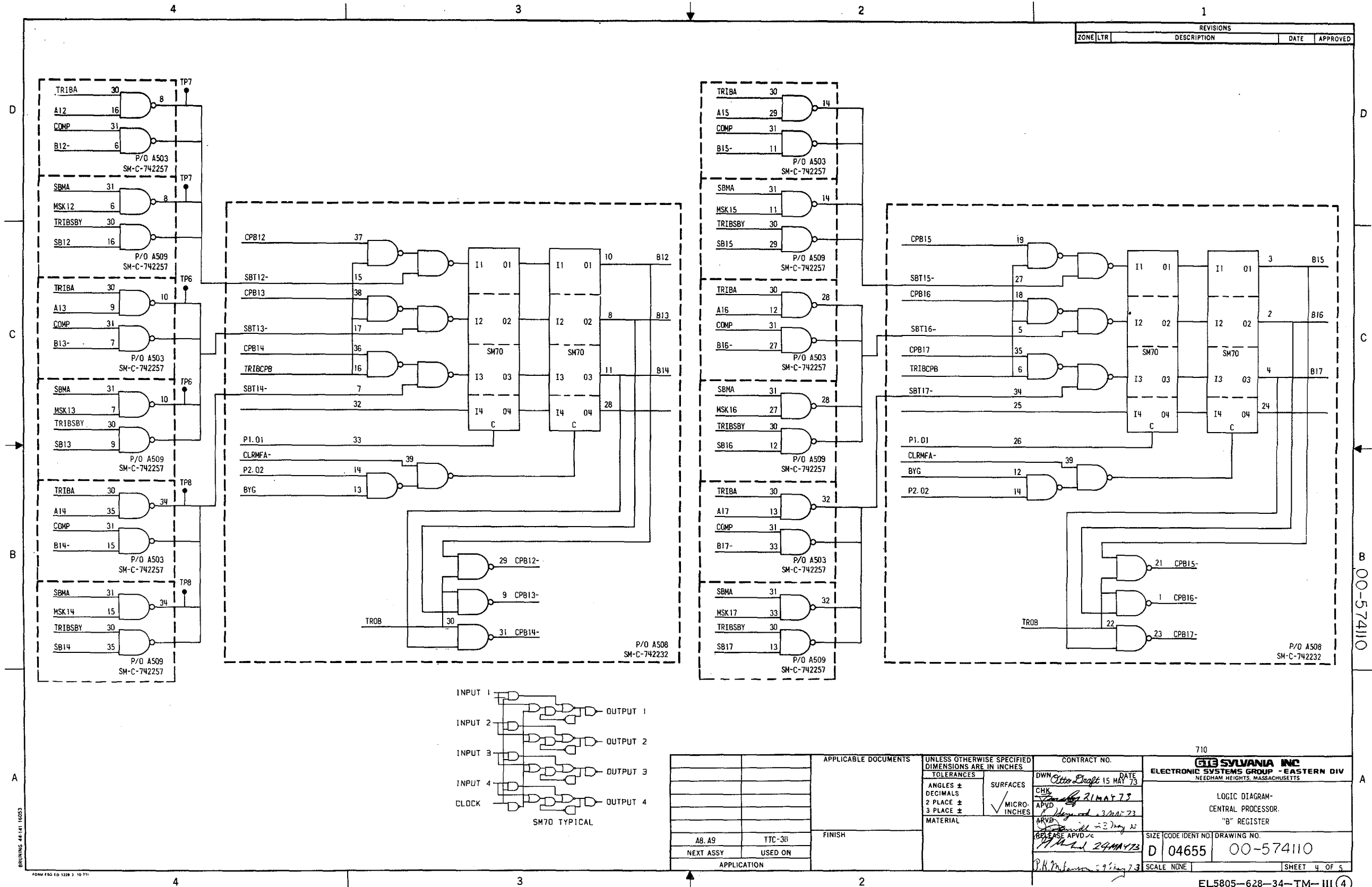


Figure 8-11(3). Central processor B register (sheet 3 of 5)



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		710	
		TOLERANCES		DWN <i>Otto Draft</i> 15 MAY 73		DATE	
		ANGLES ±		CHK			
		DECIMALS		APVD <i>[Signature]</i> 21 MAY 73			
		2 PLACE ±		ARVD <i>[Signature]</i> 23 MAY 73			
		3 PLACE ±		ARVD <i>[Signature]</i> 23 MAY 73			
		MATERIAL		APVD <i>[Signature]</i> 24 MAY 73			
		FINISH		SCALE NONE			
				SIZE		CODE IDENT NO.	
				D 04655		DRAWING NO.	
						00-574110	
						SHEET 4 OF 5	

Figure 8-11(4). Central processor B register (sheet 4 of 5)

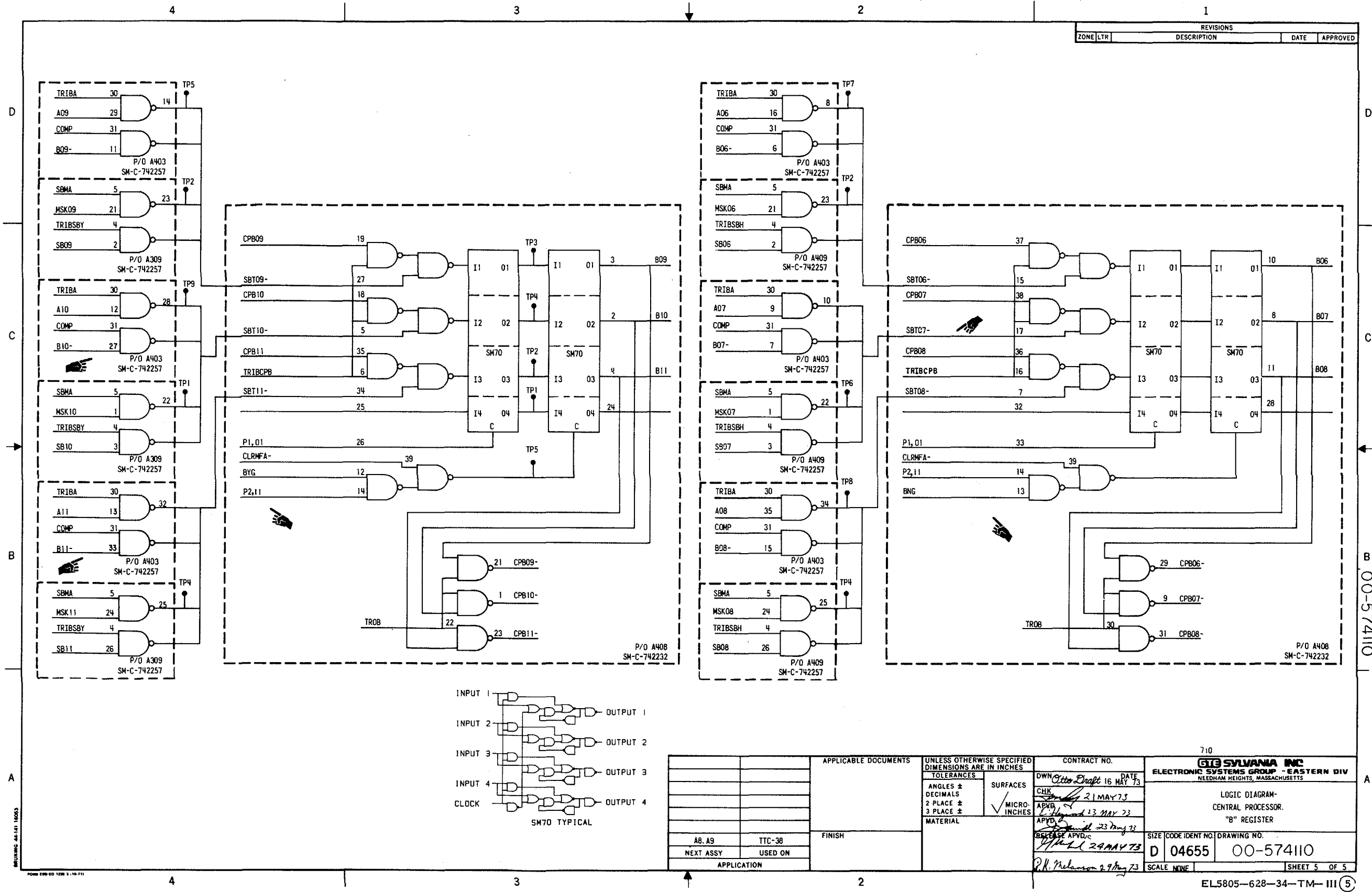
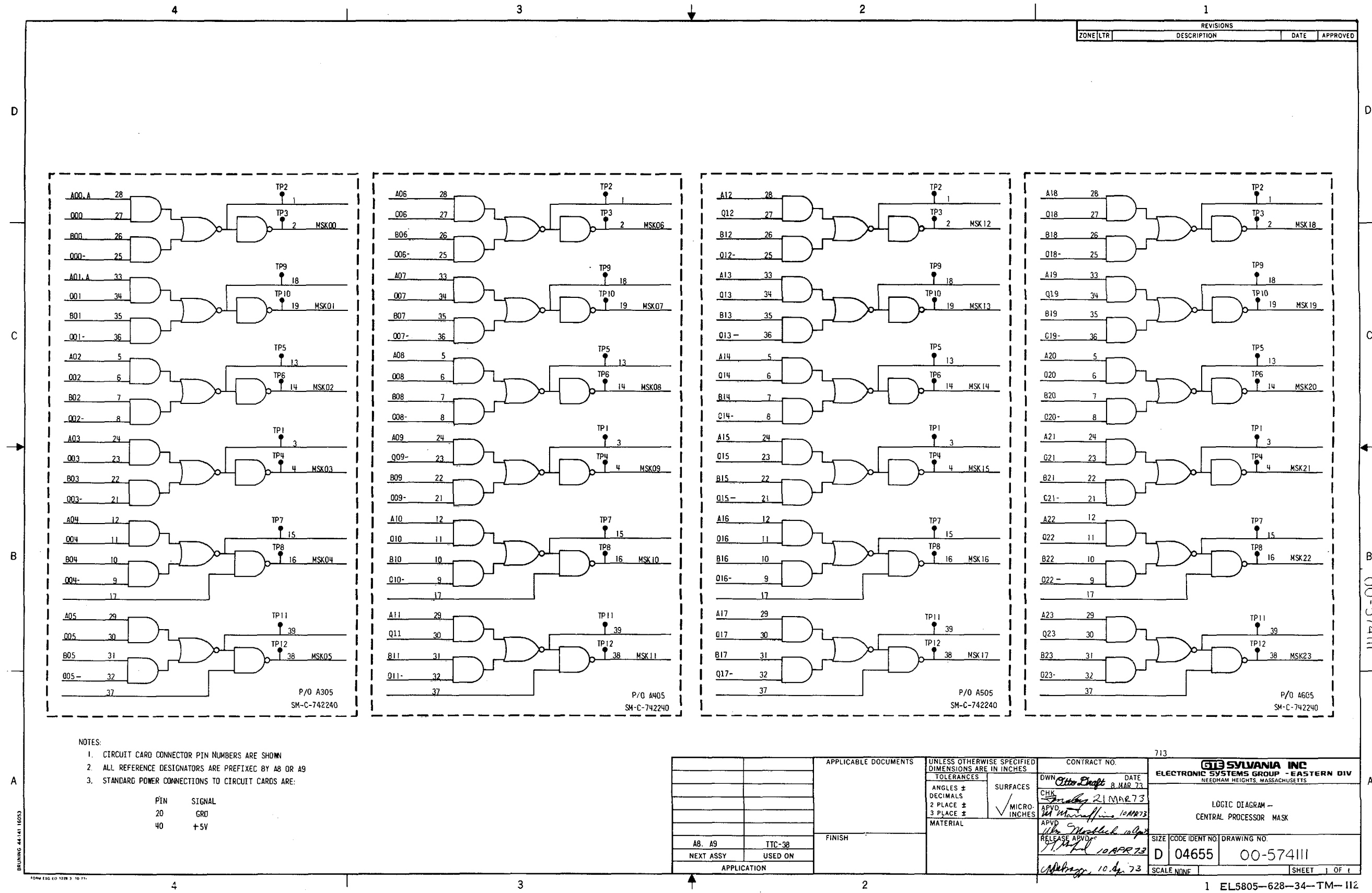


Figure 8-11(5). Central processor B register (sheet 5 of 5)



REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED

- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:
- | | |
|-----|--------|
| PIN | SIGNAL |
| 20 | GRD |
| 40 | +5V |

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO. 713	
FINISH		TOLERANCES		DATE 8 MAR 73	
APPLICATION		ANGLES ±		DWN <i>Otto Dwyer</i>	
NEXT ASSY USED ON		DECIMALS		CHK <i>Franklin 21 MAR 73</i>	
		2 PLACE ±		APVD <i>W. M. ... 10 APR 73</i>	
		3 PLACE ±		RELEASE ADVISOR <i>10 APR 73</i>	
		MATERIAL		APVD <i>W. M. ... 10 APR 73</i>	
		SURFACES		SIZE CODE IDENT NO. D 04655	
		MICRO-INCHES		DRAWING NO. 00-574111	
				SCALE NONE	
				SHEET 1 OF 1	

Figure 8-12. Central processor mask.

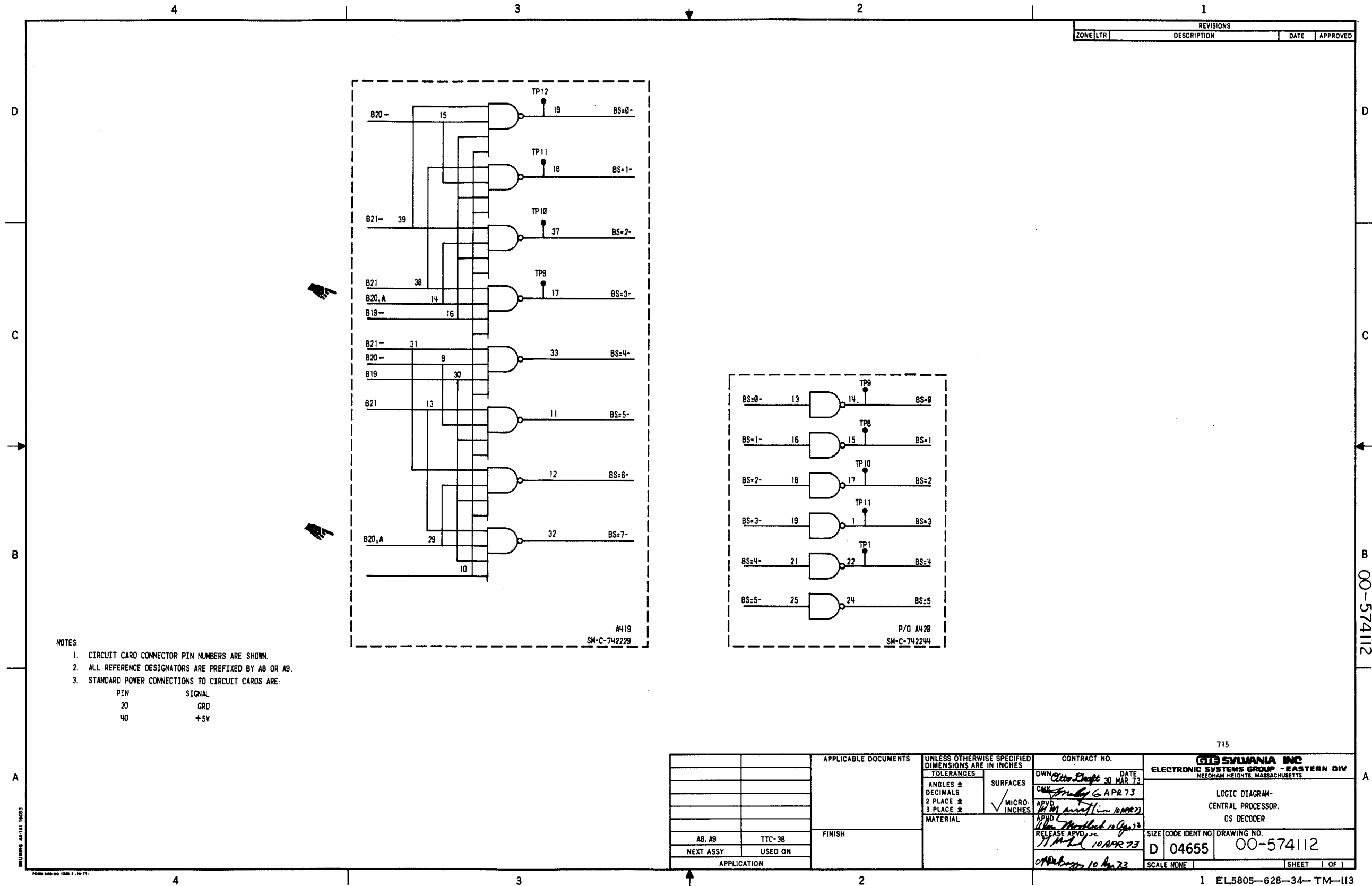
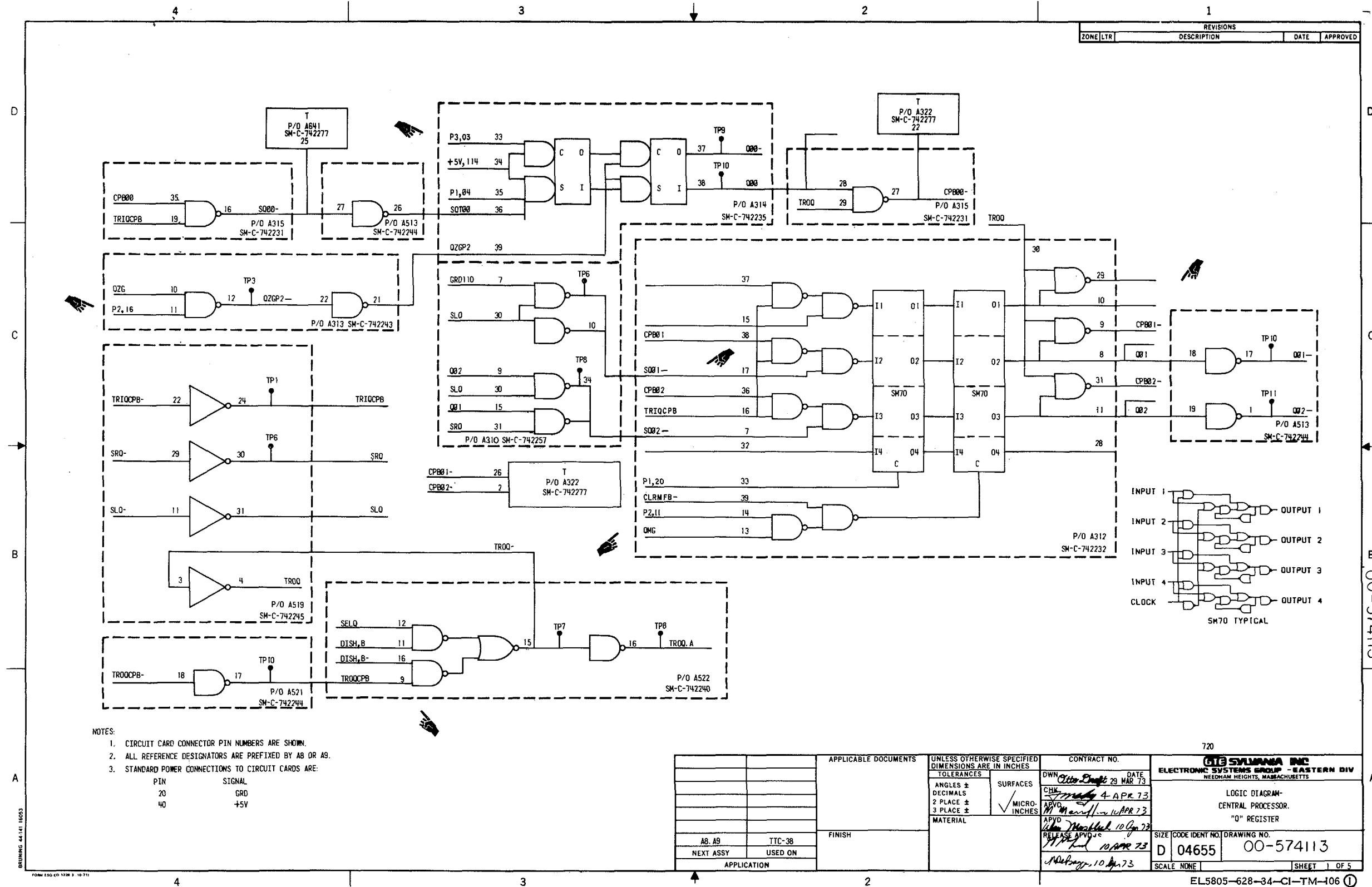


Figure 8-13. Central processor NS decoder.



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

PIN	SIGNAL
20	GRD
40	+5V

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO. 720	
		TOLERANCES		DATE	
		ANGLES ±		DWN <i>Otto Draft</i> 29 MAR 73	
		DECIMALS		CHK <i>W. M. ...</i> 4 APR 73	
		2 PLACE ±		APVD <i>M. M. ...</i> 10 APR 73	
		3 PLACE ±		RELEASE APVD <i>J. M. ...</i> 10 APR 73	
		MICRO-INCHES		APVD <i>W. M. ...</i> 10 APR 73	
		MATERIAL		SCALE NONE	
FINISH				DRAWING NO. 00-574113	
				SIZE [CODE IDENT NO.]	
				D 04655	
				SHEET 1 OF 5	
				EL5805-628-34-C1-TM-106 ①	

Figure 8-14(1). Central processor Q register (sheet 1 of 5)

Change 3 8-31

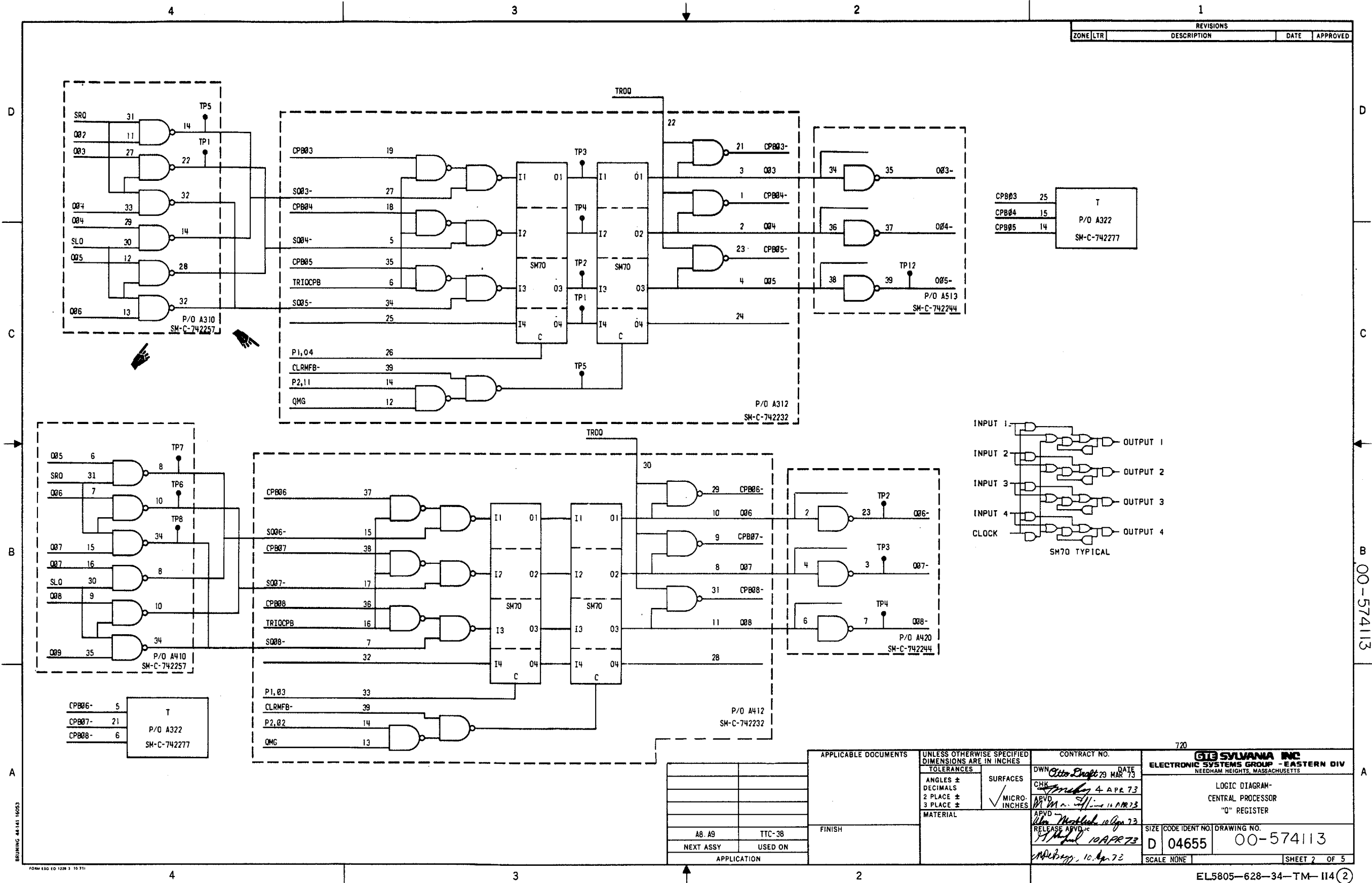
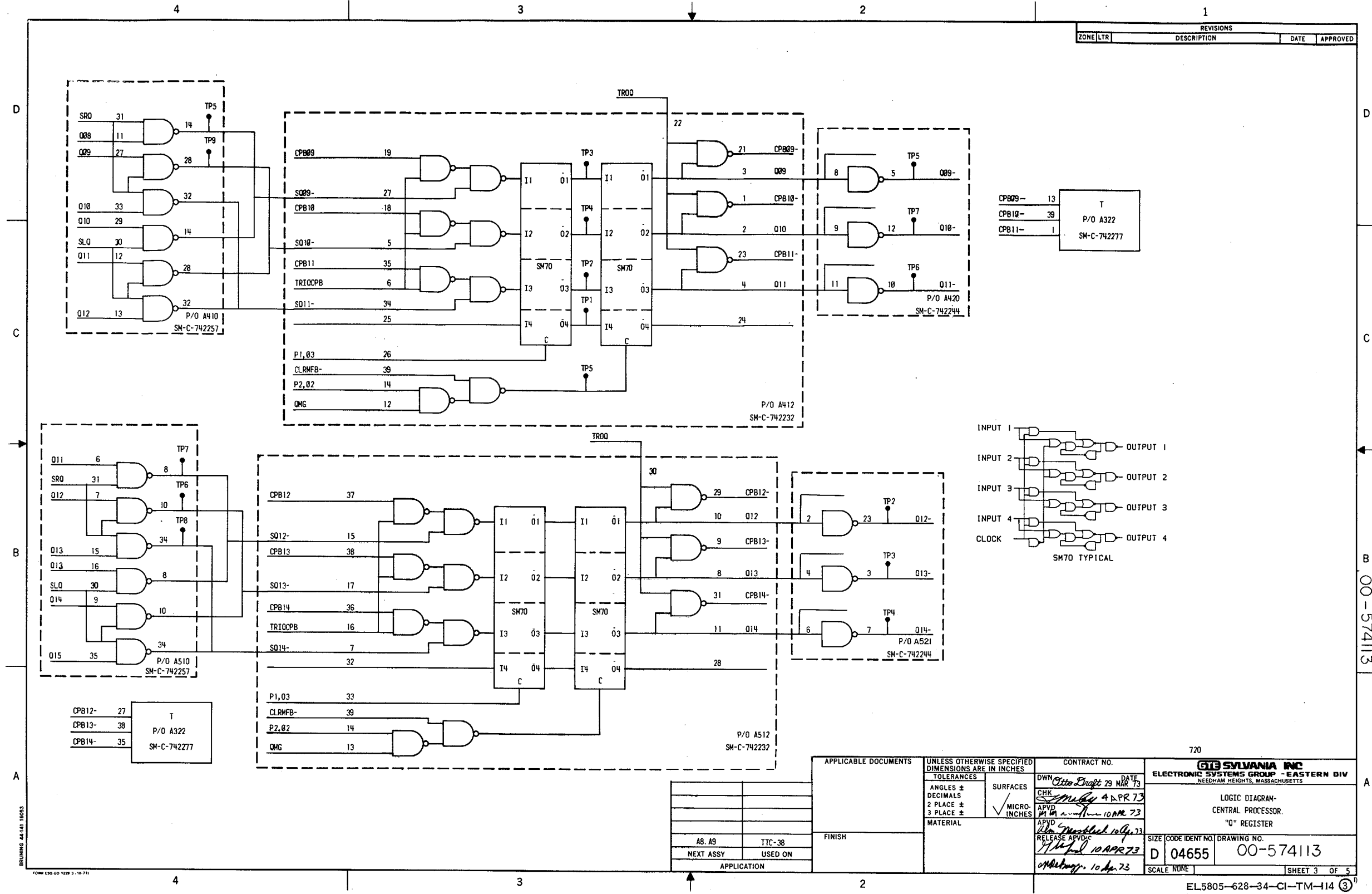
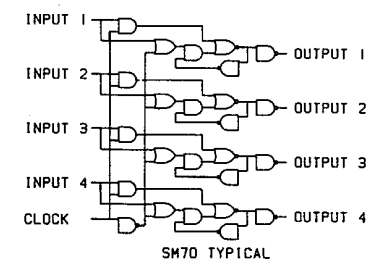


Figure 8-14(2) . Central processor Q register (sheet 2 of 5)



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED



CPB12-	27	T	P/O A322	SM-C-742277
CPB13-	38			
CPB14-	35			

P1,03	33	T	P/O A512	SM-C-742232
CLRMFB-	39			
P2,02	14			
QMG	13			

APPLICABLE DOCUMENTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	CONTRACT NO.	720
	TOLERANCES	DWN <i>Edto Draft</i> 29 MAR 73	DATE
	ANGLES ±	CHK <i>Mulley</i> 4 APR 73	
	DECIMALS	APVD <i>MVA</i> 10 APR 73	
	2 PLACE ±	APVD <i>Smothered</i> 10 Apr 73	
	3 PLACE ±	RELEASE APVDC <i>MVA</i> 10 APR 73	
	MATERIAL	APVDC <i>MVA</i> 10 Apr 73	
FINISH			
A8, A9	TTC-38		
NEXT ASSY	USED ON		
APPLICATION			

GTS SYLVANIA INC	
ELECTRONIC SYSTEMS GROUP - EASTERN DIV	
NEEDHAM HEIGHTS, MASSACHUSETTS	
LOGIC DIAGRAM - CENTRAL PROCESSOR "Q" REGISTER	
SIZE	CODE IDENT NO. DRAWING NO.
D	04655 00-574113
SCALE	NONE
SHEET 3 OF 5	

Figure 8-14(3) . Central processor Q register (sheet 3 of 5)

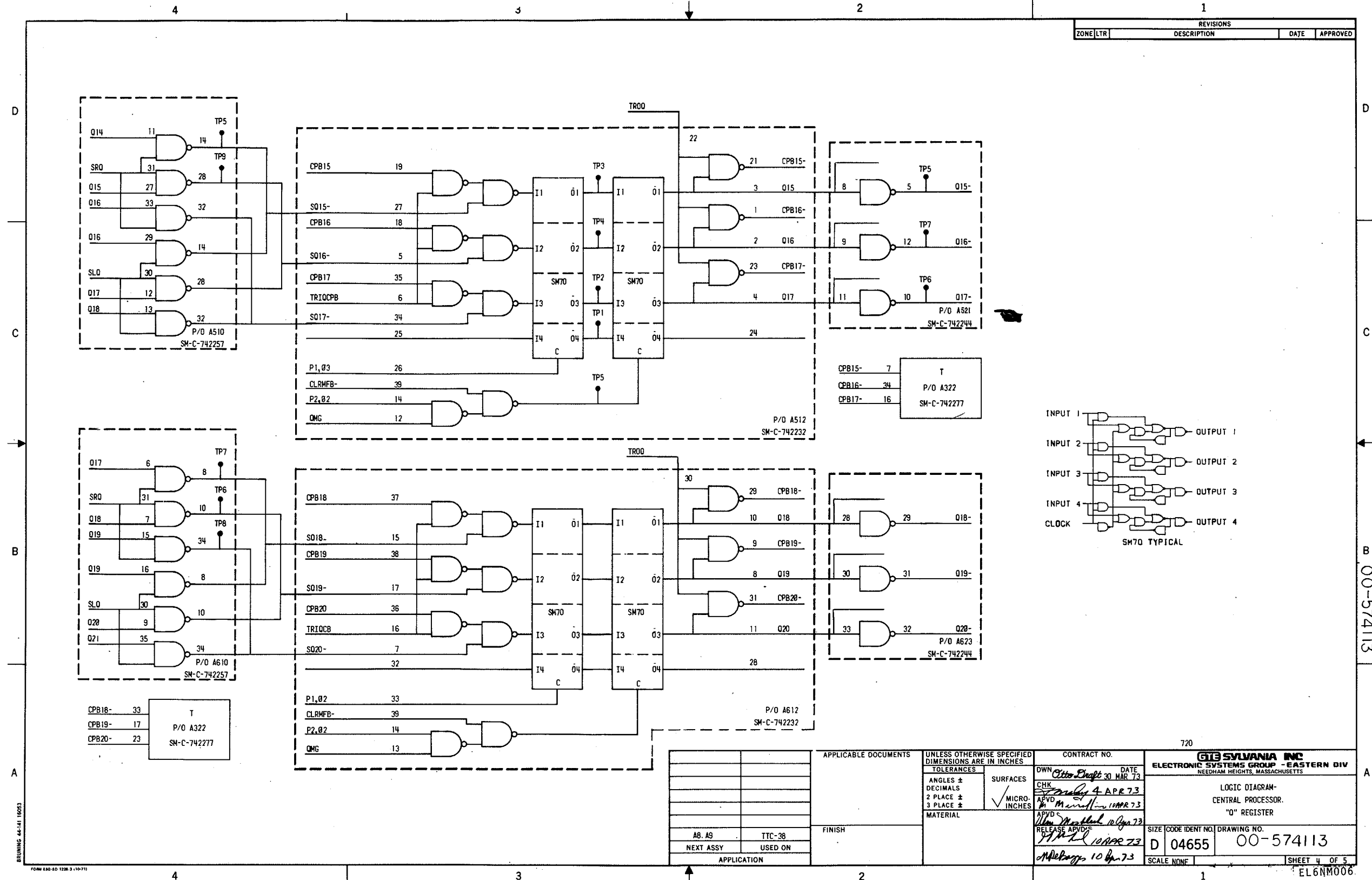


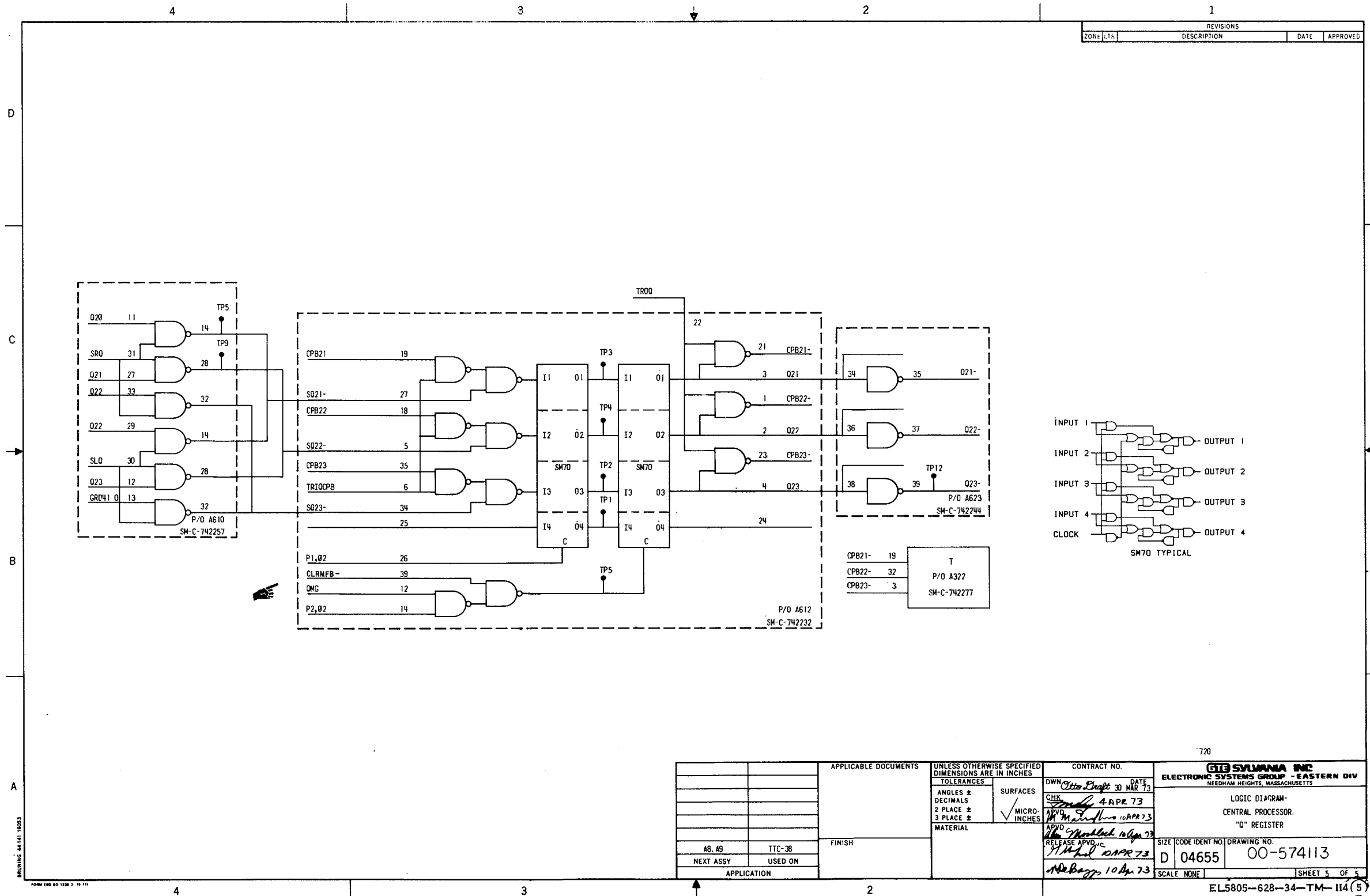
Figure 8-14(4) . Central processor Q register (sheet 4 of 5)

Change 2 8-34

DRAWING 44-11 1003

FORM 830-50 1228 3-10-73

EL6NM006



REVISIONS			
ZONE	DATE	DESCRIPTION	APPROVED

APPLICATION		AB, AS	TIC-38	FINISH	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	CONTRACT NO.	720	GIB SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS
					TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MICRO-INCHES SURFACES ✓ MICRO-INCHES	DWN <i>Otto Draft</i> 30 MAR 73 CHK <i>Smith</i> 4 APR 73 APVD <i>M. Mainelli</i> 10 APR 73 APVD <i>W. Maddox</i> 10 APR 73 RELEASE APVD <i>J. M. Hall</i> 10 APR 73 <i>McBryde</i> 10 Apr 73	LOGIC DIAGRAM CENTRAL PROCESSOR "Q" REGISTER	
								SIZE CODE IDENT NO. DRAWING NO. D 04655 00-574113
								SCALE NONE SHEET 5 OF 5 EL5805-628-34-TM-114 (5)

Figure 8-14(5). Central processor Q register (sheet 5 of 5)

Change 3 8-35

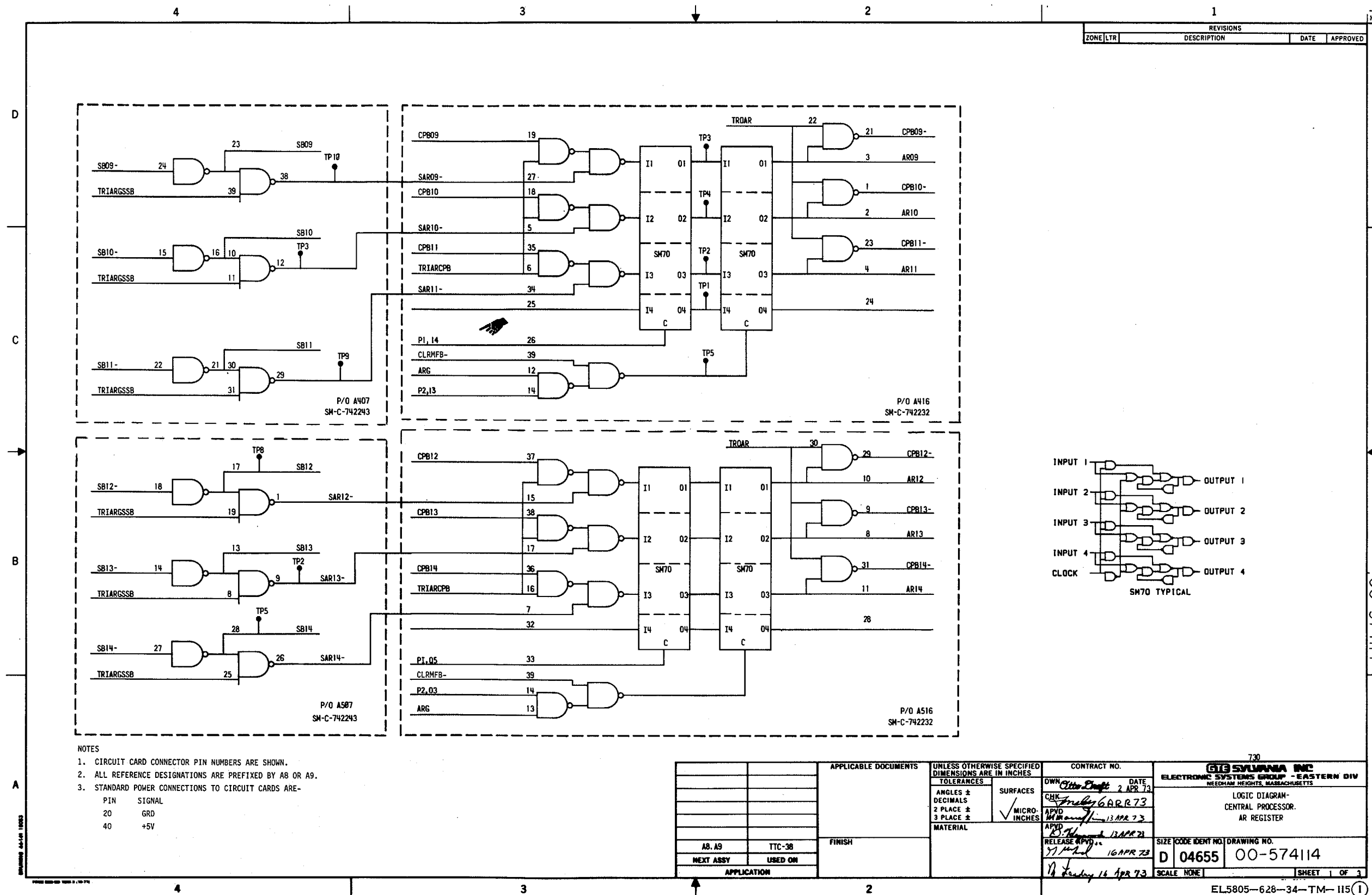
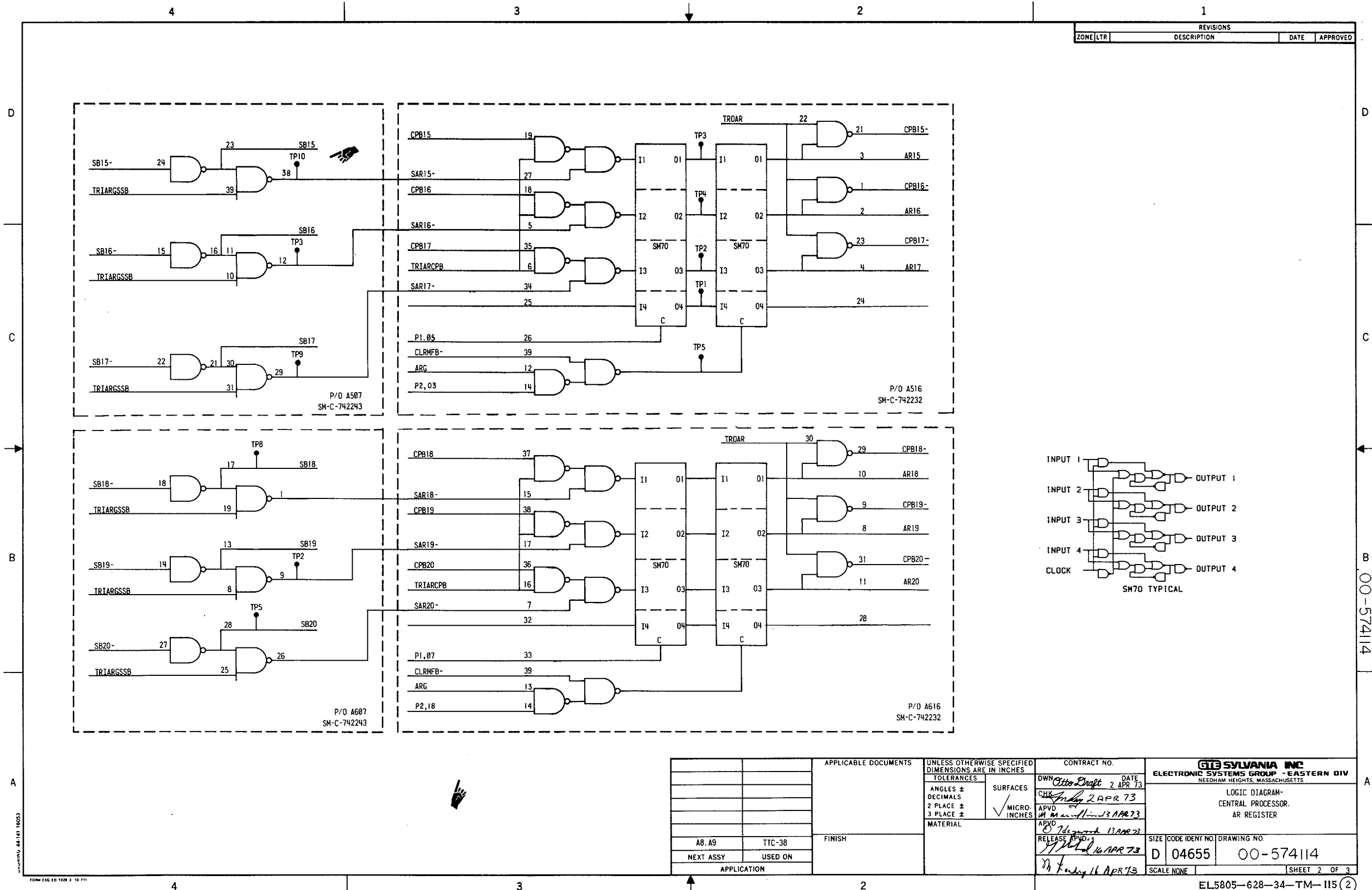
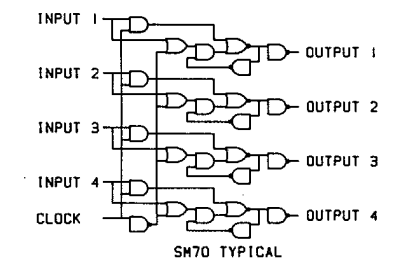


Figure 8-15(1). Central processor AR register (sheet 1 of 3)

Change 3 8-36



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE



APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTS SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES		DWN <i>Otto Draft</i> 2 APR 73		DATE	
		ANGLES ±		CHK <i>Friday</i> 2 APR 73		LOGIC DIAGRAM-	
		DECIMALS		APVD <i>W. M. ...</i> 13 APR 73		CENTRAL PROCESSOR.	
		2 PLACE ±		APVD <i>O. ...</i> 13 APR 73		AR REGISTER	
		3 PLACE ±		RELEASE APVD <i>W. ...</i> 16 APR 73		SIZE (CODE IDENT NO) DRAWING NO.	
		MATERIAL		APVD <i>W. ...</i> 16 APR 73		D 04655 00-574114	
A8, A9		TTC-38		FINISH		SCALE NONE	
NEXT ASSY		USED ON		APPLICATION		SHEET 2 OF 3	

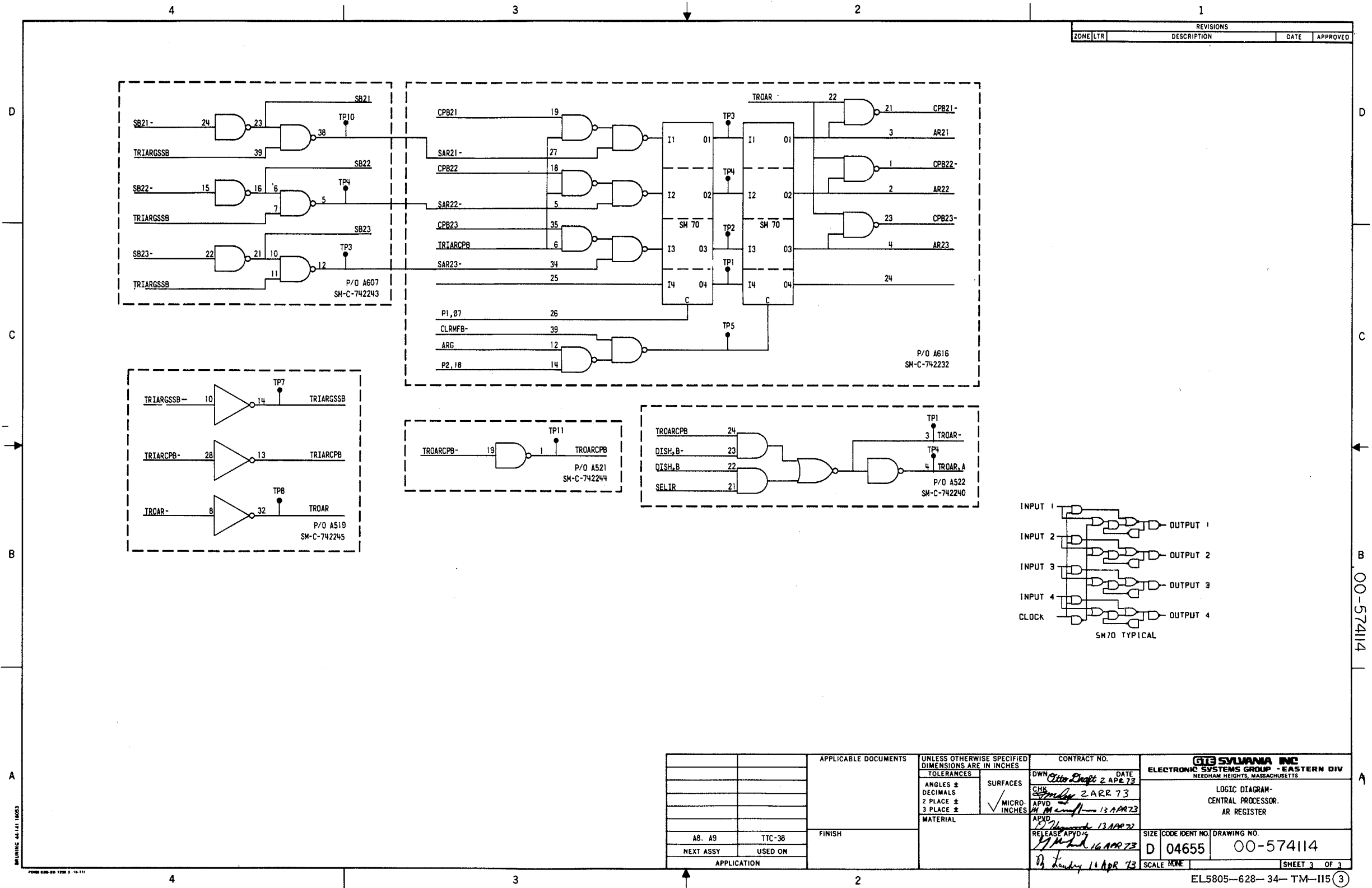
Figure 8-15(2) . Central processor AR register (sheet 2 of 3)

Change 3 8-37

FORM EEC 10 1228 3 10 711

00-574114

EL5805-628-34-TM-115 (2)



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

INPUT 1		OUTPUT 1
INPUT 2		OUTPUT 2
INPUT 3		OUTPUT 3
INPUT 4		OUTPUT 4
CLOCK		
SM70 TYPICAL		

APPLICABLE DOCUMENTS AB, A9 NEXT ASSY APPLICATION	FINISH TTC-38 USED ON	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MICRO- INCHES MATERIAL	CONTRACT NO. DATE 2 APR 73 DATE 2 APR 73 DATE 13 APR 73 DATE 16 APR 73 DATE 14 APR 73	GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS LOGIC DIAGRAM- CENTRAL PROCESSOR. AR REGISTER
		SIZE D 04655	CODE IDENT NO. 00-574114	
		SCALE NONE	SHEET 3 OF 3	
		EL5805-628-34-TM-115 (3)		

Figure 8-15(3). Central processor AR register (sheet 3 of 3)

Change 3 8-38

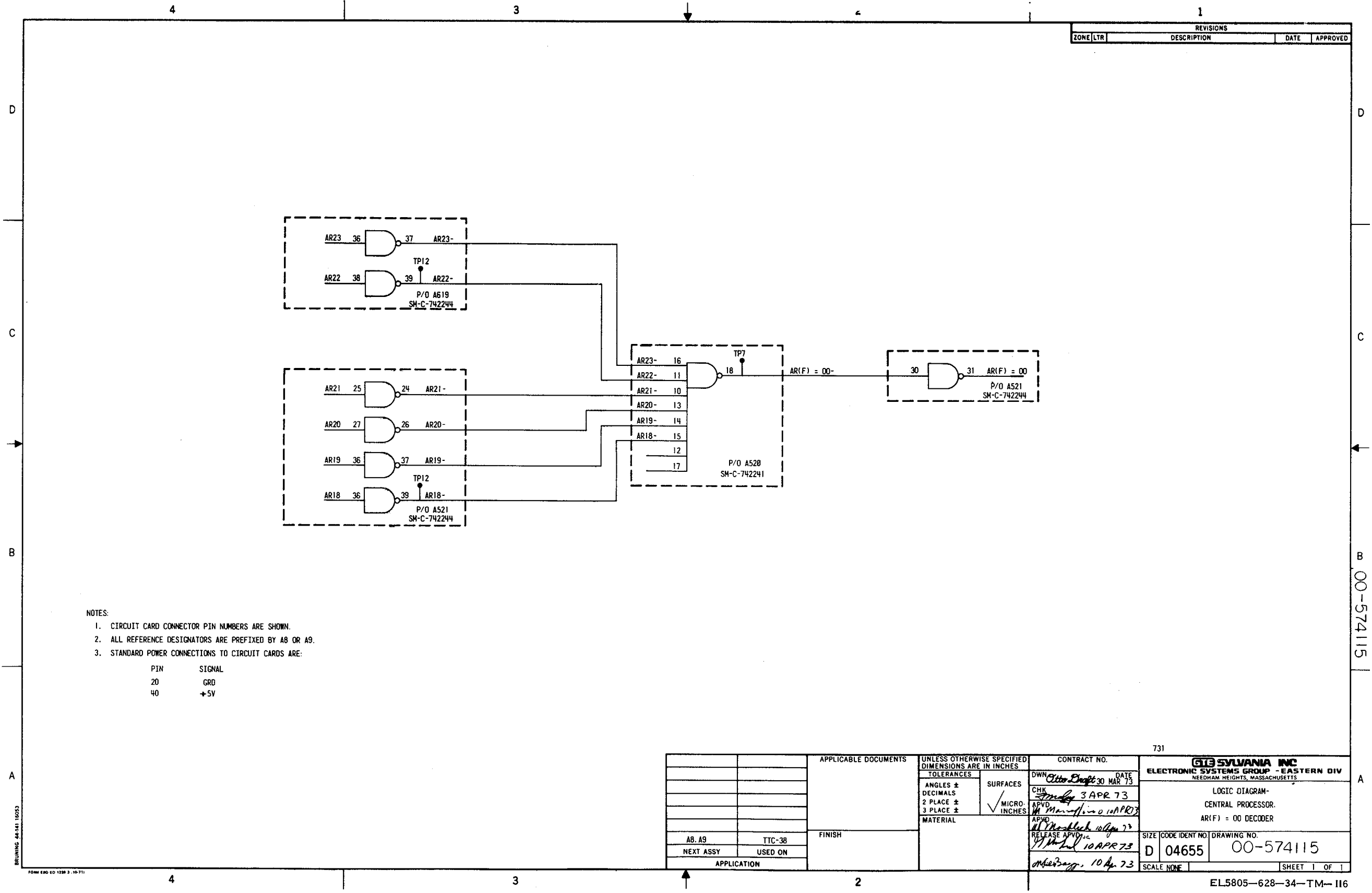


Figure 8-16. Central processor AR(F) = 00 decoder

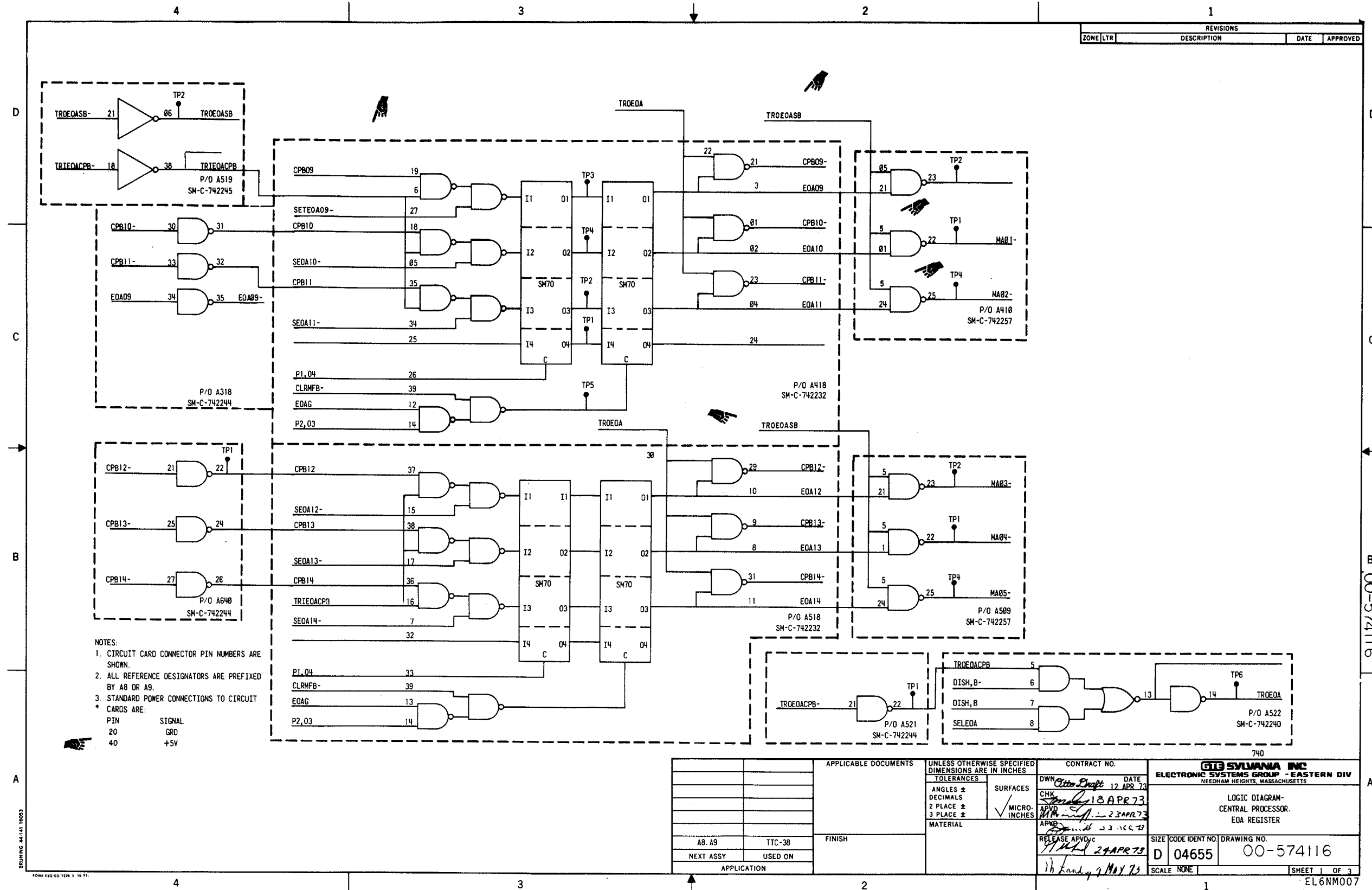


Figure 8-17(1) . Central processor EOA register (sheet 1 of 3)

Change 3 8-40

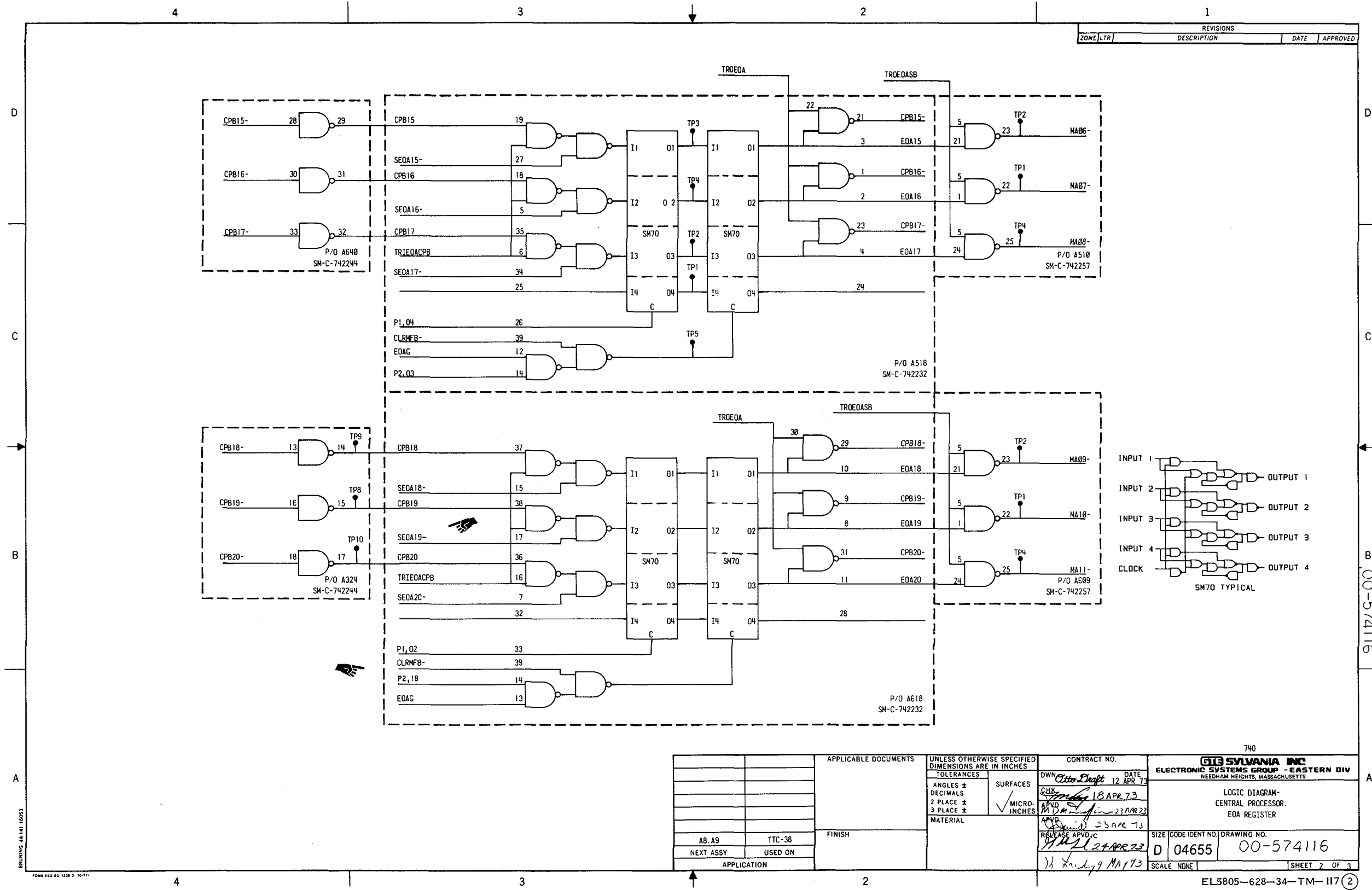


Figure 8-17(2) . Central processor EOA register (sheet 2 of 3)

Change 3 8-41

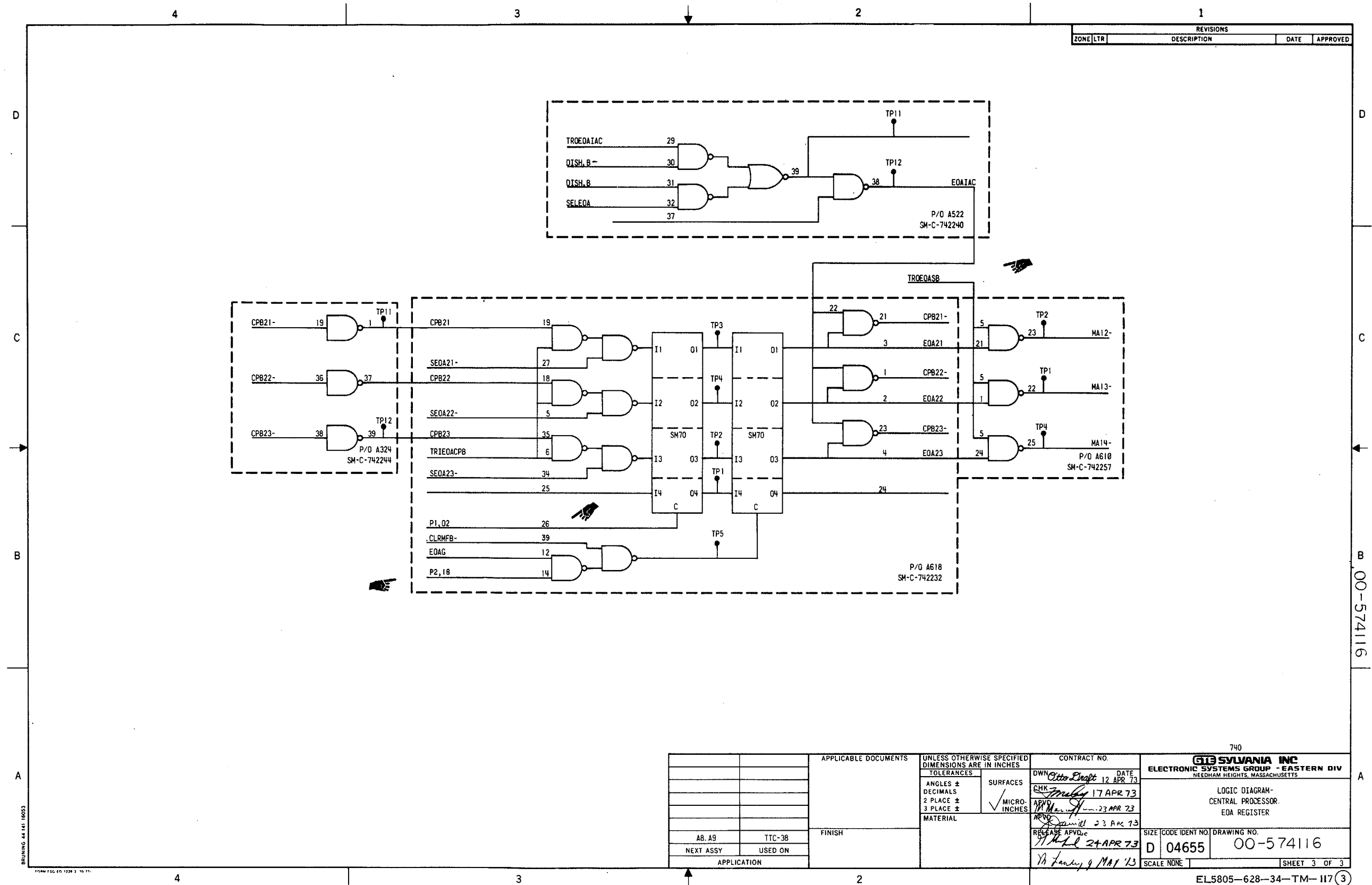


Figure 8-17(3). Central processor EOA register (sheet 3 of 3)

Change 3 8-42

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		740	
		TOLERANCES		DATE		GIB SYLVANIA INC	
		ANGLES ±		12 APR 73		ELECTRONIC SYSTEMS GROUP - EASTERN DIV	
		DECIMALS		17 APR 73		NEEDHAM HEIGHTS, MASSACHUSETTS	
		2 PLACE ±		23 APR 73		LOGIC DIAGRAM-	
		3 PLACE ±		23 APR 73		CENTRAL PROCESSOR.	
		MATERIAL		23 APR 73		EOA REGISTER	
AB, A9		TTC-38		24 APR 73		SIZE (CODE IDENT NO) DRAWING NO.	
NEXT ASSY		USED ON		24 APR 73		D 04655 00-574116	
APPLICATION		FINISH		24 APR 73		SCALE NONE SHEET 3 OF 3	

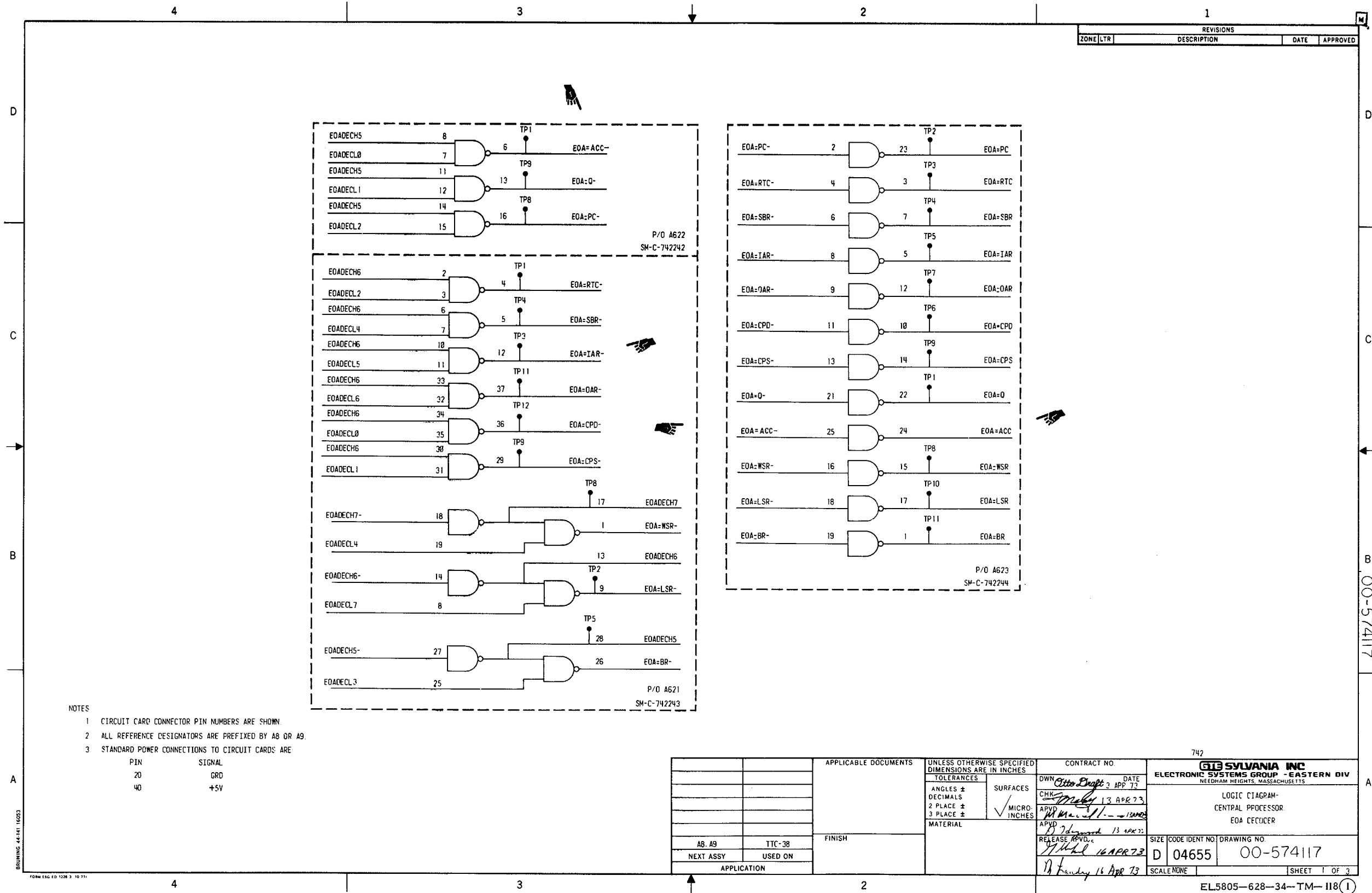
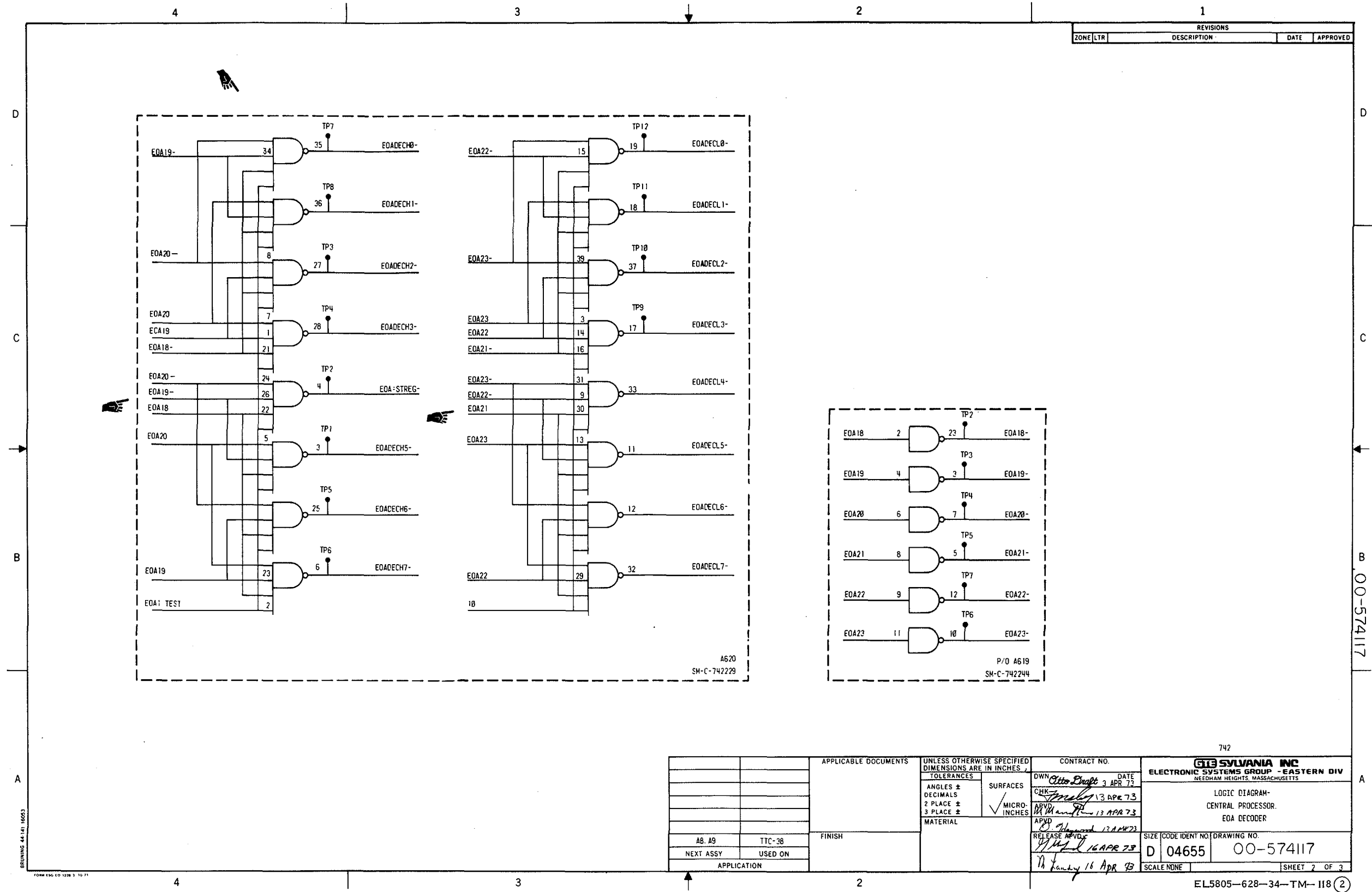


Figure 8-18(1). Central processor EOA decoder(sheet 1 of 3)

Change 3 8-43



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.		CONTRACT NO.		742	
						GTE SYLVANIA INC	
						ELECTRONIC SYSTEMS GROUP - EASTERN DIV	
						NEEDHAM HEIGHTS, MASSACHUSETTS	
						LOGIC DIAGRAM-	
						CENTRAL PROCESSOR.	
						EOA DECODER	
						SIZE	CODE IDENT NO. DRAWING NO.
						D	04655 00-574117
						SCALE NONE	SHEET 2 OF 3

Figure 8-18(2). Central processor EOA decoder(sheet 2 of 3)

Change 3 8-44

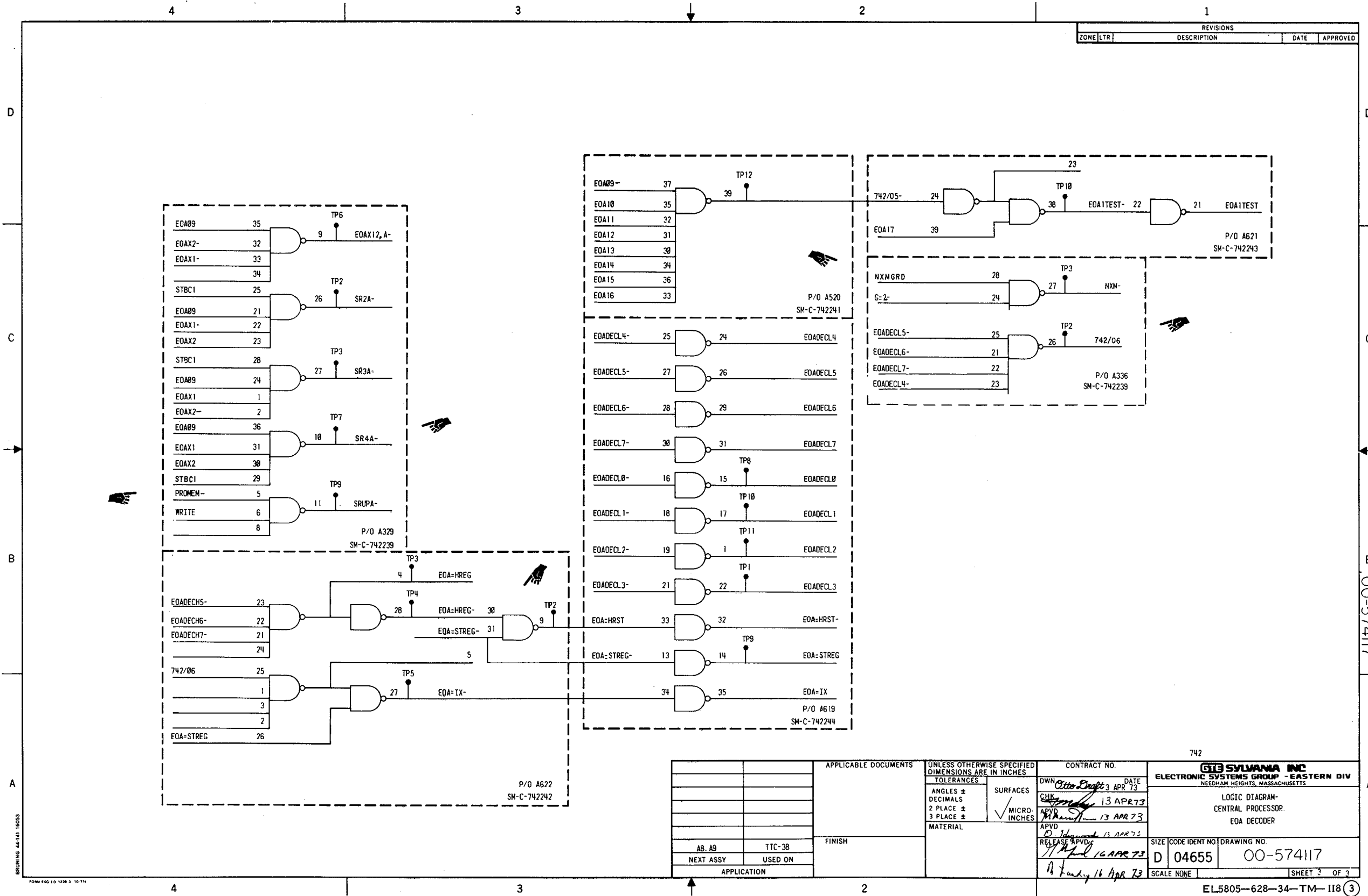


Figure 8-18(3). Central processor EOA decoder(sheet 3 of 3)

Change 3 8-45

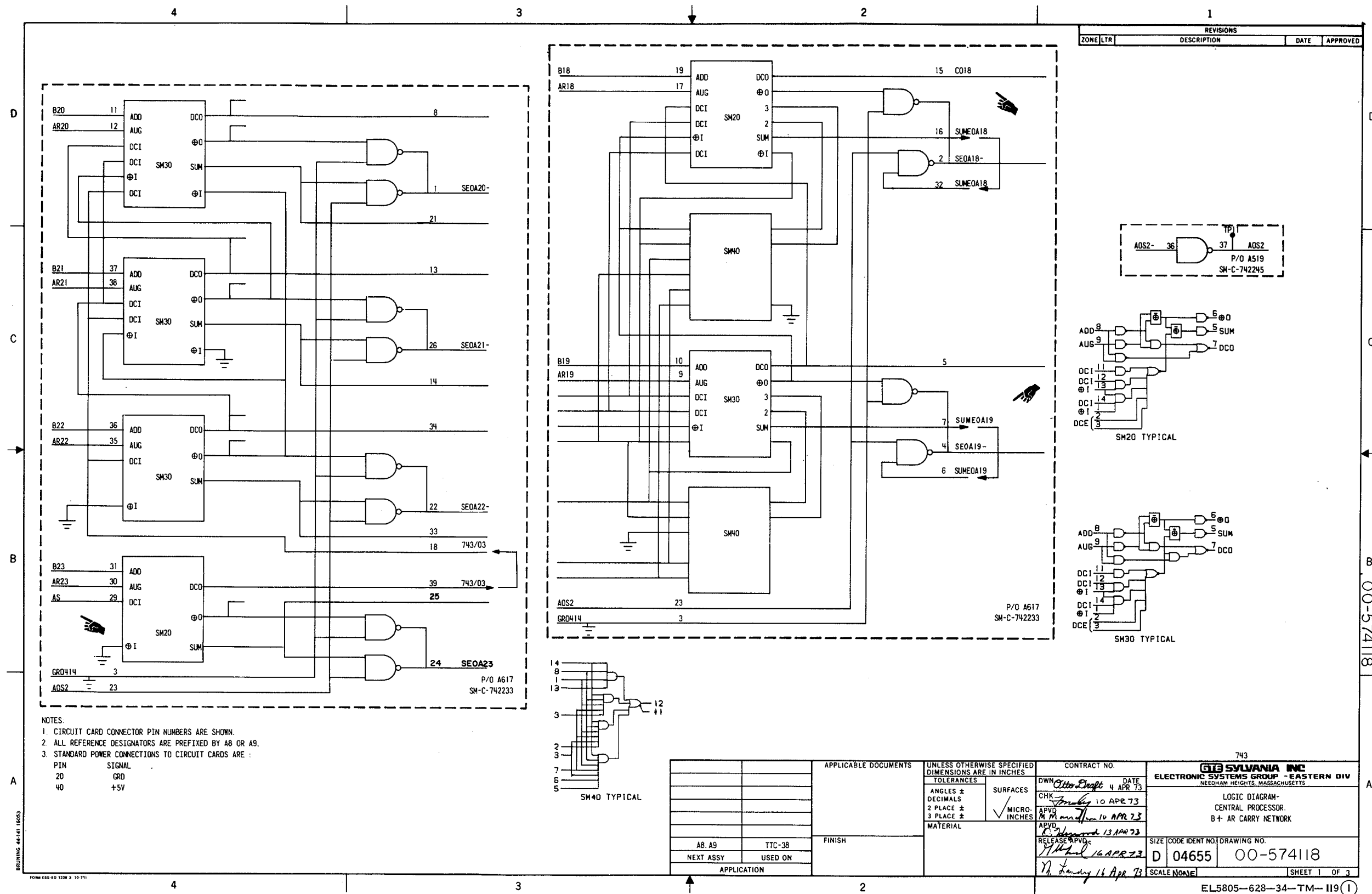


Figure 8-19(1) . Central processor B+AR carry network (sheet 1 of 3)

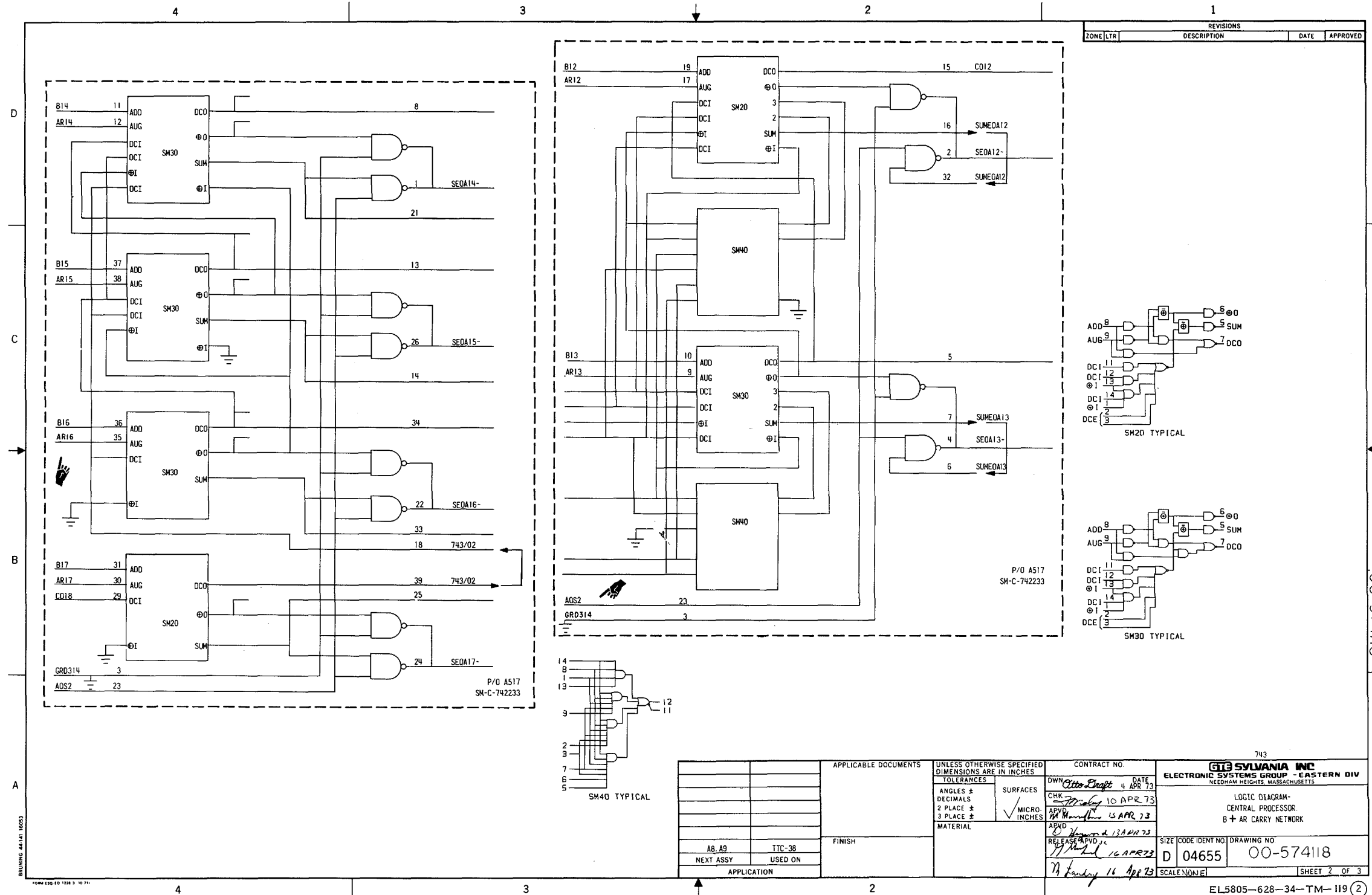


Figure 8-19(2). Central processor B+AR carry network (sheet 2 of 3)
Change 3 8-47

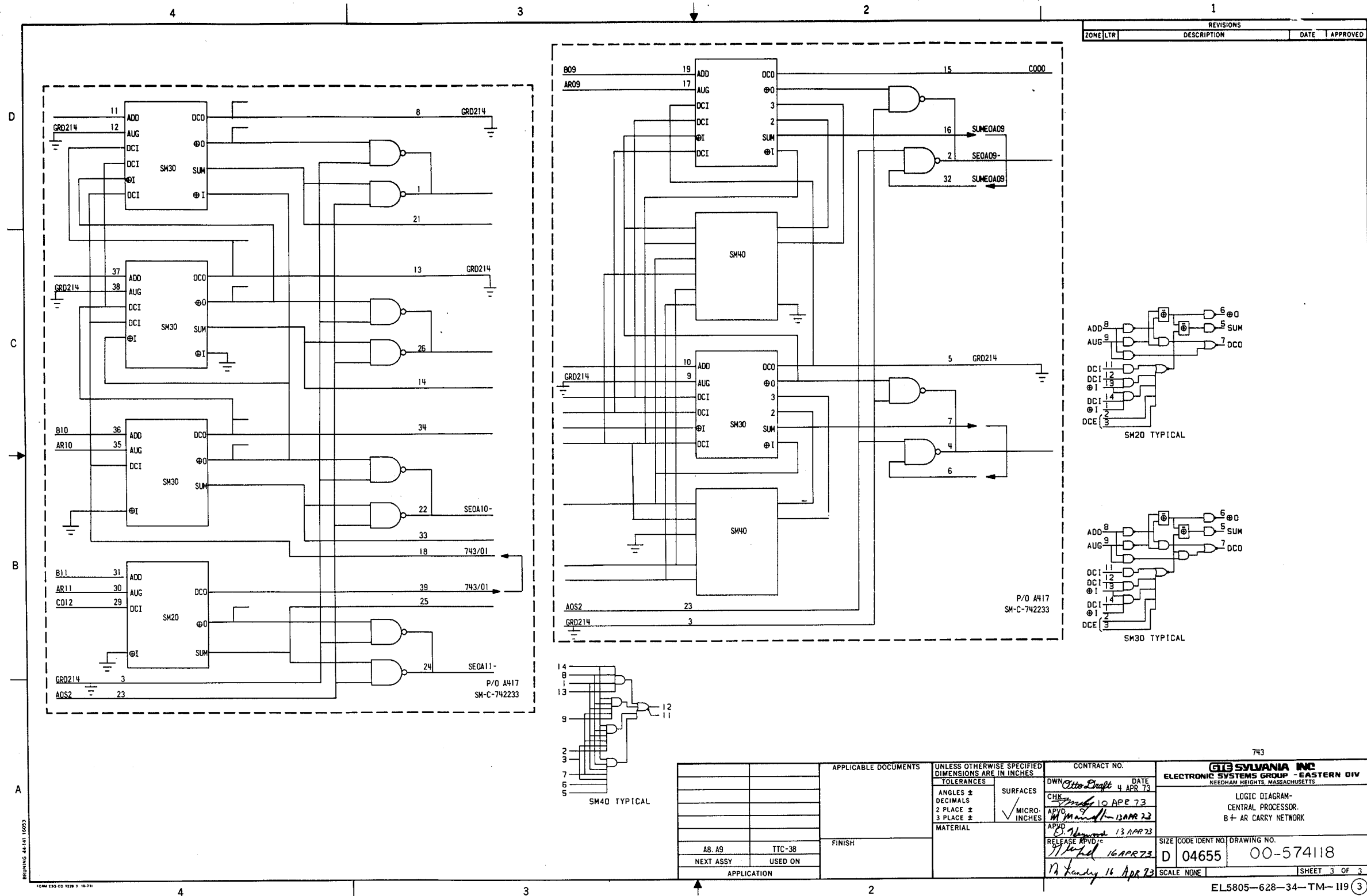


Figure 8-19(3). Central processor B+AR carry network (sheet 3 of 3)

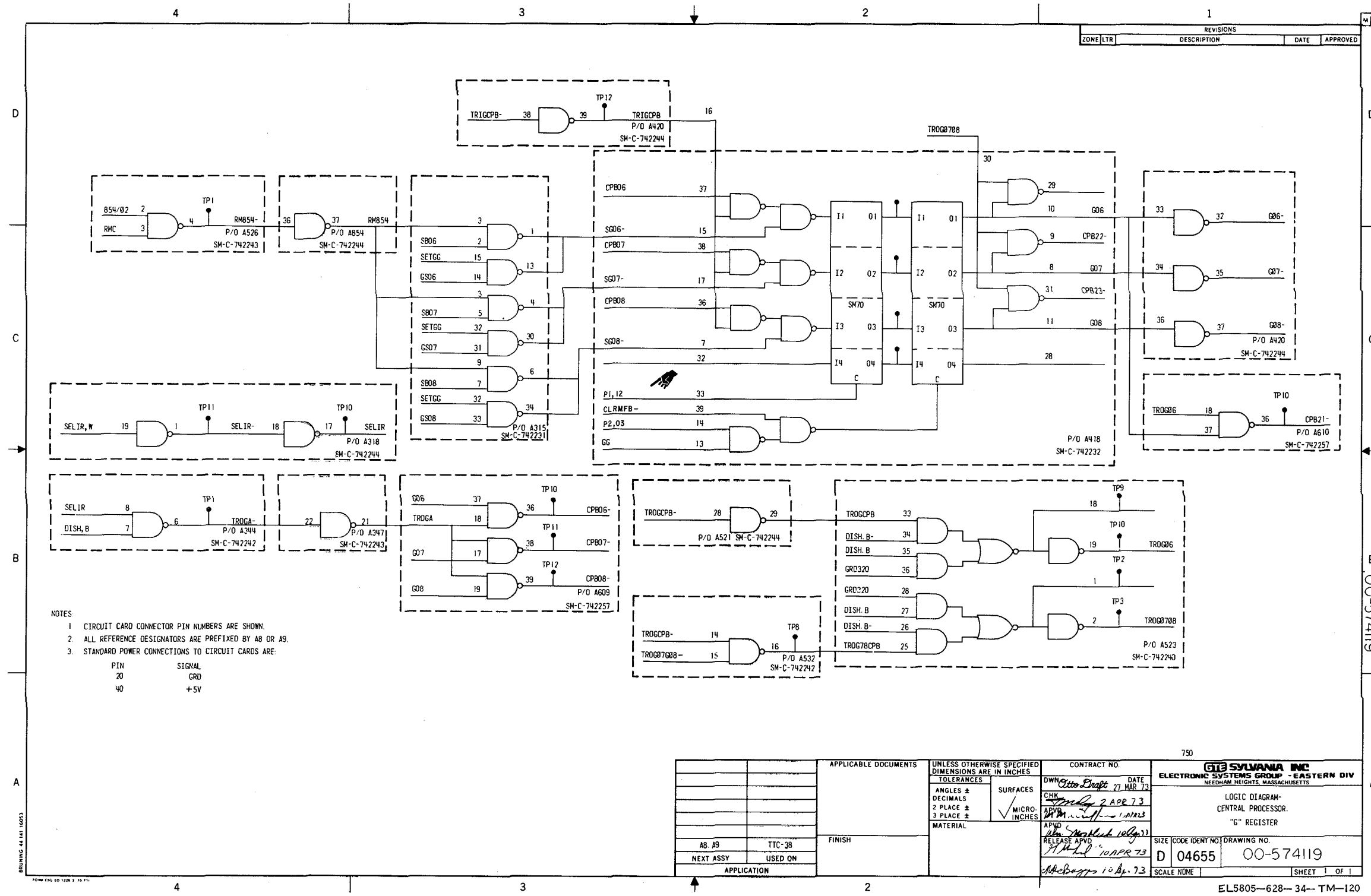


Figure 8-20. Central processor G register.

Change 3 8-49

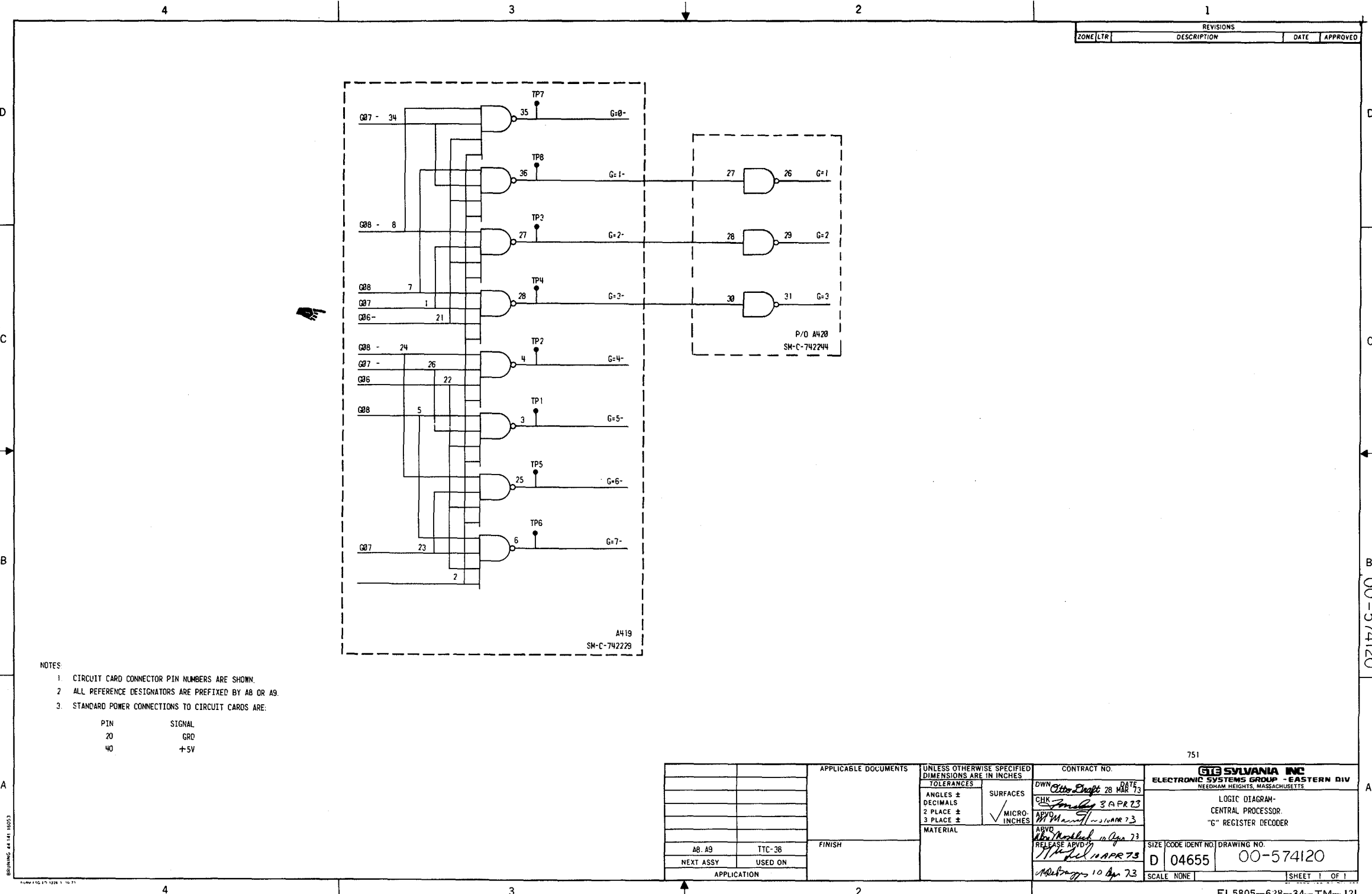


Figure 8-21. Central processor G register decoder

8-50 Change 3

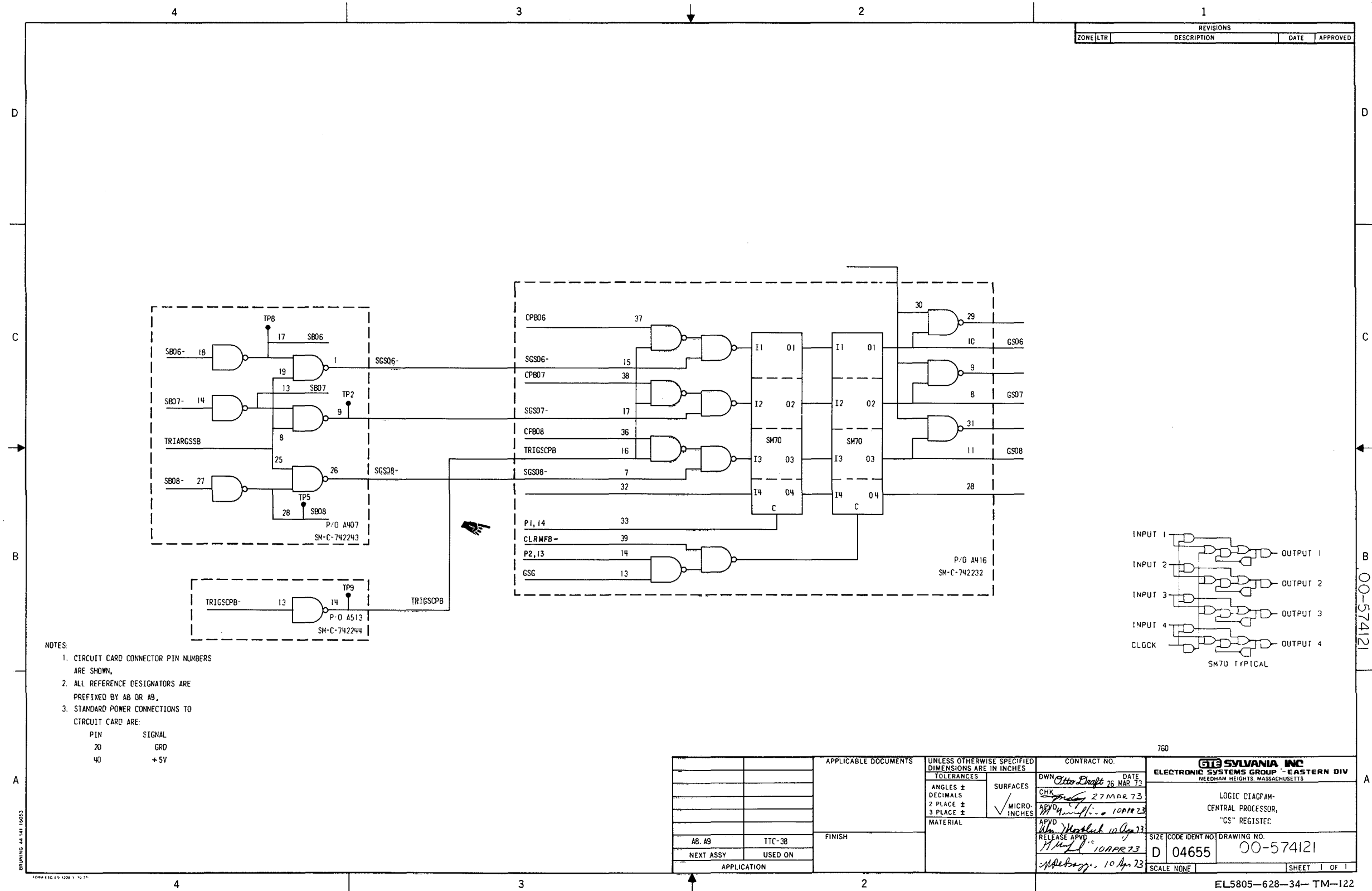


Figure 8-22. Central processor GS register.

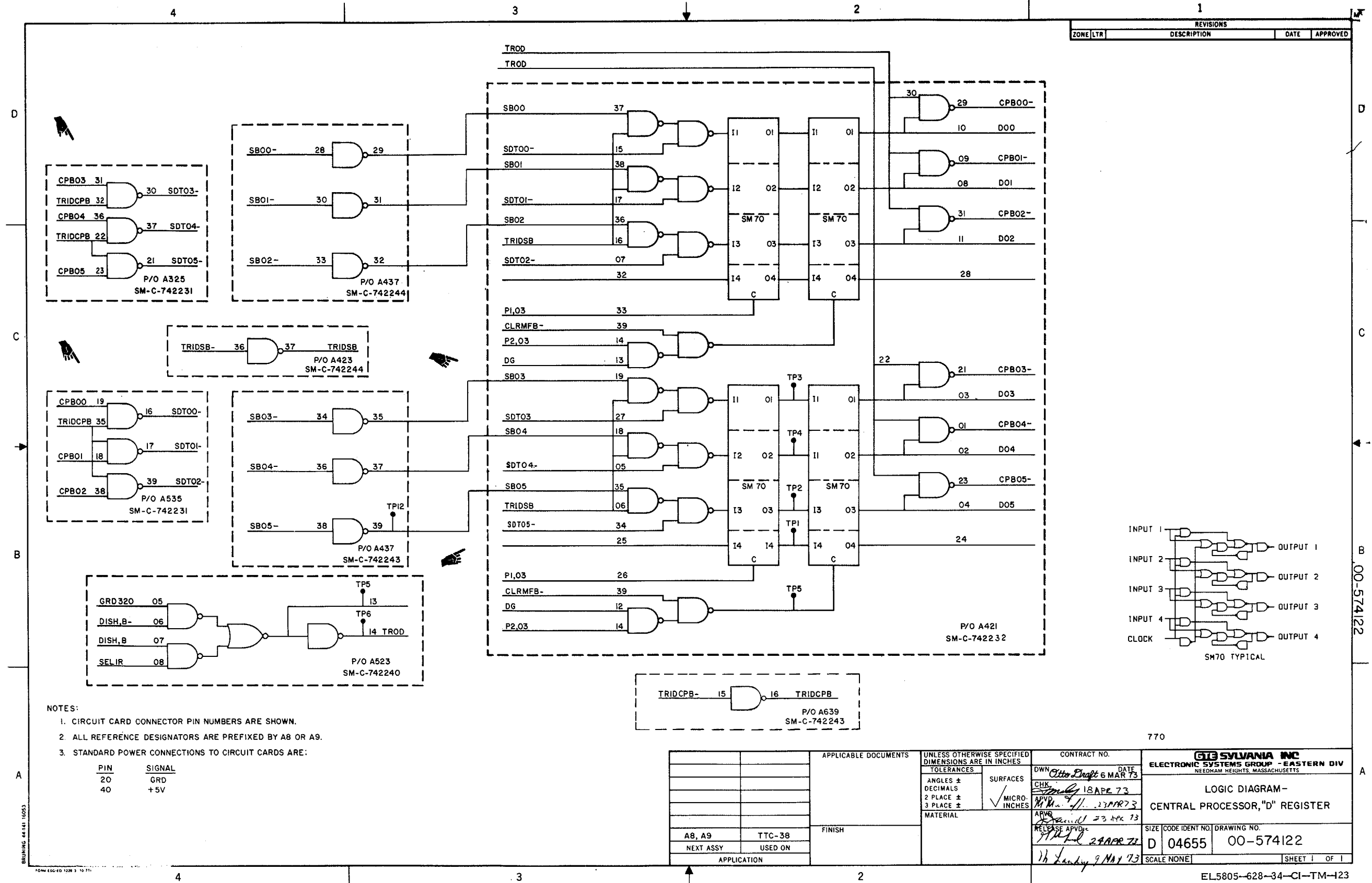
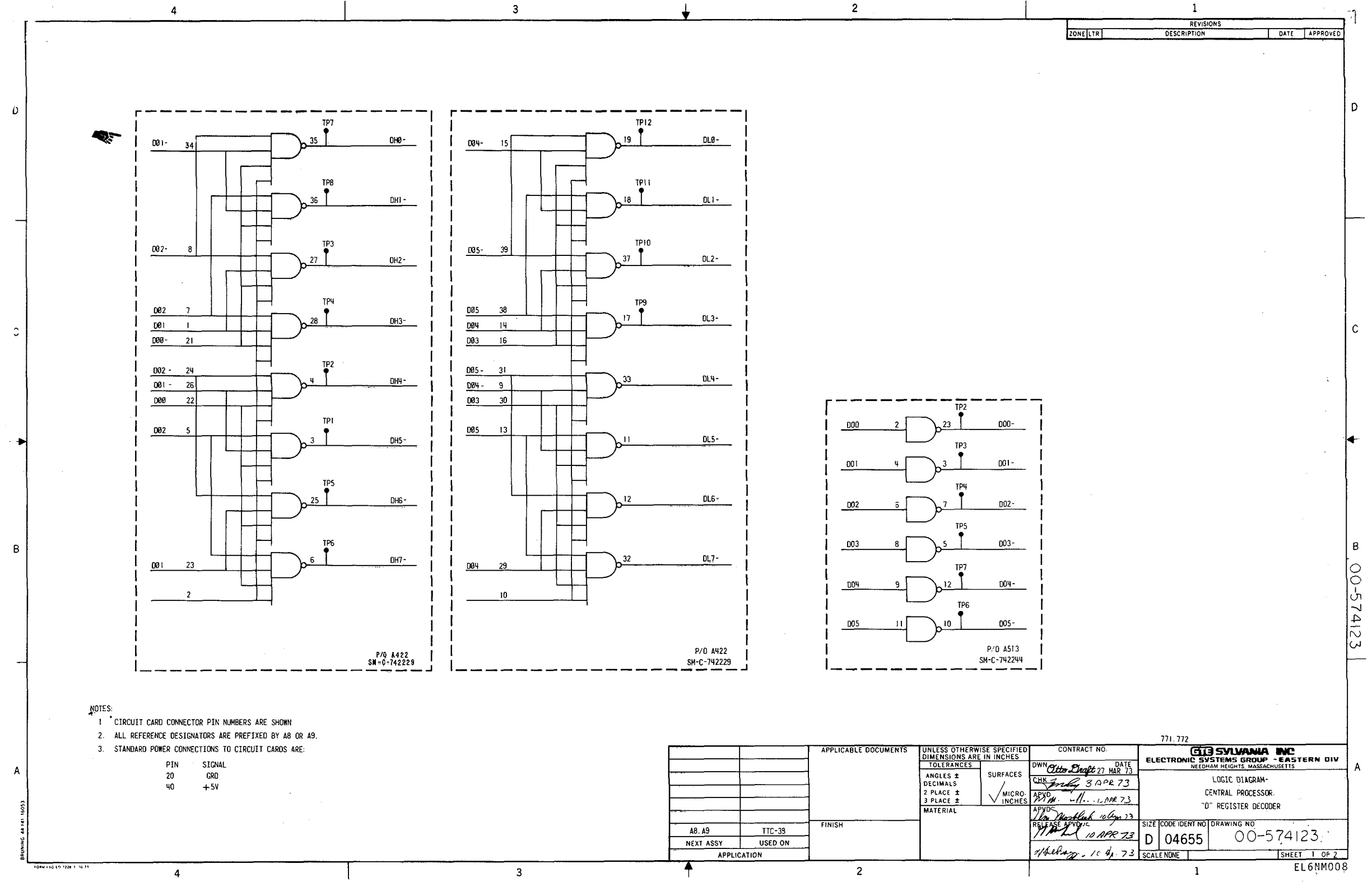


Figure 8-23. Central processor D register.
8-52 Change 3



- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

PIN	SIGNAL
20	GRD
40	+5V

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO. 771.772	
		ANGLES ±	SURFACES	DATE	
		DECIMALS	✓ MICRO-	DWN <i>Otto Buehler</i> 27 MAR 73	
		2 PLACE ±	INCHES	CHK <i>Proby</i> 3 APR 73	
		3 PLACE ±		APVD <i>MM</i> 11 APR 73	
		MATERIAL		APVD <i>W. D. ...</i> 10 APR 73	
A8, A9	TTC-39	FINISH		RELEASE BY <i>...</i> 10 APR 73	
NEXT ASSY	USED ON			/ <i>...</i> 10 APR 73	
APPLICATION				SIZE	CODE IDENT NO
				D 04655	00-574123
				SCALE NONE	SHEET 1 OF 2

Figure 8-24(1). Central processor D register decoder (sheet 1 of 2).

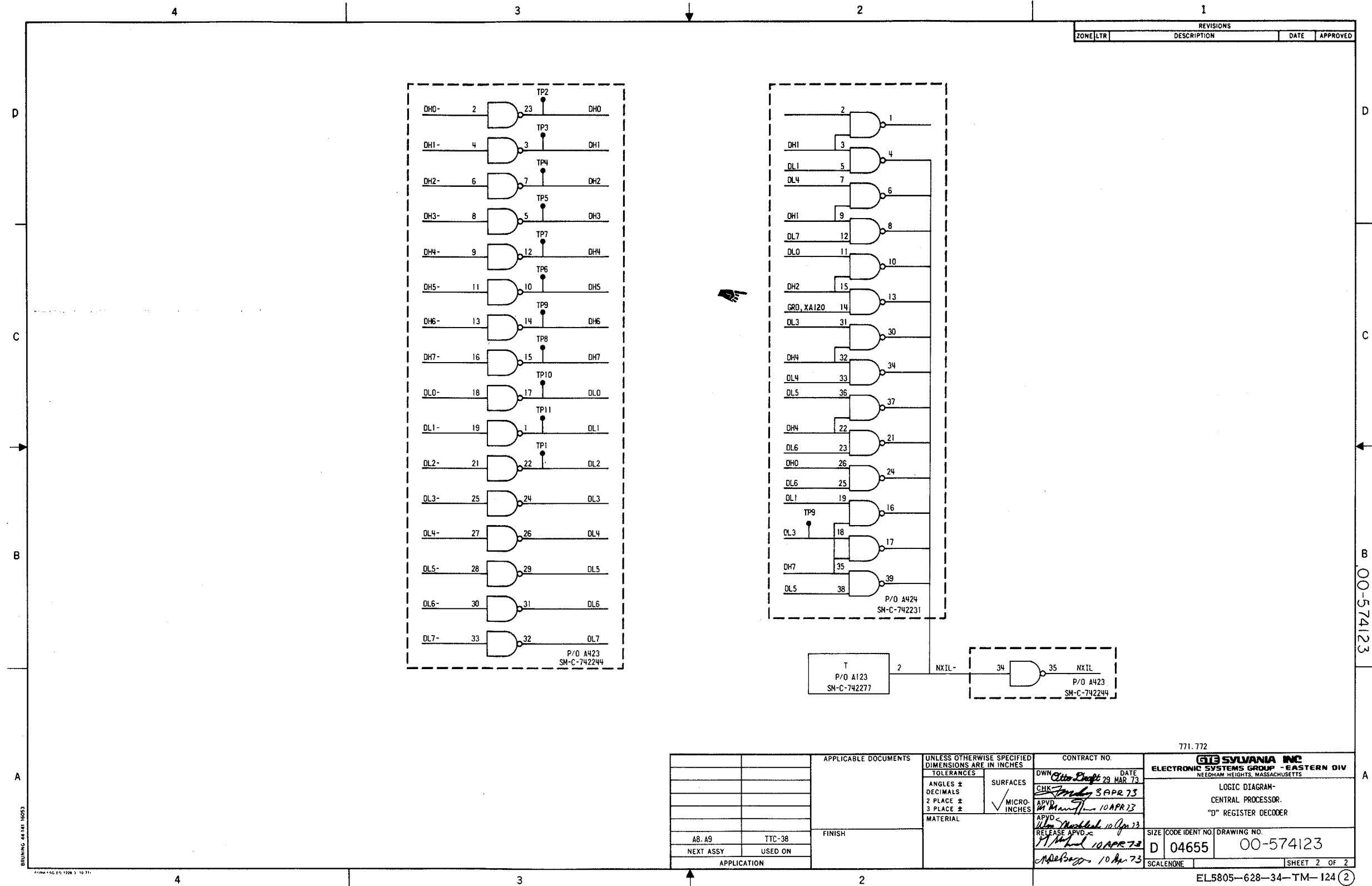


Figure 8-24(2). Central processor D register decoder (sheet 2 of 2)

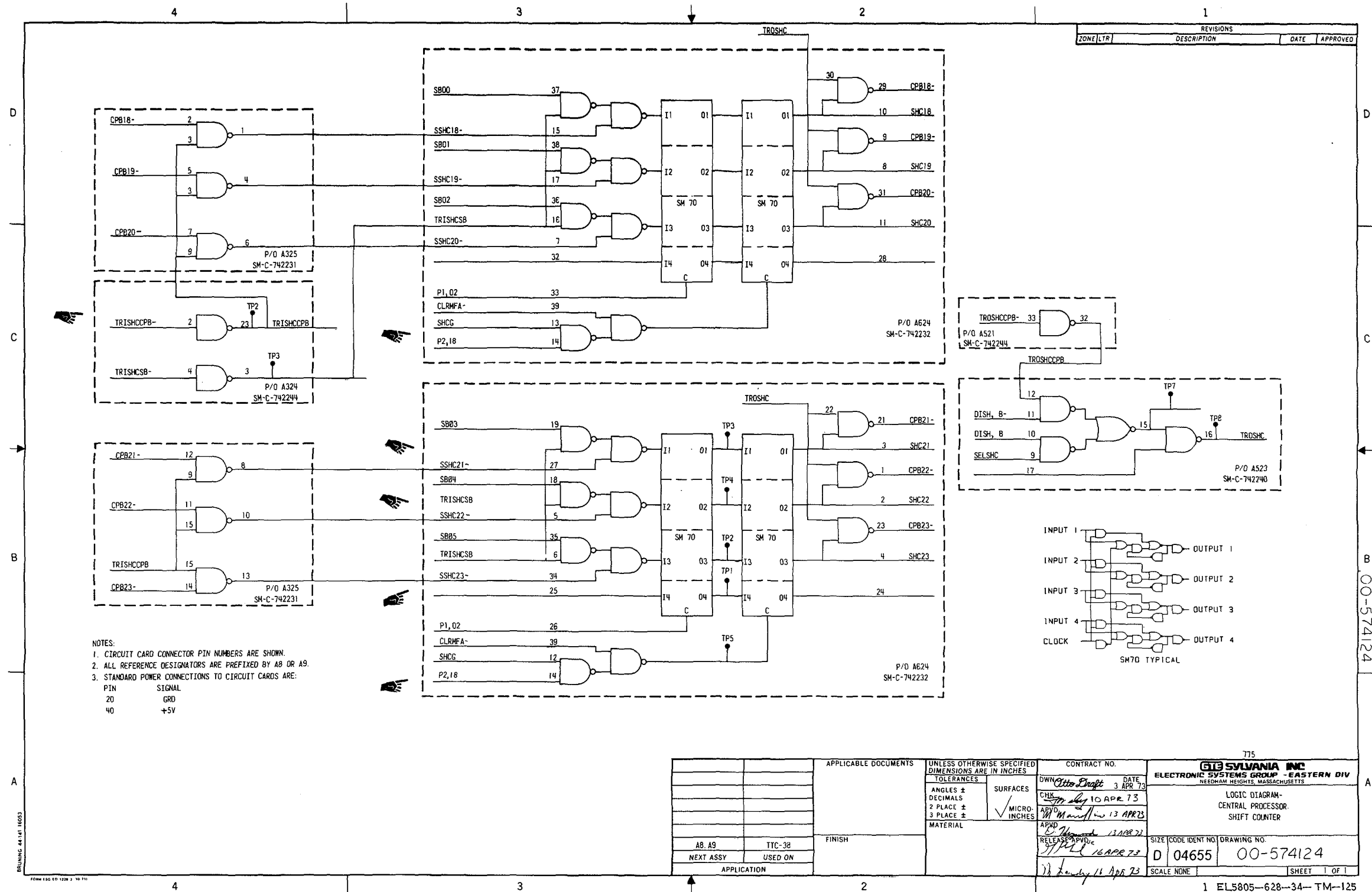


Figure 8-25. Central processor shift counter.

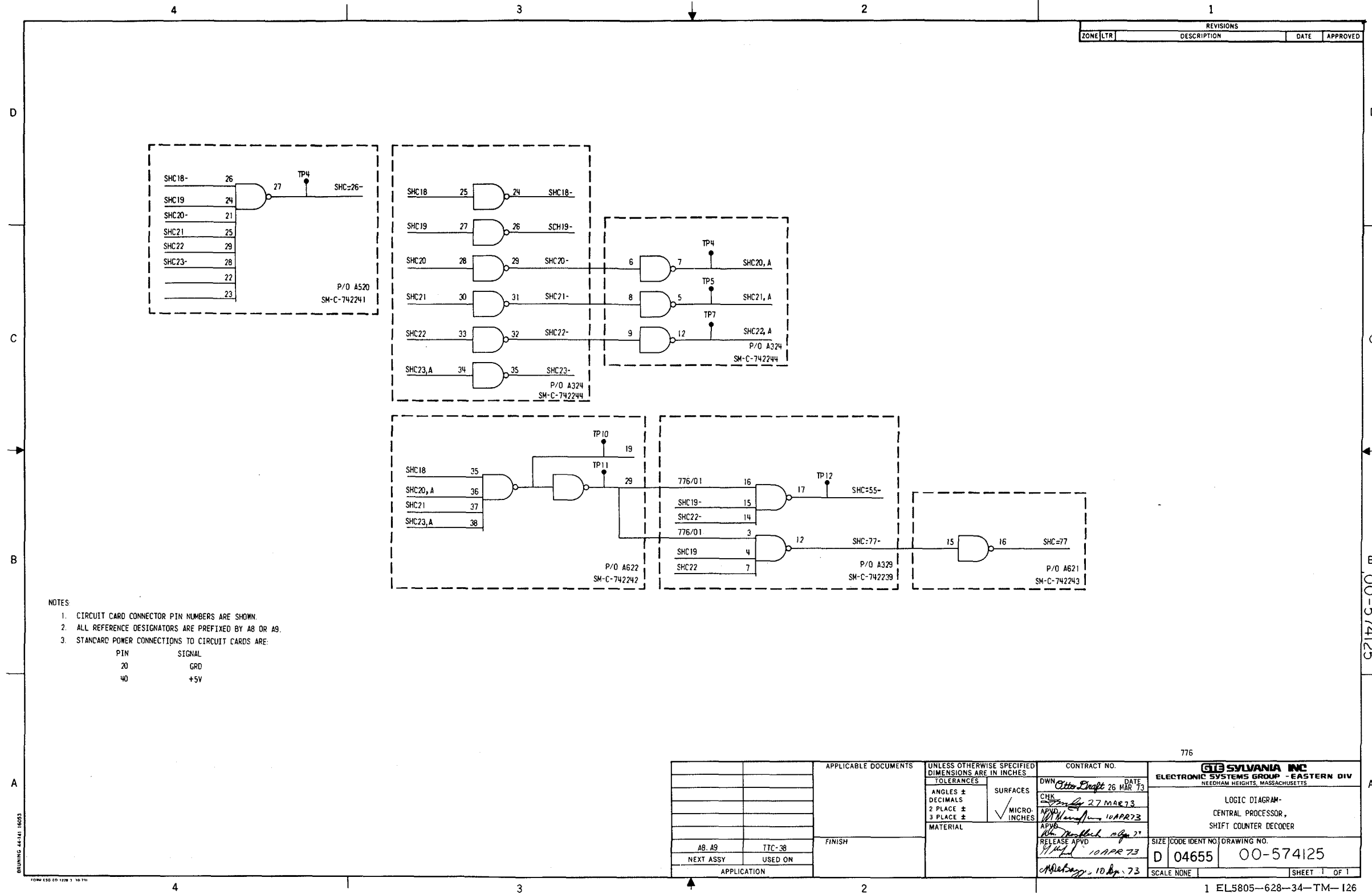


Figure 8-26. Central processor shift counter decoder.

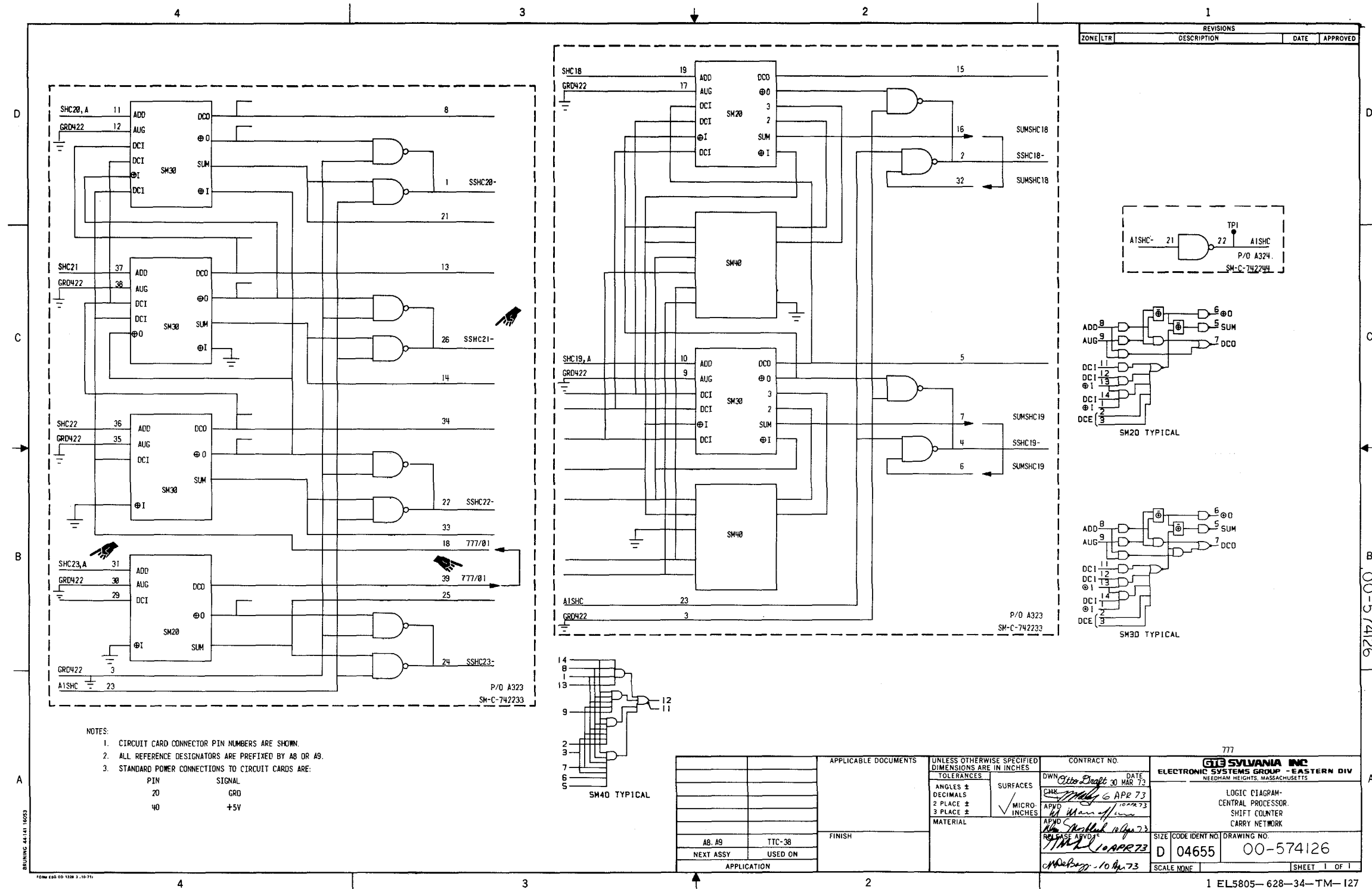


Figure 8-27. Central processor shift counter carry network.

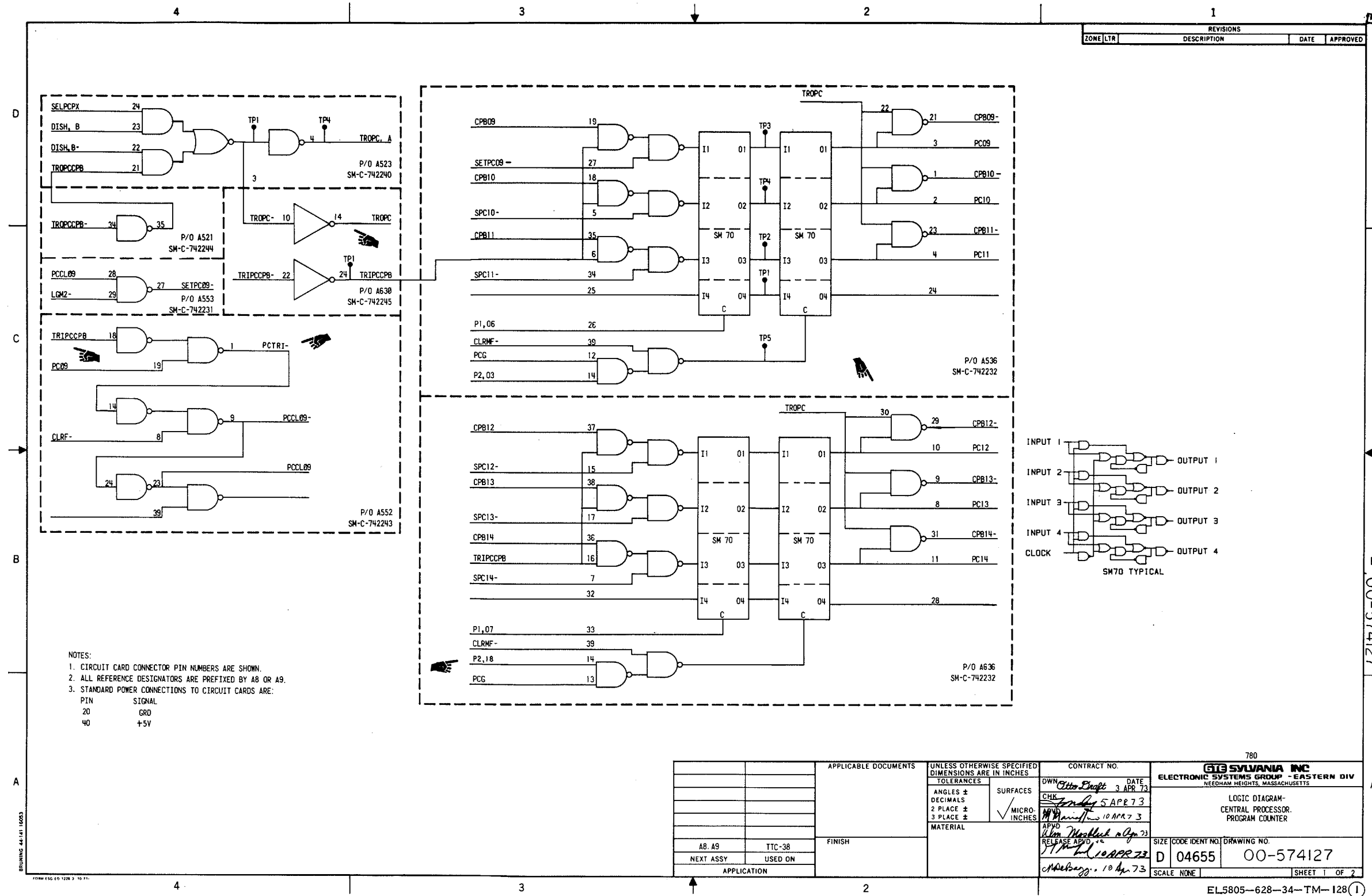


Figure 8-28(1). Central processor program counter (sheet 1 of 2).

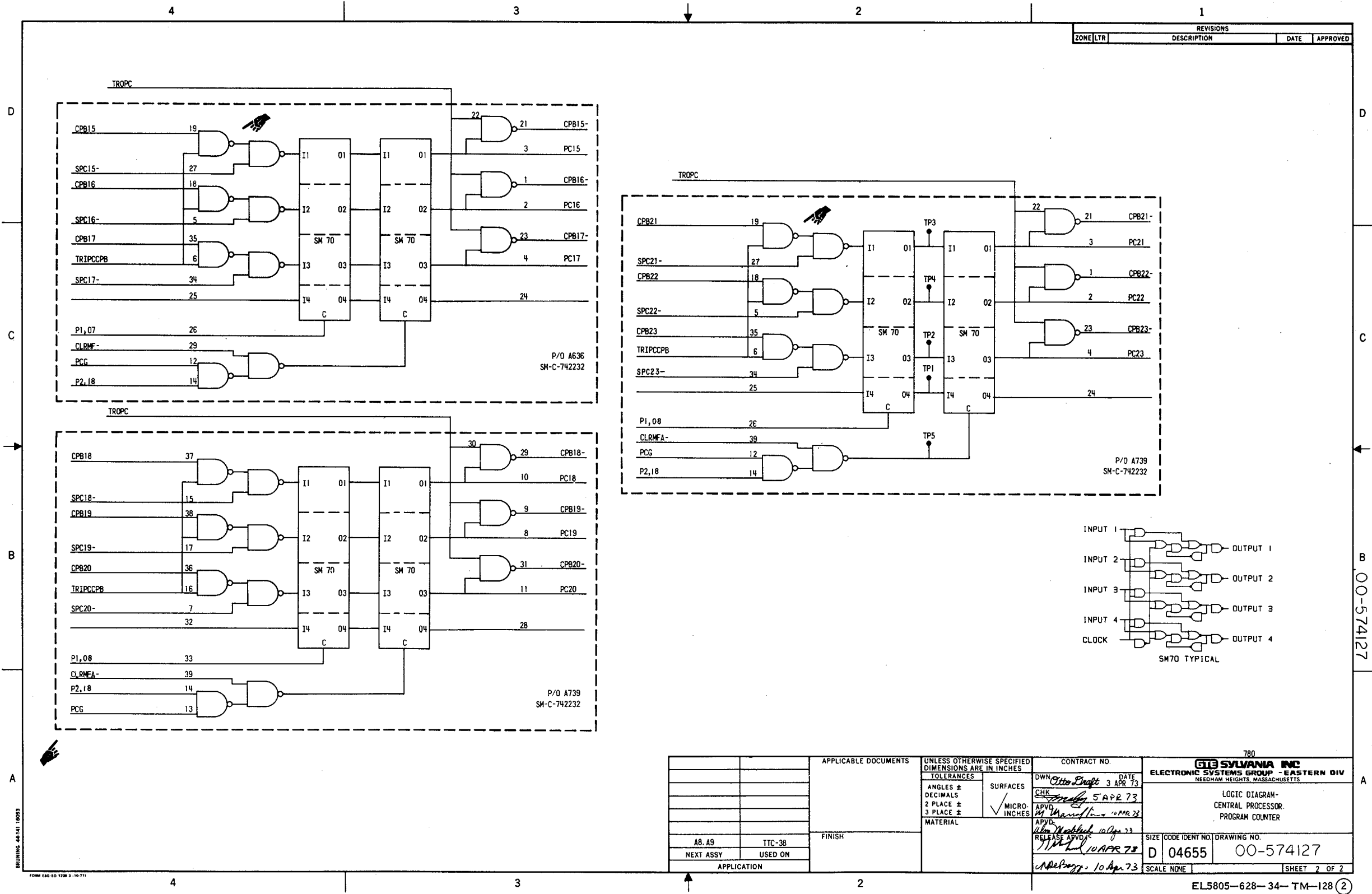


Figure 8-28(2). Central processor program counter (sheet 2 of 2).

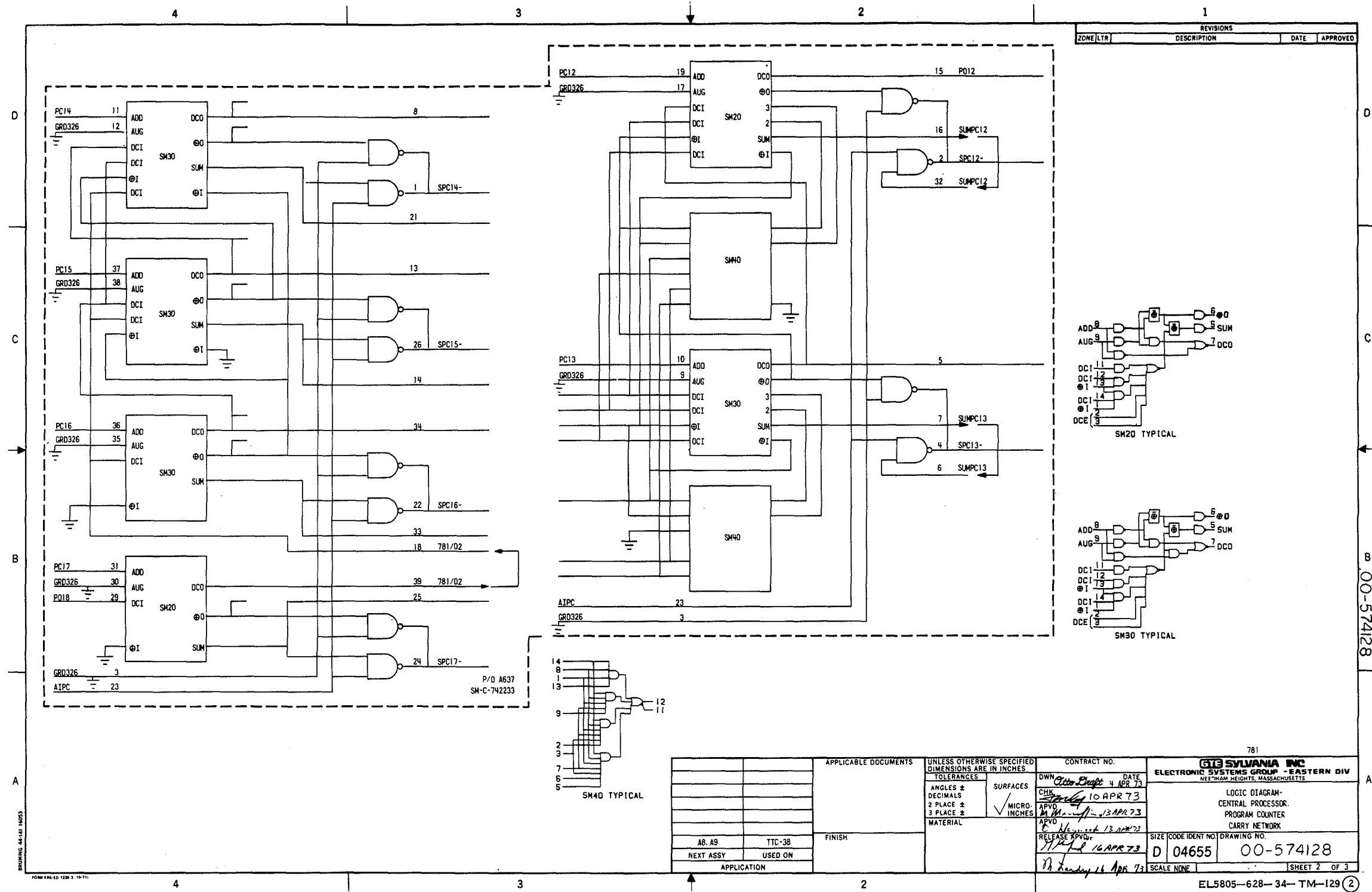


Figure 8-29(1). Central processor program counter carry network (sheet 1 of 3).

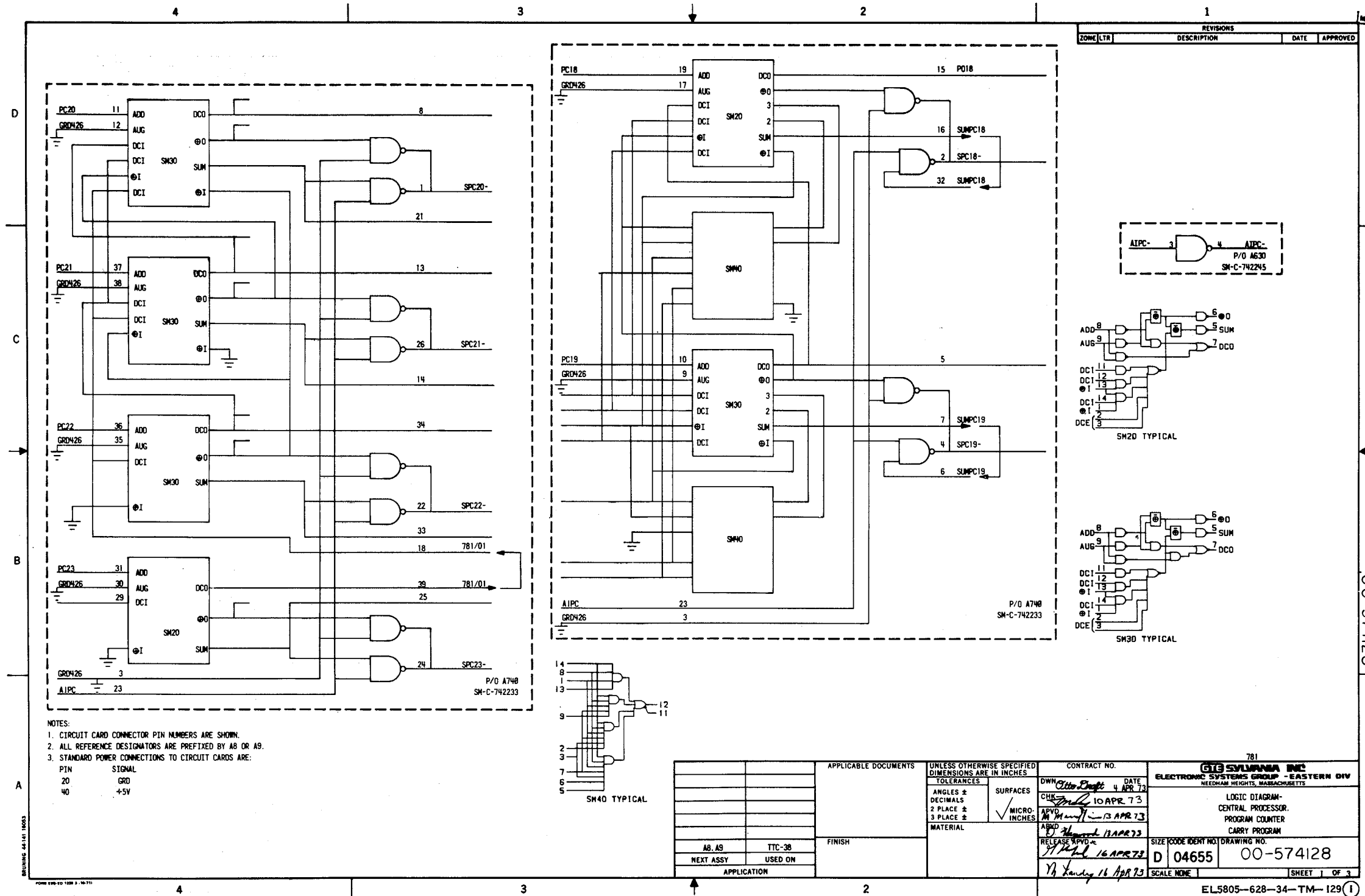


Figure 8-29(2). Central processor program counter carry network (sheet 2 of 3).

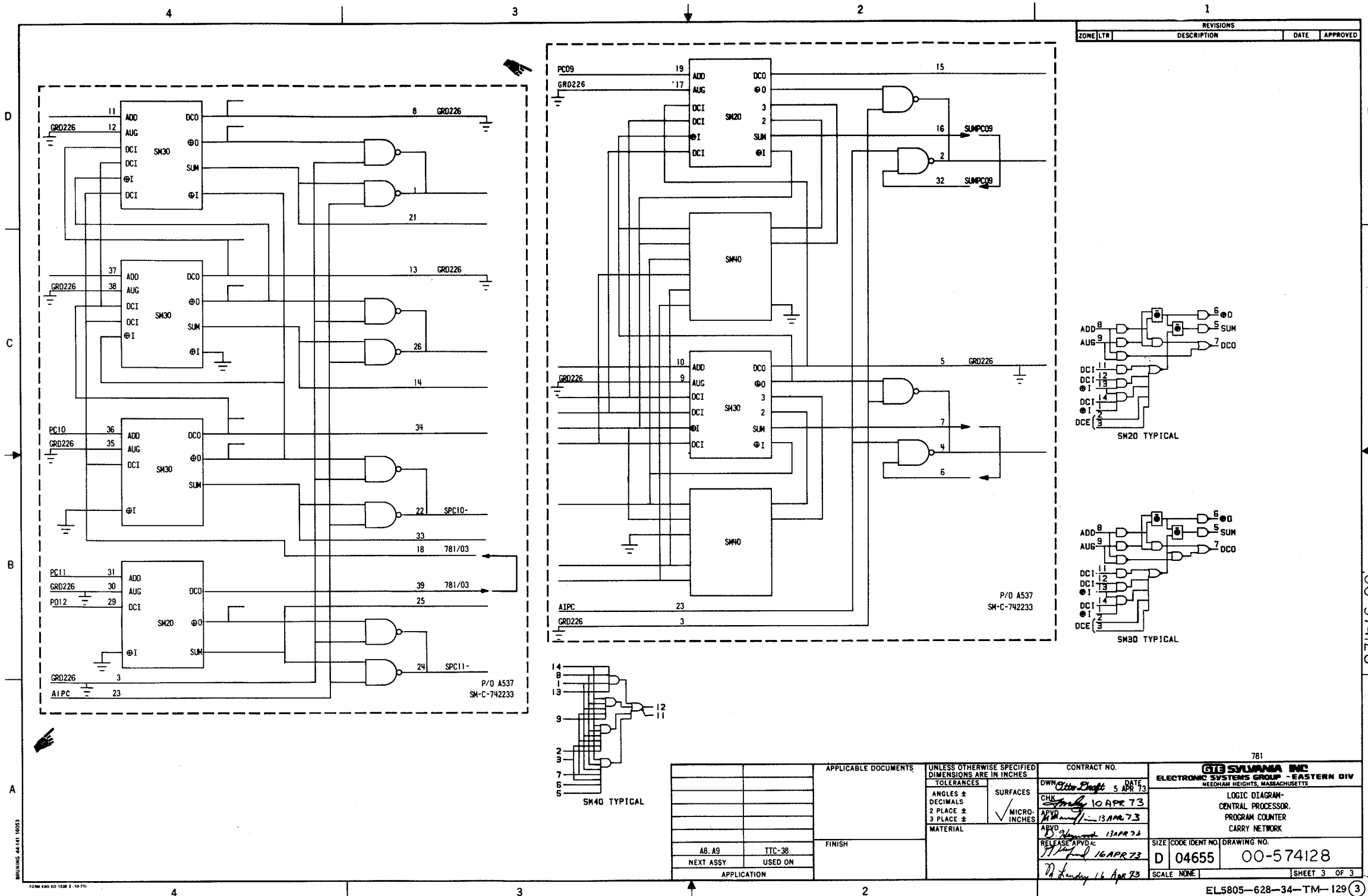


Figure 8-29(3). Central processor program counter carry network (sheet 3 of 3).

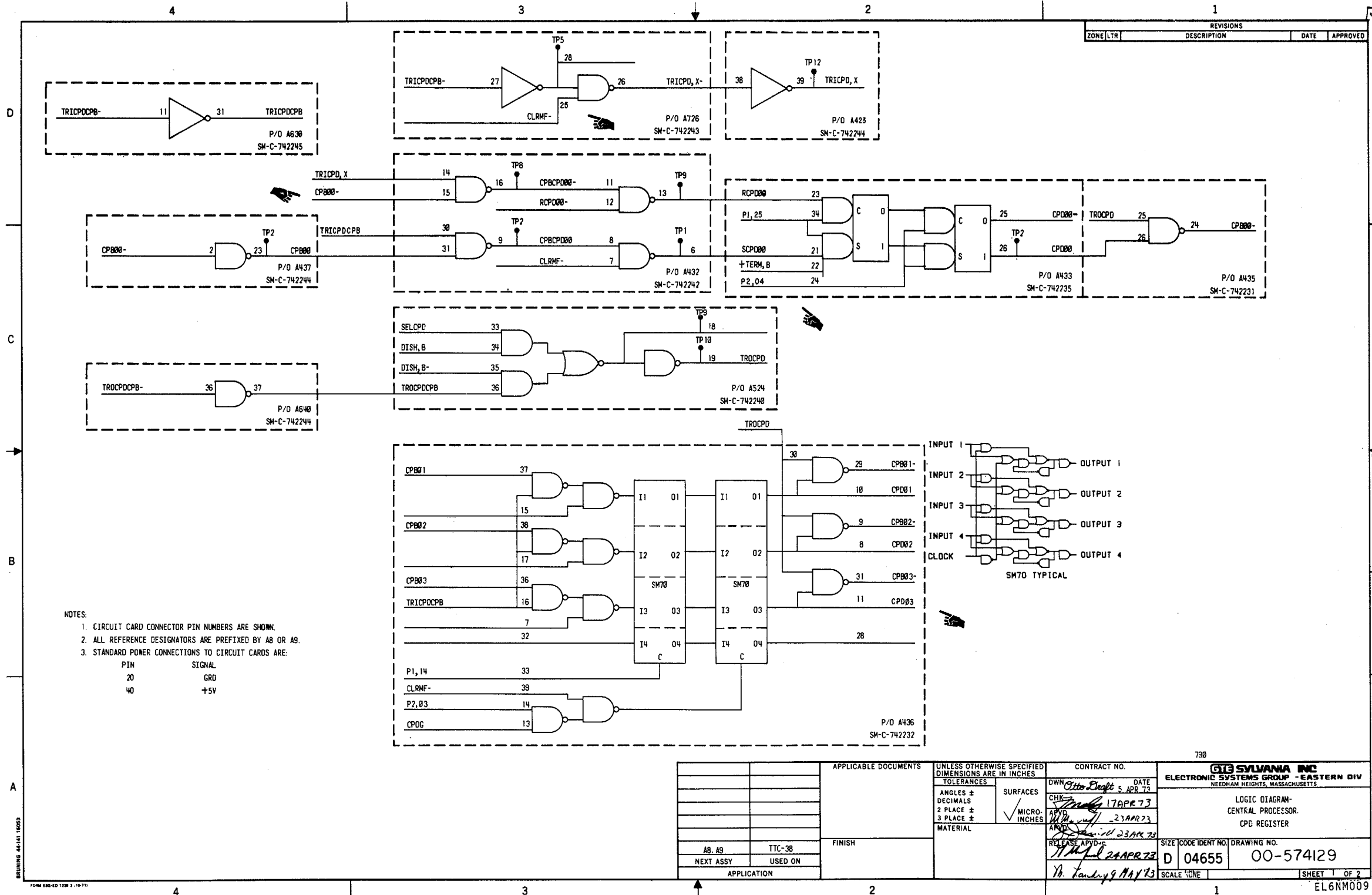


Figure 8-30(1). Central processor CPD register (sheet 1 of 2).

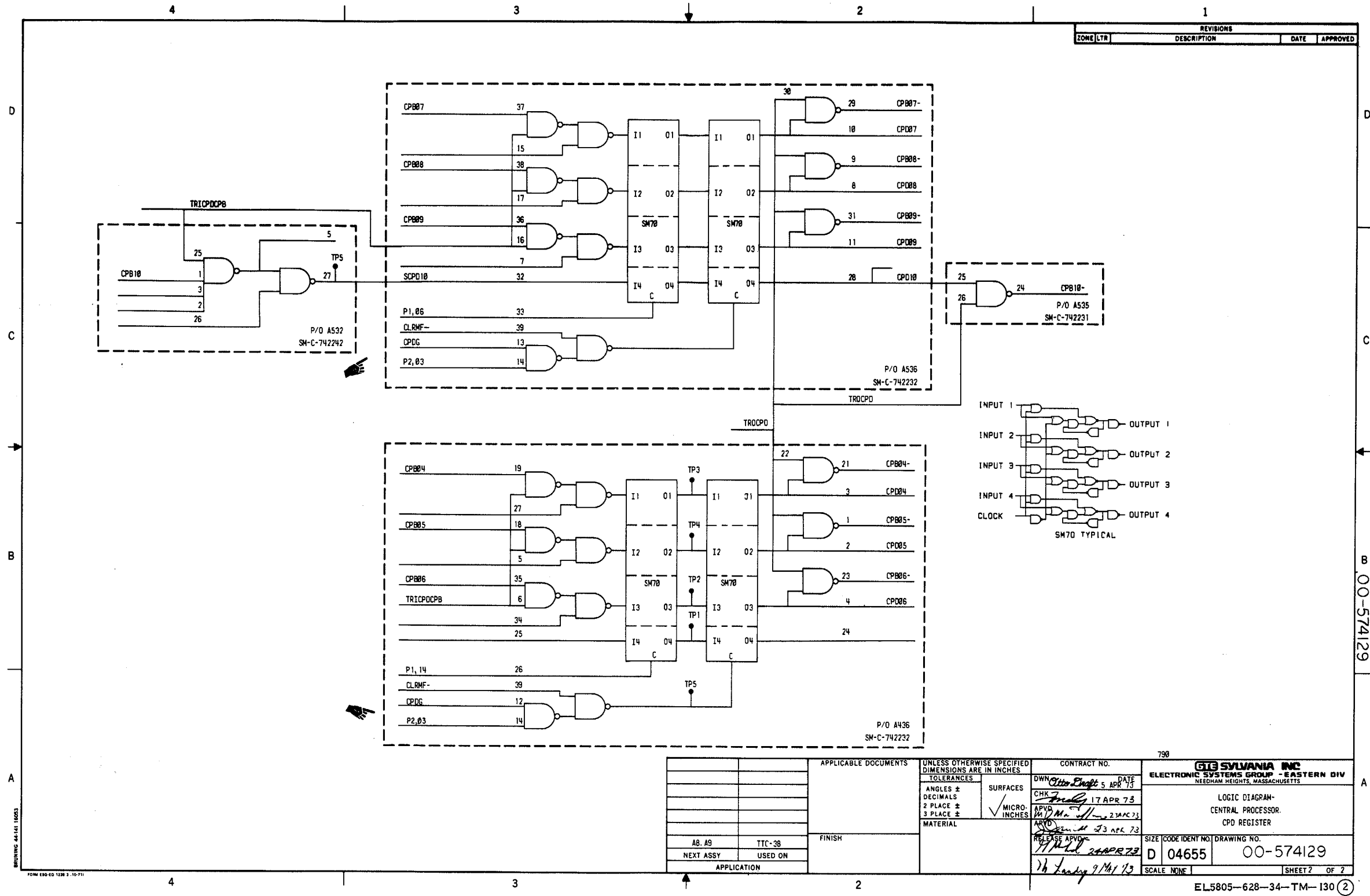
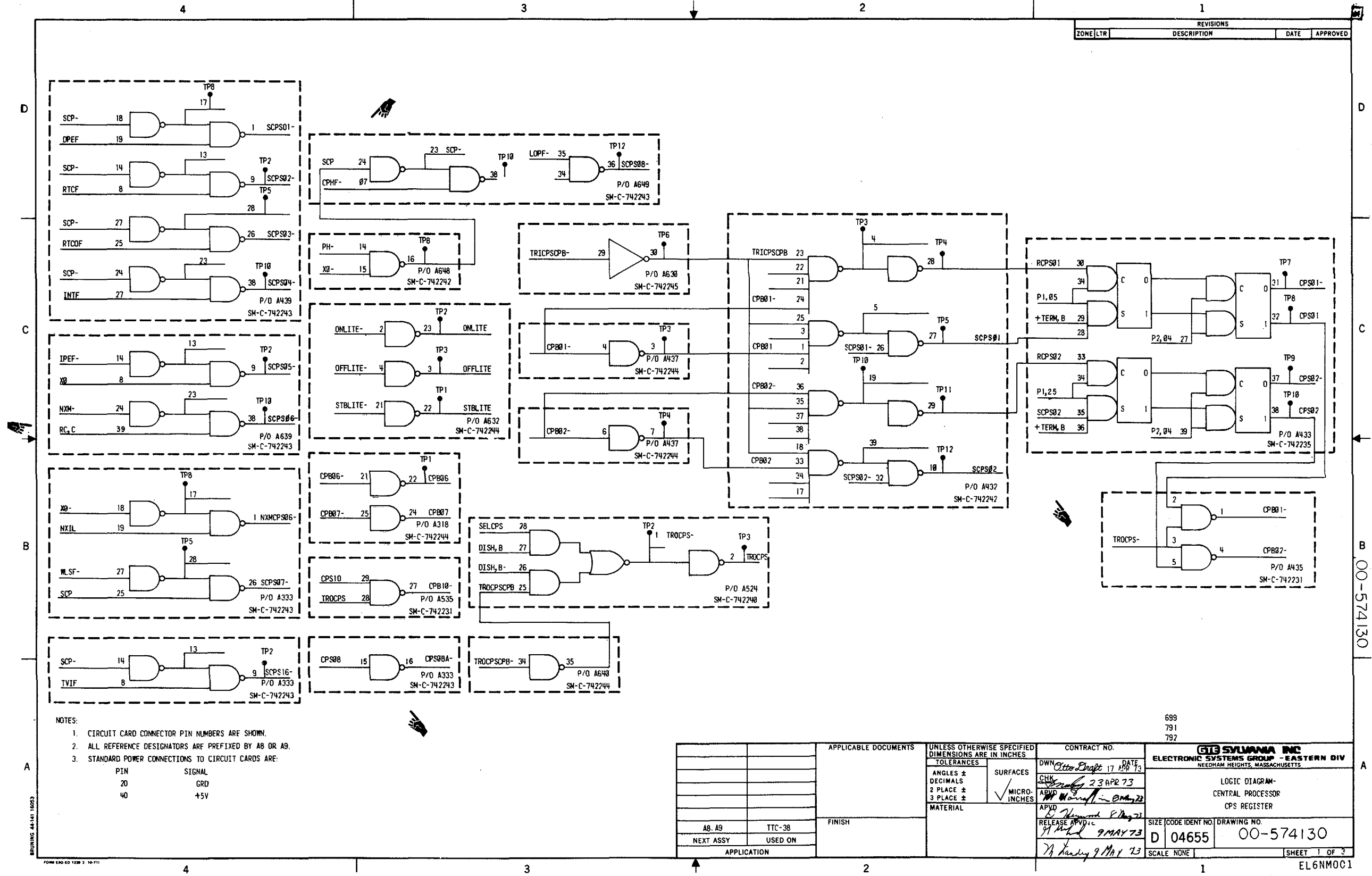


Figure 8-30(2). Central processor CPD register (sheet 2 of 2)



- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:
- | PIN | SIGNAL |
|-----|--------|
| 20 | GRD |
| 40 | +5V |

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
FINISH		TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MICRO-INCHES		DWN <i>Otto Draft</i> 17 APR 73 CHK <i>...</i> 23 APR 73 APVD <i>...</i> 2 MAY 73 RELEASE APVD <i>...</i> 9 MAY 73 <i>...</i> 9 MAY 73		LOGIC DIAGRAM- CENTRAL PROCESSOR CPS REGISTER	
NEXT ASSY USED ON		MATERIAL		APPROVED		SIZE (CODE IDENT NO.) DRAWING NO. D 04655 00-574130	
APPLICATION				SCALE NONE		SHEET 1 OF 3	

Figure 8-31(1). Central processor CPS register (Sheet 1 of 3).

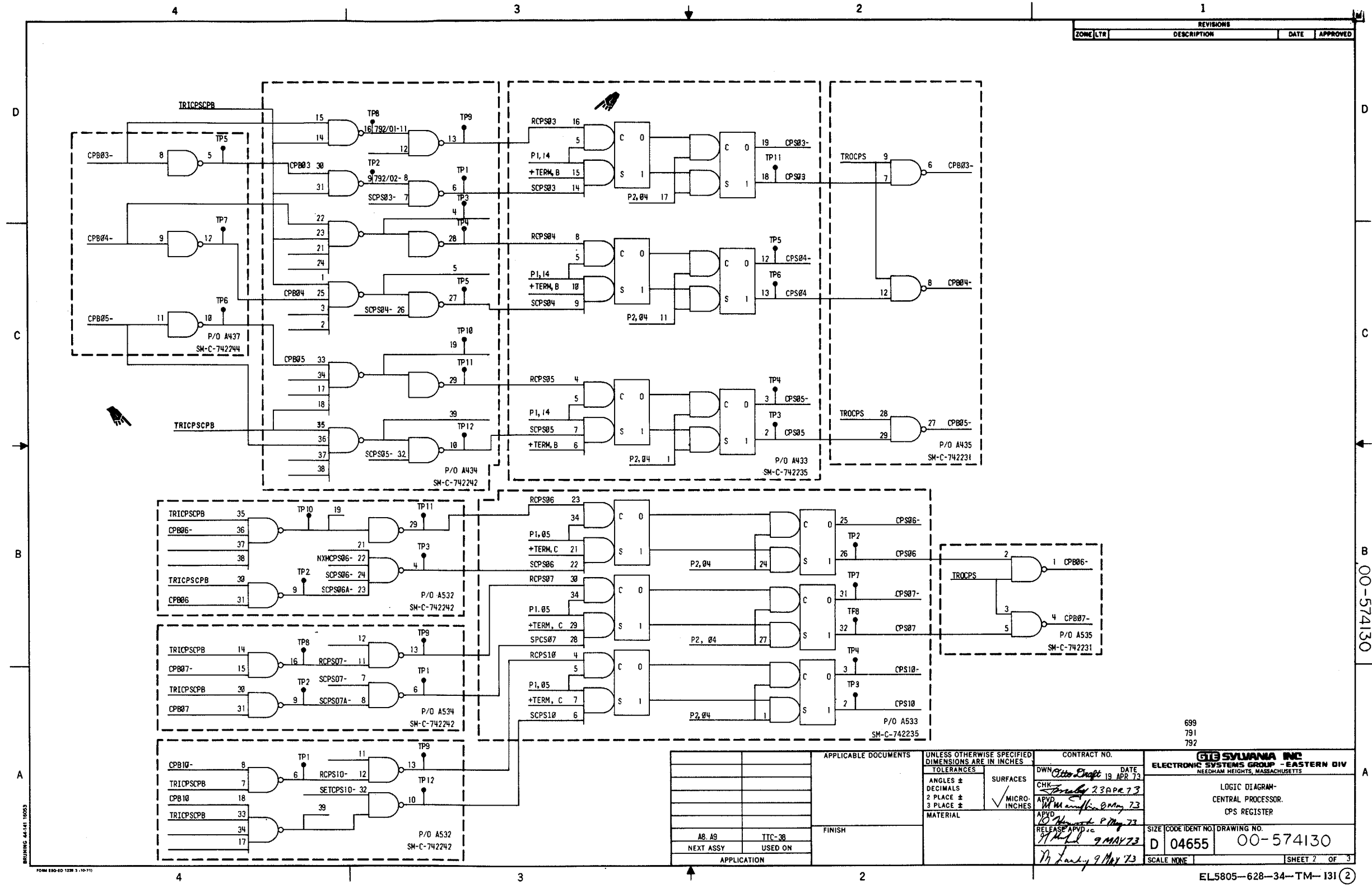


Figure 8-31(2). Central processor CPS register (sheet 2 of 3).

Change 3 8-66

REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED

APPLICABLE DOCUMENTS AB, A9 NEXT ASSY USED ON APPLICATION	FINISH TIT-38 USED ON	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MATERIAL SURFACES MICRO- INCHES	CONTRACT NO. DWN <i>Order Draft</i> DATE 19 APR 73 CHK <i>Franky</i> 23 APR 73 APVD <i>M. M. ...</i> 23 APR 73 RELEASE APVD <i>P. ...</i> 9 MAY 73 <i>M. ...</i> 9 MAY 73	GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS LOGIC DIAGRAM- CENTRAL PROCESSOR. CPS REGISTER SIZE CODE IDENT NO. DRAWING NO. D 04655 00-574130 SCALE NONE SHEET 2 OF 3
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699
791
792

EL5805-628-34-TM-131 (2)

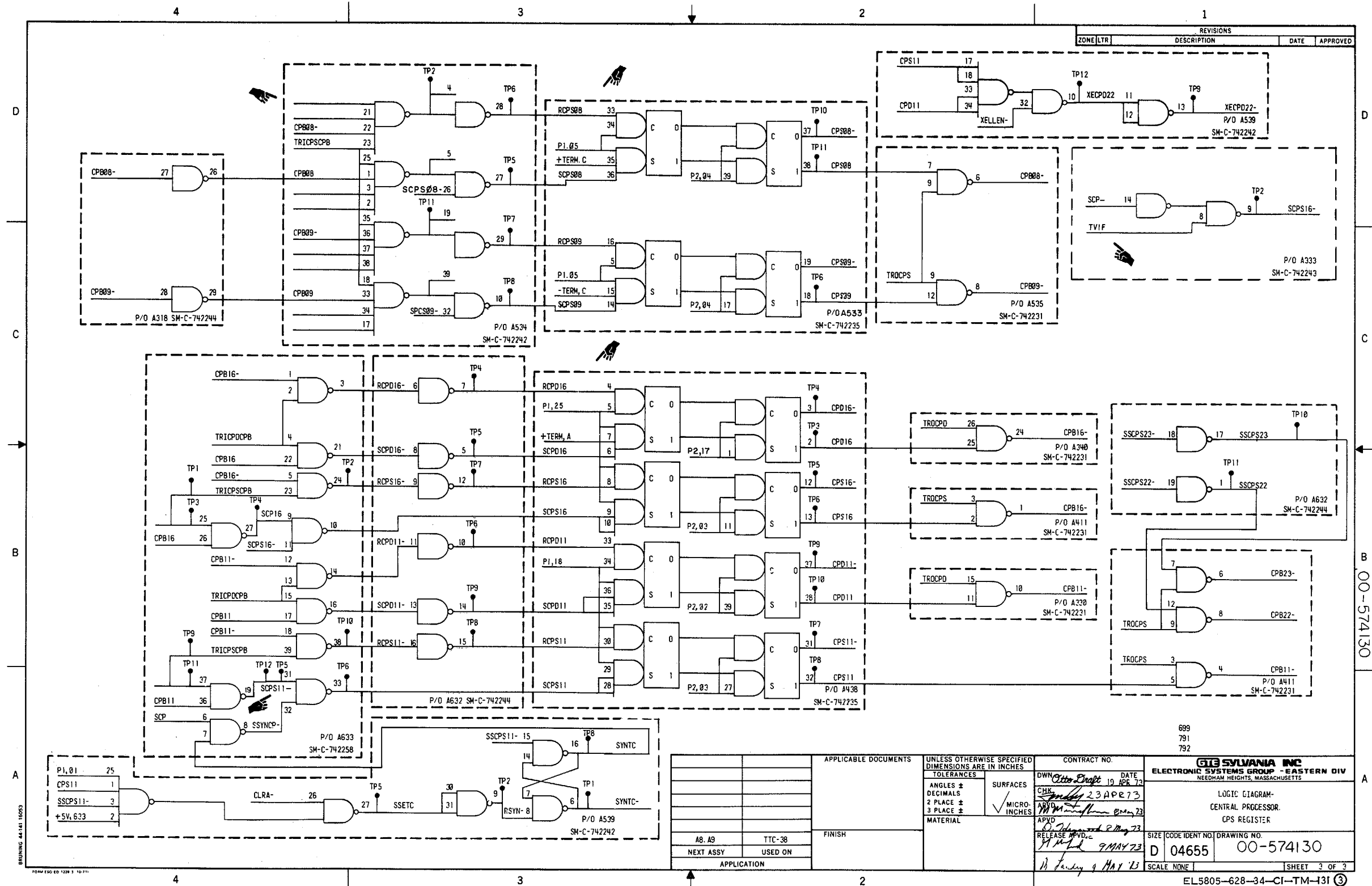
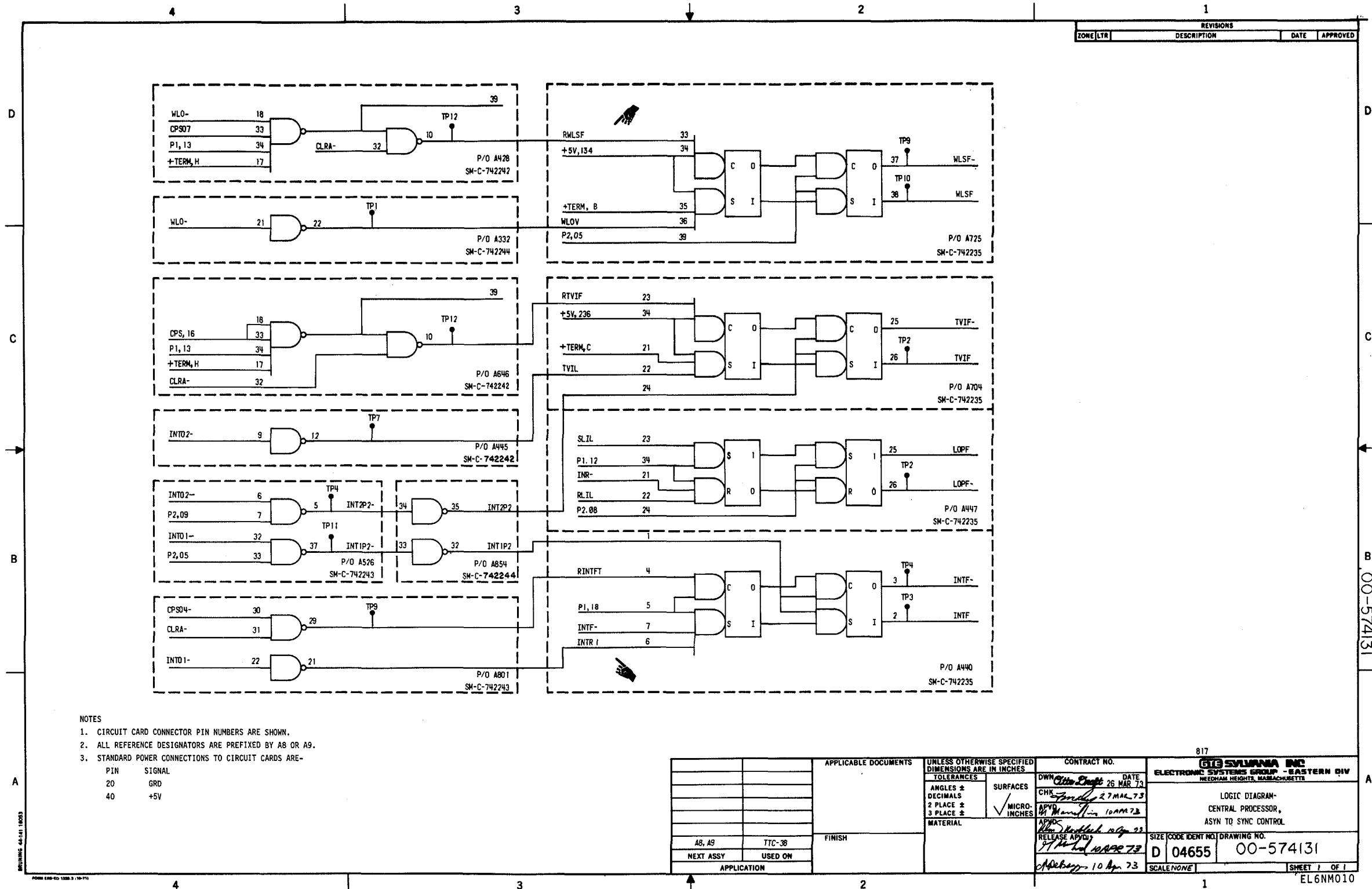


Figure 8-31(3). Central processor CPS register (sheet 3 of 3).

Change 3 8-67



- NOTES
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE-

PIN	SIGNAL
20	GRD
40	+5V

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO. 817	
		TOLERANCES		DATE 26 MAR 73	
		ANGLES ±		DWN	
		DECIMALS		CHR	
		2 PLACE ±		APVD	
		3 PLACE ±		RELEASE APD	
		MATERIAL		SCALE NONE	
FINISH		SURFACES		SIZE CODE IDENT NO. DRAWING NO.	
AS, A9		MICRO-INCHES		D 04655 00-574131	
NEXT ASSY USED ON				SHEET 1 OF 1	
APPLICATION				EL6NM010	

Figure 8-32. Central processor ASYN to SYNC control.

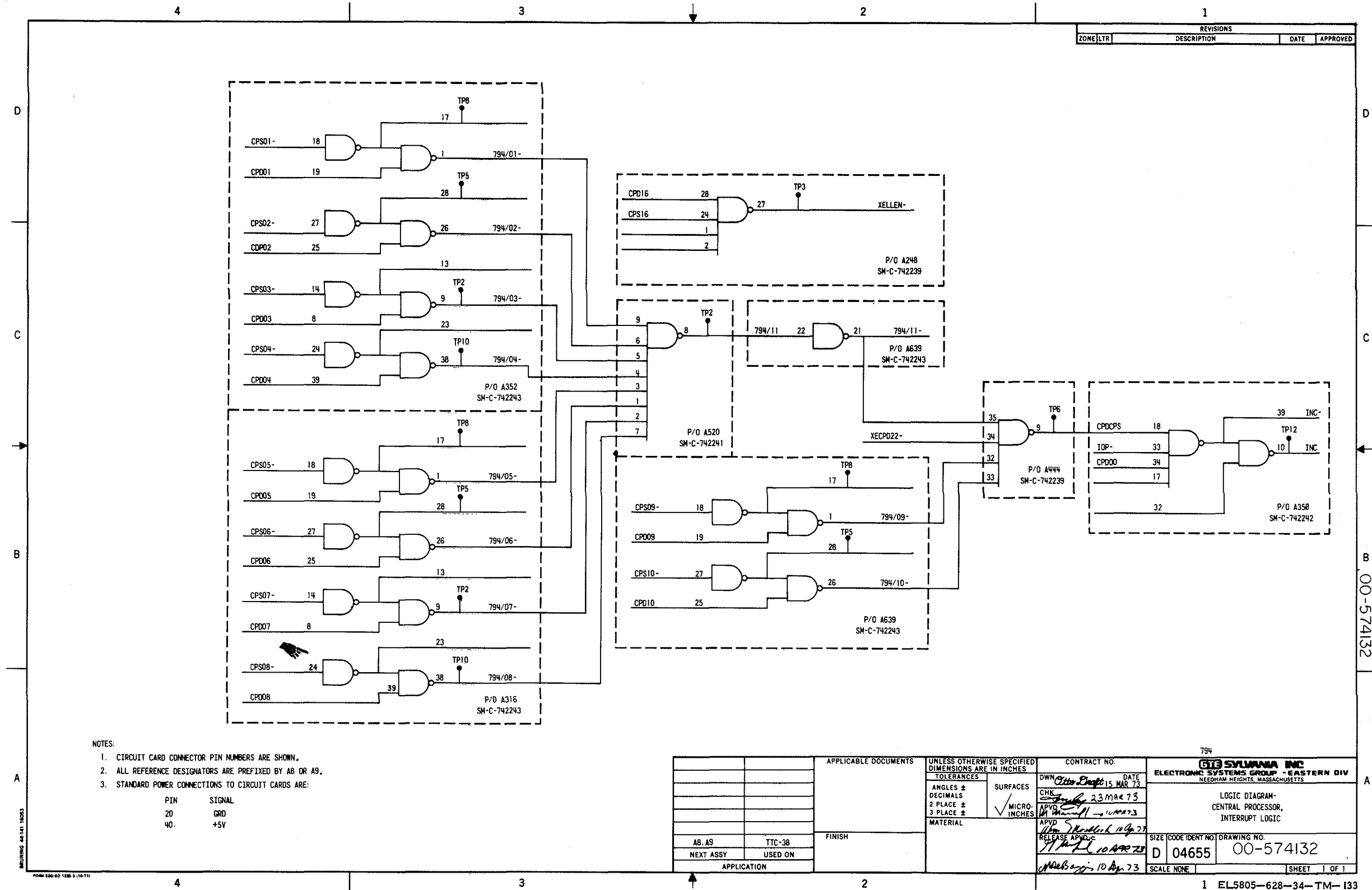


Figure 8-33. Central processor interrupt logic.

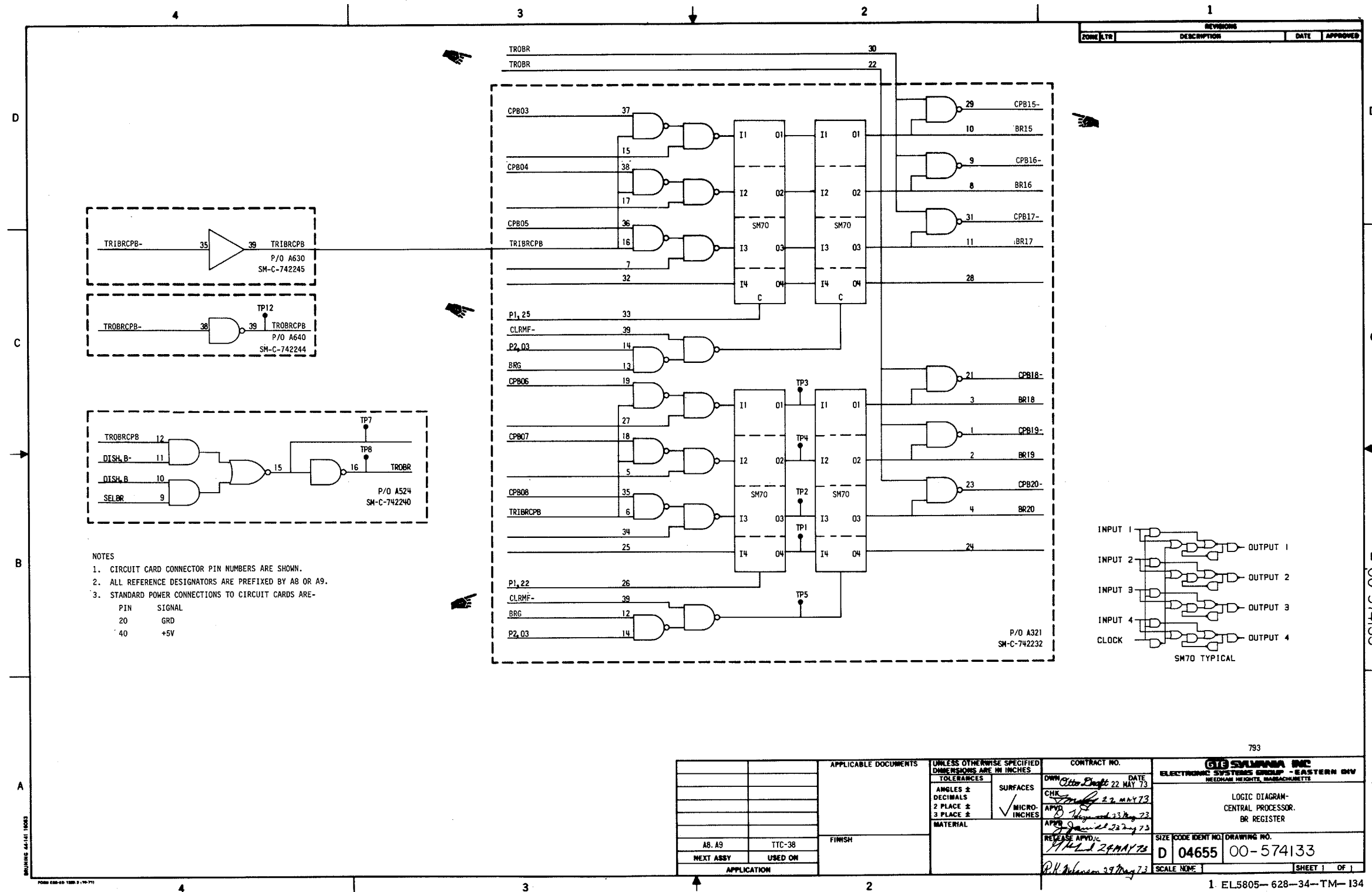
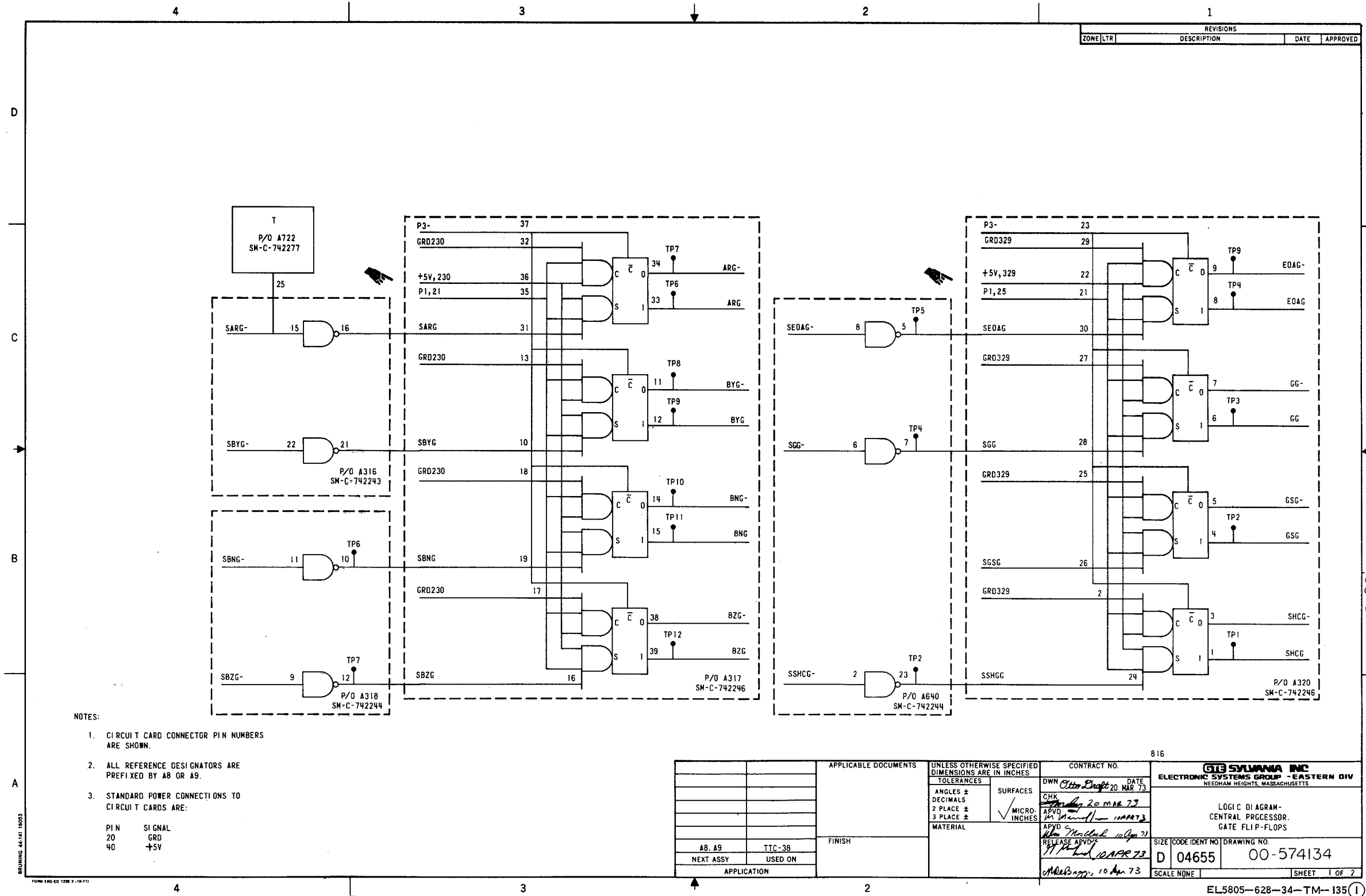


Figure 8-34. Central processor BR register.

Change 3 8-70



- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

PIN	SIGNAL
20	GRD
40	+5V

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO. 816	
FINISH		TOLERANCES		DATE	
A8, A9		ANGLES ±		DWN <i>Otto Drape</i> 20 MAR 73	
NEXT ASSY		DECIMALS		CHK <i>W. M. ...</i> 20 MAR 73	
USED ON		2 PLACE ±		APVD <i>W. M. ...</i> 10 APR 73	
APPLICATION		3 PLACE ±		RELEASE APVD <i>W. M. ...</i> 10 APR 73	
		MATERIAL		APVD <i>W. M. ...</i> 10 APR 73	
		SURFACES		ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		✓ MICRO-INCHES		LOGIC DI AGRAM - CENTRAL PROCESSOR. GATE FLIP-FLOPS	
				SIZE CODE IDENT NO DRAWING NO. D 04655 00-574134	
				SCALE NONE SHEET 1 OF 2	

Figure 8-35(1). Central processor gate flip-flops (sheet 1 of 2).

Change 3 8-71

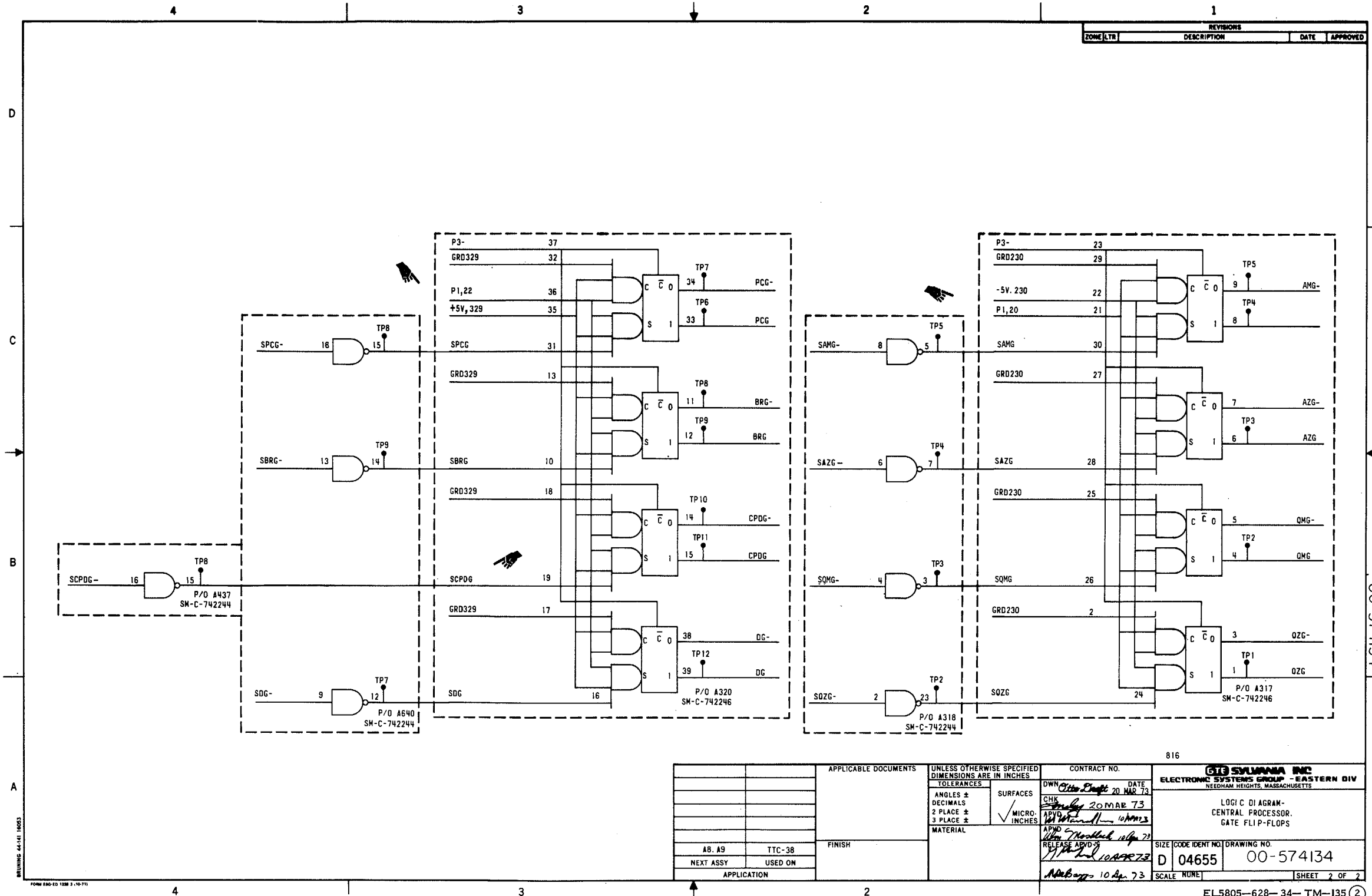


Figure 8-35(2). Central processor gate flip-flops (sheet 2 of 2).

Change 3 8-72

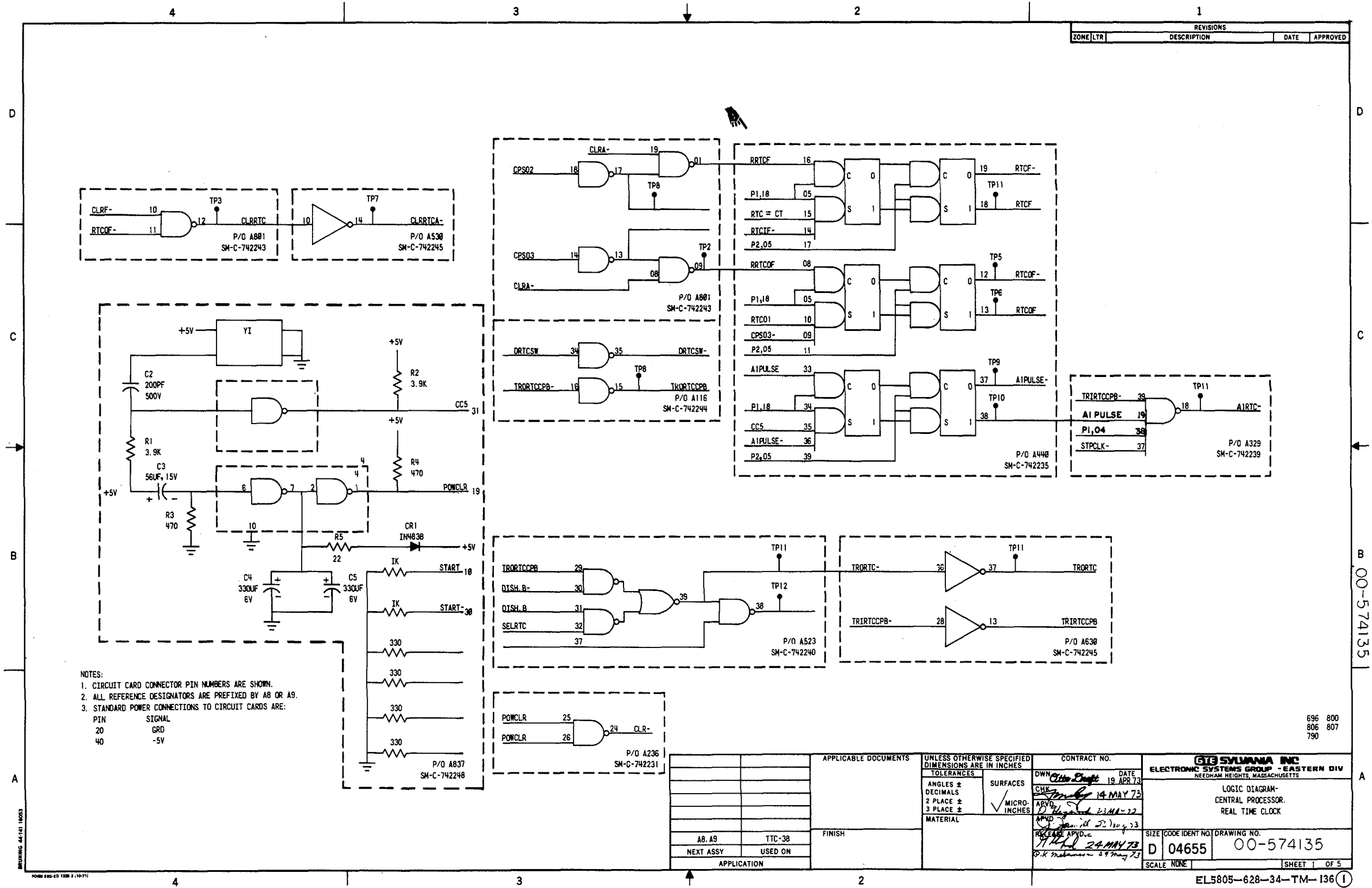


Figure 8-36(1). Central processor real time clock (sheet 1 of 5).

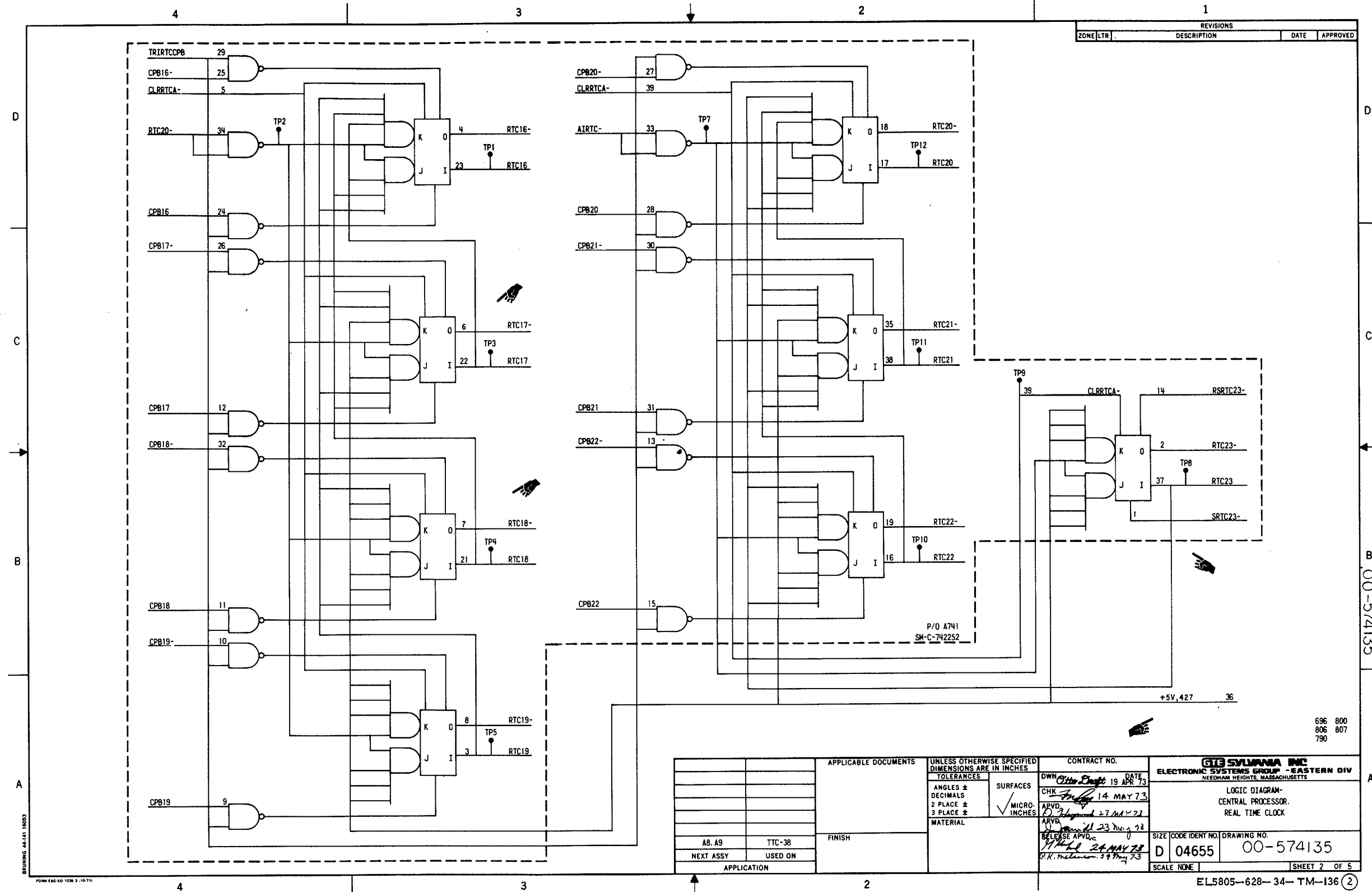


Figure 8-36(2). Central processor real time clock (sheet 2 of 5).

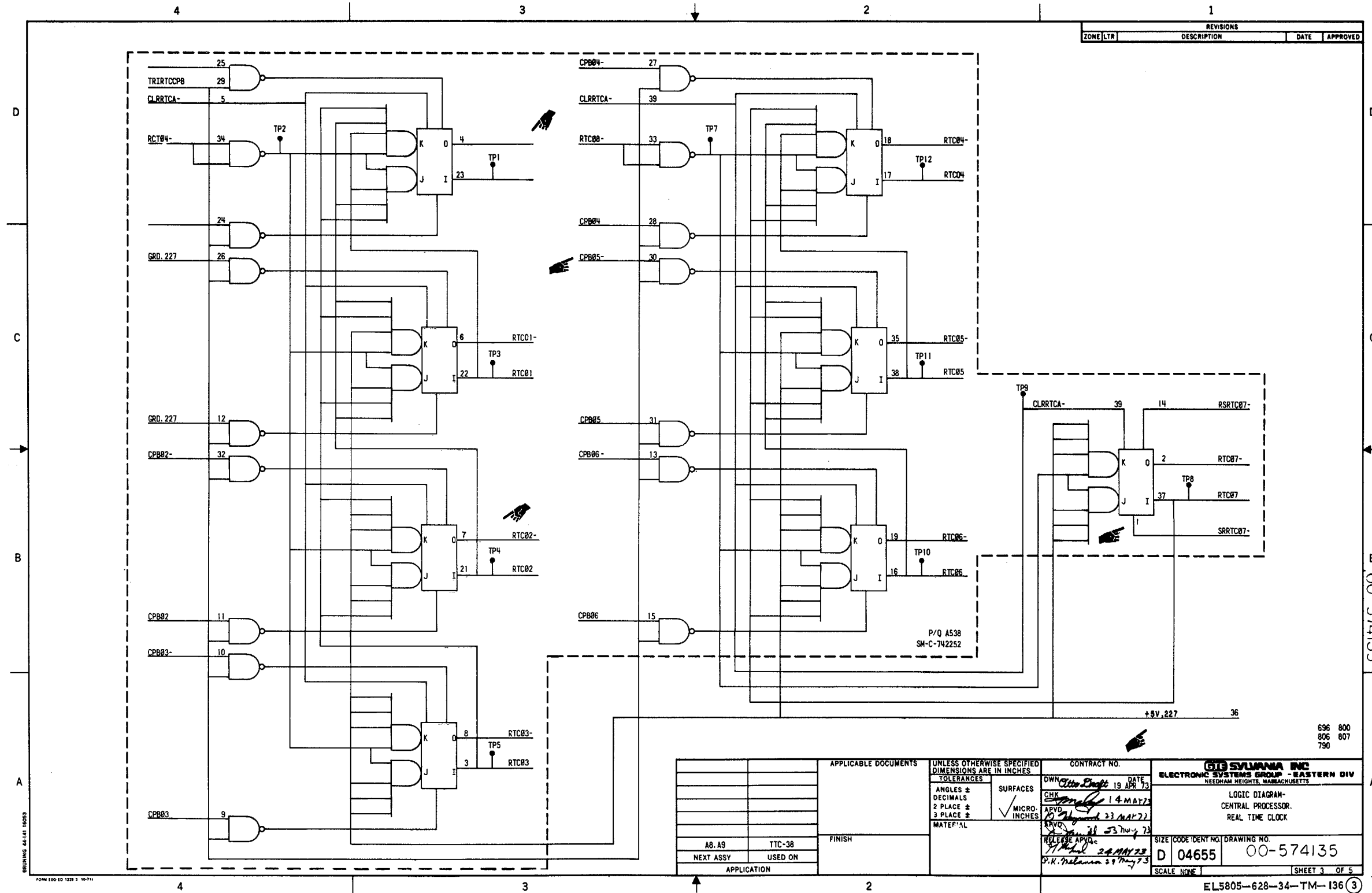
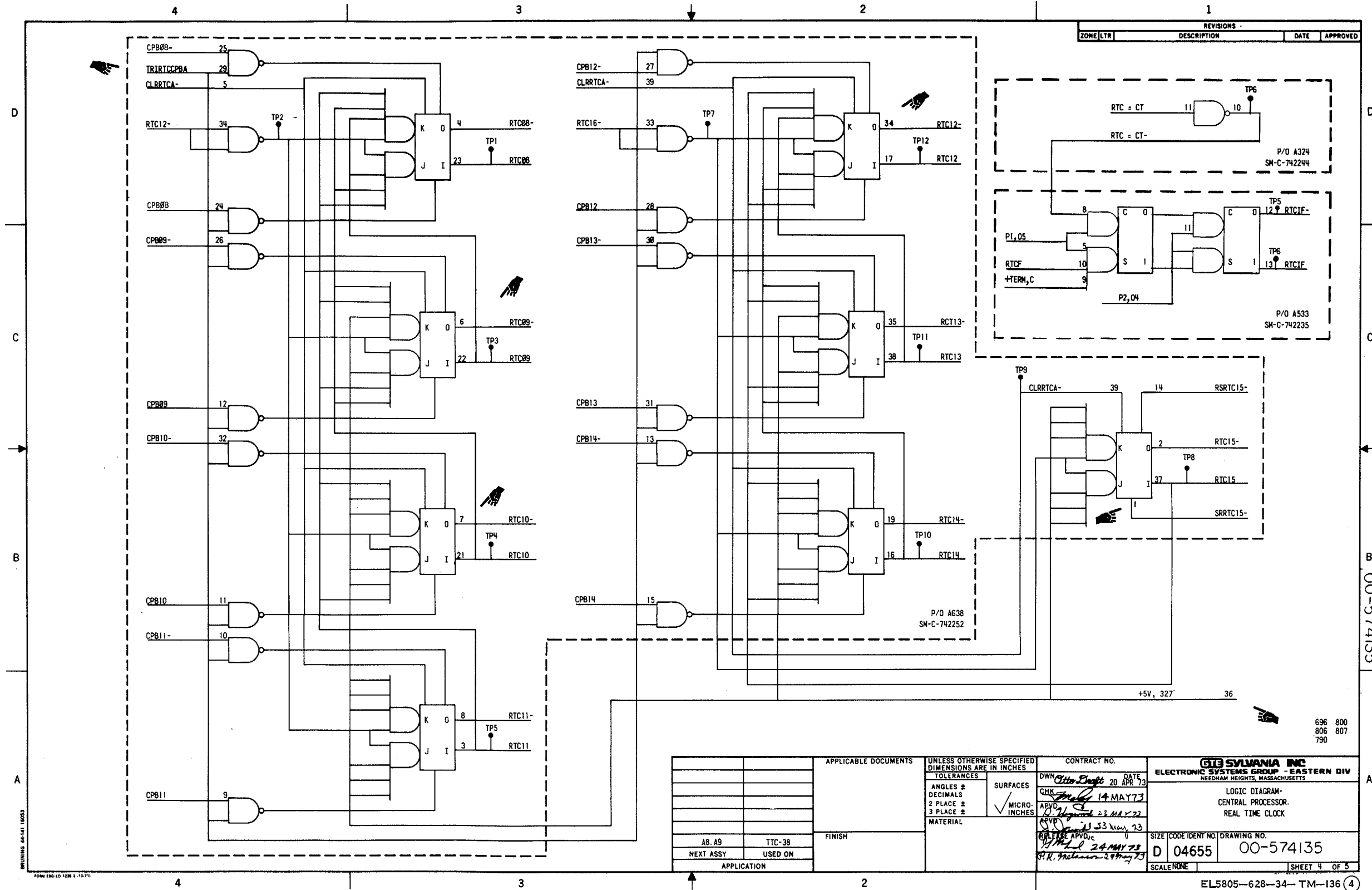


Figure 8-36(3). Central processor real time clock (sheet 3 of 5).



REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MATERIAL		SURFACES ✓ MICRO-INCHES	CONTRACT NO. DWN <i>W.D. Smith</i> DATE 20 APR 73 CHK <i>[Signature]</i> 14 MAY 73 APVD <i>[Signature]</i> 23 MAY 73 RVD <i>[Signature]</i> 23 MAY 73 RELEASE APVD <i>[Signature]</i> 24 MAY 73 P.H. <i>[Signature]</i> 29 May 73	696 800 806 807 790
APPLICABLE DOCUMENTS AB, A9 NEXT ASSY FINISH USED ON APPLICATION	TTC-38 USED ON	LOGIC DIAGRAM CENTRAL PROCESSOR REAL TIME CLOCK	SIZE (CODE IDENT NO) DRAWING NO. D 04655 00-574135	SCALE NONE SHEET 4 OF 5

Figure 8-36(4). Central processor real time clock (sheet 4 of 5).

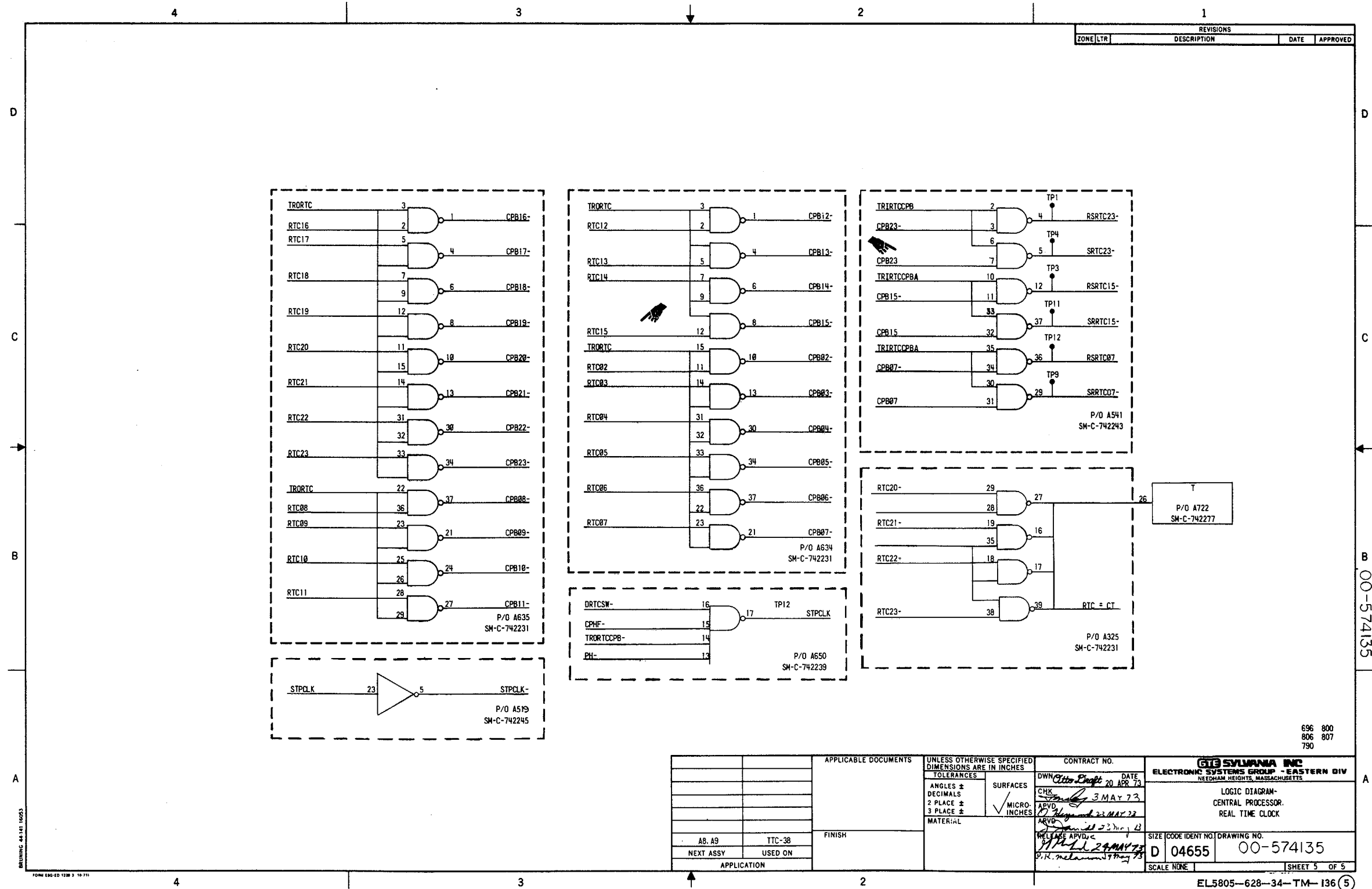


Figure 8-36(5). Central processor real time clock (sheet 5 of 5).

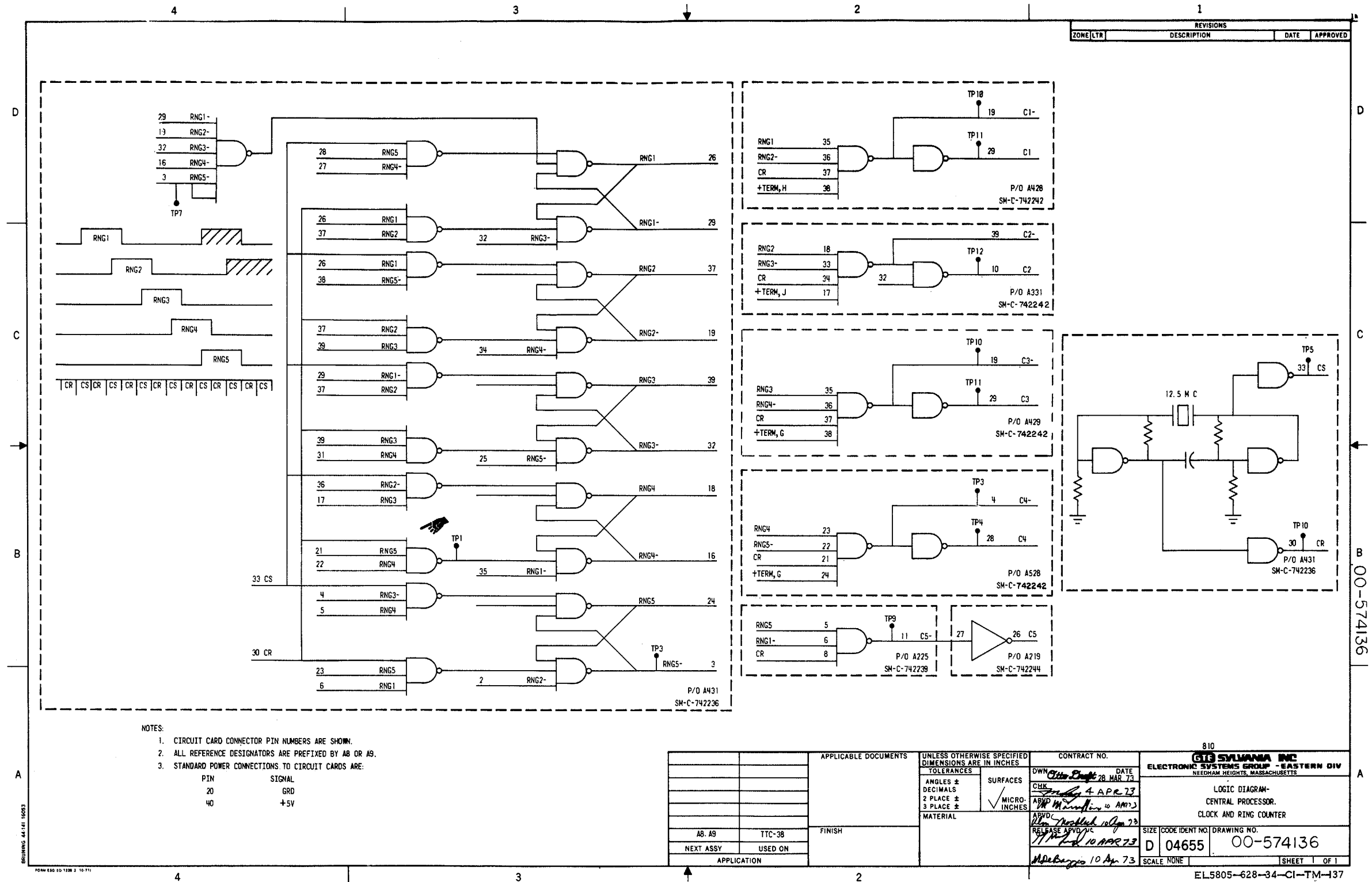


Figure 8-37. Central processor clock and ring counter.

Change 3 8-78

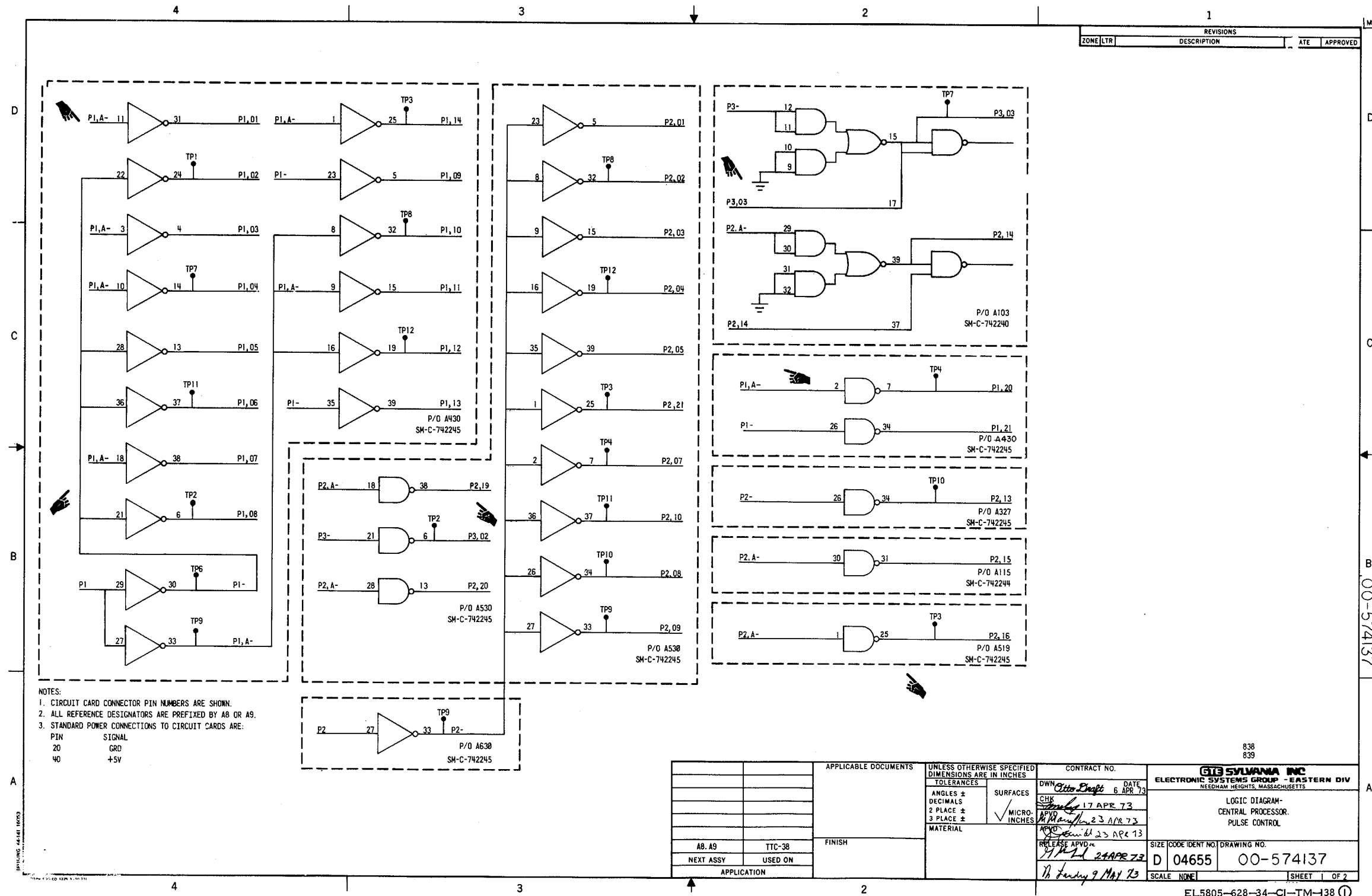


Figure 8-38(1). Central processor pulse control (sheet 1 of 2).

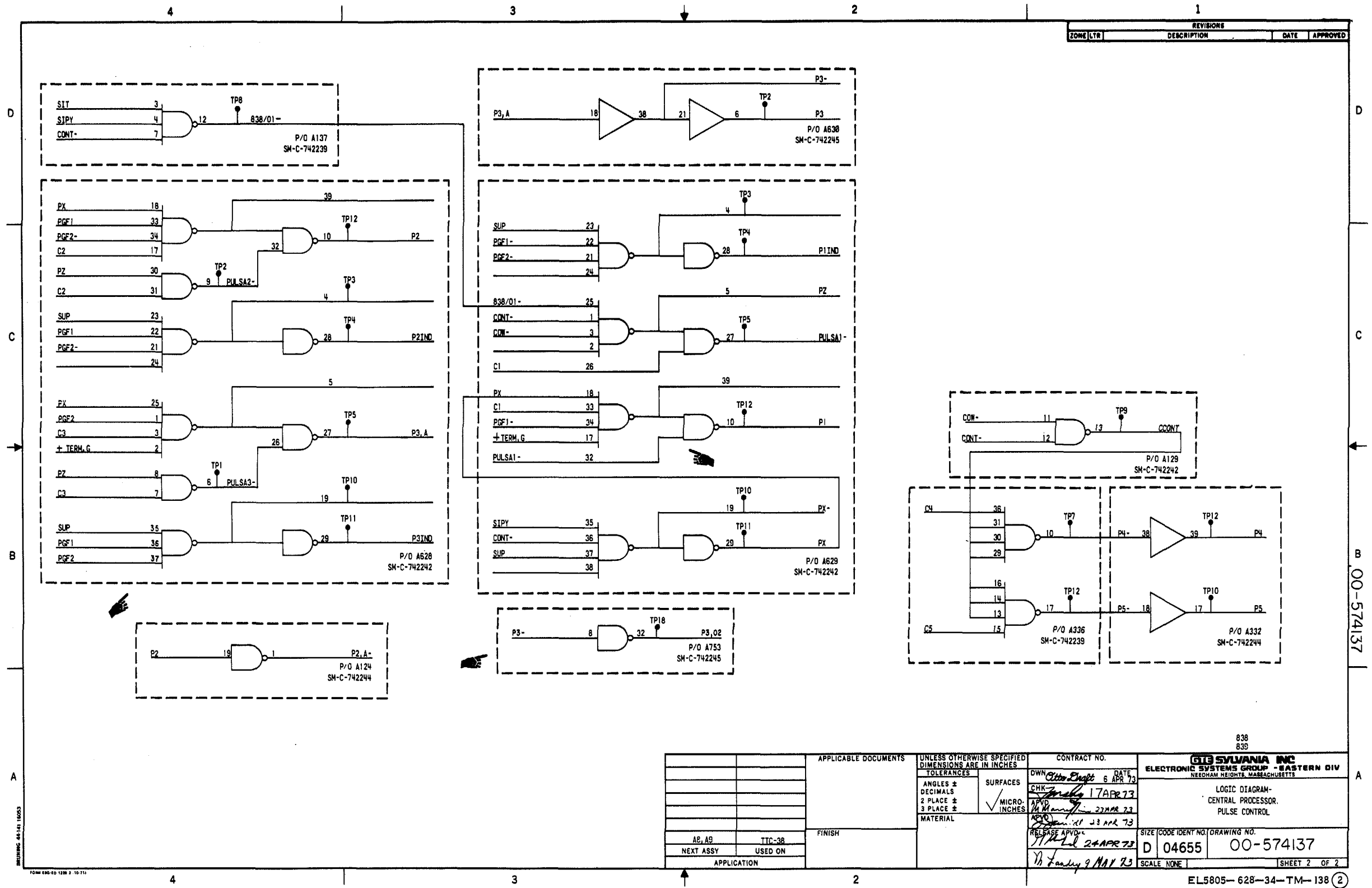


Figure 8-38(2). Central processor pulse control (sheet 2 of 2).

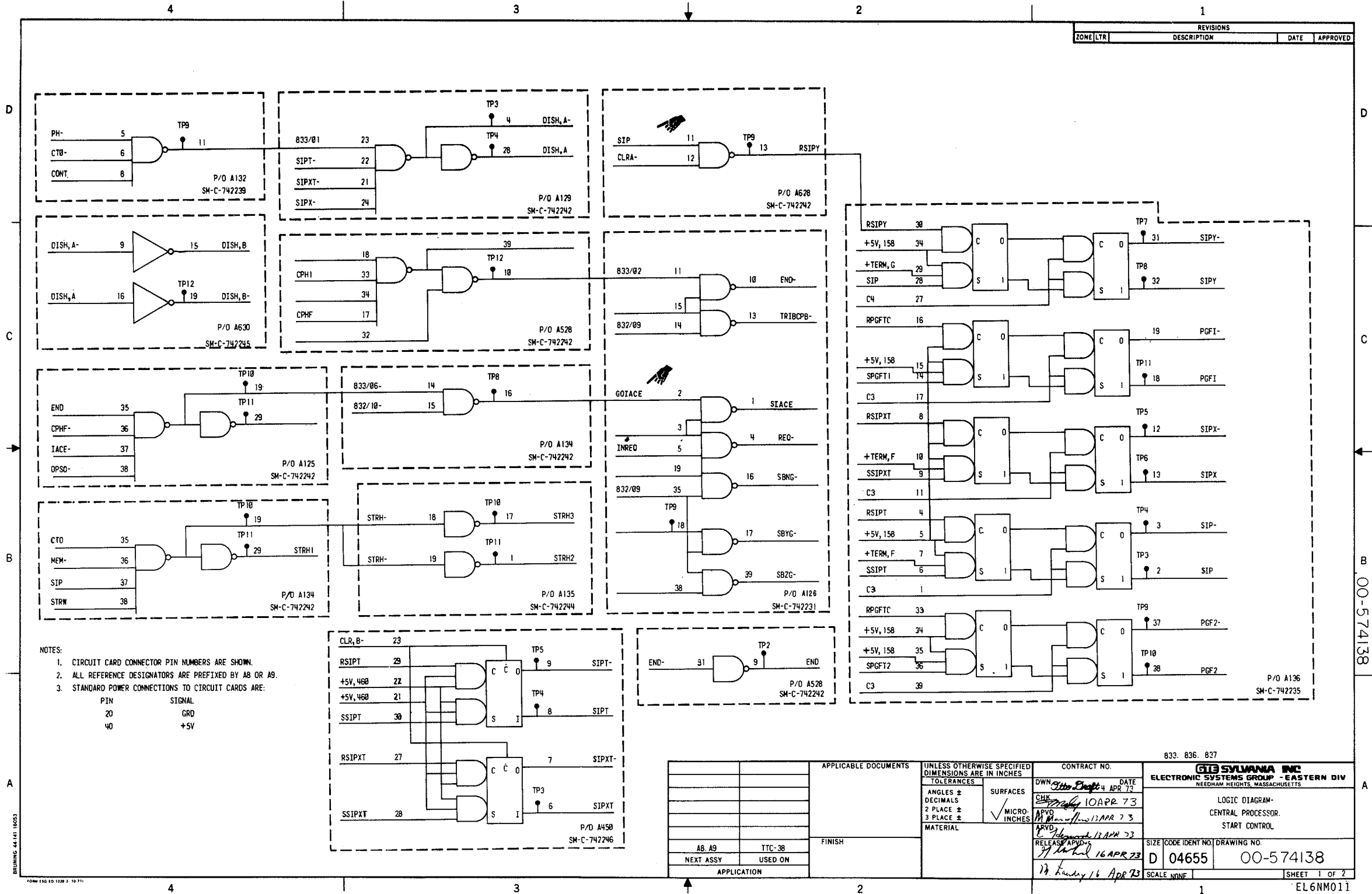


Figure 8-39(1). Central processor start control (sheet 1 of 2).

Change 3 8-81

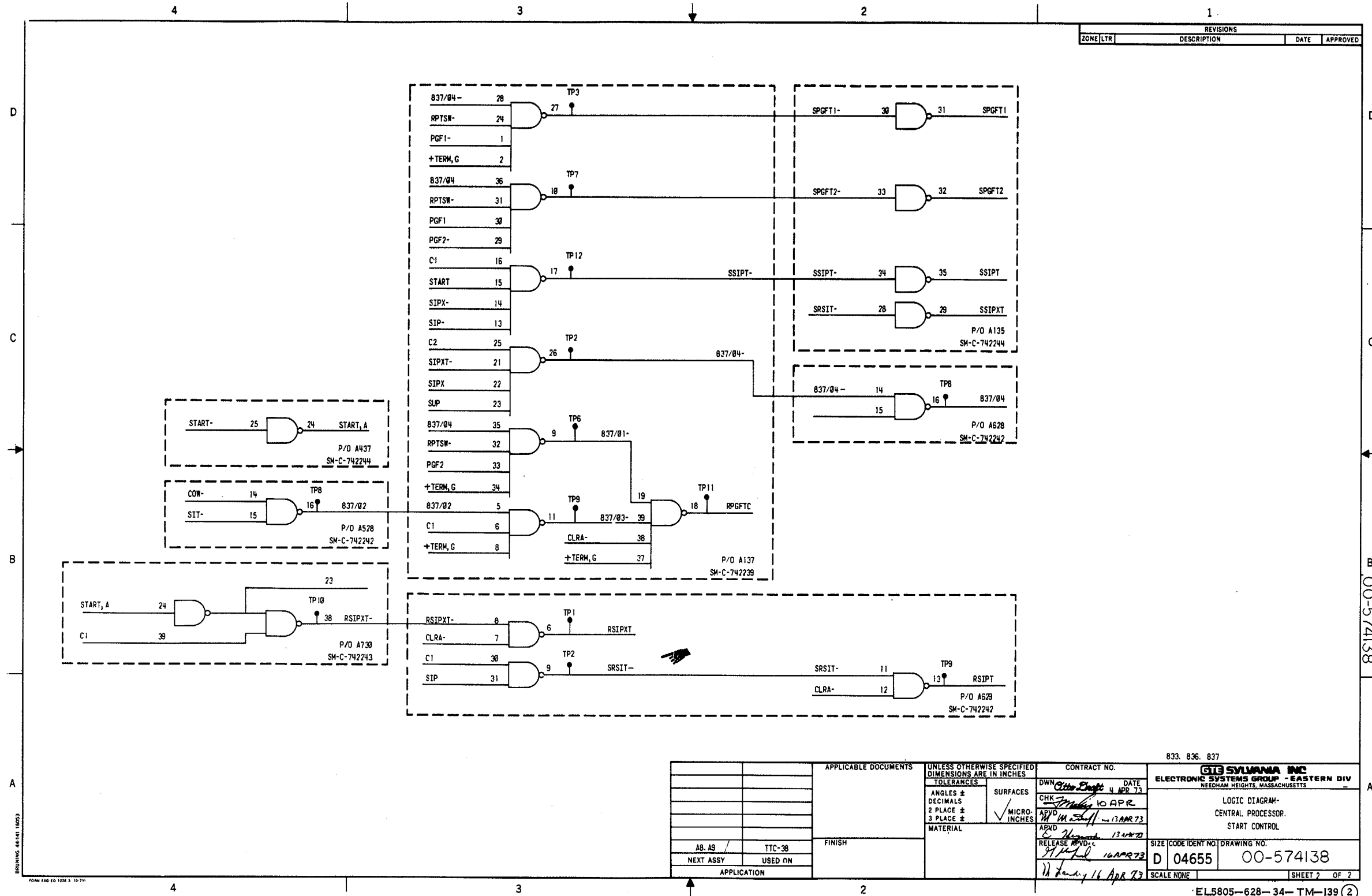
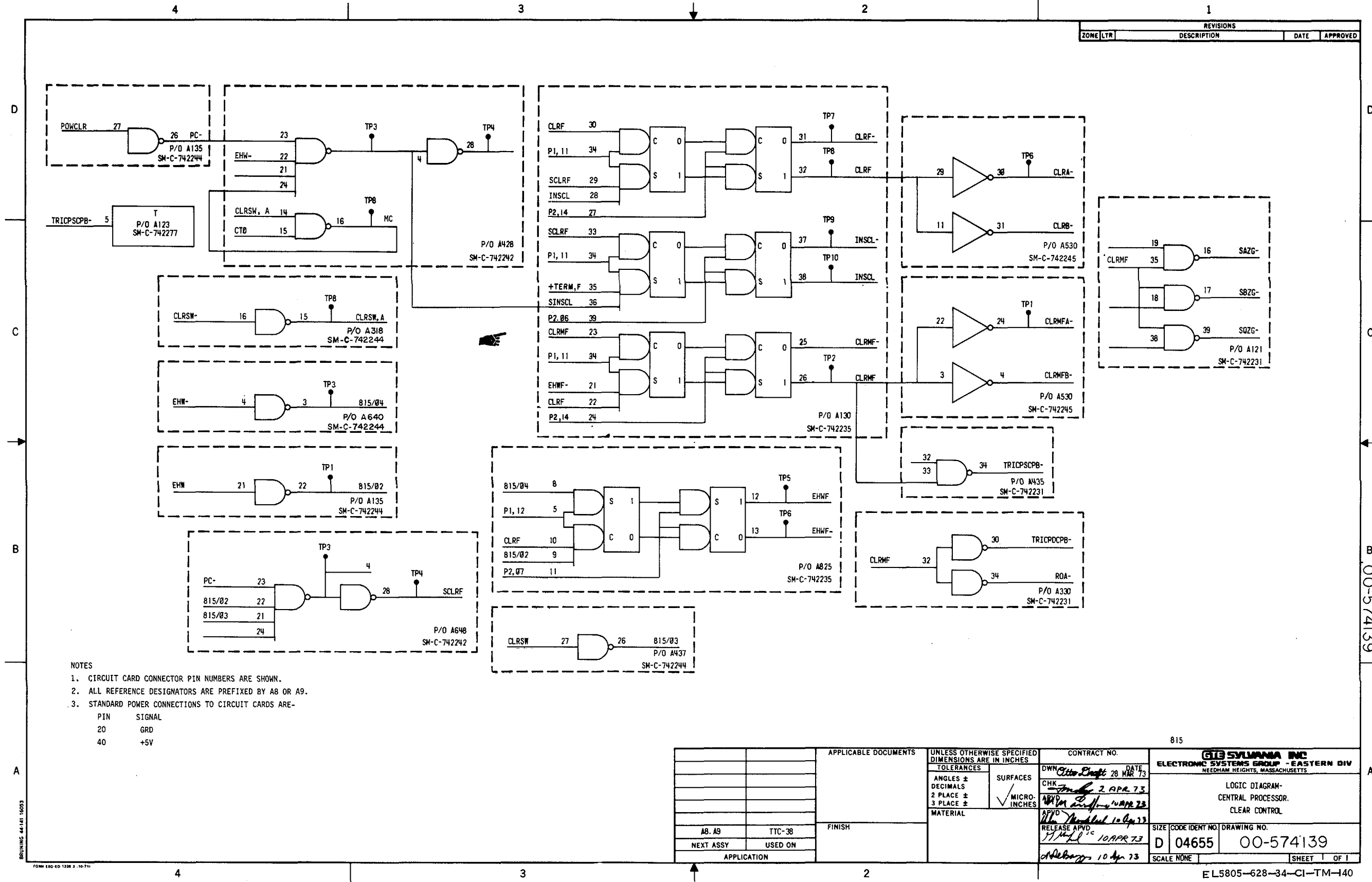


Figure 8-39(2). Central processor start control (sheet 2 of 2).



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

- NOTES
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE-

PIN	SIGNAL
20	GRD
40	+5V

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		815	
FINISH		TOLERANCES		DATE		GTS SYLVANIA INC	
AB, A9		SURFACES		28 MAR 73		ELECTRONIC SYSTEMS GROUP - EASTERN DIV	
NEXT ASSY USED ON		MICRO-INCHES		2 APR 73		NEEDHAM HEIGHTS, MASSACHUSETTS	
APPLICATION		MATERIAL		10 APR 73		LOGIC DIAGRAM-	
						CENTRAL PROCESSOR.	
						CLEAR CONTROL	
						SIZE CODE IDENT NO. DRAWING NO.	
						D 04655 00-574139	
						SCALE NONE SHEET 1 OF 1	

Figure 8-40. Central processor clear control.

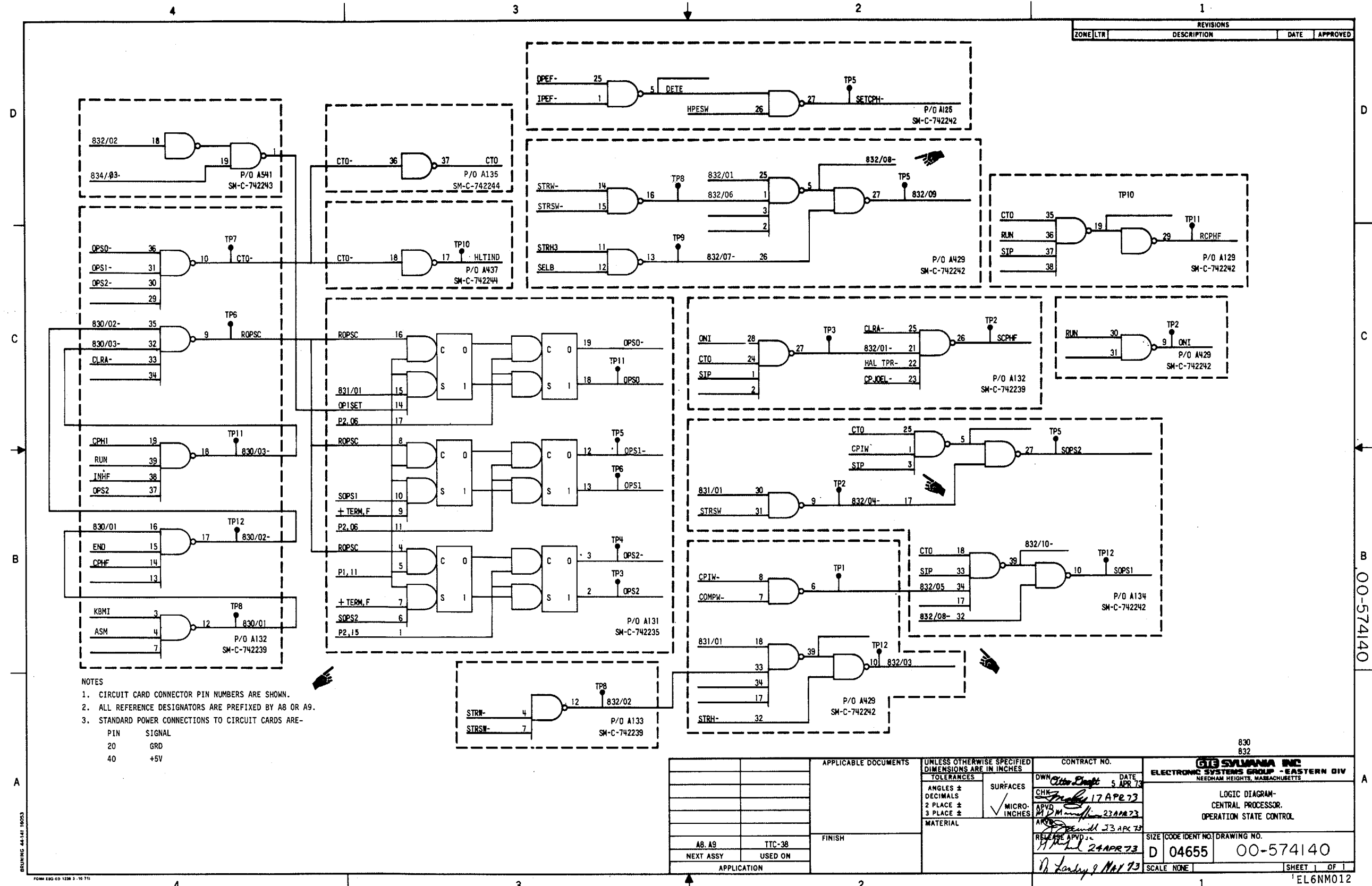


Figure 8-41. Central process operation state.

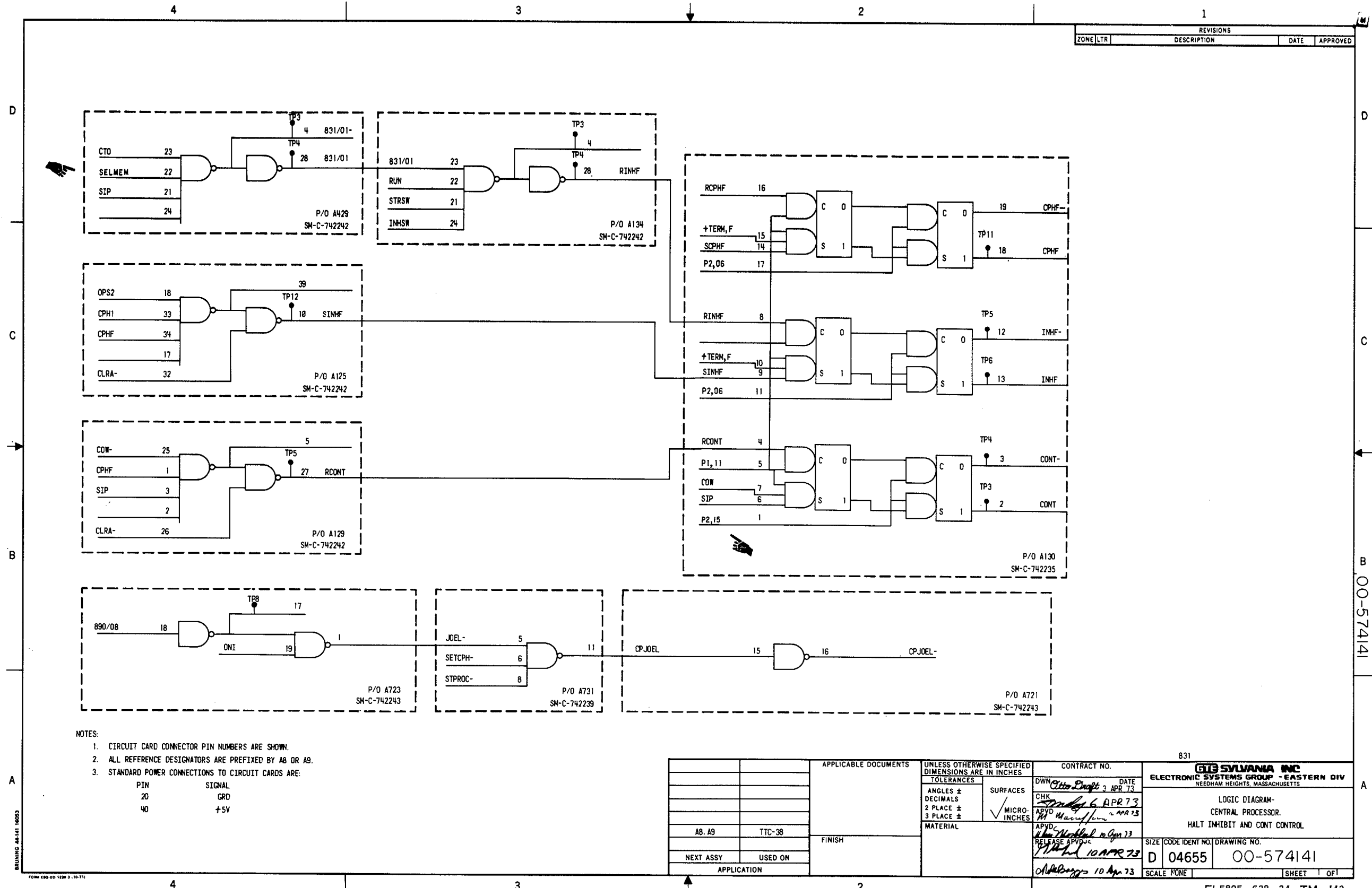
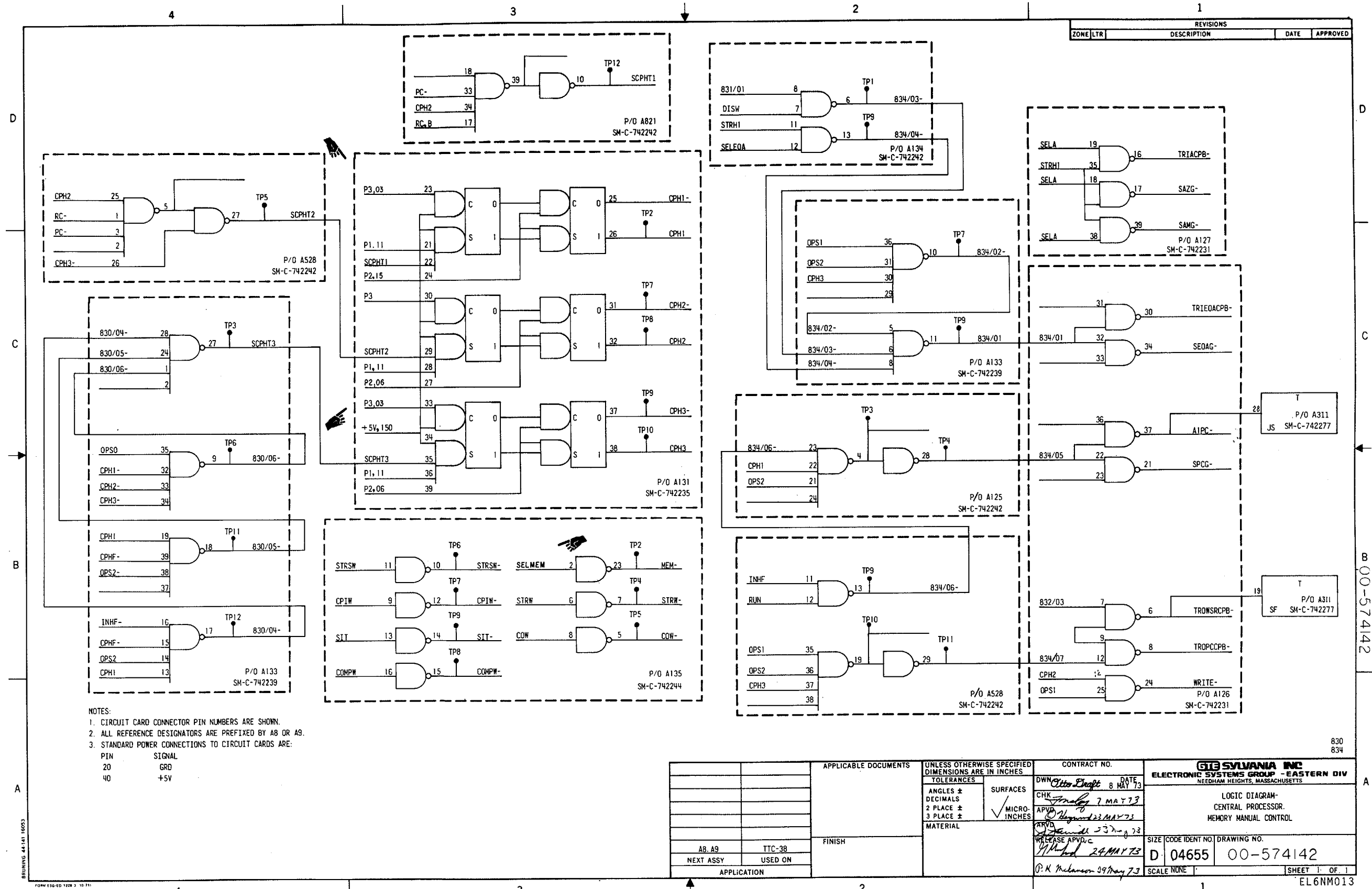


Figure 8-42. Central processor halt inhibitor and cont. control.



- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY AB OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:
- | | |
|-----|--------|
| PIN | SIGNAL |
| 20 | GRD |
| 40 | +5V |

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES		DWN <i>Atto Draft</i> 8 MAY 73		LOGIC DIAGRAM- CENTRAL PROCESSOR. MEMORY MANUAL CONTROL	
		ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ±		CHK <i>Finley</i> 7 MAY 73		SIZE CODE IDENT NO. DRAWING NO.	
		SURFACES ✓ MICRO-INCHES		APVD <i>Hayward</i> 23 MAY 73		D 04655 00-574142	
		MATERIAL		RVD <i>Hayward</i> 23 MAY 73		SCALE NONE SHEET 1 OF 1	
AB. A9 NEXT ASSY USED ON		FINISH		RELEASE APVDC <i>Finley</i> 24 MAY 73		EL6NM013	
APPLICATION				P.K. Melanson 29 May 73			

Figure 8-43. Central processor memory manual control.

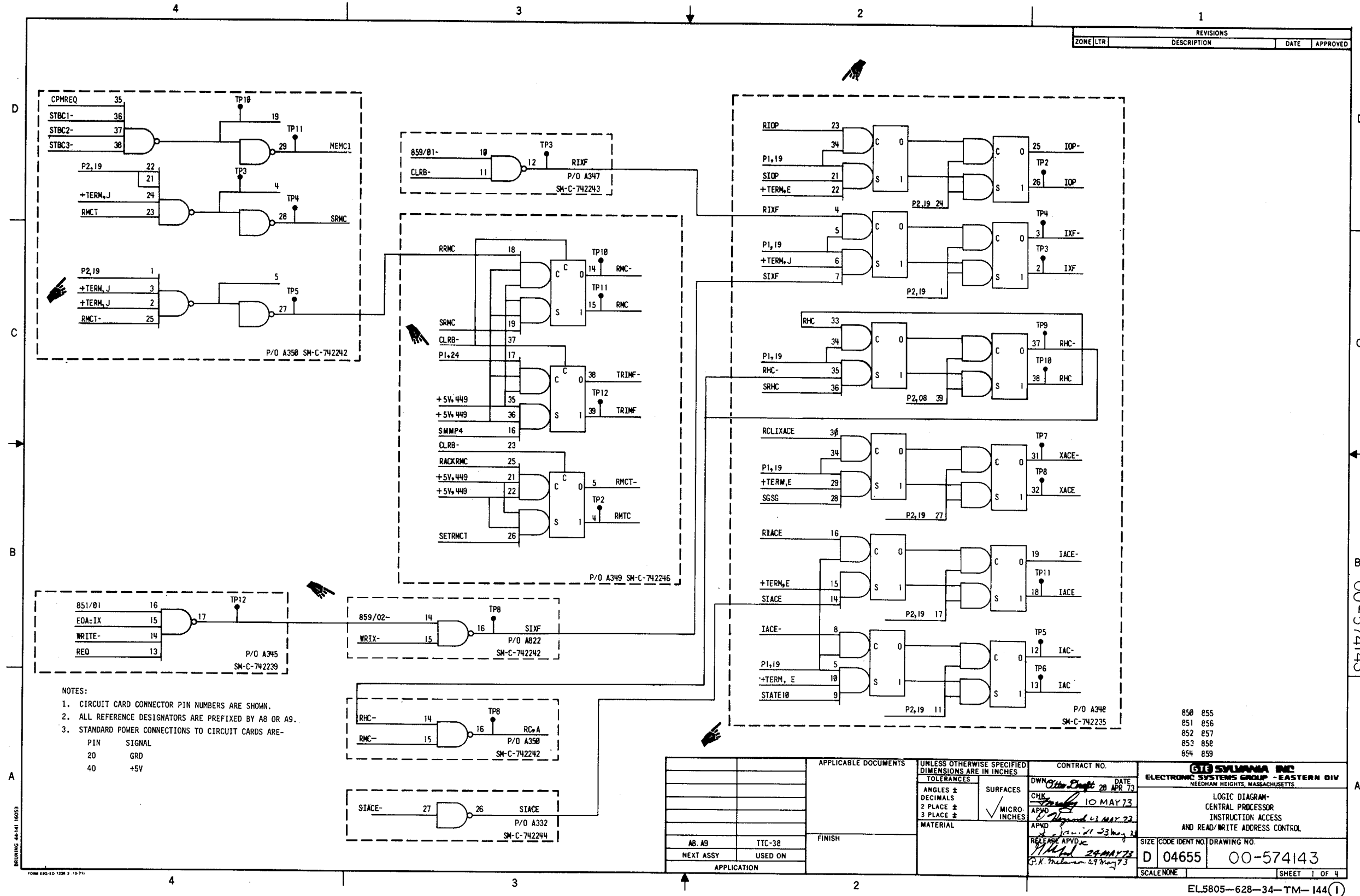


Figure 8-44(1). Central processor instruction access and read/write address control (sheet 1 of 4).

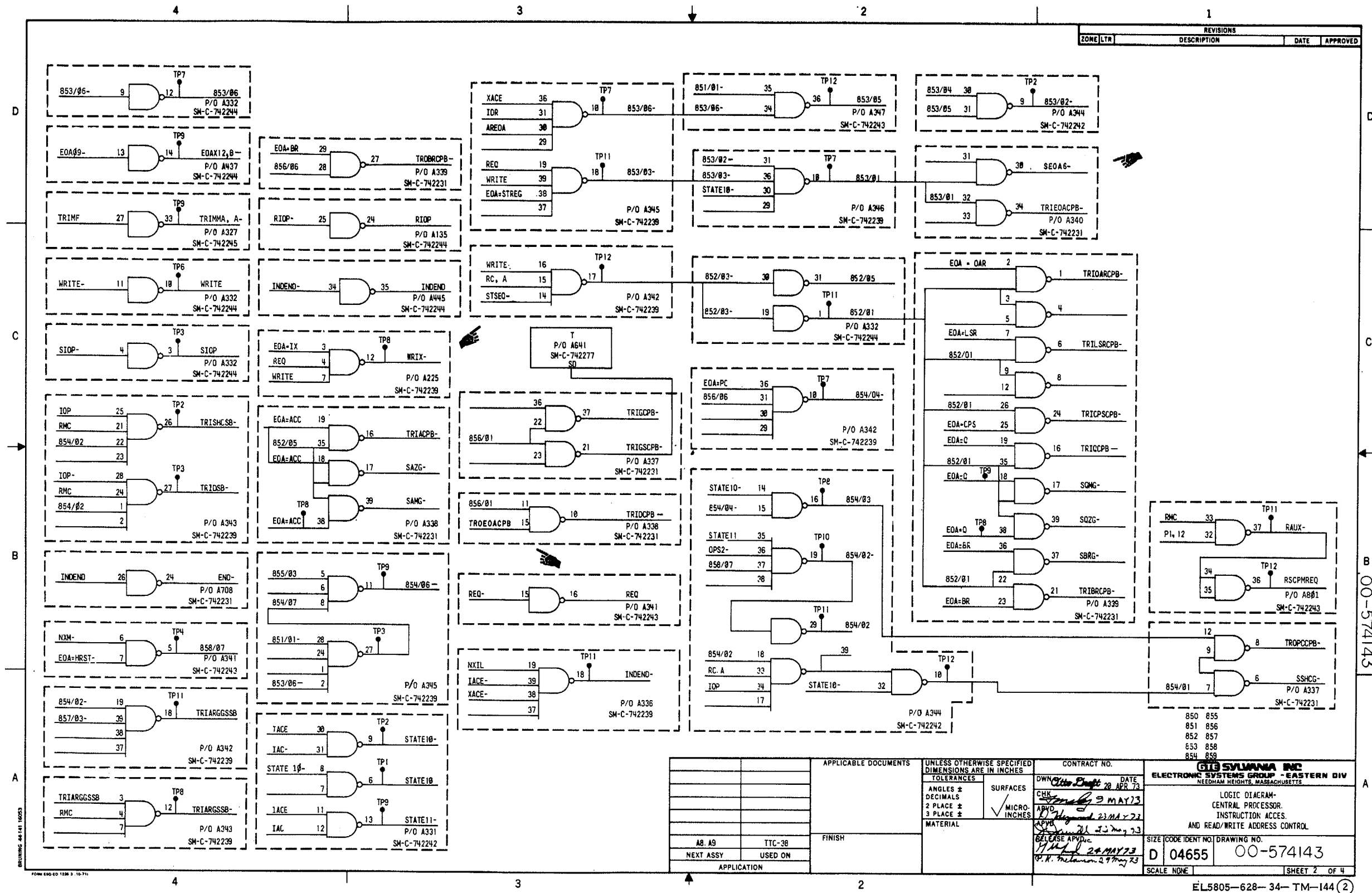


Figure 8-44(2). Central processor instruction access and read/write address control (sheet 2 of 4).

Change 3 8-88

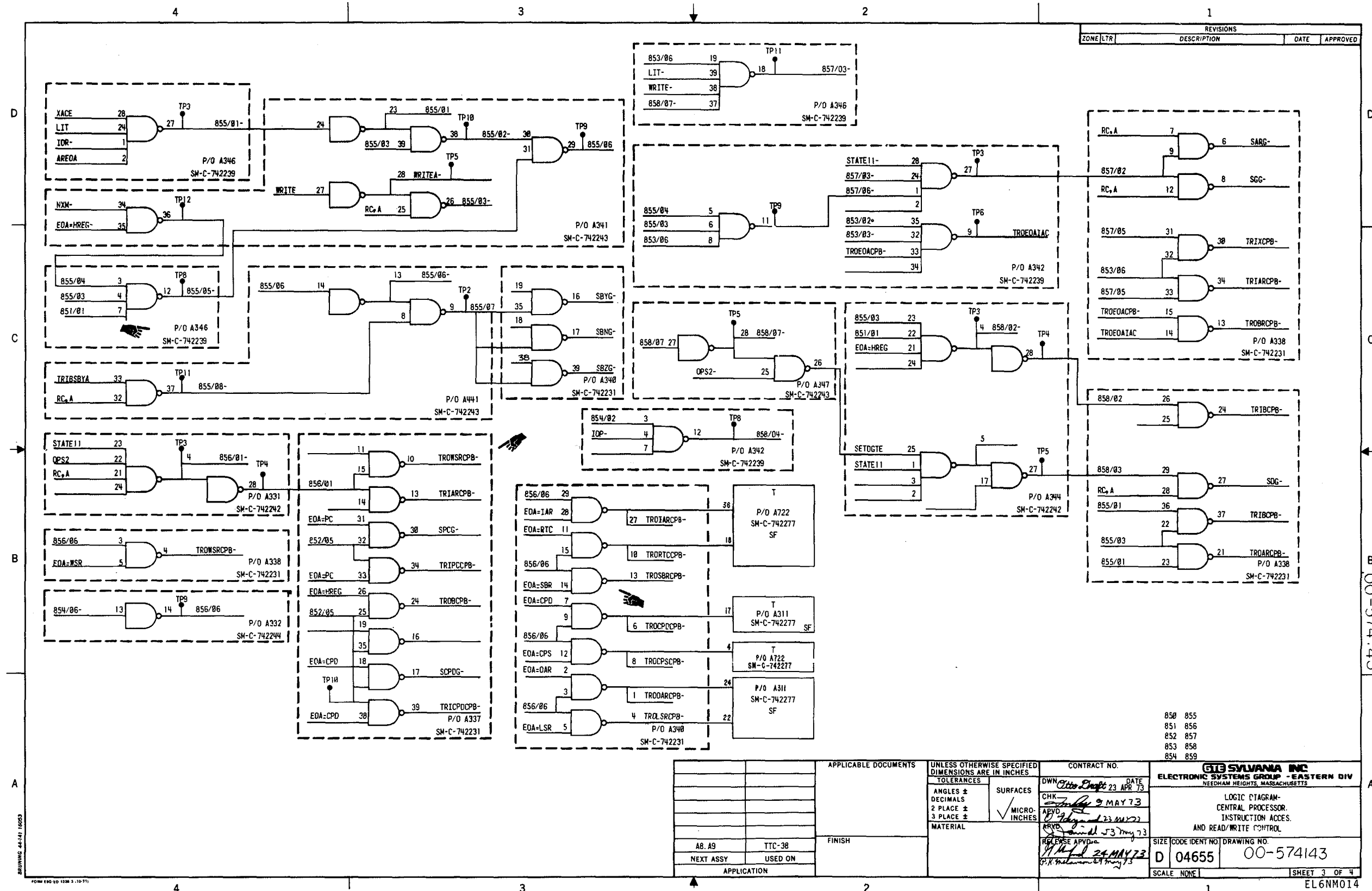


Figure 8-44(3). Central processor instruction access and read/write address control (sheet 3 of 4).

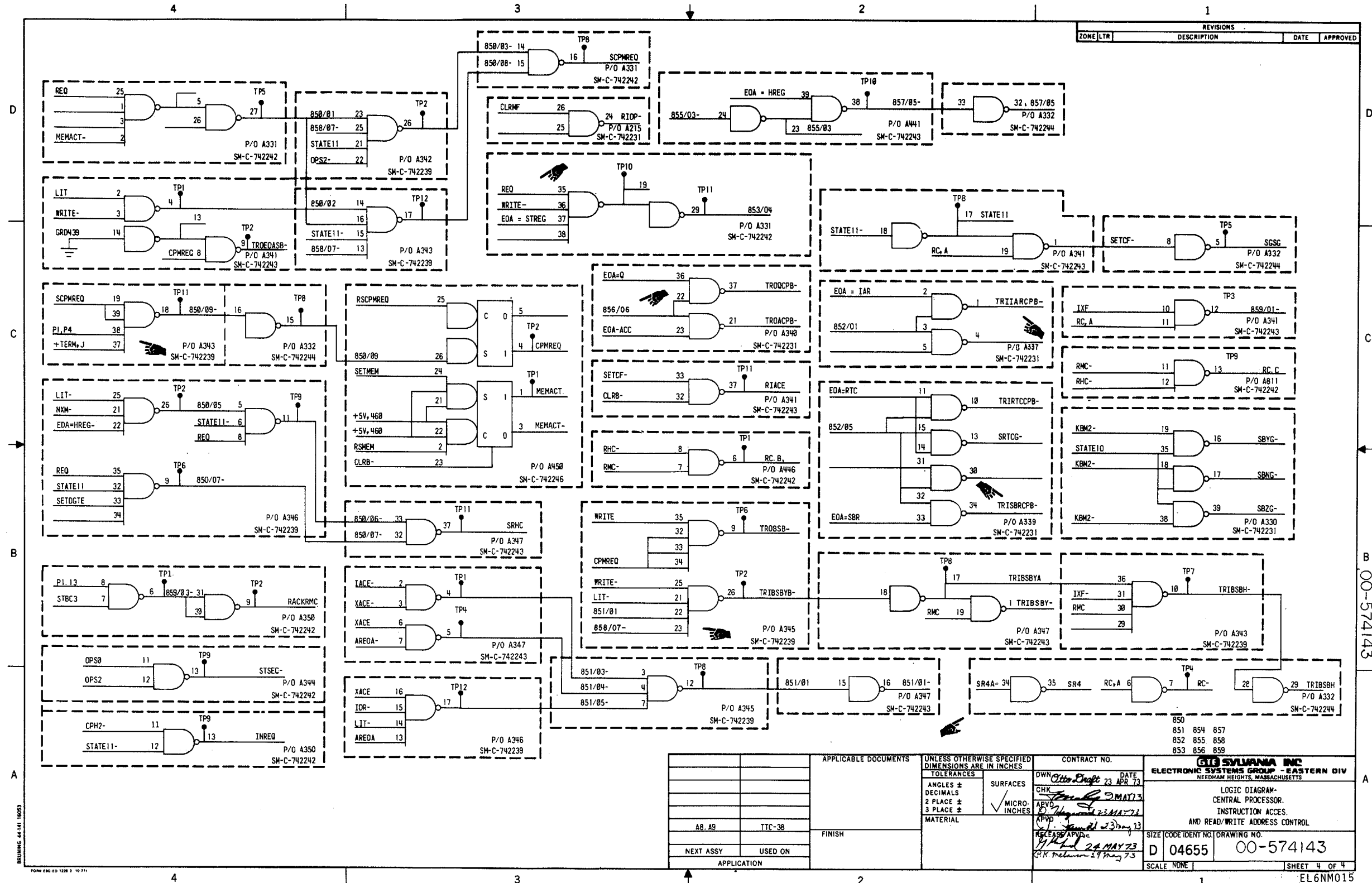


Figure 8-44(4). Central processor instruction access and read/write address control (sheet 4 of 4).

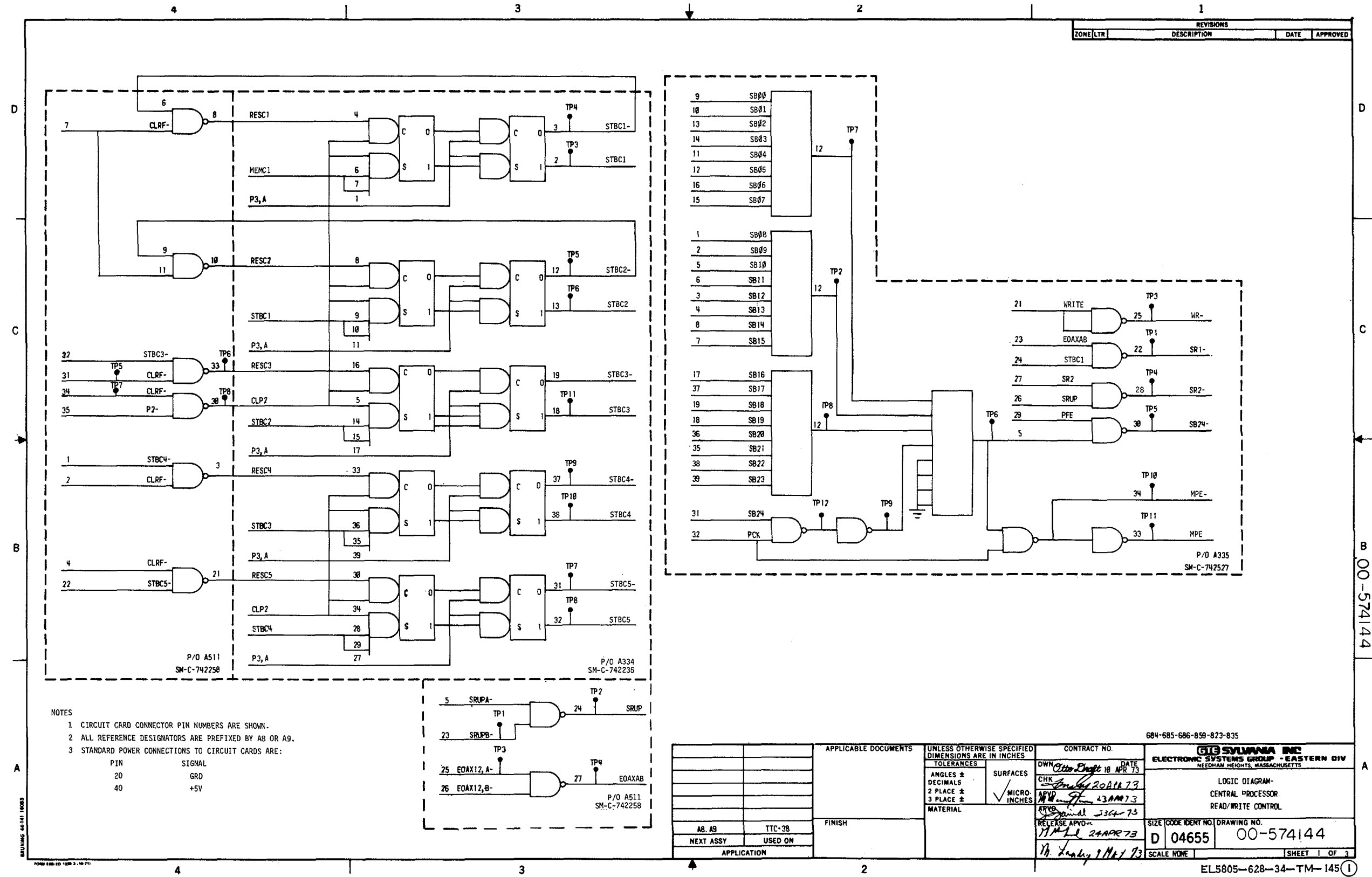


Figure 8-45(1). Central processor read/write control (sheet 1 of 3).

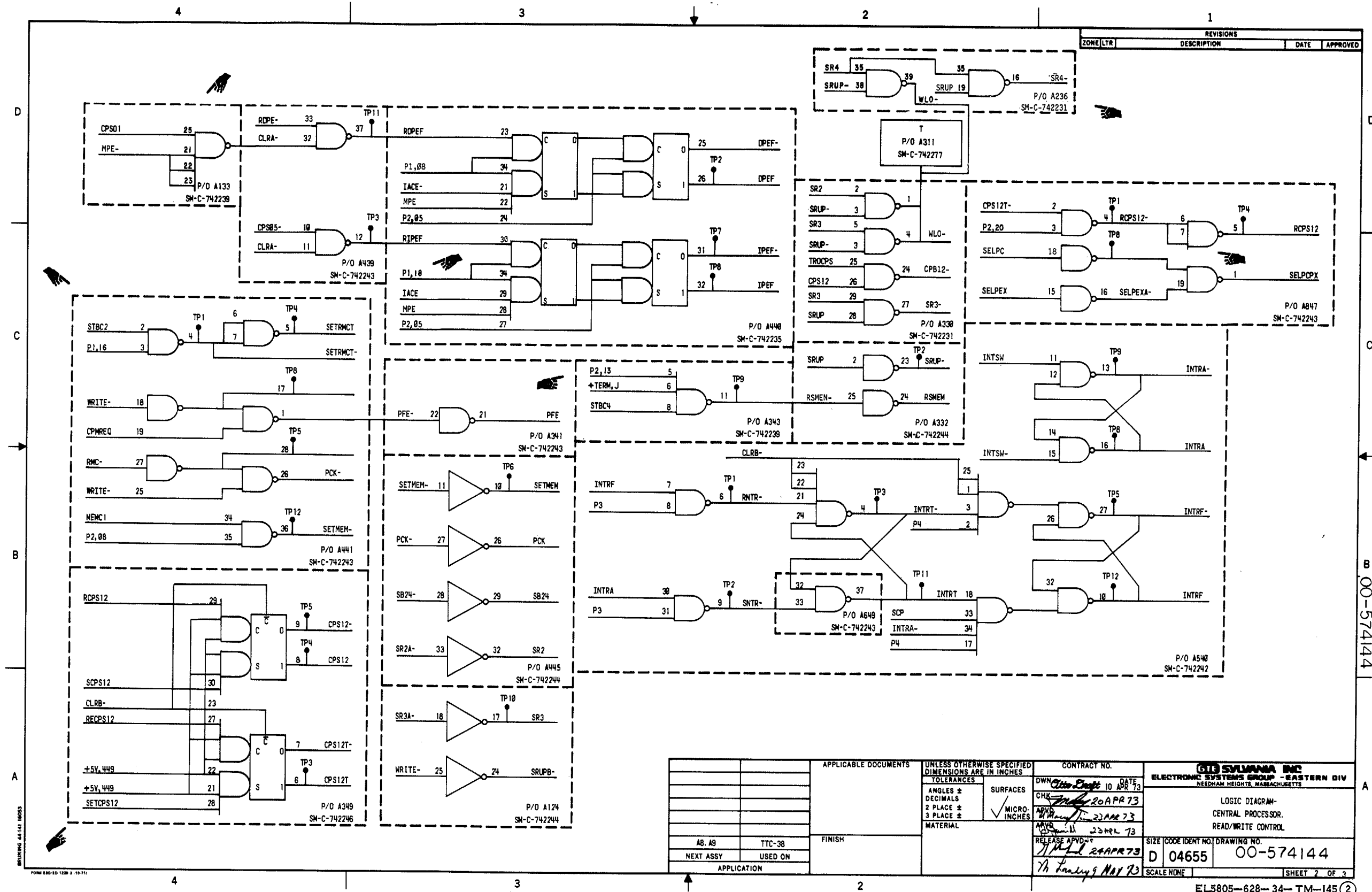


Figure 8-45(2). Central processor read/write control (sheet 2 of 3).

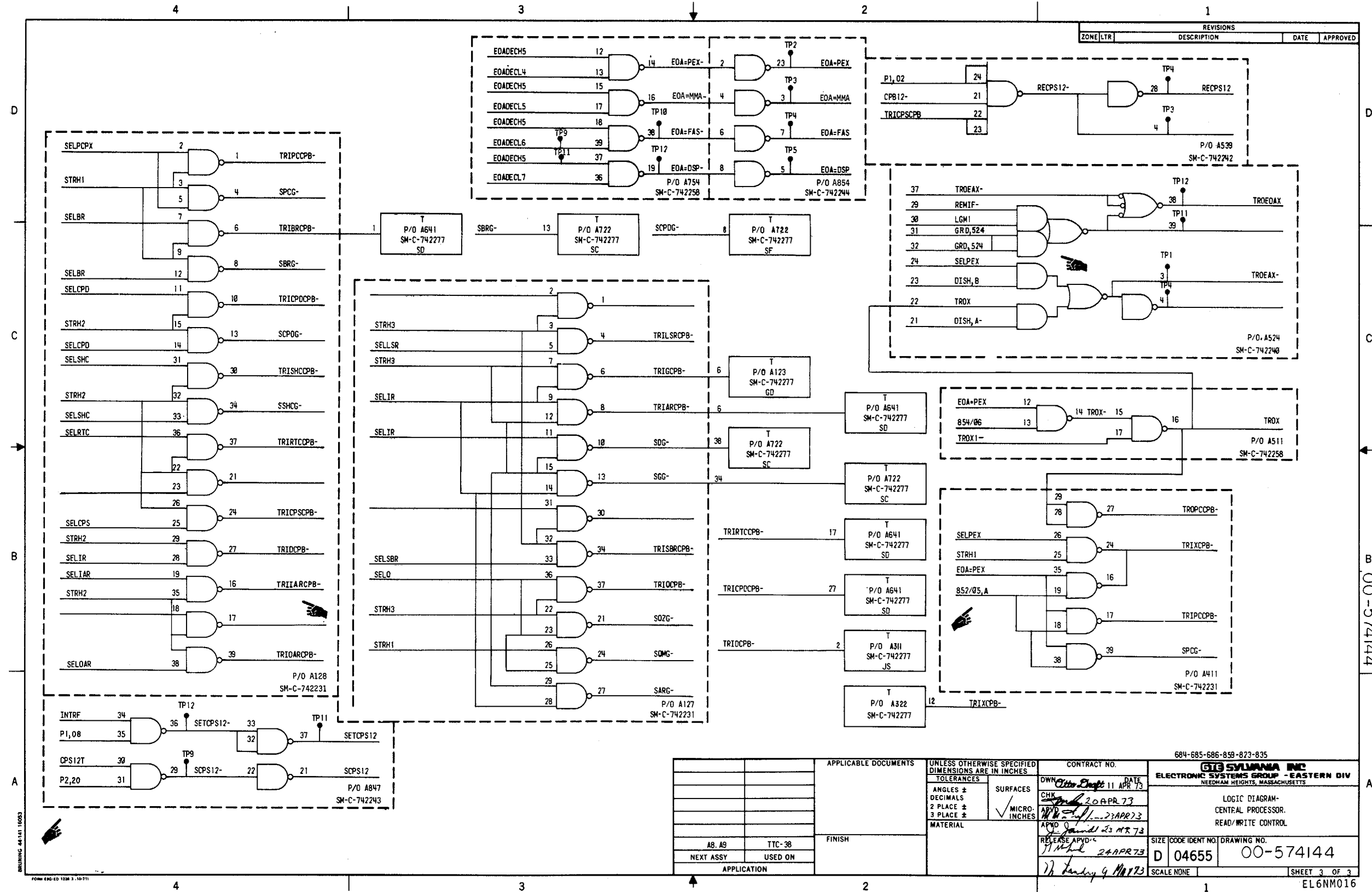


Figure 8-45(3). Central processor read/write control (sheet 3 of 3).

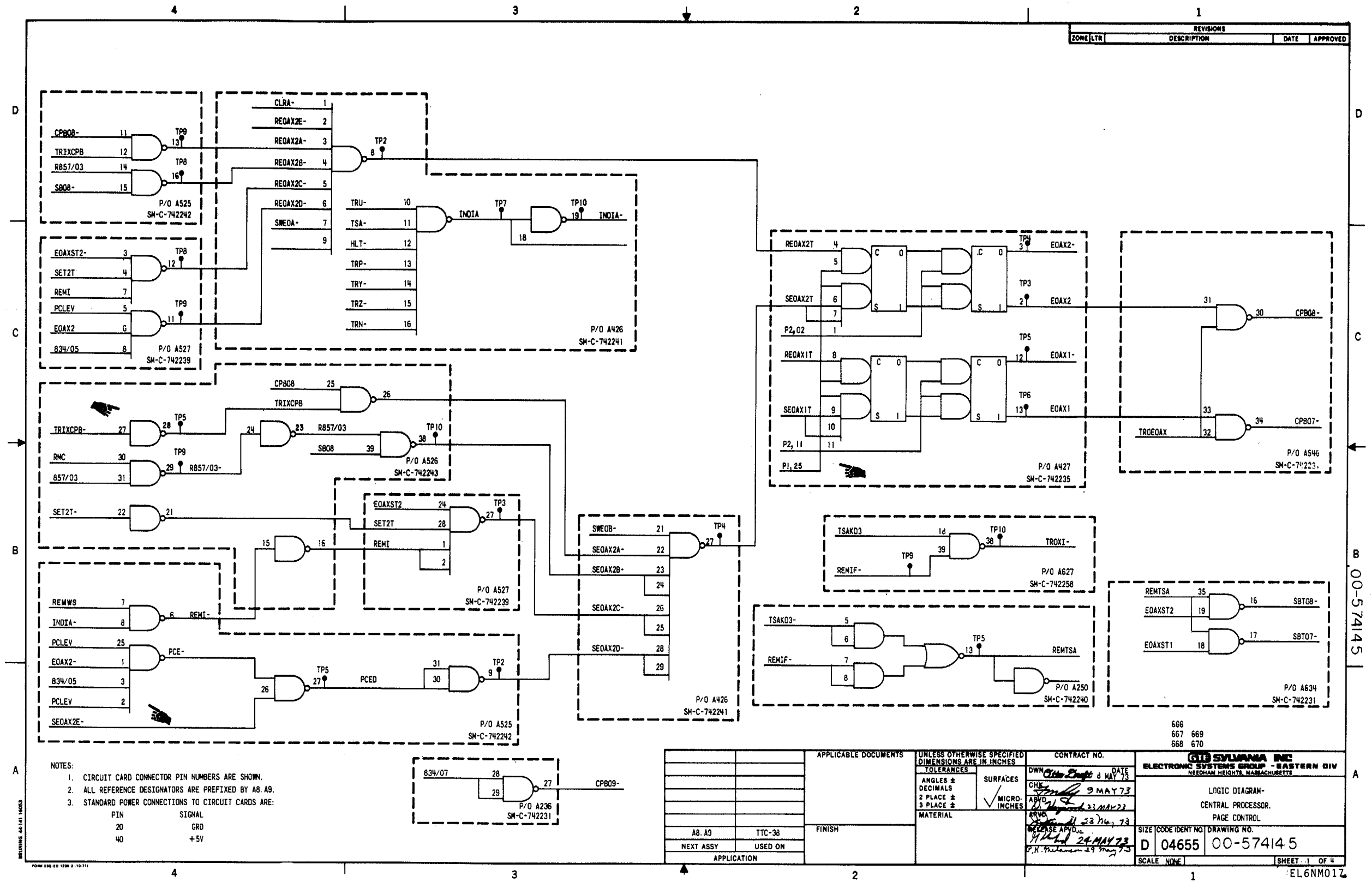


Figure 8-46(1). Central processor page control (sheet 1 of 4).

Change 3 8-94

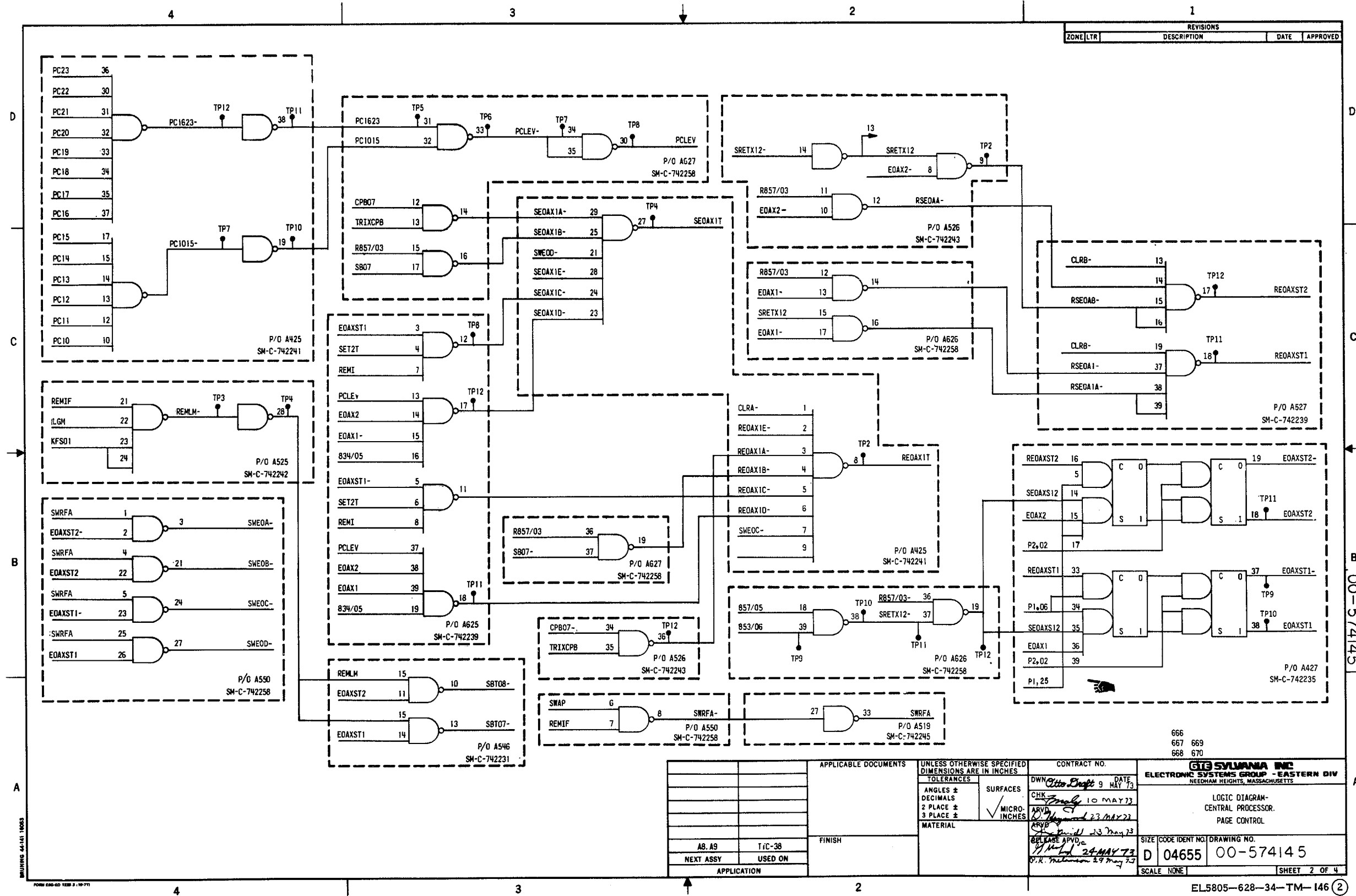


Figure 8-46(2). Central processor page control (sheet 2 of 4).

Change 3 8-95

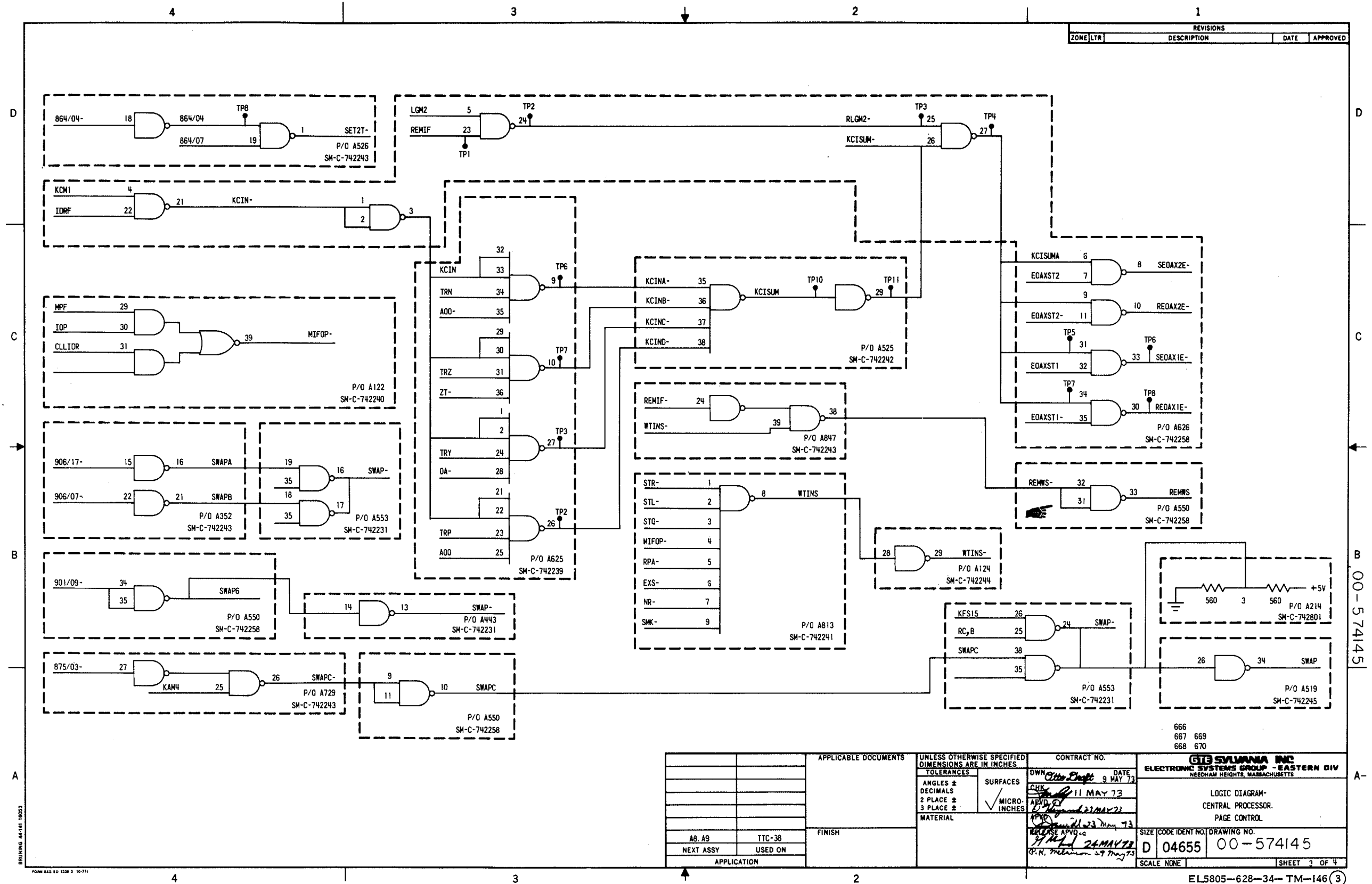


Figure 8-46(3). Central processor page control (sheet 3 of 4).

Change 3 8-96

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.	
FINISH		TOLERANCES		DWN <i>Otto Dreyf</i> DATE 9 MAY 73	
A8, A9		ANGLES ±		CHK <i>[Signature]</i> 11 MAY 73	
NEXT ASSY		DECIMALS		APV <i>[Signature]</i> 23 MAY 73	
APPLICATION		2 PLACE ±		RVD <i>[Signature]</i> 23 MAY 73	
		3 PLACE ±		RELEASE APV <i>[Signature]</i> 24 MAY 73	
		MATERIAL		G.P.R. <i>[Signature]</i> 29 May 73	
		SURFACES		GIB SYLVANIA INC	
		✓ MICRO-INCHES		ELECTRONIC SYSTEMS GROUP - EASTERN DIV	
				NEEDHAM HEIGHTS, MASSACHUSETTS	
				LOGIC DIAGRAM-	
				CENTRAL PROCESSOR.	
				PAGE CONTROL	
				SIZE CODE IDENT NO DRAWING NO.	
				D 04655 00-574145	
				SCALE NONE SHEET 3 OF 4	

EL5805-628-34-TM-146 (3)

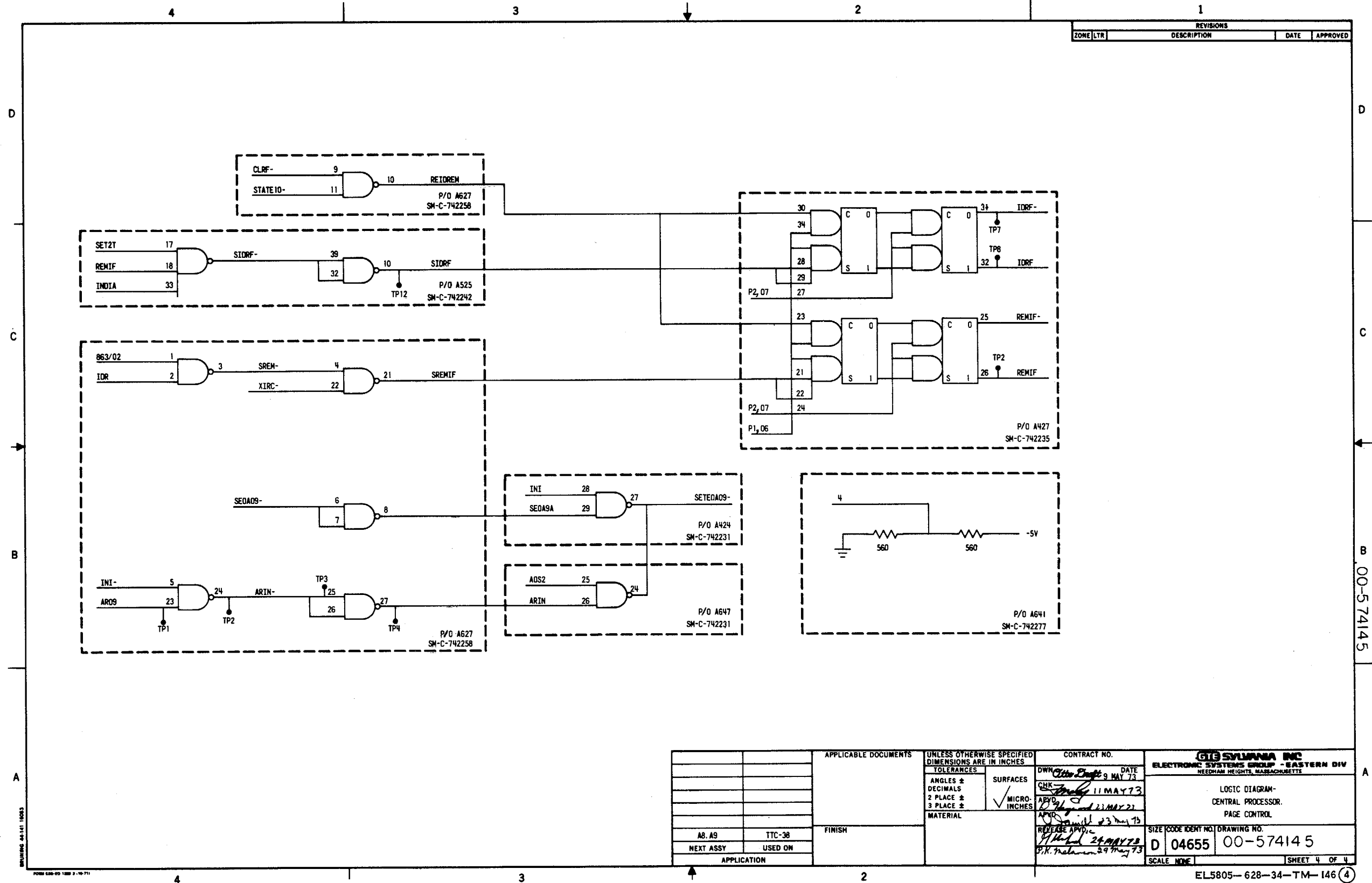


Figure 8-46(4). Central processor page control (sheet 4 of 4).

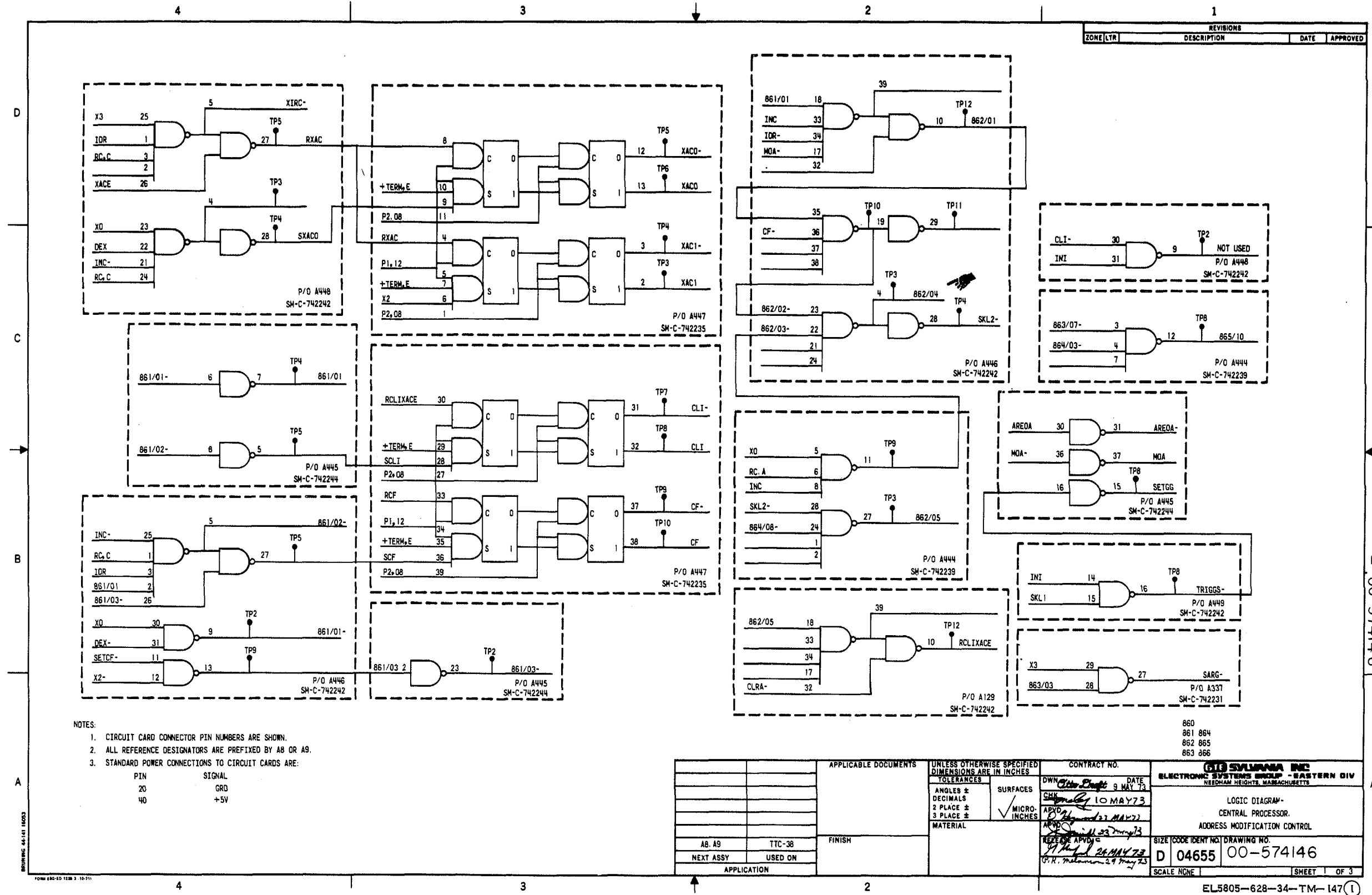


Figure 8-47(1). Central processor address control (sheet 1 of 3).

Change 3 8-98

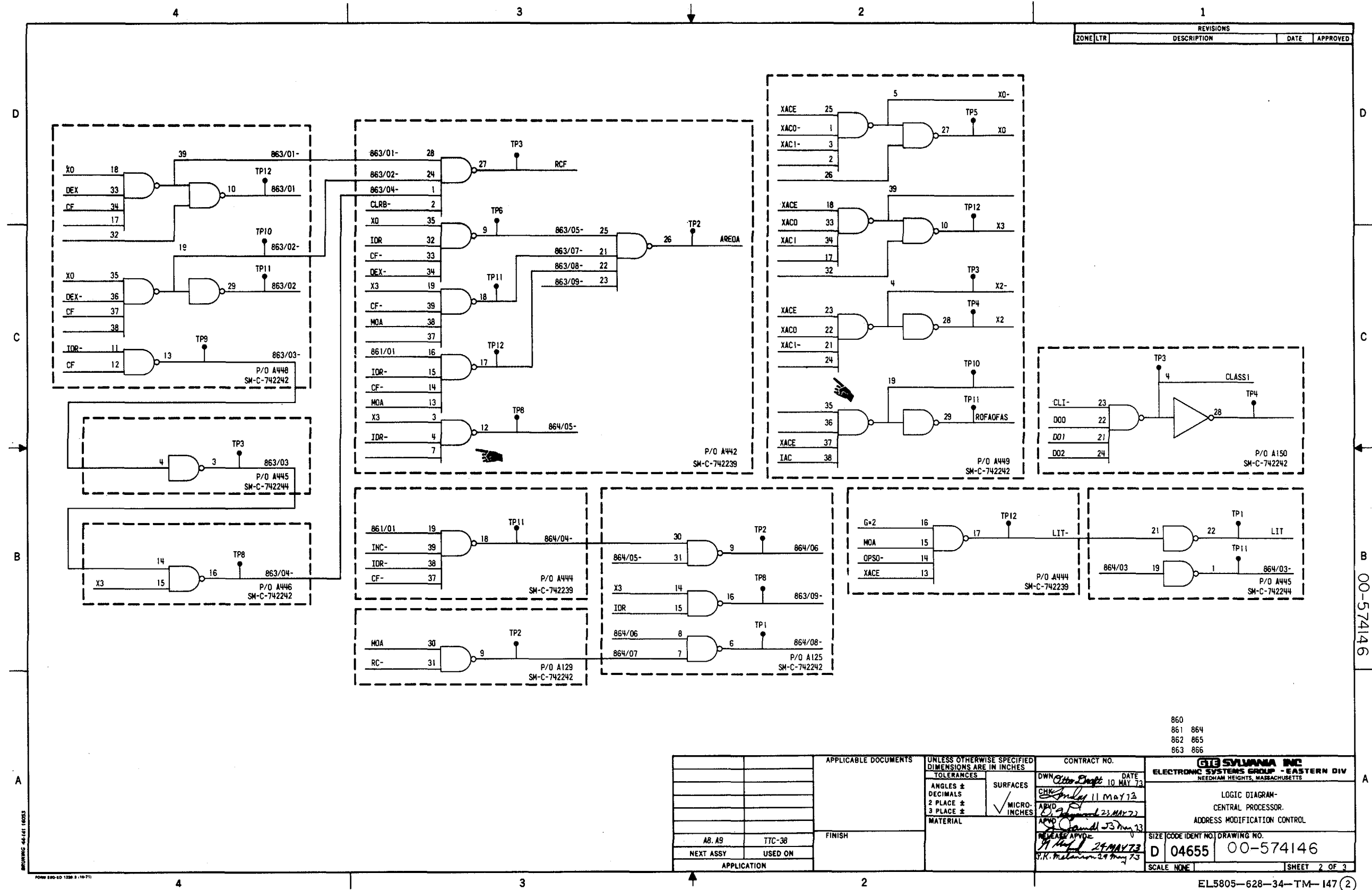


Figure 8-47(2). Central processor address control (sheet 2 of 3).

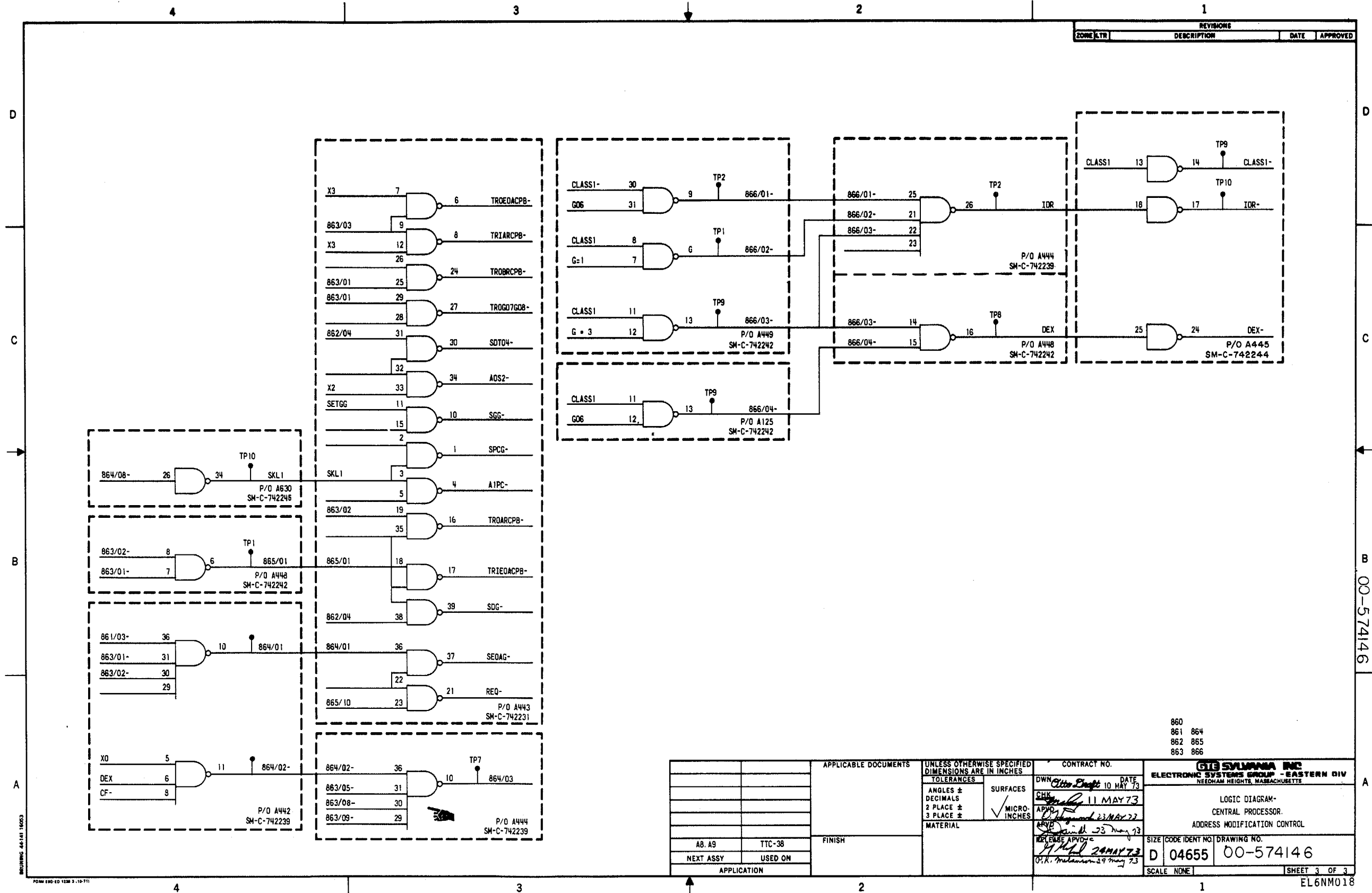
Change 3 8-99

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.	
		TOLERANCES		DWN <i>Chris Craft</i> DATE 10 MAY 73	
		SURFACES		CHK <i>Chris Craft</i> 11 MAY 73	
		✓ MICRO-INCHES		APVD <i>D. J. [unclear]</i> 23 MAY 73	
		MATERIAL		APVD <i>[unclear]</i> 23 MAY 73	
AB, A9 TTC-38		FINISH		RELEASE APVDC <i>[unclear]</i> 24 MAY 73	
NEXT ASSY USED ON				S. K. [unclear] 24 May 73	
APPLICATION				GTS SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
				LOGIC DIAGRAM - CENTRAL PROCESSOR. ADDRESS MODIFICATION CONTROL	
				SIZE CODE IDENT NO. DRAWING NO. D 04655 00-574146	
				SCALE NONE SHEET 2 OF 3	

860
861 864
862 865
863 866

EL5805-628-34-TM-147 (2)

00-574146

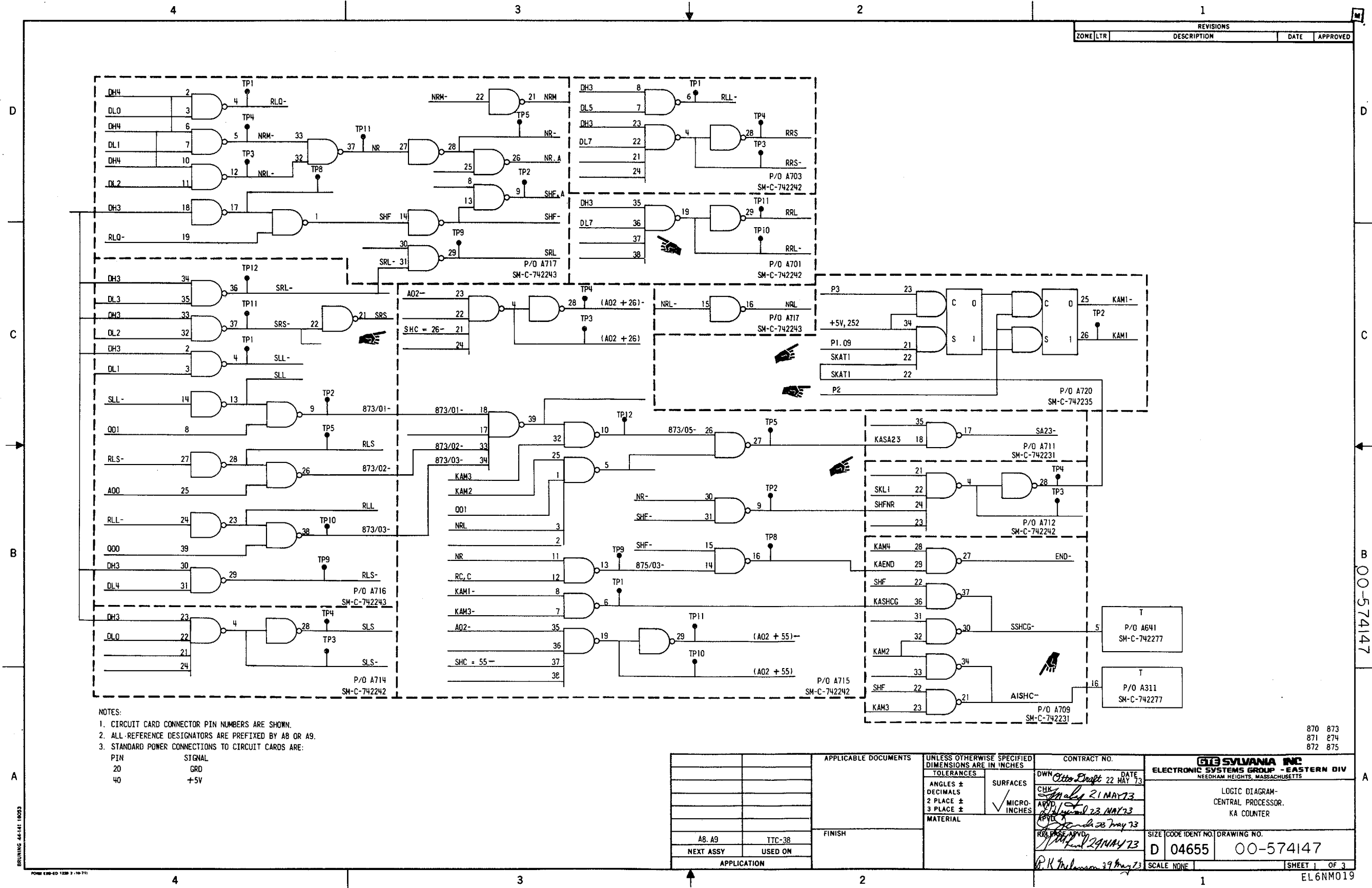


REVISIONS			
ZONE	LYR	DESCRIPTION	DATE

860
861 864
862 865
863 866

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTS SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
FINISH		TOLERANCES		DATE		LOGIC DIAGRAM- CENTRAL PROCESSOR. ADDRESS MODIFICATION CONTROL	
NEXT ASSY USED ON		ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MATERIAL		DWG <i>John Smith</i> 10 MAY 73 CHK <i>John Smith</i> 11 MAY 73 APVD <i>John Smith</i> 23 MAY 73 RELEAS APVD <i>John Smith</i> 23 MAY 73 D.P.R. Melanson 29 May 73		SIZE CODE IDENT NO. DRAWING NO. D 04655 00-574146	
APPLICATION				SCALE NONE		SHEET 3 OF 3 EL6NM018	

Figure 8-47(3). Central processor address control (sheet 3 of 3).



- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

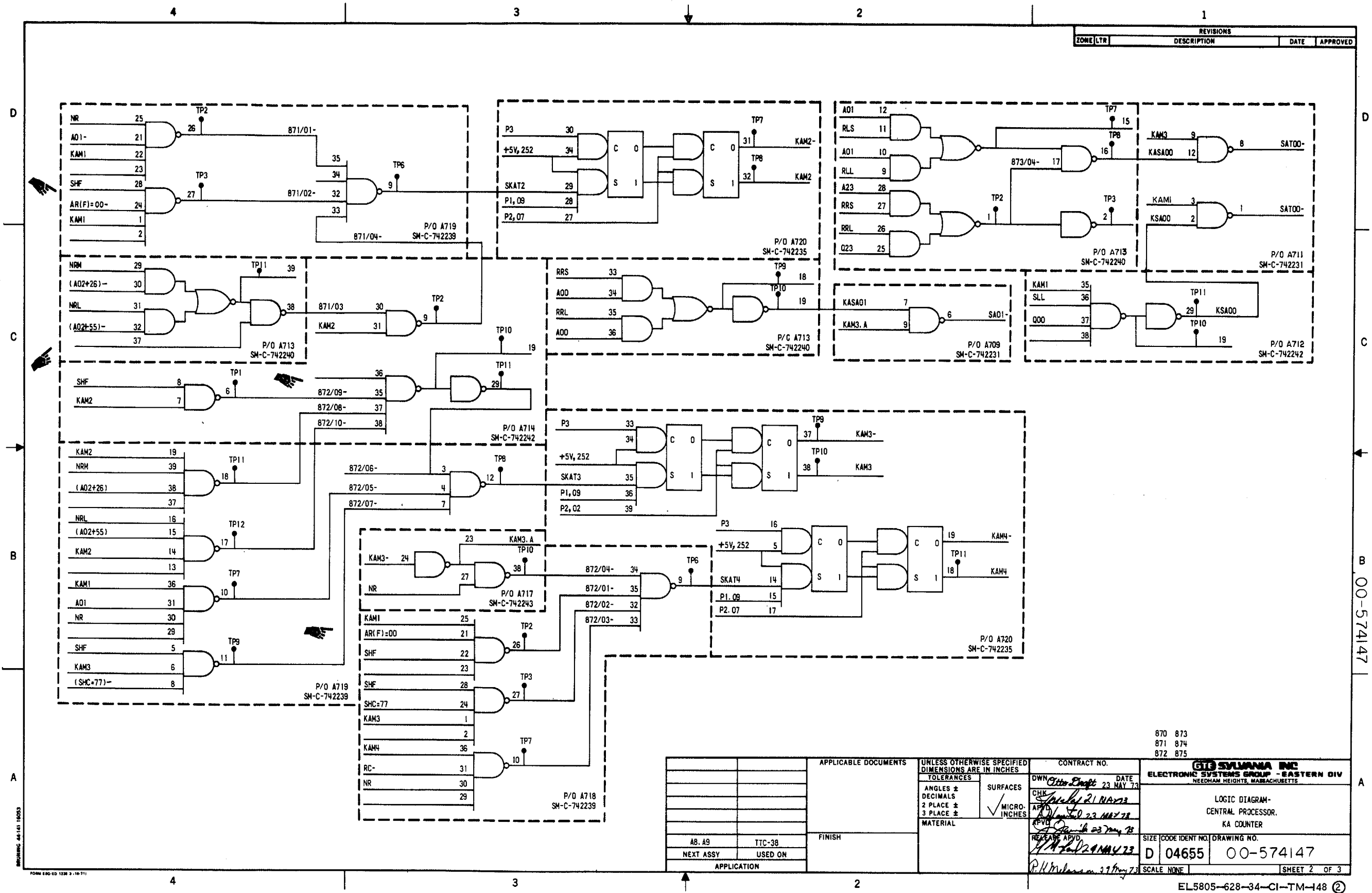
PIN	SIGNAL
20	GRD
40	+5V

870 873
871 874
872 875

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		613 SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
FINISH		TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MATERIAL		DATE 22 MAY 73 21 MAY 73 23 MAY 73 29 MAY 73			
A8, A9	TTC-38	SURFACES MICRO-INCHES		CHECKED APPROVED RELEASED BY P. R. K. [Signature] 29 May 73		LOGIC DIAGRAM - CENTRAL PROCESSOR - KA COUNTER	
NEXT ASSY	USED ON	SCALE NONE		SIZE CODE IDENT NO DRAWING NO. D 04655 00-574147		SHEET 1 OF 3 EL6NM019	

Figure 8-48(1). Central processor KA counter (sheet 1 of 3).
Change 3 8-101

00-574147



REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED

870 873
871 874
872 875

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.	
		TOLERANCES	SURFACES		
		ANGLES ±	✓ MICRO-		
		DECIMALS	INCHES		
		2 PLACE ±			
		3 PLACE ±			
		MATERIAL			
AB, A9	TTC-38				
NEXT ASSY	USED ON				
APPLICATION					

DATE		GTE SYLVANIA INC	
23 MAY 73		ELECTRONIC SYSTEMS GROUP - EASTERN DIV	
		NEEDHAM HEIGHTS, MASSACHUSETTS	
LOGIC DIAGRAM-			
CENTRAL PROCESSOR.			
KA COUNTER			
SIZE	CODE IDENT NO	DRAWING NO.	
D	04655	00-574147	
SCALE	NONE	SHEET 2 OF 3	

Figure 8-48(2). Central processor KA counter (sheet 2 of 3).
Change 3 8-102

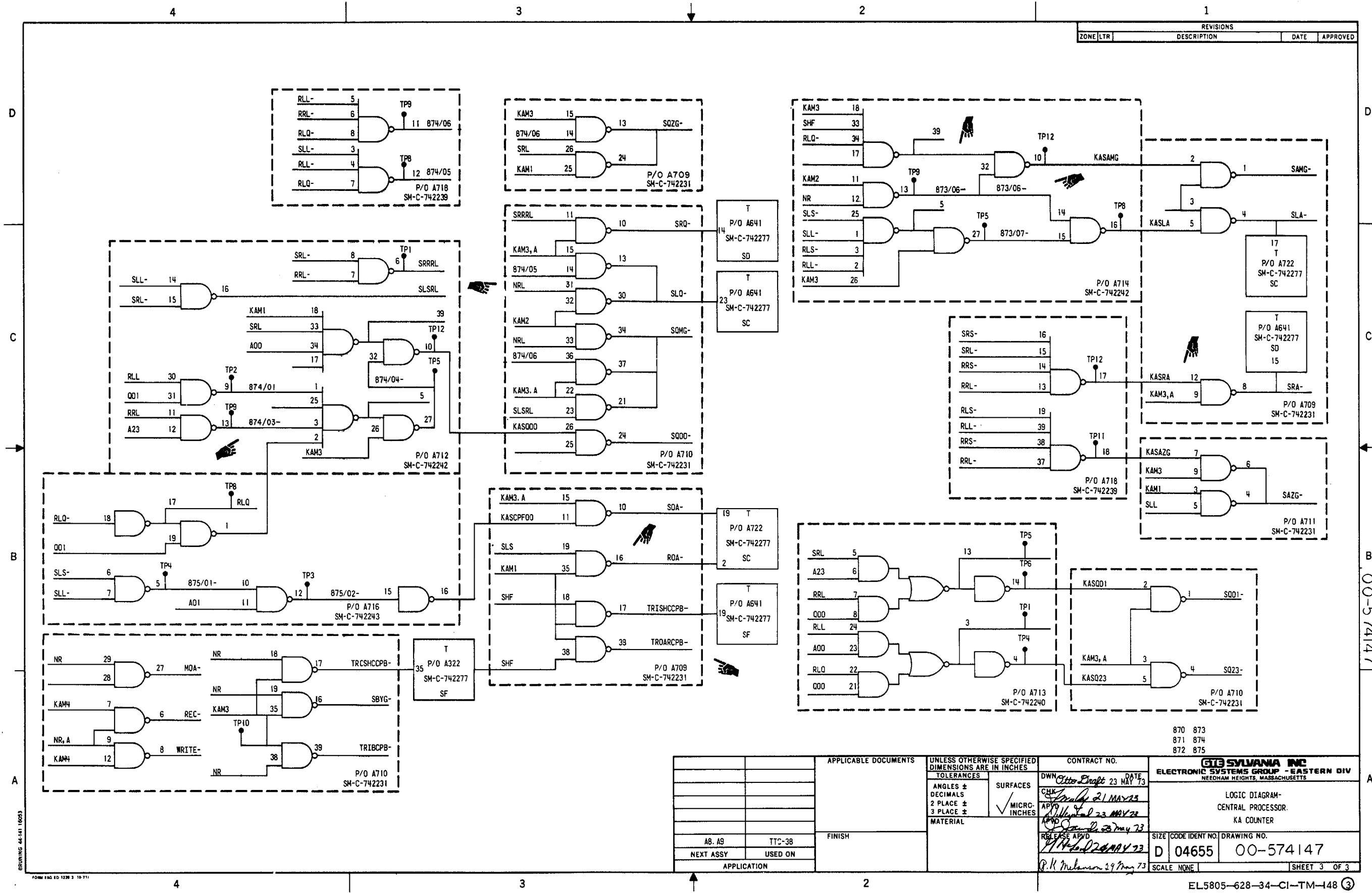


Figure 8-48(3). Central processor KA counter (sheet 3 of 3).
Change 3 8-103

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

870 873
871 874
872 875

GTB SYLVANIA INC
ELECTRONIC SYSTEMS GROUP - EASTERN DIV
NEEDHAM HEIGHTS, MASSACHUSETTS

LOGIC DIAGRAM
CENTRAL PROCESSOR
KA COUNTER

SIZE CODE IDENT NO. DRAWING NO.
D 04655 00-574147

SCALE NONE SHEET 3 OF 3

EL5805-628-34-CI-TM-148 ③

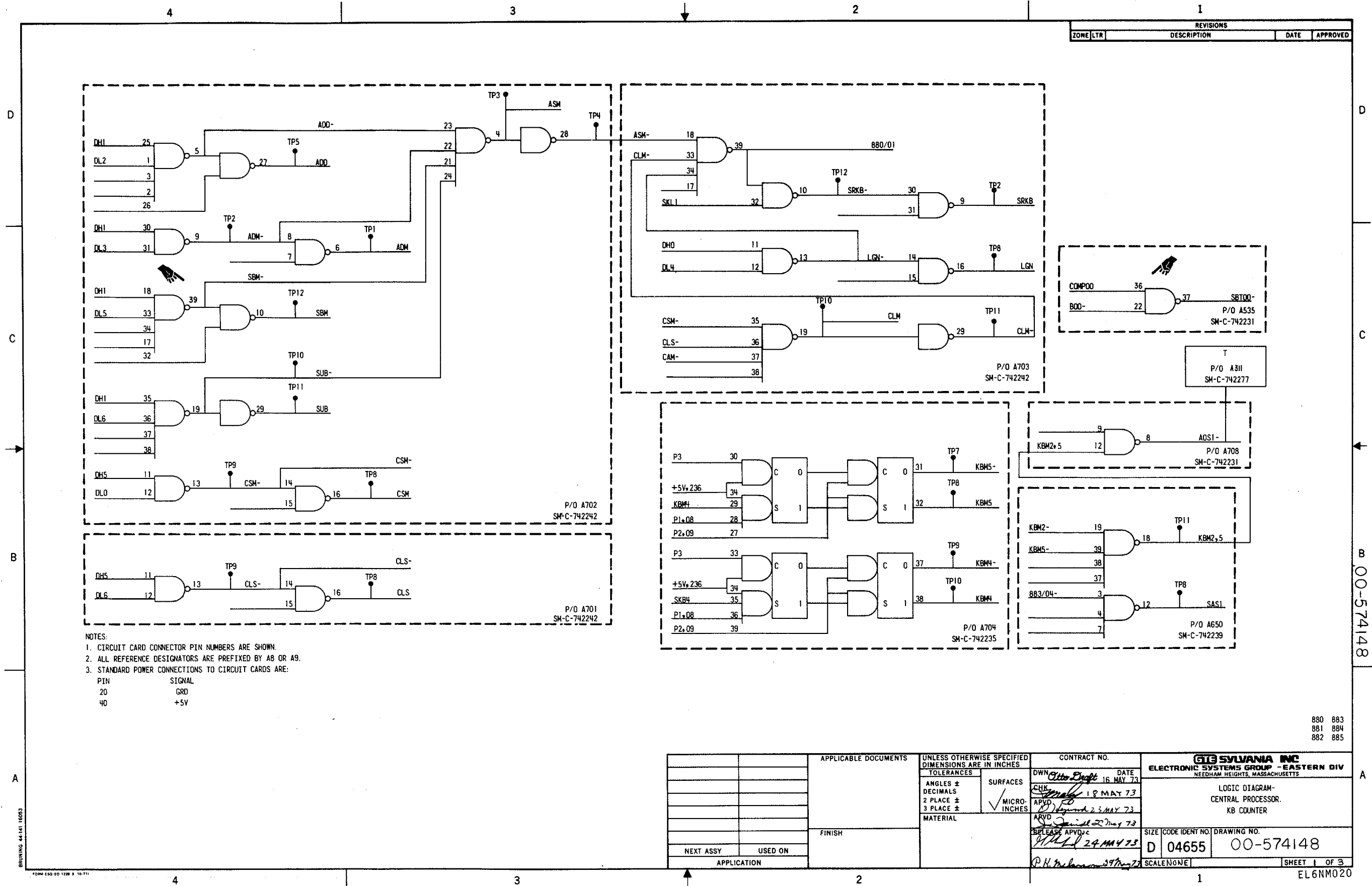
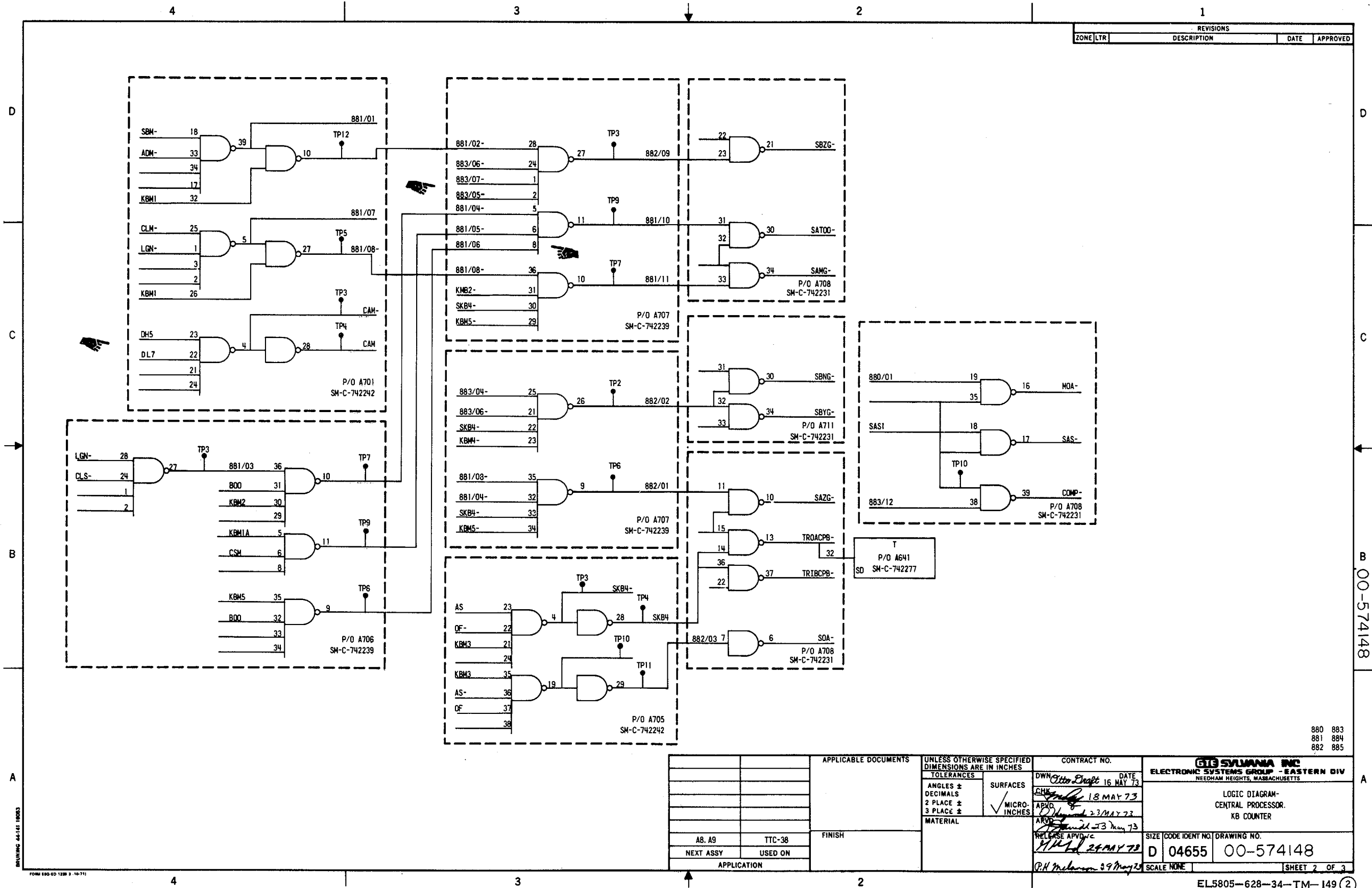


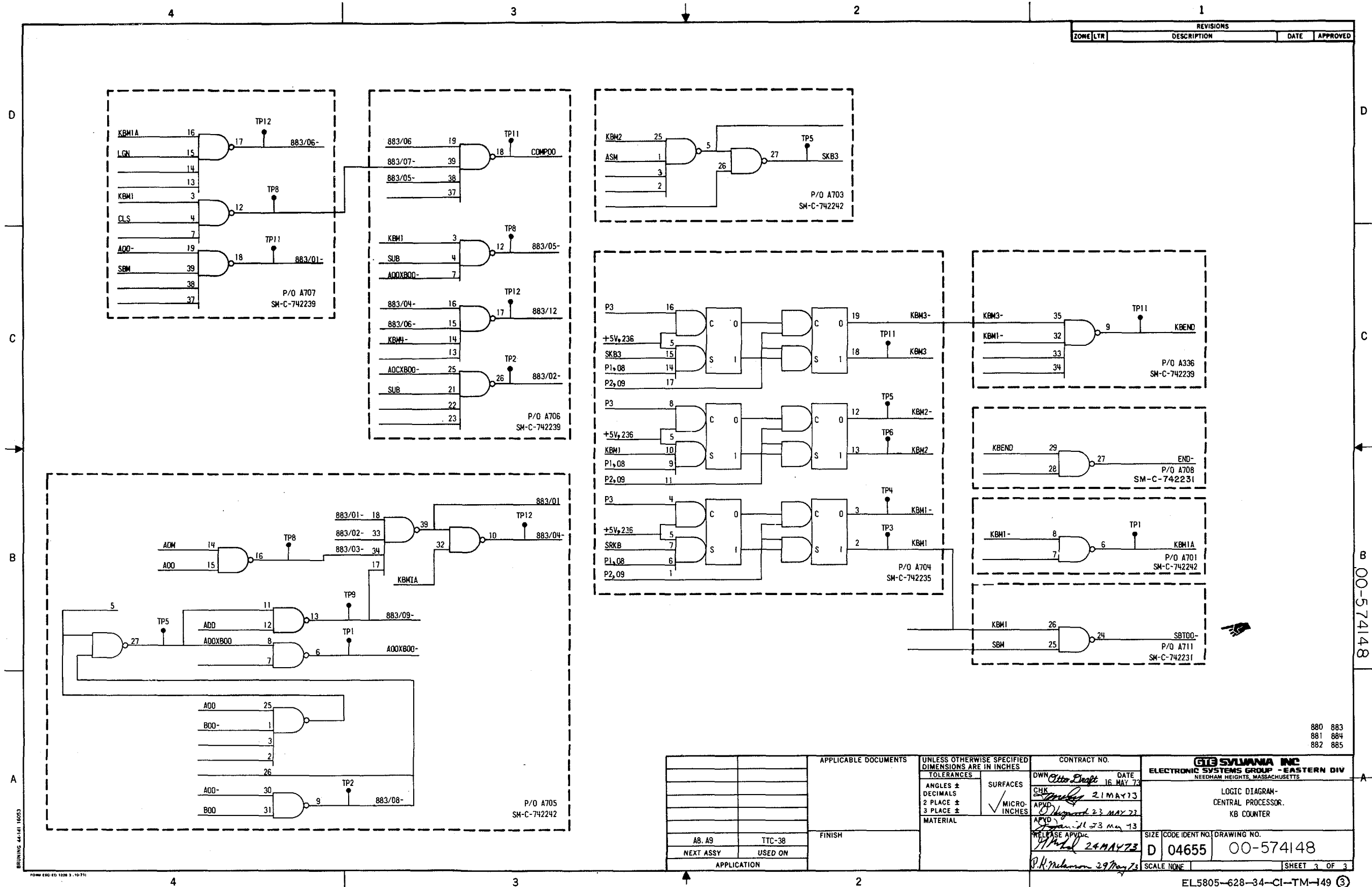
Figure 8-49(1). Central processor KB counter (sheet 1 of 3).



880 883
881 884
882 885

AB, A9 NEXT ASSY APPLICATION	TTC-38 USED ON	FINISH	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	CONTRACT NO.	GIG SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS
		TOLERANCES	SURFACES	DATE 16 MAY 73	LOGIC DIAGRAM- CENTRAL PROCESSOR. KB COUNTER
		ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ±	MICRO- INCHES	CHK 18 MAY 73	
		MATERIAL	ARVD 23 MAY 73	SIZE CODE IDENT NO. DRAWING NO. D 04655 00-574148	
RELEASE APVD 24 MAY 73	ARVD 29 May 73	SCALE NONE SHEET 2 OF 3			

Figure 8-49(2). Central processor KB counter (sheet 2 of 3).
Change 3 8-105

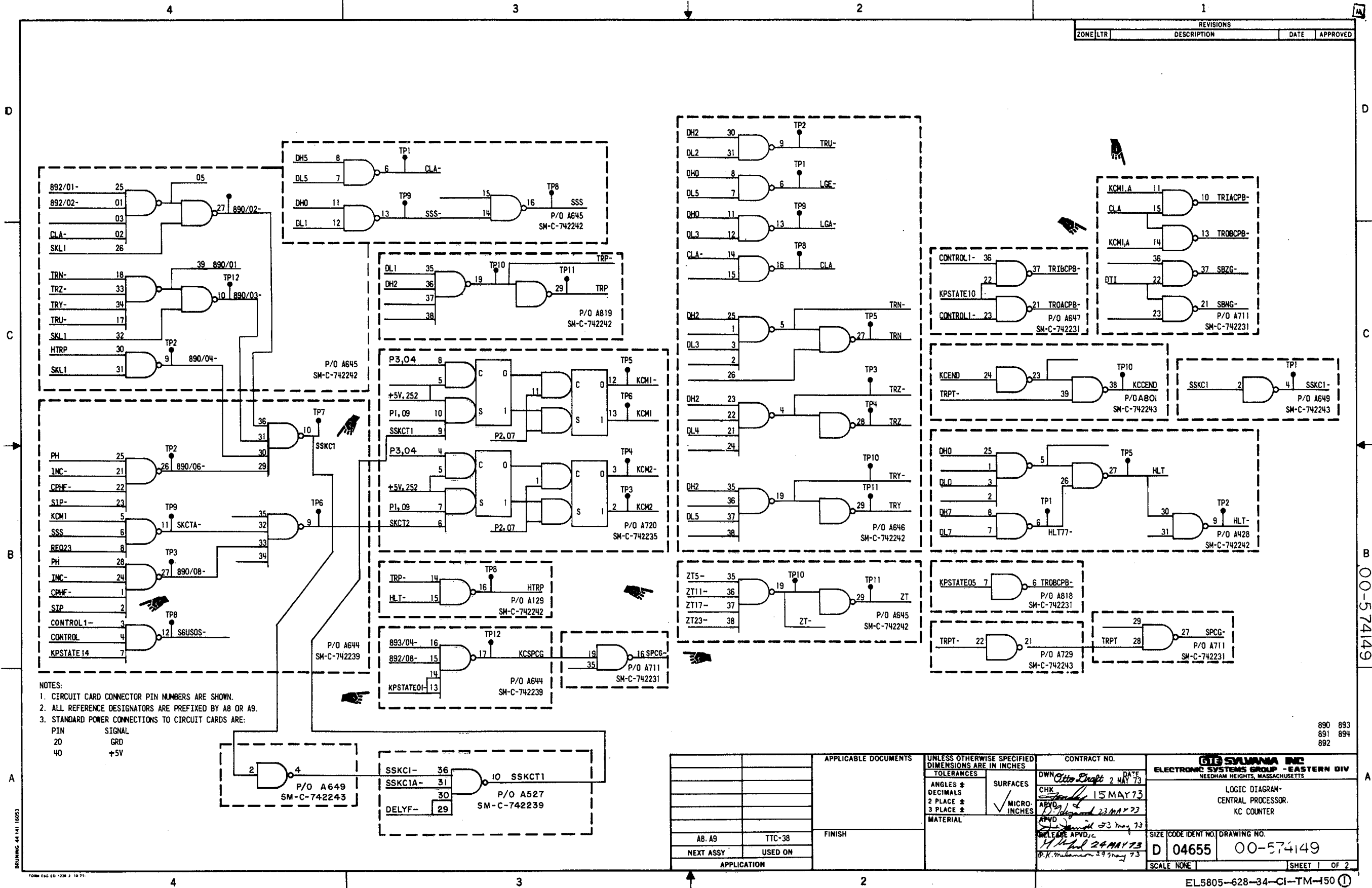


00-574148

880 883
881 884
882 885

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GEN SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
AB, AS NEXT ASSY		FINISH USED ON		TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MATERIAL		SURFACES <input checked="" type="checkbox"/> MICRO-INCHES	
APPLICATION		DATE		DWN <i>Otto Draft</i> 16 MAY 73 CHK <i>[Signature]</i> 21 MAY 73 APVD <i>[Signature]</i> 23 MAY 73 APVD <i>[Signature]</i> 27 MAY 73 RELEASE APVDIC <i>[Signature]</i> 29 MAY 73		SIZE CODE IDENT NO. DRAWING NO. D 04655 00-574148	
		SCALE NONE		SHEET 3 OF 3			

Figure 8-49(3). Central processor KB counter (sheet 3 of 3).
Change 3 8-106

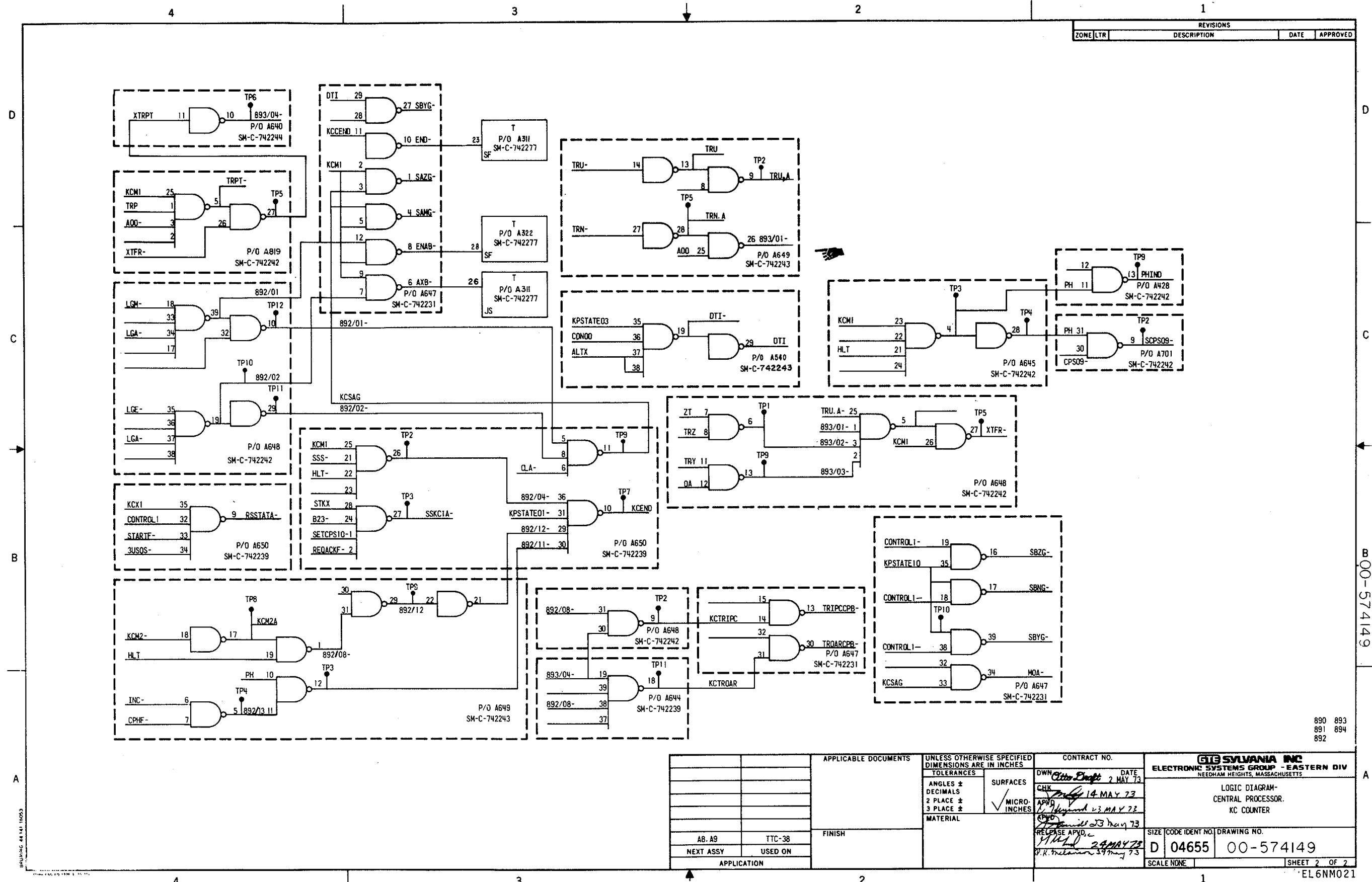


NOTES:
 1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

PIN	SIGNAL
20	GRD
40	+5V

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES		DWN <i>Edna Swift</i> 2 MAY 73		LOGIC DIAGRAM- CENTRAL PROCESSOR. KC COUNTER	
		ANGLES ± DECIMALS		CHK <i>Edna Swift</i> 15 MAY 73		SIZE CODE IDENT NO. DRAWING NO.	
		2 PLACE ±		APVD <i>D. J. ...</i> 23 MAY 73		D 04655 00-574149	
		3 PLACE ±		RELEASE APVD <i>M. ...</i> 24 MAY 73		SCALE NONE SHEET 1 OF 2	
		MATERIAL		P/K. ... 29 MAY 73			
AB. A9		TTC-38		FINISH			
NEXT ASSY		USED ON		APPLICATION			

Figure 8-50(1). Central processor KC counter (sheet 1 of 2).
 Change 3 8-107

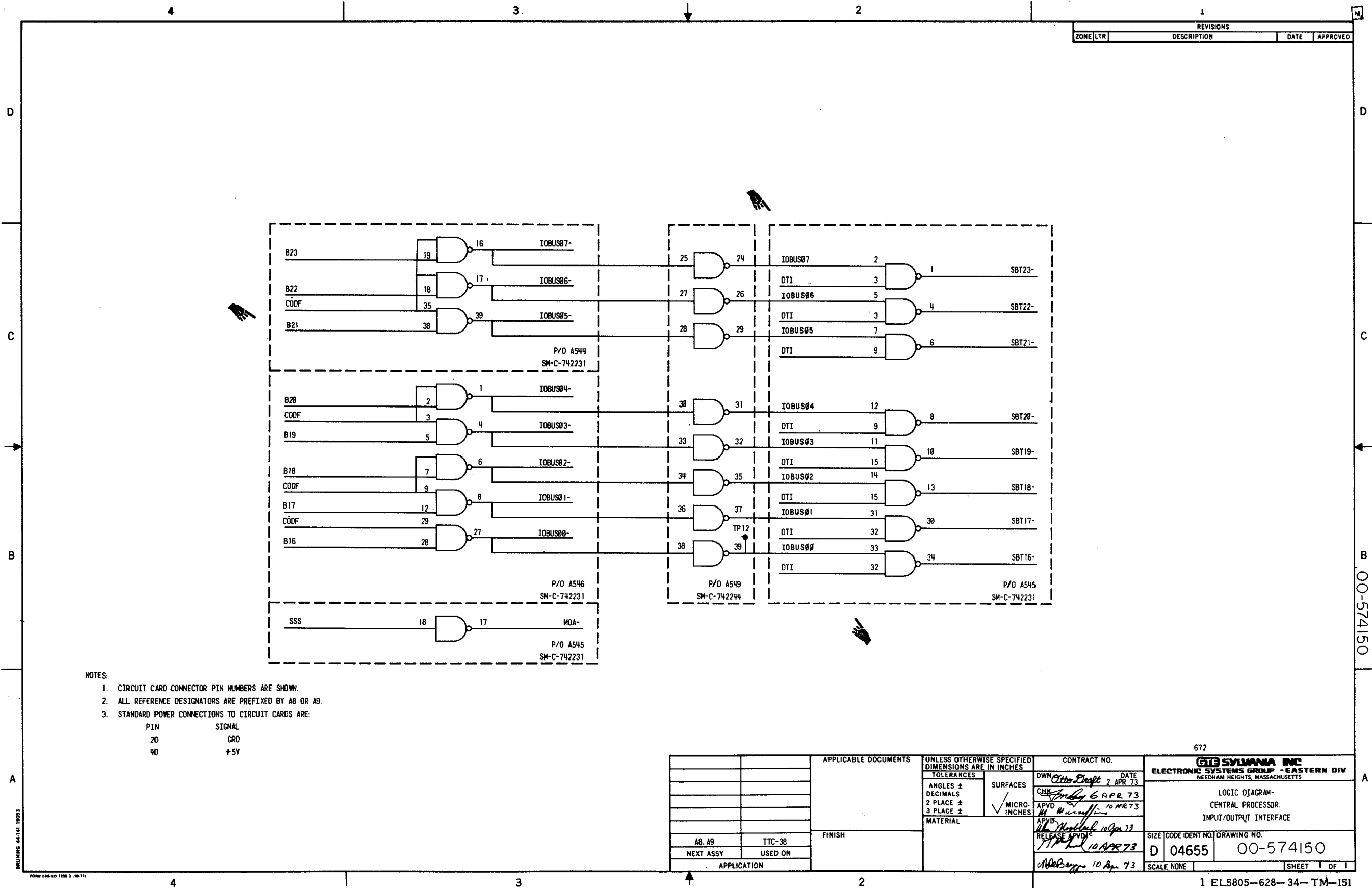


REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

890 893
891 894
892

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTS SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES		DWN <i>Chris Dwyer</i> DATE 2 MAY 73		LOGIC DIAGRAM - CENTRAL PROCESSOR. KC COUNTER	
		ANGLES ± DECIMALS		CHK <i>[Signature]</i> 14 MAY 73		SIZE CODE IDENT NO. DRAWING NO.	
		2 PLACE ± 3 PLACE ±		APVD <i>[Signature]</i> 23 MAY 73		D 04655 00-574149	
		SURFACES		RELEASE APVD <i>[Signature]</i> 23 MAY 73		SCALE NONE SHEET 2 OF 2	
		✓ MICRO- INCHES		P/R <i>[Signature]</i> 24 MAY 73		EL 6NM021	
		MATERIAL					
AB, A9 TTC-38		FINISH					
NEXT ASSY USED ON							
APPLICATION							

Figure 8-50(2). Central processor KC counter (sheet 2 of 2).
Change 2 8-108



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

PIN	SIGNAL
20	GRD
40	+5V

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		672	
FINISH		TOLERANCES		DATE		ELECTRONIC SYSTEMS GROUP - EASTERN DIV	
NEXT ASSY USED ON		ANGLES ±		DWN <i>Sto Draft</i> 2 APR 73		NEEDHAM HEIGHTS, MASSACHUSETTS	
APPLICATION		DECIMALS		CHK <i>Sto</i> 6 APR 73		LOGIC DIAGRAM-	
		2 PLACE ±		APVD <i>M. W. Sullivan</i> 10 APR 73		CENTRAL PROCESSOR.	
		3 PLACE ±		RELEASE APVD <i>Sto</i> 10 APR 73		INPUT/OUTPUT INTERFACE	
		MATERIAL		APVD <i>Sto</i> 10 APR 73		SIZE CODE IDENT NO. DRAWING NO.	
				RELEASE APVD <i>Sto</i> 10 APR 73		D 04655 00-574150	
				APVD <i>Sto</i> 10 Apr 73		SCALE NONE SHEET 1 OF 1	

Figure 8-51. Central processor input/output interface.
Change 3 8-109

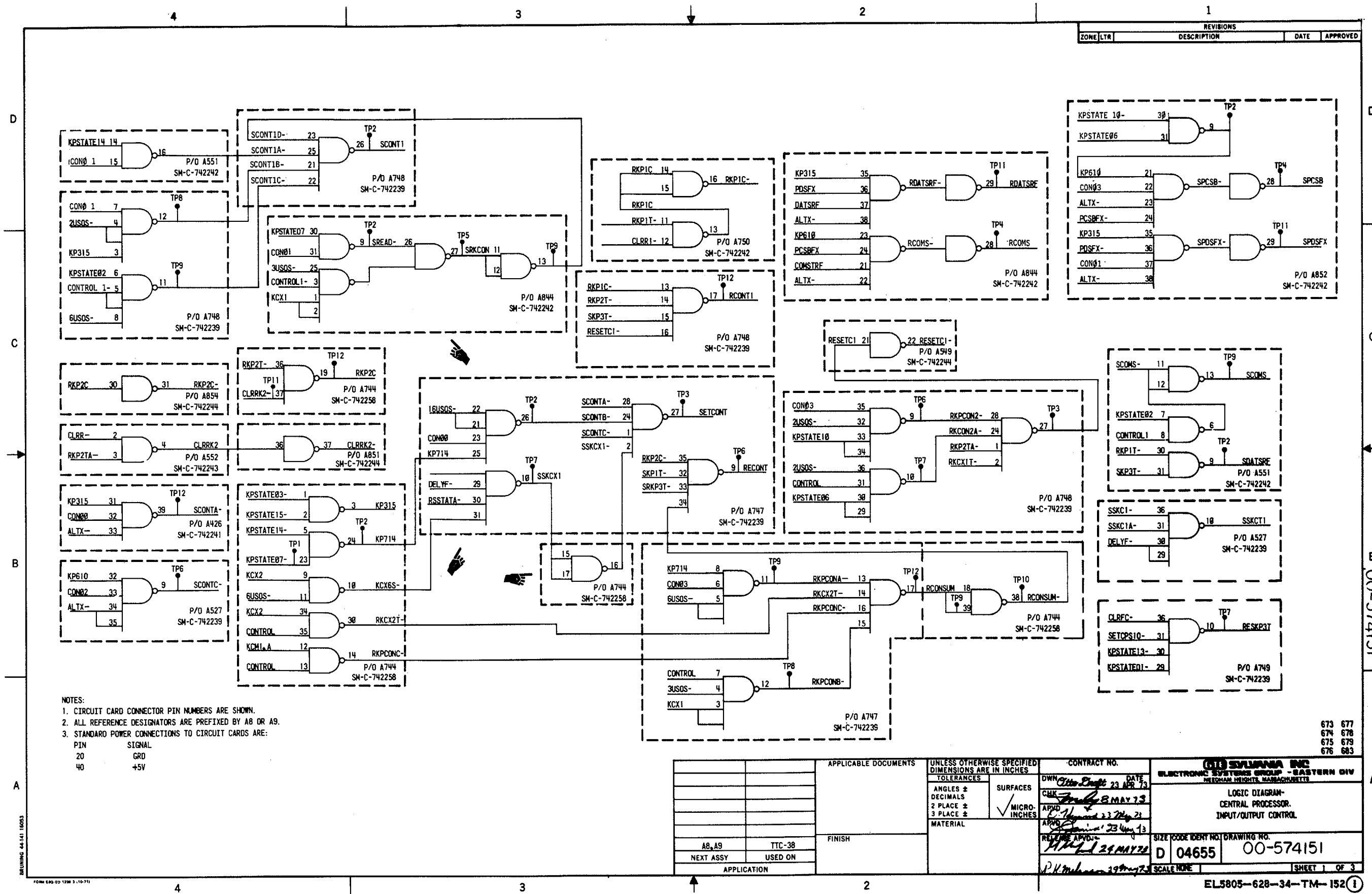
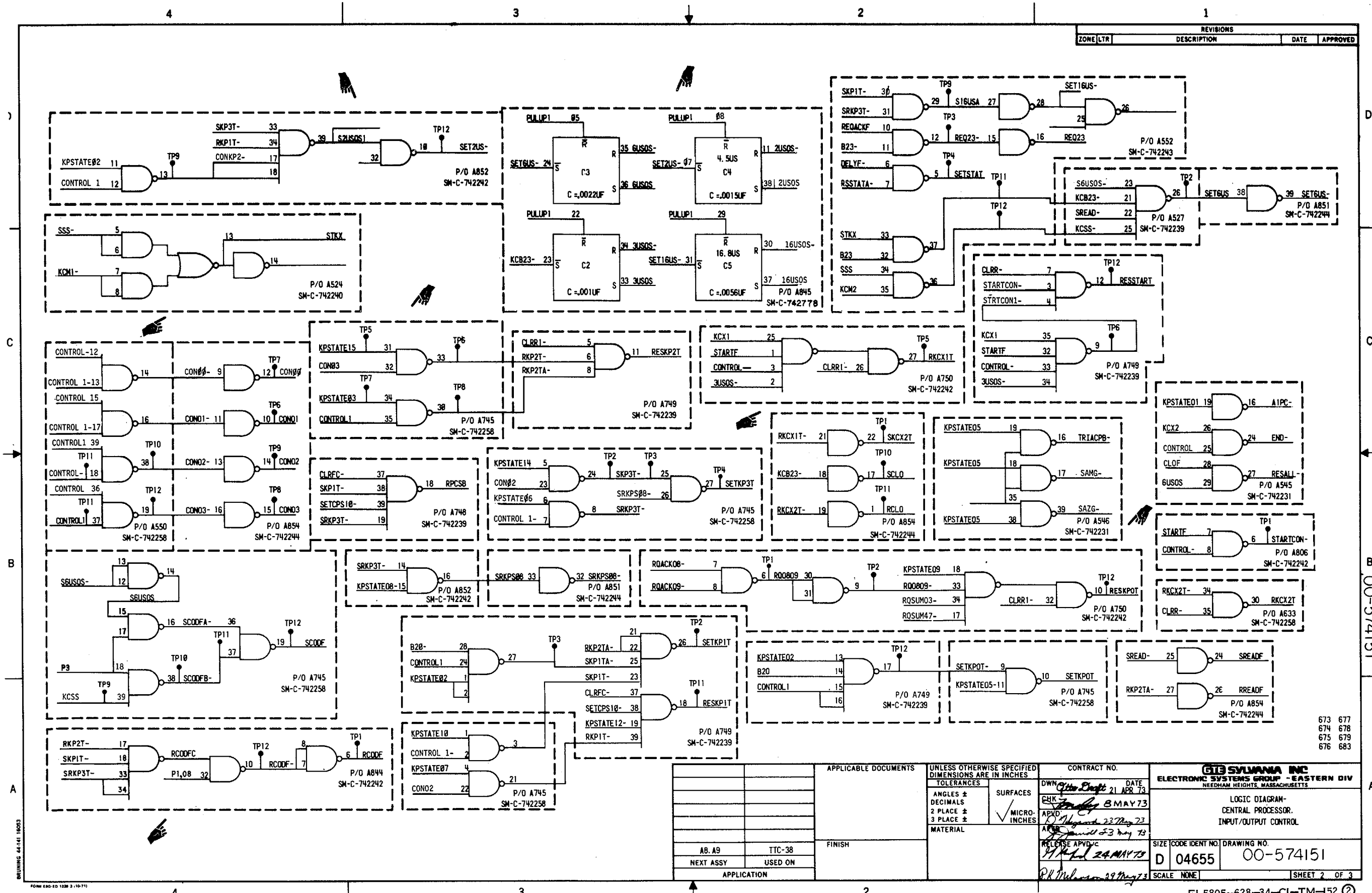


Figure 8-52(1). Central processor input/output control (sheet 1 of 3).
Change 3 8-110



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

CONTRACT NO.		DATE	
DWN <i>After Draft</i>		21 APR 73	
CHK <i>By</i>		3 MAY 73	
APVD <i>By</i>		23 May 73	
RELEASE APD/C		24 MAY 73	
SCALE NONE		SIZE	CODE IDENT NO.
		D	04655
		DRAWING NO.	
		00-574151	
		SHEET 2 OF 3	

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
		TOLERANCES	SURFACES
		ANGLES ±	✓ MICRO-INCHES
		DECIMALS	
		2 PLACE ±	
		3 PLACE ±	
		MATERIAL	
AB, A9	TTC-38	FINISH	
NEXT ASSY	USED ON		
APPLICATION			

Figure 8-52(2). Central processor input/output control (sheet 2 of 3).
Change 3 8-111

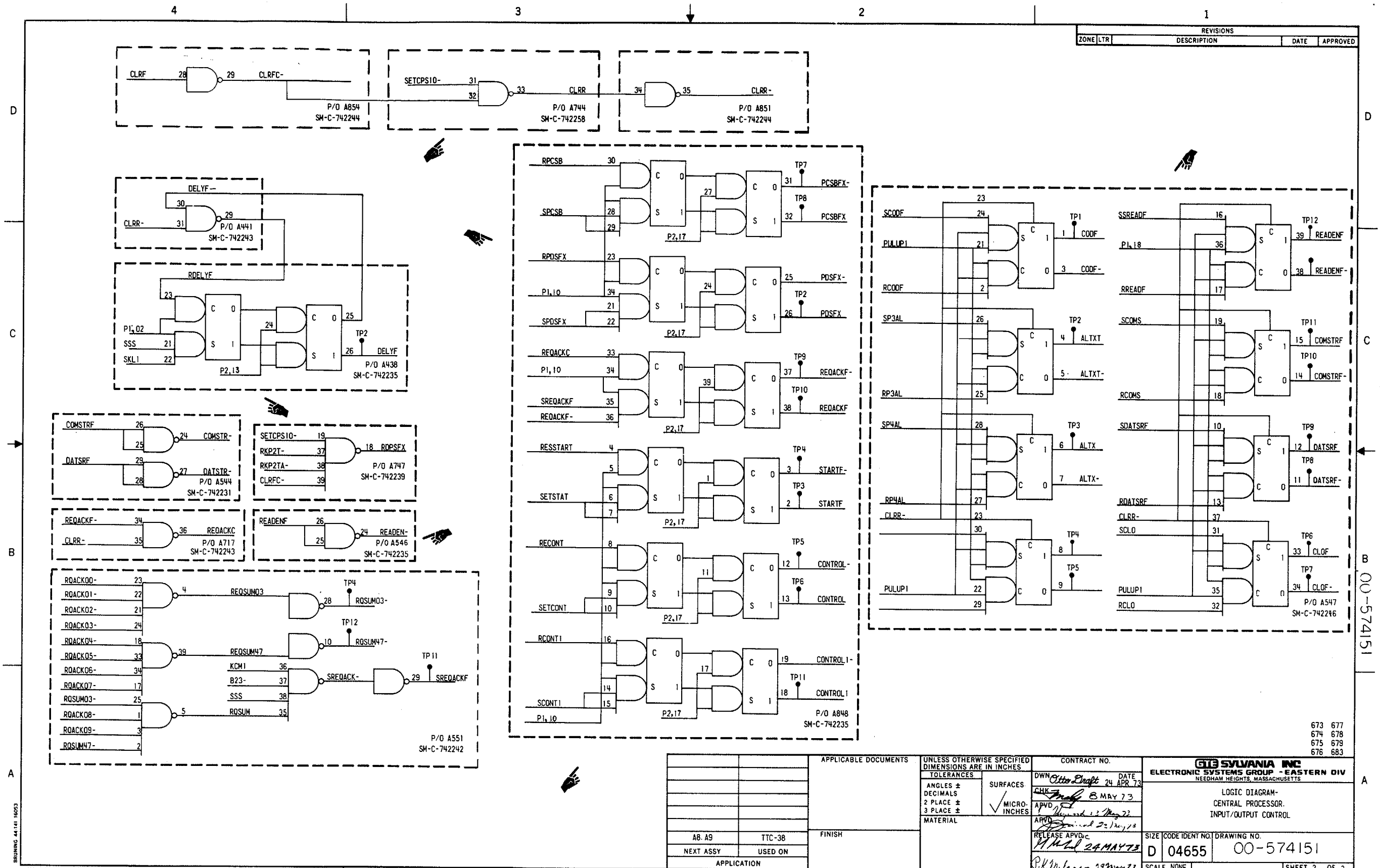


Figure 8-52(3). Central processor input/output control (sheet 3 of 3).
Change 3 8-112

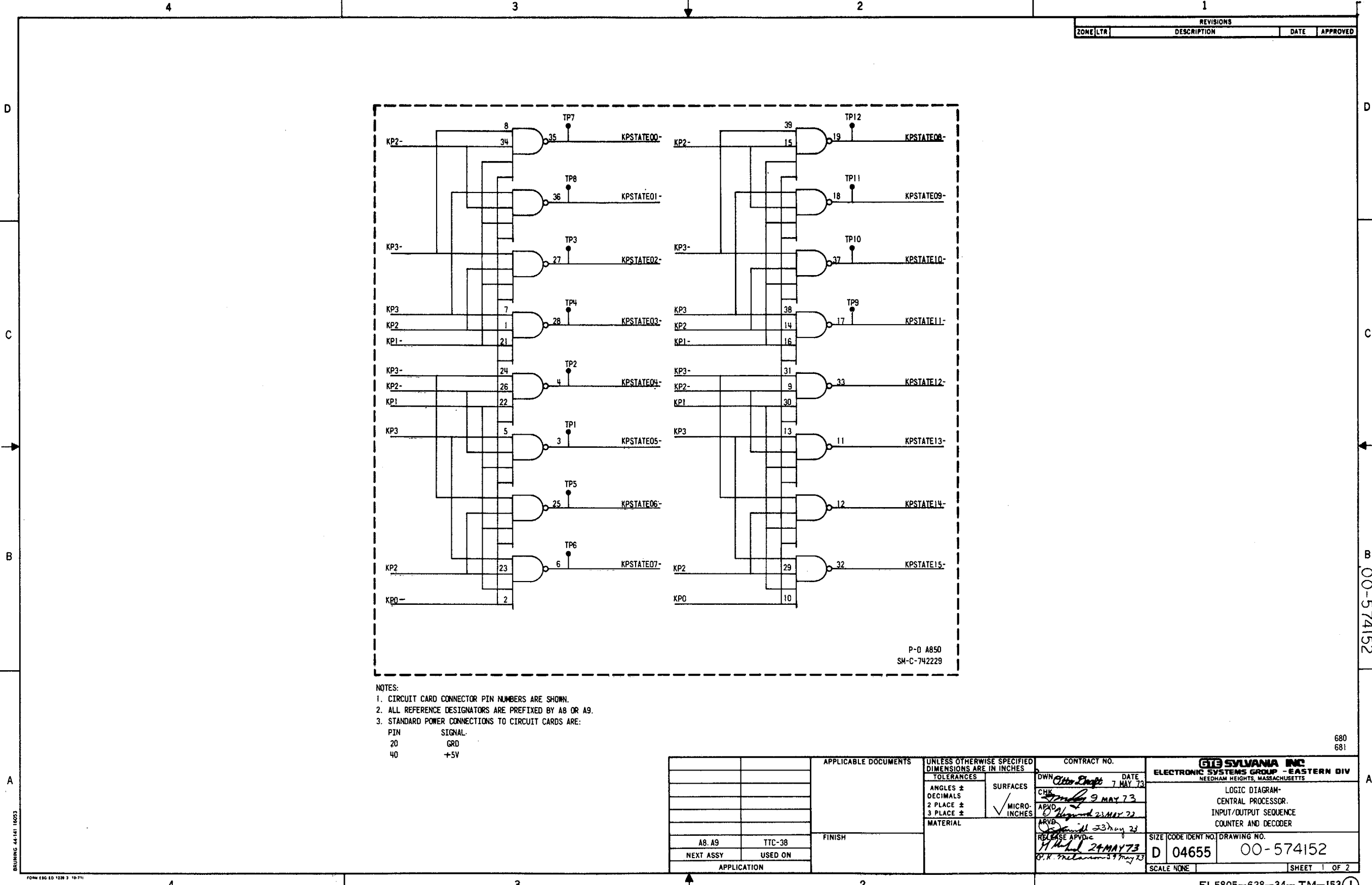


Figure 8-53(1). Central processor input/output sequence counter and decoder (sheet 1 of 2).

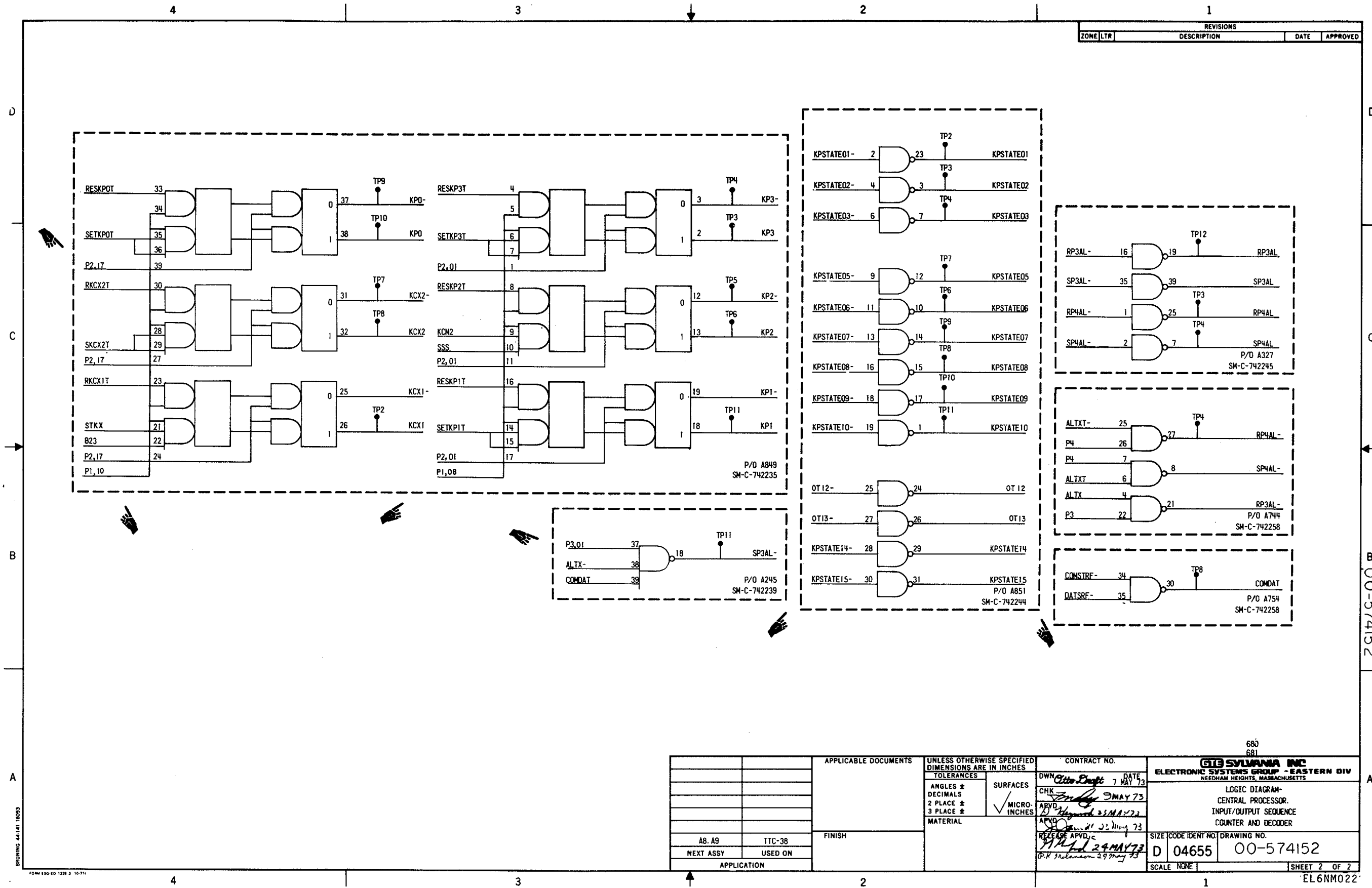
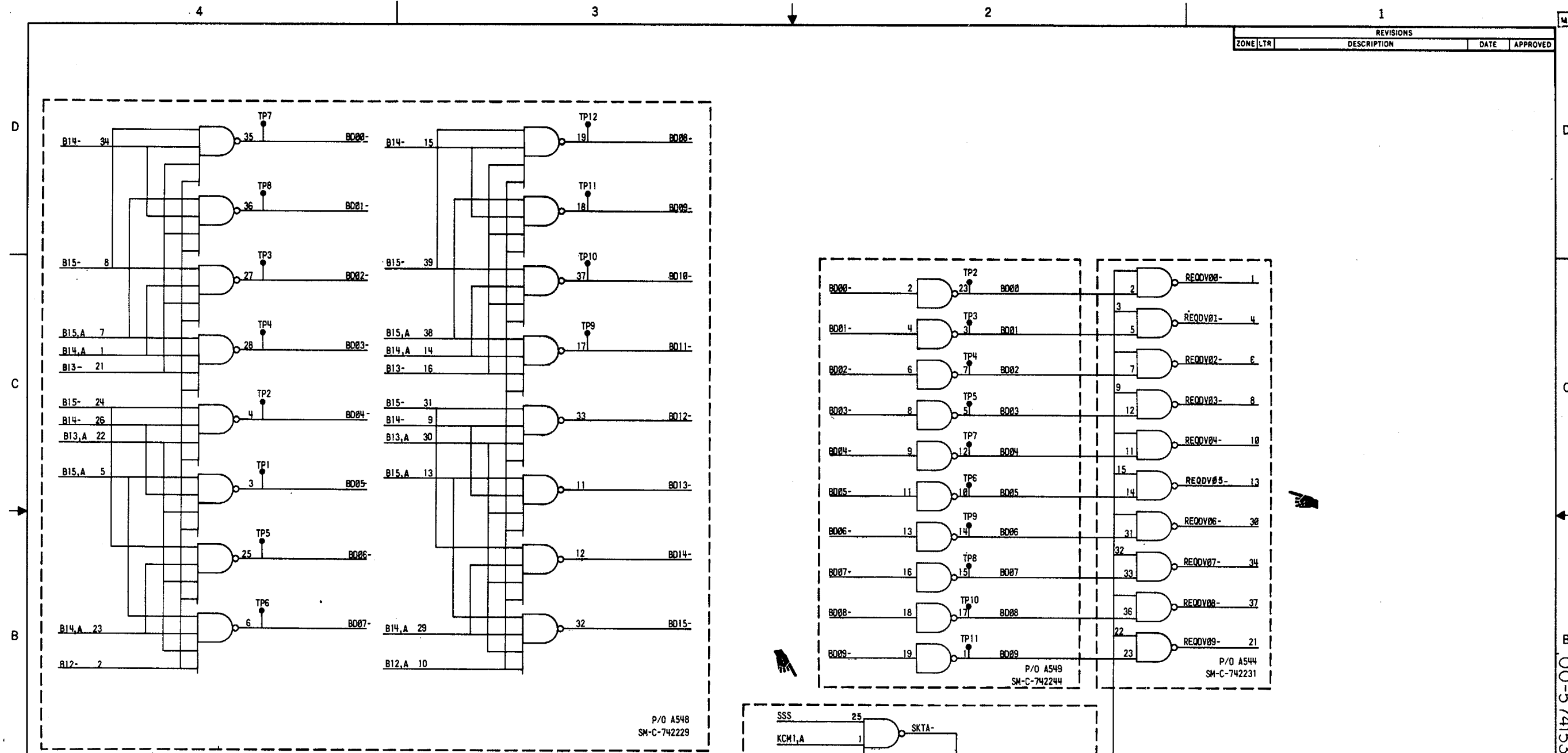


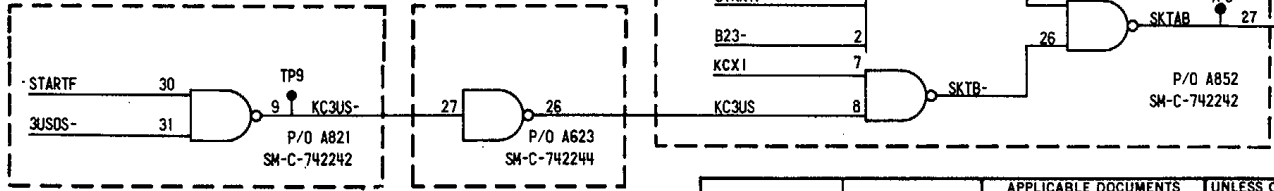
Figure 8-53(2). Central processor input/output sequence and decoder (sheet 2 of 2).
Change 3 8-114

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		680 681	
		TOLERANCES		DWN <i>John Deane</i> DATE 7 MAY 73		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ±		CHK <i>[Signature]</i> 3 MAY 73		LOGIC DIAGRAM- CENTRAL PROCESSOR. INPUT/OUTPUT SEQUENCE COUNTER AND DECODER	
		SURFACES ✓ MICRO-INCHES		APVD <i>[Signature]</i> 23 MAY 73		SIZE CODE IDENT NO DRAWING NO.	
FINISH		MATERIAL		RELEASE APVD <i>[Signature]</i> 29 MAY 73		D 04655 00-574152	
AB. A9	TTC-38			SCALE NONE		SHEET 2 OF 2	
NEXT ASSY	USED ON					EL 6NM022	
APPLICATION							

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED



- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE
- | PIN | SIGNAL |
|-----|--------|
| 20 | GRD |
| 40 | +5V |



APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO. 682	
FINISH		TOLERANCES		DWN <i>Clayton</i> DATE 4 APR 73	
A8, A9		ANGLES ±		CHK <i>Tracy</i> 11 APR 73	
NEXT ASSY		SURFACES		APVD <i>W. H. ...</i> 13 APR 73	
TTC-38		MICRO-INCHES		APVD <i>W. H. ...</i> 13 APR 73	
USED ON		MATERIAL		RELEASE APVD: <i>W. H. ...</i> 16 APR 73	
APPLICATION				SCALE NONE	
				SIZE CODE IDENT NO. DRAWING NO.	
				D 04655 00-574153	
				SHEET 1 OF 1	

Figure 8-54. Central processor input/output address decoder. Change 3 8-115

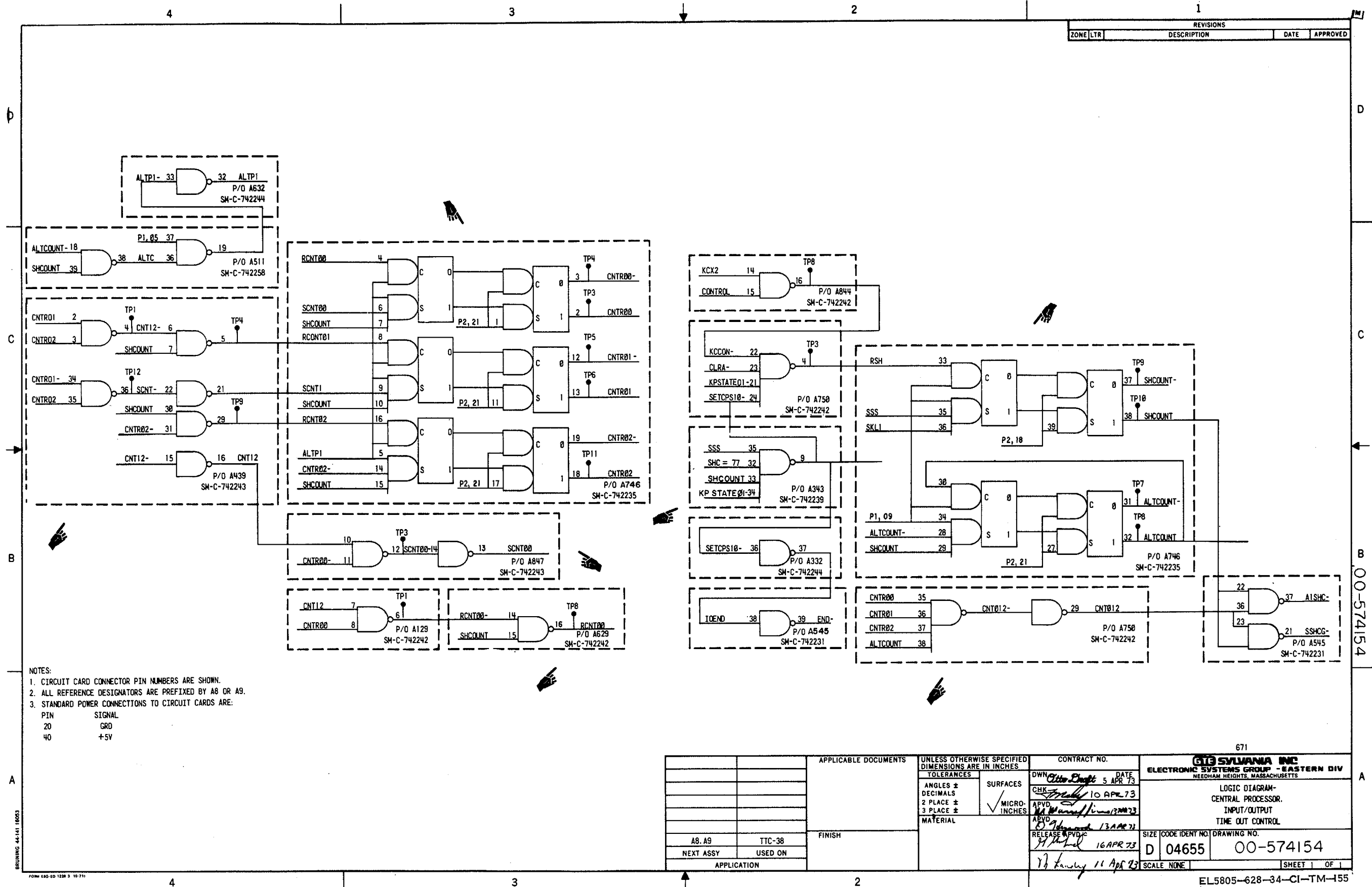
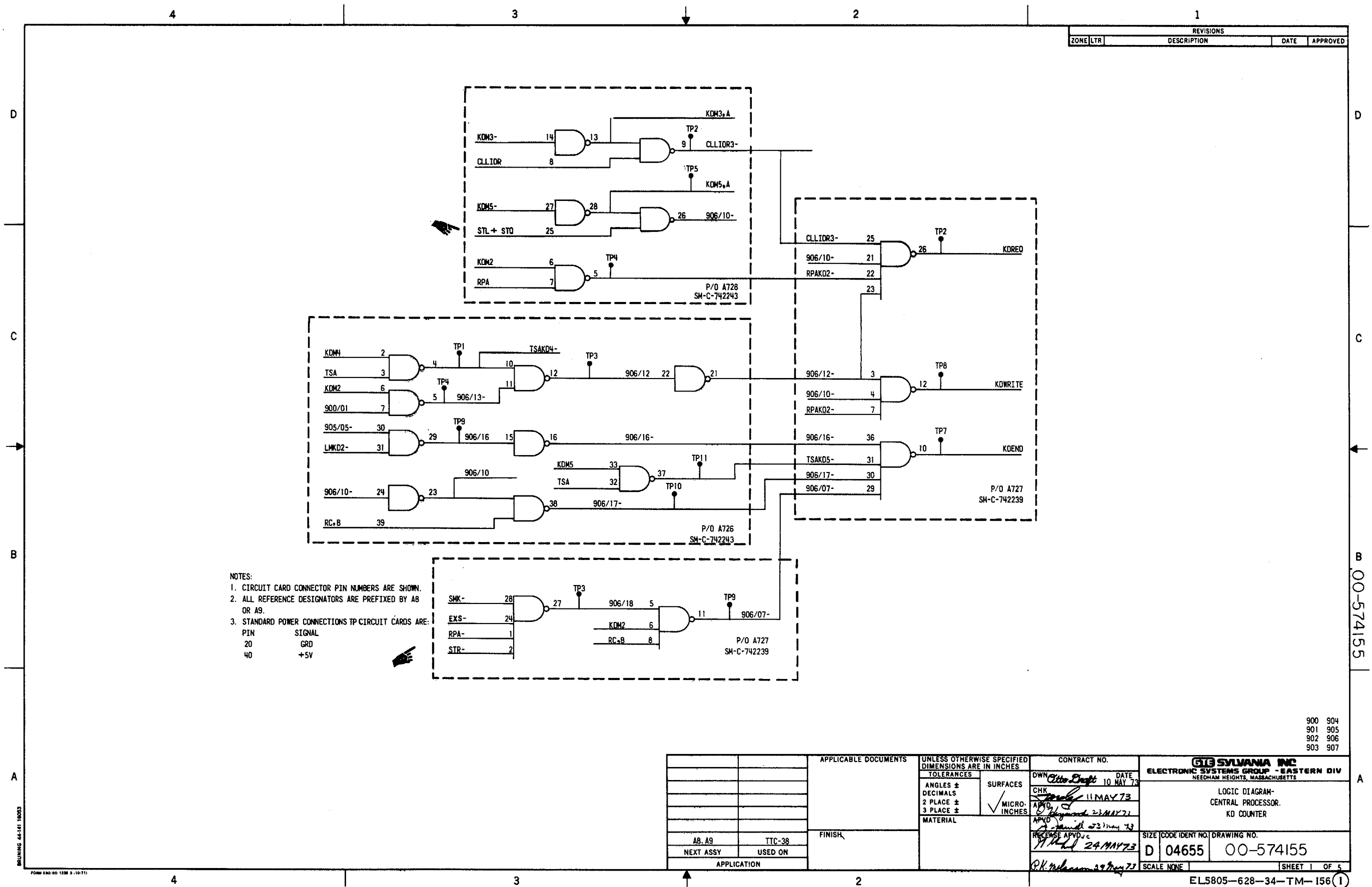


Figure 8-55. Central processor input/output time out control.
Change 3 8-116



- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A8 OR A9.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

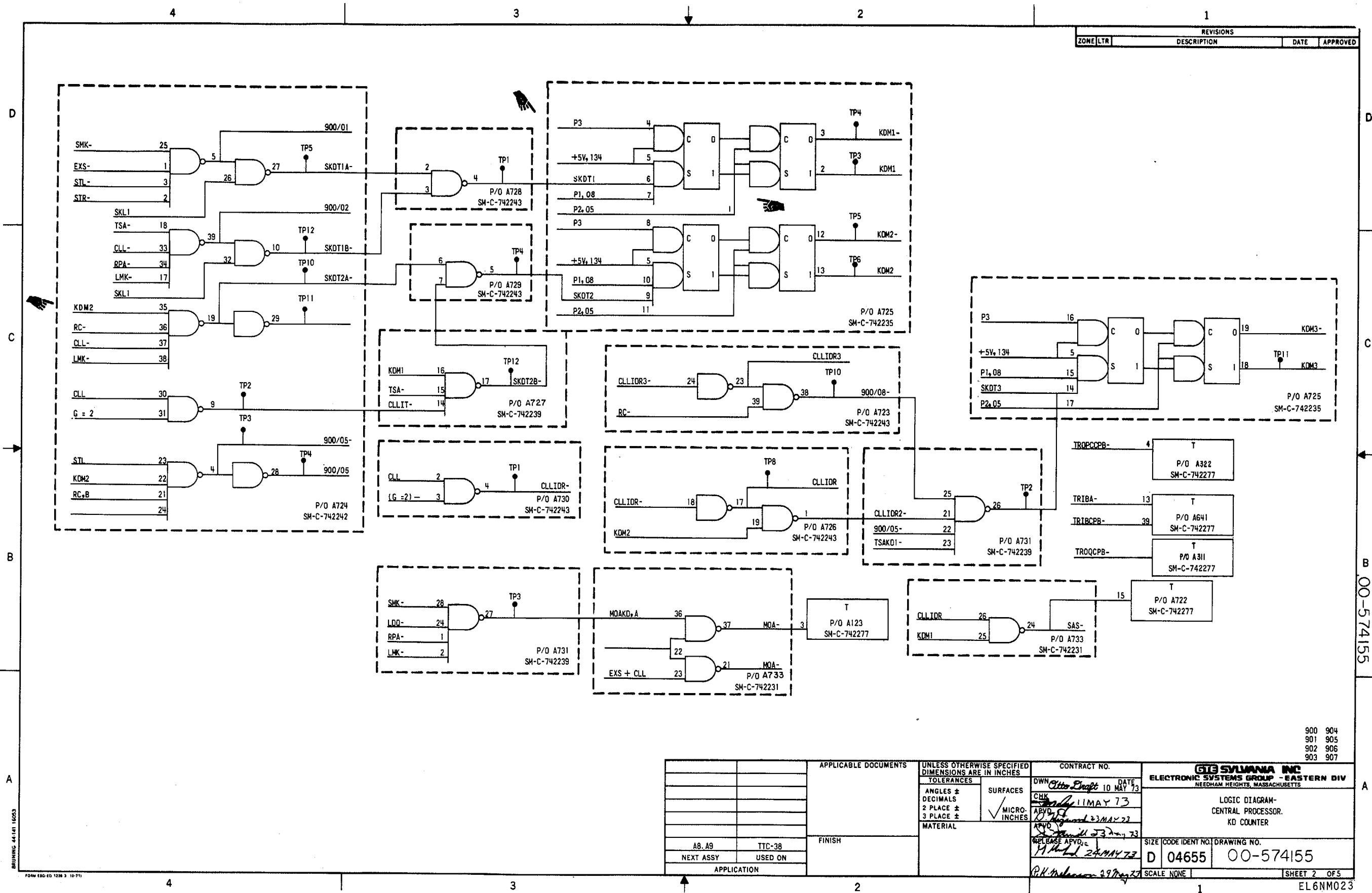
PIN	SIGNAL
20	GRD
40	+5V

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

900 904
 901 905
 902 906
 903 907

APPLICABLE DOCUMENTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	CONTRACT NO.	GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS
	TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MATERIAL	SURFACES ✓ MICRO-INCHES	
AB, A9 NEXT ASSY APPLICATION	TTC-38 USED ON	FINISH	SIZE (CODE IDENT NO) DRAWING NO. D 04655 00-574155 SCALE NONE SHEET 1 OF 5

Figure 8-56(1). Central processor KD counter (sheet 1 of 5).
 Change 3 8-117



REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED

900 904
901 905
902 906
903 907

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.			
FINISH		TOLERANCES		DATE		LOGIC DIAGRAM - CENTRAL PROCESSOR - KD COUNTER	
AB, A9		ANGLES ±		10 MAY 73		SIZE (CODE IDENT NO.) DRAWING NO.	
NEXT ASSY		SURFACES		11 MAY 73		D 04655 00-574155	
APPLICATION		MICRO-INCHES		23 MAY 73		SCALE NONE SHEET 2 OF 5	
		MATERIAL		24 MAY 73		EL 6NM023	

Figure 8-56(2). Central processor KD counter (sheet 2 of 5).
Change 3 8-118

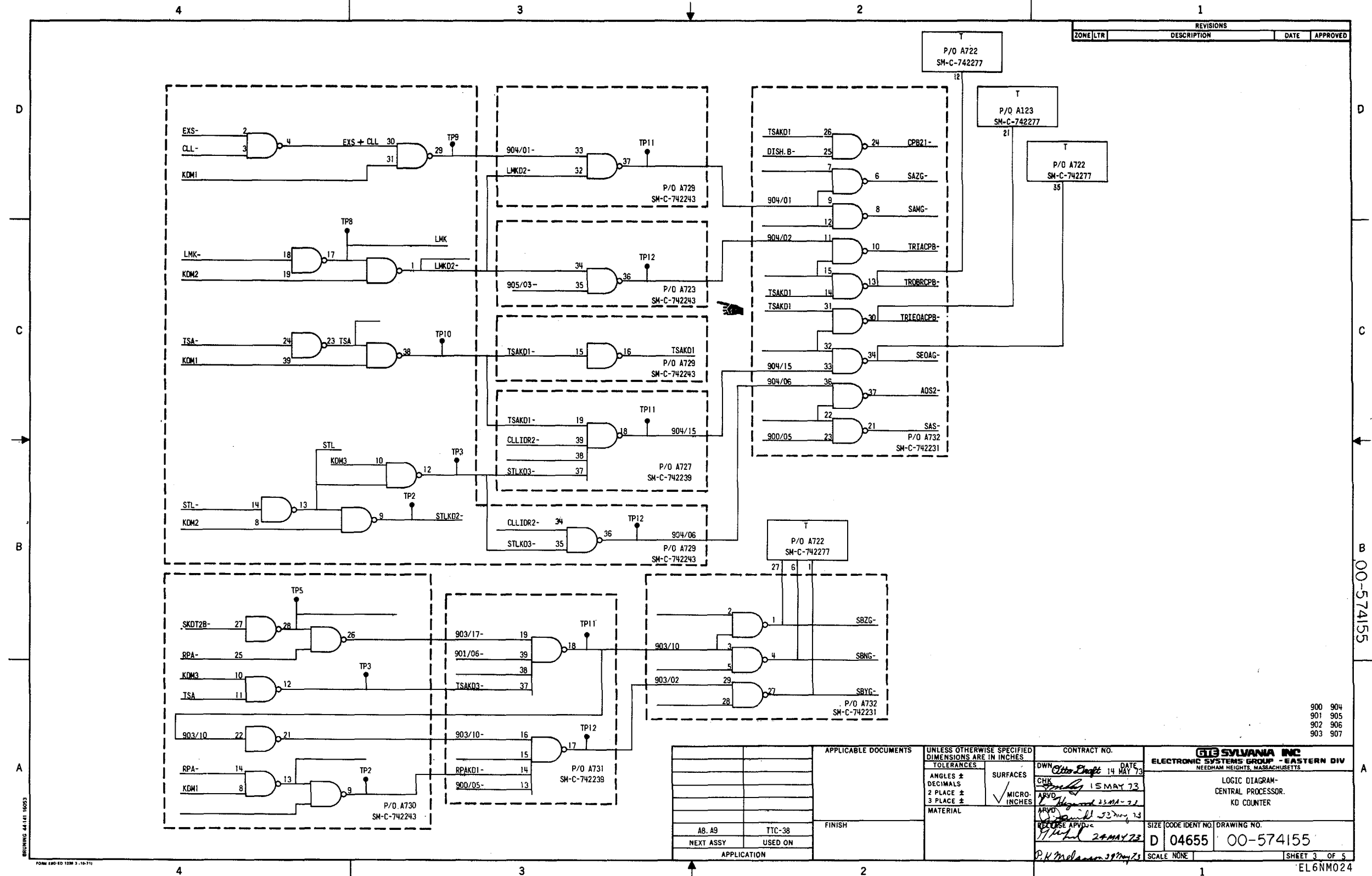


Figure 8-56(3). Central processor KD counter (sheet 3 of 5)

Change 3 8-119

REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED

900 904
901 905
902 906
903 907

APPLICATION	AB, A9	TTC-38	FINISH	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	CONTRACT NO.		613 SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS
	NEXT ASSY	USED ON			TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MATERIAL	SURFACES ✓ MICRO-INCHES	
SCALE NONE				SHEET 3 OF 5			

EL6NM024

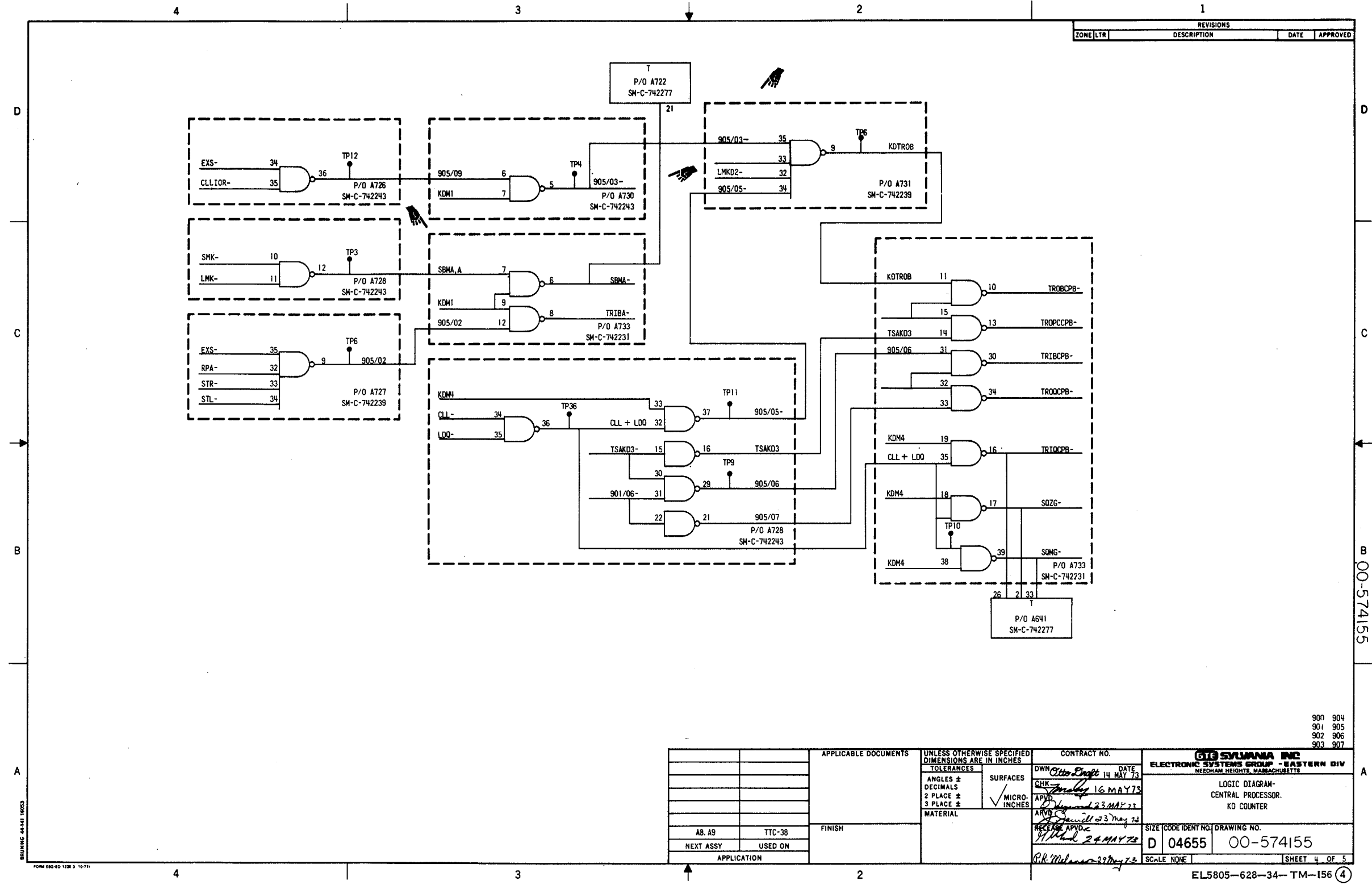


Figure 8-56(4). Central processor KD counter (sheet 4 of 5)

Change 3 8-120

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		RTS SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES		OWN <i>Otto Engel</i> DATE 14 MAY 73		LOGIC DIAGRAM -	
		ANGLES #		CHK <i>Tracy</i> 16 MAY 73		CENTRAL PROCESSOR.	
		DECIMALS #		APVD <i>Samuel</i> 23 MAY 73		KD COUNTER	
		2 PLACE #		ARVD <i>Samuel</i> 23 May 73		SIZE CODE IDENT NO. DRAWING NO.	
		3 PLACE #		RECEIVED APVD <i>W. H. ...</i> 24 MAY 73		D 04655 00-574155	
MATERIAL		SURFACES		SCALE NONE		SHEET 4 OF 5	
FINISH		MICRO-INCHES		EL5805-628-34-TM-156 (4)			
AB, A9	TTC-38						
NEXT ASSY	USED ON						
APPLICATION							

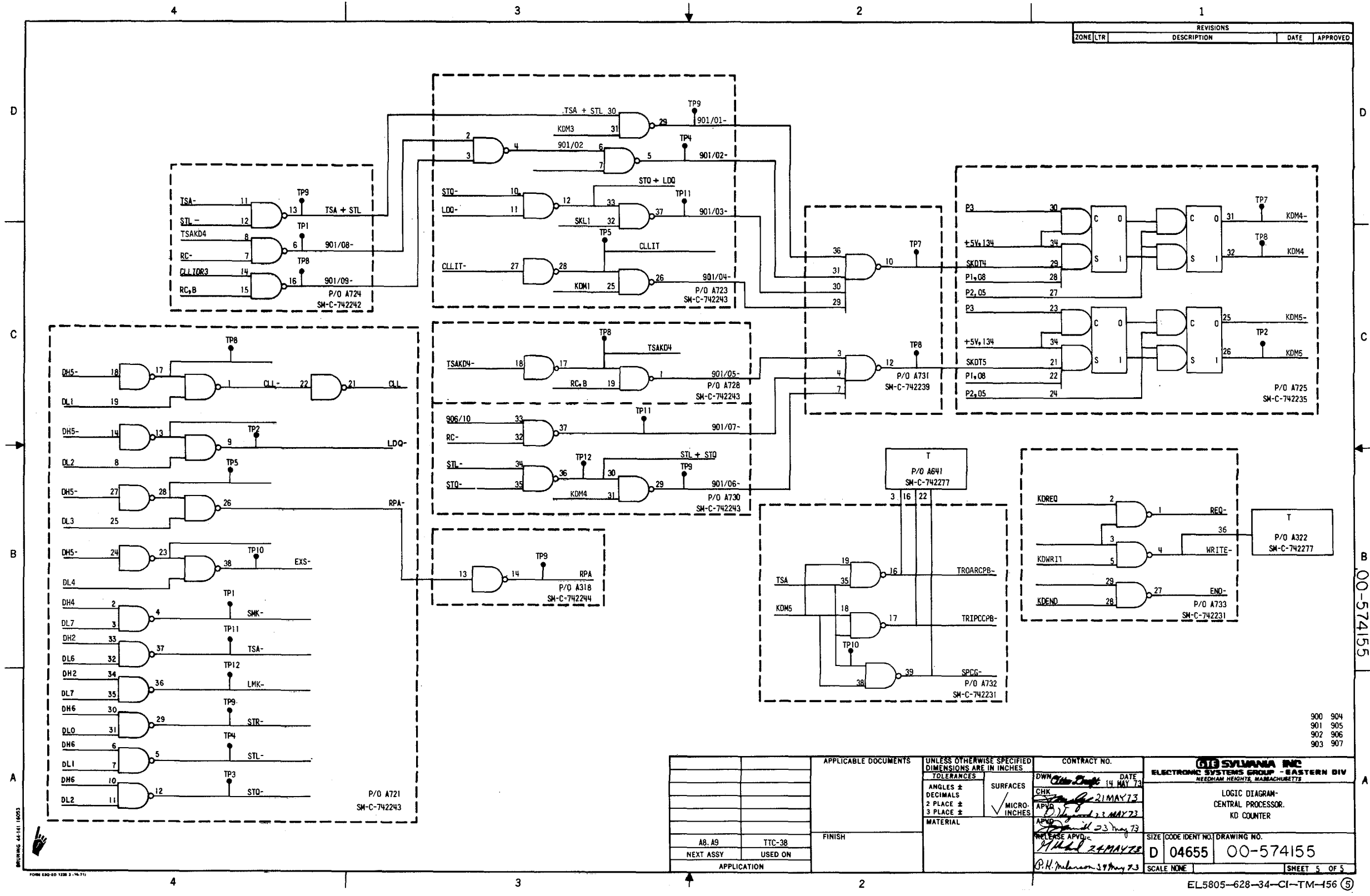


Figure 8-57(1) . Central processor KF counter (sheet 1 of 5)

Change 3 8-121

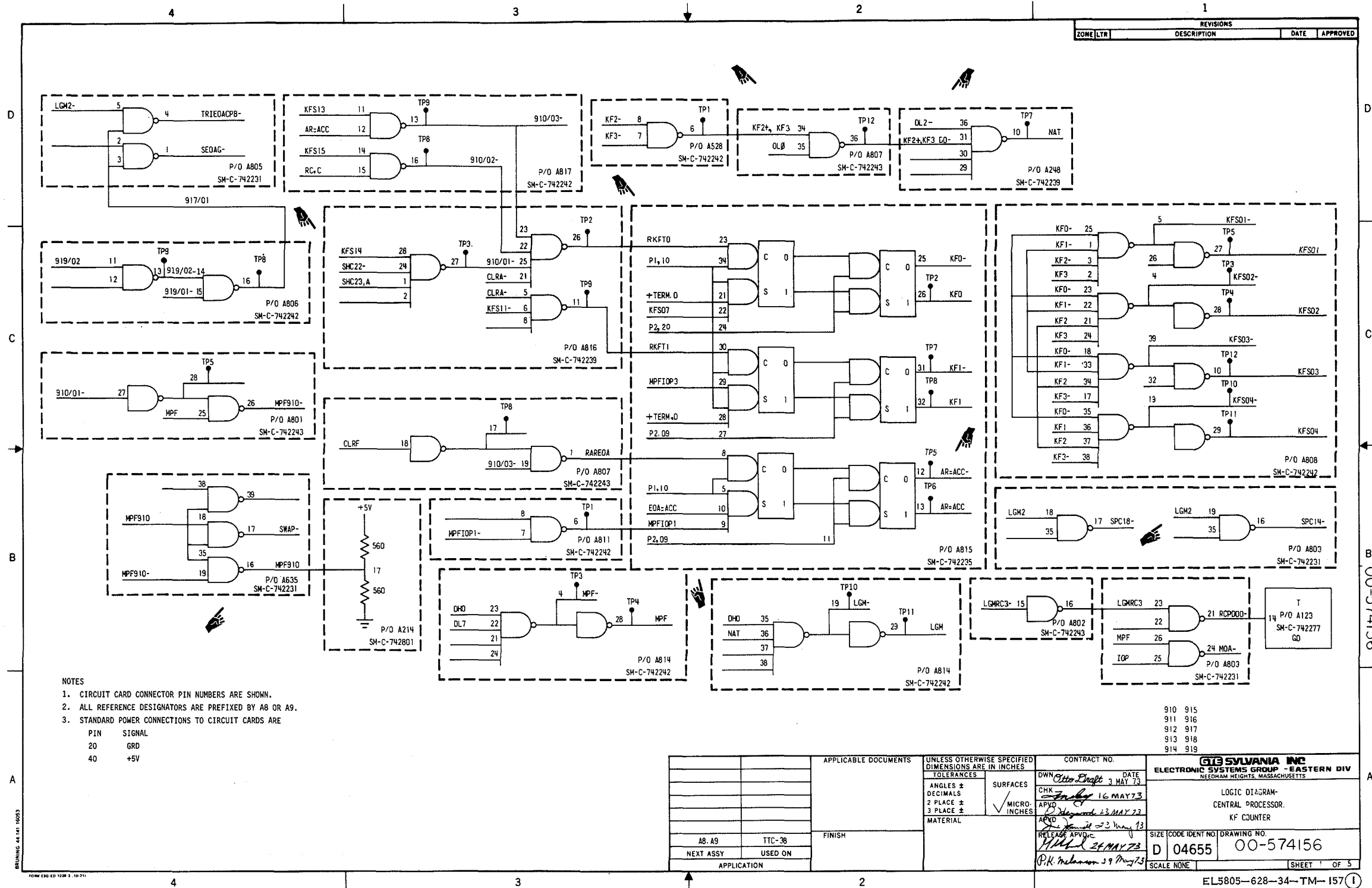


Figure 8-56(5). Central processor KD counter (sheet 5 of 5)

Change 3 8-122

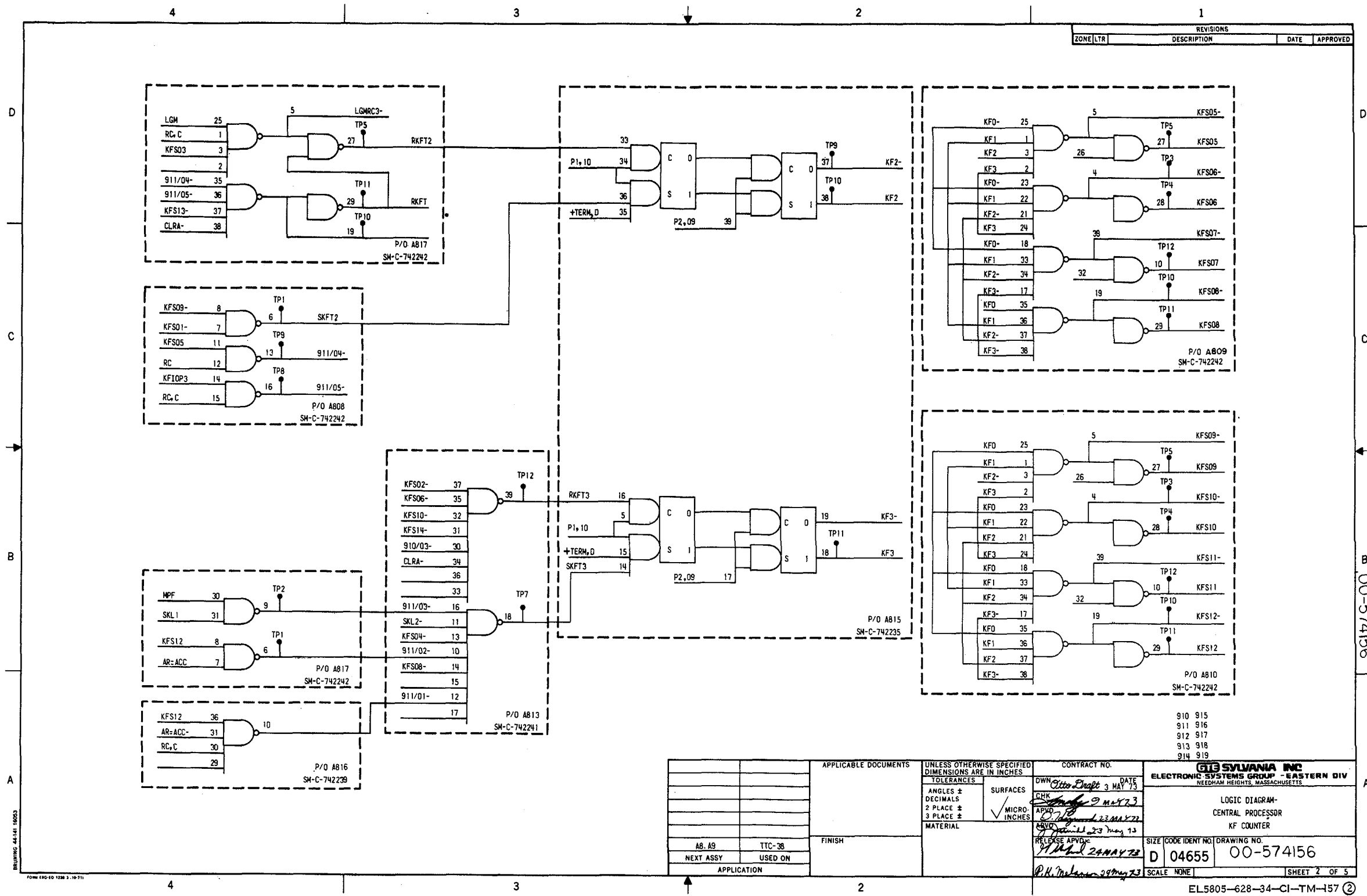


Figure 8-57(2). Central processor KF counter (sheet 2 of 5).

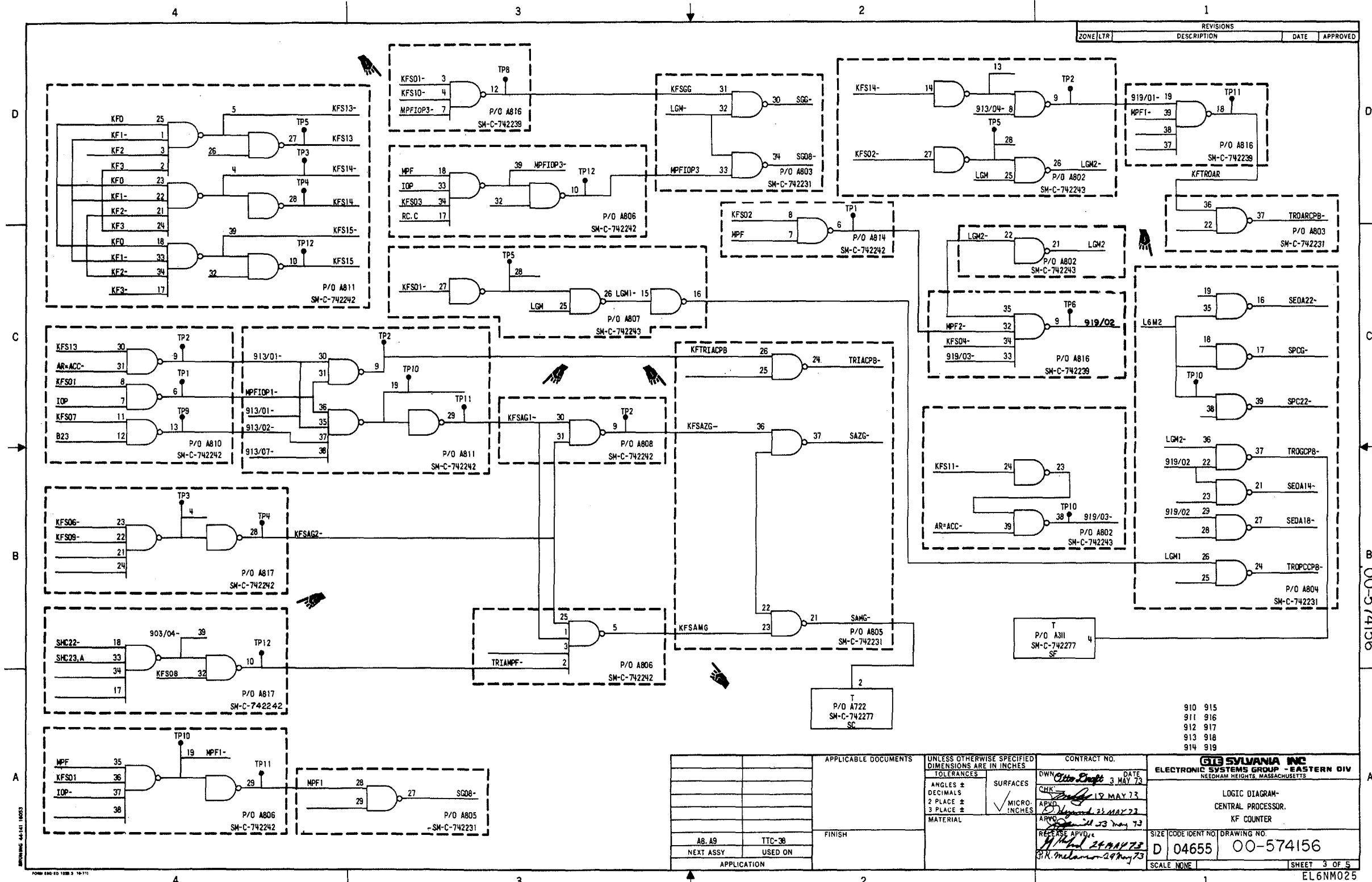


Figure 8-57(3). Central processor KF counter (sheet 3 of 5)

Change 3 - 8-124

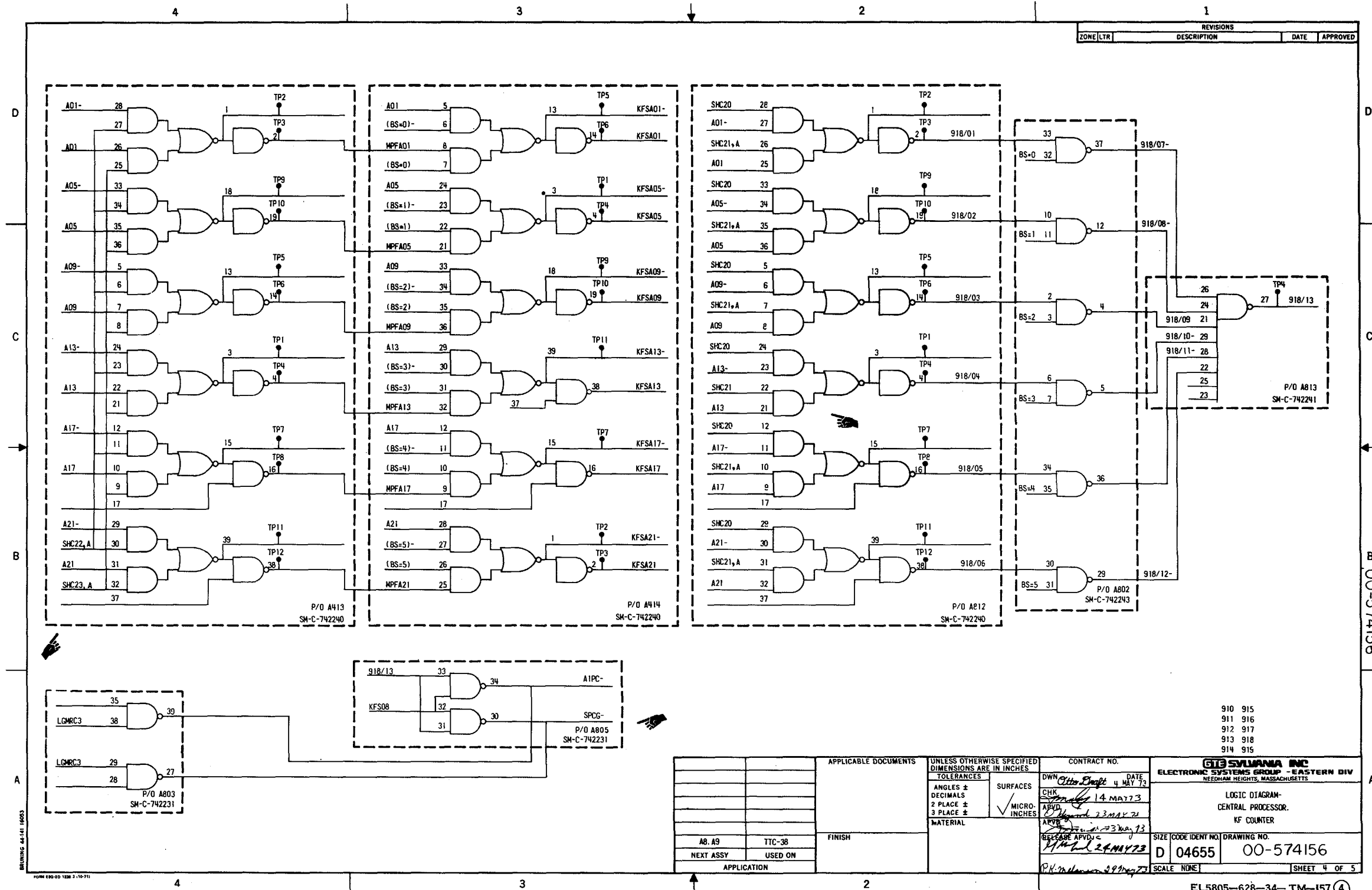


Figure 8-57(4). Central processor KF counter (sheet 4 of 5)

Change 3 8-125

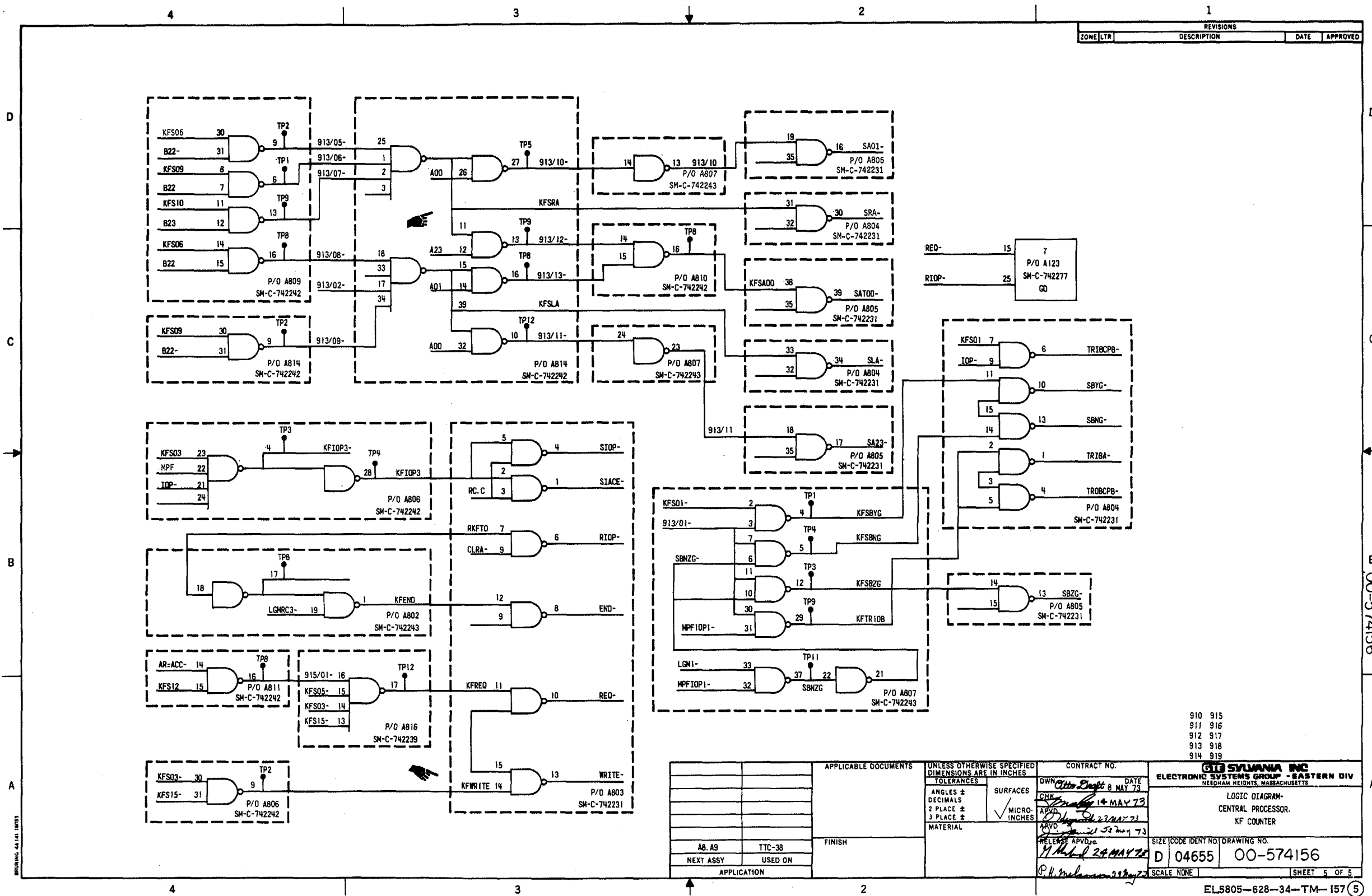


Figure 8-57(5). Central processor KF counter (sheet 5 of 5)

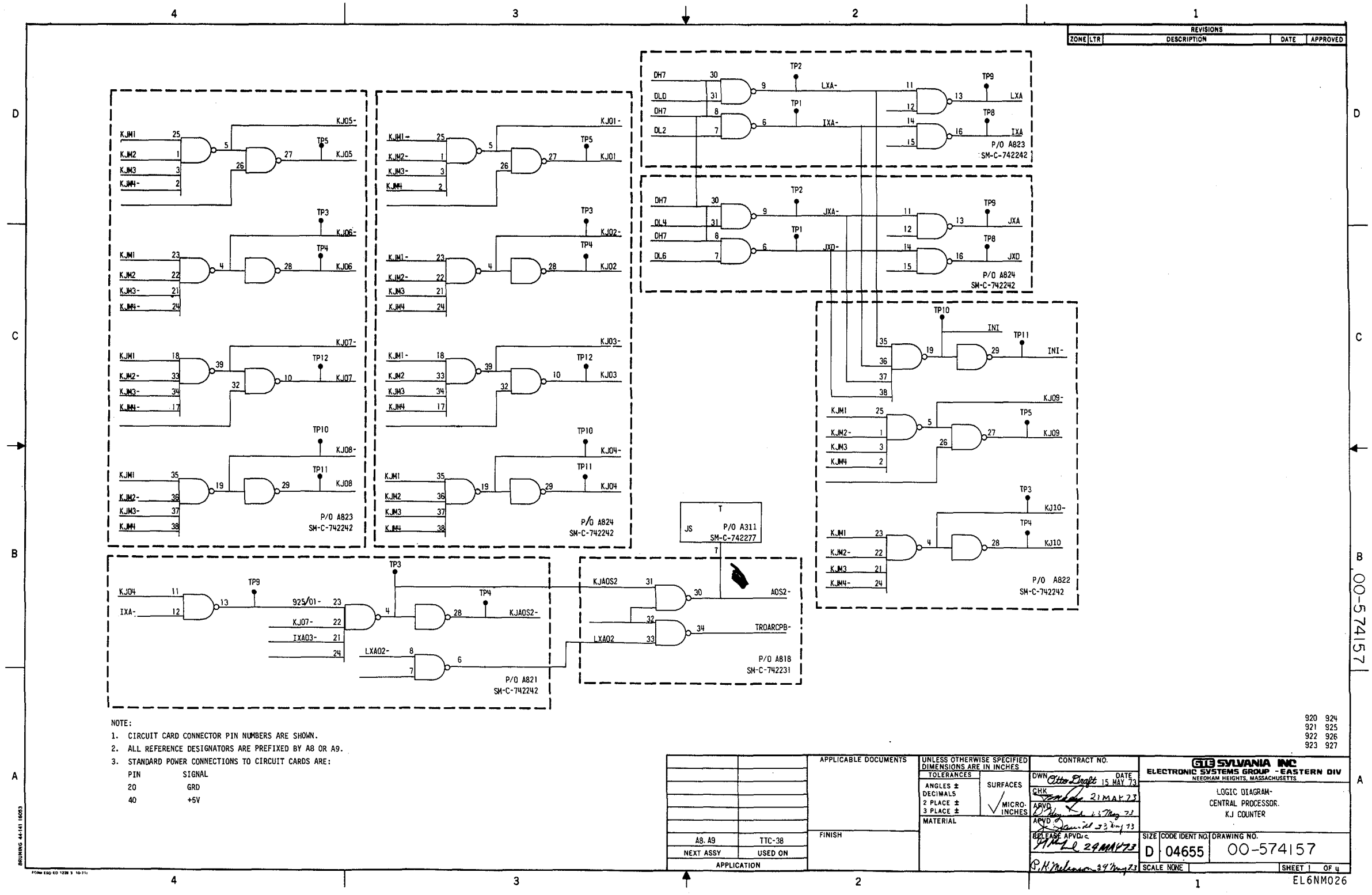
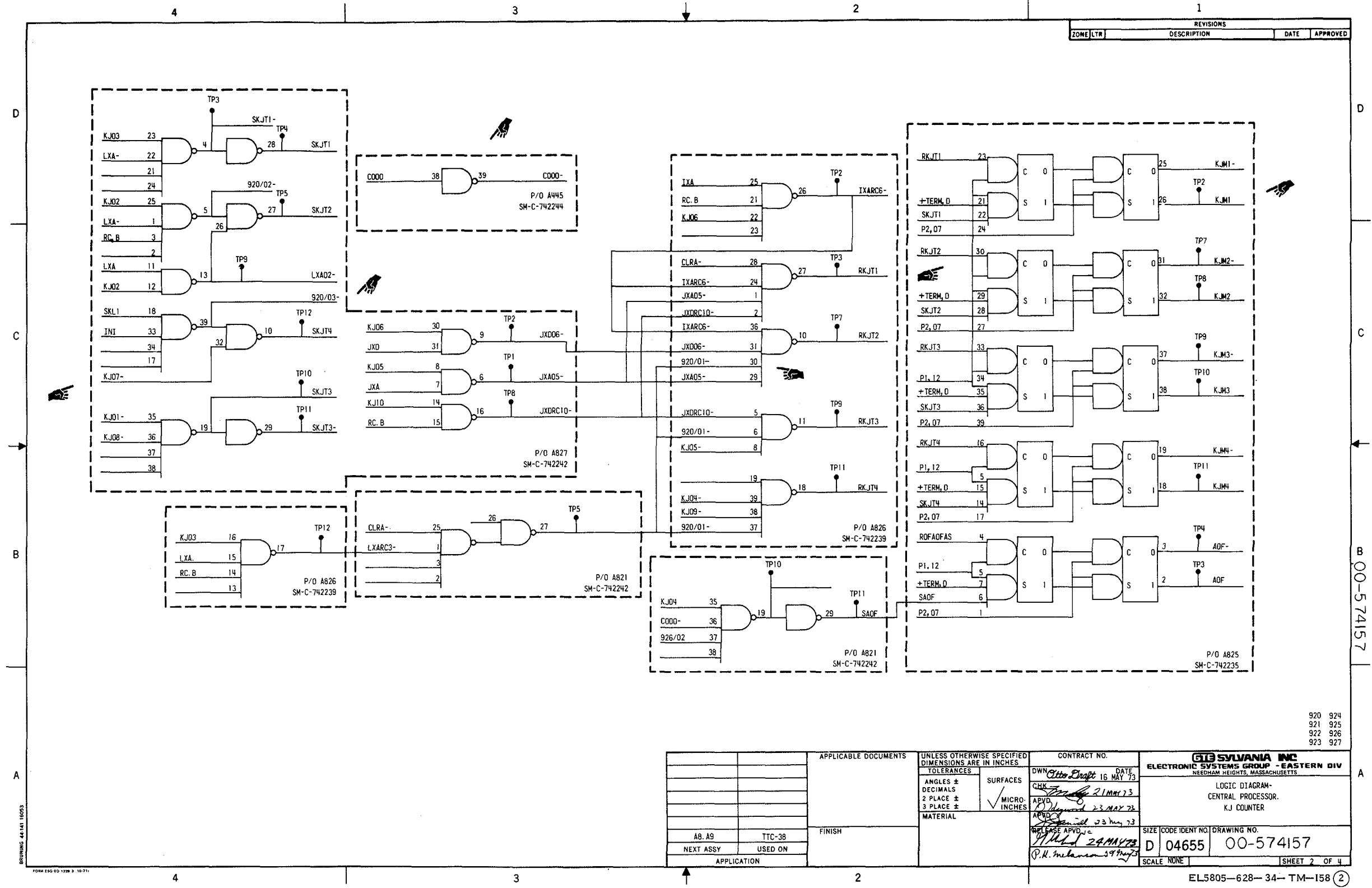


Figure 8-58(1). Central processor KJ counter (sheet 1 of 4)

Change 2 8-127



REVISIONS		DATE	APPROVED
ZONE	DESCRIPTION		

920 924
921 925
922 926
923 927

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MATERIAL		SURFACES <input checked="" type="checkbox"/> MICRO- INCHES		DWN <i>Atto Draft</i> DATE 16 MAY 73 CHK <i>[Signature]</i> 21 MAY 73 APVD <i>[Signature]</i> 23 MAY 73 APVD <i>[Signature]</i> 23 MAY 73 RELEASE APVD <i>[Signature]</i> 24 MAY 73 P.H. Melanson 29 May 73	
AB, AB NEXT ASSY APPLICATION		FINISH		SIZE CODE IDENT NO. DRAWING NO. D 04655 00-574157		SCALE NONE SHEET 2 OF 4	

Figure 8-58(2). Central processor KJ counter (sheet 2 of 4)

Change 3 8-128

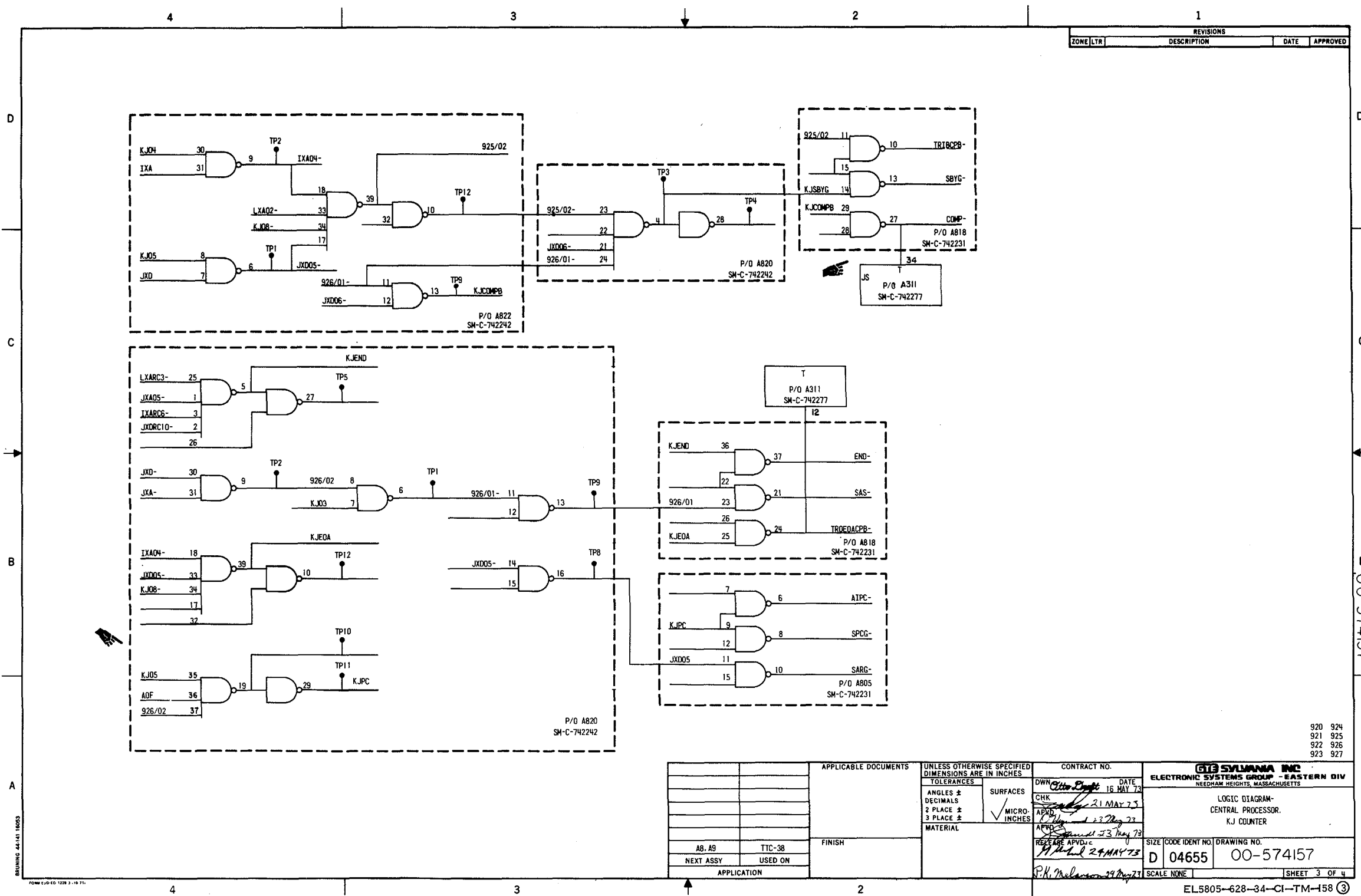
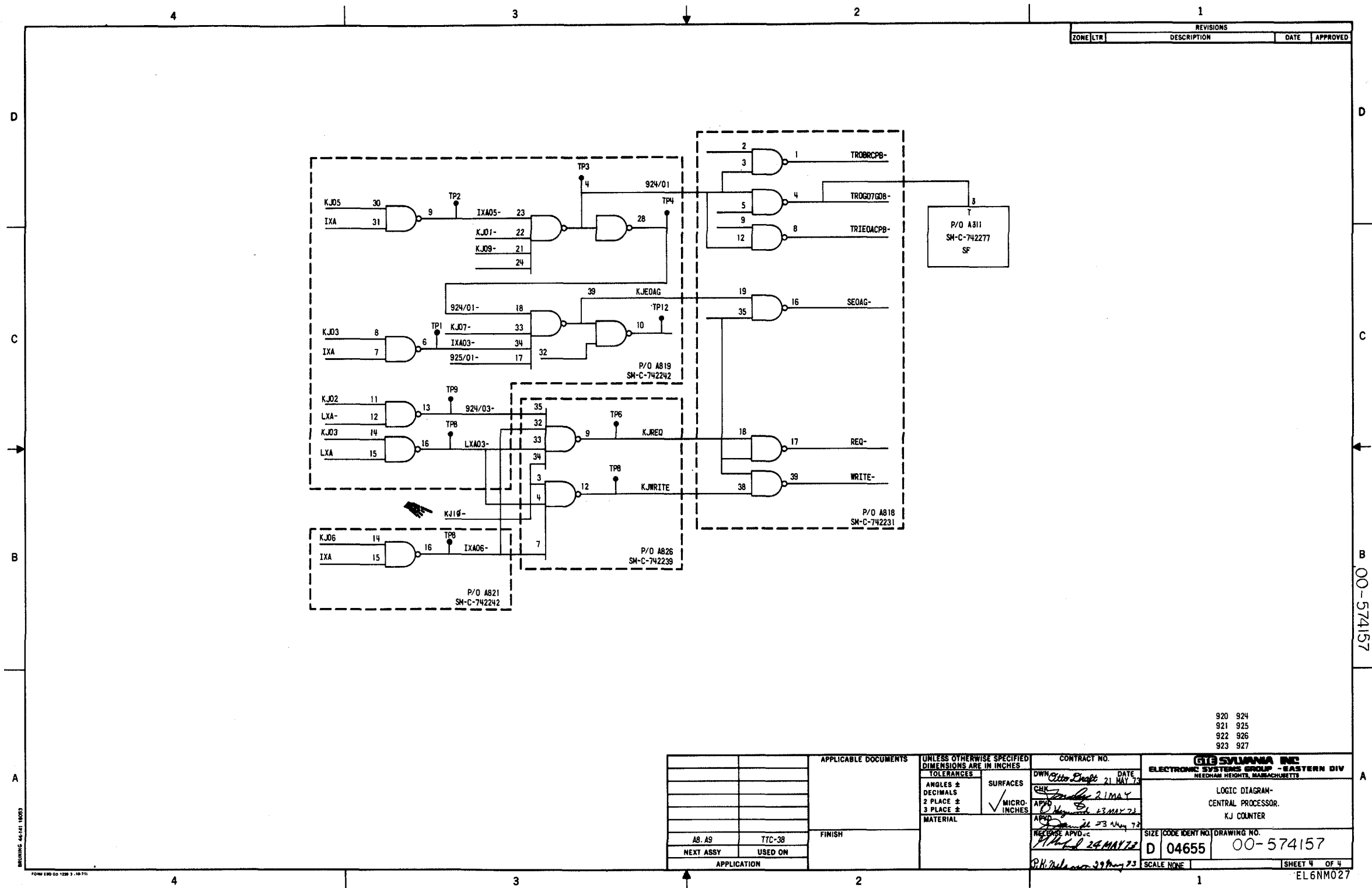


Figure 8-58(3). Central processor KJ counter (sheet 3 of 4)

Change 3 8-129



920 924
921 925
922 926
923 927

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GIG SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES		DATE		LOGIC DIAGRAM- CENTRAL PROCESSOR. KJ COUNTER	
		ANGLES ±		21 MAY 72		SIZE (CODE IDENT NO) DRAWING NO.	
		DECIMALS		21 MAY 72		D 04655 00-574157	
		2 PLACE ±		23 MAY 72		SCALE NONE	
		3 PLACE ±		23 MAY 72		SHEET 4 OF 4	
		MATERIAL		23 MAY 72		EL 6NM027	
AB AS		FINISH		P/O A311			
NEXT ASSY		USED ON		P/O A819			
APPLICATION				P/O A818			
				P/O A826			

Figure 8-58(4). Central processor KJ counter (sheet 4 of 4)

Change 3 8-130

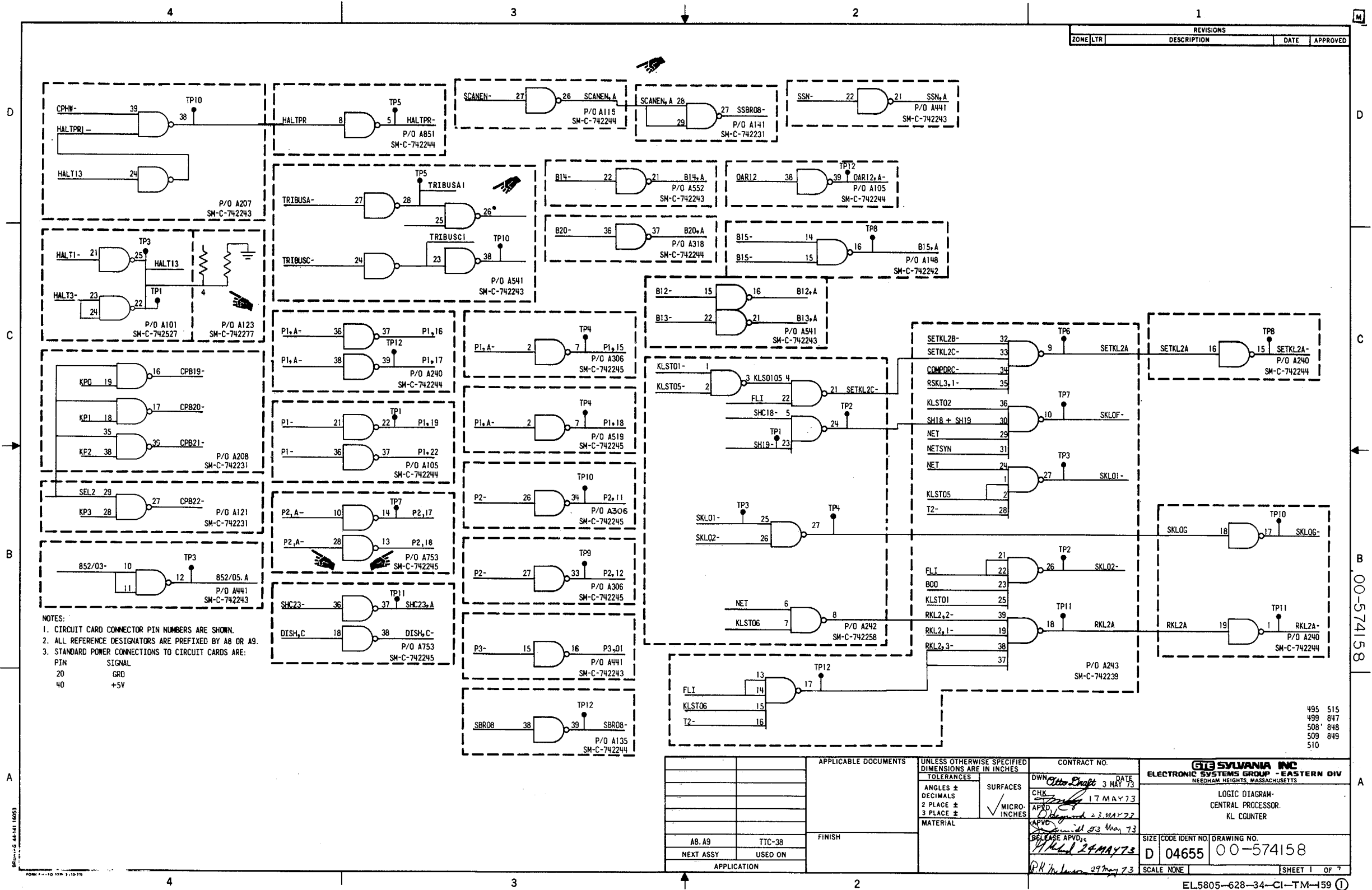


Figure 8-59(1). Central processor KL counter (sheet 1 of 7)

Change 3 8-131

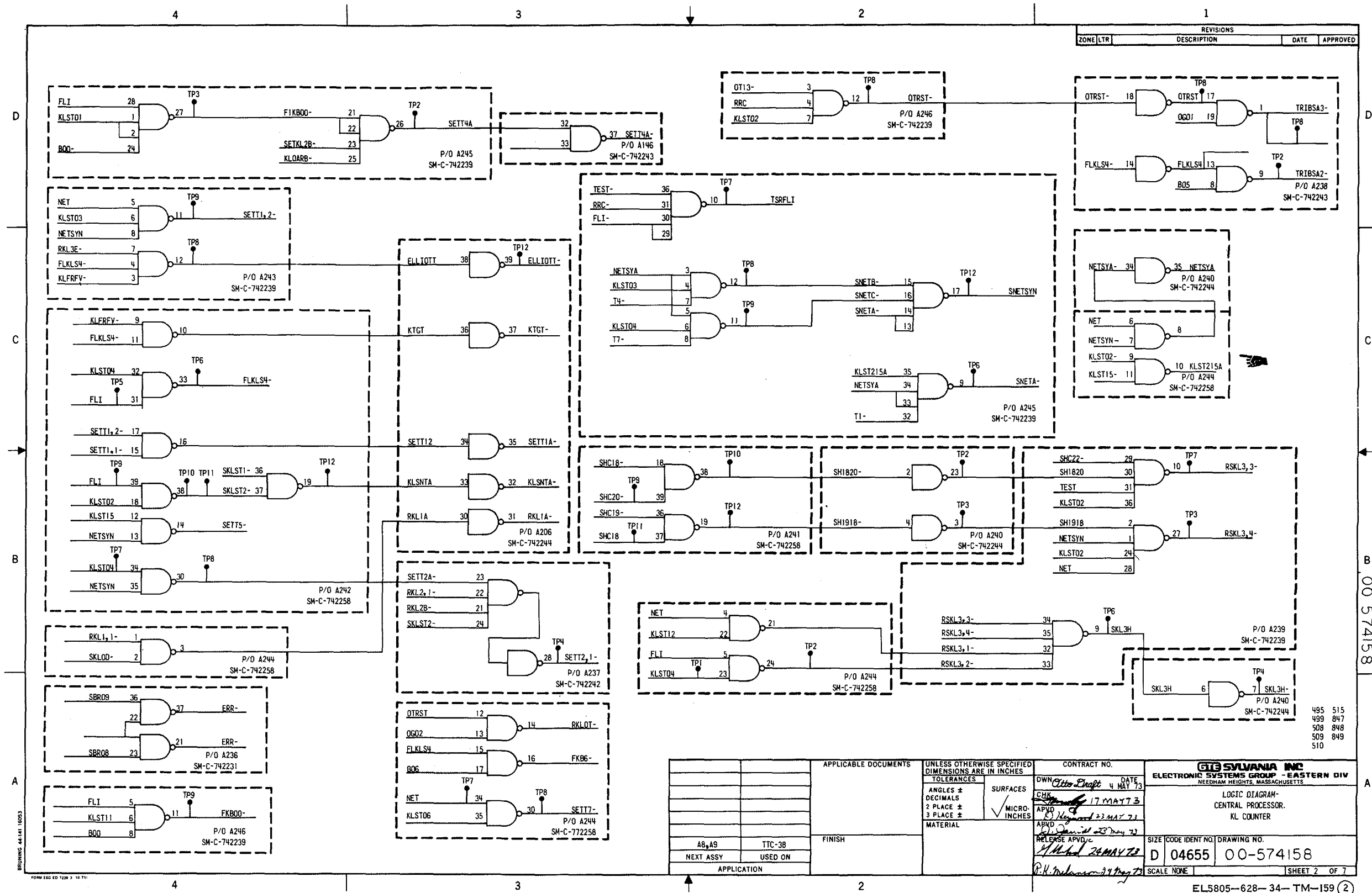


Figure 8-59(2). Central processor KL counter (sheet 2 of 7)

Change 3 8-132

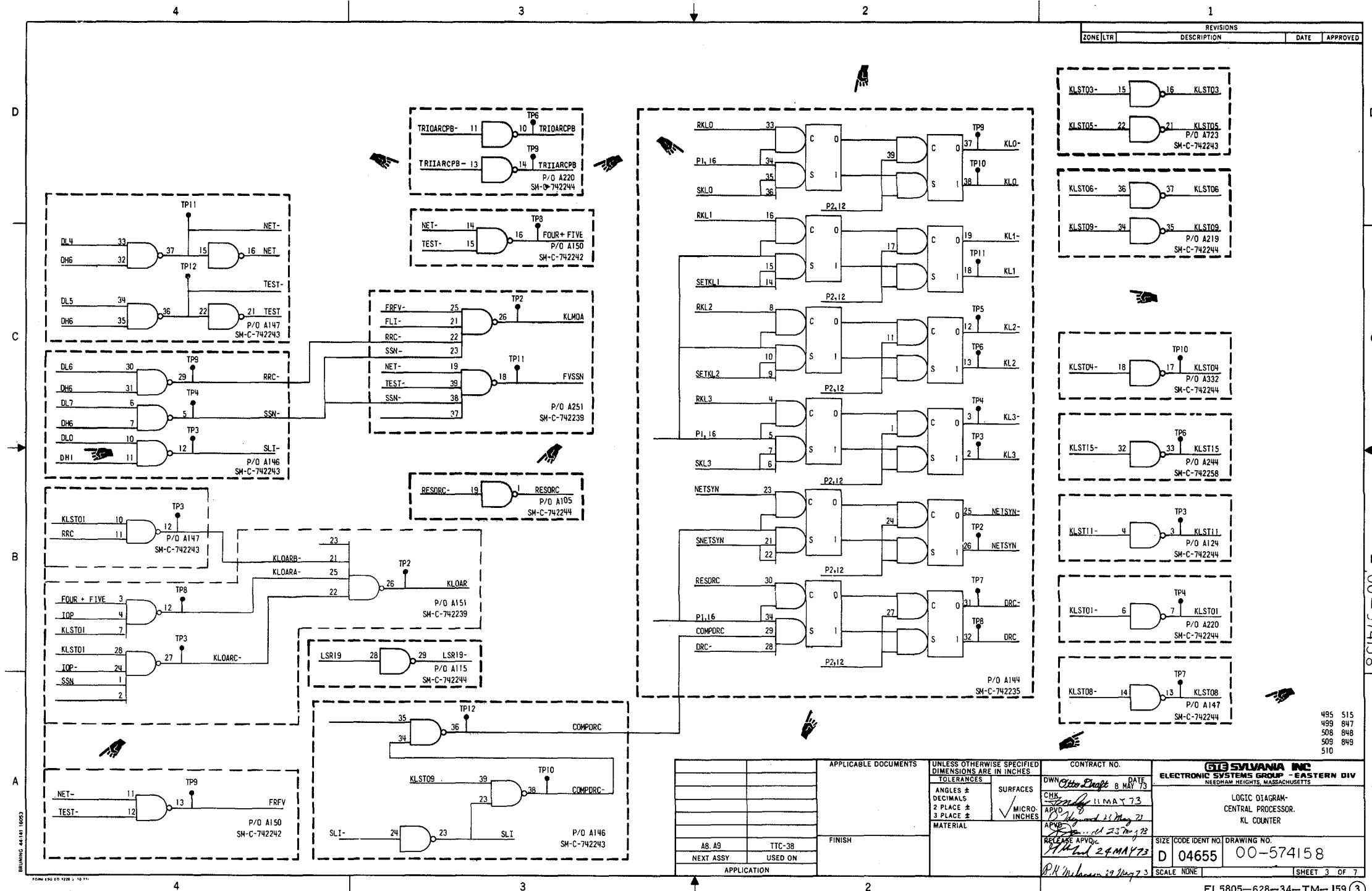


Figure 8-59(3). Central processor KL counter (sheet 3 of 7)

Change 3 8-133

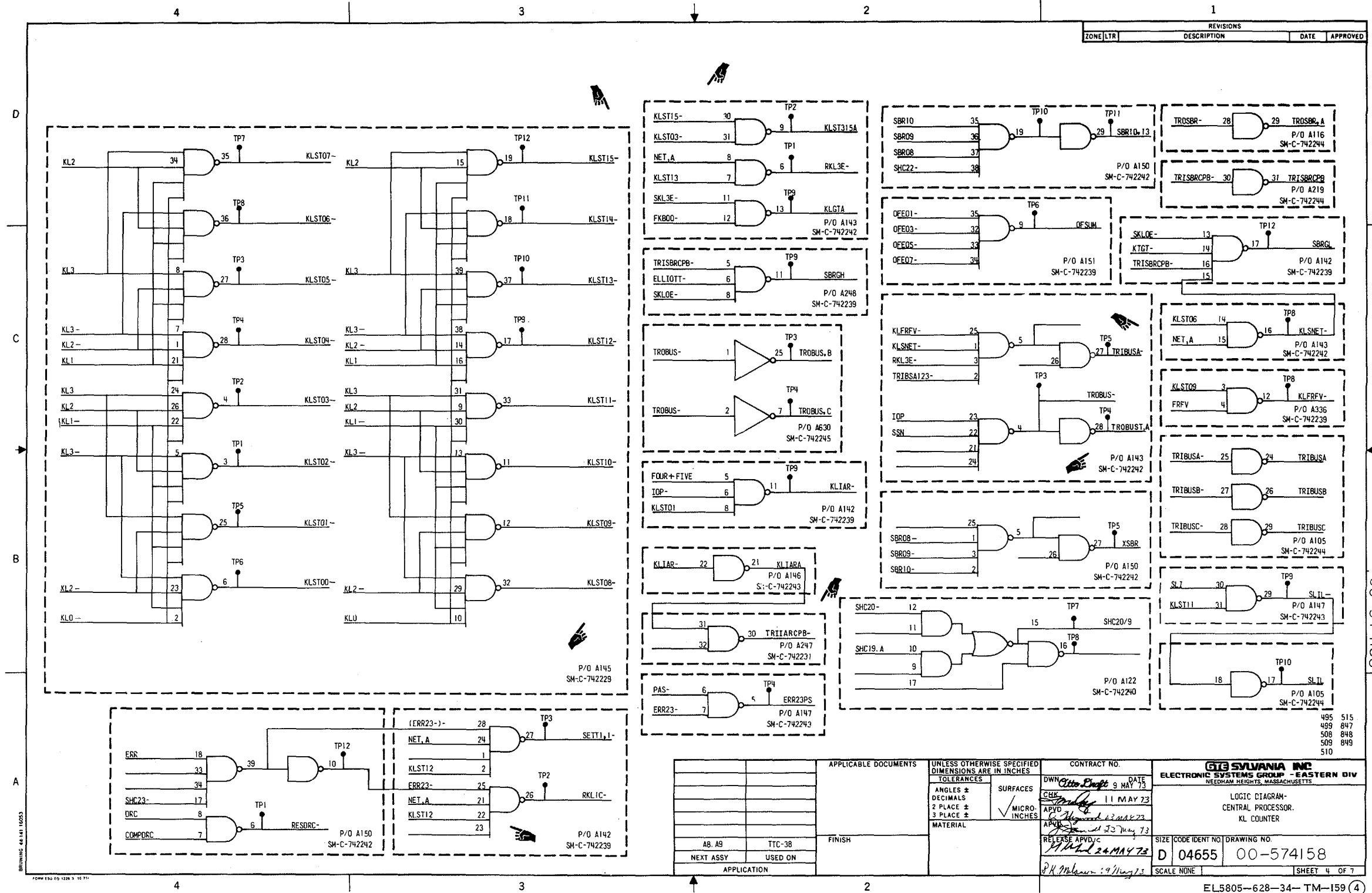


Figure 8-59(4). Central processor KL counter (sheet 4 of 7)

Change 3 8-134

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.	
		TOLERANCES		DWN <i>Chris Dwyer</i> 9 MAY 73	
		ANGLES ±		DATE 11 MAY 73	
		DECIMALS		CHK <i>[Signature]</i>	
		2 PLACE ±		APVD <i>[Signature]</i> 23 MAY 73	
		3 PLACE ±		REL. <i>[Signature]</i> 23 MAY 73	
		MATERIAL		RELEASE APVD <i>[Signature]</i> 24 MAY 73	
AB. 89		FINISH		SIZE CODE IDENT NO. DRAWING NO.	
NEXT ASSY USED ON				D 04655 00-574158	
APPLICATION				SCALE NONE SHEET 4 OF 7	

EL5805-628-34-TM-159 (4)

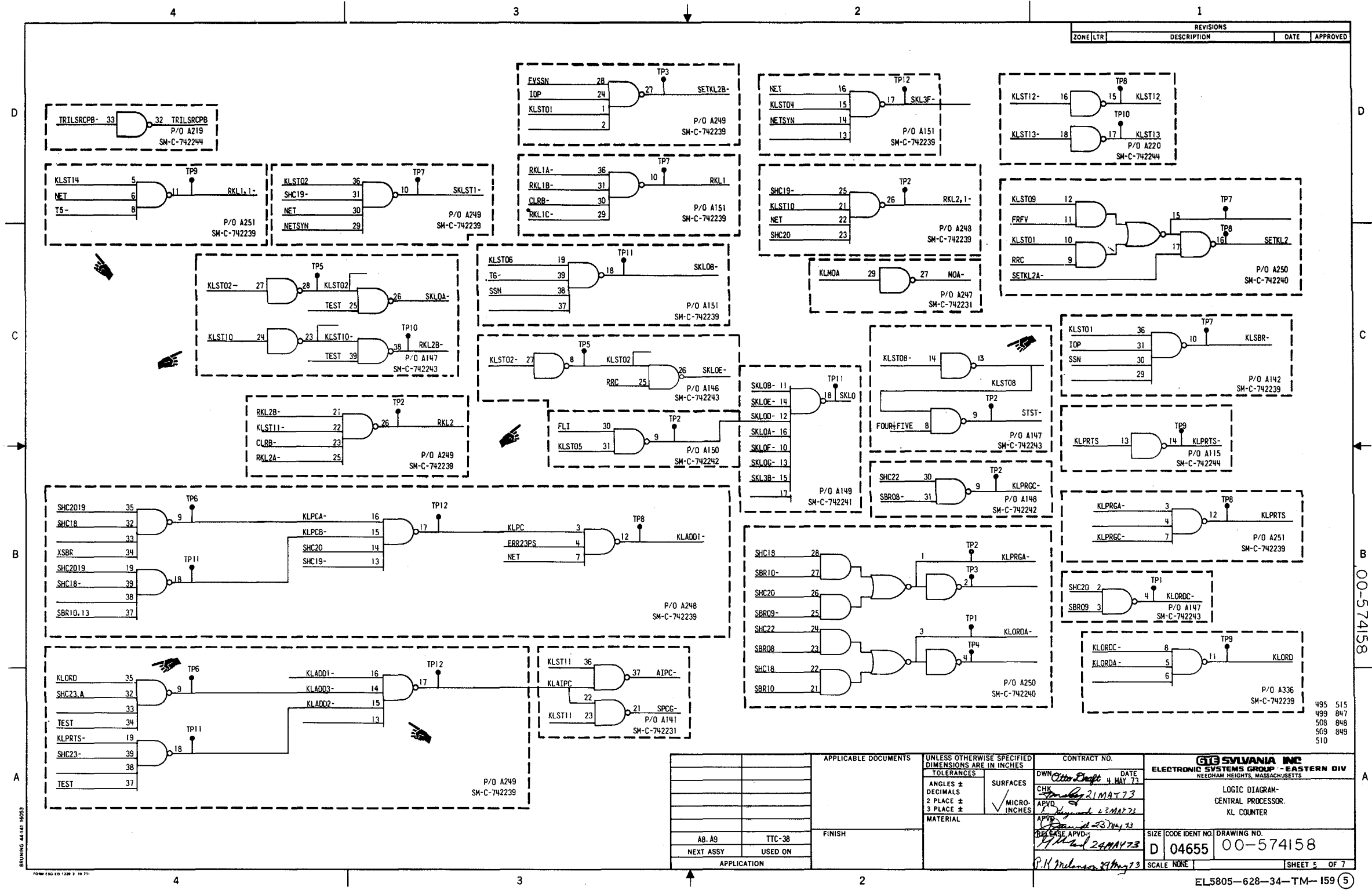


Figure 8-59(5). Central processor KL counter (sheet 5 of 7)

Change 3 8-135

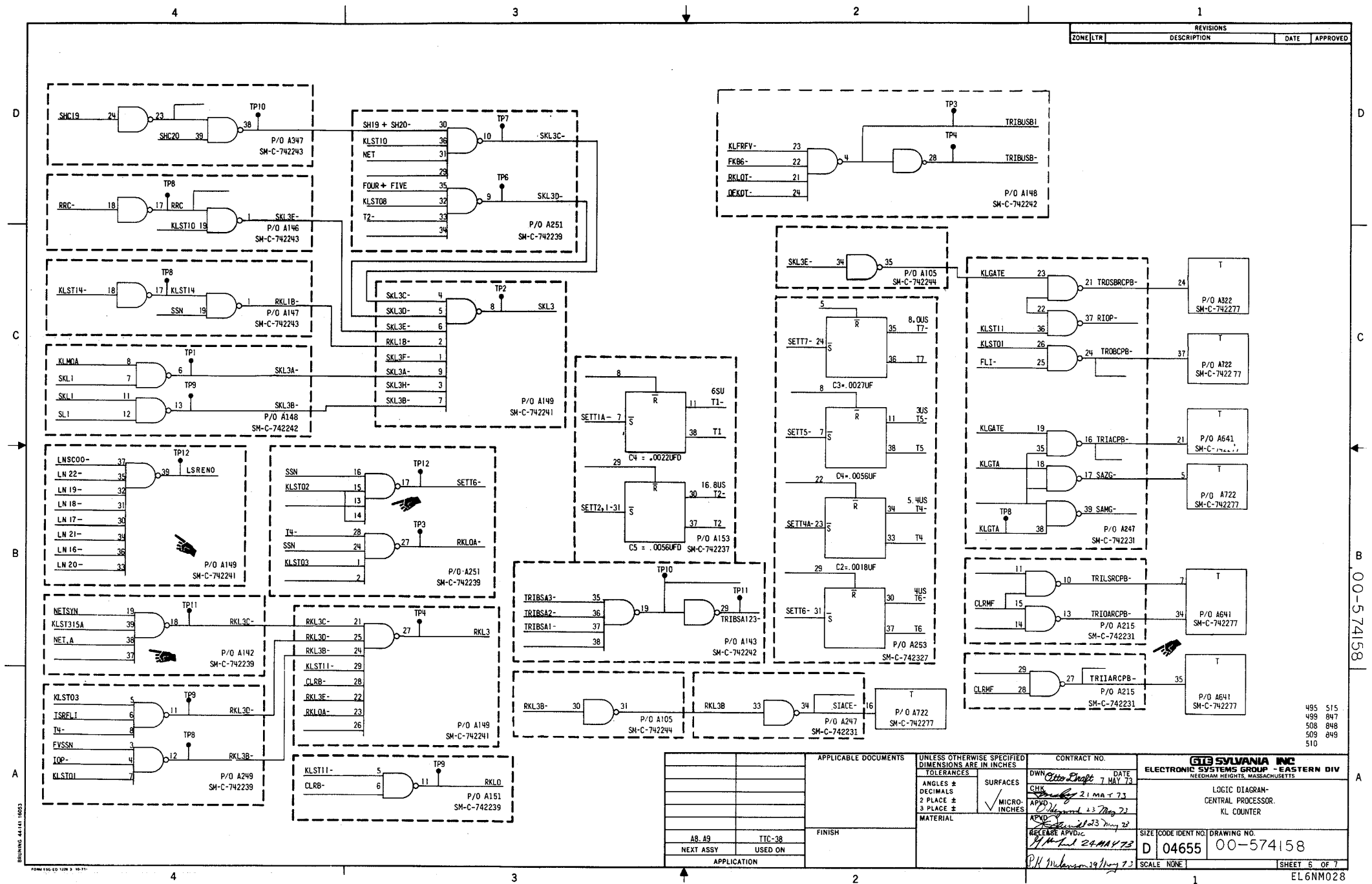


Figure 8-59(6). Central processor KL counter (sheet 6 of 7)

Change 3 8-136

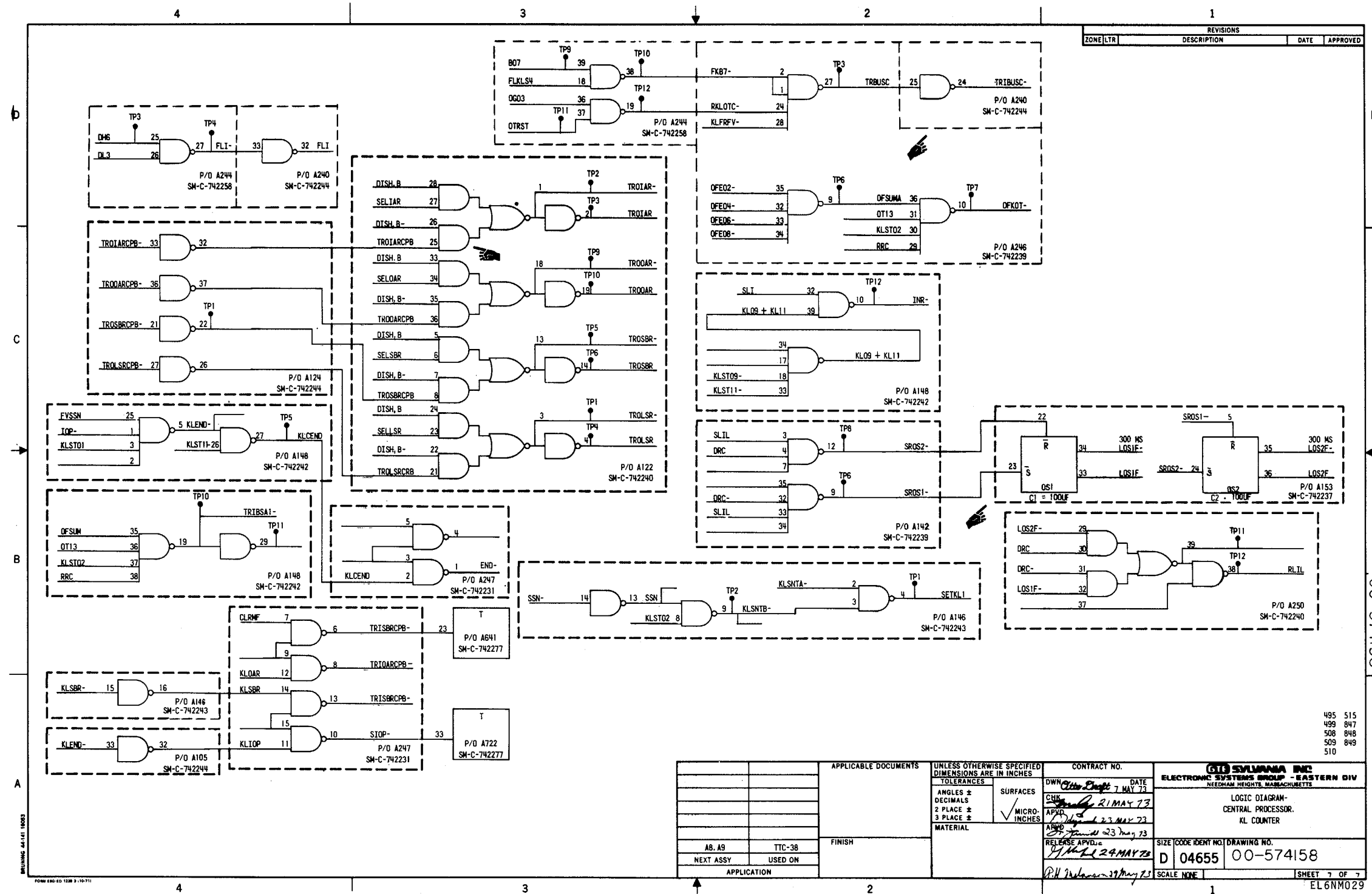


Figure 8-59(7). Central processor KL counter (sheet 7 of 7).

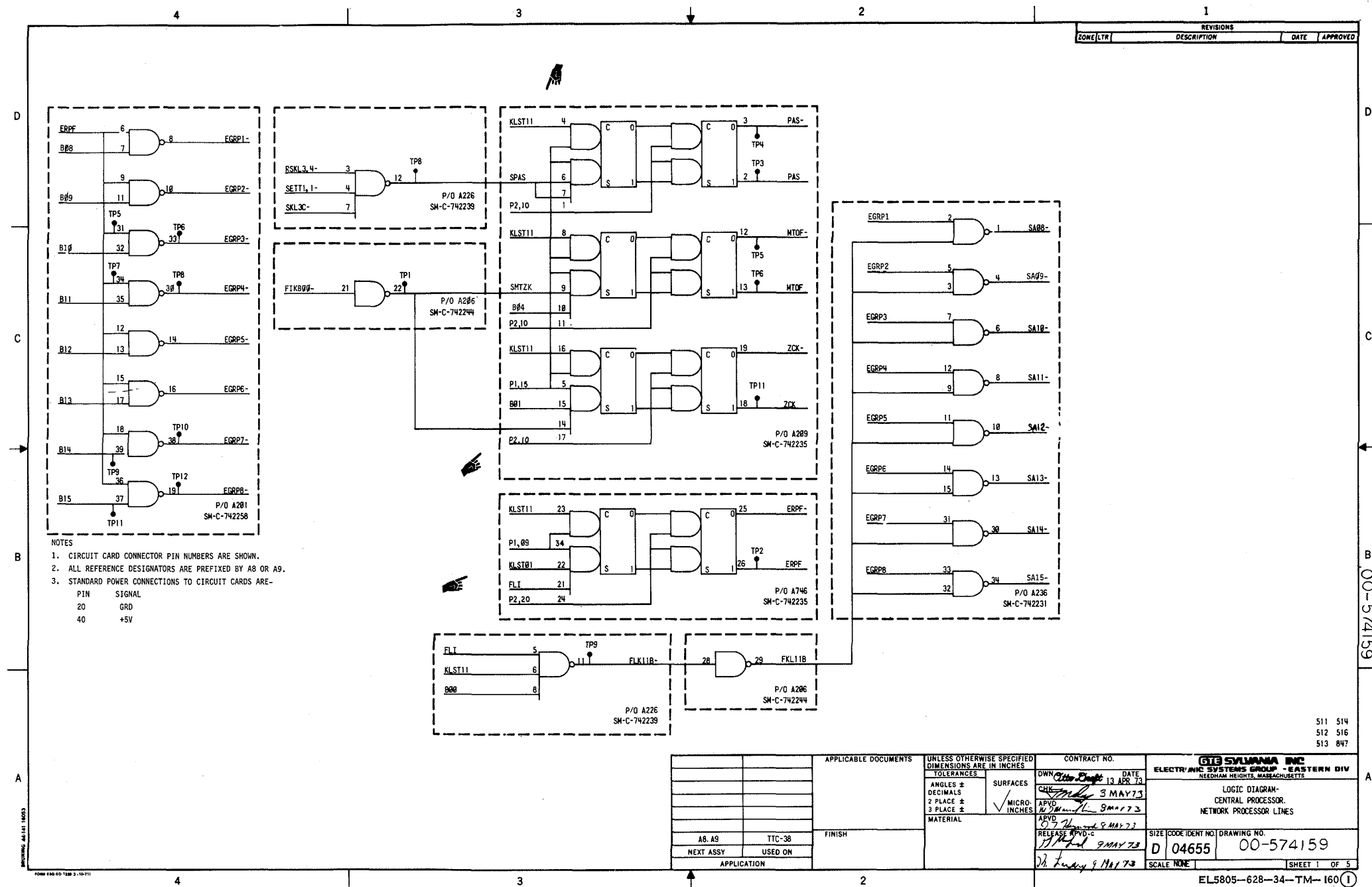


Figure 8-60(1). Central processor network processor lines (sheet 1 of 5)

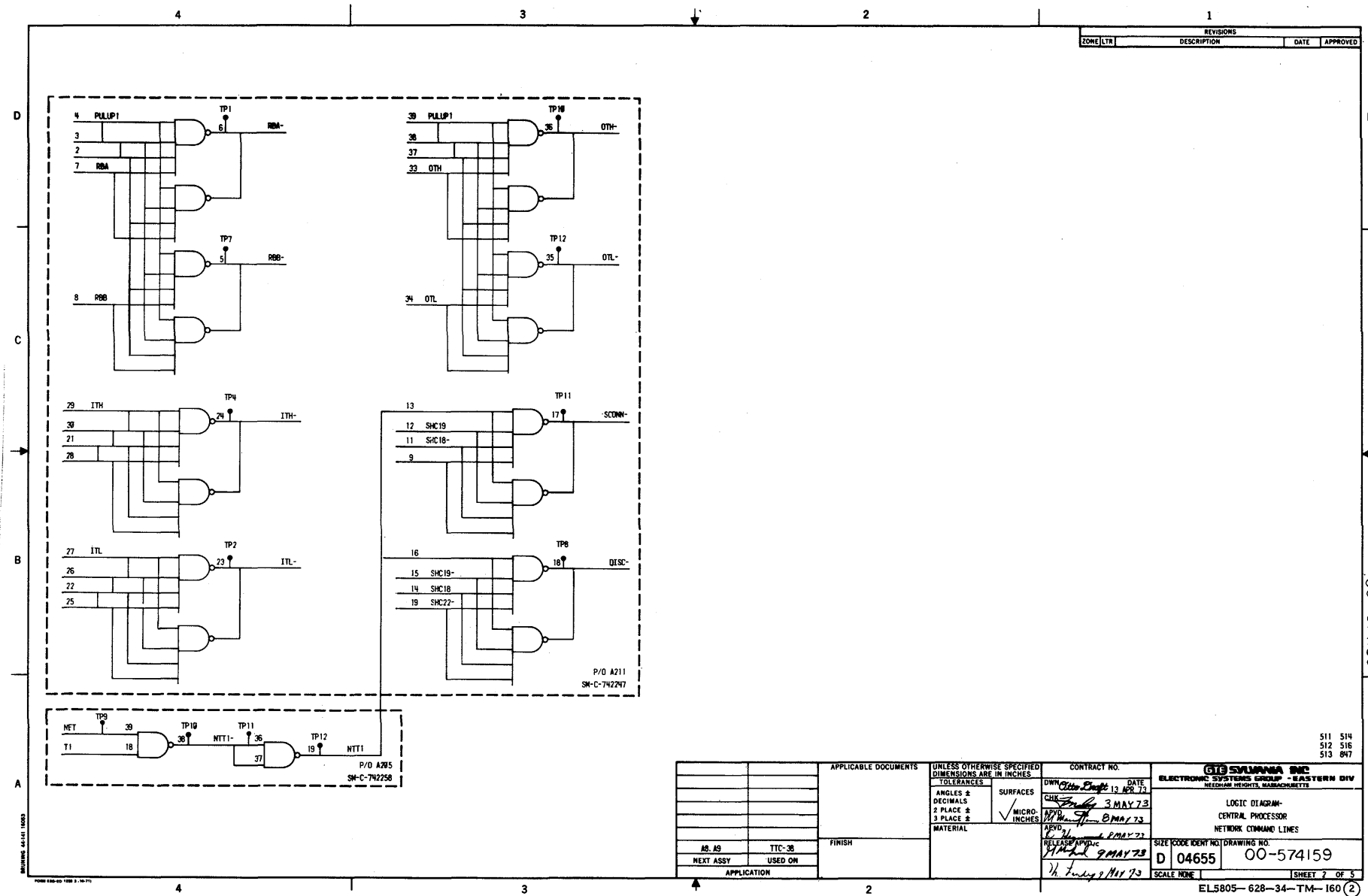


Figure 8-60(2). Central processor network processor lines (sheet 2 of 5)

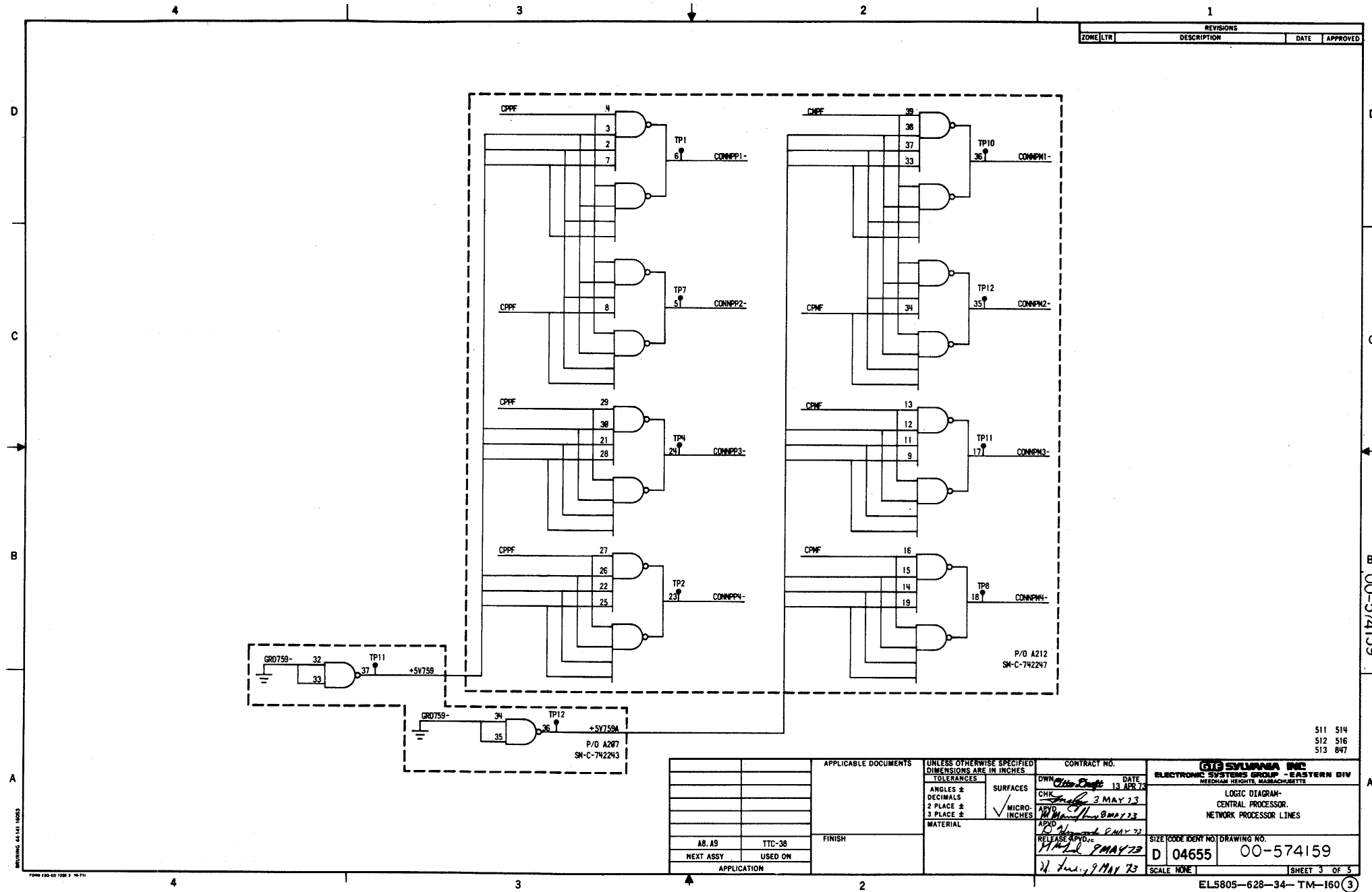


Figure 8-60(3). Central processor network processor lines (sheet 3 of 5)

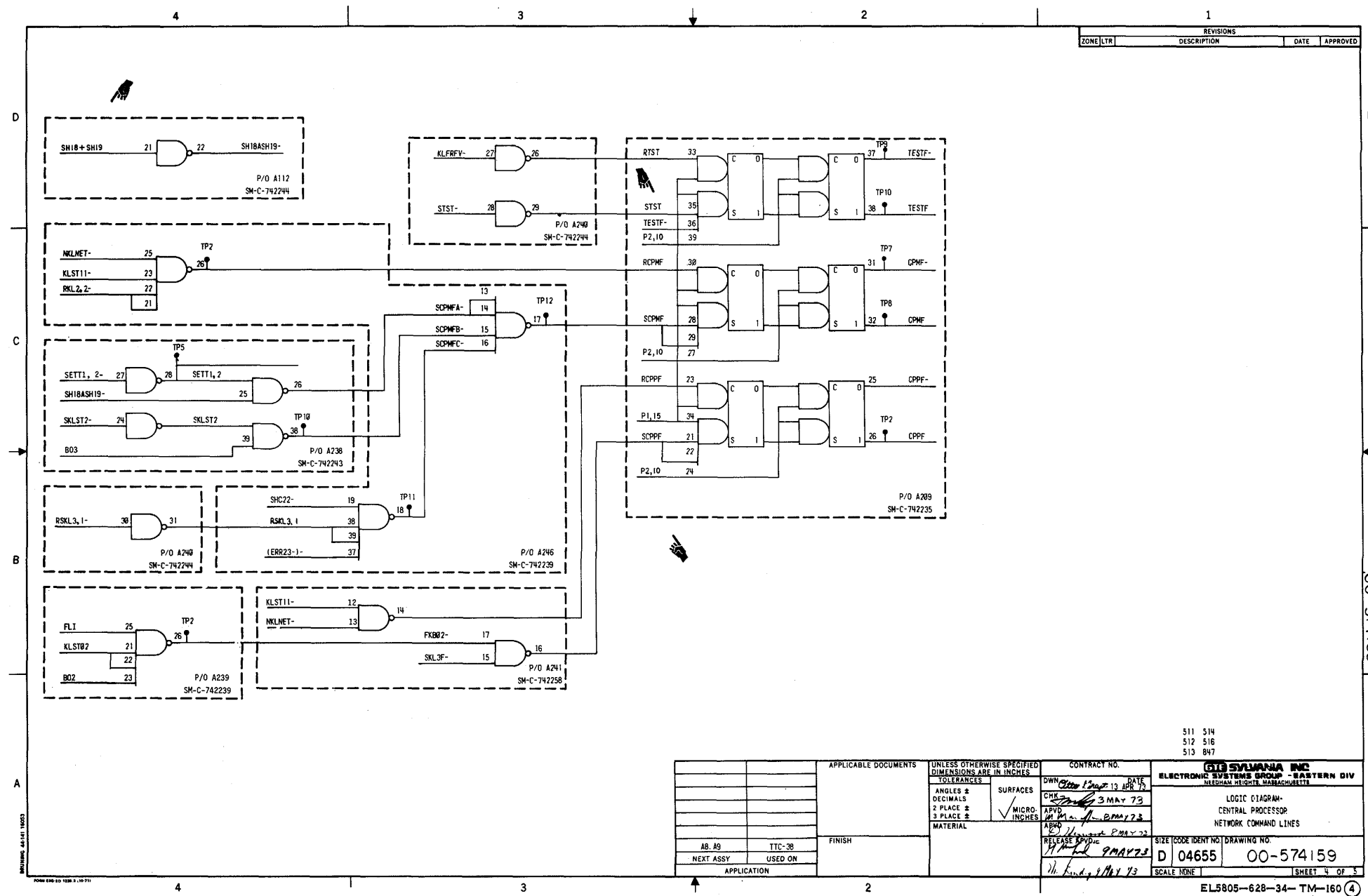


Figure 8-60(4). Central processor network processor lines (sheet 4 of 5)

Change 3

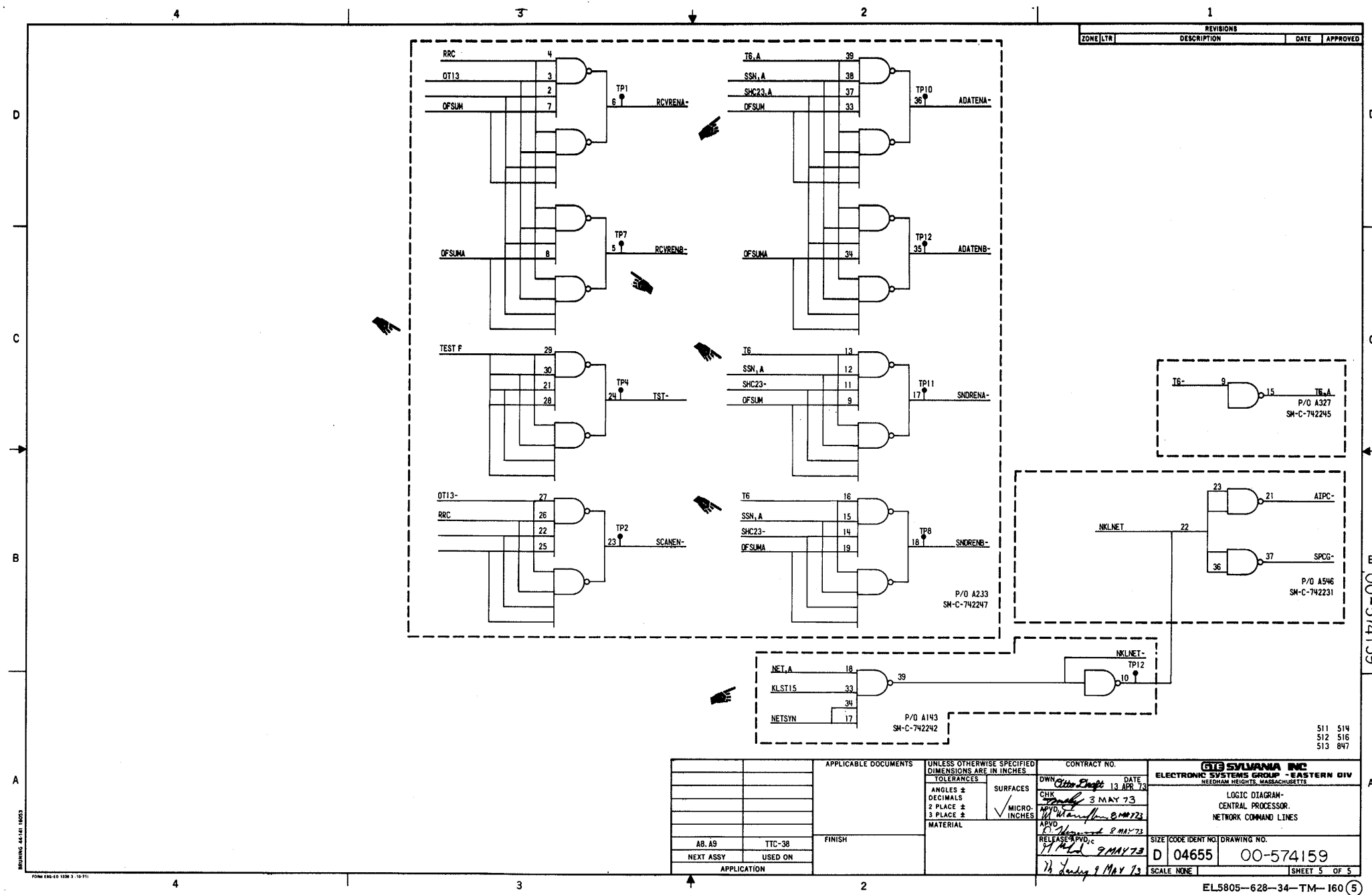


Figure 8-60(5). Central processor network processor lines (sheet 5 of 5)

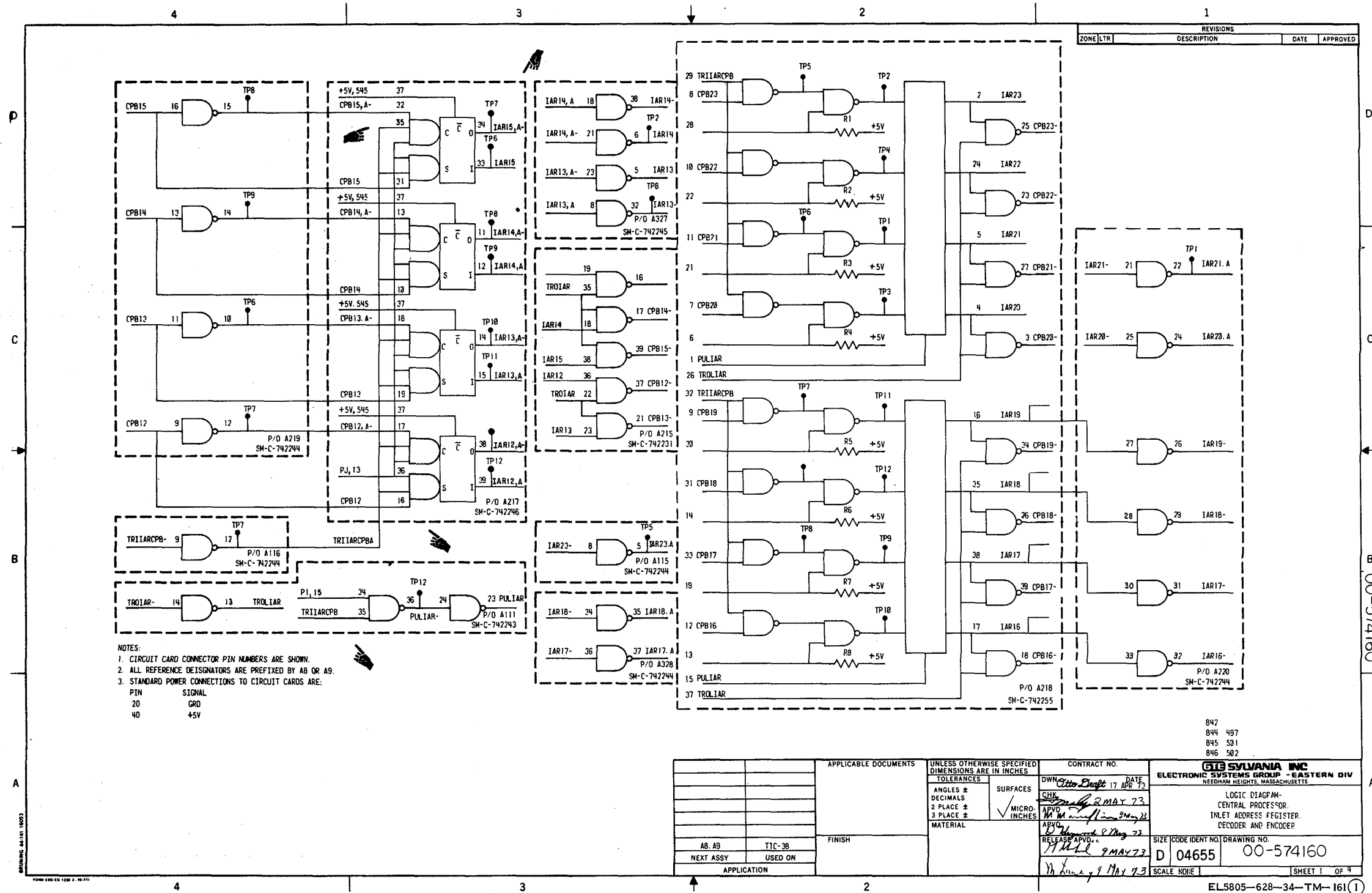


Figure 8-61(1). Central processor inlet address register, decoder and encoder (sheet 1 of 4)

Change 3 8-143

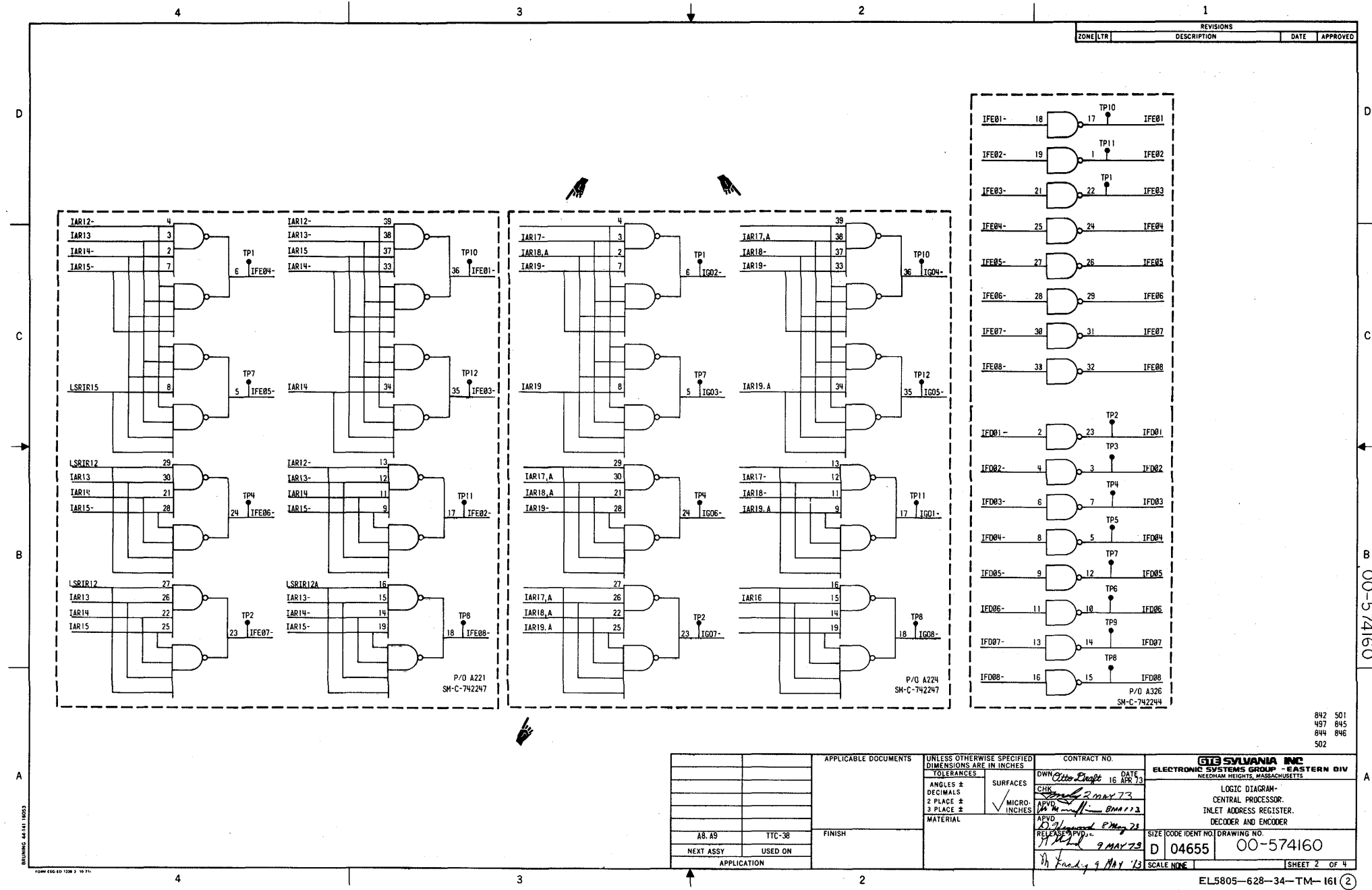


Figure 8-61(2). Central processor inlet address register, decoder and encoder (sheet 2 of 4)

Change 3 8-144

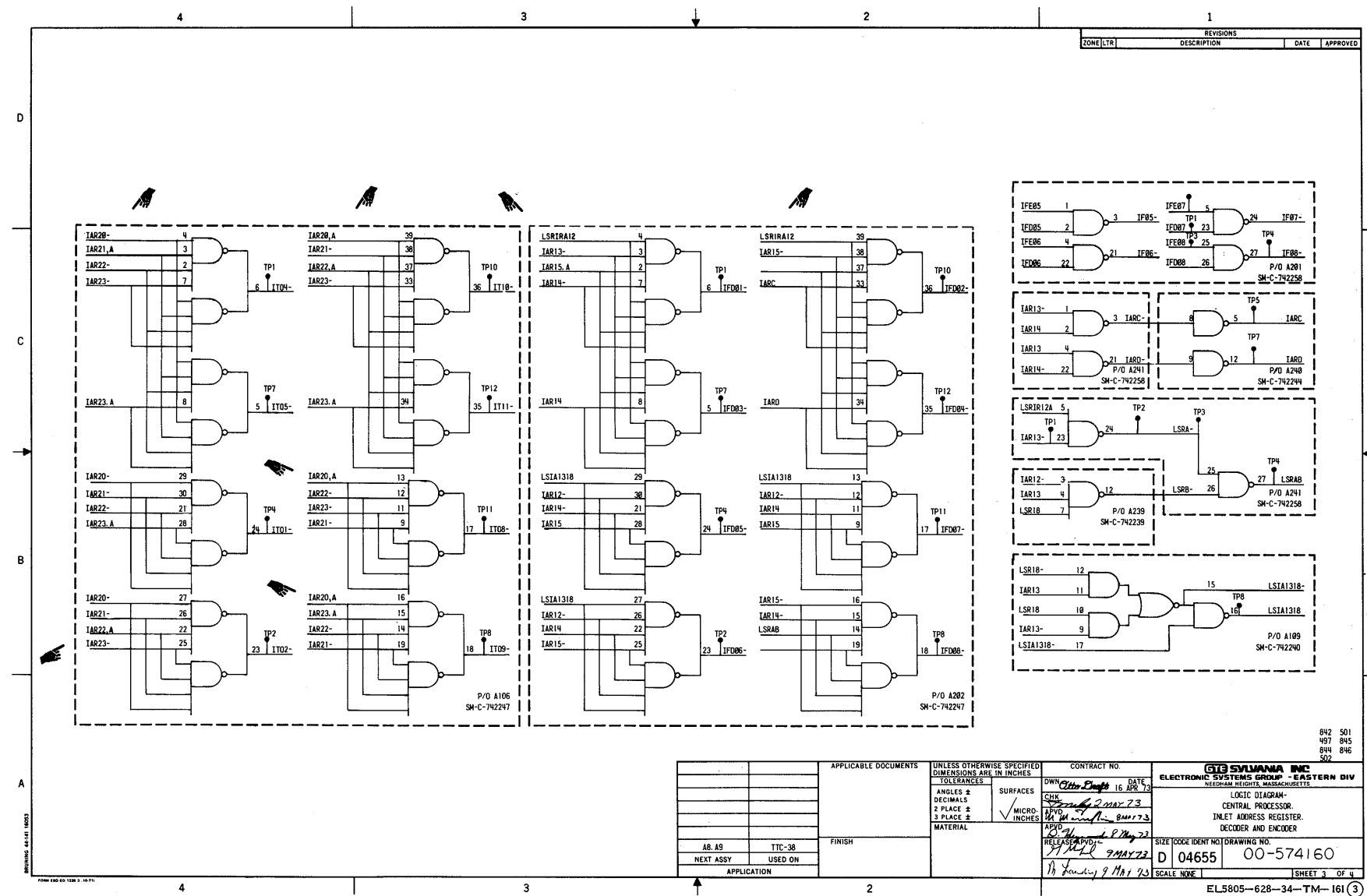


Figure 8-61(3). Central processor inlet address register, decoder and encoder (sheet 3 of 4)

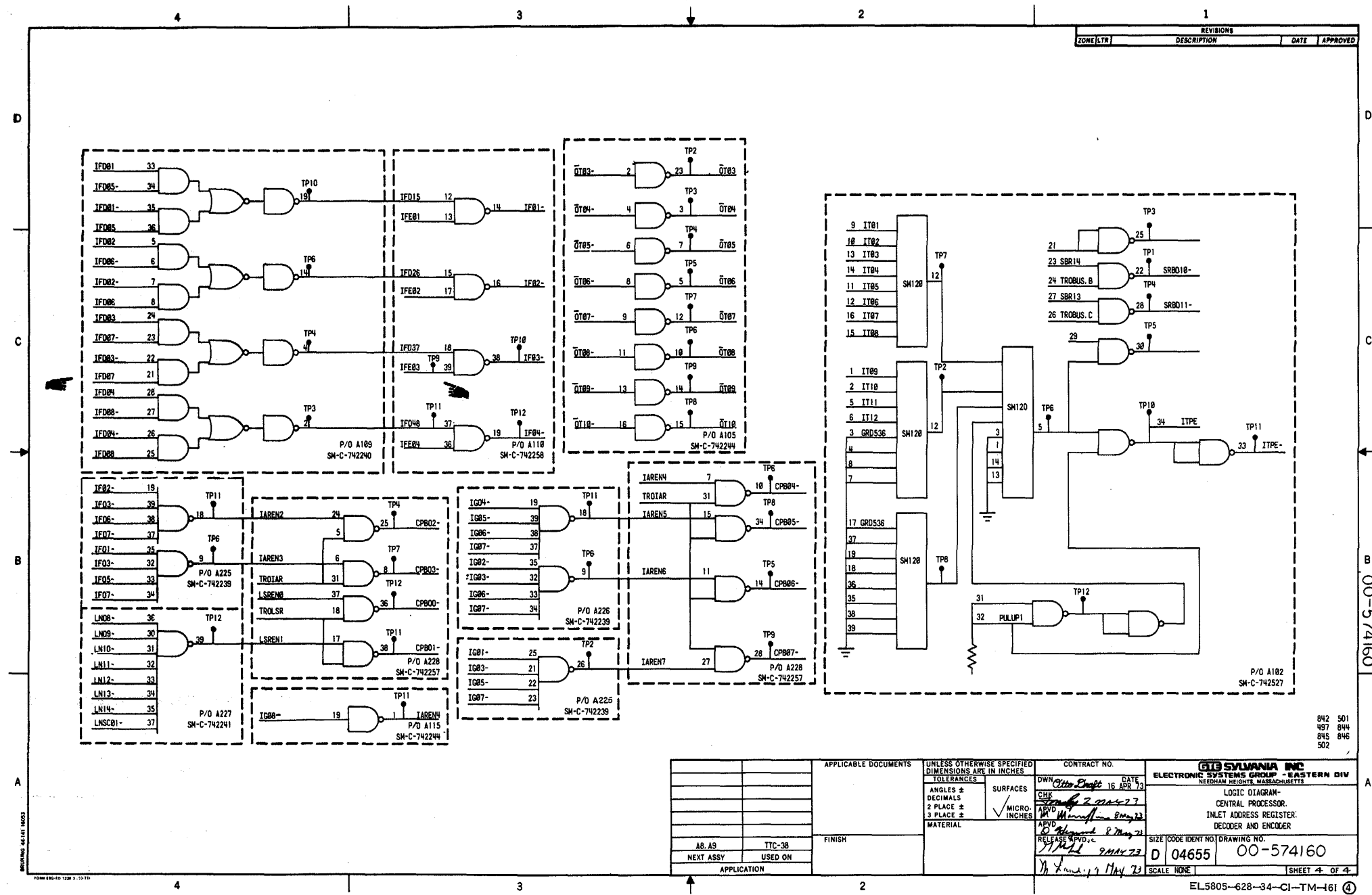


Figure 8-61(4). Central processor inlet address register, decoder and encoder (sheet 4 of 4)

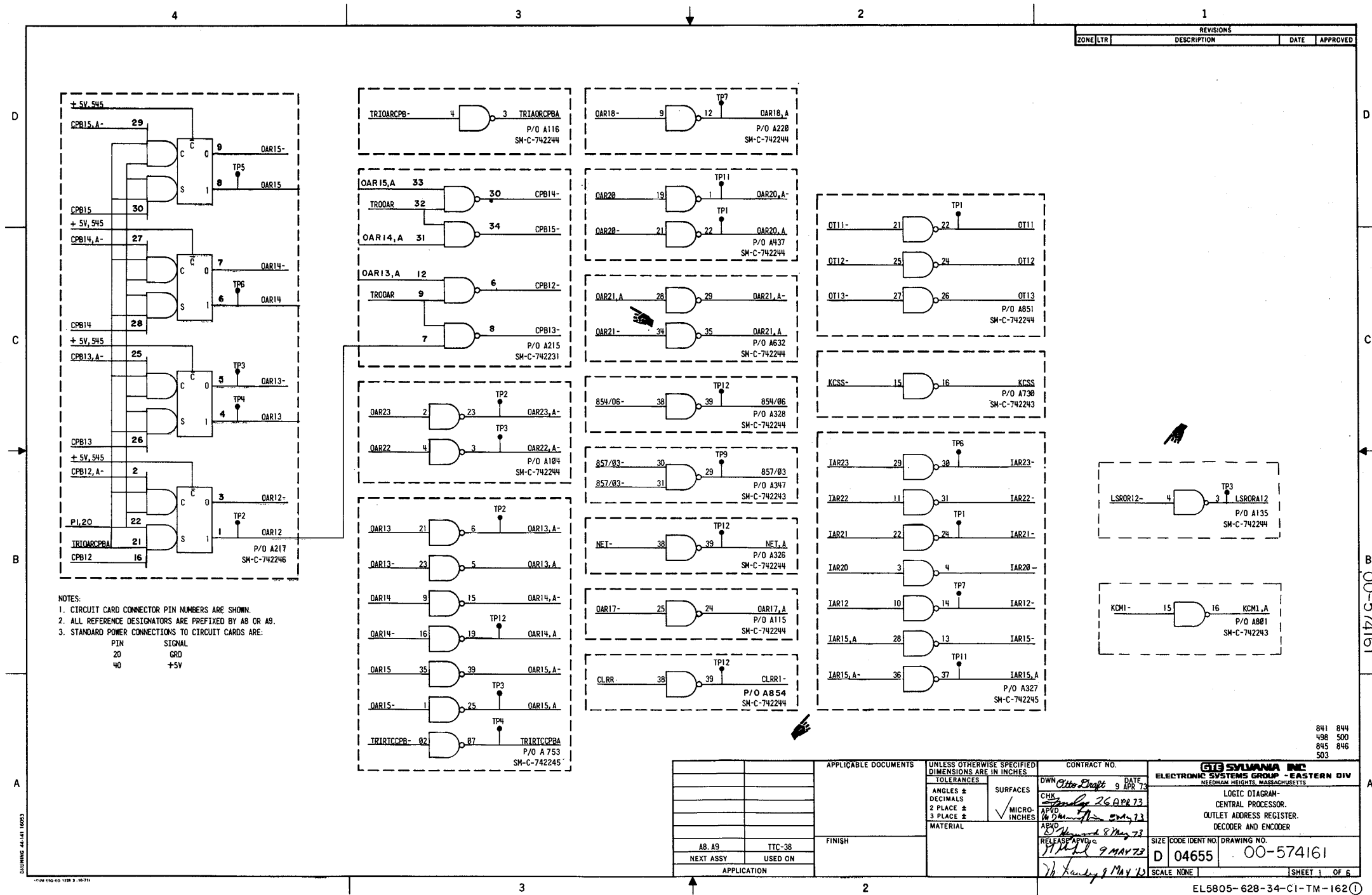


Figure 8-62(1). Central processor outlet address register, decoder and encoder (sheet 1 of 6)

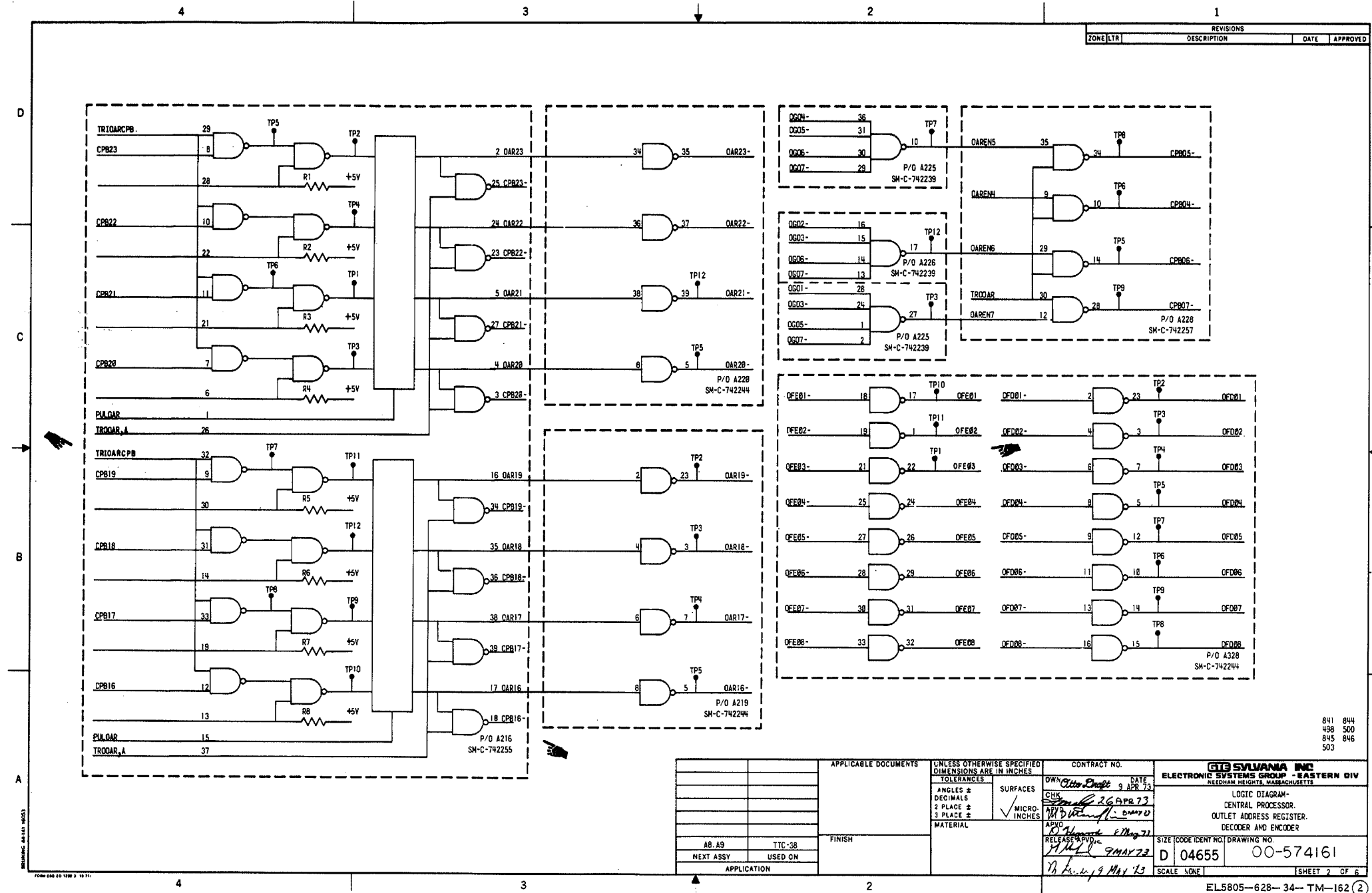


Figure 8-62(2). Central processor outlet address register, decoder and encoder (sheet 2 of 6)

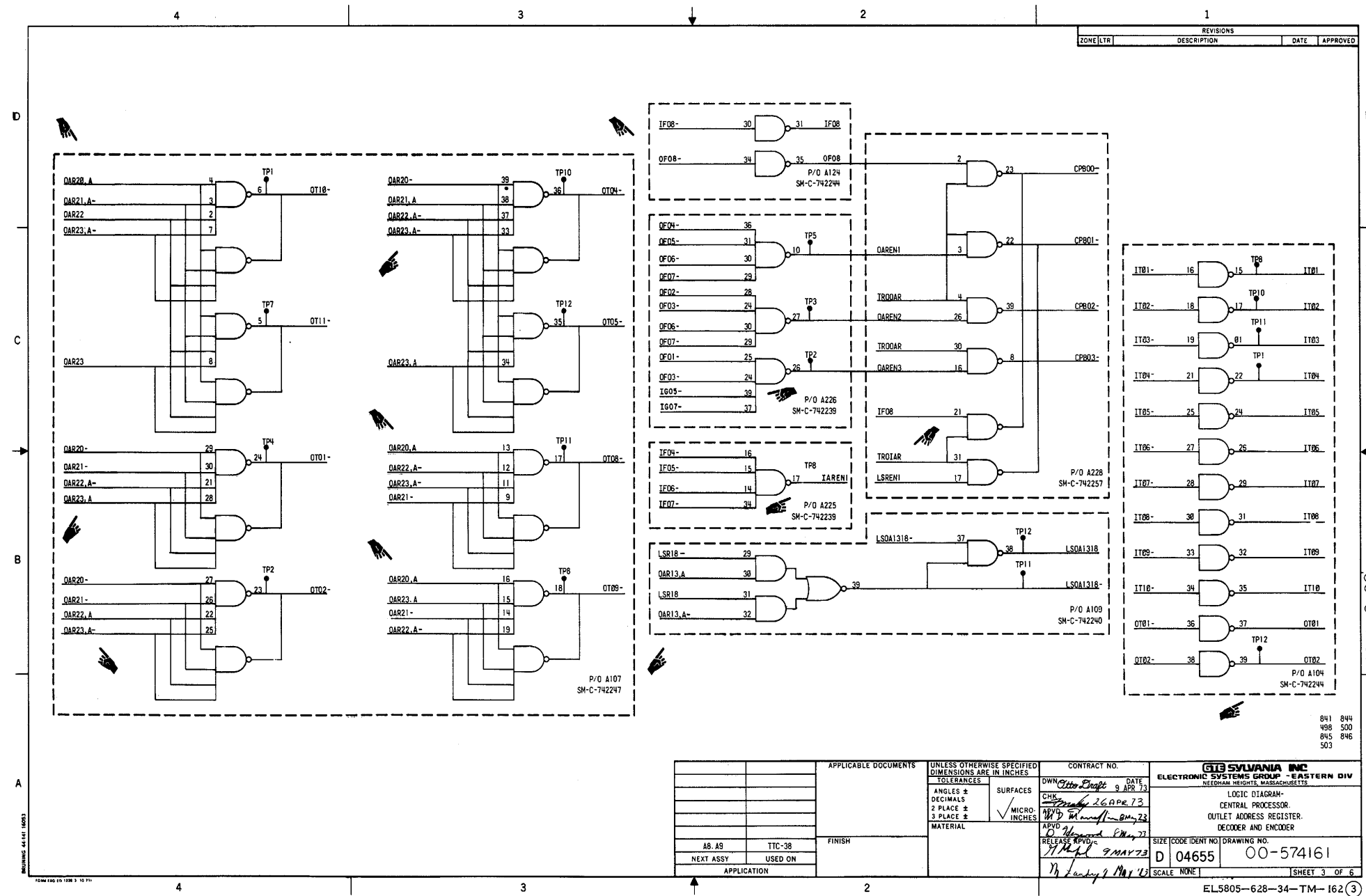
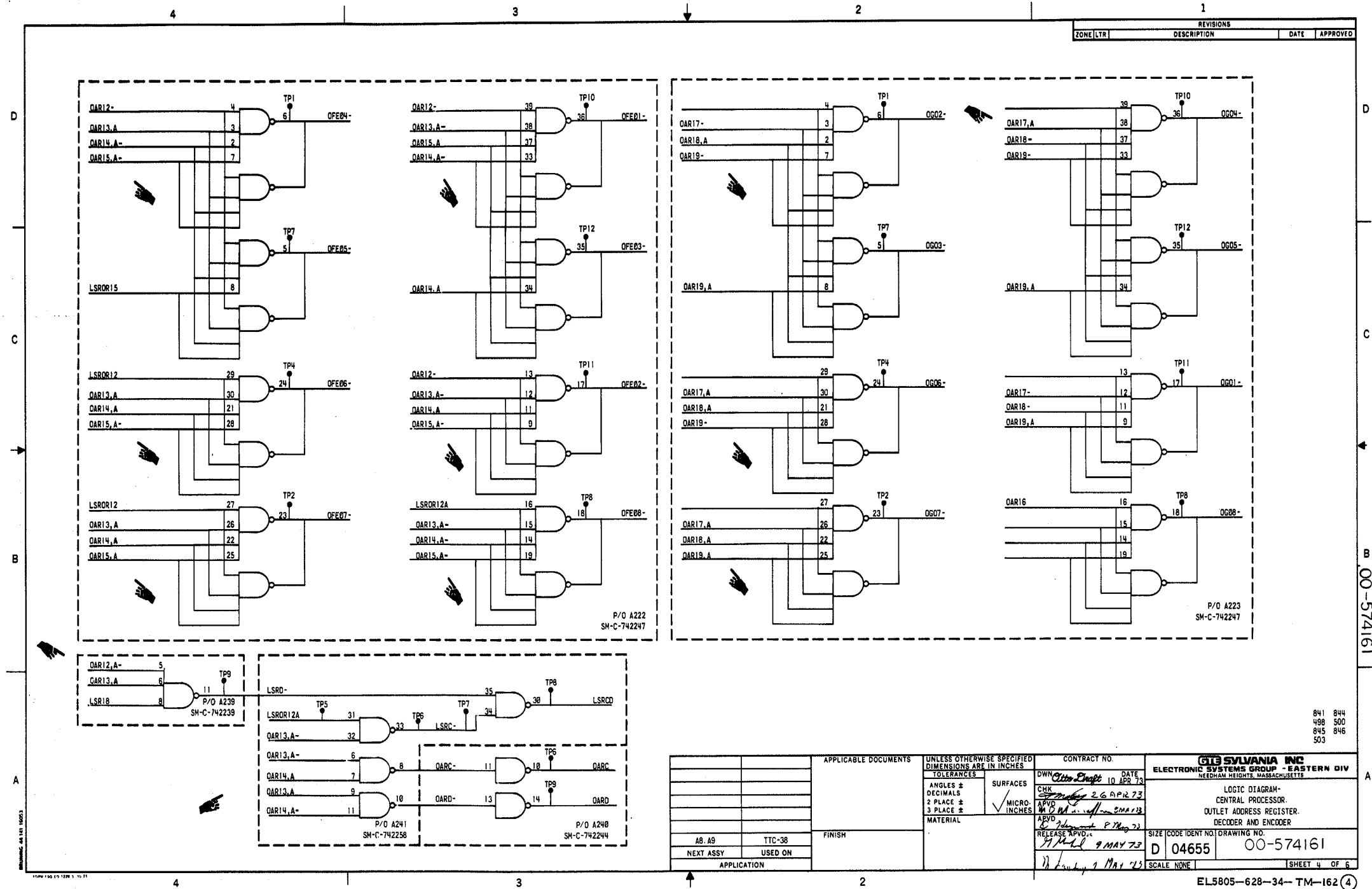


Figure 8-62(3). Central processor outlet address register, decoder and encoder (sheet 3 of 6)



REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED

00-574161

841 844
498 500
845 846
503

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
FINISH		TOLERANCES		DATE		LOGIC DIAGRAM - CENTRAL PROCESSOR - OUTLET ADDRESS REGISTER - DECODER AND ENCODER	
AB, A9		ANGLES ±		10 APR 73		SIZE (CODE IDENT NO) DRAWING NO:	
NEXT ASSY USED ON		SURFACES		APPROVED		D 04655 00-574161	
APPLICATION		MICRO INCHES		RELEASE APPROVED		SCALE NONE SHEET 4 OF 6	
		MATERIAL		17 MAY 73		EL5805-628-34-TM-162 (4)	

Figure 8-62(4). Central processor outlet address register, decoder and encoder (sheet 4 of 6)

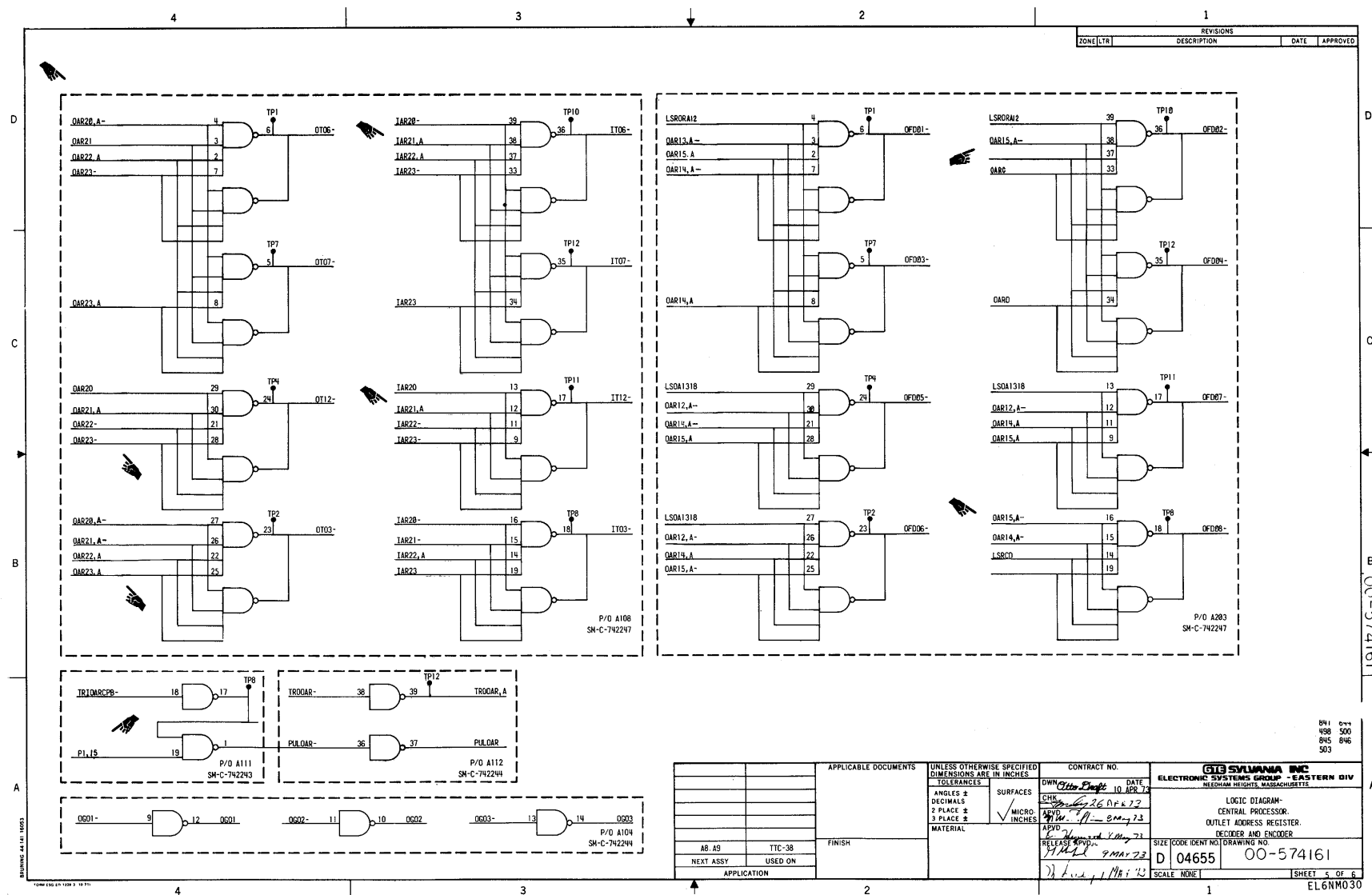


Figure 8-62(5). Central processor outlet address register, decoder and encoder (sheet 5 of 6)

Change 3 8-151

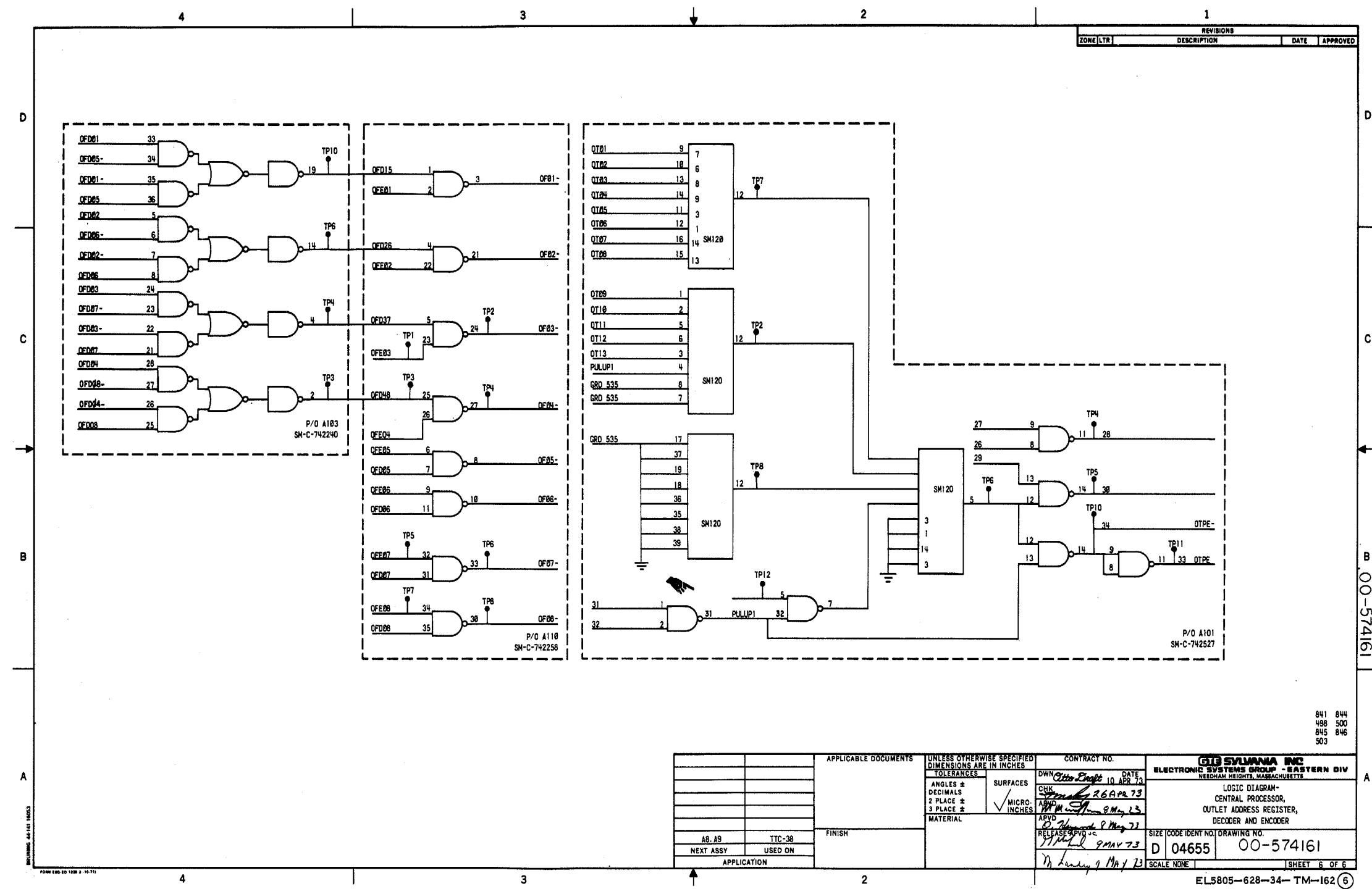


Figure 8-62(6). Central processor outlet address register, decoder and encoder (sheet 6 of 6)

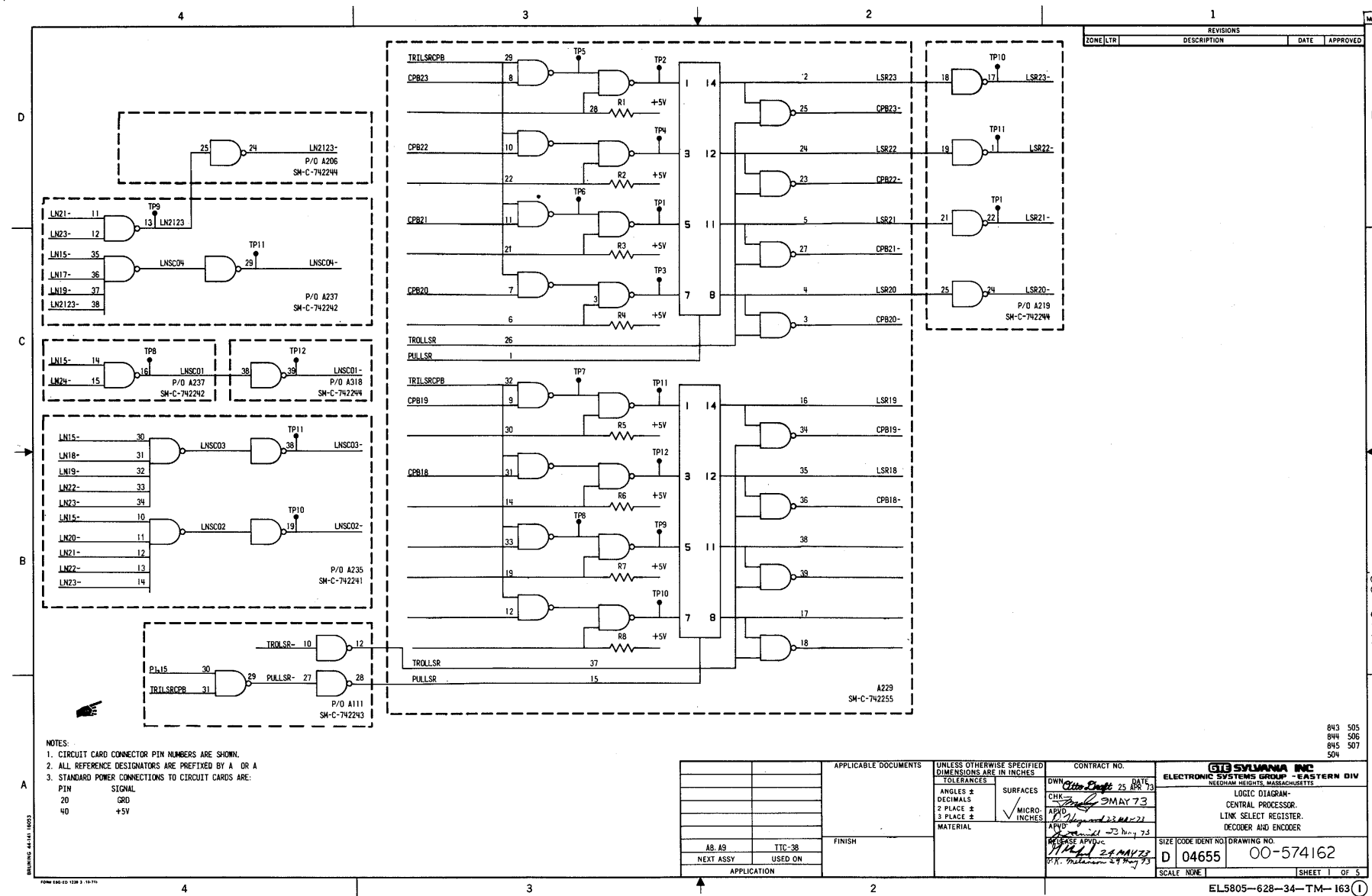


Figure 8-63(1). Central processor link select register, decoder and encoder (1 of 5).

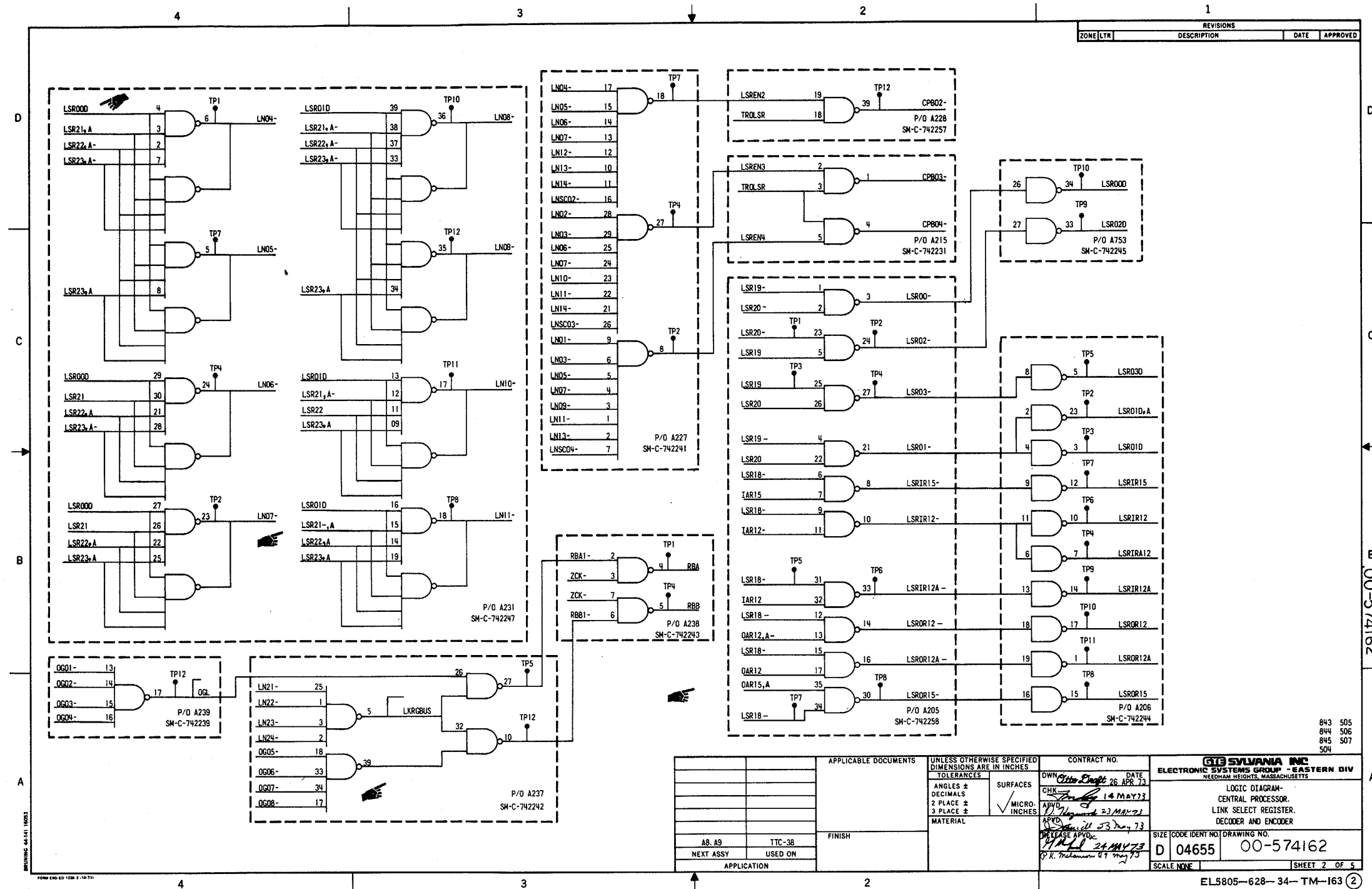


Figure 8-63(2). Central processor link select register, decoder and encoder (2 of 5).

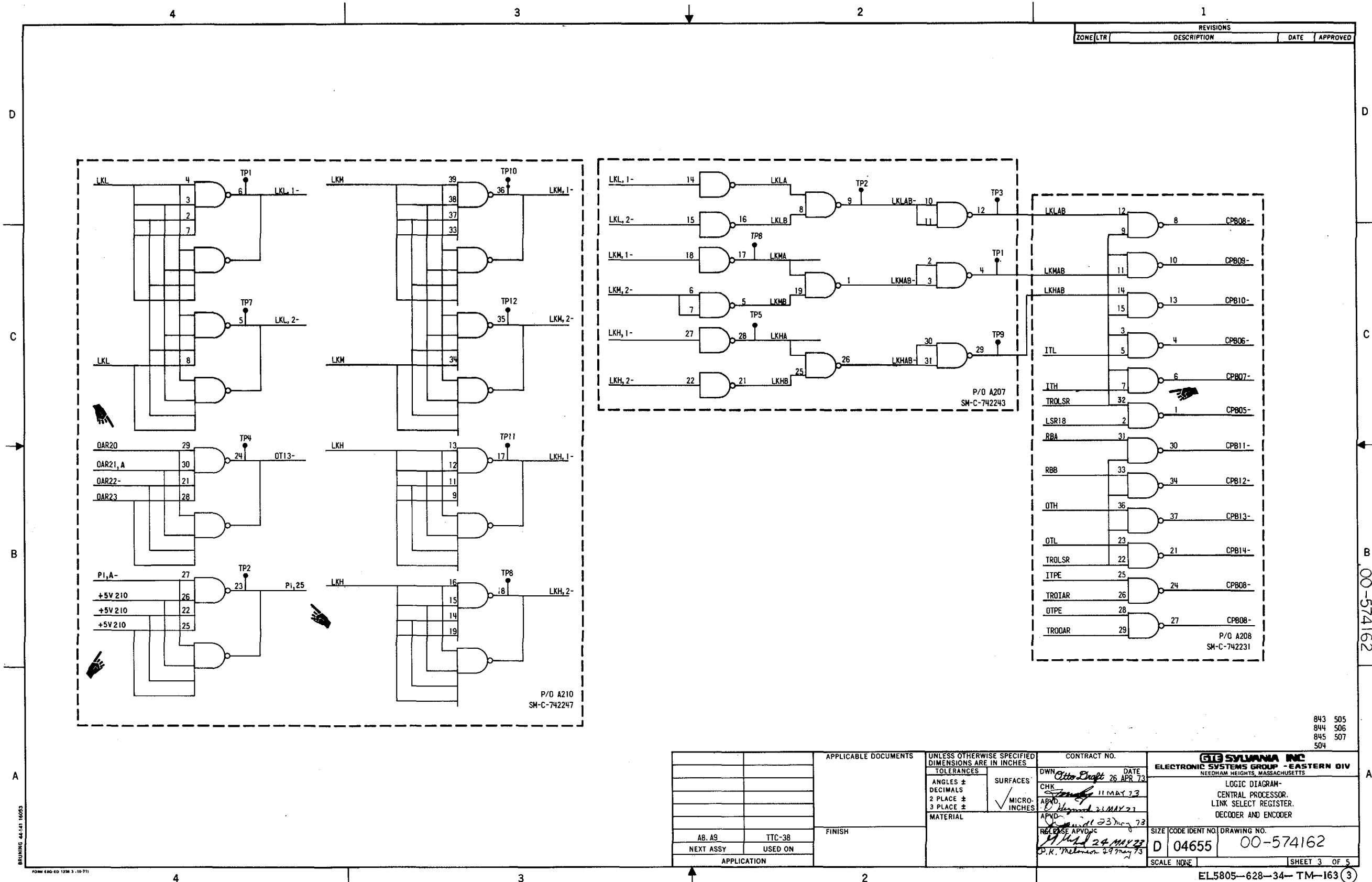


Figure 8-63(3). Central processor link select register, decoder and encoder (sheet 3 of 5).

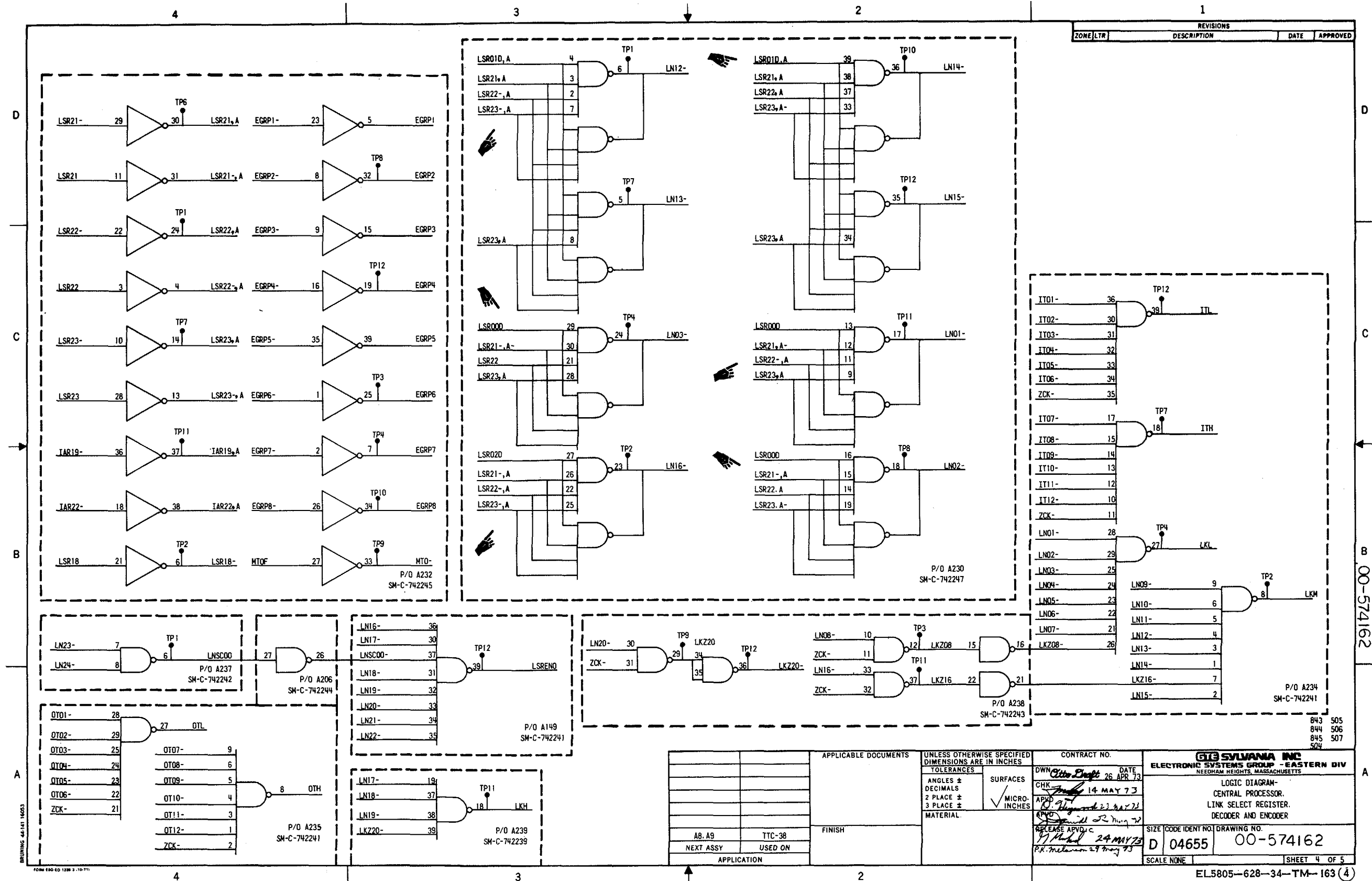
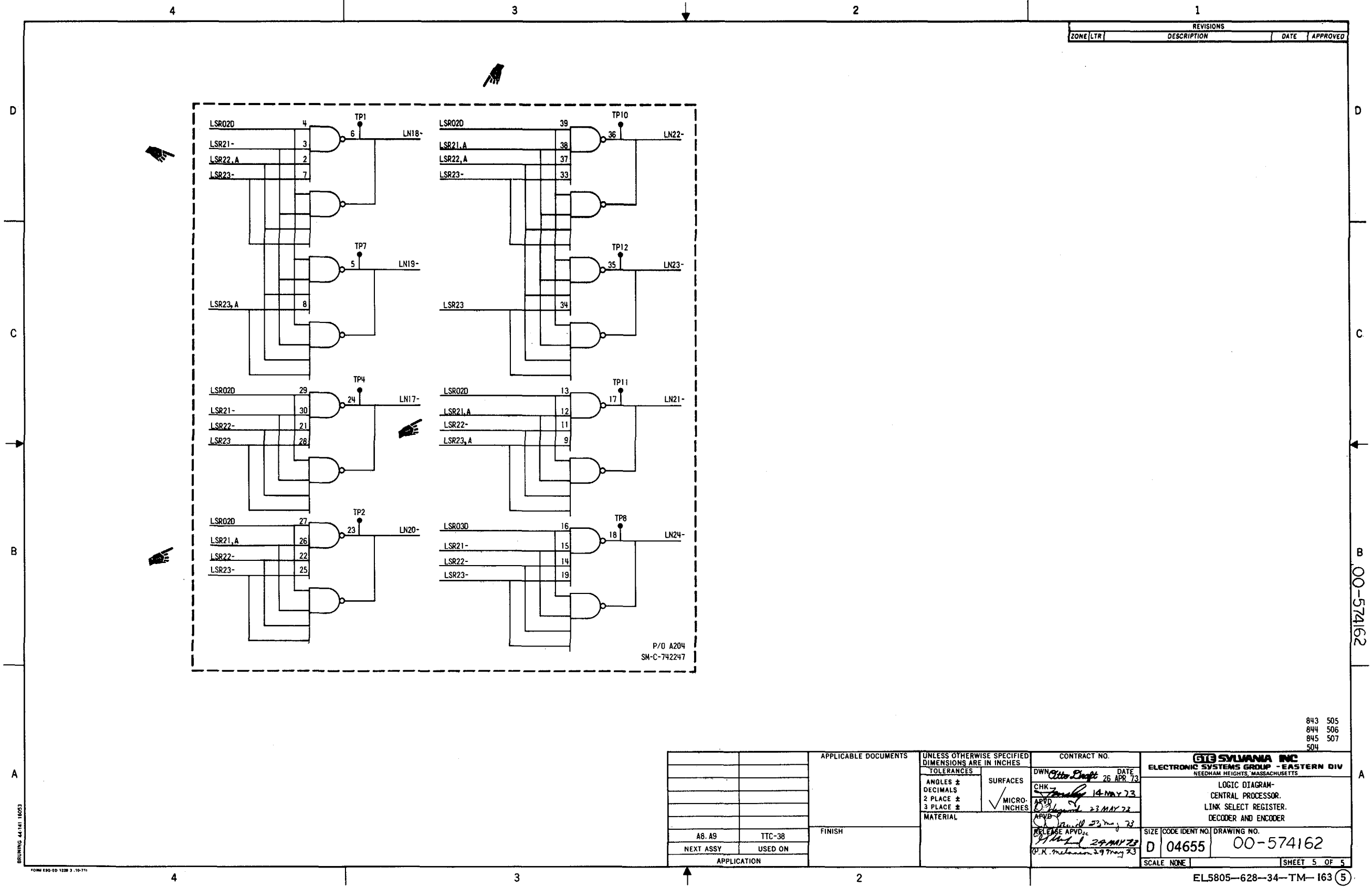


Figure 8-63(4). Central processor link select register, decoder and encoder (sheet 4 of 5).



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

843 505
844 506
845 507
504

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
							LOGIC DIAGRAM-
							CENTRAL PROCESSOR.
							LINK SELECT REGISTER.
							DECODER AND ENCODER
							SIZE (CODE IDENT NO) DRAWING NO.
							D 04655 00-574162
							SCALE NONE SHEET 5 OF 5

Figure 8-63(5). Central processor link select register, decoder and encoder (sheet 5 of 5).

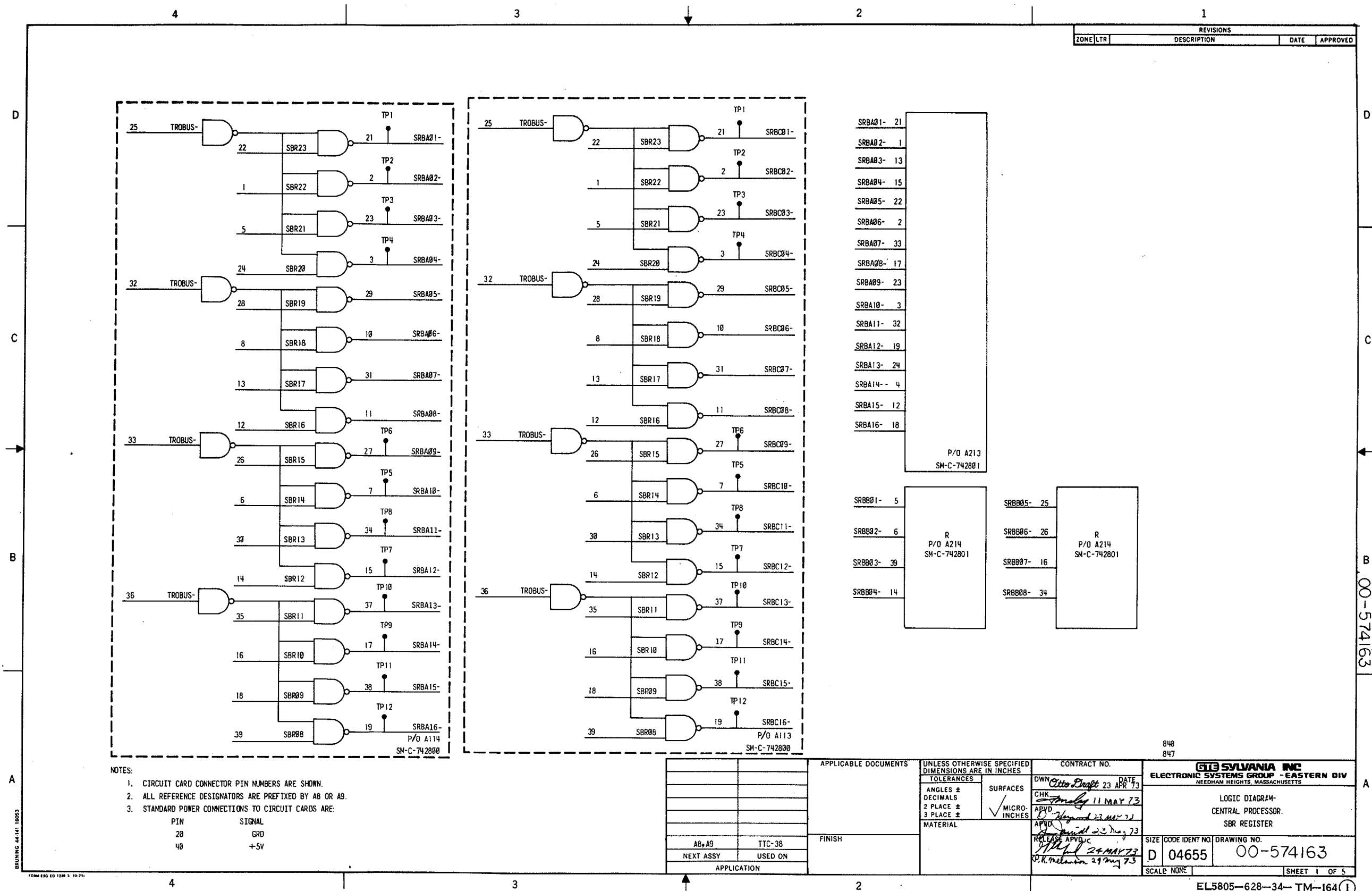


Figure 8-64(1). Central processor SBR register (sheet 1 of 5).

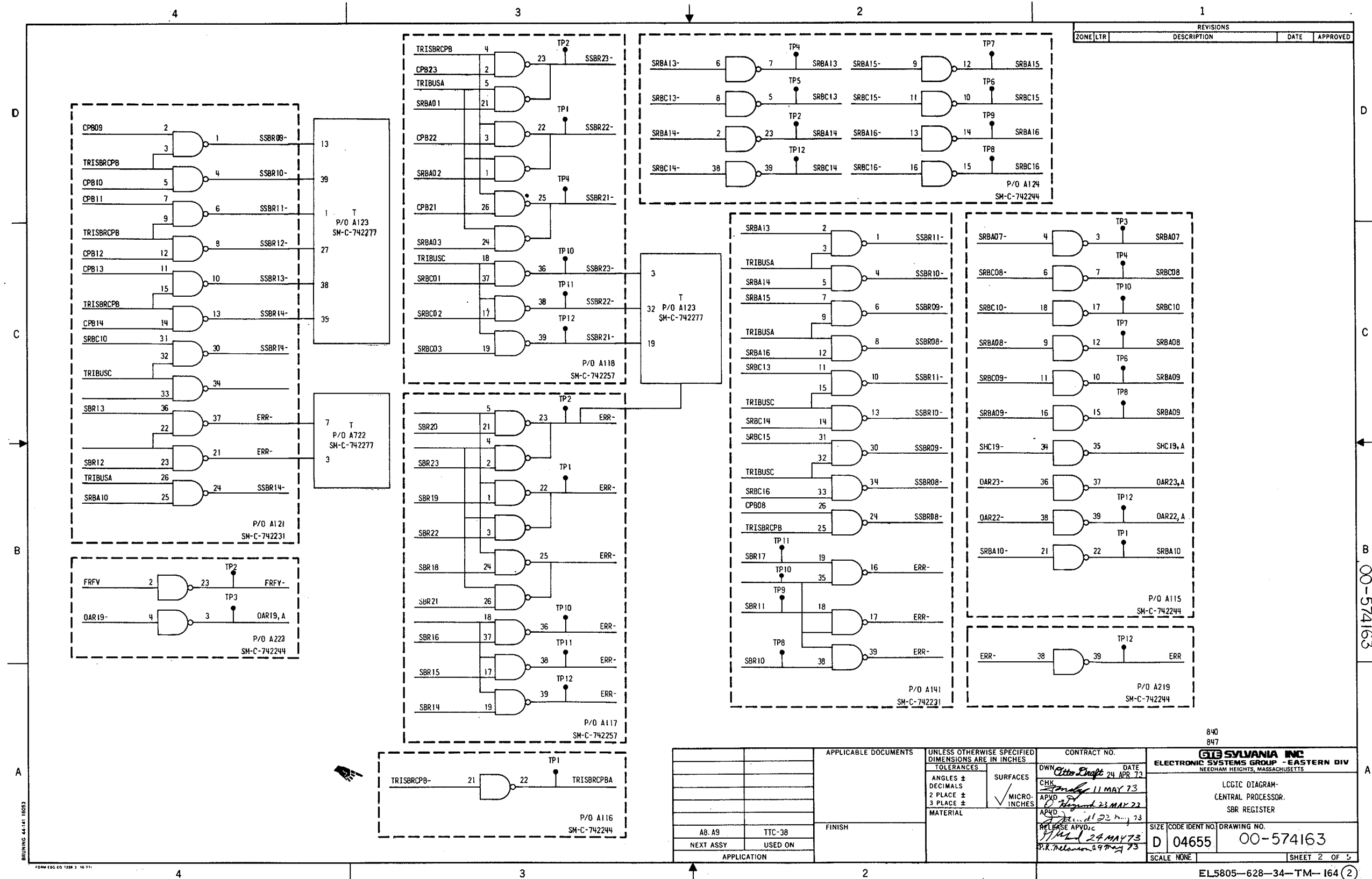


Figure 8-64(2). Central processor SBR register (sheet 2 of 5).

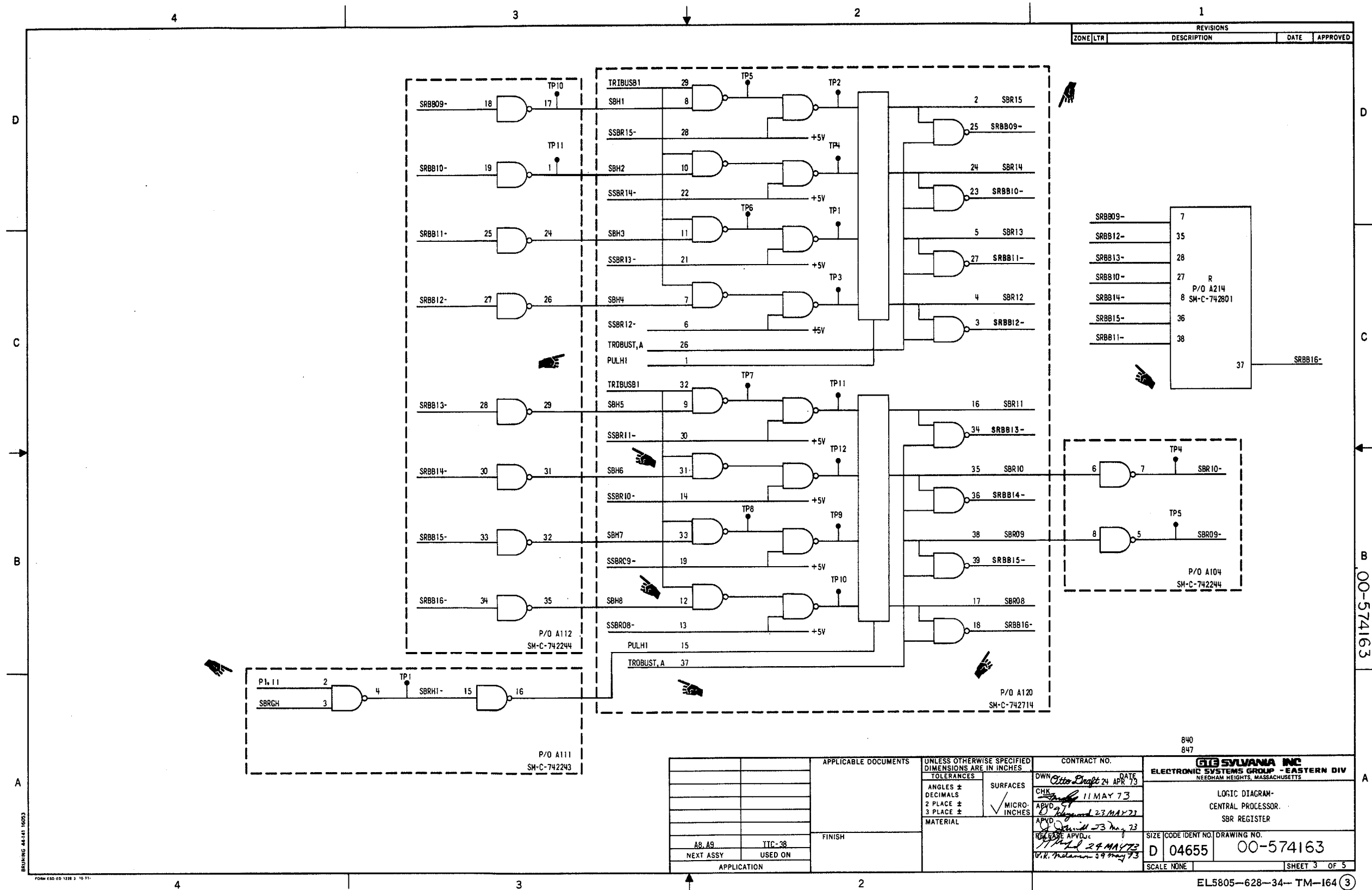


Figure 8-64(3). Central processor SBR register (sheet 3 of 5).

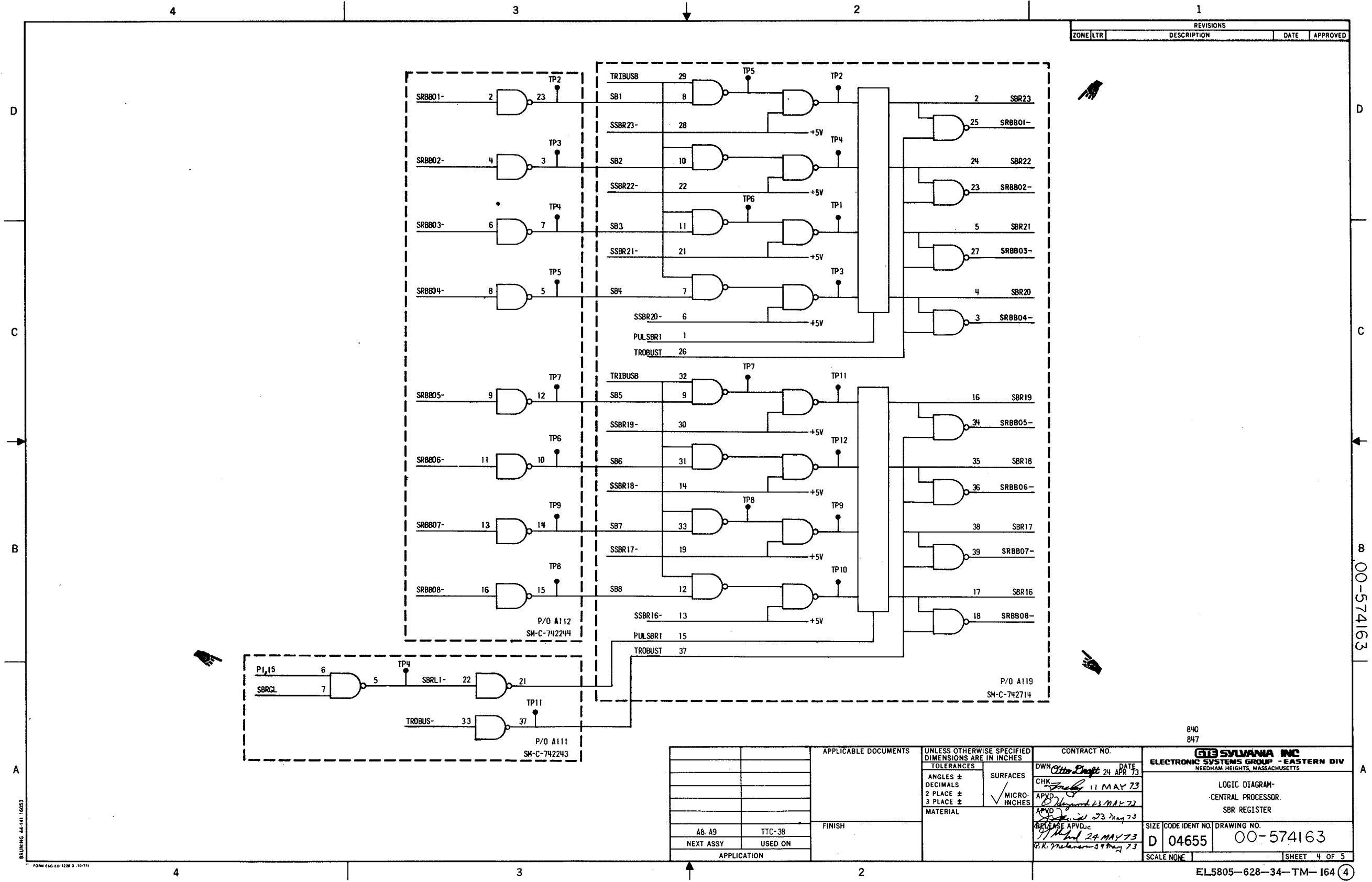


Figure 8-64(4). Central processor SBR register (sheet 4 of 5).

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
1				

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.	
		TOLERANCES		OWN <i>Otto Draft</i> DATE 24 APR 73	
		ANGLES ±		CHK <i>Frank</i> 11 MAY 73	
		DECIMALS		APVD <i>O. H. ...</i> 23 MAY 73	
		2 PLACE ±		APVD <i>...</i> 24 MAY 73	
		3 PLACE ±		APVD <i>...</i> 24 MAY 73	
		MATERIAL		APVD <i>...</i> 24 MAY 73	
FINISH				SCALE NONE	
A8, A9		TTC-38		SIZE CODE IDENT NO. DRAWING NO.	
NEXT ASSY USED ON				D 04655 00-574163	
APPLICATION				SHEET 4 OF 5	

840
847

840
847
GTE SYLVANIA INC
ELECTRONIC SYSTEMS GROUP - EASTERN DIV
NEEDHAM HEIGHTS, MASSACHUSETTS
LOGIC DIAGRAM-
CENTRAL PROCESSOR.
SBR REGISTER
SIZE CODE IDENT NO. DRAWING NO.
D 04655 00-574163
SCALE NONE SHEET 4 OF 5

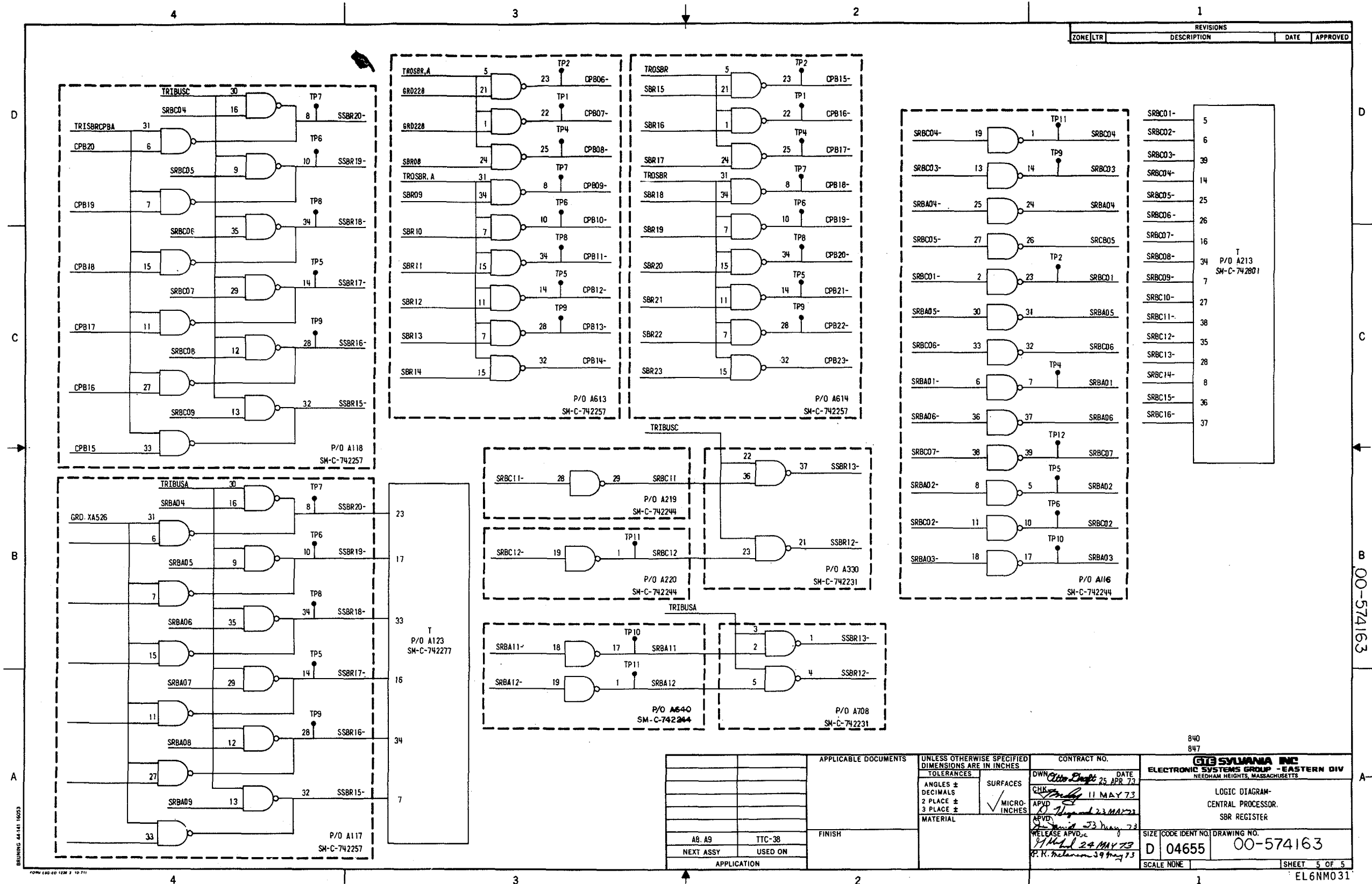
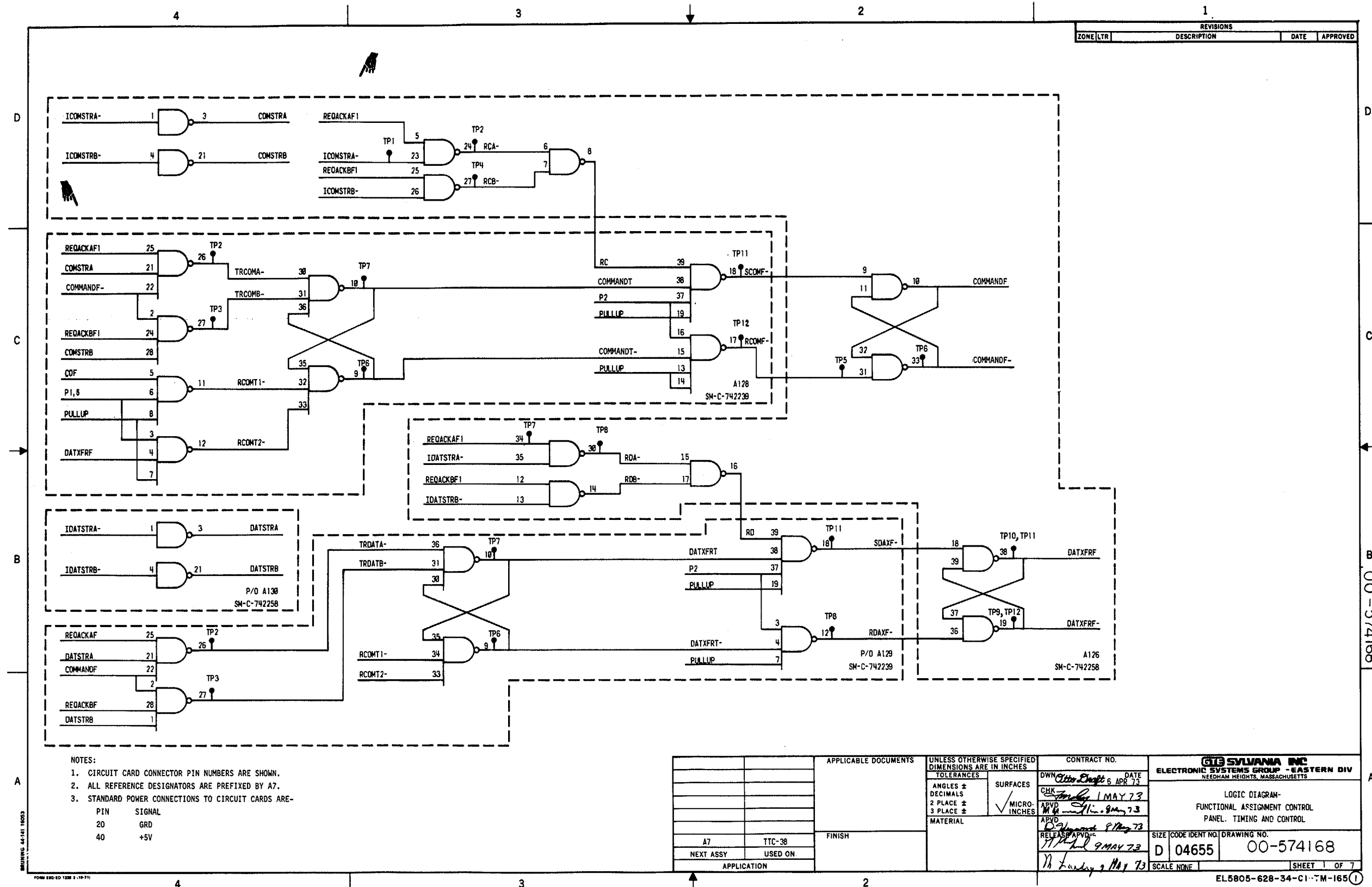


Figure 8-64(5). Central processor SBR register (sheet 5 of 5).

8-3 Functional Assignment Control Panel, A7



- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A7.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE-
- | | |
|-----|--------|
| PIN | SIGNAL |
| 20 | GRD |
| 40 | +5V |

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.	
		TOLERANCES		DWN <i>Atty Draft</i> DATE 6 APR 73	
		ANGLES ±		CHK <i>Atty</i> 1 MAY 73	
		DECIMALS		APVD <i>M. J. ...</i> 9 MAY 73	
		2 PLACE ±		RELEASE APVD <i>...</i> 9 MAY 73	
		3 PLACE ±		SCALE NONE	
		MATERIAL		SHEET 1 OF 7	
A7		FINISH		SIZE CODE IDENT NO. DRAWING NO.	
NEXT ASSY		USED ON		D 04655 00-574168	
APPLICATION				SCALE NONE	

Figure 8-65(1). Functional assignment control panel timing and control (sheet 1 of 7)

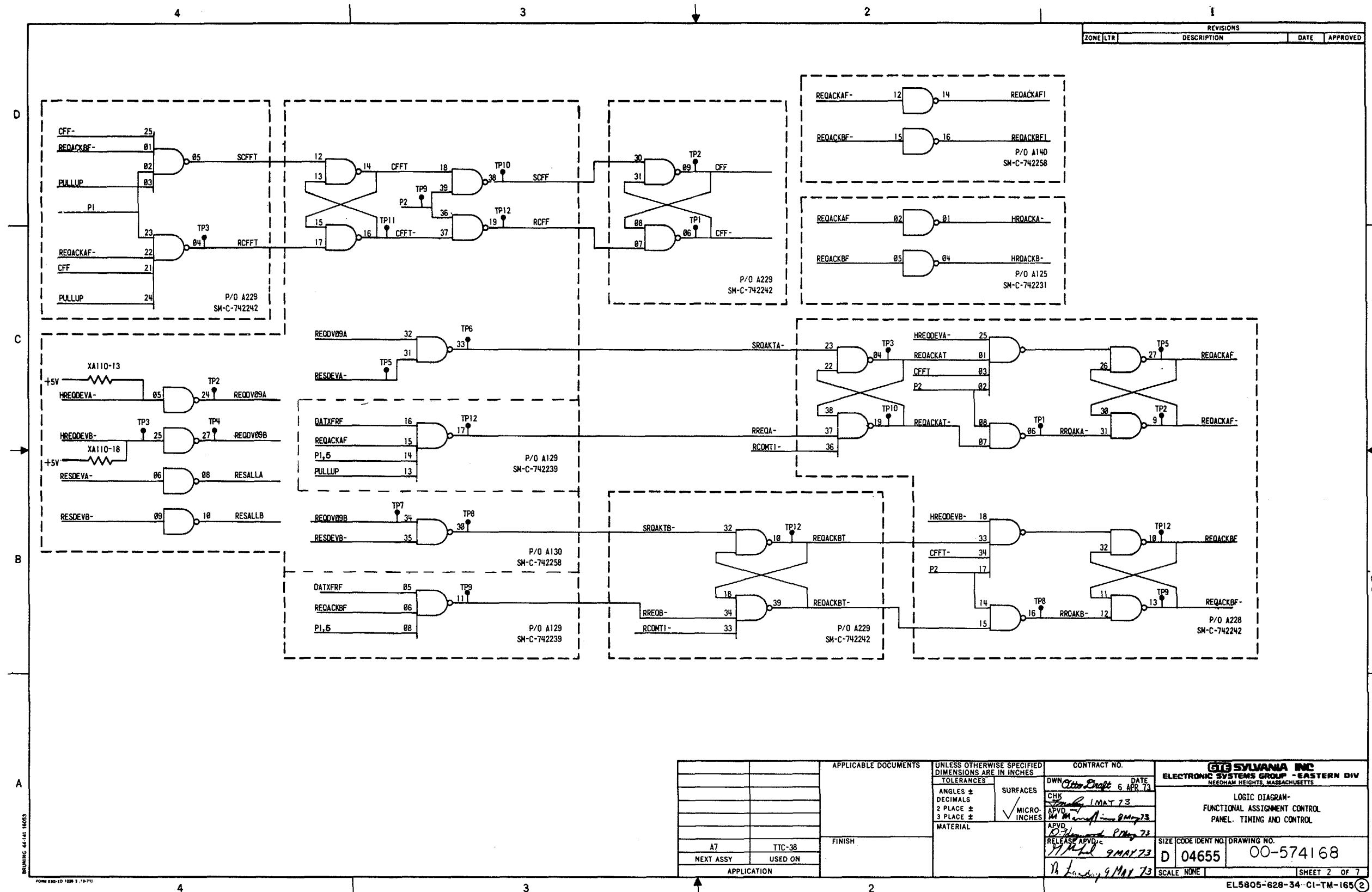


Figure 8-65(2). Functional assignment control panel timing and control (sheet 2 of 7).

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GE Sylvania Inc ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES		DWN <i>Other Draft</i> DATE 6 APR 73		LOGIC DIAGRAM - FUNCTIONAL ASSIGNMENT CONTROL PANEL. TIMING AND CONTROL	
		ANGLES ±		CHK <i>Franky</i> 1 MAY 73			
		DECIMALS		APVD <i>W. M. ...</i> 8 MAY 73			
		2 PLACE ±		RELEASE APVD: <i>W. M. ...</i> 9 MAY 73		SIZE CODE IDENT NO. DRAWING NO.	
		3 PLACE ±		APVD <i>W. M. ...</i> 9 MAY 73		D 04655 00-574168	
		MATERIAL				SCALE NONE SHEET 2 OF 7	
A7 TTC-38		FINISH				EL5805-628-34-C1-TM-165(2)	
NEXT ASSY USED ON							
APPLICATION							

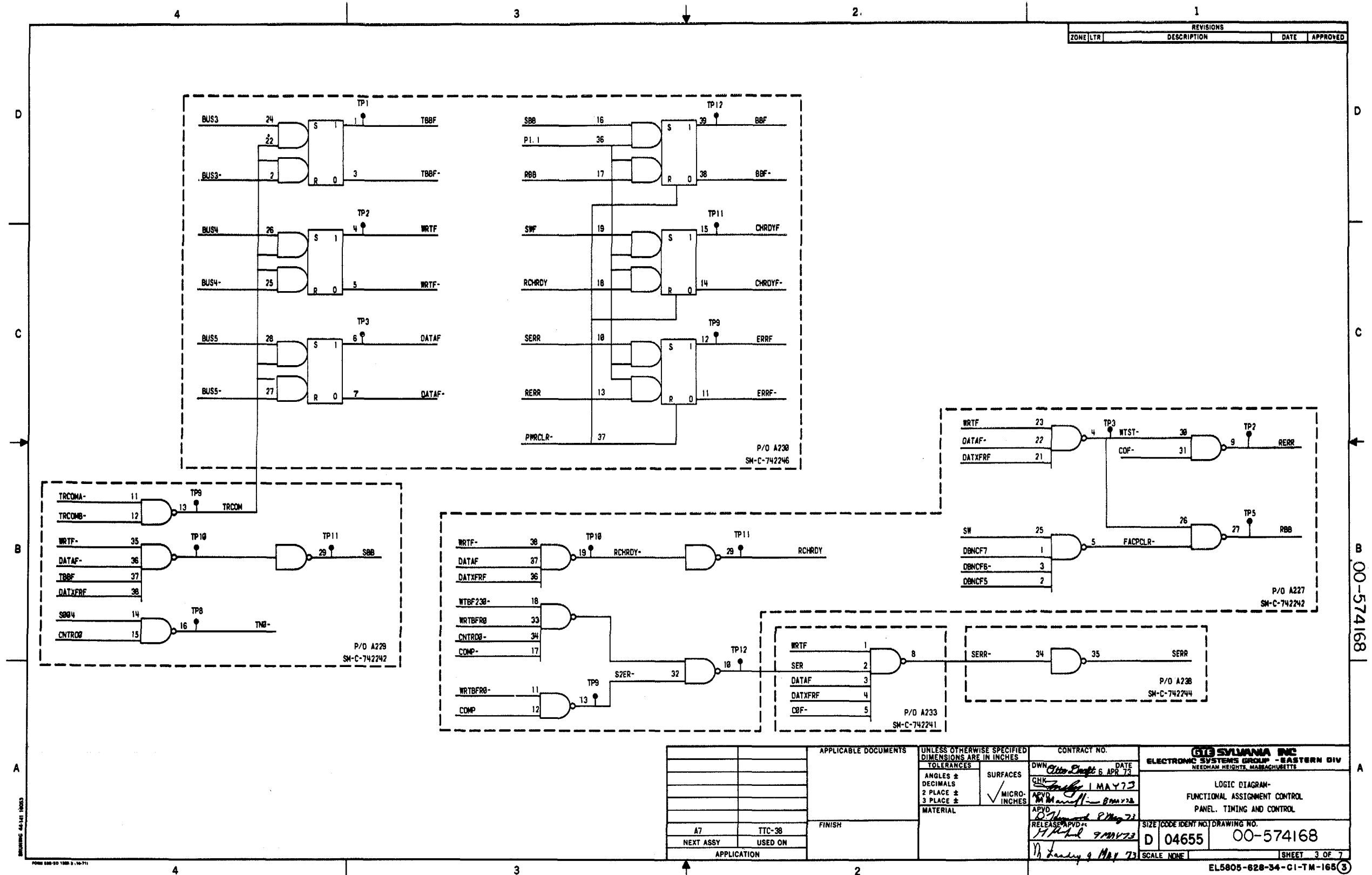
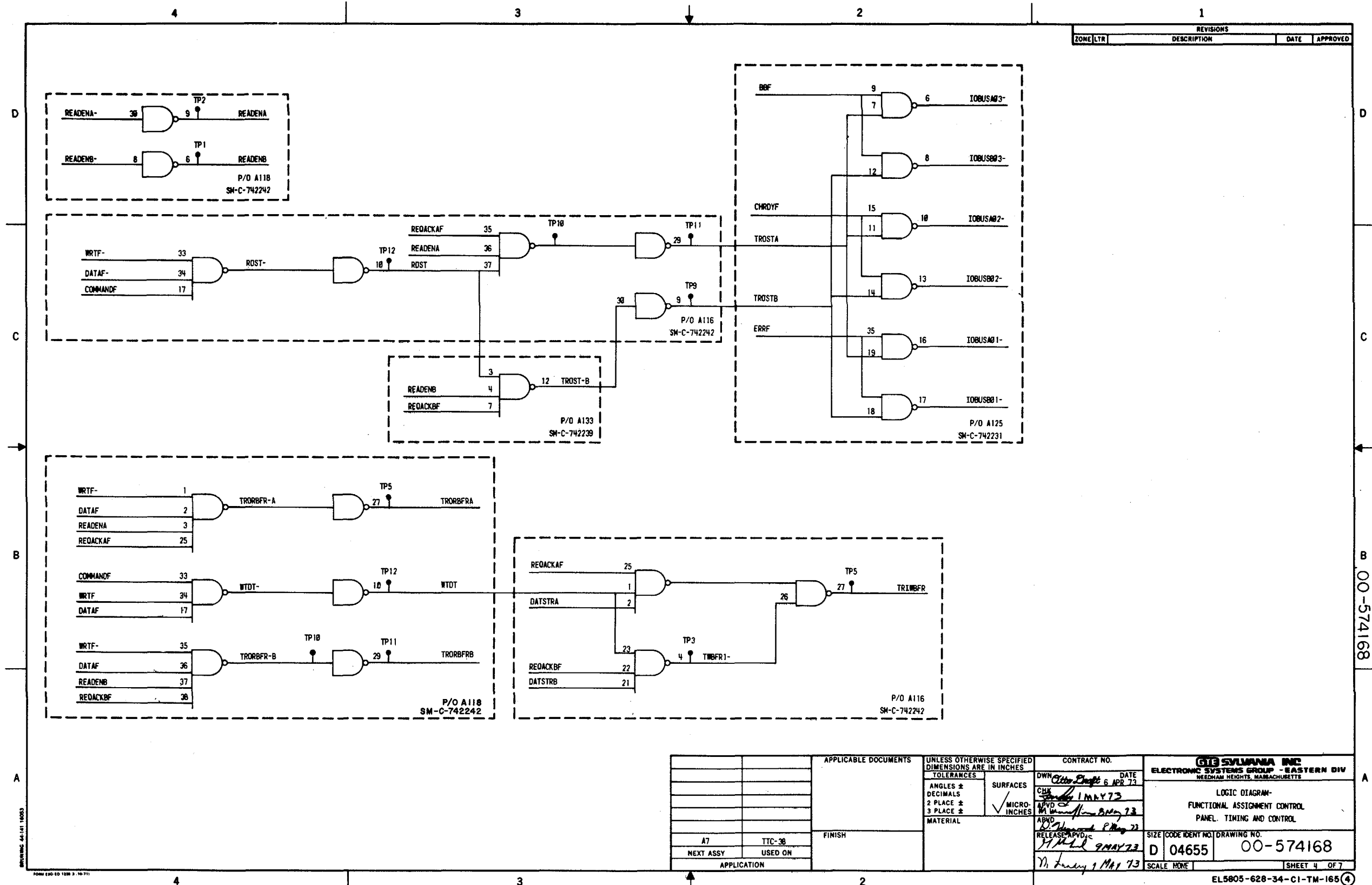


Figure 8-65(3). Functional assignment control panel timing and control (sheet 3 of 7).



REVISIONS			
ZONE/LTR	DESCRIPTION	DATE	APPROVED

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
FINISH		TOLERANCES		DATE		LOGIC DIAGRAM- FUNCTIONAL ASSIGNMENT CONTROL PANEL, TIMING AND CONTROL	
A7		ANGLES ±		6 APR 73		SIZE CODE IDENT NO. DRAWING NO.	
NEXT ASSY USED ON		DECIMALS		1 MAY 73		D 04655 00-574168	
APPLICATION		2 PLACE ±		3 MAY 73		SCALE NONE	
		3 PLACE ±		7 MAY 73		SHEET 4 OF 7	
		MATERIAL				EL5805-628-34-C1-TM-165 (4)	

Figure 8-65(4). Functional assignment control panel timing and control (sheet 4 of 7).

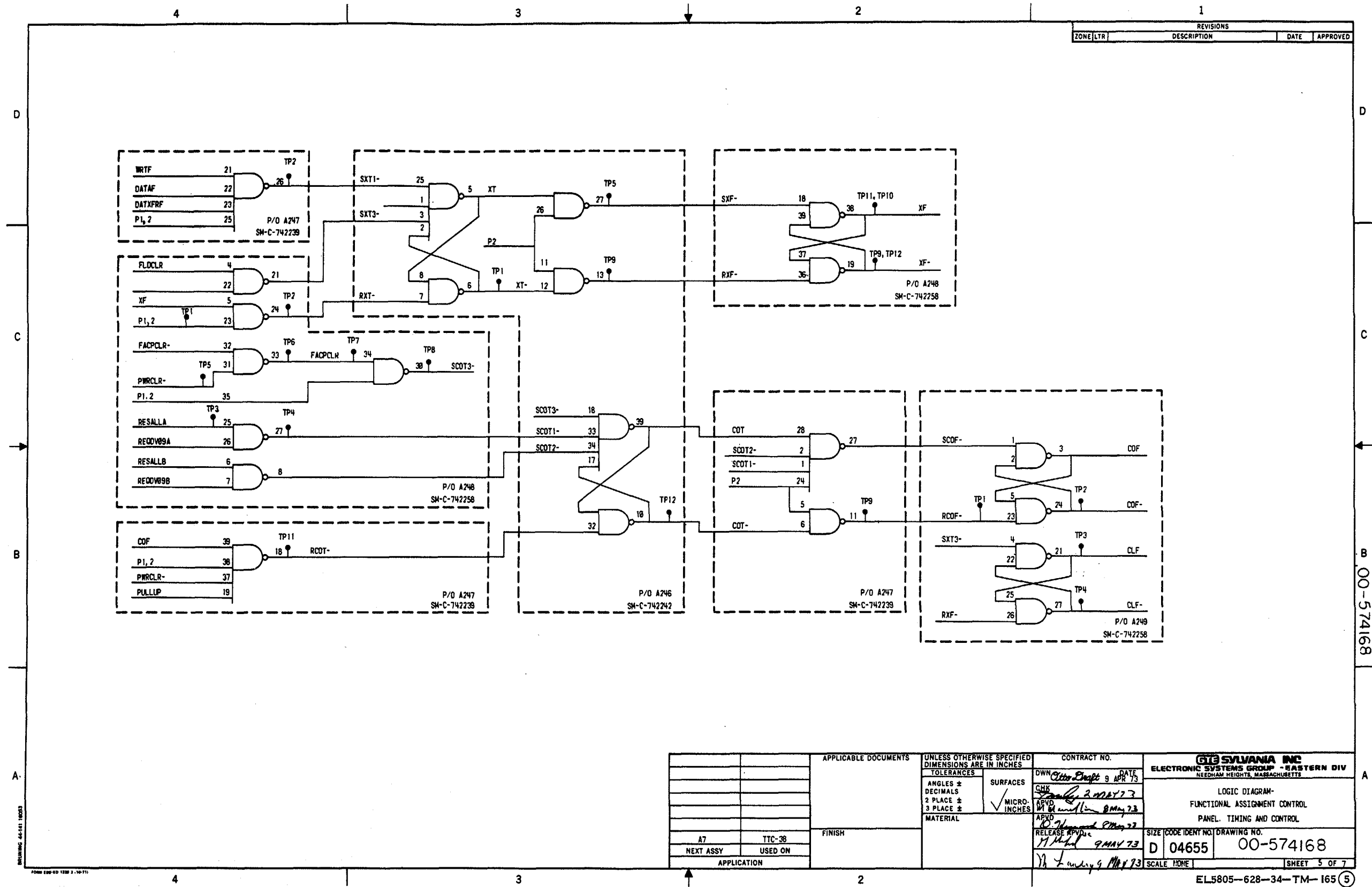
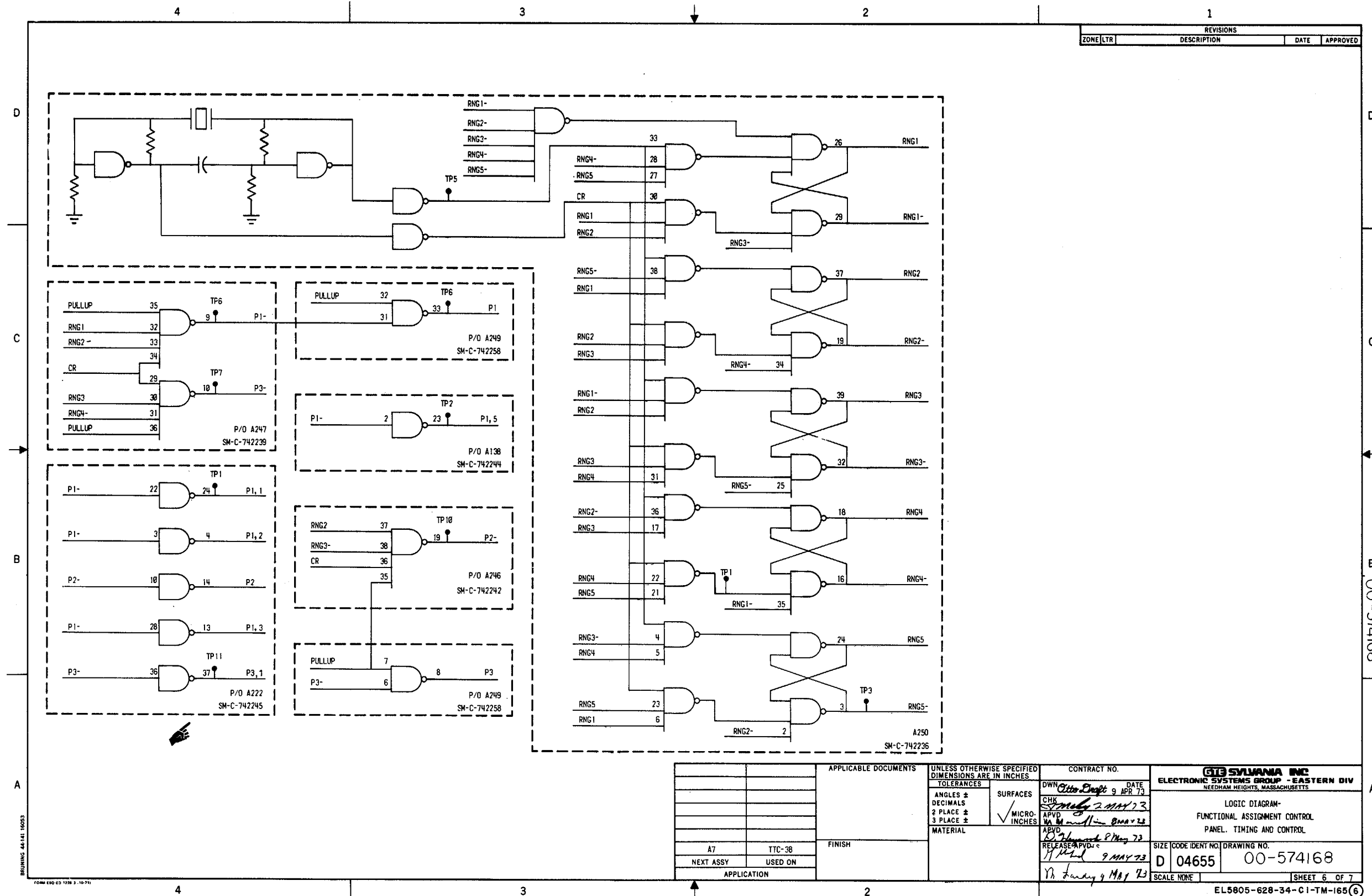


Figure 8-65(5). Functional assignment control panel timing and control (sheet 5 of 7).



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
							LOGIC DIAGRAM-
							FUNCTIONAL ASSIGNMENT CONTROL
							PANEL, TIMING AND CONTROL
							SIZE CODE IDENT NO. DRAWING NO.
							D 04655 00-574168
							SCALE NONE SHEET 6 OF 7
							EL5805-628-34-C1-TM-165 (6)

Figure 8-65(6). Functional assignment control panel timing and control (sheet 6 of 7).

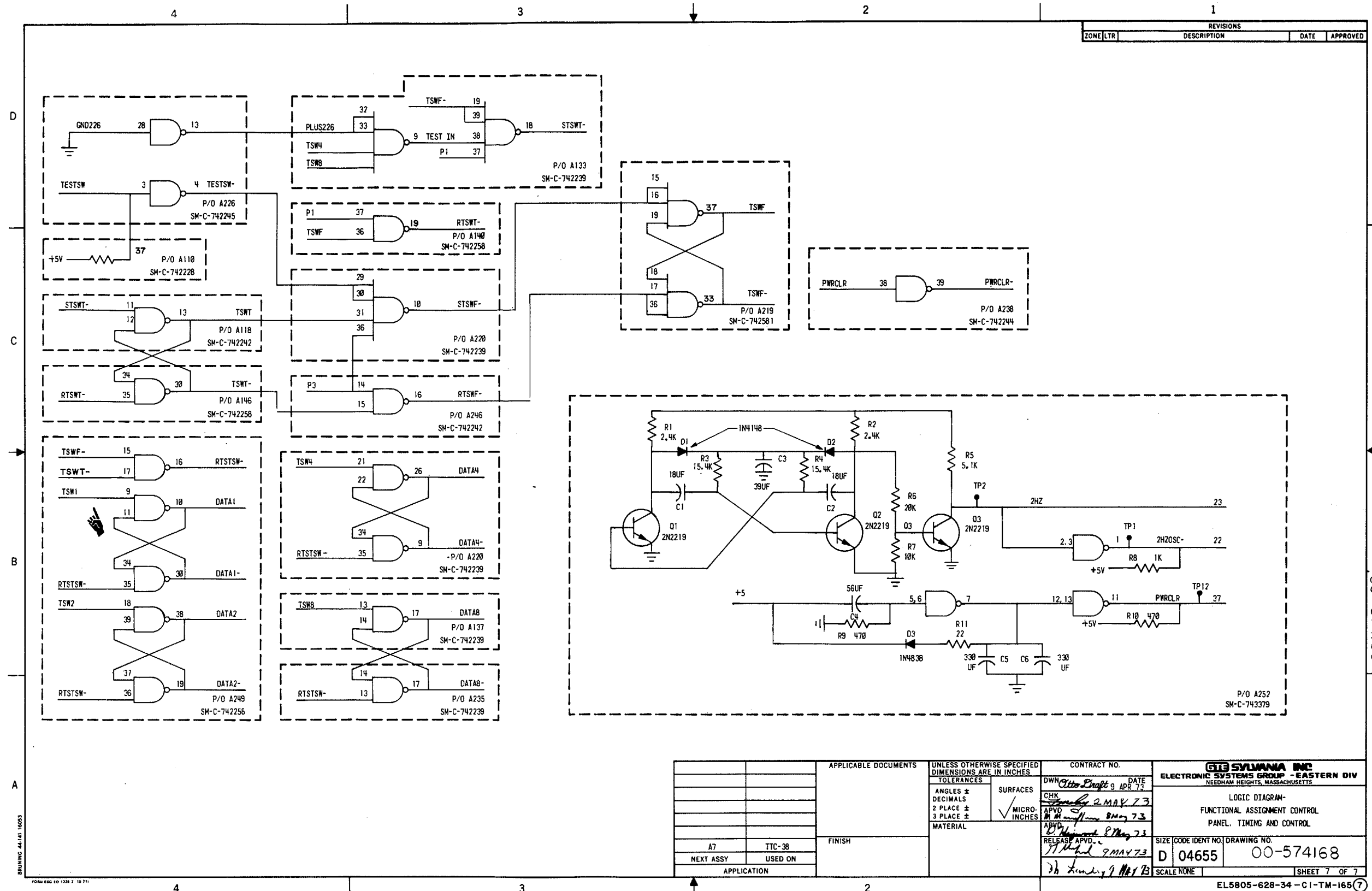
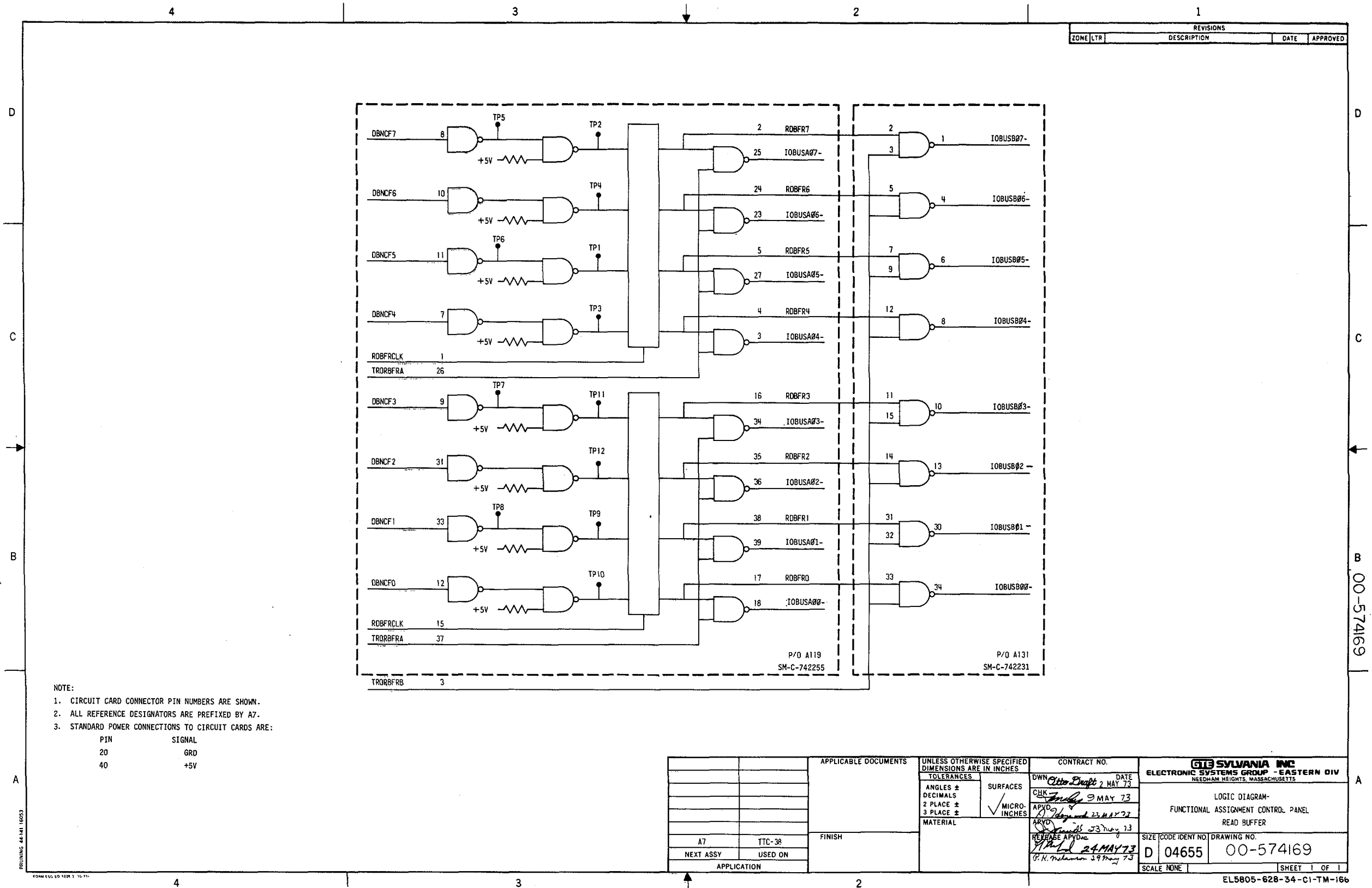


Figure 8-65(7). Functional assignment control panel timing and control (sheet 7 of 7).



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

- NOTE:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A7.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:

PIN	SIGNAL
20	GRD
40	+5V

APPLICABLE DOCUMENTS	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	CONTRACT NO.	GTS SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS
FINISH	TOLERANCES	DWN <i>Other Draft</i> 2 MAY 73	LOGIC DIAGRAM- FUNCTIONAL ASSIGNMENT CONTROL PANEL READ BUFFER
APPLICATION	ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ±	CHK <i>...</i> 9 MAY 73	SIZE CODE IDENT NO. DRAWING NO.
	SURFACES	APVD <i>...</i> 23 MAY 73	D 04655 00-574169
	MATERIAL	REL <i>...</i> 23 MAY 73	SCALE NONE SHEET 1 OF 1
		RELEASE APYD <i>...</i> 24 MAY 73	
		P. K. Melanson 31 May 73	

Figure 8-66. Functional assignment control panel read buffer.

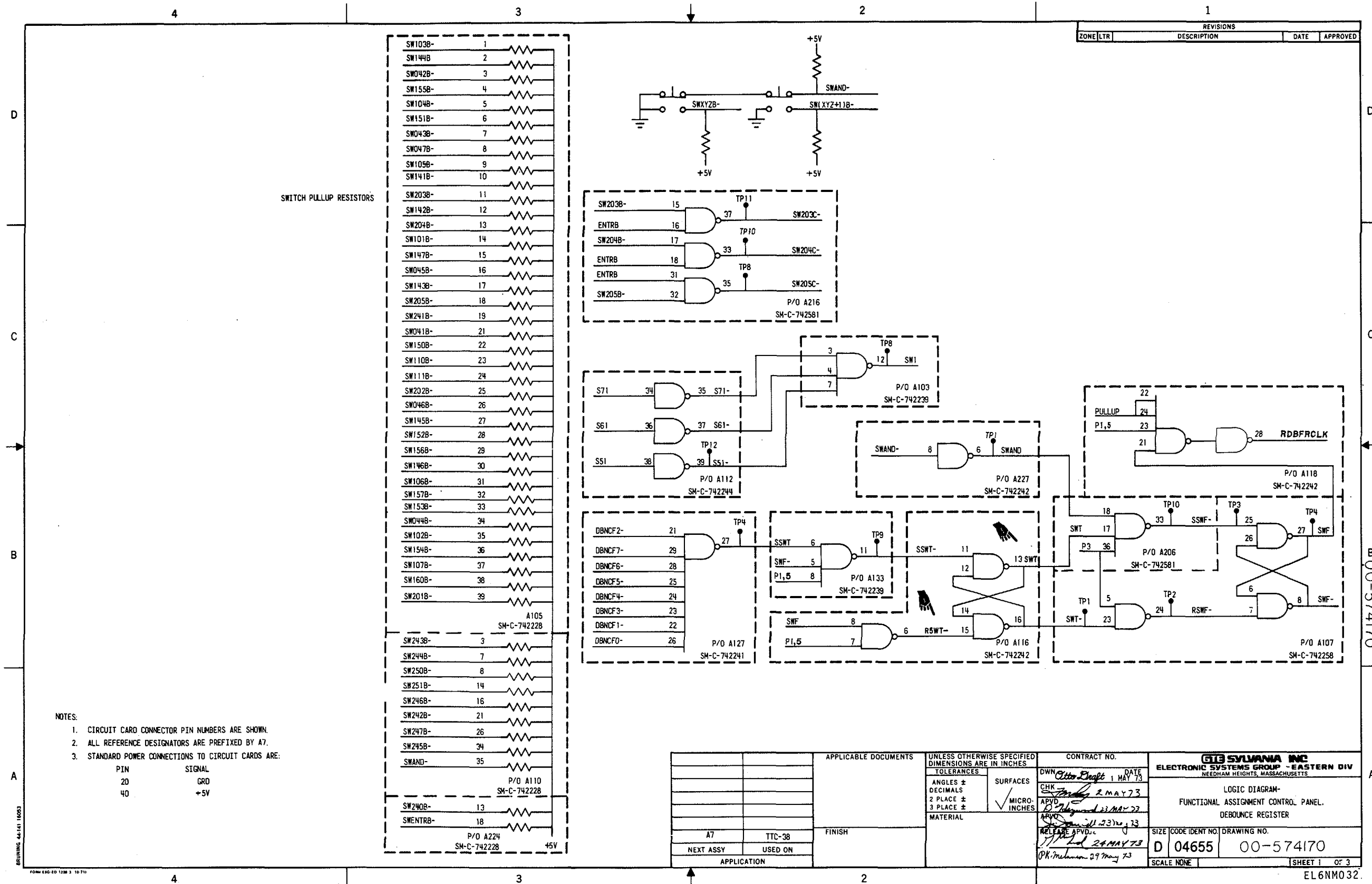


Figure 8-67(1). Functional assignment control panel debounce register (sheet 1 of 3).

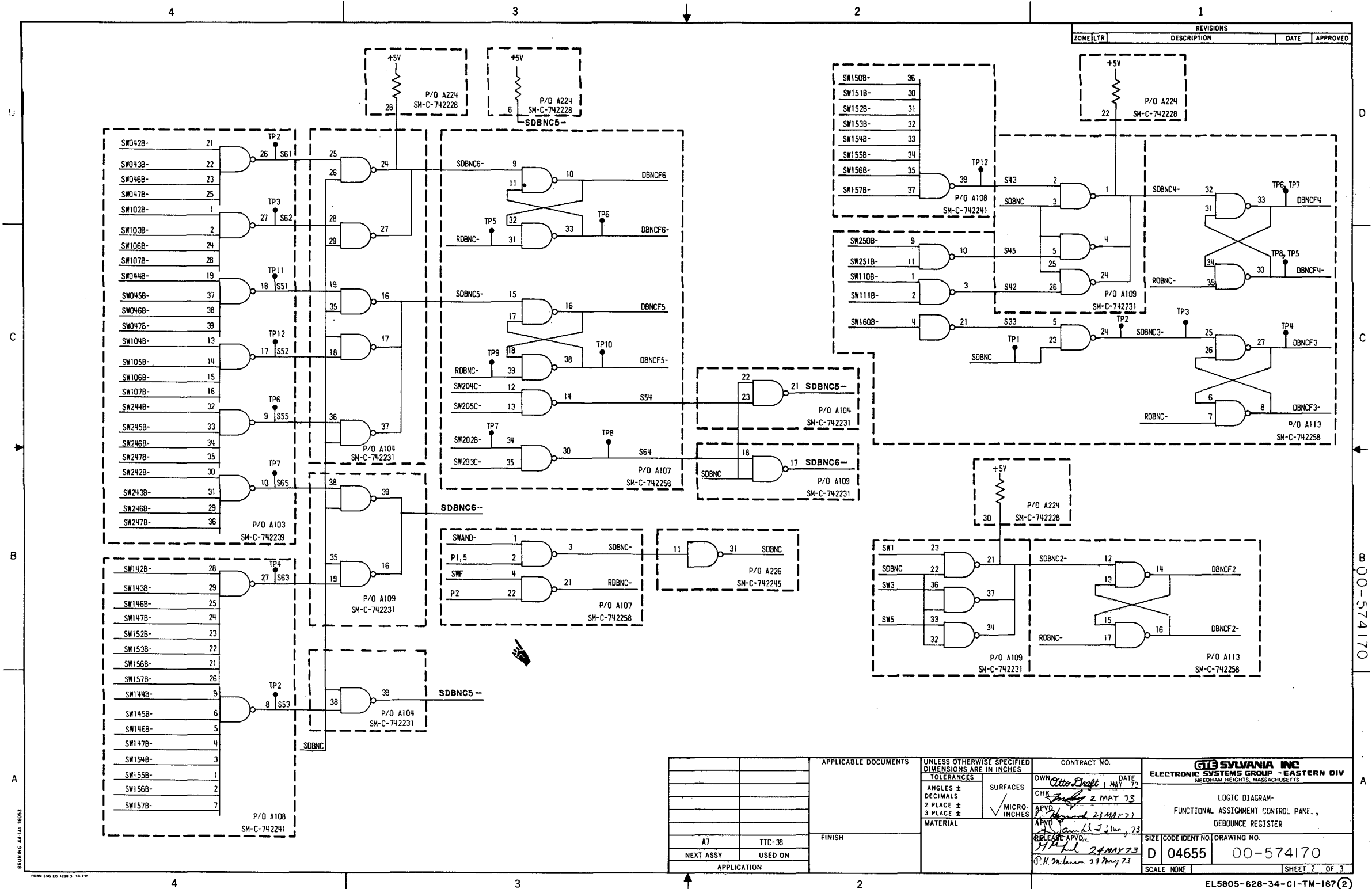


Figure 8-67(2). Functional assignment control panel debounce register (sheet 2 of 3).

Change 3 8-173

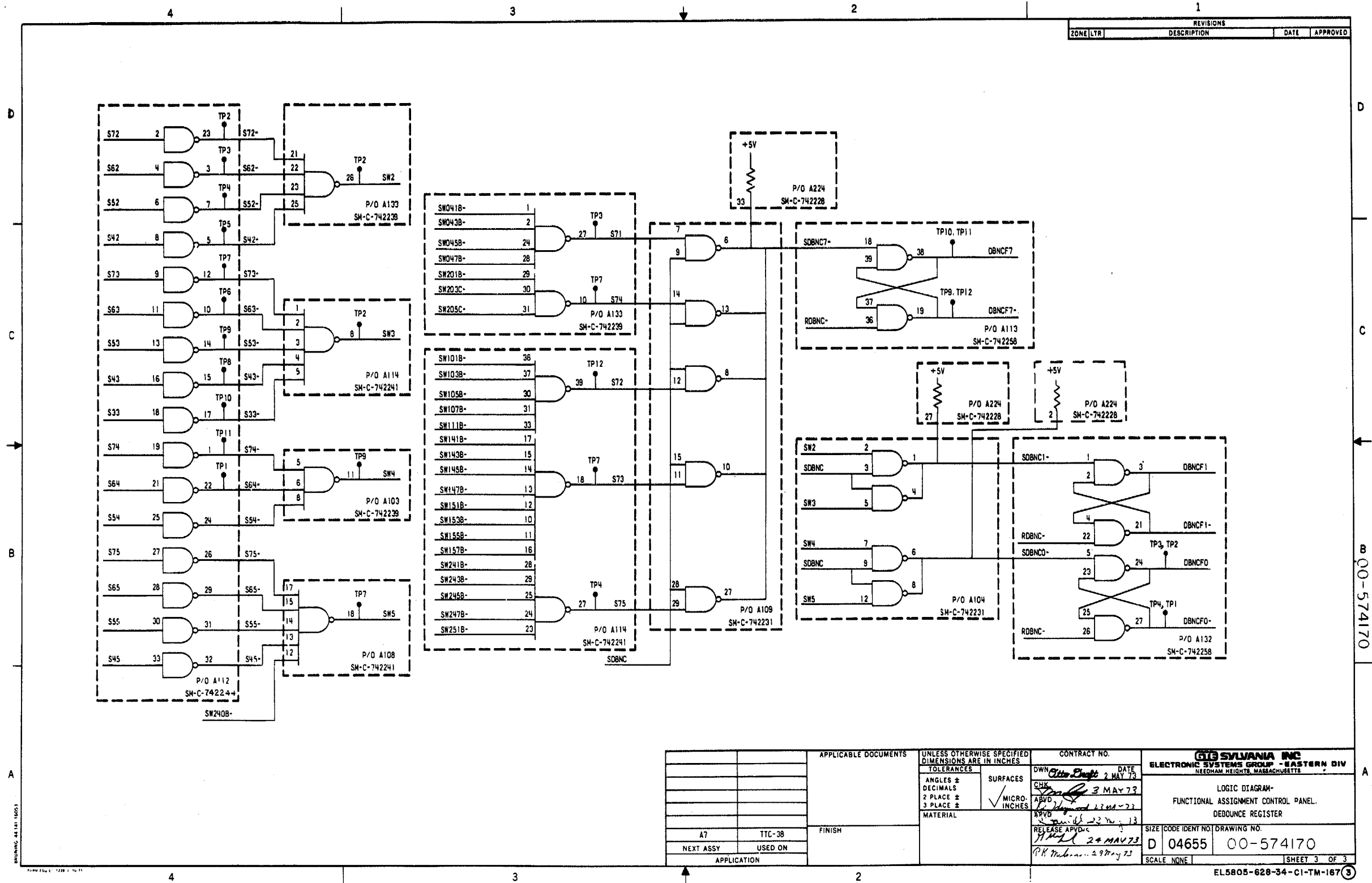


Figure 8-67(3). Functional assignment control panel debounce register (sheet 3 of 3).

Change 1 8-174

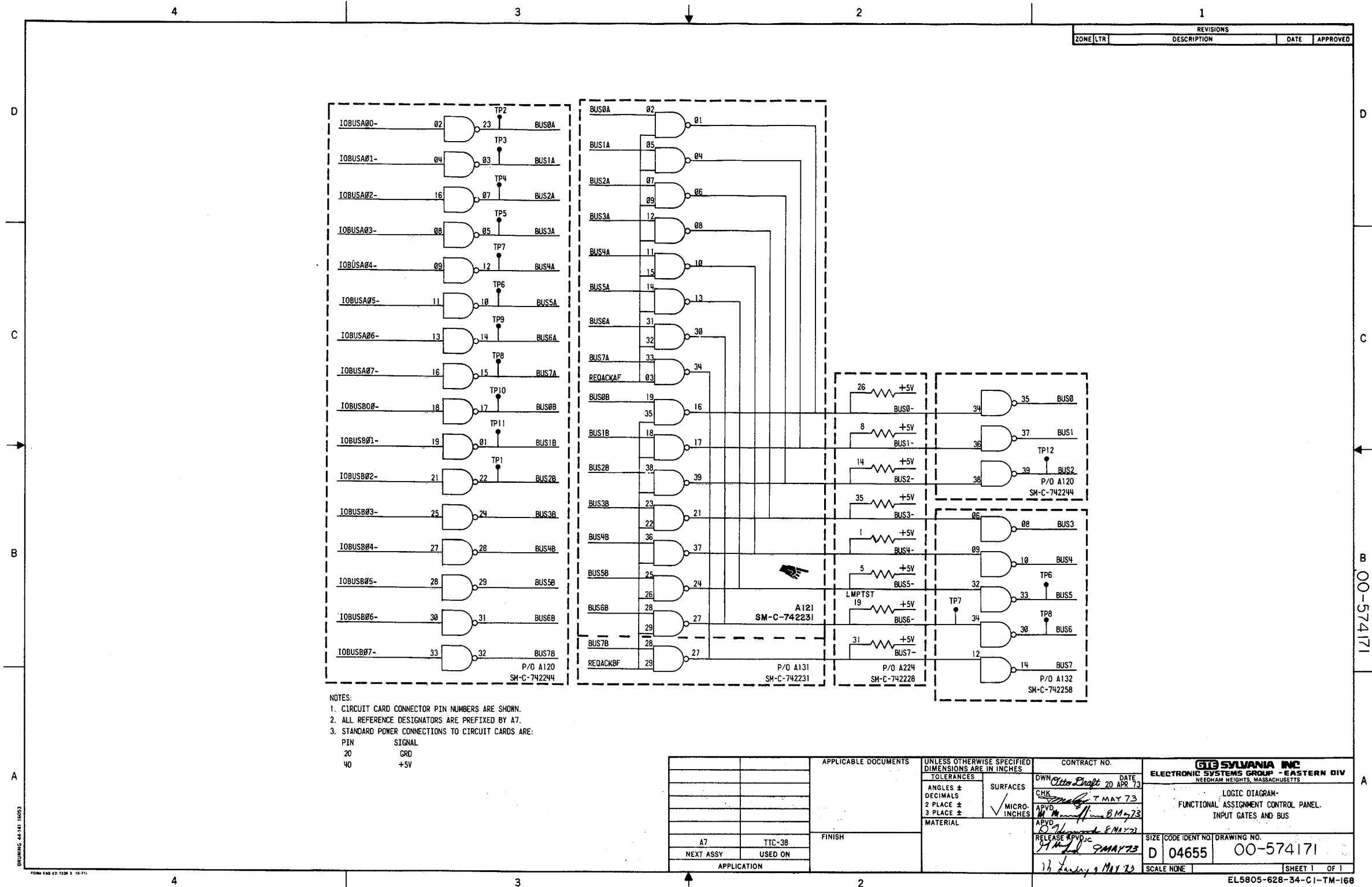


Figure 8-68 . Functional assignment control panel input gates and bus.

Change 1 8-175

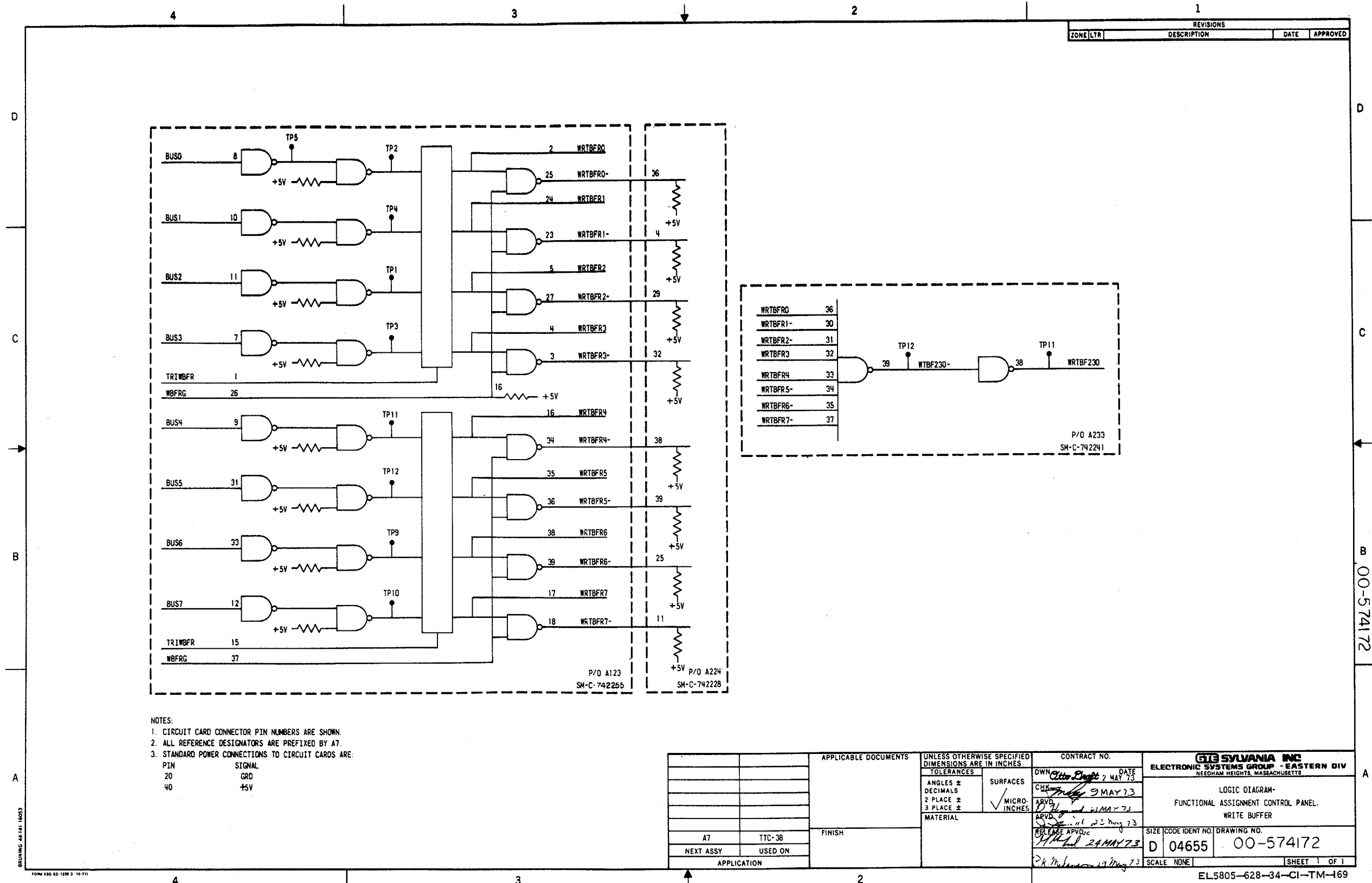


Figure 8-69. Functional assignment control panel write buffer.

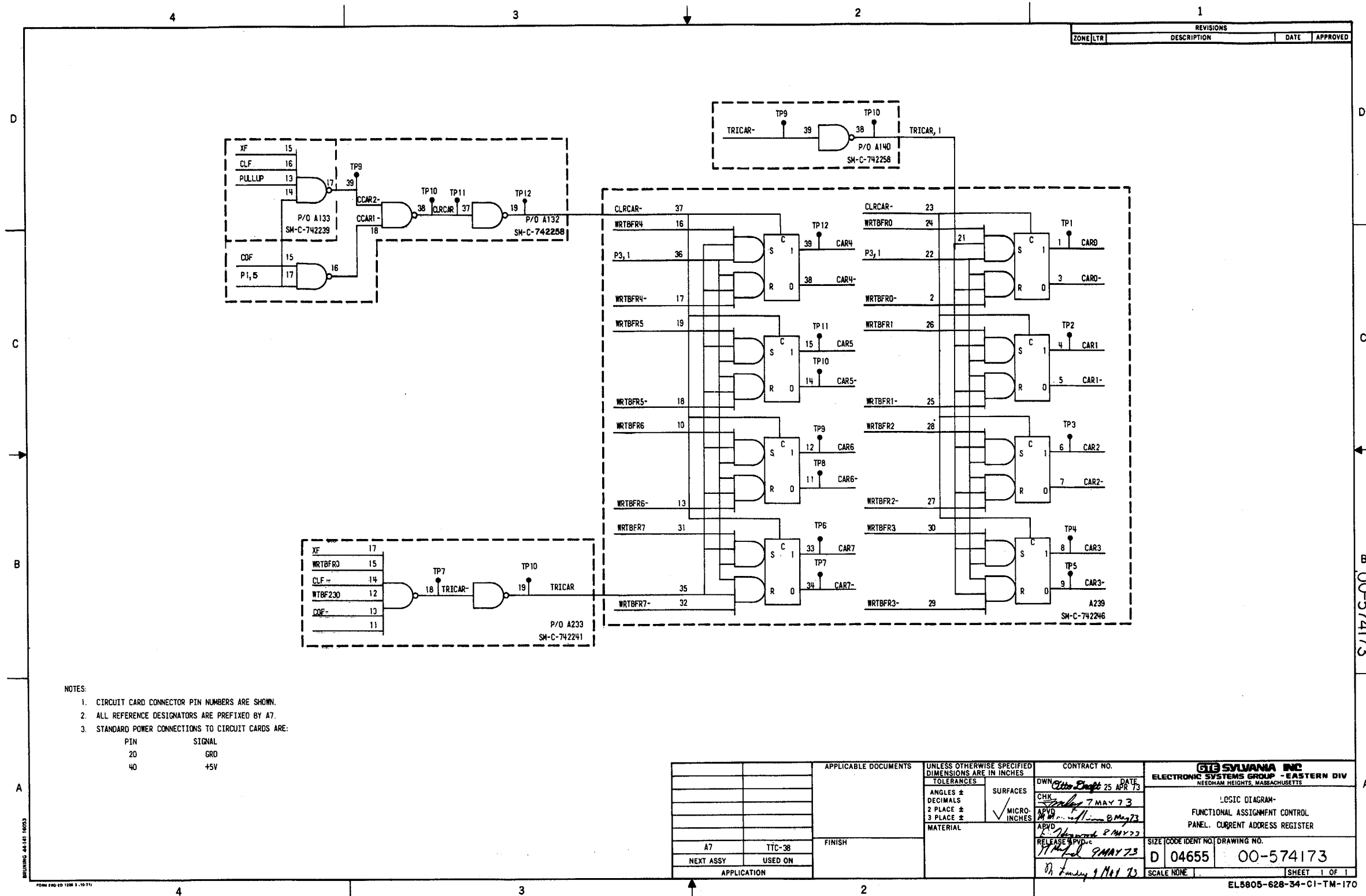


Figure 8-70. Functional assignment control panel current address register.

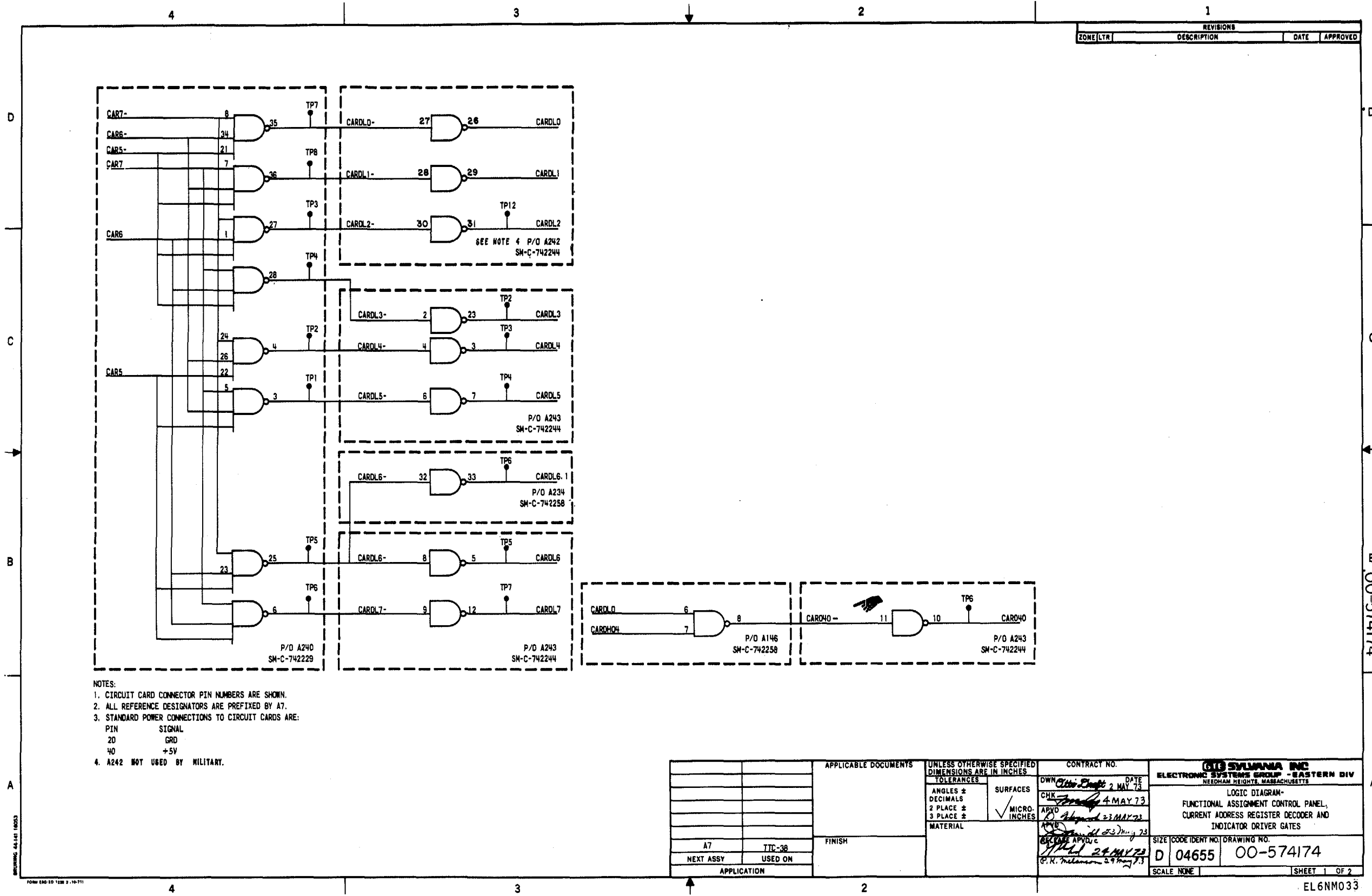


Figure 8-71(1). Functional assignment control panel current address register decoder and indicator driver gates (sheet 1 of 2).

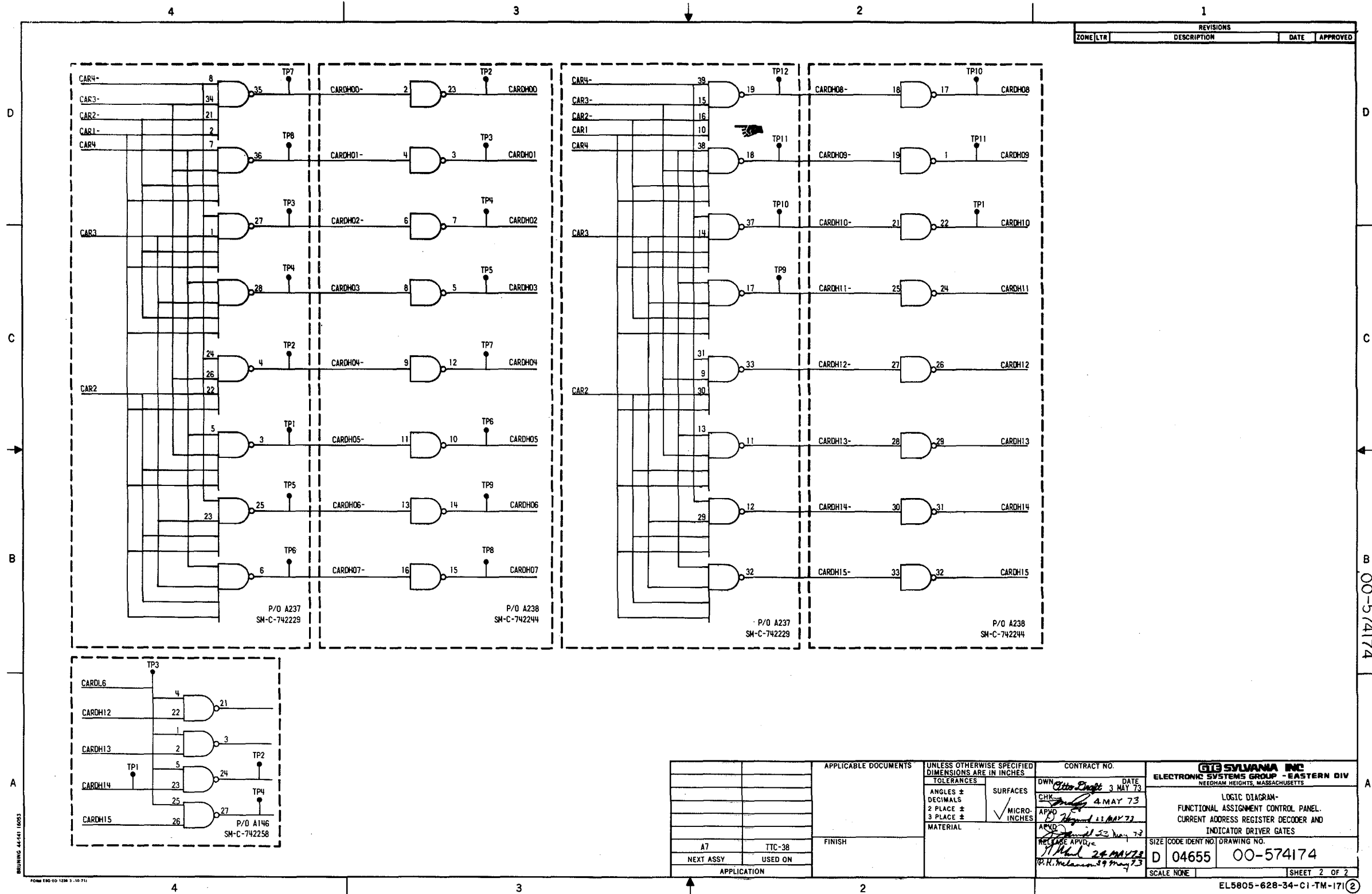


Figure 8-71(2). Functional assignment control panel current address register decoder and indicator driver gates (sheet 2 of 2).

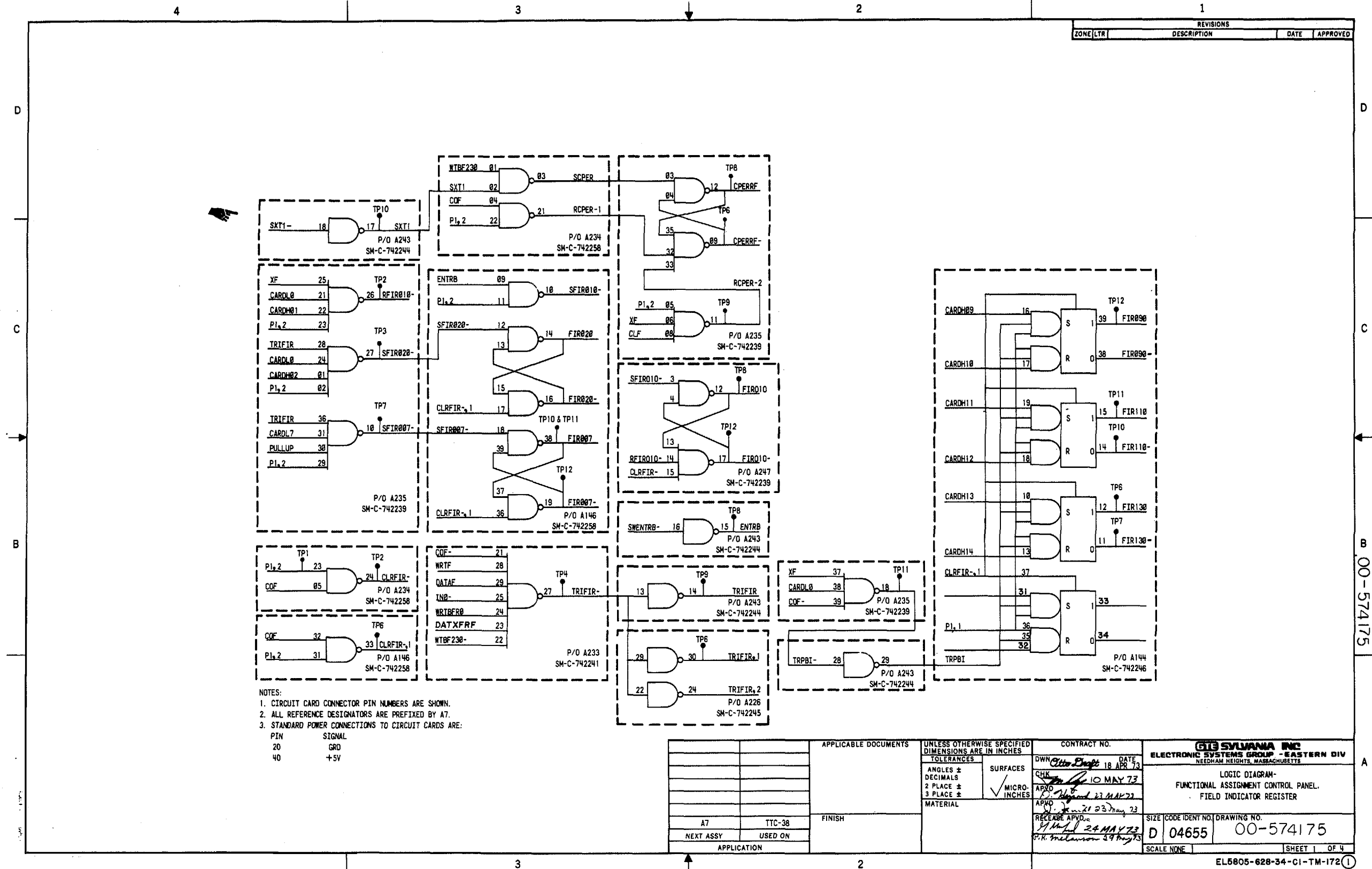


Figure 8-72(1). Functional assignment control panel field indicator register (sheet 1 of 4).

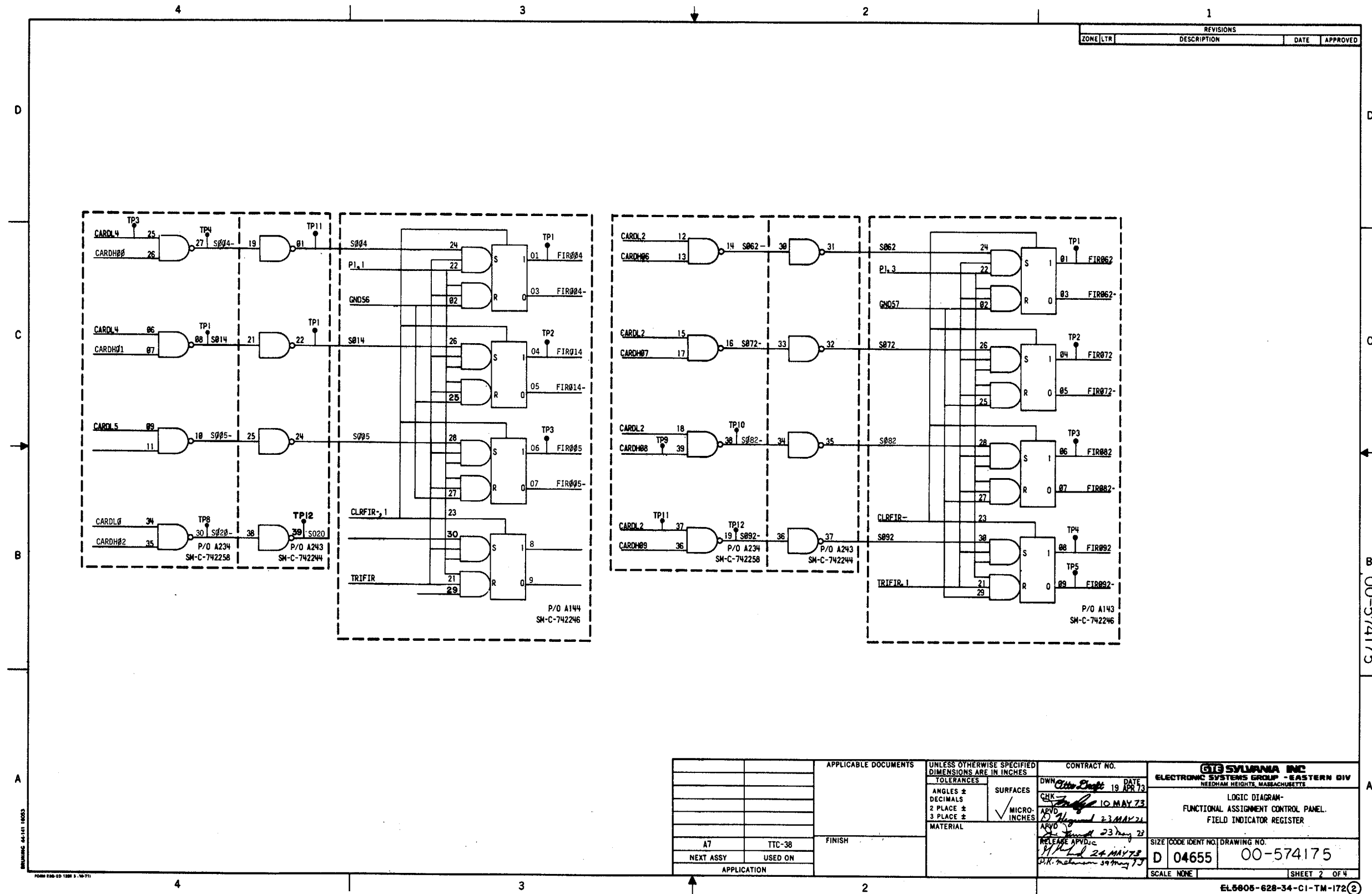
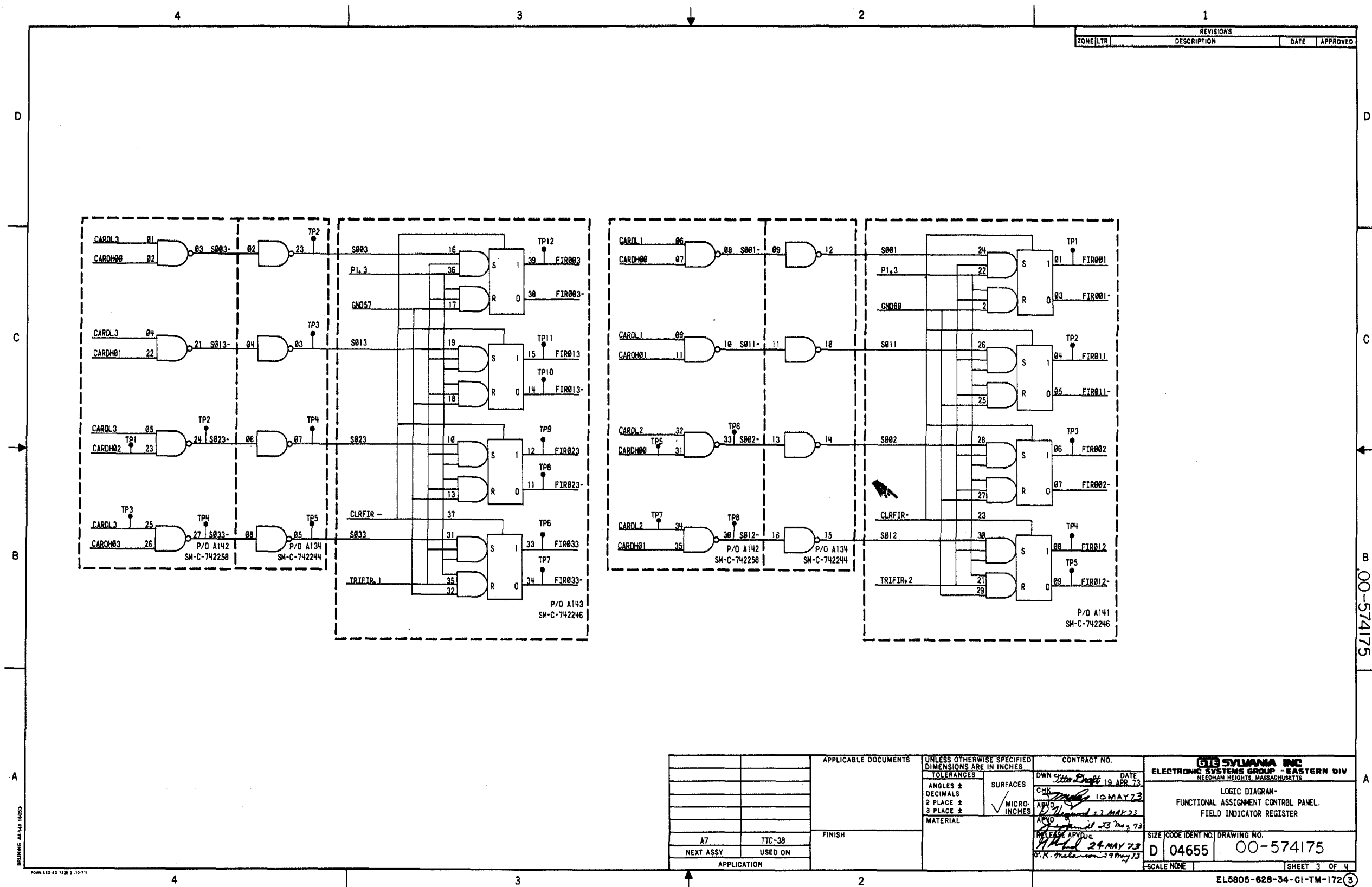


Figure 8-72(2). functional assignment control panel field indicator register (sheet 2 of 4).



APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		613 SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
FINISH		TOLERANCES		DATE		LOGIC DIAGRAM-	
A7		ANGLES ±		19 APR 73		FUNCTIONAL ASSIGNMENT CONTROL PANEL.	
NEXT ASSY		DECIMALS		10 MAY 73		FIELD INDICATOR REGISTER	
TTC-38		2 PLACE ±		24 MAY 73		SIZE (CODE IDENT NO.) DRAWING NO.	
USED ON		3 PLACE ±		29 MAY 73		D 04655 00-574175	
APPLICATION		MATERIAL		SCALE NONE		SHEET 3 OF 4	

Figure 8-72(3) . functional assignment control panel field indicator register (sheet 3 or 4).

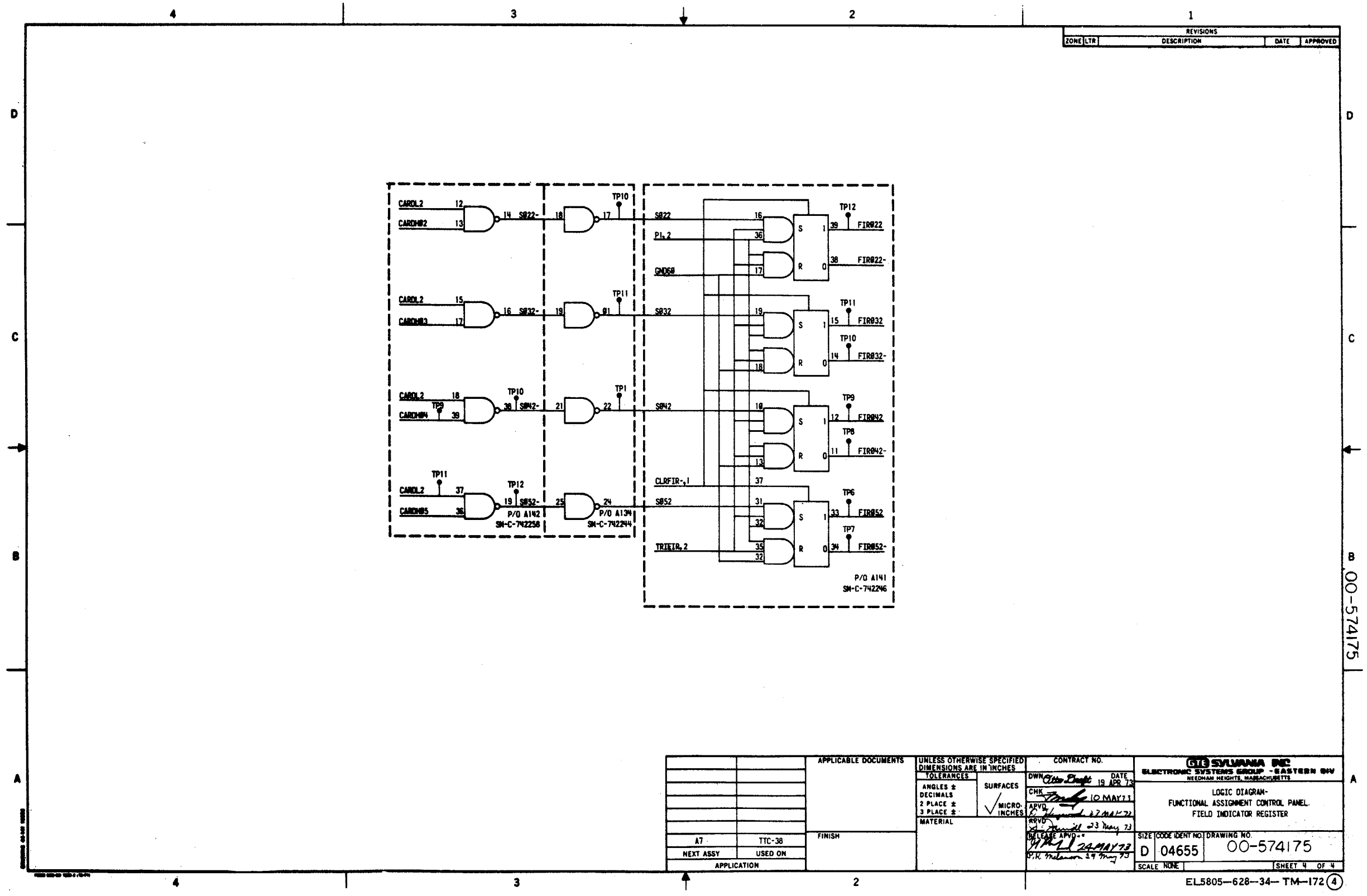


Figure 8-72(4). Functional assignment control panel field indicator register (sheet 4 of 4)

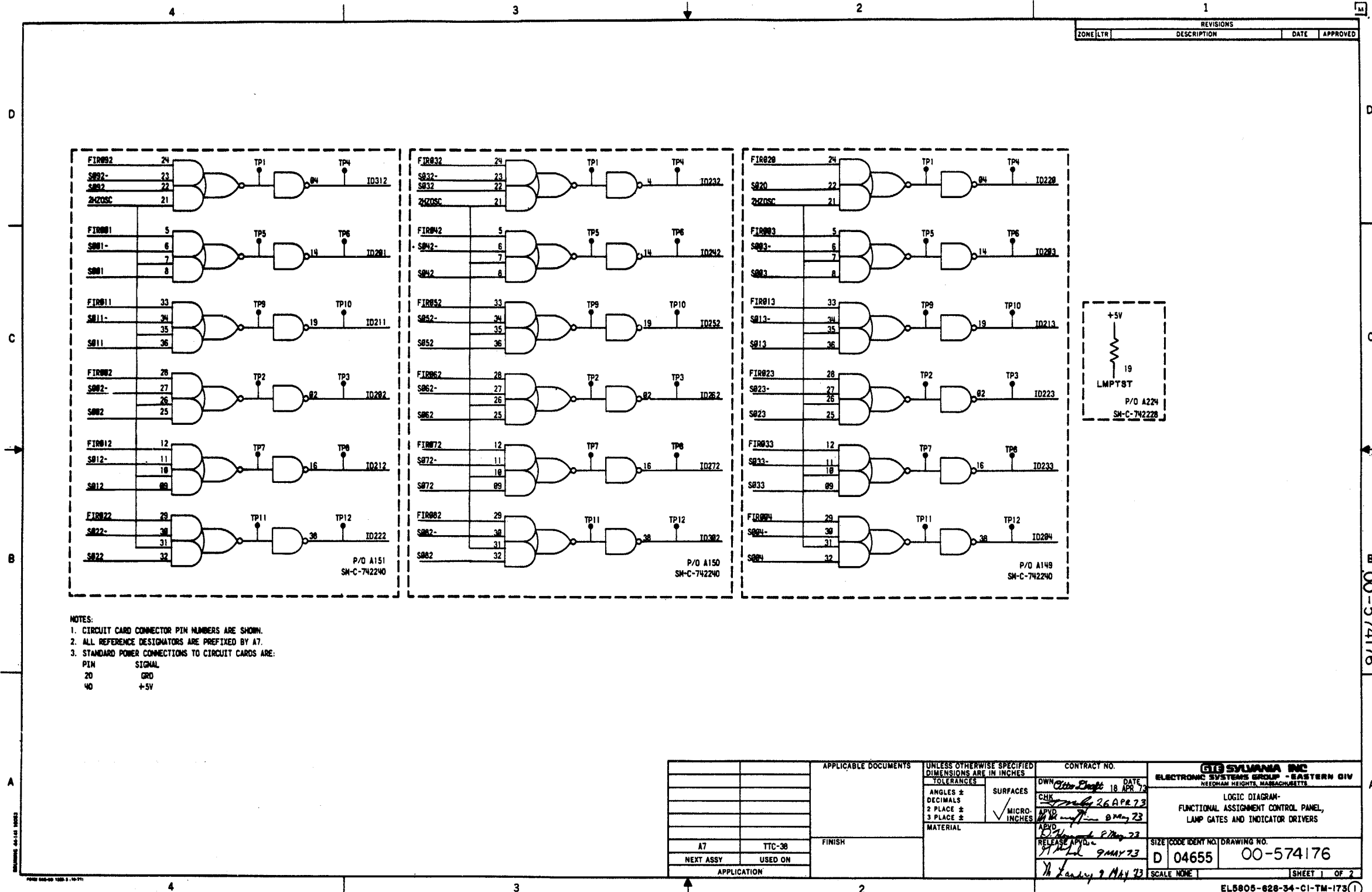


Figure 8-73(1). Functional assignment control panel lamp gates and indicator drives (sheet 1 of 2).

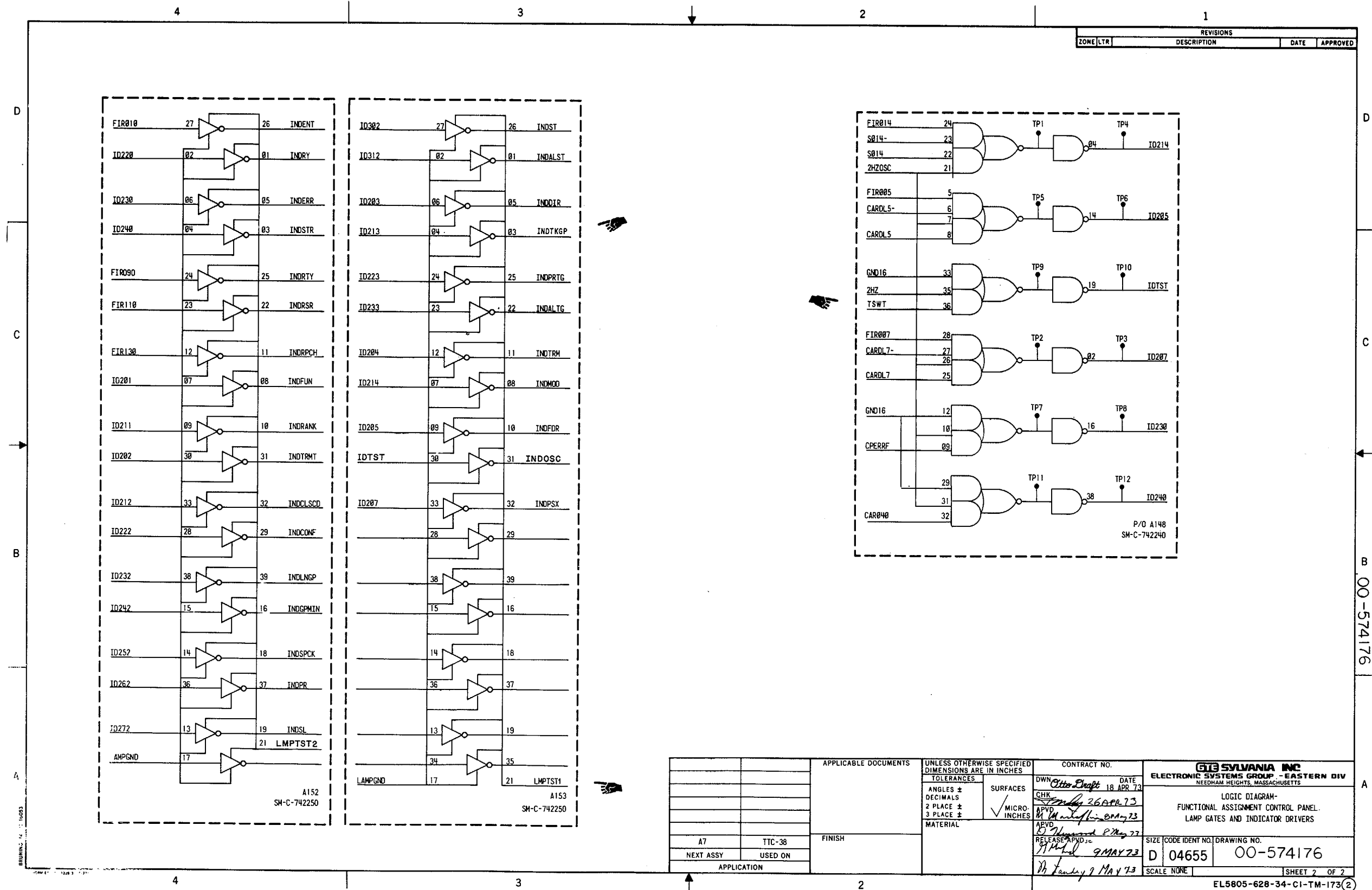
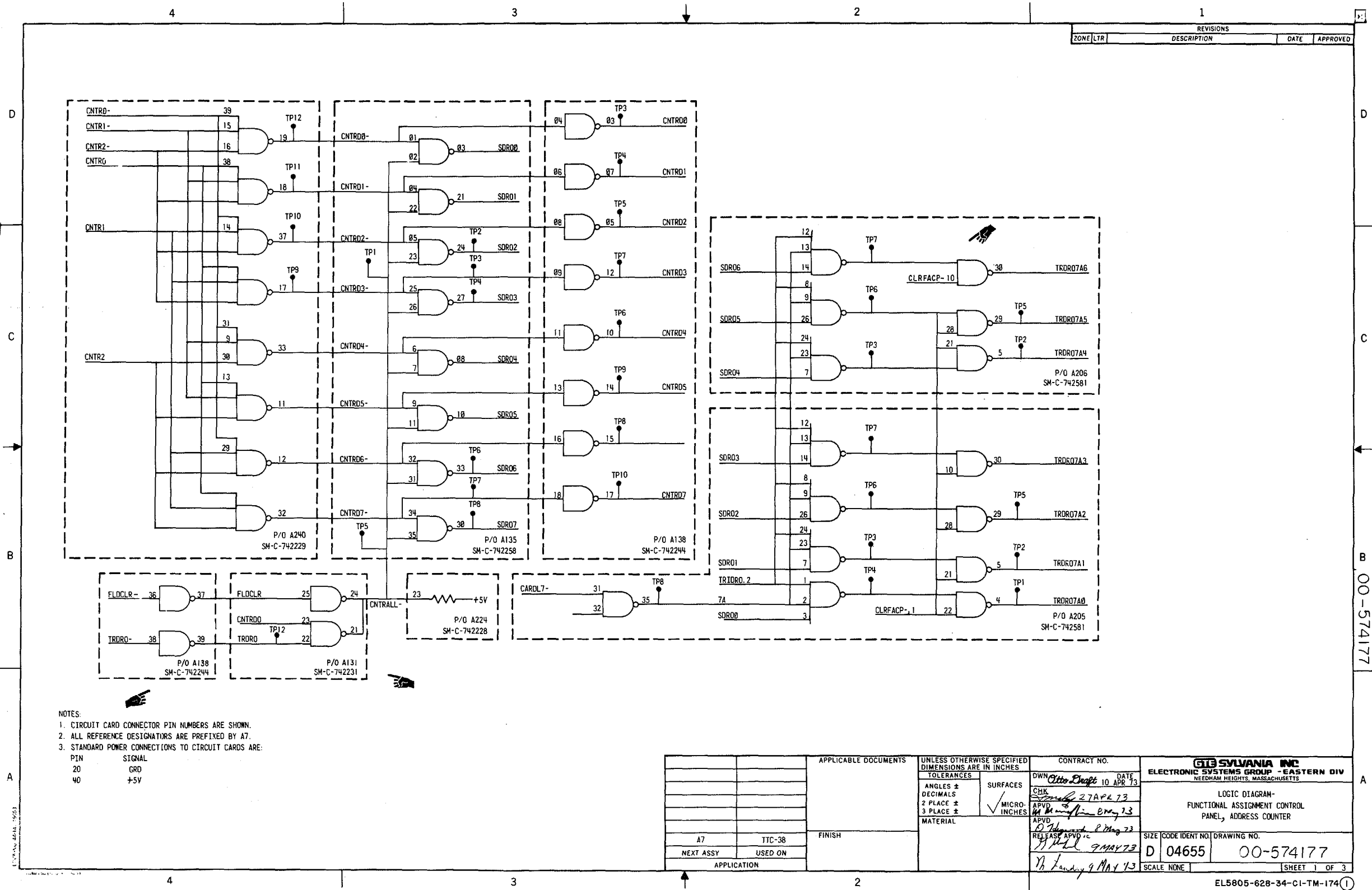


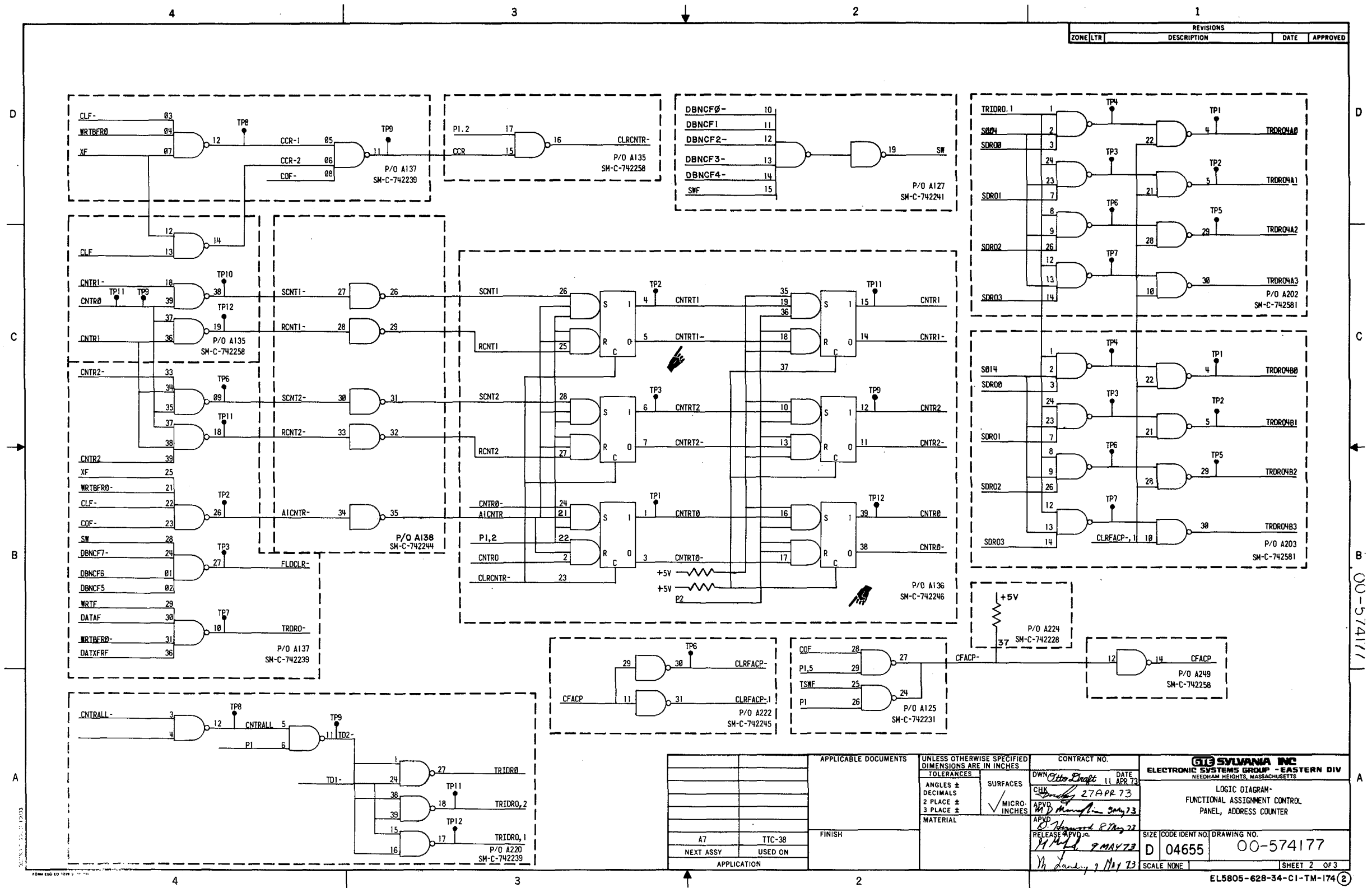
Figure 8-73(2). functional assignment control panel lamp gates and indicator drivers (sheet 2 of 2).



- NOTES:
1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A7.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:
- | | |
|-----|--------|
| PIN | SIGNAL |
| 20 | GRD |
| 40 | +5V |

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.	
FINISH		TOLERANCES		OWN <i>Cliff Draft</i> DATE 10 APR 73	
NEXT ASSY USED ON		ANGLES ±		CHK <i>W. M. Murphy</i> 27 APR 73	
APPLICATION		DECIMALS		APVD <i>W. M. Murphy</i> 28 APR 73	
		2 PLACE ±		RELEASE APVD <i>W. M. Murphy</i> 9 MAY 73	
		3 PLACE ±		Yb <i>Landry</i> 9 MAY 73	
		MICRO INCHES		SIZE CODE IDENT NO. DRAWING NO.	
		MATERIAL		D 04655 00-574177	
				SCALE NONE SHEET 1 OF 3	

Figure 8-74(1). Functional assignment control panel address counter (sheet 1 of 3).



ZONE(LTR)	REVISIONS	DATE	APPROVED
	DESCRIPTION		

APPLICABLE DOCUMENTS A7 TTC-38 NEXT ASSY USED ON		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES ± DECIMALS SURFACES 2 PLACE ± 3 PLACE ± MICRO-INCHES MATERIAL		CONTRACT NO. DWN <i>Otto Draft</i> DATE 11 APR 73 CHK <i>Smully</i> 27 APR 73 APVD <i>M.D. Munnell</i> 30 MAY 73 RELEASE APVD <i>J.P. Thompson</i> 2 MAY 73 RELEASE APVD <i>M. Smully</i> 9 MAY 73		GTB SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS LOGIC DIAGRAM - FUNCTIONAL ASSIGNMENT CONTROL PANEL, ADDRESS COUNTER	
FINISH		SCALE NONE		SIZE CODE IDENT NO. DRAWING NO. D 04655 00-574177		SHEET 2 OF 3	

Figure 8-74(2). Functional assignment control panel address counter (sheet 2 of 3)

Change 3 8-187

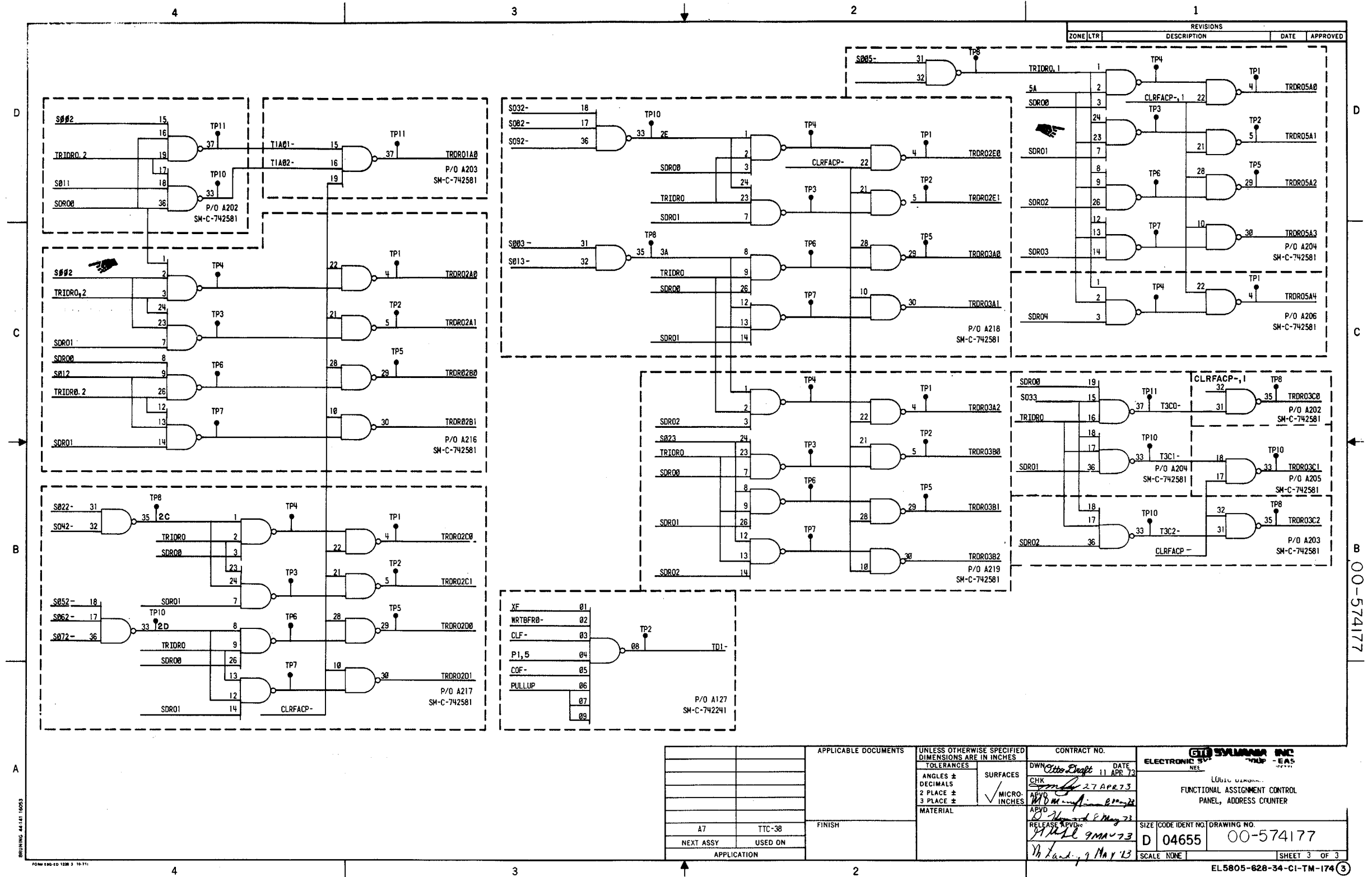


Figure 8-74(3). Functional assignment control panel address counter (sheet 3 of 3)

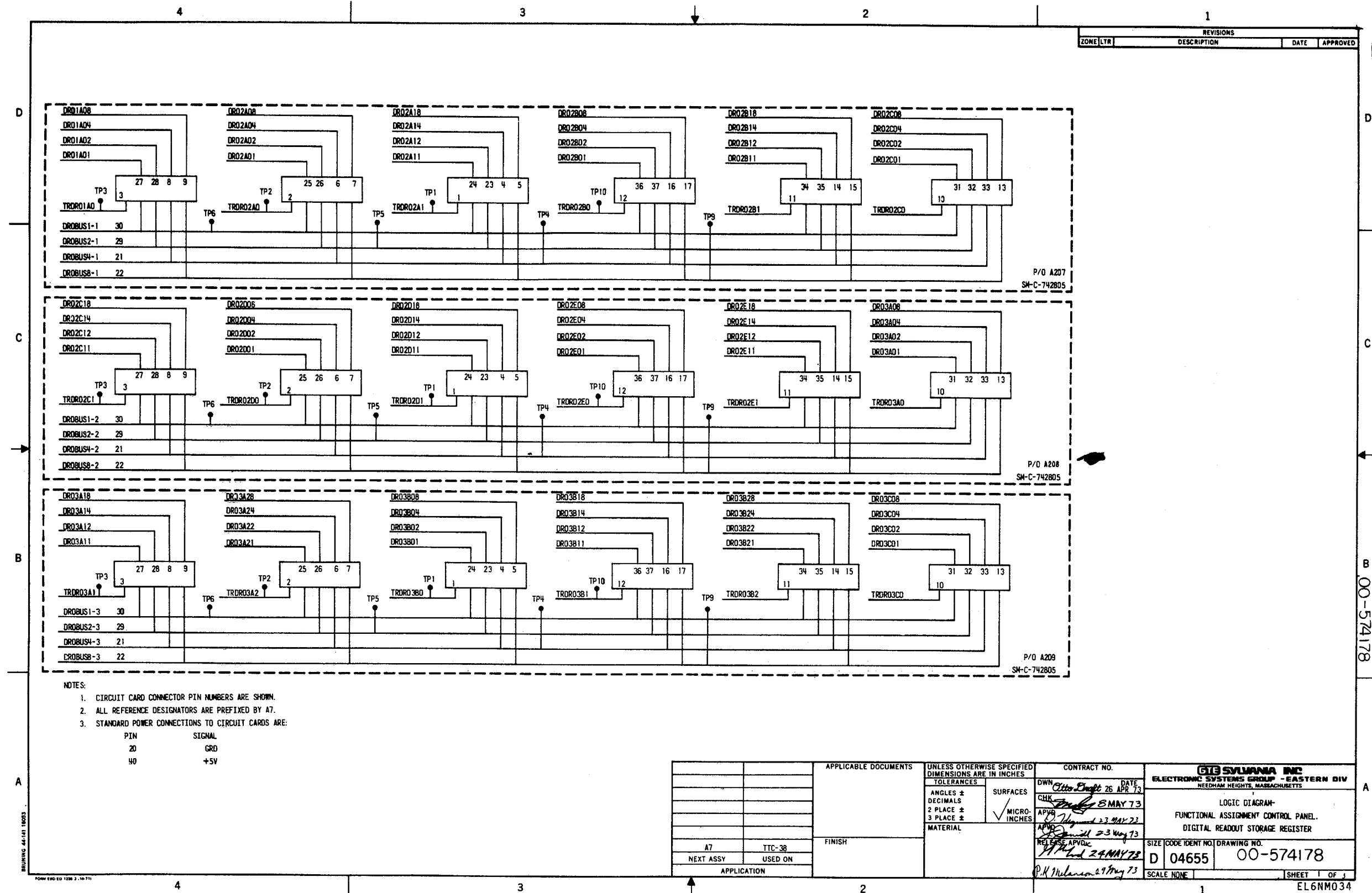


Figure 8-75(1). Functional assignment control panel digital readout storage register (sheet 1 of 3)

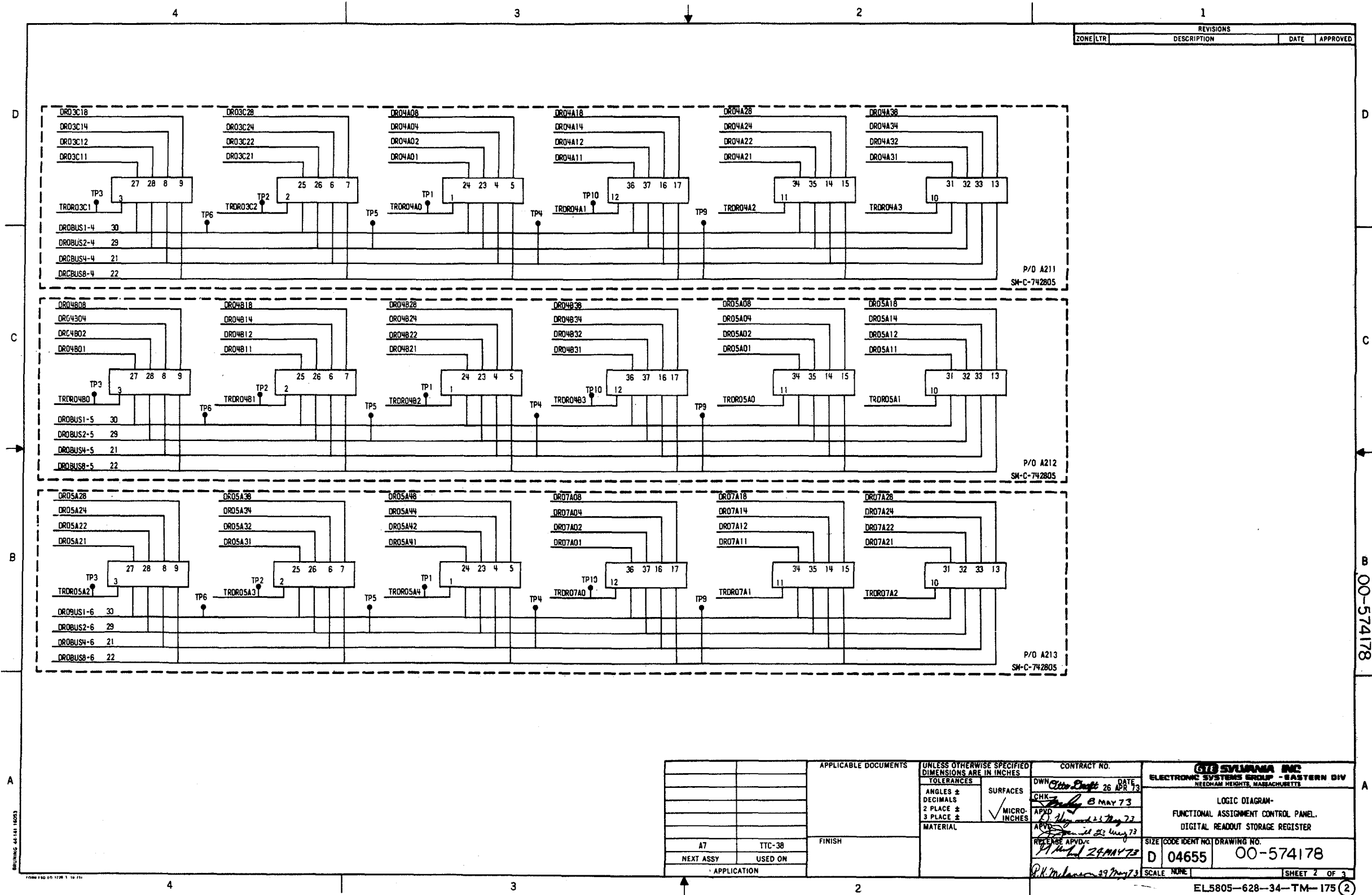


Figure 8-75(2). Functional assignment control panel digital readout storage register (sheet 2 of 3).

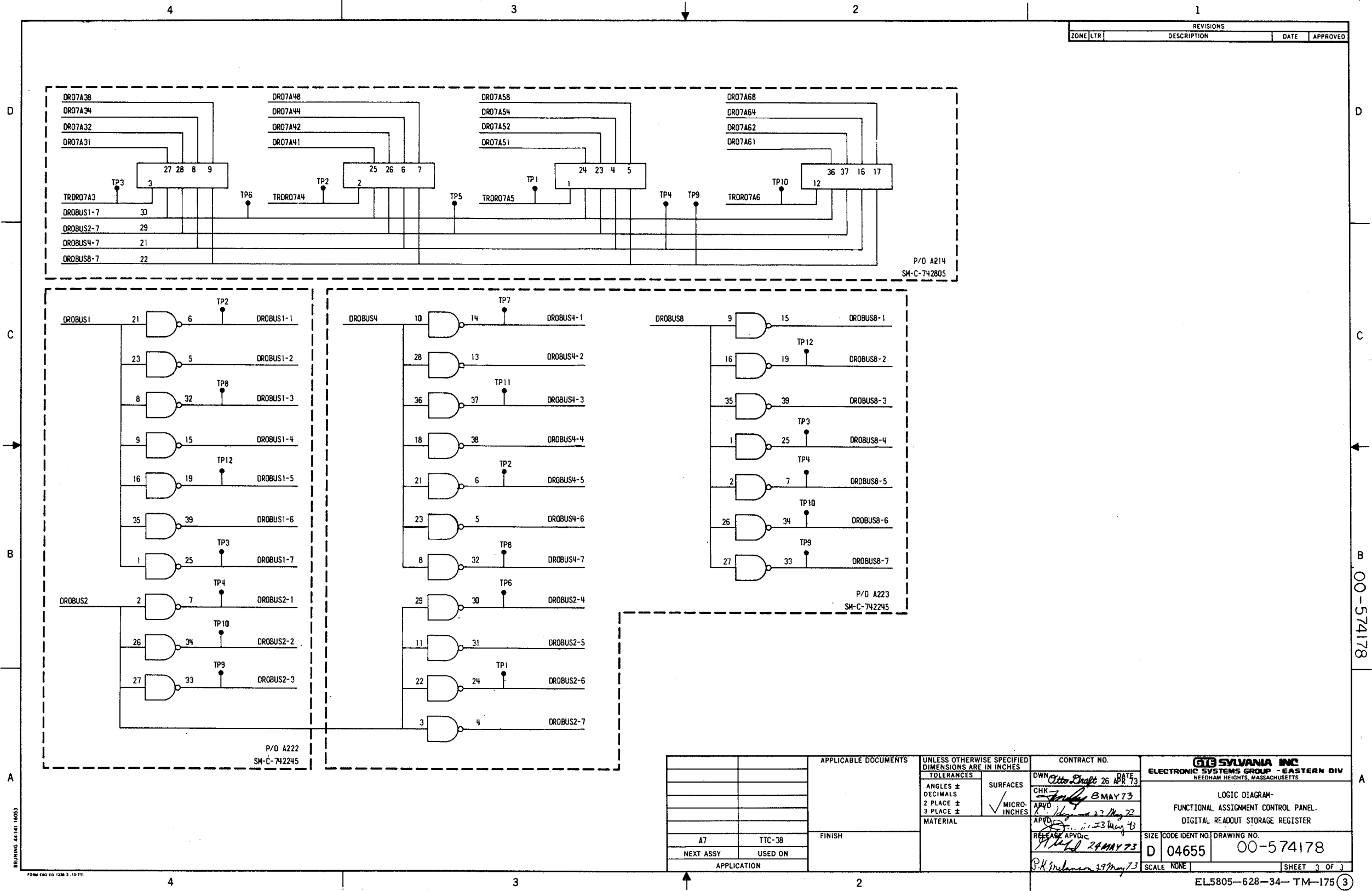


Figure 8-75(3). Functional assignment control panel digital readout storage register (sheet 3 of 3).

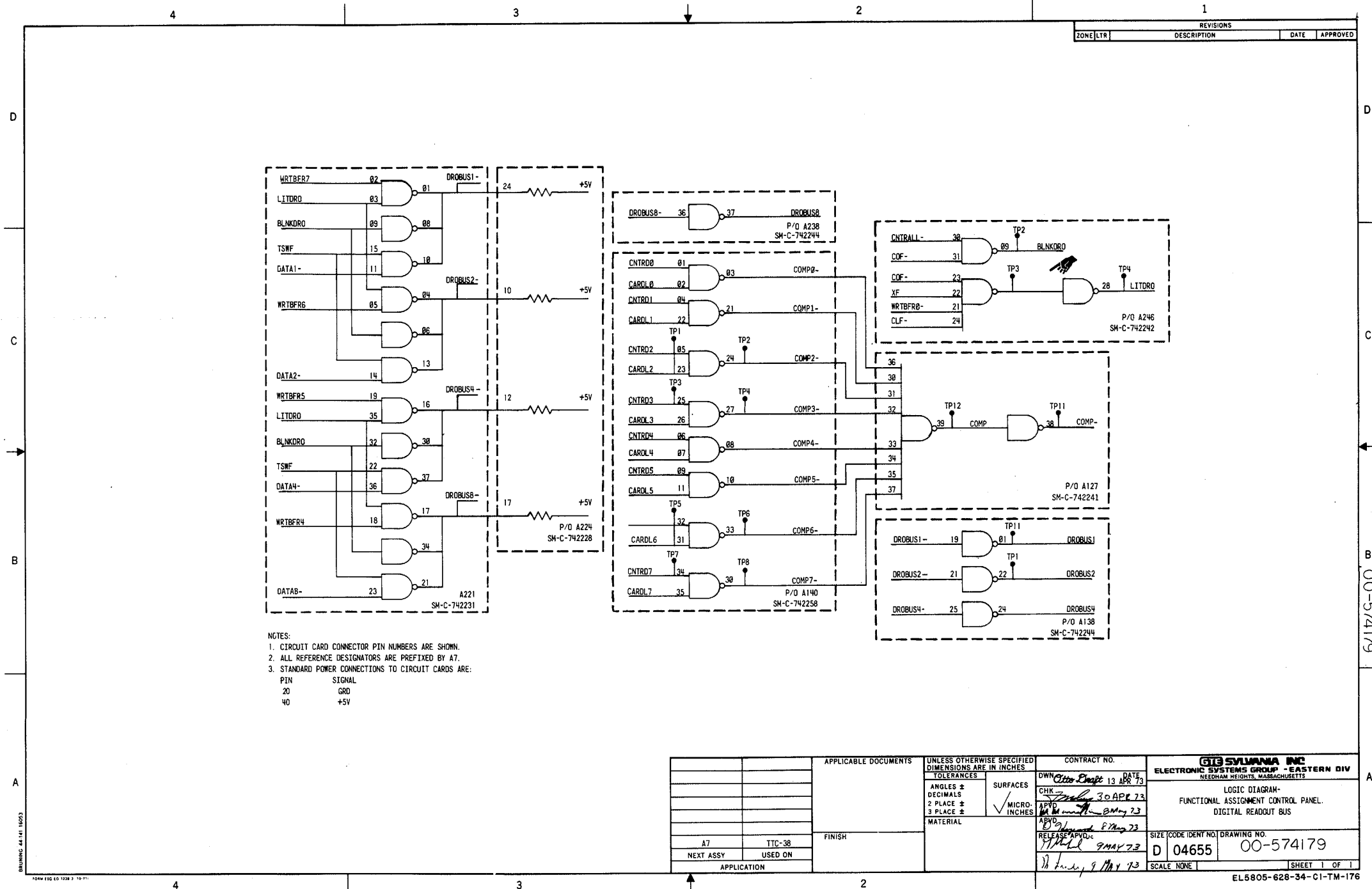


Figure 8-76. Functional assignment control panel digital readout bus.

Change 3 8-192

8-4 Synchronizer and Alarm Transfer, A16

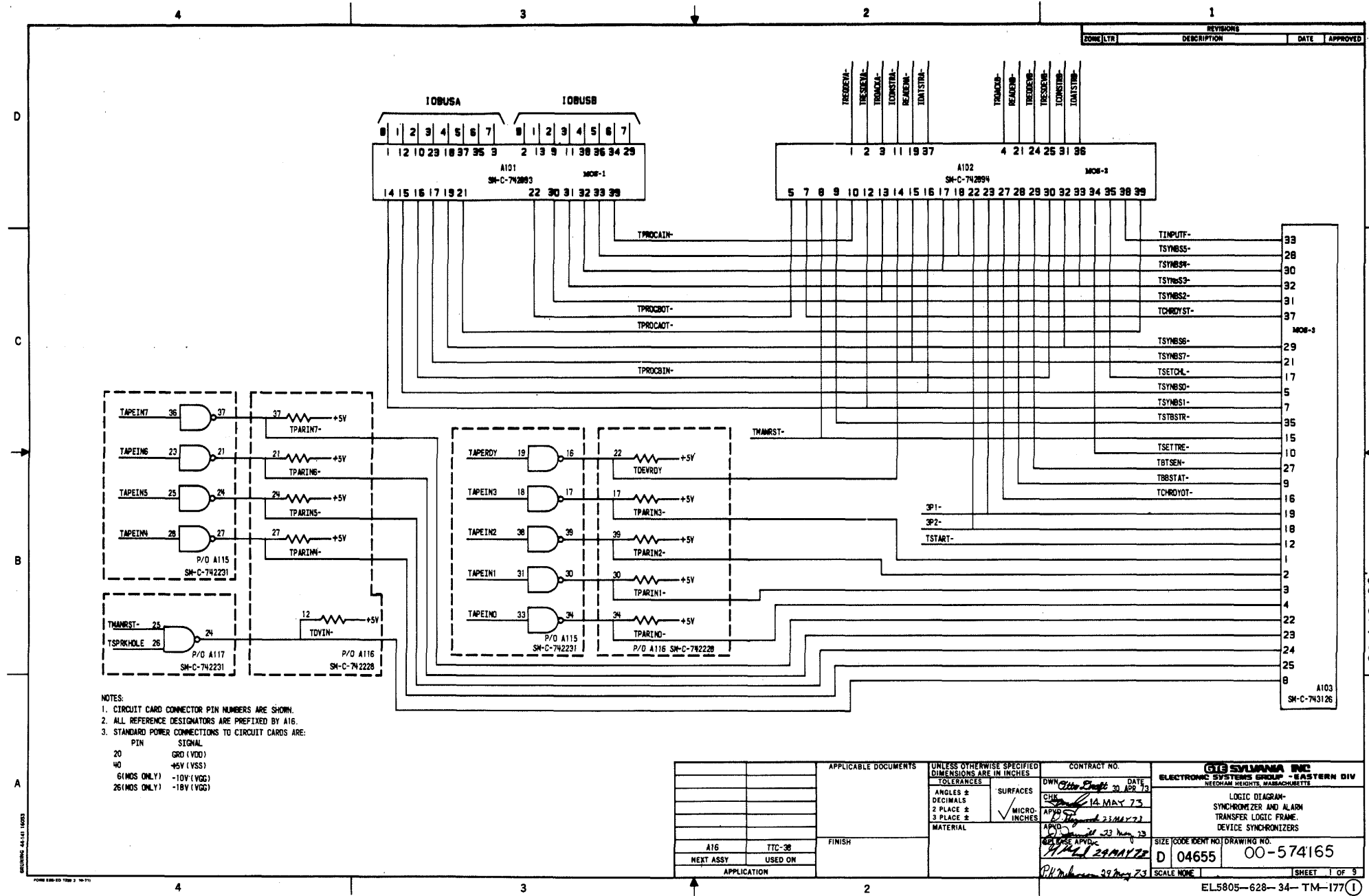


Figure 8-77(1). Device synchronizers, synchronizer and alarm transfer logic frame (sheet 1 of 9).

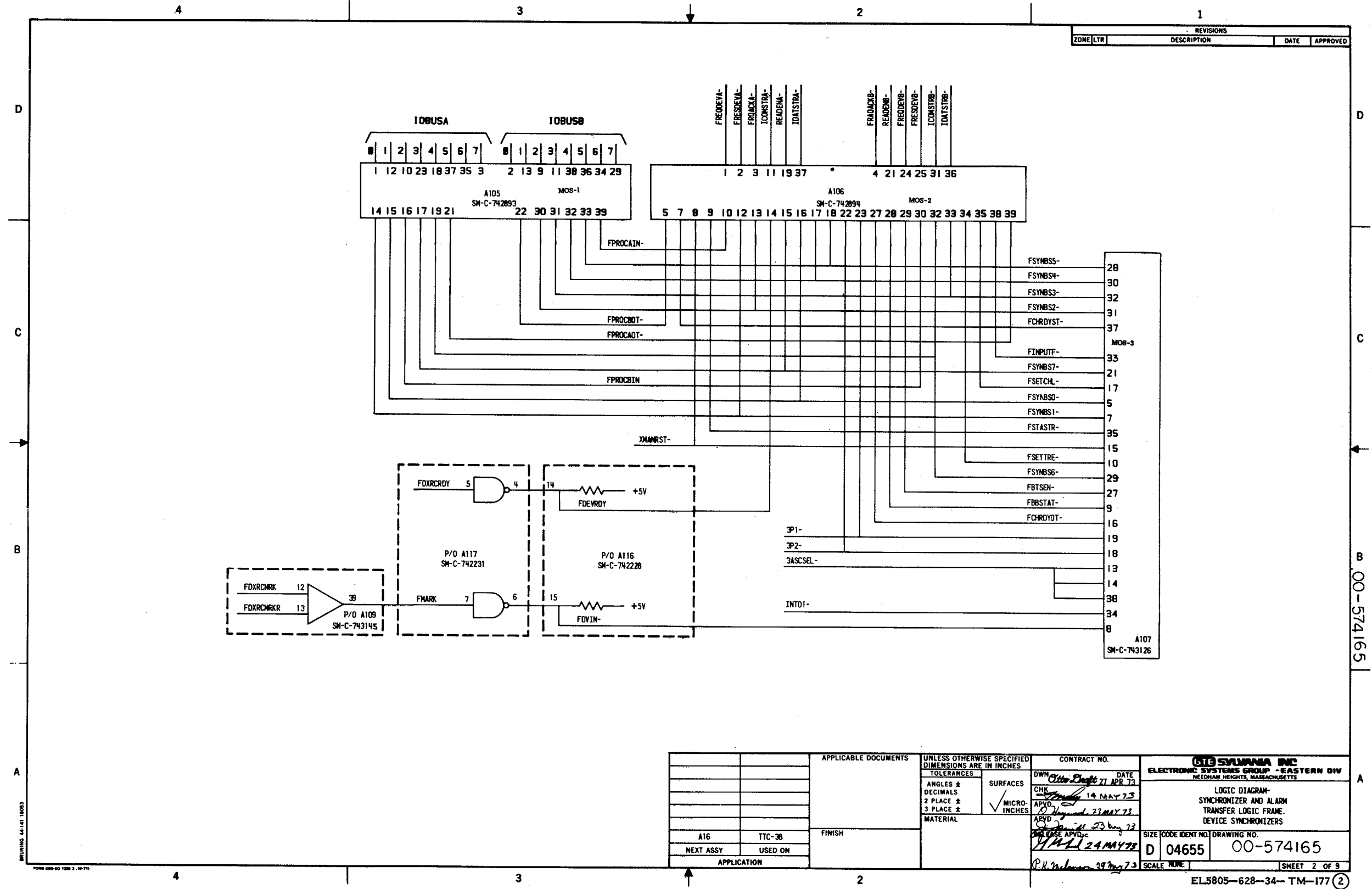
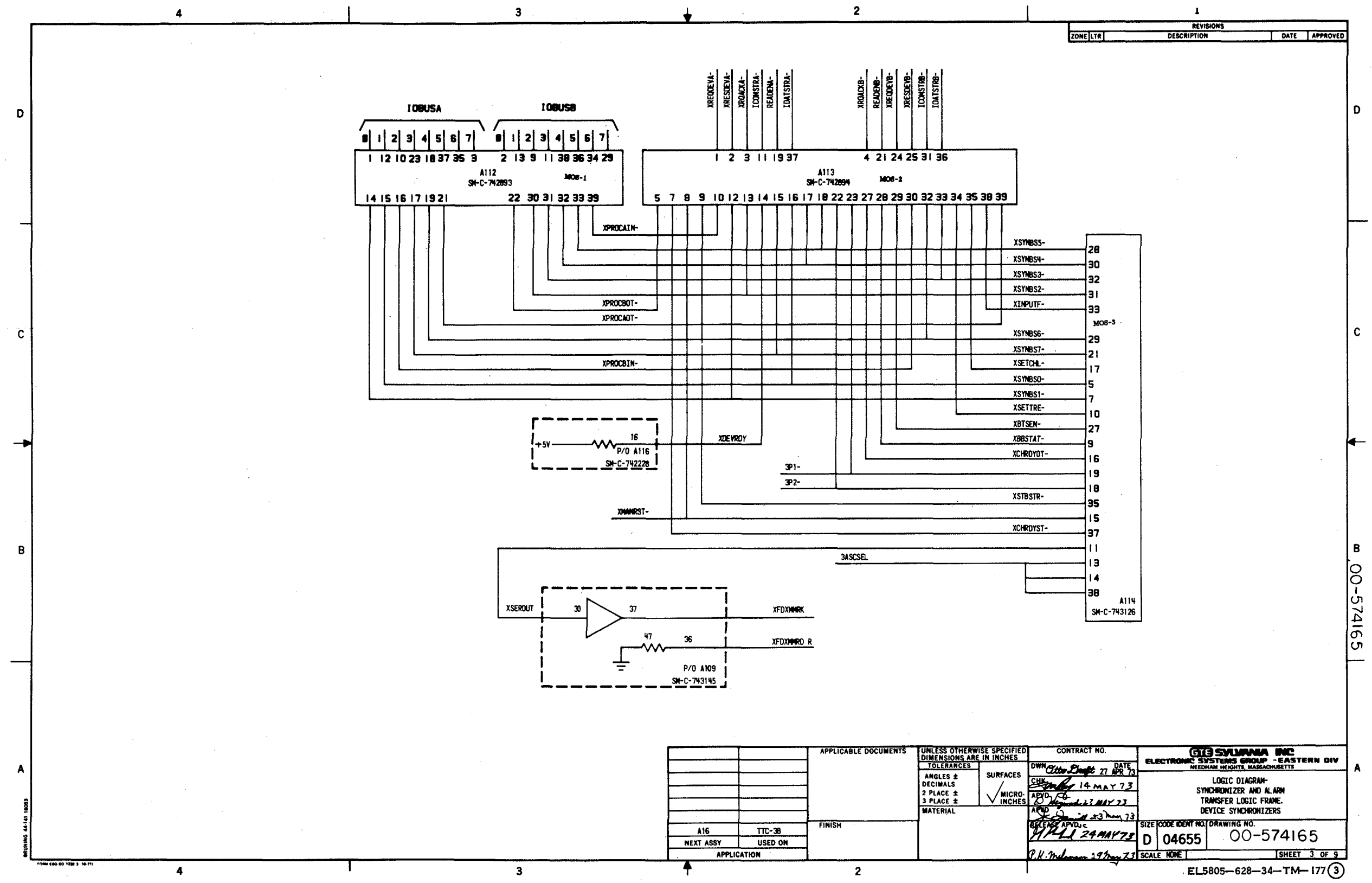
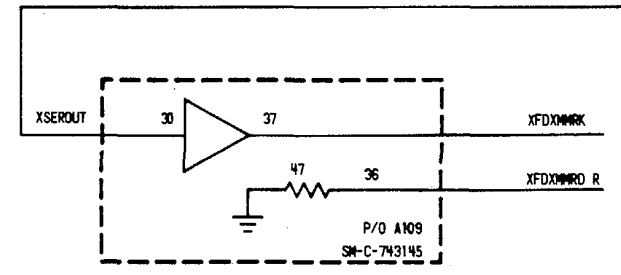
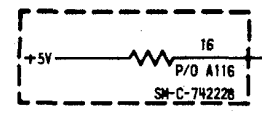
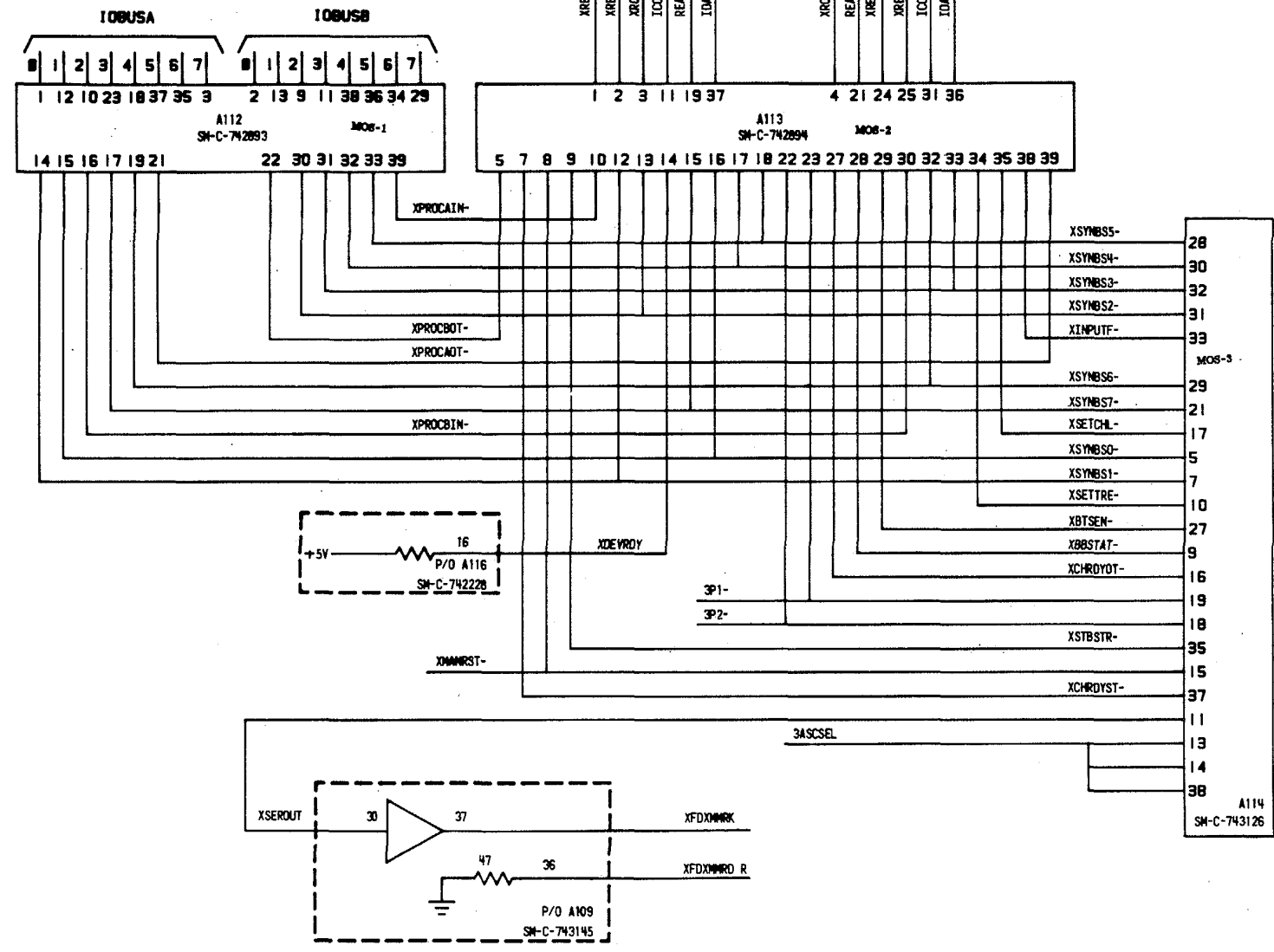


Figure 8-7(2). Device synchronizers, synchronizer and alarm transfer logic frame (sheet 2 of 9).



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE



APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES		DWN <i>Other Draft</i> 27 APR 73		DATE	
		SURFACES		CHK <i>Other</i> 14 MAY 73		LOGIC DIAGRAM- SYNCHRONIZER AND ALARM TRANSFER LOGIC FRAME DEVICE SYNCHRONIZERS	
		MATERIAL		APVD <i>Other</i> 23 MAY 73		SIZE CODE IDENT NO. DRAWING NO.	
A16		TTC-38		RELEASE APVD <i>Other</i> 24 MAY 73		D 04655 00-574165	
NEXT ASSY		USED ON		SCALE NONE		SHEET 3 OF 9	
APPLICATION							

Figure 8-77(3). Device synchronizers, synchronizer, and alarm transfer logic frame (sheet 3 of 9).

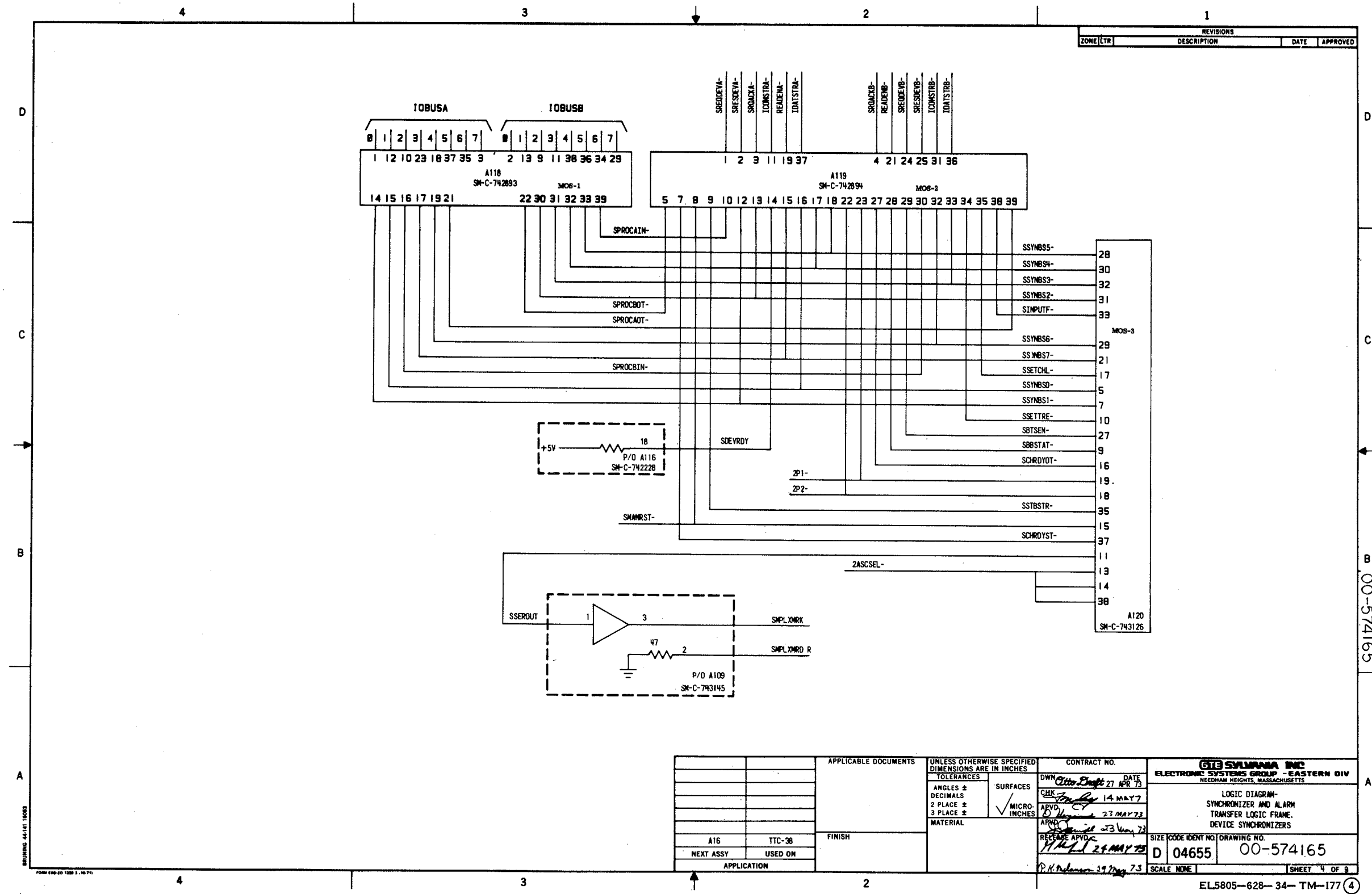


Figure 8-77(4). Device synchronizers, synchronizer, and alarm transfer logic frame (sheet 4 of 9).

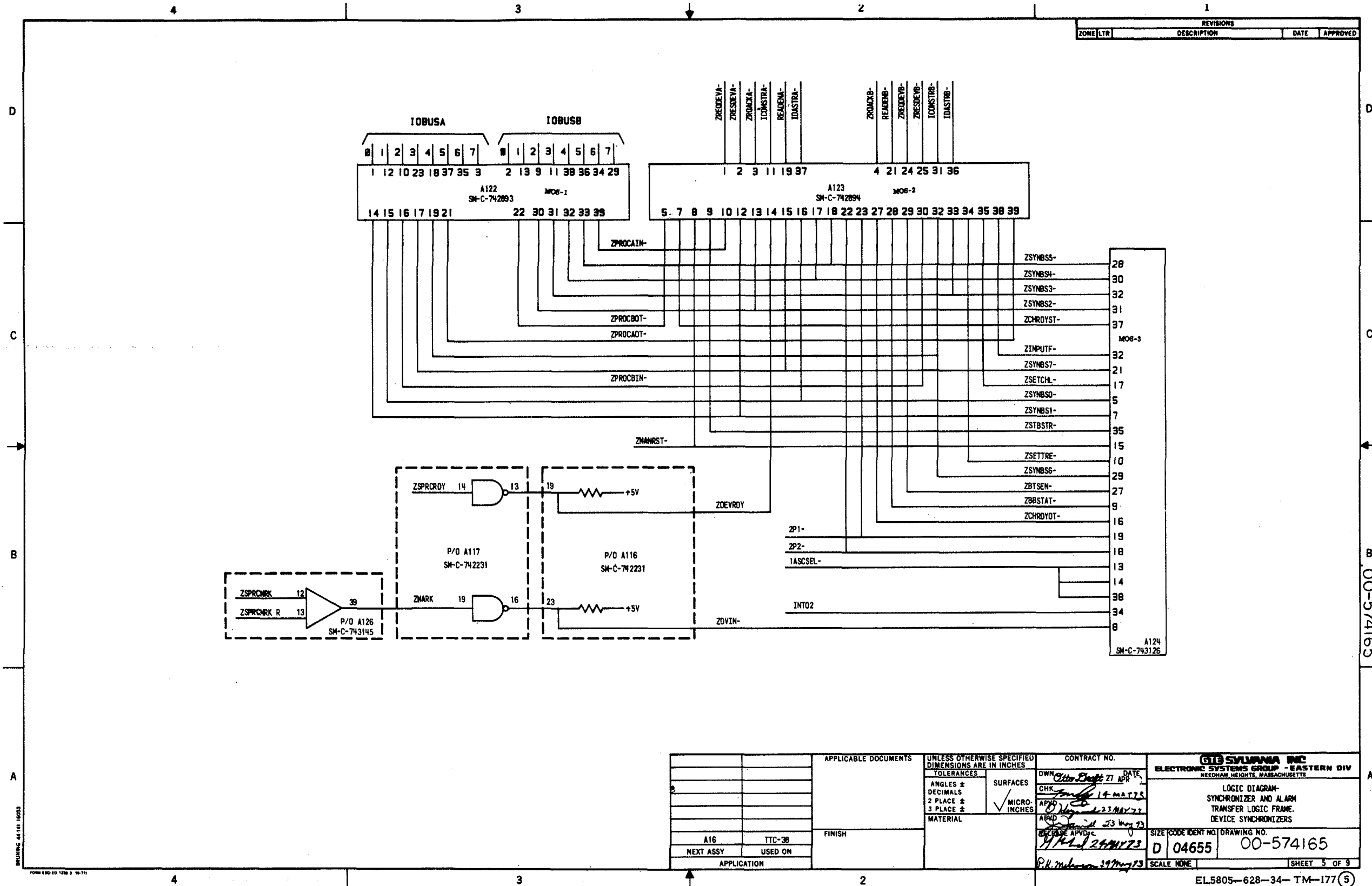


Figure 8-77(5). Device synchronizers, synchronizer, and alarm transfer logic frame (sheet 5 of 9).

APPLICABLE DOCUMENTS A16 TTC-38 NEXT ASSY USED ON APPLICATION		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MATERIAL	CONTRACT NO. DATE DWN <i>John Deane 27 APR</i> CHK <i>[Signature]</i> 14 MAY 73 APVD <i>[Signature]</i> 23 MAY 73 ARVD <i>[Signature]</i> 23 MAY 73 RELEASE APVD/C <i>[Signature]</i> 24 MAY 73 P.K. <i>[Signature]</i> 29 MAY 73	ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS LOGIC DIAGRAM- SYNCHRONIZER AND ALARM TRANSFER LOGIC FRAME. DEVICE SYNCHRONIZERS SIZE CODE IDENT NO. DRAWING NO. D 04655 00-574165 SCALE NONE SHEET 5 OF 9
--	--	--	--	--

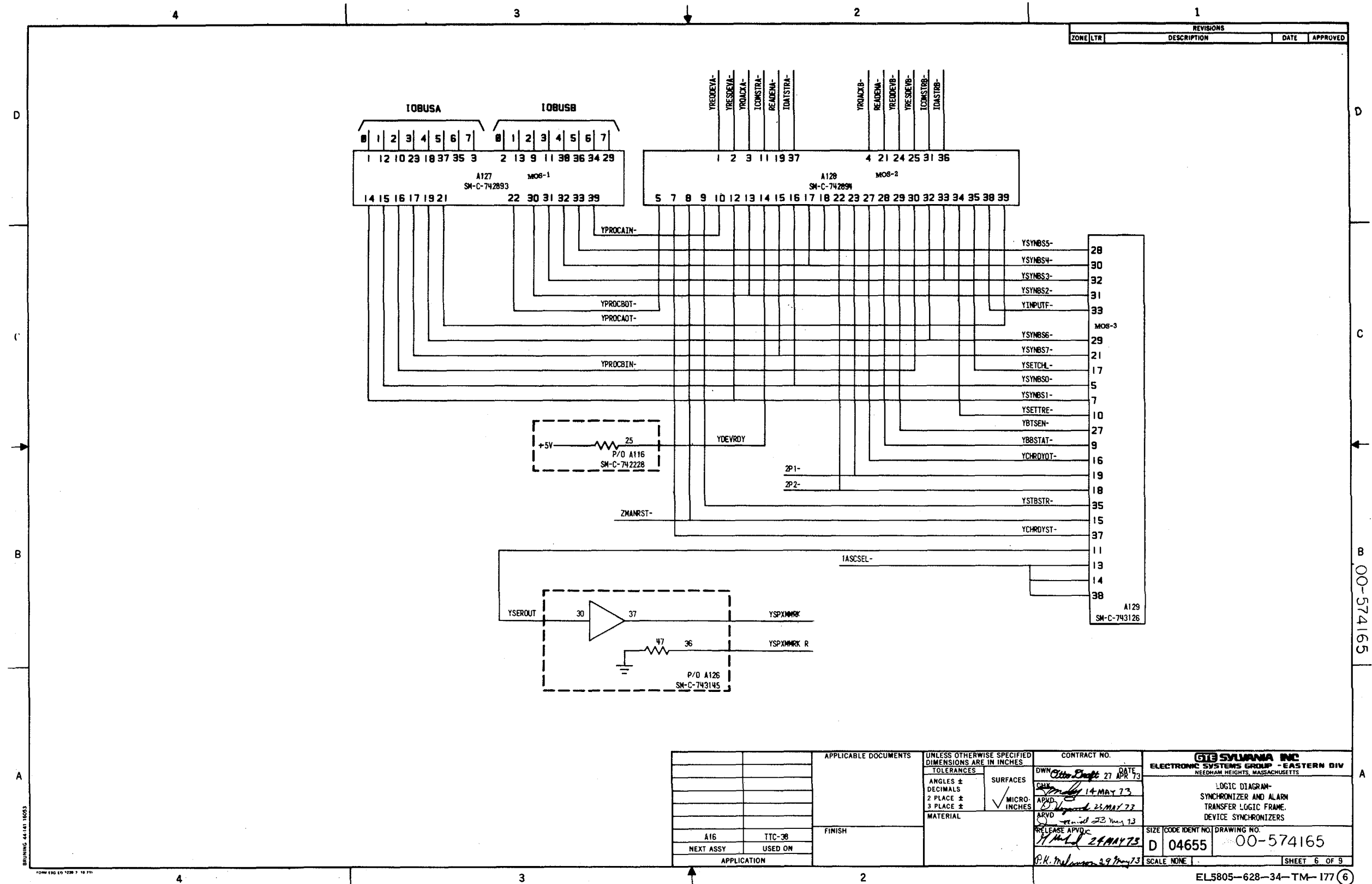


Figure 8-77(6). Device synchronizers, synchronizer, and alarm transfer logic frame (sheet 6 of 9).

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
FINISH		TOLERANCES		DWN <i>John Duff</i> 27 APR 73		LOGIC DIAGRAM- SYNCHRONIZER AND ALARM TRANSFER LOGIC FRAME. DEVICE SYNCHRONIZERS	
A16 TTC-38		ANGLES ±		DATE <i>14 MAY 73</i>		SIZE (CODE IDENT NO) DRAWING NO.	
NEXT ASSY USED ON		DECIMALS		APVD <i>D. Vignone</i> 23 MAY 73		D 04655 00-574165	
APPLICATION		2 PLACE ±		APVD <i>P.K. Melanson</i> 29 May 73		SCALE NONE SHEET 6 OF 9	
		3 PLACE ±		RELEASE APVD <i>P.K. Melanson</i> 29 May 73			
		MATERIAL					

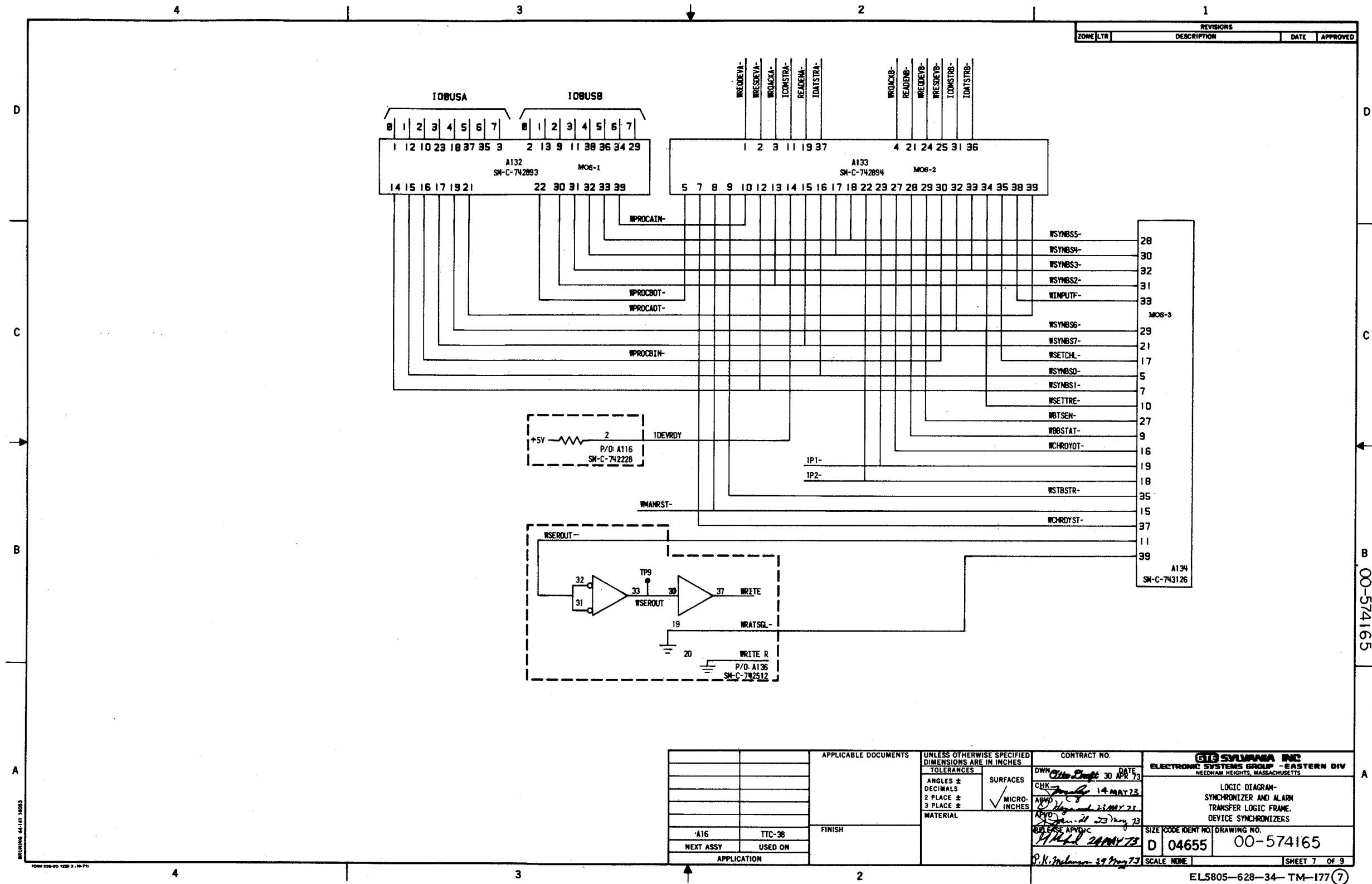


Figure 8-77(7). Device synchronizers, synchronizer, and alarm transfer logic frame (sheet 7 of 9).

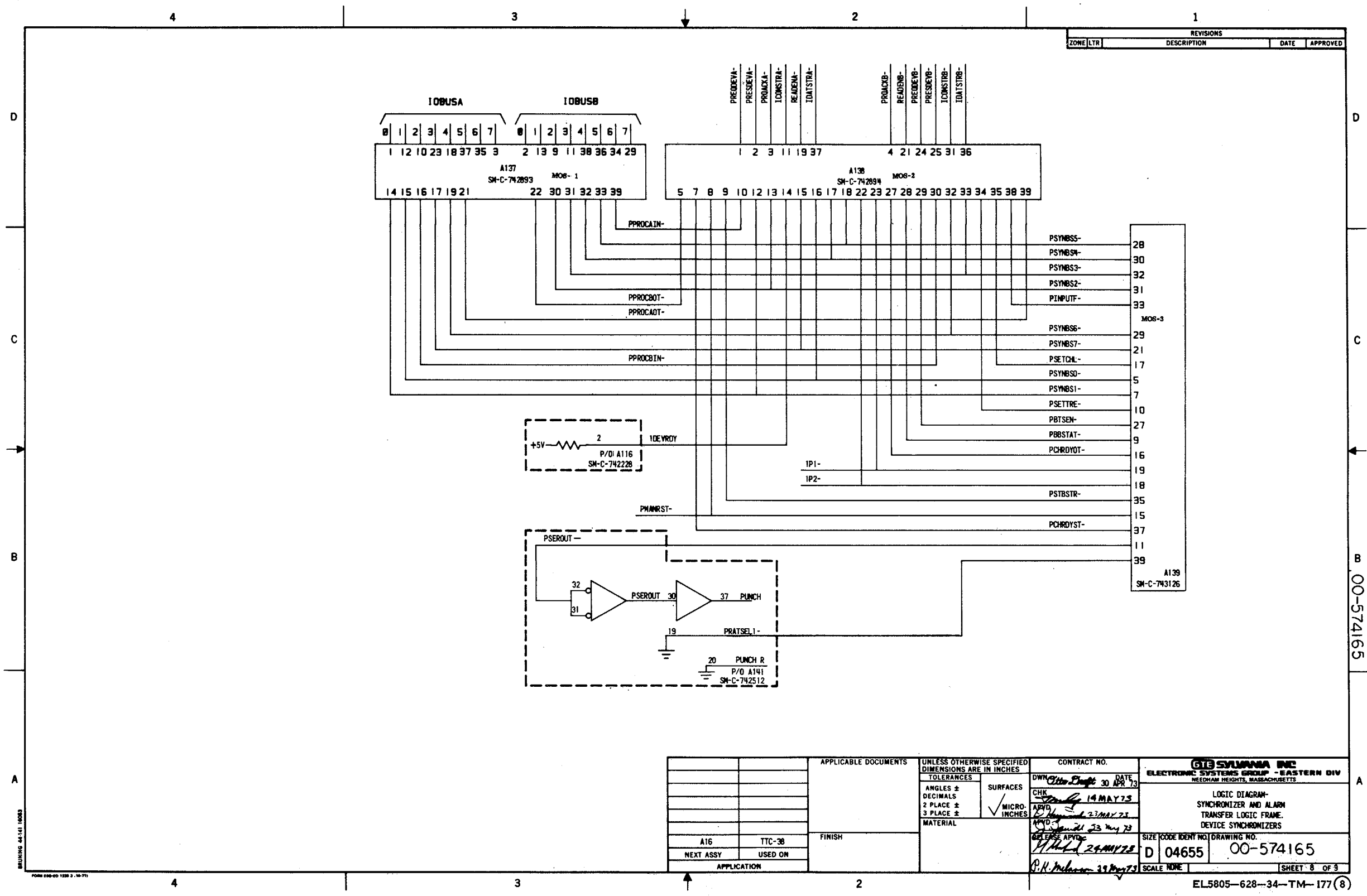
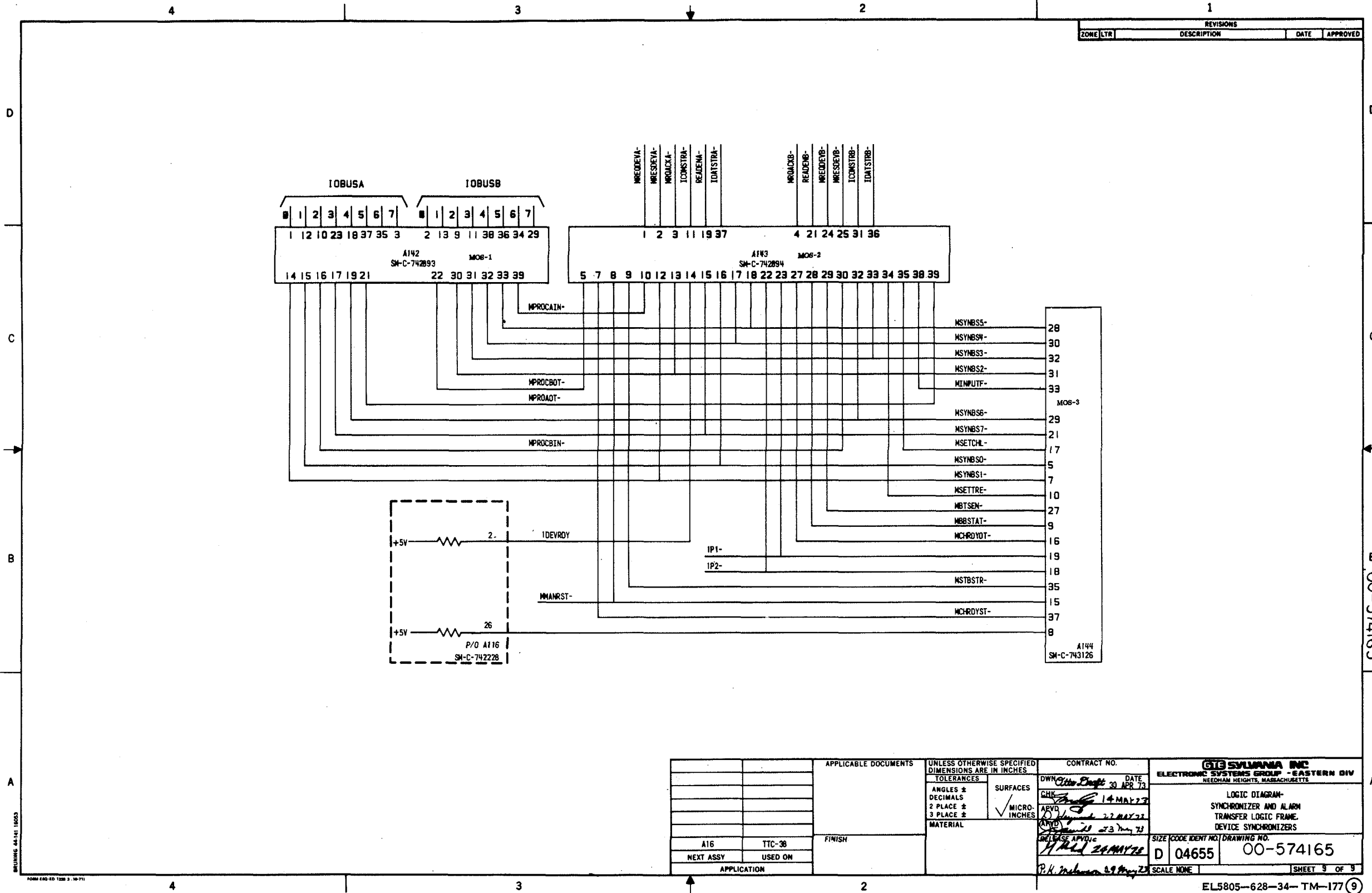


Figure 8-77(8). Device synchronizers, synchronizer, and alarm transfer logic frame (sheet 8 of 9).



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GIB SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES		DWN <i>Other Draft</i> DATE 30 APR 73		LOGIC DIAGRAM- SYNCHRONIZER AND ALARM TRANSFER LOGIC FRAME. DEVICE SYNCHRONIZERS	
		ANGLES ± DECIMALS		CHK <i>[Signature]</i> 14 MAY 73			
		2 PLACE ±		APVD <i>[Signature]</i> 23 MAY 73			
		3 PLACE ±		RWD <i>[Signature]</i> 23 MAY 73		SIZE (CODE IDENT NO) DRAWING NO.	
		MATERIAL		RELEASE APVD: <i>[Signature]</i> 24 MAY 73		D 04655 00-574165	
A16 TTC-38		FINISH		SCALE NONE		SHEET 9 OF 9	
NEXT ASSY USED ON							
APPLICATION							

Figure 8-77(9). Device synchronizers, synchronizer, and alarm transfer logic frame (sheet 9 of 9).

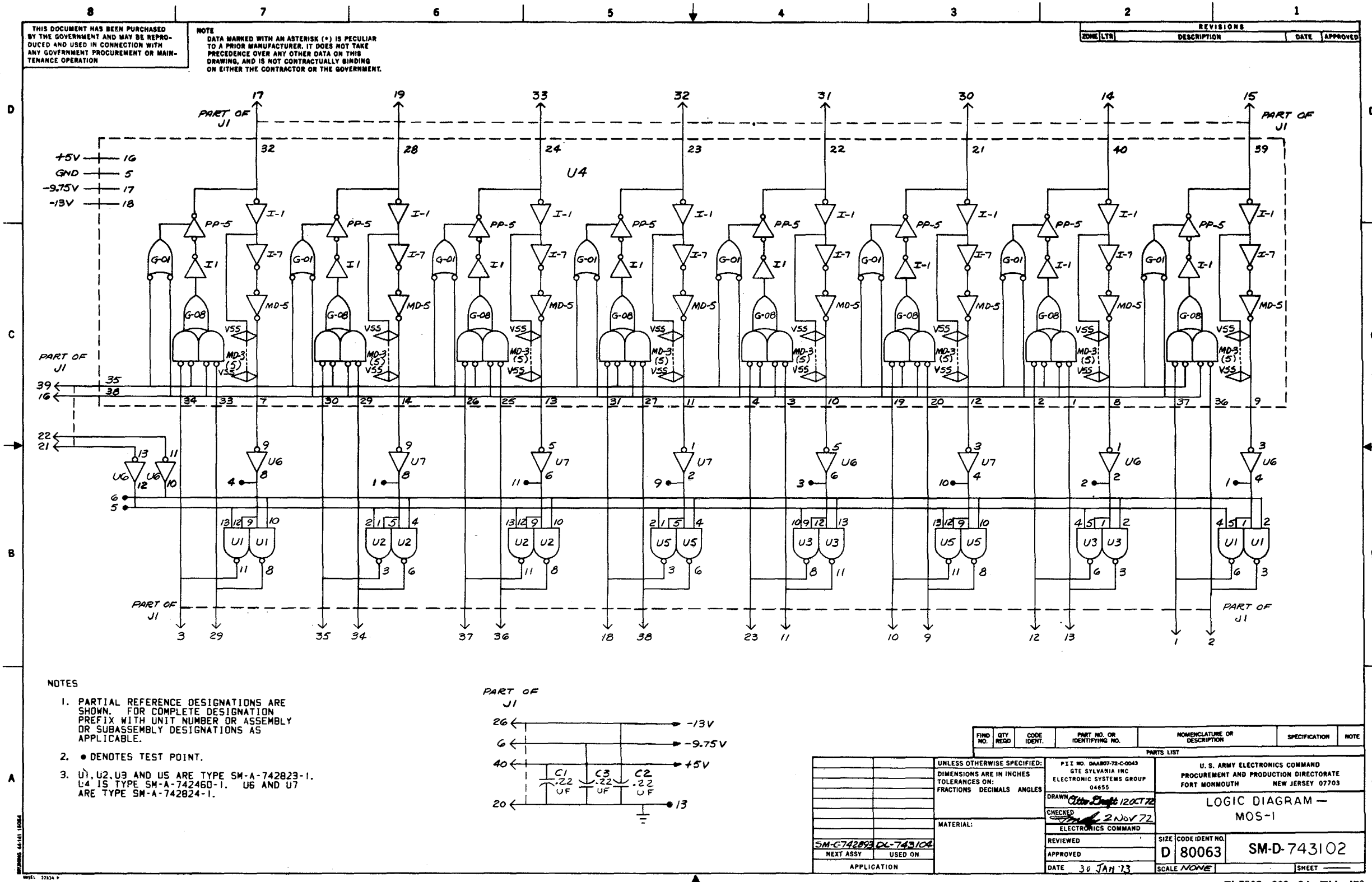


Figure 8-78. MOS-1.

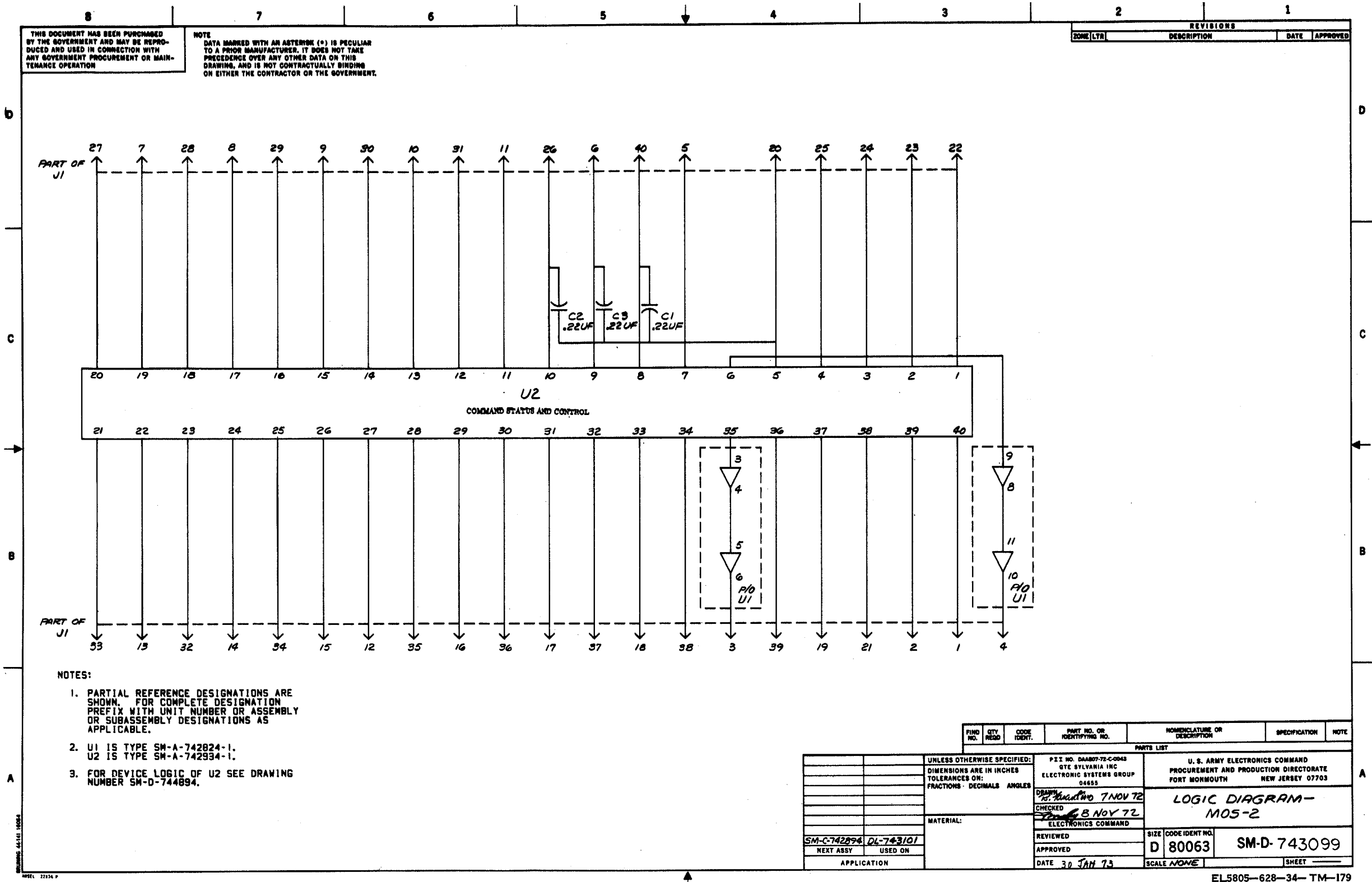


Figure 8-79. MOS-2.

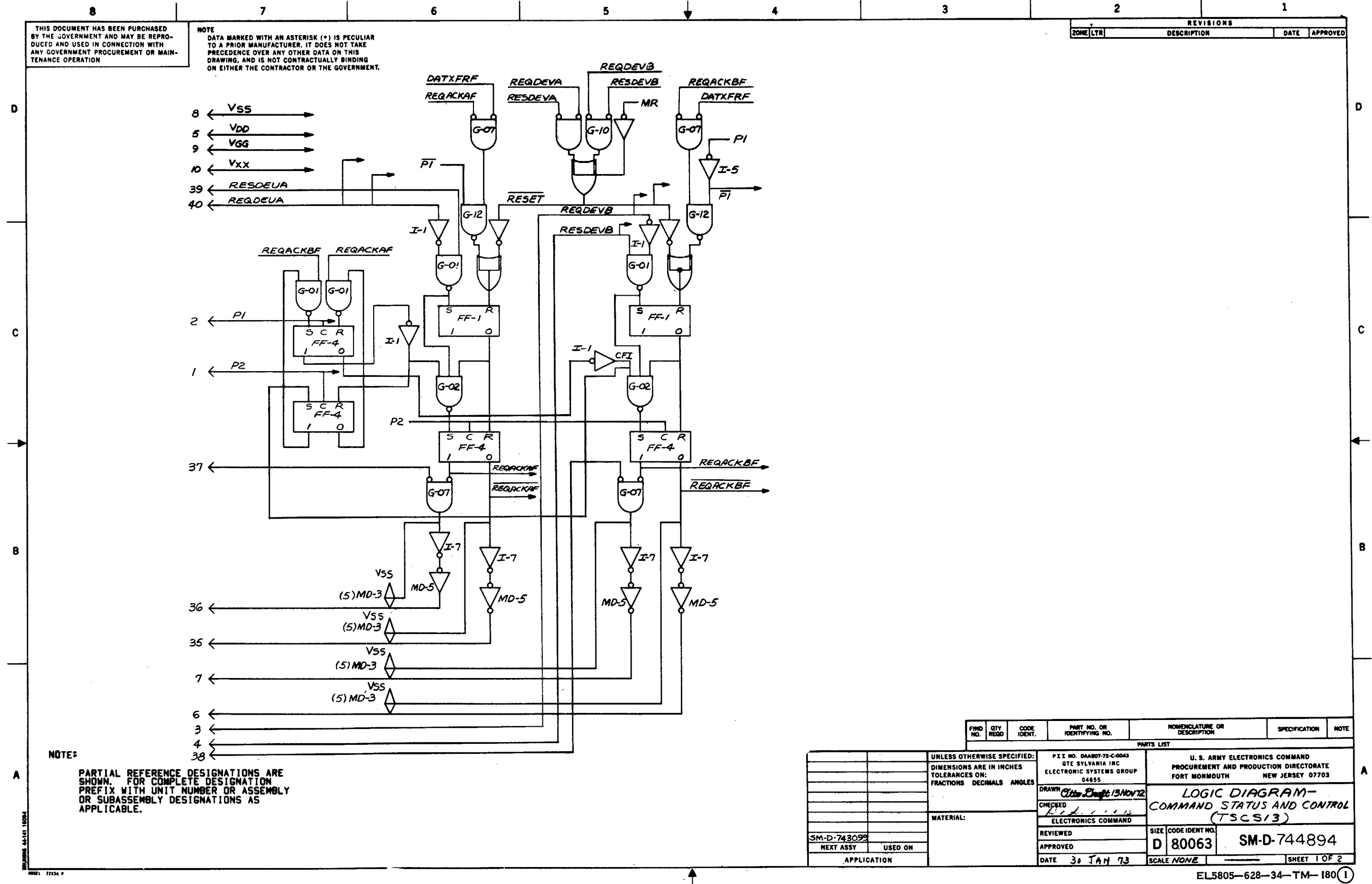


Figure 8-80(1). Command status and control (sheet 1 of 2).

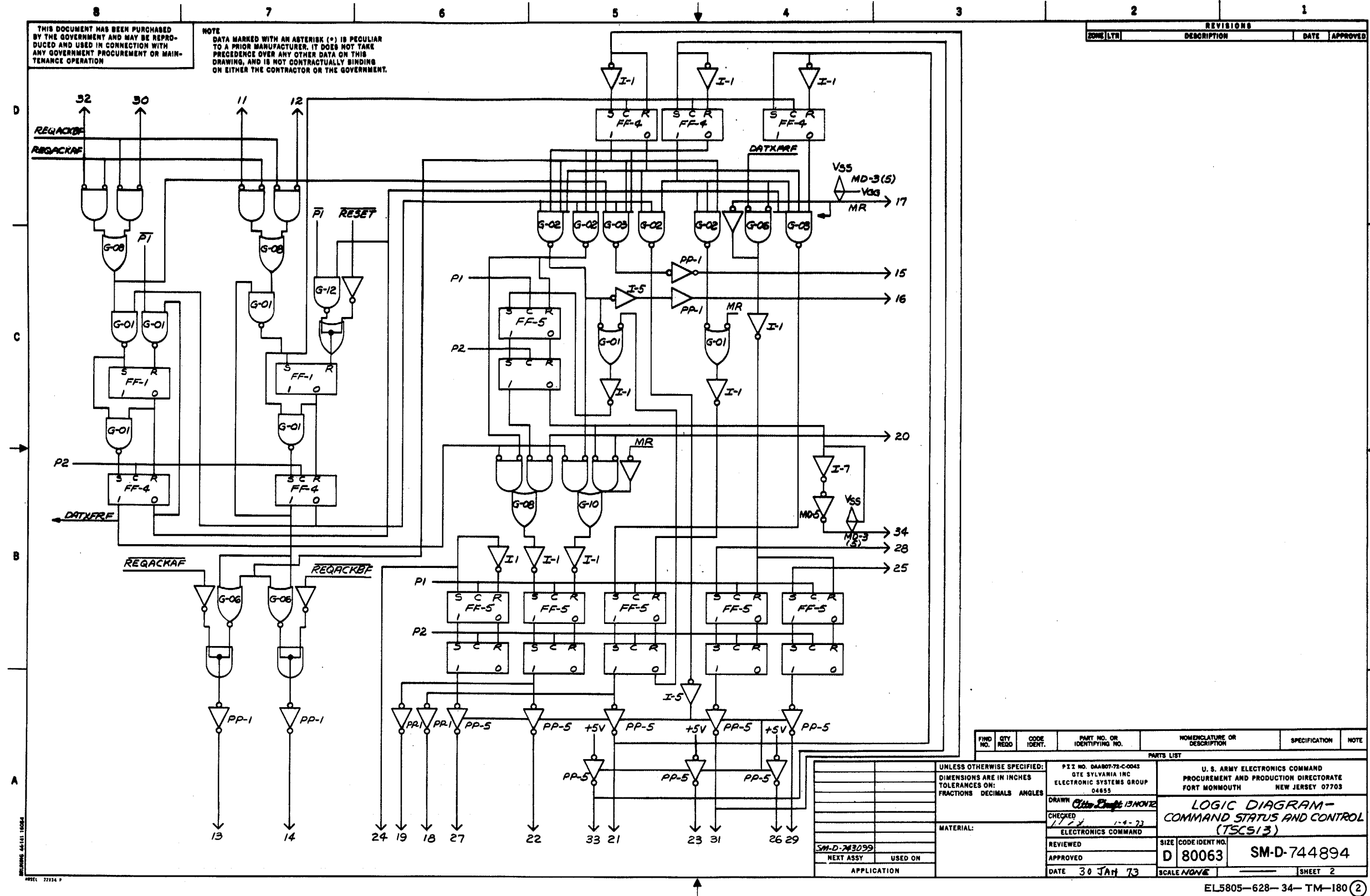


Figure 8-80(2). Command status and control (sheet 2 of 2).

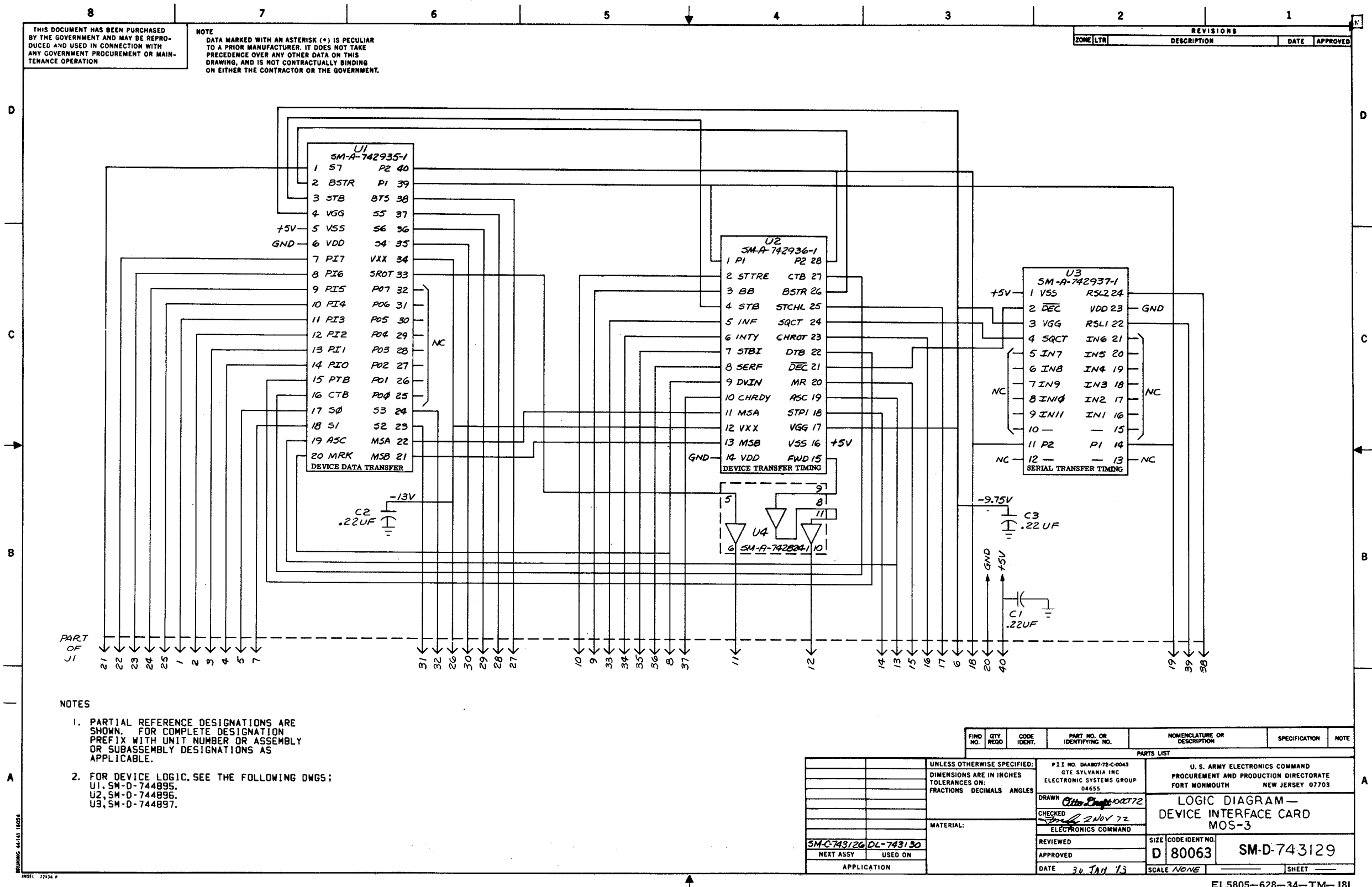


Figure 8-81. Device interface card MOS-3.

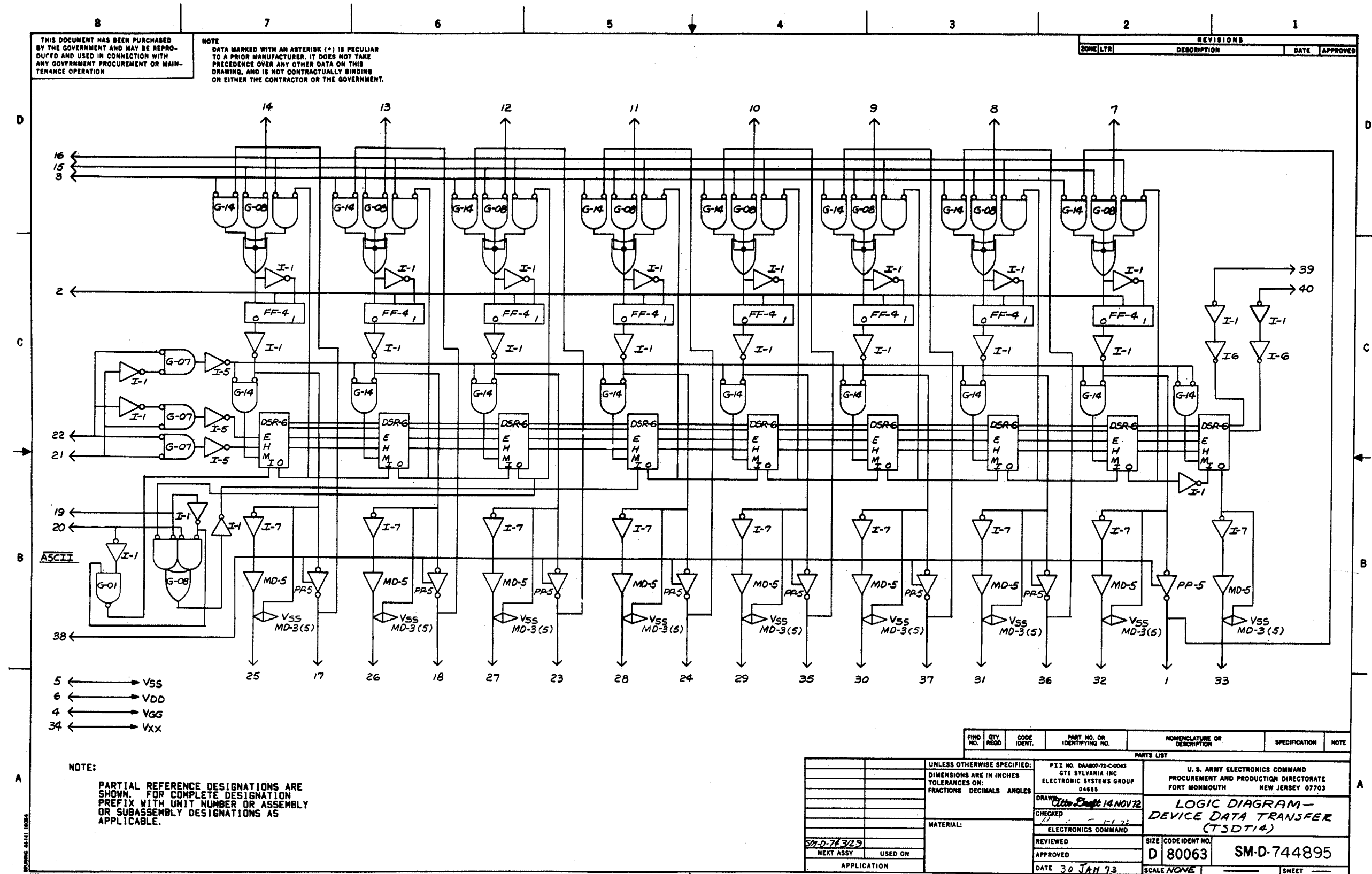


Figure 8-82. Device data transfer.

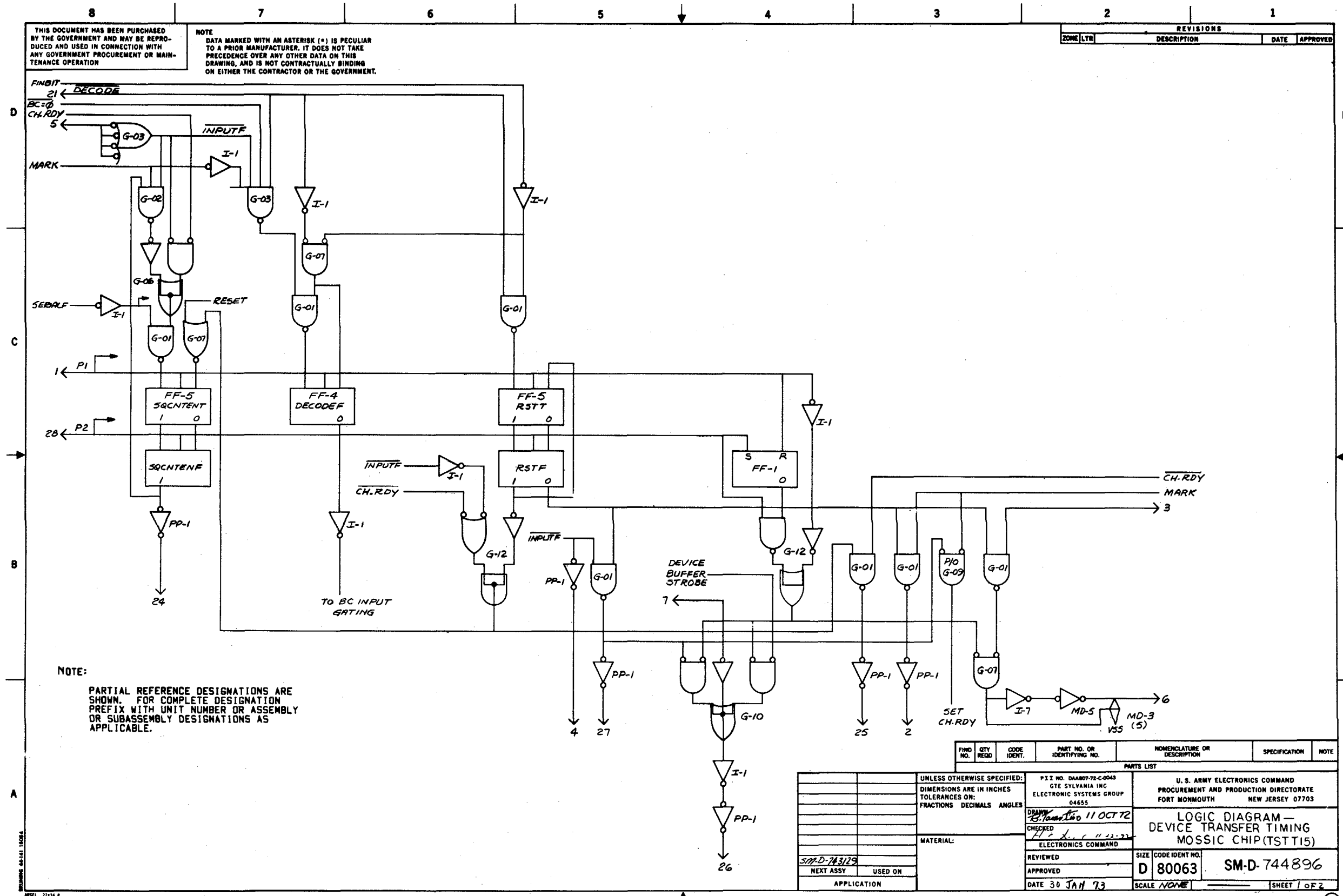


Figure 8-83(1). Device transfer timing mossic chip (sheet 1 of 2)

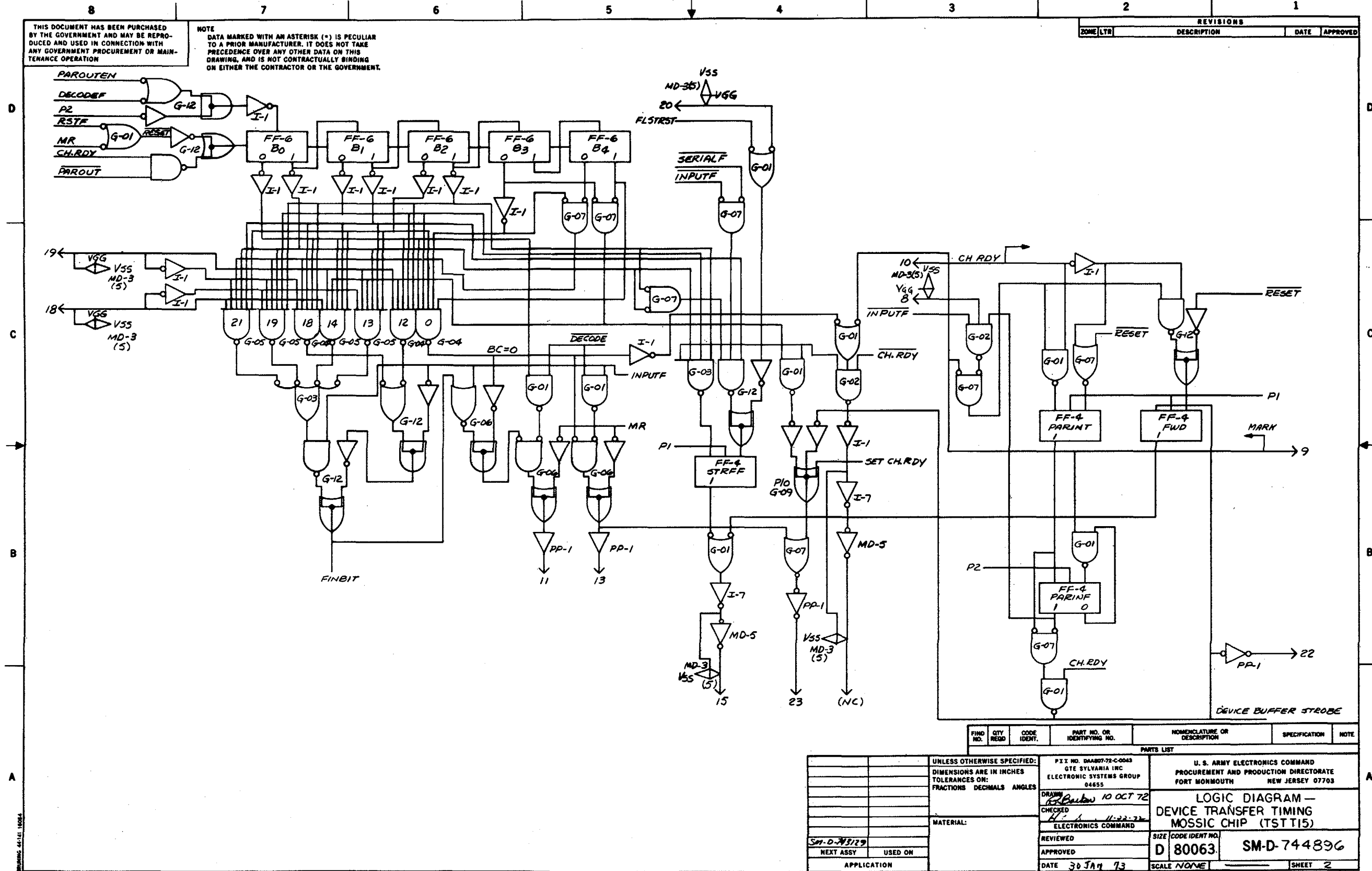


Figure 8-83(2). Device transfer timing mossic chip (sheet 2 of 2)

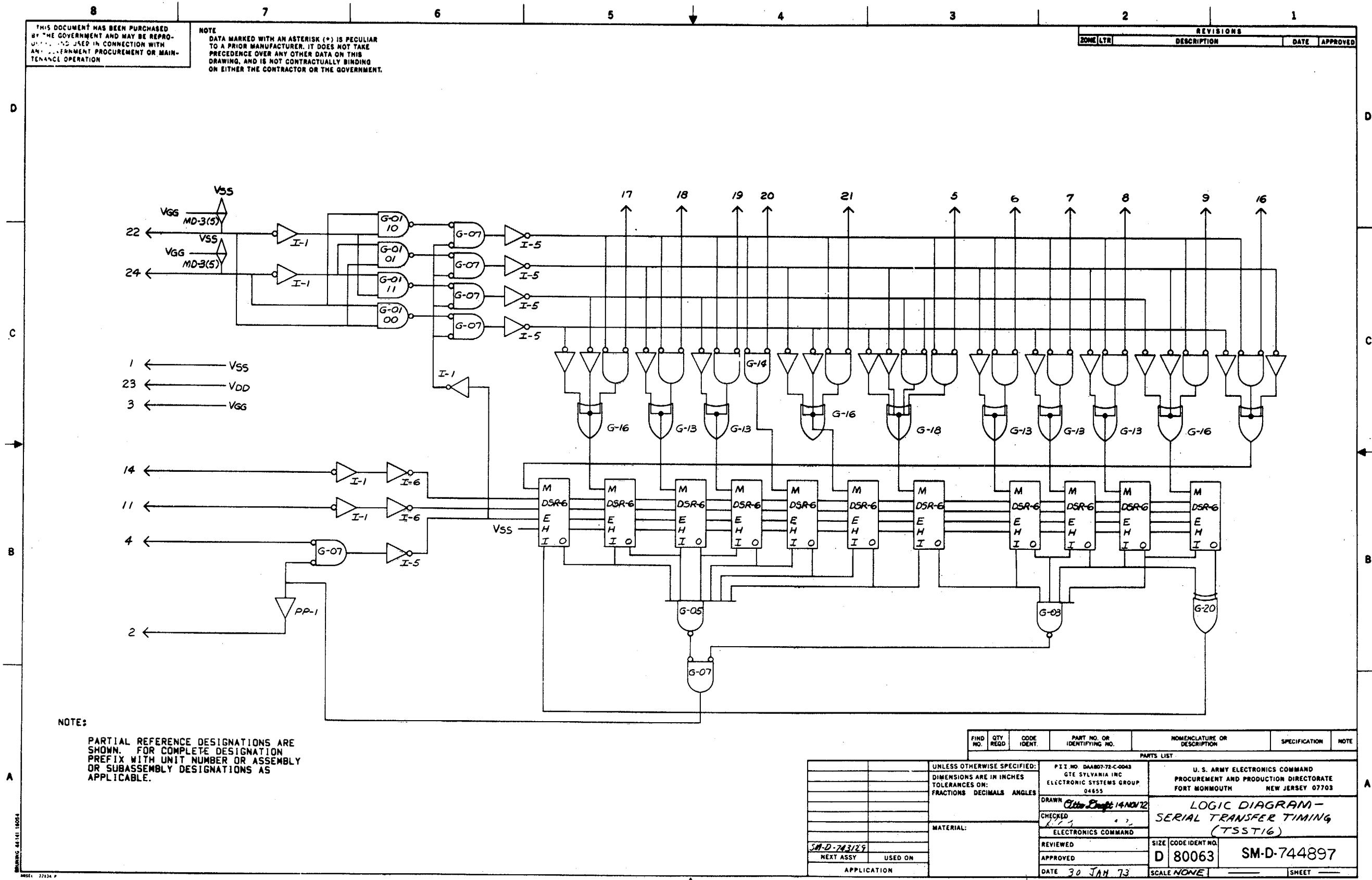


Figure 8-84. Serial transfer timing.

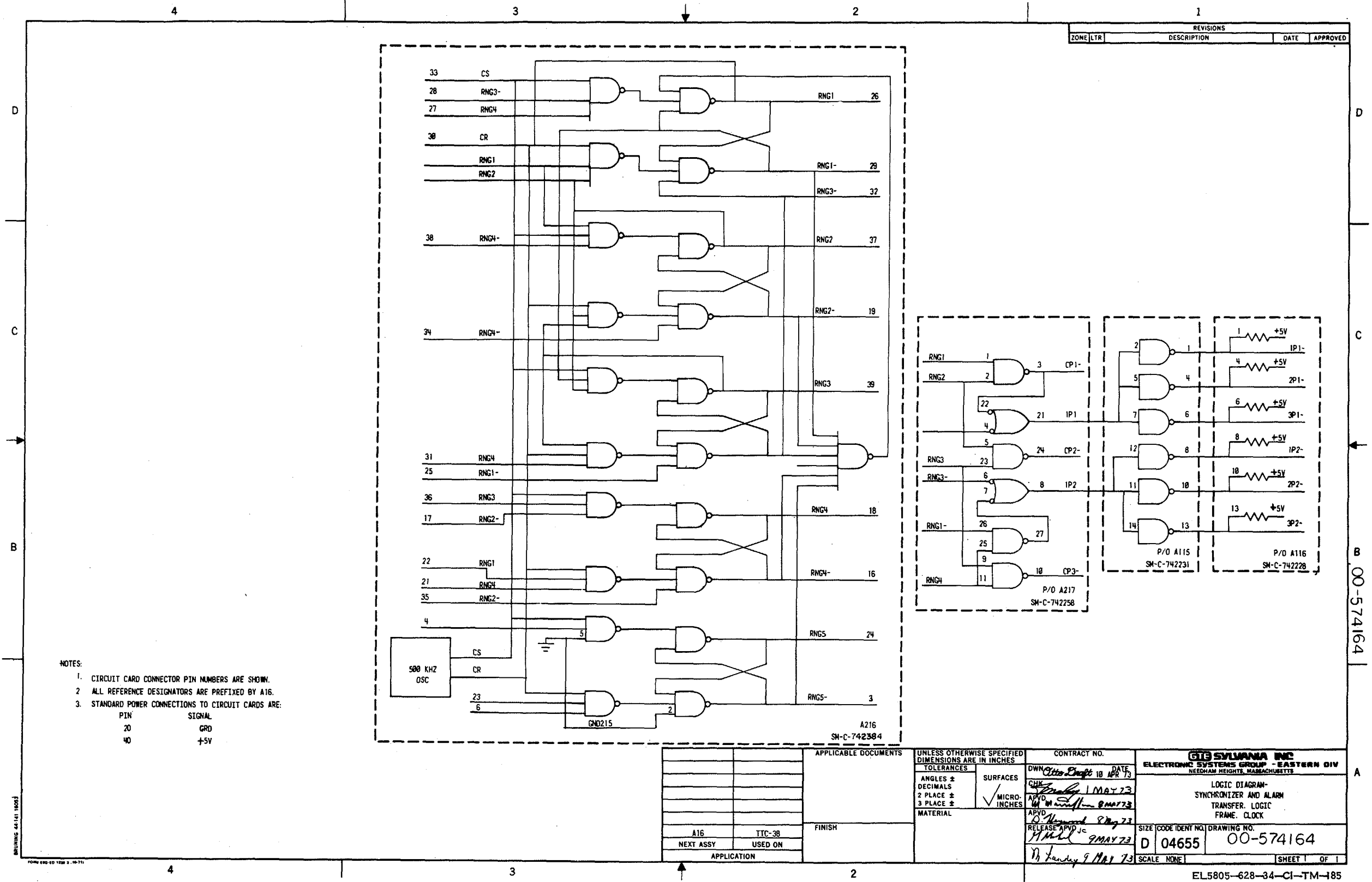
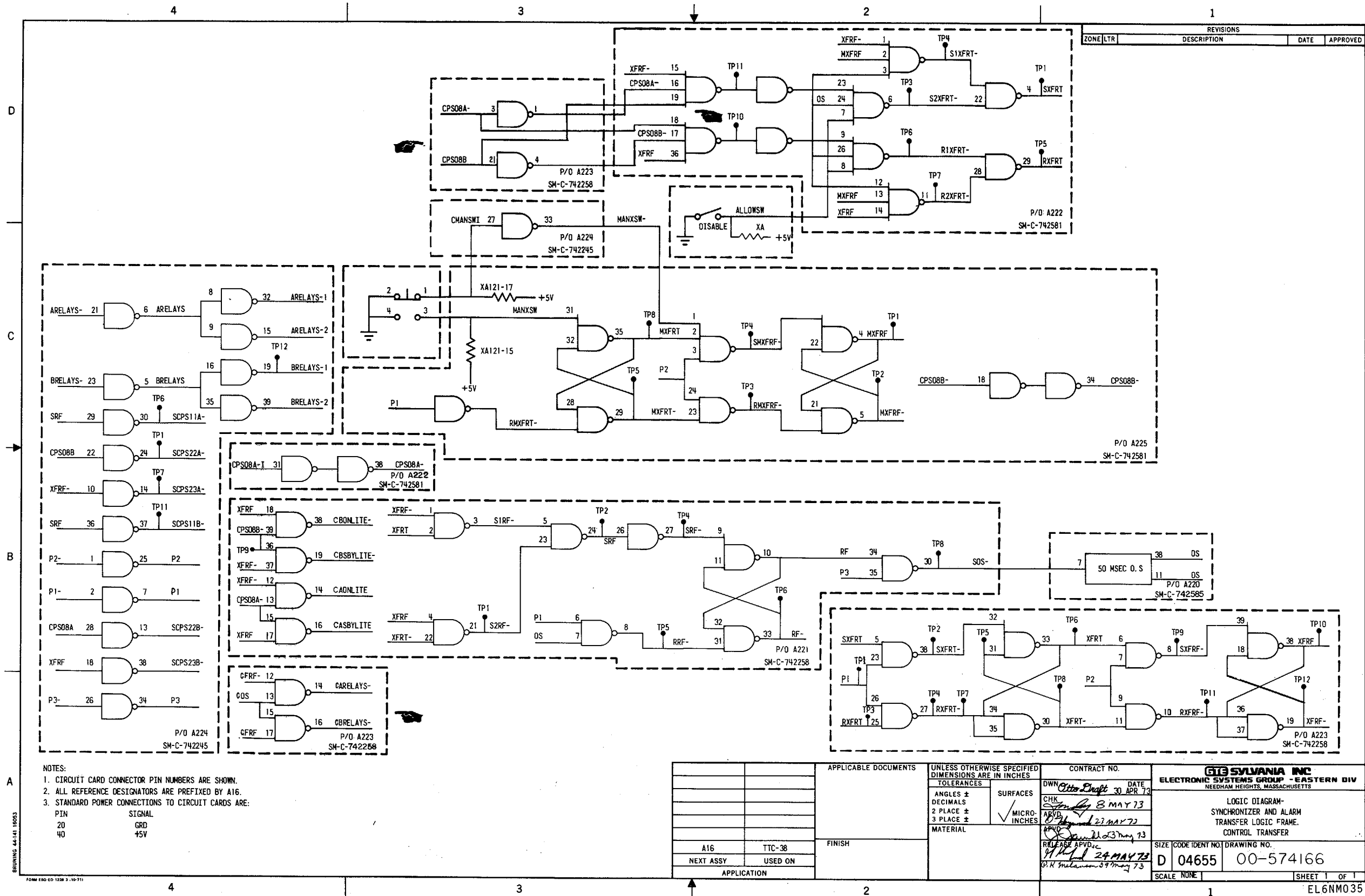


Figure 8-85. Synchronizer and alarm transfer logic frame clock..

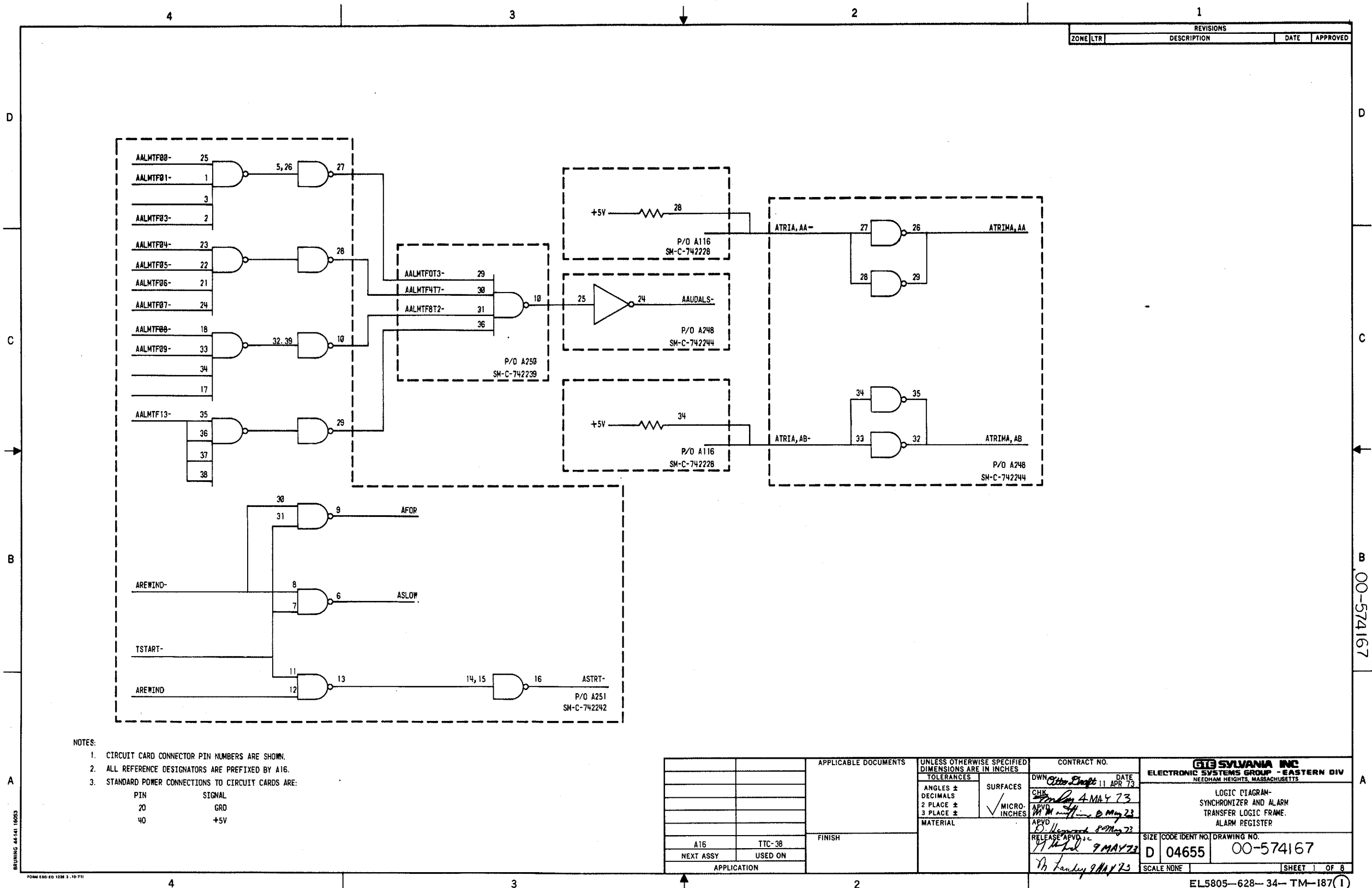
Change 1 8-212



NOTES:
 1. CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 2. ALL REFERENCE DESIGNATORS ARE PREFIXED BY A16.
 3. STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:
 PIN SIGNAL
 20 GRD
 40 +5V

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.	
		TOLERANCES		DATE	
		ANGLES ±		30 APR 73	
		DECIMALS		CHK	
		2 PLACE ±		8 MAY 73	
		3 PLACE ±		APVD	
		MATERIAL		23 MAY 73	
				RELEASE APVD	
A16		TTC-38		24 MAY 73	
NEXT ASSY		USED ON		B.R. Melanson 29 May 73	
APPLICATION		FINISH		GTE SYLVANIA INC	
				ELECTRONIC SYSTEMS GROUP - EASTERN DIV	
				NEEDHAM HEIGHTS, MASSACHUSETTS	
				LOGIC DIAGRAM -	
				SYNCHRONIZER AND ALARM	
				TRANSFER LOGIC FRAME.	
				CONTROL TRANSFER	
				SIZE (CODE IDENT NO) DRAWING NO.	
				D 04655 00-574166	
				SCALE NONE	
				SHEET 1 OF 1	

Figure 8-86. Synchronizer and alarm transfer logic frame control transfer..



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

- NOTES:
- CIRCUIT CARD CONNECTOR PIN NUMBERS ARE SHOWN.
 - ALL REFERENCE DESIGNATORS ARE PREFIXED BY A16.
 - STANDARD POWER CONNECTIONS TO CIRCUIT CARDS ARE:
- | PIN | SIGNAL |
|-----|--------|
| 20 | GRD |
| 40 | +5V |

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
FINISH		TOLERANCES ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ± MATERIAL		SURFACES ✓ MICRO-INCHES		DWN <i>Cher Draft</i> DATE 11 APR 73 CHK <i>W. M. Smith</i> 4 MAY 73 APVD <i>W. M. Smith</i> 6 MAY 73 RPD <i>W. M. Smith</i> 8 MAY 73 RELEASE APVD <i>W. M. Smith</i> 9 MAY 73 BY <i>W. M. Smith</i> 9 MAY 73	
A16	TTC-38	FINISH		SIZE		CODE IDENT NO. DRAWING NO.	
NEXT ASSY	USED ON	APPLICATION		D 04655		00-574167	
APPLICATION				SCALE NONE		SHEET 1 OF 8	

Figure 8-87(1). Synchronizer and alarm transfer logic frame alarm register (sheet 1 of 8)..

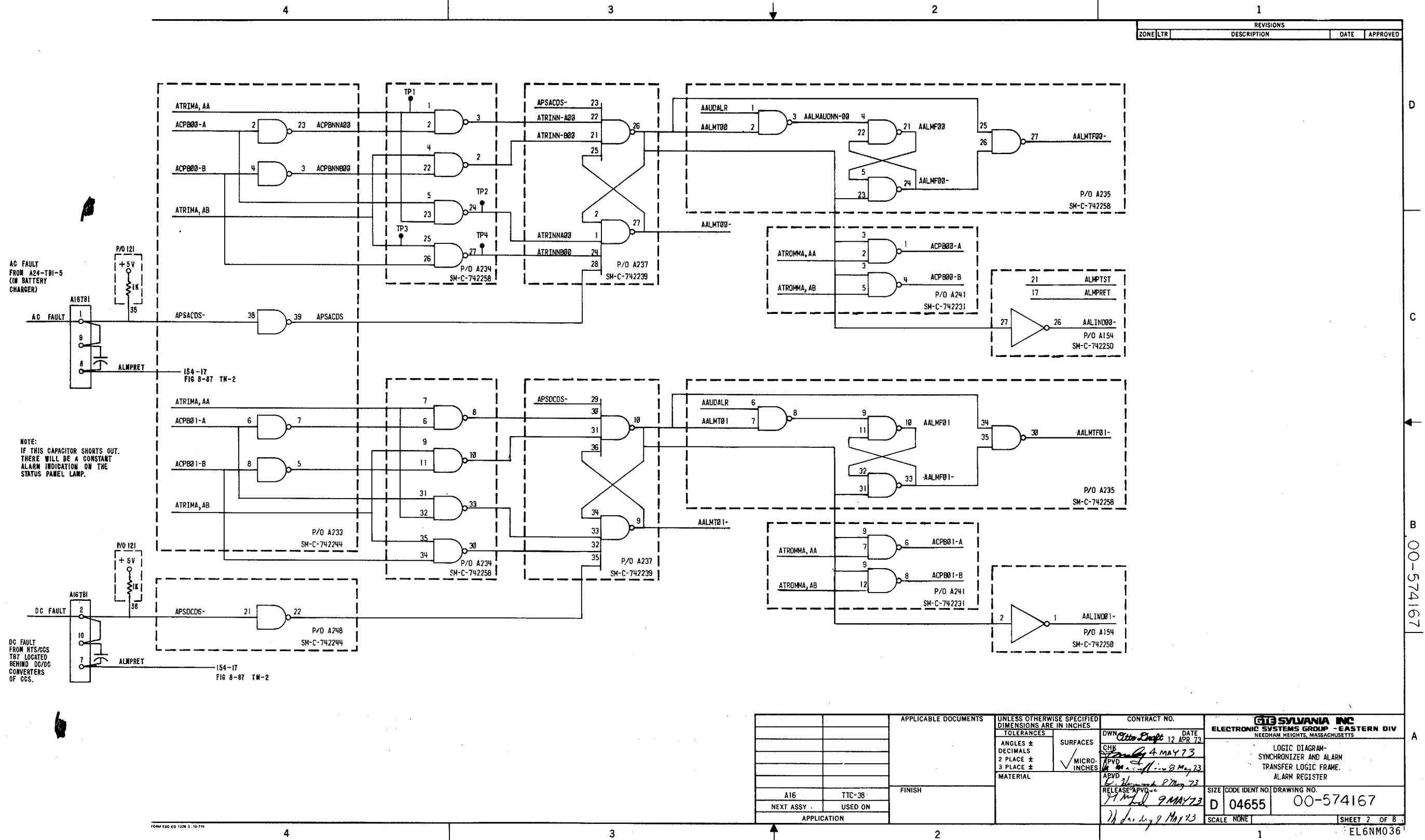
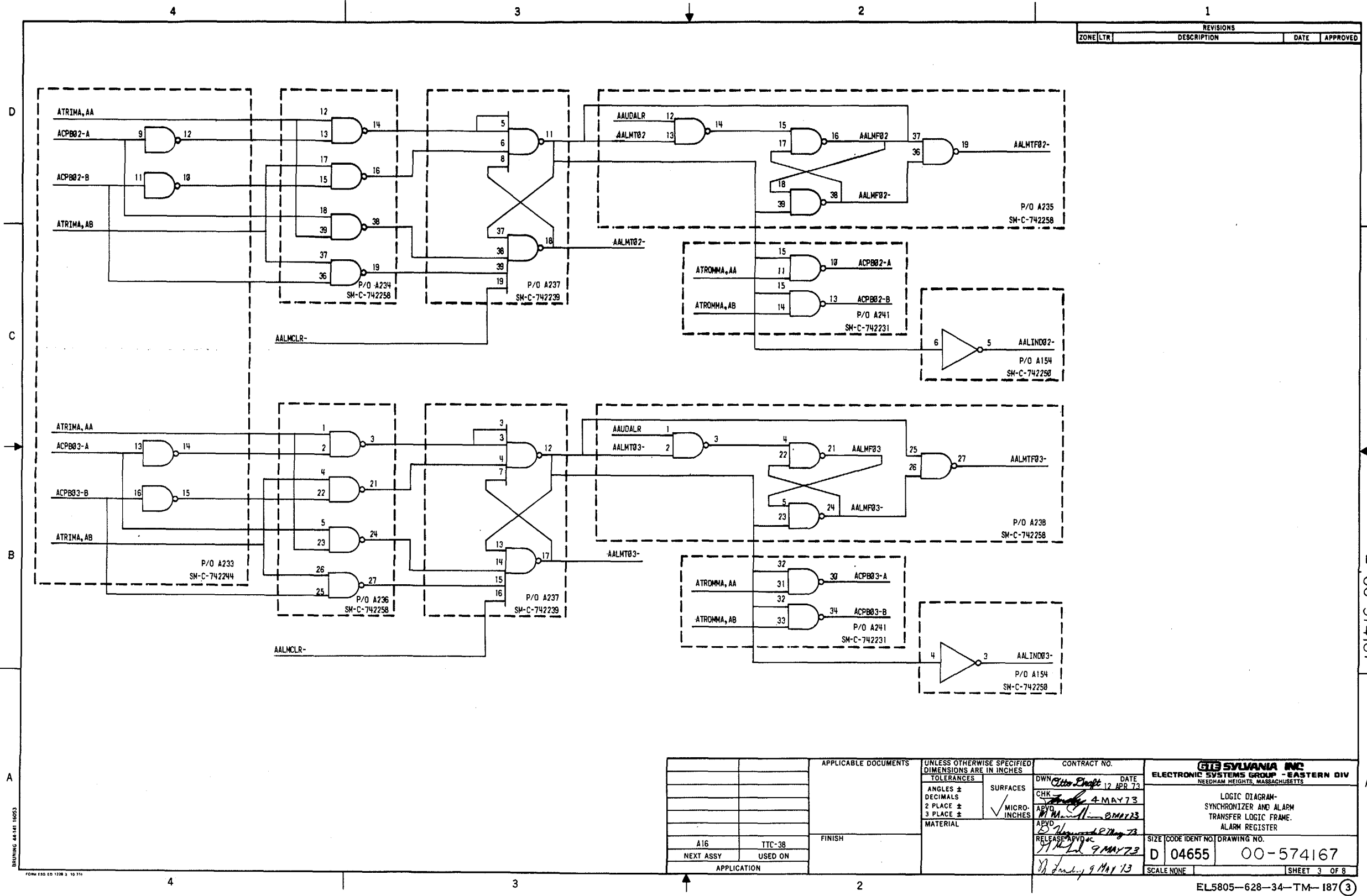


Figure 8-87(2). Synchronizer and alarm transfer logic frame alarm register (sheet 2 of 8).

Change 2 8-215



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		ANGLES ±	SURFACES	DWN	DATE	LOGIC DIAGRAM- SYNCHRONIZER AND ALARM TRANSFER LOGIC FRAME. ALARM REGISTER	
		DECIMALS	✓ MICRO-	CHK	12 APR 73	SIZE (CODE IDENT NO) DRAWING NO.	
		2 PLACE ±	INCHES	APVD	4 MAY 73	D 04655	00-574167
		3 PLACE ±		APVD	9 MAY 73	SCALE NONE	SHEET 3 OF 8
		MATERIAL		RELEASE	9 MAY 73	EL5805-628-34-TM-187 (3)	
A16	TTC-38	FINISH					
NEXT ASSY	USED ON						
APPLICATION							

Figure 8-87(3). Synchronizer and alarm transfer logic frame alarm register (sheet 3 of 8).

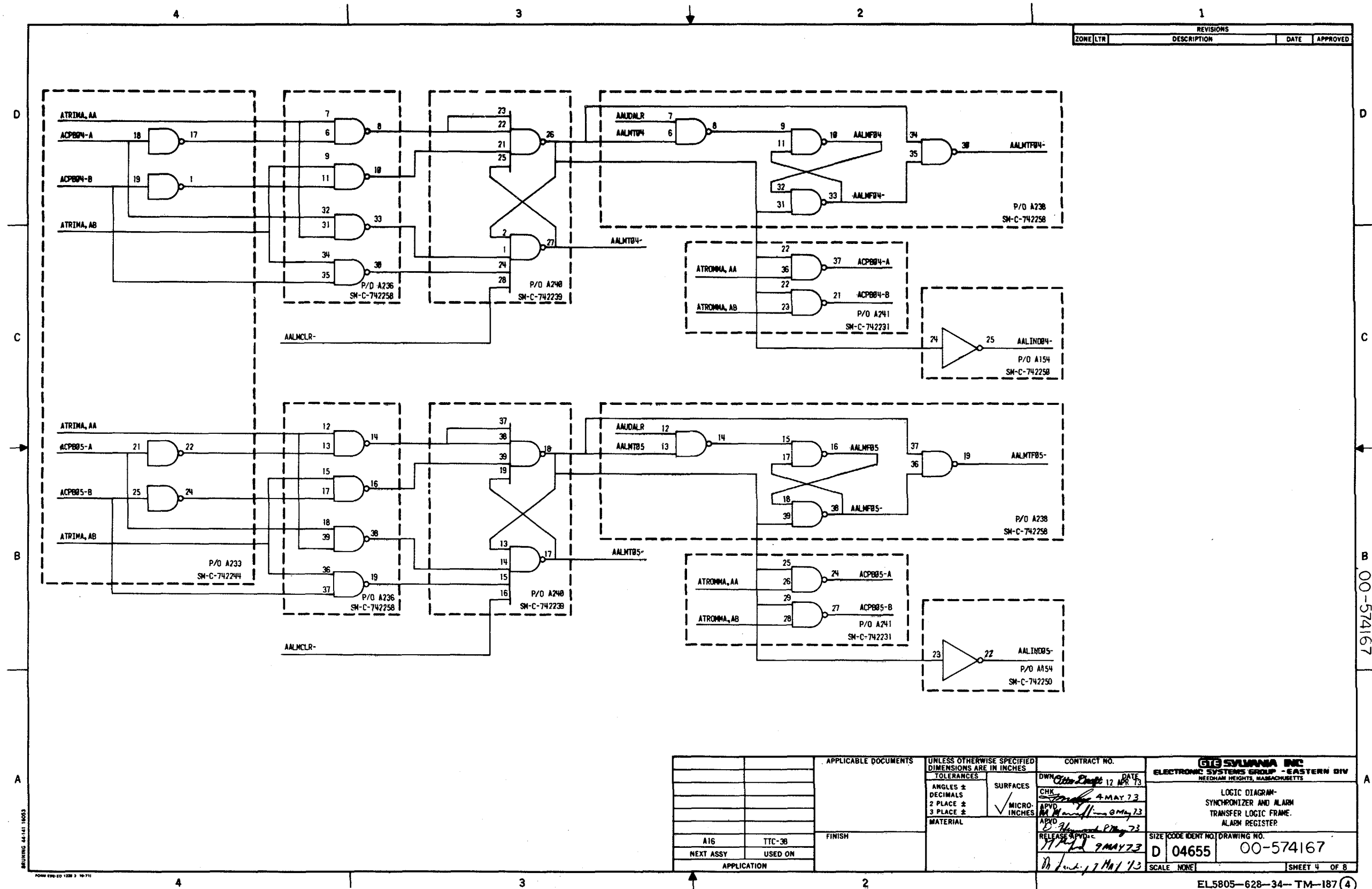


Figure 8-87(4). Synchronizer and alarm transfer logic frame alarm register (sheet 4 of 8).

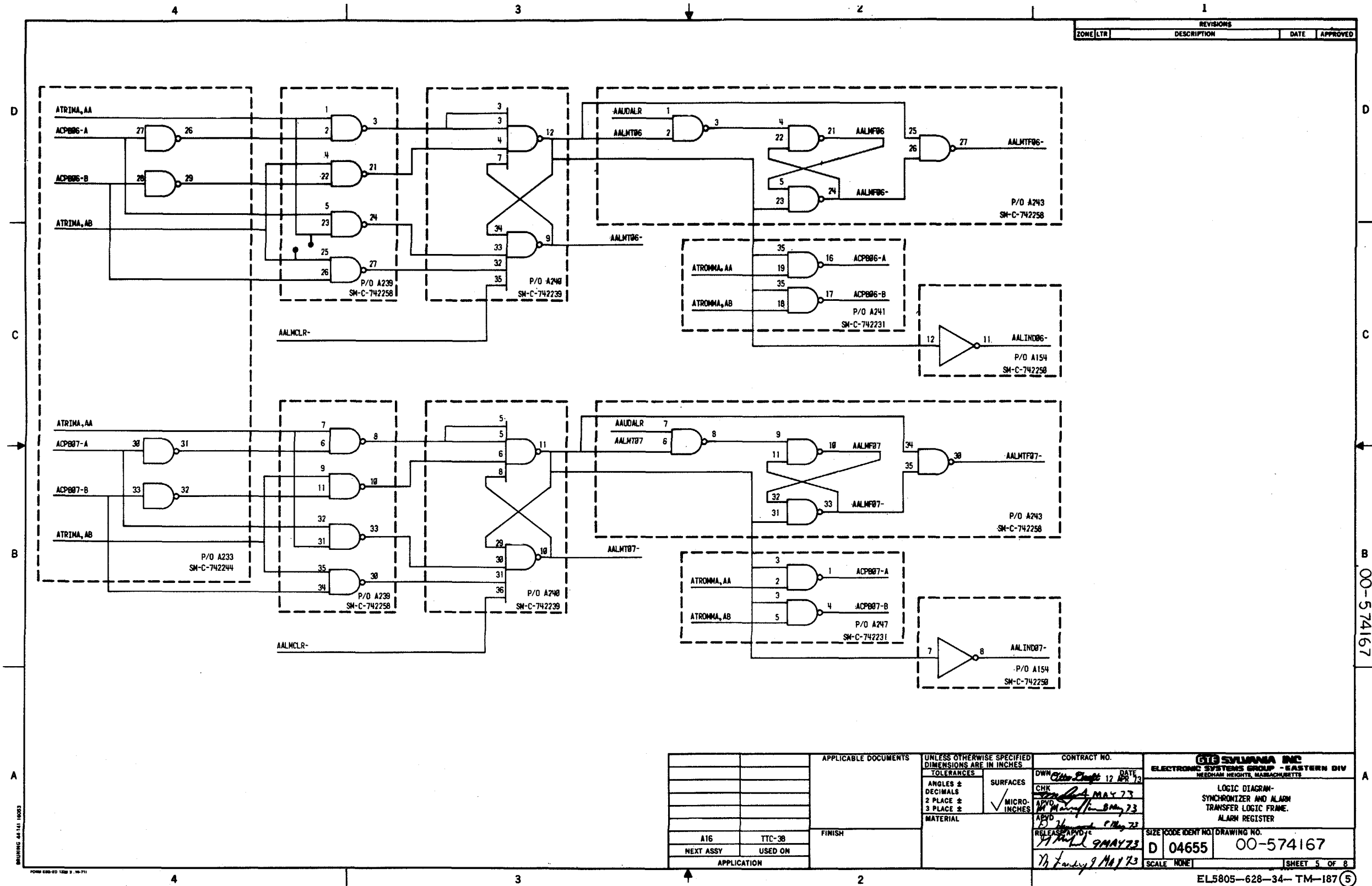


Figure 8-87(5). Synchronizer and alarm transfer logic frame alarm register (sheet 5 of 8).

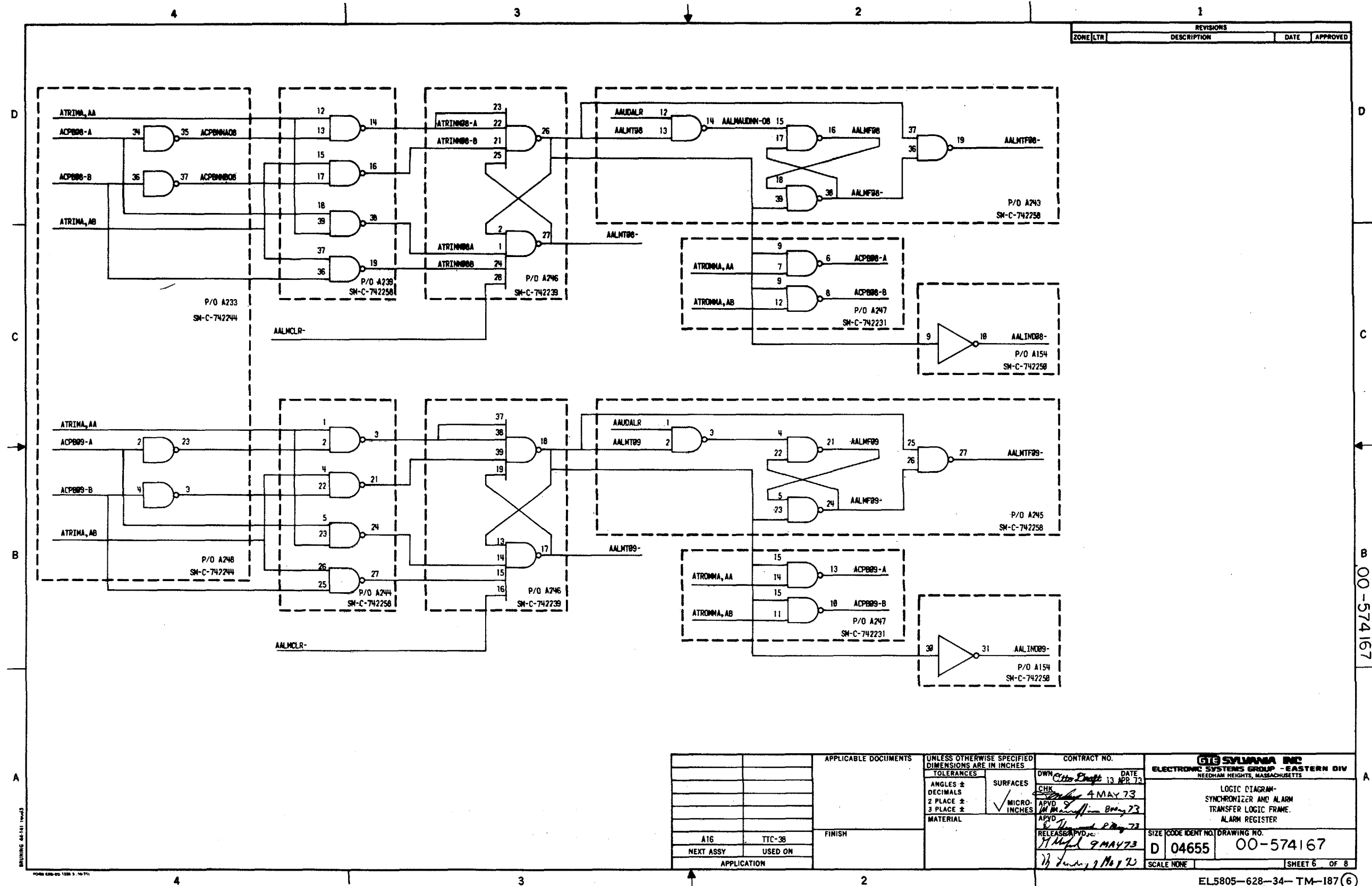


Figure 8-87(6). Synchronizer and alarm transfer logic frame alarm register (sheet 6 of 8).

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GIG SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
FINISH		TOLERANCES		DWN <i>Chris Smith</i> DATE 13 APR 73		LOGIC DIAGRAM - SYNCHRONIZER AND ALARM TRANSFER LOGIC FRAME. ALARM REGISTER	
NEXT ASSY USED ON		ANGLES ± DECIMALS 2 PLACE ± 3 PLACE ±		CHK <i>[Signature]</i> 4 MAY 73		SIZE CODE IDENT NO. DRAWING NO.	
APPLICATION		SURFACES ✓ MICRO-INCHES		APVD <i>[Signature]</i> 9 MAY 73		D 04655 00-574167	
		MATERIAL		RELEASED PVD <i>[Signature]</i> 9 MAY 73		SCALE NONE SHEET 6 OF 8	

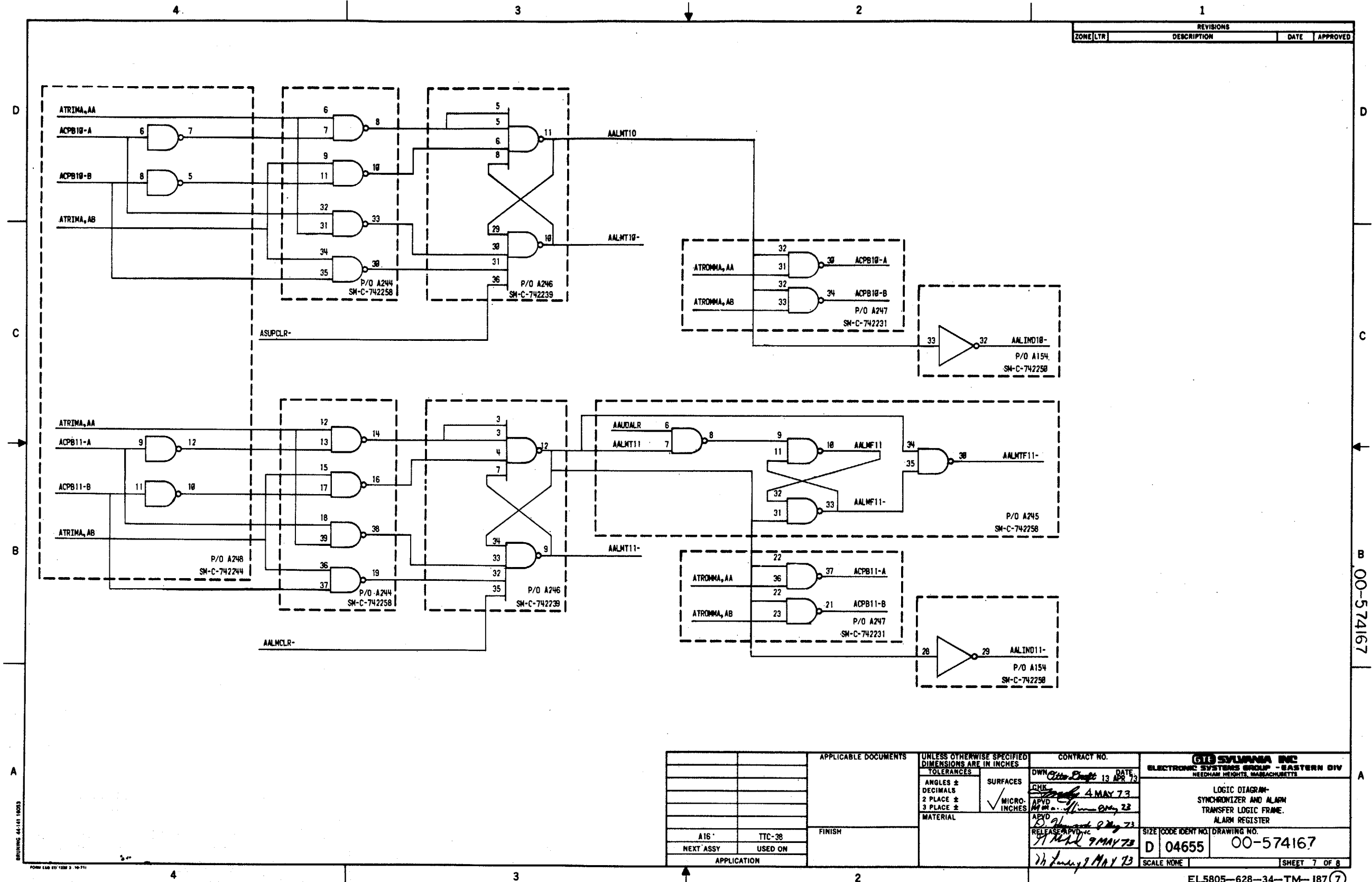
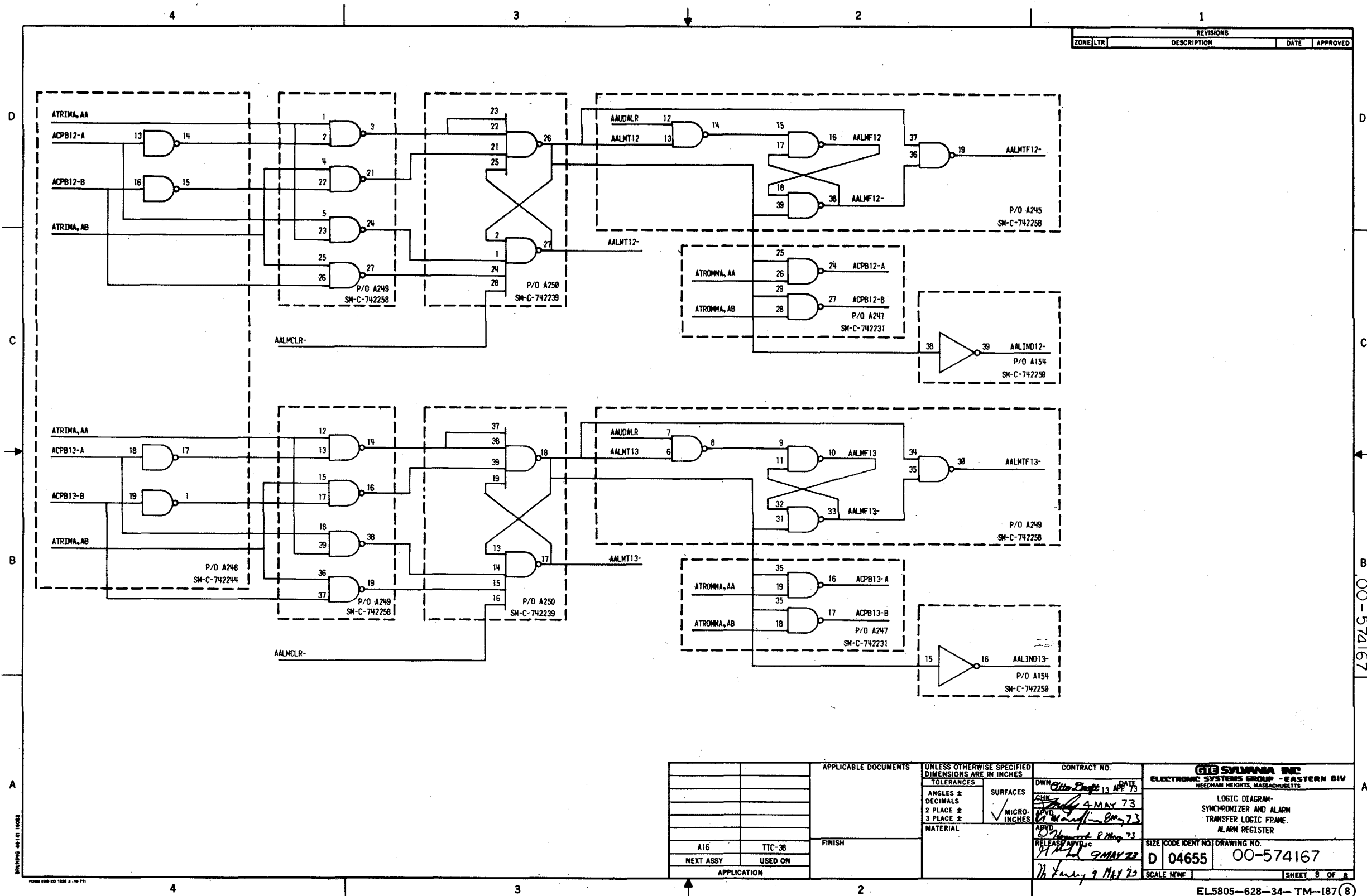


Figure 8-87(7). Synchronizer and alarm transfer logic frame alarm register (sheet 7 of 8).

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		615 SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES		DWN <i>Otto Duff</i> 13 APR 73		LOGIC DIAGRAM - SYNCHRONIZER AND ALARM TRANSFER LOGIC FRAME. ALARM REGISTER	
		ANGLES ±		CHK <i>[Signature]</i> 4 MAY 73		SIZE (CODE IDENT NO) DRAWING NO.	
		DECIMALS		APVD <i>[Signature]</i> 23 MAY 73		D 04655 00-574167	
		2 PLACE ±		APVD <i>[Signature]</i> 23 MAY 73		SCALE NONE	
		3 PLACE ±		RELEASE AUTHORITY <i>[Signature]</i> 9 MAY 73		SHEET 7 OF 8	
MATERIAL		SURFACES					
		✓ MICRO-INCHES					
FINISH							
A16		TTC-38					
NEXT ASSY		USED ON					
APPLICATION							



REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED

APPLICABLE DOCUMENTS		UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		CONTRACT NO.		GTE SYLVANIA INC ELECTRONIC SYSTEMS GROUP - EASTERN DIV NEEDHAM HEIGHTS, MASSACHUSETTS	
		TOLERANCES		DWN <i>Otto Dwyer</i> 13 APR 73		LOGIC DIAGRAM - SYNCHRONIZER AND ALARM TRANSFER LOGIC FRAME. ALARM REGISTER	
		ANGLES ±		DATE <i>4 MAY 73</i>		SIZE CODE IDENT NO. DRAWING NO.	
		DECIMALS		CHK <i>[Signature]</i>		D 04655 00-574167	
		2 PLACE ±		P/O <i>[Signature]</i> 9 MAY 73		SCALE NINE	
		3 PLACE ±		MATERIAL		SHEET 8 OF 8	
		FINISH		RELEASED BY <i>[Signature]</i> 9 MAY 73			
A16		TTC-38					
NEXT ASSY		USED ON					
APPLICATION							

Figure 8-87(8). Synchronizer and alarm transfer logic frame alarm register (sheet 8 of 8).

8-5. Central Processor Index

The following table lists each card in the central processor in numerical sequence and the number of each page in this manual (page numbers in the list must be prefixed with 8-) on which a portion of the card appears.

CARDS PREFIXED BY A1

Card number (Prefixed by A1)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A1)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A1)	Page on which card appears (Prefixed by 8-)
01	131, 152	20	160	37	80, 82
02	146	21	83, 131, 159	38	10
03	79, 152	22	96, 134, 137	39	11
04	147, 149, 151, 160	23	54, 83, 93, 118, 119, 122, 126, 131, 159, 162	40	—
05	131, 133, 134, 136, 137, 146	24	80, 92, 96, 133, 137, 149, 159	41	131, 135, 159
06	145	25	81, 84, 85, 86, 99, 100	42	134, 135, 136, 137
07	149	26	12, 81, 86	43	134, 136, 142
08	151	27	86, 93	44	133
09	145, 146, 149	28	93	45	134
10	146, 152	29	80, 81, 84, 85, 98, 99, 107, 116	46	132, 133, 134, 135, 136, 137
11	143, 151, 153, 160, 161	30	83, 85	47	133, 134, 135, 136
12	131, 141, 151, 160, 161	31	84, 86	48	131, 135, 136, 137
13	158	32	81, 84	49	135, 136, 156
14	158	33	84, 86, 92	50	99, 133, 134, 135
15	79, 133, 135, 143, 146, 147, 159	34	81, 84, 85, 86	51	133, 134, 135, 136
16	73, 134, 143, 147, 159, 162	35	81, 82, 83, 84, 86, 88, 131, 147	52	—
17	159, 162	36	81	53	136, 137
18	159, 162			54	—
19	161				

CARDS PREFIXED BY A3

Card number (Prefixed by A3)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A3)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A3)	Page on which card appears (Prefixed by 8-)
01	13	18	40, 49, 65, 67, 71, 72, 83, 121, 131, 153	34	91
02	12, 13, 19	19	24, 25	35	91
03	13, 19, 25	20	71, 72	36	45, 80, 88, 106, 134, 135
04	23	21	70	37	88, 89, 90, 98
05	29	22	19, 31, 32, 33, 34, 35, 93, 103, 108, 118, 121, 136	38	88, 89, 125
06	12, 20, 24, 131	23	57	39	88, 90
07	18	24	41, 42, 55, 56, 57, 76	40	67, 88, 89, 90
08	25	25	52, 55, 77	41	88, 89, 90, 92
09	24, 25, 28	26	144, 147	42	88, 89, 90
10	6, 24, 31, 32	27	79, 88, 114, 142, 143, 147	43	88, 90, 92, 116
11	19, 86, 89, 92, 93, 101, 104, 108, 118, 124, 127, 129, 130	28	83, 147, 148	44	49, 88, 89, 90
12	31, 32	29	45, 56, 73	45	87, 88, 90
13	5, 12, 13, 14, 16, 25, 31, 63	30	5, 67, 83, 90, 92, 162	46	88, 89, 90
14	12, 17, 25, 31	31	78, 88, 89, 90	47	49, 87, 88, 89, 90, 136, 147
15	12, 25, 31, 49	32	68, 80, 87, 88, 89, 90, 92, 116, 133	48	87
16	9, 69, 71	33	9, 65	49	87, 92
17	71, 72			50	69, 87, 90
				51	—
				52	9, 69, 96
				53	—

CARDS PREFIXED BY A2

Card number (Prefixed by A2)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A2)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A2)	Page on which card appears (Prefixed by 8-)
01	138, 145	20	133, 135, 143, 147, 148, 159, 162	39	132, 141, 145, 150, 154, 156
02	145	21	144	40	131, 132, 137, 141, 145, 150
03	151	22	150	41	132, 141, 145, 150
04	157	23	150	42	131, 132
05	139, 154	24	144	43	131, 132
06	132, 138, 153, 154, 156	25	78, 88, 146, 148, 149	44	132, 133, 137
07	131, 140, 155	26	138, 146, 148, 149	45	114, 132
08	131, 155	27	146, 154	46	132, 137, 141
09	138, 141	28	146, 148, 149, 154	47	134, 135, 136, 137
10	155	29	153	48	69, 122, 134, 135
11	139	30	156	49	101, 135, 136
12	140	31	154	50	94, 135, 137
13	158, 162	32	156	51	133, 135, 136
14	96, 122, 158, 160	33	142	52	—
15	90, 136, 143, 147, 154	34	156	53	136
16	148	35	153, 156	54	—
17	143, 147	36	73, 94, 132, 138		
18	143	37	132, 153, 154, 156		
19	78, 133, 134, 135, 143, 148, 153, 159, 162	38	132, 141, 154, 156		

CARDS PREFIXED BY A4

Card number (Prefixed by A4)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A4)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A4)	Page on which card appears (Prefixed by 8-)
01	14	20	30, 32, 33, 49, 50	38	67, 112
02	14, 19	21	52	39	65, 92, 116
03	14, 19, 28	22	53	40	68, 73, 92
04	22	23	52, 54	41	89, 90, 92, 112, 131
05	29	24	54, 97	42	99, 100
06	16, 18, 24	25	95	43	96, 100
07	18, 36, 51	26	94, 110	44	69, 98, 99, 100
08	28	27	94, 95, 97	45	68, 88, 92, 98, 99, 100, 128
09	6, 24, 28	28	28, 62, 83, 107, 108	46	90, 98, 99
10	6, 32, 33, 40	29	78, 84, 85	47	68, 98
11	7, 67, 93	30	79	48	98, 99, 100
12	32, 33	31	78	49	98, 99, 100
13	125	32	63, 65	50	81, 90
14	125	33	63, 65, 66	51	—
15	8	34	66	52	2
16	36, 51	35	7, 63, 65, 66, 83	53	2, 3
17	48	36	63, 64	54	3
18	40, 49	37	52, 63, 65, 66, 72, 82, 83, 84, 88, 147		
19	30, 50				

CARDS PREFIXED BY A5

Card number (Prefixed by A5)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A5)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A5)	Page on which card appears (Prefixed by 8-)
01	15	20	39, 45, 56, 69	39	5, 67, 93
02	15, 19	21	12, 24, 31, 33, 34, 38, 39, 40, 49, 55, 58	40	92, 108
03	15, 19, 27			41	77, 84, 131
04	21	22	12, 24, 31, 38, 40, 42	42	—
05	29	23	49, 52, 55, 58, 73	43	8
06	15, 18	24	63, 65, 70, 93, 111	44	109, 112, 115
07	18, 36, 37	25	94, 95, 96, 97	45	109, 111, 116
08	27	26	49, 68, 94, 95, 96	46	94, 95, 109, 111, 142
09	6, 27, 40	27	94, 95, 107, 110, 111	47	112
10	6, 33, 34, 41	28	78, 81, 82, 122	48	115
11	91, 93, 116	29	—	49	109, 110, 115
12	33, 34	30	73, 79, 83	50	95, 96, 111
13	12, 17, 25, 31, 32, 51, 53	31	—	51	110, 112
14	7	32	49, 64, 66	52	58, 110, 111, 131
15	8	33	66, 67, 76	53	4, 58, 96
16	36, 37	34	66, 67	54	4
17	47	35	52, 64, 65, 67, 104		
18	40, 41	36	58, 64		
19	5, 7, 31, 38, 40, 46, 77, 79, 95, 96, 131	37	62		
		38	75		

CARDS PREFIXED BY A7

Card number (Prefixed by A7)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A7)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A7)	Page on which card appears (Prefixed by 8-)
01	101, 104, 105, 106, 108	20	101, 102, 107	37	—
02	104	21	85, 121	38	—
03	101, 104, 106	22	12, 19, 25, 71, 77, 89, 93, 103, 118, 119, 120, 124, 136, 137, 159	39	59
04	68, 104, 106			40	61
05	105, 106			41	74
06	105, 106	23	85, 118, 119, 121, 133	42	—
07	105, 106	24	118, 121	43	—
08	88, 104, 105, 106, 162	25	68, 118, 121	44	110, 112, 114
09	101, 102, 103	26	63, 117, 118, 120	45	111
10	103	27	117, 118, 119, 120	46	116, 138
11	101, 102, 103, 105, 106, 107	28	117, 118, 120, 121	47	110, 112
12	101, 102, 103	29	96, 107, 118, 119	48	110, 111
13	102, 103	30	82, 118, 119, 120, 121, 147	49	110, 111
14	101, 102, 103	31	85, 118, 119, 120, 121	50	110, 111, 116
15	101	32	119, 121	51	—
16	101, 103	33	118, 120, 121	52	4
17	101, 112	34	—	53	4, 80, 131, 147, 154
18	102, 103	35	—	54	4, 5, 93, 114
19	102	36	—		

CARDS PREFIXED BY A6

Card number (Prefixed by A6)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A6)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A6)	Page on which card appears (Prefixed by 8-)
01	16	20	44	38	76
02	16, 19	21	43, 45, 56	39	9, 52, 69
03	16, 19, 26	22	24, 43, 45, 56	40	41, 63, 65, 70, 71, 72, 83, 108, 162
04	20	23	34, 35, 43, 115	41	31, 88, 93, 97, 101, 103, 105, 118, 120, 121, 136, 137
05	29	24	55	42	—
06	18, 24	25	95, 96	43	—
07	18, 37, 38	26	95, 96	44	107, 108
08	26	27	94, 95, 97	45	107, 108
09	26, 41, 49	28	80, 81, 82	46	68, 107
10	34, 35, 42, 49	29	80, 82, 116	47	97, 107, 108
11	24	30	24, 58, 61, 63, 65, 70, 73, 79, 80, 81, 100, 134	48	65, 83, 108
12	34, 35			49	65, 92, 107, 108
13	6, 7, 162	31	—	50	77, 104, 108
14	6, 7, 162	32	5, 65, 67, 116, 147	51	—
15	—	33	67, 111	52	4
16	37, 38	34	7, 77, 94	53	5
17	46	35	77, 122	54	5
18	41, 42	36	58, 59		
19	39, 44, 45	37	60		

CARDS PREFIXED BY A8

Card number (Prefixed by A8)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A8)	Page on which card appears (Prefixed by 8-)	Card number (Prefixed by A8)	Page on which card appears (Prefixed by 8-)
01	24, 68, 73, 88, 107, 122, 147	19	107, 108, 130	37	73
02	122, 124, 125, 126	20	129	38	—
03	122, 124, 125, 126	21	115, 127, 128, 130	39	—
04	124, 126	22	87, 127, 129	40	—
05	122, 124, 126, 129	23	127	41	—
06	111, 122, 124, 126	24	127	42	—
07	122, 124, 126	25	83, 128	43	—
08	122, 123, 124	26	128, 130	44	110, 111, 116
09	123, 126	27	122	45	111
10	123, 124, 126	28	—	46	—
11	90, 122, 124, 126	29	—	47	92, 93, 96, 116
12	125	30	—	48	112
13	96, 123, 125	31	—	49	114
14	122, 124, 126	32	—	50	113
15	122, 123	33	—	51	110, 111, 112, 114, 131, 147
16	122, 123, 124, 126	34	—	52	110, 111, 115
17	122, 123, 124	35	—	53	—
18	107, 127, 129, 130	36	—	54	49, 68, 93, 110, 111, 112, 147

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Sig Sec, USA Dep (2)
Sig Dep (2)
USAERDAA (1)
USAERDAW (11)
Sig FLDMS (1)
Units org under fol TOE: 1 ea.
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29-134
29-136

ARNG & USAR: None.

For explanation of abbreviations used, see AR 310-50.

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