

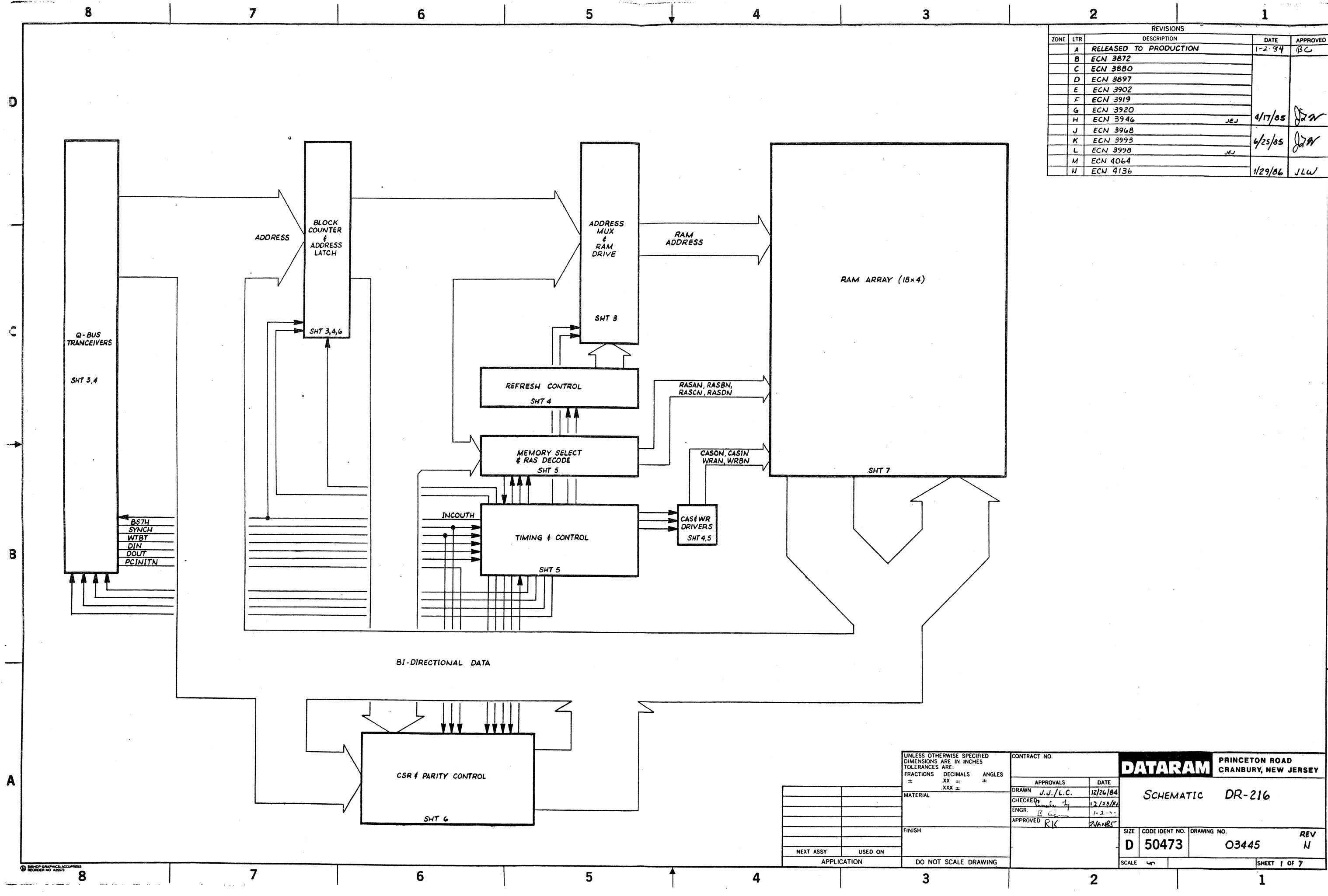
| REVISIONS | | | | |
|-----------|-----|------------------------|---------------|----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| | A0 | RELEASED TO PRODUCTION | 1-4-85 | BT BC |
| | A1 | ECN 3872 | | |
| | B0 | ECN 3863 | | |
| | B1 | ECN 3896 | | |
| | B2 | ECN 3897 | | |
| | B3 | ECN 3899 | | |
| | B4 | ECN 3900 | | |
| | B5 | ECN 3902 | | |
| | B6 | ECN 3919 | | |
| | B7 | ECN 3920 | | |
| | C0 | ECN 3931 | | |
| | C1 | ECN 3946 | J E J 4/17/85 | J E J |
| | C2 | ECN 3960 | | |
| | C3 | ECN 3961 | | |
| | D0 | ECN 3963 | | |
| | D1 | ECN 3968 | | |
| | D2 | ECN 3976 | | |
| | D3 | ECN 3993 | | |
| | D4 | ECN 3997 | | |
| | E0 | ECN 3998 (REDRAWN) | J E J 4/25/85 | J E J |
| | E1 | ECN 4006 | 7/15/85 | J E J |
| | F0 | ECN 4029 | BL 8/30/85 | J L W |
| | F1 | ECN 4063 | | |
| | F2 | ECN 4064 | | |
| | G0 | ECN 4068 | | |
| | G1 | ECN 4084 | | |
| | G2 | ECN 4136 | 1/29/86 | J L W |

NOTES:

1. INSTALL AFTER FLOW SOLDER.
2. INSTALL ITEM 22 (SOCKETS) PRIOR TO INSTALLING ITEM 21 (INTEGRATED CIRCUIT).
3. MARK THE DATARAM ASSY. NO., REV LEVEL, SERIAL NO., AND DATE CODE APPROX. WHERE SHOWN. CHARACTERS SHALL BE .10 MIN. HIGH AND LEGIBLE.
4. SQUARE PAD DENOTES PIN 1 ON "E" POINTS, SW1 AND DL1.
5. JUMPER THE FOLLOWING USING ITEM 59: E10-1 TO E10-2, E14-1 TO E14-2 AND E15-1 TO E15-2.
6. WIRE WRAP THE FOLLOWING USING ITEM 66: E1-1 TO E1-2, E2-1 TO E2-2, E3-1 TO E3-2, E4-1 TO E4-2, E5-1 TO E5-2, E6-1 TO E6-2, E7-1 TO E7-2, E9-1 TO E9-2, & AFTER TEST E8-1 TO E8-2; E8-2 TO E8-3.

| | | | | | |
|---|--|----------------------|----------------|---|--------------|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES ± .XX ± ± | | CONTRACT NO. | | DATARAM CORPORATION CRANBURY NEW JERSEY | |
| MATERIAL | | APPROVALS | DATE | ASSEMBLY DR-216 256K x 18 | |
| FINISH | | DRAWN J JOHNSON | 18 DEC 84 | | |
| NEXT ASSY USED ON | | CHECKED [Signature] | 12-21-84 | | |
| APPLICATION | | ENGR. B Chen | 1-2-85 | | |
| DO NOT SCALE DRAWING | | APPROVED [Signature] | 2/10/85 | | |
| | | SIZE | CODE IDENT NO. | DRAWING NO. | REV |
| | | D | 50473 | 61545 | G2 |
| | | SCALE FULL | | | SHEET 1 OF 1 |

| REVISIONS | | | | |
|-----------|-----|------------------------|-------------|----------|
| ZONE | LTR | DESCRIPTION | DATE | APPROVED |
| | A | RELEASED TO PRODUCTION | 1-2-84 | BC |
| | B | ECN 3872 | | |
| | C | ECN 3880 | | |
| | D | ECN 3897 | | |
| | E | ECN 3902 | | |
| | F | ECN 3919 | | |
| | G | ECN 3920 | | |
| | H | ECN 3946 | JEJ 4/17/85 | JAN |
| | J | ECN 3968 | | |
| | K | ECN 3993 | 4/25/85 | JAN |
| | L | ECN 3998 | JEJ | |
| | M | ECN 4064 | | |
| | N | ECN 4136 | 1/29/86 | JLW |



| | | | | |
|--|--|---------------------|----------|--|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: FRACTIONS .XX ± ANGLES .XXX ± | | CONTRACT NO. | | DATARAM PRINCETON ROAD CRANBURY, NEW JERSEY |
| MATERIAL | | APPROVALS | DATE | |
| FINISH | | DRAWN J.J./L.C. | 12/26/84 | SCHEMATIC DR-216 |
| NEXT ASSY | | CHECKED [Signature] | 12/28/84 | |
| USED ON | | ENGR. [Signature] | 1-2-85 | |
| APPLICATION | | APPROVED RJK | JVANBS | REV N |
| DO NOT SCALE DRAWING | | SIZE D 50473 | | DRAWING NO. 03445 |
| | | SCALE 1/4" = 1" | | SHEET 1 OF 7 |

Alan Gordon
X252

| STARTING ADDRESS SELECTION (SW1) | | | | |
|----------------------------------|-------|-------|-------|-------|
| STARTING ADDRESS | POS 8 | POS 7 | POS 6 | POS 5 |
| 0KW | OFF | OFF | OFF | OFF |
| 8KW | ON | OFF | OFF | OFF |
| 16KW | OFF | ON | OFF | OFF |
| 24KW | ON | ON | OFF | OFF |
| 32KW | OFF | OFF | ON | OFF |
| 40KW | ON | OFF | ON | OFF |
| 48KW | OFF | ON | ON | OFF |
| 56KW | ON | ON | ON | OFF |
| 64KW | OFF | OFF | OFF | ON |
| 72KW | ON | OFF | OFF | ON |
| 80KW | OFF | ON | OFF | ON |
| 88KW | ON | ON | OFF | ON |
| 96KW | OFF | OFF | ON | ON |
| 104KW | ON | OFF | ON | ON |
| 112KW | OFF | ON | ON | ON |
| 120KW | ON | ON | ON | ON |

FOR ALL OTHER SETTINGS USE EQUAL INCREMENTS OF 128K PLUS THE APPROPRIATE 8K INCREMENT FROM THE ABOVE TABLE

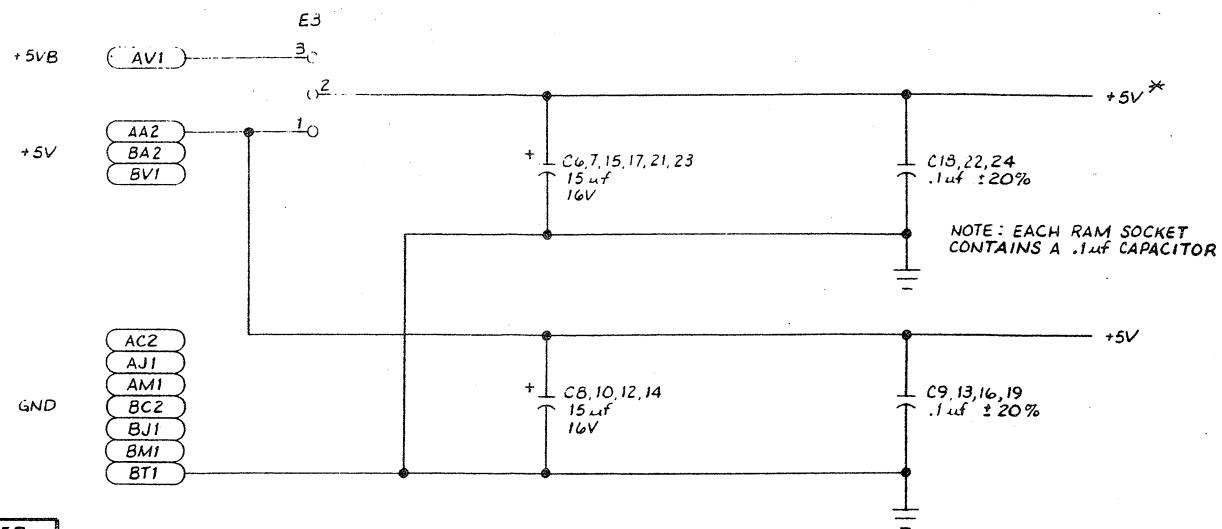
| | POS 4 | POS 3 | POS 2 | POS 1 |
|-------------|-------|-------|-------|-------|
| 0-128KW | OFF | OFF | OFF | OFF |
| 128-256KW | ON | OFF | OFF | OFF |
| 256-384KW | OFF | ON | OFF | OFF |
| 384-512KW | ON | ON | OFF | OFF |
| 512-640KW | OFF | OFF | ON | OFF |
| 640-768KW | ON | OFF | ON | OFF |
| 768-896KW | OFF | ON | ON | OFF |
| 896-1024KW | ON | ON | ON | OFF |
| 1024-1152KW | OFF | OFF | OFF | ON |
| 1152-1280KW | ON | OFF | OFF | ON |
| 1280-1408KW | OFF | ON | OFF | ON |
| 1408-1536KW | ON | ON | OFF | ON |
| 1536-1664KW | OFF | OFF | ON | ON |
| 1664-1792KW | ON | OFF | ON | ON |
| 1792-1920KW | OFF | ON | ON | ON |
| 1920-2048KW | ON | ON | ON | ON |

| CSR ADDRESS SELECTION | | | | | | |
|-----------------------|----------------|----------------|-----------------------------|----------------|----------------|----------------|
| CSR ADDRESS | | | E12 WIRE WRAP CONFIGURATION | | | |
| 16 BIT ADDRESS | 18 BIT ADDRESS | 22 BIT ADDRESS | E12 PIN 5 TO 6 | E12 PIN 4 TO 5 | E12 PIN 2 TO 3 | E12 PIN 1 TO 2 |
| 172100 | 772100 | 17772100 | OUT | OUT | OUT | OUT |
| 172102 | 772102 | 17772102 | OUT | OUT | OUT | IN |
| 172104 | 772104 | 17772104 | OUT | OUT | IN | OUT |
| 172106 | 772106 | 17772106 | OUT | OUT | IN | IN |
| 172110 | 772110 | 17772110 | OUT | IN | OUT | OUT |
| 172112 | 772112 | 17772112 | OUT | IN | OUT | IN |
| 172114 | 772114 | 17772114 | OUT | IN | IN | OUT |
| 172116 | 772116 | 17772116 | OUT | IN | IN | IN |
| 172120 | 772120 | 17772120 | IN | OUT | OUT | OUT |
| 172122 | 772122 | 17772122 | IN | OUT | OUT | IN |
| 172124 | 772124 | 17772124 | IN | OUT | IN | OUT |
| 172126 | 772126 | 17772126 | IN | OUT | IN | IN |
| 172130 | 772130 | 17772130 | IN | IN | OUT | OUT |
| 172132 | 772132 | 17772132 | IN | IN | OUT | IN |
| 172134 | 772134 | 17772134 | IN | IN | IN | OUT |
| 172136 | 772136 | 17772136 | IN | IN | IN | IN |

NOTE: E5 PIN 2 TO 3 DISABLES CSR SELECTION.
E7 PIN 2 TO 3 MUST BE INSTALLED FOR 16 OR 18 BIT ADDRESS OPERATION.

| LAST DESIGNATION USED | |
|-----------------------|-------|
| INTEGRATED CIRCUIT | Z34 |
| CAPACITOR | C24 |
| RESISTOR | R13 |
| RESISTOR MODULE | RM4 |
| DIODE | CR20 |
| INDUCTOR | L1 |
| DELAY LINE | DL1 |
| SWITCH | SW1 |
| OPTION | E15 |
| LIGHT EMITTING DIODE | LED 3 |
| TRANSISTOR | Q1 |

| REF. DES. | GATES / TOTAL USED / GATES | TYPE |
|-----------|----------------------------|-------|
| 227 | 3 / 4 | 74F32 |
| 227A | 1 / 2 | 74F20 |



CONN. A

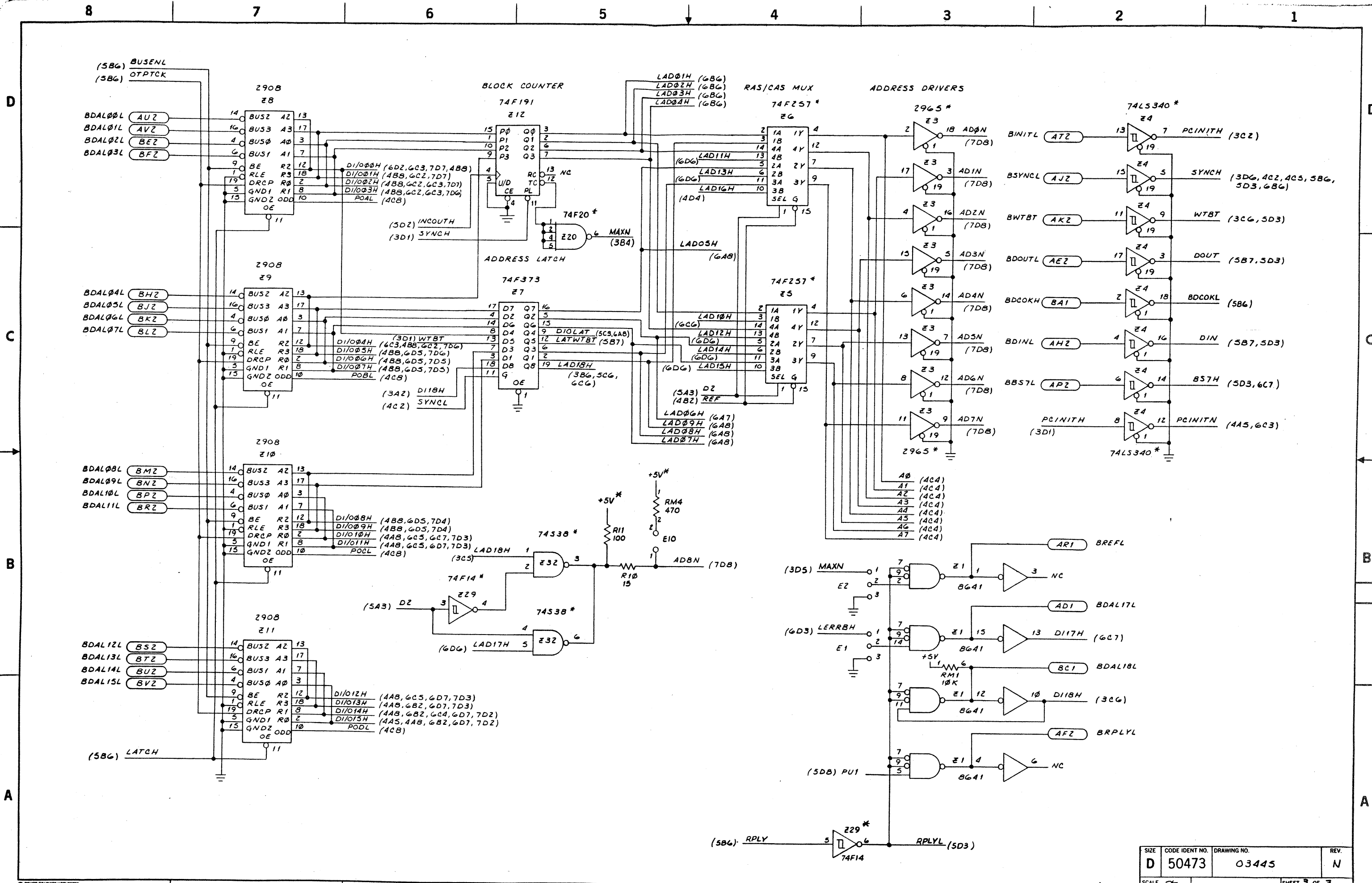
| Terminal | Signal |
|----------|----------|
| A | +5V |
| B | GND |
| C | GND |
| D | GND |
| E | BDOUT L |
| F | BRPLY L |
| G | BDIN L |
| H | BSYNC L |
| J | BWBT L |
| K | GND |
| L | GND |
| M | BIAKI L |
| N | BIAKO L |
| P | BB57 L |
| R | BDMGI L |
| S | GND |
| T | GND |
| U | BDAL00 L |
| V | BDAL01 L |

CONN. B

| Terminal | Signal |
|----------|----------|
| A | +5V |
| B | GND |
| C | GND |
| D | GND |
| E | BDAL02 L |
| F | BDAL03 L |
| G | BDAL04 L |
| H | BDAL05 L |
| J | BDAL06 L |
| K | BDAL07 L |
| L | BDAL08 L |
| M | BDAL09 L |
| N | BDAL10 L |
| P | BDAL11 L |
| R | BDAL12 L |
| S | BDAL13 L |
| T | BDAL14 L |
| U | BDAL15 L |
| V | GND |

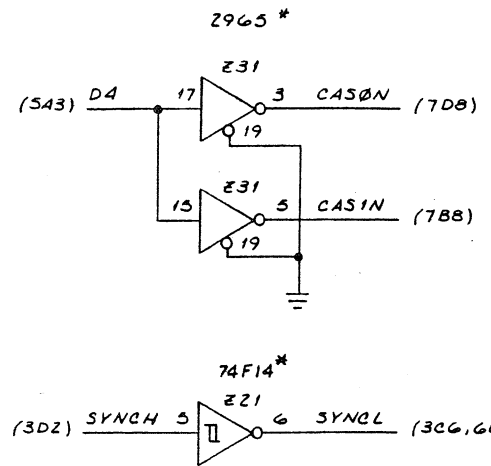
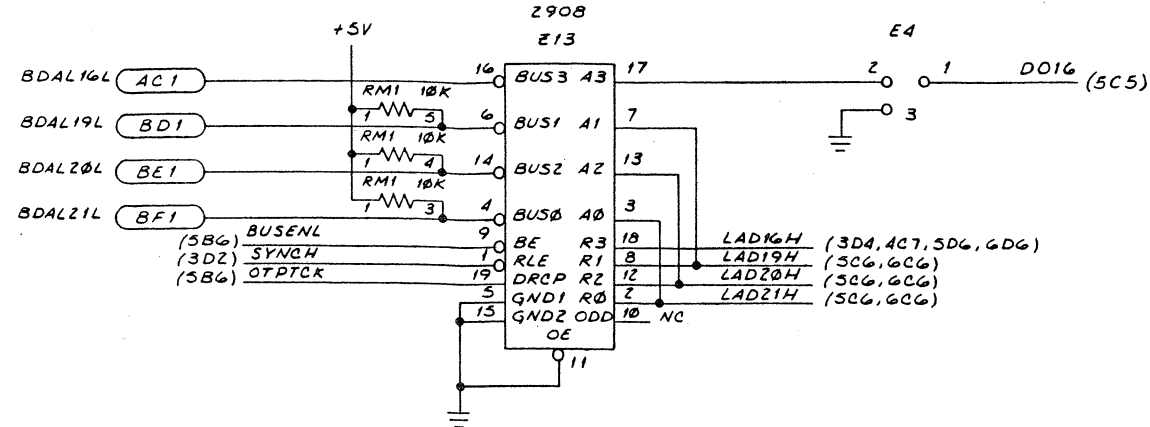
NOTES: UNLESS OTHERWISE SPECIFIED
1. ALL RESISTORS ARE CARBON COMPOSITION 1/4 WATT.
2. * INDICATES I.C.'s SUPPLIED BY +5V*

| JUMPER FUNCTION SUMMARY | | | | | |
|--|------------------------------|------------------------------|--|---|---|
| FUNCTION | JUMPERS | | FUNCTION | JUMPERS | |
| | IN | OUT | | IN | OUT |
| CSR SELECTION DISABLE CSR ENABLE CSR | E5-2 TO E5-3 E5-1 TO E5-2 | E5-1 TO E5-2 E5-2 TO E5-3 | I/O SPACE SIZE 4KW 2KW 1KW .5KW | E8-1 TO 2, E8-2 TO 3, E9-1 TO 2 E8-2 TO E8-3, E9-1 TO E9-2 E8-1 TO E8-2, E9-1 TO E9-2 E9-1 TO E9-2 | E9-2 TO E9-3 E8-1 TO E8-2, E9-2 TO E9-3 E8-2 TO E8-3, E9-2 TO E9-3 E8-1 TO 2, E8-2 TO 3, E9-2 TO 3 |
| PARITY ERROR REPORTING NON-CSR WITH-CSR | E1-2 TO E1-3 E1-1 TO E1-2 | E1-1 TO E1-2 E1-2 TO E1-3 | 64K/256K DRAMS 64K 256K | E15-1 TO E15-2, E10-1 TO E10-2 E15-2 TO E15-3 | E15-2 TO E15-3 E15-1 TO E15-2, E10-1 TO E10-2 |
| WRITE WRONG PARITY ENABLE DISABLE | E6-1 TO E6-2 E6-2 TO E6-3 | E6-2 TO E6-3 E6-1 TO E6-2 | MEMORY CAPACITY 256Kx18 OR 1024Kx18 128Kx18 OR 512Kx18 | E14-1 TO E14-2 E14-2 TO E14-3 | E14-2 TO E14-3 E14-1 TO E14-2 |
| PARITY DISABLE ENABLE | E4-2 TO E4-3 E4-1 TO E4-2 | E4-1 TO E4-2 E4-2 TO E4-3 | BLOCK MODE ENABLE DISABLE | E2-1 TO E2-2 E2-2 TO E2-3 | E2-2 TO E2-3 E2-1 TO E2-2 |
| ADDRESSING 16 OR 18 BIT ADDRESS 22 BIT ADDRESS | E7-2 TO E7-3 E7-1 TO E7-2 | E7-1 TO E7-2 E7-2 TO E7-3 | | | |
| BATTERY BACK UP WITH WITHOUT | E3-2 TO E3-3 E3-1 TO E3-2 | E3-1 TO E3-2 E3-2 TO E3-3 | | | |

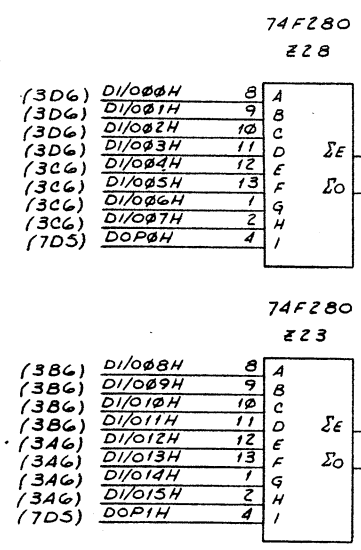
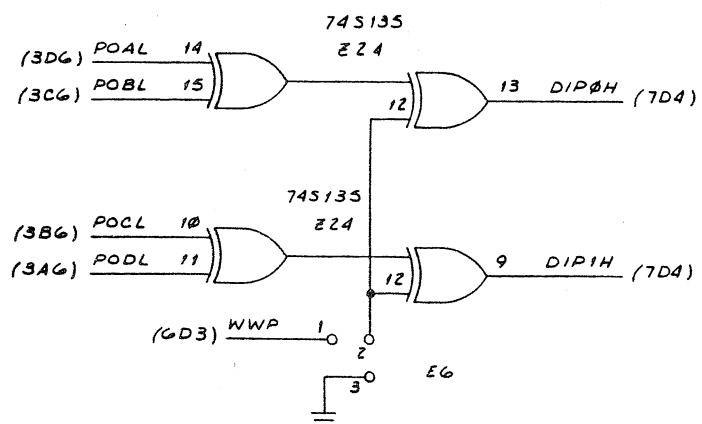
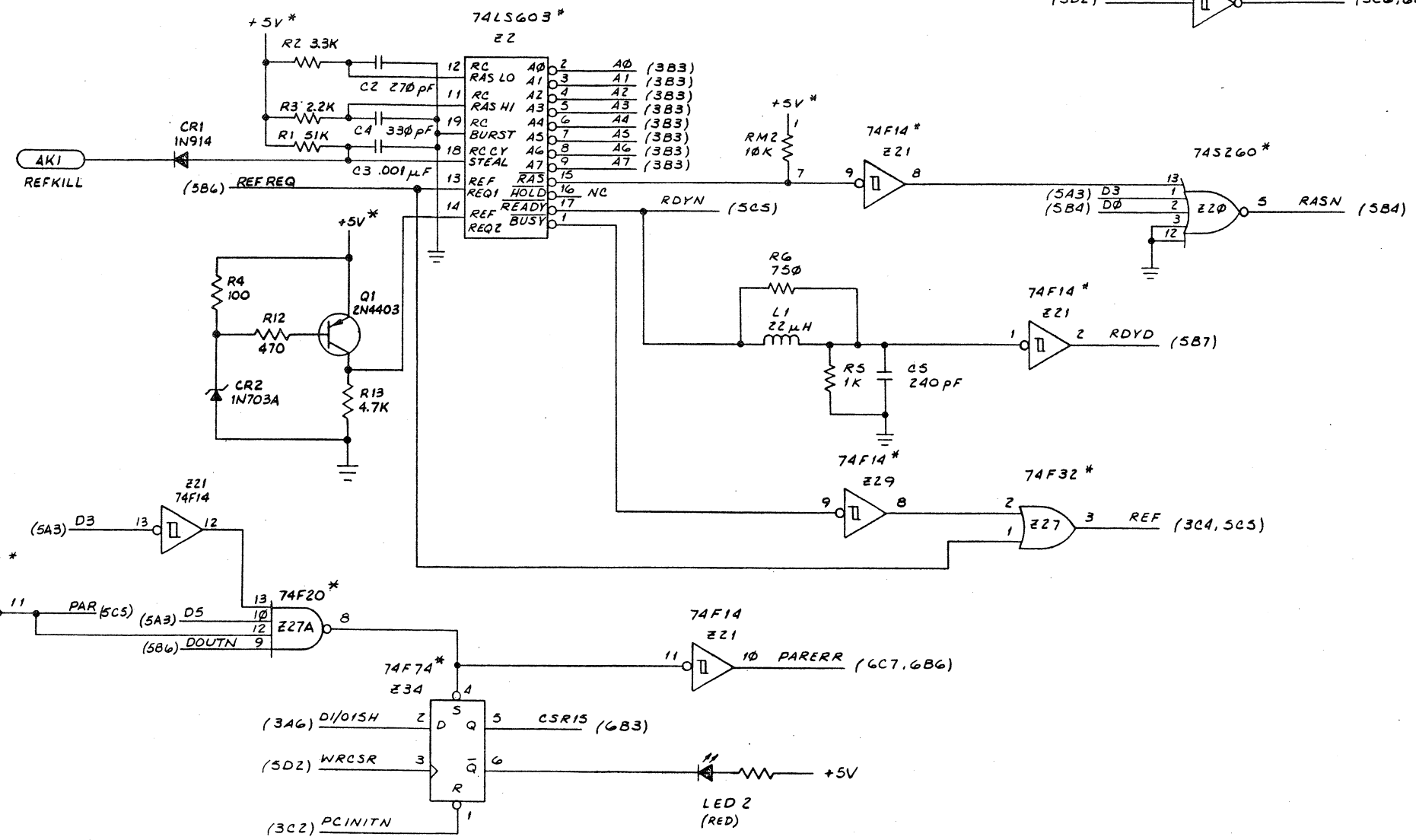


| | | | |
|-------|----------------|-------------|--------------|
| SIZE | CODE IDENT NO. | DRAWING NO. | REV. |
| D | 50473 | 03445 | N |
| SCALE | | | SHEET 3 OF 7 |

ADDRESS RECEIVER/LATCH



REFRESH CONTROL

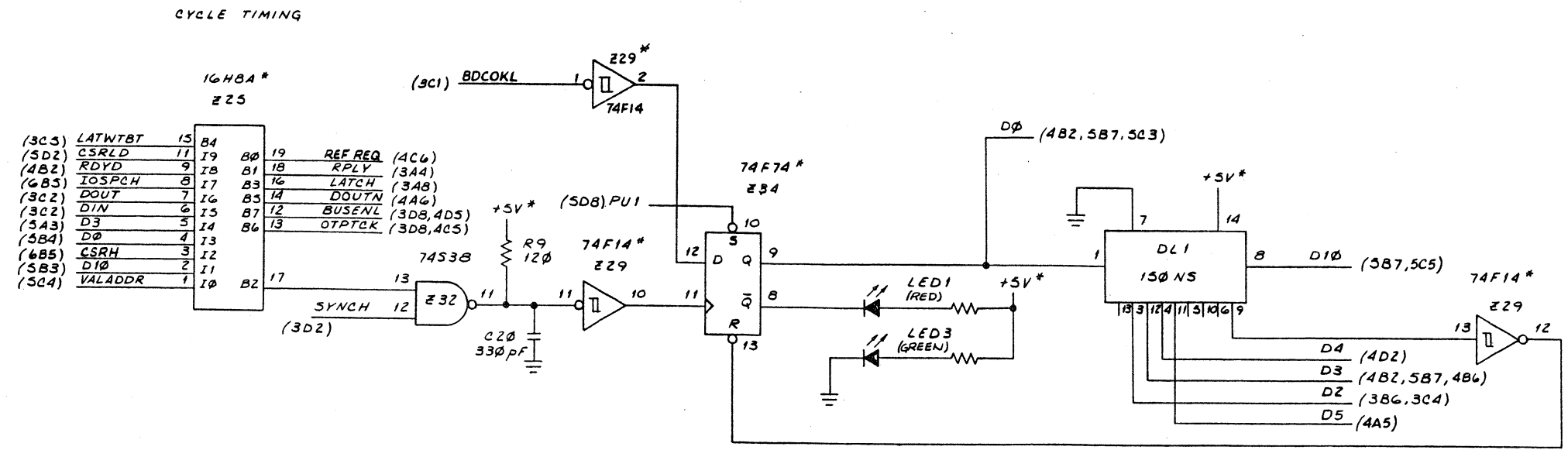
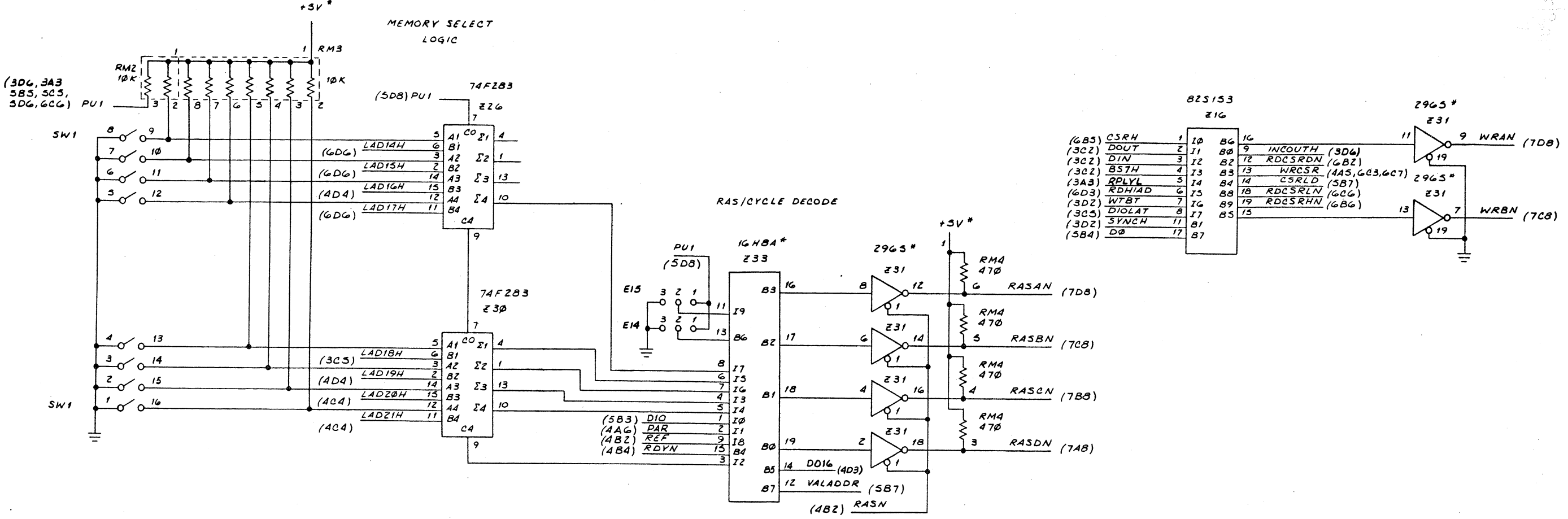


D

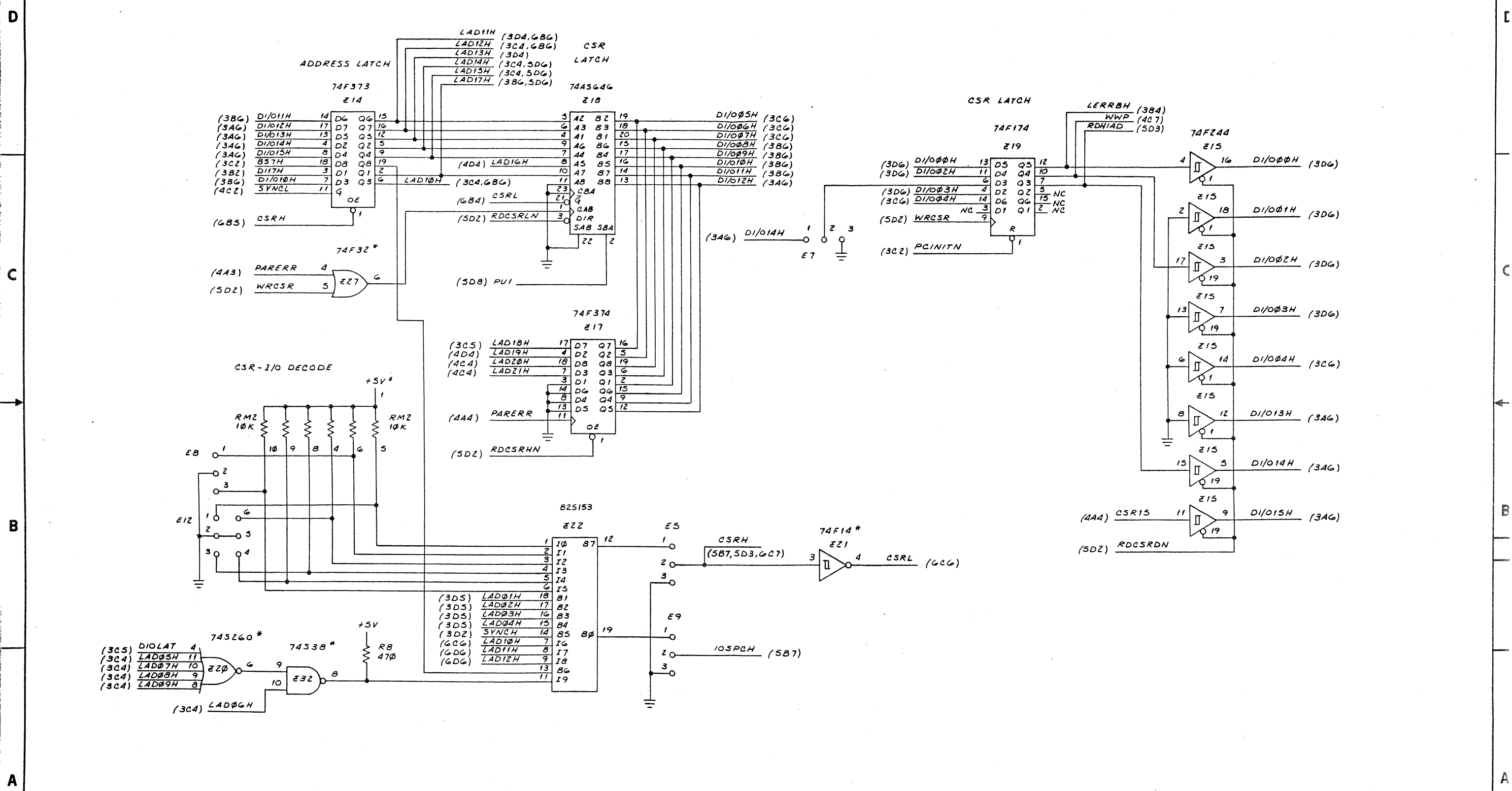
C

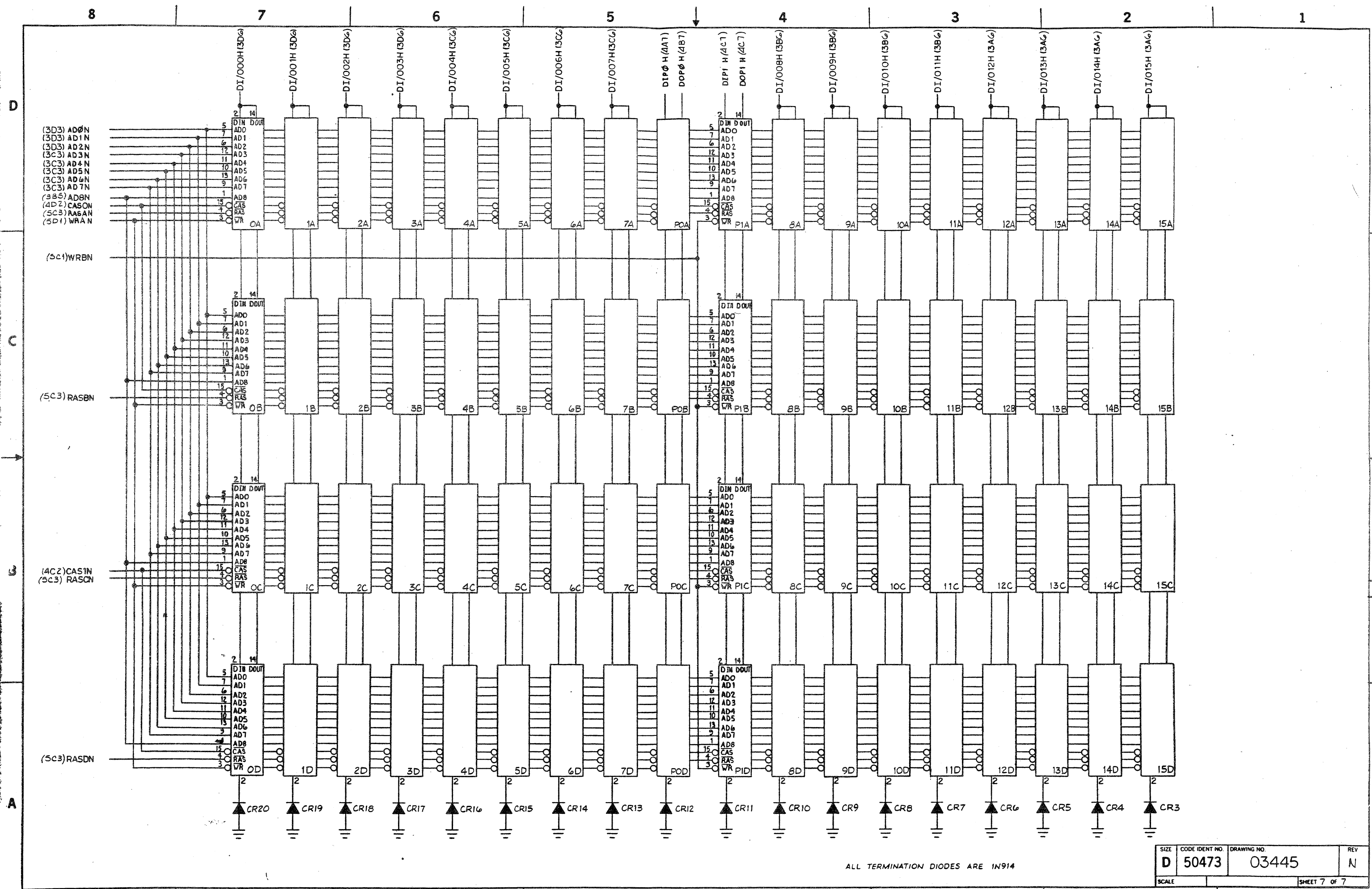
B

A



| | | | |
|-------|----------------|-------------|------|
| SIZE | CODE IDENT NO. | DRAWING NO. | REV. |
| D | 50473 | 03445 | N |
| SCALE | SHEET 5 OF 7 | | |





ALL TERMINATION DIODES ARE 1N914

| | | | |
|-------|----------------|-------------|-----|
| SIZE | CODE IDENT NO. | DRAWING NO. | REV |
| D | 50473 | 03445 | N |
| SCALE | SHEET 7 OF 7 | | |