

ENGINEERING NOTES

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- 60. POWER FEEDERS TO THE EQUIPMENT CABINETS SHALL BE SIZED TO INSURE VOLTAGE RANGE OF 42.75 TO 52.50 VOLTS AT EACH EQUIPMENT CABINET. FEEDER SIZES IN TABLE H OR J SHALL BE USED UNLESS THE MAXIMUM LOOP LENGTHS SHOWN ARE EXCEEDED. IF JOB CONDITIONS REQUIRE GREATER FEEDER LENGTHS THAN SHOWN IN TABLE H OR J, FEEDERS MUST BE CALCULATED BY ENGINEER. (SEE NOTE 6).
- 61. JOB CALCULATED EQUIPMENT CABINET POWER FEEDERS THAT TERMINATE AT CONNECTORS AT THE TOP OF THE EQUIPMENT CABINET MUST BE SPLICED TO A 3-FOOT SECTION OF THE ED-5A079-30,G8 CABLE SPECIFIED IN TABLE H OR J. THE SPLICE SHALL BE MADE IN THE CABLE RACK ABOVE THE EQUIPMENT FRAME USING A THOMAS & BETTS "C" TAP (AS REQUIRED). THE SPLICE IS REQUIRED TO MATE WITH CONNECTORS ON THE EQUIPMENT CABINET. SEE NOTE 64,162 FOR REQUIRED TERMINATIONS AT THE PCFD CABINET.
- 62. JUNCTION BAR SPLICE PLATES FOR ESS SINGLE POINT GROUND (GROUND WINDOW) AND FOR -48 VOLT SHOULD BE PER H-512-137 (A&M ONLY) OR ED-4C471-30 (SEE NOTE 70). SELECT SIZE AND QUANTITY TO SUIT JOB REQUIREMENTS. THE -48 VOLT SPLICE PLATES MAY NOT BE REQUIRED WHEN THE POWER PLANT IS CLOSE TO THE PD FRAME. THE SINGLE POINT GROUND SPLICE PLATE (GROUND WINDOW) IS ALWAYS REQUIRED. (SEE NOTE 73). ADDITIONAL GROUND SPLICE PLATE (AUX. GROUND WINDOW) MAY BE REQUIRED DUE TO A BUILDUP OF CABLING AND MUST BE LOCATED WITHIN 3 FEET FROM THE CENTER POINT OF THE MAIN GROUND BAR.
- 63. \$IT IS REQUIRED THAT THE MAIN POWER FEEDERS TERMINATING WITHIN THE J86334D-1 PCFD FOR PANELS 1 THRU 3 BE 350MCM MAXIMUM SIZE AT BOTH THE BATTERY AND RETURN BUS BARS. DUE TO MOUNTING BOLT HOLES BEING DRILLED ON 1 1/4 INCH CENTERS FOR A HALF INCH MOUNTING BOLT, STANDARD MOUNTING TERMINALS FOR POWER FEEDERS SMALLER OR LARGER THAN 350MCM MUST BE ENGINEERED AS FOLLOWS:  
 A. SPLICE A SECTION OF 350MCM CABLE TO THE CALCULATED SIZE POWER FEEDER FROM THE POWER PLANT. THE SPLICE SHOULD BE MADE IN THE CABLE RACK ABOVE THE PCFD USING THE APPROPRIATE SIZE "C" TAP COMPRESSION TYPE CONNECTOR. (FOR FULLY ASSIGNED FUSE PANELS OR PANELS CABLED FOR ULTIMATE MAXIMUM EXPECTED DRAIN OF THE PANEL).  
 B. PROVIDE ED-4C471-30 JUNCTION BUS BARS AS SPLICE PLATES. (TO BE USED IF CABLE REQUIREMENTS ARE ENGINEERED WITH MANY MULTIPLE FEEDERS OR IF ULTIMATE DRAIN IS EXPECTED TO REQUIRE THE ADDITION OF MORE CABLES AT A LATER TIME. (SEE NOTE 70).  
 C. PROVIDE TERMINALS WITH BLANK TONGUES FOR CABLE SIZES SMALLER THAN 350MCM AND HAVE INSTALLER DRILL TWO 9/16 HOLES ON 1 1/4 INCH CENTERS. (FOR FULLY ASSIGNED FUSE PANELS OR PANELS CABLED FOR MAXIMUM ULTIMATE DRAIN EXPECTED ON THE PANEL). KS15977,L103 CONNECTORS ARE PROVIDED WITH THE PCFD FOR TERMINATING 350MCM CABLES.\$
- 64. \$THE MAXIMUM SIZE EQUIPMENT CABINET POWER FEEDERS THAT CAN TERMINATE ON THE PD CABINET FUSE PANELS 1 THRU 3 AND RSM MISC CAB PD PANEL IS 10 GAUGE STRANDED. IF JOB CONDITIONS REQUIRE LARGER THAN 10 GAUGE FEEDERS, A SECTION OF 10 GAUGE FEEDER WIRE MUST BE SPLICED TO THE LARGER CABINET FEEDER. THE SPLICE SHOULD BE MADE IN THE CABLE RACK ABOVE THE PD CABINET USING A THOMAS & BETTS "C" TAP.  
 THE PD CABINET REQUIRES KS-15977,L23 TERMINALS FOR TERMINATING 10 GAUGE RETURN FEEDERS WITH TWO 840059083 SCREWS AND TWO 802217612 (P221761) LOCKWASHERS FOR EACH GROUND TERMINAL AND THOMAS & BETTS G52 FLAG TERMINALS FOR TERMINATING 10 GA OR -48 VOLT FEEDERS. A GROUP ON J86334D-1 FRAME CAN BE ORDERED TO PROVIDE ALL LUGS REQUIRED PER PANEL OR THEY CAN BE ORDERED ON AN INDIVIDUAL BASIS. LARGEST GAUGE FEEDER TO TERMINATE ON FUSE  
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ENGINEERING NOTES

- 51. THIS DRAWING IS MADE FROM INFORMATION FOUND IN SD-5D005-01.
- 52. LIST OF ASSOCIATED SYSTEM DRAWINGS:  
 ED-5D022-11 5ESS GROUNDING  
 ED-5D021-12 5ESS AC DISTRIBUTION  
 ED-4C184-12 3B20D MOD 2,3 AC & DC DIST. 6-FOOT CABINET  
 ED-5D024-11 5ESS RSM GROUNDING  
 SD-5D002-01 CURRENT DRAIN DATA
- 53. LEAD DESIGNATIONS SHOWN ON EQUIPMENT FRAME FEEDERS AGREE WITH STAMPING AT TOP OF EQUIPMENT CABINETS.
- 54. THE POWER DISTRIBUTION FRAME J86334D- (FIGURE 6) IS NOT USED WITH A 131A (FIGURE 1) OR 133A (FIGURE 2) POWER PLANT.
- 55. THE 131A (FIG. 1) AND 133A (FIG. 2) POWER PLANTS WOULD BE USED ONLY WITH THE 5ESS CONFIGURED AS A 5A REMOTE SWITCHING MODULE (RSM), AS SUCH THE 3B PROCESSOR IS NOT INCLUDED, THEREFORE, SYSTEM DRAINS MIGHT BE LOW ENOUGH TO USE EITHER A 131A OR 133A POWER PLANT. EQUIPMENT FRAMES WOULD BE POWERED DIRECTLY FROM THE POWER PLANTS DISCHARGE FUSE PANELS THUS ELIMINATING THE NEED FOR A POWER DISTRIBUTION FRAME. THE POSITIVE DISCHARGE BUS (GROUND BAR) OF THE POWER PLANT SERVES AS THE ESS GROUND WINDOW IN THIS ARRANGEMENT, AND SHOULD BE GROUNDED PER STANDARD GROUNDING METHODS. POWER FEEDERS IN TABLE E SHALL BE USED BETWEEN THE POWER PLANT AND THE EQUIPMENT FRAMES. IF DISTANCE EXCEEDS THE MAXIMUM LOOP LEAD LENGTH IN TABLE H OR J LEAD SIZES MUST BE CALCULATED BY THE JOB ENGINEER.
- 56. UNLESS OTHERWISE SPECIFIED ALL FEEDERS SHOWN ON FIG. 6 AND UP AND IN TABLE J ARE BASED ON A MAXIMUM VOLTAGE DROP OF .75 VOLT IN THE LOOP OR .375 VOLT ONE WAY.
- 57. MAXIMUM DRAINS FOR POWER PLANTS (FIG. 1 THRU FIG. 5)  
 A. 131A POWER PLANT (FIG. 1) MAXIMUM DRAIN IS 70 AMPERES TOTAL OR 35 AMPERES PER BUS. (THIS PLANT CANNOT BE UNITIZED)  
 B. 133A POWER PLANT (FIG. 2) MAXIMUM DRAIN IS 140 AMPERES TOTAL OR 70 AMPERES PER BUS. (THIS PLANT CANNOT BE UNITIZED)  
 C. 151C POWER PLANT (FIG. 3) MAXIMUM DRAIN IS 600 AMPERES TOTAL OR 300 AMPERES PER BUS.  
 D. 153A POWER PLANT (FIG. 4) MAXIMUM DRAIN IS 1200 AMPERES TOTAL, OR 600 AMPERES PER BUS. (THIS PLANT CANNOT BE UNITIZED)  
 E. 155A POWER PLANT (FIG. 5) MAXIMUM DRAIN IS 2400 AMPERES TOTAL, OR 1200 AMPERES PER BUS. (THIS PLANT CANNOT BE UNITIZED)  
 F. 151B POWER PLANT (FIG. 3) MAXIMUM DRAIN IS 600 AMPERES TOTAL, OR 300 AMPERES PER BUS. (THIS PLANT CANNOT BE LOCATED IN THE ESS LINEUP (SEE NOTE 73)).  
 G. LINEAGE 2000 MCS POWER PLANT MAXIMUM DRAIN IS 3200 AMPERES TOTAL OR 1600 AMPERES PER BUS. (THIS POWER PLANT CANNOT BE UNITIZED)
- 58. GREATER THAN 1.0 VOLT DROP APPLIES.
- 59. \$UNLESS OTHERWISE SPECIFIED ALL FEEDERS SHOWN ON FIGURE 6 AND UP AND SHOWN IN TABLE H ARE BASED ON A MAXIMUM VOLTAGE DROP OF 1.0 VOLT IN THE LOOP OR 0.5 VOLT ONE WAY.\$  
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ISSUE NOTES

DRAWING REISSUED TO ADD POWER INFORMATION FOR CM2 CABINETS USING J5D003FJ-1 MODULAR FUSE FILTER UNIT. ADDED TABLES D1,J1, FIG. 40-43. ENGINEERING NOTES MOVED FROM UNIGRAPHICS TO FOCUS PDD DATABASE.

ORIG ISS: 09/09/92 CHANGE CLASS: B

DRAFT: PKK ENGR: GM SUPV: CERTIFIED: 09/15/92 ISSUE: 13

DRAWING REISSUED TO ADD POWER INFORMATION FOR ALL 5ESS CABINETS EQUIPPED WITH THE J5D003FJ-1 MODULAR FUSE FILTER UNIT. ADDED FIGURES 44-64. ADDED ITEMS 5-25 TO TABLE D1. ADDED ITEMS 3-23 TO TABLE J1. ADDED ENG. NOTE 174.

ORIG ISS: 09/09/92 CHANGE CLASS: B

DRAFT: MR ENGR: GM SUPV: CERTIFIED: 10/07/92 ISSUE: 14

ENGINEERING NOTE 175 WAS ADDED. DRAWING WAS RATED DA AND REPLACED BY ED5D805-10 AND THE WEB SITE "HTTP://IXSTAR.IH.LUCENT.COM/MFFU/". CHANGED REFERENCE FROM "AT&T" TO "LUCENT".

ORIG ISS: 09/09/92 CHANGE CLASS: ME

DRAFT: RCT ENGR: RCT SUPV: GJM CERTIFIED: 10/12/00 ISSUE: 15

SHEET INDEX

SHT NBR	A1 THRU A4 ISSUE 15										
ISSUE											
SHT NBR	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11
ISSUE	14	13	14	13	13	13	13	14	14	14	14
SHT NBR	B12	B13	B14	B15	B16	B17	B18	B19	B20	B21	B22
ISSUE	14	14	14	14	14	14	14	14	14	14	14
SHT NBR	B23	B24	B25	B26	B27	B28	B29	B30	B31	B32	B33
ISSUE	14	14	14	14	14	14	14	14	14	14	14
SHT NBR	B34	B35	B36	B37	B38	B39	B40	B41	B42	B43	B44
ISSUE	14	14	14	14	14	14	14	14	14	14	14
SHT NBR	B45	B46	B47	B48	B49						
ISSUE	14	14	14	14	14						
SHT NBR											
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TABLE OF CONTENTS	
DESCRIPTION	SHT
SHEET INDEX	A1
ISSUE NOTES	A1
ENGINEERING-NOTES	A1
B SECTION GRAPHICS	B1

LUCENT TECHNOLOGIES - PROPRIETARY  
 USE PURSUANT TO COMPANY INSTRUCTIONS

BT13

5ESS SWITCHING EQUIPMENT  
 -48 VOLT  
 DC POWER DISTRIBUTION CKT  
 ( 6'-0" CABINETS )

DWG SIZE C2 ISSUE 15

LUCENT TECHNOLOGIES INC ED5D073-11

SHEET A1 OF 53

ENGINEERING NOTES

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- OR CABINETS. INFORMATION FOR ENGINEERING 3B PROCESSOR DC DISTRIBUTION IS FURNISHED ON ED-4C184-12. THIS DRAWING DOES NOT CONTAIN FIGURES FOR 7'-0" 5ESS EQUIPMENT FRAMES OR CABINETS. (FOR 7'-0" 5ESS EQUIPMENT, SEE ED-5D073-10). ALL OSPS APPLICATION FOUND IN THIS DRAWING IS PER ED-5D135-01 (OSPS APPLICATION SCHEMATIC).
77. FOR ADDITIONAL ARRANGEMENTS OF JUNCTION BUS BAR ASSEMBLIES, SEE ED-4C471-30.
  78. THE MAIN & SUPPLEMENTARY GROUND WINDOW BUS BARS SHALL NOT BE INSULATED OR TAPED. SEE ED-4C471-30 G6,12,17,20,21 & 22.
  79. PROVIDE KS-15977,L81 LUGS FOR TERMINATING THE 2/0 CABLES TO PANEL 4 OF THE PD CABINET J86334D-1. DISCARD THE KS-15977,L91 LUGS FURNISHED WITH THE PD CABINET. PRIOR TO ISSUE 3 "B" BUS FEEDERS WERE 2 AWG.
  80. ONLY ONE -48V & RTN FEEDER PAIR IS REQUIRED FOR TEST TALK CIRCUITS. POWER THEN SHALL BE MULTED FROM TEST TALK TO TEST TALK PER JOB REQUIREMENTS.
  81. THE -48 VOLT RTNA MUST NOT BE GROUNDED TO MDF GROUND. USE MDF GROUND FOR HRG AS SHOWN.
  82. FOR ANY 5ESS LINEUP THAT CONTAINS A LINE UNIT, ALL "A" BUS RETURNS ("O" BUS) MUST BE MULTED TOGETHER WITHIN THAT INTERFACE OR SWITCHING MODULE (IM) AND ALL 5ESS "B" BUS RETURNS ("I" BUS) MUST BE MULTED TOGETHER WITHIN THAT INTERFACE OR SWITCHING MODULE (IM) OR (SM) PROCESSOR FRAMES AND 5ESS FRAMES THAT ARE NOT PART OF AN INTERFACE OR SWITCHING MODULE SHALL NOT HAVE THE RETURNS MULTED. THESE STRAPS ARE PROVIDED PER LISTS ON THE INTERFACE OR SWITCHING MODULE EQUIPMENT J DRAWINGS.
  83. AC AND DC POWER DISTRIBUTION FOR 3B PROCESSOR EQUIPMENT SHALL BE ENGINEERED USING ED4C184-11,-12,-13. SEE TABLE F OR K FOR 3B20D TYPICAL FUSE ASSIGNMENTS.
  84. SEE SKETCH A ON SHEET B5 FOR EXAMPLES OF STAMPING FUSE ASSIGNMENT LABELS ON FRONT OF PD CABINET.
  85. CABINET 0 SHALL BE FUSED FROM BUS A, AND CABINET 1 SHALL BE FUSED FROM BUS B.
  86. LINE TRUNK PERIPHERAL CABINETS SHALL BE EQUIPPED PER JOB REQUIREMENTS, AND FEEDER DRAINS CALCULATED ACCORDINGLY, USING CURRENT DRAIN DATA FOUND IN SD-5D002-01. SEE NOTE 69,91 FOR POWER DISTRIBUTION CABINET ASSIGNMENT REQUIREMENTS.
  87. THE ABS FEEDER & RTN IN FIG. 1 THRU 5 IS PROVIDED PER ED-5D500-11.
  88. THE MISCELLANEOUS CABINET SHALL BE EQUIPPED PER JOB REQUIREMENTS. THE DRAINS FOR THE -48A0, -48A1, -48B0 & -48B2 WHEN REQUIRED, AND THEIR RETURNS MUST BE CALCULATED ON A JOB BASIS BASED ON THE EQUIPMENT CONFIGURATION AND CURRENT DRAIN DATA FOUND IN SD-5D002-01. THE KS-20816,L1 & A (DA), WP-91652,L20 INVERTER AND THE ALARM UNIT IS REQUIRED ONCE PER 5ESS OFFICE FOR THE MCC AND FIRST DATA SET CABINET, AND IS TYPICALLY MOUNTED IN MISCELLANEOUS CABINET MOO.
  89. 5ESS MAY USE OLDER TYPE POWER PLANTS (FIG. 17) WHICH USE COUNTER ELECTROMOTIVE FORCE (CEMF) (FIG. 15) OR EMERGENCY CELL (END CELL) (FIG. 16) SWITCHING PROVIDED THE FOLLOWING CONSTRAINTS ARE MET:
    - A. CEMF STEP VOLTAGE TRANSIENTS ARE LIMITED TO TYPICALLY 2 VOLTS AND NO MORE THAN 4 VOLTS.
    - B. EMERGENCY CELL STEP VOLTAGE TRANSIENTS ARE LIMITED TO APPROXIMATELY 4.4 VOLTS, AS WOULD BE OBTAINED WHEN SWITCHING 2 CELLS IN EACH CELL GROUP. USE OF 3 OR MORE CELLS PER GROUP IS NOT PERMITTED WITH 5ESS.
    - C. 5ESS GROUNDING RULES PER ED-5D022-11 AND BSP 802-001-195 MUST BE MET.
    - D. THE POWER PLANT MUST MAINTAIN ITS OUTPUT VOLTAGE WITHIN 5ESS LIMITS.
    - E. BATTERY RESERVE CALCULATIONS SHOULD BE VERIFIED.
    - F. IF THE DISTRIBUTION GROUND BUS BAR OF THE POWER PLANT IS NOT INSULATED FROM THE POWER PLANT FRAMEWORK, THE POWER PLANT GROUND BAR SHOULD BE THE MAIN GROUND BUS (GROUND WINDOW). THE GROUND WINDOW MUST BE WITHIN ONE FLOOR OF THE 5ESS OFFICE. IF THE GROUND WINDOW IS REMOTE FROM THE POWER PLANT, ALL DISTRIBUTION FEEDERS FROM THE POWER PLANT MUST BE ROUTED BY AND BONDED TO THE 5ESS GROUND WINDOW. THESE POWER FEEDERS MAY NOT TERMINATE AT THE PCFD WITHOUT BONDING THE RETURNS

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ENGINEERING NOTES

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- G. WHEN ADDING FEEDERS TO EXISTING FEEDERS, THEY MUST BE OF THE SAME SIZE, TYPE, AND FOLLOW THE SAME ROUTING. BATTERY FEEDERS SHOULD ALWAYS BE RUN WITH A GROUND FEEDER.
71. \$WHEN THE KS-20816,L1 & A INVERTER IS PROVIDED WITH THE J5D005C (FIG. 10) MISC. CABINET, THE POWER FEEDERS AND LOAD CIRCUIT BREAKER SHALL BE ASSIGNED AT THE POWER PLANT FUSE BOARD. THE INVERTER REQUIRES A 50 AMPERE CIRCUIT BREAKER. USE 6 GAUGE WIRE FOR UP TO 50 FEET (LOOP). USE 2 GAUGE WIRE FOR UP TO 100 FEET (LOOP). WHEN TWO GAUGE WIRE IS REQUIRED, PROVIDE TWO 7-FOOT SECTIONS OF 6 GAUGE WIRE AND SPLICE TO THE 2 GAUGE WIRE IN THE CABLE RACK ABOVE THE MISC. FRAME OR CABINET, SPLICE WITH THOMAS & BETTS "C" TAP NO. 54735. THE INVERTER MUST BE PROTECTED BY A 50 AMPERE CIRCUIT BREAKER. A 50 AMPERE FUSE IS UNACCEPTABLE SINCE IT MAY OPERATE AT INVERTER STARTUP CURRENT. DRAINS FOR THE INVERTER ARE AS FOLLOWS:
 

LIST 1	LIST 2	
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.25 AMPS	.31 AMPS	INVERTER STANDBY
27.8 AMPS	39.0 AMPS	INVERTER RUNNING\$
  72. THE 131A & 133A POWER PLANTS MUST MEET THE NO. 5 ESS TRANSIENT VOLTAGE LIMITS AND MAY REQUIRE THE ADDITION OF CAPACITORS TO THE DISCHARGE BUS. RECOMMENDED TRANSIENT VOLTAGE LIMITS FOR NO. 5 ESS ARE:
    - A. TRANSIENT VOLTAGE RANGE DUE TO A STEP LOAD CHANGE: -54.9 TO -47.3 VOLTS FOR 300 MILLISECONDS.
    - B. MAXIMUM TRANSIENT VOLTAGE DUE TO RECTIFIER FAILURE: 53.5 VOLTS FOR 150 MILLISECONDS.
    - C. TRANSIENT VOLTAGE RANGE DUE TO FAULTS BEING CLEARED: -59.3 VOLTS FOR 20 MICROSECONDS.
    - D. ALSO SEE BSP 800-610-165.
  73. A. THE 151B POWER PLANT IS AN ISOLATED DISCHARGE GROUND RTN BUS AND TYPICALLY IS USED WHEN THE POWER PLANT IS SEPARATE FROM THE NO. 5ESS. IN THIS CONFIGURATION THE PLANT IS AT BLDG GROUND, AND THE RETURN BUS IS CONNECTED TO THE ESS SINGLE POINT GROUND ABOVE THE FIRST PD FRAME OR CABINET. THE 151B PLANT MAY ALSO BE LOCATED IN THE NO. 5ESS GROUND COMMUNITY, IN WHICH CASE THE PLANT IS AT ESS GROUND. THE RTN BUS IS CONNECTED TO THE SINGLE POINT GROUND IN EITHER CASE. NOTE THAT THE 151B PLANT DOES NOT HAVE A CHARGE BUS AND CANNOT BE UNITIZED OR MOVED IN A HOT SLIDE.
    - B. THE 151C POWER PLANT HAS A NON-ISOLATED (GROUNDED) RTN BUS. WHEN THE 151C POWER PLANT IS NOT AT ESS GROUND POTENTIAL, THE DISCHARGE BUS BAR MUST BE INSULATED FROM THE POWER PLANT FRAME. AND THE ESS SINGLE POINT GROUND MUST BE ESTABLISHED AS SHOWN IN ED-5D022-11.
  74. \$USE OF A 300 AMP BREAKER OR FUSE FOR FUSE PANELS 1 THRU 3 IS NOT A REQUIREMENT: SMALLER SIZES AS APPROPRIATE TO THE ASSIGNED DRAIN MAY BE USED. NOTE HOWEVER THAT IF THE PD FUSE PANEL IS EXPECTED TO GROW TO ITS ULTIMATE CAPACITY, THEN IT SHOULD BE SERVED BY A 300 AMP BREAKER OR FUSE AND USING POWER FEEDERS OF THE SIZE REQUIRED TO MAINTAIN PROPER VOLTAGE AT THE PD CABINET. THE PD CABINET IS DESIGNED TO TERMINATE 350 MCM BATTERY AND RETURN CABLES AT FUSE PANELS 1 THRU 3. LUGS PROVIDED WITH THE PD FRAME ARE DESIGNED TO TERMINATE, CABLES SIZES JUST STATED. ANY CABLES OTHER THAN THOSE SPECIFIED CABLE LUGS MUST BE JOB ENGINEERED. (SEE NOTE 63) TERMINATING OTHER CABLE SIZES ARE LIMITED DUE TO LUG BOLT HOLE SPACING. KS TYPE CIRCUIT BREAKERS MAY BE USED AT 100 PERCENT OF L2 DRAINS, EARLIER BSP'S SPECIFIED 150 PERCENT OF L2 DRAINS, BUT THIS NO LONGER APPLIES. WIRE GAUGE MUST BE SIZED TO THE CIRCUIT BREAKER AMPACITY. A TYPICAL SIZE BREAKER FOR A PD PANEL SERVING ONLY THE 3B PROCESSOR (PANEL 1) WOULD BE 100 AMPS PER BUS. A TYPICAL SIZE BREAKER FOR PD PANELS SERVING A SMALL NO. 5ESS (PANEL 2 & 3) WOULD BE 100 AMPS PER BUS. EACH PANEL MUST HAVE A BREAKER FOR EACH BUS. DO NOT COMBINE THE SAME BUS FROM TWO OR MORE PD PANELS ON THE SAME BREAKER OR BATTERY SPLICE BUS BAR.\$
  75. J86334D-1 POWER DISTRIBUTION CABINET FUSE REQUIREMENTS FOR FUSE PANEL 4.
    - A. LOAD FUSE 35 TO 60 AMPERES SHALL BE TYPE A13 BY CHASE SHAWMIT OR EQUIV. ORDER 50 PERCENT SPARES.
    - B. ALL PILOT FUSES SHALL BE 70 TYPE 1/2 AMPERE. ORDER 50 PERCENT SPARES.
  76. THIS DRAWING DISAGREES WITH SD-5D005-01 AS FOLLOWS: THIS DRAWING DOES NOT CONTAIN FIGURES FOR 3B PROCESSOR FRAMES

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ENGINEERING NOTES

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- PANEL 4 IS 2 GAUGE. LARGER GAUGES MUST BE SPLICED TO A LENGTH OF 2 GAUGE. SPLICE IS TO BE MADE IN THE CABLE RACK ABOVE THE PD CABINET. T&B CO. TERMINAL NO. G671 ARE REQUIRED TO TERMINATE THE 2 GAUGE FEEDERS ON FUSE PNL. 4.\$
65. EQUIPMENT CABINET POWER FEEDER REQUIREMENTS.
    - A. P= DENOTES PAIRED FEEDERS.
    - B. WHERE A PAIR IS MADE UP OF TWO SINGLE CONDUCTORS, THEY SHALL BE LACED TOGETHER EVERY TWO FEET THEIR ENTIRE LENGTHS.
    - C. FOR 2,4 OR 6 GAUGE SINGLE CONDUCTORS, USE KS-13385,L2.
    - D. FOR 8,10 OR 12 GAUGE SINGLES OR PAIRS, USE KS-13385 STRANDED.
    - E. FOR 2,4 OR 6 GAUGE PAIRED CONDUCTORS, USE KS-13385,L4.
    - F. SEE TABLE H OR J FOR CABINET POWER FEEDER REQUIREMENTS.
  66. THE POWER FEEDERS FROM THE POWER PLANT TO THE PD CABINET MUST HAVE THE -48 VOLT FEEDER AND RETURN FEEDER RUN IN CLOSE PROXIMITY TO EACH OTHER AND ON THE SAME CABLE RACK.
  67. SEE TABLE F OR K FOR TYPICAL FUSE ASSIGNMENTS ON J86334D- PD CABINET FOR THE 3B PROCESSOR EQUIPMENT CABINETS.
  68. SEE TABLE G FOR ALLOWABLE VOLTAGE DROPS.
  69. \$J86334D-1 POWER DISTRIBUTION CABINET FUSE ASSIGNMENT REQUIREMENTS. (FUSE PANELS 1 THRU 3)
    - A. MAXIMUM TOTAL L1 BUSY HOUR AMPERES PER FUSE BLOCK IS 44 AMPERES AND PER BUS IS 264 AMPERES.
    - B. MAXIMUM L1 BUSY HOUR AMPERES AT NORMAL BATTERY VOLTAGE FOR ANY INDIVIDUAL FEEDER IS 13 AMPERES. (UNLESS OTHERWISE SPECIFIED).
    - C. IF ANY INDIVIDUAL FEEDER HAS A L-1 BUSY HOUR DRAIN OF MORE THAN 12.5 AMPERES, THEN ONLY 3 FEEDERS MAY BE ASSIGNED TO THAT FUSE BLOCK.
    - D. ALL LOAD FUSES ARE TYPE 74F, 20 AMPERES.
    - E. ALL PILOT (ALARM) FUSES ARE TYPE 70G 0.5 AMPERES. (PROVIDED WITH PD FRAME).
    - F. ORDER LOAD FUSES AS REQUIRED. ORDER 50% SPARE LOAD AND PILOT FUSES.\$
  70. THE ED-4C471-30 JUNCTION BUS BAR UNIT PERMITS THE ADDITION OF FEEDERS (AS OFFICE GROWTH WARRANTS) UNDER POWER-ON CONDITIONS. THEREFORE, DURING THE ENGINEERING OF A NEW PD FRAME, THE FEEDERS BETWEEN THE BATTERY PLANT AND THIS UNIT SHOULD BE SIZED (WHEN POSSIBLE) FOR THE "INITIAL" VS "ULTIMATE" CURRENT DRAIN. THE FOLLOWING STEPS ARE RECOMMENDED TO DETERMINE THE NUMBER AND SIZE OF FEEDERS AND PROTECTIVE DEVICES:
    - A. DETERMINE BOTH THE "INITIAL" AND "ULTIMATE" CURRENT DRAINS BY USING THE CURRENT DRAIN INFORMATION IN TABLE H OR J.
    - B. INCREASE THE "INITIAL" DRAIN BY APPROXIMATELY 20%. THIS FIGURE IS TO BE USED TO PROVIDE THE "INITIAL" FEEDERS. THE 20% FACTOR SHOULD INSURE ADEQUATE FEEDER CAPACITY TO PERMIT MODEST FRAME GROWTH FOR AT LEAST A 5-YEAR PERIOD. MAJOR FRAME ADDITIONS (NECESSITATING AN INCREASE IN FEEDERS) IS UNLIKELY WITHIN A 5-YEAR PERIOD OF THE INITIAL INSTALLATION. IF THE "INITIAL +20%" DRAIN EXCEEDS THE ESTIMATED ULTIMATE DRAIN, PROVIDE FEEDERS FOR THE ULTIMATE DRAIN.
    - C. DETERMINE QUANTITY AND SIZE OF POWER FEEDERS FOR BOTH THE "INITIAL +20%" AND "ULTIMATE" CURRENT DRAINS. CALCULATE BY USE OF THE GS5420 POWER LEAD CALCULATOR AND THE REQUIREMENTS OF THE POWER PLANT.
    - D. SPECIFY FEEDERS BASED ON THE "INITIAL +20%" CURRENT DRAIN.
    - E. PROVIDE CIRCUIT BREAKERS OR FUSES AT THE POWER PLANT ON THE BASIS OF THE "ULTIMATE" CURRENT DRAIN.
    - F. PROVIDE INFORMATION TO THE CABLING ENGINEER TO SIZE RACKS FOR THE "ULTIMATE" FEEDER REQUIREMENTS AND TO NOTE ON CABLE RACK DRAWINGS THAT THESE ROUTES SHOULD NOT BE USED FOR OTHER PURPOSES SINCE THEY MAY BE EVENTUALLY ADDED TO AS OFFICE GROWTH WARRANTS IN ORDER TO MEET "ULTIMATE" FEEDER REQUIREMENTS.

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SEE PROPRIETARY NOTICE ON SHEET ONE

BT13

5ESS SWITCHING EQUIPMENT  
-48 VOLT  
DC POWER DISTRIBUTION CKT  
( 6'-0" CABINETS )

DWG SIZE C2 ISSUE 15

ENGINEERING NOTES

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- MUST BE SPLICED TO THE 4/0 IN THE CABLE RACKING ABOVE THE MISC. CABINET. (SEE FIG. 21 & HG).
152. PROVIDE 74F 20 AMPERE FUSES AND 70G PILOT FUSES FOR EACH FUSE POSITION EQUIPPED ON J87334D-1 PCD FIG. 6 20 AMPERE PANEL AND THE RSM MISC. CAB. (FIG. 21) FUSE DISTRIBUTION PANEL.
  153. THE MISCELLANEOUS CABINET (FIG. 21) IS INTERNALLY WIRED FROM THE FUSE PANEL TO THE FILTER UNIT. THE MISC. CAB. FILTER FUSE UNIT INTERNAL LOADS ARE JOB ASSIGNED AND CURRENT DRAINS MUST BE CALCULATED BASED ON UNIT ASSIGNMENTS AND DRAINS FOUND IN SD-5D002-01.
  154. CURRENT DRAINS FOR ISLU'S WHICH ARE NOT PART OF RISLU'S MUST BE CALCULATED PER THE AMOUNT OF TELEPHONE TRAFFIC, USING SD-5D002-01. THE WORST CASE DRAINS MUST NOT BE USED FOR EVERY CASE. MAXIMUM L1 DRAIN IS 15 AMPERES PER FEEDER FOR ISLU'S. IF L1 DRAIN IS MORE THAN 13 AMPERES, ONLY 2 FUSE POSITIONS IN THE PD FUSE BLOCK MAY BE ASSIGNED. (SEE NOTE 91).
  155. THE OSPS DATA SET CABINET J5D003K-1 (FIG. 28) IS EQUIPPED WITH UP TO TWO 300 VA INVERTERS.
  156. SEE OSPS APPLICATION SCHEMATIC SD5D135-01 FOR PROPER APPLICATION OF THIS EQUIPMENT.
  157. EACH OSPS BST AND VDT REQUIRES ONE ED-5D621-35, G128 POWER CORD ASSEMBLY. THE FEEDERS FROM THE PD CABINET SHALL BE SPLICED TO THE POWER CORD ASSEMBLY AS REQUIRED. IN SOME CONDITIONS MULTIPLE BST'S OR VDT'S CAN BE POWERED FROM ONE FUSE. SEE NOTE 156 & TABLE S.
  158. FIGURE 31 SHOWS A TYPICAL J5D003H-1 OSPS PD CABINET ARRANGEMENT FOR REMOTE OSC SITE WITH DEDICATED POWER PLANT AND LOCAL OPC PD. THE PD CABINET IS LOCATED WITH THE OSPS EQUIPMENT AND IS ON ESS ISOLATED GROUND. THE PD CABINET CONFIGURATION IS JOB ENGINEERED WITH A MAXIMUM OF TEN ED-5D627-30 PD PANELS AND MAXIMUM OF TWO ED-83024-30 POWER DISTRIBUTION PANELS. (SEE NOTE 156,164).
  159. FIGURE 32 SHOWS A TYPICAL J5D003H-1 OSPS PD CABINET ARRANGEMENT FOR OSC SITE SHARING A POWER PLANT WITH A 5ESS SWITCH AND THE OPC PD CABINET IS REMOTED WITH 2,3 OR 4 VDT'S ASSIGNED TO A FUSE POSITION. THE OPC PD CABINET IS JOB ENGINEERED AND CAN BE EQUIPPED WITH UP TO TWO ED-83024-30 POWER DISTRIBUTION PANELS. THE OSC PD CABINET IS LOCATED NEAR THE TERMINALS AND IN A NON-ESS AREA. (SEE NOTE 156,164).
  160. FIGURE 33 SHOWS A TYPICAL J5D003H-1 OSPS PD CABINET ARRANGEMENT FOR OSC SITE SHARING A POWER PLANT WITH 5ESS SWITCH AND THE OPC PD CABINET REMOTED WITH BST'S AND VDT'S. THE OSC PD CABINET IS JOB ENGINEERED AND CAN BE EQUIPPED WITH UP TO TEN ED-5D627-30 FUSE PANELS AND UP TO TWO ED-83024-30 POWERED DISTRIBUTION PANELS. THE OSC PD IS LOCATED IN A NON-ESS AREA. (SEE NOTE 156,164).
  161. THE OSPS BST (FIG. 29) AND VDT (FIG. 30) REQUIRES CO GROUND BONDS. THE GROUND WIRE SHALL BE SIZED THE SAME AS THE -48 AND RETURN FEEDER.
  162. A. THE MAXIMUM SIZE INVOLT AND INVOLT RETURN FEEDERS THAT CAN TERMINATE ON THE FILTER FUSE PANEL OF J86334D-1 PD CABINET, OR THE ED-83024-30 POWER DISTRIBUTION PANEL OF THE OSPS J5D003H-1 PD CABINET IS 350MCM CABLE. LINE ENGINEER SHALL PROVIDE CONNECTORS AND TERMINATING HARDWARE ON A JOB BASIS PER TABLE P. IF FEEDERS LARGER THAN 350MCM ARE RUN, THEY MUST BE SPLICED TO A 350MCM CABLE FOR TERMINATION WITHIN THE PD CABINET. SPLICE PLATES OR T & B C-TAPS CAN BE USED.  
B. THE MAXIMUM SIZE LOAD FEEDERS FROM FILTER FUSE PANEL OF J86334D-1 PD CABINET, OR THE ED83024-30 POWER DISTRIBUTION PANEL OF THE OSPS J5D003H-1 PD CABINET IS 10 GAUGE. LINE ENGINEER SHALL PROVIDE CONNECTORS AND TERMINATING HARDWARE ON A JOB BASIS PER TABLE R. IF JOB CONDITIONS REQUIRE LARGER THAN 10 GAUGE FEEDERS, A SECTION OF 10 GAUGE FEEDER WIRE MUST BE SPLICED TO THE LARGER FEEDER. THE SPLICE SHOULD BE MADE IN THE CABLE RACK ABOVE THE PD CABINET USING A THOMAS & BETTS "C" TAP.
  163. HARDWARE FOR TERMINATING OSPS DATA SET CABINET ON THE 300VA INVERTER IS SUPPLIED WITH THE INVERTER.
  164. OSPS FUSE ASSIGNMENTS ARE JOB ENGINEERED.  
A. PROVIDE 74F 20 AMPERE FUSE AND 70G PILOT FUSE IN J5D003H-1 (ED-83024-30 POWER DISTRIBUTION PANEL) TO FUSE OSPS RISLU CABINET, DATA SET CABINET, LTP CABINET AND TO FUSE ED-5D627-30 FUSE PANEL FUSE BLOCKS.  
B. PROVIDE 74E 15 AMPERE FUSE AND 70G PILOT FUSE WHEN MORE THAN ONE VDT IS ASSIGNED TO A FUSE POSITION ON J5D003H-1  
----- CONTINUED ON NEXT SHEET -----

ENGINEERING NOTES

\*\*\*\*\* CONTINUED \*\*\*\*\*

- MODEL 2 (CM2) (FIG. 19 & 20 OR 40-43) EITHER SINGLE OR DUAL FABRIC, WHEREBY CIRCUIT PACKS ARE ADDED IN VARIOUS EQUIPMENT UNITS THROUGHOUT ALL BAYS, CIRCUIT DRAINS SHOWN FOR FIGURE 19 AND 20 IN TABLE J ARE ESTIMATED MAXIMUM DRAINS FOR THE MAXIMUM NUMBER OF SWITCHING MODULES. FOR ACTUAL DRAINS, THE EXACT CIRCUIT CONFIGURATION OF THE CABINET MUST BE KNOWN AND DRAINS CALCULATED USING DRAIN INFORMATION FOUND IN SD-5D002-01. IT IS RECOMMENDED THAT THE CM2 CABINET FEEDERS FROM THE PCFD CABINET BE SIZED BASED ON THE MAXIMUM DRAINS AND LEAD LENGTHS FOUND IN TABLE J. IF FEEDER LENGTHS EXCEED LOOP LENGTHS IN TABLE J, THE CALCULATED LEADS MUST BE SPLICED TO A SECTION OF ED-5A079-30 GROUP 8 CABLE ASSEMBLY (NOTE 61) FOR TERMINATING AT THE CM2 POWER CONNECTORS AND SPLICE A SECTION OF KS-13385 10GA FOR TERMINATING AT THE PCFD CABINET (NOTE 64).
96. COMMUNICATION MODULE MODEL 2 (CM2) FUSE ASSIGNMENT REQUIREMENTS ARE AS FOLLOWS AND PER NOTE 91.  
A. ASSIGNMENTS FOR CABINET 0 MUST BE ON THE PCFD CABINET A BUS AND CABINET 1 MUST BE ON THE PCFD CABINET B BUS.  
B. ASSIGNMENTS FOR THE GROWTH BAYS (FIG. 20) MAY BE COMBINED IN THE SAME PD PANEL USED FOR THE BASIC BAYS (FIG. 19).  
C. LOADS MAY BE ASSIGNED TO MORE THAN ONE PCFD CABINET, IF CONVENIENT.  
D. USE ANY AVAILABLE FUSE POSITION IN ANY PCFD FUSE PANEL FOR ASSIGNMENTS.  
E. FUSE POSITIONS FOR GROWTH CABINETS DO NOT NEED TO BE RESERVED.
  97. SWITCHING MODULE CONTROL CABINETS WILL BE EQUIPPED WITH A SMPU & TSIU OR A MCTU, A LOCAL DSU OR A LOCAL DSU2. ADDITIONALLY PERIPHERAL UNITS CAN BE MOUNTED IN UNEQUIPPED MOUNTING POSITIONS. CURRENT DRAINS SHOULD BE CALCULATED ON A JOB BASIS PER SD-5D002-01. BATTERY AND RETURN FEEDERS MUST BE CALCULATED ON A JOB BASIS.
  98. THERE ARE MANY VARIOUS CONFIGURATIONS IN BRINGING -48 RTN FEEDER LEADS INTO 5ESS POWER DISTRIBUTION CABINETS, DEPENDING UPON OFFICE SIZE, NUMBER OF POWER DISTRIBUTION CABINETS, DISTANCE TO THE POWER PLANT, LOCATION OF THE GROUND WINDOW, OFFICE LAYOUT, AND POSSIBLE LOAD SHARING WITH OTHER SYSTEMS. USE OF JUNCTION BARS (SPLICE PLATES) IN 5ESS FOR -48 RTN/S IS NOT A REQUIREMENT. FOR SMALL OFFICES CLOSE TO THE POWER PLANT, WITH THE POWER PLANT DISCHARGE BUS BAR USED AS THE GROUND WINDOW, THERE IS NO NEED FOR -48 RTN SPLICE PLATES. THESE FEEDER RTN'S MAY BE RUN DIRECTLY FROM THE POWER PLANT INTO P.D.O., WITHOUT NEED OF SPLICE PLATES. FOR OFFICES WITH THE GROUND WINDOW LOCATED AT P.D.O., SPLICE PLATES WILL BE REQUIRED TO CREATE THE GROUND WINDOW. FOR INSTALLATIONS WHERE THE POWER PLANT IS SOME DISTANCE AWAY, SPLICE PLATES WILL BE REQUIRED TO MAKE PROVISION FOR EITHER LARGER CONDUCTORS OR FOR MULTIPLE CONDUCTORS, TO MEET VOLTAGE DROP CONSTRAINTS. SOME POWER DESIGNERS PREFER TO COMBINE ALL THE -48 RTN'S COMING TO A PD CABINET INTO A FEW LARGE CONDUCTORS TERMINATED ON A SPLICE PLATE AT THE PD: THIS IS PERMISSIBLE AS LONG AS THE -48 AND RTN'S ARE PAIRED AS WELL AS POSSIBLE ON THE RACKING LEADING TO THE PD.  
IF THE SPLICE PLATES ARE PROVIDED AT TWO OR MORE PD CABINETS FOR ANY REASON, THEN THESE SPLICE PLATES SHOULD BE BONDED TOGETHER WITH 750 MCM CABLE. IF THE LOWER NUMBER PD'S DO NOT HAVE RTN SPLICE PLATES, THEY DO NOT NEED TO BE INCLUDED IN THIS BONDING ARRANGEMENT. ANY SUCCEEDING PD'S WHICH DO HAVE SPLICE PLATES SHOULD BE BONDED TOGETHER. DO NOT ADD SPLICE PLATES MERELY TO BE ABLE TO BOND TOGETHER ALL PD'S.  
THE PURPOSE OF THIS BONDING IS TO PROVIDE A RELATIVELY LOW EQUALIZED IMPEDANCE PATH FOR THE LIGHTNING CURRENTS PLACED IN THE RTN'S BY THE LINE UNITS. IN LARGER OFFICES WITH MORE THAN ONE PD, THE ADDED DISTANCES AND MAGNITUDES OF LIGHTNING CURRENTS MAKE THIS BONDING IMPORTANT FOR STABLE SYSTEM OPERATION. SMALLER OFFICES HAVING PD'S WITHOUT SPLICE PLATES WILL FUNCTION PROPERLY WITHOUT SUCH BONDING.
  99. THE MISCELLANEOUS CABINET (FIG. 21) IS FOR RSM APPLICATION AND IS EQUIPPED WITH A ED-83024-30 POWER DISTRIBUTION PANEL AND CONTROL UNIT THAT PROVIDES 22 A BUS AND 22 B BUS FUSE POSITIONS AVAILABLE FOR JOB ASSIGNMENT. FUSE POSITIONS F1 & F2 IN BOTH A & B BUS ARE ASSIGNED TO THE MISCELLANEOUS CABINET FILTER FUSE UNIT AND ARE SHOP WIRED.
  100. ENGINEERING NOTES ARE CONTINUED WITH NOTE 151 AND UP.
  151. KS21053 CONNECTORS (LUGS) ARE PROVIDED WITH THE MISC CABINET FOR TERMINATING POWER FEEDERS FROM THE POWER PLANT. KS-20921 4/0 WIRE SHOULD BE USED FOR THE MAIN POWER FEEDERS INTO THE CABINET. IF THE JOB CONDITIONS REQUIRE LARGER CABLES, THEY ----- CONTINUED TO THE LEFT -----

ENGINEERING NOTES

\*\*\*\*\* CONTINUED \*\*\*\*\*

- AT THE GROUND WINDOW FIRST.
90. THE J86334D-1 PCFD CABINET MAY BE POWERED FROM EITHER THE TOP OR BOTTOM. WHEN BOTTOM FED, THE GROUND WINDOW AND ANY BATTERY AND GROUND SPLICE PLATES REQUIRED SHOULD BE LOCATED ON THE FLOOR BELOW. IF THE DISCHARGE BUS OF THE POWER PLANT IS USED AS THE GROUND WINDOW, THE POWER PLANT MUST BE LOCATED ON THE FLOOR BELOW THE 5ESS. IF THE PCFD IS BOTTOM FED, SEE FLOOR PLAN DATA SECTION FPD 820-800-000-( ) FOR FLOOR CABLE HOLE SPECIFICATIONS. IF JOB CONDITIONS REQUIRE, THE SPLICE PLATES AND GROUND WINDOW CAN BE LOCATED BELOW A RAISED FLOOR AND MUST BE JOB ENGINEERED. IT IS NOT RECOMMENDED THAT THE SPLICE PLATES BE PLACED BELOW A RAISED FLOOR DUE TO THE LIMITED SPACE TO ROUTE THE POWER AND GROUND FEEDERS AND ROUTING OF ALL ITEMS THAT MUST BE BONDED TO THE GROUND WINDOW.
  91. THE MODIFIED 30B FUSE BLOCKS IN 20 AMPERE PANELS OF THE J86334D-1 PCFD HAS A CURRENT LIMIT OF 45 AMPS AND TOTAL FUSE WATTAGE DISSIPATION LIMITATION OF 3.48 WATTS PER BLOCK. USE TABLE L TO ENGINEER FUSE ASSIGNMENT BASED ON LIST 1 BUSY HOUR DRAIN WATTAGE DISSIPATION OF THE 74F FUSES. THE WATTAGE DISSIPATION OF 70G PILOT FUSE MAY BE IGNORED. SEE TABLE M FOR TYPICAL ACCEPTABLE HIGH AMPERAGE FUSE ASSIGNMENTS THAT MEET THE MAXIMUM 3.48 WATTS AND 45 AMP PER 30B FUSE BLOCK. (SEE NOTE 154).  
  
THE FOLLOWING EXAMPLES SHOW BOTH ACCEPTABLE AND UNACCEPTABLE FUSE-WATTAGE ASSIGNMENTS TO A 30B FUSE BLOCK BASED ON THE LIST 1 DRAINS OF THE ASSIGNED EQUIPMENT FEEDER (TBL J) USING WATTAGE TABLE L.  
  
EXAMPLE A ACCEPTABLE  
1ST FUSE 13 AMPS 1.25 WATTS  
2ND FUSE 13 AMPS 1.25 WATTS  
3RD FUSE 11 AMPS .80 WATTS  
4TH FUSE 5 AMPS .16 WATTS  
-----  
TOTAL 42 AMPS 3.46 WATTS  
ACCEPTABLE ACCEPTABLE  
  
EXAMPLE B UNACCEPTABLE  
1ST FUSE 13 AMPS 1.25 WATTS  
2ND FUSE 13 AMPS 1.25 WATTS  
3RD FUSE 11 AMPS .80 WATTS  
4TH FUSE 8 AMPS .41 WATTS  
-----  
TOTAL 45 AMPS 3.71 WATTS  
ACCEPTABLE UNACCEPTABLE  
  
EXAMPLE C UNACCEPTABLE  
1ST FUSE 12 AMPS 1.05 WATTS  
2ND FUSE 12 AMPS 1.05 WATTS  
3RD FUSE 11 AMPS .80 WATTS  
4TH FUSE 11 AMPS .80 WATTS  
-----  
TOTAL 46 AMPS 3.70 WATTS  
UNACCEPTABLE UNACCEPTABLE
  92. CALCULATE POWER FEEDERS USING ALLOWABLE VOLTAGE DROPS SHOWN IN TABLE N. CALCULATIONS OF FEEDERS USING TABLE N INVOLVES A TRADE-OFF BETWEEN FIRST COST OF THE FEEDERS, OFFICE LIFE CYCLE COSTS OF ENERGY DISSIPATED IN THE FEEDERS, AND FEEDER LOOP LENGTHS. CALCULATE FEEDER SIZES USING THE POWER LEAD CALCULATOR "GS-5420" OR BY USING THE FOLLOWING FORMULA: BASED ON LIST 2 PEAK DRAINS.  
$$\text{CM OF WIRE} = \frac{11.1 \times \text{AMPS} \times \text{FT}}{\text{VOLTAGE DROP}}$$
  93. THE EQUIPMENT CABINET DISTRIBUTION FEEDERS WITHIN THE J86334D-1 PCFD CABINET (FIG. HF) SHALL REMAIN TWISTED PAIRS WITHIN THE PCFD TO A POINT AS CLOSE AS POSSIBLE TO THE FUSE BLOCK TERMINATION OF BATTERY FEEDER THEN THE GROUND RETURN FEEDER SHALL CONTINUE ON TO TERMINATE ON THE GROUND BUS BAR.
  94. THE MAIN POWER FEEDERS FROM THE POWER PLANT TO THE J86334D-1 PCFD SHALL HAVE THE BATTERY FEEDERS ROUTED ALONG THE UPRIGHTS AND THE RETURN GROUND FEEDERS ROUTED DOWN THE CABINET CENTER AS SHOWN ON J89334D-1, FIGURE 1 REAR VIEW.
  95. BECAUSE OF THE GROWTH PATTERN OF THE COMMUNICATION MODULE ----- CONTINUED TO THE LEFT -----
- SEE PROPRIETARY NOTICE ON SHEET ONE

BT13

5ESS SWITCHING EQUIPMENT  
-48 VOLT  
DC POWER DISTRIBUTION CKT  
( 6'-0" CABINETS )

DWG SIZE C2 ISSUE 15

ENGINEERING NOTES

\*\*\*\*\* CONTINUED \*\*\*\*\*

APPLIES. WIRE GAUGE MUST BE SIZED TO THE CIRCUIT BREAKER AMPACITY.

- 173. DOLLAR SIGNS (\$) IN FRONT OF AND BEHIND WORDS, SENTENCES, PARAGRAPHS AND/OR CHARACTERS, INDICATES HORIZONTALLY LINED OUT INFORMATION.
- 174. THE MODULAR FUSE FILTER UNIT MAY BE CONFIGURED FROM A MINIMUM OF 2 POWER FEEDERS TO A MAXIMUM OF 12 POWER FEEDERS. FOR DETAILS ON ALL POSSIBLE CONFIGURATIONS SEE J5D003FJ-1 ENGINEERING NOTES.
- 175. THIS DRAWING IS DISCONTINUED. SEE FOLLOWING DOCUMENTS FOR POWER DISTRIBUTION ENGINEERING INFORMATION:
  - 1. DRAWING ED5D805-10 FOR 5ESS POWER DISTRIBUTION SPECIFICATIONS.
  - 2. DRAWING ED5D888-10 FOR POWER FEEDER CONFIGURATIONS FOR 5ESS AND 7R/E EQUIPMENT THAT DOES NOT USE THE MODULAR FUSE FILTER UNIT (MFFU).
  - 3. THE WEB SITE "HTTP://IXSTAR.IH.LUCENT.COM/MFFU/" FOR POWER FEEDER CONFIGURATIONS FOR 5ESS EQUIPMENT CABINETS USING MFFU. (SEE ED5D805-10 FIG. B45 FOR MORE DETAILS ABOUT THE WEB SITE.)

ENGINEERING NOTES

\*\*\*\*\* CONTINUED \*\*\*\*\*

(ED-83024-30 POWER DISTRIBUTION PANEL).

C. PROVIDE 3 AMP 70 TYPE FUSE FOR BST OR 5 AMPERE 70 TYPE FUSE FOR VDT ASSIGNED TO J5D003H-1 PD ED-5D627-30 FUSE PANEL.

- 165. RISLU CABINETS HAVE 8 INPUT FEEDERS AND REQUIRE A AND B BUSES. FOR THE FIRST RISLU CABINET, A 6 FEEDER GROUP IS APPLIED TO THE A BUS AND 2 FEEDER GROUPS TO THE B BUS. WHEN ADDITIONAL RISLU CABINETS ARE PLACED IN LINEUP, ALTERNATE THE 6 FEEDER AND 2 FEEDER GROUPS BETWEEN THE A AND B BUSES.
- 166. IN OSPS SITES SHARING POWER PLANT WITH 5ESS AND OPC PD REMOTED WITH BST'S AND VDT'S, THE ALLOWABLE VOLTAGE DROPS ARE AS FOLLOWS:
  - BETWEEN POWER PLANT AND OPC PD CABINET = .75 VOLTS
  - BETWEEN OPC PD CABINET AND BST OR VDT = 6.75 VOLTS
  - BETWEEN POWER PLANT AND BST OR VDT = 7.5 VOLTS MAXIMUM
 SEE TABLE S FOR MAX CABLE LOOP FEET AND SIZE.
- 167. IN OSPS SITES REMOTED WITH DEDICATED POWER PLANT WITHOUT OPERATOR POSITION CONTROL PD CABINET (MAX 800 CABLE LOOP FEET FROM POWER PLANT AND BST OR VDT AND A MAXIMUM VOLTAGE DROP OF 7.5 VOLTS). SEE TABLE T FOR MAXIMUM CABLE LOOP LENGTHS AND CABLE SIZES.
- 168. IN OSPS APPLICATIONS THE BST'S, VDT'S, DATA SET CABINET, RISLU CABINET AND LTP CABINET CAN BE FED DIRECTLY FROM A LINEAGE TYPE POWER PLANT. IT IS RECOMMENDED THAT THE LINEAGE BE EQUIPPED WITH AN ED-83018-30 DISTRIBUTION PANEL.
- 169. FOR RSM, ORM OR SMALL 5ESS APPLICATIONS, TO SAVE FLOOR SPACE AND CABINET COST, THE FOLLOWING LINEAGE 400 AMPERE ARRANGEMENT MAY BE USED IN LIEU OF USING THE J86334D-1 POWER DISTRIBUTION CABINET. THE FOLLOWING UNITS COULD BE PROVIDED FOR DISTRIBUTION FROM A LINEAGE PLANT.
  - J85500B  
USE J85500B LIST 4 (ED-82947-30 IS AVAILABLE).  
USE WITH MCS, CCS OR XCS CONTROLLER REQUIRES FRONT/REAR ACCESS.
  - J85500C  
USE J85500C, LIST 1 & 5. USED WITH ED-83182-30.  
USE WITH XCS CONTROLLER FRONT ACCESS.
- 170. ONLY ONE SINGLE POINT GROUND (GROUND WINDOW) MAY BE USED WITH ANY GIVEN POWER PLANT. A 5ESS SWITCH MAY SHARE A GROUND WINDOW WITH ANOTHER ESS OR ELECTRO MECHANICAL SYSTEM, AS LONG AS THE POWER IS SHARED VIA THE GROUND WINDOW. THE GROUND REFERENCE TO THE CENTRAL OFFICE GROUND BUS MUST BE AT LEAST 1/0 OR MUST BE SIZED FOR THE LARGEST GAUGE REQUIRED BY THE USING SYSTEM. NOTE THAT AT&T PRACTICES 802-001-195, PARAGRAPH 8.2 VOLT REQUIRES A MAXIMUM VOLTAGE DROP OF .05 VOLT. THIS IS APPLICABLE TO THOSE OTHER SYSTEMS THAT PUT CURRENT INTO THIS LEAD.
- 171. WHEN A WP-91652,L20 INVERTER IS PROVIDED IN A J5D005C MISC. CABINET, THE POWER FEEDERS AND LOAD CIRCUIT BREAKER SHALL BE ASSIGNED AT THE POWER PLANT FUSE BOARD. THE INVERTER REQUIRES A 50 AMP CIRCUIT BREAKER. A 50 AMP FUSE IS NOT ACCEPTABLE SINCE IT MAY OPERATE AT INVERTER STARTUP CURRENT. THE MAXIMUM SIZE POWER FEEDERS THAT CAN TERMINATE AT THE INVERTER IS 4 GAUGE. IF JOB CONDITIONS REQUIRE LARGER GAUGE FEEDERS, PROVIDE TWO 7 FOOT SECTIONS OF 4 GAUGE WIRE AND SPLICE TO THE LARGER FEEDERS IN THE CABLE RACK ABOVE THE MISC. CABINET WITH THOMAS & BETTS "C" TAPS. TERMINATING SCREWS FOR THE POWER FEEDERS ARE PROVIDED WITH THE INVERTER. SEE TABLE J & FIG. 39.
- 172. IF THE PD FILTER FUSE PANEL IS EXPECTED TO GROW TO ITS ULTIMATE CAPACITY, THEN IT SHOULD BE SERVED WITH A BREAKER AND FEEDER SIZE TO SUIT ESTIMATED PANEL LOAD. HOLE SPACING IN PD PANELS IS 1.25 INCH. TYPICAL SIZE BREAKERS FOR A PD PANEL SERVING ONLY THE 3B PROCESSOR WOULD BE 100 AMPS. TYPICAL SIZE BREAKERS FOR A PD PANEL SERVING A SMALL 5ESS OR 4 SWITCHING MODULES WOULD BE 110 OR 125 AMPS. EACH SIDE (BUS) OF EACH PD PANEL SHOULD HAVE ITS OWN BREAKER. FOR RELIABILITY REASONS: DO NOT COMBINE THE SAME BUS FROM 2 OR MORE PD PANELS ON THE SAME BREAKER.
 

KS TYPE CIRCUIT BREAKERS MAY BE USED AT 100% OF THE L2 DRAINS: EARLIER BSP'S SPECIFIED 150% OF L2 DRAINS, BUT THIS NO LONGER

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SEE PROPRIETARY NOTICE ON SHEET ONE

BT13

5ESS SWITCHING EQUIPMENT  
-48 VOLT  
DC POWER DISTRIBUTION CKT  
( 6'-0" CABINETS )

DWG SIZE C2 ISSUE 15

LUCENT TECHNOLOGIES INC ED5D073-11

SHEET A4 OF 53

ED5D073-11



TABLE D								
FEATURE TABLE								
ITEM	NOTE	POWER FEEDERS REQUIRED FOR EQUIPMENT LISTED BELOW	SPECIFY ED-5D073-11				J OR ED CODE	REMARKS
			FIG.	QTY	WRG	APP		
1		131A POWER PLANT -48V, 70 AMPS ( NO. 5A RSM ONLY )	1	1			J86867A-	1 FIG. ( AS REOD )
2		133A POWER PLANT -48V, 140 AMPS ( NO. 5A RSM ONLY )	2	1			J86869A-	1 FIG. ( AS REOD )
3		151B POWER PLANT -48V, 600 AMPS	3	1			J86917	1 FIG. ( AS REOD )
4		153A POWER PLANT -48V, 1200 AMPS	4	1			J86909	1 FIG. ( AS REOD )
5		155A POWER PLANT -48V, 2400 AMPS	5	1			J86911	1 FIG. ( AS REOD )
6	90	POWER DISTRIBUTION FR	6 HA ( DA )	1 1			J86334D-	1 FIG. ( AS REOD )
7		TIME MULTIPLEX SWITCH CABINET	7	1			J5D001C-1	1 FIG. PER CABINET
8		SWITCHING OR INTERFACE MODULE CONTROL CABINET ( EQUIPPED WITH TWO J5D003AU-2 FILTER/FUSE PANELS )	8	1			J5D003E-1	1 FIG. PER CABINET
9		LINE TRUNK PERIPHERAL CABINET ( EQUIPPED WITH TWO J5D003AU-2 FILTER/FUSE PANELS )	9	1			J5D003F-1	1 FIG. PER CABINET
10		MISCELLANEOUS CABINET ( SEE TBL D ITEM 20 )	10 ( DA )	1			J5D005C-1	1 FIG. PER CABINET
11		MESSAGE SWITCH CABINET	11	1			J5D006C-1	1 FIG. PER CABINET
12		MAINTENANCE CONTROL CONSOLE OR STLWS CONSOLE	12	1			ED-5D039-35	1 FIG. ( AS REOD )
13		PROTECTOR OR MDF FRAME	13	1				1 FIG. PER PROTR FR & MDF FR
14		MAINTENANCE CONTROL CABINET OR STLWS CABINET	14	1			J5D002A-1 J5D002B-1 J5D002C-1 J5D002D-1	1 FIG. PER CABINET
15	89	TYPICAL OLDER TYPE POWER PLANT USING COUNTER ELECTROMOTIVE FORCE CELLS ( CEMF )	15 & 17	1 1			-	AS REOD
16	89	TYPICAL OLDER TYPE POWER PLANT USING EMERGENCY CELLS ( END CELLS )	16 & 17	1 1			-	AS REOD
17		LINEAGE 2000 MCS POWER PLANT -48V 3200 AMPS	18	1			J85500A-	1 FIG. ( AS REOD )
18		COMMUNICATION MODULE MODEL 2, BASIC CABINET 0 ( BAY 5 ) OR CABINET 1 ( BAY 6 )	19	1			J5D020A-	2 FIG, 19 PER CM2 OFFICE
19		COMMUNICATION MODULE MODEL 2, GROWTH CABINET 0 ( BAY 0 THRU 4 ) OR CABINET 1 ( BAY 7 THRU 11 )	20	1			J5D020B-	MAX 10 FIG, 20 FOR DUAL FABRIC. MAX 4 FIG, 20 SINGLE FABRIC
20		MISCELLANEOUS CAB FOR RSM APPLICATION EQUIPPED WITH POWER DISTRIBUTION PNL ( SEE NOTE 99 )	21	1			J5D005C-	RSM MISC CABINET POWER DIST
21		TRANSMISSION FACILITY CABINET ( 2-J5D003BT-1 FUSE PANELS )	22	1			J1C251A-	1 FIG. ( AS REOD )
22		LTP CABINET EQUIPPED WITH AN ISLU ON BUS 0 AND ANY UNIT NOT REQUIRING HIGH CURRENT FUSES ( 2-J5D003BT-1 FUSE PANELS )	23	1			J5D003F-	1 FIG. ( AS REOD )
23		LTP CABINET EQUIPPED WITH AN ISLU ON BUS 1 AND ANY UNIT NOT REQUIRING HIGH CURRENT FUSES ( 2-J5D003BT-1 FUSE PANELS )	24	1			J5D003F-	1 FIG. ( AS REOD )
24		LTP CABINET EQUIPPED WITH TWO ISLU'S ( 2-J5D003BT-1 FUSE PANELS )	25	1			J5D003F-	1 FIG. ( AS REOD )
25		REMOTE INTEGRATED SERVICE LINE UNIT CABINET ( RISLU ) OSPS APPLICATION RISLU ON BUS 0	26	1			J5D003G-1	1 FIG. ( AS REOD )
26		REMOTE INTEGRATED SERVICE LINE UNIT CABINET ( RISLU ) OSPS APPLICATION RISLU ON BUS 1	27	1			J5D003G-1	1 FIG. ( AS REOD )

TABLE D CONTINUED								
FEATURE TABLE								
ITEM	NOTE	POWER FEEDERS REQUIRED FOR EQUIPMENT LISTED BELOW	SPECIFY ED-5D073-11				J OR ED CODE	REMARKS
			FIG.	QTY	WRG	APP		
27		DATA SET CABINET OSPS APPLICATION	28				J5D003K	1 FIG. ( AS REOD )
28		BST TERMINAL FOR OSPS APPLICATION	29				ED-5D522-33	1 FIG. ( AS REOD )
29		VDT TERMINAL FOR OSPS APPLICATION	30				ED-5D522-33	1 FIG. ( AS REOD )
30	158	OSPS POWER DIST CABINET	31				J5D003H-1	1 FIG. ( AS REOD )
31	159	OSPS POWER DIST CABINET	32				J5D003H-1	1 FIG. ( AS REOD )
32	160	OSPS POWER DIST CABINET	33				J5D003A-1	1 FIG. ( AS REOD )
33	169	LINEAGE 400 AMP POWER PLANT	34				J85500B OR C	1 FIG. ( AS REOD )
34		SMC CABINET ARRANGED FOR LU(2) AND MISC UNITS	35				J5D003L-	1 FIG. ( AS REOD )
35		SMC CABINET ARRANGED FOR MCTU2(2) AND DLTU2(2)	36				J5D003L-	1 FIG. ( AS REOD )
36		SMC CABINET ARRANGED FOR MCTU2 AND PSU(2) OR MISC UNITS	37				J5D003L-	1 FIG. ( AS REOD )
37		SMC CABINET ARRANGED FOR MCTU2 AND AN ISLU	38				J5D003L-	1 FIG. ( AS REOD )
38		MISCELLANEOUS CABINET ( SEE TABLE D ITEM 20 )	39				J5D005C-1	1 FIG. ( AS REOD )

ED5D073-11

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DC POWER DISTRIBUTION CKT  
(6'-0" CABINETS)DWG SIZE  
C2ISSUE  
13

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ED5D073-11

SHEET  
B2

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TABLE D1 - DC POWER DISTRIBUTION

(SHEET NOTE 1)

FEATURE TABLE								J5D003FJ-1 FUSE PANEL	
ITEM	NOTE	TYPICAL EQUIPMENT CONFIGURATION	SPECIFY ED-5D073-11				J OR ED CODE	REMARKS	NUMBER OF FEEDERS
			FIG.	QTY	WRG	APP			
1		COMMUNICATION MODULE MODEL 2, BASIC CABINET 0 (BAY 5)	40	1			J5D020A-	1 FIG. 40 PER CM2 OFFICE	6A
2		COMMUNICATION MODULE MODEL 2, BASIC CABINET 1 (BAY 6) OR	41	1			J5D020A-	1 FIG. 41 PER CM2 OFFICE	6B
3		COMMUNICATION MODULE MODEL 2, GROWTH CABINET 0 (BAY 0 THRU 4)	42	1			J5D020B-	MAX 5 FIG. 42 FOR DUAL FABRIC. MAX 2 FIG. 42 SINGLE FABRIC	6A
4		COMMUNICATION MODULE MODEL 2, GROWTH CABINET 1 (BAY 7 THRU 11)	43	1			J5D020B-	MAX 5 FIG. 43 FOR DUAL FABRIC. MAX 2 FIG. 43 SINGLE FABRIC	6B
5		LTP CABINET STANDARD CONFIGURATION WITHOUT ISLU, PSU	44	1			J5D003F-2		2A/2B
6		LTP CABINET WITH ONE ISLU AND WITHOUT PSU	45	1			J5D003F-2		5A/1B
7		LTP CABINET WITH ONE ISLU AND WITHOUT PSU	46	1			J5D003F-2		1A/5B
8		LTP CABINET WITH TWO ISLU OR CABINET CONFIGURED FOR 1-5 PSU'S	47	1			J5D003F-2		4A/4B
9		LTP CABINET E/W ISLU WITH PSU	48	1			J5D003F-2		6A/2B
10		LTP CABINET E/W ISLU WITH PSU	49	1			J5D003F-2		2A/6B
11		LTP CABINET WITH TWO ISLU2 UNITS	50	1			J5D003F-2		5A/5B
12		LTP CABINET FIVE SHELF ISLU2	51	1			J5D003F-2		9A/1B
13		LTP CABINET WITH FIVE SHELF ISLU2	52	1			J5D003F-2		1A/9B
14		SMC STANDARD CONFIGURATION	53	1			J5D003L-1		2A/2B
15		SMC WITH LINE UNIT	54	1			J5D003L-1		2A/4B
16		SMC WITH LINE UNIT	55	1			J5D003L-1	FUTURE CONFIGURATION	3A/3B
17		SMC WITH LINE UNIT	56	1			J5D003L-1		4A/2B
18		SMC WITH PSU	57	1			J5D003L-1		4A/4B
19		SMC WITH ISLU	58	1			J5D003L-1		6A/2B
20		SMC WITH ISLU	59	1			J5D003L-1		2A/6B
21		MISCELLANEOUS CABINET	60	1			J5D005C-1		2A/2B
22		MODEM POOLING CABINET	61	1			J5D007B-1		1A/1B
23		EXPORT DATA SET CABINET	62	1			J5X099A-1		1A/1B
24		DCSS CABINET	63	1			J5X101A-1		2A/2B
25		3B21D BASIC CABINET	64	1			J3T060A-1		6A/6B

## SHEET NOTES:

- TABLE D1 CONTAINS INFORMATION FOR CABINETS EQUIPPED WITH THE J5D003FJ-1 MODULAR FUSE FILTER PANEL UNIT.

TABLE H MFR DISC REPLACED BY TABLE J ( NOTE 93 )

CABINETS AND MISC. EQUIPMENT	FIG.	VOLT DROP (LOOP)	-48V BATTERY				GROUND					TOTAL FR DRAIN (AMPS)		FEEDER CBL GROUP NO.	TERMINAL TYPE AT PD	MAX LEAD LENGTH (LOOP)	NOTE
			LEAD DESIG	LEAD SIZE	FUSE SIZE	NO. OF FEEDERS	CURRENT DRAIN (AMPS)		LEAD DESIG	LEAD SIZE	NO. OF FEEDERS	LIST-1	LIST-2				
							LIST-1	LIST-2									
TIME MULTIPLEX SWITCH CABINET J5D001C-1	7	1.0	-48 ( 10	10	20A	1	14.95	18.32	RTN ( 10	10	1	27.51	33.55	ED-5A079-30 GR-8	NOTE 64	51	85
			-48 ( 11	10	20A	1	12.56	15.32	RTN ( 11	10	1					61	
INTERFACE MODULE CONTROL CABINET J5D003E-1	8	1.0	-48A0	10	20A	1	3.76	4.62	RTNA0	10	1	10.72	13.12	ED-5A079-30 GR-8	NOTE 64	200	82
			-48A1	10	20A	1	1.60	1.94	RTNA1	10	1					475	
			-48B0	10	20A	1	3.76	4.62	RTNB0	10	1					200	
			-48B1	10	20A	1	1.60	1.94	RTNB1	10	1					475	
LINE TRUNK PERIPHERAL CABINET J5D003F-1	9	1.0	-48A0	10	20A	1	NOTE 86	NOTE 86	RTNA0	10	1	NOTE 86	NOTE 86	ED-5A079-30 GR-8	NOTE 64	-	86, 69, 82
			-48A1	10	20A	1			RTNA1	10	1					-	
			-48B0	10	20A	1			RTNB0	10	1					-	
			-48B1	10	20A	1			RTNB1	10	1					-	
MAINTENANCE CONTROL CENTER CONSOLE ED-5D039-35	12	1.0	-48B0	10	20A	1	.05	.06	RTNB0	10	1	.05	.06	KS13385 STRANDED	NOTE 64	500	
PROTECTOR OR MDF	13	1.0	-48TT	10	20A	1	.03 PER TT JK	.04 PER TT JK	RTNTT	10	1	.03 PER TT JK	.04 PER TT JK	KS13385 STRANDED	NOTE 64	500	80, 81
MESSAGE SWITCH CABINET J5D006C-1	11	1.0	-48 ( 10	10	20A	1	5.80	7.06	RTN ( 10	10	1	20.70	25.26	ED-5A079-30 GR-8	NOTE 64	132	85
			-48 ( 11	10	20A	1	4.05	4.98	RTN ( 11	10	1					188	
			-48 ( 12	10	20A	1	5.05	6.16	RTN ( 12	10	1					152	
			-48 ( 13	10	20A	1	5.80	7.06	RTN ( 13	10	1					132	
MISCELLANEOUS CABINET J5D005C-1	10	1.0	-48 A0	10	20A	1	NOTE 88	NOTE 88	RTN A0	10	1	NOTE 88	NOTE 88	ED-5A079-30 GR-8	NOTE 64	NOTE 88	88
			-48 B0	10	20A	1	NOTE 88	NOTE 88	RTN B0	10	1					NOTE 88	
			-48 A1	10	20A	1	NOTE 88	NOTE 88	RTN A1	10	1					NOTE 88	
			-48 B1	10	20A	1	NOTE 88	NOTE 88	RTN B1	10	1					NOTE 88	
			-48A INVO	6	50A	1	37.25	45.81	RTN INVO	6	1			50	71		
INVERTER (OPTIONAL) ALM CKT (OPTIONAL)			ABS		1 1/3 A	1	.12	.15	RTN ABS		1			-	-	-	87
MAINTENANCE CONTROL CENTER CABINET J5D002A-1	14	1.0	-48B0	10	20A	1	.05	.06	RTN B0	10	1	.05	.06	KS13385 STRANDED	NOTE 64	500	

TABLE J

ITEM	CABINETS AND MISC. EQUIPMENT	FIG.	VOLT DROP ( LOOP )	-48V BATTERY				GROUND				TOTAL FR DRAIN ( AMPS )		FEEDER CBL GROUP NO.	TERMINAL TYPE AT PD	MAX LEAD LENGTH ( LOOP )	NOTE	
				LEAD DESIG	LEAD SIZE	FUSE SIZE	NO. OF FEEDERS	CURRENT DRAIN ( AMPS )		LEAD DESIG	LEAD SIZE	NO. OF FEEDERS	LIST-1					LIST-2
								LIST-1	LIST-2									
1	TIME MULTIPLEX SWITCH CABINET J5D001C-1	7	.75	-48 ( 10 )	10	20A	1	7.54	9.18	RTN ( 10 )	10	1	12.69	15.44	ED-5A079-30 GR-8 NOTE 61,64	SEE TBL R	76	60, 85, 93, 152
				-48 ( 11 )	10	20A	1	5.15	6.26	RTN ( 11 )	10	1					114	
2	INTERFACE MODULE CONTROL CABINET J5D003E-1	8	.75	-48A0	10	20A	1	NOTE 97	NOTE 97	RTNA0	10	1	NOTE 97	NOTE 97	ED-5A079-30 GR-8 NOTE 61,64	SEE TBL R	-	60, 82, 152
				-48A1	10	20A	1	NOTE 97	NOTE 97	RTNA1	10	1						
				-48B0	10	20A	1	NOTE 97	NOTE 97	RTNB0	10	1						
				-48B1	10	20A	1	NOTE 97	NOTE 97	RTNB1	10	1						
3	LINE TRUNK PERIPHERAL CABINET J5D003F-1	9	.75	-48A0	10	20A	1	NOTE 86	NOTE 86	RTNA0	10	1	NOTE 86	NOTE 86	ED-5A079-30 GR-8 NOTE 61,64	SEE TBL R	NOTE 97	60, 86, 69, 82, 93, 152
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
4	MAINTENANCE CONTROL CENTER CONSOLE ED-5D039-35	12	.75	-48B0	10	20A	1	.05	.06	RTNB0	10	1	.05	.06	KS13385 STRANDED	SEE TBL R	+500	152
5	PROTECTOR OR MDF	13	.75	-48TT	10	20A	1	.03 PER TT JK	.04 PER TT JK	RTNTT	10	1	.03 PER TT JK	.04 PER TT JK	KS13385 STRANDED	SEE TBL R	+500	60, 80, 81, 93
6																		
7	MESSAGE SWITCH CABINET J5D006C-1	11	.75	-48 ( 10 )	10	20A	1	3.75	4.56	RTN ( 10 )	10	1	14.88	18.14	ED-5A079-30 GR-8 NOTE 61,64	SEE TBL R	152	60, 85, 93, 152
				-48 ( 11 )	10	20A	1	4.15	5.08	RTN ( 11 )	10	1					132	
				-48 ( 12 )	10	20A	1	3.0	3.66	RTN ( 12 )	10	1					190	
				-48 ( 13 )	10	20A	1	3.75	4.56	RTN ( 13 )	10	1					152	
8	MISCELLANEOUS CABINET J5D005C-1 ( NOTE 88 )	10	.75	-48 A0	10	20A	1	NOTE 88	NOTE 88	RTN A0	10	1	NOTE 88	NOTE 88	ED-5A079-30 GR-8 NOTE 61,64	SEE TBL R	NOTE 88	60, 88, 93, 152
				-48 B0	10	20A	1	NOTE 88	NOTE 88	RTN B0	10	1						
				-48 A1	10	20A	1	NOTE 88	NOTE 88	RTN A1	10	1						
				-48 B1	10	20A	1	NOTE 88	NOTE 88	RTN B1	10	1						
	INVERTER ( KS20816 (DA) (OPTIONAL) ) ALM CKT (OPTIONAL) (OPTIONAL) WP, 91652 INVERTER	39	.42	-48A INVO	6	50A	1	NOTE 71	NOTE 71	RTN INVO	6	1			KS13385 L4	-	45	71
ABS	1 1/3 A	1	.12	.15	RTN ABS		1									87		
MAINTENANCE CONTROL CENTER CABINET J5D002A-1	14	.75	-48A INVO	4	50A	1	-	28.8	RTN INVO	4	1						55	171
9	MAINTENANCE CONTROL CENTER CABINET J5D002A-1	14	.75	-48B0	10	20A	1	.05	.06	RTN B0	10	1	.05	.06	KS13385 STRANDED	SEE TBL R	+500	60, 93, 152
10	COMMUNICATION MODULE MODEL 2 BASIC CABINET J5D020A-	19	.75	-48 ( 10 )	10	20A	1	11.2	13.7	RTN ( 10 )	10	1	52.9 NOTE 95	64.7 NOTE 95	ED-5A079-30 GR-8 NOTE 61,64	SEE TBL R		85, 93, 95, 96, 152
				-48 ( 11 )	10	20A	1	10.2	12.4	RTN ( 11 )	10	1						
				-48 ( 12 )	10	20A	1	7.8	9.6	RTN ( 12 )	10	1						
				-48 ( 13 )	10	20A	1	7.8	9.6	RTN ( 13 )	10	1						
				-48 ( 14 )	10	20A	1	9.9	12.1	RTN ( 14 )	10	1						
				-48 ( 15 )	10	20A	1	6.0	7.3	RTN ( 15 )	10	1						
11	COMMUNICATION MODULE MODEL 2 GROWTH CABINET J5D020B-1	20	.75	-48 ( 10 )	10	20A	1	3.6	4.4	RTN ( 10 )	10	1	35.6 NOTE 95	43.6 NOTE 95	ED-5A079-30 GR-8 NOTE 61,64	SEE TBL R		85, 93, 95, 96, 152
				-48 ( 11 )	10	20A	1	0.5	0.6	RTN ( 11 )	10	1						
				-48 ( 12 )	10	20A	1	7.8	9.6	RTN ( 12 )	10	1						
				-48 ( 13 )	10	20A	1	7.8	9.6	RTN ( 13 )	10	1						
				-48 ( 14 )	10	20A	1	9.9	12.1	RTN ( 14 )	10	1						
				-48 ( 15 )	10	20A	1	6.0	7.3	RTN ( 15 )	10	1						
12	MISCELLANEOUS CABINET FOR RSM EQUIPPED WITH PD PNL J5D005C-	21	-	-48A0	-	20A	-	NOTE 153	NOTE 153	-	-	-	NOTE 153	NOTE 153	-	-	-	99, 152
				-48A1	-	20A	-			-	-	-						
				-48B0	-	20A	-			-	-	-						
				-48B1	-	20A	-			-	-	-						

CONTINUE ON SHEET B6

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DC POWER DISTRIBUTION CKT (6'-0" CABINETS)		
DWG SIZE C2	ISSUE 13	
AT&T	ED5D073-11	SHEET B5

TABLE J CONTINUED FROM SHEET B5

I T E M	CABINETS AND MISC. EQUIPMENT	FIG.	VOLT DROP ( LOOP )	-48V BATTERY				GROUND			TOTAL FR DRAIN ( AMPS )		FEEDER CBL GROUP NO.	TERMINAL TYPE AT PD	MAX LEAD LENGTH ( LOOP )	NOTE		
				LEADD DESIG	LEAD SIZE	FUSE SIZE	NO. OF FEEDERS	CURRENT DRAIN ( AMPS )		LEAD DESIG	LEAD SIZE	NO. OF FEEDERS					LIST-1	LIST-2
								LIST-1	LIST-2									
13	TRANSMISSION FACILITIES CABINET J1C251A	22	.75V	-48A0	10	20A	1	2.94	3.59	RTNA0	10	1	17.64	21.54	ED-5A079-30 G8 NOTE 61,64	SEE TABLE R	195	60, 91
				-48A1	10	20A	1	2.94	3.59	RTNA1	10	1					195	
				-48A3	10	20A	1	2.94	3.59	RTNA3	10	1					195	
				-48B0	10	20A	1	2.94	3.59	RTNB0	10	1					195	
				-48B1	10	20A	1	2.94	3.59	RTNB1	10	1					195	
				-48B3	10	20A	1	2.94	3.59	RTNB3	10	1					195	
14	LINE TRUNK PERIPHERAL CABINET J5D003F - WITH ISLU ON BUS 0 AND E/W PACKET SWITCH ( TYP )	23	.75V	-48A0	10	20A	1	NOTE 154	NOTE 154	RTNA0	10	1	NOTE 154	NOTE 154	ED-5A079-30 G8 NOTE 61,64	SEE TABLE R	107	60, 91, 154
				-48A1	10	20A	1			RTNA1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48A3	10	20A	1	RTNA3	10	1								
				-48A4	10	20A	1	5.36	6.53	RTNA4	10	1						
				-48A5	10	20A	1	5.36	6.53	RTNA5	10	1						
				-48B0	10	20A	1	5.36	6.53	RTNB0	10	1						
15	LINE TRUNK PERIPHERAL CABINET J5D003F - WITH ISLU ON BUS 1 AND E/W PACKET SWITCH ( TYP )	24	.75V	-48B0	10	20A	1	NOTE 154	NOTE 154	RTNB0	10	1	NOTE 154	NOTE 154	ED-5A079-30 G8 NOTE 61,64	SEE TABLE R	107	60, 91, 154
				-48B1	10	20A	1			RTNB1	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
				-48B3	10	20A	1	RTNB3	10	1								
				-48A0	10	20A	1	5.36	6.53	RTNA0	10	1						
				-48A1	10	20A	1	5.36	6.53	RTNA1	10	1						
				-48B4	10	20A	1	5.36	6.53	RTNB4	10	1						
16	LINE TRUNK PERIPHERAL CABINET J5D003F - WITH ISLU ON BUS 0 AND JOB ENGINEERED SPLIT BUS J5D003BT-1 FILTER/FUSE PNL	23	.75V	-48A0	10	20A	1	NOTE 154	NOTE 154	RTNA0	10	1	NOTE 154	NOTE 154	ED-5A079-30 G8 NOTE 61,64	SEE TABLE R	107	60, 86, 91, 154
				-48A1	10	20A	1			RTNA1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48A3	10	20A	1	RTNA3	10	1								
				-48A4	10	20A	1	RTNA4	10	1								
				-48A5	10	20A	1	NOTE 86	NOTE 86	RTNA5	10	1						
				-48B0	10	20A	1	NOTE 86	NOTE 86	RTNB0	10	1						
17	LINE TRUNK PERIPHERAL CABINET J5D003F - WITH ISLU ON BUS 1 AND JOB ENGINEERED SPLIT BUS J5D003BT-1 FILTER/FUSE PNL	24	.75V	-48B0	10	20A	1	NOTE 154	NOTE 154	RTNB0	10	1	NOTE 154	NOTE 154	ED-5A079-30 G8 NOTE 61,64	SEE TABLE R	107	60, 86, 91, 154
				-48B1	10	20A	1			RTNB1	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
				-48B3	10	20A	1	RTNB3	10	1								
				-48A0	10	20A	1	NOTE 86	NOTE 86	RTNA0	10	1						
				-48A1	10	20A	1	NOTE 86	NOTE 86	RTNA1	10	1						
				-48B4	10	20A	1	NOTE 86	NOTE 86	RTNB4	10	1						
-48B5	10	20A	1			RTNB5	10	1										

( TABLE J CONTINUED ON SHEET B7 )

TABLE J CONTINUED FROM SHEET B6

I T E M	CABINETTS AND MISC. EQUIPMENT	FIG.	VOLT DROP ( LOOP )	-48V BATTERY				CURRENT DRAIN ( AMPS )		GROUND			TOTAL FR DRAIN ( AMPS )		FEEDER CBL GROUP NO.	TERMINAL TYPE AT PD	MAX LEAD LENGTH ( LOOP )	NOTE
				LEADD DESIG	LEAD SIZE	FUSE SIZE	NO. OF FEEDERS	LIST-1	LIST-2	LEAD DESIG	LEAD SIZE	NO. OF FEEDERS	LIST-1	LIST-2				
18	LINE TRUNK PERIPHERAL CABINET J5D003F- E/W TWO ISLU'S	25	.75V	-48A0	10	20A	1	NOTE 154	NOTE 154	RTNA0	10	1	NOTE 154	NOTE 154	ED-5A079-30 GB NOTE 61,64	SEE TABLE R		60, 91, 154
				-48A1	10	20A	1			RTNA1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48A3	10	20A	1	NOTE 154	NOTE 154	RTNA3	10	1	NOTE 154	NOTE 154				
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
-48B3	10	20A	1			RTNB3	10	1										
19	REMOTE INTEGRATED SERVICE LINE UNIT CABINET J5D003G- RISLU ON BUS 0 ( OSPS APPLICATION )	26	.75V	-48A0	10	20A	1	.60	.80	RTNA0	10	1	15.0	18.5	ED-5A079-30 GB NOTE 61,64	SEE TABLE R	650 205 650 205 370 195 370 195	60, 91, 156
				-48A1	10	20A	1	2.60	3.35	RTNA1	10	1						
				-48A2	10	20A	1	.60	.80	RTNA2	10	1						
				-48A3	10	20A	1	2.60	3.35	RTNA3	10	1						
				-48A4	10	20A	1	1.50	1.80	RTNA4	10	1						
				-48A5	10	20A	1	2.80	3.55	RTNA5	10	1						
				-48B0	10	20A	1	1.50	1.80	RTNB0	10	1						
				-48B1	10	20A	1	2.80	3.55	RTNB1	10	1						
20	REMOTE INTEGRATED SERVICE LINE UNIT CABINET J5D003G- RISLU ON BUS 1 ( OSPS APPLICATION )	27	.75V	-48B0	10	20A	1	.60	.80	RTNB0	10	1	15.0	18.5	ED-5A079-30 GB NOTE 61,64	SEE TABLE R	650 205 650 205 370 195 370 195	60, 91, 156
				-48B1	10	20A	1	2.6	3.35	RTNB1	10	1						
				-48B2	10	20A	1	.60	.80	RTNB2	10	1						
				-48B3	10	20A	1	2.6	3.35	RTNB3	10	1						
				-48A0	10	20A	1	1.50	1.80	RTNA0	10	1						
				-48A1	10	20A	1	2.8	3.55	RTNA1	10	1						
				-48B4	10	20A	1	1.50	1.80	RTNB4	10	1						
				-48B5	10	20A	1	2.8	3.55	RTNB5	10	1						
21	DATA SET CABINET J5D003K- E/W TWO 300 VA INVERTERS ( OSPS APPLICATION )	28	.75V	-48A	10	20A	1	4.5	5.5	RTNA	10	1	9	11	KS-13385 AS REOD	SEE TABLE R	125 125	60, 91, 155, 156, 163
				-48B	10	20A	1	4.5	5.5	RTNB	10	1						
22	BST TERMINAL ( OSPS APPLICATION )	29		-48( )	NOTE 163	NOTE 164	1	.3	.4	RTN( )	NOTE 163	1	.3	.4	KS-5482-01 AS REOD	SEE TABLE R	SEE TBL S & T	156, 157
23	VDT TERMINAL ( OSPS APPLICATION )	30		-48( )	NOTE 157	NOTE 164	1	1.87	2.40	RTN( )	NOTE 157	1	1.87	2.40	KS-5482-01 AS REOD	SEE TABLE R	SEE TBL S & T	156, 157
24	SWITCHING MODULE CONTROL CABINET J5D003L- E/W SPLIT FILTER/FUSE PNLS. (FOR LU (2) AND MISC UNITS).	35	.75V	-48A0	10	20A	1			RTNA0	10	1			ED-5A079- 30,GB NOTE 61,64	SEE TABLE R		
				-48B0	10	20A	1			RTNB0	10	1						
				-48( )	10	20A	1			RTN( )	10	1						
				-48( )	10	20A	1			RTN( )	10	1						
25	SWITCHING MODULE CONTROL CABINET J5D003L- E/W SPLIT FILTER/FUSE PNLS. (FOR MCTU2 (2) AND DLTU2 (2) UNITS).	36	.75V	-48A0	10	20A	1			RTNA0	10	1			ED-5A079- 30,GB NOTE 61,64	SEE TABLE R		
				-48B0	10	20A	1			RTNB0	10	1						
				-48A1	10	20A	1			RTNA1	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
26	SWITCHING MODULE CONTROL CABINET J5D003L- E/W SPLIT FILTER/FUSE PNLS. (FOR MCTU2 AND PSU (2) OR MISC UNITS).	37	.75V	-48A0	10	20A	1			RTNA0	10	1			ED-5A079- 30,GB NOTE 61,64	SEE TABLE R		
				-48B0	10	20A	1			RTNB0	10	1						
				-48A1	10	20A	1			RTNA1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
27	SWITCHING MODULE CONTROL CABINET J5D003L- ARRANGED FOR MCTU2 UNIT AND AN ISLU	38	.75V	-48A0	10	20A	1	NOTE 97,154	NOTE 97,154	RTNA0	10	1	NOTE 97,154	NOTE 97,154	ED-5A079- 30,GB NOTE 61,64	SEE TABLE R	-	60, 82, 152
				-48B0	10	20A	1			RTNB0	10	1					-	
				-48( )1	10	20A	1			RTN( )1	10	1					-	
				-48( )2	10	20A	1			RTN( )2	10	1					-	
				-48( )3	10	20A	1			RTN( )3	10	1					-	
				-48( )4	10	20A	1			RTN( )4	10	1					-	

ED5D073-11

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DC POWER DISTRIBUTION CKT (6"-0" CABINETS)		DWG SIZE C2
AT&T		ISSUE 13
ED5D073-11		SHEET B7
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TABLE J1 - POWER FEEDER INFORMATION

(SHEET NOTE 1)

ITEM	CABINETS AND MISC. EQUIPMENT	FIG.	VOLT DROP ( LOOP )	-48V BATTERY				GROUND				TOTAL FR DRAIN ( AMPS )		FEEDER CBL GROUP NO.	TERMINAL TYPE AT PD CABINET	MAX LEAD LENGTH ( LOOP )	NOTE	
				LEAD DESIG	LEAD SIZE	FUSE SIZE	NO. OF FEEDERS	CURRENT DRAIN ( AMPS )		LEAD DESIG	LEAD SIZE	NO. OF FEEDERS	LIST-1					LIST-2
								LIST-1	LIST-2									
1	COMMUNICATION MODULE MODEL 2 BASIC CABINET J5D020A-	40 41	.75	-48 ( )0	10	20A	1	11.2	13.7	RTN ( )0	10	1	52.9 NOTE 95	64.7 NOTE 95	ED5A079-30 GR-38 NOTE 61,64	SEE TBL R		85, 93, 95, 96, 152
				-48 ( )1	10	20A	1	10.2	12.4	RTN ( )1	10	1						
				-48 ( )2	10	20A	1	7.8	9.6	RTN ( )2	10	1						
				-48 ( )3	10	20A	1	7.8	9.6	RTN ( )3	10	1						
				-48 ( )4	10	20A	1	9.9	12.1	RTN ( )4	10	1						
				-48 ( )5	10	20A	1	6.0	7.3	RTN ( )5	10	1						
2	COMMUNICATION MODULE MODEL 2 GROWTH CABINET J5D020B-	42 43	.75	-48 ( )0	10	20A	1	3.6	4.4	RTN ( )0	10	1	35.6 NOTE 95	43.6 NOTE 95	ED5A079-30 GR-38 NOTE 61,64	SEE TBL R		85, 93, 95, 96, 152
				-48 ( )1	10	20A	1	0.5	0.6	RTN ( )1	10	1						
				-48 ( )2	10	20A	1	7.8	9.6	RTN ( )2	10	1						
				-48 ( )3	10	20A	1	7.8	9.6	RTN ( )3	10	1						
				-48 ( )4	10	20A	1	9.9	12.1	RTN ( )4	10	1						
				-48 ( )5	10	20A	1	6.0	7.3	RTN ( )5	10	1						
3	LTP STANDARD CONFIGURATION WITHOUT ISLU AND PSU J5D003F-2	44	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		86
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
4	LTP WITH ONE ISLU, WITHOUT PSU, J5D003F-2	45	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		86
				-48A1	10	20A	1			RTNA1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48A3	10	20A	1			RTNA3	10	1						
				-48A4	10	20A	1			RTNA4	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
5	LTP WITH ONE ISLU, WITHOUT PSU, J5D003F-2	46	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		86
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
				-48B3	10	20A	1			RTNB3	10	1						
				-48B4	10	20A	1			RTNB4	10	1						
6	LTP WITH TWO ISLU OR 1-5 PSUDS J5D003F-2	47	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		86
				-48A1	10	20A	1			RTNA1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48A3	10	20A	1			RTNA3	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
				-48B3	10	20A	1			RTNB3	10	1						

SHEET NOTES:

- TABLE J1 CONTAINS INFORMATION FOR CABINETS EQUIPPED WITH J5D003FJ-1 MODULAR FUSE FILTER UNIT.

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(6'-0" CABINETS)

DWG SIZE C2	ISSUE 14
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SHEET B8
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ITEM	CABINETS AND MISC. EQUIPMENT	FIG.	VOLT DROP ( LOOP )	-48V BATTERY				CURRENT DRAIN ( AMPS )		GROUND			TOTAL FR DRAIN ( AMPS )		FEEDER CBL GROUP NO.	TERMINAL TYPE AT PD CABINET	MAX LEAD LENGTH ( LOOP )	NOTE
				LEAD DESIG	LEAD SIZE	FUSE SIZE	NO. OF FEEDERS	LIST-1	LIST-2	LEAD DESIG	LEAD SIZE	NO. OF FEEDERS	LIST-1	LIST-2				
7	LTP WITH ISLU AND PSU J5D003F-2	48	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		86
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48A3	10	20A	1			RTNA3	10	1						
				-48A4	10	20A	1			RTNA4	10	1						
				-48A5	10	20A	1			RTNA5	10	1						
8	LTP WITH ISLU AND PSU J5D003F-2	49	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		86
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
				-48B3	10	20A	1			RTNB3	10	1						
				-48B4	10	20A	1			RTNB4	10	1						
				-48B5	10	20A	1			RTNB5	10	1						
9	LTP WITH TWO ISLU2 UNITS J5D003F-2	50	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		86
				-48A1	10	20A	1			RTNA1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48A3	10	20A	1			RTNA3	10	1						
				-48A4	10	20A	1			RTNA4	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
				-48B3	10	20A	1			RTNB3	10	1						
				-48B4	10	20A	1			RTNB4	10	1						
10	LTP WITH FIVE SHELF ISLU2 J5D003F-2	51	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		86
				-48A1	10	20A	1			RTNA1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48A3	10	20A	1			RTNA3	10	1						
				-48A4	10	20A	1			RTNA4	10	1						
				-48A5	10	20A	1			RTNA5	10	1						
				-48A6	10	20A	1			RTNA6	10	1						
				-48A7	10	20A	1			RTNA7	10	1						
				-48A8	10	20A	1			RTNA8	10	1						
				-48B0	10	20A	1			RTNB0	10	1						

SHEET NOTES:

- TABLE J1 CONTAINS INFORMATION FOR CABINETS EQUIPPED WITH J5D003FJ-1 MODULAR FUSE FILTER UNIT.

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DC POWER DISTRIBUTION CKT (6'-0" CABINETS)	DWG SIZE	ISSUE
	C2	14
AT&T	ED5D073-11	SHEET B9

ITEM	CABINETS AND MISC. EQUIPMENT	FIG.	VOLT DROP ( LOOP )	-48V BATTERY				CURRENT DRAIN ( AMPS )		GROUND			TOTAL FR DRAIN ( AMPS )		FEEDER CBL GROUP NO.	TERMINAL TYPE AT PD CABINET	MAX LEAD LENGTH ( LOOP )	NOTE
				LEAD DESIG	LEAD SIZE	FUSE SIZE	NO. OF FEEDERS	LIST-1	LIST-2	LEAD DESIG	LEAD SIZE	NO. OF FEEDERS	LIST-1	LIST-2				
11	LTP WITH FIVE SHELF ISLU2 J5D003F-2	52	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		86
				-48B0	10	20A	1			RTNA0	10	1						
				-48B1	10	20A	1			RTNA0	10	1						
				-48B2	10	20A	1			RTNA0	10	1						
				-48B3	10	20A	1			RTNA0	10	1						
				-48B4	10	20A	1			RTNA0	10	1						
				-48B5	10	20A	1			RTNA0	10	1						
				-48B6	10	20A	1			RTNA0	10	1						
				-48B7	10	20A	1			RTNA0	10	1						
				-48B8	10	20A	1			RTNA0	10	1						
12	SMC MODEL 2 STANDARD CONFIGURATION J5D003L-1	53	.75	-48A0	10	20A	1			RTNA0	10	1		ED5A079-30 GR-38	SEE TBL R		97	
				-48A1	10	20A	1			RTNA0	10	1						
				-48B0	10	20A	1			RTNA0	10	1						
				-48B1	10	20A	1			RTNA0	10	1						
13	SMC MODEL 2 WITH LINE UNIT J5D003L-1	54	.75	-48A0	10	20A	1			RTNA0	10	1		ED5A079-30 GR-38	SEE TBL R		97	
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
14	SMC MODEL 2 WITH LINE UNIT (FUTURE) J5D003L-1	55	.75	-48A0	10	20A	1			RTNA0	10	1		ED5A079-30 GR-38	SEE TBL R		97	
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
15	SMC MODEL 2 WITH LINE UNIT J5D003L-1	56	.75	-48A0	10	20A	1			RTNA0	10	1		ED5A079-30 GR-38	SEE TBL R		97	
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48A3	10	20A	1			RTNA3	10	1						

SHEET NOTES:

- TABLE J1 CONTAINS INFORMATION FOR CABINETS EQUIPPED WITH J5D003FJ-1 MODULAR FUSE FILTER UNIT.

ITEM	CABINETS AND MISC. EQUIPMENT	FIG.	VOLT DROP ( LOOP )	-48V BATTERY				CURRENT DRAIN ( AMPS )		GROUND			TOTAL FR DRAIN ( AMPS )		FEEDER CBL GROUP NO.	TERMINAL TYPE AT PD CABINET	MAX LEAD LENGTH ( LOOP )	NOTE
				LEAD DESIG	LEAD SIZE	FUSE SIZE	NO. OF FEEDERS	LIST-1	LIST-2	LEAD DESIG	LEAD SIZE	NO. OF FEEDERS	LIST-1	LIST-2				
16	SMC WITH PSU J5D003L-1	57	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		97
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48A3	10	20A	1			RTNA3	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
				-48B3	10	20A	1			RTNB3	10	1						
17	SMC WITH ISLU J5D003L-1	58	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		97
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48A2	10	20A	1			RTNA2	10	1						
				-48A3	10	20A	1			RTNA3	10	1						
				-48A4	10	20A	1			RTNA4	10	1						
				-48A5	10	20A	1			RTNA5	10	1						
18	SMC WITH ISLU J5D003L-1	59	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		97
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
				-48B2	10	20A	1			RTNB2	10	1						
				-48B3	10	20A	1			RTNB3	10	1						
				-48B4	10	20A	1			RTNB4	10	1						
				-48B5	10	20A	1			RTNB5	10	1						
19	MISCELLANEOUS CABINET J5D005C-1	60	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		88
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						
20	MODEM POOLING CABINET J5D007B-1	61	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		
				-48B0	10	20A	1			RTNB0	10	1						
21	EXPORT DATA SET CABINET J5X099A-1	62	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		
				-48B0	10	20A	1			RTNB0	10	1						
22	DCSS CABINET J5X101A-1	63	.75	-48A0	10	20A	1			RTNA0	10	1			ED5A079-30 GR-38	SEE TBL R		
				-48A1	10	20A	1			RTNA1	10	1						
				-48B0	10	20A	1			RTNB0	10	1						
				-48B1	10	20A	1			RTNB1	10	1						

SHEET NOTES:

- TABLE J1 CONTAINS INFORMATION FOR CABINETS EQUIPPED WITH J5D003FJ-1 MODULAR FUSE FILTER UNIT.

I T E M	CABINETS AND MISC. EQUIPMENT	FIG.	VOLT DROP ( LOOP )	-48V BATTERY				GROUND			TOTAL FR DRAIN ( AMPS )		FEEDER CBL GROUP NO.	TERMINAL TYPE AT PD CABINET	MAX LEAD LENGTH ( LOOP )	NOTE		
				LEAD DESIG	LEAD SIZE	FUSE SIZE	NO. OF FEEDERS	CURRENT DRAIN ( AMPS )		LEAD DESIG	LEAD SIZE	NO. OF FEEDERS					LIST-1	LIST-2
								LIST-1	LIST-2									
23	3B21D BASIC CABINET J3T060A-1	64	.75	-48A0	10	20A	1						ED5A079-30 GR-38	SEE TBL R		83		
				-48A1	10	20A	1											
				-48A2	10	20A	1											
				-48A3	10	20A	1											
				-48A4	10	20A	1											
				-48A5	10	20A	1											
				-48B0	10	20A	1											
				-48B1	10	20A	1											
				-48B2	10	20A	1											
				-48B3	10	20A	1											
				-48B4	10	20A	1											
				-48B5	10	20A	1											

SHEET NOTES:

- TABLE J1 CONTAINS INFORMATION FOR CABINETS EQUIPPED WITH J5D003FJ-1 MODULAR FUSE FILTER UNIT.

TABLE F

POWER DISTRIBUTING FRAME NUMBER 0  
FILTER/FUSE PANEL NUMBER 1

A BUS								B BUS							
FUSE BLOCK	FUSE	FEEDER MNEMONIC	LOAD FRAME					FUSE BLOCK	FUSE	FEEDER MNEMONIC	LOAD FRAME				
			FRAME OR CAB.	FEEDER ASSIGNMENT	L1 BUSY HOUR AMPERES (NORMAL BATTERY)	L2 CURRENT (AMPERES)	FEEDER SIZE				FRAME OR CAB.	FEEDER ASSIGNMENT	L1 BUSY HOUR AMPERES (NORMAL BATTERY)	L2 CURRENT (AMPERES)	FEEDER SIZE
A1	1	-48A 01 01		-48A	NOTE B3	NOTE B3	NOTE B3	B1	1	-48B 01 01		-48A	NOTE B3	NOTE B3	NOTE B3
	2	-48A 01 02		-48B					2	-48B 01 02		-48B			
	3	-48A 01 03		-48D					3	-48B 01 03		-48D			
	4	-48A 01 04		-48E					4	-48B 01 04		-48E			
A2	1	-48A 01 05		-48F				B2	1	-48B 01 05		-48F			
	2	-48A 01 06		-48G					2	-48B 01 06		-48G			
	3	-48A 01 07		-48H					3	-48B 01 07		-48H			
	4								4	-48B 01 08		-			
A3	1	-48A 01 09	DPC	-48B				B3	1	-48B 01 09	DPC	-48F			
	2	-48A 01 10	DPC	-48D					2	-48B 01 10					
	3	-48A 01 11	TUO	-48A					3	-48B 01 11	TU1	-48B			
	4	-48A 01 12							4	-48B 01 12					
A4	1	-48A 01 13						B4	1	-48B 01 13					
	2	-48A 01 14							2	-48B 01 14					
	3	-48A 01 15							3	-48B 01 15					
	4	-48A 01 16							4	-48B 01 16					
A5	1	-48A 01 17						B5	1	-48B 01 17					
	2	-48A 01 18							2	-48B 01 18					
	3	-48A 01 19							3	-48B 01 19					
	4	-48A 01 20							4	-48B 01 20					
A6	1	-48A 01 21						B6	1	-48B 01 21					
	2	-48A 01 22							2	-48B 01 22					
	3	-48A 01 23							3	-48B 01 23					
	4	-48A 01 24							4	-48B 01 24					

POWER DISTRIBUTING FRAME NUMBER 0  
FILTER/FUSE PANEL NUMBER 4

A BUS								B BUS							
FUSE BLOCK	FUSE	FEEDER MNEMONIC	LOAD FRAME					FUSE BLOCK	FUSE	FEEDER MNEMONIC	LOAD FRAME				
			NAME	FEEDER ASSIGNMENT	L1 BUSY HOUR AMPERES (NORMAL BATTERY)	L2 CURRENT (AMPERES)	FEEDER SIZE				NAME	FEEDER ASSIGNMENT	L1 BUSY HOUR AMPERES (NORMAL BATTERY)	L2 CURRENT (AMPERES)	FEEDER SIZE
A1	1	-48A 05 01	DPC	N48VA	NOTE B3	NOTE B3	NOTE B3	B1	1	-48B 05 01	DPC		NOTE B3	NOTE B3	NOTE B3
	2	-48A 05 02	DPC	N48VC					2						
	3								3						
	4								4						

TABLE G

ALLOWABLE FEEDER VOLTAGE DROP

FROM EQUIPMENT	TO EQUIPMENT	ALLOWABLE VOLTAGE DROP IN LOOP
POWER DISTRIBUTION FUSE BOARD	POWER DISTRIBUTION FRAME	0.25 VOLT
POWER DISTRIBUTION FUSE BOARD	EQUIPMENT FRAME	1.0 VOLT
POWER DISTRIBUTION FRAME	EQUIPMENT FRAME	1.0 VOLT

TABLE K ( 3B20D MOD 3 ONLY ) ( NOTE 93 )

POWER DISTRIBUTING CABINET PCFDO  
FILTER FUSE PANEL NUMBER 1

A BUS								B BUS											
FUSE BLOCK	FUSE	FEEDER MNEMONIC	FRAME OR CAB.	FEEDER ASSIGNMENT	LOAD FRAME				FUSE BLOCK	FUSE	FEEDER MNEMONIC	FRAME OR CAB.	FEEDER ASSIGNMENT	LOAD FRAME					
					L1 BUSY HOUR AMPERES ( NORMAL BATTERY )	L2 CURRENT ( AMPERES )	FEEDER SIZE							L1 BUSY HOUR AMPERES ( NORMAL BATTERY )	L2 CURRENT ( AMPERES )	FEEDER SIZE			
A1	1	-48A 01 01	PCCA0	-48A	NOTE B3	NOTE B3	NOTE B3	JIC173B-1 CAB 0	B1	1	-48B 01 01	PCCA1	-48A	NOTE B3	NOTE B3	NOTE B3	JIC173B-1 CAB 1		
	2	-48A 01 02	PCCA0	-48B						2	-48B 01 02	PCCA1	-48B						
	3	-48A 01 03	PCCA0	-48D						3	-48B 01 03	PCCA1	-48D						
	4	-48A 01 04	PCCA0	-48E						4	-48B 01 04	PCCA1	-48E						
A2	1	-48A 01 05	PCCA0	-48F					B2	1	-48B 01 05	PCCA1	-48F					JIC173B-1 CAB 0	
	2	-48A 01 06	PCCA0	-48G						2	-48B 01 06	PCCA1	-48G						
	3	-48A 01 07	PCCA0	-48H						3	-48B 01 07	PCCA1	-48H						
	4	-48A 01 08								4	-48B 01 08	PCCA0	-48J						
A3	1	-48A 01 09	T/DCO	-48A					B3	1	-48B 01 09	T/DCO	-48E				JIC192A-1 E/W MAX 4 DISKS		
	2	-48A 01 10	T/DCO	-48B						2	-48B 01 10	T/DCO	-48F						
	3	-48A 01 11	T/DC ( )	-48A						3	-48B 01 11	T/DC ( )	-48B						
	4	-48A 01 12	T/DC ( )	-48E						4	-48B 01 12	T/DC ( )	-48F						
A4	1	-48A 01 13	T/DC ( )	-48A					B4	1	-48B 01 13	T/DC ( )	-48E						JIC192A-1 E/W MAX 8 DISKS
	2	-48A 01 14	T/DC ( )	-48B						2	-48B 01 14	T/DC ( )	-48F						
	3	-48A 01 15	T/DC ( )	-48C						3	-48B 01 15	T/DC ( )	-48G						
	4	-48A 01 16	T/DC ( )	-48D						4	-48B 01 16	T/DC ( )	-48H						
A5	1	-48A 01 17						B5	1	-48B 01 17									
	2	-48A 01 18							2	-48B 01 18									
	3	-48A 01 19							3	-48B 01 19									
	4	-48A 01 20							4	-48B 01 20									
A6	1	-48A 01 21						B6	1	-48B 01 21									
	2	-48A 01 22							2	-48B 01 22									
	3	-48A 01 23							3	-48B 01 23									
	4	-48A 01 24							4	-48B 01 24									

POWER DISTRIBUTING FRAME NUMBER 0  
FILTER/FUSE PANEL NUMBER 4

TABLE L ( NOTE 91 )

74F FUSE	
L1 BUSY HOUR AMPS	WATTAGE DISIPATED IN 74F FUSE
1 AMP	.01
2 AMP	.02
3 AMP	.05
4 AMP	.09
5 AMP	.16
6 AMP	.22
7 AMP	.32
8 AMP	.41
9 AMP	.55
10 AMP	.70
11 AMP	.80
12 AMP	1.05
13 AMP	1.25

TABLE M ( NOTE 91 )

FEEDER	LIST 1 AMPS ( BUSY HOUR )								
	13A	13A	13A	13A	13A	13A	13A	11A	12A
FIRST	13A	13A	13A	13A	13A	13A	13A	11A	12A
SECOND	13A	13A	13A	12A	12A	12A	11A	11A	11A
THIRD	11A	10A	9A	11A	10A	9A	10A	11A	11A
FOURTH	5A	6A	8A	7A	8A	9A	10A	11A	11A
TOTAL AMPS	42A	42A	43A	43A	43A	43A	44A	44A	45A
TOTAL WATTS	3.46W	3.42W	3.46W	3.42W	3.41W	3.40W	3.45W	3.20W	3.45W

TABLE N ( NOTE 92,94 )

FEEDER LENGTH IN FEET		TYPICAL VOLTAGE AVAILABLE AT BATTERY AT LOW END CELL VOLTAGE ( 24 CELLS )								TYPICAL VOLTAGE AT POWER PLANT OR DISCHARGE BUS BAR AT BATTERY LOW VOLTAGE	ALLOWABLE FEEDER VOLTAGE DROP POWER PLANT TO POWER DISTRIBUTION CABINET		TYPICAL VOLTAGE AT POWER DIST. CAB. AT BATTERY LOW VOLTAGE	ALLOWABLE FEEDER LOOP VOLTAGE DROP PWR DIST CAB. TO EQUIP. CAB.	TYPICAL VOLTAGE AT EQUIP. CAB. AT BATTERY LOW VOLTAGE
ONE WAY	LOOP LENGTH	VOLTS PER CELL									ONE WAY VOLT DROP	LOOP VOLT DROP			
		1.83V	1.84V	1.85V	1.86V	1.87V	1.88V	1.89V	1.90V						
UP TO 30 FT.	UP TO 60 FT.	43.92V								43.75V	.125V	.25V	43.50V	.75V ( SEE TABLE J )	42.75V
31 FT TO 60 FT	61 FT TO 120 FT		44.16V							44.00V	.25V	.50V	43.50V	.75V ( SEE TABLE J )	42.75V
61 FT TO 100 FT	121 FT TO 200 FT			44.40V						44.25V	.375V	.75V	43.50V	.75V ( SEE TABLE J )	42.75V
ABOVE 101 FT	ABOVE 201 FT				44.64V					44.50V	.50V	1.00V	43.50V	.75V ( SEE TABLE J )	42.75V
HOT SLIDE ANY LENGTH TEMPORARY	HOT SLIDE ANY LENGTH TEMPORARY				44.64V	44.88V	45.12V	45.36V	45.60V	44.50V	.50V	1.00V	43.50V	.75V ( SEE TABLE J )	42.75V

TABLE P		
TERMINALS REQUIRED FOR INVOLT & INVOLT RETURN CONNECTORS FOR PD CABINETS		
CONNECTOR KSI5977	CABLE SIZE	COMCODE
L 305	350MCM	995082963
L 93	4/0	996948394
L 83	2/0	995082682
L 73	1/0	995082617
L 63	2	995082575
L 53	4	995082476

MOUNTING HARDWARE REQUIRED PER INVOLT CONNECTOR  
 2,P147284,HH CAP SCR, .375-16 X 1/4  
 2,P228677,LOCKWASHER, .375

MOUNTING HARDWARE REQUIRED PER INVOLT RETURN CONNECTOR  
 2,P147284,HH CAP SCR, .375-16 X 1/4  
 2,P228677,LOCKWASHER, .375  
 2,P-182907,HEXNUT, .375-16

TABLE R		
TERMINALS REQUIRED FOR LOAD CONNECTIONS FOR PD CAB J86334D-1 AND PD CAB J5D003H-1		
TERMINALS ( T & B CO )	CABLE SIZE	COMCODE
C52	10	996585972
	12	
AB52	14	403665409
	16	

MOUNTING HARDWARE REQUIRED PER TERMINAL		
1,P206518,HEXNUT, .164-32		
TERMINALS REQUIRED FOR LOAD RETURN CONNECTIONS FOR PD CAB J86334D-1 AND PD CAB J5D003H-1		
CONNECTOR	CABLE SIZE	COMCODE
KSI5977,L23	10	997088026
KSI5977,L13	12	996514857
KSI5977,L3	14	997087911
AB6 ( T & B CO )	16	997627906

MOUNTING HARDWARE REQUIRED PER INVOLT RTN KSI5977 CONNECTOR  
 2,B40059083,PHM SCREW .164-32 X 1/2  
 2,P-221761, LOCKWASHER, .164

MOUNTING HARDWARE REQUIRED PER INVOLT RTN T & B CONNECTOR  
 1,B40059083,PHM SCREW, .164-32 X 1/2  
 1,P221761,LOCKWASHER, .164

TABLE S ( SEE NOTE 166 )				
MAX. CABLE LOOP FEET FROM PD TO LOAD				
CBL SIZE	1VDT PER FUSE	2VDT'S PER FUSE	3VDT'S PER FUSE	4VDT'S PER FUSE
14	1000 ( 2 )	500 ( 2 )	350 ( 2 )	250 ( 2 )
12	1700	850	550	400
10	2700	1350	900	650
8	3280	2150	1450	1050
6	-	3280 ( 1 )	2300	1700
4	-	-	3280 ( 1 )	2750
2	-	-	-	3280 ( 1 )
CBL SIZE	1BST PER FUSE	2BST'S PER FUSE	3BST'S PER FUSE	4BST'S PER FUSE
14	3280	3280	2700	2100
12	-	-	3280 ( 1 )	3280 ( 1 )

( 1 ) MAX. DISTANCE ALLOWED FOR DSL FROM ISLU TO BST OR VDT.

( 2 ) 74E 15AMP FUSE IS REQUIRED AT THE POWER DISTRIBUTION PANEL.

TABLE T ( SEE NOTE 167 )				
MAX. CABLE LOOP FEET				
CBL SIZE	1VDT PER FUSE	2VDT'S PER FUSE	3VDT'S PER FUSE	4VDT'S PER FUSE
14	800	600	400	300
12	-	800	600	480
10	-	-	800	760
8	-	-	-	800

14AWG CABLE TO BE USED FOR ALL BST APPLICATIONS ( UP TO 4 BST'S ). MAX. CABLE LOOP FEET TO BE 800 FT.

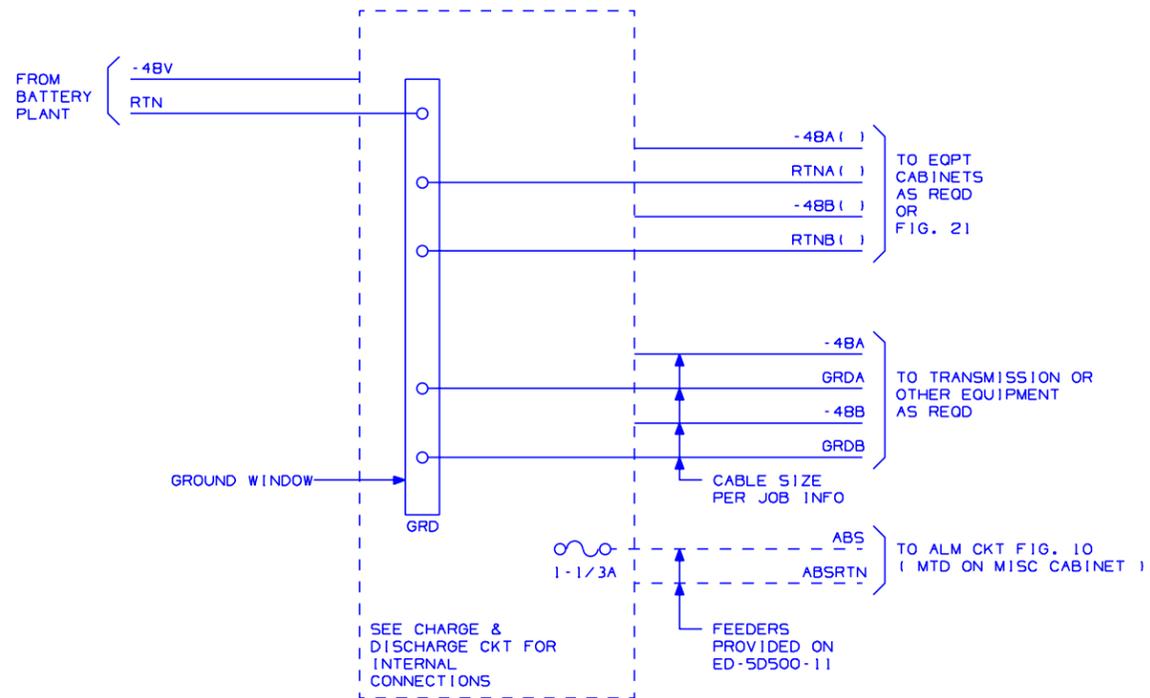


FIG. 1  
131A POWER PLANT, -48V, 70 AMPS  
JB6867A  
( NOTE 54,55,57,72 )

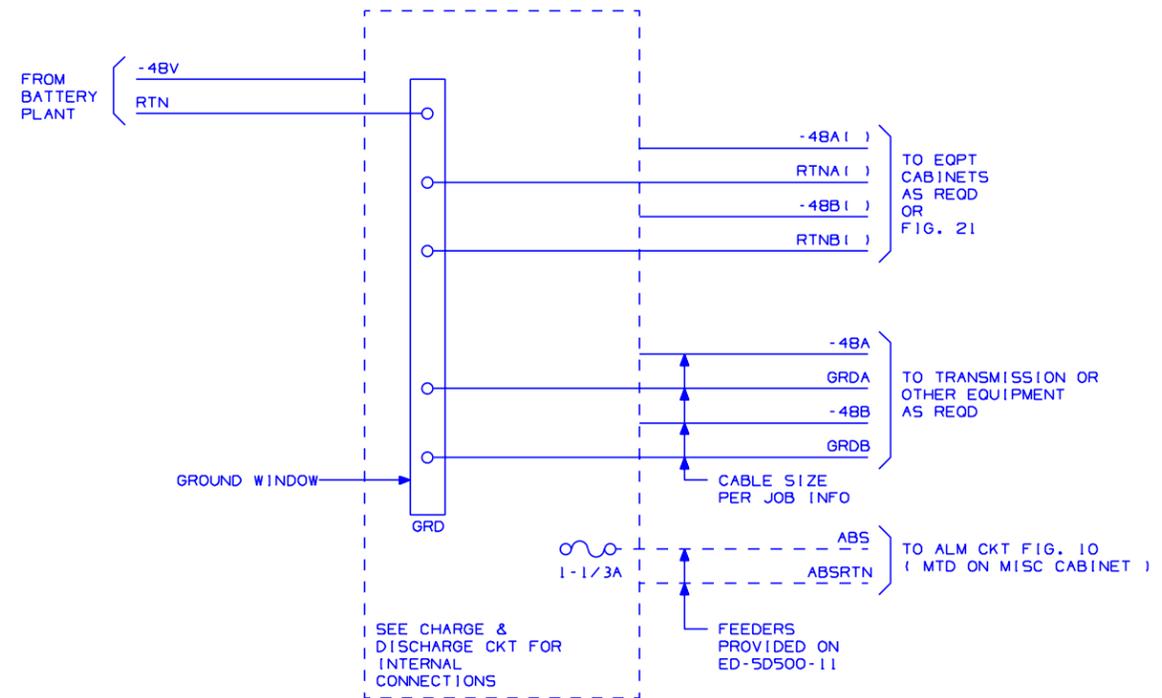


FIG. 2  
133A POWER PLANT, -48V, 140 AMPS  
JB6869A  
( NOTE 54,55,57,72 )

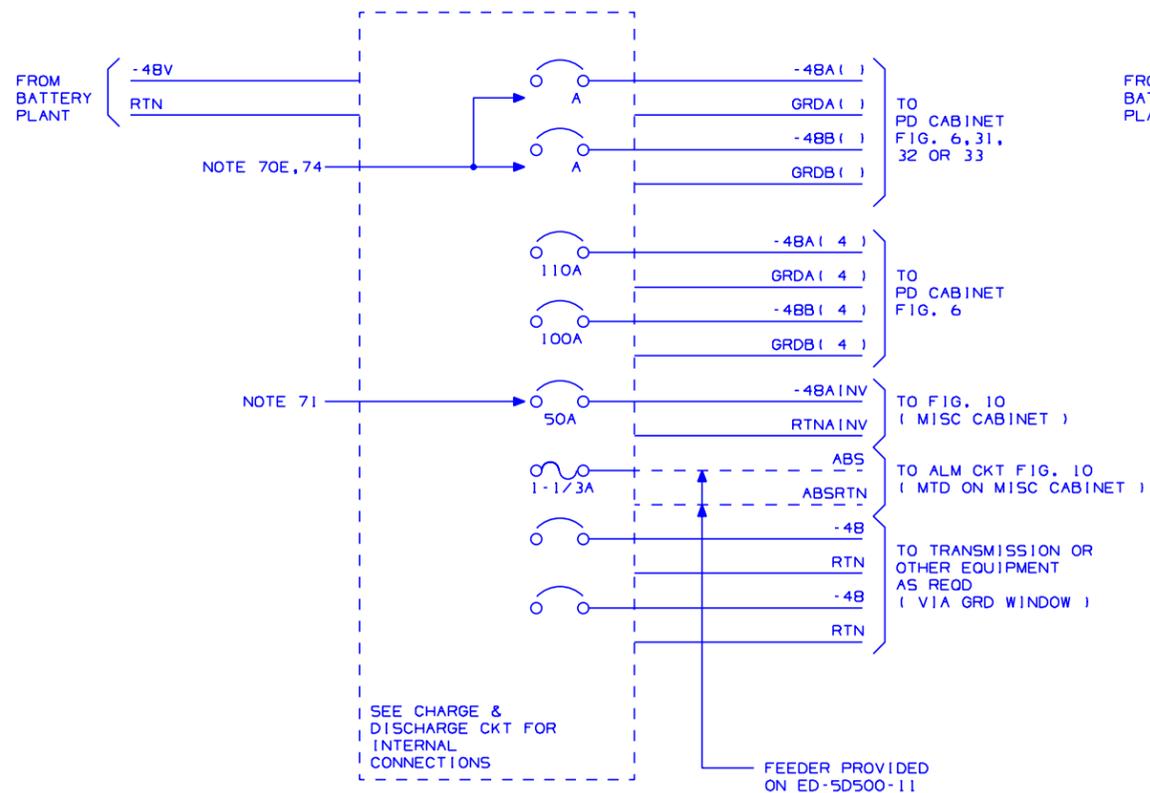


FIG. 3  
151B OR 151C POWER PLANT  
JB6917A  
( NOTE 57 )

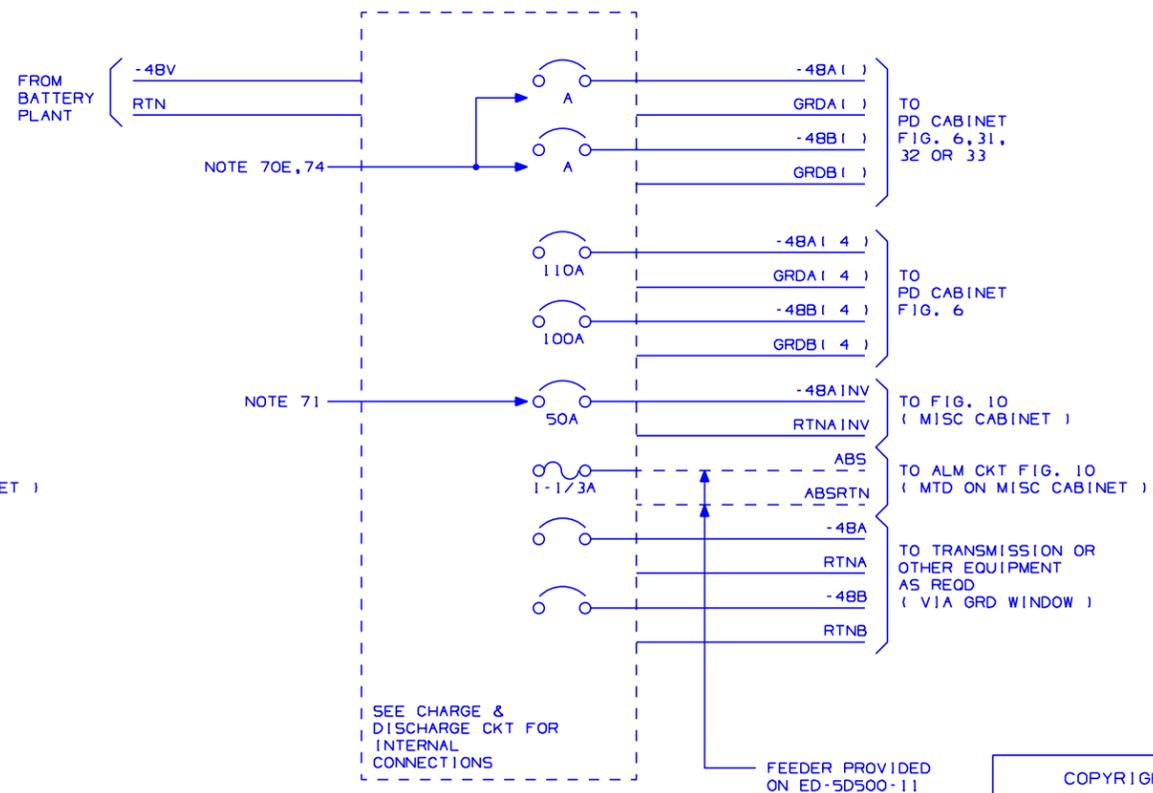


FIG. 4  
153A POWER PLANT  
-48V, 1200 AMP  
JB6909  
( NOTE 57 )

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DC POWER DISTRIBUTION CKT (6'-0" CABINETS)	DWG SIZE	ISSUE
	C2	14
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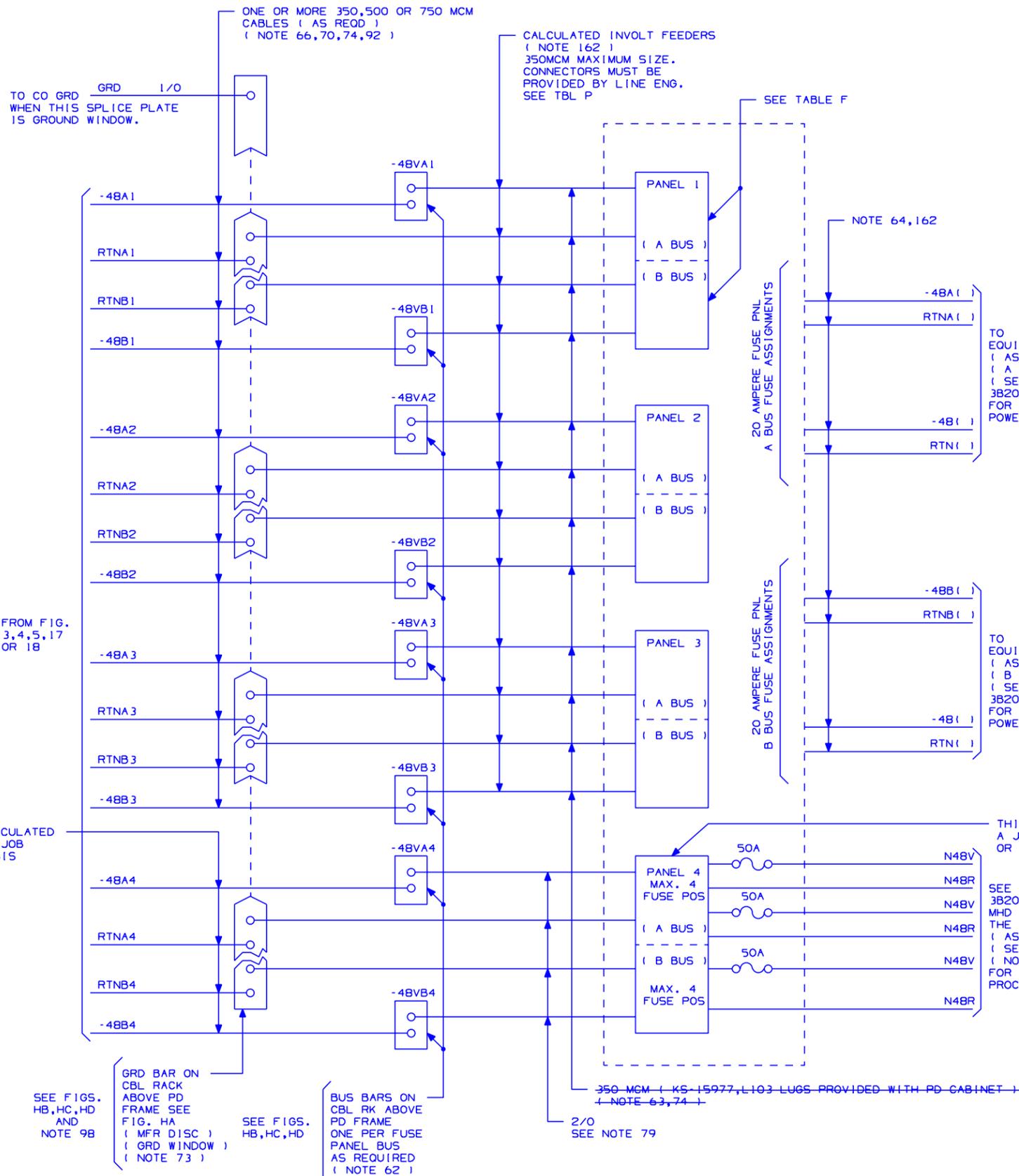


FIG. 6  
POWER DISTRIBUTION FR  
JB6334D-1 6'-0" CABINET  
( NOTE 54,59,60,62,63,70,75,77,78,93,94,95,96,162 )  
( PROVIDE INVOLT & INVOLT RTN LUGS  
PER TBL P AND LOAD AND LOAD RTN LUGS PER TBL R )

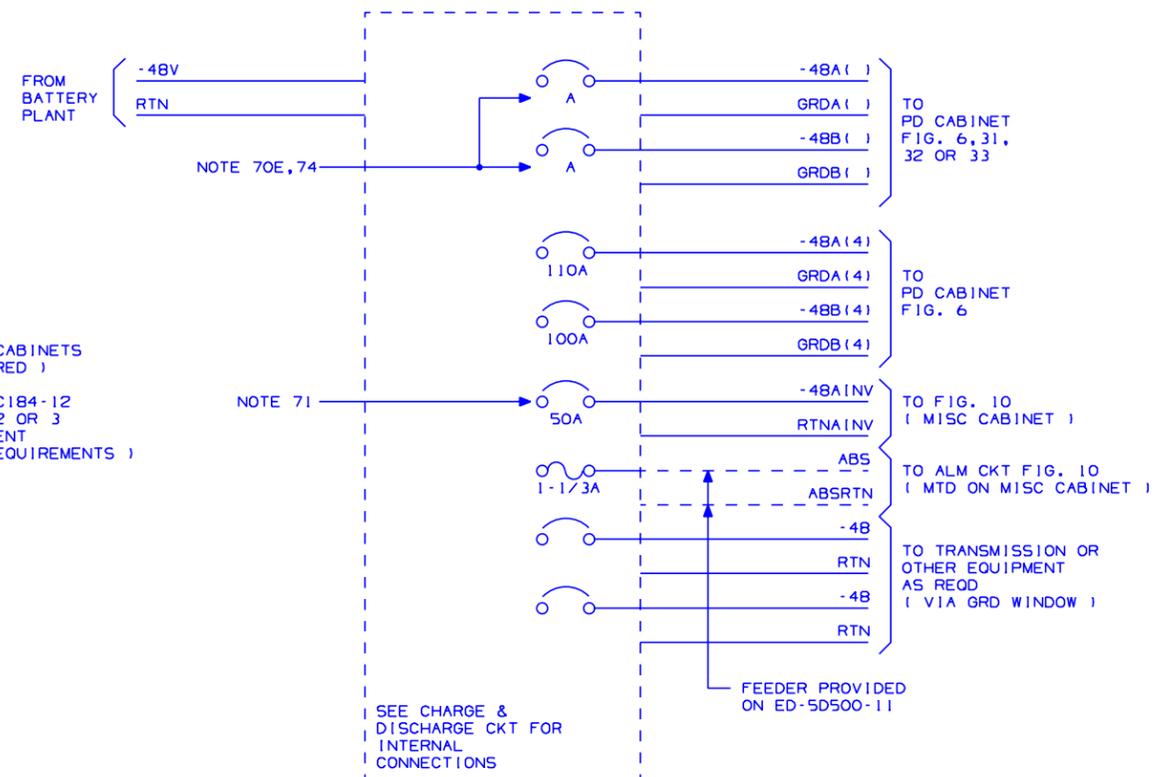


FIG. 5  
150A POWER PLANT  
-48V, 2400 AMP  
JB6911  
( NOTE 57 )

TO EQUIPMENT CABINETS  
( AS REQUIRED )  
( A BUS )  
( SEE ED-4C184-12  
3B20D MOD 2 OR 3  
FOR EQUIPMENT  
POWERING REQUIREMENTS )

TO EQUIPMENT CABINETS  
( AS REQUIRED )  
( B BUS )  
( SEE ED-4C184-12  
3B20D MOD 2 OR 3  
FOR EQUIPMENT  
POWERING REQUIREMENTS )

THIS PANEL CAN BE  
A JB6334D-1 LIST C ( 40 TO 60 AMPERE )  
OR JB6334D-1 LIST AK ( 20 AMPERE 12 INCH PANEL )

SEE ED-4C184-12  
3B20 MOD 2 PROCESSOR  
MHD INVERTER VIA  
THE DPC CABINET  
( AS REOD )  
( SEE TABLE F )  
( NOT REQUIRED  
FOR 3B20 MOD 3  
PROCESSOR )

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DC POWER DISTRIBUTION CKT ( 6'-0" CABINETS )	DWG SIZE	ISSUE
	C2	14
AT&T	ED5D073-11	SHEET B19

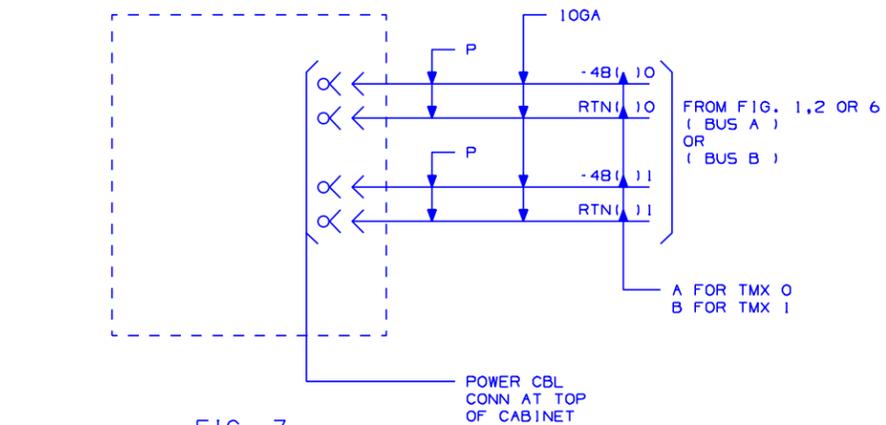


FIG. 7  
TIME MULTIPLEX SWITCH CABINET ( NOTE 85,69 )  
J5D001C-1

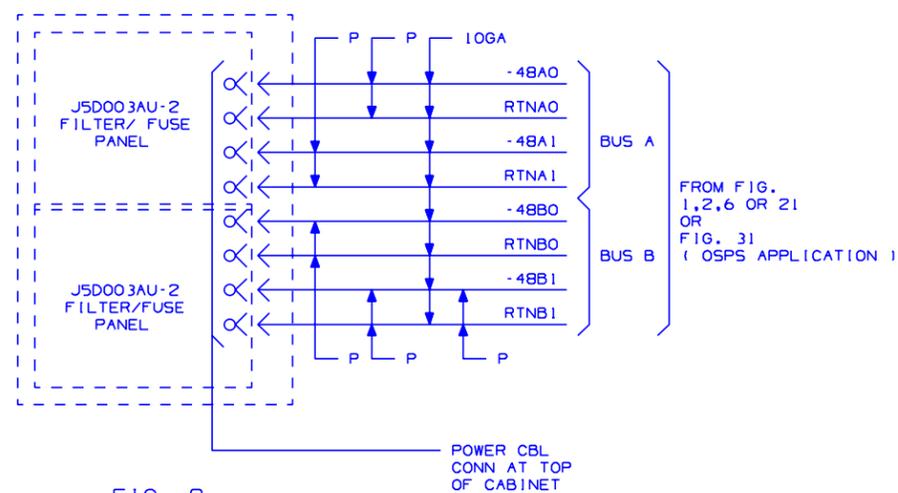


FIG. 8  
SWITCHING MODULE CONTROL CABINET ( NOTE 69,91 )  
J5D003E-1

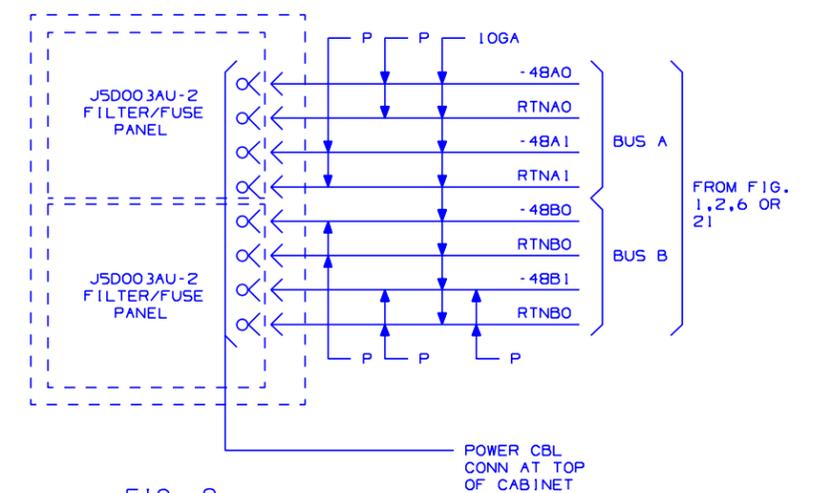


FIG. 9  
LINE TRUNK PERIPHERAL CABINET ( NOTE 69,86,91 )  
J5D003F-1

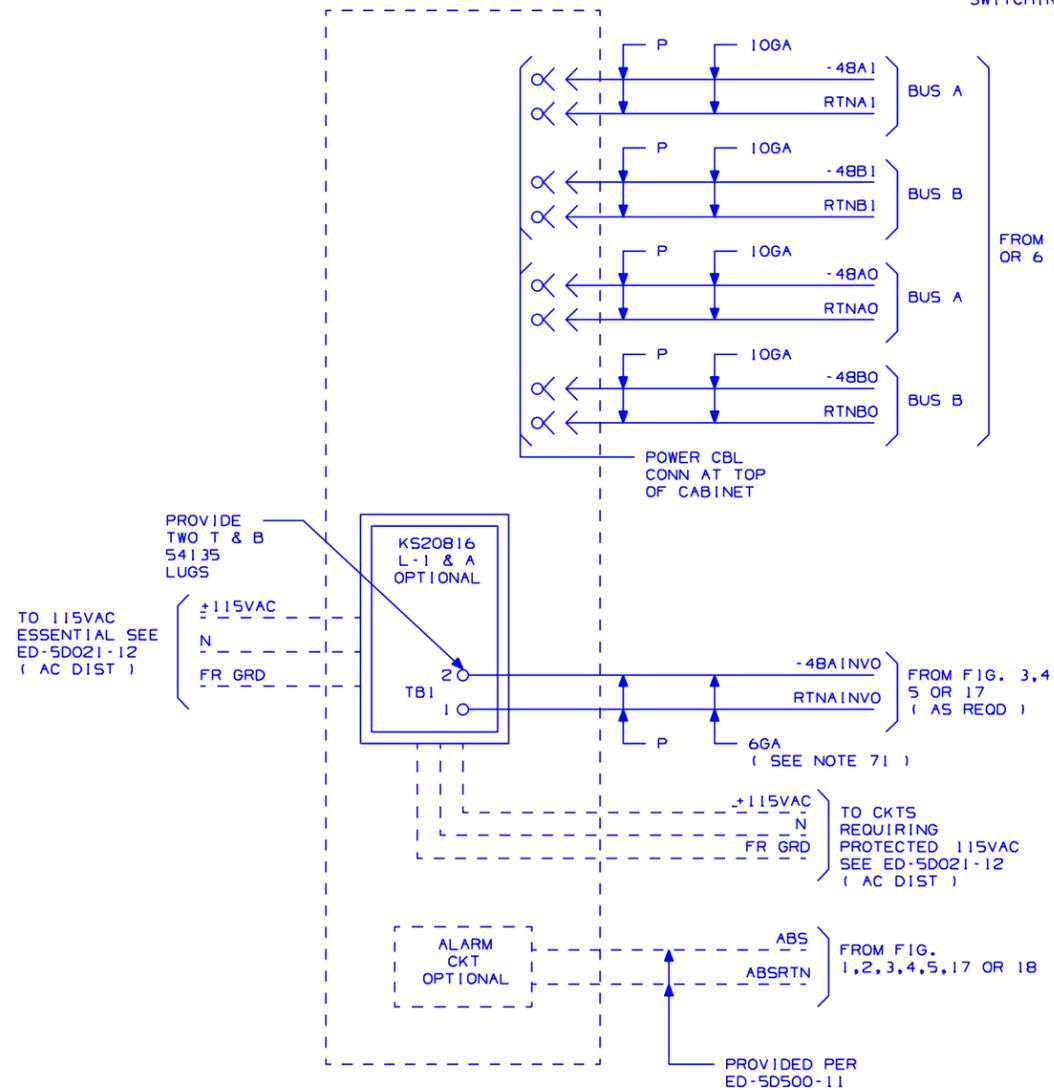


FIG. 10 (DA) SEE FIG. 39  
MISCELLANEOUS CABINET ( NOTE 69 & 88 )  
J5D005C-1

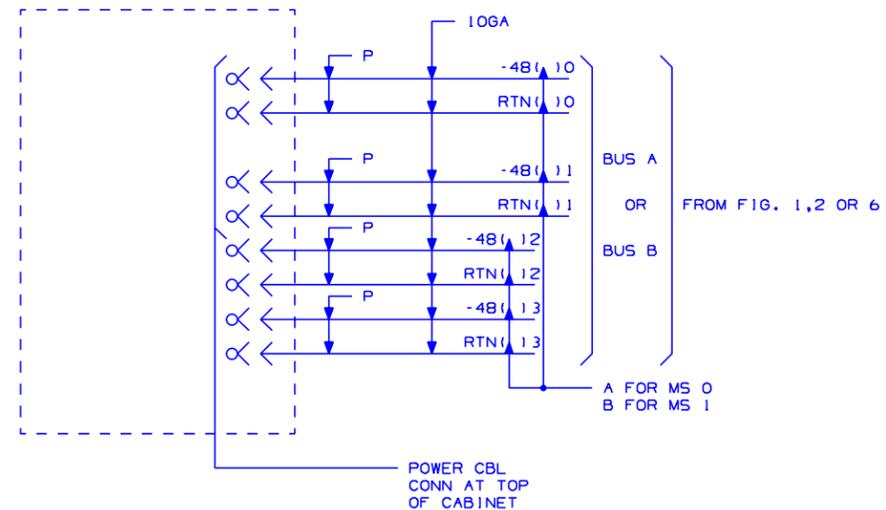


FIG. 11  
MESSAGE SWITCH CABINET ( NOTE 69,85 )  
J5D006C-1

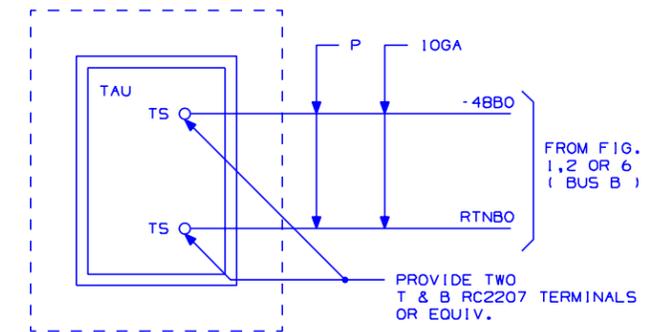
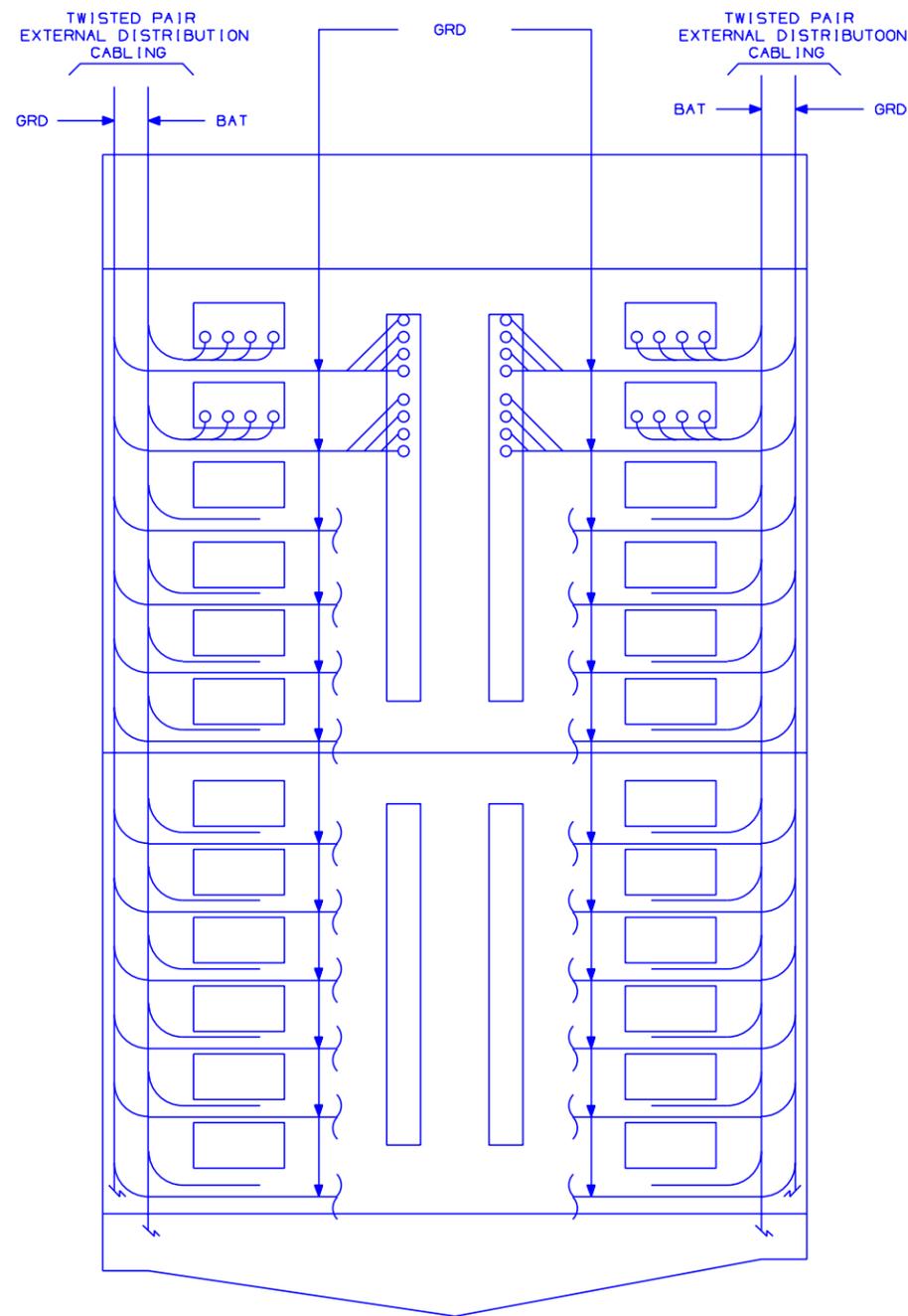


FIG. 12  
MAINTENANCE CONTROL CENTER CONSOLE OR STLWS CONSOLE  
ED-5D039-35



( REAR VIEW )  
METHOD OF ROUTING DISTRIBUTION  
CABLES WITHIN THE JB6334D-1  
PCFD CABINET ( ONLY TWO PANELS SHOWN )  
FIG. HF  
( NOTE 93 )

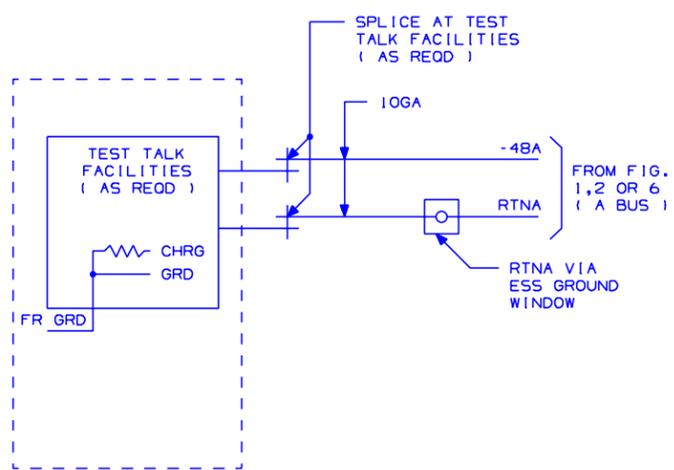


FIG. 13  
PROTECTOR FRAME OR MDF  
NOTE 80,81

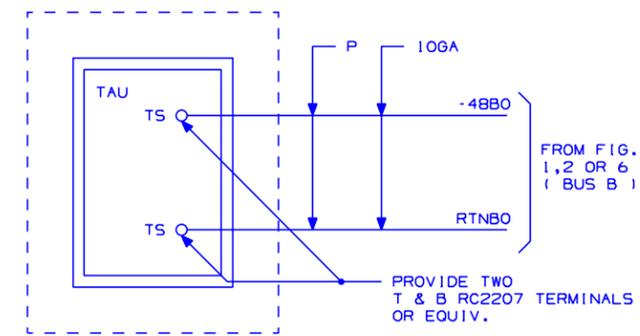


FIG. 14  
MAINTENANCE CONTROL CENTER CABINET OR STLWS CABINET  
J5D002A-1,B-1,C-1 OR D-1

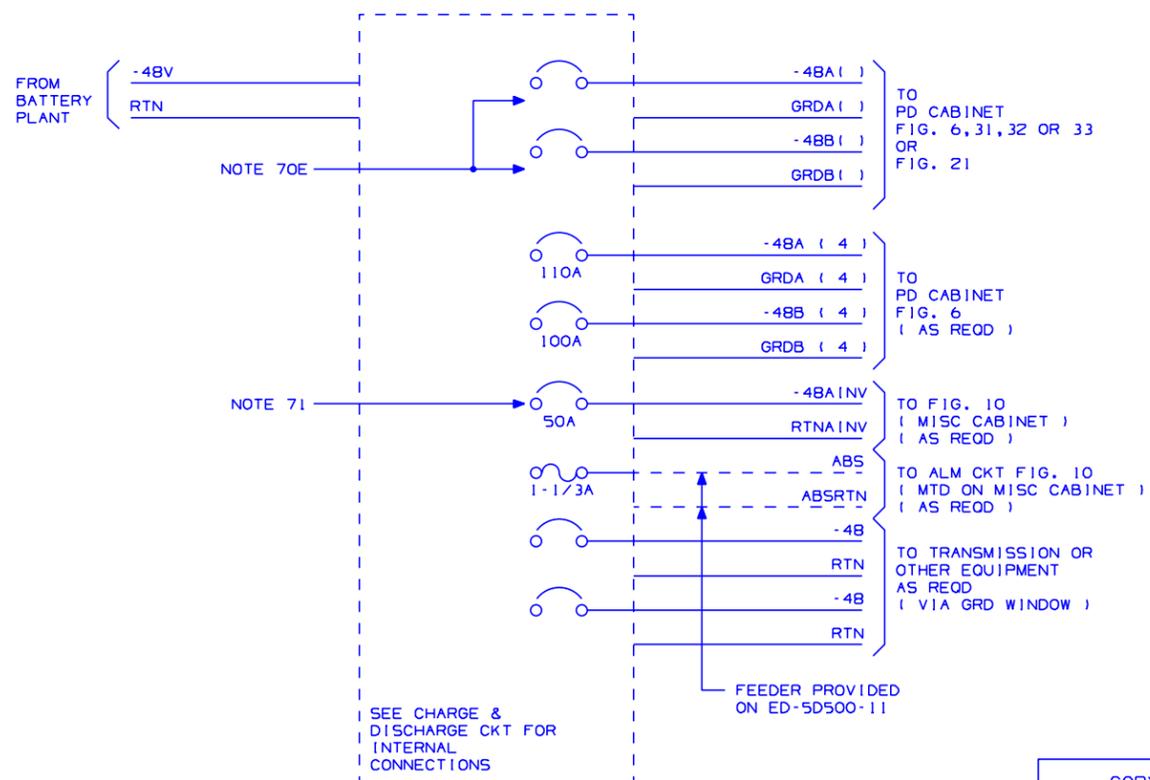
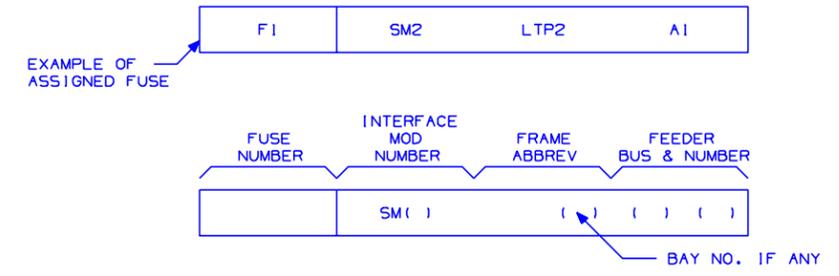


FIG. 18  
LINEAGE 2000 MCS POWER PLANT  
-48V, 3200 AMP  
J85500A-

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DC POWER DISTRIBUTION CKT (6'-0" CABINETS)	DWG SIZE	ISSUE
	C2	14
AT&T	ED5D073-11	SHEET B21
PRINTED IN U.S.A.		



SK. A  
TYPICAL EXAMPLES OF FUSE ASSIGNMENT  
LABEL STAMPING INFORMATION ON FRONT OF PD.

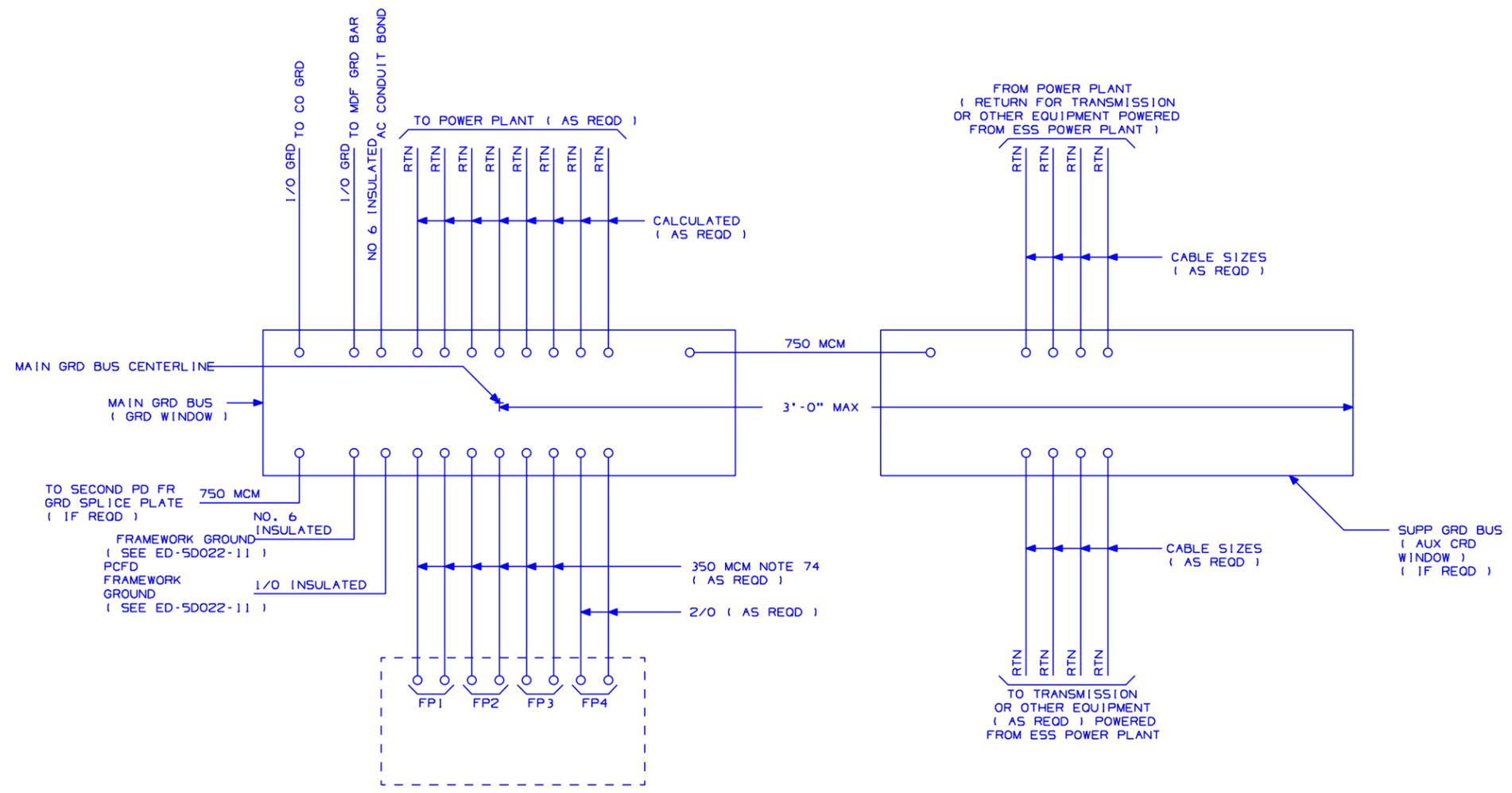
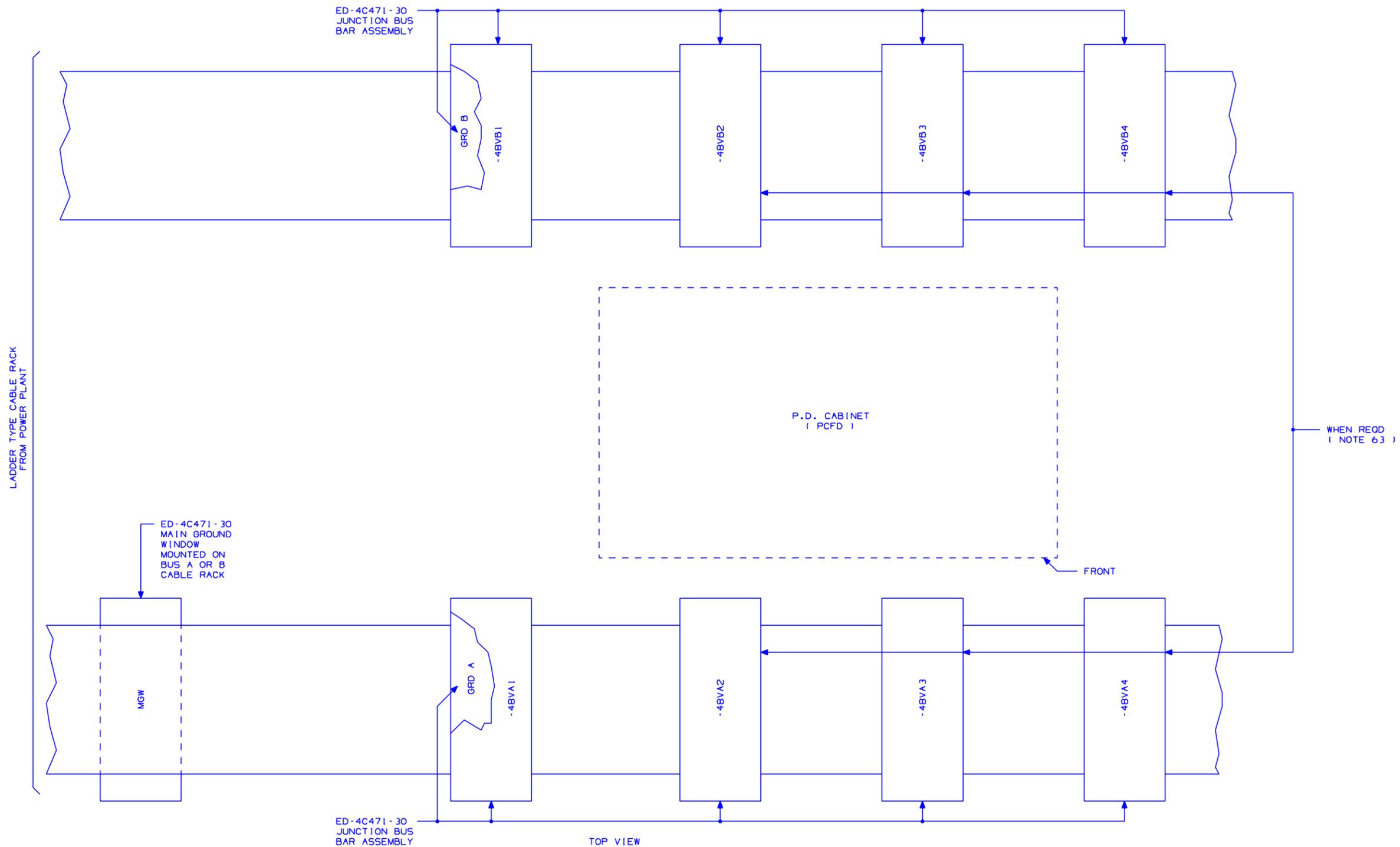


FIG. HA ( MFR DISC )  
TYPICAL H512-137 SINGLE POINT GROUND JUNCTION  
BAR LOCATED ABOVE PD FR

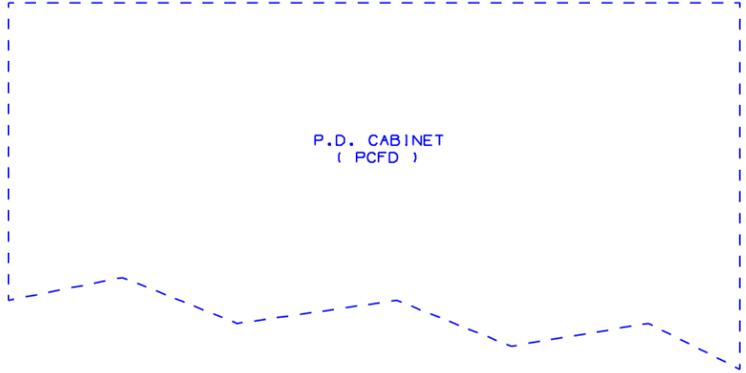
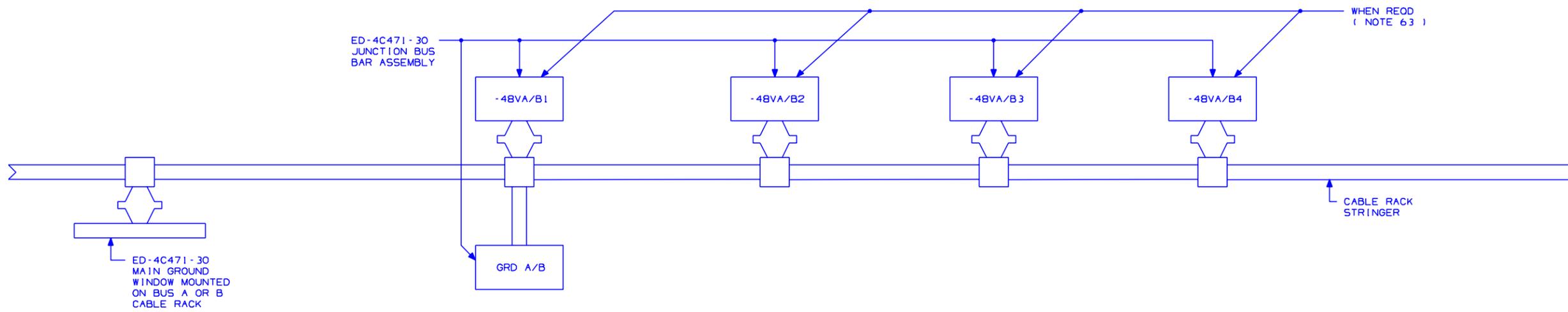
COPYRIGHT 1992 AT&T, ALL RIGHTS RESERVED		
DC POWER DISTRIBUTION CKT (6'-0" CABINETS)	DWG SIZE	ISSUE
	C2	14
AT&T	ED5D073-11	SHEET B22

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TOP VIEW  
 TYPICAL POWER CABLE RACK AND ED-4C471-30  
 JUNCTION BUS BAR ASSEMBLIES AT POWER  
 DISTRIBUTION CABINET ( PCFD )  
 SEE FIGS. HC & HD FOR TYPICAL SIDE VIEWS  
 SEE NOTES 62,70,77,78  
 FIG. HB

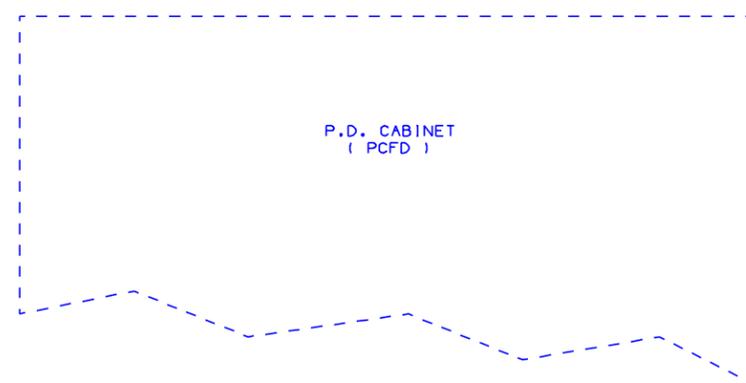
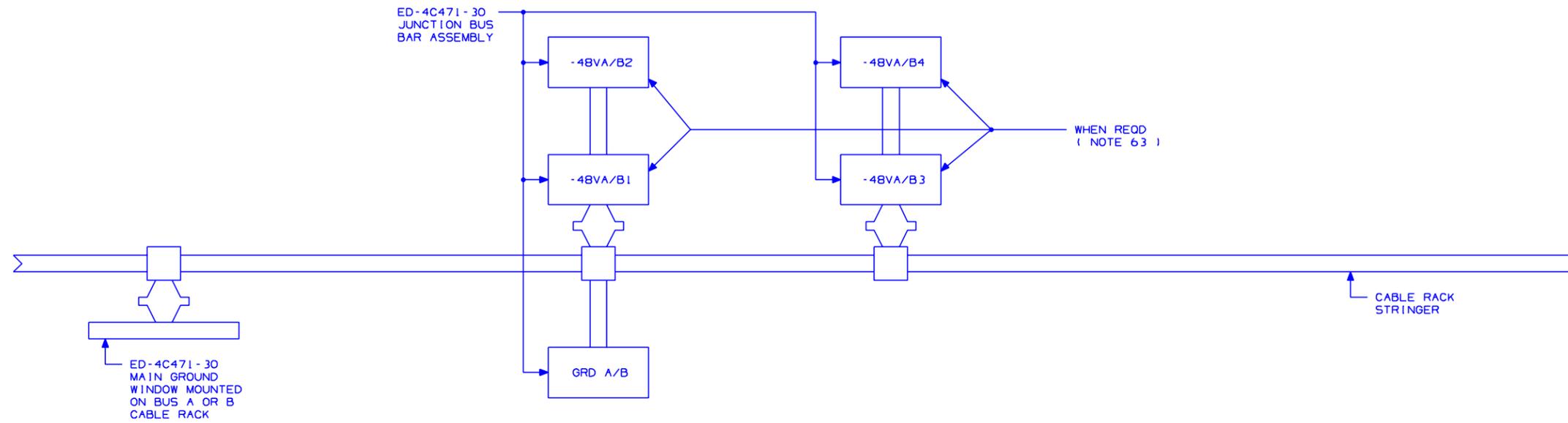
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DC POWER DISTRIBUTION CKT (6'-0" CABINETS)	DWG SIZE	ISSUE
	C2	14
AT&T	ED5D073-11	SHEET B23



SIDE VIEW(TYPICAL)  
SEE NOTES 62,70,77,78  
FIG. HC

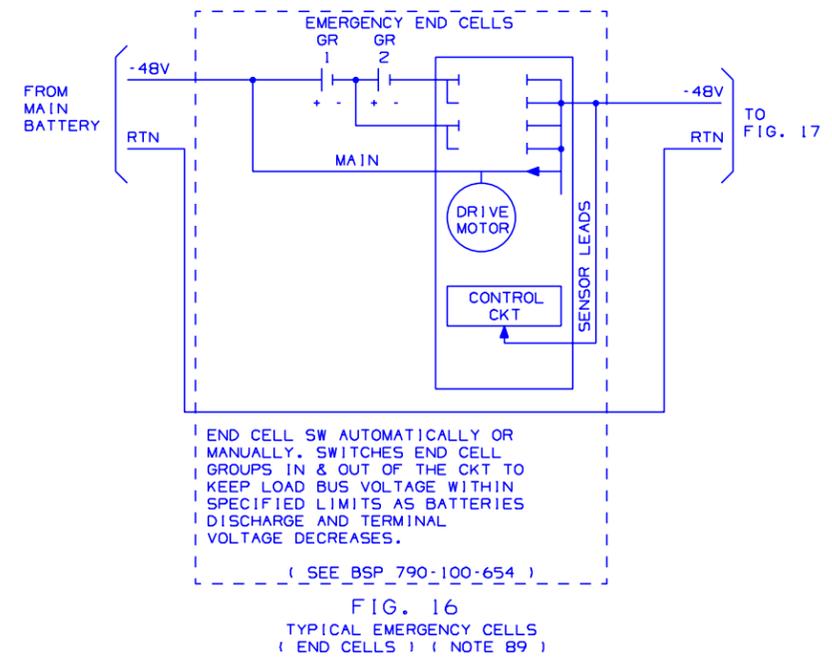
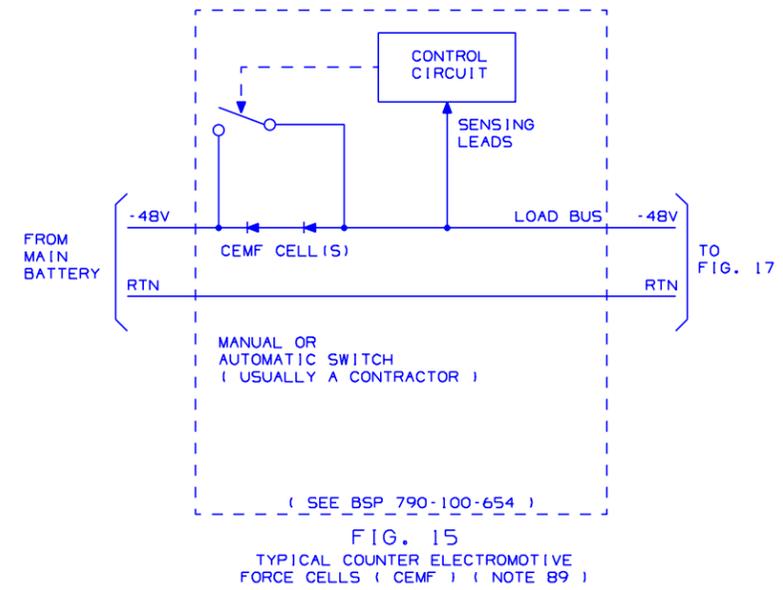
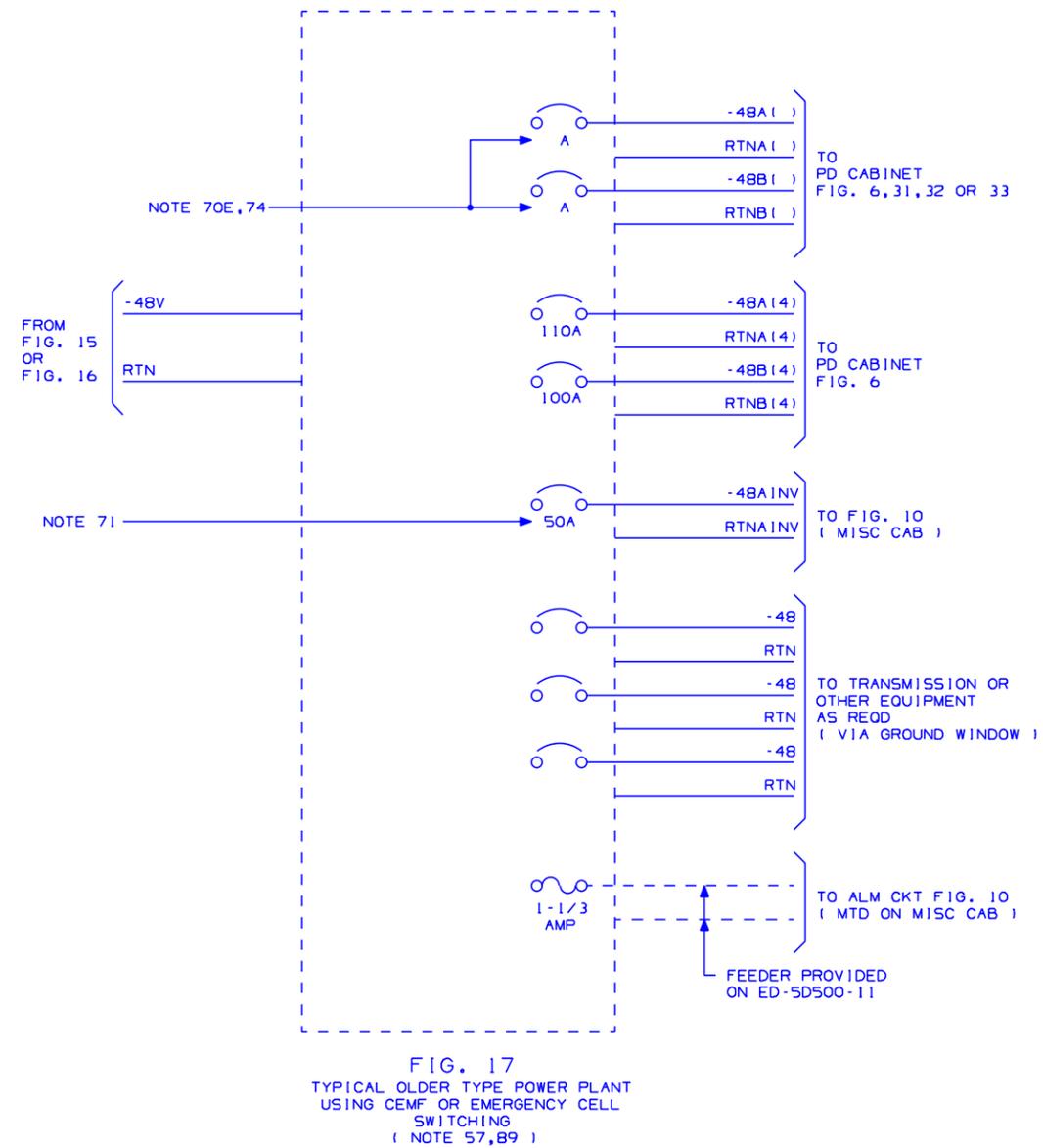
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DC POWER DISTRIBUTION CKT (6'-0" CABINETS)	DWG SIZE	ISSUE
	C2	14
AT&T	ED5D073-11	SHEET B24

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SIDE VIEW ( TYPICAL )  
SEE NOTES 62,70,77,78  
FIG. HD

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DC POWER DISTRIBUTION CKT (6'-0" CABINETS)	DWG SIZE	ISSUE
	C2	14
AT&T	ED5D073-11	SHEET B25



NOTE: FOR GROUND RULES SEE  
ED-50022-11 OR ED-50024-11.

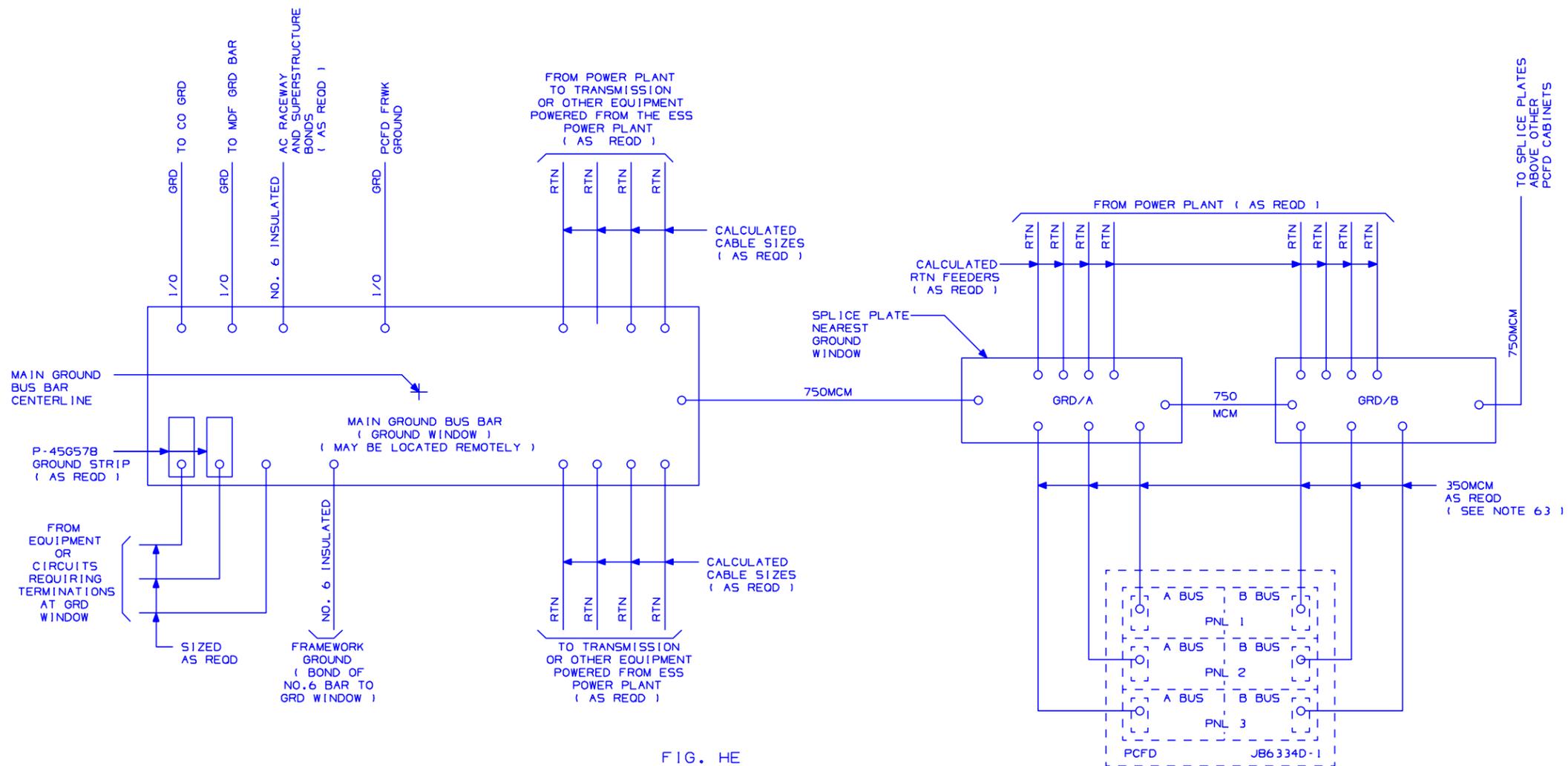


FIG. HE  
TYPICAL SINGLE POINT GROUND JUNCTION  
BUS BAR & RETURN SPLICE PLATES OVER  
THE PCFD CABINET USING ED-4C471-30  
BUS BARS ARRANGED FOR FIG. HB, HC OR HD

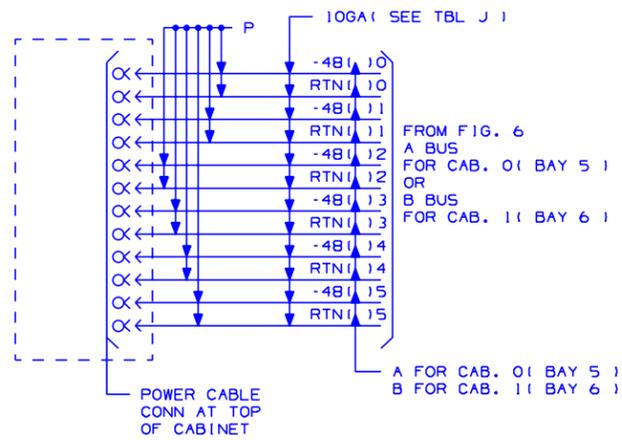


FIG. 19  
COMMUNICATION MODULE MODEL 2  
BASIC CABINET  
CABINET 0 ( BAY 5 )  
CABINET 1 ( BAY 6 )  
NOTE 85,95,96  
J5D020A-

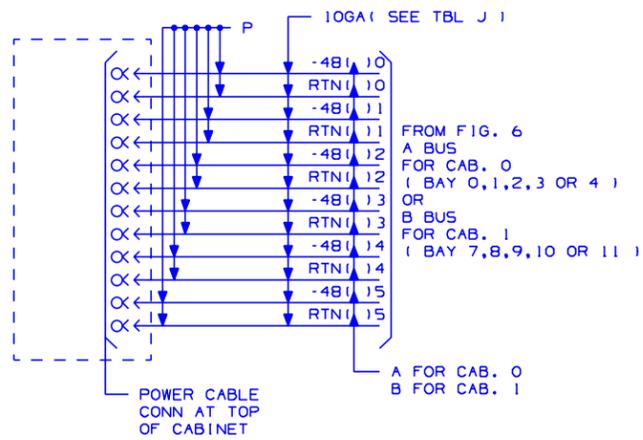


FIG. 20  
COMMUNICATION MODULE 2  
GROWTH CABINET  
CABINET 0 ( BAY 0,1,2,3 OR 4 )  
CABINET 1 ( BAY 7,8,9,10 OR 11 )  
NOTE 85,95,96  
J5D020B-

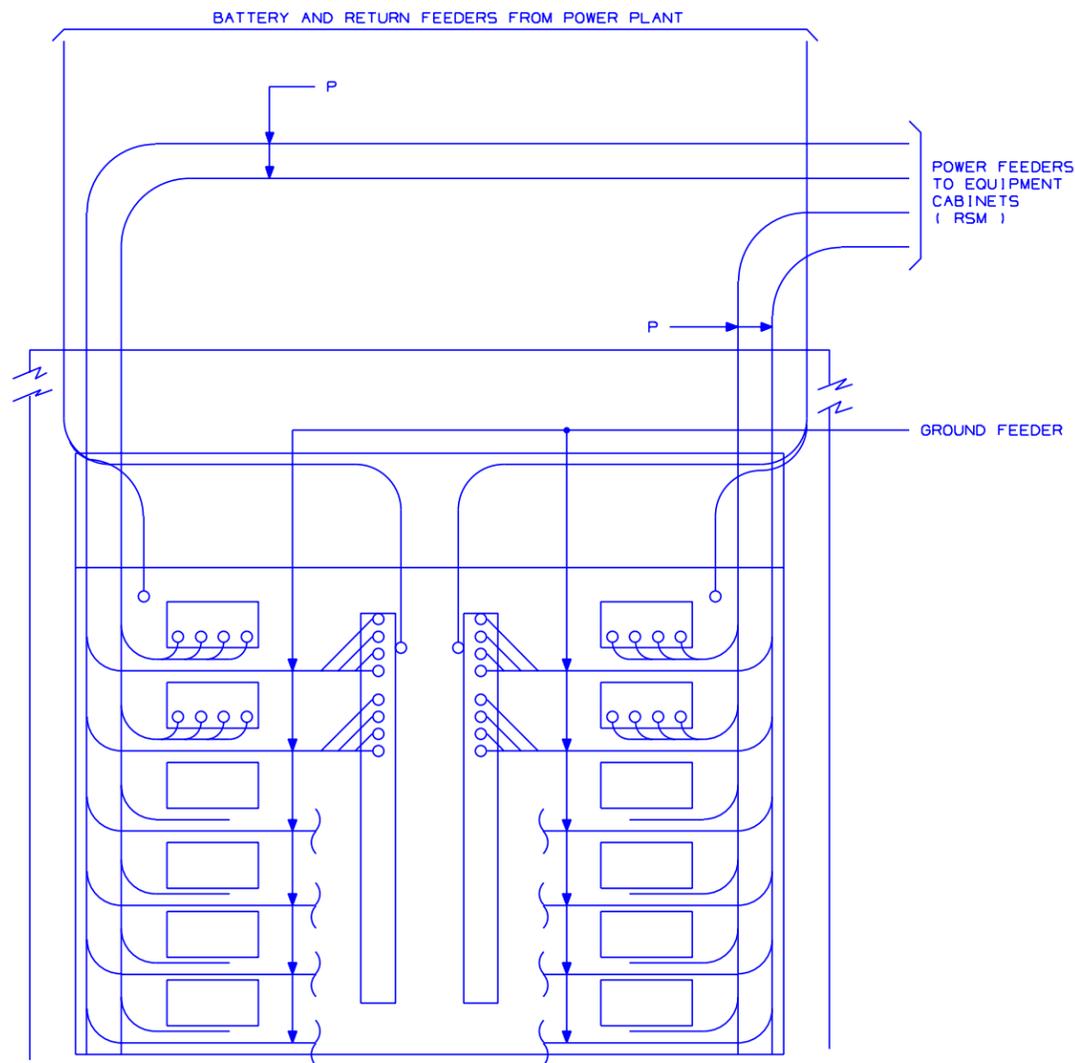


FIG. HG  
( REAR VIEW )  
METHOD OF ROUTING POWER  
FEEDERS WITHIN THE J5D005C-  
MISC CABINET ( FIG. 21 )

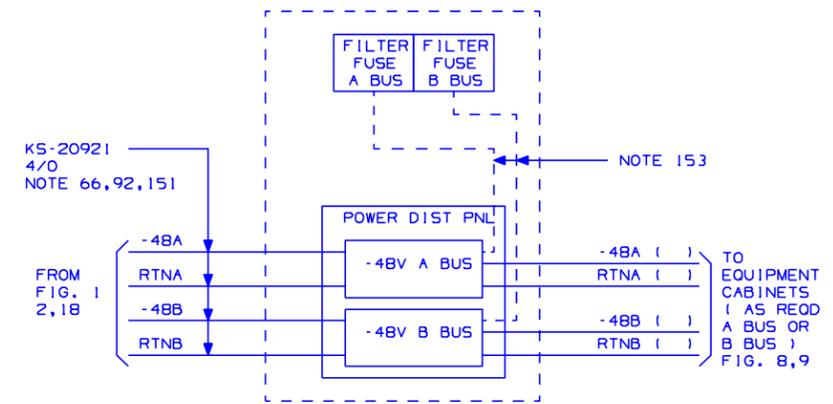


FIG. 21  
MISCELLANEOUS CABINET BAY ( )  
6 FOOT FOR RSM APPLICATIONS  
( J5D005C- )  
( NOTE 60,152 )

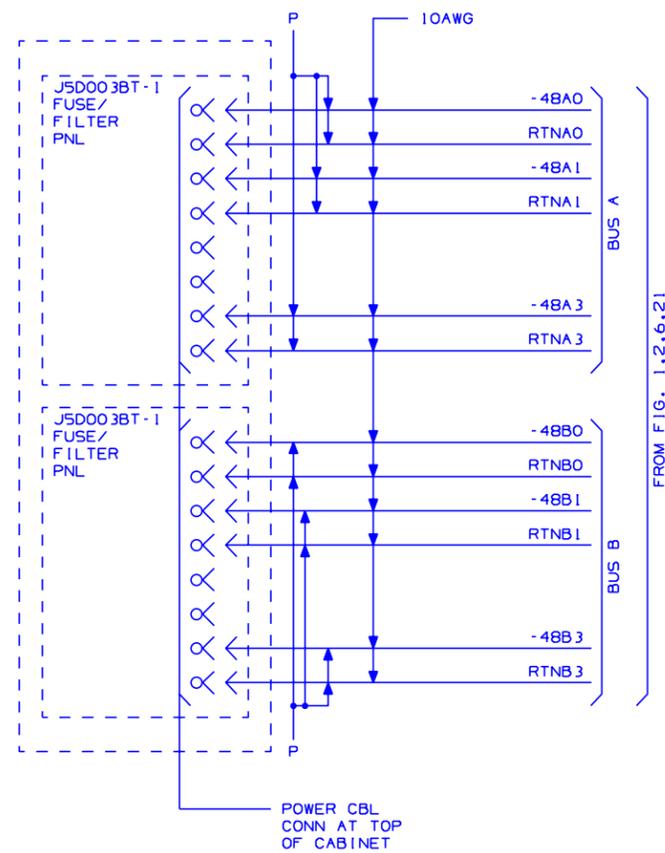


FIG. 22  
TRANSMISSION FACILITY CABINET  
( JIC251A- ) ( SEE TBL J ITEM 13 )

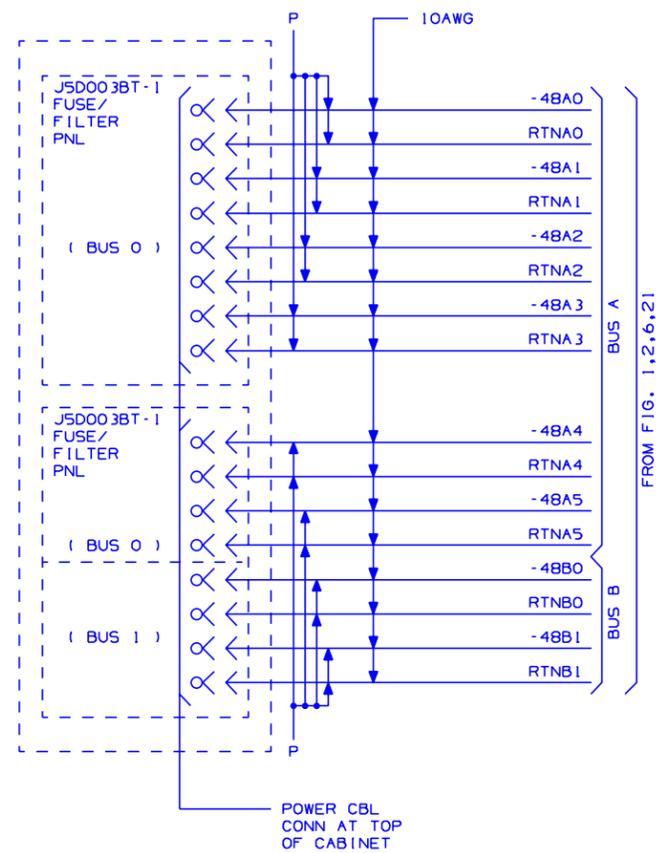


FIG. 23  
LINE TRUNK PERIPHERAL CABINET EQUIPPED  
WITH AN ISLU ON BUS 0 AND ANY UNIT  
NOT REQUIRING HIGH CURRENT FUSES ( NOTE 91,154 )  
( J5D003F- ) SEE TBL J ITEM 14,16

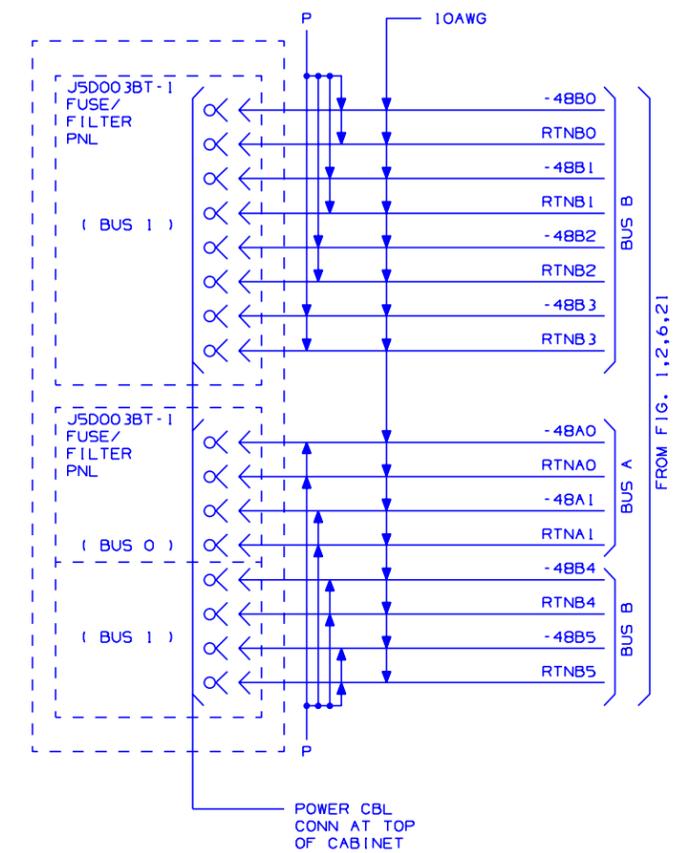


FIG. 24  
LINE TRUNK PERIPHERAL CABINET EQUIPPED  
WITH AN ISLU ON BUS 1 AND ANY UNIT  
NOT REQUIRING HIGH CURRENT FUSES ( NOTE 91,154 )  
( J5D003F- ) SEE TBL J ITEM 15,17

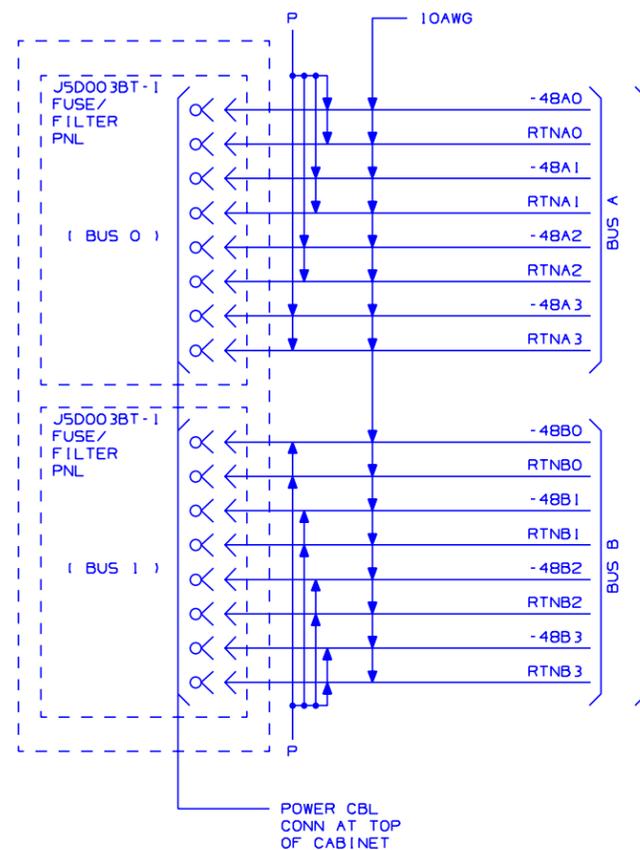


FIG. 25  
 LINE TRUNK PERIPHERAL CABINET  
 EQUIPPED WITH TWO ISLU'S ( NOTE 91,154 )  
 ( J5D003F-1 ) ( SEE TABLE J ITEM 18 )

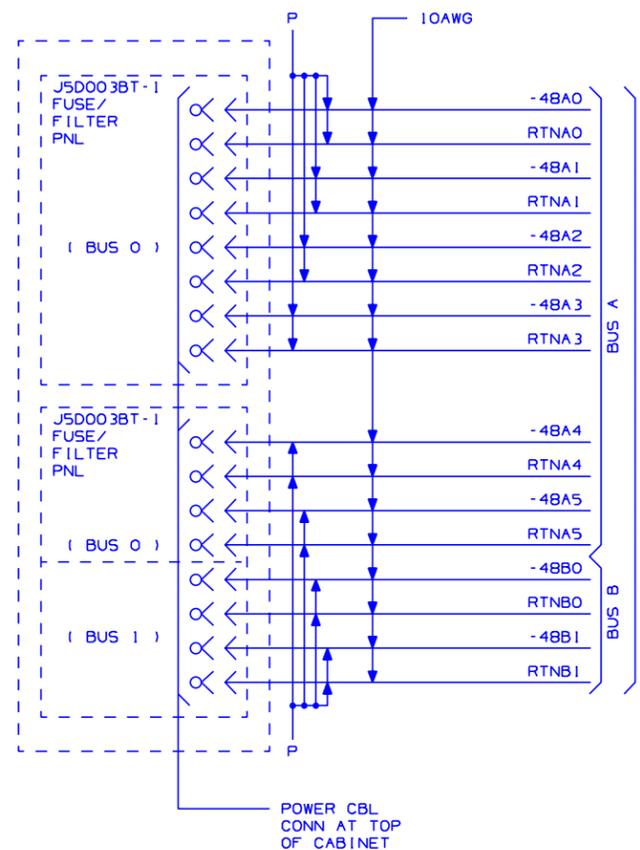


FIG. 26  
 REMOTE INTEGRATED SERVICE LINE UNIT  
 CABINET E/W RISLU ON BUS 0  
 ( OSPS APPLICATION )  
 ( J5D003G-1 ) SEE TABLE J ITEM 26

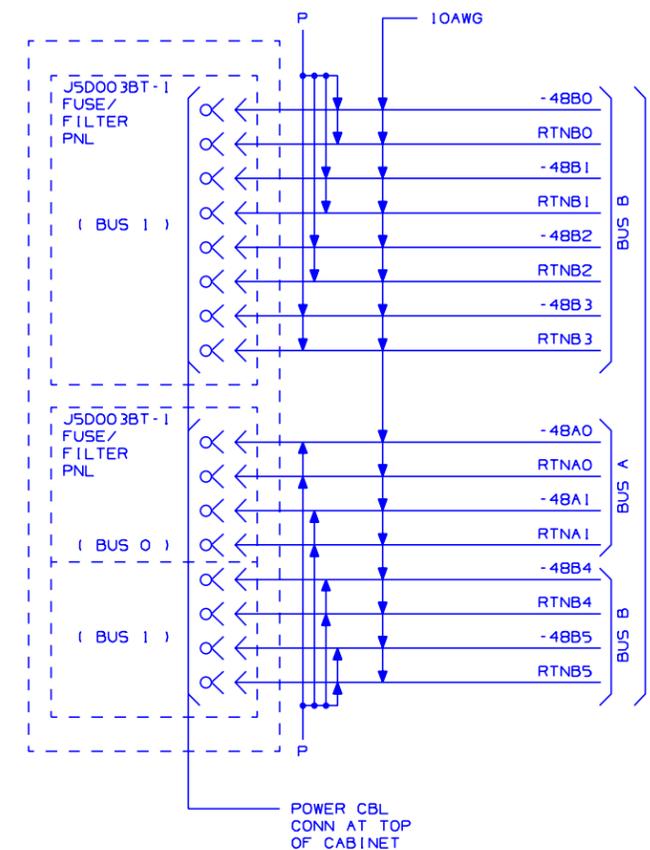


FIG. 27  
 REMOTE INTEGRATED SERVICE LINE UNIT  
 CABINET E/W RISLU ON BUS 1  
 ( OSPS APPLICATION )  
 ( J5D003G-1 ) SEE TABLE J ITEM 27

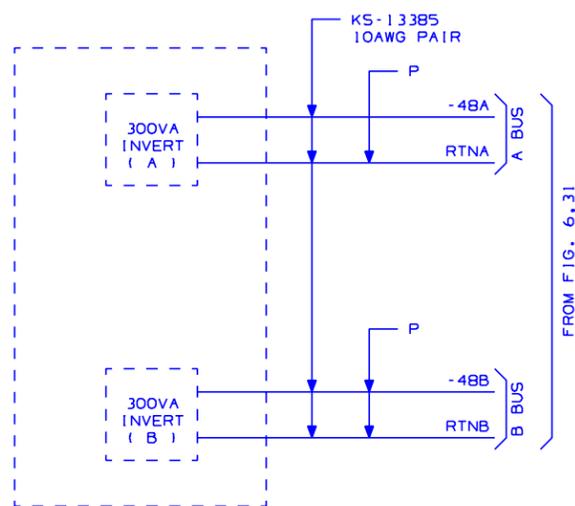


FIG. 28  
DATA SET CABINET  
J5D003K- ( SEE TABLE J ITEM 21 )  
( NOTE 155,156 )

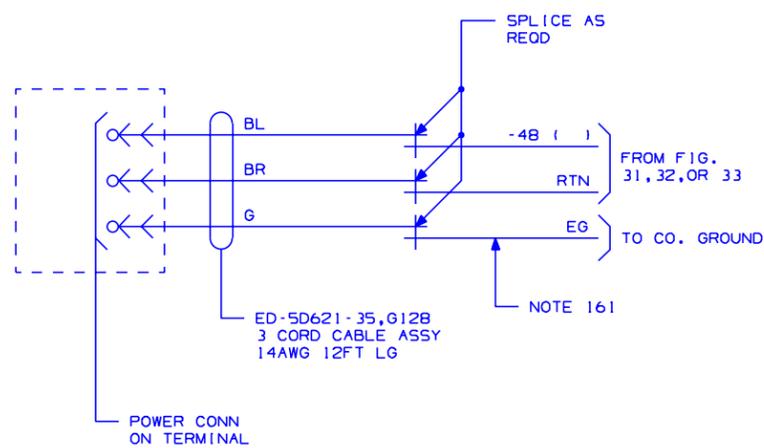


FIG. 29  
( BST FOR OSPS APPLICATION )  
( SEE TABLE J ITEM 22 )  
( NOTE 157,161 )

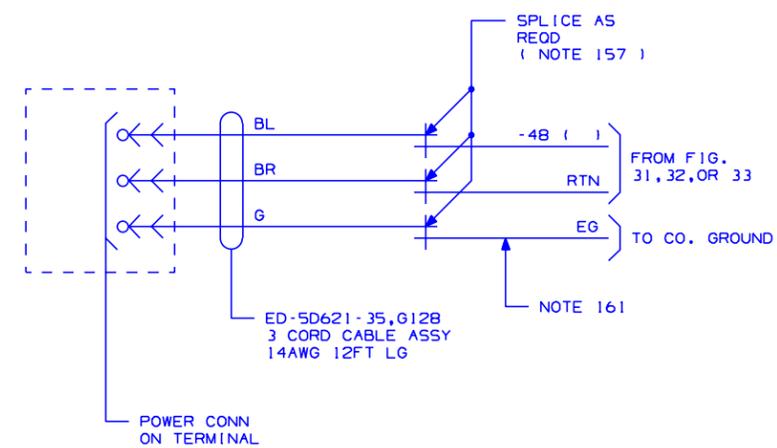


FIG. 30  
( VDT FOR OSPS APPLICATION )  
( SEE TABLE J ITEM 23 )  
( NOTE 157,161 )

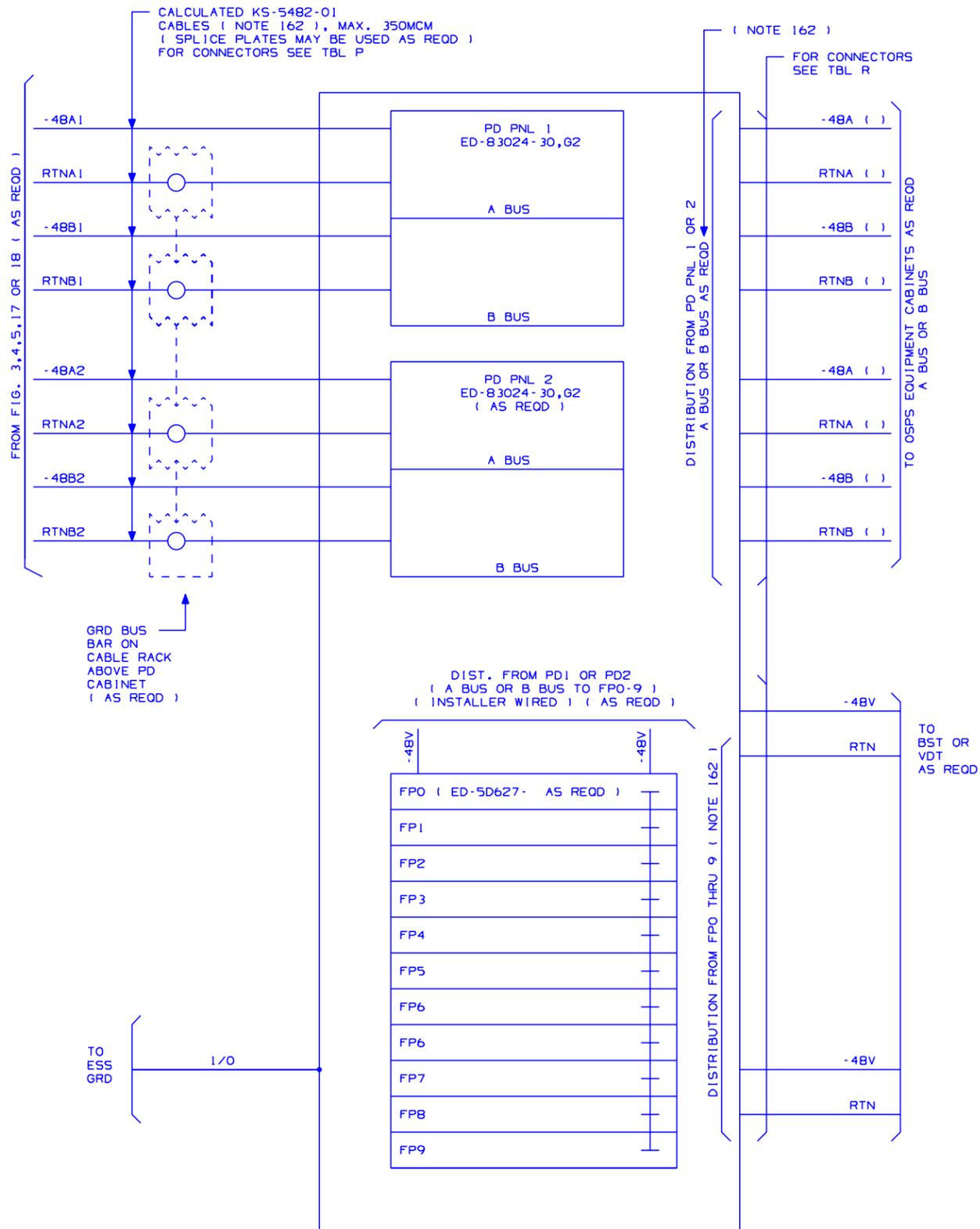


FIG. 31  
 OPC POWER DIST. CAB J5D003H-1 FOR REMOTE OSC SITE WITH DEDICATED POWER PLANT AND LOCAL OPC PD ( PD LOCATED WITH OSPS EQUIPMENT AND ON ESS GROUND ) ( NOTE 156,158,162 )

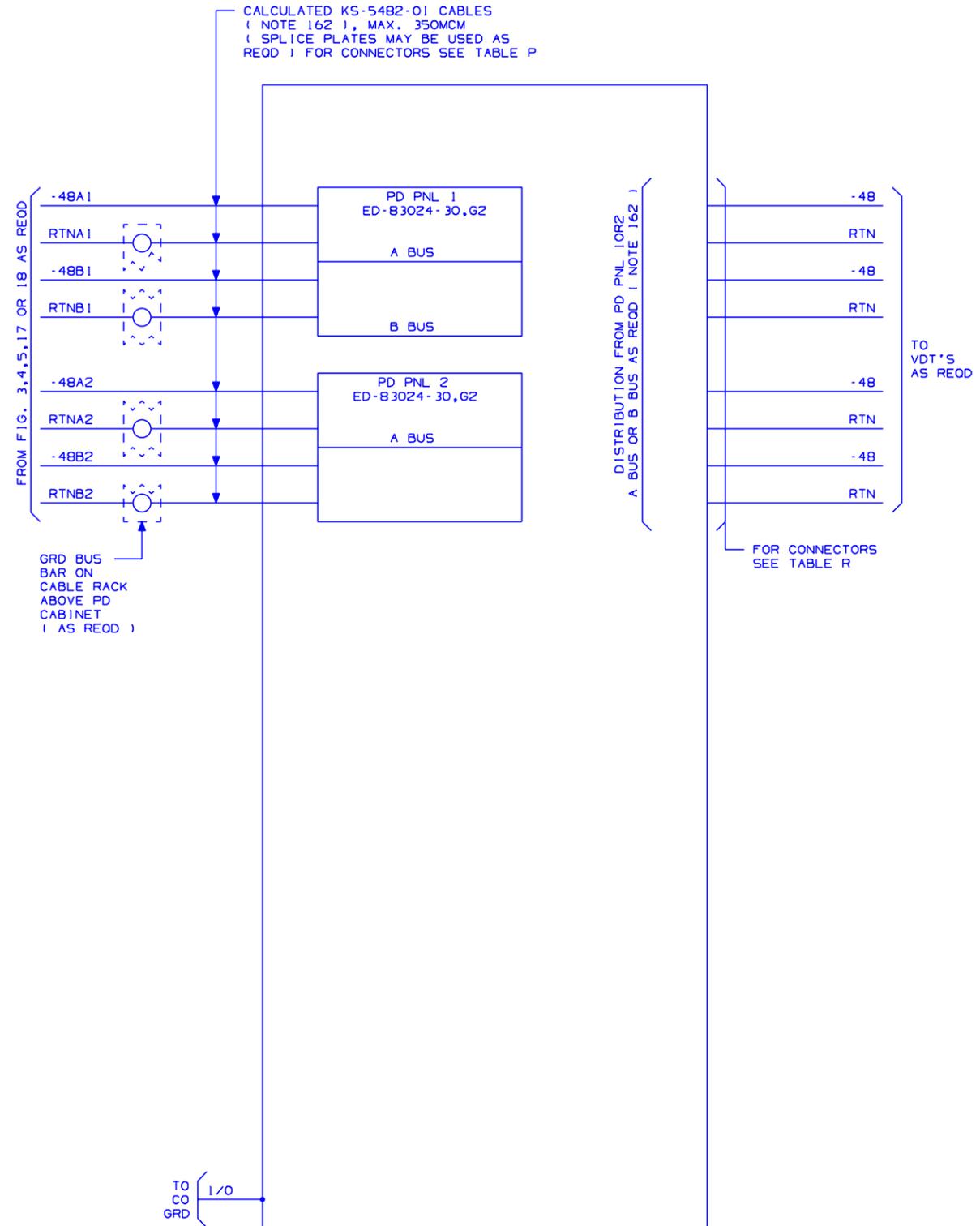


FIG. 32  
 OPC POWER DISTRIBUTION CABINET ( J5D003H-1 ) FOR OSC SITE SHARING POWER PLANT WITH A SESS SWITCH AND THE OPC PD REMOTED WITH 2, 3 OR 4 VDT'S ASSIGNED TO A FUSE POSITION ON THE POWER DISTRIBUTION PANEL ( NO ED-5D627-30 FUSE PANELS USED ) ( NOTE 156,159,162 ) ( PD NOT IN ESS AREA )

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	C2	14
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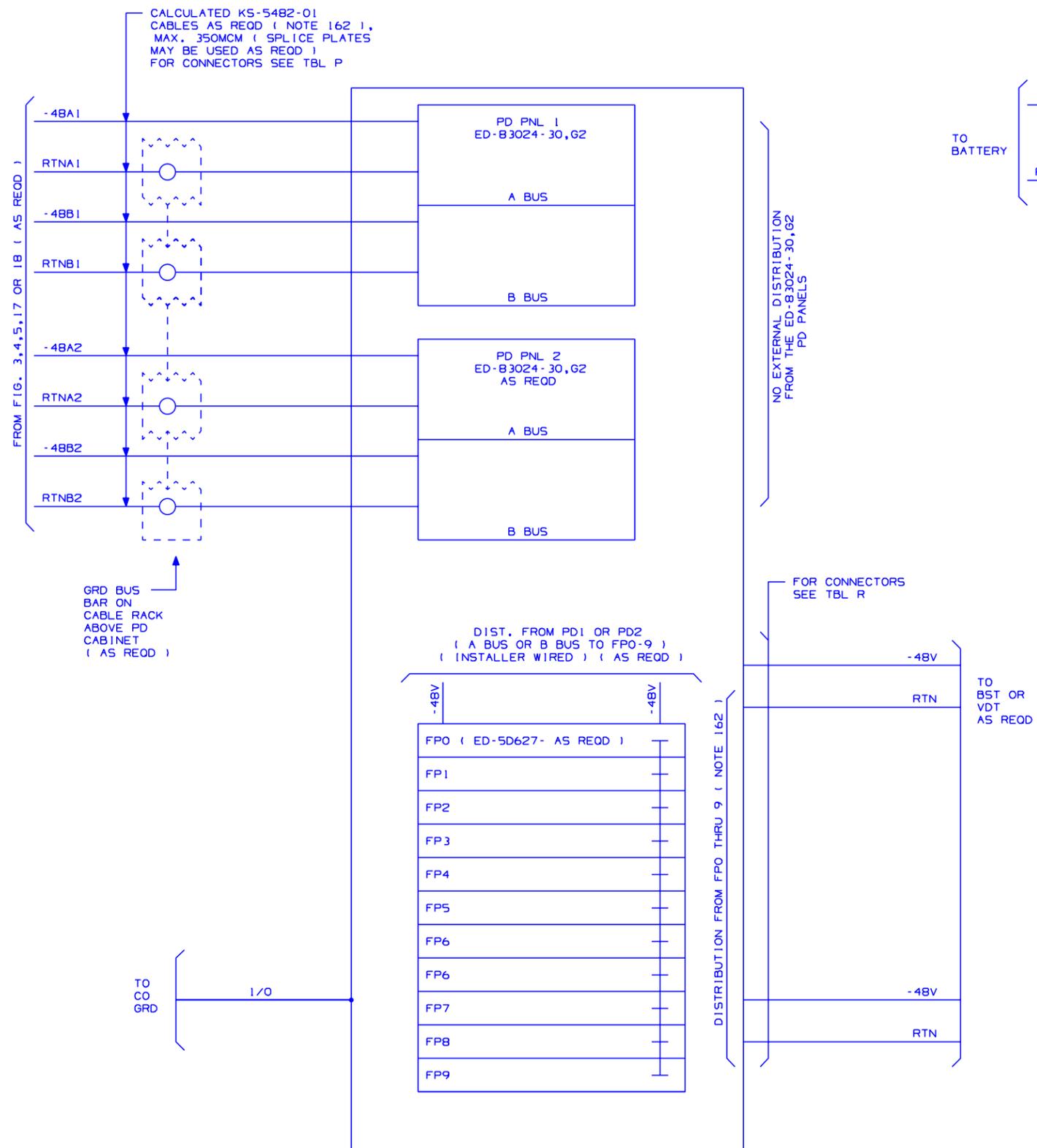


FIG. 33  
 OPC POWER DISTRIBUTION CABINET ( J5D003H-1 )  
 FOR OSC SITE SHARING POWER PLANT  
 WITH SESS SWITCH AND OPC PD REMOTED  
 WITH BST'S AND VDT'S ( PD NOT IN ESS AREA )  
 ( NOTE 156,160,162 )

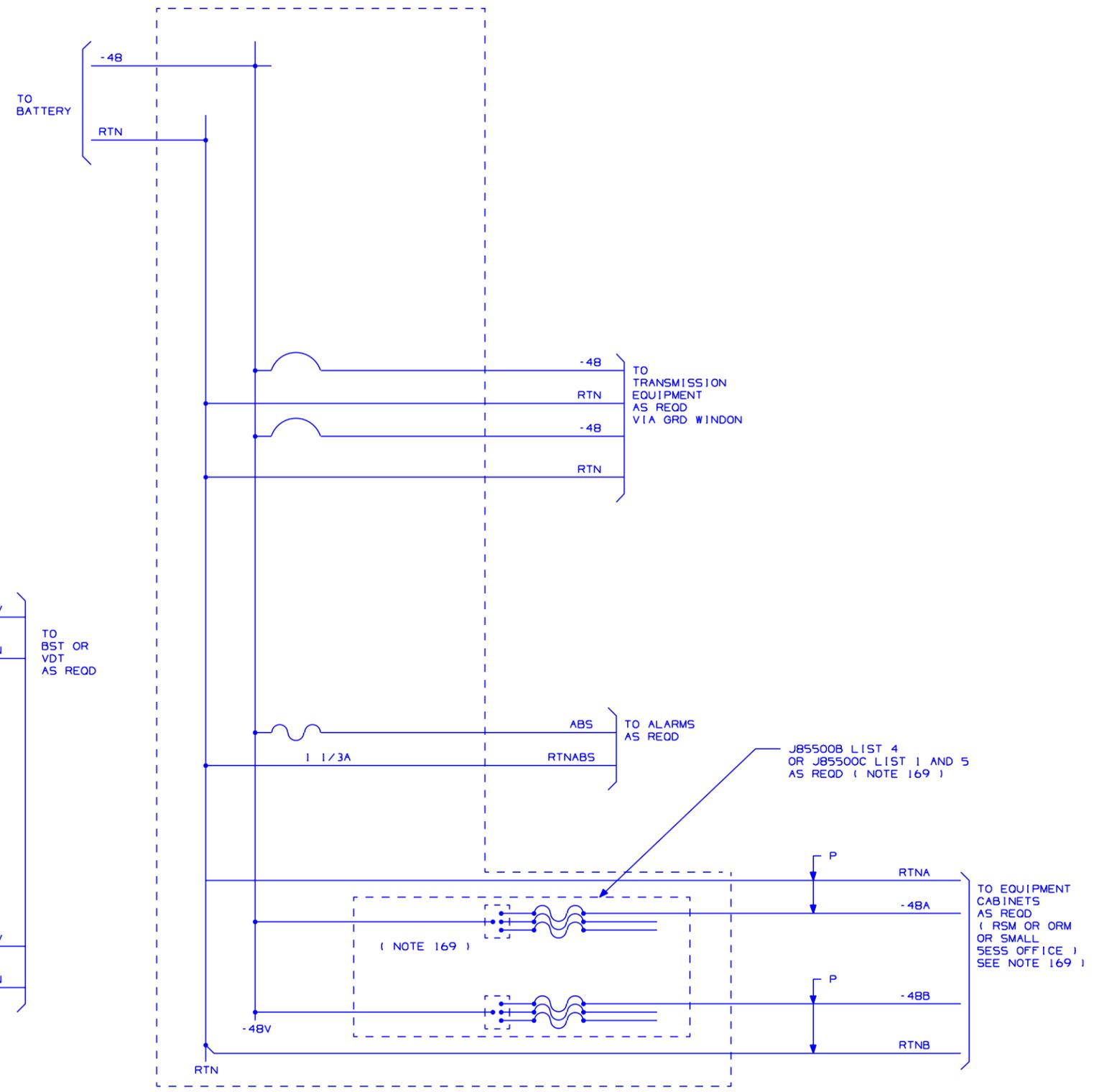


FIG. 34  
 LINEAGE POWER PLANT 400 AMPERE ( J85500B OR J85500C )  
 ( SEE NOTE 169 )

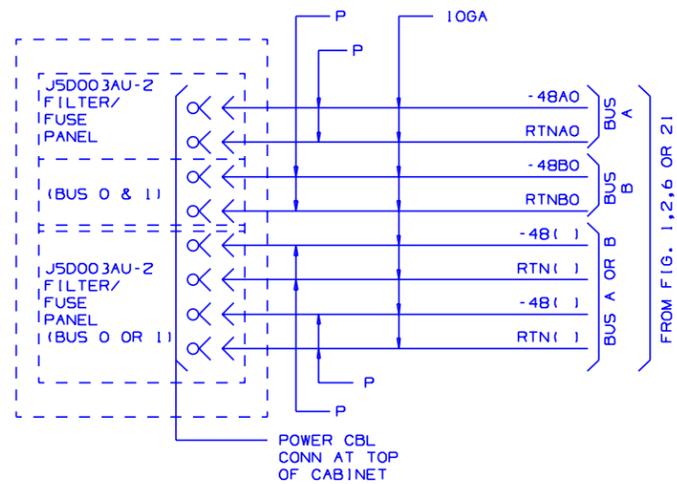


FIG. 35

SWITCHING MODULE CONTROL CABINET ARRANGED FOR ANY UNIT(S) NOT REQUIRING HIGH CURRENT FUSES (ASSIGNED TO SPLIT PANEL) AND ONE OR TWO LU UNITS. (SEE NOTE 91 AND TABLE J ITEM 24)  
J5D003L-

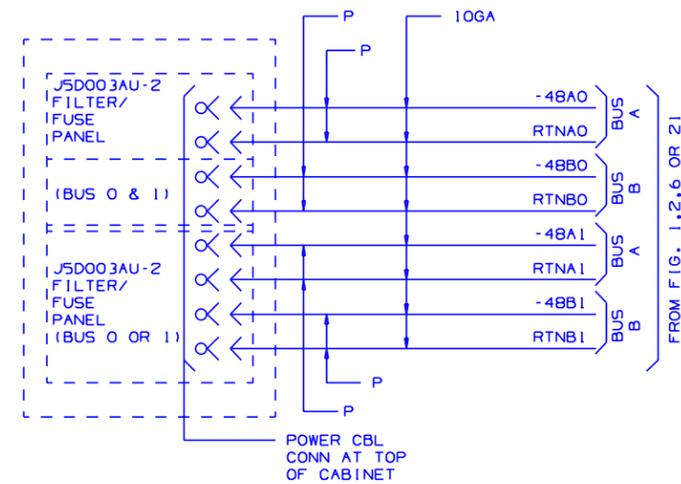


FIG. 36

SWITCHING MODULE CONTROL CABINET ARRANGED FOR TWO MCTU2 AND TWO DLTU2 UNITS. (SEE NOTE 91 AND TABLE J ITEM 25)  
J5D003L-

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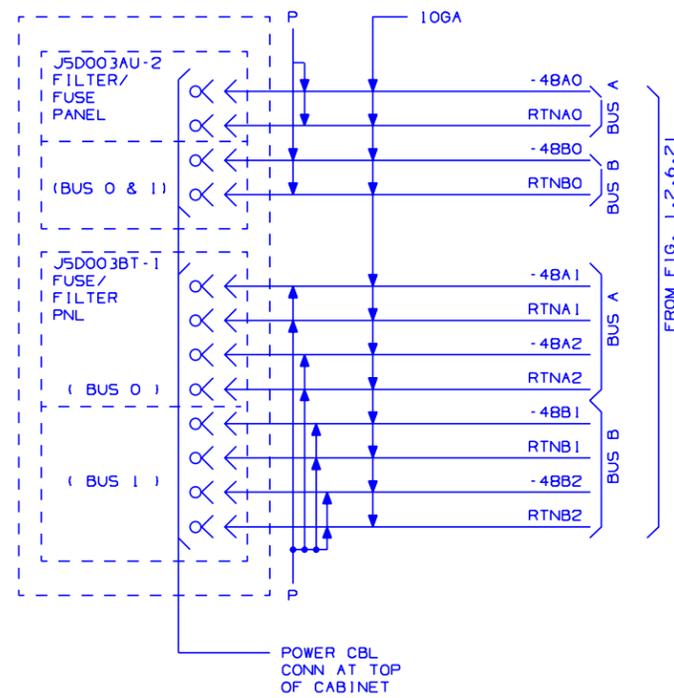


FIG. 37  
 SWITCHING MODULE CONTROL CABINET ARRANGED  
 FOR MCTU2 AND TWO PSU UNITS OR ANY UNIT(S)  
 NOT REQUIRING HIGH CURRENT FUSES. (SEE NOTE 91  
 AND TABLE J ITEM 26)  
 J5D003L-

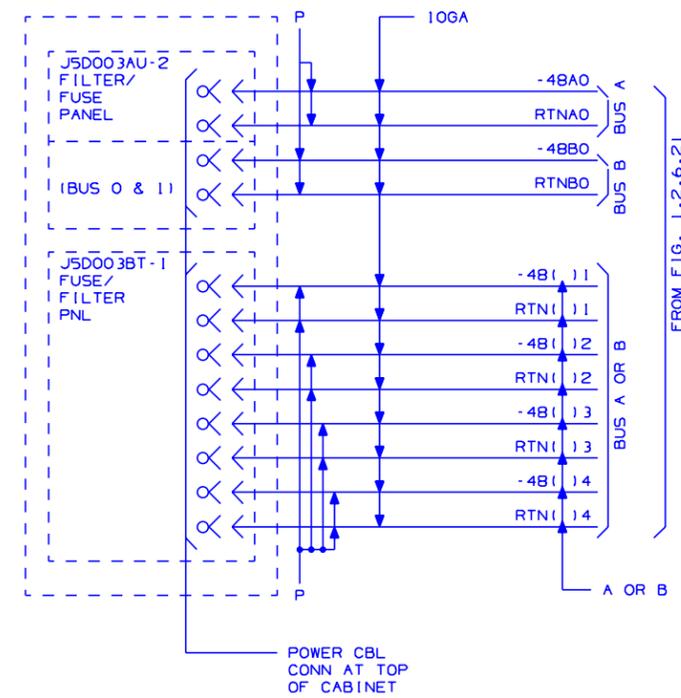


FIG. 38  
 SWITCHING MODULE CONTROL CABINET ARRANGED  
 FOR AN MCTU2 UNIT AND AN ISLU. (SEE NOTE 91,  
 154 AND TABLE J ITEM 27)  
 J5D003L-



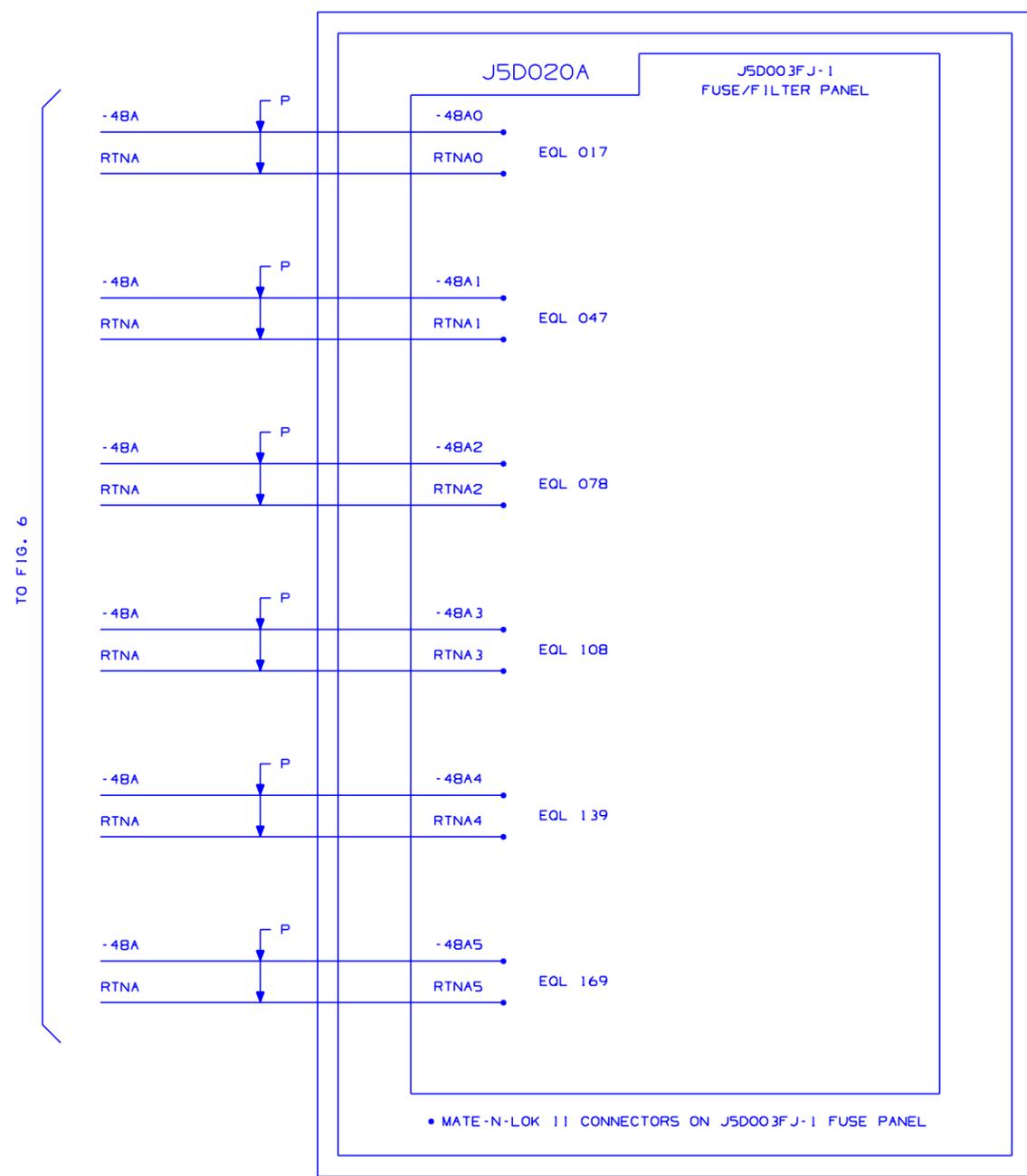


FIG. 40  
 COMMUNICATION MODULE MODEL 2  
 BASIC CABINET  
 CABINET 0 (BAY 5)  
 (SEE NOTES 85, 95, 96, 174)

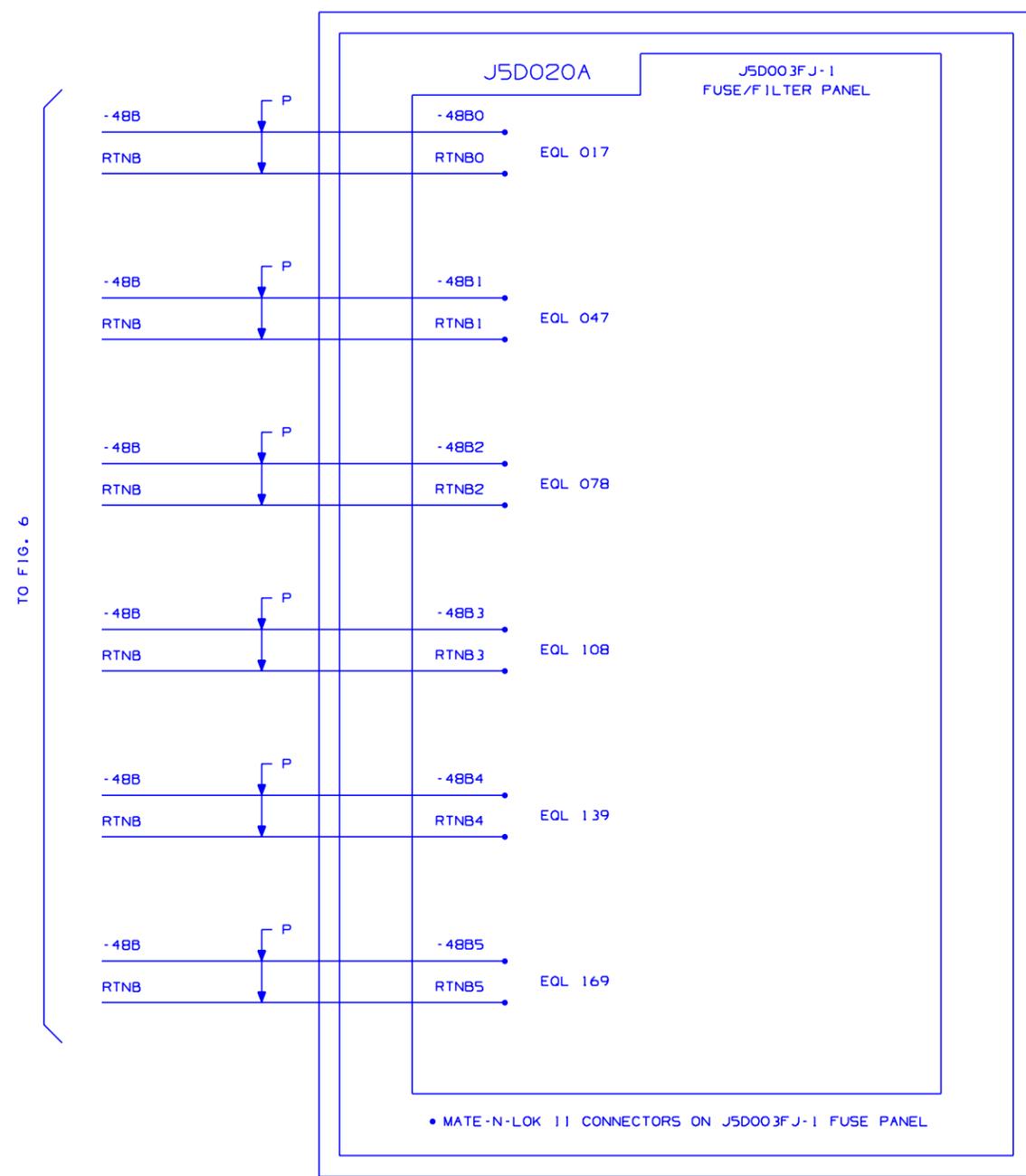


FIG. 41  
 COMMUNICATION MODULE MODEL 2  
 BASIC CABINET  
 CABINET 1 (BAY 6)  
 (SEE NOTES 85, 95, 96, 174)

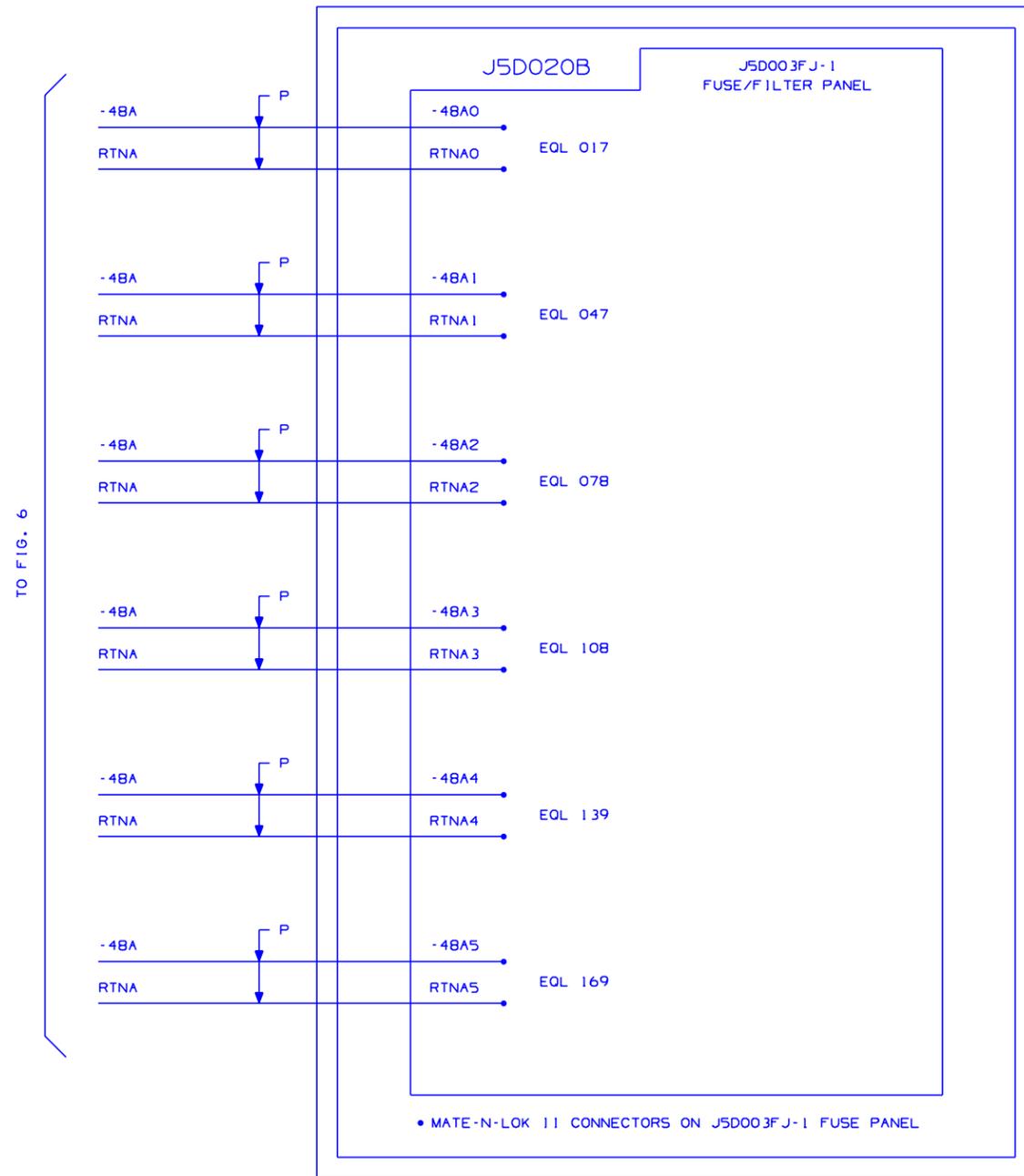


FIG. 42  
 COMMUNICATION MODULE 2  
 GROWTH CABINET  
 CABINET 0 (BAY 0,1,2,3 OR 4)  
 (SEE NOTES 85,95,96,174)

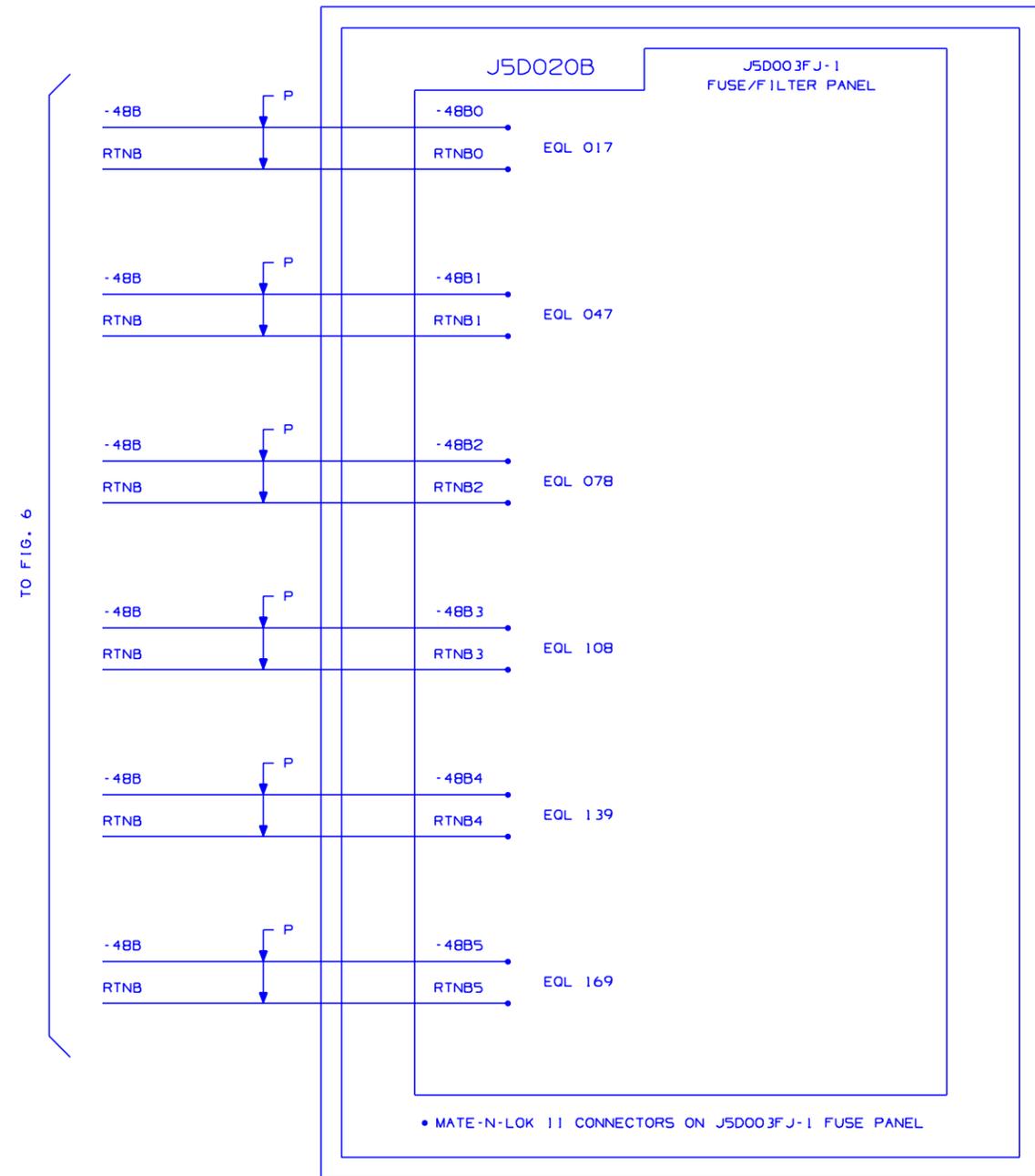


FIG. 43  
 COMMUNICATION MODULE 2  
 GROWTH CABINET  
 CABINET 1 (BAY 7,8,9,10 OR 11)  
 (SEE NOTES 85,95,96,174)

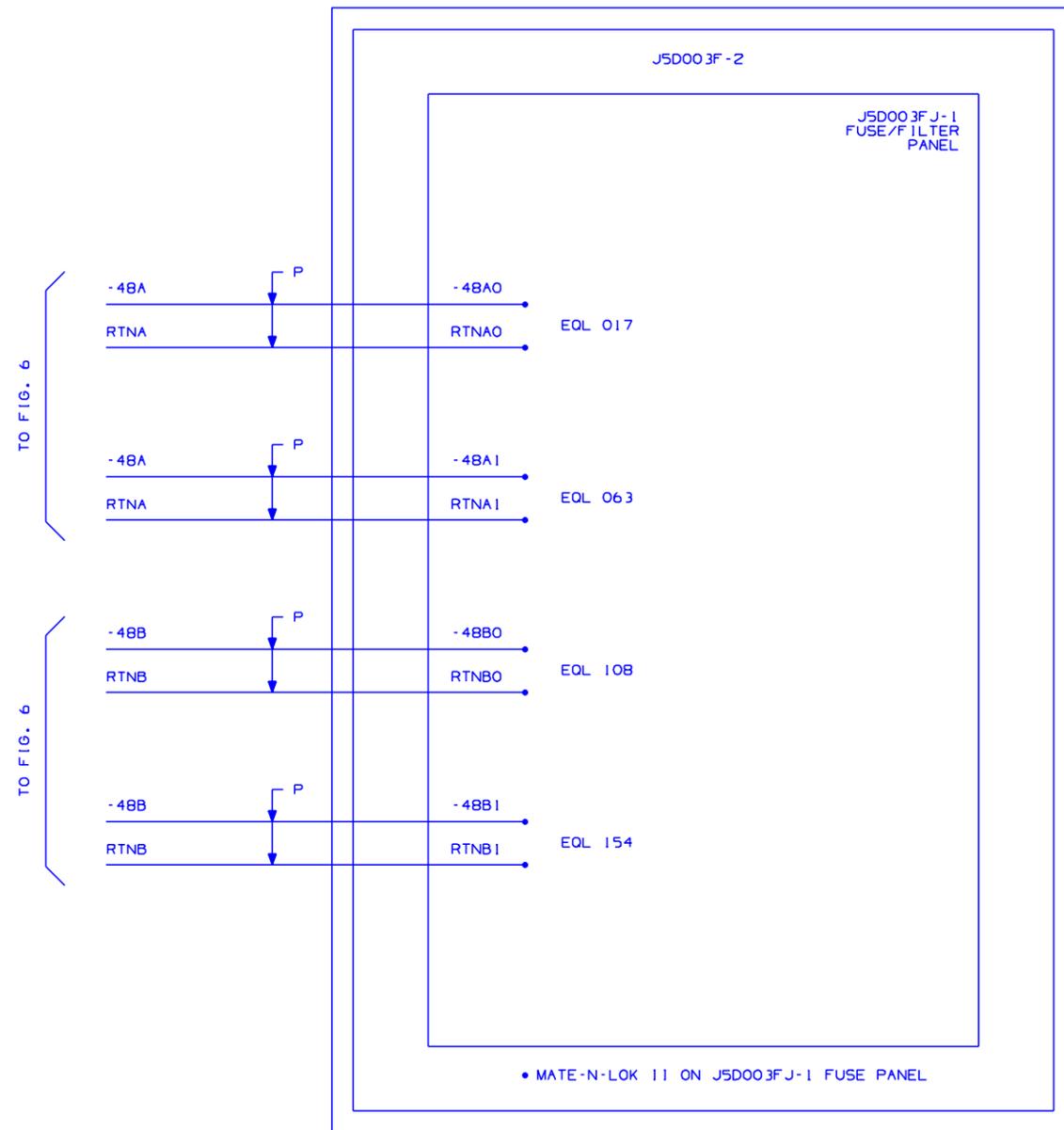


FIG. 44  
 LTP CABINET  
 E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
 2 'A' FEEDERS AND 2 'B' FEEDERS  
 (SEE NOTES 86,91,154,174)

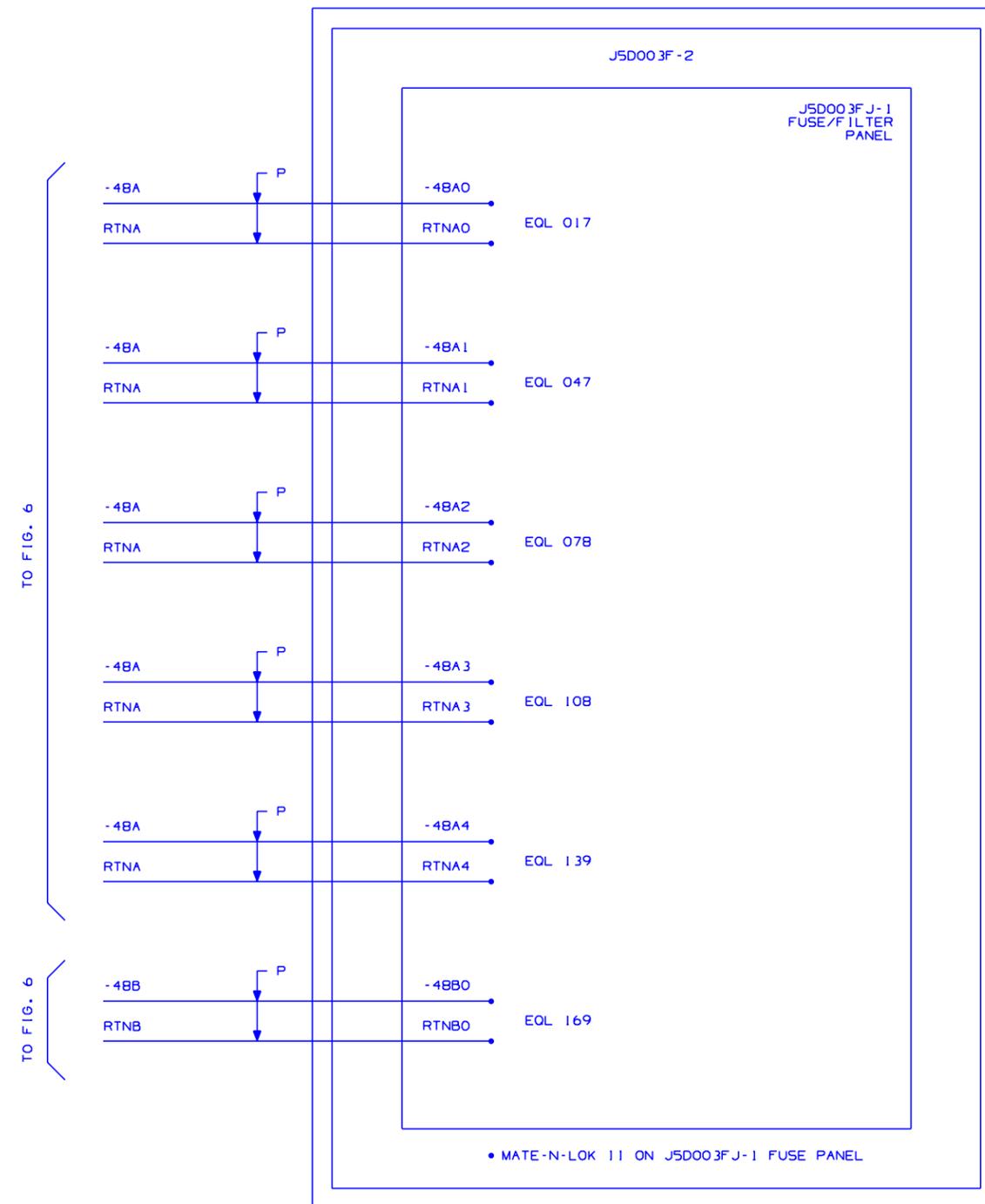


FIG. 45  
 LTP CABINET  
 E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
 5 'A' FEEDERS AND 1 'B' FEEDER  
 (SEE NOTES 86,91,154,174)

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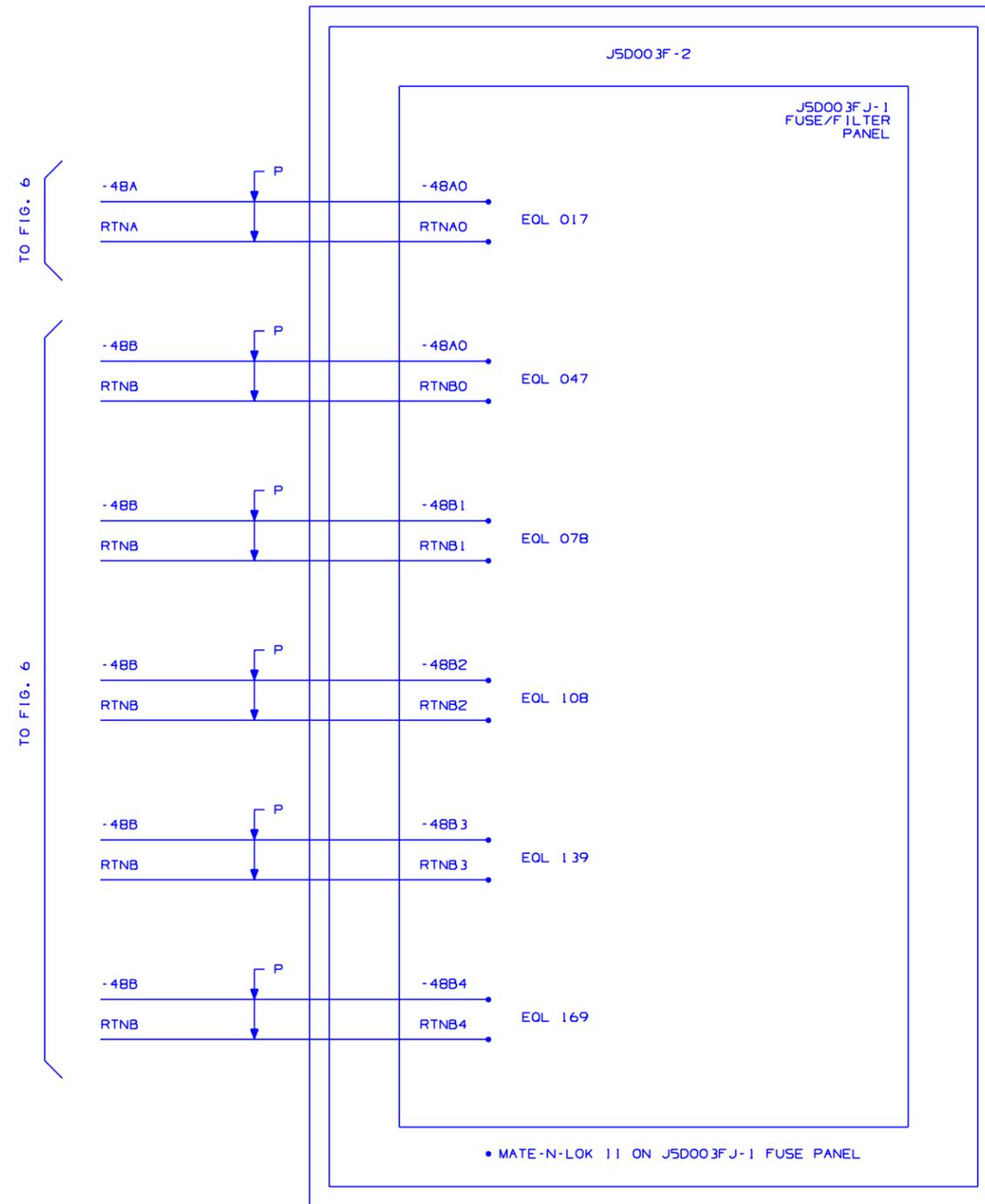


FIG. 46  
LTP CABINET  
E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
1 'A' FEEDER AND 5 'B' FEEDERS  
(SEE NOTES 86,91,154,174)

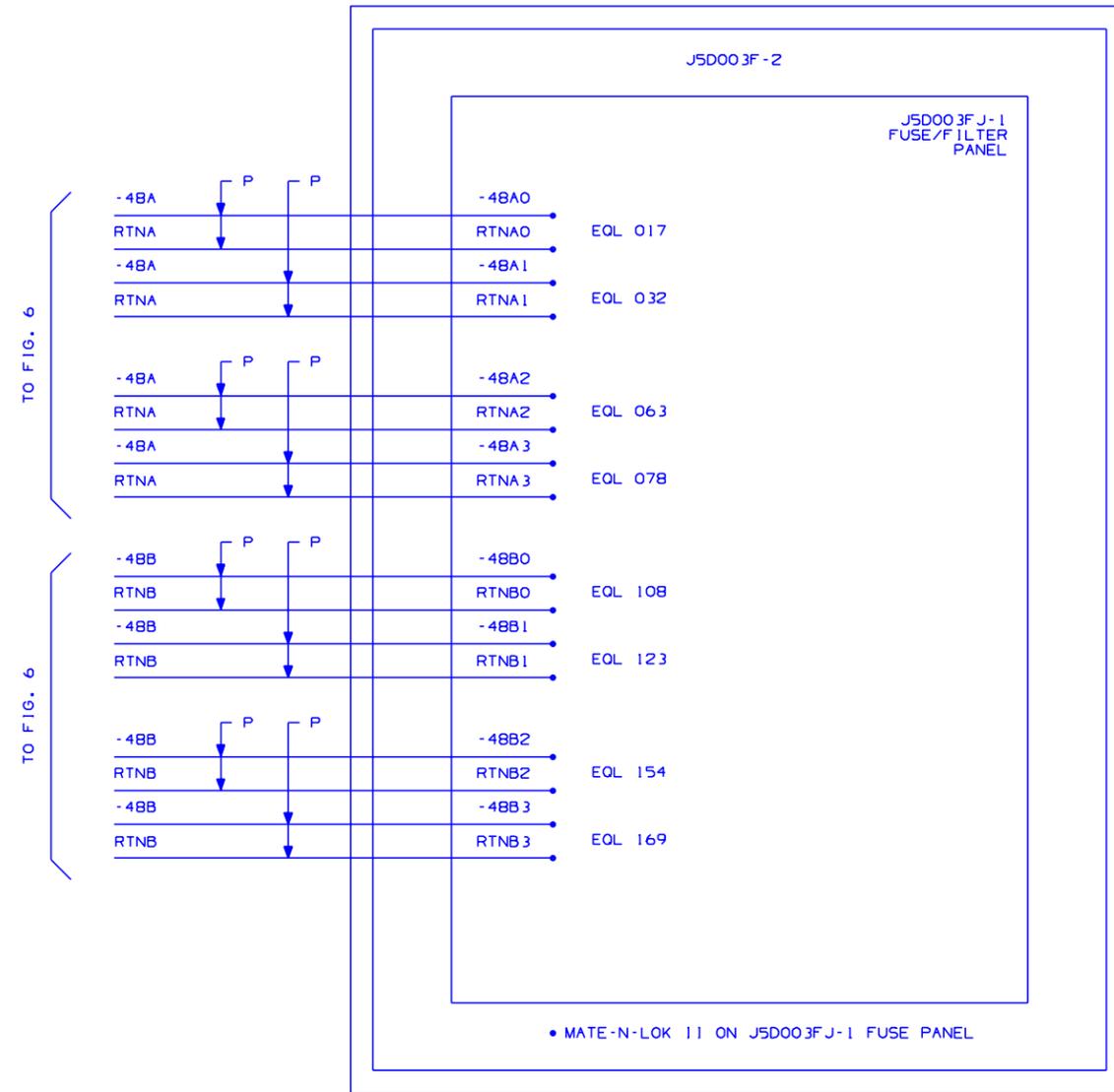


FIG. 47  
LTP CABINET  
E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
4 'A' FEEDERS AND 4 'B' FEEDERS  
(SEE NOTES 86,91,154,174)

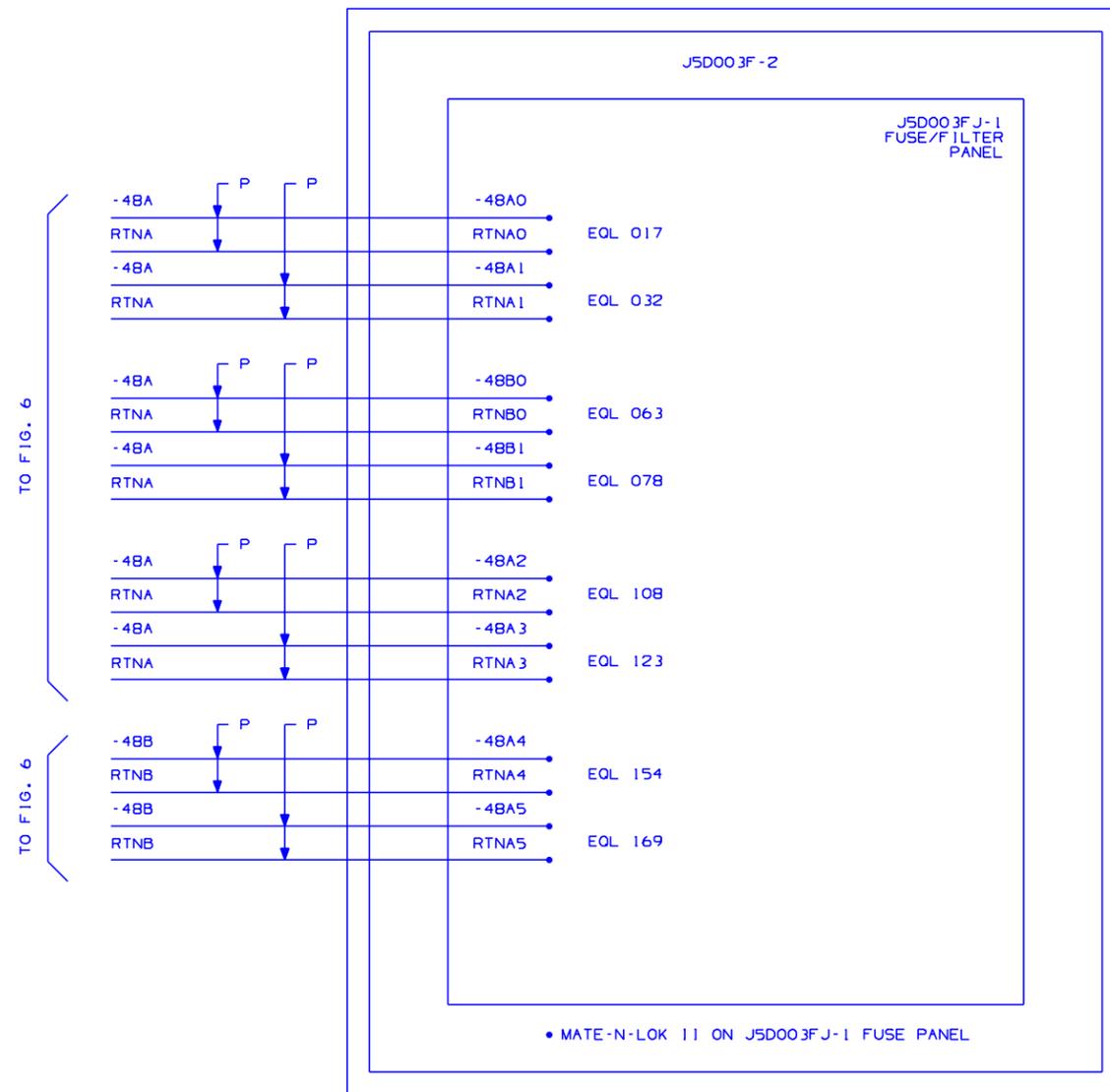


FIG. 48  
LTP CABINET  
E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
6 'A' FEEDERS AND 2 'B' FEEDERS  
(SEE NOTES 86,91,154,174)

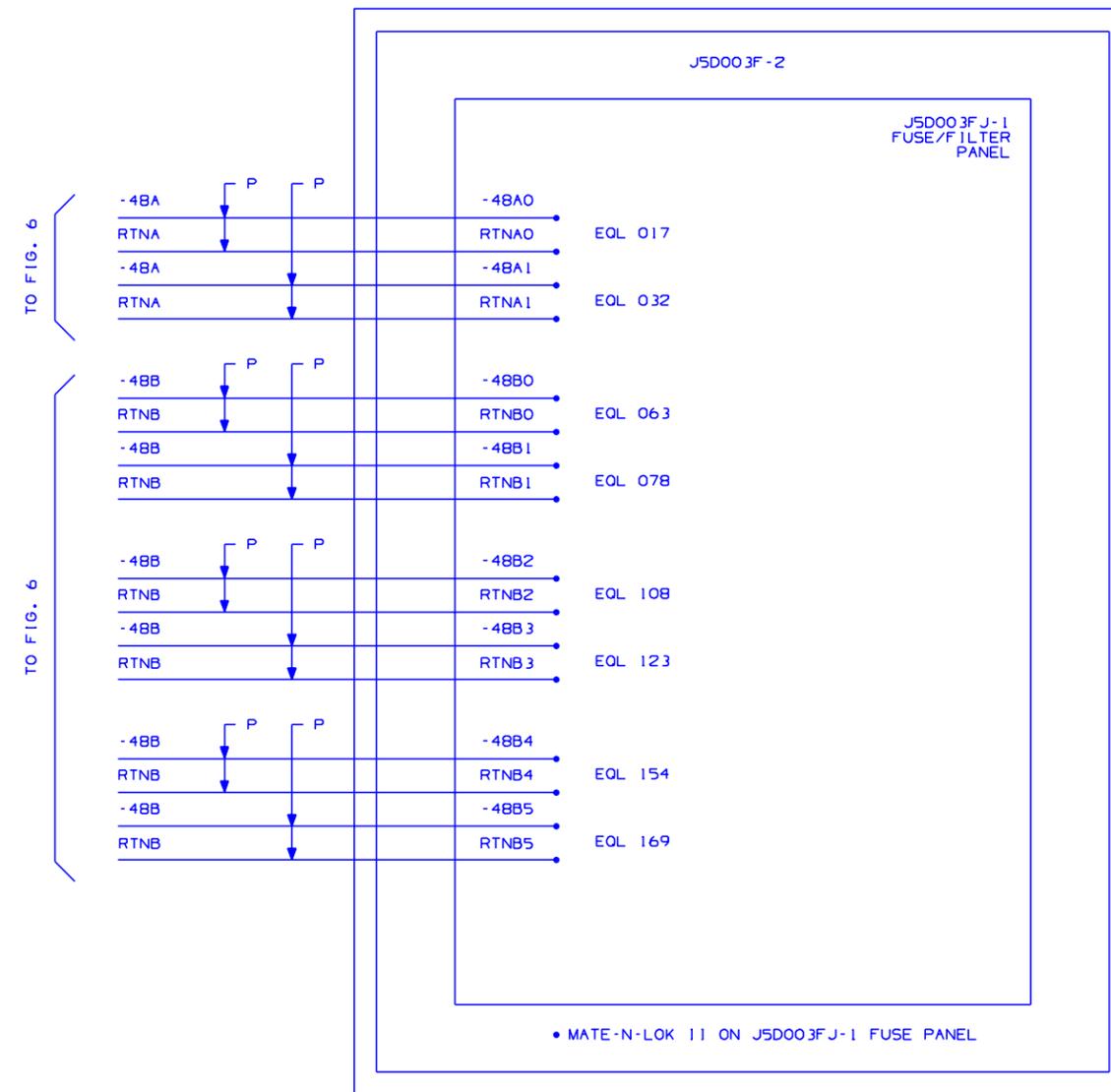


FIG. 49  
LTP CABINET  
E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
2 'A' FEEDERS AND 6 'B' FEEDERS  
(SEE NOTES 86,91,154,174)

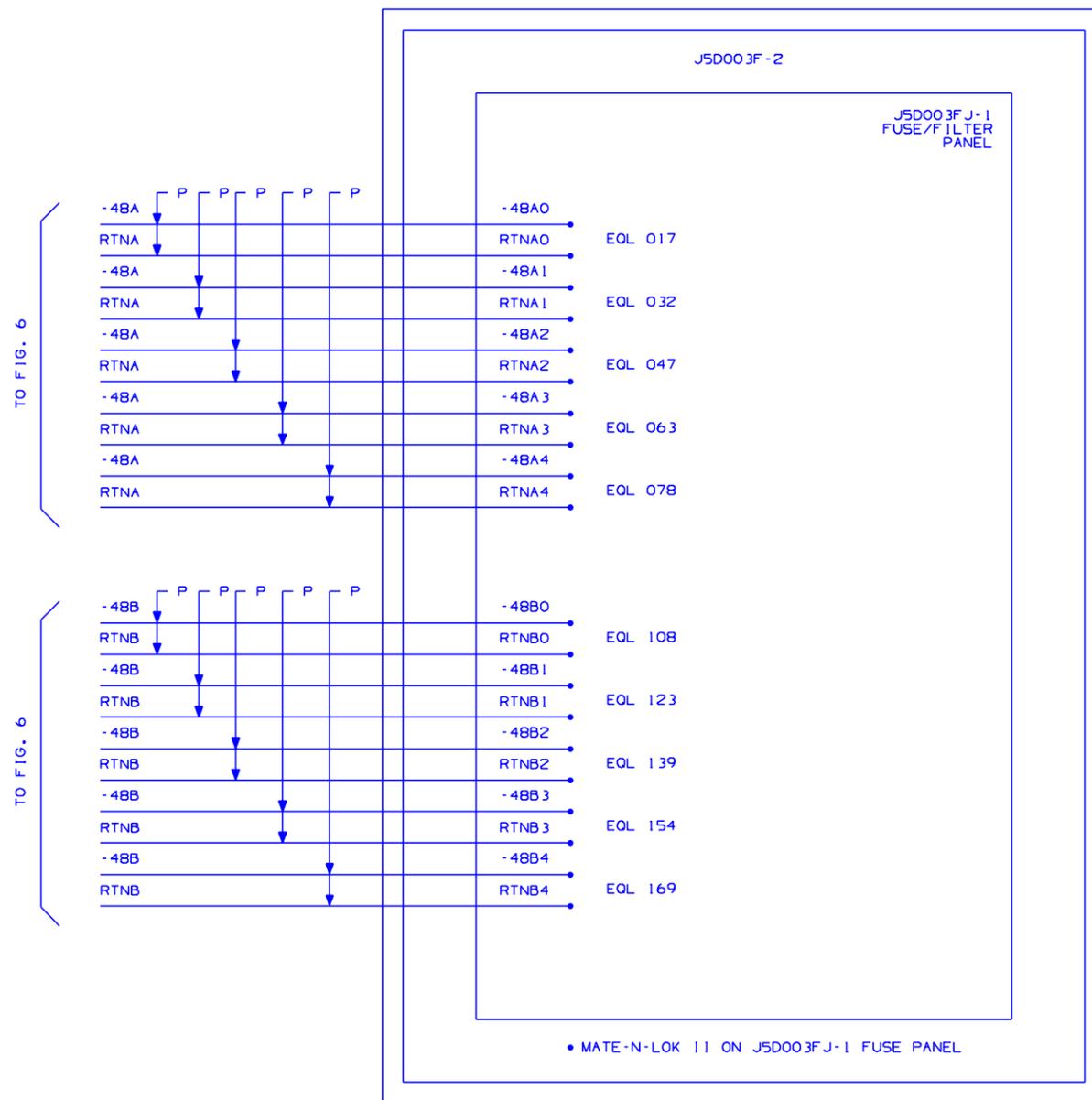


FIG. 50  
LTP CABINET  
E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
5 'A' FEEDERS AND 5 'B' FEEDERS  
(SEE NOTES 86,91,154,174)

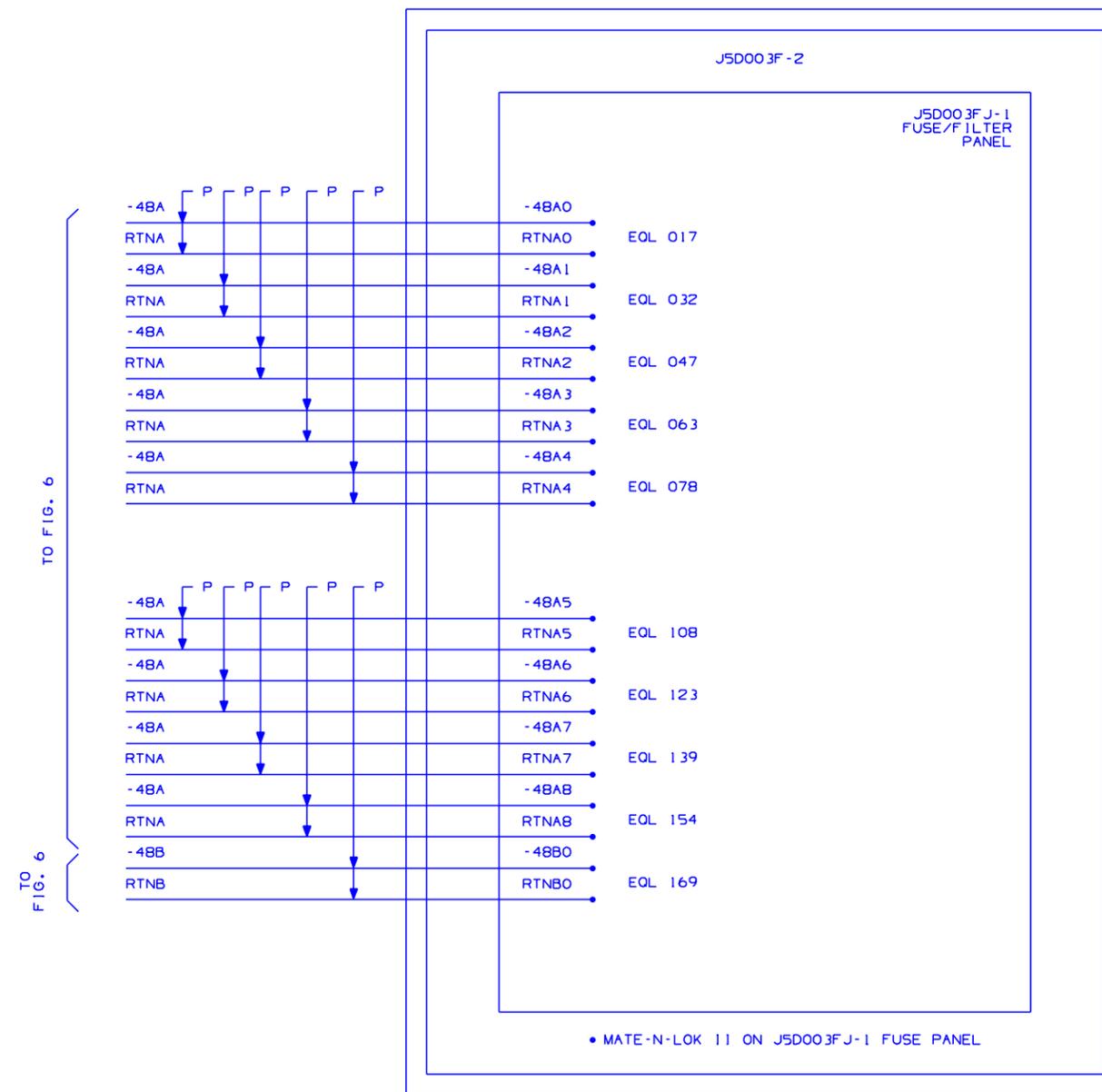


FIG. 51  
LTP CABINET  
E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
9 'A' FEEDERS AND 1 'B' FEEDER  
(SEE NOTES 86,91,154,174)

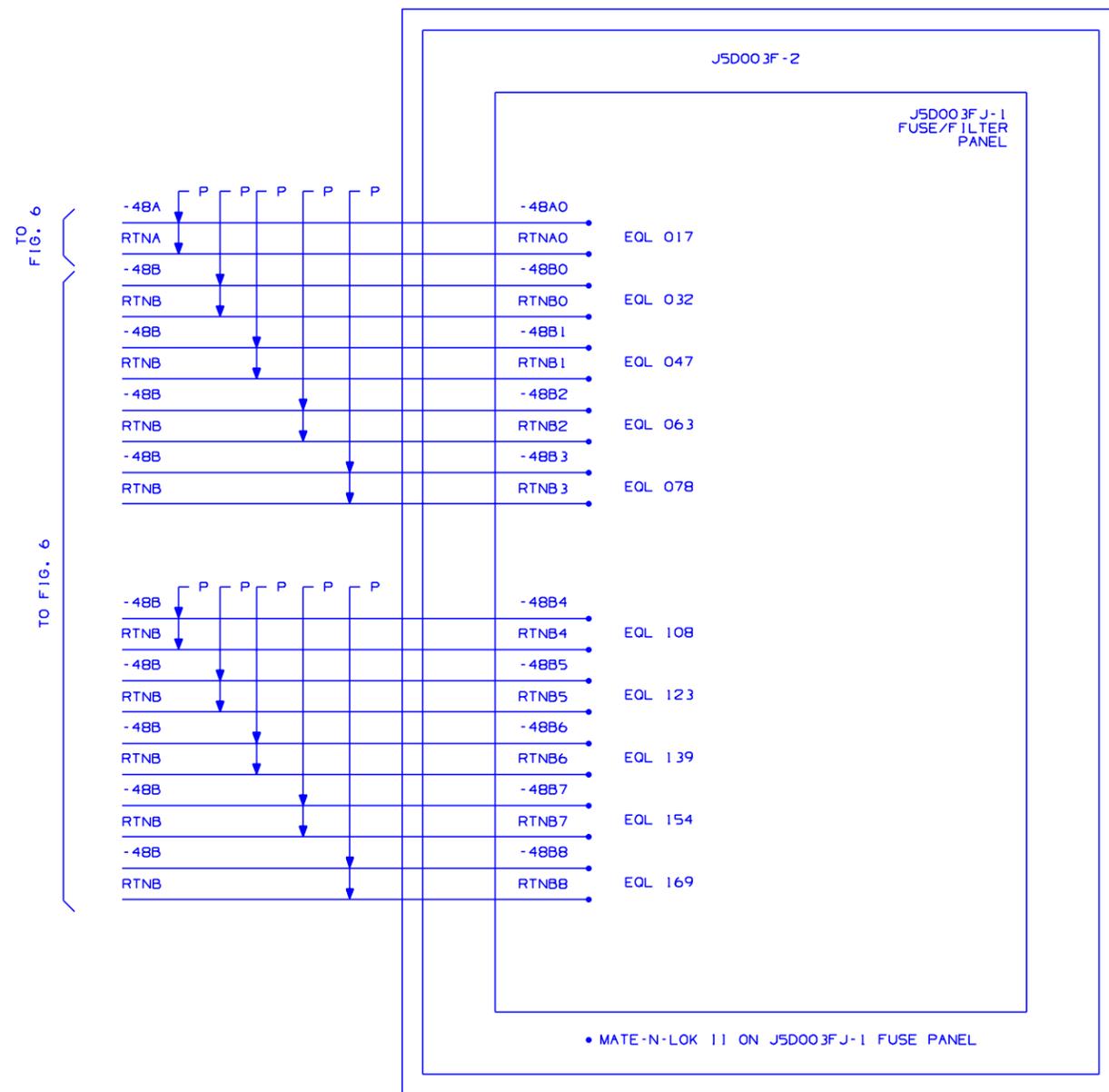


FIG. 52  
LTP CABINET  
E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
1 'A' FEEDER AND 9 'B' FEEDERS  
(SEE NOTES 86,91,154,174)

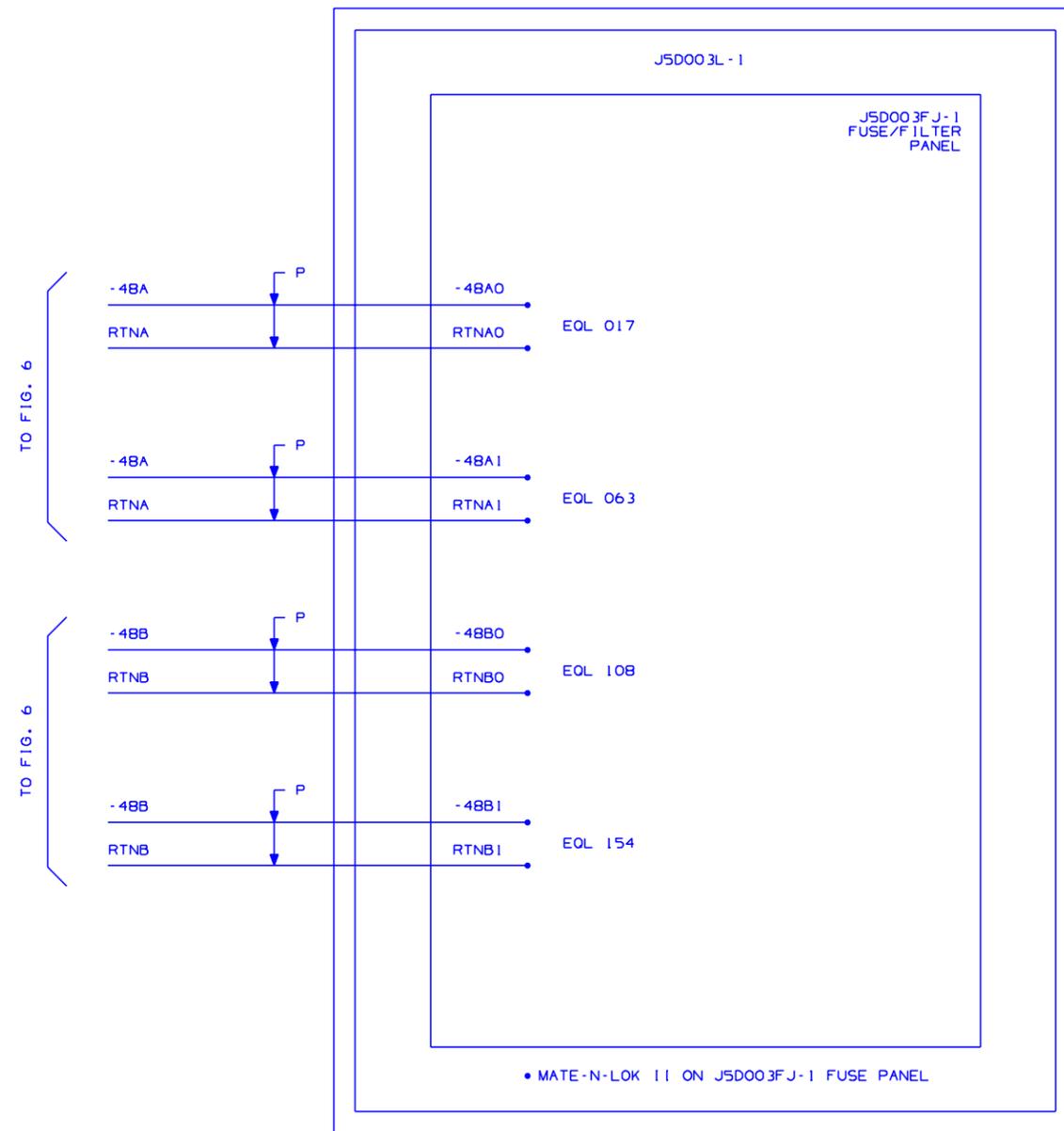


FIG. 53  
SWITCH MODULE CONTROL CABINET MODEL 2  
E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
2 'A' FEEDERS AND 2 'B' FEEDERS  
(SEE NOTES 91,174)

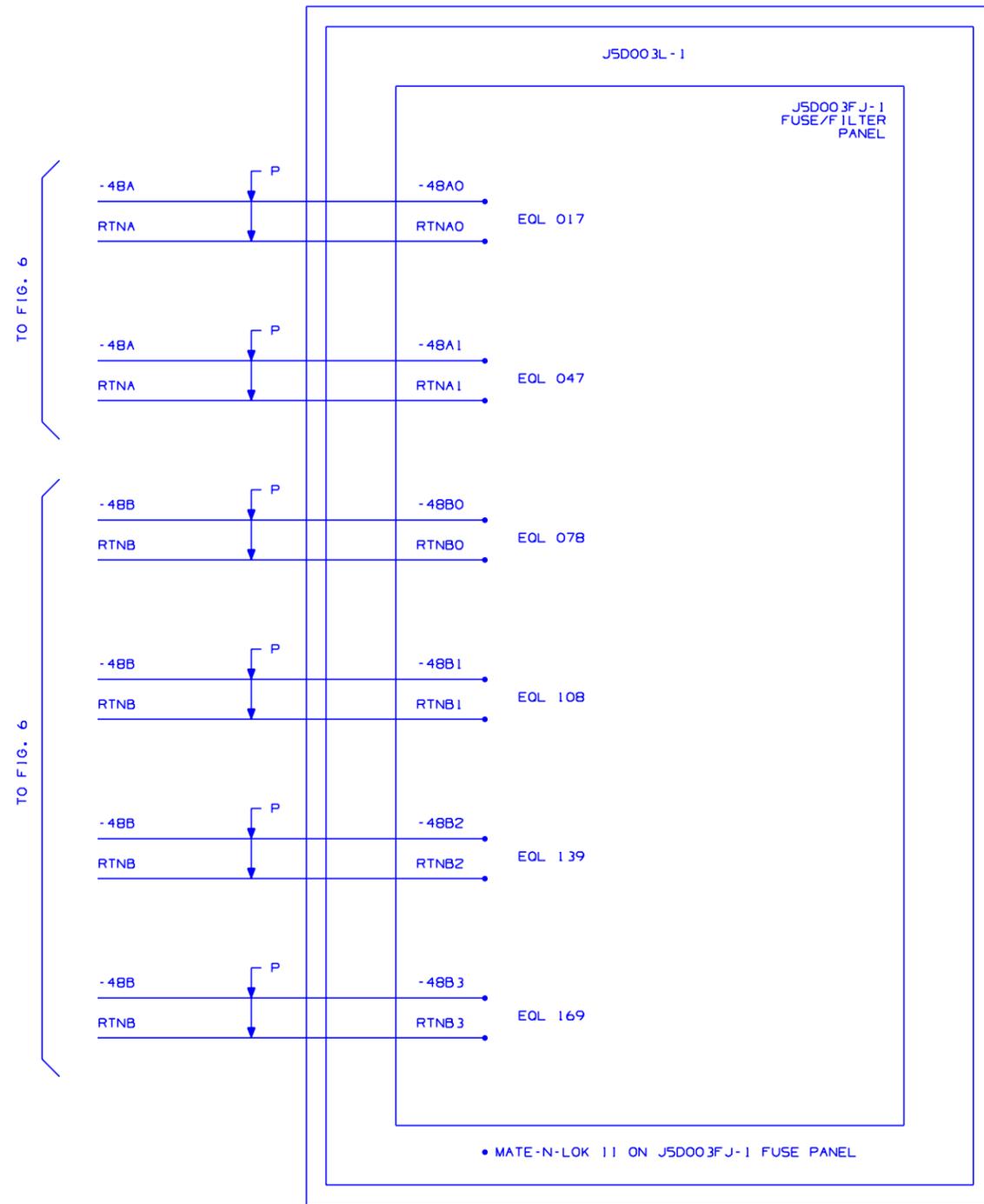


FIG. 54  
 SWITCH MODULE CONTROL CABINET MODEL 2,  
 E/W J5D003FJ-1 MODULAR FUSE/FILTER UNIT,  
 2 'A' FEEDERS AND 4 'B' FEEDERS  
 (SEE NOTES 91,174)

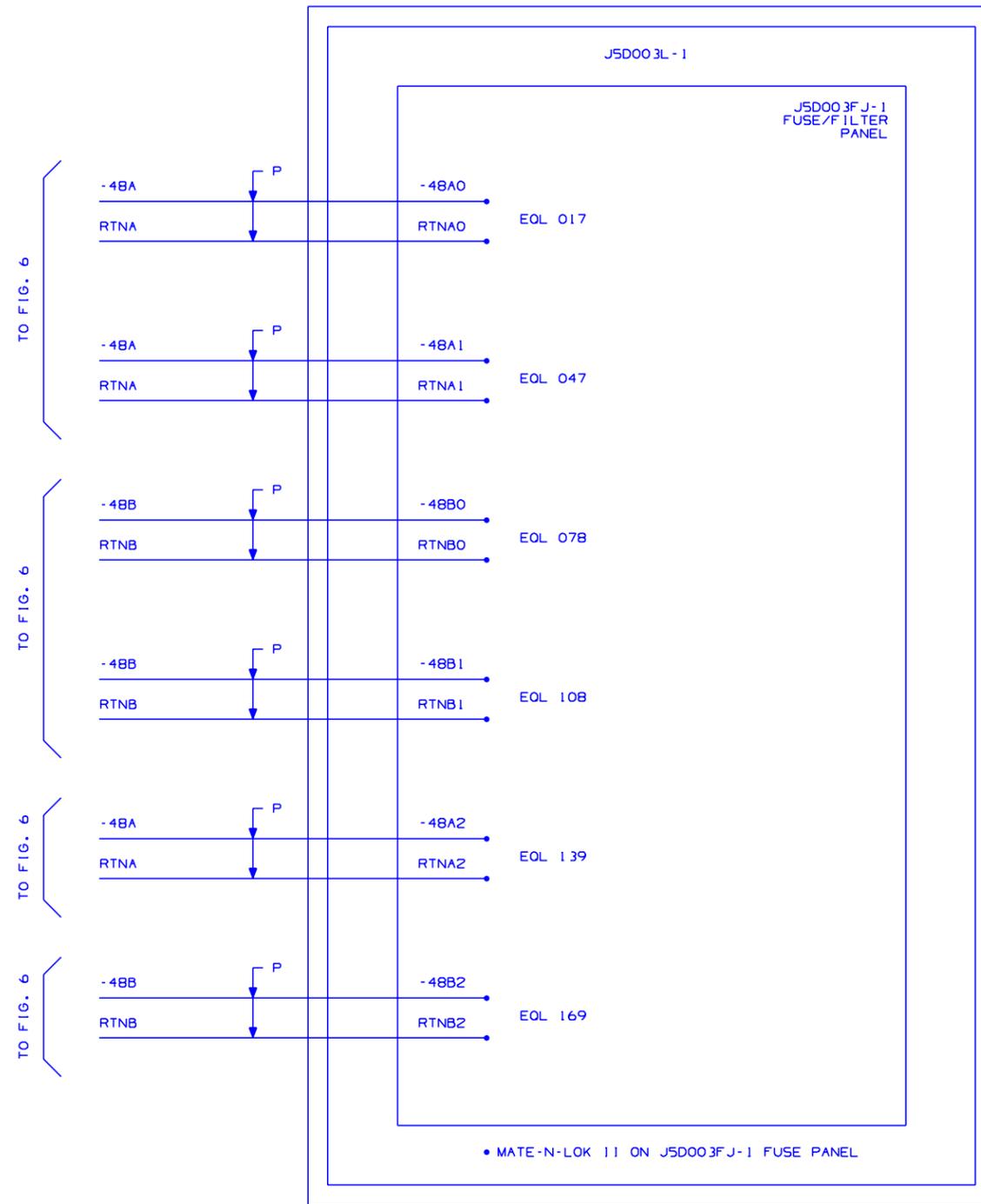


FIG. 55  
 SWITCH MODULE CONTROL CABINET MODEL 2,  
 E/W J5D003FJ-1 MODULAR FUSE/FILTER UNIT,  
 2 'A' FEEDERS, 2 'B' FEEDERS,  
 1 'A' FEEDER AND 1 'B' FEEDER  
 (SEE NOTES 91,174)

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	C2	14
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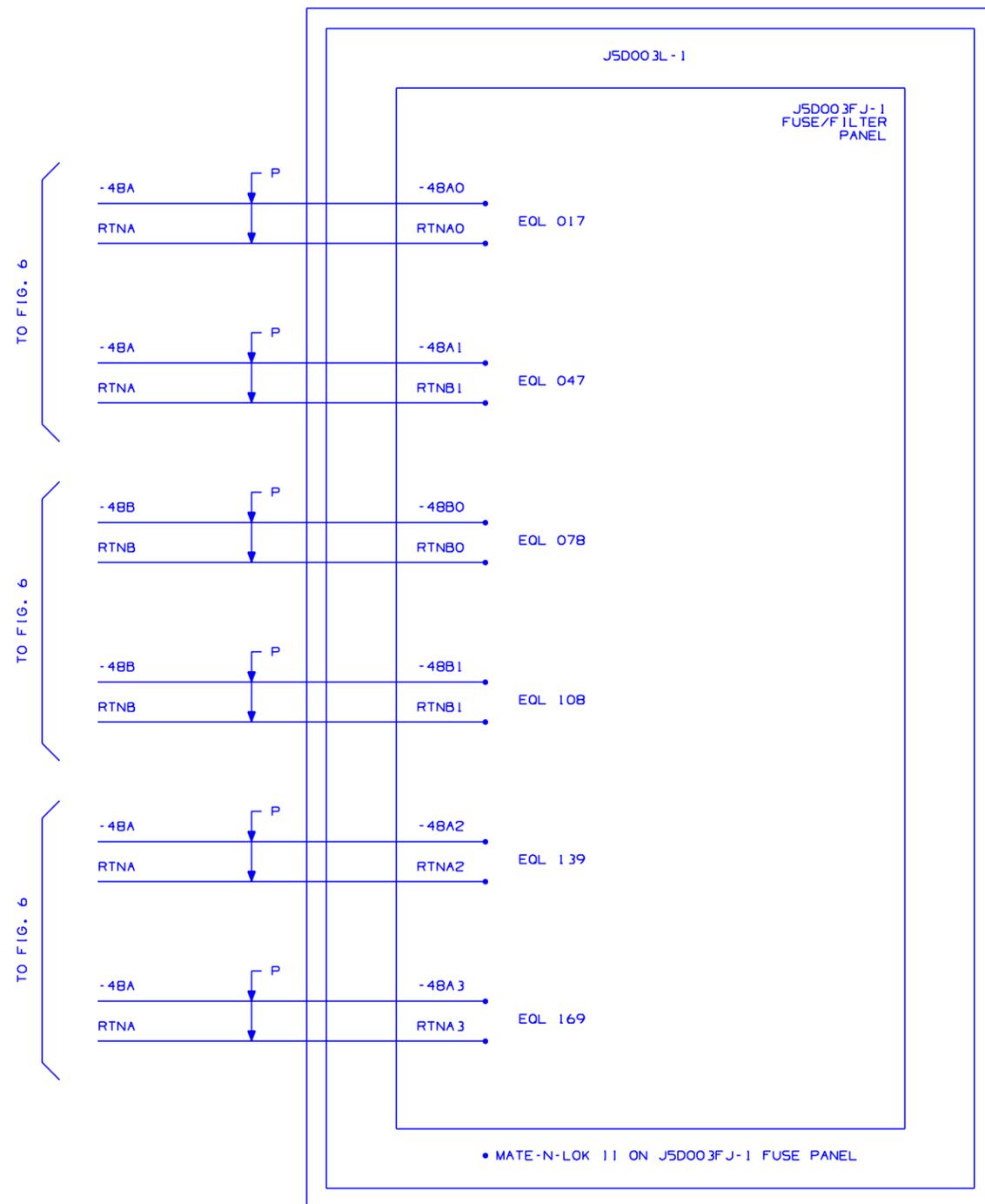


FIG. 56  
 SWITCH MODULE CONTROL CABINET MODEL 2,  
 E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
 2 'A' FEEDERS, 2 'B' FEEDERS AND 2 'A' FEEDERS  
 (SEE NOTES 91,174)

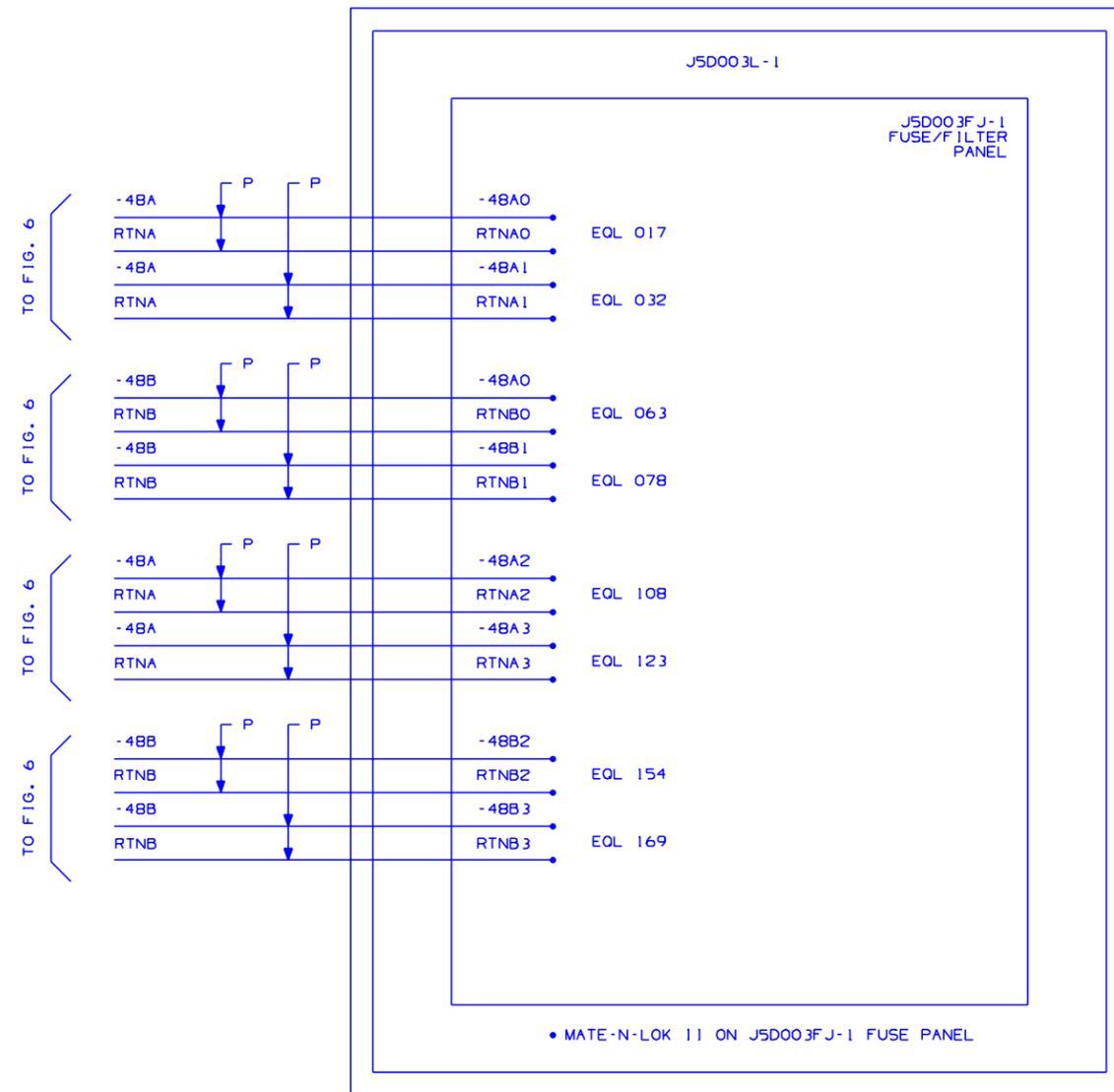


FIG. 57  
 SWITCH MODULE CONTROL CABINET MODEL 2,  
 E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
 2 'A' FEEDERS, 2 'B' FEEDERS,  
 2 'A' FEEDERS AND 2 'B' FEEDERS  
 (SEE NOTES 91,174)

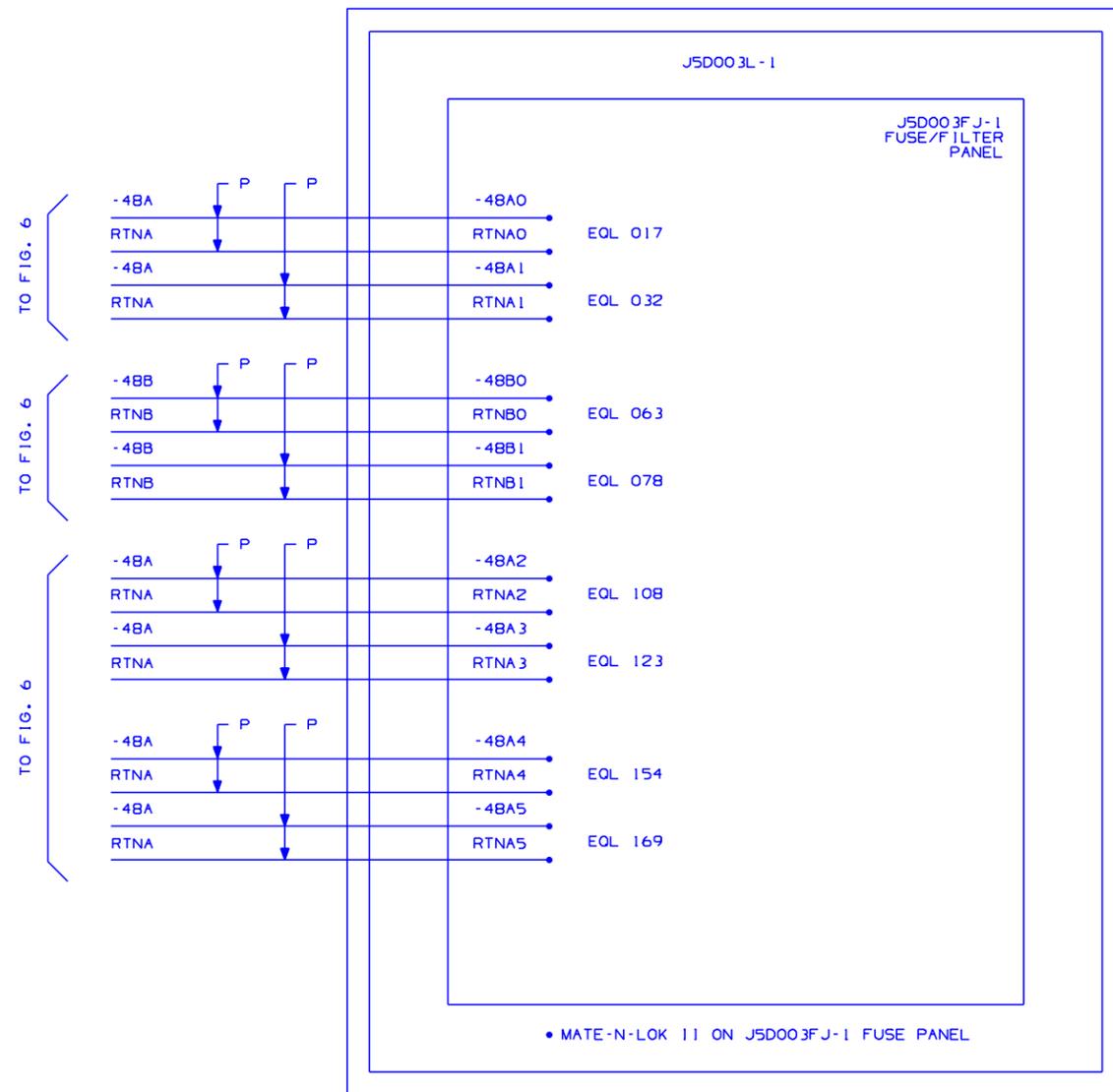


FIG. 58  
SWITCH MODULE CONTROL CABINET MODEL 2,  
E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
2 'A' FEEDERS, 2 'B' FEEDERS AND 4 'A' FEEDERS  
(SEE NOTES 91,174)

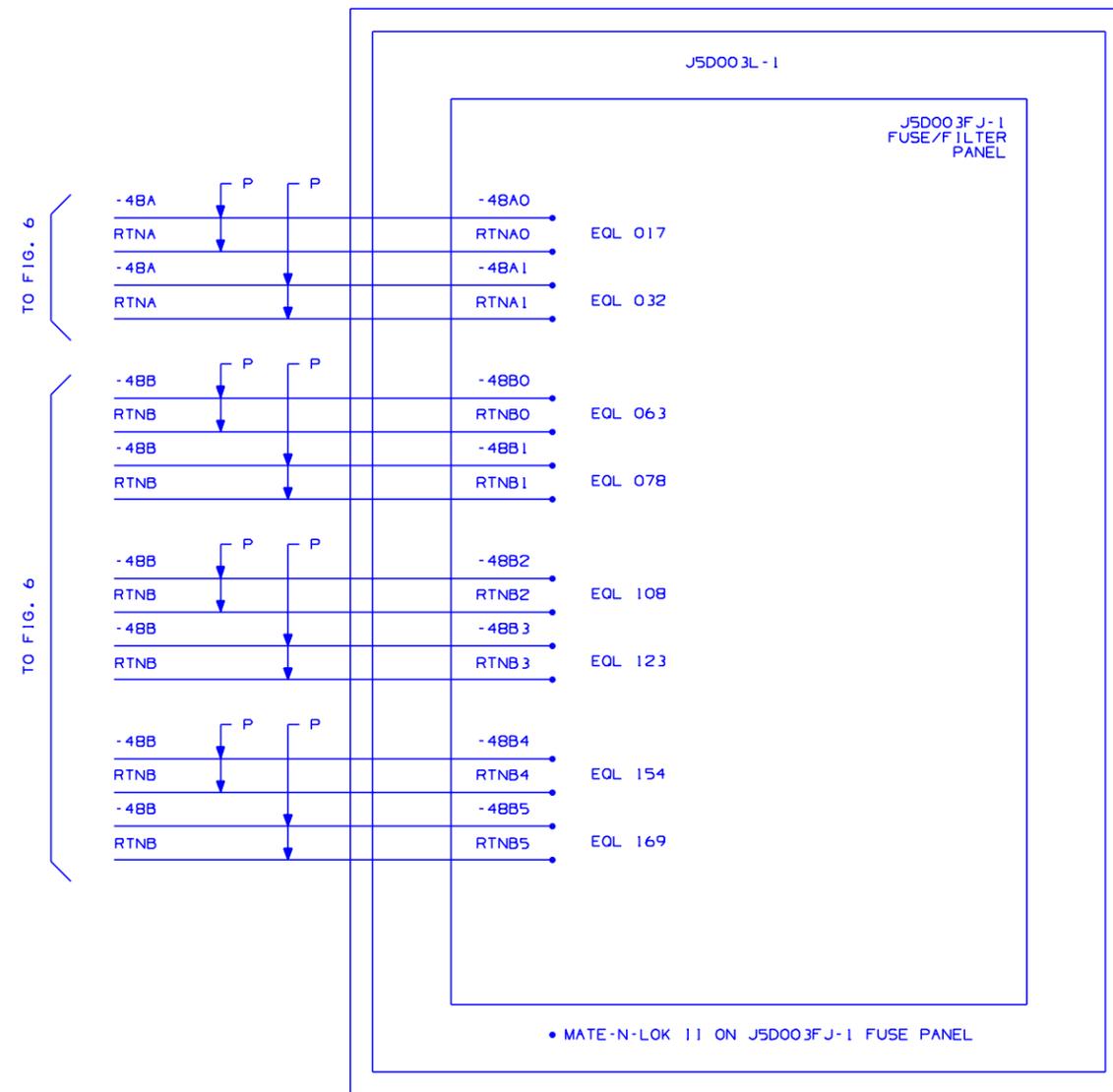


FIG. 59  
SWITCH MODULE CONTROL CABINET MODEL 2,  
E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
2 'A' FEEDERS AND 6 'B' FEEDERS  
(SEE NOTES 91,174)

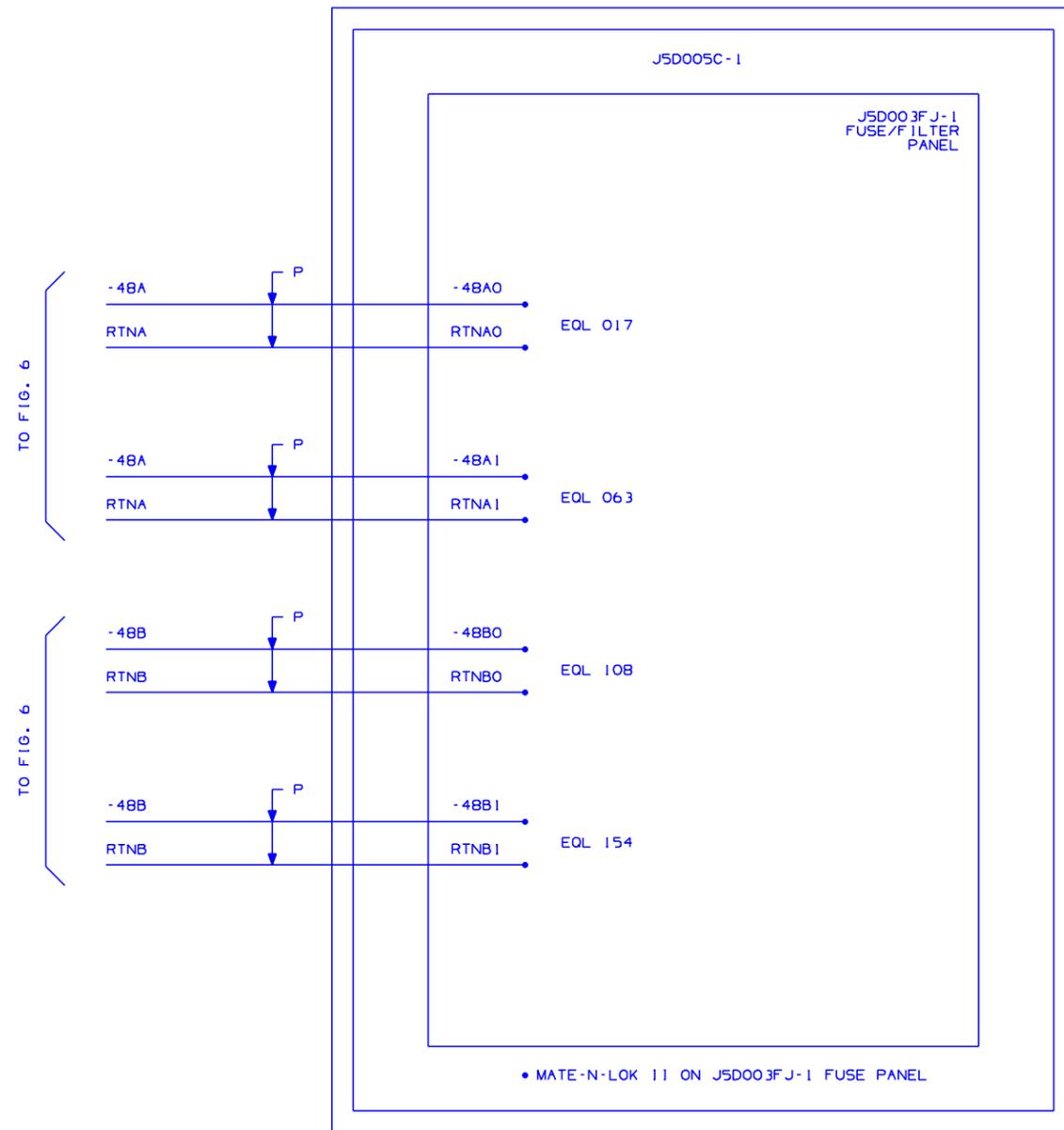


FIG. 60  
 MISCELLANEOUS CABINET  
 E/W J5D003FJ-1 MODULAR FUSE/FILTER UNIT  
 AND 2 'A' FEEDERS AND 2 'B' FEEDERS

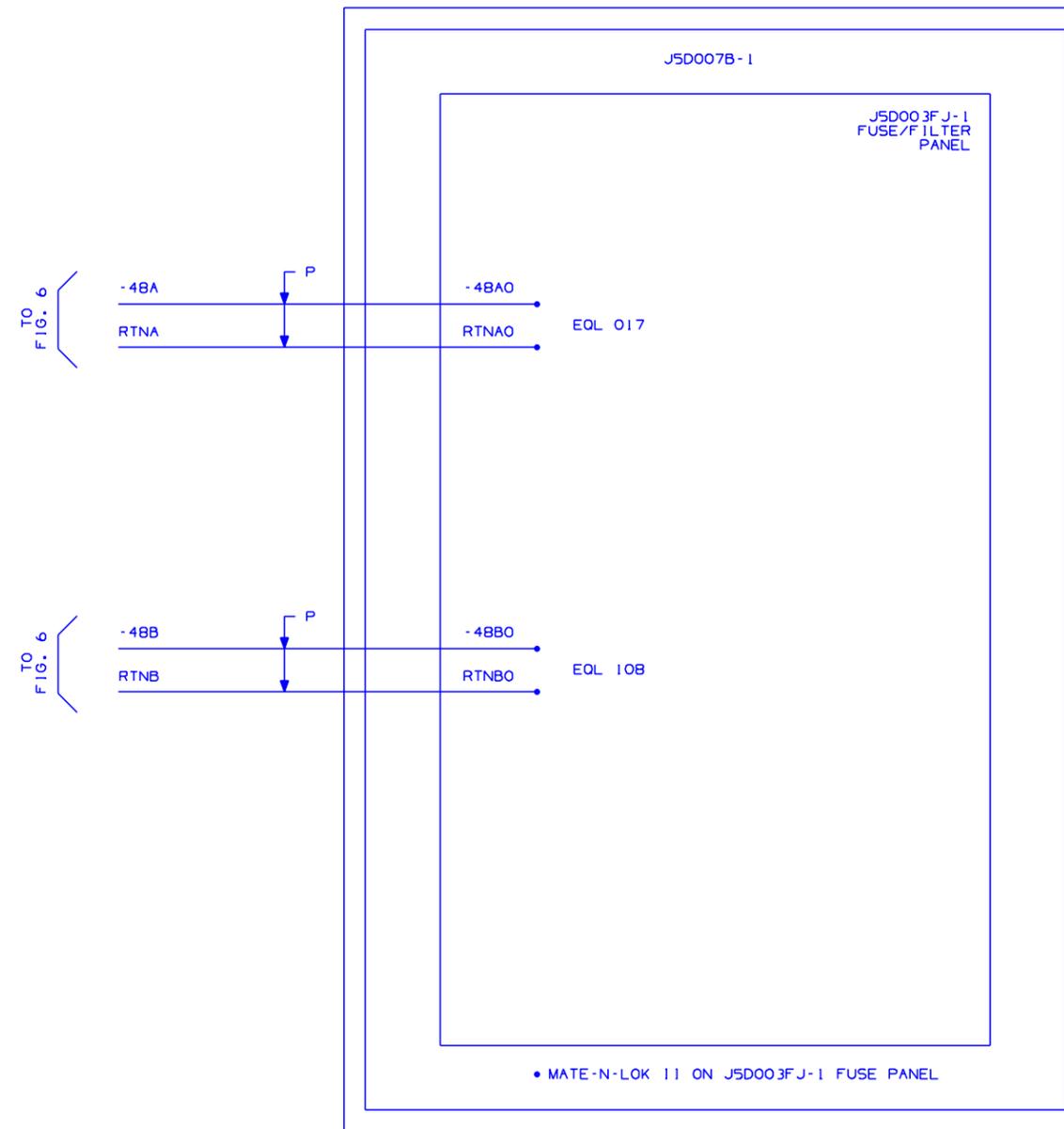


FIG. 61  
 MODEM POOLING CABINET  
 E/W J5D003FJ-1 MODULAR FUSE/FILTER UNIT,  
 1 'A' FEEDER AND 1 'B' FEEDER

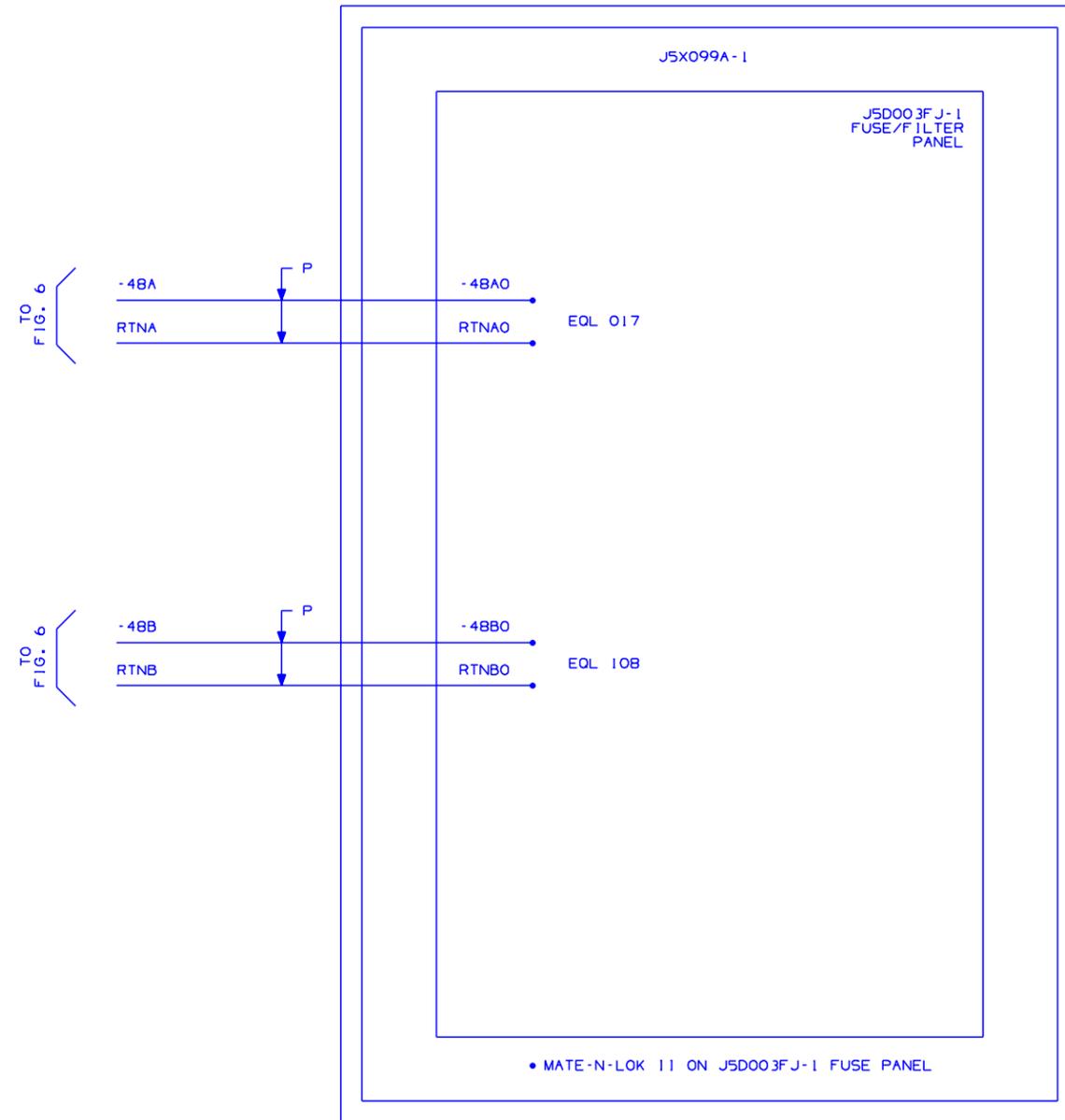


FIG. 62  
 EXPORT DATASET CABINET  
 E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
 1 'A' FEEDER AND 1 'B' FEEDER  
 (SEE NOTES 91,174)

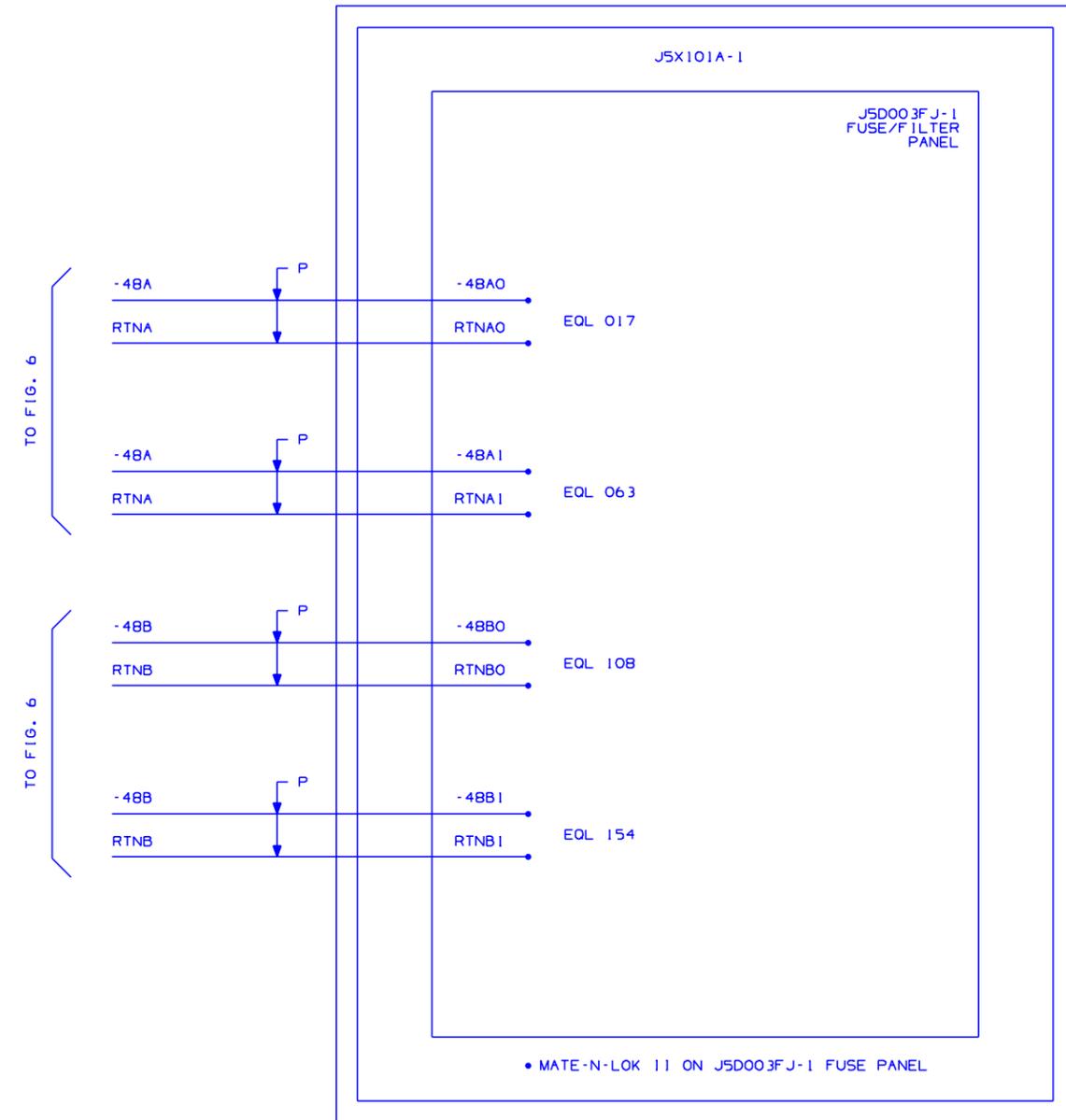
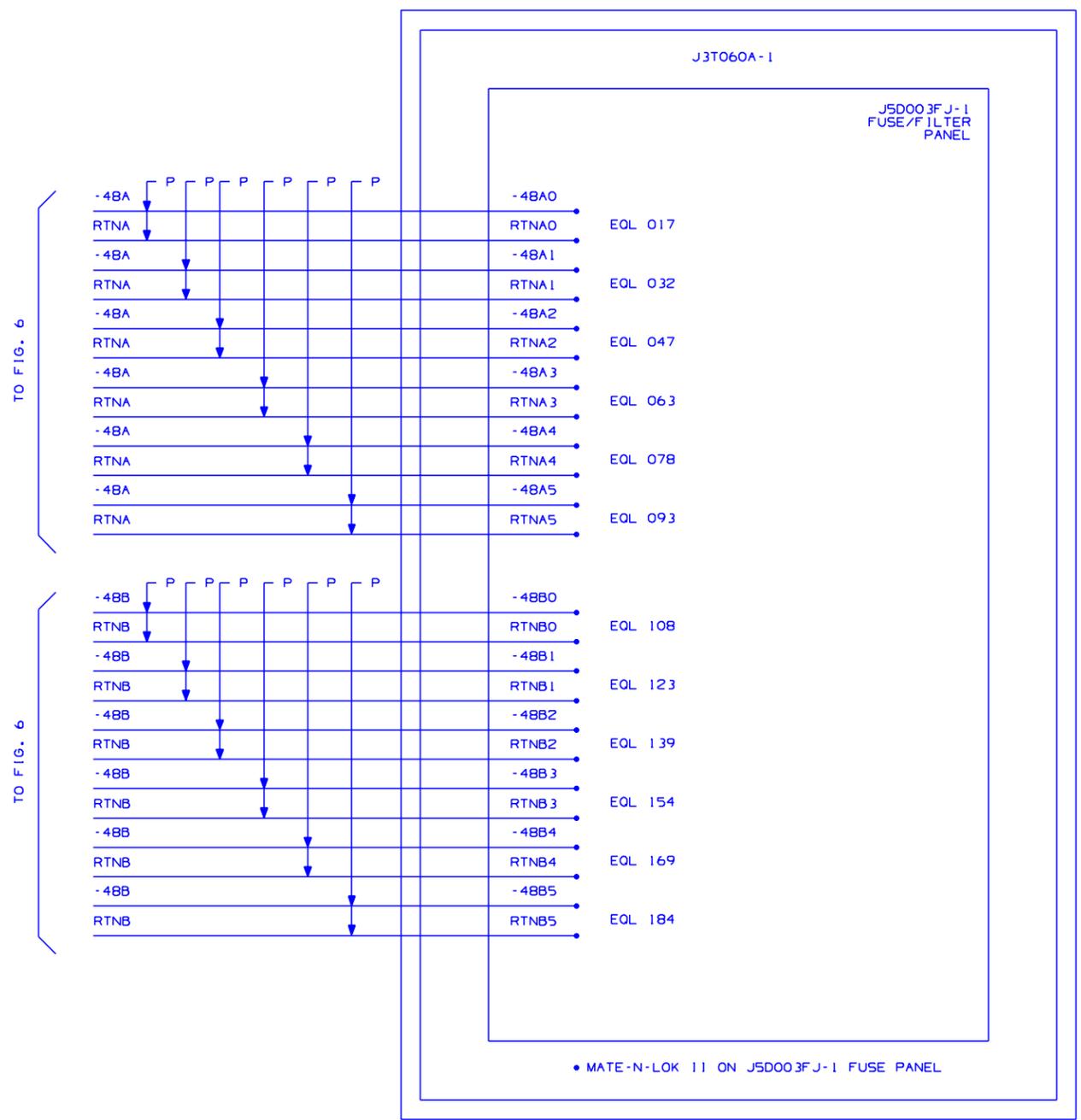


FIG. 63  
 DCSS CABINET  
 E/W J5D003FJ-1 MODULAR FUSE FILTER UNIT,  
 2 'A' FEEDERS AND 2 'B' FEEDERS  
 (SEE NOTES 91,174)

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TO FIG. 6

TO FIG. 6

FIG. 64  
3B21D BASIC CABINET  
E/W J5D003FJ-1 MODULAR FUSE FILTER PANEL,  
6 'A' FEEDERS AND 6 'B' FEEDERS  
(SEE NOTES 91, 174)