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OPTION INDEX

APP OR WRG	RATED ON ISSUE	REF NOTES	LOCATION

DWG ISS	CD ISS	DWG ISS	CD ISS	DWG ISS	CD ISS
1	1 APR	2AC	2AC APR	3D	3D APR
4M	3D APR 1M	5M	3D APR 2M	6B	3D APR 3B

DWG ISS	CD ISS	DATE ISSD	DRFT	APP
7B	3D APR 4B	1-7-92		
8B	4A JUN	8-18-93		

SUPPORTING INFORMATION

SYSTEM USED ON	DESIGN CONTROL	CATEGORY	NO.
5ESS	IH	COMMON LIGHTING CIRCUIT	SD-4C003-01
		AC POWER DISTRIBUTION CIRCUIT	ED-5D021-11
		AC POWER DISTRIBUTION HARDWARE	ED-5D094-30
		GROUNDING METHODS AND REQUIREMENTS	ED-5D022-01
		DC POWER DISTRIBUTION CIRCUIT	SD-5D005-01
		AC LIGHTING ARRANGEMENT	ED-5D072
		LIGHTNING PROTECTION	SD-61968-01
		AC HARDWARE DISTRIBUTION HARDWARE	ED-5D131-10

SHEET INDEX NOTES

1. ONLY THE LATEST ISSUE, OR ISSUES IF CONCURRENT, ARE SHOWN IN THE INDEX.
2. FOR REISSUES, A CHANGED OR NEW SHEET IS ASSIGNED THE SAME ISSUE NUMBER AS SHEET 1.
3. THE ISSUE NUMBER OF SHEET 1 IS RECOGNIZED AS THE ISSUE NUMBER OF THE WHOLE DRAWING.

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BT13

ELECTRONIC SWITCHING SYSTEMS

5ESS®

AC POWER DISTRIBUTION CIRCUIT

DWG SIZE	ISSUE
C2	8B

AT&T | SD-5D004-01 | SHEET A1 24 SHEETS

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FIG. 1
ESSENTIAL AC INPUT

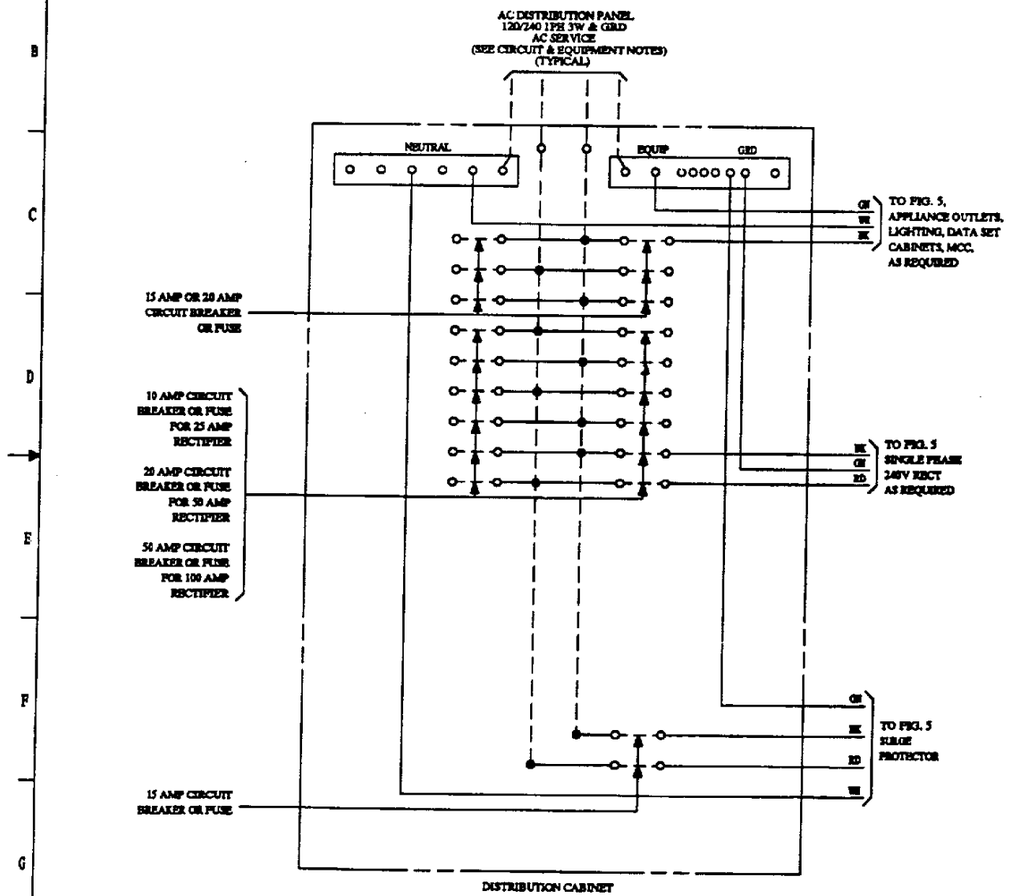
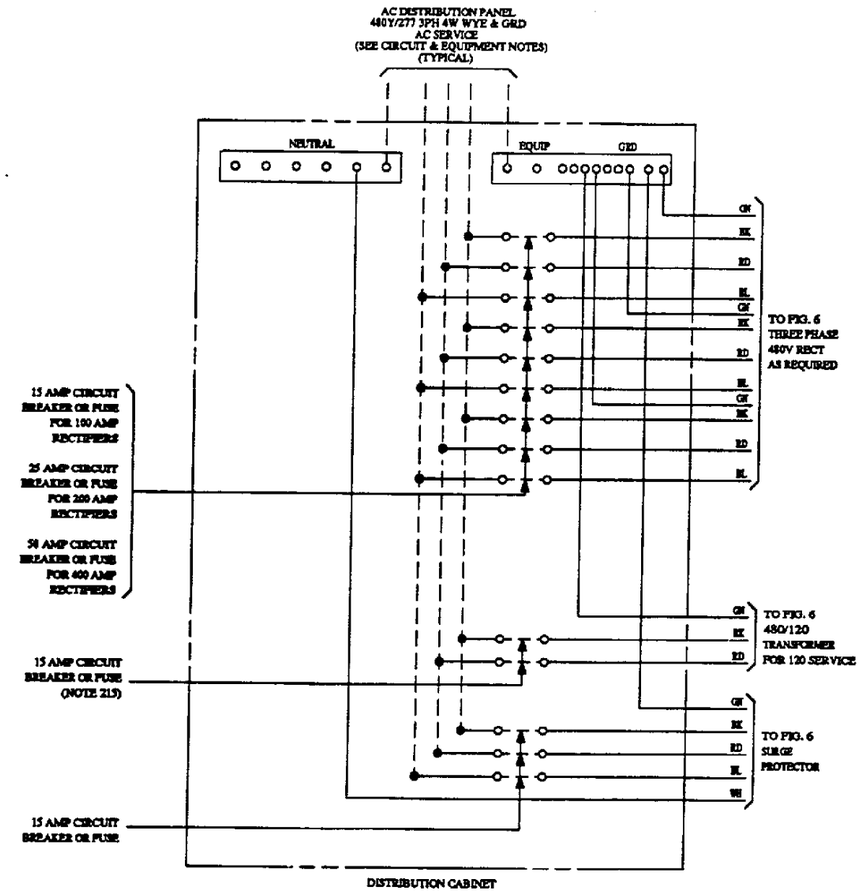


FIG. 2
ESSENTIAL AC INPUT



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AC POWER DISTRIBUTION		DWG SIZE: C2	ISSUE: 7B
AT&T	SD-5D004-01	SHEET: B1	

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FIG. 3

ESSENTIAL AC INPUT

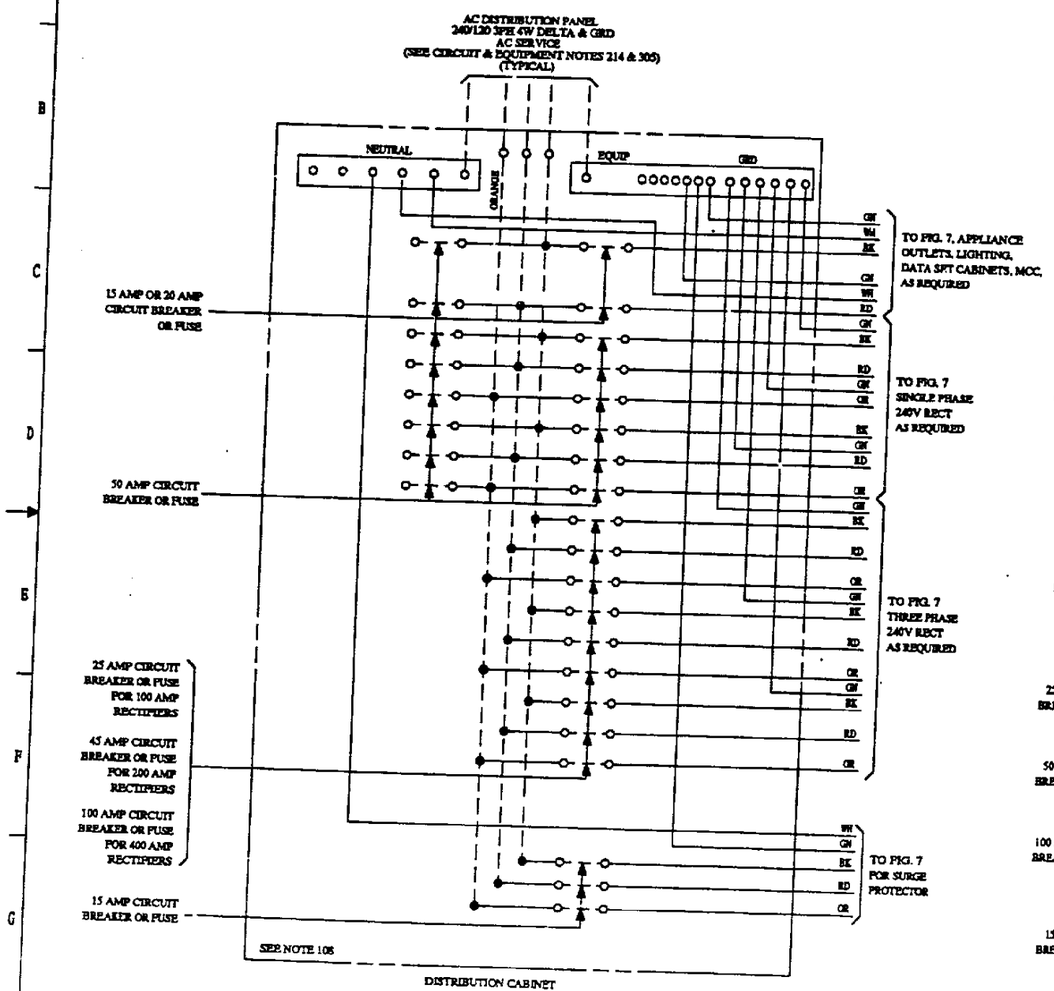
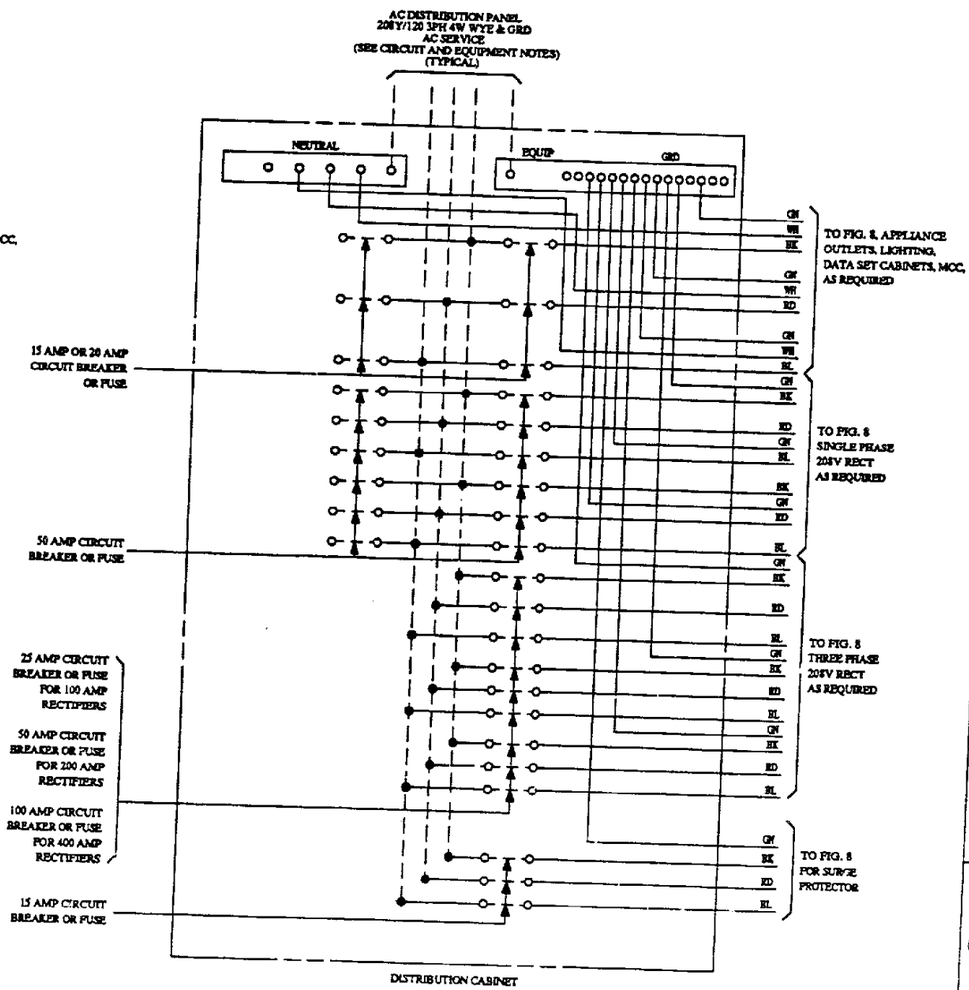


FIG. 4

ESSENTIAL AC INPUT



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AC POWER DISTRIBUTION		DWG SIZE C2	ISSUE 7B
AT&T	SD-5D004-01	SHEET B2	

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FIG. 5

WIRING DIAGRAM FOR CONDUIT AND WIRE WAY FOR AC POWER FOR 120/240 1PH 3W & GRD

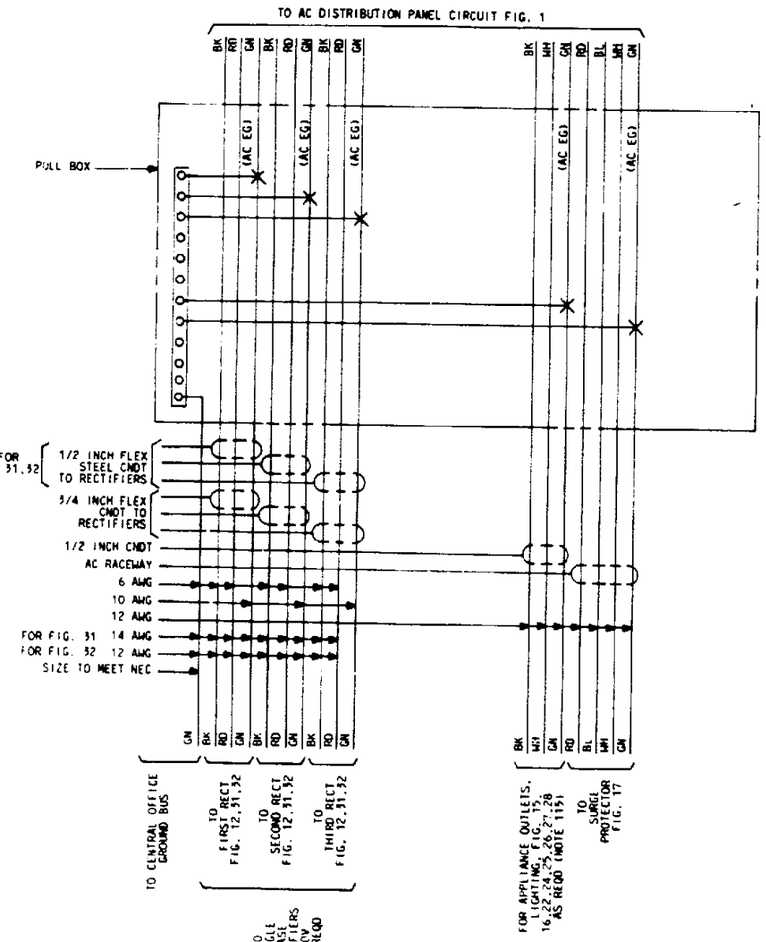
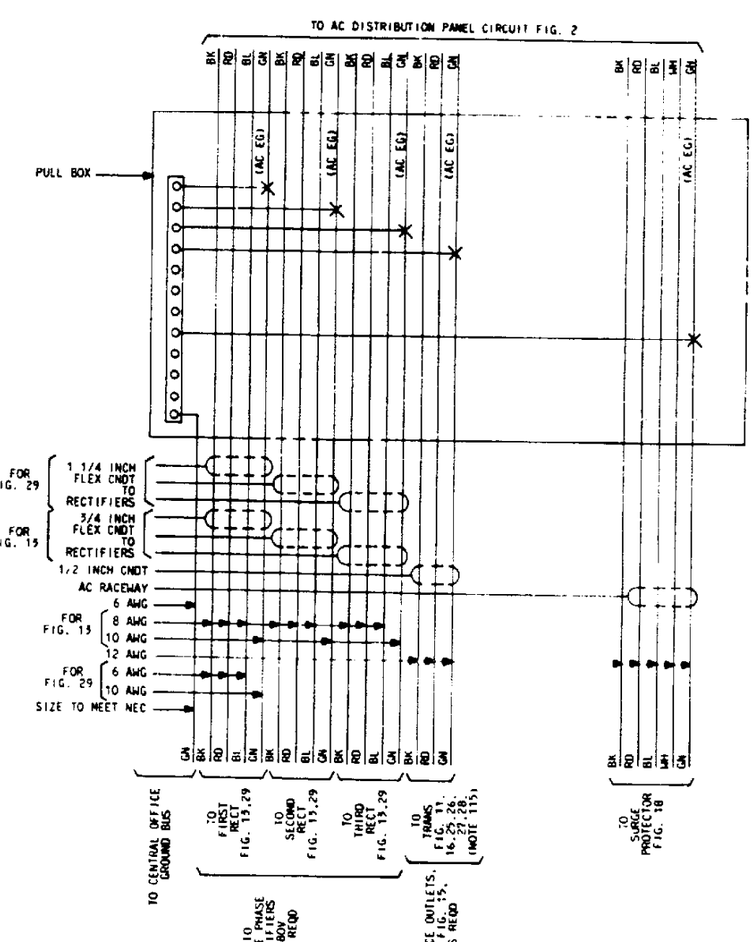


FIG. 6

WIRING DIAGRAM FOR CONDUIT AND WIRE WAY FOR AC POWER FOR 480Y/277 3PH 4W WYE & GRD



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AC POWER DISTRIBUTION	DWG SIZE B3	ISSUE 4M
AT&T	SD-5D004-01	SHEET B3

FIG. 7

MIRING DIAGRAM FOR CONDUIT
AND WIRE WAY FOR AC POWER
FOR 240/120 3PH 4W DELTA & GND

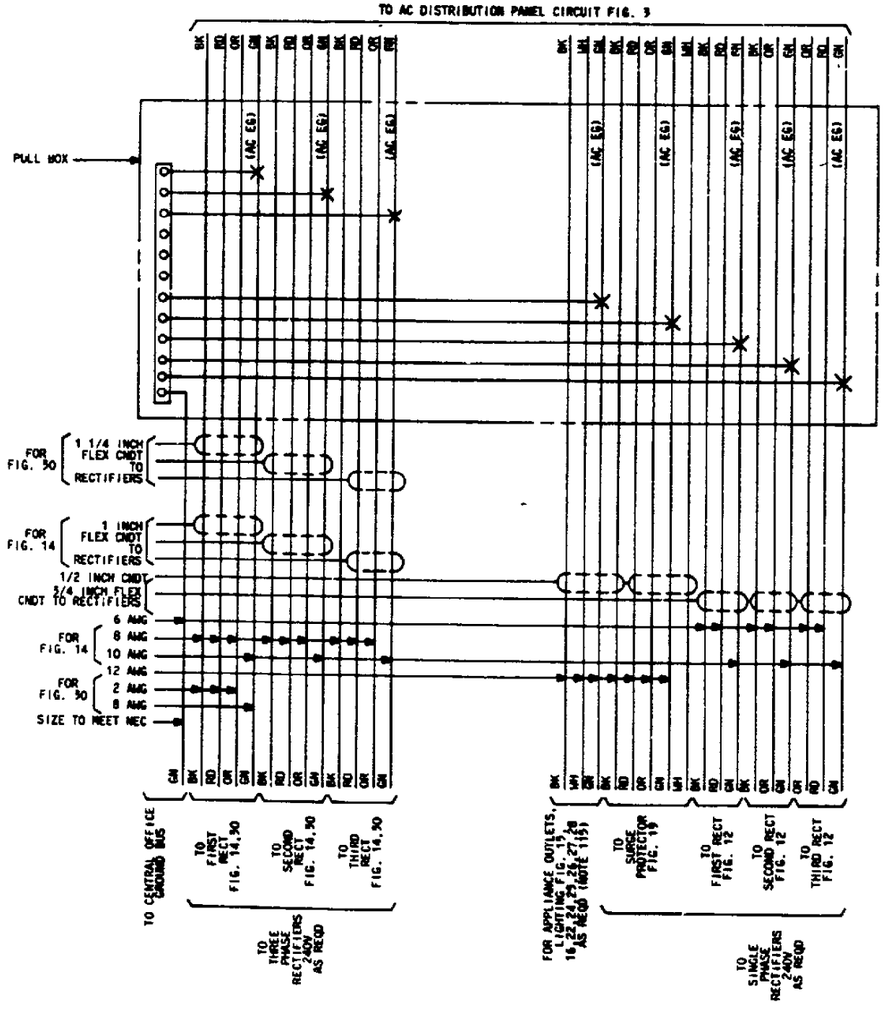
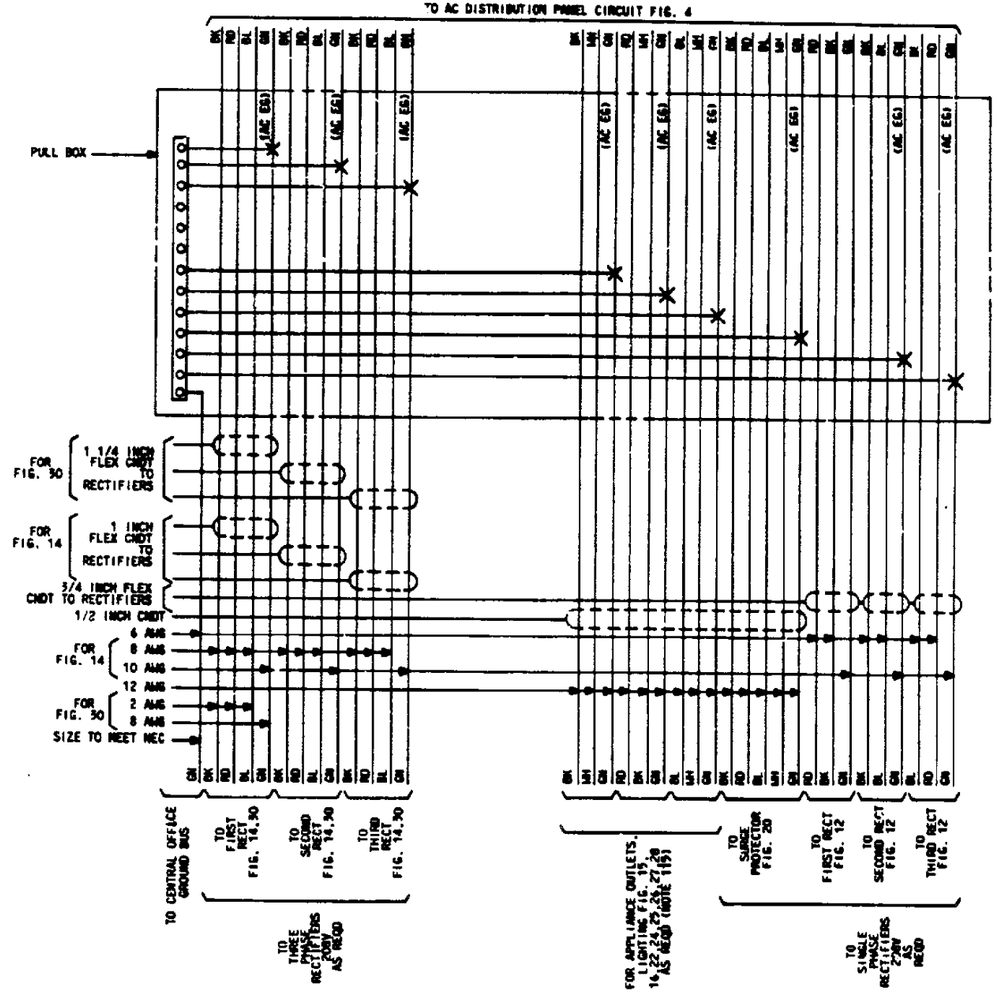


FIG. 8

MIRING DIAGRAM FOR CONDUIT
AND WIRE WAY FOR AC POWER
FOR 208Y/120 3PH 4W WYE & GND



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AC POWER DISTRIBUTION	DWG SIZE 88	ISSUE 4M
AT&T	SD-50004-01	SHEET B4

FIG. 11

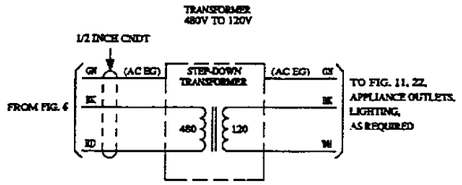


FIG. 12

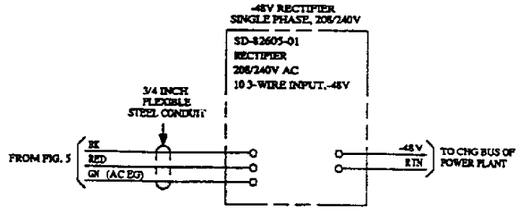


FIG. 13

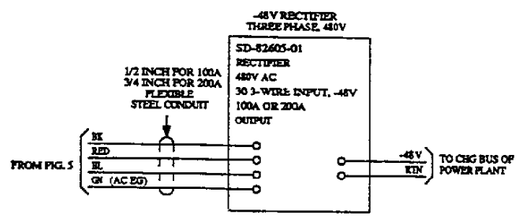


FIG. 14

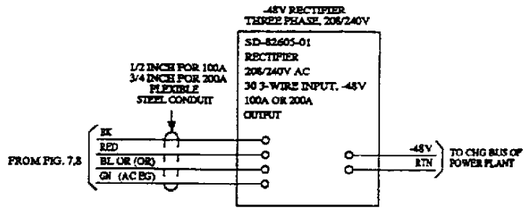


FIG. 15

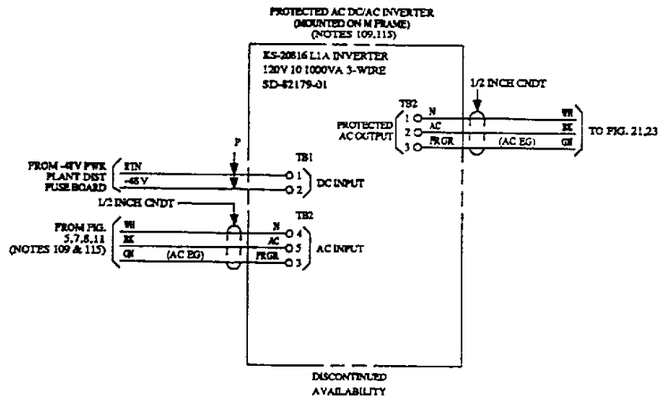
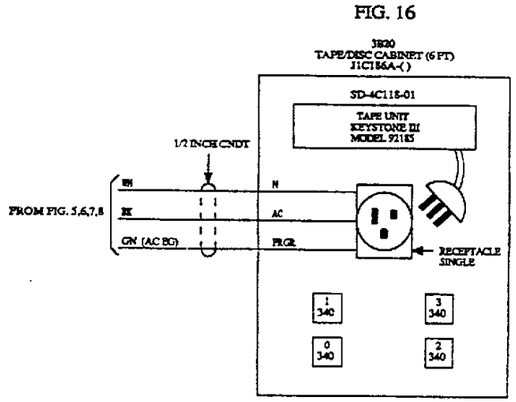


FIG. 16



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DWG SIZE	ISSUE
C2	7B

AT&T	SD-5D004-01	SHEET
		B5

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FIG. 17

AC SURGE PROTECTOR
T-81968-30
(240V SINGLE PH)
TYPICAL
SEE NOTE 213

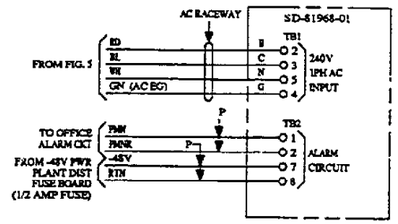


FIG. 18

AC SURGE PROTECTOR
T-81968-30
(460V, 3PH)
TYPICAL
SEE NOTE 213

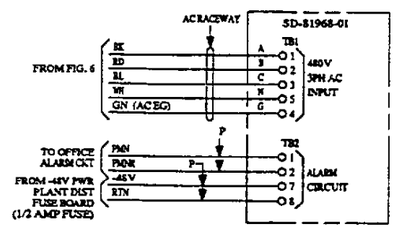


FIG. 19

AC SURGE PROTECTOR
T-81968-30
(240V, 3PH)
TYPICAL
SEE NOTE 213

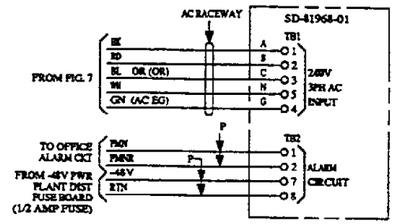


FIG. 20

AC SURGE PROTECTOR
T-81968-30
(208V, 3PH)
TYPICAL
SEE NOTE 213

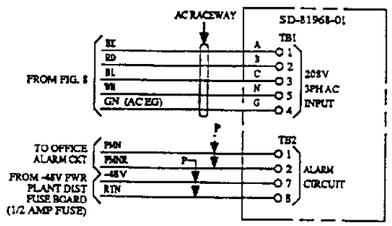


FIG. 21

FIRST DATA SET CABINET
ED-5D061-50
(PROTECTED AC)

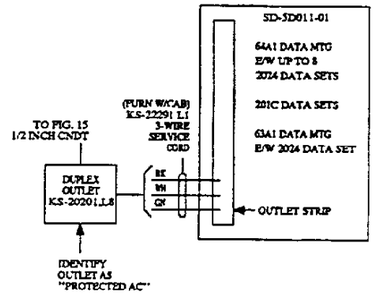
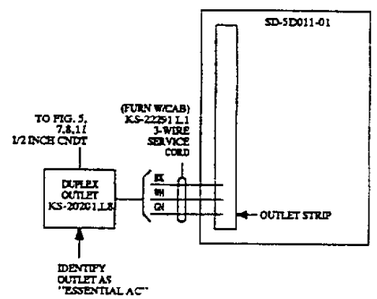


FIG. 22

SECOND & UP DATA SET CABINET
ED-5D061-50
(ESSENTIAL AC)



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DWG SIZE	ISSUE
C2	7B

AT&T	SD-5D004-01	SHEET
		B6

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FIG. 23

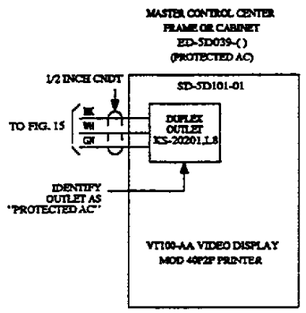


FIG. 24

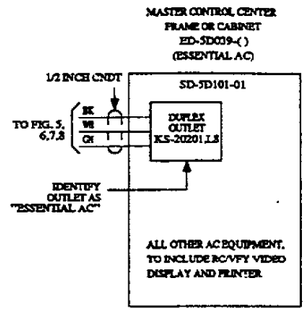


FIG. 25

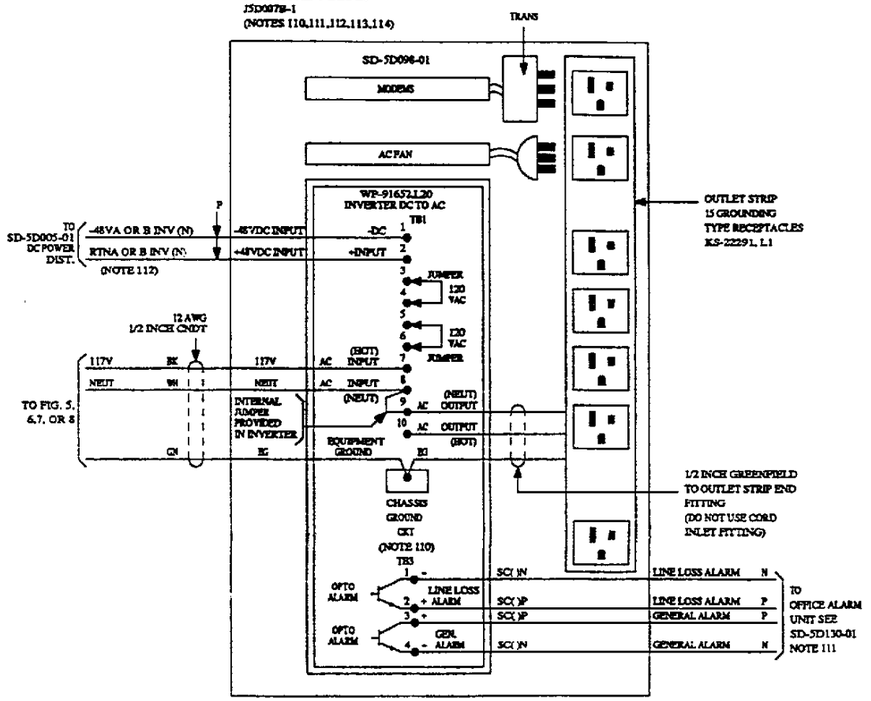
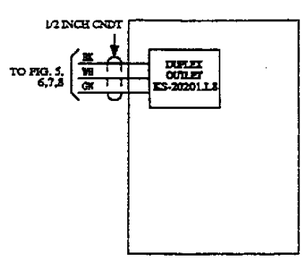


FIG. 26



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DWG SIZE	ISSUE
C2	7B

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FIG. 27

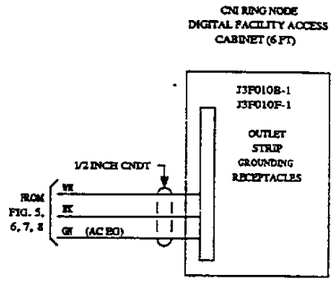
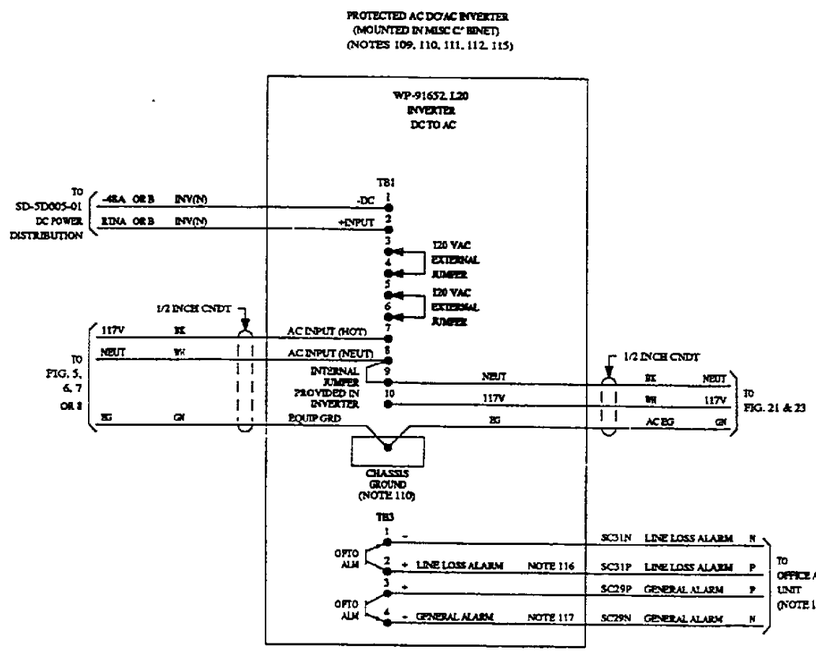


FIG. 28



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DWG SIZE	ISSUE
C2	7B

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FIG. 29

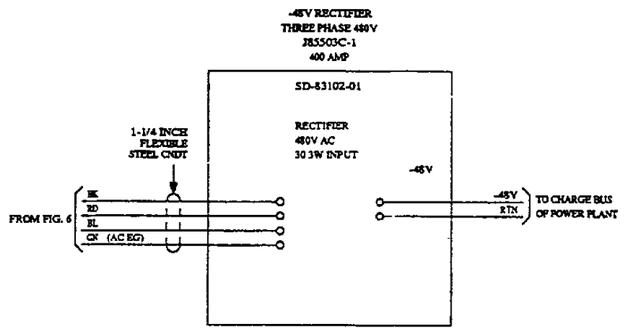


FIG. 30

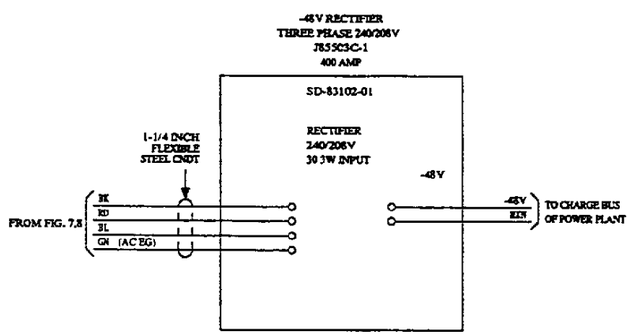


FIG. 31

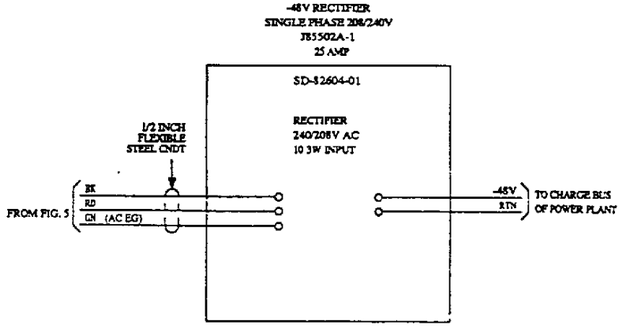
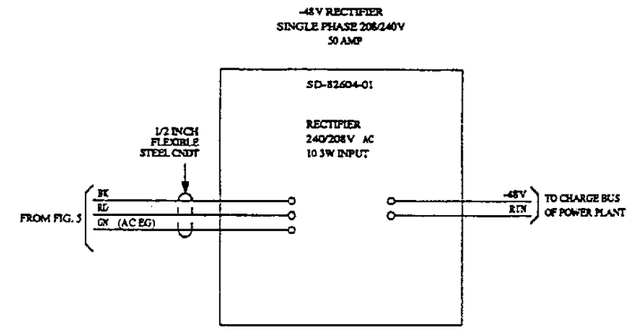


FIG. 32



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DWG SIZE	ISSUE
C2	7B

AT&T	SD-5D004-01	SHEET
		B9

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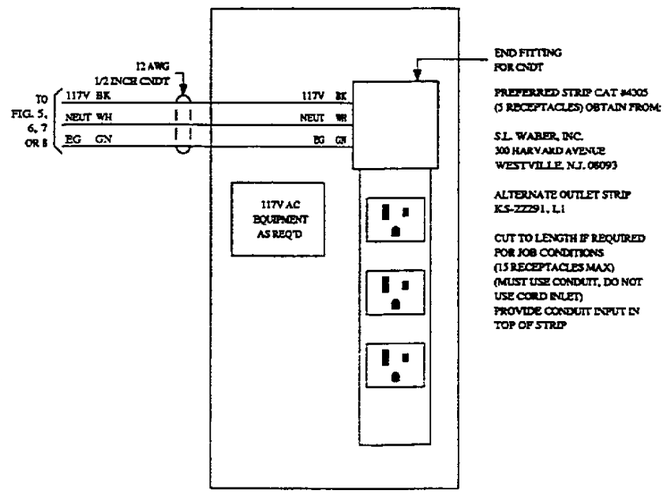
FIG. 33

MISCELLANEOUS CABINET
6 FT
J5D005C
E/W 117V OUTLET STRIP



END FITTING
FOR CNDT

PREFERRED STRIP CAT #4305
(5 RECEPTACLES) OBTAIN FROM:

S.L. WABER, INC.
300 HARVARD AVENUE
WESTVILLE, N.J. 08093

ALTERNATE OUTLET STRIP
KS-ZZ291, L1

CUT TO LENGTH IF REQUIRED
FOR JOB CONDITIONS
(15 RECEPTACLES MAX)
(MUST USE CONDUIT, DO NOT
USE CORD INLET)
PROVIDE CONDUIT INPUT IN
TOP OF STRIP

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AC POWER DISTRIBUTION

DWG SIZE	ISSUE
C2	7B

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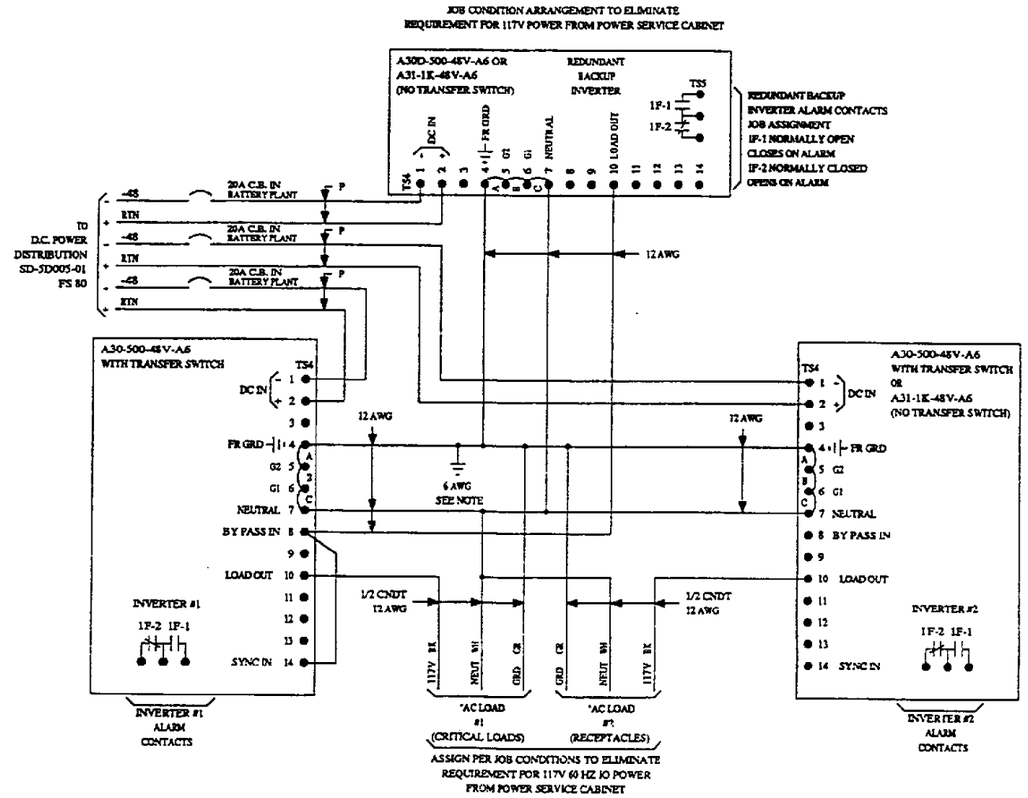
FIG. 34



A30-500-48V-A6 RATINGS	
D.C. INPUTS	48V NOMINAL INPUT VOLTAGE RANGE -42 TO -58V RANGE
	3.0 AMPS AT NO LOAD 13.9 AMPS AT FULL LOAD EFFICIENCY 75%
A.C. INPUTS	500 VA 120 VOLTS NOMINAL 4.2 AMPERES 1.0 TO 0.8 P.F. LAGGING 60 +-.05% OUTPUT FREQUENCY +7%/-10% LINE VOLTAGE REGULATION 3.5 LOAD CURRENT CREST FACTOR 150% CURRENT LIMIT 50MS TRANSFER TIME (INVERTER TO BACKUP INVERTER) FUSE OUTPUT PROTECTION 10% TOTAL HARMONIC DISTORTION

D.C. INPUT WIRING (1/2 VOLT LOOP DROP)		
ONE-WAY DISTANCE TO BATTERY PLANT		-48V WIRE SIZE (13.9 AMPS FULL LOAD)
UP TO	11 FEET	12 AWG
	17 FEET	10 AWG
	27 FEET	8 AWG
	43 FEET	6 AWG
	68 FEET	4 AWG
	109 FEET	2 AWG

NOTES:

1. THIS ASSEMBLY OF 3 INVERTERS SHOULD BE MOUNTED IN A STANDARD COMMERCIAL 19" OR 23" RELAY RACK AND LOCATED ON THE ISOLATED GROUND PLANE. INSULATE THE FRAME FROM THE FLOOR.
2. CONNECT THE FRAME OF THIS RACK TO THE ESS SINGLE-POINT GROUND (MASTER GROUND BAR) USING A #6 AWG GROUND WIRE.
3. NOTE THAT THERE IS A TRANSFER TIME OF 50MS BETWEEN THE LOAD INVERTER AND THE BACK-UP INVERTER; THIS MAY CAUSE SOME MINOR LOSS OF DATA AND IS ACCEPTABLE.
4. THE 3.5 LOAD CURRENT CREST FACTOR MUST BE CONSIDERED WHEN DETERMINING TOTAL INVERTER LOADS.
5. IF DESIRED, THE 1F-1 NORMALLY OPEN INVERTER ALARM RELAY CONTACT MAY BE CONNECTED INTO THE 3ESS ALARM CIRCUIT AS A JOB CONDITION.
6. THESE INVERTERS ARE LISTED BY UNDERWRITERS LABORATORIES. A REQUEST HAS NOT BEEN MADE TO PROVIDE THEM AS WE SPECIFICATION ITEMS, BECAUSE THEY ARE A STANDARD GRADE COMMERCIALLY AVAILABLE PRODUCT, AND M..Y NOT MEET SOME OF THE NEBS AND BELLCORE REQUIREMENTS.
7. INVERTER #1 IS BACKED UP BY THE "REDUNDANT BACKUP INVERTER" AND TYPICALLY WOULD BE ASSIGNED TO CRITICAL LOADS SUCH AS MODEMS.
8. INVERTER #2 IN THIS CONFIGURATION IS NOT BACKED UP AND TYPICALLY WOULD BE ASSIGNED TO NON-CRITICAL LOADS SUCH AS END GUARD RECEPTACLES. THIS INVERTER MAY BE PURCHASED WITH A TRANSFER SWITCH SO THAT IT MAY BE USED AS AN EMERGENCY ON-SITE REPLACEMENT FOR INVERTER #1. BUT SINCE THE TRANSFER SWITCH IS NOT USED IN THE PRESENT CONFIGURATION, A LARGER 1 KVA MODEL WITHOUT THE TRANSFER SWITCH (#A31-1E-48V-A6) MAY ALSO BE PURCHASED.
9. THE A30D-500-48V-A6 AND A31-1E-48V-A6 MAY BE OBTAINED FROM:
   LA MARCHE
   106 BRADROCK DRIVE
   DES PLAINES, IL 60018
10. ENSURE THAT THE NEUTRAL OF EACH INVERTER IS INDEED REFERENCED TO FRAME GROUND VIA INTERNAL STRAPS A, B AND C.

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AC POWER DISTRIBUTION	DWG SIZE	ISSUE
	C2	7B
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FIG. 35

MISCELLANEOUS CABINET
6 FT J5D005C
B/W MUSIC ON QUEUE AND
117V 60HZ OUTLET STRIP

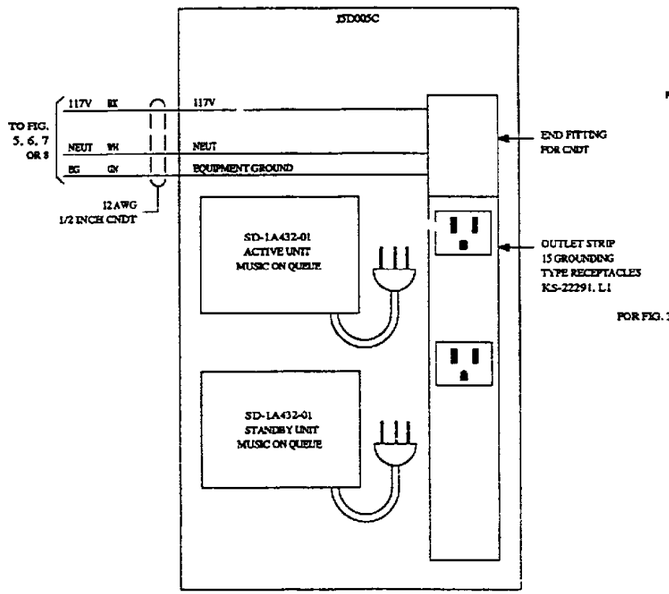


FIG. 36

ESSENTIAL AC INPUT
AC DISTRIBUTION PANEL
230V 1PH 3W & GRD, 50HZ
(TYPICAL)

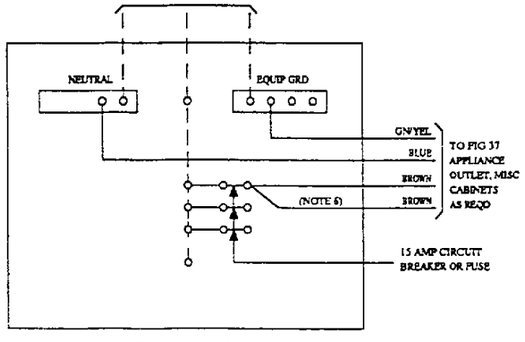


FIG. 37

WIRING DIAGRAM FOR CONDUIT
AND WIRE WAY FOR AC POWER
FOR 230V, 1PH, 3W & GRD 50HZ

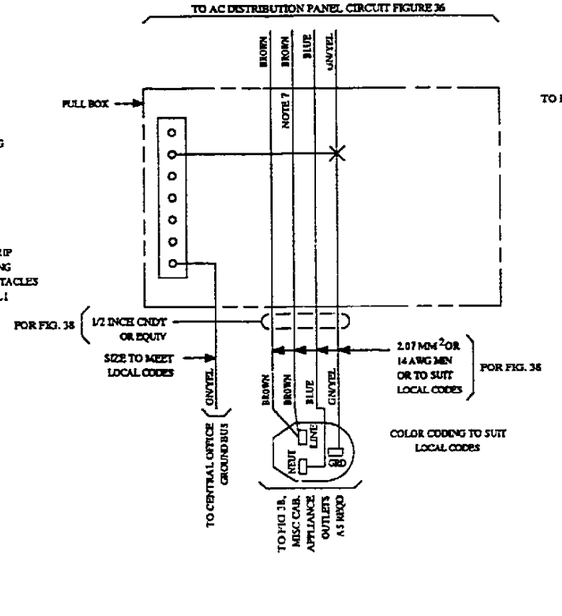
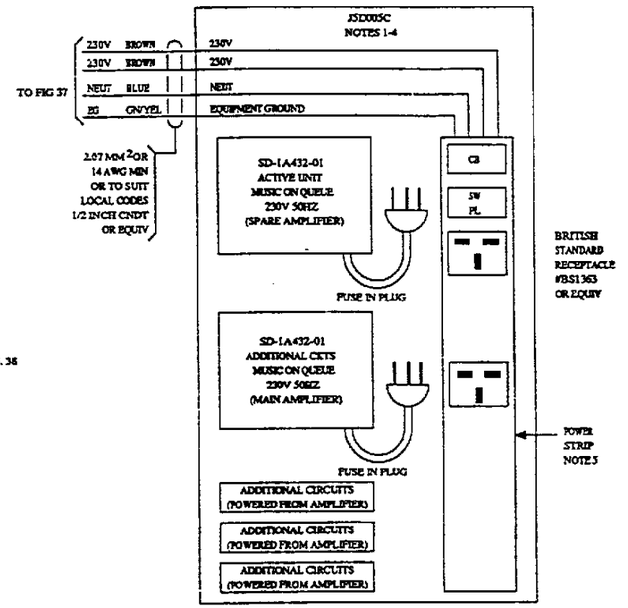


FIG. 38

MISCELLANEOUS CABINET
6 FT J5D005C
B/W MUSIC ON QUEUE AND
115V 50 HZ OUTLET STRIP



NOTES:

1. COLOR CODING TO SUIT LOCAL CODES.
2. POWER STRIP AS FURNISHED IS E/W 3-WIRE CORD TERMINATED IN PLUG PER BRITISH STANDARD #1363. PLUG INTO NEARBY RECEPTACLE. CORD IS 6 FEET OR 1.4/3 SJT W/EPPN-0336 PLUG.
3. IF LOCAL CODES REQUIRE IT, REMOVE 3-WIRE CORD AND BRING CONDUIT INTO OUTLET STRIP, USING AN END FITTING.
4. SECOND BROWN CONDUCTOR IS SHOWN IN CASE THE BRITISH WIRING TECHNIQUE IS DESIRED. THE TWO BROWN LEADS FEED THE SAME "LINE" CONNECTION OF EACH RECEPTACLE TO FEED IT FROM TWO DIRECTIONS.
5. OUTLET STRIP IS RATED 13A - 250V AND IS EQUIPPED WITH EPPN-0369 SWITCH/PILOT AND 8 GROUNDING RECEPTACLES. STRIP IS TYPE X99-579 AND IS AVAILABLE FROM S.L. WABER, INC.
6. SECOND BROWN CONDUCTOR IS SHOWN IN CASE THE BRITISH RING WIRING TECHNIQUE IS DESIRED. OMIT SECOND BROWN CONDUCTOR OTHERWISE.
7. TYPICAL RECEPTACLE WIRING USING BRITISH RING WIRING TECHNIQUE. IF DESIRED, PER BRITISH STANDARD 1363.

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FIG. 39

ESSENTIAL AC INPUT

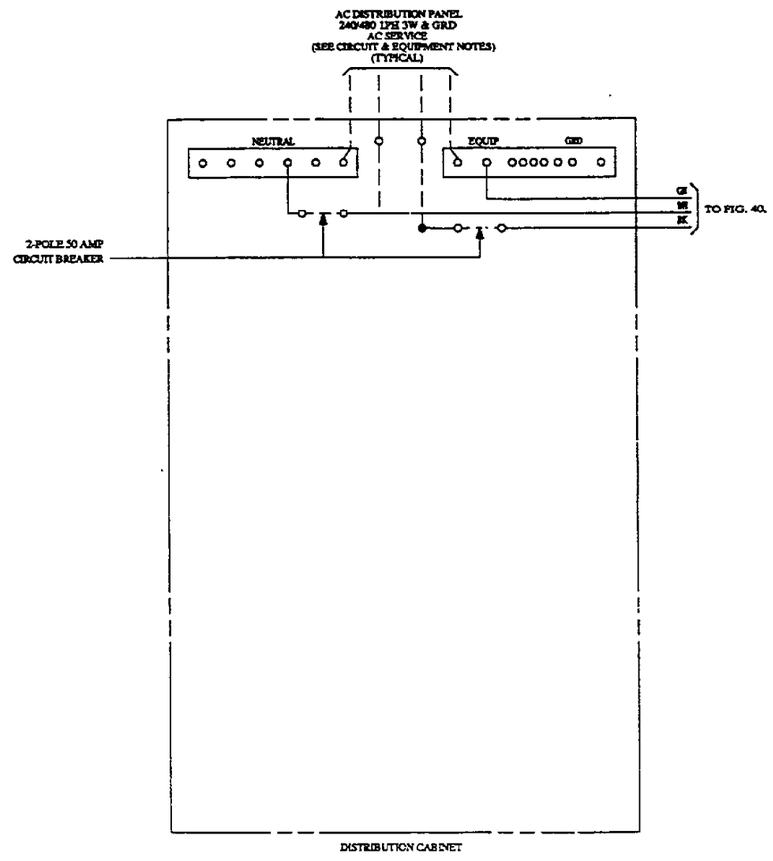
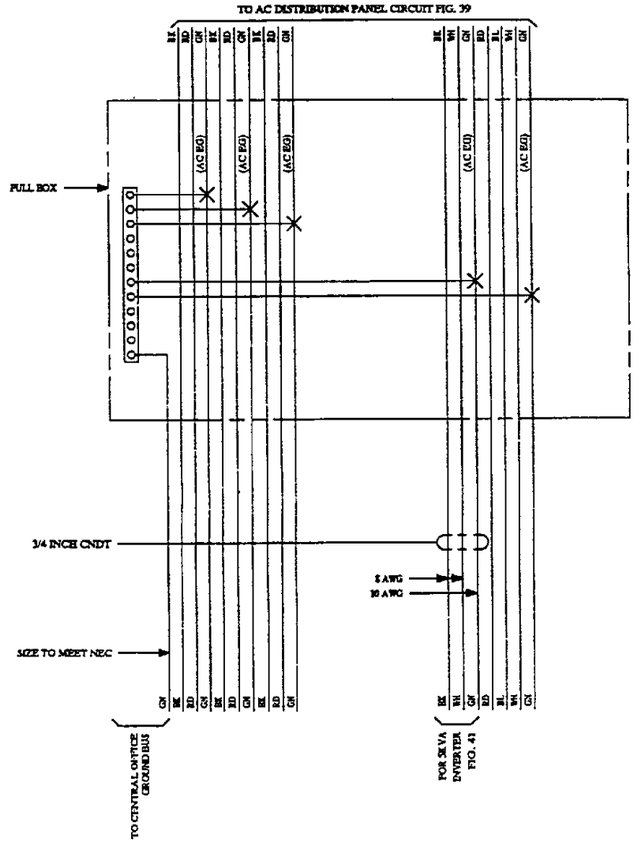


FIG. 40

WIRING DIAGRAM FOR CONDUIT
AND WIRE WAY FOR AC POWER
FOR 240/480 1PH 3W & GRD



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DWG SIZE	ISSUE
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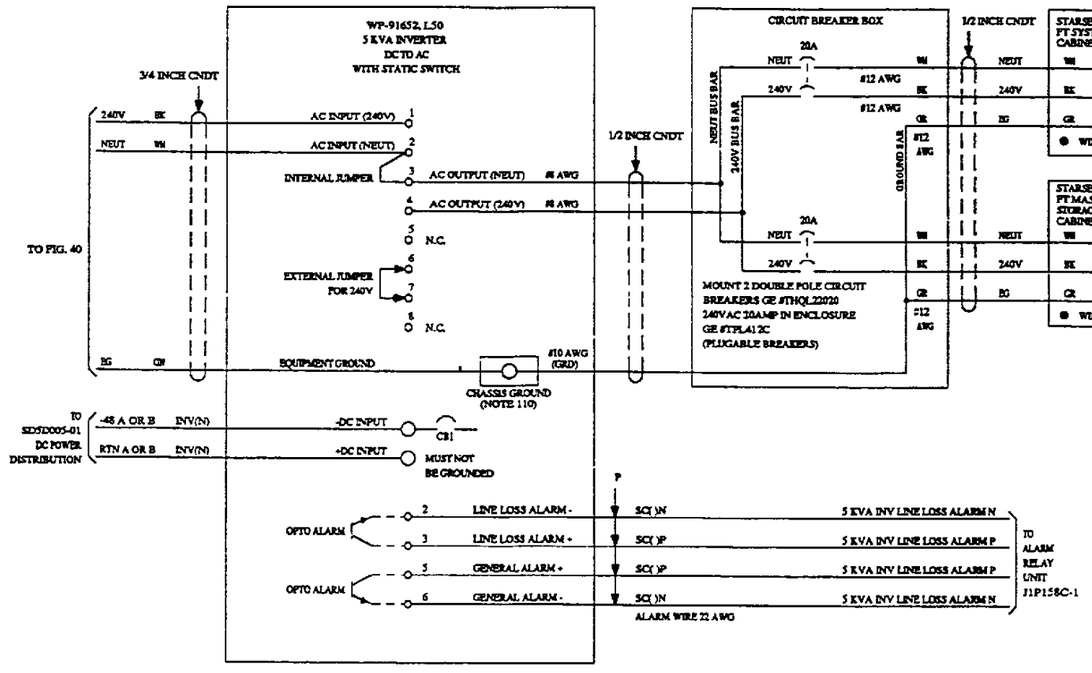
FIG. 41

5K VA DC/AC INVERTER
(MAY BE MOUNTED IN MISC CABINET)
(NOTES 110,111,112,115)



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DWG SIZE	ISSUE
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FIG. 42

ENHANCED SERVICE ADJUNCT
AC POWER DISTRIBUTION
9-TRACK TAPE DRIVE POWER DIAGRAM
(FOR CENTRAL OFFICE APPLICATIONS)

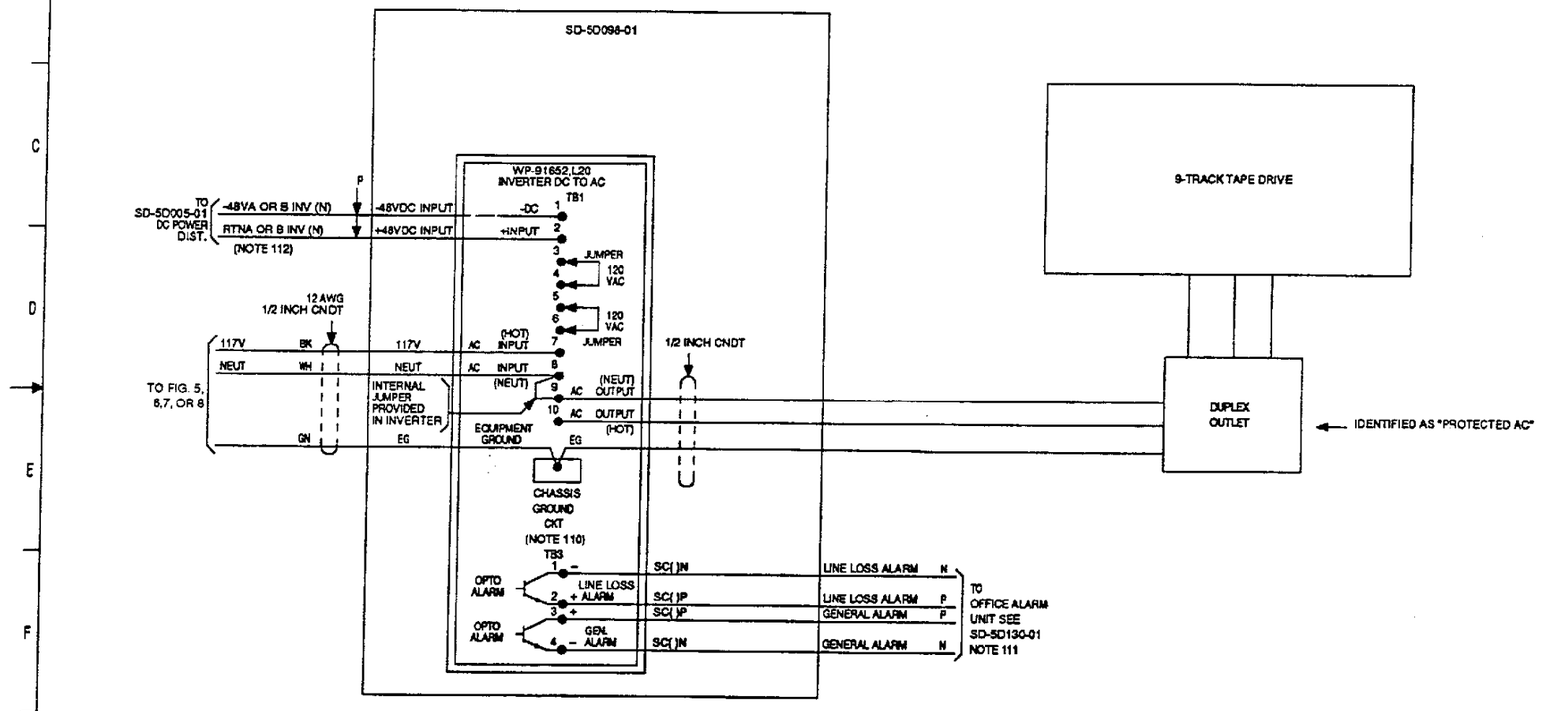

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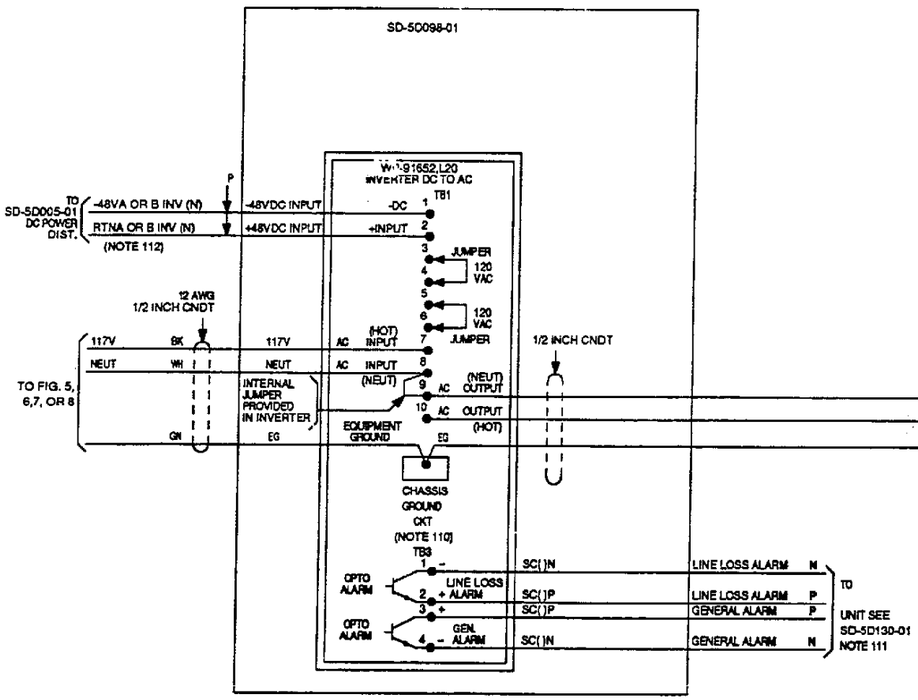
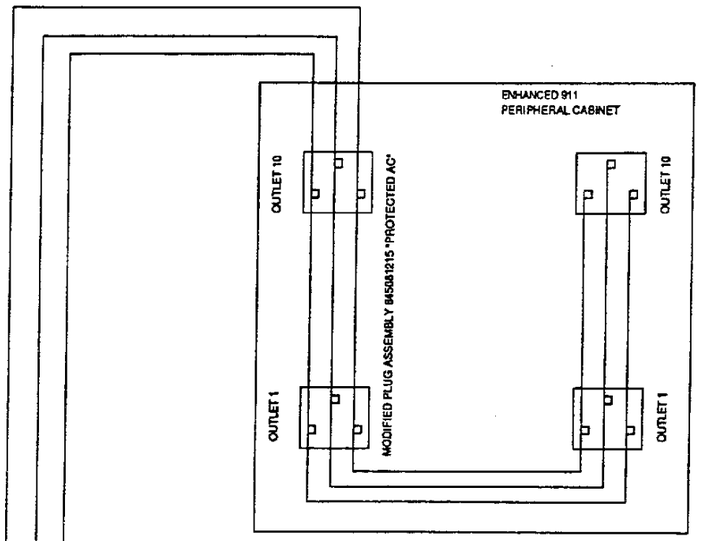
FIG.43

ENHANCED 911 SERVICE ADJUNCT
AC POWER DISTRIBUTION
PROTECTED AC POWER
ENHANCED 911 PERIPHERAL CABINET
(FOR CENTRAL OFFICE APPLICATIONS)

FIG. 25

MODEM POOLING CABINET
J5D007B-1
(NOTES 110,111,112,113,114)





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DWG SIZE	ISSUE
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AUXILIARY WORK STATION (AWS) PROTECTED AC

FIG. 44

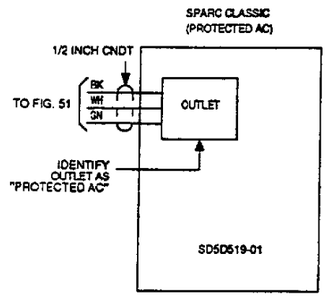


FIG. 45

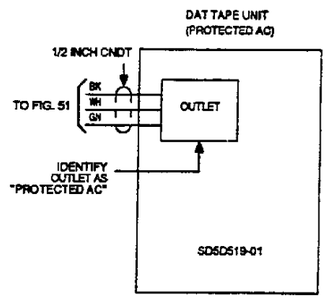


FIG. 46

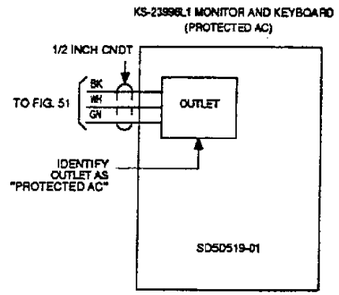


FIG. 47

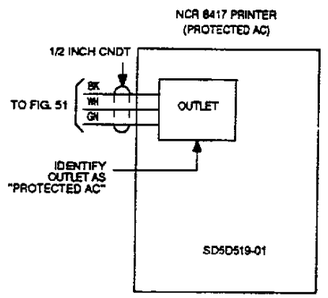


FIG. 48

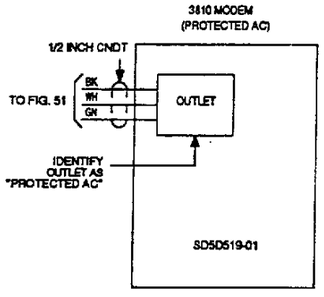


FIG. 49

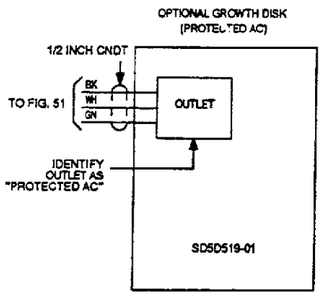
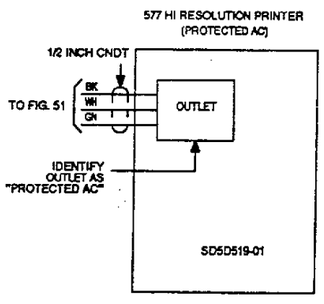


FIG. 50



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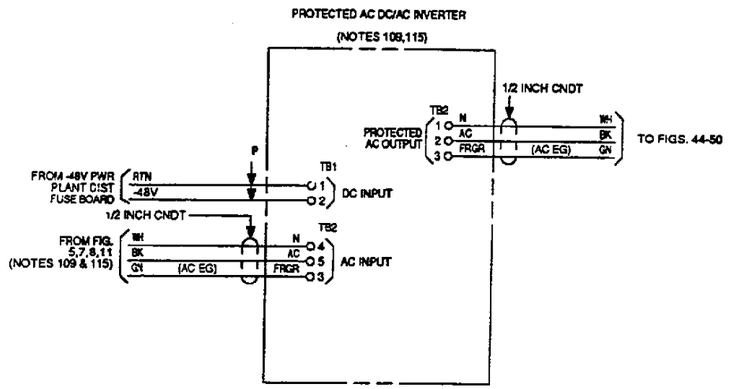
AUXILIARY WORK STATION (AWS) PROTECTED AC

FIG. 51



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APP FIG. 1

APPLIANCE OUTLET (SINGLE)
FOR CDF

RECEPTACLE, SINGLE

OPT	DESIG	LOC	CODE
		2E1 2C8 2D8	5284 (PASS & SEYMORE, INC OR APPROVED EQUIVALENT)

APP FIG. 2

APPLIANCE OUTLET (DUPLEX)
FOR SWITCHING FRAMES

RECEPTACLE, DUPLEX

OPT	DESIG	LOC	CODE
		2B5	WE 5262 (HARVEY HUBBELL CO. OR APPROVED EQUIVALENT)

APP FIG. 3

APPLIANCE OUTLET (DUPLEX)
FOR DATA SET CABINET

RECEPTACLE, DUPLEX

OPT	DESIG	LOC	CODE
		8B6, 8B8, 8E6	DUPLEX OUTLET KS-20201 L8

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AC POWER DISTRIBUTION

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ISSUE: 7B
AT&T
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SHEET: C1

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CIRCUIT NOTES:

101.

DESIG	FUSE AMP	POTENTIAL	ONE PER
	10	208V	25A RECTIFIER 10
	10	240V	25A RECTIFIER 10
	15	208V	50A RECTIFIER 10
	15	240V	50A RECTIFIER 10
	50	208V	100A RECTIFIER 10
	50	240V	100A RECTIFIER 10
	15	480V	100A RECTIFIER 30
	25	208V	100A RECTIFIER 30
	25	240V	100A RECTIFIER 30
	25	480V	200A RECTIFIER 30
	45	240V	200A RECTIFIER 30
	50	208V	200A RECTIFIER 30
	50	480V	400A RECTIFIER 30
	100	208V	400A RECTIFIER 30
	100	240V	400A RECTIFIER 30

BATTERY SYMBOL — VOLTAGE RANGE

102. BRANCH CIRCUITS SHALL BE ASSIGNED TO PHASE LEG AND NEUTRAL BUSES OF BRANCH CIRCUIT DISTRIBUTION EQUIPMENT SO AS TO LOAD PHASES AS EQUALLY AS PRACTICAL. THE HEAVIEST PHASE LEG LOAD SHALL NOT EXCEED THE FEEDER CIRCUIT OVERCURRENT DEVICE CONTINUOUS LOAD RATING. THE FEEDER NEUTRAL CONDUCTOR SHALL BE THE SAME SIZE AS PHASE LEG CONDUCTORS. THE BRANCH CIRCUIT DISTRIBUTION EQUIPMENT (PANEL BOARD, ETC) CONTINUOUS LOAD RATING SHALL EQUAL OR EXCEED THE FEEDER CIRCUIT LOAD CAPACITY.

103. THE LOADS ON THE "ESSENTIAL AC BUS" ARE THOSE WHICH CAN TOLERATE MORE THAN 5 SECONDS INTERRUPTION IN THE EVENT OF A COMMERCIAL POWER FAILURE.

104. FEEDER CIRCUITS MAY BE:

(A) 120V, 1-PHASE, 2-WIRE (FIG. 1).

(B) 120V/240V, 1-PHASE, 3-WIRE (FIG. 1).

(C) 120V/208V, 1-PHASE, 3-WIRE (FIG. 1).

(D) 120V/208V, 3-PHASE, 3-WIRE (FIG. 1).

(E) 480V, 3-PHASE, 3-WIRE (FIG. 1).

105. THE FEEDER CIRCUIT AMPERE CAPACITY SHALL BE EQUAL TO OR GREATER THAN THE ULTIMATE CONNECTED LOAD.

106. FEEDER AND BRANCH CIRCUIT OVERCURRENT DEVICES (CIRCUIT BREAKER, SWITCH AND FUSE) SHALL HAVE INTERRUPTING CURRENT RATINGS GREATER THAN THE AVAILABLE FAULT CURRENT TO THE INPUT SIDE OF THE DEVICE OR A CURRENT LIMITING FUSE MUST BE ADDED IN SERIES TO PROVIDE ADEQUATE LIMITATION TO THE DEVICE AND DOWN STREAM CURRENT COMPONENTS.

107. BRANCH CIRCUITS SHALL BE EQUIPPED WITH OVERCURRENT DEVICES PER NOTE 101 OR AS FOLLOWS:

(A) MISCELLANEOUS LOADS - OTHER LOADS SHALL BE ADDED TO THE BRANCH CIRCUIT LOAD SUMMARY ON THE BASIS OF RATED INPUT POWER REQUIREMENTS.

108. IF NO CENTER TAP ON ONE PHASE IS PROVIDED, THE AC SERVICE WOULD BE DESCRIBED AS 240V 3-PHASE DELTA WITH GROUND, AND MAY BE USED FOR 3-PHASE LOADS. A SEPARATE 120/240 1-PHASE 3W SERVICE WOULD BE REQUIRED FOR SINGLE PHASE LOADS.

CIRCUIT NOTES (CONT):

109. AS A TELEPHONE COMPANY OPTION, THIS UNIT MAY BE CONNECTED TO THE NON-ESSENTIAL (COMMERCIAL AC ONLY) BUS INSTEAD OF THE ESSENTIAL BUS WHICH IS BACKED UP BY AN ENGINE ALTERNATOR DURING A COMMERCIAL AC OUTAGE.

110. CHASSIS GROUND TERMINAL WILL BE USED AS FRAME GROUND (EG) FOR THE AC INPUT AND OUTPUT CIRCUITS. THE NEUTRAL LEAD (NEUT) MUST NOT BE CONNECTED TO THIS TERMINAL.

111. OPTO ISOLATORS ARE USED IN LIEU OF CONTACT CLOSURES TO PROVIDE ALARM INDICATIONS. THESE ARE RATED AT 60V MINIMUM, AND 16 MA MAXIMUM. POLARITY IS IMPORTANT.

112. THE INVERTER D.C. INPUT ASSIGNMENTS SHOULD ALTERNATE BETWEEN THE "A" BUS AND THE "B" BUS TO BALANCE THE D.C. LOADS.

113. ALL ITEMS USING AC POWER MUST RECEIVE THAT POWER FROM THE OUTLET STRIP IN THAT SAME CABINET.

114. TO AVOID THE EXPENSE OF HAVING A FUSE/FILTER PANEL JUST FOR THE FAN, A 117V AC FAN SHOULD BE USED.

115. FOR CIRCUITS ENTERING THE 5ESS ®, CONNECT THE GREEN WIRE TO THE ESS GROUND WINDOW AND CONTINUE THE GREEN WIRE RUN TO THE EQUIPMENT BEING SERVED. BOND THE CONDUIT TO THE GROUND WINDOW PER ED-5D022-01.

116. THE "LINE LOSS ALARM" (AN OPTO-ISOLATOR CIRCUIT, NOT A RELAY CONTACT CLOSURE) IS CONNECTED AT THE OFFICE ALARM UNIT TO AN OUTPUT OF A TN367 (USED AS A TIE POINT) AND IS THEN CONNECTED TO THE 3B20 IOP'S. PC01, TO PROVIDE THE SIGNAL INPUT TO SC31 INV XFER, TO INDICATE INVERTER TRANSFER DUE TO ITS LOSS OF COMMERCIAL POWER.

117. THE "GENERAL ALARM" (AN OPTO-ISOLATOR CIRCUIT, NOT A RELAY CONTACT CLOSURE) IS CONNECTED AT THE OFFICE ALARM UNIT TO AN OUTPUT OF A TN367 (USED AS A TIE POINT) AND IS THEN CONNECTED TO THE 3B20 IOP'S. PC01, TO PROVIDE THE SIGNAL INPUT TO SC29 INV FAIL, TO INDICATE A GENERAL FAILURE OF THE INVERTER.

118. THE CIRCUITS USED IN POWER PLANTS FOR 5ESS APPLICATIONS SHOULD BE TYPE SELV, PER EN6950 AND IEC50950, AS ARE 5ESS CIRCUITS. NOTE THAT ALL CONNECTIONS TO OUR NETWORK MUST BE TNV (CLASS C) TYPE CIRCUITS (PROTECTED) FOR A SINGLE FAULT.

EQUIPMENT NOTES:

201. LWC - DENOTES LOOP WITHOUT CUTTING.

202. ✕ DENOTES SPLICES WHICH MAY BE MADE AT POINTS OTHER THAN THOSE INDICATED AS FOUND CONVENIENT TO SUIT JOB CONDITIONS.

203. UNASSIGNED

204. THE NEUTRAL WIRES FROM EITHER "PROTECTED" OR "ESSENTIAL" AC FEEDER CABLES MUST NOT CONNECT TO ESS GROUND AT ANY POINT WITHIN THE SYSTEM.

205. WIRE SIZE FOR THE "PROTECTED" AC FEEDER WIRES ON THE OUTPUT OF THE KS-20816, L1A INVERTER MUST BE SIZED TO GIVE A MAXIMUM LOOP DROP OF 1 VOLT AT 10 AMPERES.

206. "ESSENTIAL" AC FEEDER CABLES CONNECT TO CENTRAL OFFICE PRIMARY AC POWER VIA THE AC DISTRIBUTION CIRCUIT.

207. USE 12 AWG THW SOLID WIRE TO CONNECT TO ALL LOADS NOT EQUIPPED WITH FLEXIBLE CORD AND ATTACHMENT PLUG. THE COLOR CODING OF THESE LEADS SHALL BE AS FOLLOWS:

120V AC - PHASE LEAD - BLACK

NEUTRAL - WHITE
EQUIP GRD - GREEN

208. TO DENOTE PHASE LEG TO WHICH A CIRCUIT HAS BEEN ASSIGNED, PHASE LEG COLORS WOULD BE USED IN ALL BRANCH CIRCUITS WHEN COMMERCIAL POWER SOURCE IS 3-PHASE, ASSIGN COLORS AS FOLLOWS:

A PHASE - BLACK (BK)

B PHASE - RED (RD)

C PHASE - BLUE (BL)

209. CONDUCTOR DERATING SHALL BE IN ACCORDANCE WITH NEC CHAPTER 310-12 AND 310-15.

210. GROUNDING METHODS AND REQUIREMENTS ARE SHOWN IN ED-5D023-01.

211. AC POWER DISTRIBUTION HARDWARE IS SHOWN IN ED-5D094 AND DESCRIBES HARDWARE ASSEMBLY FOR AC POWER. SEE ALSO SD-4C003-01 AND ED-5D021-11, -12.

212. TYPICAL LIGHTING, RACEWAY AND HARDWARE FOR TOLL EQUIPMENT IS SHOWN IN ED-5D072.

213. AC LIGHTNING AND SURGE PROTECTION EQUIPMENT SHALL BE FURNISHED PER SD-81968-01 OR T-81968-30. TYPICAL SURGE PROTECTION SHOWN IS REQUIRED FOR RECTIFIERS, INVERTERS AND POWER SUPPLIES.

214. NEC 215-8 SPECIFIES THAT THE PHASE CONDUCTOR HAVING THE HIGHEST VOLTAGE TO GROUND SHALL BE IDENTIFIED BY THE COLOR ORANGE, ON 4 WIRE DELTA-CONNECTED SECONDARY WHERE THE MIDPOINT OF ONE PHASE IS GROUNDED TO SUPPLY LIGHTING AND SIMILAR LOADS.

215. THIS CIRCUIT BREAKER MUST BE LOCATED ON THE SAME FLOOR AS THE EQUIPMENT IT SERVES.

216. FOR CONSISTENCY AND APPEARANCE, MOUNT 117V RECEPTACLES WITH THE U SLOT DOWN OR TO THE RIGHT.

217. ALL WIRE SIZES SPECIFIED AS KCMIL WERE PREVIOUSLY MCM.

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INFORMATION NOTES:

301. UNLESS OTHERWISE SPECIFIED:
RESISTANCE VALUES ARE IN OHMS,
CAPACITANCE VALUES ARE IN MICROFARADS,
VALUES PRECEDED BY THE SYMBOL + (PLUS)
OR - (MINUS) ARE IN VOLTS.

302.

FEATURE OR OPTION	PROVIDE		
	APP FIG	APP OR WRG	QUANTITY

INFORMATION NOTES (CONT):

305. LEAD DESIGNATION

MNEMONIC	DEFINITION	USAGE IN 3PH SYSTEMS	USAGE IN 1PH SYSTEMS
BK	BLACK WIRE	FIRST PHASE	-120V
RD	RED WIRE	SECOND PHASE	-120V
BL	BLUE WIRE	THIRD PHASE	———
WH	WHITE WIRE	NEUTRAL	NEUTRAL
OR	ORANGE WIRE	HI PHASE 240/120 4W	———
GN	GREEN WIRE	EQUIPMENT GROUND	EQUIPMENT GROUND
GRD	GROUND	GROUND	GROUND

303.

RECORD OF FIGURES, WIRING AND APPARATUS CHANGES					
CHANGED ON ISS	IF JOB RECORDS DO NOT SPECIFY	THIS OPTION WAS FURN	SEE NOTE	USE IN CIRCUIT	
				AVAIL	DA

304. SEE SHEET D3.

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		D2

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INFORMATIVE NOTES (CONT):

304. TYPICAL AC DISTRIBUTION FOR UNITIZED 151C POWER PLANT.

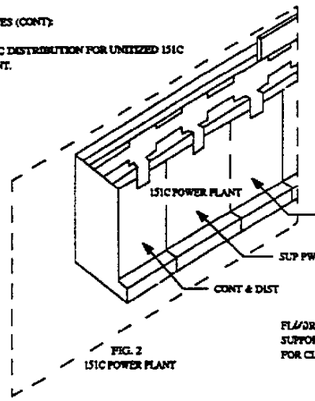

FIG. 2
151C POWER PLANT

NOTE:

1. SUBSTITUTE FIG. 2 TO CONVERT TO ARRANGEMENT FOR 151C POWER PLANT WITHIN EQUIPMENT LINE-UP.

FIG. 1
ARRANGEMENT WITHOUT POWER PLANT IN EQUIPMENT LINE-UP

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AC POWER DISTRIBUTION		DWG SIZE	ISSUE
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INFORMATION NOTES (CONT)

304. TYPICAL AC DISTRIBUTION FOR NO. 5 ESS (FIGURE 1).

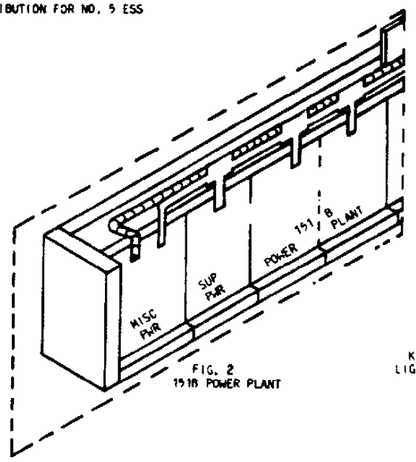

FIG. 2
1518 POWER PLANT

NOTE:

1. SUBSTITUTE FIG. 2 TO CONVERT TO ARRANGEMENT FOR 151C POWER PLANT WITHIN EQUIPMENT LINE-UP

STRAP CONDUIT TO GRD WINDOW BUS BAR WITH NO. 6 AWG WIRE.

CONDUIT FOR CONV. OUTLETS.

WIREWAY AND PULLBOXES

TYPICAL RACEWAY FOR AC (SHOWN HERE FOR CLARITY; RELOCATE AS DESIRED)

PULLBOX FOR MDF SEE FIG. 7 & 8

ALARM CIRCUIT FOR ED-82372-30 WHEN PROVIDED, SEE FIG. 17, 18, 19, 20

KS-21599, L1 FLOURESCENT LIGHT FIXTURE. SUPPORTING HARDWARE OMITTED FOR CLARITY.

TO BLDG. GRD REF. POINT.

ED-82372-30 SURGE PROTECTORS FOR -48V RECTIFIERS SEE FIG. 17, 18, 19, 20

AC SERVICE ENTRANCE PANEL - SEE FIG. 1, 2, 3, 4

CENTRAL OFFICE GRD BUS

NO. 0 AWG

NO. 6 AWG

TO GRD WINDOW

TO MDF GRD BAR BUS

TU CABLE SHEATHING

FRONT OF CONTROL COMPLEX

WIREWAY FOR LIGHTING

ESS COMPLEX

EQUIPMENT AISLE

MSGS

LINE

LT #1

LT LST #2

MISC

P.D.

TMS

WIRING AISLE

GROUND WINDOW BUS BAR ABOVE P.D. FRAME

LT #3

LT #4

SPACE FOR OTHER NON-UNITIZED LINE-UPS IF REQUIRED

TOLI EQUIPMENT NOT UNITIZED

KS-20440, L1 FLUORESCENT LIGHT FIXTURE FOR BOTH FRONT AND REAR OF MDF. SUPPORTING HARDWARE OMITTED FOR CLARITY.

KS-21599, L1 FLUORESCENT LIGHT FIXTURE. SEE NOTE 215 AND FIG. 8. WIREWAY AND SUPPORTING HARDWARE ARE PROVIDED PER ED.

ESS ISOLATED GROUND PLANE

P/O BUILDING INTEGRATED GROUND PLANE

SEE NOTE 1

FIG. 1
ARRANGEMENT WITHOUT POWER PLANT IN EQUIPMENT LINE-UP

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AC POWER DISTRIBUTION	DWG SIZE 6S	ISSUE 4M
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